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LONDON: SATURDAY, JANUARY 3, 1903.

An Address

ON THE

FUTURE OF ELECTRO-THERAPEUTICS.

Delivered at the First Anniversary Meeting of the British Electro-Therapeutical Society.

By EDMUND OWEN, F.R.C.S.,
Consulting Surgeon to St. Mary's Hospital.

MR. PRESIDENT AND GENTLEMEN,—In compliance with a complimentary invitation from your Council, I am here to-night to congratulate you, formally but heartily, on the celebration of your first anniversary; to wish you many happy returns of the day, and to make a few remarks in connexion with the young Electro-Therapeutical Society. Together with your other friends, then, I do, most heartily congratulate you and wish you well! You have made an excellent start, for you have a membership-list of no less than eighty-two, and, considering the number of Medical Societies already in existence around you, and considering also the comparatively small number of qualified men and women who take an intelligent and practical interest in Electro-therapeutics, the success which you have attained, even in your first year, is as remarkable as it is gratifying.

You have certainly done well in organizing yourselves into a separate Society. The questions which specially interest you are, I imagine, still in their infancy, and have to be perpetually studied, discussed and criticized; and it is absolutely necessary that you have the opportunity of directly comparing notes with each other on the subject. This you could not do in an ordinary Society. Even the old Medical Society of London—perhaps the most liberal of all the London Societies—would scarcely be found catholic enough to offer you a welcome as Electro-therapeuticians; for if its Fellows understood your language (which is partly that of signs and symbols), they would be apt, I think, to vote you somewhat of a nuisance after having listened to you for a whole evening. It was absolutely essential, therefore, that you started a Society of your own, where you may show each other your methods of working and discuss the results; where you may talk your own language; and where, by discussing in an informal and friendly way, you may help in a great scheme of mutual edification in a manner which cannot be accomplished by mere reading—"Iron sharpeneth iron; so a man sharpeneth the countenance of his friend."

THE LATE DR. BLACKER.

I am sure that the members of this Society would like me at the outset to make allusion to the loss which they have experienced by the death of Dr. Arthur Barry Blacker, one of the founders of the Society and, from the first, a member of its Council. Dr. Blacker received the chief part of his medical education at St. Thomas's Hospital. But in order that he might obtain a degree in medicine, he pursued a certain amount of his studies at Durham, and a little more than two years ago he took the Doctorate of Medicine of that University. In connexion with this "trekking" of London medical students in order to obtain a Degree in Medicine, I would like to make a few remarks. In the first place, it seems to me to be absurdly wrong that a diligent worker (such as Dr. Blacker evidently was at St. Thomas's Hospital) who did not happen to have passed the Matriculation examination of the University of London before registering as a student, should be compelled to desert the school of a Metropolitan Hospital, with all its associations and its immense wealth of clinical material—to say nothing of its laboratories and of its staff of teachers,—to work during a definite number of terms in a provincial town in order that he may obtain the legal right to the title of *Doctor*. I will not go so far as to say that a degree in Medicine is at the present day almost a necessity in the case of a medical man who is embarking on any line of practice other than that of pure Surgery, but I have no hesitation in saying that its possession is an undoubted and distinct advantage to him. I think, moreover, that matters ought so to be arranged that the title can be obtained as a matter of course and of right by every student of Medicine in London who possesses average intelligence, and has followed the prescribed course of medical education in London with average industry.

The hope is widely spread and keenly expressed that some arrangement may shortly be arrived at between the University of London and the Royal Colleges of Physicians and Surgeons, by which this consummation may be obtained, and, I, for my part, can see no valid reason to the contrary. But this can only be by both the Senate of the University and the Councils of the Colleges entering into the consideration of the matter fully prepared to yield in certain points which, possibly, may at present seem to be absolutely unalterable. The two ends of an iron hoop cannot be welded together unless *each* of them be first softened in the fire. But in the meanwhile it is saddening to recognize the fact that the medical schools of London, with their unrivalled opportunities for imparting a practical knowledge of our profession, are steadily being deserted, and that students are travelling northward under the influence of the knowledge of the fact that at the end of their work they will receive, not merely a licence to practise, but a solid Degree in Medicine. And for this I can not blame them. Being no longer on the staff of a medical school, the placing of a degree in medicine within the reach of every London student can make no possible difference to me personally, but in the interests of medical education and of the London Schools, and in fairness to the students and the teachers who are attached to them, I feel once more impelled to utter a cry in the wilderness.

But to return to Dr. Blacker, I find on referring to a sympathetic obituary notice of him in the *Lancet* of September 27th, that in November, 1889, he went to Cairo, where he practised for two winters as resident physician to Mena House, and that for some time he had acted as Assistant Electrician at St. Bartholomew's Hospital. Soon after the discovery of those marvellous *x* rays, he was made Superintendent of the *x*-rays department at his *alma mater*, St. Thomas's Hospital, and also at the Brompton Hospital, and in this branch of practice "he did a great deal of useful work." Coming to the private side of his life, we are told that he was an earnest Churchman, and that he rendered a great deal of unostentatious and valuable help to the parish of St. Barnabas, Pimlico. Amongst the wreaths which were sent to his funeral one came from the poor children and the workers at an Orphanage; this suffices to show, I think, what sort of a man Blacker was. And who is there amongst us who would not like to believe that the poor and needy might possibly have a kind thought for *him* at his death? The writer in the *Lancet* ended by remarking that it might well be said of Blacker,

> "And full of kind deeds simply done
> were all his days."

Gentlemen, I am sure that both your Society and our profession at large could ill afford to lose Dr. Blacker!

The Advance of Electro-therapeutics.

When I was a student at St. Mary's Hospital but slight interest was taken in the subject of electro-therapeutics, although the late Dr. Handfield Jones, a most studious and learned physician, paid some considerable attention to it. It was in more recent times that Dr. de Watteville, a gentleman whose name is honourably known to and respected by every member of this Society, undertook the organization of the Electrical Department of St. Mary's Hospital on a scientific basis, and on those lines it is now worked with great skill and success by Dr. Wilfred Harris. At the present day each one of our students is expected to serve a clerkship in that Department before engaging in general medical work in the wards. I will attribute it, therefore, to the imperfect state of Medical education in my student days, that I must this evening content myself with the position of a mere outsider or, rather, a mere spectator, as regards this comparatively new science of electro-therapeutics. And it must be only from an outsider's point of view that I dare attempt to speak, but proceeding in this manner I shall, at any rate, feel safe; whereas, had I struggled to address you from a scientific standpoint on matters electro-therapeutical, I, to say the least, should have felt extremely ill at ease.

I think that it would be a very good thing if, for a time, at any rate, your meetings were made quite private, and that, except in special circumstances, your discussions were not reported in the weekly Journals. But though thus depriving the work of your Society of contemporary publicity, I would by no means suggest that it should be dropped over the side of the ship into the trackless sea. I would most certainly have due provision made for its respectful interment in an Annual Volume of Reports. And Reports of a new Society in a comparatively new field of work, might be—ought to be—extremely useful, for they will contain the best thoughts of many of our best workers upon the bearing of electricity in the Healing Art. These printed communications cannot fail to be helpful and stimulating to your fellow workers all over the world; and the fact of a man being already a member of your Society will cause him to take a much deeper interest in its Reports than he otherwise would have done, even though he may not have had the opportunity of being present at its meetings. Your fellow members in the antipodes, for instance, will at once assume a personal interest in your proceedings, and will, in their turn, send to your Society records of their own failures, advances, and successes. Thus the influence of your published work will be great and increasing. And I feel sure that the modest, blue paper-covered *Journal* which contains your Reports just published—the result of your first year's work—is the forerunner of a long series of volumes which will be bound in leather, lettered in gold, and shelved with respect.

As an old Parliamentary hand, let me advise you to watch over your Society with jealous and protecting care, always remembering that the subject with which it deals is a comparatively new one. You, or your Secretaries acting for you, must carefully inquire into the nature of all communications brought to its doors, not necessarily to be assured that the work is fresh or original, but rather that it is sound and honest. For unless your Society is very different from other Medical Societies with which I have been officially connected, you will every now and then find persons coming to it and begging that they may be permitted to show certain apparatus before it, or read papers in it, which would eventually be found to savour very strongly of mere self-aggrandisement or rank advertisement. As a rule, such an individual comes first to the President with a laudatory introduction from some physician or surgeon who would, perhaps, if asked, be compelled to confess that he had but slight personal acquaintance with the man or his methods. The President, of course, will be able to promise nothing, but he will send the application on to the Secretaries, asking them to do what they can in the matter. If the Secretaries are men of the right sort they will know exactly how to deal with such applications. But they will have to be firm as well as gentle. You must, always be very careful, therefore, as to whom you elect as your Secretaries. If you have two secretaries one may be gentle if the other is firm; but they must not both be gentle, for unpleasant work in the way of declining offers will have to be done. Shall I say that if one of the Secretaries is Mr. Spenlow the other will have to be Mr. Jorkins; that if one is *positive* the other must be *negative*?

Electro-therapeutics and Quackery.

I have no hesitation in making the statement that the subject of the treatment of disease by electricity has hitherto received but scant professional courtesy and recognition in England, that it has, so to speak, been allowed to lie in the mud; that the orthodox practitioner has been apt to regard it askance, and, passing by, has drawn his gown around him lest by chance it should become soiled by contact with it. If any one here is shocked at the strength of this metaphor, I will ask him to look at the advertisement columns of some of the back numbers of the, so-called, Society Journals; there he will see the lines on which electricity has been used, and what kind of persons many of them were who employed it. The public have, however, become thoroughly impressed with the fact that electricity may often be found a most powerful and efficacious remedial agent, though the only personal acquaintance which they may have had with it dated from the time that they stood upon an insulated stool and emitted sparks from their upright hair, or when they placed their hands on the brass balls which glitter upon the showman's table at the fair. To them electricity is electricity; and as there is something mysterious, not to say "uncanny," about it, it is more than probable that, as suggested, or actually affirmed by the specious advertisements, electrical treatment is exactly suited to their peculiar complaint. Thus it has come about that in recent years the public have taken to electrical treatment with extraordinary enthusiasm. They have resorted to it either with, or without, the knowledge or approval of their medical attendants. But I imagine that they have derived the greater satisfaction, enjoyment, and benefit from it when they have resorted to it surreptitiously. Fortunately they have, as a rule, had to pay somewhat heavily for the treatment, and it is not unlikely that that very fact has made them the more highly to appreciate it. For, certain it is that when patients pay little or nothing for professional service, they are apt to estimate its therapeutic value in accordance, whilst if they are heavily charged they really like it. And the unorthodox practitioner readily brings himself and his treatment in complete harmony with this feeling.

A medical friend of my own, who some time since paid a professional visit to an electrical establishment in the west end of London, sent in his name and requested an interview with the gentleman in charge. He did not go there in any unfriendly spirit; but, being interested in the subject of electro-therapeutics, he was anxious to see what arrangements were made there for carrying them out. A nurse, or, at any rate, a female in a nurse's dress, came forward to speak to him, expressing her regret that the manager was absent and would not be back for some days, but she kindly undertook to show him round. In the course of conversation the visitor asked her how she would get on if, during the manager's absence, some new patient applied for treatment. "Oh," said the person in the nurse's dress, "I should take charge of him, and treat him in the meanwhile." "But what should you do," said the visitor, "if it were a patient needing treatment by the Finsen light?" To this the person in the nurse's dress replied, "I know lupus, and should treat it." She *knew* lupus, and should treat it! Possibly to her every skin disease would be "lupus." Just think of it, gentlemen, the recognition and the treatment of a serious tuberculous disease of the skin being entrusted to the care of a man who, for for ought one knows, has hitherto been only an unsuccessful house-furnisher, an artizan, or a speculator of one sort or another, or, during his temporary absence, to a person in a nurse's dress. Perhaps she to whom I just referred was a fully trained and accomplished nurse; but strange people sometimes masquerade in nurses' dress. "*Cucullus non facit monachum.*" Possibly even the person in the nurse's dress was far more skilled in diagnosis and treatment than was her chief, but, whether she was or whether she was not, whether she was a duly trained and competent nurse or whether she was not, I maintain that she was in an absolutely false and dangerous position.

Next, as an illustration of the very poor repute in which duly-qualified and well-skilled practitioners in the field of electro-therapeutics are apt to be held by the public, I will instance a case in which a lady of good position and education was, a short time since, sent by a consulting physician to receive electrical treatment at the hands of a Surgeon, who is, by the way, an official, in this Society. At the outset of the interview the lady said that she was rather apprehensive as to the effect of electrical treatment upon her as her heart was "weak." Partly to ascertain the truth of her statement, and partly by way of giving her assurance in the matter, the Surgeon said that he would examine her heart. To this the

lady replied, "Oh, I did not think *you* could do that, being a quack"! I do not know how an unorthodox practitioner would receive such a retort as that; my friend, however, took it quite quietly and as being all in the day's work. He then proceeded to explain to her his exact position in the medical profession and also in the field of electro-therapeutics. And let us hope that in the latter part of this explanation he did not feel it incumbent upon him in any way to assume an apologetic tone. The lady, in her turn, took the explanation very nicely, remarking that she had evidently been under a misapprehension in thinking that only quacks used electricity, but that on a former occasion when her doctor had sent her to some persons for electrical treatment, he had clearly given her to understand that they were quacks. The electro-therapeutician ended his letter to me as follows:

"Electrical treatment has suffered immensely from the apathy of our "own Profession and the ravages of the quacks. If our own Profession "would stop sending their patients to unqualified persons, electrical "treatment would find its own position in Therapeutics."

No doubt you will all agree with your unnamed colleague in finding fault with medical men who, though even of high professional standing and responsibility, have been known to send their patients to electro-therapeutic establishments which are not under the charge of qualified medical men. Well, I am not going to defend that practice; but, if need be, I shall be able to say a good deal in the way of excuse for it.

Some years ago I knew of an electrical institution which was "run" by a person who used to call himself, and be called by his assistants, "The Professor." And the amount of influence which he managed to obtain over his confiding patients was quite remarkable. Amongst other things he was affirmed by them to be able to effect cures which no legally qualified man could have done. He was one of Nature's craftsmen, and had not been spoilt by having had to submit himself to the usual course of medical training. The title of "Professor" is, I think, rather a favourite one of the unorthodox and quack practitioner; it means such a great deal to ignorant and imaginative people; and its assumption does not bring him within the grasp of the law. The quack may call himself "Professor" as much as he pleases; but, of course, he must not give himself out to be "legally qualified"—which is quite superfluous, seeing that he can get all that he wants without it. It is a boast with us all that England is a free country; in many respects it is a great deal too free, its freedom being greatly abused. Any person who has been a failure in trade, business, or profession may, if he chooses, come and practise on the borders of our Profession and do almost exactly what he likes. The broken-down solicitor, the broken-up photographer, the impecunious foreigner, or the enterprising, impudent, and aggressive business-man from the United States may come over here and trade to any extent upon the credulity of our deaf, halt, blind, palsied, crippled, and hysterical without any interference from the police, so long as he does not give himself out as possessing a legal qualification. He may forcibly wrench a hip-joint which he affirms to be "out," and thus do incalculable harm to a tuberculous child; he may put one hand into the wide open mouth of an edentulous patient whilst the other hand is deep in that individual's pocket; he may with electric baths and fair and oily words go on treating the feeble-minded old man, or the neurotic and gullible woman, as long as the one or the other has any money left of which he or she can be mulcted; he may charge guineas for tuppenny, useless ear-drums—he may fleece the public to any extent. No one interferes with him; England is a free country!

You, members of the Electro-Therapeutical Society, must have some considerable knowledge of the freedom which these camp-followers of our Profession enjoy. In the first place, they may advertise for patients in the most shameless way; and the more untruthful the advertisement the more attractive it is apt to appear in the eyes of the ignorant reader. Small, indeed, are the meshes of the net which they throw over a public which delights in being gulled; every disease in the nosology, from *Abscess* to *Wry-neck*, being apparently curable by their method—a method, by the by, which not seldom proves ruinously expensive to the poor, confiding patient. There is no Bar of Professional opinion at which they may have to answer; there is no question of handing back a Qualification to a Licensing Body or University, for the simple reason that these persons possess none, and there is no fear of the Medical Council before their eyes. It is not unlikely that some future Government may make it its business to put these matters right—to endeavour to protect an ignorant populace from unqualified practitioners and therapeutic harpies of all sorts. Possibly, indeed, our present Government might have dealt with it had they not assumed that the passing into law of a new and popular scheme of education will eventually exert so beneficial an influence upon the *Masses* that they will no longer be susceptible to advertising impostors and quacks. That may be all very well so far as it goes; but I would remind them that it is not only the *Masses* which the quack wants but the *Classes* as well. I take it that the distinction between the Masses and the Classes is regulated solely by a monetary scale. As a general rule, those who have money have had a better education than the others. But, strange to say, the higher that the individual is amongst the Classes, the more apt is he to hold out his hand to bone setting, Christian Science, and quackery of all sorts. He is apt to believe that a person who has had no training in Natural Science, Medicine, or Surgery must be, for that very reason, more likely to do him good than an educated practitioner. And, perhaps, this applies with particular force in the matter of electro-therapeutics. I regret to say that I have found no clause in the new Education Bill which is at all likely to give material help towards imparting intelligence in this respect either to the Masses or the Classes.

But unqualified practitioners will have to be a little more circumspect after the ruling of Mr. Justice Bigham in the recent case of the man Herring, *alias* Hoffmeister, *alias* Dobie, the railway-clerk, who maltreated the unfortunate woman with the strangulated hernia[1]. Mr. Justice Bigham, in summing up this case, said that it was for the jury to say whether the negligence alleged against the prisoner amounted to criminal negligence. In illustration he shadowed a case of a person being run over by a driver in the streets, and drew a distinction between the reasonable care which one driver might exercise, and the criminal negligence which might be shown by another. He pointed out to the jury that if a man like the prisoner held himself out to have medical skill, that was gross negligence. He gave it to the jury that they might take that as a direction from him upon the point. In illustration of this he said that for a man who was skilful in the handling of horses it would not be a negligent act to drive a trap in Fleet Street, but that if a man without the slightest knowledge of horses or driving did so, it would be gross negligence on his part. The judge also put it to the jury that in what he was doing the prisoner acted for his own personal ends, and for the purpose of making money and without regard to the consequences. As a result of this, the jury found Mr. Herring guilty, and the judge awarded him five years penal servitude.

I have spoken of the way in which the public regard electricity as a healing agent. What shall I say now about the position of the ordinary medical man in respect to it? Well, tell me, please, if this picture is over drawn:—A gentleman has under his care a lady with an obscure nervous affection of the lower extremities, for which in vain he has administered valerian in large doses and, of course, arsenic in small. Patient and practitioner are growing weary of each other; so at last he takes her to a physician, who, a little disappointed at hearing that arsenic has already been prescribed, suggests a line of treatment which includes the use of electricity in a form which the practitioner did not clearly understand, though, for some reason or other, he did not think it necessary to ask to have it explained to him. On his way home, however, he remembers that he has got a "battery" of his own, and on further thought he does not see why he should not himself take charge of the electrical treatment of the lady with that very battery. "What is the good," says he to himself, "of sending on a patient to somebody else for treatment when one can do it oneself just as well"?

So when he arrives at his house he starts a hunt for his "battery,' which he quickly discovers beneath a pile of back numbers of the BRITISH MEDICAL JOURNAL, the contents of which, I fear, he has but carelessly read. It is in a brass fitted case of polished mahogany a little larger than a cigar-box. I need not describe it further. It is the old magneto-electric machine, which played a not unimportant part in the electro-therapeutics of those days when the compound decoction of sarsaparilla was the usual prescription for tertiary manifestations, and when it was firmly held that tincture of arnica was the appropriate application to contused wounds. In saying this, I am by no means scoffing at our friend's apparatus, for I have no doubt that in certain cases he had already employed it with real benefit. I associate its use with that of sarsaparilla and arnica merely that I may mark the

time at which its reputation was at its zenith; and really this is as far as the knowledge and experience of some practitioners go in the matter of electro-therapeutics even at the present day. Is it not full time, therefore, that a Society should be established in our midst, if only to call attention to the fact that electro-therapeutics have been developed into an important branch of practice, and that it is worthy of the most respectful consideration and the most careful study of physician, surgeon, and general practitioner?

A Central Electrical Institution.

During the time that I was considering the subject for the Address of this evening, one thought was constantly asserting itself, namely, that your Society differs from all other Medical Societies in that its members cannot carry on their work unless they are in possession of, or at least are enabled to use, various extremely delicate and equally costly apparatus. The most expensive "plant" that members of other Societies require for their practice would be, perhaps, an ophthalmoscope, a laryngoscope, a microscope, or merely a stethoscope. But to equip oneself for the best work in electro-therapeutics a very great outlay is demanded. Now, it cannot possibly be within the power of every young and ambitious electro-therapeutician to acquire all such apparatus, and, even were he able to do so, he would scarcely have house room for it. It seemed to me, therefore, that one object of this Society should be to secure premises of its own in which it may establish all machines, batteries and electrical apparatus which may at any time be wanted by its members, and, under certain conditions, to permit the members to use them in their practice. The premises should be large, light and airy, and they ought to be situated in a convenient part of London, near railway and omnibus routes, so as to be of easy access for all patients, and for provincial and suburban members as well as to those practising in London.

In the basement of this establishment there should be workshops, store-rooms, and perfectly appointed electric baths. On the ground-floor should be the offices of the paid secretary (who should be a good business man—not a medical man) and, in addition, waiting-rooms and a staff-room or common-room. A large library should occupy the chief part of the first floor, and there should be rooms for electrical examination and treatment on the second and third floors. Above this, perhaps, a certain number of bedrooms might be arranged. There should, of course, be a lift from basement to attic for the convenience of those working in the establishment as well as for the patients, many of whom would be unable to walk up-stairs. The library might also be used for the meetings of the Society, one great advantage of this arrangement being that clinical demonstrations could be given there, as all needful apparatus would be close at hand.

This Establishment would thus be the head-quarters and the home of your Society, and it would contain, of course, the most perfect apparatus for *x*-ray pictures that can be constructed, together with a complete laboratory for developing, and printing from the plates. Although I have from time to time had very beautiful prints sent to me by certain surgical instrument makers who have taken up the *x*-ray work with great energy, intelligence, and heartiness, still I must confess that some of the *x*-ray prints which have been laid before me have not been high class productions, leaving too much detail to be filled in by the imaginations. I have no hesitation in saying that physicians, surgeons, and general practitioners would be extremely glad to know the address of an institution to which they could send their cases when in need of the best results obtainable from an *x*-ray investigation. And when several highly trained and well-skilled medical men are working side by side, as it were, with the *x*-rays, discussing their failures and comparing their triumphs, better results are likely to be forthcoming than when a man is plodding on by himself. As to the way in which this large scheme should be carried out, as to its primary financing, as to the attendance given to it by individual members, as to privileges, remuneration, and other allied matters, I have no detailed suggestions to make; I feel sure that everything would happily arrange itself in due course. First and foremost, however, this is to be a paying concern. It would most likely take the form of a limited liability company, the members of the Society themselves being the shareholders.

Possibly this suggestion, that a number of medical men, as medical men, should form themselves into a more or less commercial society under the Companies Acts, may have caused a sudden molecular disturbance in the cells of the grey matter of some of you, giving rise to what is known as a mental shock. You possibly think that because we are medical men, we must have nothing to do with financial schemes in connexion with our Profession, or, at any rate, not with any scheme by which money may be obtained. Medical men in general have strange notions and habits as regards business matters. The bogus company-promoter knows that Quixotic and peculiar ideas are deeply rooted in us; he regards us as an easy prey; he classifies us with clergymen and old maids, and he bombards us day by day with his specious circulars. Is his classification very incorrect? Are not a large proportion of the members of our Profession very bad business-men? And would it be really discreditable to us so to arrange and carry on our work in concert that we can earn money by it? Was it not chiefly by the co-operation of practitioners by means of clubs that the blow was first given to those so-called medical aid-societies?

If you have not yet got over the shock of my suggestion that you should form yourselves into a sort of limited liability company, permit me to remind you that most of you, as medical men, are already members of such a Company. It is a Company which is as yet in its infancy as regards the benefits which, we are going to derive from it in various ways. I allude, of course, to the British Medical Association, which is an enormous and most successful venture, under the Companies Acts. It is, moreover, an Association which I hope every registered medical practitioner in His Majesty's Dominions will shortly consider it his duty as well as his privilege to join. Well, all that you as Electro-therapeuticians would have to do would be to constitute yourselves upon the lines of that Association. Then, selecting Committees from your Council to watch over the different departments, and appointing high-principled and well-paid men and women in the various non-medical offices, you would soon be astonished at your own success, and would feel no slight satisfaction, I should think, in knowing that a considerable proportion of the contents of your treasury had been diverted from the coffers of unqualified practitioners or adventurers. And, surely, it would be a most important step towards raising the subject of electro-therapeutics out of the mud!

At the present moment a great deal too much professional work is being done for nothing, one result being that many young medical men find it a very difficult matter to make a living. We have in the past become too much accustomed to constituting ourselves unthinking members of a large scheme for depriving the Britisher of his independence by treating him for nothing. This English system of gratuitous medical advice teems with fallacy and abuse. You will have to watch over your Electro-therapeutic Institution with great care, therefore; and, whilst you need by no means deprive yourselves of the power of treating certain cases gratuitously, you must see that by no possibility can its benefits be taken advantage of or abused. And you must first of all insist that matters are so arranged that those who do good work receive good pay. In every Profession except our own, the labourer not only obtains due respect but is also considered worthy of his hire.

I feel confident that in a year or two every practitioner in the Empire would know of the existence of your Institution, and when he came to learn that his patients could there be treated by persons who not only possessed a practical acquaintance with the Science of electricity but who thoroughly well understood how to employ it as a remedial agent, you would cease to be galled by hearing that qualified medical men were sending their patients to unqualified practitioners for electrical treatment.

Recognition by the British Medical Association.

One of the first things which your Society should do is to apply to the Council of the British Medical Association for Sectional recognition at their annual meetings. Whether your application will at once prove successful one cannot say, but I sincerely hope that it may. And if it does not you must keep on applying—"Its dogged as does it." At any rate, if it does not succeed, I know enough of the constitution of the Council of the Association to be able to assure you that a refusal should not be regarded in the light of a slight or a snub. One reason for a refusal might be that the local committees could not find a room for you. But if the question of space arose, I do not see why your Society should not share a room with one of the other younger or smaller sections, you having it for two days and the other section for two days. Then, as your work increased, you could justify your claim for having a room set apart for yourselves, which might well

be in one of the physical laboratories of the centre at which the Association is meeting.

Personally, I should be very glad if you could have a room provided for your section at next Summer's meeting in South Wales, because our friend Mr. Brook, the senior surgeon of the Swansea General Hospital, is not only a Member of this Society, but has already evinced his practical interest in electro-therapeutics by work done with the *x*-rays in the treatment of carcinoma of the breast. You, certainly, as electro-therapeuticians, had an unfortunate experience at the Manchester Meeting. You went there as fully charged as a Leyden-jar, intending to emit sparks if not to cause explosions, in the Surgical Section, when the subject of inoperable cancer was being discussed, and also in the Dermatological Section, where views were to be exchanged upon the value of the high-frequency methods and of the light-treatment in certain diseases of the skin. But it so happened that these two Sections set to work on their respective subjects at the same time, so that anything like a focusing of your views in either one of them became impossible. Now, had there been an Electro-therapeutic Section at Manchester, both the Surgical Section and the Dermatological Section would—or should—have arranged that you should be fully represented at each of those discussions.

In conclusion, Gentlemen, on behalf of the many friends who have come here to-night to show their interest in your work, and also on my own behalf, let me express the hope that with you and your Society it may never be a question of "Make," "Break," but that it may be ever "Make," and never "Break." That each one of you may strive his best to *make* a good name for himself, and so, at the same time, to *make* the work of your young Society regarded with approval and respect; that at your Meetings, as well as outside of them, in your dealings with each other and with your professional brethren, you may *make* many a true and lasting friendship, and that your work and that of your Society may have a *continuous current* of happiness and success!

REFERENCE.

1 BRITISH MEDICAL JOURNAL, November 1st, 1902.

The Purvis Oration

ON

THE SIMULATION OF INTESTINAL OBSTRUCTION.

Delivered before the West Kent Medico-Chirurgical Society.

BY ANTHONY BOWLBY, C.M.G., F.R.C.S.,

Lecturer on Surgery at St. Bartholomew's Hospital.

THERE are few subjects more interesting to the surgeon of the present day than those that deal with the acute affections of the alimentary tract; and foremost amongst these is the condition spoken of in general terms as "acute intestinal obstruction." And it is because this condition is one that demands prompt recognition, because it is within the day's work of every practitioner, and because it is of vital importance to the patient that I have chosen it for my subject this evening.

In the first place, let me say that by the term intestinal obstruction I mean "mechanical obstruction of the intestines within the abdomen," and that I exclude all cases of external hernia where the obstructed bowel is outside the peritoneal cavity. But I will ask you before going further to consider what is the one essential difference between an ordinary strangulated hernia and a strangulation by bands or adhesions inside the abdomen. It is this. Whereas in the one case the morbid processes which ensue are limited to the sac and to the tissues outside the sac of the hernia, in the other they take place inside the peritoneum and are early complicated by peritonitis. The strangulated bowel in either case exudes fluid, and we are all familiar with the fact that as this goes on in a case of unrelieved hernia, the fluid in the sac becomes blood stained, and ultimately foul smelling or even faeculent in odour. This no doubt is due to the transudation through the inflamed and softened bowel of both serum and blood as well as of micro-organisms. And this same process is present also in internal strangulation, with this important difference, that the exuded fluid escapes into the peritoneal cavity and causes in many cases both septic peritonitis and also general septic poisoning. And the discovery of this fluid, which is often blood-stained on opening the abdomen, is in very many cases a most valuable sign as indicating that strangulated bowel is to be sought for as the cause of the peritonitis. It thus results that those cases of intestinal obstruction where there is strangulation of the bowel are early complicated by peritonitis, and to this point I shall again have to direct your attention.

SYMPTOMS.

I would now ask you to consider for a few minutes the principal symptoms and conditions that result from acute intestinal obstruction, so that we may be prepared to compare them with the symptoms of other conditions that simulate this affection. Amongst many other symptoms there are three which are most characteristic—abdominal pain, vomiting, and obstruction to the passage of wind and faeces.

Pain.—The first of these is very early complained of, but its onset will differ with the nature of the obstruction. Thus the acute and sudden strangulation by a band of adhesion or a volvulus will usually cause a sudden and definite attack of severe pain, and perhaps collapse; whilst, on the other hand, in cases where the obstruction occurs first and is only later on followed by strangulation the pain may have no very definite onset. The pain may be correctly localized by the patient at the seat of the obstruction, or may be referred to the umbilical region in addition, or may be felt in the umbilical region alone. Occasionally it is referred to other regions of the abdomen distant from the part affected. In cases where at first there is no strangulation but merely obstruction the pain is liable to increase as the case progresses, and is often spasmodic and griping in character, coming on in paroxysms, which are evidently the result of violent contractions of the intestines. The pain is not relieved by pressure, and is usually associated with extreme hardness of the whole abdominal wall, although this is often more marked in the neighbourhood of the obstruction. Pain is often increased as the intestine becomes more distended, and, in addition to the pain, there is great discomfort as tympanites becomes more marked and the diaphragm is prevented from acting.

Vomiting—This may commence, as in strangulated hernia, within a few minutes of the occurrence of strangulation, whilst in other cases it does not supervene until after an interval of many hours or even days. Occasionally, but very rarely, it is absent or but little marked, and I have seen a man with severe strangulation proceeding to gangrene of the gut in whom not only was there no vomiting for three days, but the patient took food readily to within eighteen hours of his death. Such an occurrence, however, is extremely rare, and intractable sickness culminating in true faecal vomiting is present in most cases of intestinal obstruction. If food is withheld vomiting may cease for many hours and retching may similarly be in abeyance. It is therefore to be remembered that these important symptoms may be absent in cases which have been properly treated by the withholding of all food given by the mouth, and without the administration of any opiates.

Obstruction to the Passage of Wind and Faeces.—This is of little less importance than the vomiting. But the absence of the passage of wind is in all cases of greater significance than is mere constipation, and it almost always happens that in cases of acute obstruction the retention of wind really causes more trouble than the inability to pass solid matter.

PERITONITIS SIMULATING OBSTRUCTION.

So much then for some of the main symptoms, and I will not occupy your time by describing in detail the general condition of a patient with advanced intestinal obstruction. It is well known to you all, but I must point out that in cases of internal strangulation, as opposed to those of external hernia, the symptoms are much more rapid in their onset, the general state of the patient at any given time is much worse, and symptoms of peritonitis and of septic poisoning are early present; so that it is well known that in all such cases the prognosis is much more serious than it is in hernia, and that operation is not at all so satisfactory. This is no doubt due to the fact which I have already laid stress upon, namely, the early infection of the peritoneum in all cases of internal strangulation. And it is this peritonitis which complicates internal obstruction that so often renders an accurate diagnosis impossible. Yet on the one hand it is to be remembered both that the peritonitis itself may suggest the obstruction as its cause, and that, on the other hand, in very many instances of peritonits there is also

very serious obstruction due to the impaired peristalsis of the inflamed bowel. There are consequently many cases in which a diagnosis of peritonitis can with confidence be made, but in which it is difficult to say whether the peritonitis is the main cause of the obstruction or whether in its turn it results from the presence of strangulated bowel in the peritoneal cavity. And thus it happens that peritonitis more frequently simulates mechanical obstruction than does any other affection; and considering the frequency with which peritonitis is the result of inflammation of the appendix, it may be said with truth that a very large number of cases that clinically present themselves as cases of obstruction are cases of acute appendicitis in which there is either a diffuse inflammation of the peritoneum or a localized peritonitis limited to the neighbourhood of the caecum. But I do not propose to deal this evening with appendicitis or say more on this well-worn subject. I think we may take it as generally accepted that peritonitis may simulate mechanical obstruction, and I will pass on to consider how inflammation or other lesion in the neighbourhood of the peritoneum merely may have the same effect.

Obstruction due to Perityphlitic Abscess.

Some years ago I was sent for to a considerable distance from London to see an elderly lady who was suffering from obstruction. Her history was that she had always been constipated, and had been obliged to take aperients and use enemata. On one occasion two years previously there had been a more complete obstruction due to faecal impaction, and this had necessitated the breaking up of a large mass before relief was obtained. Her recent attack, for which I saw her, had lasted several days and had not yielded to treatment. The patient was an exceedingly stout woman, weighing about 17 st. She was in no pain, but complained of flatulence and distension. Her temperature and pulse were normal, her tongue clean, and her general condition quite satisfactory. The rectum was empty and an examination of the abdominal wall revealed nothing, the immense thickness of the fat quite preventing any positive conclusions being drawn. It seemed to me that everything pointed to mere constipation, for the whole history led to this as a probability, so I ordered enemata and small doses of opium and very little food.

The treatment seemed at first to produce the desired result, for thirty-six hours later there was a satisfactory evacuation and much relief. Again, however, the bowels refused to act, and after an internal of four more days I saw the patient again. She had had no relief by the passage of faeces and was in great discomfort. Her tongue was not so clean and her pulse was a little more rapid, but the temperature remained normal and there was no pain or tenderness. As ordinary enemata had proved useless I had her placed under an anaesthetic and irrigated the bowel with warm water for a quarter of an hour. There was practically no result, but still feeling that the case was one of obstinate constipation or faecal impaction I did not then advise operation.

Two days later I was again called to see her. There had been no relief and the distension had become more marked; the patient had also begun to be sick after food. It was now a fortnight since the beginning of the attack and there were still no pain or tenderness and the temperature remained normal. The general condition of the patient was, however, not so satisfactory, and her pulse was more rapid and her respiration quickened, the distension also caused much distress and there was a constant feeling of sickness. There was a general consensus of opinion of those in attendance on her that the obstruction was in the large intestine, and the question now presented itself whether there was a cancerous growth causing partial occlusion of the bowel, although only conclusion that could be arrived at was that the distension must be relieved and that operation could not be further postponed. But in view of the difficulty and risk of opening so distended an abdomen in so fat a person of advanced years in order to search for the seat of obstruction I decided to cut down upon the caecum and open it, believing that this would give give the best chance of recovery and knowing that this would involve no undue handling of intestine and no difficulty of closing the abdomen through distension of the bowel. I therefore proceeded to cut down upon the caecum, but fortunately before reaching it I opened, to my surprise, an abscess of considerable size in the loose cellular tissue of the iliac fossa, and consequently did not proceed further with the operation. The symptoms of obstruction were at once relieved and without further complication the patient recovered.

Now this case is not only remarkable in itself as an example of perityphlitic abscess without pain or fever, but it illustrates in a striking manner the way in which an inflammation near to the peritoneum may cause a serious interference with the peristalsis of the intestine.

This was a case of abscess which was probably due to mere retention of scybalae in the caecum, and as soon as the pus was evacuated the bowels at once returned to their work. There was no real mechanical obstruction throughout, for the abscess could not have occluded or sensibly compressed the bowels. Yet this patient had all the conditions which justify a diagnosis of complete obstruction of the large intestine, and was in no way assisted by the treatment adopted, which usually suffices to overcome a mere accumulation. We must regard the case as an illustration of the simulation of intestinal obstruction by inflammation of a neighbouring tissue causing a paralytic condition of the intestine; and I hope to show that the affections of various organs near to the peritoneum may produce similar results.

But before dealing with the peritoneum and the abdominal viscera, I would remind you that, apart altogether from the abdominal cavity, it has long been recognized by physicians that certain cases of acute pneumonia and pleurisy simulate intestinal obstruction and cause abdominal pain, distension, and sickness; and it is therefore well to bear in mind such cases, and not to allow the attention to be diverted from the thorax merely because of the presence of abdominal symptoms. I will not, however, say more on this subject now, because it has very recently been dealt with by Mr. Barnard in an interesting paper read at a meeting of the Clinical Society of London, with which many of you are doubtless familiar, and because the time at my disposal is all too short.

AFFECTIONS OF THE SOLID VISCERA SIMULATING OBSTRUCTION.

In the next place, I would say that it may be laid down as a general rule that many of the acute affections of the solid abdominal viscera cause severe and sudden abdominal pain and sickness, and that in some cases constipation and flatulence also coexist, so that in some degree, at any rate, the cardinal symptoms of intestinal obstruction may be present.

No organ illustrates the truth of this statement better than does the kidney. Consider any acute affection of this organ, such as the torsion of a movable or floating kidney, the lodgement of a calculus in the ureter, or laceration by an injury. In all of these there is not only pain, but also in many cases sickness, which may be persistent, and tympanitic distension of the colon. In most cases, of course, the other symptoms are sufficiently definite to admit of a correct diagnosis, but occasionally there is no complaint of special pain in the lumbar region, and pain is felt all over the belly.

Renal Colic Simulating Intestinal Obstruction.

I was sent for one day to see a case said to be one of intestinal obstruction, probably requiring operation. The patient was a well-built man of about 40 years of age, who had always enjoyed good health, and who said that his present illness had begun after dinner with severe pain in the abdomen, and sickness. He went to bed and sent for his doctor, who found him much collapsed, with general abdominal pain and constant retching. Pain was felt all over the abdomen, and there was much discomfort from flatulence. Fomentations gave little relief, an enema produced no result, and the sickness and pain continued during the night. I saw him the following afternoon, and found that the condition had not much changed. The bowels had not acted, and the abdomen was distended but nowhere tender, the tongue was clean, the pulse was regular (at about 85 to the minute), and abdominal respiratory movements were not much impeded. The retching continued, but was less; and there had been but little fluid vomiting throughout. There was now what there had not been at first, namely, more pain in the right lumbar region than elsewhere, and distinct tenderness was now complained of when pressure was made at this part. Under these circumstances, as it was now becoming clear that there was no need for any immediate operation, and that the case might prove to be one of renal colic, we decided to give opium to diminish the spasm, and then to await events. The result was satisfactory, for very soon the pain subsided, and in the evening the presence of blood in the urine and the free passage of flatus cleared up all remaining doubts.

I think, however, that at the onset of this attack, when there was general pain all over the abdomen and no renal symptoms, it would have been impossible to say that the case was not one of obstruction; and whilst it illustrates the simulation of obstruction, it points to the advisability of exercising a little patience before coming to a decision. I would also like to point out that the persistent vomiting and retching noticed in this patient are frequently seen in such cases, as well as occasionally after operations on the kidney. Thus I have quite recently seen a lady in whom the persistence of the vomiting suggested to her medical advisers the probability of pyloric obstruction, but in whom the whole of the symptoms subsided with the passage of a small calculus.

Most of what I have said with regard to the kidney might almost be repeated for the gall bladder, for here also in "hepatic colic," the pain, which is usually local, may be general, the sickness may be violent and persistent, and there may be flatulent distension and constipation, as well as a good deal of collapse in some patients. I have seen several cases where the symptoms have been such as to raise the question of obstruction, and in one case at least the vomiting and distension had caused the physician in attendance to make a definite diagnosis of obstruction, and to advise operation for its relief.

But although these cases are well recognized, it must be remembered that gall stones may cause real obstruction by impaction in the bowel, so that, whilst a history of previous attacks of gall-stone colic may rightly suggest another attack of a similar kind, the same history may be found when a stone is lodged in the ileum. This is illustrated by the following case:

Obstruction due to Impaction of Large Gall Stone.

A stout woman of 60 was admitted to St. Bartholomew's Hospital under my care last October. She gave a history of four weeks' abdominal discomfort and flatulence, and one week's complete constipation with sickness. Her previous history was uneventful, except that she had had

attacks of so-called "indigestion," which her doctor had told her were due to gall stones.

Her general condition was good, except that her pulse was weak and rapid—120 a minute. She was in no pain, and the abdomen, though slightly distended, was quite soft and free from all tenderness. The rectum was empty. Soon after admission she was sick after taking whey, the vomit being yellowish and bad smelling. She was given a turpentine enema, and passed wind and a little faecal matter with relief.

The sickness, however, continued at intervals, although all food was withheld and flatus passed freely, and as this vomited material was evidently regurgitated from the intestine, and the long history rather suggested obstruction of the large intestine, I cut down on the descending colon the next day, expecting that I had to do with a stricture of the rectum or sigmoid flexure. I found, however, that the large intestine was empty, and the peritoneum quite normal and free from all fluid; so, as it was now clear there could be no strangulated intestine and no rectal stricture, and as the abdomen was quite soft, I decided to do no more exploration at that time on account of the general feebleness of the patient; I therefore closed the wound, and continued rectal feeding.

For forty-eight hours after this all sickness stopped and the abdomen remained soft and undistended, yet no motion was passed. I now reverted to the history of previous attacks of gall-stone pain, and had the advantage of a consultation with Sir Thomas Smith. He agreed that this might be a case of impacted gall stone, so I decided to open the abdomen in the middle line and explore it. On this being done it was found that the great omentum was adherent at one place to the bottom of the pouch of Douglas, and on separating it from adhesions, evidently recent, some coils of distended intestine were revealed. The tendency of the omentum to seek out in some curious way any inflamed viscus and to attach itself thereto is well known to all surgeons, so I was at once suspicious that the intestine in Douglas's pouch was the piece I wanted. I drew it up into the wound without difficulty, and immediately felt a very large foreign body in its lumen. The intestine was very little altered and had evidently not been much hurt, so withdrawing it from the abdomen I incised it and turned out a very large gall stone. The wound in the gut was sutured by the Czerny-Lembert method, and the abdomen being quickly closed, the operation was completed within half-an-hour of the commencement of the anaesthesia. I am sorry that I cannot tell you of such a satisfactory ending as seemed likely to result, for within a few hours of the obstruction being removed acute diarrhoea supervened, and after passing large quantities of watery stools the patient became suddenly collapsed in spite of all remedies, and died.

Necropsy showed that the wound in the bowel was quite securely closed and that the gall stone had entered it by ulcerating through the gall bladder into the duodenum, and had traversed the greater part of the small intestine before becoming arrested in the ileum.

The case illustrates a rare form of obstruction, and one in which the diagnosis is always difficult. The long history of abdominal discomfort, the passage of wind but not of faeces, the absence of all abdominal tenderness, and the absence of signs of peritonitis are conditions commonly met with in such cases as these, where the obstruction is not quite complete, and where there is no strangulated intestine to set up peritonitis. In other cases I have seen there has been more pain than there was in this patient, and in various recorded cases the pain has been griping and paroxysmal, and evidently due to the efforts of the bowel to propel onwards the obstructing mass. The onset of the symptoms may be sudden, and, as I have pointed out, the pain may be mistaken for gall-stone colic. But in many patients there is rather evidence of long-continued abdominal discomfort, gradually culminating in increasing obstruction and sickness.

ACUTE PANCREATITIS.

I will now ask you to direct your attention to a less familiar organ—the pancreas—whose ailments until very recently attracted but little notice.

Acute Pancreatitis.

A few years ago I was asked to see a lady under the following conditions: She was a healthy unmarried woman of 40, of a naturally vigorous disposition, and had always enjoyed excellent health. One morning after breakfast, whilst sitting quietly reading the newspaper, she was suddenly seized with intense abdominal pain, which was so severe that she lay on the floor, and within a few minutes was violently sick. The doctor found the patient exceedingly collapsed, with cold hands, a clammy perspiration, and still retching. He at once administered a small injection of morphine, and had the patient carried to bed. Later in the day a well-known physician was sent for from London, but as the distance was some two hundred miles he did not arrive until late in the evening. After seeing the patient he sent for me and I arrived the following morning.

I found that during the previous day the pain had decreased, but that there had been no action of the bowels, and no passage of flatus. Sickness had continued at intervals, but the vomit was merely bilious. No food had been given, but small doses of belladonna and morphine had been administered with relief. The patient looked very ill, but did not complain of severe pain any longer. The tongue was furred and dry (perhaps from the drugs), the temperature was 100°, and the pulse was singularly good at about 90 per minute. The abdomen was universally tender, but the tenderness was very superficial, and was not increased by pressure. The abdomen moved on respiration, though not freely, and the muscles were not rigid as in peritonitis. There was no diminution of liver dullness, nor was there any increased dullness to suggest the presence of fluid or a tumour. We decided that in view of the very serious condition of the patient it was advisable to open the abdomen, and we were all the more inclined to advise this because of the distance from London or from any large town where surgical aid could be obtained. The exact diagnosis seemed doubtful, but it was considered probable that there was perforation of a gastric ulcer or perhaps strangulation of a coil of intestine.

The abdomen was accordingly opened, and revealed a normal peritoneum, free from gas or fluid. There was also revealed, however, that which was the key to the correct diagnosis—namely, "fat necrosis" of the great omentum, the latter being thickly studded with those small areas of opacity varying in size, but mostly not larger than a pinhead or a pea, which characterize this condition. It is now well known that fat necrosis complicates many cases of acute pancreatitis, and that apart from affections of this latter viscus, it is rarely seen; so that its presence here at once suggested that, instead of there being either perforation or strangulation, there was acute pancreatitis. The finding of a firm swelling behind the great omentum confirmed this, and the operation was brought to a close.

I am sorry that there is little to add to this history, as the patient died three days later. She lost all pain after the operation for some unexplained reason, and was quite comfortable for two days; then she suddenly collapsed, and died in a comatose condition.

The history of this patient may be taken as fairly typical of acute pancreatitis, for although the symptoms may be more or less acute and the course of the illness more or less prolonged, the general conditions are the same. I will not stop to discuss the varieties or causes of acute pancreatitis, interesting though they be, but would rather sum up as briefly as possible the leading clinical features of a disease which is so little recognized and which simulates both acute intestinal obstruction and acute peritonitis.

In the first place, acute pancreatitis has never been seen in children; most of the patients are males and are usually about middle age, and more often than not they are fat people. A previous history of gastric or duodenal catarrh or of gall stones is obtainable in many but by no means in all of the cases. The onset is usually very sudden, and is characterized by acute pain, which may be general or localized, by vomiting and by constipation. There is usually also some collapse, with feeble and rapid pulse, and a subnormal temperature. It is, however, to be noted that the abdominal wall is not so hard or so universally tender on deep pressure as in cases of perforative peritonitis, and that the vomit is often only the contents of the stomach, perhaps with dirty brown or black matter, and not faeculent.

In most cases not rapidly fatal, after an interval of a day or two there is a definite abdominal swelling, and, at a later stage, a localized or general peritonitis. The swelling may be due to the enlargement of the pancreas, but is in part due in many cases to the effusion into the lesser peritoneal cavity, and at this stage there is generally some pyrexia, and there may also be sugar in the urine. I will not take up your time by describing the later histories of those who survive after the first few days, for enough has been said for my present purpose. It will be seen that acute pancreatitis may simulate intestinal obstruction by the pain, vomiting, and constipation that accompany it. But the development of a definite localized swelling, the absence of hardness and retraction of the abdominal wall, and in some cases the absence of intestinal vomit will often suggest a correct diagnosis. It must, however, be confessed that in very many cases it is impossible in the early stage to decide that the symptoms caused by acute pancreatitis are not due to either perforative peritonitis or strangulation of the intestine.

I have, I think, said enough to indicate that certain affections of the solid viscera cause pain, vomiting, and tympanites; and I will pass directly to the conditions of the intestines themselves that may simulate obstruction, merely reminding you that in addition to the causes above alluded to, others, such as an ovarian cyst with a twisted pedicle and some cases of intraperitoneal haemorrhage, are associated with these same symptoms.

EMBOLISM OF SUPERIOR MESENTERIC ARTERY.

The next class to which I wish to direct your attention is fortunately rare, for I desire to point out that the symptoms caused by embolism of the superior mesenteric artery, or its branches may simulate obstruction and peritonitis. The following is a typical case:

Embolism of Superior Mesenteric Artery: Gangrene of Intestine.

A middle-aged man was admitted into St. Bartholomew's Hospital a good many years ago under the following circumstances: It was winter, the weather was exceedingly cold, and the patient was engaged unloading coal trucks in a snowstorm. He noticed afterwards that his fingers were very numbed and dead, and that one hand had become very feeble. The next day the fingers of this hand were found to be shrivelled and cold and in a state of commencing dry gangrene, a condition which was fully explained by his exposure, so that a diagnosis of frostbite was readily arrived at. His hand was kept wrapped up in cotton-wool, and the patient was confined to bed.

All went well for a few days, and then one afternoon the man had a violent attack of abdominal pain, followed by sickness and collapse. He rapidly became worse in spite of treatment, and the abdomen became distended and tympanitic with universal hardness and tenderness. No flatus could be passed, and the bowels would not act to enemata. The symptoms continued unchanged, and from the initial collapse the patient never really rallied, and died in thirty-six hours.

Necropsy.—On opening the abdomen, it was found that practically the whole of the smaller intestine was gangrenous; and the cause of this

was soon discovered to be, not a strangulation, but an embolus occluding the main trunk of the superior mesenteric artery. Further examination showed that in the left ventricle was a clot evidently resulting from endocarditis, and an examination of the arm showed that another embolus had lodged at the bifurcation of the brachial artery, and small secondary emboli being swept into the digital branches fully accounted for the gangrene of the fingers which had been thought due to frostbite.

Now this case is a fairly typical one of its class, and it is fortunate that there are but few of them, for they must always be difficult to diagnose, and it is only too evident that when the main artery is plugged and all the small intestines involved in the resulting gangrene, treatment is of no avail. There are, however, other cases where only a branch of the vessel is occluded, and in these, as there is a gangrene of only a corresponding portion of the bowel, the symptoms are less severe, and there is a possibility for the surgeon to render aid. A very interesting case of this kind was recently recorded at the Clinical Society by Dr. Tyson and Mr. Linington, of Folkestone. A woman, aged 66, had pain, sickness, and obstruction, which had been increasing for a week before she was admitted to the hospital and was operated on. It was then found that about a foot of the intestine had been rendered gangrenous by embolism of a branch artery, and the damaged bowel was accordingly resected. The patient did not recover, and the necropsy showed that the embolism resulted from the detachment of clot from an atheromatous aorta. But the case illustrates that in such a condition there is at least a chance for surgery, and points to the importance of recognizing the existence of such an affection.

The authors I have named, in discussing similar cases, say: "The first common symptom is abdominal pain, closely resembling an ordinary attack of colic. Nausea is frequent and comes on fairly early. Vomiting follows, with a gradual change in the character of the vomit. Constipation is the rule, but diarrhoea has been commonly reported. Tension and tympanitic distension of the abdomen are late symptoms, indicating the advent of peritonitis. Extreme fetor of the stools, should there be diarrhoea, is of serious omen, and points to gangrene of the bowel. Profuse intestinal haemorrhage has also been recorded." It may be added that, as in my own case, there may be evidence of other emboli, and in some patients at least there may be definite evidence of valvular lesion to suggest an origin for the embolus.

An exactly similar condition of limited gangrene of the bowel may result from a blow on the abdomen, which tears the mesentery and damages a branch of the mesenteric artery.

Functional Constipation.

But there are certain other and more common affections of the intestines themselves which may simulate intestinal obstruction, and I propose to allude particularly, first, to that common class of "functional constipation" in which aperients lose their characteristic action; and, secondly, to "enteritis." The following is a characteristic example of the first of these:

Functional Constipation.

An unmarried lady, aged 40, resident in the country, and of a neurotic disposition, consulted her medical attendant because of constipation, which had not been relieved by her usual remedies. He ordered some cascara, and as this had no effect gave a full dose of castor oil, and followed it up by an enema, at the time restricting his patient to fluid diet. The treatment failed to act, and her bowels had now been confined about six days. The patient complained of abdominal pain, and as another aperient resulted in sickness and nausea, with disinclination for food, I was asked to see her with regard to possible operation. I found her free from all severe pain, with no distension at all, a soft abdominal wall moving well on respiration, a quiet pulse, and a normal temperature. Her tongue was furred, and she suffered from headache. It was quite evident that there was here no sign of complete obstruction, so I ordered what I have usually found best in these cases, namely, rectal feeding, small doses of opium, nothing but water by the mouth, and after two days of this a turpentine enema. This had the desired result, and no further trouble arose.

I am sure most of us must have seen similar cases in which large and repeated doses of aperients give no result, and in my experience all the patients have been women. They are most often neurotic or hysterical, but I have seen a lady of sixty who was in no way neurotic and who caused much anxiety by just such an attack as I have described.

The condition is generally easily recognized, for, although purgatives do not relieve the constipation they do not cause pain, and there is no abdominal distension or tenderness such as is induced when aperients are given in real obstruction. I will not pretend to give any explanation of the failure of aperients to produce their natural result, but will content myself with pointing out that the want of proper innervation of the intestine is paralleled by the other evidence of imperfect innervation, such as the hemianaesthesia and paraplegia of the hysterical temperament. These are patients whose nervous systems are constantly surprising us by their inconsistent actions, for, whereas they may be peculiarly sensitive in one direction they are absolutely dulled in others. In the cases I have been alluding to there is a complete absence of all serious pain and there is never material distension. Anxiety as to the presence of a real cause of obstruction is chiefly due to the difficulty of getting the bowels to act, but the anxiety is generally mainly on the side of the friends and relations, and the patient herself is rather inclined to assume the air of a martyr who takes pride in bearing her sufferings in silence. There is none of the real anxiety which is so marked a feature in patients with real obstruction and especially in cases of strangulation. Opium in moderate doses, abstinence from all solid food, and the administration of enemata usually suffice to bring about a satisfactory result.

Enteritis.

But while the sluggishness of the bowels to which I have referred may bring about obstinate constipation, a completely opposite condition may even more seriously simulate obstruction. For "acute enteritis" may cause an absolute arrest of the passage of wind and faeces, as well as produce severe abdominal pain and vomiting. It is, of course, true that enteritis much more often causes acute diarrhoea; and I think myself that the frequency of obstruction due to uncomplicated enteritis has been rather exaggerated. But, on the other hand, the simulation of mechanical obstruction in some cases is of the most complete kind, and the real obstruction to the passage of the contents of the bowel is so extremely severe as to threaten early death unless relief is obtained.

I remember to have seen a very typical case of this kind under the care of the late Mr. Morrant Baker, when an elderly man was admitted into St. Bartholomew's Hospital suffering from great distension of the abdomen, faecal vomiting, and complete obstruction, which, together with severe pain, had followed upon a very large meal, in which cold pork had played the chief part. All other means having failed, Mr. Baker opened a coil of small intestine, and sutured it to the skin, with the result that the obstruction was relieved, and the patient recovered, the opening in the bowel healing spontaneously. I know of very similar cases which have either required similar treatment or which have died without relief, but I have also seen two other cases in which acute enteritis was complicated by a previous narrowing of the bowel, and I am a little inclined to think that in others of this class of cases I am now alluding to similar conditions may be present.

Obstruction due to Enteritis and Distension above Old Adhesions.

In the first of these two cases the patient was a man who one Christmas time some years ago had completely gorged himself, and confessed to having eaten ten mince-pies after a surfeit of meat and vegetables and drink. A few hours later he had severe pain and vomiting, and this continued until the next day. The abdomen became distended, and flatus would not pass, nor could the bowels be made to act. On admission to the hospital forty-eight hours after his first symptoms the man was already in a dying condition. His belly was enormously distended, and he was constantly sick and in great pain. He was far too ill to admit of much surgery, and though the small intestine was opened he got but little relief, and died soon afterwards.

I made the necropsy, and found that the small intestine was tied down and very much narrowed by old adhesions, in the right iliac fossa, so that it would hardly admit the tip of the little finger, and above this point was enormously distended, inflamed, and darkly discoloured.

It was evident that, although the altered intestine was quite equal to its ordinary work the symptoms were largely due to this narrowing, which prevented the bowel from transmitting sufficiently rapidly the huge meal and the fluid secreted by the irritated intestine. The sudden and great distension had thus practically resulted in strangulation at the seat of stricture, and had been followed by the usual paralysis of intestine above the obstruction.

Well, this case remained deeply impressed on my mind, but it was not until last Christmas that I saw its parallel.

Obstruction due to Enteritis and Distension above Old Adhesions.

A man was admitted under my care with a precisely similar history of a huge meal followed by intense abdominal pain, sickness, and obstruction. The only contradictory thing was his pulse, which was quite equal and steady at about 86, the temperature keeping about 100°. In this case I was so greatly impressed with the amount of pain the man evidently suffered, and with the extreme hardness of the abdominal wall, that I decided to operate at once in spite of the history that all the symptoms were due to mere overeating, and as it turned out it was very well I did so.

As soon as I opened the abdomen an immense quantity of chocolate coloured and distended intestine presented itself, and had to be withdrawn and wrapped in a hot towel to enable me to find the seat of obstruction. I then soon ascertained that the lower part of the ileum was closely adherent to the left side of the mesentery, and before I could free it I had to divide five bands which had evidently tied down and constricted the smaller coils of the intestine for many years past. There was here no definite loop that had recently become strangulated, but rather, as in the other case I have alluded to, a long-standing contraction of the lumen of the bowel which nevertheless did not prevent the passage of the intestinal contents until the ingestion of a great quantity of indi-

gestible food, and the sudden filling up of the irritated intestine produced such a congestion of the traffic that an absolute block resulted.

I completed the operation by opening the distended bowel in three places, emptying it, and suturing the incisions, and finally I replaced the now flaccid intestine in the abdomen and closed the wound. The man made a complete recovery in spite of the very bad condition of several feet of the intestine, and I think it is quite certain that without operation he must inevitably have died.

THE INDICATIONS FOR EXPLORATORY OPERATIONS.

And now, gentlemen, I have nearly concluded all I have to say on this subject, and will only ask your attention to a few concluding words.

I have shown you that abdominal pain, vomiting, and complete constipation, which may be taken collectively as good prima facie evidence of mechanical obstruction of the intestine, may nevertheless all be found in certain patients in whom no mechanical obstruction exists.

I have pointed out that many acute affections of the abdominal viscera may be associated with these same symptoms, and that consequently there are many conditions which simulate intestinal obstruction, but yet need no surgical treatment at all. It is not possible in a single address to describe in detail the differential diagnosis of every class of such cases, but I think I may at least point out that the knowledge of each of these various conditions is very essential in attempting a diagnosis of cases which are very frequently difficult, and are always anxious.

There is I think a very foolish and harmful tendency to say in such cases, "Oh, make an exploratory abdominal section to see what is the matter," and a still more foolish and dangerous creed which adds "There is no risk in an exploratory incision."

For myself I regard all such sayings as dictated very largely by mere ignorance, and whilst I would be the first to urge operation where necessary, I find that the suggestion to open the abdomen is often made by those who have never seriously considered the necessity of knowing what is to be sought for when it is opened, and who are very ignorant of the difficulties they would rashly encounter and of the risk to the patient of the operation they propose.

I would urge rather that the interests of the patient and the success of the surgeon alike demand a most careful consideration of all symptoms and an attempt to arrive as nearly as possible at a diagnosis before deciding upon any line of treatment. In many patients needless operations will thereby be avoided altogether, and in others where abdominal section is decided upon it will be undertaken with some definite object in view and with a definite plan of procedure in the mind of the surgeon.

With regard to the alleged safety of all exploratory operations, I would further say that however safe they may be made when the patient can be carefully prepared and dieted, as for the performance of an ovariotomy, all the essential elements of safety are wanting when the patient is acutely ill and the intestines are greatly distended. It is impossible to exaggerate the difficulties that may be encountered in a stout patient under these circumstances, and it is only those who have had to deal with them who know how great is the risk that is run in a so-called exploration, and how difficult or impossible it may be to ascertain what an abdomen does or does not contain until many feet of intestine are withdrawn and the question presents itself as to how the bowels are ever to be put back again. Such operations are necessarily always dangerous, and I know none in which there is more need of good assistance.

In conclusion, may I suggest for your consideration a few points as to procedure when in a doubtful case it is decided to open the abdomen in order to seek for a supposed mechanical obstruction?

1. Open in the middle line below the umbilicus, because most of the causes of obstruction will be found in the lower half of the abdomen.

2. Without allowing any intestine to escape examine first with two or more fingers, or even the whole hand, the right iliac region, and pass from there towards the umbilicus to feel whether there are any adhesions there. It is in this right lower half of the abdomen that most of the causes of obstruction are to be found, for here are (1) the appendix; (2) intestinal diverticula, perhaps attached to the umbilicus or to the neighbouring mesentery; (3) the commonest site for volvulus, that is, the caecum; (4) the usual site for the lodgement of an impacted gall stone, that is, the lower part of the ileum; (5) a common place for adhesions due to caseous mesenteric glands; (6) the sites of inguinal, femoral, and obturator hernia. Further, if the obstruction be in the small intestine, it is in the right iliac fossa that undistended intestine will be found, and if this can be secured and traced upwards it is the surest guide to the seat of obstruction.

3. Examine next the left iliac region and the pelvic region, the latter especially if the patient be a woman, for there, as additional causes of adhesions, may be inflamed ovaries or tubes or some uterine trouble with neighbouring inflammation.

4. If no cause can be discovered then either open a coil of distended intestine and suture it to the skin, if the patient be too ill to bear more; or else decide to take the distended bowel out of the abdomen altogether, and if necessary open it, empty it, and suture it. It is only by so doing that you will be able to return it once you have decided to let it escape, and it is often only by so doing that you will find a deeply-seated obstruction.

These are the rules I have made for my own guidance, and I have found that it is of great assistance to have some definite plan on which to proceed. If one has been able to eliminate the various conditions that simulate intestinal obstruction, it is evident that the next thing is to have some clear idea as to how best to proceed in dealing with any mechanical obstruction itself.

THE DIAGNOSIS AND TREATMENT OF VARIOUS FORMS OF SEPTIC SYNOVITIS.*

BY F. C. WALLIS, M.B., B.C.CANTAB., F.R.C.S.,
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SYNOVITIS due to sepsis has never yet received the attention that it should have in works on surgery. Most textbooks refer to it in a perfunctory manner, and only a few books written on diseases of joints refer to the subject at all. Each year it becomes more obvious to me that a very large number of cases of acute and subacute synovitis are caused by sepsis in some form or other, and the acuteness of the condition depends upon the virulence of the micro-organism responsible for the trouble. A number of these micro-organisms have been found in joint effusions—namely, streptococcus articulorum, staphylococcus pyogenes aureus, pneumococcus, gonococcus, and several others. The only paper I have seen which in any way touches on this extremely interesting and very important condition is one by Dr. H. D. Rolleston,[1] in which he states his belief that it is a much more common occurrence than is generally known or suspected.

When a patient has one or more joints swollen, hot, and painful, and this is associated with a temperature, it is usual to treat the case as one of rheumatic fever. But in these cases now referred to, if attention is paid to the symptoms it will be noticed that certain clinical signs are absent, notably the profuse sweating which is, I believe, invariably present in an attack of rheumatic fever, whilst others are added, and I would particularly refer to two symptoms which are nearly always present in septic conditions, and upon which I depend to a considerable extent in making my diagnosis—namely, the dry, harsh, unpleasant condition of the skin, and more particularly the restless, distressed, unhappy mental condition which exists in these patients. These points are well brought out in Dr. Rolleston's paper.

To further illustrate this class of case, let me quote from a paper of my own which was published in the BRITISH MEDICAL JOURNAL of October 6th, 1900, on the causes and treatment of non-malignant stricture of the rectum. In this paper, three cases are described in which the patients suffering from septic ulceration of the rectum were subject to attacks of acute synovitis in one or more joints. The usual remedies for acute rheumatism were given in the first case, because I did not then know or recognize the cause, and yet it was obvious that the attacks in no way resembled acute rheumatism. After the septic ulceration of the rectum had been successfully dealt with, these attacks of synovitis ceased and have never recurred. It is now over two years since I operated on the last case, and four and a-half years since the first one was done.

These are instances of a large group of cases of synovitis, generally multiple, which in certain ways resemble acute rheumatism and yet there is practically no doubt that some septic process is the cause of it.

*Read at a meeting of the West Surrey District of the South-Eastern Branch of the British Medical Association.

Much has to be done before these cases can be classified. The fluid from such joints must be examined bacteriologically, and the condition of the patient carefully observed. The alimentary canal from the mouth onwards must be carefully investigated, with the expectation of finding some condition which on account of its septicity has caused the secondary affection of the joint. When this is cured, then the joints will cease to give trouble.

What micro-organisms cause this particular form of septic synovitis I have not yet been able to ascertain, as these attacks usually clear up with rest and simple measures, and operative aid is seldom needed. Generally speaking the form of sepsis in this group is quite mild in character, and usually leaves the large joints at all events unharmed, or only slightly impaired, even after many attacks.

GONORRHOEAL SYNOVITIS.

I have taught for some years now that monarticular synovitis, coming on suddenly in young people, without any known reason, is always suggestive of gonorrhoea. The onset of the effusion is not very painful, but it persists and does not yield to ordinary treatment. It is usually associated with a rise of temperature and accompanied by a rapid atrophy of the governing muscles.

The excess of synovial fluid is here due to direct irritation of the secreting membrane by either the micro-organism itself or the effect of its toxins. Such being the case the sooner this destructive and irritating condition is removed, the less damage will there be of the joint structures and the more perfect will be the ultimate recovery.

It is not necessary to procure local evidence of the nature of the synovitis. This may have entirely disappeared before the joint has become affected. Under these conditions, if after a week or ten days of expectant treatment, such as rest and strapping; internal remedies, such as salicylates, potassium iodide, and mercury, the joint still remains distended and does not show any sign of amelioration, no further time must be wasted. The joint should be opened and washed out with warm saline solution; after this has been thoroughly done the incision is carefully closed. The limb is kept at rest until the incision is quite healed, and at the end of from ten to fourteen days the joint may gradually be used again, when massage will be found of benefit.

It is not desirable to use any strong chemical lotion in washing out these joints; in fact, it is most desirable not to do anything of the sort. The synovial membrane has been already irritated and inflamed by the destructive action of the gonococcus. It is therefore obvious that any strong chemical solution will only still further act as an irritant. The peritoneum and the synovial membrane of a joint have many points in common, and one of these is the strong natural resisting and protective power of both these secreting membranes, which, if not upset by unnecessary irritation, is quite extraordinary. Although it is a fact that strong chemicals kill micro-organisms, it is also a fact that they kill or maim the natural protecting powers of the membrane. When, therefore, a strong chemical solution is used, the synovial membrane, instead of having one enemy to contend with, has two—greatly to the injury of the joint. Sterilized saline solution is used with the idea of getting rid of the septic fluid, and thus giving the synovial membrane the best chance of reasserting itself.

The fluid which comes from the joint is turbid, with large flakes of lymph in it; under the microscope various cells are seen. When examined bacteriologically the gonococcus may or may not be made out, but when it is not seen it is no proof that it is not the cause.

The immediate result of the treatment is most remarkable, even after the effusion has lasted for some little time. The temperature drops to normal, the pain ceases, the joint does not refill, and the patient proceeds forthwith to get well.

To illustrate this I have chosen the following typical cases:

CASE I.—A young girl, aged 18, was admitted to Charing Cross Hospital into a medical ward for rheumatic fever. She had a temperature ranging between 100° and 102°, and a painful distended knee-joint. She was treated for three weeks by the physician for rheumatic fever, and at the end of that time the joint was swollen and painful, and the temperature still high—in fact, her condition was in no way improved. Under these circumstances I was asked to see her, and, after doing so, I decided to open the joint and wash it out. The day after this was done the temperature became normal and continued so. The patient made a perfect recovery, with a normally movable joint.

CASE II.—A young man, aged 26, came to my out-patients with a distended right knee-joint. There was no history of a blow or any suggested traumatism. The onset was causeless as far as the man knew; he denied gonorrhoea, and showed no sign of it. Temperature between 99° and 100°. After a week's rest with a back splint, and taking potassium iodide and mercury internally, he was seen again, when the joint, if anything, was worse. The patient came in the hospital, and the joint was opened and washed out with saline solution. The fluid was examined, and gonococci found. The man made an uninterrupted recovery.

CASE III.—A young woman, aged 24, came to my out-patients at Charing Cross with a painful right shoulder joint, which was distended with fluid. There was no history of injury—the onset was causeless as far as the patient knew. There was no history of gonorrhoea, but she had a vaginal discharge. She was treated expectantly for a fortnight as an out-patient and was then admitted. Ten days' rest in bed making no difference the joint was opened and washed out with saline solution. The contained fluid was turbid, with flakes of lymph in it, pus was found under the microscope, and bacteriological examination showed gonococci. The patient made an uninterrupted recovery.

In cases then of young people with synovitis which comes on without a cause, and which persists in spite of treatment and may be associated with a rise of temperature, no time should be lost but the joint should be opened, washed out and sewn up again.

SYNOVITIS AFTER INFLUENZA.

Septic synovitis follows, or is associated with, various other conditions such as influenza, tonsillitis, and the like.

CASE IV.—A female patient, aged 32, was brought to me with the history that six months previously she had an attack of influenza, during which many of her joints became swollen and tender. All these cleared up except the left knee-joint, which remained painful and swollen. The joint had been rested for five months, but the pain on walking or in moving was so much that the patient got about with great difficulty. As there was a strong tuberculous history I decided to open the knee-joint, in case it was an unusual case of this sort, but mainly because of the pain. When this was done it was at once seen that the joint was free from tubercle, but the patella was attached to the femur, and the internal condyle of the femur was firmly ankylosed to the tibia. The patella was separated but nothing else was done. The patient made an excellent recovery and has lost her pain.

If this case had been recognized early as one of septic synovitis, and the joint opened and washed out, the result would have been very different.

SYNOVITIS ASSOCIATED WITH OSTEOMYELITIS.

The next septic synovitis I wish to refer to is one which is often associated with acute infective osteomyelitis, in which the neighbouring joint may be affected soon after the original onset or some considerable time later on. The following case is a good example of this:

CASE V.—A boy, aged 7, was admitted under my care at Charing Cross Hospital with acute infective periostitis of the femur, which had gone on to suppuration. This was opened. It was noticed that the knee-joint was slightly distended at the time. The distension increased and the temperature rose to 105° F. The joint was opened and washed out and sewn up. The wound healed by first intention. Almost exactly a year after the boy returned with fresh trouble in this joint, which was greatly distended. The old wound was incised and the same sort of fluid escaped—namely, turbid fluid with lymph and abundance of pus cells; the joint was washed out and sewn up again, and healed by first intention. The knee-joint remained sound until the boy's death, which occurred the year before last, nine years after the first operation, from septicaemia occurring in connexion with a recrudescence of the original bone trouble.

Here the plan of opening and washing out the joint must at once be resorted to, because, owing to the greater virulence of the micro-organism in these cases destructive changes are rapidly brought about. It may even be desirable for a day or two to drain the joint.

SYNOVITIS DUE TO STREPTOCOCCUS INFECTION.

To further illustrate what I have already said with regard to the varying virulence of the micro-organisms in these septic joints I will take the following case:

CASE VI.—A railway guard, aged 36, on September 13th, 1899, started from Waterloo to Southampton, feeling quite well. On the journey he "caught a cold," and before he arrived at Southampton his right knee was swollen and painful. (He told me that he had knocked his knee in getting into the train.) He managed to return to London, and then went home feeling generally ill, and had a "shiver." The knee became more and more swollen during the next few days, also the thigh and the calf. The pain was severe, keeping him awake. He was admitted into the hospital on September 18th, five days after the onset, in great pain, with a temperature of 102°. The knee-joint was greatly distended, in a position of semi-flexion, and any movement was extremely painful. There was marked oedema of the thigh and calf and fullness in the popliteal space. Two ounces of straw-coloured fluid were aspirated from the knee; this was found to contain a pure culture of streptococcus longus. September 20th. Knee as distended as ever; no improvement in the general condition; aspirated and washed out with saline. September 22nd. No improvement; joint opened by lateral incisions and drained. A portion of the patella was felt to be rough, and the cartilage had disappeared. October 2nd. Drainage imperfect; incisions lengthened and a Thomas's knee-joint splint applied. October 10th. Gradually-increasing fullness of popliteal space; temperature high and irregular; drainage not acting well. The joint was examined under an anaesthetic, and it was found that the cartilage had been denuded from the patella, femur, and tibia; pus had tracked down along the popliteus to the calf. The leg was amputated in the middle third of the thigh. The patient made a satisfactory recovery from the operation.

The indications here for the urgent need of a much more effective treatment as soon as the man came in were the pain, inflammation, swelling, general temperature, and the condition of distress.

A condition such as this must be met by the most energetic measures to prevent a disastrous result. The joint must be

opened freely, drained, and frequently irrigated. The question of a movable joint here is of secondary importance. The main thing to aim at is to keep the limb and preserve the life of the patient.

PYAEMIC SYNOVITIS.

The wonderful recoveries which occur when a patient suffering from pyaemia gets pus in a joint are well shown in the following case:

CASE VII.—A woman, aged 25, was admitted to the Metropolitan Hospital under my care, suffering from pyaemic suppuration of the arm and left knee-joint. The pus had formed very rapidly. The knee-joint was opened and drained. All wounds healed, and the patient left the hospital six weeks after the operation able to bend her knee and walk. Seen often since, and she has now practically a normal knee-joint.

The rapid production of pus in these cases, and the great urgency with which the conditions appeal to the surgeon, are in a way preservative to the limb because the joint is opened promptly, drained, and irrigated, with results that are quite remarkable.

This last case emphasizes better than anything one of the objects of this paper, which is to show the necessity for early and more effective treatment in certain cases of synovitis the origin or progress of which in any way suggest sepsis. It also proves my statement with regard to the recuperative and protecting power of the synovial membrane.

Here a joint is distended with pus, but because of its rapid formation and early recognition the joint is freely opened and drained before the synovial membrane is disorganized, with the result that the membrane reasserts itself, and a good joint is preserved to the patient.

In cases of synovitis, then, which are not associated with rheumatic fever, some septic source must be carefully looked for, and if found treated.

In the other group of cases, which it will be noticed are mainly monarticular, my experience goes to show that when, without any adequate known cause, a joint becomes distended with fluid, often associated with a rise of temperature, unless in a very few days improvement takes place, the joint should be opened, washed out and sewn up.

In cases of injury followed by increasing temperature, great distension, local pain, and general distress, no time should be lost, but the joint should be opened, the fluid if possible then and there examined, and the joint should if necessary be drained. By this means the septic fluid is got rid of before much damage has been done, the synovial membrane recovers itself, and the movements of the joint are unimpaired. When once the synovial membrane has been overcome and the cartilage eroded, a stiff joint is the best that can be expected. Early incision and washing out will prevent many of these. No harm can happen to the joint when this is properly done, and no joint can be properly washed out through a trocar. An incision sufficiently large to admit of an examining finger should be made, in order that the condition of the cartilage and membrane may be felt.

There is no hesitation on the part of the surgeon to open the joint freely for the removal of a loose body or cartilage. And there should not be any at all, in opening the joint, in such cases as have been described above, having regard to the good results obtained when this is done, and to the disasters that occur when some form of "expectant" treatment is carried out. Great good may be done, and a definite advance made in their surgical treatment by the early recognition and treatment of these conditions of septic synovitis.

REFERENCE.

1 *Clinical Journal*, March 1st, 1899.

BEQUESTS AND DONATIONS TO HOSPITALS.—Mr. W. W. Astor has given £50,000 to the Great Ormond Street Hospital for Sick Children as a fund for the building of a new out-patient department, to be dedicated to the memory of his little daughter, Gwendoline Astor, who died last autumn. Under the will of the late Mr. Henry Maitland, of St. Andrews, the sum of £2,000 each has been bequeathed to the Edinburgh Royal Infirmary and the Edinburgh Medical Missionary Society, £1,000 each to the Ventnor Hospital for Consumption, the Edinburgh Royal Hospital for Sick Children, and the Longmore Hospital for Incurables, and £500 each to the Craigleith Victoria Hospital for Consumption, the Royal Infirmary, Dundee, and the Edinburgh Royal Maternity Hospital. The Chelsea Hospital for Women has received a donation of £1,000 from the estate of the late Mr. Francis Thomas Freeman, allotted under the discretionary powers of the executors, and the North-Eastern Hospital for Children, Hackney Road, has received a donation of £750 from the same estate.

A Lecture

ON THE

USE OF PARAFFIN FOR SUNKEN NOSES.

Given to the Post-graduate Students of the West London Hospital, December 1st, 1902.

BY STEPHEN PAGET, F.R.C.S.,

Surgeon to the West London Hospital; Surgeon to the Throat and Ear Department of the Middlesex Hospital.

GENTLEMEN,—The history of this method of treatment is a curious chapter of surgery, for the method was not invented for the treatment of sunken noses, and it has been used over a very wide range of surgical deformities. There has been, perhaps, a certain extravagance, an excess of zeal, in the treatment of this or that case; but we have by this time plenty of evidence that the injection of paraffin has done good in cases of prolapse and of fistula, even after the failure of the ordinary operations. It is worth while, therefore, to note the original use of the method.

In May, 1899, Gersuny of Vienna was consulted by a young man who had undergone the removal of both testicles for tuberculous disease, and now was obliged to submit himself to medical examination as to his fitness for military duty. Gersuny, in the course of some experiments on animals, had observed that hard vaseline melted and injected under the skin remained there unchanged as a rounded swelling; and he bethought himself that he could in this way produce the appearance of the testicles in the scrotum. He therefore injected 11.6 c.cm. into the right half of the patient's scrotum, and 10 c.cm. into the left half; not all at once, but five injections in all. The patient passed his medical examination without detection. A year later, in May, 1900, the lumps of paraffin were unchanged, and felt as hard as cartilage. In the autumn of 1900 the patient had typhoid fever, and his temperature rose to the melting point of the paraffin, 104° F. According to his own account, the lumps at this time became softer, and seemed to run together; but in May, 1902, they were as they had always been, perfectly hard.

Gersuny's next case was that of a girl, aged 18, who two years previously had undergone operation for cleft palate. The cleft had been closed, but the palate was too short to reach the back of the pharynx, and the patient could not sound hard *g* or *k*. Gersuny, with some difficulty, succeeded in enlarging the soft palate by injecting paraffin into it, and by this method he made some improvement in the patient's speech. His third case was one of the same kind, and was improved; but the injection gave severe pain. His fourth case was a sunken cicatrix, and his fifth was a sunken nose; and each of them gave an excellent result.

In 1900 he published these five cases, with suggestions for further uses of paraffin. It might be used, he said, to raise the cheek after the removal of the upper jaw; to fill a cavity in bone after operation for necrosis; to make good a defect in the brain; to obtain a movable joint after resection, by filling the space between the ends of the bones with paraffin till a sort of capsule was formed, and then letting the paraffin work out through a small incision; to support the weight of the blood in varicose veins, by making a firm swelling of paraffin round a vein; to cure incontinence of faeces, or incontinence of urine in the female, by injecting paraffin under the prolapsed mucous membrane; to keep back a hernia that could not be kept back with a truss; and to conceal the flatness of the chest wall after the removal of the breast. Some of these suggestions may sound extravagant and beyond good surgery; but Gersuny had already reported, in 1900, a successful case in which he had cured, by his method, a case of incontinence of urine in a woman who had undergone seven operations for vesico-vaginal fistula, and all of them in vain.

Then, came a disastrous case. On November 23rd, 1900, Pfannenstiel used this method on a woman suffering from prolapse of the bladder, with vesico-vaginal fistula, after an operation for cancer of the vagina. He chose a paraffin having a higher melting point (115°) than Gersuny's (104°); he injected no less than 30 c.cm., all at one time, into the loose submucous tissue of the prolapse; he gave no anaesthetic, and he sent the patient straight back to the railway station. It is no great wonder that on the way there she had pulmonary embolism. She recovered, but this disaster hindered the general adoption of the method. Moreover, she was not in any way improved; the prolapsed mucous membrane had been left unreduced after injection, and, though the opening



Fig. 1.—A case of injury, followed by caries and perforation of the septum. One injection under an anaesthetic; two subsequent injections, each of a few drops, under cocaine.

into the bladder was narrowed, the incontinence of urine was as bad as ever.

Kapsammer, in February, 1901, reported 3 cases of incontinence of urine in the female, all cured by the injection of paraffin; in 1 it had been due to vesico-vaginal fistula, in 1 to cystitis, and in 1 to simple weakness of the bladder, made worse by a recent labour.

Then in June, 1901, came Moskowicz's paper, giving an account of more than 30 cases treated by Gersuny and himself in Vienna. These cases cover a very wide range of surgical practice; they include the narrowing of clefts and fistulae, the filling up of cavities, the keeping up of prolapsed mucous membrane, the keeping back of herniae which came down under a truss, the removal of small-pox marks, the prevention of reunion of a nerve divided for the cure of neuralgia, the raising of the cheek after removal of the upper jaw, and the remodelling of nine noses. In all these 30 or more cases there had been no disaster, and the great majority had been successful: but in one or two of them there is room for a faint suspicion that the patient would have done better with less paraffin. For instance, there are 2 cases where the injections were used to occlude a hernial ring, and then a truss was immediately applied, before the paraffin had fully set; and some of it in each case found its way into the scrotum, and set there. Also there is a case of defective speech after closure of a cleft



Fig. 2.—A case of injury in early childhood. One injection, under an anaesthetic.

palate, where the surgeon, to narrow the space between the palate and the back of the pharynx, made injections under the pharyngeal mucous membrane; he did at last succeed, but the treatment extended over a year, and he used no less than 60 c.cm. of paraffin. But, after full allowance is made for the excessive use of a new method, there remains a very long list of excellent results; especially the occlusion of faecal fistulae, and the holding up of prolapses of the bowel, or the vagina, or the uterus; and in some of these most miserable cases the ordinary operations had failed again and again.

What are the dangers of this method? Certainly, there is no fear of poisoning. Paraffin, properly selected and sterilized, is absolutely incapable of doing any harm as a drug. This fact has been proved a hundred times over, both by Stein's experiments on animals and by surgical experience.

There is no risk of suppuration, or of sloughing, which may not be avoided with almost absolute certainty by careful preparation and sterilization, and by the use of the right sort of paraffin. Once and again, as in the general operations of surgery, suppuration has occurred; and it is said that a case of sloughing has occurred, but I have not found the original reference to it. Apart from the use of paraffin too hot, and apart from the use of an excessive quantity of paraffin, there is no more risk of these troubles than in any other operation.

What is the risk of embolism? I have searched through a great many English, American, German, and French journals,

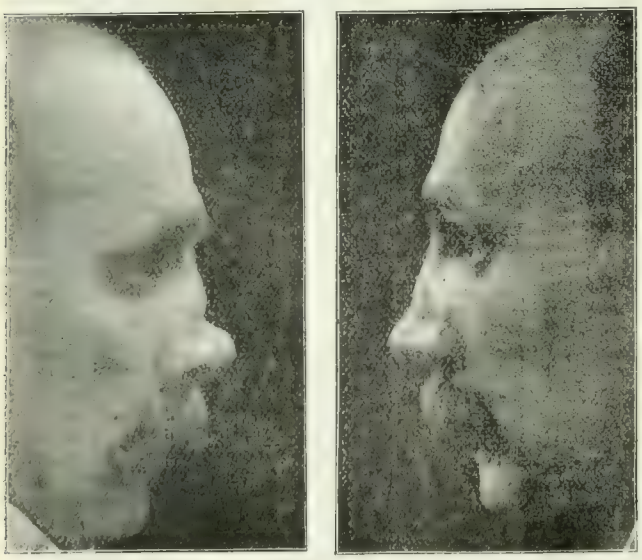


Fig. 3.—A case of disease, with perforation of septum. One injection, under an anaesthetic. A subsequent injection is still to be made.



Fig. 4.—A case of injury. One injection, under an anaesthetic.

and have found three cases recorded. One of them was Pfannenstiel's, where a very large quantity of paraffin was injected, and the patient was not kept at rest. One, a similar case, is said to have happened in Vienna; but I cannot find the original reference. In the third case, loss of vision in one eye followed the injection of paraffin under the skin of the nose; it was due, probably, to direct wound of a vein with the needle. Here, again, I cannot get at the original reference, or learn whether the amaurosis became permanent. Of course, it is possible that other cases have occurred, and have not been recorded; but, considering the novelty of the method, and the division of opinion between those who use Gersuny's paraffin and those who use Eckstein's, it is not likely that a case of embolism would easily escape the comment of surgeons. We may fairly believe that the risk of embolism, if every precaution be taken, is not more than 1 per cent., even in those cases where the injection is made into the loose and vascular submucous tissue of the rectum or the vagina; and that it is practically nil, if the injection be made under the skin of the nose, or under a depressed cicatrix.



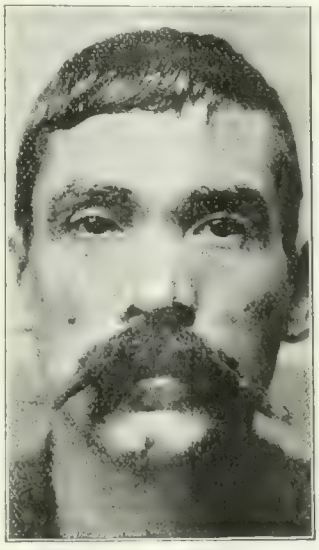


Fig. 5.—Congenital; no history of injury or disease. One injection under an anaesthetic; one under cocaine.





Fig. 6.—The same case as Fig. 5.



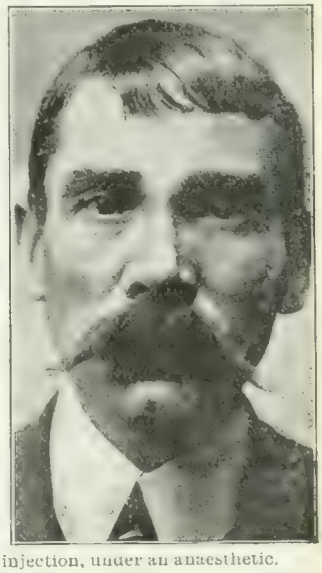


Fig. 7.—A case of disease. One injection, under an anaesthetic.

But we must look at this question of embolism more closely. What do we mean when we say that the injection of paraffin may be followed by embolism? Do we mean that a vein is wounded, and that the paraffin is injected into it, or that the paraffin is in some way absorbed into the circulation, or that the heat of the paraffin causes coagulation of the blood in the veins round it, and that these coagula get loosened and carried into the circulation? This is a practical question, for it concerns our choice between a paraffin with a low melting point and a paraffin with a high melting point. Cases of embolism have occurred now and again after the subcutaneous or intramuscular injection of mercurialized oils for the cure of syphilis; these could not be due to heat. Professor Comstock, of Minnesota, has made a number of experiments on rabbits, and has found that death from embolism occurred in cases in which the paraffin had a melting point equal to, or rather lower than, the normal temperature of the animal; but no embolism occurred in any case where a paraffin with a higher melting point was used. Here again the embolism could not be due to heat. On the other hand, the use of a very hot injection, after the method of Eckstein, causes a good deal of local inflammation; it might fairly be called a slight subcutaneous burn, and if embolism were to follow the injection of Eckstein's paraffin, it would probably be due to its heat; but so far as I can find, no such case has occurred.







Figs. 8, 9, 10.—Three cases, before treatment, of disease, or of congenital defect of development. A very considerable improvement has been made in 8 and 9, and a slight improvement in 10. But the photographs are rather intended to illustrate the special difficulties that occur in some of these cases, for example, the splaying out of the nasal arch, the breadth and coarseness of the tip of the nose, the presence of cicatrices, the elongation of the upper lip, and the want of room between the forehead and the tip of the nose.

The experiments of Juckuff and of Comstock, and the fact that the paraffin, in Gersuny's first case, did seem to soften during an attack of fever, and the fact that embolism has sometimes followed the injection of mercurialized oils, make it advisable to use a paraffin with a melting point above "fever heat," but not hot enough to burn—say a melting point of 106° to 115°. Certainly 106° is high enough for injection into the loose and vascular tissues of a prolapsed bowel or vagina. But I have no experience of this kind of cases; all my cases have been nose cases, and of these—thanks mostly to the doubtful blessing of paragraphs in the papers—I have had twenty-two. What I have to say, therefore, concerns the remodelling of sunken noses, and that only.

For the earlier cases I used Eckstein's paraffin, which melts at the very high temperature of 136°. I took it for granted that the latest modification of the treatment would be the best, and I gave it a very thorough trial in more than 12 cases. I am absolutely sure now that Eckstein's paraffin is without any real advantage. It is very difficult to handle, it sets very rapidly, it causes a great deal of swelling and some inflammation, and may even produce some discoloration of the skin; and it yields no better results than Pfannenstiel's paraffin, which melts at 115°. This I think is almost perfect—easy to inject and easy to mould, and not too hot, and setting perfectly hard. Lately I have been using a mixture of two paraffins, which melts at 111°; this also is excellent.

I hesitate to do what better surgeons are doing, that is, to use Gersuny's original mixture of paraffin and vaseline, for the following reasons. I am not sure that it might not give way a little under the influence of continued high fever, or continual exposure to tropical sunshine. These fears may be stupid, but there is another reason—that the skin of the nose exercises immediate and very heavy pressure on the paraffin injected under it. To meet and stand this tremendous strain, you want a paraffin that sets fairly quick and absolutely hard. You have to hedge between a paraffin that may be a little too soft and a paraffin that may be a little too hot. I do not deny for a moment that other surgeons have obtained as good results as mine, or better, with Gersuny's paraffin; only I feel safer and more confident, working with one that melts at or near 110° F.

Now comes a most important point. When paraffin sets it shrinks; and the hardest paraffin shrinks the most. Always, I think, you can observe this shrinkage, a few hours after the injection. It is very slight, and in some cases it is only just visible. It is not enough to be an argument in favour of a softer paraffin, and it is not enough to justify the surgeon in injecting more paraffin than is necessary because it will all shrink a little. But it does in some cases, and I think in the majority of cases, involve the "touching up" of the nose, a week or ten days later, with a few drops more. This touching up, of course, does not require an anaesthetic; a little cocaine is injected, and a place is made for the extra drops of paraffin with a tenotomy needle.

With regard to a syringe for these cases, I think that none of those now in use are absolutely perfect; but I have not had any experience of the syringe with which Mr. Walker Downie has produced such excellent results; only, his plan of keeping the needle hot by a platinum wire connected with a storage battery seems to me unnecessary. I have used many syringes—an ordinary antitoxin syringe, a Schleich's infiltration syringe, a syringe made by Messrs. Mayer and Meltzer, having the proximal part of the needle jacketed with a thick coating of copper, which retains its heat well and transmits it to the tip of the needle; and an Eckstein's syringe. This syringe is jacketed with indiarubber, and so is the proximal half of the needle; it is easily worked with one hand, and there is a screw nut on the piston which prevents all risk of paraffin going in with a jerk; the needle is long and curved near the tip. This is the best syringe that I have used; it keeps its heat well, it takes only one hand, and it cannot inject too much paraffin. Its needle is too long and not sufficiently rigid, but this is easily altered.

Of course before the injection is made everything is prepared as for an operation. The paraffin and syringes—it is best always to have two syringes, in case one gets out of order—are kept in a water bath 6° or 7° above the melting point. A general anaesthetic is given. The skin is nicked for the needle; 5 or 6 c.cm. of the paraffin are taken up, and the syringe is held in the water bath while the screw-nut is adjusted; then the needle is dipped for a second or two into boiling water. It should not be passed through the flame of a spirit lamp, for this method burns and stains the paraffin in it.

An assistant keeps up very firm pressure all round the nose, making his fingers and thumbs meet in a ring, and it may help him to have a strip of soft metal under them. The needle must be put well under the skin, a little to one side of the middle line, below the point where the bridge ought to be, and directed upward. The injection should be made at or about the rate of 1 c.cm. every ten seconds. The paraffin begins to set in less than a minute, but it remains doughy for about a-quarter of an hour. The moulding must be done pretty vigorously; the surgeon must not be afraid of pushing and squeezing the nose into a good shape, and he must not leave off till the paraffin is absolutely hard and unimpressionable. Then the patient is put back to bed and a cold compress is lightly laid over the face, and, as soon as he comes out of his anaesthetic, a hand-glass is given to him, and he is told to look after himself and to give his nose a gentle moulding now and again during the next few hours. At one time I used to apply a Walsham's external nasal splint immediately after the injection; but I gave it up because I realized that the apparent slight settling down of the paraffin was due simply to its shrinking, which cannot be prevented.

What happens, ultimately, to the paraffin? Is it encapsuled like a bullet, or is it, like a sponge graft, replaced, particle for particle, by granulation cells and finally, by tough fibrous tissue? So far as I can learn by reading, the very hard paraffin used by Eckstein becomes encapsuled; the paraffins that melt at a point from 104° to 110° or 115° are slowly, very slowly, replaced by fibrous tissue. The idea that this molecular absorption can give rise to any embolism, such as the fat embolism that may follow a fracture, is absolutely without evidence.

I come now to what I have learned not by reading but from my own cases. I have taken every case that came to me, except one that was too trivial for treatment. I have had no disaster; but, in one case, a slight suppuration occurred, many days after the injection; and in two cases the line of puncture broke down, and gave rise to a slight discharge. In one case the patient, while still under the influence of the anaesthetic, suddenly rolled over on to his face in bed and some of the paraffin was displaced. In a few cases—but only in a few—some reddening of the skin has followed the injection, and in a very few this reddening has been very slow to fade. And, of course, one gets more skilful with more experience, and able to avoid any uneven distribution of the paraffin. But the fault in those cases that have not been altogether satisfactory is not wholly mine: some of it is to be attributed to the use of Eckstein's hot and rather unmanageable paraffin, which is, I am sure now, in no way superior to a paraffin that melts 25 degrees lower.

In two cases the nose was not only sunken but crooked, and had to be straightened before injection with a Walsham's forceps. In several of them, the septum had been destroyed more or less by caries: but these perforations of the septum have very little effect, if any, on the success of the treatment. In one, a very bad case of old syphilitic necrosis, the skin was scarred and adherent, and had to be freed with a tenotomy needle; but, unless there be this rigid and puckered cicatrix, there is no need to use the tenotomy needle; the paraffin raises the skin easily and evenly. In one or two of the cases the quantity injected was very small, not more than 1 or 2 c.cm., yet a great improvement was made. The average quantity for a badly-sunken nose is 7 or 8 c.cm., and it is better to use too little than too much.

A surgeon can always find some fault, if he likes, in every operation that he does; I have never made a perfect Greek nose, and perhaps I never shall. In some cases the nose is so short and squat that you cannot do much good; there is no room between the forehead and the upper lip for a Greek nose. Do what you will, you cannot achieve much success, and you dare not run the risk of making the nose look almost grotesque. In some cases the lower end of the nose is very coarse and heavy, and you cannot make it narrow and refined. Looking back over my twenty-two cases, I can find some slight fault or defect in every one of them, either avoidable or unavoidable.

Still, the general results are very good. You cannot promise to any patient a pure Greek profile, but you can promise a fairly good profile, that shall at least be straight enough to be unnoticeable. You can raise and mould the skin between the eyes, making this part of the nose quite good-looking, even though it has been, for a quarter of a century or more, absolutely flat and ape-like; and by doing this you improve the look of the eyes, and make the whole face look different, more intellectual and less stupid, more spiritual and less animal. You can, by raising the middle portion of the nose, slightly lengthen the nose, and at the same time you slightly depress the tip of it, so that the nostrils look more downward and lose their ugly forward aspect. Altogether you can accomplish a change that may fairly be called wonderful. The photographs show results of average success: and in every case some days elapsed after the operation, so that the shrinkage of the paraffin is shown. Of course one wants skilful assistance; and I am deep in the debt of Mr. Aubrey H. Pollock, my house-surgeon: Dr. Shuter, anaesthetist to the West London Hospital; and Mr. H. P. Noble, anaesthetist to the Middlesex Hospital.

NOTE.

Since this lecture was given, I have done four more cases, making twenty-six in all. One of these four cases was the hardest I have yet had; and I have failed, even with two operations, to do much good. The nose had been absolutely flat for half a century, and the skin was almost hopelessly rigid: and a preliminary use of the tenotomy knife caused some bleeding. Happily, I have done no harm, and some good; and shall be able to do more, a few weeks hence; but it is a disappointing case. Such intense tightness and unyielding rigidity of the skin are altogether exceptional. To sum up—I have had twenty-six cases without death or disaster; and the general results are very good. In nine cases out of ten, the surgeon can be sure of making a very great improvement: but he may not be able to do it all at once. He cannot make perfect noses; but he can make the patients good looking enough to be happy instead of miserable, and able to get work, to get married, and to go about without being ridiculed, pitied, or suspected of syphilis. Only, let nobody think that the method is so easy as it sounds. It is full of little difficulties; it wants experience; and it involves very grave responsibility.

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THE NOMENCLATURE OF MALARIA:

A SUGGESTION.

BY LIEUT.-COLONEL DAVID BRUCE, R.A.M.C.

1. IT would seem that the time has arrived when the diagnosis of cases of malaria must aim at giving the name of the species or variety dealt with, and not merely one of the general terms—intermittent or remittent fever—as laid down in the last edition of the *Nomenclature of Diseases*.

2. Information is wanted as to the geographical distribution of the various kinds of malaria, and this can only be arrived at by recognizing them in the new edition of the *Nomenclature*.

3. The demonstration of the species of malarial parasite which is the infecting agent in a particular case will necessitate the use of the microscope. This routine microscopical examination of the blood will, it may be presumed, bring about a more correct diagnosis of fevers in malarious countries, and assist towards rational treatment. Malta fever was treated until lately with large doses of quinine on the supposition that it was malarial in origin. In the same way it is too often assumed that any fever occurring in a malarious locality is malarial in character, and quinine is given in enteric fever, tuberculosis, liver abscess, etc., when a blood examination might have prevented the error.

4. The nomenclature I would suggest for the three well-recognized species of malaria is the following:

Malarial Fever.—Synonyms: Ague, intermittent and remittent fevers.

(*a*) Tertian synonyms: Haemamaeba vivax, simple or benign tertian.

(*b*) Quartan synonyms: Haemamaeba golgii.

(*c*) Crescent tertian synonyms: Laverania laverani, aestivo-autumnal fever, malignant tertian, tropical tertian, remittent fever.

I have left out the commonly used terms, simple, benign, malignant, pernicious, as they are misleading. The so-called simple tertian may often be more severe than the so-called malignant tertian. Aestivo-autumnal is a term which may apply appropriately enough to the fever as it occurs in Italy, but in other parts of the world is unsuitable.

The genius of Koch suggested the term tropical tertian for the third variety, and this is undoubtedly an excellent name, but as the fever is also found in temperate climates it is also misleading.

In regard to the scientific names I think Golgi, who discovered that the parasite of malaria consisted of more than one species, should be commemorated, and also Laveran, whose epoch-making discovery of the malarial parasite has, it seems to me, never been sufficiently appreciated in this country.

In the present edition of the *Nomenclature of Diseases* the old term malarial cachexia has been left out. I would propose that in the next edition the chronic form of malaria when the parasites have disappeared from the blood, but the anæmia, pigmentation, enlarged spleen, etc., remain, be again given a place, and I would put forward the name:

Chronic Malaria.—Synonym: Malarial cachexia.

This short note has been written in order that any one who takes an interest in this question may have the opportunity of bringing forward other suggestions or criticisms.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

PRELIMINARY NOTE ON A PHASE IN THE LIFE-HISTORY OF BILHARZIA HAEMATOBIA.

DURING a fairly exhaustive examination of the literature upon the life-history of bilharzia haematobia we have found no reference to an appearance we have several times met with in the larvae. It is that in the case of certain larvae, while still living, there occurs the formation of spheres with double contour and provided with long cilia. These spheres show intense vibratile movement of granules in their protoplasm, and although the cilia have usually been motionless, they have been seen by us in active movement. These spheres are able to carry on an independent existence. Non-ciliated spheres have already been described by many authors and we have repeatedly seen them, but the ciliated forms to which reference is made above are absolutely distinct therefrom. We hope to make a full communication on the subject at an early date.

W. S. LAZARUS-BARLOW, M.D., F.R.C.P.
J. J. DOUGLAS, M.D., F.R.C.P.E.
Clinical Research Laboratory, Westminster Hospital.

PURPURA HAEMORRHAGICA FOLLOWING SEA BATHING.

THE following case is of interest owing to the sudden and severe onset of this disease in a boy who had had perfect health up to the time of his taking his first sea bath.

On July 17th, W. R., aged 5 years, was brought to me for treatment. He was suffering from vomiting, severe pain in the lumbar region, and a slight petechial rash—not more than a dozen spots, chiefly on the chest. Examination of the heart, lungs, and kidneys revealed nothing out of the normal. The temperature was 101.2° F. The day previous he had bathed for the first time, being then in perfect health. The above symptoms commenced the same evening. The following day, however, boy became anaemic, there was a haematoma in the left popliteal space the size of an egg, and a large ecchymosis 2 in. in width extending on the abdomen from the umbilicus to the pubes. There were other ecchymoses varying in size on the legs and arms, and on the inner side of the cheeks and lips. The temperature was normal. The urine, which was scanty, contained blood, as did the motions. A slight systolic murmur was heard in the left axilla.

I diagnosed the case as purpura, and treated it with absolute rest, light milk diet, and gave a mixture of dilute sulphuric acid. No fresh symptoms occurred until a week later, when I was urgently summoned. The whole left side of the body was convulsed, though the patient was conscious. The temperature was 105.5° (taken with two thermometers); the pulse was 130, and occasionally intermittent; respiration appeared practically normal. The ice-pack was used to the head, and the body sponged with ice water, and an enema of castor oil and glycerine given. Six hours later the temperature was 99.2°, and the convulsive movements gradually ceased; and though convalescence was delayed for two months, he having several relapses with more or less severe subcutaneous haemorrhages, he recovered, and at the present is back at school. Only yesterday, however, I was informed that he had cut his finger very slightly, but it had continued to bleed for two hours.

Beer, Devonshire. EDWARD TONGE, M.B., B.S.Durh.

ABNORMALITIES.

The following instances of abnormality seem to be worthy of record:

1. *Testicle in Perineum in an Infant.*—As seen in the photograph, the left testicle occupies a distinct compartment behind the left side of the scrotum, whilst the right testicle is in its normal situation. The testicle was not unusually



tender to pressure, and could be pushed up towards the external abdominal ring on that side, which was more patent than the one on the right side. The child presented no other abnormality, nor was phimosis present, as the photograph might lead one to think.

2. *Case of Supernumerary Nipple.*—The nipple was situated



on the under border of the right breast in a patient from whom a large adenomatous multilocular ovarian cyst had been removed.

Edgar Wm. Sharp, M.B.,
Senior House-Surgeon.
The Infirmary, Bury.

CATARACT EXTRACTION WITHOUT CAPSULOTOMY OR IRIDECTOMY.

A Hindu, aged 65, was operated on for a Morgagnian cataract of seven years' standing on April 12th, 1902. He was of a very nervous disposition and quite unable to keep his eyes steady or fixed on any one particular spot. The usual corneal incision was made under cocaine, but before the iridectomy could be performed the patient rolled his eyes violently, and what appeared to be a very large cataract presented in and passed through the lips of the corneal incision. On picking up the tumour with fine forceps a small quantity of milky fluid escaped, and it was then found to consist of the capsule of the lens which had been delivered in its entirety, and which contained in its interior a hard cataract. It would appear therefore that a sudden spasm of the ocular muscles had ruptured the suspensory ligament of the lens and forced the lens in its capsule through the corneal wound. Nothing further was done beyond instilling atropine and putting on a pad and bandage. The patient made an unusually rapid recovery, and when fitted with a + 10 D lens was able to count at a distance of 10 ft. dots corresponding to a bull's eye 3 ft. in diameter at 600 yards, which is the standard of vision required of recruits for the British army.

Poona, India. D. J. Collins, Captain R.A.M.C.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

LEEDS GENERAL INFIRMARY.

CASE OF CAESAREAN SECTION IN A RACHITIC DWARF.

(Under the care of Dr. Hellier, Obstetric Physician to the Infirmary.)

M. N., aged 33, residing in Leeds, was sent into the Leeds Infirmary on August 27th, 1902, by Mr. J. J. Pickles, because she was in labour, but had a pelvis too contracted for delivery.

Clinical History.—The patient, dwarfed and deformed from infancy, has lived all her life in Leeds. Her father died of cancer of the bowel. Her mother died at 47 of "dropsy." Several brothers and sisters have died. Two brothers and two sisters are living; the latter are married and have borne children. She is the only one of stunted growth in the family, and is the youngest surviving child. She had rickets in infancy, and says that her deformity increased up to 10 years of age, but that since then she has not changed much in this respect. She has never been able to walk without crutches, but on the whole has had good health. Menstruation, which commenced at 21, was never quite regular. She was unmarried. She became pregnant on December last. Labour began on August 26th in the morning. Admitted to infirmary August 27th in the evening.

Condition on Admission.—The patient is a dwarf, standing 3 ft. 1 in. high, and (after delivery) weighing 72 lb. The head is well shaped and of ordinary size. She has lateral curvature of the spine, with convexity to the right. The right side of the thorax is much more prominent posteriorly than the left. On the right the edges of the lower ribs almost touch the iliac crest, and there is a deep sulcus between. The clavicles are much curved, the bones of the upper limb are short and curved. The femora are short and bowed. The tibiae are bent in an antero-posterior direction at an angle of about 120 degrees, the crest of the tibiae forming a sharp keel. The actual length of the tibia is about 12 in., but the shortest distance between the ends is 9½ in. The feet are fairly well formed, but the small distorted lower extremities bear on the whole an almost infantile appearance when contrasted with the trunk. In the erect posture the angles of the tibiae are close upon the dorsum of the feet, and the legs rub together and cross each other as she walks. The pelvis is a dwarfed rickety pelvis, flattened to an advanced degree, and giving "absolute" indication for Caesarean section.

The interspinous brim measurement is 9½ in.
The intercristal brim measurement is 10 in.
External conjugate a little less than 5 in.

On Vaginal Examination the sacral promontory seemed to fill the upper part of the pelvis and the available conjugate was rather less than 2 in. On admission there was vigorous uterine action; the abdomen was exceedingly prominent owing to spinal lordosis and pelvic contraction. The fetus was alive. The head was inferior, but not entering the pelvis; membranes not ruptured. The patient was in good condition; pulse 87; no previous attempt at delivery had been made.

Caesarean Section was performed on admission by Dr. Hellier, assisted by Mr. Lawford Knaggs. Chloroform was administered by Mr. Radcliffe. The thin abdominal wall was incised in the middle line for 7 in. Some free ascitic fluid then escaped. The bladder projected into the lower part of the wound like a small subperitoneal cyst. The uterus was incised for 6 in. in the longitudinal direction. The breech and back then presented in the wound and the child was easily extracted. The placenta was now removed from the posterior wall of the fundus. There was exceedingly little haemorrhage, either from the uterine edge or placental site, digital pressure on broad ligaments and uterine wall being employed to control it. The

uterus was washed out with boiled water, and quickly closed by (1) six deep silk sutures, including everything except mucosa; (2) six superficial silk sutures; (3) continuous catgut suture, closing peritoneum over incision and burying the silk sutures. A portion an inch long was then excised from each oviduct. The patient's consent to this sterilization had been previously obtained. The abdominal wound was then closed with a continuous catgut suture through the peritoneum and interrupted silkworm-gut sutures through the rest of the abdominal wall, a few interrupted catgut sutures being passed to adjust the aponeurotic edges.

The Child.—Mr. H. Brown, resident obstetric officer, received the child from the operator, and had little difficulty in exciting respiratory action. It was a small but healthy male, weighing 5½ lb.

After-history.—The patient's after-progress was very satisfactory. There was no *post-partum* haemorrhage and no puerperal complication. The wound healed entirely by first intention, without a single point of redness or drop of pus, and she made an excellent recovery, and was discharged cured on September 20th, 1902.

REMARKS.

Living in a district where rickets is exceedingly common, and where the disease is often seen at its worst in infants and children, one is struck with the fact that serious degrees of pelvic contraction do not come before our notice with greater frequency. If every woman in Leeds who has bowed legs had also pelvic contraction, dystocia would be obtrusively frequent in our obstetric practice. But we do not think that difficult labours are conspicuously frequent here. Rickets has to be very severe before the pelvis is much affected, and in the worst cases the patients usually die in infancy or early childhood from convulsions, gastro-enteric disease, lung affections, or other intercurrent disease. The deformity of the chest, which is so marked in bad cases, is of very serious import, and tends to shorten life.

The operation calls for little comment. The patient was sent to us in good condition, and not infected by any previous manipulations, and, given such favourable circumstances, Caesarean section gives excellent results.

ROYAL NAVAL HOSPITAL, BERMUDA.

CASE OF SARCOMA OF LEG.

[Communicated by Deputy Inspector-General H. M. ELLIS, R.N.]

JAMES BURNS, aged 29, a coloured dockyard labourer, was admitted to the Royal Naval Hospital on October 19th, 1901. He had slipped down on board a tugboat, with his left leg under him, and had felt it "crack." He was seen at the time by a medical man, who applied splints. On his admission to hospital the splints were taken off, and a fusiform enlargement of the tibia was seen at the junction of the upper and

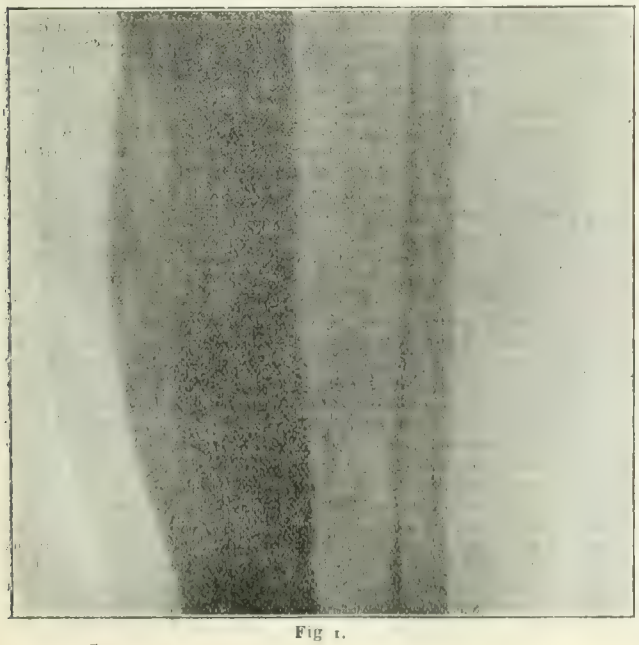


Fig. 1.

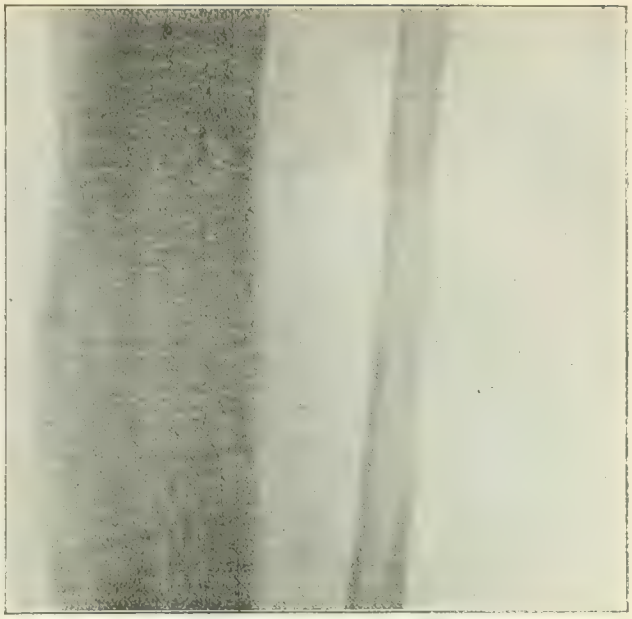


Fig. 2.

middle thirds of the bone. The part was exceedingly sensitive and inflamed, but there was no crepitus or displacement. A skiagraph (Fig. 1) showed a crack running transversely across the bone, with paling of the shadow at the site of the tumour.

The following was the history obtained: Eight years previously he had received a blow on the shin from a baulk of timber, but had not been incapacitated from work by it. Two years previously he had first noticed an enlargement of the bone, but he had suffered no pain from it and had continued to work until his fall.

He was treated in hospital until December 20th, when all pain and inflammation had subsided and he could walk about again. A skiagraph (Fig. 2) was taken before he left and is interesting as showing a still greater penetrability of the bone by the *x* rays.

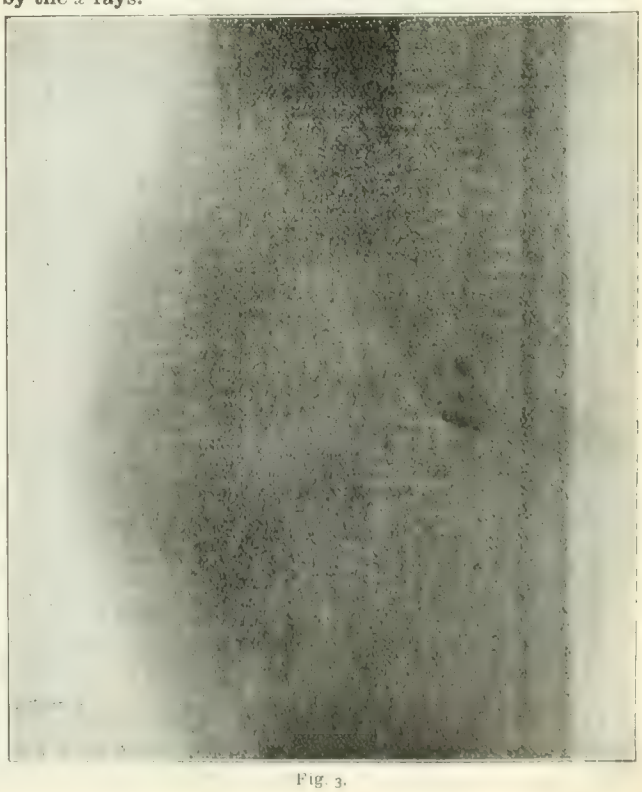


Fig. 3.

On March 226th, 1902, he was readmitted from his home with an enormous increase of growth in the tumour. A skiagraph (Fig. 3) showed the detruction of the bony structure by the tumour. There could then be no doubt as to its nature, and two days later Surgeon Philip amputated the leg through the kneejoint, using lateral skin flaps and retaining the patella. A good stump resulted, and the patient was discharged on April 25th. A section of the tumour examined microscopically showed it to be a small spindle-celled sarcoma (Fig. 4).

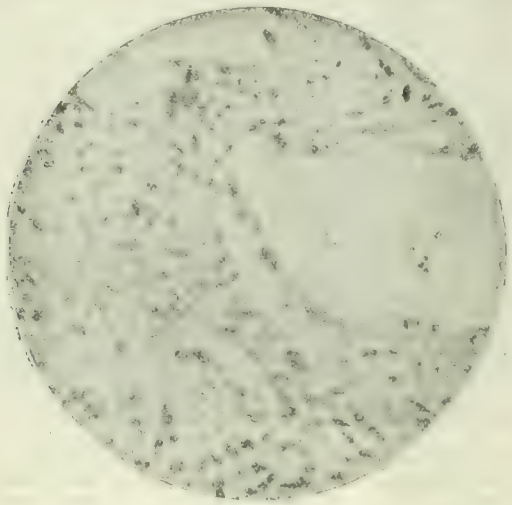


Fig. 4.

The accompanying skiagraphs are the work of Mr. Hooper, the dispenser at the hospital.

REPORTS OF SOCIETIES.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

PATHOLOGICAL SECTION.

Professor E. H. BENNETT in the Chair.

Friday, November 7th, 1902.

DISLOCATION OF THE SHOULDER.

PROFESSOR BENNETT exhibited specimens of dislocation of shoulder. The specimens were a dissection of an old unreduced dislocation, which in all particulars conformed with Malgaigne's definition of subclavicular dislocation, and a cast of the limb exhibiting the characteristic features of the injury. The cases recorded were two from the living; one seen on the day of the injury, the second five weeks later. In the first an attempt at reduction had already failed. The second was five weeks unreduced, and had been five times submitted to attempts at reduction under anaesthesia. The reduction was in both obtained by traction with rotation on the arm abducted downwards and outwards.

In reply to Dr. KNOTT, Professor BENNETT said the reason Kocher's method was useful was that it applied particularly to the intracoracoid dislocation, which was the most common, or its immediate modifications.

ADENOMA OF THE LIVER.

Dr. EARL showed a case of adenoma of the liver. He said his attention was drawn to a small, round mass, well marked off, and of a green colour. The liver contained a large number, fifteen or twenty of these, and most probably there were more. The largest was about half an inch in diameter. The cells in them bore a close resemblance to liver cells. They were divided into lobules, and were surrounded by a fibrous capsule. Sections of some of the smaller tumours showed more marked resemblance to normal liver structure. These tumours appeared to be one of the forms of adenoma.

Dr. DAWSON asked Dr. Earl whether this liver showed signs of malignancy.

Professor O'SULLIVAN said he would like to ask Dr. Earl if there was any difference between the cells in this liver and normal liver cells.

Professor WHITE was inclined to agree with Dr. Earl that it was adenoma from its microscopic characters.

Dr. EARL, in reply, said he felt certain that they were not malignant tumours. That there were no growths found elsewhere, with the fact that the resemblance to normal liver cells was so close, would negative the view that the tumours were malignant.

CAVERNOMA OF THE LIVER.

Dr. EARL said this liver showed multiple cavernomata of different sizes which were not raised above the surface of the organ when they abutted on it; they were also found in its substance. The larger tumours were surrounded by a fibrous capsule; the smaller merged in the liver substance without any capsule. They were merely substitutions of the liver tissue, and were generally believed to be due to dilatation of lobular cavities with subsequent pressure atrophy.

EPITHELIAL TUMOUR OF GALL BLADDER.

Professor SCOTT exhibited an epithelial tumour of the gall bladder which had been removed by Mr. Heuston. There was a large mass attached to the gall bladder, which was swollen. A section showed the tumour to be of undoubted epithelial origin. Most of the cells were undergoing a mucoid degeneration.

CONGLOBATE TUBEROULOUS TUMOUR OF THE CHOROID.

Mr. ARTHUR BENSON and Dr. EARL showed a case in a girl aged 14. The growth, which only dated from March 27th, 1902, occupied almost the whole interior of the globe, the vitreous being pushed to one side and the lens remaining transparent throughout. In this case there was no tuberculous family history, nor was there any other focus of tuberculous disease in the patient. The sections, which were made by Dr. Earl, showed that caseation had taken place in the tumour, and giant cells were also visible. The growth was adherent to the sclerotic in one place, and the retina was wholly detached. The other eye was normal, and the child, though naturally frail, seemed to be in excellent health.

Dr. EARL said he found the vitreous chamber almost completely obliterated by a whitish mass, which was tuberculous.

Mr. STORY made some remarks.

LIVERPOOL MEDICAL INSTITUTION.

PATHOLOGICAL AND MICROSCOPICAL SECTION.

RUSHTON PARKER, M.B., F.R.C.S., President, in the Chair.

Thursday, December 11th, 1902.

SPECIMENS.

DR. GROSSMANN exhibited sections of a polypus of the conjunctiva, of six weeks' growth; the structure was that of granulation tissue; but he did not feel confident that the possibility of its being of sarcomatous nature could be altogether excluded.—Mr. DOUGLAS-CRAWFORD showed a myxomatous fungating tumour of the breast of three months' duration, probably non-malignant. Mr. PAUL regarded the growth as a cystic adenoma and not malignant. Mr. THELWALL THOMAS agreed with this opinion.—Mr. DOUGLAS-CRAWFORD also showed a sequestrum consisting of half the lower jaw, the result of necrosis after typhoid.—Dr. NATHAN RAW showed a specimen of deciduoma malignum, with secondary growths in the lungs; also two kidneys from an adult the subject of congenital cystic disease; also a heart from a case of ulcerative endocarditis with perforation of the mitral valve.—Dr. RICHMOND showed the liver, stomach, and large intestine from a case of gall stones; the liver exhibited biliary cirrhosis, and also several biliary abscesses, the rupture of which had led to chronic peritonitis; the patient died from obstruction due to bands. The large intestine showed several stercoral ulcers and a gall stone embedded in an ulcer of the caecum.—Dr. J. C. MATTHEWS exhibited the pelvic organs of a case of imperforate rectum, and also a heart with diffuse gummatous infiltration.—Dr. R. KELLY showed two brains, in both of which the posterior cerebral arteries arose from the internal carotid.—Mr. R. J. HAMILTON showed specimens and sections of an epithelioma from the sclero-corneal margin of the eye of a man, aged 47; also an orbital periosteal sarcoma, and sections from a case of haemorrhage into the sheath of the internal rectus.—Mr. THELWALL THOMAS exhibited a diphtherial cast of the trachea and bronchi removed in the course of a tracheotomy from a child, aged 5 years; also a specimen showing a fishbone embedded in the mucous membrane of an appendix; thirdly, a Meckel's diverticulum perforated by a fishbone, leading to adhesions between the diverticulum and the Fallopian tube and subsequent intestinal obstruction; for the latter condition operation had been performed and

the diverticulum removed, recovery resulting.—Mr. MONSARRAT showed sections of interacinous growth in chronic mastitis.

THE EFFECT OF BILE SALT ON BACTERIAL CAPSULE FORMATION.

Dr. A. STANLEY GRIFFITH read a note on the effect of bile salt on bacterial capsule formation. He remarked that certain organisms, when grown on bile salt agar, were found to produce extremely large, pale, mucoid colonies, the mucoid transformation being due to the production of a definite mucoid capsule around each organism. This change was best seen in the case of organisms of the B. lactis aërogenes group, but a similar result, though less in degree, was obtained with B. coli, B. enteritidis, B. typhosus, and others.

PYLORIC OBSTRUCTION IN INFANCY.

Dr. PETER DAVIDSON and Mr. MONSARRAT showed photographs and specimens from a case of pyloric obstruction in an infant. The most remarkable symptoms of the case had been violent spasmodic contractions of the stomach, owing to which all foods were rejected. After death the stomach was found to be enormously dilated and the pylorus thickened and hypertrophied. Microscopical examination had proved this pyloric obstruction to be due to great hypertrophy of the muscular coat. The cases of similar nature which had been recorded were referred to, and the etiology of the condition discussed. No entirely satisfactory explanation had been given of the hypertrophy. The question of operative interference had been considered in this case, but, owing to the extremely bad condition of the infant, it was thought not to be advisable.

CRYSTALLINE DEPOSITS OF TOXICOLOGICAL INTEREST.

Dr. R. J. M. BUCHANAN exhibited a large number of lantern slides, showing for the most part crystals of salts of morphine, strychnine, cyanide salts, and other deposits of toxicological interest. The slides were taken by the method of dark-ground illumination, and illustrated in a striking way the structure and the formation of the various deposits.

The following members took part in discussions on the specimens and demonstrations: Mr. PAUL, Dr. BRIGGS, Dr. BLAIR BELL, Mr. DUN, Dr. WARRINGTON.

MANCHESTER MEDICAL SOCIETY.

THOMAS HARRIS, M.D., F.R.C.P., President, in the Chair.

Wednesday, December 3rd, 1902.

RHEUMATIC ARTHRITIS AND OTHER ALLIED JOINT AFFECTIONS AND THEIR TREATMENT.

DR. J. DRESCHFELD opened a discussion on this subject. He selected only well-defined groups, and confined himself to the most important points to be discussed. The subject naturally divided itself into acute and chronic joint affections. Of the acute the first place was occupied by acute rheumatic arthritis. Recent observations had thrown considerable light on the etiology of this affection, though a good deal still remained obscure. Most pathologists and clinicians were now agreed that it was an infectious disease, but the question whether it was due to a pathogenic micro-organism or whether more than one micro-organism might give rise to the same symptom complex, or whether it was due to a non-specific micro-organism, which only under certain hereditary or predisposing conditions became active, was still a disputed point. Recent observers starting with the assumption, which was well founded, had looked upon the tonsils as the portals of entrance of the micro-organism causing acute rheumatic arthritis, and the observations of E. Meyer, Wassermann, and more recently of Paine and Poynton, and Menzer, had shown the presence of a streptococcus in the form of a diplococcus in the tonsils of patients affected with acute rheumatic arthritis, which could be cultivated, and when injected into rabbits produced lesions such as was seen in rheumatic fever. As yet, however, one could not look upon these diplococci as the pathogenic organism of acute articular rheumatism, as pointed out by Menzer,[1] for other micro-organisms had produced the same results, the diplococci described by the various observers showing marked morphological differences, and diplococci found in the healthy tonsils and in tonsils affected with angina and other affections had occasionally, when injected into animals, produced similar lesions, though it must be observed that Widal and Besançon in a very large series of experiments got mostly negative results. Further, in some cases the injection of the streptococci obtained from the tonsils produced at times septic and pyaemic lesions. It would appear from these experimental data that though the exciting cause in acute rheumatic arthritis was a micro-organism, special favourable conditions, depending on an inherited or some peculiar constitutional predisposition or some accidental causes (exposure to cold, to damp, etc) played a prominent part in the causation of acute rheumatic arthritis and favoured the entrance of the micro-organism into the blood. The importance of these secondary causes should not be overlooked. The experimental researches on this subject had further shown that acute rheumatic arthritis, septic arthritis, and pyaemic or suppurative arthritis were more closely related that was at one time supposed and supported the clinical evidence, such for example as was shown in the relationship between rheumatic or papillary endocarditis and septic endocarditis. The treatment of acute rheumatic arthritis offered little scope for discussion: the salts of salicylic acid were given, but they could scarcely be looked upon as specific remedies; they reduced the temperature, relieved the pain, caused a diminution of the swelling, and were said to increase the elimination of uric acid, but they did not shorten the duration of the disease, did not prevent relapses, and unless alkalies in fairly large doses were given also, endocarditis often occurred; local treatment was essential, but radiant heat baths, etc., except in protracted cases, were not needed. One form of acute arthritis was especially alluded to, in which often the wrist and the ankle became affected, and in which there was, besides excessive pain, a good deal of inflammatory subcutaneous oedema and inflammation of the sheaths of tendons; the disease was very obstinate to treatment, and often left the joint ankylosed. Davies-Colley described this affection occurring in women affected with leucorrhoea. It was a septic arthritis, often due to gonorrhoea, but was occasionally found independent of gonorrhoea; in some rare cases most of the joints might become involved; the treatment was alluded to.

Acute Osteo-arthritis.—This, no doubt, was a rare affection, but occasionally one observed cases in which there was marked pyrexia, profuse acid perspiration, swelling and pain of the joints, and in which the joint, instead of returning to its normal condition, showed the appearance seen in osteo-arthritis. In the present state of knowledge it was impossible to say whether there was here a double infection or whether the disease was primarily one of osteo-arthritis.

The Infective Arthritis of Fevers.—Pneumonia, typhoid, scarlet fever, diphtheria, small-pox, influenza, cerebro-spinal meningitis were sometimes accompanied or followed by an acute swelling and pain of one or more joints. They had to deal here with various affections: (1) A toxic affection, due to a toxin only remotely due to the micro-organism. Some doubted the existence of a toxic arthritis, but that such an arthritis existed was shown by the arthritis sometimes following very soon after the injection of antitoxin serum in diphtheria; (2) an arthritis due to the pathogenic micro-organism, as in the cases of pneumococcus arthritis described by Cave and Nathan Raw, and in some of the reported cases of arthritis in typhoid: (3) a mixed infection, the effusion into the joint, which might be serous or purulent (pyaemic), containing septic micro-organisms; (4) true rheumatic arthritis as a complication of the primary infective fever. Occasionally, as in typhoid fever, the vertebral column might be affected (typhoid spine), characterized by excessive pain and stiffness of the vertebral column, and this again sometimes a nervous affection, at other times a purely toxic affection, at other times there was distinct osteitis and periostitis. Gonorrhoeal arthritis in its various types was alluded to. It occurred much more frequently than was generally supposed, and the joint lesions remained long after the gonorrhoea had disappeared. Occasionally the vertebral column was also affected.

Chronic Rheumatic Arthritis.—In most persons who had had acute rheumatic arthritis the joints assumed again their normal appearance, and occasionally, however, the smaller joints formed a spindle-shaped swelling, and remained so permanently; in a few cases with a marked family history of rheumatism the symptoms of rheumatic arthritis came on slowly and insidiously, the joints became stiff and painful, the muscles in the neighbourhood of the joints underwent atrophy, marked deformities of hands and feet ensued, and the patient might become quite crippled. The distinction in such a case between rheumatic arthritis and rheumatoid arthritis was almost impossible. Such differences as had

[1] *Die Aetiologie des acuten Gelenkrheumatismus*, Berlin, 1902.

been pointed out by some observers were scarcely sufficient to differentiate them.

Chronic Rheumatoid or Osteo-arthritis, a chronic disease in which one or more joints were affected, with marked changes in the cartilage, and bones of an atrophic or hypertrophic character, and atrophy of muscles, and resulting in marked deformity of the joint. Various affections had been classified under this head: (1) Heberden nodules. It was very doubtful whether this was osteo-arthritis. In some cases the affection was true gout, in others the lesion was a trophic one due to overstrain and a general debilitated state of the system. Still described two cases in children who had congenital syphilis. (2) The general progressive osteo-arthritis. Most would agree with Garrod that more than one affection was included in this group. The older observations of Wohlmann, Blaxall, and others, and the case described by Still pointed to its infectious nature; the more recent ones of Cave showed that often it was of a septic nature, the infective agent reaching the system through the alimentary canal. (3) Arthritis deformans or monarticular arthritis; probably also microbic in origin, as shown by Paine and Poynton, in which, however, trauma and a debilitated constitution played an important part. The various forms of spondylitis deformans and their relation to osteo-arthritis, gonorrhoeal arthritis, and affections of the meninges were alluded to. In conclusion, Dr. Dreschfeld spoke of the treatment of chronic rheumatoid arthritis. In the earlier stages the baths of Buxton, Bath, and Llandrindrod often answered well, also massage, passive movements, the application of hot air—either in the form of sand baths or radiant heat baths—and Bier's treatment by means of passive hyperaemia. These methods of modern physical therapeutics might also be tried in the later stages of the disease. Weak galvanic currents were indicated when there was much pain and atrophy of muscles. In the form of monarticular arthritis, in which the joint was very much distended and in which there was large villous synovial growth, surgical treatment had sometimes been resorted to.

Professor G. A. WRIGHT spoke of the need for an entire revision of the nomenclatures of joint diseases and the desirability of abolishing all names with rheumatism in them. He laid stress upon the frequency of specific joint diseases of various kinds—septic, exanthematous, and others.

Dr. DIXON MANN considered that there could be little doubt that acute rheumatism was due to the invasion of micro-organisms, but the causal micro-organism had not yet been satisfactorily identified. He could not accept Menzer's view, that streptococci which were capable of setting up a septic state as ordinarily understood, were the micro-organisms in question, as the morbid processes that occurred in acute rheumatism were of an entirely different character from those of septicaemia, although doubtless borderland cases occurred which were probably due to mixed infection. It was of interest to note how in some of these cases the septic factor got the upper hand and the inflammatory processes developed true septic features, and in others it subsided and left the field to causal organisms of the condition called "acute rheumatism," whatever these causal organisms might be. Acute rheumatism was too well defined in its course and symptoms, and was a disease that was too widely spread, to be dependent for its production upon an assumed modification, within the organism of each individual that was attacked, of the specific action of a micro-organism which without any modification set up a vastly different train of events.

Dr. WILKINSON considered acute rheumatism to be a definite disease due to a micro-organism, in which, however, as in diphtheria, a mixed infection might occur. Sodium salicylate appeared to neutralize the toxin rather than directly affect the germs, and so did not act as a true specific. Hence it removed the joint symptoms which were probably toxic, but left untouched the endocarditis and other micro-organismic products. The mobility of the joint lesion was the strongest indication for the use of the salicylate. He agreed with Dr. Dreschfeld in preferring moderate doses, and always prescribed with it tr. nucis vom. and potassium citrate. The latter salt did not lead to the objectionable darkening of the mixture produced by pot. bicarb., and objected to by critical patients. In single rheumatic joint lesions, and in the solitary gonococcal swellings, in which the disease took the joint on lease, local 2 in. by 2 in. blisters usually gave most relief. Dr. Wilkinson also referred to a case of acute herpes following the branches of the right anterior crural nerve, in which changes resembling those seen in subacute osteo-arthritis developed in the knee-joint, but gradually subsided in the course of six months.

Professor WILD considered that the name "rheumatic arthritis" covered a group of pathological conditions, and that with our present knowledge an accurate differentiation of the members of the group was impossible. One member, however, acute rheumatism or rheumatic fever, appeared to be more sharply defined, and differed in many ways from the others in its course. Among the points of difference attention was drawn to the type of the fever, and especially its comparatively slight depressing action on the central nervous system; secondly, the peculiar tendency of the arthritis to affect joint after joint and rapidly disappear, the evanescent character of the arthritis in any one joint being comparable to the acute onset and rapid disappearance of the lesions of the skin in urticaria, a disease which was produced by absorption of toxic substances from the alimentary canal; thirdly, the very slight anatomical lesions found in the inflamed joints when examined *post mortem* was worthy of note. With respect to treatment, the salicyl compounds in full doses certainly relieved the symptoms, and the probability of their having a specific action upon the rheumatic toxins was suggested by the fact that similar good effects were not produced by closely allied chemical compounds such as benzoic acid, pyrocatechin, or even the meta-hydroxybenzoic and para-hydroxybenzoic acids which were isomeric with salicylic acid.

Dr. C. W. BUCKLEY (Buxton), referring to the treatment of rheumatoid arthritis, drew attention to the importance of lesions of the mucous membranes of the respiratory and genito-urinary tracts as an entrance for bacilli, and the necessity for treating these where present with a view to removing the cause. He considered change of subsoil important in the general treatment; dryness of soil, with a bracing climate, going far in improving the general health, and a visit to a health resort of this type, together with suitable balneological treatment, caused much improvement, and in many cases a cure.

CLINICAL CASE.

Mr. THORBURN showed a case of Charcot's joint disease of the knee, developed after a slight injury and preceding other ataxic symptoms, which had been treated by arthrodesis.

CARD SPECIMENS.

Exhibition of specimens illustrating various diseases of joints (by permission of the Curator of the Pathological Museum, Owens College), and of diagrams illustrating various diseases of bones and joints (by permission of Professor Wright).

EPIDEMIOLOGICAL SOCIETY.—At a meeting held on November 21st, 1902, Dr. PATRICK MANSON, C.M.G., F.R.S. (the retiring President), resigned the chair to Dr. W. H. CORFIELD, the new President.—Lieut.-Colonel A. M. DAVIES, R.A.M.C., read a paper entitled, What is Climatic Disease? It was formerly the custom, he said, to speak of the deadly climate of stations in the tropics, but it was soon recognized that the appalling mortality was almost wholly due to certain specific diseases or to diseases of the liver and other organs, induced by drink and bad habits. It could not be denied that these were avoidable, and the late Dr. Parkes ventured to doubt whether, apart from malaria, a tropical climate was necessarily hurtful to Europeans. Laveran's discovery of the plasmodium in 1880 attracted little attention, and it was not until since 1896 that the labours of Manson, Ross, Grassi, and others proved that malaria was not the necessary consequence of certain climatic conditions, but the result of infection by a parasite; and if Sambon's suggestion of a like specific cause of hepatitis, favoured by Osler and Manson, should be established, there would be no purely climatic diseases left but sunstroke and frostbite. It was hard to say how far the bacilli, mostly of the coli group, and the amoebae found in dysentery, were essential or accidental to the disease, which appeared to be also independent of climate or temperature: but whether the essential causes of hepatitis were specific or not, it was certain that the attacks were almost always excited by a tropical chill—one consequent on exposure to the rapid fall of the temperature at night from perhaps over 100° F. to below 60° F., as was most unusual during certain seasons on elevated plateaux in India and Africa; while hepatitis was very rare in equable, though not less tropical, climates as that of the West Indies. But a disease might be clearly due to parasites, and yet be strictly climatic if the bacilli in the extracorporeal and non-parasitic stages of their life-history required a certain temperature or other conditions. Thus yellow fever never became epidemic save

where the mean temperature was 72° F., or spread to any extent when it was under 68° F., the mean winter temperature of its tropical home. This was true of dengue also, and of the malarial fevers, the climatic conditions of which were those required by the particular species of mosquito serving as alternate hosts. Filariasis was for this reason confined to the tropics. The more one learnt of the etiology of tropical diseases the less important appeared the part played by mere climatic conditions, except in relation to the fauna and flora, which constituted the efficient and essential factors in the causation of the disease. There was, however, a disease or state of ill-health not so frequent as formerly, but strictly due to climate; the progressive anaemia, asthenia, and cachexia caused by long exposure to great heat alternating with sudden changes of temperature, inducing excessive action of the skin with hyperaemia, congestion of the internal organs, and ultimately degeneration of the liver, kidneys, etc.—Dr. PATRICK MANSON recalled how the late Dr. E. Parkes had predicted the breaking down of the barrier between the diseases of the tropics and those of temperate climates, a recent illustration of which was the discovery by Dr. Haldane of the ankylostoma in the Cornish tin mines. He was strongly inclined to the belief that hepatitis would be proved to be of parasitic origin, that the poison of the beri-beri was a product of bacteria, though generated out of the human body, and that the same might in a sense be said of the alcoholism so generally associated with liver disease. Far too much was ascribed to chills as a cause of illness, for even in a common catarrh other factors were necessary. After remarks by Lieutenant-Colonel BRUCE SKINNER, R.A.M.C., and Major MCCULLOCH, Dr. C. W. DANIELS remarked that such tropical diseases as were purely climatic would be included in the residuum left after all due to other and ascertainable causes had been excluded, but small as was the residuum on Colonel Davies's showing, he included some that could scarcely be pronounced climatic. For instance, he referred to great changes in temperature as a chief cause of hepatic abscess; but whatever might be the case in the West Indies, the disease was frequent in British Guiana, where the climate was most equable. With every advance in our knowledge diseases hitherto assumed to be climatic were found to be of parasitic origin, and it was probable that those truly due to climate would form an insignificant minority.—Dr. A. NEWSHOLME thought that in the behaviour of certain diseases in this country there was evidence of climatic influences. Nothing but meteorological factors would explain the seasonal prevalence of diseases, though, of course, other factors were necessary. As to hepatic disease, if alleged facts were such, there were three co-operative causes—climate, alcohol, and amoebae coli.—Dr. FRANKLIN PARSONS inclined to the view that in the discussion there had been too great a tendency to accentuate one factor, that of climate; whereas in most of the diseases under consideration there were three—the seed, the soil, and the weather or climate.—Dr. HARFORD observed that no one had defined the term "climatic" as applied to disease. The opener had used it as synonymous with tropical, but to a native of India scarlatina and other diseases of the temperate zone were "climatic." He believed that the number of diseases referable to meteorological conditions or chill only would in time be reduced almost to vanishing point, but he would not go so far as Dr. Sambon, who, in a paper on acclimatization, seemed to doubt altogether the influence of meteorological conditions in the production of disease, for it was evident that the effect on the vascular system of a change from a cool to a hot climate, and of that on the intestines of a complete change of diet, must render the individual more susceptible to the attacks of certain forms of disease germs.—Major FIRTH, R.A.M.C., while fully agreeing with Colonel Davies and other speakers that the malarial and other diseases commonly held to be tropical were such in respect only of the geographical limitation of their vehicles and hosts, was surprised that so little reference had been made to what he might call tropical physiology, or the influence of heat and humidity on the functions of metabolism and excretion in all but the natives: an initial elevation of body temperature, lowering of arterial tension and pulse-rate, and lessening of the respiratory function, the net result of which was a deterioration of the blood, increase of the perspiration, decrease of the volume of the urine and increased secretory action of the liver, some effete matters passing with the bile into the intestine, while the hepatic congestion involved in this excessive secretion led in time to degeneration of the liver and impairment of its functions, which might fairly be called climatic, as might certain abnormal blood states directly due to prolonged heat. Two years ago he conducted a series of observations on the urinary secretion of a number of soldiers in the Punjab, with special reference to the ratio, normally constant, between the aromatic and total sulphates, the former of which furnished a fairly trustworthy index of intestinal putrefaction and thus indirectly of imperfect metabolism, especially of proteids, and it was remarkable that all who showed a constant excess of aromatic sulphates succumbed sooner or later to the so-called ardent or simple continued fever.—Dr. BRUCE LOWE and the PRESIDENT also took part in the discussion.

GLASGOW OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.—At a meeting on December 17th, 1902, Dr. J. NIGEL STARK, President, in the chair, a discussion on minor degrees of contracted pelvis was introduced by Dr. J. M. MUNRO KERR. After referring to the inaccuracy of all the methods employed to measure the pelvis, he noticed that it was just in these cases that accurate measurements were of use in determining treatment. Measurement of the brim by means of the fetal head which had to pass through it was discussed. Diagrams illustrating the methods of Müller and Pinard for estimation of the time for induction of labour were shown, and the speaker described his method of determining the capacity of the pelvis for the fetal head. By observing the descent of the head into the brim when pressed from above, as in Müller's method, the thumb of the hand whose fingers were in the vagina could readily estimate the amount of the fetal vault which overhung the symphysis when that sign was present. Two drawbacks to these manœuvres were mentioned: the first was the necessity for general anaesthesia in many cases, and the second was that the breech often presented. In such cases no treatment was called for till labour had been in progress for some time, and an idea had been given as to the possible amount of interference which would be necessary. Contraction of the conjugata vera to about 3 in. was considered as constituting the "minor" degrees of contracted pelves. A number of factors which would influence treatment were enumerated, such as the term of pregnancy, the condition of the mother, the presence of complications, the nature of the presentation, the condition of the fetal heart, malformations, prolapse of the cord, and multiple pregnancy. The obliquity of Nägele was considered more favourable than that of Litzmann, as was also the location of the occiput towards the larger side of the pelvis when the contraction was irregular. The bearing which the consistency of the head had on the prognosis of the delivery was referred to. The use of the forceps was contrasted with the operation of version, and the higher mortality and morbidity of the latter were pointed out. The employment of the forceps below $3\frac{1}{2}$ in. was dangerous to both mother and child. The indications for symphysiotomy were given, and with regard to measurements, from $2\frac{3}{4}$ in. to 3 in. were considered as the margins, though in exceptional cases this operation might be necessary with larger dimensions. The section of the symphysis should only be undertaken when there was little overlapping of the latter by the head. A presentation of the breech and fetal heart involvement were contraindications. The induction of premature labour was considered to be preferable if the proper period of the pregnancy could be ascertained and taken advantage of. The induction of labour below 3 in. was deprecated. Caesarean section was not often required in the minor degrees, but the amount of previous interference to get delivery was to be carefully considered before the operation was decided upon. Professor MURDOCH CAMERON thought that the external methods of estimation of how much the fetal head was too large for the pelvis were deceptive, and that a better knowledge could be got by introducing the entire hand into the vagina and palpating the entire brim. The occiput should be directed towards the wide side, so that engagement in the bitemporal diameter might be got. Below $3\frac{3}{4}$ in. the bitemporal always engaged, and above that a full-term child was to be expected to be born alive unaided. Symphysiotomy ought not to be done with the diameter (C.V.) under 3 in., and great care was necessary in selecting the proper cases. Professor Cameron was not an advocate of version; it was especially bad practice after the forceps. Induction of labour was to be carried out in pelves about $3\frac{3}{4}$ in., and about the seven and a-half or eighth month. Forceps might possibly be also required. Under 3 in. Caesarean section was required.—Dr. S. SLOAN thought that the treatment must be regulated by the past history and from

the clinical facts. He referred to contraction caused in the pelvis by obesity, and remarked upon the influence of thyroglandin in its treatment. He protested against the exclusive use of one pattern of forceps and regretted that the straight forceps had all but gone out of use. A case was described by Dr. RITCHIE where Dr. Sloan had delivered a woman of a living child after the other forceps (Milne-Murray's) had failed; the head lay above the brim. The great ease with which the straight forceps permitted rotation in the pelvis was advanced in their favour. Dr. SLOAN showed his own antero-posterior forceps which he employed for compression of the head. Dr. JARDINE remarked upon the diagnosis of contracted pelvis in a primipara from the appearance of the abdomen, and especially from the position of the child's head. He mentioned that the delivery was more likely to be successfully done by the forceps when the obliquity of Nägele was present; if the posterior obliquity (Litzmann's) was present great difficulty was likely to be encountered, and version was considered to be then the operation of election. He agreed with the statements made by Dr. Kerr regarding the induction of premature labour, but mentioned that such a method of treatment might be necessary even in pelves with a C.V. of 4 in. This would depend on the size of the child's head. Dr. KELLY agreed in the main with the opening remarks, and where there was no history of previous labour he advised the routine examination of the pregnant woman in the course of her confinement. Dr. ALEX. MACLENNAN laid stress upon the use of examination of the abdomen in all patients about four weeks previous to term, and to the ease with which disproportion between the head of the child and the pelvic brim could be ascertained. The PRESIDENT said that the discussion had had a distinct educative value. He recommended an early diagnosis so that the correct treatment might be instituted at the proper time, and that a variety of operations might not be performed one after the other. He agreed that the gross deformities were often less important, and that the minor deformities often escaped observation. The unrestrained use of chloroform in all cases where difficulties presented themselves was strongly advocated. Dr. KERR replied.

MIDLAND MEDICAL SOCIETY.—At a meeting held on November 19th, 1902, Dr. LANGLEY BROWNE in the chair, Dr. CHARLES showed a specimen of cardiac aneurysm:

The patient was a woman, aged 56, who had lived a temperate and hard-working life. She was admitted into general hospital under Dr. Simon for dilated heart with dyspnoea. The arteries were thickened, but the urine was normal. After being in hospital about three weeks, she suddenly fell back when eating her dinner one day and died within a minute or two. On *post-mortem* examination the pericardium was found distended with sixteen ounces of blood. At the apex of the left ventricle was an aneurysm about the size of a tangerine orange filled with clot. The heart was dilated surrounded by masses of fat, and the muscle wall was exceedingly soft and fatty. The coronaries were markedly atheromatous, as was also the aorta. The kidneys were sclerotic and cystic.

Dr. PURSLOW showed a fleshy mole. The interest of the case lay in the history:

The patient, who had never been pregnant previously, last menstruated at the end of October. From then until the end of February there was amenorrhoea. She then consulted Dr. Purslow, who diagnosed pregnancy, but was inclined to think that the pregnancy was of shorter duration than the amenorrhoea, as the size of the uterus did not exceed that of the eighth or ninth week. Shortly after this sanguineous discharge set in and continued for five weeks. This completely ceased, and there was absolute amenorrhoea until October 9th—exactly seven months. On that day severe abdominal pain with haemorrhage set in, and on making a vaginal examination a mass was felt presenting at the os. This was easily removed with ovum forceps and proved to be a fleshy mole of the size of a hen's egg, containing a distinct amniotic cavity, but presenting no traces of a fetus.

Dr. Purslow drew attention to the fact that during a period of seven months there was no vaginal discharge whatever, and thought such a long period of retention of a fleshy mole without symptoms must be very rare. The subsequent history of the case showed that at the time of the first examination the disproportion noted between the size of the uterus and the duration of the amenorrhoea must have been due to the fetus having died at an earlier stage of the pregnancy. Dr. Purslow also showed a specimen of broad ligament cyst with pyosalpinx.

The patient, aged 28, married six years, never pregnant, was admitted into the Queen's Hospital with a tumour in the lower part of the abdomen, which presented all the physical signs of a multilocular ovarian cyst. It was about the size of a six months pregnancy, soft and fluctuating in its upper part, and below and in front harder and more irregular. On opening the abdomen, the cyst presented at the wound, and was tapped and drawn from the abdomen. It was then seen to be a cyst of the broad ligament, and the ovary, unaffected, was seen on its surface. The nodular swelling in front proved to be a much-distended Fallopian tube. The fluid in the cyst, which measured about 1½ pt was thin and watery, that in the tube measured 4½ cz, and was found to be pus. It proved possible to tie off the broad ligament below the cyst and tube, and to remove them entire, and leave the enveloping peritoneum undisturbed. The patient had made a good recovery. The curious point was that the cyst in growing had displaced the tube downwards and forwards, so that it lay immediately behind the pubes. The uterus was retroverted and lay behind and below both cyst and tube.

Mr. JAMESON EVANS showed a specimen of Foreign Body in the optic nerve.—Mr. JORDAN LLOYD read a paper On Chronic Indigestion and its Treatment by Surgical Operation.

NORTH OF ENGLAND OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.—At a meeting held at Manchester on December 19th, 1902, Dr. S. BUCKLEY, President, in the chair, Dr. LLOYD ROBERTS (Manchester) showed a specimen of a papilliferous cystadenoma removed from the abdominal wall fourteen years after ovariotomy.

The patient, aged 48, married, 7-para, last child born four years ago, had noticed a lump in the abdomen for about six months. It was steadily increasing. The left ovary had been removed for cystic tumour fourteen years previously. The abdomen was opened and about 3 pints of ascitic fluid escaped. The tumour was found to be attached to the cicatrix, and was intimately connected with the parietal peritoneum. Some coils of intestine adhered to the under surface and required separation. The cyst was carefully detached and removed. There was no pedicle. The right ovary was healthy, and there was no trace of the left ovary, which had been removed fourteen years before. The patient recovered.

The specimen was described as a papilliferous cystadenoma of the subperitoneal tissues of the abdominal wall. The structure, closely resembling that commonly occurring in the ovary, suggested that the growth was secondary to the ovarian tumour previously removed.—Dr. S. BUCKLEY (Manchester) showed a large fibromyoma and cystic ovaries removed by abdominal section.

The operation was undertaken in consequence of severe pain, especially on the left side, which had existed for two or three years. There had recently been an increased menstrual flow, but this increase had not been sufficient to interfere with nutrition. When the abdomen was opened a large fibroid was found attached by a short broad pedicle to the fundus uteri. The growth was removed by myomectomy, as also were two smaller fibroids from the anterior surface of the uterus. The ovaries were found cystic and enlarged to the size of large walnuts. They were adherent and wedged between the tumour and the uterus and after separation were removed together with the tubes.

It was probable that the severe pain had been chiefly due to the condition of the ovaries and to their compression by the growth. The patient recovered well and was free from pain.—Dr. W. WALTER (Manchester) showed a solid ovarian tumour removed from a patient, aged 58.

The swelling had been noticed about three years, but during the last twelve months it had increased rapidly and the presence of ascites had become obvious. There was no loss of flesh or cachexia, but the patient's three sisters had all suffered from abdominal tumours. The tumour had a short pedicle and was so closely adherent to the back of the uterus that the signs were those of an uterine rather than of an ovarian tumour. The ascitic fluid was reddish and amounted to about two pints. The other ovary was cystic and contained a small fibroid nodule.

Microscopic sections showed the growth to be a simple fibroma with commencing myxomatous degeneration. The patient made a good recovery. The difficulty of diagnosis and prognosis in solid ovarian tumours was discussed.—Dr. WALTER also showed an ovarian cyst with twisted pedicle. The tumour had been known to be present for some time, but rapidly increased in size after an injury. Sections of the cyst showed interstitial haemorrhage which had separated the layers of its wall.—Dr. H. BRIGGS (Liverpool) showed:

(1) A small ovarian cyst (2½ in. by 4½ in.) associated with metrostaxis and retrouterine haemorrhage. The source of the bleeding was not obvious, but there was no evidence of any form of ectopic gestation. (2) A fundal fibroid polypus and inverted uterus. The uterus and growth had been successfully removed by vaginal hysterectomy. The patient having passed the menopause, no attempt was made to save the uterus. Reposition of the uterus after removal of the polypus would no doubt have been impossible. (3) Early cancer of the cervix uteri, with questions as to the early symptoms of the disease.

—Dr. ARNOLD W. W. LEA (Manchester) related a case of acute prolapse of the urethra. Owing to the oedematous and strangulated condition of the prolapsed mass it was found necessary to resect this part of the urethral mucous membrane. The result was satisfactory. The cause of the condition was obscure. There was a little cystitis, but this was probably not present before the attack. Masturbation was suspected.—The papers were discussed by Drs. W. WALTER, H. BRIGGS, A. DONALD, T. B. GRIMSDALE, W. E. FOTHERGILL, LLOYD ROBERTS, E. T. DAVIES, and Mr. STANMORE BISHOP.

CHELSEA CLINICAL SOCIETY.—At a meeting on December 16th, 1902, Dr. C. C. GIBBES, President, in the chair, Mr. A. F. PENNY read a paper on oral sepsis as a factor in the causation of disease, and referred to the extraordinary manner in which local septic conditions in connexion with dis-

eased teeth were overlooked. Oral sepsis was the commonest and most noxious of all forms of infection in rich and poor alike. The organisms in connexion with dental cario-necrosis were pus-forming organisms of a most virulent kind, and the infection was of a mixed character. In the stomach and intestines the most marked effects of oral sepsis were to be found. Cases were cited illustrating the extraordinary beneficial effect produced in chronic dyspepsia by remedying the oral septic condition, and stress was laid on the advisability of examining the teeth in every case. The matter was of great importance from a surgical, medical, and dental point of view. The surgeon who took every possible precaution, as he imagined, to render his patient aseptic before operating, performed operations of the gravest character on the stomach and intestines, while the patient's mouth was septic and full of necrotic teeth. The dentist extracted teeth, and left open wounds in a place most prone to infection. Cases showing the grave toxic effects were cited, including a case of what at first sight appeared to be subacute rheumatism, but which cleared up rapidly after the mouth had been rendered aseptic.—A discussion followed, in which Drs. GIBBES, PALMER, and WALLIS took part.

PATHOLOGICAL SOCIETY OF MANCHESTER.—At a meeting of this Society, held on December 10th, 1902, Dr. H. A. G. BROOKE, the President, in the chair, Dr. ASHBY gave a communication on rickets and achondroplasia, illustrated by a series of sections thrown upon the screen by micro-lantern.—Dr. MILLIGAN made remarks upon the etiology and pathology of aural polypi, illustrated by limelight views of microscopic sections of the various forms of polypi usually met with in ear disease. Special reference was made to the histological characteristics of these growths, and cases were mentioned illustrating various points which were of importance from the clinical aspect. In addition, various photographs were demonstrated and explained. Mr. SOUTHAM made remarks on a second series of fifty cases of recurrent appendicitis, and showed specimens to illustrate the various pathological conditions met with in this affection; 23 of the cases, or not quite one-half, occurred in persons between 20 and 30 years of age, this being the period of life during which recurrent appendicitis is most common. The youngest patient was 10 and the oldest 53 years of age. In 5 cases the operation was performed after a first attack, and in each instance marked lesions were found in the appendix, so that there would have been a recurrence of the attacks if it had not been removed; in 10 cases the patients had suffered from a second attack; in 6 instances faecal concretions were found in the appendix; and in 11 cases, after several attacks had subsided without any formation of pus, suppuration had eventually occurred and necessitated operation. Several cases were mentioned where, after attacks of acute suppurative appendicitis, the patients had suffered from further attacks, which subsequently required removal of the appendix. Attention was called to the fact that in many cases marked changes were found in the appendix, and yet in the quiescent periods between the attacks there had been an entire absence of any local signs or symptoms. It was mentioned that all the patients made a good recovery from operation.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—At a meeting held on November 27th, 1902, Dr. J. H. STOWERS, President, in the chair, Dr. E. STAINER showed three cases of scleroderma. Dr. E. GRAHAM LITTLE showed: (1) A case of parapsoriasis in a small boy; (2) a case for diagnosis. Mr. A. SHILLITOE showed a case of tertiary syphilis. Dr. A. EDDOWES showed: (1) A case for diagnosis; (2) a case of barber's dermatitis. Dr. W. WARDE showed a case for diagnosis. The PRESIDENT then read his address on mycosis fungoides.

BRITISH ELECTRO-THERAPEUTIC SOCIETY.—The ninth meeting of this Society was held on December 5th, 1902, Dr. W. S. HEDLEY, President, in the chair. Drs. David Arthur and G. B. Batten were appointed auditors. Mr. EDMUND OWEN then delivered an address to the members of the Society, which is published at page 1. Mr. Owen was proposed for election as an honorary member. An exhibition of electrical apparatus then followed, the exhibitors being: Messrs. J. E. MONTAGUE, skiagraphs; ISENTHALL AND CO., high frequency and the nodon valve; H. W. COX AND CO., high frequency, etc.; A. E. DEAN, high frequency, etc; K. SCHALL, electrical apparatus; the Dowsing radiant heat baths; J. DAVIS, various mineral waters. The meeting concluded with a successful *conversazione*.

REVIEWS.

ELECTRO-THERAPEUTICS AND PHOTOTHERAPY.

THE fact that a third edition of Dr. DAWSON TURNER'S *Manual of Practical Medical Electricity*[1] has been called for, indicates that it has achieved popularity. The new edition is larger by a third than the first, which was published in 1893. The first half of the book is devoted to the physics and physiological effects of electricity, and the author's attempt to condense the extensive literature of the subject within small limits is fairly successful, though it may be, here and there, objected that clearness of description is sacrificed to considerations of space. The illustrations are numerous and well executed, but some of them seem superfluous. In the section devoted to electro-diagnosis, attention is specially directed to the electrical resistance of the body, and a table is given in which the specific resistance, in ohms, of some of the tissues is set forth. It is pointed out that the variations in the degree of resistance to electricity in the urine or blood may be utilized in certain diseased conditions as a valuable aid to diagnosis and prognosis, but the author's careful experiments are more interesting scientifically than useful practically, and do not add much to either the accuracy or convenience of present clinical methods. A good account is given of the Apostoli plan of treatment for fibroid tumours. The therapeutic results of electricity are notoriously uncertain, and the statement that "the symptoms of lateral sclerosis can frequently be relieved by stable continuous currents," and that in acute rheumatism "pain and fever can be diminished, and the duration of the disease shortened" are surely not meant to be true as applied to the majority of cases of either the one disease or the other. From the Roentgen rays and Finsen's light most brilliant results have been recorded, but we doubt whether such diseases as phthisis and carcinoma ought to be placed at the head of a list of ailments for which one or other of these forms of treatment is suitable. We expected to find more detailed reference to the promising achievements of high-frequency currents. The work done by d'Arsonval, Doumer, and others in this latest field of electro-therapeutics is at present exciting considerable attention, and seems deserving of a more prominent position than is conceded to it in Dr. Dawson Turner's latest edition.

We have received the second edition of a book on *Electricity in Medicine and Surgery*,[2] by Dr. W. H. KING, of New York, the first edition of which was published so recently as May, 1901. Certain sections have been revised, but the new volume is practically a reproduction of the earlier edition. It is divided into two parts—the first dealing with physics, diagnosis, *x* rays, etc., and the second being devoted to therapeutics. Special sections on electro-physiology and on the Bottini operation are contributed respectively by Dr. W. Y. Cowl and Dr. Albert Freudenberg, both of Berlin. There is nothing very distinctive about the book, which is well printed and abundantly illustrated. The chapter on motor points is one of the best, separate mention being made of each muscle and of the exact point for the stimulation of its supply nerve. The reaction of degeneration is well described. On the whole, Part I may be said to be fully up to the average of textbook descriptions of electro-physics. In Part II the usefulness of the various forms of electricity as a therapeutic agent is extravagantly extolled, and after its perusal we are left in wonder whether there is any form of disease to which the author thinks them inapplicable. The following sentences, taken at random, will indicate the extent to which this enthusiasm is carried: "Some cases of cerebral softening and sclerosis have been reported cured by the local application of the galvanic current to the head." In chorea "the marked results frequently following electrical treatment are so apparent that there can be no mistake regarding its efficacy." Progressive muscular atrophy "is one of the diseases in which nearly all the authorities agree that electricity is one of the best therapeutic remedies." In constipation, medication, it is said, sometimes fails the patient; "at this critical juncture electricity can be depended upon to relieve and permanently cure 90 per cent. of the cases." Again, "It is a very gratifying fact that some of the most

[1] *Manual of Practical Medical Electricity.* By Dawson Turner, B.A., F.R.C.P.Edin., etc., Lecturer on Experimental Physics, Surgeons' Edinburgh. Third Edition. London: Baillière, Tindall, and Co. (Pp. 396. 7s. 6d.)

[2] *Electricity in Medicine and Surgery.* By William Harvey King, New York. In two parts. Second edition. New York: Boericke Runyon Company. 1902. (Pp. 564. $3.50 net.)

obstinate cases of nausea and vomiting during pregnancy, and those that resist every other form of treatment, will yield readily to electricity." These are but a few of the innumerable examples that might be quoted to support the contention that this book, like many others of its kind, claims for electricity far more than accurate observation has yet proved it capable of accomplishing. Its cause as a new and promising department of curative medicine is seriously prejudiced by attempting to place it in the position of a panacea for all the ills to which flesh is heir.

The English edition of Professor FINSEN'S little book on *Phototherapy*,[3] prepared by Dr. J. H. SEQUEIRA, is welcome at the present time, when so much interest is taken in the subject. The first part is devoted to the red light treatment of small-pox. This subject was dealt with so fully in our columns a few years ago that we may be excused further reference to it beyond saying that in a recent Lyons thesis (1901), Bayle states that Courmont tried the method with negative results, and the French observers found that patients exhibited mental irritation and begged to be placed in ordinary daylight. Professor Finsen then describes some interesting biological experiments showing the effects of light on salamander eggs, etc.; but the last part of the book, which deals with the treatment of lupus vulgaris by means of concentrated chemical rays, will appeal more specially to medical men. It is not necessary to go into the details of the method, as it has been fully described in these columns (BRITISH MEDICAL JOURNAL, September 30th, 1899). The subject has been brought up to date in an appendix by Dr. Sequeira, which is based on a paper by Dr. Forchhammer, who is in charge of the clinical work at the Copenhagen Light Institute. There can be no doubt as to the efficacy of the Finsen treatment in lupus vulgaris, but there are cases in which it fails and recurrences occur; pyrogallic acid and other applications are also employed in conjunction with the light. The portable and cheaper Lortet-Genoud lamp, and the numerous modifications of it, differ from the Finsen apparatus in that the rays are not gathered together and brought to a focus on the diseased part. Experiments are now going on in the experimental laboratory of the Copenhagen Lys Institut, with a view to combining the Finsen system of lenses with the Lortet-Genoud arc-light apparatus in the hope of obtaining a better therapeutic result. The light treatment necessitates many sittings, even hundreds in extensive cases, and regularity of attendance. As with other methods of treating it, lupus vulgaris must never be left alone as long as any diseased focus, however small, remains. In lupus erythematosus, the results vary. The disease may be benefited, uninfluenced, or even aggravated by the light treatment. Experiment must decide. Good results have been obtained in rodent ulcer by means of the Finsen apparatus, but whether complete cures have been achieved in this way, the future will show. Whatever the upshot may be with regard to the light treatment, Professor Finsen deserves great credit for the persevering and scientific way in which he has worked out the subject, and also for the scrupulous care he has always taken to preserve it from the taint of quackery and self-seeking.

MISCELLANEOUS.

IT is not to be expected that the members of the "agricultural oligarchy," as the author calls the agricultural classes in Ireland, will find *The Green Republic*[4] agreeable reading. It presents too accurate a picture of their shortcomings, but no person reading it will be able to rid himself of the striking and often novel ideas with which its pages bristle however much he may desire to forget them. The scene of the character, sketches, and conversations related in this remarkable book is laid among the rural population of a portion of Ireland where the mixture of Scotch hardness and Irish laziness has produced a breed that is very typical of the province of Ulster. The theme of the author is a modification of land nationalization. He shows plainly enough that were the other industries of the world worked by the same system of unorganized and unskilled labour as agriculture is almost everywhere, except in the Western States of America and Canada, they would immediately break down and end in bankruptcy, and it is his opinion that the individual farmer will in the end work out his own annihilation. His conclusions may be expressed in one sentence: "He knows too that there must be limits to public tolerance of the waste and abuse of the land, and of dependence on food raised abroad, that the trespass on the ignorance and stupidity of the people (that is, industrial classes) is going too far." There are probably few thinking men who will not agree with the author that sooner or later the masses in Great Britain and Ireland will ask themselves the question why their land should be allowed to go waste or half cultivated while they must procure the bulk of their food from abroad. The first big war in which we are involved with another great naval power may be expected to bring about radical changes not for the benefit of the farming interest. The remedy Dr. O'GARA suggests is the cultivation of large areas by joint stock companies employing one or more capable agriculturists as managers, and utilizing machinery to its fullest extent, with the primary object of providing the largest possible amount of food for the people. Incidentally the author pictures the various types of the Irish dispensary medical officers, their work and their hardships, in realistic language. "In dispensary work you are disheartened by finding that often you can do little and sometimes nothing at the expense of an enormous amount of work. I drive five miles to see a patient lying in a miserable hovel without proper food, without an intelligent nurse, without the means of applying treatment. I have to tell Murphy that I cannot see him again for two or three days, that he cannot be treated where he is, and he must go into the workhouse hospital. Murphy takes this for sentence of death. I send the van for him; it is all I can do.....I have only half a dozen patients at a time, but as they are scattered over a district of 30,000 acres the work is mostly travelling." This is a true picture of the hopeless sort of task the medical officer of almost every rural dispensary in Ireland has to undertake.

In *Wellington's Lieutenants*[5] Mr. SHAND has given a sketch of the careers of eight great leaders who fought under Wellington—Lord Hill, General Craufurd, Sir Thomas Picton, Marshal Beresford, Lord Lynedoch, the Earl of Hopetoun, the Marquis of Anglesey, and Lord Combermere. We follow their independent battles, victories, and defeats, at the same time gathering an impression of their good understanding with their great chief. Among his lieutenants in the Peninsula there was none in whom Wellington reposed more absolute confidence than in Rowland, Viscount Hill. We follow Hill's heroic exploits through the Peninsular war, and to Waterloo, where at the head of the Light Brigade he charged the solid phalanx of Napoleon's Old Guard in such a *mêlée* as will seldom be seen again in these days of smokeless powder and long ranges. "Volleys at half pistol-shot," as a staff officer describes it, were followed by hand-to-hand fighting and heroic single combats. It was then that Napoleon dropped his glass, with the despairing exclamation, "*Mon Dieu, ils sont mêlés!*" Hill had his horse shot under him; the charger had five bullets through the body. Next day, with Wellington, Hill visits Blücher. Neither of the veterans seemed to have been much shaken by their falls, for, as Hill wrote to his sister, they found the old marshal amusing himself with Buonaparte's hat, star, and personal baggage, which with his carriage had been taken by the Prussian cavalry. After Waterloo, Hill passed twelve years quietly in his country home in Shropshire; then he was selected by Wellington to be Commander-in-Chief. The veteran complained bitterly at being besieged by applicants—chiefly ladies—with petitions. When asked how he got rid of these supplicants, he answered with a twinkle in his eye, that he received them in a room with a single chair, and insisted on their being seated. "Then they are sorry to see me standing, so they do not stay very long." Hill resigned in 1842 and died shortly after. He had given up the quiet rustic life in which he delighted to serve his country. Then Mr. Shand tells the stories of the stern Craufurd and the rugged Picton. In the most critical emergencies, in advance or retreat, in directing, scouting and mounting the guards, in protracting the audacious games of bluff before the overwhelming forces of a vigilant enemy, Craufurd was the soul of the Field Intelligence Department, wielding a sword that was ever ready to feint to strike or to parry. There is a touching picture of Napier, who had had his shattered arm amputated, and Craufurd, dying, lying in different rooms of the same house, and sending messages to each other. At the storming of Ciudad Rodrigo a ball had

[3] *Phototherapy*. By Professor Niels Finsen, Copenhagen. Translated from the German edition by James H. Sequeira, M.D., M.R.C.P. London: Edwin Arnold. 1901. (Demy 8vo, pp. 88. 10 illustrations. 4s. 6d.)

[4] *The Green Republic: a Visit to South Tyrone*. By A. P. A. O'Gara, M.D. London: T. Fisher Unwin. 1902. (Crown 8vo, pp. 248. 6s.)

[5] *Wellington's Lieutenants*. By Alexander Innes Shand. London: Smith, Elder, and Co. (7s. 6d.)

passed through Craufurd's arm, traversed his body, and lodged in the spine. He died, and his solemn burial is described "six rugged veterans" carrying the coffin, all six in tears. If we remember what those veterans had gone through, and how hardened they had become to death and suffering, no soldier could receive a more impressive tribute. Wellington and many of his lieutenants seemed to have charmed lives, yet in those days of point-blank volleys from the musket, with the clashing of sabres and the crossing of bayonets, these were continually in the thickest of the *mêlée*. The Duke was only once hit—by a spent ball at Orthez. Hope, who was the most conspicuous of marks, had seven bullets through his clothes before Bayonne, and escaped with a scratch. Not one of them spared himself. Picton lived to fall in the closing battle of the long war, and the others retired on their laurels, to die peaceably in their beds. Craufurd was the solitary exception, and, if his career was prematurely cut short, he died as he had often desired to die. Wellington's philosophic coolness was proverbial. Once when passing the French in a dense fog, he could see nothing, but some prisoners on being questioned said, to the dismay of every one except Wellington, that the whole French army was there. All he said was, quite coolly: "Oh, they are there, are they? Well, we must mind a little what we are about." And when Lord Uxbridge's leg was shattered by a shell when riding beside Wellington, he quietly remarked, "By God, I am hit!" and his chief as calmly replied, "Are you, by God?" Shakespeare must have been thinking of heroes such as these when he wrote:

> Life every man holds dear; but the brave man
> Holds honour far more precious—dearer than life.

NOTES ON BOOKS.

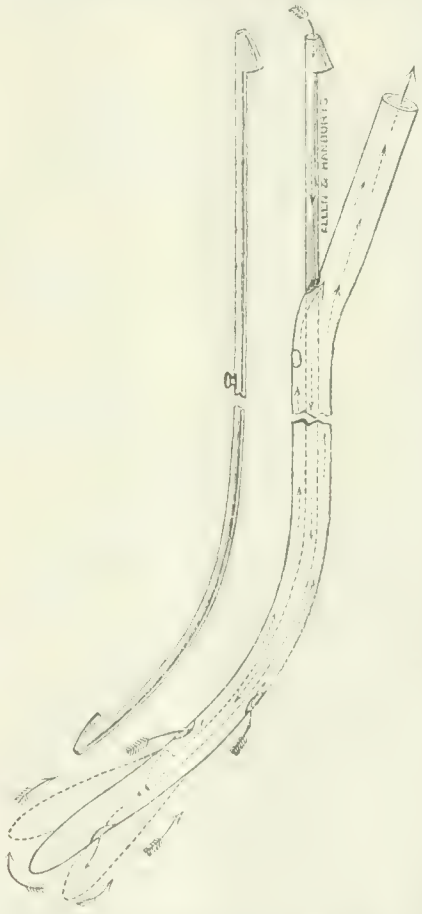
WE have received from Messrs. J. and A. Churchill, 7, Great Marlborough Street, London, W., a copy of the *Medical Directory* for 1903 (148.). The appearance of the volume has been materially altered; the size of the page has been enlarged to royal octavo, thereby reducing the thickness of the volume. The binding differs a little from that previously used, and bears the date on the side covers as well as on the back. The abstract of the principal laws affecting the medical profession prepared by Mr. R. G. Glenn and revised by Mr. E. A. Armstrong, barristers, appears again with certain improvements in typography, which will render it easier for reference. It contains a brief reference to the Midwives Act as part of an article on the events of the past year. A somewhat fuller statement of the provisions of the Act will, we hope, be a permanent feature of this section of the *Directory* in the future. The volume contains 37,291 names, as compared with 36,788 in 1902, an increase of 503. The number of members of the profession resident in London and Wales remain almost stationary, the increase in London being only 17, and in Wales 3; the provincial list for England contains 190 names more than last year, equivalent to an increase of about 1.2 per cent.; Scotland with 35 more names shows a rate of increase of under 1 per cent., whereas the 54 additional names in the list for Ireland shows an increase of nearly 2.2 per cent. There are 165 more names in the list of registered medical practitioners resident abroad, an increase of about 4.2 per cent.; the number of the officers of the naval, military, and Indian medical services has increased by 31, the total being 2,917. It is rather surprising to find that the rate of increase has been greater in Ireland than in England. Of the general accuracy of this issue of the *Directory* we are of course unable to speak, but the daily experience of previous issues renders us fairly confident that there can be little left to desire in this respect.

PAY OF MEDICAL OFFICERS OF THE RUSSIAN ARMY.—Under the revised scale of pay recently approved by the Czar, medical officers of the Russian army on entrance to the service draw pay at the rate of £80 a year. After five years this is increased by annual increments so that after nine years' service the officer is passing rich on £96 a year. After a further period of four years he gets £130 a year, and four years later—that is, after seventeen years' service—he reaches the dazzling amount of £150 a year. The highest point to which he can ever hope to attain is £550. Whatever may be the honour and dignity, privileges and prerogatives attaching to the position of a medical officer of the Russian army, Dr. Johnson could not have said of the service that it offered the potentiality of growing rich beyond the dreams of avarice.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEDICAL AND SURGICAL APPLIANCES.

A Double Channel Wash-out Catheter.—Dr. JAMES MACMUNN (Finsbury Pavement, E.C.) writes: In the BRITISH MEDICAL JOURNAL of June 8th, 1901, I described some useful modifications of the rubber catheter. I now desire to call attention to some others I find very helpful. The illustration shows an ordinary rubber catheter, but with extra perforations, and containing a metal tube (shown also alongside) by which a double channel (with the catheter) is afforded. In this way a contrivance is made, which I have found the least hurtful and most useful of this class of instruments. The little tube can be removed at will, cleaned, and pushed into any medium-sized rubber catheter which is made wet. It can be bent to dip into post-prostatic pouches. The instrument has been made for me by Messrs. Allen and Hanburys. Another most satisfactory use I make of the rubber catheter is as a guide for long endoscopic tubes for the deep urethra or the bladder. Years ago (in the BRITISH MEDICAL JOURNAL) I advised bougies for such purposes, but the plan now suggested is far better. Let those engaged in this work do the following, and they will ever after eschew "prostatoscopes" with their little "windows," nor will they continue to chafe the urethra by the blind pushing of unpiloted tubes. Let them quite fill a long tube by a rubber catheter, the latter being itself filled by a large wire inserted up to about 1½ in. from the tip of the catheter. Let them allow this catheter to project some 2 in. beyond the distal end of the tube. This will make an instrument easy to pass and easy to withdraw. To render examination perfect let the rectum be pulled back to straighten the deep urethra. Acetylene light, and a good perforated mirror, will be a good substitute for electric light, and the rectum lit up by an electric lamp, whilst a long modified endoscope is used, holds out, with me, the promise of a simple and inexpensive mode of cystoscopy.



Adjustable Stretcher Cover.—Major R. CALDWELL, F.R.C.S., D.P.H., R.A.M.C., has devised an adjustable stretcher cover intended to prevent the contamination of stretchers occupied by persons suffering from communicable disease. It consists of a waterproof sheet of sufficient dimensions to cover all parts of the stretcher, including the pillow, which are likely to be brought into contact with the patient. It is furnished at each corner with tapes and buckles, by which it can be fastened to the stretcher handles and so secured against displacement. It can be readily adjusted, readily removed, readily disinfected. It is manufactured by Messrs. Evan Wormull, Stamford Street.

NEW OUT-PATIENT DEPARTMENT OF THE LONDON HOSPITAL.

THE new out-patient department of the London Hospital, which is to be formally opened by their Majesties the King and Queen this year, is a lofty pile of red brick building opposite the south-west corner of the hospital grounds; it is connected with the main hospital buildings by a subway under Turner Street, E., which forms the western boundary of their grounds, and has a south frontage and main entrance in Oxford Street, E., the continuation of which forms their southern boundary. It consists of a large central hall, which is capable of seating 900 patients, passing from the ground floor through the first and second floors to the roof, around which are grouped the different consulting and special waiting rooms.

New out-patients, who must all attend in the first instance at the main hospital entrance, are referred thence to the out-patient department, and to the appropriate part of it, and they enter the new building by the main doorway from Oxford Street, E.

Patients on entering pass into a vestibule, in which are a number of pitch-pine seats, where they remain until their turn comes for registration. They then file past two registration offices—for medical and surgical patients respectively—where the necessary particulars are entered and the proper cards given out. The cards are filed on an ingenious alphabetical plan, with a different colour for each member of the staff. The card files are kept in a series of shelves in a compartment adjacent to each registration office. After having received their cards, the patients enter the general waiting hall, the surgical passing right and the medical left: the old cases arranging themselves, according to printed notices, separately from the new.

The spacious waiting-hall is lighted from the roof in the day time and by powerful globe arc lights at night. On a mosaic floor are arranged in rows some hundred pitch-pine benches, half being for medical and half for surgical patients. On the ground floor to the right are the surgical rooms, to the left the medical rooms, in front facing the entrance is the dispensary, on the same level as the dispensary and to the left is a refreshment bar, on each side of the dispensary is an exit for medical or surgical patients into the street. On the face of the walls of the well of the hall at the level of the first and second floors are gangways connecting the special departments. There are two electric lifts connecting the different floors, and wherever patients are required to wait—and this applies to the whole of the building—ample lavatory accommodation is provided. The hall is warmed with hot-water radiators and ventilated by a system of Tobin's tubes.

Two surgeons are in attendance, to each of whom is attached three fully-qualified assistants with nurses and dressers. Each surgeon has a precisely similar set of rooms in his department. At the south side of the department is a long waiting room well warmed and comfortably appointed for new male cases. It is wide enough to allow of the surgeon and his senior clinical assistant (who must not only be qualified but must have also held house appointments), passing down the line in order to make a provisional arrangement for their examination and treatment. At the end of the waiting room is a small well-appointed consulting room for the senior clinical assistant who examines and treats, under the supervision of the surgeon, the less serious cases. At right angles to the door of this room, and at the end of the waiting room a door leads into the large main consulting room, with mosaic floor, distempered walls, well heated with radiators, and lit by numerous windows and electric incandescent lights. Behind the surgeon's table are chairs for students and visitors. The ordinary accessories, sterilizers, testing apparatus, hot and cold water sprays of special design, and everything requisite, including dark blinds to all the windows, are provided. A glass door opens from the consulting room to a dressing room for male patients, in which the student dressers attend to the cases as directed. This is likewise a commodious room, well fitted with water supply and sinks. A feature in this room is a curtained recess, in which is a couch for special examinations for which a degree of seclusion is desirable. Corresponding with the waiting room and dressing room are duplicate rooms nearer the middle of the department for female cases; in this dressing room the work is done by nurses under skilled supervision. For the old cases there is a consulting room used by the junior clinical assistant—also a qualified man—which communicates with the main consulting room, together with waiting rooms for male and female cases. The two dressing rooms are common to old and new male and female cases respectively. Each surgeon has a small theatre for minor operations, well lighted by windows, and capable of being brilliantly lighted by electric light. The floor, as throughout the building, is a mosaic tile, and the walls are of opalite. Adjacent to it is a recovery room; and in the corner, near the senior clinical assistant's room, is a dark room for laryngoscopic and other special examinations. The arrangements are duplicated for the second surgeon sitting simultaneously.

On the other side of the great hall, turning to the left after passing the registration office, is the medical department. This corresponds very closely with the surgical. There are similar consulting rooms for the two physicians for the day and their clinical assistants, and similar waiting rooms for old and new male and female cases, but there is nothing, of course, corresponding with dressers' rooms or with the operating theatre. The consulting rooms are completely fitted with testing apparatus, pedestal electric lamps, and dark blinds.

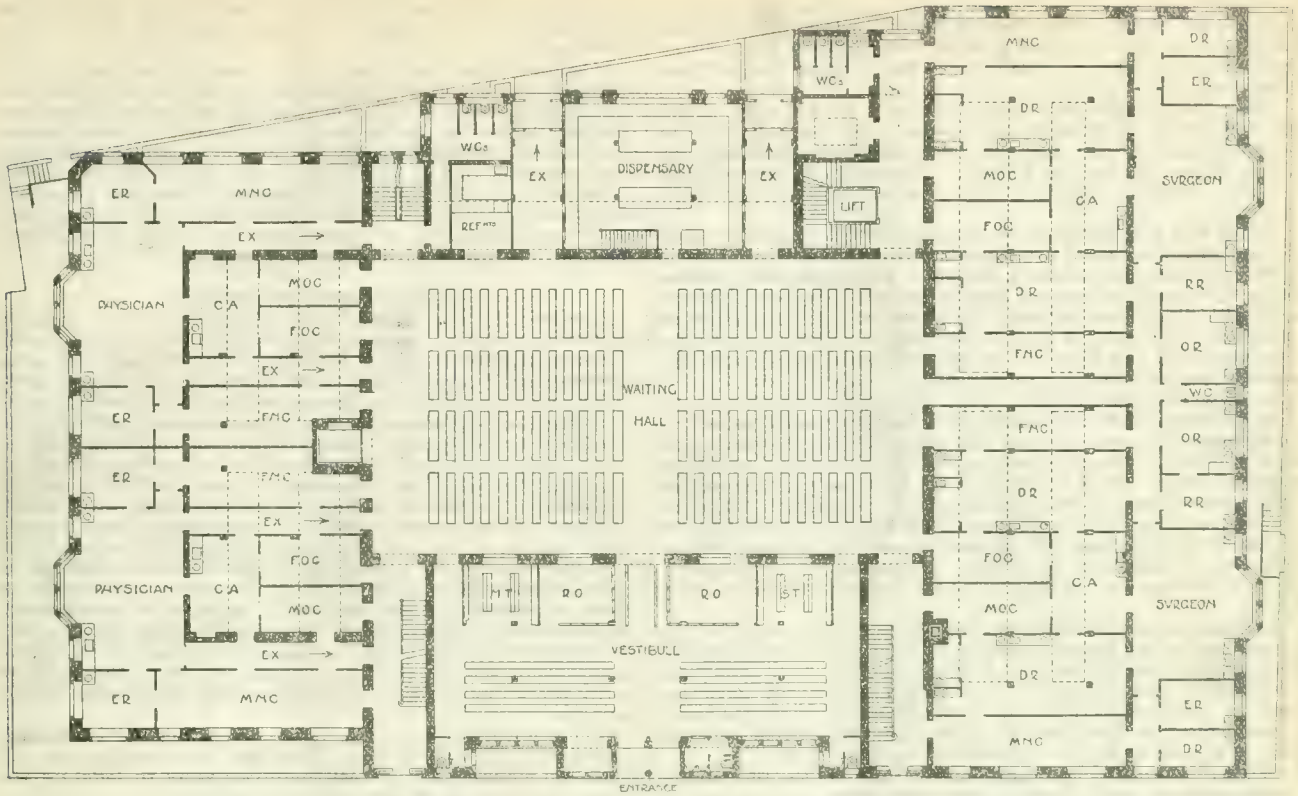
A capacious electric lift conveys patients and staff to the first floor. Here, arranged round the hollow square formed by the central hall, are complete suites of waiting and consulting rooms for the various special departments. Orthopaedic, obstetric, dermatological, dental (including stopping, extracting, recovery, gas extracting, and teeth cleaning rooms), for massage, and for diseases of the throat, ear, and nose. The latter department has a long consulting room provided with a row of glass-topped tables running down the middle, each having an electric standard lamp. The arrangements are on the type of those at the Golden Square Hospital. There are in it numerous sinks, glazed cupboards for instruments and sterilizers, and there is a good arrangement for securing ventilation while the dark blinds are drawn. In connexion with this department there is a room which can be made absolutely dark for the purpose of examining the antra by transillumination. There are also operating, anaesthetic, and recovery rooms. On the first floor are also a suite of rooms with lavatories for the use of the members of the staff, and a sister's room. The consulting rooms are all remarkably bright, and their size is proportioned to the number of patients expected to attend.

On the second floor is a well-arranged ophthalmic department, with consulting room, operating, anaesthetic, and recovery rooms, dark room fitted with 16 cubicles—each of which has an electric lamp fitted on an upright bar so that it may be raised or lowered, and each light having a screw arrangement by which its intensity may be regulated. There is a spacious refraction room, a clinical assistants' room, and a spectacles room. Adjacent to this department is a large room for the light treatment of lupus, fitted with two large arc lamps hanging from the roof in the middle of the room, and with six small lamps on the walls of the pattern described in the BRITISH MEDICAL JOURNAL of January 4th, 1902, p. 44. Attached to this room is a surgical dressing room for the after-treatment of the patients, and there are rooms for the medical officer and nurses.

A department for electro-therapeutics adjoining includes a waiting room, a room for the administration of electricity, two dressing rooms for male or female patients, an electric bath room to which a dressing room is attached: also a Roentgen-ray room for the light treatment of rodent ulcer. Completing this uppermost floor is a special dark room fitted with red light for the manipulation of radiographs, and attached to it is a complete photographic department, including a photographer's workshop.

The subway under Turner Street leads into the basement, which is devoted in the main to a series of large storerooms for surgical dressings and the crude drug materials from which medicines are manufactured for the hospital (about nine-tenths being for out-patients and one-tenth for in-patients). To this an electric drop comes from the road. In addition to the storerooms is a special department for baths and a large hall in which the furniture of any ward which is undergoing cleaning may be stored. In the basement, also, are a cloakroom for dressers and clinical assistants, and a complete department for the manufacture of medicines. There is a room and apparatus for the making of soda water, and a well-fitted chemical laboratory for testing everything that is manufactured.

Leading up from this portion of the basement is an electric lift opening into the dispensary on the ground floor. This is a large room, with mosaic floor, tiled walls, lit from the roof



London Hospital, New Out-patient Department; ground floor plan.

ER, examining room. CA, clinical assistant. MNC, male new cases. FNC, female new cases. MOC, male old cases. FOC, female old cases. EX, exit. MT, medical tickets. DR, dark room. OR, operating room. RR, recovery room. RO, registration office. ST, surgical tickets. DR DR, dressers' rooms.

and sides, and heated with radiators. For the actual dispensing there are at each end, for medical and surgical patients respectively, shelves and tables corresponding with four separate windows, through which medicines can be handed to the waiting patients.

The total cost of the department will be about £75,000, and it is certainly one of the best and most complete in the world.

A RETROSPECT OF THE IRISH POOR-LAW DISPENSARY, LUNATIC ASYLUM, AND WORKHOUSE SYSTEMS.

I.—THE POOR-LAW DISPENSARY SYSTEM.

THE condition of Irish dispensaries, workhouses, and asylums and of their respective medical staffs having been frequently referred to in these columns for some years, a few remarks upon the origin of these services, the effect upon them of recent legislation, and the points wherein they differ from similar institutions in England and Scotland may be of general interest, and will throw some light upon the undoubted discontent existing among the members of the Irish Poor-law service. We include the lunatic asylum service, because it is to all intents a Poor-law department and is controlled now by the same class who serve as guardians.

The Origin of the Dispensary System.

In the early part of the last century there were probably as many men practising medicine in Ireland as there are to-day. They called themselves surgeons or apothecaries, and appear as such in local directories. Nearly all were resident in the towns, and no gratuitous medical aid was at that time provided for the poor, with the exception that in most towns one or more charitable dispensaries were established and maintained by voluntary contributions, and in a few instances by grants from the Grand Jury of the county.

Under the Irish Poor-law Acts of 1837, the Poor-law Commissioners permitted certain Boards of Guardians to give medical relief outside the workhouse, but it was not until the country had passed through the furnace of the famine years and the ensuing plague of typhus and relapsing fever that in 1851 an Act was passed dividing up every union into dispensary districts, each managed by a local dispensary committee under the Board of Guardians and each provided with one or more resident dispensary medical officers to afford gratuitous medical assistance and medicine to the poor. This was called the Medical Charities Act, but where the charity comes in, except what may actuate the ill-paid medical officer, is hard to discover anywhere in the Act itself and even more difficult if one considers its subsequent administration. Under the Parliamentary Voters Act of 1850 the receipt of poor relief disfranchised the recipient, and a poor person entitled to workhouse relief had under a previous Act been declared to be one possessing less than a quarter of an acre of land. These definitions while they lasted, acted as safeguards against the indiscriminate issue of tickets for medical relief, but the former was soon abolished, being inconvenient to politicians seeking votes, and the latter was interpreted as applying only to indoor relief, with the result that the dispensary medical officers have been and are compelled to attend on tickets numbers of persons who have no claim whatever to gratuitous attendance. This has always been one of the chief grievances of the Irish Poor-law Service and one which no amount of remonstrance has succeeded in remedying or even abating.

In 1866 there were 785 dispensary medical officers in Ireland to serve a population of nearly six millions. Their salaries amounted to £70,000, or about £90 each; 635,000 dispensary tickets were issued, and 202,000 visiting tickets. In 1900 the number of dispensary medical officers had been increased by 30, with an average salary of almost £100 a year. The population of the country had decreased by a million and a-half, and dispensary tickets had decreased in proportion, but the visiting tickets, which involve the arduous work of the medical officer, had only decreased 26,000, from 202,000 to 176,000.

The Grievances of Poor-law Medical Officers.

It is not to be supposed that Irish Poor-law medical

have only recently begun to complain. They have been complaining all along, and some appointments in addition to the dispensary appear to have been thrown to them about every decade to stop their mouths, as it were, when they got too troublesome.

Under the Compulsory Vaccination Act of 1858 a fee of one shilling for each successful vaccination was allowed. By the amending Act of 1879 this was increased to two shillings, at which figure it remains to day. Under it the dispensary medical officers receive on the average about £10 each yearly.

When the Registration of Births, Deaths, and Marriages Act of 1863 was passed the dispensary doctors were appointed registrars, each for his own district. The duties are troublesome, the least inaccuracy involving endless correspondence with the Registrar-General. The fees are a shilling each for registering a birth or a death, and sixpence for a marriage. As a matter of fact these fees might be halved, because all the entries have to be made in duplicate.

In 1874 they got another sop. The Public Health Act of that date appointed each dispensary doctor medical officer of health for his own district, and enacted that his salary as such should not exceed one-fourth of his salary as dispensary medical officer. It is needless to say that the guardians carefully avoided any contravention of this regulation. The returns of salaries under both these Acts fail to distinguish the amounts paid to medical as apart from lay officers, so that only an estimate can be given. It appears that the average annual emoluments under both Acts amounts to about £27 a head.

In addition to the above each medical officer will certify an average of 2.5 lunatics yearly, and receive therefor £2 10s. Putting all together, we find him passing rich on £140 a year from public appointments. He may or may not have the luck to be appointed medical attendant to the Royal Irish Constabulary in his district. If he is he will get 24s. a man yearly, a sufficiently liberal scale of remuneration.

Since 1874 nothing has been done to improve the position of the dispensary medical officer if we except the abortive annual holiday granted him 1899. For this £140 per annum he has to take medical charge of some 5,600 persons, not one-fifth of whom will ever insult him with a fee. The Irish Poor-law Dispensary system is a gigantic Medical Aid Association, differing from those in England and Scotland inasmuch as it is run by the Government, and the medical officers are paid on a scale probably far inferior to the worst of the English clubs.

Poor-law Finance in Ireland.

In the year 1867 £65,000 was voted by Parliament as a grant to Irish unions for Poor-law and educational purposes; a similar grant was made to English and Scottish unions. The grant to English unions only pays half the salaries of workhouse medical officers. The grant to Scottish unions is divided *pro rata* among the parish councils. Out of the grant to Ireland the Local Government Board pays half the salaries of all Poor-law medical officers, half the cost of drugs, and half the salary of one trained nurse for each of the 160 Irish workhouses. Hence the Irish Local Government Board is able to exercise full control over the appointments, salaries, qualifications, and conduct of these officers.

The Irish Local Government Act of 1898 took from the grand juries the control of the fiscal business of the country, and vested it in the new county councils. It took from the Board of Control—as the Irish Lunacy Department is called—nearly all the authority it possessed and vested it in Asylum Committees elected by the county councils. It deprived the landlords of their right to representation on Boards of Guardians, and also of any powers they possessed as grand jurors over the county rates, and at the same time relieved them of their liability to pay half the poor-rate. Lest this should be considered an undue favouring of that class it must be recollected that the Irish occupier is now practically the owner of the soil, the landlord having only a rent-charge, and this rent-charge has been cut down some 40 per cent. to 50 per cent. within the last twenty years by the action of the Land Courts. Prior to 1898 the occupier paid half the poor rate and the whole of the county rate; by the Act of 1898 a sum of £724,000 a year was allocated from Irish Imperial taxation to the new county councils, being equivalent to half the poor rate and half the county rate. Therefore, direct taxation only exacts from the occupier one-half the burden of the rates, out of which the lunatic asylums, workhouses, dispensaries and roads are defrayed, and, in addition, Imperial taxation continues to defray half the cost of the medical charities and the four shillings per week capitation grant for pauper lunatics in district asylums.

It follows from this that at the present time three-fourths of the cost of the Poor-law Medical Service is defrayed from Imperial taxation, and the contention of the Irish Poor-law Medical Service is that it would greatly add to its efficiency were the Government to pay the other fourth and take over entire control of the service, for every day is demonstrating more and more the difficulty of inducing Poor-law guardians and County Councillors elected under the new system to grasp their responsibilities as administrators of the sanitary and medical aid institutions under their control.

Evil Results of the Present System.

Poor-law medical officers can only hope to avoid conflict with their nominal masters by ignoring many of the duties they are required by law to discharge—duties which the Local Government Board expect them to discharge. Hence these unfortunates are placed in the unenviable position of having to serve two masters, whose aims are often the reverse of identical. The Poor-law medical officer must try to please the Local Government Board, which wants to make the service efficient, and the local councils, which see no reason for increased efficiency, the peasant in all countries being a rigid conservative. The dispensary medical officer is placed between the Local Government Board, which can dismiss him for inefficiency, and the local public, who can punish his pocket if he is too energetic. Convenient blindness to sanitary laws must sometimes be almost a necessity of his position. Pampering of the poor will not meet with any approval. Good work, long service, conscientious discharge of public duty, will gain him no recompense from either of his masters, so that there is an extra premium upon mediocrity in this Cinderella of the services.

Is it any wonder the Irish Poor-law medical service is discontented? We think not. We think it is surely time for those on whom the real responsibility rests to level up the service before it drifts into a worse condition.

(To be continued.)

INTERNATIONAL UNIFICATION OF PHARMACOPOEIAL FORMULAE.

The General Medical Council has recently issued as part of its minutes the report of the Pharmacopoeia Committee. This embodies a report by the Chairman of the Pharmacopoeia Committee (Dr. Donald MacAlister) on the International Conference for the Unification of the Pharmacopoeial Formulae of Potent Drugs and Preparations held at Brussels, September 15-20th, 1902.

Dr. MacAlister was the delegate representing Britain, and his report detailing the recommendations of the conference is interesting. As he points out, there can be no two opinions as to the value of international standards for potent drugs and their preparations, and indeed in these days, when facilities for travel are so many, real danger is to be apprehended by reason of the great variation in standards which obtains in the *Pharmacopoeias* of different countries.

One of the proposals which found favour at the conference was the establishment in Brussels of an International Bureau of Information on all matters relating to pharmacopoeial unification. It is satisfactory to note that the Pharmacopoeia Committee has requested the President to indicate to the Belgian Government that the General Medical Council approves of this, and is willing to nominate a correspondent representative of the *British Pharmacopoeia*. The conference sat for six days. After thorough discussion the conclusions reached were approved unanimously, and the delegates undertook to recommend them to their several Governmental authorities for adoption at the next revision of their respective *Pharmacopoeias*.

These conclusions have been translated by Dr. MacAlister and appended to the report. He notes that in most instances they correspond closely to the directions in the *British Pharmacopoeia*, 1898, and it would appear that in two or three cases where they do not the British standards are better.

It may be of interest if we briefly discuss some of the more important proposals:

(*a*) *Tinctura Aconiti. To be Standardized to 0.025 per cent. of Total Alkaloids.*—No preparation has greater claims for consideration, but the proposal to base the standard on a deter-

mination of total alkaloid will give rise to much criticism. Our knowledge as to the proportion (and variations in the proportion) of aconitine present in the total alkaloid is in a very unsatisfactory state. The root to be used in the preparation of the tincture is the same as that official in the *British Pharmacopoeia* (that is, tubers of the current year), and it is probably thought that by carefully defining the root the proportion of aconitine in the total alkaloid will be fairly constant; the same idea, which is undoubtedly good, appears to have guided the compilers of the *British Pharmacopoeia*, but it is a significant fact that official aconite root can scarcely be obtained on the market.

(*b*) *Tinctura Belladonnae. Strength 10 per cent.*—This is more frequently prescribed than any other preparation of belladonna, and in the *British Pharmacopoeia* is standardized to contain a definite percentage of alkaloid. The variation in alkaloidal value of the crude drug is considerable, and two 10 per cent. tinctures might be prepared, one of which would contain twice as much alkaloid as the other. It is well known that the activity of the preparation depends on its alkaloidal content, and therefore our adoption of the proposed standard would be a retrograde step.

(*c*) *Colchici Semen. Use only the Seed (that is, not the Corm).*—This is no doubt a step in advance, for since the corm can be collected at any time, the proportion of colchicine present is likely to undergo variation. For this reason the tincture is the best preparation in the *British Pharmacopoeia*.

(*d*) *Ipecacuanhae Radix. The Powder should have an Alkaloidal Strength of 2 per Cent.*—The alkaloidal content of ipecacuanha root is not subject to much variation, and the powder is not standardized in the *British Pharmacopoeia*. Since it enters into many preparations, however, the proposed standard would be advantageous.

(*e*) *Hyoscyami Folium. Use only the Leaf (that is, not the Branches and Flowers).*—Are the first or second year's leaves intended?

(*f*) *Nux Vomica. Alkaloidal Strength of Powdered Drug 2.5 per Cent.: Tinctura Nucis Vomicae, Alkaloidal Strength 0.25 per Cent.: Extractum Nucis Vomicae, Alkaloidal Strength, 16 per Cent.*—The adoption of the above standards would be a retrograde step. At present the *British Pharmacopoeia* tincture and extract are standardized to contain a definite proportion of strychnine The proposals above relate to total alkaloid—that is strychnine + brucine; as the ratio of strychnine to brucine varies very considerably, and as brucine is comparatively inactive, the proposals do not make for uniformity in the strength of these preparations. Powdered nux vomica is but little prescribed in this country, but it should also be standardized in terms of strychnine.

(*g*) *Tinctura Opii. Strength in Morphine 1 per Cent.*—This corresponds with 0.75 per cent. in *British Pharmacopoeia*.

(*h*) *Tinctura Opii Benzoica. Strength in Morphine 0.05 per Cent.*—This is nearly the same strength as the corresponding *British Pharmacopoeia* preparation, tinctura camphorae composita.

(*i*) *Sodii Arsenas. The Crystallized Salt containing 36.85 per Cent. of Arsenic Acid.*—The salt recommended is Na_2HAsO_4, $7H_2O$, which contains 36.85 per cent. of As_2O_5, whilst the salt of the *British Pharmacopoeia* is anhydrous, and contains 61.8 per cent. In most other pharmacopoeias the crystallized salt is official, and obviously this is a case where uniformity should be obtained. The anhydrous salt is perhaps more definite, as two crystalline salts are known containing different percentages of As_2O_5.

(*j*) *Syrupus Ferri Iodidi. Strength in Anhydrous Ferrous Iodide 5 per Cent.*—This correspondends closely to the *British Pharmocopoeia* syrup, but others contain from $\frac{1}{5}$ to 12 per cent., a very unsatisfactory state of things.

(*k*) *Tinctura Cantharidis. Strength 10 per Cent.*—The *British Pharmacopoeia* tincture is about 1.25 per cent., whilst 10 per cent. is the standard in most Continental pharmacopoeias. The chief disadvantage of a strong tincture is the small dose rendered necessary. There would be no difficulty in standardizing to contain a definite proportion of cantharidin.

(*l*) *Tincturi Iodi. Strength 10 per Cent.*—The tincture of the *British Pharmacopoeia* is about 2.5 per cent., but amended as proposed, the strength would be much nearer that at present official in other pharmacopoeias.

(*m*) *Unguentum Hydrargyri. Strength 30 per Cent.* Corresponding to *British Pharmacopoeia* ointment of nearly 50 per cent.

The meeting of the conference and the tenour of its proposals seem to bring an international pharmacopoeia within the regions of practical politics.

THE FIRST EGYPTIAN MEDICAL CONGRESS.

[*From Our Correspondent.*]

CAIRO has suddenly burst into life. The commencement of the season was much delayed by the dread of cholera; then the inauguration of the Assouan Barrage, while attracting many visitors to Egypt, depleted Cairo by calling its principal inhabitants South. Now, however, the capital is enthusiastically medical; the social side of the Congress has captivated the volatile Cairenes and *les congressistes* are the lions of the day. The Congress bureau is at the Continental Hotel, in the very heart of the city; the meetings are at the School of Medicine, almost in the outskirts, and between the two passes a continuous stream of red-ribboned men and women seeking invitations in the one place or knowledge in the other. It is difficult to ascertain the exact number of members, but 500 may be accepted as a fairly accurate approximation.

The functions of the Congress fall into two quite distinct orders, differing alike in scene and actors. The first is the dramatic, the second the practical. The former is enacted in the Opera House, at the Abdeen Palace, and in other high places, and is admirably organized by the energetic Secretary, Mr. Voronoff, who not only arranges the programme but gives much time to drilling the various actors in the rehearsal of their parts. The latter takes place in the Government School of Medicine, attached to the Kasr-el-Aini Hospital. Here the Director, Dr. Keatinge, rules supreme; the arrangements for the meetings and demonstrations are virtually perfect though, as may presently appear, anything but an adequate appreciation of them is from time to time shown.

Before entering upon an account of the work of the Congress it is our duty to record a state of affairs which must appear anomalous even in England, but which in Egypt is regarded as nothing less than discreditable. In no case has the process of Anglification of Egyptian institutions been more rapid or more beneficent than in that of medical education. The Government Medical School is now supplied with a virtually complete staff of English professors, specially selected for their energy and ability; the examinations are held in English, and the whole system of training is based upon that of the medical schools of London. The amiable rivalry which has long existed between Paris and Lyons as to which should absorb the Cairo Medical School is thus by way of becoming abortive, and even the special facilities offered to Egyptians to obtain French diplomas (only qualifying them to practise abroad) are no longer so dazzling as to prevent the educated natives from realizing that England is also a home of advanced medical thought and practice.

Now the first Egyptian Medical Congress is accepted by the thoughtful local practitioners as a recognition of the progress which the country has made of late in the art of medicine, and it would have only appeared natural that England should have taken her part in that recognition by sending a representative group of delegates, men picked for their eminence and reputation. The circumstances are so special that it should have been possible, had it been necessary, to provide, even out of Government funds, for the expenses of the deputation. What has actually happened? France has sent over fifty delegates, forty-two of whom, including such famous names as Bouchard, Chantemesse, Lannelongue, Terrier, Lortet, Courmont, and Teissier represent officially the Ministry of Public Instruction, and are, it is said, sent at the Government expense. England, on the other hand, has done absolutely nothing. Fortunately it happens that Mr. Reginald Harrison habitually takes a short winter holiday in a warm climate, and the Royal College of Surgeons has profited by that fact to secure an admirable representative. One or two other less important institutions have appointed resident practitioners, not all of them English, to act as delegates, and that is all. England has lost some of the local prestige—always an asset of the utmost value in Oriental matters—which her professors have so laboriously earned.

OFFICIAL OPENING BY THE KHEDIVE.

The evening before the official opening of the Congress was devoted to a reception of the members by the Committee at the Hotel Continental. The actual inauguration by the Khedive took place in the Opera House on the morning of December 10th. The delegates and members of the Committee were in evening dress, with decorations, and occupied the platform; the ordinary members were in frock coats, garments seldom seen in Egypt except in association with a tarboosh. Many lay guests were present, including Lord and Lady Cromer, and the boxes contained a large number of

ladies. Two of the principal boxes were screened off by gauze veils behind which indistinct movements hinted at the presence of ladies of the harem. The scene was on the whole brilliant, but it seemed somewhat incongruous to be shut up at 9.30 on a bright Cairo morning in an electrically-lighted opera house without a vestige of ventilation. The Khedive, speaking in French, very graciously welcomed the delegates, and expressed his pride and gratification at this recognition of medical progress in Egypt, than which no more suitable country could be found for the study of the diseases of warm climates.

The speech was well delivered and enthusiastically received. The President of the Congress, H. E. Ibrahim Pacha Hassan, then briefly recounted the origin of the movement and its objects. He was followed by H. E. Abbate Pacha, who said much the same thing in a more flowery way, likening the Khedive to Ptolemy and the Congress to Sirius. Next the Secretary gave the formal history of the preliminary proceeding, and said that at the sectional meetings some 240 papers would be read. He stated also that 520 members had joined the Congress, of whom 340 were resident in Egypt, 152 of them being natives. The usual series of addresses by delegates followed. Dr. Nolda spoke for Germany, Professor Nothnagel for Austria, Dr. Eid for Belgium, Major Gorgas for the United States, Professor Bouchard for France, Mr. Reginald Harrison for England, Professor Karl Hoor for Hungary, Professor Maragliano for Italy, Mirza Mohamed M. Khan for Persia, Professor Pawlow for Russia, and Professor Eternod for Switzerland. Mr. Reginald Harrison spoke as follows: "May it please your Highness,—As the delegate of the Royal College of Surgeons of England and the representative of Great Britain and Ireland, I have the honour of offering your Highness on behalf of my countrymen engaged in the practice of medicine our most respectful congratulations on the occasion of this Congress. It is a matter of regret that my country should not be more fully represented. I would, however, venture to say to your Highness that this mainly arises from the fact that many distinguished and well-known members of my profession at home have professional duties to perform, which render their presence here at this time impossible. In initiating this Congress, and extending to it your personal patronage, we are deeply sensible of the desire of your Highness not only to promote the health and prosperity of your own subjects, but to encourage, for the advantage of humanity generally, independent research in your ancient and historical country. Permit me to inform your Highness that it has also been my duty and pleasure, since I have been in Egypt and by the direction of my College, to look into the system and methods of medical education and examination employed for enabling young Egyptians and others to learn and to practise medicine and surgery, under diploma in your country. I have, therefore, made myself acquainted from observation with the Hospital and School of Medicine in Cairo, where such instruction is and has been systematically given. In their marked efficiency and progressive character these institutions have even surpassed my anticipations, and I have much satisfaction in saying so in the presence of your Highness. In the name of Great Britain I tender to your Highness my most grateful thanks for the deep interest you are taking in the work of the Congress."

The remainder of the meeting was occupied by an address by Professor Bouchard on modern tendencies in therapeutics. The inclusion of such a paper at a general, or rather public, meeting was, of course, a mistake, and Professor Bouchard felt himself considerably hampered by the circumstances. He gave, however, a very lucid, if cursory, summary, urging with particular emphasis the treatment of rheumatism and syphilis by the subcutaneous administration of minute doses of salicylates, and mercury and potassium iodide respectively.

RECEPTION BY THE KHEDIVE.

In the afternoon the Khedive held a reception at the Abdeen Palace, to which the delegates and Committees of the Congress were commanded. The palace is a huge but squat pile in one angle of the historic square where Arabi raised the standard of revolt in 1882. The reception was held in one of its noblest suites, and was rendered pleasantly informal by the Khedive's great personal affability. He took the opportunity of conveying his appreciations to Mr. Reginald Harrison. "I thank you," he said, "for the kind words you spoke this morning, in which you appreciated the medical work which is being done in Egypt. Your speech will do much good in encouraging the young medical men in Egypt, and in drawing the two countries together." His Highness added many expressions of personal goodwill, which, it may be said, were fully deserved, for Mr. Harrison has acquitted himself of a difficult task in a most diplomatic and withal genial manner. The other visitors from Great Britain at the reception were Mr. Spanton of Hanley, representing the British Medical Association; Dr. Bertram Abrahams of London, and Dr. Robert Bell of Glasgow.

FÊTE AT THE PYRAMIDS.

In the evening the committee gave a fête at the Pyramids, at which various performances which are usually held up to tourists as examples of Arab customs were gone through, the Sphinx was illuminated (*horribile dictu*), and such members as felt disposed went for camel rides by moonlight. There was supper at the Mena House Hotel, followed by a bitterly cold ride home.

THE SECTIONS.

The next day (December 20th) the work of the sections began. Of these there were three: Pathologie Interne, Chirurgie, and Ophthalmologie. We propose to give some account of their deliberations next week.

The committee of the Congress is as originally announced, with the exception that Dr. Ruffer has resigned and his place is filled by Dr. Sandwith, and that Dr. Milton has handed over the duties of Treasurer to Khayatt Bey. Dr. Ruffer has, however, taken an active part in the work of the Congress, to which he made an important communication on the pathology of bilharziasis. The Honorary Presidents are Sir Horace Pinching, Director-General of the Sanitary Department, and H. E. Abbate Pacha, and the Acting President—Dr. Milton having been medically forbidden to serve—H. E. Ibrahim Pacha Hassan, President of the School of Medicine. The Sectional Presidents are Comanos Pacha, Dr. Herbert Milton, and Mohammed Bey Eloni respectively.

In addition to these names the following Englishmen hold office in connexion with the Congress: Dr. Keatinge, Director of the School of Medicine and Kasr-el-Aini Hospital, Vice-President of the Congress; Dr. Madden, Vice-President of the Section of Surgery; Dr. Frank Milton, English Secretary of the Section of Surgery; Dr. Fischer, Vice-President of the Ophthalmological Section; Dr. Sandwith, Vice-President of the Section of Medicine; Dr. Tribe, Vice-President of the Section of Medicine; Dr. Beddoe, Secretary of the Medical Section; Dr. Symmers, Professor of Pathology; Dr. Wilson, Professor of Physiology; Dr. Elliot Smith, Professor of Anatomy, are in the section committees, and Dr. Page May is the Secretary of the English Committee.

SMALL CHARITABLE CONTRIBUTIONS.—Mr. J. Bernard Lamb, the Secretary of the Royal Medical Benevolent College, Epsom, has written a letter to the *Times* making a suggestion for the easier collection of small contributions to London charities. His plan is that the Post Office should issue "post card cheques" of the value of 6d., 1s., 2s. 6d., 5s., 10s. 6d., and one guinea, the cheques to be payable only to the Charity Commission. Such cheques should be received by a department of that Commission, which should once or twice a year pay over the amounts received to the charities indicated, less a poundage and postage due to the Post Office. The advantages claimed for the scheme are that there would be no loss of time to the donor, as the name of the charity would be the only entry necessary to be made on the cheque, there would be no risk of accidental loss or of pilfering as in the case of uncrossed postal orders or stamps, for the postcard cheques would be payable only to the Charity Commission, and the charities would be saved the costly work of acknowledging small contributions. There is no doubt that charities of all kinds do suffer owing to the fact that a sort of shyness in sending contributions of less than a guinea or at least half a guinea seems to be very prevalent, and it is of course true that even when sent direct to the charity the cost of the clerical work is proportionately higher in acknowledging a small subscription. Mr. Lamb's scheme seems worthy of consideration, but like some others which are put forward, it appears to have the defect that, as stated by him, it would apply only to the metropolis.

NOTIFICATION OF CHICKEN-POX IN LONDON.—The order of the London County Council requiring the notification of chicken-pox in the administrative county of London expires on Tuesday next, January 6th. Subject to any local orders in metropolitan boroughs notification will not be required, and no fee for such notification will be paid for cases occurring after midnight on January 6th.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1903.

MEMBERS of the British Medical Association are reminded that commencing with January 1st, 1903, the annual subscription is a uniform one of 25s., inclusive of the Branch, and that all subscriptions should be paid direct to the General Secretary, 429, Strand, London, W.C., and not to a Branch Secretary.

British Medical Journal.

SATURDAY, JANUARY 3RD, 1903.

THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association is entering upon a new epoch in its history. The new Articles and By-laws came into force when finally adopted last July, and the Standing Committees appointed under them are already at work; but the full extent of the changes then made in the constitution will become apparent only during the course of the year which has now commenced. A modification of the constitution of the Association was rendered advisable by many contributory causes, chief among which must be placed the great increase in the number of members during the last twenty years, the rapid growth in the interest taken in medico-political questions by the general body of the profession, and the greater earnestness in the desire for co-operation to achieve those reforms which are so urgently required. The establishment of the Divisions as units of organization smaller and, for practical purposes, more convenient than Branches, will, it is hoped, largely increase the opportunities for discussion and effective local action, while the institution of an annual meeting of representatives of such units will enable the wishes of the whole body of members to be clearly formulated.

It will be interesting to look back at this moment upon the history of the British Medical Association, and to trace, necessarily in rapid outline, the steps by which it has attained its present position of influence and usefulness. It completes this year the seventieth of its life. It was founded at a meeting held in the Worcester Infirmary on July 19th, 1832, called by Dr. (afterwards Sir Charles) Hastings, who had conceived the idea of founding an association which should form a bond of union among all members of the profession engaged in every branch of practice in the provinces. At that time there were few local societies and no general association embracing all grades and all places. There was no *Medical Register* giving all qualified practitioners a common ground. The Universities in England did little for the profession beyond furnishing a few physicians to London and the county towns. The general practitioner could look only to the corporation which had granted him a licence to practise, and these bodies for the most part paid little heed to the wants of their licentiates.

The Provincial Medical and Surgical Association, called into existence by Hastings, continued to bear that name until 1856, when the title was changed to the British Medical Association, so that it might include London, the sister countries, and the British colonies and dependencies. In this extension of the bounds of the Association the original idea of encouraging and developing the local organization of the profession was never lost sight of. The need was met by the system of Branches, the development of which began in 1836, when the East Anglian Branch brought a notable accession of strength, and when a Branch was formed in Bath; in the following year a project, which had originated earlier at Newton-le-Willows was brought into shape, and the Lancashire and Cheshire Branch came into existence. In the succeeding decade Branches were formed in the south-west, in the south-east, and in the midlands, but the growth in numbers was slow, so that in the tenth year of its existence the Association consisted of only some thirteen hundred members. The financial position at this time was far from encouraging, and improvement was slow in coming; the more honour to those who did not despair of the republic, but held steadfastly on perfecting, and extending the local organization, and finally placing the business management on a sound basis. With the permanent appointment in 1870 of the late Mr. Ernest Hart to be editor of an enlarged and improved BRITISH MEDICAL JOURNAL, and in 1872 of Mr. Francis Fowke, who retired only a few months ago long to enjoy, as all hope, a well-earned rest, to be General Secretary, the central business was well organized, and the financial anxieties of the Council were quickly diminished. In the next twenty years a large number of Branches were recognized not only in the United Kingdom but in the Colonies and India, and the membership of the Association grew rapidly from 4,700 in 1872 to 14,267 in 1892. Since then many more new Branches have been formed, and the membership has continued to grow to 16,955 in 1897, and to 18,758 in 1902.

In bringing about these results, increased membership and a satisfactory financial position, the BRITISH MEDICAL JOURNAL has played no inconsiderable part. In his plan for the formation of the Association the founder placed first the accumulation, analysis, and publication of contributions to medical science, the other main objects being the maintenance of the honour of the profession "by promoting friendly intercourse and free communication of its members, and by establishing among them the harmony and good feeling which ought ever to characterize a liberal profession." It was sought to attain the latter object by the formation of Branches and the holding of annual general meetings in different provincial cities, and the former by the publication of *Transactions*. It was soon found, however, that an annual volume could not meet the needs of the scattered members of the Provincial Medical and Surgical Association. The *Provincial Medical and Surgical Journal* was first issued on October 3rd, 1840. It was edited by Dr. Hennis Green and Dr. Streeten, and was founded to carry out the objects for which the Association had been called into being, although it does not appear at that time to have had any direct connexion with the Association. The numbers of the *Provincial Medical and Surgical Journal* for the first year are among the rarities of medical literature, and so far as we have been able to ascertain, a complete set exists only in the British Museum. It was published in London, was registered as a newspaper, and the first number contained 24 pages, rather more than nine being devoted to advertisements. A new series with a different-sized page and narrower column was commenced a year later, and in a leading article in that number the editors expressed their gratification at the considerable measure of success which had already crowned their efforts.

The *Provincial Medical and Surgical Journal* continued to be issued weekly, and in 1842 at the annual meeting of the

Provincial Medical and Surgical Association at Exeter a special vote of thanks was passed to Drs. Hennis Green and Streeten for the liberal arrangements made by them for the weekly supply of the *Journal* to members of the Association. This vote was renewed the following year. At the annual meeting in 1844 a committee was appointed to consider the relation of the Association to the *Journal*, and in the following year the connexion of Dr. Hennis Green with the *Journal* ceased. It continued to appear under the direction of Dr. Streeten, who acted both as editor of the *Journal* and Secretary of the Association. Dr. Streeten died in May, 1849, and in September of the same year Dr. W. H. Ranking of Norwich, and Mr. J. H. Walsh of Worcester, were appointed joint editors of the *Journal*, which was then published fortnightly in Worcester. Subsequently the place of publication was changed to Manchester. At the annual meeting in 1852 it was resolved that the *Journal* should be issued weekly and edited and published in London; Dr. (afterwards Sir John Rose) Cormack was appointed Editor and Dr. Alexander Henry Sub-editor, and the first issue of the *Association Medical Journal* was published at the beginning of January, 1853. Two years later Dr. Andrew Wynter succeeded Dr. Cormack. In 1856, the title of the Association was changed to the British Medical Association, and with the first number of 1857 the JOURNAL assumed the title which it now bears.

At the beginning of 1861, Dr. Markham succeeded Dr. Wynter as Editor, and from that time the JOURNAL has formed, in each year, two volumes. Dr. Markham continued to edit the JOURNAL until August, 1866, when he was appointed Medical Inspector under the Local Government Board, and was succeeded by Mr. Ernest Hart. Mr. Hart retired in 1869, and was succeeded by Mr. Jonathan Hutchinson, who, however, only held office until 1870, when he gave way to Mr. Ernest Hart, who continued to edit the JOURNAL until his death in January, 1898.

It has been the object of succeeding Editors to render the JOURNAL useful to all members of the Association by reflecting the rapid advance which during the last half century has taken place in the science and art of medicine, while at the same time representing to the public and to the lay press the views which the medical profession takes on questions of public health and other current topics affecting medical interests. That the efforts made to attain this object have not been in vain is shown by the high position which the BRITISH MEDICAL JOURNAL has won among the medical periodicals of the world, and by the steady increase in its circulation. The growth of medical science, the increased interest taken by all classes of the community in public health and by the profession itself in questions affecting its material interest has from time to time necessitated large additions to the number of pages contained in the annual volume. In 1857, when the JOURNAL was first issued under its present name, the number of pages published during the year was 1,074, in 1877 this had increased to nearly 2,000, and in 1887 to nearly 3,000, and the two volumes for last year contained 3,840 pages. In spite of this great increase, however, the mass of material which reaches us and the multiplicity of topics which call for comment has continued to increase in a greater ratio, and the task of selection becomes yearly more difficult and also more invidious. With the view to meeting the demand to some extent without adding to the bulk of the JOURNAL a slight alteration in its form has now been made; this consists in an increase in the length of the column, which will add to the space available without increasing the bulk of the numbers. It has been arranged also to issue supplements from time to time as occasion may require containing chiefly reports on medico-political matters and on the business of the Association. The change will, it is hoped, conduce to the convenience of our readers by facilitating the classification of matter and making reference easier without diminishing the amount of attention which can be given to the scientific side of the Association's work or the due representation of the progress of clinical medicine and surgery upon which the influence and status of the profession and the prosperity of the individual practitioner must alike ultimately rest.

ELECTRICITY IN MEDICINE AND SURGERY.

THERE is no force in Nature which within recent times has been rendered more subservient to the use of man than electricity. It supplies him with light and heat under conditions which, as regards utility and healthfulness, surpass any other artificial method of producing either of these fundamental necessities to life and civilization. It provides him, moreover, with a motive power which bids fair to supersede all predecessors and reign supreme. A natural force of such extensive adaptability, and possessed of such potentialities, is one to which the medical practitioner may reasonably look for valuable assistance in his conflict with disease and in his attempts to bring about its prevention and cure. For this assistance he has not looked in vain; the quantitative and qualitative reactions of muscle to galvanism and faradism have provided an accurate means of differential diagnosis in certain disorders of the nervous system; the *x* rays have enabled many difficult surgical problems to be unravelled with ease and precision; and such an intractable malady as lupus is found to be to some extent amenable to the ultra-violet rays.

There are several reasons why electricity has been tardy in establishing itself as a useful therapeutic agent. Until recently there was a great lack of precision in the knowledge possessed concerning it. The apparatus used was defective, and one kind of battery was looked upon as being as good as any other. It was not recognized that though there is only one kind of electricity, it may be produced under various conditions and in several different forms, each of which has its special sphere of action. The discoveries of Galvani and Faraday proved it to be capable of wide variability, but not till long after their day was it established that the continuous and interrupted currents were of distinctive value when used for therapeutic or diagnostic purposes. Besides this, electricity is an agent which, in its manifestations, has always appealed to the human imagination. It has been credited with marvellous powers of cure, and, in the hands of the unscrupulous quack, has been utilized to impress that large section of the public which is gullible; but with the effect on the medical mind of raising distrust and prejudice against a therapeutic measure for which so much was claimed and yet of which so little could be proved.

Gradually the utilization of electricity is passing out of the hands of pretenders and showmen, and its value and merit are becoming recognized by thoughtful men and scientific workers, who see in it a vast power for good if kept within the compass of its applicability.

In other countries—particularly in America and France where the work of Tesla and d'Arsonval has done so much to bring it within the reach of therapeutic adaptation—electricity has established for itself a firm position as a

branch of medical science, but in England we have been slow to accord to it even the share of credit as a curative power which it has been proved to possess. New notions and untried methods do not germinate rapidly in the cold soil of our insular canniness; but once the process of growth begins, the plant seldom fails to acquire a vigour which enables it to make up for its early inactivity. Though we have accepted almost grudgingly the evidence of the increasing importance of electricity, we have at least so far admitted its claims to scientific individuality as to have established in our midst an Electro-Therapeutical Society. This Society recently celebrated its first anniversary meeting, when an interesting and suggestive address—which is published elsewhere in this issue—was delivered by Mr. Edmund Owen. With much of what he had to say on the future of electro-therapeutics there will be general agreement. It is true that "the orthodox practitioner has been apt to regard it (electricity) askance, and, passing by, has drawn his gown around him lest, by chance, it should become soiled by contact with it"; but has he not had some justification? Not only has the vulgar charlatan found in electricity a means well suited to his ends, but too often the legitimate practitioner has condescended to advise and resort to its use as a kind of forlorn hope in cases that baffled the resources of his ordinary everyday therapeutic armamentarium. And unfortunately he has not always sent his patient to a reputable member of the profession with special knowledge of electrical procedure, but has chosen either the hazardous alternative of subjecting his client to the consequences of his own not specially trained services, or has entrusted him to one of the many catch-penny institutions which exist in our midst—institutions, many of them run by a commercial syndicate, presided over by an unqualified manager, and called into being solely to exploit electricity as a curative agent for the dividends it can earn. In such institutions scientific accuracy is impossible; the patient's welfare is made to play second fiddle to his guineas; and the medical man, did he but recognize it, is the guileless victim of a clever ruse.

So long as men and women are to be found who allow their ears to be tickled by the delusive promises of advertising adventurers, and so long as there remain within the ranks of our profession men of the type described by Mr. Owen, who persuade themselves into the belief that they are able to extract all the good there is to be got out of electricity from "the old magneto-electric machine which played a not unimportant part in the electro-therapeutics of those days, when the compound decoction of sarsaparilla was the usual prescription for tertiary manifestations, and when it was firmly held that tincture of arnica was the appropriate application to contused wounds," just so long will the prospects of electricity becoming a recognized and valuable addition to our therapeutic resources be delayed.

Let the Legislature adopt wise measures for the suppression of the unqualified practice which is now fearlessly carried on in these commercial institutions, and let the members of our profession realize that electricity is a large and complex subject, the application of which can be successfully attempted in many cases only by those who have devoted special time and attention to its study and practice. There will then be room for reasonable hope that electro-therapeutics will be freed from the stigma of quasi-quackery which now attaches to it, and that the real value which it undoubtedly possesses will become legitimately available to help the medical man in the practice of his profession, and to assist the patient suffering from a disorder amenable to its influence towards recovery.

We sincerely hope that the British Electro-Therapeutical Society will justify its existence by evolving a scheme whereby these desirable reforms may be accomplished. Whether a central electrical institution such as that advocated by Mr. Owen would meet the requirements of the case we are not prepared to say, but a system of co-operation on the limited liability principle will not receive the unanimous support of the profession, and is not the basis of organization upon which everyone will agree that success may be obtained in "raising the subject of electro-therapeutics out of the mud." It is true that the British Medical Association "is an enormous and most successful venture under the Companies Acts," but it exists for the benefit of the profession and the promotion of professional interests, not for the individual pecuniary advantage of its members. It cannot, therefore, in fairness, be held to be in any way analogous to an institution the watchword of which it is suggested should be "First and foremost, this is to be a paying concern."

SEWAGE CONTAMINATION OF OYSTERS AND MUSSELS.

THE numerous cases of enteric fever in Winchester, Southampton, and Portsmouth attributed to the eating of sewage-contaminated oysters at mayoral banquets and on other occasions, to which we drew attention in the BRITISH MEDICAL JOURNAL of December 26th, 1902, have aroused a large amount of public attention. The lamented death of the Dean of Winchester and of other prominent men in connexion with this particular outbreak of disease attributable to specifically contaminated oysters has given a more serious aspect to the question. It may be some slight consolation to the relatives of those whose valuable lives have unhappily been lost that their death may lead to the enactment of legislation, already too long delayed, which shall render the occurrence of such disasters a very remote possibility, instead of an event which under present conditions must be expected to recur. The importance of this subject has been frequently urged. As long ago as 1880 Sir Charles Cameron showed the "possible relation of typhoid fever to the consumption of specifically polluted oysters" in Dublin. His observation, however, remained without the notice it deserved; and the next contribution to the subject was not made until the early part of 1894, when Dr. Newsholme, M.O.H. Brighton, reported a number of cases of enteric fever which in his opinion were attributable to the consumption of oysters derived from oyster layings grossly contaminated by sewage. In April, 1894, the Town Council of Brighton sent a deputation to the Local Government Board to urge it to bring pressure to bear upon the authorities of Southwick, near Brighton, where the oyster layings believed to be responsible for the enteric cases in Brighton were situate, to execute an efficient combined scheme of main sewerage, and in December of the same year the Local Government Board received a second deputation from the same body.

In December, 1894, Sir R. Thorne Thorne submitted a report to the Local Government Board, in which he expressed his conviction that "the distribution of shell-fish from Cleethorpes and Grimsby as a centre had been concerned in the diffusion of scattered cases of cholera

over a somewhat wide area of England." The contributions of Sir William Broadbent[1] and Sir Peter Eade,[2], published in the BRITISH MEDICAL JOURNAL in 1895, undoubtedly went far to convince medical men of the importance of this source of infection.

Dr. Bulstrode's valuable and exhaustive report to the Local Government Board, issued in October, 1896, on oyster culture in relation to disease, showed the extent of the evil, and brought the available evidence to a focus. Meanwhile, in the early part of 1896, the Town Council of Brighton made the first practical attempt to deal with the evil, which as the result of inquiry extending over several years, its medical officer stated to be responsible for at least one out of every three cases of indigenous enteric fever in that town. The Council sought to obtain Parliamentary powers authorizing it to prohibit the sale, within the borough, of shellfish known or suspected to be the cause of infectious disease, similar to the powers given under the Infectious Disease Prevention Act for preventing the continued sale in a district of milk shown to be infective. The refusal to grant these powers was due, in some measure at least, to the fact that the representatives of the central Government departments informed the Parliamentary Committee that powers of the nature asked for, if granted, should be general and not local. No general legislation being forthcoming, a deputation representing the chief towns of the country was organized in March, 1898, and the then President of the Local Government Board (Mr. Chaplin) definitely promised legislation. In 1899 an Oysters Bill was introduced by the Local Government Board. This Bill laid upon the local authorities of counties and boroughs the duty of inspecting oyster layings within their boundaries, and prohibited the removal, for sale, of oysters from layings so situate as to cause serious risk of communicating disease, unless the oysters were deposited for ten days in some other laying approved by the authority.

This is not the occasion for discussing the merits of this derelict Bill. It was in some respects unsatisfactory, and particularly so in not dealing with the question of contaminated mussels, which is almost as serious and more difficult to control than that of oysters. The Bill was referred to a Select Committee of the House of Lords, by whom it was entirely altered in character. Sea Fisheries Districts Committees, as the acting authority, were substituted in lieu of county authorities—authorities for the preservation of fish instead of authorities concerned in the preservation of the public health. It is not surprising that under these circumstances the Local Government Board decided to drop the Bill.

No attempt was made to bring in another Bill. In February, 1900, in answer to a question by Mr. Loder, M.P. for Brighton, as to whether the Government intended to introduce the Oyster Bills again that session, Mr. Chaplin stated: "Since the publication of Dr. Bulstrode's report, and since legislation was proposed on this subject, a great deal has been done to remove the evils complained of, and it is alleged that further improvement is still in progress. I have directed one of the medical inspectors of the Board to report me on this. The places complained of are comparatively few, and I am awaiting the inspector's report before deciding whether reintroduction of the Bill is necessary or not." Reference to a Royal Commission or to a Departmental Committee is a well-recognized method of shelving, at least for a time, inconvenient questions, in which influential trade interests are involved. Alas! that reference to a medical inspector should be utilized to the same end. We are in the dark as to whether the results of this renewed inspection of oyster layings have yet reached Mr. Long, now President of the Local Government Board, and in what proportion of oyster layings effective measures have been taken against continued pollution by sewage. But where Governmental information is lacking, trade information, that is, information supplied by the interested trade, is forthcoming. Mr. J. M. Tabor, an oyster merchant in London, has stated that "there are only two beds in England which still remain polluted," and that "there is not a single oyster coming to London from a polluted bed." Both these items of news would be very satisfactory could they be accepted as established by independent expert evidence, but the fact is that Mr. Tabor's statements until substantiated must be regarded as valueless. He is on firmer ground when, as in the letter published elsewhere, he urges that sewage should not be turned into the sea untreated, a point urged also with much force by Dr. J. Lloyd-Roberts of Colwyn Bay (page 49). The public will, it is hoped, insist on legislation dealing generally with oyster layings and mussel beds. If all except a few of these are free from possible contamination, why should not the fish trade through its representatives agree even to the most drastic legislation?

[1] BRITISH MEDICAL JOURNAL, 1895, vol. i, p. 61.
[2] Ibid., p. 121.

THE DURBAR HONOURS.

A LONG list of honours conferred in connexion with the Coronation Durbar at Delhi on New Year's Day has been issued. In this list we observe the names of the following members of the medical profession: Surgeon-General William Roe Hooper, C.S.I., Indian Medical Service (Retired), who succeeded Sir Joseph Fayrer as President of the Medical Board at the India Office in 1895, has been created K.C.S.I. Surgeon-General Benjamin Franklin, C.I.E., Director-General of the Indian Medical Service and Sanitary Commissioner with the Government of India has been created K.C.I.E. Lieutenant-Colonel Gerald Bomford, M.D., Indian Medical Service, Principal of the Medical College, Calcutta, and Major Alfred William Alcock, M.B., F.R.S., Indian Medical Service, Superintendent of the Indian Museum, have been created C.I.E. The Kaisar-i-Hind medal for public service in India of the First Class, has been conferred on Lieutenant-Colonel Robert William Steele Lyons, M.D., Indian Medical Service, Civil Surgeon and Superintendent of the Lunatic Asylum, Dharwar, Bombay Presidency, and upon Major David Semple, M.D., R.A.M.C., Director of the Pasteur Institute, Kasauli. The honour of knighthood has been conferred on George Watt, M.B., C.M.Glasg., C.I.E., Reporter on Economic Products to the Government of India and Officer in Charge of the Economic and Art Section of the Indian Museum, Calcutta, to whose work at the Exhibition of Indian Art at Delhi Lord Curzon referred in his speech at the opening of the exhibition. Sir George Watt, who was appointed Assistant Professor of Botany in Aberdeen in 1871, became Professor of Botany in Calcutta University in 1873. He became Scientific Assistant Secretary to the Supreme Government of India in 1884, and was President of the Pharmacological Section of the Indian Medical Congress in 1894. He is the author of a *Dictionary of the Economic Products of India*, published in nine volumes, royal octavo, and is the editor of the *Agricultural Ledger*.

THE EGYPTIAN MEDICAL CONGRESS.

THE first Egyptian Medical Congress, of the opening of which we publish some account at p. 29, presented a goodly number of special features of interest. In the first place the

particular maladies of the country demand attention not only by their nature but also by the fact that they are not those which are as a rule most common in tropical or subtropical climates. Thus for instance the bilharzia worm was first detected in Egypt and commemorates by its name the labours in that country of a distinguished German investigator. Then again ankylostomiasis is so prevalent as to be the first supposition in all cases of anaemia. Pellagra and leprosy are not infrequently seen, but malaria, especially of a pernicious type, is, except in a few localities, quite rare. As a considerable amount of the time of the Congress was devoted to these subjects much light may be expected upon some of the obscurer problems connected withthem. It seems, indeed, a pity that considering the large and increasing share taken by Englishmen in the development of the country no representative of our Schools of Tropical Medicine was present at the Congress. Another valuable function of the Congress has been to offer to European medical men an opportunity of first-hand acquaintanceship with Egyptian health resorts. Egypt may be termed a popular country for medical exportation, but often unsuitable cases are sent or patients are recommended to go to unfitting spots. "Go to Egypt for the winter" is easily said, but it is sometimes forgotten that Egypt is a country extending from the thirty-second parallel of north latitude to the tropics, and that the difference between the climates of Assouan and Alexandria is almost as great as that between those of Nice and London. A visit to the country and participation in the excellent and convenient excursions arranged by the Reception Committee cannot fail to conduce to a more discriminating selection of appropriate places. Thirdly, the Congress is of the utmost importance to the native practitioners who at the end of their course in the Government Medical School at Kasr-el-Aini migrate into the country in increasing numbers. From them are recruited the staffs of the local hospitals and the lower ranks of the sanitary service. Upon their skill in the detection and treatment of disease the health of Egypt must ultimately depend. Egypt is, as it were, a portal by which epidemics may be admitted from the East to Europe. The quarantine officers are bound to be in part Egyptian, and to make the gate secure their efficiency must be maintained at a high standard. The Congress has afforded these native practitioners a unique opportunity of refreshing and revising their knowledge, and this consideration has no doubt been responsible for much of the exceptional interest taken in the meeting by the Khedive. His Highness has spared himself no trouble in receiving the guests, and in arranging for their amusement; he even put off his annual State Ball, and converted it into a reception in honour of the members. The social side has thus been anything but forgotten. It is only to be wished that more English visitors had been present to participate in the success both of the scientific deliberations and of the entertainments.

THE UNIVERSITY OF LONDON.

MR. BUTLIN, the Dean of the Medical Faculty of the University of London, has written to the *Times* an opportune letter on the question of financial appeals on behalf of the University of London and its constituent colleges. Mr. Butlin points out with much force that the development of a true teaching university for London is largely dependent upon organizing and co-ordinating, around the University at South Kensington, groups of schools and laboratories for various branches of academic study. Prominent among these should be accommodation for the adequate teaching of preliminary and intermediate medical sciences. To this end generous endowment is urgently needed. Meanwhile an appeal for such endowment in the name of and for the purposes of the University is deferred, while individual appeals on behalf of certain of the constituent colleges fill the public eye, engage the public interest, and tend to exhaust the public purse. The Vice-Chancellor of the University, in his reply to Mr. Butlin, fails to meet the objections raised; he is perhaps too closely associated with one of the colleges in question to view the problem with complete impartiality. The late Mr. Hutton used to demur to the proposed reconstitution of the University as being liable to set up a group of more or less independent ganglia with no governing cerebrum. Unless more decided and leading action is speedily taken by the Senate, we fear that Mr. Hutton's gloomy anticipation may be in danger of fulfilment.

THE INTERNATIONAL CATALOGUE OF SCIENTIFIC LITERATURE.

THE latest addition to the *International Catalogue of Scientific Literature*, published for the International Council by the Royal Society of London, is the volume on Physiology,[1] forming Volume Q of the first annual issue. As would naturally have been anticipated in the carrying out of the gigantic scheme, some difficulties have occurred in organizing fully the work of the regional bureaus, so that the collection of the material for the year 1901 has been somewhat delayed; and the present volume is to be shortly followed by a second. But it is intended in future years that only one volume of physiology shall appear in each year. Physiology has been found to share with chemistry the honour of being the subject in which research is most active. These two subjects together include nearly half of the total entries made in all the sciences. The present volume shows, moreover, that the most active branch of physiology is that in which chemistry lends a helping hand. The list of the journals used in making the catalogue comprises no fewer than one hundred and seventy-five periodicals. This, of course, does not include books, which also find a place. In looking through the catalogue the enormous value it will be to scientific workers can at once be recognized; and it can be realized also how greatly the labours of researchers in the past would have been lessened if such a catalogue had been commenced one hundred years ago. So, for the sake of those who are to use it in the centuries to come, the co-operation of all writers is again to be urgently solicited. Those who write original papers or books should furnish the officials of the catalogue either with copies, or at least with references to where their contributions are published. The catalogue speaks volumes for the diligence of the cataloguers, but, after all, they are human, and are apt to miss occasionally even an important paper, especially if it does not happen to be published in any of the well-recognized journals, or as a separate book. If writers neglect this very simple precaution, and find their names omitted, they will only have themselves to blame. Dr. H. Forster Morley is the director of the Central Bureau (34 and 35, Southampton Street, Strand, London, W.C.), and he would furnish any writer with the names of the special referees appointed to guard the interests of the several divisions of science. The main heading of the volume which has prompted these remarks is *Physiology*, but it must be understood that this includes experimental pathology, experimental psychology, and pharmacology. It is therefore of direct interest to medical men, as well as to those who devote their attention to the more scientific side of the profession. We would remind readers also that the catalogue is not a mere list of papers under the heading of their authors, but is also a subject catalogue. This has immensely increased the difficulty of preparing the volumes, but it has more than proportionally increased their value. The system adopted we need not describe, except to say that it is so eminently simple that a child should have no difficulty in discovering what he wants. We will conclude with a word of regret that the price of the volumes is so high; but we understand that the cost of production is also high, and we must therefore for the present wait until the Executive Committee can see their way to reduce the price of the books to the public.

CANCER RESEARCH AT THE MIDDLESEX HOSPITAL.

THE laboratories in connexion with the new cancer wing of the Middlesex Hospital were opened on March 1st, 1900,

[1] *International Catalogue of Scientific Literature.* First annual issue. Q. Physiology. Part I. (London: Harrison and Sons. 21s.

and the first report[1] of the Cancer Investigation Committee is edited by Mr. A. G. R. Foulerton. Dr. Sidney Coupland contributes a most interesting historical account of the cancer charity of the hospital. Periodically letters and articles appear in the lay press the purport of which is the grievance of this or that inventor of some infallible remedy because the medical profession is supposed to view him and it with jealousy and interested suspicion. To those responsible for such effusions no better reply could be offered than that which Dr. Coupland's article supplies, which proves that the profession has been always ready to test remedies, not obviously futile, which have been honestly put before it; and, on the other hand, that its members are justified in exercising extreme caution in accepting claims and statements made on behalf of this or that "cure." In the second article Dr. H. W. P. Young gives the results of inoculation experiments with seven different members of the yeast group on mice, guinea-pigs, and rabbits. The organisms used were three of Sanfelice's yeasts, saccharomyces albicans, S. tumefaciens albus (Foulerton), and two yeasts obtained from milk. The conditions produced were essentially the same in all cases, that is to say, local and generalized nodules, stated to be granulomatous in character. The greater part of the paper is occupied by descriptions of the cultural and morphological peculiarities of the yeast cells themselves. This ground has been largely worked over already by others, and the value of the paper would have been increased had the writer given more detail as to the structure of the nodules, their variations in the different organs and the effect on and part played by the tissue cells. An article by Dr. Cecil Price-Jones on the cytology of the blood in malignant disease, though preliminary and introductory to further studies on this very important subject, is a serious and valuable contribution. Two points of particular interest are: (1) That many cases progressively examined during the progress of the disease showed a conformity to one cytological type, characterized by a gradual increase of the granular leucocytes and a diminution of the non-granular; and (2) that in a few instances yeast-like bodies and diplococcus forms were found in blood films. On this second point the writer rightly reserves his opinion until further study has been completed. A statistical paper by Dr. Hillier is chiefly of interest for the information it gives on the relative frequency of secondary growths corresponding to the various primary growths. The last contribution to the *Report* is by Mr Foulerton and Dr. Price-Jones on the bacteriological examination of cases of carcinoma and sarcoma. The very variable results obtainable from ulcerated growths and specimens examined *post mortem*, are well known, and bacteriological examinations are of interest from the etiological point of view only when they concern growths from which accidental contamination can be excluded with some probability. There is no record in any case of carcinoma of the breast of attempted culture from affected glands, although at least one prominent writer has stated that he has obtained yeast cultures with exceptional facility from these glands. Different types of organisms were cultivated from many of the growths examined, but in no case was a yeast found, and the cultures obtained are considered to have been due to aërial contamination, terminal infection, or invasion from an ulcerated surface. In the introductory paper we learn the directions which further investigations in the laboratory to are take. The present classification of sarcoma is said to be unsatisfactory, and an attempt is to be made to formulate one on a histological basis. We are not sure that we grasp the significance of this proposal; with the idea that possibly some new formations now classed as sarcomata may be due to parasitic invasions there is every reason to agree from past experience. With regard to the causation of carcinoma, Mr. Foulerton hopes for the most definite results from studies on the evolution of these growths as the consequence of perverted or irregular overgrowth, independently of the influence of any parasites from without. We are glad that it was not thought necessary to spend time and paper on the discussion of the significance of "cell inclusions;" the inoculation of Sanfelice's and other yeasts into the smaller animals is a field of work almost equally unpromising, and the cultural examination of growths on the ordinary laboratory media is a research the continuance of which is also of questionable value. During the last two years the "parasitic theory" in the form in which it was put forward at first has lost ground; it is still, however, far from being abandoned, though it undoubtedly requires to be recast. Hitherto experimental work on these lines has been somewhat rough and ready, and from most of it no argument, for or against the theory, can be deduced. Cancer research is work that requires for success a combination of faculties; no amount of perseverence without originality and imagination is likely to bear fruit.

[1] *Reports from the Cancer Research Laboratories: the Middlesex Hospital.* Vol. i. Edited by Alexander G. R. Foulerton, F.R.C.S., Director. London: Macmillan and Co. 1902. (Roy. 8vo, pp. 204; 8 plates. 8s. 6d.)

THE BRITISH RED CROSS SOCIETY.

The Council of the British National Society for Aid to the Sick and Wounded in War (the British Red Cross Society) has issued a *Report*[1] of its operations in connexion with the Transvaal war, 1899-1902, which is signed by Lord Rothschild as Chairman. The other members of the Council are Mr. A. K. Loyd, K.C., M.P., Colonel J. S. Young, Sir V. B. Kennett-Barrington, Mr. A. D. Fripp, M.S., F.R.C.S., and Mr. G. Bonham Carter. The last report, issued in 1898, related to the Society's work during the Turco-Greek war of 1897-8, and the Soudan expedition of 1898; the new report recounts much more important operations. It would be difficult to overestimate the amount, value, and importance of the noble work done by the Society during the war in South Africa. It is all very modestly set forth in this *Report*. The Society laments the loss during the past three years of many generous patrons and supporters, including Queen Victoria, Lord Wantage, Sir Douglas Galton, the Duke of Westminster, and Sir William Mac Cormac. His Majesty the King has been graciously pleased to assume the position of Patron of the Society so long occupied by the late Queen. Since the last report the Central British Red Cross Committee has been formed, and officially recognized by the War Office; Queen Alexandra is its Honorary President, the Chairman is Viscount Knutsford, the Honorary Secretary Major T. McCulloch, R.A.M.C., Deputy Assistant Director-General; and among its members is H.R.H. Princess Christian. Through it the work of the British Red Cross Society and other kindred organizations is harmonized with the best results; but the direction is exercised only during wars in which British troops are engaged, so that the National Society retains a free hand in aiding in foreign wars as heretofore. In September, 1899, before the actual outbreak of war, the Society sent out Colonel Young to South Africa as Chief Commissioner, and on his return home in connexion with the administration of the Patriotic Fund the work was continued by Sir John Furley. The Society thus secured the services of gentlemen of great energy and the ripest experience in this class of work. The aid afforded both in money and in kind was very great, and its promptness may be measured by the fact that its stores were among the first to arrive on the relief of the garrisons of Kimberley and Ladysmith. Among the many able commissions, Colonel Ryerson acted on behalf of Canada. Among the chief efforts of the Society were the *Princess of Wales* Hospital Ship and the "Princess Christian" Hospital Train, both of which rendered invaluable services. The Society equipped a small army of bearers and hospital orderlies, and distributed to the various military hospitals and to the prisoners of war at Pretoria immense quantities of clothing, hospital, medical, and general stores, medical comforts, newspapers, and periodicals, while money grants were made to local funds. Its disbursements were large, amounting to upwards of £162,000 down to September 30th, 1902; leaving a balance in hand of £20,000. These large

[1] *Report by the British National Society for Aid to the Sick and Wounded in War* (The British Red Cross Society), 1899-1902. Offices of the Society: 5, York Buildings, Adelphi, London.

sums were rendered available by the generous support of the public from the Royal Family downward: the Lord Mayor's Fund alone yielded over £100,000. Appendices to the report contain letters and reports from the various Commissioners and others, forming a very interesting and important contribution towards the medical history of the war.

THE LEAGUE OF MERCY.

DURING the past week the various hospitals to which sums have been voted by the King Edward's Fund have received cheques for the amounts already published. In most instances in the Coronation year the sums received have been larger than—in many cases double—those received in any previous year. This is owing mainly to the unusually large donations made by way of a Coronation gift to His Majesty. If this high-water mark of subventions from the King's Fund to the metropolitan hospitals is to be maintained, and the original intention of that Fund of subsidizing the hospitals, which need such help, to the extent of some £100,000 a year is to be achieved, some permanent organization must be utilized for the purpose. We believe that the League of Mercy provides such an organization. Since its incorporation under Royal Charter a few years ago it has contributed £22,000 to the King's Fund. Sir Henry Burdett has recently issued an appeal to the press with a view to make the beneficent work of the League more widely known. In each Parliamentary division in London and the Home Counties a branch of the League is either in existence or in course of formation. While one in every three or four Londoners in his lifetime resorts to one or other of the hospitals, it is probably true that not one in ten of those who could afford to subscribe to the upkeep of the voluntary hospitals does so. We would fain believe that this is due not to want of thought or want of heart, but to want of opportunity. The members of the League working under vice-presidents and presidents provides this opportunity. It is, we believe, by such an organization, working not by sensational appeals, or under the stress of temporary excitements, but by regular direct and systematic labour that, without recourse to public funds, the efficiency of our hospitals can be best provided for.

A SUSPICIOUS WATER SUPPLY.

IN another column are given some particulars of the water supply of Gosport, which throw grave suspicion on its purity. The water in question is supplied by a public company from a well which is sunk in and takes its supply from the chalk formation. It has been found to contain a large excess of common salt, and this excess will doubtless continue so long as the well is pumped to an extent which brings the level of its water below high water mark in the neighbouring creek communicating with the sea. The presence of excessive salt implies great deterioration in the value of the water for domestic purposes, even if its presence be not regarded as rendering the water unwholesome; and nothing short of diminished pumping will prevent the continuance of this evil. The fact that in a recent analysis conducted at King's College "a large amount.... of bacteria" was found, indicates—unless it can be shown that these had an extraneous origin—that the water is suspicious from an organic standpoint. The local authority should be called upon to have frequent bacteriological analyses made in order to settle this point. The presence of bacteria in large number would be less disconcerting were it not for the fact that the chalk formation in which the well is situate outcrops in Fareham Creek, which is the outlet for the sewage of Fareham. The inhabitants of Gosport should insist on the exact state of matters being known, and on the best advice being obtained. The local authority, under Section LII of the Public Health Act, 1875, cannot proceed to construct waterworks in a district supplied by an authorized water company if such company is able and willing to supply water proper and sufficient for all reasonable purposes. Water showing, after repeated examinations, the presence of bacteria in excessive numbers, and water containing a considerable proportion of sea water—unless it can be proved that water cannot be obtained at a reasonable cost free from this disadvantage—does not come within the scope of the above requirements; and the Gosport public can, under these circumstances, bring pressure to bear on the local authority to take the necessary steps to ensure a wholesome supply.

THE LONDON WATER ACT.

IT is proverbially unwise to lament over spilt milk; it is not less idle to lament over wasted opportunities in the matter of water legislation. Not unfriendly critics of the Government affect to foresee, under the operations of the new metropolitan Water Board, a rise in water rates with little or no amelioration of the quality or quantity of the article supplied. If these prophets prove correct, it will be sorry compensation for the ratepayer to be privileged to blaspheme a Board of sixty-eight in the place of one or other of the eight moribund water companies. No one could be found to bless Mr. Long's Bill on second reading, and its tortuous passage through the Committee stage failed to excite exuberant admiration. Precedent favoured a municipal authority directly responsible alike to the water consumer and the ratepayers, and the London County Council, as the central metropolitan sanitary authority, seemed a not inappropriate body for the purpose. But we are again reminded that we are governed neither by precedent nor by logic, but by the House of Commons, and that august assembly, at the close of a winter session and under summary methods of procedure, has, for weal or woe, committed a gigantic financial undertaking to a newly-constituted Board of sixty-eight gentlemen collected from various county councils, borough councils, urban district councils, and the like. We would fain hope that all is for the best; but if the Cassandras, who are plentiful, turn out correct, the attempt to bring home responsibility for financial blundering or maladministration will be as edifying and profitable a spectacle as a game of hunt the slipper.

IS RUPTURE OF THE AORTIC VALVE AN ACCIDENT UNDER THE WORKMEN'S COMPENSATION ACT?

AT the Newcastle-upon-Tyne County Court the widow of a miner recently claimed compensation from the owners of a large Northumberland colliery on account of the death of her husband, which was believed by the medical attendants to have been the result of an injury received while following his occupation in the pit. The man, who was 46 years of age, went to work in his usual good health on the evening of February 9th, 1902. Along with other men he was told off to remove sleepers from rails in the pit, and to assist in shifting an iron wheel on which had been running an endless rope. For the purpose of removing the sleepers he was obliged to use a stone "mell" or hammer 12 lb. in weight. After wielding this hammer, and striking a blow, the man complained to his mate of a severe pain that had suddenly struck into his right chest, and stated that he felt as if he had wrenched himself. Although he finished this particular shift he did not attempt to use the hammer again. On reaching home a few hours afterwards his wife found him outside supporting himself by the sides of the door. She stated that her husband, who had left home seven hours previously, now looked ill, and that he complained of pain in his side, which he himself attributed to a wrench. He went straight to bed, and never left it again alive except on one occasion, when he was helped up to get the bed made. He died sixteen days afterwards. When Dr. Matthew Bruce saw him on the day but one after the alleged injury he was struck by the altered appearance of the man. Loud murmurs were heard over the cardiac area pointing to aortic regurgitation; there was a very noticeable increase in the area of cardiac dullness, marked irregularity of the heart's action, and considerable distress of breathing. Dr. Bruce had been attending one of the children at the house two or three days before the accident, and he had never seen the miner look in better health than he did then. Owing to the illness of Dr. Bruce the subsequent

medical supervision of the case was undertaken by his brother, Dr. Robert Bruce, who at the coroner's inquest gave it as his opinion that "deceased's death was due to cardiac failure resulting from dilatation of the heart induced by a wrench sustained in the pit on February 10th, 1902." It appears that in August, 1901, the miner, whose family history and previous health were good, developed a perineal abscess which at the time was attributed to an injury. For this he was sent into the Newcastle-upon-Tyne Infirmary, where, as the abscess had penetrated the bowel, the fistula was divided, and the contents of the cavity cleared out. Dr. James W. Heslop, Surgical Registrar to the Royal Infirmary, Newcastle, gave evidence as to the soundness of the man's heart at the date of the operation, the improbability of the perineal abscess having been tuberculous, and testified to the otherwise general healthy appearance of the patient. The miner did not resume work in the pit until January, 1902, partly on account of a succession of small abscesses in the perineum. When he did return to work he followed his avocation regularly from the beginning of January to February 10th. He worked twenty-four shifts in succession, and was recognized by his friends at this time to be apparently in good health. Professor Thomas Oliver, who was called on behalf of the plaintiff, stated that he had gone carefully over all the written evidence, medical and other, that had been submitted to him, and he had listened to the examination of witnesses in the Court. He gave it as his opinion that as the miner had worked in the pit for twenty-four shifts consecutively, was apparently in good health at the time he experienced the strain, was found on the day after the supposed injury to have developed signs and symptoms of cardiac disease, of which there had been no evidence previously, and died in a fortnight from its effects, death was due to heart disease, probably traumatic, and due to sudden strain. For the defence it was urged by Mr. T. A. Dodd that as the man had suffered from fistula in ano in the previous August death was probably due to chronic pulmonary disease and that the facts above mentioned were most improbable causes of rupture of the aortic valves. Judge Greenwell in a considered judgement did not discuss the medical evidence but simply stated he had come to the conclusion that the miner had died from rupture of a valve of the heart but that there was no convincing or even satisfactory evidence to show how that rupture had been caused. The case must therefore be dealt with on the basis that when the injury was caused the man was doing the ordinary work of a shifter in the usual way. According to the evidence of a fellow workman the miner had used the "mell" on one occasion only. While not impossible still it had not been proved that rupture of the valve of the heart had been definitely caused by that particular act. The question of accident or no accident was therefore one of fact. Was there anything "fortuitous and unexpected" in the circumstances attendant upon the injury? His Honour did not feel called upon to express an opinion as to whether the fortuitous and unexpected circumstance must be something "external to the man himself" as had been argued in the judicial inquiry Boardman *v.* Scott. For the purpose of the present case in order to constitute an accident something fortuitous and unexpected, other than the injury itself, must be shown. Injury resulting, however unexpectedly, from an act done in the ordinary course of work could not alone entitle a workman to receive compensation. In the case submitted to him Judge Greenwell found that the injury was caused by the use of the hammer, used in the usual and proper way, and that no fortuitous or unexpected circumstance had arisen in connexion with that use other than the injury itself, and he therefore dismissed the application.

SYPHILIS IN TURKEY.

Elsewhere we publish a paper by Dr. George Ogilvie founded on an interesting report recently issued by Professor v. Düring Pacha on endemic syphilis in Turkey, and particularly in the vilajet of Castamuni. During the last forty years the disease had been rapidly increasing in different parts of Asia Minor, and the steps which from time to time have been taken by the Turkish Government have proved utterly inadequate to check its progress. Some years ago Professor v. Düring was requested by the Turkish War Office to suggest measures for dealing effectively with the difficulty. The plan submitted by him included a complete reorganization of the medical and sanitary services, a number of legal reforms, the building of new and the rebuilding of old hospitals, and the erection of dispensaries through the affected districts. The final acceptance of this far-reaching scheme (in 1899) was chiefly due to the personal initiative of the Sultan, who takes an active interest in all matters of hygiene. During the last two years spent by Professor v. Düring in Asia Minor he was engaged in a regular campaign against endemic syphilis, with the help of a staff of twenty-five Turkish army surgeons. All these gentlemen must be highly congratulated upon the splendid success of their mission, obtained under the most extraordinary difficulties. The bodily hardships and personal privations under which their task was accomplished could scarcely have been greater in actual warfare. Professor v. Düring examined altogether more than 30,000 cases of syphilis. So vast a field of observation was sure to yield a harvest of considerable scientific value, which is garnered in a lengthy article on endemic and hereditary syphilis published in the *Archiv. für Dermatologie und Syphilis* (Bd. lxi, Hft. 1, 1902). The problems of syphilitic heredity and hereditary immunity are treated with special thoroughness. In the questions of syphilitic heredity, v. Düring Pacha's recent experience has borne out the views lately expounded by Dr. Ogilvie, to whose critical acumen and scientific suggestions he confesses himself greatly indebted.

THE PHYSIOLOGICAL LABORATORY OF THE UNIVERSITY OF LONDON.

The courses of lectures and demonstrations in advanced physiology in the physiological laboratory of the University of London, South Kensington, will be resumed on January 20th, at 5 p.m., when Professor W. D. Halliburton, F.R.S., will commence a course of eight lectures on the chemistry of muscle and nerve; the lectures will be continued on succeeding Tuesdays. On Thursday, January 22nd, at the same hour, Dr. T. G. Brodie will commence a course of eight lectures on the circulation, to be continued on succeeding Thursdays; and on Friday, January 23rd, Dr. A. D. Waller, F.R.S., will begin an additional course of eight lectures on experimental pharmacology, which will be continued on succeeding Fridays. The laboratory has been established in order to afford to the lecturers of the University of London and other accredited physiologists a place in which the results of current research can be presented by lectures and by demonstrations, and of giving to advanced students of physiology opportunities for the prosecution of research. Applications to occupy a laboratory table should be made in the first instance to Dr. Waller, the lecturer in charge, at the University, South Kensington. The laboratory, it will be remembered, includes a lecture room, a workshop, a chemical room, a general laboratory, and two rooms assigned to the physiology of the special senses, inclusive of physiological psychology. Mr. G. W. Palmer, M.P., whose generous gift of £2,000 enabled the laboratory to be fitted, has, as has been already announced, now presented, through Dr. Waller, a further sum of £1,000 towards the formation of a fund for the permanent endowment of the laboratory.

THE NEW ADMIRALTY SCHEME OF NAVAL TRAINING.

The scheme of naval training lately issued as a Parliamentary paper by Lord Selborne does not directly touch on the medical department of the Royal Navy. It is of interest, however, to medical men who have sons who may feel drawn to a career at sea, and to them as to all citizens of this great country which has so long ruled the waves, it must be satisfactory as showing that the First Lord of the Admiralty is thoroughly in earnest in his desire to make

the service attractive. Apart from the new regulations as to the general and professional education of cadets, the most important matter dealt with by Lord Selborne is the assimilation of the ranks of engineer officers to those of the corresponding officers of executive rank. They will in future have the same titles with the letter (E) appended. Thus: Sub-lieutenant (E) up to rear-admiral (E). The promotion of future lieutenants (E) and commanders (E) will, as in the case of the executive officers, be by selection and qualifying service. As regards the present engineer officer, the general period of reaching each rank will be assimilated as far as possible to that of the executive branch, so as to correct the present disparity of age which too often obtains between officers of the two branches of relatively equal rank. It is further stated that the Board of Admiralty is fully aware of the importance of this question to the officers of other branches than those dealt with in the memorandum, and is now engaged in considering it. The "other branches" referred to may perhaps be taken to include the medical department. There is no doubt that the medical service of the Royal Navy is at present the reverse of popular with young members of the medical profession on the outlook for a career. We have several times called the attention of the naval authorities to some of the more flagrant of the grievances of medical officers, and we have some reason to believe that our remarks have attracted the attention of the Admiralty. Medical officers of the Royal Navy are so tightly held in the bonds of disciplinary red tape that they have comparatively little opportunity of making their grievances public; at any rate, for some reason, they do not choose to give expression to them. We are therefore not in a position to say whether or not there is any widespread desire among them for executive titles. On *a priori* grounds we think it probable that such titles would materially improve their position in the service.

THE INOCULATION DISASTER IN THE PUNJAB.

LAMENTABLE accidents from the use of contaminated serum have in the last few years been recorded at Milan and elsewhere, and the report of a similar disaster in India has been received with deep regret. The facts as given by the *Times of India* are as follows: After a series of inoculations against plague, conducted by a European doctor in the small village of Malkowal, near Gujrat, where the people came forward freely, headed by their local officials, several cases of illness occurred and rapidly became grave. Suspicion was quickly directed to one particular phial of the fluid used, and our contemporary believes that subsequent examination has proved that it must have been contaminated. It is said that the whole of the persons inoculated from that phial became dangerously ill, and that nineteen in all have died from the effects. According to another account, of twenty-five men inoculated all have died. The moment the grave effects of the contaminated serum were recognized the Provincial Government, in view of the risk that other phials might also be affected, ordered inoculation to be stopped through the province pending investigation and the elimination of all fluid that might be found open to suspicion. In the meanwhile the temper of the people is said to have been excellent. They have frankly recognized the accidental character of the mishap and profess themselves ready to go on with inoculation when and if the authorities allow a fresh start to be made. The deplorable incident calls for the fullest investigation by the Indian Government. We hope also that the fullest publicity will be given to the results of the inquiry. It is scarcely necessary to add that the most stringent precautions must be taken to prevent the repetition of such an occurrence.

POOR-LAW MEDICAL APPOINTMENTS IN IRELAND.

AN important meeting of the medical profession of the city and county of Cork was held in Cork on December 17th, 1902, for the discussion of the status and interests of the Dispensary and Union medical officers of Ireland. It was pointed out by Dr. P. J. Cremen, who occupied the chair, that the remuneration of Irish Poor-law medical officers had remained the same for the past fifty years, although the salaries of the English medical officers and of those of the navy and army had been largely increased. A resolution was carried to the effect that the present rate of remuneration was quite inadequate considering the nature of the services performed, and that reform was urgently needed in the direction of improving the pay and prospects of the officers of the service. It was stated in support of the resolution that the Poor-law medical officer was no better off at the end of twenty years' service than he was when he entered it; and that £100 a year was not sufficient remuneration for never-ending duties by night and day, which involved, moreover, the keeping of a servant and horse and trap. Private practice was often impossible, because the medical officer's first duty was to the poor, and this often absorbed the whole of his time. Another resolution was passed urging all intending candidates for Poor-law medical appointments not to apply for these positions until the recommendations of the Irish Medical Association were generally adopted, the principal being that no Poor-law medical officership should be accepted at a less salary than £200 a year. Any action which would have the effect of depriving the poor of medical attention during the settlement of the question was deprecated, and the members of the profession present undertook to provide *locum tenentes* to discharge the duty where vacancies existed at a remuneration of 4 guineas a week.

THE MIDWIVES ACT.

FROM inquiries which reach us, it would seem to be well to recall the fact that this Act does not come into operation until April 1st next, and that some of its most important provisions do not take effect until later dates. Thus the provision which forbids any woman not certified under the Act from taking or using the name or title of midwife or any other title or description implying that she is certified under the Act, under a penalty, comes into force on April 1st, 1905; while the further provision forbidding a woman, under penalty, from habitually and for gain attending women in childbirth otherwise than under the direction of a qualified medical practitioner unless certified under the Act does not come into force until April 1st, 1910. As already announced, all the members of the Central Midwives Board have now been appointed, and have held a meeting, and will, we understand, meet again before April, but such meetings are informal, as the Board will not have any legal existence until April 1st next. It will then be possible for a woman who holds certain certificates in midwifery specified in the Act, or approved by the Central Midwives Board, or who produces satisfactory evidence that at the passing of the Act "she had been for at least one year in bona-fide practice as a midwife, and that she bears a good character," to apply to the Central Midwives Board to be certified under the Act. Such application must be made within two years from the date of the Act coming into operation—that is to say, before April 1st, 1905.

THE Advisory Committee of the King's Consumption Sanatorium have appointed Mr. H. Percy Adams, F.R.I.B.A., as their architect. Mr. Adams is the architect to St. George's and Westminster Hospitals.

AT the last meeting of the Royal Army Medical Corps Fund it was resolved that a brass memorial tablet should be erected to the memory of the late Surgeon-General J. B. Hamilton, in recognition of his efforts to promote the interests of the Corps.

SIR JOHN WILLIAMS, Bart., who has recently been in attendance upon the Princess of Wales on the occasion of the birth of her son, has been invested by the King with the insignia of a Knight Commander of the Royal Victorian Order. Dr. Friedrich Ilberg, M.V.O., Physician to the German Emperor, has been promoted to be a Commander of the Order (C.V.O.).

NOVA ET VETERA.

DOCTORS IN BRITISH FICTION.

The progress of the medical profession in the public esteem may to a great extent be gauged by the position occupied by its members in contemporary fiction, and especially in the novels of the day. The modern novel was the creation of the eighteenth century, which saw the physicians Radcliffe and Mead, Cheselden the surgeon, and the Hunters wax and wane. Yet although Mead and Arbuthnot and others were distinguished among the leaders of literary taste aud culture, no medical man is given a prominent place by the novelists of the century if we except Smollett, who being himself a Doctor of Medicine and a naval surgeon, naturally wrote of that which he did know. His sketches of his professional brethren are not very flattering, but then Smellfungus was irascible and somewhat atrabilious. These pen and ink pictures suggest the caricatures of Rowlandson or Gilray, while the brief but graphic descriptions of Fielding are as sober and restrained as Leech's or Du Maurier's drawings in *Punch*. Some of Smollett's doctors are skilful, some ignorant. Some are honourable gentlemen like Morgan, others lying cowardly curs like MacShane, in whose description Smollett betrays a dislike to the Irish generally; but be they apothecaries, examiners at Surgeons' Hall, spa physicians, or naval surgeons and their mates, they are all drawn with bold strokes of broad satire, as are the non-medical characters in his novels. On the other hand, although no doctor is a prominent character in Fielding's novels, there are a good many brief references to medical men and their foibles, which are occasionally satirized with great acumen. When diagnoses differ, we are to understand that "every physician almost has his favourite disease to which he ascribes all the victories obtained over human nature;" and we are told with an admirable gravity that "There is nothing more unjust than the vulgar opinion by which physicians are misrepresented as friends to death." But expectant treatment was something so new and strange in that age of active interference, that those physicians who, "to avoid a possibility of killing the patient.....abstain from all methods of curing," are hardly treated seriously. But despite Fielding's omissions, the medical man of the eighteenth century has been immortalized in *Tristram Shandy* in the person of Dr. Slop, the man midwife ("Accoucheur, if you please"). His is not a dignified figure in any way, and Sterne's description of his person is in as broad a vein of caricature as any of Smollett's characters; yet, although out of tenderness to Mrs. Shandy's modesty it had been arranged that he should "follow the midwife," he successfully maintains his professional dignity when he insists on her coming to report to him, instead of himself obeying her peremptory summons. Moreover, he was an up-to-date and skilful practitioner, and had invented a midwifery forceps of his own. It is said that Dr. Slop was a spiteful libel on Dr. John Burton, of York, who was a suspected Jacobite, and was obnoxious to Sterne's influential uncle Jacques. He had a high reputation as an accoucheur, and his essay on Midwifery has been described as "a most learned and masterly work." He was still more distinguished as an antiquarian, and probably was not much like his fictitious representative.

In the eighteenth century the select body of physicians consisted of men of culture, whatever may have been the therapeutic value of their attainments, but surgeons and apothecaries seem for the most part to have been men of little general education and scanty scientific acquirements. To be able to "bleed and give a clyster, spread a plaster and prepare a potion," as Crab said to Roderick Random, was of more importance than to be able to "account for muscular action and explain the mystery of the brain and nerves." The short-sighted practical man is still blind to the truth that so-called theoretical knowledge leads to practical improvement. Medicine and surgery, however, benefited by the great upheaval at the end of the century, and the better surgeon found a better status in fiction when Scott wrote *The Surgeon's Daughter*, to the first chapter of which he prefixed Dr. Johnson's fine verses written on the death of his friend Levett. Gideon Grey has been so often quoted of late as an example of what a Scotch country doctor is and should be, that further description of him is needless. In *Horae Subsecivae* we are told that Dr. Clarkson, of Selkirk, was the original of the character. Sir Walter Scott may be considered as the first of the great English novelists — English in that he wrote in the English tongue—to give to a doctor an important place in fiction and Thackeray, Bulwer Lytton, George Eliot, and Trollope have followed him. Dickens was an enthusiastic admirer of Smollett, by whom he was, perhaps, influenced in his treatment of the doctors who (with the exceptions of Losberne in *Oliver Twist* and Allan Woodcourt in *Bleak House*) do not much honour to their calling, but the medical profession shares with all science and scientific men the amusing but scornful ridicule which he poured out on the British Association in the "Report of the Mudfog Association," and in other allusions, scattered over his novels. Mr. Bob Sawyer and Mr. Benjamin Allen are the two names that occur to every one when Dickens and doctors are mentioned together. Their first introduction to the reader is at Dingley Dell when

> One on 'ems got his legs on the table and is a drinkin' brandy neat, vile the tother one—him in the barnacles—has got a barrel of oysters atween his knees, wich he's a openin' like steam, and as fast as he eats 'em, he takes a aim vith the shells at young dropsy who's a sittin' down fast asleep in the chimbly corner.

Their vulgarity, their want of manners and of clean linen, or in Mr. Allen's case of any visible linen at all, their desire to bleed any or everybody on the slightest provocation are so familiar that no extended quotation is necessary or excusable.

When Bob Sawyer succeeds in passing the College, his friends buy for him the practice of Dr. Nockemorrf at Bristol, yet he does not improve in his ways, but still drinks brandy neat, and his attempts to keep up an appearance of propriety and decorum are spasmodic and not likely to have deceived anybody. Mr. Winkle finds him in the parlour behind his shop, where he and Allen, who has been staying with him for three weeks, during the whole of which time he "had been wavering between intoxication partial and intoxication complete," are producing "a sound as of persons fencing with fireirons." The inevitable brandy bottle is produced, and after that they and Winkle dine together, and spend the greater part of the afternoon smoking and drinking rum-punch made in a mortar and stirred with the pestle.

The question has often been asked, Is it possible that this is a fair picture of the medical student and practitioner of the Thirties? There can be no doubt that it is not, but it is probably only a moderately exaggerated sketch of a small proportion of the London medical students, for Dickens is not alone in his views. Albert Smith—himself a M.R.C.S., although he practised, if at all, as a dentist—describes medical students who do not differ much from Bob and Ben and their Lant Street friends, and even Thackeray, who is far more sober in his judgements of men, draws in *Pendennis* a by no means flattering picture of Mr. Huxter. This gentleman, whose father was a surgeon at Clavering, recalls himself to Pen's remembrance when Pendennis treats Fanny Bolton and her mother to Vauxhall:

> A young man in a large white coat, with a red neckcloth, over which a dingy shirt collar was turned so as to exhibit a dubious neck; with a large pin of bullion or other metal, and an imaginative waistcoat with exceedingly fanciful glass buttons, and trowsers that cried with a loud voice, "Come, look at me, and see how cheap and tawdry I am; my master, what a dirty buck!" and a little stick in one pocket of his coat, and a lady in pink satin on the other arm.

Mr. Huxter invites Pen to supper in Charterhouse Lane—"some devilish good fellows from Bartholomew's, and some stunning gin punch!" Pen is indignant and disgusted, and Thackeray thereupon remarks:

> Mr. Samuel Huxter was not aware there was any great social difference between Mr. Arthur Pendennis and himself. Mr. Huxter's father was a surgeon and apothecary at Clavering, just as Mr. Pendennis's papa had been a surgeon and apothecary at Bath. But the impudence of some men is beyond all calculation.

Huxter reappears several times in the story, but he is always the same—vulgar, coarse, overdressed, and with dirty hands (the dirt is insisted on over and over again), but withal good-natured. Such a person does not seem to the reader to be making a *mésalliance* when he marries Fanny Bolton of the Porter's Lodge, Shepherd's Inn, a union which is graciously furthered by Arthur Pendennis, Esq.

If Thackeray libelled Physic in the person of Huxter, he made magnificent amends with Dr. Goodenough. It is generally supposed that Goodenough is drawn from Elliotson, to whom *Pendennis* is dedicated. His person is not described, although his great eyebrows are referred to; but his skill and his goodness, tempered by a gruff manner, are praised again and again.

A propos of Dr. Goodenough, there is a fine passage in *Pendennis* on the responsibilities of the physician:

> It is not only for the sick man, it is for the sick man's friends that the doctor comes. His presence is often as good for them as for the patient, and they long for him yet more eagerly. How we have all watched after him! What an emotion the thrill of his carriage wheels in the street, and at length at the door, has made us feel! How we hang upon his words, and what a comfort we get from a smile or two if he can vouchsafe that sunshine to lighten our darkness! Who hasn't seen the mother prying into his face, to know if there is hope for the sick infant that

cannot speak, and that lies yonder, its little frame battling with fever? Ah, how she looks into his eyes! What thanks if there is light there! what grief and pain if he casts them down and dares not say "Hope!" Or is it the house-father who is stricken? The terrified wife looks on while the physician feels his patient's wrist, smothering her agonies, as the children have been called upon to stay their plays and their talk. Over the patient in the fever, the wife expectant, the children unconscious, the doctor stands as if he were Fate, the dispenser of life and death; he *must* let the patient off this time; the woman prays so for his respite! One can fancy how awful the responsibility must be to a conscientious man: how cruel the feeling that he has given the wrong remedy, or that it might have been possible to do better; how harassing the sympathy with survivors, if the case is unfortunate—how immense the delight of victory!

In Fildes's fine picture is it not this question, "Have I done the best possible?" which is bending "The Doctor's" brows into a thoughtful frown?

On the other hand, the villain of *A Shabby Genteel Story*, and of its sequel, *Philip*, is a physician—Dr. Brand Firmin—and he and Dr. Goodenough meet at Philip Firmin's bedside. His gloomy handsome face, and white hands and beautiful teeth, loom large throughout the story. He is one of the best of Thackeray's villains, for he is not altogether bad, though base enough to make away with his son's inheritance and forge his acceptance of a bill of exchange, besides such a trifle as the desertion of a woman after a (supposed) mock marriage.

Thus Scott and Thackeray acknowledged that doctors might be interesting characters in fiction, but in no great novel had a surgeon-apothecary been made a central figure until George Eliot created Lydgate, and neither before nor since has any English writer shown such an insight into the troubles of medical life, or touched with so light but sure a hand on the humours and jealousies of practice in a country town in the first half of the nineteenth century. Dorothea was without doubt meant to be the central figure of *Middlemarch*, but certainly to the medical reader, if not to all readers, the tragedy of Lydgate's life is more interesting than the tragi-comedy of Dorothea and Will Ladislaw.

Lydgate intended to reform medical practice as well as to make discoveries in physiology and pathology, but his zeal for the latter was held to be "a poor tale for a doctor, who if he was good for anything should know what was the matter with you before you died, and not want to pry into your inside after you were gone." Drs. Sprague and Minchin, the two physicians of Middlemarch, "concealed with much etiquette their contempt for each other's skill"; but it must be admitted that Lydgate was not at great pains to conceal his opinions about his colleagues, and the injured Mr. Wrench put it mildly when he told Dr. Minchin "that Lydgate was disagreeably inattentive to etiquette." His faults only make his character more lifelike. His failure in practice in Middlemarch and his humiliations ("for remember he was one of the proudest among the sons of men") are scarcely more tragic than his matrimonial disaster, and the reader feels that although he was afterwards what is called a successful man, he was right in that "he always regarded himself as a failure ..... he had not done what he once meant to do." "To love what is great and try to reach it and yet to fail" is a great and enduring sorrow, and it is a relief to know that he died prematurely.

After *Middlemarch*, Trollope's Dr. Thorne is the most notable instance of a medical hero of fiction, and he is drawn with that faithfulness and quiet humour by which his author was distinguished; but many other novelists of the nineteenth century introduced doctors. Charles Reade, who hated "mad doctors," had a high opinion of Dr. Samuel Dickson, author of the *Fallacies of the Faculty and the Chronothermal System of Medicine*, whose representative in *Hard Cash* diagnoses lovesickness when others had only thought of liver. Wilkie Collins has villainous and virtuous specimens. Marryat has kindly sketches of naval surgeons. Charles Kingsley has Tom Thurnall as a prominent character, and rather a self-assertive one.

In later years every possible field is explored by the enterprising novelist hard put to it to find pastures new, and many doctors have appeared. As recent instances may be taken four books by well-known hands—*Flames*, *The Luck of the Vails*, *Cinderella*, and *Sir Richard Calmady*.

In *Flames* his unpleasant but powerful "London Phantasy", Mr. Hichens has made Dr. Hermann Levillier, the nerve specialist of Harley Street, a very important character. "There was no doctor in London so universally sought by the sane lunatics of society." His psychological principles were beautifully simple. "The body has a hook, the soul an eye—they meet at birth and part only at death." Dr. Levillier was constantly and ignorantly entreated to adjust the one comfortably in the other. Apparently he reversed the time-honoured theory that the body contains the soul. "It is a delicate business this adjustment, sometimes an impossible business. Half the Harley Street patients come saying 'make me well.' What they really meant was 'make me happy.'"

Dr. Levillier kept big dogs, who were unfortunately prevented from rending one of his demoniac patients, but after all his skill—which is more talked of than shown—he is left with two dead men and a reformed prostitute on his hands as the result of or despite his efforts. Mr. Hichens's doctor is on the side of the angels, but in *The Luck of the Vails* Mr. Benson has a doctor for his secondary villain, who repents in the end without any very obvious motive.

In *Cinderella* Mr. Crockett's bad hero is "Sir Sylvanus Torpichan-Stirling, Bart., M.D., Philanthropist and Malefactor," but this story has little concern with his professional doings, and thus is a good example of the changed position of medical men in the opinions of novelists. Mr. Crockett chooses to make his hero a physician, presumably because doctors are important and interesting people, not because he is hard up for novel scenes and circumstances.

Sir Richard Calmady was the victim of the brutality of an ancestor and a consequent curse. He was born with maimed lower extremities, and later in life became the owner of a bulldog who objected to adultery. Dr. Knott is the guide, philosopher, and friend of Sir Richard's and various other county and noble families, who thinking very highly of his skill allow him a free and easy familiarity, unlike the well-born Lady Chettam in *Middlemarch* who liked "a medical man more on a footing with the servants; they are often all the cleverer." If we may test Dr. Knott's skill by his treatment of Sir Richard's deformity, he was not a very able practitioner. After hurting his patient fearfully by trying on some ready-made appliances, he decides—and such is his reputation that the decision is not questioned—that nothing can be done, and so condemns Sir Richard to a condition of morbid sensibility which nearly wrecks his life—a condition very far from common in those who suffer from congenital deformities. And all this could have been prevented by amputation of the feet and a pair of artificial limbs.

PROFESSOR V. DÜRING PACHA'S CAMPAIGN AGAINST ENDEMIC SYPHILIS IN ASIA MINOR.

By GEORGE OGILVIE, B.Sc., M.B.Edin., M.R.C.P.Lond.,
Physician to the French Hospital, and to the Hospital for Epilepsy and Paralysis, London.

THE increase of syphilis in Asia Minor, and in the vilajet of Castamuni particularly, has for more than forty years attracted the attention of the Turkish Government. It is from the latter province that the regiments of the metropolis are principally recruited. In 1896 Professor E. von Düring Pacha, the well-known syphilographer, was commissioned by the Turkish Minister of War to report on the distribution and spread of syphilis in the province of Castamuni and to submit proposals for its prevention and cure to the Government. After a stay of a few months v. Düring Pacha returned to Stamboul, but he had to wait three years until all the obstacles were removed which stood in the way of the realization of his plans, and his final success has been due to the personal interest which the Sultan takes in matters of hygiene. At the end of 1899 v. Düring Pacha again started for the field of his operations, and, with a short interruption during the spring of 1900, remained there for two years. He organized the sanitary and medical service, built hospitals, formed out-patient departments, and was frequently his own architect and engineer. He also examined and treated about 65,000 people—a truly Herculean undertaking. He remarks[1] that no one personally unacquainted with the mode of travelling, can form any idea of the strain and fatigue which it imposes upon the nervous system. During his stay in the country he rode about 5,000 kilometres on horseback, at all seasons of the year, camping under a tent or in the open air, and frequently on the road for fifteen hours at a stretch. He halted only to examine the people of a village, of, say, fifty or a hundred inhabitants, to make notes and dispense medicines. He was often drenched to the skin, or broiled by the sun, living on a diet of bread, eggs, milk, fruit and chicken, in fact leading the life of a soldier engaged in a regular campaign. He bestows the highest praise upon the endurance and loyalty of the twenty-five Turkish colleagues who formed his staff, not only for their unswerving faithfulness to duty, in spite of

[1] *Deut. med. Woch.*

very slow advancement and utterly inadequate and most irregular remuneration, but also for the true scientific spirit with which they followed the demonstrations and lectures he could spare time for during this nomadic life. The Turkish medical officer is not paid by the day, but by the yard, that is, by the number of miles he travels. Up to the rank of vice-major he receives 4d. the travelling hour. Nothing is paid for the stoppages. If fifteen travelling days a month, and eight hours a day be assumed—a high average—the monthly pay is about £5, out of which sum he has not only to keep himself, but to buy and keep a horse, to pay for the transport of his luggage, etc. Of course, living is cheap; for 1d. five to eight eggs may be bought, a chicken costs from 1½d. to 2½d., a whole lamb from 2s. 6d. to 3s. 6d., a good horse from £7 to £8. It seems that v. Düring Pacha himself had, for all his toil and privation, only a very poor return in the goods of this world, but his official position precludes him from doing more than hint at his personal grievances.

From a medical and humanitarian point of view, however, the result of v. Düring Pacha's mission cannot fail to be in itself a source of the greatest satisfaction. The province of Castamuni has an area of 60,000 km., with a population of about a million. The whole vilajet is the seat of endemic syphilis, but those most affected are the inhabitants of the secluded mountainous districts. In some of these districts scarcely a single healthy individual is to be met with. When first v. Düring Pacha went there he found five hospitals, which, although healthily situated, and not badly built, and affording room for from 60 to 100 patients, could not shelter more than from 8 to 12, from want of beds, linen, and medical appliances. All the sanitary arrangements were in a most defective, often in a filthy, condition. These hospitals were rebuilt, enlarged, equipped with all modern requirements of medical and sanitary science, good dispensaries, etc. Five more hospitals have been built, and two more are in the course of erection. At the present moment there are ten hospitals in the province, with altogether 730 beds and proper outfits. To each of these hospitals an out-patient department is attached, where patients are seen daily. All who present contagious symptoms are at once sent to the wards. At seven other places out-patient departments have been erected, which brings the number of these "poli-clinical" institutions up to seventeen. Two more are to follow. On market days medical men have to examine the people and to send those affected with contagious lesions to the nearest hospital. In this task they are supported by the police, officials, and even the priests.

The effect of these measures on the general state of health of the province cannot manifest itself until after a number of years, yet all those who are convinced of the favourable influence of proper specific treatment, of good sanitary arrangements, of sound preventive measures, will see a guarantee of future success in the rapid and constant increase of the number of those repairing to these clinical institutions. During the year 1315 A.H. (March 1st, 1899, to March 1st, 1900), 1,200 patients were under treatment; in the year 1316 A.H. this number rose to 4,400, of which about 2,300 are registered in the hospitals, and 2,100 in the out-patient departments; during the first seven months of the year 1317 (that is, up to October 1st, 1901), 7,288 patients had been under treatment, of whom 2,689 went to the wards. The medical men are gradually gaining the confidence of the populace, the "empirics" are losing ground, and patients begin to flock to the hospitals of their own free will. All drugs, medical attendance, and maintenance in the wards are gratis. Before leaving his work v. Düring Pacha had the satisfaction of finding at least one district, formerly a hotbed of syphilitic infection, where now, thanks to the co-operation of an eminently active medical man and an intelligent official, scarcely a sufferer from syphilis was to be found who was not under proper treatment.

It is only natural that a man possessing v. Düring Pacha's scientific bent of mind and abilities, should have made use of these exceptional opportunities for wholesale observation (more than 30 000 cases) to control, confirm, or correct "previous convictions." The principal results he has arrived at are laid down in a lengthy but interesting paper in the *Archiv für Dermatologie*. The author has totally abandoned some of his former views, as personal experience has made him rather sceptical with regard to much that has been handed down on authority. In particular, many of the modern French doctrines meet with doubt and opposition.

I am pleased to learn that a similar commission has been offered by the Turkish Government to Professor v. Düring Pacha for the vilajet of Angora, and has been accepted by him for at least a couple of years. No doubt this second "labour" will be overcome with equal success, and I only hope that he may be able to spare sufficient time for further scientific communications, out of the uncommonly rich and rapidly increasing stores of his experience.

CONTRACT MEDICAL PRACTICE.

PRIVATE MEDICAL CLUBS.

AN ordinary meeting of the Walsall and District Medical Societies was held on Thursday, December 14th, 1902, at which a discussion was opened on the subject of private medical clubs. The members present were unanimously of opinion that steps should be taken to alter the existing unsatisfactory state of affairs, and it was decided that a meeting of all of the medical men practising in the town should be called for December 18th, 1902, in order that the subject might be freely discussed, and, if feasible, that action might be taken.

The meeting was duly held, and was well attended. All those present were of opinion that the "family club" system, with its attendant evils, is an incubus under which the profession has laboured only too long. It was decided that the best thing to do with the "private medical clubs" was to give them up, and the following resolution was drawn up and signed, and has appeared in the local newspapers as follows:

That this meeting of medical men, practising in Walsall and district, views with disapprobation the system of "private medical clubs," and pledge themselves to discontinue associating with the said system. At the same time they signify their intention to cease their connexion with these clubs from February 1st, 1903. In future the same medical men are prepared to attend any of the public, whose weekly wages do not allow of paying usual medical fees, for a fixed sum per week, to be agreed upon by the head of a family and the practitioner called in, to be paid at the commencement of each week during which the illness may continue. We, the undersigned, subscribed to the above resolution.

J. SCOTT WILSON,	F. DEAKIN,
G. A. PHILLIPS,	S. H. HAWLEY,
GEOFFREY STEAD,	ARNOLD J. DEARDEN,
FREDK. SYDENHAM,	J. F. O'MEARA,
TOM LONGMORE,	FRANK G. LAYTON,
D. RIORDAN,	G. M. FOX,
JOHN G. COOK,	W. H. MCKINSTRY.
HARRY SHORE,	

It is to be regretted that, so far, the medical men of Walsall are not quite unanimous in the matter: still, as will be seen, by far the greater number have subscribed to the resolution, and it is to be hoped that before long the others will come into line.

COUNTY OF DURHAM MEDICAL UNION.

A general meeting of this Union was held in the Town Hall, Durham, on December 16th, when the chair was taken by Dr. E. Jepson, J.P., President.

A vote of condolence to the family of the late Dr. J. E. Norman of Hebburn, Chairman of the Jarrow Local Committee, was adopted.

The Treasurer's statement showed a balance in favour of the Union, and twelve new members were elected.

The report of the Council and reports from local committees were received. Dr. Hubbersty, in his report from Sunderland, stated that a member had been asked to take a female lodge, and a discussion upon the subject took place. The following resolution, moved by Dr. Cox, seconded by Dr. Todd, was carried unanimously:

That in the opinion of this meeting it is inadvisable that any member of the County of Durham Medical Union should accept a female Friendly Society lodge on any terms whatever.

On the report of the Council, Dr. Todd observed that, while it was satisfactory that the Coalowners' Association, through the efforts of the Union, had agreed to pay a fee of two guineas when any colliery doctor attended *post-mortem* examinations and inquests on their behalf under the Workmen's Compensation Act, and a fee of one guinea for attending an inquest only, many practitioners were in the habit of giving workmen certificates gratis, whereas under the Act the employers were bound to pay their doctors for such certificates. He thought that this should be known.

Dr. Cox moved the following resolution, which was seconded by Dr. Hunter:

That this meeting strongly recommends every member of the Union to become, without delay, a member of the British Medical Association, with a view of uniting this and all similar bodies into a strong and united national medical association.

Dr. Hubbersty thought that there was a financial difficulty, inasmuch as the amount that would be allocated by the British Medical Association would be insufficient for the work now carried on by the Union.

Dr. Hill Drury (Darlington) opposed the resolution, and moved an amendment to leave out all the words after "with."

This was seconded by Dr. James Drummond, and carried.

The President then moved:

That whilst it is desirable that all medical men should become members of the British Medical Association, it is most essential that the County of Durham Medical Union should retain its entirety, and at some time become a Branch of the British Medical Association.

He urged that the organization of the Union was ready to hand to be adapted to the formation of a Branch; Durham being compact would give strength to the Association; the North of England Branch at present covered too large an area; from the Durham Union members, numbering about 250, a good Branch could be formed; if ethical and scientific matters were to be discussed there would not be time for the business of two large counties to be taken together at one meeting.

The resolution was seconded by Dr. William Jaques, and carried.

Certain alterations in the rules of the Union were adopted, and the meeting terminated with a vote of thanks to Dr. Jepson.

CHEAP FAMILY CLUBS.

DR. JOHN ELLERTON (Middlesbrough) writes: Will you allow me to mention some further objections to family clubs? In the first place they are extremely unfair to medical men who, while they recognize their objectionable character, are obliged either to associate themselves with them or suffer a considerable loss of income. In my own case during the time that canvassing for members was in full swing in Middlesbrough I was told by the officials of a large ironworks to which I was surgeon that things had reached such a pass that I must either commence a club of this kind or lose my position. I was therefore obliged either to act on their suggestion or see the works pass into other hands. Then these cheap clubs indirectly encourage quackery. A man who pays to his doctor for the year about the same sum as he does to the Goose Club for his Christmas dinner and who gets three or four pounds a week in wages, which have risen considerably of late years, can well afford to pay the bonesetter 7s. 6d. for a first visit and 2s. 6d. for subsequent ones, and he frequently does do so. This infection of low fees and inadequate payment spreads rapidly to the higher classes of the community. A person recently sent one of her servants to a medical man in this town with the consultation fee, and it turned out that the doctor was required to examine the patient, diagnose the case, and supply medicines for the magnificent sum of 2s. 6d. These clubs reduce all respect for the profession to a vanishing point. The ladies of the cheap family club, to take a minor example, for instance, have a supreme contempt for a prefix, and refer to their medical attendants as "Jones" or "Robinson," rarely as "Mr. Jones" or "Dr. Robinson." These are a few examples, homely ones I know, but not unimportant in a professional sense, of the bad effects of these clubs as they appear in this town. I could multiply them. But surely something could be done to raise medical practice to a higher standard in large towns. To increase the contributions of clubs and works by a few shillings a year is something, but it does not go nearly far enough. What with rich insurance companies requiring reports on candidates for 3s. 6d., local medical societies sanctioning the granting of sixpenny certificates, cheap clubs, and cheap fees, the profession is slowly but surely being dragged into depths of degradation which will soon be difficult to fathom.

I am very pleased to be able to some extent to modify an opinion I expressed in a former letter that cheap family clubs had the approval of the Middlesbrough Medical Council. There have so far been three presidents of the Society, and it is only fair to say that one of these gentlemen considers these clubs a nuisance which ought to be swept away. Another tells me that the family club system is extensive and degrading. The opinion of the third president I have not yet been able to ascertain.

THE IMPERIAL VACCINATION LEAGUE.

THE President of the Local Government Board in England has consented to receive a deputation representing the Imperial Vaccination League on January 14th, at 2.30 p.m. The Vaccination Act of 1898 expires at the end of this year, and the Government is therefore under an obligation to introduce a Bill in the next session of Parliament, as the expedient of merely continuing the present system for another year cannot, we feel sure, commend itself to Mr. Long. The provisions which the Bill should contain are now doubtless under the consideration of the Local Government Board, and the Imperial Vaccination League desires to press certain points upon the attention of the President. Among these will be, we understand, the desirability of introducing the principle of compulsory revaccination at the legal age of employment, that is to say, at or about the time when school attendance ceases.

Mrs. Garrett Anderson, M.D., the Hon. Secretary of the League, has drawn up the following circular letter, and the appended statement of adherence to the principle has already been signed by influential laymen. If any members of the Association are in a position to secure further signatures from laymen holding official positions, especially members of municipalities, copies for distribution can, we are informed, be obtained on application to Dr. E. J. Edwardes, Secretary, Imperial Vaccination League, 53, Berners Street, Oxford Street, London, W.

Imperial Vaccination League,
53, Berners Street, London, W.,
December 20th, 1902.

DEAR SIR,—The Imperial Vaccination League is urging upon the Government the importance of making revaccination at school age obligatory, permitting, however, "the conscientious objector" to obtain exemption as in the case of primary vaccination.

The Committee of the League think it would greatly assist the Government if a large number of influential persons would express their approval of systematic revaccination at the age of twelve or thirteen.

The reasons for urging obligatory revaccination are briefly these:

1. By the age of twelve the protection afforded by primary vaccination is in large measure worn out, and children of that age when exposed to the contagion of small-pox are liable to take the disease, though for some years longer they would probable only have it lightly.

2. The task of providing an adequate amount of glycerinized lymph would be immensely simplified by the demand for such lymph being nearly the same, year by year. At present there is an enormous demand in epidemic years, and a comparatively small demand at other times. Lymph is not prepared quickly or cheaply, and it does not keep for indefinite periods of time. If the Government knew within a little the number of tubes that would be wanted each year, the problem of providing what is required would be much simpler than it is at present.

3. Protection from small-pox by systematic revaccination would be very much cheaper than by providing costly small-pox hospitals and attempting to deal with epidemic small-pox by isolation of the patients. The recent epidemic has added, for hospital accommodation only, a rate of 3d. in the £1 all over London. There have been in addition many other heavy expenses arising out of the epidemic.

Should you be disposed to help the League in its efforts to secure systematic revaccination at school age, I should be greatly obliged by your signing the enclosed form and returning it to me as promptly as possible.

I am, dear Sir,
Yours faithfully,
E. GARRETT ANDERSON,
Hon. Sec., I.V.L.

Believing that in vaccination and revaccination we possesss the best protection against epidemic small-pox, I should heartily welcome legislation making revaccination at school age obligatory on all but the children of conscientious objectors or those who may be for a time excused on the ground of ill-health.

Signed.....
Address.....

THE TREATMENT OF "BORDERLAND" INEBRIATES.

AT a recent meeting of the London County Council a report was presented by the Inebriates Acts Committee which dealt with the treatment of quasi-criminal and weak-minded inebriates. They stated:

We have from time to time, as opportunity arose, indicated certain points, suggested by our experience at Farmfield, in connexion with the treatment of inebriates which seemed to us to call for special consideration. As early as November, 1900, we reported to the Council upon the need there was for better means of classifying persons committed under the Inebriates Acts for detention in certified reformatories, and the Council decided to urge upon the Secretary of State the desirability of a State reformatory being established for the treatment of inebriates who could not be suitably dealt with at these establishments. The opening of a State institution in August, 1901, relieved the Farmfield reformatory of a number of turbulent cases whose presence at the institution impeded the work. There is, however, another class of cases which seems equally unsuitable for treatment at certified reformatories, namely, the weak-minded or "borderland" cases, which seem in some respects allied to the excitable hysterical cases which are now dealt with, with little hope of success, at the State reformatory. In presenting our report for the year 1900-1901, our chairman for that year prefaced the report with some remarks in which he said: "The paramount importance of discriminating classification is forced upon the minds of those who have endeavoured to deal remedially with these 'borderland' cases. The mad and the bad pass insensibly into one another. The prison, the asylum, the hospital, and the reformatory are all required, but the sorting of their contents is, at present, very imperfectly done." As time goes on, informed opinion inclines more and more to the belief that inebriety is often associated with certain forms of insanity. The 91 cases received at Farmfield since the opening of the institution have included some of the explosive type, unable to control themselves when excited, others, also, of the weak-minded imbecile type, who entirely fail to appreciate their position, and who seem almost insusceptible to reformatory influences. Apart from the question whether these women should be regarded as beyond reform, there are other reasons why they appear to be unsuitable for treatment in an institution which has reformation for its first object. The women who constitute the class in question are as a rule, though not always, of mature age, their condition often being the result of long-continued indulgence in alcoholic liquor. Their age, together with their weak mental condition, renders it a matter of considerable difficulty to find suitable employment for them in places away from their old surroundings, and there is often no alternative but to allow them to return to their accustomed haunts where they very soon fall into their old intemperate habits, and the reformatory effort of one, two or three years is, so far at least as these women are concerned, almost wasted.

The nature of the disease with which these moral paralytics are afflicted makes it a matter of some doubt whether they are suitable for treatment under the system contemplated by the Inebriates Acts, in

accordance with which an inebriate is, on the completion of his sentence, at liberty whether cured or not, to return, free of all control, into the world which holds so many temptations for him. Many witnesses who gave evidence before the Departmental Committee on the treatment of inebriates, which sat in 1892 and 1893, spoke of the difficulty of treating refractory and mental cases, and various expedients—a special institution, the asylum and the prison—were in turn suggested; some licensees of retreats stated that for want of suitable means of dealing with these patients they were often compelled to discharge them. The difficulties experienced by managers of retreats where the persons dealt with are, as a rule, possessed of some means and education, and, in the first instance, voluntarily submit to treatment are naturally augmented in the case of a reformatory where the inmates are detained by force of law, and at first keenly resent their detention. These very difficulties were anticipated by a Departmental Committee appointed in 1898 to advise the Secretary of State upon the regulations to be made under the Inebriates Acts, for in making their report they said: "It is a serious and difficult question how to deal with inebriates on whom reformatory treatment shall prove to have no curative effect..... Only experience can show how numerous this incurable residuum will prove to be." Our experience has been that from 10 to 15 per cent. of the cases committed to Farmfield have been unsuited for reformatory treatment on account of disordered mental condition.

While we feel that persons of weak mental powers should not be sent to certified reformatories, we are at the same time fully alive to the advantages which would accrue to society through the removal of these persons from their accustomed haunts, where they act as a focus for disorder and crime; and in view of all these circumstances, and of the difficulties presented in the classification and treatment of quasi-criminal and mentally weak or "borderland" cases, which are at present, without adequate discrimination, committed to prisons, asylums, and reformatories, we have thought it advisable to suggest to the Secretary of State the desirability of causing some inquiry to be made, either by Departmental Committee or otherwise, into the certification, commitment, and treatment of such cases.

MOTOR CARS FOR MEDICAL MEN.

SOME little time after the publication of the paper on this subject by Dr. Edward Phillips, of Coventry, in the BRITISH MEDICAL JOURNAL of September 27th, p. 981, we received several letters on the subject, to which, owing to the pressure of other matter, it was not possible to give immediate publication. The following will however, we believe, still be read with interest by members who may be contemplating the purchase of a motor car.

DR. A. D. GRIFFITHS (Bridgend, Glamorgan), in the course of a letter on the subject, writes: I have gained some slight knowledge in motoring, and for the past five months have used no other means of getting round my practice. I lay claim to having obtained an ideal car for a doctor with a large round. My car is a Pick car, manufactured by the Pick Motor Company, of Stamford. It is two-seated, belt driven, 6 horse-power, painted white. The important thing for a doctor will be the keeping in good running order, and my experience shows me that three matters lie uppermost.

I.—*Ignition.*

I have a trembler on an ordinary induction coil, the primary circuit being automatically made and broken by a cam. This should present no terrors to a doctor. It is in fact the simplest form of electric ignition. My accumulators run for about 350 miles, and are in my case charged by an amateur friend, but may be done from dry cells or any source; in fact, dry cells work admirably. The sparking plugs occasionally get a little carbon upon them, but petrol and a toothbrush soon remedies this.

II.—*Compression.*

Occasionally valves have to be ground, mine have been ground once. I do it myself, and it is a matter of the greatest simplicity. Oil may clog on the pistons, but this is rare if the oil be good and suitable.

III.—*Transmission.*

I have belts and am glad I have. I can easily do my mile in two minutes or less if I so desire, which I do not. A belt may break (I have never experienced this) or it may want tightening. This will not present difficulty to any man of ordinary common sense. Belts slip, I am told, which is probably advantageous, or I should travel at about 100 miles per hour. The vexed belt slipping question surely has been solved long ago, or all manufactories would have given them up and substituted cogs. As my car has twice travelled from Newnham-on-Severn to Newport (Mon.), one of the hilliest roads in the country, with no trouble, the belts have certainly stood hill climbing tests thoroughly.

Popularity.

My pretty little white car, I believe, is more popular than any horse could be. I take the utmost pains to train horses and to avoid irritating other users of the highway, and frequently give a lift to foot travellers, who become enthusiasts at once. I am able to get to an urgent call in the shortest possible time, and at the same time carry the messenger with me.

Cost.

The upkeep should be very small. My two cylindered motor uses about one gallon of petrol, at 1s. 2d., for thirty miles, and about two or three pennyworth of lubricant for the same distance. Nuts may need tightening, and the ordinary things that would happen to a trap, such as a loose wheel or broken spring might occur, but has not in my case. I have not blown up my tyres since I had them and they show no signs of wear after some thousands of miles, but I claim my car has the right tyres.

I travel all conditions of roads, newly metalled and otherwise, and can easily and without fatigue travel a fifty-mile round in a day. My man stays at home and does the garden.

There is inherent in some men what is termed "a mechanical turn of mind," this is essential to success. Electric wires may break, nuts may split, and every day some trivial thing will occur. Patience will overcome all these troubles.

Now, in answer to Dr. Phillips, no motor bicycle can, reliable as they are, do more than my car. In the *Lancet* other gentlemen have spoken of the ease of handling these cars, and I feel that many of my professional brethren must be only waiting for such a testimony as I am making, to invest in a motor themselves. Roughly put 12 per cent. on the price of the car for repairs and depreciation per annum, and the mileage as above, and the total cost may be arrived at very simply. My car cost £175. The work done is unlimited, and the cost as compared with horses is therefore considerably less.

Any boy of 14 with a hose pipe can clean the car. Usually I run the motor before starting and notice the hum of the engine and other details, and then, wet or fine, night or day, off it goes, and the pleasure it gives me is immense.

A SADDER AND A WISER MAN writes: Having been recommended to try one particular kind of car, I started for a short trial; but in two minutes the wheel came off. I was then told that Messrs. A. and B. had a car of the same kind close by; would I try that? I applied to Messrs. A. and B., who answered most courteously that they would be pleased to oblige me, but unfortunately the axle of their car was broken.

I then investigated the merits of another car recommended, and on examining the machine remarked that the foot-brake arrangement was much too slight for practical use. I was, of course, told that I knew nothing about it. On inquiring of a friend who had a car of this particular make, his account was by no means satisfactory, and he added that the foot-brake broke at a most important juncture.

I then tried a third firm, who promised to give me a trial ride. Three times I waited patiently for a car to come here and give me a lift. As often did they fail to get a car over the four miles to my house, so I gave them up.

Not satisfied with these failures, I tried a fourth firm. They did get a car to my house, and gave me a very satisfactory trial ride of some thirty-five miles. In an evil moment I ordered one of these cars. This company have a very fair reputation, and so satisfactory have their cars proved in the recent extended trials that they have some important orders in consequence. My car cost me in all about £350, it was delivered two months ago, and I should say I got it simply for pleasure.

During that two months I have had just two pleasurable and satisfactory rides upon it, together amounting to about thirty-five miles. The second time it was used it made an awful skid on some tram lines, suddenly putting its back where its front should be and mounting the pavement. I should say that I began life as an engineer, and worked for a time in an engine factory, so I know something about machinery, and having been used to drive horses nearly all my life, know the rules of the road. Further, I have been constantly assisted in working the car by my two youngest sons, who have had very considerable experience in motoring. In spite of this, the car has simply been one continued bother, worry, and annoyance in every way from the very first. My experience is that these things are utterly unreliable, very pleasant when they do happen to run properly, but unsuitable for wet weather, greasy roads, over tram lines, and I should also suppose over snow, and very tricky. I am quite aware that some doctors have been much more successful and speak well of these cars. There are, however, many little bothers and troubles with them that are not discovered until tried, and which the limits of a letter will not allow me to express; they are by no means cheap, and I should have had far more pleasure and that, too, much more cheaply and safely with a pony trap.

A SCOTTISH MEDICAL DEFENCE UNION.

THE Medical and Dental Defence Union of Scotland, Limited, has been formed in the interests of the medical and dental professions in Scotland. The fundamental differences which exist between the laws of England and Scotland in many important respects, and the conviction that Scottish practitioners will be protected more adequateiy in a purely Scottish Society, are held by the promoters to justify the formation of the Union. The number of medical and dental practitioners in Scotland is nearly 4,500, and there is thus a wide scope for its energies. The object of the Society may be stated briefly to be to support and safeguard the characters and interests of legally qualified medical and dental practitioners. Among others, the following are the aims of the Society:

(1) To defend actions and claims against members of the Society for alleged malpraxis and the like, and for slander. (2) To institute proceedings for the vindication of the characters and rights of the members. (3) To advise and assist members in all legal difficulties which may arise in the practice of the professions. (4) To act as a court of arbitration and conciliation between members in any disputes or difference which may arise between them. (5) To consider and, when necessary, take action upon legislative proposals calculated to affect the interests of the professions.

Every member of the Union will be entitled, at the Union's expense, to consult the solicitors at any time, either personally or by correspondence, on any subject arising out of his practice. Questions frequently arise under various statutes affecting the professions, such as the Medical Acts, the Dentists Act, the Lunacy Acts, the Poor-law Acts, the Public Health Act, the Notification Act, and many others. Difficulties also arise between members of the professions and Friendly Societies and clubs in regard to appointments, and in many other directions legal advice and assistance are necessary from time to time. The subscription is 10s. per annum for each member, payable each year on the anniversary of admission as a member. Members may resign at any time on giving two months' notice. Under the Articles of Association the utmost liability of any member for subscriptions, or in the event of winding-up is £1. The following is a list of the officers of the Union:

EXECUTIVE COUNCIL.

Presidents.—A. R. Simpson, M.D., Professor of Midwifery in the University of Edinburgh; William Stephenson, M.D., Professor of Midwifery in the University of Aberdeen; James Finlayson, M.D., LL.D., President of the Faculty of Physicians and Surgeons, Glasgow; J. V. C. Kynoch, M.B., Professor of Midwifery in the University of St. Andrews.

Vice-Presidents.—J. O. Affleck, M.D., Edinburgh; D. Berry Hart, M.D., Edinburgh; J. Murdoch Brown, M.D., J.P., Edinburgh; T. M'Call Anderson, M.D., Professor of Medicine in the University of Glasgow; Samson Gemmell, M.D., Professor of Clinical Medicine in the University of Glasgow; J. Lindsay Steven, M.D., Glasgow; J. Crawford Renton, M.D., Glasgow; R. H. Parry, F.R.C.S.E., F.F.P.S.G., Glasgow; John Gordon, M.D., Aberdeen; J. Scott Riddell, M.B., C.M., Aberdeen; Albert Westland, M.D., Aberdeen; David M. Greig, M.B., C.M., Dundee; George Halley, M.B., C.M., Dundee; William A. M'Lachlan, M.D., Dumbarton; William Frew, M.D., Kilmarnock; J. M. Lipscomb, L.D.S., Kilmarnock; John Ritchie, M.B., C.M., Dunoon; Thomas Graham, M.D., Paisley; James Laurie, M.B., C.M., Greenock; J. Watkin Pennoy, M.B., C.M., Rothesay; James Livingstone Loudon, M.D., Hamilton; Donald Macphail, M.D., Coatbridge; Donald M'Fadyen, M.D., Stirling; D. Sinclair Kennedy, M.D., Perth; J. D. L. Macalister, M.B., C.M., Forfar; A. Leslie Curror, M.B., C.M., Kirkcaldy; J. Munro Moir, M.D., Inverness; George W. E. Kerr, M.B., C.M., Inverness; James Leslie Fraser, L.D.S., Inverness; Fred. H. Clark, M.B., C.M., Dumfries; John Dale, L.R.C.P.S., L.F.P.S.G., Stranraer; J. Bruce Ronaldson, M.D., F.R.C.S.E., Haddington.

Central Council.—Robert W. Forrest, M.D., Glasgow, Convener; John Adams, M.B., C.M., Glasgow; Robert Crawford, M.D., Glasgow; William Frew, M.D., Kilmarnock; A. N. M'Gregor, M.D., Glasgow; William A. M'Lachlan, M.D., Dumbarton; Donald Macphail, M.D., Coatbridge; George Balfour Marshall, M.D., Glasgow; A. Barr Pollock, M.B., C.M., Glasgow; J. Anderson Robertson, M.B., C.M., Glasgow; Robert Wilson, M.D., Glasgow; John Wright, M.B., C.M., Glasgow.

District Councils.—Edinburgh and District: Professor Simpson, Drs. Affleck, Berry Hart, and Murdoch Brown (Edinburgh), and Dr. Bruce Ronaldson (Haddington)—Dr. Murdoch Brown, Convener—with power to add to their number, the Council to consist of not more than twelve members. Dundee and District: Professor Kynoch, Mr. Halley (Dundee), Dr. MacAlister (Forfar), Dr. Curror (Kirkcaldy) and Dr. Kennedy (Perth), Convener—with power to add to their number, the Council to consist of not more than twelve members. Aberdeen and District: Professor Stephenson, Drs. Gordon, Riddell, and Westland (Aberdeen)—Dr. Riddell, Convener—with power to add to their number, the Council to consist of not more than twelve members. Inverness and District: Drs. Munro Moir and Kerr, and Mr. Fraser (Inverness)—Dr. Munro Moir, Convener—with power to add to their number, the Council to consist of not more than twelve members.

Council on Dental Matters.—J. A. Biggs, L.D.S., Glasgow, Convener; Thomas M'Nair Brown, L.D.S., Glasgow; J. M. Lipscomb, L.D.S., Kilmarnock; Alexander P. Robertson, L.D.S., Glasgow.

Secretary and Treasurer.—William Young, Accountant, 65, Jamaica Street, Glasgow.

Solicitors.—Turnbull and Findlay, 133, St. Vincent Street, Glasgow.

Auditors.—Macdonald, Stewart and Stewart, C.A., 116, Hope Street Glasgow.

THE PREVENTION OF CONSUMPTION.

WEST WALES.

THE annual general meeting of the West Wales Sub-branch of the South Wales Branch of the National Society for the Prevention of Tuberculosis was held at Carmarthen under the presidency of the Archdeacon of St. Davids (the Ven. D. E. Williams).

A report on the present position of the movement in West Wales was read by the Secretary, Dr. Douglas Reid of Tenby. Five general meetings had been held during the year. Among other matters discussed was the question of the desirability of forming a separate branch of the parent society, and of severing the connexion with the South Wales branch. It was pointed out that the headquarters of this branch was at Cardiff, and the meetings could not be conveniently attended. Also that the annual subscriptions were transmitted to the treasurer of the South Wales branch, who allowed 50 per cent. for working expenses. After some discussion it was decided to form a West Wales branch, to include the counties of Carmarthen, Cardigan, and Pembroke.

A report of the Committee appointed to visit various parts of the three counties with a view of selecting sites for sanatoria was considered, and referred back, as the Committee had not visited all the sites offered. Mr. Colby, of Rhosygilwen, who had first offered a free site for a sanatorium, was appointed President of the new branch. Six vice-presidents were elected, two from each of the three counties, and Dr. Reid was reappointed Hon. Secretary.

CARDIFF.

A deputation of the Educational Committee of the South Wales branch recently waited upon the Health Committee of the Cardiff Corporation to suggest the utilization of the nurses of the Queen Victoria Nursing Institution to visit houses containing consumptives in order to give advice and render assistance. The deputation pointed out the superiority of nurses over sanitary inspectors for this purpose.

The Medical Officer of Health (Dr. Walford) was asked to report on the matter. Dr. Walford in his report thought it would be of greater service to obtain the entire services of a properly-trained woman inspector who would be more under the direct control of the Committee. The matter was again adjourned for the Chairman and Medical Officer of Health to make further inquiries.

SWANSEA.

At the annual meeting of the Swansea Charity Organization held in the Guildhall under the chairmanship of the Mayor, Dr. C. G. Higginson, of Birmingham, read a paper on Open-air Sanatoria for the Poor. Referring to the provision for the sanatorium treatment of poor consumptives in Switzerland, he compared this with the totally inadequate provision in England and Wales, where the poor consumptive could hardly find any accommodation except in the wards of the workhouse infirmary. Not only were these wards unsuitable for the treatment, but the patients in them suffered the unmerited stigma of pauperism. In his opinion sanatoria for the consumptive poor—whether founded by millionaires, by private subscription, or out of public funds—should be maintained by county councils. He then discussed the question of cost, and quoted the Westmorland Sanatorium as a good example of the lines on which such an institution might be satisfactorily established and supported. He advocated the foundation of a sanatorium for Swansea, his native town, and pointed out the advantages to be derived from such an institution. Prevention of the disease, already partially achieved by general hygienic improvements, was also important, and much remained to be done in the direction of teaching people the value and necessity of fresh air in the home, the workshop, and the factory. In passing a vote of thanks to Dr. Higginson for his paper, the hope was expressed that a sanatorium would be established for Swansea, and the chairman assured the meeting that the executive would call together a committee to consider the subject.

CANADA.

The Anti-Consumption League recently presented to the Toronto Municipality a petition, signed by a great number of persons, asking for a municipal grant of 50,000 dols. promising to raise an equal sum by private subscription. The medical health officer of Toronto, however, pointed out to the Board of Health that Toronto is now perfectly able to treat its own consumptives properly. Sufferers from tuberculosis are not refused admission to any hospital in Toronto, and since June, 1902, the Gravenhurst Free Hospital for Consumption has received 27 incipient cases from Toronto on orders from the city.

UNITED STATES.

In October, 1901, the New Haven County Medical Association appointed a committee to take steps for the organization of an active campaign against tuberculosis. In consequence of their efforts restrictive regulations have been passed by most of the cities and towns of the State of Connecticut; appeals have been made to philanthropists; available sites for sanatoria have been inspected: and hospital plans have been studied. In October, 1902, a general meeting of persons interested in the movement was called to appoint a committee to see and approve the site selected for the sanatorium and to form an association for the furtherance of the plan of campaign submitted. The result was the foundation of the New Haven County Antituberculosis Hospital Association, of which Dr. Francis Bacon was elected president. The list of vice-presidents and members of council includes the names of many prominent citizens. The plans of the Association are not fully matured, but the *Yale Medical Journal* states that the sanatorium will be constructed upon the "cottage system" (a central building for offices, dining room, kitchen, etc., and small detached buildings for sleeping apartments, each accommodating three or four patients only); that the site has been selected and an option secured upon it; that sufficient funds are already available for its purchase, and that it is to be a purely charitable institution, and no official connected with the association will receive a salary except the medical superintendent. This position will be filled by a man who has made a special study of pulmonary tuberculosis.

LITERARY NOTES.

AMONG the books shortly to be published by Mr. John Murray is *The Truth and Error of Christian Science*, by Miss M. C. Sturge, for which Canon Scott Holland has written a preface.

At the exercises to be held under the auspices of the University of Pennsylvania, in honour of Washington's birthday (February 22nd), Dr. S. Weir Mitchell, who last year read a poem entitled "The Birthday of Washington," will this year deliver the University Day oration.

Herr Gustav Fischer, the well-known medical publisher of Jena, has recently had the honorary degree of Doctor of Medicine conferred upon him by the Medical Faculty of the University of Jena.

With the New Year the St. Bride's Press, Limited, the proprietors of the *County Council Times*, the official organ of the county councils and of various educational associations, commenced the publication of a weekly paper called *Education: Primary, Secondary, and Technical*, which deals mainly with the work of the authorities under the Education Act.

Dr. Stephen Le Paulmier of Paris, whose death is announced in the French journals, was physician to the staff of the *Siècle* for more than thirty years. He was a man of much curious lore and gave special attention to medical antiquities. He was the author of a work on Ambroise Paré, which appeared in 1885, and is regarded as a standard authority on the life of the famous old surgeon. He also wrote the *Histoire de l'Orviétan* and *Mondor et Sabarin*, works full of quaint erudition. Dr. Le Paulmier was of Norman origin, and was the author of several monographs on famous physicians and surgeons belonging to Normandy. Among them was his ancestor Julien Le Paulmier, physician to Charles IX and Henry III.

Among the signs of the awakening of interest in the study of medical history we note that at a recent meeting of the Senate of the University of Sydney, a letter was received from Dr. Fiaschi offering to deliver a voluntary course of lectures on the history of medicine to medical students. The offer was accepted. We congratulate Dr. Fiaschi on his public spirit, and we hope he will succeed in arousing the interest of his hearers in a branch of professional study which is still too much neglected.

The curve of interest in the scientific study of children's diseases has reached a considerable height, if we may judge from the number of new journals devoted to that special branch of medicine which are to make their appearance with the new year. Last week we mentioned an Italian one: this week we have two more to announce. The *Monatsschrift für Kinderheilkunde* will be published by F. Deuticke, of Leipzig and Vienna; the editor will be Dr. Arthur Keller. The contents will be of the usual character. Dr. Raimondi of Paris has founded a *Revue de Puériculture*, the object and character of which are sufficiently described by the title.

Dr. Smiles, the author of *Self-Help*, who celebrated the completion of his 90th year the other day, was a doctor "by first intention." He was born at Haddington in 1812, and educated at Edinburgh, becoming in due course a Licentiate of the Royal College of Surgeons of that city. He practised as a doctor in Haddingtonshire for six years, but his tastes lay in another direction. His opportunity came to him earlier than to most men. He was offered the editorship of the *Leeds Times*, and from the drudgery of editorship he rose to be Secretary of the Leeds and Thirsk Railway, and afterwards of the South-Eastern. He is best known, however, by his books. In addition to *Self-Help*, he has produced *Lives of George and Robert Stephenson; Lives of the Engineers; A Life of John Murray; Thomas Edward, Scotch Naturalist; Robert Dick, Geologist and Botanist;* and a series of works of a homiletic character—*Duty, Thrift, Character, Conduct*, etc. The publisher to whom Dr. Smiles first offered *Self-Help*, when the Crimean war was raging, would not look at it. "People won't read anything of this kind," he said. After the book had lain for years in his desk, Dr. Smiles published it at his own expense. It at once became popular. Twenty thousand copies were sold in the first year, and since then its circulation has gone beyond the quarter-million mark.

The December number of the *North American Review* contains the first part of an article on Christian Science by Mark Twain. He attributes the success achieved by the movement mainly to the fact that it is a religion. When, in addition to Heaven hereafter, it offers in the present health and a cheerful spirit—for cash, it becomes irresistible. In reply to the question, Who are attracted by Christian Science? he says:

> There is no limit; its field is horizonless; its appeal is as universal as is the appeal of Christianity itself. It appeals to the rich, the poor, the high, the low, the cultured, the ignorant, the gifted, the stupid, the modest, the vain, the wise, the silly, the soldier, the civilian, the hero, the coward, the idler the worker, the godly, the godless, the freeman, the slave, the adult, the child; they who are ailing in body or mind, they who have friends that are ailing in body or mind. To mass it in a phrase, its clientage is the human race. Will it march? I think so. Remember its principal great offer: to rid the race of pain and disease. Can it do so? In large measure, Yes. How much of the pain and disease in the world is created by the imaginations of the sufferers, and then kept alive by those same imaginations? Four-fifths? Not anything short of that, I should think. Can Christian Science banish that four-fifths? I think so. Can any other (organized) force do it? None that I know of. Would this be a new world when that was accomplished? And a pleasanter one—for us well people, as well as for those fussy and fretting sick ones? Would it seem as if there was not as much gloomy weather as there used to be? I think so.

The December issue of *Knowledge* contains the programme for 1903 of the department of microscopy so ably conducted by Mr. M. I. Cross, the author of *Modern Microscopy*. It is intended in future to devote a larger amount of space to microscopy than hitherto, and by the co-operation of specialists to publish articles treating on different departments of both the popular and scientific sides. Among those who have promised to contribute are the following: Mr. Rousselet: (1) How to Collect Rotifers, and (2) How to Examine Pond Life under the Microscope; Mr. C. D. Soar: The Collection, Examination, and Preservation of Water Mites; Mr. Earland: Coccoliths and Coccoopheres; Mr. Weschè: (1) The Mouth Parts of the Tsetse Fly in comparison with those of the Gnat, Gad Fly, etc., and (2) Notes on Entomological Subjects; Mr. F. Noad Clark: The Photography of Opaque Objects; Mr. Sanger Shepherd: Photomicrography in Natural Colours; and other similar articles will appear.

The January number of the *World's Work* fully maintains the high standard reached by the first which was noticed in these columns two or three weeks ago. It contains a highly appreciative article on the career and work of Major Ronald Ross by Mr. Edmund D. Morel. We learn that it is not only in the field of science that Major Ross has gained laurels. He is the author of two novels entitled *Child of Ocean* and *Spirit of Storm*, and of a drama in five acts, the recollection of which is said now to afford the author some amusement. It would be interesting to know whether it ever afforded any amusement to an audience. Major Ross, however, has high scientific precedent for his drama. Did not Claude Bernard obtain the means of going to Paris by the production of a vaudeville of which he was the author, and did he not enter Paris with a five-act drama in his pocket? He sought counsel from a literary oracle, with the result—a fortunate one for science—that he abandoned the Muse for Medicine.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 21st day of January next, at 2 o'clock in the afternoon.

GUY ELLISTON, *General Secretary*.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1903.

MEETINGS of the Council will be held on January 21st, April 22nd, July 8th, and October 21st in the Council Room of the British Medical Association, 429, Strand, London, W.C.

ELECTION OF MEMBERS.

Any candidate for election should forward his application upon a form, which will be furnished by the General Secretary of the Association, 429, Strand. Applications for membership should be sent to the General Secretary not less than thirty-five days prior to the date of a meeting of the Council.

GUY ELLISTON, *General Secretary*.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m. Members can have their letters addressed to them at the office.

A BACTERIOLOGICAL INSTITUTE IN SIAM.—It is stated in the *Semaine Médicale* that in order to give France a manifest proof of its friendly feeling, the Siamese Government has decided "to create at Bangkok a bacteriological institute to be under the exclusive direction of French physicians, and to institute forthwith in connexion with the health department a service of sanitary works, having at its head a French engineer, and reinforced by engineers, also French."

SPECIAL CORRESPONDENCE.

SYDNEY.

Friendly Societies' Dispensary—Hospital Saturday Fund.—Care of the Consumptive Poor.—The Education of Imbeciles at Newcastle.—Sanitary Work of the Sydney Municipal Council.—A Curious Dental Case.

A COMMEMORATIVE stone was laid recently in connexion with a new building for the Sydney United Friendly Societies' Dispensary and Medical Institute by the Colonial Treasurer. In the course of his remarks he stated that there were 75,000 members of Friendly Societies in this State; that last year between £60,000 and £70,000 were paid away in benefits, and £16,000 in funeral donations. The accumulated funds of all the societies in New South Wales amounted to £650,000. The estimated value of the medical aid and medicine given to the members reached the large total of £80,000, and but for the existence of the Friendly Societies the same advice and medical comforts would have cost about £250,000. The Treasurer referred to the amount of good work done by these societies, but he did not mention the fact that it was owing to the self-denying efforts of members of the profession that they were enabled to do this work; nor did he emphasize the fact that the sum of £170,000 saved by the efforts of the Friendly Societies came out of the pockets of medical men. The Treasurer also mentioned that the existence of these societies helped the Government enormously in connexion with its charitable work.

A meeting of the representatives of the various trades unions affiliated with the Sydney Labour Council was held recently to consider the support of the Hospital Saturday Fund. The organizer of the Fund addressed the meeting, giving a history of the movement in Sydney, of the work it had accomplished, and explained its aims and objects, methods and policy. He stated that, in harmony with the practice of kindred associations in England, the Board of Directors had recently determined to afford facilities and assistance to obtain for regular industrial subscribers who might need, but were unable to pay the cost, any of the following medical helps: Indoor hospital treatment, skilled home nursing, surgical appliance aid, convalescent treatment, and ambulance and transport aid. He said no departure would be made from the principle of voluntary giving, nor would any encouragement be afforded to the idea of preferential rights being established by reason of the contributions made. A resolution was carried recommending the unions to arrange for regular collections on behalf of the Hospital Saturday Fund, and to use their personal endeavours to forward the movement.

In September, 1901, a resolution was passed by the State Legislature:

> That in the opinion of this House the housing of consumptives by the State is not in a satisfactory condition, and that it is desirable, in the interests of the public health and for the benefit of the sufferers, that some more adequate provision be made for their accommodation and treatment.

In the State Legislative Council recently Dr. Nash asked what steps had been taken to comply with this resolution, and whether the consumptive poor under treatment by the State were still sent to the Liverpool Asylum? The reply on behalf of the Government was to the effect that:

> no alteration had been made in the method of dealing with the consumptive poor since September of last year, and that nothing could be done until funds were available for the erection of new buildings in a suitable locality. The matter was still under the consideration of the Government.

Nearly twelve months ago the Premier promised to place on the estimates a sum of money for the purpose of building a hospital for advanced cases of consumption. A site for this hospital was selected, but the local residents vigorously opposed it, and nothing further has been done. It has been represented to the Government over and over again that this is a matter of the utmost urgency at the present time, but it still remains "under consideration."

Dr. Eric Sinclair, Inspector-General of the Insane in New South Wales, has stated that the educational part of the routine at the Hospital for Imbeciles at Newcastle has gradually become so prominent that a separation of the children capable of instruction into what is practically a school within the hospital is justified. A detached building, with complete accommodation for dayroom, dormitory, bathroom, etc., is being set apart for 24 boys whose intelligence is of such a grade as to warrant their inclusion in school routine. The instruction now given is not confined to reading and writing, but includes sewing, tailoring, drill, and object lessons, the course being selected to stimulate the dormant mental faculties, and to teach practical work which will be of value to the children in after-years. The progress hitherto made has been so marked that it is proposed to add a trained teacher to the staff.

A return was furnished in October to the Sydney Municipal Council on the amount of sanitary work accomplished during the first ten months of 1902. Ordinary house-to-house inspections numbered 16,124, and 3,980 special inspections were made. The number of rats caught was 5,608, and the amount of rat poison distributed 33,700 packets. The number of houses disinfected after scarlet fever, diphtheria, typhoid fever, and pulmonary phthisis was 191. The number of convictions for selling adulterated food was 71. The number of milkshops, dairies, and vendors registered was 915; and 2,670 visits of inspections were made. The meat inspections numbered 3,916, and the number of rabbits inspected and condemned as unfit for human food was 3,587 pairs. The number of premises cleansed and disinfected during the outbreak of plague from February 15th, 1902, to June 2nd, was 7,788. There were also 215 prosecutions for expectorating on the footpaths, as compared with 470 in the year 1901.

In the Sydney District Court recently two actions were brought against a dentist for unskilful extraction of teeth, and a verdict of £15 damages was given by the judge against him in each case. It appeared that he had used a solution of cocaine, and in consequence of improper sterilization of the needle abscesses formed in the jaw in both patients. The solution was proved in evidence to be sterile.

INDIA.

The Campaign against Plague.—The New Arrangements for Special Training of Army Medical Officers.

THE campaign against plague in the Punjab made a good start with the arrival of the specially recruited officers, for although some of the less affected districts did not respond freely to the offers of inoculation, yet by drafting as many as possible of the staff into those districts which had suffered most from the disease, and which therefore were most willing to try the prophylactic measure, a large number of vaccinations were performed. Unfortunately, this favourable beginning has been marred by the failure of the Bombay plague laboratory to furnish anything like an adequate supply of the vaccine, and at the present time it is reported that the thirty-seven doctors on special duty under the Punjab Plague Department are for the most part idle for want of the necessary supply of protective fluid—an unfortunate occurrence the cause of which has not yet been made known. On the other hand, a distinct success has been scored in Cawnpore, where the disease has been raging so severely that a large portion of the population have fled and the local mills have had nearly to cease work for lack of labour. It will be remembered that less than two years ago this town was the site of a formidable plague riot, in which a plague camp and its police force were burnt, although, fortunately, some of the perpetrators of this outrage were convicted and punished severely for the offence. As so many of the mill hands belong to low and ignorant castes who are very difficult to deal with, Cawnpore was a particularly dangerous place in which to try to introduce inoculation, or, to use a more correct and safer term, vaccination against plague. The difficulties have, however, been overcome in a very satisfactory and ingenious manner if the following story be true, as I have good reason to believe it to be. The officer in charge began by treating only Europeans, who were injected in the presence of natives. When after a time some of the lower class natives began to inquire about the process they were informed that the vaccine was only for the "sahibs," and was much too valuable to be wasted on them. This aroused great interest and after still more inquiries for the prophylactic had been received the doctor said that as he had a few doses over, which he did not want to throw away, he could do just two or three of them, and proceeded accordingly. When the people found that no serious harm resulted they came forward in increasing numbers until after a short time several hundred were being protected weekly, with most gratifying results up to date. The people are now beginning to return to work, and the outbreak is on the decline. Thus by the display of timely tact and by avoiding the common mistake of making

things so cheap as to arouse suspicion as to their beneficial nature, all fears were overcome in the case of an extremely ignorant and fanatical people. The weekly plague figures have risen rapidly, as is usual at this time of the year, and unfortunately there are now over 10,000 deaths a week against just under 8,000 at the same time last year. The increase is chiefly due to greater prevalence in the North-West Provinces, Madras, and Bengal, Cawnpore and Bangalore being especially bad. On the other hand, Bombay and the Punjab show lower figures than last year, although not to such an extent as to afford any hope that the disease is dying out in those much-afflicted provinces. In Bangalore wholesale evacuation and disinfection is about to be carried out in blocks at a time, lasting over two months—an interesting trial.

The greatly increased competition for the Royal Army Medical Service is satisfactory evidence that the increased pay and other reforms granted have served their purpose, and it is also noteworthy that a large number of recruits were also obtained for the Indian Medical Service, no doubt on account of the expectation that the pay of this service must of necessity also at an early date receive a substantial increment, so as to make it sufficiently greater than that of its sister service to compensate for continuous foreign service, and to keep up the high standard of efficiency for which it has been for so long distinguished. At the present time it is worse paid in nearly every grade than the British army branch of the medical services. It has recently been announced that the question of the Indian pay and allowances of the British service is not likely to be settled for some time, as dispatches on the subject are still going backwards and forwards between England and India, and this is probably also blocking the question of increased pay for the Indian Medical Service, and this is keeping up a good deal of discontent. The new arrangements whereby the recruits for both services do a two months' course on bacteriology and hygiene, after which those of the British service go to Aldershot, and the Indian men to Netley for two months' teaching in military surgery and tropical medicine, appears to be much less satisfactory than the old arrangement, under which each subject was taught for four months at Netley, the shorter period being especially ridiculous in the case of bacteriology, the teaching of which at Netley by Professor Wright during recent years has had a most beneficial effect in stimulating research work in India. The fact that the British army officers alone are now allowed to count their period of training for service is also most unfair to the Indian Medical Service, especially in view of the fact that the latter service alone used to possess this privilege, and were only deprived of it a few years back, on account of the Army Medical Service then asking that the same advantage should be extended to them.

LIVERPOOL.

Reception to Professor Ronald Ross at the Liverpool Town Hall.

ON December 22nd, 1902, Major Ronald Ross, C.B., F.R.S., F.R.C.S., Professor of Tropical Medicine in the Liverpool University College, was entertained at the Town Hall by the Lord Mayor of Liverpool, in connexion with the award to him of the Nobel Prize for his researches into the cause and prevention of malaria. After dinner the guests repaired to the large ball room, where a reception, attended by a large and representative gathering of citizens, was held and congratulatory speeches were delivered. The Lord Mayor said that the occasion was most important. There were two elements in that importance—first, because it marked a stage of advance and success in the warfare which humanity was waging against disease and death; and secondly, because those present were able to gratulate and rejoice with their fellow-townsman, Professor and Major Ronald Ross, to whose labours that advance was due. Malaria was the great scourge of many lands which were the finest on earth, teeming with the products of tropical nature, and filled with the treasures of the richest mines, but which for many centuries had been practically uninhabitable owing chiefly to malaria. Major Ross had been primarily instrumental in the discovery that the mosquito carried the parasite of the disease from person to person. The discovery of quinine two centuries ago as a remedy for malaria was a great advance, but that was merely a cure, while this was a discovery of prevention. While in India Major Ross made more than a thousand observations, over a period of two years, without obtaining any result, but he went on, and eventually succeeded, and traced the life history of the mosquito, which was responsible not only for the propagation of malaria, but also for that of yellow fever and other desperate diseases. As Chief Magistrate of Liverpool, he had great pleasure in giving the citizens an opportunity of showing their appreciation of the great work done by a Liverpool citizen, and of rejoicing with him in his victory. At the suggestion of Sir Alfred Jones, he was about to send three telegrams in the name of that gathering. The first was to Mr. and Mrs. George Myers, "renewing their expression of deep sympathy, and trusting that consolation will be found in the fact that the labours of such as the late Dr. Walter Myers are tending to the benefit of suffering humanity." The second was to the King of Sweden, "Respectfully offering your Majesty an expression of our deep appreciation of the high honour conferred by your Majesty and Sweden on our fellow-townsman." The third was to Lord Knollys, the Secretary of King Edward VII, and was in the following terms:

Please convey the following respectful message to His Majesty the King: "May it please your Majesty, the Nobel Prize having been just awarded by his Majesty the King of Sweden to our fellow-citizen Major Ronald Ross, for his most important discoveries in relation to the origin and transmission of malaria, we the citizens of Liverpool, assembled at the Town Hall in honour of Major Ross, respectfully congratulate your Majesty upon the honour thus conferred upon one of your Majesty's subjects.

Mr. C. W. Jones said they were there that night to do honour and justice to a hero from Africa who had been occupied in a war, not against his fellow men, bnt against a most insidious enemy to mankind in general. He asked those present to join with him, on behalf of the commercial world of Liverpool, in congratulating Major Ross and in congratulating themselves upon having such a man as Major Ross amongst them.

Sir Alfred Jones said that the Liverpool School of Tropical Medicine had done more good in the world than any school yet started. When one thought of the horrible pestilential climates to which people had to go in the interests of commerce, they realized that they were very much indebted to all those brave men who had gone forward into such countries with the object of improving the conditions of life for their fellow-men. Such work was not of a selfish character; it was not a merely national movement, it benefited the whole world; and men such as Professor Ross made the countries better, not only for those who belonged to them, but better for people of other nations who went to them, and in this way the whole world was benefited. Liverpool could lay greater claim to the establishment of a university by reason of the Tropical School. He hoped that Major Ross's example would encourage many others of their fellow-countrymen to follow in his footsteps.

Professor Ross, who was received with tremendous applause, said that ten days ago in Sweden he thought he had received the greatest honour of his life, but he had found a greater honour awaiting him at home. It was not always that a prophet received honour in his own country, but when he did he ought to feel very proud, as he, the speaker, did. He went on to describe the kind reception which he had received from the people of Sweden when he went there to receive the Nobel Prize from the King's own hands. The ceremony was one of the most magnificent that a scientific man could ever hope to participate in. The prize he had won was doubled in value by the enthusiasm and kindness with which it had been given, and he believed that the institution of the prize would do a great deal for science. Having mentioned the names of his predecessors in the work he had in hand, including Dr. Manson, and of his fellow workers in Liverpool, including Professor Boyce and Mr. Milne, the Secretary of the School, he thanked the gathering for the honour they had done him and the people of Liverpool for the splendid support they had given to the school.

CHOLERA.—In Egypt during the week ending December 8th 42 cases of cholera occurred, against 20 in the previous week. Of this number 32 occurred in Alexandria, 8 in Damietta, and 2 in the Gharbieh province. In no other city or province of Egypt were any cases of cholera met with, Cairo being quite free of the disease since November 4th. From the Philippines cholera is reported to be very virulent around Lanao; and some of the villages on the eastern shores of the island are stated to have been depopulated by the disease. In Macin and Bacolod there is an average of 50 deaths daily. In many instances people are seized whilst working in the fields and die in a very short time.

CORRESPONDENCE.

STATE VACCINATION BY ALL REGISTERED PRACTITIONERS.

SIR,—I am requested to forward you a copy of the enclosed memorial to the President of the Local Government Board, in the hope that any other Medical Societies who agree with it will forward similar ones.—I am, etc.,

JAMES PEACOCK,
December 22nd. Honorary Secretary, Leicester Medical Union.

MEMORIAL.

To the Right Honourable Walter Long, M.P., President of the Local Government Board, this Memorial of Medical Practitioners constituting the Leicester Medical Union respectfully sheweth:

That, in the opinion of your Memorialists, it would conduce to the practice of vaccination in this country if Parliament were to enact that every duly qualified medical practitioner shall be put on the same footing in regard to the practice of vaccination as that on which public vaccinators now are.

It is well known to your memorialists that many adult persons who refuse to visit the public vaccinator would have their children vaccinated, and would be themselves revaccinated, if this could be done, free of cost to themselves, by their regular medical attendant.

Signed for the Leicester Medical Union,

C. F. BRYAN, President.
JAMES PEACOCK, Hon. Secretary.

335, Humberstone Road, Leicester, Dec. 20th, 1902.

SMALL-POX AND VACCINATION.

SIR,—I have read both with pleasure and interest the account of the first meeting of the Imperial Vaccination League, and your editorial thereon in the BRITISH MEDICAL JOURNAL of December 20th, 1902. Speaking as a medical officer of health, and having regard to the facts that the present Act expires next year and that small-pox has within the past few years been fairly well distributed throughout the country, I have no hesitation in saying that from a public health point of view this is much the most serious question confronting authorities at the present time. In my last annual report I made bold to say:

I have no wish to open up a great controversy (though I hold very decided views on the subject), but I am very strongly of opinion that if the Government of this country continue to deal with the question of vaccination as they have been doing, it is their bounden duty to see that every authority in the country has a proper small-pox hospital, and those authorities which are wise in time will from an economic point of view regard this an indispensable adjunct to the machinery which they may place at the disposal of their sanitary officials.

I stated this as an alternative, though from my own experience I can corroborate to the full what Dr. McVail said, that sanitary authorities are unable to procure the necessary sites for hospitals.

As to the point specially referred to by Sir Michael Foster, the transferring the administration of the Vaccination Act from the Poor-law guardians to some other authority, I agree with him that the present position of affairs is nothing less than absolutely absurd. In fact, were it not for the tragedy that is almost certain sooner or later to follow, the whole affair is comical to a degree. A great many of these Boards are antivaccinationist, and consequently are diametrically opposed to the very Act they are supposed to administer. It really does not matter very much what views the vaccination officer, generally the registrar, may hold. He for the most part is between the devil and the deep sea, and finds that the dictum "No man can serve two masters" is as true to-day as when it was first written. In my own district I have never known, in the last ten years at least, such a thing as a prosecution.

I am glad to see that the Organizing Committee of the League have formed a subcommittee of experts to study certain questions. Personally, I should answers Nos. 1 and 2 in the affirmative, but it is on No. 3 that I wish now to say a few words. To my mind there can be no question (*a*) that the State should be in a position to supply lymph for all vaccinations; and (*b*) that the preparation and sale of lymph by private persons should be under State control; and I have no doubt upon this point that these conclusions are quite in keeping with those formed by the medical inspectors of the Local Government Board. This is so absolutely the duty of the State, and so essential to the proper carrying out of any Vaccination Act, that one wonders that it should require further consideration. The fact is the question is purely one of expense—more shame to those who administer. Every year we vote millions for the destruction of human life, then why should we be niggardly in this, which aims at its preservation?

If the preventive power of vaccination against small-pox has been proved, as I submit it has, over and over again, then it behoves the Government of the day to see that all may be brought to enjoy such protection, and that the lymph supplied is, as far as human knowledge can go, absolutely pure, and, like Caesar's wife, above suspicion. At the present time, I am not absolutely satisfied that this is so—so far as the supply to private practitioners is concerned—and I have reasons for saying so which I would be glad to communicate to the proper parties.—I am, etc.,

December 23rd, 1902. MEDICAL OFFICER OF HEALTH.

THE "CONSCIENCE CLAUSE" OF THE VACCINATION ACT, 1898.

SIR,—The question of retaining, mending, or ending the above clause will shortly have to be settled. There are many medical men in favour of, and seriously advocating, the last alternative. They argue (1) that a "conscience clause" is altogether wrong in principle; that it is an anomaly without precedent, and opposed to the spirit of all other compulsory legislation; and that if vaccination is to be compulsory, it should be compulsory for all. (2) That the "conscience clause" is greatly abused, and that its administration is becoming a farce. (3) That it has not succeeded, in the sense of securing more vaccination. It is stated that the number of exemption certificates obtained is increasing, whilst any apparent increase in the number of vaccinations performed can be accounted for by other causes, for example, domiciliary visitation.

On the other hand, there are undoubtedly many who favour the retention of this clause. They recognize the difficulty of withdrawing a concession of this kind, once it has been granted, unless it can be shown to have been a positive failure. They realize that to close the loophole afforded by the clause to those who honestly object to vaccination would certainly arouse very violent opposition, and would act as a potent stimulant to the whole antivaccination movement.

Although there is little likelihood that the present or any future Government will ever abolish the conscience clause until very much stronger grounds exist for such a step, it seems desirable to call to mind that the Royal Commission on Vaccination, the most authoritative tribunal to which we can refer, was, after seven years' deliberations, emphatically in favour of such a loophole as the conscience clause was intended to afford. The enactment of this clause was indeed one of the important practical results of all its labours. As the conclusions of the Royal Commissioners are to a large extent buried (and possibly forgotten) in its own voluminous reports, I may be pardoned for quoting from them here.

We think that ardent advocates of vaccination have not always borne in mind the practical consequences of the attempt to enforce the law in such cases (of conscientious objection). They have maintained that no one has a right to set up his judgement against that of the community embodied in the statute law, and to refuse in consequence to render that law his obedience; they have, therefore, opposed any relaxations of the laws relating to vaccination, assuming that, because in particular instances it might lead to children remaining unvaccinated who would otherwise have been vaccinated, it must necessarily result in a diminished number of vaccinations. We believe that this assumption is not well founded..... We think these ardent advocates have not always been the wisest friends of vaccination, and that there would have been more vaccinated persons if the law had been enforced with more discretion (Final Report, Section 523).

Too blind a confidence is sometimes reposed in the power of an Act of Parliament. It is thought that if the law be only sufficiently stringent and inflexibly enforced the desired end is sure to be attained. There is, however, abundant experience to the contrary. When that which the law enjoins runs counter to the conviction or prejudices of many members of the community, it is not easy to secure obedience to it; and when it imposes a duty on parents the performance of which they honestly, however erroneously, regard as seriously prejudicial to their children, the very attempt to compel obedience may defeat the object of the legislation. (Final Report, Section 527.)

It cannot be denied that the Conscience Clause has been abused; but the abuse has not been confined to those applying for exemptions. That there is room for amendment in the wording of the clause will probably be admitted by all, and, if any modification is made, it is sincerely to be hoped that magisterial duty in the matter of granting exemptions will be more clearly defined.—I am, etc.,

Leicester, Dec. 27th, 1902. C. KILLICK MILLARD.

OYSTERS AND SEWAGE DISPOSAL.

SIR,—The deplorable epidemic of typhoid at Winchester, etc., generally credited with taking origin by the consumption of oysters from the Emsworth beds—beds which all accounts describe as sewage-washed—opens out a very wide field for consideration and action by sanitarians. Assuming the correctness of the source of infection and the means by which infection was conveyed to the sufferers, sanitarians and the Legislature are at once brought face to face with momentous questions: (1) The protection of a food supply and the pre-

servation of an important industry; and (2) the pollution of the sea by sewage.

Whilst the Local Government Board and the local authorities concerned may be looked to to safeguard the public health, the Fishmongers' Guild may be relied upon to watch the interests of the trade and of the industry of oyster growing. Perhaps the latter may be able to quicken the former in their respective methods.

Any commission of inquiry which may be called into existence in consequence of this epidemic would do well to extend its sphere of investigation beyond the oyster industry, and to consider generally the effect of sea pollution by sewage. Though perhaps all other fish besides the oyster are cooked before being eaten, and so presumably disinfected, there yet remain other untraced cases of disease in seaboard towns or watering places which, though explained away, are not quite satisfactorily accounted for.

Pollution of the sea with untreated sewage is general all round our island, and no opportunity for polluting seems to be anywhere neglected. True that in a large majority of sewage-disposal schemes sewage is carried out to below the low-water mark, and is discharged with the outgoing tide. The point of discharge can be traced on the face of the waters, and is mostly well marked by the presence of gulls. The difference in the densities of sea waters and of sewages is such that they do not (as the intention is that they should) readily mix. This failure of waters to mingle may be seen in many an inland fresh-water lake, where rivers passing through when loaded with flood waters will not discolour the waters of the lake.

A simple illustration will show that sewage matters are not destroyed or decomposed in the sea. Bacon and other meats are salted to preserve them from decomposition. Why, then, should the sea "brine" decompose the materials, septic and other, of sewage?

The second consideration or proposition is whether or not all sewages ought to be treated before being discharged into the sea. I maintain that they should be, and that but little, if anything, would be added to the cost by bacterial treatment of sewage in septic tanks and discharging the effluent much nearer to the high-water mark on the shore. In the solution of this second consideration lies the remedy for the first.—I am, etc.,

Colwyn Bay, Dec. 25th, 1902. J. LLOYD-ROBERTS.

SIR,—The outbreaks of typhoid from Emsworth oysters at Winchester, Portsmouth, and Southampton has again drawn public attention to the connexion between polluted shellfish and disease. The remedy usually proposed is a closure of the oyster beds. And this is the remedy proposed by the Local Government Board in their Oysters Bill of 1899. It will be remembered, however, that that Bill was withdrawn because it was clearly proved to the Select Committee which considered it that the danger to public health was caused not so much by the oysters or oyster beds, but by the sewage which polluted them.

It is somewhat remarkable that when the danger to public health was believed to be oysters the Local Government Board was most anxious to protect it; but when it was shown that the sewers sanctioned by the Local Government Board were responsible, its anxiety to protect public health was not so apparent. Is it not time, however, to consider this question from a wider point of view than merely the closing of oyster-beds?

The Public Health Act of 1875 provides that all new schemes of drainage shall be on the most approved principle known at the time they are laid down. And in pursuance of that principle, most of the new sewers are constructed on the bacterial tank system. This system, it is well known, renders the effluent practically harmless. The Public Health Act of 1875, however, makes no provision for bringing ancient sewage systems up to date. The consequence is that these barbarous old systems go on discharging an ever-increasing amount of crude sewage into the sea. The damage done is not confined merely to oyster beds, but to the whole of the valuable fisheries of our estuaries and foreshores. Evidence is accumulating every day in the numerous reports of the medical officers of health round the coast, of the danger to health which arises from the consumption of fish of all kinds from sewage-polluted areas. That oysters are not more frequently implicated is due to the fact that the oyster merchants themselves, and the local sanitary authorities they have been able to influence, have voluntarily gone to the expense of purifying the beds condemned in the Local Government Report of 1896. But the number of old-fashioned sewers which polluted oyster beds was small compared to the large number of them in existence. And these sewers remain to pour an ever-increasing volume of crude sewage into the sea, to the detriment of our fisheries other than oysters.

Further dangers from this crude sewage might be mentioned. Bathers at our seaside resorts are specially liable to come into contact with the infected matter. A recent outbreak of typhoid and other illness (26 cases) at Mistley and Bradfield in Essex, is clearly traceable to the water from a sewage-polluted river leaking into a boat containing food, and the food being contaminated therefrom. And if space permitted other dangerous results could be mentioned.

The value of the sewage discharged into the sea is estimated by a writer in the *Edinburgh Review* to be worth as manure £20,000,000 per annum. And, as Professor Crookes has shown, the want of this manure will be severely felt when the nitrate and guano beds of the world are exhausted—a contingency anticipated in about twenty years' time.

The question is not a local question but a national question. It is not merely a question of closing oyster beds. If the existing system of sewage disposal is continued, demands in the direction of closing different fisheries will go on until all of them are closed, and the fishing industry ruined. The root of the whole matter is the treatment of sewage. If it is intended to continue discharging sewage into the sea, it should be treated by modern methods, and rendered innocuous.

A short amendment to the Public Health Act is all that is necessary. And local authorities would be bound to bring their sewage systems up to date. The expense would not be great; but it is an expense which must be borne sooner or later; and the sooner the better for our fisheries, public health, and the pockets of the ratepayers.—I am, etc.,

J. M. TABOR,
London, E.C., Dec. 22th. Oyster, Fish, and Poultry Merchant.

THE ETIOLOGY OF LEPROSY.

SIR,—You refer in the BRITISH MEDICAL JOURNAL of December 27th, 1902, p. 1967, to Mr. Jonathan Hutchinson's Indian expedition which he is undertaking with the object of gaining facts as to the manners, customs, and diet of the natives in infected districts. You mention Mr. Hutchinson's well-known and often expressed opinion as to the etiological relationship of cured or salted fish to leprosy.

I am not aware whether any one has pointed out that that acute observer and deep thinker, Gilbert White, author of the *Natural History of Selborne*, held the same opinion as Mr. Hutchinson, as expressed in letter lxxix, dated January 8th, 1778. Perhaps you will permit me to quote a few lines:

> It must in these days be to a humane and thinking person a matter of equal wonder and satisfaction when he contemplates how nearly this pest is eradicated.....The happy change perhaps may have originated and been continued from the much smaller quantity of salted meat and fish now eaten in these kingdoms, from the use of linen next the skin, from the plenty of better bread, and from the profusion of fruits, roots, legumes, and greens so common in every family. Three or four centuries ago..... no fresh meat could be had in winter or spring. Hence the marvellous account of the vast stores of salted flesh found in the larder of the eldest Spencer, in the days of Edward II .....now .....our best and fattest meats are killed in the winter; and no man needs eat salted flesh.....
>
> One cause of this distemper might be no doubt the quantity of wretched fresh and salt fish consumed by the commonalty at all seasons, as well as in Lent, which our poor now would hardly be persuaded to touch.....

As you well observe, Mr. Hutchinson "has used his independent judgement to such good purpose in many directions" that any strong and decided expression of such judgement should receive our respectful attention and give us pause before we definitely accept the declaration of the Berlin International Conference that contagion was the only admissible theory, particularly in view of the lack of positive evidence on the matter. Our knowledge of the lepra bacillus is very limited; we know practically nothing of its life-history. In the meantime it becomes us to welcome any researches which may throw light on this obscure problem.—I am, etc.,

Southend-on-Sea, Dec. 30th, 1902. J. T. C. NASH.

TREATMENT OF RHEUMATOID ARTHRITIS.

SIR,—I cannot help thinking that Dr. Jones[1] is a little too sweeping when he says blistering the spine is merely palliative. I am of opinion it is a "cure" in suitably selected cases. Much depends on the way in which the blisters are applied; they must not only be applied, but the raw surfaces must be kept open as long as the physician in attendance

[1] BRITISH MEDICAL JOURNAL, December 20th, 1902, p. 1931.

may consider necessary, and also they must be repeated again and again. I am afraid if my patient had been left entirely to the action of the *vis medicatrix Naturae* she would have had a poor chance of recovery; there is no doubt in my mind as to the part the blisters played.

It is easy to say one has used blisters in rheumatoid arthritis. I heard of a doctor once who said he had used them. On making inquiries I found he had written a prescription for one, but it had never been applied.

The doctor himself should closely superintend the blistering. I always not only apply the blisters, but remove them and dress the raw surfaces once a day at least myself. I would refer those interested to Dr. P. W. Latham's article in the *Lancet* of April 6th, 1901. If his directions are closely followed I am sure great good must result in many cases of rheumatoid arthritis. Dr. Jones's letter may be the means of debarring many medical men from using this valuable remedy; if so, it will be to me at least a matter for keen regret.—I am, etc.,

Bournemouth, Dec. 22nd, 1902. W. J. MIDELTON.

THE NEW SYDENHAM SOCIETY'S *CLINICAL ATLAS*.

SIR,—You have repeatedly accorded to the Society which I represent the valuable privilege of addressing its members and others in your pages, and I am emboldened by past favours to solicit another.

The Council of the New Sydenham Society is desirous to place before the profession a statement as to what has been done, and what is in progress, in respect to its great undertaking to publish a *Clinical Atlas* of medicine, surgery, and pathology, and all allied branches of professional knowledge. The decision to undertake such an Atlas was arrived at after much deliberation more than two years ago, and as the first year of its issue is about to be completed we are now in a position which enables us to report as to what is likely to be accomplished.

In the first place the Council has had reason to congratulate itself in three separate directions. The number of subscribers, although much below what it is hoped may be obtained, is yet adequate; the cost of the work proves to be much less than was expected; and the supply of material is abundant. In the next place the Council feels that it is due to the Society's members to offer some explanation of what may appear like unpunctuality. We are only just about to conclude the issue of the series for 1901, and to commence that for 1902. Thus it may be said that we are a twelvemonth behindhand. No one, however, who will give the slightest thought to what the production of such a work as this means will feel any surprise at this. Our plates take a long time in passing through the artists' hands, and to hurry is to spoil. Many months also were consumed in inquiries as to whether the work would receive the support of the profession, and it was, of course, impossible to make preparations before a decision was arrived at. We are engaged not on the reproduction of any existing work, but in the publication of an original work of very large dimensions, and involving the collection of an immense amount of material, a large part of which now sees the light for the first time.

The fact just alluded to must stand as the explanation not only of a certain amount of delay in issue, but of some want of systematic arrangement which will become apparent. Any attempt at finality in such arrangement would be to the injury of our work. New illustrations may be supplied late which it would be a great pity to exclude, and unforeseen impediments may be encountered in the production of any one fasciculus. There is but little room for automatism in the compilation of such a work as ours, and as the foremost aim of those engaged upon it will be to make it useful as a clinical record of all that is susceptible of pictorial illustration in reference to disease, some latitude must be asked for in the matter of arrangement. We shall do our utmost to study the convenience of the reader, but shall not sacrifice his real interests by a too rigid endeavour to adhere to a cut-and-dried programme. He may now and then encounter supplementary plates, or find a topic which he had thought concluded again referred to. It must be remembered also in reference to the selection of subjects, that our *Atlas* is an international one, and is not intended exclusively for the home profession.

The issue of works for the year 1901 will be completed in a few days by the publication of a double fasciculus illustrating "Xanthelasma and Xanthoma as Symptoms of Functional or Organic Disease of the Liver." When our members for that year receive this fasciculus, they will have had for the guinea subscription a printed volume (von Limbeck's *Treatise on the Clinical Pathology of the Blood*, translated by Dr. Arthur Latham), and four fasciculi of the *Atlas*, which contain a total of twenty-two coloured and twenty-one uncoloured plates. Thus considerably more than was promised has been accomplished, for the Council's undertaking did not go beyond the issue of four fasciculi of eight plates each, and the addition of the printed volume was only conditional upon financial success. What makes this result especially satisfactory is the fact that it has been attained on a comparatively small list of members. Now that our year's work is before the profession we may legitimately hope that our list will rapidly increase, and if it does so we shall be able to afford much more. Without making any sort of promise, I may say that I am sanguine that instead of four we may be able to afford eight fasciculi a year, or their equivalent in an increased number of plates in each. If this can be done the *Atlas* will rapidly develop, and will be likely to attract still further additions to our members' list. However this may be, it is certain to become by far the largest and most comprehensive work of its class ever attempted.

In order to attain the results just alluded to, all that is necessary is that our members generally should bestir themselves. They have their own interests in their own hands. In the hope of giving a fillip to zeal in this matter, the Council has decided to accord a small privilege in compensation for trouble taken. It will issue to all who pay in one sum the subscriptions of five members for any one year six copies of the fasciculi issued for that year, with also any printed volume which may have been added. This privilege will be accorded not only to local secretaries, but to all members of the profession. As the stones from which the plates are printed will have to be cleaned off very soon, and no new edition is in the least degree probable, it is desirable that those who wish to secure the work should apply early.

In conclusion, I have but to state that the issue of the *Atlas* (in its clinical form) began with the year 1901, and that new subscribers should at once forward their subscriptions for that year and for 1902. If it is wished to save trouble, the subscription for 1903 may also be added. Our agent is Mr. H. K. Lewis, 136, Gower Street, W.C.—I am, etc.,

JONATHAN HUTCHINSON,
General Secretary (Hon.) to the New Sydenham Society.
Cavendish Square, W.

A DEGREE FOR LONDON STUDENTS.

SIR,—The association of the London University and Royal Colleges for examination purposes seems to me to be highly desirable, as it offers a prospect of a satisfactory end to the absurd and rather cruel confusion which involves medical qualifications.

A rational layman would imagine that a plain double qualification denotes only the lowest degree of tolerable medical and surgical efficiency; that the M.B. or B.S. denotes something higher; and the M.D., M.S., F.R.C.S., or M.R.C.P., the highest efficiency recognised by examination. I maintain that until our governing bodies have arranged examinations to this end they will allow an evil to exist which damages the public, the many excellent students who from want of foresight in their guardians are shouldered out of the university course, and the graduates of the University, whose position would be much stronger if it were true that all capable students could take a degree.

As it is, the university course is surrounded by unreasonable obstacles at its commencement, the Matriculation having hitherto been abhorred by the highest class schools, and the Preliminary Scientific being notoriously beyond the teaching capacity of some of the London hospitals. These rather tricky examinations keep out many who would be a credit to the University, and whose exclusion is as indirectly discreditable to the individual graduates as it is directly discreditable to their Alma Mater.

Why should not all the examinations of the London University and Conjoint Board be brought into line? There is not much between them now. Both bodies have examinations (1) in Arts, (2) in Preliminary Science, (3) in Advanced Science—for example, Anatomy, etc.—and (4) Medicine, Surgery, etc. If the examinations were on exactly the same line, the examiners of the Conjoint Board might divide their successful candidates into two classes, the members of the higher being up to the university requirements. The can-

didates for the M.B., B.S.Lond. by this route would have to pay a fee to the University when registering their steps as well as to the Conjoint Board for the examination; but this would be only fair, as they would be running less risk of absolute failure.

If the candidate should pass the higher or University standard through the Conjoint Board in the later stages—for example, in the "Anatomical" and "Final"—why should he not be allowed to take the Matriculation and Preliminary Scientific afterwards, and register his degree? Both bodies have still higher examinations for the M.D., M.S., M.R.C.P., and F.R.C.S.; surely the medical and surgical tests which the Colleges regard as sufficient for specialists should be recognizable by the University for its highest degrees, and possibly vice versa.

The next step might be to level the different qualifications and degrees of all the English, Scotch, and Irish universities and colleges by systematic inspection. The present inequality is injurious to the public, the members of the medical profession, and the London medical schools. Students, if not foolish, will tend to go where their efforts and abilities are most highly rewarded. Who can blame them? This is another story; but, until the levelling is done, I do not think your correspondent of December 20th, 1902 (Dr. Steele), nor coming M.B's. of London will get much practical satisfaction out of their trophy. They may even occasionally regret that they did not take their goods to another market in their student days.—I am, etc.,

H. Blake, M.B.Lond., M.R.C.S., etc.

Great Yarmouth, Dec. 23rd, 1902.

Sir,—Nothing could be more beside the point than the remarks of Mr. Steele under this heading. Some men do not care a button for a degree, either as a matter of vanity or lucre, and I count myself fortunate to be of the number. But that is not to say that the fact of their non-possession of the mystic letters is no detriment to them with a generation that seeks for a sign and cannot comprehend the riddle: "When is a 'doctor' not a Doctor." That the "Conjoint man" is harder worked than the man from the Celtic fringes is unquestionable. That he is better taught is not alleged, nor that he is a better article in the end; but that the others get a degree on terms absurdly easier than those open to the London student is certain. To the profession the merits reasonably attributable to the owner of the London degree are very real, but by the general public his attainments are often no better valued than those of the M.D. of the University of Tusculum, not the classic spot, but that in Greenville, where this degree, costing about £5, is conferred *in absentiâ*, and, as I am credibly informed, has been obtained by at least one ribald scoffer for his horse. What is justly due to the London student is that his equal or superior attainments should be protected from the most obvious disparagement by reason of his purely titular inferiority to a man from Glasgow or Dublin.

So far from being accurate, the insinuation that the ordinary London student has "a rooted objection to obtaining a degree in the usual way" is the precise opposite of the fact. That is exactly what he does want; that is why he goes north and west for the sake of getting it in the usual way; and he does not want it by the unusual, London University, way. That is why he does not take it so, preferring if he goes to a London school for its educational advantages, to dispense with this distinction, being at least a practically-minded man in the main, and not an examination-wallah. To say that he wishes to drag "the University of London degree from its pedestal" is absurd. If the average London student does not want the London degree, surely he has no use for the pedestal. A Westminster or Blackfriars M.D. without a pedestal will serve his turn quite well.—I am, etc.,

Fordcombe, Dec. 20th, 1902. Hamilton Hall.

THE ENGLISH CONJOINT DIPLOMA.

Sir,—Much has been written on the above diploma respecting the right of one holding it to style himself "Dr." Accepting the by-law, clause 27, made at the time of amalgamation of the College of Surgeons with the College of Physicians in February, 1883, one has no right to do so. I agree with those who consider Conjoint men have a grievance. Surely if an M.B. can style himself "Dr." an L.R.C.P. should have the same right. What I should like to know is, What is the position of those gentlemen who hold the L.R.C.P.Lond. before the Conjoint diploma was formed, and were such by-laws then in force? I believe not; therefore, who is to prevent a L.R.C.P.Lond. before that date from styling himself "Dr.?" Is it not somewhat degrading to a Conjoint man to seek a degree of M.D. from some foreign M.D. factory, which many men have to do, at the same time knowing they hold a good London diploma? Within half a mile of my house there is a practitioner, a L.R.C.P.Lond., L.R.C.S.Edin., who has "Dr." on his plate. Being on very friendly terms with him I told him he had no right to it. His answer was, "No such by-law existed in my day"; and doubtless there are many others. I must confess I knew nothing of this by-law until I was presented with a little paper-covered book after my final examination. I don't hesitate to say that Conjoint men have to read quite as much medicine as the M.B. man. I know the M.B. is an examination of theories more than the Conjoint. However, I have no wish to discuss the quality of the two examinations, but I believe the fees of the latter are nearly double those of the M.B. Let the M.D. put his degree on his plate, and let the construction of the word doctor mean a man who practises medicine as is generally understood by the public, although I am quite satisfied with only

December 23rd, 1902. "Physician and Surgeon."

ASSOCIATION OF LICENTIATES AND MEMBERS.

Sir,—With regard to the suggestion that this Association would strengthen its position by admitting diplomates of the Scotch and Irish Colleges, I cannot see that this would be of any advantage either to the Association or the diplomates, inasmuch as the Scotch and Irish diplomates are permitted to use the courtesy title of "Doctor," and thus have a decided advantage over the London diplomates. If the latter would only be contented if the College of Physicians saw fit to omit the by-law prohibiting diplomates from using the courtesy title, and leaving it to their discretion to use it when necessary, perhaps they might attain this much, which is all they can reasonably expect. But to suppose the College would help them to obtain a degree elsewhere is absurd and impossible, and applies equally to the Scotch and Irish Colleges. The letters M.D. would always distinguish the graduate from the diplomate, so I cannot see why the College of Physicians should place its diplomates at such a disadvantage.—I am, etc.,

December 30th, 1902. M.R.C.S., L.R.C.P.

MEDICAL DISABILITIES.

Sir,—At the present moment a moiety of the entire medical profession in Ireland are deprived of their statutory rights of eligibility for membership of county councils. There could be no greater mistake than for the profession to shirk their share of local affairs. The great majority have pursued that course too long, and they must by this time have realized how injurious it has been to the best interests of the profession. Anyhow, this Irish exclusion is an affront to a learned profession. The Local Government Amending Bill recently before the House afforded an opportunity for removing this affront, but neither Association nor medical member lifted a finger to remove it, though all were importuned to do so.—I am, etc.,

Cashel, Dec. 19th, 1902. Thomas Laffan.

OBITUARY.

WILLIAM ENGLAND, M.D.Edin., F.R.C.S.Eng.

As we have already briefly announced, the first victim of the outbreak of enteric fever which followed the mayoral banquet at Winchester on November 10th, was Dr. William England, who died on December 16th at the age of 79. He was born at Dudley in Staffordshire, and was educated at the University of Edinburgh, taking first the degree of B.A., and afterwards, in 1847, that of M.D. In Edinburgh he was House-Surgeon to Sir James Simpson, was present at the first operation under chloroform, and had a colleague and fast friend in Sir William Gairdner. He practised first at Chesterfield, Derbyshire, where he was appointed Surgeon to the Chesterfield Hospital and Dispensary. Afterwards he settled at Torquay and became Physician to the Torbay Infirmary and Dispensary. He married in 1857, and six years later removed to Winchester, where he continued to practise until his retirement from active professional work in 1892.

He was appointed, first, physician, then surgeon, and eventually consulting surgeon to the Royal Hants County Hospital, and retained the latter appointment until his death. He was President of the Southern Branch of the British

Medical Association in 1884, and for some twenty years held a surgeon's commission in the Hants Carbineer Yeomanry Cavalry. He was a sound, successful practitioner, well known as a consultant in the county of Hants, and universally esteemed and valued; he never spared himself in his work, and was always cheery and courteous. He was a man of active and energetic temperament, and was formerly a great horseman, riding well to hounds: his physical vigour and courage may be gauged by the fact that he became a bicyclist at the age of 74. His loss will be much mourned by all classes of the community in Hampshire, and especially in Winchester, where he resided and practised so long.

FREIHERR VON KRAFFT-EBING, M.D.,
Formerly Professor of Psychiatry in the University of Vienna.

BARON VON KRAFFT-EBING, sometime Professor of Psychiatry in the University of Vienna, died at Graz on December 22nd at the age of 62. He had long been suffering from a chronic affection of the kidneys. He was born at Mannheim in 1840 and studied medicine at Heidelberg, where he graduated in 1863. Afterwards he studied for some time at Zurich. The teacher who most influenced him at the former university was Friedreich, who gave him his bent towards neurology; at the latter he worked mainly under Griesinger. In 1863 Krafft-Ebing went to Vienna to seek his fortune. In 1864 he was appointed Assistant in the Illenau Lunatic Asylum. Four years later he went to Baden-Baden, where he practised as a neurologist. In 1872 he became Professor at Strassburg. A year later he was appointed Director of the Feldhof Asylum near Graz; and in 1874 he became Professor of Psychiatry in that ancient University. In 1886 he became the head of a psychiatric and neurological clinic in connexion with the University. He acquired a large practice, and founded a private asylum for his patients. After the death of Leidesdorf he was appointed head of the first psychiatric clinic at Vienna. In 1892 he succeeded Meynert in his chair. A few months ago the state of his health compelled him to resign his professorship. He was a copious contributor to the literature of his speciality. Among his works are a textbook of psychiatry which has gone through six editions; a textbook of medico-legal psycho-pathology; and monographs on moral insanity, menstrual insanity, traumatic psychoses, etc. His name was brought into somewhat unfortunate prominence by his book entitled *Psychopathia Sexualis*, of which an unfavourable opinion was expressed in the BRITISH MEDICAL JOURNAL some time ago. The book has gone through many editions, but this questionable popularity has been due rather to the curiosity of the public than to the appreciation of the medical profession. Krafft-Ebing, however, made many valuable contributions to neurology for which his name must be held in honour.

MAJOR WALTER REED, M.D.,
United States Army.

THE death of Dr. Walter Reed, which was recently announced in the BRITISH MEDICAL JOURNAL, is a severe loss not only to the United States army, but to scientific medicine. He was born in Virginia in 1857, graduated from the Medical Department of the army, and was commissioned First Lieutenant and Assistant Surgeon on June 26th, 1875; five years later he became Captain and Assistant Surgeon, and on December 4th, 1893, was promoted to the position of Major and Surgeon. At the time of his death he was at the head of the list of Majors of the Medical Department of the army. He made special studies in bacteriology at the Johns Hopkins Hospital, Baltimore, and afterwards was selected by the Surgeon-General as Bacteriologist in his office, where he was on duty from 1893 until the outbreak of the Spanish-American war. During that time he was a member of the Board of medical officers appointed to investigate and report on the prevalence of typhoid fever in home camps, and the Commission recommended the plan of collecting excreta in galvanized iron tanks, which was afterwards successfully carried out at the United States General Hospital, Presidio, California, and was followed by cessation of the disease.

Dr. Reed's most notable service to the science of medicine was in connexion with yellow fever. He was appointed President of the Board, the other members of which were Drs. Carroll and Agramonte, of the army, which met in Cuba for the study of yellow fever, and their discoveries in connexion with the cause and prevention of this disease mark an epoch in medicine.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE GILBERT BLANE MEDAL.

THE Gold Medal, founded by the late Sir Gilbert Blane, Bart., to be given biennially, has been awarded by the Medical Director-General of the Navy and the Presidents of the Royal College of Physicians and the Royal College of Surgeons to Surgeon C. W. L. Bunton, M.B., R.N., for his journal of H.M.S. *Forte*, 1901; and to Staff Surgeon J. Falconer Hall, M.B., R.N., for his journal of H.M. Naval Brigade in North China, 1900.

MR. FREDERICK F. MAHON, has been reinstated on the list of Surgeons in His Majesty's Fleet, with seniority of July 11th, 1898.

The following appointments have been made at the Admiralty: ALEXANDER G. ANDREWS, Staff Surgeon, to the *President*, additional, for a course of hospital duty, January 1st; HENRY R. GARDNER, M.B., Surgeon, to the *Vivid*, January 8th; GEORGE LEY, Surgeon, to Plymouth Hospital, December 23rd: SIDNEY ROACH, Surgeon, to Bermuda Hospital, December 23rd; SAMUEL H. FACEY, Surgeon, to the *Pembroke*, December 23rd; FREDERICK W. PARKER, Staff Surgeon, to the *Tamar*, December 29th, 1902.

ROYAL ARMY MEDICAL CORPS.

WE published last week the rates of pay recently approved by the Government of India for officers of the Royal Army Medical Corps serving in India. The following table shows the old rates of pay in contrast with those which will henceforth be in force. The amounts stated are in all cases consolidated pay, and are subject to an addition for exchange compensation equivalent at the present time to about 5½ per cent.:

	Old.		New.
Lieutenant	Rs. 350	.....	Rs. 420
Captain	Rs. 350	.....	Rs. 475
Captain, 7 years' total service ...	Rs. 450	.....	Rs. 530
Captain, 10 years' total service ...	Rs. 500	.....	Rs. 630

CAPTAIN C. J. O'GORMAN, D.S.O., is seconded for service with the South African Constabulary, September 5th, 1902.

Lieutenant THOMAS FINUCANE, M.B., died at Peshawur, Punjab, on December 12th, 1902, of enteric fever. He was appointed Lieutenant, November 29th, 1900. He was within two days of completing his 30th year.

Lieutenant-Colonel G. D. BOURKE, who has been serving in the Punjab Command, is granted the temporary rank of Colonel, from November 10th, 1902, while officiating as Principal Medical Officer, Bombay and Nagpore Districts.

Lieutenant J. TOBIN, at present serving in the Bombay Command, has been detailed for duty in connexion with the Aden Column and Somaliland.

THE NEW UNIFORM, R.A.M.C.

WE have received several letters from correspondents on the "dull cherry" facings of the new uniform, which are criticized from different standpoints.

One correspondent says these facings are very unpopular, and characterizes the "dull cherry kit as 'painfully ugly.'" He suggests that when the corps was made "Royal" it should have been given Royal facings, which are red.

Another correspondent, writing from a large station, says that most of the senior officers have got the new mess kit, and "like it." But he recommends a trouser change which he declares would be "universally popular," on the double ground of appearance and economy—namely, "to substitute a plain dull cherry stripe for the present 'rail-road' stripe." The plain stripe costs 7s. 6d. and can be turned; the rail-road stripe costs 17s. 6d. and cannot be turned; as a pair of trousers will wear out two stripes the saving would thus be £1 7s. 6d.

We trust the sartorial efforts of the War Office, which are never ceasing, and sometimes very wonderful, will in the end meet the objections to the new uniform of the R.A.M.C.

INDIAN MEDICAL SERVICE.

COLONEL H. HAMILTON, M.D., Bengal Establishment, is appointed Principal Medical Officer, Lahore District.

Colonel B. O'BRIEN, M.D., Bengal Establishment, is appointed Principal Medical Officer, Presidency District.

The undermentioned officers are detailed for duty in connexion with the Aden Column and Somaliland: Major W. S. P. RICKETTS, Bombay Establishment; Captains E. F. E. BAINES and G. M'PHERSON, Lieutenants C. C. MURISON, W. M. HOUSTON, R. M. CARTER, and J. H. HORTON, all being of the Indian Medical Service.

Lieutenant-Colonel H. ALLISON, M.D., Madras Establishment, officiates as Principal Medical Officer, Burmah District, from November 25th, with the temporary rank of Colonel.

Lieutenant-Colonel A. A. C. DANE, M.D., Bombay Establishment, is promoted to be Colonel, from November 2nd. His first appointment dates from September 30th, 1867.

IMPERIAL YEOMANRY.

THE following announcement is substituted for that which appeared in the *London Gazette*, dated November 7th, 1902: Surgeon-Lieutenant-Colonel A. COOPER, Suffolk (the Duke of York's Own Loyal Suffolk Hussars), resigns his commission, and is granted the honorary rank of Surgeon-Colonel, retaining his uniform, November 8th.

ROYAL ENGINEERS (VOLUNTEERS).

SURGEON-CAPTAIN J. KYFFIN, 1st Hampshire, resigns his commission December 24th.

MANCHESTER ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

PRESENTATION OF PRIZES BY SIR FREDERICK TREVES, BART., K.C.V.O., C.B.

THERE was a large gathering of members and friends of the Manchester Companies R.A.M.C. (Volunteers) on the evening of December 22nd, 1902, to witness the distribution of prizes by Sir Frederick Treves.

Lieutenant-Colonel Coates, the commanding officer, presided, and was supported, in addition to Sir F. Treves, by Colonel Walter Whitehead, Honorary Colonel of the Manchester Corps and President of the British Medical Association; Colonel A. W. Duke, R.A.M.C., Principal Medical Officer North-Western District; Professors G. A. Wright, W. Stirling, and R. D. Wild; the commanding officers of the various Manchester volunteer battalions, and many volunteer medical officers and other members of the profession.

Colonel Coates spoke of the history of the corps and its increase of strength consequent on the South African war, when four new companies and nine transport sections were added. During the past year, in response to a request, a seventh new company, to act as the brigade bearer company of the 29th Infantry Brigade, had been organized. The strength of the Manchester corps was now 906, and it held the proud position of being the strongest organization of the kind in the country. It had been able to send out to South Africa 265 officers, non-commissioned officers and men, and he had yet to hear of a volunteer unit which had beaten that record. Referring to the new head quarters scheme, Colonel Coates said that four years ago they appealed for £12,000, and obtained £2,000. The War Office had now consented to lend them the money still required to build the new head quarters. Negotiations for the purchase of three or four acres of land were in progress, plans were being drawn up, and it was hoped next year that the prize distribution might be held in the corps' own hall.

Sir Frederick Treves, who had a very hearty reception, expressed his pleasure at finding Manchester in possession of such a fine corps. He contended that when a number of individuals who were busy enough with their civil vocations could organize and develop such an exceedingly important and valuable branch of His Majesty's service, the very least the magnates of Manchester could do was to provide them with the very best equipment. Among the many things made manifest by the war in South Africa was that it was absolutely impossible to maintain an army medical corps on a war footing. The comparatively slight alterations which Mr. Brodrick's Commission had introduced into the Army Medical Service would cost the country about £100 000 annually, and that did not represent the maintenance of the service on any other than what might be called a modified peace footing. In war the medical service must turn to volunteers for aid, and that, to be of any use, must have been previously well organized. Men were of no use in the field unless they had received some training such as was carried out by this corps. In connexion with the force to which he was attached—the Ladysmith relief column—it was felt at once how infinitely more serviceable the surgeons with that column would have been had they received some previous volunteer medical training. The same remark applied to non commissioned officers and men. Although the corps was to have the assistance of the War Office in regard to new head quarters, there were many ways in which it deserved encouragement at the hands of the public, and he would like to recommend to the wealthy citizens of Manchester two ways in which they might render special service to the corps and the nation. One was by supplying it with a completely equipped field hospital, which would greatly increase its efficiency should occasion arise. It was well known that in the future field hospitals and bearer companies would be combined, and Manchester might well be proud to put the corps in a position to turn out at a moment's notice a well-trained, fully-equipped bearer company and field hospital. The late war had disclosed a weak spot in the medical service. It had no kind of outfit to follow a rapidly moving cavalry column. A galloping field hospital would have rendered excellent service. This problem was one that must be solved, and its solution would prove exceedingly expensive unless it was solved by the generosity, enterprise, and he might say sportsmanlike spirit of some one who would feel it a great honour to himself and to the city to which he belonged to evolve the organization of such a mobile hospital. He appealed to the citizens of Manchester to give earnest heed to this question, and lend their aid in a noble and patriotic work, which was fraught with real advantage to the nation and to the individuals who took part in it.

After Sir Frederick Treves had distributed the prizes and South African clasps, a vote of thanks was enthusiastically passed to him, on the motion of Colonel Whitehead, seconded by Major Fairclough. A vote of thanks to the donors of prizes, moved by the Honorary Chaplain (the Rev. Canon Davenport Kelly) and seconded by Captain T. W. Smith, was also passed.

Sir Frederick Treves was subsequently entertained at supper by the officers of the corps.

VOLUNTEER RIFLES.

THE undermentioned are granted temporary rank in the army, as follows, while serving with regular troops. To be temporary Surgeon-Lieutenant-Colonel: Surgeon-Lieutenant-Colonel G. L. FREER, 1st Volunteer Battalion the Royal Warwickshire Regiment, May 23rd, 1902. To be temporary Surgeon-Captain: Surgeon-Captain W. O. EVANS, 2nd Volunteer Battalion the Royal Welsh Fusiliers, April 7th, 1900. To be temporary Surgeon-Lieutenant: Surgeon-Lieutenant H. N. A. TAYLOR, 3rd Volunteer Battalion the Essex Regiment, October 1st, 1900.

SURGEON-MAJOR W. H. WEBB, 5th (the Hay Tor) Volunteer Battalion the Devonshire Regiment, is promoted to be Surgeon-Lieutenant-Colonel, December 24th.

Surgeon-Lieutenant F. EDGE, M.D., is promoted to be Surgeon-Captain, December 24th.

Surgeon-Lieutenant-Colonel F. H. APPLEBY, 4th Volunteer Battalion the Sherwood Foresters (Nottinghamshire and Derbyshire Regiment), ceases to be seconded, and is borne as supernumerary while serving with the Sherwood Foresters Volunteer Infantry Brigade, December 24th.

Surgeon-Captain C. R. HANDFIELD-JONES, 24th Middlesex, resigns his commission, December 9th.

VOLUNTEER INFANTRY BRIGADE BEARER COMPANY.

LIEUTENANT J. A. WOLVERSON, Staffordshire Company, is promoted to be Captain, December 24th.

THE VOLUNTEER OFFICERS' DECORATION.

THE Volunteer Officers' Decoration has been conferred upon the following: Surgeon-Lieutenant-Colonel W. MEARNS, M.D., 1st Durham Royal Engineers (Volunteers); Surgeon-Captain JOHN CHESTNUTT, 2nd Volunteer Battalion the East Yorkshire Regiment; Surgeon-Lieutenant-Colonels J. W. BLANDFORD and G. MIDDLEMISS, M.D., 1st Volunteer Battalion the Durham Light Infantry; Surgeon-Lieutenant-Colonel EDWARD WILLIAMS, 2nd Volunteer Battalion the Royal Welsh Fusiliers; Surgeon-Lieutenant-Colonel ROBERT ALLAN, M.B., 1st Ayrshire and Galloway Royal Garrison Artillery (Volunteers); Surgeon-Major W. H. WEBB, 5th (the Hay Tor) Volunteer Battalion the Devonshire Regiment; Surgeon-Lieutenant-Colonel S. B. MASON, 4th Volunteer Battalion the South Wales Borderers.

FEMALE NURSES FOR THE UNITED STATES NAVY.

A BILL is before Congress which provides for fifty women nurses for the United States navy. These nurses are to be taken from the best training schools, and to be subjected to a rigid mental, moral, and physical examination. They must have sufficient knowledge of medicine to be able to prescribe for emergency patients, and to diagnose cases if necessary. The pay will be the same as that of army nurses, or about as much as could be earned at private nursing. There are now about one hundred such nurses in the regular army corps under the command of a woman chief nurse.

MEDICO-LEGAL AND MEDICO-ETHICAL.

THE LICENSING ACT 1902.

THE Licensing Act which received the Royal assent on August 8th came into force on January 1st. A brief abstract of its provisions appeared in the BRITISH MEDICAL JOURNAL of August 30th, 1902, p. 646, and September 13th, 1902, p. 824. It may not be amiss, however, to recapitulate the most important parts of the measure. By Section II it is made a criminal offence for any person to be drunk in any public place while in charge of a child who is apparently under 7 years of age. Section IV provides that when a licensed victualler is charged with permitting drunkenness on his premises, and it is proved that any person was drunk on his premises, it shall lie on the licensed person to prove that he and the persons employed by him took all reasonable steps to prevent drunkenness on the premises. By Sections V and VI, which are devoted to amending the law affecting habitual drunkards, it is provided that in certain cases the wife or husband of a habitual drunkard may be released by order of the justices from cohabiting with him or her. An order of this kind is to have the same effect as a decree of judicial separation. Section VI provides that it shall be an offence for a habitual drunkard to purchase or attempt to purchase or obtain intoxicating liquors at licensed premises or at any registered club. Further, it is to be an offence for any licensed victualler knowingly to supply liquors to any such person. The duty of supplying information and the means of identifying habitual drunkards is to fall on the police. Section VII imposes a penalty upon any person who procures drink for any drunken person.

The Act provides that all clubs in which intoxicating liquor is supplied shall be registered. An application for registration is to be made by the secretary, who is to furnish particulars every year so that the register may be kept up to date. The register must contain (*a*) the name and objects of the club; (*b*) the address of the club; (*c*) the name of the secretary; (*d*) the number of members; (*e*) the rules of the club relating to (i) the election of members, and the admission of temporary and honorary members and of guests; (ii) the terms of subscription and entrance fee, if any; (iii) the cessation of membership; (iv) the hours of opening and closing; and (v) the mode of altering the rules. It is obvious that all bona fide clubs will find no difficulty in supplying satisfactory particulars

under the above headings; but the necessity of having suitable rules with regard to temporary members and terms of subscription will do much to check the use of a so-called club as a tavern. The Act further provides that the supply of liquor at an unregistered club shall be punishable by fine; and that supply for consumption off the premises shall only be allowed when a member himself obtains it. A club may be struck off the register upon the following amongst other grounds: (1) That it is not conducted in good faith as a club; (2) that there is frequent drunkenness on the club premises; (3) that illegal sales of liquor have taken place on the club premises; (4) that persons who are not members are habitually admitted to the club merely for the purpose of obtaining intoxicating liquor; (5) that persons are habitually admitted as members without an interval of at least forty eight hours between their nomination and admission. This last clause may give rise to some difficulty in the case of a bona fide club which is in the habit of accepting honorary members. A golf club, for instance, habitually admits visiting members on short notice. It is presumed, however, that in considering the question whether a club shall be struck off or no, the court of summary jurisdiction will have regard to the character of the club and to all circumstances. As the police are given powers of entry upon registered clubs and also upon premises suspected of being carried on as clubs, the new Act may have a good effect in preventing the sale of much liquor which is now carried on in defiance of licensing Acts.

The Licensing Act 1902 does not apply to Scotland or Ireland.

CERTIFICATION OF STILLBIRTHS.

THE *Neath Gazette and Mid-Glamorgan Herald* for December 20th, 1902, contains a report of an affiliation case heard at the Aberavon Police-court, at which one of the points at issue was whether the child was or was not stillborn. Dr. R. T. Williams, of Cwmavon, said that the child was born between four and five in the morning; that it moved before and during delivery, and after delivery breathed two or three times, and that the heart beat for a few seconds, and after the cord was cut he tried artificial respiration. He gave a certificate of which he could not remember the exact wording. Asked whether he drew a distinction between a "live-born child" and a "child born alive" he said he did, and that when the child lives a day or two he gave the usual certificate, but when it lived only a few minutes he did as he had done in that case. Asked what are the tests in England in regard to a stillborn child, he declined to reply. David Jones, the sexton, said he received a certificate, which was a printed one, and contained the words "not born alive." He noticed that particularly, as he could not have buried the child without the vicar otherwise. He had put the certificate on one side, but had mislaid it. Dr. Williams was recalled and cross examined as to the signs of life, but maintained that it was usual to give a certificate of stillbirth when these signs only lasted for 10 or 15 seconds, as in this case. He denied having received a notice from the registrar drawing his attention to an Act of Parliament which necessitated in the case of death under the hour that the minutes and seconds of life should be given. He admitted that he had told complainant's mother that the child was stillborn. The midwife, Hannah Thomas, said that the child breathed two or times and gave other indications of life. She was corroborated by Alice John, who was also present at birth.

THE HAYDEN DRINK CURE.

AT the Liverpool Winter Assizes the action of the Hayden Cure for Intemperance Syndicate, Limited, *v.* Herbert Leyland was heard on December 15th 1902, before Mr Justice Walton. According to a report which appeared in the *Times* of December 22nd, the plaintiffs claimed an injunction restraining the defendant from using or revealing certain secret prescriptions and medicines employed by them in the treatment of patients suffering from the effects of intemperance, and also an injunction restraining him from soliciting the plaintiffs' patients or revealing their names. They also claimed the delivery of all lists, catalogues, and papers which the defendant had obtained while in their service, and damages. The defendant counterclaimed for damages. Mr. Horridge, K.C., said that the plaintiff company was formed to treat inebriety according to certain American prescription, and had met with considerable success. It had established two homes at West Derby—one for men, the other for women. The defendant was engaged as valet at the home for men, and in the course of his employment he became acquainted with the names of a number of patients, and learned the secret of the prescriptions and their source from reading the labels on the bottles as he unpacked them. At the end of a year's service, under pretext of going to London for a holiday, the defendant went to Belfast and made arrangements with a doctor there the result of which was that an advertisement appeared in the *Catholic Times* recommending a new cure for alcoholism. The plaintiffs, suspecting its genuineness, procured that letters asking for information should be written from London and Newcastle. The defendant's answers, together with the results of the plaintiff's inquiries, led to the institution of proceedings, and an interim injunction was obtained. It was found that about 2,000 pills had been supplied to the defendant by a firm of local chemists either exactly like or only colourably different from those used by the plaintiffs for their cure, and they claimed that these should be given up. With regard to the law, Mr Horridge said it was clear that it was not a breach of a contract of secrecy to employ servants who by their position were enabled to become acquainted with such secrets, any more than it was a breach of confidence on the part of a barrister to take a pupil into his chambers. It was equally clear that good faith towards the employer was implied from a contract of service, and it was no defence to say that a servant who revealed his master's secrets might have got the information from somewhere else.

His Lordship said it would be a good defence in the action if the servant had, in fact, got the information from some other source, either before or after he was in the plaintiffs' service.

Mr. W. F. Taylor, K.C., who appeared for the defendant, said that that was precisely his case.

His Lordship heard the evidence until it became necessary that the names of former inmates of the plaintiffs' homes should be given. The court was then closed, and the rest of the case heard *in camera*.

His Lordship delivered judgement on December 18th. The case, he said, was chiefly one of fact, and he had come to the conclusion that he ought to accept the plaintiffs' evidence. He would grant an injunction, but not quite in the terms asked for. He thought the use of gold and sodium chloride, one of the plaintiffs' prescriptions, was sufficiently well known to be common property, but the defendant would be restrained from using it in conjunction with the plaintiffs' other prescriptions—namely, Dr. Edwards's compressed pills, nervine tonics Nos. 1 and 3, or either of them. He must also be restrained from soliciting or interfering with patients whose names he had learned while in the plaintiffs' employment. He gave judgment for the plaintiffs, with costs.

THE OBLIGATIONS OF A PARTNER.

LONDONER.—From an ethical point of view we think that A. is not justified in continuing his tutorial work against his partner's wishes.

MEDICAL ADVERTISING.

FAIR PLAY.—The matter has been referred to the Ethical Committee.

MEDICAL ETIQUETTE.

D.—Undoubtedly no practitioner should visit a patient still under the care of a colleague. In this case it might be pleaded that B. accompanied A., and that A. consented to his doing so. It is difficult to understand why A. accompanied B. on his visit if he objected to his seeing the patient. When A. advised the patient to go into hospital, was that not equivalent to recommending him to place himself under B.'s care? If so, there was further excuse for what B. did.

MEDICAL FEES.

E.S.M.B.—If our correspondent gave up his whole time to the case, he might reasonably charge ten guineas a day in addition to any special expense to which he was put by having to return home. We should not advise any charge being made for loss of holiday.

HOSPITAL ADVERTISEMENTS.

IMPARTIAL.—Our correspondent should bring the local hospital advertisement before the Ethical Committee or Council of his Branch. We think boards upon which the names of members of the hospital staff are painted and displayed outside the institution are objectionable, but we must admit that they are customary, and it would be unfair to single out one institution or staff for condemnation. It is a matter in respect to which professional opinion needs to be aroused.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Degrees.—At the congregation on December 18th, 1902, the last of the term, the following medical and surgical degrees were confirmed: *M.D.*: Clement White, Christ's. *M.B.*: J. H. Philbrick, Trinity. *M.B. and B.C.*: F. A. Rose, St. John's.

Appointments.—Dr. C. W. M. Moullin and Dr. R. G. Hebb have been appointed Additional Examiners for the Third M.B. Examination. Mr. F. G. Hopkins, Emmanuel, has been promoted to a Readership in Chemical Physiology.

Awards.—Mr. L. Doncaster and Mr. V. J. Woolley, King's, have been pronounced equal in merit for the medals given by Lord Walsingham for biological (including physiological) research. Twenty-three entrance scholarships and exhibitions in Natural Science have been awarded at the recent examinations held by ten of the Colleges for candidates coming into residence next October.

UNIVERSITY OF LONDON.

Leaving School Certificate

IT is announced that the Senate of the University of London has adopted a scheme for the inspection of schools and for the granting of school-leaving certificates to boys and girls. The scheme is intended to secure (1) that the school-leaving certificate shall in every case admit the holder to be registered as a matriculated student of the University without further examination or payment on attaining the age of 16 years; and (2) that a certain freedom in the selection and treatment of the subjects of the curriculum should be left to the schools. No certificate will be awarded for the standard below that required for matriculation, but a document to be called a school record will be issued to pupils attaining the necessary standard in some but not all the subjects required for the school-leaving certificate. Where the authorities of a school desire that an opportunity should be afforded to the older and more advanced pupils to obtain credit for advanced work special papers in particular subjects will be set. In order to maintain the same standard for the matriculation and for the school-leaving examination, it is proposed to appoint a small Board of inspectors, consisting of persons of distinction and large teaching experience, who will act as moderators for the matriculation examination, and be at the same time responsible for maintaining the standard of the school-leaving certificate.

UNIVERSITY OF EDINBURGH.

Unveiling of a Bust of Principal Sir William Muir.

A MARBLE bust of Principal Sir William Muir was formally presented to the University on December 19th by Lord Kinross. The bust was made by Mr. Charles McBride. Lord Kinross delivered a laudatory oration before unveiling it.

Professor Sir William Turner, as the senior colleague of the Principal, received the bust on behalf of the University.

Principal Sir William Muir feelingly expressed his thanks for the honour done him.

Sir Ludovic Grant proposed a vote of thanks to Lord Kinross for his good offices.

A vote of thanks on behalf of the subscribers was given to the sculptor.

A large and distinguished company was present.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH

ANNUAL ELECTION MEETING.

THE annual election meeting of the College was held on December 4th, 1902, when the following office-bearers were elected for the ensuing year: Dr. T. S. Clouston, President; Sir Thomas R. Fraser, Vice-President; Council: The President, Vice-President, Dr. James Andrew, Sir John Batty Tuke, Dr. John Playfair, Dr. G. A. Gibson, Dr. James Ritchie.

EXTRAORDINARY MEETING.

An extraordinary meeting of the College was held on Tuesday, December 23rd, 1902, Dr. Clouston, President, in the chair.

Election of Office-bearers.

The Secretary reported the following office-bearers had been elected by the Council for the ensuing year: Peter A. Young, M.D., Treasurer; R. W. Philip, M.D., Secretary; D. Berry Hart, M.D., Librarian; Sir John Batty Tuke, M.D., Curator of Research Laboratory.

Appointment of Representatives on the Board of Management of the Royal Infirmary.

The College unanimously appointed Dr. Andrew and Dr. Affleck to be representatives of the College on the Board of Management of the Royal Infirmary.

Appointment of Examiners.

I. *Examiners for the Licence.*—First Board: Dawson Turner, M.D., and Alfred Daniell, D.Sc., Physics; W. G. Aitchison Robertson, M.D., and John Gibson, Ph.D., Chemistry: John Macmillan, M.B., and Arthur T. Masterman, B.Sc., Biology. Second Board: Sir James A. Russell, M.B., and Joseph R. Whitaker, M.B., Anatomy; D. Noël Paton, M.D., and J. Craufurd Dunlop, M.D., Physiology. Third Board: Norman Walker, M.D., Robert A. Fleming, M.D., and Francis D. Boyd, M.D., Pathology; J. Murdoch Brown, M.D., G. Lovell Gulland, M.D., and Alex. Lockhart Gillespie, M.D., Materia Medica. Final Board: Andrew Smart, M.D., Claud Muirhead, M.D., James O. Affleck, M.D., Chas. E. Underhill, M.B., W. Allan Jamieson, M.D., Alex. James, M.D., Byrom Bramwell, M.D., G. A. Gibson, M.D., J. Graham Brown, M.D., Alexander Bruce, M.D., Wm. Russell, M.D., and R. W. Philip, M.D., Medicine; Sir J. Halliday Croom, M.D., D. Berry Hart, M.D., A. H. F. Barbour, M.D., R. Milne Murray, M.B., F. W. N. Haultain, M.D., and J. W. Ballantyne, M.D., Midwifery; James Andrew, M.D., P. A. Young, M.D., James Carmichael, M.D., J. Allan Gray, M.D., R. S. Aitchison, M.D., and C. J. Lewis, M.D., Medical Jurisprudence and Public Health; Sir John Batty Tuke, M.D., T. S. Clouston, M.D., Sir John Sibbald, M.D., John Macpherson, M.D., and John Fraser, M.B., Insanity.

II. *Examiners for the Membership.*—A. R. Simpson, M.D.; Andrew Smart, M.D.; Claud Muirhead, M.D.; Andrew Davidson, M.D.; Sir Thomas R. Fraser, M.D.; John Wyllie, M.D.; James Andrew, M.D.; Sir John Batty Tuke, M.D.; T. S. Clouston, M.D.; J. J. Kirk Duncanson, M.D.; P. A. Young, M.D.; James O. Affleck, M.D.; John Playfair, M.D.; Sir John Sibbald, M.D.; Charles E. Underhill, M.B.; W. Allan Jamieson, M.D.; Alexander James, M.D.; Peter M'Bride, M.D.; Byrom Bramwell, M.D.; G. A. Gibson, M.D.; Sir J. Halliday Croom, M.D.; D. Berry Hart, M.D.; Sir James A. Russell, M.D.; W. S. Greenfield, M.D.; A. H. F. Barbour, M.D.; Alexander Bruce, M.D.; James Ritchie, M.D.; William Russell, M.D.; G. H. Melville Dunlop, M.D.; N. T. Brewis, M.B.; R. W. Philip, M.D.; John Thomson, M.D.; J. Haig Ferguson, M.D.; G. Lovell Gulland, M.D.; W. G. Aitchison Robertson, M.D.; Norman Walker, M.D.; William Elder, M.D.; K. Mackenzie Downie, M.D.

III. *Examiners for Diploma in Public Health.*—First Examination: W. G. Aitchison Robertson, M.D., Practical Work in Laboratory; Alex. Crum Brown, M.D., Chemistry; Dawson Turner, M.D., Physics; Sir Arthur Mitchell, K.C.B., Meteorology. Second Examination: Claud Muirhead, M.D., Epidemiology and Endemiology; J. Allan Gray, M.D., Practical Sanitation; Sir James A. Russell, M.B., Sanitary Law, Vital Statistics, and Statistical Methods.

IV. *Officers.*—R. W. Philip, M.D., Registrar; D. Noël Paton, M.D., Superintendent of Laboratory; Alex. Sholto Douglas, W.S., Clerk; John Wilson Brodie, C.A., Auditor; John Matheson Shaw, M.A., Sub-Librarian.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following gentlemen having passed the necessary examinations and conformed to the By-laws, have been admitted Fellows of the College, and have received their diploma:

H. B. Bailey, L.S.A.Lond., Guy's Hospital; H. W. Pilgrim, M.B.Lond., St. Bartholomew's Hospital and Edinburgh University; H. B. Angus, M.B., M.S.Durh., L.R.C.P.Lond., Durham University; C. G. R. Wood, L.R.C.P.Lond., University College, Royal Infirmary, and General Hospital, Bristol; V. T. Greenyer, L.R.C.P.Lond., St. Bartholomew's Hospital; H. T. Hicks, L.R.C.P.Lond., Guy's Hospital; J. McClure, M.B., C.M.Glas., Glasgow University; J. A. Craig, M.B., B.Ch.Irel., L.R.C.P.Lond., Belfast and Vienna University; S. M. Smith, L.R.C.P.Lond., St. Mary's Hospital; A. S. Morley, L.R.C.P.Lond., St. George's Hospital; S. R. Scott, L.R.C.P., M.B.Lond., St. Bartholomew's Hospital; R. Warren, M.B., B.Ch.Oxon., L.R.C.P.Lond., London Hospital; C. J. N. Longridge, M.D., Ch.B.Vict., L.R.C.P.Lond., St. George's Hospital; B. C. Bromhall, L.R.C.P.Lond., London Hospital; L. Jones, L.R.C.P., M.B.Lond., St. George's Hospital; E. M. Ridge, L.R.C.P.Lond., London Hospital; F. H. Wessels, M.B., B.Ch.Aberd., L.R.C.P.Lond., St. Bartholomew's Hospital; F. G. Cross, L.R.C.P.Lond., Guy's Hospital; A. R. Thompson, M.B., Ch.B.Vict., Guy's Hospital and Yorkshire College, and General Infirmary, Leeds; N. F. Ticehurst, M.A., B.C.Camb., L.R.C.P.Lond., Guy's Hospital; C. B. Shuttleworth, M.D., C.M.Trin.Coll.Toronto, L.R.C.P.Lond., Trinity College, Toronto, and King's College, London; G. J. Jenkins, M.B., C.M.Edin., L.R.C.P.Lond., King's College Hospital; A. P. Parker, M.B., B.Ch.Oxon., Middlesex Hospital and Oxford University; R. H. J. Swan, M.B., B.S.Lond., Guy's Hospital.

SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST, December, 1902.—The following candidates passed in:

Surgery.—J. E. L. Bates (Sections I and II), Guy's Hospital; V. E. M. Bennett (Section I), Royal Free Hospital; A. N. Collier (Section I), Manchester; D. Cotes-Preedy (Section II), Cambridge and St. George's Hospital; W. B. Harris (Section II), St. Mary's Hospital; J. Hunter (Sections I and II), Toronto and Westminster Hospital; E. Knight (Section I), Royal Free Hospital; M. L. Pethick (Sections I and II), Royal Free Hospital; L. C. A. Savignard (Sections I and II), Manchester; G. B. S. Soper (Section II), Guy's Hospital.

Medicine.—V. E. M. Bennett (Sections I and II), Royal Free Hospital; J. C. O. Bradbury (Sections I and II), Cambridge and Guy's Hospital; W. C. P. Bremner, Toronto; L. Courtauld (Sections I and II), Middlesex Hospital; E. H. Griffin (Sections I and II), Guy's Hospital; J. D. Keir (Section I), St. Mary's Hospital; E. Knight (Sections I and II), Royal Free Hospital; G. B. S. Soper (Section I), Guy's Hospital; J. A. W. Webster (Sections I and II), St. Mary's Hospital; G. Wilmersdoeffer (Section I), Royal Free Hospital.

Forensic Medicine.—V. E. M. Bennett, Royal Free Hospital; J. C. O. Bradbury, Cambridge, and Guy's Hospital; E. H. Griffin, Guy's Hospital; E. Knight, Royal Free Hospital; M. L. Pethick, Royal Free Hospital; H. S. Tumber, Sheffield; J. A. W. Webster, St. Mary's Hospital; G. Wilmersdoeffer, Royal Free Hospital.

Midwifery.—J. E. L. Bates, Guy's Hospital; V. E. M. Bennett, Royal Free Hospital; W. E. Denniston, St. Thomas's Hospital; R. S. Dollard, R.C.S.I. and Westminster Hospital; A. C. George, Manchester; E. H. Griffin, Guy's Hospital; O. Gutermann, Berlin and Rostock; E. Knight, Royal Free Hospital; W. Martin, St. George's Hospital; H. G. Peel, Leeds; M. L. Pethick, Royal Free Hospital; L. S. Shoosmith, St. Mary's Hospital; G. Wilmersdoeffer, Royal Free Hospital.

The diploma of the Society was granted to E. H. Griffin, J. Hunter, and J. A. W. Webster.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

SANITARY INSPECTORS INFECTIOUS DISEASE NOTIFICATION, AND DISINFECTION.

A MEDICAL correspondent notified a case of scarlet fever, which subsequently did not desquamate, or only very slightly. The sanitary inspector of the district, after making inquiries as to the symptoms of the patient, wrote to our correspondent asking if the case were really scarlet fever. We need hardly say that in thus acting he grossly exceeded his duties. If any question of diagnosis arose it should be between the medical officer of health and the practitioner, and the wise medical officer of health never questions diagnosis. Following on this difference of opinion, we are asked whether stoving, by which we assume is meant disinfection in general, and not merely sulphur fumigation or steam disinfection of bedding, etc., is legally compulsory. The law on this point is contained in Section CXX of the Public Health Act, 1875, the substance of which is as follows:

Where any local authority are of opinion, on the certificate of their M.O.H. or of any other legally qualified medical practitioner, that the cleansing and disinfection of any house or part thereof, and of any articles therein likely to retain infection, would tend to prevent or check infectious disease, it shall be the duty of such authority to give notice in writing to the owner or occupier of such house or part thereof, requiring him to cleanse and disinfect such house or part thereof, and articles, within a time specified in such notice.

The person not complying with this notice is liable to a fine and the local authority can do the work in his default and recover the expenses from him. If the local authority is of opinion that the person liable is unable to carry out the work, it can with his consent carry out the work and defray its cost.

In districts in which the Infectious Disease Prevention Act, 1890, has been adopted (whether this is so in a given district can only be ascertained by local inquiry) the following provision takes the place of the above: where the M.O.H. or any registered practitioner certifies that the cleansing and disinfection of any house and any articles in it likely to retain infection would tend to prevent the spread of infection, the clerk to the local authority shall serve notice on the owner or occupier of the house stating that this will be done by the local authority at his cost, unless within twenty-four hours he informs the local authority that he will himself at once carry out the work to the satisfaction of the M.O.H. If in the opinion of the M.O.H. the owner or occupier of the dwelling cannot effectually cleanse and disinfect the house, the local authority is empowered by consent of the owner or occupier to carry out the necessary work. Section VI of the same Act empowers the M.O.H. by notice in writing to require the owner of any bedding, etc., to deliver it to an officer of the local authority for disinfection.

In actual practice these formalities are not gone through, the disinfection being carried out in the vast majority of districts at the expense of the local authority, and the legal machinery only utilized in cases of obstruction.

In the particular case which called forth these comments, the question whether disinfection and what amount of disinfection was imperative was clearly one for the practitioner and the medical officer of health to settle in consultation. The M.O.H. can, if he thinks fit, override the opinion of the practitioner that disinfection is unnecessary, by giving the certificate mentioned above. Hence the desirability of consultation between the two under the special circumstances of this case.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 8,173 births and 5,582 deaths were registered during the week ending Saturday, December 20th, 1902. The annual rate of mortality in these towns was 19.6 per 1,000, having been 19.1, 17.2, and 19.6 per 1,000 in the three preceding weeks. Among these large towns the death-rates ranged from 6.5 in

Wallasey, 10.6 in Leyton, 11.6 in Barrow-in-Furness, 12.3 in Burton-on-Trent, 12.6 in Aston Manor, 13 3 in Leicester, 13.4 in Reading and in Bury, and 13.5 in East Ham, to 24 9 in Stockport, 25 1 in Brighton, 25.4 in Wigan, 26.1 in Rochdale, 26.4 in Liverpool, 26.8 in Salford, 27.1 in Halifax, and 28.0 in Newport (Mon.). In London the rate of mortality was 19 6 per 1,000, which was also the average rate in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 2.2 per 1,000 in the seventy-six towns; in London this death-rate was equal to 1.9 per 1,000, while it averaged 2.3 in the seventy five other large towns, among which the highest rates were 4.0 in Tynemouth and in Cardiff, 4.1 in Norwich and in Liverpool, 6 3 in West Bromwich, 6.8 in Salford and in Newport (Mon.), 7.1 in Great Yarmouth, and 8.9 in Hull. Measles caused a death-rate of 1 8 in Smethwick and in Liverpool, 2.2 in Middlesbrough, 2.5 in South Shields, 2.8 in Salford, 4.0 in Tynemouth, 4.7 in West Bromwich, and 7.0 in Hull; scarlet fever of 1.7 in Wigan, 2.1 in Burnley, and 3.0 in Great Yarmouth; diphtheria of 1.1 in Hull and Swansea, 1.2 in Bristol and in Cardiff, 1.3 in Rhondda, 1 4 in Reading, and 2.1 in Salford; whooping-cough of 1.2 in Cardiff, 1.8 in Norwich, 2.4 in Southampton, 2.8 in Stockport, and 4.0 in Great Yarmouth; "fever" of 1.5 in Merthyr Tydfil; and diarrhoea of 1.1 in Middlesbrough and 1.6 in Warrington. Of the 6 fatal cases of small-pox registered in these large towns, 4 belonged to Bolton, and 1 each to Hanley, Oldham, Blackburn, and Rotherham. The number of small-pox patients under treatment in the Metropolitan Asylums Hospitals, which had been 17 at the end of each of the three preceding weeks, had increased to 21 on Saturday, December 20th; 5 new cases were admitted during the week ending on that date, against 4, 6, and 1 in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had declined from 2,900 to 2,565 at the end of the six preceding weeks, had further decreased to 2,487 at the end of the week under notice; 279 new cases were admitted during the week, against 362, 265, and 250 in the three preceding weeks.

During the week ending Saturday last, December 27th, 1902, 6,057 births and 4,826 deaths were registered in seventy-six of the largest English towns. The annual rate of mortality in these towns, which had been 19 6 per 1 000 in each of the two preceding weeks, declined last week to 16.9 per 1 000. The rates in the several towns ranged from 4.8 in Hornsey, 7.2 in Walthamstow, 8 7 in Hastings 9 4 in Willesden and in Handsworth, 10.7 in Barrow-in-Furness, 10 9 in Coventry, and 11 3 in Burton-on-Trent to 21.8 in Liverpool and in Rhondda, 22 5 in Hull, 22.9 in West Bromwich, 23.2 in Stockton-on-Tees, 23 3 in Reading, 23.4 in Hanley, 24 4 in Bootle, and 26 6 in Merthyr Tydfil. In London the death-rate was 16.6 per 1,000, while it averaged 17.1 per 1,000 in the seventy-five other large towns. The principal infectious diseases caused a death-rate of 1.7 per 1,000 in the seventy-six large towns; in London this death-rate was equal to 1.5 per 1,000, while it averaged 1 8 in the seventy-five other large towns, among which the highest rates were 4.1 in Burton-on-Trent, 4.2 in Hanley, 4.5 in Oldham, 4 6 in Smethwick, 6 8 in Newport (Mon.), 7.1 in West Bromwich, and 7.2 in Hull. Measles caused a death-rate of 1.6 in Hastings and in Salford, 1.8 in Bolton, 2 0 in Tynemouth, 2.7 in Smethwick, 4.7 in West Bromwich, 5.3 in Hull, and 6 1 in Newport (Mon.); scarlet fever of 1.4 in Birkenhead; diphtheria of 1 6 in West Hartlepool, 1.7 in Hanley, and 1 8 in Smethwick; whooping-cough of 1.5 in Tottenham and in Oldham, 1.7 in Hanley, 1 8 in Northampton, 1.9 in Croydon, and 2 2 in Cardiff; "fever" of 2 8 in Wallasey; and diarrhoea of 1.6 in Wolverhampton. Two deaths from small-pox were registered in Stockport, 2 in Bootle, 2 in Burnley, and 1 each in Liverpool, Bury, Oldham, Leeds, and Merthyr Tydfil, but not one in any other of the seventy-six large towns. There were 17 cases of small-pox under treatment in the Metropolitan Asylums Boards Hospitals on Saturday, December 27th, 1902, against 17, 17, and 21 on the three preceding Saturdays; no new case was admitted during the week, the numbers in the three preceding weeks having been 6, 1, and 5 respectively. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 2,680, 2,565, and 2,487 at the end of the three preceding weeks, had risen again to 2,528 at the end of last week; 205 new cases were admitted during the week, against 265, 250, and 279 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday, December 20th, 895 births and 681 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 18.5 and 19 9 per 1,000 in the two preceding weeks, further rose to 21.1 per 1,000 during the week under notice, and was 1.5 per 1,000 above the mean rate during the same period in the seventy-six large English towns. The rates in the eight Scotch towns ranged from 15 6 in Perth and 19.2 in Leith to 22.1 in Aberdeen and 24.4 in Dundee. The death-rate from the principal infectious diseases averaged 2.1 per 1,000, the highest rates being recorded in Aberdeen and Greenock. The 314 deaths registered in Glasgow included 2 from measles, 2 from scarlet fever, 2 from diphtheria, 22 from whooping-cough, 4 from "fever," and 5 from diarrhoea. Three fatal cases of whooping-cough and 2 of diarrhoea occurred in Edinburgh.

In eight of the principal Scotch towns, 875 births and 688 deaths were registered during the week ending Saturday last, December 27th, 1902. The annual rate of mortality in these towns, which had been 18.5, 19 9, and 21.1 per 1 000 in the three preceding weeks, further increased to 21.3 per 1,000 last week, and was 4.4 per 1,000 above the mean rate during the same period in the seventy six large English towns. Among these Scotch towns the death-rates ranged from 17 5 in Aberdeen and 18.3 in Dundee to 23 0 in Glasgow and 23 7 in Paisley. The principal infectious diseases caused a death-rate of 1 9 per 1,000 in these towns, the highest rates being recorded in Glasgow and Aberdeen. The 343 deaths registered in Glasgow included 2 from measles, 3 from diphtheria, 16 from whooping-cough, 5 from "fever," and 11 from diarrhoea. Two fatal cases of measles and 2 of diarrhoea were recorded in Edinburgh. Two deaths from whooping-cough occurred in Dundee; and 2 from measles and 3 from diarrhoea in Aberdeen.

THE GOSPORT WATER SUPPLY.

THE *Southern Daily Mail* has recently published a summary of an analysis made at King's College, London, of the water of the Foxbury Well. The report was to the effect "that a large amount of mineral matter and bacteria had been found in the water; also the quantity of salt was far in excess of the usual amount..... Its continued use was not to be recommended.....That it was quite possible that this was due to the 'inculation' (infiltration ?) of sea water, and arrangements to prevent this would have to made as soon as possible." Inspector-General Walter Reid, R.N., M.D., resident in the district supplied by this water, and who was formerly Instructor in Naval Hygiene at the Medical School, Haslar, furnishes some valuable supplementary information to the same newspaper. He states that "the Foxbury Well is sunk in, and takes its supply from, the chalk formation which has since been discovered to outcrop in Fareham Creek. Hence contamination by sea water simply percolates through the fissures which always exist in chalk formations. Unfortunately, as pumping goes on the channels and communications leading from the sea to the well gradually get cleared, and sea water in the well increases ....., I happen to know that if inquiry is made in the proper quarter it will be found that the impurity during the last four years has doubled in amount; and as a proof that the sea water reaches the well from below, it will be found that the contamination of the water in the bottom of the well is very largely in excess of that taken from the top ..... when the pumps stand idle for a time the water in the well rises to and stands at about mean sea level..... The presence of bacteria is alarming as the sea water that contaminates Foxbury Well must come from Fareham Creek, which takes in the outlet for the whole of the sewage from Fareham District ..... It is evident that no effective measure can be taken to prevent percolation of sea water in the case of a well which goes deep down into the chalk, and is supplied through long adits through the same stratum."

The condition of the water supply from this well should be dealt with as soon as possible, and as Inspector-General Reid maintains that no effective measures can be taken to prevent this sea water contamination, its use as potable water unboiled should be at once discontinued.

As the Naval Victualling Yard, Royal Marine Headquarters, and Military Barracks are situated at Gosport, this state of its water supply is a matter for the consideration of the naval and military authorities. We are informed that already the Admiralty have directed that water is no longer to be taken from the Victualling Yard. For a short time in 1897, when Inspector-General Reid informed the Principal Medical Officer of Haslar Hospital of the existence of enteric fever in the Fareham District, and the consequent danger of the contamination of this well from the sewage discharged into Fareham Creek the use of the water was stopped, the Commander-in-Chief directing that the ships should water from the Portsmouth water supply. The Royal Hospital, Haslar, has fortunately its own water supply of great purity.

SMALL-POX IN GLAMORGAN.

FROM the quarterly report of the county medical officer (Dr. W. Williams) it appears that there were 46 cases of small-pox during the quarter ending September 27th, as compared with 11 cases in the previous quarter; 6 of these were notified in July, 31 in August, and 9 in September; 18 of these cases were from Merthyr, 6 from Neath Borough, 6 from Caerphilly, and the rest from the different districts, not more than 3 from any one district. These cases do not include Swansea, which, though in Glamorganshire, is not in the administrative county.

In regard to small-pox in Swansea, the medical officer of health (Dr. E. Davies) reports what is apparently the conclusion of the small-pox outbreak. No case had been notified for over four weeks, and there is only 1 case remaining in the hospital. The total number of small pox cases in Swansea since January was 190 from within the borough and 10 from outside, 200 in all. The outbreak lasted ten months.

The above figures, also, do not take into account the more recent cases at Merthyr. In another table Dr. Williams records these as 47 in Merthyr notified up to November 15th.

EXOTIC DISEASES ON BRITISH SHIPS.

REGULATIONS were issued by the Local Government Board in November, 1896, making provision for the hoisting and display by the master of every ship infected with cholera, yellow fever, and plague, when within three miles of the coast of England and Wales, of a signal during the whole of the time between sunrise and sunset. A new order has now been issued providing also for the display of a night signal under similar circumstances. The day signal is a large flag of yellow and black, borne quarterly, hoisted at the masthead; the night signal is to consist of three lights arranged, not less than 6 ft. apart, in the form of an equilateral triangle, the light at the apex of the triangle to be white and the lights at the base of the triangle to be red; the three lights are to be placed at the peak or other conspicuous place at a height of not less than 20 ft. above the hull of the ship.

WORKHOUSE INFIRMARY NURSING.

IT has been pointed out to us that in our comments on the Report of the Departmental Committee (BRITISH MEDICAL JOURNAL, December 20th, 1902) we did not make it clear that a scheme which had for its purpose the nursing of the sick in grouped centres and in properly constructed buildings was under consideration and that evidence was given on it by Dr. F. R. Humphreys. Dr. Humphreys's contention is that the sick are to be nursed by fully trained nurses only, and that the scheme of linked infirmaries referred to does not meet his difficulty, as it does not provide for the proportion of "one probationer to two staff nurses" (Part II, Appendix X, p. 170). The Chairman pointed out that Dr. Humphreys's scheme involved a general alteration of the Poor law which was not within the scope of the inquiry, and as it appears at present to be outside the range of practical politics we did not refer to it specifically.

MEDICAL APPOINTMENTS IN THE HIGHLANDS OF SCOTLAND.

WITH reference to the paragraph under this heading that appeared in the BRITISH MEDICAL JOURNAL of November 22nd, 1902, dealing specially with the advertised terms and conditions attached to the appointment of medical officer for the Applecross District of the parish of Applecross, Ross-shire, we have received communications from two medical men who held the post, and, from the tenour of their remarks, were evidently not satisfied with the treatment they received. We have also received a letter from a former medical officer, who signs himself "Cuaig." He states:

"There was no medical officer in this part (Applecross division of parish) till the late Lord Middleton and the present proprietor made it possible to get a medical man by giving a free house and garden, and an adequate salary for attending gamekeepers and estate servants. In addition to this, Lord Middleton does everything in his power to make things comfortable and easy for the doctor, and does not in any way interfere unduly with the decision of the parish council beyond claiming

a voice in the election of a doctor, which is under the circumstances surely his right."

"Cuaig" states that the "estate agent" mentioned in the paragraph to whom applications were to be sent is a member of the parish council, and that it was in that capacity he received applications. From some cause or other there are frequent changes of medical men in this parish. We do not know whether this dual control of Lord Middleton and the parish council is satisfactory or not. It is, as a rule, not a good thing for a medical officer in a country parish to be too much under the control of the proprietor.

We have also received a communication from the Rev. Mr. Dewar, Minister of Applecross, who writes:

My attention has been called to a paragraph in your Journal which is manifestly intended to prejudice the interests of the people of this parish. It states that applications for the medical appointment in this district of it "are not to be made to the parish council or local authority." Allow me to contradict this statement. They are to be made directly to the local authority. It states further that in 1896 the proprietor, "after failing to induce the parish council to dismiss the then medical officer, took away the residence, which it would appear is the only one available, so that the medical officer was thus indirectly compelled to vacate the appointment." I beg to inform you that the whole of that statement is incorrect, and evidently malicious. There never has been the shadow of a shade of foundation for any part of it. I shall be obliged if you will do justice by publishing this letter.

We are pleased to publish this statement, and to learn that it is not correct that a former medical officer of Applecross was deprived of his residence. We observe that the appointment is still being advertised in the lay press, and we also notice that four other appointments in the Highlands are also advertised.

We would recommend intending applicants for any of these appointments to make every inquiry why the former holders of office left.

The Secretary of the Poor-law Medical Officers Association (Dr. W. L. Muir, 1, Seton Terrace, Dennistoun, Glasgow) is always willing to give every assistance in such cases.

A POINT IN NOTIFICATION.

W. J. H. asks if a child is brought suffering from diphtherial paralysis, all signs of throat trouble having for a month disappeared, is it necessary to notify the case as one of diphtheria to the sanitary authority?

*** In our opinion the case ought to be notified. Failing this, an important clue to the cause of other cases might be missed, and the public interests suffer. Strictly speaking the legal obligation to notify relates to "patients suffering from an infectious disease" which is notifiable: and the question arises whether the above patient is thus suffering, when affected by such an immediate sequela of diphtheria as paralysis. In our opinion it is safer to assume that he is; it is well known that in cases of diphtherial paralysis, the infection may often by bacteriological means be shown to persist for a considerable period in the throat.

NOTIFICATION FEES.

A. H.—Nothing is stated in the Infectious Disease (Notification) Act as to the form in which accounts for notification fees are to be presented. As, however, our correspondent's difficulty has been caused by the red-tapeism of the Government auditor, and the clerk to the local authority expresses his regret at having to trouble him to send in an account on the acceptable form, we advise compliance with the request.

MEDICAL NEWS.

Dr. A. A. Jervis-Pereira, a member of the British Medical Association, has been appointed by his Hellenic Majesty Consul for Greece, in the Province of Mozambique, Portuguese East Africa.

The Laryngological Society of London will hold its annual meeting on Friday, January 9th, at 4.15 p.m. The annual dinner of the Society will take place at the Café Royal at 7.45 on the same evening.

Mosquito Extermination.—According to *American Medicine* the report of a committee of South Orange, New Jersey, states that by the use of oil and drainage for two years fully 75 per cent. of the mosquitos of the region have been exterminated. This year they expect to exterminate 10 per cent. more, but further than that they cannot hope to go until the surrounding communities take up the fight.

Presentations.—Dr. Ffennell MacCarthy, of Worcester, was recently presented with a gold-mounted umbrella by the members of his ambulance class in connexion with the Midland Railway, as a mark of their appreciation of his services. —At Pontypool, on November 27th, Captain Percy J. Probyn, R.A.M.C., D.S.O., who was on the eve of leaving for active service in West Africa, was presented with a gold English chronometer, bearing an inscription that it was presented by his fellow townsmen as a memento of his gallantry in the South African campaign 1899-1902.

The Spitting Nuisance in America.—Illinois has followed the example of several other States of the American Union by taking steps to put down public spitting. A resolution was recently passed by the Board of Health, Springfield, prohibiting expectoration on sidewalks and in public places.

The War against Tuberculosis in France.—The Paris *Figaro* has made an appeal to the French public for subscriptions to a fund for carrying on active warfare against tuberculosis. It is pointed out that whereas Germany has 64 sanatoria with 23,000 consumptives under treatment, France has only two such institutions. At the head of the list of subscribers is the name of Professor Brouardel, late Dean of the Medical Faculty of the University of Paris. An anonymous benefactor has given 200,000 francs (£8,000). The sum so far collected amounts to £44,147.

Birmingham Dental Students' Society.—The President, Mr. Karl Daman, took the chair at the eleventh annual dinner of the Birmingham Dental Students' Society. There was a larger gathering than in former years of past and present members of the Dental School, and many visitors were also present. Among those who sat down to dinner were Sir James Sawyer, Mr. Haslam, Mr. F. Huxley, Mr. J. Humphreys, Dr. Wright, Mr. F. Richards, Mr. F. M. Farmer, and Mr. Dencer Whittles. After the dinner, in the intervals between the toasts, songs were given by the President and by some of the members, and a flute solo was rendered by Mr. F. Huxley. In the speeches many references were made to the inadequacy of the present Dental Hospital, which had originally been a private house, and of the difficulty, owing to the public not knowing more about the work of the institution, of raising the necessary funds with which to build the proposed new hospital.

Female Medical Practitioners.—The Local Government of Bosnia-Herzegovina have recently appointed Miss Rosa Einhorn to be Medical Officer at Travnik. There are now five female medical officers in these provinces. In addition to Miss Einhorn, there are Madame Gisela Kuhn at Banjaluka, Madame Bohnslawa Keck at Mostar, Madame Theodora Krajewska at Sarajewo, and Madame Hedwig Olszewska at Doluja. It may be added that for the first time a lady doctor, Miss Helene Friederike Stelzner, who took her degree at Halle *magna cum laude*, has, with the approval of the Cultus-minister, been appointed a volunteer assistant in the Berlin Charité. Three female practitioners, Miss Klausner, Miss von Leyen, and Miss Widgozinsky, have also been admitted members of the Medical Sick Assurance Association.

Paris Prizes.—The Académie des Sciences has awarded the three Montyon prizes in medicine and surgery to Professor Déjerine for his work on the semeiology of the nervous system; to Dr. G. H. Roger for his work on infectious diseases; and to Dr. P. Ravaut for his thesis on the diagnosis of the nature of sero fibrinous pleural effusions (cytodiagnosis). The Barbier prize has been divided between Professor A. Le Dentu for his work on cancer of the breast and Dr. L. Grimbert for his chemico-biological and bacteriological researches. The Larrey prize has been awarded to Dr. P. Triaire, of Tours, for his book entitled *Dominique Larrey et les Campagnes de la Révolution et de l'Empire*. The Académie de Médecine has awarded the Barbier prize (£80) to Dr. A. Marmorek, of the Pasteur Institute; the Theodore Herpin (£120) to Dr. R. Cestan, of Paris; the Saintour (£176) to Professor Testut; the Tarnier (£120) to Dr. Bué, of Lille. Many of the prizes, including the François-Joseph Audiffred (£960), have not been awarded.

A Medical Representative in the Saxon Ministry of the Interior.—The Government of Saxony has yielded to the oft-expressed wish of the medical profession that they should be represented by a professional colleague in the Ministry of the Interior. Professor Friedrich Renk has accordingly been appointed to a seat in the State Council of the Ministry of the Interior. He was born at Munich in 1850, studied medicine in the university of his native city under Pettenkofer and Karl Voit, and graduated there as Doctor of Medicine in 1874. He was assistant in the Institute of Hygiene under Pettenkofer, and in 1879 qualified as *Privat-docent*. In 1887 he succeeded Dr. Wolffhügel as an ordinary member of the Imperial Health Bureau, continuing to lecture as *Privat-docent* at Berlin. In 1890 he was appointed Professor of Hygiene in the University of Halle. In 1894 he became Director of the Central Station for Public Health and Professor in the Technical High School of Dresden. In 1898 the title of Medical Privy Councillor was conferred on Professor Renk.

HYGIENIC MILK SUPPLY EXHIBITION AT HAMBURG.—The Government of Germany has intimated that a general exhibition, devoted to hygienic milk supply in all its branches, will be held at Hamburg from May 2nd to May 10th, 1903. It will be divided into eight different departments. The first will comprise everything relating to milk production, including the exhibit of a limited number of cows of known pedigree; the carrying out of milk tests; the management of cows in stable and pasture; the clothing, health, and supervision of the persons having charge of them; etc. The second department will be devoted to the veterinary control of the condition of cows and of its relation to the purity of milk, to the laws governing sanitary management, the control of outbreaks of contagious diseases, the ordinary and special diseases to which cows are subject, to unwholesome plant foods and drinking water, and the excretion of medicinal stuffs through the milk. It will also include everything relating to the means and apparatus which have been tried or perfected for disinfecting stalls. Applications by intending exhibitors should be made not later than February 15th, 1903, to the Geschafftstelle, 46, Kampstrasse, Hamburg.

MEDICAL VACANCIES.

The following vacancies are announced:

BETHNAL GREEN BOARD OF GUARDIANS.—District Medical Officer. Applications on forms provided to be sent to the Clerk to the Board of Guardians, Administrative Offices, Bishops Road, Victoria Park, N.E., by January 14th.

BIRKENHEAD BOROUGH HOSPITAL.—Senior Resident Male House Surgeon. Salary, £100 per annum, with board. Applications to Chairman of Weekly Board by February 1st.

BOOTLE: GENERAL HOSPITAL.—Junior Resident (male). Salary, £80 per annum, with board and laundry. Applications to the Secretary.

BOURNEMOUTH: ROYAL VICTORIA HOSPITAL.—House Surgeon. Salary, £100 per annum, with board and lodging. Applications to the Chairman of Committee by January 29th.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—(1) Second House-Physician. Appointment for six months. Board, washing, and residence provided, and salary at the rate of £30 per annum. (2) Physician to out-patients. Must be F. or M.R.C.P.Lond. Applications to the Secretary for (1) by January 15th, and for (2) by February 9th.

DEWSBURY AND DISTRICT GENERAL HOSPITAL.—House-Surgeon. Salary, commencing £100 per annum, with board, residence, and washing. Applications, endorsed "House-Surgeon," to be sent to the Secretary by January 4th.

GLOUCESTER: GENERAL INFIRMARY AT GLOUCESTER AND THE GLOUCESTERSHIRE EYE INSTITUTION.—Senior House-Surgeon. Salary, £100 per annum, with board, residence, and washing. Applications to the Secretary by January 13th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—(1) Physician in charge of Roentgen Ray Department. Honorarium, £52 10s. (2) Resident House-Physicians. Appointment for six months. Honorarium £25. Applications to the Secretary for (1) by December 31st, and for (2) by January 7th.

JARROW-ON-TYNE: PALMER MEMORIAL HOSPITAL.—House-Surgeon. Salary, £120 per annum, with board and residence. Applications to the Secretary by January 6th.

JENNER INSTITUTE OF PREVENTIVE MEDICINE, Chelsea Gardens.—Studentship of the value of £150 (tenable for one year but renewable) for the purpose of research in the Department of Bacteriology at the Institute. Applications to be sent in by January 31st.

LEAMINGTON: WARNEFORD HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board, washing, and apartments. Applications on forms provided to be addressed to the Secretary before January 22nd.

LEEDS PUBLIC DISPENSARY.—(1) Honorary Surgeon. (2) Honorary Ophthalmic Surgeon. Applications to the Chairman of the Election Committee, Public Dispensary, New Briggate, Leeds, by January 19th.

LIVERPOOL STANLEY HOSPITAL.—Third House-Surgeon. Salary £10, with board, residence, etc. Applications, endorsed "House-Surgeon," to be addressed to the Chairman of the Medical Board by January 9th.

LONDON COUNTY COUNCIL.—Medical Officer to certain employés residing in Borough of Lewisham. Applications to the Clerk of the Council, County Hall, Spring Gardens, S.W., by January 17th.

MANCHESTER: ST. MARY'S HOSPITAL.—Medical Officer. Appointment for six months, but eligible for re-election. Salary, £65 per annum, with board and residence. Applications to the Chairman of the Board of Management by January 14th.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by January 9th.

ROYAL DENTAL HOSPITAL FOR LONDON AND LONDON SCHOOL OF DENTAL SURGERY, Leicester Square, W.C.—Demonstrator. Honorarium, £200 per annum. Applications to the Dean by March 22nd.

SALISBURY: FISHERTON ASYLUM.—Assistant Medical Officer; unmarried, and about 30 years of age. Salary, £150 per annum, with board, lodging, and washing. Applications to Dr. Finch, Salisbury.

SAMARITAN FREE HOSPITAL, Marylebone Road, N.W.—Clinical Assistants. Applications to the Secretary by January 10th.

SHEFFIELD ROYAL HOSPITAL.—Junior Assistant House-Surgeon; unmarried. Salary, £50 per annum, with board, washing, and lodging. Applications to the Secretary of the Honorary Staff, Dr. S. Riseley, 389, Glossop Road, Sheffield, by January 17th.

SOUTHPORT INFIRMARY.—Resident Junior House and Visiting Surgeon. Appointment for six months. Salary at the rate of £70 per annum, with residence, board, and washing. Applications to the Secretary, Infirmary Office, 24, King Street, Southport, by January 2nd.

TOTTENHAM HOSPITAL.—Two Honorary Anæsthetists. Applications to the Chairman of the Joint Committee, Tottenham Hospital, N., by January 12th.

VICTORIA HOSPITAL FOR CHILDREN, Tite Street, Chelsea, S.W.—Physician to the Out-patients; must be F. or M.R.C.P.Lond. Applications to the Secretary by January 10th.

WHITTINGHAM: COUNTY ASYLUM.—Assistant Medical Officer; unmarried and not over 30 years of age. Initial salary, £150 per annum. Applications to the Medical Superintendent.

MEDICAL APPOINTMENTS.

ADAMS, Edward W., M.D.Lond., appointed Honorary Assistant Demonstrator in Pathology at University College, Sheffield.

ALLIN, Charles J., L.D.S., R.C.S.Eng., appointed Honorary Dental Surgeon to the Derbyshire Royal Infirmary.

ASHWORTH, F. H.S., M.B., Ch.B.Vict., appointed Resident Medical Officer to the Swansea Hospital.

BATHE, Allan Arthur, M.A., M.B.Oxon., appointed District Medical Officer for the South District of Paddington Parish.

BUZZARD, E. Farquhar, M.D.Oxon., M.R.C.P.Lond., appointed Assistant Physician to the Royal Free Hospital.

FRASER, T. P., M.B., Ch.B.Aberd., appointed House-Surgeon to the Grimsby and District Hospital, *vice* H. Freeth, M.D.

GORDON, F. W., L.R.C.P., M.R.C.S., appointed Honorary Visiting Surgeon of the Auckland Hospital, New Zealand.

GREAVES, F. L. A., F.R.C.S.Eng., appointed Honorary Surgeon to the Derbyshire Royal Infirmary, *vice* Mr. C. H. Hough, resigned.

HAY, John, M.D.Viet., M.R.C.S., L.R.C.P., appointed Honorary Assistant Physician to the Hospital for Consumption and Diseases of the Chest, Liverpool.

HENDERSON, Robert G., M.A., M.B., Ch.B.Aberd., F.R.C.S.Edin., appointed Honorary Anæsthetist to the Liverpool Stanley Hospital.

HEPPER, E. G., M.R.C.S., L.R.C.P., I.M.S., appointed Clinical Assistant to the Chelsea Hospital for Women.

MURPHY, J. Montague, L.D.S., R.C.S.Eng., appointed Honorary Dental Surgeon to the Derbyshire Royal Infirmary.

POLLEN, Henry, M.D.Dub., M.Ch., appointed Health Officer for the the Port of Wellington, New Zealand.

PORTER, Charles, M.D., B.Sc.Edin., M.R.C.P.Edin., of the Public Health Hospital, Leith, appointed Demonstrator in Bacteriology at University College, Sheffield.

RAINSFORD, H. M., L.R.C.P.&S.Irel., appointed District Medical Officer of the Stanford Union.

REID, George M., M.B., C.M.Aberd., appointed Health Officer for the Shire of McIvor, Victoria.

SCOTT, R. F. McNair, B.A., M.B., Ch.B., appointed Clinical Assistant to the Chelsea Hospital for Women.

VALLANCE, H., M.R.C.S., L.R.C.P. appointed District Medical Officer of the Newhaven Union.

VERLING-BROWN, C. R., M.R.C.S.Eng., L.R.C.P.Lond., appointed Senior House-Physician to the Great Northern Hospital, Holloway Road, N.

WADE, E. B., M.B., Ch.M.Syd., appointed Honorary Assistant Surgeon to the Sydney Hospital for Sick Children, New South Wales.

WALKER, T. Malcolm, M.R.C.S., L.R.C.P., appointed Medical Officer of Health to the Banbury Rural District Council, *vice* E. Francy, M.R.C.S.Eng., resigned.

WATKINS-PITCHFORD, Wilfrid, M.D.Lond., F.R.C.S.Eng., D.P.H.Oxon, appointed Assistant Bacteriologist in the Government Research Laboratories, Pietermaritzburg, Natal.

WILLEY, Florence E., M.B., B.S., B.Sc.Lond., appointed Surgical Registrar to the Royal Free Hospital.

WILLIAM, G. T., jun., B.A.Camb., M.R.C.S., L.R.C.P.Lond., appointed District and Workhouse Medical Officer of the Milton Union.

EAST LONDON HOSPITAL FOR CHILDREN, SHADWELL, E.—The following appointments have been made:
Assistant Physicians.—S. Vere Pearson, M.B.Cantab., M.R.C.P.Lond.: Clive Riviere, M.D.Lond., M.R.C.P.Lond.
Assistant Surgeon.—R. P. Rowlands, F.R.C.S.
Pathologist.—Leonard S. Dudgeon, M.R.C.S., M.R.C.P.
House Physician.—Ambrose Emerson, M.B., B.C.Cantab.

DIARY FOR NEXT WEEK.

TUESDAY.

Pathological Society of London, 20, Hanover Square, W., 8.30 p.m.—Mr. Lenthal Cheatle: The Repair of Bullet Wounds of the Intestines. Dr. Shrubsall and Dr. Mullings: Tuberculosis of the Œsophagus. Dr. F. W. Andrewes: (1) A Case of Congenital Tube-calculi; (2) Two Cases of Congenital Heart Disease. Dr. H. M. Fletcher: Cholesteatoma of the Pineal Body. Dr. O. Grünbaum: Membranous Gastritis. Card specimen by Dr. Dudgeon.

WEDNESDAY.

Obstetrical Society of London, 20, Hanover Square, W., 8 p.m.—Discussion on Puerperal Insanity, to be opened by Dr. Robert Jones (introduced by Dr. W. S. A. Griffith). Among those who are expected to take part in the discussion are: Sir John Williams, Bart., Dr. W. Lloyd Andriezen, Dr. G. F. Blandford, Dr. F. H. Champneys, Dr. W. S. A. Griffith, Dr. G. E. Herman, Dr. T. B. Hyslop, Dr. Charles Mercier, Dr. W. D. Moore, Dr. F. W. Mott, F.R.S., Dr. G. H. Savage, Dr. Percy Smith, Dr. Seymour Take, and Dr. Ernest White.

FRIDAY.

Clinical Society of London, 20, Hanover Square, W., 8.30 p.m.—Mr. T. H. Openshaw: The Morbid Anatomy and Treatment of Congenital Dislocation of the Hip-joint. Dr. E. W. Goodall: A Case of Haemorrhagic Typhoid Fever. Dr. H. D. Rolleston: Generalized Tuberculosis with Arthritis.

Laryngological Society of London, 20, Hanover Square, W., 4.15 p.m.—Annual meeting. 5 p.m.—Ordinary meeting. Cases, specimens, and instruments will be shown by: Mr. W. H. R. Stewart, Sir Felix Semon, Dr. Bronner, Dr. Watson Williams, Dr. Lack, Mr. Lake, Dr. Tilley, Dr. Barclay Baron, Dr. Donelan, and others.

POST-GRADUATE COURSES AND LECTURES.

Charing-cross Hospital, Thursday, 4 p.m.—Demonstration of Medical Cases.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 5s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning in order to ensure insertion in the current issue.

BIRTHS.

ADDISON.—On Sunday, December 21st, 1902, at Wican Croft, Northwood, Middlesex, the wife of Christopher Addison, M.D., F.R.C.S., of a daughter.

HICKLEY.—On December 21st, 1902, at 259, South Lambeth Road, S.W., the wife of A. Mackenzie Hickley, L.R.C.P.Lond., M.R.C.S.Eng., of a daughter.

SPINK.—On December 20th, 1902, at Lyndhurst, Reddish, Lancs., the wife of Ernest W. Spink, M.D., B.S., M.R.C.S., of a son.

WATSON.—On December 31st, 1902, at Houdro, Overton Park, Cheltenham, the wife of Deputy Surgeon-General George Alder Watson, Bengal Army (retired), of a son.

MARRIAGES.

GODWIN—APPLEBY.—On November 25th, 1902, at St. Oswald's Church, Durham, by the Rev. M. Horsfall, M.A., of Whitby, assisted by the Rev. W. M. Wadsworth, M.A., Vicar of St. Oswald's, Herbert James Godwin, M.B., B.S., F.R.C.S., of Winchester, eldest son of the late James Godwin, M.R.C.S., L.S.A., of Twyford, Winchester, Hants, to Florence Marion Appleby, second daughter of Captain George Walton Appleby, late 26th Cameronians (Scottish Rifles), of 10, Church Street, Durham.

LANGDON BROWN—PRESLAND.—On December 20th, 1902, by the Rev. J. Brown, B.D., father of the bridegroom, W. Langdon Brown, M.D., M.R.C.P., of 37A, Finsbury Square, E.C., to Frances Eileen, daughter of the late John Presland, Esq., of Warboys, Hunts.

PANTING—HEPBURN.—On December 17th, 1902, at St. Mary's, Aldridge, Lawrence Christopher Panting, M.A., D.M.Oxon., of Truro, to Jane Agnes, younger daughter of the late Archibald Hepburn, Esq., and Mrs. Hepburn, of the Mont House, Aldridge.

DEATHS.

ANDERTON.—On December 7th, 1902, at the Mansion House, Ormskirk, aged 29 years, Edmund Balmer Anderton, M.D., eldest son of Dr. William Anderton, of Ormskirk.

CAMERON.—At Dunalby Tomintoul, on Tuesday, December 16th, 1902, Alexander Gordon Smith Cameron, M.B., C.M., late of The Firs, Glenlivet.

HEATH.—On December 20th, 1902, Richard Heath, M.D., of St. Leonards-on-Sea.

ROSE.—On December 26th, 1902, suddenly, Robert Donald Campbell Rose, L.R.C.P., L.R.C.S.Ed., L.F.P.S.Glas., at 8, St. Leonard's, York, eldest son of Robert Duncan Rose, F.R.C.S.Ed.

TOPHAM.—On December 23rd, 1902, at 36, Prescott Street, Halifax, Albert Stocks Topham, M.R.C.S., L.R.C.P., in his 46th year. Please accept this the only intimation.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiologe, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

SUSSEX wishes to know whether treatment by Frenkel exercises and high-frequency currents can be obtained at Montreux, Nice, Mentone, Monte Carlo, San Remo, Cannes, or Bordighera.

ANSWERS.

H. H. W.—Even when used only in his business, every medical practitioner is bound to pay a tax annually on his carriage or motor.

M B. (Edgbaston) would probably find what he requires in the *Atlas and Principles of Bacteriology*, by Dr. K. B. Lehmann and Dr. R. O. Neumann (London: W. B. Saunders and Co., 1901, 21s.); and in a *Guide to the Clinical Examination of the Blood for Diagnostic Purposes*, by Dr. R. C. Cabot, 4th edition (London: Longmans, Green, and Co., 1901, 16s.).

INCOME TAX.

D. P. H.—The employé of an English company paid by cheque on London is liable to assessment to income tax on his salary, even though resident abroad.

A DEGREE FOR LONDON STUDENTS.

SYNTAX asks: In reference to the vexed question of the title of "Dr." being used by the London Conjoint diplomates, seeing that there appears at present to be no prospect of having the title conceded to us, is there any reason why (for the sake of the title) one should not take a holiday after reading up, and come back with the degree of M.D. of the University of Erlangen or Giessen? Even if the degree is not registrable in this country one would have the right to call oneself "Dr." It would be interesting to hear from some graduate of the said Universities as to the status and kind of examination required for the degree of M.D.

LETTERS, NOTES, Etc.

ERRATUM.—In the report of the meeting of the Border Counties Branch, in the BRITISH MEDICAL JOURNAL of December 27th, p. 1971, col. 2, four lines from bottom, for "Maxwell Gross," read "Maxwell *Ross*."

WE have received a letter from Dr. Herbert E Durham, dated from Kuala Lumpur, stating that an advertisement issued by Mr. T. Hawksley as to "H. Durham's Haemacytometer" does not conform to Dr. Durham's instructions. The counting slide designed by Dr. Durham consists of the ordinary Thoma-Zeiss slide with the addition of a few extra lines to facilitate counting leucocytes. It was made and supplied to him by Messrs. Zeiss. The sample submitted by Mr. Hawksley to Dr. Durham did not meet with the latter's approval.

THE OPEN-AIR TREATMENT IN IRELAND.

A CORRESPONDENT writes: The wife of a small farmer had been some three months under treatment in the local tuberculosis sanatorium, and was discharged to her home, a mud-wall cabin, with the disease quiet, some 20 lb. extra flesh, a clinical thermometer, half a dozen charts, a Veutnor flask, and strict injunctions. Meeting her husband a few weeks later the following colloquy ensued:

"Well, Peter, how is your woman getting on?"

"Bravely, yer honour, bravely, thanks be to God an' you she's nearly well."

"I'm glad to hear it. Has she carried out my instructions?"

"Turoth, she has, yer honour, to the letter. The day she kem home I had to take the two sashes out iv the room windy before she'd go to bed, an' the next mornin' she swore she was smothered all night for want iv air, an' nothin' would contint her till I bruck a hole in the back wall as big as a bucket; an' now ther's a blast through the room day an' night fit to turn a mill."

"Has she sent me a chart?" I asked.

"Is it the paper ye mane? Yis, sir, here it is," producing a chart. "But I can't make head or tail iv it meself."

Observing a single 100° spike on the chart, I asked for an explanation.

"Will, now, its smart iv yer honour to see that. She towld me ye would want to know about it. Well, now, I'll tell ye the truth. One night whin she was goin' to bed says she, 'I'll have to lie in bed to-mo.row.' 'What for,' says I, 'sure yer not sick?' 'No,' says she, 'but the therometther says I have faver.' 'Faver,' says I! 'Holy Virgin, where cud ye get the faver. Sure ye were only washin' the clothes.' 'That's it,' says she, 'it was the washin' done it: I washed too hard, an' I'll have to lie in bed be the Doctor's orders. Is it true doctor, she cud tell be yon wee glass rod that she ought to lie in bed?"

"Quite true, Peter, and I am glad to find she has learnt her lesson so well." A pause.

"Yer honour?" with hesitation, "Will the thratemint last long?"

"I daresay. Why do you ask?"

"Well, sir, if it lasts much longer me an' the children will get our death iv cowld, for since she kem home, only for the roof over our heads we might as well be livin' out on the sthreet!"

AN UNUSUAL SOURCE OF LEAD POISONING.

DR. PERCY SHARP (Brant Broughton, Newark-on-Trent) writes: A few months ago I was called to attend the younger of two elderly maiden ladies, and found that the condition complained of was wrist-drop. The lady stated that she had been leaning against a table with her right hand bent under in some manner she could not exactly explain; and thought that the local paralysis was in some way caused by her having pressed the wrist against the edge of the table. No other symptom was complained of, the patient being otherwise in excellent health, though living a very secluded and sedentary life.

I could find no paralysis or loss of power in any other muscles; there was, however, some indefinite discoloration of the gums, not a definite "blue line"; the teeth were very defective, and those that remained were imperfectly cleaned. There had not been at any recent time any abdominal pain, or constipation. I then carefully inquired as to whether the patient had been handling or using any metal objects, with a negative result. I next inquired if they had had any part of the house or premises redecorated or painted, but they had not done so, and as the lady never visits she had not entered any other house where painting had been going on. Finally, I asked if they had had any plumbers working there, and if they had used lead in any shape or form. In reply to this I was told that the pan of the watercloset was cracked, and a month before the plumber had plastered the pan all round with white lead, the smell of which had pervaded the house for three weeks. I ordered a new pan to be at once put in, and the wrist-drop has completely disappeared under the ordinary treatment. There is nothing at all remarkable about the case except, perhaps, the unusual source of the poisoning and the total absence of any other symptom than paralysis of the extensors of the forearm, but perhaps on this account the case may be worth recording.

LETTERS, COMMUNICATIONS, ETC., have been received from:

A Admiralty, Director-General of Medical Department of, London. **B** Dr. R. C. Buist, Dundee: H Blake, M.D., Great Yarmouth; Dr. J. M. Bleyer, New York. **C** Mr. A. A. Cooper, London; Dr. E. O Croft, Leeds; Captain R.A.M.C. serving in India. **D** Rev. D. Dewler, Applecross: Messrs. Down Brothers, London. **E** E. S., M.B. Dr. J. Ellerton, Middlesbrough. **F** Field Officer and Economist; Dr. H. M. Fletcher, London. **G** Mr. G. Gresswell, Louth; Dr. L. Grant, Ballachulish; J. G. Gornall, M.B., Warrington. **H** Mr. W. H. Hall, Fordcombe; Mr. J. R. Hill, Edinburgh; H. S. B.; Dr. P. Z. Hebert, London; Dr. W. M. Harman, Winchester; Mr. E. T. Habbijam, London. **I** Impartial. **J** Mr. F. Jaffrey, London; Dr. W. M. Jones Torquay; Dr. J. A. Jones, Aberavon; Justitia. **L** Liverpool Medical Institution, Secretary of, Liverpool; Londoner; Mr. J. B. Lamb, London; Messrs J. Lyons and Co., London; J. Lloyd-Roberts, M.B., Colwyn Bay. **M** M.D.; Mr. W. J. Midelton, Bournemouth; M O H; B. G. A. Moynihan, M.B., Leeds; A. Murchison, M.B., Uig: T. R Macdonald, M.B., Inverness; M.O.; M.R.C.S., L.R.C.P.; Dr. C. K. Millard, Leicester. **N** Dr. J. T. C. Nash, Southend-on-Sea; Mr. P. Newell, Crowborough. **P** J. Peacock, M.B., Leicester: Messrs. Parke, Davis and Co., London; Physician and Surgeon; S. V. Pearson, M.B., London; Perplexed. **R** Mr. R. Roche, London; Dr. G. E Rennie, Sydney; Dr. C. Riviere, London; J. M. Ross, M.B., Dumfries; G. F. Rossiter, M.B., Weston-super-Mare; R. S. S J E H. Sawyer, M.B., Birmingham; Mr. H. Smurthwaite; Newcastle-on-Tyne; Dr. H. B. Shaw, London; Dr. Sachs, London; Sussex; Syntax; W. L. Strain, M.B., Sao Paulo, Brazil, Dr. F. H. Spencer, Exeter; S. M.; Dr. A. D F. Sayres, Woodford; Dr. W. Sykes, Exeter; Messrs. W. B. Saunders and Co., London; Mr. P. C Smith, Middleton St. George. **T** Dr. W. Turner, Gibraltar; Mr. G. S. Taylor, Partington; C. N. Thomas, M.B., Lydney; Mr. J. M. Tabor, London. **W** W. H; Mr. C. H. Whiteford, Plymouth; H. C. Woodhouse, M.B., Dawley; Mr. F. F. White, Coventry; Dr. F. Willcocks, London; Mr. W. Watson, Dumfries; Mr. J. West, Bradford-on-Avon. **X** X. P. V. **Y** Mr. W. Young, Glasgow. **Z** Zeta; Zoological Society of London, Secretary of, London.

BOOKS, ETC., RECEIVED.

Die Bekämpfung des Lupus Vulgaris. Von Niels R. Finsen. Jena: Gustav Fischer. 1902. M. 2.

The Army Medical System: What it is, is not, and ought to be. By One Who Knows. London: Sands and Co. 1903. 1s.

Veröffentlichungen aus dem Gebiete des Militär-Sanitätswesens. Heft 21. Die Bekämpfung des Typhus. Von Professor Dr. Robert Koch. Berlin: August Hirschwald. 1902. Pf. 50.

Die physikalisch-diätetische Therapie in der ärztlichen Praxis. Von Dr. med. Bernhard Proesch. Lieferung III. Wurzburg: A. Stuber. 1903. M. 2.

The London University Guide, 1902-1903. Containing the Regulations for Examinations to be held in 1903 and 1904. London: University Correspondence College.

School Hygiene. The Laws of Health in Relation to School Life. By Arthur Newsholme, M.D., F.R.C.P. New edition, rewritten by the above and by Walter C. C. Pakes, D.P.H. London: Swan, Sonnenschein and Co., Limited. 1903. 3s.

A Concise History of the Rise and Progress of the North Staffordshire Infirmary and Eye Hospital. From the year 1802 to 1902. By Ralph Hordley. Newcastle (Staffs): G. T. Baggaley. 1902. 5s. net.

*** In forwarding books the publishers are requested to state the selling price.

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N.B.—It is against the rules of the Post Office to receive letters at *Poste Restante* addressed either in initials or numbers.

A Clinical Lecture
ON
APPENDICITIS.

Delivered at the Medical Graduates' College and Polyclinic.

BY GILBERT BARLING, M.B., F.R.C.S.,
Professor of Surgery in the University of Birmingham; Surgeon to the General Hospital.

GENTLEMEN,—Up to June 30th, 1902, I find that I had operated on 143 cases of appendicitis in the acute stage. These cases have been carefully tabulated, and in many instances the patients have been followed up years after, when it appeared desirable to obtain the history subsequent to operation. My remarks to-day are based upon the experience obtained from a study of this material.

The first of these operations was performed in December, 1891, a little more than ten years ago. Before that date I had not wittingly operated for this condition, and I had not seen more than a few swellings in the right iliac region, which at this time I can look back upon, in the light of further knowledge, and say were probably appendical in origin. This, despite the fact that during the period from 1880 to 1891 I was connected with the same hospital as now, and for four years of the time was resident, and therefore had every opportunity of examining any interesting or unusual cases. Does this imply a much greater incidence of the disease now, or merely its recognition, whereas it was formerly overlooked? Perhaps both explanations are applicable. Now that the signs and symptoms of appendicitis are so well defined and recognized, and the pathology of peritonitis in general has been so much more fully worked out, there can be no doubt the disease is often recognized when in earlier days it would have been overlooked; this is especially true of the acute fulminating cases in which the local manifestation of a tumour is very generally absent or is obscured. Giving due weight to this, I am yet inclined to believe the disease to be of more frequent occurrence than formerly. I know how fallacious general impressions may be, but my tentative belief has some justification in the records of our hospital. I went through the *post-mortem* books for the 20 years ending December, 1894, and found recorded 20 deaths clearly traceable to mischief in the vermiform appendix, with 2 others possibly due to the same part, making a total of 22 deaths in the period of 20 years. Evidently, therefore, disease of the vermiform appendix was recognized at this date. In the immediately succeeding period of seven years from January 1st, 1895, to the end of 1901, 41 deaths are to be found in the records due to appendical mischief; in other words, the deaths recorded per annum in the latter period are nearly six times as numerous as in the former. The more general and ready recognition of the disease causes many more cases to seek for relief at hospitals now who may not have done so in earlier years, yet this will hardly apply to the more severe cases which, if incompletely diagnosed as peritonitis, iliac phlegmon, or perityphiitis, without recognition of the part played by the appendix, were yet so ill that they were as likely to be admitted to hospital before 1895 as since. Making considerable allowance for the non-admission of the milder cases, there is still an enormous discrepancy in the mortality records of the General Hospital in the two periods. The *post-mortem* practice of the hospital has not varied since 1874; a special officer, the resident pathologist, has made the examinations and kept the records, and fortunately now, as formerly, nearly all the cases dying are submitted to section. It is not easy to offer any sufficient reason why appendicitis should be more common now than a few years ago. Bad teeth, feeble digestion and the bolting of imperfectly masticated food are increasingly common, and may be reasonably expected to have an influence in any disease arising from the digestive tract, and to many people the hurry of modern life brings constipation, as the action of the bowels is often a deliberate habit, and very easily deranged, but these factors are insufficient to explain any great increase.

In a considerable number of cases the attack of appendicitis can be directly attributed to unsuitable food—pork, mackerel, over-ripe or under-ripe fruit, uncooked vegetables. In some cases, not so numerous, chill from cold and wet plays an active part, but whether food or chill be the active excitant, they both seem to act by setting up catarrh of the colon, and of course in any process involving the caput coli the vermiform appendix shares. Catarrh of the colon I believe to be a very common condition, causing many twinges and discomforts which fortunately do not all imply an attack of appendicitis. If, however, from constipation, a concretion lies in the appendix, or the lymphoid tissue in the body is easily stirred up into active inflammation, or there is any malposition of the appendix preventing its free mobility and evacuation, then we have conditions likely to result in appendicitis as a sequel to colic catarrh.

Of the part played by age and sex it is not necessary to say anything, but I should like to call attention to a certain family predisposition to this disease. I have personally operated for appendicitis upon a brother and sister in one family, upon two brothers and a cousin in another family, upon a boy whose brother had been operated upon by another surgeon, and upon a boy whose uncle had died of the disease, whilst I am acquainted with similar instances in the practice of my surgical friends. These cases are too numerous to be mere coincidences, and suggest either local anatomical conditions or special proclivity to the invasion of certain micro-organisms which favours the occurrence of the disease in certain families.

A few years ago an animated and at times rather acrimonious discussion occurred in the medical journals as to what constituted a stone in the bladder. At first sight it would have appeared as though agreement could be reached in a few words, but it was not so. An agreement as to what constitutes an attack of appendicitis would be even more difficult to arrive at if it is to include all cases from the very mildest to the most intense. What I may regard as probably a mild attack of the disease another surgeon may look at as a colitis or as due to something in the right ureter, etc., or the parts may be reversed. Certain it is that pains and discomforts in the right iliac region are very common, I believe much commoner than appendicitis. Equally certain is it that sharp but fleeting pains in the abdomen, not over the caecal region, are due to the appendix. A man, aged 32, whom I saw with wide-spread pelvic suppuration from a perforated appendix had never suffered from any illness before such as would lay him up, but for more than a year he had occasionally been seized with an acute pain in the region of the umbilicus which made him double himself over the back of a chair or similar object to get relief by pressure. There was no vomiting or other symptom, and in a few minutes the pain would pass off and the patient resume his work. The explanation of these pains was furnished, I believe, by a large, hard, faecal concretion which escaped from the appendix, for since the patient's recovery from operation two years ago he has been absolutely free from the old attacks of pain. If the definition of an attack of appendicitis is to be so elastic as to include this patient in his early attacks of pain, it would be meaningless; yet other similarly vague cases could be quoted which, as this, were undoubtedly due to mischief in the appendix, and which eventually came to the hands of the operating surgeon. I do not, therefore, intend to spread the meshes of my definition so as to include every case of the disease, but to describe it broadly as characterized by pain, which in the onset is often umbilical, though it may be right iliac, pelvic, or left iliac; this is usually associated with vomiting, elevation of temperature, considerable quickening of pulse, and the phenomena which attend a peritonitis, local and then perhaps spreading—namely, acute tenderness in a limited area with local muscular rigidity, perhaps both of them eventually extending until a greater part or the whole of the abdomen is involved. The essence of the whole thing is a peritonitis starting from an inflamed appendix, from which infective organisms are invading the peritoneum. The peritonitis may result merely in sufficient production of inflammatory lymph to enclose and mat the appendix to adjacent parts; it may result in the formation of matter well circumscribed by adhesion, but originating inside the peritoneum and forming an abscess, which as it enlarges may push forward to the anterior parietal layer of that membrane and become adherent there. Or the abscess may make its way backwards into the loin or in other directions, or it may burst into the general cavity of the peritoneum through the giving way of some of the enclosing adhesions. Or, from the first, the inflammatory products of the peritonitis are not well defined and limited by adhesions, but become diffused to a greater or less degree. Not infrequently, when the appendix lies in the pelvis or on its brim, a suppurative peritonitis results which involves

most of that cavity, reaching to the surface of the rectum and the bladder, thus giving rise to special symptoms. In other cases the wall of the appendix is perforated from the pressure of a concretion on its inflamed walls, or it becomes gangrenous from thrombosis of and pressure on its vessels, when, owing to the intensity of the infection or to the patient's low reparative power, adhesions fail to form and a rapidly widely-spreading peritonitis is initiated which may involve the lower abdomen and pelvis, being limited eventually by the transverse mesocolon, or it may involve the whole cavity. A similar dangerous condition occasionally results from the rupture of an abscess which, hitherto localized by adhesions, bursts into the general cavity through incautious movements on the part of the patient, from violent peristalsis induced by purgatives, or even from the manipulations of the doctor. These varying results of inflammation of the vermiform appendix must be divided into groups or classes for any useful purposes of study. A localized abscess and a case of diffused peritonitis vary so much in the intensity of their symptoms, in the urgency with which operation is required, and in their mortality that it would be absurd to present all my 143 cases together and speak of them as a single group. Any classification must be in a degree artificial, but the following appears to me to form a useful and practical subdivision.

Table I.

Class I. Diffuse peritonitis.—29 cases, 14 deaths, 15 recoveries.
Class II. Pelvic and adjacent peritonitis and suppuration.—34 cases, 7 deaths, 27 recoveries.
Class III. Localized non-adherent abscess.—49 cases, 2 deaths, 47 recoveries.
Class IV.—Localized "safe" or adherent abscess.—31 cases, 2 deaths, 29 recoveries.
Total number of cases, 143; deaths, 25; mortality, 17.5 per cent.

The mortality was brought about in most of the cases by sepsis, due to an extensive peritonitis; this was so in all the patients who died in Class I, and nearly all in Class II. In Class III one death resulted from suppression of urine on the sixth day in a man aged 42, who was known to be suffering from chronic Bright's disease. The other death was from sepsis, not from an extending peritonitis probably, but directly from the abscess and infection of the wound in a man prematurely senile. In Class IV one patient, a feeble man aged 60, died of exhaustion two days after operation; he was the subject of a large abscess which had formed in a very insidious manner. The other death in this group was the result of a rapidly spreading emphysematous gangrene extending from an abscess which found its way into the subcutaneous tissues of the anterior abdominal wall, and thence spread rapidly over the abdomen and thorax; the patient, a boy, had only been ill eight days.

It is unreasonable to speak of this death-rate of 17.5 per cent. as the mortality of the operation. All of these patients would in my opinion have died if the disease had been left to run its course unless some unforseeable accident (such as the escape of the abscess by the bowel in the patient with Bright's disease) should have dispensed with the necessity for operation. Such a rare contingency as this cannot be waited for; and even if it happened recovery would by no means have been assured, as the appendix was stenosed and perforated and contained pus. The deaths were in the main due to delay in surgical interference. There was a time in the history of many of them when successful operation was possible, before the peritonitis became widely diffused. Perforation or gangrene of the appendix does not flood the peritoneal cavity suddenly with infective matter as may do a perforated gastric ulcer, partly because of the position of the appendix in a corner of the abdomen and also because of its limited fluid contents, hence there is a time after the onset symptoms, even in the very acute cases, when recovery may be brought about by surgical intervention, but this time may occasionally be measured by hours. A few exceptions to this are provided by cases in which an already existing abscess is ruptured into the peritoneum, overwhelming the serous membrane with a dose of septic material from which there is scarcely a chance of escape. I should like to emphasize how brief is the interval for successful interference in the fulminating form of appendicitis in children, for a study of my cases shows the death-rate amongst them to be distinctly higher than it is in older subjects.

Indiscriminate operation in appendicitis I am no advocate for: the safety and welfare of our patients lies, I believe, in judicious selection. If a patient can be carried safely through his attack he may never have another or any other may be prevented by the removal of the appendix in a quiet interval with only very small risk to life. To operate in the acute stage is to run risk of sepsis, to expose the patient to a tedious convalescence, to leave him often with a weak and yielding scar and possibly with a sinus or even a faecal fistula. My own practice has been, when it seemed reasonable, to defer operation in the acute stage, and I have little to regret in the cases in which I have advocated delay though this course has often been advised with much anxiety. In any patient whom I am, by reason of time or distance, prevented seeing again at an early date, when in doubt as to the safety of leaving him I advocate operation as involving less risk than delay.

What are the conditions inside the abdomen which call for operation? The presence of a localized suppurative peritonitis shut off by adhesions, that is an abscess. Or, a peritonitis which is purulent or sero-purulent but not circumscribed by adhesions and in which the general and local signs indicate that the peritonitis is diffusing and the patient is becoming toxic from the products of inflammation. I do not emphasize the condition of the appendix itself as to whether it is perforated or not, gangrenous, stenosed, kinked or otherwise altered. Though one may often correctly conjecture what the state of the organ is, yet more often this cannot be done. The great point is to endeavour to picture to ourselves what is the condition around it which the changes in the appendix have given rise to and to determine whether operation is required for the safety of the patient or whether expectant treatment will carry him through.

To arrive at a correct conclusion, many considerations have to be weighed. When the patient is first seen it is generally impossible to foretell what course his attack will run. At the onset the pain may be so acute, the pulse so quick and feeble, and the general aspect of the patient so bad as to suggest the necessity for almost immediate operative interference. In three or four hours, however, there may be a marked change for the better; the pain has now become bearable, the patient is no longer writhing with it, his collapse is passing off, the pulse is twenty or thirty beats slower, and under these circumstances further time may safely be taken for observation. In a very few cases where a hitherto unrecognized purulent collection has ruptured or an appendix perforated without protective adhesions, the symptoms do not improve, and operation is required at the end of a few hours after the commencement of the pain. Such extreme urgency is rare, but it has fallen to my lot to operate occasionally under these circumstances, once five hours after diffusion of an abscess ruptured by the manipulations of the medical attendant, the patient recovering; once eight hours after rupture of an abscess by muscular effort, the patient, a doctor, having been walking about with mild symptoms of appendicitis for three days previously; in this case, unhappily, a fatal result supervened very rapidly. Two patients were operated upon respectively fifteen and eighteen hours after the onset pain, and both recovered; the appendix was acutely perforated in both, without protection; and in the first of the two both the right iliac fossa and the pelvis were flooded with pus. These fulminating cases are exceptional; in the majority of attacks, either the onset is less intense, or in a few hours there is some recession of symptoms, giving time for reflection. Another twelve hours or so may bring a further accession of pain, quick pulse, etc., such as may call for operative relief without further delay, but this again is exceptional. Or the onset symptoms may be of moderate severity, but continue without abatement, and at the end of two or three days operation is clearly called for. In the majority of cases, at the end of some hours there is improvement, which steadily continues and leads on to convalescence, the result happily attained I believe in more than half the patients attacked. In a certain percentage, however, convalescence will be checked, sometimes about the third day, but it may be as late as the seventh or eighth; there is a recrudescence of some symptoms, and fresh ones arrive, indicating the formation of a localized abscess. Here there is plenty of time for observation and diagnosis, and operation can be carried out at leisure. There is no royal time for operation, neither the first, second, or any other day; the time for intervention may be as soon as possible after the onset, or a few hours later, or at the end of a week, but this should be determined entirely by the progress of the disease. The safety of the patient requires repeated observation of his case in the early days of the attack, until it is clear what course the disease will run; I know of no condition which demands closer or more careful watching if preventable catastrophes are to be avoided.

With the pain of the onset the patient generally *vomits*,

and when the stomach is empty vomiting usually ceases. It may, however, not occur at all, and in a few cases it is persistent, but this in a great measure depends upon the management of the feeding. If the patient is allowed to take nourishment freely, even though it be in fluid form, vomiting may persist, but if mouth feeding is interdicted for a time vomiting almost always ceases. If it still persists when food is withheld, this is a pronounced indication for operative interference. Other symptoms will generally be in accord, but if they are not, their moderate intensity should not outweigh the warning conveyed by continued vomiting, and should not be allowed to stand in the way of operative measures.

On investigating the condition of the patient's abdomen the *tenderness* over the caecal region at first may be very intense but it is generally to be described by a less emphatic adjective. The position of the acme of tenderness varies to a considerable extent and cannot always be fixed at what is known as McBurney's point. It is unreasonable to expect that it would be so constantly located when we remember how the position of appendix varies. Even when the caecum is quite normal in its position the appendix may lie to its inner or to its outer side or beneath it. Again, the whole or part of the appendix may lie in the pelvis adjacent to bladder or rectum, or across the base of the sacrum, in the left iliac fossa, or in one of several other rare positions. These variations must be kept in mind not only because they vary the position of the tenderness, but because they will influence any operative measures undertaken. With the tenderness *muscular rigidity* is associated, often involving a fairly wide area of the lower part of the abdomen, but becoming more localized as the severe pain and tenderness of the onset subside. If this improvement does not occur it is an indication of peritonitis of some severity and extent underneath, and should be carefully watched; whilst, if the rigidity extends, it is generally a good reason for operation without much delay. Localized muscular rigidity is often mistaken for an inflammatory tumour. The truth is, in the early stages of an attack, the persistent contraction of muscle quite prevents palpation of anything underneath it, and only when the muscular rigidity is passing off can the inflammatory thickening of appendix, matted to adjacent parts, and perhaps surrounded by pus, be palpated as a *definite tumour*. In the more severe cases a well-defined tumour may never form. In such, on opening the abdomen, there is an absence of matting and infiltration, and the appendix is found unprotected by adhesions, perforated or gangrenous, and lying in some quantity of sero-purulent fluid. If eventually, perhaps at the end of three or four days, a well-defined mass can be palpated, its limits should be carefully observed and noted. Mere matting of parts around the appendix, infiltration of the parietal peritoneum, and perhaps of the adjacent layers of the abdominal wall, may produce a tumour of considerable dimensions, and must not be regarded as conclusive of the presence of pus; but if, despite rest and other appropriate treatment, the tumour increases in size, this is fairly positive indication of an abscess. Let me again remind you that the appendix is not always to be found in exactly the same place, and that any inflammatory tumour due to its disease may be found in other localities than the right iliac fossa; in the right loin, for instance; in the upper part of the pelvis, or perhaps in its lower part, and most easily palpated by rectum, vagina, or bimanually.

Percussion may tell one little or nothing as to the presence of any inflammatory condition, as the intestinal resonance may obscure a collection of fluid of some amount which the gut surrounds and envelops, but as a rule any considerable amount of fluid gives rise to some degree of dullness. Resonance may mislead, for it is occasionally due to free gas circumscribed in an abscess cavity, the resonance being misinterpreted as due to gas-containing intestine. In such a case other symptoms will probably be sufficiently conclusive of the presence of pus, and should be acted on despite the doubt which the presence of resonance rather than of dullness may not unnaturally raise.

Of all the signs which may guide us as to the necessity or otherwise of operation in the early stages of acute appendicitis, *the pulse* is the most valuable and reliable. In the main its rapidity will be the index rather than its quality. As peritonitis is the essential feature of the disease, it may cause some surprise if I do not refer to the hard, wiry pulse to which inflammations of the peritoneum are supposed to give rise. Hard and wiry are certainly not the terms to apply to the pulse in appendicitis; it is on the contrary soft and yielding. It is to its rate that attention will chiefly be directed. When the onset pain is distracting the patient the pulse-beat may be 120 or 130 in the minute, but with a less intense seizure 20 or 30 beats slower is more to be expected. With diminution of the pain the pulse-rate falls from, say, 120 down to 90 or 96 at the end of six hours or so after the first seizure of pain. In other less intense cases about 100 will be the maximum quickening of the pulse, and it may soon become about 86 to 90. In the case of such improvement as I have just suggested, it is very probable that other symptoms will improve also, and there is ample time for watching the patient and deciding if operative intervention is necessary.

Should the quick pulse of the onset remain at 120 or higher for more than twelve hours, the case should be looked upon as a grave one, and unless there is some particular explanation of the rapidity, such as the very youthful age of the patient or his recent removal from one place to another, delay in operation is inadvisable. Quite as significant is a steady quickening of the pulse. I recall the case of a lady whose attack began with a rigor early one morning, her pulse then being noted as 90; all day there was a steady quickening, until fifteen hours later it was 132. Vomiting and pain had disappeared under the influence of morphine, and when I insisted forthwith on operation the patient was so comfortable as to ridicule the idea. My opinion was, however, submitted to, and the lower part of the abdomen was found flooded with pus. If a quick pulse—one of 110 or higher—were always present in the graver cases, it would be an enormous boon, the decision for operation or the reverse so much easier. Unfortunately, valuable as is the aid given by the rate of the pulse generally, in the exceptional cases it cannot be relied upon. Illustrating this point I may mention a case in hospital. The patient, a male aged 25, on the third day of his attack, had a pulse of 80 and a temperature of 98°, yet his right iliac fossa and pelvis contained a large quantity of pus, and the indication for operation lay in persistent vomiting despite careful feeding. Quite recently I have operated upon a boy aged 15, whose appendix was distended with pus, and was gangrenous; the distal end was attached by old adhesions to a portion of small intestine, and under the arch thus formed about a foot of ileum was sharply strangled. At the time of operation and for sixteen hours before, the pulse was barely 100 and the temperature scarcely higher than 99°, but, as in the last-mentioned patient, vomiting was persistent. After the early days of the attack have passed, say the first week, and other indications have arisen which suggest the presence of a localized abscess, the pulse-rate will be of little assistance as a rule, for it will probably have fallen to something approximating to normal—to about 80, for instance. Such an improvement in the pulse must not for a moment be allowed to counterbalance the positive signs gained by palpation, the thermometer, or by other methods of examination.

The temperature is an uncertain guide in appendicitis, but not one by any means to be despised. We are so accustomed in suppurations generally to find an increase in temperature that many men still fail to realize how comparatively common it is to find pus in the abdomen, with scarcely any, or perhaps no, elevation of temperature. If the observer is once really convinced of this, the occasional eccentricities of temperature he meets with will not be likely to seriously mislead him. At the onset the temperature is almost always raised; it may in the first twelve hours or so reach to 102° or 103°, but more often it is a degree or two less. If the attack is a severe one the temperature remains considerably raised as a rule; and should this continue for three or four days, relief by operation is called for, whatever may be the associated symptoms. In exceptional cases, with severe peritonitis, the temperature is normal or subnormal, and if we have the paradox of a falling temperature and an increasing pulse, the former should be disregarded, and the latter should be our guide to the patient's condition. In the general improvement which occurs in a large proportion of cases attacked the temperature shares, and at the end of three or four days it may be normal. As I have already pointed out, an accession of symptoms at this time is by no means rare, suggesting the formation of a localized abscess, and one of the most positive indications is a fresh increase of temperature at night with a morning remission, the hectic chart with which we are so familiar in suppurations. It is, however, necessary to keep constantly in mind the possible absence of fever when pus is present and to give the fullest weight to other signs of abscess some of which will be present, namely, a tumour which can be palpated and which tends to increase, persistent pain and tenderness, the earthy anaemic unhealthy appearance of the

patient, and last, but by no means least in importance, the condition of his leucocytic count.

The value of the *leucocyte count* in appendicitis is undoubtedly considerable, but it is not an infallible guide any more than any other sign. The examination for leucocytosis can be made by any practitioner who will take the small amount of trouble necessary to acquire a knowledge of the method. The degree of leucocytosis is an uncertain guide to to the amount of pus present. I have seen a count of only 17,000 in the presence of an abscess forming fairly rapidly and containing more than a pint of pus, and, on the other hand, a count of 25,000 with an abscess containing only a couple of drachms of pus, but, speaking generally, the more widespread and intense the infection the greater the leucocytosis. As I have already mentioned, the number of leucocytes present in the blood is not an infallible guide, for, in a few exceptional cases there is no leucocytosis when pus is present, but a negative result should not be accepted until more than one examination has been made. If time and circumstances permit, an examination should be made on three consecutive days to determine not only whether there is a leucocytosis, but whether it is rising or falling, if the latter, this may justify delay in operation. In the estimation of the leucocytes, as in so many other signs which affect the diagnosis, a positive result is more valuable than a negative, for whilst the latter may be misleading, in none of my cases has a positive result been obtained without the presence of pus.

Constipation is the rule in appendicitis, but *diarrhoea* may take its place and indicates usually a severe attack, but one in which happily the peristalsis of the bowel is still active, therefore diarrhoea is on the whole of good prognosis. It is, I think, specially likely to be present when the pelvis is chiefly involved in the peritonitis. There is a distinct group of cases which are best designated by the term "pelvic appendicular peritonitis," in which diarrhoea or rectal tenesmus and free discharge of mucus is to be expected. Here there is a degree of proctitis, the mucous membrane of the rectum is swollen and oedematous, its roof is often much thickened and infiltrated, whilst a defined tumour is sometimes to be found, it may be as large as the fist, indicating the presence of an abscess close to the rectal wall. In such cases the bladder is likely also to be troubled, micturition may be frequent and painful, or retention may arise. These symptoms are mostly due to inflammation of the peritoneum covering the organ, but in a few there is a degree of cystitis due probably to extension of the inflammatory process through the bladder walls. These rectal and bladder symptoms should receive careful attention as indicating the severity of the illness, the need as a rule for operation, and the locality involved, for this in its turn may materially influence the operative measures required.

In summing up the considerations which determine the necessity or otherwise for operation, I would say, be guided always by the severity of those symptoms present, ignore the absence of symptoms usually present, or their slight intensity if they are present. If a patient does not vomit, and if his temperature is approximately normal while the pulse is 120 and the abdomen very rigid, lay stress on these last two signs, and pay little heed to the others; or, again, if the pulse is but moderately quick, and the temperature is in correspondence, yet the patient continues to vomit despite the prohibition of mouth feeding, too great emphasis can hardly be placed on the last symptom. If the temperature is falling and the pulse at the same time quickening, whatever the state of the other symptoms, the pulse will be the index to the condition inside the patient's abdomen.

The necessity for operation having arisen the details by which relief is to be given have next to be considered. The position of the incision is not always the same, but should vary according to the site of the inflammatory focus. It will generally be made over the right iliac fossa about an inch external to the semilunar line, and will vary in length from 3 in. to 5 in., according to the depth of the abdominal wall. I always divide the deeper muscles instead of attempting merely to separate their fibres in a direction transverse to the skin incision. Whatever the advantage of the gridiron incision in the quiet interval operations, in the acute state too little room is obtained, and the parts are so infiltrated as to be easily torn and ragged. In a few cases the focus of disease will lie under the lower part of the right rectus, and the incision should be made through its sheath, separating the fibres of the muscle in their long axis.

When there is evidence of pus in the pelvis, incision in the middle line sometimes gives the most convenient access to it, and through the same opening the vermiform appendix may be found and removed. Or the right iliac incision may be supplemented by one in the middle line when through the former the pelvis is found to be extensively involved, and a thorough clearing out of purulent pockets is required. When the focus of disease presents in the loin it may be attacked there rather than by an anterior incision, though perhaps more often it is convenient to incise in front, and, having removed the pus—and the appendix if this seems feasible—to close the anterior incision and drain through the loin. In a limited number of cases in which the pelvis is involved, the abscess may with advantage be opened in the rectum or vagina, but the operator should be quite sure that only the rectal wall intervenes between him and the pus, or he may open small intestine or bladder. When operation is undertaken for a diffuse lesion the position of the incision is not of so much importance, but when a localized abscess has to be dealt with it is a sound rule to incise as directly as possible on to it, evacuating the pus as directly as possible, thus avoiding the risk of diffusing infection.

Operation.—When the incision has been made, indeed whilst it is being made, if the attack has lasted several days and a well-defined tumour mass can be recognized, pus will probably well up into the wound, and there has been no evident opening of the abdominal cavity. The condition is one of "*safe*" *abscess*; pus has formed in the neighbourhood of the appendix, adhesions have circumscribed it; as the pus increased in amount the abscess wall has pushed forward, become adherent to the abdominal wall, and if the incision is directly on to the most prominent part of the swelling, the pus is let out as safely as possible. The finger passes into the abscess cavity and feels its lining of soft granulation tissue; cautiously searching about the appendix may now be recognized, generally matted to other parts, and perhaps perforated or partially ulcerated through. In a large majority of cases of this kind, however, the appendix cannot be detected by touch and should not be sought for further. If it is, persistent oozing of blood from soft granulations lining the cavity obscures things very much, and the search may be difficult and prolonged, leading to breaking down of adhesions and fresh infection; the softened and infiltrated bowel wall may be torn and a faecal fistula formed. Against this conservative course the possibility of recurrence may be urged if the appendix is not removed; but recurrence is quite uncommon, and in 25 patients from whom the appendix was not removed only in one has there been recurrence. In many abscesses of this kind a faecal concretion may be found, and such should always be carefully felt for, as, if overlooked, it may cause a sinus eventually. The abscess cavity is now lightly sponged out, and may be treated either by gauze packing or merely by draining and by suturing of the wound as closely as circumstances permit.

Instead of an adherent abscess it may be found as the incision is deepened that the general cavity of the abdomen is opened. As soon as this happens sponges, or any substitute used, should be packed all round any localized swelling to protect the peritoneal cavity from soiling. Only when this has been done should the fingers carefully and without violence begin to strip the adherent parts from the place where the pus is believed to lie. When the pus is located in the iliac fossa or behind the ascending colon it should be approached from the outer side, the large intestine being pushed inwards, and as soon as the abscess is tapped the pus should be quickly sponged out and it should be prevented by the fingers from gushing out in large quantities and so deluging the belly cavity. If the pus is located elsewhere it should be approached in whatever direction the adhesions are found to strip most easily and with every precaution to prevent it from soiling adjacent parts. The abscess cavity having been emptied the finger seeks carefully for the appendix or any faecal concretions as in the case of the "safe" abscess and if found these should be removed. In the cases at present under consideration greater freedom is allowable in the search for the appendix, for in contrast to the "safe" abscesses the peritoneal cavity is already open to possible infection and the operator can now see what he is doing and can take a definite guide to the base of the appendix in one of the longitudinal bands on the caecum, but even in these cases prolonged or extensive search is in my experience to be deprecated. If the appendix is not removed recurrence is quite uncommon, for in 25 of my cases in which it was not removed in only 1 was there recurrence.

It may be asked, If in some abscesses relief by operation involves opening the general peritoneal cavity, with its

attendant risk of infection, why not wait until the abscess has come forward and become adherent or "safe?" The answer is, We do not know in which direction any abscess may be progressing; it may be forwards to the surface, but, on the contrary, it may be in one of several other directions, producing destruction of tissue, with the attendant risk of secondary involvement of other parts, as the pleura or the portal veins, or perhaps eventually rupturing into the general cavity. Risks such as these should not be run when early operation affords so safe a method of escape.

If, when the abdomen is open, instead of a localized abscess we find a *diffuse condition*—sero-purulent fluid or thick pus lying amongst the intestines and omentum—it must not be inferred that there is necessarily a general peritonitis present. In a considerable number of cases the pus, though not bounded by such adhesions as would justify one in speaking of it as an abscess, is yet far from being distributed all over the abdomen; it may be limited to the pelvis, to the pelvis and right iliac fossa, or to the right iliac and umbilical regions. Inspection and careful exploration with the fingers will generally determine if this is so. If the inflammatory process appears to be limited, every care should be taken not to infect adjacent areas. The fingers should move gently amongst the intestines in search for pockets of pus—this especially in the pelvis—but with the intention, if possible, of sparing any circumscribing adhesions, however imperfect. In this way and by gentle sponging the parts involved are cleaned. The vermiform appendix is next sought and removed, if this can be done without great disturbance of parts or undue prolongation of the anaesthetic, for many patients bear this badly. As will be seen from Table II of cases presented, I have removed the appendix more freely in this group than in those of abscesses; indeed, I may put the matter in this way: the more diffuse the lesion the more often the appendix has been removed—partly because it was more easily found and partly because there was practically no added risk of spreading infection.

In this condition, as in the case of widespread peritonitis, a second incision in the middle line of the abdomen may be needed for purposes of cleansing and draining. If it is called for, the bladder should always first be emptied with the catheter, and even then careful watch made against damaging the walls of the organ, which often is fixed unusually high up.

If, instead of a peritonitis limited to the pelvis or quite the lower part of the abdomen, we have to deal with one which is *widely diffused*, we should act much as in the last group considered, though we may, instead of cleansing by sponges, use hot saline irrigation freely, but evisceration to aid in this purpose is rarely to be recommended, the shock it induces in these patients is more than they can bear. If the appendix can be removed without prolonged search, this should be done, but if it is left recurrence is quite exceptional, for it has only happened in 1 case out of 7, as the table shows. In the diffuse cases, whether a moderate or an extensive area is involved, drainage is always necessary, either by means of Mikulicz gauze packing or by drainage tubes inserted perhaps in two or three directions.

In a few cases drainage may be either by rectum or vagina, either in addition to that provided through the abdominal incision, or as a primary means of treatment. If the latter the evidence of pus presenting into one of the cavities should be clear, either there should be definite fluctuation or a soft yielding boggy patch in the middle of an area of oedema and infiltration in the wall of either rectum or vagina.

TABLE II.

Class I. Diffuse peritonitis.—29 cases—vermiform appendix not removed in 12, 7 survivals, 1 recurrence.

Class II. Pelvic peritonitis and suppuration.—34 cases—vermiform appendix not removed in 22, 15 survivals, 2 recurrences.

Class III. Localized non-adherent abscess.—49 cases—vermiform appendix not removed in 26, 25 survivals, 1 recurrence.

Class IV. Safe or adherent abscess.—31 cases—vermiform appendix not removed in 27, 25 survivals, 1 recurrence.

A total of 5 recurrences in 72 patients who survived. Two hospital cases cannot be traced.

My observations have already so encroached upon your time that I hardly dare trespass upon your patience further, but I should like to emphasize one point in the general treatment of these cases. On the use of opium in appendicitis there has been during the last few years a concurrence of opinion which it is difficult to disregard. It has to be given to relieve the severe pain often present at the onset and no one will gainsay the necessity. It is the repeated and persistent use of it which is so strongly to be deprecated. If the patient continues in severe pain which the first reasonable dose of opium or morphine does not relieve the medical adviser should give a second with hesitation, and any more with still greater doubt as to the wisdom of his course. He may soothe his patient and comfort the friends, but he will run the risk of seriously misreading his case and of leaving a dangerous condition to progress beyond the reach of surgical measures. Severe and persistent pain should not be the occasion for repeated doses of sedative but for early operative interference.

REMARKS ON A SECOND SERIES OF FIFTY CASES OF RECURRENT APPENDICITIS TREATED BY OPERATION.*

By F. A. SOUTHAM, M.B.Oxon., F.R.C.S.,
Surgeon to the Manchester Royal Infirmary; Professor of Clinical Surgery, Owens College.

THE following remarks are based upon a consideration of a second series of 50 cases of recurrent appendicitis treated by operation which have recently been completed. Details of the first series of 50 cases were published in the BRITISH MEDICAL JOURNAL, December 22nd, 1900, p. 1763.

Sex.

Of the 50 patients, 39 were males and 11 were females, it being a well-established fact that the former sex are the most liable to this affection.

Age.

Twenty-three of the cases, or not quite one half, occurred in persons between 20 and 30 years of age, the third decade of life being the period during which recurrent appendicitis is most common. In 14 cases the patients were between 10 and 20 years of age. In two instances the patients were 10 years old, this being the youngest age at which the affection was met with. Though acute suppurative appendicitis is common in younger subjects, it would appear that when an attack of appendicitis in a child subsides without suppuration, there is less probability of the attack recurring in children if they are under 10 years than if they are over that age. Ten cases occurred in persons between 30 and 40, 2 cases between 40 and 50, and only 1 case in a subject over 50 years, the patient in this instance being 53 years of age. In 115 cases of recurrent appendicitis operated upon up to the present time, in no instance has the patient been under 10 years of age; in only one case (namely, that just mentioned) has the age of the patient exceeded 50 years, the liability to this affection decreasing as age advances. Several instances of acute suppurative appendicitis in much older subjects have, however, come under my notice, for in 3 cases the patients were respectively aged 61, 65, 76 years.

Number of Attacks.

In 5 cases there had been only one distinct attack, but the patients had subsequently suffered from what might be termed "reminders" of its occurrence, namely, frequent pain, or a sense of aching after any exertion, sometimes attended by a local tenderness in the region of the appendix; in all these cases marked changes were found in the appendix, a concretion being present in one instance, so that there would certainly have been a recurrence of the attacks if it had not been removed. In 10 cases there had been two well-marked attacks, and in the remaining 35 cases three or more attacks. In several instances the attacks had been so numerous that the patients had lost count of the number.

Condition of Appendix.

In almost every case the lumen of the appendix was either partially or completely occluded at some point in its course, sometimes close to its origin from the caecum, sometimes at its middle or distal third. Though in most cases the walls were thickened, in a few, where the appendix was distended with fluid, they were extremely thinned. In one case, where the distension was extreme and the fluid contents were clear and watery, the appendix was quite translucent. It was frequently kinked or bent on itself at a sharp angle, and fixed in this position by adhesions which were present in the majority of cases, often firmer and more extensive after a few than after numerous attacks.

Contents of Appendix.

In 3 cases collections of pus were found shut off in the distal portion of the appendix, which was dilated into a

* A communication to the Manchester Pathological Society.

small cyst. In 6 cases faecal concretions were present in its interior. In the remaining cases the contents consisted of a mucoid or muco-purulent fluid, sometimes mixed with faecal matter. In no instance was any foreign body found.

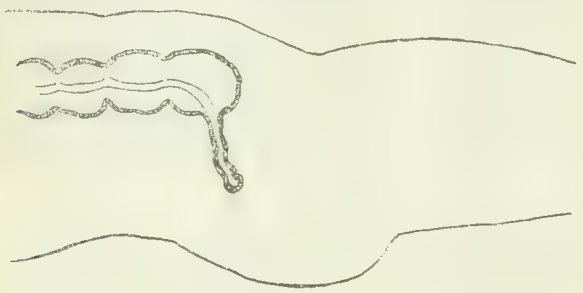
Suppuration round Appendix.

In 11 cases a localized suppuration had taken place outside the appendix, generally associated with a perforation of its wall. In four instances, where the amount of pus was small, there had been no indication of its presence previous to operation. These cases illustrate the fact that in a large proportion of cases of recurrent appendicitis suppuration sooner or later takes place.

Recurrence after a Previous Attack attended by Suppuration.

In 2 cases the patients had previously been operated on for appendicular abscess. In one, where the operation had been performed by the late Professor Tom Jones, the wound healed soundly, and the patient afterwards enjoyed good health for between three and four years. At the end of this period another abscess formed in the same situation, and on opening it a large quantity of very foul pus was evacuated, together with a hard concretion the size of a marble. As the appendix was not readily found, it was again left. The wound quickly closed, and up to the present time, eighteen months since the second operation, the patient has kept free from any further trouble, enjoying perfect health.

In the other case, the patient, who was a soldier, had been operated upon while on active service in South Africa during a second attack, which had ended in suppuration, a large abscess having been opened and drained. The wound healed, but during the next nine months he suffered from three recurrent attacks, which all subsided without suppuration. He was invalided home, and admitted into the Manchester Royal Infirmary. An exploratory incision was made over the region of the appendix during a quiescent period, and, contrary to expectation, it was readily found. It was completely stenosed near the caecum, and its walls were thickened. It was, however, remarkably free from adhesions, except at one spot near its middle, where there were signs of an old perforation; and there was no evidence to lead one to suppose that there had previously been an extensive formation of pus around it.



Quite recently I removed the appendix from another recurrent case, where a year previously I had opened and drained a large abscess, the appendix not being found. The wound healed and the patient enjoyed good health for nearly twelve months, when another abscess formed. An operation was subsequently performed for the removal of the appendix, which was readily exposed; it was much thickened, occluded at its origin, dilated beyond, and full of very offensive pus. As in the last case, there were few adhesions present, except at one point, evidently the site of a former perforation.

It is, therefore, evident that an attack of suppurative appendicitis is not necessarily followed by destruction of the appendix and immunity from future attacks, as used to be believed. No doubt in the majority of cases this occurs, the appendix afterwards shrivelling up and becoming obliterated. This result is especially likely to happen in children, where I have on several occasions found a gangrenous appendix, which had completely separated, come away with the discharge when the abscess was opened and drained. More frequently a localized perforation is found in the wall of the appendix, and if this closes—often by the formation of adhesions between it and adjacent structures—the appendix in recurrent cases is left in much the same condition as before, and consequently with the same liability to further attacks.

These cases illustrate the advisability of removing the appendix in all instances of suppuration—in recurrent as well as in first attacks—if this can be effected without risk of breaking down the protective barrier of adhesions which shut off the collection of pus from the general peritoneal cavity.

Absence of Local Symptoms during Quiescent Periods.

It is interesting to note that in many instances where marked lesions were found in the appendix there had been an absence of any local signs or symptoms during the quiescent periods between the attacks—for example, there was no tenderness on pressure and no induration or thickening to be felt. This was explained by the position of the appendix, which in these cases was found lying behind the caecum, with its tip directed backwards towards the posterior wall of the pelvis, where it was often fixed by adhesions, its long axis being vertical when the patient was recumbent. Consequently, when its distal end was thickened and indurated or otherwise deformed it was impossible to recognize these conditions on palpation through the abdominal walls, owing to the depth from the surface at which the affected portion of the appendix lay (see Fig.).

In conclusion, it may be mentioned that in every case the patients made a successful recovery from the operation.

CONSTRICTION OF THE SMALL INTESTINE BY A GANGRENOUS APPENDIX.

BY

G. LOVELL GULLAND, M.D., F.R.C.P.E., Assistant Physician, and DAVID WALLACE, C.M.G., M.B., F.R.C.S.E., Assistant Surgeon, to the Royal Infirmary, Edinburgh.

THOUGH it is now fully recognized that the appendix vermiformis is capable of almost any vagary, the following case, whose clinical aspects were interesting and unusual, illustrates a pathological combination in which the appendix was at its very worst in ingenious mischief-making. The actual condition must be nearly unique; we can find no record of an exactly similar case.

The patient, a boy aged 11, was seen by Dr. Gulland in consultation with Dr. Allan, of Laswade, on a Monday afternoon. He had been a healthy boy, and was quite well until the previous Tuesday, when his father saw him eating green apples. This indiscretion resulted in an attack of diarrhoea, which lasted most of the Tuesday night. Towards morning he complained of pain in the right iliac fossa, which only lasted for a short time, and was followed by vomiting. This was treated lightly at first, as the apples were thought to be sufficient to account for it, but as it continued steadily after all food, Dr. Allan was sent for. The bowels did not act after the diarrhoea on the Tuesday, though several enemata were given. The vomiting was constant, and on the Monday morning had become faecal in character. The abdomen distended gradually, and there was a good deal of gastric pain in the later days. The temperature was never raised more than a few points, and the pulse had varied between 90 and 100.

When Dr. Gulland saw him the boy looked well, and of a good colour, but had lost a good deal of flesh. He was restless, and had not slept well. Pulse 108, poor; temperature (at 4 p.m.) 98.6°. He had just vomited some coffee-ground material with a good deal of mucus, no faecal odour. The heart was dilated, the first sound weak. Lungs and other organs were normal. The tongue showed red papillae at the tip, was furred at the back, but was moist, and had been so all along. The boy could lie at full length, but was more comfortable when the knees were bent. The abdomen was much distended, especially in its upper and anterior regions, the distended stomach was visible, with a well-marked "ladder pattern" of small intestine below. There was distinct resistance to palpation in the right iliac fossa, no special tenderness there or in any other part of the abdomen.

The percussion note over stomach and intestine was tympanitic, while that in the right iliac fossa was dull over an area of about 3 in. square. There was also very slight dullness in the flanks, altering to resonance on change of position; hepatic and splenic dullness were normal. A diagnosis was made of gangrenous appendicitis, perhaps causing obstruction by adhesions, some peritonitis, with a small amount of fluid in the abdomen, probably serous. Operation was advised, and the boy was removed to the Royal Infirmary. Dr. Gulland and Mr. Wallace saw him there at 9.30 p.m., when

the condition was unchanged, except that there had been some faecal vomiting; temperature normal, pulse 120. He had borne the journey well. Mr. Wallace suggested obstruction by Meckel's diverticulum as a possible cause for the condition.

He operated at once, and opened the abdomen first in the middle line, for the above reason. Some serous fluid escaped, and distended and congested bowel presented. A mass was felt in the right iliac fossa. An incision was then made over the appendix, which was with difficulty brought into the wound. It was then found that the appendix, which was $3\frac{1}{2}$ in. long., was gangrenous in all but the proximal $\frac{1}{2}$ in. of its length. It was not perforated. It had been twisted on itself so that $\frac{1}{2}$ in. from its base it was very thin, and its lumen was completely obliterated (see Fig. 1). It was firmly adherent by its tip to the mesentery close to its attachment, and through the ring thus formed a loop of small intestine, $10\frac{1}{2}$ in. in length, and close to the ileo-caecal valve, had passed (Fig. 2). Its base was constricted, and it was much distended and congested, with some fibrinous exudation on its surface. Slight adhesions had formed round the appendix, but when this was snipped through they were easily freed. The gangrenous portion of the appendix had some faecal contents; the cut ends were treated with pure carbolic acid. There was a distinct ring on the surface of the intestine from pressure. The appendix was removed in the usual way, and the wounds stitched up.



Fig. 1.

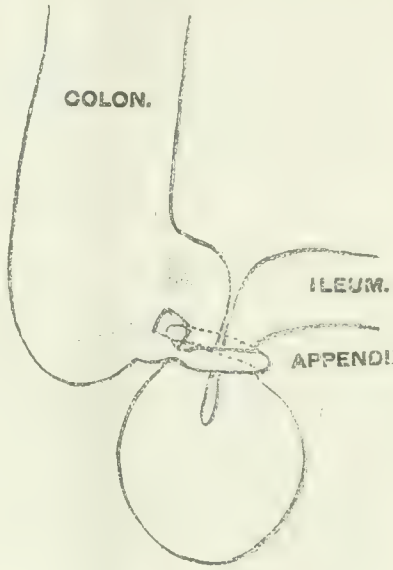


Fig. 2.—Diagrammatic.

The pulse rather improved under chloroform and after operation, and the patient seemed better. During the night, however, vomiting returned, and persisted, and he died about 1.30 p.m. on the following day. At the necropsy next day no new facts were ascertained. The peritonitis was not great in amount, and no pus or lymph was found; but the constricted loop of bowel had not recovered its tone, and this was probably the cause of the continued vomiting.

As far as one can follow them the sequence of events was probably that as the result of some long past inflammation the tip of the appendix had become adherent. The diarrhoea with which the illness commenced had given rise to a greatly increased peristalsis, by which a loop of bowel had been forced through the ring formed by the appendix. This had given rise to the pain, vomiting, and obstruction, and to a gradually increasing strangulation of the bowel. But the intestine, in its passage through the ring of the appendix, had apparently twisted the latter on its axis, so that its blood supply was cut off at the base, its lumen was obliterated, and it became gangrenous. The comparatively slight amount of peritonitis was probably due to the fact that no perforation had occurred in the appendix, so that only the organisms which made their way through its walls reached the peritoneum. To this fact, also, and to the fact that the loop of bowel though tightly constricted was not strangulated, we may ascribe the freedom from pain, and the apparent wellness of the patient. The only marked symptoms were the constipation and the vomiting.

FOUR CASES OF DUODENAL ULCER PERFORATING ACUTELY.

By D'ARCY POWER, F.R.C.S.Eng.,

Assistant Surgeon to, and Surgeon in Charge of, the Throat Department at St. Bartholomew's Hospital.

THE records of perforated duodenal ulcer are less full at present than those of perforated gastric ulcer, and details of the following cases upon which I have operated during the last year may be of interest to others besides myself. Cases I and II are quoted very shortly, because I have published a fuller account of them in the *St. Bartholomew's Hospital Reports*, vol. xxxvii, 1901, pp. 46 50.

CASE I.—A porter, aged 41, was admitted to St. Bartholomew's Hospital on May 23rd, 1901, saying that he was at work and quite well until 11 a.m., when he was suddenly attacked with pain in his epigastrium. The pain continued, and he vomited several times before coming to the hospital. He had passed no flatus since the pain began; his bowels were well open on the previous day. He was a temperate man, and there was no history of indigestion. At 2 p.m. the patient was reported to be a well-nourished man in obvious pain. His tongue was clean and moist; his respirations were very shallow, and 60 in the minute; his pulse was of fair volume and tension, regular, and beating 100 per minute. The pain in the abdomen was not localized, but it was sharpest in the upper half and down the right side. The abdomen was held rigid, and though it moved only slightly with respiration the movement was equal; it was not distended. It was tender all over, and was tympanitic everywhere, but the liver dullness was present. In the chest the percussion note was impaired at the right base, and the entry of air at the right base was weaker than on the left. No definite diagnosis was made, but the patient was thought to be suffering from pulmonary rather than from abdominal trouble. The patient remained in much the same condition, except that his pulse increased from 100 to 120 per minute until at 1 a.m. the abdomen became distended, the patient showed signs of collapse, and his pulse was 144. I saw him for the first time at 2 a.m., when he appeared to be so ill that I determined to explore his abdominal cavity. I therefore opened his abdomen in the middle line above the umbilicus. Liquid contents escaped as soon as the peritoneal cavity was opened, and a perforation was found apparently on the posterior wall of the stomach. The hole was large enough to admit a full-sized probe, and there was a considerable deposit of lymph around it. An attempt was made to close the perforation with Lembert sutures, but the operation was very difficult, owing partly to the awkward position of the ulcer and partly to the rotten state of the neighbouring tissues. Four sutures were passed, and it seemed as though the opening had been successfully closed. During the suture large quantities of a thin transparent fluid kept welling up from the perforation until the last suture was inserted, when it ceased. The patient bore the operation badly, and his pulse was almost imperceptible at the end of it. At 4 a.m. he was transfused with 3 pints of saline solution, and at 7.30 a.m. he died.

A necropsy at 3 p.m. on the same day showed that the whole peritoneum was acutely inflamed, its endothelial aspect being covered with a layer of fibrino-purulent lymph. There were collections of purulent matter at the bottom of the recto-vesical pouch, in the lumbar region and in the right subphrenic space, this space being almost completely shut off from the rest of the peritoneal cavity. The beginning of the duodenum at the upper and posterior part was the seat of a conical ulcer which measured $\frac{1}{2}$ in. in diameter. It had sharply cut edges, but there was no infiltration at the margins. The floor of the ulcer had perforated, but the sutures were not accurately applied, as water and intestinal contents easily passed through.

The particular interest of this case lay in the fact that the localized peritonitis must have lasted a much longer time than the sudden onset of the symptoms would have led one to suppose, whilst the symptoms, when they appeared were so obscure as to make it seem, even to competent observers, that the patient was suffering from pneumonia rather than from an acute peritonitis.

CASE II.—The second case of perforated ulcer of the duodenum occurred in the person of a fat and cheery cabman, aged 47, who was admitted at 8.30 p.m. on July 13th, 1901, suffering from intense pain in his abdomen. He awoke apparently in the usual health on the morning of this day, and whilst he was eating his breakfast of tea and bread and butter at 9 o'clock he was suddenly doubled up with stomach-ache. He passed neither faeces or flatus all day, and though he was not collapsed on his admission to the hospital in the evening he was in great and constant pain which he referred to the epigastric region. He was quite clear that he had never suffered from indigestion and that he had never vomited blood, but he admitted that he had drunk much beer. His temperature was 99.8° F., his pulse was 104, and his respirations 24. His abdomen was full but not distended. It moved slightly but equally during respiration, and any deep inspiration caused an increase in the pain. There was some general tenderness, more marked in the epigastric region, and the abdominal muscles were held rigid. The abdomen was everywhere resonant, and there was an absence of liver dullness in the nipple line. I opened the abdomen at 10.45 p.m. in the middle line above the umbilicus, gas and fluid escaping as soon as the peritoneum was divided. The stomach was carefully examined, and after a short search the perforation was discovered close to, and at the back of, the pylorus, in all probability in the first part of the duodenum. The hole was circular, accurately defined, and just large enough to admit the end of a probe. Nothing escaped from it whilst it was being sewn up, but fluid kept welling up from beneath the liver. I was particularly careful to close this perforation completely, as I remembered the fate of

the previous case. I therefore put in two tiers of Lembert sutures, the first row closing the ulcer and the second bringing a piece of omentum over it. The abdominal wound was closed completely after the area of operation had been sponged. The patient bore the operation well, and there was no subsequent vomiting. On the following day he was given nothing but a little hot water by the mouth. He had a nutrient enema of three ounces of beef-tea and an ounce of peptonized milk at noon. On July 15th, his bowels were opened thrice, his abdomen was moving well, there was no distension, and his progress would have been perfectly satisfactory if his pulse had not remained unduly quick. The patient began to fail on the 20th, and the abdominal wound, which had hitherto been healing kindly, now reopened and discharged pus. Three stitches were therefore removed, and a large drainage tube was inserted. The patient became more and more collapsed, and died on July 21st, eight days after the operation.

The necropsy showed that the peritoneal cavity contained about a pint of foul pus. The abscess was situated above the stomach and first part of the duodenum, below the right lobe of the liver and behind a portion of the great omentum. It was strictly localized, and there was no general peritonitis. There was a perforation in the upper portion of the first part of the duodenum just below the foramen of Winslow, and beyond the pyloric constriction. The perforation communicated with the abscess cavity. It was noticed that the ulcer was much larger than at the time of the operation, and that several of the sutures had cut their way through the softened tissues.

The result of this case was particularly disappointing, for the patient had felt so well after the operation that he was constantly inquiring when he might get up. The continued rapidity of the pulse, however, warned us not to be too sanguine of the result, and the lesson I learned from the case was to drain the abdominal cavity much more freely, and especially the portion which lies on the under surface of the liver.

Case III.—A clerk, aged 37, was admitted into St. Bartholomew's Hospital suffering from severe pain in the abdomen. He said that for the last six months he had often suffered from stomach-ache about half an hour after taking food. On May 10th, 1902, the day of his admission he was suddenly attacked at 12 o'clock midday with such severe pain that he was brought to the surgery in a cab. He referred the pain to the neighbourhood of the umbilicus and to the right side of the abdomen beneath the ribs.

On admission, he appeared to be a strong man in a state of extreme collapse. His pulse was 120 and his temperature 97.4°. His abdomen was contracted, but moved freely and equally during respiration. The abdominal walls were somewhat rigid, and the liver dullness was decreased. I saw the patient at 6 p.m. and decided to explore his abdominal cavity. The abdomen was opened above the umbilicus and in the middle line. Free gas and a quantity of bile-stained fluid escaped as soon as the peritoneum was divided, but considerable difficulty was experienced in locating the perforation as adhesions had formed in front of it. A circular hole was eventually found in the peritoneum, which measured about an eighth of an inch across. The outline of the ulcer was sharply defined, and a quantity of bile-coloured fluid was pouring out of it. The perforation was closed with two layers of Lembert sutures, and an incision was made in the right iliac region. A long rubber drainage tube was passed from this wound, its end being brought out at the first incision and a second drainage tube was passed beneath the liver. The patient never rallied from his state of collapse, and died on the following day at 1.55 p.m.

The necropsy showed that the patient had a suppurative peritonitis, with 2 oz. of turbid fluid in the pelvis. The stomach was much dilated and contained a dark fluid like "coffee grounds." There was a deep ulcer on the anterior wall of the duodenum, just beyond the pyloric orifice. The ulcer would have lodged a pea; its edges and surrounding parts were hard from cicatricial tissue, which had caused considerable stenosis of the pylorus. The ulcer had perforated externally into the peritoneal cavity, but it had been effectively closed by a series of interrupted silk sutures.

Case IV.—A well-nourished man, aged 26, was admitted to the hospital at 3.50 a.m. on July 26th, 1902, suffering from acute abdominal pain and sickness. He said that he had suffered previously from attacks of stomach-ache, but that he was quite well until 7 p.m. on the previous evening, when the pain and sickness commenced suddenly. On admission his temperature was 97.2° F., and his pulse 112; the abdomen was hard and tense, and appeared to be tender everywhere. I did not see the patient until 10.30 a.m. on the day of his admission, and he then seemed to me to be suffering from an attack of acute perforative appendicitis, for he localized his pain entirely to the right flank, and the abdomen was more rigid in the right iliac region than elsewhere. I opened his abdomen at once by an incision carried through McBurney's point, and as soon as the peritoneal cavity was opened, gas rushed out with a large quantity of thin fluid which was sticky, odourless, and light yellow in colour. The large intestine and the appendix were found to be normal, but the small intestine was greatly inflamed, especially in the neighbourhood of each Peyer's patch. I therefore closed the opening, and made a second incision into the peritoneal cavity in the middle line. The small intestine was then systematically examined until a perforation was found on the anterior surface of the first part of the duodenum. The hole was small and well circumscribed. It was closed with Lembert sutures and the peritoneal cavity was drained by inserting very large rubber tubes into the space below the liver, into the recto-vesical pouch and into both flanks. The fluid contents of the tubes were pipetted away daily until August 4th, when the tubes were replaced with a light plugging of iodoform gauze. The patient made an uninterruptedly good recovery, and was discharged to the convalescent home at Swanley on September 2nd.

The feeding of patients with a sutured ulcer of the alimentary canal is of the greatest importance, and Miss Bryan, Sister Kenton, has kindly given me the following account of the method we adopted in this case. The operation was performed at 10.30 a.m. and nothing at all was given by the mouth until after 8 p.m. when a drachm of water was given occasionally. Nutrient enemata were administered every four hours for ten days after the operation, the first one being given at 6 p.m. on the day of the operation. Each enema consisted of peptonized milk with plasmon 3 oz.; beef essence, 1 oz.: salt, ½ drachm. All the nutrients were retained, and the bowel was washed out with plain water twice every twenty-four hours. The patient began to complain of thirst after the first twenty-four hours, but it was relieved by constantly washing out his mouth with water and by an occasional rectal injection of half a pint or a pint of warm water. A soap and water enema was given on the sixth day and the bowels were relieved by similar means every other day from this date. Three grains of calomel given by the mouth on the eighth day were without effect in causing a motion. For the first five nights the patient received an injection of one-fifth of a grain of morphine hypodermically, and for the first two days morphine was injected twice a day. The food given by the mouth was as follows: During the first twenty-four hours a teaspoonful of water occasionally, amounting in all to about an ounce, and during the second twenty-four hours to about 3 oz. On the third day a little lemon juice was added to the water, and 4 oz. were given. On the fourth day a drachm of Benger's food was administered every two hours, with a drachm of lemon juice and water occasionally, and the same quantities were given on the fifth day. On the sixth day a drachm of Benger's food and a drachm of beef essence were given every hour alternately, the amount being increased to ½ oz. on the seventh day. The patient felt some discomfort after the fifth hour, and was inclined to be sick, so 1 oz. of whey was given every hour instead of the Benger and essence, and this amount was increased to 2 oz. hourly on the eighth day. On the ninth day the patient was given 2 oz. of peptonized milk every hour, and at 4 p.m. he had some tea; thereafter on the ninth, tenth, and eleventh days he had beef essence or tea every two hours, and each time 2 oz. On the eleventh day he had some baked custard at midday, and on the thirteenth day this feeding was supplemented by a slice of thin bread and butter for tea and some bread and milk for supper. On the fourteenth day some jelly and sponge cake were added to the diet, and on the eighteenth day he was placed upon the ordinary half diet of the hospital, advancing to full diet on the twenty-fifth day after the operation.

The following lessons, I think, are taught by the four cases here recorded: (1) Duodenal ulcers occur more often in men than in women. (2) The extravasated fluid trickles into the iliac fossae, and causes a local peritonitis which may be mistaken for an acute appendicitis. (3) The transparent or bile-stained succus entericus found in the peritoneal cavity is diagnostic of a perforated duodenal ulcer. It is quite different from the astric contents escaping at a perforated ulcer of the stomach. (4) The prognosis of a duodenal ulcer is worse than that of a perforated gastric ulcer on account of the greater difficulty in closing it satisfactorily. (5) The prognosis should not be too sanguine until after the lapse of the eighth day, and it is always bad, however well the patient may appear, if the pulse-rate continues rapid. The pulse is a much better guide than the temperature. (6) Free drainage is imperative, both iliac fossae, the recto-vesical pouch, and the space below the liver more particularly need tubes. It is better that the patient should recover with a scarred belly than that he should die with an abdomen full of pus. (7) The feeding of the patient is a matter of great importance. Small quantities of food should be given frequently, and if the patient feels sick the amount must be reduced at once. It is better to give nutrient enemata for some days after the operation than to administer food by the mouth.

A Clinical Lecture

ON

RESECTION OF THE LARGE INTESTINE FOR CARCINOMA.

Delivered at the Bristol Royal Infirmary,

By JAMES SWAIN, M.S., M.D.Lond., F.R.C.S.Eng.,
Professor of Surgery at University College, Bristol; Surgeon to the Bristol Royal Infirmary.

Cancerous growths of the intestine are almost always found in the large bowel; the sigmoid flexure, the caecum, and the descending colon being the parts most usually affected, if the rectum is excluded.

The disease commences in the mucous membrane, columnar epithelioma being the most common type of cancer found in

the gut. Its chief peculiarity consists in the contraction of the new growth, which causes a marked stenosis of the lumen of the intestine. This is sometimes so severe that the gut looks as if a tight string had been tied round it, and the lumen of the gut in the middle of the growth will then scarcely admit a crow's quill.

The occurrence of stenosis in carcinoma, which stands in obvious contrast to the patency of the intestinal canal in sarcoma, is the chief cause of the symptoms for which the patient seeks relief; and a gradually increasing constipation, amounting in some cases to actual obstruction, accompanied by attacks of pain, should make us suspicious of the possibly malignant nature of the affection.

The pain is caused by ineffectual attempts on the part of the bowel above the constriction to overcome the obstruction, and the pains become more frequent and more severe as the stenosis increases. Above the growth the intestine is generally considerably dilated and hypertrophied, and when undergoing contraction a visible peristalsis can often be distinctly seen. Visible peristalsis, frequently accompanied by loud gurglings, may lead us to a correct diagnosis of the site and cause of the obstruction, and it is a valuable sign, for it practically never occurs without some form of chronic obstruction being present. Alternating with the marked constipation attacks of an irritative diarrhoea may occur.

A tumour can sometimes be felt, especially in the transverse colon, which is the most superficial part of the large gut. Such tumours have a slight mobility, but are somewhat fixed as compared with growths in the small intestine.

The only means of cure consists in the resection of the adjacent part of the bowel and mesentery involved. (I do not propose to speak of the treatment of cases which do not admit of free removal of the disease). The operation of resection for carcinoma must be considered under two heads:

1. In an early stage of the disease—that is, before the patient is threatened with complete obstruction.
2. In a late stage of the disease—that is, where intestinal obstruction is present.

Resection of the Intestine without Symptoms of Obstruction.

Parietal Incision.—This should always be made, if possible, over the tumour or slightly to the outer side of it if it be in the ascending or descending colon. For the transverse colon the middle line is generally the best, but for the caecum, ascending colon and descending colon, a vertical incision in the neighbourhood of the tumour gives the most direct access to the part to be removed, which is often fixed by a mesocolon shortened by implication in the disease. The muscular fibres in the line of the incision may be bluntly separated rather than divided, but in cases of malignant disease such as we are considering there should be no impediment to the thorough removal of the parts affected, and surgical refinements must, if necessary, give way to the needs of the case. The incision should at first be about 2 in. long—sufficient for the thorough examination of the tumour—and if resection be considered desirable the incision can be enlarged in accordance with the amount of tissue to be removed. Firm adhesions to neighbouring bowel or extensive lymphatic involvement would contraindicate operation in most cases.

Delivery of the Part to be Resected.—In every case the portion to be operated upon should be brought freely outside the abdominal cavity through the parietal incision, and isolated by means of gauze or sponge cloths. Where the mesocolon is short it may be necessary to incise it, after ligation, before the bowel can be brought to the surface. If it is considered desirable to use intestinal clamps, the gut should be emptied by pressing the contents upwards and downwards before they are applied. In all cases in which clamps are used they should be placed at least 2 in. away from the line of resection on either side of the growth.

Resection of Bowel.—The gut should be divided at least an inch away from the growth on either side; this is best done by sharp scissors. If the mesocolon has not previously been incised, the portion to be removed must be freed from the adjacent mesocolon by an incision parallel to the bowel, the raw surface so left being closed by a continuous stitch, drawing together the divided mesocolon on either side. It is better to make the cut in the bowel rather obliquely so that more of the convexity away from the mesocolon is removed, as in this way the nutrition of the bowel will be better maintained after suture, and gangrene is less likely to result. Resection of the caecum generally has to be done without complete delivery of the bowel, and involves the division of the mesentery at the ileo-colic junction. Resection of the transverse colon necessitates division of its own mesocolon, of the gastro-colic omentum, and of the great omentum.

Enterorrhaphy.—After the removal of the growth we have to consider the best means of uniting the divided intestine and so restoring the continuity of the intestinal canal. Although the apposition of rawed surfaces would give the strongest union, we have to rely on the apposition of serous surfaces, owing to the thinness of the bowel wall, which prevents the practical use of other methods to any extent. This end-to-end union may be effected directly by suture, or we may secure approximation by means of the Murphy button, Mayo Robson's decalcified bone bobbins, potato tubes, and such-like appliances. When the caecum has been removed the inequality of the size of the ileum and the colon have led some surgeons to close the end of the colon and then to implant the open end of the ileum into the side of the ascending colon. In other cases the two divided ends of the bowel have been closed and the continuity of the bowel restored by making lateral anastomotic openings in the two portions of intestines placed side by side. These methods—like the end-to-end union—may be effected either by direct suture or by the aid of such apparatus as I have referred to. A surgeon must be familiar with all these methods so as to suit them to the needs of the case, but, whenever practicable, I greatly prefer the end-to-end union by direct suture, and time will only allow me to speak of this mode of enterorrhaphy. The use of most forms of apparatus is open to the objection that a foreign body is left in the gut, and these methods of union are not always so secure against leakage as union by direct suture. These objections are not valid against certain retentive mechanisms which hold the gut in place while being sutured and are withdrawn before the suturing is complete. The most useful of this last class of apparatus is perhaps O'Hara's forceps, which act at once as intestinal clamps—and thus prevent leakage during the application of the sutures—and as intestine holders. I have lately used the forceps in two cases of intestinal resection, and have found them most useful. When, however, the general condition of the patient is bad and it is desirable to finish the operation as speedily as possible, the use of a bone bobbin, Murphy button, etc., may be desirable.

Sutures and Method of Suturing.—The best suture material is one of the smaller sizes of Chinese silk twist. The best needle is an ordinary milliner's needle or a crewel needle. Both have no cutting edge and if the points are not too sharp the intestinal vessels are not likely to be perforated. Sutures passed obliquely through the peritoneal and muscular coats only are liable to cut their way out. The needle should be passed at right angles to the bowel and pushed on until it reaches the firmer submucous tissue, and should then be passed some distance along this tissue before it is brought to the surface again. The resistance offered by the submucous tissue can only be appreciated by experience, but it is of the greatest practical value in intestinal work to recognize the firm hold which this tissue gives to the sutures. Of intestinal sutures there are many varieties, but one of the best and the most easily applied is Halsted's stitch, which turns in the serosa as each stitch is tied. In order to keep these stitches in a line it is desirable that all the stitches should be passed before any are tied. About four complete Halsted's stitches should be placed in each inch of the circumference of the intestine, and I have usually found that one row carefully placed is sufficient to ensure against leakage. Extra sutures may be placed at any point where the union seems weak or the line of suture may be covered with an omental graft. After the union is completed, the bowel is returned into the abdominal cavity and the wound closed without drainage, except in cases where it is feared that leakage might occur, when strips of gauze may be passed on either side of the newly-united intestine and brought out at one end of the parietal wound. One of the most extensive resections for carcinoma of the large intestine is the following:

Case I.—*History.*—P. H., male, aged 35, had attacks of "biliousness" and constipation from November, 1900, to January, 1901. Each attack lasted four or five days, and was attended with distension and pains round the middle of the abdomen. The constipation was continued, though not so marked, and he has had abdominal pain on and off ever since. Until a week before I saw him, when he felt a lump in the right side of the abdomen which caused sickness on pressure, he attributed his symptoms to indigestion. The patient's mother was said to have died "riddled with cancer."

State on Examination.—He looked well-nourished but was pallid. A hard, irregular mass, rather larger than the fist, was found in the right iliac fossa, the upper border coming just above a line joining the right anterior superior iliac spine with the umbilicus. The swelling caused a slight bulging of the anterior parietes, moved slightly with respiration, and

could be moved about one inch in an upward direction and rather less from side to side. The inner border of the tumour was more defined than that towards the loin. There was somewhat impaired resonance over the swelling. All the organs were healthy.

Diagnosis.—From the position and comparative fixity of the tumour it was regarded as an affection of the ascending colon, and the fact that there was at least distinct, though slight, mobility of the swelling, gave some hope that it might be possible to remove the disease.

Operation.—A 4-in. vertical incision was made over the outer part of the growth, the middle of the incision being about 1 in. below the level of the umbilicus. On turning up the great omentum, a hard, irregular mass was found occupying the upper part of the ascending colon, but invading the mesocolon, and, by its contraction, dragging the transverse colon and caecum towards itself. The tumour and the adjacent parts of the intestine were delivered through the parietal wound, and isolated with sponge cloths. One of O'Hara's forceps was placed on the ileum, and another on the transverse colon well away from the growth. Swain's clamps were placed on the gut about 2 in. nearer the tumour in each case. The transverse colon was divided with scissors close to the proximal side of the O'Hara forceps, and removal of the growth from the upper end (as seen in the body) was commenced. Portions of the gastro-colic omentum and transverse mesocolon were divided and sewn over and over with catgut, but, as the bleeding was considerable and this method was slow, the whole of the ascending mesocolon, mesocaecum, and the portion of the mesentery attached to the lower ileum were tied off by a series of mass sutures passing through the structures. The ileum was then divided on the distal side of the other O'Hara forceps, about 6 in. from the ileo-caecal valve, and the whole mass thus removed. The two O'Hara forceps were approximated, so that the cut end of the ileum came in close contact with the cut end of the transverse colon, and ileo-colostomy by end-to-end union was effected by Halsted's sutures. The mesentery of the ileum was also attached to the remains of the transverse mesocolon. Haemorrhage was fairly free, especially from a wound in a large vein in the mesentery which had been dragged in by the contracting growth, and which could only be distinguished from intestine by its position. Another accident was discovered by the escape of bile from the wound, and the posterior surface of the stomach was found perforated by a ligature which was free because the thread had fortunately broken in tying. The perforation had doubtless occurred in consequence of the stomach being drawn towards the contracting growth by means of its attachment to the transverse colon by the gastro-colic omentum. The thread was removed and the hole closed by two Halsted's stitches; but the second hole, which obviously must have existed on the opposite side of the stomach, could not be found. In consequence of the wound in the stomach, and the hasty suturing of the gut, a drainage tube was placed under the right kidney and brought out through a counter puncture in the right flank. Two pieces of iodoform gauze were placed over the newly-united intestine, which was placed in the lumbar hollow, and the ends brought out through the same counter-puncture. The incision in the anterior parietes was completely closed with interrupted silkworm-gut sutures. The specimen removed consisted of six inches of ileum, the caecum, and vermiform appendix, the whole of the ascending colon with the growth, about two-thirds of the transverse colon, and the whole of the great omentum. Two lymphatic glands, the size of small marbles, were removed from the ascending meso-colon. The growth involved the whole circumference of the gut, and was about three inches in diameter. The tube was removed the following day, and the pieces of gauze two days later. Solid food was given five days after operation, the bowels acted spontaneously on the eleventh day, and the patient began to get up at the end of three weeks after operation, his recovery being rapid and complete.

RESECTION OF THE INTESTINE WHEN INTESTINAL OBSTRUCTION IS PRESENT.

The presence of obstruction, especially in the large intestine, causes a great depression of the resisting powers of the patient, and the resection of the gut under these circumstances is attended with a very high mortality.

The late Mr. Greig Smith taught that it was much safer in these cases to relieve the obstruction first, and to resect the bowel afterwards. His method was, first, to fix the growth outside the body, and to immediately establish intestinal drainage; secondly, to resect the growth about ten days after; and thirdly, to close the artificial anus at a still later date. For some time past I have merged these last two stages into one, the ends of the divided intestine being approximated immediately after the growth is excised. This is a saving of time, and the operation is easier than in three stages because the calibre of the two portions of the gut is less unequal, and there is no marked "spur" to contend with.

The first part of the operation consists in making an incision over the tumour if its position can be accurately diagnosed. Failing this, an incision must first be made in the median line, and after the tumour is found a second incision must be made laterally if necessary. The tumour and the adjacent parts of the intestine are then delivered through the abdominal parietes, a glass or vulcanite rod being passed through the mesocolon to keep the gut in place. This rod should pass under the tumour and rest on the parietes. The extruded bowel is isolated with gauze or sponge cloths, and an incision is then made in the proximal portion of intestine, and a glass Paul's tube with rubber tubing attached is tied into the bowel. Through this tube the faeces are conducted to a receiver at the side of the patient. A layer of "protective" is placed over the exposed intestine, and dressings of gauze or lint and wool are strapped on. At the end of a week or ten days, when the patient has fully recovered from the symptoms of obstruction, and is taking food well, the cancerous bowel may be resected and the ends of the divided intestine united.

The resection is carried out as previously described by cutting across the bowel with scissors at least an inch away from the growth on either side. If sufficient intestine has been left outside, there will be no difficulty in uniting the divided ends, but more bowel must be drawn into the wound for this purpose if necessary. The posterior parts of the intestine are first united on their serous aspects by interrupted silk sutures passing down to the submucous coat. A continuous catgut suture is then placed in the mucous coat on either side so as to restore the continuity of the gut, and over this Halsted's silk sutures are placed to unite the serous surfaces in the anterior part of the gut left unsewn before the puncture of the mucous membrane was effected. The newly-united intestine is then gently pushed towards the peritoneal cavity, and the parietes are sutured over it with interrupted silkworm gut. As examples of this method I may quote the following cases:

CASE II.—*History and State on Examination*—A. D., female, aged 45, complained of great abdominal pain and sickness, with absolute constipation of ten days' duration. She looked very ill, with dry tongue and bounding pulse of 120 per minute. The abdomen was distended, especially in the neighbourhood of the caecum, and during the attacks of pain peristaltic waves could be seen passing across the abdomen. No tumour could be felt in the abdomen. The temperature was normal.

Operation.—A median incision was made extending above and below the umbilicus. The caecum was enormously distended and was about 5 in. in diameter. On passing the hand into the abdomen a hard growth was discovered at the splenic flexure of the colon, under the left costal margin. This was brought to the surface and it appeared as a tense band tightly constricting the gut. Some enlarged glands were removed from the mesentery in the neighbourhood. The loop of bowel with the growth was kept outside the abdomen by means of a glass rod passed under the growth, and the proximal loop of the colon was then opened and a Paul's tube tied in. Faeces came freely through the Paul's tube, and after this sloughed out on the third day the artificial anus so formed continued to act well, and the patient rapidly recovered from the effects of the intestinal obstruction. Ten days after this operation the growth was excised by an incision in the colon on either side about 1 in. away from the tumour. The cut ends of the divided gut were then united end-to-end by direct suture, loosened from the adherent parietes at the base of the loop, and gently pushed inside the abdominal cavity. The parietes were then united except at the lowest part which was left open for drainage. The patient got up about three weeks afterwards and made a good recovery.

The following case is interesting on account of the great age of the patient:

CASE III.—*History.*—L. L., a female, aged 78, had had several attacks of obstruction during the preceding twelve months. For ten days before operation there had been symptoms of incomplete obstruction with vomiting, and for twenty-four hours before operation there was complete obstruction, with gradually-increasing abdominal distension, pain, and vomiting.

Operation.—A coil of the descending colon with a malignant growth at the apex was fixed over a glass rod outside an oblique incision in the left flank, and a medium-sized Paul's tube was placed in the upper end of the loop, by which a pint of liquid faeces and much flatus soon came away. The Paul's tube was cut away on the third day, and the patient allowed to get up on the tenth day after operation. On the seventeenth day after operation the colon was completely cut across above and below the growth, and the latter thereby freely excised. The two ends of the gut were then immediately united by a double layer of sutures. A faecal fistula formed, but the advanced age of the patient rendered further operation undesirable. The growth—which was a columnar epithelioma—occupied about 1½ in. of the circumference of the gut, and had almost completely obliterated the lumen.

AFTER-TREATMENT OF CASES OF INTESTINAL RESECTION.

Resection is often followed by a good deal of shock, which is best met by the administration of nutrient enemata of brandy and peptonized milk every four hours. Hot water may be allowed by the mouth from the first, and as soon as vomiting has ceased water gruel, Benger's food, or other easily assimilable diet may be given. Bread and butter may be given on the third day, and solid food thereafter gradually increased.

Morphine may be required during the first twenty-four hours, but should be avoided afterwards. Flatulence may cause much trouble, but can generally be relieved by a turpentine enema—one of the "sheet-anchors" of the after-treatment of abdominal operations. If possible the bowels should be allowed to act spontaneously or after an enema, as it is desirable to avoid purgatives for the first week or ten days after operation.

BEQUESTS TO HOSPITALS.—Mr. John Heneage, of Richmond Hill, Surrey, has left his residuary estate in equal shares to the Royal Hospital at Richmond, the Royal Free Hospital, the Middlesex Hospital, and the Home for Incurables at Putney. Under the will of the late Mr. Eli Parkinson Ackroyd, of Shipley, the sum of £4,000 each has been bequeathed to the Bradford Royal Infirmary and Dispensary, and the Bradford Children's Hospital.

ENTERECTOMY FOR MALIGNANT DISEASE.*

BY WALTER L. WOOLLCOMBE, F.R.C.S.E.,
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THE indications for as well as the limits of operations on organs covered by peritoneum are altering with such startling rapidity that it is most necessary that we should review our position in regard to them at comparatively short intervals of time, and this is my excuse for speaking on a subject already so amply dealt with in all surgical textbooks, for when we reflect that twenty years ago the peritoneal cavity was looked upon as sacred ground, which must only be trespassed upon with the greatest precaution and anxiety, and that it is now regarded as *par excellence* the scavenger which is best able to rectify the errors and dispose of the refuse of the intruding surgeon, we see that all the grounds upon which we based our rules of procedure at that time must be discarded, and we must rearrange our ideas accordingly. We have only to go back three years, and we find in Treves's *System of Surgery*, published at that time, the statement that, "as a rule, if a growth causing obstruction (of the intestine) is found to be malignant, it will be left *in situ* and short circuiting done." Now although this still applies to a good many cases, I do not think we should find many surgeons who would adopt it as a rule, and the two cases I propose relating are with a view of controverting it.

In discussing the question of enterectomy, it is, of course, necessary to draw a sharp line between that done for malignant disease and all other conditions. Marvellous feats have been performed in abdominal surgery in cases of punctured wounds, bullet wounds, simple growths, or inflammatory conditions; but in malignant disease we are confronted with certain difficulties which do not exist in other affections, and to understand this it is necessary to consider for a moment the characters of the malignant growths we meet with in the intestine.

I believe histologically the only variety is that known as cylindrical-celled epithelioma or cylindroma, though of course various degenerations may occur, such as colloid, which are sometimes described as varieties. The growth commences in Lieberkuhn's glands and the deeper parts of the mucous membrane, and in its early stages appears to the naked eye as a plaque or nodule, which gradually spreads round the bowel, following the course of the vessels. However far it extends, it still retains to a remarkable extent the type of the glands from which it starts, and thus a growth possessing horrible and malignant properties may so faithfully mimic a simple structure that, if a small portion be examined alone, it is difficult to say whether or not it is malignant. Luckily this type of growth does not tend to spread to surrounding lymphatic glands till somewhat late in the disease, and then only slowly.

It follows from this short sketch that we are not likely to get much evidence of the presence of a growth until it has advanced so far that the bowel is obstructed either by an outgrowth or by the elastic intestinal wall becoming replaced by the new growth, which has a strong tendency to contract, imitating the result of tying a piece of cord round the bowel. This is just what occurs and what forms the distinctive difficulty of dealing with malignant disease as opposed to other forms of intestinal disease; I mean the progress made by the disease and the state of intestinal distension.

We know of no special symptom at present to distinguish the slight digestive disturbances and constipation of the early days of malignant disease from those due to functional disturbances, and in fact in these days of patent liver pills we are seldom consulted about the principal symptom, constipation, till it is almost absolute. It seems to me we cannot expect or hope for really good results till either we can discover some early distinctive symptom or can feel justified in opening the abdomen to examine suspicious cases. I hope I do not give the impression that I am an advocate of exploratory operations to save the trouble of exhausting all other aids to diagnosis, a crime of which surgeons have been sometimes accused, but I maintain, on the one hand, that no one can diagnose an early stage of malignant disease of the intestine from symptoms and external examination only; and, secondly, that we are rapidly approaching a time when we can guarantee our patients an abdominal wall not weakened by the opening and an infinitesimal risk to life from the mere exploration.

* Read before the South-Western Branch of the British Medical Association at Plymouth.

Our failure to be able to arrive at an early diagnosis is the more unfortunate as the type of growth we have to deal with is of low malignancy compared to that occurring in other parts of the body, and only tends to invade glands slowly and late, so that we might hope to achieve unusually good results if we could get at it in as early a stage as, say, mammary or tongue cancer. Of the different parts of the bowel, the large is by far the most commonly attacked, and here the gland invasion is slower than when the small bowel is affected—another favourable point. If you will allow me, I will now shortly relate two cases illustrating some of these points.

CASE I.—J. J., aged 35, was sent to me in June, 1900, by Dr. Jones of Polyphant, with the following history: He had always been constipated, especially so the last three years. For eighteen months he had been subject to occasional attacks of pain coming on after two or three days' constipation, and, after lasting two or three hours, terminating in a loose action. Two months previously a little dark blood appeared on a motion, and had been noticed several times since. Motions now always porridgy and unformed. For two months Dr. Jones had been cognizant of a hard lump in the abdomen. In the previous eighteen months the patient had lost 14 to 20 lb. in weight. Now eats well and has no pain or vomiting after food. I found a hard, rounded, nodular mass lying just to the left of the middline, half-way between umbilicus and pubes, about the size of a tangarine orange (as usual); it could be moved freely in all directions, especially upward and to the left; in fact, it could be made to disappear into the kidney pouch. No left kidney could be palpated.

It was evident that the man had a malignant growth, and that the lumen of the bowel was seriously narrowed, but I did not feel certain at this first examination whether it had originated in the colon or had invaded it secondarily to the kidney.

After spending a few days in trying, without much success, to diminish the intestinal distension, the abdomen was opened by an incision through the left rectus. A growth was found involving the whole circumference of the transverse colon, and puckering up the great omentum. Its under-surface rested on a coil of jejunum, which it had invaded deeply. Was one now to do a double enterectomy with the intestine in a state of distension, and in a patient much reduced in strength, or to leave a man in the prime of life to die a miserable death in a few weeks from intestinal obstruction? I decided on the former, and at once had an intravenous saline injection commenced and kept up slowly all through the succeeding operation, altogether 5 pints, with brandy ʒj and liq. strych. mx. The jejunum was first dealt with, 4 in. being excised, and the ends approximated with a Murphy's button, and next the colon, of which 8 in. were excised together with the great omentum, and a large wedge of mesocolon with infected glands. The bowel was united with a Mayo Robson's bone bobbin, considerable difficulty being experienced with the portions lying between the widely-diverging layers of the mesocolon, and haste being imperative on account of the patient's condition.

The next few days were anxious ones on account of the difficulty of feeding, but he was tided over these. On the fifth day he had stomach pain, hiccough, and distension, followed by the evacuation from the upper end of the wound of a collection of very foul pus—no doubt a leak from the colon junction. (Chlumskij, by an elaborate series of experiments on dogs, shows that the intestinal junction weakens to the fourth day, and then strengthens till by the tenth it is as strong as normal.) The button was passed on the nineteenth day. At the end of the fifth week he passed a motion bigger than a working man's thumb. His weight progressed as follows: August 6th, 8 st. 13 lb.; August 15th, 9 st. 6 lb.; August 21st, 9 st. 8½ lb.; September 1st, 9 st. 12 lb. On October 26th he appeared before the Plymouth Medical Society weighing 11 st. 8 lb. He could walk five miles, eat anything, and his motions were formed and normal.

In June, 1901—twelve months after the operation—I heard of his death. No necropsy could be obtained, but I gather from the report that he must have had a recurrence in the dorsal vertebrae.

CASE II.—A man, aged 55, was sent to the South Devon and East Cornwall Hospital by Dr. Kelly in November, 1900, on account of intestinal obstruction. The symptoms began three weeks previously, and for three days there had been complete obstruction in spite of medicine and injections. On admission there was great distension with visible peristalsis. *Per rectum* the finger could reach no narrowing, but pressing up as firmly as possible I could feel a small lump in the recto-vesical pouch bob away from my fingers; and feeling convinced from the history that the obstruction was due to a growth low down in the gut, I suspected the lump of being a prolapsed loop of sigmoid containing a growth, and consequently opened the abdomen as for a left inguinal colotomy. The growth was found as expected; it completely encircled the bowel but was not of great extent, and its mesentery just permitted of its being brought out on to the abdomen, where it was fixed. Next day the growth was excised with about 5 in. of bowel and a small gland in mesentery, a Paul's tube tied in the proximal end and the distal end gently ligatured with a strip of gauze over a gauze plug inserted into it. On the fifth day the Paul's tube came away, and on the fifteenth day I proceeded to reunite the ends, all intestinal distension having by this time subsided and the patient's condition being good. An elliptical incision was made round the open ends of gut just clear of the edge of old incision and carried down through the peritoneum, the ends of gut brought out, the thickened portions removed, and the fresh ends brought together over a Mayo Robson's bone bobbin, reinforced by interrupted catgut sutures. The only difficulty was due to the fact that to get clear of the disease I had to go as far down towards the rectum as possible, and even then was only just clear, so that I was working in rather a hole. The ends having been united were dropped back and the abdominal wound brought together.

An uninterrupted recovery followed, and the bobbin was so completely absorbed that, though so close to the anus and carefully looked for, no trace of it was ever seen. The growth was examined by Dr. Bushnell, and reported to be a typical cylindrical-celled glandular carcinoma. This patient is in robust health, above his normal weight, passes good-sized motions without difficulty, and has no trouble from the scar.

These two cases are both illustrations of growths originating in the commonest position—namely, large bowel, though the

first also furnishes a good example of the manner in which they sometimes become disseminated—namely, by implantation, and is, as far as I know, the only example of excision of two separate portions of gut for cancer. The first was done with the bowel in a state of distension, and though successful should not be taken as a precedent, for one of the cardinal rules upon which I wish to lay stress is that wherever possible the gut should be efficiently drained when distension exists before an attempt is made to reunite the ends. It is the disregard of this rule which has made the death-rate so high until recently. For the fluid in the distended coils is practically a cultivation of the B. coli communis in a high state of virulence, and it is not reasonable to expect the intestine to resume its functions while filled with this. The first case also illustrates the great extension which is added to our field of operations by the use of intravenous injections of saline fluid, with the addition, at the operator's discretion, of strychnine and brandy, for it is impossible to believe that such an operation as that described could have been borne by an exhausted patient suffering from intestinal obstruction without its aid. It also illustrates what I think is a very important point—namely, the method of giving it. It is no good waiting until the anaesthetist tells you the patient is very bad and his pulse failing, and then in a panic sending assistants and nurses scurrying about to get the necessary apparatus to transfuse him. Everything must be arranged beforehand, and the transfusion started at the commencement of the operation and made to extend over the whole time it is in progress.

The second case is an example of the typical and ideal method of proceeding after discovering a malignant tumour of bowel—namely, its removal in three or more stages:

1. Consisting of the delivery and fixation of the growth and contiguous bowel outside the abdomen.
2. Opening and drainage of the gut above the growth.
3. Removal of growth.
4. Freeing and uniting ends of bowel and repair of abdominal wall.

Some of these four stages may, if necessary, be combined—for example, 1 and 2 may be done at one sitting if the need for relieving distension is urgent, but it is always best to allow, if possible, twelve hours to elapse between them, to give the peritoneal surfaces a chance of erecting a barrier against general infection.

Then, again, 2 and 3 may be combined, as in my second case; and this is a very useful combination, and can generally be carried out, as, if you are going to tie in a Paul's tube, you may just as well cut away the growth; it requires no general anaesthetic—packing swabs wrung out of a solution of cocaine round it is quite enough.

Four must always be a separate and carefully planned operation, but the method chosen for uniting the ends is capable of great variation; 200 plans for effecting it have been described, and about 20 of these survive as reasonable and practicable, but I will not prolong this paper with any description of them.

The usefulness and simplicity of any one plan over any other lies not so much in the superiority or the reverse of the method as in the familiarity of the operator with the details of the plan he is employing. Surgeons A. and B. might each be getting excellent results, the one with simple suturing, and the other with the employment of some mechanical aid, as a bone bobbin or metal button, but let A. suddenly adopt B.'s method and B. take A.'s, and they would both be disappointed for a time, chiefly from the extra time taken, for in this, more than any other operation, every minute saved is an important gain, as the severity of the operation is in an almost exact proportion to its length.

One word on the question of anaesthetics in these cases, and I have done. It has been too long considered essential before opening the abdomen to give a general anaesthetic, and the custom dies hard; but in a simple opening for the relief of distension, or where the delivery and fixation of a loop of gut is contemplated, it is a great advantage to the patient, and quite easy to do, after an injection of eucaine.

Of course, I do not for a moment claim this as in any way original, but if it were more generally adopted, especially in cases which have to be relieved at very short notice without any preparation, a great many lives would be saved which are now registered as dying of exhaustion or from the anaesthetic.

NOTE.—In July, 1902, the second patient was seen, and found to be in good health, and again in November, 1902.

THREE CASES OF ACUTE INTUSSUSCEPTION IN THE SAME FAMILY.

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THE following is the history of 3 cases of intussusception occurring in a family of four children, 1 ending fatally and 2 being relieved by operation. I can find no account of a similar series of cases in any of the works on the subject that I have consulted.

CASE I.—This was not diagnosed as such by the medical man then in attendance, or, if so, the mother was not made acquainted with the fact; but from the accounts of the mother and friends there can be little doubt that it was a well-marked case of intussusception. The child was born in 1895, and was brought up chiefly on the breast, but occasionally was allowed to have other kinds of food, and, no doubt owing to this, suffered from attacks of diarrhoea and abdominal pain. When 5 months old it was one evening seized with sudden pain and screamed violently. It vomited all the food it was given, and passed several motions, which the mother describes as looking like apple jelly. All next day it was in great pain, and vomited a quantity of greenish-brown fluid which smelled "like a motion." It also passed a considerable quantity of blood, and became very collapsed and sunken about the eyes. On the third day it died.

CASE II.—This child, a boy, was born in 1900, and was strong and healthy up to the age of seven months, when he began to have the usual digestive troubles connected with teething. One evening a little blood was passed in the motion, and during the night he cried a good deal. Next day he threw up his food, and more blood was passed by the bowel. In the evening the vomit became brown and offensive. Next day more blood was passed, and the sickness continued. The mother at last became alarmed, and called in the doctor, who at once diagnosed intussusception, and had the child removed to the Barnet Victoria Cottage Hospital. Drs. W. Thyne and D. R. G. Corrigan operated, and found an intussusception, which was reduced without much difficulty. The child made a good recovery, and has not since had any serious abdominal trouble.

CASE III.—This child was born in 1901, and, with the exception of an attack of broncho-pneumonia in the spring, had good health till he began to cut his teeth at 7 months, when there was some trouble with the bowels, occassonal attacks of diarrhoea alternating with constipation. On May 6th the child seemed quite well till the evening, when some blood was passed in the motion, and an hour later he began to scream and to vomit his food. More blood was passed, and the mother, who by this time had become an expert in these matters, diagnosed intussusception, and brought the child to the surgery. He was then collapsed, the eyes sunken, and the pulse rapid and feeble. The abdomen was not distended or rigid, and it was easy to palpate an elongated lump in the upper part of the right lumbar and umbilical regions. As soon as the necessary preparations could be made an operation was performed. With the assistance of Mr. W. H. Elam, the anaesthetic being given by Dr. W. Thyne, I had not much trouble in reaching the intussusception by a linear incision above the umbilicus sufficient to admit two fingers. It was easily reduced, and the patient suffered little from shock. Recovery was uninterrupted.

It is difficult to account for the occurrence of these cases in the same family. In all three there was a history of digestive troubles due no doubt to careless feeding, accentuated in the last two by dentition, and this is given by most authorities as a frequent cause. Added to this, one would expect that there must have been some congenital condition common to all three, which in the presence of an exciting cause such as the above would be sufficient to determine the occurrence of intussusception. It has been suggested by Leichtenstern that an abnormally movable caecum predisposes to ileo-caecal invagination, while a caecum firmly fastened down may give rise to the ileo-colic variety. One can also imagine that when, from some cause, one part of the bowel is abnormally fixed, and an adjacent movable segment is thrown into violent peristalsis, a similar condition of things is produced to that brought about in the experiments of Nothnagel, where one segment of the bowel was paralysed and an adjacent one stimulated, an intussusception being thereby produced.

None of these conditions were distinguished at the operations, but only the most limited examination was possible (or desirable) through the small incision. One can, however, only come to the conclusion that the occurrence of a somewhat rare malady in three children out of a family of four is to be considered something more than a mere coincidence.

I am indebted to Dr. Thyne for permission to publish these cases.

CASE OF VOLVULUS OF THE CAECUM.

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Tunbridge Wells.
WITH NOTES ON THE OPERATION BY
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Assistant Surgeon to Guy's Hospital.

SIR FREDERICK TREVES, in his *Intestinal Obstruction*[1] says: "More than two-thirds of all cases of volvulus of the intestine are instances of twist of the sigmoid flexure about its mesenteric axis," and he quotes only one case of volvulus of

the caecum, and that ended fatally on the ninth day.[2] It seemed to me desirable, therefore, that notes of the following case should be put on record.

The patient was a spare, delicate spinster, aged 52, of an exceedingly nervous temperament. She had suffered from constipation since childhood, the bowels seldom or never acting without aperients, and of late years she had been subject to severe attacks of dyspepsia, but there was no previous history of any serious illness. On Sunday, January 20th, 1901, I was sent for, and her sister gave me the following details of her present illness: For the last month she had suffered severely from indigestion, accompanied by constipation. For this she had taken stronger aperient medicine than usual. On the previous day the bowels had acted three or four times very freely, and after the last action she was seized with sharp pain in the lower part of the abdomen, which caused her to feel very faint, and she vomited. The pain continued on and off for three or four hours, and then gradually subsided.

Her condition when I saw her was as follows: She was in bed, complaining of some discomfort in the lower part of the abdomen, more especially in the right iliac region. There was occasional feeling of nausea. The abdomen moved freely on respiration, and was not distended. There was some tenderness on pressure in the right iliac region, but no definite resistance. The temperature was subnormal; the pulse 68; the tongue was furred. There had been no action of the bowels, nor had any flatus passed since 10 p.m. the previous evening.

She was ordered milk and soda water in small quantities, and an effervescent mixture of soda and ammonia. No aperient or sedative was given.

She had no return of the pain, passed a good night, and on January 21st felt quite comfortable. The bowels had not acted, nor had any flatus passed. She still complained of nausea, and had vomited her milk once. Examination of the abdomen revealed nothing fresh, nor was there any change in the temperature and pulse. The urine passed in the previous twenty-four hours was normal in quantity, and contained no albumen.

On January 22nd the temperature went up to 99° and the pulse to 76. She complained of a good deal of intermittent pain in the lower part of the abdomen. She vomited four times after the milk. There had been no action of the bowels nor passage of flatus. It was noticed for the first time that the abdomen was slightly swollen in the middle line below the umbilicus, and the tenderness on pressure was somewhat more marked. Examination of the rectum and vagina revealed nothing abnormal. An enema of soap and water was ordered, but it returned without any result. Hot fomentations were applied to the abdomen, the medicine was discontinued, and the feeds of milk and soda water were diminished to ℥ iij every four hours.

On January 23rd the patient felt much more comfortable. She had had no return of the sickness or pain. The temperature was the same as on the previous day, but the pulse had risen to 88. Nothing had passed per rectum. The distension below the umbilicus was markedly increased, especially in the hypogastric and left iliac regions, where a distinct swelling could be seen about the size of two fists. This on manipulation was felt to harden and contract, and was taken to be a coil of intestine. The enema was repeated, but without any effect.

On January 24th, finding the patient's condition and symptoms unaltered except that the pulse-rate was steadily mounting, I decided to get Mr. Fripp to see the case with me, with a view to an exploratory operation. Although the patient's general condition was good, it was clear that there was complete obstruction of the bowels, and that any further delay was inadvisable.

REMARKS BY MR. FRIPP.

I saw the case with Dr. Bisshopp on January 24th, at 2.45 p.m. In view of the absolute obstruction for five days, and of the tender lump below and to the left of the umbilicus, and of the excellent general condition of the patient, I concurred with him in advising an exploration.

We discussed the various causes which appeared most probable in this particular case to account for the symptoms, and inclined most to a diagnosis of either malignant stricture of the sigmoid or volvulus. Volvulus is one of the rarer forms of intestinal obstruction, and, except in the sigmoid, it is very rare indeed; even in the sigmoid it is much more rare than a malignant stricture. It is seldom diagnosed before operation. In the case under review, the possibility of the obstruction being due to this cause was held to be likely, chiefly for three reasons:

1. The previous history of chronic constipation.
2. The definite tumour to be felt in the region of the sigmoid.
3. The fact that though obstruction had been absolute for five days, neither its onset nor its continuance had been marked by any local or general signs of acute strangulation.

The negative evidence gathered from a rectal examination could not be allowed to weigh against a diagnosis of cancer of the sigmoid, for the stricture is often too high, and also forms too small a mass to be detected by the finger. But there were wanting in this case the two distinctive signs which are most suggestive of malignant stricture of the sigmoid, namely, a history of blood or mucus upon, and altered character in, the stools during the last few weeks or months, and a distension of the whole area, more or less, of the large intestine. The palpable lump in this case was, as already stated, quite localized to the sigmoid region.

The abdomen was opened in the middle line below the umbilicus, Dr. Bisshopp assisting and Dr. Malden giving the anaesthetic.

The case well exemplifies the advisability of selecting the middle line for every laparotomy which is at all of an exploratory nature. Had the presence of a tumour in the left iliac region tempted us to make our incision at that spot we should have found it necessary to make another incision more to the right, in order to enable us to deal with the condition revealed. The same remark applies to intussusception. The lump in such cases may be felt high up in the abdomen, or well to either side, but its reduction involves its being forced to retrace its steps through a circular course whose centre is just below the umbilicus, and it is at this spot that the incision will give most easy access to the lump throughout its retreat. Two fingers were inserted through the small median incision, half-way between the umbilicus and the pubes. A small quantity of blood-stained fluid escaped from the peritoneal cavity. It was at once apparent that the cause of the prominence of the abdominal wall (to the left of and below the umbilicus) was a single coil of intestine which was distended for some seven or eight inches of its length.

The incision was extended in the middle line sufficiently to permit of a thorough examination of this distended loop: it proved to be the large intestine; its two extremities converged to and ended in a small pedicle.

It was, therefore, clear that the suspicion of volvulus had been confirmed, and from its position it appeared likely that it was of the commonest or sigmoid variety. However, the discovery of an appendix attached to the distended gut engorged almost to blackness, and swollen to the size of the little finger, proved that we had to deal with one of the rarer forms involving the caecum.

The volvulus was easily untwisted, and then it was plain that the distended part consisted of the caecum and the ascending colon, provided with an abnormal mesocolon sufficiently long not only to allow of its intestine undergoing a twist through one complete circle about its own mesenteric axis, but also to permit the distended loop to take up a position well over in the left iliac fossa. The mass was the size of two fists placed side by side. It was soft and heavy, but the wall of the gut did not appear to be altered in thickness, and though it was purple with congestion there was no evidence of peritonitis or ulceration. In spite of the obstruction having been complete for five days, and of the distension being considerable, there were no adhesions, nor any cracks of the peritoneum.

The contents of the distended bowel were easily expressed into the ascending, and then onwards into the descending colon, and as the volvulus showed no inclination to return the abdomen was at once closed.

The first motion was passed six hours after the operation. The after-history was uneventful, though a good deal of trouble was experienced in re-establishing regular action of the bowels. The wound healed by primary union, the stitches being removed on the eighth day. The patient is at the present time in excellent health. She wears an abdominal belt, fixed with an indiarubber pad containing air over the position of the caecum. The bowels are kept open by a mild aperient pill taken three times a day after meals.

REFERENCES.

[1] London: Cassell and Co. 1899. [2] Vide Avery, *Path. Soc. Trans.* vol. ii, p. 222.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

HYOSCINE AND BROMIDE IN MANIA.

MENTAL disease being extremely variable in type and duration it is sometimes difficult to avoid attributing curative properties to a particular therapeutic agent when cure and treatment are merely coincident. This is less liable to occur when the patient has had exactly similar attacks which have not yielded to other methods of treatment. In the BRITISH MEDICAL JOURNAL (September 11th, 1897) I reported a case in which incipient acute mania was arrested by a single injection of hyoscine, the patient having, in a prior attack, been under my care in an asylum before this drug had come into use. The present note refers to a patient not previously under my care, but whose fourth attack of mania was exactly like all her antecedent ones until its course was altered by hyoscine.

The patient was aged 37, married, and the mother of seven children. Her mother died, at the age of 47, of "drink and change of life," when the patient was very young. The latter is thin, pale, and neurotic-looking, but presents no degenerative stigmata except prominent anthelices and adherent lobules. The third and the fourth attack followed closely the weaning of her seventh and her sixth child respectively. The premonitory symptoms were headache, restlessness, insomnia, increased activity, "wildness of eye," shrillness of voice, loquacity, "queerness" or strangeness of manner.

In this attack she was seen by me on July 19th, the third day of extreme excitement, or the tenth from the first appearance of forewarnings. Loss of inhibition was the most striking characteristic of her mental condition in the developed attack. The reaction of the pupils was very slight—a noteworthy physical peculiarity, as general paralysis was quite excluded.

Hyoscine hydrobromide was then given in sufficient quantity (gr. $\frac{1}{100}$ hypodermically, and, after forty minutes, gr. $\frac{2}{100}$ by the mouth) to procure seven hours' sleep, and again on July 21st, the excitement having increased, after a slight abatement on the night of July 20th, in a dose (gr. $\frac{1}{50}$ hypodermically) large enough to induce ten hours' sleep. Sodium bromide in drachm doses was administered in the forty hours' interval between these sleeps, and for two days after the second sleep until 2 oz. in all had been taken. After the second sleep the patient slept well every night, but remained awake in the daytime, although she was very drowsy. She was kept in bed on liquid diet, principally milk, practically until July 25th. On July 26th—within a week of the commencement of treatment—she had thrown off all drowsiness and was cured of her maniacal excitement. The three previous attacks had each necessitated asylum treatment for some months. In all four attacks "sleeping draughts" failed to procure sleep.

The patient remains well at the time of writing (October 9th). Her husband and she both attribute her recovery to the sleep caused by the second injection of hyoscine. I think, however, that the bromide contributed, although the very prolonged "bromide sleep," advocated by Dr. Neil McLeod, was not induced. The hyoscine acted much better when administered altogether hypodermically, and the bromide when exhibited every two hours; four doses of the latter so given, after the second hyoscine sleep, produced a decidedly more beneficial effect than did seven with four hours' intervals before that sleep. The case would seem to teach one not to be discouraged if the first dose of hyoscine, which must be more or less tentative, does not greatly ameliorate, or even if it appears to aggravate, the symptoms. Both the patients here referred to were treated at their own homes in thickly populated streets.

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"MILK FEVER."

THE term "milk fever" is commonly used in textbooks on midwifery to denote a febrile condition arising about the third day after confinement, and often attributed to commencing secretion of milk. Dr. Galabin, in his *Manual of Midwifery*, notes that physiologically there is no connexion between the secretion of milk and the pyrexia, but he does not appear to give a reason for the frequent occurrence of the pyrexia at this particular time.

As before mentioned, all other causes of fever having been excluded, there is frequently a rise of temperature about the third day, particularly in primiparae; a careful examination of the nipples invariably, I may say, discloses a slight abrasion of the skin or a very minute, almost microscopic, crack in the tissues of the nipple, often in the central depressed portion. This, if neglected, rapidly goes on to a fissure, now easily seen on account of its large size, and is probably followed by mastitis, the result of entrance of pyogenic organisms, as mentioned by Dr. Jellett in his *Short Practice of Midwifery*.

From the above it would appear that during the first few days of nursing, the skin of the nipples, unaccustomed to its new duty, is easily damaged, and minute cracks, difficult of detection, are produced by the act of suction; these form a suitable nidus for the growth of organisms, which in the intervals of suckling grow with rapidity through the ducts into the interior of the gland, and cause obstruction by inducing inflammatory exudation. Mild symptoms of mastitis follow, often attributed to hypersecretion of milk, and give rise to a febrile condition, the so-called "milk fever."

Acting on this theory, Miss Dryland, matron of this hospital, undertook the following treatment: All patients on admission, either before or during labour, had the nipples thoroughly cleansed with soap and water and then thickly painted with a solution consisting of 1 part each of glycerine of tannin and sulphurous acid with 2 parts of water, as recommended for cracked nipples by Dr. Playfair in his *Science and Practice of Midwifery*. This solution was applied every few hours up to the sixth or seventh day after confinement, whether there was an abrasion or not, until it was considered that the nipples were in a fit state to withstand the irritation caused by the suction of the child. Sterilized or antiseptic pads were kept over the nipples.

This treatment has been in use for the last three years. In the majority of cases it prevented the occurrence of the so-called "milk pyrexia" altogether, and was of great benefit to mother and child. The breasts in many cases became full, but there was no mastitis or fever. Of 100 unselected temperature charts of patients admitted before this special treatment was adopted, 12 showed normal temperatures, whereas since the treatment was commenced 100 unselected charts show 31 normal temperatures.

I may mention that during the later months of pregnancy pain in the breasts with turgescence appears to be due in a similar manner to the inward growth of organisms which batten on the serous exudation from the nipples incident on the pregnant state. The treatment before described is useful in such cases, but only a few applications of the solution are necessary to relieve the symptoms.

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ACUTE DILATATION OF THE STOMACH WITHOUT APPARENT CAUSE.

IN view of the discussion lately held in the Section on Medicine of the British Medical Association, and the interest which distension of the stomach has excited of late years, the following case may be worthy of record, especially as the patient was one in whom none of the recognized causes could be ascertained, being a healthy infant, 9 months old, entirely brought up on the breast, and with whom, moreover, the mother's milk had always agreed.

One morning the baby was found dead two hours after she had been suckled and put to bed. Nobody was in the room so that no question of overlying arose, nor did the clothes cause any constriction of any part. According to the mother (and there seemed no reason to doubt her statements) the child, who was the first, had always been healthy, and no pain or enlargement of the abdomen after meals had ever been noticed. There had never been any vomiting; indeed, there was an entire absence of symptoms of any kind.

The necropsy showed a well-nourished body, without any signs of rickets. All the organs were examined, particularly the spleen, liver, lymphatic, and other glands, but nothing abnormal was found in any of them except the stomach. This viscus came prominently into view after incision of the abdominal wall, and appeared like a small football bladder distended with gas. Whatever state of affairs may have previously prevailed, the intestines did not seem to be pressed upon by the enlarged stomach, which bulged forwards and appeared, as it were, to float away from the surrounding structures. Obviously the relief of pressure caused by opening the abdomen had a great deal to answer for this condition. There was no stric-

ture of the pylorus or adhesions. The duodenum was not dilated. The gastric mucous membrane did not show any signs of inflammation, and the organ contained only a small quantity of clotted milk. The muscle unfortunately was not examined microscopically, but seemed normal in thickness and texture, although it had been well stretched.

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CANCER OF PANCREAS.

WRITING in Quain's *Dictionary of Medicine* on diseases of the pancreas, Dr. F. T. Roberts, referring to the difficulty of diagnosis, says:

> If more attention were paid to the pancreas by the general body of medical practitioners our knowledge concerning its morbid states would probably be increased. Many seem to forget that there is such an organ, and even when symptoms or signs point to it with sufficient clearness, at any rate as being the possible seat of mischief, they ignore it altogether, and it never seems to enter into their calculations.

I am led to quote these remarks by a case which has recently occurred in my own practice, where I had the opportunity not only of watching the patient for a few months, but also of following it up with a *post-mortem* examination. I did not arrive at a diagnosis during life other than that of "malignant abdominal disease," but it has occurred to me—more especially since I read Dr. Roberts's remarks—that it might have been possible, by a process of exclusion mainly (the pancreas not included in the operation) to have come to a fairly accurate diagnosis during life of the *fons et origo mali*.

The patient was a man, aged 65, who came to me in October, 1900, complaining of repeated attacks of intense abdominal pain, more marked in the right iliac region, and attended with vomiting. These attacks were agonizing, and almost unbearable, and much difficulty was experienced in relieving them. They were attended with a general tympanitic condition of the abdomen, most marked over the right iliac region, and, as they subsided with violent eructations of wind, and occasionally watery pyrosis. The progress of the case briefly was an increasing recurrence of the paroxysmal attacks, general emaciation, a slight amount of ascites towards the end, weakness, and death.

I examined this man repeatedly, and under the most favourable conditions obtainable, but could find no tumour or any evidence of any enlarged organ in the abdomen; but I must candidly admit that I did did not take the pancreas as a possible source of disease sufficiently into consideration, and consequently examination in that particular region may not have been as thorough as it might have been.

To take the two leading symptoms first. That there was some interference with the calibre of the bowel from pressure above was evidenced by the condition of the abdomen which accompanied each attack. But where? Then the peculiar, intense, and paroxysmal pains might have been due to hepatic colic, only at no time—not even till the time of his death—was there any trace of jaundice. Nor was there any evidence of kidney mischief or bladder trouble. The process of exclusion it now appears to me might fairly have left the question of duodenal or pancreatic cancer as a more than likely diagnosis. The former did suggest itself to my mind, but with regard to the latter, I am afraid I must be entered in Dr. Roberts's classification as belonging to that body of practitioners who do not appear even to take the pancreas into their calculations, or at any rate fail to give it that consideration which it deserves.

At the necropsy all the internal organs of the abdomen, which alone was opened, were found healthy, with the exception of the pancreas. There was as had previously been noted a limited amount of ascitic fluid. The pancreas had been converted into a hard scirrhous solid mass, part of which towards the head of the pancreas had ulcerated and broken down, forming an abscess cavity. The duodenum was obstructed by the pressure of the growth which was bound down and clearly adherent to the parts below. The cause of the leading symptoms and of the man's death were at once apparent.

The moral in this case is, I think, as Dr. Roberts expresses it in the words I have already quoted, that we general practitioners are apt to forget that there is such an organ as the pancreas at all, and as an open confession is said to be good for the soul I make haste to plead guilty to the charge. Of course the satisfaction remains to me that under no circumstances could any operation have afforded relief to my patients. But to have an intelligent opinion with regard to one's cases and to have the same verified by necropsy is at all times satisfactory. Zoja, of Pavia, reports eight cases of tumour of the head of the pancreas; the symptoms, he says, vary with the seat and stage of the disease, but the following are the most reliable for diagnostic purposes: (1) obstruction of the common bile-duct—jaundice; (2) obstruction of the pancreatic duct—fatty stools; (3) distension of the gall-bladder; (4) pain and presence of palpable tumour; (5) symptoms of pyloric or duodenal stenosis; (6) haemorrhage from the bowel.

Workington. JOHN HIGHET, M.D., M.O.H.

SUBPHRENIC ABSCESS: OPERATION: RECOVERY.

A. W., female, aged 20, was suddenly seized with severe pain on the left side in the region of the eighth, ninth, and tenth ribs in the posterior axillary line. The pain was aggravated on inspiration, and described as sharp and cutting; the area was also extremely painful to the touch. On auscultation no abnormal sounds were heard, and percussion yielded only normal notes. The temperature was 103°. Pleurisy with or without pneumonia seemed the only diagnosis possible so far. Medicine was prescribed and hot applications ordered. Next day nearly all pain had disappeared but the temperature was still about 103°. There was no dullness or alteration of breath sounds. For six days the pyrexia was maintained without any local changes being found, both sides of the chest appearing equal in all respects. I now learned that the patient had some six months previously been treated at the local hospital for some stomach trouble (probably gastric ulcer from her description of the symptoms), and that for the last fortnight she had had some slight pain in the left side. I now thought it possible the patient might be suffering from a subphrenic abscess secondary to a perforated gastric ulcer, considering this history and the continued high temperature. Accordingly I asked Dr. Harland to see the patient with me, who agreed with me as to the possibility, but we decided to wait a day or two before operating to see if any local signs would appear.

At this examination we thought there was slight comparative dullness over the painful area, but as this area was continuous with the upper border of the spleen, and only about two or three fingerbreadths wide, it was very doubtful. An hour after seeing the patient on the seventh day, I was hurriedly called, and found she had had a rigor. The temperature was then 107°.

On consultation with Dr. Harland, it was decided to operate. Chloroform was given, and a fine Potain's aspirating cannula and trocar was introduced between the eighth and ninth ribs with a negative result. A small ordinary trocar and cannula were then introduced deeply an inch or so anterior to the first puncture, and on withdrawing the trocar a considerable quantity of extremely stinking pus escaped. As the patient now showed signs of collapse, necessitating the administration of strychnine, brandy, and digitalin hypodermically, an incision was quickly made between the ribs and a drainage tube introduced. Next day the patient had rallied, the temperature being 99.5°. An uninterrupted recovery took place, the cavity being occasionally washed out with lysol lotion.

The above case appears to me interesting on account of the history of stomach trouble and the absence of local objective signs.

South Shields. R. M. HALL, M.B. C.M.Edin.

EXCISION OF THE TONSILS DURING AN ATTACK OF ACUTE TONSILLITIS.

I HAVE always been led to believe that it was contrary to surgical principles to excise an inflamed tonsil, but recent experience has led me to doubt that fact.

About four years ago I attended a man about 50 years of age, who was suffering from acute follicular tonsillitis. He gave a history of having had seven or eight attacks of "quinsy" at intervals of from nine to twelve months. I tried the usual remedies, and on two occasions incised the tonsils, but in spite of treatment the inflammatory condition persisted for about ten days, and then gradually disappeared without suppuration. I told the man he must have the tonsils removed as soon as he had sufficiently recovered, but when I referred to it later he refused to consent to their removal.

About nine months afterwards he commenced with an attack similar to the first, and on the third day the tonsils were almost meeting in the middle line, and swallowing was practically impossible. Remembering the previous difficulty I had experienced in persuading the man to consent to operation when inflammation had subsided, I decided to excise the tonsils at once, and by the aid of the guillotine I

was able to remove a large portion of the left tonsil only without anaesthetic. There was less bleeding than I anticipated, and next morning I found he had partaken of a fair quantity of food and was able to swallow comfortably. The inflammation had almost subsided, and he complained of nothing beyond a little soreness on swallowing and a slight pain in the left ear.

In the course of a few days he was able to attend to his business, and has had no recurrence of the trouble up to the present time.

About the same time I attended a lady who was suffering from a similar attack, and in this case, also, I removed one tonsil with an equally satisfactory result. Since that time I have had one or two cases in which I have adopted the same line of treatment with very good results. In the first two cases I used no anaesthetic, but latterly I have previously painted on the throat a 2 per cent. solution of B. eucaine. I should like to ascertain what has been the experience of other medical men, and whether they have met with any complications of a serious nature. I am confident that in the cases I have referred to the attack was cut short by several days, and the throat was in a much better condition afterwards than would have been the case had the tonsils remained.

Ashton-under-Lyne. ROBERT BLEASDALE, M.B., Ch.B.

FOREIGN BODIES IN THE CORNEA.

THE memorandum in the BRITISH MEDICAL JOURNAL of October 4th, p. 1247, Foreign Bodies in the Cornea, reminds me of a much more simple method of attaining the desired object. Recently having a troublesome case, and not having at hand any cocaine in solution, I applied to the spot a "speck" of the hydrochlorate. This answered perfectly, and it seems (apart from the mydriasis) unnecessary and undesirable to anaesthetise the whole of the conjunctiva for the sake of dealing with so small a portion of its surface.

WILLIAM A. S. ROYDS, L.R.C.P., etc.

St. Mary Bourne, Hants.

VELD SORES.

VELD sores are shallow ulcers, often very extensive, with ragged irregular edges, very little induration around, and bases of coarse granulations which exude a quantity of pus. They occur, it is my experience, much more frequently in fair-complexioned men, individuals with sandy hair and freckled faces being apparently most prone to them; they occur on the hands chiefly, and on the dorsal aspect of the hands and fingers almost entirely, but also on the face, especially at the angles of the nose or mouth, and by the lobes of the ears; they also occur on any part of the body. The predisposing cause seems to be a scratch or any abrasion of the skin, barbed wire wounds being frequently followed by veld sores. There does not seem to be any liability to veld sores until a man has been at least three months in the country, and then all conditions of men are liable to the complaint, infantry as well as mounted troops, although there is a preponderance of cases on the bridle hands of mounted troops. My experience shows that it is probably a species of scurvy, because, on the one hand, cases occur chiefly when troops are on "trek," when fresh vegetables are not obtainable; and, on the other hand, I have found them clear up well under lime juice; Boers and Colonials also suffer from them to a less degree. On healing, veld sores leave pigmented scars, which take a long time before disappearing. Dirt is apparently the exciting cause, because if abrasions and wounds are kept covered up veld sores rarely supervene; I have seen several cases of lymphangitis of the forearm result.

R. V. DOLBEY, M.R.C.S., L.R.C.P.,
Civil Surgeon, Naauwpoort, Transvaal.

INTRACTABLE COUGH CAUSED BY ASPIRATION OF A TOOTH.

MRS. S., aged 35, came under my care complainlng of persistent cough and considerable discharge of frothy sputum, sometimes tinged with blood. There was no history of any pulmonary disease, and the patient was otherwise fairly well nourished and healthy looking. On examination pleurisy on the right side was detected. For some three weeks every endeavour to relieve the condition seemed of no avail, and then a gradual improvement took place. The pleurisy yielded, but the cough remained, excessively irritating to the patient and her friends, and discouraging in the extreme to me. I tried every drug and combination of drugs of which I could think, and looked up the treatment of many recognized authorities. The patient passed many sleepless nights, and began to show signs of great distress. One morning she was seized by an extra-violent fit of coughing, and, to her unbounded surprise brought up a tooth in the sputum. Some little time before she sought advice and treatment she had been to a dentist to get a tooth extracted. The tooth was extracted, but had inadvertently slipped from the forceps. Both patient and dentist were under the impression then the tooth had fallen into a spittoon, and nothing more was thought of the matter. The patient, curiously enough, felt no ill-effects at the time, but soon developed the irritating cough. She quickly regained her former good condition of health.

D. WALLACE SMITH, M.B., C.M.Glasg.

Brixton.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

HULL ROYAL INFIRMARY.

CASE OF INTRAPERITONEAL RUPTURE OF THE BLADDER TREATED BY LAPAROTOMY AND SUTURE OF THE BLADDER SIXTY-FOUR HOURS AFTER RUPTURE: RECOVERY AFTER UNUSUAL COMPLICATION.

(Under the care of E. O. DALY, M.A., M.D.Oxon., M.R.C.P Lond., Honorary Physician; and EDWARD HARRISON, M.A., M.D.Cantab., F.R.C.S.Eng., Honorary Surgeon to the Royal Infirmary.)

B. S., aged 36, an Irish harvester, was admitted to the infirmary on the evening of July 29th, 1902, under the care of Dr. Daly. On the morning of admission after carrying a pail of water in which he was about to wash himself he experienced sudden severe pain in the abdomen which struck down into the penis. He had received no injury, and stated that he was not intoxicated the previous evening.

On admission the abdomen was tender and there was a little dullness in each flank. A catheter was passed, and 10 oz. of perfectly clear urine were withdrawn; there was no blood. After admission he vomited, and stated that his bowels had not been relieved that day. An enema was administered with negative result, but a second one gave relief. The day after admission he became seriously ill. He lay on his back, had a pinched anxious expression, a small pulse, hurried, shallow respirations, frequent vomiting, severe abdominal pain and tenderness, and there was a small quantity of fluid in the peritoneal cavity.

On the evening of the 30th (some twenty-four hours after admission) Dr. Harrison was asked to see him. His condition was as just described. A catheter passed now drew off 4 oz. of clear urine. He now volunteered the information that he had had previously two similar attacks of less severity which were cured by taking a dose of salts.

A positive diagnosis was not made, though the possibility of its being a rupture of the bladder was entertained, and also, on the evidence of having had two former similar attacks, it was thought that it might be a case of appendicitis. In any case an exploratory laparotomy was imperative, and this was urged as strongly as possible, but was absolutely declined by the patient.

On the following day all his symptoms were exaggerated, and his condition was as bad as it could be. A catheter passed drew off nothing, and the amount of fluid in the peritoneal cavity was now evidently very considerable. He was visited by a priest, who persuaded him to submit to operation. He was accordingly prepared for laparotomy, which was performed the same evening. Before opening the abdomen, an injection of strychnine was administered, and arrangements made for transfusion of saline solution. This was done during the operation, some three pints being introduced, into which was put some adrenalin.

On opening the abdomen sixty-four hours after the onset of symptoms by a median incision, a large quantity of slightly turbid fluid having a (?) urinous odour was evacuated, and the abdomen washed out with a plentiful supply of warm water. There was no peritonitis. On passing the hand into the abdomen and exploring the posterior surface of the

bladder a rent was immediately discovered of sufficient size to admit the tip of the index finger. This was very carefully sutured with two layers of Lembert sutures, the mucous membrane not being included. The material used was silk. The rent, which was about three-quarters of an inch in length, was situated midway between the fundus of the bladder and the bottom of Douglas's pouch, and was vertical and central. But little difficulty was experienced in the application of the sutures. The abdominal cavity was again washed out and the wound closed.

Before operation he had a scarcely perceptible pulse, and seemed to be *in extremis*, but at the conclusion his pulse had considerably improved, and his general condition was much better.

The house-surgeon, Mr. Carter, was directed to tie in a soft rubber catheter; as, however, a suitable one was not to hand, this was postponed till his return to bed, when, on passing a catheter some fifteen to twenty minutes after the closure of the wound, 10 oz. of urine were evacuated. This rapid secretion was probably due to the adrenalin injection, while the quantity (10 oz.), gave one some guarantee that the suturing was efficient.

During the following three or four days the urine continued abundant, some three pints per diem; it had a high specific gravity, and was loaded with uric acid crystals to such a degree that the catheter and tube became at times blocked with them. The catheter was removed on the eighth day, and the bladder afterwards emptied at intervals of about four hours. His condition was uraemic; he remained in a drowsy state, constantly picking at the bedclothes, dressing, etc., and trying to pull the catheter out. He required uninterrupted attention.

On the second and third days his temperature rose gradually to 101° F., and he had some cough. On the sixth day it reached 102.4° F., and there were signs of consolidation at the base of the left lung. He was put in a steam tent propped up in bed, and had oxygen inhalations and injections of strychnine.

On the eighth day he had improved. His temperature was normal, the wound healed, and the sutures were removed; the delirium, too, was less marked, and decided hopes were entertained of his ultimate recovery. These hopes were, however, dashed to the ground by the occurrence of a most dramatically alarming incident. During the absence of the nurse for a few minutes he contrived to pass his hands beneath the dressings and tear open his recently healed wound, and pull out about 2 ft. of intestine. He was removed to the theatre in a very collapsed state.

On removing the dressings fully 2 ft. of intestines lay exposed on his abdomen. These were carefully cleansed, washed, and returned, and the abdominal cavity again flushed. An opportunity was thus given of observing the state of the bladder wound. This was nicely healed.

During the night following his pneumonia reasserted itself, and he was only kept alive by the unremitting attention of Mr. Carter, who gave him a continuous supply of oxygen and strychnine injections (m x) every three hours.

His subsequent progress, though slow, was uneventful and satisfactory, and he was discharged cured on September 15th.

REMARKS BY DR. HARRISON.

In the *Annals of Surgery*, August, 1901, Professor Alexander, of New York, contributed a most important paper on intraperitoneal rupture, the bladder treated by laparotomy and suture; and gave a detailed tabulated record of all the published cases. These were 45 in number, of which 23 died and 22 recovered.

The first two were by Willett in 1876 and Heath in 1879; these both died from imperfect suturing, as all the coats of the bladder were included. Grandchamps as early as 1826 had proved by experiment on animals that if the mucous coat were included in the suture leakage invariably occurred.

The next two cases by Bull in 1885 and McGill in 1886 also died, the first from leakage, and the second from shock. Mac Cormac had the two first successful cases, both in 1886. The 23 deaths may be tabulated as follows: 4 from peritonitis due to imperfect suturing, 2 from shock, 2 from haemorrhage, 2 died during operation, 1 from pneumonia on fourth day, 12 from peritonitis. The time elapsing between the accident and the operation varied from 2 to 90 hours. Alexander, from a study of these 45 cases, concludes that success depends on three factors, namely, first, surgical intervention at the earliest possible moment; secondly, thorough cleansing of the peritoneal cavity; and thirdly, perfect closure of the bladder wound by suture.

The above related case is, I think, unique and remarkable in several particulars. In the first place the diagnosis was difficult. Both Holmes and Mac Cormac have recognized that the diagnosis is sometimes difficult. Here was a man who gave no history of injury (and as far as I have been able to discover only 6 cases of spontaneous rupture of the bladder are recorded),[1] and on admission to the infirmary 10 oz. of clear urine were drawn off; there was never any blood withdrawn by catheter, and there was no stricture. Secondly, the length of time which elapsed between the supposed time of the rupture, namely, early morning of July 29th, and the date of the operation, 10 p.m. on July 31st—about sixty-four hours. In only 5 cases recorded has the time been longer or as long as this, and of these only one recovered. Thirdly, the disaster occurring on the eighth day, when he tore open his wound and withdrew 2 ft. of intestine, and yet in spite of this made a good recovery.

No. 15 GENERAL HOSPITAL, HOWICK, NATAL.

TRAUMATIC ANEURYSM IN LEFT GROIN: LIGATURE OF LEFT COMMON ILIAC ARTERY: RECOVERY.

(By ARTHUR A. MARTIN, M.B., Ch.B.Edin., Civil Surgeon, South African Field Force.)

[Communicated by the DIRECTOR-GENERAL, Army Medical Service.]

THE following case is of marked interest, adding as it does, one more to the very meagre list of recoveries from the formidable operation of ligature of the common iliac artery.

History.—Private J. S., of the Victorian Mounted Rifles, aged 31, while in action against the Boers near Vryheid, Transvaal, received a bullet wound in the left groin. He states that he fell off his horse a few minutes afterwards owing to faintness. He was at once conveyed to hospital, and remained in bed for three or four weeks. Was then sent down to the hospital at Dundee, Mooi River, and finally to the Convalescent Dépôt at Howick, Natal. All this time he says he felt very weak, and walked with a decided limp. Had frequent pains in the left groin, and felt a hard lump there. While at the dépôt he met with an accident. A soldier fell on him, driving his knee with great violence into the left groin of the already injured man. This was followed by acute pain, increased swelling in the groin, faintness, and inability to use the limb. He was admitted into the surgical wards of No. 15 General Hospital, Howick, on November 18th, 1901.

State on Admission.—He looked thin and wasted, and very pale. He lay on his back, and moved with difficulty owing to the pain in his left groin. On examining the groin the healed wound of entrance of a bullet was found, situate about three fingerbreadths above Poupart's ligament, and internal to the course of the external iliac artery. The wound of exit was situated below the crest of the ilium on the same side. The bullet had on its way directly crossed the line of the external iliac artery (and as the case will show, wounded that artery high up), pierced the iliac bone, and emerged externally. The skin of the left inguinal region was erythematous, and tender to touch. The oblique inguinal glands were enlarged and painful. A marked bulging was easily observed, situated above Poupart's ligament, and below and external to the umbilicus. By laying the hand over this area a heaving pulsation, synchronous with the cardiac systole, could be felt. The whole area felt boggy to the touch. By compressing the aorta slightly (this caused the patient excruciating pain) the pulsations in the mass were distinctly lessened. There were no *bruits* in the heart to account for the marked systolic *bruit* heard on placing the stethoscope over the swollen area. The diagnosis of aneurysm of the external iliac artery was therefore arrived at with comparative certainty. From the history one could deduce that an aneurysm must have formed after the bullet wound, that this aneurysm had been probably increasing slowly or had begun to coagulate, and that the injury he received shortly before his admission to Howick Hospital had probably ruptured the sac and occasioned a fresh outpouring of blood from the torn artery.

Progress and Treatment.—The patient was put to bed, with the limb elevated and bandaged from toes to hip, lead and opium fomentations were applied to the groin to reduce the inflammation in the inguinal glands already referred to; given a smart purge, and put on milk diet. November 19th.—Patient very restless; complains of agonizing pains in left groin and hip; cannot sleep; given morphine subcutaneously. Temperature 100.8°, and rising. The aneurysmal mass is distinctly larger: it is now well out towards the anterior superior spine, and has extended inwards and upwards towards the umbilicus: the outer part of the aneurysm feels more resistant than the inner; systolic *bruit* over mass is very loud. A large pad was placed over the aorta, and a firm bandage applied to hold it in place. This pad gives the patient a great deal of pain. November 22nd.—Temperature, 101.2°. Inflammation of inguinal glands has disappeared; aneurysmal mass larger; patient extremely weak and restless; still has the acute pain in the left groin and hip. November 23rd.—Temperature, 101.6°. The aneurysm is now about one fingerbreadth below the umbilicus, and has extended well into the middle line, heaving pulsations very marked. A consultation was held to-day, and it was agreed that without operation the patient's chance was hopeless, on account of the extreme rapidity with which the aneurysm was growing. Prolonged compression of the abdominal aorta under an anaesthetic was out of the question owing to the patient's enfeebled state, and owing to the danger of rupturing the thin sac of the aneurysm. The patient was accordingly prepared for operation.

Operation.—An incision was made from a point 1½ inch above and external to the centre of Poupart's ligament to 1 in. above and internal to the left anterior superior spine, cutting through the skin and various

[1] Neale's *Digest*, 1053: 3.

muscle and fascial layers. This incision exposed the aneurysm sac, which looked extremely thin and felt very soft. One could not get above the sac by this incision, so it was prolonged upwards in a slight curve, with the convexity downwards and outwards. The peritoneum was exposed and incised, and the intestines held back by warm sterile cloths. The sac could now be clearly defined. It was found to extend over to the brim of the pelvis and well outwards into the iliac fossa. The external iliac artery could not be defined. The common iliac entered directly into the aneurysmal mass, and the internal iliac emerged from the upper part of the mass. All hope of tying the external iliac was therefore abandoned; the iliac vein, therefore, having been defined and separated, a double silk ligature was then tied round the common iliac artery in two places close to the aneurysm, and the artery divided between the ligatures. Pulsation immediately ceased in the internal iliac and over the aneurysm. The incision was then closed in the ordinary way, the peritoneum and muscles and skin being brought together separately, and a sealed dressing applied. The limb was surrounded evenly with thick layers of cotton wool, and a flannel bandage firmly applied from the toes to the hip. He was put to bed and surrounded by hot water bottles. He took the anaesthetic badly, and had to be frequently stimulated with strychnine, ether, etc., during the operation.

November 24th. Had a restless night. Given morphine subcutaneously. Pulse volume and tension good. Temperature 100° F.

November 25th. Bandage round limb not disturbed. Patient weak, but takes milk and chicken-tea well. Says that he "cannot feel his left leg." Temperature 98 4°.

November 26th. Vomited several times during the night. No abdominal distension. Pulse good. Kept on nutrient enemata for eight hours with sips of warm water by mouth. Bandage round limb removed. The left lower limb is much colder than the right. Roots of the toes very oedematous. Limb looks very blanched. Below the knee the skin is quite anaesthetic. No pulsation present in tibial or popliteal. Again bandaged as before.

November 27th. Several large watery blebs have formed on the leg and foot. Still anaesthetic below knee. Toes still oedematous. Limb colder than right, but has a certain degree of warmth of its own. General condition fair. Has not had any pain in the groin since the operation, and sleeps well during the day and night.

November 30th. Temperature of left limb is now almost equal to that of right. The anaesthetic area below the knee has now disappeared, and patient complains of pain in his calf. Can now "feel" his leg, but says it is "as heavy as lead." The blisters and oedema of toes have gone.

December 22nd. Circulation in limb freely established. Temperature of two limbs equal. On grasping limb firmly, the skin becomes pale, and when pressure is relaxed a rosy blush follows. The mass in left iliac fossa is smaller, and is getting firm. No pulsation is present. The patient can extend and flex his limb quite freely. Massage is being carried out daily to the left limb.

January 20th, 1902. Moves leg freely. Can extend, flex, and rotate easily, but is unable to lift the whole leg up vertically while lying on his back.

January 22nd. Up on a wheeled chair. Is putting on flesh daily.

January 23rd. Up on crutches. Gets along well. Puts left foot to the ground at intervals.

February 3rd. Can walk about slowly without the aid of crutches or stick. A hard firm mass about the size of a goose egg can be felt in the left iliac fossa.

REMARKS.—The question arises in this case whether, having cut down on the sac, one should not have carried out Symes's operation—namely, incising the sac, turning out the blood clot, and catching all the bleeding points. This is a much more formidable and prolonged operation than simple ligature, and statistics show that secondary haemorrhage is not an uncommon sequel. The fact that this patient was cured and able to walk about ten weeks after the operation is sufficient justification for the procedure adopted. Again, should one have tried prolonged compression of the abdominal aorta under an anaesthetic? Against this method one must place the extremely weak state of the patient. The anaesthetic would have had to be carried out for several hours, and the patient could not have undergone this. During the short time he was under the anaesthetic, while the operation was being performed, he was weak and collapsed and constantly required stimulation. One other point of interest is the collateral circulation, which in this case must have been largely carried out by the anastomosing lumbar, circumflex, and lower intercostals, with a slight assistance from the pudics, inferior haemorrhoidals, and sacral arteries. The deep epigastric and deep circumflex iliac arteries fortunately came off below the aneurysm. I wish to thank Drs. Thomson and O'Dea for so kindly assisting me at the operation, and Dr. Horwich for his careful administration of the anaesthetic.

KISUMU DISPENSARY, BRITISH EAST AFRICA.

INJECTIONS OF MERCURY PERCHLORIDE INTO THE PLEURAL CAVITY, IN A CASE OF EMPYEMA, AFTER TAPPING.

(By R. E. DRAKE BROCKMAN, M.R.C.S., L.R.C.P., Medical Officer, East African Protectorate.)

I CONSIDER the following case sufficiently interesting to bring before the profession, and I do so in the hope that the treatment may be of use in similar cases, when the severer operation of excision of a rib and drainage is for any reason contraindicated. As far as I am aware, treatment by injections of antiseptics has never before been suggested or adopted, though washing out of the cavity of the pleura has been done.

The patient, an Inganda porter, attended the Kisumu Dispensary as an out-patient on June 9th, 1901, suffering from malarial fever. He, however, only occasionally made his appearance until July 2nd, when I saw him for the first time, and found him suffering from pleurisy.

After this, on my being called away to an outlying station, my assistant treated him till my return on July 20th, when I diagnosed an empyema, and explained to the patient that an operation was necessary. This suggestion, however, he would not entertain for one moment, but after a great deal of talking he consented to be "pricked" on the following day, after he had discussed it with his friends. On the next day, as I anticipated, he did not return, nor even the day following, but on July 23rd he appeared, looking very much worse.

I tapped the empyema and withdrew 20 oz. of a thick, curdy, greenish-tinged pus. He was much relieved after the operation, and was quite pleased.

He presented himself daily until July 30th, when I again tapped, and this time withdrew 90 oz. of pus. I asked him during the performance of this operation to allow me to give him something to send him to sleep and then do the severer operation; but he said he was content with the relief the tapping gave him, so, finding further arguments of no avail, I decided to inject a solution of corrosive sublimate with a view to arresting the formation of pus.

Taking into account the size of the empyema, I decided to inject a strong solution and carefully watch its effect. I dissolved ¼ gr. of mercury perchloride in 2½ oz. of water and injected it through the cannula, which I retained *in situ*. The patient was none the worse for the injection, and walked a quarter of a mile to and from the hospital daily. The pus after this was slow in accumulating, and the patient was very cheerful and pleased with his progress.

I now saw him daily, and on August 6th tapped him for the third and last time, withdrawing 10 oz. of pus, and again injected ¼ gr. of the perchloride dissolved in 2½ oz. of water. After this injection he was much easier and the formation of pus seemed to be arrested. He visited me once or twice again and then disappeared, and, as I found out afterwards, went an eight or nine days' canoe journey to his home across the lake. The patient arrived home safely, and, according to native reports, was quite well.

I cannot help thinking that the success in this case was permanent and that it was due to the injections, and not merely to the withdrawal of the pus. I am quite aware that empyemata occasionally do get well, even after a single tapping, but taking into consideration the size of this, I hardly think the formation of pus would have been arrested without excision of a rib and drainage.

With regard to the antiseptic, I am of opinion that perhaps a less poisonous one might have been used and done just as well. Personally, I do not think less than 2½ oz. of liquid should be injected in the case of an adult, as there is then a better chance of the antiseptic solution being distributed over the diseased area. I regret I could not keep the patient under observation until he had completely recovered, but, all natives of Africa, as soon as they feel improved in health get up and leave the neighbourhood. I have waited in vain for the past year for a similar case, but have not been fortunate enough to get one.

No. 3 STATIONARY HOSPITAL, DE AAR, CAPE COLONY.

CASE OF BULLET WOUND OF LIVER, RIGHT KIDNEY, AND RIGHT LUNG: NEPHRECTOMY: DEATH.

(Reported by EDWARD TURTON, M.B., Ch.B.Vict., M.R.C.S.Eng., L.R.C.P.Lond., Civil Surgeon.)

A NATIVE BOY, about 30 years of age, was shot whilst on the train about thirty miles from De Aar. He was seen at 11 p.m. on March 4th, about two hours after being shot. The range was unknown.

Condition on Admission.—He was in a state of great collapse, the extremities were cold, he was pulseless, and the breathing was very shallow and rapid. There was an entrance wound on the right side of the chest, 2 inches to the outer side of the right nipple, and immediately over the upper edge of the sixth rib. The exit wound was in the back, at the level of the spine of the third lumbar vertebra, and 2½ in. from the middle line. Patient was coughing slightly, and there was some oozing from both wounds, which were clean cut and evidently produced by a Mauser or Lee-Metford bullet. The abdomen was slightly distended, hard and board-like, but there was no dulness in the flanks.

Treatment.—As the patient was *in extremis*, both wounds and the skin around were cleaned up and dressed with cyanide gauze and wool pads. Shock was treated by liq. strychninae hypodermically, and brandy by the mouth. Hot bottles were applied, and he was given ice to suck and sips of iced water.

Progress.—Before morning the pulse became perceptible and the shock passed off. The bowels were not opened nor was urine passed until about 5 a.m. At 8 a.m. his general condition had improved, the pulse was very feeble and 120 per minute and the breathing was rapid, and all on the left side of the chest. The abdomen was very much distended and there was dullness in the flanks, more marked on the right side. The urine passed in the early morning was 12 oz. in quantity and consisted almost entirely of blood. From the position of the entrance and exit wounds, it was supposed that the track of the bullet passed through the right kidney. The large quantity of blood in the urine and the increasing quantity of fluid in the abdomen, tended to confirm this opinion. It was decided to perform an exploratory laparotomy.

Operation.—Patient's condition at the commencement of the operation, twelve hours after the wound was received, was very bad, the radial pulse was almost gone and the breathing was far from satisfactory. He was given an enema of a pint of warm water with brandy ℥j and liq. strychninae ♏x. Ether two parts, and chloroform one part, was given by Lieutenant Mason, R.A.M.C. The operation table was kept warm by means of hot bottles. With the assistance of Dr. H. A. E. Noble, civil surgeon, I made an incision 4½ in. in length, in the right semilunar line. On opening the peritoneum that cavity was seen to contain a large quantity of fluid almost entirely blood, and there was commencing peritonitis. The hepatic flexure of the colon was deeply congested, but no wound could be found. The posterior peritoneum was found bulging below the kidney and found to be filled with blood clot. This was incised and the blood clot turned out and the kidney reached. This was found to be seriously pulped, the organ being torn almost into four separate portions. The damage was so considerable that stitching was impossible and the patient's condition did not allow of delay. The kidney was carefully separated and the vessels and ureter cleared. The vessels were ligatured together with silk and the ureter was tied separately. The whole organ was then removed. The patient's condition was so critical that the abdomen was cleared as far as possible of clots and irrigated with warm boiled water. A large india-rubber drainage tube was inserted and the peritoneum closed. The operation was hardly completed when the patient died. Liq. strychninae and brandy were given hypodermically during the operation. Infusion apparatus was ready, but was not used.

Necropsy.—The abdomen was full of blood-stained fluid. There was a track leading from the exit wound, through the abdomen and through the posterior part of the right lobe of the liver; the entrance and exit wounds in that organ were slit-like, and the tissue around was congested. There was no destruction of tissue. The right pleura was full of blood-stained fluid, and there was a track leading through the right lung; the lung tissue round about was congested, but there was no great destruction of tissue. Examination of the right kidney after removal showed the organ divided up into almost four complete sections, and the tissue almost pulped. The hilum was opened up and the capsule ruptured extensively.

REMARKS.—This case is of interest as showing the very great destruction of tissue which had resulted by the passage of the bullet through the kidney, and the comparative slight destruction of tissue in the lung and liver. In view of the urgency of operation in cases of this sort, the immediate passage of a catheter in all cases where the kidney may have been injured is advocated.

YORK LUNATIC HOSPITAL.

PERFORATED GASTRIC ULCER: RECOVERY WITHOUT OPERATION.

(Reported by ERNEST G. GROVE, M.R.C.S., L.R.C.P., Assistant Medical Officer.)

History. L. F., aged 27, laundress, was seized on March 20th, 1902, with acute pain in the abdomen. She had had a slight pain in the left side on the morning of that day, but ascribed it to hurrying in walking. She had dinner, consisting of roast mutton, potatoes, and cabbage, at 12.45 p.m.; attended chapel at 2.15 p.m., and during the latter part of the service had some pain. This got worse, and she went to bed after chapel, and was seen about 4 p.m. She was then collapsed, lying on her left side in bed, her head hanging over the side of the bed, her knees drawn up; she felt sick, but did not vomit, was pallid, with feeble pulse and subnormal temperature. The abdomen was rigid and tender on pressure, but without definite local tenderness; the pain was across the lower part of the abdomen; respiration was thoracic.

Previous History.—She had suffered from anaemia and dyspepsia, with vomiting and pain in the epigastrium on several occasions, the last severe attack being in September, 1901. She had had chronic constipation. She had taken food at irregular intervals and frequently, and a large quantity of tea daily.

Further Progress and Treatment.—Operation was negatived. The temperature on the evening of March 20th was 99 8°, pulse 110. Tenderness as before; mouth dry. Hot flannels sprinkled with turpentine were applied to the abdomen. She slept a little during the night. On the next day the abdomen was a little less rigid, but was tender just above the umbilicus. All nourishment by the mouth was forbidden, and peptonized nutrient enemata were given every four hours during the day and night, and two pints of warm water injected during the twenty-four hours. The temperature kept up a little at first, but was never higher than 101 8°, and gradually dropped, till in five days it was normal. The pain and tenderness continued for some days, but the pain was only now felt on coughing; she had a slight cough. The mouth and tongue got dry (the patient was allowed to wash out her mouth) owing to the enemata being discontinued at night, as she slept, but this was corrected by feeding every four hours regularly. She was allowed to sip water on May 1st, but feeding by the bowel was continued. The bowels were open every day. Milk diluted with lime water was next day given, and the diet gradually increased. She progressed favourably, and was doing some work a little less than a fortnight later.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

RICKMAN J. GODLEE, M.S., Vice-President, in the Chair.

Tuesday, January 6th, 1903.

THE REPAIR OF BULLET WOUNDS OF THE INTESTINES.

MR. LENTHAL CHEATLE demonstrated the lesions due to a recent injury produced by a Jeffrey's bullet. The material came from South Africa. The bullet perforated the abdomen, death occurring within forty-eight hours. In the skin at the site of entrance no microscopic lesion was discernible, there was little haemorrhage, and the epidermis did not appear wanting. The caecum had been perforated by the bullet, but no extravasation of its contents had occurred. The author thought this latter fact due to a valve-like condition of the apertures, resulting possibly from differences in the elasticity of the coats. The sigmoid flexure was injured, and peritonitis had arisen at this spot. The bullet lay half out of the skin at the aperture of exit.

In answer to Dr. PURVES STEWART, who pointed to the fact that the base and not the apex of the bullet presented at the aperture of exit, the speaker thought that the missile had rotated during its passage, from having been nearly spent and not from having struck any bone as in the case referred to by Dr. Stewart, where such rotation was caused by rebound from the inner side of the skull.

Mr. S. G. SHATTOCK had had the opportunity of examining a piece of recent material brought from South Africa by Mr. Makins. He had studied horizontal sections of the subcutaneous fat close beneath the aperture of entry of a Mauser bullet in the skin. There was some extravasation of blood, but beyond some slight displacement of fibres amongst the fat no indication of the passage of the bullet was detectable.

TUBERCULOSIS OF THE OESOPHAGUS.

Dr. F. C. SHRUBSALL and Dr. W. T. MULLINGS reported the case of a man, aged 54, admitted into the Brompton Hospital under the care of Dr. T. D. Acland, suffering from hydro-pneumothorax. No tuberculous disease existed in the tongue or pharynx. Pain in swallowing supervened, which was relieved by cocaine, though only when some of the solution was swallowed. The necropsy was unavoidably only partial. Both lungs were tuberculous, and the trachea and bronchi extensively ulcerated. The larynx could not be removed, but examination twelve days before death showed early tuberculous disease. The lymphatic glands of the mediastinum, mesentery, and

neck, and those about the bronchi, did not present signs of tuberculous disease. Numerous tuberculous ulcers occurred in the lower part of the ileum and much of the large intestine.

Oesophagus.—The extreme upper portion of this viscus could not be examined. Throughout the lower part of the upper third and the greater part of the middle third, and involving almost the whole circumference of the tube for a space of 3½ in. were very numerous ulcers. The tissue between these appeared to be infiltrated and to contain areas of caseation. Below this level a gradually decreasing amount of scattered ulceration was to be seen, and even at the lower end were a few abrasions suggestive of ulceration. Though the ulcers presented a ragged appearance and in many cases freely intercommunicated, there seemed to be evidence of a series of separate foci of infection. Where individual ulcers appeared they were roughly oval in shape, and lay with their long axes in the long axis of the oesophagus. They presented a rather sharply cut edge which seemed in some instances to be a little undermined. The loose areolar mediastinal tissue around the oesophagus appeared to be healthy and there were no caseous glands in the immediate vicinity of, much less adherent to, that organ; so that extension in contiguity from without could at once be excluded as the source of infection. The fauces and pharynx were not examined *post mortem*, but during life no signs of ulceration had been detected in them.

Microscopical Examination.—A section through one of the ulcers at the upper end of the oesophagus showed a somewhat infiltrated edge containing numerous typical tubercles with giant cells and also caseous and necrotic areas. The squamous epithelium lining the oesophagus ended abruptly at the edge of the ulcer. The floor was rough and densely infiltrated with small round cells among which a few areas of caseation, but no giant cells, were visible. The ulcerative process had not proceeded very deeply into the submucosa and was sharply bounded by a zone of fairly dense fibrous tissue which contained a few dilated vessels. In every section examined typical tubercles were found only beneath the still intact epithelium at the margins of the ulcers.

Tubercle bacilli were found in fair numbers between the squamous epithelial cells and in the tuberculous formation of the edge of the ulcer. In the actual base of the ulcer they were seen however only in very scanty numbers. A section cut through the infiltrated, but not actually ulcerated, area immediately above that of the preceding section showed in the mucous membrane patches of infiltration and caseation, with numerous typical tubercles and giant cells. In close proximity to, and in most cases in direct continuity with, these areas of caseation appeared gaps in the epithelium and basement membrane. In some such situations tubercle bacilli were found between and beneath the epithelial cells, a fact which seemed to suggest a primary surface infection rather than a direct downward extension from pharyngeal ulceration. A section through the extreme lower end of the oesophagus showed an intact epithelium and no signs of disease in the submucous or muscular tissue. In contrast to the microscopic appearances found in so-called aphthous ulceration of the oesophagus, there was in this case much less congestion and dilatation of the small vessels of the mucosa, much more round-cell infiltration, and a more sharply-defined marginal limitation both in depth and extent. The extent of the fibrous tissue bounding the tuberculous ulceration seemed to suggest a considerable degree of chronicity in the progress of the disease. After reviewing the possible methods in which oesophageal tuberculosis might arise, the authors thought that in the present instance the infection had occurred through the sputum.

Dr. HORTON SMITH in an examination of 200 cases of tuberculosis dying at the Brompton Hospital had found no oesophageal lesions. In Dr. Habershon's experience only 2 cases of oesophageal tubercle had been met with in 2,500 necropsies.

CONGENITAL TUBERCULOSIS.

Dr. F. W. ANDREWES exhibited the lungs of an infant which he had recently obtained from amongst the contents of the museum of St. Bartholomew's Hospital and which had not hitherto been adequately described. It was apparently an authentic example of congenital tuberculosis in the human subject—an exceedingly rare condition, though one well known to occur in certain of the lower animals. The specimen consisted of the thoracic viscera of an infant stated in the original catalogue to have died shortly after birth, a statement confirmed by the size of the organs and by the fact that the ductus arteriosis was still pervious. The tracheal and bronchial glands were enlarged and caseous, and the lungs contained numerous miliary tubercles. The histological appearances were characteristic of tubercle. The glandular lesions must evidently have arisen long before birth. Assuming that the disease was prenatal it was suggested that the infection had arisen from the fetus swallowing liquor amnii containing tubercle bacilli derived from a disintegrating lesion of the placenta. That the entrance of amniotic fluid occurred per os during fetal life had been established.

TWO SPECIMENS OF MALFORMATION OF THE HEART.

Dr. F. W. ANDREWES also showed the above. In one there was complete absence of the right auriculo-ventricular orifice, with a double orifice on the left side, the right ventricle being rudimentary, the foramen ovale widely patent, the interventricular septum perforated by a small aperture, and the ductus arteriosus practically closed. The two orifices connecting the left auricle and ventricle were provided with separate and well-formed valve curtains and chordae tendineae. The possible origin of this rare abnormality was discussed, and it was suggested by the author that it arose from faulty development of the three segments from which the septum between the right and left sides of the heart was formed. In the second case there existed a thick muscular septum separating the proper cavity of the right ventricle from the conus arteriosus, perforated only by a minute aperture admitting a good-sized probe. This form of pulmonary stenosis was evidently a true developmental anomaly and not due to fetal endocarditis.

CHOLESTEATOMA OF BRAIN.

Dr. H. M. FLETCHER recorded an instance of this form of new growth from a young man. The patient had been well until a fall, when he became comatose. Shortly before death the temperature rose to 106° F. All the organs were found at the necropsy to be healthy. There was excess of fluid in the lateral ventricles. The tumour lay above the corpora quadrigemina in connexion with the velum interpositum; it was about the size of a walnut, and consisted histologically of a thin layer of connective tissue, succeeded by a basement membrane and a layer of stratified squamous epithelium; the softer central mass was of laminated epithelial scales mixed with cholesterin. Some authors had related such tumours to endothelioma, but he thought they were rather related to dermoid cysts, though the psammoma was doubtless of endothelial origin.

Dr. F. J. POYNTON had seen two cases, one unaccompanied with any symptoms. He thought an explanation of the sudden onset of symptoms highly desirable.

Dr. F. E. BATTEN observed that the sudden onset of symptoms was not rare in the case of innocent tumours of the brain, and thought that pressure on the iter, etc., might be their explanation, or pressure leading to distension of the fourth ventricle.

Dr. C. OGLE remarked that in two cases (amongst others) of pineal tumour, heavy sleep had been a marked symptom; this apparently arose from insufficient draining of the ventricles.

The PRESIDENT referred to a case he had seen of melanotic tumour of the medulla in which no symptoms appeared until the patient became intoxicated; persistent coma then resulted.

HARVEIAN SOCIETY OF LONDON.

W. WATSON CHEYNE, C.B., F.R.S., President, in the Chair.

Thursday, December 18th, 1902.

VENOUS DYSTROPHY.

DR. A. MORISON exhibited a child 5 months old, who showed the dilated veins which a French author described as "venous dystrophy," and attributed to specific disease. Dr. Morison could find no evidence of specific disease in the case, and ascribed the malnutrition of the child and the increased intracranial pressure to overproduction of children by a delicate mother rather than to specific disease.

POST-DIPHTHERIAL PARALYSIS OF THE PALATE.

Dr. WILFRED HARRIS showed a woman, aged 24, who suffered with a sore throat, not diagnosed as diphtheria at the time, in January, 1900. A few weeks later she had difficulty in swallowing, and nasal regurgitation, with altered voice. Later on the muscles of the lips and eyes became affected. In November, 1901, she was treated by hypodermic injections

of strychnine, but she became worse. Now there was complete paralysis for reflex and voluntary movement of the palate. There was bilateral wasting and almost complete paralysis of the orbiculares palpebrarum, and less marked in orbicularis oris. The tongue was partially atrophied and weak. Sensation was diminished on the pharynx. The deep reflexes were all brisk, the plantar reflexes could not be obtained. Electrical reaction was very slight to strong faradism in the soft palate, with well-marked reaction to galvanism, K > A. Very slight reaction to faradism in orbiculares palpebrarum with better-marked reaction to galvanism, K > A. Under treatment with galvanism of the affected muscles for five months, and with potassium iodide in 10-gr. to 15-gr. doses three times a day the condition had scarcely altered.

Peripheral Neuritis.

Dr. Risien Russell showed a case of peripheral neuritis with paralysis of the right side of the face of peripheral type, paralysis of the right external rectus, slight paresis of the left external rectus, and well-marked double optic neuritis subsiding into atrophy. Under treatment the paralysis of the face and of the external recti had recovered, and the limbs were also improving, though the patient was still unable to stand or walk. No cause had been determined, but the appearance of the patient and the features of the paralysis of the limbs made alcohol most probable.

Resection of Supraorbital Nerve for Neuralgia.

Dr. E. Cautley showed (for Mr. P. L. Daniel) a woman, aged 63, on whom resection of the supraorbital nerve had been performed for severe neuralgia. The pain followed a bad attack of herpes in the region supplied by this nerve, and was accompanied by marked trophic changes in the skin and hair, affecting also the blood vessels. Medical treatment proved useless. There was an extensive scar of the right side of the forehead and right eyebrow, with lachrymation and blepharospasm, loss of hair, and considerable thickening of the scar of a keloid nature, with vascular maculae. At the operation two nerves were found, and about half an inch excised. The blood vessels were much compressed. The operation had done no marked good to the pain, but the nutrition of the affected parts had somewhat improved.

Mr. Jaffrey had seen marked improvement in certain cases of severe trigeminal neuralgia by the injection of osmic acid into the affected nerve.[1] In a case of his own where the third division of the fifth nerve was affected he trephined the ramus of the lower jaw and injected osmic acid into the inferior dental and gustatory nerves with complete success.

The cases were also discussed by Mr. Campbell Williams and Dr. G. A. Barton.

SOCIETY FOR THE STUDY OF DISEASES IN CHILDREN.

A. H. Tubby, M.S., F.R.C.S., in the Chair.

Friday, December 12th, 1902.

Tuberculous Peritonitis.

A discussion on this subject was opened by Dr. E. Cautley, who dealt with the etiology. He remarked that since the tubercle bacillus was so extremely common, a vulnerability to the microbe must play as important a part as exposure to the possibility of infection. To fortify the body, therefore, by good food and clothing was as important as war against the bacillus outside the body. How far peritoneal tuberculosis might be due to invasion by the bacillus of bovine tuberculosis he considered still an open question.

Dr. Theodore Fisher (Bristol) followed with a few facts in connexion with the morbid anatomy. Eighty cases of tuberculosis of the peritoneum, which clinically had been cases of abdominal disease, had been analysed. These had been taken not only from the Bristol Royal Infirmary, but, through the kindness of Dr. Lauriston Shaw and Dr. Lazarus-Barlow, also from Guy's and the Westminster Hospitals. At the time of death the great majority of cases proved to be of the adhesive variety, although in many fluid had been present at some time during life. In 8 cases, that was in 10 per cent. of the number, suppurating caseous masses had opened into the intestines, and in another 5 cases perforation of intestinal ulcers had occurred. Intestinal ulcers were present in about half the cases. The great omentum in very few instances was sufficiently thickened to form anything like a tumour. In 17 cases the lungs were quite free from disease, and in 7 others the tubercles were limited to the pleurae, but in the remainder there was disease of the lungs, which, however, was either recent, or, when old, generally limited in character. There were 5 cases of tuberculous disease of the Fallopian tubes in adult females, but apparently these lobes were more commonly affected in children.

Dr. Chaffey (Brighton) had analysed 118 cases of tuberculosis in children, and found tubercle of the peritoneum in 45. Of these 45 cases, in 22 the disease was chronic; in 13 of these 22 chronic cases intestinal ulcers were present, and in 17 the lungs were diseased. In the 23 cases of recent tuberculosis of the peritoneum the lungs were affected in every instance.

Dr. James Barr (Liverpool) dealt with the diagnosis. The most striking feature was swelling of the abdomen, which, however, might be moderate in degree. Pain was generally absent in the early stages, but there was occasionally some tenderness. At first the appetite might be good and there might be little indication of ill-health, but as the abdomen increased in size the appetite was lost, the patient wasted, and colicky pains associated with constipation might be added. These pains, however, might be removed by diarrhœa, only to return with a return of the constipation. The temperature rarely rose above 101°, and might be normal or subnormal in the morning. These remarks applied especially to the ascitic variety. In the adhesive form there were various degrees of resistance in several places over the abdomen, and the thickened omentum as a sausage-shaped mass might occasionally be felt; localized collections of fluid, when present, were generally in the lower half of the abdomen. In cases in which emaciation had been very marked improvement rarely took place, but Dr. Barr had seen recovery after the bursting of an abscess at the umbilicus, and also in a case where a faecal fistula had formed in the same situation. A serious symptom was the occurrence of purpuric spots on the extremities and flanks.

Dr. George Carpenter referred to many cases which had been under his own care, and showed sketches illustrating what had been felt on abdominal palpation. In many of the slighter cases the true nature of the disease could only be recognized on combined rectal and abdominal palpation.

Dr. Porter Parkinson on looking over the notes of 22 cases had been struck with the somewhat rapid onset. The average history of 19 cases extended only over three and a-half weeks. He thought the occasional presence of enlarged veins over the upper half of the abdomen worthy of note, and suggested some interference with the portal circulation. An interesting case of colloid carcinoma of the peritoneum occurring in a girl aged 12 years was referred to. Clinically it had been impossible to distinguish it from a case of tuberculous peritonitis, but a nodule removed at the time of the exploratory operation revealed the nature of the disease. Of his 22 cases, 14 were under the age of 4 years.

Dr. G. A. Sutherland read a paper on the prognosis of tuberculous peritonitis. Forty one cases treated at the Paddington Green Children's Hospital had been examined. Of these 41 cases, 29, or 70 per cent., recovered, 11 died, and 1 was unrelieved. Of the cases treated medically, 22 recovered and 4 died; of those surgically treated, 7 recovered and 7 died. The word "recovery," it was pointed out, did not by any means necessarily indicate permanent recovery. The 29 cases were, however, well when looked up after leaving the hospital. After the discharge of some only a few months had elapsed, but in others it extended to years, in one over six years. Dr. Sutherland afterwards briefly dealt with the various types of tuberculous peritonitis, referring to features which might be considered to be of good or of unfavourable omen. Some complications such as intestinal ulceration, extensive caseation of mesenteric glands, and localized suppuration were, as might be expected, of serious import. In cases in which marked pulmonary lesions proved to be present the prognosis was unfavourable, but when disease was limited to the pleura the outlook was not necessarily bad.

Dr. Robert Hutchison thought a clear distinction must be drawn between those cases in which tuberculous peritonitis was primarily in the abdomen and remained there, and in those in which it was merely a part of widespread tuberculosis. With regard to the ascitic form of the disease, he thought it probable that a simple chronic peritonitis might exist. It did not necessarily follow that all cases of peritoneal effusion in children when the fluid disappeared had been tuberculous in nature.

A communication from Dr. James Carmichael (Edinburgh) stated that in 48 of his cases of tuberculous peritonitis there

[1] *Lancet*, vol. ii, 1899, p. 1220.

had been 9 deaths, and in 13 of the cases recovery. The patients had been kept under observation for a prolonged period, and remained in perfect health.

Dr. LEONARD GUTHRIE read a paper upon the medical treatment. He dealt largely with the relative value of medical and surgical treatment. It was not considered that surgical treatment was of more value than medical. He mentioned that it had been suggested that the cases which recovered under medical treatment were not tuberculous, but he thought it a little hard that the physician should be right when he called the surgeon in, and wrong when he did not. With regard to medical treatment, it was a matter for opinion whether such drugs as mercury or arsenic did any good. Medical treatment was in the main confined to treatment of symptoms, and after recovery to attention to hygiene. While, however, medical treatment was in the main symptomatic, it was doubtful whether the value of surgical treatment was more than mythical. The surgeon, like an ancient Etruscan Haruspex, after opening the abdomen, merely gazed at the entrails of his victim, and discovered propitious omens for the future. Yet possibly the letting out of fluid might do good, but there was no reason why simple puncture should not answer quite as well.

Dr. CHRISTOPHER HAYWARD (Manchester) thought tonic treatment to be of good, and he considered a combination of bromide of arsenic and bromide of gold valuable in chronic tuberculous affections.

Mr. WATSON CHEYNE stated that if the physicians had discovered that tuberculous peritonitis was a curable disease, they should thank the surgeons for the discovery. Six years ago he had been unable to find any statistics indicating the curability of the disease. When the physician had given up a case of tuberculous peritonitis as hopeless he brought it to the surgeon, and to the surprise of both, perhaps, the case often recovered. Since it was the worst cases which were brought to the surgeon the statistics of those medically treated and those operated upon could not be compared. In spite of the change of front of the physicians, Mr. Cheyne was not yet going to admit that laparotomy was of no value in tuberculous peritonitis.

Mr. ABBOTT thought the cases which were most benefited by operation were those in which the disease started in the pelvic organs of the female. Clinically tuberculous peritonitis occurred most frequently in females, but fatal cases were more common in males.

Mr. WHITELOCKE (Oxford) thought with Mr. Abbott the cases specially marked out for operation were those in which the Fallopian tubes or ovaries were diseased, and he gave some details of the way he dealt with the diseased structures.

SOUTHERN BRANCH OF THE BRITISH MEDICAL ASSOCIATION: SOUTH-EAST HANTS DISTRICT.

A. LLOYD OWEN, M.D., in the Chair.

November 11th, 1902.

INFANTILE SCURVY.

DR. TULLIS read a paper on this subject. He said Cheadle, Gee, and Barlow were the first to publish cases of the disease; and in 1895 Barlow described it fully in his Bradshawe Lecture. Since then several other observers had added to the store of knowledge by publishing cases, and working out the etiology of the malady. Now it was recognized as an important morbid condition, and as one of the many dangers that beset the hand-fed infant. Infantile scurvy was a constitutional disease due to prolonged improper diet in infants. Its salient symptoms were marked hyperaesthesia, pseudo-paralysis of the lower extremities, swellings and ecchymoses about the joints—chiefly the knees and ankles—spongy gums, and profound anaemia. He had recently met with three cases, each of varying degree of severity, but all clearly examples of scurvy. A typical one was the following:

G. D., female infant aged 9 months, had been a difficult child to rear, and as various combinations of diluted cow's milk had been tried and failed, she was dieted on a well-known proprietary infant's food. She did well on this diet at first, but at the eighth month the troubles began. The child became restless and peevish, cried if touched, and screamed if lifted out of her cot. On examination it was found that the left leg was never voluntarily moved, and that passive movement caused great pain. There was a large spindle-shaped swelling just above the knee-joint which was evidently tender to touch. The long axis of the swelling corresponded with that of the femur. The right leg was almost as helpless as the left, and there was a well-marked swelling at the lower end of the thigh. Dentition was arrested, and the gums were spongy and swollen. The temperature was subnormal, and the child was anaemic and feeble. The diet, which was found to be almost entirely of a patent food for infants, was altered to one of diluted fresh cow's milk with whole-meal flour, raw meat juice, broth, eggs, juice of grapes and of oranges. The result was almost instantaneous, recovery setting in at once, and in a few weeks there was complete restoration to health. The pain and pseudo-paralysis disappeared very rapidly, and in a very short time after the change of diet the child moved both legs freely.

The next case was a much milder one. The infant, aged 8 months, had lost the use of its left leg, and there was a swelling above the knees. It cried if moved, and resented strongly being in any way handled. It came to him with a suggested history of a blow to its leg, but he could get no evidence to support the suggestion. The child had been fed on the same proprietary food with a small proportion of sterilized cow's milk and water. Altering the diet by stopping the patent food and substituting a cow's milk dietary as in the former cases brought about a very speedy recovery, three or four days sufficing to show marked improvement.

The last case was a bad one, and previous to his seeing the child a diagnosis of tuberculous mischief of the spinal cord had been made. The pseudo-paralysis was in this case well marked in both legs, and the child lay absolutely helpless. This paralysis no doubt led to the diagnosis of spinal trouble. The infant screamed when any attempt was made to move her as she lay in her cot listless and helpless. She was anaemic and dentition was arrested. Dr. Tullis found the diet had been the same patent food with a little milk, and raw meat juice. The treatment adopted was the same as in the two previous cases quoted and the results were as rapid and complete. The patient responded at once to the change of diet and she was now a healthy and strong child.

No doubt the cause of infantile scurvy was improper diet, and the proprietary foods which had flooded the market and condensed milk were the chief offenders. Dr. Eustace Smith had informed the author that he had seen cases arise from an exclusive diet of humanized milk and sterilized milk, and Dr. Tullis himself had known of cases produced by the long use of peptonized food. Dr. Eustace Smith held that the process of boiling or sterilizing removed from milk a great deal of its antiscorbutic properties, and he strongly urged the use of unboiled fresh milk in the feeding of infants. The disease appeared to be more frequently met with now than in former times, and Dr. Tullis firmly believed that the modern tendency of parents to give patent foods with or without a certain proportion of cow's milk was responsible for this increase. These patent foods were usually so easily prepared and frequently so easily tolerated, that one could hardly blame a distracted mother for using what she was assured by advertisements was a perfect food, when she saw her infant wasting from errors in the administration of cow's milk or from a want of assimilative power on the part of the infant's mucous membrane. Scurvy showed itself from about the seventh to the twentieth month of life. In Dr. Tullis's experience it was most frequent on the eighth and ninth months. The diagnosis was not as a rule difficult, but it might be confused with rheumatism, rickets, spinal diseases, and traumatism. The essential lesion was a subperiosteal extravasation of blood which produced the characteristic swellings of the disease. The prognosis was most favourable. The treatment was simple. Rational diet, adapted to the age of the child, avoidance of proprietary food, and the administration of an abundance of fresh cow's milk, with baked flour or rusks; meat juice, juice of grapes and oranges, and, if the child was old enough, potato mashed in gravy, and green vegetables. The results of careful diet and hygiene were most gratifying. The very worse cases rapidly responded to the proper diet. Drugs were unnecessary, except perhaps the use of iron in the convalescence to hasten the disappearance of the anaemia.

CASES.

The following cases were shown: Dr. J. WARD COUSINS: Patient after operation for compound fracture of the skull.—Mr. C. P. CHILDE: Two cases of cleft palate after operation, four cases of nephropexy, excision of tuberculous glands from the anterior triangle, Asch's operation for deviation of the nasal septum.

SPECIMENS.

Dr. J. WARD COUSINS showed several calculi which he had recently removed.—Dr. J. T. LEON exhibited some very fine stained specimens of tinea tonsurans and favus.—Mr. CHILDE demonstrated the operation for removing tuberculous cervical glands *en masse*.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

H. MALET, M.D., President, in the Chair.

Thursday, December 11th, 1902.

AMPUTATION AT THE HIP JOINT.

MR. HASLAM showed a young man, aged 19, on whom he had performed amputation at the hip-joint for a severe smash. Reference was made to two similar cases recently under his care, one a man of 57 and the other a man of 20, both of whom had recovered. Attention was drawn to the necessity of first treating the initial shock caused by the accident, and of amputation as soon as the condition had sufficiently im-

proved. Saline injection and the free use of strychnine subcutaneously were strongly recommended. The amputations were all done by Furneaux Jordan's method, and the bleeding controlled by Wyeth's pins and elastic tourniquet.

RODENT ULCER TREATED BY THE X RAYS.

Mr. HALL-EDWARDS showed a woman, aged 55, suffering from rodent ulcer of the nose and eyelids, which had greatly benefited by exposure to the *x* rays. A mask of plaster-of-paris bandage and tinfoil was fitted, and the tube (a hard one) excited by means of a 12-in. spark coil, the electrolytic interruptor being used with a current of 10 ampères at a pressure of about 60 volts. The treatment was begun in August last, and continued at intervals for three months, each exposure lasting about ten minutes. Photographs of the case at various stages were also shown.

TUBAL GESTATION.

Dr. MALINS showed a case of tubal gestation, situated at the ampulla. The tube contained a mole the size of a small hen's egg, and exhibited marked erosion and thinning at this spot. The abdominal ostium was closed by adhesion to neighbouring parts. The opposite tube was dilated into a large hydrosalpinx, the end being firmly sealed so as to form a smooth, rounded shape. Abdominal section was performed before rupture. The patient did well.

LARGE VESICAL CALCULUS.

Dr. DEANESLY showed an enormous stone removed by suprapubic section from a man aged 37 years. In size and shape it resembled a large apple dumpling, and it weighed immediately after removal 17 ozs. It was over 3 in. in each diameter and 10½ in. in its greatest circumference. It appeared to be composed mainly of urates. The man had suffered from pain and difficulty in micturition ever since he could remember, but had continued laborious work until a few months before operation. At the operation the anterior and right lateral bladder wall was found increased to a thickness of ¾ in., and the section suggested that it was infiltrated with cancerous growth. This was confirmed by microscopic examination, and by a renewed examination of the bladder under an anaesthetic, when it was found that an ulcerated growth had eaten through the bladder wall on the right side and laid bare the obturator fascia. Death took place from exhaustion three weeks after removal of the stone, and the necropsy revealed advanced dilatation of both ureters, pyelitis, and destruction of both kidneys.

A CRITICISM OF CURRENT DOGMAS CONCERNING HERNIA.

Dr. DEANESLY read a paper with the above title, of which the following is a synopsis: Use of term "rupture" misleading; contrast post-operative ventral hernia with common inguinal hernia; primary factor in the one traumatic, in the other congenital; all oblique inguinal hernias really due to pre-existing patent funicular process; perhaps femoral hernia also due to congenital malformation; influence of this view on treatment; operation *versus* truss; operation for radical cure should be based on sound etiology; summary of results of 120 consecutive operations for radical cure by Kocher's method.

Mr. JORDAN LLOYD, Mr. HEATON, Mr. LEEDHAM GREEN, Mr. BENNETT MAY, Mr. MORRISON, Mr. THOMAS, and Dr. EDGE took part in the discussion; and Dr. DEANESLY replied.

CASES AND SPECIMENS.

Mr. JORDAN LLOYD showed a large calculus removed from the prostatic urethra, in which situation it had been formed, and a cast of which it really was. A sound passed over it into the bladder, so that the stone could not be struck by the beak of the instrument in the ordinary manner. The bladder was opened above the pubes, and the stone could not be felt until the examining finger was passed from behind towards the urethral canal.—Mr. PLUMMER showed a hairpin and calculus which he had removed by suprapubic cystotomy from a woman, aged 20. The points of the hairpin had penetrated into the vagina. A drainage tube was inserted from the suprapubic wound through the urethra. Uninterrupted recovery followed.—Dr. FREDERICK EDGE showed Bossi's dilator, and made remarks on its value in cases of abortion, especially in the fourth, fifth, and sixth months. He mentioned that it had been used by Professor Simpson, of Edinburgh, with great success for rapid delivery in eclampsia. Dr. Edge had used it three times, and found it a powerful, speedy, and efficient dilator of the cervix.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

H. J. CAMPBELL, M.D., President, in the Chair.

Tuesday, December 16th, 1902.

THE RELIEF OF PAIN IN CASES OF BRAIN TUMOUR.

DR. H. C. MAJOR read a paper on this subject. He alluded to the intolerable nature of the pain in cases of cerebral tumour, and advocated, in cases where the tumour could not be localized or could not be removed, in the first place the use of mercury with potassium iodide, together with full doses of phenacetin, antipyrin, etc. If these failed to give much relief he then considered that trephining should be performed with a view to relieving the pressure. The operation should be performed fairly early, before the patient was exhausted by the pain and vomiting. He quoted Sir Victor Horsley as saying that the operation had a satisfactory result in the majority of cases, and that blindness was averted and other symptoms relieved.

ACUTE CROUPOUS PNEUMONIA.

Dr. EURICH introduced a discussion on this subject. After showing a number of cultures of some of the organisms of acute pneumonia, he said it was indisputable that pneumonia was an infective disease. Numerous organisms had been found in association with pneumonia, but it had not been shown that any one of them was specific strictly speaking, and consequently the serum treatment was not likely to be of much use. It had not been found possible to immunize animals against all strains of pneumonic organisms. The mere presence of pneumococci in sputum unless in a practically pure culture was of no diagnostic value. The diplococcus might be found in the sputum of healthy people, but it was doubtful if it occurred in healthy lung. The injection of pneumococci into the lungs did not produce pneumonia unless the walls of the bronchioles were previously damaged by the injection of some acrid substance.

Dr. R. HONEYBURNE read a paper on the symptomatology of pneumonia. He considered that hyperpyrexia was not a specially dangerous symptom, many cases manifesting a high temperature on the first or second day. The pulse lagged behind the rising temperature, and the respiration followed rather the extent of the changes in the lungs than the course of the fever. In cases of apical pneumonia friction sounds were rarely heard, though frequently so in cases of basal pneumonia. In describing the sputum, it was stated that when the sputum was deeply-coloured and thin it was of bad import; fairly copious haemoptysis was not considered of specially grave significance. Should the fever continue for more than ten days, it was probable that some complication was present. Dr. Honeyburne considered that the case mortality of lobar pneumonia, in the Bradford district and in private practice, was not more than 10 per cent. Complications were spoken of as few and rare, pericarditis being one of the most serious.

Dr. H. ANGUS read a paper on the treatment of pneumonia. He spoke of pneumonia as a general disease, the brunt of which might fall upon any part or parts; the rational treatment would therefore aim at the destruction or diminution of the poison in the system or at neutralizing its effects. In reviewing the history of the remedies in vogue in the past, Dr. Angus suggested that the copious bleedings once practised possibly had the same effect on the blood as the modern practice of saline injections, namely, increasing relatively the watery constituents. The treatment by alcohol in large doses, and the "expectant" treatment were reviewed, also the treatment by antipyretic drugs. Quinine, creosotal, and salicylic acid were mentioned as drugs given to act as antiseptics. The use of antipneumonic serum had not been very successful. In the symptomatic treatment, pain might be relieved by strapping the side. If dyspnoea was due to the large amount of lung involved, relief might be obtained by inhalation of oxygen; but this method, though apparently reasonable, had fallen far short of expectation in its results. In the treatment of the failing heart, hypodermic injections of strychnine and large doses of the tincture of digitalis were mentioned. Dr. Angus did not regard alcohol as a heart stimulant, but as an agent which went to soothe the nervous system. Sleeplessness and delirium should be treated by alcohol and bromides and with cold sponging. The use of opium was deprecated in bad cases, but heroin was suggested as being relatively free from the objections to morphine and opium. On the whole, Dr. Angus advocated the securing of as complete physiological rest for the patient and his organs as possible. He deprecated fussing nursing, frequent changing of applications, and the overloading of the patient with food, particularly drinks. Care must be taken to detect the occurrence of complications and sequelae, particularly empyema.

Dr. FARROW remarked that in his experience the detection of streptococci in the sputum was a very unfavourable sign.

Drs. Bell, Goyder, Bampton, Mercer, Crowley, and Bonner also made remarks; and the readers of the papers replied.

CEYLON BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

W. G. Van Dort, M.D., President, in the Chair.

Saturday, June 7th, 1902.

Suppurative Phlebitis of the Spermatic Cord.

Dr. H. George Thomasz read a paper on this subject. He drew attention to the supposed rarity of the disease, and to the lack of literature on the subject, and to the number of cases which he had seen recently. He said that the diseased condition manifested itself without any premonitory symptoms in some cases and ran a rapid course, and unless the patient was subjected to an immediate operation the case was sure to end fatally. The great danger was that this serious malady might be overlooked or mistaken for less serious ailments. One great danger was to mistake it for typhoid fever. In regard to etiology, he said the disease occurred in young adults about 30 years of age, who had varicocele, and was brought about by a strain, which apparently led to some injury to the tissues locally, whereby suppurative micro-organisms were enabled to invade the tissues. Proceeding to deal with the physical signs, he said the scrotum was found to be much swollen, and tender. The cord was thickened, painful, and tender. The skin was oedematous, reddish in colour, and had a shining appearance. In early stages it was easy to demonstrate that it was the cord and not the testicle which was affected. The swelling began about the epididymis, and spread upwards along the cord. It was rare to get a case in the early stage, because the swelling so rapidly spread and all landmarks were obscured; the temperature rose rapidly; the pulse was rapid and soft; the tongue was dry; the skin was hard and dry; the expression was anxious. The abdomen was often distended from constipation. Vomiting, jaundice, and delirium might be present. The author next considered the symptoms. The pain was not merely located at the seat of the disease, but in the loin and the side of the abdomen. Seventy-five per cent. of the cases were on the left side. The prognosis was very grave, and if the case was left alone, fatal. The operation consisted in removal of the testicle and as much of the diseased cord as possible. After the operation the temperature usually dropped, and the other symptoms rapidly disappeared. Sometimes, however, delirium set in, and death resulted from systemic infection.

Glasgow Southern Medical Society.—At a meeting for the session on December 11th, 1902, Dr. M'Gilvray, President, in the chair, Dr. Crawford Renton showed a number of surgical cases which he had treated in the wards of the infirmary. Among them was a man who had been admitted to the infirmary suffering from a severe injury in the right lumbar region, received by falling down the hold of a ship. For the first five days he had a feeble pulse, elevation of temperature, and bloody urine; then the pulse, temperature, and urine became normal. On the tenth day he had a sudden seizure of bloody urine, and became collapsed. Dr. Renton injected saline solution subcutaneously; exposed and removed the kidney, which was found to be almost torn through. The man made a good recovery, and expressed himself to the meeting as being as well as ever he was. Dr. Renton pointed out that in connexion with many cases of ruptured kidney the symptoms subsided for a certain number of days, then manifested themselves with greater severity as in the case shown. Another case shown was that of a man who had been admitted suffering from urgent renal symptoms. Blood had never been passed, but the urine contained traces of albumen. The case was radiographed, when the presence of a large stone was shown, which was removed, the patient quite recovering. Dr. Crawford Renton said that in some cases of marked pain in the renal region it was difficult to determine the cause, as many cases simulating renal calculi were found on exploration to be due to the presence of inflammatory adhesions round the kidney, the separation of which from the kidney caused the pain to disappear. Several cases of complete recovery from acute tuberculous peritonitis were then shown, the tubercles entirely disappearing after the admission of light into the abdomen by an incision. In connexion with the radical cure for femoral hernia, Dr. Renton expressed his great satisfaction at the results he had obtained by the operation for the radical cure introduced by Professor Roux, of Lausanne. This consisted in exposing and removing the hernial sac, then passing a metal staple obliquely through Poupart's ligament, and hammering it into the pubic bone, thereby effectively and permanently obliterating the canal. A most interesting case in connexion with some cases of intestinal obstruction which were shown was that of a young woman who was literally "corked up." The patient was admitted as a case of appendicitis. She had pain and swelling in the right iliac region, rapid pulse, and elevation of temperature. The morning after her admission the symptoms greatly subsided when Dr. Renton decided to wait before operating. Under treatment the patient passed a great number of pieces of cork, varying in size from a quarter to three-quarters of an inch in length, the quantity being sufficient to fill a glass jar of the capacity of eight fluid ounces. It turned out that she had been in the habit of chewing pieces of cork while engaged at her occupation of bottling beer. These pieces she had swallowed from time to time which, gradually accumulating, caused the obstruction.

Nottingham Medico-Chirurgical Society.—At a meeting held on December 17th, 1902, Mr. J. Mackie, President, in the chair, Dr. H. Handford showed (1) a man suffering from alcoholic neuritis who had exhibited pronounced muscular inco-ordination, but had much improved under galvanic treatment and general tonics; (2) a boy, aged 9, the subject of congenital syphilis with rhagades about the mouth, who resembled a case of pseudo-hypertrophic muscular paralysis as regards development of legs and difficulty in assuming the erect attitude from sitting, but knee-jerks were increased and ankle clonus present: there were no eye symptoms. The cases were discussed by the President, and Drs. W. Hunter, W. B. Ransom, and C. H. Cattle.—Dr. C. H. Cattle showed and read notes (1) on a case of early locomotor ataxy in a man, aged 49, who had no ataxy but had had lightning pains, loss of knee-jerks, and Argyll-Robertson pupils; illness dated back five years, following influenza; (2) a male cretin, aged 12; (3) a woman, aged 30, suffering from acromegaly of three years' standing, the bones of face, hands and feet, sternum and ribs all appearing enlarged, with increased curvature of upper dorsal region of spine; the thyroid was large, eyes rather prominent but no other eye symptoms; skin was sallow and thick, no sugar or albumen in urine but increased quantity passed; amenorrhoea for past six months. The case was discussed by the President, Drs. W. B. Ransom, and H. Handford; and Dr. Cattle replied.—Mr. A. R. Anderson read an account of a case in which he had removed the spleen for splenic anaemia. The patient was a woman, aged 30, who had developed symptoms of the disease about a year previously. Splenic enlargement had been noted for some months. At the time of operation the spleen reached the mid-abdominal line, and downward as far as the crest of the ilium. There was no enlargement of the lymph glands. A repeated examination of the blood confirmed the diagnosis. An elevation of the evening temperature to 101·2° was a feature of the case. The spleen, which was removed on July 9, 1901, weighed 2¾ lb. Afterwards there was considerable apparent improvement, with a normal temperature at night, but she subsequently relapsed. She left the hospital in a month's time, and died a month or so later apparently from cardiac failure.

Leeds and West Riding Medico-Chirurgical Society.—At a meeting on December 12th, 1902, John Irving, M.B., President, in the chair, Dr. A. Bronner (Bradford) read a paper on the use of Haab's giant magnet in extracting small pieces of iron from the eyeball. The point of the magnet was placed in front of the cornea, and the electric current turned on slowly and gradually. The foreign body, if in the vitreous, was drawn to the posterior surface of the lens through the suspensory ligament, behind the iris into the anterior chamber. The old-fashioned method of making an incision in the sclera and introducing the small point of the magnet into the vitreous was dangerous, and often caused inflammation of the vitreous and detachment of the retina. The use of the giant magnet required a good deal of experience and patience. Dr. Bronner thought that in a large number of cases the eyeball could be saved if the foreign body were extracted at once and with care. He read notes of several cases which had come under his care. The giant magnet used at the Bradford Eye and Ear Hospital was a modification of Haab's by Hirschberg.—Mr. A. L. Whitehead discussed the paper; and Dr. Bronner replied.

DR. MANTLE (Halifax) showed a man, aged 43, suffering from syringomyelia. The patient, who was under his care at the Royal Halifax Infirmary, had also been an in-patient at the National Hospital for Paralysis under Dr. David Ferrier. He was a hand worker, like the majority of these cases, and worked in a boot manufactory, his employment necessitating his grasping with both hands cold steel knives. His first symptoms commenced four years ago in vasomotor and trophic disturbances of the hands. Coldness of the fingers and pains in the upper extremities were followed by muscular wasting, extending to the shoulders and back. Sensory disturbances in the loss of sensation for pain, heat, and cold developed, causing him to frequently burn his fingers. The sense of touch was unimpaired, distinguishing the condition from Morvan's disease. Scoliosis of the spine in the dorso-lumbar region was well marked, and the condition now was one of progressive muscular atrophy with sensory changes. The reflexes of the lower extremities were exaggerated, and the legs becoming spastic.—The following were also shown: Dr. ALLAN: (*a*) Heart showing stenosis of mitral and tricuspid valves; (*b*) aneurysm of aortic arch, the arch giving off the thyroidea ima; (*c*) specimen showing musculus sternalis.—Dr. A. E. PEARSON: (*a*) Colon from case of ulcerative colitis; (*b*) ileum from case of enteric fever; (*c*) vaccination scar measure for rapid determination of scar area; (*d*) fetus (4 months) from case of variola confluens.—Mr. CONSTABLE HAYES: Two cases of choroido-retinitis.—Dr. PAUL ANNING: (*a*) Specimen of twin pregnancy (6½ months); (*b*) specimen of two separate and unruptured bags of membranes and placenta.—Mr. R. LAWFORD KNAGGS: (*a*) Ruptured liver; (*b*) large abscess of liver communicating with a bile duct; (*c*) diaphragmatic hernia of the liver; (*d*) ulceration and perforation of the gall bladder by a stone. Fatal peritonitis.—Dr. CROWLEY (Bradford): A specimen of tabetic arthropathy.—Mr. PRIESTLEY LEECH (Halifax): (*a*) Case of carcinoma of abdominal wall involving colon and small intestine; (*b*) stomach and heart from a case of perforated gastric ulcer which was operated on.—Dr. CHURTON: A case of Graves's disease treated by anti-thyroidin.—Mr. B. G. A. MOYNIHAN: (*a*) Large semi-solid renal tumour; (*b*) stone removed from the ureter; (*c*) several stones removed by lithotrity; (*d*) 218 stones removed from a perineal abscess; (*e*) calculus removed from the prostate; (*f*) a specimen from a case of complete prostatectomy.

Mr. A. E. PEARSON and Mr. J. F. DOBSON read papers on isolation hospital and return fever cases and on intussusception of Meckel's diverticulum respectively.

REVIEWS.

SURGERY.

DR. LENZMANN has succeeded in producing an eminently practical treatise on the various inflammatory affections of the appendix and of the structures in its immediate neighbourhood.[1] His facts are drawn largely from his own practice, and he has given much thought to extracting from his varied experience very useful knowledge which could not have been turned to better advantage even by writers of more ambitious treatises. Dr. Lenzmann gives references to writers already known to English readers. The greater part of the volume is devoted to the study of affections of the appendix, but Dr. Lenzmann does not hesitate to retain the terms "typhlitis," "perityphlitis," and "paratyphlitis," and so exposes himself to the common criticism that he tries to define as clinical entities conditions which have for most physicians separate characters in the *post-mortem* room only, and not at the bedside. A brief account is given at the end of the volume of such inflammatory affections as tuberculous, typhoid, and dysenteric ulceration in the ileo-caecal region, and also of its invasion by actinomycosis. Though it is admitted that a non-perforative appendicitis is milder, in many cases in its effects than a case of perforative disease, yet Dr. Lenzmann is not against accepting the converse opinion. He also strongly combats Sahli's statement that, because there is an exudation to be made out clinically there is necessarily a collection of pus; he holds that there may be simply fibrin or serofibrin, and still believes that many cases of appendicitis can be treated without surgical interference. He might have been more explicit in his recognition of what we have been taught to call ultra acute cases, for it is often difficult to decide whether or not to interfere on the first or second day in a case presenting very severe symptoms. From the account given on p. 127 of such a case, it would seem that Dr. Lenzmann would operate at once. In the latter part of this treatise, surgeons will find a very complete account of the author's method of preparation for the operations he practises and of the after-treatment. Very much has been written of late years on appendicitis, but there is always room for contributions such as this which are based upon a large clinical experience, and give to the world a complete account of a series of cases sometimes of extreme difficulty, together with the conclusions of so competent an observer.

[1] *Die Entzündlichen Erkrankungen des Darms in der Regio ileo-caecalis und ihre Folgen. Eine Studie aus der Praxis für die Praxis.* [The Inflammatory Diseases of the Intestine occurring in the Ileo-caecal Region and their Sequelae. A practical study]. By Dr. Richard Lenzmann. Berlin: August Hirschwald. 1901. (Demy 8vo, pp. 371. 3 Coloured plates. M. 10.)

An atlas of Roentgen ray pictures illustrating diseases of bones has been issued by Dr. ALBAN KÖHLER[2] of Wiesbaden, with two objects. In the first place it is intended for the general practitioner who has seen good radiographs of bone diseases while at the university, but subsequently has had few opportunities of keeping up his knowledge on the subject; and in the second place the author intends the atlas to be used as an aid in diagnosis. Fractures are not treated of, as there is, it is said, not often much doubt with a good radiograph as to the existence or otherwise of a fracture. The subjects written on and illustrated are the following: Tumours of bone, atrophy, tuberculosis, spina ventosa, osteomyelitis, syphilis, osteitis deformans, rickets, osteomalacia, and some deformities. According to the plates the Roentgen-ray pictures do not afford definite diagnostic distinctions between enchondroma and sarcoma, nor can much information be gained from the plate illustrating atrophy of the bones of the feet. But some of the photographs of tuberculous osteitis are particularly good, notably those on Plate VI. Exostoses give fair pictures, and so do sequestra due to necrosis, and deformities such as syndactyly and macrodactyly afford good subjects for Roentgen-ray pictures. On the whole this atlas will serve the purposes for which it is issued, and we congratulate the author and the publishers on its appearance.

Sir WILLIAM BENNETT'S *Lectures on the Use of Massage and Early Passive Movements in Recent Fractures, and Other Common Surgical Injuries*,[3] describes the mode of treatment originally advocated by Lucas-Championnière; whilst protesting against the notion that he is an enthusiast with regard to it, Sir William Bennett defends it as sound in theory and advantageous in practice. In this new edition the reader will find a general introduction on the subject of the treatment of recent fractures by massage and movements, which, together with the original lectures, will afford a good idea of the indications and the practical details of this surgical innovation. This edition contains also a lecture, not previously published, on the rational treatment of stiff joints by forcible manipulation.

Mr. HOWARD MARSH has collected a series of *Clinical Essays and Lectures*,[4] which from time to time have been separately published in the *Reports* and *Journal* of St. Bartholomew's Hospital, and in other periodicals. The contents of the book include, it must be confessed, some two or three slight papers, but on the whole they are of a high order, and may fairly be regarded as important contributions to the modern literature of surgery and surgical pathology. The author has exceeded his modest aim of adding something to what is already known in the diagnosis and treatment of disease. He has not only added much to our knowledge, but has afforded much valuable comment and suggestion, which ought to stimulate further research and give further enlightenment on many of the subjects with which he deals. Of the twenty chapters, ten deal with lesions of bones and joints. That on the "present uses of excision of the knee-joint" defines, according to the latest views, the present position of an operation which, it is pointed out, affords a typical illustration of evolution in surgical practice. Although the indications for excision of the knee recognized by Fergusson and his immediate followers have during the last quarter of a century become very much narrowed, there is still, Mr. Marsh teaches us, a fair list of lately recognized conditions to which this operation may be regarded as admirably adapted. The article on the pathology and clinical history of some rare forms of bony ankyloses will throw light on the puzzling specimens of osseous junction found in almost every pathological museum. The subjects discussed in the remaining chapters, all of practical interest, are connected with certain surgical affections and injuries which, though too briefly considered, as a rule, in ordinary textbooks, are likely to come at any time under the care of the active practitioner. In dealing

[2] *Knochenkrankungen in Röntgenbilde.* [Diseases of Bones as shown by Roentgen-ray Pictures.] Von Dr. Alban Köhler, Assistant Surgeon in the Surgical Section of St. Joseph's Hospital, Wiesbaden. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1901. (Roy 8vo, pp. 40; 20 plates. 20s.)

[3] *Lectures on the Use of Massage and Early Passive Movements in Recent Fractures and other Common Surgical Injuries, the Treatment of Internal Derangements of the Knee-joint, and the Management of Stiff Joints.* By Sir William H. Bennett, K.C.V.O., F.R.C.S., Senior Surgeon to St. George's Hospital. Second edition. London: Longmans, Green, and Co. 1902. (Demy 8vo, pp. 140; 17 illustrations. 6s.)

[4] *Clinical Essays and Lectures.* By Howard Marsh, F.R.C.S., Surgeon to, and late Lecturer on Surgery at, St. Bartholomew's Hospital; Consulting Surgeon to the Hospital for Sick Children, etc. London: J. and A. Churchill. 1902. (Demy 8vo, pp. 303, 26 illustrations. 7s. 6d.)

with injuries of muscles and tendons, Mr. Marsh, who has paid much attention to these lesions, imparts much useful information on a class of surgical cases too often allowed, through inadequate attention, to pass into the hands of the quack. In the clinical comment on senile tuberculosis we find authoritative statements as to the frequency of this affection and the identity of its manifestations with those observed in the young, which seem likely to suggest that it is now hardly necessary to make any special distinction between tuberculous manifestations in old age and those observed at other periods of life. The chapter on the "etiology of mistakes in diagnosis" will be found very helpful by the busy practitioner, to whom rather than to the ordinary student this excellent series of clinical papers seems to be especially adapted.

The volume of *Clinical Lectures on Surgical Subjects*,[5] delivered by Mr. HEATH in University College Hospital during the last few years, will be found both profitable and pleasant reading by the busy practitioner as well as by the junior student. The lectures, which were previously published in different periodicals, present in their reprinted and collected form, much sound instruction on surgical injuries and affections of ordinary occurrence, and, at the same time, are full of suggestive comment. The author discusses things both new and old, and whilst fully convinced of the great strides made by practical surgery since the days of Liston and Fergusson, is disposed to deal in a spirit of cautious criticism with some of its latest developments. To the strictly clinical comments, the most interesting of which are perhaps those on aneurysm and the treatment of tuberculous joint disease, are added a review of the surgery of the past century which was published in the BRITISH MEDICAL JOURNAL early in 1900, and the Hunterian Oration delivered by the author in 1897.

The plan followed by Professor ALBERT in the work now presented in an English dress with the title of *The Diagnosis of Surgical Diseases*,[6] was to select a region of the body and to mention the various surgical conditions likely to be met with in it; the signs which are of use in making a diagnosis between maladies likely to be confused are there plainly set forth. For example, Chapter I deals with the causes of abnormal positions of the head; Chapter XIII with tumours of the thorax and breast; Chapter XX with dysphagia—stenosis of the oesophagus: Chapter XXI with a few surgically-important abdominal tumours. In such a manner the nearest approach to bedside teaching is made, though the subjects are more fully discussed, illustrative cases more freely quoted, and a wider range of debate is obtained than would be possible or permissible in teaching in the wards. The work is already well-known in Germany and Austria. The translation has been well done by Dr. ROBERT T. FRANK, and the book should therefore prove decidedly helpful to English speaking practitioners.

Dr. WHARTON HOOD'S *Treatment of Injuries by Friction and Movement*[7] may be said to constitute an "apologia." The opening chapter ("Introductory and Personal") is concerned with a brief account of the circumstances under which Dr. Wharton Hood was initiated into the secrets of the bone-setting practice of the late Mr. Hutton. Mr. Hutton, the "prince of bonesetters," was the representative of a family who had practised the "rude surgery of the dalesmen" for many generations; the secrets and the arts he practised were hereditary. Dr. Wharton Hood had abundant opportunity for witnessing the treatment carried out by Mr. Hutton, and of judging of its value and success. The cases in which Mr. Hutton was successful were mainly examples of spurious ankylosis following injury or strain which had been treated by prolonged rest. Briefly put, his principle of treatment was that the joint should be used because it was painful, not that it should be rested, as was the common teaching of hospital surgeons of that day. Dr. Wharton Hood was quick to see the good in this principle, and has applied it with abundant success for many years. An increasing confidence and success in the method gradually convinced Dr. Wharton Hood that the routine treatment of early recent injuries by prolonged rest, evaporating lotions, and so forth was essentially wrong, and by degrees he became assured that all injuries which are not attended by any external wound may be safely treated by rubbing, strapping, and immediate and persistent use of the part. The greater portion of this volume is occupied by descriptions of the method here enunciated applied to the various regions of the body. As a type of this practice the treatment of fracture of the patella may be quoted:

> The only treatment required for such an injury is to send the patient to bed for a day or two with the usual daily rubbing of the seat of the injury. About the fourth day a strip of Mead's plaster, 3 in. wide, should be so applied as to encircle the thigh in the lower third, and to steady and control the movements of the extensors, the lower margin of the strip not descending low enough to interfere with flexion of the knee, and no attempt being made to bring the fragments either into apposition or even very near together.
>
> As soon as the plaster is applied the patient should get up and walk about, the plaster being renewed as it becomes loose.

It is impossible to quote more fully, but a careful reading of the book, which is very well written, will certainly be helpful to many surgeons. It must be some satisfaction to Dr. Wharton Hood to find that his teaching in a modified form is embodied in the standard practice of the day.

The excellence of the *Manual of Surgery*,[8] by ROSE and CARLESS, in its original form, and the repeated efforts of its authors to maintain this excellence by judicious revision and addition, have led to an increasing demand on the part of both student and practitioner, and to the necessity of a somewhat rapid succession of editions. In this the latest of five revised issues, published in the course of the last four years, the practical value of the book has been still further increased by certain changes in the order of its chapters, and by sundry modifications which, it is thought, will lead to a more harmonious pathological and clinical picture than was previously presented. With the object of adapting their teaching to the latest views, and of meeting modern requirements, the authors have placed the subjects of inflammation and its treatment in a somewhat subordinate position, secondary to that occupied by bacteriology and the principles of antiseptic and aseptic surgery. In congratulating the authors on the excellent results of their labours, and on their prospects of renewed success, we are tempted to express the hope that this will remain a manual in the strict sense of this word and a "single-volume" book.

Dr. ZUCKERKANDL'S *Atlas and Epitome of Operative Surgery*,[9] an English translation of which has been edited by Professor DA COSTA, though recommended by him as a guide to the surgeon who operates upon the living, is much better adapted, in accordance with the intention of the author, to the special requirements of the student of operative surgery. Like most Continental works of this kind, it deals almost exclusively with anatomical and technical details, leaving questions of prognosis, and the range of application and the indications of each operation, to the teacher of general surgery. The author has thoroughly revised the whole work, and made many additions to this the second edition. The excellence of the illustrations and the full and clear descriptions of the different operations render this a good practical guide to operative surgery on the cadaver.

Professor LESER'S volume of Lectures on Special Surgery[10] is deservedly popular amongst German practitioners and students. Although a late addition to the many important textbooks on surgery by university professors in Germany, it has in the course of twelve years gone through no fewer than five edi-

[5] *Clinical Lectures on Surgical Subjects* (delivered in University College Hospital). By Christopher Heath, Past President of the Royal College of Surgeons of England: Emeritus Professor of Clinical Surgery in University College, London; and Consulting Surgeon to University College Hospital. Second series. London: J. and A. Churchill. 1902. (Fcap. 8vo, pp. 343. Fifteen illustrations 6s.)

[6] *The Diagnosis of Surgical Diseases.* By Dr E. Albert, late Director and Professor of the First Surgical Clinic at the University of Vienna. Authorized translation from the eighth edition by Robert T. Frank, A.M., M.D. London: Henry Kimpton. 1902. (Demy 8vo, pp. 419, 53 illustrations. 18s.)

[7] *The Treatment of Injuries by Friction and Movement.* By Wharton P. Hood, M.D St. Andrews, M.R.C.S., L.S.A. London: Macmillan and Co. 1902. 4s. 6d.)

[8] *A Manual of Surgery for Students and Practitioners.* By William Rose, M.B., B.S.Lond., F.R.C.S., Professor of Clinical Surgery in King's College, London, and Senior Surgeon to King's College Hospital; and Albert Carless, M.S.Lond., F.R.C.S., Surgeon to King's College Hospital, and Teacher of Operative Surgery to King's College, London, etc. Fifth Edition. London: Bailliere, Tindall, and Cox. 1902. (Demy 8vo, pp. 1228; 39 plates, 420 illustrations. 21s.)

[9] *Atlas and Epitome of Operative Surgery.* By Dr. Otto Zuckerkandl. 2nd Edition. Edited by J. Chalmers Da Costa, M.D., Professor of the Principles of Surgery and of Clinical Surgery in Jefferson Medical College, Philadelphia, etc. Philadelphia and London: W. B. Saunders and Co. 1902. (Crown 8vo. pp. 410, 40 coloured plates, 278 illustrations. 15s.)

[10] *Die specielle Chirurgie in 60 Vorlesungen* [Special surgery in 60 lectures]. By Edmund Leser, Professor in the University of Halle. Fifth edition. Jena: Gustav Fischer. 1902. (Roy. 8vo, pp. 1130; 355 illustrations M. 20.)

tions. The author, encouraged by the speedy demand for a successor to the fourth edition, which was issued but two years since, has revised all the sections of his book, and devoted special attention to those subjects, diseases of the thyroid body and abdominal surgery, for instance, in which much advance has recently been made. Twenty-five illustrations have been added, and the full and excellent index which compares so very favourably with those in some other works of this kind, has also been extended and revised. Professor Leser has good reasons for anticipating that his work in its present form will retain the favour of old friends and gain new ones.

NOTES ON BOOKS.

TEXTBOOKS AND ENCYCLOPAEDIAS OF MEDICINE.

THE *Text Book of Medicine*,[11] which bears the honoured names of the late Dr. HILTON FAGGE and Dr. PYE-SMITH (the second volume of a fourth edition of which has recently appeared) still appeals to us as a wonderful book. But in the metamorphosis which it has undergone from the old order to the new it has on the whole suffered. It is, indeed, a good example of the disadvantages of putting patches of new cloth on old garments; the new cloth appears incongruous, and the old garment is somewhat seriously rent. We should, in fact, like to see from the pen of Dr. Pye-Smith (what he could well produce) a textbook on modern lines—it would without doubt be of the very first rank. As it is, from the point of view of the original work, the fourth edition seems to us less readable because less individual than the earliest. In this new edition there is, however, much new and sound pathology and therapeusis, and for the rest it is too well known to call for characterization.

The eleventh volume of the *Encyclopaedia Medica*[12] ranges in subject matter from sciatica to syncope. The only series of articles from a group of writers is that on affections of the skin. In three instances, however, the disorders of particular organs are treated from the medical and surgical side respectively by different writers. Dr. E. W. Hope, Medical Officer of Health for Liverpool, contributes a really well written and well illustrated article on small-pox, the gruesome appearance of the unvaccinated cases of the disease as compared with the clean, not to say healthy, look of those suffering from the modified disease, is in itself a very striking comment on the vaccination controversy. It gives eminently practical advice in regard both to the prevention and treatment of the disease. Dr. James Galloway writes on sclerodermia; Dr. A. E. Garrod on infantile scurvy; Dr. T. R. Bradshaw on scurvy in adults; and Professor Sheridan Delépine on splenic fever. Dr. Patrick Manson writes on sleeping sickness, and Staff Surgeon Bassett-Smith and Dr. G. Leighton on snakebites. Mr. Edmund Owen writes on spina bifida; Dr. Arthur Giles on sterility; Mr. James Cantlie on sprue; and Mr. Bland-Sutton and Dr. Gulland on surgical and medical affections of the spleen. Mr. George Cathcart contributes a useful article on stammering. Dr. W. H. Allchin writes on the diseases of the stomach, and Mr. Alexis Thomson on its surgical affections. Taken as a whole this volume, although not perhaps ranking high in adding anything of importance to medical science, yet from the point of view of general interest stands very high indeed. By itself it would be a valuable addition to the library.

The tenth volume of MM. BROUARDEL and GILBERT'S *Traité de Médecine*[13] is the last of the series. It subject matter has reference to the diseases of the peripheral nerves, the neuroses, and the diseases of muscles. The contributors to the volume are MM. Pitres, Vaillard, Gilles de la Tourette, Gasne, Grasset, Rauzier, Triboulet, Lannois, Lamy, Sainton, Brissaud, and Marinesco. The articles sustain, and more than sustain, the high standard of excellence set in the previous volumes. The chapters on the diseases of the peripheral nerves by MM. Pitres and Vaillard give a concise, lucid, and satisfactorily complete account of present day knowledge of this important section of neurology. Such phenomena as the "reaction at a distance" or the cell changes occurring in motor nuclei following section or other lesion of the peripheral nerves are clearly described, and their bearings on the pathology of nerve diseases well brought out. The articles on hysteria and hypnotism are among the last work of M. Gilles de la Tourette, who had the help of his assistant M. Georges Gasne. That on hysteria is a very valuable contribution, fuller indeed both of information and suggestiveness than writers of other countries are apparently able to achieve owing probably, in part at any rate, to the fact that in France hysterical manifestations are more frequent and more diverse than elsewhere. The spasmodic disorders—chorea, myoclonus, the various ties, and athetosis—are well described and discusssed by M. Triboulet. The articles on epilepsy and paralysis agitans are by M. Grasset and Rauzier. That on epilepsy, including a section on "Jacksonian epilepsy or the Bravais-Jackson disease," is certainly not exhaustive, but it is full of good points and of recent views. M. Paul Sainton has written an interesting if short and rather slight account of exophthalmic goitre. M. Brissaud contributes good articles on neurasthenia and migraine. The concluding chapter by M. Marinesco on myopathies is valuable both from the clinical and the pathological standpoint. There is a good reference index for the whole work at the end of this volume. Reviewing the series as a whole, we would congratulate the editors and their colleagues on an excellent system of medicine whose outstanding good qualities are its modernity and the important place given in it to practical therapeutics.

The *Cyclopedia of Practical Medicine and Surgery*,[14] compiled by Dr. GEORGE M. GOULD and Dr. WALTER L. PYLE, is a fitting companion to Dr. Gould's well-known *Illustrated Dictionary of Medicine*. The latter defines medical terms in a manner at once terse and accurate, and the present volume deals with propositions and the conclusions that may be drawn from them. The high character of the *Dictionary* is strong presumptive evidence that the *Cyclopedia* will prove a valuable acquisition, nor is the anticipation disappointed. Dr. Pyle's name is also a guarantee of sound work, and the conjoint editors have had the assistance of some seventy-four American leaders in the departments of medicine, surgery, obstetrics, materia medica, therapeutics, and the various specialities, who have contributed lucid, pithy articles on a vast range of subjects with almost uniform success. Among these contributors appear such well-known names as Dr. William Osler, Dr. John H. Musser, Dr. Nicholas Senn, Dr. Horatio C. Wood, Dr. Abraham Jacobi, and Dr. William W. Keen. The articles deal, as its editors state, with the more important facts in medicine and surgery that are of working value to the active practitioner. Diagnosis and treatment therefore receive special attention. At not infrequent intervals there occur condensed statements of comparable facts in parallel columns, and not a few valuable tables are incorporated in the text. An ample system of cross reference makes the riches of the work easily come at. It may be recommended as likely to prove practically useful in a high degree.

IN the matter of year books, America, it must be admitted, is distinctly ahead of this country. Of our year books, two valuable examples have lately ceased to appear, and we have produced nothing comparable to *Saunders' Year Book of Medicine and Surgery*,[15] edited on the other side of the Atlantic by Dr. GEORGE M. GOULD, the four volumes of which for 1901 and 1902 are now before us. The *Year Book* purports to be a digest of scientific progress and authoritative opinion in all branches of medicine and surgery, drawn from journals, monographs, and textbooks of the leading American and foreign authors and investigators, and in its production Dr. Gould has had the assistance of nearly thirty subeditors, a different expert being responsible for each main section. In addition to general medicine, surgery, obstetrics, and gynaecology, most of the so-called specialities receive individual treatment, and sections are also devoted to such subjects as experimental therapeutics and pharmacology, physiology, forensic medicine, hygiene and physiological chemistry, and

[11] *A Text Book of Medicine.* Begun by the late Charles Hilton Fagge, M.D., F.R.C.P.; completed after his death, and since revised or rewritten by Philip Henry Pye-Smith, M.D., F.R.S. Fourth edition. Vol. ii. London: J. and A. Churchill. 1902. (Roy. 8vo, pp. 1,068. 21s.)

[12] *Encyclopaedia Medica.* Under the general editorship of Chalmers Watson, M.B., F.R.C.P.E. Volume xi. Sciatica to Syncope. Edinburgh: William Green and Sons. 1902. (Roy. 8vo, pp. 536. 25s.).

[13] *Traité de Médecine et de Thérapeutique.* Publié sous la direction de MM. P. Brouardel et A. Gilbert. Tome Dixième. Paris: J. B. Baillière et Fils. 1902. (Royal 8vo, pp. 872. Fr.12.)

[14] *A Cyclopedia of Practical Medicine and Surgery,* compiled under the Editorial Supervision of George M. Gould, M.D., and Walter Pyle, M.D. London: Rebman Limited. (Imp. 8vo. 42s.)

[15] *Saunders' Year Book of Medicine and Surgery.* Under the general editorial charge of George M. Gould, M.D. In two volumes. London and Philadelphia: W. B. Saunders and Co. 1902. (Roy. 8vo, pp. 1,400. 20s.)

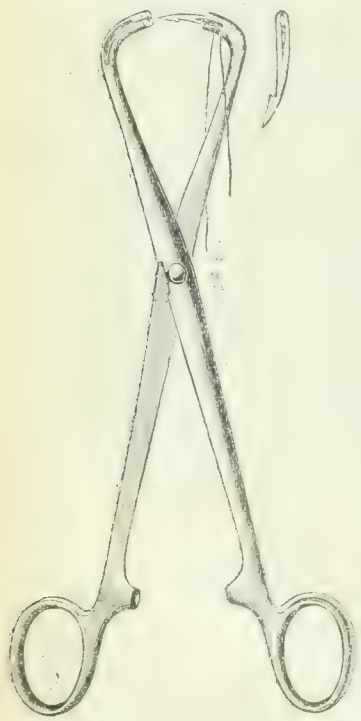
anatomy. The abstracts of papers are copious enough to be of real value, and their usefulness is increased by many well-executed plates.

The first and second volumes of the twelfth series of the *International Clinics*[16] for 1902, edited by Dr. H. W. Cattell, of Philadelphia, contain much interesting and instructive reading, although the papers are obviously in the majority of cases of the ephemeral type. That they are both interesting and sound may be gathered from the following list of the names of some of the contributors: Dr. Boas of Berlin, Professor Hallopeau of Paris, Dr. Hemmeter and Dr. Simon of Baltimore, Professor Finger of Vienna, Professor Jonnesco of Bucharest, Professor Lepine of Lyons, Professor Lucas-Championnière of Paris, Professor Arnold Pick of Prague, and Dr. Robin and Dr. Romme of Paris. Biographical sketches of eminent living physicians in America are a feature of the volumes. The former volume includes a useful review of the progress of medicine during the previous year (1901).

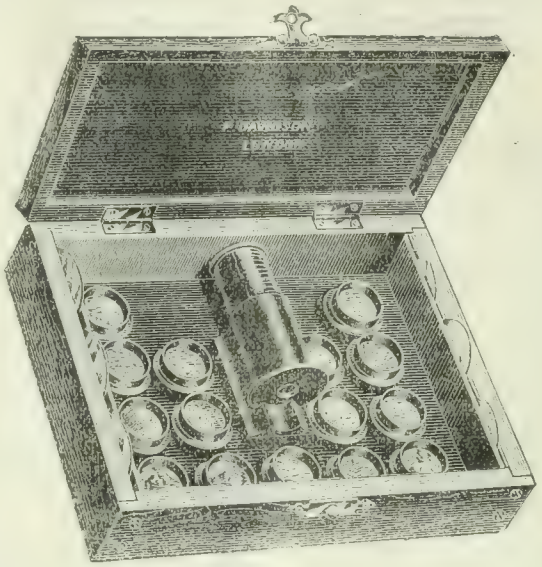
REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEDICAL AND SURGICAL APPLIANCES.

Suture Forceps.—Dr. Edgar Kurz has designed an ingenious form of forceps for the application of ligatures and sutures in difficult situations. As the illustration shows, one branch holds a short, slightly curved needle in a vertical slit, and is also bisected by a second, horizontal slit for the suture. When the instrument is closed, the arrow-head-shaped needle is caught and gripped by the opposite branch. The needle is in this way passed from one branch to the other, transfixing the tissue in its course. The principle is that of a combined needle-holder and needle-catcher, and we see no reason why it should not be adaptable to a variety of conditions and situations. It is easily and rapidly manipulated. It is recommended that two pairs should be used, so that as soon as the operator has used one his assistant may hand him another armed with a fresh needle. The one branch alone is a handy needle-holder, the second is a very useful addition, and as far as we are aware an original contrivance. The inventor is certainly to be complimented on his ingenuity; we think the instrument will be welcomed by surgeons. It may be obtained from the Holborn Surgical Instrument Company, 26, Thavies Inn, Holborn Circus, E.C.



A Model Eye.—Mr. Percy Dunn, F.R.C.S., Ophthalmic Surgeon to the West London Hospital, and Lecturer on Ophthalmology at the West London Post-graduate College, writes: The next best thing to practising retinoscopy and the use of the ophthalmoscope with the human eye is to employ an appliance which almost answers the same purpose. Believing, however, that a model eye completely fulfilling these requirements has so far not been available for practitioners and students, I some time ago devoted attention to the subject, and I now venture to think that the result will be helpful. The model itself is an improvement upon a design which has for some years been known in America. It consists of two brass (blackened) cylinders, one of which is fixed on a stand, the other being movable, sliding backwards inside the former. On the movable cylinder is a printed graduated scale by which a maximum of myopia 6 D. and of hypermetropia 6 D. can be measured. At the end of the fixed cylinder is a



lens of 2 in. focus, thus enabling the observer, by altering the position of the movable cylinder, to produce various degrees of ametropia. The beginner, for example, might make the model eye myopic to 4 D., and proceed with the lenses taken from an ordinary trial case to estimate the defect; having arrived at the correction, he can then ascertain by looking at the graduated scale whether his result corresponds therewith. Furthermore, different lenses are provided with the model, by which various degrees of astigmatism can be created, by merely inserting one or other of the lenses in front of the lens in the fixed cylinder. In addition, a diaphragm is supplied, to be placed in the slot in front of the 2 in. lens, for the purpose of representing the pupil in an undilated state. For the study of changes in the fundus, seventeen metal discs are provided, so made as to cover the outer end of the movable cylinder, each containing an ophthalmoscopic drawing. On the reverse of these discs a number is placed, which corresponds with a number on a printed list fixed inside the box, the idea being that the student should first examine the drawing with the ophthalmoscope in the ordinary way, and make a diagnosis of the fundus depicted before referring to the list. The following is the list of drawings in question:

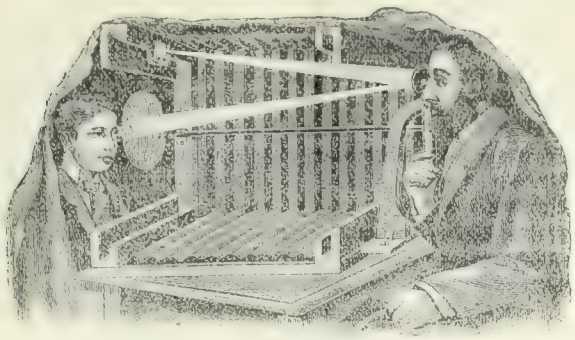
(1) Optic neuritis, (2) posterior staphyloma, (3) coloboma of the choroid, (4) normal eye, (5) retinitis pigmentosa, (6) opaque nerve fibres, (7) syphilitic neuro-retinitis, (8) detachment of the retina, (9) sarcoma of the choroid, (10) advanced chronic glaucoma, (11) subhyaloid haemorrhage, (12) albuminuritic retinitis, (13) post-neuritic atrophy, (14) disseminated choroiditis, (15) embolism of the central artery of the retina, (16) rupture of the choroid, (17) primary atrophy of the optic nerve.

The model is manufactured and supplied by Mr. F. Davidson, optician, 140, Great Portland Street, W., to whom I am much indebted for the skill and care with which my ideas have been carried out; the ophthalmoscopic drawings were all executed by Mrs. Davidson, whose artistic talents are well displayed therein; while to Messrs. Bale Son and Danielsson much credit is due for the excellent lithographic reproductionof the drawings. The price of the model is very moderate.

Davidson's Portable Dark Room for Retinoscopy.—The portable dark room invented by Mr. Davidson, optician, of Great Portland Street, is very similar in construction to a much enlarged bellows-bodied camera open at each end. At one end the patient sits with his head covered by a curtain, and at the other the observer is stationed covered in a similar manner. Above the patient's head is an electric lamp, and by means of a rod, a disc carrying lenses can be made to revolve in front of his eyes. The retinoscopy mirror is attached to a stand by means of a joint with universal movement.

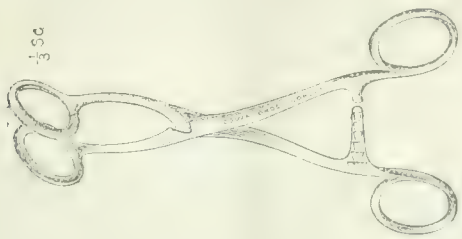
[16] *International Clinics.* Edited by H. W. Cattell, M.D. Volumes i and ii. Twelfth Series. London: J. B. Lippincott Co. 1902. (Demy 8vo, pp. 617. 10s. 6d. per volume.)

When extended for use the apparatus stands on a table, and when closed it is not too heavy to be moved, though its bulk and weight are considerable. It has the disadvantage of



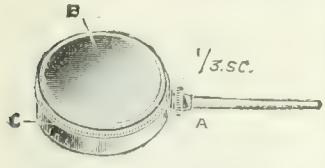
making the patient and surgeon breathe together in a confined space for a greater or less length of time. The apparatus may be found convenient, but for practical purposes the same effect can be obtained by darkening an ordinary room.

A Modification of Kocher's Forceps.—The modified form of Kocher's forceps shown in the accompanying drawing has been made by Messrs. Down Brothers from the design of Dr. Ashley Cummins, Cork. The following advantages are claimed for this forceps in the operation for the removal of



tuberculous lymphatic glands: (1) That it can be used with a very small incision; (2) that a great number of glands can be removed through one small incision without injury to the deep vessels to which they are often so closely adherent; (3) that deep glands can be lifted and separated with facility, and withdrawn without danger of bursting and infecting the wound.

Powder Insufflator.—Dr. H. GREY BROWN (Edinburgh) writes: The powder insufflators that are at present widely used appear unsatisfactory, in that they cannot be sterilized. I have accordingly designed one which can be sterilized perfectly, either by dry heat or by boiling, and have had it made by Messrs. J. Gardner and Son of Edinburgh. It is on the principle of what is known as "Bart's Puff," but with the following alterations: 1. The pipe screws off at A. 2. The top, B, is made of spring metal, and it is from this that the pressure is got. 3. For introducing the powder, the top screws off at C. 4. The aperture of the pipe inside is covered with a piece of gauze, to prevent large pieces of powder being blown through. 5. A screw cap, secured to the box by a fine chain, can be fitted into the end of the pipe, when the insufflator is not in use. 6. There is no solder whatever used, so that the insufflator may be sterilized by dry heat, and in this way the powder may, if desired, be sterilized inside the instrument. The insufflator is strong, light, and neatly finished.



SANITARY PREPARATIONS.

A Coal Tar Disinfectant.—We are informed by Jeyes' Sanitary Compounds Company, Limited, 64, Cannon Street, London, E.C., that after experiments extending over several years they have introduced a coal tar disinfectant which will be called Jeyes' Special Fluid. The Company have transmitted to us the following report by Dr. E. Klein, F.R.S.:

[COPY.]
St. Bartholomew's Hospital, London, E.C.

The Secretary,
Jeyes' Sanitary Compounds Company, Limited, London, E.C.

Dear Sir,—In accordance with your instructions I made a series of experiments with the "Jeyes' Special Fluid" sent me from your office.

The experiments were of the following kinds, namely:

1. Experiments to test the germicidal action of the fluid on staphylococcus pyogenes aureus, in various dilutions and after varying periods of exposure of the microbes to the fluid.

2. Experiments to test the germicidal power of Jeyes' Special Fluid in various dilutions on tuberculous sputum, the time of action being twenty-four hours and the microbe materials having been applied to the surface of wood.

The staphylococcus pyogenes aureus, as is well known, is the chief microbe found in most purulent inflammations and on account of its wide distribution, is an important microbe both in medical and surgical practice: it is at the same time a microbe of considerable power of resistance to influences, retaining vitality under many adverse conditions, under which other microbes—in fact most non-sporing microbes, pathogenic as well as non-pathogenic—succumb.

Provided the staphylococcus pyogenes aureus is derived from an active and recent culture, growing under ordinary favourable conditions, its resisting power to a disinfectant does, for the above reasons, represent a valuable index of the power of the disinfectant. The bacillus tuberculosis occurring abundantly in tuberculous sputum (derived from the lung of a consumptive patient) is known by inoculation into guinea-pigs to be infallibly productive of disseminated tuberculous deposits in various viscera. The tuberculous sputum derived from a consumptive patient is admitted to be one of the chief means by which tuberculous infection in man is carried out, and, therefore, the disinfection of the tuberculous sputum deserves always careful attention.

I proceed now to describe the experiments in detail, namely:

Series I.

Experiments with staphylococcus pyogenes aureus. In the experiments to be described in this series a 24-hours-culture of the microbe, grown on the slanting surface of alkaline nutrient agar at 37° C. was used in this manner: A particle of the growth is taken up with a platinum needle and distributed in a few drops of sterile water (owing to the composition of Jeyes' Special Fluid the emulsion should not be made with salt solution) so as to form a uniform turbid emulsion.

Of a particular dilution of the Jeyes' Special Fluid 1 to 2 c.cm. are poured into a sterile test tube; to this is added the emulsion of the microbe just mentioned, and the whole well shaken. After the lapse of the required time a loopfull of the mixture is taken out, and with it the slanting surface of nutrient agar is inoculated; similarly a loopful of the mixture is transferred to nutrient alkaline bouillon.

Both tubes (agar and bouillon) are then incubated at 37° C., and the result watched. The addition of a loopful of the dilution of the disinfectant does not render the nutritive media unsuitable for the development and growth of the microbe, as was found in those instances in which the culture test was positive, that is, in which subsequent growth of the medicated microbes did occur. The number of microbes in the emulsion that has been added in all instances to the 1 to 2 c.cm. of the dilution of Jeyes' Special Fluid is so great that the single loopful actually used yielded in a control agar plate so great a number of the colonies as to be uncountable. It follows from this that the tests were of a severe nature, inasmuch as a comparatively large number of the microbes were subjected to the action of a comparatively small amount of the disinfecting fluid.

The following table (A) explains without further description the results obtained. It may be added, however, that the sign + means in general growth, — no growth in the culture tubes inoculated with a loopful of the mixture (disinfectant *plus* microbe) after exposure.

TABLE A.—*Results of Cultivation after Exposure of Stapyhlococcus Pyogenes Aureus to Dilutions of Jeyes' Special Fluid.*

Nature of Dilution.	Five Minutes.		Ten Minutes.		Fifteen Minutes.	
	Broth.	Agar.	Broth.	Agar.	Broth.	Agar.
1 in 300	—	—	—	—	—	—
1 in 400	—	—	—	—	—	—
1 in 500	+	+	+	+	+	+

These experiments were repeated with the same results. From this it follows that a dilution of 1 in 400 is a complete disinfectant for staphylococcus pyogenes aureus in five minutes' exposure.

Series II.

In this series the sputum (expectoration) of a person affected with pulmonary tuberculosis was used. Microscopic examination showed that the sputum contained an abundance of the bacilli of tuberculosis. This sputum was applied to the surface of wood and for control on a piece of paper.

It took forty-eight hours for the sputum to dry. The wood was then placed into the solution of Jeyes' Special Fluid, and left there for twenty-four hours. After this time the sputum, now swollen up into a voluminous jelly-like mass, was scraped off from the wood and injected subcutaneously into one guinea-pig. At the same time the dried sputum was scraped off from the control paper, distributed in a small quantity of sterile saline solution, and injected subcutaneously into the control guinea-pig. Four weeks later the animals were killed and a *post-mortem* examination was made in order to ascertain whether the glands at or near the seat of inoculation, and the abdominal and thoracic viscera contained tuberculous deposits with the typical tubercle bacilli in them. The control guinea-pig just named showed on *post-mortem* examination the typical appearances of tuberculosis both locally and viscerally, with the characteristic tubercle bacilli in the tuberculous deposits, thus proving that the original tuberculous sputum was of the normal virulence.

Table B shows the result of the experiments made on guinea-pigs with the sputum after its treatment for twenty-four hours with Jeyes' Special Fluid on wood. The sign + means tuberculous deposits were found in the inoculated animals, and the sign — means the animals remained unaffected.

TABLE B.

Nature of Dilution.	Time of Exposure.	Result of Inoculation.
1 in 500	24 hours	—
1 in 600	,,	—
1 in 700	,,	—
1 in 800	,,	—
1 in 900	,,	+

From these experiments it follows, then, that the virulent tubercle bacilli deposited and dried on wood became completely disinfected by solutions of Jeyes' Special Fluid up to 1 in 800. Time of exposure, 24 hours.

(Signed) E. KLEIN.

December, 1902.

THE REPRESENTATION OF THE UNIVERSITY OF LONDON.

As already announced Sir Michael Foster on November 28th addressed a letter to Sir John Rotton, Chairman of his Parliamentary Committee, stating that he had come with regret to the conclusion that he must resign his seat as representative of the University of London in the House of Commons. It appears that Sir Michael Foster had reached this decision in January, 1902, but had postponed his resignation in deference to a request of his Committee; he concluded by stating that he intended to retire at the close of the autumn session. In consequence of this announcement the name of Sir John Williams was put forward as a Conservative candidate for the representation, Sir Philip Magnus accepted an invitation to stand as an academic candidate with Conservative leanings, whilst Sir William Collins was brought forward as the candidate of the Liberal Association.

Sir Michael Foster, however, did not resign, and has now addressed the following letter to Sir John Rotton:

The Athenaeum, January 2nd, 1903.

My dear Sir John,—I wrote to you a short time ago that the reasons (not political, but of quite a different nature) which had led me to wish to resign my seat as member for the University of London had disappeared. This under other circumstances would simply mean that I was willing to retain my seat. But the announcement of my intended resignation had led to the candidature of Sir John Williams, Sir Philip Magnus, and Sir W. J. Collins. My natural feelings would lead me to decide that having put these gentlemen to the trouble of beginning an election I ought to complete my resignation, in spite of the altered circumstances; and I have said as much.

But it has been put to me very strongly that the matter is not really in my own hands: that if an adequately large number of graduates wish me to retain my seat, I ought to do so in spite of the unfortunate circumstances which have occurred. Of course I could ascertain the opinion of the graduates by resigning and allowing myself to be nominated for re-election. This would put the University to the trouble of an election; and this I will certainly not do.

If, however, I receive in any way what seems to me an adequate assurance that the University as a whole wishes me to continue its member, I feel that I should be justified, even under the circumstances, in not resigning. If I do not receive that assurance, and that very speedily, in order to put an end as soon as possible to a state of affairs which is most painful to myself, I shall certainly apply for the Chiltern Hundreds as soon as I can—that is to say, as soon as Parliament meets. I used above the words "University as a whole" for the following reason:

When the University did me the honour to elect me I distinctly stated that I accepted the position, not as a party man, but as an academic representative. I further stated that my views on the South African war decided me to sit "for the present" on the Conservative side, but that, though I could not accept the Home Rule policy of Mr. Gladstone, I was in many other respects a Liberal, so much so that I could not consider myself as distinctly belonging to the Conservative or even the Liberal Unionist party.

Many things have changed since then, and I have now come to the conclusion that though there has been no change in my own opinions, I should prefer to sit on the Liberal side. In doing so I wish to preserve my position as an academic representative, so that the change of side in my case may have the least political significance. I do not propose to join the Liberal party but merely to sit on the Liberal side; in other words, as when I was elected—since one must sit on one side or the other—the balance seemed to me to be in favour of my sitting on the Conservative side, it now seems to me to be in favour of my sitting on the Liberal side.

I have tried in the past to be an academic representative not bound by any distinctly party ties; and if it is desired that I should retain my seat, my wish is to show that this can be done as well by my sitting on the Liberal side as on the Conservative side.

Yours very truly,

Sir J. Rotton. M. FOSTER.

In view of this declaration the Chairman of Sir Michael Foster's Committee has issued a circular letter to the graduates of the University inviting them to sign a requisition for Sir Michael Foster to retain his seat.

Under date of January 3rd, Sir William Collins addressed a letter to Sir Michael Foster, in which, on political grounds, he appears to desire to hold Sir Michael Foster to his promise to resign. The Chairman and other members of the Committee formed to promote the election of Sir Philip Magnus have published their opinion that the only way in which Sir Michael Foster can ascertain the views of the University "as a whole" is by resigning his seat and offering himself for re-election. This, however, Sir Michael Foster has stated he will not do.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

DURING the weeks ending November 22nd, 29th, December 6th and 13th, the plague mortality in India amounted to 12,028, 12,039, 12,400, and 13,415 respectively. The most severely affected areas are in the Bombay Districts, in which the deaths from plague during the weeks mentioned amounted to 6,734, 5,935, 6,132, and 6,416. In Bengal plague is increasing, as the figures during the five weeks ending December 13th show—163, 457, 878, 865, and 1,186.

In the United Provinces (North-West Provinces and Oudh) plague appears to be spreading, the mortality returns during the five weeks ending December 13th showing 114, 1,078, 1,175, 1,203, and 1,473 deaths respectively.

In the Punjab, during the five weeks mentioned above, the deaths from plague were returned as 1,072, 1,181, 1,412, 1,695, and 2,145.

Plague would appear to be again increasing in India in almost every district. The ratio of deaths to seizures in plague cases is now about 70 per cent. The percentage is highest in Madras and the United Provinces and lowest in the Punjab.

EGYPT.

No case of plague has been recorded in Egypt since November 19th.

CAPE OF GOOD HOPE.

A case of plague was discovered at Port Elizabeth on November 17th. Until the above-recorded case occurred, no plague had been notified in Cape Colony since September 23rd. No case of plague was discovered in Cape Colony during the weeks ending November 23th and December 6th. During the week ending December 13th one corpse dead of plague was discovered at Port Elizabeth. The patient mentioned as suffering from plague on November 17th still remains under treatment at the plague hospital.

MAURITIUS.

For the weeks ending December 11th and 18th, 23 and 27 fresh cases of plague respectively occurred in Mauritius, and the deaths from the disease amounted to 16 and 14 respectively.

MEXICO.

Plague is reported in Mexico; the outbreak is stated to be serious, and from the city of Magatlan some 5,000 persons are reported to have fled to escape infection. The authorities are taking decisive measures to stamp out the disease. Women are stated to be more generally affected than either men or children.

CONTRACT MEDICAL PRACTICE.

PRIVATE MEDICAL CLUBS.

WE published last week under this heading a resolution adopted at the meeting of medical men practising in Walsall and the district expressing disapprobation of the system of private medical clubs and pledging those present to discontinue any association with the system. The extent to which it must have been carried may be gathered from a discussion which took place at the meeting of the Walsall Board of Guardians on January 2nd; it was stated that the number of people in these penny-a-week clubs was something like ten or twelve thousand, and some of the guardians anticipated that the greater number of these would apply for medical relief under the Poor Law. One member was wise enough to suggest that the guardians should give their moral support to the relieving officers to enable them to resist people who had been in the clubs obtaining medical relief for nothing. The clerk asserted that none would be entitled to anything for nothing unless destitute. There is a good deal of unreality about discussions of this kind, when it is remembered that the same medical men who are giving up private medical clubs have expressed their readiness to attend any person whose weekly wages do not allow of their paying the usual medical fees for a fixed weekly sum to be agreed upon by the head of the family and the practitioner called in, the amount to be paid at the commencement of each week during which the illness may continue.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1903.

MEMBERS of the British Medical Association are reminded that commencing with January 1st, 1903, the annual subscription is a uniform one of 25s., inclusive of the Branch, and that all subscriptions should be paid direct to the General Secretary, 429, Strand, London, W.C., and not to a Branch Secretary.

British Medical Journal.

SATURDAY, JANUARY 10TH, 1903.

THE ART OF PRESCRIBING.

THE vast additions which are made year by year to the drugs placed at the physician's service make the matter of accurate and compatible prescription writing a question of increasing importance, yet the licentiate or graduate is let loose to practise his art without more knowledge of how to order the remedies with which he hopes to cure those who avail themselves of his services than the mere smattering he has succeeded in picking up during the brief period of his attendance in the out-patient room, or of his clinical clerkship in the wards of his hospital. He has heard this or that formula recommended by one or other of the chiefs whose practice he has followed in the wards, or whose lectures he has listened to in the theatre, and these he has laboriously committed to memory, principally for the purposes of examination; but he starts on the voyage of his medical career with the vaguest notion of how properly to combine the drugs that are indicated by the conditions of the first patient who confides to him the responsibility of relieving his symptoms.

To some of those who have experience in the examination of students for their qualification to practise there is no fact more striking than the extent to which inefficiency prevails in this elementary but most necessary accomplishment. The fault does not lie in a seriously defective knowledge of drugs or of their therapeutic value, but in a lack of tuition and training in the art of so prescribing them that the patient may count upon getting his remedy in an agreeable and convenient form, the chemist a prescription that is within the bounds of possibility to dispense, and the doctor himself a combination of drugs which the experience of others has proved capable of achieving certain results.

There is nothing to be said in favour of a polypharmacy that blindly associates drugs in such numbers as to obscure the action of the important constituents of a prescription, but on the other hand it is common knowledge that a combination of remedies will often produce a more certain and speedy effect than an equivalent dose of any single one. The ingenuity and enterprise of manufacturing chemists has not removed the need for detailed prescriptions that existed before the days of cachets, tabloids, and capsules; and it is to be deplored that accuracy of individual knowledge should run the risk of being sacrificed to convenience of commercial opportunity. The prescriber, if he orders his drugs in this form, is depriving himself of the power of initiation in the selection of his quantities; he must accept the chemist's preparation as it stands, and must administer it in every case on the principle of curing the disease, and without much attention to important questions as to the idiosyncrasy and temperament of the patient. In the case of single drugs the portable and convenient products of the chemist's manufactory have much to commend them, but when it comes to a question of a combination of remedies we adhere to the good, even if old-fashioned, rule which would have no two prescriptions necessarily alike, but have each one regulated in accordance with the daily requirements of the patient and of his disease.

Another obvious objection to the present taste for pharmaceutical "elegance" is the opportunity it offers to the public for dosing themselves. This probably can do no harm when simple drugs only are indulged in, but there is serious evil in the facilities which are nowadays afforded for purchasing in the shop of any chemist powerful and often poisonous remedies without the authority of any one competent to judge whether they are suitable or necessary. The *Birmingham Daily Mail* has been making some enquiries on "how Birmingham doctors itself," and has found, "roughly speaking, that two-thirds of the average Birmingham druggist's business to-day consists of the sale of patent and proprietary articles, the remaining third being chiefly the dispensing of prescriptions." How far the tissue stability of future generations is being endangered by the present extravagant use of the various analgesic and other drugs with which the market is flooded it is impossible to estimate, but the question may well be asked whether immediate relief to pain or discomfort is not sometimes purchased at the expense of ulterior consequences to the individual and to the race which make for physiological and psychological depravity rather than for righteousnesss. If these modern developments in pharmacy tend to make the art of prescription writing less essential, is it conducive to the scientific advancement of therapeutics that this should be so? If not, the time has come when those who are concerned with the teaching of the practical applicability of drugs to the needs and necessities of the sick must devote more time to the education of students in the laws of chemical and therapeutical incompatibility, in the principles of medicinal combination, and in the physiological modifications and effects which may be produced by the combination of two or more drugs.

The difficulties which arise in consequence of want of sufficient accuracy of knowledge in this important subject are principally experienced by the dispensing chemists, who are sometimes brought face to face with ethical problems which they have trouble in solving. This is evidenced by the increasing frequency with which communications on the subject are made, and discussions conducted, at the meetings of the various pharmaceutical societies.

Our attention has been directed to such a paper recently read before the Pharmaceutical Society of Edinburgh by Mr. Donald McEwan, on the limits of discretion in dispensing.[1] With much of what the writer has to say we are in accord, but if the pharmaceutical education of the average medical man was up to the standard which the public has a right to expect and even to demand, there should be no question of discretion so far as the chemist is concerned. His business consists in carrying out the written instructions of the prescriber, and in standing as a safeguard between him and his patient in the matter of dosage.

The properly trained medical practitioner ought to know how to construct his prescription so that it can successfully

[1] *Pharmaceutical Journal*, December 27th, 1902.

face the criticism of the dispenser, and the relation between the one and the other should be such that the prescriber is fully assured of having his attention at once drawn to any inadvertent error in quantity for which either a clerical slip or a passing carelessness may be responsible. The chemist has no right to alter any detail of a prescription without the prescriber's authority; his office is merely executive, and if he desires to retain the confidence of the medical profession he will be duly careful not to depart, on any pretext, from the straight line of his duty. But the question of ethics as between doctor and chemist is not confined to the comparatively simple and obvious issue of how prescriptions ought to be dealt with. It goes much further: the chemist, in many cases, is prone to don the doctor's mantle, and assuming a knowledge which he does not possess, is willing not only to supply the drugs he has for sale, but also to prescribe for the ailments of those who are foolish enough to believe that by consulting him they may be cured of their malady—whatever it may be—without the inconvenient formality of paying a doctor's fee. We are well aware that this practice is not universal, but we have good reason for believing that it prevails to an enormous extent. Might not "the limits of discretion" on this aspect of the ethical question afford to some militant pharmaceutist a suitable text for a valuable and practical sermon?

The ineffective and altogether inadequate training of the student in practical pharmacy is one of the weak points in the medical curriculum. The first step towards the removal of any claim for discretionary power on the part of the chemist must be increased knowledge on the part of the medical practitioner, and this can only be achieved by more careful and detailed attention to this department of his professional education.

THE GROWTH OF THE LOCAL GOVERNMENT BOARD.

IN the January number of the *Nineteenth Century and After* Sir Michael Foster, K.C.B., gives an interesting sketch of the position of the Local Government Board. He compares the Board with other Government departments, and only touches on the relation between the Local Government Board and local sanitary authorities in so far as it is necessary for his argument as to the supremely important character of the duties of the Board. It is, as he points out, a department of Government which must necessarily grow in importance as the extension of local administration continues and increases. Whatever may be the amount, small or great, of central control over local sanitary administration, central co-ordination and supervision must always be necessary; and it is therefore certain that, as a great increase of local government is imminent, the Local Government Board, which is the central authority for local government, must share in that development.

Sir Michael Foster shows in an interesting manner how the Local Government Board has developed into its present form. The main distinction between it and the Home Office is that the Board deals with home affairs in which local government is an important factor, while the Home Office deals with the maintenance of peace and order, and has charge of factories, workshops, mines, etc. Although this is not pointed out in Sir Michael Foster's article, the administration of factories and workshops shows how impracticable it is to draw a logical line between local and central administration. These are administered in part locally and in part centrally. In view of the general trend of affairs, there can be little doubt that their administration in the future will be more through local authorities, and that indirectly in connexion with this a transfer of central control to the Local Government Board may become necessary. Sir Michael Foster does not point out the even greater anomaly constituted by the fact that the central administration of the Adulteration Acts, however strange it may appear, is under the control of the Board of Agriculture, while its local administration is in the hands of local sanitary authorities.

It is not easy to understand how and in what respects the work in the offices of Secretaries of State taken as a whole "requires higher qualifications than does that of other public departments," including the Local Government Board; but that it is so was asserted in an answer given on behalf of the Treasury by Mr. Austen Chamberlain. We are further assured that this opinion "is based upon the character of the work done in the different offices." This is a matter of some importance to those concerned, as higher remuneration is associated with the "higher qualifications" supposed to be required in other departments than the Local Government Board. This is true not only for the permanent officials, but is shown also in the fact that the Home Secretary receives £5,000 per annum, as compared with a salary of £2,000 per annum for the President of the Local Government Board. After careful consideration we share Sir Michael Foster's opinion that this difference is unjustified by the facts, and ought to be rectified. If there is one department in which the greatest encouragement to efficiency should be given, it is in that which is intended to co-ordinate and regulate the vast ramifications of local sanitary administration.

But, although the relative honour and emoluments of Government officials form a tempting subject, the readjustment and improvement of the relations between the Local Government Board and local authorities is one of supremely greater consequence. If Sir Michael Foster will pursue his investigations into this branch of his subject, he will have no difficulty in extending the conclusion stated by him that "the time has surely come when the question of some readjustment of our Government machinery ought to be seriously considered"; and in stating that this readjustment is needed not simply in regard to internal relationships, but in regard to the relationships with local authorities. Under present conditions, the Local Government Board often obstructs local authorities anxious to do their duty to the utmost, especially if they seek for further parliamentary powers. Until recent years most of the additions to sanitary legislation have been inaugurated by pioneer local authorities, and have subsequently, and bit by bit, become part of more general enactments. In recent years the policy pursued by the Local Government Board has rendered it increasingly difficult to obtain such local powers, and much good work has thus been vetoed. On the other hand, in its relations to local authorities who fail to carry out their statutory duties, the Local Government Board often appears to be inert. It does not, for instance, secure power to compel co-operation between neighbouring local authorities when conjoint action is required in the interests of both economy and efficiency, and it seldom compels recalcitrant local authorities to carry out neglected duties, or enforces its powers of carrying them out in their default. We sin-

cerely trust that in a later contribution Sir Michael Foster will be able to throw light on this important aspect of the duties and potentialities of the Local Government Board.

MEDICAL EVIDENCE AT INQUESTS IN LONDON.

WE publish elsewhere (page 104) a report of a meeting of medical practitioners held at the instance of the South-West London Medical Society to consider the precedent which Mr. Troutbeck, the newly-appointed coroner for South-West London, seems to desire to establish with regard to the making of *post-mortem* examinations at the coroner's order and the giving of medical evidence at inquests. The meeting was attended by medical men from other parts of London, and as will be seen from the letter signed "Barrister-at-Law," which is appended to our report, the matter seems to be one which will affect all practitioners in the area over which the London County Council has authority.

It appears that at the beginning of last month a subcommittee of the Public Control Committee of the London County Council approved a long series of propositions to which selected candidates for the office of Coroner for the South-Eastern District, recently vacant, were required to subscribe. Among other points the candidate was required to declare that he was prepared to entrust *post-mortem* examination to a skilled pathologist in all cases except those in which he may be satisfied that the medical man connected with the case is competent to make a trustworthy *post-mortem* examination. A *post-mortem* examination is ordered by the coroner in order that the jury may have before it adequate evidence upon which to arrive at a sound conclusion as to the cause of death, and in the majority of cases the medical man called to the deceased before death is not only quite competent to make the necessary *post-mortem* examination, but is in a position to give evidence as to the circumstances surrounding the case and as to the observations made at the time when he was first called in. These are frequently of the greatest importance in cases where neglect is alleged, or the death has arisen from other than natural causes. The position of the body, the appearances immediately after death, the descriptions of wounds or injuries, statements made by relations of the deceased or by others, and sometimes by the dying person himself, may all be of considerable value in the coroner's court in enabling the jury to arrive at a correct verdict, and often assist in accomplishing the ends of justice.

It is only in cases of considerable doubt or difficulty, such as, for example, secret poisoning, that the services of a specially skilled pathologist are required, and he should not be employed to the exclusion of the evidence of the medical man called in at the time, or who has been in attendance on the deceased, as such previous knowledge is often material to the issue. The medical man who has attended the deceased should be present, too, at the *post-mortem* examination, so that a joint conclusion may be reached. Evidence given after such consultation would be of much greater value for judicial purposes than the result of the *post-mortem* examination alone, made without personal knowledge of previous details.

It is the duty of the coroner not only to ascertain "the cause of the death" but also to inquire into "the circumstances attending the death," and very often the most important witness is the medical practitioner first called in at the time of the death. From a statement recently made by the Chairman of the Public Control Committee of the London County Council, it appears that Dr. Freyberger does not hold any official appointment under the Council, and that the resolution of the Council merely recommended him to the coroners for employment should any special pathological work be necessary in the holding of an inquest. To this the medical practitioners of the South-Western district do not object, and it has been stated that some members of the County Council have expressed the opinion that Mr. Troutbeck had exceeded the intentions suggested by the Council. The undertaking which the subcommittee of the Public Control Committee has required candidates for the office of coroner to sign seems also to go beyond the principle embodied in the resolution approved by the Council itself.

With regard to the provisions of the Coroners Act touching this matter the opinion expressed by Mr. Muir Mackenzie fully supports the view expressed in the BRITISH MEDICAL JOURNAL[1] some time ago, and without wishing to limit the discretion which a coroner is called upon to exercise in the interests of justice, we trust that Mr. Troutbeck will see his way to modify the action he has recently taken, that he will call for the services of specialists in special cases only, and that in future he will summon such medical witnesses as the statute law directs, namely, the practitioner who has attended the deceased person "at his death, or, during his last illness," or failing such attendance, a practitioner "who is at the time in actual practice in or near the place where the death happened."

THE NOTIFICATION OF DYSENTERY AND TUBERCULOSIS IN ASYLUMS.

IN two previous articles in the BRITISH MEDICAL JOURNAL[2] we have commented on the prevalence of dysentery in lunatic asylums, and on the necessity for a system of registration and notification of all cases of this disease occurring in these institutions. Remarks on this subject are made in the fifty-sixth report of the Commissioners in Lunacy dealing with the statistics for 1901. In this report the Commissioners state that with every allowance for greater accuracy in diagnosis, it must be admitted that the figures show a decided increase in the relative mortality from this specific cause and a widening distribution of dysenteric diseases amongst asylum communities. After referring to contributions on the subject by Drs. Gemmel and R. F. Legge, and the report of Drs. Mott and Durham, they add, "there is still much to be learnt, for....there can be no doubt that diseases of this class are more prevalent in asylums than formerly, notwithstanding the greater attention paid to sanitary matters; and it is somewhat disheartening to find that these affections almost invariably appear in newly-opened asylums within a short period of their establishment. This is often due to the fact that every new asylum is in the first instance occupied by patients coming from other institutions where dysentery has occurred; for it cannot be too emphatically urged that the affection is a communicable one." The Commissioners add the welcome information that they have recently initiated a plan, based on that devised by Dr. Mott, to ensure the registration and notification of cases of dysentery and diarrhoea in asylums, amongst members of the staff as well as patients. A knowledge of the evil and of its extent almost necessarily implies the adoption of practical

[1] November 22nd, 1902, p. 1675.
[2] April 6th, 1901, p. 846; March 8th, 1902, p. 604.

measures for its diminution, and it is, therefore, satisfactory to be able to record this great reform in the sanitary administration of public asylums.

More recently we have drawn attention[3] to the excessive mortality from tuberculosis in lunatic asylums, and have advocated a similar system of registration and notification for this disease as is now, happily adopted for dysentery. Such a system of registration and notification of tuberculosis has been adopted in connexion with the asylums of the London County Council, and we hope that when the next annual report of the Commissioners in Lunacy appears, they will be able to state that they have taken similar action so far as all the asylums under their control are concerned. In this instance, no less than in that of dysentery, an indispensable preliminary to effective measures of prevention is that every person responsible in any degree for the administration of lunatic asylums shall have forced upon his attention a complete knowledge of the extent of the evil to be combated. The Asylum Committee of the London County Council has taken the lead in this important matter: it is to be hoped that all other asylum authorities will follow this lead.

The completeness of the information concerning the prevalence of tuberculosis and dysentery in asylums depends in large measure on the adoption of a system enforcing the making of necropsies in every death in these institutions, and the keeping of accurate records of results. This may involve additional work on the medical staff, and it should be met by the appointment of pathologists. The importance of accurate information is, however, so great as a preliminary to effective preventive measures, that no considerations of expense should be allowed to stand in the way of a thorough system. That reform is practicable is indicated by the great reduction in the prevalence of dysentery which has already been secured in the asylums of the London County Council. Similar reform cannot be impracticable in other asylums, and it cannot be beyond the powers of medical science and good organization to secure a similar reduction in the prevalence of tuberculosis in asylums.

OUR LISTER NUMBER.

WE have received from many quarters gratifying expressions of approval of our Lister Number both as a record of the life and work of one of the most remarkable men of the day, and as a collection of papers of high scientific value. In the press numerous tributes to the interest and value of the number have appeared. The *Glasgow Medical Journal* refers to the issue as "an occurrence of the greatest interest to the medical profession throughout the world, inasmuch as it gives us a clear and concise account of the rise and progress of modern surgery." In discussing the several articles, it calls attention to a statement of Professor Annandale's to the effect that Lister had already commenced his bacteriological work before he left Edinburgh for Glasgow. The *Glasgow Medical Journal* states that, as a matter of fact, it was not till after he went to Glasgow that bacteria or other microbes claimed his attention. Altogether, concludes our Glasgow contemporary, "the Jubilee Number is a notable one." Our scientific contemporary, *Nature*, describes it as "a notable number devoted to a notable man." The German medical journals are particularly appreciative. The *Berliner klinische Wochenschrift* gives more than a column to an analysis of its contents; and more or less extended references to it are made by the *Münchener medicinische Wochenschrift*, the *Wiener medizinische Presse*, the *Allgemeine Wiener medizinische Zeitung*, the *Allgemeine medicinische Central-Zeitung*, and the *Gazette Médicale de Paris*. In the *Algemeen Handelsblad van Zaterdag* Dr. Pijnappel, of Zwolle, devotes a long and ably-written article to a summary of the contents of the number. We therefore think we are justified in the belief that the Lister Jubilee Number of the JOURNAL, on the preparation of which considerable pains were expended, has met with the approval of the medical profession throughout the world.

THE ECONOMIES OF THE GENERAL MEDICAL COUNCIL.

IT is well known that the financial position of the General Medical Council is not satisfactory, and it will be remembered that among the proposals which have been made by some members of the Council to improve the existing state of affairs has been the practice of certain economies. The first, and, so far as we have observed, the only serious economy attempted is that mentioned in the letter from the late Registrar of the Irish Branch of the General Medical Council, which is published in another column. The financial position of that Branch has been more especially unfortunate, and it has now been determined to effect a material economy by giving up the office in Dublin, and dispensing with the services of the Branch Registrar and his clerk. For some years past the number of registrations annually effected in Dublin has been below 200; the averages for the five years ending 1901 were: England, 669; Scotland, 474; Ireland, 149. Beyond the actual registration and the work connected with the comparatively few meetings of the Branch Council (an average of 3.4 a year), little work falls upon the branch offices, and in Dublin, at least, there can hardly have been full employment for a separate office, registrar, and clerk. It does not appear that any similar economies are contemplated in Scotland, where the average number of Branch meetings is the same as in Ireland, although the average number of registrations is considerably greater. The work of registration must, of course, be carried on both in Scotland and in Ireland, and we hear that it has been suggested that in Dublin it could be done by some solicitor of standing in his own offices.

THE MINUTES OF THE GENERAL MEDICAL COUNCIL.

THE *Minutes* of the General Medical Council and its Committees for the period from June 4th to December 2nd, 1902, have now been issued, and with the eleven appendices form a volume of 468 pages. Most of the matters dealt with in the volume have been fully reported in the BRITISH MEDICAL JOURNAL, but we observe that further particulars are given with regard to two disciplinary cases. Both of these cases were heard *in camerâ*, and the nature of the charges was not then announced, and could not therefore be recorded in our report of the proceedings. It appears from the *Minutes* under date November 27th that the charge against William Arthur Jones, upon which the Council judged him guilty of infamous conduct in a professional respect, and directed the Registrar to erase his name from the *Medical Register*, had reference to the procuring of abortion in the case of two women. In the case of Dr. George Pearse Sargent the Council directed that the qualification of M.R.C.S.Eng., appended to his name should be erased from the *Medical Register*. According to the *Minutes* of November 28th the Council acted upon a letter received from the Secretary of the Royal College of Surgeons of England stating that the Council had adjudged Dr. Sargent to have been guilty of disgraceful conduct in a professional respect, and that he had been removed from being a Member of the College. The particulars of the offence of which he was adjudged guilty by the Council are by the *Minutes* stated to be "That in the year 1892 he issued certain handbills or circulars of an objectionable character. That notwithstanding a promise given by him in a letter dated 20th January, 1893, whereby he undertook not again to issue such handbills, he has again in and about the year 1901 caused similar handbills to be circulated to various persons, other than his patients residing in his neighbourhood."

[3] BRITISH MEDICAL JOURNAL, October 25th, 1902, pp. 1349, 1357.

THE COST OF OPEN-AIR SANATORIA.

ONE of the points to which the attention of the competitors for the prize offered by the King Edward VII Sanatorium Committee was the cost. "Economy in construction," it was said, "will be an important consideration, but it must not interfere with the reasonable comfort of the patients or the efficiency of the institution." In the essay which gained the first prize, written by Dr. Arthur Latham, in association with Mr. William West, architect, the question of cost is briefly referred to, but it is stated that no definite statement as to the cost of the proposed scheme could be given without knowing the cost of labour and of materials at the chosen site and other details.[1] It is added that many sanatoria have been built for the poor at the cost of £250 to £300 per bed, but that comfortable modern sanatoria with single bedrooms are necessarily more expensive; that the Anstalt at Nordrach which accommodates 24 patients cost £500 a bed, and is usually considered to be a model of cheapness; that the sanatorium now being built at Frimley for the Hospital for Consumption at Brompton, which is to consist of one large block, is to cost £560 a bed, and that the sanatorium to be built for Manchester is expected to cost about £1,000 a bed. In the essay which won the second prize, written by Dr. Wethered in association with Messrs. Law and Allen, architects,[2] there is a detailed estimate, which, excluding the farm buildings and chapel, also comes out at £560 a bed. Dr. Heron, in a letter published recently in the *Times*, stated that the cost of the sanatorium built at Beelitz by the German Industrial Assurance Organization, which is designed to accommodate 600 persons, cost £1,133 per bed. Dr. Freund, the President of the Landesversicherungsanstalt, Berlin, has challenged these figures, and states that the cost comes out at £750 a bed, but adds that the kitchen, laundry, machine-house, bath-house, central heating house, etc., have been built on a scale sufficiently large to serve a larger number of beds, that it is intended during the present year to add 300 to the number of beds, and that the cost of this addition is estimated to work out at £150 a bed, so that when it has been made the average cost of the 900 beds will be at the rate of £550 a bed. Dr. Heron thinks that "a sanatorium of the very first class, and containing everything that is necessary for the purposes of such a building and many luxuries besides" ought not to cost more than from £200 to £300 per bed, but this estimate is based upon the opinion that a sanatorium should be so built that it may be easily and cheaply pulled down and replaced by a new structure when the advance of medicine and sanitary sciences has put the old building out of date. He would construct the building of such materials as galvanized iron, felt, and wood, with cement or plaster for the inner coverings of the walls. The parts of such a building designed to provide sleeping accommodation for the patients would not, we presume, be more than one story high, and this would of course necessitate a larger site; but the cost of the site is not included in any of the estimates just quoted. The authors of all three prize essays contemplate the accommodation of patients in permanent buildings two stories high. Some recent German sanatoria, and these not among the least expensive to the patient, have four and five stories; this, we apprehend, will be generally considered to be a defect, but as between one and two or three stories opinion cannot yet be said to be fixed.

[1] *Prize Essay on the Erection of a Sanatorium for the Treatment of Tuberculosis in England.* By Arthur Latham, M.A., M.D.Oxon. London: Baillière, Tindall, and Cox. 1903. Price 5s.

[2] *Lancet*, January 3rd. Our contemporary publishes in the same issue the first prize essay and also the third, written by Dr. E. C. Morland in association with Mr. Geoffrey Morland, architect.

FATAL MASTITIS: A SEPTIC BOOK?

A REMARKABLE case of death on the twenty-eighth day after delivery from inflammation of the breast followed by pyaemia is reported at length by Dr. Max Bensinger of Mannheim in the *Centralblatt für Gynäkologie* for December 27th. It led to a defamatory letter from a relative, and legal proceedings ending in a verdict for the obstetrician. The patient was 30 years old, and was safely delivered of her second child at term on February 1st, 1902. No local damage could be detected; indeed, there was no evidence of inflammatory or septic affection of the genital tract, even at the date of the patient's death. Great care had been taken about the midwife, who belonged to an institution where training and rules were strict. The patient could suckle her child with ease till the eleventh day, when the right breast began to swell. Next day the child was weaned. There were no fissures in the nipple. Free incisions were made on the second day; a little pus escaped from the interglandular connective tissue. On the fourteenth day the child sickened, otitis and cutaneous abscesses developed, and it died two days later. The mother's condition became graver, antistreptococcus serum was used when the temperature had risen on the fifteenth day to 104°. On the nineteenth the right knee, and on the next day the left wrist, became swollen. Pus from the right knee was found to contain the streptococcus, but no other organism: the joint suppurated, and the patient died on February 28th, after a sudden attack of dyspnoea. The evidence was against infection from nurses, friends, or insanitary domestic conditions of any kind, but it was not clear whether the child infected the mother or the mother the child. Dr. Bensinger, however, felt inclined to suspect a book which was found in the patient's bed. It was old, greasy, and smelt offensively; the patient, for whom it had been procured from a circulating library, was accustomed to read it when suckling her infant. Scrapings from the leaves and from the dirty cover were examined, and found to contain, amongst other germs, numerous streptococci. Dr. Bensinger, however, does not profess to set down the book as the undoubted source of sepsis in this case. The patient had suffered from an attack of fever, two years before her death, as the result of a sting in the face at St. Moritz; Dr. Bensinger thinks that an old septic focus might have been rendered active, as the typhoid bacillus has been found in abscesses developed long after convalescence from the fever. Still, in this case the source of infection was probably external, and Dr. Bensinger's suspicions about the book seem more than plausible.

EDUCATION OR CHARITY.

DR. PEYROUX has published recently in *La Semaine Médicale* an interesting analysis of the influence on infant mortality of the two charitable organizations known as "Consultations de Nourrissons" and "Gouttes de Lait," to which reference has so often been made in the BRITISH MEDICAL JOURNAL. The former is concerned chiefly in teaching the mothers to feed their infants, and to weigh them weekly; both mother and child are supervised in order to induce the mothers to watch carefully over their children during the first two years of life. The great majority of these children are fed at the breast, but there are a few cases of mixed or artificial feeding, and for these the "Consultations" sterilize and distribute milk. These cases are relatively rare, and in fact the "Consultations" insist and, for the most part with great success, upon the need for breast feeding. The first of these institutions was founded at the Charité Hospital in 1892 by Professor Budin, who organized a second in 1895 at the Maternité Hospital, and a third in 1898 at the Clinique Tarnier. At the last named 636 children have been under observation since 1892; of these 39 have died, and only one from diarrhoea. As to the mode of feeding, out of 201 children who were seen at the Clinique Tarnier, 140, or 70 per cent., were fed at the breast; 48, or 24 per cent., had mixed feeding, and 13, or 6 per cent., were fed artificially. Similar proportions hold good for the "Consultations" which have been started at various places—Montmartre, Saumur, and Bar-le-Duc. At the last place, in order to encourage women to nurse their babies, each nursing mother is given 3 lb. of meat a week, and those who are careful receive prizes of 10 fr. to 20 fr. The other organization, called "Gouttes de Lait," is occupied chiefly in sterilizing milk, which is distributed either gratuitously or for payment according to the circumstances

of the recipient. No effort seems to be made to induce the mothers to nurse the children themselves, but the babies are examined once a week by the directors of the charity. The first of these was founded in 1894 at Fécamp and was succeeded by others at Grenoble, Havre, Bourg, Elbeuf, Nantes, Rouen, Versailles, and Nancy, in several of which towns the work is undertaken by the municipality. Dr. Peyroux has carefully studied the influence of these institutions upon the infant mortality during the last ten years and has compared the figures with a similar period preceding their establishment. He finds that at Elbeuf, Havre, and Nancy the mortality of children aged under one year, from all causes, compared with 1,000 deaths at all ages is higher in the later period, and this without the occurrence of any epidemic. At Versailles, Bourg, and Fécamp there is a slight diminution and the results are somewhat better at Rouen, Nantes, and Grenoble. On comparing the deaths of infants under one year of age per 1,000 births, before and after the establishment of these institutions, he finds that at Elbeuf and Havre the mortality is greater in the later period; at Nancy, Versailles, and Bourg it is nearly stationary, while it is diminished at Grenoble, Nantes, Fécamp, and Rouen. Even where, as at Grenoble, there is a diminution in the infantile mortality, he gives reasons to doubt whether this improvement is due to the action of the charity. He thinks that the failure is caused by want of attention to practical details: for example, care is not taken to secure that babies get the milk in the condition in which it is sent out, as it is fetched by children, who often uncork it and drink some by the way, or perhaps fill up the bottle with tap water. He suspects that the bottles in which the babies take the milk are not sterilized, and he particularly condemns the use of feeding-bottles with long tubes. A half-finished bottle is put aside and kept from motives of economy; the children are not fed regularly, but whenever they cry; and probably other articles of food are given in addition. He lays stress upon the point that the "Gouttes de Lait" replace natural breast feeding by artificial feeding, and he reproaches the charity with taking no pains to persuade mothers to suckle their children, while by the distribution of large quantities of sterilized milk, and by fostering the belief in its supreme value as a means of infant feeding, careless mothers are encouraged to feed their children artificially. Nothing can be more dangerous than the growth of an idea in the public mind that any artificial means of feeding infants can safely replace the maternal breast. Experience shows the danger that may underlie the best intentioned charitable schemes, if these tend to relieve parents of the responsibilities which they ought to bear.

STATE REGISTRATION OF NURSES IN AMERICA.

THE nurses of New York are making a determined effort to organize themselves with the object of securing registration. At a recent meeting of the New York State Nurses' Association, Dr. William S. Ely showed that the nurses now stand where the State medical profession was in 1891, when the law was passed which took the licence to practise medicine from the schools and placed it in the hands of the State Board of Regents. The New York nurses are working for a similar reform in appealing to the Legislature to be placed under the control of the Regents. It is not the aim of the Association to interfere with home-nursing, or with the gratuitous care of the sick; the movement is directed against what are called the "quack nursing schools." An almost unanimous vote was passed after much discussion that the term "registered nurse" should replace that of "trained nurse" in the proposed Bill. The first Section of the Bill runs as follows: "Any resident of New York State, being over the age of 23 years and of good moral character, holding a diploma from a legally incorporated training school for nurses connected with a general hospital or a hospital for the insane giving a satisfactory course of at least two years, and registered by the Regents as maintaining in other respects proper standards, and who shall have received from the Regents of the university a certificate of his or her qualifications to practise as a registered nurse, as hereinafter provided, shall be styled and known as a 'registered nurse,' and no other person shall assume such title, or use the abbreviation R.N., or any other words, letters, or figures to indicate that the person using the same is such a registered nurse." In Illinois the State Association of Graduate Nurses has prepared a Bill more detailed in its provisions, but aiming at the same end, and by much the same methods, as that of of New York nurses. The term "registered nurse" is also preferred by the Illinois nurses, but it is made illegal for those not properly qualified to use the term "trained" or "graduate nurse."

AN AMERICAN ANTIVACCINATION PAMPHLET.

IT has not infrequently been pointed out that antivaccinist opinions are often conjoined with peculiar views on other subjects in individual minds. An instance of this has just come before us in the shape of republications by a lady in this country of two foreign pamphlets, one being an attack on vaccination by an American dentist, and the other an attack on the operative treatment of appendicitis, by a Frenchman. The latter paper has been translated as well as published by the lady, and we observe from a preliminary note that she is also engaged in the treatment of appendicitis apparently by hydropathic methods. The antivaccination pamphlet is the more interesting of the two. It is a reprint from articles in the *Dominion* and *Ohio Dental Journals*, under the title "Vaccination a Prime Factor in the Destruction of Children's Teeth," and is useful as showing the statements that antivaccinists on the other side of the "herring pond" make regarding this country's experiences of vaccination and small-pox. The dentist (Mr. D. V. Beacock) tells his readers that "in the City of London alone no less than 200 children die annually from vaccination." The fact that in the whole of England and Wales only a mere fraction of this number of deaths is registered annually as having any connexion with vaccination is a sufficient comment on the character of the statement. Another assertion is that "when persons are vaccinated during a small-pox scare" they are "invariably the first in every epidemic to catch small-pox." How diametrically this is opposed to experience in this country need hardly be pointed out, for indeed every small-pox epidemic shows that those who are successfully vaccinated or revaccinated in the course of it are, unless the disease is already incubating, protected against small-pox in a wonderfully uniform fashion. The latest example is that of Glasgow, where of 400,000 persons revaccinated during the epidemic not one took the disease. "Invariably" is a favourite word in the mouth of the antivaccinating dentist. He speaks of the "legion of infantile diseases that invariably follow in the wake of vaccination," and calls on his readers to "think of the multiplex eruptive diseases, the tortuous eczemas and their associates which so invariably follow and make life a terrible burden." As regards embryology, he explains to his readers that not merely the development but also "the genesis" of organs depends "supremely upon the constancy and perfection of the nutritive supply." He even calls the *Medical Times and Gazette* to his support, stating that "it calls attention to this fact—that consumption had widely spread since the introduction of vaccination." That consumption has really much diminished is a mere matter of fact which cannot, of course, be allowed to interrupt the flow of denunciation. When he says that vaccination was "fostered in the beginning by feminine conceit and courtly prerogative," one wonders whether he knows enough of the subject to enable him to distinguish historically between vaccination and small-pox inoculation—but it really does not matter whether he knows or not. Nor does it matter that in the pamphlet as reprinted "vesicle" is spelt "vesical" and "turpitude" has become "torpitude," and "variolae vaccinae" appears as "variola vaccinia." One can only express a mild surprise when the author states that "the blood of nearly all our ancestors was inoculated with the virus of small-pox, and to our shame be it said, was as highly recommended by physicians as vaccination is to-day." No details are given of this cannibalism, so it

does not appear whether the blood was prescribed to be taken raw or made into puddings. As we have said, however, the republication of the pamphlet in this country is not without use in showing that the material on which antivaccination feeds in America is pretty much of the same sort as nourishes it here.

SMALL-POX IN ENGLAND AND WALES.

DISTURBING intelligence is being received from many widely separated provincial districts as to the spread of small-pox. Cases are reported from Whitchurch and Shrewsbury in Shropshire, from Chester, Crewe, and Nantwich in Cheshire, and from Newtown and Tregynon in Montgomeryshire. In the Midlands cases have occurred in Birmingham and Aston, in Chesterfield, and in Wolverhampton. In the Northern counties cases have been notified in Liverpool, Stockport, Bolton, Radcliffe, and Farnworth in Lancashire, in Sheffield, and in Sunderland. Most of the cases have occurred among tramps, hawkers, and other users of common lodging-houses, and workhouses. For example, one of the cases notified in Sheffield at the end of the year was that of a tramp who had visited lodging-houses or workhouses at Derby, Nottingham, Loughborough, and Leicester. The disease, which is now spreading in Birmingham and in the neighbouring district of Aston, was introduced by a tramp about a month ago. Other facts having a similar significance are such as the following: A recent case notified in Chester was that of a woman who had been living in one of the courts of the city, and had been in contact with a number of people before she was isolated. A new case in Shrewsbury was that of a man in whom the disease made its appearance on the night he was lodged in the gaol for drunkenness. At Chesterfield one case was that of a young man who had been employed in the local ironworks, and had been mixing with his fellow workers for several days before he was considered ill enough to require the services of a medical man. The degree of its prevalence may be gauged from the following facts. Up to December 30th, 1902, 205 cases were under treatment in the Liverpool hospitals, the number of new cases arising during the last week of the year was 74 and during the previous week 56. In Sheffield on the same date there had been 28 cases. Up to January 3rd there had been 66 cases notified in Bolton and 22 in the neighbouring towns of Radcliffe and Farnworth. Up to January 6th 80 cases had been notified in Newtown, Montgomeryshire; in Stockport 55 cases were under treatment several days ago. It is stated that at Newtown, in the absence of facilities for isolation patients are being treated at their own homes, and it is to be feared that a similar unpreparedness may obtain at other centres of infection.

PROFESSOR KOCH ON TYPHOID FEVER.

IT used to be said of Dupuytren that his motto in surgical practice was *Faire autrement*. Where the recognized authorities said that a wound should be enlarged, he closed it, and vice versa. Professor Koch seems to have taken the same motto for his public deliverances. Scarcely have we recovered from the shock of his famous address at the Tuberculosis Congress, in which he told the world that the precautions previously insisted upon to prevent contamination of milk were useless, than there comes another in the form of a pronouncement that in the prevention of typhoid fever special precautions with regard to drinking water may be dispensed with provided certain others are enforced. An address on the prevention of typhoid fever, delivered by him to the Senate of the Kaiser Wilhelms Academy, has just been published by A. Hirschwald of Berlin. In this address he urges that the surest method of prevention is that in all places where the disease is endemic every single case should be dealt with by isolation and disinfection of the clothes and excrements. Inasmuch as no other source of typhoid infection exists except the diseased man, he holds that by this method alone, without special precautions as to drinking water, etc., the disease can be stamped out in the foci where it originates, as in the case of cholera and malaria. The only means of preventing typhoid from spreading consists, he says, in the complete isolation of the sick, and on these lines he has experimented at Treves so successfully that he was able to stamp it out completely in a group of villages in the neighbourhood notorious for the frequency of its typhoid cases. Professor Koch suggests that a new institution for the combating of infectious diseases should be founded. We hope as soon as possible to give a fuller account of the address.

NURSING OF THE SICK POOR IN WORKHOUSES.

IN the article published in the BRITISH MEDICAL JOURNAL of December 20th, 1902, in which some account was given of the report of the Departmental Committee on the Nursing of the Sick Poor in Workhouses, attention was drawn to the unfortunate proposal to establish under official sanction a lower grade of nurse, to be called a "qualified nurse," apparently on the principle *lucus a non lucendo*, for she would not be qualified to undertake general nursing duties. We now learn that the Committee of the Workhouse Infirmary Nursing Association has drawn up a memorial to the President of the Local Government Board protesting against the proposed creation of "qualified nurses," on the ground that they would be women trained for one year only in a small workhouse, and would merely hold a certificate of good conduct and proficiency from the superintendent nurse, chairman of the Board of Guardians, and the medical officer. Any person desiring to sign the memorial can obtain a copy on application to the Hon. Sidney Holland, the London Hospital, E., or to the Secretary of the Workhouse Infirmary Nursing Association, 6, Adam Street, Adelphi, London, W.C. The memorial has, we are informed, already been signed by many influential persons.

THE TYPHOID BACILLUS IN WATER.

IN connexion with the recent alarm about the sewage contamination of oyster beds and the undoubted cases of typhoid fever which have followed the use of oysters from beds so polluted, some observations by M. Busquet, published in the *Annales d'Hygiène* for last July, seem to be worth recalling. The difficulty in finding the typhoid bacillus in water is well known, and was strikingly illustrated in the Maidstone epidemic a few years ago. M. Busquet was called upon to investigate a small epidemic of typhoid fever which had attacked a battalion of Zouaves, causing 56 cases with 10 deaths. The examination of the water supply showed that it was probably polluted by infiltration, and that in one part of the pipe where there was a curve the bend contained a muddy deposit covered by clear water. Examination of the water failed to discover any pathogenic bacillus; but, on the contrary, Eberth's bacillus was easily isolated from the sedimentary mud. M. Busquet adds that out of 984 bacteriological examinations of water which he had previously made, 5 only gave positive results, and in these 5 cases the water contained more or less muddy deposit. He concludes from these facts that it is not sufficient to examine the water only, but that in all cases a certain amount of the sediment must be taken at the same time, and he has devised a special apparatus for obtaining samples from the bottom of wells and other waters.

THE NATIVE MEDICAL SERVICE IN MADAGASCAR.

A COMMITTEE of the Académie de Médecine has presented a report on the account given by General Galliéni, the Governor of the Native Medical Service in Madagascar. A school of medicine has since 1896 taken up the work commenced by the English and Norwegian missions. There is a five years' course in the Tananarivo School, and the title of Doctor of Medicine (Madagascar) is conferred. As a result of the examinations in 1900 four men were considered sufficiently equipped to proceed to the French degree, and were sent to Montpellier for further study. The native hospital attached to the school contains 140 beds; the average daily number of patients has risen from 40 in 1897 to 120 in 1900. Midwives are also trained here and in the Maternity Hospital. The average daily attendance at the out-patient department of the hospital

is about 150. Vaccinations are done weekly on market day. General Galliéni, struck by the sparseness of the population in otherwise fertile and well-watered regions, has taken means for increasing the population, including medical and hygienic measures, such as the creation of hospitals, dispensaries, and orphanages. These institutions are in charge of native medical men trained in the Tananarivo School. A vaccination station was founded at Diego-Suarez in 1899, and in the same year a Pasteur Institute in Tananarivo. Epidemics of small-pox used to occur every year, carrying off thousands of people. The number of native doctors is not yet sufficient for vaccination to be made compulsory all over the island, but it is compulsory in the capital. Several patients have already undergone successfully the antirabic treatment in the Pasteur Institute. The number of lepers in the island is very great, especially in the Imerina and Betsileo districts. Five leper hospitals have been built by the French Government. The children who show no signs of leprosy by the age of eighteen months are taken from their parents and placed in a home. There are also private leper institutions belonging to religious missions. In the reign of Ranavalona II the danger of allowing lepers to roam about was recognized, and a strict law was passed, but it became a dead letter under Ranavalona III. Venereal diseases are very rife among natives of the central plateau. A hospital for venereal diseases was founded in 1900 at Itaosy, near Tananarivo, a *service des moeurs* instituted, and a hospital for pregnant women suffering from venereal diseases established. Orphans have been boarded out in some districts, the native foster-parents receiving 24 francs a year. This has been found much cheaper than orphanages, and the foster-parents get attached to their charges and practically adopt them. In order to improve the hygienic conditions of the natives of the central plateau and to prevent the spread of disease, illustrated pamphlets in the vernacular dealing with the hygiene of pregnancy, the rearing of children, the benefits of vaccination, and the evil consequences of alcoholism, of syphilis, and other venereal disorders, have been distributed. The officials and native doctors explain these pamphlets and answer questions at the weekly palavers on Sundays. The habits of the Malgache natives are very dirty both as to themselves and their dwellings, and two great festivals are the means of spreading contagious disorders. The *Mamodika*, held on the central plateau, is a festival of the dead, when the departed are turned in their graves and their clothes changed; this was followed on several occasions by an outbreak of small-pox, and in 1897 it was forbidden to open the graves of those who had died from variola. The *Miandravana*, festival of the Betsileo district, was a kind of wake, which finished up with dancing and drunkenness. Alcoholism has greatly increased of late years in the island, and insanity also. Drunkenness, however, existed under the native rulers, as ordinances show. The *Pulex penetrans* was imported by the Senegalese sharpshooters forming part of the army of conquest, and the ravages of the parasite have been great. Malaria every year cuts down numbers of the French army of occupation, but the disease is steadily diminishing owing to improved cultivation and to the precautions taken against *Anopheles* and their breeding grounds. Efforts are also being made to impress on the native mind the importance of a pure water supply.

THE PREVENTION OF OPHTHALMIA IN EGYPT.

IT is announced in the newspapers "on good authority" that Sir Ernest Cassel, the true begetter of the King's Sanatorium—as to which we may be allowed to express the pious hope that it may succeed before long in breaking the *fata aspera* that have hitherto impeded its birth—has offered to give £40,000 in furtherance of the study of ophthalmia in Egypt. It is stated that the money will be administered by local direction, but the details are not yet decided upon. The main object of the scheme, however, is a closer study of diseases by native doctors, who alone can effectively influence the habits of the people. Amongst the ignorant natives, says the *Daily Telegraph*, it is considered bad luck to wash the faces of infants. Thus for months at a time a child's face remains coated by filth, and the eyes are injured by flies. In many cases the eyesight is ruined before the child walks. Any effort, therefore, to alter the present lamentable condition of the eyes of the natives must commence by instilling habits of cleanliness amongst the mothers.

A MEDICAL PRESIDENT.

M. ADOLF DEUCHER, who was recently elected President of the Swiss Republic for the third time, is a member of the medical profession. He was born at Steckborn, in the Thurgovia Canton, in 1831, and early began to take an active part in local politics. It is said by those who have watched his career that the devotion and self-sacrifice with which he practised his profession won for him the hearts of the people, and paved his way to the distinguished position which he now holds. He became a member of the National Council in 1867. In 1883 he became a member of the Federal Council, and almost at once was elected President of the Republic. He has also served as head of nearly all the departments of State, but his principal work has been accomplished as chief of the department of Commerce, Industries, and Agriculture. President Deucher has always taken a special interest in labour questions, and by his method of dealing with them he has gained the full confidence of the working classes. It may be added, as showing the true Republican simplicity with which Switzerland manages its affairs, that M. Deucher's official salary as President is £720. Another noteworthy point is that that very comprehensive catalogue of persons of note, *Who's Who?* omits his name altogether. It is doubtless sufficient for Dr. Deucher that he has the rare distinction of being most honoured by those who know him best.

ETHER DRINKING IN RUSSIA.

THE habit of ether drinking is extremely prevalent in some parts of Russia as of East Prussia, and all the efforts of the authorities to combat the evil have hitherto been almost fruitless. An idea of the extent to which the habit prevails may be gathered from reports given in the Russian newspapers of a recent accident which occurred at a place called Trossno. Ether is drunk by farmers on festive occasions, when it appears to be consumed in pailfuls. A farmer celebrating his son's wedding, in the fullness of his hospitality, got in two pails of ether. During the process of decanting the ether into bottles a violent explosion took place, by which six children were killed, and one adult was dangerously, and fourteen others more or less severely, injured.

A BILL has recently passed the Swedish Parliament, and received the assent of the King, providing for State insurance against accidents in workmen.

DR. ADOLF SZILI, Professor of Ophthalmology in the University of Buda-Pesth, has received the honour of hereditary nobility in recognition of his services to public health.

A SOCIETY for the Study of the History of Medicine has recently been founded in Holland. It already has a considerable membership. The foundation of the Society is due to the initiative of Dr. Peypers, the editor of *Janus*.

AT a meeting of Convocation of the University of London to be held on January 18th the chief business will be the consideration of a scheme for the improvement of the library which has not hitherto been made as extensive or as useful as the library of such an institution as the University of London ought to be.

THE Swiss Republic seems to honour the physician for the need it has of him in a political sense. Not only has it, as above stated, a medical President, but its diplomatic representative in France is Dr. Lardy, who is also a member of the medical profession.

NOVA ET VETERA.

DALHOUSIE AND GRANT.

UNDER the suggestive title of *Physician and Friend*.[1] Dr. George Smith, C.I.E., well known as a former editor of the *Friend of India*, and author of several works relating to India and Indian history and administration, has recently published a collection of papers and letters, with interesting editorial comments, concerning mainly the life and work of the late Surgeon-Major Alexander Grant, F.R.C.S., of the Indian Medical Service.

Apart from Grant's personality and services, the period of his Indian career was stirring, and in some respects tragic; and his intimate association with the "great Proconsul," Lord Dalhousie, imparts to the story of his life a peculiar, almost historic, interest. He was a close observer and diligent recorder. He kept a diary, and prepared a brief autobiography. He also wrote a short account of the personality of the great ruler with whom he was so intimately connected, and into whose confidence and friendship he effected so thorough an entry. The main incidents of Grant's life and career are capable of being represented in brief summary. Born at Elgin, Morayshire, in January, 1817, he was educated at the academy of that charming little town. He studied arts in the Aberdeen University (whether at King's or Marischal is not stated, probably the former), and medicine in the University of Glasgow. He obtained the licence of the Royal College of Surgeons, Edinburgh (of which he subsequently became a Fellow), in 1838. Failing to obtain a commission in the Queen's service, he made a voyage as Surgeon in the Indiaman *The Thames* to Madras, Calcutta, and China. This voyage lasted from March, 1839, to July, 1840. There is a curious mistake in the book, which represents the voyage as having been undertaken in 1837-38. His experience as a ship doctor was not wasted. He observed closely the constitution, habits, treatment, and ailments of the British seaman, and contributed a series of papers on the subject to the *Medical Times*, from which a long extract is given indicating a keen interest in his profession and work and no ordinary capacity.

On his return from this voyage he was appointed an Assistant-Surgeon of the Bengal Medical Service, and arrived in Calcutta on April 11th, 1841, after a voyage of five months, during which provisions ran short and the crew got out of hand. Shortly after his arrival he was appointed to H.M.'s 55th Foot under orders for service in China. Starting on May 24th, 1841, in an overcrowded and overladen transport, Grant showed the sort of man he was by stopping her at the Sandheads and getting her lightened and relieved of one-third of her passengers. His service in China lasted till October, 1844—three years and five months, most of it with the 55th Regiment. He kept a diary and contributed a series of letters to the Calcutta *Englishman*: some of his private letters to Sir Charles Forbes, Bart., were published in the *Times*, and he wrote in the *Calcutta Medical Journal* a series of medical sketches of the expedition to China. He also contributed to the Agri-Horticultural Society of Bengal some observations on the Chinese system of agriculture, "so admirable in many of its features."

The diary of service in China is full of interest. He touched at Hong Kong, of which a topographical sketch is given; was present at the capture of Amoy and at the siege of Tinghai, where he was under fire for the first time, and attended to the wounded under difficulties. Subsequently, at Chusan, he treated many Chinese wounded. In May, 1842, he took part in the capture of the town and garrison of Chipoo. "In the Tartar part of the town," he writes, "the scenes of wholesale suicide of men, women, and children were the most heart-rending I have ever witnessed." He next accompanied the expedition up the Yang-tse-Kiang River, and was at the storming of Chin-Kiangfoo. The preparations to attack Nankin were stopped by the declaration of peace: but the sojourn near that town in August was the cause of serious sickness in the force. Grant gives a vivid description of a journey which he undertook for the purpose of replenishing his stores, and of the conveyance of his sick over a "broad rapid stream," which cut off his communications. The adjutant swam the river, and found a manure tub, in which, with the help of bamboo poles the patients were ferried across. The subsequent march was through inundated country "standing or wading up to the thighs for hours." These obstacles were due to the bursting of a canal embankment, but the transport was reached at last. The year 1843 was spent at Chusan, where, in consequence of sanitary improvements suggested by Grant, the sickness was greatly reduced; but a gravestone in that place was erected "to the memory of 11 sergeants, 13 corporals, 4 drummers, and 403 privates of H.M.'s 55th Regiment who were killed in action or died from disease while serving in China from July 13th, 1841, to February 22nd, 1844." In parting with the regiment at Hong Kong, Grant obtained very high praise from the surgeon, who "considered him one of the best medical officers he had ever met with." He was detained at Hong Kong till June, and arrived at Calcutta in October, 1844.

Shortly after his return to India he was offered the medical charge of Simla and the Civil Station of Bhagulpore. He chose the latter, but in January, 1846, was ordered to join the army of the Sutlej. He received this order with glee, and with characteristic energy made his way to the front whence on peace being declared he returned to Bhagulpore. In the hot weather of 1848, his health failing, he left this station and obtained charge of the Civil Station of Chuprah, then one of the three best stations in Bengal. The work was lighter. He was postmaster and registrar of deeds as well as civil surgeon, and his emoluments amounted to Rs. 1,000 per mensem. In September of this year an autograph letter reached him from Lord Dalhousie asking him to accompany Lady Dalhousie as her medical attendant from Calcutta to Simla. The Governor-General was obliged to visit the Punjab and take Dr. Bell, his own doctor, with him. Grant, after some hesitation, accepted the offer and started at once for Calcutta. The journey to Simla, which can now be accomplished in three or four days, occupied five months—by river to Allahabad and thence by marches via Agra, Delhi and Meerut.

Lord Dalhousie reached Simla in April, 1849, and appointed Grant as his medical attendant, a post which he retained until he parted with the ex-Viceroy in England in September, 1856, after taking him home in broken health.

During these seven years he was in close association with Lord Dalhousie as his trusted medical adviser, his intimate friend, and his counsellor in matters medical. These seven years were critical and stirring, and constituted a memorable epoch in the history of the Indian empire. Lord Dalhousie's administration was masterful; he not only added vast territories—the Punjab, Pegu, Nagpore, Sattara, Jhansi, Berar, and Oudh—to the empire, but he improved its condition and developed its resources in many ways; by constructing roads, railways, and canals, introducing cheap postage, and generally infusing into the government of the country a spirit of energy, order, and progress. In all this he had to battle with an infirm constitution and miserable health, and his heart was almost broken by the death of his wife on the voyage home in 1853. Reasons of State and reasons of health caused him to be continually on the move, and wherever Dalhousie went Grant went with him. This book gives a short record of these wanderings. In 1850, on medical grounds, he took a sea voyage from Karachi to Calcutta via Ceylon and the Straits, touching at various places *en route*. The rains of the same year were spent at Chini—150 miles from Simla—at an elevation of 9,000 feet. A triumphal progress was made through the Punjab in 1851, and by slow marches down country Calcutta was reached in January, 1852. During this year Grant accompanied Lady Dalhousie to Ceylon, whither she went in pursuit of health. He employed his leisure hours in preparing a *Guide to the Domestic Medicine Chest in India*, which was well received. In 1853 Burmah was visited. Grant supplies some interesting notes of this visit. He started, in conjunction with Dr. Norman Chevers, the publication of the *Indian Annals of Medical Science*, which he continued to edit as long as he remained in India, and to which he contributed some interesting papers.

In 1855 the Governor-General paid a second visit to Burmah. In this same year he was strongly urged to quit India; but he deliberately set aside medical opinion, "believing it to be his duty to remain in India in fulfilment of his pledge." A trip to sea and residence on the Neilgheries were resorted to by way of compromise. He left India in March, 1856, and took Grant with him, after obtaining for him the coveted appointment of Surgeon-Superintendent of the European General Hospital at Calcutta on his return. This seems to have been Grant's only absence from India during his service, and lasted from March 6th to December 1st. He had

[1] *Physician and Friend: Alexander Grant, F.R.C.S.: His Autobiography and his Letters from the Marquis of Dalhousie.* Edited by George Smith, C.I.E., LL.D. London: John Murray. (8vo, pp. 213, with plates and illustrations. 10s. 6d.)

consultations with distinguished physicians and surgeons in London and Edinburgh, who fully endorsed his view of the case of his illustrious patient, and approved of his management and treatment of it. He paid a round of visits in Scotland and Ireland, and lingered in places on the Continent on his outward journey.

On arrival at Calcutta he took up the office which had been reserved for him, but soon exchanged it for the more congenial appointment of Apothecary-General and Opium Examiner to the Government. In this capacity he had to provide medicines and stores for the troops employed in the Mutiny and in the expedition to China in 1860. He earned high praise for his services on both occasions. He continued his editorial work, and took an interest in the University of Calcutta, of which he was created a Fellow and elected President of the Medical Faculty. Failing health compelled him to resign his appointment and leave India in February, 1861, after a service of twenty years.

He wandered about in search of health for some time, retired in 1863, and finally settled in Connaught Square, Hyde Park, where he lived in comfort and happiness with his sister until he died in 1900, at the age of 83. During this time he was by no means idle. His house was a happy rendezvous for old Indian friends and acquaintances. He started a serial work—*The Annals of Military and Naval Surgery and Tropical Medicine and Hygiene*—but it did not pay expenses. He gave evidence before the Royal Commission on the sanitary state of the army in India, and was consulted on the then burning question of the amalgamation of the Royal and Indian Medical Services. By way of recognition of his merits and services he was created Honorary Surgeon to the Queen; but, as this book shows, this distinction fell far short in merit and weight of the high estimation in which he was held by his official superiors, acquaintances, friends, and patients. He was a large-brained, large-hearted man, upright in all his deeds and dealings, shrewd, progressive, devoted to his profession, and a type of the many-sided, self-reliant Indian medical officer.

So much for the physician; but the book also throws a flood of light on the friend Dalhousie. It contains a pen portrait of him by Grant, which is really an analytical presentation of his person, disposition, and character. It contains a series of letters written to Grant during the two years following his retirement from India, while he was suffering from the stress of physical pain and illness, and from the crushing mental depression caused by the outbreak of the Mutiny.

Dr. Smith raises, and in some measure contributes to solve, the question of the influence of Dalhousie's administration on the causation of this disaster. Probably this question will not be fully settled until the publication of Dalhousie's papers, which, according to his will, will take place fifty years after his death—in 1910. Dalhousie was a staunch and strenuous friend of the Indian Medical Service, as his celebrated dispatch of 1856 clearly proclaims. Grant furnished the material on which this was founded, and no doubt largely inspired its tone.

Dr. George Smith's book provides fascinating reading for Indians of many sorts and classes. He makes some side excursions into subjects suggested by his main theme, such as the still-to-be-written history of the Indian Medical Service, the life of Baron Larrey, the Conquest of Burmah, and the Indian Mutiny, which are full of interest, and give additional zest to a volume every page of which is entertaining.

THE BALLACHULISH QUARRY COMPANY AND THEIR MEDICAL OFFICER.

IN the BRITISH MEDICAL JOURNAL of August 30th, 1902, a short account was given of the extraordinary action of the Ballachulish Slate Quarry Company in attempting to get rid of their medical officer, Dr. Lachlan Grant, notwithstanding the fact that the men, from whose wages the medical officer's salary was deducted, strongly wished him to remain. The action of the directors caused great indignation among the men, who passed a resolution that they would have no other medical officer than Dr. Lachlan Grant. They claimed the right to elect their own medical officer, and refused to allow any money to be deducted from their wages to be paid to any other doctor. The directors, on the other hand, insisted on their right to choose a medical officer for their employés in defiance of their expressed wishes, and to make them pay with their own money for the services of any practitioner who might be thrust upon them. They seem, if statements in the *Highland News* are to be trusted, to have stooped to the discreditable manœuvre of attempting to manufacture complaints against Dr. Lachlan Grant.

The company took the case to the Court of Sessions, and, as appears from a report published in the *Scotsman* of November 6th, 1902, they asked for an interdict to prevent Dr. Lachlan Grant from practising in Ballachulish, and in particular against his acting as medical practitioner or surgeon to the employés of the company and their families. The company stated that they employed about 600 men at their quarries, and were in use under an agreement with them to make arrangements for their medical attendance. Under their agreement with Dr. Lachlan Grant, it was provided that his salary should be £270, that his engagement should cease at any time upon one month's notice, and that any local appointments or any other practice in the immediate locality should be held only during the tenure of his appointment as medical officer to the company. Dr. Grant contended that he had faithfully discharged his duties, and that no ground existed for the course adopted by the company. He maintained further that the company, being only trustees for their workmen in the appointment of a medical officer, and the workmen having unanimously passed and communicated to the directors their resolution that Dr. Grant was to continue as their medical adviser, the action of the directors to prevent him from doing so was *ultra vires*, and the action should be dismissed. Lord Kyllachy on December 18th gave judgement against Dr. Lachlan Grant, said it was contended that the company, not being themselves medical practitioners, had no interest to enforce the stipulation. It appeared to him that having regard particularly to the known situation and character of the district, the directors had a material and quite legitimate interest to make it a condition of the medical officer's employment that if he ceased to be their salaried officer, he should not compete with his successor in the appointments or practice within the district. With regard to Dr. Lachlan Grant's averment that there had arisen a change of circumstances which excluded for the future all interest on the company's part in the medical arrangements of the locality, it appeared to his Lordship to be a conclusive answer to Dr. Grant's argument that the position of matters which now existed, and on which he founded, was a position resulting from his own breach of contract, and on which therefore he could not found. For it was at least possible that if he performed his contract and went away the situation would very soon, if not immediately, right itself—doing so just in the way which the parties contemplated when they made the stipulation in question a condition of the medical officer's employment.

Lord Kyllachy's decision has caused widespread dissatisfaction among the Ballachulish quarriers. A correspondent of the *Highland News* points out that the district served by Dr. Grant contains a population of between two and three thousand persons, all of whom have an interest in the doctor. Of those not connected with the quarries, he says, every one without exception is strongly in favour of Dr. Grant, and of the 380 quarry employés all, except three, have signed in favour of retaining the services of Dr. Grant as their medical officer. The three objectors, he alleges, are cousins of the manager of the quarries. He calls on all his fellow-workers in the employment of the company to resist by all known legal means the attempt to rob them of their rights as freemen. The editor appends a note to the correspondent's letter to the effect that if "the quarries tamely submit to the sequel of this decision against Dr. Grant, they will be willingly allowing themselves to be placed on a level with horses, cattle, sheep, and swine, the possessors of which call in any veterinary aid without the consent of the dumb patients." He calls on them to stand "shoulder to shoulder all around" their medical officer.

As Dr. Lachlan Grant has given notice of appeal we refrain from commenting on the case at present. We may say, however, that we have reason to believe that both the quarrymen and the population are determined to make a firm stand on behalf of Dr. Lachlan Grant, and that the movement is and has been absolutely spontaneous. It certainly seems remarkable that a company should claim the right not only of choosing a medical officer for their employés while allowing them the privilege of paying for his services, but of actually preventing a doctor, who for whatever reason has made himself obnoxious to the directors, to practise his profession within their sphere of influence. This may be the law, but if it be, the law seems to need amendment.

THE VACCINATION ACTS.

By JOHN C. McVAIL, M.D.

To the Special Vaccination Number of the BRITISH MEDICAL JOURNAL, published on July 5th last, I contributed an article, entitled Vaccination Problems for Parliament. In view of the fact that the five years' legislative experiment formulated by the Vaccination Act of 1898 comes to an end on December 31st, 1903, and that the subject will therefore in some shape or other come before the next Session of Parliament, the Editor has now asked me to state more fully my views on the questions at issue. The subject was dealt with in July under seven headings, namely:

1. The local authority for the administration of the Vaccination Acts.
2. Efficiency of vaccination.
3. Public and private vaccination.
4. Calf lymph supply.
5. Revaccination.
6. The Conscience Clause. And
7. Small-pox hospital accommodation.

I propose now to depart from that order, and to consider first the question of

A REVACCINATION ACT.

The reason for beginning with this is that the passing of a Revaccination Act seems to me not only of the first importance in itself, but also the only feasible basis for the most important of the other reforms in the Vaccination Acts which experience calls for at the present time.

The request for a Revaccination Act is based on the evidence that without systematic revaccination we cannot have national freedom from small-pox epidemics, and that with systematic revaccination there can be such freedom. Logically there are in this matter only two alternatives. Either we should have no obligatory Vaccination Acts whatever, or these Acts should apply alike to primary vaccination and revaccination.

If Parliament were to declare that it disbelieves in vaccination its immediate duty would be to give effect to its disbelief by disestablishing and disendowing the whole system, as the National Antivaccination League demands. But Parliament adopts no such attitude. By passing the Vaccination Act of 1898 it has once more recorded its faith in vaccination and its conclusion that the subject is one suited for legislative control. That being so, there is no getting away from the position that the Vaccination Acts should embrace revaccination as well as primary vaccination. The statistical evidence in support of the need for revaccination is of the same character and validity as the evidence for primary vaccination. Both are necessary to protect the country against small-pox epidemics. There is no sense in maintaining the present obligatory law, with all its elaborate arrangements central and local for the protection of children from small-pox, without a similar law for their protection in after-life, when they will be useful members of the community, earning their living, and paying rates and taxes, and propagating the species. To confine to the obligatory vaccination of children all the labours of the Local Government Board and its inspectors and its lymph laboratories, and all the work of local authorities and their public vaccinators and vaccination officers, is a manifest absurdity which has at last been so far recognized that public vaccinators are now permitted and paid to revaccinate those who come to them in times of small-pox prevalence asking for protection. Such applications, however, are quite unsystematic, and depend on the existence of the very evils which the whole vaccination system is intended to prevent—the occurrence, namely, of epidemics of small-pox. At present, pressure towards revaccination of the general population is exercised almost wholly by small-pox, while the purpose of revaccination should be to prevent the occurrence of small-pox.

If one could rely on a mere threat of small-pox in a community bringing about general revaccination of all susceptible persons, there might be something to urge in favour of a voluntary system, though even then a great deal would remain to be said as to the defects of panic vaccination. These defects are due to the rush and hurry of crowds of persons making simultaneous application for protection. As will be pointed out later on, it is difficult so suddenly to meet demands for lymph supply and to find time for all the modern precautions for sterilizing the patient's skin and carrying out the whole procedure aseptically. Even assuming that all this is achieved, some proportion of those presenting themselves for revaccination may already have small-pox incubating in their system.

But there is precedent to these objections to voluntary or panic revaccination another of even greater weight. Experience shows that a few cases of small-pox occurring in a large community are not sufficient to send the great bulk of the susceptible population to seek for vaccination. The danger requires to be very obvious before public dilatoriness can be overcome. In Glasgow, when small-pox was showing itself in 1900, the medical officer quickly appreciated the danger and issued placards all over the city informing the public that arrangements had been made by which practically the whole medical profession of Glasgow were prepared to revaccinate on behalf of the Corporation and free of charge to the individual. This offer was only taken advantage of to a very trifling extent, and the outbreak continued to creep on month after month, so that though from April to the end of the year 1900 there had been nearly 400 cases of small-pox the revaccinations in a population of more than three-quarters of a million amounted to only 8,001 persons over 10 years old. But in 1901 rapid increase of small-pox caused rapid increase of vaccination, so that in that year the revaccinations ran up to over 400,000. Later on another difficulty was experienced. A class of the population was reached whose indifference alike to their own welfare and to that of others was such that it took more persuasion to get a single revaccination done than a few months previously had been sufficient for a score.

Now, in Scotland, it is well known that there is much less opposition to vaccination than in England, and I doubt whether a better result of a voluntary system can be looked for anywhere in England than was obtained in the city of Glasgow. As a protection to those who did accept revaccination the measure was an absolute success; not a single one of the 400,000 took small-pox. Among those who refused, however, there were between April, 1900, and May, 1902, no fewer than 2,255 cases of small-pox, with their customary toll of death and disfigurement, and anxiety and loss of work, besides all the costs of destruction of infected articles, disinfection of houses, maintenance and extension of hospital accommodation, and so forth. Compare such an experience now with that of Germany. Since 1874 there has been compulsory revaccination of all school children in the twelfth year of life, as well as primary vaccination of children under 2 years. The result, as stated in the tract issued by the Council of the British Medical Association,[1] is that small-pox epidemics are utterly abolished from Germany, and only a few scattered deaths occur each year, mostly on the frontiers. Here are the small-pox deaths per million of the population in Prussia, just prior to the law of 1874, in the nine years 1866 to 1874—620, 432, 188, 194, 175, 2,432, 2,624, 357, 95. Here, on the other hand, are the figures for the twenty-four years, 1875 to 1898—36, 31, 3, 7, 13, 26, 36, 36, 20, 14, 14, 5, 5, 3, 5, 1, 1, 3, 4, 3, 0.8, 0.2, 0.2, 0.4. For the German Empire as a whole the statistics are given from 1886 to 1899 inclusive, and in this population of 52,000,000 we get nearly to the vanishing point of small-pox. The rates per million are as follows: 4, 3.5, 2.3, 4.1, 1.2, 1.0, 2.1, 3.1, 1.7, 0.5, 0.2, 0.1, 0.3, 0.5.

The neighbouring country of Austria, on the other hand, which is without compulsory vaccination, gives the following rates for the years 1887 to 1896: 440, 640, 520, 250, 290, 260, 250, 110, 47, 35. England, with obligatory vaccination of infants not well carried out, comes between these two with the following rates in 1887 to 1898: 18, 36, 0.8, 0.6, 1.7, 14.7, 49.3, 27.3, 7.3, 17.6, 0.8, 8.1. It should be noted that these are favourable years for England, and that since 1898 we have had the London epidemic.

In face of such facts, what can be said against the introduction in England of a law of obligatory revaccination of children before leaving school? German experience answers in advance one possible argument. A single revaccination cannot under all circumstances be regarded as absolute protection of the individual through all the rest of his life. Where, however, in any town, and especially in any whole country, one revaccination is added to another until nearly all have been overtaken, the protection increases at a high rate of compound interest. In addition to the individual having the benefit of his own inoculation with vaccine lymph, he has also the benefit of being surrounded by a protected community, or, as it would be under a Revaccination Act, by a protected nation. Small-pox would then have much more difficulty than at present in obtaining a footing in the country, and would be much less likely than at present to search out those individuals here and there whose susceptibility had in greater or less degree returned,

[1] *Facts about Small-pox and Vaccination.* British Medical Association, 429, Strand, W.C. Price 1d.

or those others who had been the subjects of exemption certificates. When occasionally small-pox would succeed in finding a victim, it would be much easier than at present to confine the infection within narrow limits. The proportion of susceptible persons among immediate "contacts" would be small, and the surrounding community would to a very large extent be immune from risk of attack. For these reasons, then, though a single revaccination at about the age of 12 years would not invariably give life-long protection, yet a revaccinated nation would be living under a condition of national protection.

The possible influence of a Conscience Clause on this national protection has next to be discussed.

THE FIRST EGYPTIAN MEDICAL CONGRESS.

[From our Correspondent.]

(Continued from Page 30.)

General Impressions.

The first Egyptian Medical Congress came to an end on December 24th, 1902, and it was announced that another Congress would be held in Cairo five years hence. It is obviously too soon to attempt an estimate of the value of the labours of the first Congress, but certain general impressions about which there is pretty uniform agreement are perhaps worthy of record. The greatest success was undoubtedly from the social side. Unbounded hospitality was offered to all visitors, and some of the medical discussions which took place round the dinner table were almost equal in importance to the more formal proceedings of the Sections. Then, again, those who were visiting Egypt for the first time had an unrivalled opportunity of examining picked cases and admirable pathological specimens illustrating the forms of disease which either are indigenous or assume special types in that country. Many thoughtful papers were read giving well-balanced summaries of present information, and hence assisting in strengthening the attack upon certain of the problems of tropical medicine. This, rather than brilliant announcements of new discoveries, was the best type of contribution offered.

The office work of the Congress was excellently done; the Secretary-General and his assistants were always hardworking and uniformly courteous. The sectional meetings were on the whole well organized, though often extremely unpunctual in starting. The attendance varied enormously, according to the subject of the paper and the personality of the speaker; the largest audiences listened to the addresses of Dr. Loos on bilharzia, Dr. Bitter on cholera and plague epidemics, and Mr. Reginald Harrison on the geographical distribution of stone. The Ophthalmological Section was but little frequented, and the meetings usually closed long before the appointed time. The arrangements at the Medical School, where the scientific part of the Congress took place, were as nearly as possible perfect, owing to the forethought of Dr. Keatinge and his assistants. The only serious oversight on the part of the Congress Committee which we have to record was the absence of any adequate arrangements on behalf of the medical press.

Dinner of the School of Medicine.

Before proceeding to an account of the work of the Sections it will be convenient to continue the brief account of what may be called the external events of the Congress. On the evening of December 20th the School of Medicine held its annual dinner, postponed from October on account of the Congress. The guests were H.E. Jacoub Artin Pacha (Minister of Education), Mr. Reginald Harrison and Dr. Bertram Abrahams representing England, Professor Lortet and Dr. Jules Courmont from France, and Major Gorgas and Judge Tuck from America. H.E. Ibrahim Pacha Hassan (President of the School and of the Congress) was in the chair, and proposed "The School." Dr. Keatinge toasted "The Visitors," for whom Mr. Harrison, Major Gorgas, and Professor Lortet replied.

Entertainments.

On December 21st the Congress met in the morning only. In the afternoon its members were the guests of the Khedive at a garden party at the Barrage. They were taken down in His Highness's own yachts, and sent back by special train. It was a pleasantly informal affair; much admiration was expressed for the famous dam—the earliest of the modern examples of its kind—and the beautiful park upon the islands which it unites. The next evening the President and Secretary of the Congress and their wives gave a *fête arabe* at Cairo; the chief feature of this was the performances of the native dancing girls. A more intellectual entertainment was offered on the afternoon of December 23rd, when His Excellency Hussein Pacha Fakhry, Minister of Public Instruction, was "at home" in the magnificent new Museum of Antiquities. Lord and Lady Cromer were among those present, and a large number of Egyptologists conducted the members of the Congress through the unique collections, where one could see the mummy of the actual Pharaoh of the Exodus, or marvel at the artistic triumphs achieved by the goldsmiths of 6,000 years ago.

Final General Meeting.

The medical labours of the meeting were by now ended, and on the following morning Hussein Pacha Fakhry presided at the final general meeting. The delegates then made their adieux, Mr. Reginald Harrison again speaking on behalf of England. Next, certain general resolutions which had previously passed the Committee were put to the meeting and declared carried. Among the most important of these were two which were originally proposed by Dr. Ruffer, to the effect that the sanitary regulations ordained by the Venice Conference had proved inefficient, and that a further Conference was urgently called for. On the motion of Dr. Langlois it was resolved that the surveillance of pilgrims adopted in Egypt should be extended to Morocco, on that of Dr. Legrand that more active measures in the same direction were necessary along the Suez Canal and the Red Sea, on that of Dr. Gayet that the State should adopt legislation to prevent the spread of granular ophthalmia in the schools of Egypt, and on that of Professor Chantemesse that typhoid cases should be treated in special wards.

It was then announced that the next Congress would be held in Cairo at the end of December, 1907.

Professor Nothnagel next delivered a very interesting address on prophylaxis. He took up the question from a popular point of view, and showed how the modern sciences ancillary to medicine, and particularly bacteriology, had played a certain though limited part in the treatment of disease, but were of infinitely more importance in its prevention. Prophylaxis must be, he said, the ultimate aim of medicine, and would remove the terrors even of those diseases which had thus far been found to be incurable.

Professor Maragliano's oration, which followed, was much more technical. He chose as his subject the pathology of nephritis, and declared that in his opinion the old theory of the retention of effete products would have to be abandoned or greatly modified. He stated that the elimination of nitrogenous materials by diseased kidneys was altered not in quantity but in quality. The normal kidney allowed the passage of completely elaborated nitrogenous products, but not of those incompletely elaborated; in disease the reverse was the case. He cited a number of experiments in support of this view, taking the formation of a precipitate on the addition of phosphotungstic acid as the criterion of the imperfect elaboration of the nitrogenous principles. He asserted that these new researches would lead to considerable modification in the diagnosis and treatment of kidney disease.

Finally the Chairman delivered the closing address, expressing the extreme satisfaction of the Khedive at the successful course and termination of the Congress, and his hope that the foreign delegates would not fail to revisit Egypt.

Reception by the Khedive.

In the afternoon the Khedive held a reception at the Abdeen Palace, to which all the members of the Congress and their ladies were invited, together with a distinguished gathering representative of society in Cairo. A State reception and ball had been arranged for the previous evening; the modification was adopted in consequence of the death of an aunt of His Highness. The Khedive was extremely gracious, and the visitors evidently enjoyed wandering about in the noble apartments of his enormous palace. The huge room in which refreshments, including afternoon tea, were served, afforded a fitting frame to the closing scene of the Congress.

Excursions.

The rest of the week was filled up with excursions to Helouan, to Abbasieh, and up the river to Luxor and Assouan. These were very largely attended, though many of the members who had sufficient time at their disposal preferred to travel up country in a more leisurely manner by steamer.

The Work of the Sections.

Medicine.

The deliberations of this Section commenced on December

28th with an introductory address by H. E. COMANOS PACHA, the President. He announced that 128 papers would be presented, 58 by Egyptian doctors, and 70 by visitors. In order to facilitate business these would be grouped under five headings, namely, dysentery and hepatitis, malaria and the various fevers of hot climates, cholera and plague, tuberculosis, and general medicine. It was perhaps, he said, somewhat audacious for a country in which the spread of scientific knowledge was of such recent date as in Egypt, to invite the attendance of the masters of medicine at a congress, but he felt that such audacity was the best guarantee of progress. He presented the various foreign professors to the audience—which numbered about 50—and announced that Professor Nothnagel would preside at that sitting, which would consider the questions of dysentery and hepatitis, Professor Bouchard over the discussion on malaria, and Professor Maragliano at that upon tuberculosis. Professor Nothnagel then took the chair amid loud applause.

Dysentery and Hepatitis.—Dr. CARTULIS (Alexandria), the author of the article on dysentery in Nothnagel's *Handbuch*, opened this discussion by expressing the view that amoebae were the sole cause of dysentery and abscess of the liver, but of 164 cases of the latter affection observed by him 85 followed dysentery. He felt convinced that the prophylaxis of liver abscess lay in the early recognition and proper treatment of amoebic dysentery.—Dr. MÉTIVI (Saigon), on the other hand, as the result of a prolonged series of observations made in Cochin China, had come to the conclusion that the cause of dysentery was a cocco-bacillus analogous in some ways to that of Eberth, but to be readily distinguished from it by cultural peculiarities. When injected into animals it caused death from septicaemia.—Professor CHANTEMESSE (Paris) held that two forms of dysentery existed, the one amoebic, endemic, and the cause of liver abscess; the other bacillary, epidemic, and produced by an agent similar to that causing cholera and typhoid, but quite easy to isolate—namely, the bacillus of Shiga.—Dr. LEGRAND (Alexandria) stated that the frequency of dysentery and liver abscess was diminishing in Egypt, and recounted the excellent results which he had himself obtained with one of the Chinese *Simarubaceae*, El Kozan. This, he said, was of particular value in acute cases, but he had known patients who had been ill for months with dysentery cured by it in four or five days. It had, however, no action on pseudo-membranous enteritis if not dysenteric.—Dr. BELLELI (Port Said) strongly recommended enteroclysis with antiseptic solutions (carbolic acid).—COMANOS PACHA (Cairo) discussed the causes and the influence of climate on hepatitis, a tropical disease unknown in cold countries. He held that in hot climates the liver had to take on part of the work of the lungs and muscles, and so was liable to be chronically congested and predisposed to inflammation. This climatic influence was abetted by overfeeding and alcoholic excess; the soil being thus prepared, accidental invasion of a microbe excited the disease. This factor would not cause it were it not for the predisponents.

(To be continued.)

OUT-PATIENT DEPARTMENTS.

THE questions of the existence and regulation of the out-patient departments of public hospitals is at the present time one of great perplexity, that perplexity being largely due to the gross neglect and abuse of times past. An out-patient department of some kind is an almost necessary part of every hospital, were it only for the completion of the cases whose treatment had been so far carried on in the wards as to allow of the patient's discharge. This was all that was done in old times in the out patient rooms. But when the further step was taken of admitting for out-patient treatment persons recommended by the subscribers, who had never previously been in the hospital, no care was unfortunately taken to guard against the abuses which were sure to follow. They attained so great a height that a vigorous effort at reform was made, now a great many years ago, by a committee of medical men in London under Sir W. Ferguson's presidency. We cannot say that any great success followed that effort—nay, a fresh abuse (as many think) has been added in the system of payments by out-patients—payments ludicrously inadequate, if regarded as an equivalent for the treatment—which it would justly be held improper for a medical man to publish his willingness to accept, yet they are publicly advertised by leading hospitals.

Then again subscriptions have been solicited from working men, and from their clubs and societies; and the subscribers have very naturally considered that such subscriptions give them a right to treatment in return—generally out-patient treatment for trivial ailments. This state of things presses hardly on the local practitioners who are thereby deprived of many patients, members of the artisan class perfectly able to pay adequate fees and suffering only from ordinary ailments for which hospital treatment is in no respect essential.

All this applies to London and other great towns in which hospitals with out-patient departments have existed for a long time. But we need not be surprised if the opposition of medical practitioners to the establishment of such departments is still more pronounced in places where they have before been unknown. And such a case is presented to us in a report published in the *Chronicle*, Leigh, Lancashire, for December 19th, 1902. An infirmary is being built in that town and a public meeting was held on December 16th, 1902, to consider the question whether provision should be made in it for the treatment of out-patients. The local medical practitioners (unanimously, as we infer from the report) were opposed to the creation of such a department; but the meeting decided for it by a very large majority, and the result would seem to be that there is a prospect that the new infirmary may be officered by paid physicians and surgeons imported from outside.

This conclusion is to be deprecated, and we hope that before the new charity is in working order better counsels may prevail. We gather from the report that some regulations were submitted to the meeting, having for their object the prevention of abuse in the proposed out-patient department, but these are not given in the report. It was assumed on the side of the medical practitioners in the town that no such regulations could be effective: but that a subscriber would have the right to nominate any person (even himself) for gratuitous treatment—any rule to the contrary notwithstanding. This seems to us absurd, and we would earnestly press upon both sides in this controversy at Leigh to reconsider their attitude to each other, and to nominate a small mixed committee, medical and lay, for the purpose of devising regulations acceptable to a general meeting, and calculated to prevent the abuses of which the medical men so justly complain.

Speaking generally it appears to us that out-patient departments might be better regulated if the following rules were observed:

1. As the cases are not urgent, there is ample time for proper inquiry. Cases accepted should therefore be accepted for a future day and hour, and not kept waiting.
2. That inquiry ought not to be confined to the patient's money resources, but should also be directed to ascertaining the nature of his disease.
3. Every applicant for out-patient treatment should produce a medical recommendation.
4. Only a limited number should be seen each day, and subscribers' letters should not be required.
5. The medical officer should have the right to refuse any case, reporting his reasons to the hospital authorities.

THE FOURTEENTH INTERNATIONAL CONGRESS MADRID.

THE fourteenth International Congress at Madrid will, as already announced, begin on April 23rd, 1903. Messrs. Thos. Cook and Son have arranged the following itinerary, the tour being accompanied by experienced conductors. The inclusive cost is 33 guineas for members of the Congress and their wives holding cards of invitation, and 39 guineas for other friends of members of the Congress.

The party will leave Charing Cross Station at 2.20 p.m. on Monday, April 20th, and will arrive in Paris at 9.15 p.m. Hotel accommodation commences with supper on arrival at the Hôtel du Palais d'Orsay. On Tuesday, April 21st, the journey will be continued by train de luxe from Paris, starting at noon. Berths in the sleeping cars will be reserved for the party, and meals will be served *en route*. Madrid is to be reached about 3 p.m. on Wednesday, April 22nd, and those who apply first for tickets will be able to secure rooms at the Hotel des Ambassadeurs. The return journey will commence on Thursday, April 30th, when the night express will be taken to Biarritz, where the party will sleep. Biarritz will be left at 6.27 a.m., and Paris reached about 10.30 p.m. on Saturday, May 2nd, luncheon and dinner being served in the express on the way. The conductor will leave Paris by the morning express, via Boulogne and Folkestone, arriving in London early in the afternoon of Sunday, May 3rd, but members of the party may remain in Paris, as the tickets are available for forty-five days. The inclusive fare provides: First-class tickets from London back to London. Hotel accommodation and meals *en route*, commencing with dinner at Boulogne on the onward journey, and terminating with breakfast in Paris on the return (Sunday), according to the dates named in the itinerary. The accommodation con-

sists of bedroom, lights, and service, plain breakfast, *table d'hôte* luncheon, and dinner at *table d'hôte*. While travelling it will be necessary to modify this arrangement, refreshments being provided *en route*. Berth in sleeping car from Paris to Madrid (outward journey only). Fees to hotel and railway servants. Carriage drive on one day in Madrid. Free conveyance of 56 lb. of baggage. Omnibuses to and from the hotels while with the conductor. Services of a competent conductor, who will undertake the general supervision of the arrangements throughout.

Deposits.—In order that the necessary arrangements for sleeping car berth, hotel accommodation, conducting, etc., may be completed in good time, it is requested that intending passengers will register their names by paying a deposit of £10 each as early as possible. When paying deposits passengers are requested to state the full name of each member, and to say whether married couples, single ladies, or single gentlemen, in order that the necessary rooms may be arranged. The balance of fare must be paid one week before the date of departure. Owing to the large demand for hotel accommodation in Madrid, it has been necessary to reserve same in advance, therefore the amount of deposit cannot be returned if for any reason the tour is not taken.

Arrangements have also been made for an additional tour from Madrid to the South of Spain. This tour will occupy nine days, and will visit Seville, Cordova, Granada, and the Alhambra. The inclusive fare is 18 guineas for members and their wives, and 21 guineas for friends. The party will leave Madrid by the night express for Seville on Thursday, April 30th, and will arrive at Madrid again at 10.35 a.m. on Saturday, May 8th. Intending visitors to Spain are strongly advised to insure their luggage before leaving England, and they must provide themselves with passports.

POST-MORTEM EXAMINATIONS FOR CORONERS IN LONDON.

A SPECIAL meeting of the South-West London Medical Society was held in the Drill Hall, Clapham Junction, on January 2nd, to discuss the position raised by the action of Mr. Coroner Troutbeck towards the medical practitioners of that district. Medical men not belonging to the Society were invited to attend the meeting. Dr. MARK ROBINSON was in the chair, and about eighty medical men, many coming from various districts round London, were present.

The CHAIRMAN said that the meeting had been called to consider the novel proceedings of the new coroner, Mr. Troutbeck, in that district in relation to *post-mortem* examinations. Counsel's opinion had been taken in regard to the meaning of Section XXI of the Coroners Act. The London County Council had nominated a medical gentleman to assist coroners as a pathologist in urgent cases of a special nature wherever the circumstances indicated that special pathological skill and knowledge were desirable. Mr. Troutbeck was the only coroner who had largely availed himself of this assistance, and, instead of doing so only in exceptional cases, had made it the rule. The Coroners Act seemed to direct that the coroner, if he wished to have medical evidence, should call the medical attendant, and, if he was not available, should call on a medical practitioner in the neighbourhood. If this were not done it seemed that a certain amount of discredit was thrown on medical men in the neighbourhood, and they were deprived of fees they had a right to earn. Dr. Freyberger, the pathologist nominated by the London County Council to assist, did not seem to have been appointed after advertisement or competition. No practitioner at that meeting would object in certain cases to have the aid of a specialist; but if a specialist were employed, the medical man in attendance on the case should also be present at the *post-mortem* examination.

Dr. M. MACKINTOSH, one of the Honorary Secretaries of the Society, said that it had been deemed necessary to obtain counsel's opinion on Section XXI of the Coroners Act and its subsections. Mr. Hempson had obtained an opinion from Mr. Muir Mackenzie, which contained the following passages:

1. The words of Subsection (1) of Section XXI are "may summon," while the words in Subsection (2) are "shall comply;" but although the word "may" in a statute prima facie gives a discretion, if the statute in which it occurs is one which relates to public justice and is of general interest and concern, the word "may" is imperative and imposes a duty. My opinion is, therefore, that the practice adopted by Mr. Troutbeck as detailed in the case is not in conformity with the statutory duties imposed on him.

2. The enactment does not in my opinion give to any medical practitioner whom the coroner ought to have summoned a right either to bring an action for damages or for an injunction against the coroner to restrain him from summoning Dr. Freyberger in future. If the medical practitioners, who in my opinion justly and reasonably complain of the course which the coroner has adopted, desire to proceed in the matter, my advice to them is in the first instance to represent the facts to the Lord Chancellor by an influentially signed memorial addressed to him.

Continuing, Dr. Mackintosh said that under the circumstances it was deemed advisable to call a special meeting of the Society to which all practitioners, whether resident in the district or not, should be invited with a view to combining in a course of action which might be considered proper.

The CHAIRMAN said that there were three courses oper: (1) To approach the Lord Chancellor; (2) to go to the London County Council; or (3) to ask one of the medical defence societies to take the matter up. His view was that they should approach the London County Council, and he saw no reason for believing that they would be received otherwise than sympathetically.

Dr. T. A. I. HOWELL moved the following resolution:

That this meeting of medical men summoned by the South-West London Medical Society on January 2nd, 1903, while appreciating the great step that the London County Council have taken in the interests of public health, view with great regret the action taken by the coroner of this district in practically giving all the *post-mortem* cases to a pathologist selected by the London Council in direct opposition to the resolution of the Council, which declares "it is desirable that *post-mortem* examinations in inquest cases of a special nature should be entrusted to a specially-skilled pathologist." This meeting further declares that it welcomes the assistance provided by the Council in suitable cases, but protests strongly against the way in which this resolution has been interpreted in this district, as it has practically superseded the medical attendant in ordinary cases, and this meeting respectfully calls on the London County Council to give this matter their serious consideration.

The best course would be to approach the London County Council in the first instance, and to ask it to see that its resolution was carried out in the way intended, and not as the coroner thought fit to interpret it. The reasonable resolution of the London County Council had been carried out in a manner which amounted to direct opposition to the wishes of that Council. Within the last few months, out of 23 inquests in Battersea, Mr. Troutbeck had called in the pathologist appointed by the London County Council in 16. Battersea must be an extraordinary place to produce 16 exceptional inquests out of 23. He was certain that the resolution of the Council had been unduly stretched, and Sir William Collins, the Chairman of the Public Control Committee of the Council, had said that it was not contemplated that the medical men in the locality should be superseded in ordinary cases.

Dr. MCMANUS seconded the resolution, and complained that Mr. Coroner Troutbeck treated medical men in a most discourteous manner. He produced a letter from the London County Council, stating that Dr. Freyberger had not been appointed pathologist to the Council, and it was incorrect to describe him in that manner.

Dr. W. H. P. HILL moved the following as an amendment:

That the registered medical practitioners assembled at this meeting heartily welcome the suggestion of the London County Council to appoint a special pathologist to assist at *post mortems* in special cases. That the appointment of pathologist be advertised and the candidates selected as in other appointments made by the Council. That no person be elected unless he be Fellow of the Royal College of Physicians or Surgeons of London, Edinburgh, or Dublin, or a Doctor of Medicine of an English, Scotch, or Irish University, and has for some years held the office of teacher of pathology at a hospital with a medical school attached.

Dr. MYLES said that a pathologist from the London County Council should come to them with qualifications implying the approved sanction of the heads of the medical profession, and he should win such an appointment in open competition.

Dr. LENNANE said that the coroner of the district ought not to set himself up as an arbitrary judge of what medical men could or could not do. Mr. Troutbeck should have consulted his brother coroners.

Dr. HUGH WOODS said that medical men had a right to be present at any inquest on one of their cases, and if not called they should claim their right to be present and should proffer evidence.

Dr. RYAN, in seconding the amendment of Dr. Hill, said that the phrase in Dr. Howell's resolution declaring that the meeting welcomed the assistance provided by the Council in suitable cases was practically an acceptance on their part of Dr. Freyberger's appointment. He contended that theories of the causes of death framed by a pathologist who had not the opportunities of the practitioner in attendance on the case would sooner or later lead to a miscarriage of justice.

Dr. HOWELL said that he would alter the wording of the phrase to which objection had been raised.

Dr. JAMES B. HOWELL proposed that a letter should be written to the Lord Chancellor stating the facts of the case.

Dr. FINUCANE said that they should approach the Lord Chancellor through the Home Office, and in that way deal with the coroner's masters. They had nothing to do with the pious opinions of the London County Council, who were not yet legislators.

Dr. JOHN GAY said that the proper course to pursue was to approach the London County Council, who had given the

coroner the instructions that were objected to by the meeting. Dr. Howell's resolution expressed the feelings of those present, and a deputation of medical men could put their views before the London County Council. The opinion even of a counsel like Mr. Muir Mackenzie might not be the opinion of the judge.

Dr. BEDFORD FENWICK proposed the formation of a small Committee to take the matter to the London County Council, and afterwards, if necessary, to the Lord Chancellor.

Dr. DICKINSON said that the meeting should indicate some definite course to be carried out by the body to whom the conduct of this matter was entrusted.

Dr. BIGGS said he believed the London County Council were in sympathy with the views of the meeting, and that practically the old arrangement could be restored if application were made to the County Council.

Dr. MACLEOD YEARSLEY having addressed the meeting,

Dr. HOWELL, after some further discussion, submitted his resolution to the meeting altered in the following manner:

That this meeting of medical men summoned by the South-West London Medical Society on January 2nd, 1903, while appreciating the great steps that the London County Council have taken in the interests of public health, view with great regret the action taken by the coroner of this district in practically giving all the *post-mortem* cases to a pathologist selected by the London County Council in direct opposition to the resolution of the Council, which declares "it is desirable that *post-mortem* examination in inquest cases of a *special* nature should be entrusted to a specially-skilled pathologist." This meeting further declares that it would welcome the assistance of a skilled pathologist in suitable cases, but protests strongly against the way in which this resolution has been interpreted in this district, as it has practically superseded the medical attendant in ordinary cases, and this meeting respectfully asks the London County Council to give the matter their serious consideration.

This was put to the meeting after Dr. Hill had withdrawn his amendment, and carried almost unanimously, only one vote being recorded against it.

Dr. GAY proposed that the matter should be put in the hands of the Council of the South-West London Medical Society to ask the London County Council to receive a deputation.

This was seconded by Dr. BEDFORD FENWICK, and carried.

A resolution by Dr. HUGH WOODS that the Council should have power to choose members of the deputation outside their own number was duly seconded and carried.

The CHAIRMAN explained the financial circumstances in connexion with the matter, and Dr. James Howell was elected Honorary Treasurer for a special fund to be raised for the purpose of defraying necessary expenditure.

Dr. HUGH WOODS suggested that an appeal should be made to all members of the medical profession through the medical press.

The meeting, which was of the most enthusiastic nature, terminated with loud cheers for the Chairman.

THE TERMS OF APPOINTMENT OF CORONERS IN LONDON.

SIR,—The recent action of Mr. Troutbeck, Coroner for South-West London, in employing Dr. Freyberger to perform necropsies, from time immemorial given to the practitioner first called to the case, has excited great dissatisfaction among the medical men of that district. It would appear that Dr. Freyberger holds some appointment—it is not quite clear what—under the London County Council, and it may be that the coroner's action is due to promises made by him when appointed to succeed the late Mr. Braxton Hicks. So it is just possible that the coroner is not to blame in the matter, and that the grievance lies at the door of the County Council.

I think, therefore, that the recent practice of the London County Council of extorting—for it amounts to this—promises as to their future official conduct from candidates for a coronership open to very serious objections.

I am of opinion that it is illegal. The Local Government Act of 1888, which transferred the right of electing the coroner from the freeholders to the county councils, gave the latter no more than the rights up to that time possessed by the former. It could hardly be contended that the freeholders ever enjoyed the right of demanding from candidates signed promises. By what right then can their successors do so?

At the recent election of coroner for South-East London a series of questions was put in writing to the candidates, and it was stated that those selected would be required to signify their assent to or dissent from the conditions it was sought to impose on the new coroner, in addition to those laid down in the Coroners Acts.

I enclose a copy of these questions, all of which I submit with the exception of the first, which is unnecessary, being directly regulated by the above Acts, are improper and illegal.

I would also commend this matter to the consideration of the Coroners' Society.—I am, etc.,

BARRISTER-AT-LAW.

LONDON COUNTY COUNCIL.

Appointment of Coroner.

Propositions to which applicants for appointment as Coroner for the South-Eastern District should be asked to agree, as approved by Subcommittee of the Public Control Committee on December 2nd, 1902:

1. Shall you be prepared to furnish proof that you possess sufficient land in fee in the County of London to satisfy the requirements of Section XII of the Coroners Act, 1887?

2. Do you agree to give your whole time to the duties of the office, that is, not to practise any other profession or hold any other public appointment?

3. Are you prepared to resign the office of coroner on reaching the age of 70 years?

4. The Council has resolved "That the salaries of newly-appointed coroners continue to be calculated on a basis of not exceeding 30s. per inquest until the salary reaches £1,350, but that no salary be fixed or revised above that amount unless the average number of inquests held would, on a basis of 21s. per inquest, produce a higher salary." Do you agree to accept the officer of Coroner of the South-Eastern District on this basis?

5. The costs of coroners' inquests largely depend upon the discretion exercised by the coroner. Will you be prepared to exercise that discretion in all cases, with a view to limiting the expenditure to such as is reasonably necessary?

6. Complaint has justly been made of the manner in which the jury are summoned, and it is the Council's desire that as far as possible the juries should be chosen strictly in rotation from persons in the parish eligible for service, and where so summoned the Council has approved the payment of a fee of 2s. per juryman on application being made by the juryman for the fee. Are you prepared to see that these stipulations are properly carried out in the district?

7. The Council desires that coroners' officers should be men serving in the Metropolitan Police Force, and nearly the whole of the coroners' officers in London are in the police force. Are you prepared to only appoint police officers and to exercise reasonable supervision over the manner in which they perform their duties?

8. It is believed that many inquests are held unnecessarily. Are you prepared to hold inquests only in those cases in which preliminary inquiry has indicated an inquest to be desirable?

9. Are you prepared to entrust the *post mortem* examinations to a skilled pathologist, as desired by the Council, in all cases except where you are satisfied that the medical man connected with the case is competent to make a trustworthy *post-mortem* examination?

10. Do you agree to keep the records of inquests in your district in one of the courts in your district provided for holding inquests, and to regard such records as county records, and not as the property of the coroner?

11. Do you agree to pay your deputy an agreed sum for each inquest he may hold in the district, and if so what sum do you consider a reasonable one?

12. Should you be one of the candidates selected by the Committee for recommendation to the Council, it will be necessary for you to state in writing your agreement with these propositions. Are you prepared to do this?

*** The wording of paragraph 9 of the above "propositions," to which the selected candidates for the office of coroner for the South-Eastern Metropolitan District were required to subscribe, differs from that of the resolution adopted by the London County Council, as given by the Chairman of the Public Control Committee in the statement which he made to the Council on December 16th, 1902.[1] That resolution ran as follows:

That all coroners be informed that in the opinion of the Council it is desirable that *post-mortem* examinations in inquest cases of a special nature should be entrusted to a specially-skilled pathologist.

The "proposition," as will be seen, might be interpreted as going a good deal further than this, although we must confess that we do not fully grasp the significance of the word "trustworthy." We should like to have some explanation of the ambiguity from the Chairman of the Public Control Committee.

That Mr. Troutbeck is prepared to go very far in the direction which he considers the Council to wish is apparent from the report of an inquest published in a recent issue of the *Pimlico News*. It was held by Mr. Troutbeck at the Westminster Coroner's Court, and had reference to the death of a widow whose room had caught fire. Dr. Freyberger was called as a witness, and said that he had seen the body, which bore the marks of very severe burns and a bruise on the forehead, as if she had fallen on her face; death was due to shock from burns. The witness did not state that he had made a *post-mortem* examination, and from the wording of the report it would appear that he had not done so, but had merely inspected the body. We are informed that a local practitioner was called by the police to the case, and carried out artificial respiration for some considerable time; he was not, however, called as a witness. We trust that the representations to be made to the County Council as the result of the meeting reported above may lead to a satisfactory adjustment of this difficulty.

[1] BRITISH MEDICAL JOURNAL, December 20th, 1902, p. 1957.

A RETROSPECT OF THE IRISH POOR-LAW DISPENSARY, LUNATIC ASYLUM, AND WORKHOUSE SYSTEMS.

II.—IRISH DISTRICT ASYLUMS.

THERE are in Ireland 23 district asylums for the insane of the 32 counties. The Richmond Asylum, Dublin, is the largest, with 2,303 inmates, and Ennis the smallest, with 379 inmates, being 79 in excess of its accommodation.

The salaries of the medical superintendents vary from £900, including allowances, to £550; and their assistants get from £200 to £300. The Lunacy (Ireland) Act of 1887 gave the Governors power to allow whole-time officers such superannuation allowance "as they shall think fit" at the rate of a sixtieth for each year of service. Under the old Boards of Governors appointed by the Grand Juries and the Lord Lieutenant we never heard of superannuation being refused, but we have grave doubts for the future of those holding office under the new councils, having regard to their treatment of Poor-law officials.

The Establishment of District Asylums.

The district asylums were established in Ireland by 1 and 2 Geo. IV, and the first asylum erected under this Act was that of Armagh in 1825, the latest being those for Monaghan and Downpatrick in 1869.

The Lunacy (Ireland) Act of 1837 enacted that:

If any person should be discovered and apprehended under circumstances denoting a derangement of mind and a purpose of committing some crime for which, if committed, such person would be liable to be indicted, it should be lawful for any two justices of the peace to call to their assistance any legally qualified physician, surgeon, or apothecary, and if the said justices should be satisfied that such person was a dangerous lunatic or dangerous idiot, it should be lawful for the said justices to commit such person to the gaol, there to be kept in strict custody until or unless such person should be discharged in manner by said Act provided.

Twenty years later another Act prohibited the sending of dangerous lunatics or idiots to gaol, and directed them to be sent to district asylums. It also directed that instead of "any physician, surgeon, or apothecary," the justices when committing a lunatic

shall call to their assistance the medical officer.....of the dispensary district in which they shall be at the time.....who shall examine such person without fee or reward,

and further, that if the medical officer certifies the person to be a dangerous lunatic, it should be lawful for the justices to commit him by warrant under their hands and seals to the district asylum. In fact, they were still to be committed to asylums in much the same manner as they were hitherto sent to gaol, the medical superintendent taking the place of the gaoler.

Some years later yet another Act empowered the justices, if they think fit, to make an order on the guardians of the union for reasonable remuneration to the medical officer employed, and for the payment of all other reasonable expenses not exceeding in the whole the sum of two pounds. This does not include the cost of conveying the lunatic to the asylum, which is done by the constabulary, and the necessary expenses having been certified by one of the justices are paid by the constabulary authorities.

Tragedy or Comedy.

There are few things more thoroughly Irish in Ireland than the existing method of disposing of pauper lunatics, or, more correctly, the lunatics unable to afford the cost of treatment in private establishments. The Act of 1837 above referred to prescribed the process, and notwithstanding the vast increase in lunacy since 1837 this cumbersome and absurd method is still the ordinary mode of transferring an insane person to the asylum, out of 3,500 admissions in the year 1900, 2,400 were committed as dangerous, 884 were admitted by the asylum medical officers (most of these would be readmissions) and only 94 were admitted on certificate.

The condemnation of a human being—it may be the father or mother of a family, or a young man or woman on the threshold of life—to what will prove in most cases perpetual imprisonment—would appear to most people to possess all the elements of tragedy, but so far as Irish pauper lunatics are concerned it is usually a comedy worthy of a Gilbert to delineate its humours.

It begins by some relative or neighbour of the alleged lunatic going to the clerk of petty sessions, who proceeds to extract from a long-winded story the substance of a short information. The informant proceeds to swear this before a magistrate to the effect that A. B. assaulted him, or threatened to assault him, or in case there has been no assault or threat, that A. B. is a dangerous lunatic, and deponent believes that unless he is confined in an asylum A. B. will do injury to himself or some one else. The latter form is certainly a stretching of the law, because no sane person could well be indicted on the mere belief of another that he would be likely to injure himself or others. Yet, unless this was winked at by the justices, many potentially dangerous lunatics must be left at large. The magistrate then issues his warrant to the officer in charge of the nearest police barrack, authorizing him to arrest the criminal, the form being the same in substance as that used for other indictable offences.

Now the fun begins. Two magistrates must be procured, and, if necessary, persuaded to travel to some place, possibly miles away, generally a police barracks, often only a roadside cabin, where at an hour appointed they, the clerk of petty sessions, two or more policemen, the man or woman who made the information, and the lunatic, together with the car-drivers and inquisitive neighbours assemble. Not infrequently the only available room will not hold all the officials, and then the proceedings take place partly inside and partly outside the house. In strict law the magistrates being assembled should send for the dispensary medical officer of the district to ascertain if the prisoner is insane, but in practice the doctor arrives about the same time probably, if the place is remote, having himself hunted up and conveyed the justices and clerk on his car.

Inasmuch as the doctor is the only person who will make any money out of it, he finds it to his interest to make the process as easy for the justices as he can. No one bothers much about the lunatic; in fact, it is sometimes not easy to identify him among the bystanders. Heads being bared the clerk again administers the oath to the informant and gabbles over the information, while the rest of the company discuss the weather, etc. The informant generally makes his mark, not being used to penmanship, and acknowledges himself bound in the sum of £10 when you would not give 10d. for all the clothes on his back, to attend and prosecute the prisoner when and where called on. Meantime, the justices are busy signing the committal order prepared beforehand by the clerk. It is a long rambling mass of legal verbiage, wherein the name of the lunatic is eight times mentioned, and which no one thinks of reading; also the order on the guardians for payment of a pound to the doctor, while the doctor, who probably knows all about the lunatic, rapidly fills in a few particulars of the case and signs them. The justices again sign the original information. The doctor makes sure of his payment order and goes off with the magistrates and clerk: the police and the lunatic get on their car and set out for the asylum, maybe twenty or thirty miles distant, and the crowd of bystanders disperses, the entire tragedy having been completed in the space of five or ten minutes—perhaps a speedier exercise of important judicial functions than could be found anywhere outside the court of an oriental potentate in comic opera. In the majority of cases the lunatic—poor devil—does not appear to realize his position, and the proceedings are often humorous. But distressing scenes occasionally occur which, taken with the usually squalid surroundings, make a mixture of tragedy and comedy hard to beat. Not infrequently there is considerable difficulty in getting two justices sufficiently friendly with the doctor to oblige him, or the doctor may be on a case, or both doctor and justices may have assembled only to discover that the lunatic has given his friends the slip and cannot be found.

The system is expensive, cumbersome, and a nuisance to every one concerned. Occasionally the justices allow the medical officer £2, and if he has conveyed them to some remote place this does not appear unreasonable, but it means a row at the next meeting of the Board of Guardians when the bill comes in.

According to law lunatics may be admitted to district asylums on the certificate of a medical man counter-signed by a magistrate, who need not see the lunatic at all, but asylum governors, with the vain hope of keeping lunatics out of those institutions, have in most instances passed resolutions refusing to admit any not committed as dangerous, and the dispensary medical officer naturally prefers a process entitling him to a fee. Unfortunately the burlesque tragedy we have endeavoured to describe has become so common that people have ceased to see the ghastliness of it.

The Increase of Lunacy in Ireland.

During the last half century the increase of lunacy in Ireland has been rapid. In 1851, just after famine and fever

had decimated the population, the number of lunatics and idiots in Ireland was about 10,000, of whom half were at large, and some 300 in local gaols. In 1875, when the capitation grant of 4s. a head was first given from the Consolidated Fund, the number in district asylums was 7,692 out of a population of 5½ millions. In the quarter century from 1875 to 1901 the population decreased by a million, but the number of lunatics in asylums and workhouses increased to 21,000.

In 1875 the expense of maintaining the lunatics in district asylums was nearly £200,000, of which £57,000 was capitation grant, and £140.000 from county rates. In 1901 these figures had been swollen to nearly half a million, of which £160,000 came from Government grant, and £300,000 from the rates. Were the country rich and prosperous this might not be much felt, but it is a terrible and unhappily a growing tax upon a country practically dependent on agriculture, the most depressed industry of these islands.

Irish asylums are dangerously overcrowded. We find that in 1901 out of 33 district asylums only 6 had sufficient room for their inmates, the remaining 17 being overcrowded to the extent of 1,700 persons, and this is yearly becoming worse, for the epidemic of lunacy, if we may so call it, is certainly increasing rapidly. So acute has the overcrowding become that several Boards of Asylum Governors have within the last few months received warning that their neglect to provide immediately sufficient accommodation would entail the withdrawal of the capitation grant. Where an asylum having room for only 419 persons has 200 inmates in excess of that number, it cannot be said the threat has been made with undue haste.

In the Local Government Act of 1898 the framers made a clever but abortive attempt to curtail the growth of the capitation grant by proposing that auxiliary asylums should be established by county councils in disused workhouses, where harmless lunatics transferred from asylums and workhouses could be cheaply maintained, innocently offering a capitation grant of 2s. a head, but the county councillors were too astute to be caught, and this project has been and probably will remain a dead letter unless the grant is doubled.

The Irish Local Government Board is very properly anxious to have all troublesome lunatics and idiots removed from workhouses, for it is admitted on all sides that a workhouse is no place for men and women whose mental condition unfits them to associate with their fellows. There are at present in Irish workhouses about 4 000 persons classed as of unsound mind. Of these fully one-half should be transferred to asylums. We have then an excess of population of 1,700 already in district asylums, and 2,000 who should be removed from workhouses to be provided for. This would entail an outlay of about £200 a bed, or £740,000, a grave outlook for the ratepayers when compared with the wealth, or perhaps we should say the poverty, of the country; and yet the establishment charges and maintenance in Irish asylums is certainly not extravagant, being only £25 10s. a head on an average, but there are few inmates whose friends could pay even this moderate sum, so that we may regard the entire cost as falling on the ratepayers.

The Government would probably have been well advised to promote the establishment of auxiliary asylums by offering them the full capitation grant, which would not have entailed a very large demand upon the Treasury—less than £20,000 a year—or by permitting the boarding-out of chronic cases under suitable restrictions.

AN INTERNATIONAL MEDICAL MANIFESTO ON ALCOHOLISM.

THE following manifesto has, we learn from the *Medical Temperance Review*, been agreed upon by the Council of the British Medical Temperance Association, the American Medical Temperance Association, the Society of German-speaking Medical Abstainers, and representative medical abstainers in France:

"In view of the terrible evils which have resulted from the consumption of alcohol, evils which in many parts of the world are rapidly increasing, we, members of the medical profession, feel it to be our duty, as being in some sense the guardians of the public health, to speak plainly of the nature of alcohol, and of the injury to the individual and the danger to the community which arise from the prevalent use of intoxicating liquors as beverages. We think it ought to be known by all that: (1) Experiments have demonstrated that even a small quantity of alcoholic liquor, either immediately or after a short time, prevents perfect mental action, and interferes with the functions of the cells and tissues of the body, impairing self-control by producing progressive paralysis of the judgement and of the will; and having other markedly injurious effects. Hence alcohol must be regarded as a poison and ought not to be classed among foods. (2) Observation establishes the fact that a moderate use of alcoholic liquors, continued over a number of years, produces a gradual deterioration of the tissues of the body, and hastens the changes which old age brings, thus increasing the average liability to disease (especially to infectious disease), and shortening the duration of life. (3) Total abstainers, other conditions being similar, can perform more work, possess greater powers of endurance, have on the average less sickness, and recover more quickly than non-abstainers, especially from infectious diseases, whilst they altogether escape diseases specially caused by alcohol. (4) All the bodily functions of man, as of every other animal, are best performed in the absence of alcohol, and any supposed experience to the contrary is founded on delusion, a result of the action of alcohol on the nerve centres. (5) Further, alcohol tends to produce in the offspring of drinkers an unstable nervous system, lowering them mentally, morally, and physically. Thus deterioration of the race threatens us, and this is likely to be greatly accelerated by the alarming increase of drinking among women, who have hitherto been little addicted to this vice. Since the mothers of the coming generation are thus involved the importance and danger of this increase cannot be exaggerated. Seeing, then, that the common use of alcoholic beverages is always and everywhere followed, sooner or later, by moral, physical, and social results of a most serious and threatening character, and that it is the cause, direct or indirect, of a very large proportion of the poverty, suffering, vice, crime, lunacy, disease, and death, not only in the case of those who take such beverages, but in the case of others who are unavoidably associated with them, we feel warranted, nay compelled, to urge the general adoption of total abstinence from all intoxicating liquors as beverages, as the surest, simplest, and quickest method of removing the evils which necessarily result from their use. Such a course is not only universally safe, but is also natural. We believe that such an era of health, happiness, and prosperity would be inaugurated thereby that many of the social problems of the present age would be solved."

This document is signed by a large number of medical practitioners who are total abstainers, including some 300 British doctors, 8 Americans, 100 Germans, 40 Russians, 35 Swiss, 17 Austrians and Hungarians, 15 Swedes, 13 Danes, 2 Dutchmen, and 1 Frenchman.

SEWAGE-CONTAMINATED OYSTERS AND MUSSELS.

A MEETING of the General Committee representing the oyster trade was held at the Fishmonger Hall, London, on January 5th, when a series of resolutions were adopted. One of these stated that the oyster merchants would spare no effort to secure that no oysters shall be sold other than those known to be taken from beds free from sewage. The report by Dr. Klein forwarded by Dr. Collingridge, M.O.H. for the City of London, was as follows: "Mumbles oysters, sewage polluted, but not to any great extent. Bosham oysters, extensive sewage pollution. I would therefore certainly advise that the sale of Mumbles and Bosham oysters be stopped, and that further samples be taken of the Mumbles. Cockles collected from the Blyth opposite Chapman lighthouse show extensive sewage pollution, and sale of these should be stopped absolutely, even if cooked at once without relaying."

Mr. Mead, an oyster merchant of Falmouth, made a reassuring report with regard to the Cornish fisheries with the exception of Flushing, which, it was said, was still in an unsatisfactory condition. The discharge of sludge by the London County Council into the Barrow deeps was considered and referred to a subcommittee with instructions to seek its prohibition. With reference to the storage of oysters in "legions" or beds in ebb dry fisheries a report of the Fishmongers' Company's inspector suggested that in the interest of trade and the public health it was most desirable that such storage be discontinued.

These facts collected and published by the trade justify our suggestion last week[1] that Mr. Tabor's assertion, that "there are only two beds in England which still remain polluted,"

[1] BRITISH MEDICAL JOURNAL, January 3rd, p. 34.

should be received with reserve, as does also a resolution adopted by the meeting requesting merchants and oyster planters to advise the Committee of any discharge of sewage that occurs in the neighbourhood of their fisheries in order that prompt action may be taken against the possibility of any contamination.

As was to be expected, the decision of the Fishmongers' Company to prohibit temporarily the sale of Mumbles oysters, in consequence of Professor Klein's report, has caused great indignation at Mumbles. It was decided to challenge the Fishmongers' Company to hold the enquiry suggested by Dr. Klein, to which the local authority should be a party. The Glamorgan Sea Fisheries Board have also protested against the action of the Fishmongers' Company, apparently on the ground that six days were allowed to elapse between the dispatch and "analysis" of the samples on which Dr. Klein based his unfavourable report. It was resolved to submit samples of Mumbles oysters to the Board of Trade for analysis. This is a curious illustration of the confusion of authorities which exists with regard to this matter. To most people it must seem quite obvious that the body which should deal with a matter of this kind, affecting the public health, is the central authority charged with public health administration —that is to say, the Local Government Board.

The meeting of the trade determined to send a deputation to the Local Government Board to urge the necessity of immediate legislation to prohibit the discharge of sewage into rivers, estuaries, or any part of the coast. The matter is one to which the Local Government Board is clearly called upon to give early attention; further enquiry to ascertain the facts as to possible contamination appears to be unnecessary in view of the detailed report made in 1896 by Dr. Bulstrode and the further report by a medical inspector referred to by the then president in 1900, and which must now be in the hands of the Board.

LITERARY NOTES.

ACCORDING to the *Publishers' Circular* the number of new books on medicine, surgery, etc., published in 1902 was 237, being an increase of just 100 compared with the output of the previous year.

We are informed that extraordinary activity was displayed by Messrs. Baillière, Tindall and Cox, in the issue of the King's First Prize Essay on "The Sanatorium Treatment of Consumption" by Dr. Latham. After the proofs were passed for press by the author, the entire work, consisting of 274 pages, with separate drawings and plans, was printed, bound in cloth and published within three days.

We understand that the Dean of Norwich is preparing for publication the addresses on Christian Science recently delivered by him in the nave of Norwich Cathedral. Owing, however, to the large demands on Dr. Lefroy's energies in other directions it will be some time before the book is ready.

The International prize of the Craig Colony for Epileptics, New York, has been unanimously awarded to Dr. Julius Donath, *Docent* in the University of Buda-Pesth, and Physician to the Neurological Department of the St. Stefan Hospital of that city, for his essay, "On the Rôle of Cholin in Epilepsy."

Medical poets are not very common, although there are enough in this country to make "a nest of singing birds," to use Dr. Johnson's phrase. The newest medico-poetic planet that has swum into our ken is Abdullah Dgevet, Physician to the Ottoman Embassy at Vienna. His poems have been published under the title of *The Turkish Lyre*.

Professor J. M. Cattell of Garrison-on-Hudson, New York, is compiling a biographical index of scientific men of the United States for the Carnegie Institution, Washington.

In these days of Celtic revival it may be interesting to many of our readers to know that Dr. H. Cameron Gillies has published (London: D. Nutt) an introduction to the Gaelic language, entitled *The Elements of Gaelic Grammar Based on the Work of the Rev. Alexander Stewart, D.D.*

A new series of the *Practitioner* was begun with the new year. Mr. Malcolm Morris has resigned the editorial chair, which he has occupied for eight years, to Dr. W. Cecil Bosanquet. The appearance of the journal has been changed, and a uniform type is used throughout. The journal contains original articles, reviews, and Notes by the Way. Sir Henry Thompson contributes a brief history of cremation in England.

Dr. J. Harold Bailey (Port Erin) writes:

The writer of "Doctors in British Fiction" in the BRITISH MEDICAL JOURNAL for January 3rd, when dealing with "Sir Richard Calmady," criticizes Dr. Knott's ability as a practitioner, and suggests that Sir Richard's deformity could have been remedied by amputation of the feet. The novelist, however, distinctly mentions that the scene is laid in pre-anaesthetic days, so perhaps Dr. Knott does not deserve the writer's criticism.

Writing in the *Saturday Review* of January 3rd, Mr. Cunninghame Graham, after pointing out that "our best fetich men" are puzzled by the sleeping sickness at Uganda, suggests that their diagnosis may be at fault. He quotes the statement of an old chronicler that, when the Spaniards "conquered" the Canaries, a certain disease slew more of the islanders than the sword. He calls the disease "La Modorra," which means drowsiness. The Guanches, when attacked by it, sat down by the roadside and died. Mr. Cunninghame Graham goes on to say that what caused it—and the same he thinks may be the case in Uganda—was probably the mysterious influence induced by the presence of the whites. "Usually gin and rum (whisky, quite curiously, seems not in use for trade with 'niggers') with small-pox and the civilizing rifle bullet." The etiology seems rather complicated, but Mr. Cunninghame Graham would doubtless say that accuracy in such trifles is the business of the "fetichman." We should like, however, to know a little more about "la modorra," and we wish Mr. Cunninghame Graham had given the name of the chronicler from whom he quotes.

Under the title of *Nordisk Tidskrift for Terapi*, a new medical journal devoted to therapeutics, has recently begun to appear in Copenhagen. The editor is Dr. Marius Lauritzen, and he will have the advantage of the collaboration of several of the leading physicians in the Scandinavian countries. The new journal is to be published monthly.

Dr. Burton Brown, Physician to the British Embassy in Rome, has reprinted the articles on the universities and medical schools of Italy which he contributed to the BRITISH MEDICAL JOURNAL in December, 1901, together with an interesting commentary from the *Nazione*, of Florence. After paying a tribute to the accuracy of the facts collected by Dr. Burton Brown by personal visits to all the institutions described, the *Nazione* expresses its satisfaction at the favourable judgement on the Italian course of medical study passed by so competent a critic in "one of the most authoritative of English scientific periodicals." The *Nazione* concludes by hoping that monographs as accurate as that of Dr. Burton Brown may be written about other branches of Italian culture.

Professor David W. Finlay, of Aberdeen, writes: "The paragraph occurring in your Edinburgh Notes in the BRITISH MEDICAL JOURNAL of November 22nd regarding the hospital ticket dated 1768 presented by Professor Chiene to the infirmary, reminds me that I possess one of a similar kind. It was given to me many years ago by a relative, who, if I remember rightly, stated that the student's name on it was that of her uncle. It is a holograph document (no doubt in the handwriting of the Professor), and runs as follows:

Ticket
for
Course of Anatomy
Session 1777
Thomas Hamilton, A.P.
No. 23
Mr. Thomas Rogers.

It is written on the back of "the three of Hearts." Thomas Hamilton was the Professor of Anatomy in the University of Glasgow at the date mentioned, having been appointed to the chair in 1757."

Dr. Stuart Nairne, "Praeses" of the "Societas Medica Meridionalis Glasguensis," sends with a New Year's card bearing the usual good wishes, a "Mem." consisting of the following well-known old Latin epigram about doctors and patients:

Tres medicus facies habet: unam quando rogatur
Angelicam; mox est, cum juvat, ipse deus;
Post ubi curato poscit sua praemia morbo
Horridus apparet terribilisque Satan.

This he has Englished as follows:

An Angel's face the Doctor wears
When first his aid is sought,
A God-like countenance he bears
Soon as the cure is wrought.

But when his little bill he makes,
And seeks his humble fee,
A form most terrible he takes,
A horrid Devil he.

Collectors of curious epitaphs may be glad to have the following specimen, which Sir Charles A. Cameron, C.B., M.D., has sent to the *Dublin Journal of Medical Science* (January). The epitaph is said to have been written in the "Merchant's Coffee House," in Essex Street, Dublin, about the year 1753,

by Boyle Godfrey, a well-known chemist in those days, a short time before his death:

EPITAPHIUM CHYMICUM.
"Here lieth to *digest*, *macerate*, and *amalgamate* with Clay
In *Balneo Arenae*,
Stratum super Stratum,
The Residuum, Terra Damnata et Caput Mortuum
Of BOYLE GODFREY, Chymist,
and M.D.
A Man, who, in this earthly *Laboratory*,
Pursued various Processes to obtain
Arcanum Vitae,
Or, the Secret to live;
Also, *Aurum Vitae*,
Or, the Art of getting, rather than making, Gold,
Alchymist-like,
All his Labour and *Projection*,
As *Mercury* in the Fire, *evaporated* in *Fume*.
When he *dissolved* to his first Principles,
He *departed* as poor
As the last Drops of an Alembic;
For Riches are not poured
On the *Adepts* of this World.
Though fond of News, he carefully avoided
The *Fermentation*, *Evervescence*
And Decripitation of this Life.
Full seventy Years his exalted *Essence*
Was *hermetically* sealed in its *Terene Matrass*,
But the Radical Moisture being *exhausted*,
The *Elixer* Vitae spent
And *exsiccated* to a Cuticle:
He could not *suspend* longer in his *Vehicle*,
But *precipated Gradatim*,
Per Carpanam
To his original Dust.
May that Light, brighter than *Bolognian Phosphorus*,
Preserve him from the *Athanor*, *Empyreuma*, and
Reverberatory Furnace of the other World:
Depurate him from the *Faeces* and *Scoria* of this,
Highly rectify and *volatilize*
His aetherial Spirit,
Bring it over the *Helm* of the *Retort* of this Globe
Place it in a proper *Recipient*
Or *Chrystaline* Orb,
Among the Elect of the *Flowers* of Benjamin;
Never to be *saturated*
'Till the general *Resuscitation*,
Deflagration, *Calcination*
And *Sublimation* of all Things.'"

Dr. Major Greenwood has sent us the following circular dating probably from the end of the eighteenth century:

THIS is to inform the PUBLIC.
THAT Edward Bradly, Surgeon, Apothecary, and Man-Midwife; late from Dartford in Kent; is encouraged by the extensive and successful Practice of Mr. John Langrish at Petersfield in Hants, in the several Branches of Physic, Surgery, and particularly Inoculation, to enter into Partnership with the said Mr. Langrish, and will jointly with him assiduously carry on the several Branches aforementioned, in strict Conformity to the most approved Methods.
N.B.—Bradly proposes to deliver poor Women Gratis, at any distance not exceeding five Miles.

It must with sorrow be admitted that advertising is still too much practised by the medical profession. But we are somewhat less crude in our methods, and professional dignity is no longer offended by the title "man-midwife" to which Dr. Slop so justly took exception.

In regard to the comprehensiveness of their claims, however, our ancestors had little to learn even from the most advanced American practitioners of the art of advertisement. Queen Anne, who sometimes counsel took and sometimes tea, may well have thought that she derived more benefit from the latter than from the former if her royal eye had ever glanced through a pamphlet by one Thomas Garway printed about 1660. In this publication, for a knowledge of which we are indebted to *Merck's Archives*, the ingenious author sets forth the virtues of tea in the following dithyrambic style:

It maketh the body active and lusty.
It helpeth the headache, giddiness and heaviness thereof.
It removeth the obstructions of the spleen.
It taketh away the difficulty of breathing, opening obstructions.
It is good against tipitude, distillations, and cleareth the sight.
It removeth lassitude and cleanseth and purifieth acrid humors, and a hot liver.
It is good against strengthening the weakness of the ventricle or stomach, causing good appetite and digestion, and particularly for men of corpulent body, and such as are great caters of flesh.
It vanquisheth heavy dreams, easeth the frame and strengtheneth the memory.
It overcometh superfluous sleep and prevents sleepiness in general, a draught of the infusion being taken; so that, without trouble, whole nights may be spent in study without hurt to the body, in that it moderately healeth and bindeth the mouth of the stomach.
It prevents and cures agues, surfets and fevers, by infusing a fit quantity of the leaf, thereby provoking a most gentle vomit and breathing of the pores, and hath been given with wonderful success.
It strengtheneth the inward parts and prevents consumption; and powerfully assuageth the pains of the bowels or griping of the guts and loosenes.

There is much more to the same effect. After this the experienced reader will not be surprised by the announcement—at the end of the pamphlet—that the said Thomas Garway has the best tea to sell at from 16s. to 50s. a pound.

With the beginning of the new year the *Archives Générales de Médecine* has been transformed into a weekly publication, instead of a monthly one as heretofore. It is considerably reduced in size, but in respect of its contents preserves its former character. It is one of the oldest medical journals in France, having been founded in 1825. Professor Simon Duplay is no longer editor. The journal is under the direction of an editorial committee, consisting of Drs. Bouglé, Brindeau, Klippel, Launay, R. Marie, G. Marion, E. Nuchon, J. Renault, L. Rénon, and Emile Boix. It is described in the prospectus as "a serious Committee composed of *young* physicians and surgeons of Paris, *specialists* of recognized authority, and the most esteemed provincial practitioners."

Mr. J. G. Frazer (*The Golden Bough*, vol. ii, p. 363) has some curious things to say on the subject of inoculation among savage peoples. Quoting from Maclean's *Kafir Laws and Customs*, he says:

In some Caffre tribes, when an animal or a man has been struck by lightning, the priest comes straightway and vaccinates every person in the kraal, apparently as a sort of insurance against lightning. He sets to work by tying a number of charms round the neck of every man and woman in the village, in order that they may have power to dig the dead man's grave; for in these tribes beasts and men alike that have been struck by lightning are always buried and the flesh is never eaten. Next a sacrificial beast is killed and a fire kindled, in which certain magic woods or roots are burned to charcoal and then ground to powder. The priest thereupon makes incisions in various parts of the bodies of each inmate of the kraal, and rubs a portion of the powdered charcoal into the cuts; the rest of the powder he mixes with sour milk, and gives to them all to drink.... ...Hence it would appear that all persons in a village which has been struck by lightning are supposed to be infected with a dangerous virus, which they might communicate to their neighbours, and the vaccination is intended to disinfect them as well as to protect them against the recurrence of the calamity.

Messrs. D. Appleton and Company, of Bedford Street, Covent Garden, are now publishing in this country the principal medical works which appear on the catalogue of their New York house. Among the books published by them may be mentioned Barker's *Nervous System and its Constituent Neurones*; Kelly's *Operative Gynecology* (2 volumes); Reed's *Textbook of Gynecology*: Thayer's *Lectures on the Malarial Fevers*; Thompson's *Practical Dietetics*: and Wyeth's *Textbook on Surgery*.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 21st day of January next, at 2 o'clock in the afternoon.

GUY ELLISTON, *General Secretary*.

BRANCH MEETINGS TO BE HELD.

SOUTH-WESTERN BRANCH.—The next intermediate meeting of this Branch will be held at the Athenaeum, Plymouth, on Wednesday, January 21st, at 3 p.m., the President, Mr. J. Delpratt Harris, in the chair. Luncheon will be provided from 1.30 to 2.30 p.m. at Risdon's Restaurant, 38, George Street, and tea after the meeting. The following communications are promised:—Mr. R. H. Lucy: On Tonsillar Haemorrhage. Mr. Paul Swain: (1) On Amputation at the Hip-joint for Sarcoma of Femur (with specimen); (2) Operation for Intestinal Obstruction complicated with Pregnancy. Mr. Walter Woolcombe: Paper and Cases illustrating the Treatment of Clubfoot. Dr. W. H. Webber: On Double Inguinal Ovarian Hernia. Mr. George Jackson will show a specimen of Recent Fracture of the Neck of the Femur and a Longitudinal Fracture of the Shaft. Mr. C. Hamilton Whitelord will show: (1) A Self-retaining Silver Empyema Tube; (2) a Combined Retractor and Ligature Adjuster. Gentlemen desirous of joining the Branch are requested to communicate with G. YOUNG EALES, M.R.C.S., 1, Matlock Terrace, Torquay, Honorary Secretary.

SOUTHERN BRANCH: SOUTH WILTS DISTRICT.—The next meeting of this District will be held on Thursday, January 15th, at the Infirmary, Salisbury, at 9 p.m. Programme: Minutes of last meeting; election of vice-president; election of representative governor for the Hartley University College; Mr. Manning: Re construction of boundaries of districts of the British Medical Association; subject for discussion, "Gastric Ulcer," opening address on the subject by Dr. Gilbert Kempe; Mr. R. T. Richmond will read a paper entitled Surgeon and Anaesthetist; cases. The meeting will be preceded by dinner at the County Hotel, at 7.30 (by invitation of the Salisbury members). Members intending to be present at the dinner are requested to communicate with the Honorary Secretary not later than Monday, January 12th.—J. E. GORDON, 52, Endless Street, Salisbury, Honorary Secretary.

CORRESPONDENCE.

THE FUTURE OF DISTRICT NURSING.

SIR,—The rapid extension of district nursing throughout the length and breadth of this country must be a source of satisfaction to those who have at heart the health and welfare of our industrial population. The influence for good exerted in the homes of the sick poor by this movement is not easily exaggerated.

Nevertheless, serious objection may be taken to the form of organization adopted by most district nursing institutions, and it is much to be desired that a wiser basis of work could be substituted. The objection is founded on the fact that a large number of persons who are well able to pay for the skilled nursing they receive, are treated gratuitously and indiscriminately with a small proportion of such as are too poor to pay. In this way the movement sins against the best principles of charitable relief, and benefits, which ought to be gratuitous only for the really necessitous and indigent, are conferred on persons who ought not to be the recipients of charity. District nursing under such circumstances, like other charities unwisely administered, tends to weaken those principles of self-reliance and self-help amongst the working classes which it is eminently desirable to foster.

It is possible so to organize district nursing, both in urban and rural districts, that its benefits may be conferred gratuitously on the submerged and destitute poor, while at the same time the working classes pay their fair share in supporting the institution. In other words such arrangements can be made that the families of artisans and labourers are enabled, in return for a small regular payment, to provide themselves with efficient nurses as a matter of right, instead of being dependent on eleemosynary aid, whilst a charitable side concurrently provides for cases of destitution. The basis is similar to that adopted by provident dispensaries, which supply medical attendance and medicines on condition that a small payment is made regularly and in advance, and, as that payment is made in health as well as in sickness, it can be fixed at so low a rate as to fall within the means of all who are not entirely indigent. If a district nursing association is established on similar provident and self-supporting principles, quite a trifling payment per annum will be found sufficient, since the attendance of a skilled nurse, although so valuable in case of severe illness, is less frequently required than is the doctor. The effect is that, as in the case of the provident dispensary, a large proportion of members will not need the services of the institution during any one year, and will help to pay for their less fortunate neighbours. In towns an annual premium of 1s. 6d. per head (1¼d. per month) will generally be sufficient; while in rural districts, where the population is scattered, and a nurse is unable to cope with the needs of so large a population, a slightly higher amount will be required, local circumstances requiring local adaptations.

Probably the ideal arrangement will be found in an amalgamated provident dispensary and nursing association, the combination allowing of greater economy in management as well as of close co-operation between the medical and nursing departments.

There are various advantages in establishing district nursing on such a provident, instead of on a charitable, basis:

1. The institution teaches the working classes to rely on themselves instead of on the gratuitous help of benevolent persons, and to make provision, on terms within their reach, for nursing attendance, as they already do for medical attendance, in time of sickness.

2. The nursing institution, instead of being dependent on voluntary subscriptions and donations which are often difficult to obtain, will be maintained on a self-supporting, and therefore healthy, basis.

3. The services of the nurse will be more appreciated than if rendered gratuitously. There is much truth in the saying, "Persons value most what they pay for," and many of our self-respecting wage-earners, as well as others, prefer to pay for services received instead of feeling indebted to charity.

Although this proposed institution should in the main be a provident one, there is no difficulty in combining with it a charitable side for the purpose of supplying nurses in cases of extreme poverty, and any subscriptions or donations to the institution may be allocated for this purpose. Moreover, where actual destitution exists, the guardians of the poor have power to apply the rates for the nursing of outdoor paupers, as is already done in many unions. Where the guardians employ the nurses attached to the institution, they should contribute to the latter their fair share of the expenses incurred.

Should persons who have not enrolled themselves as provident members of the institution desire the services of the nurses in the time of illness, those services should only be granted on payment of an entrance fee or fine, which should be considerably higher than the premium paid on the insurance principle—high enough, indeed, to encourage the person to become a provident member in the future on the mere ground of economy.

The only real difficulty that can arise is to obtain a sufficient number of members to make the institution self-supporting at the outset, and it may be necessary to raise a guarantee fund for the purpose of supplementing the income until a sufficient number of subscribing members has been obtained, and on the understanding that such a fund is regarded as a provisional arrangement, and will not be required when once the institution is fairly afloat. Such a fund should appeal to those thoughtful persons who distrust the numerous charitable agencies that offer a premium to improvidence, but who gladly support organizations for the promotion of thrift and self-help.

Full details of the working of a such a model district nursing association, together with a list of institutions that have adopted this basis of organization, have been published elsewhere,[1] and need not be repeated here. Established with the object of freeing this beneficent movement from the abuses commonly associated with it, these provident institutions claim to be promoting the truest and best interests of the poor, by helping them to help themselves.—I am, etc.,

Reading. JAMIESON B. HURRY, M.A., M.D.

THE DIAGNOSIS AND TREATMENT OF VARIOUS FORMS OF SEPTIC SYNOVITIS.

SIR,—Mr. F. C. Wallis in his interesting paper in the BRITISH MEDICAL JOURNAL for January 3rd, page 9, expresses, I believe, an opinion which is held by many that we are apt to be somewhat backward in dealing surgically with some more or less obscure forms of arthritis. Such forms of arthritis are differently named by different writers, but the surgeon as a rule terms them septic, using that word, I should suppose, in a general sense rather than in the narrower sense of an infection with the so-called ordinary pyogenic micrococci.

There is one point which appears to me very important to the surgeon, and which, with Dr. Paine, I have examined into carefully; it is the method of access of the micro-organisms, whatever they may be, into the cavity of the joint. Writers sometimes lead one to suppose that, given an inflamed joint with exudation, the micrococci will be found in that exudation, and even lead one to think that their presence in the exudation acts, as it were, as the excitant of the arthritic changes. If that were the case then removal of the exudation could only work for good. But it is our experience that the micro-organisms first reach the joint—except in cases of punctured wound—by the minute blood vessels which are so numerous immediately under the endothelium, especially in the synovial fringes. They escape then into the synovial tissues, and there takes place the first struggle for supremacy. Experimental arthritis enabled us to observe this fact, and it is, I believe, widely upheld by French authorities. In it probably lies the explanation of the negative results obtained on culture in rheumatic arthritis. When the inflammation is persistent the endothelium perishes in places—it is itself actively phagocytic—and the micro-organisms escape into the cavity of the joint, and may there be present in vast numbers, though there also the leucocytes and endothelial cells engulf them.

The problem, therefore, with which we are confronted seems to me to be this: that even though by operation some micro-organisms may be removed, and the ill-effects of tension removed; still, often enough, many more micro-organisms may be left behind in the synovial tissues to reassert themselves. I do not intend to infer that operative treatment may not be of great service. Mr. Wallis has in his paper shown its value, but I think the point alluded to must be remembered, for it speaks for caution. It is lamentable to do harm to such a structure as a large joint which has very grea reparative power, and the possibility of haemorrhage into the joint with micro-organisms still in the synovial tissues is worth a thought.

I should also like to mention a condition well known b sometimes liable to be forgotten or mistaken, a condition me

[1] *District Nursing on a Provident Basis.* (The Scientific Press, Limited. 2s.)

with in some stubborn forms of arthritis. The joint appears full of fluid, but there is found a viscid exudation which cannot be withdrawn by aspiration, and which is small in amount, for much of the enlargement is due to a gelatinous swelling of the capsular tissue. Such cases look easier to manage than they in reality prove.—I am, etc.,

Queen Anne Street, W., Jan. 6th. F. JOHN POYNTON, M.D.

THE EFFECT OF REVACCINATION DURING PREGNANCY ON THE CHILD.

SIR,—During 1901 I was for nine months deputy for the public vaccinator for this district, and vaccinated during that period some 800 infants. In a considerable number there was difficulty in obtaining a successful result. Seeking a cause for this at the time, I was disposed to exculpate my own defects of manipulation and the lymph used, for the following reasons:

In the cases where I failed to get four insertions to take, it was often noticed that where any did take, there was a delay in their maturation; and on the other hand where none took, a repetition of the operation resulted in only one, or at the most two pocks. Occasionally a third inoculation proved necessary, but I did not come across a single case of entire insusceptibility to vaccination. What there appeared to be in these infants was a relative insusceptibility, as shown by the difficulty of obtaining success with four insertions, and by the slowness of the development of the pocks. During this period by using the same lymph and the same methods of procedure, I was obtaining very good results in the remainder of the children vaccinated.

I do not, of course, for a moment mean to suggest that either the lymph or myself were never to be blamed for poor results, but I made inquiries in almost every instance where I had to repeat the operation, and was struck with the number of instances in which one or both parents had been revaccinated during the epidemic of small-pox in Warrington in 1892-3; the exception was generally the father. During the epidemic it is estimated that some 14,000 persons were revaccinated, and the greater number of these were young people, especially girls about to leave school or already employed in factories and workshops. Many of these, nine years afterwards, were the mothers whose children I was called upon to vaccinate. I had already come across several cases in which revaccination in the earlier months of pregnancy was followed by the birth of a child immune to cow-pox.

From the above experience I derived an impression that in some instances a degree of such immunity is also inherited by children born of revaccinated mothers in after-years. To establish this impression on more solid ground I ought to have obtained a complete account of the state as to vaccination or revaccination of all the parents of all the children that I had to deal with, and I actually did begin to do this but from want of time was unable to go on with so laborious a proceeding which, I began to find, involved numberless journeys—mothers being out when I called to vaccinate the baby, and so on. Moreover, one wanted something more than the mere statement that they had been revaccinated—namely, to examine the marks. It would form an interesting subject of inquiry for any public vaccinator in whose district much revaccination has taken place lately, and who has the time and would take the trouble, to collect during the next ten years or so particulars of the relative susceptibility of the children of revaccinated and non-revaccinated mothers.

Like revaccination in adult life, the vaccination of infants born partly immunized would appear to leave less conspicuous marks, or even none sometimes. The following case will illustrate this. It is our custom to note the vaccination marks of all persons admitted into the Warrington Fever Hospital, and, when there are none, to send the name and address to the vaccination officer on the discharge of the patient. Two children of the same family were recently discovered with no visible trace of cicatrices. The usual procedure was followed. The vaccination officer called on me to show me two certificates of their successful vaccination, one of them signed by myself during my period as public vaccinator. On referring to the register, I found a note that I had only succeeded in producing one pock, and that the mother had been successfully revaccinated in 1892. This is, I believe, only one of the many like instances which might be discovered in this town.—I am, etc.,

J. GUEST GORNALL, M.A., M.B.,
Warrington, Dec. 26th, 1902. M.O.H., County Borough of Warrington

THE ROYAL NAVY MEDICAL SERVICE.

SIR,—The following points as to the Navy Medical Service have to be considered:

1. *Relative Rank of Director-General.*—This officer should have the relative status of vice-admiral. He ranked as rear-admiral in former years when the navy was a small affair. To-day the responsibilities are far greater and extra status is needed.

2. *Pay of Deputy-Inspector-Generals of Hospitals.*—These are very important offices. In the recent Naval Warrant they were entirely omitted from increases of pay granted. The Admiralty copied in an unquestioning way the error of the War Office Committee on the R.A.M.C., which omitted the colonel class from any increase of pay. Their emoluments are far below those of captains Royal Navy, with whom they rank.

3. *Charge Pay to Medical Officers in Charge of Warships.*—A graded charge pay running from 10s. per diem downwards to 2s. 6d. should be granted to the medical officer in charge of all warships, according to size. Fancy the responsibility of a chief surgeon of a first-class line of-battleship, say on the China station, with plague in every port, and increasing anxiety as to its entry into his ship!

If the army medical officers get charge pay on a sliding scale for hospitals, surely the medical officer who by his vigilance and ability keeps the crew of a huge man-of-war healthy and fit for work deserves well the 10s. a day extra pay he would get if in charge of an army hospital. A charge pay of this kind would stimulate the Navy Medical Service, and perhaps dissipate some of the pessimism which is not unusual amongst its members.

It is, on the whole, a non-lucrative branch of the medical profession, and more money is needed as a stimulus.—I am, etc.,

January 1st. BETTER EMOLUMENTS.

A DEGREE FOR LONDON STUDENTS.

SIR,—Mr. Hamilton Hall in discussing the relative value of British degrees assumes too much when he states it is "unquestionable" that the Conjoint man is harder worked than the man from the Celtic fringes, and that it is "certain" the latter gets a degree on terms absurdly easier than those open to London students. If by "the men from the Celtic fringes" he means Irish and Scotch graduates, I venture to question his very sweeping assumption as far, at least, as Irish degrees are referred to. Dublin University confers its degrees only on its own graduates of Arts and those of Oxford and Cambridge, and is therefore unavailable by the general student, so that its standard of medical examination need not be discussed here. The other Irish university—the Royal—is the only one whose degrees are open to the ordinary Conjoint student or licentiate, and without in the least wishing to decry the attainments of such students, I would earnestly warn any one, qualified or unqualified, seeking to obtain the mystic letters on somewhat easy terms not to allow Mr. Hamilton Hall's rather unflattering references to "Celtic fringes" to deceive him into the belief that there is anything absurdly easy, comparatively or actually, about these examinations. From the Entrance to the Final he will find the standard of examination—modelled much on the lines of London University—very stiff, and in proof of this the report of the Visitors to the examinations published some months back[1] will bear out what I say. In some subjects, notably anatomy and physiology, the amount of knowledge required to obtain a pass is not absurdly easy, but in the opinion of a good many who have been through the mill, ridiculously hard. The English student who knows sufficient anatomy and physiology to get through the third medical examination of the Royal had better stay in London and tackle the Primary Fellowship. Besides avoiding the probable unpleasantness of *mal de mer* he will have obtained a far more valuable asset.

If any Conjoint man, presuming on the correctness of Mr. Hamilton Hall's unsupported assertion, and endowed with a large degree of insular self-complacency and a correspondingly small amount of knowledge, goes to Dublin with a view of obtaining an intellectually cheap degree, he will have his mental horizon broadened, enjoy some lovely scenery, meet some very pleasant people, including examiners, but he will return without the coveted parchment. If such an one has "a rooted objection to obtaining the London degree in the usual way" and is yet desirous of annexing the mystic letters about which Mr. Hamilton Hall does not care a button, and if, with

[1] BRITISH MEDICAL JOURNAL, June 7th, 1902, p. 1418.

his wholly imaginary "superior attainments" he desires to remove "a titular inferiority to the man from Glasgow or Dublin," and must "go west" for a degree I would humbly recommend such a superior person to leave Ireland severely alone and try his luck at Philadelphia.—I am, etc.,

Guildford, Jan. 4th. W. G. NIALL, M.D., R.U.I.

SIR,—I submit that the Royal Colleges should combine with the new University for examination purposes on grounds of public policy.

If the new University is to fulfil one of the objects for which it was created, it must facilitate the obtaining of a medical degree on reasonable grounds. The revision of the matriculation and preliminary scientific examinations will tend to bring the University examinations to the present level of the Royal Colleges. There will then be two competing bodies granting medical degrees and licences. More men will take the degree, fewer will enter for the Conjoint diplomas; the result will be a falling off in the finances of the colleges, this again will tend to the lowering of the present standard of the colleges. For though the colleges are ancient and august bodies, they are composed of an aggregate of individuals, and corporations like individuals are apt to act under straitened circumstances in a manner that they would not adopt under more affluent conditions. It would therefore be beneficial to avoid this possible contingency by a combination of the colleges and the new University for examination purposes.—I am, etc.,

Devonshire Street, W., Jan. 5th. FREDERICK W. COLLINGWOOD.

SIR,—Unless the Licentiates of the Society of Apothecaries be admitted to the scheme of the amalgamation of London University with the Royal Colleges for examination purposes, I hope nothing will be done in that direction. Dr. Steele concerns himself nothing about laws and privileges, but much about such subsidiary things as "standards," "pedestals," etc. He is aware that the M.D.London requires a special examination, and that only about 3 per cent. of candidates obtain this distinction. Yet he says nothing about such an absurd arrangement, although a student can go to any other university in the empire, and obtain his M.D. on easier terms.

His arguments may be academic, but they are not conclusive, and will do nothing to soothe those gentlemen who, having taken out qualifications which they were assured were honourable and all-sufficient, now find themselves unfairly set down, because, forsooth, they cannot sign "M.D.," although in rights, knowledge, clinical work, and common sense, they may be superior from the point of view of the safety of life of the people, to their competitors. Why should there not be a State examination for a M.D., held under a "Board of the combined Universities of England, of Ireland, and of Scotland"? If any further work in arts be thought of, it should be remembered that the standard of student's entrance examinations ought to be made sufficient from the very first.

I gather that the writer thinks the London degree exists to be placed upon a "pedestal," and not for the convenience of the people and students of London.—I am, etc.,

Bradford, Jan. 1st. PERCY LODGE.

THE NEW SYDENHAM SOCIETY'S *CLINICAL ATLAS*.

SIR,—The BRITISH MEDICAL JOURNAL of January 3rd contains a letter from Mr. Jonathan Hutchinson, apologetic in tone, concerning the New Sydenham Society's *Clinical Atlas*. When I first saw the prospectus I was greatly inclined to subscribe in the hope it would assist me—a country practitioner. However, after waiting to hear what might be contained in its first volume, I felt it would be of slight value to one practising in England. Amongst the first objects to be illustrated were yaws and syphilis, xanthelasma and lupus. The first idea brought to my mind on observing this list was what order could these illustrations be in, and how could one pitch on the illustration required if alphabetical order or regional order be so traversed.

To-day we are virtually told in the fourth paragraph of the letter that confusion is to reign and we must put up with it. This is very sad reading for medical men like myself, who honestly try to keep up with the day and allow ourselves a portion of our earnings to that end.

Of the value of good pictorial illustrations of certain ailments and tests there can be little question. I had read several descriptions of myxoedema, but it was not until I saw an illustration of it in a book that I at once said, "Why that is like Mrs. M." On treating her with thyroid tabloids she regained her former appearance.

Where is there to be found a good illustration of a myxoedematous face or hand of a typical post-nasal adenoid face; of the ravages of osteomalacia; of an acromegalic head and hand; of an osteitis deformans head; of a hot cross bun head; of Charcot's joints; and a host of other ailments seen by us (and perhaps sometimes missed) every day, and all suitable for graphic teaching?

It seems to me a great opportunity is being lost, and the general wants of an every-day English medical man sacrificed to personal predilections. If it is replied that the *Atlas* is not intended for the every-day English practitioner, then I say, why look to him for support and subscription?—I am, etc.,

January 6th. A PROVINCIAL SURGEON.

THE GENERAL MEDICAL COUNCIL: IRISH BRANCH.

SIR,—Will you be so good as to permit me to state through the medium of the BRITISH MEDICAL JOURNAL that in conformity with the following resolution of the Branch Medical Council for Ireland passed on June 2nd, 1902, I have terminated my connexion with the Irish Medical Registration Office?

Resolved: That in order to carry out the requirements as to economy in the management of the Irish Branch Council, notice be given to the landlord of the premises that the office will be surrendered on December 31st next, or as soon after as may be, and that notice of the terminations of their appointments at the same date be given to the Registrar of the Branch and to his clerk.

—I am, etc.,

Dublin, Jan. 5th. S. WESLEY WILSON.

THE ENGLISH CONJOINT DIPLOMA.

SIR,—The friend of your correspondent "Physician and Surgeon" is quite wrong when he says that before 1883 the L.R.C.P. of London was not forbidden to call himself "Dr." When I was a student at University College Hospital in 1882 it was perfectly well known to the students there that if they passed the L.R.C.P.Lond. they were forbidden to call themselves or use the title of "Dr." Consequently a good number of us, after passing the M.R.C.S., went to Edinburgh in order to avoid being hampered by this restriction. Judging by the doorplates and visiting cards one sees about, these conscientious scruples are by no means universal.—I am, etc.,

Ormskirk, Jan. 5th. HUGH HEALD.

HYPERTROPHIC GINGIVITIS DUE TO A NEMATODE.

SIR,—I have pleasure in acquainting you that I have discovered a nematode in a case of hypertrophic gingivitis that came under my care whilst dental surgeon to the General Hospital of this city. I have found the same nematode in skin lesions, and it was present in the systemic circulation on the date at which I removed some tissue for microscopical examination. I hope to be able to present the completed history of the case in a short time, when I shall have finished the photomicrographs and made new blood films and photographed these latter.—I am, etc.,

DENCER WHITTLES.

University of Birmingham, Jan. 7th.

OBITUARY.

PAUL QUICK KARKEEK, M.R.C.S.Eng., L.S.A.Lond., M.O.H. Torquay.

MR. PAUL KARKEEK, who died on December 27th, 1902, was the son of the late Mr. William Karkeek, of Truro, where he was born in September, 1843. He was educated at Probus Grammar School and on the Continent. He then entered St. Bartholomew's Hospital, and, after obtaining the diploma of M.R.C.S.Eng. and L.S.A. in 1865, was appointed House-Surgeon to the Chester Infirmary, and later on Assistant Surgeon to the Seamen's Hospital, Greenwich. He then travelled on the Continent, visiting and attending the hospital practice of the chief medical schools.

Eventually he settled down in practice in Torquay. In 1878 he was appointed Medical Officer of Health for Torquay and also for St. Marychurch, and in 1900, when the borough was enlarged by the inclusion of the latter township and of Cockington, he was appointed Medical Officer of Health for the whole borough.

He was the author of the bold scheme for buy ig the watershed on Dartmoor, whence Torquay's water was (rived. This met with the most violent opposition, chiefly, strangely enough, from what might be called the educated classes, and at a poll which was demanded the burgesses declared emphatically against it. Mr. Karkeek, however, confident in his scheme and in the great benefits which would accrue to Torquay from its adoption, did not recognize this defeat, but again brought the proposal before the Corporation, this time including in it the Trenchford Valley—a subsidiary supply in addition to the Kenniek Valley. With characteristic perseverance he kept constantly bringing the matter before the Corporation, until, in 1896, the correctness of his far-sighted idea was acknowledged by the passing of the Water Bill. Still he was not satisfied. He wanted the removal of all the farms and all the dwellings from off the watershed; and here again his perseverance was rewarded, so that Torquay now, owing entirely to his exertions, enjoys a pure moorland water supply without a single dwelling on the watershed. This is only one instance; but in all other sanitary matters, especially as regards the dairies and milk supply, he displayed the same ardour, usually with the same happy result.



He was a Vice-President of the South-Western Branch of the British Medical Association, and President in 1900. His Presidential address, which was published in the British Medical Journal, was on the preliminary education of medical students. In it he laid great stress on the value of a good classical training, being himself convinced that science subjects could be much more easily assimilated after a good knowledge of Greek and Latin.

He was a Member and Past President of the Torquay Medical Society, whose meetings he regularly attended, and upon the papers read there he almost always spoke, usually prefacing his remarks by something like this: "Gentlemen, I don't know much about the subject we are discussing, but I will tell you a tale," and a good racy tale he would tell, but always so *à propos* to the subject as to induce his hearers not to take his modest disclaimer too much on trust. At the last meeting in December he was to have read a paper on cancer, but on the day fixed, to everybody's regret, he was unable to do so for he was lying unconscious.

He was also a most energetic member and past-president (two terms) of the Torquay Natural History Society, having been mainly instrumental in the addition of the Pengelly Memorial Hall to the Museum Buildings. He attended most of the meetings there and his annual lecture, usually on a classical or anthropological subject, was always looked forward to with pleasure. He was arranging the lantern slides for one of these lectures when he was seized with paralysis. He was also an active member of the Devonshire Association to which he contributed frequent papers chiefly on folk lore.

He married as his first wife Miss Heard, of Truro. His second wife was Miss Elise Paton, daughter of Mr. A. A. Paton, British Consul at Ragusa, who survives him.

On the evening of December 2nd he had a paralytic stroke and lay practically unconscious till his death on December 27th, 1902. He was an upright man in the best sense of the word and a hater of all humbug and sham. In spite of his impulsiveness he was a most chivalrous opponent and his friendship was warm and strong. His pleasant manner and bright cheery appearance influenced all with whom he came in contact and will be sadly missed at many gatherings, not only in Torquay, but in the West of England generally.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. Nicoladoni, Professor of Surgery in the University of Graz, aged 52; Dr. Heinrich Struck, formerly Director of the Imperial Health Bureau and Surgeon-General *a la suite* of the Sanitary Corps of the German Army, aged 77; Professor Rudolf Massini-Meyenrock, Professor of Pharmacology in the University of Basle, Director of the Municipal Policlinic and Surgeon-General of the Swiss Army; Dr. S. Ehrenhaus, of Berlin, a well-known specialist in children's diseases, and one ever foremost in good works for the public benefit, aged 68; Dr. Karl von Kupffer, Professor of Anatomy in the University of Munich, aged 72; and Dr. Wenzel Sobieransky, Professor of Pharmacology in the University of Lemberg, aged 40; Dr. Francesco Occhini, Professor of Surgical Anatomy and Operative Surgery in the University of Rome; Dr. A. W. L. Hénocque, Assistant Director of the Laboratory of Biological Physics at the Collège de France, author of several works on the spectroscopy of the blood, and of very numerous papers on anatomy, physiology, experimental therapeutics, toxicology, and of nearly every branch of medical science, aged 62; Dr. Herrnheiser, of Prague, an ophthalmologist of repute, and Editor of the *Prager medizinische Wochenschrift*, aged 44; Dr. A. Mazzuchelli, Professor of Surgical Pathology in the University of Pavia, aged 63; Professor Max Schede of Bonn; and Professor Panas of Paris.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVY MEDICAL SERVICE.

Medical Officer, R.N., writes: Among the many causes of discontent among naval medical officers is one which has never been sufficiently brought to notice. I refer to the cases of officers who have completed twenty years' service and are then entitled to £1 a day pension. At present they are not relieved immediately on request and placed on the retired list, but are retained for periods varying from a few months to a year or two. For this extra time served they receive no corresponding increase of pension.

If the Board of Admiralty wish to show that they intend to act in perfect good faith towards medical officers, I would submit that they amend the rates of retired pay as shown below:

	£	s.	d.	
Fleet-surgeon after 20 years' service	1	0	0	per day
,, ,, 21 ,, ...	1	1	0	,,
,, ,, 22 ,, ...	1	2	0	,,
,, ,, 25 ,, ...	1	5	0	,,
,, ,, 30 ,, or on retirement at 55	1	10	0	,,

For purposes of comparison I give the following rates:

	£	s.	d.	
After 20 years' service	1	0	0	,,
,, 24 ,, ,, ...	1	2	6	,,
,, 27 ,, ,, ...	1	5	0	,,
,, 30 ,, ,, or on retirement at 55	1	10	0	,,

This alteration would enable an officer always to retire at about twenty years' service on a pension proportionate to his service. I would note that retirement is not allowed while an officer is serving abroad.

You speak, sir, in the British Medical Journal of January 3rd, about change of titles for us. As I have heard many opinions on the subject I will concisely give you our ideas. Every one ridicules the titles of Inspector-General of Hospitals and Fleets, Deputy Inspector-General, etc. Anything would be better. When the whole cumbersome title is given, it scarcely would give to a layman the impression that its holder is a medical man.

I find most medical officers wish for the rank of Surgeon retained, but rank of Staff Surgeon abolished. The feeling about Fleet Surgeon as a rank varies, but it seems to be conceded that if our ranks are really going to be adjusted to our average age, then Surgeon-Commander might well be substituted for Fleet Surgeon, but not otherwise. The average age of entry is 25 years and a fraction of a month. This, then, should be taken as the standard if medical ranks are to be assimilated age for age to the executive branch.

Two other conditions I would refer to:

1. An officer to receive the pay of his new rank when promoted. At present a Surgeon taking the place of a Staff or Fleet Surgeon continues to draw Surgeon's pay, but a Staff Surgeon in the place of a Surgeon draws Surgeon's pay.

2. Officers suffering from climatic affections should not be put on half-pay at the end of three months or before. Surely, dysentery, Malta fever, or malaria are due to the service, whatever my Lords say to the contrary, when contracted while serving His Majesty abroad. It is bad enough to have one's constitution broken down, without having financial ruin as well.

Hope Deferred writes: I see that in the British Medical Journal of January 3rd you express doubt as to whether naval surgeons desire executive titles. Let me assure you that the majority of us would

strongly object to them. With regard to the wider question of why we do not ventilate our grievances, I think it is because we do not care to break regulations unless some good is to come of it. If the Admiralty would have a Commission, and try to get to the bottom of things, we would not be slow in saying what we want; but we do not feel that isolated letters to the papers do any good.

THE following appointments have been made at the Admiralty: JOHN VERDON, Surgeon, to the *Fearless*, January 6th; FREDERICK F. MAHON, Surgeon, to the *Prince George*, January 6th.

Mr. GEORGE E. A. EVANS, civil practitioner, has been appointed Surgeon and Agent at Seaton, Beer, and Branscombe Coastguard Stations, January 3rd.

ROYAL ARMY MEDICAL CORPS FUND.

AT the second meeting of the Committee of the Army Medical Services' Fund for perpetuating the memory of deceased officers of the Royal Army Medical Corps, it was resolved that the fund should bear the name which stands at the head of this notice. It was resolved that the subscription for officers on the active list should be £1 per annum. As regards officers on the active list, it was agreed that the holders for the time being of the following appointments should be *ex-officio* members of the executive committee:—The Director-General, Chairman; the Deputy-Director-General, Vice-Chairman; the Deputy-Assistant-Director-General, the Principal Medical Officers of the First Army Corps and of the Home District; the Commandant and the Professor of Hygiene, Medical Staff College; the Quartermaster, Medical Store Depôt, Woolwich; and one junior captain, R.A.M.C., to be elected by officers of the R.A.M.C. mess at Aldershot, but not necessarily a member of that mess. The representatives of retired officers are Surgeon-General J. B. C. Reade, C.B.; Surgeon-General H. Skey Muir, C.B.; and Lieutenant Colonel J. F. Beattie, and the Honorary Secretary is Lieutenant-Colonel B. Skinner, R.A.M.C. A Subcommittee was appointed to consider the proposal of a compassionate fund for warrant officers, non-commissioned officers, and men of the corps and their wives and families; but a further proposal to start a fund to meet cases of distress among widows and children of deceased officers was negatived, as it was felt that the R.A.M.C. Fund was not yet in a position to undertake such large financial matters as were involved in this, and in a further proposal to take over the existent Benevolent Fund. Officers of the corps desiring to join the fund may obtain all information on application to the Secretary, 68, Victoria Street, S.W.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL T. B. A. TUCKEY retires on retired pay, January 3rd. He was appointed Surgeon, February 5th, 1881; Surgeon-Major, February 5th, 1893; and Lieutenant-Colonel, February 5th, 1901. He was in the Egyptian war in 1882 (medal, and Khedive's bronze star); with the Nile expedition in 1884-5 (clasp); with the Burmese expedition in 1886 (medal with clasp); and in the South African war in 1899-1900, being mentioned in dispatches.

Lieutenant-Colonel U. J. BOURKE also retires on retired pay, January 7th. He joined as Surgeon, February 4th, 1877; became Surgeon-Major, February 4th, 1889; was granted the rank of Lieutenant-Colonel, February 4th, 1897; and made Brigade-Surgeon-Lieutenant-Colonel, May 10th, 1899. He was in the Soudan campaign in 1885, being present at the engagement at Hasheen, the advance in support of the Tofrek zereba, and the destruction of Temai (medal with clasp, and Khedive's bronze star).

Major R. G. THOMPSON, M.D., likewise retires on retired pay, January 7th. His commissions are dated: Surgeon, May 30th, 1885; Surgeon-Major, May 30th, 1897. He served with the Burmese expedition in 1885-7 (medal with clasp), and in the operations in Sierra Leone in 1898-9 with the Karene expedition (medal with clasp).

THE APPEAL FOR THE FAMILY OF THE LATE LIEUTENANT-COLONEL BRODIE, R.A.M.C.

ON behalf of the widow and orphans of Lieutenant-Colonel J. F. Brodie, R.A.M.C., for whom an appeal was made in the BRITISH MEDICAL JOURNAL of May 24th, Colonel Leake, 42, The Common, Woolwich, begs to acknowledge, with many thanks, the following additional contribution, and to express his cordial appreciation of the kind words of sympathy which accompanied it:

	£	s.	d.
Major R. J. Power, R.A.M.C.	1	1	0
Previously acknowledged	84	15	0
Total to date ...	85	16	0

As this appeal is about to be closed, intending contributors will greatly oblige by notifying the same at once

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UNIVERSITIES AND COLLEGES.

UNIVERSITY OF EDINBURGH.

ANNUAL REPORT FOR 1902.

Numbers of Students.

DURING the past year the total number of matriculated students (including 321 women) was 2,918. Of this number, 881 (including 271 women) were enrolled in the Faculty of Arts, 195 (including 1 woman) in the Faculty of Science, and 1,396 (including 15 women) in the Faculty of Medicine. Of the students of medicine 648, or over 46 per cent. belonged to Scotland; 327, or over 23 per cent., were from England and Wales; 112 from Ireland; 74 from India; 211, or fully 15 per cent., from British colonies; and 24 from foreign countries. Besides these matriculated students, 58 non-matriculated students have paid the 5s. entrance fee, 30 of whom were women. The number of women attending extra-academical lectures, with a view to graduation in medicine in the University, was 102.

Degrees Conferred.

The following degrees were conferred during 1902: Master of Arts (M.A.), 141 (including 33 women); Bachelor of Science (B.Sc.), 27 (including 1 woman); Doctor of Science (D.Sc.), 3; Bachelor of Medicine and Master in Surgery (M.B., C.M.), 7 (including 1 woman); Bachelor of Medicine and Bachelor of Surgery (M.B., Ch.B., 180 (including 15 women); Doctor of Medicine (M.D.), 68 (including 1 woman). The General Council of the University now numbers 9,243. The special University certificate in diseases of tropical climates was conferred on 23 candidates (including 1 woman).

Fellowships, etc.

The total annual value of the University fellowships, scholarships, bursaries, and prizes now amounts to about £18,150—namely, in the Faculty of Arts, £10,600; in the Faculty of Science, £1,500; and in the Faculty of Medicine, £3,630. A number of bursaries are in the gift of private patrons, but the great majority of the University bursaries, prizes, etc., are awarded by the Senatus after competitive examination. In addition to the above a sum of upwards of £600, being the income of the Earl of Moray Endowment Fund, is annually available for the encouragement of original research.

The Carnegie Gift.

The munificent gift of Mr. Andrew Carnegie, to be applied in part to the payment of class fees and in part to the better equipment of the Scottish Universities, has now been in operation for over a year, and a marked increase in the amount of the fee fund for this year is doubtless due to the former provision, which has enabled students to take out a larger number of classes than they would otherwise have taken. The sum of £50,000 annually available for the better equipment of the universities has now been apportioned by the Carnegie Trust among the four Universities for a period of five years, subject to the condition that they satisfy the Trust as to the efforts which they themselves are making to secure the further University extension. To Edinburgh there falls an annual grant of £11,500, making a total grant of £57,500, which is thus apportioned: Buildings and permanent equipment (the first charge under this head being for the natural philosophy and engineering departments), £8,000 annually; teaching (for the endowment of modern languages, or some other purposes approved by the Committee of the Trust), £2,500 annually; library, £1,000 annually.

Appeals for Funds.

As the allocation made to the University from the Carnegie Trust is inadequate to satisfy all its pressing requirements, an appeal will shortly be made to the public for subscriptions to a fund "for the further development and extension of the University." In this connexion it is also noteworthy that a movement for the extension of the Edinburgh University Union is to be publicly inaugurated at an early date, and that a movement has been started to provide a habitation for the Indian Association.

Benefactions.

As in former years, the University has to make grateful acknowledgement of numerous benefactions. Among these may be mentioned: A bequest of £5,000 by the late Miss Martha Brown, of Lanfine: a gift of £1,000 by Sir A. Conan Doyle (a M.D. of the University), for the foundation of a prize in the Faculty of Medicine, to be awarded annually to the most distinguished graduate, M.B., Ch.B., from South Africa; a gift by Sir T. D. Gibson Carmichael, Bart., of a lantern for purposes of demonstration, etc., in the Natural History Department: and further gifts by the Rev. Professor Gwatkin, D.D., Cambridge, of collections of molluscan radulae for the microscope. Intimation has also been received by the University Endowment Association of a bequest by the late Robert Irvine, F.C.S., of Royston, Granton, for the ultimate foundation of a Professorship of Bacteriology.

The Library.

Although there is a slight decrease in the number of works presented to the University library, there have been among the 1,548 donations many works of considerable value. A number of books on tropical diseases have been presented by Dr. Andrew Davidson. The re-cataloguing of the library has been continued throughout the past year under the supervision of Dr. James Burgess, C.I.E., by a special staff of cataloguers. By the end of December a total of 197,990 volumes had been dealt with in 168,460 entries and 10,300 cross references. This covers the whole of the books in the general library, with the exception of some small special collections. The theological libraries have been catalogued, as also the physiological and medical and other books in the reading room of the new University buildings. The catalogue has brought to light a large number of incomplete books of a kind that ought to be completed, and the want of other works that a University library out to possess. When the catalogue is arranged alphabetically for printing this will be more apparent; and it is hoped that funds will be forthcoming to supply these defects. The printing of the students' hand catalogue has been delayed with a view to its entire revision by one of the librarians.

Usher Institute, etc.

The "John Usher Institute of Public Health," for which the University is indebted to the munificence of Sir John Usher Bart., of Norton, was formally handed over to the University authorities on June 11th. The institute provides facilities, which are certainly unsurpassed elsewhere, for teaching and for advanced laboratory work in bacteriology, bacteriological chemistry, and other subjects cognate to the science of preventive medicine. The work of the Public Health Chair was transferred to the Institute in October. Certain important structural alterations in the pathological department have afforded greatly increased facilities for the teaching of pathological bacteriology, and the new rooms are equipped with all the appliances necessary for this most important branch of medical study.

Resignation of Principal.

Sir William Muir, K.C.S.I., has intimated his resignation of the office of Principal, which he has held since January, 1885. The period covered by his Principalship has been coeval with the introduction of many momentous changes in the University system, and has witnessed many important additions to the University buildings. Sir William Muir will carry into his retirement the affectionate remembrances and good wishes both of his colleagues, with whom his relations were ever cordial, and of the students, in whose welfare he always took a most sympathetic interest.

Other Changes in Office-bearers.

For the second time in its history the Lord Rectorship was rendered vacant before the completion of the appointed term by the lamented death of the Marquis of Dufferin and Ava, which occurred early in the year. On November 1st last a successor in the Rectorship was appointed in the person of the Right Hon. Sir Robert Bannatyne Finlay, K.C., M.P., Attorney-General for England. Other changes among University office-bearers have been: The appointment of Mr. David Dundas, K.C., as one of the representatives of the University Court on the Board of Curators of

Patronage, in succession to Principal Sir William Muir, resigned; the appointment of Dr. W. W. Taylor as an additional lecturer in the department of Chemistry; and the resignation of Dr. T. H. Milroy, lecturer in Advanced Physiology and Physiological Chemistry; and the appointment of three lecturers in the same department—namely, Dr. P. T. Herring (Histology), Dr. John Malcolm (Physiological Chemistry), and Dr. Sutherland Simpson (Experimental Physiology).

Innovations.

It is noteworthy that a special course of instruction in the administration of anaesthetics has been instituted in connexion with the class of Clinical Surgery; that a special course of instruction in diseases of tropical climates has been held for women in the University; and that, for the first time, the special University certificate in that subject has been conferred upon a woman candidate.

UNIVERSITY OF LONDON.

Board of Studies in Human Anatomy and Morphology.

IN response to a petition from the recognized teachers of anatomy, the Senate has resolved to constitute a Board of Studies in Human Anatomy and Morphology.

School Hygiene.

A conference on the subject of hygiene for schools, arranged by Bedford College and the Sanitary Institute, will be held at the College on January 21st. Further particulars can be obtained from the Secretary of the Sanitary Institute or from Bedford College.

University College.

A course of ten lectures on the mechanism of the secretory process will be delivered by Dr. W. M. Bayliss in the Physiological Theatre on Mondays at 5 p.m., beginning on Monday, January 12th. The lectures are open to all internal students of the University without fee, as well as to qualified medical men on presentation of their cards.

MEDICO-LEGAL AND MEDICO-ETHICAL.

"THE CORONER AND THE DOCTORS."

UNDER the above heading a long report of an inquest held by Dr. A Kinsey Morgan, the Bournemouth borough coroner, appears in the local press concerning the death of a person who died whilst under the influence of chloroform, when he was about to be operated upon for appendicitis.

It appears that three medical men were engaged in the case, and that within about an hour after the death had taken place one of them telephoned to the coroner and acquainted him with what had occurred.

Dr. T. F. Gardner gave evidence at the inquest, and stated that the only chance of saving life was an operation, and that although it was a serious case, there was no special indication that an anaesthetic should not be administered. This was done with all the usual precautions, and when heart failure was noticed every effort was made to resuscitate the patient, but unfortunately without effect.

Dr. Harold Simmons, the police surgeon, made the necropsy, and stated that he found an incision 8 in. long in the side of the abdomen, which had been made by some one after death, and he further found that there had been perforation of the bowel, and that death was due to heart failure.

On hearing that one of the medical men in attendance had evidently made the abdominal incision after death had taken place without receiving a *post-mortem* order, the coroner, without asking for any further medical explanation, expressed himself very strongly on the impropriety of this being done, pending the inquest, and without the previous permission of the coroner. He described it as tampering with the body, extraordinary behaviour, unjustifiable, morbid curiosity, interfering with the ends of justice, and contempt of court.

Such observations were naturally resented by the three medical men engaged in the case, and they replied to them in a joint letter, signed by each, fully and satisfactorily explaining what had taken place, with the consent and at the request of the patient's relatives and friends. It was merely an examination to ascertain the condition of the bowel, which was found to be perforated, and at the time they were not certain that the coroner would hold an inquest. We learn now that the explanations given have so far satisfied the coroner that in the *Bournemouth Daily Echo* of December 11th, 1902, the following notice appeared:

"*Notes and News.*

"We understand that the friction which arose between certain medical men of this town and the borough coroner in consequence of the remarks of the latter at a recent inquest, has been adjusted. The former have expressed their regret that any action of theirs should have seemed to have infringed upon the coroner's jurisdiction, and the latter has expressed his regret that anything he said may have seemed to have reflected upon the skill or discretion of the medical men engaged in the case."

*** We are glad that the matter has thus been amicably settled, and that friendly relationship has been re-established between the coroner and the local practitioners; but at the same time, whatever the exact law may be on the question in dispute, we would suggest that it is advisable when there is a probability of an inquest being held in any case, to leave the body untouched until the coroner has given his decision, or until he has ordered a necropsy to be made.

THE WANT OF STRAIGHTFORWARD PROHIBITION.

THE issues raised in a recent prosecution under the Dentists Act reported in the *Morning Advertiser* are of some general interest. An unregistered man purchased the practice of a deceased dentist who had been upon the *Dentists' Register*. The purchaser put up his own name, but kept up or put up two plates bearing the name of the dead man with the letters L.D.S. (registered dental surgeon) appended, letters very similar to L.D.S. (Licentiate in Dental Surgery). It was contended that he was thereby using the legal qualification of a deceased person to cover his own disabilities, but the magistrate dismissed the summons on the ground that it was not shown that the defendant applied the description to himself. It is, however, encouraging to read that the magistrate remarked that "he was surprised on reading the Act to find that there was no straightforward attempt to debar an unqualified man from acting as a dentist." The roundabout methods of our Acts do not nowadays appear to commend themselves to every one.

UNQUALIFIED PRACTICE.

AT a special sitting of the Nottingham Police Court on December 31st, 1902, Morris Martin was prosecuted at the instance of the Medical Defence Union, Limited, for wilfully and falsely pretending to be, and taking and using the title of "Doctor" on various dates between August 15th and December 23rd, 1902, he not then being a registered medical practitioner.

Mr. Hempson, the solicitor to the Medical Defence Union, conducted the prosecution, the defendant being represented by Mr. R. A. Young, solicitor, of Nottingham. Mr. Hempson stated that the prosecution was instituted under the penal sections of the Medical Acts, and explained that the defendant had received warning as to his practices from Dr. Bateman, the General Secretary of the Medical Defence Union, but that such warning had been disregarded and the practices continued. He also put in a certificate given by the defendant to one of the witnesses showing that the defendant had formerly carried on similarly irregular practices at Hollinwood. Evidence of various persons who had consulted Martin, believing him to be a registered practitioner, was called in support of the prosecution.

Mr. Young, for the defence, admitted a technical offence, stating that his client held a Roumanian diploma, and had served as a medical man in the Boer army, and addressed the Bench in mitigation, offering an undertaking by the defendant not to practise again in Great Britain until he became registered. After a hearing lasting nearly two hours the magistrates convicted the defendant, and inflicted a fine of £5, to include costs, with one month's imprisonment in default of payment. The fine was paid, and a written undertaking was subsequently given by the defendant to the Medical Defence Union not to practise again in Great Britain until he became registered.

THE CORONER'S COURT AND MEDICAL WITNESSES.

LAPIS DIVINUS sends us details of two cases that have recently occurred in his practice, in both of which he was the medical attendant immediately before the deaths, which occurred from injuries received. Inquests were held, but in neither did the coroner think it necessary to call medical evidence, and we are asked if it is not the duty of the coroner to place medical evidence before the jury? Our correspondent further inquires if it is usual for the coroner to write to a doctor before the inquest and obtain his opinion about the case, and to enclose him a fee of 5s. for his reply?

*** (1) At all inquests a medical witness should be called to give evidence in order that the correct cause of the death may be returned by the jury. Without such evidence many curious and incorrect verdicts are recorded; we would especially draw attention to those cases mentioned by the then Registrar-General when he gave evidence before the Parliamentary Committee on Uncertified Deaths. (2) Medical men are not legally called upon to answer such letters. The only power county councils have with regard to coroners' disbursements arise "on the holding of an inquest." The county council is empowered to fix a scale of allowances and disbursements which may be paid by the coroner at the termination of the inquest. The fees to medical witnesses, it should be observed, are fixed by statute law, and are therefore not under the control of the county council. The County Council of London has gone fully into the matter and obtained counsel's opinion, which was to the effect that the Council could not make any payment unless an inquest was held. Some county councils (Kent and Surrey) used to make such payments, but have ceased to do so, as they could not be sanctioned by the Local Government Board auditor. As a matter of public policy the system of making payments before or without an inquest is open to serious objection, and might easily lead to cases of neglect or even crime being overlooked. The holding of an open inquest at which medical evidence is called to establish the true cause of death is a great safeguard to the public. Though coroners are not bound by statute law to summon medical witnesses at an inquest the jury have full power to call for such evidence, if they so desire.

MEDICAL EVIDENCE AT INQUESTS.

W. A. (West Indies) states that he was called to attend a person suffering from severe burns who died about six hours after the event. The death being reported to the City Board, an inquest was ordered by the coroner and was duly held, but our correspondent was not summoned to attend, and when the jury desired to hear his evidence, the coroner would not permit him to be called, but took the evidence of a Government medical officer who had only seen the body after death, and who was paid the usual fee. W. A. asks why his evidence was not required, and why he did not receive a summons to attend the inquest.

*** In the holding of inquests, the coroner has power to summon all witnesses that he may consider necessary for the purposes of the inquest, and it is usual to summon the medical man who last attended the deceased person, or the one called in at the time of the death, as being most competent to give the medical evidence required. The coroner, however, may call some other medical man, if he thinks proper to do so, but at the same time the jury, if not satisfied, have power to request the coroner to call any other medical man whom they may name, and it is the duty of the coroner to do so.

MEDICAL ETIQUETTE.

PERPLEXED.—There is no obligation upon the practitioner who supersedes another to communicate with him directly; it is sufficient, and in most cases preferable, that the communication should come from the patient or a representative of the patient. A should consult his proposer and seconder and lay the facts before them, placing himself in their hands, as it may be better temporarily to withdraw his name until the matter can be cleared up. There is no redress for blackballing at a club. It is recognized that members have the right to express their personal feelings in the ballot, and no one can question their motives.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 9,407 births and 5,705 deaths were registered during the week ending Saturday last, January 3rd. The annual rate of mortality in these towns, which had been 19 6, 19 6, and 16.9 per 1,000 in the three preceding weeks, rose again last week to 20 0 per 1,000. Among these large towns the death-rates ranged from 8.3 in Hornsey, 10 3 in Hanesworth, 11.6 in Derby, 12.0 in King's Norton, 12.9 in Northampton, 13 6 in West Hartlepool, and 14 1 in Middlesbrough, to 25.3 in Bootle, 25.5 in Hull, 26.1 in West Bromwich, 26 8 in Oldham, 27.1 in Stockport, in Wigan, and in Tynemouth, and 39.4 in Newport (Mon.). In London the rate of mortality was 20.9 per 1,000, while it averaged 19.6 in the seventy-five other large towns. The mean death-rate from the principal infectious diseases was 2.1 per 1,000; in London the death-rate from these diseases was 2.2 per 1,000, while among the seventy five other towns, the rates ranged upwards to 4.2 in Wigan, 4.5 in Middlesbrough, 5 0 in Stockport, 5.5 in West Bromwich, 5 8 in Hanley, 8.9 in Hull, and 9.1 in Newport (Mon.). Measles caused a death-rate of 2.0 in Blackburn, 2.2 in Salford, 2 4 in Hastings and in West Bromwich, 7.6 in Hull, and 8.3 in Newport (Mon.); scarlet fever of 1 2 in Walsall, 1 6 in West Bromwich, and 1.7 in Wigan; diphtheria of 1 4 Reading and in Preston, 1.5 in Oldham, 1.7 in Hanley, and 1.8 in Bury; whooping-cough of 1 3 in Willesden and 2.4 in Grimsby; "fever" of 1 4 in Portsmouth; and diarrhoea of 1.5 in Coventry, 1.6 in West Bromwich, and 1 7 in Hanley. Of the 12 fatal cases of small-pox registered last week in these large towns, 4 belonged to Stockport, 3 to Liverpool, and 1 each to Hanley, Bolton, Huddersfield, York, and Merthyr Tydfil. The Metropolitan Asylums Hospitals contained 14 small-pox patients on Saturday, January 3rd, against 17, 21, and 17 on the three preceding Saturdays; 1 new case was admitted during last week, against 1, 5, and none in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had been 2,565, 2,487, and 2,528 at the end of the three preceding weeks, had declined again to 2,378 at the end of last week; 214 new cases were admitted during the week, against 250, 279, and 205 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, January 3rd, 908 births and 707 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 19 9, 21.1, and 21 3 per 1,000 in the three preceding weeks, further rose last week to 21.6 per 1,000, and was 1.6 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scotch towns the death-rates ranged from 17.0 in Perth and 18 1 in Aberdeen to 23 3 in Glasgow and 27.8 in Greenock. The principal infectious diseases caused a mean death-rate of 2.4 per 1,000 in these towns, the highest death-rates from these diseases being recorded in Greenock and Perth. The 352 deaths registered in Glasgow included 2 from scarlet fever, 4 from diphtheria, 26 from whooping-cough, and 7 from diarrhoea. Four fatal cases of diphtheria, 4 of whooping-cough, and 2 of diarrhoea were recorded in Edinburgh. Two deaths from whooping-cough and 2 from diphtheria occurred in Dundee; 8 from measles in Aberdeen; 2 from diarrhoea both in Paisley and in Leith; 2 from "fever" in Greenock; and 2 from diphtheria in Perth.

EFFLUENTS FROM TINPLATE WORKS.

IN a recent special report to the Glamorgan County Council Dr. Williams, the County Medical Officer, gives some interesting particulars in regard to the tinplate effluent contamination of streams, and the best means of prevention.

There are about forty tinplate works in the county of Glamorgan. In the process termed "pickling" the tinplate bars are immersed in crude oil of vitriol until the surface is clean. After the acid is "spent" it is run off into tanks. There are two general methods adopted in dealing with the waste "pickle." The best method is to concentrate in lead-lined tanks containing scrap iron and then convert into iron sulphate. The copperas crystals are separated out in separate lead chambers. The other method, which is used at two of the three works in which copperas is not made, is to pump the "pickle" on to large cinder heaps, which are always present in the vicinity of these works. The acid is spent by coming into contact with the iron in the cinders. The sulphate of iron produced may, however, as Dr Williams points out, be dissolved by surface water and carried into streams, and the adjoining streams were frequently found to contain free acid and copperas. He is of opinion that the conversion of the "pickle" into copperas, wherever the works are situated, should be insisted upon, and that facilities should be given at all reasonable times for the taking of samples and inspection of the works by the officials of the County Council and local authorities. The "swilling fluid" is very much weaker than the "pickle," but in volume very much larger, and to get rid of the free acid and iron sulphate it contains is a difficult problem. In only one instance in Glamorgan has any attempt been made to purify the "swilling fluid" by passage through limestone, which, however, rapidly becomes coated and useless. In the report no satisfactory method of purification was pointed out.

GREENWICH POOR-LAW CHILDREN.

THE State Children's Association call attention to the cost of the village community lately opened by the Greenwich Guardians for Poor-law children at Sidcup. The rateable value of the union is said to be £1,000,000, and the guardians have expended the very large sum of £160,000 on the erection of a palatial colony for 600 children, and propose to spend a further sum of £12,000 on school accommodation for them. Apart from the financial question we agree with the Association in thinking that the best way to train these unfortunate children to take their proper place in the world is not to put them in a palatial colony, which has cost £290 a bed to build, and will probably cost £60 a child per annum to maintain. The object should be to train them to earn their own living as the more fortunate members of the class from which they spring are taught in their own homes.

WORKHOUSE DIETARIES.

CALORIE.—1. Our correspondent should obtain a copy of Dr. Downes's excellent report on the Workhouse Dietaries of Lancashire (1890) and the General Order: Workhouse Regulation (Dietaries and Accounts), October 10th, 1900. (Eyre and Spottiswoode.) An enormous amount of labour was expended by Dr. Downes in the preparation of the various tables; every one of the rations given in the schedules was calculated out on a system similar to that used in the following table.

The new dietary order has been of very great use, not only in improving the dietary, but in consequence of the large increase in the variety of rations in reducing the number of "special diets" in the sick wards. We may say that the new order has been in force for more than a year and a-half, and opinion appears to be almost unanimous in its favour

WORKHOUSE REGULATION (DIETARIES AND ACCOUNTS) ORDER, 1900.
SCHEDULE "A."—PART II: *List of Rations for Breakfast or Supper. Men.*

No. of Ration.	Kind of Food—Plain Diet.	Nutritive Value (in ounces).				Cost (in pence).	
		Dry.	Fat.	Starch, etc.	Proteid.	Classes 1, 1A, 2, and 2B.*	Class 2B.
1	Bread, 4 oz.; porridge, 1½ pint	8 06	0 37	6 28	1.09	0.71	0.59
2	,, 6 oz.; gruel, 1½ pint	7.07	0.20	5.89	0 82	0 66	0.54
3	,, 8 oz.; broth, 1 pint; cheese, 2 oz. ...	6.59	0.64	4.57	1 16	1.23	1.10
4	Porridge, 1½ pint; skim milk, 1 pint	7.40	0.53	4 96	1.46	0 97	0.97
5	,, 1½ pint; buttermilk, 1 pint	7.49	0.56	4.82	1.61	0.76	0.76
6	,, 1½ pint; milk, 1 pint	8.03	1 09	4.99	1.53	1.57	1.57
7	Bread, 2 oz.; porridge, 1½ pint; sugar, 1 oz. ...	7.75	0.36	6.10	0.95	0 68	0.68
8	,, 8 oz.; skim milk, 1 pint	7 06	0.20	5.46	1.21	0.99	0 87
9	,, 8 oz.; buttermilk, 1 pint	7.35	0.23	5.32	1.36	0 78	0.66
10	,, 8 oz.; milk, 1 pint	7.71	0.76	5 49	1 26	1.59	1.47
11	,, 8 oz.; rice-milk, 1 pint	9.32	1.61	6 74	1 34	1.77	1.65
12†	Bread, 8 oz.; tea, 1 pint; margarine, ½ oz. ...	6 32	0 52	5 09	0 63	0.99	0.87
13†	,, 8 oz.; ,, 1 pint; butter, ½ oz.	6.32	0 52	5 09	0.63	1.13	1.00
14†	,, 8 oz.; coffee, 1 pint; margarine, ½ oz. ...	6.45	0.56	5.14	0.66	1.18	1.01
15†	,, 8 oz.; ,, 1 pint; butter, ½ oz. ...	6.45	0.56	5.14	0.66	1.31	1.19
16†	,, 8 oz.; cocoa, 1 pint; margarine, ½ oz. ...	6.82	0.81	5.35	0.73	1 12	1.00
17†	,, 8 oz.; ,, 1 pint; butter, ½ oz. ...	6.82	0.81	5.15	0 73	1.25	1.13
18	Plain cake, 6 oz.; tea, 1 pint	5.01	0.82	3 66	0.40	0 91	0.91
19	,, 6 oz.; coffee, 1 pint	5 14	0.86	3.71	0.43	1 09	1.09
20	,, 6 oz.; cocoa, 1 pint	5 51	1.11	3.72	0.50	1 04	1.04
21	Seed cake, 6 oz.; tea, 1 pint	4 76	0 79	3.52	0.38	0.81	0 81
22	,, 6 oz.; coffee, 1 pint	4.89	0.83	3.57	0.41	0.99	0.99
23	,, 6 oz.; cocoa, 1 pint	5.28	1.08	3 58	0.48	0.94	0 04
24	Bread, 8 oz.; treacle, 1½ oz.; tea, 1 pint... ...	6.91	0 10	6 08	0.63	0.60	0 82
25	,, 8 oz.; ,, 1½ oz.; coffee, 1 pint ...	7.04	0.14	6.13	0 66	1.08	1.00
26	,, 8 oz.; ,, 1½ oz.; cocoa, 1 pint ...	7.42	0.39	6.14	0.73	1.03	0.94
27	,, 8 oz.; jam, 1½ oz.; tea, 1 pint	6.91	0.10	6 08	0.63	1.20	1.12
28	,, 8 oz.; ,, 1½ oz.; coffee, 1 pint... ...	7.04	0.14	6.13	0.66	1.39	1.30
29	,, 8 oz.; ,, 1½ oz.; cocoa, 1 pint	7 42	0.39	6.14	0.73	1.33	1.25
30	Bread, 8 oz.; marmalade, 1½ oz.; tea, 1 pint ...	6.91	0.10	6.08	0 63	1.20	1.12
31	,, 8 oz.; ,, 1½ oz.; coffee, 1 pint ...	7.04	0.14	6.13	0.66	1.39	1.30
32	,, 8 oz.; ,, 1½ oz.; cocoa, 1 pint ...	7.41	0 39	6.14	0.73	1.33	1.25

III.—*Additional Meals.*

No. of Ration.	Kind of Food.	Nutritive Value (in ounces).				Cost (in pence).	
		Dry.	Fat.	Starch, etc.	Proteid.	Classes 1, 1 A, 2, and 2 A.*	Class 2 B.
1	Bread, 4 oz.; cheese, 1½ oz.	3.47	0.36	2.28	0.72	0.66	—
2	,, 4 oz ; butter, ½ oz.	3.00	0.43	2.26	0.28	0.56	—
3	,, 4 oz.; margarine, ½ oz.	3.00	0.43	2.26	0.28	0.43	—
4	Plain cake, 4 oz.	2.85	0.50	2.06	0.22	0.39	—
5	Seed cake, 4 oz.	2.63	0.48	1.97	0.21	0.33	—

Additional Meals for Class 2b only.

Kind of Food—Plain Diet.	Nutritive Value (in ounces).				Cost (in pence).
	Dry.	Fat.	Starch, etc.	Proteid.	Class 2 B.
Bread, 2 oz.; and milk, ½ pint	2.56	0.36	1.61	0.49	0.67
,, 2 oz.; and bouillon, 1 pint	2.09	0.09	1.33	0.51	0.60
Rice pudding, ½ lb.	2.42	0.42	1.66	0.28	0.47
Sago pudding, ½ lb.	2.42	0.42	1.68	0.28	0.49
Semolina pudding, ½ lb.	2.42	0.42	1.66	0.28	0.49
Bread pudding, ½ lb.	3.29	0.66	2.16	0.32	0.64
Cocoa, ½ pint; and bread, 2 oz.	1.90	0.18	1.44	0.22	0.35
Broth, ½ pint; and bread, 2 oz.	1.40	0.07	1.14	0.14	0.21
Gruel, ½ pint; and sugar, 1 oz.	2.05	0.06	1.78	0.14	0.19
Rice-milk, ½ pint; and bread, 2 oz.	3.35	0.49	2.25	0.53	0.70

IV.—*Dinners.*

No. of Ration.	Kind of Food.	Nutritive Value (in ounces).				Cost (in pence).	
		Dry.	Fat.	Starch, etc.	Proteid.	Classes 1, 1 A, 2, and 2 A.*	Class 2 B.
1	Beef, boiled, 4 oz.; bread, 4 oz.; potatoes or other vegetables, 8 oz.	6.57	0.33	4.26	1.69	2 47	2.02
2	,, roast, 4 oz., bread, 4 oz.; potatoes or other vegetables, 8 oz.	(Assumed as above.)				2 71	2.26
3	Mutton, boiled, 4 oz.; bread, 4 oz.; potatoes or other vegetables, 8 oz.	,,	,,	,,		3.20	2.64
4	Pork, boiled, 4 oz ; bread, 4 oz.; potatoes or other vegetables, 8 oz.	8.00	2.09	4.24	1.34	2.43	2.02
5	Tinned meat, 4 oz.; bread, 4 oz.; potatoes or other vegetables, 8 oz.	7.07	0.59	4.24	1.84	1.76	1.42
6	Beef, boiled, 8 oz.; bread, 4 oz.; potatoes or other vegetables, 4 oz.; and suet pudding or dumpling, 4 oz.	7.28	0.78	4.76	1.53	2.16	1.88
7	Mutton, boiled, etc., as in No. 6...	—	—	—	—	2.69	2.47
8	Pork, boiled, etc., as in No. 6	8.45	2.21	4.74	1.24	2.09	1.85

* 1, Men not employed in work. 1 A, Men employed in work, with an additional meal on week days. 2, Men not employed in work (infirm diet). 2 A, Men employed in work, with an additional meal as in Class 2. Class 2 B, Feeble men, special infirm diet (extra meal).
† Infirm diet, Sundays only for Classes 1 and 1 A.

The quantities given in each ration are adequate for the average individual.

2. The best work to consult for information is that recommended in Dr. Downes's report, *Chemische Zusammensetzung der menschlichen Nahrungs-und Genussmittel*, by Dr. J. König (Julius Springer, Berlin), an encyclopaedic work of over 1,000 pages. He will also find a large amount of useful information in Dr. Burney Yeo's *Food in Health and Disease* (London: Cassell and Co.); and as regards dietary tables in the *Pharmacopoeia of the London Hospital* (London: J. and A. Churchill).

FEES FOR NOTIFICATION OF INFECTIOUS CASES BY DISTRICT MEDICAL OFFICERS.

PAROCHIAL writes to ask if a Poor-law medical officer is only entitled to a fee of 1s. for notifying a case of infection in his district.

*** This depends upon whether the patient is a pauper or not. If a pauper patient the fee for notification is 1s. If the patient is a private patient the fee is 2s. 6d. Club patients are to be regarded as private patients, and the notification of such patients carries the higher fee.

THE AMERICAN PUBLIC HEALTH ASSOCIATION.

THE thirtieth annual meeting of the American Public Health Association was held at New Orleans from December 8th to 12th. More than 300 delegates were present. The first day was devoted to the report of the Committee on Standard Methods of Water Analysis, before the Section on Bacteriology and Chemistry, of which Dr. F. F. Wesbrook, of Minneapolis, was chairman. On the following day a resolution was adopted adding Cuba to the list of countries represented. Dr. Wingate, of Milwaukee, announced the failure to secure the creation by Congress of a national department of health. Papers were read on Cause and Prevention of Infant Mortality, by Dr. E. S. Muñoz, Mexico; Wet Nurses, their Hygienic Importance, by Dr. R. N. Prado, Mexico; Examination of Rooms occupied by Diphtheria and Tuberculosis Patients, by Dr. H. W. Hill, Boston; and Experiments in Disinfection with Formaldehyde Gas, by Dr. M. P. Ravenel, Philadelphia. On December 19th a resolution was passed recommending the establishment of a national consumption sanatorium. The resolution asking for the abolition of quarantine was reported back by the executive committee, with a recommendation that it was not expedient to adopt it at this time. This recommendation was sustained. A motion was adopted instructing the President to appoint delegates to the International Tuberculosis Congress in St. Louis, in 1904. A resolution was adopted urging that illuminating gas be placed under municipal control. The following officers were elected for the ensuing year: President, Dr. Walter Wyman, Surgeon-General U.S.P.H. and M.-H.S.; Vice-Presidents, Dr. D. P. Wilkinson, New Orleans, and Dr. J. L. Leal, New Jersey; Treasurer, Dr. F. W. Wright, Connecticut; and Secretary, Dr. C. O. Probst, Columbus, Ohio. The next meeting will be held in Washington, D.C. As a result of the meeting an International Quarantine League has been organized at New Orleans, with Dr. J. L. Linosay, of Havana, as President, and 150 medical men from the United States, Cuba, Mexico, and South America, as members. The League accepts the doctrine that the mosquito is the only means of transmitting yellow fever, and that destruction of the mosquito is the proper protection against an epidemic of yellow fever. The object of the League is to secure a modification, if not the abolition, of all quarantine against yellow fever.

FOURTH PAN-AMERICAN MEDICAL CONGRESS.—The Minister of the Argentine Republic at Washington has notified the Executive Committee of the Fourth Pan-American Medical Congress that his Government desires the postponement of the Congress from June, 1903, to October, 1905, in order that a more fitting reception may be given delegates in Buenos Aires. A further reason for the postponement is that the earlier date would conflict somewhat with the International Congress at Madrid.

MEDICAL NEWS.

THE will of the late Mr. Lennox Browne has been proved at £14,873 2s. 6d.

THE annual dinner of the British Gynaecological Society will be held at the Café Monico, London, W., on Thursday, January 29th, at 7.30 p.m.

DONATIONS TO HOSPITALS.—A bed in the Derbyshire Royal Infirmary has been endowed by Messrs. G. W. and C. Crompton with £1,000 given in memory of their brother, Mr. E. A. Crompton who was killed a few weeks ago while hunting.

THE Board of Agriculture announces that no case of foot and mouth disease has occurred either in Great Britain or Ireland since May last. There is every reason to believe that the disease does not now exist either in the United Kingdom or the Channel Islands.

IT is announced that Professor Koch, accompanied by Dr. Neufeld and Dr. Kleine, of the Institution for Infectious Diseases at Berlin, will leave Berlin for Rhodesia on January 12th for the purpose of making investigations on the spot in reference to cattle diseases and their prevention.

THE Congress of American Physicians and Surgeons will hold its sixth meeting at Washington on May 12th, 13th, and 14th, 1903. The President of the Congress, Dr. W. W. Keen, will deliver an address on the duties and responsibilities of trustees of medical institutions.

UNIVERSITY OF CHICAGO.—Senn Hall, of the Rush Medical College, Chicago, was formerly dedicated on December 17th. The principal address was delivered by Sir William Hingston, Professor of Surgery in Laval University, Montreal. The building has been erected at a cost of £26,000, of which £6,000 was given by Dr. Nicolas Senn.

PRESENTATION.—Dr. H. F. Marley, of St. Issey, Cornwall, has recently been presented with a purse of gold containing 110 guineas and an address testifying to the admiration and affection of those among whom he had lived and worked for many years. The address was accompanied by a list of the names of over 400 subscribers.

COLONIAL CONGRESS.—A Colonial Congress in Paris will take place on March 8th, 1903. All medical men who are acquainted with colonial practice and who are likely to introduce subjects interesting or profitable to residents abroad are invited to attend. The discussions are arranged under five headings: (1) climate; (2) dwelling; (3) food; (4) clothing; (5) the *régime* of life.

A POST-GRADUATE MEDICAL SCHOOL IN TURIN.—The Italian Minister of Public Instruction has authorized the establishment of a Post-graduate School of Hygiene and Medical Jurisprudence in connexion with the University of Turin. It is intended for graduates in medicine who wish to obtain the title of sanitary officer, and for others who wish to make their scientific training more complete.

CHOLERA IN EGYPT.—Seventeen cases of cholera occurred in Alexandria during the week ending December 22nd, 1902. No cases of cholera were reported from any other part of Egypt. In Alexandria during the week ending December 15th, 1902, 59 cases of the disease were notified, so that a marked diminution of the outbreak is to be noted.

A COURSE of lectures and demonstrations for sanitary officers similar to the courses given on thirty-four previous occasions will be given at the Sanitary Institute, Margaret Street, Regent Street, W. The course will commence on Monday, February 2nd, and will terminate on April 24th. The class will be afforded opportunities of inspecting disinfecting stations, sewage disposal works, soap works, the cattle market, a knacker's yard, and a dairy farm.

PROPOSED COMPULSORY VACCINATION IN BELGIUM.—Drs. Terwargne and Delbastée, members of the Belgian Chamber of Representatives, have introduced a Bill making vaccination and revaccination compulsory. It is provided that children must be vaccinated within six months of birth and revaccinated before the age of 12, under a penalty of a fine of 10 fr. to 20 fr., to be imposed on their parents and guardians.

HOSPITAL SUNDAY AND SATURDAY FUNDS.—At a recent meeting of the Council of the Metropolitan Hospital Sunday Fund, it was stated that of the 104,000 in-patients who were admitted into the hospitals in London 25,000 came from outside the twelve miles radius. It was calculated that out of a total expenditure of £600,000, over £150,000 was spent in relieving the wants of poor people from the country. This was made the basis of an appeal for financial support from the provinces. The total receipts of the Hospital Saturday Fund for the past year were £17,165 as compared with £16,754 for the previous year.

A CONGRESS OF SOCIAL MEDICINE IN AUSTRIA.—The Vienna Medical Association has decided to summon a Congress of Social Medicine to be held next spring. Delegates from all the medical societies of Austria will be invited to attend. The conditions of medical practice in relation to legislative measures recently passed in Austria will be discussed. The object of the Congress is said to be the organization of the medical profession of the Austrian empire.

A THALASSOTHERAPEUTIC CONGRESS.—An International Congress on Thalassotherapy (which being interpreted—for the benefit of the future non-humanized generation of doctors—means sea-air treatment) will be held at Biarritz from April 19th to 21st. The following questions are proposed for discussion: (1) What is the effect of living by the sea on the intimate phenomena of nutrition? (to be introduced by Drs. A. Robin and M. Binet); (2) what are the effects of the seaside "cure" from the point of view of the distribution of sufferers from tuberculosis? (to be introduced by Dr. Labesque); (3) what is the influence of a stay by the sea and of the sea "cure" in general on the cardio-vascular apparatus? (to be introduced by Drs. H. Huchard and Fiessinger.)

MEDICAL VACANCIES.

The following vacancies are announced:

BIRKENHEAD BOROUGH HOSPITAL.—Senior Resident Male House-Surgeon. Salary £100 per annum, with board. Applications to the Chairman of Weekly Board by February 1st.

BIRMINGHAM: GENERAL HOSPITAL.—House-Physician. Appointment for six months, but eligible for re-election. Salary, £50 per annum, with residence, board, and washing. Applications to the House Governor by January 31st.

BIRMINGHAM: QUEEN'S HOSPITAL.—(1) Pathologist. (2) Second Physician for Out-patients. Applications to the Secretary by January 21st.

DERBYSHIRE ROYAL INFIRMARY. (1) Two Resident House-Surgeons. (2) House-Physician. (3) Assistant House-Surgeon. Appointments for (1) and (2) for twelve months, salary, £100 per annum, and (3) for six months, salary at the rate of £60 per annum. Apartments, board, etc., provided in each case. Applications to the Secretary by January 22nd.

GLOUCESTER: GENERAL INFIRMARY AT GLOUCESTER AND THE GLOUCESTERSHIRE EYE INSTITUTION.—Senior House-Surgeon. Salary, £100 per annum, with board, residence, and washing. Applications to the Secretary by January 13th.

GREAT NORTHERN HOSPITAL, Holloway, N.—Junior House Physician. Appointment for six months. Salary at the rate of £30 per annum, with board, lodging, and washing. Applications, on forms provided, to be sent to the Secretary by January 19th.

JENNER INSTITUTE OF PREVENTIVE MEDICINE, Chelsea Gardens.—Studentship of the value of £150 (tenable for one year but renewable) for the purpose of research in the Department of Bacteriology at the Institute. Applications to be sent in by January 31st.

LEAMINGTON: WARNEFORD HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board, washing, and apartments. Applications on forms provided to be addressed to the Secretary before January 22nd.

LIVERPOOL HOSPITAL FOR CONSUMPTION.—Stipendiary Medical Officer: non-resident. Salary, £70 per annum. Applications to the Secretary by January 17th.

LONDON LOCK HOSPITAL.—House Surgeon to the Female Hospital. Salary, £80 per annum, with board, lodging, and washing. Applications to the Secretary, Harrow Road, by January 28th.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer; unmarried, and not less than 25 years of age. Remuneration £150 per annum, with board and residence. Applications to the General Superintendent by January 24th.

ROCHESTER: ST. BARTHOLOMEW'S HOSPITAL.—Assistant House-Surgeon. Salary, £100 per annum, with apartments, board, washing, etc. Applications, marked "Application for Assistant House Surgeon" to be sent to the Clerk to the Trustees, 42, High Street, Rochester, by January 26th.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—(1) Clinical Pathologist. Salary, £75 per annum. (2) Assistant Pathologist. Salary, £25 per annum. Applications to the Secretary by January 10th.

RYDE: ROYAL ISLE OF WIGHT COUNTY HOSPITAL.—Resident House-Surgeon. Salary, £90 per annum. Applications to the Secretary by January 20th.

SALFORD UNION.—Resident Medical Officer at the Infirmary, Hope, near Eccles. Salary, £150 per annum, with furnished apartments and attendance. Applications, endorsed "Assistant Medical Officer," to be sent to the Clerk to the Guardians, Union Offices, Eccles New Road, Salford, by January 13th.

SALISBURY GENERAL INFIRMARY.—Assistant House-Surgeon, unmarried. Salary at the rate of £75 per annum, with apartments, board, and lodging. Applications to the Secretary by January 30th.

SHEFFIELD ROYAL HOSPITAL.—Junior Assistant House-Surgeon; unmarried. Salary, £50 per annum, with board, washing, and lodging. Applications to the Secretary of the Honorary Staff, Dr. S. Risley, 389, Glossop Road, Sheffield, by January 17th.

WHITTINGHAM: COUNTY ASYLUM.—Assistant Medical Officer; unmarried and not over 30 years of age. Initial salary, £150 per annum. Applications to the Medical Superintendent.

WINCHESTER: ROYAL HANTS COUNTY HOSPITAL.—House-Physician; unmarried. Salary, £65 per annum, rising to £75 per annum, with board, residence, etc. Applications to the Secretary by January 24th.

WREXHAM INFIRMARY.—Resident House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications, on forms provided, to be sent to the Secretary, 9, Temple Row, Wrexham, by January 10th.

MEDICAL APPOINTMENTS.

BARBER, G., M.R.C.S.Eng., L.R.C.P.Lond., appointed Honorary Ophthalmic Surgeon to the Kalgoorlie Hospital, Western Australia.

BARNES, Frank, M.B., B.S.Lond., F.R.C.S.Eng., appointed Resident Surgical Officer to the General Hospital, Birmingham, *vice* A. W. Nuthall, F.R.C.S.Eng., resigned.

CAMERON, S., M.B., Ch.B., appointed Resident Medical Officer to the Chelsea Hospital for Women.

CAMPBELL, Alfred, F.R.C.S.Edin., L.R.C.P.Lond., appointed Government Medical Officer and Vaccinator at Young, New South Wales, *vice* Dr. J. T. Heeley.

CHARLTON, F. J., M.R.C.S., L.R.C.P.Lond., appointed House-Surgeon and Dispenser to the Beverley Dispensary and Hospital.

COLE, F. Hobill, M.B., Ch.B.Melb., appointed Examiner in Pharmacy and Materia Medica in the University of Melbourne.

EASTON, H. A., M.R.C.S., L.R.C.P.Lond., appointed Assistant Medical Superintendent of the Croydon Union Infirmary.

ELGEE, William, M.R.C.S.Eng., L.R.C.P.Lond., appointed Health Officer for Bellevue, Western Australia.

FLUX, G. B., M.D.Brux., M.R.C.S., L.R.C.P., L.S.A., appointed Assistant Anaesthetist at King's College Hospital.

GRAHAM, Edward A., M.B., B.Ch.Melb., appointed Government Medical Officer and Vaccinator at Deniliquin, New South Wales, *vice* Dr. A. W. Noyes.

HOLMES, W. S., M.B., Ch.B.Vict., appointed Junior House Surgeon to the Oldham Infirmary.

HOWE, John, M.B., Ch.B.Vict., appointed Medical Officer and Public Vaccinator to the District of Levenshulme and part of West Gorton (No. 8) of the Chorlton Union, Manchester, *vice* H. E. H. Matthews, M.R.C.S., resigned.

HUTCHENS, H. J., M.R.C.S.Eng., L.R.C.P.Lond., D.S.O., appointed Assistant Bacteriologist to the West Riding of Yorkshire County Council.

MCCOY, S. H., M.B., B.A.Toronto, appointed Clinical Assistant to the Chelsea Hospital for Women.

MATTHEWS, S. P., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer and Public Vaccinator for the No. 3 District of the Horsham Union.

MOON, R. O., M.A., M.D., M.R.C.P., appointed Physician to Outpatients at the Infirmary for Consumption, Margaret Street, W.

MORRIS, J. M., M.A., M.B., C.M.Edin., appointed Medical Officer of Health for the Borough of Neath, *vice* James E. Elias, M.R.C.S.Eng., D.P.H.Cantab., resigned.

MURRAY, G. S., M.B., Ch.B.Edin., appointed Senior House-Surgeon to the Oldham Infirmary.

MURRAY, W. A., M.B. Ch.B.Edin., appointed Deputy Principal Medical Officer for the Gold Coast Colony.

OSWALD, H. R., M.D.Edin., appointed Coroner for the South Eastern District of London, *vice* Mr. E. Carttar, deceased.

PERNET, George, M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant to the Skin Department of University College Hospital.

PLOWMAN, Sidney, F.R.C.S.Eng., L.R.C.P.Lond., appointed Examiner in Pharmacy and Materia Medica in the University of Melbourne.

READ, Stanley J., D., M.B., appointed Public Vaccinator for the Northern District and Officer of Health for the Borough of Raywood, Victoria.

SAVAGE, W. G., B.Sc.Lond., M.D., D.P.H., appointed Medical Officer of Health for the Borough of Colchester.

THOMAS, G. Crewdson, M.D., C.M., M.R.C.P., appointed Physician to Out-patients at the Infirmary for Consumption, Margaret Street, W.

WALDRON, Derwent H. R., M.B., C.M.Edin., appointed Senior Medical Officer of the Gold Coast Colony.

WIGHTMAN, C. F., F.R.C.S.Eng., L.R.C.P.Lond., appointed District Medical Officer of the Royston Union.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Society of London, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Mr. Bernard Pitts: Suppression of Urine in a case of Ovarian Tumour and Pregnancy; Removal of Tumour and Uterus; recovery. Dr. B. J. Collingwood: The Etiology of Emphysema from the Physical Standpoint.

TUESDAY.

Royal Medical and Chirurgical Society, 20, Hanover Square, W., 8.30 p.m.—Professor Clifford Allbutt: Rise of Blood Pressure in Later Life. Mr. Philip R. W. De Santi: A report on four cases of Acute Septic Inflammation of the Throat with Bacteriological examination of each.

WEDNESDAY.

Dermatological Society of London, 11, Chandos Street, Cavendish Square, W., 5.15 p.m.—Demonstration of cases of interest.

South-West London Medical Society, Bolingbroke Hospital, Wandsworth Common, S.W., 8.45 p.m.—Mr. Macleod Yearsley: On the Indications for the Mastoid Operation.

Hunterian Society, London Institution, Finsbury Circus, E.C., 8.30 p.m.—Dr. Russell Andrews: Some notes on Obstetric Practice in Berlin and Vienna. Dr. W. H. Kelson: On Nasal Discharges.

FRIDAY.

Society for the Study of Disease in Children, 11, Chandos Street, Cavendish Square, W., 5 p.m.—Dr. G. A. Sutherland and Mr. Thomson Walker: A case of Syphilitic Endarteritis and Nephritis in an Infant. Specimens by Mr. Thomson Walker and Dr. C. W. Chapman.

POST-GRADUATE COURSES AND LECTURES.

Charing-cross Hospital, Thursday, 4 p.m.—Demonstration of Surgical Cases

Hospital for Sick Children, Great Ormond Street, W.C., Thursday, 4 p.m.—Lecture on Empyema.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C. Demonstrations will be given at 4 p.m. as follows:—Monday, skin: Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, ear. Lectures will also be given at 5.15 p.m. as follows: Monday and Tuesday, Diseases of the Cardiac Valves; Wednesday, The Diagnosis of Pregnancy; Thursday, Cerebral Haemorrhage; Friday, Purulent Nasal Discharges.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., Tuesday, 3.30 p.m.—Demonstration: Functional Paralysis.

North-East London Post Graduate College, Tottenham Hospital, Thursday, 4 p.m. Lecture on Broncho-pneumonia in Children and its Treatment.

Post-Graduate College, West London Hospital, Hammersmith Road, W.—Lectures will be delivered at 5 p.m. as follows: Monday, Mental Affections in Childhood; Tuesday, Whitlow: Cellulitis; Wednesday, Surgical Anatomy; Thursday, Treatment of some Injuries and Emergencies; Friday, Mental Unsoundness amounting to Insanity.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning in order to ensure insertion in the current issue.

BIRTHS.

SUTHERLAND.—At 3, Osborne Place, Dundee, on January 4th, the wife of L. R. Sutherland, M.B., Professor of Pathology, University of St. Andrews, a daughter.

MARRIAGES.

COWAN—CLERK.—On January 1st, at St. Andrew's Church, Bath, Frederic S. Cowan, second son of the late S. B. Cowan, F.R.C.S., and Mrs. Cowan, to Isabel Gladys, youngest daughter of Prebendary and Mrs. Angus Clerk.

STRATTON—NORTON.—At the Friends' Meeting House, Shaftesbury, on December 31st, 1902, J. Ernest Stratton, M.D.Lond., of 154, Jamaica Road, S.E., to Ethel R. Norton, of Minerva House, Shaftesbury.

DEATHS.

COLMAN.—On January 2nd, 1903, at Nottingham Place, London, W., Thomas John Colman, of the City of Bristol, M.D., aged 70.

PRICE.—On January 1st, 1903, at Chepstow House, Ross, Herefordshire, William Elliot Price, M.B., M.R.C.S., aged 46 years.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

TELAMONIDES inquires as to the prospects in Canada (or other British colony) for a general practitioner, aged 35, of excellent qualifications and good education, but not accustomed to horses.

LONDON AND NORTH-WESTERN RAILWAY SURGEONS.

A CORRESPONDENT, who is a surgeon to this company, writes to inquire whether any attempt has been made to form an association similar to the long-established Great Western Railway Provident Society Medical Staff, and the new Association of Midland Railway Surgeons; he thinks that the surgeons of the London and North-Western Railway Company might follow suit.

COMPENSATION FOR INJURY.

T. W. H. asks to be referred to any publication giving information as to the degree of recovery possible for a patient who suffered an injury by a circular saw, resulting in the loss of a little finger of the left hand, and permanent stiffening of the ring finger. He is a joiner and carpenter, and his wage-earning capacity is materially diminished.

*** In such a case the diminution in wage-earning capacity, estimated as percentage of original wage-earning capacity, must depend largely on the exact nature of the work. Effects of treatment and facility of using the other hand have likewise to be considered. In estimating the amount of compensation, a perusal of Wyatt Johnston's article in the *Montreal Medical Journal*, April, 1900, might prove helpful. An abstract of Dr. Wyatt Johnston's article was published in the BRITISH MEDICAL JOURNAL of January 5th, 1901, page 38.

RECESSION OF GUMS.

X. Y. Z. asks for information as to the cause and treatment of atrophy of the gums, causing them to recede from the teeth in early middle age?

*** Sometimes friction with the finger, avoiding the actual edges—shampooing, in fact—improves the nutrition of the gums. But the subject is too lengthy to discuss in an answer. It is treated in the works on *Dental Surgery* by Tomes, Smale and Colyer, and Sewill.

EXAMINATION FOR M.R.C.P.EDIN.

T. B. desires information as to what books to study for the M.R.C.P.Edin. in medicine, therapeutics, and diseases of the chest.

*** The College authorities give no indication as to appropriate text-books. Probably Dr. Frederick Taylor's *Manual of the Practice of Medicine*, sixth edition (London: J. and A. Churchill, 1901, 16s.), or Osler's *Principles and Practice of Medicine*, fourth edition (London: H. Kimpton, 1901, 18s.), along with Muir and Ritchie's *Manual of Bacteriology*, third edition (London: Young J. Pentland, 1902, 12s. 6d.), would suffice for medicine; while, in therapeutics, Burney Yeo's *Manual of Medical Treatment*, new edition (London: Cassell and Co., 1902, 21s.), and West's *Diseases of the Organs of Respiration* (London: C. Griffin and Co., 1902, 36s.) would meet the needs of most candidates.

GENERALIZED VACCINIA.

J. T. F. (Leeds) writes to ask if the rash of generalized vaccinia ever resembles that of varicella.

*** The rash is more usually described as resembling that of small-pox, but varicella and modified small-pox may be confused. The date given for the appearance of the rash corresponds with the date of vaccination. Vesicular eruptions sometimes occur after vaccination which are not those of generalized vaccinia.

ANSWERS.

THE ARREST OF THE SECRETION OF MILK.

G. T.—In reply to similar inquiries in the past, it has been recommended that the extract of belladonna should be painted for 1 in. around the nipple twice a day for three days, and then belladonna liniment applied. Simultaneously small doses of potassium nitrate and of magnesium sulphate may be given with the aromatic spirit of ammonia. Colchicum has been recommended, and the administration of potassium iodide with magnesium sulphate is a well-approved method.

HOUSING OF THE WORKING CLASSES.

A LARGE number of books have recently been issued respecting the housing question and working class dwellings. Probably the following would furnish our correspondent with the information he desires: *The Housing of the Working Classes*, by Edward Bowmaker, M.D. (London: Methuen and Co. 2s. 6d.); *Public Health and Housing*, by J. F. J. Sykes, M.D. (London: P. S. King and Son. 1901. 5s.). This volume formed the Milroy Lectures of 1901. *The Housing of the Working Classes*, by Alderman W. Thompson of Richmond (London: P. S. King and Son) contains many particulars respecting different forms of artisan dwellings. For London the most complete record is the London County Council report entitled *The Housing Question in London, 1855-1900* (London: P. S. King and Son). This work was compiled by Mr. C. J. Stewart and his colleagues in 1900. Our correspondent is, of course, aware of the Report of the Royal Commission on the Housing of the Working Classes, 1885, which may be obtained from Eyre and Spottiswoode. The report itself (not including the large volume of evidence) is a classic on the whole question (price 11d.).

THE CLIMATE OF SMYRNA.

F. W. F.—The climate of Smyrna is variable and on the whole rather humid. From November to about the end of March there is a good deal of rain, and very often strong winds blow either from the interior or down from the steppes of Russia. It therefore often seems cold though the temperature is not really low. From May to October little rain falls and it gets rather hot. In the daytime the air is always fresh, as the "imbat" or S.W. wind blows with great regularity; but at night this wind falls, and the air being still and warm is sometimes oppressive. During half March, April, May, most of June, late September, and much of November the climate resembles that of England during a very fine summer. July, August, and part of September are the only months when the place feels really hot; it is then very much like Cape Town at Christmas time, but the real temperature is not as high as in Egypt, Syria, Athens, and Gibraltar. Some people find the place relaxing; but tennis, golf, cricket, and football are all popular games. Many Europeans nowadays live outside the town in the villages, coming into their work by train and tram. The town is clean on the whole and away from the quay more free from smells than most South European towns. The drainage, however, is bad, inasmuch as the pipes are badly laid and discharge into shallow water all along the quay. Here, therefore, there is often an extremely strong smell. In spite of this it is the quay that is the daily resort of the whole population and no one seems to suffer from it. There are occasional outbreaks of typhoid, but it is of a mild type and certainly not so common as in many Continental towns of corresponding size (about 300,000 inhabitants). Diphtheria, measles, and scarlet fever are all uncommon; malaria non-existent; phthisis is rather common and rapid in course. There are no health statistics available, but the death-rate among Europeans is probably low, the birth-rate is very high. Further testimony in favour of the town is that an outbreak of cholera some nine years ago was entirely confined to the poorest quarters of the town, and lasted a very short time, and that an outbreak of plague in 1900 was crushed as far as the town is concerned quite as easily as at Glasgow.

LETTERS, NOTES, Etc.

RODENT CANCER AND ELECTRICITY.

DR. J. INGLIS PARSONS (Mayfair) writes: In the EPITOME of the BRITISH MEDICAL JOURNAL of January 3rd, you give a full abstract of a case of rodent cancer healed by electricity, by Dr. W. R. FOX, of Melbourne, but it is not stated that the credit of introducing this method of treatment belongs to me, although Dr. Fox in his paper describes the operation as mine, and also very kindly wrote to me and congratulated me on his result. I may add that the method is fully described in my book on *Rodent Ulcer*, published in 1893 (John Bale and Sons), and was reviewed in the JOURNAL. The treatment is quite as successful as the *x* rays and much less tedious, as many cases can be done at one sitting.

SMALL CHARITABLE CONTRIBUTIONS.

MR. J. BERNARD LAMB writes with reference to the paragraph published in the BRITISH MEDICAL JOURNAL of January 3rd, p. 30, as follows: Will you permit me to state that, although I had London charities in my mind when formulating the scheme, I did not state in my letter to the *Times* that it would apply only to the metropolis? As a matter of fact the scheme could apply, if desired, to all important British charities without the slightest difficulty.

*** Mr. Lamb, in the opening sentence of his letter to the *Times*, spoke of "a simple scheme for the transmission of small contributions to the larger hospitals and charities in London," and in the concluding sentence he expressed the opinion that "the adoption of a scheme somewhat after the lines of that I have indicated would result in a material improvement in the incomes of many of the important London charities." It is obvious that the extension of the scheme to all British charities would very greatly increase the amount of work to be done at the central distributing office.

HARLEY STREET.

MR. E. MUIRHEAD LITTLE (London, W.) writes: In the obituary notice of the late DR. SAMUEL FENWICK in the BRITISH MEDICAL JOURNAL of December 27th, 1902, I see that it is stated that in 1862 there was only one other consultant in Harley Street; but on referring to the local list in the *London Medical Directory* for 1862 I find the names of twenty-two practitioners in Harley Street, and four in what was then Upper Harley Street. Among these names are such well-known ones as Jenner, Quain, Hancock, Garrod, (Dr.) Henry Thompson, Southey, Busk, Oscar Clayton, and G. Harley. In fact, the popularity of the street began long before 1862, and steadily progressed, for as early as 1850 there were fourteen names in the local list, and these had increased to nineteen in 1855, thirty in 1865, fifty-one in 1875, sixty-eight in 1885, one hundred and twenty-five in 1895, until in the 1903 *Directory* there are one hundred and eighty-six practitioners who claim Harley Street as their address, although a few of them must be sought well round the corners of cross streets.

INEBRIATE HOMES.

DR. BRANTHWAITE, the Inspector under the Inebriates Acts, in his report for the year 1900 expressed the opinion, quoted in the BRITISH MEDICAL JOURNAL of December 27th, 1902, p. 1969, that there is a great demand, especially near London, for an institution entirely devoted to the reception of inebriate patients able and willing to sign for a month or even less. We are informed that such a home may shortly be started if inquiries now in progress appear to justify the venture.

SCHOOL BOARD MEDICAL CERTIFICATES.

DR. DENNIS VINRACE (South Kensington, S.W.) writes: A good deal of diversity exists among medical men in the metropolis, particularly the staffs of the various hospitals, as to the propriety of signing certificates as to the inability of children, through illness, to attend the schools of the School Board for London. At some hospitals it is the rule for members of the medical staff to give certificates in the case of children who are "in" or "out" patients, while at others the members of the staff follow their own views, some granting certificates and others refusing to do so. The consequence is that a great deal of confusion and uncertainty exists on this subject, so that it is very difficult for a medical man holding a hospital appointment to know what course he ought to adopt. If the General Medical Council or some other representative body would give a definite ruling on the question, many members of the medical profession would be relieved from a source of considerable difficulty.

LETTERS, COMMUNICATIONS, ETC., have been received from:

A A. S.; Messrs. D. Appleton and Co., London; Dr. T. C. Askin, Woodbridge; Mr. H. E. Allen, London. **B** Messrs. Bates, Hendy and Co., London; Mr. J. C. Braine-Hartnell, Stroud; Mr. E. Bellis, London; Sir H. C. Burdett, London; Better Emoluments; Dr. C. A. Beck Langsett; Dr. A. L. Bendict, Buffalo; Barrister-at-Law; Mr. L. A. Bidwell, London; J. H. Bailey, M.B., Port Erin; Dr. C. Buttar, London; Dr. J. Brownlee, Glasgow; Messrs. Bailliere, Tindall and Cox, London. **C** Countryman; Calorie; Dr. J. B. Christopherson, Khartoum; Mr. S. W. E. Colyer, London; Mr. F. W. Collingwood, London; Cantab. **D** Delta; Mr. D. P. Dunne, Manchester. **E** Dr. G. M. Edebohls, New York; Enquirer; Mr. G. Y. Eales, Torquay; Dr. G. H. Edington, Glasgow. **F** Dr. T. Fisher, Clifton; F. M.; Dr. W. D. Foster, Kansas City; F.R.C.P.Edin.; Dr. F. R. Fairbank, Dorking. **G** Grandison; Mr. G. H. F. Graves, Edinburgh; Dr. R. Green, Northfield; Mr. F. S. Gotla, London; Dr. L. Grant, Ballachulish; General Electric Co., Manager of, London; Dr. J. Galloway, London. **H** Mr. J. Hutchinson, London; Mr. W. Hutchinson, Portland, U.S.A.; Dr. J. S. Hooker, London; Mr. E. J. A. Haynes, Perth, W.A.; P. S. Hichens, M.B., Northampton; Dr. W. Hutton, Cheltenham; Mr. H. Heald, Ormskirk; Hope Deferred; Hysterical; Mr. A. Hope, London. **I** Insularis. **J** Dr. W. M. Jones, Torquay. Jeyes Sanitary Compounds Co., Manager of, London; Dr. C. H. Joy, Tamworth; Dr. F. H. Jacob, Nottingham. **L** Mr. P. G. Lodge, Bradford; W. T. Lichfield, M.B., Sydney, N.S.W.; Lacnanthes; Mr. F. G. Layton, Walsall; Mr. J. B. Lamb, Harrow. **M** M.P.S.; Medical Enquirer; Mr. D. W. K. Moody, London; M.O.H.; Medical Officer R.N.; A. MacLennan, M.B., Glasgow; Major R.A.M.C.; Dr. S. Moritz, Manchester; B. G. A. Moynihan, M.B., Leeds; Dr. B. E. Myers, London. **N** Norfolk; Dr. W. G. Niall, Guildford. **O** Mr. W. Osborn, Milverton. **P** Parochial; Dr. J. I. Parsons, London; P. V.; Mr. E. J. Pritchard, London; Progress; Dr. T. Pike, Twickenham; Provincial Surgeon; Mr. F. J. Poynton, London. **R** Dr. R. D. Rudolf, Toronto; Railway Surgeon, L. and N.W.R.; Mr. R. Roché, London; Dr. J. Reid, London; Mr. J. F. Reid, London. **S** Miss F. W. Saunders, London; Messrs. Spiers and Pond, London; Dr. F. H. Spencer, Exeter; Dr. J. H. Swanton, London; S. Stephenson, M.B., London. **T** Mr. J. M. Tabor, London; Mr. T. J. Tonkin, Hanley; J. H. Targett, M.B., London; Mr. A. Teevan, Hove. **U** Undergraduate London University, M.R.C.S., L.R.C.P. **V** Mr. E. D. Vinrace, London. **W** West Indies; Dr. T. J. Wood, Bradford; Dr. E. W. A. Walker, Witney; Dr. F. Willcocks, London; Mr. S. W. Wilson, Dublin W. O. T.

BOOKS, ETC., RECEIVED.

A Handbook of the Open air Treatment and Life in an Open-air Sanatorium. By Dr. Charles Reinhardt and Dr. David Thomson. Second edition. London: John Bale, Sons, and Danielsson, Limited. 1902.

The London Manual for 1903. Edited by Robert Donald. London: Edward Lloyd, Limited. 1903. 1s. 6d.

Penrose's Pictorial Annual. 1902-3. An illustrated review of the Graphic Arts. Edited by William Gamble. London: A. W. Penrose and Co.

The Prize Essay on the Erection of a Sanatorium for the Treatment of Tuberculosis in England. By Arthur Latham, M.A., M.D Oxon., M.A Cantab., in Association with A. William West. London: Bailliere, Tindall, and Cox. 1903. 5s.

Diseases of the Bronchi, Lungs, and Pleura. By Professor Dr. Friedrich A. Hoffman, Professor Dr. O. Rosenbach, Dr. E. Anfrecht. Edited, with additions, by John H. Musser, M.D. Translation from German under supervision of Alfred Stengel, M.D. Philadelphia and London: W. B. Saunders and Co. 1903. 21s.

Mosquitos and Malaria. By F. Pearse F.R.C.S.Eng., M.R.C.P.Lond., D.P.H., Camb. Calcutta: W. Newman and Co. London: Edward Stanford. 1902. 1s. 6d.

Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India. No. 2. Malaria in India. By Captain S. P. James, M.B.Lond., I.M.S. Calcutta: Office of Superintendent of Government Printing. 1902. 2s. 3d.

Le Vrai Trachome et ses Rapports avec les autres Affections de la Conjonctive. Par le Dr. Naoum Voilas. Cairo: Imprimerie du Journal Hélène. 1902.

The Edinburgh Medical Journal. Edited by G. A. Gibson, M.D., F.R.C.P.Edin., and Alexis Thomson, M.D., F.R.C.S.Edin. New Series. Vol. xii. Edinburgh and London: Young J. Pentland. 1902.

Elements of Pharmacy, Materia Medica and Therapeutics. By William Whitla, M.A., M.D. Eighth edition. London: Henry Renshaw. 1903.

Constipation. By G. Sherman Bigg, F.R.C.S.E. London: Bailliere, Tindall, and Cox. 1902. 2s.

*** In forwarding books the publishers are requested to state the selling price.

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Observations

ARISING OUT OF THE

GEOGRAPHICAL DISTRIBUTION OF STONE AND CALCULOUS DISORDERS.

Read at the Egyptian Congress of Medicine, December, 1902.

BY REGINALD HARRISON, F.R.C.S.,
Past Vice-President and Hunterian Professor of Surgery, Royal College of Surgeons.

IN offering a short paper on the subject of stone, it is with the hope that it may draw from some of the distinguished members of this Congress, now meeting for the first time in Cairo, information which will add to our knowledge of its causes. An occasion such as this, when many are present from various parts of the Eastern world where these disorders abound, or, on the other hand, are comparatively rare, would seem opportune for the purpose. My remarks will apply to those calculi which are associated with the renal excretion.

The points to which I more particularly desire to draw attention may be formulated by the questions: (1) has the study of the geographical distribution of calculous diseases added to our knowledge of their causes; and (2) if so, to what extent?

I do not think it necessary to remind you at any length of the facts showing that the distribution of stone throughout the world is very varied and irregular. In my own country, with her colonies and dependencies, there is abundant evidence of this. In some districts of England and the British Isles, as, for instance, in the eastern counties, stone is common, whilst in other parts, amongst which may be included the whole of Ireland, it is remarkably rare. In British India, as is well known these contrasts are still more remarkable. In the United States and Canada similar differences exist but not to the same degree.

In analysing the evidence deducible from the fact that such varieties are to be found in the distribution of calculous disorders, stress has been laid upon certain differences in the conditions under which the inhabitants of respective countries live. These have reference mainly to the food and drink supply, to climate and to states incidental to the latter, for instance, a local liability to certain parasitical affections, or to physical conditions of the urinary apparatus favourable to these concretions.

An important discussion took place at the meeting of the British Medical Association at Cheltenham in 1901 on the subject of stone in the tropics, which had the advantage of being opened by my colleague, Mr. Freyer. Though there was considerable variety in opinion as to the relationship of water containing lime salts in excess and liability to stone, there were two conclusions arrived at upon which I do not think any doubt as to their correctness can be entertained. And I say this not because I have ever practised in a stone district, or had any exceptional opportunities of studying the etiology of calculous affections, but from having performed a large number of operations for stone on persons who have presented themselves under various circumstances at all periods of life, and often with other complications.

In the first place, Dr. Patrick Manson pointed out two kinds of calculi whose etiology was positively known; he referred to those formed on foreign bodies, and on the ova or débris of the bilharzia. The second conclusion was that emphasized by Mr. Freyer to the effect that about one-third of the cases of stone he had operated upon in England were complicated with enlargement of the prostate. Taken in conjunction with the statement that there was ten years' difference in the expectancy of life in favour of the inhabitants of England as compared with India, this indicated that structural obstruction, as a consequence of age or otherwise, must be regarded as a factor in the production of urinary calculi.

The recognition of the uniformity of the process by which a stone is contructed on a foreign body consisting, for instance, either of a piece of catheter accidentally left in the bladder or upon a product of the bilharzia, is one of the first importance. Here the process of stone-making is uninfluenced by food, drink, climate, or by any other condition to which the human body is liable, and illustrates a natural law which governs the construction of this form of calculus, in whomsoever it occurs. The retention of a foreign body within the urinary apparatus is never immediately followed by the formation of any other but one kind of deposit, and is always the same, whether happening to the Indian in the Punjab, the Egyptian in Cairo, or the Russian in Siberia.

What, however, we further want to determine is a practical explanation of the formation of other calculi applicable alike to the isolated case in places were stone is a rare disorder, to countries where it may be said to be endemic, and to the varied conditions under which its geographical distribution shows it to exist.

It would seem, partly from a study of its incidence and history, and partly from experiment, that it is unnecessary to go outside the field of natural phenomena to explain the manner in which stone is formed, and the causes which lead to it. Rainey's[1] theory and demonstrations relating to molecular coalescence cover both.

For constructive as well as for conservative purposes, we see these views beneficently and beautifully utilized in the formation of shells and other kinds of protection for some of the lower animals; on the other hand, we find bodies similarly produced in the shape of stony concretions which are destructive in their effects, and serve, as far as we know, no good purpose in the human economy other than as testimonies of obedience to natural laws. That Rainey's views are applicable to human urinary calculi I do not think can be doubted. It is a matter of some surprise to me that they are not more generally recognized in this application, and utilized as a basis for a preventive treatment which would then cease to be empirical.

In his able article on urinary calculi, which commences with a notice of the geographical distribution of these bodies, Dr. E. L. Keyes[2] of New York states in reference to stone formation: "The experiments begun by Rainey and improved upon by Ord are the first serious efforts towards a scientific appreciation of the subject of which we have any record." Nor is other testimony wanting to support these views. The late Dr. Vandyke Carter,[3] who devoted so much attention in India to this subject, writes: "It seems to me that the necessary conditions for the operation of molecular coalescence may at times well occur in the living human subject. Thus an excess of mucus, perhaps altered in character, would furnish a colloid medium with which urid acid, the urates and oxalates, could combine in the manner described."

I will pass on to consider (1) what the acceptance of Rainey's views on molecular coalescence relative to the causes and formation of stone implies; and (2) the probable relationship of some facts obtained from the study of geographical distribution of calculus thereto.

1. In discussing this, it may be asked, Can a stone analogous with a urinary one be made artificially by Rainey's process outside the human body? There can be no doubt of this provided Rainey's directions are accurately followed. A reference to his drawings (Fig. 1) is sufficient to indicate

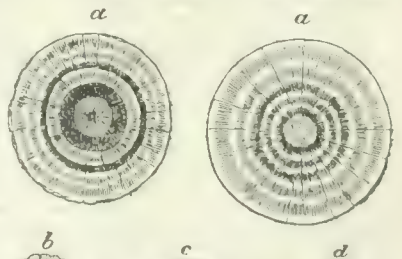


Fig. 1.

this. Though a complex process, involving careful attention to details of a chemico-physical nature, his demonstrations can be readily repeated. Further, the acceptance of Rainey's views implies our recognizing that, though the process is dependent on the presence of a material which is eventually to constitute the stone in sufficient amount, it also includes in their proper order and degrees other conditions which are equally necessary. A test tube may be replete with the salt or material it is desired to concrete, but, unless other conditions supervene, the process of stone making ends here. Again, some find out by the use of various artifices in the shape of certain drinking waters—as, for instance, those of Contrexéville or Evian—or by means of drugs used in this way, that though the quantity of their uric acid is not thereby

diminished, they effectually prevent it concreting. Is not this, in other words, an instance of spoiling the act of stone making; or, if the process was being conducted in the laboratory, should we not speak of it as aborting an experiment by introducing an incompatible or discordant element? There does not appear to be any evidence to show that excess in the urine of the salts which constitute stone is to be regarded as causes of stone other than in the sense that the man with the shot-gun is more likely to bring down a bird than he with the rifle, other conditions being equal. It should, however, be clearly understood that the processes of crystal formation and crystal concretion are distinct, and are in no sense necessarily sequential. Take the case of a healthy man of middle age and vigorous life, excreting, I will say, 10 gr. of uric acid a day. If he were only to void half this with his urine and concrete the remainder, it is obvious that he might form a stone of this material alone, weighing not less than $\frac{1}{2}$ oz., in something like forty-eight days.

2. In the second place, geographical considerations would seem to indicate the presence in certain districts of a fortuitous concurrence of conditions necessary to effect a concretion of the normal or abnormal supply of concretable material the individual inhabitants are capable of supplying—or, as the late Dr. Ord[4] puts it, "if the causes of the varying prevalence of calculous disease in different communities and regions are to be fully and carefully examined, such subjects as constitutional proneness or indisposition to vesical catarrh, habits of life, diet, or regimen, or local conditions of soil, water, and climate, which can hinder or promote the secretion of mucus or the occurrence of irritation in the urinary tract, must be carefully treated. And if such observations are applied to practice we may hope to find that the prevention of stone becomes partly possible through the prevention of the local conditions which constitute the soil in which it is sown and grows."

I am putting these matters forward in the hope that it may arouse further attention to Rainey's important work in connexion with this subject. I feel that its importance lies chiefly in two directions. First, as furnishing a true basis for investigating many points of interest relative to the formation of stone. Much of our work in this field, I fear, has fallen short of what we desired, not from ignorance of what Rainey did, but from failure to reconcile its bearing upon the formation of concretions as observed both in man and animals. And, secondly, because it presents reasons for lines of preventive treatment which have not been adequately appreciated or utilized. I would not wish it thought that these remarks, which have arisen out of reflections relating to the distribution of calculous disorders, are mere expressions with no practical basis to support them.

Let me occupy a few moments longer with the applied side of my argument. Some time ago I published[5] a paper which contained an analysis of 110 persons, upon whom I had recently operated for stone in the bladder by various methods, which occurred in a consecutive series. Though this number included many serious cases in persons of advanced age or broken-down constitution, the mortality only amounted to six, of which two died four weeks after operation. Lithotapaxy was the operation of selection, and was employed in 101 instances. I was quite satisfied with this degree of success so far as the removal of the stones was concerned, as it appeared equal to any results that had hitherto been obtained in a country where enlargement of the prostate was a frequent complication of stone in the bladder.

I was not, however, so satisfied with the knowledge that out of these 110 persons 23 were known to have had recurrences of stone to some degree. In analysing these I found they might be divided into two classes; first, those which were entirely limited to the bladder, where the recurrence was invariably in the form of a phosphatic concretion; and secondly, those where it was to be attributed to a more recent formation and descent from the kidney and its detention in the bladder by a large prostate.

Since these observations were made I have succeeded in most instances, where my directions were carried out, in effectually preventing recurrences of both kinds taking place. Time will not permit me to describe in detail the means that were adopted for the prevention of those relapses which were traceable to enlargement of the prostate and to the insanitary condition of the bladder it had caused. This had been described in a paper[6] which has also been recently published.

3. Liability to recurrence by fresh descents from the kidney, when indicated, has been successfully dealt with on those lines which I have advocated in connexion with Rainey's views of molecular coalescence. Here in various ways I interposed artificial conditions which appeared to abort the process of concretion. Nor will time allow me to describe the various agencies which have been employed in the form of flushing and otherwise for spoiling the process of concretion by molecular coalescence. In addition to the well-known properties of Contrexéville water, and probably of other spas acting on the same principle, such, for instance, as Wildungen or Harrogate, sodium salicylate, sodium benzoate, urotropin, and borocite, have been used for this purpose. Sandal wood oil and turpentine have also proved serviceable in this way. In the course of these investigations a preparation was tried which is described in Paris's *Pharmacologia* (5th edition, 1822), called "Dutch drops," which was largely used as a prophylactic against stone and gravel a century ago. It is a mixture of oil of turpentine, tincture of guaiacum, spirit of nitric ether, with small portions of the oils of amber and cloves, I have no doubt from a trial of it of its efficacy. It may be conveniently taken in capsules. In several instances I know of, though it has not stopped the excretion of uric acid, it apparently has prevented the crystals concreting; and I may say the same observation has been made in the cases of some persons changing their residences and other modes of life.

Some years ago my attention was called to a salt called boracite by a paper by Dr. Kohler,[7] of Kosten, which is well worth attention in connexion with the preventive treatment of stone. I have employed it for the last twelve years for the purpose I am now referring to. Though by no means an exceptional instance the following case, where this preparation was largely used, is of so much interest that I will briefly narrate it, and at the same time show the specimen. The action of boracite seems, in this instance, to have contributed to produce what Rainey speaks of as "a process of disintegration," which is of equal importance with the constructive act:

In October, 1890, I saw a gentleman, aged 70 years, on the advice of Dr. Johnstone, of Landport. He had undoubtedly one or more stones in his bladder of some size, and the urine contained an excess of uric acid. Though the symptoms were marked they were not urgent. His prostate

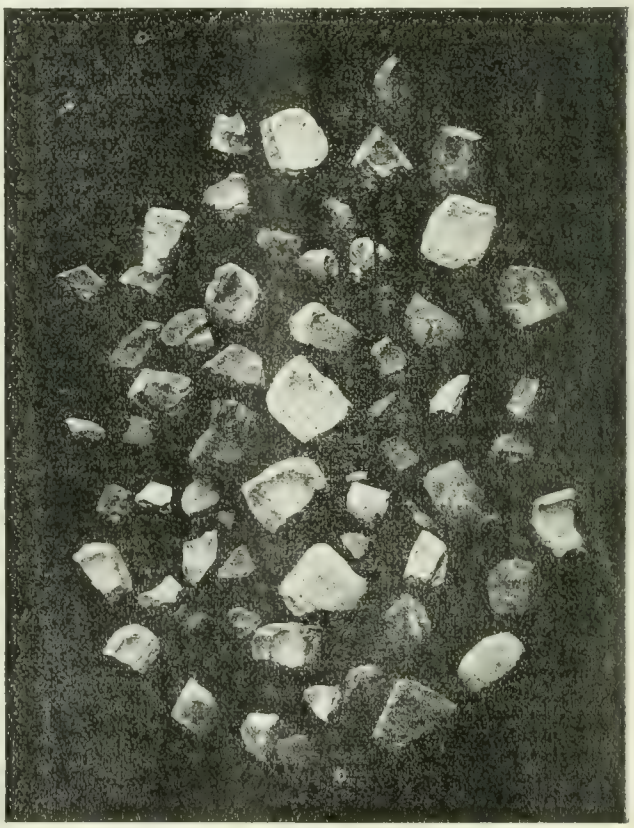


Fig. 2.

was somewhat enlarged, and so had commenced to trap the somewhat abundant crystals and concretions of uric acid which his kidneys

furnished. He did not wish to be sounded or to submit to any operative treatment whatever. I mention this particularly, as mechanical treatment could not have had anything to do with what subsequently followed. He wished me to prescribe for him something which might possibly arrest the further formation of stone, and this I accordingly attempted.

I heard nothing further about him, after a lapse of two years and a-half, until a few weeks ago, when his doctor again wrote me and sent me the specimen I am showing you to-day. It would appear from Dr. Johnstone's account that about two years after the only occasion I have seen him and he commenced to take the boracite, he began to pass fragments of stone, and, "although they have sometimes caused pain in coming through the urethra, there has only once been any haemorrhage, and that very slight." The fragments thus expelled weighed 2 drachms, and consisted mainly of uric acid with a slight coating of some of them of phosphates. The whole mass is made up of sixty-four separate pieces as shown in the figure. (Fig. 2).

In closing these remarks, which, thongh arising out of geographical considerations relative to the subject matter, have been somewhat discursive, I feel that as in other cases of preventable disorders that of stone, particularly when it occurs in endemic proportions, is deserving of further notice. It is a symptom and not a disease.

I have read with satisfaction in an issue of the *Indian Medical Gazette*, specially devoted to the subject of Stone (August, 1900), that my friend Dr. Keegan, whose work in India has so largely contributed to our knowledge, suggests that the Government of India, in places where stone in the bladder is so common, should supply the most modern instruments necessary for its treatment, and thus save a large number of lives. I would go a step further, and see if measures could not be taken to prevent concretion occurring. I cannot help thinking that more might be done in this direction, and that this aspect of the question is worthy of the consideration of so important a gathering.

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A DEMONSTRATION OF THE OPERATION OF INTERNAL URETHROTOMY AND OF A URETHROTOME.*

BY C. B. LOCKWOOD, F.R.C.S.,
Assistant Surgeon to St. Bartholomew's Hospital.

GENTLEMEN. The patient who is being anaesthetised is believed to have a urethral stricture or strictures, for strictures of the urethra are usually multiple. I speak tentatively because no urethral examination has been made. The less the urethra is touched before the operation the better the after-progress of the case. Unless the exploratory proceedings are carried out under aseptic conditions the depths of the urethra, and perchance the bladder, are likely to be infected. Try to imagine the dangers of sepsis, or of septic urine, in contact with an incised wound in the depths of the male urethra. Surely the dangers of infection must be exceedingly great. Besides, the clinical history is a very clear one. Four years ago the patient, a man, aged 32, had an attack of gonorrhoea, and that was followed by difficult micturition. The urine was expelled with much straining, and in a small stream, and at last an attack of retention had to be relieved with catheters. The day after his admission into the hospital the house-surgeon introduced a 5 mm.† catheter into the bladder and left it in position during the night. I suppose he hoped to dilate the stricture which he had diagnosed at the membranous urethra. I have, however, no faith whatever in dilatation as a measure of permanent relief, and, moreover, it is attended with great danger of the introduction of sepsis. Fortunately, in this instance this danger has been averted. The urine ought to undergo a quantitative and qualitative examination before nearly all operations upon the genito-urinary tract. This has been done, and we know that the quantity of acid urine passed in twenty-four hours is from 50 to 60 oz., that its specific gravity is 1020, and that its percentage of urea is 2·4. It gives a haze of albumen on boiling, but this is unaccompanied by either pus or blood.

Of course we cannot be certain that the urine is aseptic, but we are sure that it is so near asepsis that it is not likely to complicate the operation. I know hardly anything more dangerous in urethral operations than septic urine. Now, observe how the patient was prepared for the operation. Last night the usual aperient was given, and to-day no nourishment whatever has been taken for at least four hours before the time fixed for the operation. After a warm bath the pubes and scrotum were thoroughly shaved. It is singular to observe how often this precaution is omitted in this class of operation, but nevertheless nothing conduces more to sepsis than hair within the field of operation. The field of operation is prepared exactly as it would be for any other aseptic operation. Sterilized towels are placed over the thighs, flanks, and upper part of the abdomen. Then the penis and scrotum and the whole of the cutaneous surface of the abdomen within the ring of towels is disinfected with my solution of biniodide of mercury in methylated spirit (1 part in 500). My hands and my assistants' hands are disinfected with the same solution, which takes not less than three minutes to soak in. The time is measured by the clock, another precaution which is so often omitted.

For the operation certain special instruments have to be provided. First a gauge for measuring the circumference of the bougies is essential. The numbers put upon catheters and bougies by the instrument makers are apt to be wrong. The gauge which I hold up is an oblong metal plate made by Messrs Arnold and Sons. One edge has upon it a scale graduated in centimetres and millimetres; the other edge a scale in inches and eighths of an inch. One set of apertures in the plate measure the circumference of the instruments in millimetres, and the other set by the English scale, which latter is, I believe, purely arbitrary. Next, a set of flexible bullet-ended bougies is required to locate and measure the stricture and to ascertain its characters. These are made of some form of rubber. Metallic instruments would be preferable because of the ease with which they can be sterilized; but I know of none which are flexible; those which are rigid are painful when passed through the membranous urethra. Those which I am about to use have been thoroughly scrubbed with soap and hot water, and soaked in biniodide of mercury lotion, 1 part in 2,000. Beginning with a large size, I find that No. 27 mm. passes the external urinary meatus and stops abruptly at 12 cm. therefrom (about 4¾ in.). No. 27 ought to pass backwards until it reaches the compressor urethrae. Take care not to mistake that muscle for an organic stricture. I now proceed to pass smaller sizes, and find that No. 7 mm. bullet-ended bougie passes the stricture at 12 cm. and enters the bladder. As the bullet is withdrawn, it is caught at 12 cm. from the meatus by the stricture, which imparts a feeling as if a piece of thread had been tied round the urethra. The inference is that I have to deal with an annular stricture 7 mm. in circumference at 12 cm. from the meatus, and just anterior to the triangular ligament.

Such a stricture as this, associated with aseptic urine, is most favourable for internal urethrotomy. But hitherto I have not been able to obtain a urethrotome which fulfils two indispensable conditions: (1) that it should be small enough to pass strictures of such narrow calibre; and (2) that it should cut accurately from behind forwards. Teevan's urethrotome can be passed through a very narrow stricture, and, owing to its guide and the exit of urine along its grooved staff, its proper entry is assured, but it cuts from without inwards. In using Teevan's urethrotome I have always felt most uncomfortable whilst pushing the knife onwards through the stricture. On one occasion the staff was badly bent when withdrawn: and in others the knife shield during withdrawal caught in the cut, and had to be forcibly dislodged. Thompson's urethrotome is an excellent instrument, which cuts from behind forwards, but the smallest one will not pass through a stricture of less than 11 mm. in circumference, and this stricture is 7 mm. To meet these difficulties, Messrs. Arnold and Son have made for me a urethrotome which combines all the advantages of Teevan's and all the advantages of Thompson's. It consists of a staff with a groove in it, and of a flexible guide to screw on the end of the staff (Fig. 1).

The flexible guide is made of metal, and, like the rest of the instrument, can be sterilized by heat. The groove in the staff serves a double purpose. As soon as it reaches the bladder urine runs along it, so that no doubt exists as to the position of the staff; next the groove carries a small knife (Fig. 2), which is pushed along it after the urine has been seen. A little catch causes the knife to project, when the handle is set free and withdrawn.

When the knife is hidden in the slot at the end of the groove the urethrotome and its guide taper gradually from 4 mm. in circumference to 11 mm. The two together are a well-balanced and workmanlike instrument.

* Given in the operation theatre of the hospital.

† That is, 5 mm. in circumference. The English scale is purely arbitrary, and very inexact and inconvenient.

Now, observe how this instrument behaves in action. My attempt to pass the staff without its flexible guide has failed. So now the guide is attached, and easily passes onwards into the bladder, followed by the staff. Now some urine escapes along the groove in the staff, so that the staff is through the stricture and in the bladder. Next, the knife is pushed along the groove and opened just beyond the stricture. The scale on the staff enables me to do this quite accurately.

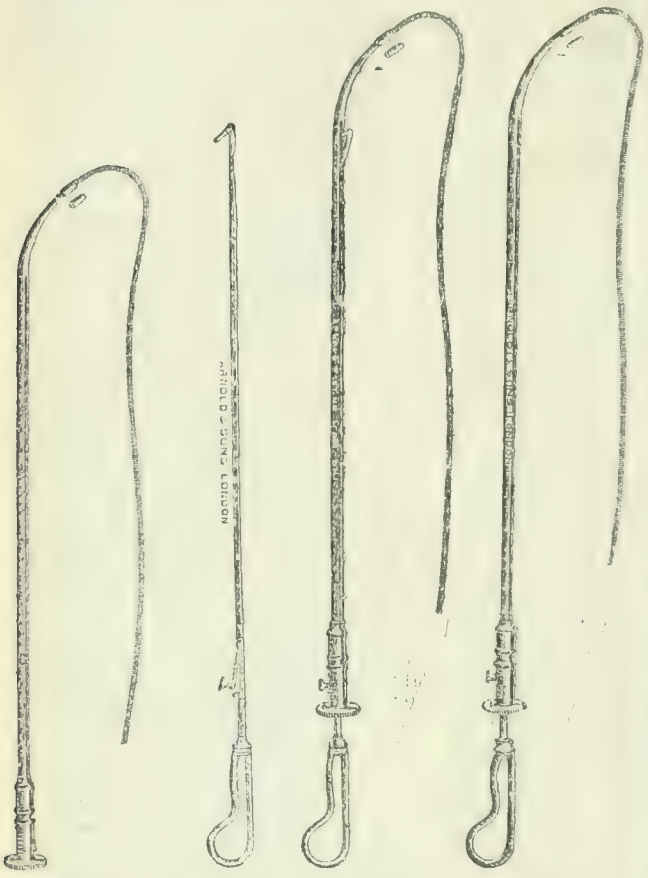


Fig. 1. Groove staff and guide.

Fig. 2. Knife which runs in groove in staff.

Fig. 3. Knife exposed.

Fig. 4. Knife hidden.

As the knife is pulled forwards against the stricture a decided resistance is felt, and as soon as this ceases the knife blade is pushed back into its slot. Very little bleeding ensues. I do not, however, rely upon this urethrotome for the thorough division of a stricture. If the fibrous ring which constitutes the stricture be merely notched, a relapse is sure to ensue; but if the fibrous ring be completely severed, then the ends separate and are spliced together with new material, and the calibre of the urethra is permanently increased. Therefore, to make sure of a complete division I insert Otis's dilating urethrotome, and by dilatation and cutting ensure the passage of this 28 mm. bougie, which has entered the bladder with great ease. Having withdrawn the 28 mm. bougie, the blood is washed away with biniodide of mercury lotion (1 in 2,000), and an antiseptic dressing fastened over the penis. This of course has to be removed and replaced whenever urine is passed.

The after-treatment of these cases is very simple. The first passage of urine is usually attended with pain and haemorrhage, which, however, both quickly subside. The patient is of course kept in bed, and on a light diet, and is encouraged to partake freely of liquids, such as barley water, milk, and soda water, or weak tea. On the tenth day the urethra is cocainised and 26 to 28 mm. bougie passed for the first time. After this has been done and the patient instructed in the use of bougies, he returns to his work. I usually advise that the bougie be passed once a week for a month, then once a fortnight, then once a month, then once a quarter, then once in six months, and at last once a year. I could adduce examples of cases which have proved to have been cured when examined years after the urethrotomy.

Note.—The operation was done on December 7th, 1901; it was followed by no complication whatever, and on December 17th No. 28 mm. bougie was passed under cocaine. A very small quantity of blood followed the dilatation, but it soon disappeared. Since such rigid antiseptic precautions have been taken, a series of cases have pursued the same course.

TOTAL EXTIRPATION OF THE PROSTATE: FREYER'S OPERATION.

By R. C. ELSWORTH, M.D.Edin., F.R.C.S.Eng.,
Surgeon to the Swansea Hospital.

I have no desire to add anything to the inkshed which has already occurred on the subject of Freyer's operation for the total extirpation of the prostate, the possibility of accomplishing which seems, in the minds of some surgeons, to be doubtful. The following case may be of some interest, particularly as I found the operation easy of performance and the result highly satisfactory to the patient. There can be no doubt that the operation suggested and carried out by Mr. Freyer is a valuable addition to our means of dealing with a distressing malady and one which has hitherto been treated in an unsatisfactory manner. And I would like in this place to acknowledge my indebtedness to Mr. Freyer for bringing before the profession an easy and effective means of overcoming and removing what has been up to this time in many cases, the greatest affliction of old age.

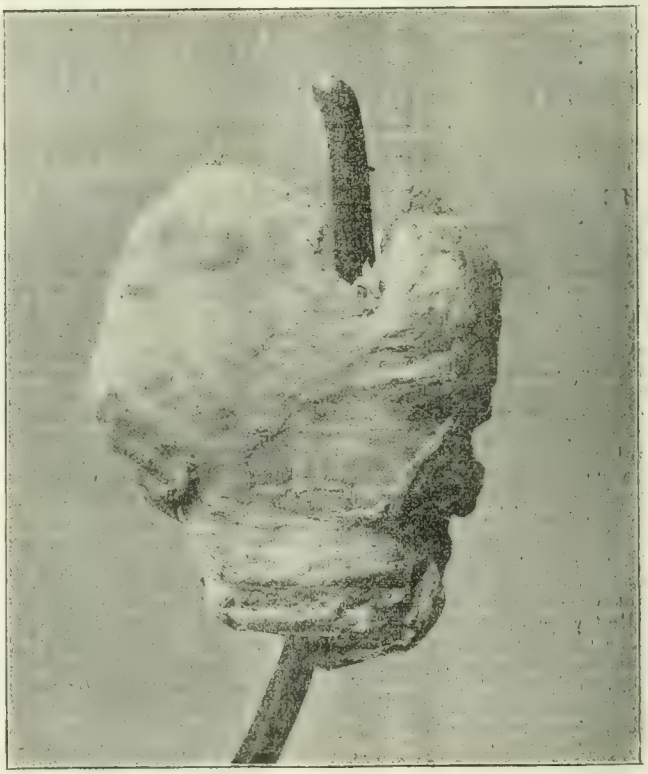


Fig. 1.

H. G., aged 67, was admitted into the Swansea Private Nursing Home on July 2nd, 1902, suffering from retention due to enlargement of the prostate. He had been compelled to use a catheter regularly for the last twelve months; but during the week preceding admission he had been unable to pass the catheter himself, and was obliged to seek the assistance of his medical man, who was able to relieve him for a couple of days, after which it was found impossible to pass a metal instrument, and for the next three days the bladder was punctured suprapubically, drawing off a quantity of blood-stained urine.

When I first saw the patient the bladder was considerably distended, and by means of a coudée catheter, which passed easily, the bladder was emptied. After this the catheter was

tied in, and the rubber tube connected with it was led into a vessel containing antiseptic lotion. During the first four days the urine contained a quantity of blood, which frequently blocked the catheter with clot. Subsequently the urine became clear, and the patient was asked if he would not be willing to go on again using the catheter as he had done for the last twelve months. The prostate was much enlarged, especially the right lobe, smooth, firm, and elastic, and on passing a metal instrument distinct obstruction was encountered at the prostate. He was a frail old man, and one did not care to undertake the operation without first giving him the option of continuing the use of the catheter if he preferred to do so. Without hesitation he decided to undergo the operation, which was performed on July 10th.

Operation.—The patient being anaesthetised, a coudée catheter was passed into the bladder, and connected with the rubber tube of a large douche can containtaining hot boracic lotion, and raised about a foot and a half above the patient. The distended bladder was then opened by the suprapubic route, when the lotion began to flow out, and continued to do so till the operation was completed, so that the whole of the parts concerned were continuously irrigated throughout the operation with hot lotion. Within the bladder the prostate was found considerably enlarged, forming a circular, hummocky mound round the urethral orifice, and a circular trench of bladder outside the prostate. The mucous membrane over the most prominent hummock was snipped through with scissors, and the forefinger of the left hand insinuated into the opening thus made, which readily yielded to pressure. The finger was hen carried over the surface of the prostate and close to it and the fibrous bands connecting it with the

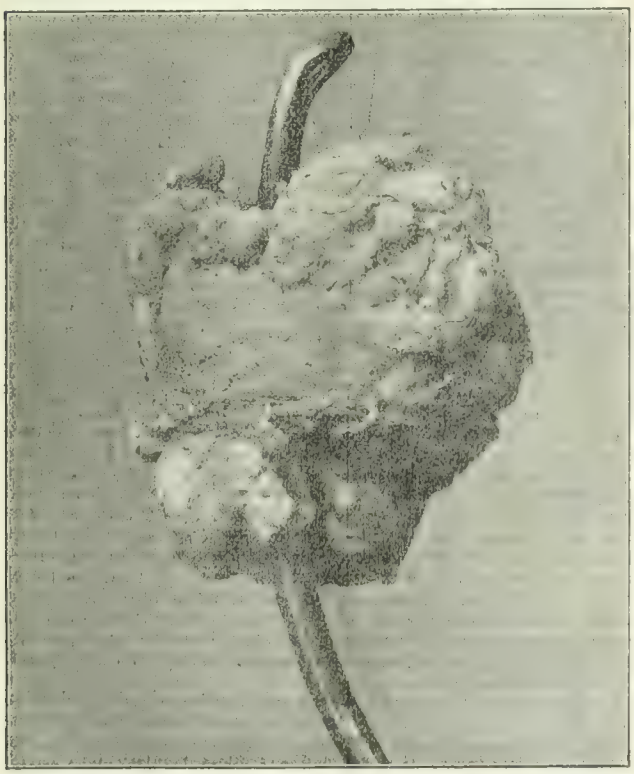


Fig. .

surrounding tissue (the capsule) broken down; the whole organ being meanwhile pressed up and steadied by two fingers of the right hand in the rectum. The only difficulty occurred in separating the apex of the prostate from its capsule, but this was overcome by firmly pressing up the prostate per rectum, when the apex became more accessible. No line of separation between the lobes could be made out, and it was felt that the urethra must be divided. The finger was then carried down the urethral canal, between the mucous membrane and the tumour, and the mucous membrane stripped off. With the finger outside the tumour, it was gently raised into the bladder, and then delivered with a volsellum. The haemorrhage, which had been trifling, now became free for a few moments, but rapidly ceased under the stream of lotion still flowing through the bladder.

The catheter was left in for three days and a drainage tube placed through the suprapubic wound into the bladder. The bladder was daily irrigated with hot boracic lotion. There was a free discharge of pus for about fourteen days, when a slough about the size of a goose-quill and about 1½ in. long came away while irrigating, after which the pus rapidly diminished and the wound was allowed to close.

The patient passed urine voluntarily while on the night-stool about the end of the third week, the first time for twelve months, and he returned home at the end of the fifth week after the operation, the urine being then voided voluntarily but at frequent intervals. Seven weeks after the operation the patient expressed himself as being quite comfortable and able to retain his water for between two and three hours.

The patient was weakened by an attack of bronchitis at the end of the first week, which was followed by an obstinate attack of diarrhoea that persisted till the end of the fourth week.

The labour of nursing and the discomfort of the patient were much relieved by the use of Sprengel's pump, which reduced the necessity of changing the bed to one twelfth of what it had previously been.

The distension of the bladder and continuous irrigation during the operation, a method I always adopt where possible was first used by the late Mr. Greig Smith. No rectal bag was used, and my experience in operating on bladder cases leads me to think that it is altogether unnecessary.

The tumour weighed 3½ oz., was pear-shaped, flattened from before backwards, firm and elastic. The lobes were firmly united, the tissue of the tumour passing over the middle line both in front and behind, and connecting the two lateral portions into one continuous mass. The part of the tumour which corresponded to the right lobe of the prostate bulged into the urethral canal, so as to give the canal a curve to the left as it swept round this projection, and showed a marked encroachment on and obstruction to the canal.

The rupture of the prostatic portion of the urethra did not seem to produce any untoward effect except some increase in the haemorrhage, and did not in any way interfere with the introduction of the catheter, nor has the patient suffered any appreciable trouble on that account up to this time.

CASE OF BULLET WOUND OF BLADDER AND BOTH HIPS: OPERATION: RECOVERY.

BY H. GOODMAN, M.A., M.B.GLASG.,
Late Resident Surgeon, Western Infirmary, Glasgow; lately Civil Surgeon South Africa.

As cases in which recovery takes place after a bullet wound of the bladder are rare, the following case, in which drainage was used with success, appears worthy of record:

Private R., 1st Northumberland Fusiliers, was wounded on February 25th, 1902, in the attack upon and capture of Colonel Von Donop's convoy, near Klerksdorp, W. Transvaal.

History.—He states that he was hit at a range of about fifty yards, the convoy having been surprised; that his wounds were dressed with his first field dressing, that he lay out on the veld for two days, after which he walked into Klerksdorp—a distance of about twelve miles—and that he was admitted to the hospital there on the morning of February 28th. On March 4th he was transferred by hospital train to 18 Stationary Hospital, Krugersdorp, where he arrived in the evening. This was the eighth day after he had been wounded; his temperature was 101.8° on admission.

Condition on Admission.—The entrance wound was small, and situated 2 cm. above the right great trochanter; it was practically healed. The exit wound was situated immediately behind the left sacro-sciatic notch; it was large (2 in. in diameter), ragged and suppurating, and from it urine was leaking. There was a marked "uriny" smell; there was great inflammation of the surrounding tissues, and suppuration had extended upwards and forwards.

Operation.—After consultation with Mr. Howard Ensor, D.S.O., Lieutenant R.A.M.C.—my colleague on the surgical side of the hospital—I decided to at once drain the bladder through the perineum. Accordingly, next morning (March 5th), under chloroform, I performed Cock's external urethrotomy, and left in the bladder a soft rubber catheter, which I secured to the skin of the perineum with silk sutures. I also scraped the exit wound, and inserted a large rubber drainage tube.

After-history.—The drainage from the exit wound not being free, and the pus continuing to collect, I had to make a large counter-opening on March 9th well behind the left great trochanter, and I connected this with the exit wound by a drainage tube. The temperature rose to 102.6° and 102.8° respectively on the two evenings following the first operation; but after this, drainage being established and no urine leaking, as the urine all passed through the perineal catheter, the temperature fell to about 100° at night and normal in the morning.

Recovery.—Captain J. D. Alexander, R.A.M.C., took over charge of the case on March 14th, on which day the evening temperature was only 99°, and I am indebted to him for the following extract from the detailed

medical history sheet of the patient: "The catheter was removed fourteen days after its insertion; the patient then passed all his urine through the natural channel, and the perineal wound healed completely in about ten days. For some time after I took charge of the case the patient did well, but on June 8th, as pressure in the left inguinal region caused pus to flow from the exit wound, another operation was undertaken as follows: The exit wound was enlarged, and a piece of loose bone, 40 mm. by 8 mm., was removed from the posterior edge of the left sacro-sciatic notch. The sinuses were swabbed with pure carbolic, and a drainage tube passed through the sciatic notch into the pelvis. This was replaced by gauze six weeks later. Since that time patient's condition has improved and the sinuses are now (August 17th) closing. Patient leaves here to-day for No. 20 General Hospital on his way to England 'for a change.' He walks about with the aid of sticks, and he will not require to leave the service."

The following points are noteworthy:

1. In all bladder wounds in which urine is escaping it is not enough to empty the bladder by a catheter in the ordinary way, but it is advisable to drain the bladder by a catheter through the perineum at once and to keep this drainage up continuously until the bladder wound is healed. (The protracted convalescence in this particular case was due to the military exigencies, which prevented immediate operation. Had the operation been done shortly instead of eight days after the injury, there would have been little or no escape of urine into the tissues and little or no suppuration.)

2. The perineal catheter completely drained the bladder, the wound in which healed within fourteen days after perineal drainage was established.

3. The perineal wound healed without trouble in about ten days; indeed, a fistula very seldom results after a Cock's perineal urethrotomy.

A CLINICAL LECTURE ON TWO CASES OF CHOREA GRAVIDARUM.

Delivered at the Extramural Class of Clinical Medicine in the Edinburgh Royal Infirmary.

By D. BERRY HART, M.D., F.R.C.P.E.,
Gynaecologist to the Edinburgh Royal Infirmary, etc.

ABSTRACT.

CHOREA is one of the most distressing complications a pregnant woman can experience; and to the medical attendant and friends the spectacle of the unceasing writhings and contortions of the unfortunate patient soon becomes a nightmare. Two instances of it have been under observation in Ward 36. In one the induction of abortion was successful in arresting the malady, whilst in the other the administration of a well-known drug was followed by speedy and effectual relief. I purpose, therefore, to-day discussing these cases, and hope to show you that, serious as the complication is, it is by no means a hopeless one.

CASE I.—Mrs. N., aged 18, was admitted to Ward 36 on December 9th, evidently suffering from chorea; it was also stated she was pregnant.

History.—The patient gave a very graphic, if markedly jerky, account of the origin of her attack, and in brief it was that on December 2nd she had been suddenly startled by a rat running out of a cupboard from which she was taking dishes. She dreamt of rats during the next night, and on the ensuing day a neighbour noticed and informed her that she was suffering from irregular twitchings. She had a habit of resting her hands on her hips, but became now aware that her hands would not keep still. The restlessness and jerkiness gradually got worse until the 6th, when she was seen by Dr. Lucas, of Dalkeith, and sent into the ward under my care.

Previous and Family History.—She has already had a child, which lived a month, but there was no chorea during this pregnancy, nor during her childhood. There had, however, been some recent instances of chorea among children in the village where she resides, and she had seen some of them. There is no rheumatic diathesis; she is left handed. Her father, who died ten years ago, was a heavy drinker; her mother seems at one time to have had epileptic fits, and she herself is the tenth child of a family of sixteen.

State on Admission.—In bed the patient is constantly tossing about, and tells you that she cannot control these irregular movements. She shrugs the left shoulder, works the left arm like a flail, and does the same on the right side, though less markedly. Her limbs are never at rest; she kicks the bedclothes off, grimaces, frowns, and smacks her lips. These movements cease when she sleeps, but when awake they go on unceasingly. At present she is mentally acute, notices everything, and asks questions quite intelligently. She has sometimes fits of uncontrollable laughter, and there is some difficulty in speech. A case like this, once seen, cannot be mistaken for anything else, and the whole picture of the patient's unrest and turmoil is more easy to recognize than describe. Apart from this nervous disturbance, her systems are healthy. On bimanual examination under chloroform it was ascertained she was two months pregnant.

Progress and Treatment.—We first tried the ordinary remedies—bromides, chloral, paraldehyde, morphine, trional, spray of ether to the spine—but all to little or no advantage. The patient developed delusions and became so noisy that I determined to bring on abortion and thus attempt to stop the morbid nervous condition. How abortion does this is not known, but its usual success is a fact. The stage of two months is a favourable time for induction, and accordingly it was done as follows. Nine days after admission (December 18th), the patient was chloroformed, the parts shaved and cleansed. Great care must be taken in this matter. All antiseptic precautions were observed as to the hands, etc., of those engaged in the induction. I then inserted tupelo tents into the cervix, and twenty-four hours afterwards removed them, completed the dilatations with vulcanite dilators, and with the fingers of the right hand in the vagina, the middle one being passed into the uterine cavity, I cleared out the uterus bimanually, washed out the uterus, and plugged the cavity and vagina with one long strip of iodoform gauze which had been kept in biniodide of mercury solution (1 in 3,000). There was no special haemorrhage. Next day I removed the tampon and washed out the uterus, but, so far as the local result was concerned, there was no hitch, and a tear of the cervix running into the left parametrium, which happened during the dilatation, gave no trouble. The result of the induction of abortion was very marked. The chorea gradually passed off, so that by the 23rd the house-surgeon, Dr. Harlin, notes: "She was very quiet all day; movements much less marked; sleeps well." She ultimately made a perfect recovery, and left hospital on January 8th, 1902.

I need give you only short notes of the second case, which was not such a serious one as the former.

CASE II.—Mrs. K., aged 19, was admitted to Ward 36 on February 17th, 1902. She complained of uncontrollable movements, and stated she was at the mid-term of pregnancy. She looked a soft ill-developed woman, and the choreic movements came on six months after marriage, the apparent cause being a quarrel with her husband. The choreic movements soon became well marked, but not of a violent type. She grimaces, smacks her lips, lifts her eyebrows, and so on. Her speech is little impaired, but she laughs in a meaningless manner. Her right arm and leg are more affected than the left.

Treatment.—In this I put the patient on large doses of antipyrin. The favourable effect of antipyrin on the chorea of children has been shown by Comby,[1] and it accordingly occurred to me that it would be advisable to try its effect in chorea gravidarum. So far as I know this drug has not been employed in this special condition. In the ordinary chorea of children large doses are given, but care must be taken to see that the kidneys act efficiently. I accordingly gave this patient sodium bromide and antipyrin, 15 gr. of each, four times a day. This was begun on February 20th, 1902, and continued till March 9th, when the sodium bromide alone was given. The beneficial effect of the drugs was soon manifest, and she left the hospital quite well.

COMMENTARY.

Preliminary.—By chorea gravidarum we mean that during pregnancy the patient has irregular spasmodic movements—a want of co-ordination of voluntary movements, with muscular and mental weakness.[2] The part of the nervous system involved is the motor cortex and not the spinal cord. The immediate cause of its disturbance is unknown, but, as these cases show, pregnancy, a neurotic condition, or heredity and some fright or nerve irritations predispose. McCann discusses this well.

Statistical.—The main facts as to chorea gravidarum are well stated in special articles by Robert Barnes (1869), McCann (1891), and Buist (1894-5).[3] The statistics of the last author are the most recent, In 214 patients there were 273 attacks of chorea associated with pregnancy. The mortality was 1 in 5: in 7 the chorea became chronic, 60 cases recovered before delivery, while 90 recovered after labour. Insanity as a result was infrequent. Fifty-nine per cent. of the cases were primiparae.

Passing now to the more immediate comment afforded by our cases, I wish to draw your attention to its therapeutics: (1) The induction of abortion; (2) the drug treatment.

(1) *Induction of Abortion.*—In the first case you would note that dilatation preceded the emptying, and that all antiseptic precautions were employed. The mere passage of a sound may not only be insufficient but is highly dangerous, as it may probably introduce a septic element, and any delay in this being expelled may lead to serious sepsis. When once dilatation is completed—in eighteen to twenty-four hours—you should clear out bimanually, as your finger has a touch the curette lacks. There is no harm, of course, in supplementing the finger with the curette. The good effect of inducing abortion was soon manifest in the first case, and, I have no doubt, saved the patient's life. How it exactly acts is at yet unknown.

(2) *The Drug Treatment.*—This cannot be considered satisfactory, and is open to the comment that we are employing drugs of whose action we know little on a disease of whose pathology we know infinitely less. Practically, the drugs employed are sedatives—chloral, trional, paraldehyde, conium, the bromides, morphine, chloroform, and so on. Probably paraldehyde and chloral or trional are the best. As I have mentioned, I used antipyrin, and it seemed to cure the second case. Remember, however, that this is only one case, it was a mild one, and that all we can say is that it is worth a more extended use in such cases to settle its value. By a mistake sodium bromide was given with the antipyrin at first, but this does not seem to me to specially vitiate the conclusion that antipyrin is worthy of further trial in such cases.

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[1] *Arch. de Méd. des Enfants*, April, 1899. [2] See McCann, p. 428. [3] R. Barnes, *Lond. Obstet. Trans.*, 1869; McCann, *Lond. Obstet. Trans.*, vol. xxxiii; R. C. Buist, *Edin. Obstet. Trans.*, 1894-95.

OVARIOTOMY SEVEN YEARS AFTER VAGINAL HYSTERECTOMY.

By G. GRANVILLE BANTOCK, M.D., F.R.C.S.Edin.,
Consulting Surgeon, Samaritan Free Hospital.

On March 4th, 1895, I saw, with Dr. Washington Isaac, Mrs. D., aged 46, on account of severe menorrhagia, accompanied with great pain. The condition pointed to the possible existence of an intrauterine polypus, and the cervix was dilated by means of a large-sized laminaria tent. On removing the tent the index finger could be passed through the internal os, and nothing was found but a brawny hardness of the cervix. The severe pain from which the patient suffered almost continuously, together with the excessive and somewhat irregular menstruation, raised in our minds a suspicion of malignancy, and we felt justified in recommending hysterectomy. For this purpose she entered one of the hospitals for women. After several weeks of rest and minor local treatment the symptoms improved, and it was decided not to operate. After a short period at home the symptoms returned, and on July 8th I removed the uterus per vaginam. Examination of the specimen revealed the true nature of the disease. The whole cervix was converted into a mass of obstructed mucous follicles, ranging from a mere point to the size of a medium-sized grape. One of the largest was opened on the posterior aspect in the act of freeing the cervix, and for the moment rather disconcerted me. Both ovaries appeared to be perfectly healthy and were left purposely. The recovery from the operation was quite uneventful.

On May 8th, 1902, Dr. Washington Isaac brought the patient to me on account of abdominal enlargement which she had first observed a few months previously. I diagnosed the condition as ovarian disease, and operated on the 14th. The tumour, weighing $5\frac{3}{4}$ lb., was very adherent in the pelvis, and the operation unusually difficult. No trace of the right ovary could be found. Convalescence was afebrile.

My object in publishing this case is to call attention to a doctrine which has recently become current, namely, that the ovaries play an important part in the female economy, and to the practice arising therefrom of leaving one or both ovaries in operations involving the removal of the uterine body, on the ground that the patients are thus spared the inconveniences usually supposed to attach to the menopause.

With regard to the first point, I quote Howard Kelly as specifically supporting the idea of an "internal secretion of the ovary."[1]

This was one of the subjects of my address at the annual meeting of the British Medical Association at Portsmouth in 1899. I then said:

> There is not an atom of evidence to support that idea. Yet there are those who do not hesitate to found, and urge the adoption of, a practice upon a pure and ridiculous assumption. It appears to have been assumed that, because disease or loss of the thyroid gland—of whose function we know nothing absolutely definite—is sometimes followed by a certain train of symptoms, therefore the loss of the ovaries, of whose function we have definite knowledge, must be avoided because their loss will deprive the economy of something which the ovary secretes.

In the meantime, no evidence has been forthcoming, and I take it for granted that none can be produced.

Mr. Bland-Sutton seems to hold similar views, for at the same meeting, in introducing a discussion on the natural and artificial menopause, he said: "The function of the ovary was not merely ovigerous: Graafian follicles were to be regarded as a ductless gland of the same type as the thyroid." There seems to be some contradiction in the expression of his views, for he went on to say, "The period of ovarian activity was coterminous with that of menstrual life," and "the normal menopause was the result of atrophy of the secreting elements of the ovary." I am, therefore, at a loss to imagine wherein, from this point of view, lies the value of leaving one ovary after hysterectomy. Many thousands of women have now suffered the loss of their ovaries and it ought to be possible to produce some evidence of the injurious effects of such a loss. On the contrary the perfect health which the majority of these women enjoy bears eloquent testimony to the fact that no injury has resulted, either mental or physical.

When he says that "other disturbances are generally met with at this epoch" it would appear that he holds to the old doctrine that every woman must suffer from certain symptoms at the "change of life," as it is the custom to call it, and that he has not got away from the teaching of the old textbooks. For more than a quarter of a century I have paid particular attention to this matter, and, having been consulted by a very large number of women who have passed this period, I deliberately affirm that, as the result of my inquiries, the majority of women suffer no inconvenience whatever; they have no "flushings," no headache, nor disturbance of the nervous system. Therefore it is not correct to say that "in addition to cessation of menstruation other disturbances were generally met with at this epoch."

Again, when he says, "These signs (flushings, etc.) did not appear after removal of the uterus alone; usually the patient passed through a quiet menopause without disturbances," I join issue with him, for one of my objects in publishing this case is to prove the contrary. The patient in question suffered to an unusually severe extent, both as to intensity and duration. I therefore take it that his experience in this respect—if he is arguing from experience and not on assumption—confirms my view, and that the cases in which no symptoms were present were those of women who would not have suffered in the natural course of things, and who, as I have said, constitute the majority.

The second question to which I referred in my address was thus stated.

> The ovary was evidently devised for the purpose of perpetuating the species by providing ova....., and, in the normal state, having discharged that function it atrophies, or, like its neighbour the uterus, becomes not only a useless but even a dangerous organ, for, as we only too well know, it is very liable to disease. In a large number of cases disease attacks this organ long after it has served its purpose; and it seems to me rather one's duty to secure the removal of such an unsatisfactory appendage when opportunity offers,

especially after the removal of the uterus and the two Fallopian tubes. It has happened to me to have to remove the second ovary at periods ranging from one to eighteen years after the first, and to prove, or at least support the supposition, that the second ovary was healthy at the time of the first operation, I again record the fact that one patient who had to undergo operation after a lapse of eleven years brought forth twins—a boy and girl—within eighteen months of the first operation. Was I not justified, therefore, in adding, "Surely the possibility of such an occurrence (the necessity for a second operation) is a very strong argument against the practice in question"?

Little did I dream when purposely leaving the ovaries in this case that my views would so soon receive confirmation. It has been affirmed by some gynaecologists that, provided the organ be not attacked by disease, the ovary atrophies within three years—a view that would seem to derive some support from the fact that in this case no trace of the second ovary could be found. Nor is the case different as regards the Fallopian tube, for in one instance I have had to treat a case of pyosalpinx seven years after supravaginal hysterectomy for fibroid.

It appears to me, then, that it would be well if men would deal with facts rather than assumptions. But facts take a long time to collect, while assumptions are easily arrived at. We should then have fewer recantations of previous opinions.

REFERENCE.
1 *Amer. Journ. of Obstet.*, December, 1900, p. 818.

REMOVAL OF AN OVARIAN FIBROMA FROM A PATIENT, AGED 73 YEARS,

WHO WAS IN GOOD HEALTH FOUR YEARS AND SEVEN MONTHS AFTER THE OPERATION.

By FREDERICK J. McCANN, M.D.Edin., F.R.C.S.Eng., M.R.C.P.Lond.,
Physician to the Samaritan Hospital for Women, London.

The following case is of interest not merely because of the age of the patient, but because the history clearly demonstrates that a solid ovarian tumour may exist and increase in size after the climacteric and yet be simple in character. It is probable, too, that the new growth did not appear until after the cessation of menstruation in 1873.

Mrs. R., widow, aged 73 years, was sent to me by Dr. Wade in May, 1898. Reliable evidence has been produced to show that she was born on May 11th, 1825, at Blythboro', Southwold, Suffolk. She had had three children, and menstruation ceased in 1873.

History.—Dr. Wade has kindly furnished an account of the history, which I shall give in his own words:—"At the end of October, 1897, whilst alighting from an omnibus, the patient felt a sensation as if something had 'given way' in her abdomen. After this she felt a hard substance in the lower abdomen and a sensation of weight in that region. Three weeks later she was seized with obstruction of the bowels. Abdominal examination revealed a hard movable tumour in the lower abdomen, which was also detected per vaginam. The obstruction yielded to medical treatment. The tumour steadily increased in size, causing difficulty in walking and in lying down. The only position in which the

patient could get ease was on her back with both knees drawn up. Sometimes when an attempt was made to relieve the bladder micturition was not possible until after the patient had lain on her back for half an hour or an hour, and by pressure on the tumour, first on one side and then on the other, enabled the bladder to be emptied. At other times great difficulty in defaecation was experienced. In fact life became such a burden that she was quite willing, and even anxious, to undergo anything in preference to continuing as she then was."



Fig. 1.—Drawing of tumour; one-third natural size.

Operation.—On May 13th, 1898, the abdomen was opened in the middle line. (Dr. Wade kindly assisted me, and the anaesthetic was administered by Mr. Morley Agar). Two fingers were inserted, and it was found that the tumour was wedged into the pelvis. The incision was enlarged, and the sigmoid flexure, which was adherent to the left side of the tumour, was carefully separated. By means of the fingers pushed down on the right side of the tumour, and a large pair of vulsellum forceps grasping its upper part, it was lifted out of the pelvic cavity. I have never seen a tumour so tightly wedged in the pelvic cavity. The tumour was attached by a long slender pedicle. The uterus was flattened against the symphysis pubis. The ovary on the left side was atrophied. There was no ascites. The pedicle was ligatured, and the tumour, which grew from the right ovary, was removed. The pelvic cavity was flushed with hot salt solution, and the parietal wound closed.

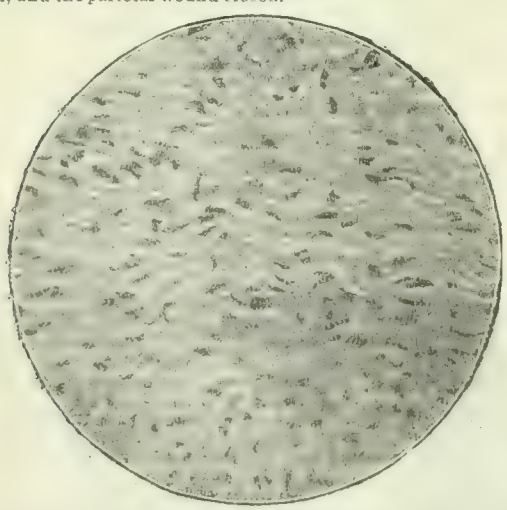


Fig. 2.—Photomicrograph of a section of the tumour; the interlacing wavy bundles of fibrous tissue are seen and the elongated nucleated cells.

After-History.—The patient made a good recovery. Dr. Wade wrote me on August 31st, 1898, that "Mrs. R. says she is in better health now than she has been for years. She has not had a day's illness; the only sensation she complains of is a feeling of emptiness in the abdomen." I heard in December, 1902, that she is still alive, and in the enjoyment of good health four years and seven months after the operation. The abdominal scar is quite sound.

Description of Tumour.—The tumour removed was nodulated and firm. It measured 8 in. by 6 in., and had no trace of calcareous change (Fig. 1). Microscopically it was a fibroma (Fig 2). Interlacing wavy bundles of fibrous tissue are seen throughout the sections, together with elongated nucleated cells. The blood vessels possess well-formed walls.

The fibrotic changes noted as occurring in the ovaries after their active functions have ceased would seem to favour the development of fibromata, although myomata have also been described. The museum of the Royal College of Surgeons of England, contains a specimen weighing over 7 kilograms, and described as an ovarian myoma. It was removed by the late Sir Spencer Wells from a single woman, aged 68 years, who had noticed its presence for eight years. "It had a good pedicle; the Fallopian tube and mesometrium were free from disease."

Leopold, in his paper entitled "Die soliden Eierstockgeschwülste[1] refers to a case recorded by Löbl.[2] The patient aged 73 years, died of septic peritonitis after an operation for the removal of a "nodulated fibroid" the size of a child's head growing from the right ovary.

Haase[3] mentions a *post-mortem* specimen of an "osteoid tumour" obtained from a patient, aged 72 years. It measured 13 cm. in length, 10 cm. in breadth, and was 3 cm. thick. The weight is stated to be 250 grams. Haase does not state whether the growth originated from the right or the left ovary.

Briggs[4] mentions a case where an ovarian fibroma was removed from a single woman, aged 68 years.

I have not succeeded in finding the record of a case successfully treated at such an advanced age as 73 years. Ovarian cysts, however, have been removed from patients who were much older, of which numerous records exist in the literature.

An admirable summary of our knowledge regarding ovarian fibromata will be found in the *Transactions* of the Obstetrical Society of London, vol. xxxviii, 1896. p. 187. In a paper entitled Cases of Fibroma of the Ovary and Ovarian Ligament Removed by Operation, with a Series of After-histories of Cases Reported in the *Transactions* since 1879, Doran mentions a case where a patient, aged 52 years (married), had a fibroma of the right ovary weighing 3 lb. removed by ovariotomy. Her menstrual periods had ceased for five years before the operation. She was reported "quite well" over six and a-half years after the operation.

Although both Leopold and Doran have shown that ovarian fibromata occur in very young women, still a sufficient number of cases is now on record where such tumours have been removed from patients whose menstrual functions had ceased.

It is of interest to the clinician to find that a solid ovarian growth may increase in size and probably even originate after the menopause and yet be of a simple character.

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[1] *Arch. f. Gynäk.*, Band vi, 1873, p. 180. [2] *Zeit. d. Ges. der Aerzte in Wien*, 1844-5. [3] *Neue Zeitschrift f. Geb*, 7, 2. [4] BRITISH MEDICAL JOURNAL, May 1st, 1897, p. 1083.

NOTES OF TEN CASES OF HYSTERECTOMY FOR FIBROID DISEASE.*

BY THOMAS H. MORSE, F.R.C.S.ENG.,
Norwich.

[THE author having discussed the operation of vaginal hysterectomy for cancer and related several cases with their after-histories, went on to describe ten cases in which he had performed extirpation of the uterus for fibroid disease as follows:]

CASE I.—A married woman, aged 43, but with no children. Menstruation had been profuse for three years, but the most prominent symptom was pressure on the bladder during the same time. For the last year she had only been able to hold the water for at the most forty-five minutes at a time both day and night; if she slept beyond that time she woke in great pain; this had told upon her health very much by disturbing her rest.

The whole pelvis was filled with a hard tumour which was attached to the uterus and was about the size of a child's head at term. With the able assistance of Messrs. Fenner and Dent and Dr. McClure abdominal hysterectomy was performed. The tumour was so tightly wedged into the pelvis that it was with difficulty withdrawn. Recovery was complete; she began from the very first to sleep soundly the whole night. The tumour was a single one and very hard.

CASE II.—A married woman, aged 50. She had had four children. Haemorrhage had been very profuse for the last nine years. The electrical treatment had been used for a long time without producing any effect. For the last four months before operation she did not cease to lose blood for a single day, so that she often fainted, and was extremely

* Abstract of paper read before the East Anglian of the British Medical Association at Southwold.

anaemic. The uterus contained several fibroids; the largest, about the size of a cricket ball, was felt extending nearly to the umbilicus, and was only slightly movable. Although her condition was very bad, yet I felt sure that her only chance of life was by operation, and with the valuable assistance of the late Mr. Waring and of Mr. C. J. Muriel, abdominal hysterectomy was performed. The difficulties of the operation were very great owing to dense adhesions, which prevented the tumour from being drawn upwards, so that the ligatures had to be passed and tied at a considerable depth from the surface. Convalescence was slow owing to the extreme condition of anaemia, and it was several months before she could walk, but at the present time—namely, four years after operation, she is strong and well.

CASE III.—Patient, aged 51, showed her courage by taking a return ticket from Australia and coming to England for the purpose of her operation. She had known of the existence of a tumour for ten years, and during all this time menstruation had been profuse, but of late her loss had been continuous, lasting, for instance, ten weeks at one time, so as to compel her to give up her occupation. There was a large tumour filling the pelvis which extended to the umbilicus. Abdominal hysterectomy was performed. On opening the abdomen the tumour was seen to bulge widely into both broad ligaments, so as to occupy both right and left iliac fossae, besides filling the pelvis. Owing to its attachment it was not possible to drag the tumour upwards with corkscrews, and the separation had to be commenced from above. Finally the whole uterus and the tumour were removed, the vagina and pelvic peritoneum closed, and the abdominal wound united. Recovery was uninterrupted, and in about five months she returned to Australia.

CASE IV.—Patient, unmarried, aged 55, no haemorrhage, but the prominent symptom was pressure on the bladder, which had been increasing for the last two years, and was disturbing her sleep at more and more frequent intervals. The tumour felt very hard and nearly filled the pelvis. The tumour as shown in the photograph was removed by abdominal hysterectomy, the Trendelenburg position being used. It consists of a fibroid of the uterus filled almost entirely with calcareous plates, and so hard that it could only be divided with a saw. She recovered completely and is at the present time quite well.



Fig. 1.—Case IV.

CASE V.—Patient, a married woman, aged 60, under the care of Dr. Dent, of Cromer, to whose assistance the successful result was due. For the last two years there had been daily uterine haemorrhage which had left her in a very weak condition. The abdomen was occupied by a soft fibroid which extended to 1 in. above the umbilicus. On opening the abdomen in the Trendelenburg position a large soft gelatinous tumour of the uterus was found in which corkscrews would not hold. This was drawn well out of the wound and first the vagina was opened posteriorly—then the broad ligaments were cut through with scissors and the vessels as they appeared compressed with forceps several of the arteries were larger than the radial. Unfortunately the bladder was torn during its separation, but this was at once repaired with a double row of sutures and no harm resulted. Convalescence was tedious owing to her weak condition and to the formation of an abscess probably in connexion with the bladder sutures, thus throwing considerable strain upon the nursing staff of the Cromer hospital, but owing to the most unremitting care and attention to every detail of the after-treatment complete recovery eventually followed.

CASE VI.—Patient, unmarried, aged 40, was under the care of Dr. Burton Fanning. She had struggled successfully against phthisis ever since the age of 17, by wintering abroad; this disease at the time of operation was quite in abeyance. For five years, during which time the patient has been aware of the presence of a tumour, its size has steadily increased, so that the whole pelvis was filled, and the abdomen as high as the xiphoid cartilage, with a hard multinodular tumour. The os uteri could just be reached above and close behind the pubes. Haemorrhage had not been excessive, but the tumour was telling upon the patient's health by its size alone. Abdominal hysterectomy was performed. The Trendelenburg position was used, and a long incision having been made, the tumour was drawn out with corkscrews. The veins of the broad ligaments were enlarged to the size of a forefinger. The vagina was first opened, using a pair of curved forceps as a guide to it; next the large vessels contained in one broad ligament were caught in a bunch and compressed between the thumb and forefinger while they were cut with scissors. Having secured their proximal ends, the other ligament was treated in the same way. The Fallopian tubes being much hypertrophied, were removed, together with the ovaries. The vagina was closed with a pursestring suture, and the pelvic peritoneum united across. The wound was then closed. The tumour was very hard and multinodular, weighing 8 lb. The patient made a rapid recovery.

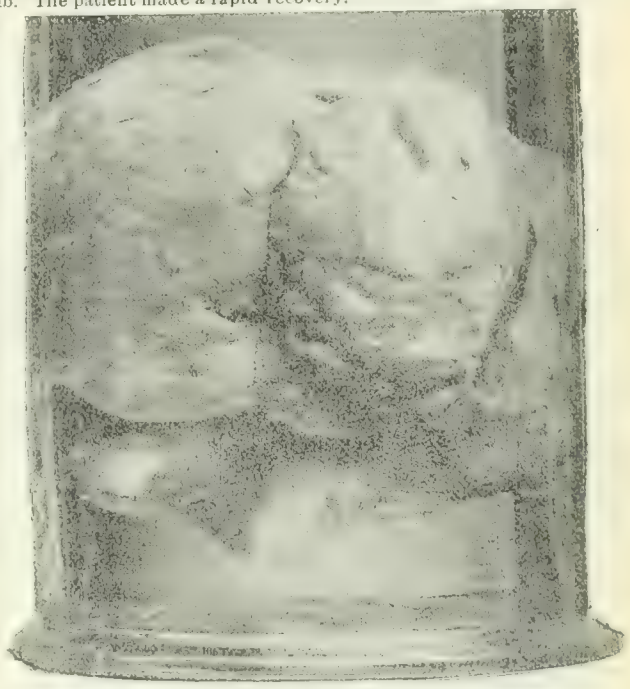


Fig. 2.—Case VIII.

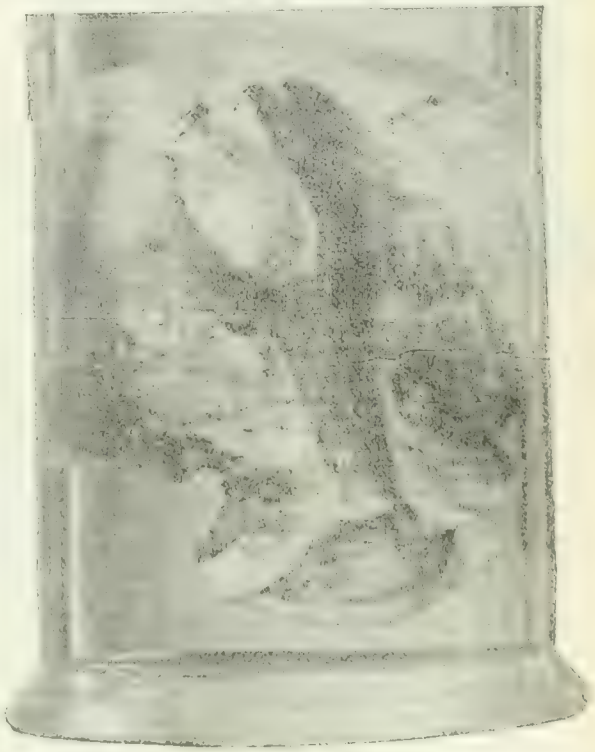


Fig. 3.—Case IX.

CASE VII.—Patient, an unmarried woman, aged 51, had had symptoms of haemorrhage and an abdominal tumour for 15 years. The tumour, she said, was sometimes larger and sometimes smaller during that time. For the six months preceding the operation there had been daily uterine haemorrhage. The abdomen contained a solid but not very hard tumour, smooth on the surface, and extending to 2 in. above the umbilicus

The operation was performed with the assistance of Mr. Alexander and Dr. Panting, under whose care she was. On opening the abdomen in the Trendelenburg position a large single tumour appeared with the uterine tissue spread out over its surface. The tumour was so soft that corkscrews would not hold in it. Having drawn the tumour out of the wound it was separated from below upwards, the broad ligaments being cut through with scissors, and the vessels secured as they appeared. The tumour was of the soft oedematous variety, and owing to its large size was not preserved. Convalescence was tedious owing to her weak condition, but with much careful after-treatment her recovery was complete.



Fig. 4.—Case x.

Case viii. Patient was under the care of Mr. Dent, of Cromer, was aged 45 years, was married, and had had one child twenty-three years ago. For the last two years menstruation had been profuse and for the last six months there had been almost continual loss of blood from the uterus. She was very anaemic, and in consequence of her weak condition had to give up her occupation as a lodging-house keeper. She complained also of pressure upon the bladder; every night she was disturbed from her sleep four or five times to pass water. A hard single tumour could be felt projecting from the anterior wall of the uterus and quite filling the pelvis. With the assistance of Mr. H. C. Dent and Dr. Manby abdominal hysterectomy was performed. The Trendelenburg position was used, and having passed a sound into the bladder and a pair of curved forceps into the vagina as guides the vagina was first opened and the uterus, together with the tumour, separated from below upwards. The tumour was a single one rather larger than an orange, the greater part of its surface being submucous, but with a broad attachment to the posterior wall of the uterus. Complete recovery followed.

Case ix. (See Fig. 3).—Patient was a married woman, aged 51, and had had three children, the youngest nine years ago, since the last confinement she had never felt quite well. Menstruation had been regular but profuse and especially during the last few years excessive, and such as to necessitate her remaining in bed for about a week each time, when large clots of blood would be passed, so as to produce faintness and to be followed by great exhaustion. I sent her to Dr. Galabin, who wrote as follows: "The fundus bulges in front with some irregularities and sound passes 4 in. I think she has small fibroids in wall of uterus but not enough to form abdominal tumour." This patient when staying in this neighbourhood had been seen by Mr. Dent about fifteen months previously. I therefore sent her to him again in order that he might compare her present condition with that of the year before. The result of his examination was to show that there was a distinct increase in the size of the uterus during the interval. As a result of this and considering also that the haemorrhage was increasing, Dr. Galabin, who now saw her again, advised me to perform a radical operation. Therefore with the assistance of Mr. Dent and Mr. C. J. Muriel I removed the uterus as shown in the photograph, choosing the vaginal route because of the small size of the tumour, and although more difficult to the surgeon, yet I believe making a less severe demand upon the patient's resources than does the abdominal route. This patient recovered completely, but was several months in recovering from her severe and prolonged loss of blood.

The photographs of Cases viii and ix I wish particularly to call attention to, as showing that when a fibroid is surrounded by the uterine muscle and compressed by it it is futile to wait and hope for the menopause at an age when loss of blood is not so well borne nor so rapidly recovered from as in earlier years.

Case x (See Fig. 4).—Patient was 38 years of age, was married, but had never had children. Menstruation had been regular up to the last three periods, which had been missed, and patient believed herself to be pregnant. The whole pelvis was filled accurately with a solid and very hard tumour, which was firmly fixed there and was steadily increasing in size. With difficulty the os uteri could be reached above and close behind the pubes. It was decided to remove the whole uterus by abdominal section. The photograph shows the specimen as it was situated in the body: the lower part is a very dense fibroid springing from the cervix and tightly wedged in the pelvis, while at the upper part is shown the placenta in the fourth month of gestation attached to a solid and non-contractile part of the tumour, from which severe haemorrhage must have followed its separation.

RUPTURE OF THE UTERUS, WITH RECOVERY

By CLAUDE BURGOYNE PASLEY, L.R.C.P.&S.I., L.M.Rotunda,
Medical Officer in Charge of Troops, Cahir, co. Tipperary.

The following is an account of a case I conducted which may prove interesting from its comparative rarity.

Mrs. C., aged 28, primipara, a delicate woman suffering from advanced aortic valve disease, was confined on July 4th, 1902.

When called in by the nurse attending at 4.30 p.m., I found the patient in the first stage of labour. Examination of the abdomen revealed a transverse presentation of the fetus, the head lying to the left side. Hydramnios was present. Vaginal examination revealed a slightly-contracted pelvis.

I turned the transverse into a head presentation, placed a firm binder on the abdomen, put the patient to bed, and administered 10 min. tr. digitalis every four hours combined with liq. strychninae miij, as symptoms of failing compensation were present. The uterine contractions were infrequent and slight.

At 11.30 p.m. I was again sent for and found the following conditions present: The heart was beating rapidly and weakly, the murmur over the aortic region being extremely marked; patient's face was very pale and anxious-looking, tongue dry and coated. Temperature in the mouth 102°, pulse 112, respirations 28; there was a considerable amount of bronchitis present.

On examining the abdomen I found that the head had slipped into the left iliac fossa, that the uterine contractions were strong and frequent, and that the liquor amnii had come away. I found by vaginal examination that the os uteri was dilated to the size of half-a-crown; vaginal temperature about 103°. I converted, after considerable trouble, the oblique into a vertex presentation, replaced the binder, and kept the head pressed down into the pelvis. At 11 45 I sent to Cashel for Dr. George Russell, as I deemed it advisable to have help.

In the meantime I sterilized my forceps, etc., as I thought they would be needed. I took the patient's temperature at 12.30 a.m., and found it 104.5°; pulse 140; respirations 30.

I immediately got the forceps ready and after great difficulty succeeded in applying them, the difficulty was greatly increased by want of room and incompetence on the attending midwife's part. However I was at length able to correctly apply them, and delivered the child alive at 2.40 a.m.

At 3.30 a.m. Dr. Russell arrived, and confirmed my diagnosis of rupture. He kindly sutured the vagina and perineum. I saw the patient again at 10 a.m.; found everything satisfactory. Temperature 100°; pulse 98. I douched the vagina thrice daily for the following five days. Patient made a splendid recovery, the temperature never having risen above 101°.

The difficulty of the case will be understood when I state that the labour was conducted in a tiny room in a double bed, and that while applying forceps I had to support the patient's right limb by hanging it over my neck as the nurse was busy watching the heart. Chloroform was, of course, impossible, as heart failure was imminent; in fact, the patient was quite comatose and cyanosed. The placenta came away ten minutes later. Immediately after delivery I

administered $\frac{1}{50}$ gr. strychnine combined with $\frac{1}{100}$ gr. digitalin in brandy hypodermically. I gave patient a saline injection per rectum also. Hot bottles were placed around the patient's body and hot blankets wrapped round her.

On examining the abdomen as soon as patient recovered somewhat I found a mass of boggy consistence around the fundus uteri, which I diagnosed as blood clot. I injected ergotinin hypodermically and got the uterus well contracted. The mass found in the abdomen remained there for about a week and then gradually disappeared.

A CASE OF TRANSPLANTED UTERINE FIBROID GIVING RISE TO INTESTINAL OBSTRUCTION.

By E. PERCY PATON, M.S., F.R.C.S.,
Assistant Surgeon to Westminster Hospital.

E. C., aged 48, a single woman, was admitted into Westminster Hospital under the care of Dr. de Havilland Hall on March 29th, 1902, with symptoms of intestinal obstruction.

History.

Soon after her admission I was asked to see her with Dr. Hall. Her history was that fourteen days before, she had been attacked with pain in the abdomen, vomiting, and constipation, for which various purgatives were given without result, but the vomiting continued, and in four days' time (ten days before admission) became faeculent in character; this continued more or less, and the abdomen becoming more distended, and the patient collapsed, she was sent to the hospital. For the past four years she had suffered from myxœdema, for which she had been treated with thyroid extract. In October, 1901, she had a similar attack to the present one, but not so severe; this laid her up for three weeks, but she got well, though she had never felt very strong since, and had been losing flesh. There was no history of any uterine trouble of any kind.

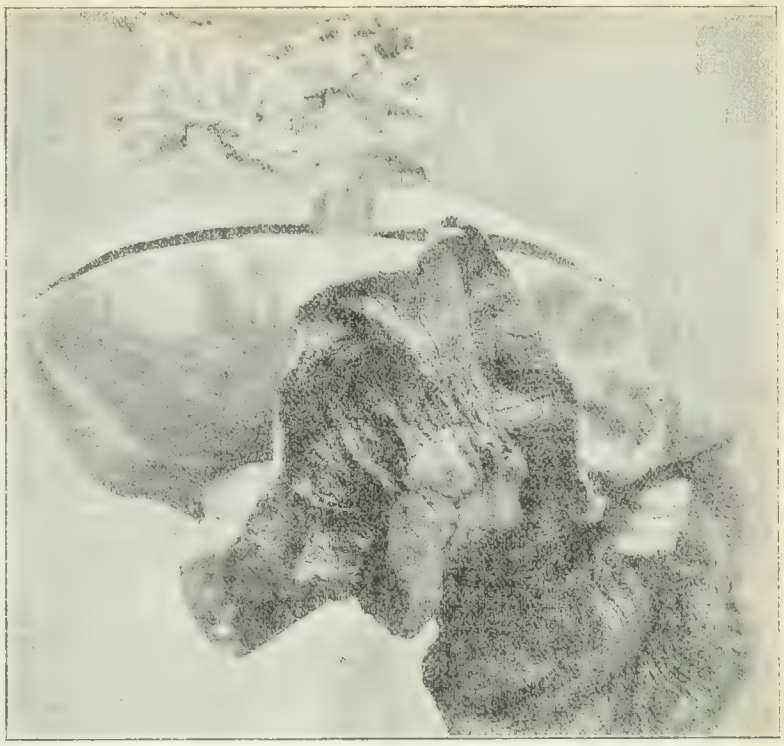


Fig. 2.—Tumour showing adhesions to gut, mesentery, and omentum.

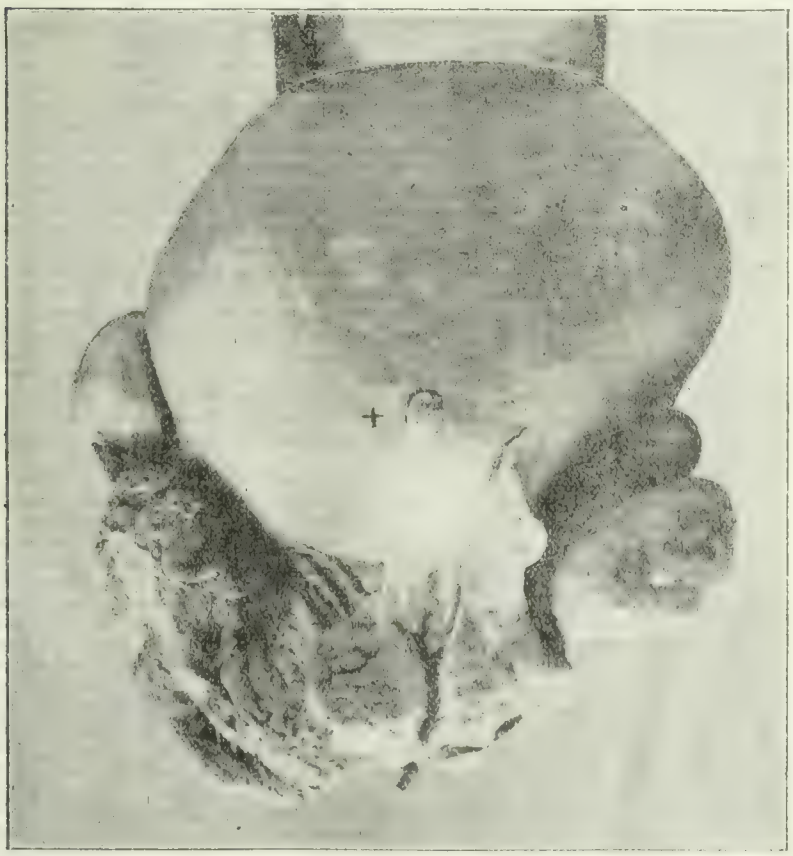


Fig. 1.—Posterior aspect of uterus; to the right of the + is the pedicle from which the tumour had become detached.

When first seen she had the pinched appearance of advanced intestinal obstruction, and was considerably collapsed, the pulse being small and wiry. The abdomen was a good deal distended, but was not very tense. On the right side there was to be felt a tumour which extended from the loin almost to the umbilicus; it was oval in shape, very hard, and could be moved from side to side and somewhat up and down, it did not seem to have any pelvic connexion, although it felt very like a uterine fibroid, and was thought possibly to be such. Rectal examination showed the uterus to have several small fibroids in connexion with it, but bimanual examination did not reveal any connexion between the uterus and the tumour: there was nothing else abnormal to be felt by the rectum.

Operation.

The general condition of the patient was very bad, but it was decided to open the abdomen at once. This was done in the lower part of the right linea semilunaris and the tumour was exposed; it was then found to be attached to a considerable length of gut and mesentery, which was very much engorged: it was thought possiby to be malignant, and it was quite clear that it could not be removed or dealt with in such a way as to relieve the obstruction; and as the patient was very bad, and there appeared to be no reason to believe that any advantage would be gained by opening a piece of

small intestine, the abdominal wound was closed. She died some few hours later.

Necropsy.

At the necropsy, in addition to the general distension of the intestines and the ordinary signs of obstruction, the tumour, which was examined at the operation, and which at first sight appeared to be malignant, was found to be a transplanted fibroid of the uterus, from which organ it had become entirely separated, but upon the posterior wall of which was to be seen a short stalk, and from this there could be little doubt that the tumour had become disconnected. The tumour itself was oval in shape, with some irregularities on its surface; it measured 6 in. by 9 in. in its two greatest diameters, and weighed 5 lb.; it was adherent for about 2 ft. to the mesentery on the right side, and for nearly the same distance to the small intestine a foot or so above the ileo-caecal valve: there was also an extensive connexion with the omentum, from which it received most of its blood supply, as the large vessels seen in the adhesion show; there was also a very considerable twist of the mesentery, to which no doubt the constriction was to a very large extent due; the mesentery and gut connected with it were in a very congested condition. Microscopic examination showed the tumour to have the ordinary structure of a uterine fibroid.

The accompanying photographs show very well the tumour and its attachment to the mesentery and omentum, and also the short pedicle on the posterior aspect of the uterus from which the tumour almost certainly became separated.

Remarks.

Transplantation of an ovarian cyst does not seem to be very uncommon, and I have myself had an opportunity of seeing more than one case, but the transplantation of a fibroid, so far as I can gather from a somewhat rapid survey of the literature, seems to be very rare. Twisting of the pedicle in a fibroid rapidly, as a rule, terminates in gangrene of the tumour and its serious consequences: but that connexion may take place to other parts and complete separation follow is mentioned by Herman,[1] Haultain,[2] Barbour,[3] Kelly,[4] and others, but no references to cases is given by them. Pozzi[5] refers to three cases, but on turning to the original references I have been unable to identify the case in one of them, and in the other two the description leaves one in some doubt if the cases were really what they were supposed to be; Jacobs[6] gives an account of one case, and Turner[7] describes a case in which a fibroid which had become calcareous had become completely separated and was lying quite free in the pelvis.

The method by which separation has taken place has been suggested to be by the fibroid becoming adherent during pregnancy, and, being of the subperitoneal pedunculated variety, the thin pedicle becomes separated as the uterus returns to the pelvis; this, of course, cannot be the cause in the case above described, as she had never been pregnant.

[Since the above was written two other cases have come under my notice.]

REFERENCES.

[1] Herman, *Diseases of Women*, p. 826. [2] Haultain in Allbutt and Playfair's *System*, p. 576. [3] Hart and Barbour's *Diseases of Women*. [4] Kelly's *Operative Gynaecology* p. 345. [5] Pozzi's *Diseases of Women*, vol. i, p. 283; Huguier, *Gaz. des Hôp.*, 1860, p. 411. [6] Nélaton, ibid., 1862, p. 77. [7] Jacobs, *Bull. de la Soc. Belge de Gyn. et d'Obstet.*, vol. xii, 1901. [8] Turner, *Edin. Med. Journ.*, 1861, p. 608.

GANGRENOUS FIBROID POLYPUS OF THE UTERUS.

By JOSEPH SCOTT, M.B.,

Assistant Medical Superintendent, Indo-European Telegraph Department, Shiraz, Persia.

THE history of the case I wish to record is as follows: The case was that of Fatima, a Persian, aged 32, whom I was hurriedly called to see, and on arrival found her very ill, anaemic, and that there was a most disagreeable odour in the room. Four years ago she had had an abortion, since when she had suffered much from haemorrhage. Fifteen days before I first saw her, on washing herself after micturating, according to Mohammedan custom, she discovered a small tumour in the vagina, about the size of a walnut, which became larger daily, and easily came down on straining at stool. A native midwife having been called in diagnosed a dead child, and did her best to remove it by force, causing the poor woman great pain. She succeeded in tearing off a portion of the tumour.

On examination a firm, round tumour was found filling the vagina, the pedicle of which could easily be made out. Having satisfied myself that no inversion of the uterus existed, I tried removal by means of a wire *écraseur*, but unfortunately the wire broke before I had cut through the pedicle. The tumour was then seized with a vulsellum and pulled well down; a female slave held the vulsellum, while the stalk of the tumour was cut through with a pair of scissors curved on the flat.

The tumour was easily removed from the vagina. It measured 10 in. in circumference; part of it was decomposed, which would no doubt account for the bad odour. The tumour had the usual appearance of a fibroid.

CASE OF RUPTURED ECTOPIC GESTATION.

By J. GAY MOFFAT, M.D., C.M.,

Surgeon to the Victoria Hospital, Keighley.

THE following case seemed of interest chiefly on account of the somewhat misleading character of the symptoms complained of for a week or ten days prior to the final attack which terminated in operation.

Mrs. L., widow, in domestic service, 29 years of age, was, about midnight on January 23rd, 1902, wakened up by very acute pain in the region of the stomach. She got up out of bed, walked about for some little time, but as the pain showed no signs of abating, she went downstairs and roused her mistress. She was then put back to bed and hot poultices applied, but in spite of this and morphine administered hypodermically, no relief came until 10 o'clock next morning. Before the morphine was given she had vomited bile-stained mucus freely. There was not at this or any future time any jaundice. No history of any indiscretion in diet was given. The diagnosis made was "biliary colic." The patient got up on January 25th, but could not bear the pressure of her clothing, nor could she stand erect on account of abdominal pain. On January 30th she had another similar seizure, but this was much less severe, so that she was able to be up the same day, and on the day following she went to stay with friends to recuperate.

On February 2nd I was urgently requested to see the patient whom I found in bed retching and vomiting bile-stained mucus as before, and looking extremely ill. She was blanched, with a weak runaway pulse of 140, and was complaining of severe pain in the lower part of the abdomen, which was distinctly distended, more particularly over the left iliac region. The history I got was this: On the previous evening, feeling comparatively well, she went out for a walk, but had not gone very far when she was seized with acute pain in the left iliac region accompanied by faintness and sickness. She was at once conveyed home, put to bed, and hot flannels applied, but her condition grew steadily worse until my visit next day, when I found her as described. I also learned that she had had twins in 1892, since which time she had suffered more or less from pain in the left iliac region. Menstruation had been regular until the previous December, during which month she was unwell three times, for a few hours each time. During January of this year she was unwell several times, also for a few hours each time, and accompanied by pain. A vaginal examination showed the uterus slightly enlarged and the cervix softened; there was tenderness in the left fornix, but no parauterine tumour could be made out.

The woman was evidently suffering from some form of internal haemorrhage, probably from a ruptured ectopic gestation, and was manifestly in a very grave condition. I therefore advised operation without delay, and with her consent had her taken into hospital. I operated as soon as possible—which was about midnight—after her admission. In opening the abdomen in the middle line between the umbilicus and pubes, dark blood clot could be clearly seen through the peritoneum, and on entering the cavity a large quantity, probably about 3 pints, of dark fluid blood and clots escaped, in which was floating a three months fetus. I found the sac continuous with the left Fallopian tube, which I ligatured and removed. Haemorrhage, presumably from broken down adhesions, was troublesome, but was controlled by flushing the cavity with hot saline solution. This, also, I feel sure, very materially helped to combat the collapse, as when I commenced the operation the pulse was 144, and when the patient was returned to bed it had fallen to 128. A Keith's tube was left in the lower end of the wound, and was removed on the third day. A complete decidua was passed, also on the third day. Nothing more remains to be said, excepting that her recovery was uneventful, being, however, protracted, owing to

an attack of acute rheumatism which came on in the second week of her convalescence.

In going over the case, the interest to me is mainly in connexion with the symptoms of January 23rd and 30th, and their proper interpretation. Whether they were really attacks of biliary colic, or were associated in some way or other with the ruptured tube, it is difficult to say. If the latter, and a correct diagnosis had been possible at the time, the patient would have been in a much better condition to stand operation, and consequently the risk to life would have been less.

TWO CASES OF MITRAL STENOSIS COMPLICATED BY PREGNANCY.

By G. A. WILKES, M.D Birm., D.P.H.Conj.
Birmingham.

THE following cases of mitral stenosis, ending fatally after the first parturition, illustrate the danger which attends this form of heart disease during gestation and labour:

Case 1.

Mrs. W., aged 23 years, first seen on April 6th, 1899, gave a history of rheumatism at 10 years of age. She had no knowledge of any subsequent heart disease, and enjoyed good health till a few days before I saw her. She was then in the seventh month of her first pregnancy, and was deeply cyanosed, suffering great dyspnoea, and expectorating blood-stained sputum. Moist *râles* were heard all over the chest, back and front. The cardiac impulse was in the fifth space, displaced a little horizontally, and accompanied by a presystolic thrill. There was epigastric pulsation. The superficial cardiac dullness began at the third rib. A presystolic murmur and slapping first sound were heard at the apex. The pulse was regular and fast (134 per minute). She was given a mixture of tr. digitalis m xv, and liq. strych. mx, every four hours, and calomel gr.v.

I saw her again on the morning of April 7th. The bowels had acted freely. There was no improvement in her condition, and as labour pains had commenced in the night and the os was dilated I ruptured the membranes. The pains then became more vigorous, and in about an hour's time she was delivered of a seventh-month fetus. The second stage of labour was comparatively easy, but the bearing-down efforts caused the patient to become distressingly short of breath and increased the cyanosis and the pulse-rate. There was very little uterine haemorrhage during the third stage, and as the right heart was seriously embarrassed, venesection was suggested, but refused by the patient and her friends. Stimulants were freely exhibited, and gr. $\frac{1}{30}$ of strychnine injected under the skin, but without avail. The pulse became almost imperceptible, and she died two hours after the birth of the child.

Case 2.

Mrs. B., aged 29 years, first seen on April 10th, 1899, had had rheumatic fever at 15 years of age. Her subsequent history was good till she became pregnant. She was ignorant of her heart disease. During her pregnancy she suffered from cough and shortness of breath on exertion, symptoms which became more marked as she approached full term.

Labour commenced on April 9th, 1899. She was attended by a midwife. On April 10th she gave birth to a full time child after a long and exhausting labour, which greatly increased her dyspnoea. When I saw her some hours after parturition, she was in much the same condition as Case 1—cyanosed, breathless, and expectorating bloodstained sputum. There was a presystolic thrill and a presystolic murmur at the apex. The cardiac dullness was increased upwards. Epigastric pulsation was present. The pulse was small, regular, and 120 per minute. Moist *râles* were heard all over the chest. Although she had lost a considerable amount of blood *post partum*, and was still losing, it did not appear to have relieved her breathlessness and cyanosis in any way. Venesection, therefore, was recommended, but rejected in favour of six leeches over the liver area. Brandy was freely given, and gr. $\frac{1}{30}$ of strychnine injected. She was also given tr. digitalis mxv and liquor strychninae mx every four hours, and a calomel purge. I saw her again on April 11th. The bowels had acted freely, and there had been considerable oozing from the leech bites. Her condition, however, was hopeless. She had sunk down in the bed breathing easily, but greatly cyanosed. The extremities were cold and oedematous. The heart was very fast and feeble, and she died at 8 p.m. the same day, thirty hours after delivery.

The cases here recorded emphasize the liability to fatal loss of compensation in mitral stenosis when associated with pregnancy. During gestation the work of the heart is increased. The presence of the placental circulation increases the amount of blood and raises the blood pressure. The cavities of the heart become dilated, and the left ventricle is usually slightly hypertrophied. The right ventricle, being thinner and weaker, does not so readily undertake compensatory changes, and shortness of breath, pulmonary congestion, and other evidences of right ventricle embarrassment often occur in debilitated women during pregnancy in the absence of valvular disease.

In mitral stenosis the compensation ultimately depends on the integrity of the right ventricle. In severe cases, apart from pregnancy, the right heart utilizes most of its reserve force. A breakdown of the compensation is almost inevitable when such cases are called upon to meet the greater demands of pregnancy and parturition. In a number of cases premature labour results, and the earlier in pregnancy the right ventricle becomes unable to cope with its difficulties the sooner the pregnancy is liable to be brought to a close. A failing right ventricle leads to obstruction to the flow of blood in the great veins, to congestion of the placenta, and to the circulation of imperfectly oxygenated blood in that structure. Haemorrhage into the placental area may result, or the fetus may die from asphyxia, in either case initiating labour. It is during the second stage of labour, whether premature or not, that the compensatory mechanism is most severely taxed. In the effort of bearing down the glottis is closed, the diaphragm descends, and the abdominal muscles contract vigorously. The first effect of the contraction of the diaphragm and abdominal muscles is to drive the blood from the abdominal veins to the right auricle, assisting the filling of the ventricle in diastole. But as the pressure rises in the thorax, the blood is dammed back in the great veins, and the filling of the right heart opposed. At the same time the increased pressure of the air enclosed in the air passages tends to drive the blood from the lungs and raise the pressure in the pulmonary artery. The positive intrathoracic pressure of forced expiration is replaced by the negative pressure of a deep inspiration, and blood is aspirated from the venous system to the right side of the heart, overdistending the auricle and ventricle.

In the normal condition the expansion of the lungs in inspiration lessens the intrapulmonary pressure; the pulmonary vessels dilate and relieve the burden of the right heart by accommodating more blood. In mitral stenosis, however, the constant high pressure in the pulmonary vascular system counteracts to some extent the beneficial effects of inspiration. The right ventricle is thus persistently overloaded, and may become dilated to a point beyond recovery. Women with severe mitral stenosis should, if they seek an opinion on the subject, be advised not to marry. For, although such patients may survive the ordeal of parturition, a grave risk is incurred, and the danger becomes greater with succeeding pregnancies. In the case of patients who present symptoms of serious circulatory disturbance in the early months of pregnancy, or in the case of those who have with difficulty escaped a fatal issue from cardiac failure in a previous labour, the induction of abortion should be considered in preference to premature labour, as the latter, whether spontaneously or artificially induced, appears to be attended with as heavy a mortality as labour at term.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

MYIASIS INTESTINALIS.

IN connexion with the article in the BRITISH MEDICAL JOURNAL of March 15th, 1902 (EPITOME, par. 169), the following account of what I observed in North China appears to be interesting:

An officer in a regiment serving at Tongshau, North China, during the recent troubles in China, contracted dysentery. On examination of the stools, blood, mucus, and a number of small yellow-coloured worms, with a blackish head, resembling maggots, were found. Microscopic examination showed them to be dipterous maggots.

These were found in every stool passed by the patient. In consequence, calomel was given, but with no good result. Next santonin was given, but with no better result. The stools were then examined immediately after passing, and no larvae were found in them, although shortly afterwards numbers were detected. One day, whilst examining a stool, two large flies settled on it, and rapidly deposited the larvae upon it; in less than a minute the stool was swarming with them. After this I many times waited by freshly-passed stools in which were no larvae, and watched these flies deposit the larvae upon the stool. The larvae were deposited on the stools as larvae, and not as ova.

This led me to catch this species of fly and dissect it. Inside the fly were larvae in the same shape and form as when deposited on the stools. Some of the flies which were dissected were from those which settled on the stools, and the others were captured outside on the windows of houses; all had live larvae inside them. Finally, healthy stools, in which were no larvae, were found to be swarming with larvae very shortly after passing them, due to the flies depositing the larvae on them.

It appears to me, therefore, that these larvae are passed not

by the patient, but are deposited on the patient's stool by the large flies after he has passed it.

This particular species was the size of a bluebottle, had red eyes, black body, with three greenish stripes on the dorsal aspect of the thorax, and a curved greenish stripe of the dorsal aspect of the abdomen.

C. HUDSON, Capt. I.M.S.

ADAPTATION TO LOSS OF ENTIRE LEFT ARM.

H. E. P., aged 17½ years, lost his entire left arm, together with the outer half of the clavicle and all the scapula by operation after an accident on March 6th, 1900. To-day he informs me he "can dress entirely and unaided in five minutes; can do everything for himself except cut up his meat." He utilizes his chin when arranging his collar, and he buttons up his braces, gets his boots on and off easily (elastic side boots).

This is interesting, since we often hear of the "utter helplessness" of persons who have lost a hand, especially where there is a large claim for damages at common law trials.

This youth, I may add, informs me that he now "acts as postman and can sort and deliver the parcels and letters as rapidly and efficiently as his fellow-postmen."

Possibly the youth of the subject supplies the explanation of what must be regarded as an adaptation not always occurring at a later age. The cerebral centres are more "plastic" before confirmed adult age. An alert and bright mentality had much to do with this success.

Finsbury Circus. T. D. PATMORE, L.R.C.P., M.R.C.S.

A CASE OF PREVACCINATED SMALL-POX.

THE original source of infection was that of an adult native, who arrived at Deelfontein with well-marked small-pox in about his seventh day of disease. He was subsequently only in contact with others for one hour and a half, during which time another healthy adult native saw him and shook hands with him on August 24th, 1902. The latter, aged about 36, previously unvaccinated, was primarily vaccinated on September 4th, 1902, with three insertions in the left arm. Calf lymph supplied by the Bacteriological Institute of Grahamstown was used. All the insertions took well, but the vaccinia ran a rapid course, as on the fourth day the initial papules had already developed into compound vesicles; otherwise the vaccinia ran a perfectly normal course, the scabs falling off on September 25th, the twenty-first day, leaving a flat red surface.

On September 6th he complained of headache and backache. The latter was very severe, occurring in the lumbar region and being very suggestive of lumbago. His temperature was 102°. This was the thirteenth day after exposure to infection, no other cases having arisen meanwhile.

On September 8th, the third day of disease, his temperature (103° on the second day) had fallen to 100.4°, and a copious papular eruption had appeared on the face, there being a few papules on the chest and back, and a fairly large quantity on the arms, wrists, legs, and ankles. This eruption probably began to appear before the disease was forty eight hours old. The disease ran a typical course, more papules appearing for the next three days. It remained in the discrete form on the arms, legs, and body, but assumed a mildly confluent type on the face, with oedema of the eyelids; the pustules, however, did not discharge freely, but dried up somewhat rapidly.

On the twentieth day of the disease the black scabs on the arms, legs, and body were falling off, the clinical course of the eruption on the face being about five days behind that of the arms and legs, and convalescence had commenced.

The chief points of interest in this case are that:

1. The two diseases, vaccinia and variola, were both running their clinical courses together.

2. The vaccinia appeared to develop somewhat more quickly than usual.

3. The variola appeared to take the course of a confluent modified small-pox, and it seems to suggest the following facts:

(*a*) That vaccinia and variola, although certainly derived from an original common origin, are not identical diseases, each running its own clinical course at the same time on the same patient.

(*b*) That they respectively act one on the other, the variola firstly modifying the vaccinia, and the latter with its quicker development and constitutional effects subsequently modifying the variola; and, if this holds good, then

(*c*) The efficacy of vaccinating previously unvaccinated individuals, who have already been infected or brought into contact with variola is established.

L. H. D. HALE, M.R.C.S., L.R.C.P.,
General Hospital, Deelfontein. Civil Surgeon.

LABOUR COMPLICATED BY BONY TUMOUR.

ABOUT a year ago I was called to a case of labour, this being the woman's second child. The first was born fourteen years previously, but that labour was over before I got there. On examination I found what I thought to be two fetal heads obstructing the passage. I sent for my partner, Dr. Catherine Smith, and after she had given an anaesthetic, I introduced my hand, and found a large bony tumour, which felt exactly like a fetal head, springing from about the region of the lumbo-sacral joint. There was very little room for delivery, but on consultation with Dr. Smith, I decided to perform craniotomy, and succeeded in delivering the patient. She has kept well ever since, and as I had never examined her before I can throw no light on the nature of the growth.

FRANK BROADBENT, M.R.C.S., L.R.C.P.
North Collingham, Newark.

FREQUENT TAPPING FOR ASCITES IN CIRRHOSIS OF THE LIVER.

A PENSIONER, aged 67, came to the Kilkeel Union Infirmary in July, 1900, complaining of enlargement of the abdomen, noticed first three weeks before. It proved to be due to ascites, and the abdomen was tapped. From that time until his death in September, 1902, a period of 115 weeks, tapping was done 205 times. A record of the quantity drawn off on each occasion was kept after the 104th operation, which shows that the average amount at each tapping was 15¾ pints.

The patient had always taken spirits freely, usually raw. He had never had syphilis or any serious illness. He was able to get about until four days before death, which was preceded by delirium merging into coma.

A limited necropsy was permitted. The veins of the abdominal wall were enlarged, and after opening extensive adhesions were found in the upper abdomen, the viscera being bound to each other and to the parietal peritoneum. The liver was much shrunken, hard, and coarsely nodular.

The advisability of operation to promote short-circuiting of the circulation had been considered, but it is questionable whether any such operation would have improved on the existing condition, while the adhesions which had already formed would have probably been disturbed by it. It might, however, have been of advantage if it could safely have been carried out, to have drained continuously for a time in order to have allowed the formation of still more extensive adhesions.

FERGUSON FLOYD, M.B.,
Kilkeel, co. Down. Medical Officer.

A CASE OF INTUSSUSCEPTION OF THE SMALL INTESTINE IN CONNEXION WITH WOUND OF THE DUODENUM.

A BURMAN, aged 33, was stabbed in the abdomen with a spear between the umbilicus and xiphoid, and was seen by me six hours afterwards. Laparotomy was performed at once, and a large rent in the small omentum found; this rent bled freely from several large branches, and the abdominal cavity was full of blood. The bleeding vessels having been secured, the abdominal cavity was washed out and the intestines examined. It was then noticed that there were two intussusceptions of the ileum about its middle, the first, involving about one foot of the gut, was hard and was with difficulty reduced, the second was about two feet lower down and was just commencing.

Some bile was noticed in the abdominal cavity and a large rent in the third part of the duodenum was noticed; this was sewn up through the opening in the small omentum, and the small omentum was then sewn up over it.

After operation the patient was fed by nutrient enemata for six days. The day after operation vomiting set in, which lasted for three days; there were no signs of peritonitis. The wound healed by first intention, and the man was perfectly well on the twenty-first day. I saw him three months after, and he was perfectly well.

E. R. ROST,
Captain I.M.S., Resident Medical Officer
General Hospital, Rangoon.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

NO. 15 GENERAL HOSPITAL, HOWICK, NATAL.

GUNSHOT WOUND OF ABDOMEN: TRAUMATIC ANEURYSM OF FEMORAL ARTERY: AMPUTATION THROUGH THIGH.

(Reported by ARTHUR A. MARTIN, M.B., Ch.B.Edin., Civil Surgeon, Natal Field Force.)

THE following case is of interest, not only from the grave sequelae following on a gunshot wound of the abdomen, but also for the splendid "power of resistance" of the man who was struck.

History (for which I am indebted to the medical officers of Vryheid Hospital).—Sergeant P., of the 7th New Zealand Mounted Rifles, during a skirmish with the Boers at Orangedale on October 17th, 1901, was struck by a Mauser bullet at a range of about 400 yards. The bullet passed between the radius and ulna of the right arm, then through his water-bottle, and then entered the peritoneal cavity about 2 in. above and to the right of the umbilicus, travelling towards the left iliac fossa. He was admitted into Vryheid Hospital (October 22nd, 1001), and was then suffering from localized peritonitis in the neighbourhood of the abdominal wound—namely, tenderness, slight abdominal distension, rigidity of right rectus muscle, and a "rocky" pulse. At this time, also, he was very weak and collapsed. In about three days' time this peritonitis disappeared, and the pain shifted to the region of the left iliac fossa. On October 27th the pain in the left iliac fossa became very severe, and a fluctuating swelling was now made out, situated at the site of the pain, slightly external to the left common femoral artery, The temperature now took on a septic character, and the patient was getting very weak.

Operation.—On October 28th, under an anaesthetic, an incision was made into this swelling, external to the femoral. When the fluctuating area was reached a large quantity of stinking pus gushed out. This was followed by an alarming rush of arterial blood. A large suppurating aneurysmal sac was disclosed, and the common femoral was at once tied. After the operation the patient was very collapsed, and his life was despaired of for some time. He made a good rally, however, but gangrene of the foot shortly afterwards set in.

Second Operation.—This gangrene slowly advanced up the leg, and on November 29th, 1901, he was again put under an anaesthetic, and his leg was disarticulated at the knee-joint. The patella was retained. After this operation his condition was again critical for some time, and again he called on his reserve energy, and made a good rally. The flaps of this amputation now sloughed, and left the lower end of the femur quite bare. Several weeks after this he was transferred to No. 15 General Hospital, Howick (owing to the Vryheid Hospital having been closed), and he was admitted under my care in the surgical ward. He was then very anaemic and emaciated. He had slight emphysema of the lungs and had frequent attacks of asthmatic bronchitis, the asthma at times being severe. His heart and kidneys were healthy. The healed scars of the bullet wounds were present as described above, and also the linear cicatrix over the femoral artery. The left thigh muscles were flabby and wasted. The lower end of the left femur was projecting for about 1½ in. beyond a ring of skin and cicatricial tissue. The cartilage was eroded in places, and covered with fungoid granulation tissue at others. Obviously the limb required amputating higher up in order to give him a good stump. As the patient was in such an enfeebled condition, we determined to delay operating till he was stronger. He was accordingly put on a liberal diet of roast chicken, and vegetables, fish, eggs, rice, port wine, etc., was given respiratory stimulants, and carried out in his bed for two or three hours on fine afternoons into the sunshine in order that the bracing air of Howick should have an opportunity to work good. Under this treatment his strength rapidly increased, his anaemia disappeared, and the crepitant *rales* in his chest became a thing of the past.

Third Operation.—On February 24th, 1902, four weeks after admission to Howick, under an anaesthetic (chloroform), I amputated his thigh in the lower fourth, making anterior and posterior flaps, with circular division of the muscles at the base. There was scarcely any haemorrhage during the operation. The popliteal artery was very much smaller than normal—it was about as large as the temporal artery—but was quite full of blood. Only two vessels required ligature; torsion stopped the bleeding from the others. The flaps had a very good vascular supply. The after-result was perfectly satisfactory. Everything healed by primary union, and the stitches were removed on the ninth day. The cicatrix is now well posterior, and the bone is covered with firm healthy tissues. I should have mentioned that the bullet has never yet been discovered. The patient is now in good condition, but still has occasional attacks of asthma. An artificial limb can be affixed with comfort later on.

I wish to thank Dr. Horwich, Civil Surgeon, for so ably administering the anaesthetic at the last operation, and Dr. Scoweroft, Civil Surgeon, for his ready assistance during the operation.

ABSCESS OF APEX OF LUNG DUE TO LODGEMENT OF A BULLET: EXTRACTION OF BULLET: RECOVERY.

History.—Corporal R., aged 27, of the Imperial Yeomanry, was struck by a bullet in the back while in action at Tweefontein on Christmas Day, 1901. This yeoman was in a trench when he was ordered by his officer to retire to another position. While retiring he was struck by the bullet in the back, ran forward a few more paces then fell, and, as he states, "coughed up a mouthful of blood." He was shortly afterwards conveyed in an ambulance to Harrismith Hospital, where he remained till January 31st, 1902. He was then transferred to No. 15 General Hospital, Howick, where he came under my care.

State on Admission.—He was very anaemic and weak, had an irritative cough, and a temperature of 99.7°F. Situated above the spine of the right scapula on a level with the second rib was a large irregular wound with gaping edges and dirty granulations. This was the wound of entrance of the bullet; there was no wound of exit. On probing this wound one came on the second rib, which was here denuded of periosteum and partially fractured. The expansion of the right apex of the lung was impaired, and a dull note was obtained on percussing above and slightly below the clavicle. The respiratory sounds were very distant and feeble on listening over the apex with a stethoscope.

Operation.—On January 2nd, 1002, under an anaesthetic this wound was enlarged. A piece of lead about the size of a pea was found embedded in the rib. This was removed, and about 1 in. of the rib was then cut away with bone forceps in order to give free room for exploring the apex. The lung was firmly adherent to the rib and felt hard and resistant. On plunging a closed Kocher's artery forceps into this resistant area a quantity of pus gushed forth. The forceps were then withdrawn with the blades widely open, and the finger inserted into the abscess cavity. At once some hard foreign bodies were felt, and on extraction these proved to be a piece of lead, twisted and indented, and about the size of a small marble, three small pieces of the metal casing of a cartridge, a piece of cloth, and two small chips of bone. The walls of the cavity felt very firm. A large rubber drainage tube was then inserted, and the wound was left open. On recovering from the anaesthetic he coughed violently and expectorated some blood-stained mucus.

After-history.—On January 3rd his condition was not promising. His temperature ran up to 101°, he had frequent coughing, and brought up pus and mucus by the mouth. All over his right lung coarse bubbling *rales* were heard. By January 8th all these bad signs had cleared up; no expectoration of pus, no *rales*, and normal temperature. The drainage tube was taken out on the seventh day after the operation and the wound then closed rapidly. He left the hospital for England on March 9th perfectly well.

REMARKS.—I take it that the bullet had entered the apex of the lung, and set up the haemoptysis which he had immediately after having been struck; that it had then become surrounded by dense fibroid tissue, and that the abscess had, so to speak, become encysted. During the operation the walls of the abscess cavity had been broken and loosened at places, and some of the pus had evidently got into the air spaces and bronchi, and so set up the septic bronchitis which followed immediately after the operation.

LEICESTER INFIRMARY.

ABSCESS IN THE CEREBELLUM: OPERATION: RECOVERY.

(Under the care of CLAUDE DOUGLAS, F.R.C.S., Surgeon to the Infirmary.)

H., aged 15, a printer, was admitted to the Leicester Infirmary on the evening of December 17th, 1901.

History.—The present illness was said to have lasted about four weeks. He had had discharge from the right ear "nearly all his life." This had been intermittent during the previous week or so, and had entirely ceased for the last three days. He had had headache and sickness, with tenderness behind the right ear. A day or two before admission he had marked loss of power on the right side.

State on Admission.—The patient was dull and drowsy, and somewhat irritable. Speech was slow and hesitating; complained of headache and sickness. The pain in the head was chiefly on the right side; pupils dilated, and equal; some optic neuritis in right eye; knee-jerks exaggerated on both

sides; rolled over on to right side in bed from any position; temperature subnormal. A few drops of foul pus were removed from right ear by syringing.

Operation.—On December 19th the mastoid antrum was opened and found healthy. The wound was temporarily closed, and a semilunar flap turned up over the occipital bone. An opening was made with a trephine through the occipital bone below the inferior curved line. On removing the circle of bone the dura mater bulged into the opening without pulsation. It was incised and Horsley's seeker passed forwards, upwards, and inwards into the lateral lobe of the cerebellum, and at the second attempt pus escaped. About three drachms came away; it had no offensive odour. A rubber drainage tube was inserted and brought out through a hole in the skin flap, and the wound closed. The wound over the mastoid was also closed, a small drainage tube being left in.

Progress.—The patient recovered well from the anaesthetic, and there was little sickness. Next day he was doing well, with only slight headache, quite conscious, and less dull. Some little discharge from the tube in the abscess cavity. For the next two days things went on about the same, but on the 23rd the patient was not so well. The temperature went up, discharge of pus from the tube ceased, and headache and the other symptoms came on again. On the 24th the patient became cold and collapsed; there was severe pain in the head, etc. Under an anaesthetic the wound was explored, and about a drachm of pus evacuated and a silver tube inserted. After the operation the patient rapidly improved. A small discharge of pus took place through the tube, but as there was difficulty in retaining the tube in position, a rubber tube was again substituted on the 26th. This was gradually shortened, and in about a week replaced by a gauze plug. Recovery was steady and continuous. The patient became brighter and took interest in his surroundings, varied his position in bed, his speech improved, and all pain disappeared. For a few days he kept his right eye closed, but could open it when told to do so (he afterwards said that the reason he did so was because he saw double if he used both eyes). This soon passed off, and he used both eyes normally. The optic neuritis subsided, and his vision was as good as ever. There was no paralysis, and the reflexes were normal. After the first week the temperature remained normal. The appetite was voracious. He always said he did not get enough to eat, and when any one approached his bed he always asked for something to eat even directly after a large meal. This continued up to his discharge. The urine was normal, without sugar or albumen. The mastoid wound quickly healed, and there was no discharge from the meatus. He was discharged cured on February 4th, 1902. When last seen—August 27th, 1902—patient remained quite well. He is at work, and suffers no inconvenience. The scar is sound and firm and quite concealed by the hair. There is no discharge from the ear, and the hearing is good. There is no headache or giddiness, no nystagmus, no paralysis or apparent weakness. The knee-jerks are normal. His mother says that he has a very large appetite.

REMARKS.—This case is of interest, although it does not throw any fresh light on the functions of the cerebellum. The symptoms correspond on the whole with those of previously published cases. With regard to the abnormal craving for food, Luciani found in his experiments on monkeys that removal of the lateral lobe produced voracious appetite with wasting.

NEWCASTLE-ON-TYNE ROYAL INFIRMARY.

RUPTURED DUODENAL ULCER: LAPAROTOMY: RECOVERY.

(By H. BRUNTON ANGUS, M.S., F.R.C.S., Senior Assistant Surgeon to the Infirmary.)

J. J., aged 41, a furnaceman, was admitted at 10.10 p.m. into the infirmary on January 5th, 1902, suffering from severe abdominal pain.

History.—On January 5th, at 8.30 p.m., he was walking along the street, when he was seized with a sudden cramping pain over the pit of the stomach, which doubled him up and brought him to his knees to ease the pain. He managed to walk to the Central Railway Station, where he was given a cup of hot bovril and some peppermint water. This caused him such agony that he made himself sick by inserting his finger into his throat.

Previous History.—For the last ten years he had had pain in the stomach after drinking bouts. Two weeks before admission he had suffered from pain one hour and a-half after a meal, but had not vomited, nor did he feel sick. The bowels had been regular. He had had 9 to 10 gills of beer on some of the days during this period. No haematemesis or melaena had been noticed.

Condition on Admission.—He was a big, powerful-looking man, much collapsed, covered with a cold sweat; pulse 108, of small volume; and complaining of great pain over the epigastrium, and with a subnormal temperature. At 11.15 p.m., when I saw him, he had rallied after warmth had been applied, and strychnine ($\frac{1}{30}$ gr.) given subcutaneously. His pulse was then 94, and of good tone. The abdomen was tense and somewhat distended; his breathing was thoracic. The abdominal wall was rigid and there was a tenderness on pressure. The liver dullness was absent internal to the nipple; it was present at the side. The flanks were resonant.

Diagnosis.—It was decided that he was suffering from a ruptured gastric ulcer situated near the pylorus.

Operation.—Chloroform was given and a median incision was made above the umbilicus. Free gas was found in the abdominal cavity. A perforated ulcer was found on the anterior surface of the first part of the duodenum just beyond the pylorus and around it the duodenum was indurated. It was closed by a pursestring catgut suture, then Lemberted with catgut. There was little extravasation, so a gauze drain was passed down to the seat of the ulcer and a Keith's tube was placed in the pelvis. A little turbid fluid was withdrawn from the pelvis at the operation; no lavage was used; the abdominal wall was sutured in layers with catgut and the skin with silkworm gut.

Subsequent History.—The operation lasted forty minutes, was well borne, the pulse at the end was 90 and of good tone. On January 7th the gauze and tube were removed. The wound healed up straight away and the after-progress was uneventful. The man was placed on solid diet on January 19th and was discharged quite well on January 30th. On February 14th, 1902, when the man reported himself, he was in splendid condition without any discomfort after food.

REMARKS.—Mr. Moynihan has given a record of cases in the *Lancet* for December 14th, 1901, which shows the condition has previously been very fatal, and since his paper successful cases have been recorded by Mr. A. Marmaduke Sheild and Mr. R. H. Lucy. The points of interest are: (1) The absence of symptoms except after a drinking bout; (2) That it occurred in a powerful looking working man who was apparently in robust health; (3) the small amount of extravasation present in spite of the fact of liquid having been given after the perforation had taken place. Apparently the pylorus had contracted and prevented fluid passing out before he had relieved his stomach by vomiting.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

ALFRED WILLETT, F.R.C.S., President, in the Chair.

Tuesday, January 13th, 1903.

RISE OF BLOOD PRESSURE IN LATER LIFE.

PROFESSOR CLIFFORD ALLBUTT, who communicated a paper on this subject, said that it was inevitable that in the growth of medicine a static morbid anatomy should precede the study of morbid processes or clinical dynamics. Nevertheless, occupation with the ruins of the dead body for a time took observers away from origins to consummations, and effected a certain fatalism in medicine. The revolution in thought which followed the publication of the *Origin of Species* extended its influence into pathology; diseases began to lose fixity of form in the mind of the physician, and the hope of detecting and neutralizing morbid processes at their sources relieved the despair of the deadhouse. Of certain early deviations from the true balance of function it might be said that if they did not arise primarily in the circulation, yet that in this system the first evidence of them might be perceived. Of such evidences, the fluctuations of arterial blood pressure were very important. In the present paper changes of pressure in the direction of increase would be considered, and that mode of it which in many elderly persons was apt to be persistent. The rise of pressure in Bright's disease was perhaps the best-known instance of such a rise, but the change was by no means confined to this disease. Some degrees of fibrosis of the kidneys, as of other parts, were to be found in a large

majority of necropsies upon elderly persons; but "granular kidney" had peculiar clinical characters, and must have its own niche in nosology. It was generally assumed that arterial disease was necessarily attended with a rise of blood pressure; many kinds of arterial disease being comprehended, or confused, under the title "arterio-sclerosis." Such was far from being the case; it was not true that many of the acuter affections of the arterial tree, and, in many of the more chronic even of the involutionary kinds, however extreme, hyperpoiesis was conspicuously absent. The more senile forms of arterial disease might then be divided, from the present point of view, into those in which pressure was raised and those in which it was normal or even low. The first kind—those with high pressure—tended to death by apoplexy; the latter tended, often after length of years, rather to obliterative changes in the cerebral arteries, with softening. Pressure must depend upon two antecedents, singly or in combination; namely, diminution of the calibre of the arterial system and increased viscosity of the blood; it was not proved, or probable, that loss of elasticity in the vessels always or generally led to loss of capacity. Encroachment upon capacity in some areas was apt to be compensated by dilatation in others. It was suggested that the tendency to rise of pressure, often seen in elderly persons, especially in such as had led a sedentary life with positive or relative excess of food, depended on increase of viscosity of the blood. In contrast with the rising pressure of many elderly men might be set the low pressures in the young and athletic. In temperate and active men under 30 or 35, the pressure ranged from 95 to 105 mm. Hg. If the opinions expressed that the arterial tree was prone to be "self strained," and that arterio-sclerosis was a result rather than a cause of high pressure were so, the tendency to such rises and their causes should be watched. There was no definite reason to allege that a rise of this kind was to be regarded as of the nature of gout, whatever gout might be; though it might well depend on some perversion of assimilation or excretion having an affinity to gout. If the morbid tendency to rise of pressure were detected in time the disposition was remediable, chiefly by deobstruent, dietetic, and gymnastic means, some such change of habits of life being, of course, permanently imposed upon the patient; if, on the other hand, it were not detected till the strain had resulted in a new "set" of the vascular tissues, if palliation were possible, cure was out of the question. Hitherto it had been difficult to measure blood pressures, and finger estimates had not commanded a ready acceptance; the personal equation of the observer entered too far into such observations; now, however, useful instruments for the purpose had been invented.

Sir WILLIAM BROADBENT found himself in general agreement with practically every point of importance. It was desirable to have a clear idea of what was meant by rise of blood pressure in later life. The estimation by any instrument of the blood pressure at the wrist or elbow meant the gauging of the force of the heart's contraction. The rise in later life was due to more; its worst effects might develop when the heart was not capable of giving high records. The more important cause was peripheral obstruction. The one rise was fugitive, the other permanent. The obstruction arose either in the arterioles or in the capillaries, probably in the latter, as suggested by the miliary aneurysms in the minute arterioles, indicating obstruction in the capillaries beyond. The degree of pressure in the artery and the fullness of the vessel between the beats were the two indications. The condition was sometimes recognizable in the child, the schoolboy, and often in men under 30. Small arteries did not, in his experience, occur mostly in spare individuals. The connexion between high blood pressure and kidney disease was indirect; in many cases there was no such disease; it was probably due to a blood condition which also gave rise to the renal disease, and this when established was itself an accessory cause. Renal inadequacy had nothing to do with high arterial tension. As to the ultimate consequences of the condition, the causation of heart defects was important. The heart frequently gave way before the vessels, as in acute cardiac dilatation. The whole of the changes in heart and vessels were secondary to the increased peripheral resistance. Long ago he had brought forward evidence that the high blood pressure of renal disease was due to active contraction of the muscle of the vessel walls, and that due to a blood state. In advanced life there were arterial changes with which high blood pressure had nothing to do, and without any cardiac changes. The more common brain result of this was thrombosis and cerebral softening. Syphilitic arterial disease affecting both the large and small arteries gave rise quite commonly to aneurysm independently of any high arterial tension, and aneurysm was very rare in renal disease.

Dr. ALEXANDER HAIG referred to some experiments he had made eight years ago, but had not published, in which urates were injected into animals while observing manometer readings; the result was *nil*. On analysis of the blood after death there was no excess of uric acid, that which had been injected was probably caught up by the liver. Allusion was made to the effect of a meat diet or the ingestion of uric acid on the rapidity of the capillary circulation.

Dr. NEWTON PITT thought the younger pathologists would agree that high arterial tension was the predecessor rather than the sequel of vascular disease. Reference was made to observations by Dr. Herbert French to the effect that in chronic Bright's disease there was no retention of nitrogenous products in the blood, and similar observations were recently advanced at the Cairo Congress. The smallest amount of retention daily would speedily lead to a conspicuous increase and a speedy death.

Dr. H. D. ROLLESTON said that among the interesting questions raised by Professor Allbutt two were especially important that the relation of high blood pressure to arterio-sclerosis which had already been fully dealt with, and secondly the relation of kidney disease to arterial disease. No doubt tubal nephritis might lead to increased blood pressure and so to degeneration of the muscular coat and the compensatory process of chronic endarteritis. The nitrogenous excretion and intake was not the whole matter, other toxic substances might be retained in the body, causing vascular spasm and arterial degeneration with the action and reaction of the kidneys on the circulatory organ. Chronic granular kidney was probably a multiple fibro-substitution process. An ordinary granular kidney was rather a mechanical effect of arterio-sclerosis depending on impaired blood supply than an inflammatory process. Imperfect renal secretion might give rise to high tension and compensatory arterial changes.

Professor ALLBUTT, in reply, held that there were certainly two factors in high tension, a proportional heart vigour to an increased peripheral resistance. The heart usually gave way by muscle or value failure if apoplexy had not previously occurred. The maximum pressure of aortic regurgitation was very high, but the minimum was very low; he had been referring to mean blood pressures. High tension was a phrase which he thought could only be applied to a dead tube, not to a living artery. The corresponding changes in children in blood pressure and uric acid excretion were episodical, and possibly due to an infection. There were many causes of high blood pressure. Observations on the viscosity of the blood were required; it must be the immediate cause of the peripheral resistance. The specific gravity was another matter. In nephritis the principal thing was a toxic process injuring the renal epithelium; an inflammatory reaction was not essential.

CLINICAL SOCIETY OF LONDON.

HOWARD MARSH, F.R.C.S., President, in the Chair.

Friday, January 9th, 1903.

CONGENITAL DISLOCATION OF THE HIP-JOINT.

MR. T. H. OPENSHAW showed a recent specimen obtained from a girl, aged 6, who had died of bronchial pneumonia. The acetabulum existed; it was small, shallow, and flattened, and not filled up with fibrous tissue. The bone and cartilage beneath it were thicker than normal. The cotyloid ligament was well developed, but curved inwards towards the centre of the acetabulum, and partially filled up this cavity. The capsule of the joint was attached to the margins of the acetabulum, and was constricted externally to this attachment, so as to leave a small opening through which the finger could be passed into the acetabular cavity. From this point the capsule was widely expanded, permitting the contained head of the femur to move freely within it. The internal surface of the capsule was normal. The capsule itself was about normal in thickness. The ligamentum teres was represented by a thin band frayed out at its unattached extremity. It would seem to have been gradually thinned out and ultimately ruptured. The head of the bone was normal in shape, with the exception of a small area of flattening at the lower end and back part. The neck of the femur presented no abnormality. The above appearance entirely accorded with what Mr. Openshaw had found by operation. In his experience, in every case an acetabulum

existed. It was small, shallow, and triangular. The cartilage forming its floor was thicker than normal. Over it the capsule was constricted, so that the point of the forefinger was with difficulty passed down to the acetabular surface. In Mr. Openshaw's opinion, the head of the femur before the age of 3 was normal. It then became flattened at one part. The flattening gradually extended over the whole surface, and thus the head of the bone became deformed, and, as the result of subsequent osteo-arthritic change, ultimately disappeared. The ligamentum teres he had considered hitherto to be absent, but it was quite possible he might have overlooked a thin flaccid band, such as existed in the specimen which he submitted. In many cases the neck of the femur was curved, and this was especially the case on one side in cases of double dislocation. The curve presented usually a concavity anteriorly, so that when the patella was directed forwards the head of the femur looked forwards as well as inwards instead of directly inwards. Various groups of muscles were more or less contracted in this condition. Thus, the adductors were always considerably shortened, the tensor vaginae femoris, sartorius, and the front part of the gluteus minimus and medius were nearly always somewhat contracted, and the hamstrings occasionally. The iliacus and psoas tendon, in consequence of displacement of the femur upwards and outwards, passed round the anterior inferior spine, outwards and backwards, and in some cases even upwards to the small trochanter, thus in severe cases the pelvis was partly suspended upon the psoas tendon. The muscles of the leg generally on the affected side were somewhat wasted, and the pelvis was apt to be flattened and oblique upon the affected side; and, lastly, in consequence of the dropping of one side of the pelvis in unilateral cases, scoliosis was subsequently developed. In bilateral cases lumbar lordosis existed from the first. He advocated one or two methods of treatment. Reduction of the shortening by tenotomy and extension, and then reposition, so-called, of the head of the bone by manipulation as practised by Lorenz; or (2) the manufacture of an acetabulum by the open method after it had been made possible to replace the bone by manipulations. As the result of the experience of some 20 cases treated by the first method during the past six years, he considered, first, that reposition within the joint was an impossibility; and, secondly, that redislocation was exceedingly common. He strongly advised the two methods combined, and showed two cases where he had operated with excellent results. He pointed out that if the shortening were overcome first the shock of the operation was slight and a fatal result need never be anticipated, and that if an open operation were advisable, that of deepening the acetabulum was the only one to be entertained.

Mr. Jackson Clarke considered that the author's specimen closely resembled what he (the speaker) had found in the newborn infant. In about twenty cases of operation done by him after the Lorenz method he had failed in only one case to obtain any result. In some cases it was very nearly reposition. In the case of failure there was also spastic paralysis.

Mr. Noble Smith said that Lorenz, who had largely contributed to the introduction of the open method, had now abandoned it. His own experience had been chiefly manipulative. He advocated the division of the operation into two stages, by which the amount of force required to effect replacement, was, he believed, much reduced.

The President reverted to the pathology of the condition, which had been exactly investigated and carefully described in a valuable paper by Dr. Burkhardt in the British Medical Journal in 1891. That author referred to the hour-glass contraction of the capsule which offered an obstacle to the reduction of the head of the bone thus shut off from the acetabulum by the contraction. Dr. Burkhardt had found that division of the ilio-psoas tendon facilitated the replacement of the head of the femur. He suggested the formation of a committee of the Society to watch cases from their commencement, before operation. He was not sure that all the cases of alleged return of the head of the femur to the acetabulum were really such. He had seen the young woman whose case had been extensively reported by the late Mr. W. Adams as an instance of cure by long extension; it was clearly a case of unaltered congenital dislocation.

Mr. Openshaw, in reply, said that not only was the psoas-iliac tendon at fault; the capsule as a whole was contracted.

Haemorrhagic Typhoid Fever.

Dr. E. W. Goodall communicated this case.

The patient was a hospital nurse, aged 26, who, after being out of sorts for a week, noticed on January 20th some purpuric spots on her legs, and was found to have a temperature of 104°. Within the next few days a considerable number of purpuric and petechial spots appeared in the skin and subcutaneous tissue, and there was bleeding from the fauces and gums, together with epistaxis, haematemesis, haematuria, metrorrhagia, and melaena. There was continued pyrexia, with rapid action of the heart and lungs. The bowels were confined, there were no rose spots, and the spleen was not enlarged. The patient gradually sank and died at the end of a fortnight from the appearance of the purpura. A necropsy revealed typhoid ulcers in the small intestine, and, besides those into the skin, haemorrhages into the stomach, peritoneum, bladder, and right kidney. In the kidney were also a number of small yellow spots, which, under the microscope, proved to be masses of round cells surrounding clumps of bacilli, probably B. coli. The blood gave only a feeble serum reaction. An agar culture taken from the heart blood gave B. coli, while cultures taken from the spleen and a mesenteric gland gave B. coli and B. typhosus.

The case was reported because of the difficulty that attended the diagnosis, and also because of its rarity. The diagnosis made was acute bacterial infection, perhaps streptococcus, and it was not till two or three days before death that typhoid fever was suspected. The rarity of the case was shown by the fact that it was the only marked one of its kind in a series of 1,733 cases of typhoid fever. The pathology of these cases was obscure; probably the purpura was due to the action of bacteria or their toxins, in this case perhaps the B. coli. In a similar case reported by Nicholls and Learmouth[1] the organism concerned appeared to be the staphylococcus pyogenes albus. In the present case calcium chloride and adrenalin chloride were given without avail.

Dr. Lee Dickinson referred to two similar cases by American authors, and one which he had seen at St. George's Hospital. This latter patient was a woman, aged 29, who bled from almost every mucous surface. Professor Wright had recently stated at the Royal Medical and Chirurgical Society that in the acute stage of typhoid the coagulability of the blood was lessened, whereas in the later stages it was abnormally increased, thereby favouring the formation of clots. Alcohol lessened the tendency of the blood to coagulate, and in both the American cases the patients were confirmed alcoholics.

Dr. Coode Adams described another case observed by himself in North London. The patient had patches of purpura as large as a shilling over the limbs and trunk, but she recovered. In that case there was no question of under-nutrition or alcohol.

Dr. Goodall, in reply, stated that these cases were usually fatal, but were happily rare. He believed alcohol could be excluded in his case, and it was not prescribed until long after the symptoms had developed.

Generalized Miliary Tuberculosis with Acute Synovitis.

Dr. H. D. Rolleston read notes of a man, aged 52, who was admitted to St. George's Hospital after two weeks' illness, with a temperature of 103°, in a semi-delirious condition, and with painful and swollen joints. At first, under salicylates, the pain diminished and the temperature fell, but shortly this effect was lost. There were no physical signs of any importance, except widespread tenderness, and the patient became more prostrate and delirious, and died five days after admission. The diagnosis during life lay between generalized tuberculosis, severe typhoid, and some pyaemic state. The general condition suggested tuberculosis, but the arthritic manifestations made some other form of haemic affection more probable. At the necropsy, except for synovitis, nothing definite was found; no tubercle could be seen. Pieces of the lungs and spleen, after being hardened, were seen, even by the naked eye, to be riddled with miliary tubercles. The association of generalized tuberculosis with acute synovitis of several joints was a very rare condition, and might lead to an erroneous diagnosis of acute rheumatism. Another point of clinical interest was the widespread tenderness.

Dr. Kingston Fowler referred to the case of a girl with a cavity in the lung, who suddenly developed acute synovitis of the wrist-joint. He thought that, in the author's case, there must have been some other concurrent affection, because, if the joint affection were due to tuberculosis, one would expect it to be more frequently seen.

MEDICAL SOCIETY OF LONDON.

A. Pearce Gould, M.S., F.R.C.S., President, in the Chair.

Monday, January 12th, 1903.

Suppression of Urine in a Case of Ovarian Tumour.

Mr. Bernard Pitts communicated a paper on a case of suppression of urine in a subject with ovarian tumour and pregnancy from which recovery occurred after removal of the tumour and uterus. Three years after the patient had noticed a swelling

[1] *Lancet*, February 2nd, 901.

in the abdomen she sought medical advice, when a hard fluctuating ovarian tumour was found complicating pregnancy. The urine became scanty and albuminous, until only 1 oz. was passed in twenty-four hours, with the onset of uraemic symptoms, and later absolute anuria for sixteen hours. Laparotomy was performed, a large multilocular ovarian cyst was found, much of it being solid, and the fluid in the cysts could not be removed by tapping. It was found impossible to remove the tumour without the pregnant uterus, so both were removed. Free secretion of urine was then re-established, and the amount of albumen which reappeared in the urine diminished, and in the course of a few days ceased altogether. Reference to the literature of anuria from intra-abdominal pressure was made, and other causes of anuria were alluded to. The possible relation of the pregnant condition to the anuria was discussed.

The PRESIDENT referred to the remarkable polyuria which followed the anuria when the pressure was relieved, suggesting possibly both pressure on the ureters, and also on the kidney or kidneys and vessels. Was there definite evidence of pressure on both kidneys?

Dr. MARTINDALE WARD said that the woman had been at work up to three weeks from the operation; later in one day the girth increased from 44 to 46 in. For thirty-eight hours before the operation only 1 oz. of urine was passed. He had estimated that the matters removed would weigh from 85 to 90 lb.—that was including tumour and uterus.

Mr. BERNARD PITTS thought that the uterus would most probably have pressed on the ureters. It did not follow that both kidneys were equally pressed upon.

THE ETIOLOGY OF EMPHYSEMA FROM THE PHYSICAL STANDPOINT.

Dr. B. J. COLLINGWOOD communicated a paper on this subject, in which an attempt was made to bring about a compromise between the expiratory and inspiratory theories of the causation of emphysema. It was suggested that emphysema in the protected parts of the lungs was due to inspiration, and in the unprotected to expiration. Two causes were given for the production of the disease in both protected and unprotected parts of the lungs—namely, weakness and overstraining of the elastic tissue of the lungs. Both causes resulted in the production of a vicious circle, for either weakness or overstraining of the elastic tissue of the lungs would lead to its overdistension, and consequently further weakening. The following facts were adduced in support of the view that emphysema in the protected parts of the lungs was due to inspirations. (1) The position of the chest in emphysema was one of extreme inspiration, a result which could not be brought about by any form of expiration; (2) emphysema was a markedly progressive disease, but if expirations were its cause, the further emphysema advanced the less power would they possess, for more and more difficulty was experienced in producing expiration; (3) emphysema was more marked at the periphery than at the centre of the lung, but the periphery was the part most directly compressed by expiration. It was pointed out that violent expiratory efforts against an obstruction could not produce emphysema in protected parts of the lungs, for during such efforts the protected parts were slightly contracted. Although it was difficult to decide which parts of the lungs were unprotected, yet it was certain that such parts formed only a small proportion of the whole lung. A general emphysema, accordingly, must be mostly inspiratory in origin. Compensatory emphysema was stated to be due to inspirations of normal depth but excessive strength causing hyperdistension of pulmonary infundibula when some neighbouring infundibula owing to disease were incapable of expansion. A method of treatment for general emphysema was suggested, consisting in supplying some elastic support to the thorax. It was urged that this would prove beneficial by aiding expiration and preventing excessive inspiration.

Dr. HORTON-SMITH thought the combination of inspiratory and expiratory theories of the etiology of emphysema explained much. In regard to the unprotected parts, as the apices, no doubt the expiratory force was chiefly concerned, and in the protected parts the inspiratory force came into play in producing the pathological condition.

After Dr. AULD had criticized the experimental demonstration which Dr. Collingwood had given,

Dr. H. A. CALEY observed that it was important to distinguish between the protected and unprotected parts of the lung. One reason why the elastic tissue did not expand more than it should was that in expiration the elastic tissue was at rest. If there were obstruction to the outlet of air, the inspiratory strain might be prolonged—meaning the prolongation of normal alveolar pressure. In regard to the relative importance of primary degeneration and inspiratory strain, it was held that the predisposing cause of degeneration was more important than the exciting cause. The influence of chronic alcoholism in impairing the elasticity of the lung was alluded to.

Dr. COLLINGWOOD replied.

ABERDEEN MEDICO-CHIRURGICAL SOCIETY.

JOHN GORDON, M.D., President, in the Chair.

Thursday, December 4th, 1902.

POTASSIUM PERMANGANATE IN CERTAIN CASES OF MENSTRUAL SUFFERING.

PROFESSOR STEPHENSON read a paper on certain forms of menstrual suffering and the action of potassium permanganate therein. Cases were selected to illustrate the effects the remedy and the forms of suffering in which relief was obtained. By such a study fresh light might be thrown on the physiology of menstruation. The term "menstrual suffering" was used to embrace all forms of derangement of the function, as well as affections of distant organs associated with the rhythmic changes of the mensal cycle. There was abundant evidence that manganese possessed special therapeutic properties, but nothing was known of its action. The disappointing results in many trials had arisen from erroneous ideas regarding its action and the indications for its use. It could never be regarded as a "substitute" for iron; it had no action on the coloured blood corpuscles; anaemia was not an indication for its use. The indications were not to be sought for in the general terms amenorrhoea, menorrhagia, dysmenorrhoea; nor was its use to be limited to any one of these affections. The author's experience was that direct and reliable results were to be obtained in many and varied forms of menstrual suffering when these were due to certain vascular disturbances. What these conditions were, and the inferences to be drawn from them, were the objects of the paper. Attention was directed to what the author regarded as a type of constitution or diathesis possessing a distinctive character or individuality as distinct in itself as that of the chlorotic constitution. In chlorosis the defect lay in the blood formation, in this other in the blood vessels, and principally in the capillaries and venous system. Iron was indicated in the one, manganese in the other. Each might exist independently; they were also to be found combined. The condition was readily to be recognized by the colour of the hands, which was familiar to all. They were of a dull red, generally cold, and when so they assumed a purplish tint, better described by the Scotch word "blae." Hence he had been in the habit of designating this as the "blae" type of constitution. In the full development, when the health became impaired, the colour of the face was often uncomfortably high, a dull not a bright red, often flushed, full, and swollen looking (Scotice, "hoved"), and at times assumed the "blae" tinge. The patients complained of being depressed, heavy all over, with loss of energy, and a tendency to fall asleep if remaining quiet. The menstrual function was liable to be deranged, even when the health was otherwise good. In some the flow was diminished, in others increased. The period was always accompanied by pain, varying in position and character; the heaviness and lack of energy increased as the period approached and diminished after. As the menstrual suffering increased or the health was impaired the venous distension might show itself in the legs. Before a period they became full, heavy, dragging, the veins stood out more, and finally in some they became varicose. Frequently also such patients suffered from headaches, which were strictly associated in time with the periods, and might afterwards occur in the intervals. In all the cases illustrating these features very striking and permanent results were obtained from the use of the permanganate. The tendency to undue fullness of the venous system disappeared, and with it the various forms of menstrual suffering, as well as the general feeling of dullness, heaviness, and loss of energy. The usual expression of the patient was, "I feel lighter all over, and have no pain to speak of." In the class of cases under review the distress was evidently due to a loss of the normal balance between the arterial and venous systems. There were rhythmic vascular changes in the mensal cycle. In the premenstrual week there was a rise in the temperature of the body and in the arterial blood pressure. Menstruation, however, did not occur till three or four days after these had

begun to fall. Now this corresponded in time with the gradually increasing fullness in the veins in the legs two to three days before and the first day. The time corresponded, also, with the period of pelvic suffering. The idea associated with the "congestive dysmenorrhoea" of writers had generally been an arterial, not a venous, congestion. A study of the cases recorded suggested the view that the phenomena of menstruation were associated with, if not due to, the rise of the tide in the venous system. Further, as it was evident that manganese, acting probably through the nerve centres, regulated the rhythmic vascular changes, reliable indications for its use were to be found in the evidence that constitutionally or locally there was a disturbance in the venous circulation, as illustrated in the cases recorded by the author.

The following members took part in the discussion: Drs. FINLAY, EDMOND, WESTLAND, MCKERRON, RENNET, J. F. CHRISTIE, A. WALKER, ROSE, and the PRESIDENT.

BRITISH GYNAECOLOGICAL SOCIETY.—The annual meeting of this Society was held on January 8th, Sir J. HALLIDAY CROOM, President, in the chair. The Fellows elected to succeed the retiring officers were as follows: *President:* Dr. Heywood Smith. *Vice-Presidents:* Mr. Stanmore Bishop, Dr. H. Macnaughton-Jones, Dr. J. A. Mansell Moullin, Mr Christopher Martin, and Dr. F. F. Schacht. *Members of the Council:* Dr. Roe Carter, Dr. Ebor Chambers, Sir J. Halliday Croom, Dr. F. Edge, Dr. Clement Godson, Mr. Mayo Robson, Mr. Charles Ryall, and Dr. R. T. Smith. *Secretary:* Dr. S. Jervois Aarons. —Dr. J. J. MACAN read his report upon the *Journal* of the Society, which was accepted, with the thanks of the Society to him for his services as editor.—Dr. MACNAUGHTON-JONES read notes of cases of (1) binovular pregnancy and birth of female twins after salpingo-oöphorectomy and resection of the other ovary; (2) repeated pregnancies after salpingo-oöphorectomy and ventrifixation of the uterus; the patient had two uncomplicated labours, the children being healthy, but a third pregnancy ended in a miscarriage. Dr. HEYWOOD SMITH and the PRESIDENT commented on the cases.—Dr. WILLIAM DUNCAN exhibited a very large sarcoma of the uterus removed by abdominal hysterectomy eight years after an uncomplicated menopause.

The tumour, detected ten years ago, had increased gradually till six months before the operation, when it took on rapid growth, with loss of flesh and strength. At the operation a cavity was opened, from which escaped a clear odourless fluid, and it was taken to be a cyst; it was freely incised, but proved to be the urinary bladder, drawn about 3 in. above the navel by the tumour. The incision was closed by a single layer of silk sutures, supplemented by a few finer stitches through the peritoneal coat, and the fundus of the elongated organ was fixed to the abdominal wall just above the pubes. The tumour was after much difficulty got out of the abdomen, and amputated. When the posterior layers of the broad ligaments had been united from behind forwards, a cavity as large as an adult head was left above the small cervical stump; this cavity was marsupialized to the lower part of the abdominal wound, and lightly packed with gauze. Little blood was lost, and the patient stood the operation, which lasted an hour and three-quarters, well, and made an uneventful recovery.

Dr. BEDFORD FENWICK pointed out the valuable information to be gained by passing a vesical sound when operating on large tumours, and for large cavities in the broad ligaments recommended complete closure above and drainage through the vagina. Dr. HERBERT SNOW said that the microscopic section proved that the tumour was sarcomatous, but the duration for ten years suggested that it was the result of degeneration of a fibroid. Mr. BOWREMAN JESSETT had found a catgut suture of the mucous membrane with Halsted's suture of the peritoneum an efficient way of closing wounds of the bladder, for which he did not think more than two layers were required, but he would have preferred to have introduced in this case, as he was in the habit of doing in all his vaginal hysterectomies, a self-retaining catheter, to spare the patient the annoyance of the repeated passage of an instrument. Dr. MACNAUGHTON-JONES made some remarks, and Dr. DUNCAN replied.—The RETIRING PRESIDENT delivered his valedictory address. Specialism, he pointed out, not only had great advantages, but was now absolutely necessary on account of the vastness of the field opened to the medical profession by the scientific knowledge acquired by improved methods of research. Whatever the future of gynaecology might be, it had made more substantial progress than other branch of surgery. He could understand the position of those who held that as absolute diagnosis was often impossible until the abdomen had been opened, the operating gynaecologist must be a skilled abdominal surgeon, and that if a general surgeon was to do hysterectomy, a gynaecologist might perform gastrotomy. But the difficulty was where the line was to be drawn if gynaecology was to remain a speciality. The tendency at present was to ignore the medical elements in gynaecology, but even on its surgical side its proper field was the genito-urinary tract. In Edinburgh he and his colleagues professed obstetrics and the diseases of women, and he held that to be the reasonable position for gynaecologists to adopt.

FOLKESTONE MEDICAL SOCIETY.—The annual meeting was held on January 9th, Dr. W. J. TYSON in the chair, in the unavoidable absence of the President. Twenty members were present. The following officers were elected for the year 1903:—*President:* Dr. T. Eastes (re-elected). *Vice-Presidents:* Dr. Hackney and Dr. Tyson. *Committee of Management:* Mr. Gilbert, Mr. Gore, Mr. Read, Mr. Murdoch, and Dr. Sworder. *Library Committee:* Mr. Madden, Mr. Linington, and Dr. Gordon-Wilson. *Honorary Secretary and Treasurer:* Dr. Calverley.

REVIEWS.

INFANT FEEDING.

The Theory and Practice of Infant Feeding,[1] by Dr. H. DWIGHT CHAPIN, of New York, is written on somewhat different lines from the other works, now numerous, treating of the same subject. The author does not consider the main desideratum in infant feeding to be the preparation of a mixture identical in chemical composition with human milk. He justly argues that the mere identity in chemical composition between modified cow's milk and human milk is of secondary importance compared with the physiological differences obtaining between two such fluids. Some of the comparative physiology the author cites, dealing with the digestion in the stomachs of different animals of their own appropriate milks, is useful as throwing light on the behaviour of such milks in the stomachs of infants. Much of the remaining elementary physiology, however, might well have been omitted as being within the ordinary knowledge of every medical man, and as merely adding unnecessary bulk to the volume. Dr. Chapin lays great stress on the value of a readily obtainable milk supply of reliable quality. He was, it would seem, the prime mover of a scheme by which an arrangement was come to between the County of New York Medical Society and a number of the chief dairymen supplying the city. In consideration of certain precautions being taken by the dairy proprietors in the milking and storage of the milk, and the liberty accorded to the agents of the Medical Society to examine and test specimens frequently, the Society granted permission for metal capsules to be used on bottles, certifying in its name as to the quality of the contained milk. The standard required by the Medical Society in this "certified" milk is that it shall not fall below a 3.5 percentage of butter fat, shall not exceed 0.2 per cent. in acidity, and shall not contain more than 30,000 bacteria per cubic centimetre. Dr. Chapin argues that such a milk meets all reasonable requirements, and, if so, the more elaborate and expensive processes—such as those of the Walker Gordon Company—are unnecessary. The expenses of the working of the scheme arranged between the Medical Society and the dairymen is borne by the latter, payment being made in proportion to the amount of milk sent out; but they are more than repaid by the ready sale of the "certified" milk at one cent the American quart above the ordinary market price. The greater part of the work is taken up with the important questions of the composition of different milks and the precautions to be taken to ensure a supply of reliable milk in the nursery. In contrast with this, the space devoted to the immediate preparation of milk for the use of infants is brief. The chapter on suckling, indeed, is somewhat inadequate, and might with advantage have been amplified and elaborated. Dr. Chapin's method of dealing with cow's milk is to allow the cream to rise thoroughly in a 32-oz. measure, then with a special dipper to remove the top 9 oz. for the use of infants under the age of 4 months, and the top 16 oz. for infants above that age, and then to dilute these top milks in appropriate proportions. He claims that these "top" milks contain the important ingredients fat and proteid in more definite and settled proportions; 3 to 1 in the case of the top 9 oz., and 2 to 1 in that of the top 16 oz.,

[1] *The Theory and Practice of Infant Feeding.* By Henry Dwight Chapin, A.M., M.D., Professor of Diseases of Children at the New York Post-Graduate School and Hospital. 1902. London: Baillière, Tindall, and Co. (8vo, pp. 326.)

than can be determined in the case of the total quantity of milk. But how this greater precision in the ratio of fat to proteid is so attained is not very evident from the text. By the use of such "top" milks, no doubt, a due quantity of fat is ensured in the infant's meals, and it is in a deficiency of this ingredient that the main fault lies in many of the commoner methods. For a diluent, Dr. Chapin is strongly in favour of a malted gruel, but it may be questioned whether he does not overrate the nutrient value of it as prepared according to his directions. In addition to those dealing with the diet of infants in health, there are several short chapters treating of the diet in some of the commoner infantile diseases, and on the whole the advice given would seem judicious and appropriate. The book is well written and deserving of careful consideration.

DIETETICS.

THE bulky volume before us on *Practical Dietetics*,[2] by Dr. GILMAN THOMPSON, is a compendium of information industriously compiled. In it will be found many tables and similar matter derived from reports of prisons, hospitals, arctic expeditions, and military service, but like most books upon this subject it contains too much of this sort of detail and too little clear statement of the general principles upon which dietaries should be based. We believe that the problem of dietetics for healthy persons has been solved by the human race, and that the business of science is not to dictate, but to explain those results. Where men are healthy and at liberty they may be trusted to choose their own food, but undoubtedly where these conditions do not exist the quantity and quality of the diet must be determined for them. The author quotes a criticism which reaches him from the inmates of a large girls' college, where the diet was for some time experimentally regulated by an expert in such matters, to the effect that "if one half the time were bestowed upon properly serving and selecting the food that is given to computation of its force producing value, the girls would have very much better appetites and digestion." We question whether it is desirable to give so much space in a book like this to the consideration of a number of proprietary articles unless the author has the courage to deal with them thoroughly. It is not satisfactory for him to repeat the proprietors' statements, even although he may guard himself from adopting them by using the formula "it is said." We notice that he has given an incorrect advertised analysis of Soya bread, although he might have found in such a well-known book as Frankland's *Agricultural Chemistry*, the analysis which shows that Soya beans contain 24 per cent. of carbohydrates. Dr. Thompson quotes a report of Major Woodruff of the American army, in which, speaking of the diet of soldiers, he says that "it is impossible to concentrate food to more than about three-fifths of its original bulk." It would have been well to have reminded the reader of this fact in the section dealing with those proprietary foods which profess to put an ox into a teacup. Moreover, we do not find our author a very safe guide to the digestibility of various articles of food. He frequently says that an article is digestible, meaning, perhaps, that it is capable of being reduced to an assimilable form, but many things so described are ordinarily recognized as "indigestible" in the popular sense, that is to say, they are articles which are not easily digested. For example, among the articles described as digestible are buttered toast, carrots, parsnips, salsify, radishes, and almonds. Again, the statement that vegetable albumen is digested in the stomach in a manner quite similar to the digestion of animal proteids would be understood by many persons to mean that vegetable albumen is as digestible as animal albumen, although this is probably far from being what the author intended to imply. Further, under alcohol, we are told that "alcohol is of service for many forms of diseases of the nervous system," and we think that it would have been far better to have stated the very opposite, namely, that alcohol is injurious in diseases of the nervous system, and the conditions and limitations under which its use may be prescribed should have been insisted upon. About half the book is taken up with the special dietaries to be used in diseases. They are compiled from many authorities, but we should have much preferred the author's own judgement and experience to have been more in evidence. In the treatment of those diseases in which diet is of especial importance, such as diabetes, for example, we do not find the author a very satisfactory guide. We have already alluded to his mistake about Soya bread, but it is of far more importance that he has failed to grasp the principle upon which modern diabetic dietaries are based, and in this respect his book is quite out of date. There is no bibliography, and we miss references for many statements which should be open to verification. The text contains a number of misprints, among which we have noticed—p. 142, "mineral waters" for "mineral matter"; p. 188, "non-nitrogenous" for "nitrogenous"; p. 209, "Seltzers" for "Selters," "Kissengen" for "Kissingen"; p. 232, "more inferior than"; p. 269, "beats" for "beets"; p. 290, "Ufflemann" for "Ueffelmann"; p. 426, "London" for "Leeds"; p. 495, "Granger Stewart" for "Grainger Stewart"; p. 649; "Clarke" for "Clark."

[2] *Practical Dietetics*. By W. Gilman Thompson, M.D. Second edition. London: Henry Kimpton. 1902. (Demy 8vo, pp. 852. 21s.)

The preparation of cocoa, or cacao, as Dr. ZIPPERER, the author of a bulky volume, *The Manufacture of Chocolate and other Cacao Preparations*,[3] prefers to call it, seems to lend itself more readily to adulteration than any other article of commerce. As the law fixes no standard for the proportion of cocoa mass in the various articles sold as cocoa or chocolate, the addition of extraneous substances is left entirely to the pleasure of the maker, and so long as he avoids the use of substances which can be shown to be injurious to health, he does not bring himself within reach of its penalties. Cocoa powder should consist of the powdered beans deprived of their fat; but undoubtedly a very large amount of foreign substance is in some cases added, such as ochre, clay, sand, the powdered husks of the cocoa beans, bean meal, sawdust, earth nut, walnut, hazel nut, and acorn powder. Formerly starch was used, but as this causes the cocoa to thicken when mixed with hot water, it has been discontinued, and other adulterants substituted. A liquid called "Theobrominat" is said to be employed in the preparation of cheap products in order to increase their aroma; this appears to consist of a 15 per cent. spirituous solution of oil of coriander. The so-called soluble cocoa is prepared either by mixing the powder with an alkali or by treating it with steam, and at the present time excellent machinery seems to be in existence for performing all the necessary operations; Dr. Zipperer recommends the employment of ammonium carbonate or ammonia solution, the latter being the more effectual. A form of adulteration of chocolate which is said to be increasingly common is the addition of excessive quantities of cacao butter. Dr. Zipperer points out that diabetic chocolate contains a larger proportion of laevulose and starch than is desirable in view of the nature of the disease for which it is recommended; but cocoa made from the nibs may be used by diabetic patients, as the amount of starch contained in the beans is not sufficient to be of real importance. The quality of cocoa does not seem to stand in direct relation to the amount of theobromine, but rather to the aromatic oils to which the flavour is due. Theobromine is found, not only in the beans, but largely in the husks, and since the introduction of this substance into medical practice the husks have acquired a considerable value for the purposes of its manufacture. The best-known salts of theobromine are diuretin, agurin, and uropherin, of which the first is in fairly common use and has gained considerable reputation as a diuretic. Dr. Zipperer's book seems to be a manual of value to the manufacturer of cocoa and chocolate, but is only interesting to the medical profession in so far as we are concerned with food and its adulterations.

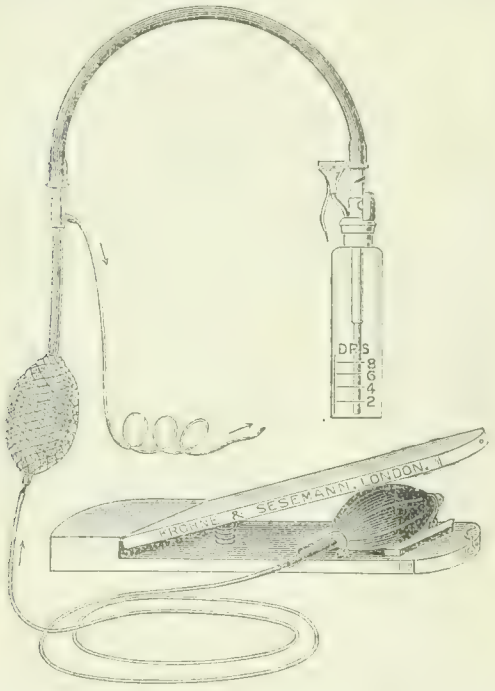
[3] *The Manufacture of Chocolate and other Cacao Preparations*. By Dr. Paul Zipperer. Second edition. London: E. and F. N. Spon. 1902. (Demy 8vo, pp. 287. 16s.

INTERNATIONAL LIFE ASSURANCE CONGRESS.—The International Congress of Life Assurance Medical Officers will hold its third meeting in Paris in May. Among the communications promised are tuberculosis of bones and joints, by Dr. Poels of Brussels; the importance of chronic peritoneal inflammations from the life insurance point of view, by Dr. Bourcy, of Paris; emphysema, by Dr. Hirtz, of Paris; cholelithiasis, by Dr. Carrigues, of Paris; diseases of the stomach and intestine, by Dr. Braga, of Paris; tuberculosis, by Dr. Florschutz, of Gotha; asthma, by Dr. Mahillon, of Paris; anomalies of the thorax, by Dr. Redard, of Paris; pregnancy, by Dr. Tissier, of Paris; gout, by Dr. Lereboullet, of Paris; arteriosclerosis, by Dr. Moritz, of St. Petersburg; obesity, by Dr. Norton, of Paris; specialists and confidential medical examinations by Dr. Weil, of Paris; and the contagion of cancer by Dr. Peyrot, of Paris.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEDICAL AND SURGICAL APPLIANCES.

Foot Bellows for Use with Junker's Inhaler.—Mr. HARVEY HILLIARD (Assistant Instructor in Anaesthetics at the London Hospital, and Assistant Anaesthetist to the Royal Dental Hospital) writes: Having frequently felt the want of a third hand when using Junker's chloroform apparatus in prolonged and bloody operations upon the face and jaws, it occurred to me that the ordinary bellows might be equally well worked by the foot, thus liberating a hand; but on inquiry I found that already Dr. Dudley Buxton had invented a form of foot bellows; this apparatus, however, has disadvantages which are not present in the one here figured, which has been made to my design by Messrs. Krohne and Sesemann, and is extremely simple and portable; it can be used with the ordinary hand bellows by making a slight alteration in them, which any anaesthetist can easily effect for himself. The apparatus



consists of a wooden base with a raised piece upon which to rest the heel when working the bellows, upon this is hinged another piece of wood supported by a spiral steel spring, under which is placed the modified hand-ball of the Junker bellows; this ball is detached from the second, netted ball, a sufficient length of tubing being interposed having a conical circularly-ribbed metal nozzle at each end, so that it can be easily and firmly inserted by one end into the netted ball, and by the other into the handball; this simple alteration can be effected in a moment, and does not in any way spoil the apparatus for ordinary use, as the balls can be reunited by means of one of the nozzles. When being used as a foot bellows the ball is kept in place by a little ledge of wood in front and behind, and by two stout wire loops which pass round its extremities where they become elongated into its entry and exit tubes; these loops when not in use fall inwards so that the whole apparatus can be shut up flat, being then only 1 in. in thickness, thus taking up very little room in one's bag. By its use the anaesthetist has one hand free to manage a gag or to sponge out the throat in such operations as I have mentioned above; it will also be of value to the general practitioner who desires to give chloroform while attending a midwifery case singlehanded; and doubtless also to a pathologist when using ether for freezing specimens for cutting microscope sections.

THE VACCINATION ACTS.

By JOHN C. MCVAIL, M.D.

(Continued from p. 102.)

THE CONSCIENCE CLAUSE.

CLOSELY interlinked with the subject of a Revaccination Act is that of the Conscience Clause. When the Royal Commission on Vaccination published its final report and boldly recommended a Conscience Clause, a great part of the medical profession and probably also of the public were startled at what they regarded as a lowering of the vaccination flag. Some opponents of vaccination appeared at first to be jubilant over what they professed to regard as an antivaccination victory. Compulsion had gone by the board, and everything else relating to vaccination would quickly follow. Very soon, however, a reaction began in the reading of the recommendation. Heed was given to the fact that the Commissioners themselves suggested such a clause not to permit a lessening of the practice of vaccination, but to achieve an increase of it. Looking, indeed, to the well-defined conclusions of the Commission regarding the necessity and efficacy and safety of vaccination as a preventive of small-pox, any proposal to diminish its practice would obviously have been inconsistent. The Commission, however, might have been mistaken in their judgement as to the likely effect of a Conscience Clause, and when Government introduced their Vaccination Bill in 1898 it appeared that they had thought so, for all that they proposed was to diminish the number of penalties exigible in respect of any one unvaccinated child. As the law had previously stood there could be constant repetition of prosecutions and penalties until an unvaccinated child had reached 14 years of age, and the Government's proposal was to limit the penalties to one or two. Discussion in the House of Commons resulted in the substitution of a Conscience Clause for these limited penalties. Opinions still greatly differ as to whether or not this was a wise substitution. Personally, I think it was. No weapon in the hands of an antivaccinationist was equal in value to that furnished by the spectacle of repeated prosecutions and fines, and selling of goods and imprisonment for refusal to pay the fines inflicted. Such proceedings had, indeed, been a large factor in the election in many parts of England of Boards of Guardians whose policy was to allow the compulsory provisions of the Vaccination Acts to become a dead letter, so that not merely were active opponents exempted from the law, but tens of thousands of children were annually permitted to pass the compulsory vaccination age without any effort being made to procure their protection against small-pox. Here and there, however, Boards of Guardians still continued the system of repeated prosecutions, and the limitation of the penalties to one or two, as proposed by the Vaccination Bill of 1898, would have had the effect of restraining the action of such Boards. But it would still have left the weapon, perhaps slightly blunted yet useful, for antivaccination propagandism. In this country no Act of Parliament has every really been, or probably will ever really be, compulsory in the sense of forcing the vaccination of a child against the will of a parent prepared to pay penalties rather than submit. The question, therefore, of the amount of pressure to be brought by law in support of vaccination is simply one of degree and expediency. So far as I can see, a well-drawn Conscience Clause is the best method of relief from absolute compulsion. The present Conscience Clause is not well drawn. As pointed out in the paper already referred to, the clause is faulty in two directions. It allows a great many people to receive exemption certificates who by no stretch of imagination can be regarded as conscientious objectors, and it allows refusal of certificates to other persons who are willing to prove their determined resistance to vaccination by every means which the law allows to them. The Conscience Clause is defective in leaving far too much to the discretion or indiscretion of magistrates. Any two of these may, on the one hand, grant certificates by the hundred to people who choose to walk through their court in the course of an evening stroll, and on the other hand, if the magistrates should chance to change their views, or to have for successors on the same bench others differently minded, they may discuss the whole subject of vaccination by the hour with objectors and their agents, and may in the end declare themselves not "satisfied," and so refuse to grant certificates.

The purpose of the Royal Commission in recommending an exemption clause was to set up a standard which would be as nearly as possible successful in distinguishing the determined opponent of vaccination from the merely indifferent and

neglectful parent. It is useless to discuss here what constitutes conscience. A good clause may be difficult to frame, but it should surely not pass the wit of those who draft Parliamentary Bills for Government to formulate, in consultation with the Local Government Board, some scheme which would give the merely careless parent more trouble than the procuring of the vaccination of his child would do, and at the same time would allow irreconcilable opponents of vaccination to escape without interposing needless and futile difficulties. Indeed, if there were any better method of distinguishing between the two classes, then, seeing that the purpose of the Acts is not to punish folly but only to promote vaccination, I would take no legal proceedings whatever against those who cannot, by any method sanctioned by any Act of Parliament, be induced to accept protection against small-pox. But, unfortunately, no such method is known. Even under the Conscience Clause there have been since 1898 a few cases in which it has been possible for antivaccinationists to get up demonstrations, and processions, and orations regarding men who would neither have their children vaccinated nor apply for exemption certificates. Such things may not be entirely avoidable under any Act of Parliament, but it is obvious that the public is not likely to be so easily led to look on a man as a martyr who merely will not take the trouble to obtain an exemption certificate, as in the case of a man who had no choice between submitting to vaccination on the one hand, or to a penalty with its alternative of seizure of goods or imprisonment on the other.

But all this does not answer the question, Can we, with a Conscience Clause, expect in England such immunity from small-pox as Germany has achieved? More than one point has to be considered here.

Assuming that we are to have legislative obligation with regard both to primary vaccination and to revaccination, will a Conscience Clause be very largely resorted to, for infants, or for school children, or for both? That again will depend partly on the terms of the Conscience Clause. If amended as above suggested, I think it quite likely that resort to exemption certificates would not be so great as if the present clause were retained. The latest returns show that in the provinces the conscientious objectors amount to about 5 per cent., and in London to about 1 per cent. This possibly gives too favourable a result, because in some places no great amount of pressure has yet been brought to bear on the parents of unvaccinated children to force them towards either vaccination or exemption certificates. But a stronger clause, allowing no such vagaries as are at present possible, would have a better effect in leading careless parents towards vaccination. If so, it may be asked, might it not also lead to more imprisonments and more "martyrdoms"? Not necessarily, but that point will be referred to again.

Also, it is to be remembered that there may not be the same resort to exemption certificates in the case of children 12 years old as in the case of infants. A nervous mother may not so readily be filled with groundless alarm regarding her sturdy schoolboy as when he was a tiny infant. Besides, as time passes, and revaccination comes to be more and more a matter of course in the case of school children, opposition should tend to diminish. Resort to revaccination would become all the more general if the requirement came to be anything like a routine one in obtaining employment. Much frothy indignation has been expressed by antivaccinationists on this subject. Government departments, especially the Education Department, and some employers of labour, have been accused of tyranny and undue interference with the liberty of the subject because they have refused to accept or retain the services of those who would not be vaccinated or revaccinated. But surely if a father has the right to resort to a Conscience Clause owing to his disbelief in vaccination, a business man has a right to exclude from his establishment any individual who, through exceptional liability to small-pox attack, is regarded as likely to become a means of spreading the disease among his fellow workmen. The antivaccinationist of course would hold that the employer is mistaken, just as other people think the antivaccinationist mistaken, but if the latter is allowed to support his own opinion by getting an exemption certificate and refusing vaccination, surely the former has a similar right of exemption from employment of the unvaccinated. The idea that any one desiring a servant should be compelled against his will to engage or continue to employ a person whom he regards as a danger to his other servants only shows how differently an antivaccinationist can look on the question of compulsion as applied in different circumstances. It is not merely the health of other employés that is in question; there is also the possible disorganization of business and all that that involves. In a trade where the stock consists of material capable of conveying infection, as in clothing, drapery, or millinery, it is easy to see that great monetary loss might result from even a single case of small-pox. In this matter the liberty of the subject cannot be entirely confined to the antivaccinationist.

As concerns possible attainment of German results, there is still another point to be noted. A great deal of the very trifling amount of small-pox that is now experienced in Germany occurs near the frontiers, through importation of infection from less vaccinated countries like Austria and Russia. Owing to her sea border, the risks of England are, in that respect, much less than those of Germany. How far this would counterbalance the existence in England of a scattered percentage of unvaccinated persons, and especially the existence of localities here and there in which such persons might particularly abound, is a question which admits of no present answer; but the English nation as a whole, being vaccinated and revaccinated, would form a valuable cordon of protection round localities in which antivaccination might prevail. Variolous infection would not readily reach them, and when it did the surrounding populations would be well protected against invasion. When small-pox might chance to be occasionally introduced elsewhere in England, it would be easily controlled. The number of susceptible contacts would not be great, and there would be little opportunity for spread of the disease. If, however, the Conscience Clause were to result in some less degree of immunity than Germany enjoys, we would yet be much better off than at present; and of this there is no doubt whatever, that there would be much less small-pox under a Revaccination Act with a Conscience Clause than under a Primary Vaccination Act alone.

The Age for Revaccination.

A subordinate question is the exact age for revaccination under a Revaccination Act. The Compulsory Education Acts would here come to the aid of an obligatory Revaccination Act. The school registers would be available for obtaining periodical lists of children reaching the stipulated age. Unless in presence of small pox, the revaccination age should, I am inclined to think, be made as late as is consistent with securing the vaccination of all children before leaving school. The reasons are twofold. The longer the interval between two vaccinal operations, at least as regards the possible intervals here under consideration between primary and revaccination, the greater is the likelihood of the second operation being thoroughly successful as measured by area and number of marks and character of scars. It is desirable to give as much opportunity as the limits of elementary school life will allow for the production of typical vesicles of sufficient number and area. The second reason is complementary to this. The later revaccination is in being done the longer will its full protective power endure. This is not necessarily to be regarded as a mere adding on of a year at one end by subtracting it at the other. It has always seemed to me possible that the growth and development of the individual may be a factor here. At the age of primary vaccination the individual is only some 14 lb. or 16 lb. in weight. His height and weight grow and multiply so rapidly as to suggest that the vaccinal protection originally conferred may be subject to a kind of dilution or distribution throughout the larger bodily frame, and so may diminish somewhat in value. If there is anything in that view (and it is not mentioned here as more than a theory), then it might be better, other things being equal, to defer the second vaccination, so that the body would have more nearly approached to its full development. But experience of small-pox hospitals has shown that, at least in epidemics, susceptibility to attack has returned to a considerable percentage of persons between 10 and 15 years of age, and to an appreciable number even before 10 years of age. The fact is not to be denied, but in presence of national revaccination its weight would be lessened on the lines above indicated that small-pox would have much more difficulty in getting a footing in a community than at present. One practical reason for making it quite out of the question to think of postponing revaccination beyond school life is that then there would be no sure way of getting lists of persons about to reach whatever age might be specified for the purpose. And it is obviously desirable that boys and girls should be revaccinated before entering on the business of life. The law should therefore apply to school life, but at the same time should come into force as

nearly as might be to the end of it. Even this waiting should be strictly limited to times of absence of small-pox from a community. It ought always to be possible, by order of the Local Government Board or otherwise, to temporarily lower the age limit in any given area until variola had departed from it.

Efficiency of Vaccination.

No Vaccination Act in this country has ever yet drawn the slightest distinction between one kind of vaccination and another. In the eye of the law a person is either vaccinated or not vaccinated according as he has or has not been medically certified to have been vaccinated. Yet there is superabundant evidence that the completeness of individual protection against small-pox depends largely on the thoroughness with which the operation has been performed. Owing to the absence from vaccination certificates of any information as to the area or number or character of the resulting marks, it is difficult to get any useful statistics of the relative susceptibility to attack by small-pox of groups of persons differentiated according to quality and quantity of their vaccination scars. Necessarily, therefore, the evidence available is mainly that of small-pox hospitals, and has to do, not with susceptibility to attack, because all in such hospitals are the subjects of attack, but with susceptibility to death when attacked. In Dr. Gayton's 10,403 cases of small-pox at the Homerton Hospital, 2,085 had good marks, and the fatality-rate was 3 per cent.; 4,854 had indifferent marks, with a fatality-rate of 9 per cent.; 1,295 were alleged to be vaccinated, but had no marks, with a fatality-rate of 27 per cent.; and 2,169 were unvaccinated, and had a fatality rate of 43 per cent. In nearly 7,000 cases observed in recent years the Royal Commission found that the fatality-rate in persons with 1 mark was 6.2 per cent., with 2 marks 5.8 per cent., with 3 marks 3.7 per cent., and with 4 marks 2.2 per cent. It is obvious, therefore, that whatever an Act of Parliament can do to promote thoroughness of vaccination it ought to do. Its powers, however, in this matter are strictly limited. Supposing that a new Vaccination Act were to insist that every vaccination should consist of three or four marks with a total area of not less than half a square inch, it would not be possible always to enforce the provision. In any profession of 30,000 members there are a proportion of men more or less incompetent and more or less careless, and also a proportion of black sheep. Every insertion of lymph is not necessarily effective, and through incompetence or carelessness or deliberate intention some vaccinations would fall short of the Government standard. Taking the worst case—that of the black sheep—it would always be open to the operator to plead that he had attempted to obey the law, but that the vaccination had been partially unsuccessful. This partial failure could not at once be remedied by repetition of the operation. Experience shows that even a single small mark gives for a time a very considerable amount of protection against small-pox, and makes it impossible to revaccinate successfully immediately after the first operation. Government therefore, though it might quite properly prohibit from further vaccination practice men proved to regularly produce only very imperfect local results, yet could not prevent some amount of very imperfect vaccination. It can, however, quite easily do two things usefully in the matter. It can insist that every vaccination certificate shall in future state the number and area of marks, so that the good name of vaccination shall no longer be subjected to obloquy through the imperfect performance of the operation; and so that also when a vaccinated person takes small-pox it may be possible, if the place and date of vaccination are known, to refer to the register of vaccinations to ascertain exactly what was the character and quality of the operation. It can, in the second place, encourage good vaccination by fixing a proper money payment—perhaps the same as for a certificates under the Infectious Disease Notification Act—for every certificate received where a specified standard of success, as measured by area and number of marks, had been achieved. If any such system of payment on a basis of certification of thoroughness of vaccination were to be established it would have to be safeguarded by an imposition of very severe penalties for false certificates. Men belonging to the dregs of the profession who might be found guilty of repeatedly certifying four marks where there had been, say, only one, should be treated as unworthy to remain in the ranks.

Calf Lymph Supply.

Since glycerinated calf lymph came into general use in England in substitution for arm-to-arm vaccination, there has been an increasingly clamant demand on the part of the medical profession, and to some extent on the part also of the public, that lymph from the Government laboratories should be obtainable for all vaccinations. Alternatively it has been urged that Government should at least undertake supervision of production of lymph by private makers. A difficulty in the way of this latter proposal is that much lymph is imported from abroad for sale in England, and its preparation could not well be supervised by the home Government.

The justice of the demand that only lymph prepared in the best-known methods shall be used for insertion into human beings is obvious. At present, Government undertakes to supply only public vaccinators, and as it is open to every one to go to a public vaccinator, it may be urged that after all no one need be operated on with other than Government lymph unless he pleases. But the retort is ready, that if Government produces enough lymph for all vaccinations, there is no sufficient reason why it should not supply private practitioners as well as public vaccinators, seeing that as a matter of fact private practitioners do perform a very large number of vaccinations. The inference seems to be that in arranging the size and equipment of its establishment, heed has been given to the fact that in practice only part of the population wishing to be vaccinated do come to public vaccinators, so that for these vaccinators a less amount of lymph and a smaller establishment are needed than if all vaccinations had to be provided for.

That is only after all a subsidiary consideration. The great difficulties in the provision of glycerinated calf lymph are (1) that the lymph has to be stored for one month before it attains its greatest fitness for use, and (2) that in the present condition of the law the demand for it is most irregular in amount, and depends largely on the presence or absence of small-pox. The greatest irregularity is in respect of revaccination, which at one time may be almost at a standstill in a locality, and at another time much more in extent than primary vaccination.

The reason for a month's storage of glycerinated lymph prior to use is twofold; on the one hand it takes that time to get properly rid of extraneous micro-organisms, and on the other, if the lymph is kept much longer it is apt to become inert. These are matters in which a Government laboratory can take no risks. It is far better to refuse requests for lymph than to send out any that is either insufficiently purified or useless through too long keeping.

I have said that my reason for beginning these articles by a plea for Revaccination Act is that such an Act is not only important in itself, but is also a basis for the most important of the other reforms required, and I think it is clear that this is the case with regard to lymph supply. It is an unquestionable duty of Parliament to safeguard by every practicable and reasonably available means those whom it obliges by law to be vaccinated. But there is only one way of working out this duty, and that way is the passing of a Revaccination Act. It would be ridiculous to propose that Government should set going and keep up lymph production on such a scale as would be required perhaps only once in ten years in presence of extensive prevalence of small-pox. The meaning of such a proposal would be that every month during the intervals between epidemics huge quantities of lymph would have to be thrown away as useless, and great annual expenditure incurred without any corresponding benefit. On the other hand, under a system of obligatory primary vaccination and revaccination, the demand for lymph would be very steady and regular, and any exceptional requirements would be comparatively moderate in amount. There would, in fact, be the often desired but seldom achieved combination of efficiency and economy.

Small-Pox Hospital Accommodation.

Under this heading another great benefit has to be pointed out as certain to result from a national system of revaccination supplementary to primary vaccination. The erection and maintenance of small-pox hospitals imposes a heavy financial burden on sanitary districts throughout the country. In one sense the burden is all the more aggravating because, as a result of even the partial protection of the people by vaccination as at present carried out, small-pox is not very prevalent, and hospitals provided for it are out of use for long periods of time. On the other hand, in the absence of general revaccination such hospitals have to be built and maintained, and that on a very considerable scale. No doubt the repeal of all Vaccination Acts would result in

a much more frequent occupation of such hospitals, so that there would in a way be more to show for the money expended. Though the hospitals might often be full, however, in an unvaccinated community, they would not prevent small-pox epidemics. Unvaccinated nurses, unless they had previously had small-pox, would themselves be attacked. Those nursing the nurses would contract the disease next in order, and so on indefinitely.

But prior to all these questions regarding the cost and worth of hospitals, there is the constantly experienced difficulty in finding suitable sites. Owing to the liability of small-pox hospitals to act as centres for the spread of the disease, the Local Government Board have framed regulations as to the isolation of such institutions which make it very hard for local authorities to acquire ground at once sufficiently isolated and sufficiently convenient for the population to be served. In passing I may remark that it would be no kindness, but the opposite, to local authorities for the Central Board to approve of sites which might afterwards prove dangerous to the surrounding population. So long as small-pox remains absent, the possession of a hospital might indeed keep the minds of local authorities easy through a feeling that they had obeyed the Board's behests, but when small-pox came their troubles might be increased tenfold. The anomalous position in which sanitary bodies are placed at present, therefore, is that, on the one hand, they have the utmost difficulty in obtaining suitable sites for small-pox hospitals, and on the other hand they have no power to insist on the protection of their districts by revaccination so as to render hospitals unnecessary. These troubles would be got rid of under a Revaccination Act. The whole problem of small-pox hospital accommodation would be essentially changed. A mere fraction of what is at present required would be sufficient, and to a surrounding revaccinated community a hospital would be a much less serious source of danger. Regarding the merely financial question, I understand that the late outbreak in London has added a permanent charge of threepence per pound per annum to the rates, and this of course does not represent anything like the total loss resulting from the epidemic.

(To be continued.)

A RETROSPECT OF THE IRISH POOR-LAW DISPENSARY, LUNATIC ASYLUM, AND WORKHOUSE SYSTEMS.

(Concluded from page 107).

III.—THE WORKHOUSE THE CURSE OF THE IRISH POOR-LAW.

The Establishment of Workhouses.

WHEN in 1836 the problem of Irish destitution and Irish pauperism pressed for solution and the Government of the day sent Sir George, then Mr., Nicholl, one of the English Poor-law Commissioners to Ireland to report upon the causes of the pauperism and the desirability of introducing the English union system and the workhouse test for destitution as a remedy, he strongly advocated the establishment of Poor-law unions with a workhouse in each as a test of destitution, not of poverty, and he plainly indicated his opinion that these institutions should be so conducted as to make them as deterrent as possible. In his reports he almost entirely leaves out of consideration the treatment of those whose destitution might be due to sickness or age. All were to be treated alike, and he estimated that a pauper could be fed in an Irish workhouse for about 1s. a week, or less than half what it would cost in England.

Sir George no doubt acted up to his lights and his education. He overlooked the fact, however, that the English Poor-law system, like the common law, was the growth of centuries modified from time to time by statute to suit the varying conditions of the people, and that to introduce a system so alien to the habits and genius of the Celt into Ireland was, to say the least of it, a doubtful experiment.

Ireland was at this time (1836) swarming with mendicants. Sir George Lewis, writing in 1835, says: "It is probable from the way the population has increased that the number of poor as compared with rich is larger than at any previous period." But this vast army of pauper mendicants, estimated at 80 000 out of a population of 8,000,000, was the outcome of peculiar economic conditions. The enormous population was of comparatively recent and rapid growth, starting from the general peace of 1815 and due to various causes: The extraordinary fertility of the soil in the production of potatoes, the staple food of the masses; the reduction in the price of food consequent on peace, the cessation of the drain upon the manhood of the country to fill the ranks of the army and navy, and, to a certain extent, to the efforts of the clergy to maintain morality by encouraging early marriages. A condition soon arrived when there was not sufficient arable land under cultivation to employ the millions of the labouring class, whose only resource was to beg or starve, manufactures outside the Ulster weaving industry being absent. What the state of the poor was we may judge by an extract from the report of the Devon Commission, published in 1845:

> Adverting to the condition of the various classes of occupiers in Ireland, we noticed with deep regret the state of the labourers and cottiers in most parts of the country from want of certain employment. It would be impossible adequately to describe the privations which they and their families habitually and patiently suffer. It will be in evidence that in many districts their sole food is the potato, their only beverage water; their cabins are seldom a protection against the weather; that a bed or a blanket is a rare luxury, and that in nearly every case their pig and manure heap constitute their only property.

The above was written eight years after the workhouse test for destitution had been established, and during a period to which the farming classes look back even yet as the golden era of Irish prosperity—for them—and it forms a striking commentary upon the homilies addressed to the farmer and landlord guardians in 1841-42 which we shall quote later.

While potatoes were cheap and could be had almost for the asking, small wonder these poor souls preferred to beg rather than starve; and as even to this day the Irish peasant regards giving of alms as a saving virtue, it is not surprising that beggars became both numerous and importunate—how numerous and how importunate Lever's and Carleton's novels of the period plainly indicate.

To stem this tide of pauperism would have taxed the energy and resource of any Government; but looking at it from the dawn of the twentieth century the attempt to exterminate pauperism so vast by incarcerating the pauper and starving him appears about as sensible as the efforts of Irish asylum governors to check the spread of lunacy by closing the asylum doors against undoubted lunatics because they are coming too fast.

There is little doubt the entire Irish Poor-law system would have broken down, so far as it was intended to stamp out mendicancy, and it would have been a lucky thing for Ireland if it had, were it not that the famine and pestilence of 1846-7, followed by years of wholesale emigration, depopulated vast areas of the country and solved the difficulty. Probably State-aided emigration would have been the best remedy for the congestion of 1836, and guardians were empowered by the Poor Law to advance money for that purpose from the rates, but neither then nor since have the classes from whom Poor-law guardians are drawn shown any real desire to help the labourer, and the British Government of that day evidently considered that as the union and workhouse system was capable of dealing successfully with the comparatively small proportion of English poor the same system ought to agree with the Irish poor. To mend matters, the Irish unions were for some ten years after their formation controlled by English Poor-law Commissioners sitting in London knowing as much about the wants of Ireland as of India, and addressing lessons on economy to the guardians of the starving Irish poor. That the lessons were effectual the subsequent history of Irish workhouses plainly proves.

Their Administration.

The Irish Poor-law Act was passed in the second year of our late Queen's reign, and the Poor-law Commissioners in 1841, in which year a large number of workhouses were opened, laid down a dietary for the inmates as follows:

For Adult Paupers.—Breakfast: 7 oz. of meal, ½ pint of new milk, or 1 pint of butter milk. Dinner: 3½ lb. of potatoes, ½ pint of new milk or 1 pint of butter milk. Supper none.

Children, 9 to 15 years.—Breakfast: 3½ oz. of meal and ½ pint new milk. Dinner: 2 lb. of potatoes, ½ pint new milk. Supper: 6 oz. of bread. Children 5 to 8 years to be fed on same, or diminished at discretion of the guardians.

And the Commissioners observe that "the system of two meals a day is far more convenient than the three meals, and much more economical." About the sapiency of this observation there can be no question. Not infrequently the guardians of those days, new to their business, were more humane than their instructors, and tried to give the poor wretches a little more food, with the invariable result of bringing down upon their heads a long lecture upon their improvidence. For example:

Balrothery Guardians.—Notice of motion, March 14th, 1842: "That each adult pauper get at Easter 1 lb. mutton, and each child ½ lb." The Com-

missioners read them a lecture, concluding: "They (the Commissioners) therefore cannot approve of such a course, which is directly opposed to sound principle."

North Dublin Union.—Extract from inspector's report, July 20th, 1841: "The average cost for the past half-year has been 2s. 2d. (including the hospitals), the previous half-year it was 2s. 4d., per week. This is satisfactory, but by increased vigilance and attention to details still greater economy can be effected." As the cost of maintaining an able-bodied pauper in the North Dublin Union at this period was only 1s. 4d. a week, one is at a loss to see how the further economy was to be effected.

Limerick Union.—Extract from inspector's report, January 14th, 1842: "To the male adult paupers 1 oz. of meal and 8 oz. of potatoes is allowed each individual beyond the amount sanctioned by the Commissioners. This addition to the food has a doubly injurious effect. When distributed over so large a number of inmates it seriously increases the expense, and it places the paupers in a better condition than the independent poor supporting themselves by their own industry." Compare this with the report of the Devon Commission above quoted. He then proceeds to show how ineffectual the workhouse test was in stamping out mendicancy: "The streets of the city (Limerick) are still infested by a throng of professed beggars, and the operation of the Act has as yet done little towards clearing away these blots from the constitution of society."

Tipperary Union.—Extract from inspector's report, December 24th, 1841: The inspector severely censures the guardians for allowing adult paupers an extra ½ lb. of potatoes. The ruinous diet referred to consisted of 7 oz. of meal and ½ pint of milk for breakfast, 4 lbs. of potatoes and 1 pint of skim milk for dinner, and no supper, for able bodied adults: while aged and infirm paupers got ½ lb. of bread and a noggin of milk for breakfast, the same for dinner, and no supper. The inspector proceeds: "The allowance of bread in the hospital is too general, and the consumption of milk over and above the allowance included in the dietary is a circumstance requiring inquiry and explanation.....Much vigilance will be required on the part of your Board in checking the discretionary power vested in the medical officer of ordering extras."

The truth was the medical officer had recognized the claims of humanity to the extent of raising the average cost in the hospital to 4s. 7½d., hence this outburst of virtuous indignation. But a little praise and encouragement was occasionally meted out to guardians; as for instance:

Rathkeale Union, inspector's report, December 20th, 1841.—"During the half year 147 paupers were admitted into the house, 61 were discharged, 3 died, and 83 were remaining at end of half year. Two-fifths of those who accepted relief in the house are thus proved to have left it, a fact which speaks most favourably for the discipline of the establishment, as showing that no inducements were held out to the idle and dissolute to protract the term of their residence after a prospect of redeeming themselves from destitution by their own industry presented itself." It would appear that the 61 found the starvation in the workhouse more unbearable than destitution outside.

Again he says: "It is to be remarked that the soup diet, which might be supposed to be more expensive than the milk diet, is actually less so"! We can well believe it. Here are the ingredients for 12½ gallons of that soup: 20 lb. of beef at 3½d. per lb., 7 lb. oatmeal, 2 lb. salt, 2½ oz. spice; total cost 6s. 6d., or ½d. per head. The cost of feeding a man on soup diet was only 2d. per diem.

It would be useless to quote further. Suffice to say that each succeeding Commissioner's report contained the same lessons until they had been thoroughly learnt, and so we come to the awful visitation of 1846 and 1847. Up to that period the workhouse test for destitution as laid down by Sir George Nicholl had been practically a failure so far as the diminution of mendicancy was concerned, but it had been most successful in embittering the last years of the poor compelled to seek the shelter of the house, and in inculcating upon their masters, the farmers and landlords, the economy of making the poor man's lot as hard as possible, keeping down the rates by keeping him out of the workhouse, for at this period and for long after no outdoor relief was permitted.

The Famine.

The history of the Irish famine has been written by able pens, and there is no need to repeat it, but a few facts may prove of interest in this connexion. In the year 1846 there were 123 workhouses open, which, on January 1st of that year contained 42,000 inmates, about the same number as the Irish workhouses contain to-day. By the end of the year the numbers had swelled to 94,000, and by February 1847, to 116,000. The average cost in 1846 was only 1s. 8d., showing how well the guardians had learnt their lesson. In that year 245,000 persons were relieved at a cost of £425,000; besides these, during the first three months of 1847 144,000 starving people found their way to Liverpool and other west coast towns, where special measures were adopted for their relief. Irish guardians, at their wits' end for space to house the people, tried to give outdoor relief, but the Commissioners still refused, on the ground that it was contrary to sound principle. Relapsing fever and malignant typhus followed famine, and during the first five months of 1847, out of 150 workhouse officials attacked by fever in the discharge of their duties, over one-third died, including 7 medical officers, and the weekly rate of workhouse mortality, which in April, 1846, was 3 per 1,000, had risen in April, 1847, to 25 per 1,000, 2,700 deaths per week out of 25,000 sick. Of the thousands who died in their hovels or on the roadside during that awful winter no record remains.

Relief works were tardily started, but the people were too weak to work; and many of these projects remain to this day half-finished monuments to the fatuity of our predecessors.

Then the stream of emigration set in, bearing millions to America, who carried with them and have retained to this day an undying hatred of England and the English, which was intensified if not actually caused by the harsh administration of the workhouse test for destitution.

The Later History of the Workhouses.

The history of the Irish workhouse for the half century from 1846 to 1896 is a sad story of man's inhumanity to man. It is a squalid story, a story of the oppression of worn-out labourers compelled through lack of relatives, age, or sickness to seek the shelter of its walls: a story of treatment of the poor so gross and shameful that one blushes to think it occurred in our times. The landlord and farmer guardians affected and still affect to regard the inmates of Irish workhouses as driven there by their own dissipation—a tradition handed down from father to son from 1841 onward, knowing full well that the vast majority of these poor people are those who worked on their farms as long as they were able for wages barely sufficient to keep body and soul together. We are drawing no fancy picture. Any one who doubts can refer to the reports of our Special Commissioner sent to Ireland in 1896 to investigate the condition of the workhouses or to the official Blue Books of the half century in question.

We do not propose to pursue this history. Suffice to say that among other circumstances the publication of our Commissioner's report and the formation of the Irish Workhouse Association compelled attention to the condition of these places. Coincidently, there was an infusion of new blood into the permanent staff of the Irish Local Government Board, successors of the old Poor-Law Commissioners. These gentlemen have turned over a new leaf in workhouse administration, and have, we believe, honestly tried, so far as their limited powers permit, to make the workhouses comfortable refuges for the aged worker, and the infirmaries efficient hospitals for the treatment of the sick, but their task has been an uphill one, for the curse of the Poor Law still overshadows those institutions. Guardians still act on the lessons so carefully taught their forefathers, and the workhouse official too often takes his cue from his employers, and tries to carry out the old test for destitution.

The workhouse test is still in force, but will it always remain so? Will the time ever come when the destitute aged worker, instead of being shut up in an institution he regards with horror, shall be boarded out among his neighbours and comrades, where he can pass the evening of his days in surroundings more congenial than he can ever enjoy in the workhouse? or is such a suggestion like the Balrothery mutton—"opposed to all sound principle." Yet call it by any name—old-age pension or outdoor relief—the poor man could be more cheaply and comfortably maintained outside than he is or ever will be as an indoor pauper.

HOSPITALS FOR PAYING PATIENTS.

There is no country in the world which has better or more justifiable reason for being proud of the charitable organizations for dealing with its sick poor than Great Britain. Our hospitals are admittedly administered on the most enlightened principles; they are maintained by the voluntary contributions of the public, and, though often burdened by the tightness of their financial resources, they manage to provide for the treatment of their large population on the most advanced lines of scientific and therapeutic discovery. Nor are the Poor-law infirmaries far behind the hospitals in the provision they afford for the efficient and successful management of the surgical and medical cases which occupy their beds. They lack some of the subtleties of research which well-found laboratories, elaborate operating theatres, and a large staff of competent workers make possible in the larger hospitals, but they approach them not only in the administrative care of their patients, but in the solicitude with which they utilize the main resources of medicine and surgery for the cure of disease.

It may, without fear of contradiction, be asserted that, so far as the poor of our population are concerned, they are admirably provided for by existing institutions. That they are kindly as well as successfully treated is evidenced by the confidence which to-day replaces the widespread distrust existing not so many years ago among the labouring classes in regard to the comfort of hospitals and the treatment therein adopted. Their popularity has indeed become so

great that, despite the enormous number of beds which are at the service of suitable and deserving cases, the supply barely meets the demand and the available accommodation is taxed to its utmost. No small difficulty is experienced in the selection of cases, in order to minimize the risk of admitting those whose circumstances do not warrant their being accepted as recipients of charitable relief.

Among those who must needs live on a limited income, but who are sufficiently well off to be removed from the category of "the very poor," the fact that hospitals are charitable institutions is not sufficiently recognized; nor do they appreciate that it is part of their moral obligation to the community to furnish their proportion of the money necessary for maintaining them and for enabling their beneficient work to be efficiently carried on.

Should it ever become necessary to make all hospitals rate-supported, a complete revolution in the management and conduct of these great institutions, which have hitherto done so much for the alleviation of pain and sickness, will be brought about, and a trammelling red tapeism will almost certainly arise which will seriously hamper their present usefulness. We do not forget that the working classes already do much to keep distant the day when such undesirable developments of policy may become urgent, but they are not enough alive to the need that exists for their doing more, because it is to them that the country must principally look for increased assistance to meet the needs of an expenditure which grows constantly heavier. The wealthy members of our population have nobly responded to the cry of the sick for help, and it is to their benevolence, stimulated and fostered by the splendid example of His Majesty the King, that our hospital system mainly owes its present unique position as the grandest charitable system in the world. But there is a limit to the bounds of their generosity. They will doubtless in the future continue to be the chief mainstay of hospital requirements, but the time has come when their example should be more generally followed by others who, though not so well off, can yet do more than hitherto in the way of relieving the increasing stress of financial exigency, and of enabling a multiplying population to cope with the necessities of its sick poor on the lines that have hitherto proved so successful and praiseworthy.

The argument as it applies to the treatment and cure of the sick among the deserving poor is thus reduced to a very simple proposition: Increasing demands necessitate more accommodation, and that, in its turn, needs more money. If a sufficiency of guineas are to be forthcoming voluntarily, those who have hitherto contributed little, or in many cases nothing, must in the one instance be more liberal, and in the other become responsive to the responsibilities of their citizenship.

So far as the rich are concerned, sickness is a matter of little moment to them from the pecuniary point of view. They can afford everything that art and science can provide for the relief of their sufferings and the cure of their maladies, either in their own houses or in the various surgical and medical homes which exist for their accommodation. Even among them, however, there is a growing feeling of discontent at the present provision for dealing with their sick and afflicted. It is not always convenient to have members of their families who are stricken with illness treated at home. Especially is this true in conditions where a critical surgical operation becomes a matter of necessity, or in cases of infectious disease. In these days of elaborate asepsis it must be recognized that almost no ordinary dwelling-house can provide the environment that is considered necessary for the achievement of the best surgical results. And as regards infectious disease, it is simply astounding that there should be, in such a dense centre of population as London, no provision for the separate treatment of cases except such as is afforded by the Metropolitan Asylums Board hospitals, or in the case of certain diseases by the London Fever Hospital.

Nursing homes are plentiful in which non-infectous ailments, whether medical or surgical, may be treated, but though many are admirably conducted and in every respect satisfactorily equipped, there are not a few of which it is complained that the nursing is inadequate and incompetent, that the food is inappropriate and either stinted or badly cooked, and that the charges are excessive or even exorbitant. Such faults, and others which need not be enumerated, have induced a certain number of medical practitioners to establish homes of their own, but this is a very doubtful policy and, while not necessarily removing the causes of complaint, lays the proprietor open to the unpleasant suspicion of having a personal interest in the financial success of his institution. Nursing homes on a larger scale may, some day, be able to provide all the safety and comfort which belong to the best of those which now flourish at a substantially diminished price, but to a large number of the middle classes the cost of treatment as at present assessed is prohibitive. We do not suggest that it is unreasonable, because we are fully aware that rent, taxes, nursing, and dietary sum up a formidable total to be provided for before any margin of profit comes within sight; but it has become almost essential that those who cannot afford the charges of a private nursing home should be able to command elsewhere the advantages which such an institution offers at a rate of pay within the limits of their income.

A fresh move in the direction of meeting this much-felt want was made last week by the formal opening of what is somewhat clumsily called a "pay hospital" in Fitzroy Square. This hospital, better known as Fitzroy House, was founded on the initiative of Sir Henry Burdett nearly a quarter of a century ago. A sum of £20,000 was then contributed by the the public towards the foundation, and in June, 1880, the institution was formally opened by the late Duke of Northumberland. It has been almost exclusively used for surgical work, and has been conducted on the principle of charging each patient little more than the cost price of his bed, board, and attendance, leaving him to arrange and settle for himself the fees of his medical adviser. During the twenty odd years of its existence 5,376 patients have been treated in Fitzroy House, many of them under the immediate supervision of leading surgeons. Present-day requirements having made increased accommodation desirable, it was decided last autumn by the Board of Management to reconstruct and rebuild the premises so as to provide a modern and up-to-date hospital for the further carrying on of the good work already done. For this purpose it became essential to raise a sum of £10,000, and of this amount over £2,000 has already been promised. The new hospital is now complete and was reopened on Monday. On the preceding Friday a formal inauguration ceremony took place, at which the Duke of Northumberland, who like his predecessor in the title takes a very active personal interest in the movement, presided. In declaring the new hospital open, his Grace said that the experience of the past twenty-two years had proved that the founders of Fitzroy House were right in the belief that there was a large class of people who would gladly avail themselves of the advantages of a home hospital for paying patients. The hospital had been reconstructed to meet requirements which were much more elaborate now than a quarter of a century ago, and he sincerely trusted the balance of £8,000 which was needed to cover the cost of rebuilding would be speedily forthcoming. Sir William Church, the Bishop of Southwark, and Sir Henry Burdett took part in the proceedings, and, after the completion of the opening ceremony, the visitors were conducted through the buildings.

The reconstructed house contains about forty rooms, of which thirty, each with one bed, constitute the wards. They are comfortably furnished and brightly decorated. Each room is provided with an electric installation so arranged that the power may be utilized for cooking and surgical purposes as well as for lighting and heating. The beds are after the Guy's Hospital pattern, and all the grates are of the slow combustion type. The floors are laid with papyrolith, which is an impermeable mixture of asbestos, paper pulp, sawdust, magnacite, and magnesium chloride—this forms a smooth hard surface, which is readily kept clean and aseptic. An operation room is situated on the top floor; it is well lighted, provided with all the furnishings which experience has proved necessary for a modern surgical theatre, and is easily reached by a passenger lift from all the lower floors of the house. Isolated bathrooms and lavatories are provided on each flat, and a sanitary tower, extending to the whole height of the building, insures their efficient ventilation.

There is a public dining-room, sitting-room, and smoking-room, each appropriately furnished and comfortable. The accommodation for the nursing and executive staff is sufficient. The kitchen, which is in the basement, is spacious and well lighted. By means of a special kind of trolly, lined with a non-conducting material and heated inside by an electric plate, the food is conveyed from the kitchen to the various floors in a lift reserved for the purpose. Altogether, the architects have made the most of their opportunities, and are to be congratulated on the hygienic and artistic success which they have achieved. Minor faults which are inevitable in a reconstructed house would have been avoided had the

building been a new erection, but none of them are of serious consequence, and the hospital may be looked upon as admirably suited for the work which is before it. The aim of the Committee is to make the institution self-supporting, and to this end it has been decided that in future the accommodation fees shall be from four to ten guineas a week, the charge varying according to the position and size of the room engaged.

Every contributor of fifty guineas to the Foundation Fund will be regarded as a Governor of the Association, and will have priority of admission to the hospital for himself and family, with the power of nominating two patients annually. A donor of twenty guineas will be regarded as a member of the Association, and will have priority of admission for himself and the power to nominate one patient annually. Its previous success is a sufficient testimony to the foresight of Sir Henry Burdett and those who were associated with him in the original scheme.

But this house is equipped solely for surgical cases, and, though distinctly a move in the right direction, is a mere corner of the greater question of the adaptability of its principles and methods to the whole field of disease.

Medical homes are almost as necessary as surgical homes. The advances in the one science have been, within recent times, no less striking than in the other, and the wants of that section of the public for whom home hospital accommodation is desirable demand facilities for the treatment of their medical disorders no less than for those which, for their cure, necessitate a surgical operation. There is a growing disinclination on the part of surgeons to operate in private houses, but there is also an increasing desire on the part of physicians to have certain forms of disease removed from the influence of home surroundings, and placed under conditions of observation and control which will enable details of diagnosis and treatment to be worked out on systematic lines. Cases suitable for Weir-Mitchell treatment are not the only ones which, to be successfully treated, must be removed from the well-meant but unwise influence of friends and relatives. There are many other disorders from which recovery would not only be more speedy but also more permanent if the patient were brought under the influence of routine supervision and carefully-adjusted discipline.

Home hospitals have everything to commend them, and it is almost certain that Fitzroy House will prove the pioneer of many successors, but does its scope go far enough to meet the whole circumstances of the public need? May we not anticipate, perhaps at no very distant time, the foundation of hospitals, staffed and equipped on precisely the same lines as our present charitable institutions, but wholly devoted to the treatment of patients who pay for the privilege of admission? House-surgeons and house-physicians would be responsible for the immediate care of the inmates, and would be under the direction of the medical practitioner in attendance on each patient. A nursing staff would be provided for constant duty day and night. Suitable laboratories would enable all the refinements of diagnosis to be applied to each case, and the equipment would allow treatment in all its most modern developments to be carried out in detail. Wards as well as private rooms might be provided, by which means the cost would be reduced and the advantages of such an institution brought within the reach of a large section of the population.

Sir Henry Burdett has suggested the establishment of a society or insurance fund, whose members would, by the payment of a small annual premium, be entitled to medical treatment in the paying wards of our present hospitals. But many objections may be urged both by subscribers to hospitals, by paying patients, and by medical men to such a plan. It must always be a matter of difficulty to carry out a combination of charitable and paid work under one management, and, so far as paying wards have already been tried, they have not proved either entirely satisfactory or strikingly successful.

The greater scheme, however, of separate institutions would be free from all such hindrances, and, if it could be accomplished, would undoubtedly prove a boon to a large and increasing number of those who, being sick, recognize how much upset at home would be saved and how much anxiety as to cost lessened if they could command the entry to a hospital where, on the payment of a certain sum, they could rely upon having everything done in the best and most efficient way to promote their recovery. The great stumbling block is, of course, money; but the first and only cost would be for foundation and equipment. Once started, such an institution should have no difficulty in balancing its expenditure by its income, even at fees considerably below those charged at Fitzroy House. We trust it may not be long before such an enlarged edition of Fitzroy House as we have outlined may be brought into being. The munificence of the great and generous capitalists of this country could be directed to no better or more utilitarian purpose.

THE DISTRIBUTION OF HOSPITALS IN LONDON.

[From a Correspondent.]

Every hospital that desires to keep abreast with modern advances has at times to consider the question of reconstruction of premises either in whole or in part. On such occasions the anxious question of expense necessarily comes up, and in many of the hospitals which are situated at spots where land is of great value, the possible advantage, from a financial point of view, of removal elsewhere has of late years been seriously debated.

Of this fact the lay press has become aware, and in several papers during the last few months the removal of certain hospitals has been either urged or deprecated with much energy, and in some cases with an irresponsible volubility characteristic of a certain type of paper, and rather calculated to arouse opposition and thus defeat the object in view. The question of hospital removals is no new one, as some of the papers seem to think, but one which was gone into with considerable care some eleven years ago by the Select Committee of the House of Lords on Metropolitan Hospitals.

The point of view from which it was dealt with was less that of the financial advantage which might accrue to any specific hospital by its removal and re-establishment elsewhere than that of the much larger question of the public disadvantage of the aggregation in Central London of the majority of institutions for medical relief.

The Committee in its final report published in 1892 drew strong attention to the question, stating its opinion that, while London as a whole was amply supplied with hospitals, the accommodation in some of the most populous districts was inadequate. It was of opinion that any general scheme for the removal and more equal distribution of existing hospitals was impracticable, but drew special attention to the South of London, and the Camberwell district in particular, as an area in which fresh philanthropic effort was urgently required.

Since then the question has not been allowed to sleep, but nothing very material has so far been done. The ebb of the working and poorer classes towards the outskirts, and the depopulation of Central London, continues, the increment of land value has not ceased, and the majority of hospitals remain where they were, congregated for the most part in a very limited area.

The great inequality of distribution and the undue concentration of institutions in certain districts is easily appreciated if the situation of each hospital and the number of its beds be marked on a large scale map of London. The numeral results of the study of such a map are sufficiently large to be striking, and are as follows: There are in that part of modern London which lies north of the Thames, and which according to the census of 1901 has a population of under three millions (2,873,795), no fewer than 30 institutions for the treatment of general ailments and 69 others for special diseases or women and children, in all a total of 99 institutions and 8,391 beds. These figures refer to those institutions which depend primarily if not entirely upon charitable contributions and other sources of voluntary support either in the present or the past, and do not include borough infirmaries and asylums or the hospitals of the Metropolitan Asylums Board.

On the other hand, London on the south side of the Thames, with a population of nearly two millions (1,749,566) has only 17 hospitals all told. Altogether, including both the 330 beds represented by Putney and Streatham Asylums for Incurables and two or three far outlying institutions of the cottage hospital type, it has a total of 1,831 beds against the eight thousand odd above shown to be provided on the north side of the Thames. It is to be noted, too, that on the south side over 1,200 of the beds, and the only 5 institutions of any note, lie at the apex of the rough triangle formed by South London, the base and outer angles of which lie upwards of five and nine miles respectively from Charing Cross.

On the north side the concentration of hospitals is most accentuated near Charing Cross. Within a distance of about half a mile of this spot there are 3 general hospitals and 4

others, affording altogether a total of 624 beds. Within about a mile there are 4 general and 9 others, and within a mile and a-half of Charing Cross a grand total of 3,732 beds.

Outside this limit we have an aggregate of 4,639 beds, with still some tendency to congestion in certain parts, but with the London Hospital looking after the East, and the West London, Great Northern, and Metropolitan all fairly well placed.

The above figures can leave no doubt as to the undesirable inequality of distribution of hospitals in general, and the undue congestion that exists in certain districts. Many factors have tended to bring the condition about, and the disadvantages of the arrangement, or, rather, want of arrangement, are possibly not quite absolute; but, on the whole, it is certain that, as the Committee of 1892 pointed out, it leads to some clashing of interests and loss of public utility.

Other things being equal, every existing hospital would naturally prefer to adhere to the locality in which it is already established; but there are certain considerations in virtue of which the managers of a great many hospitals ought to consider closely the question of the precise locality in which each of their institutions is situated.

In the case of those which look largely to the assistance which it is in the power of the several metropolitan hospital funds to bestow, there is this to be thought of. The dependence of some hospitals on these sources, and the power wielded by the administrators of them, is yearly increasing. A proportion of the administrators, and a good many of those who have influence with them, are inclined to consider all hospitals as local institutions, that is, as places which should cater primarily, if not exclusively, for the needs of the populations immediately surrounding them, and to regard any institution as in a measure superfluous, if the "paper" requirements of the district are otherwise provided for, and the institution has not got a fairly large area of, so to speak, "unopposed practice."

In the case of hospitals of great and wide repute this view is not sound, but there is considerable force in it as regards the smaller and perhaps more recent institutions; and, in any case, there is good reason to believe that, as time goes on, there will be a tendency to withhold grants from hospitals which cannot prove the necessity of their existence exactly where they are.

Some of those hospitals, again, which have medical schools attached have also reason to consider whether they would not be wise to remove to places where room for extensions could be obtained at an expenditure within their means quite independently of the possibly great value of their existing sites. Of late years the poor equipment and cramped accommodation of more than one London school in comparison with the requirements of modern science has been freely commented on. The reports of the London University Commissioners contain remarks on the subject, and action is presaged which will threaten the standing, if not the existence, of several of the less wealthy schools.

In addition to the hospitals included in the foregoing general remarks, there are two hospitals to which considerations of an entirely special character attach. These are the "Hospital of St. Bartholomew," and "King's College Hospital."

St. Bartholomew's, like King's, is within the congested Charing Cross mile and a-half area, although upon its extreme boundary. So far as the necessity of its existence on the precise site it occupies is concerned, if its presence is not now as absolutely necessary as ever it was it is the fault, not of itself, but of more recent and less important institutions which have established themselves in the same area. St. Bartholomew's, however, has managed to keep itself free from dependence on the support of metropolitan funds or of any outside aid whatever; and for other reasons, also, any attempt to weigh its utility and importance from the number of poor in its neighbourhood is futile. It is in no sense a local hospital, but a representative institution of English medicine, the oldest and in some ways the most important school and hospital in London, the fame of which depends not upon the repute of its existing staff—good as it is—but upon an unbroken record of nearly 900 years' good work upon its existing site.

The considerations as regards King's College Hospital are of a different character. It has a career of only about sixty years behind it, and was founded and placed where it is—in Portugal Street, behind the Law Courts—not because a hospital was particularly required there, but as a necessary adjunct to King's College, which had been recently instituted and desired to have a Medical Faculty.

It is of comparatively small size, but in spite of this has attained a considerable name, owing to the repute and exertions of several present and former members of its staff. In itself it is a somewhat out-of-date structure, surrounded by large buildings, with practically no room whatever for anything but purely clinical work, and standing in the very midst of the most congested hospital area with over twenty other hospitals within a mile of it. Situated where it is, it would not be very easy to justify its existence from the point of view of local requirements, though it may be claimed with truth that it has done good work for the public.

King's College, after a somewhat struggling and fluctuating existence, has now entered upon a new period by being made one of the constituent schools of the University of London, sharing with University College the honour of being one of the only two "Colleges" in London whose teaching is recognized in all the Faculties in which they afford instruction.

This is a great position to hold, and to duly equip itself for it, it is now asking public support to the extent of £500,000. It is doubtful, however, if, even with this large sum at its command, it would be able in its present situation to provide anything like the accommodation really required by a successful institution including nearly every branch of science and art, law, theology, music, architecture, and engineering within its scope; besides anatomy, physiology, chemistry, medicine, surgery, and bacteriology. Doubling the use of class rooms and laboratories will not do; every department should have its own blocks, and the amount of ground required is very considerable if the College is to attain the great position which all would be glad to see it hold.

The question of site, therefore, again arises, and should be much easier to settle in the case of an educational institution than in that of a hospital, and especially in that of one which, if it has anything like the success hoped for it, should almost make its own neighbourhood and surroundings. The observations and recommendations of the House of Lords Committee on this head have already been mentioned, but the poverty of South London in higher educational institutions is even yet greater. If King's College moved to the other side of the Thames it would not only fulfil a great want, but would place itself in the midst of an immense and almost unopposed field of educational enterprise. Ample land between Lambeth and North Camberwell could be readily obtained, and it would become the representative institution of all South London, having at its back the patriotism of ten municipal boroughs, with a population of practically 2,000,000 people.

The transfer would, of course, involve the transfer also of the hospital, and the question is thus one which directly touches the interests of private practitioners in South London. Many of them are probably of opinion that a good general hospital is required in the district, and that it would be no detriment to the profession in itself. It is certain that if such a hospital is established its introduction under the scheme above outlined would bring with it contingent advantages of many kinds. To others who may not at first see the matter in this light the following considerations are suggested. It is exceedingly improbable that many years will elapse before more hospital accommodation of some sort is provided in South London, coming about either by the transfer of some institution, whether voluntary or under pressure of the several metropolitan hospital funds, or else through the foundation of a new hospital altogether by some philanthropist.

A new institution would have to make its name, and for that purpose would open its doors widely; but a place like King's would bring its reputation with it, and could so afford to guard its out-patient rooms jealously. Under such circumstances it would probably treat no more of the possible patients of private practitioners than it does now. Possibly fewer; for all the better-known hospitals north of the Thames get patients from the south, and over patients from distant parts it is impossible to exercise a supervision as regards claims to treatment, however stringent the rules may be, as effectual as that which may be exercised as regards those from near at hand.

Moreover, the evidence given before the House of Lords Committee tends to show clearly that it is not so much large general hospitals which do harm to private practitioners, but rather the small "special" hospitals, and particularly those semi-philanthropic establishments, promoted sometimes from very mixed motives, which tend to spring up where real hospitals are distant, competition great, and the poor numerous. These, then, are the sort of institutions

which the medical profession in growing South London has to guard itself against, and not a general hospital of repute such as is above referred to.

THE LIVERPOOL SCHOOL OF TROPICAL MEDICINE.

At a meeting of the Liverpool School of Tropical Medicine, held last week, Sir Alfred Jones, K.C.M.G., in the chair, it was unanimously resolved:

That the Committee of the Liverpool School of Tropical Medicine wish to take this opportunity of expressing to their colleague, Major Ronald Ross, C.B., F.R.S., their hearty congratulations on the high distinction that he has attained by winning the Nobel Prize, which has reflected great honour on the school itself. They are very proud that such a distinction has fallen to the first Professor of the Liverpool School of Tropical Medicine, and are glad that the self-sacrificing labours of those who have lost or risked their lives in the tropics in the cause of medical science have been honoured in the person of Major Ross. They wish to convey to Major Ross an expression of their own appreciation of the remarkable value of his research work in tropical diseases.

The Sir Alfred Jones Professorship in Tropical Medicine.

It was announced that since the last meeting of the Committee the sum of £10,600 had been collected or promised towards the foundation of a Chair of Tropical Medicine in University College, Liverpool, which had been offered to the University authorities and accepted. Major Ross had been unanimously elected to the Professorship, and his title in connection with the school will be in future "The Sir Alfred Jones Professor of Tropical Medicine."

Walter Myers Lectureship.

The Walter Myers lectureship in tropical medicine now having become vacant, Dr. J. W. W. Stephens, who has recently joined the staff of the school, was unanimously elected to fill that position. Dr. Stephens, who until recently was a member of the Commission of the Royal Society on Malaria, has had a distinguished career, and has been closely identified with research in tropical medicine.

The Foreign Office and the Liverpool School.

A letter was read, which had been received by the chairman from Lord Lansdowne in which the Secretary of State for Foreign Affairs stated that he had received the news of the award of a Nobel Prize to Major Ross with great satisfaction, and that he offered his congratulations on the honour thus done to him, as also to the Liverpool School of Tropical Medicine.

The Nobel Prize for Medicine.

On the occasion of the award of the Nobel Prize for Medicine to Major Ronald Ross, Professor Count Morner delivered an address in which he said that among the stipulations set forth by Alfred Nobel in his will, that concerning the international character of the prizes occupied a prominent place. All branches of medical science and those working at them in different countries had ultimately the same aim, that of gaining the most thorough knowledge possible, both about the human body and the processes in it, and about the injurious influences that might affect it and the means of neutralizing them. All medical workers united their forces in pursuing that aim and in doing so felt members of one great fellowship. Nevertheless the different fields of medical science lay at such distance one from another that the individual worker on many occasions must look afar in the attempt to get a thorough view of the progress of the work. With respect to diseases; they were often of different kinds and importance in different regions. For instance, malaria was now of little importance in Sweden, whereas it was a veritable scourge in other regions. Professor Morner gave statistics showing the ravages of the disease in Italy and in India, and pointed out that malaria was a scourge extending over vast territories, so as to cause the very greatest difficulties in the development of countries which, but for it, were specially favoured by Nature. Passing on to speak of the nature of the disease, he said that a very important discovery concerning it was made more than twenty years ago by Laveran, a French army surgeon, who satisfied himself that malaria was caused by a very low form of animal life which he found in the blood of malarious patients. By this discovery he had for ever become renowned in the history of malaria. Research as to malaria had in the last two decades been mainly based on Laveran's discovery. After referring to the discoveries of Golgi and others, he said the mosquito theory of malaria was introduced to science by King eighteen years ago. The theory, however, remained a conjecture without other evidence than some suggestions given by epidemiological observations. The attempts made in Italy in the early Nineties, with the aim of experimentally proving the theory, gave results that seemed anything but encouraging, and more likely to prevent the investigation from following this line. A man to whom great merit must be accorded in connexion with the solution of the problem was Patrick Manson. It was a change in the appearance of the parasite, which was sometimes observed to occur as the blood was shed, that Manson especially regarded as the first stage of its life outside the body. This phenomenon was afterwards shown by the American pathologist MacCallum to imply an act of fecundation of the parasite. Manson was, moreover, guided by his experience of filaria, the transference of which from one part of its life-cycle to another he had found effected by the mosquito, more particularly by special species of the mosquito. By the views set forth on malaria, and by exciting expectation that the solution of the malaria problem was to be found in the direction indicated by him, Manson gave impulse to the further testing of the mosquito theory, and at last to its being established. Manson, who lived in England, had no opportunity of taking up the experimental work of the problem. The solution came from India. It was an English army surgeon in India, Ronald Ross, who, impressed by Manson's induction, undertook the experimental testing of the matter. Critically arranging his experiments, he caused mosquitos hatched from larvae in the laboratory to bite malarious patients, and endeavoured to follow the parasite in the body of the mosquitos. The results of the first two years' labour gave little promise of success. But in August, 1897, while experimenting with another less common species of mosquito he found in the wall of its stomach bodies that very probably were an evolutionary stage of the human malarial parasite. Ross, being prevented by circumstances from pursuing his plan of studying the malarial parasite of man, continued his work with an allied malarial parasite of birds. The result was that he was able not only to confirm his discovery concerning the human malaria, but also in a short time succeeded in revealing the further development of the avian malarial parasite in the body of the mosquito. Ross's discoveries about malaria were immediately followed by a series of important works. Thus Grassi, in association with his colleagues, Bignami and Bastianelli, proved that the human malarial parasite not only in its early stage, already detected by Ross, but also in its further development underwent the same evolution that Ross described for the growth of the avian malarial parasite in the body of the mosquito. Grassi also precisely defined the species of mosquito that were of importance in regard to human malaria. After referring to further work done by Ross, by the Italian investigators, by Robert Koch and by many others, Count Morner said that it was on account of the high scientific value of Ross's work, its importance as a basis for the success of recent investigations into malaria, and the rich increase of power it had brought to medical art, and especially hygiene, that the professorial staff of the Caroline Medico-Chirurgical Institute had decided to award to him the Nobel Prize in Medicine.

The University of Pennsylvania Hospital.—Plans involving an outlay of £50,000 are being prepared for the enlargement and improvement of the hospital of the University of Pennsylvania. When the design has been carried out, the capacity of the institution will be nearly double that of the present. Its architectural appearance will also be greatly improved.

An International Quarantine League.—As the outcome of the recent meeting of the American Public Health Association at New Orleans, the International Quarantine League has been formed with Dr. J. M. Lindsay as president, and a membership of 150 medical men of the United States, Cuba, Mexico, and South America. The League, according to the New York *Medical Record*, accepts the doctrine that the mosquito is the only means by which yellow fever is transmitted, and that the proper protection against an epidemic of yellow fever is the destruction of mosquitos or preventing them from gaining access to persons ill with the fever. The object of the League is to secure a modification of quarantine against yellow fever, in conformity with the resolutions adopted by the International Sanitary Congress at Havana last February.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1903.

MEMBERS of the British Medical Association are reminded that commencing with January 1st, 1903, the annual subscription is a uniform one of 25s., inclusive of the Branch, and that all subscriptions should be paid direct to the General Secretary, 429, Strand, London, W.C., and not to a Branch Secretary.

British Medical Journal.

SATURDAY, JANUARY 17TH, 1903.

MR. LONG ON VACCINATION.

ON Wednesday last the President of the Local Government Board received a deputation of the Imperial Vaccination League with regard to the amendment of the Vaccination Acts. The deputation was large in numbers and most representative and influential in character. There were present not only leaders of our own profession as representing medical knowledge and belief on the subject of vaccination, but also members of the other learned professions—including, it may be mentioned, the Chief Rabbi—of the great municipalities of the country; of large commercial and industrial interests; and of public schools and colleges. To all such the subject of obligatory vaccination and revaccination is of the utmost practical importance. Not only did these interests appear directly in the deputation, but there was handed in a declaration, signed by head masters of great public schools, head mistresses of public girls' schools, heads of colleges for women, municipal authorities, large employers of labour, ship owners, ship builders, and many persons distinguished in other walks of life.

The speeches were numerous, but short and to the point; and the President of the Local Government Board was clearly impressed by them. His reply could hardly have been more satisfactory. He has evidently given much attention to the whole subject, and, quite independently of his present position as Minister of Public Health, he has come to the conclusion that vaccination and revaccination are necessary for the welfare of England so far as small-pox is concerned. In referring to what the Government may or may not do in the matter, he was careful to state that he had not yet brought the subject before his colleagues in the Ministry. His own views, however, on every division of the question, such as the efficiency of vaccination, the necessity for repetition of the operation at a proper age, the supply of pure lymph, and the unsuitability of Boards of Guardians for the administration of the Vaccination Acts are in almost entire sympathy with those submitted to him by the Imperial Vaccination League.

He wisely urged on the League the importance of extending its work beyond the effort to influence the Legislature or the Government. He pointed out how in the past at election times candidates for Parliament have been pressed by small bodies of opponents of vaccination to give pledges which would secure their votes, and that very little had been done to counteract such efforts. This is unquestionably true. Medical men who, indeed, know the truth about vaccination, do not readily condescend to enter the controversial arena with the class of people who usually constitute the local mouthpices of antivaccination. For such work as is here in question, however, this descent is not always necessary. The reconstitution of the British Medical Association should do much to make easy the placing of the views of the profession before members of Parliament. The system of Divisions now being instituted will lend itself to these objects. Areas so small as to contain, perhaps, only fifty medical men are likely to be within the boundaries of only one or two Parliamentary constituencies, and the members should be very conveniently able to place their views directly before their representatives or would-be representatives in the House of Commons. We heartily concur with Mr. Long's advice in this matter, and we trust that, even though the new machinery of the Association is only in process of creation, it may yet be possible to bring much influence to bear on members of Parliament in support of legislation for amendment of the Vaccination Acts in the coming session of Parliament.

The facts submitted to Mr. Long by various members of the deputation show how far-reaching are the evil influences of small-pox. Wherever epidemics come they cause enormous expenditure. The addition of threepence in the pound to the London assessment rates is the most convenient recent illustration of this. Even a single case of small-pox may practically put a great merchant ship or passenger steamer out of commission. Commerce and education, indeed, are alike interfered with, and in the matter of national efficiency Germany is here far in advance of England. For these evils obligatory revaccination as the complement of obligatory primary vaccination is the obvious remedy. It is a remedy the means of application of which are ready to hand. The school registers will supply the lists of those reaching the vaccination age, and whatever be the merits or demerits of the new Education Act it has at least this convenience that if, as Mr. Long rather indicated might be the case, the county councils are to be the new authorities for administration of the Vaccination Acts, there will be no need of application by one public body to another for aid in carrying out the two sets of Acts, as the education authority will also be the vaccination authority.

In conclusion we have to congratulate the Imperial League and its honorary secretary, Mrs. Garrett Anderson, on the striking success of its deputation, and we may also express our pleasure at the fact that Dr. Bond, of Gloucester, was there to speak on behalf of the Jenner Society, and to indicate the cordial relations which exist between two organizations whose objects are essentially the same.

THE PHYSIOLOGY OF DIGESTION.

DR. THOMPSON has rendered good service to the profession by translating Professor Pawlow's lectures on the physiology of digestion[1] into English. His work is well done, and we owe to him a readable account of investigations which are not unworthy to be compared with the inimitable researches of Claude Bernard. By careful asepsis and scrupulous regard for the conditions under which the animals are housed, Professor Pawlow has been able to keep thirty or forty dogs continuously under observation, and to make them the subjects of many series of experiments. He has succeeded in maintaining them alive for months after division of the vagi, with oesophageal, gastric, and pancreatic fistulae, and with a small accessible stomach-diverticulum cut off from the general gastric

[1] *The Work of the Digestive Glands.* By Professor J. P. Pawlow. Translated into English by W. H. Thompson, M.D., M.Ch., F.R.C.S Eng. London: Charles Griffin and Co. 1902. (Demy 8vo, pp. 208. 6s.)

cavity; he has been thus enabled to study very carefully the action of the various organs concerned in digestion.

One of his most novel results is that different kinds of food may stimulate the appropriate ferment in the secretion of juice from the same gland; thus, for example, when an animal is fed on milk the fat-splitting ferment of the pancreas is abundantly present; when it is fed on bread the amylolytic ferment prevails, and when the dogs were fed continuously on one or other of these articles of diet the secretion of the pancreas appeared to be permanently altered so as to contain a larger proportion of the required ferment. No such change was observed in the gastric juice, but the question whether this could be induced by more prolonged dietetic conditions is left open.

If a dog with an oesophageal fistula is fed by the mouth none of the food reaches the stomach, but the effect is to stimulate a copious secretion of gastric juice, which may be obtained from such a dog, to use his own words, as milk is got from a cow. But if both vagi have been divided no secretion occurs until the peripheral end of the left vagus is stimulated by slow induction shocks, when a secretion of gastric juice invariably follows, In Professor Pawlow's opinion these experiments conclusively settle the controversy as to the innervation of the gastric glands. Similar experiments on stimulating the vagus demonstrate that it is not only the excito-secretory nerve of the pancreas, but possesses also an inhibitory power over this gland. The secretion of saliva can be stimulated not merely by tempting the animal by offering it food, but by putting into its mouth anything that acts as a mechanical stimulus, such as sand; but the effect did not extend to the gastric glands even when such substances as bitters, pepper, and mustard were employed. On the other hand, the gastric glands may be excited by the idea of food, especially if the animal has been prepared by a fast of two or three days; of course the flow of gastric juice is not so great as when the animal is allowed to eat the food even if it escapes from the oesophageal fistula. as under these circumstances the effect of the sense of sight is aided by that of smell and taste. Professor Pawlow denies very explicitly the statement hitherto generally received that the gastric glands may be excited by mechanical means such as Beaumont used in his experiments upon St. Martin, where he speaks of collecting gastric juice by introducing an elastic tube 5 or 6 in. in length into the stomach and moving it up and down so as to increase the discharge. Professor Pawlow used a feather and a glass rod alternately, and states that not a drop of fluid escaped from the stomach after such stimulation, yet as soon as the sham feeding commenced the juice began to flow. He shows that it is possible to introduce food into the stomach of a sleeping dog without stimulating secretion. In his opinion, appetite is the great normal stimulus of gastric secretion; the truth of the old saying, "*l'appétit vient en mangeant*," is emphasized, and he suggests that it is probably from the absence of this psychic stimulus that neurasthenic and other nervous patients suffer from digestive failure. When hunger is present simple touching of the gastric mucous membrane may afford the impulse which excites the appetite, and in this way the flow of gastric juice, observed by Beaumont, may have been caused.

Water causes a moderate secretion of gastric juice, and many solutions (of sugar, salt, egg albumen) have no better effect. A solution of sodium bicarbonate had a distinct inhibitory influence; on the other hand, solution of Liebig's extract, of gelatine and milk, appeared to be direct stimulants of gastric secretion. The ordinary practice of commencing a meal with soup is therefore sanctioned by these experiments, but it is right to recall that Schiff long ago came to the same conclusion.

Fat seems to have an inhibiting effect upon the secretion of gastric juice, and fat-containing fluids, such as milk, share this property. This action probably does not interfere with the digestion of milk when taken alone, but explains why, when used as a beverage with other food, it frequently causes digestive discomfort. The secretion of the pancreas seems to be stimulated by the presence of acids in the duodenum, and conversely to be controlled by the presence of alkalies; this is not only the effect of hydrochloric acid, but occurred with phosphoric, citric, lactic, and acetic acids; pepper, mustard, and similar substances produced no effect upon the flow, nor did a solution of sugar, peptone, or egg albumen, except in proportion to their acidity. Further experiments showed that so long as the acid remained in the stomach it did not affect the secretion of the pancreas and that this only followed the passage of the acid into the duodenum. The pancreas, like the stomach, is stimulated by psychical influences as was shown by offering food to fasting animals. These experiments prove the great importance of appetite for the normal fulfilment of digestion and give support to the view which, although generally admitted, is too often disregarded, that food to be digestible, should be well cooked and served so as to be agreeable. Bitters, *hors d'oeuvre*, and liqueurs served before meals may also serve a useful purpose in inciting appetite, but the practice of taking these preliminary stimuli is more esteemed in Russia than among ourselves.

Professor Pawlow suggests that the good effect of alkalies in catarrhal affections of the stomach is probably due to their inhibitory action upon the gastric glands, since the inflamed condition of the stomach causes an abnormal excitability or irritability of the secretory apparatus which gives rise to a superfluous and useless flow of gastric juice.

In a series of dogs which had well-marked hypersecretion of gastric juice excellent results followed from the use of a half per cent. solution of sodium bicarbonate. The hypersecretion diminished markedly and the greatly exalted excitability ot the glands was fully and permanently abolished. If the effect of a glass of Vichy water be to restrain this excessive work it may contribute to the removal of the pathological condition and to restore the normal state. Other experiments show the value of drinking large quantities of water as a stimulus to the flow of gastric juice, which is necessarily diminished where the proportion of water in the blood is in any way lessened.

The old problem of the function of the bile is dealt with and the conclusion reached is that its chief duty is to facilitate the transition from gastric to intestinal digestion, to arrest the action of pepsin which is injurious to the ferments of the pancreatic juice, and to favour the ferments of the latter, in particular the fat-splitting ferment. The mechanism of the pylorus is dependent upon the reaction of the fluid in the duodenum; when this is acid the pylorus is closed, but when alkaline or neutral the pylorus opens, and as the neutralization of the duodenal contents is the work of the bile the regulation of the pylorus mechanism must be reckoned among its functions.

Professor Pawlow urges the utility of experimental therapeutics as a part of pharmacology; the experiments

to be conducted not upon human beings but upon dogs. He believes that if this could be done the distrust of pharmacology, which is, he recognizes, felt by many practical physicians, would be diminished, as it would then become not only a study of the general physiological action of remedies but of their curative influence in disease. We may quote with appreciation his concludings words: "It is only by an active interchange of opinion between the physiologist and the physician that the common goal of physiological science and of medical art will be quickly and surely reached."

SPECULATIVE THOUGHT AND EXPERIMENTAL SCIENCE.

"IN the long run to construct a true method is a greater service to mankind than to discover items of knowledge." In these words Professor Clifford Allbutt gives the keynote to the Boyle Lecture on the Rise of the Experimental Method in Oxford, which he delivered to the Oxford University Junior Scientific Club.[1] He treats his subject from the historical standpoint, beginning with an outline of the early development of Oxford as a centre of learning; then follows a masterly exposition of the value for science of Roger Bacon's critical methods, and the concluding part of the essay is devoted to Robert Boyle, who paved the way for future research by his insistence on the importance of conducting experiments upon a systematic plan.

Professor Allbutt writes as the man of letters, displaying his wide knowledge of mediaeval literature with a characteristic vigour of style and brilliance of epigram; he also exhibits the rarer and more valuable gift of interpreting successive epochs of intellectual growth and decadence according to their logical value for the evolution of a wider knowledge, and recognizes the corresponding advances and retrogressions of the physical sciences as the natural outcome of their general intellectual environment. It is owing to this power of insight into the influence of speculative thought upon experimental research that Professor Allbutt's views have an important bearing upon the scientific problems of the present day.

The further experimental science advances the more evident does it become that the unexplored field of future research is illimitable. To pursue fresh items of knowledge does indeed carry with it its own justification as a pursuit of truth; but the value of our acquisition varies in degree according to the intrinsic importance of the truths pursued. Scientific data gain their importance not as isolated facts but by their interrelationships and in their bearing on general principles. Data, true in themselves, may be valueless or actually misleading if correlated in an arbitrary or injudicious manner; hence the importance of our results depends on the wisdom of our method and the prescience of our working hypotheses.

The mere addition to the perplexities of accumulated facts may be of admonitory value in its emphasizing present impotence; it falls short of the higher scientific ideal of that knowledge which carries with it a fresh acquisition of power for the control of our environment. The work of the scientist, if it be honest, is not likely to be forgotten; but a finger post for future guidance is a more lasting memorial than a mausoleum of misdirected energy. The mind of the true scientist is absorbed in the details of his particular experiments without being submerged in them; he retains his hold of the superior vantage ground which commands in its true perspective the landscape of scientific principle merging into the wider horizon of intellectual progress. No better illustration could be given of the advantage gained by this breadth of view than the passage in which Professor Allbutt describes the revival of Oxford learning after the decadence of the eighteenth century. ".....So Oxford slumbered on, to be awakened, not by the hum of the laboratory, but, as by Wycliffe three hundred years before, now anew by the thunders of Wesley, and the lightning of Newman, in St Mary's; St. Mary's the nurse of her infancy, the venerable mother of her prime. St. Mary's and modern physical science teach alike that between the material and the spiritual worlds there is no gulf; that in the death of either the other is also dead; and that in the life of each is their consummation."

It is from thoughts such as these that science receives its most potent stimulus, because they are stamped with the profound conviction that the mainsprings of thought, the fountain-head alike of speculative theory and experimental research, have a common origin and are vitalized by a common enthusiasm.

Moreover, they raise a most interesting topic—the influence of the sister universities on modern sciences. Happily both Oxford and Cambridge are rapidly growing out of the narrow spirit of pedantry which regards their schools of experimental science as a mere excrescence on their academical lore, with no higher destiny than that of a possible encumbrance, and, still more fortunately, the scientist, too, is ceasing to despise the knowledge not born of the laboratory as speculative dreaming or literary verbiage. It is now admitted as a scientific truism that the direct influence of mind on mind is powerful and subtle; and this is true, not only of the interaction between individual minds, but also of the influence exerted upon the individual by the collective intellect of his university. It is to the richness of their heritage of learning that Oxford and Cambridge owe their unique position. Secure in their continuity as the parent source of our national intellect, self-gathered the knowledge of their power and the consciousness that their destiny knows no end, they exert an influence not communicable by words or to be stored in books; it must be directly inhaled by living in the atmosphere of the place, for the influence of mind on mind is an inspiration, and not the imposition of a dogma. We know well enough what university life has done to mould men of letters, lawyers, and statesmen, and we are accustomed to recognize their achievements as springing from a common parentage on the banks of the Cam or Isis. May we not hope that this same influence will be extended more and more into the domain of experimental science, and, in particular, will make itself felt with ever-increasing insistence in that science which, though still in its infancy, is paramount in importance, the science of the human body in health and disease?

[1] *Journal of the Oxford University Junior Scientific Club.* London, Edinburgh, Glasgow, and New York: Henry Frowde. 1s. net.

THE INDUSTRIAL ACCIDENTS COMMITTEE AND CERTIFYING SURGEONS.

CERTIFYING surgeons will read with mixed feelings the recommendations made in the report of the Industrial Accidents Committee with reference to investigation of certain well-

defined classes of "factory" accidents. It is gratifying to find the surgeon's ability to throw light on the causation of accidents duly recognized, though perhaps such recognition might have been more complete. It is as much within the province of the surgeon to define the exact causation of an accident as it is for him to describe the nature of the injury resulting, and reliable information cannot be obtained under this head without the special knowledge afforded by his professional training. It is useless to attempt to devise preventive measures unless the causation can be accurately determined, and to render statistics reliable every case must be properly investigated. The surgeon's knowledge of the nature of an injury, and the means by which alone a particular injury could be inflicted, often enables him to state with exactness the true causation when stories differ, or in cases of instant death or sudden unconsciousness when no witnesses are present. The investigation by the certifying surgeon is therefore not only valuable, it is a necessity. There should, however, be no slipshod work, and those surgeons, if such there be, who think that the copying out of the employer's notification fulfils all requirements should recognize that this perfunctory course is damaging to the reputation of the whole body of certifying surgeons. The causation should be stated in so clear a manner that the inspector shall be able to judge of the necessity or otherwise of visiting the works for the purpose of securing efficient guards. The report rightly lays considerable stress upon this. We are glad to know that many accurate reports are made at present to a greater extent than the Committee were perhaps made aware of, and that the slipshod style is luckily not universally adopted by certifying surgeons. The wretched scale of payments which has up to the present been regarded by the Home Office as an adequate equivalent for the services rendered has long been a sore point with certifying surgeons, and it is satisfactory to find the Committee recommending an increased fee. The classes of accidents requiring investigation by the surgeon are and always have been defined by statute, and, in face of the failure of the attempt made in the last Factory Bill to empower the Home Secretary to fix by order what should be handed over to the certifying surgeon for report, it is somewhat astonishing that the same idea of fixing this officer's duties by order, instead of by Act of Parliament, should reappear. It is recommended that the inspector should refer to the certifying surgeon only such accidents as come within the scope of certain regulations to be made (presumably by the Home Office) for his guidance. On the former occasion it was satisfactorily shown to a large number of members of Parliament that the only systematic investigation was that made by the surgeon, who not only visits the works, but the injured person as well, and that, except in fatal cases, the local inspector rarely makes inquiries at the factory. If the statistics are to be kept up to the existing standard, every preventable case must be looked into by the factory surgeon. The report expresses the view that the duty of the surgeon consists in determining the extent of injury, and, as many injuries are but trivial, that there is no need for a report in such cases. This is a very serious confusion of cause and effect. It is an established fact that the degree of injury is no indication *per se* of the nature of the causation. A form of accident causing the most frightful injuries is brought about by being caught by machinery shafting, yet such an accident has been known to have resulted in nothing worse than contusions. The precautions taken, as the result of the surgeon's investigation, in the case of the slight injury might easily prove the means of saving a subsequent fatal catastrophe. It is also well known that the investigation by the surgeon of a slight accident has resulted in the discovery of an unfenced machine, which thus receives attention probably months earlier than would be the case if the only chance of attention being called to it were at the annual visit of the inspector. As no investigation by the certifying surgeon means practically no investigation at all, it is to be hoped that Parliament in its wisdom will refuse to adopt this resuscitated recommendation.

THE ARMY MEDICAL SCHOOL AND THE MEDICAL STAFF COLLEGE.

THE report of another prize distribution at Netley will probably excite some surprise. The distribution by Earl Roberts in July last was declared to be the closing ceremony of the Army Medical School, Netley; and so it was, for the Medical Staff College, which has taken its place, has held its first session in the laboratories of the Royal Colleges on the Thames Embankment, which has been temporarily hired for that purpose. The course of instruction carried out in these premises during the months of September and October included the subjects of hospital administration, military hygiene, and pathology, the latter two including laboratory work. Practical instruction was also given in the examination of recruits. Work which used to be spread over four months was compressed into two. Several important subjects which used to be taught at Netley were omitted from this course, and the practical initiation into the methods of management of military hospitals and generally into the life and work of a medical officer in the army had still to be undergone. For these purposes no suitable arrangements existed, or could be provided in or near London. Accordingly the officers belonging to the Royal Army Medical Corps were sent to Aldershot at the conclusion of the London course in order to obtain instruction and training in the more practical and technical parts of their business as army surgeons, while those belonging to the Indian Medical Service proceeded to Netley, where arrangements and means still existed for giving instruction in military surgery, tropical diseases, skiagraphy, and lunacy, and inculcating the habits and ways of military medical life and service. Hospital arrangements and customs in the native army of India are simpler than in the British army, but they necessarily follow similar lines, and as time goes on these lines will converge. On service there is often an interchange of duties between the two medical establishments, and any Indian medical officer may have to serve in or supervise the hospitals of British troops. For these reasons the association of officers of the Royal Army Medical Corps and Indian Medical Service in instruction and in hospital work at the commencement of their careers is sound and useful, while the sense of fellowship and community thus engendered is calculated to produce excellent results in India, where they will often be associated in life and work. When the new military hospital and its adjuncts have been built and equipped in London—and the sooner the better—these salutary arrangements will be more thoroughly accomplished. Meantime, it has been wisely determined to hold by the present means and opportunities of teaching and training still available at Netley until similar or better have been established elsewhere.

BABY-FARMING.

ATTENTION has been called on many occasions in these columns to the inadequacy of the Infant Life Protection Act to prevent the abuses that exist under the present baby-farming system. The case that was dealt with at the Middlesex Sessions last week proves that the Act and its administration are quite impotent to effect the object that was intended. The case was as follows: A man, his wife, and daughter were charged at the Middlesex Sessions with grossly neglecting nine children entrusted to them. They had received with each of the children sums varying from £10 to £30. Two of the infants, miserably clothed, were packed into the lid of an old rush basket. All the children looked in a most wretched condition, and were evidently suffering from insufficiency of food. All the prisoners were found guilty, and Sir Ralph Littler, taking a common-sense view of the case, "made the punishment fit the crime by sentencing each of them to three years' imprisonment." The present Act provides that where upwards of £20 is paid the child shall be exempt from inspection. It is to be hoped that the present case will convince those who have opposed the extension of the Act to all cases of the absolute necessity

that exists for the revision of the Act if it is not to remain a dead letter. At present these unfortunate children are in a far worse position than the destitute children under the care of the State. "To cure is the voice of the past, to prevent the divine whisper to-day," and the first thing that ought to be done is to require every one of these places, whether one or more children are kept, to be licensed, to keep a record of the name and residence of the parent, and to at once give information to the authorities of the removal of themselves or the child. We should be prepared to go even further than this, and compel all people receiving women to be confined for gain to be licensed. The British Medical Association suggested that a clause requiring all lying-in homes to be licensed should be introduced into the Midwives Bill, but Parliament did not find time to deal with the proposal, although it met with no serious opposition. We shall no doubt be met with the old cry that such drastic legislation would lead to an increase in the number of infanticides; we believe that the reverse would be the case, and we are strengthened in this opinion by the results of the administration of the Roussel law, which, according to Dr. Drouineau, has very greatly diminished the number of cases of infanticide in France. If the Act is to be properly administered we must have women inspectors, not only to see that the children are not wilfully abused, but also that they do not suffer from the ignorance and carelessness of the nurses. In what ignorance and carelessness may result is shown by the fact that of 2,500 children who died in Paris last year from gastro-enteritis no fewer than 2,000 were bottle-fed.

THE LONDON HOSPITAL.

UNDETERRED by the intention of the authorities of St. Bartholomew's Hospital to appeal through the Mansion House for the sum of £300,000, the governing body of the London Hospital issued its quinquennial appeal on Tuesday last. It is signed by the Hon. Sydney Holland, Chairman, and is a forcible and even picturesque document. He states that last year 13,160 persons were treated in the wards, and 162,147 separate persons in the out-patient department. Borrowing a method, which to judge from some of the monthly magazines has recently become popular, he endeavours to impress the magnitude of these figures upon the public mind by asserting that the hospital during the 365 days of last year treated 66½ miles of human beings standing side by side; for the treatment of these miles of human beings 92 miles of lint and 476 miles of bandages and 9 miles of plaster were used, and the in-patients ate 6½ miles of eggs; the patients also swallowed, or were told to swallow, 2½ millions of pills, and 3 tons of cough lozenges. Mr. Holland asserts that the London Hospital is placed just where it is wanted, which no one will be disposed to dispute, and implies that the whole 66½ miles of human beings were suitable subjects for charitable treatment. We hope so; but we must confess that the figures are not convincing in the absence of any assurance that no means are taken to sift out from the total of applicants those—and there surely must be some—for whom medical attendance could be properly provided by a development of the system of provident dispensaries if not by the general medical practitioners of the district, which the London Hospital seeks to serve. The hospital has an income from invested and trust funds of £22,000 a year, but spends £85,000 a year, yet in spite of the financial difficulties under which it is conducted, it has, since the last wide appeal made to the public five years ago, erected an isolation block at a cost of £32,000, the gift of an anonymous donor; built five operating theatres at a cost of £13,000, the gift of another anonymous donor; it has built, at a cost of £20,000, a large pathological department which Mr. C. Morrison has endowed for three years, and has erected a new out-patient department at a cost of £70,000, while a convalescent home has been built by the executors of the late Baroness de Stern, and Mr. Hora has endowed a women's ward which is to be built. It would be a misfortune if the London Hospital were to be deprived of public support, but we venture to hope that the Chairman's zeal will not lead him to encourage further proposals for adding to the number of beds in the hospital, or increasing its out-patient department. If further beds and more out-patient accommodation are required in the East End of London—a point which we think requires to be proved—we venture to submit that the need will not best be met by adding to the furlongs of wards and the miles of patients now treated by the London Hospital. London is spreading, and more and more square miles are becoming covered with houses inhabited by persons many of whom belong to the same class as throng the London Hospital. Organizations for medical aid should follow the same tendency towards the periphery, and we could wish that there was some authority which could determine whether the extension of existing hospitals, and when and where the institution of new medical charities were required. No body with such powers exists, but we may hope that the executive of the King Edward's Hospital Fund may be able in time to exert its influence in this direction.

THE PRINCIPAL OF THE UNIVERSITY OF EDINBURGH.

THERE are endless rumours as to who is to be the new Principal of the University of Edinburgh. The mystery or privacy of the negotiations leads to this in part. So also does the mode of procedure. The Curators of Patronage meet and talk over the persons they think worthy of consideration for the vacant office, but the vacancy is not advertised. Possible candidates are not invited to make applications. The general belief is that, if he is not actually to be the next Principal, Sir William Turner will at least have the refusal of the office. There have been difficulties in the way, but it is generally believed that these have been adjusted. After a full term of office the retiring allowance to the Principal would be £600. The retiring allowance of the present Professor of Anatomy would be £1,341 6s. 8d. It is now understood that his years of service in the latter will be allowed to count in calculating the pension of the Principalship. The latest gossip in Edinburgh is that, if appointed Principal, Sir William Turner will also continue to hold the Chair of Anatomy as well as the office of President of the General Medical Council. These conjoint tasks might well seem beyond the strength of a man of 70 years. Anyhow, it is a matter of history that although the late Sir Alexander Grant wished to give advanced lectures in philosophy (a task for which he was highly qualified, and a task which would have been so congenial to him) while he held the Principalship, the lectures were never given. If Sir William Turner, then, is offered and accepts the Principalship it is believed that he will *ipso facto* cease to be Professor of Anatomy. While some would have wished to see a somewhat younger Principal, it will be admitted that no one has done more to advance the material and financial interests of the University than Sir William Turner, and he well deserves, if he so wishes, to crown an honourable career by becoming the head of the University he has served so well.

TENT LIFE FOR THE TUBERCULOUS INSANE.

DR. A. E. MACDONALD, Superintendent of the Manhattan State Hospital, East Ward's Island, New York City, has, we learn from the New York *Medical Record*, introduced at that large institution a system of tent care of the insane which, according to Dr. C. Floyd Haviland, one of the assistant physicians, has been attended with the most gratifying results during the years it has been in operation. On June 5th, 1901, 40 phthisical patients began a residence in tents. In this number were included all cases of both miliary tuberculosis and phthisis at that time in the hospital. Two large tents were employed, each being 14 ft. high and having a capacity of 20 beds, allowing 40 square ft. of floor space per bed. These tents were erected upon elevated, dry ground, where they were surrounded by abundant shade, and were constantly swept by breezes from the river. The ground was cleared of all vegetation beneath each tent, and a board floor constructed about 18 in. above the ground, which, being made

in sections, could be taken up and exposed to direct sunlight as occasion demanded. In pleasant weather one side of the tent was kept open, so that the interior was literally flooded with pure air, and at all times sufficient ventilation was afforded by large ventilators at either end placed near the top of the tent. Near at hand were erected several small auxiliary tents, which included two dining tents, a clothing tent, and those for the residence of the attendants. Facilities for bathing were provided, and a separate water supply was established, while the sanitary arrangements generally and personal cleanliness of the patients were closely looked after. During the year 81 patients were given the benefit of tent life, and in that period of time 19 deaths occurred among them, a percentage of 23.45 out of the total number of cases treated. On the other hand, when all the deaths occurring in the hospital during the past year are taken into account, these figures make the percentage of those succumbing to tuberculosis as low as 8.8. The real benefit of the tent system is shown by a comparison of this percentage with that recorded in former years in the Manhattan State Hospital. Ten years ago they formed 17.8 per cent. of the total number of deaths, but with increasing care the proportion steadily decreased during the succeeding years, so that the yearly average has been 14.1 per cent. during that time. One year ago 9.8 per cent. of the deaths resulted from tuberculosis, but under the tent system the percentage of 8.8 is established, which is the lowest in the history of the institution. Isolation is acknowledged to be the most effective safeguard against spreading the disease in any public institution. In asylums for the insane there is greater need to prevent infection than in ordinary institutions, on account of the dirty personal habits of the demented. It is therefore especially necessary to isolate the tuberculous insane.

A NEW HOME FOR CONSUMPTIVES IN PHILADELPHIA.

ONE of the signs of the times seems to be a competition among millionaires in lavish giving for philanthropic purposes. An American millionaire, Mr. Henry Phipps, the "steel magnate" who gave £20,000 for the relief of the Boers, has, if we may be allowed the expression, gone £100,000 better than Sir Edward Cassel by founding in Philadelphia a home for the treatment of consumptives at a cost of £300,000. As provision is made for the use of the Finsen treatment in the new home, it may perhaps be inferred that the benefits of the institution will not be confined to consumptives, but will be extended to sufferers from other forms of tuberculosis.

THE PLEA OF INSANITY.

THE plea of insanity is frequently urged as a last resort in answer to criminal charges of a serious nature. So successful has this plea been of late in Scotland, that in a recent case Lord Stormonth Darling took occasion to state his view of the law upon the subject. It appears that a man was charged with the murder of his wife, and a plea was urged that he was insane at the time when he committed the act. Medical witnesses called for the prosecution stated that when the prisoner was examined by them he was quite sane. No medical men were called for the defence, the plea of insanity being based upon the fact that the prisoner, who had recently returned from South Africa, had been much disturbed upon his arrival in England by hearing that his wife had been unfaithful in his absence. Evidence was also tendered to show that he had been guilty of strange conduct about the time when the murder took place. In charging the jury, Lord Stormonth Darling said: "The defence that a prisoner is mentally sane enough to be criminally responsible, but is nevertheless in such a state of mind as to reduce the criminality of his act from murder to culpable homicide, is admitted by the law, but must be accepted with extreme caution. The evidence must amount to this: that there has been a process of deterioration going on in the prisoner's mind which amounted for the time to brain disease. If the evidence justifies you in holding that the accuser had so brooded over his wife's conduct that, apart altogether from the effects of drink or jealousy, his mind became so morbidly affected that he was no longer fully responsible for his actions, in that case it is within your province to return a verdict of guilty of culpable homicide." In the result the jury found the accused guilty of murder, with a unanimous recommendation to mercy. He has since been reprieved. It is in the best interests of justice that the perpetrator of a *crime passionelle* should be treated by a jury as if he had been actuated by more sordid motives. A recommendation to mercy is quite sufficient, in all genuine cases, to secure the exercise of the prerogative of mercy. The defence of insanity is not often set up in courts of justice, except in cases which involve the penalty of death; the reason being that a lunatic is deemed to be incapable of that "malice aforethought" which forms an integral part of the crime of murder. But it is difficult to see how a weakminded person can have the "felonious intention" which is also an integral part of many lesser crimes. In another case which recently came before the Sheriff Court of Edinburgh, a young man of good family was tried and convicted for the second time on a charge of committing frauds on jewellers. When brought up for sentence it was stated that the prisoner was subject to a mental derangement which had caused him to be placed in a private asylum when very young. He had no lack of means, and the frauds were perpetrated to gratify a mere passing whim, and with an absolute want of any precaution to prevent their being found out. Two eminent specialists said that although they could not certify that the prisoner was insane, he exhibited distinct traces of mental weakness. The sheriff, in sentencing the prisoner to nine months hard labour, observed that nine-tenths of the prisoners tried were of weak mind.

THE EXTERMINATION OF THE MOSQUITO IN SIERRA LEONE.

THE Honorary Secretary of the Liverpool School of Tropical Medicine has received from Dr. Logan Taylor, the leader of the Sierra Leone Expedition sent out by the school, a letter giving an account of the progress of the expedition. He states that he is getting a report ready for the school about the Sierra Leone work, which will shortly be sent. They had to stop most of the men at the end of August, only keeping the oiling gang after that. Dr. Logan Taylor is well pleased with the work this gang has been doing during his absence, as when he went round to inspect their work he found, both in untouched and drained streets, a very noticeable absence of *Anopheles* larvae in places where they used to be able to get any number. This is due to their not being able to breed, owing to the pools being either swept out or oiled regularly. The result of this is that, compared with the corresponding time last year, in some of the notoriously bad streets, where in a single house they could find as many as six, seven, or a dozen *Anopheles* mosquitos in the early morning, this year, with great difficulty, after searching house after house, they could get one, or perhaps two, adult insects. He intends to keep on an oiling gang until the end of February, by which time he should be free of the Gold Coast; he is leaving eleven men to peg away at Grassfields district until he returns to Freetown. An extra £500 has been put down in next year's estimates for continuing drainage work. The engineers are working at the hill railway, and also at the new waterworks. Since the men of the expedition stopped clearing up yards and emptying out the water containing *Culex* larvae, no one else has taken up the work, and these insects are getting bad again. Dr. Logan Taylor goes on to say: "In fact, the rubbish is beginning to accumulate in the yards as before, and several of the Europeans were complaining to me of being much annoyed by *Culex* and *Stegomyia*. This means that unless the Government and the school will keep on the work, the money the school has spent on it will be almost thrown away. My destination now is Cape Coast, where I am to

go and take charge of the sanitary work of the town, and see that my former recommendations are carried out. The people of Accra have been very kind, and the principal medical officer and the medical department are doing everything to assist me."

PERTH HOSPITAL, WESTERN AUSTRALIA.

In the *Daily News*, Perth, West Australia, for December 3rd, 1902, is published a full report of an attack made in the Legislative Assembly upon the present management of the Perth Hospital. The hospital seems to have been started in 1897, and the chief complaints appear to be (1) that the same staff has been re-elected, with few exceptions, since that year; (2) that these gentlemen are, for the most part, members of the Board of Management, who elect themselves or their partners; and (3) that such outsiders as have been admitted are comparatively junior men. In our opinion it is absolutely essential for the good management of a hospital that there should not be frequent changes in the staff, and we think that the plan of an annual re election is very bad. We should suggest that the medical officers should be elected for a terms of years, and for that time should not be removable, except for grave causes. It is only natural that those who took part in the foundation of the hospital should have seats upon the Board, and should exercise a considerable amount of influence over medical appointments, and we cannot agree with the proposal of the speaker that in the future no practising medical man should be allowed to have a seat upon the Board. We also feel that there is no legitimate ground for complaint in the fact that when vacancies have occurred these have been filled by the appointment of comparatively junior men, for a hospital staff composed wholly of seniors might prove unworkable. The critic put his finger upon a more serious defect in the management of the institution when he pointed out that the lay members of the Committee, who number sixteen, and whose proportion to the medical members is as sixteen to five, attend very irregularly. In the management of a hospital the presence of an active business element is essential. We hope our friends in Western Australia will seek to strengthen the hospital by enlisting the services of public men of all sorts, and encourage them to take an interest in the work. It is an advantage to have all classes represented, and the value of the co-operation of ladies and of working men should not be overlooked.

THE PROPHYLACTIC VALUE OF ANTIDIPHTHERIA SERUM.

WITH the object of obtaining the materials for a definitive judgement as to the prophylactic efficacy of antidiphtheria serum a collective investigation is about to be undertaken in Germany. For this purpose a circular has been sent to all medical practitioners in the German Empire asking for answers to the following questions: (1) Have you used antidiphtheria serum for prophylactic purposes? (2) How often (*a*) in families (a short account of the conditions is desirable); (*b*) in schools and similar communities (orphanages, homes for widows, holiday colonies, etc.); (*c*) in hospitals? (3) How many individuals in all were inoculated (*a*) under the age of 12, (*b*) over that age? (4) Were all the exposed persons inoculated? (5) How many were not? (6) Were the inoculated persons isolated from those suffering from diphtheria? (7) What serum was used? (8) With how many units of immunity? (9) How many of the inoculated persons contracted the disease? (10) Within what space of time from the inoculation did the disease begin? (11) Did cases of diphtheria occur at the same time in exposed persons who had not been inoculated? (12) Have you ever noted any disturbance of health after the inoculation? (13) Have you repeated the inoculation in the same persons—(*a*) at what interval of time; (*b*) in how many cases? (14) Are you, on the basis of your personal experience, convinced of the utility of the protective inoculation of antidiphtheria serum? The results of the investigation will be laid before the International Congress of Hygiene and Demography, which is to meet in Brussels in September next. A similar investigation is also to be made in other countries.

THE VACCINATION AUTHORITY.

ON the invitation of the Medical Officer of Health for the County Borough of Wigan, Dr. William Berry, a large number of the medical men of Wigan and district met in conference on January 6th. Dr. Berry, who occupied the chair, in referring to the epidemic of small-pox in the town, remarked that he knew whatever might be said to the contrary, they, the medical men of Wigan, rendered unselfish and unrewarded aid in regard to its public health. Base motives had been insinuated by certain members of the public, for example that the main object of their notification of infectious cases was to obtain the small fee attached, and that a similar reason applied to vaccination. No greater calumny had ever been hurled at a noble profession. The first cases of small-pox of the present epidemic had been discovered in a lodging-house during a careful supervision systematically carried out, and the two cases were removed to hospital while in an early stage, together with two persons who had been in contact with them. The public vaccinator at once revaccinated the remaining occupants of the lodging-house with the exception of four; one of these was found next day to have the disease and was removed to hospital; another was suffering from scabies (he was eventually isolated); and two others refused because they considered themselves too old. One of these, aged 68, was the father and grandfather of one of the patients, and on the ninth day after the discovery of the first cases he was found to have the disease. In view of the moral certainty that the disease must have been brought into the town by frequenters of tramp-wards and lodging-houses, he had considered it his duty to write to the Wigan Board of Guardians asking for facilities for the revaccination of such persons, advising that all officers who came in contact with them should be revaccinated, and especially that those tramps who were sent to lodging-houses owing to want of accommodation in the wards should be compelled to be revaccinated before they gave them a night's lodging. The letter met with a very unfavourable reception. He had long held the opinion, which had been confirmed by the reception of his letter, that the proper authority for the carrying out of the Vaccinations Acts was the sanitary authority, and in any future Bill dealing with the subject he trusted that such a provision would be made; for if so, in ten years after such provision small-pox would be practically extinct in this country. Reference was made also to other matters relating to the prevention of infectious disease, including the voluntary notification of measles and the desirability of notifying whooping-cough. These and other cognate matters were carefully discussed by a number of the medical men present, and by two aldermen of the Wigan Corporation.

THE DISPOSAL OF SEWAGE IN RURAL DISTRICTS.

AMONG the subjects discussed at the recent conference of the Gloucestershire Poor-law and Rural District Councils Association held at Gloucester were the establishment of labour colonies as a solution of the rural vagrancy question, and the education of the children of gipsies. Dr. J. M. Martin, Medical Officer of Health of the Stroud Rural District Council, read a paper on the disposal of sewage which furnished the conference with a most suitable account of the present position of the subject, and more particularly of its application in rural districts. After sketching the history of sewage treatment from the time of the Romans, Dr. Martin dealt with the best methods for (*a*) the isolated house, and (*b*) for towns having the water-carriage system. For the former Dr. Vivian Poore's well-known method was recommended, the lecturer advising "an earth closet of small capacity so that no accumulation can take place, and the burying of the contents superficially in the garden, slop water being distributed on the surface of the garden (preferably among shrubs). Thus by dispos-

ing of the refuse in the surface soil the ground will be improved for agricultural purposes, and there will be no accumulation of filth to pollute water supplies. For the latter, the water-carriage system, Dr. Martin discussed broad irrigation, intermittent irrigation, Liernur's system, chemical treatment, and bacterial treatment. It was contended that the last named was in principle the same as that recommended for the isolated house, and was in fact "a natural method under control." Whatever method it was intended to adopt, thoroughness of application and competency of scheme were matters of importance. The bacterial method, for example, if mismanaged, would create a greater nuisance than it was designed to remove. Disposal works, to be successful, should include means for temporarily retaining and dissolving suspended matter, bacteria beds, provision for storm water, and such arrangements as would reduce the liabilities to derangement by frost or snow to a minimum. Dr. Martin referred incidentally to the requirement of the Local Government Board as to the provision of land for further treatment of sewage effluents which had recently been modified and to the importance of the effluents being free from putrescible matter, which it was now quite feasible to obtain by the bacterial treatment properly managed. From our knowledge of rural district councils, we think such papers as Dr. Martin's are to be greatly commended as educational factors. No one would suggest that they should be anything more than elementary and of an explanatory nature, for if more than this they would pass over the heads of a lay audience and only create confusion. Dr. Martin's paper was an excellent example of the wise diffusion of information to persons, who as district councillors have an influence in relation to public health work. Dr. Martin was able to announce that a septic-tank plant is now being laid down by the Stroud Rural District Council, and is nearly ready for use.

THE KING EDWARD VII SANATORIUM, GUERNSEY.

The ceremony at the Castel, Guernsey, of opening a new Hospital for Infectious Diseases was attended by His Excellency the Lieutenant-Governor (General H. M. Saward), Mr. H. A. Giffard, Bailiff of Guernsey, the Jurats of the Royal Courts and representatives of the medical profession. The hospital is built on the same hill, 200 ft. above the sea, on which the present wood and corrugated iron isolation building belonging to Castel Hospital now stands. Two pavilions have been erected each having accommodation for both sexes. One of these is for diphtheria cases, and will accommodate twelve patients. The other block is for typhoid patients and "observation" cases. The old iron and wood building will be reserved for scarlet fever cases, and space has been reserved for building another pavilion when necessary. There is an administrative block, with accommodation for the matron, nurses and servants, a laundry and discharge block; efficient disinfecting arrangements and stables for the ambulance and disinfector van and the necessary horses complete the scheme. Mr. Giffard, in declaring the hospital open, suggested that it should be called the King Edward VII Sanatorium. Jurat Ozanne, in proposing a vote of thanks to Mr. Giffard and to the Lieutenant-Governor, asked permission of the Bailiff and of His Excellency to allow the committee to name one block the Giffard Pavilion and the other the Saward Pavilion. The company before dispersing inspected the various wards, several of which are ready for the reception of patients.

A CAMPAIGN FOR THE SUPPRESSION OF TYPHOID IN GERMANY.

The *Berliner klinische Wochenschrift* states that in the estimates for the Imperial Home Office for the coming year provision is made for the establishment of "typhoid stations," at first in the Rhine Provinces and the adjacent Imperial Prussian territories. In these stations a systematic effort in accordance with Professor Koch's recent researches to which reference was made in the British Medical Journal of January 10th, will be made under the supervision of the Imperial Health Bureau and the Imperial Sanitary Council, for the stamping out of typhoid fever in its endemic foci. For this purpose a sum of £7,500 is allocated. Provision is also made for an addition to the buildings of the Bacteriological Laboratory for the purpose of researches on protozoa. Other items in the estimates relate to the collection of statistics of sickness and mortality, and to investigation of the ultimate results of the sanatorium treatment of tuberculosis.

MEDICINE AND LAW AS PROFESSIONS IN GERMANY.

Of 5,617 pupils of the gymnasia and "modern side" gymnasia in Germany who passed the leaving examination in 1901, only 525, or 9.35 per cent., chose medicine as a profession, whilst 1,310, or 23.3 per cent., entered at the various universities as students of law. These figures seem to show that in Germany at least the public is beginning to realize that the medical profession under existing conditions does not offer a very attractive career.

The University of Dorpat, or as it is now called in Russia, Jurjev, celebrated the hundredth anniversary of its foundation on December 25th and 26th.

Professor Ehlers of Copenhagen, will, we understand, accompany a commission sent out by the Danish Government to study and report on the Danish West Indies from various points of view. He will investigate the diseases prevalent in the islands.

The residuary estate of the late Mr. Frederick James Quick, of Eltham and Trinity Hall, Cambridge, which will probably amount to between £50,000 and £60,000, has been bequeathed to the University of Cambridge, in trust, to supply the income in the promotion of study and research in animal and vegetable biology.

The German Cancer Research Committee has addressed to the medical practitioners of the districts in which the occurrence of cancer seemed to be most frequent questions which, it is hoped, will supply important statistical material. A Spanish Cancer Research Committee has also collected a considerable amount of material which will shortly be published.

It is proposed to erect in Munich a memorial to the late Professor Pettenkofer, who died in February last. A large and influential Committee has been formed in Germany, and the Bürgemeister of Munich has, through Professor W. H. Corfield, formally invited the co-operation of sanatarians in this country. A provisional Committee has been formed with Dr. Christopher Childs as Honorary Secretary.

It is announced that the sum of £10,000 has been vested in trustees by Mr. T. Sutton Timmis, J.P., for the purpose of systematic investigations into the origin and cure of cancer, which it is intended shall be carried out in the Liverpool Royal Infirmary and the new laboratories of experimental medicine in the University College, Liverpool.

On January 9th Professor von Esmarch celebrated his 80th birthday. His numerous admirers and friends, with Prince Henry of Prussia at their head, have taken advantage of the auspicious occasion to erect a memorial of the venerable surgeon in his native place, Tonning, in Schleswig-Holstein. To the congratulations of the whole medical profession of Germany we venture to add the expression of a hope that Professor von Esmarch may long be spared to enjoy the best fruit of length of days—the happy memory of a life devoted to the furtherance of knowledge and the relief of suffering.

ST. BARTHOLOMEW'S HOSPITAL.

IT is well known that the authorities of St. Bartholomew's Hospital, London, have for some years realized that it had become necessary to make extensive alterations and additions to the hospital buildings, with the view not of increasing the number of beds, but of bringing the general arrangements of those parts of the hospitals subsidiary to the actual wards up to the standard of modern requirements. The beds for patients are for the most part contained in four pavilions built round a central quadrangle; the medical school buildings lie mainly to the west of this quadrangle; the casualty and out-patient department is in the north-east corner; the college, an old building, occupies a narrow strip behind the east block; and the nurses' home, a cramped and wholly inadequate site at the south-east corner.

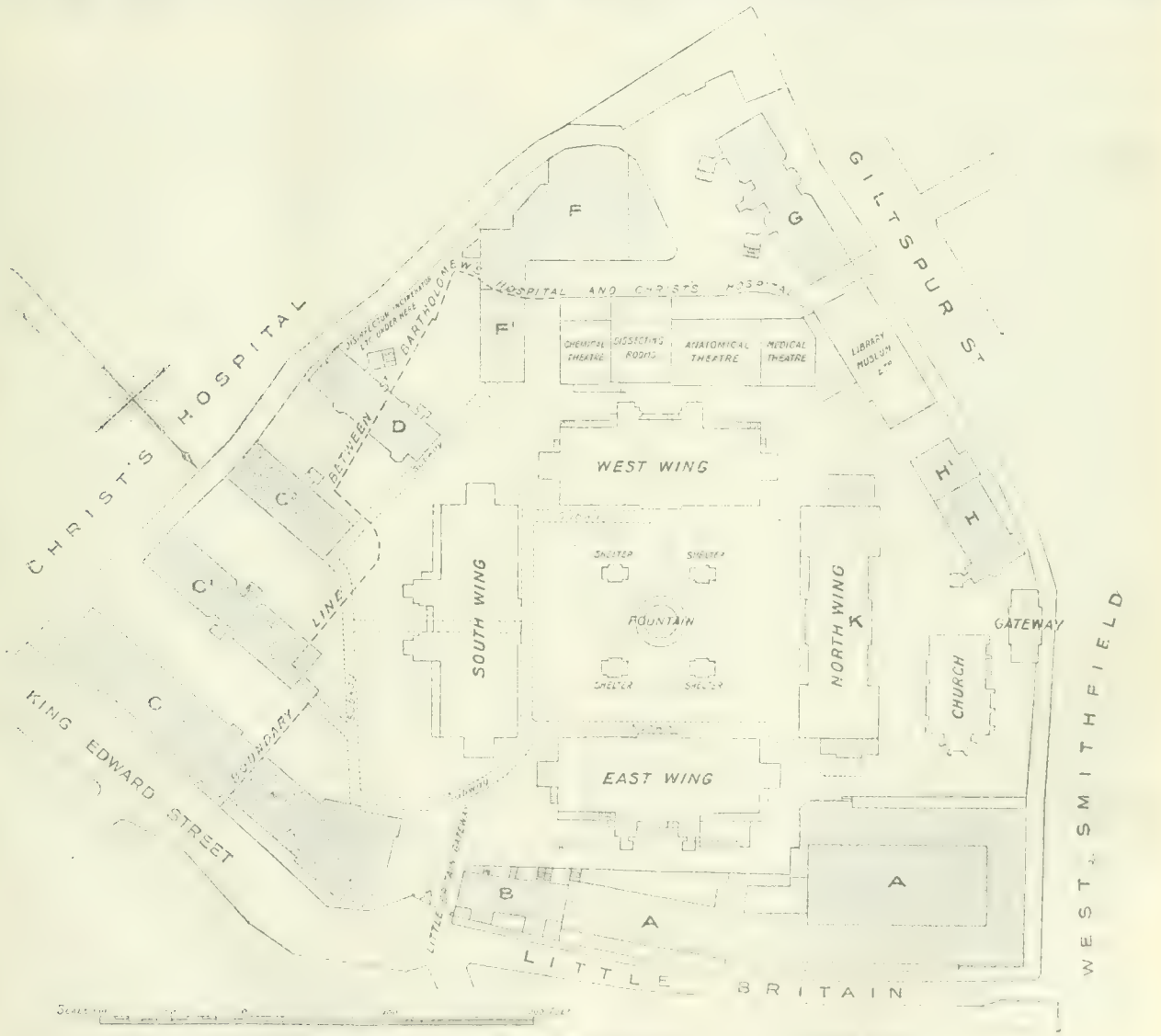
LAND PURCHASED FROM CHRIST'S HOSPITAL.

When the site of Christ's Hospital, which lies immediately to the south-west of St. Bartholomew's Hospital, became free by the removal of the school to the country the authorities of St. Bartholomew's Hospital considered it advisable to purchase a portion of this site with the view mainly to afford space for the erection of a nurses' home and an isolation block for infectious and septic cases. The site would also afford space for a new *post-mortem* room and mortuary and for clinical laboratories.

THE PROPOSED NEW BUILDINGS.

The acquisition of this additional land of course led to a consideration of the best means of utilizing the whole site as a single area. The original site covers rather more than five acres; the new ground purchased from Christ's Hospital raises the total area to about six acres and a-half. The general decision, which has been reached after much study of more than one set of plans, is illustrated in the accompanying block plan.

With an exception to be mentioned presently, it is not proposed to touch the four ward pavilions, called respectively North, South, East, and West Wings. Though not modern, the wards are regarded as being good and well ventilated, and a considerable amount of money has been spent in recent years on reflooring and making other improvements. It is not intended to add to the number of beds or, as far as we can ascertain, to extend the work of the hospital in any direction, but rather to render the facilities for conducting the general work and that of the special departments in a more satisfactory manner. At the present time the casualty and out-patient departments are quite unsuited to their purpose, as is clearly shown by the evidence given by Sir



Plan of St. Bartholomew's Hospital, with proposed additions (new buildings are shaded).

A, Out-patients, casualty, special departments, and dispensary.
B, Steward, clerk of works, head porter, and fireman.
C, **C¹** **C²**, Nurses' Home, etc. (Hospital kitchen on top floor of **C¹**.)
D, Pavilion block for patients.
F, **F¹**, Pathological department, including laboratories, *post-mortem* room, mortuary, inquest room.
G, Isolation block.
H, Resident medical officers.
H¹, Vicar.
K, Five operating theatres to be built on the top of the North Wing.

Thomas Smith, Sir William Church, and Mr. Bowlby before the House of Lords Committee some years ago. Nobody who has seen these buildings will dispute this opinion. With the increase of special departments the pressure upon the inadequate accommodation has become greater, the comfort of the patients has suffered, and, what is of more importance, their effective treatment has been rendered difficult.

It is proposed to clear the north-east angle, now occupied by the casualty and out-patient departments and by wards for about one hundred beds, and also the east side now occupied by the old buildings in which the resident medical officers and the residential college are accommodated. It may be said in passing that the residential college is a very small institution, providing only for some 26 students out of a total of between 400 and 500. Upon the ground thus obtained marked A in the plan, it is intended to erect a new casualty and out-patient departments, and to provide accommodation for the following eight special departments—eye, throat, ear, teeth, skin, gynaecology, orthopaedics, and electricity—and for the apothecary's department and dispensary. The existing small nurses' home would be pulled down, and partly upon the ground thus cleared but mainly upon part of the site purchased from Christ's Hospital, a new nurse's home would be erected in three blocks, the hospital kitchen being established on the top floor of one of these. West of the nurses' home would be built a ward block to provide for the beds dispossessed by the pulling down of the small block at the north-east angle; a disinfector and incinerator would also be provided here. West of this, and still mainly on the new ground obtained from Christ's Hospital, the pathological block would be erected, containing a *post mortem* room, mortuary, inquest room, and clinical laboratories. On the north-west boundary of the new site, facing Giltspur Street, an isolation block would be erected for infectious and septic cases; and near the gateway opening on to West Smithfield a building to provide quarters for the resident medical officers and a house for the vicar.

In the present hospital the operating theatres are insufficient in number, and one of them is old and badly lighted. It is intended to build on the top of the north wing (K) five operating theatres, each with an adjacent anaesthetic room and recovery room, and to provide proper sterilizing and instrument rooms on the same floor. As there are five surgeons and five assistant surgeons, this plan would provide a separate operating room for each surgeon and assistant surgeon acting together.

There can be no doubt that all the additions enumerated above are urgently needed. The inadequacy of the operating theatres has already been mentioned; the casualty and out-patient rooms are not only too small, but very ill-adapted to their purpose; the special departments are without proper accommodation; the *post-mortem* room is too small, and there is no proper mortuary; the nurses' home is old and quite inadequate, so that at the present time many of the nurses live elsewhere. As will be observed, the college will entirely disappear, but in any case it ought to be pulled down. Granting that it is found desirable to continue such an institution, a much larger building should be provided, and there seems no valid objection to its being erected at some little distance, if a suitable site can be found, since the new plan provides adequate accommodation for the resident staff within the hospital precincts.

The medical school buildings are comparatively new, having been rebuilt, at a cost of about £50 000, in 1880. The lecture theatres, anatomical rooms, museum and library are among the best belonging to any medical school in London, and in view of the scheme for the establishment of a great teaching centre for the preliminary sciences at South Kensington, a plan which sooner or later we are convinced must be carried out, it is improbable that an extension of the school buildings will be necessary. The present needs of the hospital may therefore be enumerated as follows:

1. New casualty and out-patient departments.
2. Special departments.
3. New operating theatres.
4. Isolation block
5. Clinical laboratories.
6. *Post-mortem* room and mortuary.
7. Quarters for residents.
8. Nurses' home.

All these would be provided by the new scheme.

THE FINANCIAL QUESTION.

Although St. Bartholomew's Hospital, owing to the fact that its capital has for the most part been invested in London, is a wealthy corporation, its financial position has been seriously crippled by the purchase of the land from Christ's Hospital, an area rather less than one acre and a-half in extent.

In preliminary expenses, surveying, the promotion of a Bill in Parliament, and arbitration, about £12,000 was spent, and the arbitrator fixed the sum to be paid at £238,000, so that the site has cost in round numbers a quarter of a million. This has been provided by selling securities to the amount of £130.000 and by borrowing £120,000 from the bankers. The new buildings are estimated to cost £300,000, so that altogether the hospital in order to carry out this scheme has to face a capital expenditure of more than half a million.

Various objections have been advanced to this scheme. In the first place, it is pointed out that the site, although greatly improved by the purchase from Christ's Hospital will remain cramped, and that when the remainder of the site of Christ's Hospital has been sold and used for building St. Bartholomew's will not only be blocked out from any possibility of extension in that direction, for many generations at least, but also that the erection of lofty buildings would cause a deterioration of the suitability of the area for a hospital. On the other sides the St. Bartholomew's site is surrounded by streets except to the north, where there is the relatively open space of West Smithfield. It is asked whether it is wise to spend so much money upon a site incapable of extension in the future, more especially when this expenditure involves an appeal to the public for at least £300,000.

PROPOSAL TO REMOVE THE HOSPITAL.

The question naturally arises whether at this crisis in the history of St. Bartholomew's Hospital it would not be wiser, at whatever temporary inconvenience, to remove the hospital altogether, and to erect a modern building with all necessary dependencies on a new site. In support of this contention two arguments have been advanced: First, that the present site would fetch about a million, and, secondly, that the hospital could secure a somewhat larger site, capable of extension in the future, at no great distance. With regard to the first point, the estimate of the value of the site is little more than a guess, and it must be remembered that the larger, and from the business point of view the most valuable, part of the ground still belonging to Christ's Hospital is in the market, and that none of it has yet been sold.

The alternative site suggested is that now occupied by St. Luke's Hospital for Lunatics in Old Street, and adjacent land belonging to St. Bartholomew's. The site occupied by St. Luke's Hospital has an area of about three acres, and it is believed that possession could be obtained on terms, but it would, of course, be necessary to wait until St. Luke's had found a new site and its new building had been erected. The Governors of St. Luke's cannot be compelled to relinquish the site on which their hospital is built, but it is understood that they would be willing to do so if a suitable site were found and an asylum built on it in the country. The estimated cost of this is about £120,000. Possession of an additional acre could be obtained at once. An area of four acres could thus be provided within a few years for the new St. Bartholomew's. But the old site now covers an area of six and a-half acres, and those who advocate removal consider this to be insufficient. To meet this objection it is urged that St. Bartholomew's Hospital owns land, covering an area of three acres and a-half immediately adjacent to St. Luke's Hospital. This it is said would be available for the new building. Sir Trevor Lawrence, Treasurer to the hospital, however states that the majority of the houses on this additional site are let on leases which with but few exceptions have more than twenty-five years still to run. He points out also that the area of four acres and a half outside St. Luke's is intersected by eight streets. If the unexpired leases could be bought, this plan would give a site of seven acres and a-half, and it seems to be possible that under the circumstances Parliament would sanction a scheme for treating it as a single site and permitting the closure of the intersecting streets. It appears to be admitted, even by those who advocate the move, that it would not be worth making for the sake of the additional acre if this alone could be obtained, but they believe that further ground, covering altogether seven acres and a-half, might be obtained, so as to give a total area of fifteen acres. Sir Trevor Lawrence, however, states that this additional seven acres and a-half is the property of several owners is intersected by public streets, and is not in the market.

If it were certain that the present site of St. Bartholomew's Hospital could be sold for a million, and if the hospital

actually possessed an area of 15 acres in and around St. Luke's, there would be a good deal to say for the removal, but the advantages become somewhat problematic when it is learnt that the new site which can with any confidence be said to be available is only about one-seventh larger than the present site, and that the erection of a new hospital would probably cost about as much as would be received, on the most sanguine estimate, for the present site. This has been put down at one million sterling, but to erect wards for 670 beds, the number provided on the present site, a new nurses' home and all the subsidiary buildings would probably cost not far short of the million, leaving practically the whole of the expenses connected with obtaining and clearing the site to be provided from some other source.

THE APPEAL TO THE PUBLIC.

It appears, therefore, that St. Bartholomew's Hospital, if its arrangements are to be brought to the level of modern requirements, has no other alternative but the disagreeable necessity of appealing to the public for a large sum of money, certainly not less than a quarter of a million, whether it is kept where it is or removed to the St. Luke's site. It is perhaps not unnatural that those who are responsible for the maintenance of other hospitals in London which are under the continuous necessity of appealing to the public for funds, for maintenance as well as for improvements, are aghast at the prospect of such a competitor as the great city hospital. The Hon. Sydney Holland, the Chairman of the London Hospital, is particularly aggrieved that St. Bartholomew's should make an appeal this year when the London Hospital had arranged to make its special quinquennial appeal for a large sum. It is no doubt an unfortunate coincidence, but we must, from the medical point of view, express a definite opinion that the improvements proposed to be made at St. Bartholomew's Hospital are so urgent that the authorities are under an obligation to carry them out without delay. If the financial position of the hospital, strong as it is, is not sufficiently good to enable it to carry out the improvements without a liberal donation from the public, then it seems hardly just to call upon St. Bartholomew's Hospital, which has hitherto never, in modern times at least, appealed to the generosity of the public to set aside its needs because those of other hospitals are also pressing.

REMEDIES FOR THE CONTAMINATION BY SEWAGE OF OYSTERS AND OTHER MOLLUSCS.

IT has become increasingly clear that public attention has been thoroughly aroused by the numerous cases of enteric fever attributed to the consumption of oysters from Emsworth. The most convincing evidence of this is the action which the oyster trade has found it necessary to initiate. The representatives of this trade commenced their defence by minimizing the evil, by making the remarkable statement that oysters were not coming into the metropolis from any sewage-contaminated source, and by the almost equally misleading and erroneous statement that only two oyster beds in England remain polluted. At the meeting representing the oyster trade which met on January 5th at Fishmongers' Hall they had received further light on some of these points. The official account of their proceedings admits sewage contamination of oysters from Mumbles, Bosham, and Flushing in Cornwall. If to these be added the now notorious Emsworth beds, and the beds at Southwick, near Brighton, which judging by the continued capacity of the oysters grown in them to cause enteric fever are still contaminated by sewage, we have here to hand, without any attempt at investigation, five sewage-polluted oyster layings, in lieu of two. When the results of the belated inquiry of the Local Government Board are forthcoming, this number will probably be considerably increased.

Until the proper remedy is applied the oyster trade may rest satisfied (or unsatisfied) that the majority of the public will not be contented with stereotyped and inaccurate assurances from interested parties, but will abstain from a food which has rightly obtained an evil reputation as a dangerous luxury. This is undoubtedly the proper course until an official and authoritative assurance is given that all places from which oysters sold in this country are derived are free from the risk of contamination by sewage.

In the BRITISH MEDICAL JOURNAL of January 3rd Dr. Lloyd Roberts and Mr. Tabor write advocating that no crude sewage should be allowed to discharge into the sea or into estuaries, but that sewage should be first subjected to the "bacterial tank system," which we are informed by Mr. Tabor "is well known to render the effluent practically harmless." What may be the special virtue of the word "practically" we cannot say, but we suppose that the effluent is or is not harmless. That there is no sufficient ground for maintaining that the effluent from a septic or bacterial tank is harmless is shown by the following remarks by Dr. Houston:

> No definite proof has been furnished that the effluents from bacteria beds are conspicuously more safe in this sense (that is, from the point of view of the epidemiologist), in their possible relation to disease than is crude sewage. Indeed, all the available evidence tends to show that they must be regarded as nearly, if not quite, as dangerous to health as raw sewage.[1]

There cannot, therefore, be said to be any sufficient evidence that the feeding of oysters on septic tank effluents would be less risky to those who eat the oysters than their present feeding on crude sewage; and there is, as shown above, strong evidence to the contrary. One cannot but admire Mr. Tabor's attempt to show that there is danger to health from "the consumption of fish of all kinds from sewage-polluted areas." If there are only, as he states, two places in England at which sewage-polluted oysters are grown, it is strange that other fish should be so commonly exposed to pollution. This proves too much, and Mr. Tabor has yet to show that eviscerated, washed, and cooked fish is a source of enteric fever.

The fact is that the attempt to remove the burden of responsibility from the shoulders of the oyster trade to those of the local sanitary authorities must inevitably fail. It is no doubt desirable that the water of estuaries should be free from the admixture of crude sewage, and, as has been said, the effluent after bacterial treatment is still to be shown to be worthy of trust from our present standpoint. But this is a very large question, and it would be unreasonable, even if it were possible, to require all sanitary authorities at the present moment to apply the land system of treatment to their sewage before turning the effluent into estuaries. The oyster trade after all is a relatively small interest, and it is the business of the oyster merchants to find safe places for carrying on their trade, since they admit, and even loudly proclaim that such places are numerous and suitable.

Two remedies have been proposed in Parliament, and these, so far, hold the field. The unhappy Oysters Bill of 1899 of the Government laid upon local authorities the duty of inspecting oyster layings within their boundaries, and prohibiting the use of contaminated oysters from these layings. The Brighton Corporation Bill of 1896 prohibited the sale within that borough of shellfish (note the wider scope of operation: shellfish—not oysters only) known to be the cause of disease. Without entering into details, it seems pretty clear that the machinery of the Brighton Bill was preferable to that of the Government Bill, which placed the local authority in the position of closing oyster layings within its jurisdiction, which might have been rendered unfit for this purpose by the sewage of the authority in question. The Brighton Bill, on the other hand, prevented the importation of the disease-producing food into a given community, and left the shellfish merchant and the local authority in whose district the molluscs were grown to settle their differences among themselves.

Two facts are certain. First, if a remedy, and an effective remedy, for the present state of matters is not found, the oyster trade, as a whole, will continue to suffer severely. The present agitation will die down, but will be followed by successors of a like kind. As attention becomes more directed to this evil, it becomes increasingly clear that we have in polluted shellfish an explanation of a large proportion of these sporadic cases of enteric fever, the causation of which in the past has been mysterious. Secondly, it will pay the oyster trade to assist those of their number who cannot afford to move from their present insanitary layings to others not liable to sewage contamination; for in such a case as this, it is difficult for the public to distinguish between the good and the bad, and the former must be exposed to suffer with the latter.

We return once more to the point, that the problem is not one—as might be imagined from the scope of the Government Bill of 1899—solely concerned with oysters. It affects also mussels, cockles, and other humbler molluscs. The Blyth cockles now enjoy an evil notoriety. An investigation in Belfast from this standpoint might not improbably show that no insignificant part of this excessive amount of enteric

[1] Second Report of the Commissioners appointed in 1898 to Inquire and Report what Methods of Treating and Disposing of Sewage may properly be Adopted, page 26.

fever is caused by cockles. Any future Bill must deal with other molluscs as well as with oysters. The oyster trade will do well to assure themselves that the onus of reform will lie on them and not on the sanitary authorities. If any one is to receive notice to quit, it will be they. Once this is realized, the remedy ought not to be long in being applied.

THE NOTIFICATION OF INDUSTRIAL ACCIDENTS.

THE report of the Departmental Committee appointed to inquire into the notification of industrial accidents, which has just been issued, is worthy of consideration, particularly as one branch of the medical profession is intimately interested in the views expressed therein.

The Committee owed its origin to the forced deletion of the obnoxious "accidents" clause during the passage of the Factory Bill of 1901 through Committee, and to the resulting promise made by Mr. Ritchie to have the whole subject of notification of industrial accidents reconsidered, with a view to future legislation. Messrs. H. H. S. Cunynghame, C.B., Assistant Under-Secretary for the Home Department; C. E. Troup, C.B., of the Home Office; and H. Llewellyn Smith, of the Board of Trade, constituted the Committee. Among those called to give evidence were Dr. B. A. Whitelegge, Chief Inspector of Factories; Dr. W. F. Dearden, Honorary Secretary of the Association of Certifying Factory Surgeons; and Dr. G. Paddock Bate, one of the metropolitan certifying surgeons.

The report first deals with the purposes of notification, which are stated to be two, namely, to render possible the enforcement of statutory provisions for the protection of workpeople (administrative), and the collection of particulars relating to accidents (statistical). It is laid down that for both purposes the character of the accident to be reported must be defined, and that, for practical ends, the standard must be reasonable though precise, the definition, at the same time, embracing a wide range, and being, as far as possible, uniform in different industries. The present system of notification of accidents in mines, quarries, factories, workshops, buildings in course of erection, docks, railways, engineering works, and in connexion with merchant shipping, are described and the defects noticed. There are two classes of non-fatal accidents notified in connexion with the mining industry: those occurring from special causes, such as explosion, which require notifying at once; and others vaguely defined as those causing serious personal injury. As the definition of serious accident is left to the employer, the uselessness of the latter classification is easily demonstrated. Non-fatal "factory" accidents are also divided into two classes: (A) special cause accidents—that is, occurring in connexion with definite manufacturing processes; and (B) any accident causing the injured person to stay away from work for a specified time. As the number of accidents in Class B is very numerous, and the investigation and compilation of particulars in the majority is of no practical value for preventive purposes, some cutting down is regarded as necessary. The main difficulty in connexion with docks and buildings is to get at the proper person who can be held responsible for notifying. In railways the only difficulty, apparently, is to discriminate properly between the class of accidents reportable to the factory department and those to be notified to the Board of Trade, otherwise the system in operation is regarded as satisfactory. Engineering (that is, civil engineering) works are not under proper inspection, and as a consequence the notification is not properly enforced.

Proposals for amending the regulations in force are discussed and certain recommendations are made. The view is that one absolute uniform standard of disablement to qualify for notification in all industries would be unworkable. "Special cause" accidents should be brought under the cognizance of the inspector at the earliest possible moment, in mines at once, in factories, railways, docks, etc., if the injured person is compelled to absent himself from work for a whole day at any time subsequent to the occurrence of the accident (the present qualification being five hours' absence). The fourteen days' standard of the Workmen's Compensation Act finds great favour with the committee for other than special cause accidents. In the case of railways, mines, and engineering works periodical returns of accidents under this class are advocated, and for factories, workshops, docks, etc., individual notification after the expiration of this period. In the case of accidents occurring in connexion with particular industries, such as the flying of grindstones in grinding mills, which might, or might not, cause very serious injury, it is regarded as necessary to have notification. It is thought this could be managed, under existing powers for the regulation of dangerous trades, without any fresh legislation.

The position of the certifying surgeon with regard to the investigation of factory accidents is specially alluded to. At present, all fatal accidents and non-fatal "special cause" accidents are notified to him direct. It is recommended that this direct notification should cease, "and that the inspector, acting under regulations to be laid down for his guidance in the matter, should refer to the surgeon such accidents, both in Class A and in Class B, as require his investigation." It is suggested that the surgeons' reports would be more useful if they were made fuller, "so as to enable the inspector to judge as to the cause of the accident and the necessity for further precautions, even though the number of accidents reported on were reduced. If this change were made some readjustment of the fees would no doubt be necessary."

THE BALLACHULISH SLATE QUARRIES COMPANY AND THEIR MEDICAL OFFICER.

THE Ballachulish quarriers have no intention of surrendering their right of choosing their medical officer, which the company is seeking to take from them, while graciously allowing them to provide his salary. Their "Medical Committee" has addressed a statement to the shareholders of the company, pointing out that from time immemorial the quarrymen have had a say in the appointment of the doctor. They nominated Dr. Grant at a meeting held for the purpose in June, 1900. They reported this to the manager, and subsequently the company made a formal agreement with Dr. Grant. In July, 1902, the company, without consulting the quarrymen, gave Dr. Grant notice that his agreement would terminate on August 4th, and only then did the quarrymen ascertain that in the agreement there was a condition that when the directors terminated the contract the doctor would be required to cease practice in the district. This action of the directors, says the Medical Committee, surprised not only the quarrymen but the entire community, as Dr. Grant during his two years' service had performed his duties faithfully and well. There had not been even a murmur of complaint against him, while he had earned the respect of all, and endeared himself to many, not only as medical adviser, but as one who interested himself in the welfare of the entire community. The men therefore petitioned the directors to retain Dr. Grant's services. When that request proved fruitless they intimated to the directors that they would neither accept nor pay for the services of any doctor they did not themselves appoint. On August 4th, 1902, the quarrymen appointed Dr. Grant, in whom they had and still have the fullest confidence. He has continued to practise amongst them, and the Medical Committee collects and pays his salary. The quarrymen do not wish him to be removed from the district, and it is plainly intimated that they will not accept a doctor appointed by the company, nor allow any interference whatever by the company in an appointment. The workmen hold that the action of the directors is a gross injustice to themselves and a grievous wrong to their doctor, and they wish the shareholders to know that they will resist to the utmost and prevent by every known lawful means the removal of their trusted medical adviser. In regard to a statement made in a recent report of the action in court to the effect that the company's employés numbered 600, and that the directors were fighting for "a considerable body of quarrymen," it is pointed out by the Medical Committee that the number of employés for many years past has varied from 360 to 400, and at present does not exceed 380. Of this number all, except three, have intimated that they will have no doctor but one of their own appointment. The Medical Committee goes on to say that in several newspapers in November, 1902, there appeared reports of a public meeting held in Ballachulish on October 21st, at which there had been exposed a conspiracy for the removal of the doctor. The Committee alleges that it was publicly stated at that meeting that certain relatives of the manager had, under threats and with inducements, canvassed the quarrymen to make complaints against the doctor, telling them how the manager wished his removal, and how, if complaints were sent in by five persons to the company's office, such removal would be assured. Of this, it is added, confirmation may readily be obtained by the shareholders from any independent

source in the locality. In conclusion, the quarriers express the hope that the shareholders' sense of right and justice may guide them to make an effort to terminate this unrighteous and unmeaning persecution by the directors of a respected, upright, and honourable man.

We are informed that the directors are now trying to force the quarriers to sign an agreement which will completely deprive them of any freedom of choice in the appointment of a medical officer. The men, it is said, will not be allowed to resume work until they have signed this agreement. As we said before, the company may have the law on its side, but we do not hesitate to say that it is using it in an oppressive spirit. Dr. Lachlan Grant is fighting not only his own battle and that of his profession, but that of the quarriers. We heartily wish him and them success in their struggle against what, even if the law allows it, is none the less an intolerable injustice.

CONTRACT MEDICAL PRACTICE.

WALSALL.

DR. FRANK G. LAYTON, Hon. Secretary of the Walsall and District Medical Society, has addressed a letter to the *Walsall Advertiser*, in which he corrects certain misapprehensions which have arisen with regard to the action taken by the society in resolving no longer to continue the system of private medical clubs. He points out that the action is not in any way aimed at the Friendly Societies. A private medical club is a totally different thing; a medical man wishing to do such work let it be known that he was willing to attend all and sundry when ill for a weekly payment of 1d., or, in the case of a whole family, of 4d. The money was collected by agents, who were paid a commission of 25 per cent., and were also entitled to pocket the payments for the first four weeks. This method of paying the collectors, he points out, is obviously a direct inducement to canvassing, which has been condemned by the General Medical Council. Dr. Layton goes on to argue that the system is bad not only because it involves the employment of a collector, but because it is felt that in undertaking this kind of club practice the medical man is undertaking to do what he cannot perform, since the number of patients who, under the system of private medical clubs flock to the doctor, is so large that it is impossible to give to each one the attention which his case deserves. He continues:

A system that is responsible for the perfunctory performance of duties, namely, the seeing of large numbers of patients in a very limited space of time, is rotten, bad both for patient and doctor. The patient thinks he is having his disease properly treated, when there has been time only to form a rough diagnosis; and the doctor, at first distracted by having to do what he knows is bad work, ends by becoming callous.

The alternative offered by the Walsall doctors is that patients shall pay for the attendance that they actually receive. If they wish it they can, during an illness, pay a fixed sum per week, which will entitle them to medical attendance and medicine as long as that illness lasts, the sum to be fixed between patient and doctor in accordance with the patient's ability to pay.

It has been said that the dissolution of the clubs will mean that a great many people will go off to the parish doctor. But will they? The people who pay into clubs are mainly not those who would go to the parish doctor under any circumstances; by far the greater number are quite able to pay a doctor a weekly sum when ill, and many are in a position to pay ordinary medical fees. There is no fear that the rates will go up, and even if there were, it is hardly fair that such a catastrophe should be avoided at the expense of the doctors.

These "family clubs" differ essentially from registered provident clubs and from Friendly Societies, in this respect, that in the family clubs (which are solely under the management of the doctor and the collector) people are admitted by the collectors or canvassers at any time on payment of a few pence, and are immediately entitled to medical attendance, whereas in the Friendly Societies the members are admitted only if in good health, and after examination by the society's doctor, and the society is under the management of a committee of the members. The family club system encourages improvidence; the latter encourages thrift and self-respect.

With regard to the alternative now offered, we are informed that it has been in vogue in Walsall for a very long time, and is sometimes known as the "note system." Instead of members of the working classes being charged for each individual visit, they are charged for a week's attendance, that is, for a certain sum a sick person can obtain medical attendance and medicine for one week.

The advantage claimed is that a medical man can see his patient as often as he thinks fit during the week without the patient being worried at the rapid growth of an account against him, for he knows exactly what his weekly outlay must be.

It is urged that the system by which a person is charged for each visit, etc., is open to the objection that the medical man may often refrain from seeing a patient when he would like to pay a visit, which at the same time he may think is not absolutely necessary, and the sick person's mind also must often be disturbed as he thinks of the growth of the bill against him. The system, we are further informed, has not encouraged underselling, but it is hoped that the medical men in Walsall may be able to agree on some minimum fee, though this point has not yet come up for discussion. The system, which we are assured has long worked well in Walsall, has the further advantage that it avoids bad debts, while entirely eliminating the collector.

LORENZ'S TREATMENT OF CONGENITAL DISPLACEMENT OF THE HIP.

BLOODLESS SURGERY.

DR. LORENZ is a guileless Austrian professor, who could not be expected to know the manners and customs of the American newspaper man. He seems throughout his visit to the States to have been much in the same position as Martin Chuzzlewit when he was informed that he would have to hold a reception on pain of "riling" the people. During his triumphal progress from city to city his steps have been dogged by the ubiquitous reporter. Probably no surgeon has ever had to endure so much of the fierce light that beats on the man whom the many-headed beast claims as its own. The indecent publicity in which he was forced to live and move and have his being must have been a grievous affliction, though perhaps it may have had its compensations. How great a trial it must have been may be gathered from the following specimen of the way he was maltreated by the newspapers. The *Sunday Record-Herald* of Chicago gives a thrilling account of an operation on a little girl carried out under conditions which must have severely taxed the nerve even of so experienced a surgeon as Professor Lorenz. The scene was the King's County Hospital, Brooklyn.

About 500 of the most prominent physicians of Brooklyn were present. The first patient brought into the operating room was Mary Donnelly, 6 years of age, suffering from a single dislocation of the right hip. Dr. Lorenz reduced the dislocation in three minutes. One of his most interested auditors was Arthur Doig of the house staff, to whom had been entrusted the task of keeping the little patient under the influence of ether. So eager was Dr. Doig to keep in touch with everything going on that he became excited and dropped the bottle of ether he had been using to the floor. The bottle broke and the fluid scattered over the doctors around the operating table.

There was no more ether in the room, none nearer than the storeroom, and Dr. Doig, knowing that the child would not remain insensible long unless the administration of the anaesthetic was kept up, made a rush for a new supply. There was a big crowd around the door, and he had difficulty in getting through. He was gone for several minutes, while the excitement in the operating-room was at fever heat. In the meantime, Dr. Lorenz was working with marvellous rapidity to get the child in readiness to be placed in the plaster cast by Dr. Mueller. But in the height of his manipulations the little sufferer recovered her senses. She screamed in agony at the tremendous turning and twisting of her leg, and implored the big surgeon to desist. "Please stop," she cried, "you hurt me so."

Dr. Doig returned as the child was screaming. Hurrying to her he adjusted the cone and poured out a powerful dose of the drug. The little one gasped and gurgled and struggled, while Dr. Lorenz, his face expressing grave concern, kept up his motions.

Suddenly one of the doctors gathered around the table cried out an order for a pair of forceps. The specialist quickly saw that it was a case of chloroform narcosis, in which the tongue sinks back in the throat, stopping the breathing, and the jaws become rigid. Then came an order for the respiration tank. Dr. Lorenz and Dr. Mueller ceased working with the limb of the child and began to exercise the arms to enforce artificial respiration. The jaws were forced open, the tank was hurried in, and after twelve doctors had helped to administer oxygen and otherwise restore respiration they brought the little one out of danger.

It is a relief to read that the operation was after all a success. But the picture of an excited house-surgeon having to force his way through a crowd for a fresh supply of anaesthetic, of a physician, who seems to have been one of the spectators, calling for forceps to pull forward the tongue, and of the general bustle and disorder, gives an English reader the idea rather of a prize fight or of a street accident than of an operation conducted in a hospital of repute by a leading European surgeon.

The trail of the sensational reporter is over it all. Our own newspapers are giving more or less intelligent accounts of Professor Lorenz's operation in this country, but, compared with their American contemporaries, they are decorous to the point of dullness.

DEMONSTRATION AT LIVERPOOL.

MR. D'ARCY POWER sends us the following notes of Professor Lorenz's demonstration at Liverpool:

The treatment of congenital displacement of the hip is now exciting renewed attention. It may be worth while, therefore, to give a short account of the impressions left on

the mind of a spectator who watched the most interesting demonstration given by Professor Lorenz last Saturday afternoon at the Southern Hospital, Liverpool. Professor Lorenz operated upon two female children, one aged 8, and the other about 4 or 5 years old. The elder girl had a unilateral, and the younger a bilateral, displacement of the hip.

The technique of the operation was the same in each case. The patient was lightly but sufficiently anaesthetized, and the pelvis was raised upon a well-padded metal bracket clamped to the end of the operating table. The thigh on the affected side was then abducted until the adductor muscles were taut. By a series of sharp but light blows given rapidly with the edge of his hand Professor Lorenz tore away the the upper attachments of the adductors from the rami of the pubis and ischium until he was able to show that the fold of skin which had covered them was quite empty, yet the skin itself was uninjured. The thigh was then forcibly abducted and rotated outwards with the knee bent until the head of the femur could be heard to pass over a ridge of bone said to be the margin of the acetabulum, and until its outline became visible subcutaneously on the inner aspect of the thigh and in close relation to the femoral vessels. The front part of the capsule was said to be enlarged by this manœuvre, whilst the head of the bone was brought down to the level of the acetabulum. The thigh was then held at right angles to the trunk, still with the knee bent, and it was secured in this position of extreme abduction by means of a plaster-of-paris bandage, which enveloped the leg from the knee upwards, and passed round the body at the level of the crest of the ilium. As soon as the plaster began to set, the bandage was pared away with a sharp scalpel until there only remained a broad pelvic band continuous with the plaster case enveloping the thigh, but still of sufficient strength to keep the thigh at right angles to the trunk, the knee being free. The bandage when applied to the patient with double displacement made it assume the position taken by the jointed cardboard man, with which children play, when the middle string is pulled. Directions were given that the plaster should be left untouched for at least six months; that the child should be allowed to go about as best it could after a short rest in bed, and that the skin under the plaster should be massaged and kept clean by a simple but ingenious arrangement of bandages which Professor Lorenz demonstrated to his audience. When the bandage was removed at the end of six months the child was to be allowed gradually to redress the deformity for itself, the primary rectangular position being restored every night by means of a pillow placed between the legs. It was important, we were told, that no violent anterior-posterior movements should be allowed at the hip after the bandage was removed, though movements of abduction and adduction might be permitted.

The operation in the master's hands seemed to be easy and satisfactory. It appeared, however, that in the hands of a beginner harm might be done first to the skin whilst detaching the origins of the adductor muscles; secondly, to the femoral vessels during the manipulation of the head of the femur, and thirdly, to the bone itself by breaking its neck or separating the epiphysis. It was interesting to notice how completely Professor Lorenz has given up all cutting operations,—even tenotomy. He prefers to treat children of four or five years and remarked that the elder girl of eight years was almost beyone his limit of age for a successful operation by manipulation.

It appears evident that the value of the method depends very largely upon the prolonged fixation of the joint, the bone lying near the imperfect acetabulum. This fixation might fairly be assumed to act in two ways. There might be some pressure absorption to form a deeper acetabulum, but the tearing away of the adductor attachments and the subsequent manipulation of the head of the bone probably sets up a sufficient periostitis with formation of new bone to form a more perfect rim to the acetabulum. This seems the more likely from the care with which Professor Lorenz prevents swinging movements at the hip though he allows abduction and adduction. The great merit of the operation in the hands of a careful manipulator is undoubtedly its safety, for if no great good is obtained there is not much likelihood of harm being done, and the patient is never in any risk of his life. Moreover he can get about in a reasonably short time and there is no wearisome confinement to bed which is so marked an obstacle to other plans of treatment. The particular value of the demonstration for us lies in the fact that we now have two children in England who will be carefully watched by the surgical staff of the Southern Hospital at Liverpool from whom we may expect reports from time to time as to the success or failure of the bloodless method of treatment.

Demonstration in London.

Professor Lorenz gave a demonstration of his method of reduction of congenital displacements of the hips at the City Orthopaedic Hospital on January 14th. It was attended by 87 medical men, amongst whom were Sir Alfred Cooper, Mr. Fripp, Mr. Raymond Johnson, Dr. Guthrie, and Dr. G. A. Sutherland. Mr. Noble Smith introduced Professor Lorenz, and said that though at the present time great scepticism existed with regard to the value of the bloodless operation performed by Professor Lorenz, and though that scepticism had been distinctly expressed at the Clinical Society of London a few days earlier, he thought that that opinion would be reconsidered, if not changed, when the results achieved by Professor Lorenz had been seen and appreciated.

Professor Lorenz then operated on a girl of 8 years of age with bilateral congenital displacement of the hips, and was helped by his assistant, Dr. Müller. Mr. Noble Smith, Mr. John Poland, and Mr. Jackson Clarke also gave a helping hand. During the progress of the operation Professor Lorenz described the details of his method, addressing his audience in excellent English. He said that he called his operation "the functional weight-bearing one," and practically repeated the observations he had made at the Southern Hospital at Liverpool. The next case was one of unilateral displacement of the hip in a child, aged 4 years, and the reduction was expeditiously carried out.

The Professor then gave a demonstration of his treatment of congenital club-foot. He performed what he described as his "bloodless modelling method." He incidentally referred to resections of wedge-shaped pieces of bone in cases of club-foot as unnecessary and therefore most deplorable mutilations of the feet. He explained his method of treatment as consisting in overcoming, first, the shortening of the soft parts—that term including tendons, fascia, ligaments, etc.—whose resistance had to be practically annihilated. The principle of his modelling operation was to keep on overcoming the resistance of the parts concerned until the elasticity of the tissues was completely destroyed, so that the foot did not return again to its previous wrong shape—"the foot must be made as pliable as a piece of wet cloth." In that state it could be placed in almost any shape and it would stay there without any tendency to return to the previous position. Professor Lorenz illustrated his remarks by very gradually correcting the faulty position of the left foot of the child, while Dr. Müller carried out a similar manœuvre on the right foot, and after a little time the complete reduction of the deformity in both feet was clearly demonstrated. This was the stage for the application of the plaster-of-paris bandages, but it was necessary to fenestrate the plaster cast because the forcible treatment caused circulatory disturbances. The Professor took very special precautions to make sure that the circulation in the extreme tips of the toes was perfect before he ended, and explained that the case could be kept on the foot for several months, and would have to be renewed after removal until the foot was in a complete valgus position. In conclusion he said: "I then start with gymnastic exercise and massage, in order to develop and strengthen the pronators, so that the valgus position is maintained by the tonicity of these muscles."

Reversion of a Fothergillian Medal to the Medical Society.—Mr. H. B. Boulter, F.R.C.S., of Richmond, offered to the Medical Society of London, at its meeting on January 12th, a Fothergillian Gold Medal, which was presented by the Society in 1790 to Dr. Robert Willan, the eminent dermatologist of that time. It had come into his hands through the wish of a representative of Dr. Willan's family recently deceased. The medal was gratefully accepted on behalf of the Society by the President in the chair, Mr. Pearce Gould. This particular medal was the second bestowed by the Society, the first having been awarded in 1787 to Dr. Falconer, and the third to Dr. Lettsom in 1791. It was stated that the medal which had been given to Dr. Willan was the second that had reverted to the Society, and it was anticipated that others might in time follow.

The Orient Steam Navigation Company announces two pleasure cruises in the Mediterranean, one starting on February 26th and the other on March 14th.

THE IMPERIAL VACCINATION LEAGUE.

DEPUTATION TO THE PRESIDENT OF THE LOCAL GOVERNMENT BOARD.

A DEPUTATION of the Imperial Vaccination League waited upon the Right Hon. Walter Long, M.P., President of the Local Government Board, on Wednesday, January 14th, in order to represent to him the necessity for introducing a Vaccination Bill in the next session of Parliament, and in particular to urge the desirability of instituting a system of compulsory revaccination. Amongst those present were Sir William S. Church, Bart., M.D., President of the Royal College of Physicians; Professor Clifford Allbutt, M.D.; Dr. Bond, Gloucester; Dr. McVail, Glasgow; Mr. T. L. Devitt, London; Mr. Ernest Debenham, Dr. Adler, Chief Rabbi; Mr. Brudenell Carter, F.R.C.S., Dr. Acland, Sir J. Crichton-Browne, F.R.S., Sir Henry Truman Wood, Professor W. R. Smith, Dr. Groves (M.O.H. Isle of Wight), Dr. Beale Collins, Miss Penrose, Mrs. Garrett Anderson, Mr. Thomas Bryant, Dr. Glover, Mr. Alfred Hoare, Miss Cock, M.D., Miss Agnes Zimmermann, Miss Emily Davies, Sir Richard Farrant, Dr. R. Dudfield, Alderman Menlove (Chairman of the Health Committee of Liverpool), Dr. Mussen, Dr. Arnold Thomson, Mr. Charles J. Price, Captain Lewis, Dr. Dawson Williams, Dr. Reginald Dudfield, Mr. William Whiteley, Mr. H. Garrod, Dr. Patrick Manson and Mr. Greenwood. Mr. Long was accompanied by Sir S. B. Provis (Secretary), Mr. Knollys and Mr. Lithiby (Assistant Secretaries), Mr. W. H. Power (Principal Medical Officer), Mr. Lowry (Private Secretary), and Sir Vincent Kennett-Barrington.

Sir JAMES CRICHTON-BROWNE, Chairman of the Imperial Vaccination League, read a letter from the President of the League (the Duke of Northumberland), who was unable to be present, in which his Grace expressed his hope that a very substantial advance might be made in safeguarding the people of this country from the inroads of small-pox both by a careful administration of the existing Acts and by their extension and improvement.

Sir WILLIAM CHURCH, in introducing the deputation, said that the Imperial Vaccination League, though it included among its members many medical men, was not a medical organization, but drew its main strength from the support of the public. The League considered the present a favourable time for approaching the President of the Local Government Board, because the recent epidemic in London and the presence of small-pox in other parts of the country had excited public interest; and because the expiration of the present Vaccination Act, at the end of this year rendered it necessary for the Government either to re-enact that Act, or, as the deputation hoped, pass an amending Act. He then indicated briefly the points which the deputation desired to bring forward.

Professor CLIFFORD ALLBUTT said that he could remember how terrible was the affliction of small-pox in the third quarter of last century. Though that picture had faded from the public mind he thought that the dislocation of business due to small-pox was probably still as great, because the centre of gravity, so to say, had been shifted from childhood to later life. The deputation consisted for the greater part of men of business who wished to represent that the beneficent effects of vaccination had not been carried far enough, they believed that revaccination at 10 or 12 years of age was necessary in the interests of the country and that such revaccination would last, practically speaking, for the rest of life. He desired to make it quite plain that the deputation did not seek to interfere with the conscientious objector. The enforcement of revaccination rendered greater the obligation upon the Local Government Board to see that the lymph used was beyond even suspicion. At present the private practitioner was compelled to have recourse to private firms, and only three or four of these gave any adequate public guarantees of the efficiency of their processes and the purity of the product which they sold.

Dr. BOND (Gloucester), representing more particularly the Jenner Society, expressed the Society's thorough sympathy with the objects of the deputation. He referred to the necessity for compulsion in regard to the vaccination of children and young persons, and to the opinion expressed by the Royal Commissioners to the effect that they were not prepared to recommend that pressure for carrying out the Vaccination Acts should be abolished because there was a large portion of the population who could not be trusted to have their children vaccinated spontaneously. The opposition to vaccination was due mainly rather to defects of administration than to the Acts themselves.

Dr. J. C. MCVAIL dwelt on the importance of obligatory revaccination of children before leaving school. It was important not only in itself, but as a basis for other reforms and alterations necessary in the vaccination laws. The fact that the Government in 1898 passed a new Vaccination Act, and the terms of the Act showed not only that it believed that vaccination was a preventive of small-pox, but also that it was a proper subject for legislative concern. The present Vaccination Acts referring to children were simply half-measures. There was no evidence in favour of primary vaccination of infants which did not equally apply to the revaccination of adolescents. To have all the machinery of vaccination devoted solely to the protection of infants and children was a huge waste of administrative force. The same machinery should be available for the protection of those who were about to enter upon the valuable period of life, economically speaking—boys and girls who were to be a useful addition to the nation, useful alike in peace and in war. In that sense revaccination was a factor in the production of national efficiency. The essential points of the request made by the Imperial Vaccination League with regard to revaccination was that when a child was approaching 12 years of age the duty should be impressed on the parent of seeing that that child was protected against small-pox before entering on its further career. It asked that the parents should receive notices requiring revaccination, that the public vaccinator should call for the purpose of offering revaccination, and that if a parent was careless or indifferent he should be put to as much trouble in order to secure exemption from revaccination as he would be put to by procuring revaccination. That was all; it was not proposed to interfere with what was called conscientious objection. He did not think there would be the same amount of opposition and of nervous fear on the part of a mother with regard to the revaccination of a sturdy boy or girl of 12 years old as there was when the child was a tiny infant. It was surely better for the revaccination to be done at school, when the child could give his arm a rest, rather than ten or twenty years afterwards in the presence of a small-pox epidemic, when the youth had grown to a man and would be obliged to leave off his work after revaccination. If early revaccination was adopted in England as in Germany, epidemics of small-pox would be abolished, and those trade disturbances which resulted from outbreaks of small-pox would disappear or be minimized. There would be great economy in the provision of small-pox hospital accommodation, and there would be an enormous saving in the supply of glycerinated calf lymph, as the demand would be more regular. He ventured to think that the President of the Local Government Board, who had abolished rabies in this country, would be acting on the same lines in abolishing small-pox epidemics, but the one was infinitely more important than the other. As regards rabies there had been hysterical objection on the part of old wives with poodle dogs and there might be more or less objection to revaccination, but the right hon. gentleman had an opportunity of conferring an enormous boon on the nation.

Mr. T. L. DEVITT (London) spoke on behalf of shipowners, merchants, and bankers, and gave instances of the great pecuniary losses suffered through seamen and others on board vessels not being vaccinated.

Mr. MENLOVE, Chairman of the Liverpool Public Health Committee, urged that power should be given to revaccinate "contacts."

Mr. ERNEST DEBENHAM presented a petition signed by about 150 names representing firms engaged in the clothing, furnishing, and allied trades, employing some 30,000 persons.

Dr. ADLER, the Chief Rabbi, strongly commended the objects of the deputation, and gave instances from the experience of the managers and visitors of Jewish schools in the East End of London and other poor quarters, showing that even in the presence of an epidemic the protection of the individual was effectually renewed by revaccination.

Mr. R. BRUDENELL CARTER urged the economic value of vaccination. The expenditure of the Metropolitan Asylums Board alone in the recent epidemic was estimated

to have been at least half a million sterling, a sum which did not include the expenses to which the different metropolitan boroughs were put with regard to the removal of cases, and the disinfection of houses in which small-pox had occurred. This direct expenditure, however, did not equal the indirect loss inflicted by the disturbance of trade and of the ordinary events of life. The commerce of Gloucester during the epidemic was for the time extinguished, and in the past a scare of small-pox had inflicted injury to the trade of country towns from which they had never recovered. The deputation therefore hoped that the Government would take into consideration not only the personal misery, the blindness, the mutilation, the life-long illness inflicted by small-pox, but also the very serious pecuniary injury which the occurrence, or even the threat of the occurrence, of small-pox could inflict on a community.

Dr. ACLAND spoke as to the necessity for an adequate supply of pure glycerinized lymph.

Copies of the following declaration signed recently by a number of representative persons were handed to Mr. Long:

"Believing that in vaccination and revaccination we possess the best protection against epidemic small-pox, I should heartily welcome legislation making revaccination at school age obligatory on all but the children of conscientious objectors or those who may be for a time excused on the ground of ill-health."

Among those whose signatures were appended to this declaration were:

Sir Thomas Dyke Acland, Bart.	President of the Society of Actuaries.
Sir Thomas Barlow, Bart.	
Dr. Barnardo.	The Chief Rabbi.
Lord Chelsmford.	The Hon. W. F. D. Smith, M.P.
Mr. H. Rider Haggard.	The Hon. Maude Stanley.
Professor MacAlister, Cambridge.	Sir William Turner, K.C.B.
Mr. R. W. Perks, M.P.	Sir John Williams, Bart.

The Head Masters of the following Schools.

Rugby.	Christ's Hospital.
Harrow.	Tonbridge.
Marlborough.	Repton.
Fettes College,	Radley.
Sedbergh.	Epsom College.
University College School.	Mill Hill School.

And sixteen other large public schools.

Head Mistresses of Public Girls' Schools.

Ladies' College, Cheltenham.	Roan School, Greenwich.
Notting Hill High School.	City of London for Girls.
Gateshead High School.	Ladies' College, Guernsey.
Church of England High School, Baker Street.	Skinner's School, Stamford Hill.
	North London Collegiate School for Girls.

Heads or Honorary Secretaries of Colleges for Women.

Girton.	Lady Margaret Hall, Oxford.
Newnham, Cambridge.	Westfield, London.
Somerville.	Holloway College.

Municipal Authorities.

The Lord Mayor of Sheffield.	The Mayor of Wandsworth.
The Lord Mayor of Leeds.	The Mayor of Lewisham.
The Mayor of Paddington.	The Mayor of Hackney.
The Mayor of Kensington.	The Mayor of Chelsea.
The Mayor of Woolwich.	The Mayor of Shrewsbury.
The Mayor of Hammersmith.	Eighteen Givers of Concerts.

Large Employers of Labour. Representatives of:

Lewis and Allenby.	William Whiteley, Limited.
Debenham and Freebody.	Stagg and Mantle.
Price, Waterhouse, and Co.	L. E. and W. Williams.
Sandilands and Co.	Searly, Tansley and Co.
Shoolbred.	Collard and Collard.
Maple and Co.	Elkington and Co., Limited.
Marshall and Snelgrove.	M. B. Foster and Sons, Limited.
Jay's.	Edward Stanford.
Harrod's Stores.	G. Street and Co.
Rowton Houses.	Mellins' Food, Limited.
Sir R. Farrant.	Spratt's Patent, Limited.
D. H. Evans and Co.	M. Isaacs and Sons, Limited.
Harvey Nichols and Co.	Army and Navy Stores.

Shipowners and Lines of Steamers.

Allan Line.	Spell.
Anderson, Anderson, and Co.	Tyser.
Atlantic Transport.	Wilsons and Furness.
Bibby.	Aberdeen S.N. Co.
Cunard.	Booth SS. Co.
Federal.	Carlon Co.
Frederick.	J. F. Cory and Co.
Hall.	Devitt and Moore.
Harrison.	F. Green and Co.
Houlder.	Joseph Hoult, M.P.
Leyland and Co., Ltd.	T. and J. Harrison.
Lund.	Lamport and Holt.
Moss.	McMoraith McEacharn and Co.
Oceanic.	W. Milburn and Co.
Orient.	J. Leslie.
Pacific.	Trinder, Anderson, and Co.
Prince.	Turnbull, Martin, and Co.
Shaw, Savill, and Albion Co.	Tyne Steam Shipping Co.

Shipbuilders.

Fairfield Shipbuilding and Engineering Co., Limited.	G. B. Hunter (Swan and Hunter).
	Mercantile Dry Dock, Jarrow.
Wallsend Slipway and Engineering Co.	R. and H. Green, Ltd.

Lloyd's Registry.

Sir John Glover, Chairman.	And 15 others.
A. G. Dryhurst, Secretary.	

Stevedores.

Hay's Wharf.	T. Rowland and Son.
Port of London Master Porters and Stevedoring Co.	And six other large firms.

Sir WILLIAM BROADBENT believed that there would be less objection to revaccination than to primary vaccination, because he took it that employers of labour would insist upon revaccination before engaging children, and that in this way a good deal of indirect pressure would be brought to bear, since the interests of the children would be evident to the parents.

Dr. GLOVER read extracts from a letter from Dr. Barnardo, who said that he had under his care in Stepney during the eighteen months of the recent epidemic between six and seven thousand children, that these children had been vaccinated and that no case of small-pox occurred among them.

The PRESIDENT OF THE LOCAL GOVERNMENT BOARD, who was received with applause, in reply to the deputation, said that he felt that he had really very little to say in answer to the very interesting speeches that had been made, because, happily, it was not necessary for him on that occasion, as it frequently was when he had to receive deputations, to attempt to refute either the allegations or the arguments which had been advanced. Nobody in the office of the Local Government Board would attempt to dispute either the assertions that had been made in support of vaccination, or the gravity which had rightly been attached to its successful performance throughout the country. As one of their speakers had already said, the Board had a growing experience of the advantages of vaccination, and the only wonder that filled it at all was that it should be necessary at that period of the world's history for a great deputation, so representative in character and gathering its members from all parts of the country, to come to support that which they in that place at all events believed ought to receive the unqualified support of every intelligent person. He hoped that that remark would not be misunderstood by those who did not believe in vaccination. He did not desire to say anything against those who believed that vaccination was wrong, but he felt bound to say what he had said quite frankly, that the more he had studied the question the more difficult he had found it to understand how anybody could hesitate to give their hearty support to what he believed to be one of the greatest preventive medicines that had ever been discovered in the world. He did not believe that there was anything which had done so much for the communities where it had been successfully and generally carried out as vaccination. Reference had been made to Germany, and the record of Germany was startling. He thought he might say that Germany had practically eliminated the disease altogether, because the cases that occurred were almost entirely limited to the frontiers. They were due, no doubt, to the very much more lax administration in other countries, and ought not to be credited as against Germany. Having regard to the largeness of the population in Germany, and having regard to its previous history, it was remarkable to find that the disease had in a comparatively short time been practically removed from the list of diseases in that country. Again, the Indian statistics were perhaps as well worthy of study as the statistics of any part of the world. It was a common remark often heard from people of a certain age who said that in their young days it was quite an every-day occurrence to meet men and women one after another in the daily avocations of life who were disfigured by small-pox, whereas now it was the exception. What was the reason? It was not a process of Nature which had been going on of itself without any assistance from science. It was not an accident; but it was due to some cause. What was the cause? Those who did not believe in vaccination told them that the proper remedy for that disease was to be found in isolation. Isolation no doubt was a most excellent thing, but did any man in his senses believe that if in this country nothing but a process of isolation had been generally adopted, that remarkable change in the condition of the people of the country would have been brought about? Surely it was no unfair statement for those who believed in vaccination to make that that remarkable and most beneficial

change in the condition of the people was due to the fact that vaccination had been recognized, and had been, notwithstanding all the obstacles and all the opposition, very generally adopted in the country. He ventured to say that much because he was anxious that whatever it might be possible for him, as the Minister especially responsible for public health questions, to do in Parliament, at the commencement of their proceedings there should be no doubt whatever as to the views held by the Local Government Board. The deputation had made some specific recommendations with which he would deal with very briefly and very generally. They would not expect him to state in any definite terms what the intentions of the Government were. In the first place, as the deputation would know, it was not usual to do so on such an occasion, and in the second place, even if it were usual, so active were the opponents of vaccination that he thought it would be very undesirable to make them a present of proposals beforehand, because they would thereby get themselves into line of battle much earlier than was desirable. He could not help regretting that a great society like the Imperial Vaccination League had not come into existence many years ago, and become as active in the constituencies of the country as the Antivaccination League had been. He had seen many a good man standing for Parliament who had no definite views about vaccination—who had never thought about the subject, never read its literature, never studied it at all—and in some doubt as to the issue of the election, attacked in one place after another by the antivaccinators. He was told harrowing tales of the suffering, death, and misery which had been produced by vaccination. He heard nothing on the other side—no counter-agitation was got up, and no pressure was brought to bear upon him to stand firm on the vaccination question, consequently he went over to the antivaccination party simply for the want of a great organization like the League and the influence which it could bring to bear on candidates and electors. He hoped that that great deputation was evidence not only of a quickened interest in the question to which reference had been made in the speeches, but that it was proof that, having put their hands to the plough, they would not turn back until the work was done. That work was not to be done in that room by a deputation. It was not to be done by a Minister or a Government, however strong the Government might be in Parliament. No Government could carry legislation in the teeth of the opposition of the majority of the people. He agreed with the deputation that they had the majority of the country with them; but, if the facts in evidence were only put before the people of the country then they would have a much larger majority. If the vaccination laws were to be amended so as to make them an effectual weapon for the protection of the public health, it must be done not only by the work of Ministers and Governments, but by placing before the people of the country generally the experience and the knowledge which had been gained, and by showing to them the reasons which had led those present to hold the views which they expressed. Therefore he hoped the League was not going to end its work, but would go on to spread broadcast throughout the country information which he believed to be of such vital importance to all citizens. The first and perhaps the most important of the proposals made by the deputation was to whether the existing authority should be continued. The history of local government was very remarkable. Fresh powers had been constantly created by Parliament and had been frequently handed over to local authorities, not because there was any special justification for handing them to those particular bodies but because it seemed that as there was a body already in existence it might as well have the extra work. Could anything more inconsistent with the proper functions of a Board of Guardians be conceived than that they should be charged with the general duty of vaccinating the people in their neighbourhood? What had vaccination to do with the proper maintenance of paupers? Boards of Guardians had done their best in the matter, and very often the efficient administration of the Poor Law had been interfered with by agitations got up in connexion with vaccination on the occasion of Poor-law elections. He himself made no pronouncement because he had not been able to lay his views before his colleagues, but he might say broadly that he believed the proper line of reform in that particular matter was in the direction of centralization. Therefore his inclination would be to make county councils and borough councils the authorities in future. As to revaccination, he agreed with the remark made by Dr. McVail, and emphasized by him in a very interesting article which he had had the advantage of reading within the last day or two,[1] that primary vaccination of itself was really almost a farce—to vaccinate the children, and then to believe that everything had been done that was necessary in order to secure the proper effects of vaccination was almost a farce, and was really almost a deception. It would be a very great advantage if a well-considered system of revaccination at certain ages could be devised. Statistics were widely circulated by the opponents of vaccination, in which allegations were frequently made that people had died of small-pox who had been vaccinated, but in those statistics the period of lives at which these persons had been vaccinated was not stated, nor whether they had ever been revaccinated, nor whether it were not the fact that it was because they had only been vaccinated some twenty or thirty years before and had not been revaccinated that they had died of small-pox. Vaccination in infancy, unless it were repeated at proper intervals, was not a certain safeguard. It reduced the virulence of the disease and the risk of infection, but if repeated at proper intervals it gave the utmost safeguard that could be obtained by the individual. That being the case, it was desirable that there should be a clearer expression of what was meant by efficient vaccination, that some means should be devised by which revaccination might be carried out so that the population of the country could be properly protected. Some figures had been got out by his own department, showing the enormous cost of measures against small-pox when they had to be taken suddenly at a moment of panic. There were those who would still say that vaccination was no remedy, and that the attempt to spread vaccination was to do that which was wrong and antagonistic to the liberties and the privileges of the people. He stood aghast in the face of statements of that kind. He could not understand why it was that a certain section of the community took so strong a view about the dangers of vaccination. He thought that Mr. Devitt's case was one that ought to be made known far and wide, because it was a most striking illustration of the effects of one single case of small-pox upon a great industry, and upon the convenience of a large number of people. If such effects could be prevented, surely it was incumbent to do so. The facts and statements which had been given as to the great shipping port of Liverpool were also of a striking character. That one case, of the man taken on to act in the ambulance department who had not been revaccinated, who was the one man to take small-pox, all the rest doing the same work and running constant risk of infection, getting off scot-free because they adopted reasonable precautions, was of a very interesting and striking character. He could not help hoping that those and similar facts would become widely known and would help in the campaign that they had before them; any attempt to reform the law with regard to vaccination would be met by very violent opposition in some quarters. He read an article in the *Lancet* in which the hope was expressed that a Bill dealing with the question might be introduced which might be regarded as a non-contentious measure; he was very doubtful whether the ingenuity even of the Local Government Board could devise a Bill which would be so regarded by the antivaccinators. If the principle which had now been established by Parliament that vaccination should be general, but that a conscientious objector should be entitled, by adopting certain procedure to escape from the obligation of the law, were maintained there ought to be no opposition from reasonable people at all events. That did not invade the dominion of the antivaccinator, who had only to get his certificate to be released from the obligations which it was hoped the majority of the people would cheerfully bear. The output of the new sterilized lymph raised a very difficult question. Although the Vaccine Establishment had been much enlarged, it would be impossible to undertake the supply of lymph generally to the whole country; the demand would be larger than could be met. If the law of vaccination could be strengthened and the general vaccination of the country made more regular, those panics when people suddenly rushed to be vaccinated might be avoided. If things could be brought into an average condition then it might be a practical question to attempt to deal more largely with the supply of lymph than at present. The supply had been largely increased during the recent epidemic, and lymph for revaccination had been supplied to public

[1] BRITISH MEDICAL JOURNAL, January 10th, p. 101.

vaccinators on a large scale, though the Board had no reason to believe that the greater portion of the commercial lymph supplied was not of a satisfactory character. He would discuss that question with his advisers, although he did not disguise from himself that it would be extremely difficult to undertake a general supply sufficient for the needs of the whole country. He agreed that if vaccination was to be made general the supply of lymph should be of the best possible description, but he thought they should be satisfied that the commercial lymph was unsatisfactory before they attempted to embark on so large a business as the supply by the Government of lymph for general use. That was a question he preferred to reserve for more careful consideration, because naturally it would involve a discussion between the Board and the Treasury, and was not one on which he could now say what his final view would be. He had to indicate what his views were as the Minister responsible; he had had no opportunities of consulting his colleagues; all he had sought to do was to indicate the general principles which would guide him in any recommendations he might make to his colleagues. The deputation might rest assured that the Board would do nothing calculated in any way to diminish one of the greatest advantages that the country could possibly enjoy, namely, the general adoption throughout the country of vaccination as a prevention against one of the most terrible of diseases.

Sir JAMES CRICHTON-BROWNE, on behalf of the deputation, then returned thanks for the reception which the right hon. gentleman had accorded them and for the patient attention that he had given to their somewhat lengthened representations.

BIRKENHEAD MEDICAL SOCIETY.

AT a meeting held on January 9th, Dr. G. S. Stansfield (in the absence of the President) in the chair, Dr. J. Herbert Dixon drew the attention of the Society to the working of the Vaccination Act, in view of the probability of its being modified next year. He proposed the following resolutions, which were seconded by Dr. J. LAMBERT, and unanimously agreed to:

1. That the post of public vaccinator should be abolished, and that every registered medical practitioner should be paid by the constituted authority for vaccinations performed.

2. That the names of all children for whom at the age of 4 months the necessary certificate is not forthcoming should be handed by the vaccination officer to the parish medical officer for the district in which such children are resident, who should vaccinate them and be paid at the same rate as other practitioners.

3. That lymph should be supplied by the Government.

4. That the Conscientious Objector's Clause should be abolished.

LITERARY NOTES.

WE learn from the *Athenæum* that Sir James Crichton-Browne, who knew the Carlyles well, is writing an introduction to the additional letters of Mrs. Jane Welsh Carlyle, which Froude for various reasons did not print, but which are now to see the light. Sir James will give his own reminiscences of the pair. He thinks that the wife could hold her own, even with her distinguished but "crabbed" husband.

In December appeared the first number of the *Transactions* of the German Society for the Prevention of Venereal Diseases. The editors are Dr. Blaschko, Professor Lesser, and Professor Neisser. The publisher is Herr Barth, of Leipzig.

The *Medical Temperance Review* for January contains a paper by Professor Sims Woodhead on the pathology of alcoholism. The paper is said to be "one of a series by eminent authorities on the alcohol question, which it is intended ultimately to publish as a standard book on alcohol from a medical point of view."

To the expressions of appreciation of our Lister Number quoted in the BRITISH MEDICAL JOURNAL of January 10th, we are able to add a few more. The *Deutsche medicinische Wochenschrift* describes it as a convincing testimony of the honour in which Lord Lister is held. The *Wiener medicinische Wochenschrift* and the *St. Peterburgischer medicinische Wochenschrift* make kindly references to it. The *Boston Medical and Surgical Journal*, in connexion with what it calls "an interesting *Festschrift*," devotes a leading article to Lord Lister and Modern Surgery, tracing the gradual acceptance of the Listerian gospel in America from Lord Lister's visit to Boston in 1875. The article concludes as follows:

From the days of sole reliance upon the destructive antisepsis of carbolic acid and ordinary cleanliness to the present days of scientific aseptic detail and environment, we have watched with consuming interest the remarkable progress of surgery; and we, who have been through it all, give to Lister the credit of founding modern surgical science. We have lived to see his methods elevated and refined; his deductions reduced to a science, and his results brought, as it seems to us, as near perfection as they ever can be. That he, the founder—the "master," as his followers love to call him—should have lived to see the wonderful harvest, the whole medical and surgical world now hastens to congratulate him.

Our contemporary had in a previous issue said of the number that "the whole forms a most gratifying tribute to this noble benefactor of the human race." The *New York Medical Journal* says the Lister Number "must possess very great interest for surgeons all over the world," and describes it as "a worthy memorial to the father of modern surgery." Mention of it is also made by the New York *Medical Record* and the *Philadelphia Medical Journal*.

The *Riforma Medica* of Palermo, which for eighteen years has enjoyed the distinction—unique as far as our knowledge goes—of being the only daily medical journal in the world, has with the beginning of the present year transformed itself into a weekly.

The following note which appears in the *Vaccination Inquirer* is interesting in more ways than one:

Mr. Herbert Spencer has shown his continued interest and sympathy with the antivaccination movement by sending to the League through Mr. Tebb permission to reprint and circulate his short essay on vaccination in *Facts and Comments*. This permission has been gratefully acknowledged and acted on. Mr. Spencer's essay is now one of the tracts of the League.

We hope Mr. Spencer duly appreciates the new form of greatness thus thrust upon him. On the appearance of *Facts and Comments* we took occasion to express a frank opinion on Mr. Spencer's views on vaccination. The essay may be taken as an illustration of Cicero's saying that there is no opinion, however foolish, that has not been held by some philosopher.

At a recent meeting of the Academie de Médecine, Dr. Laborde presented, on behalf of the author, Dr. Beugnies, of Givet, a pamphlet entitled *Circumcision, a Pagan Ceremony: Its Hygienic Value*, and illustrated by three plates representing different episodes of the phallic worship in the Egyptian temples at Abydos, Luxor, and Carnac. It may be mentioned that Dr. Beugnies has written several monographs dealing with Jewish medicine: *Mosaic Rumination* (1888); *The Medical Archaeology of Judea* (1889); *The Genital Apparatus in the Bible* (1894); and *Baths among the Semitic Peoples* (1896). An essay, *Drinks among the Hebrews*, by Dr. Beugnies, is in the press.

The *Review of Neurology and Psychiatry* is the title of a new medical "monthly" published at Edinburgh (Otto Schultze and Co.). The editor is Dr. Alexander Bruce; the assistant editor, Dr. Edwin Bramwell. The object of the new periodical is stated to be "to provide in English a journal similar to the various shorter reviews and *Centralblatter* on the same subjects which are published on the Continent in French, German, and Italian," and "is in no way intended to trench upon the field already occupied by the various larger British and American journals of nervous and mental disease." Each number will contain short original articles or preliminary communications, abstracts of the most important origina papers recently published in every department of neurology and psychiatry, reviews of books, and a bibliography of all accessible recent articles, as well as occasional digests of recent progress in knowledge of special subjects. The original articles in the number before us are contributed by Sir W. Gowers (Local Panatrophy), Sir John Sibbald (Psychiatry in General Hospitals), and Dr. Byrom Bramwell (The Relative Frequency of Disseminated Sclerosis in Scotland and the North of England, and in America).

THE Medical Department of Tulane University, New Orleans, has been made the residuary legatee of the late Mr. A. C. Hutchinson, and it is expected that it will benefit under his will to the amount of £200,000.

ITALIAN SOCIETY OF INTERNAL MEDICINE.—The following questions are proposed for discussion at the next annual meeting of the Italian Society of Internal Medicine, which will take place in the autumn of 1903: (1) Individuality in relation to pathogenesis and the evolution of diseases (to be introduced by Professors A. de Giovanni and L. Giuffré); (2) modern views on immunity in regard to the prophylaxis and treatment of acute infectious diseases (to be introduced by Drs. L. Lucatello and N Pane); (3) premature induction of labour in the course of internal diseases (to be introduced by Drs. G. Zagari and V. Ascoli). Dr. A. Zeri of Rome will report on progress in diagnosis, and Dr. U. Flora of Florence on progress in treatment.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 21st day of January next, at 2 o'clock in the afternoon.

The following Committees will also meet:—

Tuesday, January 20th.—1.45 p.m. Index Medicus Committee.—2.0 p.m. Premises and Library Committee.—3.30 p.m. Annual Meeting Committee.—4.30 p.m. Public Health Committee. *Wednesday, January 21st.*—10.0 a.m. Journal and Finance Committee.

January 12th. GUY ELLISTON, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

THE Council Room will be required for the purpose of meetings of the Council and Committees of the Association on Wednesday next, January 21st, and therefore the Library will be closed on that day.

BRANCH MEETINGS TO BE HELD.

SOUTH-WESTERN BRANCH.—The next intermediate meeting of this Branch will be held at the Athenæum, Plymouth, on Wednesday, January 21st, at 3 p.m., the President, Mr. J. Delpratt Harris, in the chair. Luncheon will be provided from 1.30 to 2.30 p.m. at Risdon's Restaurant, 38, George Street, and tea after the meeting. The following communications are promised:—Mr. R. H. Lucy: On Tonsillar Haemorrhage. Mr. Paul Swain: (1) On Amputation at the Hip-joint for Sarcoma of Femur (with specimen); (2) Operation for Intestinal Obstruction complicated with Pregnancy. Mr. Walter Woollcombe: Paper and Cases illustrating the Treatment of Clubfoot. Dr. W. H. Webber: On Double Inguinal Ovarian Hernia. Mr. George Jackson will show a specimen of Recent Fracture of the Neck of the Femur and a Longitudinal Fracture of the Shaft. Mr. C. Hamilton Whitelord will show: (1) A Self-retaining Silver Empyema Tube; (2) a Combined Retractor and Ligature Adjuster. Gentlemen desirous of joining the Branch are requested to communicate with G. YOUNG EALES, M.R.C.S., 1, Matlock Terrace, Torquay, Honorary Secretary.

SOUTHERN BRANCH: ISLE OF WIGHT DISTRICT.—A meeting of this District will be held at the Station Hotel, Sandown, on Friday January 23rd, at 3.45 p.m. Members intending to read papers or show cases, etc., are requested to communicate as early as possible with G. BENINGTON WOOD, M.B., Newlands, Sandown, Isle of Wight, Honorary Secretary.

SPECIAL CORRESPONDENCE.

NEWCASTLE-ON-TYNE.

The New Royal Victoria Infirmary.—College of Medicine Past and Present Students' Dinner.—Lying-in Hospital.—Northumberland and Durham Medical Society.

DURING the last few months there have been signs of great activity on the Leazes Moor, the site of the new infirmary. The buildings are advancing rapidly, especially the much required nurses' home. Already the general buildings have reached such a stage that they convey a good impression of the extent of surface the hospital will ultimately cover. The severe weather and the recent snowstorms have to some extent interrupted progress. The rapidly-growing population of Newcastle and Tyneside renders it very desirable that the building should be completed within the specified time, for the strain upon the accommodation afforded by the old Royal Infirmary is at present very great, especially in the female medical and surgical wards.

The dinner which is to be held in the County Hotel, Newcastle-upon-Tyne, on Friday, January 30th, promises to be a very large and influential gathering of past and present students of the College. Dr. Howden, the genial Professor of Anatomy, will occupy the chair. Already upwards of seventy gentlemen have intimated their intention to be present. Among the guests there will be Sir George H. Philipson, President of the College and the Deputy Mayor of Newcastle-upon-Tyne; Professor Annandale, of Edinburgh University; Professor Page, Dr. Hume, Dr. Buckley, and Mr. W. A. Watson-Armstrong, of Cragside, Chairman of the Committee of the Royal Infirmary. Past students of the College of Medicine who wish to be present should apply for tickets to Dr. William Turnbull, College of Medicine, not later than January 23rd.

The report for 1902, which was submitted to the Committee last week, showed that although the Lying-in Hospital was closed last year for three months on account of structural alterations and additions, the number of patients attended in the hospital was 74 and at their own homes 306, making a total of 380. This is an increase of 111 upon the number for 1901. One patient died in the hospital from pneumonia complicated with heart disease. There are two students always in residence in the hospital. The opportunities afforded by the charity of obtaining a large experience of practical midwifery are great and are much appreciated. The two obstetric physicians, Dr. R. Rankin Lyle and Dr. Robert Nesham, take four months' duty alternately. The new ward erected to the memory of the late Dr. T. C. Nesham, which was publicly opened on October 8th, 1902, by Mrs. Watson-Armstrong, gives 8 additional beds to the hospital, making 17 in all.

Under the presidency of Professor George R. Murray, the meetings of the Northumberland and Durham Medical Society this session have been very successful. Arrangements are being made for a dinner to be held in Newcastle-upon-Tyne on March 26th, immediately previous to which an address will be delivered by Professor J. Rose Bradford, F.R.S., to the members of the society.

CORRESPONDENCE.

"LA MODORRA."

SIR,—The editor of the *Saturday Review* has directed my attention to your reference to "La Modorra" in his columns. The name of my authority is José Viera y Clavijo (1731-1813). You will find the statement in his *Noticias de las Islas Canarias.*

The incident which stamps itself most on my memory (I have not the book by me) is when Alonso de Lugo was fighting against Bencomo, the last Mencey (king) of the Guanches. Clavijo says the whole hillsides were covered with dead men, and Alonso de Lugo met an old woman, who said to him, "Where are you going, Christian? Why do you hesitate to take the land? The Guanches are all dead." Clavijo states that the disease came on after a very wet season, and that the people sat down "and slept away."

At the town of Icod-el-Alto, in the caves of the hills, bodies are still found sitting with their heads bowed on their arms as if they had died asleep.

"Etiology" is a vile word when the thing can be expressed in English. But, passing from that, as the politicians say, I do not dogmatize upon my "account of causes." It may be that neither rum, bullets, syphilis, nor small-pox have anything to do with the decline of population in Uganda. Even the compulsory clothing of a primarily unclothed people may not be at fault. It may even be that the missionaries and Government folk in Uganda do not insist on clothes, knowing that uncivilized people never change them when they get wet—though I allow it would be to admit much were I to suppose that anybody ever learnt from previous experience.

One thing is certain: that is, that the sleeping sickness is making great ravages in Uganda, and that the cause of it seems to be obscure. It has at first sight, and to an entirely unscientific mind, a certain resemblance to the mysterious "Modorra" of the Canary Islanders. My own hypothesis, which is, of course, entirely unsupported by any proof, is that in some way the presence of the whites is inimical to savage races.

In the Southern States of America I have heard negroes complain of the horrible smell of white people when gathered in churches and in public halls, in the same way that white people complain of the perfume of the negro race.

This and the fact that quadroons and octoroons rarely have fruitful marriages may, perhaps, show that the two races cannot permanently exist conterminously.

As regards "fetichman," I beg to withdraw the word and move to replace it by the word "Medicine-man," because, speaking for myself alone, I do not wish that hard and fast lines should be drawn betwixt the white and red, the yellow and the black, or that the scientific men, of any of the various divisions of mankind, should dogmatize about their practice or position in the scientific world.—I am, etc.,

Sloane Street, S.W., Jan. 13th. R. B. CUNNINGHAME GRAHAM.

THE FAILURE TO RECOGNIZE COLONIAL CIVIL SURGEONS IN SOUTH AFRICA.

SIR,—The final honours list for the Boer war is now out. In connexion therewith permit me, in no carping spirit, to draw attention to the fact that one class of medical officer has been entirely left out of any official recognition whatever. I allude to the locally-engaged civil surgeons. This omission, I can assure you, has been felt most keenly, and has been the subject of much conversation amongst ourselves; but, until the final list came out, we held our peace, hoping that the omission might be rectified. To all the other classes of medical officers—the R.A.M.C, the British and colonial volunteers, the irregulars, the English civil surgeons—official recognition of services has been granted, even apart from such things as V.C.'s for special individual services in the field. We have been left in splendid, but very disheartening, isolation. We came forward, most of us, just at the tightest period of the war, the time of pressure at the end of 1899 and the beginning of 1900, when men were wanted on the instant, and when the authorities were almost going down on their knees to get us. We were at least as useful as our *confrères* from home, presumably more so, for most of us were men of some seniority, and with some experience in the diseases and climatic conditions of the country. We cost the War Office far less than the English civil surgeon, for we had only to be paid for the actual days we were doing duty, no time being lost in transit, and no transport had to be provided for us. Until June, 1900, we were actually paid at a lower rate than any other class of medical officer, receiving a bare pound a day, with neither allowances nor gratuity. Later we were only paid at the same rate, and only got the gratuity after a full year's service after a very hard struggle and a direct appeal home over the heads of the military authorities here. We were flung out at a day's notice, exactly as it suited the authorities. And now we are the one class passed over in the honours list. If one of us civil practitioners happened to join an irregular corps he obtained rank and recognition, or at least the reflected recognition coming from one or two of the body he belonged to being honoured. If one simply went straight to the P.M.O. and said "Utilize me as you like" we got nothing. And yet many of us—my humble self included—joined from motives of the purest patriotism, giving up in many cases fair practices for the good of the Empire. To some, I admit, the employment was welcome for a time—to such men as the Johannesburg refugees—but many men who had no need to leave their practices offered their services, and did yeoman's work. I gave up a practice just at the most critical period, when it had just began to be remunerative. I returned to civil life to find it gone to the winds, and have had simply to begin again in another place. A colleague, in partnership, made a great sacrifice to induce his partner to let him go for six months to serve his country; and so on in many cases. Surely the least that could have been done would have been to have selected one of the body and given him a C.M.G. or a D.S.O. That would have taken away all sense of grievance. As it is, a fairly large class of Colonists of influence in the community are bitterly realizing the truth of the dictum, so often heard amongst us here, that "loyalty does not pay."—I am, etc.,

November 5th, 1902. EX-CIVIL SURGEON (Local).

THE JUNIOR MEDICAL OFFICERS OF LONDON ASYLUMS.

SIR,—The grievances of certain of the public medical services have been from time to time ventilated in the columns of the BRITISH MEDICAL JOURNAL, and by this means the conditions of service have been much improved. I shall be glad if you would afford me space to place a few facts before intending applicants for posts as junior medical officers in the asylums under the control of the London County Council.

The salary of a junior medical officer appointed to a London County Council Asylum is £150 per annum, with the usual allowances; should the junior be promoted a step the salary remains unaltered, but a second promotion raises his salary to £180, and two more steps give him a salary of £220 per annum. At this he remains until—if he has luck—he becomes a senior assistant medical officer, when he enjoys a salary of £300, rising by annual increments to £400, with aforesaid allowances. He may then reach a final stage of evolution and, on a vacancy occurring, become a medical superintendent at a salary of £1,000 per annum, with valuable allowances.

To the recently-qualified man this service may at first sight appear a very promising prospect; but a closer inspection of facts reveals the "flies in the ointment." Promotion is extremely slow, and in some asylums it is worse than in others. A man may drag on for years at one of the lower salaries. Of course £150 per annum, all found, sounds fair enough for the first year; but when one has existed for six or seven years or more with little or no increase to the initial income, he may well ask himself the question: Could he not have done better for himself by entering some other service while still young enough?

The regulations by which the London County Council Asylums Committee binds their medical officers are much more stringent than those of provincial asylums, particularly with respect to leave out, reception of visitors, and annual leave, etc. Further, an asylum medical officer is condemned as long as he holds office to a life of celibacy, the superintendent only excepted. Some asylums, however, permit their senior medical officer to marry.

Thus the life of enforced confinement and consequent separation from the outer world is irksome and monotonous to a degree known only to those who have tried it. For it must be remembered that owing to the ever-increasing duties, only a few hours can be spent each week outside the asylum gates. The rest of the time is spent in constant touch with the depressing sights and sounds of the insane patients committed to his care; never is he off duty, unless ill, as long as he remains on the asylum premises.

It cannot be said, even by their worst enemies, that medical men fear to face the risk of infection by deadly disease in the discharge of their duties, but in asylum life an additional risk is added. Violence, amounting to murderous assaults, may at any time be the lot of any member of the staff. To those familiar with the life this is nothing new, and to those who have not tried it the reports of the Lunacy Commissioners for the past few years might prove interesting reading, containing as they do accounts of assaults of a grave nature made on asylum officials.

In conclusion, I would point out that the rate of pay offered by the London County Council Asylums Committee does not compensate their medical officers for the amount of work expected of them, together with the irksome restrictions, confinement, and risk of asylum life. The junior men can and do find other and more congenial posts, provided they do not put off until too late the resignation of their asylum appointment, but for those who have devoted the best years of their life, with the exception of the fortunate few who become superintendents, the outlook is indeed a gloomy one.

I may state that the changes in the junior medical staff of the London County Council asylums are more than ever becoming conspicuous by their frequency.

I hope the above remarks will not be construed into a desire on my part to cast odium in any way on the medical superintendents, who are, I may say, invariably courteous and considerate to their junior colleagues. The superintendents themselves are tied and bound by a too rigid red tape system of centralization—a system which, I believe, has been found to work unsatisfactorily when in force in many other public services.—I am, etc.,

Dec. 17th, 1902. A. M. O.

THE ROYAL NAVY MEDICAL SERVICE.

SIR—In regard to the letter in the BRITISH MEDICAL JOURNAL of November 8th, I am sure the feeling of all naval medical officers is "save us from our friends." The scheme is too utterly wild for rational criticism, but in regard to the main idea of it, I can affirm that we naval medical officers are proud to belong as naval officers to the grandest service in the world, and nothing would be more repugnant to us than to form a state within the State as he advocates. We have no craving for "bands of music," to become "fully militarized," whatever that may mean, or for "military titles." We only ask for a more liberal treatment, so that by evolution on the present lines we may attain to the highest scientific knowledge and professional ability worthy of the great service of which we are a unit.

No one can deny that a great advance has been made during the last five years, a new spirit has animated the service, yet recruiting is at the lowest ebb. This lack of candidates I attribute to the working of the law of supply and demand—the demand is greater than the supply, and men do not come into the navy because of the vastly superior attractions of the R.A.M.C., which, briefly put, are as follows:

Promotion.—In the R.A.M.C promotion is practically now according to ability, which means an ambitious man who likes to work has every

chance. In the navy promotion is still almost entirely by strict seniority resulting in stagnation.

Foreign Service Leave.—In the R.A.M.C. foreign service leave is on the generous army scale, and an officer in the corps will practically get a full month to every week which his naval *confrère* can wring from an unwilling Admiralty. People who have not been through the mill do not realize how niggardly naval leave is. The regulation is fourteen days for every year abroad, so that after three years abroad a naval officer gets only six weeks' leave and frequently this pittance is curtailed by the "exigencies of the service," naval manœuvres, etc. This gives him barely time to see his near relatives and visit his outfitter before he is whisked off to the Home or Channel Fleet, both of which are accounted home billets and where the time spent in port is shortening every year. It may be said that the medical branch is no worse off than other naval officers are in this respect, and that concessions to one branch would necessitate their being made all round. True, but this argument does not appeal to the possible candidate who only compares with the R.A.M.C. and failing the leave he will expect an equivalent in some other direction.

Pay.—In this the advantage is wholly on the side of the R.A.M.C. The Admiralty have unwillingly followed the army in raising the pay to an equality with the R.A.M.C., which equality exists on paper only. For example:

Specialists.—R.A.M.C. get allowances as specialists in about ten different subjects. Naval Medical Service *nil*.

Indian and Colonial Allowance.—R.A.M.C. get Indian and Colonial allowance; in the navy there is nothing of the kind.

Charge Pay.—R.A.M.C. get charge pay for doing the work of a senior officer; naval service nothing of the kind.

Extra Pay.—In the navy extra pay can be drawn by such a very limited number of officers that it has practically no effect as an inducement to men joining, while in the R.A.M.C. quite the reverse holds good.

Dr. Johnson said a sailor's was an unnatural form of life, and this is a factor which must be taken into account in comparing the sea and the land service from the point of view of a possible candidate. Unfortunately the discomforts of sea life do not get less irksome as a man gains in seniority. Whereas a colonel in the R.A.M.C. holds a big position ashore, the fleet surgeon or senior staff surgeon is no whit better off than when he first went to sea. He is still in a small cabin with no increase of personal comfort, and in the great fighting machine, a modern battleship, he holds a position of very minor importance and responsibility. He is only "the old doc.," and a very second fiddle indeed to the commander, a man probably his junior by many years. This must be so, for it is as a fighting force that the navy primarily exists, and the civil branches, therefore, can only be complementary to, but of vastly inferior importance to the executive.

But it is as a married man that the pinch is so hardly felt. A naval man hears the R.A.M.C. grumbling because they are attached to no mess, and marvels; his one ideal being to avoid a mess where he has to keep up two establishments, which means at the lowest £8 a month out of his pocket. Added to this, the married naval man spends months if not years of weary separation from his wife, which the army doctor can altogether evade by an occasional judicious exchange. There is a saying that the Admiralty do not recognize wives. This may do very well for the executive and other branches in which the men are entered young; but I think in regard to the medical branch, if candidates are to be obtained, the needs of married men will need to be a little more studied. Owing to the increased medical curriculum men enter now later than formerly, the average age now being 24 or 25. Many men of that age are either married, engaged, or look forward to being so, and naturally consider the service from that point of view compared to the R.A.M.C., find it entirely lacking.

The Admiralty are blind to this most important view of the case, and instead of increasing the service appointments with a house are diminishing them—as instance Malta Hospital, where the married quarters for two surgeons are being transformed into a mess for three bachelors.

It is great mistake to imagine that the lack of candidates is in any way the result of agitation or boycotting engineered from the branch. Quite the reverse; for the decrease in numbers hits no one harder than the present medical officers, who are loyally and without complaint bearing the heat and burden of the day. They are not discontented. Why should they be? They chose the service with their eyes open, and the conditions are now far better than they contracted for. Naval medical officers have their, I will not say grievances, but rather ambitions, the most important of which is a largely increased establishment which would permit of longer foreign service leave and study leave, and do away with the anomaly of a fleet surgeon of over 50 years of age doing day on and day off with a junior surgeon, as is now frequently the case in the home ports. It would also lessen the expensive and exasperating frequency of changes of station, which makes the service so unsettled just now, it being not unusual for a surgeon to have been appointed to as many as twelve different ships during his first twelve years of service.

Medical guard should depend on a fixed Admiralty order, and not left as now to the caprice of the admiral on a station.

Charge pay should be given in every case where a surgeon is doing the work of a staff surgeon or fleet surgeon—for example, say, two shillings a day if he is in sole medical charge of over 300 men, and a shilling a day for every additional 300.

Specialists.—Encouragement should be given to men to specialize in various subjects by granting extra pay to all qualified as such.

Something should be done in the way of granting indulgence passages on troop ships to wives joining their husbands on foreign stations or returning home.

I have been moved to write the above owing to the extraordinary misconceptions which prevail both as to the so-called grievances of naval medical officers and to the reasons which are at present deterring candidates from entering the service; and my only motive in doing so is the hope that a better knowledge may suggest a remedy, and that the branch may soon regain its former prestige.—I am, etc.,

December 4th, 1902. VERITAS.

SIR,—This ancient service has fallen on evil days, when the byeways and hedges have to be swept for recruits. The eyes of "The abandon hope crowd" are turned on that able administrator who has already almost brought unity to the naval service, by his sweeping and up-to-date changes, for which posterity will call him blessed—the service upon which this country depends for its very life.

It is for an old branch of this service, however, for which I now plead. I would suggest that a humble petition be presented to their Lordships by the British Medical Association to grant the same rights, titles, and position as has been granted to both the Army and Indian Medical Services, that the navy is as much entitled, even, both these, will I am sure, readily admit, I know that the naval officers rejoiced when their army brethren at length attained their proper position in the ranks of the army. Since the abolition of relative rank in the army, naval medical officers cease to rank with their army *confrères;* in fact they have no rank, for even the naval executive do not recognize this "bogus" rank, as witness the cabin question, etc. I remember two captains, who, when this question came up, frankly said they did not recognize relative rank.

The present meaningless titles, especially the senior ones, are also ridiculous, and entirely unuseable, except on paper.

All these facts the lower deck, with increased education, know, and fully appreciate, to the disadvantage of the medical officers. Of one thing I am certain, that were the Naval Service levelled up with the army, there would be no lack of good men to enter our ranks.

As one who is near retirement, and sees little to gain, I trust this letter will have some effect in drawing attention to what ought to be one of the most popular services under King Edward the Seventh.—I am, etc.,

January 7th. SENIOR SERVICE.

SIR,—There are many causes of discontent among naval medical officers, some of which are:

1. The inequality of rank according to age. The medical officer gets promotion to staff and fleet rank considerably later than any other branch of the service. This may seem a small matter, but is not so in reality; for instance, a medical officer cannot have a servant for himself until he is, on the average, 45 years of age. This should be altered as soon as possible.

2. The absolute want of consideration shown to officers, especially of staff surgeon's rank. After serving in a ship on a foreign station for three years these unfortunate officers are frequently appointed either to the Channel, cruiser, or Home squadrons; the above squadrons are kept cruising nearly continuously, and it is therefore very difficult to obtain leave. After serving from one and a-half to two years in one of these fleets they are again sent on foreign service for another three years, and as the majority of staff surgeons are married, this means that out of eight years' service he has about four months at home with his wife and family.

3. I am distinctly in favour of executive titles being substituted for the present ridiculous and meaningless ones. At present I consider that the medical officer has no rank or authority whatever.

There are many other grievances, namely, the low rate of pay when serving on a foreign station compared to army medical officers; involuntary half-pay, which has by no means been abolished. The result is that one never comes across a naval medical officer of any seniority who is not heartily sick of the service, and looking forward to the day when he may retire on his pension. Unfortunately for the majority—when this long-wished-for time arrives, they are

serving abroad, and are told that they are not entitled to retire.

Under the present regulations any candidate who knows anything about the service, and can pass into any other service or earn a living in private practice, would be very foolish to enter the navy.—I am, etc.,

January 10th. DISGUSTED.

A DEGREE FOR LONDON STUDENTS.

SIR,—I have read with interest the letters of Dr. Steele and others in your paper, and though not a London University graduate, I quite agree with his views, although I think that the Conjoint men are at a considerable disadvantage.

The points your various correspondents raise may be best dealt with in question and answer form.

1. Is the Conjoint preliminary education as thorough as the M.B. London?—No; they admit easier preliminary examinations. I may cite my own case. I had three attempts at Intermediate M.B.:

(1) Failed in Anatomy, Physiology, Organic Chemistry. Weak in Materia Medica.
(2) Failed in Organic Chemistry.
(3) Failed in Anatomy, Physiology, Organic Chemistry. Weak in Materia Medica.

The same year as (3), a few months after, I passed all subjects at the Conjoint Board.

2. Is the Conjoint Board examination comparable with provincial degrees?—Having been educated in a provincial school I think the standard is about the same; if anything, provincial men proceeding to the degrees of their own university have the advantage in knowing some of their own examiners, and being examined on their own museum specimens.

3. Have the Conjoint men any real grievance?—Yes; the fact that graduation at "a" university is generally a *sine qua non* for eligibility to hospital appointments. Thus a man who has been dresser or clerk to a Conjoint Board house-physician or surgeon can, if he has taken a provincial degree, be appointed to honorary posts which are debarred his former superior in office.

In comparison with the above it seems to me the question of whether we should pass an examination to become a M.B. that we may be called doctor, although we still would not hold a doctor's degree, is very trivial, as we are all "doctors" by courtesy, and in a deeper sense so to our patients.—I am, etc.,

AN UNDERGRADUATE LONDON UNIVERSITY,
January 5th. M.R.C.S., L.R.C.P.

THE DIAGNOSIS AND TREATMENT OF VARIOUS FORMS OF SEPTIC SYNOVITIS.

SIR,—I have read Dr. Poynton's letter with much interest, and also a copy of his and Dr. Paine's paper published in the BRITISH MEDICAL JOURNAL for November 1st, 1902.

The method of entrance of the destructive micro-organisms into the joint is most instructive, and from my point of view serves further to emphasize the protecting and reparative power of the synovial membrane—which holds out even after destruction of the cartilage has occurred.

I can assure Dr. Poynton that no harm is done to a large joint by incising it, provided it is properly sewn up again. The possibility of haemorrhage may be discounted if the joint is washed out with hot saline solution.

I do not wish in any way to advocate the wholesale opening of joints, but I am most anxious that it shall be fully recognized what good may result, and what disaster averted, by the timely washing out of a joint distended with fluid containing destructive micro-organisms.—I am, etc.,

Harley Street, W., Jan. 14th. FRED. C. WALLIS.

THE FUNCTION OF THE APPENDIX.

SIR,—The theory that the vermiform appendix is an excretory gland is far older than your correspondents in the BRITISH MEDICAL JOURNAL of July 5th and 12th seem to think.

I have in my possession the four volumes of the 6th edition of E. Chambers's *Cyclopaedia* published in the years 1786-9, volumes which are replete with most interesting articles on almost every subject under the sun, including surgery, medicine, and therapeutics. Turning to the article Appendix we find the following:

Mr. Monro assures us he never saw the appendix vermiformis of any of the human fetuses which he dissected distended with meconium, and therefore he cannot allow it as a reservoir of the faeces during gestation. From the numerous mucous lacunae in the human appendix, and the like structure in the caeca of brutes, its use seems to be to furnish mucus to lubricate the internal surface of the great sac of the colon, and to moisten the faeces in it, that they may be more easily pushed forward out of this part of the gut, where there is the greatest difficulty in their progress, and where by stagnating too long they may bring on troublesome symptoms. Witness the disease called placenta intestinalis.—*Med. Eff.*, Edinb., vol. iv, art. 12.

I can find no account of this latter disease, but I should judge from the derivation of the word that it referred either to faecal impaction, or even to what we know as perityphlitis. The term "caecum" appears in those days to have been a synonym of the vermiform appendix. Turning to the article Caecum in the *Cyclopaedia*, we find the following:

Caecum, in anatomy, the *blind gut*, the first of the thickand (*sic*) intestines; so-called because made like a sack, having but one aperture, which serves it for both entrance (*sic*) exit. It is situate (*sic*) on the right side, below the kidney; and in length is about the breadth of three or four fingers. In children, newborn, and in quadrupeds, it is found full of excrements; but in adults, etc., it frequently disappears, or hangs like a worm.

That appendicular abscess was not unknown in those days appears probable from the following extract from the same article:

M. Giles gives us another account of the caecum of a lady being distended so as to form a tumour, that held almost three *chopines*[1] of a thin greyish, and almost liquid substance, whereof she died. And Mr. Knowles, a third, of a boy's caecum being vastly extended and stuffed with cherry stones, which likewise proved fatal.

The article concludes as follows, which appears to put beyond doubt that the vermiform appendix is only referred to:

Some say the name *caecum* is mistaken, not allowing this to be the caecum of the ancients, which they imagine to be the thick globous part of the colon, immediately appended to the ileum; and therefore gives this part the name of *appendicula vermiformis*.

—I am, etc.,

VIDAL G. THORPE,
Royal Naval Sick Quarters, Wei-Hai-Wei, China, Nov. 15th, 1902. Staff Surgeon, R.N.

CORONERS AND *POST-MORTEM* EXAMINATIONS.

SIR,—I note the South-West London Medical Society has decided to approach the London County Council in this matter, after receiving counsel's opinion to approach the Lord Chancellor. The decision of the London County Council has not the force of an Act, and may amount merely to a friendly readjustment, which is not binding on the coroner; but if the judgement of the Lord Chancellor was obtained, the same would have the force of a law, and be of use to the profession in other parts of the country where conditions are very much worse than in the case of the South-West London coroner, and Medical Societies in all parts of the country would subscribe to the funds to obtain such a decision.—I am, etc.,

Blackburn, Jan. 13th. JOHN W. WELLS.

SMALL-POX AND REVACCINATION.

SIR,—The following facts relating to the connexion between small-pox and revaccination may be of interest: About three weeks ago I was called in the evening to one of our common lodging-houses here—which, by the way, are anything but model—to see a supposed case of "rheumatic fever." It was a case of variola. I put some policemen at the door to prevent egress or ingress, and went for the medical officer of health. I came back and revaccinated all in the house, with four exceptions, they refusing. Of those revaccinated not one contracted the disease; all four who refused vaccination were early infected, and two of them died.—I am, etc.,

Rotherham, Jan. 12th. T. H. DONOVAN.

DISCLAIMERS.

SIR,—My attention having been called to the undue prominence given to my name in a pamphlet on catarrhal deafness, published by the Akouphone Manufacturing Company of New York, I trust it is hardly necessary for me to state that this has occurred entirely without my knowledge or consent. I have requested the company to discontinue the use of my name.—I am, etc.,

Cavendish Square, W., Jan. 8th. DUNDAS GRANT.

SIR,—My attention has been called to a largely circulated pamphlet advertising "Yohimbin," in which a brief note I wrote for one of the medical journals concerning the drug is quoted. I need hardly say that this use of my name in an advertisement is entirely without my approval or sanction.—I am, etc.,

J. RUTTER WILLIAMSON, M.D., etc.

Miraj, S.M.C., India, Dec. 23rd, 1902.

[1] A *chopine* is defined as "a French and Scotch liquid measure, containing half the pint."

OBITUARY.

HENRI VARNIER, M.D.,

Paris.

By the recent death of Dr. Henri Varnier, France has lost one of its foremost obstetrical teachers. Born at Epernay in 1859, he went to Paris in 1877 to study medicine. From the first he had determined to devote himself specially to the study of obstetrics. He had seen his mother die in childbed, and he resolved, if possible, to discover the means of preventing such distressing occurrences. He had at first a hard struggle for existence. He was the son of a poor teacher in a provincial school, and he was compelled to take a place as usher in a school in Paris. Notwithstanding the disadvantages with which he had to contend, he came out second in the competitive examination for the post of externe of the Paris hospitals in 1880. In 1882 he gained the coveted post of interne, which led to his becoming connected with Professor Pinard, then obstetric physician at the Lariboisière Hospital. In 1888 he took his degree, and in due course he was appointed Physician Accoucheur to the Paris hospitals, and Professor *Agrégé*. He was also General Secretary of the Society of Obstetrics, Gynaecology, and Paediatrics.

He contributed largely to the literarure of the special province of medicine which he had chosen. Besides numerous papers on continuous irrigation in puerperal fever, gangrenous cystitis in the course of retroflexion of the gravid uterus, vaginal urethrocele complicated by calculi, etc., he collaborated with Pinard and Champetier de Ribes in the production of an atlas of obstetrical morbid anatomy, and with Faraboeuf in an *Introduction to the Study of Midwifery*. He was also the author of a treatise on the mechanism of delivery and the technique of obstetric operations, and of a fine work, illustrated with numerous plates, on everyday midwifery, which appeared in 1900. He was one of the editors of the *Annales de Gynécologie* and of the *Revue d'Obstétrique et de Pédiatrie*.

Dr. Varnier was a very successful teacher, and took a prominent part in the revival of symphysiotomy in France. He was a man of most amiable character, beloved by his pupils and his patients, and living wholly in his work and for the help of others. When at last compelled to take to his bed, he busied himself in historical researches, to which he brought the same scientific method and the same conscientiousness that had marked his medical work.

ROBERT T. A. O'CALLAGHAN, F.R.C.S.I.,

Surgeon and Gynaecologist to the French Hospital, London.

WE have to record with regret the death, after a short illness, of Mr. R. T. A. O'Callaghan, Surgeon-Gynaecologist to the French Hospital, London. Mr. O'Callaghan, a man of apparently robust constitution and in the prime of life—he was born in 1858—had, since an attack of influenza some time ago, suffered occasionally from cardiac symptoms. On Saturday last he experienced a severe attack of gall-stone colic. He was seen by several medical friends, suitable remedies were applied, and it was hoped that his progress would be satisfactory, but on Monday morning last he became rapidly worse, and death being due to cardiac failure.

Robert Thomas Alexander O'Callaghan, the son of the Rev. R. O'Callaghan, LL.D., at one time a chaplain in the Royal Navy, and afterwards Rector of Holton, Suffolk, was born at Achill, Galway, and received his early education at the Royal Naval School, then at New Cross. Having abandoned his intention to enter the Royal Navy, he went to Trinity College, Dublin, and became a student also at the School of the Royal College of Surgeons in Ireland. He obtained the diploma of L.R.C.S.I. in 1877, and held the appointments of House-Surgeon to the Children's Hospital, Dublin; Resident Surgeon to the Meath Hospital, Dublin; and House-Surgeon to the Stockport Infirmary. He first settled in practice at Buckley, Flintshire, where he became attached to the 1st Flintshire Royal Engineers; he was Surgeon-Lieutenant-Colonel in this corps at the time of his death, and had received the Volunteer Decoration. He married, in 1880, the daughter of Mr. David Carse, of Rockferry, and about twenty-one years ago settled at Carlow, where he became Surgeon to the County Infirmary, and attained a leading position as a practitioner in the town and county. He entertained wider ambitions, however, and desired to devote himself to abdominal surgery; to this end he followed the practice of the late Mr. Lawson Tait, and was for some time his assistant. He had taken the diploma of F.R.C.S.I. in 1882, and in 1894 he gave up his practice in Carlow and settled in London. He was shortly afterwards appointed Surgeon to the Chelsea Hospital for Women, but did not long retain that office. In January, 1900, when the Langman Hospital was presented for service in the South African war by Mr. John L. Langman, Mr. O'Callaghan was appointed Senior Surgeon. He proceeded with that hospital to South Africa. He served with it for some time, and returned home from Bloemfontein before the conclusion of the war. For his services in connexion with this hospital his name was mentioned in dispatches, and he received the medal and clasps. At the time of his death he held the appointment of Surgeon-Gynaecologist to the French Hospital, London. His contributions to medical literature had reference chiefly to the speciality to which he devoted himself; among them may be mentioned an essay on the treatment of tuberculous peritonitis by abdominal section and flushing out, and a case of abdominal section in perforating gastric ulcer, published in our columns in 1894.

Mr. O'Callaghan was a man of genial disposition, was fond of field sports, and was a well-known breeder and judge of certain classes of sporting dogs. He leaves a widow and a large family, with whom much sympathy will be felt.

THOMAS JOHN COLMAN, M.D.,

Bristol.

THOMAS JOHN COLMAN, whose death took place on January 2nd, was a native of Bristol, being the son of Thomas Colman, a gentleman connected with the malting trade in that city. He received his medical education at the Bristol School of Medicine and at Edinburgh University, of which he was M.D. His other qualifications were the L.S.A. and the M.R.C.S. Eng., taken in 1865 and 1864 respectively. Before commencing practice he served the offices of House-Physician at the Royal Infirmary, Edinburgh; Assistant Physician at the Royal Edinburgh Asylum, Morningside; and House-Surgeon at the Bristol General Hospital, which last post he resigned in 1866 to start private practice in Bristol. For two years—1871-1872—he was Surgeon to the Children's Hospital, Bristol.

For many years Dr. Colman enjoyed a large and lucrative practice in the districts of Cotham and Redland, though it was not confined to those parts of Bristol. He was a highly cultivated man apart from his profession, and was a pianist of great ability. His knowledge of music was wide and varied, and he possessed great powers of expression and execution. No one delighted more than Dr. Colman to get skilful musicians to his home and spend the evening talking, performing, and listening to music. On such occasions he was a most genial and agreeable host, and by the musically inclined these evenings will be much missed.

In spite of a not too robust constitution, Dr. Colman got through a very large amount of work in the years he was in practice, his kindly, sympathetic nature endearing him to his patients. For some little time he had suffered from indications of trouble in the bladder, and sought advice recently in London. An operation was performed with satistactory results as far as immediate troubles were concerned, but complications developed, and he died aged 60 on January 2nd.

Dr. Colman was unmarried. His funeral in Bristol was largely attended by his medical and lay friends.

MAX SCHEDE, M.D.,

Professor of Surgery, University of Bonn.

WE regret to announce the death of Dr. Max Schede, Professor of Surgery in the University of Bonn, which took place on December 31st, in his 59th year. He was recognized as one of the foremost surgeons in Germany. He was born at Arnsberg in Westphalia in 1844, and studied at Halle where he took his doctor's degree in 1866. He was a pupil of Volkmann, and after graduation was for three years *Privatdocent* at Halle. He served through the Franco-Prussian War on the medical staff of the German army. From 1875 to 1880 he was Director of the Surgical Departmentof the Friedrichain Municipal Hospital at Berlin. From 1880 to 1895 he was Senior Surgeon of the Surgical Department of the General Hospital at Hamburg. In 1895 he was called to Bonn as Professor Ordinarius. He contributed largely to the literature of surgery, and all his writings were marked by earnest love of truth, and a strongly practical spirit. Among them may be mentioned *On Deep Atheroma of the Neck*, *Injuries of the Hands and Fingers*, *Extirpation of the Larynx*, *The Treatment of Empyema*, *The Antiseptic Treatment of Wounds with Corrosive Sublimate*, *The Surgical Treatment of the Pleural Cavity*, *Injuries and Diseases of the Kidneys and Ureters*, and *Jacksonian Epilepsy*.

PHOTINOS PANAS, M.D.,

Professor of Ophthalmology, University of Paris.

WE regret to have to record the death of Dr. Photinos Panas, the distinguished ophthalmologist of Paris. Dr. Panas, who was of Greek origin, was born in the island of Cephalonia in 1832. He proceeded to Paris to study medicine, and graduated in 1860 with a thesis on the anatomy of the nasal fossae and the lachrymal canals. Becoming naturalized as a Frenchman he was admitted an *agrégé* Professor in 1865, and the same year he was appointed Surgeon to the Bureau Central. He was afterwards successively Surgeon to the Bicêtre, Lourcine, Midi, Saint Antoine, Saint Louis, and Hôtel-Dieu Hospitals. In 1873 he was appointed Lecturer on Ophthalmology, and published a book on strabismus and ocular paralyses. He was also the author of works on affections of the lachrymal apparatus, inflammatory diseases of the internal membranes of the eye, retinitis, and the pathological anatomy of the eye. In 1879 he was appointed Professor of Ophthalmology, and in the same year he was elected a member of the Académie de Médecine, of which he was some time President.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession who have recently died are Dr. W. Sobieranski, Professor of Pharmacology in the University of Lemberg, aged 41; Dr. Heinrich, Baron von Weil, a well-known orthopaedic surgeon of Vienna, aged 69; Dr. Zaager, Professor of Anatomy in the University of Leiden, aged 65; Dr. O. Rapin, Professor of Obstetrics in the University of Lausanne, aged 56; Dr. Laroyenne, Professor of Gynaecology in the University of Lyons; Dr. Wilhelm Pfitzner, Professor of Anatomy in the University of Strassburg, aged 50; Dr. Wenzel Bernatzik, sometime Professor of General Pathology and Materia Medica in the Josefs-Akademie, Vienna, in his 83rd year; Dr. E. Ridder, formerly Professor of Gynaecology in the Grand Duchess Helena Paulovna Clinical Institute, St. Petersburg; Dr. Michael Umnoff, Emeritus Professor of Comparative Anatomy and Embryology in the University of Kasan, aged 75; and Dr. Johannes Bockendahl, Professor of Hygiene in the University of Kiel, in his 77th year.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

PRIZE DAY AT NETLEY.

THE presentation of prizes to the lieutenants on probation of the Indian Medical service who were successful at the Netley examination took place at the Royal Victoria Hospital, Netley, on Saturday, January 10th. Surgeon-General Sir William Hooper, K.C.S.I., attended to make the presentation, and there were also present Surgeon-General E. Townsend, C.B., C.M.G.; Colonel Cayley, C.M.G.; Colonel MacLeod, Colonel Stevenson, C.B.; Professor Wright; Lieutenant-Colonels Dick, Sylvester, Johnston, Treherne, and Chester; Miss Cole, Superintendent of the nursing staff, and others.

Colonel MacLeod read a report of the session showing that twenty-nine lieutenants on probation who had during the months of September and October undergone a course of instruction in hospital administration, military hygiene, pathology, and recruiting in the Medical Staff College, London; joined on November 8th for two months' further instruction at Netley. A programme of studies was submitted to the Director-General Army Medical Department and approved. Special orders were issued by the Director-General: (1) That all matters of discipline should be dealt with by the principal medical officer; (2) that the principal medical officer should be associated with the professors in arranging details of instruction; (3) that the officers in charge of divisions should afford every facility and assistance to the professors in carrying out clinical instruction; (4) that the pathological laboratory being organized and equipped for hospital purposes should be available for clinical and pathological work by the lieutenants on probation; and (5) that Colonels Stevenson and MacLeod be appointed Consulting Surgeon and Physician to the Hospital during their term of service as Professors of Military Surgery and Medicine at Netley. The work of the session comprised: (1) Drill (company and ambulance), 5 hours weekly; (2) military surgery, 15 lectures; (3) optical instruction, 10 lectures; (4) *x* rays, 10 lectures, and practical demonstrations on Saturdays; (5) military medicine, 14 lectures; (6) clinical medicine, 7 lectures, and systematic clinical instruction on five days weekly in the wards; and (7) lunacy, 6 lectures. The lieutenants on probation were placed in responsible charge of medical and surgical wards, one month each, under the supervision of officers of divisions, and had the use of the testing room, pathological laboratory, library, and museum. They also took their time of orderly duty, had quarters assigned to them, and were members of the officers' mess. Their work and behaviour gave satisfaction.

Examinations in surgery and medicine were held on January 5th and 6th, with the results shown in the following list:

List of Lieutenants on Probation of the Indian Medical Service who were successful at the Netley Examination. The prizes are awarded for marks gained in the special subjects taught at Netley.

January 10th, 1903.

	Marks.		Marks.
*†Mackie, F. P. ...	... 1,431	Saigol, R. D. ...	... 1,077
††Pridham, A. T. ...	... 1,264	Melhuish, H. M. H.	... 1,057
‡‡O'Leary, J. ...	... 1,241	Brown, H. M. ...	... 1,051
Young, T. C. M. ...	... 1,220	Brown, H. C. ...	... 1,027
Lauddie, A. K. ...	... 1,214	Collinson, W. J. ...	... 1,022
**Christophers, S. R.	... 1,207	Pilkington, A. F.	... 1,013
††Dunn, C. L. ...	... 1,199	Nesfield, V. B. ...	... 1,003
Easton, P. G. ...	... 1,183	Jeudwine, W. W.	... 968
Murray, J. H. ...	... 1,180	Rogers, F. C. ...	... 963
Emslie Smith, H.	... 1,177	Baket, M. ...	... 937
†Jolly, G. A. ...	... 1,172	Bulteel, C. E. ...	... 901
Vieyra, F. P. ...	... 1,159	Hingston, C. A. F.	... 882
‡‡Talbot, R. F. C. ...	... 1,129	Humphreys, G. F.	... 843
Dutton, H. R. ...	... 1,125	Lunham, J. L. ...	... 800
Kiddle, H. H. ...	... 1,115		

* Gained the 1st Montefiore Prize of 20 guineas and medal.
† Gained the 2nd Montefiore Prize.
‡ Gained the Martin Memorial Prize.
** Gained the Maclean Prize for Clinical and Ward Work.
†† Honourable mention in Surgery.
‡‡ Honourable mention in Medicine.

After presenting the prizes, Sir William Hooper said it was particularly gratifying to him to have the honour of presenting the prizes; for in July last, when Lord Roberts, the Commander-in-Chief, very kindly made the distribution, it was feared that there would be no subsequent distributions at Netley. It was even thought that the War Office might close the school, in which such excellent work had been done under Parkes, Longmore, Maclean, Aitken, De Chaumont, Boyes-Smith, and more recently under Colonels Cayley, Notter, and Bruce, MacLeod, Stevenson, and Professor Wright. A long list of men of both services had received most valuable instruction at Netley. It was a matter for general regret that Professor Wright had severed his connexion with the school. Professor Wright was a teacher of great ability, and possessed the valuable gift of being able to impart to others his own zeal and love for science. Under his tuition many members of both services had qualified for the valuable work which they had since been able to accomplish. He was sure, too, that they all felt thankful that Colonel Stevenson's transfer to the Medical Staff College would not entail a loss to the successful candidates for the Indian Medical Service, for he would instruct both the junior and senior classes at the College, so that his valuable teaching and the influence he had so long and beneficially exercised at Netley would still be available for the good of both services. They were, moreover, very fortunate in having with them Professor MacLeod, who was a tower of strength to the school, to which he gave the benefit of his great teaching ability and long experience. They had, indeed, much to be thankful for, and especially that the Advisory Board for Army Medical Services had undertaken the supervision of the course of instruction carried out at Netley, and they might hope that the school would remain available for lieutenants of the Indian Medical Services until a similar course could be provided elsewhere. They who had a knowledge of the school could bear testimony to the great value of the laboratory course which they had undergone in hygiene and pathology now given at the Medical Staff College in London under the direction of the Advisory Board as an important part of the War Office reorganization scheme. Those interested in the medical service considered it essential that the men who would proceed from Netley straight to service in India should have the benefit of clinical instruction under skilled guidance in the great Netley Hospital directly after the laboratory course, whilst methods and processes were fresh in the mind; for greater facilities and more clinical material in tropical diseases were available at Netley than elsewhere in the United Kingdom. He considered that the young lieutenants were to be congratulated in that they had enjoyed the benefit of the instruction given at Netley after the London course, and had enjoyed the most valuable training ever given to a batch of men leaving Netley. Some of them, he was glad to know, availed themselves of the great privilege provided by the Secretary of State for India in Council under the revised regulations for

entrance to the service, and after they had obtained their places in the *Army List* would be seconded whilst they held house appointments at hospitals. Those who took up hospital work after the completion of their training would the better reap the advantages to be gained from hospital experience, whilst the hospitals and eventually the Government service would benefit by their riper knowledge. Professor MacLeod has presented a most gratifying report on the work of the class during the course now ended, and he heartily congratulated both the professors and the class upon the report. He reminded the lieutenants on probation that they had entered a grand service, with great traditions, and made famous by many celebrated members. He commended to their perusal a most interesting account by Surgeon-General W. B Beatson of the Indian Medical Service Past and Present, first published in the *Asiatic Quarterly Review* for October, 1902. It was given to few to leave footprints on the paths of science, but some of them were doubtless qualified to do so, and all of them would, he was confident, strive honourably as earnest workers to maintain the high character of the service which they had entered. In whatever sphere they might be called upon to use their energies they would find their brother officers in India a hard-working body of men, some of them employed in positions of great responsibility, and all of them fully occupied. When he entered the service in 1859 there survived a tradition of an old-time doctor known as "Dr. Dado"—a Hindustani word for "give." The old doctor was supposed to believe solely in the virtues of a pill of great potency—his own composition—and when he went the round of his hospital he was attended by an orderly armed with a large box of these pills. After hearing the complaint of every patient, to each one, whatever might be his ailment, he directed his orderly to "dado." Even if any foundation existed for this story the doctor of the "dado" order has long been as extinct as the dodo. One of the great advantages of the Indian Medical Service was that a man could obtain employment in the particular branch for which he was best fitted. A great additional inducement was now offered to highly-trained men to enter the service, for under the advice of the late Surgeon-General Harvey, Director-General, the Government of India was organizing a research department, in which some of their predecessors in that excellent school, who worked there under Professor Wright, were now engaged. India presented an immense field for investigation into the great problems of tropical disease; and the opportunities for their solution might be given to some of them, while zealous and industrious officers would find full scope for their energies in every branch of medicine and surgery, as well as sanitary work, and in teaching institutions throughout India. To the kind and sympathetic doctor the sick natives of India would flock in their hundreds, and great would be their opportunities to relieve suffering, reap experience, and earn their unlimited gratitude. All who were interested in the Indian Medical Service would feel thankful that that most excellent school still survived. His own interest in it had increased with his knowledge of its advantages and potentialities for valuable instruction to officers who would serve in the tropics, and he inherited his interest in the school from his distinguished predecessor in office, Sir Joseph Fayrer, who had always been a staunch supporter of Netley, and to whom it was an open secret they owed it that the school was not years ago swept away under a misdirected demand for economy. He wished them all possible success in the noble profession which they had adopted, and whatever might be the measure of that success, they would each and all have the great privilege of mitigating something of the great sum of human suffering.

Surgeon-General Townsend read a sympathetic letter of apology from Sir Joseph Fayrer, thanked Sir William Hooper for his excellent address, and wished the young officers every success in their future career.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: GEORGE S. DAVIDGE, Surgeon, to the *Galatea*, January 8th, and to the *Dido*, undated; ROBERT W. G. STEWART, M.B., Surgeon, to the *Latona*, January 1st; CHARLES A. G. PHIPPS, Surgeon, to the *Vivid*, for disposal, January 12th; JAMES A. THOMPSON, Surgeon, to the *Wildfire*, for disposal, January 12th.

VERITAS writes with reference to a letter which appeared in the BRITISH MEDICAL JOURNAL of January 10th, p. 113, to suggest that the rate of pension should be amended by giving an additional shilling a day for every year of service after the twenty years have been completed

At present the pension is on a lower scale than that received by the R.A.M.C. officers. The latter are advanced after about twenty-two years' service to a higher scale of pay corresponding to the old rank of brigade-surgeon, and after three years' service as such, or about twenty-five years' total service, and without any loss of half-pay time, can retire on £1 7s. 6d. a day, whereas in the naval service a medical officer after twenty-five years' full-pay service can only receive £1 2s. 6d. a day pension—a very considerable difference.

Other conditions which require attention are: (1) The cabin accommodation for senior medical officers; (2) no fleet surgeon should be sent to a sea-going ship after holding that rank for four years or attaining the age of 50.

As regards change of titles for medical officers, I think it is absolutely necessary they should be changed owing to changes which are about to take place in rank and title in other departments under the new naval scheme; and I would suggest the new titles be Lieutenant-Surgeon, Commander-Surgeon, etc.

ROYAL ARMY MEDICAL CORPS.

The following is a list in order of merit of successful candidates for commissions in the Royal Army Medical Corps at the recent examinations held in London:

	Marks.		Marks.
J. G. Bell	... 619	C. Bramhall	... 484
M. G. Winder ...	... 576	T. E. Harty	... 477
F. W. W. Dawson ...	... 548	H. H. Swanzy ...	... 474
I. M. M. Crawford ...	... 528	K. C Edwards ...	... 473
R. M. Ranking ...	... 522	J. M Duguid ...	... 468
T. S. Coates	... 517	H. B. Kelly	... 468
A. E. B. Wood ...	... 516	G. H J. Brown ...	... 461
R. H. Bridges ...	... 503	E M Pennefather ...	... 451
J. Gatt	... 502	H. W V. Dunbar ...	... 439
J. C. G. Carmichael ...	... 501	J. S Skey	... 437
F. C. Lambert ...	... 500	H. T. Stack	... 432
I. B. Meldon	... 490	D. G. Carmichael ...	... 428
R. C. Wilmot ...	... 489	D. Ahern	... 428
C. W. Holden ...	... 487	B. G Patch	... 425
J. A. W. Webster ...	... 487	G. W. G. Hughes ...	... 419

COLONEL W. F. STEVENSON, M.B., C.B., is granted the temporary rank of Surgeon-General whilst employed at the Medical Staff College, January 14th.

Colonel J. L. NOTTER retires on retired pay, January 14th. His commissions are thus dated: Assistant Surgeon, March 31st, 1866; Surgeon, March 1st, 1873; Surgeon-Major, March 31st, 1878; Brigade-Surgeon, March 28th, 1892, and Surgeon-Colonel, July 6th, 1896. After tours of service in various parts of the world, he was appointed Professor of Military Hygiene at Netley Hospital in October, 1888, and retained that position until he was sent to South Africa in 1900.

Major D. M. SAUNDERS has been appointed Staff Officer to the Principal Medical Officer 3rd Army Corps, Ireland.

SPECIALISTS.

INDIA.—We understand that opportunities will be afforded in connexion with the Medical Staff College to captains returning from foreign service to qualify as specialists by attendance at suitable classes or hospitals.

PENSIONS.

CANTAB. directs attention to the difference in the rates of pension in the three sister medical services. In the Royal Navy, at the expiration of twenty-four years, 22s. 6d. daily; after twenty-seven years, 25s. daily; after thirty years, 30s. daily. In the Indian Medical Service, after twenty-five years, 27s. 6d. daily; after thirty years, 38s. 6d. In the R.A.M.C., after 25 years, 22s. 6d. daily; after thirty years, 25s. daily. In the R.N. and R.A.M.C. a shilling daily for each year's completed service would be a fair rate, and would not add much to the estimates.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL A. W. MACKENZIE, M.B., Bengal Establishment, is permitted to retire from the service, from January 31st. Appointed Surgeon, March 31st, 1877, he became Surgeon-Lieutenant-Colonel twenty years thereafter. He was in the Afghan war of 1878-80, including the action of Chihildukhteran, the march from Kabul to the relief of Kandahar, and the battle on September 1st (medal with clasp, and bronze decoration); with the Mahsood Waziri expedition in 1881; in the two Miranzai expeditions in 1891 (medal with clasp); and with the Waziristan expedition in 1894-5 (clasp).

Brigade-Surgeon RICHARD JAMES QUINNELL, M.D., Indian Medical Service (retired), died at Melbourne on December 3rd, 1902, at the age of 68.

Surgeon-Major WILLIAM SHILLITO, late Bengal Army, died at Putney on January 5th, after two days' illness, aged 86.

IMPERIAL YEOMANRY.

MR. JOHN H. DAUBER, M.B., is appointed Surgeon-Lieutenant in the Sussex Imperial Yeomanry, January 7th.

Temporary Captain T. B. M'A. SHERWEN, Medical Officer 28th Battalion, resigns his commission, is granted the honorary rank of Captain in the army, and retains his uniform, November 26th, 1902.

Temporary Captain A. F. KENNEDY, M.B., Medical Officer 33rd Battalion, resigns his commission, with the honorary rank of Lieutenant in the army, retaining his uniform, December 13th, 1902.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

MR. DAVID WATERSTON, M.D., is appointed Lieutenant in the Edinburgh Company, January 7th.

Major A. A. WATSON, having relinquished his temporary commission for service in South Africa, is granted the honorary rank of Major in the army, retaining his uniform, September 25th, 1902.

ROYAL ENGINEERS (VOLUNTEERS).

LIEUTENANT-COLONEL ROBERT T. A. O'CALLAGHAN, F.R.C.S., 1st Flintshire Royal Engineers, died at 137, Harley Street, London, on January 12th, in his 45th year.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

SURGEON-LIEUTENANTS D. J. DUHIG, 2nd Middlesex, and G. W. WILSON, M.B., 1st Newcastle-on-Tyne, resign their commissions, January 7th.

VOLUNTEER RIFLES.

MR. JOHN T. TITTERTON is appointed Surgeon-Lieutenant in the 4th Volunteer Battalion the Royal Scots (Lothian Regiment), January 7th.

Surgeon-Captains A. R. RENDLE, 2nd (Prince of Wales's) Volunteer Battalion the Devonshire Regiment, and W. T. CRAWFORD, M.D., 4th (Nottinghamshire) Volunteer Battalion the Sherwood Foresters (Nottinghamshire and Derbyshire Regiment), resign their commissions, January 7th.

Major A. F. A. FAIRWEATHER, M.D., 2nd Volunteer Battalion the East Yorkshire Regiment, retires under paragraph 111, Volunteer Regulations, retaining his rank and uniform, January 7th.

Mr ROBERT W. MEIKLE is appointed Surgeon-Lieutenant (supernumerary) in the 1st Roxburgh and Selkirk (the Border) Rifles, January 7th.

Surgeon-Major R. L. SPARROW, 6th Volunteer Battalion the Manchester Regiment, is promoted to be Surgeon-Lieutenant-Colonel, January 7th.

The notification which appeared in the *London Gazette* of December 19th, 1902, appointing Mr. John F. Fergus to be Second Lieutenant in the 2nd Volunteer Battalion the Highland Light Infantry, is cancelled, and the following substituted: Mr. JOHN F. FERGUS, M.D., is appointed Surgeon-Lieutenant in the 2nd Volunteer Battalion the Highland Light Infantry, December 20th, 1902.

VOLUNTEER INFANTRY BRIGADE BEARER COMPANY.

SURGEON-CAPTAIN J. N. BROWN, M.D., from the 5th (West) Middlesex Volunteer Rifle Corps, to be Captain 2nd London, and to command the company under Paragraph 55A Volunteer Regulations, December 23rd, 1902.

Surgeon-Lieutenant E. C. MONTGOMERY-SMITH, from the 5th (West) Middlesex Volunteer Rifle Corps, to be Lieutenant in the London Company, December 23rd, 1902.

AUSTRALIAN MEDICAL SERVICE.

SURGEON-MAJOR WILLIAM JAMES GUTHRIE BEDFORD, late Permanent Staff, New South Wales, died at Doddington, Cambridgeshire, on December 29th, 1902, aged 58.

ARMY MEDICAL OFFICERS' FRIENDLY AND BENEVOLENT SOCIETIES.

A MARRIED MAJOR writes: The letter of "Bachelor R.A.M.C." in the Service Notes of the BRITISH MEDICAL JOURNAL of October 25th, 1902, p. 1382, draws attention to the unsatisfactory state of the Army Medical Service Friendly and Benevolent Societies.

I distinctly remember being puzzled years ago by a report similar to the one described by your correspondent, and should not have joined if its advantages had not been pointed out to me by the late Sir Thomas Longmore.

The Societies are not in touch with the general body of officers R.A.M.C., and new blood is needed on the committees to infuse vigour into them. Above all what is wanted is a bright, smartly written pamphlet, in the style of a life assurance company's prospectus, drawing attention to the advantages of the widows' annuity and the needs of the benevolent society. It should show the fact that this annuity is obtainable from the Army Medical Service Friendly Society at a much cheaper rate than by ordinary life assurance, and it should be sent several times to young officers, if the societies are to expand.

MEDAL FOR OPERATIONS IN INDIA.

AN Army Order recently issued says that the King has been pleased to command that the India medal of 1854, with clasp inscribed "Chin Hills, 1892-3," and "Kachin Hills, 1892-3," shall be granted to all troops who were engaged in those operations between October 19th, 1892, and March 10th, 1893, and December 3rd, 1892, and March 3rd, 1893, respectively: all dates being inclusive. Those already in possession of the India medal of 1854 will receive the new clasp only.

MEDICO-LEGAL AND MEDICO-ETHICAL.

INQUEST FEES FOR CASES DYING IN COTTAGE HOSPITALS.

AT an inquest held recently by Dr. Ambrose with regard to the death from injury of a cyclist who died in Woodford Jubilee Hospital, Dr. Alexander Sayres on being called said he must enter his protest against being called to give evidence; the law compelled him to come, but he had to give up the customary fee, owing to the fact that he was a medical officer to a local institution. Because he gave his time to that local institution the State compelled him to give his evidence gratuitously. He thought that was very hard and very unjust, and calculated to discourage men from belonging to the staff of a hospital. The Coroner said: I think you are quite right about it, but as the law at present stands I have no power to pay you, and I am very sorry for it.

There can be no doubt that the grievance to which Dr. Sayres called attention is one which ought to be remedied. The matter has frequently been discussed in our columns, and has been receiving the attention of the British Medical Association. It is proposed to refer this case to the Medico-Political Committee.

MEDICAL ANNOUNCEMENTS.

A CORRESPONDENT sends us a copy of the programme of Buffalo Bill's Wild West, now at Olympia, in order to draw our attention to the name of the consulting medical officer, which is given after that of the scenic artist and the limelight man. This does not seem to be quite in accordance with the dignity of the profession, and we should advise the gentleman in question to have his name withdrawn.

MEDICAL ADVERTISING.

JUSTITIA.—A correspondent sends us a poster announcing a concert in aid of a Sunday school, to be presided over by a local councillor who is a member of the medical profession and whose qualifications are appended to his name. We do not consider that there is anything in the matter contrary to propriety or the usages of the medical profession. Those medical practitioners who enter public life must necessarily meet a greater degree of publicity than those who avoid such duties, but medical men share all the obligations of citizens, and those who feel that they have a vocation and liking for the work should not be discouraged from undertaking it, and it is ungenerous to treat them as merely seeking personal notoriety. It is pretty certain that participation in public affairs is more often detrimental to medical practice than advantageous.

MEDICAL ETIQUETTE.

R.B.L. writes: A. is a practitioner in charge of a case; B. a physician and personal friend of the patient called in consultation; C. a neighbouring practitioner who had seen the case and was present at the consultation; D. an operating surgeon not present at the consultation. At the consultation the desirability of an immediate operation is discussed and negatived by B., but it is agreed that should certain symptoms arise D. should be sent for. The same evening C. writes a letter to A., strongly urging the danger of delay, and counselling him to send for D. at once. A. agrees, sees the friends, summons D., and the operation takes place. We are asked to say whether C.'s letter was a breach of medical etiquette or not.

*** Not having seen C.'s letter, we can express no opinion upon it, but it is not a breach of medical etiquette, although inconvenient, for a party to a consultation to change his mind and write to say so. A. was the right person to address, and the responsibility of deciding whether to refer the matter to B. again or not rested with him or the patient's friends.

MONTHLY NURSES.

R. S. asks to what proportion of her fee a monthly nurse is entitled who, owing to a miscarriage, is not required at the time by the lady who engaged her. Four months' notice was given that she would not be required.

*** We are advised that legally the nurse would not have any claim unless it could be shown that there was an established and recognized custom prevailing between patients and nurses which would override the common law. So far as we are aware there is a custom that if the services of a nurse previously engaged are not required owing to miscarriage or premature confinement at two, or possibly three, months from the date for which she was engaged, half the fee should be paid; when so long a notice as four months has been given most people would probably offer a small solatium.

PAY PATIENTS IN GENERAL HOSPITALS.

J. A.—There can be no objection to the medical staff of a hospital admitting paying patients to paying beds, even when the hospital is otherwise wholly supported by voluntary contributions. The only criticism that seems to be well founded is where a hospital supported by charitable funds enters into unfair competition with private pay hospitals by charging less than the actual cost of the patient (rent, nursing, and maintenance).

While there can be no doubt about the opinion just expressed, our correspondent must understand that he clearly cannot charge a patient who has been admitted to the hospital under the belief that he is to be treated gratuitously. In order to recover fees it would be necessary both in equity and at law to show that the patient knew that he was incurring a debt for medical treatment. The same answer applies to the question of fees for administering anaesthetics for operations performed in the hospital. Such fees, if payable by the patient, could only be asked where the patient had been made aware that he would have to pay them. We think that the staff and the Committee should come to an arrangement, and draw up rules to regulate the payments to be made by patients who are "not in necessitous circumstances," and for this purpose we would draw our correspondent's attention to the principles laid down on this subject at page 58 *et seq.* of Dr. Saundby's *Medical Ethics*.

MEDICAL FEES.

DUBITANS.—We think twenty guineas a day would, under the circumstances, be a reasonable and proper fee to charge.

ROLESTON.—The account seems to be calculated upon an equitable and reasonable basis.

M.D.—As long as the circular is confined to former patients it does not seem to be contrary to professional etiquette, if in somewhat questionable taste.

UNIVERSITIES AND COLLEGES.

SOCIETY OF APOTHECARIES OF LONDON.

THE following candidates have passed the Primary Examination (Part I) in the subjects undernoted:

Biology.—T. Bickers, Leeds; M. Rathbone, Royal Free Hospital.

Chemistry.—R. P. Wylde, Manchester.

Materia Medica and Pharmacy.—T. P. Cox, Glasgow; H. D. O'Donnell, Westminster Hospital.

The following candidates passed the Primary Examination, Part II, in the subjects undernoted:

Anatomy.—G. E. Austin, Royal Free Hospital; H. D. H. W. Bund, St. Bartholomew's Hospital; H. S. Burnell-Jones, Cardiff; W. G. H. Cable, London Hospital; C. W. De Morgan, St. Mary's Hospital; C. H. J. Fagan, St. George's Hospital; F. C. M. Gabites, Edinburgh; J. W. Kollings, University College Hospital; E. Sutcliffe, Leeds; R. M. Wingent, Guy's Hospital.

Physiology.—G. E. Austin, Royal Free Hospital; J. M. Burke, Cork and Middlesex Hospital; C. W. De Morgan, St. Mary's Hospital; C. H. J. Fagan, St. George's Hospital; G. W. Hassall, Birmingham; H. T. Roberts, St. Mary's Hospital; E. F. Skinner, Cambridge; E. Sutcliffe, Leeds.

LORD STRATHCONA has promised to preside at a festival dinner in aid of the funds of University College Hospital, London, which will take place on Wednesday, March 18th, at the Hôtel Métropole.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 9,164 births and 5,350 deaths were registered during the week ending Saturday last, January 10th. The annual rate of mortality in these towns, which had been 19.6, 16.9, and 20.0 per 1,000 in the three preceding weeks, declined again last week to 18.5 per 1,000. The rates in the several towns ranged from 10.0 in Hornsey, 10.9 in Handsworth and in West Hartlepool, 11.8 in Walthamstow, 12.3 in Southampton, 12.4 in York, and 12.7 in Leyton, to 21.7 in Manchester, 22.7 in West Bromwich and in Rochdale, 23.7 in Liverpool, 24.2 in Wolverhampton, 24.4 in Rhondda, 25.2 in Oldham, and 28.2 in Great Yarmouth. In London the death rate of was 18.8 per 1,000, while it averaged 18.4 in the seventy-five other large towns. The principal infectious diseases caused a death-rate of 1.7 per 1,000 in the seventy-six towns; in London the death-rate from these diseases was also equal to 1.7 per 1,000, which corresponded with the average-rate in the seventy five other large towns, among which the highest rates were 3.0 in St. Helens, 3.2 in Hastings, 3.3 in Liverpool and Cardiff, 3.9 in West Ham, 4.0 in Cardiff, 5.3 in Smethwick, and 5.9 in Newport (Mon.). Measles caused a death-rate of 1.2 in Walsall and in Salford, 2.4 in Devonport and in Liverpool, 1.5 in Cardiff, 1.6 in Hastings, 2.0 in Tynemouth, and 5.9 in Newport (Mon.); scarlet fever of 1.4 in Coventry, 1.6 in King's Norton, 1.8 in St. Helens, and 2.0 in Great Yarmouth; diphtheria of 1.4 in Preston, 1.6 in Hastings and in Hanley, 2.7 in Bury, and 3.5 in Smethwich; and whooping-cough of 1.2 in Cardiff, 1.5 in Oldham, 1.9 in Tottenham, and 2.2 in West Ham. The mortality from "fever" showed no marked excess in any of the large towns. Of the fatal cases of small-pox registered in these towns last week 6 belonged to Liverpool, and 1 each to London, Derby, Oldham, and Preston. The number of small-pox patients under treatment in the Metropolitan Asylums Hospitals, which had been 21, 17, and 14 at the end of the three preceding weeks, had further declined to 10 at the end of last week; 4 new cases were admitted during the week, against 8, none, and 1 in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital, on Saturday the 10th inst., was 2,219, against 2,487, 2,528, and 2,378 on the three preceding Saturdays; 223 new cases were admitted last week, against 270, 205, and 214 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, January 10th, 1,010 births and 740 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 21.1, 21.3, and 21.6 per 1,000 in the three preceding weeks, further rose last week to 22.6 per 1,000, and was 4.1 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scotch towns the death-rates ranged from 17.0 in Perth and 17.3 in Greenock to 24.2 in Leith and 24.4 in Glasgow. The mean death-rate in these towns from the principal infectious diseases was 2.4 per 1,000, the highest rates being recorded in Aberdeen and Greenock. The 370 deaths registered in Glasgow included 2 from measles, 3 from diphtheria, 17 from whooping-cough, 4 from "fever," and 14 from diarrhoea. Two deaths from measles, 2 from diphtheria, 2 from whooping-cough, and 2 from diarrhoea occurred in Edinburgh; 2 from diphtheria and 2 from whooping-cough in Dundee; 10 measles and 2 from diarrhoea in Aberdeen; 2 from scarlet fever in Paisley; and 2 from diarrhoea in Greenock.

THE GOSPORT WATER SUPPLY.

ATTENTION was called in the BRITISH MEDICAL JOURNAL of January 3rd to the unsatisfactory condition of the Gosport water supply, and it was stated that a recent examination of the water made at King's College had disclosed the presence of a large amount of bacteria as well as of a large excess of common salt. It was pointed out that under the circumstances the local authority should arrange to have frequent bacteriological examinations made in order to remove the suspicion under which the water lay from an organic standpoint.

We have now received from the Engineer and Manager of the Gosport Waterworks Company a copy of the correspondence which has passed between him and the clerk to the local council. It appears from a communication dated January 8th that the directors had become aware during recent months of a considerable increase in the amount of chlorine; in September, when pumping machinery of greatly increased power was established at the works, it was possible to lower the water in the Foxbury well to such a level as to allow of the whole of the workings being inspected. An exhaustive investigation, in conjunction with analyses, enabled the company's engineer to locate the source of the excessive saltiness, and on his recommendation, and with the approval of expert geological and analytical opinion measures were adopted which the directors hope will have the effect of rendering the supply all that can be desired; the work is now in hand, and will be completed as quickly as possible. The Engineer and Manager traverses the correctness of the reports which have appeared in the public press, and states that the directors have no evidence showing that the Foxbury water is bacteriologically impure; their own examinations have, on the contrary, shown that the water is pure. While the work at Foxbury is in process, water will, it is stated, be as far as possible obtained from the Bury Cross works, but it may be necessary to discontinue the constant supply.

It appears from analyses made, copies of which have been submitted to us by a correspondent, that the salinity of the Foxbury well water, previously high, has within the last few years rapidly increased. An analysis made by Dr. Stevenson in January, 1898, showed the total solids to be 52.78, chlorides 35.53, and total hardness 11.5 (fixed 6.5). In February of the same year another analysis made by Dr. Stevenson showed that all these figures had slightly increased; an analysis given in Dr. Parry's report in August, 1902, showed total solids 113, chlorides 72.1, total hardness 57.5 (fixed 53). It is believed that this excess of chlorides is derived from the water of Fareham Creek, which is known to be polluted by sewage, and as the well is sunk in the chalk formation it remains to be seen whether percolation from the creek can be effectually prevented. To ascertain this systematic analyses and bacteriological examinations at short intervals will be necessary.

EXTRA REMUNERATION FOR OPERATION.

THE Easingwold Board of Guardians have awarded a fee of £5 to Dr. F. Sidney Gramshaw, of Stillington, Yorks, as extra remuneration for the successful performance of a surgical operation not included in the schedule.

PUBLIC VACCINATORS AND PRIVATE PATIENTS.

RURAL.—The Act of 1898 provides that "if a child is not vaccinated within four months after its birth, the public vaccinator of the district, after at least twenty-four hours' notice to the parent, shall visit the home of the child, and shall offer to vaccinate the child." If a public vaccinator calls and offers to vaccinate a child under 4 months of age, or without sending intimation to the parents or person having the custody of the child he is exceeding his duty. If our correspondent is in a position to produce clear evidence on these points we would suggest that he should refer the matter to the Council of the Branch to which he belongs.

EXTRA FEES FOR FRACTURES IN DISTRICTS.

T. P., a district medical officer, writes to say that he attended a patient in his district with fracture of both legs; that he has charged £6 for the case—namely, £3 for each fracture; that his account has been returned by the clerk as being incorrect.

*** A district medical officer can only claim a fee for one fracture occurring to the same patient from the same cause. The fee payable in this case is £3.

INDIA AND THE COLONIES.

NEW SOUTH WALES.

Insanity.—The annual report of Dr. Eric Sinclair, the Inspector-General of the Insane in New South Wales for the year 1901, has just been issued. It states that on December 31st, 1901, there were 4,448 insane persons under official cognisance, an increase of 92 on the previous year. The average annual increase for the last twenty years has been 112. The number of admissions was 848; of these, 696 were admitted for the first time, and 152 had been in the same hospital on some previous occasion. The number of admissions is less than in 1900 but is still higher than in any previous year. The proportion of insane to the general population was 1 to 307. The number of patients discharged recovered was 398, equal to a rate of 46.93 per cent. on the admissions and readmissions. This rate is well over the average for the past ten years, but it is probably due in part to the discharge on trial of a larger proportion of patients than formerly. In this return are included the figures from the Hospital for Imbeciles at Newcastle, from which, of course, no recoveries are expected. Excluding Newcastle, the recovery-rate is increased by 3.45 per cent. The death-rate was 6.83 per cent. on the average number of patients resident. Dr. Sinclair again urges the necessity of increased accommodation, as well as some additions and alterations to the existing hospitals to bring them into line with the most modern institutions, and to give all necessary facilities for the scientific treatment of the insane. There has been a difficulty in securing the services of medical officers for the different asylums, the salaries offered being much below what a medical man of ability should earn in an established practice. Steps are now being taken to fit up clinical and pathological laboratories at the different asylums, so that every facility may be afforded to the resident medical officers to undertake scientific investigations. The total receipts from all sources amounted to £19,881 1s. 9d., and the total expenditure amounted to £129,978 11s. 10d. The average weekly cost shows an increase of 5½d. a patient over that for the previous year. This is explained by the very great increase in the cost of provisions, an increase which added to the expenses of the department a sum of £4,000.

MEDICAL NEWS.

DR. S. E. JOHNSON of Moseley has been elected an Alderman of the City of Birmingham.

DR. J. N. LANGLEY, F.R.S., will deliver his presidential address to the Neurological Society of London at the annual meeting, which will be held at 11, Chandos Street, W., on Thursday next at 8.30 p.m. The subject of the address will be the autonomic nervous system.

THE GRESHAM LECTURES.—A course of four lectures on digestion will be given by Dr. E. Symes Thompson, Gresham Professor of Medicine, at Gresham College, Basinghall Street, E.C., on January 27th, 28th, 29th, and 30th, at 6 p.m. on each day.

UNIVERSITY OF CHICAGO.—At the recent convocation exercises of the University of Chicago, it was announced that Mr. John D. Rockefeller had given £200,000 to be added to the endowment, and that other sums, amounting to £104,150, had been given to the University.

AN INTERNATIONAL MEDICAL CONGRESS AT THE ST. LOUIS EXPOSITION.—An Executive Committee for an International Medical Congress, to be held in St. Louis in 1904, has, we learn from the *New York Medical Journal*, been appointed by the President of the St. Louis Exposition Commission on the recommendation of Howard J. Rogers, Director of Congresses. Among the members of the Committee are Dr. W. E. Fischel, Dr. L. H. Laidley, Dr. K. Tubo'ske, Dr. F. J. Lutz, and Dr. William G. Moore.

Dr. James O'Shaughnessy, the oldest J.P. and D.L. in Ireland, died on January 15th at Limerick in his 93rd year. He was a schoolfellow of the late Sir Richard Quain, and became a Member of the English College of Surgeons in 1837. He was a justice of the peace for the City and County of Limerick.

Presentation.—Dr. H. G. Cowie of Turriff, Aberdeenshire, was recently presented by his friends and patients in the district with a massive oak bureau, bearing a suitable inscription, on the occasion of his leaving Turriff to commence practice elsewhere. Mrs. Cowie was at the same time presented with a necklet and pendant.

Present of X-ray Apparatus to Portsmouth Hospital.—At a recent meeting of the Committee of Management of the Portsmouth Hospital it was announced that Mrs. Preston Jones had presented £70 for the purchase of an *x*-ray apparatus, and was willing to provide any further sum necessary.

New Wing of Kingsbridge Cottage Hospital.—A new wing of the Kingsbridge and District Cottage Hospital was opened on January 1st, consisting of two wards, each accommodating three patients, a room for a probationer, bathroom, and offices. It is a one-story building of red brick, facing south, with cavity walls for dryness, and a verandah fronting eastwards.

Small-pox.—The epidemic of small-pox in South-East Lancashire is assuming serious proportions. In Manchester and Salford 9 fresh cases were reported on January 12th. At Stockport 68 cases have occurred since the beginning of the outbreak. We are informed by the Clerk of the Newtown and Llanllwchaiarn Urban District Council that the number of cases of small-pox at present under treatment in Newtown, Montgomeryshire, is only seven, and not as previously stated.

Dentists in the American Navy.—The House Committee on Naval Affairs at Washington has had the question of dentistry under consideration. At a meeting on December 13th, many leading dentists were present to urge that a Bill be passed raising the grade of naval dentists. At present they are rated as yeomen, but the National Dental Association asks that a "dental corps" be created, so that the dentists may have proper rank and pay.

Proposed American Tuberculosis Congress.—A petition was, we learn from the New York *Medical Record*, filed in the Superior Court of Georgia, at Atlanta, on December 17th, 1902, asking for a charter for the incorporation of the "American Congress on Tuberculosis." The purpose of the corporation is stated to be to promote discussion and devise means of bettering the condition of patients suffering with tuberculosis. Another object is to assist in organizing the world's congress on tuberculosis.

Medical Senators.—At the recent election for the French Senate, eighteen members of the medical profession were successful. Among these are M. Combes, the Premier, who was returned by two departments; Dr. Peyrot, Surgeon to the Lariboisière Hospital, and a member of the Académie de Médecine; and Dr. Jean Bayol, formerly a medical officer of the French navy, Lieutenant-Governor of Senegal, and Governor of French Guinea. Among the unsuccessful candidates were Professor Cornil and Professor Pozzi.

Malaria in Italy.—The Italian Government has issued ordinances to the effect that all employers of labour in malarious regions, more than two kilometres distant from the residence of the doctor, or in a district where there is no pharmacy, must, under a penalty, always keep by him a quantity of quinine sulphate and hydrochlorate, sufficient for the needs of all his employés if attacked by malarial fever. Each year, in the month of November, the Ministers of Finance and of the Interior, with the advice of the Superior Health Council, will decide as to the conditions and methods of the distribution of quinine by the State.

Bequests and Donations.—Under the will of the late Dr. Frederick Martin, of Beckenham, the sum of £1,500 each has been bequeathed to Guy's Hospital and to Epsom College. Mr. Edward Unwin Berry, M.R.C.S., of West Hampstead, bequeathed £500 to the London Hospital, £500 to St. Thomas's Hospital, £300 to the Royal Medical and Chirurgical Society in Hanover Square, and £100 to the Royal Hospital for Incurables. It is stated that under the will of the late Mr. Abraham Samuel, of Louth, there are legacies of £5,000 to the Louth Hospital, and £500 to the Lincoln County Hospital. Mr. Abram Lyle has promised to give £500 to the Building Fund of the North-Eastern Hospital for Children, provided nine other donations of the same amount are given during the next six months.

The Serum Treatment of Diphtheria in Austria.—An official report on the results of the serum treatment of diphtheria in Austria during 1901 states that the total number of cases notified in the course of that year was 28,373. Of this number, 17,413 were treated with serum, with 2,417 deaths, a percentage of 13.9. Of the 10 960 patients not treated with serum, 4,111, or 37.5 per cent., died.

The League of Mercy.—The Honorary Secretaries of the League of Mercy, which was founded by Royal Charter to promote the welfare of hospitals by securing support for King Edward's Hospital Fund, have received a letter from Lieutenant-Colonel Sir Arthur Bigge, G.C.V.O., Private Secretary to His Royal Highness the Prince of Wales, Grand President of the League of Mercy, conveying to the officials and members of the League the expression of his thanks for the sum of £8,000 which has been handed over to the Fund by the League. This substantial contribution is an increase of £1,000 on the amount received last year, which His Royal Highness says he feels sure will be generally regarded as a practical proof of the excellent results accomplished by the earnest and untiring work of the League of Mercy.

French Institute of Colonial Medicine.—The first award of diplomas of proficiency to students of the French Institute of Colonial Medicine was recently made in Paris in the presence of a number of academic and Colonial notabilities. Professor Brouardel, Honorary Dean of the Paris Faculty of Medicine and Director of the Institute, delivered an address, explaining the object and aims of the Institute and emphasizing its practical usefulness. He laid stress on the fact that the establishment of the Institute was not intended to be in rivalry with the teaching on tropical diseases given at Marseilles and Bordeaux. He thanked the Union Coloniale, the Association des Dames Françaises, and other societies which had helped on the foundation of the Institute, and M. Doumer, who had allocated 30,000 fr. from the budget of Indo-China for its support.

A Floating Sanatorium.—The Berlin correspondent of the *Daily Chronicle* states that steps are being taken by several physicians and associations to test the value of sea air on patients suffering from consumption. Ordinary steamers, owing to the noise, unpleasant smells, and want of proper accommodation, are unsuitable. Sailing ships, as at present built, are also unsuitable. It is therefore proposed to build a large floating sanatorium, with roomy open-air wards and medical supervision, and a complete equipment for scientifically testing the effects of sea air on consumptives. After careful inquiry it has been decided that the cruising ground for the new ship will be the north-eastern Atlantic, in the neighbourhood of the Canary Islands. Should success attend the effort, further floating sanatoria will be built. The voyages will last about six weeks.

Post-graduate Study in Frankfort.—A scheme for the organization of post graduate medical study in Frankfort-on-the-Main has for some time been under consideration, and has lately taken definite shape by the formation of an Academy of Practical Medicine. A private benefactor has given a large sum of money for the erection of a suitable building, which will include an anatomical institute and a laboratory for food analysis. The Municipal Council has voted £83,200 for the enlargement of the city hospital. Provision for special clinics will be made. All the medical institutions of Frankfort, including the Senckenberg Institute and the public lunatic asylums, and such as may henceforth be created by the State or by the city, will be affiliated to the Academy.

The Medical Profession in Austria.—The Austrian *Medizinalkalender* for 1903 states that the number of medical practitioners at the end of 1902 was 11,339. At the corresponding period of the previous year it was 10,797. They are distributed as follows: Lower Austria, 3,325; Upper Austria, 393; Salzburg, 124; Styria, 675; Carinthia, 148; Krain, 104; Küstenland, 339; Tyrol and Vorarlberg, 601; Bohemia, 2,789; Mähren, 943; Silesia, 237; Galicia, 1,382; Bukowina, 139; Dalmatia, 140. In Bosnia-Herzegovina there were 100 practitioners. Taking the chief cities, in Vienna there were 2,576 practitioners; in Linz, 60; in Salzburg, 40; in Graz, 270; in Klagenfurt, 37; in Laibach, 36; in Trieste, 181; in Innsbruck, 84; in Prague, 538; in Brunn, 188; in Troppau, 37; in Lemberg, 288; in Czernovitz, 57; and in Zara, 17.

AN EVERYDAY MEDICAL SOCIETY.—A medical society has recently been founded at Lyons under the title of Société Médico-Chirurgicale des Praticiens de Lyon et de la Région de Lyon which presents the unique feature that its meetings are to be held daily. It is hoped that by meeting every evening and discussing the professional events of the day, the members may learn from each others' experience. We venture to predict that if the life of the Society extends beyond a week it will be by transforming itself into a club where talking "shop" will be treated as an unclubbable offence.

MEDICAL VACANCIES.

The following vacancies are announced:

ABERDEEN UNIVERSITY.—Examiner in Materia Medica for Degree in Medicine. Applications to the Secretary, University Court, by February 4th.

BELFAST: MATER INFIRMORUM HOSPITAL.—House-Physician. Appointment for six months. Salary at the rate of £50 per annum, with board. Applications to the Secretary.

BIRKENHEAD BOROUGH HOSPITAL.—Senior Resident Male House-Surgeon. Salary £100 per annum, with board. Applications to the Chairman of Weekly Board by February 1st.

BOLTON INFIRMARY AND DISPENSARY.—(1) Senior House-Surgeon. Salary, £130 per annum. (2) Junior House-Surgeon. Salary £100 per annum. Apartments, board and attendance provided in each case. Applications to W. W. Cannon, Esq., Honorary Secretary, 20, Mawdsley Street, Bolton, by February 10th.

BRITISH LYING-IN HOSPITAL, Endell Street, W.C.—Honorary Physician to the Out patients. Application to the Chairman of the Board of Management by February 7th.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Physician to Out-patients, must be F. or M.R.C.P.Lond. Applications to the Secretary by February 9th.

DERBYSHIRE ROYAL INFIRMARY.—(1) Two Resident House-Surgeons. (2) House-Physician. (3) Assistant House-Surgeon. Appointments for (1) and (2) for twelve months, salary, £100 per annum, and (3) for six months, salary at the rate of £60 per annum. Apartments, board, etc., provided in each case. Applications to the Secretary by January 22nd.

DOVER: ROYAL VICTORIA HOSPITAL.—House-Surgeon; unmarried. Salary, £100 per annum, increasing after twelve months' service, with board, lodging, and washing. Applications, on forms provided, to be sent to the Honorary Secretary, Arthur B. Elwin, Esq., 2, Castle Street, Dover.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—Medical Officer for the Casualty Department. Appointment for six months but renewable. Salary at the rate of £100 per annum, with luncheon. Applications to the Secretary by February 14th.

GREAT YARMOUTH HOSPITAL.—House Surgeon. Salary, £90 per annum, with board, lodging, and washing, and £10 for lectures to nurses. Applications to Richard F. E. Ferrier, Honorary Secretary, 33, Hall Plain, Great Yarmouth, by January 20th.

HOLBORN UNION.—Medical Officer of the Union Schools at Mitcham. Salary £100 per annum, non-resident. Applications, endorsed "Applications for Medical Officer," to the Clerk to the Guardians, Holborn Union Offices, Clerkenwell Road, E.C., by January 20th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Surgeon, unmarried. Appointment for six months. Salary, £20; washing allowance £2 10s., with board and residence. Applications, on forms provided, to be sent to the Secretary, by January 27th.

KING'S COLLEGE HOSPITAL, Lincoln's Inn Fields, W.C.—Clinical Pathologist. Salary, £250 per annum. Applications to the Secretary by January 24th.

LEAMINGTON: WARNEFORD HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board, washing, and apartments. Applications on forms provided to be addressed to the Secretary before January 22nd.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer; unmarried, and not less than 25 years of age. Remuneration, £150 per annum with board and residence. Applications to the General Superintendent by January 24th.

MOUNT VERNON HOSPITAL FOR CONSUMPTION, Hampstead and Norwood.—Four Clinical Assistants in the Out-patient Department at Finsbury Square and the Hospital at Hampstead. Appointments for six months. Applications to the Secretary by January 31st.

NEW HOSPITAL FOR WOMEN, Euston Road, N.W.—(1) Surgical Assistant, must be fully qualified medical woman. (2) Two Clinical Assistants. Applications to the Secretary by January 28th.

ORTH RIDING ASYLUM, Clifton, York.—Senior Assistant Medical Officer; unmarried. Salary commencing at £150, rising to £200 per annum, with furnished apartments board, washing and attendance. Applications to the Medical Superintendent by January 26th.

REDHILL: EARLSWOOD ASYLUM.—Two Assistant Medical Officers; unmarried and under 30 years of age. Salary for Senior £160, rising to £200 per annum, for Junior £130, rising to £150 per annum. Apartments, board, washing, and £2 per annum in lieu of stimulants provided. Applications, endorsed "Assistant Medical Officer," to be sent to the Secretary, 36, King William Street, London Bridge, E.C., by February 9th.

ROCHESTER: ST. BARTHOLOMEW'S HOSPITAL.—Assistant House-Surgeon. Salary, £100 per annum, with apartments board, washing, etc. Applications, marked "Application for Assistant House Surgeon," to be sent to the Clerk to the Trustees, 42, High Street, Rochester, by January 26th.

ROYAL GENERAL DISPENSARY, Bartholomew Close, E.C.—Physician, must be F.R.C.P.Lond. Applicants to attend the Medical Subcommittee on January 27th, at 2 p.m.

RYDE: ROYAL ISLE OF WIGHT COUNTY HOSPITAL.—Resident House-Surgeon. Salary, £90 per annum. Applications to the Secretary by January 20th.

ST. GEORGE'S HOSPITAL MEDICAL SCHOOL.—Lecturer on Insanity. Applications to the Dean by January 24th.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester Square, W.C.—Superintendent. Salary, £200 per annum. Applications to the Board of Management.

SALISBURY: FISHERTON ASYLUM.—Assistant Medical Officer, unmarried, age about 30. Salary, £150 per annum, with board, lodging, and washing. Applications to Dr. Finch, Salisbury.

SALISBURY GENERAL INFIRMARY.—Assistant House-Surgeon, unmarried. Salary at the rate of £75 per annum, with apartments, board, and lodging. Applications to the Secretary by January 30th.

VICTORIA HOSPITAL FOR CHILDREN, Tite Street, Chelsea.—House Surgeon. Appointment for six months. Honorarium, £25, with board and lodging. Applications to the Secretary by January 31st.

WHITTINGHAM: COUNTY ASYLUM.—Assistant Medical Officer, unmarried, and not over 30 years age. Initial salary, £150 per annum. Applications to the Medical Superintendent.

WINCHESTER: ROYAL HANTS COUNTY HOSPITAL.—House-Physician; unmarried. Salary, £65 per annum, rising to £75 per annum, with board, residence, etc. Applications to the Secretary by January 21th.

MEDICAL APPOINTMENTS.

BENNETT, H. C. P., M.B.Lond., appointed House Physician to the Auckland Hospital, New Zealand.

BORLAND, Hugh Howie, M.D., C.M., D.P.H.Camb., appointed Vaccinator to the Glasgow Royal Infirmary, *vice* Dr. R. Home Henderson, resigned.

BRANCH, Edmund R., M.B., Ch.B.Edin., appointed District Medical Officer at St. Kitts.

BROWNE, Ada M., L.S.A., appointed Anæsthetist to the New Hospital for Women, Euston Road, *vice* Mrs. C. Keith, L.R.C.P. and S., resigned.

DEANE, Charles M., M.D., M.R.C.S., appointed Port Health Officer and Medical Officer to Police, Gaols and Paupers, Strahan, Tasmania, *vice* P. J. Godfrey, L.R.C.P., L.R.C.S., resigned.

DITTMAR, Frederick, M.D., C.M.Glasg., D.P.H.Camb., appointed Medical Officer of Health for Scarborough, *vice* W. Heywood Waddington, M.B., Ch.B.Vict., D.P.H., resigned.

EDGAR, John James, M.B., C.M.Glasg., L.R.C.P. and S.Edin., appointed Public Vaccinator for Napier, Tasmania.

EVANS, G. E. A., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer of the Branscombe District of the Honiton Union.

GARLAND, P. J., L.R.C.P., L.R.C.S.Irel., appointed Senior Medical Officer of the Gold Coast Colony.

GREAVES, Dudley, L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg., appointed District Medical Officer at Dominica, *vice* Edmund R. Branch, M.B., Ch.B.Edin., transferred.

GRUNBAUM, Otto, M.A., M.B., B.C.Cantab., M.R.C.P.Lond., D.Sc.Lond., appointed Medical Registrar at the London Hospital.

LYSTER, Robert Arthur, M.B., B.Ch., B.Sc., D.P.H., appointed Assistant to the Chair of Hygiene and Public Health in the University of Birmingham.

MUIR, Alan, M.B., C.M.Glasg., appointed Medical Officer to the Kyle Union Poorhouse Board.

PALMER, J. Horace, L.R.C.P., L.R.C.S.E., L.F.P. and S.G., L.M., appointed Medical Officer and Public Vaccinator to the Gamlingay District of the Caxton and Arrington Union.

RENDOR, A. W., M.R.C.P., L.R.C.S.Edin., appointed Surgeon to the Broad Arrow Hospital, Western Australia.

SCOTT, G. M., M.D., B.C.Camb., appointed Honorary Ophthalmic Surgeon to the Kalgoorlie Hospital, Western Australia.

TOSWILL, John Cecil, M.B., C.M.Edin., appointed Public Vaccinator at Hastings, Tasmania.

DIARY FOR NEXT WEEK.

TUESDAY.

Chelsea Clinical Society, Jenner Institute of Preventive Medicine, Chelsea Gardens, Grosvenor Road, S.W., 8.30 p.m.—A Discussion on the President's opening address, Child-bearing in Chronic Heart Disease.

Pathological Society of London, 20, Hanover Square, W., 8.30 p.m.—Dr. Klein, F.R.S.: A New Pathogenic Diphtheroid Bacillus. Mr. A. Foulerton and Dr. Victor Bonney: A Diphtheroid Bacillus Isolated from Two Cases of Puerperal Fever. Dr. Lazarus-Barlow: A Higher Mould Fungus Isolated from a Case of Multiple Granulomatous Tumours. Mr. A. Fullerton and Dr. A. M. Kellas: The Action on Bacteria of Currents or Discharges of High Tension and Rapid Frequency. Dr. C. S. Sehgmann: The Inhibitory Effect on Bacterial Growth of the Viscid Exudate from Tabetic Joints, etc. Dr. Klein, F.R.S., will give a Demonstration of Specimens from Plague in Rats.

Society for the Study of Inebriety, London Temperance Hospital, 4 p.m.—Dr. James Stewart: On Inebriety among Gentlefolk: A Twenty-five Years' Clinical Retrospect.

Therapeutical Society, Apothecaries' Hall, Water Lane, Blackfriars, E.C., 4 p.m.—Dr. F. W. Tunnicliffe: On Certain New Purgatives, their History and Uses. Dr. Gordon Sharpe (Leeds): On Australian Bitter Bark Alstonia Constricta, and on Disa Bark Alstonia Scholaris. Dr. Lee: On the Objects of the Therapeutical Society.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Professor W. D. Halliburton: On the Chemistry of Muscle and Nerve.

WEDNESDAY.

Royal Microscopical Society, 20, Hanover Square, W., 8 p.m.

Royal Meteorological Society, Institution of Civil Engineers, Great George Street, Westminster, S.W., 7.45 p.m.—Annual General Meeting.

THURSDAY.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Dr. T. G. Brodie: On the Circulation.

Neurological Society of London, 11 Chandos Street, Cavendish Square, W., 8.30 p.m.—Annual Meeting. President's Address by Dr. J. N. Langley on the Autonomic Nervous System.

FRIDAY.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Dr. A. D. Waller: On Experimental Pharmacology: the Action of Anæsthetics and Narcotics.

Clinical Society of London, 20, Hanover Square, W., 8 p.m.—Exhibition of Clinical Cases, followed by discussion. Patients will be in attendance from 3 p.m. to 9 p.m.

POST-GRADUATE COURSES AND LECTURES.

Charing-cross Hospital, Thursday, 4 p.m.—Pathological Demonstration.

Hospital for Sick Children, Great Ormond Street, W.C., Thursday, 4 p.m.—Pathological Demonstration.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C. Demonstrations will be given at 4 p.m. as follows:—Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, throat. Lectures will also be given at 5 15 p.m. as follows: Monday, Hydrotherapeutics and Balneotherapeutics; Tuesday, Cranial Nerve Paralysis; Wednesday, Inflammation and Repair; Thursday, Infantile Scurvy; Friday, House Ventilation and Drainage.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., 8.30 p.m.—Tuesday, Anatomy of the Spinal Cord; Friday Surgery of the Nervous System.

Post-Graduate College, West London Hospital, Hammersmith Road, W.—Lectures will be delivered at 5 p.m. as follows: Monday, Broncho-pneumonia and its Treatment in Children; Tuesday, Treatment of some Injuries and Emergencies; Wednesday, Surgical Anatomy; Thursday, Surgical Cases; Friday, Epilepsy.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning in order to ensure insertion in the current issue.

BIRTHS.

ELKINS.—On January 12th, the wife of Frank Ashby Elkins, M.D., Medical Superintendent, Metropolitan Asylum, Leavesden, of a son.

WAKEFIELD.—On January 7th, at Lincoln Lodge, Horley, Surrey, the wife of Christopher Frank Wakefield, M.R.C.S., L.R.C.P., of a daughter.

MARRIAGE.

FLOYD—DUTCH.—On January 7th, at Flixton Parish Church, by the Rev. T. S. Floyd, Curate of Chorlton and brother of the bridegroom, assisted by the Rev. A. W. Smith, Curate-in-Charge of Flixton, James Edward Floyd, M.B., B.S., of Gorton, third son of the late Rev. Thomas Floyd, Vicar of Castle Hall, Stalybridge, to Kate, only daughter of the late Isaiah Symonds Dutch, of Manchester.

DEATH.

EDGOWES.—On January 8th, at Middlington Clare, Elizabeth, the beloved wife of Charles Edgowes, M.R.C.S. Eng., L.S.A. Lond.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London*. The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

MORELLI asks for advice in the treatment of a lady who a year ago had measles. Before the attack she had a perfect complexion, but it is now broken and coarse.

EXAMINATION FOR M.R.C.P.LOND.

EXCELSIOR asks for advice as to books for the M.R.C.P.Lond. Examination, and how much reading would be required.

*** The following books might be read or consulted, but there are others not mentioned which would be equally good. In medicine proper the works of Osler, 4th edition (London: Henry Kimpton, 1901, 18s.); Frederick Taylor, 6th edition (London: J. and A. Churchill, 1901, 16s.); or one or other of the more recent *Systems of Medicine* might be consulted. In nervous diseases the translation of the work of Oppenheim (London: J. B. Lippincott Co., 1901, 21s.). In skin diseases Dr. Norman Walker's book, *An Introduction to Dermatology*, 2nd edition (Bristol: J. Wright and Co., 1902, 9s. 6d.). In mental diseases the work of Savage, 3rd edition (London: Cassell and Co., 1891, 9s.). In hygiene Parkes and Kenwood's *Hygiene and Public Health*, 2nd edition (London: H. K. Lewis, 1902, 12s.). In pathology Green's *Pathology*, 9th edition (London: H. Renshaw, 1900, 21s.), and the work of Ziegler (London: Macmillan and Co., 1897, 34s.) might be consulted. A work on bacteriology, such as that of Hewlett (London: J. and A. Churchill, 1898, 10s. 6d.); on clinical methods, as that of Judson Bury, 2nd edition (London: C. Griffin and Co., 1899); or Hutchison and Rainy (London: Cassell and Co., 1897, 9s.) should receive attention. Among the classical authors sometimes set are Celsus, Livy, and Horace, also Trousseau and Sydenham. At least six months of steady reading should be given.

ANSWERS.

F.—The regulations for the medical examination of candidates for assistant clerkships, Royal Navy, state that in their case short-sightedness will be specially considered in the case of successful candidates who are otherwise physically fit. No more definite information can be given, but it seems improbable that so high a degree of myopia as 4·5 D would be passed.

BERI-BERI.

MAJOR T. C. MOORE, I.M.S.—In reply to our correspondent's questions we may say that there is no evidence that beri-beri is propagated by insects. In India it occurs at any season, but especially during hot, damp weather. The disease is undoubtedly quite distinct from malaria. As the course of the disease is prolonged, extending over months in individual cases, epidemic outbursts cannot be expected to disappear abruptly. Our correspondent states that there is a heavy continuous discharge of phosphates (prismatic crystals) in the urine of patients suffering from beri-beri; authorities do not appear to recognize that phosphaturia is a symptom of beri-beri.

EXCISION OF TONSILS DURING ACUTE TONSILLITIS.

DR. ALEXANDER DUKE (London) writes: We all have no doubt, at some time or other, been called upon to treat acute follicular tonsillitis, and with varied results. I think the bold treatment of excising (or partially excising) the tonsils while in that condition, must be new; but I should like to inquire if the patient had been treated for rheumatism, the generally accepted cause being rheumatic diathesis. I have found the local application of sodium bicarbonate and scarification combined with antirheumatic treatment sufficient.

LETTERS, NOTES, Etc.

ERRATUM.—In the article on Hyoscine and Bromide in Mania, in the BRITISH MEDICAL JOURNAL of January 10th, p. 74, col. 1, line 21, for "The third and the fourth attack" read "The fourth and the third attack."

ABNORMAL FEAR OF CATS.

DR. S. WEIR MITCHELL, 1,524, Walnut Street, Philadelphia, desires to hear of cases of fear of cats and of persons presumed to be affected variously by cats when the animal is not known to be in the room. On hearing of such cases Dr. Weir Mitchell will forward a set of questions to which he will desire careful replies.

WANTED, A NEW THERMOMETER.

DR. JOHN HADDON (Denholm) writes: Since the thermometer began to be used in the diagnosis of disease facts have been accumulating which render it necessary that we should have a new thermometer, or perhaps it might be better to have two, one for low and one for high temperatures. Hitherto most attention has been paid to high temperatures, and a record above 111° cannot be taken by the present clinical thermometer, whereas it may rise to over 120°. Low temperatures, however, deserve quite as much attention in some diseases as high ones do in others, and the present thermometer records nothing below 95°, whereas the temperature is frequently below that level, in which cases the heat-regulating centre seems to be at fault. To record such low temperatures we require a thermometer with a lower scale, which is perhaps more necessary than that with a higher one. It is to be hoped that the makers of our clinical thermometers will endeavour to supply us with such as are now found to be required.

LETTERS, COMMUNICATIONS, ETC., have been received from:

A Mrs. E. B. Anderson, Nottingham; Dr. T. R. Atkinson, Chadwell Heath; Messrs. Allen and Hanburys, London; Messrs Arnold and Sons, London. **B** Mr. J. N. Bredin, Sutton Valence; Mr. A. Bennett, Beeston; Dr. H. T. Bulstrode, London; Mr. J. Barclay, Birmingham; Dr. E. R. Bowen, Cardiff; Dr. E. Blacker, Faraborough; Mr. L. A. Bidwell, London; Mr. W. P. E. Barnes, London. **C** Cymro; Cantab, Messrs. Carr and Co., Carlisle; Mr. C. Corben, Caldicot: Correspondent; Mr. B. G. Corney, Suva, Fiji; Dr. J. Calvert, London; Mr. D. Crombie, Edinburgh. **D** Dr. L. Drage, Hatfield: Dr. H. E. Denny, London; Mr. R. E. Delaney, Graves nd; Disgusted; Mr. F. H. Donovan, Rotherham; Dr. W. F. Dearden, Manchester; Dubitans; A. Douglas, M.B., Oamaru: Dr. A. Duke, London; J. G. Duncanson, M.B., London. **E** Enquirer. **F** W. W. Fyfe, M.B., Johnstone; Folkestone Medical Society, Secretary of, Folkestone; Mr. J. H. Fardon, Birkenhead: Mr. E. H. Freeland, London. **G** Dr. F. S. Gramshaw, Stillington; Mr. P. B. Giles, Bletchley; J. E. G dson, M.B., Droylsden; Dr. L. Grant, Ballachulish; Mr. R. B. C. Graham, London. **H** Dr. J. Highet, Workington; Mr. F. Haydon, London; Mr. J. Hughes, London; Dr. R. G. Hebb, London; Mr. T. H. Hatfield, London; Dr. J. S. Hooker, London; Dr. Head, London; Dr. J. Haddon, Denholm; Dr. R. N. Hamilton, Nottingham; Mr. A. Hope, London; Dr. W. Hunter, Nottingham; Dr. H. W. Haydon, Bristol; Mr. E. T. Hildred, Gosport. **J** P. Johnson, M.B., Birmingham; Mr. F Jaffrey, London. **K** Mr. J. M. Kaye, Leeds. **L** J. F. Little, M.B., London; Licentiate: R. B. Lorraine, M.B., Castle Douglas; Messrs. Longmans, Green, and Co., London; Mr. F. G. Layton, Walsall; Mr. C. B. Lockwood, London; H. Lawrie, M.B., Ramsbottom; Liverpool Medical Institution, Secretary of, Liverpool. **M** A. Murchison, M.B., Uig: E. A. Miller, M.B., London; Mr. W. L. Muir, Glasgow; B. G. A. Moynihan, M.B., Leeds; Mr. H. May, Birmingham; Morbilli; Dr. J. J. Macan, Cheam: T. R. Macdonald, M.B., Inverness: Dr. H. Manders, London; M.B.; A. B. Mitchell, M.B., Belfast: M.D.; Dr. J. McConville, Glasgow: **O** G. Ogilvie, M.B., London; Opium. **P** Dr. T. D. Poole, Wolverhampton; Puzzled One; Mr. T. Percival, Knottingley; Dr. W. S. Porter, Sheffield. **R** Rural; Mr. W. Roberts, London; Mr. W. A. S. Royds, St. Mary Bourne; Roleston. **S** Senior Service: Dr. J. Shaw, Liverpool; Dr. H. Smith, London. **T** J. H. Teacher, M.B., Glasgow. **U** Ultonia. **V** Veritas. Dr. J. B. Williamson, Miraj; Dr. B. Walker, Kirkby Stephen; Dr. F. Willcocks, London; E. W. White, M.B., Dartford; W. H. T.; G. C. Walker, M.B., Kumasi: Mr. M. Woosnam, Newtown, Mon.; W. Wilhams, M.B., Portmadoc; G. B. Wood, M.B., Sandown, I. of W.; Dr. W. B. Warde, Tunbridge Wells; F. C. Wallis, M.B., London; J. W. Wells, M.B., Blackburn.

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An Address

ON THE

MODIFICATIONS AND IMPROVEMENTS IN OPERATIONS ON THE BILIARY PASSAGES.

Delivered before the London Polyclinic.

By A. W. MAYO ROBSON, F.R.C.S.,

Consulting Surgeon to the General Infirmary, Leeds; Vice President Royal College of Surgeons of England.

It is sometimes useful in surgical as in other matters to pause and look backward, if this be done with a mind open to find fault with its own past acts. Such a process in my own case has led me to modify considerably and, I confidently believe, to improve my work in the branch of surgery about which I propose to speak.

After an experience of over a thousand operations in the upper abdomen, it is only natural that one should be more critical of one's own work and that of other surgeons, and only satisfied with something more nearly approaching perfection, though so far as the saving of life was concerned in my earlier operations, I was able to state in the preface to the first edition of *Diseases of the Gall Bladder and Bile Ducts* that:

> I had never lost a single patient after any operation for gall stones in the absence of malignant disease, deep jaundice, or infective cholangitis, and that cholecystotomy for gall stones, even including the infective cholangitis and deeply-jaundiced cases, only showed a mortality of 1.7 per cent.

I feel, therefore, that the proposition "as soon as gall stones give serious trouble their removal by operation is the most rational method of treatment" is one that can be safely supported, since it is only from the complications, which in many cases of cholelithiasis arise sooner or later, that any danger after operation need be apprehended.

I can see, however, that had I been operating on my early cases at the present time, several of those that required a second operation would have been cured at first. Moreover, I believe that many of those in which the convalescence was prolonged would have been saved much time and inconvenience had the more thorough measures now adopted been followed out.

I will endeavour to point out in what manner my methods have changed, and also how my views on the subject of cholelithiasis and the operations for the disease have undergone some alteration.

When gall stones have once formed, no medicine, so far as I know, can dissolve them or produce permanent relief, though much may be done by medical and general treatment for the relief of the catarrh so regularly associated with cholelithiasis, which may in fact bring on attacks not to be distinguished from true gall-stone seizures.

Medical treatment must therefore always be tried fully before surgical measures are resorted to, but I think we are now all agreed that if after a fair trial medical means fail, surgical treatment should be adopted before serious complications supervene and before the patient is reduced by jaundice, suppuration, or other untoward manifestation.

While cholecystotomy is generally recognized as the operation to be aimed at in the treatment of affections of the gall bladder and bile ducts, it is often impossible to say what operation will have to be done until the abdomen is opened and the exact state of affairs made out, for a contracted or dilated gall bladder, a suppurating or merely a distended viscus, concretions in the gall bladder or cystic or common ducts, the condition of the surrounding organs, the presence or absence of adhesions, and a host of other conditions, will all influence the subsequent action of the surgeon, who always begins the operation as an exploratory one, the subsequent steps being altered according to the circumstances mentioned.

No surgeon should attempt the removal of gall stones unless he is prepared for any of the various operations on the biliary passages, such as choledochotomy or cholecystectomy, as it is almost impossible to say beforehand what may be required until the ducts have been explored by the fingers and the condition of the affected viscera ascertained; no operation should, as a rule, be concluded until it is clearly made out that the ducts, including the hepatic and common, are quite free from concretions, otherwise disappointment and dissatisfaction are certain to follow.

Since in the majority of cases, then, an operation for gall stones is in the first place simply exploratory, the actual operation on the gall bladder or bile ducts being only determined by the condition found when the abdomen is opened, it may be well for us first to consider a simple abdominal section in the gall-bladder region.

Preparation for Operation.

It may be convenient here, before considering the operation itself, to accede to a request to give some of the details which I follow out in my operative work generally, especially as they apply to the operations I am about to describe.

First, as to the room in which the operation has to be performed. Any ordinary well-cleaned room having high windows so as to give good top light answers almost as well as an operating theatre. There is, of course, an advantage in having electric light, but, as I shall show, the operation I now perform on the bile passages is done close to the surface with few exceptions, not as formerly at a great depth, which necessitated a special electric lamp, and always a very good vertical or high oblique light.

The advantage of operating in a hospital or surgical home is that the surgeon, or his house surgeon or assistant, is responsible not only for the operation but also for the after-attendance, a matter almost as important as the operation itself. Moreover, the surgeon can do his work better, and with greater confidence, where he is accustomed to operate, and where he is confident that all his directions before, at the time, and subsequently, will be carried out to the letter.

In this matter of where the operation should be done, the surgeon who has to do the operation ought to make the selection, and the patient should abide by the decision with the full confidence that the operator will select the place where he can do his work to the best advantage of the patient.

I have seen several unsatisfactory cases in which patients insisted on having operations performed in their own homes, which were utterly unsuitable for such a purpose, that would in all probability have done well had they been in a surgical home, where the complications causing the trouble could have have had immediate and skilful attention.

The surgeon ought also to be helped by his ordinary assistant in all serious operations such as I am about to describe, for a stranger, no matter how skilful, can never accommodate himself immediately to the needs of the operator, and it must be remembered that surgery is a fine art that can only be carried out with the greatest perfection under circumstances that are favourable to the artist.

The selection of the anaesthetist should also be with the operator, for with a competent anaesthetist the surgeon can devote the whole of his mind to his own part of the work in hand, without having his attention diverted to make suggestions concerning the anaesthetic.

With regard to instruments, a gall-stone scoop is the only special appliance I employ, and all the instruments are boiled for half an hour before being used.

My sutures and ligatures are of formalin catgut prepared by the xylol process, which I described in the British Medical Journal, of September 27th, 1902, p. 974. No. "co" size is used for ligatures, and No. "o" size for sutures; they are strong and reliably aseptic. Since the introduction of celluloid thread I have given up the use of silk for sutures, as the former is much stronger, ties with a very firm knot, and is easily sterilized by boiling. As it is not absorbable I only employ it for the outer or serous suture in stitching the incision in the duct in choledochotomy, and for this purpose the "oo" green chromic catgut prepared by the xylol process answers equally well, as it does not become absorbed before the second or third week. As showing the disadvantage of non-absorbable sutures, a case came under my notice in which a silk suture used in a choledochotomy formed the nucleus of another gall stone, which fortunately passed without further operation.

As sponges I employ sterilized gauze swabs, but for keeping the viscera out of the way I use flat marine sponges, than which I find nothing to answer so well. The area of operation is surrounded by dry sterilized towels, sterilized by dry superheated steam for half an hour.

My assistant, dressers, and nurses all wear boiled rubber gloves, though personally I do not unless I have just had a septic case to operate on, as I find they impair my sense of touch and cause some delay, but I take especial care to scrub and wash several times before operating, and near the operating table I keep a bowl of 1 in 2,000 mercury biniodide solution in order to lave my hands from time to time during

the course of the operation. The instruments are used out of a 1 in 40 absolute phenol solution and the sponges out of 1 in 2,000 biniodide solution, but they are wrung quite dry before being used. Doubtless an ordinary saline solution would answer equally well for instruments and sponges but I think not for the hands. The ligatures are used out of a 1 in 20 carbolic solution in spirit in which they are also stored.

The patient is prepared by having an aperient given so as to secure the bowels being moved the day before operation, and an enema is given the evening before if the operation is to take place early the next morning. If there is any feebleness of pulse, 5 minims of liq. strychninae are given subcutaneously on the afternoon and evening of the day before operation, and 10 minims as soon as the operation has begun. Should there be chronic jaundice or a tendency to haemorrhage, calcium chloride is given; for although there is a greater tendency to bleeding in chronic jaundice from pancreatic disease than when jaundice is due to gall-stone obstruction, I think there can be no doubt that in all cholaemic conditions the blood becomes so altered that the coagulability becomes seriously diminished, and that these factors demand serious attention before any operation is undertaken in cases of common-duct cholelithiasis. After reading Professor Wright's researches on the coagulability of the blood,[1] my mind was prepared to grasp the possibility of turning the experience gained on dogs to practical uses in the human subject, as I had lost two jaundiced patients, one in 1888 and one in 1890, from persistent oozing of blood subsequent to operation. I therefore at once began to employ it in these cases, and with benefit, but it has been only within the last three years, since using calcium chloride in apparently heroic doses, that I have been able to get at the real value of the drug, which is one I now always employ in jaundiced patients, both before operation in 30-gr. doses by the mouth, and afterwards in 60-gr. doses by the rectum thrice daily for two or three days, or longer if needful.

The skin of the patient over the operation area is prepared the day before by thoroughly washing with soft soap, or some soap, not necessarily antiseptic, that will give a good lather; if needful, shaving is then done, and the whole area is gently rubbed with benzine. A dressing of lint, wet with 1 in 40 carbolic solution in water, is then applied, and over this oil-skin or guttapercha tissue. The dressing is changed early the next morning, and the skin is thoroughly washed, so as to clear away all loose and sodden epithelium, after which another 1 in 40 dressing is applied, to be removed on the operating table.

If the patient is feeble, a pint of normal saline solution with an ounce of brandy is given a short time before the operation.

As shock is intensified by exposure to cold, my patients are always enveloped in cotton wool, which is conveniently done by making a suit of gamgee tissue that can be readily run together by the nurses in an hour or two the day before operation. When operating in a theatre I employ a heated table, but elsewhere india-rubber hot-water bottles around the patient take its place.

It will be found that a firm sandbag, about 18 in. long by 6 in. wide and 3½ in. deep, covered with flannel, and placed on the operating table at the liver level, will push the spine forward, and with it the liver and bile ducts, so that the common and hepatic duets are brought several inches nearer to the surface. By opening out the costal angle and tending to make the intestines slip down from the liver, it acts like the Trendelenburg position in pelvic surgery.

Though this method, until I drew attention to it, does not seem to have been employed by others, I can, from ample experience, speak well of its great utility.

OPERATION.

Whereas I used formerly to make a vertical incision through the linea semilunaris, I now always make my incision over the middle of the right rectus in a line parallel with its fibres, which are then separated by the finger, the posterior sheath of the rectus and peritoneum being divided together. Where the gall bladder is distended and there is no jaundice, a small incision of 2 or 3 in. only may be required; but when it is necessary to explore either the hepatic, common, or deeper part of the cystic duct, instead of prolonging the incision downwards as was formerly done, I now carry it upwards in the interval between the ensiform cartilage and the right costal margin as high as possible, thus exposing the upper surface of the liver very freely. It will be found that by lifting the lower border of the liver in bulk (if needful first drawing the organ downwards from under cover of the ribs), the whole of the gall bladder and the cystic and common ducts are brought quite close to the surface, and as the gall bladder is usually strong enough, my assistant can take hold of it with his fingers or forceps and by gentle traction can keep the parts well exposed, at the same time that, by means of his left hand with a flat sponge under it, he retracts the left side of the wound and the viscera, which would otherwise fall over the common duct and impede the view.

It will now be observed that instead of the gall bladder and cystic duct taking a considerable angle with the common duct, an almost straight passage is found from the fundus of the gall bladder to the entrance of the bile duct into the duodenum, and if adhesions have been thoroughly separated the surgeon has immediately under his eye the whole length of the ducts with the head of the pancreas and duodenum. So complete is the exposure that if needful the peritoneum can be incised over the free border of the lesser omentum and the common duct separated from the hepatic artery and portal vein, but this is not necessary, except where a growth or glands have to be excised. The surgeon, whose hands are both free, can now deal with the gall bladder, cystic, common, or hepatic ducts quite easily; for example, with his left finger and thumb he can so manipulate the common or cystic duct as to render prominent any concretions, which can be directly cut down on, the edges of the opening in the duct being caught by pressure forceps. The assistant can now take hold of the forceps with his left hand, as they with the sponge will form a sufficient retractor, since the duct is so near the surface.

When the duct is incised there is usually a free flow of bile, which it must be remembered is probably infective, but by inserting a sponge in the kidney pouch and rapidly mopping up the bile as its flows, by means of sterilized gauze pads, any soiling of surrounding parts is avoided, and if thought necessary, the bulk of the infected bile can be drawn off by the aspirator either from the gall bladder or from the common duct above the obstruction before the incision into the bile passage is made.

After removing all obvious concretions, the fingers are passed behind the duodenum and along the course of the hepatic ducts to feel if other gall stones are hidden there, and when the common duct has been incised a gall-stone scoop, the only special instrument I use, is passed into the primary division of the hepatic duct in the liver, and down to the duodenal orifice of the common bile duct, and if thought necessary to insure the opening into the duodenum being patent, a long probe is passed into the bowel.

The incision into the bile duct, if one has to be made, is now closed by an ordinary curved round needle held in the fingers without any needle holder, a continuous catgut suture being used for the margins of the duct proper, and a continuous fine green catgut or spun celluloid thread being employed to close the peritoneal edges of the duct.

Where the gall bladder is contracted and the pancreas is indurated and swollen from chronic pancreatitis, and likely to exert pressure for a time on the common duct, I insert a drainage tube directly into the duct, passing it upwards into the hepatic duct, and closing the opening around it by a pursestring suture, the tube being fixed into the opening by a catgut stitch which will hold for about a week; but where this is not done and the size of the gall bladder will permit it, I usually fix a drainage tube into the fundus of the gall bladder in the same way, as this drains away all infected bile and avoids pressure on the newly-sutured opening in the duct.

So easy is it to remove impacted stones after this method of exposure, that I now never spend a long time in manipulating stones impacted deeply even in the cystic duct, but at once incise the duct, remove the concretions, and close the opening without damaging the duct by much pressure and prolonged manipulation.

Although there is seldom any fear of leakage or of infection, yet, where the ducts have been incised and extensive adhesions separated, there is usually some tendency to pouring out of fluid in the first few hours. I therefore generally insert a gauze drain through a split drainage tube, bringing it out by the side of the gall bladder drain. This is usually removed within twenty-four hours.

The wound is closed by continuous catgut sutures, first to peritoneum and deep rectus sheath, and next to the anterior rectus sheath. Lastly, the skin margins are brought together by means of a few interrupted silkworm gut sutures inserted quite an inch from the line of incision, and brought out an inch beyond the incision on the other side so as to allow the

edges to fall together without tension, thus securing union by first intention.

To those having little experience in these operations, the modifications I have employed may seem trivial, but to those who have experienced the difficulties of the ordinary operation of removing gall stones from a contracted gall bladder, or from the cystic or common ducts, I feel sure the method I have described, which enables the whole of the bile passages to be dealt with as a straight tube close to the surface, will be sufficiently appreciated.

In these operations I employ forcipressure for the immediate arrest of haemorrhage, but I find it is more satisfactory, also, to ligature all the bleeding points, as in jaundiced cases the compressed and unligatured vessels are apt to bleed subsequently and to lead to complications that are avoidable by careful haemostasis. For the same reason, I prefer to divide and ligature firm visceral, especially hepatic, adhesions where that is practicable, rather than as formerly to separate them with the finger or tear them through.

If the liver be slightly torn in separating adhesions, the bleeding must be carefully arrested before the abdomen is closed. Sponge pressure is usually sufficient if the laceration be small, and this may be made more efficient by using at the same time a solution of adrenalin, but, if the laceration be extensive, deep catgut sutures, applied by means of a round intestinal needle, will usually accomplish the desired effect; or, this failing, gauze pressure, the plug being left in until it becomes loose, will be certain to answer.

Nothing can be simpler than an ordinary cholecystotomy with a distended gall bladder, or even with a gall bladder of ordinary size, where a small incision suffices to expose the sac, which is emptied by the aspirator. The collapsed sac is then brought through the wound, and surrounded by sterilized gauze; it is then incised through the point where the needle was inserted, and through the wound in the fundus the gall-stone scoop is inserted, and all gall stones are removed, a probe or the finger being employed to prove the ducts clear. A firm rubber tube, much firmer than the drainage tubes ordinarily sold, is then inserted from $\frac{1}{2}$ in. to 1 in. into the gall bladder, the edges of the incision being drawn firmly around it by a catgut pursestring suture, which is tied and cut short, the tube being fixed in position by a catgut suture which transfixes the tube and the edges of the incision in the gall bladder. The edges of the incision in the gall bladder are then fixed to the aponeurosis by three or four catgut stitches, but never to the skin unless a permanent biliary fistula is intended. This tube is sufficiently long to pass into a bottle by the side of the patient, it drains all the bile away from the wound, and by the time the catgut has dissolved the wound will have healed by first intention, except where the tube was, and that part heals by granulation within the next week or two if the ducts are clear.

The following is an example out of many of a simple cholecystotomy:

Case I.—*Simple Cholecystotomy: Recovery.*

Mrs. C., aged 41, was admitted to the Leeds Infirmary, March, 1899, on account of a tumour of the gall bladder, noticed a month, but following on gall-stone symptoms of several years' duration. March 28th, cholecystotomy was performed, and after several ounces of straw-coloured fluid mixed with pus had been withdrawn through an aspirator needle, the gall bladder was opened, and fourteen facetted gall stones were removed from it and the cystic duct, the largest being the size of a small walnut, the smallest the size of a pea. Exploration within the duct by means of a long probe, and outside the duct by the finger in the abdomen, failed to discover any further obstruction. A drainage tube was inserted into the gall bladder, and surrounded by a pursestring suture; the edges of the opening were then fixed by sutures to the aponeurosis. Bile appeared on the dressing on the following day, the drainage tube was removed on the sixth, and the sutures on the eighth day. No bile was discharged after the ninth, and the wound was perfectly healed on the thirteenth day after operation. The patient returned to her home on the seventeenth day.

What has been called the "ideal" operation, in which the opening in the gall bladder is immediately closed and returned into the abdomen was suggested by Langenbuch; but as it does away with the beneficial effects of drainage, and is moreover attended with more risk than the ordinary operation I have described I never employ it.

Another modification suggested by Bloch is that of performing cholecystotomy in two stages. The operation consists in incising the parietes until the peritoneum is reached, though not opened; the wound is then packed with gauze, and left for several days, when adhesions will have formed between the gall bladder and the parietal peritoneum. The gall bladder can then be safely opened. Or if the peritoneum be opened, the gall bladder is fixed, but not opened until adhesions have formed.

As the method is only available for the simplest cases—namely, where the gall bladder is distended—as it does away with all chance of exploring the ducts by the fingers within the abdomen, and as it is frequently followed by fistula, it needs only to be mentioned to be condemned as clumsy and uncertain, and no safer than the ordinary operation of cholecystotomy.

To this opinion there may be one exception: the operation *à deux temps* may present advantages when cholecystotomy is being undertaken in the presence of chronic jaundice associated with distended gall bladder and a haemorrhagic tendency, as in such cases there is usually malignant disease either of the head of the pancreas or of the bile ducts; and when the peritoneum is exposed, but not opened, pressure can be applied to arrest the oozing of blood, which cannot always be easily stopped by ligatures or forceps. Bloch, however, in his original papers, and again in the *Revue de Chirurgie* for 1895, does not recommend the operation for this reason, but on account of the fear of septic contamination of the peritoneum, which ample experience proves to be groundless.

A simple operation like the example just given is quite the exception, the gall bladder being usually contracted and surrounded by adhesions; moreover, in these cases the obstruction will usually be found in the cystic or common ducts. The advantage of the complete operation that I have described, in which the edge of the liver is lifted up and the bile passages brought well under view, will be experienced in this class of cases.

Management of Contracted Gall Bladder.

The next question will be, How is the contracted gall bladder to be dealt with? If it is too small to be brought to the parietes, but sufficiently large to admit a drainage tube, the method of fixing the tube by purse string suture just described will be quite safe, even if the opening in the gall bladder has to be left 2 in. or 3 in. from the surface, for the omentum can be made to lie against the tube, and by the time that the catgut is dissolved a track of adhesions will have formed that will quite effectually prevent extravasation; but in order to make assurance doubly sure I frequently insert a small split drainage tube with a little gauze in it quite down to the gall bladder, and bring it out by the side of the first tube.

Case II.—*Isolation of a Drainage Tract by Omentum and by Gauze.*

Mrs. N., aged 57, seen with Dr. H. Well till eight months ago. Never had spasms or jaundice previously. Six attacks in eight months. The pain, which is severe, begins at the epigastrium and passes to the right infrascapular region. Examination negative but for tenderness over gall bladder.

Operation, December 15th, 1898.—Very adherent dilated stomach, with contracted gall bladder, containing thick mucus and gall stones. Separation of adhesions and cholecystotomy performed, but as the gall bladder could not be fixed to the parietes a tube was fixed in it and isolated by iodoform gauze.

Result.—Good recovery; tube removed on ninth day; well since operation.

If the gall bladder be so contracted as to be incapable of admitting a tube it may either be closed by suture, the line of union being protected from hurtful leakage by a strip of gauze laid over it and brought to the surface through a rubber tube, or the contracted and useless remains of the gall bladder may be removed by cholecystectomy.

Before I discovered the method for complete exposure of the whole biliary passages which I now employ, I frequently left the shrivelled and useless gall bladder, after clearing out its contents; with the result that relapse sometimes occurred and cholecystectomy had subsequently to be faced, as in the following case:

Case III.—*Cholecystotomy: Recurrence of Symptoms: Cholecystectomy: Recovery.*

Mr. A., aged 56, seen with Dr. C and Dr A., of Nottingham, for loss of flesh, general ill-health, and frequently-recurring pains in the right hypochondrium, the illness being of several years' standing.

Cholecystotomy, September 4th, 1893.—Contracted gall bladder with adhesions to surrounding parts, the result of gall-stone irritation; cholecystotomy performed, the gall bladder being isolated by a gauze drain. This was followed by relief for some months, when the painful attacks recurred, accompanied by rigors and slight catarrhal jaundice.

Cholecystectomy.—A further operation was advised, and on September 3rd, 1899, the shrivelled gall bladder containing muco-pus was removed, a small tube being passed into and fixed in the cystic duct. Bile flowed freely the next day. Ultimately the patient made a complete recovery, and when seen in 1902 he was in robust health, and said he had had no further trouble.

This and other similar cases of contracted gall bladder led me to adopt the operation of cholecystectomy in certain cases, where to leave the gall bladder means leaving a useless and diseased appendage lined with mucous membrane that is certain to secrete mucus, apt to be retained, owing to the cystic duct contracting and becoming stricture as the

result of long-continued irritation and ulceration. This mucus, retained under tension, becomes infected, and a state of affairs much resembling chronic appendicitis is apt to continue, until either the gall bladder undergoes atrophy and absorption (a condition which may be termed cholecystitis obliterans, and which I have seen on several occasions) or the patient is worn out by repeated pain and chronic septicaemia, unless a further operation is undertaken to remove the offending organ.

Methods of Performing Cholecystectomy.

Cholecystectomy may be performed by three different methods, it being an important proviso that the common duct is cleared of concretions and freely patent.

It may be completely taken away and the cystic duct used as a pedicle and ligatured. When the gall bladder is very much contracted this is both easy and effectual, as the attachments to the liver are readily dissected off without tearing the liver substance. A method of treating the pedicle, otherwise the cystic duct, which I have found effectual but which to the best of my belief has not been adopted by others, is worth mentioning. The duct is seized with strong pressure forceps and crushed, thus making a groove in which the ligature, preferably of catgut, lies quite snugly. Any vessels that bleed are ligatured, and as a matter of precaution (for the parts being dealt with are necessarily infected) a strip of iodoform gauze is left in contact with the end of the ligatured duct and brought to the surface through a split drainage tube. The following cases afford examples:

Case iv.—*Removal of Gall Stone: Persistent Fistula: Cholecystectomy: Recovery.*

Mrs. S. G., aged 49, operated on in 1888 for gall stones (when sixty-six small ones were removed from a contracted and ulcerated gall bladder and cystic duct), was left with a mucous fistula which had to be kept open by a tube, as if it was allowed to heal pain and fever resulted. On May 14th, 1890, a further operation was performed, when the gall bladder was found shrivelled and adherent, and the cystic duct was strictured. The operation of cholecystectomy as just described was performed and a complete recovery resulted, the patient being well when heard of several years later.

Case v.—*Choledochotomy and Cholecystectomy: Recovery.*

Mrs. W., aged 57, seen with Dr. M., of Bolton, for repeated attacks of biliary colic associated with jaundice of three weeks' standing and rapid loss of flesh.

Operation June 8th, 1901, when a gall stone was found in the common duct and one in a calcareous gall bladder the shape and size of a hen's egg. Choledochotomy and cholecystectomy were performed and followed by a smooth recovery, the patient being quite well in September, 1901.

The second method is applicable to cases where the gall bladder is larger, but in which it is so seriously damaged as to be unsafe to leave it; or in cases where, owing to impaction of a concretion in the cystic duct, ulceration has occurred, and may be followed by stricture, which would both prevent the gall bladder performing its function as a reservoir for bile, and might lead to an accumulation of mucus and the formation of a tumour.

In this case the attachment to the liver is considerable, and, if the gall bladder be fully detached, laceration of the liver is apt to occur and troublesome bleeding, which can be saved by making a longitudinal incision through the fibrous coat on each side of the liver attachment, when the bulk of the gall bladder and all the mucous membrane can be removed, necessitating only ligature of branches of the cystic artery in the small portion of the fibrous coat left attached to the liver.

The cystic duct may then be ligatured, as described in the last operation, or plugged with a gauze drain, or drained by the insertion of a tube which is surrounded by a pursestring suture so as to prevent leakage of bile. The following cases afford examples:

Case vi.—*Cholecystectomy: Recovery.*

Mr. M., aged 46, seen with Dr. R., of New York, and Dr. G., of Nice, for frequent seizures of intense pain, resembling biliary colic, with irregular fever and great loss of flesh and strength. At the operation, on May 2nd, 1895, I found an inflamed and contracted gall bladder, with cholangitis and extensive adhesions, doubtless due to gall stones that had passed. After opening the gall bladder and clearing away muco-pus, the organ was excised in the way just described and the duct was plugged with gauze brought to the surface through a tube. Recovery was uninterrupted, and he was able to sail at the month end. Nine months later he was in perfect health.

Case vii.—*Gangrene of Gall Bladder: Partial Cholecystectomy: Recovery.*

Mr. M. A., aged 50, seen with Dr. A., of York, January 10th, 1900, for acute local peritonitis of a week's duration, starting in the region of the gall bladder, and ushered in by a rigor followed by fever and intense pain and prostration, the first symptom of pain in the gall-bladder region having only been noticed a month previously.

The operation was performed the same day, when gangrene of the fundus of the gall bladder was discovered, with intense local peritonitis, limited by acutely inflamed and darkened omentum, the patient being a very fat subject. Cholecystectomy performed, the portion of gall bladder attached to the liver was left, as it was not gangrenous; a tube was inserted into the cystic duct. He made an uninterrupted recovery, and is now in excellent health.

Dr. W. Mayo of Rochester, U.S.A., suggested another method of partial cholecystectomy which he has found of service. He lays open the gall bladder and shells out the mucous membrane, if possible in one piece, plugging the cavity remaining with gauze. In some cases this is easy, but in others, where there has been much inflammatory disturbance, I have found it impracticable.

After cholecystectomy, in the case of a dilated cystic duct, where the ultimate patency of the common duct is questionable, the open end of the duct may be connected to the bowel by choledoch-enterostomy, as in the following case:

Case viii.—*Mucous Fistula: Cholecystectomy: Recovery.*

Mr. P., aged 55, seen at the Leeds Infirmary, July 24th, 1895. Operation undertaken for closing a mucous fistula, when the gall bladder was found to be forming a tumour with walls ½ to ¾ in. thick. Cholecystectomy was performed, and the open end of the cystic duct connected to the small bowel by means of a Murphy's button. A smooth recovery followed, and when heard of in 1896 he was completely cured and in good health.

If, as frequently happens, gall stones are so firmly fixed in the cystic duct that they cannot be pressed backward into the gall bladder, it is better not to use force but to incise the duct over the stone, and, after clearing the duct, to close it by a double row of sutures to mucous membrane and serous coat respectively, as in the following case:

Case ix.—*Empyema of Gall Bladder: Choledochotomy and Drainage: Recovery.*

Mrs. G., aged 47, seen with Dr. L., of Farsley. Repeated gall-stone seizures for two years; no jaundice; no fever; distended gall bladder, which is tender.

Operation, March 23rd, 1899.—Empyema of gall bladder with many small stones in gall bladder; one large impacted stone, which could not be dislodged from within, was removed from the cystic duct by choledochotomy; drainage of gall bladder and gauze drain down to incision in duct. Good recovery. Well 1901.

If the concretions are in the common duct either fixed or floating it is just as easy, with the duct well under the eye and near the surface, to incise it and remove the stones as it is to open the gall bladder. All such instruments as handled needles and Halsted's hammer are quite unnecessary, for the incision in the duct can as readily be closed by means of a curved round needle (sewing needle pattern) in the fingers as by any more complicated apparatus. But before closing the duct it is of the utmost importance to ascertain that there are no stones left either in the ampulla of Vater or in the hepatic duct; and although the fingers manipulating the outside of the ducts can give information as to any large stones, it would be easy to overlook small ones unless the scoop is passed freely upwards into the hepatic ducts and downwards behind the duodenum, or, if necessary, the opening in the duct can be made sufficiently large to admit the finger for exploration.

I usually pass a large probe down into the duodenum through the papilla to be sure that the passage is quite free. In one case, not being able to pass the probe beyond the papilla, I opened the duodenum and found a stricture of the common duct close to its termination, which I divided after freely laying the papilla open over a director.

The following are examples of choledochotomy:

Case x.—*Choledochotomy.*

A man, aged 50 years, was seen by me with Dr. W., of Ovenden. There had been gall-stone colic for two years and three months, with loss of flesh and strength. Jaundice and infective cholangitis were present. A stone was floating in the common duct, and there was a fistula between the gall bladder and the colon. On January 28th, 1900, a gall stone was removed from the common duct by choledochotomy; the fistula between the gall bladder and the colon was closed by sutures, and a good recovery followed. The patient was quite well in September, 1901.

Case xi.—*Choledochotomy.*

A man, aged 53 years, who was seen by me at the General Infirmary, had had colic for twelve years and jaundice for two years, the jaundice having been very deep for some time. On October 10th, 1901, choledochotomy was performed in the manner previously described, and a stone was removed from the common duct. The patient was well in December, 1901.

Case xii.—*Choledochotomy.*

A man, aged 58 years, was seen by me with Dr. R., of Preston. He had had very deep jaundice for three years. Biliary cirrhosis and ascites as well as jaundice were present, and there was a stone in the common duct. On October 21st, 1901, choledochotomy was performed, and the omentum was fixed to the anterior abdominal wall in order to cure the ascites. Anterior drainage was employed. In December, 1901, I had a letter to say that he was regaining strength and feeling well, and I am told that he has completely regained his health.

In quite a number of cases, after the common duct has been cleared, I have found stones in the hepatic ducts,

which I have removed by the scoop. The following are examples:

CASE XIII.—*Calculi in Bladder and Ducts: Choledochotomy: Recovery.* A policeman, aged 48, a stout, unhealthy subject, with a history of former intemperance, had suffered from gall stones for twenty years, and from jaundice with infective cholangitis since May, 1901. On December 7th, 1901, choledochotomy was performed in the infirmary, when 126 gall stones were removed from the gall bladder and 88 from the common and hepatic ducts. Recovery was retarded by bronchitis, but the patient was discharged in five weeks, and has remained well.

CASE XIV.—*Calculi in Bladder and Ducts; Choledochotomy: Recovery.* On July 17th, 1902, I operated on a lady, aged 70, and removed a considerable number of gall stones from both arms of the hepatic duct after clearing the common duct of concretions through a choledochotomy opening. The patient is, I am informed, now quite well.

In some cases the common bile duct is found dilated to the size of the small intestine, and, if the gall bladder and cystic duct are small and so contracted as to be useless for drainage, a firm rubber tube is inserted into the incision in the duct and pushed a little way up into the hepatic duct, the tube being surrounded by a pursestring suture and fixed in position by one or two catgut stitches, as in the following case:

CASE XV.—*Choledochotomy: Drainage: Recovery.* I saw the patient, a man, aged 51, with Dr. H., of Upwell. There had been only slight colic, but for a year deep jaundice, with great wasting and infective cholangitis. Choledochotomy was performed on September 29th, 1901, five stones being removed from the common duct. As there was chronic pancreatitis, the dilated common duct was drained by means of a rubber tube fixed in by suture and surrounded by a purse-string suture. A lumbar drain was also inserted, but as events proved this was unnecessary. The patient was very well, and he had gained 1st 3 lb. in weight by November, 1901. He remained well when heard of in June, 1902.

DUODENO-CHOLEDOCHOTOMY.

If a stone is impacted in the duodenal end of the common duct it may sometimes be more easily reached through a vertical incision in the second part of the duodenum, when the concretions can be directly cut down on through the posterior wall of the duodenum, or the papilla can be laid open over a director; it is then easy to pass the gall-stone scoop up the common duct in order to be certain that it is free from concretions. All that is now necessary is to close the anterior duodenal wound by a continuous catgut suture for the mucous membrane, and a continuous silk or celluloid thread for the serous margins. The following cases are given as examples:

CASE XVI.—*Duodeno-choledochotomy: Recovery.* A man, aged 38, was seen by me at the General Infirmary. There had been colic and jaundice for six months with loss of weight and strength. Deep jaundice was present; there were gall stones in the common duct. Duodeno-choledochotomy, performed on January 31st, 1901, resulted in a good recovery, and the patient was well some months later.

CASE XVII.—*Duodeno-choledochotomy: Recovery.* A woman, aged 49, was seen by me at the Infirmary. For six years colic had persisted with varying jaundice. On March 22nd, 1901, duodeno-choledochotomy was performed, and eight large, together with numerous small, gall stones were removed from the common duct. A good recovery ensued, the patient being well some months later.

With the better exposure of the common duct secured by the new operation, duodeno-choledochotomy will be seldom called for, as the gall-stone scoop can so freely be used through the incised duct.

CHOLECYSTENTEROSTOMY.

Cholecystenterostomy has been advocated by some surgeons for obstruction in the common duct by gall stones, the gall bladder being connected to the duodenum or colon. In my earlier practice I performed a number of these operations, but since I discovered the easy and effectual method of exposing the whole length of the bile ducts I have practically discarded this operation, for it leaves the cause untouched, and should the artificial opening close, the symptoms inevitably return, as in a case of chronic pancreatitis on which I operated in November, 1899, where the communication was effected by a Murphy button, and though the patient was relieved for a time, the symptoms returned owing to the closure of the fistula.

The junction of the viscera may be effected either by means of a small bone bobbin or by a Murphy button. As to the point of junction, the cases in which I have joined the gall bladder to the colon have done quite as well as those in which a duodenal junction was effected; and as the operation is very much easier I should certainly advocate and practise it in future, if called on to perform cholecystenterostomy simply as a means of giving relief.

The following is a description of a case of gall-bladder colon operation:

CASE XVIII.—*Cholecystotomy: Biliary Fistula: Cholecystenterostomy: Recovery.* On January 9th, 1888, a married woman, aged 42, was admitted to the infirmary suffering from acute local peritonitis, with a tumour in the region of the gall bladder.

Cholecystotomy.—On January 14th laparotomy was performed through the upper part of the right linea semilunaris, and 8 oz. of fetid pus removed from the gall bladder. Exploration of the ducts by the finger and a probe failed to discover any gall stones. The gall bladder was stitched to the abdominal wound and drained, and the patient made a good recovery, but with a biliary fistula. Although she had retained good health during the fifteen months, when the fistula was open and discharging the whole of the bile, her condition was a very miserable one, since no apparatus could be made to catch the overflowing fluid when she was walking about, and her dressings and clothes became saturated.

Cholecystenterostomy was performed on March 2nd, 1889, by reopening the abdomen through the old cicatrix in the right linea semilunaris. The viscera in the neighbourhood were found to be so matted together that it seemed to be impossible to fix the gall bladder to the duodenum, and as the hepatic flexure of the colon was conveniently near, the gall bladder was fixed to it by a double row of sutures round a decalcified bone bobbin, a free communication being made between the two viscera. After a tardy convalescence she completely recovered, and was well in every respect ten years later.

The only cases in which I should now think it justifiable to perform cholecystenterostomy are those in which the obstruction is a permanent one—for instance, in cancer of the head of the pancreas and growth or stricture of the common duct.

MALIGNANT DISEASE.

Where gall stones are associated with cancer of the gall bladder, liver, or pylorus, a much more extensive operation may have to be done, as in the following cases:

CASE XIX.—*Excision of Cancer of Liver and Gall Bladder: Recovery.* A man, aged 46. Seven years gall-stone attacks. Infective cholangitis. Loss of 4 st. in weight. Jaundice. Operation, June 26th, 1899. Tumour of liver adjoining gall bladder excised by wedge shaped incision. Fundus of gall bladder also removed. Large number of gall stones removed, and cholecystenterostomy performed. Complete and perfect recovery. Patient in excellent health at present time over three years after operation. Microscope showed disease removed to be cancer.

CASE XX.—*Excision of Cancer from Liver, Gall Bladder, and Pylorus: Recovery.* A woman, aged 63. History of pain and jaundice. Great loss of flesh and strength. Tumour in gall-bladder region.

Operation, August 10th, 1900.—Mass of growth discovered in liver, gall bladder, and pylorus. Cholecystectomy, pylorectomy, and partial hepatectomy performed. Good recovery. Patient well, and in good health now. Microscopic examination showed the disease to be cancer.

But these are exceptional cases, as there were no secondary manifestations of disease in the liver or elsewhere. Had there been such, I should have simply concluded the operation as an exploratory one.

INTERVISCERAL FISTULA.

In detaching adhesions it may be found that there is a fistula between the gall bladder and stomach, pylorus or bowel, and a careful search must always be made for this, lest an opening into one of the hollow viscera be left, which would probably mean extravasation and death. The following are examples of intervisceral fistula.

CASE XXI.—*Closure of Fistula between Gall Bladder and Stomach: Recovery.* Mrs. H., aged 60, seen with Dr. C., of Doncaster. Attacks of gall-stone pain for fifteen months, lately very frequent, and followed by slight jaundice. Constant dyspepsia with frequent vomiting and steady loss of flesh.

Operation, July 7th, 1898. The stomach was found firmly adherent to the gall bladder, and on separating the adhesions a fistula between the gall bladder and stomach was found. The edges of the stomach fistula were pared, and the opening was closed with two rows of sutures. Through the fistula in the gall bladder the gall stones were removed and drainage carried out. The patient made an excellent recovery and is now in good health.

CASE XXII.—*Closure of Fistula between Gall Bladder and Colon: Recovery.* Mr. G., aged 50, seen with Dr W. No history of spasms. First attack of gall-stone colic in October, 1897, followed by jaundice; severe seizures in December, 1897, with jaundice lasting two months and associated with ague-like seizures. Slight attacks for a year, and then one very severe in December, 1898, and again in January, 1899. During the whole period the icterus deepened after each attack, and occasionally rigors occurred; lost over 2½ st. in weight; jaundiced but not deeply; liver not enlarged; no tumour of gall bladder; tenderness above and to right of umbilicus; well-marked dilatation of stomach.

Operation, January 28th, 1900.—Fistula between shrunken gall bladder and colon discovered, cystic duct shrunken; common duct dilated to size of small intestine, and containing large floating gall stone; calculus crushed, and fragments manipulated back through cystic duct; tube introduced into common duct through cystic duct; fistulous opening into colon closed. Uninterrupted recovery.

GALL STONES AND PYLORIC STENOSIS.

If with the gall stones pyloric stenosis be found, then pyloroplasty or gastro-enterostomy will have to be performed, as in the following case:

CASE XXIII.—*Cholecystotomy, Cholecdochotomy, Pyloroplasty.* Miss T., aged 45, seen with Dr W., of Harrogate. History of gall-stone attacks, with slight jaundice for several years. History of gastric ulceration with stomach symptoms for two years. Great loss of weight and strength. Dilatation of stomach and tenderness over gall-bladder region, but no tumour.

Operation, August 5th, 1901.—Pyloric stenosis, with dilatation of stomach and gall stones, in gall bladder and common duct found; twenty gall stones removed from gall bladder by cholecystotomy, and two removed from common duct by choledochotomy. Pylorus treated by pyloroplasty. Smooth and rapid recovery. July, 1902: Patient very well, and had gained over 2 st. in weight.

CHOLELITHIASIS AND ENLARGEMENT OF PANCREAS.

In common-duct cholelithiasis, especially where there is a small floating gall stone, it is common to find the head of the pancreas enlarged and hard, the result of chronic pancreatitis, this will give rise to the suspicion of cancer of the head of the pancreas, and may lead to an unfavourable prognosis being given, but the following out of many cases that I have had shows that it is well to reserve our opinion in such cases, and to give the patient the hope of cure.

CASE XXIV.—*Enlargement of Head of Pancreas suggesting Malignant Disease: Cholecystenterostomy: Recovery.*

On October 20th, 1899, I was asked by Dr. S., of Sunderland, to see a lady, aged 51, who had been suffering for three years from attacks resembling those of gall stones, each attack being followed by jaundice. During the past fourteen weeks the seizures had been more frequent and severe, and jaundice had never quite cleared away before another attack came. She had lost flesh and strength considerably, and had vomited from time to time between the attacks. Her digestion was much impaired, and there was a want of appetite. She had had no rigors, and had only slight fever at the time of each seizure. The urine contained abundant lithates and a slight trace of albumen, but no sugar. On examination the abdomen showed no manifest enlargement of the liver or gall bladder, but some tenderness over the gall bladder and at the epigastrium, where there was an indefinite sense of fullness.

Operation, October 23rd.—After detaching numerous adhesions fifteen gall stones were removed from the cystic and common ducts, but as a large nodular mass was occupying the head of the pancreas and partly obstructing the common duct, it was deemed advisable to perform cholecystenterostomy, so as to make a permanent opening between the fundus of the gall bladder and the duodenum. The tumour gave the impression both to myself and to Dr. S., that it was malignant. Recovery was, however, uninterrupted, the button was passed on the tenth day, the wound healed by first intention, and the patient immediately began to put on flesh. She returned home, and has since been perfectly well in every respect. It is now over three years since the operation, and her health, I am informed, is perfect.

I have entirely given up cholelithotrity as a set operation, as although in my earlier cases it answered well in some cases, in several the fragments did not pass, and gave further trouble or led to relapse. Moreover, the very complete exposure which the operation I have described gives renders all uncertain methods, such as crushing, quite unnecessary.

It would be easy from my own experience to add to the number of examples of each operation that I have described. Some hundreds of cases have been reported or referred to in the second edition of *Diseases of the Gall Bladder and Bile Ducts*.

AFTER-TREATMENT.

It only remains for me now to refer to the after-treatment, which I previously said that I consider almost as important as the operation itself.

Expedition in operating is an important factor in lessening shock, especially in abdominal surgery, for it stands to reason that prolonged manipulation and exposure of the viscera, in patients so ill as the class of cases we are now considering must generally be, will be badly borne, for it is not only the work of the surgeon but the deep anaesthesia that adds to the shock, since for these operations to be expeditiously performed the muscles must be well relaxed. Choledochotomy should occupy from half an hour to an hour, and only in case of unusual complications a little longer.

After operation a pint of saline fluid with 1 oz. of brandy is given by enema, and 5 minims of liq. strychninae are given subcutaneously, this being repeated if called for. Subcutaneous injections of saline fluid or intravenous infusion are only rarely required.

Beyond teaspoonfuls of hot water or hot tea from time to time all feeding is by the rectum for the first twenty-four hours, though if there is no vomiting the teaspoonful of water is increased to a tablespoonful, or even two, every hour. After forty-eight hours if there is no vomiting, milk and soda and barley-water can be freely given. A little plasmon dissolved in the tea or beef-tea or barley-water considerably adds to the nutritive value of the fluid. Light custard pudding is usually given on the fourth day, fish on the fifth, and chicken on the sixth, after which the diet becomes almost normal.

The bowels are not disturbed before the fifth or sixth day, and then only by enema, unless there is vomiting or distension, and in case of either of these complications a grain of calomel is administered, and followed by 2 oz. of Apenta water every two hours until it acts or until flatus passes freely, this being at times helped by the rectal tube or by a turpentine enema.

Morphine is avoided after all my abdominal operations, as it tends to paralyse the intestines and leads to an accumulation of flatus. I believe that abstention from the use of morphine is a great feature in the success of abdominal surgery, just as I feel sure that in the past it has killed many patients who would otherwise have done well.

If a sedative is needed 10 gr. of aspirin will be found useful, and this can be repeated in two hours if required. In case of vomiting being troublesome or epigastric distension persisting gastric lavage will be found useful, and when the stomach is emptied a dose of Apenta water may be left in it to incite peristalsis. Under these circumstances no food or fluid is allowed by the mouth, but plenty of fluid in the shape of normal saline is given by rectum.

As a rule recovery is uneventful, and for the most part after-treatment is negative. The stitches are removed on the eight day, and the tube usually comes away about the same time; the wound generally will have healed by first intention, and the spot where the tube was heals by granulation. The dressings are of the simplest—sterilized gauze and sterilized wool being employed as a rule, double cyanide gauze just boiled being sometimes used next to the wound.

The chief lessons I have to teach are that we should operate earlier before serious complications have ensued, and that when we do operate we should be thorough, expeditious, and careful.

REFERENCE.

1 BRITISH MEDICAL JOURNAL. December 28th, 1901.

THE OPERATION OF CHOLECYSTECTOMY, WITH A RECORD OF CASES.*

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THE operation of cholecystectomy—removal of the gall-bladder—first performed on July 15th, 1882, by Langenbuch, is one which is comparatively rare in the surgery of the bile passages. It is called for in the following conditions:

1. In injuries of the gall bladder, rupture, stab, or bullet wounds.
2. In gangrene of the gall bladder.
3. In phlegmonous cholecystitis.
4. In membranous cholecystitis.
5. In chronic cholecystitis with dense thickening of the walls of the gall bladder and cystic duct with or without stenosis of the cystic duct, and in chronic cholecystitis, when the gall bladder is shrivelled and puckered, and universally adherent. In such cases it is no longer a receptacle for the bile.
6. In distension of the gall bladder, hydrops or empyema, due to blockage of the cystic duct by calculus, stricture, growth, or external inflammatory deposits; or in cases of mucous fistula following operations for these conditions.
7. In cases of fistula between the gall bladder or the cystic duct on the one hand, and the stomach, duodenum, or colon on the other.
8. In multiple ulcerations of the gall bladder or the cystic duct, when gall stones have eroded their way through the walls into the liver, the duodenum, or other protective adherent masses.
9. In primary carcinoma of the gall bladder.

In all these conditions the removal of the gall bladder is either imperative or desirable. Kehr, whose experience of the surgery of gall stones is unrivalled, has recommended, as a routine measure in the treatment of cholelithiasis, the removal of the gall bladder and the drainage of the hepatic duct. This advice is based upon the belief that so radical a measure will lessen the likelihood of recurrence of the stones,—a belief which is probably chimerical, for we know beyond dispute that gall stones are not infrequently formed in the ducts as well as in the gall bladder. The recurrence of gall stones in his patients lessens with the increasing experience of the operator, and is best guarded against by a complete exploration of all the ducts in all operations. If this be done, the surgeon will occasionally find a stone or stones in the hepatic or in the common duct, when no symptoms have been elicited by their presence there. The complete and minute examination of all the ducts is quite easily performed if the ordinary vertical incision be prolonged upwards along the costal margin and the liver rotated by gentle traction in a forward and upward direction upon the gall bladder.

In cases of recent acute or subacute cholecystitis, due to blockage of the cystic duct by a large stone, removal of the gall bladder is certainly not necessary. I have had several such cases under my care, and in all drainage of the gall bladder for seven to ten days has been ample to permit of a subsidence of the acute inflammation. The gall bladder should never be removed unless the surgeon is convinced that the common duct is patent.

* A paper read before the Yorkshire Branch of the British Medical Association.

Mayo, of Rochester, Minnesota, has suggested a modification of cholecystectomy which has met with some favour among American surgeons. It is performed in cases of permanent obstruction of the cystic duct, the common duct being permeable, and consists in the removal of the entire mucous membrane of the gall bladder. The mucous membrane at the fundus is separated with some difficulty, but at and near the neck it strips away readily. After its removal the other coats are stitched to the upper angle of the wound. The chief advantage claimed for the operation is that it is more readily performed, and is therefore a less serious procedure.

The operation of complete cholecystectomy is performed in the following manner: A vertical incision near the outer margin of the right rectus muscle is made and the muscle fibres split. The usual length of this incision is 5 in. If additional room be required it is best obtained by continuing the upper end of the incision along the costal margin upwards and inwards. All adhesions of the gall bladder, and ducts, and liver having been cleared, the liver is rotated by gentle traction upon the gall bladder until the cystic and common ducts are straightened and brought upon a level with the wound. By this manœuvre the operation is rendered simpler and quicker. The peritoneal investment of the gall bladder is then cut through along the line of its reflexion on to the liver, and the gall bladder is quickly stripped from the liver and grasped in the hand so as to exert a gentle traction upon the cystic duct. A few bleeding points are occasionally seen upon the denuded liver surface, and a ligature or a suture transfixing the bleeding point may be needed. A circular incision is now made through the peritoneum at the neck of the gall bladder, and a cuff of peritoneum reflected from the neck and from the commencement of the cystic duct. A catgut ligature is tied round the duct, and the gall bladder is cut away. The mucous membrane of the severed end of the cystic duct is gently cleansed and wiped with a 1 in 500 biniodide lotion, and the peritoneal cuff is replaced and sutured. A purse-string suture may be applied over this, the first line of suture being buried when the purse-string suture is tied. No drainage tube is needed as a rule. If, however, owing to great thickening and adhesion at and around the cystic duct there is difficulty in performing all the steps indicated, and if the closure of the cystic duct is imperfect or its peritoneal hood not completely satisfactory, drainage may be provided by a split rubber tube or by a petticoat of rubber tissue packed with sterile gauze. If in any case the precise closure of the duct were impossible, I should leave a long clip on the end of the duct and drain by the side of the clip with a large split rubber tube having a gauze wick. Throughout the operation the most scrupulous attention is paid to the details of cleanliness. The viscera are carefully protected by gauze or sponge packing, and all swabs which are soiled with bile or inflammatory effusions are at once discarded. If the peritoneum be unavoidably soiled it may be wiped over with a swab wet with sterile salt solution. The hands are rinsed always in salt solution. No antiseptic is at any time allowed to touch the peritoneum.

The following is a brief record of the cases I have had under my care:

CASE I.—*Cystoduodenal Fistula: Cystectomy.*

History.—K. H., female, aged 55. Admitted February 9th, 1901, complaining of pain in the right epigastric and hypochondriac regions. The pain is intermittent in character, comes on daily and unexpectedly, lasts a few hours, and then disappears. It is three months since the first attack; since then the spasms have increased in severity and in frequency. When an attack comes on she feels cold and faint, and almost collapses. She has never been jaundiced. A fortnight ago a tumour appeared on the right side of the abdomen described by the doctor as "a hard, smooth, globular tumour, larger than a golf ball." No tumour can be felt now.

Operation.—On February 15th the abdomen was opened through the outer part of the right rectus muscle; on exposing the gall bladder and adjacent parts the following condition was found. The gall bladder was distended with a grumous material; to its outer surface the omentum and the duodenum were adherent; the omental adhesions separated fairly easily, the duodenal with difficulty. On detaching the duodenum an opening was found between it and the gall bladder; there was, in fact, a fistula equal in diameter to a lead pencil between the two viscera. In the cystic duct a stone, about the size and shape of a nutmeg, was found tightly impacted. The gall bladder, cystic duct, and stone were removed, the cut end of the duct being ligatured close to the common bile duct and the stump covered with peritoneum. The opening in the duodenum was closed with sutures and a split drainage tube with gauze wick passed down to the common duct. Recovery was uninterrupted, and the patient left the hospital on March 12th.

Mr. Cammidge examined the gall bladder and reported, "Great increase of fibrous tissue and patches of small-celled infiltration, and patches of calcified material. No evidence of malignant disease in the material examined.

Fistulae between the gall bladder and the duodenum are more frequent than any other form of abnormal communication between the bile passages and the intestine. Roughly speaking, they form a proportion of one-third of all recorded cases, and they are followed in point of frequency by fistulae between the gall bladder and the colon. If the gall bladder is found fairly healthy it can be separated off from the duodenum and drained instead of being excised. I preferred cystectomy in this case, as I was not sure that the thick pulpy wall of the bladder might not be the seat of new growth.

CASE II.—*Primary Carcinoma of the Gall Bladder.*

History.—M. B., aged 60. Sent by Dr. Sykes, Garforth. Two years ago she had an attack of hepatic colic, followed by jaundice. No stone was found. Six months ago a second attack; and a fortnight ago a third attack. In each attack the pain has been acute, "sickening," and of several hours' duration, and after each jaundice has appeared. After the last attack a tumour was noticed in the right hypochondrium; it seemed about the size of a billiard ball, was not in the least degree tender, and moved very freely in all directions as though only held by a stalk to the liver. There was neither jaundice nor ascites. A diagnosis of stone impacted in the cystic duct, with consecutive dilatation of the gall bladder, was made, though the entire absence of tenderness was against this.

Operation.—On April 8th, 1902, the abdomen was opened through the right rectus muscle, and the gall bladder exposed. It was found densely hard, adherent to the omentum by moderately firm adhesions, but not bound to the liver. An incision into it showed that the enlargement of it was due to a great thickening of its walls, the lumen being small, and having a capacity of barely more than a drachm. The omental adhesions were separated, and the gall bladder freed down to the cystic duct. The bladder and the cystic duct were removed by cutting through the latter close to it junction with the common duct after a ligature had been applied round it. The peritoneum over the cut end was stitched with a continous catgut suture, and the abdomen closed without drainage. The cavity of the gall bladder was barely as large as a thimble; it contained a dirty greyish-black fluid. No stones were present either in the gall bladder or the cystic duct. A careful search of the hepatic and common ducts was made, but no stone was found. The wound healed by first intention, except at one stitch opening, from which about 10 to 20 drops of pus were expressed about three weeks after the operation. The patient went home well in the fourth week, and her health has been maintained since. When seen in November she had gained nearly 2 st. in weight, and was in robust health.

Report on Specimen by Dr. Maule Smith.—The growth consists of tubules of epithelial cells embedded in a dense stroma of fibrous and non-striped muscular tissue. The epithelial tubules are more numerous and more densely packed together towards the internal surface of the organ. They decrease in number towards the external surface. The matrix, on the other hand, is less in amount towards the internal surface and greatly increases in amount as the external surface is reached. So that in the former situation there is a maximum of epithelial growth and a minimum of stroma; in the latter the condition is reversed and the epithelial elements are scanty. The mucous membrane is totally destroyed. The epithelial tubules are composed principally of columnar cells in one layer; but usually in some part of the tubule the columnar shape stops abruptly, and is replaced by a clump of irregularly-shaped cells of a variable number of layers deep. These project into the lumen of the tubule or outwards into the stroma. The tubules branch irregularly in all directions. The growth is traced right into the commencement of the cystic duct. The tumour is a carcinoma apparently rising from the glands lining the gall bladder. It has much the same kind of structure as the growths in the uterus described under "a typical glandular carcinoma."

CASE III.—*Membranous Cholecystitis.*

History.—Mrs. A., aged 43. Seen August 21st, 1902, with Dr. Carlton Oldfield. The patient had suffered all her life "from spasms." Pain was felt in the right hypochondrium, shooting thence through to the back and all over the abdomen; it was attended by vomiting and collapse. There has never been any jaundice. Seven weeks ago a tumour was noticed on the right side of the abdomen, a little above and internal to the anterior superior spine. Constipation has latterly been a marked feature, and distinct intermittent intestinal coiling has been seen, the caecum rising up very prominently, and loud borborygmi have been heard. The tumour is densely hard, irregular in outline, very slightly movable laterally, and vertically during respiration; it is not tender to the touch. A diagnosis of growth of the ascending colon was made and laparotomy advised.

Operation.—The abdomen was opened on August 28th. A hard tumour adherent to the abdominal wall and ascending colon was found. On first examination it was thought that the diagnosis was accurate, but a gradual separation of adhesions revealed the gall bladder lying buried in a trough made by the colon, and adherent by strong bands to the colon and abdominal wall. The caecum was large, and very much hypertrophied, feeling tough and leathery. There was very dense thickening and stiffening of the ascending colon at the part where lay the distended gall bladder. The much thickened gall bladder was laid open and 268 stones were removed. The gall-bladder was then seen to be lined with a thick membranous coating, which peeled off the mucous membrane very readily. The condition was one of membranous cholecystitis. The gall bladder was therefore removed with a portion of the cystic duct, and the abdominal wound closed without drainage. The patient made a perfect recovery, and is now in good health, doing her ordinary household duties.

CASE IV.—*Chronic Cholecystitis: Cystectomy and Partial Hepatectomy.*

History.—Mr. H. H., aged 56. Sent to me by Dr. Booth, Grimsby. Had been subject to indigestion for many years. Sixteen days before I saw him he complained of pain in the right hypochondrium, and on examination a smooth, ovoid tumour was felt. The symptoms were strikingly few. The patient had aged very rapidly during the last few months; he had lost a little weight, but there had never been severe pain in the abdomen nor vomiting, merely a slight discomfort and an inability to take food well. On examination a smooth, rounded tumour was found in the right hypochondrium. It was slight, movable laterally, and moved during respiration with the liver. It was almost painless on palpation.

Operation.—On September 27th, 1902, the usual vertical incision was made, and extended upwards and inwards along the costal margin. The gall bladder when exposed was seen to be livid and very tightly distended. It was aspirated, and about 6 drachms of pure pus withdrawn. A mass of

stones was then felt. These were easily removed easily, until the neck of the gall bladder was reached. Here was found a large and very dense mass, which seemed to be made up of gall bladder, cystic duct, stones, and dense adhesions. The bladder was therefore stripped as cleanly as possible from the duodenum and colon, to both of which it adhered. A large stone was felt impacted in the neck of the gall bladder and was found almost to have ulcerated through. It was somewhat doubtful whether the dense thickening was due to malignant disease, and as, whether simple or malignant, the gall bladder was useless and harmful, it was determined to remove it. This was done, a small portion of the liver also being taken away, the gall bladder being inseparably welded with it. Several bleeding points in the liver were caught by a suture. The cut end of the cystic duct, from which bile flowed freely, was ligatured and a peritoneal flap stitched over. Drainage was employed. For the first three days the patient's condition was very critical; the pulse ran up to 120, and frequent vomiting and hiccough were very distressing. For forty-eight hours—between twenty-four and seventy-two hours after the operation—there was haematemesis, inky-black fluid being vomited every hour or two in quantities of 2 to 4 oz. The vomit was very acid, the corner of the patient's mouth and his lips and chin being scalded by it. The stomach was washed out, and all fluids withheld. High enemata of hot saline solution were given. The vomiting ceased, and for the next three days great progress was made; the bowels acted, there was no vomiting, and fluid, increasing from 15 oz. to 4 pints, was taken each twenty-four hours. On the seventh day the secretion of urine suddenly stopped. Before this urine had been passed in quantities of 30 to 42 oz. daily. On the seventh day he did not pass urine for fourteen hours, and I therefore introduced a catheter, but drew off only 1 drachm of urine, almost solid with albumen. For forty-eight hours after this, less than 2 oz. of urine passed, in spite of saline infusion, pilocarpin, and other remedies. During this time the patient complained a little of dull aching in the left lumbar region. All the urine drawn off was highly albuminous. On the ninth day I cut down on the left kidney, incised the capsule, and stripped most of it away, and then incised the kidney through the convex outer border into the pelvis. During the next forty-eight hours, 11 oz. of urine were passed, the earlier discharge being slightly blood stained. No adequate relief, however, was afforded, and the patient became comatose and died eleven and a-half days after the operation. The abdominal wound was soundly healed. Indeed, on the evening of the sixth day I felt assured of the patient's recovery, and I am confident that, but for the suppression of urine, he would have made a good recovery.

CASE V.—*Chronic Sclerosing Cholecystitis: Multiple Perforations: Stone in the Common Duct.*

History.—Mrs. M. S., aged 51, sent to me by Dr. W. Graddon Mortimer, of Thorne, had suffered for between three and four years from attacks of acute pain in the epigastric and right hypochondriac regions, lasting three or four hours, and then passing gradually away, leaving a sense of stiffness and soreness for a few days. Though these were the first severe attacks, the patient had for many years experienced sensations of discomfort, and grave uneasiness in the epigastrium, which was called "indigestion." In June of this year an exceptionally severe attack was followed, for the first time, by jaundice, and the jaundice has continued up to the present time. During this period—three months and a half—the depth of the tinge had varied; it is less in the morning, and gets gradually deeper during the day. There have been several attacks of shivering and faintness, followed by sweating, and after all of them a deepening of the jaundice has been observed. The motions have been like putty, and the urine has been high-coloured. A floating stone in the common duct was diagnosed.

Operation, October 3rd, 1902.—The abdomen was opened through the right rectus muscle and the upper end of the incision was prolonged towards the xiphoid cartilage. An immense number of adhesions were found and separated. It was then found that three stones, each equal in size to a Barcelona nut, had ulcerated almost through the walls of the gall bladder. Two of these lay in pockets in the omentum, and one was almost hidden in a cavity in the liver. The gall bladder was shrunken. The stones were removed and the gall bladder cleared. A stone was then found in the common duct, and was removed. The rest of the common duct was explored carefully and found to be clear. The gall bladder, which was shut off from the bile channel by an impervious cystic duct, was then removed. Drainage by a split rubber tube and gauze was adopted for forty-eight hours. The patient is now quite well.

CASE VI.—*Acute Cholecystitis: Incipient Gangrene of Gall Bladder: Cholecystectomy.*

Mrs. B., aged 33, seen with Dr. Rowling.

History.—The previous history of the patient was unimportant, save for the fact that there had been occasional "indigestion." On November 6th, 1902, she went for a long drive on the top of an electric car and felt chilled. On the following day she felt cold, shivered a little at times, and suffered all day from headache. On November 8th the headache persisted. In the early morning there was a large loose stool; there was some abdominal pain, and later in the day there were several attacks of diarrhoea and vomiting. On November 9th she was seen by Dr. Rowling for the first time. The temperature was 102°, the pulse was 90. An abdominal examination proved negative. On November 10th severe pain was experienced, entirely on the right side of the abdomen, and on examination an indefinite fullness was perceived. On the following day this had resolved itself into a definite mass in the right hypochondriac region. The mass increased in size rapidly, and by November 13th it had reached almost to Poupart's ligament. The general condition of the patient became increasingly serious; the temperature never fell below 102°, a little general distension of the abdomen developed; vomiting persisted, and was most painful and distressing, and the bowels were unrelieved. On the morning of November 13th I saw the patient with Dr. Rowling, and diagnosed the case as one of acute cholecystitis, with peritonitis. On account of the increasingly serious aspect of the case, but chiefly because of a severe rigor in the early morning, I was inclined to suspect incipient gangrene of the gall bladder.

Operation.—On Friday, November 14th the abdomen was opened through the right rectus muscle and the gall bladder exposed. It was deep maroon in colour, with irregular spotted patches of dark green. The gall bladder measured about 7 in. in length, and was tensely distended. On aspiration about 2 oz. of muco-purulent fluid were removed. The walls of the gall bladder were felt to be stiff and very much thickened. An incision into the fundus gave exit to some small gall stones. After their removal a stone about equal in size to a walnut was taken away. Beyond it and near the cystic duct a stone was felt encapsuled in the wall of the gall bladder or imbedded in a diverticulum; it was impossible to say precisely. As the gall bladder was almost gangrenous it was decided to remove it. This was done in the manner already described. On account of the intense local inflammation drainage was adopted for two days. The operation was fairly well borne; the patient rallied from her prostrate condition very quickly, and was out of danger in about three or four days. She is now (January, 1903) in good health.

On examining the gall bladder it was found to be intensely congested, and in parts gangrenous. The points of gangrene corresponded to deep ulcerations seen from the inner surface. A stone equal in size to a nutmeg was found in a separate loculus near the junction of the gall bladder and cystic duct.

GALL STONE IN THE COMMON BILE DUCT: CHOLECYSTOTOMY: RECOVERY.

By S. J. ROSS, M.B., CH.B.VICT.,
Assistant Surgeon to the Bedford County Hospital.

I RECORD this case chiefly on account of the age of the patient, the duration of symptoms, and the absence of complications at the time of operation, notwithstanding the long history.

History.

A woman, whose age was 67 years 10 months upon the day of operation, had her first attack of biliary colic at the age of 40 years, just after the birth of her last child. The attacks recurred at irregular intervals up to four years ago. They then became more frequent, and during the past twelve months still more frequent and more severe. During an attack she experienced severe paroxysmal pain in the region of the gall bladder accompanied by vomiting, shivering and jaundice, and fever which lasted for several days. My partner Dr. Coombs (to whom I am indebted for the previous history, and also for the great interest he has taken in the case subsequent to the operation) advised operation. On November 6th, 1902, I saw the patient towards the end of an attack. She was then slightly jaundiced. In the gall-bladder region was a globular swelling, the lower rounded border of which could be easily defined. It was evidently the distended gall bladder. The patient was anxious for surgical relief. Calcium chloride gr. x was administered for three days thrice daily.

Operation.

On November 10th, the patient having been prepared for operation, Dr. Coombs administered chloroform, and assisted by Mr. Nash I made an incision 4 in. in length in the right semilunar line. Upon opening the peritoneal cavity the distended gall bladder was readily seen, drawn into the wound, and packed round with sterilized flat cloths. The contained bile was then withdrawn by means of a cannula and the gall bladder opened. The stone, which was lying in the common bile duct, was easily felt, pushed onwards into the gall bladder, and delivered. The stone was oval in shape, and weighed 3ij gr. x. The ducts were examined and found free from further obstruction. The edges of the wound in the gall bladder were sutured to the parietal peritoneum. The remainder of the abdominal wound was closed in three layers, a rubber tube was inserted into the gall bladder, and removed at the end of forty-eight hours. Very little blood was lost during the operation.

After-history.

The wound healed by primary union, and I removed all the sutures upon the tenth day. There was never any rise in temperature after the operation. The fistula discharged freely for three days, and then the discharge steadily decreased. It had almost closed on December 19th.

The shape of the stone accounts for the absence of such intense jaundice as usually occurs in these cases. The attacks of biliary colic were doubtless due to axial rotation of the stone in the duct. The attacks of shivering, which are a very constant feature of cases of stone in the common bile duct, are, I think, instances of nervous traumatic fever, analogous to urethral fever following the passage of a catheter, and occurring in cases in which the element of sepsis is entirely excluded.

In conclusion, I think this case illustrates the importance of operative interference in cases of biliary calculus, and even when the age is suggestive of the presence of irremediable conditions associated with the gall stones.

TWO OPERATIONS PERFORMED UPON THE LIVER THROUGH THE CHEST WALL.

By G. P. NEWBOLT, F.R.C.S.,
Honorary Surgeon, Royal Southern Hospital, Liverpool.

GENERALLY speaking, in cases of abscess or hydatid of the liver one is able to evacuate the contents of the cavity by an incision made through the abdominal wall, but there are instances in which it is only possible to do this by resecting a rib and thus reaching the collection. The two following cases are good examples of this condition.

CASE I.—*Hydatid of Liver opened through the Chest Wall.*

History.—A. P., aged 12, was transferred from the medical wards of the Royal Southern Hospital to my care on August 7th, 1900. She was admitted on July 23rd, 1900, and had been ill for some months suffering from shortness of breath and discomfort in the right side. She had lived on a sheep farm in North Wales.

State on Examination.—The abdomen was swollen in the upper two-thirds,

but the lower part from the umbilicus downwards was retracted. The margin of the liver was visible during respiration. The liver dullness in the mammary line measured 5¾ in., extending from the upper border of the third rib to 2¾ in. below the costal margin, behind it measured 6 in., and in the axillary line 6¾ in., extending from the fourth rib downwards. The circumference at the costal margin was 23¾ in., at the umbilicus it was 19½ in. The margin of the lung expanded about an inch on inspiration over the dull area. Breath sounds were weak over the dull area in the axilla, elsewhere fairly marked vocal resonance and fremitus conducted. Heart normal, impulse fourth space in left nipple line. Respiration rapid, averaging 32 to minute. Temperature 100° at night. On palpating the liver there was distinct but regular enlargement of this organ below the ribs, but nothing like a cyst could be made out. The conclusion come to was that there was probably a hydatid in the liver pushing the lung upwards. An exploring needle introduced by Dr. Macalister two or three days later drew off pus.

Operation.—On August 7th, 1900, the patient being under chloroform, I put a large needle through the eighth interspace in the mid-axillary line and got clear yellow fluid, which had a foul smell. I again put the needle through the ninth interspace, with a similar result. I therefore cut down upon and removed a piece of the ninth rib in this region, and opened the chest. The lung which was healthy at once retracted, and the wall of a cyst bulged up at the lower part of the wound. I aspirated the cyst, and obtained fluid of the same character as before. Having drawn about 8 oz. off, I caught the cyst wall with forceps, and drew it up into the wound, sewing it to the soft parts so as to shut off the cavity of the chest. On opening the cyst freely a large quantity of fluid escaped and numbers of cysts of all sizes, some containing pus, and all being abominably fetid. I was now able to get away the whole lining of the cyst in one piece, and having washed out the cavity I put in a full-sized drainage tube, and packed it around with gauze. The girl stood the operation well.

Progress.—The temperature, which at the time of operation was 99.6°, ran up to 102° on the night of operation. The pulse was 120, and the respirations 64. For several days I was very anxious about her on account of the quick respiration and pulse, though her temperature kept low, but everything gradually quieted down, and she made a perfect recovery, leaving the hospital at the end of November with the wound soundly healed and with normal physical signs on the affected side of the chest. The discharge from the wound for many weeks was bile-stained and most profuse.

CASE II.—*Abscess of the Liver opened through the Chest Wall.*

History.—James McC., aged 37, a fireman, was admitted to the Royal Southern Hospital on December 4th, 1901, and placed under the care of Dr. Macalister. The history he gave was that in February, 1901, he had an attack of malarial or swamp fever in India, but no previous illnesses. There was also a doubtful history of dysentery. Eight days before admission he was seized with pain in the right side of the chest, low down, which had been getting steadily worse, and in addition to this he had a troublesome cough.

State on Admission.—There was slight tenderness over the right side of the chest, with impairment of movement. Wooden dullness, extending upwards to a level with the right nipple. The breath sounds were diminished, and almost inaudible, and vocal resonance and fremitus were also diminished laterally and behind. In front there was skodaic resonance at the right apex, and the breath sounds were somewhat bronchial and cavernous; pectoriloquy was present. The left lung was normal. The apex beat was outside, and on a level with the left nipple, evidently being pushed over by fluid in the right side. The pulse was 120, irregular, of small volume, and low tension. Bowels were constipated. Urine acid 1020, and the temperature varied between 99° and 101.5°. The patient lay on his right side, and was sweating profusely. An exploring needle gave a negative result. On December 9th I saw the patient with Dr Macalister. He looked white and ill; the right side of the chest was dull, and there was an absence of breath sounds; friction could be heard at the upper level of the dullness, and also when the patient turned on to his right side from his back, but this movement was attended by a good deal of pain. The liver could be felt below the ribs, and was somewhat tender and enlarged, but there was no sign of deep fluctuation, and it gave one the impression of being pushed down from above. The heart's apex was displaced, upwards and outwards. There was distinct tenderness on deep pressure in the interspaces over the right side of the chest below, and oedema with some bulging of the chest wall. The man had a bad cough, attended by profuse expectoration.

Operation.—On December 10th the patient being under ether, I introduced a big needle between the ninth and tenth ribs in the mid-axillary line, and at once got pus. I next exposed and removed 2 in. of the ninth rib and opened the pleural cavity. It was now evident that there was a large abscess in the liver, and the tension in the abscess cavity was so great that pus was escaping by the side of the needle. I therefore packed some gauze around so as to shut off the pleural cavity, and after allowing a good deal of pus to escape through the needle I freely incised the abscess wall, catching it with forceps and pulling it up into the wound. After allowing most of the contents to escape, I plugged the opening into the abscess cavity with a sponge and sewed the margins to the parietal pleura and chest wall, thus shutting off the cavity of the chest. I left the silk ligatures with which I did this long so that I could remove them easily when loose. In a previous case of hydatid opened in this way I cut the ligatures short, and one of them not separating kept the sinus open for a long time. I was now able to explore the abscess cavity, which was of large size, occupying the upper surface of the liver. It contained about a pint of chocolate-coloured pus, not offensive in character, and was lined by a soft pyogenic membrane. After gently scraping the walls of the cavity with a lithotomy scoop, I inserted a large double-barrelled drainage tube, and washed out freely with boracic lotion.

Progress.—The patient was rather collapsed for some hours after operation, but he rallied well, and the cavity was washed out daily. The symptom which gave him most trouble was the cough, probably due to the interference with his diaphragm. His pulse and temperature both dropped after the operation, and remained down until December 26th, when his temperature rose to 102°, and he was rather ill for about a fortnight. There was some pneumothorax, and as this complication occurred just after the removal of one of the six big silk ligatures holding the parts together, I think it possible that air entered through the aperture left by the ligature or by a minute separation of the edges of the wound. However, this cleared up gradually, the man put on flesh, his cough subsided, and he was discharged on February 6th perfectly well, and remained so when last seen some three months after operation. There was never any bile in the discharge from the wound nor was he at any time jaundiced, so that it is probable that the abscess was situated between the capsule and upper surface of the liver.

The diagnosis in this case rested upon the fact that from the temperature, pulse, sweating, and oedema there was evidently pus either in the chest or liver. The tenderness on deep pressure in the intercostal spaces over the liver, and on that organ below the ribs, the bulging of the side of the chest, but not so much of the intercostal spaces, together with the aggravated pain on movement, made us suspect that the pus was in the liver, though of this one could not be certain.

The point which struck me was the danger of putting an exploring needle into a tense cavity like this without being prepared to open up freely or empty the cavity for the time being with the aspirator. If this had not been done in this instance, I am sure that the tension in the abscess cavity would have forced pus through the needle track into the pleural cavity, producing an empyema. The withdrawal of a portion of the contents before incising allowed the abscess wall to come well up into the wound, and thus avoided the necessity of a preliminary stitching of the adjoining pleural surfaces, and a more prolonged operation. Both of these cases were described at a meeting of the North Wales Branch of the British Medical Association, and both were transferred to me by my colleague, Dr. Macalister.

CASE OF LIVER ABSCESS IN A CHILD AGED TWO AND A-HALF YEARS.

By W. J. J. ARNOTT, B.A., M.B.,
St. Helena.

ABSCESS of the liver in childhood is almost unknown—it is said by Manson in his *Tropical Diseases* not to occur. Given, however, a predisposing condition, debility, and the same exciting cause as in adult life—namely, dysentery and its associated organism—there is no obvious reason why the disease should not occur, even if only rarely, in a child.

It was this view of the matter which led me to diagnose an abscess in the above case.

The child was admitted to the Civil Hospital on April 16th, 1902, with a history of a neglected attack of dysentery. The stools were typically dysenteric in character. In addition to dysentery the signs of commencing tubercle in the lung were present. The general aspect was tuberculous, complexion very pale, and somewhat waxy in hue, and the mucous membranes extremely anaemic. There was at no time any appearance of jaundice.

Treatment was carried out in the open air, and both the bowel lesion and lung affection rapidly improved, all dysenteric symptoms disappearing in little over a week.

The temperature in the evening had ranged to about 100° for the first ten days after admission; it then remained about normal for the next nine days. At the end of that time it rose to 100°, two days later to 102°, and for the ensuing fortnight the morning and evening temperature ranged irregularly between 101° and 104°. There was nothing in the chest to account for this rise of temperature, as now, three weeks after admission, all signs of pulmonary disease had disappeared. The abdomen was distended, and with a little pressure to displace the bowel the liver could be felt to be enlarged about two fingerbreadths below the ribs, and to about the same extent in an upward direction. On inspection there was a slight fullness in the contour on the right side in the hepatic region, which was absent on the left side. The respiration was almost altogether of the thoracic type, and there was a certain amount of "catch" in, and acceleration of, the breathing, with nothing in the lung to account for it. Beyond this slight respiratory embarrassment the child did not appear to suffer pain. The pulse was weak and rapid, ranging generally between 120 and 130. Vomiting now became a very troublesome symptom, the child being only able to retain very small quantities of nourishment, and exhaustion was clearly threatened. The pressure of an enlarged liver was regarded as the cause of this vomiting, and on May 17th an exploring trocar and cannula were inserted in the tenth interspace in the anterior axillary line. Pus escaped through the cannula at the first puncture. The skin was frozen with ether, and an incision was immediately made over the spot in the intercostal space; a drainage tube was inserted, about 12 oz. of pus being discharged through the tube. Next day the temperature had dropped from 103° to 99°, the vomiting had ceased, the child was much relieved and slept well. During the next four days the evening temperature was below 100°, the pulse was quiet, the abdominal distension had dis-

appeared, and the liver could not be felt below the ribs. At this stage a slight convergent strabismus was noticed for two days. Its ominous significance was not at once apparent; a day later, however, a hydrocephalic cry announced the presence of tuberculous meningitis. This was followed by convulsions, which lasted with intermissions till death took place thirty hours later, and six days after the abscess had been opened.

Though the ending to this case was disappointing, seeing that incising the abscess had afforded such marked relief, nevertheless, on account of the early age of the patient, I think it one worth recording.

NOTE ON A NEW METHOD OF PRODUCING HAEMOLYSINS.

BY

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By experiment we have found that if urine of a healthy man be injected two or three times subcutaneously into a rabbit, the serum of this rabbit acquires a marked haemolytic action on human red blood corpuscles.

When such serum is added to human red blood corpuscles, haemolysis occurs very rapidly. The following experiments illustrate our meaning.

First Tube contains ... { 15 drops of rabbit's serum. (This rabbit had received 3 injections of human urine.) 2 drops of washed human red corpuscles.

Result.—Haemolysis beginning after three minutes; complete in five minutes.

Second Tube contains... { 5 drops of the same serum. 10 drops of salt solution at 7 per cent. 2 drops of washed human red corpuscles.

Result.—Complete haemolysis in eight minutes.

Third Tube contains ... { 1 drop of same serum. 14 drops of salt solution at 7 per cent. 2 drops of washed human red corpuscles.

Result.—Complete haemolysis in twenty-six minutes.

Fourth Tube contains... { 5 drops of a 10 per cent. solution of same serum in normal salt solution (7 per cent.) 10 drops of 7 per cent. salt solution. 2 drops of washed human red blood corpuscles.

Result.—Complete haemolysis in forty-six minutes.

Fifth Tube contains..... { 2 drops of the same solution of serum as in the preceding experiment. 13 drops of 7 per cent. salt solution. 2 drops of washed human red blood corpuscles.

Result.—Complete haemolysis after fifteen hours.

Sixth Tube contains..... { 1 drop of the same solution of serum as in the preceding experiment. 14 drops of 7 per cent. salt solution. 2 drops of washed human red blood corpuscles.

Result.—Haemolysis marked but not complete after fifteen hours.

Seventh Tube contains { 1 drop of a 5 per cent. solution of serum prepared as before. 14 drops of 7 per cent. salt solution. 2 drops of washed human red blood corpuscles.

Result.—No haemolysis after fifteen hours

A 0.66 per cent. solution of this serum, therefore, still possesses a fairly marked haemolytic action.

The serum heated to 56° C. during half an hour retains its haemolytic properties, though the appearance of this phenomenon is somewhat delayed.

The action of heat (56° C.) must be allowed to continue for five hours and a-half in order to completely destroy the haemolytic properties of some serums. If when the haemolytic properties have disappeared some serum of a normal animal be added, the serum regains haemolytic properties, though its action is still somewhat delayed.

First Tube contains ... { 15 drops of rabbit's serum (the same as in the preceding experiments) heated (56° C.) during two hours. 2 drops of washed (twice) human red blood corpuscles

Result.—Haemolysis complete after forty minutes.

Second Tube contains ... { 15 drops of same rabbit's serum heated (56° C.) during three hours. 2 drops of washed human red blood corpuscles.

Result.—Haemolysis complete after fifteen hours.

Third Tube contains ... { 15 drops of same rabbit's serum heated (56° C.) during five and a-half hours. 2 drops of washed human red blood corpuscles.

Result.—Haemolysis absent after fifteen hours.

Fourth Tube contains... { 15 drops of same rabbit's serum as in the preceding experiment 2 drops of washed human red blood corpuscles. 10 drops of serum of normal guinea-pig. (This serum alone having no effect on human red blood corpuscles)

Result.—Haemolysis complete after eighteen minutes.

Fifth Tube contains ... { 15 drops of same rabbit's serum as in the preceding experiment. 2 drops of washed human red blood corpuscles. 5 drops of serum of normal guinea-pig.

Result —Complete haemolysis after twenty-five minutes.

Sixth Tube contains ... { 15 drops of same rabbit's serum as in the preceding experiment. 2 drops of washed human red blood corpuscles. 2 drops of serum of normal guinea-pig.

Result.—Complete haemolysis after fifteen hours

Seventh Tube contains { 15 drops of same rabbit's serum as in the preceding experiment. 2 drops of human red blood corpuscles. 1 drop of serum of normal guinea-pig.

Result.—Haemolysis absent after fifteen hours.

The serum of a normal animal, therefore, does not replace completely the substance lost by heating, which was contained in the serum of the animal previously injected with urine. In another experiment with the serum of another normal guinea-pig the haemolytic properties were regained to a more marked extent, but nevertheless the delay still existed. The same result was obtained with the serum of normal rabbits.

It must be noted, also, that the serum of certain rabbits injected with urine does not show all these properties to so marked a degree, even when scrupulous care had been taken that the conditions of the experiment were exactly the same. Thus, one kind of serum after being kept for twenty-two days in the ice-box retained its haemolytic properties almost completely, whereas another after twelve days' keeping was but slightly haemolytic without the addition of serum of a normal animal. The second serum lost its haemolytic power after being heated to 56° C. for 1½ hour, whereas the first lost the same property only after 5½ hours' heating.

The serum produced by the injection of human urine is not altogether specific for human red blood corpuscles. It has, for instance, some action on the red blood corpuscles of guinea-pigs also, although the intensity of this action again varies greatly, as the following experiments show:

SERUM OF RABBIT A (PREVIOUSLY INJECTED WITH HUMAN URINE).	SERUM OF RABBIT B (PREVIOUSLY INJECTED WITH HUMAN URINE).
Experiment 1.	
Tube contains 15 drops of serum, 3 drops of red blood corpuscles (washed twice) of normal guinea-pig.	Tube contains 15 drops of serum and 3 drops of red blood corpuscles (washed twice) of normal guinea-pig
Result.—Haemolysis complete in eight minutes.	*Result* —Haemolysis complete in one hour.
Experiment 2.	
Tube contains 1 drop of serum diluted in 14 drops of physiological salt solution and 3 drops of red blood corpuscles (washed twice) of normal guinea-pig.	Tube contains 1 drop of serum diluted in 14 drops of physiological salt solution and 3 drops of red blood corpuscles (washed twice) of a normal guinea-pig.
Result.—Haemolysis complete in one hour.	*Result* —Haemolysis complete in fifteen hours.
Experiment 3.	
Tube contains 5 drops of a 10 per cent. solution of serum in physiological salt solution, 10 drops of physiological salt solution, and 3 drops of red blood corpuscles of guinea-pig.	Tube contains 5 drops of a 10 per cent. solution of serum in physiological salt solution, and 10 drops of physiological salt solution, and 3 drops of red blood corpuscles of guinea-pig.
Result.—Haemolysis in fifteen hours.	*Result.*—No haemolysis after fifteen hours.
Experiment 4.	
Tube contains 2 drops of a 10 per cent. solution of serum in physiological salt solution, 13 drops of physiological salt solution, and 3 drops of red blood corpuscles of guinea-pig.	
Result.—Slightly haemolysis in fifhours.	
Experiment 5.	
Tube contains 1 drop of a 10 per cent. solution of serum in physiological salt solution, 14 drops of physiological salt solution, and 3 drops of red blood corpuscles of guinea-pig.	
Result.—No haemolysis in fifteen hours.	

Whereas a 1.3 per cent. solution of serum No. 1 therefore has still some slight haemolytic action on the red blood corpuscles of a guinea-pig, a 3.3 per cent. solution of serum No. 2 has no haemolytic action.

The specificity of these serums is not absolute, and becomes more evident the more they are diluted and the longer they

are kept. Thus a 0.66 per cent. solution of serum No. 1 had a strong haemolytic action on human red blood corpuscles, whereas a 1.3 per cent. solution of the same serum had but a slight haemolytic action on the red blood corpuscles of guinea-pigs.

Serum No. 2 is still more specific, for whereas a 1 per cent. solution dissolved human blood corpuscles, a 3.3 per cent. solution had no such action on the red blood corpuscles of guinea pigs.

Similarly, the 3.3 per cent. solution of serum No. 1, kept for eighteen days, no longer dissolved the red corpuscles of guinea-pigs, though a 0.66 per cent. solution of the same serum still dissolved those of man. Serum No. 2, kept for twenty days, even when not diluted, and when fresh guinea-pig's serum had been added, no longer dissolved the red blood corpuscles of guinea-pigs, though a 1.3 per cent. solution still dissolved human red blood corpuscles, provided fresh serum from a normal animal were added.

The fact that such serum is not entirely specific is not astonishing, when one reflects that one is dealing with a liquid as complex as urine, for among the "haemolysogenous" substances contained in urine there must be several substances common to many kinds of animals.

Schattenfroh (*Centralblatt f allgemeine Pathologie*, vol. xiii, No. 14, August, 1902) also injected animals with urine and found that the serum had strong agglutinating and haemolytic but no precipitating properties.

BOTTLE-FINISHERS' CATARACT.

By WILLIAM ROBINSON, M.D., M.S., F.R.C.S.,
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HARD cataract is very common in bottle-finishers. My experience as surgeon to the Sunderland and Durham County Eye Infirmary during the last seven and a-half years has impressed upon me this fact.

How much commoner it is in them than amongst the rest of the community is shown by the fact that 18 out of 75 (1 in 4) hard cataracts operated upon last year in our Eye Infirmary were in bottle-finishers, there being only 200 or 300 bottle finishers in a population of nearly a million and a quarter in this county.

Amongst bottle-makers the "bottle-finisher" is the man who is almost always the victim of the disease, but occasionally the "founder" suffers.

The Nature of a Bottle-finisher's Work.

The following particulars were learnt from visiting some bottle works in this neighbourhood, where 3-gill black wine bottles were being made. The mixed materials (sand, lime, clay, marl, etc.) are thrown by the "founder" into the large furnace ("tank"), which is kept at a white heat by the burning of currents of coal gas and air directed on to the surface of the metal. The "founder" has to push with a long iron rake the materials away from the mouth of the furnace into which he has thrown them, and consequently he has to look occasionally into the intense light and heat. He is provided with a piece of framed dark-blue glass, through which he can look into the furnace, but this he rarely uses, and consequently some founders get cataract. The "founder" may work six or seven shifts a week of twelve hours each. At the opposite end of the furnace are several openings, at which the different bottle-makers work in squads of five men each.

A lad generally begins as a bottle maker as a "taker in," whose duty it is to carry the finished bottle from the bottle-finisher to the annealing chamber. He is afterwards promoted to be a "putter-up" or "wetter off," whose work is to put up to be heated the iron pipe, 6 ft. in length, on which the bottles are blown, into the furnace, and knock off the remains of the bottle that has just been made.

He is next promoted while still an apprentice to be a "gatherer," whose duty it is to dip the iron pipe into the sea of molten metal and take up just sufficient liquid glass to make a bottle. During this part of the work he necessarily looks into the furnace; but he is young and his eyes do not suffer, though the skin of his face is often inflamed and blistered by the heat, especially the left cheek. With his back to the furnace he next rolls the glass on a stone and roughly forms the neck and shoulder of the bottle. He then hands the pipe to the bottle-blower, who shapes the body of the bottle on another stone, then places it in a mould and blows down the pipe into it to form a bottle. During this process the cheeks of some (not all) of the bottle-blowers balloon out enormously. About two out of every three apprentices become expert enough to be promoted from being "gatherers" to be "bottle-blowers," and they are about the age of 21 at the time of promotion. A "gatherer" sometimes becomes a "founder." The glass-blower hands the blown bottle, still on the iron pipe, to the bottle-finisher, who takes hold of it with a "cage or sticker punty": the bottle is then cut from the pipe. The glass-blower does not look into the glass furnace and his eyes do not become cataractous.

The bottle-finisher, holding the bottle on the "punty" in his left hand, with an iron rod in his right looks directly with both eyes into the sea of molten glass, and takes just sufficient to form the rim on the neck of the bottle. Having done this he turns away from the furnace and sits under the shelter of a brick shade, in order to put the rim on the bottle. His left cheek is now towards the hot wall of the furnace, and it is therefore generally more inflamed than the right cheek by the heat. The extent to which the eyes of the bottle-finisher are exposed to the most brilliant light and intensest heat from the furnace may be estimated by the fact that he generally works five shifts each week, a shift lasting eleven hours, and at each shift he finishes 110 to 120 dozen bottles at the rate of 2½ bottles per minute. The time in which he is obliged to look into the furnace whilst he gets the metal for the rim of each bottle is about three seconds, so that at each shift his eyes are exposed to the glare of the furnace for at least sixty-six minutes, or about five and a-half hours a week. This is the man, therefore, whose lenses become opaque. With the old furnaces, the left eye was more exposed to the furnace, but in the present furnace both eyes are equally exposed to the light and heat; if there is any difference the right is the more exposed.

Only about one in two bottle-blowers is promoted to be a bottle-finisher, and when he is so, he is generally between the ages of 25 to 40. The bottle-finisher is a much older man at his trade than either the "taker-in," the "gatherer," or the "putter-up," who are usually under the age of 21 and he has passed through all these grades of work as well as that of bottle-blower.

If the cataracts are due to the bright light and heat of the furnace, the question naturally arises: Do men similarly exposed to light and heat in other trades suffer from the same affection?

I have been informed that in other branches of the glass trade such as the making of tumblers, glass jars and plate glass it is only the "founder" who looks into the furnace (the "tank") and he only does so occasionally, and I have met with only one case in men from these works, in which the metal is gathered from "pots" and not from the huge "tank."

In large steel and iron works, such as are at Middlesbrough where the Siemens-Martin process is used, the intense light and heat of the furnace are so great (2,000° F. to 3,100° F.) that looking into it for a short time with the naked eye the observer becomes quite blind for a while—but there the furnace men use dark blue glasses and require only occasionally to look into the furnaces and so far as I know do not suffer from cataract.

In smaller steel and iron works no glasses are used, but as the men only at infrequent intervals look into the furnace and the glare is not so great they do not suffer. The light and heat to which puddlers are exposed are much less and they are not affected by cataract.

Both Eyes are Practically always Affected.

The disease begins about the same time in both lenses, so that they usually present the same appearances when the worker applies for treatment.

The Disease begins comparatively Early in Life.

It commences as often as not before the age of 50 years, and not uncommonly before the age of 40 even, whereas ordinary senile cataract is not often seen before the age of 50.

The Disease progresses Slowly.

The bottle-finisher is often able to work for some years after the opacities begin, especially if the pupil be kept dilated by atropine; the great improvement of the sight by the use of atropine is due to the fact that at first the periphery of the lens is clear.

Mode of Development.

The opacity first appears at the posterior pole of the lens, immediately under the posterior capsule, and is shaped like

a disc or coin, which by oblique illumination is distinctly brass-coloured. The outline of this disc is well defined, but the opacity is less dense and shades off towards the equator. As the haziness spreads it at first clings closely to the posterior capsule, so that it is saucer-shaped in the earlier stages of the disease, the concavity of the posterior capsule of the lens being easily seen by oblique illumination. By direct examination with a +10 lens the central disc is not completely opaque, the opacity presenting often a shape like an irregular Maltese cross within a circle; and the surrounding less-dense opacity is often like a cobweb. From the posterior pole the cloudiness and opacity gradually spread to the rest of cortex, and when the cataract is ripe the lens has a markedly pearly hue. That the posterior capsule of the lens is itself diseased I infer from the following two facts: (1) During the extraction of a ripe cataract, even with the greatest care, vitreous is much more apt to escape than is the case with ordinary senile cataracts; and (2), after a successful operation, occasionally remnants of membrane which, owing to their depth appear to be pieces of the posterior capsule, can be seen to be thick and densely white.

Bottle-finishers' cataract thus differs from the way in which ordinary senile cataract generally develops, namely, (1) as lines or sectors (radii) from the equator of the lens: or (2) as opaque layers surrounding the sclerosed (but clear) nucleus; or (3) as small milk-white opacities scattered throughout the cortex; or (4) in two of these ways at the same time (see Fig. 1). I do not deny that an ordinary senile cataract may begin as a posterior polar cortical cataract; if it does so it is a rare event, whereas practically all cases in bottle-finishers begin in this way.

It differs from ordinary posterior cortical cataract, which is a secondary cataract following on disease of the vitreous, pigmentary degeneration of the retina (retinitis pigmentosa), or disseminated choroiditis, and which is therefore often found in the young, and if removed the vision is still bad owing to the posterior mischief.

Bottle finishers' cataract is a primary cataract, being purely a local disease of the lens, and after extraction the vision is good, and there is not, as a rule, associated with it any disease of the vitreous, choroid, or retina, though the fundus is generally "tessellated" or "tiger striped," that is, the pigment between the choroidal vessels shows through the retina, owing to disappearance of the pigment in the tessellated layer of the retina, or to increase of pigment in the choroidal intervascular spaces, an effect produced, I think, by the cause of the cataract, namely, the intense light and heat of the furnace.

Etiology.

The disease is undoubtedly due to the great light and heat of the furnace at which the bottle-finisher works, but why does the mischief always begin at the posterior pole of the lens? The explanation I advance is as follows:

1. The nodal point (which practically corresponds to the optical centre) is situated at the exact spot where the cataract begins, and here all the principal rays, of the various pencils of rays, falling on the lens cross and pass without refraction, so that this point of the lens receives the brunt of all the direct rays, harmful by their intensity and heat from the furnace, and is therefore the point first to suffer injury. (See Fig. 2.)

2. All the rays from the furnace, except the direct and principal rays mentioned above, which have fallen on the cornea when they reach the anterior surface of the lens, are again refracted, so that when they reach the posterior surface of the lens they are much more crowded together, and are consequently more injurious there than at any other part of the lens. (See Fig. 3.)

3. The bright light of the furnace contracts the pupil so that the iris shields the periphery of the lens at first from damage.

The rays from the furnace consist of light and heat rays, both of which are radiated, reflected and refracted in like fashion, the difference between them in these respects being one of degree or quality, not of kind. Probably so far as the light rays are concerned it is most likely their actinic rays ("the invisible and more refrangible rays of light at and beyond the violet end of the spectrum, on which the chemical action of light chiefly depends") which help in the production of the cataract. I think, however, that it must be the heat rays that are most to blame by probably causing a drying and shrinking of the normal lens fibres so that spaces are formed between the fibres themselves or between them and the posterior capsule, and that in these spaces fluid (liquor Morgagni) collects, and thus the opacity is produced. I do not believe that the constant sweating of the men whilst at work produces the cataract, as there are many other classes of workmen who perspire as freely, and who do not suffer in this respect.

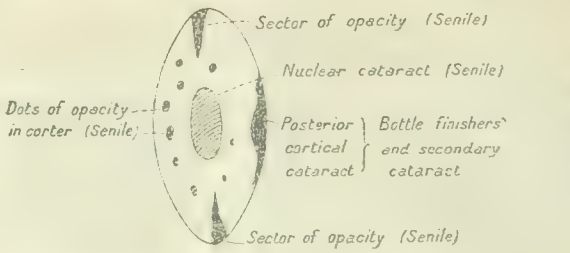


Fig 1. *To illustrate the various ways in which a cataract begins in the lens*

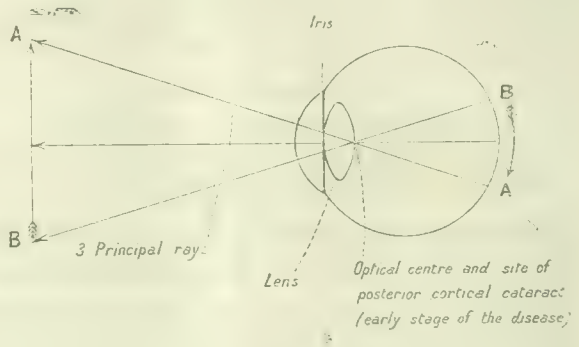


Fig 2

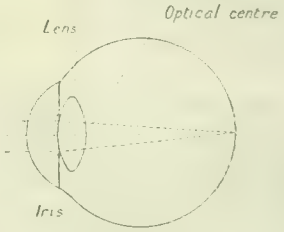


Fig 3

Prevention.

The disease can be prevented by workmen wearing dark pure blue spectacles—of this I feel sure; for glass has the property of allowing only 30 per cent. of the heat rays to pass through it; and, if the glass is dark coloured, many of the light rays would also be cut off. I have heard of one man continuing his work who has had a cataract removed from one eye, over which he wears a strong lens, and, the vision of the other eye being good, he uses only a plain glass in front of it. The Siemens-Martin men wear glasses. Although when advised to do so bottle-makers offer various excuses, I am certain that there is no valid objection to the use of the spectacles whilst they are at work, and that it would be very greatly to their advantage to wear them.

I append brief notes of 6 cases of cataract, all in bottle-finishers, who happened to come to my out-patient department on Saturday, November 8th last, whilst I was busy with this paper. They are not, therefore, picked cases, and may be taken as fair

Examples of the Disease in Bottle-finishers.

CASE I.—J. U., aged 59. Both eyes began about eighteen months ago: he can read newspapers and $\frac{6}{6}$ with each eye. The fundi are normal but "tiger-striped," and both lenses present the early signs of posterior cortical cataract described above. In the left lens there is a single sector or streak of opacity (senile) extending from the equator, half-way to the centre of the lens.

CASE II.—T. G., aged 59. Both eyes affected; the right began at the age of 46, and the left at 49. The right lens is quite ripe and pearly white in colour. I removed the right lens on December 18th; there were some adhesions of the iris to the anterior capsule, which was very dense, so I delivered the lens in its capsule complete, after performing an iridectomy. A small bead of vitreous escaped as the lids were being closed. The anterior capsule of the lens was dense and pearly white and about the thickness of tissue paper; the posterior capsule was much thinner and more translucent but whitish. The result of the operation is excellent. The left lens was removed by me on October 4th, 1902, and with + 10 D he sees $\frac{6}{6}$. There is no posterior mischief.

CASE III.—J. B., aged 59. Both eyes affected; the right began at the age of 55, in January, 1898, and the left shortly after. I removed the left lens on June 18th, 1901; he had had an injury to this eye many years before which had set up iritis and resulted in adhesions of the iris to the lens, necessitating the removal of the lens by the vectis. Some vitreous escaped, and his vision now in this eye is $\frac{6}{36}$, and there is some displacement of the pupil. The right lens I removed on September 26th, 1902; six weeks afterwards with + 11 D he read $\frac{6}{6}$. He has no fundus mischief.

CASE IV.—J. S., aged 53; both eyes affected; left began at age of 48, and right at 51. I removed the left lens in March, 1901. Immediately after the section some vitreous presented, and I removed the lens with the vectis in its capsule. He has a beautifully clear pupil, and with a + glass he saw $\frac{6}{9}$ until May, 1902, when the vision began to fail, and now with + 6 he sees only $\frac{6}{36}$. There has developed recently a separation of the retina at the lower half of the fundus and a patch of choroidal atrophy. On September 23rd last I removed his right lens, and on November 8th he read $\frac{6}{12}$ with + 6 D. He has a good pupil and no posterior mischief.

CASE V.—J. W., aged 40, presents in both eyes the appearance of early posterior cortical cataract described above. The defect in his sight he first noticed at the age of 38. He is still at work. The fundi are normal.

CASE VI.—D. McL., aged 55. Early appearances of posterior polar cataract in both lenses; left began at 50, and right at 51 (?); in each lens is a central well-defined dot, a central congenital cataract, which shows no tendency to increase, and by looking well from the side with light reflected from the mirror, clear lens tissue can be readily seen between the central and posterior cortical cataracts in each eye. He is about to give up work owing to increasing blindess. His fundi are normal and "tiger-striped." He has astigmatism.

Cases I, II, and IV were shown at the meeting of the Northumberland and Durham Medical Society on November 13th last. I have gone into this matter in some detail because, so far as I know, there is no literature at all on the subject, except a short paragraph in Berry's *Diseases of the Eye* (page 177 of second edition), in which it is stated that glass-blowers are subject to cataract, which generally affects the left eye first or altogether, owing to the left eye being nearer the glowing glass.

In this investigtion I have been much helped by our house-surgeon, Dr. C. A. S. Dalgliesh, especially in the observation of cases.

PERFORATION OF THE OESOPHAGUS BY TUBERCULOUS GLANDS.

BY CLIVE RIVIERE, M.D.LOND., M.R.C.P.,
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INSTANCES of tuberculous glands opening into the oesophagus are not often met with, and the following three examples seem, therefore, worthy of record. They occurred at the East London Children's Hospital, Shadwell, and I am indebted to Dr. Eustace Smith and Dr. Coutts for permission to publish the notes. The necropsy in each case was performed by myself.

CASE I.—W. C., a male, aged 2 years, was admitted on November 26th, 1900, with a history of three weeks' wasting and loss of appetite. There had been no diarrhoea or vomiting but cough had been troublesome. There was no family history of tuberculosis.

Condition on Admission.—The child was delicate-looking and showed well-marked rickets. The temperature was 102°; there were scattered rhonchi in the lungs; the liver was found to be enlarged and the spleen reached to the umbilicus.

After-History.—On December 7th it was noted that the abdomen was much distended and the temperature still remained high. On February 1st dullness over the upper sternum and on either side of it was recorded. The temperature kept high throughout the three months' illness, with fluctuations of 2° or 3°. Diarrhoea, which had begun on December 21st, continued throughout with three or four stools daily, and there was occasional vomiting, seven times in all. The child died on February 17th, 1901.

Necropsy.—At the necropsy a mass of caseous glands the size of a tangerine orange was found behind the manubrium sterni. The trachea lay behind it, and an offshoot of the mass surrounded and narrowed the left bronchus. The oesophagus was deflected to the left, and in its front wall, just below the bifurcation of the trachea, was a large opening where a caseous gland had become adherent and had ulcerated through. This was the bifurcation gland, and the opening led into a cavity in its interior containing foul pus and debris. In the stomach were three small ulcers in the mucous coat formed by the softening of caseous tubercles. The intestine contained only two small tubercles in the mucous membrane of the ileum. Some of the mesenteric glands were caseous, and the retroperitoneal glands formed a large caseous mass. There were besides tubercles in most of the other organs of the body.

CASE II.—L. K., a male, aged 10 months, was admitted on April 1st, 1902, with a history of three months' cough and wasting. There had been much vomiting, but the bowels had been regular. The parents were healthy and there was no tuberculous family history.

Condition on Admission.—A pale, wasted child, with yellow-tinted skin. In the lungs were found dullness and feeble breath sounds over the whole left side, and the heart was best heard to the right of the sternum. The abdomen was somewhat distended; the spleen was palpable and firm.

Operation: After-history.—On April 8th an incision was made into the left pleural cavity and 8 oz. of pus evacuated. Thereafter the child steadily wasted, vomiting occasionally (seven times during the two weeks' illness), but having no diarrhoea, and died on April 24th.

Necropsy.—At the necropsy a mass of caseous right tracheal glands, caseous bronchial and pulmonary glands and a limited lung tuberculosis were found. In the oesophagus, below the bifurcation of the trachea, opposite the bifurcation gland, was an opening through the anterior wall large enough to admit the little finger, and leading into a cavity the size of the end of a thumb. This was formed by softening of the bifurcation gland and was lined by a mucous coat over a fibrous wall. It extended upwards in front of the right bronchus to some caseous right tracheal glands. No caseous contents were left. There were no tubercles or ulcers in the stomach, but the intestine was lined with tuberculous ulcers from end to end and the mesenteric glands were caseous.

CASE III.—P. G., a male, aged 1 year 11 months, was admitted on April 18th, 1902. There was a history of five months' diarrhoea and vomiting, accompanied by wasting. He had had a discharge from the left ear for the past four weeks, and a left-sided slit three weeks before admission. There was no tuberculous family history.

Condition on Admission.—A pale, wasted child, with a profuse purulent discharge from the left ear, and a complete left facial paralysis. In the lungs a few crepitations were heard at the bases. The abdomen was somewhat distended, and the liver and spleen slightly enlarged.

After-history.—The child had a high, fluctuating temperature and much diarrhoea, the bowels acting three to seven times daily. He progressively wasted, and died on April 24th.

Necropsy.—At the necropsy performed next day was found an enormous mass of caseous glands surrounding the trachea. They were largest on the right side. There were racemose tubercles and "caseous blocks" in the lungs, and scattered tubercles in the abdominal organs. The bifurcation gland had completely emptied its contents into the oesophagus, leaving a smooth-walled sac opening through the anterior oesophageal wall by an aperture $\frac{1}{4}$ in in diameter. There were no tubercles in the stomach. The intestine contained small ulcers and tuberculous nodules throughout its extent. The mesenteric glands formed a caseous mass the size of a turkey's egg, one individual gland being as large as a pigeon's egg. The retroperitoneal glands were caseous, but not very large.

In these 3 cases it was the gland (or glands) situated below the bifurcation of the trachea which caused the trouble, and this seems to be generally the case. I can find but few instances recorded in the literature. In 1890 Dr. Voelcker exhibited a specimen to the Pathological Society from a boy aged 9 years, in whom the bifurcation gland had opened into the oesophagus, and discharged part of its contents, leaving some caseous material still present in the cavity. There was no history of oesophageal trouble, nor is the presence of any tubercle elsewhere in the body recorded. The boy died of quite other disease.

The absence of abdominal tuberculosis in such a case, if the omission of its mention really means its absence, seems to me very extraordinary. In the 3 cases described above it will be noticed that the amount of abdominal tuberculosis is, all through, as we should expect, a striking feature. In one there were tuberculous ulcers in the stomach, a very rare condition; in all 3 there was intestinal tuberculous ulceration and caseous mesenteric glands, and in 2 the retroperitoneal glands were also caseous, a condition which in my experience is by no means common. Dr. Voelcker finds only 3 other cases recorded among 2,504 necropsies made during thirty years at Great Ormond Street Hospital, and in 2 of these 3 the air passages were also involved. This we should expect to occur in many cases, the gland becoming adherent to the oesophagus on one side, and to a bronchus (generally the right bronchus) on the other side, ulcerating into both, and thus forming a passage between the two which finally may become lined by mucous membrane.

In two of the cases mentioned above the gland had completely emptied its caseous contents, its cavity was smooth-walled and appeared to possess a mucous lining.

In March, 1901, Dr. Norman Moore showed at the Pathological Society a case of an oesophageal diverticulum the size of a pea occurring in the anterior wall just below the end of the trachea. The patient was a man, aged 49, who died of bronchitis, and the diverticulum was regarded by Dr. Norman Moore as a congenital abnormality. May not such a diverticulum have originated in the same a manner as in the cases described above? The position is at the seat of the bifurcation gland in the anterior wall, and, moreover, the absence of any mention of tubercle in the body does not militate against this suggestion.

In children the bifurcation gland is often, or even generally, the first visible seat of tubercle in the body, and one may suppose that in some cases the disease goes no further. I am inclined to think that many cases of oesophageal diverticulum occurring in this situation are due to this cause. This would not include those instances of "pulsion diverticulum" which have caused so much surgical interest of late years.

These are generally large, situated in the neck, and on the posterior aspect of the tube. Those occurring at the tracheal bifurcation are smaller and on the anterior aspect, as in Dr. Norman Moore's case quoted above.

Beyond the causation of a far-spreading abdominal tuberculosis, perforation of the oesophagus by a caseous gland seems to give rise to no symptoms and its presence cannot be diagnosed during life.

AN IMPROVED HYPOBROMITE PROCESS FOR THE ESTIMATION OF UREA.

BY H. J. PECHELL, M.B., C.M.,
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(From the Pathological Laboratory of the Westminster Hospital.)

DURING a recent research I have had occasion to make numerous estimations of urea. I employed the hypobromite process with Dupré's apparatus, but with the necessary modifications; the method to be described below is applicable to any form of apparatus in which this process is employed.

Whilst examining the literature upon this subject I found the following statement in Halliburton's textbook of *Physiological Chemistry*, 1891, p. 839:

> From 1 gram of urea 0.46 gram (=372.7 c.cm.) of nitrogen is obtained. In practice, however, it is found that only 354.3 c.cm. are obtained, except in diabetic urine, in which the urea yields nearly the normal amount of nitrogen.

This suggested that possibly an improvement might be made in the ordinary method of estimation for clinical purposes by converting the urine to be examined into an artificial "diabetic" urine. This was done by the addition of 2 c.cm. of a 25 per cent. solution of glucose to the 5 c.cm. of urine used in Dupré's method, which produces a urine containing about 7 per cent. of sugar. The glucose was of the ordinary commercial type, and was tested by the hypobromite method, but no gas was evolved which could invalidate the process.

By comparing the readings thus obtained with those recorded by the same urine without the addition of sugar, a practically constant excess of one-eleventh (9 per cent.) was noticed. Details of a few actual observations are given below. Control estimations were also made with a solution of chemically pure urea of known strength, but the evolution of nitrogen in this case is unaffected by the addition of glucose. This fact indicates that the explanation of the process in the case of urine is by no means simple.

In the table given it will be noted that when any specimen has been tested more than once (*a*, *b*, *c*, *d*) and varying readings have been obtained, the lowest of the "glucose" readings is always higher than the highest of the "normal" readings.

No. of Case.	I.	II.	III.	IVa.	b	c.	d.	Va.	b.	VI.	VII.	VIII.	IX.
"Normal" urine ...	0.75	0.85	1.5	1.55	1.6	1.6	1.55	1.85	1.8	2.4	2.85	1.9	2.3
"Glucose" urine ...	0.83	0.9	1.6	1.7	1.75	1.7	1.7	1.95	1.9	2.72	3.15	2.03	2.5

This procedure is so simple, and follows so obviously on the statement already quoted from Halliburton's work, that it may not be new. I can, however, find no evidence of its previous publication.

I can give no reason for the difference in the evolution of nitrogen of urea in watery solution and in urine, nor for the reason why glucose increases the nitrogen output. Possibly its action may have a parallel in that of manganese dioxide in the process of making oxygen from potassium chlorate. Undoubtedly nitrogen is evolved from a "glucose" urine at a lower temperature than from a "normal" urine, as the level in the calibrated tube is much sooner established in the former than in the latter case. The method may in practice be further simplified as follows:—Place in the urine tube of the apparatus a piece of glucose as large as a haricot bean and about 2 c.cm. of water; dissolve the glucose by gentle heat, cool, add 5 c.cm. of the urine to be tested, and proceed in the usual manner.

I am indebted to Dr. W. S. Lazarus Barlow, Director of the Westminster Hospital Pathological Laboratory, for much help and advice in the prosecution of the above research.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

CASE OF ASCITES DUE TO HYPERTROPHIC CIRRHOSIS OF THE LIVER CURED BY OPERATION.

K. W., aged 53, married, was admitted to the Perth Public Hospital in April, 1901. The patient, who had borne ten children, rearing six, and who had had five miscarriages, had enjoyed good health until two years before, when she had an attack which was believed to be due to impacted gall stones. The jaundice and symptoms persisted for twelve months. She was then residing in Melbourne, Victoria, and was treated at home and at the Women's Hospital, Melbourne. Twelve months after the onset of her illness ascites and haematemesis occurred, and she was tapped at the Women's Hospital, Melbourne, 14 pints being drawn off. Six months afterwards she came to West Australia for a change. After coming to Perth she was tapped four times, at weekly intervals, by a doctor outside the hospital.

During her stay in the Perth Hospital she was tapped ten times, a large quantity of fluid being withdrawn each time. The fluid rapidly reaccumulated, and she required retapping sometimes in a week, sometimes in a fortnight. After the tappings the hard, rounded edge of a hypertrophic cirrhotic liver could be felt. There was no evidence of cardiac or renal disease. She denied all history of alcoholism. There was no evidence of syphilis.

She was transferred to the surgical side on October 2nd, 1901, and on October 4th her abdomen was opened in the middline above umbilicus, and ascitic fluid evacuated. The liver edge extended below the costal margin, and on examination the liver was found to present the appearance and consistency of an ordinary hypertrophic cirrhosis.

The surface of the liver was firmly scrubbed with a sponge, also that of the adjacent parietal peritoneum. The omentum was sutured in six places to the parietal peritoneum around the abdominal incision. An incision was made above the pubes, and a glass drainage tube inserted, which was kept in for several days. When the abdomen was opened it was found that adhesions had formed at several sites where former tappings had been made.

The after-history was uneventful. The patient never had a bad symptom after the operation; the fluid showed signs of reaccumulating for a few weeks, but was then absorbed. She left the hospital about a month afterwards apparently in good health, and has presented herself for examination several times since. The last time she was seen was nine months after the operation. She then stated that she had not felt so well for years. There was no ascites. The hard edge of the liver could still be felt just below the ribs; she was otherwise apparently in perfect health, and was able to attend to her domestic duties.

After the ascites had disappeared there was nothing in her appearance to suggest alcoholism, and I am inclined to think that the cirrhosis of the liver was due to a long-standing impacted gall stone which was passed some eighteen months before operation. I think that the length of time—nine months—since operation justifies one in regarding this as a cure.

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HYDATID OF THE LIVER.

ON the morning of August 30th, 1902, I was asked by Miss McNeil, M.D., of the American Mission of this station to see a case in her hospital of obscure abdominal tumour which she had had under observation for two days previously.

A well-nourished, healthy-looking man, aged 50, had come to the Mission Hospital on August 27th complaining of a swelling in the belly. He stated that two and a half years before he had suffered from fever for four months, for which he was treated by native remedies and got relief. He then had a pain in the epigastrium, which continued for about two months, when he was again relieved by native remedies. After this his belly began to swell, and has continued to do so for the past two years.

An examination on August 30th, 1902, showed an oval painless swelling, moving with respiration in the epigastric and umbilical regions of the abdomen. This swelling was roughly 7 in. in the vertical and 6 in. in the trans-

verse direction, and presented in the middle line, and 1 in. above the umbilicus, a hernia-like protrusion about the size of a small hen's egg. It was soft, elastic, movable transversely, and fluctuated freely, a wave being transmitted from one part of it to the other. On sinking the hand into the abdomen and under the swelling some hard thickening could be felt. On percussion it was painless and dull all over, the dullness being continuous with that of the left lobe of the liver. Both flanks were resonant, the pulse and temperature normal, and the appetite good.

Both Miss McNeil and I were of opinion that the case was in all probability one of hydatid tumour of the liver. A cancerous growth was out of the question from the physical characters of the tumour, absence of general symptoms, and particularly of pain.

On February 9th, 1902, an incision 3 in. long was made in the right semilunar line, commencing at the margin of the ninth costal cartilage and extending downwards towards the right pubic spine. The tumour was found adherent to the adjacent part of the abdominal wall, and an incision was made into it through this adherent area. This incision was then enlarged downwards as far as required and the cyst wall drawn forwards by means of two sutures, one on each side of the incision, and then, by placing one hand inside the cyst, the whole of its contents were evacuated. The interior of the cyst was well douched with boric lotion. Two large drainage tubes were fixed in position and the wound dusted with iodoform and boric acid and covered with absorbent dressing.

The after-treatment consisted of frequent washing out of the cyst cavity with some antiseptic solution and the maintenance of absolute cleanliness and perfect drainage. The obliteration of this large cavity was necessarily a very slow process, and for several days afterwards many pieces of the bile-stained cyst wall and ruptured vesicles continued to escape. With proper management and good nursing, however, under Miss McNeil's careful supervision, it had almost closed up by October 4th, and the patient felt and ate well.

The cyst contained large numbers of daughter cysts, many of them as large as a turkey's egg, and about 8 pints of hydatid fluid. Some of the daughter cysts were ruptured and deeply stained with bile. Many hooklets were found in the hydatid fluid. The hernia-like protrusion, seen on first examination of the tumour and before operation, was found to lie on one of the hydatid vesicles—daughter cysts—that had protruded through a thin part of the cyst wall.

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NEPHROLYSINS AND THEIR ACTION IN URAEMIA.

ALTHOUGH A. Schütze[1] was unable to obtain specific nephrolytic serums, the existence of such has been asserted by Lindemann,[2] Néfédieff,[3] and recently again by G. Ascoli[4] in a communication to the Italian Medical Congress recently held in Rome. Lindemann treated guinea-pigs with repeated doses of an emulsion of renal substance of rabbits, and obtained a serum which in doses of 1.5 c.cm. to 2.6 c.cm. per kilo. produced albuminuria, and death from uraemia on the third or fourth day after intravenous injection. On microscopic examination there was found disintegration of the epithelium of the convoluted tubules, with numerous granular cylinders in the straight tubules, the glomeruli remained intact. He also brought about a nephritis in dogs by injections of potassium bichromate, and thus obtained a serum which was free from bichromate, but the injection of which produced a nephritis in other dogs—that is, was an isonephrolytic serum. Néfédieff injected emulsions of guinea-pigs' kidneys into rabbits, and thus obtained a serum which produced slight albuminuria in guinea-pigs. He found also that in rabbits the serum is strongly nephrolytic some time after ligature of one ureter; this is apparently due to the production of lysin by the disintegration of the renal epithelium. Delezenne[5] by injecting a nephrolytic serum was able to prove the existence of an antinephrolytic serum. Ascoli obtained a highly nephrolytic serum by treating rabbits with emulsions of the kidneys of dogs. Subcutaneous injections of this produced marked nephritis, while by intravenous and subdural injections respectively disturbances of the cardio-vascular and nervous systems were produced. Further, by injecting in two dogs serum from cases of human nephritis, transitory albuminuria was produced in one. He considers that in many cases uraemia is to be ascribed to the action of nephrolysins. He asserts further that he has obtained a markedly nephrolytic serum by inducing lesions of a single kidney, and he draws the interesting conclusion that a trivial renal disturbance may in this way set up serious kidney trouble. If this be found to be true, it would probably have to be explained by the production of an autolysin; that is, amboceptors produced by the nephrolytic cells concerned might be assumed to meet with and become anchored to suitable receptors in other renal cells and by means of complement, circulating or endothelial, to bring about the destruction of these latter, and possibly the production thereby of more autolysin.

There might also be another side to these phenomena, as pointed out by Professor Welch[6] in his Huxley lecture—namely, a reaction of the nephrolytic cells to normal intermediary bodies. If these possessed receptors provided with haptophoric groups corresponding to intermediary bodies produced by normal renal epithelium, the union of such with each other and with complement might stimulate the nephrolytic cells to the production of fresh nephrolytic amboceptors, and thus a vicious circle might be brought about. Clinically it is certainly extraordinary how a very slight malarial affection will produce a lasting nephritis, very little amenable to treatment with quinine, while the occurrence of such a nephritis would be easily explained by Professor Welch's far-reaching theory.

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ON THE USE OF ALKALIES FOR THE RELIEF OF PAIN.

THE interesting article by Sir Lauder Brunton upon the uses of alkalies in relieving pain, which appeared in the BRITISH MEDICAL JOURNAL of October 18th, 1902, has led me to write these few lines in corroboration of Sir Lauder Brunton's views. During the past few months I have treated several cases of neuralgia and other peripheral nerve lesions with alkalies, with the result that pain has apparently been greatly alleviated.

The first case treated by this method was one of persistent neuralgia which had lasted for more than a year, and had resisted all attempts to relieve it. I gave the patient several of the drugs which are usually recommended for such a condition, but without success, until one day an alkaline mixture, of which ammonium carbonate was the principal ingredient, was prescribed; this appeared to give considerable relief, and the patient returned in three days expressing great satisfaction at the result. Improvement was maintained for some time under this treatment, but eventually the patient was lost sight of.

This case, from the duration and intensity of the pain, was a very severe one, and, although the pain did not entirely disappear, it was much relieved, and possibly a still more satisfactory result would have been obtained had larger doses been used. Several other less severe cases of neuralgia have also been apparently benefited by this form of treatment, and quite recently a good result has been also obtained in a case of peripheral neuritis. The patient, a female, first came under my care a few weeks ago, suffering with a long-standing peripheral neuritis of wide distribution; the pains had recently been getting worse, and when she first saw me she described them as excruciating, especially at night, when they prevented sleep. Short of opium, she seemed to have taken most of the drugs which would be likely to bring relief, so, remembering the case of neuralgia, I gave her an alkaline mixture containing ammonium carbonate, and this brought considerable relief. In order to test the value of the medicine it was discarded for a few days when the pains were rather better, but the patient soon asked for it again, and said that by taking it she was able to obtain more rest at night than she could otherwise.

These instances are in accordance with Sir Lauder Brunton's experience, and tend to show that the treatment may also be found beneficial in some cases of peripheral neuritis.

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DEATH UNDER CHLOROFORM.

ON October 20th, at 3 p.m., an Afghan man, aged 50, was brought into the operating room suffering from ankylosis of the right knee due to suppuration from the ravages of a dracunculus medinensis (guinea-worm). At 3.30 p.m. he was

put under chloroform by an assistant who had considerable experience in the administration of chloroform. At 3.45 I had completed extension, and was about to order the administration of chloroform to cease, when the anaesthetist called out that the man had stopped breathing. The leg end of the table was at once raised, artificial respiration started, and the chest flicked with a towel dipped in cold water. In a few minutes there were spontaneous shallow respirations, but they ceased in three or four minutes. Ether was injected subcutaneously, and a faradic battery employed, but respiration never returned. The heart continued to beat faintly for nearly an hour, and artificial respiration was continued till 5.45 p.m. (two hours), when further continuance was obviously useless. Altogether 5 drachms of chloroform had been administered in a Junker's inhaler. The temperature of the room was 92° F.

Banhu, North India. T. L. PENNELL, M.D.

THE TRIACID BLOOD STAIN.

THE triacid stain is so reliable that it would be much more used than it is but for the difficulty and time required for fixing films, a temperature of 150° C. in a hot-air chamber being required to get satisfactory results. Chemical fixatives such as formalin, osmic acid, and alcohol do not yield good results with this stain. For some time past I have used Merck's methyl-alcohol, fixing for three minutes in this reagent and staining for five minutes in the triacid stain. The films are not as brilliant as when heat is used, but the red cells, the nuclei of the lymphocytes and leucocytes, and the various granules of the latter are well stained. The method is simple. All that is required is methyl-alcohol, triacid stain, and tap water, and with these a film is obtained which is sufficient for all diagnostic purposes.

Wolverhampton. E. S. NUTTING.

CASE OF BOTH FEET DELIVERED SIMULTANEOUSLY WITH HEAD.

AT 10 a.m. on August 25th I was called to attend Mrs. M., a multipara, who had been in labour since 10 p.m. the previous evening, about which time the membranes had ruptured. She was not expecting to be confined for four weeks.

Upon examination, the os uteri was found to be nearly fully dilated, and one foot was presenting with the head. With some difficulty the feet were seized consecutively and brought down into the vagina, but before any attempt could be made to push up the head and thus turn, strong uterine contractions came on, the head descended and appeared at the vulva with both feet and was thus delivered, the occiput being directed backwards. The infant, a live one, was premature, about one month, weighed 4 lb., and measured 18 in. It survived two days.

Marden, Kent. W. HARLAND PEAKE, M.D., B.S.

A FIFTH ATTACK OF SCARLET FEVER.

MR. EVERARD'S case[1] recalls a case I had many years ago which I could not explain. A blacksmith had five attacks of illness, which closely resembled scarlet fever, within a space of about a dozen years; the first attack occurred during an epidemic, and was accepted as a genuine case, but the renewed attacks caused doubt.

On each occasion there was sore throat, strawberry tongue, fever, intense rash, and complete desquamation. The peeling of the hands disabled the man for many weeks. The patient was a small man, a hard drinker, anaemic-looking, and subject to piles and varicose ulcers.

It has been suggested to me that they were attacks of acute lichen, and that the rash might have been distinguished from that of scarlatina by persistence under pressure, but I had no opportunity of applying the test.

Milton Abbas. THOMAS FIELDING, M.D.

PRESENTATION OF ABDOMINAL VISCERA.

ON November 10th I was called to attend a multipara. I found the os dilated to the size of a crown piece, and a semi-solid mass filling the orifice, which I took to be the placenta. There was nothing to be felt above it, but external palpation showed the presence of a cross presentation. Turning was immediately performed without difficulty, and on extraction of the fetus the following condition of affairs was apparent: The recti abdominis and tissues covering them were absent from the ensiform cartilage to within 2 in. of the pubes. The liver (which I mistook for the placenta, and which was the presenting part) was hanging out, also the colon, right kidney, and spleen. The peritoneum was adherent to the skin at the sides of the opening. The child was at full time, sexless, and the anus absent. From an imperfect necropsy I found the right side of the heart dilated and full of blood. The lungs were cream-coloured and contained a little blood on section. The kidneys were nodular and congested. The spleen was dark-red and full of blood. There was no evidence of decomposition, and the child had evidently lived up to the time of birth. The placenta was well formed and was directly attached, there being no cord.

Ambleside, Westmorland. T. HOUGHTON MITCHELL.

[1] BRITISH MEDICAL JOURNAL, October 25th, 1902, p. 1342.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

BRISTOL ROYAL INFIRMARY.

CEREBRAL CASES.

(By HENRY WALDO, M.D., M.R.C.P., Physician to the Infirmary.)

CASE I.—*Cerebral Aneurysm in a Young Woman.*

THIS very interesting case was admitted under the care of one of my colleagues, and in whose absence I was asked to see her.

A well-educated young woman, aged 22, single, employed in a somewhat responsible position, was quite well until the afternoon of December 31st, 1901, when she suddenly complained of pain in her head, and at once fell down unconscious. Vomiting began almost immediately, and lasted for fifteen hours. Five hours after the onset the temperature was 102° F. At midnight it was 104.5° F.

On admission, the day after the attack, she was still unconscious, breathing very quietly. She swallowed quite easily. The radial artery was decidedly thickened; the pulse tension was low, some beats being much weaker than others; very slight left hemiplegia, including the face, was present. The urine was running into the bed. A catheter specimen showed total absence of albumen; well-marked double optic neuritis was present: some cerebro-spinal fluid was obtained, which was sterile. Death took place on January 2nd, 1902.

At the necropsy a burst aneurysm, the size of a cherry, of the right internal carotid artery was found, with blood all over the right hemisphere. The aneurysm had pressed on the right optic nerve. The coats of the basilar artery looked quite healthy.

REMARKS.—We ought to have diagnosed this case, but one does not think of aneurysm much in a woman—and especially a young woman; and although I have met with two cases of cerebral aneurysm in women before (published in the BRITISH MEDICAL JOURNAL, December 28th, 1901, p. 1866), it did not occur to me. The kidneys were healthy. Here was a patient in good health, with no sign of disease discoverable excepting, perhaps, the thickening of the radial arteries. As my colleague remarked, we are all skating on very thin ice.

CASE II.—*Tuberculous Meningitis in an Adult.*

A man, aged 44, was brought in a cab. He was delirious, and somewhat violent. There was a history of abuse of alcohol for twenty years. A week before admission headache was complained of, which had gradually increased.

He was now getting very drowsy. His attention could be attracted by shouting at him, but not for long, and questions were not answered. The heart sounds were clear; the pulse slow, regular, full, and hard. Rhonchi were heard at the bases of both lungs. The urine showed a thick cloud of albumen. The knee-jerks were present, the right being more active than the left. Three days after admission the patient was much worse, being unconscious, and groaning. It was now noticed that he had slight right hemiplegia, including the face. He also had several fits of a general epileptiform character. Optic neuritis was present. He was admitted on May 7th, and died on May 10th.

The necropsy revealed tuberculous meningitis, and a solitary large tuberculous ulcer in the ileum; cirrhosis of liver, enlarged spleen, and advanced disease of the kidneys.

MAFEKING HOSPITAL, SOUTH AFRICA.

SYMMETRICAL GANGRENE AFTER ENTERIC FEVER.

(Under the care of Major STONE, R.A.M.C.)

[Reported by JAMES A. ROOTH, M.R.C.S., Civil Surgeon.]

ON June 24th I took charge of the native huts. Among my patients were three men who had been in hospital for a little over three weeks with enteric and were just convalescent when I saw them for the first time. One complained of tender toes, the other two of swollen feet. The former I thought to be suffering from that very common sequela of enteric, generally considered to be a local neuritis, and the other two men from anaemia, as they were markedly anaemic. There was nothing to indicate kidney disease.

About four days later I noticed in addition to the oedema that the feet were discoloured and the toes showed symptoms of shrivelling up. On examination I found that the feet were cold, that there was a sharp line of demarcation at the ankle-joint, so sharp that on putting a finger on one side of the line the surface was warm, on the other it was quite cold. The toes were very hard, shrivelled, and blacker than the rest of the skin. There was sensation in the skin, which was hypersensitive, the toes could be moved slightly, and the feet were very painful. The condition was quite symmetrical in each case. There was no offensive odour whatever.

Treatment and Progress of the Cases.—I immediately wrapped the feet in cotton wool, and ordered a supply of hot-water bottles to be kept in the beds night and day, at the same time giving stimulants by the mouth—port wine, and Easton's syrup, and later a mixture of ether and ammonia. Under this treatment there was in a week's time an improvement; the warmth spread beyond the line of demarcation, though not quite to the extremities of the feet; the toes remained cold and shrivelled. In one case I tried friction with sweet oil, but with no obvious improvement. The process, however, had gone too far, and the skin at the line of demarcation in two of the cases was beginning to break down and discharge, the process being quite inoffensive. Cutaneous sensation was lost, but the long flexor and extensor muscles were able to move the toes. In the slightest case certain toes only were involved. There were for the most part no constitutional symptoms. One patient had a temperature of 99° to 100° for two or three days, but with that exception all the men had normal temperatures, and complained of nothing but the pain. I consulted Major Stone as to the advisability of amputation in the severest case, but he advised to wait and see whether the gangrene would be limited to the skin or until constitutional symptoms rendered operative interference imperative. On July 14th the line of demarcation was quite clear in this case, and the destruction of tissues extended down to the bone, the long extensor tendons were lying exposed and unaffected, and could be seen in action. The gangrene in the other cases was slower, but steadily progressing. On July 18th it was decided to amputate the right foot in the worst case, as nothing was to be gained by waiting. The patient took chloroform very badly, and was with difficulty restored by artificial respiration and oxygen. The amputation was made by lateral flaps through the lower third of the leg. A week later I left Mafeking, but I have no doubt whatever that two of these patients lost both their feet, and the third several of his toes, either by separation or operation. The stump left after operation was healing well when I last saw it.

REMARKS.—The patients were all young men, with good arteries and sound hearts, though no doubt their circulations were enfeebled. There were no signs or history of Raynaud's disease in any instance. The obstruction was obviously arterial. I was forced to think that these were practically cases of frost-bite; the men were living in a marquee, and the nights were extremely cold; it seemed then not improbable that the cold and enfeebled circulation acting together had produced a stasis in the blood vessels of the extremities, which were now becoming gangrenous. In the course of conversation with a local practitioner, however, I was informed that such cases were not uncommon in the district, and my informant put it down to a species of ergot poisoning, from either ergot or something allied to it, which was consumed with the Kaffir corn, either as porridge or in Kaffir beer. As this medical man had had considerable experience among natives his opinion is most likely correct; but it is right to say at the same time that upon inquiry from my natives they denied having had Kaffir corn or beer for a very long time, or that they had seen anything of the sort before among their friends. A practitioner in Grahamstown told me he had never come across anything of the kind among his native *clientèle*. It would be very interesting if any medical man who knows the country could shed any light on the matter. Gangrene after enteric fever is at any time a rare event, but cases of this description can only be explained by some primary cause acting on an enfeebled constitution. There may have been some other native drug at work. I excluded "dokka," a herb which they smoke until stupefied, as none of the men ever indulged in it, nor do I think it has any such action.

FOUNTAIN HOSPITAL, LOWER TOOTING.

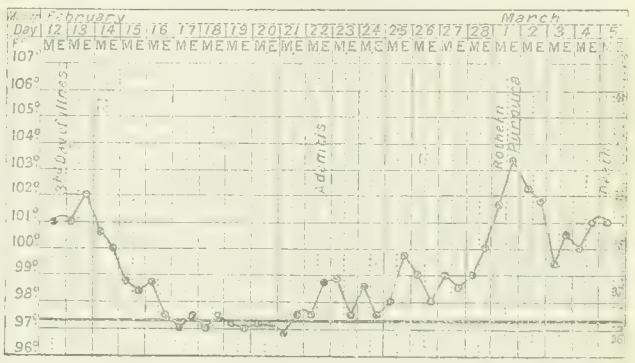
PURPURA HAEMORRHAGICA OCCURRING DURING CONVALESCENCE FROM SCARLET FEVER.

(Reported by JOHN CULLEN, M.B., Ch.B.)

F.R., aged 12, was admitted to the hospital on February 12th 1902, certified as suffering from scarlet fever of three days' duration.

History.—On February 10th the patient complained of sore throat, and on February 11th he had a headache, was sick, and a rash appeared on the chest and back. His previous health had always been good with exception of an attack of measles some years ago and diphtheria six months ago.

State on Examination.—The patient presents a well-marked punctate erythematous rash extending over the trunk, limbs, and neck. His face is flushed, with circumoral pallor. His tongue is thickly coated, both tonsils being enlarged; the fauces are swollen, injected, and covered with sero-purulent exudate. There is a well-marked systolic *bruit* in the mitral area.



Course of Illness.—The illness pursued a natural course, the temperature reaching normal on the seventh day. Convalescence was uninterrupted until the thirteenth day, when the patient developed double cervical adenitis. On the twentieth day he was found to be suffering from a well-marked attack of rötheln. He felt fairly comfortable until the evening of the same day, when he complained of headache and vomited once. His urine now contained a fair amount of albumen but no blood. On the twenty-first day he had had a rather restless night due to pain and itching in the calves of the legs. The rötheln rash was still present, the spots appearing darker in colour. There was also noted a dense purpuric patch about the size of the palm of the hand on the calf of each leg. There was a similar patch slightly smaller in size on the back of the left thigh. The calves of the legs were also swollen, tense, and tender, as if there was some subcutaneous infiltration. In the evening of the same day the purpuric patches had increased greatly in size, and there was evidently extensive subcutaneous haemorrhage into the lower limbs. The legs were much swollen, pitted slightly on pressure, and appeared plum-coloured from the knees to the bases of the toes. The patient complained more of the pain in his limbs and could hardly bear to have them touched. A new purpuric patch had appeared on the back of the right thigh, similar to that on the left. Other patches about the size of a shilling were now present in the centre of each cheek. Bleeding from the gums was now noted, as well as some petechiae on the mucous membrane of the hard and soft palate and cheeks. On the twenty-second day the patient had had a good night, slept well, took plenty of nourishment, and seemed comfortable as to his general condition. The rötheln rash had faded. The gums were now bleeding profusely, and there was a small, fresh, purpuric patch on the pinna of the left ear. The patient's legs were now more swollen and oedematous (the swelling extending midway up the thigh), tense, shining, and livid in appearance. The legs below the knee were quite black and covered with large bullae containing sero-sanguineous fluid. The feet were hot to the touch, with no loss of sensation. In the afternoon he complained that he had no feeling in his feet, although his limbs were still painful on movement. Anaemia now became a marked symptom. On the twenty-third day, after a rather restless night, the patient was more apprehensive as to his general condition. The swelling of the lower limbs was still more marked. The feet and legs were cold, with loss of sensation half-way up the calves. Many of the bullae had burst, and the skin peeled off, giving the cold, slimy feeling of a gangrenous limb. The gums were still bleeding, and the original haemorrhagic patches extending, with fresh ones appearing on the right ear and on each elbow. In the evening the anaemic symptoms became more marked, the purpuric patches on the thighs and cheeks rapidly increased in size, and the patient died on the morning of the twenty-fourth day, or seventy-two hours after the purpuric condition was noted.

Treatment.—Calcium chloride and ergot were at first employed; later suprarenal extract was given both locally to the mouth and internally with no effect.

Necropsy.—This was performed twenty-four hours after death with chiefly negative results, the most marked feature being the intense anaemia of all the organs. Very slight blood extravasations were noted in the following situations: Areolar tissue of anterior mediastinum, under the pleurae, between layers of gastro-splenic omentum, areolar tissue surrounding the upper ends of the kidneys. One or two small haemorrhages about the size of a sixpence were seen in the wall of the small intestine. On cutting into the lower limbs the tissues were found to be uniformly infiltrated with blood. Cultures on solid serum from the liver, heart, spleen, and subcutaneous tissue of the leg underlying the purpuric eruption all gave a growth of cocci.

Remarks.—Purpura haemorrhagica occurring during convalescence from scarlet fever is rare. In looking over the records of this hospital for the last nine years, I find only one similar case noted. The interesting points of the disease seem to be its sudden onset with pains in the limbs and pyrexia, the almost symmetrical character of the purpuric eruption, the large extent of the haemorrhagic infiltration of the lower limbs going on to gangrene, with slight haemorrhages from the mucous membranes, intense anaemia, and rapidly fatal termination. The points above described seem to class the case amongst those described by Henoch as purpura fulminans.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

Professor E. Klein, F.R.S., Vice-President, in the Chair.

Tuesday, January 20th, 1903.

A Mould Fungus Isolated from a Case of Multiple Granuloma.

Dr. Lazarus-Barlow recounted the above case, which concerned a man who presented a painful swelling on the back, with softened centre and brawny periphery. The lesion was thought to be a gumma, and under antisyphilitic remedies some improvement took place. Some weeks after leaving the Westminster Hospital, the patient returned with multiple nodules in addition. The skin was sterilized and the softened nodules opened under antiseptic precautions. The pus contained grains suggesting actinomyces. In film preparations a mycelium was found. In maltose broth a flocculus of growth appeared, which was at first regarded as an accidental contamination. No growths were raised from swabbings taken from the abscesses some while after they had been incised. From dried films made when the lesions were originally opened, growths were raised in maltose broth. Sections of small pieces of the tissue which had been cut away at the operation showed the same mycelium as that in pure culture. The micro-organism was not a streptothrix; the threads, though branched, were coarser; spores, oval and not round, formed at the end of the filaments. On maltose agar a white growth occurred with aërial hyphae, the growth subsequently becoming brown. No growth occurred on jelly, but this was because none occurred on unincubated media. The fungus had a slight diastatic action on starch. Its pathogenicity on animals had not been tested.

Mr. A. G. R. Foulerton observed that the organism in some ways resembled a sporothrix, but in the latter case only spores alone occurred in the lesions. Clinically the course of the disease followed that due to sporothrix.

The Resistance of Staphylococcus Pyogenes Aureus to Persalts of Mercury.

Dr. F. W. Andrewes brought forward observations relating to the resisting powers of staphylococcus pyogenes aureus against the persalts of mercury. It was well recognized that this was one of the most resistant non-sporing organisms, both against heat and chemical disinfectants, but it was not sufficiently recognized that its resistance against mercuric salts was altogether exceptional. This fact was of special importance in surgical disinfection. Dr. Andrewes described observations which he had made on a strain of this coccus which appeared to possess unusual powers of resistance, and which, in broth cultures, resisted 1 in 500 perchloride of mercury for forty-five minutes, and in pure water for twelve and a-half minutes. By repeated passages through the disinfectant, in which it might be supposed that only the most resistant survived (transmitting their resistance to their progeny), a strain of staphylococci was produced which had even higher powers of resistance. The results finally obtained were as follows: The cocci resisted 1 in 500 perchloride of mercury in pure water for twenty minutes; 1 in 1,000 perchloride of mercury in pure water for fifty minutes; 1 in 1,000 perchloride of mercury in 0.3 per cent. salt solution for eighty minutes; 1 in 1,000 perchloride of mercury in nutrient peptone broth for over four hours. The resistance against biniodide of mercury was equally great, but it did not in the least extend to antiseptics of other groups. Carbolic acid, 1 in 40, killed the cocci in less than two minutes, and 1 in 400 medical izal in less than one minute. These results might be exceptional, but in routine disinfection it was necessary to provide against the exceptional as well as against the commonplace.

Mr. N. Bishop Harman had observed similar facts in regard to staphylococcus pyogenes aureus, and noticed an increased stickiness in the cultures after treatment with non-lethal solutions of mercuric perchloride; this, with Abbott, he thought explained the resistance; the gloea protected the micrococci.

Dr. F. W. Andrewes, in answer to Dr. Poynton, had not tested the action of cyanide on the coccus. He had not noticed any increased stickiness in the colonies. In answer to Professor Klein, he had not systematically compared other strains of staphylococcus pyogenes aureus with that used, but he had incidentally found a more marked resistance of such to the same antiseptic than usually thought to hold.

A Diphtheroid Bacillus Isolated from Two Cases of Puerperal Fever.

Mr. A. G. R. Foulerton and Dr. W. F. Victor Bonney made a communication on the above subject. The organism isolated belonged to the group of bacteria of which bacillus diphtheriae was the best known type. In the first case the bacillus had been isolated in pure culture from the fundus of the uterus and, associated with other bacteria, from the vaginal secretion. The case was one in which there had been a sudden rise of temperature to 104° F. on the fourth day after a normal confinement. In the second case the bacillus was isolated from some discharge taken high up in the cervical canal shortly after a miscarriage at the second month, there being at the time a temperature of 105° F. The bacillus isolated resembled B. diphtheriae in the marked variation of form which it showed on different media, club-shaped, pear-shaped, spindle, and coccal forms being met with. The variation in morphology was especially met with when the organism was growing on ordinary nutrient agar. The bacillus stained by Gram's method, and showed well-marked beading and bipolar staining. The organism differed from B. diphtheriae in that it was not pathogenic for guinea-pigs, that it did not form acid in glucose peptone broth, and that it was generally a larger and coarser organism. Cultures on serum, agar, and in peptone-broth closely resembled those of B. diphtheriae in corresponding media. Growth at 37° C. was rather slower than in the case of B. diphtheriae, and at 22° C. scarcely any growth occurred. It was thought that the bacillus was probably pathogenic in the two cases in which it was found, but there was no direct proof of this. It was thought that the bacillus might be allied to those so-called "diphtheroid" organisms which had been described as occurring in cases of noma vulvae.

Mr. G. L. Eastes had found a similar organism in 9 or 10 cases of pus in urethritis in the male. It gave the Neisser stain; subcutaneous injection in the guinea-pig led to local swelling.

Mr. G. Dean observed that such a diphtheroid organism had been described as connected with the smegma bacillus in both sexes; it was not acid fast.

Dr. K. W. Goadby had encountered a similar organism about the mouth in pyorrhoea; it had no pathogenic properties on animals, was not acid fast, and did not give Neisser's staining reaction.

A New Diphtheroid Organism.

Professor E. Klein described a new pathogenic microbe belonging to the group of diphtheroid bacilli. It was found in white rats, causing in these animals extensive consolidation of the lungs. In the hepatized parts the alveoli and infundibula and bronchi were filled with and distended by exudation (fibrin, red and white blood corpuscles) and continuous masses and aggregations of the above microbe. Microscopic specimens and lantern slides were shown of the microbe as it occurred in the lungs and under cultivation. The morphological (including Neisser test) and cultural characters (including acid production) of the microbe appeared identical with those of the bacillus diptheriae. Small or large doses of culture caused on inoculation into rodents a firm tumour, which gradually enlarged to considerable size, and in the course of about a fortnight led to the formation of abscess. This ultimately opened spontaneously,

and led to complete recovery. No fatal issue in rats or guinea-pigs had been produced by even large doses of culture. Diphtheria antitoxin, 400 or even 600 units per half-grown guinea-pig, had no power to neutralize the pathogenic action of a small dose of culture. Professor Klein also exhibited lantern slides illustrating some points in the morphology and distribution of the bacillus pestis and a similar microbe.

OBSTETRICAL SOCIETY OF LONDON.

PETER HORROCKS, M.D., President, in the Chair.

Wednesday, January 7th, 1903.

PUERPERAL INSANITY.

DR. ROBERT JONES opened a discussion on this subject. His paper was based upon a personal experience of 259 cases of puerperal insanity, divided into 120 cases during the actual puerperal period, 83 during lactation, and 56 during pregnancy. Insanity was stated to occur once in every 700 confinements. Insanity was stated to be of a characteristic form after confinement, amounting to an almost nosological entity; but this was not the case during pregnancy nor during lactation, there being no definite type of insanity occurring in connexion with these two stages. The divisions were, however, more convenient than typical. The following propositions were advanced by the author: (1) The insanity of pregnancy is more common in first confinements among single women, the disappointment, shame, and disgrace of illegitimacy being an important factor in the mental breakdown. (2) During pregnancy the mental condition is more often acute melancholia than acute mania, and suicidal symptoms, which occurred in 41 per cent., have to be carefully guarded against. (3) The insanity of pregnancy is divided into that occurring during the early months and that occurring during the later months, and in these the nearer the insanity in point of time to the confinement the more acute are the mental symptoms. Insanity is not more frequent when the sex of the child is male. (4) The insanity of the puerperium comes on after the first confinement in 33 per cent. of the cases, and supervenes suddenly rather than gradually. (5) The cases which occur during lactation present characters of marked general physical exhaustion, and mentally are more often of the depressed than of the maniacal form. Lactation insanity becomes chronic oftener than the insanity of the other periods. There is a tendency to low forms of inflammation, thrombosis, gangrene, and phthisis during the insanity of lactation. Both suicidal and infanticidal promptings are more common in lactational than puerperal cases, that is, in cases where insanity commenced more than six weeks after confinement. (6) The early symptoms of threatening insanity are loss of sleep and headache, and these should be a forewarning of mental breakdown. The busy delirium of hallucinatory character, ending in acute, restless, purposeless mania with religious and erotic delusions, is characteristic of this variety. [The writer suggested a close analogy between the emotions of love and religion, and agreed with Simpson that the organ diseased gave a type to the insanity, and that in women suffering from affections of the generative organs the delusions were more likely to be connected with sexual matters.] (7) Etiology: Heredity is more marked and in the direct maternal line in puerperal and lactational insanity, and is equally paternal and maternal in the insanity of pregnancy. A previous record of hysteria is frequent in puerperal insanity. The question of marriage of hysterical persons is considered. (8) The pathology is that of heredity and stress. Is the stress due to a toxin? (9) As regards prognosis, cases of insanity during early pregnancy improve towards the end of pregnancy, whereas those of late pregnancy become worse at the puerperium. Puerperal insanity is markedly recoverable. Improvement is rapid, being often complete in three months, but generally takes four to five months. (10) Treatment: All cases presenting headache and sleeplessness must have absolute quiet and rest, and sleep must be procured. Home treatment in all cases if possible. Guard against unusual and sudden impulses of suicide and infanticide. The presence of the husband aggravates the symptoms. There is much necessity for a liberal and stimulating dietary. Change is necessary in puerperal insanity when cases tend to become stuporose. Menstruation is a sign of mental improvement. Purgatives and iron are well borne. The following special questions were put forward by way of criticism: (1) Is there such a disease as puerperal insanity—a mental alienation which is either caused by the puerperium or an accompaniment of this physiological crisis? (2) If there is, is the mental condition due to toxaemia, or septicaemia, or both? Or is the delirious mania which occurs in connexion with this period due to extraordinarily emotional disturbances? How far does the moral factor enter into the etiology, and how far does pregnancy in the unmarried state influence the causation of insanity? (3) What is the relation between mania and melancholia?—for instance, is there any relation between the mania of the puerperal period and the melancholia of lactation? If the former is escaped from, may the disease culminate in the latter? Are there two forms of cell reduction, and again, are they toxic or septicaemic? What is the age of greatest incidence, and in what proportion do cases of insanity occur during gestation, the puerperal period, and lactation in the poor and well-to-do? What is the influence of heredity? (4) What is the essential pathology of this disease? (5) What is the relation between albuminuria and pregnancy? also between albuminuria and the puerperal state? (6) In Dr. Jones's cases, so far as the history could be obtained from the relatives or those present, no prodromata of insanity beyond sleeplessness and headache were as a rule noticed, and the onset of insanity was sudden: what is the nature of the onset in the practice of obstetric physicians? (7) As to prevention and treatment, does hysteria in youth manifest itself by insanity in later life at the puerperal or other physiological crisis, and should marriage be discountenanced in these? What views should be generally held as to the marriage of neurotic persons? What are the views as to home and asylum treatment, as to local and general treatment, and more important and especially as to the induction of premature labour?

SIR JOHN WILLIAMS dwelt upon the peculiar condition of the nervous system in pregnancy, parturition, and the puerperal state, and reviewed briefly the pathology of puerperal insanity. He strongly deprecated the resort to surgical measures in the treatment of this insanity.

DR. BLANDFORD said that beyond question the earliest symptom of approaching mental trouble was loss of sleep, and this should be most closely watched and every precaution taken that the patient shall not be disturbed by noises or talking in the room, by the child being brought to be nursed, or by the visits of friends. With regard to Dr. Jones's question, Is the mental disturbance due to toxaemia or septicaemia, or both? it must be remembered that toxaemia and septicaemia were different things. About septicaemia, unfortunately, a good deal was known, and the result was puerperal fever, not puerperal insanity. About toxaemia a good deal had been heard, and some had gone so far as to say that all insanity was toxic, and depended upon toxins. There was a great deal more to be learnt about toxins, which were now much in fashion; for example, why did certain people generate toxins while others did not? Thousands and thousands of women bore children and never became insane. Among native races child-bearing was hardly looked upon as an ailment. Why did certain women generate the peculiar toxin which caused insanity? Toxins did not explain the pathology of insanity. They did not agree with the oncoming, the symptoms, or the passing away of the disease.

DR. HERMAN thought the paper and the discussion on it would do great good if it impressed upon the profession that the main duty of the general practitioner and the obstetric physician in regard to puerperal insanity, was to prevent it. Treatment was mainly in the hands of the alienist. To prevent puerperal insanity, the great things were to see that the patient got food and sleep. If sleep was absent, he thought that the best hypnotic was alcohol. There were objections to alcohol, of which in the present day no one was in danger of losing sight. Every hypnotic, if taken too much did harm, but the harm done by alcohol, if taken too freely, was far less, and far slower in coming, than that done by chloral, bromide, morphine, sulphonal, or any other hypnotic, if taken habitually for long periods. With regard to the questions in paragraph 7, he would ask what was hysteria? The most common and most definite hysterical phenomenon was the well-known hysterical seizure; but the author surely would not propose that the marriage of every woman who had suffered from hysterical seizures should be discountenanced. With regard to the less definite and less common nervous symptoms, commonly spoken of as hysterical, he thought the knowledge they had of these nervous states and their power of accurately forecasting the future of such patients, the effect of marriage upon them and the kind of offspring they were likely to have, if fertile, was far too imperfect to justify medical men in taking upon themselves the responsibility of discountenanc-

ing a proposed marriage. To forbid marriage was often to spoil the happiness of a woman's life. The utmost that a medical man should do was to express to those concerned whatever fears he might have as to the result of marriage, explaining also how much these fears were merely conjecture.

Dr. Mercier took exception to the statement that headache was a common prodroma of a puerperal insanity. The only reliable indications were, he thought, sleeplessness and loss of appetite. He did not think that single women who became mothers suffered much emotional stress as a rule. Many of them were already half-witted, and the insanity of the puerperium was only an exaggeration of their usual state. The rest were, for the most part, upon a low moral plane. When they incurred the risk of maternity they counted the cost, and were ready to face the music. He protested strongly against the suggestions that puerperal mania could be treated satisfactorily at home. Institution treatment was always best, for reasons which he enumerated. Menstruation was often a mark of recovery, it was true; and, when the mental state cleared up on the appearance of the menses, the combination was extremely favourable, but the establishment of menstruation without mental improvement indicated a very gloomy future.

Dr. Champneys fully endorsed all that had been said about sleeplessness as the striking symptom about threatening insanity, about the necessity for procuring sleep, and about the pre-eminent value of alcohol as a sedative in such cases. He had always been greatly interested in the relation between single births and insanity, and it had always seemed to him that, if mental distress were a factor in producing insanity, its frequency in such cases ought to vary directly as the moral standard. He would be glad to know if this had anywhere been worked out. It was a well-known fact that the moral standard with regard to such matters varied greatly in different countries; if the above contention were true, the proportion of cases of insanity in single mothers ought to be lowest in immoral and highest in moral countries. As regards toxaemia and its relation to pregnancy, he did not think that the explanation given by Dr. Jones would altogether suffice. Effete products were doubtless prevalent after confinement; on the other hand, the sense of physical and mental comfort and relief ordinarily experienced after delivery were proverbial. He did not think that this would be the case if ordinary toxins were the usual cause of insanity after labour.

Dr. Lloyd Andriezen concluded from a study of statistics that illegitimate pregnancy was twice as frequently followed by mental disorder as legitimate pregnancy. He regarded puerperal insanity as comprising three main types of mental disorder—namely, first, a collapse delirium following upon parturitions attended with marked exhaustion and haemorrhage: secondly, an acute confusional insanity with hallucinatory delirium (frequently misnamed "mania") and thirdly, mania or melancholia proper, or alternating manio-melancholic insanity. This third category of cerebral affections was rare in the puerperium, while the second variety was, *per contra*, frequent. The patients who developed the characteristic acute confusional insanity with hallucinatory delirium above noted were generally psychopathic subjects, whereas normal women going through the stresses of the puerperium suffered a slight ephemeral cerebral disturbance; 50 per cent. of cases of puerperal insanity in public asylums (whether primiparae or multiparae) gave histories and indications of a psychopathic heredity. He believed that septic infection from the bruised and wounded tissues of the parturient canal played an important part in the causation of puerperal delirium.

Dr. Mott said that among the large number of cases recorded by Dr. Jones there was not a single case of gangrene. Perhaps therefore he might be allowed to relate an instance of symmetrical gangrene of the feet, which he had seen in a woman certified as suffering with puerperal insanity, who was admitted into one of the London County Council asylums. This patient not long after admission developed signs of gangrene of the feet, and for this reason his attention was called to the case. The history showed that the child had been born dead, and it was found that she was suffering from septic endometritis. Her mental condition improved when this was treated. Dr. Mott asked Dr. Jones what he considered were the most important symptoms distinguishing puerperal insanity of septic origin from the delirium of fever occasioned by the same causes. Some authorities described a transitory puerperal psychosis, some of which cases accompanied by fever would be difficult to distinguish from cases of puerperal fever with delirium. Dr. Mott considered that the majority of cases of puerperal insanity were not of septic origin, but due to inherited psychopathic or neuropathic conditions, the determining factors being stress and a subminimal deficiency in the blood.

Dr. Percy Smith agreed with Dr. Mercier that there was no definite form of mental character which could be looked upon as absolutely characteristic of puerperal insanity, and pointed out that cases might be either of the delirious, confusional, maniacal, melancholic, stuporous, or delusional types, and he did not think it was possible unerringly to pick out the puerperal cases in the wards of an asylum without knowing the history. Mania with religious or erotic delusions was often seen in young women, the cause of whose insanity was not puerperal. He had very little personal knowledge of illegitimacy as a cause, but called attention to Clouston's statement that 75 per cent. of the puerperal cases admitted to Morningside Asylum followed illegitimate births. Another point in the etiology was that 26 per cent. of the cases admitted to Bethlem Hospital had had a previous attack of insanity, either one before marriage or one after marriage, which was not puerperal in origin or a previous puerperal attack. He referred to Dr. Herman's remarks on hysteria, and said that alienists constantly found a history of previous "hysteria" in patients admitted to asylums, which, when carefully inquired into, was found in many cases to have been a previous attack of definite mental disorder euphemistically called "hysteria." He was sure that such patients ought not to marry.

Dr. Ernest White thought Dr. Jones's proportion of occurring cases too low—probably 1 in 400 confinements was nearer the mark, for there were many which did not come to the asylum for treatment, and of which no records were obtainable. He would like to draw attention to certain of the mental symptoms and to the temperature charts in this disease. The obscene language, erotic tendency, and self-abuse were probably of peripheral origin, from abnormal uterine conditions, altered lochia, etc. Hallucinations of hearing and sight were common, more rarely those of taste. He had not observed those of smell alluded to by Dr. Jones, nor did headache occur in his cases. The delusions were those of the persecutory type, and accounted for the early refusal of food, which the patient imagined was poisoned. There was a marked tendency to suicide by impulse and to infanticide. In nearly all his cases there was an elevation of temperature of from one to two degrees in the evening, with a morning fall of a degree or less, lasting from ten days to a fortnight, then a subnormal temperature for several weeks. In two or three cases there was long-continued febrility, and charts like those of enteric fever with evening exacerbations and morning remissions, lasting a month or more, but followed by subnormal temperature for several months. These cases he thought of septic origin. They did badly and generally became chronic and died. Next as to causation. The most frequent cause was hereditary nerve instability. He had no experience of illegitimacy as a cause, and did not believe in it.

Dr. Walter Griffith stated that with regard to the insanity of pregnancy, he agreed with the prevailing opinion that there was no specific form: pregnancy might be a complication to insanity or the reverse, but there was a group of cases quite distinct, in which the main feature was the apprehension of the patient either real or simulated, that unless the pregnancy was terminated, she would become insane. He looked upon all such cases with the gravest suspicion, not of insanity, but of rather the reverse, as an ingenious method of putting strong pressure on their medical adviser to produce abortion. He had seen no exception to this in the cases in which he had been consulted. As to premonitory symptoms, he regarded the refusal of food as of equal importance as sleeplessness, and he was sure that in general practice the absolute necessity for forced feeding, even by the nasal tube, where necessary, was not properly recognized as the essential means for saving life.

Dr. Seymour Tuke, while fearing that the alienists had been given too large a share in the debate, was glad that some one had stood up for the women who had borne illegitimate children, for some were certainly cast in a higher mould and did feel the mental distress, which Dr. Jones had laid down as a possible factor in the etiology. Dr. Tuke pointed out three factors in favour of asylum *versus* home or lodging treatment, first that it was hard upon the patient to be under control where she had hitherto been in command, secondly, the possibility in a well-ordered asylum of instantly

changing the attendants if necessity arose through the patient taking a dislike to any of them, and thirdly, the fact that a home where restraint of any kind had to be applied was likely to have less pleasant associations and memories after recovery. He mentioned how acutely those who devoted themselves to their asylums felt the unjust and uncalled-for criticisms of some people, who ought to know better. He strongly agreed with previous speakers as to the necessity for good feeding, and urged the early resort to artificial feeding, if called for. While allowing the great use of alcohol, the danger of forming a habit must not be lost sight of.

Dr. CLAYE SHAW said that of the many points raised by Dr. Jones, one of the most important was that relating to the entity of a mental disorder due to the puerperal state, and though the author of this paper seemed to incline to the fact of the actual existence of a specific disease, he had yet voiced it in no very certain tones, and a similar hesitation had been apparent in the utterances of other speakers during the evening. To him it was by no means an easy thing to be always sure about. It would appear that there were two classes of cases really existent, but both characterized by the delusions, incoherence, and other mental symptoms supposed to be pathognomonic of insanity due to the puerperal state alone. Insanity characterized by prominence of sexual, mental demonstration might occur in young women at the developmental epoch, or in women of middle or advanced age in whom there were no uterine or ovarian complications of any kind to be passed, just as delusions of a sexual character might be seen in boys and men accompanied by acts of masturbation, and yet there was no occasion to attribute the symptoms to influence from the genital organs at the moment. When, however, the temperature was higher than was usually met with in acute insanity, aad the symptoms came on shortly after parturition, there was a strong argument in favour of a direct connexion between the mental and bodily states, especially when there was a history of hereditary taint, and with the probability of the presence of a septic condition. The theory that impressions from the viscera, and especially from the sexual organs, were transmitted to the central nervous system, and aroused ideas there, which formed all kinds of associated connexions, was quite sufficient to account for the fact that sexual symptoms of a similar character and intensity might occur as the result of a lesion, which was primarily central or of one due to external influence, whether caused by an autointoxication or by simple irritation.

Dr. AMAND ROUTH urged the desirability of having intermediate receiving houses, or a nursing home, where women suffering from such temporary insanities as those under discussion could be received and treated. Such a plan would avoid the stigma of having been in an asylum, and would make it much easier to get the friends of the patient to agree to her removal.

The PRESIDENT thought that obstetricians saw these cases as a rule at a much earlier stage than the alienists. Perhaps for this reason, and because of the shortness of time, the introducer of the subject had said but litt e about diagnosis. As a fact, when the patient was admitted into an asylum the diagnosis had been made. Whereas in the earlier stages it was not always easy to say that a case amounted to actual insanity. He considered with Dr. Griffith that the refusal of food was a far graver symptom, and pointed much more certainly to insanity than did sleeplessness. This, and headache too, occurred not infrequently in patients who never developed insanity. Whereas refusal of food, and by that was meant not mere anorexia, was practically only associated with insanity. In all fatal cases he emphasized the importance of making a thorough necropsy, not merely of the brain but of the other organs. For probably pure insanity was rarely fatal. He mentioned a case which presented the ordinary symptoms of puerperal insanity. She died, and a necropsy revealed suppuration extending from the parametrium behind the fascia up to the kidney.

LIVERPOOL MEDICAL INSTITUTION.

RUSHTON PARKER, B.S., F.R.C.S., President, in the Chair.

Thursday, January 15th, 1903.

ACUTE ASCENDING PARALYSIS.

DR. W. B. WARRINGTON described a case of acute ascending paralysis, usually named after Landry. There was a distinct history of an attack of influenza about a fortnight before the onset. Motor paralysis rapidly developed in the lower limbs, and spread to the arm, face, palate, and thorax. After a stationary period of a fortnight, recovery began, and became complete. Diaphoretics and morphine were given at first, then ergot, and finally potassium iodide and mercury. The electrical reactions were throughout normal and the integrity of the sphincters maintained.

Dr. BLAIR BELL thought the case one of post-influenzal neuritis. He narrated a case of true Landry's palsy he had lately seen in a girl, aged 20. A negative neurological examination had been made by Dr. Aldren Turner.

Dr. CARTER had seen two cases of acute ascending paralysis in which the administration of large doses of ergot had done good, the patients ultimately recovering.

Drs. T. R. GLYNN, A. S. GRÜNBAUM, NATHAN RAW, and BUCHANAN spoke; and Dr. WARRINGTON replied.

ACUTE YELLOW ATROPHY.

Dr. WARRINGTON also described a case of acute yellow atrophy in a young woman, who had been nursing a child for sixteen months. The early symptoms were nausea and vomiting, followed by marked jaundice and diminished liver dullness. Urea was diminished, but leucin and tyrosin were not present in the urine. The knee-jerks disappeared, and the patient died from respiratory failure. Duration of illness about six weeks.

Dr. BRADSHAW said the absence of leucin and tyrosin was no presumption against the diagnosis of acute yellow atrophy; they were absent in a typical case of his own.

ANEURYSMAL VARIX.

Dr. R. T. M. BUCHANAN showed a case of aneurysmal varix between the left subclavian artery, and the division of the left innominate vein, the result of a gunshot wound received in the late Boer war. Associated with the varix was left brachial monoplegia with the peculiar condition of flexibilitas cerea of the arm. Dr. Buchanan considered that some indirect damage had been done to the nerves supplying the rhomboids, and the lower part of the trapezius, although the bulk of the palsy might be functional.

Dr. BRADSHAW agreed with the diagnosis of aneurysmal varix. He thought the palsy entirely functional, and the wasting due simply to disuse, as there was no deformity and no trophic change in the skin. Flexibilitas cerea in one limb was rare, but the hysterical state on which it depended was not very infrequent in soldiers who had been wounded.

Dr. BUCHANAN replied.

GALL STONES.

Dr. E. T. DAVIES related a case in which he had removed 1,754 stones from the gall bladder of a woman, aged 51. There was no definite history of jaundice, but the urine was coloured, and the skin tawny. The patient made an excellent recovery.

INFANTILE SCURVY.

The adjourned discussion upon Dr. Peter Davidson's paper on infantile scurvy was opened by Mr. S. KELLETT SMITH, who said they were handicapped from the outset by the ignorance of the true cause of scurvy. There were many theories, but in this country they regarded the disease as the outcome, direct or indirect, of some malnutrition. In the case of adults the antiscorbutic properties of lime juice, which contained certain known salts, was amply proved, but it was false argument to conclude from this that the absence of these same salts from the diet was the cause of scurvy. Close examination of the dietary in most cases of scurvy revealed the fact that fats were present in insufficient quantity. Bottle-fed babies were especially liable to suffer in this way, for while attention was given to modification of the proteids and sugar of cow's milk, little regard was had, as a rule, to the equalization of the fatty matter. He thought, therefore, that in all cases showing early symptoms of scurvy the diet should be carefully criticized with respect to the proportion of fat present.

Dr. GLYNN had seen scurvy arise in people who had been put on a strict diet for flatulent dyspepsia. He thought some brands of Swiss milk were quite suitable for infant feeding up to 7 months.

Dr. O'FLAHERTY had found it difficult to get a good mixture with added cream; butter or cod-liver oil was better. The cream might be given separately, however.

Drs. RAW, BUCHANAN, GRÜNBAUM, W. B. BENNETT, and LLEWELLYN MORGAN spoke; and Dr. P. DAVIDSON, in reply, said that although the cases were still rare, yet the disease was on the increase, apparently from the increased use of preserved milks. In his experience there was no artificial food that could equal fresh cow's milk, suitably modified.

Election of Officers.—At the annual meeting held on Thursday, January 8th, the following list of office-bearers, members of Council, and Committees was adopted; those marked thus (*) did not hold the same office last year. *President:* Rushton Parker. *Vice-Presidents:* John E. Gemmell, *W. Permewan, Henry Briggs, and *G. W. Steeves. *Honorary Treasurer:* *G. H. Bickerton. *Honorary General Secretary:* J. R. Logan. *Honorary Secretary to Ordinary Meetings:* J. Hill Abram. *Honorary Librarian:* F. H. Barendt. *Council:* Edgar A. Browne, W. Murray Cairns, D. Douglas-Crawford, Ernest Nevins, W. B. Warrington, *F. C. Larkin, *W. J. R. Dunn, *Frank T. Paul, James Pinkerton, *Alexander Fisher, *C. T. Street, and *A. S. Grünbaum. *Auditors:* *D. Douglas-Crawford and *George Westby. *Pathological and Microscopical Committee:* R. Boyce, R. J. M. Buchanan, D. Douglas-Crawford, *R. J. Ewart, *Ernest Glynn, *A. S. Grünbaum, John Hay, K. W. Monsarrat, C. S. Sherrington, and W. B. Warrington. *Journal Committee:* The Honorary Secretary to Ordinary Meetings, K. W. Monsarrat, F. H. Barendt, F. C. Larkin, G. P. Newbolt, A. M. Paterson, W. Thelwall Thomas, Arthur Wallace, and W. Permewan.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—At a meeting held on January 14th, Mr. G. MUNRO SMITH in the chair, Mr. PAUL BUSH, C.M.G., showed a fibroid tumour of the uterus and papillomatous cyst of the ovary removed by operation; a fistula of the ureter ensued which healed completely without further surgical interference. Dr. E. W. H. GROVES, Dr. L. FIRTH, and Dr. W. C. SWAYNE remarked on the specimen.—Dr. E. H. E. STACK showed a most interesting series of contracted pelves, and pointed out that it was in those cases in which a moderate amount of contraction was present that gave rise to the greatest difficulty, as in extreme cases of contraction the deformity was usually diagnosed at a much earlier period. Dr. SWAYNE and Mr. MUNRO SMITH spoke on the subject.—Mr. A. W. PRICHARD read notes of a case of ruptured intestine successfully operated upon in which there was tuberculous disease of the peritoneum. Mr. C. A. MORTON, Mr. MUNRO SMITH, and Mr. PAUL BUSH commented on the case.—Mr. H. G. KYLE read notes of a case of perforated typhoid ulcer that he had operated on, in which the perforation could not be efficiently closed with sutures, and where he had placed the perforated intestine beneath the abdominal incision surrounding it with gauze, the patient eventually dying of a continuance of the enteric fever. Dr. J. O. SYMES, Mr. BUSH, Mr. W. H. HARSANT, Dr. STACK, Dr. GROVES, and Mr. MORTON spoke on the subject.—Mr. H. F. MOLE read a paper and showed the specimens of two cases of ruptured tubal pregnancy: in one the rupture had taken place into the general peritoneal cavity, and in the other between the layers of the broad ligament. Mr. T. CARWARDINE remarked on the paper.

DERMATOLOGICAL SOCIETY OF LONDON.—At a meeting held on January 14th, Dr. RADCLIFFE CROCKER, who was in the chair, showed a middle-aged man who for nine weeks had been affected by reddish-pink, oval, slightly-elevated, faintly desquamating patches on both flanks and on the left arm. The patches were about 3 in. long by 2 broad, and their long axes lay in the direction of the lines of fissure of the skin. They had apparently somewhat benefited by treatment, and the reason for showing the case was to ascertain the opinion of the members as to whether it was probably an early stage of mycosis fungoides or not. Most of the members thought the evidence was not sufficient to lead one to suspect mycosis fungoides.—Dr. J. H. SEQUEIRA showed a man who had had lupus erythematosus of typical appearance affecting the scalp, face, and ears for four years, and for the last year had also suffered from a papulo-vesicular and weeping eruption resembling eczema on the arms, buttocks, and thighs. The question was whether the second eruption was a simple eczema or whether it was one of those very acute phases of lupus erythematosus of which examples had been shown to the Society. Most members, though admitting the difficulty of making a definite diagnosis without watching the case, were inclined to believe that the disease on the extremities was really eczematous.—Dr. A. WHITFIELD showed a child aged 3 suffering from tinea tonsurans of the microsporon variety treated by *x* rays. The child had had two patches of the disease for many months, and one of these had been first treated. In all, fourteen exposures had been given, with the result that every hair, both sound and diseased, had fallen completely out one week after the cessation, and this patch was cured. The hair was beginning to grow again slowly three weeks later. The other patch was under treatment, and had had ten exposures without any hair falling. Slight reddening had, however, begun to show, and Dr. Whitfield thought that a very few more exposures would cause shedding as before. He pointed out that a little more experience was required before introducing the treatment generally, and that it must be carried out carefully, as in some cases the hair had apparently not returned, but he thought the method compared favourably with all others in rapidity, cleanliness, and painlessness. It was of course best adapted for patchy cases.—Dr. J. M. H. MACLEOD showed a child aged 6, with a rapidly-developing diffuse and areate alopecia. The whole duration of the disease was three weeks, and already most of the hair on the head was lost. The scalp was very scurfy and entirely free from oily seborrhoea. There was some plugging of the follicles, but no micro-organisms had been found either in the scales or hairs. The number of clavate and other atrophic forms of hair present was very striking.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.—The fourth meeting of the session was held on January 12th, Mr. A. E. MAYLARD, President, in the chair. Dr. HENRY RUTHERFURD showed: (1) A child operated on for intussusception at 3 months; (2) a child showing scars of intrauterine small-pox, and deformities due to the same cause; and read notes of the cases.—Dr. JOHN H. TEACHER gave a lantern and microscopical demonstration of chorion-epithelioma (deciduoma malignum of authors), and of chorion epitheliomatous and hydatiform-mole-like structures in teratomata of the testis. The latter part was from preparations, the gift of Dr. Schlagenhaufer of Vienna, Dr. Schmorl of Dresden, and Professor Marchand of Leipzig. Dr. Teacher also gave a short account of the opinions held as to these tumours.—Dr. J. KERR LOVE and Dr. J. W. LEITCH showed a specimen of aneurysm of the aorta, in which death occurred from rupture of the heart, and read notes of the case.—Dr. J. K. KELLY read notes and showed a specimen and microscopic sections of sarcomatous disease of the uterus and right ovary, with adenocystoma of the left ovary, removed from a patient aged 66.—The following exhibits were on view during the meeting by Drs. R. S. THOMSON and Dr. ROBERT FULLARTON: (1) Water-colour drawings illustrative of the prodromal rashes of variola, etc.; (2) photographs illustrating various phases of the variolar eruption. Dr. JOHN BROWNLEE: A microscopical demonstration illustrating certain features of the variolar eruption. Dr. T. K. MONRO: A water-colour drawing by Dr. A. J. Ballantyne representing severe scrofuloderma.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.—A meeting was held on Tuesday, January 6th, Mrs. BOYD, M.D., President, in the chair.—Mrs. SCHARLIEB, M.S., M.D., read notes of a case of vesicular mole complicated with double ovarian cysts.—Miss THORNE, F.R.C.S.I., read notes of two cases of carcinoma of the ovary.—Miss BOYLE, M.D., read a paper on amusements in relation to health.

REVIEWS.

PUBLIC HEALTH.

THE new *Manual of Hygiene*,[1] by Dr. HAMER, is a compact and well-written volume, and into it he has succeeded in compressing an intelligent survey of his subject. The student who masters the contents of this volume will have no need to fear the examiner in public health, and will, furthermore, be possessed of a thorough grasp of his subject. The first chapter is introductory, giving a sketch of the rise and progress of preventive medicine. The second, which deals with air, contains much that is common to all textbooks, but the most recent information has been utilized. In the chapter on water much space is devoted, as in other textbooks, to analytical details. We confess that we should prefer to see these details relegated to laboratory textbooks and more space given to details of preventive medicine and sanitary administration, and to fuller accounts of waterborne epidemics than those given in the same chapter. In the chapter on soil special importance is attached to Sidney Martin's results, but, as the recent experiments by Firth and Horrocks and by E. Pfuhl show,

[1] *Manual of Hygiene.* By W. H. Hamer, M.A., M.D., D.P.H. Camb., London: J. and A. Churchill. 1902. (Demy 8vo, pp. 634; 93 illustrations. 12s. 6d.)

much remains to be done before the bacteriological observations can be applied directly to practice. A good deal of space is given to Buchanan's results as to the relation between drying of soil and diminution of phthisis which also need revision, in view of the fact that other factors were acting to an unknown extent at the same time as soil drying. The value of the chapter on food would be increased by examples of practical dietaries. Only one of the figures of food parasites has the magnification stated. The subject of food poisoning is treated somewhat scantily. We would willingly have parted with all the analytical details in regard to air and water for a description of the methods to be adopted in examining specimens—for example, of pork-pie, for the detection of the particular member of the paratyphoid group of bacilli which may be the offending agent. It may, of course, be argued that this would be converting a manual of hygiene into a textbook of bacteriology, but bacteriological examinations are rapidly becoming much more closely associated with the work of a medical officer of health than methods of chemical analysis. For the same reason we should have welcomed exact details of the Widal reaction, and of the points by which this reaction may be distinguished from the similar reaction with the Gaertner bacillus, instead of a general statement (p. 377) that "this serum test is not quite decisive, for Durham showed that Gaertner's bacillus reacts to the serum of enteric fever patients." In speaking of the relationship of the consumption of milk to tuberculosis, Dr. Hamer attaches too much importance to the fact that among children under 1 year of age the death-rate from tabes mesenterica has actually increased during recent years. So far as we can gather, no tests are given for the different preservatives in foods, and in the description of the recent arsenical poisoning by beer, the difficulties of detecting its presence and determining its amount are not noted; nor in the alternative is reference made to other sources of information on these important points. Information as to collection and disposal of refuse is clearly and succinctly given. More diagrams as to house-drainage, and particularly a vertical section of a house showing its sanitary appliances, would have been helpful to the student. The chapter on dwellings, schools, and hospitals is one of the best in the book. The chapter on infectious diseases, which comprises over 100 pages of the book, is most satisfactory, but it is curious to find the description of cancer sandwiched between chicken-pox and cerebro-spinal fever. In speaking of disinfection by steam, Dr. Hamer says:

> Saturated steam.....constitutes a most efficient penetrating agency, but when it is used there is a tendency to wetting of the materials disinfected.

This is not a practical comment; it is of the essence of disinfection by steam that condensation, and therefore wetting, shall occur, but drying is then quickly effected by the use of current steam, as in the best disinfecting apparatus. On page 482 the Registrar-General's eight chief divisions of diseases with subsections are mentioned. These have been recently very wisely abandoned in the official reports of the Registrar-General. The chapter on vital statistics includes a short sketch of the subject of correlation, of which we should have been glad to hear more. The last eighty pages are occupied by sanitary administration and law; and into this space Dr. Hamer has compressed an admirable summary of the legal aspects of public health administration. The fact that we have been at the pains to point out various omissions which we hope to see rectified in a future edition must not be taken as an indication that a very high opinion of Dr. Hamer's work has not been formed. On the contrary, it is because the book is well written, well arranged, and will, we venture to prophesy, be a general favourite with public health students, that it has seemed worth while to go into some detail in commenting on the first edition.

Dr. SEDGWICK'S *Principles of Sanitary Science and the Public Health*[2] is a philosophical work which should be read by all medical officers of health, as well as by those preparing for diplomas in public health. It is fullest just where the ordinary textbooks are most scanty, and is therefore more interesting to read and more of a "living" book than the latter usually are. There is much to be said for lectures as contrasted with the chapters of a textbook, when the result shown in this book can be quoted on the former side. The work is divided into three parts: Part I. Health and Disease; Part II. Infection and Contagion: their Dissemination and Control; and Part III. Appendix. Under the first heading are considered in Chapter I, health, old age, and disease; in Chapter II, the various theories of disease; in Chapter III, the rise and influence of bacteriology; and in Chapter IV, the sanitary aspects of the struggle for existence. The different stages of the history of the discovery of the causation of infectious diseases are traced, and the gradual evolution of, first, a zymotic, and then a zymotoxic theory is shown. The relation between vital resistance and susceptibility is illustrated by Professsor Theobald Smith's formula $D=\frac{M}{R}$, in which D represents the disease, M the micro-organism, and R the vital resistance of the individual attacked. It is held that this idea may be carried further, the equation being written $D=\frac{MNV}{R}$, where N represents the number of micro-organisms, and V their virulence. In Part II infection and contagion are considered, dirt in relation to disease, the various vehicles by which disease is communicated (sewage, water, ice milk, uncooked foods), the prevention and inhibition of infection and decomposition by disinfection, and asepsis or antisepsis. Under the head of water as a means of conveying disease, there is an excellent description of Dr. Snow's investigation of the Broad Street outbreak of cholera, illustrated by two plans of the cholera epidemic in London in 1866, and of the Lausen and Caterham epidemics, as well as of several others. The remarks as to expert supervision are eminently judicious; and, in fact, this is a marked characteristic of the book throughout.

> The keynote of public service is expert supervision..... It will not do to leave to the shifty devices of petty politicians matters like water supply, gas supply, and food supply, which require, for mere public safety, skilled and highly-paid supervision. If democratic government is to endure and to exemplify a form of civilization above that of the republics of Central America, in which plunder and bad government are the rule, the people must see to it that in the place of small politicians to manage these things, they have educated public servants; instead of neglecting to care for watersheds they must be supervised by men technically trained; and instead of bossers and heelers to deal with these problems in their larger aspects there must be faithful and able experts. Only on this condition can we afford to surrender private supervision of some of the principal avenues of our well-being for public supervision; and until the most expert public supervision attainable takes the place of private control, it will remain true that a public supply is a public danger.

Although the conditions indicated above are not strictly applicable in this country, there is one danger which holds good. Public administration may mean public danger if the cheeseparing policy of many local authorities as to salaries of responsible officials be allowed to continue and increase. In the chapter on the infection of milk, scarlet fever and diphtheria are said to originate from this source less commonly than enteric fever. Although this is true, many important milk epidemics of scarlet fever and diphtheria might have been quoted from English experience. Under the head of raw foods as vehicles of disease, a full account is given of the outbreak of enteric fever at the Wesleyan University, Conn., due to oysters. English experience is only briefly referred to. An appendix contains some most suggestive remarks "on some popular beliefs as to certain special and peculiar causes of disease." The first of these is the belief in dangers from sewer gas. This the author regards as having been much exaggerated. Possibly the exhalations from broken drains or cesspools may be poisonous, but that they are capable of directly producing specific diseases cannot be admitted.

> The gases arising from leaks and breaks may have a toxic effect, and thus lower vital resistance and increase susceptibility. To this extent, and probably to this extent only, broken drains are "sources" of disease.

Similarly with regard to bad smells as causes of disease, the critical instance of London in 1858 is quoted from Dr. Budd's work. Never before had a stink (such as then arose from the Thames)

> risen to the height of a historic event... For months together the topic almost monopolized the public prints. . .For the first time in the history of man the sewage of nearly three millions of people had been brought to seethe and ferment under a burning sun, in one vast and open *cloaca* lying in their midst. And yet the leading peculiarity of the season was a remarkable diminution in the prevalence of fever, diarrhœa, and the other forms of disease commonly ascribed to putrid emanations.

Of course it is not contended that bad smells may not cause temporary sickness and other symptoms of poisoning. The belief in danger from well waters is another subject for comment, the views stated being identical with those of Dr. Poore, though apparently arrived at independently:

> If wells are thoroughly protected at the top from the entrance of filth, they are as a rule, from the disease-producing point of view, unimpeachable, being perhaps indeed polluted with purified sewage, but not actually infected with the germs of disease.

[2] *Principles of Sanitary Science and the Public Health, with Special Reference to the Causation and Prevention of Infectious Diseases.* By Wm. T. Sedgwick, Ph.D. New York and London: Macmillan and Co. 1902. (Demy 8vo, pp. 388. 12s. 6d.)

The main danger is no doubt from above ground, including, as in the Caterham outbreak, the entry of workmen into the well.

By precept and example Dr. VIVIAN POORE has long advocated that the earth is the only proper repository for organic refuse, and in *The Earth in Relation to the Preservation and Destruction of Contagia*[3] he has brought together his Milroy lectures (which were published in the BRITISH MEDICAL JOURNAL in 1889) and other papers and addresses devoted to the same subject. It is essential to any inquiry as to the existence or prevalence of "earthborne" disease to follow the history of pathogenic bacteria when buried in the soil, and a large amount of care has been devoted to this aspect of the question. The conclusion to which he is led is that, even in such a case as anthrax, the evidence of danger from earth contamination is less cogent than might be supposed, whilst there is practically no evidence that in the most severe outbreaks of enteric fever in this country the earth has acted as a culture medium and a distributor of the pathogenic germs. On the other hand the committal of excreta to water has led to, and in the chapter of accidents always will lead to, the occasional contamination of public water supplies with widespread disastrous consequences. Few, however, will quite go with him in his advocacy of wells, and even of shallow wells, as a source of water supply. It may be true enough that such a well under the eye of a practised sanitarian may be safe, but the continuous exercise of the needful care is too much to expect from the ordinary gardener or from the public at large. The cultivation of the ground is an integral part of his scheme for the return of excreta to the earth, and in his own experimental garden the results have been surprisingly remunerative. In some particulars the course of shallow burial which he advocates for the disposal of excreta conflicts with the conclusions arrived at by Major Firth and Major Horrocks as the outcome of their experiments upon the vitality of B. typhosus in earth, which was greater than earlier experimenters had supposed; but with this divergence of opinion Dr. Poore has himself dealt in a letter published in the BRITISH MEDICAL JOURNAL of October 11th, 1902, p. 1187, and he there admitted that under some circumstances the overlying earth may need subsequent care in the way of watering lest it be disseminated as dust. As Dr. Poore points out, more definite information is much needed as to the behaviour of B. coli and certain other pathogenic bacteria. We know little of their prevalence in common animals, little, too, of their behaviour in the earth. We can recommend the book as an excellent and carefully-reasoned exposition of the claims of the "earth system"; and though the enthusiasm of the writer for his thesis is everywhere apparent, it never leads him into looseness of statement, nor does he expect to convince his readers without giving reasons for the faith that is in him.

The fact that within a year of the publication of the first edition of PARKES's and KENWOOD's *Hygiene and Public Health*[4] a second edition should have been called for is sufficient evidence of the intrinsic merits of the book. The authors, with the assistance of Dr. Nabarro, have brought the new edition thoroughly up to date. The chapter on communicable diseases deserves special praise. It presents within a moderate compass a clear and full statement of the present position of the knowledge of the subject. But the book, as a whole, is excellent.

The Sanitary Inspector's Guide,[5] prepared by Mr. LEMMOIN-CANNON, consists of a summary and consolidation of the sanitary sections of the Public Health Acts, with remarks interspersed here and there. The information given is sufficient for the purpose; but we are somewhat doubtful whether summaries of Acts of Parliament are of material value, and whether it is not better for the responsible official to have ready for reference the complete text of each Act with a good index. As a guide to inspectors, this book may, however, prove to be useful, and save them some inconvenience in their work.

Dr. PAUL BERTHOD has republished in a volume[6] a series of annotations on subjects of public interest originally written for *Journal de Médecine* of Paris and other journals. The subjects dealt with are various branches of public assistance, medical administration, the prevention of syphilis and tuberculosis, the law relating to the public health, etc. The essays on these subjects are short and ephemeral, and their re-issue appears to have been scarcely necessary. We obtain glimpses from them of the many differences between French and English methods of medical and hygienic administration. One of the main things advocated is the transfer of public hospitals to sites outside the towns, automobiles being utilized to render this practicable for patients and for doctors. In regard to notification of infectious diseases it is urged that the obligation should rest, in the first instance, on the head of the family, and only in his default on the medical attendant. The compulsory notification of phthisis is strongly objected to, and the utility of even voluntary notification of this disease appears to be doubted. The English hygienist will find little to learn in public health administration from France, and it is curious to hear in this book an echo of the arguments against progress which passed muster in England thirty years ago.

MOTOR CARS.

A LONG process of evolution has been required to bring into being the modern motor car, and most people will be interested in reading the very complete account given in Mr. RHYS JENKINS's book on *Motor Cars*[7] of the phases in the development of mechanically propelled vehicles. The author devotes the first half of the volume to the history of the subject, and traces in this portion of the work the progress made since the introduction of mechanical and sailing carriages early in the seventeenth century up to the year 1896, when the Act of Parliament was passed removing some of the limitations imposed on motor vehicles. Until the serious attempts to employ steam power for propelling road vehicles in the early part of the nineteenth century, the various contrivances invented can be regarded as little more than ingenious toys. Between 1821 and 1840 great activity was shown in building steam carriages, and this period Mr. Jenkins well describes as the "steam-carriage boom," and gives the names of seven public companies formed or projected to work lines of steam coaches. In December, 1833, there were as many as twenty carriages built, or in course of construction, in London alone. Many of the carriages made during this period were of practical use, and in 1831 Hancock established a steam omnibus service between the City and Paddington, and called his first public car by the startling name, "The Autopsy." Boiler explosions, turnpike tolls, and above all the competition of the railroad were responsible for the gradual abandonment of steam-driven road vehicles. Considerable labour has been expended in collecting materials for this very complete historical account, and its value is much enhanced by the admirable illustrations of the ingenious and often extremely quaint types of vehicles that were projected. In the second half of the book the author deals with the modern revival of motor cars, and concentrates his attention on the petrol car, dealing only briefly with steam and electric cars. A fair general account is given of the structure and working of the petrol engine, but in this section more illustrations and greater detail would have rendered the description of electric ignition clearer. The latest types of British and foreign cars are fully illustrated, and considering the rapid succession of improvements, this section is fairly up-to-date. In the very comprehensive account of the various makes of cars, mention might well have been made of their approximate prices, and some information given as to their respective advantages or defects. A fault common to the larger books on motor cars is that they give no real guidance in the choice of a car. Information on these points, and a section giving useful hints and suggestions for those who manage their own cars, would have added to the value of the book, especially to many members of the medical profession, as there is not the least doubt that there is already a very large and rapidly-growing demand among medical men for thoroughly reliable cars of moderate

[3] *The Earth in Relation to the Preservation and Destruction of Contagia.* By G. Vivian Poore, M.D., F.R.C.P. London: Longmans, Green, and Co. 1902. (Crown 8vo, pp. 268. 5s.)

[4] *Hygiene and Public Health.* By Louis Parkes, M.D., D.P.H., and Henry Kenwood, M.B., D.P.H., F.C.S. Second Edition. London: H. K. Lewis. 1902. (Cr. 8vo, pp. 763; 88 illustrations. 12s.)

[5] *The Sanitary Inspector's Guide.* A Practical Treatise on the Public Health Act, 1875, and the Public Health Acts Amendment Act, 1890, so far as they affect the Inspector of Nuisances. By Henry Lemmoin-Cannon. London: P. S. King and Son. 1902. (Crown 8vo. Pp. 257. 3s. 6d.)

[6] *Raccourcis de Médecine Sociale et Professionelle.* Par Le Dr. Paul Berthod. Paris: Vigot Frères. 1903. (Crown 8vo, pp. 455. Frs.4.)

[7] *Motors Cars and the Application of Mechanical Power to Road Vehicles.* By Rhys Jenkins, M.I.M.E. London: Fisher Unwin. 1902. (Demy 8vo, pp. 371. 21s.)

price, let us say between £200 and £350. However, in spite of this deficiency, the details given as to the mechanism of the different types of motor cars are accurate and we have no hesitation in saying that this is the best book on the subject which has been written in this country.

NOTES ON BOOKS.

MR. COLTON, the Professor of Natural Science in the Illinois State Normal University has written a book[1] which will be welcomed not only by students but also by teachers of elementary physiology. His *The Human Body: Its Personal Hygiene and Practical Physiology* is an eminently readable little volume and remarkably free from inaccuracies. The experiments, such as those to indicate the mechanism of circulation and respiration, are described in detail. In the hygienic sections the author has quoted freely from other writers, the views on exercise and the use of alcohol being especially interesting.

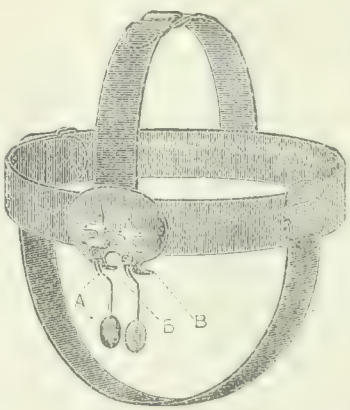
REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEDICAL AND SURGICAL APPLIANCES.

A Sterilisable Silver Catheter.—Mr. STANLEY RAW, Senior Resident Medical Officer, Sunderland Infirmary, states that, having frequently met with difficulty in withdrawing urine from patients suffering from retention due to stricture, enlarged prostate, etc., owing to the eyes of the ordinary silver catheter becoming blocked with blood clot during its passage through the urethra, he has devised an instrument to cope with this difficulty, which also possesses the advantage over the ordinary catheter, that the inside can be cleaned and rendered absolutely aseptic. Its principle can be at once seen from the accompanying diagram. It differs from the ordinary catheter in that the last half-inch is continuous, not with the catheter itself, but with the stilette, which can be moved in or out of position by pulling or pushing the end of the stilette; there is thus no necessity for any opening in the side of the instrument. To use it, the stilette is pulled upon until the distal end is in position, and the instrument is then passed into the bladder. By pushing on the end of the stilette, the end of the catheter is then displaced and the urine drawn off; the end of the instrument is then replaced, and the catheter withdrawn. The advantages claimed are: (1) The impossibility of the catheter becoming obstructed with blood clot or other foreign material during its passage into the bladder, for during this manipulation there is no opening in the instrument. (2) The ease with which the flow can be regulated according to the distance the stilette is moved. (3) The rapidity with which the bladder can be emptied, owing to the larger opening when the end is thoroughly displaced. A No. 12 ordinary silver catheter occupied forty-one seconds in emptying one pint of water, this instrument (also No. 12) thirty seconds. (4) Supposing the eyes of the ordinary instrument to become obstructed with blood clot in the bladder, there is no way of removing it excepting by withdrawing the instrument altogether; if the open end of this instrument becomes so blocked, the clot can be broken up by alternately shutting and opening the end by means of the stilette without taking the catheter out. (5) Its greater adaptability to asepsis, for when the instrument has been used the end is unscrewed, and the small button is taken off the stilette altogether. The stilette is then withdrawn, and the inside of the catheter washed by a stream of water. The stilette is then replaced and an end screwed on. A piece of gauze is then passed through the stilette, and the stilette again withdrawn, carrying with it the gauze, which thoroughly dries the inside. Mr. Raw has only had the opportunity of using the instrument in a small number of cases, but in all of these it answered admirably, and quite fulfilled his expectations. It is made by Messrs. Down Bros., of St. Thomas's Street, Borough, S.E.



Nasal Truss.—Mr. W. J. WALSHAM, F.R.C.S. (London) writes: Heretofore the difficulty has been to prevent the forehead plate of a nasal truss from slipping from side to side and upwards over the forehead. The truss shown in the accompanying drawing is designed to obviate this difficulty by making the lower border of the forehead plate follow the contour of the root of the nose and contiguous orbital margins. A rounded notch (A), corresponding with the root of the nose is cut in the plate, and the margins of the lower part of the plate forming the sides of the notch are bent backwards in a blunt curve (B B) to almost a right angle with the rest of the plate. The notch therefore embraces the root of the nose, while the turned-back portions of the margins of the plates catch under the orbital ridges at the internal angular processes of the orbits. This prevents the truss from being displaced upwards, while the notch prevents any movement from side to side. The truss is provided with the usual straps and headband, and to the plate are fixed the usual arms for making pressure upon and fixing the nasal bones or cartilages. It is made by Messrs. Arnold and Sons, West Smithfield, London, E.C.



MEDICINAL AND DIETETIC PREPARATIONS.

Sterilized Cream.—Samples of a sterilized cream stated to be prepared in Norway, and described as "Banquet Cream," have been submitted to us for examination. The article is put up in tins, and the results of our analyses show that it consists of a genuine cream of good quality free from chemical preservatives, and containing 33.59 per cent. of milk. It is described as "double" cream, a term which has no definite meaning, and which might be misunderstand. We think that the use of this expression is undesirable. The cream may be obtained from Messrs. Francis and Co., of 8, Arthur Street West, London, E.C. We consider that it may be accepted as a good and reliable product.

Hopogan.—This preparation has been used to a considerable extent in the United States under the name of "biogen," and has been placed on the European market with the above title. It is a white powder, which contains magnesium dioxide as its principal constituent, other magnesium compounds, and lactose. It is only partially soluble in water, but dissolves in dilute mineral acids with the formation of hydrogen peroxide and the liberation of some oxygen. As a remedial agent, particularly in anaemic conditions, it is said to have proved very efficient. Certainly a convenient method is thus presented for the administration of oxygen in a readily available form, without the subsequent formation of undesirable decomposition products. In addition to the powder the drug is supplied in tablet form. Hopogan is stable in dry air, but should not be exposed to moisture. Messrs. Kirchoff and Neirath, Berlin, have the sole European rights of production, and are represented in London by Mr. J. H. Weiss, Portland House, Basinghall Street, E.C.

[1] *The Human Body: its Personal Hygiene and Practical Physiology.* By Ruel P. Colton. London: The Scientific Press. 1902. (Crown 8vo, pp. 423, 103 illustrations. 5s.)

THE FIRST EGYPTIAN MEDICAL CONGRESS.

[FROM OUR CORRESPONDENT.]

(Continued from Page 103.)

SECTION OF MEDICINE.

Hepatitis.—Dr. COMANOS PACHA, having stated his belief that acute hepatitis, which arose in the manner he had described, was a specific disease of hot climates, suggested that it should henceforth be known as calorhepatitis.

Psychoses in Europeans in Hot Climates.—Dr. DE BECKER BEY (Cairo) then read a paper on the influence of hot countries in the development of psychoses among Europeans. As the result of five years' experience he had found among the Austro-Hungarian colony in Cairo an annual proportion of 1 lunatic in 210, a much higher ratio than obtained in Europe. He suggested that this might be due in part to overwork of the digestive organs together with defective elimination of certain toxins. He then proceeded to discuss a class of cases for which he suggested the name "tropical moral insanity." Patients attacked by it had often an alcoholic history; in other cases there was a pre-existing psychical taint, or they had left Europe under the stress of financial or other worry. Among further predisposing causes were isolation from contact with white men and dietary difficulties, particularly long subsistence upon tinned foods. The symptoms were those of an affective insanity characterized by conceit, irritability and coarse and brutal actions, without any notable loss of intelligence, and without hallucinations or ataxy. The author considered that Europeans were physiologically affected by the temperature and hence to some extent irresponsible for their actions. *Per contra* he held that it was inadvisable to impose European codes of laws upon the natives, who had not been prepared for them by the struggle for existence.

Of the other papers read at this sitting the most noteworthy were those of Dr. GIL CASARÈS (Santiago) on the radiography of hepatic cysts and of Dr. DONNIER (Lille) on the treatment of membranous entero-colitis by high tension currents.

Malaria in Egypt.—The principal paper in the Medical Section on the first afternoon was that by Dr. FORNARIO (Cairo) on malaria in Egypt; the chair was taken by Professor BOUCHARD, who did not, however, contribute to the discussion. Dr. Fornario pointed out that much of the malaria in his country was either mistaken for something else or denied. He demonstrated by the aid of diagrams that the temperature in an attack of ague in Egypt often ran an abnormal course, so that confusion with enteric fever might and did occur. From the epidemiological standpoint he called attention to the seasonal variations of malaria incidence according to the rise of the Nile. He contrasted the characters of the disease in Egypt generally with those observed in the Rosetta district, where the liver was far less affected than was ordinarily the case. This fact led to great difficulty in the differential diagnosis of enlarged livers. Dr. Fornario also referred to the pneumonic type of the affection and to the functional disorders of the heart and kidneys which he had seen associated with it. Dr. CRESWELL (Suez) spoke briefly as to the clinical and hygienic features of malaria as seen in his district.

Yellow Fever.—Major GORGAS communicated the results of the recent experiences of the United States army in connexion with yellow fever. An account of these has already appeared in the BRITISH MEDICAL JOURNAL.

Renal Complications of Malaria.—Professor TESSIER (Lyon) gave an account of the renal complications of malaria, laying great stress on the prognostic importance of the variety of albumen excreted, for the detection of which he had devised a special method. He stated that acute attacks of ague were rare in chronic malaria unless some new pathological factor supervened. A discussion followed, in which Dr. FORNARIO, and Professors MARIANI and MARAGLIANO took part.

Bilious Typhus.—Dr. VALASSOPOULO (Alexandria) read a paper on a fever which he called "typhus bilieux," which has been virtually endemic in that city for some thirty years. He demonstrated that it was not the same disease as that described by Griesinger in Cairo in 1853, and held that it was due to the bad condition of the town sewers, which, owing to faulty construction and the absence of a proper fall, were filled with stagnant and putrefying animal matter, particularly in the summer, when rain was unknown. He pointed out that the diseases centred in the neighbourhood of the bazaar. He suggested that the malady was not confined to Alexandria, but was found throughout the Egypt and also in Europe, where it had, in his opinion quite improperly been given the name of Weil's disease.

Early Diagnosis of Typhoid Fever.—Dr. J. COURMONT of Lyons described his method of cultivating the typhoid bacillus from the blood of patients suffering from enteric fever. He stated that whereas Widal's reaction only gave results when the patient had been ill for several days, his own procedure enabled the diagnosis to be made within twenty-four to forty-eight hours, to the great advantage of the treatment.

The Prevention of Epidemics in Egypt.—The principal paper in the Section of Medicine on December 21st, 1902, was that by Dr. BITTER on the prevention and handling of epidemics in Egypt. Dr. Bitter is Government bacteriologist, and is generally admitted to be the leading local authority on this subject, so that his address attracted one of the largest audiences of the Congress. He showed that, thanks to improved hygienic measures, the mortality had much diminished in recent cholera epidemics. The diminution was, he said, much greater than appeared, since the mortality returns in outbreaks prior to that of 1895-6, were much less than the correct figures. The epidemic of 1902 was due to infection of drinking water, and Dr. Bitter pointed out that in epidemics arising from this cause the curve of morbidity was much more rapid and less extended than in those due to aërially disseminated infection. Up to and including 1865 all defensive measures had unfortunately been directed against every source of infection except the most important—the water. In 1883 the only town which had taken precautions from this point of view was Alexandria; elsewhere all the dirt and garbage of the town was jettisoned into the Nile. As a resul the epidemic of 1883 did not assume anything like the same proportions in Alexandria as that of 1865 had done both at Alexandria and Cairo. The epidemic of 1902 was fought upon a scientific plan. The great difficulty was concealment; the family practitioners were not so great a help as they might have been, since the poor natives did not call them in when first attacked. The sole guarantee was the illegality of burying a corpse without a medical certificate; here again the difficulty had to be faced that in many villages the barber fulfilled the office of doctor and administered the system of death certification. A still further difficulty was the absence of disinfecting apparatus in the villages. Dr. Bitter proceeded to account for the cholera outbreak of 1902 on the lines adopted by the Sanitary Board, and already described in the BRITISH MEDICAL JOURNAL. He then detailed the measures taken by the Government and the Sanitary Board against cholera and plague. He stated that he had shown that the microbes in the last two Egyptian outbreaks of these diseases were extremely virulent, and inferred that the diminution in mortality was due to the energy of the measures taken, and in general to the improvements which had been carried out in the general programme of defence. At the same time he defended the preventive measures which had been adopted in the last cholera epidemic, and stated that in his opinion they were better organized than on former occasions. Nevertheless, internal sanitation was of more importance than quarantine, the results of which were never wholly satisfactory.—Dr. RUFFER agreed entirely with the substance of what Dr. Bitter had said, and invited the members of the Congress to visit the station of the Quarantine Board at Tor.

Plague in Egypt.—Dr. GOTTSCHLICH (Alexandria) next read an extremely original paper on the plague in Egypt. He distinguished two types, a commoner or summer form, bubonic in character, and relatively benign, and a much rarer and more severe winter form which took on the features of a malignant epidemic, beginning with pneumonic cases. Dr. Gottschlich stated that he had discovered that the revival of the disease in the spring was due to the multiplication of rats, which attained its maximum at that time of year. Both types of disease were, according to him, due to rats, but he held that thorough isolation and disinfection of every case of plague would nearly always prevent the outbreak of a pneumonic epidemic; a general system of disinfection was, in fact, the sole means of effecting the definite extermination of plague in any particular locality. With regard to bacteriology, the author maintained that the pseudo-plague bacillus could only be distinguished from the true by its cultural features. By careful tabulation of statistics he was enabled to prove that the old plague epidemics, for example, that of 1834-5, were in all respects similar to the recent.

Serum Therapeutics of Typhoid Fever.—Professor CHANTEMESSE (Paris) made a communication on the serum therapeutics of typhoid fever. He announced his discovery of a serum which had been of the utmost service, so that the

mortality of the disease in his wards had been reduced from 12 to 4.7 per cent.

Communications.—Among the other papers read during the morning the most noteworthy were those by Dr. STEKOULIS (Constantinople) on the last manifestations of plague in Turkey; by Dr. RAYNAUD (Algiers) on the prophylaxis of plague in Algeria; by Dr. ZIROLLA (Suez) on the part played by fleas in the transmission of plague; and by Dr. LANGLOIS (Paris) on the disinfection of ships.

Tuberculosis in Egypt.—The principal paper on the morning of December 22nd was that on tuberculosis in Egypt, by the President of the Congress, H. E. Dr. IBRAHIM PACHA HASSAN. Though containing no new facts or conclusions it presented a well-reasoned summary of present knowledge. The subject was treated from two points of view—that of tubercle as affecting the natives, and that of Egypt as a health resort in phthisis. Under the former heading attention was called to the frequency of the disease in the Soudanese, particularly when employed—for example, as soldiers—in Lower Egypt, and the general rapidity of its course. Under the latter the author deprecated the indiscriminate exportation of consumptives to Egypt, and pointed out that the cases which did best were the chronic, and particularly those occurring in older people.—Professor MARAGLIANO (Genoa) discussed the treatment of tuberculosis at some length, and once more recounted the great success which he had obtained by the serum method.—Dr. FORNARIO (Cairo) related a case which he had cured by means of Professor Maragliano's serum when all other means had failed, and showed skiagraphs in illustration.—Professor DOUMER (Lille), on the other hand, recommended the use of high-frequency currents.—Professor MARIANI (Genoa) spoke on the clinical aspects of tuberculosis, but without particular reference to Egypt; he strongly advocated the therapeutic use of oxygen inhalations.

Professor GALEOTTI (Cagliari) read a paper, postponed from the preceding day, on the serum treatment of and vaccination against bubonic plague.

Gastric Dilatation.—Dr. PAGE MAY (Helouan) gave a lantern demonstration of experiments bearing on the causation of gastric dilatation. He showed tracings illustrating the fact that the movements of the stomach continued independently of the blood stream or nervous system, and inferred that they were in all probability idiomuscular, though under ganglionic control. Stimulation of the peripheral cut end of a vagus caused at first a diminution of the gastric tone, the movements ceasing; after a while they were increased. The former effect predominated at the cardiac end, the latter at the pyloric; the left vagus was rather more active than the right. Stimulation of the central end could produce reflex inhibition as long as the other vagus was intact; this was true of any sensory nerve. Dr. May inferred the existence of at least two groups of gastromotor nerve fibres in the vagus. With regard to the splanchnics, he had found that they exercised no direct effect one way or the other on the stomach movements; they might, however, act indirectly by virtue of their vascular relations. He pointed out the great importance of the vagus influence in the causation of gastric dilatation.

Hasheesh Insanity.—In the afternoon the chief paper was that by Dr. WARNOCK, Superintendent of the Cairo Lunatic Asylum, on hasheesh insanity. He said: The importation of hasheesh (Indian hemp) into Egypt is prohibited, but as much as 16 tons were nevertheless confiscated in the country in 1901, and it is undoubtedly used in enormous quantities in the towns. It is chiefly smoked, but a considerable amount is consumed in the form of pills or sweetmeats. Its physiological effects have been related in numerous papers by Marshall, D. D. Cunningham, and others. The usual reason given by Arabs for its use is that it induces a general feeling of pleasure and content. It is also alleged to increase the appetite for food, to promote sexual desire, and to relieve feelings of lassitude and depression. Probably, as in the habits of opium, coca, alcohol, tobacco, etc., it is primarily employed on account of its "euphoric" effects upon the central nervous system. The diagnosis of hasheesh insanity, which of course belongs to the toxic group, is mainly symptomatic, but a history can often be obtained by careful, repeated and judicious questioning. Police certificates, unless otherwise confirmed, are, in this respect, habitually disregarded. The following are the main types of hasheesh insanity: (1) Temporary intoxication: The patient becomes drowsy, feels pleasantly exalted, and loses cognizance of the worries of existence. His mental pose is more "subjective" than that of the alcoholic, and less so than that of the absorbed opium user. He has a staggering gait somewhat like that of the former, but is much less demonstrative. (2) Delirium: This is accompanied by hallucinations of sight, hearing, taste, and smell, often of an unpleasant kind. Delusions of persecution, for example, by a devil or spirit, are not uncommon. There may be great exaltation, the patient believing himself to be a prophet or a sultan. These cases are restless and sleepless, but not so markedly so as in delirium tremens, the motor and gastric symptoms and the physical exhaustion of which are usually absent. Suicidal tendencies are rare, and the condition is much less grave than delirium tremens. (3) Acute mania: This varies in acuteness, from a mild, short attack of excitement to a prolonged attack of furious mania, ending in exhaustion or even death. Most cases are exalted and have delusions of grandeur or of religious importance; delusions of persecution are common, and provoke violence towards others, but not suicide. Restlessness, incoherence, destructiveness, indecency, and loss of moral control are characteristic, and a certain impudent, daredevil demeanour is notably frequent. Hallucinations are not so marked as in alcoholic mania, but those of hearing and taste are not uncommon, and the latter may lead to the delusion of being poisoned. A few cases are more melancholic in character. The type is essentially transitory. (4) Chronic mania: This includes a form of the delusion of persecution. Many of these cases are not distinguishable from ordinary chronic mania. The patient is happier and less worried than the alcoholic chronic maniac, and has not his motor or sensory troubles. Suicidal and homicidal tendencies are usually wanting. (5) Chronic dementia is the final stage of the preceding forms; the condition is that of ordinary chronic dementia, without motor or sensory symptoms. (6) Cannabinomania: This term was used to describe the condition of many hasheesh users between acute attacks. The individual is a lazy, good-for-nothing fellow who lives by begging and stealing. He pesters his relatives for money to buy hasheesh, often assaulting them if they refuse. The moral degradation of these cases is their most salient feature; loss of social position, shamelessness, lying, theft, and a loose, irregular life make them a curse to their families. In the asylum they are notorious for making false charges, refusing to work, and quarrelling. They are irritable, emotional, and alternately deny their propensity and fervently promise reform. They do not usually ask for hasheesh, but endeavour to obtain it by stealth. The craving does not appear to be so marked as in the case of the dipsomaniac or the morphinomaniac, and as no phenomena of "deprivation" are observable, the habit should be easier to break than either of the others. In the early stages these individuals are usually regarded as criminals, and their moral lapses land them in gaol; later on, when their intellectual impairment becomes more marked, they are sent to an asylum. Contrasting generally the hasheesh insanities with those produced by alcohol, the following main points stand out: (1) Suicidal tendencies are common among alcoholics, rare in hasheesh cases. It is however to be borne in mind that suicide is rare among the insane of the Arab race and Mohammedan religion. (2) Hasheesh appears to be a more important factor in the causation of insanity in Egypt than is alcohol in England. (3) As a cause of crime hasheesh appears to be as potent in Egypt as alcohol in England. (4) The use of hasheesh, unlike that of alcohol, is not followed by any characteristic anatomical lesions. Asthma and bronchitis are not specially common among hasheesh smokers. It is to be noted that the abuse of hasheesh, like that of alcohol, is sometimes only a symptom of incipient insanity. It has been suggested that if the use of hasheesh were entirely prevented in Egypt its place would be taken by another euphoric agent, probably alcohol. This change would probably be for the worse, as alcohol, a fertile source of crime and insanity in temperate countries, seems to have a specially deleterious effect in warm climates and on Oriental races. The present system of nominally prohibiting hasheesh, while a large amount is smuggled into the country and smoked in spite of the decrees, may eventually bring about the necessary amount of restriction by raising the price of the drug and rendering its immoderate purchase beyond the means of the majority of habitual hasheesh smokers. Opium is taken to some extent in Egypt, but cases of insanity among the lower classes from its use are rare; the substitution of the opium habit for that of hasheesh would probably be an improvement. Egyptian experience confirms the report of the Indian Hemp Drugs Commission in the respect that moderate use of

hasheesh produces no moral injury whatever. But its excessive use is a most frequent cause of insanity, whereas it has been stated to be but an occasional cause in India; the experience of Dr. Walsh, of the Calcutta Lunatic Asylum, however, is that in 1892-3 Indian hemp caused 25 to 35 per cent. of the insanity in Bengal. In Egypt statistics are available since the year 1895. During the six years 1896-1901, out of 2,564 male cases of insanity admitted to Cairo Asylum, 689—that is, nearly 27 per cent.—were attributed to the use of hasheesh. Very few female patients used hasheesh, and it is noteworthy that insanity is more than three times as common among the hasheesh-using sex as among women. This difference in the insanity-rate between the sexes is significant, and goes a long way to prove the importance of hasheesh as a cause of insanity among Egyptian men. In England insanity is more frequent among women than men (35 to 30).

Pellagra in Egypt.—Dr. SANDWITH (Cairo) read a paper on pellagra in Egypt, and gave demonstrations illustrating that disease, and also leprosy and ankylostomiasis.

Leprosy in Egypt.—Dr. ENGEL BEY also read a paper on leprosy in Egypt; the disease was evidently upon the increase in that country, and called for legislative intervention.

VISIT OF LORD AND LADY CROMER.

On December 21st the Sections met in the morning only, the afternoon being devoted to the excursion to the Barrage. On this day the Congress was honoured by a visit from Lord and Lady Cromer, who, after listening for some little time to the proceedings of the Section of Medicine, proceeded to the Anatomical Museum, where Professor Elliot-Smith explained to them the unique features of the collection. They were particularly interested in the extraordinary series of prehistoric remains. Lord and Lady Cromer, who were accompanied by Dr. Keatinge, Mr. Reginald Harrison and Dr. Bertram Abrahams, also inspected the various departments of the Medical School.

CONCLUDING MEETING.

The final sitting of the Section of Medicine was devoted to the reading of short papers of which over forty were announced for the morning. Most of the these were abandoned, to be subsequently printed in the *Proceedings*, the rest were as a rule read through at break-neck speed and commanded no attention from the audience which was small but chatty.

Ear Diseases in Egypt.—Dr. BEDDOE (Cairo) gave an account of the influence of the Egyptian climate—at least as regards Cairo and Upper Egypt—upon diseases of the middle ear. With regard to purulent otitis media he stated that there was nothing peculiar in its course and complications but that its causation was somewhat different from that observed at home, owing to the rare occurrence in Egypt of the exanthemata, particularly scarlet fever and measles. The majority of cases he attributed to septic sore throat due to the inhalation of infective dust, though adenoids and allied conditions were not uncommon causes. As regarded the influence of climatic conditions on prognosis he was unable to give the results of a large series of cases observed during the past five years. He stated that whilst he had seen benefit resulting in those cases of progressive deafness due to a dry sclerosing condition of the tympanum unaccompanied by and apparently not entirely due to attacks of nasopharyngeal catarrh the cures did not appear on the whole to be strikingly better than might be obtained at home under suitable treatment. With regard, however, to such cases as owed their origin and progress to repeated attacks of catarrh of the upper air passages, the improvement resulting from a residence in Egypt had been striking. Catarrh was, of course, not unknown there, but the attacks were as a rule not persistent or severe, and any accompanying middle-ear trouble was as a rule of a slight and transient nature. The climate was not a cure; it was simply a help in the treatment, which should be carried on on the same principles which obtained elsewhere. The cases which derived most benefit were the earlier ones. He attributed the improvement in them not to any direct action on the middle ear, but simply to the healthier condition of the upper air passages, the improvement in general health due to the more outdoor life, and the avoidance of chances of infection from overcrowding and living in small, stuffy, ill-ventilated rooms. The best places to stay at were those away from Cairo and the area of cultivation, notably in those resorts where the patient could breathe nothing but the dry air of the desert.

H.E. Dr. ABBATE PACHA read an interesting paper on eunuchism, and Dr. Loos recounted his now famous experiments on the life-history of ankylostoma.

H.E. Dr. COMANOS PACHA declared the business of the Section closed in a grateful and profuse speech, to which Professor MARAGLIANO made a cordial and fitting reply.

THE FOURTEENTH INTERNATIONAL MEDICAL CONGRESS, MADRID.

WE have already published in the BRITISH MEDICAL JOURNAL of January 10th, p. 103, the arrangements made by Messrs. Cook and Son in connexion with the journey to Madrid to attend the Medical Congress, which begins on April 23rd; we have have now received from Messrs. Henry Gaze and Sons, 68 and 69, Old Bailey, London, E.C., particulars of a party which they are arranging as follows:

The party will leave London (Charing Cross Station) at 2.20 p.m. on Sunday, April 19th, and will arrive in Paris at 9.15. The party will leave Paris at midday on Monday, April 20th, by the train de luxe, in which sleeping berths will be reserved, and dinner, luncheon, and breakfast served. The train is due to reach Madrid on Tuesday, April 21st, and accommodation will be provided at a first-class hotel from the arrival in Madrid until the evening of Thursday, April 30th. During this period an excursion will be arranged to Toledo or the Escurial as the traveller may select. Neither will render it necessary to spend a night away from Madrid. The return journey will be made by ordinary train from Madrid on the evening of April 30th via Burgos and San Sebastian to Bordeaux, which will be reached on the evening of May 1st. The journey will be resumed on May 2nd, the night passed in Paris, and London will be reached on the following day. For a supplementary charge members of the party may travel through from Madrid by the Sud Express, or make use of the sleeping car of the ordinary express train. Arrangements can be made for an extension of the tour to Seville, Granada, and Andalusia. The inclusive charge to those taking part in the Congress, and their friends holding letters of invitation, will be 30 guineas; for ordinary tourists 36 guineas. These charges include first-class travel from and to London throughout, and hotel accommodation commencing with dinner in Paris on the outward, dinner and terminating with breakfast in Paris on the return, journey, and consists of bedroom, light, and service, and three meals daily; 56 lb. of luggage is allowed free, and the party will have the service of a competent conductor.

Mr. H. Horace Seelig, Ph.D., British representative of the Voyages Pratiques, Marlborough House, 11, Ludgate Hill, London, E.C., has also arranged for a party and for special trains across Spain, leaving Irun at 10.30 p.m. on April 22nd on arrival of the train from Paris. The charges vary from £21 8s. 7d. for second class via Newhaven to £27 8s. 3d. for first class via Calais.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

PLAGUE has recurred in India to a serious extent, the deaths from the disease during the third week of December, 1902, amounting to over 2,000 daily. During the week ending December 20th, the deaths from plague for all India amounted to 14,203 against 13,415 during the week preceding. The following returns show the principal centres of plague. In the Bombay districts during the week ending December 20th, 7,056 deaths were caused by plague against 6,416 during the preceding week; in the Punjab, 1,734 against 2,145; North-West Provinces and Oudh, 1,639 against 1,473; Mysore State, 871 against 805; Bengal, 1,285 against 1,180; Madras districts, 478 against 336; Hyderabad State, 641 against 652.

At Dhamangaon, Berars, plague appeared for the first time during the second week of December, 1902. Central India, which has hitherto been fairly free of plague, is becoming seriously affected by the disease. In districts where plague appears for the first time, it is observed in India that the proportion of deaths to cases is higher than during recrudescences of the disease.

MAURITIUS.

During the weeks ending January 1st and 8th there were 9 and 8 fresh cases of plague reported respectively in Mauritius, and the deaths from the disease amounted to 5 and 4 respectively.

CAPE OF GOOD HOPE.

At Port Elizabeth 2 fresh cases of plague were notified during the week ending December 20th.

In Durban on January 20th 13 cases of plague were under treatment, including one European; the other patients were natives (9) and Indians (3). Since the commencement of the outbreak in Durban 34 cases of plague have been reported, of which 17 have terminated fatally.

ODESSA.

Plague seems to have disappeared from Odessa, and Count Shuvaloff, the Governor of the City, has been personally thanked by the Tsar for his exemplary activity in combating the spread of plague.

AUSTRALIAN MAILS.—We have received a small pamphlet with the title *Time Tables of the Australian and New Zealand Mails*, issued by the *Sydney Morning Herald*. It contains the service between Europe and Australasia, with cable rates and other useful information. Copies will be supplied free on application to the London office of the *Herald*, 40, King Street, Cheapside, E.C.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1903.

MEMBERS of the British Medical Association are reminded that commencing with January 1st, 1903, the annual subscription is a uniform one of 25s., inclusive of the Branch, and that all subscriptions should be paid direct to the General Secretary, 429, Strand, London, W.C., and not to a Branch Secretary.

British Medical Journal.

SATURDAY, JANUARY 24TH, 1903.

THE MANAGEMENT AND PREVENTION OF INEBRIETY.

SOME account has already been given of the report for 1901 of Dr. Branthwaite, the Inspector under the Inebriate Acts,[1] but it will not be unprofitable to recur to some of the points in the course of his lucid and interesting account of the work undertaken by the State for the care and reclamation of inebriates of various kinds. It is a complicated subject. But the evolution of the scheme has been a steady one, and, as the inspector points out, inquiries on the part of the lay public are becoming more frequent as the conviction that alcoholism is a curable condition gains ground. It is therefore probable that medical men will be called upon more and more frequently to give advice and supply information with reference to the treatment of inebriate patients, and to explain to the ignorant what methods can, or may, or even perhaps must, be applied to the various cases under the sanction, support, or even perhaps, insistence of the law. To any one looking into the question for the first time, it is bewildering to find how many institutions for the reception of inebriate patients are in existence. First, there are private unlicensed retreats, good and bad, outside the inspector's province, and having the disadvantages inherent in that position. Then there are licensed retreats, certified inebriate reformatories, and State inebriate reformatories. A perusal of Dr. Branthwaite's report shows that these various places have arisen to meet the needs of certain well-defined classes of cases. For the "quiet and inoffensive" who have injured themselves and their friends, and who submit voluntarily to treatment—the retreat. For more disorderly cases, who get into trouble with the police—the certified reformatory. For the still more disorderly, who decline to conduct themselves properly in the certified reformatory—the State inebriate reformatory.

It is evident that these various classes of institutions need not represent, though as a matter of fact they do in a great measure represent, the social status of their inmates. What they actually represent are three well-defined groups of cases characterized each by an ascending degree of disorderliness, the disorderliness in its turn being accompanied by increasing degress of nervous, mental, and moral instability. The instability culminates in a group of individuals named by those in charge of them "borderland" cases, and concerning whom a satisfactory mode of treatment has yet to be evolved. Leaving out these last, the cases would seem to fall into three clinical groups, and any skilled observer taking the trouble to visit the three classes of institution will have no difficulty in seeing almost at a glance that the right inmates are to be found in all cases in their proper places. The reports on this point by the medical officers and heads of the various institutions given by Dr. Branthwaite speak for themselves. A very rough prognosis is also possible in respect of each group of cases, for although all improve under treatment, and some very surprising results are occasionally found among cases apparently the worst, still it may safely be said that the more amenable and civilized cases found in retreats contribute a very much larger percentage of cures than the more rough and degraded inmates of reformatories. The work has shown that very much can be done, and it should show still better results as experience is gained. So far it is good to be assured by all those in charge of the various classes of case that all are capable of great improvement, not only physically but also mentally and morally, under appropriate treatment. It looks as if in time new light might be thrown by these institutions on prison methods proper.

Certain other points are made out by those in charge of the cases, such as the very fair physical health in which the majority are found to be, the great degree of nervous instability of a large number, the defective moral sense of a certain proportion often associated with a sufficiently good or quite sound mental condition, and the very large number described as mentally weak. As regards this last condition some interesting and varied opinions are put forward. For instance, Dr. Ormerod, medical officer of the Brentry Reformatory, considers that all his cases are of low mental type. Out of 166 cases, he considers 68 may be justly styled "borderland" cases—either hysterical, moral paralytics, or alcoholic dements—and he considers that in the great majority of these (in 50 as against 9) the drunkenness was probably due to mental weakness. Dr. Williamson, of the Farmfield Reformatory, considers that 5 out of 43 are "borderland" cases, and the majority of the remainder mentally weak owing to their drinking habits. Dr. Cock, of St. Joseph's, Ashford, estimates that 4 or 5 per cent. of all his cases are "borderland" cases. He thinks the mental weakness is generally acquired, as he finds that the younger inmates have usually good mental capacity.

The medical officer of the State Inebriate Reformatory at Aylesbury estimates that about 20 per cent. of the cases committed there are mentally weak, but finds it impossible to give an opinion as to the cause of the mental defect. The medical officer of the Warwick State Inebriate Reformatory gives one inmate out of eight under his care as mentally weak.

It is evident that a very interesting line of research is thus opened up. The treatment of the cases characterized as "hopeless" (because the chances of reforming them sufficiently thoroughly to enable them to live at large without giving way to temptation is a remote one) is perhaps of no great general interest, but we should certainly look to the painstaking investigators of these cases to throw light on a much-neglected subject—the diagnosis and treatment of early alcoholism; and not only of alcoholism, but of other drug excesses and "phobias," and in forms of hysteria and moral defect, examples of which are apparently gathered together in great abundance in institutions in which inebriates are received. For it is to be remembered that the investigation is not a study of drunkenness; the inmate leaves that behind him when he enters the reformatory. The material for investigation is rather the charac-

[1] BRITISH MEDICAL JOURNAL, 1902, vol. ii, p. 1969.

teristics of the individual when he is sober, and perforce at his best. For the purposes of investigation it will be useful to note in each case in what the true deviation from the normal consists, and to what degree the individual is susceptible to re-education. Re-education is only another word for reform, and to find out where it is necessary is science; and it is in the development on this side of research that a really practical method of treating inebriety and allied disorders would seem ultimately to depend.

THE ORIGIN OF THE LIQUOR AMNII.

THE problem of the origin of the liquor amnii is of perennial interest. Articles and papers of prodigious length and great profundity are flowing along through the pages of scientific periodicals, and are giving rise to a vast amount of difference of opinion among those—a select few—who are interested in the subject. To the obstetrician, however, who ponders over the mysteries of "the hidden world of the womb," as Sir Thomas Browne called it, as well as to the physiologist and pathologist, the matter is one of considerable moment; for there can be little doubt that the origin of the amniotic fluid is, in the present state of our knowledge, the central problem of antenatal life and health and disease.

There have been for many years past two main streams of opinion on the subject: There have been those who have believed firmly in the maternal origin of the fluid which forms the fetal hydrosphere, and have looked upon it as a transudation from the vessels in the decidua; and there have been those who have regarded it as a fetal secretion, and more particularly as a product of the activity of the fetal kidneys. There have been a few who have tried, but with little success, to reconcile these two opinions; and there have been one or two investigators who have admitted that from the examination of the physical and chemical characters of the amniotic fluid no information is to be gained regarding its formation. ("*Keine Auskunft ueber die Herkunft*" is the expressive fashion in which one German observer[1] has put his conclusion.)

The evidence from experiment has, on the whole, supported the view of the fetal origin of the liquor amnii. Gusserow's discovery that sodium benzoate if given to the mother is found as hippuric acid in the urine of the infant at birth, and occasionally in the liquor amnii also, is strong proof not only of the functional activity of the kidneys of the fetus, but also of the occurrence of micturition into the amniotic sac. In such cases the hippuric acid has not always been found in the liquor amnii, and the conclusion has been drawn that the fetus is not constantly passing water. Somewhat similar experiments with somewhat similar results have been carried out with phloridzin.

Nature herself, however, has sometimes carried out a still more valuable experiment upon the origin of the liquor amnii, although it is only of late years that the meaning of her test has been appreciated by Schatz, Strassmann, and, more recently, by Silberstein,[2] and some other writers. When uniovular or monochorionic twins exist in the uterus, a state of affairs is established in which the maternal factor can largely be excluded, for the fetuses are then under the same influences as regards the decidual membranes, the chorion, and the placenta. Yet in some of these cases the sac of the one fetus is distended with liquor amnii (hydramnios), while that of the other is nearly empty (oligohydramnion). When this is the case, then, as Schatz, Strassmann, and Silberstein have pointed out, the larger twin with hypertrophied internal organs belongs to the sac with hydramnios, while the smaller twin is accompanied by oligohydramnion. The conclusion is that the excess of liquor amnii in the one case, and its deficiency in the other, are due to differences existing between the twin fetuses; further, for reasons to be stated immediately, the excess and deficiency are ascribed respectively to great renal activity, and to diminished renal activity in the fetal organisms.

The facts upon which the above conclusions are founded form part of a most interesting chapter in antenatal physiology. There are many unsolved problems in this subject when there is only one fetus in utero, and of course their complexity is increased when there are twins. At the same time, the action of the life of the one twin upon that of the other has served to throw unexpected light upon the whole question of intrauterine existence, and so pathology, as often before, has tended to elucidate physiology.

Nature, by the introduction of a new factor, has acted the part of an experimentalist in this matter; it remains for us to read aright the results of her experiment. The experiment itself consists in the variations introduced into the relations which exist between the vascular systems of the twins which possess a common placenta. As Schatz pointed out, each twin has its proper circulation in the part of the placenta belonging to it, but in addition there may be a "third circulation" between the two and by its means the blood in the arteries of the one fetus will find its way into the veins of the other. So an intervillous or transfusion region is established in the placenta, and unless there be a perfect equilibrium in the two circulations the one twin will soon begin to act as the transfuser of the other; in this state of "dynamical asymmetry," as it has been named, Fetus A will be the transfuser and Fetus B the transfused. Fetus B, which receives more blood, has more work to do; its heart hypertrophies, and its liver, spleen, kidneys and bladder increase in weight. Now, the amniotic sac which belongs to it contains an excess of liquor amnii. Further, the cardiac hypertrophy may lead to the setting up of the pulmonary circulation and so produce antenatal closure of the foramen ovale and ductus arteriosus and general dropsy of the fetus; but with these changes we have not here to do. Fetus A, the transfuser, on the other hand, has a thin umbilical cord, organs below the average in weight, and very little or no liquor amnii.

A very convincing instance of this circulatory inequality in uniovular twins is that recorded by Silberstein.[3] The pregnancy came to an end at the fifth month; the one amniotic sac contained very little liquor amnii and the other six and a-half litres; and although the fetuses both measured 33 cm. in length, one of them weighed 783 grams, the other only 488 grams. The heavier twin was that accompanied by the great quantity of amniotic fluid (hydramnios); and we may call it Fetus B, while the other one is named Fetus A. The heart of Fetus B weighed 7.5 grams as compared with 3 grams in Fetus A; its liver weighed a little more and its lungs considerably more than those organs in Fetus A; its kidneys weighed 2.9 grams each as against 1 gram each; and its bladder 2.1 grams as against 0.2 gram, the startling proportion of 1,050 to 100. Further, even in their minute anatomy, the kidneys of Fetus B showed differences from those of Fetus A; for in

[1] Krukenberg, *Arch. f. Gynäk.*, xxii, p. 43.
[2] A. Silberstein, *Arch. f. Gynäk.*, lxvii, 607, December, 1902.
[3] Loc. cit.

the former the average diameter of the glomeruli was from 97 to 115 micros while in the latter it was only from 65 to 66 micros. The hypertrophy of the bladder in Fetus B was especially striking; there was no obstruction of the urethra and no signs of inflammation, so that it is concluded that it was a true work-hypertrophy. It is difficult to avoid taking the view that Silberstein takes about these twins, namely, that the circulation in Fetus B had more difficulty to encounter, that its heart, kidneys and bladder underwent hypertrophy, that it micturated freely into its amniotic sac, and that, finally, the excess of liquor amnii represented the results of this renal and vesical activity. Nature's experiment, then, would seem to support the theory of the fetal origin of the liquor amnii.

So out of the stress of what has been called the antenatal "struggle for life between twins" comes information for the physiologist who has eyes to see: so Nature in her great laboratory of "the hidden world of the womb" works wonders and in her experiments leaves nothing to be deducted for fallacies in technique. With us is the fault if we understand not what she reveals.

THE SPITTING NUISANCE.

WE are glad to note that the movement for the suppression of the spitting nuisance, appropriately initiated in America, which is one of the expectorative storm centres of the world, is at last finding active support in this country. For several years past we have called attention to what was being done for the accomplishment of this most desirable reform in the United States and on the Continent of Europe, and have urged the adoption by our own sanitary and local authorities of measures directed to the same end.

The National Association for the Prevention of Consumption has succeeded in getting notices against spitting posted in railway carriages, omnibuses, tramcars, and places of public resort, but these placards have had little practical effect. The Association has therefore come to the conclusion that the time has come for more vigorous action, and it urges that spitting in places of public resort should be forbidden by law. The Betterment of London Association has included the "spitting danger" among the evils against which it will seek to remedy, with the object of securing "a quieter, cleaner, safer, and healthier London."

The Glamorgan County Council has shown a praiseworthy regard for the public weal by making spitting in public places within its jurisdiction a penal offence; in conformity with this enactment two hawkers were recently fined 15s. each at Porth, Glamorgan, for spitting in a railway carriage. The example of Glamorgan has since, we believe, been followed by one other county council. A number of corporations, among them Glasgow, Manchester, Liverpool, and Brighton, have made spitting on their tramcars a penal offence. At Liverpool several convictions have been obtained; at Sunderland a man was not long ago fined 10s. and costs for spitting on a tramcar. The Torquay Town Council some time ago adopted a by-law forbidding spitting in public places. The South Shields Corporation intends, we believe, to insert in their new Parliamentary Bill, a clause to the effect that the Corporation may from time to time make by-laws for the prevention of spitting in public carriages, waiting rooms, halls, and places of entertainment.

In this, as in so many other matters affecting the public convenience, London is behind the provincial towns. There are, however, signs that the metropolis is awakening. Dr. Collingridge, Medical Officer of Health for the City, in a report presented to the Sanitary Committee on November 25th, 1902, states that in accordance with the resolution of the Committee a circular letter, calling attention to the nuisance, was addressed to all the railway, omnibus, and tramway companies, post-offices, telegraph offices, markets, public offices, restaurants, licensed victuallers, police, fire brigade, and School Boards, and a notice prepared for hanging up in such premises was subsequently issued. This was well received by most of the managers, who expressed their willingness to co-operate with the Corporation, and agreed to exhibit the notice supplied, or others of a similar character. Dr. Collingridge, however, is of opinion that the time has come to deal with the question in a more radical and stringent manner. He suggests that the matter should be referred to the Remembrancer and the Solicitor to advise as to how best the necessary power can be obtained, suggesting only that the co-operation of the whole of the Metropolitan Borough Councils be sought in dealing with so important a subject. The prohibition should, he thinks, be made to apply to all pavements and footways, platforms, halls, booking offices, staircases, and waiting-rooms of railway and omnibus companies, all public conveyances, and all public halls, buildings, and places of public entertainment, whether admission be obtained thereto by payment or not. The Urban District Council of Acton recently issued a notice requesting the public not to spit on the ground but only into proper receptacles.

These facts are gratifying as showing that public authorities are beginning to realize that indiscriminate spitting in public places is a serious danger to the health of the people with which it is their duty to grapple. How serious it is may be gathered from the results of an investigation recently made by Dr. H. E. Annett, of Liverpool.[1] Of 105 specimens of sputa collected from some of the principal streets of Liverpool during the winter months, 5 were proved to contain virulent tubercle bacilli. Dr. Annett points out that "besides the possibility of the masses drying in a few hours, and of the bacilli being carried and thrown about in the dust of the air, sputum also soils the boots of passers-by, and more particularly the trailing edges of ladies' skirts, tubercle bacilli being freely distributed into offices, shops, dwelling-houses, etc., by this means." The amount of expectoration discharged on the pavements of large cities in one day is incalculable. As we have more than once pointed out, the evil is one that cannot be suppressed by law, though it can undoubtedly be mitigated. It is to the force of public opinion that we must look for the abolition of a filthy and dangerous habit. When the man in the street has been sufficiently educated to understand that the casual spitter may scatter the germs of death all around him, he may be trusted to see that the law is strictly carried out.

NEWSPAPER MEDICINE.

CHARLES LAMB said that no one ever took up a newspaper without expectation, or laid it down without disappointment. This doubtless holds good as a general rule; but when the newspaper deals with medical matters a medical man may confidently expect to be amused, and will hardly ever be disappointed. A collection of extracts of this kind might be specially recommended to practitioners suffering from malaria, as it would "desoppilate" the most con-

[1] *Tubercular Expectoration in Public Thoroughfares.* Thompson-Yates Laboratories Reports. Vol. iv, Part II, 1902.

gested spleen. We have only a few at hand, but with very little trouble a vast number might be gathered. At the beginning of the late Archbishop of Canterbury's fatal illness the newspapers made the guarded announcement that "at present the symptoms are purely physical." The opinion was attributed not long ago to a distinguished physician that there was absolutely no hope of a patient's recovery, as "meningitis had developed in the form of inflammation, which was covering the brain." The death of Sir E. Burne-Jones was said by a leading London newspaper to have been due to "cardiac disease of the heart." A Chicago paper gave the following lucid account of the operation performed on President Roosevelt not long ago: "A little surgical appliance like the end of a syringe drawn to a fine point was inserted in the swelling which stood out on the President's shin midway between the knee and ankle. A miniature pump was attached, the cavity under the peritoneum was emptied 'by aspiration,' as the doctors say—which is another term for pumping—and it was all over." The enlightening comment was added that "not even a President can have edged tools inserted in his tissues beyond the wrappings of the bones itself, which are called peritoneum, without feeling it." Another American newspaper made the interesting statement that A. B. "is having his heart moved to his left side from the right side, where it had worked its way." Another, relating to the demise of a physician, informed its readers that "the immediate cause of death was eramic coma, the same being brought on by catarrhal jaundice and kidney and bladder trouble." Cases of "gastric ulceration of the stomach" and "superfocation" are recorded by other transatlantic prints. These things are, however, but trifles compared to an account of a surgical operation which appeared in *El Hadira* of Tunis, on June 3rd, 1902. It was there gravely stated that Dr. X., Surgeon-in-Chief of the Sadiki Hospital, had under his care a man named Mahmoud-ben-Belkassem, belonging to the Oulad-Ayar tribe, whose head had been shattered by a blow with a heavy club. The man was at the point of death, but was saved by the skill of the surgeon, who "took the wounded man's brain out of its membranes and changed its covering." After this uncanny feat, one learns without surprise that he gathered together the fragments of the skull, and pieced them together again so that the head became as it was before the injury. The narrative concludes as follows: "And with the help of God, and the skill of that clever surgeon, the unfortunate man obtained the benefits of a cure, and lost no time in going back to his own country. May God multiply men like this cunning leech, and work, by his hand, the good of all." To which pious wish we devoutly say Amen. In connexion with these instances of newspaper medicine we may cite a brilliant example of lawyer's medicine, which Dr. Eustace, of Dublin, was obliging enough to communicate to us some time ago. The late Sir William Stokes gave evidence at the trial for the murder of Constable Talbot. The defending counsel who, Dr. Eustace thinks, was Isaac Butt, elicited from Stokes an acknowledgement that in attempting to remove the bullet he had cut an artery. The cross-examination proceeded as follows:—Counsel: Which artery, Sir? Stokes: The arteria princeps cervicis. Counsel: Gentlemen of the jury, how can you convict the prisoner when this surgeon acknowledges that he cut the principal artery of the neck? Dr. Eustace adds that the prisoner escaped hanging, and the Fenians for years after drank Stokes's health.

THE ART OF PRESCRIBING.

UNDER this heading we ventured, a fortnight ago, to direct attention to the inadequate instruction which medical students at present receive in practical therapeutics. We pointed out that, whereas no item of his professional education is more neglected, there is yet no accomplishment which stands the newly qualified medical man in better stead at the outset of his career than such proficiency in therapeutic knowledge as enables him to deal with his cases by a combination of drugs which are on the one hand compatible, and on the other palatable. The man whose training has taught him nothing more than a few formulae which he knows to be safe, and on which he must needs ring the changes without regard to the idiosyncrasies of his patients, or the special demands of unusual circumstances or unexpected emergencies, is no more scientifically qualified to take charge of the sick than he whose upbringing, from the clinical point of view, has been so imperfect that he is incapable of estimating or recognizing the elementary facts of physical diagnosis. It is none the less true that, as regards the chances of success at the examination tables, these two types of men stand on very different levels. The former will almost surely, if otherwise up to the standard, emerge successfully from his ordeal; the latter will, with no less certainty, be referred to his studies for a longer or shorter period. The increasing importance of the part played by therapeutics in the everyday work of the medical practitioner makes such an anomalous condition of things indefensible. We are glad to know that these circumstances have not escaped notice, and that, for some time past, efforts have not been wanting in certain of our universities and medical schools to meet this educational deficiency. Notably at St. Bartholomew's Hospital, a serious endeavour has been made by Dr. James Calvert to bring the teaching of therapeutics and practical pharmacy into line with the requirements of the present day. He has recently embodied the gist of his lectures in a small volume which fills a distinct gap in literature. The first portion of the book is devoted to practical pharmacy; while the second deals with the proper arrangement and construction of prescriptions, and with the chemical and physiological incompatibility of drugs. In a future edition we hope the author will devote more space to the elaboration of the latter important portion of his subject, and that he will extend the scope of his volume by devoting one or more chapters to questions of "elegance" and palatability in connexion with the administration of medicines in liquid form. We agree with Dr. Calvert when he says, in his preface, that the subject, being of much practical importance, demands greater attention and cultivation. The students of to-day must acquire such therapeutic individuality that when they become the practitioners of to-morrow, they will not pass into practice absolutely chained to the formulae of the hospital pharmacopoeia, or to the tablets of the manufacturing chemists.

ELECTION OF PRINCIPAL OF THE UNIVERSITY OF EDINBURGH.

A MEETING of the Curators of Patronage was held in the Court Room on Tuesday last, at which there were present Lord Provost Steel (in the chair), Lord Stormonth-Darling, Sir Andrew McDonald, Mr. David Dundas, K.C., Treasurer Cranston, and Dr. Heron Watson. Colonel Forbes Mackay was the only Curator absent. It was unanimously agreed to appoint Sir William Turner to the Principalship in succession to Sir William Muir. Sir William Turner was born at Lancaster in 1832, and educated at private schools and at St. Bartholomew's Hospital. He is an M.B. of the University of London, and became Senior Demonstrator of Anatomy in the University of Edinburgh in 1854. He succeeded John Goodsir in the Chair in 1867. He has thus been identified for nearly half a century with the University, to which he has rendered very great services in connexion with the reorganization of the Anatomical Department, the erection of the new buildings, and the general administration of its affairs. With one break of three years he has represented the University on the General Medical Council since 1873, and became President of that body in 1898. He was created a Knight in 1886 and received the K.C.B. two years ago. On meeting the anatomy class on Wednesday morning the new Principal received a great ovation from the students, who crowded the theatre to its utmost. In thanking them he made an intesting speech of reminiscences, and made known his intention of resigning the Chair of Anatomy as soon as his successor was appointed.

ANKYLOSTOMIASIS IN CORNWALL.

As has been already stated, Dr. Haldane, F.R.S., in the course of his investigations into the ventilation of Cornish mines, found that a number of cases of illness at Dolcoath mine, in which the anaemia had been attributed to defective ventilation, were really due to infection by the ankylostoma duodenale. The official report[1] now issued states that the usual symptoms were pallor of the face, giddiness, dyspnoea, gastro-intestinal disturbances, and urticarial or pustular eruptions on the skin. In the more advanced cases dropsy was frequent, with signs of cardiac failure, and the patient, if untreated, was liable to succumb to some intercurrent affection such as pneumonia or phthisis. The diagnosis depended chiefly on the recognition of the ova in the faeces. The adult worm was not found in the faecal matter unless a vermifuge, preferably thymol, had been administered. The changes in the blood were particularly interesting. There was a large increase of eosinophile leucocytes, and the change in the proportion of haemoglobin to red corpuscles was similar to that in chlorosis. Although the deficient percentage of haemoglobin was accountable for the pallor and cardiac symptoms, Dr. Haldane found, by measuring the total volume of the blood in several cases, that there was not a loss or destruction of blood as had hitherto been supposed, but a great increase in its volume, with a corresponding dilution of the haemoglobin. Treatment by the administration of vermifuges under careful supervision proved, especially in the earlier cases, eminently successful. The introduction of the disease into this country is explained by the fact that Cornish miners are frequently returning from tropical districts, where the affection is common. Infection is spread by faecal pollution. The men working underground were allowed to pass their excreta where they pleased; hence the men's boots, ladders, tools, and clothing became infected and in the absence of proper facilities for cleansing the hands, the danger of swallowing infected material at meal times was extremely great. We understand that a vigorous reform in the sanitary arrangements of Dolcoath mine has now been instituted. Appended to Dr. Haldane's very interesting report are some useful photomicrographs of the parasite and its ova, illustrating various phases of development.

THE IRISH POOR-LAW REFORM AGITATION.

THERE can be no question that the agitation among the Irish Poor-law medical officers is spreading. Medical officers in co. Kerry have organized and adopted the Mayo resolutions. The medical officers of Dungarvan, Kilmacthomas, and Lismore Unions met at Dungarvan recently, and the minimum scale of remuneration laid down by the Irish Medical Association having been adopted, it was proposed by Dr. Dennehy, seconded by Dr Barry, and resolved: "That we thank the BRITISH MEDICAL JOURNAL for its article on our behalf, and fully concur with it in saying that the Local Government Board and not the local public bodies are responsible for our grievances." In this connexion we observe that when the Enniscorthy guardians failed to obtain a medical officer for a vacant dispensary, and appealed to the Local Government Board to allow them to offer an increased salary, the only consolation they got was: "The Local Government Board desire to state that it appears to be incumbent on the guardians to readvertise the vacancy in the office of medical officer of the Clonroche dispensary district. The Local Government Board are unable to recommend a candidate for the post in question." The sting of this is that the guardians are paying for the *locum tenens* at the rate of £218 per annum and advertising at a cost of £5 a week. All this money comes out of the rates. We are glad to observe that in addition to those counties previously referred to in our columns as having organized, others, among them Louth, Monaghan, Longford, Cavan, and Fermanagh, are organizing. We wish to impress upon the Irish Poor-law medical officers that the mere formation of local associations will not help them much. If they want their local associations to be successful they must affiliate with a central body as individual medical men affiliate with the local, for only by concerted action can the result they desire be obtained. Just as the unorganized mass of individual officers have failed to obtain reform in the past, so will the county associations, if they are content to remain mere units each fighting for its own hand. They must not forget that resolutions, however strong, are of little avail unless backed up by the "sinews of war."

[1] Home Office, Cd. 1318, price 4d.

HYGIENE IN SCHOOLS.

A CONFERENCE on applied hygiene for school teachers arranged by Bedford College and the Sanitary Institute was held at the College on January 21st, under the presidency of Mr. M. E. Sadler, Director of Special Inquiries and Reports in the Education Department. Professor C. S. Sherrington, F.R.S., of University College, Liverpool, delivered an address, in the course of which, after observing that the greater part of hygiene was a personal matter, and that, therefore, a wide diffusion of the knowledge of the principles underlying the maintenance of health was of imperative importance, said that so much of a child's life was spent in school that the maintenance during school hours of those principles was very important. As it was, a school that did no harm was exonerated, but, in fact, the conditions of school life should be made more healthy than those of their homes, especially for the children of the poor. The hygienic condition of many primary schools was bad, and the medical inspection of schools widely adopted in Germany and France, and in many cities of the United States, as well as in some districts in England, was a movement in the right direction, since the medical inspector could report to the managing authority on the condition of the school premises and on the health of the children. More than this however was necessary, there should be at the school every day those who could co-operate intelligently with the medical inspector, and this could only be done by the teachers, it was therefore necessary that they should be trained sufficiently in the laws of the living body and in the principles of health so that they might co-operate with the medical officer of the school as did a nurse in a hospital with the physician. In the course of the discussion which followed Mr. W. Scott Coward, Inspector of Training Colleges, urged that these colleges should institute some sensible method of teaching practical hygiene. Dr. J. Kerr, Medical Officer to the London School Board, recognized that the school afforded a possibility of invading the home and making it more sanitary; by developing the "sanitary conscience" in the children very great improvements in the future might be hoped for.

LATHYRISM IN CENTRAL INDIA.

OWING to the prevalence of lathyrism in the Central Provinces of India, Major Buchanan, I.M.S., and Mr. Stockman, M.R.C.V.S., late Professor of Pathology in the Edinburgh Veterinary School, have been appointed to inquire into the cause and prevention of this disease. The malady is regarded as arising from the consumption in large quantities of the food grain known as *Lathyrus sativus*, or teora, when not prepared in such a way as to eliminate the poisonous principle which this material is believed to contain. The clinical features of a typical case are as follows: During about two or three months previous to the onset of the symptoms the patient has been living almost exclusively upon teora, which has been made into cakes and cooked, but not boiled. Then for a few days he feels weak and drowsy, with pains in the legs and occasional cramps in the calves. Suddenly, whilst at work, he falls, and finds he is unable to rise. After this he is confined to bed for a month or two, and stops eating teora. The arms are not affected, and there is no loss of sensation, but the lower extremities are paralysed, and in severe cases there is loss of control over the sphincters and loss of sexual power. The condition of the leg muscles is one of marked spasticity; the knee-jerks are exaggerated, ankle clonus is

obtained, and. when the patient stands for a few minutes without the aid of sticks, clonic spasms occur in the legs. There is also rigidity of the muscles of the spine, so that when sitting down the patient is unable to turn the upper part of his body round. Improvement is slow but gradual, whether treatment is adopted or not. There is no fever, and little or no muscular atrophy. Males appear to be more susceptible to the disease than females. As to the causation of the disease, although some authorities appear to hold a contrary view, there seems to be a strong presumption in favour of the opinion that teora-eating is responsible for it. But, even if this be granted, there are many other points which require a good deal of investigation. Two varieties of teora are grown—a large and a small; and it has not been settled whether the former or the latter, or both, are to be held responsible for the mischief. Again, it is thought by some that the condition of the soil in which it is grown and the condition of the grain when made into food (for example, if it be old and weevil-eaten) are important factors. And, further, though in typical cases of paralysis teora has formed the staple or sole diet, the question of the incidence of the disease when the teora has been mixed with other food grains is not yet settled. Still more interesting is the question whether exposure to dry heat, boiling, or soaking in water remove its poisonous properties. Upon this point there is a certain amount of evidence which suggests that the toxic substance is a volatile alkaloid, but animal experiments made with extracts of the seeds are, so far, inconclusive. The reported cases in which teora-feeding has affected cattle, producing paralysis of the hind quarters, are also deserving of investigation. In sending us the outline of the scheme upon which his inquiry is to be conducted, Major Buchanan asks us to make it known that he will be glad to receive additional information and suggestions upon the subject, and wishes us to state, for the use of any who would like to correspond with him, that his address will be: c.o. Messrs. Grindley, Groom, and Co., Bombay.

NURSING OF THE SICK POOR IN WORKHOUSES.

REFERENCE was made in the BRITISH MEDICAL JOURNAL of January 10th to a memorial to the President of the Local Government Board drawn up by the Committee of the Workhouse Infirmary Nursing Association, protesting against the proposed creation of "qualified nurses" on the ground that they would be women trained for one year only in a small workhouse, and holding merely a certificate of good conduct and proficiency from the superintendent nurse, the chairman of the Board of Guardians, and the medical officer. We have received a copy of a supplementary memorial drawn up by the Executive Committee of the same Association, in which they submit some further objections to Mr. Long. The proposals to which they take exception are the reduction in the number of superintendent nurses, and the recommendation that in workhouse infirmaries containing from 60 to 100 beds the appointment of a superintendent nurse should be optional with Boards of Guardians. With regard to the former of these it is pointed out that if the reduction of superintendent nurses from 227 to 136 is carried out, the standard of nursing organization of 91 workhouses will be in time materially lowered; these workhouses will no longer be subject to the rules of the Nursing Order of 1897 which are now in force, and it is therefore probable that a state of friction will continue. Superintendent nurses will be succeeded by "trained nurses," the qualifications of whom are defined but not their status as regards (1) their responsibilities in relation to the master and matron, or (2) to the nurses and servants under them, or even (3) as to the extent of their own duties. Definitions as to these important questions remain as they were laid down in the Order of 1847, at which time trained nurses were practically non-existent. In regard to the second recommendation, it is pointed out that, considered as a principle, the joint appointment of a workhouse matron as trained nurse, or as matron and superintendent nurse, may have serious drawbacks. Among these attention is drawn to the following: (1) That a matron who acts also as trained nurse may have only "qualified nurses" to carry out her directions who would themselves be insufficiently trained. (2) That a matron who also holds office as superintendent nurse could not give the necessary time for training probationers. (3) That there would be grave danger of carrying infection by a matron whose joint duties would necessarily lead her into all parts of the house, including the sick wards, and who would frequently be in charge of maternity cases. It is further pointed out that, should a revision of the grant to guardians under Section XXVI (1) of the Local Government Act, 1885, be decided on, it is desirable that a clearer definition should be made of the qualifications of nurses in respect to whose salaries the grant would be paid. The supplementary memorial further states that the difficult question of efficient nursing in small workhouses appears to be inadequately dealt with in the recommendations contained in the report of the Departmental Committee. That the difficulty can be met is shown by reference to the Order of the Irish Local Government Board of July, 1901, which deals with small as well as large workhouses, and which, it is understood, is working in a satisfactory manner.

ST. BARTHOLOMEW'S HOSPITAL.

A MEETING of the Special Appeal Committee of the Governors of St. Bartholomew's Hospital was held at the Mansion House on Monday last, under the chairmanship of the Lord Mayor. On the motion of Sir Trevor Lawrence, Treasurer of the hospital, seconded by Mr. Benjamin Cohen, M.P., the following resolution was unanimously adopted: "That, having regard to the criticism upon the proposed appeal for the enlargement of St. Bartholomew's Hospital, based on inaccurate information, a committee be appointed to report, first, whether it is desirable in the public interest and on financial grounds to retain St. Bartholomew's Hospital on its present site; secondly, in the event of the retention of the hospital on its present site, whether any better scheme of rebuilding than that suggested by the Governors can be devised; thirdly, upon any other matters affecting the hospital that the committee may think it desirable to inquire into; that such committee do consist of fifteen members, nine to be nominated by the Lord Mayor and six by the treasurer of the hospital, and that the Lord Mayor and the treasurer be *ex officio* members of the committee." The proceedings were conducted in private, but it was stated that the Lord Mayor expressed his intention of pushing on the work of the Committee of Inquiry in order that it might report with as little delay as possible, and expressed the hope that the result would be made known in about six weeks' time. Sir Henry Burdett has, since our last issue, put forward another suggestion of a kind for which on general principles there is much to be said. It is that the greater part of the present site of St. Bartholomew's Hospital should be given up, that upon the remainder a small hospital of one hundred beds to serve the immediate locality should be maintained, and that St. Bartholomew's Hospital proper should be removed to another site. If Sir Henry Burdett had advocated the removal of St. Bartholomew's Hospital, with say six hundred beds, to one of the more thickly inhabited parts of London with an emergency branch in Smithfield, his position would have been strong; but as we understand him to recommend that the main St. Bartholomew's Hospital of the future should be erected on an area in St. Luke's about a mile from the present site, we cannot see that his proposal has much practical value.

NICKEL-CARBONYL POISONING.

Two men employed at Mond's Chemical Works, Clydach, recently died from an illness of a very unusual nature. When the first workman died no positive opinion could be expressed as to the character of the illness. The symptoms were obscure. On the occasion of the second death poisoning was suspected, and although the trade at which the man worked was incriminated, it was difficult to say what the poison was. Dr. John Jones, of Clydach, reported that

there had been 26 cases of slight poisoning under his care last summer in chemical workers. Their illness was at that time attributed to a breakdown of the machinery. At the date of the coroner's inquest in December last several workmen were known to be still suffering Since the matter could not be unravelled at the inquiry at the end of last year, and as the owners of the works were extremely anxious that the problems should be solved if possible, the subject was referred to Dr. Tunnicliffe of King's College, Dr. Plimmer of St. Mary's Hospital, London, and Dr. John Jones of Clydach. The medical men formed the opinion that the workman in question had suffered from oedema of the lungs probably due to some change in the blood, and that death was due to asphyxia. At the necropsy they found the lungs "oedematous and intensely congested, both being affected and the heart in a state of degeneration and loaded with fat. The other organs, including the brain, were congested." The experts gave it as their opinion that death was due to the above-described condition of the heart and lungs, and asked permission to make further investigations extending over one month. Last week the adjourned inquest was held. At this inquiry some very interesting evidence was tendered. The works manager described the processes of manufacture in which the deceased workmen had been employed, and mentioned that they had both been exposed to the vapour of nickel-carbonyl. Nickel-carbonyl is a very volatile fluid; it boils at 43° C., and is obtained from finely powdered nickel oxide first by passing hydrogen over it, and, after the water has been removed from the nickel compound, carbon monoxide is brought into contact with the residue. This fluid, when injected subcutaneously, was found to be a deadly poison. Dr. Tunnicliffe, who had examined the internal organs of the deceased workman, had come to the conclusion that death was due to nickel-carbonyl, but that there were signs of pre-existing organic disease which had made the patient more liable to be affected. New processes of manufacture were about to be introduced into the works whereby the escape of nickel-carbonyl from the reduced matter would be impossible and the processes of oxidation rendered innocuous.

LARGE FEES.

A NUMBER of fabulous statements have appeared in the press as to large fees paid to Professor Lorenz during his "bloodless" campaign in the United States. According to the *Journal of the American Medical Association* he is reported to have said: "I see it reported that I have made in this country 160,000 dollars (£32,000). Now, as a matter of fact, I got one fee of 30,000 dollars (£6,000) in Chicago, and in the four months I have been here I have earned just 30,000 dollars (£6,000)." Whether this somewhat cryptic utterance is to be interpreted as meaning that Professor Lorenz received in all £12,000 during his stay in America, or that he got nothing more than the fee for his treatment of Mr. Armour's little daughter, is a matter which concerns only the distinguished surgeon himself. In any case, £6,000 is a very fair fee even for crossing the Atlantic. American millionaires are generally liberal in their acknowledgement of medical services. Mr. Jay Gould, who died in 1893, leaving an estate of over £14,000,000, paid his doctor a regular salary of £3,000 a year, whether sick or well. For two months' attendance on his daughter Mr. Gould paid between £17,000 and £18,000. Mr. Whitney paid £5,000 for a week's attendance. Among other large fees may be mentioned one of £12,000, which, it is said, was offered to a late President of the Royal College of Physicians of London, for visiting a patient at Cannes. For the same journey the late Sir Morell Mackenzie got 1,000 guineas; for his attendance on the Emperor Frederick he received in all £13,000. For bringing the King of Rome into the world Dubois, the famous obstetrician, was named a Baron of the Empire by Napoleon, received a fee of £4,000, and an increase of salary. The late Professor Zakharin, of Moscow, for two days at the deathbed of the late Czar received £3,000; for a visit to a Russian millionaire he received £1,400, with £200 for his assistant. One of the largest fees on record is that received by Dr. Dimsdale, an ancestor of the ex-Lord Mayor, for inoculating Catherine the Second, Empress of Russia, against small-pox in 1762. The fee itself was £10,000, but, in addition, the fortunate physician got £2,000 for travelling expenses, with a life pension of £500, the title of Baron, the rank of a Councillor of State, and the office of Physician-in-Ordinary to the Empress, who further graciously gave him her portrait. In 1792 an English physician, Dr. Francis Willis, went to Lisbon to undertake the treatment of the Queen of Portugal on the following terms: "A thousand pounds per month as salary, the expenses of his journey, a table for himself and suite, and twenty thousand pounds if he is successful." He was received at Lisbon with regal honours. The Queen's malady was mental, and Dr. Willis had a great reputation in the treatment of such cases. King George III was for a time under his care. What the result of his treatment of the Queen of Portugal was we are unable to say. The largest medical fee of which we can find record is that said to have been given to the blind physician, Dr. Gale, of Bristol, who received £50,000 from a wealthy patient, whose knee he had cured by electric treatment.

EYE AFFECTIONS IN LEPROSY.

IN a monograph on leprosy of the eye, published some time ago, Dr. Lyder Borthen, of Trondhjem, Norway recorded the results of an exhaustive study of the histological changes met with in the various leprous eye affections. He has now issued a second volume,[1] containing between seventy and eighty large photographs of cases which show very clearly the clinical features of leprosy of the face and eyes. It contains also a very complete statistical record, in charts and figures, of the proportionate amount of blindness to which leprosy gives rise in Norway. The statistics bring out the differences in this respect which characterize the two forms of leprosy—namely, lepra maculo-anaesthetica and lepra tuberosa respectively. They exhibit the proportions of blindness found according to the duration of the disease, the age and sex of the patient, and so on. In another chapter is discussed the particular parts of the eye which may be affected, and which may lead to blindness. Finally, the author gives his views as to treatment. In his opinion, and probably no other ophthalmic surgeon is able to treat this matter as authoritatively as Dr. Borthen, knowledge has now advanced far enough to enable us by timely interference to save many affected eyes from becoming wholly blind. Dr. Borthen's new work, which has been published at the expense of the University of Christiania, fills a gap in our knowledge of the different causes of blindness. It will prove a most useful book of reference, giving as it does the result of a very extensive and painstaking experience. Every one who is brought in contact with leprosy will undoubtedly find in it much that will be of the greatest value to him.

THE PRESIDENCY OF THE ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

THE election of Dr. T. S. Clouston to be President of the Royal College of Physicians of Edinburgh is a compliment to the special branch of which Dr. Clouston is one of the most distinguished representatives which has been very highly appreciated. This is the second occasion within recent years on which the presidential chair of the Royal College of Physicians of Edinburgh has been occupied by a member of that speciality, his predecessor four years ago being Sir John Batty Tuke.

THE MEDICAL PROFESSION AND THE PUBLIC.

WE have received the report of an inquest and the correspondence arising out of it which was held recently at Hanley, upon a child who had died without receiving medical attendance. The mother in her evidence swore that on the Sunday the child died she, on the advice of the minister who was called in to christen it, went to two doctors both of whom refused to attend. Neither was

[1] *Die Blindenverhältnisse bei der Lepra.*

called to give evidence, but the coroner is reported to have said that the case was a very painful one which gave a very uncomfortable impression, and he thought that it was a very unfortunate thing that the poor woman could not get any assistance, and that she ought to have had it. The jury wished to censure the medical men concerned, but the coroner would not go so far as this. The woman further swore that she went for the doctors at 8 o'clock in the evening, but they write that in the one case it was between 11 and 12 at night, and in the other at 1 a.m.; that they had retired to bed and were suffering in both cases from colds. One of the doctors, in a very sensible letter to the papers, points out the unfairness of the attitude of the coroner and of the jury towards the medical profession. He very properly maintains that there is no obligation upon a medical man to give his services to the first comer, and that he is as free in this matter as is every other citizen. He complains that it is too much the custom for a certain class to postpone getting medical attendance for their children until the last moment, and then to do so only in order to get a death certificate and to save the annoyance of an inquest. He also urges that such cases show that in England there is a great want of proper public provision for attendance on the sick poor, and that the roundabout method prescribed by the Poor Law, which necessitates application through the relieving officer, is unsuited to cases of emergency, and unfair to the medical profession. It would be well if in England we were to take a leaf out of the book of our French neighbours, for it may truly be said that they manage these things better in France. In Paris, at any rate, doctors who are willing to undertake this night work inscribe their names upon a list, and are then liable to be called upon to attend any urgent case provided with an order from an office always kept open, to which applicants in need of medical assistance can go. These medical men are not left, as in England, to do this public work for nothing, but are paid out of a fund partly provided by charity and partly we believe from public money, like the poor-boxes at our police courts. It is extremely unfair to hard-worked doctors who do an immense amount of unpaid public work, to be pilloried in the newspapers as inhuman for merely exercising the liberty accorded to every other citizen, and we think they deserve more consideration and protection than they seem, from the newspaper report, to have received from the coroner in this case.

MEASLES AS A DANGEROUS INFECTIOUS DISEASE.

THE Public Health (London) Act provides that sanitary authorities may from time to time include under the expression "infectious disease" other diseases than those specified in the Act. This inclusion may have relation to notification, or to the usual preventive measures associated with "dangerous infectious diseases," or to both. Some months ago the London County Council instituted an inquiry among the metropolitan sanitary authorities as to their views on the inclusion of measles under the provisions mentioned. Ten of the borough councils expressed the opinion that measles should be included as a "dangerous infectious disease," though not for purposes of notification, while seven of the borough councils were of an opposite opinion. The Public Health Committee of the County Council recommended to the Council that an order should be made applying to measles these statutory provisions (excepting notification) with the object of limiting the spread of the disease. On Tuesday last the County Council adopted the recommendation, which must in the ordinary course receive the ratification of the Local Government Board. It is proposed that the order should come into force on April 1st next. In 1901 there were 1,952 deaths in London due to measles, yielding a death-rate per 1,000 living of 0.43. The death-rate for scarlet fever for the same year was 0.13, and for diphtheria 0.29. Whooping-cough approximated, on the other hand, to measles, giving a death-rate for 1901 of 0.35. The high death-rate from measles is due in part to the high degree of its infectivity, and in part to the neglect of suitable treatment. As is well known it is the sequelae which bring about its high fatality. The disease appears to be spread chiefly in a direct manner by those suffering from it, by means of secretions from the nose, mouth, and respiratory mucous membrane clinging to handkerchiefs, garments, etc. Overcrowding and insanitary conditions greatly affect the death-rate. The disease is looked upon as trivial, and children suffering from it are often exposed to all sorts of weather, and allowed to mix with other children. No action is taken, as a rule, by the sanitary authorities. During the past six or seven years about 1 per cent. of the sanitary authorities in England and Wales have included measles in the list of notifiable diseases. But the results have been unsatisfactory and many of the towns and districts which adopted notification have abandoned it, as the disease is infectious before the characteristic rash appears, and hence the notification certificate arrives too late to be of value in adopting preventive measures. In many cases, also, a medical man is not called in, and consequently many cases escape notification. Suitable hospital isolation for the large number of cases occurring is difficult to provide, especially in view of the fact that most of the patients are very young children. The inclusion of measles under the Act as a "dangerous infectious disease" is, however, a difficult matter. The warnings which would be issued in times of epidemic would lead the public to look more seriously upon this disease, and to take steps to avoid the fatal complications which ensue from want of care. The advantages which the London County Council have in view, and have power to obtain, in classifying measles as a "dangerous infective disease" are the disinfection of house, bedding, clothing, etc.; the destruction of infectious rubbish; the power of preventing the letting of undisinfected houses or rooms in which persons suffering from measles have been lodging, and of penalizing false statements respecting such rooms, and the power to inflict penalties upon persons exposing themselves or their belongings, whilst they are suffering from measles, of travelling in public conveyances, or of carrying on business. These powers are considerable and may, if properly administered, materially assist in reducing the prevalence of the disease. At present we presume the local authorities will only learn, as heretofore, of the existence of cases of measles through the agency of the elementary schools, and so these powers must to a certain extent be limited in their operation. Still they will operate in the most needed quarter, the schools, and this should be a material gain. How smoothly and how effectually the new application of these provisions will work remains to be seen.

MR. BERNARD SHAW ONCE MORE.

MR. BERNARD SHAW has been writing to the *Times* again, and once more the subject of his fiction has been the Imperial Vaccination League. The following appeared above his signature on January 15th:

> It is to be noted that the Imperial Vaccination League, having just enjoyed an exceptional opportunity of trying revaccination on the citizens of London, are openly begging the Government not to make the borough councils or the county council the vaccination authority, but to place the administration of the Acts in the hands of the indirectly elected Metropolitan Asylums Board, a notoriously vaccinist body over which the public has virtually no control. The significance of this is obvious. The League knows perfectly well that what it has to fear at the polls is not the arguments of the antivaccinators, but the fury of those who have been disabled by revaccination, like Dr. Stewart's workmen at Gore Farm Lower Hospital.

That the body which has charge of the small-pox hospitals should also have charge of vaccination is a proposition for which a good deal might be said, but as a matter of plain fact, the Imperial Vaccination League has neither openly nor secretly, publicly nor privately, directly nor indirectly, "begged" or requested, or hinted to the Government, or to the press, or to the public, or to any single individual anywhere, that the Asylums Board should be selected as the vaccination authority, or that the borough councils

or county council should not be selected. That Mr. Shaw says the League has done so has no bearing whatever on the case, unless, indeed, taking a line suggested by his previous assertions regarding the League, the fact that he makes a statement concerning it may now be taken as prima facie evidence that the contrary is correct.

SMALL-POX IN ENGLAND AND SCOTLAND.

In Leicester some sensation has been created by the publication of a letter from the Chairman of the Sanitary Committee of that town. In it a protest is lodged against the action and inaction of certain medical men in Leicester in connexion with the present visitation of small-pox. A young woman, a factory operative, has been a source of infection. It is alleged that she had an eruption when she consulted a medical man. Small-pox was not diagnosed, and she went home. It is not stated in what stage her illness then was. She returned to work and remained at work for two days; then she sat for two hours in the out-patients' department of the Leicester Infirmary. Here the disease was recognized, but from this and another case sixteen other cases had arisen, including several fellow workpeople. Other cases were referred to in which the disease was not identified until after the lapse of days. The Chairman appeals for the zealous co-operation of the medical profession, factory overlookers, schoolmasters, and others to enable the staff to cope with the present outbreak. Small-pox is said to be spreading in Derby, Nottingham, and Bradford. There are 14 cases under treatment at Nottingham and 11 at Derby, with a large number in the surrounding districts. A case was detected in the Bradford Workhouse at a rather late stage, and in consequence seven other male inmates of the workhouse have been removed to the small-pox hospital suffering from that disease. In the Staffordshire Potteries up to January 10th 45 cases have been removed to the isolation hospital at Bagnall, among which three deaths have occurred. The authorities are experiencing considerable difficulty in dealing with the epidemic and another isolation hospital is being erected. Owing to the large number of people who are being revaccinated the supply of calf lymph has again run out. In Scotland it has been intimated by the Local Government Board that during the period from January 1st to 15th only one case of small-pox has been notified to them—the case of a seaman who arrived at Glasgow on board ship on January 1st.

THE LATE PROFESSOR JOHN YOUNG.

The committee formed to place a memorial of the late Professor Young in the Hunterian Museum of the University of Glasgow in recognition of his long connexion with and excellent services to the University and other learned and scientific bodies, has published a first list of subscriptions: the total received to date is £291, in sums varying from five guineas to half-a-crown. It is believed that many former pupils of Professor Young, both at Gilmorehill and Queen Margaret College, will be glad to show their appreciation of his character and teaching by contributing to the fund now being raised. Professor Bower is the convener of the executive committee, Professor Henderson, Dr. Walter Colquhoun, and Dr. J. Kerr, Honorary Secretaries, and Mr. Archibald Craig, LL.B., 156, St. Vincent Street, Glasgow, the Clerk of the University General Council, Honorary Treasurer. The precise form which the memorial shall take will be determined after the subscription list is closed but it will in any case be identified with the Hunterian Museum, and will include a likeness of Professor Young. The Committee desires to close the list on the last day of this month, so that it is hoped that all those who may be disposed to contribute will send their subscription without delay to Mr. Craig.

EDINBURGH STUDENTS' UNION.

A movement to raise the sum of £20,000 with which to enlarge the Students' Union was started at a meeting held last week in the McEwan Hall of the University of Edinburgh. The Chancellor of the University (the Prime Minister) was to have presided, but was prevented by illness, and his place was taken by the Lord Rector (Sir Robert Finlay). He dwelt on the work which the Union had done in developing collective university life, and pointed out that the present Union building was insufficient to the growing demands on it. Lord Robertson of Forteviot, a former Lord Rector, moved a resolution to the effect:

> That this meeting, recognizing the important position which the Union now occupies in the social and academic life of the University, and having had placed before it a statement as to the necessity for its immediate extension, pledges itself to do all in its power to assist in raising the necessary funds.

Mr. Andrew A. Hall, President of the Students' Union, seconded, and the motion was carried unanimously. Lord Kinross moved the appointment of a Committee to carry out the resolution. Sir William Turner proposed a vote of thanks to the Attorney-General for presiding. There was a very large and influential audience at the meeting. The Committee appointed met on Monday last, and considered various schemes for raising the money required.

THE SCHUNCK LABORATORY, MANCHESTER.

Dr. Henry Schunck, F.R.S., who died on January 13th in his 83rd year, has left his private laboratory to Owens College, Manchester, for a certain number of years, together with an endowment of £20,000. The contents of the laboratory become the absolute property of the College. Dr. Schunck, who was educated in Manchester and at the Universities of Berlin and Giessen, managed his father's calico printing works near Rochdale for some time, but eventually retired and devoted himself entirely to scientific research, especially with reference to dyes and colouring matters. He was elected a Fellow of the Royal Society in 1850, and was successively Secretary, Vice-President, and President of the Manchester Literary and Philosophical Society, which in 1898 awarded him the Dalton Medal for his researches. He was President of the Chemical Section of the British Association when it met in Manchester in 1887, and ten years later was President of the Society of Chemical Industry; he received its gold medal in 1900, and in 1899 the Davy Gold Medal of the Royal Society. The laboratory is beautifully appointed, and contains not only a collection of specimens of great interest for the history of the chemistry of organic colouring matters, but also a valuable collection of books.

GRANTS FOR MEDICAL RESEARCH IN GERMANY.

In addition to the sums which, as already stated in the British Medical Journal, the German Government proposes to allocate for the prevention of typhoid fever, and the collection of sickness and mortality statistics, the Imperial budget for the coming year provides a sum of £3,250 for the carrying out of experimental researches directed to the further elucidation of the relation between human tuberculosis and the *Perlsucht* of cattle. The problem of protective inoculation of cattle against tuberculosis falls within the scope of these researches.

Sir William Broadbent will give the third Hughlings Jackson Lecture before the Neurological Society during the present year.

The Medical Faculty of the University of Würzburg has awarded the Rinecker Prize to Professor Karl Ludwig Schleich, of Berlin, in recognition of the scientific importance and practical value of his method of infiltration anaesthesia.

Sir Michael Foster has announced that the answers received to the inquiry addressed to graduates of the University of London had given him so fully the assurance which he needed in order that he should feel justified in renouncing his intention to resign his seat as the representative of the University in the House of Commons, that he had decided not to resign.

THE VACCINATION ACTS.

By JOHN C. McVAIL, M.D.

(Continued from p. 145.)

THE AUTHORITIES FOR LOCAL ADMINISTRATION OF THE VACCINATION ACTS.

THIS is the last question with which I propose to deal. For its complete consideration there would be necessary a knowledge of administrative detail which only the Local Government Board's staff can be expected to possess. Regarding the unsuitability of Boards of Guardians as vaccination authorities there is a very general consensus of opinion. They are entirely Poor-law authorities, and the very idea of pauperism should be dissociated from the provision made for public vaccination. Also, guardians have no other public health functions, and vaccination is quite outside the natural field of their duties.

At least three bodies have been suggested as best suited for administration of the Acts: the Local Government Board, the local sanitary authorities, and the county councils. In commenting on these suggestions it is to be understood that I am expressing merely my own individual opinion and not that of any society or committee of which I have the honour to be a member.

THE LOCAL GOVERNMENT BOARD AND VACCINATION PROSECUTIONS.

The Local Government Board does not seem to me to be at all a suitable body for the bulk of the work. The whole tendency of administration in this country is in the direction of devolution or localization, not of centralization. I cannot think either that Parliament would regard the Board as the body best fitted to carry out all the details of local administration of the Vaccination Acts, or that the Board itself would wish to undertake the duties.

There is, however, one part of the work which ought to be undertaken by the Board. Legal proceedings for prosecution of defaulters should be a duty, not of any local authority, nor of any officer appointed by a local authority, but of a public prosecutor appointed directly by the Board and responsible directly to it. At present vaccination officers are charged with these duties, and there is frequent friction, and complaint by guardians that in this matter they have not the control of their own servants, appointed and paid by themselves. All such complaints tell more or less against the whole vaccination system, and no such opportunities for criticism should be afforded to opponents. Still worse would it be to place the responsibility directly on the local authorities themselves. That was the system until within the last few years, when the law officers of the Crown decided that, according to the Acts, the vaccination officer must in this matter proceed independently of his local authority. To revert to the former practice by alteration of the law would be to encourage *ad hoc* elections, with all their known evils. The question would be, not the general fitness of a candidate for membership of the local body, but what his views might be on vaccination and the legal obligation thereto. Whatever local authority therefore be selected for the general administration of the law should be protected from deterioration by not being burdened with the function under discussion; and for the reasons already given no officer appointed and paid by the local authority should be similarly handicapped. If in every district the Local Government Board were to appoint a law agent for this purpose, the duty of the vaccination officer as concerns prosecutions would be strictly limited to handing to the agent periodical lists of defaulters.

There might, it seems to me, be other benefits attending such a system. I have already held that the purpose of prosecutions should be not to punish antivaccination folly, but to promote the practice of vaccination, and that if any method could be devised by which the merely indifferent and neglectful parent could be distinguished from the irreclaimable antivaccinationist, no good purpose would be served in penalizing the latter by Act of Parliament in addition to the penalties he has to suffer at the hands of small-pox. I observe that quite lately in Leicester two small-pox deaths and one non-fatal attack occurred among persons who would not be persuaded to be vaccinated even under exposure to infection. Now in Scotland there is in every district a functionary called a procurator-fiscal—a local lawyer selected and paid by the Crown to conduct inquiries and prosecutions on its behalf. His duties include reporting to the Crown authorities on cases as to which the question of prosecution is doubtful. He has nothing to do with the prosecution of vaccination defaulters, and I bring him in here only to indicate how such a system might be introduced in England with regard to these defaulters. If a local law agent were entrusted in each district in England with such work, he might often be able, through inquiry as to individual cases, to furnish such information to the Local Government Board (with whom the decision would rest), as might prevent prosecutions which could have no effect in promoting vaccination. Such a system would be entirely in accordance with the purpose which led the Royal Commission to recommend a Conscience Clause—the purpose being the promotion of the practice of vaccination.

THE LOCAL AUTHORITY.

Assuming now that the Local Government Board will not undertake general local administration of the proposed Vaccination Act, but will at the same time relieve local authorities of the work of prosecution, the question remains, Which is the best local body to entrust with routine administration—the employment of public vaccinators and vaccination officers, and the carrying on of systematic vaccination and revaccination?

In discussing this question in the Vaccination Number of the BRITISH MEDICAL JOURNAL in July, 1902, I pointed out that vaccination is essentially a public health measure, and ought to be entrusted to the local authority charged with other public health measures, including hospital accommodation and disinfection. That principle remains true, but since July I have seen reason to suggest a modification of its application. For good local administration experience shows that a sufficiently large area is very important, while in the rural districts of England, the population controlled by individual authorities is often very small, probably too small for the best interests of the localities concerned, in the matter of combined efficiency and economy. In Scotland, since 1889, the area of rural sanitary administration has been the county district, and the smaller counties form only a single district. Great benefits have resulted from this system as compared with the former administration of each small parish separately. For rural districts in England I venture to suggest that the county council would be the best vaccination authority. Counties being large, the councils ought to have such powers of devolution or allocation of work as would make for efficiency. At present these bodies have not many administrative duties, and they would of course have to be given the power of appointing the necessary officers and carrying on all work devolved on them. County boroughs are already sanitary authorities, and have sufficient areas for good administration. In London the same remark applies to the borough councils.

These bodies would in nearly all cases be large enough to make possible the employment of whole-time public vaccinators and vaccination officers. In this as in everything else, to get the best class of men proper salaries would have to be offered, but even with good salaries I think the system would be very economical as compared with the present method of payment by fees of public vaccinators who are also engaged in medical practice. Exceptions of course might have to be made in some places in view of already existing arrangements, and I am merely stating a general principle. The appointment of whole-time officials would not interfere with the rights of the public to go to their own medical attendants, or with the rights of practitioners to vaccinate their own patients. I have already suggested payment for certificates by private practitioners where the operation had been successful according to a standard required under the suggested Vaccination Act by the Local Government Board. The machinery of county council and large borough administration should make it possible to give some heed to verification of certificates where any suspicion of falsity might exist, and I have already said that false certification should be a severely punishable offence. The areas of work for whole-time public vaccinators should be sufficiently large to ensure their full employment even allowing for a considerable percentage of vaccinations by private practitioners, and to begin with it might be proper to make the districts of public vaccinators too large rather than too small, as it would be easier to add to the number of officials than to diminish it.

In addition to all this, there should be full power to every sanitary authority, however small, to carry out vaccination and revaccination in times of emergency—as in presence of

small-pox. This power was definitely conferred on all sanitary authorities in Scotland by the Public Health Act of 1897, and has been found very valuable. The expenses of administering the Acts in County Councils and large boroughs should be charged by rate over the whole area. All expenses connected with outbreaks of small-pox should be charged by rate within the sanitary areas affected, even where these are small, as in rural districts. Small-pox outbreaks, under a Vaccination and Revaccination Act with an exemption clause, would depend largely on the amount of exemption, and localities which had extensively resorted to the Conscience Clause should pay for their own small-pox, in the same way as would well vaccinated and revaccinated localities.

Such are the general lines on which it appears to me that a new Vaccination Act might be framed. The objects which I have kept before me are, not the punishment by law of the incorrigibly wrong-headed antivaccinationist, but the protection of the country against small-pox by the promotion of systematic vaccination and revaccination to the greatest degree compatible with the admission of duly restricted exemption certificates, the purity of lymph supply, and an administrative system fitted to achieve these purposes effectively, and at the same time economically, without reasonably avoidable interference with existing interests.

THE PREVENTION OF CONSUMPTION.

GREAT BRITAIN.

The National Association.

A MEETING of the Council of the National Association for the Prevention of Consumption was held on January 12th; Sir William Broadbent in the chair.

The Spitting Nuisance.—The attention of the Council having been called to the fact that, notwithstanding the numerous notices against spitting which have been placed in various railway carriages, tramcars, and places of public resort, this disagreeable and dangerous habit still continues; and also in view of the fact that spitting on the cars of certain tramway companies and in covered places of public resort in the county of Glamorgan has already been made a penal offence, it was decided that some further action was called for. The following resolution was therefore proposed by Mr. Malcolm Morris, seconded by Dr. Lionel Weatherly, supported by Dr. Arthur Ransome, and carried unanimously:

That spitting on the floors of public buildings, on platforms, corridors, staircases, and public carriages or passenger boats, or in any covered place of public resort, should be forbidden by law.

Tuberculosis in Lunatic Asylums.—The Council at the same meeting also resolved:

That the Council of the National Association for the Prevention of Consumption, having read the report of the Tuberculosis Committee of the Medico-Psychological Association of Great Britain, are of opinion that the suggestions therein expressed are most valuable, and they urge the Commissioners in Lunacy to do their utmost to get the committees of the county and borough asylums to carry these suggestions into effect.

Ventilation of Factories and Workshops.—The attention of the Council has also been called to the report of a Departmental Committee (Dr. John Haldane and Mr. E. H. Osborn) on the Ventilation of Factories and Workshops, 1902 (Blue Book, Cd. 1302). The chief recommendation in the report is (page 5) that "such a standard of ventilation should be prescribed for all classes of factories and workshops not otherwise dealt with; the proportion of carbonic acid in the air at about the breathing level, and away from the immediate influence of any special source of contamination.....shall not..... rise during daylight, or after dark when only electric light is used, beyond 12 volumes of carbonic acid per 10,000 of air, and that when gas or oil is used for lighting the proportion shall not exceed 20 volumes after dark, or before the first hour of daylight." The Council understands that, in accordance with the views of a previous Committee, an Act was passed in 1897 fixing the standard of 9 volumes of carbonic acid in all humidified cotton cloth factories, and that this Act had been very successful in improving the condition of the workers in these factories. The Council therefore beg to express their opinion that the newly-suggested standard of ventilation should not be adopted by the Government, as it would probably prove detrimental to the public health, and would tend to increase the prevalence of tuberculous disease.

The Local Government Board and Notification.—The Willesden District Council at its meeting on January 13th had under consideration a letter from the Local Government Board, dated December 1st, 1902, stating that the Board had not in any case sanctioned the inclusion of phthisis among the diseases compulsorily notifiable in a district. In the Board's view phthisis is not a disease to which the principle of compulsory notification could with advantage be applied, and it is pointed out that many persons who would be notified as suffering from phthisis would be individuals in whom the disease is so little advanced that not a few of them may be expected to have many years of life in prospect, during which it will be imperative on them to gain a livelihood for themselves and also for their families. Many authorities have entered into an arrangement with the local medical practitioners for the voluntary notification to the medical officer of health of cases of pulmonary tuberculosis occurring in their respective practices, and it is intimated that the district council had power to do this without the Board's consent, and to pay a reasonable fee for each notification. It is stated that the Board is not aware that any local authorities have obtained powers in local Acts to require notification to themselves or their medical officers of health of cases of phthisis occurring in their districts. The Board understands, however, that applications have been made to the Secretary of State for the Home Department in certain cases to confirm by-laws made by county councils dealing with the practice of expectorating in public places. The Board is advised that it is within the power of a district council under the Public Health Act, 1875, to provide hospital accommodation for persons suffering from phthisis.

Cambridge.—The Medical Officer of Health, Dr. J. H. C. Dalton, presented a report which was adopted by the guardians on December 3rd, 1902, in which he gives the results of his inquiries into the prevalence of consumption in the borough. Not only is the amount of consumption in the borough smaller than in many other districts, but it has markedly decreased of late. Nearly all the cases which have come before the Board are incurable cases which have already been under treatment in the Addenbrooke's Hospital or elsewhere, and the majority are at present in the hospital. There is evidence to show that many of the cases are the result of infection from other members of the family living in the same house. The problem in Cambridge is, therefore, not so much the provision of sanatoria for consumptives as of means to prevent the spread of the disease from one member of a family to others. Dr. Dalton accordingly suggests that a leaflet, the text of which he submitted, be printed for distribution to patients by the relieving officers and that visits be occasionally made to ascertain that the proper precautions are carried out. He further recommends that the sanitary authority be informed of any fresh cases and of deaths from phthisis with a view to the cleansing and disinfection of rooms. He suggests that consumptive patients in the workhouse be isolated as far as possible, and that the spitting regulations referred to in the leaflet be observed by these patients.

Glasgow.—The members of the Council of the Glasgow branch of the National Association for the Prevention of Consumption and Other Forms of Tuberculosis have purchased the estate of Bellefield, near Lanark, as well suited for the establishment of a sanatorium for the treatment of consumptives. The estate is some 500 ft. to 700 ft. above sea-level, on a gravel soil, and well sheltered from the north and east winds. It is estimated that about £85 000 will be required to establish the sanatorium satisfactorily, and subscriptions are solicited for the purpose. The mansion house will furnish quarters for the resident staff, and it is proposed that for the present accommodation should be provided for males only.

Dundee.—Ex-Provost Moncur is determined that the Dundee Sanatorium, which already owes so much to him, shall not be stinted for funds. The cost of the sanatorium at Sidlaws has been found to exceed considerably the original estimate. It will be remembered that the site was given by the late Earl of Airlie, and that a sum of £10,000 was given by ex-Provost Moncur towards building the sanatorium. This being insufficient for the purpose, the gift was increased to £15,000, and now this is said not to be sufficient. Ex-Provost Moncur has, however, generously assured the Committee that they need have no anxiety as to the cost, and it is authoritatively stated that before the institution is ready for the reception of patients ex-Provost Moncur will have spent over £20,000 on its erection and equipment.

THE net value of the estate of the late Mr. Manley Sims is estimated at £35,000.

NOVA ET VETERA.

THE ELIZABETHAN REVIVAL OF SURGERY.

MR. D'ARCY POWER has reprinted some interesting articles under this title contributed by him to the *Saint Bartholomew's Hospital Journal*. He says that two surgical guilds had existed in London from the earliest times recorded in the annals of the City: a civil body—the Guild of Barbers; and a Fellowship recruited from the military surgeons and Fraternity of Surgeons. The Barbers' Guild contained two groups of members: the barbers proper, who also let blood and drew teeth; and the barbers exercising the faculty of surgery. The barbers soon became a numerous body, of sufficient importance to be incorporated as the Barbers' Company in 1462, whilst the Fellowship of Surgeons remained few in number; and though they had great interest with the king and the nobles, they only used it intermittingly, for many of them were often away from London.

Foremost among the members of this body was Thomas Morstede, surgeon to Henry IV, Henry V, and Henry VI, who served as the king's surgeon at Agincourt in 1415. He died in 1450. To Morstede Mr. D'Arcy Power attributes the first serious attempt to make surgery a profession in London, for he took a leading part in the formation of a conjoint faculty of medicine and surgery, which was nearly five hundred years in advance of its time. The scheme of the faculty is preserved in a petition to the Mayor and Aldermen, dated May 15th, 1423. The petition prays that all physicians and surgeons practising in London may be considered as a single body of men governed by a Rector of Medicine, with the help of two Surveyors of the Faculty of Physic, and two Masters of the Craft of Surgery. The Rector of Medicine was to be a Doctor of Physic and a Master of Arts and Philosophy, or at the least a Bachelor of Physic of long standing. No surgeon was to be allowed to practise in London unless he had been examined by the Rector, the two Masters of Surgery, and the majority of the craft, after which he was to be licensed by the Mayor and Aldermen, under penalty of 100 shillings fine. Every surgeon called upon to treat a case which seemed likely to end in death or permanent disablement was obliged to call into consultation the Rector of Medicine or one of the Masters of Surgery within three days of his first attendance, and a like course was to be taken by every surgeon before he performed any serious operation. A surgeon duly convicted on credible evidence of malpraxis or of infamous professional behaviour was to be brought before the Mayor, who should punish him with fine, imprisonment, or "puttynge him out from alle practice in chirurgery for a tyme or for evermore after the quantite and qualite of his trespass." A patient needing a surgeon, who had fallen into such poverty that he was unable to pay a fee, was to appeal to the Rector and the Masters of Surgery, who would assign him a good practitioner, "busily to take heed of him without expense." The Rector, the two Surveyors of Physic, and the two Masters of Surgery, associating with themselves two apothecaries, were to search the shops of suspected apothecaries for adulterated drugs. If the drugs were found impure or rotten they were thrown into the street to be trampled underfoot, and the apothecary was haled before the Mayor.

The petition of the physicians and surgeons was duly granted on May 28th, 1423. Master Gilbert Kymer was sworn before the Mayor and Aldermen as rector of the Faculty of Medicine, with Thomas Morstede and John Harwe, the King's surgeons, as the Masters of Surgery. But it was not until September 27th, 1423, that Master John Sumbreshede and Master Thomas Southwell were presented and sworn as supervisors of physic, Dr. Gilbert Kymer being again appointed Rector of Medicine on that day. Dr. Gilbert Kymer was educated at Oxford in Durham College, the site of which is now occupied by Trinity College. He was a Master of Arts, a Bachelor of Law, and a Doctor of Physic before 1420. For a long time he held the office of physician to the household of Humphrey, Duke of Gloucester, uncle of Henry VI. It may fairly be said that to Kymer belongs the honour of founding the first public library in Oxford, and the profession of surgery in London. He died in 1463.

As long as the coalition of the physicians and surgeons lasted, it was formidable to the Guild of Barbers, for the College chose to exercise its penal powers on the Barbers practising surgery, alleging that they were ignorant and unauthorized practitioners. The Barbers became alarmed, and, realizing their danger, obtained in 1425 a confirmation of the power to practise surgery, which had been granted them in 1415. It is not known how long the Conjoint Faculty of Medicine and Surgery lasted in London. The City records contains no notice of the swearing-in of a rector of medicine after September 27th, 1424, nor is there any other indication of the continued existence of a conjoint college after 1425. Dr. Kymer was transferred to the West of England in 1428, and Morstede probably took part in the more active military operations in France when the Earl of Salisbury invested Orleans. The guiding hands of Kymer and Morstede being thus removed, the physicians and surgeons may have ceased to work harmoniously. At any rate the partnership was dissolved, not to be again renewed until 1883, when the Royal College of Physicians of London agreed to act with the Royal College of Surgeons of England, and it became compulsory for every student to be examined in each of the main branches of his profession before he was allowed to practise either medicine, surgery, or midwifery.

After the separation the surgeons steadily pursued their plan of consolidating the craft, and in 1435, they appear as an established body with a code of laws for the government of their society. The ordinances still exist at the Barbers' Hall as a little quarto book written on vellum. The guild received a charter of incorporation in 1462, and in 1492 it obtained a grant of arms. At this time, too, it was living peaceably with the Barbers' Company, for in 1493 the two bodies entered into a composition which is dated May 12th, and is signed by representatives of each society. The barbers had great difficulty in vindicating their privileges in the early part of the sixteenth century, for the country swarmed with quacks and unlicensed practitioners who owed allegiance neither to Surgeons' Guild nor Barbers' Company. The prestige of the company further received a severe blow in 1511, when an Act of Parliament transferred the approbation and licensing of surgeons in London to the Bishop of London and the Dean of St. Paul's, and to the bishops and their vicars-general in various parts of the country. But the Act speedily became unpopular, and was amended by another still more retrograde, for it made it lawful "to any person being the King's subject, having knowledge and experience of herbs, by speculation or practice, to minister in any to any outward sore or wound according to their cunning." This Act remained in force till 1540, when the United Company of Barbers and Surgeons was called into existence, and its effect was most injurious to the practice of surgery, for it led the Barbers' Company to lower the standard of knowledge required for its licence.

From very early times, too, in England, the surgeons had felt it a grievance that they were not allowed to take complete charge of their patients upon whom they had operated. A physician had to be called on every occasion if more than a trifling change was required in the regimen or medicine. In June, 1632, the College of Physicians procured an Order in Council with a clause to the effect that "no chirurgeon doe either dismember, trephan the head, open the chest or belly, cut for the stone, or do any great operation with his hand upon the body of any person, but in the presence of a learned physician, one or more of the College, or of His Majesty's physicians." The Order was rescinded in 1635, but it was not until after the year 1800 that a hospital surgeon was allowed complete control of his cases.

The best-known members of the Elizabethan band of surgeons were Thomas Gale, William Clowes, John Hall, John Read, and John Banester. Gale and Clowes held high office in the United Company of Barbers and Surgeons. Hall practised in Kent, and Read lived at Gloucester, whilst Bannester was first at Nottingham and afterwards in London. All, with the exception of Read, who married John Banester's daughter, Cicely, had seen service either in the army or navy. The revival appears to have begun with Richard Ferris, Serjeant-Surgeon to Queen Elizabeth, who wrote nothing, but exercised a powerful influence for good over his fellow surgeons. From him Thomas Gale seems to have learnt his zeal for the profession. Gale practised as a young man in London, then he served at Montreuil, in 1544, in the army of Henry VIII. He was at the battle of St. Quentin with Philip II of Spain in 1557, when Ambroise Paré in the French army was dressing the wounds made by the English. At the end of the war Gale returned to London, and was Master of the United Company of Barbers and Surgeons in 1561. He tried to advance his art in a threefold manner (1) by eliminating quacks, (2) by enforcing a higher standard of education, (3) by protecting surgery against the encroachments of the physicians.

William Clowes the elder was even more distinguished than

Gale as a leader amongst the great English surgeons in the reign of Elizabeth. In 1575 he was elected a surgeon to St. Bartholomew's Hospital, becoming full surgeon in 1581. He served in the English fleet against the Spanish Armada, and was afterwards appointed Surgeon to Queen Elizabeth. He died in 1604.

Very little is known of John Hall, except that he was born in 1529, lived at Maidstone in Kent, and was admitted a member of the Barber-Surgeons' Company late in life. He was the sturdiest representative of the best type of English country surgeon, and his mission in life was to abate quackery as far as in him lay by his writings, and to compel the authorities to do their duty.

John Banester, born in 1540, began his professional career as a surgeon to the forces sent under the Earl of Warwick to relieve Havre in 1563. He was admitted a member of the Barber-Surgeons' Company in 1572. The University of Oxford granted him a licence to practise medicine on June 30th, 1573, and he thus acted both as a physician and as a surgeon, a very unusual combination at a time when the surgeons were still servants of the physician. Banester's works are concerned with the principles rather than the details of surgery, but like the other members of the band, he had the true interests of the surgeons at heart, and tried to liberate them from bondage.

John Read, like Clowes, Gale, and Hall, was anxious that the practice of surgery should be freed from quackery. He deserves, says Mr. D'Arcy Power, to be named with this noble band on account of the following remarkable sentences which he wrote in the preface to his book:

> Chirurgery is maimed and utterly imperfect without the help of those other parts, which consisteth in prescribing of inward medicines and convenient diet. And is so near linked with these in alliance that no man deserveth to be called a chirurgion that is ignorant in physic..... and I do withal affirm that chirurgeons ought to be seen in physic, and that the barbers' craft ought not to be termed chirurgery.

Mr. D'Arcy Power sums up his conclusions as follows: First, that surgery was at a very low ebb during the early years of Queen Elizabeth's reign. Many surgeons looked upon the art rather as a business to be followed than as a profession to be improved. In their collective and official capacity as the Master, Wardens, and Assistants of the United Company of Barbers and Surgeons they had no objection to sell the licence to practise to any one who chose to pay their price, without much inquiry as to the credit or fitness of the applicant. The surgeons, therefore, as a body were grossly ignorant; they held a low position socially, and unlicensed practitioners abounded. Fortunately, however, a series of surgeons came forward between the years 1560 and 1590, who tried to raise surgery into a profession by the suppression of quacks, by improved methods of teaching, and by the record of their personal experiences. Their colleagues, for the most part, were ignorant of Latin, and for them, therefore, they wrote in the terse English of the period, which makes their books so eminently readable at the present time, and has saved them from the oblivion to which the writings of their successors have been long since consigned. Many of their treatises give details of the individual cases which they had treated, the histories being recited less for their own glory or in any boasting spirit than to teach others and to emphasize their remarks on treatment.

The revival lasted only a few years, and it would have died away completely before the end of the sixteenth century if it had not been for John Woodall in England and Maister Peter Lowe in Glasgow. Mr. D'Arcy Power can find no other explanation of the sudden decline than that the revival depended upon the activity of a very few great minds. In England the Elizabethan tradition was carried on solely by John Woodall, the naval surgeon, who died in 1643, when his mantle fell upon Richard Wiseman, the great surgeon of the Commonwealth. Lowe was born in Scotland about 1550, and after an adventurous career of thirty years he returned to his native country in the early part of 1598, calling himself "Chirurgeon Major to the Spanish Regiments at Paris, Doctor in the Faculty of Chirurgerie in Paris, and Chirurgeon Ordinarie to the Most Victorious and Christian King of France and Navarre." He was the founder of the present Faculty of Physicians and Surgeons of Glasgow. He died in 1610.

CANCER RESEARCH.—The Fund for Cancer Research in connexion with the Middlesex Hospital has received the sum of 125 guineas as the result of the smoking concert organized by the students of the hospital.

THE MASSACRE OF THE INNOCENTS.

FRESH evidence of the necessity of drastic legislation for the protection of children placed out to nurse is afforded by the tale told at the Central Criminal Court last week. Three women were convicted of serious crimes against children committed to their so-called "care."

In the first case—that of Gale—the prisoner was sentenced to two years' hard labour; the woman pleaded guilty to having wilfully abandoned in railway trains and stations three children that certain unmarried women had confided to her for adoption, paying with them sums varying from £15 to £20. In the second case two women—Walters and Sach, a nurse—were convicted before the same court of the murder of a male child. The prisoner Sach kept a "maternity home," one of the advantages of which, as claimed in the advertisements, was that "baby can remain." As the woman charged her cases 3 guineas a week, it is evident that her *clientèle* did not consist of the very poor class; her charge for having the baby adopted by "a lady" was £25. Walters appears to have been the woman to get rid of the children, as she was found with one wrapped up as a bundle in her arms dead; and it was proved in evidence that the same thing had occurred before with the same woman. Both were sentenced to death. No fewer than 300 articles of infants' clothing were found in the prisoner's house. One of the witnesses stated that during the time she was there no fewer than twenty women were confined in the house. The fact that about a hundred children's dead bodies are found in London alone by the police every year proves that infanticide is of very common occurrence if conviction for the crime is not.

The *Revue Philanthropique* in a recent issue expressed the opinion "that England is behind other countries in regard to the protection of children." The accusation is only too true, and we hope that those who have opposed the requisite legislation will reconsider their position, and realize that many of these deaths would have been prevented had the Act dealt with all cases, and not only with those in which two or more children are taken. That the law is inadequate to the elementary necessities of the case is proved by the report just issued on infant life protection in the Chorlton Union. Miss Zanetti, the inspector, states that, of 110 nurse children she had under inspection, only 50 came within the Act. In the case of one child not under the Act permission to inspect the child's bedroom was refused, and the reason was found to be that the family and nurse child slept downstairs on chairs and sofas, and that the bedrooms were used to keep pigeons in. After five years' experience Miss Zanetti is of opinion "that most nurse children are taken solely for the money they bring, and also that not only are the children taken entirely for gain, but that the money paid for their maintenance is the chief source of income to the nurse. The cases are generally unsatisfactory because the children do not get the necessary amount of food (particularly milk) to which they are entitled." To understand how great an effect this cause may have on the infant death-rate, we may refer to the paper read by Dr. Pierre Budin at the conference at Arras last year. He showed that in the case of children nursed at the breast the mortality was 8 per cent., bottle fed 20, and *petit pot* 41 per cent., or a mortality five times as great in the last as the first.

It would be too sanguine to hope that all the sins of omission and commission which result in the deaths of more than 140,000 children under 1 year of age every year could be prevented, but other nations have done something, and we might at least do as much. The first reform should be to bring the so-called nursing institutions under inspection. No one ought to be allowed to receive women to be confined for gain, or to receive or keep any nursing children under 7 years of age, without having first received a licence from the authorities.

Every person licensed should be bound to keep a register wherein shall be entered the names and ages of all children received or all children born on the premises, the name and residence of their parents, and also a correct register of the names and age of every child given out, adopted, or taken away, together with the name and residence of the person so adopting; a correct copy of such register being sent to the authority within forty-eight hours of such child being taken away. Even if the Home Secretary cannot see his way to this he might at least adopt the law of the State of Massachusetts, which directs that:

> Every person who receives for board or for the purposes of procuring adoption an infant under the age of 7 years shall use due diligence to ascertain whether or not such infant is illegitimate; and if he knows or has reason to believe it to be so shall forthwith notify the State Board of

Charity of such reception: and said Board and its officers or agents may enter and inspect any building where they may have reason to believe that any such illegitimate infant is boarded, and remove such infant when in their judgment removal is necessary.

The State Board recommends the licensing of infant boarding-houses. There will no doubt be an outcry against the adoption of the licensing system by Parliament, but such cries have been uttered by interested parties against every improvement. If the public can only be made to understand the enormous destruction of infant life that goes on year by year it will demand a thorough reform of the laws dealing with infant life protection.

SCOTTISH POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

AT the annual meeting of this Association, which was held in Glasgow on January 16th, the report for the past year was carefully discussed and adopted. In regard to the sale of poisons the report said that the action of the Pharmaceutical Society, in its recent prosecutions, was such that no medical man having an open surgery was safe from prosecution (with its attendant terror of being brought before the General Medical Council and found guilty of conduct infamous in a professional respect.) It was pointed out that while, in the cities and towns, it was quite possible for medical men (although only at considerable pecuniary loss) to safeguard themselves so as to keep within the recent rendering of the Pharmacy Acts, in the Highlands and Islands and country districts it was impossible, because as there were no druggists, medical men must, of necessity, supply the public with all the drugs required—poisonous or otherwise; and in the event of the medical man being absent on his professional duties, if any one in his surgery supplied the smallest quantity of a scheduled poison to a member of the public, the medical man was held guilty of breaking the law, and found guilty of "infamous conduct" by the General Medical Council. This clause was keenly discussed, especially by the country members of the Association, who felt their position very acutely in view of the action of the Pharmaceutical Society and especially of the General Medical Council.

In regard to the medical relief of the poor, the report states that it is absolutely essential that the Poor-law medical officer should have a more secure tenure of office, with an appeal to the Local Government Board against injustice; that medical officers should have the power of ordering invalid diet, stimulants, etc., without these being vetoed by the inspector or parish council; that medical officers' salaries ought to be fixed by the Local Government Board and not by the parish councils; that all fractures, midwifery, and other extraordinary cases should carry an extra and adequate fee (as in England); that all medicines should be supplied, where practicable, from the druggist, and that when this was impossible and the medical officer supplied the drugs, he should be paid on the same scale as if the medicine had been supplied by a druggist; and lastly, that every vacant appointment should be advertised by the parish council in the medical and local journals. This clause was agreed to unanimously.

In regard to the two Bills which had been before Parliament for the amendment of the Local Government (Scotland) Act, it was agreed that the Bill of the Association be again introduced, and that the Lord Advocate's Bill be carefully watched, and, if it did not contain a clause granting a more secure tenure of office to medical officers, that every possible means should be employed to get an amendment accepted by the Government. The Bill for the superannuation of all Poor-law officers was also considered, and its provisions unanimously agreed to.

A clause regarding the warning, in the medical and other papers, of candidates for Poor-law medical appointments in the Highlands and Islands was approved unanimously.

The cordial thanks of the Association were passed to the BRITISH MEDICAL JOURNAL for its ventilation of the grievances of Scottish Poor-law medical officers.

PRESENTATION.—Dr. John Adam, of Dingwall, Ross-shire, was recently presented with a purse containing 300 sovereigns to defray the expense of a holiday in South Africa, with a horse, a set of harness, a hooded gig, and a bicycle, given, as was stated in an illuminated address, by his friends, as a token of their appreciation of his professional abilities, his countless self-sacrificing efforts on behalf of his patients, and the high position he has occupied in the public regard. At the same time Mrs. Adam was presented with a valuable gold bracelet.

LITERARY NOTES.

UNDER the title, "The Master of Those who Know," the *New York Medical News* devotes a long editorial article to our Lister Jubilee Number, "a most interesting issue" which "it is impossible to allow.....to pass without pausing to praise it." For the men who have graduated in medicine and surgery since the thorough establishment of the revolutionary changes introduced by Joseph Lister, "there is," says our contemporary, "no better or more instructive reading." The *Philadelphia Medical Journal* says the number contains a most interesting list of original articles, and adds that "it is a proper and commendable spirit which prompted the BRITISH MEDICAL JOURNAL to devote this entire issue to a commemoration of this date." The *Journal of the American Medical Association* describes the number as a pleasant tribute "to one of the greatest advancers of surgical technique and success." The New York *Medical Record* also reviews the number at considerable length.

With the beginning of the New Year the *Journal of Cutaneous Diseases* passed under the editorial management of Dr. James C. White and Dr. John T. Bowen of Boston, Dr. James Nevins Hyde of Chicago, Dr. Henry W. Stelwagon of Philadelphia, Dr. Prince A. Morrow, Dr. Edward E. Bronson, Dr. George T. Jackson and Dr. John A. Fordyce of New York. Dr. A. D. Mewborn of New York will be the acting editor. The journal has been made the official organ of the American Dermatological Association. All communications relating to the editorial department should be addressed to Dr. A. D. Mewborn, 224, West 52nd Street, New York.

Under the title of *La Médecine des Accidents du Travail* a new review, devoted, as its name imports, to medicine in relation to industrial accidents, will appear in Paris before the end of the present month. The editor is Dr. Marcel Baudoin, whose name is well known as that of one of the most enterprising medical journalists of France. The sole aim of the review will, it is stated in the announcement, be to make known to its readers all medical publications relative to the subject to which it is devoted.

It is always gratifying to hear of medical practitioners snatching time from their severer studies to cultivate some corner of the field of literature. We therefore feel pleasure in calling attention to two books which have recently appeared in America. Dr. William S. Gordon, of Richmond, Virginia, has recently published *Recollections of the Old Quarter* (Moose Brothers Company, Lynchburg, Virginia, 1902) containing his reminiscences of the South as it was before the Civil war. A short essay on The Negro Dialect, introductory to the body of the book, is described by the *New York Medical Journal* as an admirable synopsis of the subject. Dr. Raley Husted Bell, a New York practitioner, has published a book entitled *The Worth of Words*, with an introduction by Dr. William Colby Cooper (Grafton Press, New York). The work is somewhat on the same lines as Archbishop Trench's delightful *Study of Words*.

The *New Medical Library and Historical Journal* is the title of a new medical journal "devoted to the interests of medical libraries, bibliography, history, and biography," which came into existence in New York on January 15th. The announcement states that it is designed to fill a place occupied by no other journal, and it will be the only magazine published in the English language devoted to the subject of medical history. Original articles will deal with medical history and biography, practical medical library administration and economy, medical bibliography, the care of books, the history, construction, and use of medical libraries, etc. A feature of the new journal will be the publication of a complete *Index Medicus* of every current medical book, both English and foreign. The contributors to the first number are Dr. Lewis S. Pilcher, editor of the *Annals of Surgery*: Dr. Eugene F. Cordell, of Baltimore; Dr. Frederick P. Henry, of Philadelphia; Dr. James M. Winfield, of Brooklyn, and others. The *Journal* will appear quarterly, the yearly subscription being 2 dollars. All communications should be addressed: *Medical Library and Historical Journal*, 1,313 Bedford Avenue, Brooklyn, New York.

It was recently announced in the BRITISH MEDICAL JOURNAL that the Carnegie Institution, Washington, had consented to grant a subsidy of £2,000 a year for the revival and carrying on of the *Index Medicus*. The nature of that publication may be gathered from the following "notice" which we have received from Dr. Robert Fletcher, Editor-in-Chief: "The *Index Medicus* was established in 1879, under the editorship of Drs. John S. Billings and Robert Fletcher, and was discon-

tinued in 1899. The present publication, which is undertaken by the Carnegie Institution, will be known as *Index Medicus*, second series, vol. i commencing in January, 1903. It consists of the titles in full of books, pamphlets, theses, contributions to co-operative works and original articles in journals, transactions of medical and scientific societies, and the like, arranged under subject headings. It is issued as early as possible after the first day of the month, time being allowed for the arrival of foreign journals, and it represents the literature of the preceding month. A table of contents accompanies each number, and on the completion of the volume an 'Annual Index of Authors and Subjects' is issued. The subject part of this annual index is elaborately subdivided, the classification closely resembling that of the Index Catalogue of the Library of the Surgeon-General's Office. The annual index of the last volume of the first series occupies 156 pages in double and triple columns. The titles in certain languages—as Russian, Polish, Swedish, Danish, Finnish, Hungarian, Bohemian, Roumanian, and Japanese—are translated into English. The editor, while indexing all really original matter, does not admit 'reports of progress' or include all copies of an article which may appear in other journals. Translations are admitted when in languages more familiar than the originals. The *Index Medicus* publishes no advertisements, and does not exchange copies with other journals. The classification by subjects which will be adopted in the monthly numbers will closely follow that which use made familiar to the readers of the first series, but with such additions and modifications as advances in medical knowledge may require." It may be pointed out that the new series will in reality be not the second, but the third, for the *Index Medicus* was discontinued after April, 1895. An appeal then made to the profession was so far successful that the publication was resumed in January, 1896. The work struggled through rather more than three years, but finally came to an end in April, 1899. The solution of continuity between the first and the second series was repaired, but the Trustees of the Carnegie Institute have, for reasons known to themselves, decided to leave unbridged the gulf fixed between April, 1899, and January, 1903, although the materials for making the publication continuous lie ready at hand. Letters relating to the editorial department should be addressed: Editors, *Index Medicus*, Washington, D.C., U.S. Communications relating to subscriptions must be addressed: Carnegie Institution, Washington. The subscription, which must be paid in advance, is in this country 25s. yearly.

The *Times* of January 19th republished the following interesting extract from its own columns of the corresponding date a century ago:

WEDNESDAY, JAN. 19.
EXTERMINATION of the SMALL POX.
London, Jan. 10, 1803.

"The invaluable Discovery of Dr. JENNER, for the Extermination of the SMALL POX, having undergone the most rigorous investigation, and received the sanction of Parliament, a MEETING will be held at the London Tavern, Bishopsgate-street, on Wednesday, the 19th instant, at 12 o'clock, to consider of the best means of carrying the same into effect: when the company of every Gentleman disposed to concur in this laudable Undertaking is earnestly requested. The Chair will be taken, by the LORD MAYOR, precisely at one o'clock.

Among the signatories are the Duke of Clarence, William Wilberforce, Walter Farquhar, M.D., J. C. Lettsom, M.D., Thomas Denman, M.D., Gilbert Blane, M.D., Robert Willan, M.D., William Babington, M.D., Alexander Marot, M.D., W. P. Dimsdale, M.D., Henry Clive, John Abernethy, Astley Cooper, and many other men of note.

CONTRACT MEDICAL PRACTICE.

CLUB FEES: AN APPEAL FOR INFORMATION.

THE members of a district medical association, consisting of all the medical practitioners in a town, are desirous of having the fees received from Friendly Societies in their district increased. They will be glad to have information regarding the fees generally paid in England.

FRIENDLY SOCIETIES.

M.B.—As at present the medical profession has by no means agreed that its connexion with the great Friendly Societies is to be repudiated, we do not think the conduct of the medical officer censurable if, at the annual meeting of the society, he expressed his opinion of its advantages for the class for which it is intended. The real evil is that medical men should be willing to accept appointments at an inadequate rate of remuneration.

FRENCH ANTITOBACCO SOCIETY.—The French Antitobacco Society, at a recent meeting, elected its officers for the coming year. Among them we note the names of Dr. Le Gris and Dr. Magnan, who are Vice-Presidents; and of Dr. Georges Petit who is General Secretary.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1903.

MEETINGS of the Council will be held on April 22nd, July 8th, and October 21st in the Council Room of the British Medical Association, 429, Strand, London, W.C.

ELECTION OF MEMBERS.

Any candidate for election should forward his application upon a form, which will be furnished by the General Secretary of the Association, 429, Strand. Applications for membership should be sent to the General Secretary not less than thirty-five days prior to the date of a meeting of the Council.

GUY ELLISTON, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m. Members can have their letters addressed to them at the office.

SPECIAL CORRESPONDENCE.

PARIS.

Académie de Médecine: Speeches of Retiring and Incoming Presidents.—Report on the Diseases to be included in the Public Health Act for Compulsory and Voluntary Notification.—Presentation of Medallion to Professor Brouardel.—Visit of the President of the Republic to Assistance Publique and Hôtel Dieu.

AT the opening meeting of the Académie de Médecine for 1903, M. Riche, the outgoing President, according to time-honoured custom, passed in review the work of the members during the previous year. The most interesting of these communications have been analysed in the BRITISH MEDICAL JOURNAL. M. Lancereaux, the newly-appointed president for 1903, then took the chair and thanked his colleagues for the high honour they had conferred on him. M. Tillaux is Vice-President.

At the meeting of the Académie de Médecine on January 13th, M. Josias presented an important report on behalf of the special commission appointed to consider what diseases the Académie were of opinion should be notifiable under the New Public Health Act of February 15th, 1902. The Commission brought forward the following list of fifteen diseases for compulsory notification.

1. Typhoid fever.
2. Typhus.
3. Variola and varioloid.
4. Scarlet fever.
5. Measles.
6. Diphtheria.
7. Pneumonia and broncho pneumonia.
8. Miliary fever.
9. Cholera and choleriform diseases.
10. Plague.
11. Yellow fever.
12. Dysentery.
13. Puerperal infections (when professional secrecy of the pregnancy shall not have been demanded).
14. Ophthalmia neonatorum.
15. Epidemic cerebro spinal meningitis.

This list is the same as that laid down by the Ministerial decree of November 23rd, 1893, with the addition of measles, pneumonia, broncho-pneumonia, and epidemic cerebro-spinal meningitis. In Clause the Commission gives the following diseases for which notification should be optional, with the consent of the family:

1. Pulmonary tubercle.
2. Whooping cough.
3. Influenza.
4. Erysipelas.
5. Mumps.
6. Leprosy.
7. The ringworms.
8. Purulent conjunctivitis in adults (trachoma, or granular ophthalmia).

The Commission has not dared to include tuberculosis in the first list of diseases for compulsory notification. The difficult

ties in the application of the law would be numerous. In the first place there would be the formal opposition on the part of relatives. Tuberculosis is not like the majority of infectious diseases, for it was a stigma not only to the patient, but also to his family. In the second place, even if all cases of tuberculosis were notified, the administration could not cope with them. With acute infectious diseases, such as scarlet fever or diphtheria, it was easy to deal; in a few weeks the disease had run its entire course, and the room, bedding, and furniture could at once be disinfected. But tuberculosis was slow in its progress, lasting on the average four or five years, and in some cases from ten, fifteen, or even twenty years. The administration could not isolate all the cases in hospitals, nor could it follow each patient and disinfect the room where he had slept after his departure. According to Professor Brouardel 150,000 deaths from tubercle occurred annually in France, so that there must be at least four or five times that number of persons living in the country affected with the disease. In the third place, some years ago 100 cases of tubercle were selected in different quarters of Paris, and the linen, utensils, waterclosets, etc., disinfected regularly. The patients soon came to be looked upon by their neighbours as if they had the plague, and in some cases even expelled by their landlords. When the disinfectors began to pay a weekly visit, those patients could not find a lodging; thanks to their unfriendly neighbours of the working class, they would soon be unable to find work, and under the pretext of prophylactic measures they would be reduced with their families to the greatest misery. When France could receive all her tuberculous patients in free or inexpensive sanatoria, then she could make notification compulsory by law; but till then it was necessary to be very prudent in adopting measures against tubercle. It was necessary to take care that the struggle against tuberculosis should not be transformed into a fight against the tuberculous patient.

On Sunday, January 18th, in the large amphitheatre of the Medical School, draped with scarlet cloth and gold fringes, and decorated with plants for the occasion, Professor Brouardel was presented by his pupils and friends with a medallion portrait, on the occasion of his promotion to the rank of Grand Officer in the Legion of Honour. M. Chaumié, the Minister of Public Instruction, took the chair at 10 a.m., having Professor Brouardel on his right hand: and among those on the platform was M. Debove, the Dean of the Faculty of Medicine; M. Chauveau; M. Liard, Vice-Rector of the University; M. Darboux, Dean of the Faculty of Science; and M. Rotz, the sculptor of the medallion. The amphitheatre itself was filled with the colleagues, friends, and pupils of Professor Brouardel. The opening speech was made by Professor Gilbert on behalf of the Organizing Committee; he analysed the life-work of the Professor. M. Chauveau then read the speech which Professor Marey (absent owing to illness) had prepared in honour of the friend of his childhood. Speeches followed by M. Croiset, M. Lereboullet, and M. Barth, the latter speaking respectively on behalf of the Association of Medical Practitioners of France and of the Department of the Seine. Professor Lacassagne, of Lyons, spoke of the work of M. Brouardel as a medical jurist. The Minister of Public Instruction then presented Professor Brouardel with the medallion, and said what pleasure and pride he felt at being the representative of the Government at this ceremony. M. Brouardel was quite overcome with emotion when he rose to thank his friends, and modestly stated that any services he had been able to give were much more due to fortunate circumstances than to his own merits. The medallion represents the portrait of the professor, while on the reverse is an allegorical design which represents Science discovering Truth.

The President of the Republic recently paid an official visit to the Assistance Publique and then to the Hôtel Dieu. The President was received by the Prefect of the Seine, the Prefect of Police, and M. Mesureur, the Director-General of the Assistance Publique. M. Mesureur, in thanking the President for his visit, stated that each year 200,000 patients passed through the Paris hospitals, 15,000 aged poor find a home, and 5 000 children are looked after and cared for, while in addition there are the countless poor and needy who are helped by the bureaux de bienfaisance in each quarter of the city. The President, in his reply, thanked the Municipal Council for the 45,000,000 francs which it had voted for the reconstruction of hospitals, saying that he hoped it would be sufficient. Although all his life long he had preached economy of public moneys, yet when it came to relieve those who suffered, economy must not be turned into parsimony. The President then drove to the Hôtel Dieu, where he visited the wards and kitchens, talking to many of the patients in the hospital. This was the first of a series of visits M. Loubet intends to pay to the Paris hospitals.

LIVERPOOL.

Demonstration by Professor Lorenz of Vienna.—The Investigation of the Origin and Cure of Cancer.—Proposed Incorporation of Bootle with Liverpool.

PROFESSOR LORENZ of Vienna, on his return from the United States of America, visited the Royal Southern Hospital, and gave a demonstration of some of his methods to a large gathering of members of the medical profession. Mr. Robert Jones, Surgeon to the Hospital, had brought together 17 cases of congenital dislocation of the hip, 7 cases of club-foot, and some cases of morbus coxae with well-marked deformity. The demonstration was described in the BRITISH MEDICAL JOURNAL of January 17th, page 163. The audience, which included several well-known surgeons, not only in Liverpool but also from London, Birmingham, Wales, and other parts, was enthusiastic in applauding Professor Lorenz's methods, and the completeness and clearness of his demonstrations.

Mr. T. Sutton Timmis, who has held the position of President of the Infirmary during the past year, has resolved to devote the sum of £10,000 to the investigation of the origin and cure of cancer. This sum has been vested in a number of trustees, and is to be expended in the ensuing ten years. The exact method of procedure is not yet determined, but the work is to be carried on in connexion with the Royal Infirmary and with University College. It is understood that some eminent scientific investigator is likely to be asked to undertake the investigation, and that a laboratory will be placed at his disposal in the Infirmary.

The Local Government Board's inquiry into the proposal of the Liverpool Corporation to annex Bootle was concluded on January 17th. Dr. Hope, Professor Bryce, and Dr. Nathan Raw gave evidence in favour of the proposal from the public health point of view. Bootle is as much a part of Liverpool as Westminster is a part of London, and together they form a port which is the largest in the world. It is strongly urged that in order to prevent the importation and spread of infectious disease it is extremely desirable that the whole community should be under a single health authority.

BRISTOL.

University College Colston Society.—Proposed Western University at Bristol.—Speech by Sir James Crichton-Browne.

THE annual dinner of the Bristol University College Colston Society was held last week in the large hall of the College. The President for the year was the Lord Bishop of Bristol, the guest of the evening Sir James Crichton-Browne, and covers were laid for about a hundred.

After the toasts for the King and clergy of all denominations, the President proposed "The Pious Memory of Edward Colston," and sketched the features of the great Bristol philanthropist's life, making reference to objects Colston had in view—the relief of old age and poverty, education, and hospitals. In the College they were called upon to work in the higher sphere of education work, and to develop and train good brains, which after all ruled the world. The obstacle that formerly existed between trade and the older universities was now being broken down, so that clever boys from any schools could reach the highest honours in the universities. In war time Bristol asserted itself, and the general public of Bristol took a deeper interest in the College. Personally he disliked the idea of many universities, but, as other towns in the country were going in for them, Bristol must not be behind. The College must claim its share of the technical grants, and be supreme in the South-West.

Mr. Arrowsmith, the Secretary, announced that £374 had been collected, and nearly £2,500 had been collected towards the £3,000 required to obtain the promised offers of Sir W. H. Wills and Sir Fred. Wills's thousands.

Sir James Crichton-Browne, who was introduced by Mr. H. Hobhouse, M.P., in reply to the toast of his health said he would not have accepted the invitation to be present had he not felt a zeal as great as former guests for the Colston Society and all its works. In obtaining considerable sums of money the Society had justified its existence, and at the same time had made more widely known the achievements and advantages of the College and the greater scheme of a Western

University located in Bristol. This scheme once having come to life would not be allowed to die; it had been sown by the Bishop of Hereford, vigorously watered by Mr. Haldane, and he would not be surprised if, under the golden sunshine shed by some wise and generous citizen, it suddenly sprang up and put forth great branches. The need for new universities was obvious in the face of the education requirements of the times. There were limits to university extension, and he warned his hearers that the creation of numerous struggling corporations stamped with provincialism was not what was required. A boy should have the chance of widening his knowledge by new traditions and associations, which were not to be got if he went to a college in the next street. Though the term "provincial university" was a contradiction in terms, it was absurd to talk of provincialism when there was a population of a quarter of a million, and where active movement was going on in every department of human affairs. In such a position was Bristol. It already contained a well-equipped college, comprehensive as regards the status and domicile of its pupils. What was required was a group of national universities to meet the educational requirements of the whole country, each university having its distinctive features, adapted to its environments, but each affording the amplest instruction. No scheme of this sort would be complete without a university in Bristol, and if the city did not obtain a charter, as other towns seemed likely to do, it would merit the remark of Pope when he said it was "a city very unpleasant, and with no civilized company in it, but crowded with a strange mixture of seamen, women, children, loaded horses, and asses." A great educational upheaval was going on; both secondary and tertiary education were feeling it, so that an extension of the university system must follow. To the large number of men in Scotland who obtained a university education he ascribed the success of Scotchmen in all parts of the world. In a new university there should be no competing with Oxford or Cambridge, which, though venerable, were not stiff with age, but were somewhat nimbly adjusting themselves to the ever-changing paces of the hour. The mission of a new university was to link together science and industry. Competition grew keener on every hand, and if this country was to hold its own in the world it must perfect its skill in every department of production, be ready to seize every new opening for commerce and utilize every method of manipulating matter. The success of this country in the past had been due to men of originality and imaginative power, and though no university could endow a man with these qualities, it could train men of superior intellects capable of becoming captains if not generals, and supply technical teaching for the average man. As an instance he recalled how by superior technical education a German firm had seized on one of our discoveries and monopolized the manufacture of aniline dyes. The trade slipped from us by our want of diffuse education. He did not share the despondent view of Professor Dewar, who said it would take two generations to attain to the point of general education and specialized equipment of Germans. We must buckle to our work to maintain our position. Were we to decay? The abject wealth worship around us, the mad race for material aggrandizement, the vicious frivolity and exorbitant pleasure seeking of a portion of the upper classes were well calculated to create misgivings; but we were consoled by the fact that science was now raising her head as she never did before, that all her leadings were towards morality, and that in co-operation with religion, the one supreme fact in human nature, she might do much to amend the evils of the day. Words, mere words, could neither make a man nor redeem a nation, but truth and righteousness could, and the first condition of science was veracity, strict unswerving adherence to fact. The toasts of "The City" and "The President" concluded the evening.

CANADA.—A private exhibition of bioscope pictures made by the Warwick Trading Company, London, for the Canadian Pacific Railway Company was given at the Palace Theatre, London, on January 20th. The pictures illustrated the journey from Liverpool to Vancouver, and showed such characteristic Canadian industries as the reaping and threshing of wheat in Manitoba and lumbering in British Columbia in a most graphic manner. The great grain steamers passing through the Saulte Sainte Marie Canal and the exciting sport of salmon spearing in a mountain stream were also illustrated. The exhibition is one which gives a most realistic idea of Canadian life and scenery, and those who may be tempted by it to take a summer holiday in Canada will not be disappointed.

CORRESPONDENCE.

THE TREATMENT OF CONGENITAL DISLOCATION OF THE HIP.

SIR,—The interesting and clear account of Dr. Lorenz's operations in Liverpool given by Mr. D'Arcy Power in the BRITISH MEDICAL JOURNAL of January 17th, p. 163, leaves nothing to be desired as a clinical report, but from his concluding sentence many of your readers may infer that the two cases treated at the Royal Southern Hospital are the first to be operated on by this method in this country. This is far from being the fact. Lorenz's present method appears to be that which he has described and practised for some years, and of which he has given full details in his book published in 1900.

At the meeting of the Clinical Society on January 10th Mr. Openshaw referred to twenty cases that he had treated by Lorenz's method, and Mr. Jackson Clarke mentioned a like number under his care, and other surgeons (including myself) have tried it in a number of cases; although they may have used less violent manœvres and taken more time to bring the head of the bone into position preparatory to attempting reposition.

In Germany it has had a very extensive trial, and the results are admirably summarized in a paper by Geheimrath L. Heusner,[1] from which, with your permission, I will quote the following:

As regards results of the Lorenz treatment, the original opinion that cure was attained with reposition has long been changed, and it has become clear that an after-treatment of 1½ to 2 years is needed to make sure of the desired result, and that yet a series (*Reihe*) of years must be waited before one can speak of a definitive cure.

From the figures given by Lorenz in his book of 1900 on his permanent results it comes out that he obtained a "good" result in 61 out of 102 cases of one-sided luxation; and in the 110 joints of 55 children in double luxation a "good" result in 47 cases, but that of the anatomically bad cases yet very many—*the number is not given*—have shown really excellent (*geradezu vorzuglichen*), even "ideal," results.

(Lorenz classifies those cases described as transpositions by other authors as subluxations forwards and reluxations upwards). Hardly any available grounds for comparison are given by Lorenz, since the idea of what is to be considered a good anatomical result cannot be accurately defined, and yet more room is allowed for the play of an optimistic comprehension in the criticism of the *functional* results.

In fact, the communications of most other authors who employ the Lorenz method are far more unfavourable. Kölliker had in 25 one sided cases 2 anatomical cures, in 13 double ones no anatomical cure (but a great number of transpositions).

Hoffa gives 95 per cent. reluxations out of his cases treated by the bloodless method. Schede, according to Petersen, in 102 cases, 13 restitutions and 30 transpositions, but it is to be remarked that all the reductions of over half a year's standing are classed among the cures, and that the permanent results will hardly remain so favourable.

Codivilla has in 66 joints treated by the bloodless method only obtained 4 or 5 complete restitutions.

Also Kümmell, who has treated very many cases of luxation, writes to me that his functional results are good, but that a reposition in the anatomical sense, established by radiography, was only attained in about 5 per cent. of the cases, and that he thinks it desirable that this should be clearly be laid down (as a fact).

The dangers of bloodless reduction are, of course, less than by any open operation, yet accidents occur, especially in the older children, and with violent proceedings, not altogether seldom.

Lorenz experienced in 450 reductions:

11 fractures of neck of femur.
1 ,, of pubis.
1 ,, of ilium.
3 temporary palsy of peroneal nerve.
5 ,, ,, of crural nerve (extensor quadriceps).
3 permanent palsy of sciatic nerve.
1 gangrene of whole limb in a girl of 13, apparently as the result of too tight gypsum bandage. Repeatedly Narath's hernia and often stiffness from "Incongruenz" of the joint parts. Concerning the latter cases, he says that they were always of a slight degree, and only 2 cases had given him any difficulty. Other observers, such as Hoffa and myself (Heusner) have had very unfavourable experiences in this connexion.

In addition to these drawbacks, Petersen[2] in 1899 recorded cases of tearing of the introitus vaginae, of the urethra, complete rupture of the perineum, and the formation of deep wound from rupture of the skin over the points of attachment of the adductors amongst the accidents that had occurred.

I think it will thus appear that the proceeding is not without its dangers, and that real cure can only be expected on something like 5 per cent. of the cases treated.

Some idea of what Dr. Lorenz means by a "good" result may perhaps be gathered from the report of the father of a patient whom I treated for one-sided congenital dislocation a few years ago. Of his own accord he took the child to Liverpool, and obtained an interview with Dr Lorenz, who, he says, told him that the hip was in excellent position. I

[1] *Zeitschrift für orthopaedische Chirurgie*, Band x. 1902, pp. 51-2.
[2] *Deutsche Zeitschrift für Chirurgie*, Bd. 50, Heft 5 and 6, S. 534.

have always regarded this case as a failure, for although reposition was easy, the head of the bone could not be kept in place, but is situated below the anterior superior iliac spine. It is generally comparatively easy to replace the head, but it is extremely difficult to keep it in its place, and in none of my cases have I obtained a permanent anatomical cure as shown by radiography, although one of them had the advantage of reposition at the hands of my friend Professor Hoffa of Würzburg. Many, however, were improved by the treatment.

Even after open operation great care has to be used to prevent reluxation. As regards Dr. Lorenz's treatment of club foot, it appears to be really a manual *redressement forcé*, which requires very exceptional muscular strength, such as I for one am unable to exercise, for with the utmost exertion I have never been able to overcome the elastic resistance of even a moderately severe case of varus, without the aid of wrench or osteoclast. Some idea of the violence used may be formed from the report of one of the cases treated by Dr. Lorenz's assistant in New York. During the manipulations the skin on the inner side of the foot gave way and Dr. Lorenz said "that is a Phelps's operation without intending it." I have seen a precisely similar accident occur when the late Dr. Grattan, of Cork, was using his osteoclast and I think that he is entitled to the credit of introducing correction of club foot in one sitting. Moreover, any one is strong enough to use the powerful and ingenious Grattan osteoclast.

It is, perhaps, useless to expect the public to understand the facts of the matter, but a little study of the literature of the subject will enable practitioners to disabuse their patients of the idea that a visit to Vienna offers more than a 19 to 1 chance of real cure by bloodless methods. Apologizing for the length of this letter.—I am, etc.,

Seymour Street, W., Jan. 17th. E. MUIRHEAD LITTLE.

THE ART OF PRESCRIBING.

SIR,—Your interesting editorial on the art of prescribing in the BRITISH MEDICAL JOURNAL of January 10th undoubtedly "hits the right nail on the head," and from what we hear from many sources it would almost appear that in the rising profession at least prescribing is a lost art. But for the other side of the question I presume my experience of newly-qualified practitioners has been unusually happy, and I have almost without exception found those I have come in contact with more proficient in the three essentials of our work—diagnosis, prognosis, and treatment—than I should have expected.

During the last five or six years I have had occasional help from quite a number of young practitioners who have spent part of their time while living in my house in working for examinations or degrees. Some of their prescriptions have at first astounded me, but the answer has been, "The physiological effect of the drug is required," and my young friends have always carefully watched for that effect. Their knowledge of those drugs or preparations which are compatible and those which are not has generally been very good, and to me the charm of their prescriptions has been their simplicity.

Perhaps I may mention that the gentlemen whose practice I have watched with the greatest pleasure and interest have been (and I have had four such) old students from my Alma Mater.

While on "the art of prescribing" the two following recent prescriptions of a gentleman who qualified in the Sixties may interest some of your readers, even if they do not excite the wonder which they caused me nor the nausea occasioned to some of the patients for whom they were ordered:

℞ Liq. fe. perchlor. mxv.
Oxymel scillae 5ss.
Tinct. digitalis mv
Liq. strichninae miij.
" morphin. mur. mv.
" arsenicalis mv.
Aq. ad 5j.
Mit. mist. Capt. ter in die.

℞ Bism. subcarb. gr. xv.
Sodii bicarb. gr. x.
Tinct. nucis vom. mx.
" belladon. mv.
Liq. morphin. mur. mv.
Acid. hydrocyan. dil. miij.
Aq. ad 5j.
Mit. mist. Capt. omn. 4ta h.

In conclusion, my young friends are manly, careful young fellows, always willing to learn many details which most general practitioners can teach and which they could not learn in the wards or the out-patient department, at the same time ready to impart the knowledge they have acquired and at once a credit to their hospital teachers and themselves.—I am, etc.,

January 17th. A BUSY M.D.

A DEGREE FOR LONDON STUDENTS.

SIR,—It is somewhat more difficult to approach this subject with satisfaction and from the practical side since the Committee of the Royal Colleges of Physicians and Surgeons of London have deliberated, and promise only reasoned objections against the University of London granting degrees to the London diplomates. They have not, however, asked the University to do this, I believe. As to the personal side of this question, it has been fairly answered in the BRITISH MEDICAL JOURNAL; but, of more importance, the Colleges themselves, luckily, are in entire accord and sympathy with our acknowledged disabilities. The licence carries no adequate distinction; the curriculum and examinations have been nearly levelled up to the university standards, and the courses, as compared with provincial centres, deserve a degree, but we get nothing more than the mediaeval title. In the past a Parliamentary Commission has appeared the only way to approach a needful reform, but it is certainly a pity, in this reform, that our own special bodies cannot be better approached and interested. The above Committee has apparently failed to solve the problem; but whatever their report will contain, it cannot upset the grievances; and it should only mean the adoption by the greater number of London medical students of patience and perseverance in our efforts to get due redress. At least, the report will help to show what are the difficulties and hindrances to be overcome in the future.

The broad questions will still be present and remain unaltered. It is no merit to London to perpetuate the wasteful and unnecessary sectioning of London medical teaching into two standards by the want of combination and lack of healthy reciprocity between the ancient Royal Colleges and the University of London. To graft the valuable asset and most representative faculty of the one with the more up-to-date requirements of the other would consolidate the renown of London as a university centre, and would mean, if this were consummated, that all students would of necessity be worked up to a university level, and those facilities would lead the college diplomate to a degree. The Senate of the University of London may now make all kinds of university laws and get them ratified by Parliament. Surely then they could, like other universities accepting diverse preliminaries, accept the college matriculations, after improving some and deleting others that were not up to the necessary standards. The further professional examinations are so nearly approaching one another, too, that alterations might be agreed upon, and the finals be supervised by joint committees, with the end in view of "external" degrees being granted. The questions of fees can be left as matters of finance for subsequent settlement. It looks as though the Senate of the University could act easily enough, and somewhat on the above lines, under Section IV of their Act and schedule Sections II, X, and XII. A large place is worthy of a large undertaking, and, if I may be pardoned making a slight bull, we do not alter but only change.

With the passage of time, and as we move rather slowly in this matter, cannot we agree to complacently accept the customary bestowal upon us of "Doctor," but with no M.D. on plate or card, certainly, as a bit of laudatory amenity; but on all-fours with the use of "Esquire," and "Reverend" for ministers, and more useful than the esteemed yet silly hot wig on the top part of a judge? They are all used as convenient distinctions.

If the Members and Licentiates' Society has not entirely succeeded in its immediate purpose, could it not be reformed into a New or Junior Medical Society or Alliance of London with a wider scope but for one of its objects—the encouragement of the legitimate claims of the London diplomates? It seems to me that this ground is not already covered, and it would be a proper and a diplomatic move for us to make. We might also gain something by adopting the motto "Progress."—I am, etc.,

Bognor, Jan. 19th. H. ELLIOT-BLAKE.

SIR,—In the BRITISH MEDICAL JOURNAL of January 17th, p. 172, I see a letter headed "A Degree for London Students." May I ask if these gentlemen are not in a position to obtain such at present, because if that is so it is a most unfair thing indeed? Surely all those most numerous candidates for the M.R.C.S., and L.R.C.P., and L.S.A. who obtain such highly-respected skill in clinical medicine and surgery as can scarcely be surpassed, and are taught by the very first university examiners, themselves lights of the great London hospitals, re-

spected throughout the world, have some opening presented to them for further advancement to university honours without going back to their schools of arts and elementary science. As for the questions cited in the letter of "An Undergraduate of London University," they are entirely beside the mark. How can invidious comparisons upon junior work affect a question of titles in connexion with fully-qualified medical men? And besides, under a new scheme in which licentiates of the qualifying bodies of London are examined or further examined in connexion with the London University, an entirely new scheme of standards would of course be selected.

In conclusion, I will remind the writer of that letter that a person may be a bachelor or pass-graduate, without any more right to the title of "Dr." than has any pass licentiate of any qualifying body that is a courtesy one only.—I am, etc.,

ARTHUR ATKINSON, M.R.C.S., L.R.C.P., L.M.

Bradford, Jan. 19th.

SIR,—"An Undergraduate, London University" cites his own case as a proof that the London M.B.'s preliminary education is more thorough than that of the Conjoint Board. To quote his letter:

I had three attempts at Intermediate M.B.

1. Failed in Anatomy, Physiology, Organic Chemistry, weak in Materia Medica.

2. Failed in Organic Chemistry.

3. Failed in Anatomy, Physiology, Organic Chemistry, weak in Materia Medica.

The same year as 3—a few months after—I passed all subjects at the Conjoint Board.

Now, I cannot see wherein the proof lies. In No. 2 the candidate seems to have passed in all subjects except Organic Chemistry. In No. 3 he failed as completely as in No. 1, which, according to his method, proves that examination No. 3 was more thorough than examination No. 2, yet both are for the Intermediate M.B., and the interval of time between 2 and 3 was probably longer than a few months. If, "the same year as 3—a few months after"—he had been able again to attempt the Intermediate M.B., who can say but what he might have passed this examination also in all subjects?

I think his experience helps to prove: (1) That examinations are mere lotteries; (2) that a long interval of time between examinations does not necessarily help the candidate. As for some of the provincial universities, if the candidates who are failed in them have less knowledge than some of those who are passed, their capacity for brain work must be practically absent. Unfortunately it is sometimes the examiners who are not overwise.—I am, etc.,

January 20th. ONE WHO KNOWS.

THE FUNCTION OF THE APPENDIX.

SIR,—In his interesting note on the function of the appendix in the BRITISH MEDICAL JOURNAL of January 17th, p. 172, Mr. Vidal G. Thorne gives a quotation to show that what we term the vermiform appendix used to be known as the caecum, while our caecum was considered part of the colon, without a distinctive name. That such was the case is confirmed, I think, by the description of these parts given by James Cooke, of Warwick, in his *Marrow of Chirurgery*, written in 1647. In my copy (fourth edition, published 1685) at page 307 it says:

The thick *Guts* are,

I. *Cæcum*, begins where *Ileon* end (*sic*) and *Colon* begins, on which it lies worm-like. 'Tis four Fingers long, and a Thumbs breadth.

II. *Colon* begins at *Cæcum*.....ending at *Rectum*.....At its beginning there's a Valve, opening downwards, to hinder the regress of any thing from the great Guts to the small.

—I am, etc.,

Belfast, Jan. 17th. MARION B. ANDREWS, M.B.

EPIPLOÖRRHAPHY FOR ASCITES.

SIR,—In the EPITOME of the BRITISH MEDICAL JOURNAL of January 17th, par. 39, you speak of fixation of the omentum in cases of ascites as Talma's operation. It seems to me that this is an error. In the JOURNAL about the middle of 1896 was published a paper by Dr. Drummond and Mr. Rutherford Morison, of Newcastle, describing the operation, which they had conjointly devised. In January, 1897, I published in the *Northumberland and Durham Medical Journal* notes of two cases in which I performed the same operation. Unless Talma devised the operation before the paper by Drummond and Morison was read, it is plain that the credit of it is due to them, and if it be so, it is equally plain that instead of "Talma's," it should be called "Morison's." In reporting my first two cases, as the operation had not then received a distinctive name, I suggested the title of "epiploörrhaphy."

As to the value of the operation there can be no doubt. One of my later cases, unreported, which I showed over a year ago at a meeting of the North of England Branch of the British Medical Association, continues at the present time in perfect health.—I am, etc.,

Bishop Auckland, Jan. 19th. MARK WARDLE.

FOREIGN BODIES IN THE CORNEA.

SIR,—In the BRITISH MEDICAL JOURNAL of January 10th Dr. Royds has been good enough to notice my little suggestion in reference to the removal of foreign bodies from the cornea. I quite agree with Dr. Royds that a small crystal of cocaine hydrochloride will meet every requirement in a simple case, especially where the foreign body is situated peripherally; and I also recognize how undesirable it is—particularly in adults—to cocainize the whole of the conjunctiva for the sake of operating on a portion. On the other hand, if a speck of grit or iron has penetrated the cornea in or about its middle, the action of a highly-soluble crystal like cocaine, I take it, will be practically the same as a solution—namely, the pupil will dilate—so that, in a case involving any time or difficulty, one would find oneself pecking at a thing which cannot be seen. Then, again, take the case of a highly-nervous patient, or a child with blepharospasm, who come with screwed-up eyelids and photophobia, which necessitate the most complete anaesthesia before the eye can be examined, let alone take anything out of it, and I think Dr. Royds will find a solution much more feasible than crystals.

In a communication before the annual meeting of the British Medical Association at Edinburgh in 1898, Dr. Adolph Bronner of Bradford read a paper on the uses of crystals of cocaine in preference to solutions, but admitted the necessity of keeping the eyelids open for a few seconds, and that, owing to the crystals causing a severe burning pain, it is first necessary to apply a weak solution. Mr. Marcus Gunn, in reply, emphasized this last objection, mentioning, also, that crystals might produce local ulceration; so that, in his opinion, a strong solution was preferable. I have often used crystals in burning the edges of septic ulcers with the galvano-cautery, as well as in operations upon the lids, and, apart from the little smarting at first, no untoward result has ever followed; but, as far as my memory serves me, there has been invariably marked dilatation of the pupil.

The suggestion to use eserine or pilocarpin turns round this question of dilatation, and I feel we have in their use a most valuable method of facilitating the removal of a certain class of foreign bodies from the cornea. The kind of case in which the method will prove useful is somewhat undefinable until it presents itself, but, as an example, I may mention a case where a speck of iron or, say, brown grit from a grindstone, has oxidized the surrounding parts so as to form a ring which has to be scraped. To attempt this effectually against a black pupil, such as occurs after the use of cocaine, be it solution or crystal, often spells failure, even with the aid of fluorescin and oblique illumination; whereas, by using a myotic to overcome the action of the cocaine, not only can inflammatory glaucoma be put out of the question, but it enables the surgeon to see what he is doing as plainly as if looking at a photographic negative against a white background.—I am, etc.,

Portmadoc, Jan. 13th. WALTER WILLIAMS, M.B.

VACCINATION IN CAPE COLONY.

SIR,—Vaccination in Cape Colony is, I think, not at as low an ebb as it was. Three or four years ago a Government circular was issued to the effect that district surgeons should be employed when possible for vaccination work. Previously it was more in the hands of laymen, and the calf lymph was often quite inert through being kept too long. Dr. Edington now sends out with the lymph instructions to use it within six weeks, and this year it has been of excellent quality. The pay, however, is not enough to tempt the district surgeon if a decent lay vaccinator can be found. This district is about 500 square miles in area, and has an estimated population of over 36,000 natives. Recently I vaccinated at 22 centres throughout the district, and once a week at the Magistracy. Many of the centres were poorly attended, as vaccination is not compulsory except where small-pox exists. The hardest day's work occupied 11 hours—3 centres were visited, 24 miles ridden, and 977 persons vaccinated—not by any means a record performance. The work has to be done in the open. The dust, the smells and noise of struggling humanity eager

to be done first one has to put up with. A far greater hardship is to be stuck at some trader's out-station doing nothing waiting for the natives to turn up and, of course, earning nothing. I was once stormstayed at such a place for three days, where there was not a book or a paper to read, except a solitary gospel of St. Luke in Dutch, and I do not know Dutch. There is no extra allowance for any work done within three miles of home. Travelling allowance is 7s. 6d. per six miles, 10s. 6d. for each night away from home, and 7s. 6d. per hour while actually vaccinating. Authority for the proposed expenditure on vaccination has first to be obtained from the Colonial Government.

At such tariff-rates, the distance travelled being about 314 miles, the amount claimed from the Colonial Government comes to £45 18s., making the cost less than 2d. a head. But the money has as it were to be dragged out of Government. One has to certify that "I left home at ——— o'clock, arrived at ——— Centre at ——— o'clock, vaccinated from ——— to ——— o'clock, left at ——— o'clock, arrived at ——— o'clock, and slept there ———" and so on, and finally the work done has to be tabulated for each centre: the total number, those under 10 years, over 10 years, male, female, primary vaccinations, and revaccinations —and all for 2d. a head. But if one only worked for money, one would not want to stay in the medical profession. Dr. Murray, I think, overlooks the fact that the district surgeon must sign the annual returns of public vaccinations and may refuse if he disapproved of the lay vaccinators.—I am, etc.,

Mqanduli, Cape Colony, Dec. 20th, 1902. P. H. WALKER.

TREATMENT OF RHEUMATOID ARTHRITIS.

SIR,—In reference to the correspondence on this subject in the BRITISH MEDICAL JOURNAL of December 20th, 1902, p. 1931, and January 3rd, 1903, p. 50, I would say, regarding the mode of application of blisters, say for example to the knee-joint, that I always put on at least twelve about the size of a shilling two inches apart. When these have risen I prick them, and apply other blisters, of course in fresh places. This plan I have followed for many years. It is by no means a novel method. I have always found the treatment productive of good results.—I am, etc.,

Sutton Valence, Jan. 6th. J. NOBLE BREDIN.

THE TREATMENT OF CORNS.

SIR,—I should like to say a few words with reference to the recent decision of the War Office to appoint accredited chiropodists to the army.

Every one, of course, will readily admit that the efficiency of the foot soldier is largely dependent on the integrity of his feet. It follows, therefore, that any measure which tends to keep the feet up to a good physical standard must tend to increase his sphere of usefulness. At the outset, then, it must be conceded that the proposal in question, in that it aims at greater efficiency, is sound in principle. But, to carry the matter a step further, the question arises whether in practice the care of the feet, even in respect to such an apparently trivial, though really important condition as corns, should not in the best interests of the patient be entrusted to the surgeon rather than to the chiropodist.

In the *Edinburgh Medical Journal* for November, 1901, I published a short paper—Some Observations on the Pathology and Treatment of Corns—which embodied my investigations into these little tumours. Therein I endeavoured to show that the methods of treatment in ordinary use are at the best palliative, in that they only secure the separation of the dead horny layer (stratum corneum) of the corn from the bed of living tissue (stratum mucosum) in which it lies, the essential part of the corn, the part from which it grows being left behind, removal of the growth being only partial and engendering a liability to recurrence. I further pointed out that any method of treatment to be curative must secure the removal of the entire corn, together with the underlying bursa, if existent; and to this end advocated the free and complete excision of the growth as the most satisfactory method of treatment.

Subsequent experience has more than justified these opinions, and by this simple operation many have been freed permanently from a life long trouble for which they have undergone various methods of treatment for years. But this operation, simple though it is, is essentially surgical and cannot well be entrusted to a chiropodist. Furthermore, for reasons which I have endeavoured to set forth in the paper above referred to, it is my belief that the permanent cure of corns can, in the vast majority of cases, be accomplished only by surgical measures, and that being so, they can only be satisfactorily treated by the surgeon.

But there are other reasons why, in the best interests of the patient, the treatment of corns should not be relegated to the chiropodist. Other affections of the foot—some varieties of pes cavus, hallux valgus, Morton's disease, etc., are frequently associated with painful corns, which stand to the affection with which they co-exist in the position of effect to cause. Under such circumstances it is manifestly futile to treat the corn without treating the affection which has called it into being. Although in their more pronounced grades these affections are comparatively easy to detect, in their slighter grades their diagnosis is not always easy even to the skilled observer. Their very existence will certainly be overlooked by the patient and in all probability by the chiropodist, both of whom will see nothing beyond the corn, the effect being much more apparent than the cause. Furthermore, when the diagnosis is made, the treatment is essentially surgical. It is important, therefore, in all cases where corns are made the cause of complaint, carefully to examine the foot in order to determine whether there exists any affection to which the origin of the corn may be justly ascribed; for, when this is so, most assuredly no method of treatment will be successful which does not aim at the restoration of the foot as well as the destruction of the corns. In other words, the treatment of the corns under such conditions is the treatment of the affection which has called them into being.

To sum up, the gist of my argument is that that the care of the feet, including the efficient treatment of the most common yet most neglected disease to which they are liable, is a matter of paramount importance to the soldier and civilian alike, but that it is a duty which, for reasons which I have stated here and elsewhere, can only be safely entrusted to the surgeon who, presumably, is well acquainted with the structure and functions of the foot and can readily detect and treat any aberrations of structure or function which may exist.—I am, etc.,

Harley Street, W., Jan. 13th. E. HARDING FREELAND, F.R.C.S.

REPRESENTATION OF THE DUBLIN UNIVERSITY.

SIR,—As the amelioration of the condition of the Poor-law medical service cannot but be of interest to all medical men, will you permit me, through your far-reaching JOURNAL, to urge my fellow electors to support Mr Samuels for Dublin University? You will see from the enclosed that he has given very definite pledges in the matter.—I am, etc.,

Loughton, Jan. 13th. A. AMBROSE, M.D., T.C.D.

*** The pledge to which Dr. Ambrose refers is contained in the following passage of a letter written by Mr. F. B. MacLaughlin, M.Ch., Dublin University, Vice-President for Ulster of the Irish Medical Association: "He (Mr. Samuels) gave me his promise some months ago, and recently renewed it, that he would do all in his power to bring to notice and try to remedy the scandalous abuses from which Poor-law medical officers in this country suffer. I, therefore, appeal to my brethren in the Poor-law service who have votes to give them to Mr. Samuels, and to try and induce their College contemporaries who are living in England under happier circumstances to think of us, the poor dispensary doctors of Ireland, and assist us to return a man who will, I feel confident, do his best to remedy our unfortunate condition. Mr. Samuels will be unmuzzled; Mr. Campbell must be muzzled in Parliament."

A DISCLAIMER.

SIR,—Some weeks since I received a book of testimonials relating to a product known as odol, and I was surprised to see that one of them purported to have been given by me. I at once wrote to the proprietors pointing out that I had never given the testimonial in question, nor, in fact, expressed any opinion of my own about their product, and requesting that it should at once be withdrawn. I received in reply a courteous letter acknowledging that I had never given a testimonial nor authorized the use of my name in connexion therewith, and promising to take steps to prevent its further publication.

In a further copy of the book which reached me to-day the testimonial again appears, the proprietors, apparently, considering that I ought to be satisfied with a tiny erratum neatly dissimulated in a corner of the last page. In order to clear myself of all complicity in the matter I trust you will allow me to repudiate all responsibility in connexion with this unauthorized use of my name, an abuse which has drawn

upon me the notice of the Censors of the Royal College of Physicians.

It is within my knowledge that at least one other testimonial therein has also been published without authority.—I am, etc.,

Gower Street, W., Jan. 17th. ALFRED S. GUBB, M.D. Paris.

OBITUARY.

WE regret to announce the death of Professor MAX SAENGER, which took place at Prague on January 12th. The distinguished gynaecologist, who was born at Bayreuth in 1853, and was therefore only 50 years of age, began his professional career in 1878, when he was appointed Assistant to Credé. Professor Saenger was the author of a monograph on Caesarean Section in the Treatment of Uterine Fibromata, and of about 150 publications on tumours, plastic operations, tubal pregnancy, laparotomy, retroversion and retroflexion of the uterus, etc. He was a pioneer of vaginal hysterectomy in Germany—an operation which he performed for the first time at Leipzig in 1881—and he was a strong advocate of antiseptic and aseptic methods in gynaecological surgery. In 1899 he accepted an invitation to succeed Rosthorn in the Chair of Gynaecology in the University of Prague.

IT is with much regret that we record the death of Mr. JOHN EDMUNDS HUTCHINGS STEPHENS, of Wood Green, N., which occurred after a long illness from laryngeal disease on January 2nd. He entered on the study of medicine rather late in life, and received his medical education at the Queen's College, Cork, and in Edinburgh. After qualifying as L.R.C.P.Edin. and L.R.C.S.Edin. in 1883, he acted as assistant to his brother, Dr. R. F. Stephens, of St. Austell, for two years. He then commenced practice in Wood Green. One of the leading members of the profession there, who knew him well, has written: "We have sustained in the profession a serious loss. Ever ready to aid a brother practitioner in a difficult case, and to bring his ripe experience to his help, it will be a long time before his place can again be filled among us. Of his Christian charity to the poor in the district, perhaps only few know, for it was done in that quiet manner that one might say of him his right hand knew not what his left had done. His death was due to his love of his profession; he worked when he should have been in bed, but he was of such a sensitive nature that he would never, if possible, trouble a *confrère* to give him help." Mr. Stephens was unmarried. At the last meeting of the Wood Green and District Medical Society a resolution of sympathy with his brother and other relatives in their loss was unanimously carried.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE STRENGTH AND DISTRIBUTION OF THE ARMY MEDICAL SERVICE.

THIS is shown in the following table, compiled from the Active List of medical officers, in the *Army List* for January, 1903:

Distribution in January, 1903, Army List.

Ranks.	Home.	South Africa.	Other Foreign Stations.	Not Posted.	Total.	Remarks. Seconded.	Reserve of Officers.	On Probation.
Surgeon-Generals.	4	1	4	—	9	—	—	—
Colonels	15	1	11	1	28	1	—	—
Lieut.-Colonels ...	71	28	76	12	187	4	4	—
Majors	89	39	126	9	263	3	2	—
Captains	64	69	142	12	287	15	1	—
Lieutenants	56	37	77	3	173	3	—	30
Total	299	175	436	37	947	26	7	30

Compared with our last analysis in November, the new distribution of army medical officers, consequent on the termination of the war, is very apparent in the Army List for January, 1903.

According to that list the total active strength is nominally 947. Of these, 299 are on the home establishment, and 175 in South Africa; but the dispersal from that country has increased the numbers at other foreign stations from 364 in July to 436 in January.

The total of 947, however, includes 30 probationers, 7 reservists, and 26 seconded; if these be deducted, the real roster strength available for foreign reliefs is 884. This is a number just under the total 890, publicly spoken of as "dangerous" by a former Director General. Such figures still disclose "undermanning"; but there is good hope that may be materially remedied during the current year, provided suitable candidates can be obtained in numbers exceeding the steady exits through retirement, death, etc. At present two out of every three medical officers are serving abroad, a disproportion that makes it hardly possible to carry out foreign reliefs in due course.

Exclusive of 7 reservists, 75 retired medical officers are still employed at home.

For the past three years and over we have (with a few exceptions) given a summary of the distribution of medical officers as shown in the current monthly army lists; a review of these summaries, as indicated in the following tables, will now be of some interest:

From November, 1899, to December, 1900:

Average total strength	876.5
Average home strength	102.3
Average South African strength	369.7

The campaign opened in October, 1899, and the November army list showed the total strength of medical officers as 833. Of these, 140 were at home and 245 in South Africa; the remainder were, of course, at other foreign stations. By successive additions the average strength for the period increased to 876, while the number in South Africa mounted up to a maximum of 431 in August; the strength at home meanwhile sank to a minimum of 63 in April, when practically every available man was abroad; the retired pay officers employed at home reached a total of 117:

From January to December, 1901:

Average total strength	974.11
Average home strength	101.70
Average South African strength	418.90

It will be observed that during 1901, as compared with 1900, the average strength increased by about 100; the lowest was in January and February, 942, and the maximum 1,004 in October. The minimum number in South Africa was 400 in January, and the maximum 431 in October; at home the minimum was 130 in April and the maximum 182 in November. A disturbing element was introduced in the home establishment in June, when 28 officers from the reserve of officers were included in the active list, which, of course, not only suddenly increased the home strength, but the total of the general list as well. The highest number of reservists employed was 34 in October, but an average of about 31 was maintained until recently. It has now sunk to 7.

From January, 1902, to January, 1903:

Average total strength	969.11
Average home strength	207.80
Average South African strength	300.20

The average total strength thus varied but little during 1901-2. The maximum strength in South Africa was 435 in January, decreasing to 424 in June, when peace was proclaimed. Meanwhile, the minimum of 159 at home in January had increased to 184 in June, including 31 reservists.

After July the number in South Africa rapidly decreased, with a corresponding increase in establishments at other foreign stations and at home.

It is as yet premature to forecast the establishment of medical officers which may be necessary for South Africa, but upon it the future total required for the army medical service must largely depend. It will probably be possible in a few months to form some reliable estimate of what it should be.

In these statistics we have not given any summary of the number of civil surgeons employed during the war, at home, in South Africa, or elsewhere, because no data are available. The number must have been very large, and probably approached, if it did not equal, the entire army medical service.

ROYAL NAVY MEDICAL SERVICE

THE following appointments have been made at the Admiralty: HAROLD F. D. STEPHENS, M.B., Staff Surgeon, and ARTHUR H. H. VEARS, M.D., Surgeon, to the *Russell*, February 10th; ARTHUR E. GASKELL, Staff Surgeon, to Chatham Hospital, February 10th; EDWARD L. THOMAS, Surgeon, to the *Hebe*, lent, January 15th; JOHN FITZPATRICK, M.B., Surgeon, to Yarmouth Hospital, lent, January 23rd; ROBERT W. G. STEWART, M.B., Surgeon, to the *Latona*, January 1st.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL S. H. CARTER, M.B., retires on retired pay, January 17th. He was appointed Surgeon, September 30th, 1874; Surgeon-Major, September 30th, 1886; granted the rank of Lieutenant-Colonel, September 30th, 1894; and made Brigade Surgeon-Lieutenant-Colonel, November 3rd, 1897. His war services comprise the Afghan war, 1878-80, including the action of Ahmed Khel (medal with clasp); the Egyptian war of 1882, when he was present at the battle of Tel el-Kebir (medal, with clasp, and Khedive's bronze star); the campaign on the North-West Frontier of India in 1897-8 with the Tirah Expeditionary Force in the lines of communication (medal, with two clasps); and the South African war in 1899-1901, during which he was Senior Medical Officer of an Infantry Division of the Natal Field Force, and subsequently Principal Medical Officer of a Division, being present at the defence of Ladysmith (several times mentioned in dispatches).

Lieutenant-Colonel G. D. BOURKE, who is serving in the Punjab Command, is appointed to officiate as Principal Medical Officer, Bombay and Nagpore Districts.

ROYAL ARMY MEDICAL CORPS EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post-office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.

MAJOR R.A.M.C., with one year and ten months to complete full South African tour, desires suitable exchange to India or Colonies for the same period.—Apply X. Y. Z., Watson and Co., Adderley Street, Capetown.

CHANGES OF STATION.

THE following changes of station amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during the last month:

	From.	To.
Surgeon-General Sir W. D. Wilson, M.D., K.C.M.G.	—	London.
Colonel W. J. Fawcett, M.B.	Egypt	Dublin.
Lt.-Col. J. C. Dorman, M.D., C.M.G.	South Africa	..
,, E. A. Roche	Barbadoes	Chatham.
,, G. W. Robinson	Punjab	Aldershot.
,, T. M. Corker, M.D.	Woolwich	South Africa.
,, G. F. A. Smythe	Egypt	Dublin.
,, L. E. Anderson	South Africa	Ceylon.
,, J. R. Dodd, M.B.	Woolwich	Bombay.
,, H. K. Allport, M.D.	Netley	Madras.
,, T. R. Lucas, M.B., C.B.	South Africa	Egypt.
,, R. C. K. Laffan	Madras	Ireland.
,, E. J. E. Risk	Southampton	Belfast.
,, W. L. Reade	South Africa	Colchester.
,, G. W. Brazier-Creagh, C.M.G.	,,	Bengal.
Major J. Riordan, M.B.	Bengal	Cork.
,, A. E. C. Spence, M.B.	Belfast	Athlone.
,, C. W. Johnson, M.B.	South Africa	Bengal.
,, C. C. Reilly	Dover	Punjab.
,, W. Turner	South Africa	India.
,, F. W. C. Jones, M.B.	,,	Bombay.
,, J. M. F. Shine, M.D.	,,	Madras.
,, W. B. Day, M.B.	Dublin	Curragh.
,, R. G. Hanley, M.B.	South Africa	Punjab.
,, J. H. Curtis	,,	Bombay.
,, M. O'Halloran, M.D.	,,	Curragh.
,, C. S. Sparkes	Colchester	Aldershot.
,, W. H. Pinches	Home Distr.	Hounslow.
,, J. B. Wilson, M.D.	South Africa	Woolwich.
,, J. G. Black, M.D.	,,	Belfast.
,, F. A. Law, M.B.	Bulford	Portsmouth.
,, T. G. Lavie	South Africa	Ireland.
,, C. J. W. Tatham	,,	Belfast.
,, H. B. Mathias, D.S.O.	,,	Devonport.
,, F. S. Le Quesne, V.C.	Scilly Isles	,,
,, W. S. Dowman	South Africa	Shorncliffe.
,, W. J. Trotter	Bengal	Ireland.
,, T. B. Beach	South Africa	Madras.
,, G. A. T. Bray	,,	Devonport.
Captain E. McK. Williams	Aldershot	Bengal.
,, H. P. Johnson	South Africa	,,
,, J. D. Alexander, M.B.	,,	,,
,, J. G. McNaught, M.B.	Edinburgh	Perth.
,, A. G. Thompson, M.B.	Bengal	Curragh.
,, E. H. Condon, M.B.	South Africa	Dorchester.
,, A. J. Chambers	,,	Bermuda.
,, L. Addams-Williams	,,	Bulford.
,, L. Wood	—	Punjab.
,, T. C. Mackenzie, D.S.O.	South Africa	Mauritius.
,, E. B. Knox, M.D.	Salisbury Plain	Aldershot.
,, J. A. Hartigan, M.R.	South Africa	Punjab.
Lieutenant F. W. Cotton	,,	,,
,, T. E. Fielding, M.B.	,,	Jamaica.
,, G. F. Sheehan	,,	Hong Kong.
,, T. F. Bitchie, M.B.	,,	Punjab.

Major J. F. BURKE, retired pay, has been placed in medical charge of troops at Lancaster.

Lieutenant-Colonel D. WARDROP, M.B., has been selected for increased pay under Article 362 of the Royal Warrant.

INDIAN MEDICAL SERVICE.

THE following promotions, all of which have been already announced in the BRITISH MEDICAL JOURNAL, have received the approval of the King: Colonel W. MCCONAGHY, M.D., Bengal Establishment, to be Surgeon-General; Lieutenant-Colonel H. HAMILTON, Bengal Establishment, retired, to be Colonel; Majors A. W. D. LEAHY, M.D., R. R. WEIR, M.B. (Bengal Establishment), R. E. S. DAVIS, M.B., W. H. NEILSON, M.B. (Madras Establishment), W. H. BURKE, M.B., and J. CRIMMIN, C.I.E., V.C. (Bombay Establishment), to be Lieutenant-Colonels.

The King has also sanctioned the following retirements, all of which have already appeared in the BRITISH MEDICAL JOURNAL: Colonel G. C. HALL, Lieutenant-Colonel J. DUKE, and Lieutenant-Colonel W. E. GRIFFITHS, Bengal Establishment; Lieutenant-Colonel H. FITZL. P. F. ESMONDE-WHITE, Madras Establishment: Surgeon-General G. BAINBRIDGE, M.D., Lieutenant-Colonel H. P. JERVIS, Bombay Establishment.

Colonel J. T. B. BOOKEY, C.B., Bengal Establishment, has been awarded the good service pension, from June 16th, 1902, in the room of Surgeon-General L. D. Spencer, M.D., C.B., Bengal Establishment, who has retired with the special additional pension of £350.

Colonel M. D. MORIARTY, M.B., Bengal Establishment, is confirmed in the appointment of Administrative Medical Officer and Sanitary Commissioner of the Central Provinces, from October 25th, 1902.

An examination for no fewer than thirteen appointments in His Majesty's Indian Medical Service was held in London on January 13th. The following is a list of the successful candidates:

	Marks.		Marks.
C. S. Parker, M.B.Lond., M.R.C.S., L.R.C.P.	3,413	C. G. Seymour, M.R.C.S., L.R.C.P.	2,930
F. N. White, M.B.Lond., M.R.C.S., L.R.C.P.	3,068	E. C. Taylor, M.B., B.Ch. Camb.	2,890
T. C. Rutherfoord, M.B., B.S. Durh., M.R.C.S., L.R.C.P.	3,037	D. P. Goil, M.B., B.Ch.Edin.	2,865
D. Heron, M.B., B.Ch.Edin.	3,018	H. C. Keates, M.B., B.S.Lond.	2,860
L. Reynolds, B.Ch.Camb., M.R.C.S., L.R.C.P.	2,987	R. A. Needham, M.B., B.S. Viet., M.R.C.S., L.R.C.P.	2,827
H. H. Broome, M.B., B.Ch. Edin.	2,940	J. Kirkwood, M.B., B.Ch. Edin.	2,812
		A. Whitmore, M.B., B.Ch. Camb.	2,782

It will be observed that the minimum number of appointments advertised has been filled up, but the number of candidates is not stated.

INDIAN MEDICAL SERVICE DEFENCE FUND.

EYEMES asks where the pamphlet published by the "Indian Medical Service Defence Fund" in 1880 is to be obtained.

"INDIA REMAINS THE CRUX OF THE R.A.M.C."

THE REAL CRUX IN INDIA writes: In October, 1901, I addressed you as to the defective character of R.A.M.C. pay in India. I stated that the underpay of the Corps there was absolutely unjust; and we have anxiously waited for the revision of those defective pay rates. The Indian Government have now published new rates, but these apply only to the lieutenant and captain grades, and not to the major or lieutenant-colonels, of whom many serve in India. What is needed is to increase the English pay factor in Indian pay in the same ratio as warrant after warrant has increased the English pay rates of the major and lieutenant-colonel grades in England and the Colonies.

How Indian Pay is Made up.—The pay of the English troops in India is made up of English pay converted into rupees at a certain value—*plus* local allowances, such as balla, tentage, horse allowance, etc. Although warrant after warrant has been issued in England for the R.A.M.C., the major and lieutenant-colonel classes in India are still paid as in the 1858 warrant. The proof of this is that an infantry major and a major R.A.M.C. are both paid the same in India, although one draws in England 16s. per diem and the medical major £1 3s. 6d., a difference of 7s. 6d. per diem, and a lieutenant-colonel infantry and lieutenant-colonel R.A.M.C. draw the same pay in India, although in England one draws 18s. per diem and a medical lieutenant-colonel draws £1 10s., a difference of 12s. per diem, equal to at least 6 rupees, or 180 rupees per mensem. Why is this? And how does the Indian Government answer this query? There is no answer; simply, it is injustice, want of consideration, and want of power in the British Medical Association to bring the Indian Government to book. Can you not help us?

Charge Allowance.—This is an allowance to cover special responsibility. It is only granted to officers when present on duty, and up to sixty days' leave. Any long leave loses the charge pay. It is also given to but one officer in a large hospital. It is quite apart from pay. The infantry lieutenant-colonel who in England gets 3s. per diem in addition to his pay on charge or command pay gets 400 rupees in India for the same duty, so that it in no way merges into pay, being quite distinct. What the R.A.M.C. want is pay—just, fair, equitable, on the Home Warrant basis *plus* Indian allowances. India is ruining the health, the energy, and the fitness of the R.A.M.C., and in return defective and unjust pay is their recompense; and we wait the strong man—or perhaps, the strong association—which can ensure justice. In the meantime I say, "How long, O Lord, how long!"

VOLUNTEER BEARER COMPANIES.

THE War Office has decided to raise the strength of Volunteer Bearer Companies to 100, and to authorize the appointment of quartermasters. This decision carries out a recommendation of the Committee of the S.M.O.'s of Volunteer Brigades which, under the Chairmanship of Brigade-Surgeon-Lieutenant-Colonel P. B. Giles, drew up a scheme and submitted it to the Under-Secretary for War (Lord Raglan). Several other recommendations of this Committee had previously been adopted by the War Office.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

SURGEON-LIEUTENANTS T. HARPER, M.B., 1st Ayrshire and Galloway, and T. G. LUSK, M.B., 1st Cheshire and Carrarvonshire, are promoted to be Surgeon-Captains, January 17th.

VOLUNTEER RIFLES.

MR. PETER M. DEWAR is appointed Surgeon-Lieutenant in the 3rd (the Blythswood) Volunteer Battalion the Highland Light Infantry, January 17th.

Surgeon-Captain T. J. BURTON, 1st Dumbartonshire, resigns his commission, January 17th.

ROYAL ENGINEERS (VOLUNTEERS).

SURGEON-CAPTAIN W. H. BROWN, Submarine Miners (the Tyne Division) is promoted to be Surgeon-Major, January 17th.

THE NEW UNIFORM.

MAJOR R A M.C. writes: The "dull-cherry" facings are barely apparent by daylight, and not distinguishable by gaslight; the mess uniform resembles that of a club waiter. Further, the blue "jumper" should be retained for hospital and barrack work, the blue pack coat being most unsuitable for such duties. The shape of the new mess jacket is very unsuitable for hot weather, but the old one was much smarter and more suitable in winter. Every officer of the corps at my last station—a large one—intensely disliked the present facings, and would gladly welcome a return to the old "red," and why not as a Royal Corps?

*** We have before remarked that it is impossible to decide on matters of taste. But it really seems that the "new uniform" of the R.A.M.C. is generally disliked as regards the facings; there appears to be no good reason why red should not be substituted for the dull cherry. The wearers of the mess jacket must be the best judges as to whether it is comfortable or otherwise; it ought not surely to be beyond the sartorial efforts of the War Office to make it so.

MEDICO-LEGAL AND MEDICO-ETHICAL.

HOW ANTIKAMNIA IS ADVERTISED.

WE have several times drawn attention to the objectionable proceedings of some American druggists, of which another example is before us. It is a typewritten leaflet headed "Gastralgia: its Treatment:" after summarizing the views of Professor Saundby, for which a reference is given to the *New York Medical Journal*, it goes on to say, "But in a recent clinical report Professor Boone, College of Physicians and Surgeons, St. Louis, states that he finds antikamnia and heroin tablets (each tablet contains 5 gr. antikamnia and ½ gr. heroin hydrochloride), given as required, not only relieve the pain, but prevent its recurrence, much more satisfactorily than either heroin or morphine alone. In other respects Professor Boone concurs with Professor Saundby in his method of treatment." There is nothing in Professor Saundby's original paper which could serve the purposes of advertisement, so after making use of his name and subject, this tag is employed to introduce the preparation. Such methods are not calculated to enlist the support of the medical profession in this country for the article recommended by these means.

ACTION AGAINST A HERBALIST.

THE case of the Apothecaries' Society *v.* Perdue, which was heard by his Honour Judge Smyly, on January 14th, serves to show that however ineffectual the law may be to prevent the unqualified practice of medicine, penalties may still be enforced against those who act as apothecaries without a certificate. The action was brought against a "herbalist" under the Apothecaries Act, 1815, to recover the sum of £20 as a penalty for practising as an apothecary without a certificate. It appears that he had supplied medicine to a Mrs. White (since deceased), who believed that she was being treated by a medical man. The defence was that the defendant had acted merely as a herbalist. This was based partly on the fact that he exhibited a notice to the following effect: "No humbug here—open every day to the public as a herbalist, not as a doctor." It was also urged that he had merely given something to relieve pain. It is satisfactory to find that the learned County Court Judge gave judgement for the plaintiffs, finding as a fact that in spite of his placard, the defendant had acted and practised as an apothecary and received fees.

It is hoped that the success of this case may induce the Society to secure the punishment of other offenders. Although the Act of 1815 does not affect the business of chemists and druggists, a chemist who not only sells, but also applies and administers medicines in the ordinary course of attending patients, has been held to practise as an apothecary, and is not exempted from the penalty. [Apoth. Co. *v.* Greenhough, 1 Q.B., 799.] The case under review makes it clear that in order to determine whether the accused has been practising as an apothecary the Court will have regard to the actual facts of the case rather than to specious disclaimers of intention to infringe the law.

A HYGIENE COMPANY.

A CORRESPONDENT has called our attention to a circular issued from Pendleton, Manchester, in which is advertised "Health Lectures to Women. Dr. Hall's new remedies cure the ailments of women." The advertisement goes on to announce a lecture to "women only" at Blackburn, which is free to "females above 20," and also states that "free consultations" are given on certain dates at a specified address, and that the various ailments mentioned on the back of the circular would be thoroughly dealt with. There is good reason to believe that the author of this effusion is not a registered practitioner; he has evidently taken a leaf out of the books of the "Viavi Company," which trades on similar lines, and appeals to the ignorant and foolish amongst women. How to stop this species of fraudulent pretence and practice is a task which is rendered almost impossible, as it has been held that the Medical Acts afford no protection to the public in this respect. The subject of "Dr. Hall's Hygiene Company" was under the consideration of the Solicitor to the Medical Defence Union some time back, but he advised that the title "Dr." in connexion with the name of a company would be a matter difficult successfully to establish as an offence falling within the penal sections of the Medical Acts.

UNREGISTERED DENTISTS.

THREE recent prosecutions under the Dentists Act are instructive as exemplifying the different estimate of the gravity of the offence of wrongful assumption of title which may be taken by magistrates. In a case heard before the Cardiff stipendiary magistrate, the defendant pleaded guilty, but urged in extenuation that he employed a qualified assistant and that he was himself competent; the full penalty and costs, or in default one month, was imposed. In a second case, heard before a bench of magistrates at Bolton, the defendant also pleaded guilty, but urged that he was continuing his deceased father's practice, that his father was on the *Register*, and that he himself had been through a college course, but had failed to pass his examinations. A course of study, followed by failure to pass the legal test of competence, seems an odd thing to accept in extenuation of subsequent assumption of title, yet the bench held that it was not an aggravated case, and imposed a modified penalty of £2 and only court costs. The third case was heard at Carlisle, the defendant having described himself as a "teeth specialist," which was held to constitute implication of being specially qualified, and he was fined £5 and £5 3s. costs, so that in this case the bench of magistrates took a stricter view and upheld the law by inflicting the full penalty.

SCHOOL CERTIFICATES IN SCOTLAND.

A. M. writes: At a sheriff court in the Highlands of Scotland some crofters were convicted and fined for not sending their children to school, although they had presented a certificate from him saying that the children were suffering from illness and not able to attend school. That certificate was presented to the School Board in due course. The parents were requested to tell him from the judge that if the certificates had been "on soul and conscience" there would have been no conviction. He had previously been advised by the Scottish Educational Department, from whom he received the following letter:

"Scottish Educational Department, 21st January, 1902.

"Sir,—I have the honour to acknowledge receipt of your letter of 14th instant. I am directed to state that, as far as My Lords are concerned, the certificate in question would be accepted as a proper and valid one. It is not necessary that such certificate should be on 'soul and conscience.'—I have the honour to be, Sir, your obedient servant,

"(Signed) H. CRAIK."

A. M. supposes that the parents will expect him to return what they paid for the certificates. He states that they are too poor to appeal to another court, but they talk of appealing to Parliament. He wishes a suggestion.

*** We would suggest that "A. M." should prepare a complete statement of the facts of the case, and forward it to the Scottish Educational Department whose advice he has followed.

PRACTITIONERS AND MIDWIVES.

PERPLEXED.—We do not think our correspondent need fear being charged with covering for going to the assistance of a midwife. The question of a fee in such a case is a difficult one; he should charge his usual fee, and if he reduces it, he should do so only if satisfied of the inability of the patient to pay.

MEDICAL ADVERTISING.

CANTAB.—Our correspondent tries to discredit the recognized rules by imagining cases in which they might be departed from with some show of reason; but this art is well known to moralists, and has received the name of casuistry; its force is recognized in the legal maxim that "hard cases make bad law." He recognizes the valid objection to the course he proposes when he says: "Of course I assume that the practitioner is fully qualified by training and experience to practise as an oculist." But this is begging the question, for it is because there is no way to prevent men without proper training and knowledge making these claims if they are allowed to advertise themselves as specialists in particular subjects that the general sense of the profession requires its members to seek special practice by special study and by appeals directed, not to the public, but to their professional brethren who are in a position to estimate the justice of their claims.

PROFESSIONAL ATTENDANCE ON THE FAMILIES OF MEDICAL MEN.

W. H. T.—We have repeatedly answered our correspondent's question (see BRITISH MEDICAL JOURNAL, September 8th, 1900, January 5th, 1901, May 11th, 1901, September 14th, 1901) to the effect that no medical practitioner is obliged to attend a colleague or a member of a colleague's family without payment; he may, if he please, charge his usual fee without anybody having the right to complain. We believe that the fee mentioned is less than is often charged by London consultants for examination and advice. These difficulties might be easily avoided if a practitioner who desires to obtain the advice or a consultant for himself or a member of his family would take the trouble to write for an appointment and ask the amount of the fee. It is undoubtedly the custom of consultants to refuse fees from medical practitioners, but it is only fair to ask for their services if it is desired to obtain these gratis. Our correspondent can see how unfairly a rule would work which obliged consultants to attend any member of the medical profession or of his family without payment.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

THE following candidates have passed the First Examination for Medical and Surgical Degrees in the subjects undernoted:

Part I. Chemistry and Physics.—L. T. Baker, Sid. Suss; M. E. Balston, Trin; A. Barker, Trin.; D. C. Bluett, Emm.; A. F. Burton, B.A., Christ's; R. S. Carey, Corp. Chr.; R. G. Chace, Trin. G. G. Collet, Trin.; B. Day, B.A., Cai; M. Donaldson, Trin.; G. W. Dryland, Cai; H. L. Duke, Cai; T. G. Elger, Cai; H. B. Elton, Cai; E. G. Fearnsides, Trin. H.; W. J. Fison, Sid. Suss; P. Hamill, Trin.; A. Hamilton, Christ's; H. A. Harris, Emm.; C. B. Heald, Cai; E. H. V. Hodge, Cla.; A. F. Jackson, Pet; L. R. King, Pemb; A. H. Lees, King's; H. M. J. F. de P. P. Leite, B.A., Cai; F. H. Lester, Pemb; C. K. McKerrow, Cla.; A. J. May, Sid. Suss.; E. Mellanby, Emm.; R. M. Moore, Joh.; E. E. Paget-Tomlinson, Trin. H.; H. B. Palmer, Pemb.; F. N. Pethick, Trin.; K. Pretty, King's; A. L. Sachs, M.A., Pemb; K. J. Saunders, Emm.; C. F. Searle, Pemb; S. E. T. Smith, Cai.; R. M. Soames, Trin.; A. Stansfield, Joh.; A. C. Sturdy, Pemb.; F. H. Teall, Sid. Suss.; A. K. Toulman-Smith, B.A., Emm.; C. H. Treadgold, Cla.; G. W. Twigg, Cai.; R. P. Varwell, Joh.; P. J. Verrall, Trin.; T. A. Weston, Joh.; C. Whitaker, B.A., Emm.; R. Gregson Williams, Cai.; P. F. Wilson, Cai.

Part II. Elementary Biology.—C. A. Anderson, Down; F. W. Argyle, Joh.; L. T. Baker, Sid. Suss.; A. Barker, Trin.; W. N. Child, Christ's; H. N. Coleman, Christ's; J. P. H. Davies, Jes.; A. P. Denby, Jes.; H. L.

Duke, Cai.; T. G. Elger, Cai.; E. G. Fearnsides, Trin. H.; E. G. Fisher, Emm.; W. J. Fison, Sid. Suss.; T. S. Gibson, Emm.; P. Hamill, Trin.; W. Harmens, Trin.; C. B. Heald, Cai.; E. H. V. Hodge, Cla.; J. W. Horne, B.A., Pemb.; S. W. Howard, Trin.; H. E. Humphrys, Cai.; A. F. Jackson, Pet.; R. Knowles, Down; A. H. Lees, King's; L. F. G. Lewis, Christ's; C. K. McKerrow, Cla.; A. G. M. Mainwaring, Trin.; W. Mathieson, Sid. Suss.; A. J. May, Sid. Suss.; R. M. Moore, Joh; J. D. Morgan, B.A., Trin.; M. W. B. Oliver, Trin.; K. Pretty, King's; E. L. N. Rhodes, H. Selw.; K. J. Saunders, Emm.; A. E. Stansfeld, Joh.; A. C. Sturdy, Pemb.; F. H. Teall, Sid. Suss.; A. K. Toulmin-Smith, B.A., Emm.; W. W. Treves, Cai.; G. W. Twigg, Cai.; R. W. S. Walker, Trin.; H. P. Weaver, B.A., Trin.; T. A. Weston, Joh.; H. B. Wilson, Pemb.; W. B. Wood, Jes.; M. M. Woods, Cla.

The following candidates have passed the Second Examination for Medical and Surgical Degrees in the subjects undernoted:

Human Anatomy and Physiology.—I. G. Back, B.A., Trin. H.; G. F. S. Bailey, Cai.; J. D. Barrie, B.A., Cai.; H. J. Beddow, B.A., Christ's; J. H. Board, Pemb.; C. W. Bowle, B.A., Trin.; J. R. Briscoe, B.A., H. Selw.; C. St. A. Coles, B.A., Trin.; D. V. Cow, B.A., Trin.; H. P. Crampton, B.A., Cla.; F. D. Crew, B.A., Emm.; A. N. Dickson, Down.; J. N. F. Fergusson, B.A., Joh.; J. F. Gaskell, B.A., Cai.; S. Gooding, B.A., Joh.; H. T. Gray, B.A., Trin.; J. M. P. Grell, B.A., H. Selw.; E. C. Hardwick, B.A., Corp. Chr.; T. S. Hele Emm.; S. A. Henry, B.A., Trin.; S. F. Hewett, B.A., Cai.; V. C. Honeybourne, B.A., Joh.; A. B. Howitt, B.A., Cla.; C. W. Hutt, B.A., Trin.; W. D. Keyworth, B.A., H. Selw.; H. E. Kitchen, B.A., Sid. Suss.; P. P. Laidlaw, Joh.; B. T. Lang, B.A., Trin.; C. Lillingston, B.A., Pemb.; S. G. MacDonald, B.A., Joh.; L. H. L. Mackenzie, B.A., Trin.; E. H. Mayhew, B.A., Emm.; A. S. M. Palmer, B.A., Jes.; M. Phillips, B.A., Cai.; W. O. Pitt, B.A., Emm.; D. W. Roy, Sid. Suss.; R. B. S. Sewell, B.A., Christ's; A. L. Singer, King's; J. M. Smith, B.A., Christ's; C. Stanley-Clarke, B.A., Cai.; W. S. Tresawna, B.A., Sid. Suss.; H. A. R. E. Unwin, B.A., H. Selw.; J. A. Venning, B.A., Trin.; R. Wade, B.A., Christ's; C. F. O. White, B.A., Trin; J. L. Wood, B.A., Trin.

The following candidates have passed the Third Examination for Medical Surgical Degrees in the subjects undernoted:

Part I. Pharmacology and General Pathology.—H. Ackroyd, B.A., Cai.; C. E. A. Armitage, B.A., Emm.; H. M. Aviss, B.A., Down.; E. Bell, B.A., Cla.; G. F. Bird, B.A., Trin.; E. M. Brown, B.A., Pemb.; H. A. Browning, B.A., Joh.; M. A. Cassidy, B.A., Cla.; S. H. Clarke, B.A., Cai.; R. M. Courtauld, B.A., Pemb.; G. H. U. Corbett, B.A., King's; G. Cowan, B.A., King's; W. B. Crowfoot, B.A., Emm.; C. R. Crowther, B.A., Joh.; C. W. Cunnington, B.A., non-coll.; H. M. Davies, B.A., Trin.; H. S. Dickson, B.A., Christ's; J. H. Donnell, B.A., Cai.; T. L. Drapes, B.A., Sid.; T. Drysdale, B.A., Jes.; R. G. Elwell, B.A., Trin.; A. H. Falkner, Pet.; T. J. Faulder, M.A., Cla.; H. H. J. Fawcett, B.A., Trin.; N. C. Fletcher, B.A., Queens'; F. M. Gardner-Medwin, B.A., Trin.; J. Goss, B.A., Jes.; G. S. Haynes, King's; F. A. Hepworth, B.A., Joh.; W. R. Higgins, B.A., Cai.; E. Higson, B.A., Magd.; T. W. S. Hills, B.A., Down.; G. Holroyd, B.A., Christ's; H. F. Howse, B.A., King's; W. G. Howarth, B.A., King's; J. B. Irving, B.A., Joh.; H. M. Joseph, B.A., Trin.; J. Lambert, B.A., Down.; J. C. Lawson-Roberts, B.A., Cla.; F. F. Leighton, B.A., Joh.; S. M. Mackenzie, B.A., Trin.; M. M'Pherson, B.A., Cla., H. F. Marris, B.A., Cai.; O. May, B.A., Joh.; W. M. Mollison, B.A., King's; A. R. Moore, B.A., Cai.; R. F. Moore, B.A., Christ's; W. L. Murphy, B.A., Joh.; C. M. Murray, M.A., Pemb.; W. V. Naish, B.A., Emm.; L. Noon, B.A., Trin.; J. A. A. Orlebar, Magd.; C. E. Palmer, B.A., Cai.; W. H. Rayner, B.A., Trin.; H. Rischbieth, M.A., Trin.; J. C. Rix, B.A., Trin.; N. O. Roberts, M.A., Christ's; H. Robinson, B.A., Trin.; J. G. Slade, M.A., Cla.; T. D. Smith, M.A., Jes.; C. Stiebel, Trin. H.; R. S. Taylor, B.A., Down.; F. J. Thornton, B.A., Cai.; W. H. Thresher, B.A., Cai.; F. C. Trapnell, King's; A. W. Wakefield, Trin.; E. Ward, B.A., Cla.; J. D. C. White, M.A., Trin.; L. E. Wigram, B.A., Trin.; A. Wilkin, B.A., King's; E. K. Williams, B.A., Cai.

Part II. Medicine, Surgery, and Midwifery.—H. W. Atkinson, M.A., Cai.; L. B. Aveling, B.A., Christ's; G. D. Barton, B.A., Pemb.; E. A. A. Beck, M.A., Cla.; F. Bryan, King's; W. F. Buckle, B.A., Cai.; R. Butterworth, B.A., Christ's; W. D. Chapman, B.A., Corp. Chr.; J. G. Cooper, Trin.; E. E. Cornaby, M.A., non-coll.; H. H. Dale, B.A., Trin.; J. F. H. Dally, B.A., Joh.; H. Davies-Colley, B.A., Trin.; F. P. Edwards, Down.; G. G. Ellett, B.A., Cath.; R. B. Etherington-Smith, B.A., Trin.; A. O. M. Fehrsen, B.A., Cai.; W. H. Fisher, B.A., Emm.; H. U. Gould, B.A., Trin.; J. C. W. Graham, M.A., Trin.; C. H. Gregory, B.A., Emm.; E. T. Harris, B.A., Christ's; M. C. Hayward, M.A., Cai.; D. Holroyde, M.A., Trin.; W. W. Holtzmann, B.A., Christ's; C. R. Howard, B.A., Pemb.; A. W. Izard, B.A., Trin.; H. D. Ledward, Trin.; E. D. Macnamara, M.A., Pet.; L. Noon, B.A., Trin.; F. H. Parker, B.A., Pemb.; J. E. Payne, M.A., Pet.; F. H. Pearce, Trin.; R. M. Ranking, B.A., Pemb.; C. Roper, B.A., Cai.; E. A. Ross, Trin.; T. StClair-Smith, B.A., Trin. H.; E. S. Scott, B.A., Pemb.; A. M. Simpson, B.A., King's; H. Statham, B.A., Christ's; W. M. Strong, M.A., Trin.; H. E. Symes-Thompson, M.A., Christ's; J. M. Twentyman, B.A., Christ's; H. Wacher, B.A., Joh.; H. Wales, B.A., Sid. Suss.; F. H. F. Wilgress, B.A., H. Selw.; H. C. Williams, B.A., Pemb.; J. A. Wood, M.A., Joh.; C. R. Worthington, B.A., Cai.

UNIVERSITY OF LONDON.

PUBLICATION OF WORK FROM THE PHYSIOLOGICAL LABORATORY.

THE Senate has adopted the following regulations in connexion with the publication of work from the Physiological Laboratory:

1. Manuscripts of lectures delivered or of the results of investigations made in the Physiological Laboratory of the University, submitted for publication with the approval of the University, must, in the first instance, be submitted for consideration to the Physiology Committee, and by them referred, if considered suitable, to two referees, who shall be requested to report to the Physiology Committee as to their fitness for publication.

2. Manuscripts shall be accepted only if reported suitable for publication (*a*) by reason of additions to knowledge in physiology and experimental psychology, or (*b*) by reason of excellence of exposition of recent additions to knowledge and doctrine in physiology and experimental psychology.

MEETING OF CONVOCATION.

A meeting of Convocation was held at the University on Monday last, when Sir E. H. Busk, Chairman of Convocation, presided. It was fully twenty minutes after the advertised time of meeting before the quorum (50) was present.

INTERMEDIATE SCIENTIFIC EXAMINATIONS FOR INTERNAL AND EXTERNAL STUDENTS.

The Chairman reported a communication from the Senate as to uniting these examinations temporarily as a matter of urgency, without communication of the same beforehand, to Convocation, as required by the statutes. He moved a resolution to the effect that Convocation fully recognized the severe strain put upon the Senate by the reorganization of the University, and that the Senate had no alternative but to act as it had done. This was unanimously passed, together with an addition moved by Dr. Preston that the House, whilst approving the regulations of the Senate, did so "without prejudice to the rights of Convocation under Section CXXII of the statutes as regards any future examinations."

THE LIBRARY OF THE UNIVERSITY.

Mr. H. C. H. Candy brought up a report from the Standing Committee, which stated that the library contained some 30,000 volumes dispersed without order in several rooms used as University offices, and there was substantially no accommodation for readers; the sum of £150 a year spent by the University upon the library was practically absorbed in maintaining the sequence of periodical publications. Miss Sheppard, B.A., who had been appointed Library Clerk, had also other University duties. He moved the following resolutions recommended for adoption by the Standing Committee:

"1. That no duty more peculiarly belongs to a university than the provision of a library and its maintenance in an effective condition.

"2. That the first necessity for a library is that there should be adequate and suitable accommodation for the books and for readers, and that the Senate should be requested to represent to the Government that increased space is required for this purpose.

"3. That University funds should be applied to the library even before the acquisition of additional class-rooms or laboratories.

"4. That the most economical and expeditious way of preserving the existing volumes and rendering them of use to any one would be to provide new shelves—replicas of the old—and restore each volume to its former position.

"5. That no other duties should be assigned to the Library Clerk than the care and control of the library and reading-room.

"6. That the full Regulations for the Library should be printed in the *Calendar* as before."

He explained in regard to the third resolution that he did not by any means underrate the importance of an adequate provision of class-rooms or laboratories, both of which were essential; but that the library question was of even greater urgency.

A general discussion ensued, in the course of which the difficulty of obtaining the best foreign books was referred to; though the richness of the London Library in this particular was fully recognized. Even the British Museum was not well provided with the best foreign books.

Dr. Silvanus Thompson deplored the present state of things. The books had been brought from Burlington House two years ago, and no attempt had since been made to place them in any proper order. The library ought to be the common meeting ground of students and graduates.

The resolutions were adopted with the insertion of the words, "in the opinion of Convocation," after the word "that" in the first resolution.

Dr. R. M. Walmsley moved:

"That a strong and urgent public appeal be made, without delay, for funds for the proper maintenance and extension of the Library of the University of London."

He said that the amount—£150 a year—spent on the library was utterly inadequate. Both money and space were needed. Little could be expected from the Government. Would Professor de Morgan and George Grote, who had left their fine libraries to the University, have been pleased that their books should lie upon the floor?

Dr. Russell Wells seconded the resolution, remarking that a graduate of the University of Pennsylvania, which possessed a library of nearly 400,000 volumes, had recently been amazed that the University of London had only 30,000 volumes.

Mr. R. W. Chambers, Librarian of University College, at this point asked for a count, when it was found that fewer than the quorum—namely, fifty members—were present. The meeting consequently stood adjourned.

UNIVERSITY COLLEGE.

The arrangements for the new department of organic chemistry under Professor J. Norman Collie are now complete, and students can be admitted to the ordinary course in organic chemistry or for research. A special advanced course of organic chemistry is now in progress.

Research students can now be admitted to the new laboratory for pathological chemistry under the direction of Professor Vaughan Harley.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY Council was held on January 15th, Sir Henry G. Howse, President, in the chair.

Court of Examiners.

Mr. Clinton T. Dent was admitted a member of the Court of Examiners.

Donation to the Museum.

The best thanks of the Council were voted to Mr. B. Glanvill Corney, M.R.C.S., for a gift of sixteen skulls of Melanesian, Malayo-Polynesian, and hybrid (Fijian) races.

Sir Gilbert Blane Medal.

The President reported the award of this medal to Surgeon Christopher Louis White Bunton, M.B., H.M.S. *Forte*, 1901, and Staff Surgeon John Falconer Hall, M.B., R.M. Naval Brigade in North China, 1900.

Board of Examiners in Dental Surgery.

The resignation of Mr. Frederick Canton was accepted. (Applications for the vacancy must be sent in before February 7th, 1903.)

Birmingham University.

Sir Henry G. Howse was renominated for election on the Court of Governors of this University.

Cairo School of Medicine.

A letter dated January 2nd was read from Mr. H. P. Keatinge, Director of the Cairo School of Medicine, reporting that he had furnished Mr. Reginald Harrison with all information in his power respecting the curriculum of the school, thanking the Council for the interest taken by them in the institution, and expressing the hope that the investigation may lead to the recognition of its teaching.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

VITAL STATISTICS OF LONDON DURING THE FOURTH QUARTER OF 1902.

[SPECIALLY REPORTED FOR THE BRITISH MEDICAL JOURNAL.]

IN the accompanying table will be found summarized the vital statistics of the metropolitan boroughs and of the City of London, based upon the Registrar-General's returns for the fourth, or autumn, quarter of last year. The mortality figures relate to the deaths of persons actually belonging to the various metropolitan boroughs, and are the result of a complete system of distribution of deaths occurring in the public institutions of London among the various boroughs in which the deceased persons had previously resided.

The 34,150 births registered in London during the three months ending December last were equal to an annual rate of 27.8 per 1,000 of the population, estimated at 4,579,107 persons in the middle of the year; this rate was 0.2 per 1,000 below that recorded in the corresponding period of the previous year, and was 1.3 per 1,000 below the average rate in the fourth quarters of the ten years, 1892-1901. The birth-rates last quarter ranged from 9.5 in the City of London, 16.2 in the City of Westminster, 17.4 in Kensington, 17.5 in Hampstead, 20.3 in Stoke Newington, and 21.0 in Chelsea to 32.5 in Bermondsey, 33.6 in Poplar, 34.6 in Shoreditch, 34.8 in Finsbury and in Bethnal Green, and 36.6 in Stepney.

The 21,111 deaths of persons belonging to London, registered during the quarter under notice, were equal to an annual rate of 17.2 per 1,000, against 21.1, 16.3, and 17.9 per 1,000 in the corresponding quarters of the three preceding years; the mean death-rate in the ten preceding fourth quaters was 18.4 per 1,000. The lowest death-rates last quarter in the various metropolitan boroughs were 11.2 in Hampstead, 13.0 in Stoke Newington, 13.2 in Wandsworth, 13.5 in Paddington, 14.1 in Hackney, and 14.3 in Lewisham; the highest rates were 20.5 in the City of London and in Bethnal Green, 21.1 in Shoreditch, 21.4 in Holborn, 22.3 in Bermondsey, and 23.5 in Finsbury.

During last quarter 2,157 deaths were referred to the principal infectious diseases; of these, 1 resulted from small-pox, 571 from measles, 132 from scarlet fever, 311 from diphtheria, 412 from whooping-cough, 119 from enteric fever, 1 from simple continued fever, 538 from diarrhoea, and not one from typhus. These 2,157 deaths were equal to an annual rate of 1.76 per 1,000, against an average rate of 2.26 per 1,000 in the corresponding periods of the ten preceding years. In the fourth quarters of the three preceding years the rates had been 1.96, 1.53, and 1.78 per 1,000 respectively. The lowest death-rates last quarter from these infectious diseases were 0.66 in Hampstead, 0.72 in Stoke Newington, 0.89 in the City of Westminster, 0.92 in Kensington 1.00 in Paddington, and 1.03 in the City of London; the highest rates were 2.08 in Poplar, 2.11 in Finsbury, 2.20 in St. Pancras, 2.32 in Camberwell, 2.41 in Fulham, 3.90 in Deptford, and 4.02 in Bermondsey. Measles showed the greatest proportional mortality in Fulham, St. Pancras, Bermondsey Camberwell, Deptford, and Greenwich; scarlet fever in Hackney, Holborn, Lambeth, Battersea, Wandsworth, and Deptford; diphtheria in Fulham, Chelsea, St. Pancras, Poplar, and Wandsworth; whooping-cough in Hammersmith, Fulham, St. Marylebone, Islington, Finsbury, and Stepney; "fever" in Hampstead, St. Pancras, Islington, Hackney, Shoreditch, Poplar, and Wandsworth; and diarrhoea in Hammersmith, Shoreditch, Stepney, Bermondsey, Deptford, Lewisham, and Woolwich. The fatal case of small-pox belonged to Camberwell.

During the fourth quarter of last year 2,017 deaths from phthisis were registered, equal to an annual rate of 1.64 per 1,000, against 2.07, 1.57, and 1.77 per 1,000 in the corresponding quarters of the three preceding years. Among the various metropolitan boroughs the lowest death rates from phthisis last quarter were recorded in Paddington, Hampstead, Hackney, Wandsworth, Deptford, and Lewisham; and the highest rates in St. Marylebone, St. Pancras, Holborn, Finsbury, Stepney, and Southwark.

Infant mortality, measured by the proportion of deaths under one year of age to registered births, was equal to 155 per 1,000 last quarter, against 150, 154, and 152 in the corresponding quarters of the three preceding years. The rates of infant mortality during the quarter under notice were lowest in Paddington, St. Marylebone, Hampstead, Stoke Newington, and Hackney; whilst the highest rates were recorded in Finsbury, Shoreditch, Southwark, Bermondsey, Deptford, and Lewisham.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 8,487 births and 5,072 deaths were registered during the week ending Saturday last, January 17th. The annual rate of mortality in these towns, which had been 16.9, 20.0, and 18 5 per 1,000 in the three preceding weeks, further fell last week to 17.5 per 1,000. The rates in the several towns ranged from 5.3 in Hornsey, 5.7 in King's Norton, 8.1 in Tottenham, 9.7 in Barrow-in-Furness, 9.9 in Bournemouth, 10.0 in Rotherham, 10.1 in Burton-on-Trent, and 11.0 in Warrington, to 21.7 in Birmingham, 21.8 in Wigan, 22.3 in Stockport, 22.4 in Swansea, 23.5 in Ipswich, 23 7 in Norwich, 24.3 in West Bromwich, 24.8 in Tynemouth, and 31.8 in Bootle. In London the rate of mortality was 17.5 per 1,000, which was also the average rate in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.6 per 1,000 in the seventy-six large towns; in London this death-rate was equal to 1.5 per 1,000, while it averaged 1 6 per 1,000 in the seventy-five other large towns, among which the highest death rates from the principal infectious diseases were 3.0 in Manchester, 3.2 in Preston, 3 3 in Swansea, 3 5 in Walsall, 3.8 in Stockport, 4 1 in Hanley, 4.7 in West Bromwich, 4.8 in Salford, and 5.0 in Tynemouth. Measles caused a death-rate of 1 5 in Hull, 1 6 in West Bromwich, 1.7 in Wigan, 2.8 in Salford, and 3 0 in Tynemouth and in Newport (Mon.); scarlet fever of 1.2 in St. Helens, and 3.1 in West Bromwich; diphtheria of 1.1 in Stockport, 1.4 in Coventry, and 1.8 in Bury; whooping-cough of 1.2 in Northampton and in Walsall, 1.3 in Hornsey, 1.4 in Preston, and 1.6 in Hanley and in Stockport; and diarrhoea of 1.6 in Burnley and in Swansea, and 1.7 in Walsall. The mortality from "fever" showed no marked excess in any of the large towns. Small-pox caused 1 death in London, 1 in Hanley, 1 in Liverpool, 1 in Bootle, 1 in Manchester, and 1 in Salford, but not one in any of the other large towns. The Metropolitan Asylums Hospitals contained 5 small-pox patients on Saturday, January 17th, against 17, 14, and 10 on the three preceding Saturdays; 2 new cases were admitted during the week, against 1 and 4 in the two preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had been 2,528, 2,378, and 2,219 at the end of the three preceding weeks, had further declined to 2,128 at the end of last week; 195 new cases were admitted during the week, against 279, 205, and 214 in the three preceding weeks.

Analysis of the Vital Statistics of the Metropolitan Boroughs and of the City of London after Distribution of Deaths occurring in Public Institutions during the Fourth Quarter of 1902.

BOROUGHS.	Estimated Population middle of 1902.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Infectious Diseases.	Deaths from Principal Infectious Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Typhus.	Enteric Fever.	Simple and Ill-defined Fever.	Diarrhoea.	Phthisis.	Deaths of Children under 1 year of age to 1,000 Births.
COUNTY OF LONDON	4,579,107	34,150	21,111	27.8	17.2	1.76	2,157	1	571	132	311	412	—	191	1	538	2,017	155
Paddington	145,107	896	525	23.0	13.5	1.00	39	—	—	4	9	15	—	2	—	9	36	126
Kensington	177,605	829	716	17.4	15.0	0.92	44	—	1	5	4	7	—	7	—	20	78	159
Hammersmith ...	114,210	841	511	27.4	16.6	1.66	51	—	1	1	7	15	—	5	—	22	41	161
Fulham	143,102	1,239	642	32.2	16.7	2.41	93	—	24	5	19	22	—	3	—	20	52	140
Chelsea	74,018	417	325	21.0	16.4	1.51	30	—	3	1	8	5	—	3	—	10	30	141
City of Westminster ...	180,800	785	764	16.2	15.7	0.89	44	—	1	3	7	28	—	7	1	7	87	157
St. Marylebone ...	132,069	1,051	653	29.6	18.4	1.36	48	—	1	3	8	26	—	2	—	18	71	113
Hampstead	83,743	393	251	17.5	11.2	0.66	15	—	1	—	1	6	—	5	—	2	17	104
St. Pancras	235,596	1,704	1,179	26.9	18.6	2.20	139	—	37	7	28	22	—	20	—	25	129	169
Islington	337,268	2,369	1,470	26.2	16.2	1.61	140	—	21	10	11	55	—	20	—	29	128	152
Stoke Newington ...	51,700	282	181	20.3	13.0	0.72	10	—	—	1	3	—	—	—	—	6	18	128
Hackney	221,926	1,622	843	27.2	14.1	1.29	77	—	6	10	14	12	—	13	—	22	69	124
Holborn	58,535	422	337	26.9	21.4	1.40	23	—	4	3	3	5	—	1	—	7	55	164
Finsbury	100,487	939	635	31.8	23.5	2.11	57	—	5	3	8	27	—	1	—	11	50	173
City of London ...	25,598	65	141	9.5	20.5	1.03	7	—	1	—	2	3	—	1	—	—	12	169
Shoreditch	117,980	1,036	667	34.6	21.1	1.87	59	—	16	2	6	6	—	11	—	18	58	178
Bethnal Green ...	129,889	1,214	715	34.8	20.5	1.30	45	—	15	5	9	2	—	3	—	11	60	164
Stepney	300,551	2,953	1,600	36.6	19.8	1.98	160	—	42	4	20	38	—	10	—	46	168	162
Poplar	169,214	1,528	900	33.6	19.8	2.08	94	—	24	4	19	20	—	9	—	18	58	168
Southwark	206,825	1,790	1,117	32.2	20.1	1.95	108	—	29	7	17	20	—	6	—	29	135	173
Bermondsey	130,218	1,136	778	32.5	22.3	4.02	141	—	91	2	11	5	—	5	—	27	69	184
Lambeth	305,102	2,303	1,489	28.1	18.2	1.73	141	—	34	14	17	31	—	12	—	33	139	145
Battersea	171,401	1,256	690	27.3	15.0	1.30	60	—	11	7	8	21	—	6	—	17	69	139
Wandsworth	241,810	1,602	855	25.6	13.2	1.40	91	—	7	10	22	23	—	13	—	26	53	139
Camberwell	262,775	1,963	1,215	27.8	17.2	2.32	104	1	86	10	19	12	—	11	—	25	120	153
Deptford	111,577	881	538	29.4	18.0	3.90	117	—	69	6	7	8	—	5	—	22	34	185
Greenwich	98,013	751	394	28.5	15.0	1.56	41	—	21	—	5	2	—	4	—	9	33	152
Lewisham	132,432	869	509	24.4	14.3	1.85	66	—	20	5	9	7	—	1	—	24	40	170
Woolwich	119,556	894	471	27.9	14.7	1.46	47	—	—	—	10	9	—	3	—	25	48	151

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, January 17th, 946 births and 766 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 21 3, 21.6, and 22 6 per 1,000 in the three preceding weeks, further rose last week to 23.4 per 1,000, and was 5.9 per 1,000 above the mean rate during the same period in the seventy-six large English towns. The rates in the eight Scotch towns ranged from 17.8 in Edinburgh and 19.8 in Dundee to 25.3 in Glasgow and 29.8 in Aberdeen. The death rate from the principal infectious diseases averaged 2.3 per 1.000, the highest rates being recorded in Aberdeen and Leith. The 383 deaths registered in Glasgow included 2 from scarlet fever, 5 from diphtheria, 23 from whooping-cough, 2 from "fever," and 6 from diarrhoea. Five fatal cases of measles, 3 of whooping-cough, and 2 of diarrhaea were recorded in Edinburgh. Four deaths from diarrhoea occurred in Dundee; five from measles, 2 from whooping-cough, and 2 from diarrhoea in Aberdeen; 2 from measles and 3 from whooping-cough in Leith; and two from diarrhoea in Greenock.

MEDICAL NEWS.

Dr. H. C. Highet, D.P.H.Lond., has been appointed Medical Adviser to His Siamese Majesty's Customs Department, Bangkok, Siam.

Dentists for the German Army.—A permanent dental service has been established for the treatment of the non-commissioned officers and men of the German army.

A serious epidemic of influenza is raging throughout Italy. It is said that 15,000 cases, with an average death-rate of 20 a day, have occurred in Padua alone.

The course of lectures at the Hospital for Consumption and Diseases of the Chest, Brompton, will be resumed on Wednesday next at 4 p.m., when the opening lecture will be given by Mr. Stanley Boyd on Pleural Effusions and their Treatment.

It has been finally settled that the Riviera Memorial to the late Queen Victoria is to take the form of a cottage hospital at Nice. To assist in the work a fancy fair will be held on February 20th and 21st during the Nice Carvival. It is expected that the Duke of Cambridge will preside at the opening ceremony in February.

We are asked to state that the President, Sir John Halliday Croom, will take the chair at the annual dinner of the British Gynaecological Society, which is to be held at the Café Monico, Piccadilly Circus, W., on Thursday next, January 29th, at 7.30 p.m. Tickets, price 10s 6d., may be obtained from the Secretary, Dr. J. H. Swanton, 40, Harley Street, W. Ladies may be invited as guests.

A new children's ward in the Royal Victoria Hospital, Bournemouth, was opened on January 16th by Princess Louise (Duchess of Argyll). Provision is made in it for 16 cots, six of which, completely equipped, were given by a local ladies' work association. In replying to a vote of thanks on behalf of the Princess, the Duke of Argyll said it was characteristic of the medical profession that the more work they had to do the happier they were.

British Medical Benevolent Fund.—The monthly meeting of the Committee of this Fund was held on January 20th. Eighteen applications for relief were considered, and the grants made amounted to £143, three cases being postponed for further inquiry. The Treasurer of the Fund is Dr. Samuel West, 15, Wimpole Street, W, and the Honorary Secretary is Mr. W. E. Sargant, St. Bartholomew's Hospital, E.C.

The Society of Medical Phonographers.—This Society will hold its next annual shorthand examination early in May. Two prizes will be offered, each of the value of £3, one for first year students and one for students of more than one year's standing. The competition will be open without entrance fee to any registered medical student in the United Kingdom who has not taken a first prize at one of the Society's previous examinations. It will be held simultaneously in London, Edinburgh, Dublin, and at any provincial medical centre in the United Kingdom at which a candidate or candidates shall offer themselves. Intending candidates should send in their names as early as possible, but not later than April 15th, to Dr. P. G. Griffith, Bonhams, Farnborough, Hants, who will furnish them in return with a detailed prospectus of the examination.

Instruction in Vaccination at Leeds.—At a meeting of the Students' Medical Society on January 13th a presentation was made to Mr. Frederick Holmes, who has recently resigned the appointment of Instructor in Vaccination after thirty-five years of service. Mr. Keeling, the President, was in the chair, and after Mr. J. Ewen had spoken on behalf of the present students, Dr. Hellier spoke on behalf of the past, and handed to Mr. Holmes a silver inkstand with suitable inscription. Mr. Holmes, who has been very popular with all his pupils and is much esteemed by his fellow-practitioners, made a cordial reply. It has been arranged, with the approval of the Local Government Board, that in future instruction in vaccination shall be given on the infirmary premises by one of the public vaccinators, who will arrange the necessary attendance of infants at certain times in the year. Mr. A. T. Bacon has received the appointment.

Society for Relief of Widows and Orphans of Medical Men.—At the last quarterly court of the directors, the President, Mr. Christopher Heath, in the chair, 3 new members were elected, the deaths of 7 members were reported; among the deaths were two vice-presidents, Mr. Tegart and Mr. Manley Sims; both had been most energetic members and had taken great interest in the Society. Two members had ceased to belong to the Society. Two widows and 3 orphans made applications for assistance, and grants were made; all had been left without any means of subsistence. It was resolved to distribute £1,376 10s. among the 56 widows, 13 orphans, and 5 recipients of special grants from the Copeland Fund. £590 had been given as presents at Christmas to the widows and orphans in receipt of grants. The expenses of the quarter amounted to £74 15s.

MEDICAL VACANCIES.

The following vacancies are announced:

AYR: AYR DISTRICT ASYLUM.—Two Assistant Medical Officers, unmarried, and under 30 years of age. Salary, £150 and £120 per annum, with board, lodging, etc. Applications to the Medical Superintendent.

BELFAST: MATER INFIRMORUM HOSPITAL.—House-Physician. Appointment for six months. Salary at the rate of £50 per annum, with board. Applications to the Secretary.

BIRKENHEAD BOROUGH HOSPITAL.—Senior Resident Male House-Surgeon. Salary, £100 per annum, with board. Applications to the Chairman of Weekly Board by February 1st.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon, unmarried. Salary, £150 per annum; £30 allowance for cab hire; furnished rooms, etc. Applications to the Secretary by February 7th.

BOLTON INFIRMARY AND DISPENSARY.—(1) Senior House-Surgeon. Salary, £130 per annum. (2) Junior House-Surgeon. Salary £100 per annum. Apartments, board and attendance provided in each case. Applications to W. W. Cannon, Esq., Honorary Secretary, 20, Mawdsley Street, Bolton, by February 10th.

CHICHESTER INFIRMARY.—House-Surgeon. Salary, £100 per annum, with board, residence, and washing. Applications to the Secretary, 9 East Street, Chichester.

DOUGLAS: NOBLE'S ISLE OF MAN GENERAL HOSPITAL AND DISPENSARY.—Resident House Surgeon unmarried. Salary, £82 per annum, with board and washing. Applications to the Honorary Secretary, Mr. F. B. Fleming, 25, Athol Street, Douglas, Isle of Man, by February 7th.

GROSVENOR HOSPITAL FOR WOMEN AND CHILDREN, Vincent Square, S.W.—Assistant Surgeon, must be F.R.C.S. Applications to the Secretary by January 31st.

HAMPSTEAD HOSPITAL, Parliament Hill, N.W.—Resident Medical Officer. Appointment for six months, but eligible for re election. Salary at the rate of £120 per annum, with rooms, coal, and gas. Applications to the Honorary Secretary by February 4th.

JENNER INSTITUTE OF PREVENTIVE MEDICINE, Chelsea Gardens.—Studentship, value £150, for the purpose of research in the department of Pathological Chemistry in the Institute. Tenable for one year, but renewable for second year. Applications to the Secretary by February 21st.

KING'S COLLEGE HOSPITAL, Lincoln's Inn Fields, W.C.—(1) Clinical Pathologist. Salary, £250 per annum. (2) Senior Medical Registrar and Tutor. Applications to the Secretary for (1) by January 26th.

KILBURN.—Provident Medical Institute. Vacancy on the Medical Staff. Applications to the Secretary, 7, Cavendish Road, Brondesbury, N.W., by January 31st.

LEEDS: GENERAL INFIRMARY.—Resident Medical Officer. Salary, £100 per annum, with board, residence, and washing. Applications to the Secretary of the Faculty by February 11th.

MARGATE: ROYAL SEA BATHING HOSPITAL.—Junior Resident Surgeon, to act as Junior until May 1st, and then as Senior for six months. Salary at the rate of £80 and £120 per annum respectively, with board and residence. Applications to the Secretary, Royal Sea Bathing Hospital Offices 30, Charing Cross, London, S.W., by January 29th.

NEW HOSPITAL FOR WOMEN, 144, Euston Road, N.W.—(1) Pathologist, must be qualified medical woman. (2) Assistant Anæsthetist. Applications to the Secretary by January 26th.

NORTH RIDING ASYLUM, Clifton, York.—Senior Assistant Medical Officer; unmarried. Salary commencing at £150, rising to £200 per annum, with furnished apartments, board, washing and attendance. Applications to the Medical Superintendent by January 26th.

POPLAR HOSPITAL FOR ACCIDENTS, E.—Assistant House-Surgeon. Appointment for six months, but eligible for re election. Salary at the rate of £80 per annum, with board and residence. Applications to the House Governor by January 30th.

REDHILL: EARLSWOOD ASYLUM.—Two Assistant Medical Officers; unmarried and under 30 years of age. Salary for Senior, £160, rising to £200 per annum, for Junior £130, rising to £150 per annum. Apartments, board, washing, and £5 per annum in lieu of stimulants provided. Applications, endorsed "Assistant Medical Officer," to be sent to the Secretary, 36, King William Street, London Bridge, E.C., by February 9th.

ROYAL LONDON OPHTHALMIC HOSPITAL, City Road, E.C.—(1) Junior House-Surgeon. Salary, £75 per annum. (2) Third House-Surgeon. Salary, £50 per annum. Board and residence provided in each case. Applications to the Secretary by February 4th.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Examiners in Dental Surgery. Applications to the Secretary by February 7th.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston Road.—Physician-Accoucheur. Applications to H. P. Bodkin, Esq., Honorary Secretary, 23, Gordon Street, Gordon Square, W.C., by January 31st.

VICTORIA HOSPITAL FOR CHILDREN, Tite Street, Chelsea.—House-Surgeon. Appointment for six months. Honorarium, £25, with board and lodging. Applications to the Secretary by January 31st.

WESTERN-SUPER-MARE HOSPITAL.—House-Surgeon, unmarried. Salary, £100 per annum, with board and residence. Applications to the Honorary Secretary by February 2nd.

WHITTINGHAM: COUNTY ASYLUM.—Assistant Medical Officer, unmarried, and not over 30 years of age. Initial salary, £150 per annum. Applications to the Medical Superintendent.

MEDICAL APPOINTMENTS.

Babcock, H. J. P., M.R.C.S., L.R.C.P.Lond., appointed District Medical Officer of the Medway Union.

Byrne, Joseph P., L.R.C.S.I., L.R.C.P.I., appointed House-Surgeon to the Dewsbury and District General Infirmary, Yorkshire.

Chadburn, Maud A., M.D.Lond., B.S., appointed Surgeon to the Out Patient Department, New Hospital for Women.

Harper, J. R., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer of Health to Barnstaple Rural District Council, *vice* Joseph Harper, L.R.C.P., M.R.C.S.

Gowland, W. P., M.R.C.S., appointed Senior House Surgeon to the Lincoln County Hospital.

HINDSHAW, James, M.B., Ch.B.Vict., appointed Assistant Medical Officer to the Nottingham Parish Workhouse.

LALL, C. C., M.R., C.M.Edin., appointed Assistant Medical Officer to the Greenwich Union Infirmary.

MACNAIR, Norman, B.Sc., M.D.Glasg., M.R.C.S.Eng., L.R.C.P.Lond., F.F.P.S.Glasg., appointed Extra Honorary Dispensary Physician to the Royal Hospital for Sick Children, Glasgow.

MAIR, William, M.A., M.B., Ch.B., B.Sc.Edin., D.P.H.Camb., appointed Resident Medical Officer, Leith Public Health Hospital, East Pilton, and Assistant to the Medical Officer of Health for Leith.

SCLANDERS, Alexander, M.D.Edin., appointed Medical Referee under the Workmen's Compensation Act for the Sheriffdom of Inverness, Elgin, and Nairn, to act for the County of Nairn.

SETTLE, V. A., L.S.A., appointed District Medical Officer of the Kington Union.

SHACKLETON, W. Webb, M.D.Dubl., appointed Joint Medical Officer to the Royal Masonic Institution for Boys at Bushey, Herts.

SMITH, G. Francis, M.R.C.S.Eng., L.R.C.P.Lond., appointed Joint Medical Officer to the Royal Masonic Institution for Boys at Bushey, Herts.

TUCK, Gnoh Lean, M.A., M.B., B.C.Cantab., appointed House-Physician to the Brompton Hospital for Consumption, S.W.

WHITE, Clement, M.D., B.A., B.C.Cantab., appointed Assistant Honorary Surgeon of St. Bartholomew's Hospital, Rochester.

DIARY FOR NEXT WEEK.

MONDAY.

Odontological Society of Great Britain, 20, Hanover Square, W., 8 p.m.—Casual communications by Mr. Stanley Read, Mr. Morton Smale, and Mr. J. B. Parfitt. Mr. Arbuthnot Lane on Some Points in the Mechanics of the Jaws.

Medical Society of London, 11, Chandos Street, Cavendish Square, W., 8 p.m. Council Meeting; 8.30 p.m., Clinical Meeting. Cases:—Dr. J. W. Carr: Chronic Joint Disease in a Child. Mr. C. B. Keetley: Undescended Testis after Operation. Dr. H. C. Pope: Venous and Lymphatic Naevus of the Face. Mr. T. H. Openshaw: Two Cases of Congenital Dislocation of the Hip, one treated by the Manipulation Method of Lorenz and the other by the Open Method of Hoffa. Dr. J. Sherren: (1) Ankylosis of Hip following Gonorrhoeal Arthritis; (2) Secondary Syphilitic Synovitis of Elbows. Dr. F. J. Poynton: Case of Atavism. Mr. J. Hutchinson, jun.: Case of Macrodactylism.

TUESDAY.

Royal Medical and Chirurgical Society, 20, Hanover Square, W., 8.30 p.m.—Mr. B. G. A. Moynihan: The Operative Treatment of Gastric and Duodenal Ulcers.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Professor W. D. Halliburton: On the Chemistry of Muscle and Nerve.

WEDNESDAY.

Hunterian Society, London Institution, Finsbury Circus, E.C., 8.30 p.m.—Pathological Evening.

Dermatological Society of Great Britain and Ireland, 20, Hanover Square, W., 5 p.m.

British Balneological and Climatological Society, 20, Hanover Square, W., 5.30 p.m.—Dr. Buckley (Buxton) on Local Factors Influencing Climate, with Special Reference to Subsoil.

THURSDAY.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Dr. T. G. Brodie: On the Circulation.

Ophthalmological Society of the United Kingdom, 11, Chandos Street, Cavendish Square, W., 8 p.m.—Card specimens by Mr. L. Werner, Mr. F. A. C. Tyrrell, Major Yarr, and Mr. E. T. Collins. Papers (8.30 p.m.):—Mr. J. H. Parsons: Primary Extradural Tumours of the Optic Nerve. Mr. T. Snowball: Ossification of the Choroid. Messrs. A. S. Morton and J. H. Parsons: Hyaline Nodules on the Optic Disc. Mr. L. Werner: Two Cases of Tumour of the Optic Nerve, in one of which Krölein's operation was performed, with preservation of the eye.

FRIDAY.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Dr. A. D. Waller: On Experimental Pharmacology: The Action of Anaesthetics and Narcotics.

Anatomical Society of Great Britain and Ireland, Westminster Hospital Medical School, S.W., 4 p.m.—Papers by Mr. F. G. Parsons, Mr. Cameron, and Mr. Bishop Harman.

British Laryngological, Rhinological, and Otological Association, 11, Chandos Street, W., 3.45 p.m.—Paper by Dr. Jobson Horne. Cases by the President, Dr. Abercrombie, Mr. Nourse, Mr. Stuart-Low, and others.

POST-GRADUATE COURSES AND LECTURES.

Charing-cross Hospital, Thursday, 4 p.m.—Demonstration of Surgical Cases.

Hospital for Consumption and Diseases of the Chest, Brompton, S.W., Wednesday, 4 p.m.—Lecture on Pleural Effusions and their Treatment.

Hospital for Sick Children, Great Ormond Street, W.C., Thursday, 4 p.m.—Demonstration of Selected Cases.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C. Demonstrations will be given at 4 p.m. as follows:—Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, eye. Lectures will also be given at 5.15 p.m. as follows: Monday, Hydrotherapeutics and Balneotherapeutics; Tuesday, The Diagnosis and Treatment of the Various forms of Chronic Non-suppurative Inflammation of the Middle Ear; Wednesday, Recent Advances in Medical Electricity; Thursday, The Nervous Manifestations of Rickets; Friday, House Ventilation and Drainage.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C.—Lectures will be given at 3.30 p.m. as follows: Tuesday, Cranial Nerves; Friday, Disseminated Sclerosis.

Post-Graduate College, West London Hospital, Hammersmith Road, W.—Lectures will be delivered at 5 p.m. as follows: Monday, Anaesthetics in Abdominal Cases; Tuesday, X Rays in Medicine and Surgery; Wednesday, Surgical Anatomy; Thursday, Treatment of some Injuries and Emergencies; Friday, Angina Pectoris.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning in order to ensure insertion in the current issue.

MARRIAGES.

ANDERSON—LLOYD.—On January 14th, at the Welsh Presbyterian Chapel, Moss Lane East, by the Rev. William James, D.D., Henry G. S. Anderson, F.R.C.S., L.R.C.P., of Bramhall, Cheshire, to Margaretta Louisa, eldest daughter of R. H. Lloyd, of Heathfield, Moss Side, Manchester.

GORDON-GREEN—EDWARDS.—On January 1st, 1903, at St. Jude's Church, Southsea, Surgeon H. W. Gordon Green, Royal Navy, M.R.C.S.Eng., L.R.C.P.Lond., to Maud, second daughter of Captain and Mrs. Edwards, Royal Navy, of 28, Wortimg Road, Southsea.

DEATHS.

FINZI.—On Wednesday, January 14th, at 93 Sutherland Avenue, W., Judah (Leon) M. Finzi, M.D., eldest son of the late Samuel Leon Finzi, L.D.S., in the 52nd year.

RUDLAND.—On January 12th, at Tolleshury, Witham, Essex, Richard Rudland, L.R.C.P., L.R.C.S., third son of the late William Goldsmith Rudland, M.R.C.S., of Foleshill, near Coventry, in his 80th year.

THOMSON.—At 27, Castle Street, Dumfries, on January 18th, after three days' illness, Alexander Thomson, M.D., aged 70 years.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

STABLE EXPENSES.

ONE-THIRD SHARE asks: What would be a reasonable yearly payment for one-third share of all stable expenses (wear, tear, risk, and maintenance) connected with a rural three-horse practice, as it is desirable that an inclusive charge should be made?

*** We have endeavoured to obtain an authoritative answer to this question, which is not quite so simple as it looks, but our first application was met by the reply that the inquirer had not stated whether each partner had a conveyance, man, and horse, or whether only one man and one trap were kept. The rough guess was hazarded that the expenses for a man, vehicle, and three horses ought not to exceed £180 a year, or in some districts £200, so that a third share would be about £60 a year.

Another correspondent of large experience in country practice to whom application was made has sent us an answer which goes into the matter very fully. It is as follows:

Choice of Horses.

After twenty-seven years' practice in which I averaged, Sundays included, more than forty miles a day, and in which my father had forty-one years, I say most decidedly that a rural three-horse practice is best worked with small horses, cobs 14 to 15 hands, and not under 6 years old. Cobs are cheaper to buy, keep, and less liable to get lame than big horses, and are better for the double duties of the country, namely, to ride and drive. Horses under six are more liable to get strains and strangles, and cannot stand the regular daily work.

Initial Cost.

Three horses, 14.2 hands, can be got for an average of £30 a piece if the purchaser can wait in buying. Level action with good shoulders is imperative; a beast with weak, straight shoulders and powerful behind the saddle is to be specially avoided. Curbs do not hurt, but an animal with splints should on no account be bought.

Carts.

Two light dog carts at £30 to £35 a piece, Perry and Turner, of Bristol, make easily running carts, with the draught from a bar from the axle not from hooks on the shafts. The three-year system is good; at the end of the third or fourth year the cart may either be sold locally or exchanged for a new one. It should, unless there is an accident, require no repairs during that period.

Harness.

Second quality is quite as good for rough wear as the best provided the reins are good. For a hilly country it is best to have a breeching on the cart and not on the harness. Stable sundries, harness, and saddles must also be got.

Food.

The three cobs will require 5 bushels of oats a week at 2s. 6d. a bushel, 2 cwts. of hay at £4 a ton, nine boltings of straw—say 3s., bran 1s. 6d., that is, 10s. 6d. a week each, or 31s. 6d. for the three.

Shoeing.

A new set every month at 4s. and moving once a fortnight 2s., that is 18s. month or £11 a year. This is a matter of the greatest importance, as if the horses' feet are regularly attended to they neither get lame nor lose shoes. In frosty weather the shoes should be bored for screws.

Stable Sundries.

If a chaff-cutter is included allow £3.

Wages.

If the partners drive themselves a good man at 22s. a week might do, or if a man is wanted to go out, a good lad at 12s. a week will be required. It cannot be too fully understood that the whole secret of healthy good-conditioned horses is regular feeding and careful attendance when they come in. It is far better and cheaper to keep the best man at home; he would not lack for work.

Wear and Tear.

Calculate 20 per cent.

Risk.

Given horses not under 5 years old, reasonably careful driving, and luck there is little risk.

Maintenance.

This depends entirely upon the knowledge of the medico, and the possession of a good servant who not only knows his work but has time and opportunity to do it. If a servant is out half his time and can only feed his horses irregularly, and so is driven to fill their mangers at night and to shirk their toilette and cleaning traps and harness, the maintenance will be high.

Initial Expenses.

	£ s. d.		£ s. d.
2 cobs	90 0 0	to	110 0 0
2 dogcarts	60 0 0	,,	80 0 0
2 sets of harness (brass)	13 0 0	,,	20 0 0
2 saddles	8 0 0	,,	10 0 0
2 double bridles	2 0 0	,,	3 0 0
1 snaffle bridle	0 6 0	,,	0 15 0
1 set clothing	1 10 0	,,	2 10 0
2 sets bandages	0 10 6	,,	0 15 0
1 set knee-caps	0 2 6	,,	0 5 0
3 Ulster rugs	1 12 0	,,	2 10 0
2 roller belts	1 0 0	,,	1 0 0
2 night rugs	1 4 0	,,	1 4 0
2 head collars	0 12 0	,,	0 12 0
Stable sundries	8 0 0	,,	12 0 0
	188 5 0	,,	243 17 0

Service and Maintenance.

	£ s. d.		£ s. d.
Wages: Man, at 22s.	57 4 0	to	57 4 0
Boy, at 12s.			31 4 0
	57 4 0	,,	88 8 0
Keep: 2 cobs, at 31s. 6d.	81 18 0	,,	81 18 0
Shoeing	11 0 0	,,	11 0 0
Repairs	3 0 0	,,	3 0 0
Livery	6 0 0	,,	10 0 0
	159 2 0	,,	194 6 0

Say from £53 to £65. To this must be added 20 per cent. for depreciation—say £15—giving £68 to £80 a year as one-third share for horseing expenses where three cobs are kept.

LOUD MUSICAL RÂLE.

DR. J. NUMA RAT (St. Kitts, British West Indies) asks for advice with regard to the treatment of the following case. A female child of European parentage, one of twins living in a neighbouring island, aged about 10 months, suffered some months ago from an attack of bronchitis which left her with a peculiar sound in the chest during each inspiration, which is audible at a considerable distance. The sound is like that of a coarse *râle* accompanied with a whistling noise, and is best heard at the bifurcation of the trachea. It ceased once, a short while ago, during an attack of so-called "influenza," but it returned immediately after, and since then continues, whether the child is asleep or awake. It only ceases occasionally, and for a few seconds, while the child's attention is suddenly drawn to some object of special interest to it. The child is small and pale, but she is free from cough, and she is well formed, intelligent, and vigorous.

ANSWERS.

ULTONIA.—We are informed that the fees for the M.D. examination at the University of Brussels must be paid in Bank of England notes or gold; a cheque would not be accepted.

PUZZLED ONE, if a member of one of the defence societies, should place the matter in the hands of the officials: if not, his wisest course will probably be to sue at once in the county court for the full amount of the fees. It is a pity that this course was not taken earlier. It will be necessary to be prepared with medical evidence to establish the excellence of our correspondent's treatment.

THE ETIOLOGY OF TYPHOID FEVER.

SCEPTIC.—Evidence that typhoid fever may be disseminated by other means than water and milk, as for instance by dust and flies, has accumulated recently. We would refer our correspondent to the volumes of the BRITISH MEDICAL JOURNAL during the last three years, and might call his attention in particular to the article by Dr. Christopher Childs on the experience in the volunteer camps of the United States Army published in the JOURNAL of July 26th, 1902, p. 203, to an article published on September 20th, p. 808, and to the report of a discussion at the Congress of the Sanitary Institute in the same issue of the JOURNAL, p. 839. He would also do well to read the paper by Majors Firth and Horrocks, from the Hygiene Laboratory of the Army Medical School, published in the JOURNAL of September 27th, 1902, p. 936.

LETTERS, NOTES, Etc.

THE TITLE OF DOCTOR.

DR. J. NICHOLSON KAYE (Kirkstall) writes with reference to what he calls "this pitiful question": Apart from the strict meaning, but looked at from the accepted view of the general public, what is understood by the term? In sending for the doctor, the medical attendant is implied; he is addressed by his patients as doctor; he it is who sends doctors' bills. During the past forty years the profession has advanced and been as progressive as the rest of the arts and sciences, throwing off many absurdities and effete customs. He adds the suggestion that the title of doctor should be held to refer to each and every one whose name is on the *Register* as qualified to practise. It would be no advantage to anybody one way or the other, except, perhaps, in softening small jealousies and clearing the medical atmosphere all round. The consultants could not object to such a course being adopted, as who is more lavish to bedoctoring the degreeless practitioner than a consultant? So much for the disinterested courtesy of the moment.

THE CONSULTING-ROOM THIEF.

SOME time ago a warning was published in the BRITISH MEDICAL JOURNAL as to a man who had gained access to a consulting-room under pretext of writing a note and had committed a theft. Either this man—who was described as about 30, tall, clean-shaven, with grey eyes, wearing a long overcoat and old boots, but otherwise well-dressed—is continuing his depredations, or his example has been followed by others, for we hear of similar thefts made or attempted in various parts of London—the West End, Kensington, and Clapham Common. In one instance the medical man had read the warning published in the JOURNAL to his parlour maid. She supplied the caller, at his request, with notepaper, but would not leave him. He then asked for a little warm water to drink, as he had an inflamed throat; for this she sent a fellow servant, and the man, being thus baffled, wrote a note saying that he would call again, but left without any booty.

LETTERS, COMMUNICATIONS, ETC., have been received from:

A Association of Registered Medical Women, Secretary of, London; Anglo-American Optical Co., Manager of, London; Dr. A. Ambrose, Loughton; Miss M. B. Andrews, M.B., Belfast; Dr H. E. Annett, Liverpool; Accident; Mr. A. Atkinson, Bradford Messrs. Allen and Hanburys, London; Ajax. **B** Dr. T. E. Brown, London; Mr. R. C. Bartlett, Romsey; Mr. T. Birch, London; Mr. A. Baker, London; Dr. T. Bushnell, Plymouth; Mr. H. B. Butterworth, Newcastle, Staffs; S. Bree, M.B., Manningtree, T. M. Bonar, M.B., Probus; Mr. G. R. Beardmore, London; Dr. O. Baker, London; Busy M.D.; Mr. L. A. Bidwell, London; Mr. J. P. Bush, C.M.G., Clifton; Mr. J. B. Blackett, London; Mr. A. E. Barker, London; Mr. G. Bull, London; Mr. E. W. Battle, Birmingham. **C** G. E. J. Crallan, M.B., Bournemouth; J. A. L. Calder, M.B., Port Maria, Jamaica; Dr. P. R. Cooper, Bowdon; Mr. C. P. Childe, Southsea; Dr. J. Calvert, London; Dr. A. Craig, Glasgow; Messrs. A. B. Cox and Co. Brighton. **D** Dr. J. H. C. Dalton, Cambridge; Messrs Down Bros., London; Dr. C. H. Dyer, Cleckheaton. **E** Mr. E. A. S. Elliot, Kingsbridge; Exemes; Mr. H. Elliot-Blake, Bognor; Enquirer; Mr. R. W. J. Evans, Wrexham. **F** Dr F. S. Fairbank, Dorking; L. Fraser, M.B., North Shields. **G** Dr. J. W. Greenwood, Hanley; Dr. A. S. Gubb, London; P. G. Griffith, M.B., Farnboro. **H** Dr J. B. Hellier, Leeds; T. E. Hill, M.B., Durham; Dr. J. Highet, Workington; Mr. J. J. Hanley, Alderney; Mr. G. C. Hoole, Glasgow; Dr. T. W. Hime, Bradford; Dr. S. H. Haberson, London; Dr. A. Haig, London; Mr. J. D. Howe, Preston. **I** Ignoramus. **K** Mr W. Kidd, Dundee; Kew; Mr. R. Kirkpatrick, London; J. M. M. Kerr, M.B., Glasgow; Mr T. C. G. Kerr Birkenhead. **L** Dr. T. Laffan, Cashel; E. K. Le Fleming, M.B., Wimborne. **M** F. Mac Rae, M.B., London Magog; W. J. McCardie, M.B., Birmingham; Messrs. Macmillan and Co., London; F. V. Milward, M.B., Birmingham; Dr. H. F. Morley, London; F. P. McLaughlin, M.B., Strangford M.Ch., R.U.I.; Marmite Food Extract Co., Manager of, London; Mr. J. McKay, London; Mr. J. E. Mills, London; Mr. W. L. Muir, Glasgow. **N** Naval Medical Officer: No Humbug; Mr. C. Nourse, London. **O** Mr. W. B. Orme, Port Said; Obstetrical Society, Secretary of, London; One Who Knows. **P** Mr. G. Pernet London; Dr. E. F. Potter, London: Perplexed; Dr. C. Parsons, London; Mr J. M. Pickthall, Bournemouth. **R** Real Crux in India; Mr. O. F. Rowley, Barnsley; R. R. S.; Revaccination; Mr. W. A. S. Reyds, St. Mary Bourne; R. M. L.; Mr. J. Richardson, London. **S** Dr. W. Sykes, Exeter; Dr J. A. Shaw-Mackenzie, London; Sir J. Sibbald, Edinburgh; Sanitary and Œconomic Association, Manager of, London; Dr. J. H. Swanton, London; S. Stephenson, M.B., London; Dr. S Sunderland, London; Secretary; Dr. P. C. Smith, London; Mr. W. E. Sargant, London. **T** Mr. J. L. Thomas, C.B., Cardiff; H. P. Taylor, M.B., Mid Yell; W. L. Thomson, M.B., Gorseinon; Mr. C. J. Thompson, London; Mr. B. M. Thompson, New York; Dr. P. Thompson, London; J. H. Teacher, M.B., Glasgow; Dr. G. C. Thomas, London. **U** Ulna. **V** Via Veritas Veta. **W** Rev. B. Waugh, London; Dr. A. Whitfield, London; P. H. Walker, M.B., Mganduli, C.C; Dr. F. Willcocks, London; Mr. J. F. Woodyatt, Halifax; W. A.; Mr. M. A. Wardle, Bishop Auckland; Mr. G. Wilkins, London; War. **Z** Dr. T. Zammit, Valetta.

BOOKS, ETC., RECEIVED.

Memoirs and Letters of Sir James Paget. Edited by Stephen Paget (one of his sons). Third Edition (eighth impression). With a postscript by Sir Thomas Smith. London: Longmans, Green and Co. 1903. 6s.

The Mycology of the Mouth. A Text-book of Oral Bacteria. By Kenneth Weldon Goadby, D.P.H.Camb., L.R.C.P., M.R.C.S., L.D.S.Eng. London: Longmans, Green and Co. 1903. 8s. 6d.

The Ventilation, Heating, and Management of Churches and Public Buildings. By J. W. Thomas, F.P.C., F.C.S. London: Longmans, Green and Co. 1903. 2s. 6d.

Lehmann's medizinische Handatlanten. Band xxix. Atlas und Grundriss der allgemeinen Diagnostik und Therapie der Nervenkrankheiten. Von Dr. W. Seiffer. München: J. F. Lehmann. 1902. M.12.

Die Mitteilungen. Auf Grundlage der statistischen Berichte Bezold's (1879-1899) bearbeitet und einer eingehenden Fortsetzung derselben bis zum Jahr 1901 incl. bearbeitet von Dr. Robert Dölgar. München: J. F. Lehmann. 1903. M.3.

Rudolf Virchow als Pathologe. Gedächtnisrede, gehalten am 21 Oktober, 1902, in der Medizinischen Gesellschaft zu Leipzig. Von Felix Marchand. München: J. F. Lehmann. 1902. M.1.

Bacteria in Daily Life. By Mrs. Percy Frankland. London: Longmans, Green and Co. 1903. 5s.

The Heresy of Teetotalism in the Light of Scripture, Science, and Legislation. By E. Thorne. London: Simpkin, Marshall, Hamilton, Kent and Co., Ltd. 1903. 6s.

Electric Traction on Street Tramways. By C. Bigg, A.I.E.E. Reprinted from the Local Government Journal. London: S. Edgecumbe Rogers. 6d.

The Story of Alchemy and the Beginnings of Chemistry. By M. M. Pattison Muir, M.A. London: George Newnes, Ltd., 1902. 1s.

Refraction. A Simple and Concise Treatise on Practical Sight Testing. By Guy E. Druiff. London: The Anglo-American Optical Co. 1902.

Cancer; its Probable Cause and its Possible Prevention and Cure. By Omega. London: Watts and Co. 1903. 1s. 6d.

Consultations sur les Maladies des Voies Urinaires à l'Usage des Praticiens. Par G. de Rouville. Préface par le Dr. Tuffier. Paris: J. B. Baillière et Fils. 1903. Fr 5.

Rapport sur les Typhus Bilieux (Ictère Infectieux Fébrile). Par Dr. A. Valassopoulo. 1er Congrès Égyptien de Médecine (Caire, 19-23 Décembre, 1902). Paris: A. Maloine. 1902.

*** In forwarding books the publishers are requested to state the selling price.

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N.B.—It is against the rules of the Post Office to receive letters at *Poste Restantes* addressed either in initials or numbers.

SCIENTIFIC GRANTS COMMITTEE

OF THE

British Medical Association.

REPORT LXXIV.

THE ETIOLOGY OF ACUTE RHEUMATISM AND ALLIED CONDITIONS.

BY

R. M. BEATON, M.B., C.M. and E. W. AINLEY WALKER, M.A., M.D.

(From the Gordon Laboratory, Guy's Hospital.)

[PRELIMINARY COMMUNICATION.]

CONSIDERABLE attention has been directed in the last few years to the question of the precise causation of the group of closely-related conditions of disease which may be broadly spoken of under the term "rheumatic," and which are recognized by clinicians generally as constituting the various manifestations (in different tissues and under different conditions) of a single and definite morbid process. Under this heading it is only necessary to mention here acute rheumatism with its associated arthritis, pericarditis, myocarditis, endocarditis, and subcutaneous nodules, chorea, some forms of tonsillitis, and a considerable proportion of cases of ulcerative endocarditis. From the clinical standpoint the diseased conditions in question have all the characters of an infective malady, and not infrequently present the picture of what may be reasonably termed an attenuated septicaemia. Yet they maintain in general a distinct identity which justified the expectation that they would be found to have a specific causal agent—probably a micro-organism, but one distinct from those of ordinary septicaemia.

Numerous investigations have been carried out in the endeavour to determine this infective agent; and a large number of different organisms have been described by bacteriologists and others as the specific cause of rheumatism, though often on quite insufficient evidence. But attention has been definitely focused in the last few years upon a micrococcus first described by Triboulet in 1898, and then by Wassermann in 1899, by the important and extended observations carried out by Paine and Poynton upon the association of this organism with the morbid lesions of rheumatic fever, and its specific action when inoculated into animals. Paine and Poynton have obtained this micro-organism from no fewer than 18 cases of acute rheumatism, and consider it to be the specific causal agent in this infection.

The present investigation was begun a year ago with the object of determining, primarily, to what extent the original observations of Triboulet and Wassermann, and those of Paine and Poynton in this country could be repeated. In the interval a considerable number of communications on the subject have appeared in the foreign literature, but no confirmatory results have yet been published in England.

We are now able to state, as the result of our own observations on the subject, that we agree entirely with the assertion that a micrococcus is constantly associated with acute rheumatic lesions, and is the causal agent in their production. And we believe the coccus which we have isolated from rheumatic cases to be identical with that obtained by Triboulet, Wassermann, Paine and Poynton, Meyer, and several others. At the outset certain important differences appeared between the organism as we found it and the original description given by Paine and Poynton; but with their later accounts of its staining and cultural characters we are, in general, fully in agreement. It may be added that the same micro-organism is obtainable from cases of chorea, and on injection into animals may produce a typical attack of acute rheumatism, just as do cultures from rheumatic fever cases.

Up to the present time we have obtained the micrococcus from some 15 cases—namely, from 8 cases of acute rheumatism, 3 cases of chorea, and 4 cases of acute endocarditis in rheumatic subjects. The general nature of the cases examined and the particular source from which the coccus was obtained in each are shown in the following summary:

Summary of Cases.

Case.	Source of Culture.	Remarks.
1. Acute rheumatism with pericarditis and endocarditis	*Post-mortem* heart's blood	—
2. Acute rheumatism	Fluid from knee-joint *intra vitam*	Cocci very few, growth very feeble.
3. Acute rheumatism with endocarditis	*Post-mortem* heart's blood	Inoculations made in rabbits with positive results.
4. Subacute rheumatism, mitral stenosis	Urine	—
5. Acute rheumatism	Urine	—
6. Acute rheumatism, nodules, morbus cordis	Blood from venesection	—
7. Acute rheumatism	Blood from ear and urine	—
8. Subacute rheumatism, morbus cordis, adherent pericardium	*Post-mortem* heart's blood	—
9. Chorea, heart failure	*Post-mortem* heart's blood	Inoculations made in rabbits with positive results.
10. Chorea	Urine	Inoculations made in rabbits with positive results.
11. Chorea, heart failure	*Post-mortem* heart's blood	—
12. Fungating endocarditis	*Post-mortem* heart's blood	Inoculations made in rabbits with positive results.
13. Fungating endocarditis	*Post-mortem* heart's blood	—
14. Acute endocarditis	Blood from ear	—
15. Acute endocarditis	Blood from ear	—

In the majority of cases we obtained the organism in a pure condition in the original cultures. Sometimes in the *post-mortem* specimens it was associated with the bacterium coli; and twice in specimens isolated from small quantities of blood (0.2 to 0.5 c.cm.), obtained by puncturing the ear with a Pakes's needle, it was contaminated with a staphylococcus albus. The subcultures used in animal experiments, however, were all derived from cases in which the original cultivations had yielded the micrococcus in a pure culture.

Microscopical and Staining Characters.

The organism is a tiny micrococcus, arranged in pairs and short chains in films from ordinary subcultures.

It retains the stain by Gram and in the Weigert modification of this method.

It stains well with all the ordinary dyes.

It is not capsulated.

It is not agglomerated either by the serum of convalescent rabbits or of man.

This organism has been classed by Paine and Poynton as a diplococcus; by the German workers it is usually called a streptococcus. So far as our own observations go, the pairing of the cocci is usually very marked in recent cultures, and more especially in the original cultivations, and in body fluids or on agar-agar; and chains may be quite infrequent in the films. Under cultivation the arrangement in chains becomes more marked, and cultures grown in milk or in a highly alkaline bouillon frequently present long chains, which in some cases may extend across one or more fields of the microscope with a $\frac{1}{12}$ oil immersion objective. When growing in the tissues—as, for example, in endocarditic vegetations in the human subject—the majority of the cocci are seen to be in pairs, but sections not infrequently show chains of half-a-dozen individuals or more.

Whether the micrococcus be spoken of as a diplococcus or a streptococcus does not appear to be of any great importance, and might be regarded merely as a matter of words.

But we think that the persistent application of the former term to an organism which is at present indistinguishable on culture media from an ordinary streptococcus, and which in cultures often shows a marked tendency to grow out into chains, has probably tended to delay considerably its general recognition by bacteriologists; for we have no hesitation in saying that without animal experiments it would almost certainly be diagnosed as an ordinary streptococcus by any one to whom cultures and stained preparations were submitted without comment. Thus, in Pakes's report on cases of ulcerative endocarditis streptococci were found in more than 80 per cent. of the cases examined. We therefore prefer to speak of it as the "micrococcus rheumaticus."

Cultural Characters.

Since the cultural characters of the micrococcus do not appear to have been very fully worked out, or at any rate have not been fully published in this country, it may be well to quote the results of our examination of a specimen from a

Table of Cultural Characters.

Culture Medium.	Coccus from Acute Rheumatism.	Coccus from Chorea.	Streptococcus from Septicaemia.
Bouillon	24 hours, white flocculent precipitate in clear fluid 3 days, ditto 5 days, ditto; no indol	24 hours, white precipitate, fine deposit on side of tube, fluid clear 2 days, ditto 5 days, ditto; no indol	24 hours, flocculent precipitate hanging to side of tube, fluid clear. 4 days, ditto 8 days, ditto; no indol.
Glucose formate bouillon	24 hours, slight acidity 3 days, acid, no gas	24 hours, acid, no gas 2 days, ditto 5 days, ditto	24 hours, neutral, with flocculent precipitate. 2 days, slight acidity 4 days ditto 8 days, sediment, slight acidity.
Peptone water	—	24 hours, slight precipitate, fluid clear 2 days, ditto 5 days, ditto; no indol	24 hours, no visible growth. 2 days, slight precipitate. 4 days, ditto; no indol.
Dextrose bouillon ...	24 hours, slight acidity, flocculent precipitate 3 days, ditto 5 days, ditto	24 hours, acid, good growth, deposit on sides and bottom of tube 2 days, ditto 5 days, ditto; fluid clear	24 hours, flocculent precipitate, (?) a trace of acid 2 days, ditto; distinct acidity 4 days, ditto 8 days, precipitate, very acid
Saccharose bouillon ...	24 hours, acid, flocculent precipitate 3 days, ditto 5 days, ditto	24 hours, acid, good growth, deposit on sides and bottom of tube 2 days, ditto 5 days, ditto; deposit at bottom, fluid clear	24 hours, flocculent precipitate, neutral 2 days, distinctly acid 4 days, ditto 8 days, ditto
Glycerine bouillon ...	24 hours, slight acidity, flocculent precipitate 2 days. acid 4 days, do. 5 days. do.	24 hours, acid, precipitate at bottom 2 days, ditto 5 days, ditto	24 hours, fair flocaulent precipitate, fluid clear 2 days, slightly acid 4 days, acid 8 days, ditto
Nitrate bouillon ...	24 hours good flocculent precipitate, no nitrite	24 hours, precipitate, fluid clear, no nitrites	24 hours, fair flocculent precipitate, fluid clear, no nitrites
Lead bouillon	24 hours, flocculent precipitate, no H_2S 3 days, ditto 5 days, ditto	24 hours, good growth, fine, suspended in clear fluid, no H_2S 2 days, ditto; precipitate 5 days, ditto	24 hours, flocculent suspended precipitate, no H_2S. 2 days, ditto 4 days, ditto 8 days, ditto
Gelatine (stab)	2 days, fair growth along track of needle, colonies discrete at bottom, no liquefaction 5 days, thin growth along track, no liquefaction	24 hours, fine growth along track of needle 2 days, ditto 4 days, ditto; growth greater, no liquefaction	2 days, no visible growth. 4 days, fine, thin, translucent, discrete colonies. 8 days, ditto; no gas, no liquefaction.
,, (streak) ...	—	24 hours, fine, thin, transparent growth 2 days, ditto 4 days, growth greater, no liquefaction	2 days, no growth. 4 days, very slight growth.
,, (shake) ...	2 days, full of minute colonies, no gas, no liquefaction 5 days, ditto	24 hours, fine growth 2 days, ditto; no liquefaction, no gas	2 days, no growth. 4 days, dotted throughout with fine colonies. 8 days, ditto: no gas, no liquefaction.
Agar streak	24 hours, small, semitransparent, non-spreading, slightly-raised colonies 3 days, ditto 5 days, colonies spreading a little	24 hours, fine, translucent, slightly-raised colonies 2 days, ditto 5 days, ditto	24 hours, semitransparent, discrete, minute, point-like colonies. 2 days, colonies larger size of pin's head, whiter and denser. 4 days, ditto
Blood serum	24 hours, very small transparent, slightly-raised colonies 3 days, ditto 5 days, ditto	24 hours, fine, small, transparent colonies 2 days, ditto 4 days, ditto	24 hours, whitish, moist, semi-transparent colonies, larger than on agar. 2 days, 4 days, and 8 days, ditto
Litmus milk	24 hours, acid, no clot 2 days, acid, slight clot 5 days, acid, clotted	24 hours, acid, no clot 2 days, acid, beginning to clot 5 days, acid, clotted	24 hours, slightly acid, no clot. 2 days more acid, no clot. 4 days acid, no clot. 8 days, acid, clotted.
Potato	No visible growth	No visible growth	No visible growth.
Anaërobic (in glucose formate bouillon) ...	24 hours, slight flocculent precipitate on side of tube, no gas 3 days, deposit at bottom, no gas 5 days, ditto	24 hours, slight precipitate, no gas 2 days, ditto 5 days, ditto	24 hours, no visible growth. 2 days, ditto

case of acute rheumatism and of one from a case of chorea in parallel columns compared with a streptococcus isolated from an ordinary case of septicaemia.

These are the details of a parallel test. But it may be stated that the rheumatic coccus when grown in fluid media of marked alkalinity not infrequently produces slight turbidity of the medium. When grown upon the surface of blood agar it gradually produces to a slight extent the change observed by Eyre and Washbourn in the growths of pneumococci on the same medium—namely, an alteration of the red blood pigment around the colonies, leading to the production of a rusty brown or chocolate colour.

From an inspection of the table, it appears that there is nothing in the ordinary cultural characters of the organism which distinguishes it from any other streptococcus.

Is this Micrococcus an Ordinary Streptococcus?

Marmorek has found that if a fluid medium in which streptococci of human origin have been grown be filtered free from micro-organisms and again employed as a culture medium, bacteria generally can flourish in the fluid, while streptococci of human origin are entirely unable to multiply in it.

Such a fluid, therefore, may be used as a test solution to determine whether a given organism obtained from man is identical with ordinary human streptococci or is different from them. And Marmorek, using this method, has recently published the conclusion that all the streptococci found in infections in the human subject are identical, though he allows that that of scarlatina exhibits a slight differentiation.

We have applied this method to two specimens of the micrococcus rheumaticus on two occasions with positive results. In both trials both specimens grew freely in a medium of filtered streptococcus bouillon, exhibiting considerable chain formation. From this it would follow that the micrococcus of rheumatism is specifically different from the ordinary pyogenetic streptococci of human origin. And, if the result be confirmed by other workers, the specificity of the micrococcus rheumaticus will be established.

Growth in Alkaline Media: Acid Formation.

The organism grows well in alkaline media, and can be grown in media of high alkalinity. We have found it capable of growth in bouillon with an alkalinity of — 25 on Eyre's notation. If a series of bouillon tubes with alkalinity of 0, — 5, — 10, — 15, — 20, and — 25 respectively be inoculated and incubated at 37° C., the growth at the end of eighteen hours is good and approximately equal to naked-eye examination in the tubes 0, — 5, and — 10; in the — 15 tube it is slight but definite; and in the other two growth is determinable on microscopic examination. Twenty-four hours later the growth in bouillon of an alkalinity of — 15 has become as copious as that in the three tubes of lower alkalinity, while that in the tubes at — 20 and — 25 remains indeter-

minable by the naked eye. Later more active growth occurs in these tubes also; apparently assisted by the reduction of alkalinity in the medium due to the formation of acid by the micro-organism.

We have grown it in a large quantity (a litre) of bouillon which contained ½ gram of sodium hydrate to the litre; that is to say having an alkalinity of — 25 on Eyre's notation (35 degrees more alkaline than ordinary standard media). In this case the production of acid was such that the culture was only faintly alkaline to litmus at the end of six days' growth. The nature of the acid formed is quite unknown. Mr. Ryffel, of Guy's Hospital, has kindly undertaken to assist us in identifying it. Up to the present, however, an exact analysis has not been possible. It apparently is not a lactic acid—a fact of interest in view of the old experiments of Richardson on dogs.

Animal Experiments.

We have examined the action of this organism in the living body on seventeen rabbits with positive results, and have obtained the following effects from inoculations into the venous system, namely, fever and wasting, mono-arthritis, polyarthritis, paresis of limbs, pericarditis, endocarditis, septicaemia, and death. Some of our rabbits have had two or three attacks of acute arthritis from successive inoculations; and one still under observation and in excellent condition has had four distinct attacks following as many different injections of the micro-organism.

The cultures which we used for the inoculations were all from growth on alkaline glycerine agar of about twenty-four hours' incubation. Paine and Poynton state that they employ blood-agar cultures for the purpose of inoculation; and this undoubtedly forms a better culture medium. There are, however, obvious objections to the intravenous injection into animals of material scraped from a number of culture tubes whose surface is covered with fine shreds of fibrin. Some shreds are almost certain to be injected, and are likely to become entangled in the chordae tendineae of the right heart, or to form emboli within the lungs with consequent infarction. Accordingly we decided not to use blood-agar cultures for the animal experiments.

We have been able to obtain quite copious growth on the medium we employ, but a blood medium appears to be necessary for the maintenance of the vitality and virulence of the micrococcus for any length of time. We are now trying blood-agar made by a special method, namely, by adding a quantity of sterile defibrinated blood to melted agar tubes when they have cooled to about 40° C. The tubes are then sloped and rapidly solidified. A perfectly smooth agar surface impregnated with unaltered blood is thus obtained, and the medium is, so far as we have tested it, extremely satisfactory and convenient.

The amount of culture necessary to obtain results depends on the activity of the organism employed. Paine and Poynton found that they required about six blood-agar cultures of their specimens. With cultures of the organism recently isolated from the human subject a similar number of glycerine-agar cultures has in our hands invariably caused death within forty-eight hours in inoculated rabbits; and we have obtained arthritis and even death with as little as a single agar culture, especially after passage of the organism through the rabbit.

We do not propose to give the protocols of our experiments at length in the present paper. But the results which we have obtained with the four specimens of the micrococcus used for inoculations may be summarized as follows:

1. *Large Doses.*—Six or more agar cultures cause death within some forty-eight hours of the time of inoculation. *Post mortem* we have usually found a large pericardial effusion, and sometimes pleural effusion also; there is a marked engorgement of the heart, which appears to be dilated, and there are sometimes beady vegetations upon the mitral valve, and occasionally on the tricuspid segments also. The joints are very hyperaemic, and may contain a clear effusion. The organism is found in pure culture in the blood, in all the exudations, and in the urine. It is also seen in sections of the heart valves (mitral) and synovial membranes of the joints.

2. *Moderately Large Doses.*—Death may occur in three to seven days or as late as three weeks after the inoculation. *Post mortem* in the earlier cases there was found a clear or blood-stained pericardial effusion and sometimes also effusion in the pleural cavities. There is effusion in the joints and tendon sheaths which may be clear or turbid, and in some joints is flaky or definitely purulent. From all the effusions the organism can be isolated in pure culture, and also from the heart blood.

3. *Small doses* of the original organism or of cultures from the heart or joints of animals killed under 1 and 2 above, give rise on inoculation to acute arthritis. This may affect only one joint but is more usually a polyarthritis passing from joint to joint in a characteristic manner, and tending to involve especially the wrists, ankles, and knees. These cases tend to make complete recovery. After recovery a fresh inoculation usually induces a fresh attack, which may affect the same or different joints from those affected in the previous attack. The arthritis usually develops in from three to six days from the date of inoculation.

Up to the present we have been unable to obtain chronic valvular disease of the heart in rabbits from inoculations of the micrococcus. Nor have we seen fungating endocarditis follow infection, though very striking examples of this have been obtained by Paine and Paynton. But Dr. Vernon Shaw, to whom we sent some of our cultures, allows us to state that one of these has in his hands produced endocarditis and visceral infarctions in an inoculated animal.

We have not seen a true chorea result from our inoculations into the blood stream, although a number of quite young animals have been used. Our cultures, even from chorea in man, have up to the present given us only acute rheumatism in animals. On one occasion, however, we have observed violent spasmodic movements of the head upon the second day after inoculation, in an animal which had developed a mono-arthritis within twenty-four hours of its inoculation, and died on the third day with beady vegetations on the mitral valve; and in another animal, which suffered from polyarthritis, and eventually recovered completely, there was for several days paralysis of both hind limbs.

Some emphasis has been laid by various observers on the non-suppurative character of the lesions following inoculations of this micrococcus. This we do not regard as of particular importance. An intravenous inoculation is the least likely to result in local suppuration, but under suitable conditions the arthritis which results may become undoubtedly purulent. Pus is occasionally seen, moreover, in rheumatic lesions in the human subject; and that the rheumatic coccus can, like any other pathogenetic bacterium, give rise under suitable conditions to suppuration is evidenced by the fact that we have produced a suppurative peritonitis in the rabbit by an intraperitoneal inoculation, and have twice seen the formation of a subcutaneous abscess after inoculation in the subcutaneous tissue of the abdomen. Moreover, on two occasions, when a small amount of the intravenous injection had escaped into the subcutaneous tissue of the ear, we subsequently saw a local suppuration and a polyarthritis both present in the animal together and both recovering. Small subcutaneous inoculations, however, usually give rise to a local infiltration which goes on to the formation of a fibrous nodule in the subcutaneous tissue.

Conclusion.—As a result of our experiments we agree with those observers who maintain that a particular micro-organism is constantly associated with acute rheumatic lesions; that this micro-organism can be cultivated on artificial media outside the living body; and that on inoculation into animals it gives rise to the characteristic lesions of the disease, and can again be isolated from those lesions.

Culturally this organism resembles a streptococcus, but that it is specifically different from the ordinary streptococci is rendered probable by our results on the application of the test of Marmorek.

Accordingly, we conclude that the bacterial specificity of acute rheumatism has been satisfactorily established. Its toxic specificity remains to be investigated; and is at present under examination.

Our thanks are due especially to Dr. Newton Pitt for much assistance in obtaining material for our investigation, and also for many valuable suggestions during the course of our experiments.

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A PSYCHOLOGICAL RESEARCH LABORATORY AT BUDA-PESTH.—A psychological research laboratory has been established in Buda-Pesth. It is under the direction of Dr. Paul Ranschburg and the Minister of Public Worship and Education, Dr. Julius Wlassics, has recognized it as an integral part of the Royal Hungarian Paediatric Institute, which is now housed in a fine set of buildings.

Notes
ON
DISEASE IN ADVANCED LIFE.

Being the Presidential Address delivered before the Shropshire Branch of the British Medical Association.

BY GEORGE HAWSON KEYWORTH, M.B.LOND., M.R.C.S.ENG.,
Wem, Salop.

IT is certain that many of the ailments of old age are due to more food being taken than the eliminating organs can get rid of, and a reduction in the amount of food should always be made as maturity glides into senility. If an old man has a good appetite and can digest well, let him have his usual three light meals a day; but as a rule the healthiest old people are the spare eaters. The case of "Old Parr" of this county may be cited as an instance of long life with very simple diet. He was supposed to be 150 years old when brought from Shropshire to see Charles I. in London, where he died. His ordinary diet consisted of subrancid cheese, milk, coarse bread, and small drink, generally sour whey. When brought to London he was tempted to eat more than customary and also, Dr. Harvey said, to partake of strong drink; these things soon ended his long life.

Few people realize how easy it is in most instances to avoid stomach derangements and their results as shown in upsetting the health of old people by adopting food appropriate to their age and activity. Brain workers can enjoy a fair degree of health by living on light food which does not require much force to digest or much muscular activity to assimilate. On a diet of well-made bread in variety, vegetables and fruits, with a fair quantity of eggs and milk, very little animal food, and without alcoholic stimulants, many disorders of old age may be avoided and life prolonged. Indigestion denotes, not a disease, but an admonition; it means that the individual thus admonished is not taking appropriate food. For inactive and aged persons three-fourths of the nutrient matters consumed should be derived from vegetable, cereal and milk produce, and one-fourth only from the animal kingdom, and many men of 60 and upwards corroborate this statement.

The typical man of 80 or 90 years, still retaining a respectable amount of energy of body or mind, is lean and spare, and lives on slender rations. The writings of Cornaro, who came of a noble family at Venice, show the extent to which some old men have reduced their food with great benefit, and he gives us facts and hints which ought not to be forgotten. He wrote his first essay on diet when 83 years old, and his object was to show that with increasing age and diminished powers a corresponding decrease in quantity of food must be observed to preserve health. After a wild and restless youth which destroyed his health, he restored himself after the age of 40 to perfect health by a most rigid diet. His food was regularly weighed and measured, amounting daily to 12 oz. solid food and 14 oz wine. The solid food consisted of bread, meat, and eggs, and the wine was the usual weak wine of North Italy. He lived on this frugal fare till he was nearly 100 years old, in the enjoyment of excellent health both of body and mind As age advances beyond fifty years, a man must reduce his "intake," because a smaller expenditure and less active elimination are enforced conditions of his existence, otherwise he will in time inevitably poison and undermine his general health with an accumulation of effete matter conducive to gout, uraemia, or apoplexy. Such a condition not uncommonly occurs when a diarrhoea has been too quickly checked in an elderly person. Take a common condition where there is imperfect renal action; excrementitious matter collects in the blood, Nature sets up diarrhoea as a compensatory process of elimination, which may need control, but should not be unwisely stopped.

Just as there is a process of evolution of the brain as the child grows and development of faculties takes place, so there is a waning of the power in old age, till at last a helpless dotage or bedridden condition is reached—a true involution of the nervous system. The highest centres are the last developed, and they are often the first to go. Mental impairment manifests itself comparatively early in some persons, as is shown by the clinical symptoms indicative of cerebral embolism and brain softening or disseminated sclerosis. Straitened means and a failing brain often go hand in hand—ill-fed body and brain—especially as busy anxious men too often forget Nature's call for bodily sustenance, and the first unnatural stimulant to hand is resorted to temporarily to bridge over the lapsed food interval. The intimate association of brain, nerve, and digestion cannot with impunity be disarranged in manhood or old age. At other times the decay of the nervous system in elderly persons assumes another aspect, and has other features. There is not such a marked impairment of the intellectual processes as a decadence of the motor powers. The condition is one of cerebro-spinal sclerosis or locomotor ataxy.

One hears sometimes of a man being of "an apoplectic habit," meaning a red face, short thick frame, and a bull neck. But it is a great mistake to assume that such persons alone are liable to apoplexy. Small active beings without an ounce of fat on them die of apoplexy, and very often there are no premonitory symptoms. During a sudden spell of cold weather many elderly people are stricken with it; the cold contracts the multitude of cutaneous vessels, and so limits the vascular area, with the consequence of sending up the blood pressure in the internal arteries; then a brittle encephalic artery may snap and effusion of the brain follows; or the heart, if weakened by dilatation or commencing fatty degeneration, may fail, being unable to overcome the opposition offered to its contraction. Bright's disease, with granular kidney, high blood pressure, and a large left ventricle are common predisposing causes of cerebral haemorrhage.

A pulse with high tension in renal disease is a danger signal, and persons of full habit should keep the skin active and warm, take a sharp purge pretty often, and a spare dietary as preventive measures. Especially is it necessary in this condition to avoid meat and malt liquors, filling the blood with an excess of excrementitious products which defective kidneys cannot get rid of, for I believe that quite as much, if not more, disease in old people is the result of erroneous habits in eating than of the habitual use of alcoholic drink, great as the evil of that is. High arterial tension in one part of the body may be compensated for by a dilatation of vessels in some other part—the liver and also perhaps the pancreas; and thus glycosuria may be induced, as is sometimes found in cases of granular kidney and angina pectoris. The late Sir B. W. Richardson was once asked: "When a patient has sugar in the urine, how do you decide whether he is glycosuric or diabetic?" He fixed his eyes on the inquirer, and said, "I *look* at him." In patients over 60 years of age, if there be a history of gout, if the general health is good, and if the thirst be slight and flow of urine moderate and not exceeding specific gravity 1030, the patient is most likely the subject of glycosuria, and not diabetes. In such cases (and they are not uncommon in advanced life) there is no special danger of life, and the ordinary diet should not be much restricted beyond avoiding sweets. Warm clothing is necessary; cream and sodium salicylate are beneficial.

Again, in advanced life, the reactions and remarkable sympathies between different organs which interest the practitioner and aid him in his diagnosis are much less constant. Vomiting is less generally present in disease of the brain, liver, or kidney than in the adult, and it may be absent even in organic disease of the stomach itself. It will scarcely be credited how latent an attack of pneumonia or empyema may be in some old people who frequently die suddenly and unexpectedly. An increase in the bronchial secretion is a normal state in the very old, and this has been regarded as a compensation for the arrested skin action. The transition from this to severe bronchitis is both easy and frequent, and is favoured by the liability to lung congestion and by the enfeebled heart power. When a generally ill-defined illness is present in an old person, this latent pneumonia should be looked for. Sir James Paget and Mr. Howard Marsh have described a senile tuberculosis sometimes met with in persons over 60 years of age. Its general features are similar to those in youth, but slower and more destructive, as shown by recorded cases of iliac abscess due to tuberculous disease of the spine, or of joints leading to suppuration and complete disorganization, tuberculous epididymitis at 65, suppurating cervical glands at 68, disorganization of wrist-joint at 75, requiring amputation; discharge of axillary glands, imitating carcinoma, at 62; and phthisis frequently.

Cancer rarely manifests itself for the first time in old age. When present it generally runs a slow course, and has been known to disappear. Sir James Paget gives some general rules for diagnosis in these cases. Doubtful discharges from bones or doubtful swellings not glandular, if tuberculous, are

generally more or less red and inflamed; if cancerous, not so. Tenderness and heat indicate tuberculosis rather than cancer.

In the diagnosis between tuberculous and primary cancerous lymph glands in old people the chief indications of cancer are hardness, close-clustering, deep-seated attachments and quick increase. In the cervical glands, which in old persons are the most frequent seats of both tubercle and cancer, the lower glands are generally tuberculous, the upper cancerous; the soft primary cancerous disease is very rare in the old. Cancerous disease in the old is often secondary to some comparatively trivial primary disease, tuberculous is very rarely so.

As age advances rest and warmth and nourishing food become more important than any treatment by cod-liver oil or iron or iodine, or even sea or mountain air.

It is remarkable that many persons have attained a great age under very insanitary conditions—in defiance of them, as it were. We sometimes hear the great ages of certain persons in a district quoted as evidence of the good sanitary state of the village or town, whereas a large proportion of the inhabitants may have died young, while some survivors, inured to the evil surroundings, may have attained to great age, thus exemplifying the ability of the human body to adapt itself to varying and even unfavourable conditions.

The power of repair after injury and disease which is shown by some very old people is interesting and remarkable. Fractures (excepting the well-known fracture of the neck of femur) often unite as quickly as in younger persons, and wounds and ulcers often heal rapidly. It seems as though the nutritive efforts requisite for the work of healing may possibly take place more quietly and smoothly, with less of that nerve irritation and of haste which is incompatible with good speed or safe progress.

It is always of the greatest importance to ensure regular and efficient action of the bowels by attention to diet and the administration of laxative drugs with tonic action, for example, cascara, colocynth, or aloin, with belladonna and strychnine. Saline aperients are as a rule too "cold" for the aged, and when administered must be combined with aromatics.

A dose of calomel may frequently be given with much benefit to the old and those who are not very unsound. Its marked antiseptic qualities are very beneficial in purifying the alimentary tract, and so clearing out noxious bacterial toxins of gastro-intestinal origin which give rise to many cases of chronic toxaemia ending even in general paralysis or tabes dorsalis. Few remedies are more useful in many cases of bronchitis with dyspnoea and inefficient expectoration in old people than a good purge, for example, the pulv. jalapa co.; it not only produces copious serous motions, but also acts on the kidneys, and thus, so to speak, drains the lungs.

Diuretics, especially potassium acetate, are valuable where the skin is altered in structure with advancing years, and does not perspire. They seem to take the place of diaphoretics, which often fail in old people. Digitalis is apt to impair appetite, but with blue pill and squill it is a highly satisfactory diuretic and tonic in the bronchitis and heart failure of the aged. Asthma in old people is often the consequence of retrocession of gout, the disappearance of skin eruptions or cessation of discharges, especially in thin persons of neurotic disposition. The association of angina pectoris with gout and atheroma is well known; both conditions are generally relieved by sodium nitrite or nitroglycerine.

It must be remembered that emphysematous and bronchitic old persons are a chilly race who make little heat because of the impairment of chemical interchanges in their lungs; consequently their body heat must be preserved to the utmost by nourishing food and wine, by a warm atmosphere and light warm clothing. The value of ammonia, strychnine, and ipecacuanha as stimulants to the respiratory centre is now fully realized. Another very useful help in this condition is the inhalation of strong turpentine vapour off boiling water.

Quinine has been called the iron of old age, and no doubt it is useful, but it should be given with aromatics or it may cause some discomfort to the urinary syttem.

Good wine is among the best of tonics for debility accompanying disease in advanced life. As "Milk is the wine of infancy, so wine is the milk of old age."

In that painful malady of old men, prostatic enlargement and its consequences, antisepsis and regular use of the catheter are paramount, and where any residual urine remains, washing out the bladder with a solution of boric acid or quinine or iodoform-emulsion (also requisite in cases of paraplegia where the bladder becomes foul), the internal administration also of urotropine, sodium salicylate or salol and benzoates are necessary. Lately the simple operation of vasectomy has led to more or less atrophy of the prostate and considerable relief, and the more formidable operation for complete removal of the prostate itself is full of promise, and has in recorded cases been most successful.

I will not occupy time by speaking of gangrene, passive haematuria, and prurigo senilis except to say that this last may be due chiefly to retention of urine solids or bile acids in the blood, and is common in persons with gouty kidneys. A blue pill at bedtime, and saline aperient the following morning will often give great relief to the intolerable itching, if followed by the use of uric acid solvents and the reduction of nitrogenous food.

A word about exercise. Long livers have usually been early risers and good walkers. Nothing so effectually promotes the more equable distribution of the blood and averts the constant tendency to local congestion in the brain or abdomen as walking exercise. Its salutary influence on the functions of the lungs and skin is well known, and a good walker can generally do without the stimulus of alcohol; so that a healthy old man may say:

> Therefore my age is as a lusty winter—
> Frosty, but kindly.

PRELIMINARY NOTE ON THE PARASITES OF SMALL-POX AND CHICKEN-POX.

BY

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INVESTIGATIONS carried on during the past five years upon the morphology and development of the parasites of small-pox and chicken-pox have led us to formulate the following tentative conclusions:

1. There are present in the blood of persons suffering from haemorrhagic small-pox small spherical bodies, highly refractive, and in general appearance simulating small globules of fat. These do not stain, however, with osmic acid, nor with any of the usual basic or acid stains. In haemorrhagic cases they were found in considerable numbers from the third or fourth day till death. Similar bodies were found, though in much smaller numbers, in cases of confluent small-pox from the third or fourth day, till the end of the first week or occasionally even later and abundantly in the prodromal stages of both small-pox and chicken-pox. These bodies were quite unlike, both in appearance and staining reaction, any of the ordinary histological or pathological constituents of the blood, and are much larger than haemoconia (size 1-5 μ).

2. In sections of the skin containing haemorrhages similar bodies are found among the extravasated blood corpuscles, but these seem to differ from the objects just referred to as being found in the blood stream, in so far that they stain, though very faintly, with both basic and acid stains.

3. In the lymph spaces and in some of the smallest blood vessels of the skin, subjacent to the cells of the epithelial layer are found groups of small spherical bodies considerably larger than staphylococci and staining with considerable difficulty. Their affinity for the ordinary stains seems to vary considerably, as in some cases the staining is comparatively faint though more distinct than that of the bodies found in the haemorrhages while in other cases the staining is decided and comparatively deep.

4. In the lymph spaces of the skin and especially in those immediately adjacent to the basement membrane of the epithelium, which are often much dilated in cases of haemorrhagic small-pox, there are found considerable numbers of small spherical bodies more closely grouped in certain situations than in others; these are larger than streptococci and stain with comparative ease with most basic dyes. These commonly assume a peculiar purplish tint different from the green presented by cocci and nuclei when Ehrlich's triacid stain is the reagent employed. The deeper groups of these bodies are often very conspicuous even in parts where there is no evidence of cellular or nuclear degeneration.

5. In sections of the skin taken from cases where the eruption is moderately advanced bodies such as are described are present and can be recognized in large numbers in the

epithelial layers. When associated with remains of disintegrating nuclei their presence is detected with difficulty.

6. In smears from vesicles bodies the same as those discussed in paragraphs 4 and 5 or at least having like staining reactions are also found and in the sections of the skin taken in the papular stages of the eruption similar bodies are present in the lymph exuded among the epithelial cells. Bodies having the same characters are sometimes present in small numbers in the blood of patients suffering from haemorrhagic small-pox.

7. In smears taken from the pocks in the later stages of the eruption, within certain of the cells small clear bodies may be seen which stain very faintly with ordinary reagents. In smears of gradually-increasing age these clear bodies are seen to increase in size until they occupy the greater part of the cell, and in smears taken at still later date these bodies are found apparently in a free state. They still stain very faintly, and present no appearance of a nucleus.

8. The absence of pyogenic micro-organisms, both from smears and skin sections, is very striking in the haemorrhagic cases, and during the earlier stage of the rash in those cases in which the eruption ultimately became pustular. Out of seventeen haemorrhagic cases examined, only three showed pyogenic organisms in sections of the skin. In one of them cocci were present in the vessels in which they formed minute thrombi; in a second case a bipolar-staining bacillus was found in groups in the corium; and in a third case both cocci and bacillus just referred to were associated.

9. Towards the end of the vesicular and in the pustular stage pyogenic organisms are frequently found in sections, smears, and cultures.

10. Appearances similar to those described as being present in smears, vesicles, and pustules of the skin in variola occur also in varicella.

In haemorrhagic and in confluent cases of small-pox, pyogenic organisms are very commonly found in the blood; these, however, are probably to be regarded as a result of accidental contaminations of the blood stream by absorption of organisms, in haemorrhagic cases probably from the lungs, in sections of which cocci are found in immense numbers, and in confluent cases by absorption from the skin, and possibly from the lungs also.

AN IMPROVED METHOD OF TESTING FOR LEAD IN URINE,

WITH SOME NOTES ON THE CONTINUED PREVALENCE OF DIACHYLON POISONING IN THE MIDLANDS.

BY

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and

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The object of this paper is threefold:

I. To remind members of our profession how common is the use of diachylon as an abortifacient in the midlands.

II. To criticize the magnesium wire deposition test for lead in urine.

III. To bring to notice a modification of the electrolytic test of great delicacy and simplicity, which has been used by Mr. S. R. Trotman for some time with much success.

I. The Prevalence of Diachylon Poisoning.

This pernicious practice appears to have been growing since it was pointed out by Dr. Pope, of Leicester, in 1893. Dr. George Crooke showed its prevalence in Birmingham in 1898. Dr. Bell Taylor records a case in Nottingham in 1898. Dr. W. B. Ransom published notes of a number of cases in Nottingham in 1900. Dr. Wrangham records among others a case from Sheffield in 1901. Dr. W. Scott published in the *Sheffield Quarterly Medical Review* in 1901 notes of 27 cases occurring in the practice of the General Hospital, Nottingham.

I myself have seen 18 cases; these have presented most diverse symptoms, as shown in the following list:

(*a*) Previous diagnoses: Cerebral tumour, 1 case; intestinal obstruction, 2 cases; ruptured tubal pregnancy, 1 case; anaemia with gastritis, 1 case; renal calculus, 1 case.

(*b*) Most prominent features of other cases: Optic neuritis, 2 cases, one ended in atrophy with absolute blindness, the other completely recovered; acute mania, 2 cases, one commenced with a series of epileptiform convulsions—both recovered after about six months; severe abdominal pain and vomiting, 4 cases; severe anaemia with milder abdominal symptoms, 3 cases.

They all presented a severe anaemia with a characteristic faintly yellow complexion and the great majority a fine tremor of hands, lips and tongue.

In the great majority of these cases an examination of the gums decided the diagnosis with a finality from which there was no further appeal. There are, however, a certain number of cases in which the gums fail to give the sought-for proof. This arises from two causes.

1. The cause common to all lead poisoning, that scrupulous cleanliness of the gums prevents the formation of the sulphuretted hydrogen necessary to the formation and deposition of the lead sulphide. This occurs usually in the more youthful unmarried women.

2. I have seen one patient in whom the black punctate line was very faint and certainly not decisive (surely the term "blue line" is very misleading for it consists of a series of black dots absolutely distinct from the truly blue line of defective cleanliness), yet three weeks later—during which she had no opportunity of taking more pills—the line was beyond dispute. Mr. Chicken tells me that he has seen a case of diachylon poisoning in which the symptoms of lead poisoning preceded the appearance of the blue line by three weeks. It is therefore, as one might expect, a fact that the line may take some time in appearing and its absence may easily mislead one.

It is therefore of advantage to possess some other means for demonstrating the presence of lead.

II. The Magnesium Wire Deposition Test.

In the *Lancet* of January 16th, 1899 Dr. Hill Abram published a modification of von Jaksch's test for lead in urine, which appeared almost as simple as testing for sugar; this I adopted some years ago, and was charmed with it, until I tried it with normal urine, with which it gave an identical result. Last year, under the kind tuition of Professor Kipping I endeavoured to obtain crystals of lead iodide from the yellow deposit obtained by this test from the urine of cases of severe plumbism and never once succeeded, yet I did obtain them from solutions of lead in water of 1 in 50,000 dilution as stated by Hill and Marsden.

The reasons for this apparent anomaly I believe to be as follows:

1. Dixon Mann states that the usual amount of lead excreted in the urine in cases of chronic lead poisoning is less than 1 milligram per diem, and assuming the quantity of urine to be 1 litre, lead is present in a dilution of less than 1 in 1,000,000. Mr. Trotman has confirmed this in two cases of chronic plumbism occurring in painters. The urines contained 0.032 and 0.006 milligram per litre respectively. It follows that a test having a limit of 1 in 50,000 will fail.

2. Recently in a case of diachylon poisoning Mr. Trotman has found in the urine 32 milligrams of lead per litre; this is equal to 1 in 26,000 solution, yet here he failed to obtain the magnesium wire test; and it was in similar cases that I failed to obtain the test.

In these cases some other explanation is needed. Now it is well known that lead is excreted in organic combination, and that on this account it fails to give the ordinary chemical tests; this no doubt is the true explanation of this failure.

III. The Electrolytic Test.

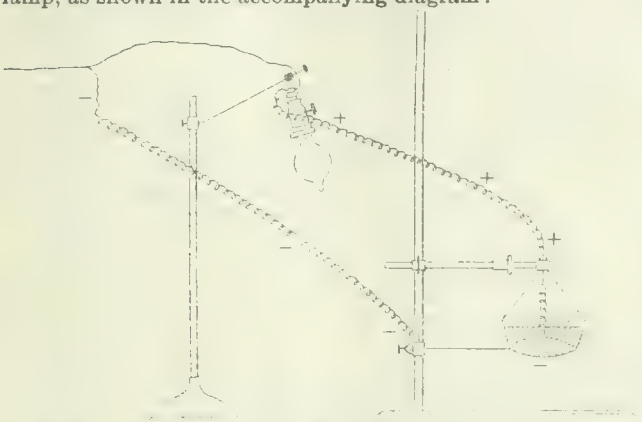
I have recently been fortunate in obtaining the aid of Mr. S. R. Trotman, our city analyst, who has not only confirmed my results with the magnesium wire test, but has tested a number of suspected urines by a modification of the electrolytic test which is both simple in manipulation and of extreme delicacy, and of which he gives the following account:

"It is unfortunate that the destruction of organic matter is essential, since the necessity for so doing often precludes the possibility of a rapid chemical diagnosis, such as could be carried out by a medical man unsupplied with laboratory apparatus. The need of rendering the combination of the lead less complex than it is in the albuminate of the urine is not, however, to be wondered at when we remember that delicate chemical, and particularly electro-chemical, reactions depend very largely upon the dissociation of a compound into its ions. Organic matter is commonly destroyed by means of hydrochloric acid and potassium chlorate, nitric acid, or other oxidizing mixtures. In the case of urine partial destruction only is required. The solution thus obtained is filtered and the lead separated by means of sulphuretted hydrogen or a double cell. Dixon Mann recommends that the liquid be placed in the inner portion of a

double cell, and dilute sulphuric acid in the outer. The cell is connected with the terminals of six Grove cells and the current allowed to run for six or eight hours. This method is perfectly satisfactory, but is capable of several minor improvements which greatly increase the simplicity of the test without altering its delicacy. The following are details of the exact method we have adopted with most satisfactory results.

"About 250 c.cm. of the suspected urine are placed in a porcelain dish (free from lead), and a few cubic centimetres of lead free sulphuric acid. A small flame is placed beneath the dish, and about 5 grams of potassium persulphate (K_2SO_4) are added little by little, with occasional stirring, the temperature of the liquid being gradually raised to 100° C. In about half an hour the contents of the dish will have become almost colourless, owing to the oxidation of the organic matter.

"Potassium persulphate is now a commercial product, and possesses many advantages over other oxidizing agents. Its substitution for hydrochloric acid and potassium chlorate does away with the evolution of noxious fumes and the prolonged boiling necessary to get rid of excess of the latter. When the liquid has concentrated to about 50 c.cm., it is introduced into a platinum dish, and an electric current passed through it for about eight hours. The current is obtained from the main supply by first running it through a lamp, as shown in the accompanying diagram:



"Before commencing the experiment the poles are tested by introducing the terminals into a solution of salt containing a few drops of phenol phthalein. After allowing the current to run for a sufficient time (conveniently over night) the liquid is poured away, and the dish well washed with distilled water. Hydrochloric or nitric acid is then added, and after digesting on the water bath or heating over a bunsen flame, a stream of sulphuretted hydrogen is passed through the liquid. The quantity of lead present may be accurately determined by matching the colour with a standard solution of lead nitrate. Great care must be taken to obtain lead-free sulphuric acid, and every fresh batch of materials should be tested by a blank experiment. As before mentioned, by employing the test in this way the most minute quantities of lead have been easily detected in specimens of urine when other tests have given negative results."

I have to thank the staff of the General Hospital for allowing me to make use of cases which I saw there while house-physician.

THE INFLUENCE OF SOME MODERN DRUGS ON METABOLISM IN GOUT.

BY WILLIAM BAIN, M.D., M.R.C.P.,
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THE increasing attention paid to variations in the constitution of the urine in gout has been partly directed to the relative proportions of the nitrogenous end products. From the therapeutic standpoint modifications induced by different substances in such urines have been studied by many observers. It is obvious that if drugs having a beneficial effect on the disease produce variations of a similar kind, a basis is provided from which inferences can be drawn in regard to the question of its causation. Among drugs employed in the treatment of this affection are a number which have been extensively recommended in recent times, and *a priori* might be expected to produce similar quantitative modifications of the urine. Such are tartrate of piperidin, benzoate of lithium, piperazin, lysidin, urotropin, sidonal, and colchi-sal. With the main object of ascertaining the influence of the drugs mentioned on metabolism they were administered to a case of chronic gout, the patient being on a fixed diet during the investigation. The general result was to indicate an absence of uniformity; a remark which applies with special force to the excretion of uric acid.

In an earlier case the investigation was rendered abortive through the development of a subacute attack of gout. This case is however included in the paper, owing to a special point of interest. It will be unnecessary to give more than the briefest clinical details of these two cases. As the methods of analysis and diet were similar in both cases they may be described now.

Methods of Analysis.—The urea was estimated by the hypobromite method, and the uric acid by Hopkins's process. For the estimation of the acidity titration by decinormal caustic soda was adopted, phenolpthalein being the indicator. For the P_2O_5 titration with uranium nitrate was employed.

The sulphates were estimated as follows: To 200 c.cm. of filtered urine 10 c.cm. of hydrochloric acid was added, followed by an excess of a saturated solution of barium chloride. The flask was shaken, and the precipitate allowed to settle. It was then separated by filtration, and washed chloride free with cold distilled water. The filtrate and washings were boiled for fifteen minutes and allowed to stand over night. In this case also the precipitate was washed chloride-free with hot distilled water. Both precipitates were further washed with alcohol and ether, dried and incinerated in a weighed capsule, the filter papers being of known ash.

Blood.—The films in Case I were fixed with formalin vapour, and stained with eosin and Loeffler's methylene blue. In Case II the films were fixed with heat (120° for about fifteen minutes) and stained, as in Case I.

Fixed Diet.—Breakfast: Tea, 1 pint; bread, 3 oz.; butter, 1½ oz.; and egg, 2 oz. Lunch: Milk, ½ pint and 2 biscuits. Dinner: Bread, 1½ oz.; meat, 4 oz.; potatoes, 3½ oz.; butter, ½ oz.; apples, 4 oz.; and lemonade, 4 oz. Tea: Tea, 1 pint; bread, 3 oz.; butter, 1½ oz.; and egg, 2 oz. Supper: ½ pint beef-tea.

Case II was placed on the fixed diet with regulated exercise four days before the analysis of the urine was commenced, and after Christmas similar conditions were observed.

I take this opportunity of thanking Dr. Barrs for his courtesy in placing the two cases at my disposal, and also Dr. Telling for supervising the diet and treatment.

CASE I. *History.*—W. P., aged 54, a coach trimmer, was admitted on November 4th, 1900, into the Leeds Infirmary. His relatives were long-lived, and there was no family history of gout or rheumatism. Apart from gout he had always enjoyed good health. Twenty years previously he had an acute illness associated with severe pain in the great toe. This attack he attributed to sleeping in a damp bed. Subsequently other joints became affected. During the last five years subacute attacks had recurred every three or four months. He had always lived well, eating, as he said, more meat than bread, and drinking a moderately large quantity of beer.

State on Examination.—On admission there were many tophi in both ears, with small gouty deposits in the fingers and toes. The radial tension was markedly increased. On November 11th his temperature rose to 100° F., the left knee being painful and swollen. On the following day his temperature was 101° F. The urine at first contained a moderate amount of proteid, about one-twentieth by measurement, but with the advent of the febrile attack the proportion rose to about one-fourth.

An interesting point was the marked preponderance of serum globulin over serum albumen. As this is considered very unusual it is advisable to detail the method of estimation.

Quantitative Estimation of Serum Globulin.—On the addition of acetic acid in the cold to the filtered urine no precipitate formed. On boiling the filtered urine after the addition of a few drops of acetic acid there was a precipitate amounting to about ⅛ by measurement. A sample of the urine was half saturated with ammonium sulphate. It was then filtered, and the filtrate boiled after the addition of a few drops of acetic acid; a mere cloudiness resulted which remained unchanged after the lapse of forty-eight hours. Full saturation with magnesium sulphate in neutral solution gave a similar result.

It was decided that the supervention of the febrile attack with marked albuminuria rendered this case unsuitable for the investigation of the action of drugs and another was selected.

The results obtained in Case I are given in Table I on p. 244.

The most notable and characteristic features of these results are the low excretion of uric acid preceding the subacute attack, and the increase after its development. Possibly the uric acid secretion was modified by the exhibition of colchi-sal, but, judging by its effect in the second case, this modification

CASE I.—TABLE I.—*Showing the Analytical Details of the Urine in the Twenty-four Hours.*

Date.	Drugs Administered.	Total Quantity.	Specific Gravity.	Urea.	Acidity in Terms of Oxalic Acid.	Uric Acid.	P_2O_5.	Preformed Sulphates.	Ethereal Sulphates.
		c.cm		grms.	grms.	grms.	grms.	grms.	grms.
Nov. 6	—	1,150	1018	25.30	2.79	0.281	1.78	1.84	0.196
,, 7	—	950	1020	24.70	2.51	0.243	1.99	1.82	0.146
,, 8	—	1,390	1017	26.01	2.62	0.340	1.94	1.91	0.156
,, 9	—	1,120	1016	28.02	2.58	0.304	1.90	2.01	0.289
,, 10	—	1,394	1014	25.78	2.46	0.250	1.88	1.81	0.136
,, 11	—	1,984	1012	27.72	2.61	0.316	1.97	1.89	0.114
,, 12	Colchi-sal, 3 capsules three times a day	820	1020	25.42	2.37	0.389	1.76	1.96	—
,, 13		960	1022	29.76	3.29	0.489	1.72	2.10	—
,, 14		890	1024	27.79	3.66	0.460	2.12	1.87	0.091
,, 15		860	1023	24.94	2.60	0.472	2.28	1.79	—
,, 16		1,284	1017	28.24	3.07	0.501	2.34	2.02	0.183

was not in the direction of an enhanced excretion. Some writers state that the acidity of the urine varies directly with the excretion of uric acid. To this view the results give some support, although the variations are not consistently parallel.

The examination of the blood revealed a distinct leucocytosis. On a differential count it was shown that the true eosinophile cells were markedly increased, and there was present a moderate number of the peculiar myelocyte-like cells originally described by Chalmers Watson. I am indebted to Professor Birch for his kindness in preparing the films in this case.

CASE II.—TABLE I.—*Showing the Analytical Details of the Urine in the Twenty-four Hours.*

Date.	Drugs Administered.	Total Quantity.	Specific Gravity.	Urea.	Acidity in Terms of Oxalic Acid.	Uric Acid.	P_2O_5.	Preformed Sulphates.	Aromatic Sulphates.
		c.cm		grms.	grms.	grms.	grms.	grms.	grms.
Nov. 21	—	1,290	1016	24.51	2.76	0.412	2.10	1.61	0.155
,, 22	—	1,100	1018	23.10	2.32	0.400	1.92	1.54	0.132
,, 23	—	1,080	1015	23.76	2.48	0.437	1.84	1.56	0.132
,, 24	—	1,144	1015	24.02	2.34	0.450	1.77	1.50	0.084
,, 25	—	1,105	1013	22.10	2.57	0.390	1.82	1.65	0.100
,, 26	—	995	1016	20.89	2.19	0.388	1.76	1.48	0.085
,, 27	Tartrate of piperidin, 10 gr. three times a day	965	1016	20.74	2.12	0.394	1.59	1.64	0.136
,, 28		1,075	1015	20.96	2.21	0.368	1.61	1.37	0.133
,, 29		1,310	1015	21.61	2.52	0.412	1.81	1.50	0.137
,, 30		1,320	1013	21.78	2.29	0.464	1.71	1.55	0.131
Dec. 1	—	1,450	1015	25.00	3.15	0.491	2.08	1.71	0.168
,, 2	—	1,125	1014	22.61	2.33	0.417	1.79	1.54	0.143
,, 3	—	1,500	1012	22.50	2.45	0.449	1.87	1.48	0.131
,, 4	Benzoate of lithium 15 gr. three times a day	1,375	1015	20.90	1.99	0.406	1.75	1.47	0.172
,, 5		1,445	1012	24.56	2.45	0.411	1.84	1.90	0.146
,, 6		1,015	1014	20.09	2.12	0.373	1.74	1.46	0.104
,, 7		1,240	1016	25.79	2.71	0.481	1.93	1.80	0.104
8	—	1,060	1015	22.20	2.16	0.373	1.85	1.50	0.095
9	—	1,190	1014	26.18	3.14	0.497	2.14	1.73	0.143
,, 10	—	1,083	1013	22.20	2.59	0.497	1.79	1.54	0.102
,, 11	—	1,495	1013	25.41	3.76	0.508	2.27	1.86	0.136
,, 12	Piperazin 15 gr. three times a day	945	1017	21.92	4.47	0.421	1.70	1.46	0.082
,, 13		1,334	1016	24.41	3.52	0.531	1.76	1.87	0.091
,, 14		1,350	1012	22.27	3.06	0.538	1.78	1.63	0.113
,, 15		1,315	1014	22.80	3.31	0.498	1.89	1.65	0.012
,, 16	—	1,755	1012	28.10	3.42	0.612	2.28	2.14	0.107
,, 17	—	1,285	1015	22.48	2.67	0.452	1.72	1.71	0.122
,, 18	—	1,515	1012	23.62	2.86	0.433	1.82	1.71	0.165
,, 19	—	1,495	1012	22.42	2.61	0.452	1.94	1.83	0.128
,, 20	—	1,320	1013	21.42	2.41	0.459	1.76	1.66	0.131
,, 21	Lysidin, 15 gr. three times a day	1,375	1013	23.37	3.44	0.509	2.06	1.76	0.148
,, 22		1,230	1013	24.60	2.63	0.504	1.96	1.72	0.073
,, 23		1,485	1014	25.24	2.86	0.530	2.01	2.11	0.130
,, 24		1,220	1014	21.96	2.19	0.452	1.73	1.73	0.146
Jan. 8	—	1,218	1015	22.57	2.38	0.481	1.91	1.81	0.132
,, 9	Urotropine, 10 gr. three times a day	1,265	1014	24.60	2.09	0.426	1.99	1.86	0.125
,, 10		1,260	1014	23.90	2.50	0.423	2.01	1.83	0.112
,, 11		1,305	1012	24.84	2.64	0.466	2.07	1.87	0.130
,, 12	—	1,525	1011	24.50	2.53	0.414	2.06	1.71	0.140
,, 13	—	1,555	1011	23.32	2.37	0.466	1.92	1.81	0.158
,, 14	—	1,385	1012	21.85	2.93	0.402	2.07	1.72	0.145
,, 15	—	1,508	1011	22.69	3.13	0.539	2.17	1.94	0.139
,, 16	Sidonal 25 gr. three times a day	1,388	1013	23.39	2.27	0.505	1.87	1.74	0.121
,, 17		1,370	1015	24.11	2.86	0.538	2.02	1.87	0.188
,, 18		1,525	1014	21.12	3.02	0.511	1.94	1.75	0.161
,, 19		1,543	1011	22.84	3.43	0.536	2.10	1.89	0.172
,, 20	—	1,130	1015	21.47	2.53	0.364	1.66	1.75	0.158
,, 21	—	1,585	1015	26.04	3.85	0.488	2.15	1.98	0.116
,, 22	Colchi-sal, 3 capsules three times a day	1,345	1014	21.86	3.21	0.348	2.21	1.67	0.168
,, 23		1,280	1016	23.68	2.93	0.346	2.00	1.91	0.195
,, 24		1,025	1018	21.52	2.88	0.397	1.76	1.62	0.172
,, 25		1,095	1016	22.77	2.86	0.459	2.09	1.56	0.215
,, 26	—	1,165	1015	20.97	2.77	0.502	1.97	1.66	0.101

CASE II. *History.*—J. M., aged 56, a plumber, had nothing of importance in his family history. His habits were temperate both in regard to alcohol and food. His first attack occurred sixteen years previously, but shortly before this he had symptoms which his medical adviser ascribed to lead poisoning. There was moderate pain in the proximal joint of the great toe. This disappeared in a few days. In a few months there was recurrence, other joints becoming affected. A year after the first attack he had an acute illness—probably rheumatism—during which nearly all the large joints were affected.

State on Examination.—Tophi were found on both ears. There was slight eversion of the fingers, with gouty enlargement of several joints. The metatarso-phalangeal joints of the great toes were somewhat enlarged and the toes slightly everted. The left knee was tender, and creaking could be heard on flexion. There was loss of power in the left leg owing to the sciatic nerve being affected. The pulse tension was slightly increased. There was the merest trace of albumen in the urine, which persisted throughout the investigation. The patient improved considerably during his stay in the hospital.

Referring primarily to the estimations made before the administration of drugs, it will be seen that the fluctuations are within physiological limits with one possible exception, namely, the aromatic sulphates. On two occasions their amount in relation to the preformed sulphates are below what may be regarded as the normal proportions. The uric acid excretion throughout is somewhat below the normal average. It will be observed that the acidity does not bear any proportionate relationship to the uric acid. I have stated in former papers that a rough parallelism existed between the excretion of uric acid and phosphorus pentoxide. In this case and the previous one the urine was generally very faintly acid and occasionally neutral, with the result that some of the earthy phosphates was frequently deposited. It is a point of practical importance that, even by vigorous agitation, this deposit cannot be uniformly diffused throughout the urine; consequently, the results obtained by the titration of a portion are not strictly reliable. The difficulty could be overcome by redissolving them with acetic acid, but this proceeding would interfere with the estimation of the acidity.

In view of the theory that impairment of the renal function is a necessary antecedent of gout, it may be pointed out that in the cases considered in this paper there was albumen associated with very moderate gouty deposits, whereas in two cases formerly reported by me the patients' urine contained no albumen, and yet the uratic deposits were excessive. It is also of some interest in the same connexion that in Case I there was a marked augmentation of the albumen coincident with the development of the subacute attack.

The blood preparations in this case, as compared with the former, gave almost negative results. There was an absence of leucocytosis, and the eosinophile cells were normal in number. There were, however, a few scattered leucocytes of the type described by Chalmers Watson with the pale staining eccentric nucleus.

CASE II.—TABLE II.—*Averages.*

	Urea.	Acidity.	Uric Acid.	P_2O_5.	Preformed Sulphates.	Aromatic Sulphates
	Grams.	Grams.	Grams.	Grams.	Grams.	Grams.
Fixed diet	23.70	2.44	0.413	1.88	1.55	0.114
Tartrate of piperidin..	21.27	2.28	0.417	1.68	1.53	0.134
,, ,,	23.37	2.64	0.452	1.88	1.57	0.127
Benzoate of lithium...	22.83	2.31	0.419	1.81	1.47	0.131
,, ,,	24.01	2.91	0.438	2.01	1.65	0.119
Piperazin	22.87	3.59	0.489	1.78	1.65	0.089
,,	23.60	2.79	0.481	1.90	1.81	0.142
Lysidin	23.79	2.78	0.505	1.94	1.83	0.124
Urotropin	24.80	2.84	0.430	2.03	1.81	0.128
,,	22.58	2.65	0.479	1.99	1.76	0.156
Sidonal	22.85	2.93	0.525	2.02	1.83	0.156
,,	24.20	3.19	0.426	1.90	1.86	0.162
Colchi-sal	22.70	2.89	0.387	2.01	1.68	0.187

Tartrate of Piperidin has been introduced by Tunnicliffe as a biurate solvent. Its action in this case on the excretion of uric acid appears to be slight, but the rise after its discontinuance warrants the hope of a more definite result if given in larger doses over a longer period.

Benzoate of Lithium.—The lithium salts have had a great reputation in gout since Garrod recommended them, but the administration of the benzoate has absolutely no apparent effect on metabolism.

Piperazin.—It is evident that piperazin has a slight augmenting influence on the excretion of uric acid, but a more

striking concurrent variation was the diminution in the aromatic sulphates.

Lysidin.—The augmentation of the uric acid excretion by lysidin is distinct, other variations being inconsiderable.

Urotropin is a drug specially efficacious as a urinary antiseptic. Its influence on uric acid excretion is shown in the table to be practically negative. The average is certainly higher than before the administration of drugs, but there is actually a slight fall relative to the excretion of the previous day.

Sidonal.—It has been claimed for sidonal that it reduces the production of uric acid to a remarkable extent, but it will be observed that the figures in the table are distinctly antagonistic to that claim. Of all the drugs used sidonal is the one with which is associated the most marked advance in the uric acid excretion.

Colchi-Sal.—As regards uric acid colchi-sal stands at the opposite end of the scale from sidonal with a minimum excretion. On the other hand it will be noted that the ethereal sulphates rise to a point above the normal proportion of 1 to 10 in relation to the preformed sulphates, the figures being the highest in the table. Curiously enough the patient was of the opinion that he derived greater benefit from colchi-sal than from any of the prescribed substances.

Subsequent to the investigation of the drugs just reviewed, my attention was drawn to tetra-ethyl ammonium hydrate, a uric acid solvent the power of which was demonstrated in Edison's laboratory to be ten times greater than piperazin. If a reliable biurate solvent were available it would provide an important means of treating gout. I therefore tested *in vitro* the solvent properties of the drug in this respect. The method employed has been described in a previous paper dealing with the solvent action of mineral waters on sodium biurate. The subjoined table indicates the result:

Table showing the Solubility of Sodium Biurate in 100 c.cm. of Distilled Water at a Temperature of 38° C., and in Distilled Water containing various Proportions of Tetra-ethyl Ammonium Hydrate.

	Sodium Biurate Dissolved in Terms of Uric Acid.
Distilled water...	0.115 gram.
1 per cent. tetra-ethyl ammonium ...	0.142 ,,
3 ,, ,, ,, ,, ...	0.240 ,,
5 ,, ,, ,, ,, ...	0.360 ,,

It will be seen that a 0.5 per cent. solution is a moderately powerful solvent for biurate. The substance being strongly alkaline it was a question whether the effect depended on an inherent chemical attribute or was the outcome of its alkalinity. To decide this point approximately liquor potassæ was then tried, and its solvent power found to be comparable with the other. The experiment was carried a step further by exactly neutralizing the alkalinity of tetra-ethyl ammonium hydrate with hydrochloric acid. This resulted in an absolute loss of solvent power. The clinical test is, however, the more important. The dose is 10 to 20 minims of a 10 per cent. solution. This drug should not be confounded with tetra-methyl ammonium, which is a powerful poison.

SUMMARY OF OBSERVATIONS.

1. There was an increase in albumen coincident with the development of a subacute attack of gout.
2. A preponderance of serum globulin over serum albumen was observed.
3. There were present in the blood the peculiar leucocytes described by Chalmers Watson.
4. Lithium benzoate and urotropin were ineffective as regards uric acid excretion.
5. Tartrate of piperidin, piperazin, lysidin, and sidonal in the order named showed an increasingly augmenting effect on the uric acid excretion.
6. The excretion of uric acid was diminished during the administration of colchi-sal and the conjugated sulphates increased.
7. The solvent action of tetra-ethyl ammonium hydrate on sodium biurate probably depends upon its alkalinity.

DONATIONS AND BEQUESTS.—At a meeting held on January 16th on behalf of the Hospital for Women in Birmingham £13,000 was raised, of which Mr. Arthur Chamberlain and Mr. Barrow Cadbury each gave £2,000.—The Chelsea Hospital for Women has received from "H. M. E." a further donation of £2 000.—Under the will of the late Mr. William Wells, of Guildford, the Royal Surrey County Hospital receives a legacy of £1,500, and the Surrey Convalescent Homes, for Men at Seaford and for Women at Bognor, receive £1,000 each.

ON A CASE ILLUSTRATING THE VALUE OF PHYSIOLOGICAL REST.*

BY W. M. WILLIS, F.R.C.S.ENG.,
Assistant Surgeon, Nottingham General Hospital and Nottingham Children's Hospital.

IN that delightful book of the late Mr. John Hilton, entitled, *Rest and Pain*, are recounted numerous cases illustrating the facility with which obscure cases of disease were accurately diagnosed by an ingenious process of reasoning from a knowledge of the anatomical distribution of nerves applied to the situation of pain complained of by the patient. The ingenuity of the reasoning and the accuracy of diagnosis arrived at by this anatomical knowledge cannot but excite admiration; and one is struck, as is usual with great truths, by the simplicity of the whole.

In addition to these lectures dealing with the diagnostic value of pain, there are others, which equally excite interest, in relation to the value of mechanical and physiological rest as a curative agent in injury and disease.

The case which forms the basis of this short paper is one which illustrates this truth very forcibly.

G. K., aged 72, is a man whom I saw in consultation with my friend Dr. Fulton on February 27th, 1902.

History.

His complaint was of pain in the rectum and the passage of large quantities of pus and blood. The passage of a motion was attended by severe pain, which was aggravated if the faeces were hard. In addition to the pus and blood which accompanied the motion there was a similar discharge coming through the anus in the intervals also. He had to some extent lost control over the sphincter, and was therefore in the horrible condition of a person who has involuntary evacuations. A short time before he began to complain of rectal symptoms he had sustained some accident by being crushed, but no bones had been broken, and the injuries were chiefly bruising and the shock which such an accident would entail on an old man. There was no evidence to show that his accident had any bearing upon his rectal disease, but it was in the course of his enforced rest in bed which the accident entailed that he first made any complaint about his bowel.

Fifteen years previously he had suffered from fistula in ano, and had been operated upon for this condition. This had been well for years, and did not appear to have been in any way connected with the condition for which I was asked to see him. Quite recently he had had an attack of urethritis; whether this had any bearing on his rectal trouble I cannot say.

Shortly after he began to have trouble in his rectum a large slough was passed per anum, and thereafter, in spite of treatment, he continued to pass pus and blood, and to suffer much pain, especially when the bowels acted.

Physical Signs.

On examining the rectum, which had to be done with the utmost gentleness on account of the pain it produced, there was discovered a large ulcerating surface on the posterior wall, and extending around the greater part of the circumference of the bowel, and reaching down to within about 2 in. of the anus. It had a ragged feeling to the touch, but was not indurated to a greater degree than that usual in inflammatory tissue which has been newly produced. A little above the lower edge of the ulcerated surface the finger entered a hole, and without the slightest force passed into a sinus or fistula which appeared to traverse the rectal wall in the direction of the upper part of the sacrum; it was of such a length that its upper limit could not be defined. The finger could, however, reach healthy mucous membrane beyond the upper border of the surface ulceration.

Dr. Fulton agreed with me in my belief that we could exclude malignant disease from the fact that there was an absence of the extreme induration of the edges of the ulcer which usually characterizes that condition. In addition, it is uncommon for a growth in the rectum to be attended with so large a discharge of true pus as in this case.

There was nothing in the history of the patient beyond the fact of the fistula, which existed years ago and had been well for so long, to excite a suspicion of it being tuberculous in character. His age, and the acuteness of the trouble also rendered tubercle improbable. His sex and the characters of the ulcer were opposed to the idea of its being syphilitic, and in addition to that there was no history suggesting that he had at any time had syphilis. Dysentery could also be excluded in the absence of any symptoms of this disease, and from the fact that the rectum is rarely ulcerated in this condition.

To what then was it due? At the time, the most I felt I could say was that it was of an inflammatory nature, but that

* Read at a meeting of the Nottingham Medico-Chirurgical Society.

there was insufficient evidence to show what was the cause of the inflammation.

In the most recent textbooks I have failed to find much guidance on the matter to enable me to conclude what is the pathology of the condition. In the *Clinical Journal*, however, for August 6th, 13th, and 20th, 1902, are three lectures delivered at the London Polyclinic by Mr. F. C. Wallis, entitled the Diagnosis and Treatment of Diseases of the Rectum. In speaking of ulceration of the rectum, he describes a condition which he says is "the commonest form of ulceration which has come under his notice" since his connexion with St. Mark's Hospital, and which is due, in his opinion, to sepsis. In his own words: "By this I mean ulceration due to some septic discharge from the outside attacking the greater portion of the mucous membrane, and so progressing; or, what was a common cause in the past, post-operative sepsis." In many respects there was a resemblance between this case and those described by Mr. Wallis as being of septic origin. There was, however, an absence of some other signs which, as described in the lectures, should have been present if the ulceration was of this nature. Thus there was no oedema of the muco-cutaneous margin around the external sphincter, with fissuring and ulceration between the oedematous portions.

The virulence of the inflammation as evidenced by the large slough which came away strongly suggested an acute septic process, and in the absence of any other discoverable cause, the question arose whether the gonorrhoeal urethritis previously mentioned had any bearing on the rectal ulceration.

I felt that the best chance of quickly improving his condition was to produce complete and immediate physiological rest in the rectum, and this could only be secured by colotomy. I therefore advised that this should be done, and through the courtesy of Mr. Joseph Thompson he was admitted into the General Hospital under my care. On March 3rd I did the first stage in the operation for inguinal colotomy by bringing a portion of the descending colon out through a small wound in the abdominal parietes, and fixing it there by passing a glass rod through its mesentery, the ends of the rod resting on each side of the wound, on the belly wall. There being no stitches used and no distension existing, as so often is the case when a colotomy has to be performed, this operation is perhaps the simplest in surgery, and occupies three or four minutes only. Three days later I opened the bowel in the wound, and the faeces were subsequently discharged through the opening thus made above the ulcerated rectum, which latter was by this proceeding placed at complete physiological rest.

For about a week after the colon had been opened I had the rectum washed through once daily, and on three or four occasions 1 oz. of iodoform emulsion was thrown into it after the irrigation.

There is but little to add to this part of the case, and at the end of less than a month all the ulceration was healed, and he was discharged from the hospital wearing a colotomy belt.

Before he went home I informed him that should he wish it I would close the colotomy wound later on, but a few weeks' additional rest would do the rectum no harm in view of the severity of the inflammation to which it had been subjected.

As he was 72 years of age I thought it doubtful if he would desire any further operation, but he came to me in August saying that the opening was a nuisance and prevented him working, and he was readmitted to have it closed. This was done on August 26th by the method described by the late Mr. Greig Smith, without opening the general peritoneal cavity. The upper opening in the colon I first shut off by a plug of cotton wool, so as to prevent soiling during the manipulations, and an incision having been made through the skin just outside the margin where the mucous membrane joined the skin, this was deepened until subperitoneal fat was reached. The finger was then able to strip the peritoneum off the inside of the abdominal parietes in the neighbourhood of the wound to the extent desired, so that it, with the attached colon with its opening in it, could be delivered well outside the belly. A continuous suture was now applied, after trimming the edges of the opening in the gut, which took up mucous membrane only and closed the bowel in a transverse direction. A series of Lembert sutures was then placed over this, thereby inverting the first union, and the gut was closed. The muscles were brought together with buried silk sutures, a tiny drainage tube being placed just beneath them in case any leakage from the bowel occurred, and the skin united with fishing gut.

There was never any leakage from the bowel, and the tube was removed next day. The whole thing was healed eight days after the operation and the stitches removed. There was some difficulty in getting the bowels to act at first, but this was eventually overcome by the use of enemata and some castor oil on the eighth day after the operation, and since then they have acted normally each day.

At the present time (November 19th) he is perfectly well and at work regularly, and there is moreover not the slightest indication of any narrowing of the lumen of the gut at the place where the ulceration existed.

He was cured of his disease solely by the application of "physiological rest" to the diseased part; and I am of opinion that no other agency which we could have employed would have so quickly, so effectively, and so satisfactorily produced this effect.

CASE OF PUERPERAL HYPERPYREXIA OF MALARIAL ORIGIN.

By THOMAS WILLIAM CLAY, L.R.C.P., L.R.C.S.,
Holyhead.

THE following case seems to be of sufficient interest to call for publication.

Mrs. A., aged 28, a primapara, was delivered by forceps of a male child at 6 a.m. on September 20th, 1900. The delivery was effected with but little difficulty; the perineum was slightly torn and was stitched. Progress was in every respect satisfactory, the last visit being made on the fifth day when the temperature was, as it had been all along, normal. On the morning of September 26th (seventh day) I received an urgent message to attend immediately. On my arrival, two hours after the onset of the attack, I was informed that the patient had been suddenly taken with a very severe rigor, felt icy cold, and soon afterwards became very hot, but that now she was feeling better. I found her bathed in perspiration, with a temperature of 102.4° F. After careful examination I utterly failed to satisfy myself as to the cause of the attack. The stitches were removed, the perineum being quite healed. The vagina was washed out with an antiseptic solution. Although the nurse told me that the bowels had acted the day previously, an enema of soap and water was given, with the result that a huge motion was passed. Three hours from the onset of the first rigor, and in my presence, she again had a rigor of such severity that her teeth chattered and the bed shook. Her temperature immediately began to rise, and rapidly reached 107.8° F.; she was now delirious, the pulse so weak and rapid that it could not be counted; in fact, she appeared to be *in extremis*. Stimulants were freely administered; a bath was not available, but ice was immediately procured from a neighbouring hotel; it was applied to the head, rubbed and applied directly to the skin of the abdomen and thorax. The effect was most gratifying; the temperature at once began to fall, and when 103.4° F. the ice was discontinued. The patient was dried and wrapped in warm blankets, perspired freely, and felt much better. Quinine in doses of 4 gr. was given every three hours. She had two or three slight shivers after this. The temperature, intermittent in character, never again rose higher than 103° F., and was normal in four days. The bowels acted naturally the day following the enema, the quantity being again quite exceptionally large. After this she made a good recovery.

The case caused me a considerable amount of anxiety, and I pondered a great deal over the possible nature and causation of the attack. The entire absence of all local signs of septic infection, as well as the non-elevation of the temperature until the seventh day, to my mind practically excluded a diagnosis of puerperal septicaemia. The quite unusual and extraordinary loaded state of the intestine appealed to me as a possible cause, absorption from the bowel, being, I believe, recognized as a cause of severe febrile disturbance during the puerperium.

The same patient, in April, 1902, after an easy, non-instrumental labour, gave birth to a second child. Things went on well until the evening of the twelfth day, when I was hurriedly summoned. The husband, who was much alarmed, informed me that she had had an attack resembling that after the first confinement; she complained of feeling very cold, shivered, and on taking the temperature he found it to be over 103° F. Arriving an hour later I found her perspiring freely, with a temperature of 101° F.

Remembering how puzzled I had been about the cause of the disturbance after the first confinement, and finding the patient again in a condition bearing such a close resemblance to the previous attack (also the absence this time of constipation), whilst at the bedside the cold, hot, and sweating

characters of the two attacks suddenly occurred to me. Malaria suggested itself, and I found, on questioning, that the patient had not only resided abroad, but that four years previously she had suffered from a severe attack of malarial fever.

Acting on this discovery, a dose of quinine (10 gr.) was given, followed by 4 gr. every three hours; she had no more rigors; the temperature was normal in twenty-four hours. Here, then, probably was the explanation which in the first attack was unsuspected. Malarial puerperal fever presents, I believe, some difficulty in diagnosis from puerperal septicaemia: but the main points of distinction were well brought out in this case. First, in both attacks, the onset of of fever not occurring until after the fifth day, probably always before this in septicaemia. Secondly, the particularly well-marked rigors and intermission of temperature, much more pronounced than in septicaemia. Thirdly, the short duration of the symptoms. The loaded state of the bowel possibly was a factor which contributed to the intensity of the first attack.

The severity of the first attack—the rarity, at all events, in this country of this condition—and the possibility that others like myself may overlook malaria as a cause of fever in the puerperium, are my reasons for wishing to record this case.

RESEARCHES ON HIBBERTIA VOLUBILIS.

By JOHN REID, M.A., M.D., C.M.,
Southfields, S.W.

THE above plant was identified by my old and esteemed friend the late Baron Sir F. von Müller, who kindly assisted me in the bibliography, and told me that, as the order had been little investigated, my work would serve to indicate the general properties of its members. Tannin and silica are the products found.

The specimens used were obtained at Coraki, on the Richmond River and Manly Beach in N.S.W., in the months of January and February; the pistil and fruit with envelope removed were extracted after being dried.

The alkaloid dillenine may be extracted by acetic acid or spirit by the usual methods. The plant residue is then boiled in methylated spirit to yield the oil, and the residue with alkali to yield dillenic acid, from whose solution a colouring matter—stephenine, named after the late Rev. Geo. Stephen, Fordyce, Banffshire—may be skimmed off, an acid from an alkaline fluid. There is also a brown-coloured neutral resinoid obtained along with the alkaloid, when the latter is precipitated by ammonia from solution.

Dillenine is a white powder depositing acicular crystals from solution in chloroform. Its acetate forms acicular crystals, the dillenate broken plates. Solution in spirit diminishes the colouring power of tincture of guaiacum on potato surface. It is slightly volatile, decomposing partly with the odour of urea or burning feathers—charring. The usual alkaloid reactions are given, with phosphomolybdic acid, $KIHgI_2$, and iodurated potassium iodide. Given internally, the tongue becomes dry and then moist; the circulation is enfeebled; no head symptoms appear. The pupils are dilated, remaining so for a few hours. There seems to be no stimulation of the liver.

Dillenic acid precipitates with lead and lime water, from which precipitates it may be obtained. It is very insoluble in water; its solution does not precipitate iron perchloride, gum, or gelatine. It decomposes sodium bicarbonate, intensifying the sherry-red colour of its solution. Ammonia makes the colour still deeper. Alkaline solutions are very soluble. An alkaline solution gives a dark ink-like solution with iron salts to transmitted light, with a lighter colour to reflected light. Silver nitrate causes a dark grey precipitate, insoluble in dilute nitric acid but readily soluble in ammonia.

Stains of silver on the fingers are readily removed by dillenic acid and ammonia. Lead in a neutral or vegetable acid solution partially precipitates, in alkaline solution entirely. Alum partially precipitates, lime water entirely or lime salts partially, the lime precipitate being redissolved by acetic acid, etc. Potash solution is partly precipitated by acetic acid; the residue gives a precipitate with HNO_3; its residue a precipitate with alum. The acid burns without odour, and seems to smoulder away when heated in a glass tube.

Solution of the acid very speedily caused tetanic spasms in a common earthworm and death, the worm *post mortem* presenting a flattened appearance. In man internally it seems to act violently on the liver, causing black motions of a watery character, with some griping and nausea. There is no irritant or astringent effect on the mouth, etc. The solution of alkaline salt or acid keeps readily, hence it has antiseptic properties worthy of investigation.

Stephenine, like carmine, dissolves readily in ammonia, and is a nuclear stain; it is soluble in glycerine, insoluble in spirit. It can be readily mounted in dammar, and will stain silk and paper of a rose colour. The oil, soluble in boiling, insoluble in cold methylated spirit, gives the sickly odour of the plant. It is solid and, like essential oils, is non-saponifiable.

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HUMAN AND BOVINE TUBERCULOSIS.

A PRELIMINARY NOTE.

By NATHAN RAW, M.D., M.R.C.P.LOND.,
British Member of the International Committee for the Prevention of Consumption; Physician, Mill Road Infirmary, Liverpool; Physician, Sanatorium for Consumption, Heswall.

THE controversy amongst scientific workers as to the exact relationship between human and bovine tuberculosis is still active, and the startling statement of Koch at the International Congress in London in 1901 has, if it has as yet led to no other result, at least stimulated men to active research throughout the world. Professor Koch only this year in Berlin has reiterated his theory, and is as firmly convinced as ever he was that the two diseases—namely, human tuberculosis and bovine tuberculosis or *Perlsucht*, are quite distinct and different, and that bovine tuberculosis cannot be conveyed to the human.

The question is too large to be discussed here, and it is, of course, quite beyond my powers, in the absence of careful and prolonged experimentation, to offer a solution, but although I was taught to believe that the two diseases were really identical, previous to the paper by Koch in 1901, I have after careful observation entirely changed my view, an opinion which is based chiefly on clinical observation.

During the last five years, namely, from 1898 to 1902, I have had under my care in Mill Road Infirmary 1,750 patients suffering from various forms of phthisis pulmonalis, and 273 children suffering from tabes mesenterica. In addition to these cases, there have been a great number of patients affected with varying forms of tuberculosis of joints, bones, glands, and skin, as would be expected in a large Poor-law infirmary containing 800 beds.

Careful *post-mortem* examination with bacteriological and microscopical observations have been carried out in the laboratory, together with inoculation experiments conducted at the Thompson-Yates Laboratories, University College.

Up to the present time it has been customary to classify all the lesions called tuberculous in one general category of disease, and to say they were all produced by one bacillus, namely, the tubercle bacillus of Koch. The chief of these lesions are:

Phthisis pulmonalis.
Tuberculosis of pleura.
" " peritoneum.
" " lymph glands.
" " joints.
" " bone.
" " skin.
" " other organs.

If we consider for a moment the disease called tabes mesenterica, which is classified as tuberculosis, we must ask ourselves the questions, "How does the bacillus gain entrance to the mesenteric glands?" and "Why is the disease not decreasing with other forms of tuberculosis?"

The late Sir Richard Thorne-Thorne in his Harben lecture of 1898, says:

> The matter, too, assumes a still more serious aspect if we limit ourselves to the first year of life, when raw milk is most largely used as food, for then we find that the reduction in the rate of death from the various forms of tuberculosis, which reduction has been going on at all ages for about half a century, not only disappears, but is actually transformed into a large increase, reaching no less than 27.7 per cent.
>
> This in itself is grave enough, but its significance is still further emphasized when we remember what are the circumstances under which this increase in the rate of death from tabes mesenterica has gone on synchronously with a decrease in that from other forms of tuberculosis.

This statement by Sir Richard Thorne-Thorne of 1898 is still true to-day. The death-rate from phthisis pulmonalis is steadily decreasing, but that from tabes mesenterica is still steadily increasing. On the other hand, we have it stated on high authority that tuberculosis in English cattle is rapidly increasing.

The majority of deaths in infants occur between the ages of 3 and 6 months, just at a time when raw milk is consumed in greatest quantity; from that time the mortality is less and sinks rapidly as age increases.

I have for some time been inclined to the view that tabes mesenterica is not true tuberculosis—that is, that it is not caused by the same tubercle bacillus as that which produces phthisis pulmonalis.

When visiting the splendid laboratories of Professor Koch a few months ago I was much impressed with the distinctive cultural peculiarities of human and bovine tuberculosis, and was bound to admit that the cultures appeared to be distinctive. Professor Koch was kind enough to give me pure, fresh cultures of both human and bovine tuberculosis, and I made several subcultures of both. The growths on blood serum were always distinctive in each case.

From a recent case of tabes mesenterica I made cultivations of the mesenteric gland on blood serum with glycerine, and to my surprise the growth exactly corresponded to bovine tuberculosis or *Perlsucht*. Again, from a case of strumous knee-joint I made a cultivation of the lymph from the interior of the joint, with an exactly similar result. The cultivations which I have previously obtained from phthisical sputum have generally shown the usual characteristics of human tuberculosis and never bovine. Professor Ravenel affirms—

> That the tubercle bacillus from bovine sources has in culture fairly constant and persistent peculiarities of growth and morphology, by which it may tentatively be differentiated from that ordinarily found in man.

From these two cases, together with a general survey of clinical facts, I feel there is some reason to suppose that whilst bovine and human tuberculosis are distinct and separate diseases, yet the human subject is susceptible to bovine tuberculosis in the early period of life especially, and that bovine tuberculosis may set up serious lesions in the human body.

I hope in a future paper to be able to substantiate this view after more precise work on tabes mesenterica, strumous glands, and tuberculous joints.

Conclusions.

In view of the foregoing, I venture to think there is some evidence to assume:

1. That there are two distinct varieties of tuberculosis affecting the human body, one produced by human tubercle, the other produced by bovine tubercle.
2. That human and bovine tuberculosis are separate and distinct.
3. That bovine tuberculosis entering the alimentary canal in milk may set up tabes mesenterica, more especially in children.
4. That bovine tuberculosis is probably the cause of enlarged lymph glands, tuberculous joints, and lupus.
5. That true human tuberculosis or phthisis pulmonalis is always conveyed from one person to another by infection, and generally from advanced cases of phthisis.
6. That every effort should be made to stamp out tuberculosis in cattle, and that milk should be boiled before use by children.

SOIL POLLUTION AND DISEASE IN CAMPS.

By Major R. CALDWELL, F.R.C.S., D.P.H.

The influence of soil upon health is a matter which has long occupied the attention of the profession, and the interest attaching to this subject has of late been materially heightened by certain speculations relative to the part played by camping grounds in the incidence of enteric fever on armies in the field. These speculations naturally tend to be narrowed to the question as to the influence exerted in this connexion by camping grounds in prolonged occupation by troops.

The soil of a camp which has been occupied for any length of time may be compared to a filter or contact bed for the purification of sewage, in which, owing to lack of rest, or to what would have the same effect, excess of material to be disposed of, the nitrifying organisms are unable to meet necessary requirements, with the production of harmful and offensive bodies as a result. In the case of the artificial filter or contact bed, not only are periods of rest most carefully regulated, but every effort is made to ensure, as far as possible, that the sewage to be treated should be of a more or less uniform character, as any sudden alteration in its composition is likely to overcome the powers of the living agencies which are utilized for its purification.

In the case of a camp it may fairly be admitted that neither of the above facts receives or, from the nature of the case, can possibly receive, serious practical consideration. Masses of human faeces, horse dung, kitchen refuse, and filth of all sorts are often of necessity thrust *en masse* into the soil, without regard to their ultimate fate once they are covered by a layer of earth of varying thickness.

I have no present intention of discussing questions relative to the variability of bacteria, except in so far as to state that when we consider how external conditions such as food and climate can so affect living protoplasm as unmistakably to alter, within a few generations, the physical and mental characteristics of the human race, we should feel no surprise if lowly organisms such as bacteria, which germinate at such a rate that the "number of individuals which might arise from a single bacterium in three or four days is almost inconceivable" (Hewlett), should develop new and sufficiently remarkable characteristics under the influence of altered surroundings, including possibly the power of producing specific disease. Whether the above theory is correct or not, the practical fact remains that as a general rule in every camp enteric fever and dysentery sooner or later make their appearance. The cause of the trouble is in most cases sought for in the water supply, which, from a sanitary point of view, is usually regarded as the root of all evil when defective, and, on the other hand, when above suspicion, as a panacea for a host of those ills incidental to service in the field.

While it would be difficult to exaggerate the importance of such a vital question, experience shows that water is by no means the sole channel by which diseases such as those under consideration are spread amongst troops. Several cases have come under my notice in which men, who for weeks had been employed in blockhouse duty on the veld, and who had only partaken of water in the form of tea or coffee, and therefore presumably safe, have been attacked by a virulent form of enteric; and officers also during the recent campaign have been victims who have assured me that for many weeks they have never partaken of unboiled water, including in the above term all forms of mineral drinks. For reasons which are too lengthy to be entered on here, the conveyance of enteric fever by milk or food amongst the troops actually in the field, as far as my own experience goes, need not be considered.

A farm, utilized as an outpost in the Harrismith district of the Orange River Colony, was to my personal knowledge a veritable hotbed of enteric fever of the worst stamp, although all drinking water was religiously boiled. The soil, however, had been much fouled by passing columns. In a camp, of which I recently had charge, also in the Harrismith district, enteric fever and dysentery occurred in spite of the fact that the water was of unimpeachable quality.

Many other instances from my personal experience could be given; let it suffice to say that, conversing with other medical officers who have recently been engaged in active service in the field, I have been deeply interested to find that their observations, like my own, point to the constant occurrence of enteric fever under circumstances which justify the absolute elimination of water as a possible cause of the disease in question, but where soil pollution was excessive. I was also much struck, during the earlier stages of the war in Natal, by the fact that men, while trekking, were as a rule singularly free from sickness, but that a return to standing camp was invariably the precursor of a lower standard of health.

The condition of a camp, under which heading blockhouses may for sanitary purposes be classed, must in any event unavoidably tend to the wholesale spread of micro-organisms of all kinds. The constant movement of men, the passage of heavy waggons with horses, cattle, or mules, the necessary trenching and digging, and apart from these, in South Africa, the heavy rainfall, are all factors in disintegration, bringing to the surface organisms which might otherwise have remained harmlessly in the soil. The influence, also, of the movements of ground air and water should not be forgotten. In particular, the effect of movements of ground air in this direction have been most ably pointed out by Sir C. A. Cameron. In his opinion, specific organisms carried into the

atmosphere by this means are one cause of enteric fever in Dublin.

In every camp, also, there is, in spite of all possible efforts at removal, a certain amount of organic matter, largely the result of pollution by animals, which decomposes on or close to the surface of the soil, and, having dried in the sun, is distributed in the form of dust.

The remedy for these evils must vary with the circumstances of the case. Where military considerations permit of such a measure, frequent change of camping ground is naturally to be recommended, but the occasions on which this step is feasible must be most infrequent. The position of individual tents may, however, be readily altered, and this should be done as frequently as possible; the surface covered by a tent rapidly becomes foul, and, the temperature in the interior of the tent—in bell tents, at least—being higher, as a rule, than that of the surrounding atmosphere, must naturally tend to cause undesirable emanations from the soil. The aspirating influence of a blockhouse on the ground air would be greater than that of a tent, and danger to health would be proportionately increased. This defect, as far as blockhouses are concerned, could be remedied by some form of impermeable flooring. Such an arrangement would constitute something more than a theoretical advantage, as the soil pollution tending to occur inside these structures must exercise a marked influence on the health of the occupants.

When the necessary implements and labour are available, buckets may be substituted for trench latrines, and all refuse removed and buried at such a distance from camp as to render pollution of the soil a matter of no practical importance. When the above method cannot be carried out—and this will usually be the case—and sufficient space is available, latrines and refuse pits should be shallow in order to subject their contents rapidly to the influence of nitrification, and frequently filled in, in order not to overtax the agencies on which the process depends. The contents of latrine trenches and rubbish pits dug several feet deep are removed from the influence of those nitrifying agencies, which, it must be remembered, being aërobic, are to be found in the upper layers of the soil only. The conditions in such a case probably resemble those found in a septic tank, liquefaction of organic matter taking place under the influence of anaërobic organisms. Percolation under these circumstances would seriously endanger neighbouring water supplies. These disadvantages must, however, at times be overlooked, and under some circumstances need never be considered. In actual practice every method is found to have its disadvantages, and even with the greatest care and with unremitting attention all organic matter will, as already stated, be neither removed nor buried, as a certain amount—the result largely of faecal pollution by cattle—must under ordinary circumstances remain adherent to the surface of the soil.

Much may be done to minimize risk; but, having regard to the ordinary circumstances of warfare and to the present state of our knowledge, a certain degree of danger remains, which must be regarded as an unavoidable incident of active service in the field.

THE SUPPLY OF PURE WATER TO TROOPS IN THE FIELD.

By JAMES FERGUSON LEES, M.D.,

Late Medical Officer 1st Battalion the Connaught Rangers, South African Field Force.

OWING to the liability of filters to go wrong or break, as well as the immense labour necessary to produce a sufficient supply of pure water in this way, purification by filtration is unfitted for general use in the field. Chemical purification is also, *per se*, of little use, since the addition of any chemical agent in sufficient quantity to destroy infection would be inadmissible.

The most efficacious method of sterilizing water is undoubtedly by boiling, the main objection to this method being the length of time required for cooling before the water is fit to drink; but a constant supply of water, sterilized in this way and at any time available, might be attained by preparing each night in advance the water supply for the next day.

With this object in view, I have designed the water-cart shown in the accompanying diagrams.

On arrival at the final halting place for the night, the water carts would be driven up to the source from which it was proposed to draw the following day's supply of water, and the settling tanks removed by a man on either side of each cart catching hold by the lugs, G, and swinging the tank with its attached furnace over to the ground, using the hinge, K, as a fulcrum. When the tank is in position on the ground—as shown in dotted lines in Fig. 1—the hinge at K is open and the tank then loose from the cart.

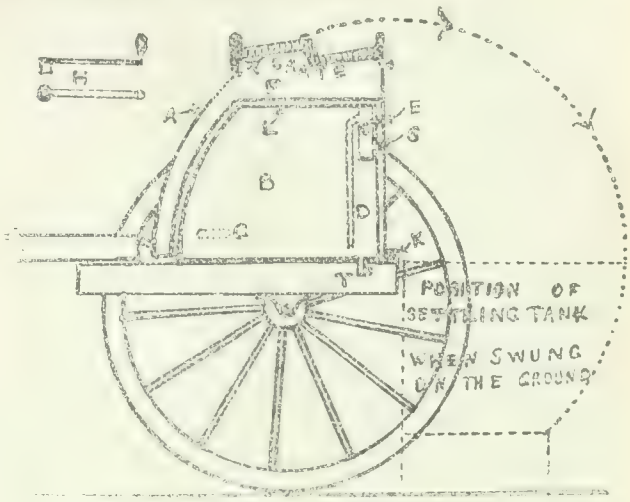


Fig. 1.—Water-cart consisting of an iron tank B, the carrying tank, fixed on the body of the cart, provided with a tap, T, and covered by a lid, L, which should be bolted down, but at the same time easily removable, for occasionally cleansing the tank. Attached to the carrying tank is a semi-rotary hand-pump, C, with a suction-pipe S, and a discharge-pipe D. This pump is worked by the handle H, which fits over the square-head E. Outside and inverted over the carrying tank is another tank, A, called the settling tank, provided with a furnace, F, and hinged to the cart at K by an open hinge. Lugs, G, are attached to the settling tank on either side for lifting it.

The water-carts, with their carrying tanks full of pure water previously prepared at the last night's halting place, would then drive to their allotted positions in the camp, and from them the whole water supply for cooking and drinking would be drawn. In the meantime, the settling tanks would have been filled with water from the proposed source, fires lit in the furnaces, and the water in each boiled for half-an-hour.

Should the water be thick with suspended organic or mineral matter, alum (6 gr. to the gallon of water) should now be added to precipitate this. A previous addition of iron perchloride (2½ gr. to the gallon) may be necessary for this precipitation should there be no lime present in the water. The water should be left standing in the tanks all night to allow of it cooling and settling.

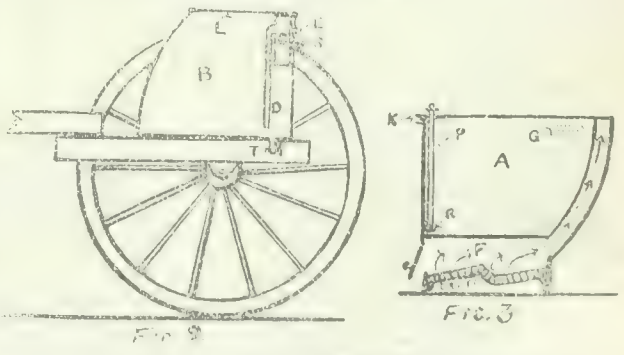


Fig. 2.—The water cart with the settling tank removed.

Fig. 3.—The settling tank on the ground. P, a pipe for drawing off the water fitted with a perforated rose, R, covered with an asbestos filtering cloth.

In the morning, by connecting the pipe, P, with the hand-pump at S by means of a flexible hose, the supernatant clear water in the settling tanks could be drawn off into the water-carts in a few minutes. The settling tanks would then be cleaned out and placed again in position over the carrying tanks.

By thus preparing each night a quantity sufficient for the next twenty-four hours, a supply of pure water which would be available at any time during the march or on arrival at

the final halting place might be obtained. With carrying tanks of a capacity of 20 cubic feet, each water-cart would contain 124 gallons, or about 11 cwt., of water, which ought to be sufficient to supply a company for twenty-four hours.

As regards the amount of fuel required to boil this quantity, since 1 lb. of wood contains 6.600 thermal units of heat, at a moderate computation, allowing for a loss of 65 per cent. of heat by radiation, etc., 35 per cent., equivalent to 2,310 thermal units, would be available for boiling; and taking the initial temperature of the water as 60° F., to raise the temperature of 124 gallons to boiling point would require about 82 lb. of wood. Allowing 30 lb. to keep it boiling for half an hour, we should require, roughly, about 1 cwt. of wood for each water-cart. One hour and a-half ought to be sufficient to bring the water "to the boil," and this would allow plenty of time during the night for cooling and settling.

Such a water-cart, complete and filled with water, would only weigh about 22 cwt. The settling tanks, considering the rough handling they would undergo, would require to be strong, but need not weigh more than 3 cwt., with furnace complete. Using the hinge at K as a fulcrum this weight could easily be manipulated by two men.

To carry out these arrangements a special staff would be advisable. One man to superintend each water-cart would be sufficient, and, allowing one cart to each company, this would make a water staff of eight men to each regiment. These men would be under the control of the regimental medical officer, whose duty it would be to see that the purification of the water was efficiently carried out, and who would be responsible for the water-carts being ready to start each morning at the appointed hour.

The carrying tanks ought to be thoroughly cleaned out periodically, as occasion offered, and the men's water-bottles placed in one of the settling tanks and sterilized by boiling. In South Africa, during the late war, each regiment was provided with three or four water-carts, which on the march accompanied the first line of transport. The water-carts, being thus massed together in one part of the column, were out of the reach of the great majority of the men, who, in consequence, were compelled to fill their water-bottles, when emptied, with water from any wayside pool or stream. This, under the present system, does not matter much, as the water-carts themselves are replenished from similar sources; but if these carts were filled with a supply of pure water for this to be of any use it would be necessary for them to be distributed along the line of march at such frequent intervals as would ensure a supply of sound water being within easy reach of any part of the column. This would, of course, entail an increase in the number of water-carts, of which I think, there should be at least one to each company.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

THE TREATMENT OF OCCIPITO-POSTERIOR PRESENTATIONS.

I consider occipito-posterior presentations are far more common than is generally believed. Most practitioners would, in a given difficult case, straightway apply one or other of the many varieties of forceps, and drag the fetal head through the pelvis. Hence many ruptured perineums, many lacerated cervices, and other conditions, all of which make work for the gynaecologist.

The orthodox textbook treatment is to wait and see whether rotation takes place when the fetal head reaches the perineum. Exhaustion of the patient does not appear to be taken into account; and, further, rotation does not always take place.

The question of version might well, therefore, be considered, and I believe it preferable in all such cases when the procedure is practicable; delivery is expedited, and the fetal head presents the same diameters to the maternal pelvis as in normal occipito-anterior presentations. Consequently the risks to the maternal structures are minimized. I do not think the child is endangered, because the maternal passages are quite sufficiently dilated by delivery of the hips and shoulders. The most important point is bringing down the arms as soon as resistance is detected.

It might be objected that the introduction of the hand into the uterus is a dangerous proceeding, but it must be remembered that the uterus is adequately protected from sepsis by the membranes, which separate that organ from the accoucheur's hand, and are expelled soon after delivery of the child.

I have adopted this treatment in occipito-posterior presentations for two years, with the happiest results, whilst previously I regarded the condition as a serious difficulty.

Wolverhampton. W. Stainton Mercer, M.R.C.S., L.R.C.P.

HEAT APOPLEXY.

The paper in the British Medical Journal of September 20th, 1902, by Dr. Henderson, late of Shanghai, is of much interest to medical men in China. One very true point is the difficulty of diagnosing whether the hyperpyrexia is due to heat apoplexy or to malaria; but the treatment by lowering the temperature must be prompt, as one cannot wait for a blood examination. Coma due to malarial hyperpyrexia is more dangerous than heat apoplexy. Coma, that is to say, a purely heat apoplexy temperature, is less fatal than a lower temperature in coma from malarial hyperpyrexia. Heart failure is certainly the danger, especially in cases which remain unconscious for hours after the high temperature has been brought down, so that it would seem to be good treatment to strengthen the heart before it begins to fail. But there is an asphyxial type of case in which bleeding is urgently called for. The following care illustrates what seems a good method of treatment:

On August 22nd, 1902, I was called at 5 p.m. to Gunner M. The ward-master was tearing off his clothes, and said that the axillary temperature (after one minute of a 3-minute thermometer) was 109.8°. The patient was quite unconscious, with general muscular spasms. As he could not be taken into the open air (a most important point) he was carried as near the door as possible and placed under a punkah. The head and back of neck were rubbed with ice, and his body thoroughly sluiced down with ice-cold water. The temperature was thus rapidly brought down to 101°: the pulse was fair: but, warned by previous experience, I gave mv of liq strychninae and mxx of tinct. digitalis hypodermically. Later on, as the pulse got weak, friction was made over the cardiac area, and a large sinapism then put over the heart. I am of opinion that this early attention to the heart had a large share in saving the patient. He remained unconscious till early next morning, and was then in a dazed condition. He was again washed down with iced water at 10 p.m. and at 3 a.m., as on each occasion his temperature had risen to 105°. He recovered, and is now at his duty.

In this station the evil influence of badly-ventilated rooms in bringing on hyperpyrexia is very marked, and the importance of treating such cases in the open air cannot be overestimated. It may, of course, be argued that strychnine may greatly increase the tendency to spasm; each case must be judged separately. I once had a case in India where no medicine had been used, and chloroform had to be administered to overcome the prolonged spasms of the respiratory muscles which threatened the patient's life. This, of course, was no case for strychnine.

S. F. Clark,
Major R.A.M.C.

Hong Kong.

CONGENITAL OBLITERATION OF THE COLON.

I wish to record a few details of this case on account of its rarity, and because I lately read an account of one somewhat similar in the British Medical Journal. The child (male) was born at the eighth month of fetal life, and appeared to be in very good health, and, so far as could be judged, had full use of all the organs. On the second day, however, it was noticed that all the faeces passed were very small in quantity, and consisted chiefly of a little discoloration of the napkin.

On examination per rectum, the little finger could only be passed in about 1½ in. to 2 in. Glycerine injection was given, with the result that a column of sebaceous matter was expelled nearly 5 in. long., without meconial colour or odour. Medicine was tried by the mouth, and the result was always sickness and vomiting, but no motion of the bowels. The vomit was decidedly faecal later, with a very foul smell. A distinct swelling was seen on the fifth day in the left hypogastric region, and notably no swelling in the situation of the descending colon. Then it was obvious that some developmental or physical obstruction was the cause of the trouble. The question of operative interference was considered, and a specialist called in, but this could not be supported with any hope of success on such a young infant. The child lived for three weeks and two days, gradually getting more and more emaciated. Occasionally it fastened to the breast and took nourishment, until sickness came on and all was ejected, when nourishment was again taken with the same result until death. A necropsy was generously allowed, when the condition diagnosed was found correct, the large intestine terminating in a balloon-shaped *cul-de-sac* at the

splenic flexure, with little trace of bowel beyond except at the anus. Otherwise the child was perfectly healthy.

Belmont, Johnstone, N.B. W. WESTWOOD FYFE, M.B.

TREATMENT OF LUPUS VULGARIS BY EXCISION AND REPLANTING.

I RECENTLY had a boy under my care in the hospital with a large patch of lupus vulgaris, covering the whole side of his foot and extending into the sole. He was of marked tuberculous constitution with angular curvature of the spine. The patch presented the usual appearance of clusters of semi-translucent nodules embedded in the corium—which Hutchinson has so aptly likened to the appearance of "apple jelly." Many of the nodules had run together, broken down, and formed small ulcers. The usual internal and external remedies were employed for a considerable time, without benefit. On account of the large extent of skin involved I determined to try the following treatment:

The foot was thoroughly disinfected by turpentine, mercury perchloride, and carbolic lotions, as for an aseptic operation; an anaesthetic was administered, and the whole patch excised, the incision being made through healthy skin. The subcutaneous fat was completely removed with scissors, and the lupoid patch of skin placed in 1 in 40 hot carbolic lotion. The haemorrhage was stopped by placing over the wound green protective gauze, and using hot carbolic lotion (120°). The lupoid patch of skin was removed from the water, dried, replanted, and dusted with sterilized iodoform. The wound was dressed with protective blue gauze, etc., and a splint applied. The graft quickly joined, the ulcerated points healed, and the result was perfect except that the skin was blue and livid.

I cannot remember having seen this method of treatment of lupus described before. I should be much interested if other members of the profession would give it a trial. I refrain from giving any ideas regarding means of cure in tuberculosis. Why Bier's method in tuberculous joints? Why laparotomy in tuberculosis of the peritoneum? It seems to be owing to a change in the blood supply repugnant to the tubercle bacillus.

B. H. NICHOLSON, M.B., C.M.Edin.,
Colchester. Surgeon to the Essex and Colchester Hospital.

NAPHTHALENE POISONING.

A SCHOOLBOY, aged 13½, ate by mistake for a sweet a piece of pure naphthalene (a moth ball) about the size of a filbert nut. He ate it so quickly that he only found out his mistake when it was swallowed. Half an hour after its ingestion he had severe pain round the umbilicus, which continued intermittently, and was followed by aching and cutting pains down the penis and at its end. The prepuce swelled and was very tender.

Within an hour micturition became very frequent, the urine, from a brownish-yellow, becoming black "like weak ink." Micturition caused pain and soreness down the urethra. There was no nausea, vomiting, or collapse, the pain being, though sharp, intermittent. He did his lessons and games as usual. He casually mentioned the accident at home, but seemed then quite well, and ate his supper. During the night he had several watery motions, "mixed with a bright red;" he thought it was blood.

Next morning I saw the urine, which, though smoky, was, he said, much less so. For two days he had severe headache and abdominal tenderness on pressure, but this was not localized. Two days later there was suppression of urine for nearly twenty-four hours, but the urine when passed was clear, and contained no trace of albumen. Four days later he would have been well again, but he developed a left-sided dry pleurisy—probably influenzal—though the temperature did not rise.

Haverstock Hill, N.W. L. FRAZER NASH, L.R.C.P. & S.

HYPERPYREXIA DURING INFLUENZA.

A FATAL case of hyperpyrexia after influenza having been recorded by Mr. F. Harman Brown, of Coventry, induces me to record the following:

On December 14th, 1902, I was called to see Mrs. C., aged 27. She was in bed, complaining of pains in the limbs and back and severe frontal headache. Her pulse was 106 per minute, and on taking her temperature in the axilla I found it to be 108.6° F.; taken in the mouth, the thermometer registered the same. As there was obviously a marked disproportion between pulse and temperature, the height of the latter did not excite so much alarm as it otherwise would have done. The patient's arms were freely sponged with tepid water, and she was put on 15-gr. doses of sodium salicylate and 3 gr. of antipyrin every six hours. I saw the patient the following morning and found her temperature 97.6°, and the pains in the limbs, back, and head quite gone. She made a good and quick recovery.

What was noticeable about the case was the complete absence of anything approaching delirium and the comparative comfort of the pat ent during the hyperpyrexia.

Edinburgh. GEORGE H. F. GRAVES, L.R.C.P.& S.Ed.

COMPLETE TRANSVERSE RUPTURE OF AORTA AND LEFT PULMONARY ARTERY.

ON September 8th, 1902, a painter who had fallen from a scaffold 25 ft. high on to the stone pavement of a church on the interior of which he was working, was brought, dead, into the Mater Misericordiae Hospital, Dublin.

At the necropsy I found that the aortic arch had been torn across about ¼ in. beyond the origin of the left subclavian, whilst, immediately beneath, the left pulmonary artery was also torn across about ½ in from the bifurcation. Rupture had taken place into the left pleura, which was full of blood, partly fluid, partly coagulated, the left lung being quite collapsed and almost airless. The intima of the aorta was slightly atheromatous at the point of rupture. That of the pulmonary seemed sound. The line of rupture was more or less jagged and the coats had somewhat separated, giving the rupture an aspect quite different from a clean cut with a knife. The mediastinal tissues were infiltrated with blood for about 3 in. below the injury. The spine did not seem to have been fractured, at least no fracture was discovered by a pretty careful examination. The four upper ribs on the right side were broken close to the angle, and their sharp points had perforated the right costal pleura. The right middle fossa of the base of the skull was the seat of a transverse fissured fracture, and the apex of each temporo-sphenoidal lobe was tipped with a small blood clot and slightly lacerated. The sagittal suture was "started." Beneath the pericranium was a large effusion of blood, but the scalp was not visibly bruised or lacerated. The only external injuries were some contusions on the right side of the face. The abdominal viscera were quite uninjured.

Traumatic rupture of the aorta and pulmonary artery is an accident of comparative rarity and therefore deserves to be recorded.

E. J. MCWEENEY, M.A., M.D.
Pathologist to the Mater Misericordiae Hospital, Dublin.

A CASE OF "TRIGGER-FINGER."

"TRIGGER-FINGER" is a term applied to an affection of the fingers, of which the following are the main features: There is a hitch in the movement of one or more fingers. Up to a certain point flexion or extension is normally carried out, then the hitch occurs, which, however, can be overcome either by increased effort or by the help of the other hand, but the rest of the movement follows with a snap or click. It is this trigger-like snap which has given the name to the condition. Usually only one finger at a time is affected—usually the thumb or ring finger. Pain may vary from mere discomfort to intense suffering, and is usually referred to the metacarpo-phalangeal articulation, but the real seat of the snap is at the first interphalangeal joint. It usually occurs in adults, and women are more liable than men in the proportion of three to one. A small node can often be felt on the flexor tendon or sheath. This node, combined with a narrowing of the lumen of the tendon sheath, is the usual explanation of the hitch. Necker, in an examination of 121 cases, found rheumatism, either in the acute or chronic form, to have been the cause in 52, traumatism in 13, and occupation in 47; it was congenital in 2, and in the remaining 7 no cause was assignable.

Work causing special fatigue of the hands has been set down as a cause by Schmidt. His cases, involving frequently a thumb and middle finger, occurred in seamstresses, knitters, and soldiers require to perform straining movements of the fingers in musket drill.[1] Rest and massage are advised for the slighter forms, and for the very severe cases removal of the thickened tissues.

The patient, a man aged 39, had never found anything wrong with the working of his fingers till ten months ago, when he commenced to play golf, of which he became an

[1] For fuller details see articles by Frederic Griffith, *Ann. of Surg.*, October, 1902, p. 588; and by Clarl, Epitome BRITISH MEDICAL JOURNAL, October 4th, 1902, par. 208.

enthusiast. Soon after taking up this game, he found that the left little finger, on attempted flexion, became fixed in semiflexion, and could be flexed completely only by an extra muscular effort or forcible movement with the other hand. Completion of the flexion was accompanied by a very audible click, with only slight discomfort, felt at the first interphalangeal joint. On examination and comparison with the little finger of the other hand there was found a distinct thickening on the flexor surface opposite the head of the first phalanx. In view of the very slight discomfort produced, no special treatment beyond free movement was advised, operation being obviously unnecessary. The thickening was probably produced partly by the pressure of the handle of the golf club and partly by the jarring communicated to the finger in making the various strokes, which is apt to be especially violent in the case of a novice at the game.

C. HAMILTON WHITEFORD, M.R.C.S., L.R.C.P.

Plymouth.

A LINK BETWEEN RHEUMATOID ARTHRITIS AND JAUNDICE.

WHEN jaundice of an obstructive type becomes fully established in the system of a patient suffering from chronic rheumatism, rheumatoid arthritis, or muscular rheumatism, the pains characteristic of these diseases disappear entirely. Such at least has been my experience in four cases which have come under my observation during the past eight months. The jaundice persisted in three of the cases during the short time they were under my observation. The fourth case is that of a coalminer aged 40 years. He has been subject to attacks of muscular rheumatism at various intervals during the past eight years. Six weeks ago he was confined to bed with a severe attack of gastro-intestinal influenza. On the eighth day jaundice appeared as a complication, but gradually disappeared during the succeeding fourteen days, by which time his general condition was materially improved. On the day after that on which the jaundice had disappeared muscular rheumatism set in as a sequela, and still remains very persistent.

One may therefore conclude from the facts observed in the four cases mentioned above that the bile present in the circulation had the effect of entirely overcoming the muscular and joint pains temporarily. The exact way in which this result was attained is difficult to explain, but it may be noted that sodium salicylate which, when administered alone, has little or no effect on chronic rheumatism, is the only drug that has been proved actually to produce an increased flow of bile.

Bedlington. JOHN WISHART, M.B., Ch.B., B.Sc.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

SKIPTON AND DISTRICT HOSPITAL.

RECURRENT VOLVULUS OF THE SIGMOID FLEXURE TREATED BY EXCISION OF THE INVOLVED LOOP.

(Under the care of Dr. WAUGH: Operation by Mr. B. G. A. MOYNIHAN.)

F. L., male, aged 21, was admitted to the Leeds General Infirmary, under the care of Mr. Ward, on September 16th, 1899, suffering from intestinal obstruction.

FIRST ATTACK.

History.—Down to a month before admission he had been quite well. He was suddenly seized with abdominal pain, not very severe or prolonged, and sickness. From that time up to admission he had been absolutely constipated; neither flatus or faeces had passed for one month. The abdomen gradually enlarged, and on admission was greatly distended. Ten days before admission he vomited, and almost every day since he had vomited more or less. Pain had become gradually more severe. Enemata of oil, turpentine and water, and soap and water had been given without any effect.

First Operation (by Mr. Ward).—The abdomen was opened on September 17th, 1899. A median incision was made below the umbilicus, and a condition of volvulus of the sigmoid flexure was found. The coil was untwisted, and, the patient being placed in the lithotomy position, and the sphincter stretched, the sigmoid and colon were partially emptied. The apex of the loop of the sigmoid was stitched to the middle line to prevent retwisting.

Second Operation (by Mr. Ward).—On September 19th, as neither faeces nor flatus had passed, the sigmoid was opened in the middle line, and an artificial anus established. On October 10th, the bowels acted naturally for the first time, and subsequently the abdominal wound gradually closed, the bowels were moved regularly and naturally, and the patient left the infirmary on November 4th.

RECURRENCE.

History.—On September 3rd, 1901, the patient was sent to Mr. Moynihan by Dr. Waugh of Skipton, on account of a recurrence of the intestinal obstruction. There had been some slight difficulty in getting the bowels opened for several months, this difficulty had become acute about a month earlier. He was confident in his statement that neither faeces nor flatus had passed for one month before.

Operation by Mr. Moynihan.—On examination he looked sallow and earthy in tinge. The abdomen was moderately distended. There was no localized bulging or any coiling. Nothing abnormal could be felt on rectal examination. The patient said that he had vomited a few times during the previous week, but he had continued to take food. Mr. Moynihan opened the abdomen on September 5th, 1901, and found the following condition: The apex of the sigmoid flexure (Fig.) was



adherent at the middle line. On separating it the sigmoid was opened; the opening was at once closed by suture. It was then seen that the upper part of the sigmoid loop—that portion between the end of the descending colon and the part of the loop adherent to the anterior abdominal wall—had become enormously distended, and had fallen into the pelvis in front of the lower portion of the loop. A kink had thus been produced in the gut at the upper part of the abdominal incision. When the heavy, hugely-distended upper part of the sigmoid was lifted out of the pelvis, the lower portion of the loop was seen; this was quite empty. The ends of the loop—that is, the end of the descending colon and the beginning of the rectum—were very much nearer together than in the normal condition. The base of the sigmoid loop was approximately 1½ to 2 in. in length. Mr. Moynihan therefore decided to remove the whole sigmoid. The upper end of the rectum and the descending colon were clamped with Doyen's hysterectomy clamps, the sigmoid arteries ligatured, and the whole loop removed. The cut ends of the bowel were closed by simple suture applied after the method adopted by Mr. Moynihan, a continuous suture for the peritoneum and muscular coats outside, and a continuous suture taking all the coats (to act as a haemostatic) within. The abdomen was then closed without drainage. The patient made a perfectly uneventful recovery, and is now (December, 1902) quite well.

REMARKS BY MR. MOYNIHAN.—The only case similar to this that I have found recorded was operated upon by Steinthal.[1] The patient was a woman 21 years of age, who suffered from volvulus of the sigmoid flexure, due to hypertrophy and elongation of the loop. The extremities of the loop were wide apart. Puncture and emptying of the twisted

[1] *Verh. des Chir. Kongress.*, Berlin, 1900.

coil were necessary before reduction was possible. When a recurrence of the volvulus took place, the gut involved was resected.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.

DEATH UNDER CHLOROFORM.

(Reported by J. C. CLAYTON, M.R.C.S., L.R.C.P.)

A MAN, aged 35, was admitted to the hospital on August 12th, 1902, suffering from an injury to the left knee caused by an accident in a coal mine.

On the day of admission ether was administered and the wound over the knee explored. Subsequently adhesions formed in the joint which it was necessary to break down at intervals. For this purpose chloroform was administered on September 28th, October 4th, and October 28th. The duration of the anaesthesia was about ten minutes on each occasion. The patient took the anaesthetic exceedingly well and with very little struggling.

On November 6th chloroform was administered again, on lint as on the previous occasions, and was borne equally well. The duration of the anaesthesia was ten minutes. The anaesthetic had been stopped for about three minutes. The patient was breathing well, was of a good colour, and responded to stimuli. There was a good corneal reflex. The pupils reacted to light rapidly. Suddenly respirations ceased, and the patient became very slightly cyanosed. Artificial respiration was adopted immediately; at the same time it was noticed that there was no femoral pulse. Restoration was attempted for half an hour with no result.

At the necropsy no gross lesion was found. The lungs were slightly oedematous, with a patch of emphysema about the size of a five-shilling piece along the anterior border of one lung. The right side of the heart was empty; the valves and orifices were normal, and the muscle in good condition; no embolism was found.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

ALFRED WILLETT, F.R.C.S., President, in the Chair.

Tuesday, January 27th, 1903.

SURGICAL TREATMENT OF GASTRIC AND DUODENAL ULCER.

MR. B. G. A. MOYNIHAN, who communicated a paper on this subject based on a series of 60 cases, said that gastric and duodenal ulcers called for treatment by the surgeon when perforation had occurred, or haemorrhage was copious and recurring, or when inveterate dyspepsia was present, due either to dilatation of the stomach, pyloric stenosis, hour-glass stomach, old perigastritis, etc. (1) In all cases of perforation operation should be advised at the earliest possible moment. In duodenal ulcer, the fluid, on escaping, was guided by a hillock in the transverse mesocolon down the outer side of the ascending colon, and the symptoms of appendicitis might be mimicked. In 19 cases out of 51 recorded the incision had been made over the appendix after a diagnosis of appendicitis had been made. Perforating gastric ulcers were acute when the rupture was of large size, the stomach full, and the contents free to escape into the general peritoneal cavity; subacute when the opening was small, the stomach empty or nearly so, and its contents sterile; the leakage was then small and comparatively innocuous, and the symptoms subdued; and chronic when, owing to limiting adhesions, a local peritonitis resulted, and a perigastric abscess formed at a later period. (2) Haemorrhage might occur from acute and chronic ulcers; from an acute ulcer it was characterized by its spontaneity, abruptness of onset and the rapid loss of a large quantity of blood, its marked tendency to spontaneous cessation, and the infrequency of a repetition of the haemorrhage in anything but insignificant quantity. From a chronic ulcer the onset was after a long history of digestive disturbance and it tended to recur with brief intermissions of a few hours or a day or two, the quantity of blood ejected in each outbreak was moderate and the anaemia produced was marked. Operative treatment was rarely necessary in haemorrhage from an acute ulcer; it should be the rule in chronic ulcer. (3) When cicatricial contractions in the body or at the outlet of the stomach, or perigastritis or inveterate dyspepsia was present, dilatation of the stomach would often be found. Free hydrochloric acid was always present, and might be in excess. The operation to be selected in all such cases was gastro-enterostomy, performed by the posterior route and by simple suture without mechanical appliance. Reference was made to 9 cases of perforating ulcer with 4 recoveries, and 7 cases operated upon for haematemesis and melaena. In one the ulcer near the lesser curvature towards the cardiac orifice was excised; the patient died on the eighth day; in another the ulcer on the posterior surface was excised and gastro-enterostomy performed at the opening so made; in 5 gastro-enterostomy alone was performed; these 6 patients recovered, and were now quite well. In all 47 cases were treated by gastro enterostomy for haemorrhage, dilated stomach, or chronic ulcer, with death in only one, from gangrene of the gall bladder. In 3 cases pyloroplasty was successfully performed.

MR. D'ARCY POWER thought that in regard to gastric ulcers they were much in the position they previously were in regard to intussusception, namely, disposed to postpone operation because some cases recovered spontaneously. Even when there was a suspicion of perforation it should be had recourse to. In regard to drainage, in his experience, when this was neglected much trouble had occurred from subphrenic abscess. Reference was made to the confusion of appendicitis with duodenal ulcer, but in these cases good results followed probably from very free drainage. He had also seen much trouble from over-feeding subsequent to operation. He quite approved of the abandonment of pyloroplasty. He had found elastic ligature of service in a few cases; the method, however, had not many advantages, and was rather slower than direct suture. In his cases there had been very little vomiting; this might be ascribed to freedom from tension on the wound; it was probably due, as was suggested in the paper, to some defect of apposition.

THE PRESIDENT thought the paper dealt with two subjects, perforating gastric ulcer being one. In regard to this, the more quickly a diagnosis was made and an operation performed the better the chances of success. The cases of chronic dyspepsia due to the causes enumerated comprised the other group. In the cases described in the paper the accuracy of diagnosis was remarkable. Another point was the futility of drug treatment. It was a striking result that in so many cases there was only one death. In nearly every instance the immediate benefit was very great, and in nearly all the ultimate result was good. Simplicity in all such operations was the great thing to be sought for, and in the operations described the manipulations were as simple as could well be imagined.

MR. T. C. ENGLISH referred to numerous cases of perforated gastric and duodenal ulcer in St. George's Hospital. Of 40 cases, 21 recovered. Many illustrated the latency of symptoms in the reaction stage. Details were given of some such cases. Of other cases which resembled perforated gastric ulcer in which exploratory operation was indicated, many were associated with the catamenia in neurotic women.

MR. PERCY PATON referred to the observations in the paper on the slight importance of drainage, and asked what was the objection to local drainage. But in some cases in which drainage had been employed he had seen the subsequent development of subphrenic abscess.

DR. NEWTON PITT, in regard to the alleged absence of anaemia in acute ulcer said that this was not borne out in his experience. In a certain number of acute cases there was profound anaemia. He asked, was there any *post-mortem* evidence that chronic ulcers did heal after a gastro-enterostomy. Chronic ulcers, though sometimes multiple, were, he thought, more usually single.

MR. MOYNIHAN, in reply, thought that if there were the smallest doubt of perforation the abdomen should be opened. As a matter of fact, he had never opened the abdomen without finding a perforated gastric or duodenal ulcer. Allusion was made to three successive cases in one hospital, in which operation had been performed without finding any perforation. Drainage was of much less importance than the possibility of getting the peritoneum clean. In one case not drained there was subphrenic abscess. If the peritoneum could be cleansed drainage was unnecessary. He had drained three cases out of eleven. Much in regard to feeding depended on the patient; many cases he had seen in the early days had been lost from starvation. The principle should be to give fluids as early and in as large quantity as possible. He had had no special experience of the elastic ligature. He did not intend ever to use a Murphy's button again. It was important to use the method of suture with which the

operator had the greatest familiarity. From his comparatively small experience he would say that if there were anaemia after acute ulcer it was transient; in chronic ulcer it persisted for months. He had never had the chance of verifying the cure of chronic gastric ulcer *post mortem*, but complete recovery of health from an apparently moribund condition due to chronic ulcer followed gastro-enterostomy. In regard to the multiplicity of ulcers, he felt sure that chronic ulcers were never solitary. He did not believe that a duodenal ulcer ever occurred without a gastric ulcer, and he believed a chronic ulcer was not usually, but always, multiple.

CLINICAL SOCIETY OF LONDON.

HOWARD MARSH, F.R.C.S., President, in the Chair.

Friday, January 23rd, 1903.

HEMIATROPHIA FACIALIS (MORPHOEA OR LOCALIZED SCLERODERMA OF THE FACE).

DR. T. D. SAVILL exhibited a man, aged 50, who in 1880 received a severe blow on the top of the head, and thereafter for fifteen years suffered from neuralgia of the vertex and face. About 1885 the hair of the left side of the scalp and eyebrow began to fall off, and the same half of the face to waste. Over the affected area, namely, roughly, that supplied by the left fifth cranial nerve, the skin was now shiny and smooth, and, with the subcutaneous tissue, was atrophied; the hair was almost absent, and the temporal and masseter muscles were atrophied. There were also a few characteristic patches of morphoea about the back, but they caused no unpleasant sensations.

Sir DYCE DUCKWORTH concurred in the view of the identity of facial hemiatrophy with morphoea, and referred to a paper communicated by him to the *Edinburgh Medical Journal* in 1883, in which he had traced the gradation from mere malnutrition of hair to the extreme cases in which skin, fat, and muscle were implicated. He considered that they were due to disease in the centres of the fifth nerve, especially of the Gasserian ganglion. He referred also to two remarkable cases in which there was entire loss of hair all over the body as a result of traumatism.

RUPTURED AORTIC VALVE.

Dr. SEYMOUR TAYLOR exhibited a hammerman, aged 50, who seventeen years ago had had syphilis, but remained apparently in good health until July, 1902, when after a hard day's work he had precordial pain and dyspnoea. He was then found to have a loud aortic obstructive murmur and a louder diastolic murmur, audible 2 in. from the chest, and all over the thorax back and front, and over the abdomen as low as the umbilicus. There was no reason to suspect an aneurysm.

Dr. A. MORISON cited reasons for thinking that the case was one of sudden failure of compensation rather than ruptured valve.

Dr. H. A. CALEY and Dr. V. PEARSON hesitated to accept the diagnosis of ruptured valve.

Dr. TAYLOR, in reply, considered that failure of compensation would not account for the musical thrill.

REMOVAL OF THE SCAPULA.

Mr. STEPHEN PAGET exhibited a boy, aged 9, from whom he had removed the entire bone for a cartilaginous growth on April 30th, 1902. The movements of the arm were now very good.

In reply to the PRESIDENT, who drew attention to this feature of the case, Mr. PAGET stated that he considered that result due to the great care which had been taken for weeks after the operation to keep the arm well up and prevent it from dropping. He had removed the whole bone rather than only the portion diseased in deference to the opinion expressed by Mr. Jacobson in his *Operations of Surgery*.

CHARCOT'S KNEE AND SPONTANEOUS FRACTURE OF TIBIA IN THE SAME LIMB.

Dr. H. D. ROLLESTON showed a woman, aged 46, a widow, who had had seven miscarriages, the last eight years ago. About that time lightning pains commenced, and visceral crises six years ago. There was sudden onset of painless swelling in the left knee after a long walk five years ago; and three years since, as she was walking upstairs, the left tibia fractured painlessly, but subsequently united firmly. On December 3rd, 1902, after diarrhoea lasting three days, she lost power in the right leg.

Mr. BOWLBY, referring to the union of the fractured tibia, said that the prognosis usually given in such fractures in cases of tabes dorsalis was bad; but that in his experience—and he cited several cases in all four limbs—the broken bones always healed well.

Mr. J. R. LUNN especially remarked upon the painlessness of such fractures, of which he had seen many instances in the Marylebone Infirmary. The bone in these cases usually united very well.

TRAUMATIC STRICTURE OF OESOPHAGUS: GASTROSTOMY.

Mr. J. R. LUNN exhibited a seaman, aged 63, who fell four years ago at sea, when he was perfectly well. Two years afterwards—1900—he had difficulty in swallowing, and an obstruction was found 6½ in. from his teeth. Mr. Mansell Moullin then performed gastrostomy, and the man returned to sea after four weeks, feeding himself by the opening into the stomach. Fifteen months after the operation the wound healed (when he was at Boston, U.S.A.), and he had it reopened in hospital. In September, 1902, the wound was trimmed and closed in the hospital at Havre by a surgeon. Since then he had been able to take some solid food by the oesophagus, and had gained in weight, but had occasional dysphagia, and some oesophageal obstruction. Seven inches from the teeth there was still some doubtful thickening around the larynx.

Mr. BOWLBY cited a case in which, sixteen months after gastrostomy, attempts to dilate the oesophagus—the disease being quite quiescent—caused abscess in the posterior mediastinum, and death. He had never known any other case of disease of the oesophagus to be alive eighteen months after gastrostomy.

PERSISTENT SLIGHT JAUNDICE OF FOUR YEARS' DURATION.

Dr. F. PARKES WEBER exhibited the patient, who was a girl, aged 18½ years, who had no obvious alteration in the size of the liver or spleen, and was without marked impairment of the general health. He suggested that the case resembled those described by French authors under the heading "simple cholaemia," but was not in this instance congenital; possibly there had been temporary cholangitis with permanent obstruction of some small hepatic ducts.

Sir DYCE DUCKWORTH suggested that the case was due to syphilitic gumma in the liver.

Dr. ROLLESTON thought it similar to the cases spoken of as urobilin jaundice.

OTHER CASES.

The following cases were also exhibited: Dr. LEONARD S. DUDGEON: A man, aged 44, suffering from tabes dorsalis. Dr. H. PERCY KIDD: A child, aged 23 months, recovering from pneumothorax.

MEDICAL SOCIETY OF LONDON.

CLINICAL EVENING.

C. A. BALLANCE, M.S., F.R.C.S., Vice-President, in the Chair.

Monday, January 26th, 1903.

JOINT AFFECTIONS OF VENEREAL ORIGIN.

MR. JAMES SHERREN showed a case of ankylosis of the hip following urethral arthritis. The first symptoms of the arthritis occurred fourteen days after the beginning of the urethritis. He also showed a case of secondary syphilitic synovitis of the elbows occurring six months after infection.

ORTHOPAEDIC CASES.

Mr. T. H. OPENSHAW, C.M.G., showed two cases of congenital dislocation of the hip, one treated by the manipulation method of Lorenz and the other by the open method of Hoffa. Also a case of congenital absence of the tibia without malformation of the toes, the result presumably of an intrauterine fracture. An untreated case of congenital dislocation of the hip was also shown.—The cases were discussed by Mr. C. B. KEETLEY and Mr. BALLANCE.

CASE OF "ATAVISM."

Dr. F. J. POYNTON showed a boy, aged 3, who was born with both thighs firmly flexed on the abdomen. When first put on his feet he was able to stand erect, but when he commenced to walk crouched, and assumed a posture like that of a chimpanzee. The whole body was bent forward, the chin pointing to the right. The hands were held in front and the upper extremities were bent at the wrists and elbows. The hips and knees were flexed and the feet turned in, the pressure coming upon their outer borders, and he could not walk slowly. The crouching attitude became more marked as the child became tired. The fingers and toes were extraordinarily long, owing to the length of the penultimate phalanges, and the movements of the toes freer than normal,

especially in the direction of flexion. The os calcis of either foot projected backwards more than usual, and the plantar arches were ill developed. Considering the shape of the fingers it was suggested that it was a "casting back" to a prehistoric ancestor.

The case was discussed by Mr. MUIRHEAD LITTLE, Dr. E. CAUTLEY, Dr. VOELCKER, and Mr. BALLANCE.

SELF-AUDIBLE AORTIC MURMUR.

Dr. ROLLESTON showed a man, aged 44, with a loud, musical, diastolic aortic murmur, like that due to a ruptured aortic valve. There was no history of sudden pain or shortness of breath, and the patient's attention was first directed to his chest by a wheezing—the murmur—in his chest; after this he got short of breath. The pulse showed some aortic reflux. There was also a thrill. There was no history of acute rheumatism or syphilis, but the man followed a laborious occupation.

OTHER CASES.

Dr. CAMPBELL POPE showed a case of venous and lymphatic naevus of both cheeks, in a boy of 14, which came on suddenly after an attack of scarlet fever. The case was discussed by Mr. J. HUTCHINSON, jun., Mr. OPENSHAW, and Mr. BALLANCE.—Dr. CYRIL OGLE showed a case of peripheral gangrene of the extremities of undetermined origin.—Mr. J. HUTCHINSON, jun., showed a case of macrodactylism.—Mr. C. B. KEETLEY showed a patient with undescended testes after operation.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

H. MALET, M.D., President, in the Chair.

Thursday, January 8th, 1903.

FRACTURED BASE OF THE SKULL WITH INJURY TO THE RIGHT SECOND AND LEFT SEVENTH NERVES.

MR. HASLAM showed a man who had sustained a fracture of the base of the skull from a fall from a ladder. The line of fracture must have extended from the right anterior fossa to the left middle fossa, for he at once lost the sight of the right eye and haemorrhage from the left ear was followed in nine days time by complete facial paralysis on that side. The facial paralysis was slowly improving.

GALL STONE FROM THE COMMON BILE DUCT.

Mr. BARLING showed a large specimen which measured ¾ in. in diameter, and showed on section two small calculi, each about the size of a pea, which had formed the nucleus around which the larger stone had been deposited. The patient's symptoms commenced two years before operation, and for some time were characteristic of stone in the common duct. There was then a period of good health without any symptoms, and then again a period of pain, vomiting, jaundice and rigors with sweating, and operation revealed the stone shown, which lay at the lower end of the duct near the duodenum, and had to be pushed up from underneath the head of the pancreas. The duct was then incised, the stone evacuated, and the incision sutured. There was no leaking from the sutured duct, and a very rapid recovery ensued.

CEREBRAL ABSCESS AND THROMBOSIS OF LATERAL SINUS.

Mr. HEATON showed a man upon whom he had successfully operated for these conditions.

ETHYL CHLORIDE AS A GENERAL ANAESTHETIC.

Dr. MCCARDIE read a paper on this subject, under the following headings: Present position of ethyl chloride as an anaesthetic; physiological action: influence in different types of patient; personal experience in over 400 cases.

Mr. BARLING, Dr. LAMB, Mr. M. HALLWRIGHT, Mr. MORRISON, Mr. JAMESON EVANS, Dr. WOOD WHITE, Dr. EDGE, and the PRESIDENT took part in the discussion, and Dr. MCCARDIE replied.

MODERN PERINEAL PROSTATECTOMY.

Mr. JORDAN LLOYD read this paper, of which the following is a synopsis: Anatomy of the prostate and the nature of prostatic enlargement; cases suitable for operation by the perineal and by other routes; details of perineal operation; its advantages and disadvantages; conclusions.

The paper was discussed by Mr. W. E. BENNETT, Mr. MORRISON, and Dr. EDGE; and Mr. JORDAN LLOYD replied.

IPSWICH CLINICAL SOCIETY. The annual meeting was held at the East Suffolk Hospital on January 15th, when the following members were elected officers for the coming year: *President:* W. W. Sinclair, M.B., C.M. *Vice-President:* G. Vincent, M.D., D.P.H. *Honorary Secretary:* W. Alex. Gibb, M.D., C.M. *Council:* J. Staddon, M.R.C.S., L.R.C.P., Branford Edwards, M.R.C.S., etc., H. B. Rygate, M.B., F.R.C.S.Edin., J. F. C. Hossack, F.R.C.S.Edin., Fowler Ward, M.B., B.S., J. Gutch, M.D., B.S.—Dr. VINCENT (the retiring President) read a paper on motor cars for the medical profession. A discussion followed, in which a large number of the members joined.

STAFFORDSHIRE BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

WHEELTON HIND, M.D., F.R.C.S., President, in the Chair.

November 27th, 1902.

GENERALIZED NAEVOID CONDITION.

DR. HUTTON showed a case of generalized naevoid condition, partly congenital and partly acquired. There was no history of bleeding or any serious trouble. Three bluish vascular tumours were attached to the face. On the chest there was a very varicose condition of the vesicles and vascular swellings. On the abdomen a similar condition was present. On the right arm the skin was almost obliterated in normal



Fig. 1.

appearance by coils of vascular growth, covering the forearm and extending partly up the upper arm. The middle finger of the right hand was atrophic. The left arm was similar, but the condition was not so well marked. On the lower limbs a similar condition was present, but slighter. Where the skin was not affected by vascular growth it had a soft kid-like feel (Fig. 1).

CIRCUMSCRIBED SCLERODERMA.

Dr. KING ALCOCK exhibited a case of circumscribed scleroderma (morphoea) situated on the left arm of a girl, aged 19.

The condition had been noticed for six months, and no material change had occurred during that period.

DOUBLE SCROTAL HERNIA.

Mr. R. ALCOCK exhibited a case of double scrotal hernia of long standing and very large size (Fig. 2).

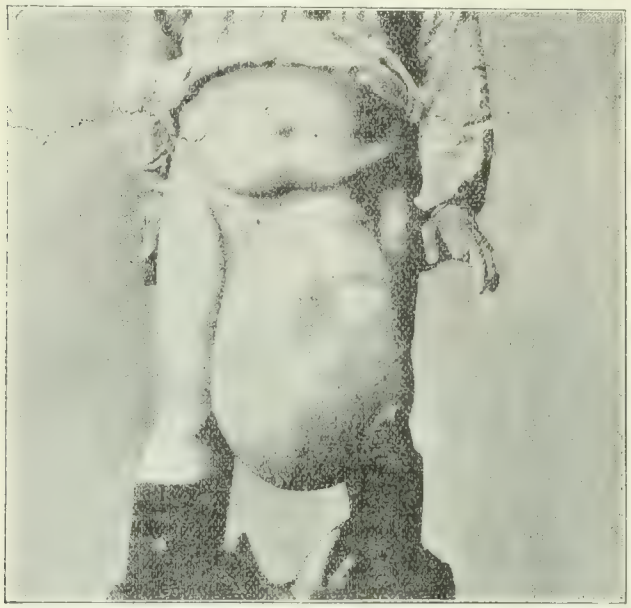


Fig. 2.

SUSPECTED CEREBELLAR LESION.

Dr. J. RUSSELL showed a case of suspected cerebellar lesion in a female child, aged 5 years. Ten months ago she developed an ataxic gait. She was seen first a week before the meeting, and it was found she was unable to walk more than a few yards without falling. She fell sometimes backwards, sometimes forwards. Her gait was peculiar being somewhat crablike. There was no nystagmus. The reflexes were normal and there was no ankle-clonus. Mr. Folker reported as to the condition of her eyes as follows: There is absolute mydriases of both pupils; the optic pupillae are both atrophic, the retinae also undergoing the same change; the arteries are very small and contracted, the veins are also contracted.

MEDICAL OPHTHALMOLOGY.

Mr. HERBERT H. FOLKER read a paper on medical ophthalmology dealing with the various symptoms met with in conjunction with general diseases. The paper was divided under three headings: pupil, retina, and optic nerve. The different appearances were dealt with, at the same time pointing out when they occurred, and the diagnostic value of each.

ADDISON'S DISEASE.

Dr. J. RUSSELL read notes on a case of Addison's disease. The patient was a man, aged 65, married; family history good. In August, 1896, the left testicle became enlarged, the swelling commencing in the epididymis; an abscess formed in September; the testicle was removed by Mr. Spanton in October, and was found to be tuberculous. In February, 1897, the right testicle became affected, no abscess formed, but it atrophied rapidly. In May of the same year he began to complain of pain over the cartilage of the seventh left rib near the sternum. It was tender to the touch, and a slight thickening could be detected. In September there was a distinct swelling and redness. A small abscess was found, and the pus evacuated. On probing no caries could be detected. The cavity was drained for some time and then allowed to heal up. In February, 1898, an abscess again formed. The patient was anaesthetised, an exploratory incision made, and a sequestrum of diseased bone removed from the seventh rib. In 1900 a fresh focus appeared, this time in connexion with the eighth rib, and in June Mr. Spanton operated and removed a considerable mass of diseased rib and cartilage. A suppurating sinus, however, remained till the time of his death. His general health improved somewhat, and he put on flesh, but still remained more or less of an invalid, as he had done since the initial seizure in 1895, being able to attend to his business only at intervals. In October, 1901, on returning from a lengthened stay at a health resort, a distinct pigmentation of the skin was noticed, which had been attributed to sunburn. On examining the palm of the hands all the lines were distinctly marked out, giving an appearance as if he had been working in brown pigment, and had carelessly washed his hands, leaving the pigment in the creases. The dorsum of each hand was dark, especially over the joints; the nails were unaffected. The face and neck were strongly pigmented, the distribution in the face being somewhat irregular, like that seen sometimes in pregnant women. The sclerotics were white, there was no discoloration of the hairy scalp, nor was the mucous membrane affected in the mouth, but the lips showed a distinct line where they came in contact. On the rest of the body pigment was markedly shown on the outer aspects of the arms and the folds of the axillae, around the nipples, in the groin and scrotum, and wherever there was friction or pressure—for example, elbows, shoulder blades, and spinous processes. The scars on the chest showed up white, surrounded by dark areolae, which gradually shaded off. The patient complained of loss of tone and inability to endure sustained effort. The slightest muscular exertion was quite a trial, and he felt equally disinclined for mental work. The heart's action was feeble. He was short of breath, suffered from palpitation, and had a tendency to syncope and coldness of the extremities. There was no noticeable emaciation. His appetite was capricious, and he had repeated attacks of indigestion, accompanied with vomiting and diarrhoea. The symptoms pointed to an invasion of the adrenal glands by the tuberculous process which had been manifesting itself in different parts since 1895. Mr. Spanton, who met Dr. Russell in consultation, agreed, and the patient was ordered to keep his bed and put on nutritious easily digested diet. Suprarenal gland extract was administered in increasing doses, commencing with the equivalent of 15 grams of gland substance. Sickness and diarrhoea were combated in the usual way. No improvement could be detected, except slight diminution of the pigmentation. The symptoms gradually increased in severity till he died from asthenia on January 3rd, 1902. He remained conscious to the last, there having been no delirium or coma. Two days after a limited necropsy was made. The left adrenal gland could not be found, it evidently having undergone entire atrophic change. The right gland was slightly enlarged and hard and presented on section an appearance very like a gumma. There was evidently complete degeneration. On microscopic examination the tissue was found to be completely caseous, there being only a thin shell of adrenal cortex left, the whole medulla having undergone tuberculous degeneration. The semilunar ganglia were examined but no pathological changes could be detected. The spleen was enlarged but healthy. All the other organs showed no trace of disease.

CEREBRAL TUMOUR.

Dr. RUSSELL also, by the kind permission of Sir Victor Horsley, contributed notes of a case of tumour of the middle third of the right Rolandic area of the cerebrum. The patient was a female, aged 36, married, no children. She had had two attacks of acute rheumatism, but the heart was unaffected. On February 20th, 1900, she had an attack of Jacksonian epilepsy, commencing in the left arm, then invading the leg, and finally the left side of the face and neck. A tendency to tremor of the left hand and forearm remained for several weeks, gradually passing off. A second convulsion occurred six months later, not so severe, but the same chronic tremor persisted for some time, and there was loss of power in the hand and forearm. Under massage and electrical treatment the hand regained power and the patient was able to go about, engage in light household duties, and cycle. On July 30th, 1902, however, she had a third seizure, which ran the same course, and was followed by actual paralysis of the thumb, index, and middle fingers, and to a less extent of the rest of the left hand. There was no loss of sensation as regarded heat and cold or pain, but there was quite an appreciable diminution of tactile sensibility. Optic neuritis was found in both eyes, in the right more recent. There was no hemianopsy. Giddiness was a prominent symptom, but there was no vomiting and headache was seldom complained of. No tenderness could be detected in any particular part of the skull. The knee reflexes were normal, the left wrist reflex was exaggerated, and there was no ankle clonus. All the symptoms pointed to a tumour in the right Rolandic area

in the middle third. On September 30th a consultation was held with Sir Victor Horsley. He advised removal of the tumour, the operation to be performed in two stages. This he did in October, and a hard greyish-red growth was found in the position diagnosed, and successfully removed, the patient making a good recovery.

SOUTHERN BRANCH OF THE BRITISH MEDICAL ASSOCIATION: SOUTH WILTS DISTRICT.

J. J. WILLIAMS-FREEMAN, M.D., in the Chair.

Thursday, January 15th, 1903.

GASTRIC ULCER.

A DISCUSSION on gastric ulcer was introduced by Dr. GILBERT KEMPE, who detailed the usual character of a gastric ulcer and course of the disease. He referred to the symptoms: Pain, vomiting, haematemesis, melaena and tender spot, which might be absent or present. Perfect recovery, he thought, occurred in many cases, he also pointed out the great danger of perforation and haemorrhage.

Dr. WILLCOX referred to typical cases and those occurring without any symptoms, excepting sudden onset of haemorrhage. Treatment, he thought, in many cases was abstention from food and feeding per rectum. He called attention to the pallor and yellow tint of the conjunctiva in patients suffering from gastric ulcer, and suggested that disappearance of the yellow tint might be an indication that the ulcer was cured. He also referred to the distinction between gastric ulcer and gastric neuralgia.

Dr. BLACKMORE had noted slowness of pulse in gastric ulcer, and commented on the difficulty of diagnosis between gastric ulcer and neuralgia in the absence of haemorrhage.

Mr. RICHMOND inquired if Dr. Kempe attached any importance to the site of the ulcer as regarded the prognosis in cases of gastric ulcer.

Mr. C. R. STRATON had tried the administration of a few doses of very dilute hydrochloric acid as a test to diagnose between gastric ulcer and neuralgia; if an ulcer was present the pain was increased by the acid mixture.

Dr. HARRIS remarked on the etiology of gastric ulcer, and considered that it was usually of a septic origin.

Mr. H. L. WILKS recalled a case in his practice in which all the symptoms of perforation were present, and in which recovery took place without an operation.

Dr. WILLIAMS-FREEMAN recommended for rectal feeding in gastric ulcer Gerard's peptones, peptonized milk, laudanum.

Dr. FISON inquired of Dr. Kempe what particular sign he placed most reliance upon as an indication of perforation of an ulcer.

Dr. KEMPE, in reply, stated that the yellow tint of the conjunctiva was most probably due to catarrh of the stomach spreading to the duodenum and bile duct; that in cases of ulcer a tender spot was usually present, many tender spots present in neuralgia; that an ulcer in front was most likely to perforate, an ulcer behind most likely to bleed. No one sign was to be relied upon for diagnosis, general condition to be considered, and in cases of doubt an incision should be made, and if necessary the patient should be operated upon at once. With regard to the duration of rectal feeding, one must be guided by symptoms.

SURGEON AND ANAESTHETIST.

Mr. R. T. RICHMOND read a paper entitled Surgeon and Anaesthetist. He considered that the choice of an anaesthetic should always be left to the anaesthetist, and the utmost confidence ought to be placed in the anaesthetist by the surgeon.

CASES.

Dr. HARRIS read notes on a case of pneumococcus arthritis, with recovery, and showed a specimen removed by excision of knee-joint in the case.—Dr. KEMPE: (1) Case of Caesarean section performed for myoma of uterus; recovery, and living child. (2) Case of perforated gastric ulcer, operation, recovery. (3) Excision of spleen; operation for traumatic rupture; recovery.—Dr. FISON showed a case of rodent ulcer treated by *x* rays; treatment was very successful.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

JOHN IRVING, M.B., C.M., President, in the Chair.

Fridays, January 9th and 23rd, 1903.

EXCISION OF THE THYROID ISTHMUS.

MR. H. J. ROPER reported the following case:

E. L., aged 20, had suffered from difficulty in breathing for many years. In June, 1901, when first seen, he was distinctly cyanosed, but was able to get about, being, however, unable to run or exert himself unduly without great distress. Examination revealed an enlarged thyroid, chiefly on the right side, compressing the trachea laterally. Treatment for five months with potassium iodide (large doses) and biniodide of mercury ointment externally failed to relieve him. In October, 1901, under the ether the isthmus was divided and the lobes of the thyroid gland widely separated.

The result was complete relief in every respect. Sixteen months afterwards the gland had shrunk considerably and he remained quite well.

Dr. CHURTON and Mr. MOYNIHAN took part in the discussion, and Mr. ROPER replied.

THE PYREXIA OF PHTHISIS.

Dr. TREVELYAN read a paper largely based on experience obtained in the Leeds Sanatorium for Consumptives at Gateforth. The importance of rectal temperatures was illustrated by charts. The types of pyrexia as met with in the course of phthisis were then discussed, but he did not think that any chart could be described as really typical of phthisis. In one of Ophüls's cases, with an intermittent temperature, an elaborate histological and bacteriological examination revealed no other micro-organism than the tubercle bacillus. Although in chronic stationary phthisis there might be long apyrexial periods, yet occasionally in some progressive and unfavourable cases there might be little or no pyrexia. Pyrexia was certainly much less marked under the newer methods of treatment. The temperature chart might be influenced by (1) intercurrent affections, (2) extension of the disease, (3) occurrence of complications, and (4) artificial means. A chart from a case of fatal pneumothorax was shown in which the patient had done very well until three or four weeks previously; the collapse period was extremely short. As regarded the causation of the pyrexia, great attention should be paid to possible secondary infections, yet it was not easy to see how in some cases the pyrexia of a pure tuberculous infection could with certainty be distinguished from that of a secondary infection. The presence of even slight pyrexia in suspected phthisis might be of considerable value in diagnosis; in similar cases without pyrexia, and where the examination of the sputum gave negative bacteriological results (including inoculation), Dr. Trevelyan thought it quite justifiable to try tuberculin in minimal doses. He showed a chart from a case in which a slight but sufficient reaction had been obtained by the tuberculin test used after Koch's method. The knowledge derived from the temperature chart was of great value in prognosis, but the possible occurrence of grave and progressive cases with little or no pyrexia made a careful scrutiny of other symptoms absolutely necessary. The indications for treatment afforded by pyrexia were complete rest, pure air, suitable and sufficient feeding. He had no special experience of hydrotherapeutic measures or antipyretic drugs in phthisis but he was inclined to try the former. Patients with at all considerable pyrexia including a morning temperature above the normal were best treated at home and if the pyrexia abated then sent to a sanatorium. He showed a chart from such a case. He had to thank Mr. E. A. Wilson, M.B., Resident Medical Officer at Gateforth, for preparing several charts.

Dr. RICHARDSON, Dr. GORDON BLACK, Dr. DRAPER, Dr. DOYLEY GRANGE, Dr. JOHNSTONE CAMPBELL, and Dr. ALLAN took part in the discussion; and Dr. TREVELYAN replied.

PAPERS.

The following papers were also read: Dr. E. SOLLY (Harrogate): On a case of rheumatoid arthritis associated with non-specific urethral disease.—Dr. T. CHURTON: On a peculiar case of delirium alternating with coma.—Mr. WILLIAM HALL: On the question of the supply of pasteurized and humanized milk to the infant poor of the community.

CASES AND SPECIMENS.

A large number of cases and specimens were shown.

ULSTER BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

Professor THOMAS SINCLAIR, M.D., F.R.C.S.Eng., President, in the Chair.

Thursday, January 22nd, 1903.

MISSED ABORTION.

DR. ENGLISH read notes of a case of missed abortion and showed the specimen.

PARALYSIS FROM ACETYLENE GAS EXPLOSION.

Dr. DARLING showed a man whose right arm had become completely paralysed with atrophy of muscle and no reaction to faradic current after an acetylene gas explosion in which the lower part of the forearm had been seriously injured, but no mark of injury or contusion was found in arm or supraclavicular region.

LUPUS AND SYPHILIS.

Mr. MITCHELL showed illustration of severe disease of bones and skin of face, probably due to a combination of lupus and syphilis.

PROSTATECTOMY.

The PRESIDENT showed a specimen of an enlarged prostate which he had removed.

Mr. MITCHELL showed a patient upon whom he had performed the same operation and also the specimen.

Mr. KIRK showed three patients upon whom he had operated and the specimens. Mr. Kirk then introduced a discussion on prostatectomy; he expressed the opinion that it was really a fibro-adenomatous mass which was removed, and not the gland proper; he urged operation before kidney and bladder disease had set it, and supported strongly the suprapubic method.

Mr. MITCHELL referred to other methods of relieving symptoms of enlarged prostate and described most of them as unscientific, unreliable, and dangerous; he likewise urged operation before cystitis had set in, or at any rate not to allow this condition to continue, and supported the suprapubic method, treating haemorrhage and residual cavities with douching of hot saline and solution.

Dr. DARLING (Lurgan) asked for some explanation of the great variation in the difficulty of the operation: he had performed vasectomy in two cases, one with no result, and one with very a successful issue.

Mr. FULLERTON said the perineal method commended itself to him.

Dr. R. J. JOHNSTONE said that it was impossible to perform the operation on the cadaver unless the prostate was greatly enlarged.

The PRESIDENT, in closing the discussion, said that the surgeons had demonstrated that the sphincter of the bladder was of little account and that the constrictor isthmi urethralis was the effectual guard in the passage of urine; he remarked that there was no stricture left after the operation, and supported the view that the real disease was a fibro-adenoma, and that if one hit the capsule the operation was easy; and the suprapubic method; the perineal method endangered the constrictor isthmi urethralis. From what he had seen, although he had never performed the operation, vasectomy gave no permanent improvement; double orchidectomy had in one case been followed by marked atrophy.

Mr. KIRK replied; and Professor REDFERN referred to prostatectomy having been attempted over fifty years ago in the dissecting room in Edinburgh.

RAPID DILATATION OF CERVIX UTERI.

Professor BYERS showed Bossi's new instrument for rapid dilatation of the cervix in such cases of obstetric practice as eclampsia and advanced heart disease.

CYSTIC DEGENERATION OF CHORION.

Professor BYERS showed a specimen of cystic degeneration of the chorion, illustrated by microscopic sections prepared by Dr. R. J. Johnstone.

Dr. R. J. DAVISON showed a similar specimen, which had occurred in a primipara, aged 22, who had had no recurrent haemorrhage.

SOLID TUMOUR OF OVARY.

Dr. ST. CLAIR BOYD showed a fresh specimen of a solid tumour of left ovary.

INTRAOCULAR IRRIGATION IN CATARACT EXTRACTION.

Dr. MCKEOWN gave a demonstration of his intraocular irrigation in the extraction of cataract. He quoted a paper from Surgeon-Major Elliott, India, to whom he had shown the method, to the effect that in the last 800 cases on which Major Elliott had operated the irrigation had been employed; that vitreous loss had been reduced to 2 per cent.; that it had dispensed with the introduction of instruments into the eye; that it enabled one to operate in cases of immature cataract; and that secondary operations were reduced.

Dr. CECIL SHAW emphasized the advantage of the rapidity with which the capsule could be got rid of and the lessened loss of vitreous.

Dr. MCKEOWN, in reply, said that for the idea of the simplification of the Florence flask arrangement he was indebted to Dr. Cecil Shaw.

CASES.

Dr. THOMPSON read notes of (1) a case of successful removal of a dermoid cyst from the abdomen; also (2) of a case of gangrene of the intussuscepted portion of gut in a man, with recovery after fourteen days; and (3) of a case of a female lunatic who had hidden some sixteen articles in the vagina—stones, glass stopper, broken neck of a bottle, piece of a pipe, etc.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—At a meeting on January 9th, Dr. SPOTTISWOODE CAMERON, President, in the chair, Dr. ALFRED HILLIER read a paper on the prospect of extinguishing tuberculosis. This, he said, depended on the activity of the sanitary administration, using the words in the widest sense. In this country the decline in the death-rate began with the inauguration of public health legislation, better dwellings, ventilation of workshops, and a higher standard of living among the working classes, whereas in Prussia it did not begin till much later—namely, 1886, following the recognition of the bacillus discovered in 1881 as the cause of the disease. The decline in the English death-rate from tuberculosis from 24 to 19 per 100,000 had been slow, that in the Prussian from 39 to 21 so rapid that if the same rate were maintained it would reach zero within one generation, whereas under like conditions a century would be required in this country. Was, he asked, this slow progress satisfactory? Why should 60,000 persons die annually in England and Wales of tuberculosis only, and why should we be left in the future so far behind Germany after having taken the lead in the past? He had conversed with Dr. Koch, who was convinced that the chief factor in the extraordinary reduction of nearly 50 per cent. in fifteen years was the popular recognition of the infectivity and the means of infection of tuberculosis, and next to it in importance was the improvement in the conditions of the industrious sections of the working classes through the workmen's insurance system promoted by the present Emperor, under which among other benefits the family of a man disabled by sickness became the care of the State, the provision of sanatoria, as yet too few, and the general improvement in the sanitary conditions of the towns probably contributing to the result. Even in the early stages cases of pulmonary tuberculosis were infective, but it was the advanced cases, and above all those in the last months of life that were the most dangerous. To isolate such in comfortable cheerful asylums, when they could not be efficiently isolated at home, would be a real kindness to them and their families, to whom they would otherwise leave a legacy of disease. The control of the sputa alone was insufficient, since the spray discharged in coughing, sneezing, and even speaking, was far more actively virulent than the sputa. This was evident from the experiments of Flugge and others recorded in the *Zeitschrift für Hygiene*, 1899. A patient having been in a glass chamber for an hour daily, with several vessels of sterilized saline solutions around him, it was found that after a time the water became infective to guinea-pigs. Heymann caused a patient in a somewhat advanced stage to cough daily in the faces of guinea-pigs, with the result that sooner or later all became tuberculous. Koch found the air of small apartments occupied by a consumptive far more infective than that of large wards, but would not have advanced cases mixed with others even in the largest wards, Making every allowance for hereditary susceptibility, direct infection alone could account for the frequency with which soon after the death of one member of a family others developed the disease. Dr. Hillier knew an instance of four sons and two daughters, all apparently healthy, who, residing with their father, died of tuberculosis within a few years of his death; while one, then a boy at school, escaped, and was now a distinguished officer in the navy. Koch would have hospitals for the reception and isolation of advanced cases near every town where the patients might be freely visited by their friends, whereas sanatoria for the cure of consumptives must be established in healthy and selected localities in the open country. Dr. Hillier then quoted extensively from Dr. Niven's reports on the notification of tuberculosis in Manchester in 1901-2, when in over 70 per cent. of more than a 1,000 cases a source of direct infection appeared certain or probable, mostly attendance on or constant association with a tuberculous relative or friend, in some houses the disease spreading almost to an epidemic. In an analysis of occupation there was always one at least of the workpeople already affected and spitting on the floor, twelve seemed traceable to previous occupations of rooms by advanced or fatal cases, in two (one of them an outdoor labourer) the wearing of infected clothes, and in one case only milk seemed to be the means of infection. There was no disease of which the bacteriological conditions of infectivity were better known, and if its virulence were low it was exerted over long periods. Compulsory notification, which worked well in Norway, had been adopted in Saxony and was contemplated in Prussia, with isolation of early cases in sanatoria and of advanced ones in asylums, where proper supervision could not be exercised at home,

with a large increase of the staffs of the medical officers of health, could alone wipe out the appalling mortality of 60,000 per annum in England and Wales. The cost would be great, but would be nearly saved out of the £23,000,000 now expended on an antiquated and thriftless Poor Law.—Dr. MCVAIL pointed to the fallacies that beset Dr. Niven's statistics, since a man might be exposed to infection in many different places; he would not have a man in the early stages treated by his fellows as a leper, and he would remind the meeting that the isolation of advanced cases would be a final parting, whereas the family of a small-pox or fever patient expected his return. The most rigid hygiene might be enforced, but human feelings must not be outraged, even in the interests of public health.—Dr. CALDWELL SMITH had often observed a rapid recrudescence of the disease on a patient's return from a sanatorium, and suggested farm colonies that might be self-supporting. In Canada such had proved most successful.—Drs. SCURFIELD and SYDNEY DAVIES did not think there would be much difficulty in securing the isolation of advanced cases that were already a burden to themselves and their friends, while Drs. DAVIES and LYON GLOVER—the latter as a hospital physician—thought that the part played by the cough spray had been unduly insisted on, to the neglect of the sputa and of general sanitary surroundings, adducing the lighter incidence among women and the immunity of medical men and nurses in hospitals. They agreed with Dr. Niven that the greatest source of infection was the practice of expectorating in workshops, still more in public-houses.—Dr. KAYSERLING of Berlin, referring to the remarks of the several speakers, stated that the decline in the mortality had been more marked among men, and among those over 40 years of age, that work on a farm under a medical director for one or two or three years had been tried with success in Hanover, and that the cost of erection of sanatoria ranged from £100 to £600 per bed.—Dr. SYKES, KAYE, JONES, ALLAN, BOND, and others, having spoken; Dr. HILLIER replied.

SOUTH-WESTERN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.—At a meeting on January 21st, Mr. J. DELPRATT HARRIS, President, in the chair, Mr. R. H. LUCY read a paper on tonsillar haemorrhage. He referred to cases in which severe and often fatal haemorrhage followed the spontaneous rupture of an abscess the result of septic tonsillitis. Believing from a study of recorded cases that erosion of one of the blood vessels in the neighbourhood was the cause, Mr. Lucy advocated early relief of tension in any peritonsillar inflammation as a preventive of septic ulceration. Eleven such cases were cited, one of which was successfully combated by ligature of the common carotid artery, full details being recorded in the BRITISH MEDICAL JOURNAL for May 11th, 1901. —Mr. PAUL SWAIN read notes of and showed a specimen of periosteal sarcoma (round celled) of the upper part of the femur. The patient, aged 21, had suffered for some months from what was supposed to be sciatica. When seen by Mr. Swain the patient had a swelling on the upper and outer part of the right thigh, which he diagnosed as sarcoma. Amputation at the hip-joint was performed on November 29th, and the patient rallied well from the operation.—Mr. WALTON WOOLLCOMBE read a paper on congenital talipes varus. After dealing briefly with the etiology, and criticizing the chief theories advanced to account for it—namely (1) defect in the primitive germ, (2) primary malposition of tarsal bones, (3) mechanical theory, (4) abnormal muscular action, (5) the dynamic or spasmodic muscular action, (6) maternal impressions—he sketched the changes in the bones, tendons, and ligaments in cases of varying degrees of severity. He then discussed the treatment of four classes of cases divided very roughly according to their severity. In the severe forms he advocated a trial of Ogston's operation of "*évidement*" as an improvement on Lund's, Davy's, and other operators. Cases and splints were shown in illustration of the various points. Dr. WEBBER read (for Mr. WHIPPLE) notes of a case of double inguinal ovarian hernia in a patient, aged 30, who had never menstruated, and who was the subject of an imperfectly developed uterus and appendages. The vagina was 2 in. in length, and terminated blindly. Both ovaries and tubes were removed by the usual operation for radical cure of inguinal hernia.—Dr. BUSHNELL showed a middle-aged married woman, the mother of six children, who was suffering from slight exophthalmos and enlargement of thyroid gland. She had prolapsus uteri, and there was a history of indefinite illness, culminating in a rapid loss of flesh, sweats, febrile temperature, rapid pulse, and cough, with bloody expectoration. There were no signs (physical) of lung mischief, although at one time the symptoms were suggestive of acute phthisis. Dr. Bushnell was of opinion that this condition might be due to perverted thyroid secretion. Dr. Bushnell also showed numerous pathological specimens and microscopical exhibits.—Mr. GEORGE JACKSON showed a specimen of a recent fracture of the neck of the femur and a longitudinal fracture of the shaft.—Mr. C. HAMILTON WHITEFORD showed (1) a self-retaining silver empyema tube; (2) a combined retractor and ligature adjuster.

NORTH OF ENGLAND OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.—The annual meeting was held at Manchester on January 16th.—The HONORARY GENERAL SECRETARY (Dr. E. O. Croft) read the annual report, which showed that the membership of the Society had been well maintained. During the year eight ordinary meetings had been held—at Manchester (3), at Liverpool (2), at Sheffield (2), and at Leeds (1). The attendances had been good, and 70 items, in the form of papers, cases, and specimens had been contributed. The statement of the HONORARY TREASURER (Dr. R. Favell) indicated that the financial condition of the Society continued to be highly satisfactory. The following were elected office-bearers for 1903:—*Presidents:* J. E. Gemmell, M.B. (Liverpool). *Vice-Presidents:* S. Buckley, M.D., W. J. Sinclair, M.D. (Manchester); H. Briggs, F.R.C.S., T. B. Grimsdale, M.B. (Liverpool); T. Kilner Clarke, M.D., C. J. Wright, M.R.C.S. (Leeds); G. H. West Jones, M.R.C.S., Sinclair White, M.D. (Sheffield). *Council:* A. Donald, M.D., A. T. Helme, M.D., Arnold W. W. Lea, M.D., S. Nesfield, M.D., D. Lloyd Roberts, M.D., J. P. Stallard, M.D., W. Walter, M.D. (Manchester); W. Murray Cairns, M.B., E. T. Davies, M.D., P. Edwards, L.R.C.P., R. Humphreys, M.B., J. McClelland, M.D., A. M. Patterson, M.D. (Liverpool); J. Braithwaite, M.D., H. Littlewood, F.R.C.S., H. Robson, M.R.C.S., A. E. L. Wear, M.D. (Leeds); Percival E. Barber, M.R.C.S., J. W. Martin, M.D., A. A. Payne (Sheffield). *Honorary Treasurer:* E. Octavius Croft, M.D., Leeds. *Honorary General Secretary:* Arthur J. Wallace, M.D. (Liverpool). *Honorary Local Secretaries:* John Scott, M.D. (Manchester); A. Stookes, M.B. (Liverpool); Walter Thompson, F.R.C.S. (Leeds); Sidney Barber, M.R.C.S. (Sheffield). A vote of thanks to the retiring President (Dr. S. Buckley), proposed by Dr. LLOYD ROBERTS and supported by Drs. H. BRIGGS, J. W. MARTIN, E. O. CROFT, and JOHN SCOTT, was carried with acclamation.

TORQUAY MEDICAL SOCIETY.—At a meeting on January 15th, Dr. F. D. CROWDY, President, in the chair, a vote of condolence to Mrs. Karkeek on the death of her husband, Mr. Paul Q. Karkeek, was carried unanimously.—Dr. MAKEIG JONES showed a man recovering from a very severe attack of zona of the third, fourth, and fifth cervical and second dorsal nerves of the left side, followed by anaesthesia of the affected parts. Dr. Jones also read some notes on circumcision, recommending slitting up the prepuce as the proper surgical operation for phimosis, instead of removal. He suggested that the older surgeons were so accustomed to ritual circumcision that when they were called in to operate for phimosis they failed to realize that they were called in as surgeons to relieve a deformity, and not as priests to perform a sacrificial rite.

ABERDEEN MEDICO-CHIRURGICAL SOCIETY.—At a meeting on January 8th, Dr. JOHN GORDON, President, in the chair, the following pathological specimens were exhibited: Dr. G. M. DUNCAN: Specimens and slides of hydatid of human breast; malignant adenoma of uterus; intercanalicular myxoma of breast; blood films from case of pernicious anaemia.—The PRESIDENT: Tumour of frontal region of brain.—Dr. H. M. GRAY: Double tumour of parotid and submaxillary glands, with slides; ruptured extrauterine gestation; abscess of kidney; congenital dislocation of hip.—Dr. LEVACK: Skiagraphs.—Dr. LISTER: Tumours of the mediastinum, with slides; microscopic slides of leucocythaemic blood; chronic glomerular nephritis; septic necrosis of the liver.—Dr. MARNOCH: Slides from case of symmetrical epithelioma of legs; gangrenous gall bladder and biliary calculi; pyonephrotic kidney with ureteral calculi; carcinoma of stomach; intestinal concretion; synovial membrane from tuberculous knee.—Dr. SESSOR (for Dr. ROSE): Perforated appendix with concretion.—Dr. USHER: Leucosarcoma of choroid.

REVIEWS.

PSYCHOLOGICAL MEDICINE.

IT is certain that until our knowledge of the etiology and pathology of mental diseases is much greater than it is at present the prophylaxis of psychiatry must consist largely in the prescription of general rules as to the maintenance of health, education of the young, and the regulation of conduct. A comprehensive study of these important subjects would be a colossal task, and would embrace almost every sphere of human activity. Dr. FUCHS, in his contribution to the *Nobiling-Jankau Handbuch*,[1] has therefore wisely confined his energies to the laying down of certain truisms which, though self-evident propositions to the medical mind, are yet disregarded in large measure in practical life. Dr. Fuchs, for example, in treating of the prophylaxis of generation, inveighs earnestly against the prevailing consideration of financial and other vulgar qualifications in the selection of a mate to the exclusion of the more important condition of freedom from hereditary taint. Dr. Fuchs's list of hereditary disqualifications is, perhaps, too wide, but it is altogether in the right direction. The chapter on mental development is particularly able, and emphasizes the necessity for the most careful individual observation and delicate handling of the child. This leads naturally to the discussion of education, an implicit criticism of the common pedagogic methods, and a condemnation of learning by rote; and again asserts the necessity for individual observation and the fundamental importance of character-formation and the building up of the power of attention. As the headmaster of Uppingham observed: "A mob of boys cannot be educated." This criticism is more applicable to educational methods in Germany than in England, where, particularly in our school athletics, Dr. Fuchs finds much worthy of imitation. The discussion of special prophylaxis takes up the latter half of this contribution, and contains sound regulations as to the training of the degenerate, the prophylaxis of epilepsy, hysteria (which the author considers is in the great majority of cases a manifestation of degeneracy), neurasthenia, paranoia, and the acquired psychoses. This special prophylaxis sustains the excellence of the first part without being in any way original. To a less degree, the same might be said of the article on prophylaxis in neurology, contributed by Dr. WINDSCHEID to the same *Handbuch*. The large part which heredity plays in diseases of the central nervous system is admitted, but the regulation of marriage by the State dismissed as Utopian. The discussion of general prophylaxis follows that laid down in the great work of Stintzing and Penzold, but is decidedly sketchy.

That every perception is formed upon a groundwork in consciousness of space and time relations, without which no perception would be possible; and, further, that mental activity depends on the psychical representation of our muscular activity, is, as Dr. STORCH,[2] the author of a German essay on the psycho-physiological presentation of consciousness, willingly concedes, not new. In the application of this thought, however, to modern psychology, and by the development of this idea, he has done a distinct service to physiological psychology. Matter and space, as we know them, are Dr. Storch says, merely the objectivication in consciousness of muscular activity. Questions of ultimate reality are, of course, of metaphysical not psychological importance, and the author's dictum concerns concepts merely. Within this limitation, however, it is apparent that this hypothesis is in conflict with the teaching of most psychologists in many directions; for instance, with regard to optical and auditory perceptions. Dr. Storch, however, treats the subject exhaustively, and makes out a very good case for his position. The psychical reflection of muscular activity is the foundation stone on which all mental activity rests, and without this then no consciousness, no perception, no ideation is possible. What we know of matter is the objectivication in consciousness of the muscular movement against resistance, and space the objectivation of unrestrained muscular movement. Dr. Storch introduces two new terms for the expression of his hypothesis which have much value throughout the work, namely, the myopsyche and the pathopsyche. Perception contains two chief elements; first, the pathopsychic process corresponding to the sensory waves from the periphery to the brain; and, secondly, the myopsychic process corresponding to the afferent waves set up by the movement resulting from the stimulus. A purely pathopsychic representation is, Dr. Storch maintains, impossible, but must ever be compounded with myopsychic elements. The elaboration of the theory of the dependence of auditory perception on muscular activity is particularly interesting. Dr. Storch affirms the correspondence of spatial dimension and musical intervals, both resting on the form of myopsychic waves derived from musculo-afferent stimuli. The recognition of (say) the interval C—E rests on the afferent impression made by the motor innervation required to produce the interval. The principal factor is, of course, the larynx, and thus tone and interval are psychic representations of laryngeal musculature.

"Matthew Field belonged to that class of modest divines who affect to mix in equal proportion the *gentleman*, the *scholar*, and the *Christian*; but, I know not how, the first ingredient is generally found to be the preponderating dose in the composition." So Dr. ALEXANDER belongs to that modest class of authors who affect to mix in equal proportion the theologian, the historian, and the physician, and in his case also the first ingredient preponderates in the composition; the second takes the lion's share of the remainder, and the portion remaining to the physician is but small. Learned and interesting and ingenious as it is, his work on *Demonic Possession in the New Testament*,[3] therefore, does not call for extended notice in a medical journal. Dr. Alexander does not shirk difficulties. He is very dexterous in his reconciliation of the varying accounts of one or many demons, and of one or two demoniacs, in the miracle of Gadara or Gerasa; and if his refutation of Huxley's charge of injury to property in destroying the swine is less ingenious and less convincing, it at least is courageous. Our chief quarrel with Dr. Alexander is for his lack of distinction between a conjecture and an ascertained fact. He makes a conjecture for which there is no warrant beyond its desirability for the purpose of his argument, and then argues from it as if it were a rooted certainty. On page 68, for instance, he says of the demoniac of Capernaum: "*Probably* (the italics are the reviewer's) there had been hallucinations of the senses, *more specially* those of hearing; so that this patient was *likely* to suffer from piercing noises, or warning and threatening voices. *In such cases* delusions often arise spontaneously.....*Hence* the frequent and powerful tendency to violence.....*Apparently* he was wandering abroad when overtaken by the maniacal impulse. That conspired with his religious instincts to *precipitate him unceremoniously* into the synagogue.....*Probably* this man was known already in Capernaum as a dangerous character; and his presence in the synagogue would *therefore* be the signal for a panic. His noisy demonstrations *must have* produced great consternation," etc. We do not know whether it would be quite fair to ascribe this mode of reasoning to Dr. Alexander's theological training; but he certainly did not derive it from his medical studies, and it is so remote from scientific methods that the scientific mind finds no common ground on which to meet Dr. Alexander, who would no doubt regard its criticism as it regards his argument—as altogether beside the mark.

Dr. MASON, in his work on *Hypnotism and Suggestion in Therapeutics, Education, and Reform*,[4] gives a brief summary of the whole subject, but the present work is especially intended to call attention to the use of hypnotism as a reformatory agent, as well as in general therapeutics. Some of the cases described will be read with great interest, and it must be admitted that the suggested remedy at least deserves a trial, especially in epilepsy and the drug habit, while a fair case seems to be made out for an attempt to treat children of morbidly obstinate and vicious temperament by this means At the same time, rather too much is made of the action of the "subconscious mind" and "odic force" hypotheses insusceptible of direct proof, and of which the evidence is, to most persons, rather unconvincing. It is also to be regretted that the value of the book as a serious work is somewhat

[1] *Nobiling-Jankau: Handbuch der Prophylaxe.* Abteilung V. Die Prophylaxe in der Psychiatrie. Von Dr. Walter Fuchs. (Demy 8vo, pp. 50. M. 1.50.) Abtheilung IX. Die Prophylaxe in der Nervenheilkunde. Von Dr. Windscheid. (Demy 8vo, pp. 44. M. 1.50.) Munich: Seitz and Schauer. 1900.

[2] *Versuch einer psycho-physiologischen Darstellung der Bewusstseins.* Von Dr. E. Storch. Berlin: S. Karger; and London: Williams and Norgate. 1902. (Demy 8vo, pp. 140. 27 illustrations. 4s.).

[3] *Demonic Possession in the New Testament: its Relations, Historical, Medical, and Theological.* By William Menzies Alexander, M.A., B.Sc., B.D., C.M., M.D.Edin. Edinburgh: T. and T. Clark. 1902. (Demy 8vo, pp. 304. 5s.)

[4] *Hypnotism and Suggestion in Therapeutics, Education, and Reform.* By R. Osgood Mason, A.M., M.D. London: Kegan Paul, Trench, Trübner, and Co. 1901. (Crown 8vo, pp. 344. 6s.)

diminished by the inclusion of cases of clairvoyance which can only be described as incredible. The account of the boy Jannicaud who accurately described the arrangement of a room which he had never seen, and of a girl who saw the exact actions of a shipwrecked crew 300 miles away, belong to a class of cases often reported, but which have always broken down when closely investigated. With regard to the marvellous and the incredible, it is necessary always to consider whether it is, on the whole, more probable that the events really took place as stated, or that the witnesses were untrustworthy or themselves deceived. In order to establish such instances of clairvoyance as those cited, the words of the seer must have been written down at the time and in the presence of trustworthy witnesses, and in addition absolute proof should be forthcoming that there were no possible natural means by which the subject could have become acquainted with the facts.

Dr. CASSEL of Berlin has set forth in a pamphlet[5] the result of his observations upon 129 children of inferior mental capacity investigated by him as medical examiner in the Ninth School District of Berlin. It would appear that the school authorities of the capital have not adopted in its entirety the system of separate "auxiliary schools" so largely established in the other cities of the German empire, but have organized in connexion with the municipal elementary schools supplementary classes (*Nebenklassen*) for the children incapable, by reason of mental or bodily infirmity, keeping pace with the ordinary curriculum. In 1899 (there is no later information) there were 50 of these supplementary classes, containing in the aggregate 645 pupils, in the ten school districts into which Berlin is divided. The 129 children examined by Dr. Cassel consisted of 71 boys and 58 girls, showing the disproportion between the sexes which has been elsewhere observed. In age they varied from 7 to 14 years, and family histories were obtained in all instances but two. A schedule of forty-seven questions in each case was filled up with industry and minuteness, and we are told that the examination of each child occupied from 15 to 30 minutes. Of the 129 children only 3 were illegitimate; there was no case of consanguineous parentage. The age of the parents is not recorded, nor are we told how many children had lost one or both parents. But it was ascertainod that 125 mothers had passed through 1,007 pregnancies, and 903 living children had been born, an average of more than 7 to a family; 39 (or 31 per cent.) had aborted, in all 104 times. In 33 families (26 per cent.) none of the children had died, while in 92 others (73.6 per cent.) the deaths of 183 children were reported. Mental weakness in the ascending line had been ascertained in 18.6 per cent. of the cases; and in brothers and sisters to the extent of 12.4. Parental intemperance was noted in 29 per cent. of the cases; inherited syphilis in 5.4; tuberculosis only in 9—a small proportion as compared with English experience. As many as 47 per cent. were rachitic. Severe head injuries, followed by brain inflammation, were noted in 11.0 of the cases; 39.5 per cent. had post-nasal obstructions, and 33.5 had infirmities of speech; 89 per cent. were below the proper standard in reading; 77.6 in writing, and 95.4 in calculation. As a result of the examinations Dr. Cassel classified 116 (89.5 per cent.) as requiring special instruction in auxiliary classes, 8 (6 per cent.) as only suitable for idiot institutions, and the remaining 5 as fit for instruction in ordinary schools. The number of observations is of course too small for generalization, but the careful attention to detail makes Dr. Cassel's pamphlet worth the study of those engaged in similar work.

FORENSIC MEDICINE.

MAJOR COLLIS BARRY, I.M.S., is preparing as a textbook for Indian medical students a work entitled *Legal Medicine (in India) and Toxicology*.[6] The first volume which is now before us has been constructed on similar lines to Lyon's well-known textbook of medical jurisprudence for India, which in some places it follows closely. It fulfils the purpose for which it was designed well, being concise, complete, and very methodical. The peculiarities of Indian law and practice as distinguished from English are carefully and fully explained. The specialities of medico legal practice in India are also represented, but in this regard the book is somewhat disappointing. The great subject of infanticide might, for example, have been with advantage somewhat expanded. Injuries to the living body by wild animals are very cursorily dealt with, and mutilation of the dead body by similar agencies, which are sometimes very puzzling, not referred to at all. Wounds and injuries caused by thrusting weapons into the vagina and rectum, which are not uncommon in India, are not mentioned. Illustrative cases and statistics are for the most part relegated to a second volume. This is perhaps the best plan in a book intended to be a textbook rather than a treatise; but we confess a preference for the old fashion of working cases into the text with a sufficiency of detail to bring out their points. The chapters devoted to toxicology are full, well arranged, and up to date. They are illustrated by a series of excellent plates obtained from Lieutenant-Colonel Kirtikar, I.M.S. The work as a whole reflects credit on the industry and ability of the author, and is excellently got up by the publishers. The subject is presented rather from a technical and didactic than from a philosophical standpoint. One seeks in vain for such side lights on ethnological and pyschological questions as Chevers's famous book supplied. The professed aim of the volume is inconsistent with such excursions; but it should not be forgotten that the facts revealed in medico-legal practice possess a higher value in a philosophical and scientific sense than their mere application and use in the administration of civil and criminal law.

The second English edition of Dr. BROUARDEL'S treatise upon *Death and Sudden Death*[7] in its medico-legal aspects differs considerably from the first. The translator has in the volume before us added considerably to the text by the interpolation of notes and comments where he considered that the meaning would thereby be rendered more clear, and also by the addition of numerous illustrative cases culled chiefly from the literature of English-speaking countries. These records are most useful, and in fact really necessary for the sake of completeness, since the appendix of cases which is given in the original work is not included in the translation. The new matter is always indicated by square brackets, and the sources from which it has been obtained are always acknowledged. This is all the more necessary because some of the statements put a tax upon our credulity, whilst others are of psychological rather than of practical importance. Dr. BENHAM has evidently bestowed great care and much thought upon his work, and he is to be congratulated upon having given to English readers so clear an account of an interesting and important subject.

[5] *Was lehrt die Untersuchung der geistig minderwertigen Schulkinder im IX Berliner Schulkreise.* (What is Taught by the Investigation of Mentally-inferior School Children in the Ninth School District of Berlin.) Von Dr. J. Cassel. Berlin: O. Coblentz. 1901. (Demy 8vo, pp. 52. M.1.20.)

[6] *Legal Medicine (in India) and Toxicology.* By Major Collis Barry, I.M.S. F.R.S.E., etc. In two volumes. Vol. i. Bombay: Thacker and Company. (Demy 8vo, pp. 605, 10 plates. 20s.)

[7] *Death and Sudden Death.* By P. Brouardel and F. Lucas Benham, M.D., B.S. Second Edition. London: Baillière, Tindall, and Cox. 1902. (Demy 8vo, pp. 352. 10s. 6d.)

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEDICAL AND SURGICAL APPLIANCES.

A STERILIZABLE SILVER CATHETER.

DR. F. W. FORBES ROSS (Gower Street, W.C.) writes: The catheter illustrated in the BRITISH MEDICAL JOURNAL of January 24th, p. 205, as being devised by Dr. Raw is not new, and is practically identical with an instrument devised by myself some time ago, for the very same reasons as led Dr. Raw to devise the pattern depicted. There is, however, an important point to be noted. I found that in cases of long-standing stricture, which give rise to bladder haemorrhage after dilatation, there is great liability to recurrence of this haemorrhage with the continual removal of the ordinary No. 12 in order to clear out obstructing clot. This is by no means the least advantage of this instrument. I find also that the "pilot" should not be soldered to the wire stylet, as there is danger of its being broken off in the bladder. The pilot of my own instrument is attached to a copper stylet by a loose joint, and in addition there is also a silk ligature accompanying the stylet to withdraw the pilot in case it leaves the stylet, in which case it easily trails out of the bladder. The pilot should have two arches crossing one another in order to give further security of attachment to stylet and silk. The delivery end of the catheter should be freely open, as it works best without the attachment depicted in the illustration. The copper stylet in my own instrument can be frequently renewed, thus preventing all risk of its becoming broken, and so leading to a suprapublic cystotomy for its recovery. The instrument I describe and send you was made by myself, and has been most successfully used in my wards in H.M. Guards' Hospital, and shows evidence of its service.

THE FIRST EGYPTIAN MEDICAL CONGRESS.

[FROM OUR CORRESPONDENT.]

(Continued from page 208.)

SECTION OF SURGERY.

Bilharzia.

THE first meeting of this Section was held with Dr. HERBERT MILTON in the chair.

Dr. Loos (Cairo) read a paper on the pathology of bilharzia. He related a large number of experiments which he had carried out upon the embryo of the worm. He had succeeded in demonstrating that it was unable to live in the gastric juice owing to the hydrochloric acid. He was convinced personally that, as he had demonstrated in the case of ankylostoma, the parasite entered through the skin, though the experimental proof was at present lacking. He pointed out as corroborative evidence that the people attacked were mainly the fellaheen of the cultivator class, who worked barefoot in fields which were always muddy and often under water. Dr. Loos had started with the conviction that a mollusc was the intermediate host for the bilharzia larva, but the most careful investigation had assured him that no such host existed.

Dr. RUFFER (Alexandria) was inclined to agree with the views of the last speaker, but pointed out that the intermediate stages between the embryo and the worm had not as yet been demonstrated in the human body. He gave an account of the principal lesions resulting from the growth of the parasite, laying particular stress upon the tendency to cyst formation.

Dr. TALAAT BEY (Cairo) also spoke on the etiology of the disease, and further emphasized the statement that it occurred principally in those who came into contact with damp earth.

Dr. ALI LABIB (Cairo), who spoke in Arabic, and whose remarks were vociferously applauded by the native section of the audience, devoted himself to a consideration of the effects of bilharzia upon the urinary passages. He stated that 98 per cent. of urinary fistulae met with in the Nile valley were due to this parasite. He distinguished five classes of these fistulae, those of the glans, the penile, the perineal, the retrovesical and suprapubic. The first group resulted from balanitis caused by the presence of ova or by scratching to relieve irritation due to infection higher up. No treatment was necessary unless a large tumour was formed, which then called for extirpation. The penile fistulae were rarely in the upper surface; his treatment consisted in a plastic operation, perineal section being done to prevent the urine from trickling over the wound. Perineal fistulae were the most common. Their treatment involved three main principles: (1) To relieve the stricture or obstruction; (2) to remove all granulation tumours and cicatrices; (3) to make a new passage below the internal opening of the fistula. Dr. Labib had found internal urethrotomy of little use; if the strictures could not be dilated he preferred a modification of Whitehead's operation. A rubber tube was passed by the urethra into the bladder, which was also washed out by a two-way tube in the perineal opening. After fifteen days or so the perineal wound was scraped and allowed to granulate and the patient encouraged to micturate in the normal manner. The treatment of urino-rectal fistula, following bilharzial prostatic abscess, was similar to that of vesico-vaginal fistula. The treatment of the suprapubic form was to scrape or remove the tumours and to drain by the perineum. Haemorrhage could be to some extent controlled by largish doses of extract of male fern, 15 gr. to 25 gr.

Professor SYMMERS (Cairo) discussed the morbid anatomy of diseases due to bilharzia, and showed a number of specimens from the museum, to which we shall refer subsequently.

Professor LORTET (Lyons) related some experiments which he had made with the object of determining the mode of entrance of bilharzia, but with a negative result.

The afternoon proceedings commenced—an hour late—with a paper by Dr. H. WILDT (Cairo) on the surgery of bilharziasis. He referred first to the enormous prevalence of the disease in Lower Egypt. He believed that in the province of Behera it would not be an exaggeration to say that every male was suffering from it to a greater or less extent; certainly 80 per cent. of the male mortality there was due to it, and the province of Sharkieh was almost as severely attacked. Slight cases were, of course, the most common, the sole manifestation being, perhaps, slight haematuria. A severer but also very frequent form was characterized by the presence of a scrotal tumour in which the testicle was not involved; this last point and the presence of bilharzia ova in the urine established the diagnosis from tubercle. The treatment was in general purely symptomatic. Anal fistulae occurred in a large proportion of cases, and required the ordinary surgical procedures.

Dr. FRANK MILTON (Cairo) gave a number of statistics from which he inferred that bilharzia was a very common disease in Egypt, attacking most frequently the peasant class, and especially the fellaheen of Lower Egypt. Persons of all ages, with the possible exception of children at the breast, were affected. Men were more frequently attacked than women, and the dark races, such as Soudanese and Berberines, appeared to enjoy a certain degree of immunity. Many more people suffered than were aware of the fact. Dr. Milton laid stress upon the different clinical course assumed by the hypertrophic and atrophic forms of the disease. He found that male fern was of use in controlling the haemorrhage, and recommended boroglyceride or solutions of quinine for the cystitis which was so common. Bilharzial calculi should, he said, be crushed rather than extracted by cutting. In operations upon the rectum the preservation of the sphincters was of great importance.

Other Papers.

Among the others papers of the afternoon were contributions by Drs. LEGRAND and ROGER, of Alexandria, upon appendicitis, and by Dr. ROBERT BELL, of Glasgow, upon the pathogenesis of cancer and its treatment without operation. Dr. MADDEN (Cairo) read a note on the employment of saline transfusion in surgery, calling especial attention to its value when used intraperitoneally.

Surgical Tuberculosis in Egypt.

On December 21st Dr. MADDEN read a paper in which he laid especial stress upon the clinical differences between the disease as observed in England and in Egypt, where surgical tuberculosis was by far commoner than medical and tended to localization, being much less often associated with the latter than in England. The average of the Egyptian patients was distinctly higher than that of the English. Among the Soudanese the power of resistance to the tubercle bacillus was very slight, and the disease if once lodged in the bones, appeared to be ineradicable. Lupus was common in Egypt, but other forms of cutaneous tuberculosis were rare. The cervical glands were often attacked by tubercle, while those in other situations suffered seldom; caseation as a rule occurred very early. Medical treatment was of little use for the glands in the neck; a free skin incision was requisite, and a considerable length of the jugular vein could be excised without fear, though great care had to be taken to avoid injuring the vagus. Tubercle of bone was very common, the sternum being attacked with singular frequency; tuberculous dactylitis was also often seen. The pelvic brim was more frequently affected by this disease than the vertebrae. The hip-joint was but rarely involved, and Dr. Madden mentioned the remarkable fact that the Kasr-el-Aini Hospital did not possess a Thomas's hip-splint. The knee was less rarely implicated, but the joints which most often suffered were the ankle and elbow.

Anaesthetics.

The rest of the morning was largely occupied with a discussion upon anaesthetics. Dr. IBRAHIM FEHMY (Cairo) gave statistics as to chloroformization in Egypt (ether was, for obvious reasons, but little employed). Drs. LATIS and KOHN SCHILDREICH (Alexandria) advocated intraspinal (epidorsal) injections of cocaine; Dr. BEDLANDI a similar procedure with tropacocaine; and Dr. MADDEN gave a favourable account of Schleich's infiltration method.

The Surgery of Abscess of the Liver.

The morning of December 22nd was devoted to a discussion on hepatic abscess, which elicited no new facts of importance, though many of the speakers suggested minor modifications in technique. The general opinion was in favour of free incision, the wound being placed as far back as possible, and a portion of rib excised if good drainage could not be otherwise obtained. Some advocated washing out the abscess cavity with sterilized water or mild antiseptics, but the general trend of opinion was against this procedure.

Dr. KARTOULIS (Alexandria) opened the debate with a very lucid account of the pathogeny and symptomatology of the disease. Dr. SOLONOFF (Cairo) followed with a paper on the surgical technique. He gave an analysis of 1,094 cases with an average mortality of 30 per cent. He was of opinion that operative interference was indicated by the first suspicion of

pus formation, and that it ought to consist in a large incision with cross openings on one or both sides. He strongly advocated the thorough scraping and cleansing of the abscess cavity, and was of opinion that if this plan were systematically followed the rate of mortality from the disease would be considerably lessened. Dr. LEGRAND (Alexandria) discussed abscess of the liver in children, and among the other speakers were Dr. MOHAMEDAL NICKLAWY (Omdurman), Dr. RIGAZZI (Cairo), and Dr. FERRARO (Alexandria). Dr. ADAMIDI (Cairo) gave some account of non-dysenteric abscess of the liver.

Urinary Lithiasis.

The afternoon sitting was occupied with the subject of urinary lithiasis. The most important paper—one highly appreciated by an exceptionally large audience—was that by Mr. REGINALD HARRISON on the geographical distribution of stone, which was published in the BRITISH MEDICAL JOURNAL of January 17th, p. 121.

Prostatectomy.

Mr. HARRISON subsequently showed seven specimens of enlarged prostates recently removed by him, and gave details of the operation. Prostatectomy was also the subject of a short communication by Dr. RIGAZZI (Cairo). Professor KALNIOUTZIS (Athens) read an interesting paper on the general question of urinary lithiasis, Dr. FRANK MILTON (Cairo) discussed the subject of litholapaxy, and Dr. WILDT (Cairo) that of suprapublic cystotomy.

Concluding Meeting.

The last sitting was occupied with the reading of miscellaneous papers on surgery, and a demonstration of cases by Dr. MADDEN. Dr. GIORDANO (Naples) read an account of two cases in which he had sutured the left ventricle for stab wounds, using the strip method of Ninni. One died; the other, after various septic complications, recovered. In this latter case the pleura was not involved. Dr. LEGRAND (Alexandria) gave an account of some highly successful operations performed by him upon diabetics.

SECTION OF OPHTHALMOLOGY.

The meetings of this Section were somewhat fewer and of shorter duration than those of the others, and not nearly so many papers were read. The main subject discussed was trachoma, which is admittedly endemic in Egypt. One speaker denied the infectious nature of this malady, but found no supporters. Unfortunately Professor Hirschberg, of Berlin, who was to have taken a leading part, was unable to attend. Still the deliberations of the Section were of considerable importance, and no doubt had some influence in determining Sir Ernest Cassel's munificent donation towards the campaign against ophthalmia in Egypt. The two principal communications were those of Dr. Fischer and Dr. Mohammed Eloni Bey, of Cairo.

Dr. FISCHER said that when a new comer, after a long experience of ophthalmology in London, he was astounded by the ravages caused by ophthalmia in Egypt. He considered that the disease was a national calamity, calling for public eradicative measures. The means adopted in other lands should be followed in Egypt, but the task was a thousandfold more difficult there, owing to the ignorance and prejudice of the native population, and above all owing to the few means which the Government had at its disposal to ensure the execution of the necessary reforms. He gave a general summary of the nature of the disease, insisting upon its contagiousness and its mode of propagation, as to which the public required instruction. The principal reforms necessary could be brought about by education and civilization; in addition to this, special technical knowledge was required. To this end, instructions should be circulated by means of the native press and through the *omdehs* (mayors) of the villages. Much, too, was to be hoped from the students of the Kasr-el-Aini Hospital, who had undergone a modern training, and who would gradually replace the hosts of ignorant local pseudo-doctors. In the second place, a great deal was to be expected from the hygiene which was the natural accompaniment of education. Much had been done by the labours of the Sanitary Department in the amelioration of eye diseases during the past twenty years. Ophthalmia had greatly diminished in the schools of Cairo, thanks to the beneficent measures instituted by Dr. Mohammed Bey Eloni, but much remained to be done in the extension of the application of hygienic laws throughout the country. In the third place, Dr. Fischer thought that enforced inspection, as in the case of small-pox, was necessary; in other words, that eye diseases should be notified to competent authorities. Finally, isolation of the patients was necessary, particularly in schools, colleges, and barracks. He was sure that once these measures were instituted under the control of the Sanitary Department they would be welcomed rather than shunned by the inhabitants of the villages.

The following is an abstract of Dr. MOHAMMED ELONI BEY'S conclusions: (1) Granular ophthalmia is diminishing in Egypt; (2) three forms of trachoma are to be recognized—the typical granulomatous, the papillo-granulomatous, and the simple papillary (false granulations); (3) the last named is the only one which leaves no stigmata; (4) none of these is connected with purulent ophthalmia, but they may be related to tuberculosis; (5) they are propagated by flies, dust, and uncleanliness; (6) they are only contagious in the secreting stage; (7) they may be contracted at any age, but half the cases occur between the ages of 1 and 3 years; (8) they should be treated at once, and the eyes of all children in Egypt should be inspected half-yearly between the ages of 1 and 5.

THE INDIAN MEDICAL SERVICE.

WE are informed that the India Office and the Government of India have every reason to be satisfied both with the number and the quality of the candidates who applied for the thirteen commissions in the Indian Medical Service offered at the recent examination in London. Forty-four names were sent in, and the number found qualified, we understand, largely exceeded the vacancies. The results of the examinations in August was almost equally satisfactory, for thirty-nine candidates then competed for nineteen advertised appointments.

THE ENTRANCE EXAMINATION.

We called attention in the BRITISH MEDICAL JOURNAL of November 29th last to the unsatisfactory character of this examination as compared with that now instituted for admission to the Royal Army Medical Corps, and to the fact, as it seemed to us, that it was too much a test of physical endurance. Our criticism called forth a letter signed by the examiners, who stated their opinion that the examination provided a satisfactory test for ascertaining the order of merit of the candidates in the competition, and added that while the method of conducting the examination certainly involves a test of endurance, it did not entail an unfair amount of physical strain. The argument was clinched by pointing to the fact that one of the candidates held the degree of M.D., and eighteen that of M.B., whilst two were Fellows of the Royal College of Surgeons of England and one of Edinburgh. The triumphant conclusion was thus reached that "it does not appear from these results that the well-qualified candidate is deterred from competition for the Indian Medical Service under the regulations in force."

The assurance contained in this letter reminds one of the story of an old-fashioned M.F.H., who was tackled by his humanitarian rector on the cruelty to the fox involved in his favourite sport. After trotting out the usual arguments as to the depredations of the fox, the improvement of the breed of horses, and the training of the riders in horsemanship without convincing his opponent, he ended the conversation by the assertion, "Why, sir, the fox likes it."

As a matter of fact, the number of candidates returned in the official list as successful at the competitive examination held in London on August 20th and following days was thirty, so that eleven candidates were accepted in excess of the nineteen for whom advertisement was made. Judging from this list, three of the M.B.'s fell by the wayside; whether this was due to deficient knowledge or physical exhaustion does not appear, but for the credit of the universities we may hope that it was attributable to the latter. To conclude this part of the subject, we may express gratification at the fact that of the thirteen candidates successful at the examination this month, all but one held university degrees, four from the University of Edinburgh, three each from the universities of Cambridge and London, and one each from those of Durham and Victoria. In spite of these very gratifying results, we still believe that "the mode of conducting the examination might be materially improved."

We venture to think, also, that the mode in which vacancies are advertised and commissions granted might likewise be improved. It does not seem very good management to take 30 out of 39 candidates in August, and 13 out of 44 in January. It would surely conduce more to the welfare of the Service to ask for and take a number of candidates approxi-

mately equal at each examination. However this may be, there is no doubt that the success of the Service, in attracting a sufficient number of suitable candidates, is a matter upon which it is to be congratulated, because one of the causes of the disappointment and consequent discontent, which we regret to know is widespread in, at least, the junior ranks of a once-contented service, is more or less directly traceable to the consequences of an insufficient establishment.

TERMS AND CONDITIONS OF SERVICE.

The terms and conditions of service are set out in the *Indian Army Regulations* and other official publications of the Government of India, some of which are not easily accessible in this country. The India Office, however, issues a *Memorandum regarding the Position of Officers to be Appointed to His Majesty's Indian Medical Service*, and as this is supplied to possible candidates who apply for it, we may take it as representing the conditions as understood by the India Office and by the Government of India itself.

The Indian Medical Service consists of two branches, military and civil. This division is recognized by the Government of India, and it is a matter of common knowledge that the main attraction of the service in the past has been the hope of civil employment, with the chance of private practice which good civil appointments afforded. The right to engage in private practice is fully recognized by the Government, and is one of the inducements held out, as appears from the following paragraph of the *Memorandum*:

> Except in the administrative grades, and in certain special appointments, medical officers are not debarred from taking private practice, so long as it does not interfere with their proper duties.

It must, however, be remembered by candidates that the Indian Government regards the Indian Medical Service as primarily a military service. The *Indian Army Regulations* are more explicit on this point than the *Memorandum*. Thus we read:

> A minimum establishment for the requirements of the army and for all other sanctioned appointments will always be maintained. This will include the prescribed margin for absentees on furlough and leave on medical certificate .. .. .. it should be understood that the army has the first claim on the Indian Medical Service, and that any officer whose services are required with the army will be placed at the disposal of the Commander-in-Chief in India.

Other regulations are as follows:

> The withdrawal of an officer of the Indian Medical Service for civil employment will not be permitted until he has completed two years' military duty, and then only provided his services can be spared.
>
> Officers of the Indian Medical Service are, subject to the above restriction, eligible for civil duties; and however employed they remain liable at any time to be recalled to military duty.

MILITARY BRANCH.

The pay received by an officer of the Indian Medical Service in military employment depends in part upon his rank and length of service, and is in part determined by the circumstance whether he has been given an administrative appointment or placed in substantive medical charge. The following table is constructed from the *Memorandum*, and shows the rates of "Indian pay and allowances" and the consolidated salaries of officers holding the principal administrative appointments and substantive military charges:

	Indian Pay and Allowances.	Administrative Appointment or Substantive Military Charge.
Lieutenant or Captain under 5 years' full-pay service...	350	450
Captain over 5 ,, ,, ,, ,, ...	450	600
,, 10 ,, ,, ,, ...	500	
Major ...	640	800
,, 15 ,, ,, ,, ...	677	
Lieutenant-Colonel	852	1,000
,, 25 ,, ,, ,, ...	888	
,, (selected)	900	1,100
Colonel		1,800—2,250
Surgeon-General		2,200—2,700

The pay is given in rupees per mensem (fractions of a rupee omitted), and is subject to exchange compensation allowance equal to an addition of 5⅓ to 6 per cent. Horse allowance is paid to a medical officer in substantive charge of a native cavalry regiment—to a lieutenant or captain Rs. 60 a month, to a major or lieutenant-colonel Rs. 90 a month.

It thus appears on the face of the regulations that there are two rates of pay, the higher rate being drawn only when an officer receives an administrative appointment or a substantive military charge. There is, however, an intermediate rate which is drawn by an officer who has not received a substantive, that is to say, a fixed and permanent, appointment, but is doing duty for the incumbent of such appointment during his absence. This pay is calculated upon a somewhat complicated system set out in the *Memorandum*. It will be sufficient here to say that this officiating pay is always less than the pay received by the officer holding the substantive appointment. This is illustrated by two instances given in the *Memorandum*.

1. A lieutenant or captain of less than 5 years' service officiating for one of the same period of service in charge of a regiment receives Rs.400, instead of Rs.450, the pay of the substantive appointment.
2. A captain of 5 years' service holding permanent medical charge of a regiment and officiating for a major over 15 years' service absent from his regiment receives Rs.561 4 0, in place of Rs.800. (Apparently, under similar circumstances a captain who did not himself hold any permanent appointment would receive only Rs.500.)

We gather that there is a more or less widespread feeling that this system of "officiating" appointments carrying a lower rate of pay is sometimes allowed to work in a way which is distinctly unfair to the officers concerned, and it is hinted that the economy thus effected may not be distasteful to the Government of India. This is a suggestion or allegation upon which it is difficult to obtain conclusive evidence. We have heard it warmly repudiated by senior officers of the Service directly or indirectly responsible for the making of appointments. On the other hand, there seems to be clear evidence that a substantial injustice is not infrequently done to officers who are kept on officiating pay for long periods before being appointed to the substantive charge in which they officiate, or to some other. The matter is one which would appear to be in the hands of the heads of the Service itself.

There is yet another obstacle in the way of the junior officer who aspires to receive the higher rate of pay. No officer can draw it "unless he has passed the examination in Hindustani know as the 'Lower Standard.' The passing of this examination does not of itself bring any increase of pay to an officer, unless appointed to a substantive or officiating charge; but failure to pass disqualifies an officer, even when holding such substantive or officiating charge, from receiving any portion of the staff allowances of the appointment," that is, the higher rates of pay for substantive or officiating charge.

With regard to this examination it is alleged in the first place that officers of the Indian Medical Service are in many cases so fully occupied and so often moved that they have difficulty in finding time to prepare for it, and in the second place that the examination is not conducted in a reasonable spirit nor even in accordance with the letter of the regulations. The first difficulty is one which might, it would seem, easily be obviated by the heads of the service itself, and appears to be well worthy of their attention. The second is, we gather, a matter of notoriety in India, unknown only to those responsible for its continuance.

The pay of officers of the Indian Medical Service in military employment is inadequate. This becomes clear when the rates are compared with those now received in India by the Royal Army Medical Corps, and the deficiency is especially marked in the junior ranks. It is a little difficult to make a comparison in detail, as so many considerations arise, but the following table, we believe, fairly represents the case:

	R.A.M.C.				I.M.S.	
	Old.	New.			Military.	
		Pay.	Charge Allow.	Total.	Min.	Max.
Lieutenant...	350	420			350	450
Captain	350	475			350	450
Captain, 5 years					450	600
Captain, 7 years	450	530				
Captain, 10 years...	500	650	60	710	500	600
Major	790	790	120	810	640	800
Major, 15 years	825	825	180	1,005	677	800
Lieutenant-Colonel	1,060	1,060	180	1,240	852	1,000
Lieutenant-Colonel (selected)	1,150	1,150	240	1,390	900	1,100

The comparison between the rates of pay of the R.A.M.C. and the I.M.S. is, however, to a certain extent unfair to the latter, since the whole of the service of an officer of the I.M.S. must be spent in India, whereas an officer of the R.A.M.C. may hope to spend part, possibly a considerable part, of his

service at home. A comparison ought to be made with the pay of other public departments in India. An officer of the I.M.S. has sent us a table of the rates of pay in various departments in the most junior grade. The rates are in all cases expressed in rupees per mensem. They are all subject to the increase of 5½ or 6 per cent. for exchange compensation allowance.

	Pay.	Travelling Allowance.	Total.
Indian Civil Service	400	150	550
Educational Department ...	500		500
Forest Department	350	120	470
Medical Service	350		350
Police	250	120	370
Public Works Department ...	350	120	470

Our correspondent asserts that the travelling allowance must be reckoned as a source of income, as it more than covers the expenses of the keep of a couple of horses and carts. He appears to assume that this allowance is always drawn by the officers of departments, as shown in the above table. This, however, we are assured is not the case in respect of the Civil Service at least. He adds, however, that an I.M.S. officer must keep a horse, and this we believe to be almost invariably the case. Yet he receives no horse allowance, except on active service, unless in substantive charge of a cavalry regiment, when a horse allowance is paid, as stated above.

CIVIL BRANCH.

The information given in the *Memorandum* with regard to the civil appointments open to officers in the Indian Medical Service, and as to the emoluments of such appointments, is very meagre. It is merely stated that "the salaries of other substantive medical appointments in the Civil and Military Departments are consolidated, and vary from Rs. 400 to Rs. 1,800 per mensem," a somewhat wide range within which the candidate may exercise his imagination.

Formerly civil appointments were classified, a first-class civil surgeoncy being more valuable in respect both to pay and appointments, and to opportunities for practice than a second. At present the system is somewhat more complicated, the civil surgeons being placed in three grades, the emoluments received depending partly on rank in the service and partly on grade in the civil department.

It is not very easy to ascertain in this country even so elementary a fact as the number of officers of the Indian Medical Service in civil employment. It is not given in any work of reference or handbook in this country, it is not known at the India Office, but it might be dug out of the official blue list if complete copies for all India were available. The pay of such officers is, of course, still more difficult to ascertain and classify. We would point out to correspondents in India who wish their case represented here that they must take no knowledge for granted. Things change so rapidly that even officers of their own service who have been retired for a few years lose touch and are unable to speak with confidence. What is wanted is not declamation but facts, hard plain facts which cannot be gainsaid.

This by the way, and as an apology for accepting the rough estimate that from 60 to 65 per cent. of the Indian Medical Service are in civil employment.

An officer in civil employment will draw the pay of his rank and grade, and may draw extra pay for charge of gaols, lunatic asylums, etc., or he may receive special consolidated pay for a hospital appointment or college professorship, etc. In addition he will, in a large station or Presidency city, have excellent opportunities for acquiring a lucrative consulting practice. The Indian Medical Service has always been something of a lottery, and these appointments in the great cities are the prizes.

The complaint which reaches us is that though the prizes are still large, the blanks are far more numerous than they were. In former days even a second class station might be well worth having owing to the opportunities it afforded for consulting and operative practice. Great changes appear to have taken place in this respect in recent years. The main causes assigned are the frequent moves, which prevent the establishment of a local reputation and connexion, and the growth of a class of well-educated native practitioners. The first cause can and ought to be removed, and if removed the injurious effect of the second on the prospect of officers of the service ought to be notably diminished.

VACCINATION AFTER SMALL-POX.

A CORRESPONDENT sends us a query which raises a question of very considerable interest, both theoretically and practically. He attended a family in which he believed there was an outbreak of chicken-pox. The father contracted the disease. The family were at once revaccinated, and all reacted well. The father left the district, and on his return was revaccinated, five months after his illness. He also took well, having a typical vaccination mark on the seventh day. The query is, "Am I justified in deciding that this patient never had small-pox, or if he had, it must have been at a much more remote period than five months?"

Susceptibility to Vaccination.

The influence of a previous attack of small-pox on the success or failure of a subsequent vaccination is a question which has engaged the attention of several authorities. Beginning at the fountain head, Jenner himself in his third publication, *A Continuation of Facts and Observations relative to the Variolae Vaccinae, or Cow pox*, writes as follows:

Although the susceptibility of the virus of the cow-pox is for the most part lost in those who have had the small-pox, yet in some constitutions it is only partially destroyed, and in others it does not appear to be in the least diminished.

By far the greater number on whom trials were made resisted it entirely; yet I found some on whose arms the pustule, from inoculation, was formed completely, but without producing the common efflorescent blush around it, or any constitutional illness; while others have had the disease in the most perfect manner.

Sir John Simon in his *Papers on Vaccination* gives the following table of the results of adult vaccination:

Result of 1,795 Adult Vaccinations at Kasan.

	Total Cases.	Perfect Success per 100 Cases.	Imperfect Success per 100 Cases.
Presenting marks of previous small pox ...	1,436	18⅝	5⅝
Presenting marks of previous vaccination	247	18⅜	9⅛
Presenting neither	112	29⅓	16½

Seaton, in his *Handbook of Vaccination*, gives facts tabulated thus:

Persons in whom the Revaccinations were Performed.	Degrees of Success of Re-Vaccination.	In those who bore Marks of Previous Small-pox.	In those who bore Good Marks of Previous Vaccination.	In those who bore Doubtful or Imperfect Marks of Previous Vaccination.	In those who bore no Mark of Previous Vaccination or Small-pox.
Wirtemberg army, 1831-5 (13,861 cases)	Perfect	319.5	310.4	280.7	337.3
	Modified	248.1	280.5	259.0	191.1
	None	432.3	409.2	460.4	471.6
		1,000	1,000	1,000	1,000
Soldiers in British army, not recruits, in 1861 (2,053 cases)	Perfect	451.4	484.6	236.8	316.0
	Modified	159.6	157.4	505.3	277.5
	None	389.0	358.0	257.9	396.5
		1,000	1,000	1,000	1,000
Recruits in British army in 1861 (4,395 cases)	Perfect	345.5	467.3	461.3	527.3
	Modified	266.8	240.8	301.3	202.6
	None	387.7	351.9	237.4	270.1
		1,000	1,000	1,000	1,000

From these figures it appears that something like one-third of the adults who had suffered from small-pox were susceptible to the local results of vaccination in a perfect manner. In this table it is interesting to note that among the soldiers in the British army, not recruits, the proportion of "perfect" success was 451 per 1,000, while among the recruits the corresponding proportion was only 345. The difference suggests the element of time. The likelihood is that the interval between attack by small-pox and subsequent revaccination was shorter on the average in the recruits than in the soldiers, the former being younger men, and the figures given

for the recruits as to the relative influence of *(a)* previous small-pox, *(b)* good vaccination, *(c)* imperfect vaccination, and *(d)* absence of vaccination and of small pox, are perhaps the most valuable in the table. None of the statistics, however, state the actual interval, so that our correspondent's question remains unanswered as to whether successful local results of vaccination are possible at so short an interval as five months after an attack of small-pox. It is not likely that much evidence is available on this point, as vaccination would hardly be thought of, excepting experimentally or unwittingly, so soon after small-pox. If, however, any of our readers, including public vaccinators, have any facts bearing on the subject, we will be very glad to publish them.

Susceptibility to Small-pox Inoculation.

Meanwhile, it may be pointed out that analogous facts are obtainable with regard to variolation after small-pox. Here the evidence is scanty, because small-pox inoculation of a person who had previously suffered from small-pox in the ordinary way would seldom be thought of; but various instances are given by Dr. J. C. McVail in the Sixth Report of the Royal Commission on Vaccination (*Minutes of Evidence*, pp. 314, 334-5). Indeed, some most remarkable records to which he called attention would appear to indicate that at least some individuals quite insusceptible to constitutional attack by small-pox were yet susceptible to local cultivation of variola inserted in the skin. An Edinburgh small-pox inoculator[1] is reported to have regularly maintained by periodical inoculation of his own arm a supply of small-pox matter for inoculation in his practice. A somewhat similar fact is recorded of himself by an old Plymouth surgeon, John Mudge, who published in 1777 *A Dissertation on the Inoculated Small-pox*. When he was inoculating a country patient whom it would be inconvenient for him to see again a few days afterwards, he was in the habit at the same time of inserting some of the small-pox matter on his own hand and of watching its course. If a sufficient local result followed, he was satisfied that the virus had been active enough to produce the disease in his country patient, and so knew that it would be unnecessary for him to make a second attempt. The exact result which he expected is thus described: "The pocky matter applied to a scratch made on the skin of a person passed the small-pox will repeatedly and almost constantly inflame the part, and raise a pimple which will itch, smart, and be troublesome; in short, will produce an appearance similar to that which we see on the arm of an inoculated patient five or six days after inoculation."

Whatever may be said about exceptional susceptibility of individuals, this general conclusion is quite safely deducible from the various recorded facts—namely, that local reaction of the skin, either to inoculated vaccinia or inoculated variola, does not in any way prove that the individual is susceptible to attack by small-pox in the ordinary way. The system may be protected, though the skin can still be used for cultivation of the virus. This principle applies both to small-pox inoculation and to vaccination.

Deductions from the Results of Revaccination.

It is too often assumed that the local result of a revaccination determines whether the individual had been previously susceptible to small-pox. If his vaccination succeeds, he is sometimes told that he would have taken small-pox on exposure to infection, while if his vaccination fails he is apt to be told that he is insusceptible to small-pox. Neither conclusion is wholly justifiable. Though revaccination done to-day may entirely fail, it may succeed next week if repeated, and though it fail next week, a third attempt, preferably with a different stock of lymph, may produce vaccinia. On the other hand, though vaccination has been successful, it does not necessarily prove that the person was constitutionally susceptible to small-pox.

In all this, however, we have taken no account of the element of time. Immediately after a successful vaccination has run its course the operation cannot be successfully repeated. Absolute failure is the ordinary result of an attempt to revaccinate, say a month after successful primary vaccination. Later on, some reaction will follow the local insertion of lymph. Very likely the reaction will be modified both in its course and in its result. It will run a quick, short course, and will quickly die away, perhaps never having become pustular, possibly never having become vesicular, and the area affected will probably be very small. If a longer interval has elapsed since primary vaccination the local result of repetition of the operation will approach more nearly to that of a primary vaccination. In many persons, after a long interval, the vesicles of a revaccination will in no way differ from those of primary vaccination performed on an individual of similar age. The first evidence, therefore, of the diminishing protection of vaccination consists in a greater or less degree of susceptibility to vaccination itself. Later on there comes susceptibility to attack by small-pox. Still later comes susceptibility not merely to attack but to death by small-pox.

These are quite general propositions, and with factors so variable as the human body and the variolous disease, and with vaccination performed so very differently as regards degree of efficiency represented by number and area of marks and character of resulting scars, only general propositions embracing large numbers of cases can be stated. Variability of result as between different individuals was observed by Jenner himself as quoted at the beginning of this article. "Susceptibility of the virus of the cow-pox is for the most part lost in those who have had the small-pox, yet in some constitutions it is only partially destroyed, and in others it does not appear to be in the least diminished." Jenner wrote this in the year 1801, only three years after the publication of his Inquiry, so that there had then been no opportunity to note the influence of lapse of time as helping to explain these differences in the vaccinal susceptibility of persons who had suffered from small-pox. Indeed with regard to the whole subject of vaccination and small-pox the mistake of Jenner's life was that he failed to learn that the protective power of vaccination against small-pox is other than permanent.

Having thus endeavoured to point out the general bearings of the subject, we revert to our correspondent's query and will be very glad to have every available item of information regarding susceptibility to vaccination of persons who have suffered from small-pox at any recent date. The intervals should be stated with the greatest possible exactitude.

[1] *Royal Commission on Vaccination, Sixth Report; Minutes of Evidence*, p. 314.

CONTRACT MEDICAL PRACTICE.

FLEETWOOD.

WE learn from the *Fleetwood Gazette* that the medical men of Fleetwood have notified to the members of the Oddfellows, Mechanics, Rechabites, and Orangemen Lodges that in future the rate for medical aid must be 4s. a member, with a fee of 1s. for each adult member examined on entrance to a lodge. At a joint meeting of the members of the lodges held recently it was decided, after a long discussion, to offer 3s. 6d. a member; and it was suggested that if this was not accepted the services of a medical man should be obtained for the different societies, and that he should be guaranteed a salary of £180 a year. The rate of 3s. 6d., we are informed, has not been accepted by the medical men, and every one who has looked into this question must be aware that such terms cannot be remunerative. It appears that the clubs in Fleetwood have hitherto been paying 2s. 6d. a year, and have thus existed through the charity of the medical profession. In our opinion it is a disgrace to working men who desire independence and fair dealing to offer such rates.

CHOLERA.—During the weeks ending December 22nd to 29th, 1902, and January 5th, 1903, the cases of cholera in Egypt numbered 17, 49, and 6 respectively. In Alexandria the cholera cases amounted to 17, 6 and 6 during the weeks in question, showing that except in the week ending December 29th all the fresh cases of cholera in Egypt were met with in Alexandria. The sudden rise in cholera returns during the week ending December 29th was due to an outbreak at the village of Khoos-el-Bousa, situate near Sohag, on the banks of the Sohagia canal. The cause of the outbreak is believed to be as follows. A workman taken ill in Alexandria returned to Khoos-el-Bousa, where he suffered from vomiting and diarrhoea. In a few days a number of persons in and near his dwelling were similarly attacked. Believing that the drinking water from the canal had become contaminated, the sanitary authorities, Dr. Goodman and staff, immediately disinfected the water and sank Abyssinian wells. The outbreak seems to have disappeared as suddenly as it came, the fortunate result being no doubt due to the prompt action of the sanitary staff. —It is reported that cholera has broken out afresh at Manila, some 30 cases being reported daily. In the southern provinces the disease is present in epidemic form, and at Iloilo the death-rate is very heavy. The authorities are said to be powerless to check the spread of the disease.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1903.

MEMBERS of the British Medical Association are reminded that commencing with January 1st, 1903, the annual subscription is a uniform one of 25s., inclusive of the Branch, and that all subscriptions should be paid direct to the General Secretary, 429, Strand, London, W.C., and not to a Branch Secretary.

British Medical Journal.

SATURDAY, JANUARY 31ST, 1903.

DEPOPULATION AND THE MARRIAGE-AGE.

THE stationary condition of the population of any country may conceivably be due either to active emigration or to a persistently close approximation of the birth-rate to the death-rate. If the emigration be very active or if the death-rate exceed the birth-rate then the population will actually diminish. The word depopulation ought, strictly speaking, to be applied only to the latter state, but it has come recently to be given somewhat incorrectly to the former also. Thus while it is correct to speak of the depopulation of Ireland or of Martinique we can only use the word in relation to France in the sense of an almost complete balancing of the birth-rate and the death-rate, or, to be brief, of the natality and the mortality. It is obviously in this sense that the phrase "depopulation of France" is being used on the other side of the English Channel at the present time, for, as a matter of fact, at the last census the population of that country showed an increase of nearly half a million. But—and herein lies the true inwardness of the matter—the populations of neighbouring countries are increasing by millions! To be crawling along by half millions while the others are advancing by leaps and bounds of millions is equivalent to standing still or to receding. It is for this reason that France is to-day concerned about her condition; this is why she has appointed an extra-parliamentary commission on depopulation; and this is the explanation of the increased number of articles on marriage, the birth-rate, the death-rate, and allied subjects which are appearing in the scientific periodicals of the day. France's concern we, her neighbours, cannot afford to be indifferent about, if for no higher reason than that there are signs that we also may before long find ourselves in like case.

That France does not stand alone in this matter of a diminishing birth-rate is clearly shown by the statistics marshalled by Emile Macquart.[1] The fall, it is true, began in France, but since 1874 it has affected also England, Germany, Belgium, and Holland. By the apt and striking image of an opened-out fan, each spoke of which represents the birth-rate of one of the Western European nations, Macquart exhibits the relative differences between their natalities. At first, about the middle of the nineteenth century, the fan was widely open, and the spoke representing the French birth-rate was far removed from those standing for the rates of England, Holland, Belgium, and Germany; but at the present time the fan is showing signs of closing up, the rate in France is practically stationary, while in the other countries there is a marked fall. The conclusion is suggested that civilization and a diminishing birth-rate go hand in hand, and that in this matter France simply leads the way with the other nations following. There is then nothing more to be said, and nothing more to be done legislatively or otherwise. But it is possible that some one may exclaim, "O Civilization, what things are done in thy name!" and that all are not ready to follow in this new French revolution. Civilization, once definable as the humanization of man in society, is now to be the sterilization of the race! The heavens forbid us any such mishap.

No; matters have not yet reached this pass. Indeed, in the very same periodical which contains Macquart's article appears one with a very different purpose and drift by Arsène Dumont.[2] This writer approaches the subject of the falling birth-rate from the side of the marriage-rate. But, objects that potent factmonger the statistician, the marriage-rate is not falling, neither does it differ markedly in France as compared with other countries. True, replies Dumont, but there is taking place a steady elevation of the age when marriage is entered into, and therein lies the very heart of the matter. Obviously if a man and woman marry late in life, say at 35 or 40, they cannot expect to have as large a family as if they had married at 25; even if 5 years could be added on to their lives after 50, it could never be of the same reproductive value as any five years of life before forty. Without admitting that Dumont has discovered the whole secret of the cause of the fall in the birth-rate (for let it be noted he does not attempt to allow for the voluntary restriction of the size of the family by "checks"), it will be interesting to follow him in some of his investigations and deductions.

First, there is the discovery, from statistical tables, that of the whole male population of France between the years of 15 and 24 only 3.6 per cent. are married, and of men between the years of 20 and 24 only 7 per cent. are in lawful wedlock. Regarding this remarkable fact, Dumont says that custom has made it to be looked upon both as normal and as moral. Of men between the ages of 25 and 29 a little over 50 per cent. are married. Still, of the whole male population between the years of 18 and 49, it is a striking fact that 45.8 per cent. are unmarried; while of the whole female population between the ages of 15 and 49 there are 44.9 per cent. unmarried. What mysterious obstacle, then, is it that prevents the 44 per cent. falling figuratively into the arms of the 45 per cent.?

It is of the greatest importance that the cause or causes of delayed marriage be found out, and if possible removed, for Dumont thinks that without altering in any degree the fecundity of the individual, the lowering of the age of marriage from 28 to 24 for men, and from 24 to 20 for women would sufficiently raise the birth-rate to enable France to keep abreast with the other nations. It may be doubted whether this change alone would work out in the way that Dumont expects, but that it would be of benefit none can doubt. What then is the obstacle?

It is to be found in the first place in the state of society which keeps a son so long dependent upon his parents. Businesses and professions are tardily lucrative, and the parasitic stage of life is lengthened; marriage is not, therefore, to be thought of till well on in the thirties, if then. Secondly, there is the dotal difficulty, for parents having so long to support their sons, cannot afford early to provide dowries for their daughters, and the dowry is a very important part of a French marriage. "*Marie ton fils quand,*

[1] Macquart, E., Mortalité, natalité et dépopulation. *Bull. et Mém. Soc. d'Anthrop. de Paris*, 5 S., iii, 385, 1902.

[2] Dumont, A., L'age au mariage, *Bull. et Mém. Soc. d'Anthrop. de Paris*, 5 S., iii, 745, 1902.

tu voudras, mais ta fille quand tu pourras," is the proverb, but for many French fathers it has become a matter of great difficulty to act in accordance therewith. Thirdly, there is the military service which France demands of her young men; this is so obvious an obstacle that no more need be said about it, except to note that Dumont proposes two years instead of the existing term of service. In the fourth place there is the example and influence of the Roman Catholic Church with its celibate clergy and its unmarried nuns. Doubtless there is also that tendency of the age by which the individual aims more and more at the goal of personal comfort, and is less and less willing to accept new and ill-defined responsibilities.

To remedy all these defects, and to break down this obstacle in the way of early marriage, Dumont proposes not only a shortened period of service in the army, but an improvement in and extension of education. Let French civilization be made scientific, instead of the "incoherent mixture of theology, metaphysics, science, and ignorance" which it is at present, and let this scientific civilization be carried into every house in the land. Let there be progress of the people by science, and let there be progress of science by and for the people.

We can scarcely look forward hopefully to the success of the remedies proposed, even if we were able to agree with Dumont as to the advisability of them (which many of us doubtless are not); but the whole subject is one of the greatest importance, and must ere long force itself upon our attention. It may be said, in conclusion, that there is a way of increasing the birth-rate which seems to have been overlooked by Dumont and many other writers and thinkers. We mean by diminishing the antenatal death-rate which takes the form of abortions and stillbirths. In this way, without increasing the fecundity of the individual or adding to the total number of conceptions, the ranks of the army of the newborn might be considerably augmented. The prevention of antenatal disease and death comes, then, in the light of a falling birth-rate, to be a matter of prime importance; it certainly calls for more study than has yet been given to it. Further, although it may be of little use, from the present standpoint, to diminish the death-rate among the very old, yet a fall in the far too high mortality among infants of a few months would be a very real gain to the population of France and other lands.

THE FIELD OF VIEW OF THE ANAESTHETIST.

FEW subjects have in a little over half a century become so completely emancipated from empiricism as that of anaesthetics. In a presidential address delivered by Mr. Richard Lloyd to the West London Medico-Chirurgical Society an attempt is made to state the case from the standpoint of physiology. The field of view of the anaesthetist comprises not only a knowledge of the physiology of anaesthesia and especially the chemical side of it, not only of the morbid processes present at the time the anaesthetic is administered and those initiated by the anaesthetic—since anaesthesia is itself a morbid condition often complex and far-reaching in its results—but also what may be termed the hygiene of the patient and of the anaesthetist as well as of his armamentarium.

Cough, bronchorrhoeal discharge, salivation, cyanosis, spasm were dealt with by Mr. Lloyd, but their relations to individual anaesthetics are worthy of elaboration. The work of Hughlings Jackson and of the French surgeons has shown that certainly in the case of chloroform the mere mechanical performance of respiration becomes less and less complete as narcosis is attained and prolonged.

That the medullary centres play the part of the predominant partner in anaesthetics has, we think, been established, and although in normal patients benumbing of the respiratory centre may be not only not dangerous but even desirable, yet in the presence of morbid conditions such as those involving respiratory embarrassment, cyanosis, and impaired circulation, danger looms large upon the horizon of the inexperienced anaesthetist. Further slight causes of asphyxia, wholly unimportant in themselves, faulty posture, accumulation of mucus or blood clot, become acutely dangerous in profound narcosis.

The gist of the matter as put by Mr. Lloyd is that the anaesthetist must have his judgement trained first by his knowledge of the physiology of the human being, then by that of the condition of his patient, and lastly by that of the state that patient passes into as the exigencies of the operation compel the surgeon to tax what resistive power the patient possesses, almost to its breaking point.

To put the matter in another way, the judgement of the anaesthetist, formed, primarily not only by his knowledge of the physiological and pathological processes seen in human beings, but by an experimental study of the action of anaesthetics upon the normal animal, and the animal under pathological conditions, enables him to grapple successfully with the problems presented to him. The expert has, or should have, no bias for one anaesthetic; such a bias usually means familiarity with one agent, and perverts his judgement about others. The expressions "etherist" and "chloroformist" should be banished. The condition of the patient must come to a certain extent into the field of the anaesthetist. He must include such knowledge as may enable him to foresee that given a patient suffering, let us say from renal or abdominal disease, his selection of the anaesthetic, and his decision as to how to administer it will result in a minimal after-danger.

This, though perhaps not expressed quite so strongly, was in fact Mr. Lloyd's contention. It has been perhaps one of the most conspicuous shortcomings of English writers on anaesthetics that they have not informed themselves fully concerning the work done in their department, whether at home or abroad. The literature of the subject is now very large, but the anaesthetist must try to keep himself acquainted with its practical teaching. Take, for instance, the numerous monographs written as to the behaviour of the pupil under chloroform and other anaesthetics. Mr. Lloyd gives his own views, which, curiously enough, do not harmonize—if, as we gather, he refers to chloroform—with the accepted views, of dilatation in the second and fourth degrees (Snow), and contraction in the third. Mr. Gill, of St. Bartholomew's, has done some excellent work upon this subject which has escaped due notice through its having appeared in hospital reports. We might mention other points in which much dispute might be avoided if a wider knowledge of the work done had been acquired. The very valuable research undertaken by Dr. Embley, which appeared in the BRITISH MEDICAL JOURNAL, received Mr. Lloyd's commendation, and was quoted very fully in his address, which also contained a warning against being guided solely by experimental results derived from anaesthetizing the lower animals. The whole object of such experimental

work from Snow onward, is to insist not upon finality, but to provide working hypotheses, which alone can be eventually accepted or rejected after being tested by the clinical experience which they enable anæsthetists to acquire.

PATHOLOGICAL ANATOMY AND CANCER INVESTIGATION.

PROFESSOR LUBARSCH, of Posen, a member of the German Committee on Cancer Research, states his conviction, in a pamphlet recently issued,[1] that a breach is growing between pathological anatomists and surgeons on the subject of cancer, and that this is largely due to differences of expression and of points of view. He sets himself the task of restating the present views of the majority of German pathological anatomists. Although in this country the two chief schools of opinion on the subject are not perhaps so sharply defined as they appear to be in Germany, yet the most uncompromising opponents of the parasitic theory are undoubtedly here also among the pathological anatomists, while some of its firmest adherents are in the ranks of the clinicians. To both Professor Lubarsch's clear exposition will be valuable. His objections to the present acceptance of the theory he groups under three headings: First, that it has not been shown that any organ is capable of producing cancerous or any other true autonomous new growth; secondly, that no analogy from studies of diseases of plants and animals has up to the present been brought to the support of the theory; thirdly, that the results of statistical, epidemiological, experimental, and clinical researches have not furnished arguments on the side of the theory.

He holds that the relations between the destructive (malignant) growths and the other types of true tumours are so numerous and intimate that if a parasitic causation be entertained for the first it must logically be held to govern the latter also, and that there are numerous true tumours which, while differing from carcinomata histologically and genetically, share with them the characteristic production of metastases and cachexia, but cannot in any conceivable way be ascribed to the action of a parasite—for example, certain fibromata, myxomata, enchondromata, and myomata. Certain types of carcinomata, he also considers, cannot be conceivably connected with the activity of characteristic parasites, such are the melanotic epitheliomata of the skin and the eye, certain primary cancers of bone, carcinomata of the adrenals, and the chorio-epitheliomata.

Having thus stated his objections to the acceptance of the parasitic theory as a basis universally applicable, Professor Lubarsch proceeds to combat the accusation that pathological anatomy has proved entirely unprofitable for the elucidation of the etiological questions. He believes that two causes have rendered this accusation partially just. He holds, in the first place, that the doctrine that irritation is never truly formative has been too unquestioningly accepted, and in the second, that every pathologist who has promulgated a theory of his own has attempted to argue its applicability to all forms and species of new growths. He maintains that no one of the theories identified with the names of Cohnheim, Thiersch, and Ribbert will explain all types and all the characteristics of new growths, but believes that each elucidates accurately different points in histogenesis—for example, Ribbert's theory gives the most logical explanation of the facts of extension and invasion, Thiersch's of certain questions of age-incidence, etc.

The histological researches of pathological anatomists appear to Professor Lubarsch to afford the most favourable basis for experimental researches, especially in connexion with the relations of cancer to chronic inflammatory processes and chronic irritation. In such experimental researches the question of predisposition should also be kept prominently in view. The best material of all for research is provided by animals affected with the disease, and it is by the use of this that the parasitic theory can best be put to the test.

In the last paragraph of this pamphlet Professor Lubarsch says: "All my remarks show that what I aim at is the maintenance of exact and critical methods in this difficult and important question..... it profits not to embark on the solution of the problem with a flourish of trumpets, to bring to bear on matters which call for calm and patient examination a mind imbued with a kind of ambitious ecstasy, and to hurl at honest criticism the accusation of bigoted scepticism." These are polemics, but that they are timely and necessary we most firmly believe.

[1] *Pathologische Anatomie und Krebsforschung. Ein Wort zur Verständigung.* Von Professor Dr. O. Lubarsch Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1902. (Royal 8vo, pp. 61. 1s. 6d.)

UNIVERSITY EDUCATION IN IRELAND.

WE publish this week the first part of an article giving the general scope and effect of the evidence taken by the Royal Commission appointed to inquire into the condition of university education in Ireland. The inquiry, as will be seen, touches the interests of medical education in Ireland at many points, but especially in relation to the future of Queen's College, Belfast. The report will, it is understood, be laid before Parliament when it reassembles on February 17th. The *Northern Whig* (Belfast) has published a forecast of the report, which, it is asserted, will recommend an increase of the grant to the Belfast College, and such development of its scientific departments as may, with increased inducements to arts students, render the institution fully equipped to meet the demand for higher education in Belfast. With regard to Dublin it is stated that the report will recommend either that the Catholic University College shall be developed and receive an increased endowment, or that a new college acceptable to the Archbishop and Bishops shall be established in Dublin with a purely Roman Catholic "atmosphere." The abolition of the Royal University will not, it is said, be recommended, but that on the contrary the Catholic College in Dublin, the Queen's College Belfast, and presumably also the Queen's Colleges in Cork and Galway, should be brought into the closest possible contact with the University, the status of which would, it is thought, thus be strengthened, while its governing body would be largely dominated by the Catholic College, Dublin, and the Queen's College, Belfast. Nothing is said about the cumbrous system of indirect endowment of the Colleges through University Fellowships. To the impartial observer it appears that it would be simpler and better to recognize facts and to give the money to the Colleges direct, leaving them to expend it on developing the teaching to the best advantage, according to their several needs.

DISEASE IN OLD AGE

THE average duration of life is, according to statistics, becoming gradually prolonged, but this is in large measure due to improved hygienic conditions. The increasing wear and tear of life, due to the feverish activity of the day, cannot fail to shorten the existence of the average adult by using up too rapidly the cell-reproductive possibilities with which his organism was originally endowed. The greater variety and abundance of the food which he eats, and the

extent to which alcohol and tobacco, in one form or other, enter into his daily regimen lays further stress upon his tissue stability; and, in addition, the growing tendency to the concentration of population in large centres exposes him to risks of disease which were almost unknown in days when people were not so thick upon the ground, and when their habits of every-day life were less complex and luxurious. These and other less important factors, all tend to hasten the day of degenerative change, even in those who are lucky enough to escape the strain of intercurrent illness. This premature senility of tissue moreover, gives to every variety of disease scope for claiming a larger number of victims than ought to fall a prey to its ravages. Two contrasted cases, taken from recent experience, will emphasize the point. A man, who had lived his life through in the uneventful surroundings of a country village, following the occupation first of a farm labourer, and later on when prosperity shone upon him, of a small farmer, complained one day of weariness and vertigo. He was in his 98th year, and declared that he had never, throughout his long life, known himself to be ill, or found himself called upon to seek the services of a doctor. He did not know what pain meant, and had never missed a day's work. His life had been simple and abstemious, and he was one of a large family, most of whom had attained an advanced age. He presented no evidences of organic disease, but his vessels were tortuous and his heart was somewhat irregular in action, and its sounds were muffled and impure. On exertion he became breathless, but he would not admit that this fact was either new or of consequence. He went to bed that night, and fell asleep as usual; but in the early morning he complained of feeling cold, and asked for a further supply of bedclothes. A few hours later his breathing became soft and shallow, and he passed peacefully, without pain or struggle, from sleep into death. Surely there could be no more typical example of perfect euthanasia! The other case, which stands in striking contrast to this, was that of a lady whose life had been passed in the whirl and excitement of society. She was the wife of a man whose social position demanded a constant round of entertaining, and she herself entered heartily into all the demands and duties of her position. She had occasionally suffered from minor ailments, but had never been seriously ill, and she belonged to a family in which gout had been known to prevail for generations. In her 50th year she caught cold, and a low type of pneumonia supervened; this in its turn became complicated by cerebral haemorrhage, and she died suddenly in a convulsion on the sixth day of her illness. Physical examination revealed the fact that this lady had advanced atheromatous changes in her vessels; the liver was enlarged, the heart hypertrophied, and the urine contained a distinct haze of albumen. The evidences of degeneration were thus widespread, and at 50 years of age she died because of tissue changes that properly belonged to a period of life some decades beyond that she had reached. No more graphic instance of the effects of undue wear and tear could be conceived. In the presidential address delivered to the Shropshire Branch of the British Medical Association by Dr. Keyworth, which will be found elsewhere in this issue, the subject of disease in advanced life is dealt with in an interesting and suggestive way. Dr. Keyworth believes that "many of the ailments of old age are due to more food being taken than the eliminating organs can get rid of." While the element of truth in this view will be generally admitted, it may be doubted whether many of those who reach 80 or 90 years can ascribe their longevity to the unattractive diet which he seems disposed to credit with the extraordinary age reached by "Old Parr." The question of excessive alimentation is one of far-reaching consequence, and probably has more to do with the preternaturally early occurrence of degeneration than any of the other conditions which nowadays conspire to make us old before our time. Dr. Keyworth instances a number of diseases to which the aged are specially liable, and gives valuable hints as to the methods by which they ought to be treated, and the means which should be resorted to for their prevention. But the incidence of most of the disorders to which he adverts is dependent upon tissue change, and there is ample evidence that senility of cells is not the penalty of advanced life only, but frequently ensues upon a combination of faults of heredity and errors in living at an age when existence, as measured by those who believe that a century is the natural limit of human life, is still young, and when man, from the point of view of his years, is little more than in his prime. The subject is one of the most important in preventive medicine, and well deserves more attention and study than it has yet received.

INTERNATIONAL AND NATIONAL MEDICAL PRESS ASSOCIATIONS.

A NUMBER of medical journalists from various countries present at the International Medical Congress in Rome in 1894 held a meeting at which the opinion was generally expressed that it would be useful to form an international organization. In July, 1900, an International Congress of the Medical Press was held in Paris, but separated without placing the organization on a satisfactory footing. The matter was taken up by Dr. Blondel of Paris, and a conference attended by representatives of the medical press from Austria, Belgium, Bohemia, Denmark, England, France, the German Empire, Holland, Italy, and Norway was held under the presidency of Professor Cornil of Paris, and on the invitation of the Société Médicale de Monaco at Monaco in April, 1902. Four long business meetings were held, and as the result a number of decisions were reached with practical unanimity. These have been embodied by the Secretary-General, Dr. Blondel, and the Assistant Secretary and Treasurer, Dr. Péchère of Brussels in a series of statutes for the International Association of the Medical Press. The Association consists of journals registered at the office of the Association in Brussels, and of journalists who are members of a national medical press association; in countries where no such association exists the scientific director, the editor, or the secrétaire de rédaction, a functionary unknown in this country, may become a member of this Association. As will be seen by a letter from Mr. Thomas Wakley, jun., L.R.C.P., published in another column, it has been resolved to form an Association of the British Medical Press in order more effectually to co-operate with the International Association. A general meeting of the International Association will be held in Madrid on April 20th, 21st and 22nd, that is to say in the early days of the week in which the Fourteenth International Medical Congress will be opened. Voting in the general meeting will be by nationality, and in order to give a voice to the minority in any nationality a suggestion, due to Mr. Adolphe Smith, the representative of the *Lancet*, at the International Conference at Monaco was adopted, under which each large nation will have five votes and others three. One of the objects of the Association is to facilitate the work of reporting the meetings of international congresses, and the opinion is expressed that the organizing committee of future international medical congresses ought to contain one or more members representing the national association of the medical press in the country in which the congress is to be held. In order to carry on the work of the International Association a permanent committee consisting of three members each for France, Great Britain, Italy, Russia and the United States, of four for German-speaking countries, of two each for Spain and Belgium, and of one each for other countries has been formed. The President of this Committee is Professor Cornil, of Paris, and the names of the Secretary-General and the Assistant Secretary and Treasurer have already been mentioned. This Committee will meet on the occasion of each International Medical Congress and in years in which there is no such Congress at the offices of the Association in Brussels. It will be the duty of the Secretary-General and the Assistant Secretary to take steps to facilitate the work of reporting international medical congresses. The official language of

the Committee is French, but at the Congress to be held in Madrid in April, Spanish, French, German, English and Italian will be recognized as official languages.

SANITARY CONFERENCE OF AMERICAN REPUBLICS.

THE Sanitary Conference of American Republics was held at Washington a few weeks ago, under the presidency of Dr. Walter Wyman, Surgeon-General of the United States Marine Hospitals Service. Dr. A. K. Reynolds, of Chicago, was elected secretary. Delegates from Brazil, Chili, Costa Rica, Cuba, Ecuador, Guatemala, Honduras, Mexico, Nicaragua, Paraguay, Salvador, Uruguay, and the United States were present. In his presidential address Dr. Wyman said that the conference was assembled, first, to gain information; secondly, to discuss quarantine; thirdly, to discuss sanitation; and, fourthly, to make scientific investigations. The most important subject discussed was the etiology and suppression of yellow fever. The agency of the *Culex fasciatus* in spreading the disease was most elaborately shown by Dr. John Guiteras, formerly Professor of Pathology in the University of Pennsylvania, now of Havana University, who stated that no case of yellow fever had originated in Cuba during the past fourteen months. The absence of disease was due to excellent sanitation, including good drainage, personal and municipal cleanliness, disinfection, hygiene, etc., and to the recognition of the fact that the mosquito transmitted the germs of the disease. The early work of Finlay and the later investigations of the late Major Reed had borne excellent results. From his personal observations during several years' residence in Cuba, Dr. Guiteras submitted a resolution to the effect that the bite of certain mosquitos is the only proved natural means of the propagation of yellow fever. Dr. Souchon, president of the Louisiana Board of Health, opposed this, citing several cases in which mosquitos did not apparently enter into the etiology of the disease. The delegates were unable to agree whether five or ten days' quarantine was sufficient detention for persons suspected of having yellow fever. It was decided that the question of the importation of infected mosquitos on vessels required further study before any great modification of the present quarantine laws could be recommended. Dr. C. W. Stiles, of Washington, presented a communication on "uncinariasis," a disease which he claimed to have discovered, and which he asserted was responsible for the laziness and backward condition of the poor white people of the sand districts of the South. The symptoms greatly resembled those of continued malaria. Its presence in succeeding generations had resulted in inferior physical development and lowered mental powers. Men and women of 20 to 23 years of age resembled in appearance children of 15 to 16. The disease, when diagnosed, was easily cured. He gave 30 gr. of thymol at 8 and 10 a.m., with a purgative at noon. The patient at the same time was kept on a diet of milk and soup. This treatment was followed by the passage of the *Uncinaria Americana*, a tiny worm from one-quarter to three-eighths of an inch long. Resolutions were adopted stating that all garbage should be kept separately on the premises until it could be removed, unmixed with anything else, and destroyed. Another resolution was passed that if all discharges from cases of typhoid fever and Asiatic cholera were instantly disinfected, such diseases would cease to be a menace. A resolution was also adopted declaring that it was the sense of the Conference that yellow fever was transmissible by mosquitos. The next meeting of the Conference will be held at Santiago, Chile, on March 15th, 1904.

ENDOWED MEDICAL RESEARCH IN AMERICA.

MILLIONAIRES in the United States are vieing with each other in the giving of vast sums for the endowment of scientific research. During the annual meeting of the American Society of Naturalists held in the buildings of the Columbian University of Washington two or three weeks ago, Professor William H. Welch, of the Johns Hopkins University, made a preliminary announcement as to an important addition to the list of such endowments. While he was not yet prepared to make the formal public announcement, he stated that within the near future a specially endowed institute or laboratory for research in scientific medicine would be founded in the United States. The institute would, he said, be in a general way similar to the Pasteur Institute of France, and would greatly facilitate and energize special research along lines that would be of incalculable benefit to humanity. Dr. Welch afterwards reviewed his experience of a year in directing research work under the endowment of 200,000 dollars made by Mr. Rockefeller for the promotion of medical science. He said that the trustees of the fund, who had been given authority to direct the manner in which the fund should be used, at once recognized that the sum would would not be large enough for the establishment of a separate laboratory. It was therefore decided that it should be distributed among different laboratories already existing. The sum was also insufficient to be applied to all lines of medical research, and it was therefore decided to institute special research on infectious diseases and preventive medicine. He stated that the work of research had continued, and that in connexion with the malady of diarrhoea, which was now being studied, special field and laboratory work would be undertaken during the coming summer. Dr. Welch said the Rockefeller fund trustees had distributed portions of the endowment in the form of scholarships, and in that way had encouraged praiseworthy investigation. Papers had been received from scientific workers in laboratories all over the country. The trustees had also aided promising young men who had been sent to laboratories at home and abroad for special investigation. The work of some of these young men in European laboratories had not only been of great good to the young men themselves, but to American science and to the people. He asserted that, while a great deal had been accomplished, much more could be done with a separate institute or independent laboratory with a competent man at the head of it, similar to the Pasteur Institute in France, the Institute for the Study of Infectious Disease at Berlin, and the Institute of Experimental Medicine at St. Petersburg.

THE REGENERATION OF CUBA.

AT a meeting of the American Academy of Political and Social Science, held in Philadelphia on December 13th, 1902, Major-General Leonard Wood gave an account of the work of the American army in Cuba. He described the reorganization of the government of the island, the establishment of schools, and the solution of important sanitary problems. In conclusion, the former Governor-General of Cuba summed up the results of his administration as follows: "The Government was transferred as a going concern; all the public offices were filled with competent well-trained employés; the island was free from debt, and had a surplus of a million and a-half dollars in the treasury; was possessed of a thoroughly trained and efficient *personnel* in all departments; completely equipped buildings for the transaction of public business; the administration of justice was free; habeas corpus had been put in force; police courts had had been established; a new marriage law, on lines proposed by the Roman Catholic Bishop of Havana, giving equal rights to all denominations, was in operation; the people were governed in all municipalities by officials of their own choice, elected at the polls; trials in Cuban courts were as prompt as in any State of the Union, and life and property were absolutely safe; sanitary conditions were better than those existing in most parts of the United States; yellow fever had been eradicated from the island; modern systems of public education, including a university, high schools, and nearly 3,700 public schools, had been established; also well-organized departments of charities and public works; the island was well supplied with hospitals and asylums; beggars were almost unknown." Referring to the transmision of yellow fever by mosquitos, General Wood expressed the opinion that no discovery of greater importance had been made since Jenner discovered

vaccination. It is fortunate that a man like General Wood, who from his medical training could appreciate the practical importance of such a matter, was at the head of the Cuban Government, otherwise it is only too probable that the experiments by which Dr. Carlos Finlay's theory was definitively proved by the work of the American Commission, consisting of the late Dr. Walter Reed, Dr. Agramonte, and the late Dr. Lazear, could not have been carried out.

A SERUM FOR CONSUMPTION.

THE newspapers have within the last few days announced the independent and almost simultaneous discovery by two foreign investigators, Professor Tizzoni, of Bologna, and Dr. Marmorek, of Vienna, of a serum which is credited with the power of curing tuberculosis. Both these names are already written in golden letters on the scroll of scientific fame, and there is nothing intrinsically improbable in the statement that either or both may have discovered a serum possessing the property of modifying the condition of sufferers from tuberculosis. Many old-fashioned remedies can do as much. Before forming a judgement as to the value of the alleged discoveries, therefore, we shall await the reports of the investigators, the secrets of whose laboratories have been prematurely, and, it may be, quite inaccurately proclaimed to the world. We cannot honestly say that we expect to learn that a real cure for consumption has been found. The history of discovery in this department of medical research during the past ten or twelve years justifies an attitude of scepticism on the part of the medical profession. So many serums have during that period had their day and ceased to be, that the announcement of two new ones can scarcely arouse more than a passing curiosity. Still hope springs eternal in the human breast, and, though we confess that we think the search for a specific for consumption as little likely to be crowned with success as that for the philosopher's stone, the object is one that may well tempt a scientific enthusiast. We note with pleasure, therefore, that the American millionaire, Mr. John D. Rockefeller has announced his intention of spending some £1,450,000 in the furtherance of research in this direction. His plans for a medical department of the University of Chicago, following on the annexation of the Rush Medical College, were made public on January 27th. They comprise an elaborate scheme for a great research hospital. It is said to be the supreme desire of Mr. Rockefeller to find a serum that will cure consumption, and to this end millions will be given to an institution for original research. The plans contemplate the immediate expenditure of the enormous sum above mentioned as soon as the Rush Medical College scheme has been worked out. Mr. Rockefeller made it known to the trustees of the University, at a recent meeting, that he did not care so much for the number of doctors that Rush Medical College could put out in the world as to evolve men who would go into original research to find cures for stubborn diseases, particularly consumption. His acceptance of the proposition made by the College was conditional upon the establishment of a post-graduate institution on University lines. This institution will be constructed upon the cottage hospital plan, one entire division of which will be devoted to efforts to discover a tuberculosis serum.

THE TEACHING OF MEDICAL HISTORY IN SPAIN

IN an interesting note contributed to *Janus* of January 15th, Dr. Rafael Ulecia points out that a course of lectures on the history of medicine has formed an integral part of the curriculum for the doctor's degree in the Madrid Faculty of Medicine for more than half a century. Two medical titles he says, are conferred by Spanish universities—Licentiate and Doctor. The former gives the right to practise medicine, while the latter requires an additional year of study to obtain, and must be taken by all who are ambitious to hold a chair in a university. It is only in Madrid, however, that a chair of history of medicine exists. In the curriculum of studies which came into force in the Madrid Faculty of Medicine, generally known as the Colegio de San Carlos, on September 17th, 1845, "the bibliography and history of the medical sciences" is included. In a later scheme dated July 8th, 1847, the subject appeared as "bibliography, history and literature of the medical sciences." It was again included in a scheme dated August 28th, 1850, the professor being Dr. Jaime Salva. In a scheme dated September 10th, 1852, the subject appeared under the title of "critical history of medicine and notions of bibliography," and Professor Salva, having passed away, Professor Gabriel Usera succeeded to his chair. The law of public instruction dated September 9th, 1857, included in the curriculum the "critico-literary history of medicine" which Professor Usera continued to teach. On his death in 1875 the duties of the chair were discharged by Dr. Francisco J. Santero, who continued to lecture on the history of medicine till his father, Dr. Tomas Santero, who was Professor of Clinical Medicine, was by royal decree dated November 16th, 1876, appointed to the chair. He held it till his death in February, 1888, when his place was filled provisionally by his assistant, Dr. Mariano Sancho Martin, and after him by other substitutes till 1892, when Dr. Ildefonso Rodriguez was by royal decree appointed to the chair.

THE BOARD OF AGRICULTURE AND GLANDERS

IT will be remembered that some four years ago a Departmental Committee, presided over by Lord Stanley, was appointed to consider what further measures could be adopted with a view to exterminate glanders, which not only ravaged London stables, but also was communicated occasionally to the human subject. A "stamping-out" policy had been advocated, and mallein (a sterile extract of the bacillus mallei) was employed, with a view of increasing the certainty of diagnosing the disease. It soon became evident, however, that either mallein was not an infallible diagnostic or it was necessary to revive current opinion as to the pathology and curability of glanders. Horses which "reacted" to mallein on being again tested were found, in some cases, to have become refractory to the injection. The question arose, Was glanders curable, and, if so, was it necessary to slaughter, at heavy cost to the rates, all horses which "reacted" but which otherwise showed no outward evidence of disease? The Departmental Committee of 1898 was divided on this question and recommended careful investigation into the pathology and diagnosis of glanders. This investigation has been completed, and we understand that the conclusions which have been arrived at throw a novel light upon the practice upon which some local authorities have embarked under the Contagious Diseases of Animals Act. It seems that "reactors" which show no clinical signs of glanders are so little dangerous to horses brought into contact with them that there is no practical risk in allowing them to go about, and a further set of experiments have shown that horses which at first reacted, but which after a while ceased to react, when slaughtered betray little or no evidence of glanders in the carcass. It seems, therefore, that to slaughter merely on the results of the mallein test is, as Mr. Hanbury, the President of the Board of Agriculture, some time ago appeared to intimate, neither a necessary procedure nor one that is free from considerable hardship and unnecessary expense.

ISOLATION HOSPITAL AT DUBLIN.

THE Dublin Corporation scheme to erect an isolation hospital in the neighbourhood of the city has been met with such marked opposition from the residents of the various localities in which a site was selected, that it has been found necessary to modify the contemplated arrangements. Of course this difficulty might have been expected. People in suburban districts where they have gone to reside because of salubrious surroundings will not calmly accept the sudden establishment of a hospital in their midst for the treatment of small-pox, cholera, or typhus. Nor is it less objectionable to plant it in a district given up to market gardening, the vegetables being sent broadcast over the country; unless, of course, ample compensation was available for the inevitable destruction

of the local trade. Now the authorities have resolved to convert the submarine mining station at the mouth of the river into a hospital for isolation purposes. The site is distant from any ordinary residences, and is on the edge of the sea. It is just possible that even this locality may be only temporary, because a large passenger traffic goes to and fro daily in the Marycross Channel steamers, and opposition is already mooted. The present condition is what might be expected. The Corporation has done nothing effective to carry out its designs in times of freedom from disease, and is panic-stricken when a case of small-pox is reported.

FIFESHIRE MEDICAL ASSOCIATION.

Dr. Craig, of Cowdenbeath, was entertained at a complimentary dinner at Kirkcaldy on November 6th, 1902, Dr. Lesslie Curror, President, in the chair; Drs. Welch (Kinghorn) and Spence (Burntisland) acted as croupiers. After dinner the Chairman presented to Dr. Craig a solid silver rose bowl of fluted style, with silver handles, and made after an antique Irish pattern, bearing the following inscription: "Presented to Dr. Wm. Craig, Cowdenbeath, by the Fifeshire Medical Association, the Fife Colliery Surgeons Association, and by medical friends in Fife, as a token of esteem and in recognition of the public spirit recently shown by him." Dr. Craig thanked his friends for their kindness. The past twelve months had been a time of great trial to him, but the consciousness that never in his life had he done harm to any one had sustained him through it all, and this token of support from his medical friends was very helpful to him. He thanked specially those who had come forward without fee or reward to give evidence in his favour, and the executive of the Medical Defence Union for leaving, as they did, no stone unturned to forward his interests. At the close of the dinner opportunity was taken to discuss the new Constitution of the British Medical Association so far as it affects Fife, and Dr. Spence gave a very full summary of the different courses which might be adopted by the Fife members. Some discussion ensued, and the general drift of feeling appeared to be in favour of Fife being constituted a Branch and Division, acting, for purposes of election of a representative on the General Council of the Association, with the Edinburgh Branch.

MORTON'S DISEASE IN PREGNANCY.

With increasing knowledge it becomes ever more evident that pregnancy gives no immunity against diseases. No sooner is a morbid entity clearly differentiated than observations begin to appear in which it is found associated with the pregnant state. This, at any rate, has been the case with Morton's disease. This malady, first described by Gross in 1864 and first clearly established as a distinct disease by Morton in 1876, is characterized by intense pain in the fourth or one of the other metatarso-phalangeal joints; hence some of the names which have been given to it, such as pododynia, metatarsalgia, painful affection of the foot, painful foot, Morton's foot or toe, metatarso-phalangeal neuralgia, and anterior metatarsalgia. It has been variously ascribed to persistent inflammation of the metatarso-phalangeal joint, to injury, to heredity, to malaria, to epilepsy and hysteria, to childbirth, to the uric acid diathesis, and to obliteration of the anterior arch of the foot from much standing. Of late the opinion has grown that it is of neuralgic nature, and it has even been regarded as a reflex pain due to cancer of the mammary gland. The information forthcoming regarding its connexion with pregnancy has been gathered together by Giuseppe Cristalli;[1] and it would seem that, including his doubtful case, there have been four recorded instances in which Morton's malady occurred during gestation. These were the cases recorded by Chambrelent (1897), by Lasserre (1897), and Noce (1901). Cristalli's patient was 40 years of age, and had had ten pregnancies; symptoms of Morton's disease (intermittent attacks of intense pain in the metatarso-phalangeal joint of the great toe of the right foot, with no local changes in size, colour, or temperature) had been present in the sixth, seventh, ninth, and tenth pregnancies. She had always suffered markedly from the sympathetic phenomena of gestation, and was of a very excitable temperament. In her eighth pregnancy she was absent from home, and did not suffer from Morton's disease; but in her ninth the symptoms were so severe that a medical man proposed to induce abortion, but his advice was not taken. Cristalli very carefully investigated the patient's various systems and organs in her tenth pregnancy; she was very nervous, but had no discoverable lesions, and the painful attacks in the great toe were not accompanied by any local changes. After close watching he discovered that the paroxysms of pain in the foot generally occurred during the night after the patient had paid a visit to a female friend who was a great sufferer from gout of the foot. The mystery was cleared up; it was a case of hysterical imitation of gout in the great toe, predisposed to by weakened inhibitory powers arising from the auto-intoxication of the pregnant state, and it was cured by stopping the visits to the gouty friend, and by the subcutaneous injection of sterilized water into the neighbourhood of the toe. In a subsequent pregnancy (the eleventh) there was no return of the neuralgia of the foot, for the visits to the friend were intermitted. Cristalli believes that the name "Morton's disease" ought to be reserved for the cases in which there is no evident cause of the pain and no alterations in the joint affected, there being only a nervous disturbance of central or peripheral origin of a known nature (for example, hysteria, epilepsy, neurasthenia), or of an unknown. Under this restricted definition his case would be regarded as one of Morton's disease in pregnancy; but it is not clear that it is necessary to give separate names to these hysterical and neuralgic manifestations.

[1] *Archivio di Ostetricia e Ginecologia*, ix, p. 752, December, 1902.

THE LAMBETH BACTERIOLOGICAL LABORATORY.

Dr. Priestley, Medical Officer of Health, reports that, since this laboratory was opened in 1899, 2,037 bacteriological examinations have been made in connexion with suspected cases of consumption, diphtheria, typhoid, and other diseases. It is satisfactory to hear that an institution of this kind has been utilized to so large an extent and that its importance is recognized by the medical practitioners in the Lambeth district. Dr. Priestley's report is very brief and the data he furnishes are too meagre to be of much scientific value. In his investigation of an outbreak of pseudo-diphtheria, for instance, a detailed description of his bacteriological methods would have been most interesting. Apparently his report is intended for those who are not conversant with bacteriological technique, but, even for popular purposes, it might with advantage have been more carefully worded. In reference to the value of bacteriological examinations of sputum for the early diagnosis of phthisis, we are told that "the advantage of being able to assure patients or their friends that the disease suspected is merely (for instance) bronchitis or pneumonia, and not consumption, goes without saying." We quite agree with Dr. Priestley as to the importance of sputum examination, but surely this method of recommending it is somewhat open to misconception and we can hardly imagine that cases frequently arise in which the general practitioner, after having obtained a sputum examination with a negative result, is in a position to be able to gratify his patient with the assurance that he has "merely" got pneumonia.

COLD AND COLDS.

The *Bulletin* of the Health Department of the city of Chicago for the week ending January 10th calls attention to the effect upon the public health of the city of the coal famine. It is there stated that fully 10 per cent., or nearly 200,000, of the residents of Chicago were suffering from ailments of a grave character caused by privation and exposure, and that the effect of these ailments was already reflected in the enormous increase of deaths among those at the extremes of life. Since the beginning of the year

there had been an increase of 19.2 per cent. in the number of deaths under 5 years of age, as compared with the corresponding period of last year, when the death-rate was about normal. Among those over 60 years of age the increase was still greater—24 per cent. over the previous week, and 36.7 per cent. over the normal rate of the corresponding period of 1902. The excess among the aged was caused chiefly by the effects of cold and exposure in hastening to a fatal termination many of the chronic diseases, the sufferers from which under ordinary conditions might have survived for many years. The annual death-rate per 1,000 was 17.29, as compared with 14.79 for the corresponding week of 1902. The tabular statement of the principal causes of death shows that the most notable increases were in pneumonia (135 as compared with 89), typhoid fever (29 as compared with 9), scarlet fever (16 as compared with 9). There was also an increase in deaths attributed to apoplexy (an average of 15 in the first two weeks of the year as compared with 9 in the second week in 1902), but there was no notable increase in the deaths attributed to bronchitis or consumption. The deaths from cancer were 24, as compared with 13, and this increase may possibly be due to privation as indicated above, otherwise unless we accept the view that pneumonia is due to cold the total figures do not afford any very convincing evidence as to the direct effect of the coal famine upon the public health. With regard to pneumonia the *Bulletin* states that "street car colds are in the experience of every physician in general practice increasing with frightful rapidity," and urges able-bodied persons to shun the "mephitic, disease-saturated atmosphere of the average street car," and walk to their business.

THE SUPINATOR LONGUS AS A GUN MUSCLE.

MR. CLEMENT LUCAS contributes to the *Guy's Hospital Gazette* (January 3rd) an interesting note on the supinator longus as a gun muscle. He says that when lecturing on anatomy, and teaching the action of the supinator longus muscle as a flexor of the forearm, he was accustomed to ask the members of the class first to pronate strongly their forearms and then to feel the lax state of the biceps during flexion in this position, and afterwards to compare the firm contracting supinator longus undertaking the work of the biceps during pronation. It happened when shooting on September 1st, 1902, that he met with an accident which broke his gun and caused some damage to himself. Recovering before his gun was out of hospital, he began to shoot with a very heavy old gun that he had discarded some fifteen years ago for a more modern and lighter weapon. After some days of exercise with this gun he was surprised, one morning in his bath, to see how the supinator longus of his right arm had become hypertrophied and stood out above the other muscles of the forearm, the pronated position of the trigger hand having contributed to this result. The left supinator showed much less distinctly, as the barrel hand was only slightly pronated and the biceps and brachialis anticus continued to do a large part of the work. The right supinator longus must then, he says, be regarded largely as a shooting man's muscle, for it does the main part of the work in raising the gun to the shoulder before firing; and a badly developed muscle after a fortnight's sport in shooting would be rather an indication of indifferent sport.

PHOTOGRAPHY AS AN AID TO COUNTING RED BLOOD CORPUSCLES.

THOSE who have been accustomed to count blood corpuscles with the haemocytometer know what an eye-destroying process, as Cabot calls it, it is. Dr. C. A. MacMunn showed at the meeting of the Physiological Society at King's College, on January 17th, several photographs of the haemocytometer of Thoma-Zeiss containing blood diluted to 1 and 0.5 per cent., in which the ruling of the cell as well as the corpuscles can be distinctly seen on the plate. The most suitable power for this purpose was found to be a ⅔ obj. and a Zeiss No. 4 eyepiece. The microscope and camera of course must be vertical. This method is likely to prove useful, as not only does it enable the observation to be made rapidly, but also serves as a permanent record. Several drops of the fluid can be successively photographed and thus the accuracy of the method increased. The negative plate answers equally well with the positive for the enumeration of the erythrocytes.

LARGE FEES.

IN an article which appeared under this heading in the BRITISH MEDICAL JOURNAL of January 24th, reference was made to what was said to be probably the largest medical fee on record, namely, one of £50,000 paid to "Dr. Gale, the blind physician of Bristol." Although the name was unknown to us, and we failed to discover it in any reference book accessible—and the receipt of such a fee is of itself sufficient to make a physician famous—the source of our information seemed to us to be trustworthy, and we gave the fact as we found it. The explanation of the mystery has been supplied by Dr. Gale himself to the *Daily Chronicle*, which quoted our paragraph. Dr. Gale states that he is not a medical doctor, but a doctor of philosophy, and that he has never resided at Bristol. He is a consulting medical electrician, and is known as "the blind inventor." The disease cured was not, he says, in the knee, but gangrene in the toe and aneurysm in the leg. Sir William Ferguson was the consulting physician (*sic*), and the fee paid was £50,000. Dr. Gale is well known in Plymouth, but at the time of receiving the fee was living at Hampstead, where he still resides. He subscribes himself Ph.D., F.G.S., F.C.S. We congratulate Dr. Gale on his fee, though he is outside the fold; but we should be interested to read a true, full, and particular account of the case which had so fortunate an issue for him as well as for the patient.

KING'S COLLEGE HOSPITAL.

MR. ROBERT REEVE STORKS, who died on December 21st, 1902, bequeathed £20,000 in trust to be applied in founding, endowing, or providing for the maintenance of a ward in King's College Hospital, to be be dedicated to the memory of his father, the late Mr. Sergeant Storks, who was for some time a governor of the hospital. Mr. Storks also left his residual estate to King's College Hospital on condition that the Storks Memorial Ward should be established within three years after his death. It is stated that the total amount which the hospital is likely to receive under the testator's will is about £60,000. We understand that the advisability of moving the hospital from its present site has been under consideration, and this large legacy appears to have fallen opportunely and may materially influence the decision. If some millionaire were now to offer to defray the expenses of moving King's College also to some freer and more suitable site, he would in the opinion of many do a great service to the cause of higher education in London.

NOTIFICATION OF DISEASES IN GERMANY.

OUR contemporary *La Semaine Médicale* in a recent number points out the extreme stringency of the German law regulating the notification of certain diseases by medical practitioners. In France, as in England, notification is obligatory only when the diagnosis is assured, and punishment is inflicted only for wilful neglect, but in Germany even suspected cases must be notified and failure to do so may render the defaulter liable to imprisonment for a term varying from three months to three years. On a recent occasion a medical practitioner at Albendorf, a small place in Silesia, to which a number of pilgrims resort, failed to recognize two cases of small-pox and consequently did not notify them. On their return home the pilgrims took the disease with them, and 65 cases followed, of which 6 died. The Albendorf practitioner was prosecuted at Glatz, the Government demanding that under Article 327 of the Penal Code he should be condemned to six months' imprisonment. The defendant pleaded that small-pox being practically unknown in Germany, he had had no opportunity of studying this disease, and that he found himself unable to diagnose it, hence his failure to notify the two cases, one being con

sidered chicken-pox and the other bullous erysipelas. The Court rejected this defence, but refused to convict under Article 327 of the Penal Code; it, however, condemned the defendant under the Imperial Law of June 30th, 1900, which requires the notification of all suspicious cases, and fined him 150 marks. The diseases to which the law applies are leprosy, cholera, typhus, yellow fever, plague, and small-pox. All these, with the exception of the last, are rare diseases in most countries, and when present as isolated cases or at the commencement of an epidemic are difficult to diagnose.

SANATORIA FOR CONSUMPTIVE POOR IN THE UNITED STATES.

IN the United States the first sanatorium for the treatment of the consumptive poor was established in the Adirondacks by Dr. Trudeau nineteen years ago. Since that time sanatoria for the treatment of tuberculous patients have been provided in several of the States. The following may be mentioned, but the list is not complete: Alabama, 2; Colorado, 3; Connecticut, 1, and another soon to be erected; Delaware, 1; Illinois, 3; Maine, site for one purchased; Maryland, 1; Massachusetts, 4; New Jersey, 1; New Mexico, 4; New York, 10; North Carolina, 2; Oregon, 1; Pennsylvania, 4. The United States Government has two sanatoria: one for the United States army at Fort Baird, New Mexico, and the other established by the Marine Hospital Service at Fort Stanton, New Mexico. Mississippi has a hospital for the tuberculous insane. Texas has an agricultural colony of tuberculous prisoners. New York City, Boston, Buffalo, Cincinnati, and Hartford provide special institutions for the care and treatment of consumptives. The Commission appointed by the State Legislature of New Hampshire to consider the question of a State sanatorium for consumptives has reported strongly in favour of the proposal. The Commissioners have drafted a Bill to be submitted to the Legislature. Active efforts to secure a State sanatorium are being made also in Connecticut, Maine, Maryland, Louisiana, Minnesota, Ohio, Rhode Island, Wisconsin, and doubtless in other States. In addition to the above, several States and some cities have measures under consideration for the establishment of other sanatoria.

THE CARNEGIE FUND AND THE ENDOWMENT OF RESEARCH.

THE Carnegie Trustees are elaborating a scheme to provide funds to the four Scottish Universities for the purpose of endowing post-graduate research in the various faculties. The scheme may include travelling scholarships. The details will be further considered at a meeting of the Trustees in the early part of February, when it is expected that the scheme will be finally adjusted and made public. The funds will come out of a portion of the gift that was kept back with this special object in view.

LECTURES AT THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE Hunterian Oration will be delivered at the Royal College of Surgeons of England by the President, Sir Henry G. Howse, on Saturday, February 14th, at 4 p.m. The first course of lectures for the session will be given by Professor Charles Bent Ball, of Dublin, Erasmus Wilson Lecturer, who has taken for his subject adenoma and adeno-carcinoma of the rectum; the lectures will be delivered on February 16th, 18th, and 20th. The Arris and Gale Lectures will be given on February 23rd, 25th, and 27th, by Mr. J. Herbert Parsons, whose subject is ocular circulation. On March 2nd, 4th, and 6th, Professor Arthur Keith will give an account of a research into the manner in which the abdominal viscera are maintained in position in man and in animals allied to man, with a view of elucidating the condition usually described as Glenard's disease. Mr. W. McAdam Eccles will lecture on some points in the anatomy and pathology of the vermiform appendix on March 9th, 11th, and 13th. All the lectures will be given at 5 p.m. on the days mentioned.

THE CREMATION SOCIETY OF BENGAL.

A PUBLIC meeting of inhabitants of Calcutta interested in the scheme for the establishment of a crematorium for that city was recently held, under the chairmanship of Lieutenant-Colonel Ranking, M.D., I.M.S. After an address by the chairman, in which objections, theological, medico-legal, and sentimental, were dealt with, Dr. Frederick Pearse explained the modern method of cremation. It was agreed that a society should be constituted to be called "The Cremation Society of Bengal," having for its object the establishment and maintenance of a crematorium in the vicinity of Calcutta, and that the rules of the Society should be based, as far as might be practicable, on those of the Cremation Society of England. Lieutenant-Colonel Ranking was elected President, and Mr. John Davenport Honorary Secretary and Treasurer of the new Society.

PROFESSOR ERNST VON BERGMANN has been elected President of the Berlin Medical Society in succession to the late Professor Rudolf Virchow.

SIR WILLIAM TURNER gave his last lecture on anatomy on Friday last, January 23rd, at one o'clock. For the rest of the present winter session the lectures are to be given by the Senior Demonstrator, Dr. Hepburn.

OWING to the complicated nature of such of the business as had reference to the boundaries of Divisions and Branches it has been found necessary to postpone until next week the publication of the report of the proceedings of the Council of the Association and of the committees.

DR. T. G. BRODIE, lately Director of the Laboratories of the Royal Colleges in London, was appointed Professor-Superintendent of the Brown Animal Sanatory Institution at the meeting of the Senate of the University of London on Wednesday. The vacancy was caused by the resignation of Dr. J. Rose Bradford, F.R.S.

AT the Hunterian Festival Dinner of the Royal College of Surgeons of England which will be held on February 14th, after the delivery of the Hunterian Oration, Field-Marshal Lord Roberts will be admitted to the Honorary Fellowship of the College, which was conferred upon him by the Council in January, 1901.

DR. A. S. F. GRÜNBAUM has been appointed Director of the Cancer Research for which Mr. Sutton Timmis, of Liverpool, has recently generously initiated a fund by a donation of £10,000. The work is to be carried on in connexion with University College and the Royal Infirmary, Liverpool.

THE meeting of the International Congress of Historical Science is now definitively fixed for April 2nd to 9th, 1903. It will be held in Rome. Among the eight Sections is one of History of the Mathematical, Physical, Natural, and Medical Sciences. One of the organizers of this Section is Professor Pietro Giacosa, Director of the Laboratory of Materia Medica, Turin, who is the author of a learned History of Medicine. Communications should be addressed to the Secretary, Via del Collegio Romano, 26, Rome.

THE Lettsomian Lectures of the Medical Society of London will be delivered by Dr. H. Radcliffe Crocker on February 16th, and March 2nd and 16th, 1903, on the conditions which modify the characters of inflammations of the skin, and their influence on treatment. Lecture I will deal with local modifying condition: (1) The irritant; (2) the microbe; (3) the local origin of many general inflammations. Lecture II, with general modifying conditions: The man: his tissues, his toxins, and his nervous system; and Lecture III, with principles of treatment: internal and external; specific and non-specific: general deductions. The lectures, which will be delivered at 11, Chandos Street, Cavendish Square, W., all commence at 9 p.m.

THE IRISH EDUCATION COMMISSION.

I.

THE Royal Commission which was appointed in July, 1901, "to inquire into the present condition of the higher, general, and technical education available in Ireland outside Trinity College, Dublin, and to report as to what reforms, if any, are desirable in order to render that education adequate to the needs of the Irish people," has now issued three bulky volumes of minutes of evidence, and its report, which will shortly be presented to Parliament, is anticipated with interest by the medical as well as the general public.

APPOINTMENT OF THE COMMISSION.

Public attention has been directed to the question of Irish university education by several events, of which the most important was Mr. Balfour's letter of January, 1899, in which he proposed to establish two new universities, in Dublin and Belfast respectively, in place of the present Royal University. The letter was preceded by several declarations of the Roman Catholic laity of Ireland expressing their discontent with the present university system. It was shortly followed by resolutions of the Senate of the Royal University of Ireland and of the Corporate body of Queen's College, Belfast, calling the attention of the Government to the inadequacy of the provision for higher education in Ireland.

Since that time the Irish university question has been a subject of warm controversy in public prints; and while there is substantial agreement that the present system is unsatisfactory, the suggested solution on denominational lines has in many quarters been deprecated. The efficiency and value of Trinity College, Dublin, is on all hands admitted, but there is a widespread dissatisfaction with the present constitution and methods of the Royal University and the Queen's Colleges, and of the Roman Catholics, who constitute 75 per cent. of the population of Ireland, a large part are debarred by religious scruples from taking advantage of the teaching of any of those institutions.

The subject of technical education has in the last years received an increasing amount of attention, both in Great Britain and in Ireland, and the department of Agriculture and Technical Education recently established in Ireland is becoming conscious of the need of co-ordination between its work and that of the universities, such as exists in industrial centres elsewhere.

PREVIOUS HISTORY OF IRISH UNIVERSITY EDUCATION.

The history of Irish universities is identical with that of Trinity College, Dublin, until 1795, when a Roman Catholic College was established at Maynooth, and received an annual Government grant of about £8,000—which was increased in 1845 to £26,000. Maynooth was intended for the education of lay as well as ecclesiastical students, but, wanting the power of conferring a degree, the former department languished, and in 1817 was abolished. At the same time as Maynooth college was established the regulations of Trinity College, Dublin, were altered so as to admit Roman Catholic students. In addition to those two colleges, there existed at that time a university Faculty of Arts in the Belfast Academical Institution, which received a small Government subsidy. At the disestablishment of the Irish Church (1869) the annual grants to those three colleges were all commuted for capital sums.

THE QUEEN'S UNIVERSITY.

The Bill founding this University was produced in 1845. The University was of the same type as Victoria University and the University of Wales, and consisted of the three Queen's Colleges of Belfast, Cork, and Galway. It was the intention of Sir Robert Peel's Government that these colleges should be strictly undenominational, and safeguards were introduced which should render them acceptable to all classes and creeds in a country where religious differences are very bitter. In particular it was hoped that the college at Belfast would be largely frequented by Protestants, and those of Cork and Galway by Roman Catholics, who constitute the majority of the population in the South and West. This expectation was disappointed in consequence of a number of rescripts issued by the Catholic authorities forbidding ecclesiastics to accept office in them, and condemning them as dangerous to faith and morals. It is said that a considerable minority of the bishops were in favour of accepting the Queen's Colleges, and that the reasons for this prohibition were principally that the Government declined to constitute the Roman Catholic bishops final judges of what was dangerous teaching and to duplicate the chairs of controversial subjects, such as mental science and history, and that Lord John Russell's Government, which succeeded to office, and carried out the scheme introduced by Sir Robert Peel, did not, as the latter had intended, appoint a large proportion of Roman Catholics on the staff of the Cork and Galway Colleges.

This ecclesiastical ban gravely impaired the utility of the Queen's University, which, nevertheless, during its short existence greatly ameliorated the conditions of education in Ireland. The annual entry of students increased from about 250 in the early years to an average of about 300 in the last six years, and in 1880 the number of its students was 1,010 as compared with 1,231 in Trinity College, Dublin. During this period the records of the latter college show no diminution in the number of its students, so that it may be said that the Queen's University in twenty years nearly doubled the university work in Ireland. The graduates in medicine averaged annually 63.

UNIVERSITY COLLEGE, DUBLIN.

In 1853 an attempt to found an independent Roman Catholic university was made by the Roman Catholic bishops. A considerable sum of money was subscribed and teaching was commenced in a building in Dublin, Cardinal Newman being the first Rector. In 1879 a college of the Roman Catholic University, under the name of University College was recognized and subsidized by the Royal University of Ireland. About this time the capital originally devoted to the college was nearly exhausted, and its management was transferred by the bishops to the Jesuits, by whom it has since been conducted with great success, though not without some pecuniary loss.

THE ROYAL UNIVERSITY OF IRELAND.

This University was founded by Royal Warrant in 1881 with the power and duty to examine for and confer degrees on all comers, male and female, without requiring any residence in college or attendance at any course of instruction, except in the faculty of medicine, in which the Senate was to recognize the certificates of certain institutions and schools. Faculties of arts, engineering, music, medicine, and law were created, and courses of examination were arranged in those subjects. The University was forbidden to confer theological degrees or prizes for proficiency in theological subjects.

The University consists of a Chancellor, nominated by the Crown, a Senate, and graduates. The Chancellor is the chief officer of the University. In his absence his duties are performed by the Vice-Chancellor, whom the Senate elects out of its own body. The Chancellor furnishes annually to the Lord Lieutenant a report on the condition and progress of the University. Since the foundation of the University the Chancellor has always been a Protestant and the Vice-Chancellor a Roman Catholic.

The Senate.

The Senate is a body of thirty-six members with the Chancellor. The original senators were nominated by the Crown. As vacancies occurred, members were elected by Convocation to the number of six, two retiring annually, but being eligible for re-election. The constitution of the Senate has been maintained in such a manner that of the members half always belonged to the Protestant and half to the Roman Catholic communities. As this tacit arrangement has not been recognized by Convocation, the balance has in general been maintained by the Crown nominating a Protestant or Roman Catholic senator as vacancies have arisen in such a manner as to neutralize the Roman Catholic or Protestant elected by convocation.

To the original Senate was entrusted the duty of drafting a scheme for the organization of the University in respect of degrees, examinations, scholarships, fellowships, etc., with the very singular proviso that in fixing the values of the said scholarships, exhibitions, fellowships, and other prizes, the Senate should have regard to the advantages of a similar kind offered by Trinity College and Dublin University, so as to avoid as far as possible any injury to the advancement of learning in that College and University.

In general the Senate is the governing body of the University, and has the entire management of its affairs and property, the regulation of all fees and examinations, and the appointment of all examiners and other servants (with the exception of the secretaries, who are Crown nominees). The Senate has also the duty of preparing from time to time accounts of the receipts and expenditure of the University which are forwarded to the Auditor-General and presented to

Parliament. A statutory meeting of the Senate is held once a year and appoints fourteen of its members as a standing committee (five to constitute a quorum), which reports on most of the matters that come before the Senate.

Convocation.

This is a body consisting of the Convocation of the former Queen's University, together with such graduates of the Royal University as register their names on the roll. It is represented by six senators. It has no direct initiative and no veto in any university affairs.

It thus appears that the Royal University is purely a body granting degrees and awarding a number of money prizes. It has no direct relation with any teaching body, and in its awards does not take into consideration, except in the medical faculty, where or how candidates have received instruction. This provision was obviously modelled upon the then arrangements of the University of London, and has encouraged many minor institutions which aim at giving an academic training, notably a number of higher Roman Catholic schools and of ladies' colleges. On the other hand, it has certainly acted detrimentally on the arts faculties of the various colleges.

Though not directly connected with any teaching institution, the Royal University has a very important connexion with certain colleges through its Fellows.

The Fellowship Scheme.

In the original draft charter the Senate was empowered to elect a number of Fellows, finally fixed at 28 and altered in 1887 to 29. The Fellowships are tenable for seven years, and are of the value of £400 per annum, except when the Fellow is in receipt of a salary in a State endowed institution, when the amount of his salary is deducted from his Fellowship. The first Fellows were appointed at the discretion of the Senate, but it was provided that after seven years it should be competent for the Senate to re-elect the same Fellows, and if this were not done, to elect their successors by competitive examination of the graduates. In addition to the ordinary Fellowships, the Royal University confers 8 medical Fellowships, with salaries of £150, subject to the same deductions as those of the Fellows and requiring the same services. The duties of the Fellows are:

1. To conduct university examinations.
2. To recommend courses of study, etc., for the university examinations.
3. To teach matriculated students of the university in the respective institutions with which they are connected at the time of their appointment.

A consideration of the third provision shows that the Fellowship scheme constitutes an indirect endowment of certain teaching institutions. At the first meeting of the Senate fourteen of the Fellowships were conferred on teachers in University College, Dublin, one on a teacher in Magee College, Londonderry, and the remaining thirteen were distributed between the three Queen's Colleges. In 1887 an additional Fellowship in Celtic Languages was instituted and given to a professor in University College. In 1888, when the expiration of the original Fellowships was imminent, when the statutes of the University were altered in such a manner as to abolish the provision for the election of Fellows from among the graduates by competitive examination, and the Senate continued to confer fifteen Fellowships on University College. University College and Magee College having no State endowment, the Fellows attached to these institutions receive the full amount of their salary, but the Fellows in the Queen's Colleges receive this sum with a deduction for the amounts of their salaries. The figures are: University College receives £6,000; Queen's College, Belfast, £676; Cork, £344; Galway, £320; and Magee College, £400.

The abolition of the provision for election of Fellows by competitive examination was obviously necessary in the interests of the colleges, as it would have been most vexatious that they should appoint as their professors the successful candidates at a competitive examination in the Royal University. There is no university or college which is restricted in the choice of its professors to the graduates of a particular university, and in the departments of arts and science, particularly the Queen's Colleges, have always had many teachers who are not graduates of the Royal or Queen's Universities. In fact, the provision for the election of Fellows was self-contradictory. It is clear that if twenty-nine gentlemen are to hold at the same time the office of professor in a college and that of Fellow in a university, one or other institution must practically confer the two offices; and, in fact, the practice of the Senate has always been, on a Fellowship becoming vacant, to confer it upon the recommendation of the president of one or other college.

As to this distribution of half the Fellowships to University College, several of the senators in their evidence implied that it was the intention of the Government to grant this relatively large share of the university funds as an indirect endowment to the Roman Catholic college, but no documentary evidence of this is forthcoming. Other witnesses denied this statement, and asserted that the arrangement was due to the influence of the then Chancellor of Trinity College, together with the Roman Catholic members of the Senate. Be that as it may, this indirect endowment has always been granted to University College out of the Royal University funds, and, as the accounts are submitted to Parliament, the term "underhand endowment" frequently applied to this grant is an unfair one.

The Examiners.

Another aspect of the same matter has been commented upon. It is that the Fellowship scheme gives the representatives of University College a preponderance on the Examining Boards of the University, which tends to induce candidates to study there rather than at the other colleges. The Fellow and medical Fellows are assisted in conducting the examinations by the junior Fellows (who are selected by competitive examination, and are not professors), and by a number of examiners who are for the most part teachers at one or other college. Of a total of 80 examiners, 26 hail from University College and the Catholic School of Medicine: 17, 9, and 7 respectively from the Queen's Colleges of Belfast, Cork, and Galway; 3 from Magee College, Londonderry; and 18 are not attached to any of these institutions. In the subjects belonging to the Medical Faculty in particular there are 34 examiners, of whom 13 belong to the Dublin School, 10 to Belfast, 5 to Cork, 2 to Galway, and 6 are connected directly with none of the colleges; 4 of these, however, are practitioners in Dublin. Of this inequality the students of the Queen's Colleges have for many years been conscious, particularly in relation to the Final Examination in Medicine, where 6 out of a total of 13 examiners belong to the Catholic School and 2 to other Dublin schools.

These two difficulties as regards the distribution of Fellows and examiners among competing schools are among the most formidable with which the Royal University has to contend. The question of examiners was discussed by several witnesses before the Gresham Commission, when a number of teaching bodies protested against the examiners before whom their students were to appear being appointed from rival institutions affiliated with a reconstituted London University.

The objections urged against this arrangement are of two kinds, one that already mentioned, that it attracts students from one college to another, and the other that the scope of the teaching is seriously hampered when a teacher has to regard rather the examinational potentialities of a subject than those aspects which he considers most important and of greatest educational value. As one witness put it, "the examination dominates the teaching." This condition is, perhaps, not to be deprecated in relation to some of the subjects of the Final Examination in Medicine which confer certain civic privileges and responsibilities, but even in those subjects the question admits of argument. In the earlier medical classes, greater freedom of teaching would clearly be a benefit to the pupils; while in the departments of literature and pure science, it is obvious that no teacher can do justice to his own learning in a course which he has no voice in determining. Many of the most eminent witnesses before the Gresham Commission emphasized this fact, that the object of scientific and literary training is rather to establish certain constructive and critical habits of mind than to inculcate a particular series of facts and every teacher should have freedom to select his own materials for the purpose.

Appointment of External Examiners.

To meet the complaints of those who think the provincial schools or their students are at a disadvantage owing to the preponderance of examiners in the Dublin School, the students being awarded places and exhibitions in order of merit, the Senate has recently adopted the principle of introducing external examiners in the medical faculty from schools outside of Ireland. It is hoped that this will increase the prestige of the medical degrees besides abating the qualms of the provincial students. Obviously this change can only be completed gradually. It is one in which the Royal University of Ireland will follow the practice of the most progressive medical schools of Britain.

Merits of the Royal University.

The Royal University, during the twenty odd years of its existence, has had to contend against great difficulties. It had to take up the work of the Queen's University at a time when the latter, so far from being decadent, was increasing every year in numbers and importance, and appeared to have justified its existence. The Queen's University was not satisfactory to Roman Catholics. It has been plainly stated that it was not satisfactory to the authorities of Trinity College, Dublin. The middle of the nineteenth century witnessed a great increase of the university population of Great Britain. For example, in the years between 1867 and 1877, Edinburgh University added 60 per cent. to its students. Trinity College, Dublin, did not share in this prosperity, but suffered a slight decline, while there was a steady, though moderate, increase in the Queen's University. The provision in the charter of the Royal University against offering greater money prizes than those of Trinity College certainly suggests that the authorities of the latter were alarmed. But unquestionably the Queen's University was very satisfactory to that section of the population from whom its 1,200 students were drawn. No serious aspersions have been thrown on the character of its teaching or degrees, which, on the contrary, were of a very high order. The graduates resented the dissolution of the University, and appear to have had little voice in the constitution of its successor. The original Senate of the Royal University of Ireland contained only ten members who had been connected with the Queen's University, with provision for the gradual introduction of representatives of Convocation. This dissatisfaction of the graduates has been perpetuated by the Fellowship scheme and by the unrepresentative character of the Senate. In general the dissolution of the Queen's University gave rise to a feeling of instability and uncertainty in Irish university affairs which has been most prejudicial to the Royal University.

In spite of these disadvantages, the Royal University in its limited sphere of action has done very good work; the standard of its degrees is high. In the Medical Faculty the course is particularly arduous, as students after passing a matriculation examination satisfactory to the General Medical Council, must pass a further examination in English, Latin, and another language, mathematics and experimental physics, along with or before their first medical examination. This regulation of course postulates a higher degree of general knowledge on the part of medical graduates of the Royal University than is frequently found accompanying other degrees and sciences to practise. The medical examinations are also admittedly of a high standard, and have from time to time received warm encomiums from the Inspectors of the General Medical Council. The other degree examinations of the Royal University also demand relatively a high grade of learning, and on the whole it may be said that the Royal University has in this respect contributed to elevate the standard of degrees in the United Kingdom. It has also admitted a large number of students to graduation. In the Faculty of Medicine the number of graduates does not materially differ from that of the Queen's University (about 50 per annum). The degree of B.A. was conferred on 2,172 candidates in the last fourteen years, as compared with 662 in a like period of the Queen's University. It may be noted that whereas 36 per cent. of those in the latter University proceeded to the M.A., in the Royal University this percentage is reduced to 13. The most remarkable feature of the B.A. figures is the numbers of women. During the last fifteen years the number and percentage of women taking the B.A. annually have increased from 15 and 10 per cent. to 55 and 37 per cent. respectively, the number of men showing little change.

The law degrees also show a large increase in the Royal University as compared with the Queen's. The faculty of engineering does not show much change in this respect.

In addition to granting degrees to about 180 students annually, the University has distributed every year a sum varying from £4,000 to £6,000 in exhibitions and other money prizes. Nearly a third of this sum is awarded to graduates and may be regarded as an encouragement of research. In the medical faculty prizes of the aggregate value of £970 are offered annually, while the average number of students who pass the first examination in medicine is 68. The sum total of prizes represents about £24 for each student who graduates, or £8 for each matriculated student. This is a considerable endowment of the higher learning. On the other hand the University fees are small, amounting to an average of less than £4,000 a year (that is, considerably less than the annual endowment of students). The total fees for the examination necessary for M.B. are £6 10s., and for B.A., £3 10s.

It will thus be seen that the Royal University offers an inexpensive, or rather a slightly endowed, avenue to degrees of high character in various faculties, and thus encourages and directs the labour of a large number of students.

In the faculty of arts it has been instrumental in greatly promoting academic aspirations, particularly among women, and schools throughout the country have notably benefited by the increase in the number of available teachers.

Defects of the Royal University.

The difficulties with which the Royal University has had to combat arise largely from the religious differences of the people. It was founded in order to give to Roman Catholic students facilities for graduation which should not be offensive to their religious advisers and should at the same time be available for Protestants. The plan of keeping an even balance of Roman Catholics and Protestants in the Senate was devised to meet this difficulty, but this balancing and the pursuit of the same policy in the Fellowship scheme has diminished the popularity of the University in many quarters. Many of the graduates would prefer to see its government in the hands of a body more directly representative of the institutions concerned. From a table given in the first volume, it appears that the average number of senators at a meeting is 16 8 (Standing Committee numbering 14), and each senator has attended 47 per cent. of the meetings. But many distinguished members have been unable to attend often, and it is complained that the business has in practice been conducted by the Standing Committee. The system of granting degrees without collegiate education (which prevails also in Dublin University) is also regarded by many witnesses as a defect in the Royal University. It has certainly depleted the arts faculties in the Queen's Colleges. The tables show that less than 33 per cent. of those who have taken the B.A. have been educated at one or other of the recognized colleges, and the number of candidates from Belfast and Cork has steadily declined.

A large proportion of the witnesses express the opinion that the absence of collegiate education preliminary to a university degree is too grave a loss to be compensated for by the increase in number of those who graduate. The lonely student does not counterbalance the crammed student. This is a question that has been debated before other Royal Commissions, and it appears that the importance of a collegiate training is more emphasized than it was ten years ago. It is suggested that London University might perform this function for Ireland, and other duties be given to the Royal University.

CHARITY AND THE POOR LAW.

MR. F. H. BENTHAM, Chairman of the Bradford Board of Guardians, we learn from a report in the *Yorkshire Daily Observer*, recently gave a lecture on Bradford charities and Poor-law administration at a meeting of the Bradford Liberal Club.

Mr. Bentham referred to the appeal for £50,000 to put the finances of the Bradford Royal Infirmary, the largest charity in the city, upon a sound foundation, and proceeded to ask whether the expenditure of the charities was sufficiently safeguarded. The spheres of private and legal charity often clashed. The Bradford Board of Guardians had increased its stringency with regard to outdoor relief, but the hospitals were subject to increasing abuse. At the Royal Infirmary there was no rule excluding the actually destitute who belonged to the Poor Law, and at the Children's Hospital children were admitted without inquiry as to the circumstances of the parents; inquiry was made afterwards, and parents were expected to contribute if able to do so, but the net result was that it had received in 1901 in respect to 315 children, with an average residence of 37.2 days each, only £104 16s. from their friends. In the out-patient department no inquiries were made as to the circumstances of parents. The out patients attended gratuitously by the staffs of the Royal Infirmary and the Children's Hospital in Bradford numbered in 1901, 12,446 cases, a number three and a-half times greater than all the Poor-law cases and the insane. Proceeding to compare the amounts of contributions for charitable purposes in different towns, Mr. Bentham said that the total amount received in subscriptions and donations in 1899 for the twenty-nine charities in Bradford amounted to £10,740, equal to 10d. per head of the population. In

Liverpool in 1898 the contributions were 2s. 8d. per head. That contribution from the population of Bradford would raise £37,333. He did not for a moment believe that £37,000 per annum was needed in addition to the income of invested funds to cope with the poverty and exceptional medical and surgical requirements of the city. But, if it were forthcoming, and the present ideas of what charity should do were continued, there was no doubt that it would soon be spent and more wanted. There was no limit to the application of charitable funds in general if only made "popular" enough. But it was not a question of how much could be done for the people, but how much was it wise to do even in the interest of the recipients themselves. The amount spent in legal relief and charitable relief in Bradford was no less than £90,000 per annum. Was all this necessary in normal times? This represented 6s. 6d. per head for every man, woman, and child in the city, and represented a very large sum. Narrowed down to the number of the actual recipients, the amount became very high indeed, though Mr. Bentham calculated the number of recipients at no less than 28,000 or 30,000—practically 10 per cent. of the population. Mr. Bentham criticized passages in the reports of the Infirmary and the Children's Hospital which seemed to imply that the committees aimed at making the institutions "popular" with the recipients of the charity, but he contended that the number of applications under the conditions which prevailed were no indication whatever of the usefulness or efficiency of an institution as a charity. He maintained that if the giver of a recommendation did not sufficiently discriminate in his distribution of these certificates, the institution should do so, or the institution became an indiscriminate charity, and might be classed with the tipsy sailor who scattered his pence through the streets. Something might be picked up by those really needing it, but the rest was worse than wasted, because it might breed vice and encourage indolence. He maintained that working people, instead of being encouraged to come upon the charities on every occasion, should be encouraged to join the provident societies and to rely on their own resources. It was not "charity" to provide free medical aid and free medicine any more than free meals, clothing, or shelter for people who could afford to pay for what they received. It was really a free gift, which was demoralizing to the recipient. Mr. Bentham strongly opposed the municipalization of the hospitals. He could not see where that could stop short of free medical and surgical treatment in or out of the hospital for all who cared to apply. In conclusion, he urged the formation of a Charities Board for Bradford to co-ordinate the local charities, to secure efficiency and economy, and to bring the claims of all objects before the public.

THE PREVENTION OF CONSUMPTION.

England.

Friendly Societies and Sanatoria.—It will be remembered that a deputation from some of the principal Friendly Societies in England recently visited Berlin under the guidance of Dr. Alfred Hillier, the energetic secretary of the National Association for the Prevention of Consumption, with the view of studying the provision made in Germany for consumptives by the State insurance companies. This deputation was organized in consequence of representations made to the Committee of the National Conference of Friendly Societies by the representatives of the National Association. Dr. Lionel A. Weatherly, who was one of these representatives, has published in the *Hospital Saturday Fund Journal* an interesting article on the steps which he considers it possible that the Friendly Societies in this country should take. A report made to the British Congress on Tuberculosis in London in 1901 by representatives of the Friendly Societies concluded with the following expression of opinion:

> We recognize that the establishment of sanatoria for Friendly Society members alone would be beyond the means of our Societies, more especially as such institutions would deal with one form of disease only; but we suggest that it would be practicable that, where county or other sanatoria are inaugurated, special arrangements may be made whereby our members may be admitted, and, as far as possible, infection of families prevented.

Dr. Weatherly states that the capital belonging to the Societies is in round numbers twenty-six and a-half millions sterling, but this cannot be used for the purpose of building sanatoria. The Societies, however, have the power, with the permission of a general meeting, to levy a rate for a specific purpose, and such a rate has been levied in some of the Societies to provide funds to send members to convalescent homes. Dr. Weatherly suggests that a special rate should be levied for the provision of open-air treatment for consumptive members of the Societies. He estimates that the actual cost of a bed in a sanatorium, including cost of site, building, lighting, and other necessaries, is £300, and we think that it would have been wiser had he based his subsequent calculations upon this estimate. He calculates, however, that as philanthropy has taken, and will take, a large part in the erection of sanatoria, £200 a bed would be a reasonable price. He then makes the following calculation:

> A rate of 1d. per quarter per member for one year only would bring in from the 3,650,798 members a sum of £60,846, which would buy or build, at my calculation of £200 per bed, 304 beds in the various sanatoria erected or about to be erected. After that year a rate of ½d. per member every twenty weeks would maintain these 304 beds, at an estimated cost of £65 per bed per annum.

He estimates further that 1,000 patients could in each year be treated in the 304 beds, and basing himself on the statistics of the German sanatoria, he estimates that out of this number 600 at least would be sent back to the wage earning class after some thirteen or fourteen weeks' treatment. The matter is, we believe, now engaging the attention of the Committee of the National Conference of Friendly Societies, and the scheme propounded by Dr. Weatherly will, we do not doubt, very much assist them in their deliberations.

Leamington.—When the new wards of the Warneford Hospital were opened three years ago, two of the old wards were temporarily closed. Some time ago the Committee of the hospital decided to utilize these two wards for the open-air treatment of consumptive patients. Each of these two wards has accordingly been occupied by 4 patients, the one for males, the other for females, and the treatment has now been carried out for several months with very gratifying success.

Sanatorium for Glasgow and District.

Another stage in the work of the Glasgow and District Branch of the National Association for the Prevention of Tuberculosis was reached the other day, when the scheme for the erection of a sanatorium was formally launched. The Council has after careful consideration purchased the small estate of Bellefield, near the town of Lanark. It is about 600 ft. above sea level, and well suited for the object in view. The mansion house is of recent and substantial construction, and will be available for administrative purposes, and it is proposed to erect pavilions. An appeal is now being made to the general public for the necessary funds, and the extent of the provision that will be made for patients will only be limited by the amount of money put at the disposal of the Association. In support of this appeal the Lord Provost, Mr. John Ure Primrose, convened a public meeting in the City Chambers on January 14th, which was largely attended by the citizens. Resolutions were passed expressing sympathy with the work of the National Association as a whole, but in particular recommending the scheme for acquiring, equipping, and working the proposed sanatorium to the generosity of the public of Glasgow and the neighbourhood. Among those who spoke to the resolutions were the Lord Provost, Lord Inverclyde, Dr. Finlayson, Professor Glaister, and Mr. W. F. Anderson, the convener of the Health Committee of the Corporation. A somewhat jarring note was introduced by Mr. Quarrier, who seems to regard the branch and its schemes as unnecessary rivals to his Bridge of Weir Sanatoria for Consumptives. However, the Bridge of Weir Sanatoria accommodate female patients only, and the Council of the National Association recommends that in the meantime at least the new sanatorium should be provided for males. A serious want is thus likely to be soon supplied, and it is hoped that the necessary funds will before long be in the hands of the Association. Wealthy patients do not need to leave Scotland to receive special treatment in sanitoria. The Glasgow Parish Council has taken a very enlightened view of the treatment of consumption among the poor both in their asylums and their poorhouses. Large numbers of working people, however, do not come within either of those classes, and the new sanatorium should help to provide for them.

Austria.

A public meeting was held at Vienna on January 4th for the purpose of constituting an antituberculosis union for Austria. The meeting, which was well attended by prominent officials, philanthropists, medical authorities, and members of Viennese society, decided to establish the union and elected as president Count Lutzow. Nearly £5,000 has already been received in subscriptions, and the Government has promised the fullest support in combating the disease, which claims a high percentage of victims in Austria.

NOVA ET VETERA.

THE ORIGIN AND HISTORY OF THE MEDICAL CORPS OF THE UNITED STATES NAVY.

THE *Journal of the Association of Military Surgeons of the United States* for May, 1902, contains a brief sketch of the origin and history of the medical corps of the United States navy by Captain George Perley Bradley, Medical Director, U.S.N.

In the earlier days almost every armed vessel, even pirates, had a surgeon of some kind, and with the first ships commissioned by the Continental Congress provision was made for surgeons and their mates, in number according to the number and size of the vessels.

THE BEGININNGS OF THE AMERICAN NAVY.

The first order concerning the establishment of a national navy was issued by General Washington in the latter part of 1775, when he commissioned Captain Nicholson Broughton with two armed schooners belonging to the colony of Massachusetts for the special service of capturing certain vessels containing supplies of war. Rules and regulations of the navy were promulgated on November 28th, 1775, and these, adopted with their modifications and approved in 1800, form the basis of the present "articles." Surgeons and surgeon's mates, the former commissioned officers, the latter warranted, were specified in certain fixed number to each vessel, and (Act of January 6th, 1776) their shares of prize money were allotted. The importance of prize money at this period will be apparent by reference to the earliest pay tablets, where the pay of the surgeon of a small vessel (under twenty guns) was only 21.3 dollars per month; that of the larger class 25.00 dollars; and that of their mates 13 3 and 15 00 dollars respectively. It would appear that surgeons and their mates were at first employed like other officers, in definite numbers, for service on such vessels as could be fitted out, with commission or warrant from the "Marine Committee" or their substitutes, and simply for the purpose of attending to the wounded and sick; and that when the ship was laid up or destroyed their employment ceased.

RANK AND PAY OF SURGEONS.

In 1777 an Act was passed prescribing that no surgeon or mate could be commissioned or warranted without a favourable certificate of examination from at least one examiner appointed for this purpose, which appears to indicate that even this qualification had not been necessary before. The pay and allowances of surgeons were also equalized with those of lieutenants, according to the class of ships on which they were serving (25.00 instead of 21.3 dollars, etc.). The only provision for shore pay or subsistence appears in an Act of 1775, allowing all officers 4 dollars a week for "board" when their ships were not in a state to receive them.

At the close of the Revolutionary war, and, indeed, for several years subsequent to 1789, there was no navy. No steps were taken to acquire vessels till 1794, when the Algerine piracies caused the passage of an Act authorizing the provision of four vessels of 44 guns, and two of 36 guns, with specific allowance of officers and men to each. The former class were entitled to one surgeon and two mates, the latter to one surgeon and one mate. It also fixed the pay of these officers at 50 dollars and 30 dollars a month respectively, and two rations (of about 20 cents each) a day. Although this Act was for a temporary purpose and soon became obsolete by the cessation of hostilities, it laid the foundation of the present navy, and for many years its provisions were unchanged. The pay and rations of medical officers remained unchanged until 1828.

STATE OF THINGS IN 1809.

In 1814 Dr. W. P. C. Barton, who entered the service in 1809, and was subsequently, in 1842, the first chief of the Bureau of Medicine and Surgery, on the adoption of the Bureau system, and who died in 1856, published a work on naval hospitals, and "a scheme for amending and systematising the medical department of the navy," which marks an epoch in the history of the corps. When Barton, still very young, entered the service, he was appointed surgeon at once, and was ordered to one of the largest vessels, the *United States*, with a complement of 430 men. He describes the state of things as follows:

> I soon found myself not a little embarrassed by the perplexities that I daily met with in my practice on board. The unhealthiness of the climate operating upon a variety of different constitutions in an entirely new crew; the change of diet and mode of life; the necessary and unavoidable exposure of boats' crews to the fervid rays of a vertical sun, as well as to the damp and heavy dews at night, and at all times to the insalubrious exhalations of marsh miasma, all combined to generate such perpetual sickness that the frigate might almost have been called a hospital ship, the average number on the daily sick list of fevers and fluxes being about 40. In this situation, on board of a ship just refitted, commissioned, and equipped, I found myself without half the comforts and necessaries for the sick that the hospital department should have been supplied with; yet this department had been reported as replenished with every requisite article for a cruise of two years, and together with medicine chest had cost the Government fifteen hundred dollars. There were neither beds for the sick, sheets, pillows, pillow-cases, nor night-caps; nor was there a sufficiency of wine, brandy, chocolate, or sugar, and that portion which the storeroom contained of those articles was neither pure nor fit for sick men. The medicine chest was overloaded with the useful, and choked up with many useless and damaged articles. That was the state of the medical department of this ship. Upon a representation of it, however, to her Commander, Commodore Decatur, he generously allowed me all the necessaries I stood in need of, and thus enabled me to administer those comforts to my patients which they so much required.....The other ships were not better furnished than the one of which I am speaking, and I perpetually heard of complaints on this score. What was the cause of these abuses? The want of a regular Board of medical commissioners whose peculiar province it should be to order the proper proportions and quantities of medicine, comforts and necessaries for the public ships, and who should have no interest, directly or indirectly, individually or collectively, in the furnishing of articles thus ordered.

Barton further speaks of his attempt to have "the lemon juice" introduced "in abundant quantities into free and liberal use in our ships." He refers to the faultiness of the regulations respecting the responsibility of the surgeon for the safe-keeping and proper appropriation of the articles entrusted to his charge exclusively for the benefit of the sick. He calls for an "alteration of the present ration, or at least the liquid part of it"; the better ventilation and warming of our ships in the winter season;" like every other surgeon of generations before and after, he denounces "the practice of wet scrubbing of the decks in cold and damp weather"; and, lastly, the "impropriety and pernicious consequences to the service of the present plan of recruiting, in which men are shipped without a strict examination by a professional man." He proposes that his "Board of medical commissioners" who are to have the furnishing of the medical outfit, should also be a Board of examiners of candidates for the appointment of surgeons and surgeon's mates. He urges that a surgeon should never be commissioned in the navy until he had passed this Board; making a special exception, however, in favour of graduates in medicine, "unless there is reason to believe they have received their degree by favour."

FEES FOR VENEREAL CASES.

It would appear from one of his chapters that it was then customary for the surgeon of a ship or hospital to receive from the purser attached thereto a fee or remuneration for each man with venereal disease whom he attended, this fee, which seems to have been five dollars, being of course charged against the unfortunate sufferer. There never was the slightest authority of law or even of navy rules for this imposition; but the men did not know this, or perhaps as Barton suggests, the sailor did not wish to incur his superior's displeasure. It is said that this practice was copied from the English service, in which, however, it had been for some time disused, a fixed compensation being allowed the surgeon by the Government. It probably did not long continue to exist in the American navy after this period.

INCREASE OF PAY.

In 1807, when a general increase of pay for officers was recommended, it was observed in a letter to Congress by Robert Smith, Secretary of the Navy, that medical officers "received less than the usual profits of the private practice of physicians on shore." An elaborate estimate of the pay and allowances (rations) shows that surgeons received 746 dollars annually; surgeon's mates 506 dollars. Officers unemployed were on half pay, without rations, and had to hold themselves in readiness for orders. In 1812 the number of surgeons was 26 (three of whom were on half pay); of mates 26, with two on half pay; in 1815 there were 47 surgeons and 66 mates; in 1820, 47 surgeons, 34 mates; in 1825, 34 surgeons, 40 mates.

NURSING OF THE SICK.

The nursing of the sick was usually performed by the enlisted man's messmates, and such other assistants as the surgeon could get. The sick quarters then, as always, were undefined and generally unsatisfactory. A fleet surgeon was also provided for, and his duties defined. It is worth remarking also that even then a hospital ship for each squadron was contemplated, though it was to have no practical existence for many years later.

EXAMINATION FOR ADMISSION AND PROMOTION.

In 1828 the very important change was made that no one should be appointed assistant surgeon (the first legal notice of change of title from "surgeon's mate") without examination by a Board of naval surgeons, and that commissions to the higher grade should be issued only by promotion from the lower after service of at least two years at sea, and the passing of an examination as before. Fleet surgeons were also established, their duties defined, and some addition made to the pay of the medical officers, according to longevity. This was perhaps the most important legislation affecting the Medical Corps of the United States Navy up to that time, and laid the foundation of its organization. In 1835 the pay of medical officers as well as of others was somewhat increased, and regulated, as at present, according to the duty performed, whether at sea, on shore, or on leave. In 1843 the Board of three commissioners was abolished and bureaus were established, five in number, one of which was to be called the Bureau of Medicine and Surgery, with a Chief, to be appointed by the President with approval of the Senate, from the surgeons of the navy. This system is still in force, the title of Chief of Bureau having been changed to that of Surgeon-General in 1871. Then also the grades of Medical Director and Medical Inspector were established with the futile allowance of six years in computing "relative" rank with precedence.

SANITARY REPORTS.

During the last forty years especially great exertions have been made by various Chiefs of Bureau to enlarge the field of sanitary and hygienic knowledge by requiring reports to be sent in every year from ships and stations. Of these reports there are many volumes, containing much of value. The advances of foreign navies are carefully noted, and encouragement was generally given to all medical officers to study and to publish. Delegates were sent to great national and international meetings of the profession.

MUSEUM OF HYGIENE.

A Museum of Hygiene was founded in Washington in 1882, an Act of Congress making an appropriation of 7,500 dollars for it. From being at first a mere laboratory of a single room a considerable collection of objects pertaining to sanitation has been made, and since 1894 they have been transferred to the former Observatory building. Here all microscopes are issued and returned, and it is well equipped with all necessary clinical and bacteriological apparatus for clinical analysis, etc. A school of instruction was a part of the design, such as was instituted in connexion with the Naval Laboratory at Brooklyn, N.Y., but like that, has been largely inoperative owing to the urgent need for the services at sea of young medical officers as soon as they were commissioned.

NAVAL HOSPITAL CORPS.

An important advance was the establishment of a naval hospital corps (Act of June 17th, 1898), under the administration of Surgeon-General Van Reypen. Before that time an apothecary was appointed by the surgeon of a ship for the cruise, with the approval of the commanding officer; or he was later enlisted, and then rated. The result was generally unsatisfactory to the apothecary, or to the service, or both. The nurses or baymen were still more untrained, and were often detailed from the more worthless landsmen on deck, as if the care of the sick was a matter of no importance. The Act in question provided for twenty-five pharmacists, with the rank, pay, and privileges of warrant officers, and for an indefinite number of hospital stewards and hospital apprentices (first and second class), according to the judgement of the Secretary of the Navy, who was empowered to make regulations for their enlistment and government. Enlisted men of the navy or marine corps were eligible for transference to the hospital corps, and vacancies in the grade of pharmacist were to be filled by the Secretary of the Navy from the hospital stewards by selection. It was ordered that all necessary hospital and ambulance service should everywhere be performed by members of this corps, and the corps was permanently attached to the medical department of the navy. The pay in the enlisted rates varied from 60 to 20 dollars per month on entrance, with the same increase on length of service as to other enlisted men, and all benefits to other warrant officers and enlisted men, now or thereafter to be allowed, were to apply to the hospital corps. The result has been very satisfactory.

MEDICAL OFFICERS KILLED IN ACTION.

In the civil war five medical officers were reported lost in vessels sunk by the enemy, or killed in action, and nineteen of the line. Among the few commissioned officers of the American navy who lost their lives during the war with Spain was, as already noticed, Assistant Surgeon John Blair Gibbs, on shore at Guantanamo. Passed Assistant Surgeon Lung at Samoa undoubtedly helped materially to bring in the party of men with him after the death of their commanding officer. Assistant Surgeon Lippitt was wounded at the siege of the Legations in Pekin. Many similar instances might be cited. In a description of the engagement at Fort Fisher, January 15th, 1865, Lieutenant-Commander (now Rear-Admiral) T. O. Selfridge says:

> While kept under the walls of the fort I was an eye-witness to an act of heroism on the part of Assistant Surgeon William Longshaw, a young officer of the medical staff, whose memory should ever be kept green by his corps, and which deserves more than this passing notice. A sailor, too severely wounded to help himself, had fallen close to the water's edge, and with the rising tide would have been drowned. Dr Longshaw at the peril of his life went to his assistance and dragged him beyond the incoming tide. At this moment I heard a cry from a wounded marine, one of a small group, who, behind a little hillock of sand close to the parapet, kept up a fire upon the enemy. Longshaw ran to his assistance, and while attending to his wounds was shot dead. What made the action of this young officer more heroic was the fact that on that very day he had received a leave of absence, but had postponed his departure to volunteer for the assault.[1]

Dr. Longshaw had previously distinguished himself by carrying under fire a line in a boat to a monitor aground on a bank, at the attack of Fort Sumter.

AN ARCTIC HERO.

The memory of James Markham Ambler's "noble example and heroic death" is commemorated by a tablet erected by the medical officers of the American navy. He was born in Virginia in 1848, entered the naval service of the United States as an Assistant Surgeon in 1874; volunteered as the medical officer of the United States Jeannette Arctic Expedition, and died with his companions on the banks of the Lena River in their memorable retreat from the Arctic Ocean and the desperate struggle with cold, storms, and starvation. The following extract from his journal tells a part of the story:

> Sunday, October 9th, 1881.
>
> Yesterday without food except the alcohol; the Captain spoke of giving the men option to day of making their way as best they could ..... I told him if he gave up I took command, and no one should leave him as long as I was alive. I then suggested that we send two men ahead to try and make the settlement, and that we make the best of our way with the rest of our party. This was done: Ninderman and Noros are ahead. God give them aid, and we are getting along.
>
> The Captain gave me the option of going ahead myself, but I thought my duty required me with him and the main body for the present.

The Medical Corps of the United States navy may well be proud of such men.

"A POT OF BASIL."

UNDER this title Mr. A. E. Shipley, Lecturer in Invertebrate Morphology at Cambridge, published in *Nature*[1] a note in the course of which he stated that there is a widely-spread belief, both amongst natives and the white sojourners in West Africa, that the presence of a certain species of plant in a room drives away mosquitos, and that in fact a single plant is sufficient to clear a room. Major J. A. Burdon, of the Cameron Highlanders, recently brought home from Northern Nigeria a few leaves of this plant, which Mr. Shipley submitted to Mr. H. H. W. Pearson, and the plant has been identified by the experts at Kew as Ocimum viride, Willd. It is a member of the order *Labiatae*, which grows from Senegambia southwards to Angola.

Major Burdon, who is Resident of the Nupe Province, Northern Nigeria, and Hausa Scholar of Christ's College, Cambridge, states that the leaves were given to him by Captain H. D. Larymore, C.M.G., Resident of the Kabba Province. Captain Larymore was led to make inquiries in consequence of having been told by a native living in the low-lying part of the native town of Lokoja that the use of this plant protected from the swarms of mosquitos which existed there. The plant grows wild, though not abundantly, in the neighbourhood, and specimens obtained were planted in pots and boxes. Captain Larymore found that the presence of one of these plants in a room undoubtedly drove the mosquitos out, and that by placing three or four around his bed at night he was able to sleep unmolested without using a mosquito net. Major Burdon added that this was very strong testimony, for he knew from experience that the house in which Captain Larymore was living was infested with mosquitos. Mr. Shipley gives the following extract from the fifth

[1] *Battles and Leaders of the Civil War.* Century Company. Vol. iv. p. 661.

[1] January 1st, 1903, p. 205.

volume of Sir W. T. Thistelton-Dyer's *Flora of Tropical Africa*:

O. viride, Willd.; Benth. in D.C. Prod. XII. 34. A perennial 3-6 ft. high, with much branched glabrous stems. Leaves distinctly petioled, oblong, acute, membranous, 3-4 in. long, glabrous on both sides, or obscurely pubescent beneath. Racemes lax, copiously panicled, 3 6 in. long; rhachis finely pubescent; bracts deciduous; pedicles not very short. Calix ⅛ in. long; tube campanulate; upper lobe orbicular, as long as the tube; lower teeth short. Corolla half as long again as the calix lobes. Stamens but little exserted, the two upper with filaments toothed above the base.—Benth. in Hook. Niger Fl. 458; Henriques in Bolet Soc. Brot. X. 149. O febrifugum, Lindl. in Bot. Reg t. 753. O. heptodon, P. Beauv. Fl. Owar. II. 59. t. 94.

The accompanying drawing, reproduced by permission of the Editor of *Nature*, was made from a dried specimen brought back by Major Burdon. Mr. Shipley adds that it is figured on plate 753 of the ninth volume of the *Botanical Register*, 1823, under the name Ocymum febrifugum or the "Sierra Leone fever plant." It is there stated that the plant is "in request at Sierra Leone for medicinal purposes," and the species is described as an "*under shrub* 3 ft. high," "having in a high degree the smell of common balm." Mr. E. M. Holmes[2] states that the leaves of Ocimum viride, when chewed or rubbed, give off a strong odour of lemon thyme, and mentions that Dr. Roberts, of Liberia, gave an effusion of the plant in place of quinine in cases of fever of all kinds.



Fig. 1. Ocymum viride, Willd. Some leaves drawn from a dried specimen brought back by Major Burdon. Below is a raceme of the same plant taken from the *Botanical Register*, vol. ix. (Both reduced.)

In India there is an allied species, Ocimum basilicum, Linn., the common sweet basil, producing a "yellowish-green volatile oil, which, on being kept, solidifies into a crystalline camphor, isomeric with turpentine camphor." The seeds are said to have demulcent, stimulant, diuretic, and diaphoretic properties, and "the juice of the leaves mixed with ginger and black pepper is given in India in the cold stages of intermittent fever;" the leaves are also used as a seasoning in cooking.

[2] *Pharmaceutical Journal*, third series, viii, 1877-8.

The important point, however, is, as Mr. Shipley points out, to ascertain whether the growing plant is really efficacious as a preventive—that is to say, does it really repel the mosquito? If so, there seems some ground to hope "that in this easily-cultivated plant man has another weapon with which to fight malaria."

INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

THE Eleventh International Congress of Hygiene and Demography will be held at Brussels this year from September 2nd to 8th, under the patronage of His Majesty the King of the Belgians and the honorary presidency of His Royal Highness Prince Albert. The Chairman of the Organizing Committee is M. E. Beco, General Secretary of the Belgian Ministry of Agriculture; the Vice-Presidents, Dr. A. Devaux, Inspector-General of the Health and Hygiene Department, and M. J. Leclerc, President of the Central Statistical Commission. Professor Felix Putzeys, of the Faculty of Medicine of the University of Liége, is the Secretary-General. All communications should be addressed to him at 1, Rue Forgeur, Liége. Professor Corfield is Chairman, and Dr. Paul Moline (42, Walton Street, Chelsea, S.W.) Hon. Secretary of the British Committee.

SECTIONS.

The Congress comprises two divisions—Hygiene and Demography. The former is subdivided into seven sections—namely:

1. Bacteriology, microbiology, and parasitology applied to hygiene.
2. Alimentary hygiene: Chemical and veterinary sciences applied to hygiene.
3. Sanitary technology: Engineering and architecture applied to hygiene; hygiene of masses.
4. Industrial and professional hygiene.
5. Hygiene of common transports.
6. Administrative hygiene: Prophylaxis of transmissible diseases; workmen's dwellings; infant hygiene.
7. Colonial hygiene.

PAPERS AND ABSTRACTS.

Papers introducing the discussions arranged by the Organizing Committee will be printed in the language in which they are written, and copies of these papers with a summary in French will be sent to all who have inscribed their names as members of the Congress at least three months before it opens. Abstracts of communications volunteered on subjects not included in the official programme of discussions will be received: they should be sent in manuscript to the President of the Organizing Committee at least two months before the date of opening of the Congress. They must not exceed a printed octavo page in length. The Committee will have such abstracts as seem to contain new facts suitable for discussion printed and distributed at latest on the day of opening. Speakers must not occupy the tribune for more than fifteen minutes, nor speak twice on the same subject at the same meeting unless by special permission of the meeting. In order to facilitate the editing of the reports of the proceedings, speakers are requested to hand to the General Secretary before the close of the Congress the abbreviated or complete text of their papers or remarks; in default of this the notes of the meeting revised by the Secretaries will be taken as definitive. Any language may be used in the papers and discussions. Special interpreters will, as far as is practicable, be attached to the sections.

PROGRAMME OF DISCUSSIONS.

HYGIENE.

Section I.—Bacteriology.

1. Mode of action and origin of active substances in preventive and antitoxic serums.
2. What are the best methods of measuring the activity of serums?
3. The value of antidiphtherial serum from the prophylactic point of view.
4. Unification of the processes of bacteriological analysis of water.
5. Are human tuberculosis and the tuberculosis of domestic animals caused by the same species of microbe, Koch's bacillus? (The last question will be discussed by the first and second sections combined.)

Section II.—Alimentary Hygiene.

1. (*a*) What diseases of animals from which butcher's meat is obtained make their flesh unfit for food? (*b*) Of these kinds of meat which can be consumed after being sterilized? (*c*) Which must be absolutely destroyed?
2. The regulation of the sale of milk intended for use as food. Study of the causes of variation in the chemical composition of milk. Measures to be taken to prevent the sale of milk too poor in useful principles; the organization of control; analytical methods to be employed.

3. The sterilization of tinned foods: the conditions under which the operation should be carried out; proof of sterility: may the use of a certain amount of antiseptic be allowed in preserved foods which cannot be sterilized? If so, what antiseptics can be employed for this purpose?

4. Conditions to be observed and technical procedures to be adopted for the destruction of pathogenic microbes in milk without detriment to the quality and value of the product.

Section III.—Sanitary Technology.

1. Bacterial purification (*a*) of sewage, (*b*) of industrial refuse water.

2. Advantages and disadvantages of the single and separate systems of sewage.

3. The determination, from the standpoint of hygienic exigencies, of the conditions to be fulfilled by water issuing from chalky soils.

4. Hygiene of public thoroughfares; house sewage, its collection, transport, and final treatment; hygienic regulations for houses and towns.

5. The progress achieved in the last twenty years in the heating and ventilation of private dwellings and community buildings.

6. General hygienic rules to be observed in the arrangement; permanent aëration and internal decoration of dwelling houses.

Section IV.—Industrial and Professional Hygiene.

1. Ankylostomiasis; its topographical development in coal-mining districts, the percentage of workmen affected, and the relations of the disease to the hygienic conditions (ventilation, temperature, moisture, etc.) of the coal mines in which it has been found. Discuss practical and feasible prophylactic measures for the prevention of the evil; state those which have been applied and the results obtained.

2. The measures to be taken to safeguard the health of workmen employed in factories where zinc and lead ores are worked, and in those in which compounds of lead are produced.

3. To what extent is it possible, by physiological methods, to study fatigue, its varieties and degrees, in different occupations? What arguments can or could medical and physiological science bring forward in favour of such and such an organization of labour?

4. What effect has the work in flax-spinning mills on the health of the workers? What measures should be adopted, particularly in regard to temperature and the hygrometric conditions of the atmosphere, to improve the conditions of labour in such places?

5. Hair workers: determination of the causes of the unhealthiness of this industry; the nature and gravity of the affections which it produces, and the means of making it healthier.

6. The sanitary measures adopted in different countries in regard to small workshops and home work (sweating, tuberculosis, and other diseases); how far they are capable of improvement.

Section V.—Hygiene of Transport.

1. The organization of a hygienic propaganda and a campaign against communicable diseases in the working staff of railways.

2. The securing of better methods for the disinfection of carriages used for the conveyance of travellers, cattle, and goods. (The last question will be discussed by Sections V and VI combined.)

Section VI.—Administrative Hygiene.

1. Rules for the feeding of infants; means of introducing into practice notions of infantile hygiene, especially as to the nourishment of sucklings; legal and administrative protection of newborn children.

2. The object of the medical and hygienic instruction of public and private schools; the organization of this inspection; conditions of its efficiency.

3. The intervention of public authorities in the struggle against tuberculosis. Distinction should be made between the countries in which assurance against illness is compulsory and those where it is not.

4. Sanitary prophylaxis of plague and the modifications required in quarantine regulations.

5. The intervention of public authorities: (1) In that which regards the erection of healthy dwellings for the necessitous working population; (*a*) indirect intervention; fiscal privileges, mitigation of building rules, etc.; (*b*) direct intervention; by helping building societies, building by municipalities and beneficent institutions, general or individual expropriation; (2) by the regulation of the hygienic conditions to be fulfilled by old and new dwellings, let to the necessitous working classes, and the imposition of measures of cleanliness and maintenance to be required of tenants; (3) by the supervision exercised over these dwellings.

6. The practical disinfection of dwellings.

Section VII.—Colonial Hygiene.

1. The feeding of Europeans and native labourers in hot countries.
2. The prophylaxis of malaria.
3. The prophylaxis of sleeping sickness.
4. The prophylaxis of beri-beri.
5. The prophylaxis of small-pox in hot countries; vaccination and small-pox inoculation.
6. The organization of the teaching of colonial medicine.

DEMOGRAPHY.

1. The causes of mortality and a critical analysis of the statistics of stillborn children in different countries. Attention is called to the notification to the Civil Power of the product of gestation from six weeks upwards and on embryos of less than 6 months.

2. Mortality in early infancy; its frequency and its causes and the measures to be adopted. Attention is called to the organization in different States of a uniform system of statistics of the mortality of children under 1 year of age.

3. The organization of an official and uniform system of statistics of the causes of death.

4. The basis of accurate statistics of birth; means of foretelling from the data of demography tendencies to increase or diminution of births; fluctuations in the number of births.

5. What are the best coefficients to employ in the study of the laws regulating the movements of population—marriages, births, deaths? What are the formulae by which they may be best determined?

6. Discussion of objections to the law which attributes the movements of population to the relations between its resources and its needs.

7. The study of the static and dynamic demography of urban agglomerations. Attention is called to the desirability of examining the utility and the possibility of distinguishing native from immigrant population.

8. Tables of professional mortality of workmen in the different industries. The means of drawing them up promptly and scientifically where they do not exist and of making it possible to compare them between country and country. To what extent may the tables for one country be provisionally utilized for another?

9. Insanity; (*a*) development, causes, measures to be taken; (*b*) method to be adopted and demographical data to be collected respecting lunatics looked after at home.

10. The mortality caused by the abuse of alcoholic beverages, facts, causes and measures to be taken.

11. Migrations within the country, depopulation of the rural districts, growth of the population of cities, advantages and disadvantages, causes and measures to be taken.

12. What profit could demography derive from the establishment of a statistic of paupers, and what is the best method of framing these statistics?

13. Statistics and causes of suicide.

14. Inventory and critical study of archives from the standpoint of historical demography.

EXHIBITION.

In connexion with the Congress there will be an exhibition of plans, models, apparatus, and publications relating to the subjects which are to be discussed.

THE LESSON OF COLNEY HATCH ASYLUM.

AN annexe to the lunatic asylum of the London County Council at Colney Hatch was burnt to the foundations before sunrise on the morning of Tuesday last. In spite of heroic efforts by the staff 51 out of the 320 patients sleeping in this annexe were suffocated and cremated in a few minutes.

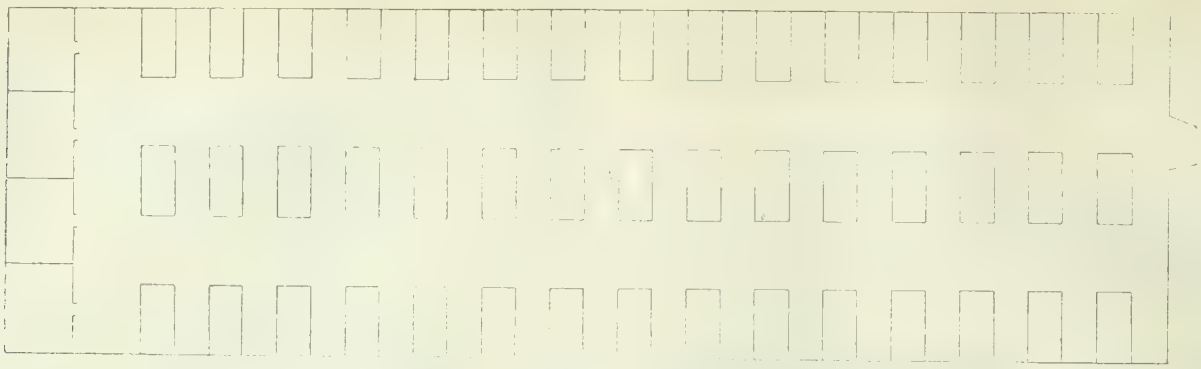
The annexe was called "temporary," but had been in use for seven years. There are similar buildings in use at the Manor and Horton Asylums. The Asylums Committee has under consideration a proposition to erect temporary buildings as an annexe to Banstead Asylum. The first lesson of Colney Hatch would seem to be that the plan of housing lunatics in annexes made of felt, matchboard, and corrugated iron might be improved upon.

THE BURNED BUILDINGS.

The "temporary annexe" at Colney Hatch which has now disappeared, consisted of a group of one-story buildings of corrugated iron, lined with pitch-pine matchboarding, and in the air space between a layer of felt, treated, it is said, with tar as a protective against damp. The only brick portions were the foundations and a separating wall in the assistant resident medical officer's residential block. There were five sections, connected by a central corridor 200 yards in length. Three of the sections crossed the corridor transversely, a day room being on one side and a dormitory on the other; the other two blocks were entirely on one side of the corridor, and constituted the infirmary wards, near which was the resident medical officer's quarters. At the opposite end of the long corridor was a boiler-room. The building was warmed throughout by hot-water pipes and radiators, and lighted by gas.

THE FIRE.

It is believed that the fire broke out in a linen room near the boiler-room—which it may be remarked was heated by a gas stove. It began about 5.30 a.m., and the alarm was at once given; the resident medical officer in charge was on the spot within three minutes of the sounding of the steam siren. The ward first involved was occupied by chronic lunatics almost entirely epileptics. As it happened, a strong wind was blowing across the annexe from the point of origin of the fire in the direction of the corridor to the main asylum buildings. Even at that interval of time—three minutes—this ward was absolutely unenterable. The heat was intense, but the worst obstacle to the rescue of the patients was the smoke and fumes, which were pungent, thick, and quite unlike those from burning wood. So irrespirable and even narcotic were they that one of the medical officers nearly "went down" no less than three times. The dense smoke speedily filled the corridor, and made it impassable. In a few minutes the adjoining block was in flames, the galvanized iron of the earliest involved being by now at a white heat. In five or six minutes after the alarm the second block was untenable, owing mainly to the fumes, nevertheless most of the patients were saved. In the first block there were 90 patients, and of these 34 are missing; in the second 76, of whom 16 are missing; in the third 75, of whom 1 is missing; in the second 50 and the first 49, all of whom were saved. Thus of 320 patients who slept that night in the annexe 51 were incinerated after having been, as is practically certain judging from the attitudes of the dead and from the effects experienced by the rescuers, rendered insensible by the fumes. In one hour the whole place was gutted and levelled to the ground. The bent



Plan of a Ward of the "Temporary" Buildings, Colney Hatch, showing Arrangement of Beds.

and reddened frames of the bedsteads and the cremated remains of the dead ceased are only too good evidence of the intensity of the heat. The baths in the bath rooms vanished in the heat, and the hot-water pipes are to be seen in places melted off short.

How the Fire was Met.

All accounts agree as to the splendid heroism displayed not only by the nurses and the Medical Superintendent, Dr. Seward, but by all concerned. Of course the first and only objective was to save the patients, and it seems, indeed, little short of miraculous that only 51 out of 320 met their death under the awful conditions which existed. Many of the patients were dements, and some resisted the efforts to save them; but, on the whole, they behaved extremely well, and not even a shriek was heard, although such sounds certainly came from excited patients in the adjoining main building.

The water supply was at first good, but as the demands on it became excessive it failed somewhat. Owing to work in progress the supply was not the ordinary one of the asylum, but was temporarily obtained from the East Barnet Water Company. To meet the emergency, a brook running through the ground was dammed up, and a supply thus obtained. From the construction of the building, intended to keep insane persons safe at night, there was difficulty in opening the doors of exit, and getting the patients out quickly. But it is very clear that everything possible was done to save life, and that the success was greater than could reasonably have been expected under the circumstances. The way in which the inmates were massed together is clearly seen from the accompanying sketch plan of one of the temporary wards now consumed. A plan of this ward was reproduced in the BRITISH MEDICAL JOURNAL some time ago to illustrate the spread of dysentery by personal contiguity.

The work of rescue was made much more difficult by the fact that the fire occurred while it was yet dark. Those on the spot believe that had there been daylight every one of the patients might have been saved, but it is evident that under any circumstances it would have been very difficult rapidly to empty wards constructed as were these, with three rows of beds and a narrow exit.

While the fire was raging in the annexe no less than 682 patients in part of the main building abutting on the burning building were moved away. As these happened to be in considerable proportion refractory patients, they gave much trouble. Only one patient who survived was slightly burned. Two nurses were rather severely burned, but no other member of the staff was seriously injured.

The Defects Revealed and some Remedies.

The danger—not to use a stronger term—of such temporary buildings for the incarceration of the poor insane is now very obvious to everybody. The buildings were called temporary, but they were opened in May, 1895, and at that time licensed for five years. They were subsequently licensed for another five years. The building was erected by the Works Department of the London County Council, and it is stated that the Lunacy Commissioners were greatly opposed to it from the first. It is to be presumed that an expert opinion in regard to the risks from fire was obtained in the first instance, but it must also be assumed that it was not acted on.

This fire also points to the inadvisability of herding masses of afflicted humanity in such large institutions—this asylum contained about 2,500 patients. It raises the question again of the unnecessary certification of many patients—technically and actually incapable of managing their own affairs—such, for example, as senile dements who, with assistance, might possibly be well looked after by their friends or boarded out; it raises the question of the need for colonies for epileptics, of the need for hospitals for acute cases, of the way in which patients are drafted from workhouses after certification. Above all, the incident ought to raise the question of provision of accommodation for chronic lunatics; their number, from the protracted nature of the disease, is necessarily an increasing quantity, and it would seem fairly obvious that provision for them should be made on a settled continuous policy. The catastrophe is an urgent appeal to the London County Council to pursue a settled policy, and in particular to forswear the use of "temporary" structures except for actual emergencies having a speedy term to their existence.

LITERARY NOTES.

WE offer our sincere sympathy to Mr. Cunninghame Graham, who has been the victim of an outrage of which we feel that we have been indirectly and all unwittingly the cause. The interesting letter from him on "La Modorra," which we had the privilege of publishing in the BRITISH MEDICAL JOURNAL of January 17th, is quoted by our excellent contemporary *Janus*, which, however, attributes its authorship to "un médecin Anglais." Mr. Cunninghame Graham would probably prefer to be called a "fetichman," which at any rate conveys no imputation of any dealings with that uncanny thing—science.

The *Subject Index of the Modern Works added to the Library of the British Museum in the Years 1881-1900*, edited by G. K. Fortescue, the first volume of which has just appeared, gives an idea of the shifting currents of medical opinion and interest. Thus in 1890 about thirty books appeared on Koch's treatment of consumption; after that the subject disappears from the index. There has been of late years a notable increase of works on the digestive organs. This may perhaps be taken as supporting Sir James Crichton-Browne's recent utterance as to the decay of digestion. Bacteriology, which was a new subject in 1881, has already placed more than 400 books on the shelves of our national library.

The *Dictionary of National Biography* contains accounts of forty-five officers of the Indian Medical Service a list of whom is given in the *Indian Medical Gazette*. In it we note the names of James Esdaile, one of the pioneers of hypnotism; Joseph Hume, Member of Parliament and economist; John Leyden, the poet and Oriental scholar, beloved of Walter Scott; Charles Murchison, a leading authority on fevers; Sir William Brooke O'Shaughnessy, Chief of the Telegraph Service; Horace Hayman Wilson, Professor of Sanscrit at Oxford; Edmund Alexander Parkes, the famous hygienist. The only medical officer of the Indian Medical Service whose name appears in the list of contributors to the *Dictionary* is Major W. W. Webb of Netley. Among the lives written by him are those of Parkes, Peter Mark Roget (author of the *Thesaurus*), Edward Smith, Sir George Burrows, Sir George Johnson, George Harley, Alfred Swayne Taylor, and Robert Willan, the dermatologist.

M. Charles Fortin, an *officier de santé* who has just died at Rouen, was the trusted adviser of Gustave Flaubert not only as to his health but as to medical matters with which he

wished to deal in his writings. He also attended Flaubert's mother, and the famous author had such confidence in him that he poured out his soul about all his troubles and difficulties, literary and other. Unfortunately, it is believed M. Fortin has left no reminiscences. Only very rarely could he be induced to say a word or two about Georges Sand, Zola and Maupassant who often paid him a visit. M. Fortin was a man of highly cultivated mind, and a great lover and collector of books. But he lived secluded from the world, and was little known among his professional brethren.

The Turin Academy of Medicine announces that it will award the Riberi Prize of the value of £800 to the author of the best work in the field of medical science, printed or in manuscript, composed in the course of the five years—1902-1907. If two or more works are adjudged equal in merit, preference will be given to those tending to improve the hygienic conditions of Italy. The works offered in competition must be written in either Italian, French or Latin. Printed works must be of later date than 1901 and two copies must be sent post paid. Manuscripts must be legibly written and will remain the property of the Academy, the authors having the right of having copies made at their own expense. If the prize is awarded to a work in manuscript, the author must publish it and send two copies to the Academy before he can receive the prize. The latest date for the presentation of works is December 31st, 1907. Intending competitors who may require further information should apply to the General Secretary, Dr. B. Silva.

In the Provincial Letters now appearing in the *Cornhill Magazine* it is stated that so far as Brighton is concerned sea-bathing was first prescribed by Dr. Russell, of Lewes, as a cure for glandular disorders, the patient's body being previously prepared for immersion by drinking sea water. Dr. Russell's picture by Zoffany is in the town collection, and his name is borne by one of the streets running into the King's Road, in which his house stood. The bathing machine was at once invented in its ideal perfection. The process of bathing was conducted by functionaries called bathers and dippers, those male, these female. Of the bathers the most celebrated was Smoaker, whose real name seems to have been John Miles; the most celebrated of the dippers was Martha Gunn. It is recorded that Smoaker refused on one occasion to let the Prince of Wales bathe, even offering to box him if he persisted. "I aren't agoen' to let the King hang me for letten the Prince of Wales drown hisself; not I, to please nobody, I can tell'e."

In an interesting article on "Mr. Herbert Spencer at Work and at Play," which appears in the February number of *The World's Work*, it is stated that when he began the composition of *First Principles* in 1860 he adopted the practice of dictating to an amanuensis. He was spending the summer by the shore of a Scottish loch. His habit was to dictate for a quarter of an hour, then row for an equal period, with the object of so stimulating the circulation of the blood as to carry him through another fifteen minutes' dictation, and so on through the forenoon. Neither then nor afterwards has he worked in the afternoon. Ten years later, at times when his health fell to a low ebb, he would go to a racket court in the north of London, play with the man in charge, and dictate in the intervals of the game. One of the most abstruse portions of the *Principles of Psychology*, the polemic against Berkeley, was composed under these unpromising circumstances. His usual programme as he wrote the volumes of the *Synthetic Philosophy* was to leave his house soon after 9 in the morning and direct his steps to Kensington Gardens. There he walked until nearly 10 o'clock, his head slightly bent, his pace somewhat rapid, his mind evidently in meditation. Regularly at 10 o'clock he appeared in his workroom in Leinster Place, a retreat known to hardly any one, and sacred against intrusion. He first dictated his correspondence, often rebelling at its onerous demands. Then he turned to his systematic work, soon rising to the full tide of dictation; usually he went on without a break till close on 1 o'clock, when he hurried away to luncheon. If his health was out of order, he would stop abruptly at any moment and leave the house, saying that his head felt queer. When fairly well he would smoke half a cigar, finding that it promoted the flow of thought. The dictation was continuous; there were no interruptions and only brief pauses. The panorama of thought unwound itself slowly, and apparently without an effort. In resuming his task he seldom needed to be reminded of the last word spoken, and he never changed his calm, sitting position in front of the grate. Never did he patch, reconstruct, or begin again.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1903.

MEETINGS of the Council will be held on April 22nd, July 8th, and October 21st in the Council Room of the British Medical Association, 429, Strand, London, W.C.

ELECTION OF MEMBERS.

Any candidate for election should forward his application upon a form, which will be furnished by the General Secretary of the Association, 429, Strand. Applications for membership should be sent to the General Secretary not less than thirty-five days prior to the date of a meeting of the Council.

GUY ELLISTON, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m. Members can have their letters addressed to them at the office.

SPECIAL CORRESPONDENCE.

LIVERPOOL.

Dinner to Professor Ronald Ross, F.R.S.: Speeches by Sir Wm. Church and Dr. Manson.—Opening of the New Out-patient Department of the Liverpool Infirmary for Children: Speech by Sir William Banks.

ON Saturday evening, January 24th, the Liverpool University College Association entertained Professor Ronald Ross, the winner of the Nobel prize, at dinner. Sir Alfred Jones, K.C.M.G., was in the chair, and among those present were Sir William Church, Bart., President of the Royal College of Physicians; Dr. Patrick Manson, C.M.G., Professor Trevelyan, and a large number of representatives of the learned professions and the commerce of Liverpool. After the health of the King had been duly honoured, the Chairman proposed the toast of "University College," which he was sorry was not a university, but he hoped soon would be. Speaking as a commercial man, he would say that if they were to maintain their hold on commerce, and if the men of the future were to have a chance of fighting the battle of commerce, they must be better trained in science than they were. They could not have their men trained unless they got a local university. In conclusion he said it was a pitiable thing to see men dying and leaving an enormous sum of money, which might have been used during their lifetime for some useful object in the world; and he hoped that men who had money to spare would give it for some good object which would make the world better off. Principal Dale read letters of apology from the President of the Royal College of Surgeons and Professor A. Laveran, who expressed regret at their inability to be present, and referred in terms of high commendation to the work of Professor Ross and of the work of the Liverpool Tropical School. The Chairman, in proposing the health of Professor Ross, referred to the importance of the work accomplished by him, saying that University College might very well be proud of what he had done. The world was now copying Liverpool's example. America had applied for Professor Ross's advice, and he was going there. Professor Ross, in responding, said he did not think practical ideas were enough recognized. It was not enough to establish a scientific proposition; it was necessary to translate it into action. Thus, Dr. Manson's great discovery of the relation of the mosquito to filariasis had remained barren of practical results because there was no practical man who was willing to undertake the expense of waging war with the mosquito. Dr. Manson was one of the first to originate the mosquito theory of malaria. His theory and induction were most profound. It was his induction that led to the solution

of the malarial question. Dr. Manson deserved a great deal of credit. Sir Alfred Jones had done very much in the way of sending out the expedition to West Africa, and too much could not be said for the way Liverpool had backed them up in the matter. Sir William Banks, in proposing "Our Guests," remarked that of late years we had been addicted to excessive praise of what had been done by foreigners, to the neglect of what had been done by our own countrymen. In the great work of the investigation and prevention of malaria he looked upon Dr. Manson as the Pasteur, and Professor Ross as the Lister, and he was much gratified to see them there to-night and able to speak of their respective shares in the great work which they had accomplished. Sir William Church, in responding, said that the great national value of the Liverpool Tropical School of Medicine had been already pointed out, and to his mind there had been no work done on the side of medical research of late which had been so striking and so wonderful as that which had been done in connexion with this school. Whatever might result from the movement for a university, there could be no doubt that an enormous impetus had been given in this part of the country, and in the country generally, to the scientific study of all subjects. A most beneficent donation had recently been received from Mr. Sutton Timmis, who had devoted a large sum of money to cancer research. Whether they were fortunate enough to discover the cause of cancer and whether they were still more fortunate to discover any method of either preventing or curing it—he was not very hopeful on that point—he felt certain that the whole work done in that direction must lead to a vast increase of knowledge, and they did not know in what way that would radiate out. He congratulated them on the fact that Dr. A. Grünbaum was going to be the director of that research—a better director could not have been found. Dr. Manson, who was received with enthusiastic applause, described in a most interesting and eloquent speech the various stages by which he had arrived at the provisional hypothesis that the mosquito was the means of introducing malaria into the human organism. At a time when this theory was in his mind, he was asked by the editor of a certain important periodical to review a paper on malaria contributed to one of the journals by his friend Major Ross, with whom at that time he was not acquainted. With the views set forth in the paper he entirely disagreed, and subsequent discoveries have shown that they were entirely wrong, but he was struck with the excellent photomicrographs by which it was illustrated and by the capacity for scientific investigation manifested by the author; and he requested the editor to introduce him to the author as soon as an opportunity might arise He was anxious himself to go abroad to investigate the subject personally, and made an application to the Royal Society for a grant of money which would enable him, with the help of funds promised him by the Committee of the same journal, to leave his practice and to go abroad to make the necessary investigation, but the Royal Society did not accede to his request. Subsequently he obtained the desired interview with Major Ross, who at once became interested in his views and proceeded to work on his lines, with the brilliant results with which they were now all acquainted. He congratulated Liverpool upon being a hospitable city, and still more upon being a wise and enterprising city. He wished the same spirit pervaded the whole kingdom, and was as active in the metropolis as in Liverpool. He had been much impressed by the splendid buildings provided in Liverpool for pathological research, but it was not so much buildings that were wanted as industry and ability, and the best of Professor Ross's work had been done in a hut with a microscope, two needles, and a matchbox. He heartily congratulated Professor Ross on the success of his work, the practical value of which was beyond doubt. Principal Dale proposed the health of the Chairman, who replied; after which the proceedings terminated.

On January 21st a large and convenient out-patient department in connexion with the Infirmary for Children was formally opened by the Countess of Derby. The Chairman said that the Committee would have to appeal for a large sum of money to enable them to pull down the existing buildings, and erect a more commodious and modern infirmary, which would cost about £50,000. It had been suggested that they should go out into the country, but after searching enquiries the committee had come to the conclusion that the balance of advantages lay in rebuilding on their old site, which was admitted to be everything that could be desired for a hospital. Sir William Banks said that in connexion with the building about to be opened it might be asked why that portion of the new infirmary should have been the first to be constructed. It must be remembered that the out patient department was the base and foundation of a children's hospital, and its chief means of rendering help to the sick poor. For one child that could be treated as an in-patient there were twenty treated in the out-door department. Moreover, it was there that that most important function of the hospital, the diffusing among poorer classes of a better knowledge of the management of young children during sickness, was carried out. If that hospital did nothing else but instruct poor mothers in the art of feeding their infants it would save hundreds of lives every year, and would be performing a great public work every day. One of the serious difficulties with children out-patients was that they were being constantly brought to such departments as that in the early stage of measles and scarlatina, and other infectious diseases, and he noticed with pleasure the arrangement by which, as soon as the medical officer detected such a case, he quietly passed it into a room with a special exit; there it remained until means of transport were provided for its proper isolation. In this way a properly-managed out-patient department became a kind of sieve in which infected patients were caught and prevented from spreading their complaints among the community. The erection of the out-patient department apart from the hospital proper and on the other side of the street would effectually protect the in-patients from the danger of infection, which was one of the great difficulties in the management of a children's hospital. This complete separation was an advance which the Committee had been among the first in this country to adopt. The necessity for the reconstruction of the whole hospital was due to the fact that it was built at a time when hospital construction was little appreciated as a special work, and when the great principles of antiseptic surgery and medicine were not known. The experience of recent years had shown that it was hopeless to attempt to patch up a building which had fallen behind in matters of sanitation.

CORRESPONDENCE.

ST. BARTHOLOMEW'S HOSPITAL.

Sir,—In the British Medical Journal of January 24th you say that you cannot see that the proposal that the main St. Bartholomew's Hospital of the future should be erected on an area in St. Luke's about a mile from the present site has much practical value. I believe that this proposal, with or without an emergency hospital on the present site for cases arising in the immediate neighbourhood, is highly practical and wise. My views are based upon inquiries I have made which lead me to believe that instead of the St. Luke's site entailing the expenditure Sir William Treloar seems to think, of from £200,000 to £250,000, it might be acquired for £80,000, or possibly less. It ought to be possible, unless the facts resulting from a private investigation are wrong, which I do not believe, to acquire a site of eight acres which would be self-contained, and where the division-by-streets difficulty would not prove insurmountable, but quite the contrary. This site would give St. Bartholomew's Hospital new life, because a hospital placed upon it would serve not only the City of London, Finsbury, and Holborn, but portions of Islington, Bethnal Green, and Stepney. A site of eight acres is ample for a city hospital of 1,000 beds, and it should be readily possible to acquire additional land for the school buildings, nursing home, etc., closely adjacent to the eight-acre site, should the latter be considered of insufficient area to enable these buildings to be erected on it in addition to the hospital wards. There seems to me to be a regrettable tendency in certain directions to try and shelve all consideration of the St. Luke's site, on the ground that Parliamentary action would be necessary to enable "Bart.'s" to acquire certain leasehold rights. Such Parliamentary powers should, however, readily be obtained, for within the last few years Parliament has granted identical powers in somewhat similar circumstances to the London Hospital, a precedent which would no doubt render a new Act for "Bart.'s" a relatively easy and inexpensive matter.—I am, etc.,

Porchester Square, W., Jan. 26th. Henry C. Burdett.

THE ORIGIN OF THE LIQUOR AMNII.

Sir,—I have read your excellent leading article on this subject in the British Medical Journal of January 24th, and I

am glad to see that the problem of the source of the liquor amnii is again exciting some attention.

In 1876 (May 9th) I raised a discussion on the subject at the Royal Medical and Chirurgical Society of London by reading a paper on "A Case of Congenital Hydronephrosis, with remarks on the Secretion and Excretion of Urine in the Foetus, and on the Facts which tend to prove that during several Months of Intrauterine Life the Urine of the Foetus is passed into the Cavity of the Amnion."

Though this paper was not published in the *Transactions* of the Society for the reason, as I was informed at the time, that the cause of the obstruction was not verified by necropsy, abstracts of it were published in the journals of the day, and several valuable private letters reached me from obstetricians and others who had seen the accounts of the discussion. Subsequently, over a lengthy period, I tried to obtain information from the chemistry of fetal urine and liquor amnii at different stages of gestation, and the late Mr. William Foster, the lecturer on chemistry at the Middlesex Hospital, took a good deal of trouble in the investigation for me.

The results were not as complete and satisfactory as we desired because of the difficulty in getting the requisite samples, and the uncertainty as to the value of the analytical numbers obtained. Still the analysis of thirteen samples of liquor amnii at the full period of gestation showed that urea is a normal constituent of that fluid.

The conclusions I arrived at from a study of congenital hydronephrosis, and from the analyses of liquor amnii, are stated at pages 332-336 of my original work on *The Surgical Diseases of the Kidney*, published in 1885, as well as in the *Medical Times and Gazette* of May 27th, 1876, and in the BRITISH MEDICAL JOURNAL of May 13th, 1876, p. 596.

I will not lengthen this letter by repeating those conclusions here; but I would suggest that further information might be obtained by those who have greater facilities than I possessed of obtaining liquor amnii and fetal urine at different periods of intrauterine life, by comparing the results of the analyses of the two fluids; and also by ascertaining whether in cases of congenital hydronephrosis there is a lack of fluid in the sac of the amnion. This, from the "natural experiments" afforded by the case to which your article refers, would seem to be the condition of things; but, so far as I know, it has not been actually proved.—I am, etc.,

Cavendish Square, W., Jan. 26th. HENRY MORRIS.

CERTIFIED MILK.

SIR,—The subject of infant feeding is important, and the literature relating to it has assumed formidable dimensions. At one time much of this literature had a depressing effect, as the impression gained from it was that the subject was too difficult and complex for ordinary human grasp and comprehension. The state of depression, however, was short-lived, for practical experience soon led me to believe that complicated methods were unnecessary and uncalled for, and the course of time has strengthened my early view that the difficulties of infant feeding have been by many writers unduly exaggerated both in degree and frequency.

It is only in a very small minority of cases, both in hospital and private practice, that I have experienced any conspicuous difficulty in infant feeding. In a very large proportion of cases of alleged difficulty there has been an obvious disregard of the first principles of physiology and of common sense. It may be granted that in exceedingly exceptional instances an infant may be temporarily incapable of digesting cow's milk, however suitably and carefully it may have been diluted; but to my mind there is not a tittle of evidence forthcoming that in such cases the loudly-vaunted percentage and other intricate methods of feeding are one whit more successful than the simpler plans mostly in vogue. This, however, is merely an expression of personal faith, and I am free to admit that the subject is open to a very considerable and intelligible difference of opinion.

On one point all interested in the subject of infant feeding will be cordially agreed—the desirability of a readily obtainable and reliable milk supply. To the use of unsound milk, or to effects directly consequent on it, are ascribable a large proportion of the unsatisfactory results in infantile feeding, and also numerous cases of disease in children and adults. The unsatisfactory nature of a large portion of our milk supply is sufficiently admitted and need not be insisted upon. On reliable authority we learn that our ordinary milk is often contaminated by bovine faeces and urine, and less frequently, but still in a sufficiently numerous percentage of cases to be reckoned with, by pus from tuberculous ulceration on cows' udders. This frequent contamination by such unsavoury constituents has formed one of the reasons for advocating the routine practice of boiling or sterilization by more than one competent authority. But I would contend that no amount of sterilizing or boiling will ever render milk with such filthy addenda a desirable or covetable article of diet. Both boiling and sterilization, moreover, bring disadvantages of their own in the way of lowered nutritive value, and I am glad to note that my long-founded objection to both processes as routine practices is now shared by many who formerly advocated them. Of course the sale of such contaminated milk should be prohibited by law, but as far as I know there is no restriction placed on the sale of any such milk, provided it attain a certain standard in its more ordinary and pleasanter constituents. The need for the control of the milk supply by municipal or other constituted authorities has often been pointed out, but time has shown how useless it is to look for assistance from any such quarters.

In the present hopeless condition of our milk supply it is matter for envy to find that a satisfactory solution has apparently been found in more than one American State, and accomplished, too, at a trifling expense borne by the consumers. This reliable milk supply has been brought about by the establishment of a system in which "certified" milk is supplied by the dealers, this "certified" milk being one the purity and nutritive value of which are guaranteed by responsible medical authorities. The initiator of the system was, I believe, Dr. H. L. Coit, of Newark, N.J., and he has been followed by others, notably Dr. H. D. Chapin, with the assistance of the Medical Society of the State of New York. Briefly, the terms of agreement between the medical authorities and the milk suppliers are that, in consideration of certain arrangements being carried out in milking, storage, and transport, and ready facilities being afforded for frequent chemical and bacteriological examinations, the dairy proprietors are allowed to send out their milk in special bottles, with capsules certifying in the name of the medical authorities as to the quality of the fluid. The standard required by the Medical Society of New York State for "certified" milk is that at the period arrived at for use in the nursery the fluid shall not contain less than 3.5 per cent. of milk fat, shall not exceed 0.2 per cent. in acidity, and that there shall not be more than 30,000 bacteria per cubic centimetre. Full details of the scheme and cost of working are given in Chapin's book on *Infant Feeding*, and one gathers from this that the arrangement acts well and satisfactorily. A charge of one halfpenny a quart above the ordinary market price, it is stated, much more than repays the dealers the expense incurred.

If such a scheme can be successfully worked in America there would seem to be no valid reason why a similar one should not succeed here. The body to whom one would naturally turn for its initiation is the British Medical Association, as being much more highly representative of the whole profession than any other society could claim to be. I would suggest that the Council of the Metropolitan Counties Branch might appoint a small committee to discuss such a scheme, on the basis of the details in Dr. Chapin's book, with several of the large dairy proprietors. When these last can be persuaded that such a scheme would not be meant to embarrass or to harass them, but will ultimately result to their own immediate benefit, I believe they will readily agree to adopt it. Given a success in London, in the course of time the scheme would be adopted by other Branches, and thus it might come about that the control of the milk supply of the country would largely pass into the hands of the Association. With a purer milk supply many of the difficulties of infant feeding would vanish, the infantile mortality would be largely diminished, and there would be a lessened frequency of epidemics of such complaints as diarrhoea, scarlet fever, diphtheria, enteric fever, and others.

The milk supply is a most important question—indeed, a national one, and it would seem to me deserving of the first consideration at the hands of our Association. I am, etc.,

London, W., Jan. 24th. J. A. COUTTS.

DEATH UNDER CHLOROFORM.

SIR,—The noteworthy case of death under chloroform recorded by Dr. T. L. Pennell in the BRITISH MEDICAL JOURNAL of January 24th, p. 195, is a marked example of an uncommon variety of collapse under chloroform which is not well recognized. In this particular type the essential bar against successful resuscitation is not the state of the heart or of the respiratory centre. Though both of these are involved, the

dominating feature is the relaxed condition of the small arteries dependent on a depression or loss of tone in their muscular coats; this causes a great fall of blood pressure and failure of circulation, which in turn reacts upon the respiratory centre, and proves in some cases the direct cause of its failure to recover.

In Dr. Pennell's case the temporary recurrence of breathing for three or four minutes, when restorative measures were employed and several minutes after chloroform had been discontinued, shows clearly that there was no direct and fatal paralysis of the respiratory centre by the anaesthetic, while the continuance of recognizable heart action for nearly an hour is sufficient proof that cardiac failure was not the determining factor.

Precisely similar instances occurring in animals have from time to time come under our notice in this laboratory, and the treatment we adopt, with almost invariable success, is compression of the abdomen—in addition, of course, to artificial respiration. Abdominal compression compensates for the loss of vascular tone by drawing blood out of the capacious abdominal blood vessels and increasing the peripheral resistance to the outflow of blood from the aorta; thus much more blood is sent into the upper half of the body and the blood pressure in the more immediate vital parts (brain, heart, etc.), is raised.

This proceedure, while producing results similar in their nature to those induced by inversion, is much more effective than the latter. It is in cases of collapse under chloroform where the heart is not directly paralysed or is only affected in a minor degree, that this method is specially applicable.—I am, etc.,

J. A. MACWILLIAM, M.D.

Physiological Laboratory, University of Aberdeen,
Jan. 27th.

SIR,—The fatality under chloroform recorded by Dr. T. L. Pennell, of Banhu (India), is in no way remarkable, but raises a point of some interest in the treatment of failing circulation under this anaesthetic.

We are aware that the operation attempted, that of breaking down adhesions in an ankylosed joint, is prone to be attended by unpleasant complications when chloroform is used, and, in this country, those who are best able to judge, usually employ ether, or nitrous oxide gas and ether, to induce anaesthesia for this procedure; in India the climate apparently renders the routine use of ether difficult or impossible. In the case in point, however, and indeed in the majority of cases where ether is injected hypodermically it would have been easier to produce its stimulating effect on the patient by inhalation than by injection.

The cause of most deaths under chloroform is without question lack of anticipation of untoward symptoms on the part of the chloroformist and want of appreciation of the indications for changing the anaesthetic. The signs of failing circulation are usually sufficiently obvious to the trained and experienced chloroformist and he will not fail to notice them early.

Personally, when giving chloroform I always have some ether in a small bottle in my pocket or at hand, and on the occurrence of pallor or shallow respiration apply Sir W. Mitchell Banks's "rough shave,"[1] and substitute about a drachm of ether on lint for the chloroform; the resulting improvement is really marvellous, the whole character of the breathing changes, and the patient's lips and ears regain their natural colour very rapidly. I feel sure that I am by no means alone in using ether in this way, but I know in the large majority of cases it is given hypodermically as a *dernier ressort* to an already moribund patient, and its administration is only too frequently futile. Dr. F. W. Hewitt, in his most valuable book,[2] points out how useless this injection of ether is in marked cases of chloroform syncope, seeing that the patient's circulation is more or less suspended or in a condition of stasis.

If an injection is used at all strychnine in full doses ($\frac{1}{30}$ to $\frac{1}{15}$ gr.) is more commonly followed by good results, used hypodermically, but even it may be given too late. In the case under notice tongue traction is not mentioned, but was presumably used during the artificial respiration. From my own experience I have concluded that hypodermic injection of stimulants must precede cessation of pulse and respiration to be of any service; only zealous tongue traction (rhythmical) and artificial respiration will set them going again, although when that happy result is attained, strychnine hypodermically and saline by the rectum may assist in maintaining them. Electric batteries unless carefully and skilfully employed are more often followed by bad than good results.—I am, etc.,

THOMAS D. LUKE, M.B., F.R.C.S.Edin.,
Instructor in Anaesthetics, University Surgical Wards, Royal Infirmary, Edinburgh.

January 28th.

[1] *Lancet*, November 16th, 1901.
[2] *Anaesthetics and their Administration*, p. 480.

THE TREATMENT OF CONGENITAL HIP MISPLACEMENT AND CLUB-FOOT.

SIR,—Anything from the pens of such sound and cautious surgeons as Messrs. Muirhead Little and D'Arcy Power is worthy of attention, and as improvement is the most that the varying condition of the parts justifies us in expecting, it is necessary that it be strongly emphasized that no "real" cure, not even 5 per cent. as Mr. Little states, can be expected. It is only in the rare cases in which there has been a partial luxation of a well-shaped head from a practically normal acetabulum, and before the capsule has been much altered, that anything approaching a real anatomical and functional cure can be hoped for. It is now more than twenty years since I demonstrated to the house-surgeons and visitors at the Royal Orthopaedic Hospital that the anterior displacements are much the more common; also, that it is rare for an anterior luxation, when once confirmed after a few months' walking, to become posterior. It is good to transpose an uncommon posterior into a common anterior misplacement and to do all possible to fix and maintain the latter, not the easiest of tasks, because the shortening, lordosis, and limp are all improved. It seems to me that Professor Lorenz is unfortunate in his titles, and that his somewhat drastic modification should not be called the "functional weighting method," but "immediate or rapid attempted reposition." As Dr. Lorenz stated he had practised this plan five years, one had hoped that a few of his "cured" cases might have been imported from Austria, but doubtless he foresaw that without convincing tests orthopaedists would not be satisfied.

To me it is very difficult to understand where the "function" or the "weighting" (pressure, I persume, is meant) comes in, for a child kept for many months in the complete "straddles" can scarcely use the limb in anything like a normal manner, so the absence of "weighting" or physiological moulding pressure is prominent by its nonentity. As a very large number of cases have passed through my hands in the last thirty years I trust Mr. Power will excuse me for differing from him as to the harmlessness of this drastic method even in careful hands. When he has seen and handled half as many of such cases as I have he will realize that they differ very much, not only in their bony conditions, but as to the tonicity and laxity of the muscles and ligaments, so that some cases are reduced comparatively easily, but usually replace themselves immediately manipulation ceases, and that others absolutely decline to remain near the deficient acetabulum with any force, sometimes pretty considerable, that I have felt justified in continuing.

As to club-feet, seeing that we can by tenotomy, in a baby a few weeks old, operating in two stages, so thoroughly correct the feet in six weeks that the parents scarcely recognize them, I am quite without any compass to guide me in the way Professor Lorenz would lead the profession. Why wait, as he does, till the child is 6 months old, then employ forcible overcorrection, and convert an equino-varus into a permanent valgus? Unfortunately, in some half-dozen instances, this has happened at the hands of energetic mothers whose infants had been treated in the ordinary way; and I have always been sorry for it, for I have had to correct this unnecessary secondary deformity, and have not always succeeded. It is time, in some orthopaedic matters, the profession put on its thinking cap.—I am, etc.,

London, W., Jan. 27th. H. A. REEVES.

AN IMPROVED HYPOBROMITE PROCESS FOR THE ESTIMATION OF UREA.

SIR,—The recent appearance of Dr. Pechell's[1] paper with the above title goes a long way to justify the remark not infrequently made by the French, that an insufficient acquaintance with their scientific literature is too often displayed by English writers. Dr. Pechell has observed that the use of a solution of glucose causes a largely increased output of nitrogen of urea from non-diabetic urine, and he can find no evidence of the previous publication of this simple procedure. It is not difficult to supply this evidence. The first book to

[1] BRITISH MEDICAL JOURNAL, January 24th, 1903.

which I turn is Gautrelet's *Urines*, written in 1889; this author remarks: "Méhu has shown that the presence of sugar in urine sets free all the nitrogen of urea in the hypobromite reaction, by suppressing the formation of cyanates and nitrates which are produced secondarily in this reaction." Vieillard, to whom I next casually refer, adds on the same subject: "Méhu, however, having remarked that diabetic urine gave out all its nitrogen, was led by this observation to add a little glycose or cane-sugar to ordinary specimens of urine. Under these conditions, as I have personally assured myself, the absolutely theoretical yield of nitrogen may be obtained. The most appropriate proportion of glycose is 1 c.cm. of a 25 per cent. solution of the chemically pure product. Dr. Moreigne has shown, and his explanation is a very rational one, that in the titration of the nitrogen of urea by means of the alkaline hypobromites, the glycose acts not only as a reducing agent preventing certain secondary reactions (nitrates or cyanates according to various authors), but also by the heat developed under the influence of its decomposition by hypobromite of soda, a degree of heat sufficient to expel from the liquid the whole of the gas retained by mechanical courses." Next I find Mercier rightly assuming that every chemist is acquainted with Méhu's method, and merely stating: "20 c.cm. of hypobromite of soda is introduced into the tube E; into the small tube *t* 2 c.cm. of urine, then about 2 c.cm. of a 5 per cent. solution of sugar." *Et ainsi de suite.* Dr. Pechell, and assumably Dr. Lazarus-Barlow, have evidently only succeeded in drawing attention to the extreme poverty of the English literature of the subject which they have been investigating. —I am, etc.,

Nice, Jan. 25th. A. W. GILCHRIST, B.Sc., M.D.

SEQUESTRATED UTERINE MYOMATA IN THE PERITONEAL CAVITY.

SIR,—Far more cases of this complication have been reported than Mr. Paton (BRITISH MEDICAL JOURNAL, i, 1903, p. 131) seems to be aware of. I will briefly refer to a few of which I have cognizance.

Sir H. Croom, on opening the abdomen, found a tumour the size of a large orange in Douglas's pouch whose pedicle was so thin that on attempting to ligature it the tumour came away in his assistant's hands (*Edin. Med. Journ.*, January, 1897, p. 15).

This explains how it is that such tumours may be found free in the peritoneal cavity, of which instances have been reported by Baldy (*Trans. Phil. Path. Soc.*, xv, p. 234), Eve (*Trans. Lond Path. Soc.*, vol. xxxi, p. 311). Depaul (*Bull. Soc. de Chir.*, Paris, iv, 1876, p. 1), Wylie (*N. Y. Journ. Gyn. and Obstet.*, March, 1894), Rindfleisch and others, besides the case (Turner's) mentioned by Mr. Paton.

Such bodies are usually of no great size, but in Rindfleisch's case (*Arch. f. path. Anat.*, clv, 1899, S. 379) a completely detached myoma as big as a goose's egg was found in the right iliac fossa; and he cites a case of Stern's in which a similar tumour, the size of the fetal head at term, was met with.

These sequestrated tumours are usually more or less calcified.

In the process of separation they are apt to contract extensive adhesions with contiguous structures, remaining engrafted when their separation from the uterus is complete (as in Mr. Paton's case). Examples of this kind have been reported by Homans (*Boston Medical and Surgical Journ.*, vol. cxx, 1889, p. 165), Wallace (BRITISH MEDICAL JOURNAL, vol. i, 1898, p. 1131), Routh (*Trans. Lond. Obstet. Soc.*, vol. xxxviii, 1896, p. 388) and others, besides the case mentioned by Mr. Paton (Jacob's).

In Routh's case a calcified detached tumour, the size of a turkey's egg, was grafted on to the small intestines, whence it was successfully removed by laparotomy. In Wallace's case the tumour—which was calcified *en coq*—adhered to the tissues at the pelvic brim. It was successfully removed by laparotomy. In Homan's case a large detached myoma adhered to small intestines, mesentery, and great omentum; and caused death shortly after accouchement by intestinal obstruction. Several specimens illustrating this complication are contained in the Hunterian Museum (Nos. 4,638 and 388 Pathological series). These and other examples of the kind I have referred to more at length in my monograph on uterine tumours.

The usual points of attachment I have found to be the great omentum, Douglas's pouch, the pelvic margin, the intestines, mesentery, etc.

Tumours of this kind are very prone to inflammation (which may eventuate in gangrene), leading to acute peritonitis, and in exceptional cases even to perforation of the bladder, rectum (8 cases), abdominal wall, etc.—I am, etc.,

Clifton, Bristol, Jan. 24th. W. ROGER WILLIAMS.

THE JUNIOR MEDICAL OFFICERS OF ASYLUMS.

SIR,—Your correspondent "A. M. O.," in the BRITISH MEDICAL JOURNAL of January 17th, p. 170, has well stated the many drawbacks of asylum service. I agree that the greatest disadvantages are the slowness of promotion, the non-increase of salary after a very moderate maximum is reached, the enforced celibacy, and the monotonous and irksome existence. The slowness of promotion is recognized by assistant medical officers, and many are the bitter regrets I have heard from men who have spent the best years of their lives in lunacy and yet have no prospect of advancement.

It is only the fortunate few who can ever expect, provided they have luck and influence, to become medical superintendents. The majority must be contented with a maximum salary of £400 per annum—in some cases less—reached after many years' service. When the time comes for them to retire, the Committee *may*—not *shall*—graciously grant them a small pension. It would, I think, be right that all the years of service in lunacy should count towards a pension, and not only the years spent in the same asylum, as at present many men who get promoted from asylum to asylum lose years which should count towards pension.

The enforced celibacy accounts, I am sure, for a considerable number of resignations. I myself have known of two such cases within the last few months. Surely, if attendants are allowed to marry, and cottages and other allowances given to them, their superior officers should not be barred.

With reference to the risk of infection by disease, it must be remembered that some asylums are old, unhygienic buildings, with deficient means for the isolation and treatment of the numerous cases of phthisis, and this, combined with indoor confinement owing to the ever-increasing duties, is a very real danger.

I never imagined that life could be so monotonous and irksome until I had lived some time in this asylum from which I write, situated as it is in a sparsely populated district some miles from a wayside station. It is rarely possible to attend concerts or theatres in the nearest large town—more than one hour's journey—as the train service is so arranged that one cannot return the same night. We are understaffed so that two men cannot get out together; consequently I am forced, if I can summon up the necessary energy, to go a short walk or bicycle ride alone, for these are our sole means of recreation for the greater part of the year. In the evenings a rubber of whist or bridge is generally out of the question.

Altogether life in this asylum is very drear—and I should judge the same to be true of many—unrelieved by contact with the outer world, and for months on end one has to be contented with the society of perhaps one man. We A.M.O.'s should, I think, be grateful that the Asylum Committee allows the superintendent to be married, as it is often solely by his courtesy that we are able to occasionally enjoy any society at all.

In conclusion, I would strongly advise any one thinking of taking up asylum work to consider well whether he could not do better and be happier in some other branch of the profession.

There is room for great improvement in the conditions of service as regards (1) promotion, (2) raising of A.M.O.'s salary to nearer that of the superintendent, (3) non-enforcement of celibacy, (4) more generous pensions, (5) increase in medical staff of some asylums.

I hope other A.M.O.'s will be led to ventilate their grievances by your courtesy in opening up the columns of the BRITISH MEDICAL JOURNAL to correspondence on this subject. —I am, etc.,

January 21st. A PROVINCIAL A.M.O.

ON THE USE OF ALKALIES FOR THE RELIEF OF PAIN.

SIR,—Dr. H. Campbell Thomson's corroboration[1] of the observations of Sir Lauder Brunton on the above subject is interesting. In this district one of the commonest domestic remedies for toothache is soda; cottagers rub the powder on the gum round the peccant tooth—as their grandmothers did before them.

Some years ago to frequently rinse out the mouth with a

[1] BRITISH MEDICAL JOURNAL, January 24th, p. 195.

hot solution of soda was considered a specific for toothache among the nursing staff of at least one Poor-law infirmary in London.

The relief of neuralgia by a mixture of which the principal ingredient is ammonium carbonate is certainly a matter for congratulation; such a prescription is venerable, and still to be found in some hospital pharmacopoeias under the heading "Mistura Neuralgica."—I am, etc.,

Mossley, Jan. 25th. SIDNEY VINES.

EXAMINATION EXPENSES.

SIR,—I was shown to-day one of the pink admission cards issued by the Conjoint Board to candidates for the Final Examination in Medicine, and was much surprised to find that on it there is a special notice requiring all candidates to come provided with an ophthalmoscope and laryngoscope!

In other words, the unfortunate candidate or his still more unfortunate parents must expend the best part of five pounds as a necessary preliminary to his going up for the examination at all, and this, sir, when in all probability he will not chance upon a case requiring the use of either in his practical examination.

That a proper knowledge of the use of these instruments is a necessity in order to make him a competent practitioner no one will deny, but that he should be compelled to present himself at the Examination Hall with them in his possession is practically adding nearly £5 to the present fee.

I am strongly of opinion that the Examining Board should themselves provide all needful instruments for clinical investigation, for otherwise there will be in the future, and with the growing importance of the use of such special instruments as the sphygmograph, cystoscope, etc., no limit to the special instruments with which the candidate has to provide himself as a *sine qua non* to examination.—I am, etc.,

W. F. VICTOR BONNEY, M.S., M.D.Lond., etc.

Devonshire Street, W., Jan. 1st.

ASSOCIATION OF THE BRITISH MEDICAL PRESS.

SIR,—A proposal was made some time ago on behalf of the French medical press for the formation of an international association of the medical press. A provisional committee was formed in this country under my chairmanship. This committee was represented at a conference held at Monaco in April, 1902, under the presidency of Professor Cornil to settle preliminary details. The regulations then adopted have recently reached this country, and the provisions proposed seem on the whole expedient and reasonable. An association of the British medical press has therefore been formed to co-operate with the international association.

The editor of any British journal devoted to medicine who may wish to join this Association, or desires further information on the subject, should communicate with Mr. L. E. Creasy, Editor, the *Clinical Journal*, 35A, Welbeck Street, Cavendish Square, London, W.—I am, etc.,

THOMAS WAKLEY, Jun.,

January 21st. Joint Editor of the *Lancet*.

REPRESENTATION OF DUBLIN UNIVERSITY.

SIR,—It may be of interest to the medical electors of Dublin University to know that Mr. Samuels, if elected, has pledged himself to act independently of any Government for the benefit of the University generally, and also to look after the interests of the medical profession.

In a letter I received from him he says: "I shall, if returned, support the interests of the medical profession in any way I can. As to the claims of the public vaccinators, I shall be prepared to advocate their claims to proper security of tenure, and superannuation, as urged by their Association." Of course the other candidate, Mr. Campbell, the Irish Solicitor General, being a Government official, will be bound to support his Government unless he chooses to jeopardize his legitimate chances of promotion.—I am, etc.,

Liverpool, Jan. 27th. ROBT. S. ARCHER, M.D., T.C.D.

OBITUARY.

R. C. A. PRIOR, M.D., F.R.C.P.

ON December 5th, 1902 the death took place in York Terrace, Regent's Park, of Richard Chandler Alexander Prior, M.D.Oxon, F.R.C.P.Lond., F.L.S. He attained the age, within a few months, of 94 years, and for some time had been the oldest living Fellow of the Royal College of Physicians of London.

He was born in Wiltshire in 1809. "My horoscope," he says in his memoranda, "was drawn the same day and is still preserved."

Educated at Charterhouse and at Wadham College, Oxford, he began his medical studies in 1830 at Mayo's Anatomy School, Great Windmill Street, and attended Faraday's lectures on chemistry. The following year he entered St. George's Hospital, where he completed his studies. He graduated in medicine in 1835 and was elected Fellow of the Royal College of Physicians of London in 1840. He visited Edinburgh and Berlin and settled in practice in Bath and subsequently in Chippenham; but after a year or two of ill health was obliged to abandon the practice of medicine, and henceforward devoted himself to botany and especially to the collecting of botanical specimens. In pursuit of this study he travelled in Austria, where he lived for three years and made a collection of nearly all the species of Styria and the adjoining provinces. He subsequently travelled in Italy and Sicily, "where I was much struck," he says, "with the circumstance that neither in the Kingdom of Naples nor in Sicily is there anything like the scattered hamlets and cottages that we find everywhere in England and Germany; a result of the comparative insecurity of life and property and a cause of the preference of Southern people for town life, and hence the little attention paid to natural history by them, both in ancient and modern times."

In 1846 he visited Cape Colony, where he stayed two years and made a very large collection of plants. He journeyed across the Karroo in an ox-wagon, "the effect of which," he quaintly says, "I felt for several years in the singular habit of connecting all noises that I heard in my sleep with the cries of the wild animals of that desert. This seems the more strange as I am not conscious that I ever dreamed of being aboard ship, although the circumstances of a sea voyage are more striking than those attending a land journey." He then visited the United States, Jamaica, Canada, Norway, and other countries.

In 1859 he assumed the name of "Prior" in addition to his former surname of "Alexander" on the death of his maternal uncle, from whom he inherited property in Somersetshire. For the last forty years of his life he divided his time between London and Somersetshire, and was occupied in winter with literary pursuits, in summer with antiquarian researches.

In 1860 he published a work on *Ancient Danish Ballads* in three volumes; in 1863 *Popular Names of British Plants*, a second edition of which was brought out in 1871. He also published several works of a lighter nature, amongst which may be mentioned a book on croquet, a game in which he was adept and an authority.

During the last few years of his life Dr. Prior was so crippled from paralysis agitans, marked especially by rigidity of body and limbs, that he was unable even to feed himself. This condition, a great affliction for one formerly so active, was borne without a murmur. Helpless in body, he retained great vigour of mind and perfect memory of even recent events until a few days before he died. During the last year or two he spoke but seldom. His impassive countenance, however, and mode of speaking, which was obviously attended with effort, and preceded by a long latent period and deep-drawn breath, if anything, rather enhanced the value of his observations, which were always to the point.

He preserved a keen sense of humour, and would find amusement, even in his 93rd year, in constructing excellent verse based on humorous themes suggested to him, examples of which were published in the *St. George's Hospital Gazette*. He retained also his interest in plants, and was wheeled almost daily into the Botanical Gardens.

Dr. Prior was very abstemious in his mode of living. He did not smoke, and was with difficulty persuaded to take any alcoholic stimulants. His long life may in part be attributed to such causes, but more, perhaps, to the longevity inherent in his family. His death was a very quiet one, due apparently to influenzal poison, and preceded, for a few days, by high temperature and deep sleep ending in coma.

ROBERT ALLAN CAMPBELL, M.B., C.M.,

Newcastle-upon-Tyne.

LAST week there passed away Robert A. Campbell, one of the best known and respected medical practitioners of Newcastle-upon-Tyne and surrounding district. He was born 51 years ago in Lanarkshire, the son of a schoolmaster who had filled

with distinction the Presidential Chair of the Educational Institute of Scotland. He graduated at Glasgow University in 1873. His first year was spent in the old College in the High Street. As a student he had the faculty of making friends, and never intentionally made an enemy, a faculty which he retained to the end of his life.

The writer of this short notice looks back with particular affection to his first meeting with the subject of this memoir in the dissecting room of Glasgow University, and to the commencement of a friendship interrupted only by death. Although Robert Allan Campbell never took a very prominent place in his classes he was always regarded as an exemplary, hardworking, and painstaking student. There was nothing of the "grind" about him, nor did he simply read to pass examinations: he read for the love of reading. Of the numerous attachments formed in his student days, many of which death has long since sundered, Dr. Campbell loved to speak. Only a few weeks ago he reminded the writer of the regularity with which, for example, birthday souvenirs passed between him and medical men of his own year. Shortly after graduating Dr. Campbell became assistant to the late Mr. Broadbent, of South Hetton, co. Durham, with whose family he always remained on the closest terms of intimacy. About twenty-eight years ago he settled at Newcastle, and was associated with Dr. Gibb, one of the best known and busiest medical practitioners in the North of England. How he plodded during those many years is known to his relatives and his immediate friends; how much he was esteemed by Dr. Gibb's and his own private patients was in evidence as the last tribute of respect was paid to the memory of the deceased on Saturday, January 24th.

Dr. Campbell was a man of versatile attainments, of wide reading, and of considerable ability. In literature, art, and poetry he found recreation, and notwithstanding the demands of a very large practice he yet found time to contribute papers upon literary subjects to the various local societies. In medicine he kept himself well abreast of the times, for he was always a student. The attractions which his profession had for him lay rather in the philosophical and biological problems that it presented than in the practice of it. Friends who had the privilege of his close acquaintance know that his generosity only equalled his ability.

Dr. Campbell was one of the founders of the Newcastle-upon-Tyne Clinical Society and one of its earliest Presidents. For a period he was Assistant Surgeon to the Hospital for Children. Inheriting all that is best in the traditions of his country, and having dived deeply into its literature, he had wide knowledge of the Scottish school of letters and romance, and was a great admirer of and believer in the Glasgow School of Art and its promises of fulfilment. He was the Chairman of the Newcastle Burns Statue Fund, ex-President of the Burns Club, and a promoter and staunch supporter of the Pen and Palette Club

In the matter of health, Dr. Campbell was most unfortunate. A poisoned wound caught in the discharge of a professional duty many years ago kept him from work for several months. He never enjoyed subsequently the same measure of good health. Two or three attacks of rheumatic fever left a weakness of the heart, which, with recurrent attacks of bronchitis, undermined a constitution that had been originally robust. For the last three months Dr. Campbell had been more or less laid aside. In his illness he had the skilful attention of his friends Dr. Limont and Dr. Oliver, as well as that of his brother-in-law Dr. Jas. Farquharson, and of his brother Dr Arch. Campbell, of Heaton, Newcastle; but, despite their efforts, his illness made steady progress, and death came quietly on the evening of January 21st. Mental and physical suffering had so told upon him that long before the end came he expressed himself as ready to go. Life and its opportunities had become gradually so narrowed down for him that, to a man of his mental energies, such circumstances were particularly trying.

He was laid to rest on January 24th in St. Andrews Cemetery, not far from where the late Professor Arnison and Mr. Williamson lie. If the esteem in which a member of our profession is held is to be reckoned by the large number of people that attended his funeral, well may it be said of Dr. R. A. Campbell that he had this to the full. At the graveside there were abundant signs of unfeigned grief in the large concourse of relatives, friends, brother practitioners, representatives of public bodies and patients, at the comparatively speaking early death of one whom to know was to respect and love.

ALEXANDER THOMSON, M.D.,

Consulting Surgeon to the Dumfries and Galloway Royal Infirmary.

We regret to announce the death on January 18th of Alexander Thomson, M.D., L.F.P.S.Glasg., of Dumfries, at the age of 70. An attack of influenza a few weeks ago had apparently been recovered from, and he was actively engaged in professional work when he caught a chill on January 14th, which was followed by acute pleurisy, ending fatally after an illness of three days.

Dr. Thomson was a native of Shotts, in Lanarkshire, and studied medicine at Glasgow University. After a distinguished career as a student he was appointed House-Surgeon to the Glasgow Royal Infirmary. He was also House-Surgeon to the Lock Hospital there, and President of the Glasgow University Medical Society.

In 1861 Dr. Thomson settled in Dumfries, where he rapidly built up a large practice. He was appointed Visiting Physician to the Dumfries and Galloway Royal Infirmary in 1872, but resigned after two years, when a vacancy occurred on the surgical staff, and to this he was appointed. His resignation two years ago the directors accepted with regret, and appointed him Consulting Surgeon to the hospital. For many years Dr. Thomson has been recognized as the leading surgeon in the South of Scotland. He was perhaps the first country surgeon in Scotland to operate on ovarian tumours, having successfully removed one in February, 1865. As President of the Border Counties Branch of the British Medical Association in 1888, he delivered an interesting address on ovariotomy.

For the long period of thirty three years Dr. Thomson acted as Medical Officer of Health for the Burgh of Dumfries, besides holding many other important public offices. By his death his medical brethren in Dumfries and a large part of the South of Scotland have lost a friend and sagacious counsellor on whom they could always rely. His great experience, sound judgement, and dexterity in operating made him trusted by patients and colleagues alike. Both in hospital and private practice the loss of his always highly valued opinion will be felt for a long time to come.

Dr. Thomson leaves a widow and two daughters to mourn his loss.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. Isidor Albu, of Berlin, sometime Professor in the Medical School of Teheran, Persia, aged 67; Dr. Alfred Kast, Professor of Medicine and Director of the Medical Clinic in the University of Breslau, aged 46; Dr. Bernardo da Serra da Murabau, for many years Professor of Physiology, and sometime Dean of the Medical Faculty in the University of Coimbra, aged 87; Dr. M. Lawdowski, Professor of Histology and Embryology in the Military Medical Academy of St. Petersburg; Dr. M. V. Pereira, Professor of Clinical Surgery in the University of Bahia; and Dr. Carl Wenzel, formerly Surgeon-General of the German navy, aged 71.

ROYAL NAVY AND ARMY MEDICAL SERVICES

ROYAL NAVY MEDICAL SERVICE.

Titles and Promotion.

The publication of Lord Selborne's scheme for regulating the mode of admission to the various branches of the navy, and determining the titles which shall be borne by the officers, has naturally raised the question of executive titles for officers of the Royal Navy Medical Service. So far as our information goes we have no reason to think that the majority of officers of that service desire executive titles. That some do so our columns have afforded evidence, but we believe them to be in a decided minority.

The slow advance in relative rank which entails disadvantages with regard to precedence and cabin accommodation is felt to be a serious disability, and we are glad to know that the question of accelerated promotion is under consideration, and that it is not improbable that an announcement on the subject may be made at an early date.

We believe it to be very improbable that executive titles will be given to medical officers, at any rate at present. Lord Selborne's scheme, which will eventually give engineer officers executive titles—lieutenant (E), commander (E), etc.—will only begin to come into operation next July, and it must be some years before any officers of the engineering branch can qualify for these titles. On April 1st, however,

the existing officers of this branch will receive compound titles—engineer-lieutenant, engineer-commander, etc. It is possible that this principle may be extended to the medical branch, and that officers belonging to it will receive the compound titles—surgeon-lieutenant, surgeon-commander.

THE following appointments have been made at the Admiralty: EDWARD C. WARD, M.D., Staff Surgeon, to the *President*, for course of hospital study, January 26th: JOHN K. ROBINSON, M.B., Surgeon, to the *Rainbow*, January 21st: THOMAS C. MEIKLE, M.A., M.B., Surgeon, to the *Pactolus*, January 23rd: EDWARD F. POWER, Surgeon, to the *Caledonia*, January 23rd; GEORGE E. MACLEOD, Surgeon, to the *Wildfire*, February 7th; DONALD T. HOSKYN, M.B., Staff Surgeon, to the *President*, for three months' course of hospital study, January 26th; ROBERT HARDIE, M.B., Staff Surgeon, to the *Jupiter*, January 26th.

ROYAL ARMY MEDICAL CORPS.

CAPTAIN E. BRODRIBB is placed on temporary half-pay on account of ill-health, January 20th.

Captain H. F. HART resigns his commission, January 24th. He joined the department as Lieutenant, July 28th, 1899, becoming Captain three years thereafter. He served in the recent South African war.

INDIAN MEDICAL SERVICE.

COLONEL ARTHUR HENRY COLE DANE, M.D., Bombay Establishment, died recently at Karachi, India, aged 50. He was appointed Assistant Surgeon, September 30th, 1867, and became Surgeon-Lieutenant-Colonel April 1st, 1898. He was in the Afghan war in 1878 80, and was in the engagement at Girashk, in the defence of Kandahar, including the sortie of Deh Khojah, and at the battle of Kandahar (mentioned in dispatches, medal with clasp).

ROYAL ARMY MEDICAL CORPS (MILITIA).

THE seconding of Lieutenant M. A. CHOLMELEY, which was announced in the *London Gazette* of November 21st, 1902, bears date November 29th, 1902, and not as therein stated.

IMPERIAL YEOMANRY.

TEMPORARY CAPTAIN R. MURPHY, Medical Officer, 38th Battalion, resigns his commission, November 21st.

Temporary Captain J. H. WRIGHT, M.B., Medical Officer Unattached, relinquishes his commission, January 15th.

Surgeon-Major R. E. WOOD, Lanarkshire, is promoted to be Surgeon-Lieutenant-Colonel, January 24th.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

SURGEON-CAPTAIN S. W. WOOLLETT, 1st Norfolk, is promoted to be Surgeon-Major, January 7th.

VOLUNTEER RIFLES.

MR. R. H. HENDERSON, M.D., is appointed Surgeon-Lieutenant in the 1st Lanarkshire, January 24th.

VOLUNTEER INFANTRY BRIGADE BEARER COMPANIES.

MR. C. H. PERRAM, M.D., is appointed Lieutenant in the Bedford Company, January 24th.

Mr. M. S. W. GUNNING is appointed Lieutenant in the Leicester and Lincoln Company, January 24th.

Captain J. W. DAVIES, South Wales Border Company, is promoted to be Major, January 24th.

Lieutenant F. J. SADLER, M.B., South Yorkshire Company, resigns his commission, January 24th.

ENNO-SANDER PRIZE.

WE are requested to state that the Enno-Sander Prize of the Association of Military Surgeons of the United States for 1903 will be awarded to the author of the best essay on the Differential Diagnosis of Typhoid Fever in its Earliest States. The Board of Award will consist of Dr. Austin Flint, of New York; Colonel Calvin De Witt, of the army; Professor Victor C. Vaughan, of Ann Arbor. Full information concerning the competition, which is open under certain conditions to medical officers of the British navy and army, may be obtained from Major James Evelyn Pilcher, Carlisle, Pennsylvania, the Secretary of the Association.

MEDICO-LEGAL AND MEDICO-ETHICAL.

ACTION FOR LIBEL BROUGHT BY A MEDICAL MAN.

As reported in the *Cambrian News* for January 20th, 1903, Dr. Bonsall, Medical Officer of the Aberystwith Workhouse, brought an action at the Cardiganshire Assizes on January 20th for damages for libel against Mr. George Rees, the Editor of the *Welsh Gazette*. The alleged libel had reference to the treatment of a pauper patient for rectal prolapse, in which the innuendo was that the case had not been treated skilfully and an unjustifiable operation had been performed. From the evidence it appears that the prolapse had been reduced and that the patient died nineteen days later from blood poisoning. The plaintiff was represented by counsel instructed by the solicitors of the London and Counties Medical Protection Association. The defendant pleaded that the article in question did not refer to the plaintiff, that it did not bear the meaning alleged, that it was not defamatory, that it was true in fact, and was a comment on a matter of public interest. The judge in reply to a question from the jury, said that if a man chose to publish that which defamed his neighbour it made no difference whether he believed it to be true. In regard to damages, no doubt higher damages would be given if it were felt that the slander was out of an evil mind and not true. The jury brought in a verdict for the plaintiff with £10 damages.

DENTAL.—We can only recommend our correspondent to consult his solicitor.

LIABILITY FOR FEES.

D. W. G. writes that he was recently called in by the police to attend a woman under their charge; in connexion with the same matter our correspondent was directed by the coroner to make a necropsy, and for this received a fee of 2 guineas. The superintendent of police declines to pay our correspondent for his attendance on the prisoner, alleging that the fees for inquests and for giving evidence at the assizes to which the prisoner is committed are supposed to cover medical attendance. He inquires how he can obtain payment.

*** The question is one of fact, and if a medical man is called in by the police to attend a person in custody he has a legal claim upon the police for services so rendered. The fee received from the coroner does not affect the question, such fee being a statutory one as defined by Section XXII of the Coroners Act, 1887.

ATTENDANCE AFTER CONFINEMENT.

GENT. CO. asks what is the usual period of attendance on the mother and baby included in a confinement fee of 4 guineas. Does this include attendance for a month?

*** It is usual for a medical practitioner to make no extra charge beyond the confinement fee for any attendance on the mother and child during the period for which he is accustomed to attend patients after their confinement, where the illness might be considered to have arisen from puerperal causes. There is no fixed period, but a month would probably be the extreme, and from a fortnight to three weeks the average.

COLLECTION OF DEBTS.

A CORRESPONDENT inquires as to the best way of collecting old standing debts, some of which have been running for more than six years.

*** We can only refer our correspondent to those means of recovering debts which are open to the rest of the community. He is the best judge whether it is advisable to take legal action, and he must not forget that he will be barred from recovering debts of more than six years' standing, unless within that time he has been paid any portion of the debt on account, or has received from the debtor in writing an unconditional promise to pay the same.

NOTIFICATION OF CHANGE OF ADDRESS.

PERPLEXED.—Either a lithographed or printed circular intimating a change of address may be sent to patients, preferably the former. The important thing is that it should only be sent to bona-fide patients, as complaints are naturally made if such circulars reach the patients of other practitioners.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

The Radcliffe Travelling Fellowship.—The Regius Professor of Medicine gives notice that an examination for a Fellowship of the annual value of £200, tenable for three years, will commence on Tuesday, March 10th. Candidates must have passed all the examinations for the degree of Bachelor of Arts, and of Bachelor of Medicine, and must have been placed in the first class in one at least of the public examinations of the University, or have obtained some prize or scholarship within the University open to general competition among the members of the University. The examination will occupy three days. Papers will be set in physiology, pathology, and preventive medicine, and a subject will be proposed for an essay; there will also be a practical examination in pathology. Candidates should send their names, addresses, and qualifications to the Radcliffe Examiners, University Museum, Oxford, on or before Tuesday, February 10th.

UNIVERSITY OF CAMBRIDGE.

Degrees.—At the Congregation on January 15th, the following were admitted to the degree of Bachelor of Surgery:

F. Bryan, King's, A. M. Simpson, King's; J. G. Cooper, Trinity; H. H. Dale, Trinity; R. B. Etherington-Smith, Trinity; H. D. Ledward, Trinity; L. Noon, Trinity; J. E. Payne, Peterhouse; E. A. A. Beck, Clare; F. H. Parker, Pembroke; W. F. Buckle, Caius; C. Roper, Caius; C. R. Worthington, Caius; E. B. Leech, Christ's; H. E. Symes-Thompson, Christ's; W. H. Fisher, Emmanuel; H. Wales, Sidney; J. H. F. Wilgress, Host. Selwyn.

UNIVERSITY OF EDINBURGH.

Freemasonry.—We are requested to state that a petition is being presented for the consecration of a Masonic Lodge founded by old students of Edinburgh University, to be named after their Alma Mater. Those members of the craft who wish to be included among the founders should communicate at once with Dr. M'Cann, Cursitor street, Mayfair.

SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST, January, 1903.—The following candidates passed in:

Surgery.—W. M. Emmerson (Sections I and II), Durham; W. T. Harris (Section II), St. Thomas's Hospital; A. R. Henchley, Middlesex Hospital and Edinburgh; G. Lucas (Sections I and II), St. George's Hospital; A. Mooney (Sections I and II), Royal Free Hospital; M. E. S. Scharlieb (Sections I and II), Royal Free Hospital; H. G. Sewell (Sections I and II), London Hospital.

Medicine.—E. F. Beaumont (Sections I and II), Middlesex Hospital; F. G. H. Cooke (Section I), University College Hospital; W. E. Denniston (Section I), St. Thomas's Hospital; L. E. Ellis (Section I), St. George's Hospital; W. M. Emmerson (Sections I and II), Durham; A. E. Henton (Sections I and II), St. Mary's Hospital; H. Jacques (Section I), London Hospital; T. G. Longstaff (Section II), Oxford and St. Thomas's Hospital; C. C. Rushton (Section II), University College Hospital.

Forensic Medicine.—R. Appleton, Leeds; E. F. Beaumont, Middlesex Hospital; F. G. H. Cooke, University College Hospital; W. E.

Denniston, St. Thomas's Hospital; H. J. Gater, Guy's Hospital; R. C. Rumbelow, Middlesex Hospital; J. W. Watson, Manchester.

Midwifery.—E. F. Beaumont, Middlesex Hospital; W. M. Emmerson, Durham; H. J. May, London Hospital; A. Rogers, Cardiff and St. Mary's Hospital; J. E. Turle, University College Hospital; T. R. Waltenberg, Manchester.

The diploma of the Society was granted to R. Appleton, W. T. Harris, A. R. Henchley, A. Mooney, and M. E. S. Scharlieb.

CONJOINT BOARD IN IRELAND.

CANDIDATES have passed Examinations of this Board as undernoted:

Final Examination.—Honours: C. W. Ewing. *Pass:* Miss L. H. Alexander, J. E. Brereton, J. B. Logan, J. P. O'Donnell, W. H. MacM. Phelan.

Second Professional Examination.—Honours: W. W. Boyce, T. J. Madden (Miss C. E. O'Meara—equal), R. Bury, A. C. Adams (M. J. C. Kennedy, R. A. Browne, J. M. Hayes, H. Hosty—equal), H. N. Cole (J. S. Dunne—equal), I. Allann, W. T. Morton. *Pass:* M. Ambrose, C. J. R. Clarke, P. E. Hayden, P. M. Moore, W. J. O'Donnell, H. E. Redmond.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

VITAL STATISTICS FOR ENGLAND AND WALES, 1902.

As all medical officers of health are now required to complete their annual reports to the Local Government Board by the middle of February in each year, the following figures have been provisionally compiled for their convenience from the Quarterly Reports of the Registrar-General:

ENGLAND AND WALES, 1902.

Annual Birth-rates and Death-rates, and Rates from the Seven Chief Epidemic Diseases.

	Annual Rates per 1,000 Living.			Infant Mortality—Annual Death-rate of Infants under 1 Year per 1,000 Births.
	Births.	Deaths from all Causes.	Deaths from Seven Chief Epidemic Diseases.	
England and Wales ...	28.6	16.3	1.64	133
Rural England and Wales	27.4	15.3	1.14	119
76 great towns	30.0	17.4	2.12	145
103 smaller towns	27.3	15.3	1.53	135

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 8,701 births and 5,822 deaths were registered during the week ending Saturday last, January 24th. The annual rate of mortality in these towns, which had been 20.0, 18.5, and 17.5 per 1,000 in the three preceding weeks, rose again last week to 20.1 per 1,000. Among these large towns the death-rates ranged from 6.2 in Smethwick, 12.0 in Hornsey, 12.2 in Leyton, 12.3 in King's Norton and in Blackburn, 12.8 in Walthamstow and in Leicester, and 13.1 in Willesden, to 25.7 in Swansea, 25.8 in Huddersfield, 26.2 in Merthyr Tydfil, 27.0 in Newcastle-on-Tyne, 27.5 in Newport (Mon.), 27.8 in Stockport and in Oldham, 29.4 in Wigan, and 32.9 in West Bromwich. In London the rate of mortality was 20.9 per 1,000, while it averaged 19.8 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.9 per 1,000 in the seventy-six large towns; in London this death-rate was equal to 2.2 per 1,000, while it averaged 1.7 per 1,000 in the seventy-five other large towns, among which the highest death rates from the principal infectious diseases were 3.3 in Middlesbrough, 3.4 in Wigan, 3.6 in Rotherham and in Hull, 3.7 in Manchester, 4.0 in Great Yarmouth, 4.4 in Stockport, 4.5 in Newport (Mon.); and 7.1 in West Bromwich. Measles caused a death-rate of 1.5 in Merthyr Tydfil, 1.8 in Manchester, 2.3 in Hull, 2.7 in Wolverhampton, 3.0 in Newport (Mon.), and 5.5 in West Bromwich; scarlet fever of 1.6 in Burnley and 1.8 in Wallasey; diphtheria of 1.5 in Merthyr Tydfil, 1.6 in Middlesbrough, and 2.0 in Great Yarmouth; and whooping-cough of 1.3 in West Ham and in Aston Manor, 1.6 in Willesden and in Huddersfield, 1.7 in Wigan, 1.8 in Rotherham, and 2.2 in Croydon and in Stockport. The mortality from "fever" showed no marked excess in any of the large towns. Of the 5 fatal cases of small-pox registered last week in these towns, 1 belonged to Stockport, 1 to Liverpool, 1 to Oldham, 1 to Burnley, and 1 to Sunderland. The Metropolitan Asylums Hospitals contained 4 small-pox patients on Saturday, January 24th, against numbers declining from 21 to 5 on the five preceding Saturdays; no new case was admitted during the week, the numbers having been 1, 4, and 2 in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had been 2,378, 2,419, and 2,128 at the end of the three preceding weeks, had further declined to 2,074 at the end of last week; 227 new cases were admitted during the week, against 214, 223, and 195 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, January 24th, 955 births and 804 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 21.6, 22.6, and 23.4 per 1,000 in the three preceding weeks, further rose last week to 24.6 per 1,000, and was 4.5 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scotch towns the death-rates ranged from 10.8 in Perth and 21.4 in Edinburgh, to 25.8 in Paisley and 27.1 in Glasgow. The death-rate from the principal infectious diseases averaged 3.1 per 1,000 in these towns, the highest rates being recorded in Glasgow and Aberdeen. The 410 deaths registered in Glasgow included 2 from scarlet fever, 3 from diphtheria, 41 from whooping-cough, 8 from "fever," and 10 from diarrhoea. Four fatal cases of measles and 5 of whooping-cough were recorded in Edinburgh; 2 of whooping-cough and 5 of diarrhoea in Dundee; 6 of measles, 2 of whooping-cough, and 2 of diarrhoea in Aberdeen; and 2 of scarlet fever in Paisley.

VACCINATION IN COMMON LODGING-HOUSES.

DEPUTY PUBLIC VACCINATOR writes: At the request of the medical officer of health I vaccinated forty persons staying in a common lodging-house in my district, a large proportion of whom are permanent lodgers. What fee should be charged in each successful case? May a lodging-house be accounted the "home" of a person staying in it, within the meaning of the Act, and the full fee (in this district 5s.) charged?

*** We consider that the common lodging-house must be held to be the "home" of the people sleeping therein, and that therefore the home fee should be charged in each case. This view has been contested in at least one district in London during the recent epidemic, in connexion with charge for vaccinations at "shelters," but we understand that the Local Government Board refused to express an opinion, and left the matter to be decided between the public vaccinator and the guardians, "subject to the decision of the auditor." There can be little doubt, however, that the "home" fee would be upheld in a court of law.

GUARDIANS AND INFECTIOUS TRAMPS.

GUARDIAN inquires as to the following matters: (*a*) The proper method to employ to disinfect clothing? (*b*) Is this applicable to the tramp ward of a workhouse? (*c*) Is it any advantage to disinfect the clothing of all casuals? (*d*) Have we (the Board of Guardians) power to destroy the clothing of diseased tramps? (*e*) Have we power to compulsorily isolate infected tramps, and tramps who have been exposed to contagion who are not suffering from any infectious disease?

*** (*a*) The most effectual method of disinfection for clothes is steam. (*b*) This is applicable wherever provision can be made for the necessary apparatus; Lyon, Thresh, Equifex, Goddard Massey and Warner, and Reck are some of the chief names of steam disinfecting machines. (*c*) Probably the labour involved in disinfecting the clothing of all casuals is too great in proportion to any advantage gained. (*d*) Guardians have, we believe, power to destroy infective clothing which is beyond disinfection. In such cases, of course, compensation should be considered (see Public Health Act, 1875, Sect. CXXI). (*e*) The isolation authority is generally the sanitary authority, not the Poor law guardians. The sanitary authority has power of compulsory removal to hospital of any person suffering from any dangerous infectious disorder and without proper lodging or accommodation. A certificate signed by a legally-qualified medical man and the consent of the superintending body of such hospital must be obtained, and then removal is enforced by the order of a justice. Compulsory isolation cannot be enforced in the case of a person not suffering from such disease, even though such person may have been exposed to infection. In practice it is generally possible to arrange for isolation without a justice's order if the whole situation is reasonably explained.

SMALL-POX HOSPITALS.

H. DE B. D. asks for information as to the minimum distance small-pox hospitals should be from inhabited dwellings, and some information as to aërial infection of small-pox.

*** We know of no precise minimum distance which is looked upon, officially or generally, as the standard in such matters. Small-pox hospital sites should be placed outside towns and at places as far distant from any populated neighbourhood as considerations of accessibility permit. The report of Mr. W. H. Power on the influence of the Fulham Small-pox Hospital on the neighbourhood surrounding it is one of the best references on the subject. The report will be found in a special supplement of the Local Government Board 1880-81. (Tenth annual report, Eyre and Spottiswoode, 58. Reissued in 1894.) This supplement also contains information on hospitals for infectious diseases generally. Since 1882 many parallel investigations have been made into this subject; see periodical medical literature, reports of the Metropolitan Asylums Board, the report of the Royal Commission on small-pox and fever hospitals, 1882, and the Local Government Board reports, medical supplements, 1884, 1885, and 1886. Reference might also be made to Allbutt's *System of Medicine*, vol. ii.

MEDICAL NEWS.

THE annual dinner of the West London Medico-Chirurgical Society will be held at the Trocadero Restaurant, London, W., on Thursday, February 19th. Further particulars can be obtained from Dr. Arthur Saunders, Honorary Secretary, 49, Harley Street, London, W.

AMONGST the names of those called to the Bar on January 19th we notice that of Mr. R. Henslowe Wellington, M.R.C.S., L.R.C.P.Lond., Deputy Coroner for London and the City of Westminster, and Secretary to the Medico-Legal Society.

DR. PERCY ATHELSTAN NIGHTINGALE has received the King's permission to accept and wear the Insignia of the Fourth Class of the Royal Siamese Order of the White Elephant conferred upon him by H.M. the King of Siam in recognition of valuable services rendered to the Government of Siam when acting as Siamese Delegate to the International Conference at Brussels.

A HOSPITAL FOR "BLOODLESS SURGERY" IN NEW YORK.—The "Lorenz Orthopedic Charity Hospital of New York City" has asked the State Board of Charities for approval of its certificate of incorporation. Its object is to establish a free hospital or dispensary for the treatment of persons afflicted with deformities, especially congenital dislocation of the hip, according to the Lorenz method.

RUSSIAN SURGICAL CONGRESS.—The Congress of Russian Surgeons held its third meeting at Moscow from December 30th, 1902, to January 2nd, 1903, under the presidency of Professor W. Rasumowski, of Kasan. About 80 surgeons attended the Congress. The principal subject of discussion was the treatment of surgical tuberculosis. The next meeting of the Congress will be held at St. Petersburg in 1904.

RUSSIAN UNIVERSITIES.—The report of the University of Jurjew (Dorpat) for 1902 shows that during the course of that year the degree of Doctor of Medicine was conferred on 6, and the diploma of medical practitioner on 144, persons. The total number of students on the books of the University of Kieff in December, 1902, was 2,441. Of this number, 537 belonged to the Medical Faculty.

THE LATE MAJOR WALTER REED.—At a recent meeting of the New York Academy of Medicine, Dr. W. W. Keen, Philadelphia, said that he had been informed that the family of Major Walter Reed, whose name is associated with the establishment of the mosquito theory of yellow fever, had been left with only a very small pension for their support, and that President Gilman, of the Carnegie Institute, had suggested the propriety of the medical profession and the public generally raising for them a fund of 100,000 dollars. At the recent meeting of the American Association for the Advancement of Science in Washington the medical and allied branches appointed a committee to collect a fund for Mrs. Reed.

FOREIGN PRACTITIONERS IN SPAIN.—The Spanish law of September 9th, 1857, gave to the Government, acting on the advice of the Council of Public Instruction, power to recognize medical studies pursued abroad, and to grant to persons holding a regular diploma obtained in another country the temporary right of practising medicine in Spain. On the downfall of Queen Isabella a more liberal spirit prevailed, and on February 6th, 1869, Señor Zorilla issued a decree declaring that foreign degrees should be held as equivalent to Spanish, and granting foreign doctors the right to practise in Spain on production of their diplomas and payment of 500 pesetas (£20). This ministerial order has recently been rescinded. A royal decree, dated November 7th, 1902, revives the law of 1857, but suspends its application till a new ordinance has been promulgated. Foreign doctors now practising are to be compelled to comply with the new enactment within six years.

THE SANITARY INSTITUTE.—Hitherto the sessional meetings of the Sanitary Institute have been held only at the headquarters in London, but it has now been arranged to hold such a meeting at the Municipal School of Technology, Manchester, on Saturday, February 7th, at 11 a.m., when a discussion on the removal and isolation of infective patients in populous districts will be opened by Dr. Meredith Young, M.O.H. Stockport. The chair will be taken by Mr. Wynter Blyth, Chairman of the Council of the Institute. In the afternoon a visit may be paid to the Infectious Disease Hospital, Monsall, under the guidance of Dr. Niven, M.O.H. Manchester, or to the Ladywell Sanatorium for infectious diseases, under the guidance of Dr. Tattersall, M.O.H. Salford.

DR. CHARCOT'S POLAR EXPEDITION.—Dr. Jean Charcot, the son of the famous neurologist, is organizing an Arctic expedition. He is having a 400-ton yacht built for him in cast steel at Marseilles. Great attention is being paid to the laboratory fittings and apparatus. The scientific staff will include a zoologist, an expert in oceanography, a bacteriologist, a geologist, and a botanist. Provisions for eighteen months will be taken on board, though the expedition is to last but six months. The expedition will start from Saint Malo and will make for Jan Mayen Island; it will then pass through the region between Francis Joseph Land and Nova Zembla, whence a northern course will be taken. Dr. Charcot is bearing all the expense of fitting out the expedition, but grants have been promised both by the Académie des Sciences and the Natural History Museum of Paris.

A COURSE of training in applied hygiene for school teachers, arranged by Bedford College and the Sanitary Institute, is being given during Lent, Easter, and Michaelmas terms this year. It commenced on January 24th, when Dr. W. H. Willcox, D.P.H., began a course of twelve lectures on personal hygiene to be given at Bedford College. In Easter term a course of five lectures on the construction and furnishing of schools will be given at the Sanitary Institute, two by Dr. Henry Kenwood, D.P.H., and three by Mr. J. Osborne Smith, F.R.I.B.A. In Michaelmas term four lectures on hygiene in education will be given at Bedford College by Miss H. Robertson, B.A. The fee for the whole course is three guineas, further particulars can be obtained on application to the Principal of Bedford College or the Secretary of the Sanitary Institute, Margaret Street, W.

FOREIGN MEDICAL PRACTITIONERS IN PERU.—The following information as to the practice of medicine by foreigners in Peru may be of interest to some of our readers. The American Consul of Callao, Mr. Charles V. Herdliska, has written as follows to the State Department in reply to an inquiry by an American practitioner at Lima: "Before a physician can enter upon the practice of his profession in Peru, he must pass a State examination upon medicine, conducted in the Spanish language. Upon being found qualified, a certificate is issued which entitles him to practise his profession in any part of the Republic. The opportunities for American physicians would seem to be good. Both Lima and Callao contain quite a large American and English colony, and the Peruvians themselves appear to have great faith in the American, English, German, and French physicians and surgeons on account of the advanced state of medical science in those countries."

MEDICAL VACANCIES.

The following vacancies are announced:

BIRMINGHAM CORPORATION WATERWORKS, Elan Valley, Radnorshire.—Resident Surgeon for the hospital. Salary, £250 per annum. Applications to Mr. E. A. Lees, 44, Broad Street, Birmingham, by February 28th.

BOLTON INFIRMARY AND DISPENSARY.—(1) Senior House-Surgeon. Salary, £130 per annum. (2) Junior House-Surgeon. Salary £100 per annum. Apartments, board and attendance provided in each case. Applications to W. W. Cannon, Esq., Honorary Secretary, 20, Mawdsley Street, Bolton, by February 10th.

BRADFORD POOR-LAW UNION.—Resident Assistant Medical Officer for the Hospital and Workhouse; unmarried. Salary, £125 per annum with rations, apartments, and washing. Applications to the Clerk to the Guardians, 22, Manor Row, Bradford, by February 10th.

BRADFORD ROYAL INFIRMARY.—Dispensary Surgeon, unmarried. Salary, £100 per annum, with board and residence. Applications, endorsed 'Dispensary Surgeon," to be sent to the Secretary.

BRISTOL ROYAL INFIRMARY.—(1) Resident Obstetric Officer. Salary, £75 per annum. (2) Resident Junior House-Surgeon and Anaesthetist. Salary at the rate of £50 per annum. (3) Resident Casualty Officer. Salary at the rate of £50 per annum. Board, lodging, and washing provided in each case. Appointment for (1) for one year, and for (2) and (3) for six months. Applications to the Secretary by February 10th.

BRITISH LYING-IN HOSPITAL, Endell Street, W.C.—Honorary Physician to the Out-patients. Applications to the Chairman of the Board of Management by February 7th.

BUXTON: DEVONSHIRE HOSPITAL.—Assistant House-Surgeon. Salary, £70 per annum, with furnished apartments, board, lodging, and laundry. Applications, endorsed "Assistant House Surgeon," to be sent to the Secretary.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Second House-Physician. Appointment for six months. Salary at the rate of £30 per annum, with board, washing, and residence. Applications to the Secretary by February 10th.

DOUGLAS: NOBLE'S ISLE OF MAN GENERAL HOSPITAL AND DISPENSARY.—Resident House-Surgeon, unmarried. Salary, £82 per annum, with board and washing. Applications to the Honorary Secretary, Mr. F. B. Fleming, 25, Athol Street, Douglas, Isle of Man, by February 7th.

GLASGOW: DUKE STREET PRISON.—Assistant Medical Officer. Salary, £50 per annum. Applications to the Prison Commissioners, 11, Rutland Square, Edinburgh.

LEEDS: GENERAL INFIRMARY.—Resident Medical Officer. Salary, £100 per annum, with board, residence, and washing. Applications to the Secretary of the Faculty by February 11th.

LIVERPOOL: ROYAL SOUTHERN HOSPITAL.—Junior House Surgeon. Salary, £63, with board, residence, etc. Applications to the Chairman of the Medical Board by February 6th.

MANCHESTER: ANCOATS HOSPITAL.—Resident House-Surgeon. Salary, £100 per annum, with board, residence, etc. Present House-Physician is a candidate, and if elected there will be vacancy for a House Physician. Salary, £80 per annum, with board, etc. Applications to the Secretary by February 4th.

NORTH RIDING LUNATIC ASYLUM, Clifton, York.—Senior Assistant Medical Officer; unmarried, and not exceeding 35 years of age. Salary, £200 per annum, rising to £400. Applications to the Medical Superintendent by February 10th.

REDHILL: EARLSWOOD ASYLUM.—Two Assistant Medical Officers; unmarried and under 30 years of age. Salary for Senior, £160, rising to £200 per annum, for Junior £130, rising to £150 per annum. Apartments, board, washing, and £5 per annum in lieu of stimulants provided. Applications, endorsed "Assistant Medical Officer," to be sent to the Secretary, 36, King William Street, London Bridge, E.C., by February 9th.

SHEFFIELD: CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to the Secretary, Mr. Frederick Gill, 14, Norfolk Row, Sheffield, by February 7th.

ROYAL LONDON OPHTHALMIC HOSPITAL, City Road, E.C.—(1) Junior House-Surgeon. Salary, £75 per annum. (2) Third House-Surgeon. Salary, £50 per annum. Board and residence provided in each case. Applications to the Secretary by February 4th.

WESTON-SUPER-MARE HOSPITAL.—House-Surgeon, unmarried. Salary, £100 per annum, with board and residence. Applications to the Honorary Secretary by February 2nd.

WHITECHAPEL UNION INFIRMARY.—First Assistant Resident Medical Officer. Salary, £130 per annum, rising to £150, with rations, furnished apartments, washing, etc. Applications, on forms provided, to be sent to the Clerk to the Guardians, Union Offices, Vallance Road, Whitechapel, E., by February 2nd.

MEDICAL APPOINTMENTS.

CLEGG, J. Gray, M.D., B.S., F.R.C.S., appointed Honorary Surgeon of the Manchester Royal Eye Hospital.

ECCLES, W. McAdam, M.S Lond., F.R.C.S.Eng., appointed Assistant Surgeon to St. Bartholomew's Hospital, London.

FLEMING, William Alexander, M.B., M.S., appointed Public Vaccinator for Catlin's District, New Zealand.

HARRISON, George Alfred, M.R.C.S., appointed Public Vaccinator for the Eltham District, New Zealand.

HARRISON, W. A., M.B., C.M.Edin., appointed District Medical Officer at York, West Australia.

HAY, John, M.D.Viet., M.R.C.S., L.R.C.P., appointed Honorary Pathologist to the David Lewis Northern Hospital, Liverpool.

HIGHET, H. C., M.D., C.M., D.P.H.Lond, appointed Medical Adviser to His Siamese Majesty's Customs Department, Bangkok, Siam.

HILL, Charles A., M.B.Cantab., D.P.H.Viet., appointed Honorary Bacteriologist to the David Lewis Northern Hospital, Liverpool.

JONES, T. C. Litler, F.R.C.S.Eng., appointed Honorary Assistant Surgeon to the Liverpool Royal Infirmary, *vice* G. G. Hamilton, M.B., C.M.Edin., promoted.

LONGFORD, J. M., L.R.C.P., L.R.C.S.Irel., appointed Resident Medical Officer to the Stoke-upon-Trent Union Workhouse.

MOLE, Alfred E., M.B., C.M.Edin., appointed Medical Officer of Health to the Gower District Council, *vice* Horatio Rawlings, L.R.C.P.I., M.R.C.S.Eng., resigned.

MOORE, Ayres, L.R.C.P., L.R.C.S.Irel., appointed District Medical Officer of the Lutterworth Union.

NOALL, William Paynter, M.B., B.S.Lond., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the Bradford Royal Infirmary.

RAINIE, Norman, M.R.C.S., L.R.C.P., Captain I.M.S., appointed Clinical Assistant to the Chelsea Hospital for Women.

SEATON, Douglas, M.B., Ch.B.Viet., appointed Honorary Surgeon to the Leeds Public Dispensary.

TEALE, Michael A., M.A.Oxon., M.R.C.S., L.R.C.P.Lond., appointed Honorary Ophthalmic Surgeon to the Leeds Public Dispensary.

WEIR, J. S. F., M.B., B.S., R.U.I., appointed Assistant Medical Officer to the Hendon Asylum of the Central London Sick Asylum District.

DIARY FOR NEXT WEEK.

MONDAY.

Otological Society of the United Kingdom, 11, Chandos Street, Cavendish Square, W., 4.30 p.m.—Discussion on Tuberculosis of the Ear, the Nose, and the Naso-pharynx, in which Dr. Wyatt Wingrave, Dr. Jobson Horne, and Dr. Wilham Milligan will take part.

TUESDAY.

Pathological Society of London, Jenner Institute, Chelsea Gardens, 8 p.m.—Laboratory Meeting. Exhibits by Drs. Hedin, Barratt, Plimmer, and Leathes.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Professor W. D. Halliburton: On the Chemistry of Muscle and Nerve.

WEDNESDAY.

Obstetrical Society of London, 20, Hanover Square, W., 8 p.m.—Annual Meeting. Specimens will be shown by Drs. Tate, Sikes, Eden, Groves, Inglis Parsons, Herbert R. Spencer, Blacker, Russell Andrews, and Mr. Handley. The President (Dr. Peter Horrocks) will deliver the annual address.

THURSDAY.

North-East London Clinical Society, Tottenham Hospital, N., 4 p.m.—Clinical Cases.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Dr. T. G. Brodie: On the Circulation.

Harveian Society of London, Stafford Rooms, Titchborne Street, Edgware Road, W., 8.30 p.m.—Mr. Noble Smith: Congenital Displacements of the Hips, including a description of Lorenz's Method of Bloodless Reduction. Mr. Sidney Spokes: Immediate Regulation of Teeth.

Roentgen Society, 20, Hanover Square, W., 8.30 p.m.—Mr. J. H. Gardiner will open a discussion on Some Points suggested by the Presidential Address of November, 1902.

FRIDAY.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Dr. A. D. Waller: On Experimental Pharmacology: The Action of Anaesthetics and Narcotics.

West Kent Medico-Chirurgical Society, Royal Kent Dispensary, Greenwich Road, S.E., 8.45 p.m.—Mr. Charles J. Heath on Operative and other Treatment of Chronic Suppuration in the Middle Ear.

West London Medico-Chirurgical Society, West London Hospital, Hammersmith Road, W., 8.30 p.m.—Discussion on The Sequelae of Typhoid Fever and their Treatment. To be opened by Dr. Seymour Taylor, and continued by Dr. William Hunter, Dr. Andrew Elliot, and others.

Laryngological Society of London, 20, Hanover Square, W., 5 p.m.—Cases, specimens, and instruments will be shown by Mr. Charters Symonds, Dr. Pegler, Mr. Lake, Mr. de Santi, Dr. Brown Kelly, Mr. Stewart, Dr. Donelan, and others.

POST GRADUATE COURSES AND LECTURES.

Charing-cross Hospital, Thursday, 4 p.m.—Demonstration of Medical Cases.

Hospital for Consumption and Diseases of the Chest, Brompton, S.W., Wednesday, 4 p.m.—Lecture on Haemoptysis.

Hospital for Sick Children, Great Ormond Street, W.C., Thursday, 4 p.m.—Lecture on Abscesses in connexion with Spinal Caries and their Treatment.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C. Demonstrations will be given at 4 p.m. as follows:—Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, ear. Lectures will also be given at 5.15 p.m. as follows: Monday, Hydrotherapeutics and Balneotherapeutics; Tuesday, Aural Vertigo. Wednesday, Erythematous Eruptions, their relationship to general disease. Thursday, Some Forms of Nervous Disease occurring in Families. Friday, House Ventilation and Drainage.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C.—Lectures will be given at 3.30 p.m. as follows: Tuesday, Bulbar Paralysis; Friday, Ocular Paralysis.

Post-Graduate College, West London Hospital, Hammersmith Road, W.—Lectures will be delivered at 5 p.m. as follows: Monday and Tuesday, Complications of Middle-Ear Suppuration, with lantern slides. Wednesday, Surgical Anatomy; Thursday, Treatment of some Injuries and Emergencies; Friday, States of Mental Exaltation—Mania, Paranoia.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning in order to ensure insertion in the current issue.

BIRTHS.

DONALD.—At St. Andrews, Aldershot, on the 26th inst., the wife of David Donald, L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg., a daughter.

PRICE.—On January 24th, at Uppermill, Saddleworth, Yorks, the wife of David Price, M.R.C.S., L.R.C.P., of a son.

SMITH.—On January 23rd, at 82 Dyne Road, Brondesbury, N.W., the wife of J. Anderson Smith, M.D.Lond., of a son.

DEATH.

ROBERTSON.—At Kintampo, West Africa, on 5th January, Alistair Robertson, Colonial Surgeon, elder son of John Robertson, Lowes, Dunkeld. (By cable.) Only intimation.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOUENAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

CREDO asks to be recommended a good method of medical book-keeping in a non-dispensing practice.

AJAX asks what would be a proper weekly charge for the hire of an incubator.

PROCUL asks for advice as to treatment of a girl, aged 11 years, who was operated on for cleft palate at 7 years of age. The operation was successful, but the nasal voice is painfully evident. There are good teachers of singing in the colony where she lives, but no other skilled assistance available.

M. R. L. desires to hear of a permanent home where a woman, aged 31, suffering from lupus of the mouth, not extensive in character, could be received. She could do light domestic or other work, and a sum of 10s. a week could be paid for her maintenance.

ACCIDENT POLICIES.

A.—All accident policies are terminable at the option of the company at the end of each renewal year, and we believe that many contain a condition that the assurance may be terminated at any time by notice on the return of the premium for the unexpired term. The companies' reasons for using their power of terminating contracts of this kind are various, but it may be assumed that every company has an age limit, on the attainment of which by the assured the assurance against accidental death would cease. In practice, however, this age limit is seldom reached while the policy is kept in force.

MARRIAGE OF FIRST COUSINS.

OBSTETRICUS writes: My advice has been asked under the following circumstances:—About thirty years ago two brothers married two sisters from another family. The result of one of these marriages was three, and of the other two healthy children. The family history is of the best; the four grandparents of these children lived each to upwards of 80 years of age. A son of one family, aged 27, is anxious to marry a daughter of the other family, aged 22 years. Both are strong and healthy. Can any of your readers give me any information as to the result of such a marriage—first cousins, doubly related as such—as regards the offspring?

DIAGNOSIS AND TREATMENT WANTED.

BOOMERANG asks for hints as to the diagnosis and treatment of the case of a man, aged 42, who for some three or four years past has been suffering from a dull aching pain in the back, confined chiefly to the lumbar vertebrae. The pain, which has never been of a sharp or acute character, is often severe enough to wake him up about 3 a.m. or later, and, though sometimes it then abates enough to allow him to go to sleep again, it generally continues, and forces him, if he wishes to sleep, to do so in a sitting position. No matter how severe the pain has been on awaking, yet if he gets up and goes about it disappears in about half an hour, and does not return till the next night or two. During the last month the pain has been much worse and more constant, occurring every night, and, instead of being confined to the lumbar region, is now present in the lower dorsal. It, however, extends now along the ribs to the nipple line on each side, described as if a huge pair of pincers were compressing the chest. With the exception of this pain he is in good health, has never suffered from any severe illness; appetite good, habits regular, rarely taking alcohol, never tasting tea, and a non-smoker. He does not, however, take much exercise. On the supposition that the pain might be due to uric acid, he has been given salicylic acid, lithia, and various other antacids, but with no marked benefit. Occasionally his urine contained lithates, but there has been no albumen or sugar. The heart and lungs are normal. He had suffered a great deal from catarrhal pharyngitis, and readily catches cold. Of late years he has occasionally had muscular twitchings in the calves of the legs and also in the thumbs.

THE MICROSCOPICAL DIAGNOSIS OF MALARIA.

W.B.O. Port Said writes to ask for information in regard to a new method of malarial diagnosis devised by Major Ronald Ross. He says microscopical diagnosis at the present is somewhat tedious, and any means which would render it more simple would be a great help.

*** The principle of Major Ross's improved method is to employ a thick film of blood for examination. It is made transparent by removing the hæmoglobin from the red blood corpuscles, and allows of a

larger number of the plasmodia being brought into one field of the microscope than with a film of the ordinary thinness. The parasites, as is well known, adhere to the stromata of the corpuscles. A thick layer of blood spread on a cover-slip is allowed to dry, but is not fixed; a few drops of Romanowsky's watery solution of eosin (ordinarily 1 in 1,000 of distilled water) are allowed to remain on the film for about 15 minutes, more or less, according to the strength of the stain, which is then washed off with a very gentle stream of water. Then a weak solution of methylene blue, as used for the Romanowsky stain (1 per cent. solution in distilled water rendered alkaline by 0.5 per cent. of sodium carbonate) is substituted. This is allowed to remain on for only a few seconds before it is similarly washed off. The film is now dried, mounted in Canada balsam and examined. By this means about twenty times as many parasites will be found in each field of the film, as would be seen in a field of an ordinary film. A full account of the method will be found in the *Lancet* for January 10th, 1903, and of the preparation of the stains in the British Medical Journal of September 21st, 1901, p. 757.

ANSWERS.

Hysterical.—We cannot hear of such an institution, possibly an inquiry by advertisement might produce replies, but it is very questionable whether an institution for nervous and hysterical cases could be conducted, at a profit, at terms so low as £1 weekly.

Mosquito Netting.

Coonoor.—The zinc-coated wire netting recommended by Sir William MacGregor in his address on malaria (British Medical Journal, 1902, vol. ii, p. 1802) can, we are informed, be obtained from E. T. Burrowes Co., Portland, Maine, U.S.A.

The Erect Attitude.

We do not know of any small book or lecture dealing with the differences in the skeletal frame of man and the lower animals (for example, the horse) due to the assumption of the upright attitude. A large amount of material bearing upon the subject is contained in the following books and monographs: Quain's *Elements of Anatomy*, tenth edition, vol. ii, Parts I and II (London, Longmans, Green, and Co., 1899, Part I 11s., Part II 16s.); *Man's Place in Nature*, by T. H. Huxley (1894, 5s.); *A Treatise on the Human Skeleton*, by Sir G. M. Humphry (London, Macmillan and Co., 1858, 14s.); *Observations on the Limbs of Vertebrate Animals, etc.*, Communications to the Cambridge Philosophical Society (Cambridge); *The Nature of Limbs*, by Sir Richard Owen (London, J. Van Voorst, 1849, 6s.), *The Vertrebrate Skeleton*, by S. H. Reynolds (Cambridge, University Press, 1897, 12s. 6d.).

LETTERS, NOTES, Etc.

Eye Affections in Leprosy.

Mr. George Pernet (London) writes: With reference to the annotation on Eye Affections in Leprosy, in the British Medical Journal of January 24th (p. 315, col. 2) may I be allowed to point out that the histopathological portion of Dr. Lyder Borthen's earlier monograph is by Dr. H. P. Lie, of Bergen?

Puerperal Insanity.

Dr. R. Percy Smith (Queen Anne Street, W.) calls attention to an error in the report of his remarks in the course of a discussion on this subject at the Obstetrical Society of London on January 7th, reported in the British Medical Journal of January 24th, p. 200. The statement quoted from Dr. Clouston as to number of puerperal cases admitted into Morningside Asylum which followed illegitimate births, should have given the percentage as 25 per cent., and not 75 as printed.

Carbolic Acid: A Warning.

Dr. H. Robert Emms (Birmingham) writes: I give below a short note of a case which seems to me to be of interest from the peculiar manner in which the injuries were received. Mr. E., on January 22nd, made use of a watercloset at a public-house. It appears that the closet had recently been either washed down, or freely sprinkled, with strong carbolic acid (the kind supplied by the sanitary authorities to cases of infectious disease). He says that he wiped the seat with paper before sitting down, but some of the acid must have remained on the lower edge of the woodwork in front, for he almost immediately felt a sharp pain at the end of the penis, and on looking found a "white streak." There is a large burn on the glans, and several others, with marked vesication, on the prepuce; and the whole organ is swollen and oedematous. It seems undesirable that so powerful a substance should be distributed without the most precise directions for its use, especially as regards proper dilution.

Rupture of the Uterus, with Recovery.

Dr. Thomas Laffan (Casnel) writes: The description of the above case (British Medical Journal, January 17th p. 130) differs so entirely from the usual ones that it would be most desirable that your readers should have further particulars. (1) The head, we are told, slipped into the iliac fossa. How was it replaced, and presumably the entire body of the child along with it, into the uterus? but above all how was it replaced so as to have not a footling but a vertex presentation? (2) How did it happen that uterine contractions continued after rupture? (3) We find it stated that though the head was in the iliac fossa at 11.30, it was not till 12.30 that delivery was attempted by forceps, which were *thought* to be wanted at 11.30. The pathognomonic signs—namely, sudden agonizing cry of pain and subsequent haemorrhage—were absent in this case. It is of such importance to study carefully all cases of uterine rupture that I have thought it desirable to draw public criticism towards this reported case. So far I am not able to see in it a case of ruptured uterus at all, but fuller details may solve all doubts on the point.

Congestion of the Left Lung in Influenza.

Dr. F. MacRae (London, S.W.) writes: During the present epidemic of influenza I have been struck by the disproportionate number of cases that have had slight congestion of the left lung in comparison with the right. It would be interesting to know whether this has been the experience of other medical men and what they consider to be the rationale of the phenomenon.

LETTERS, COMMUNICATIONS, Etc., have been received from:

A J. G. Andrew, M.B., Glasgow; Messrs. Allen and Hanburys, London; Dr. R. S. Archer, Liverpool. **B** Dr. T. E. B. Brown, London: Mr. B. Brooks, London: Dr. W. Bramwell Liverpool; Dr. C. Buttar, London; Mr. R. T. Baker, Sydney, N.S.W.; Mr. J. E. Biggs, Cardiff; Dr. W. F. V. Bonney, London; Dr. D. W. Brown, Preston; Sir H. C. Burdett, London; Dr. P. L. Benson, Winslow; Mr. L. A. Bidwell, London: Rev. C. W. A. Brooke, Cambridge. **C** Credo; Dr. J. M. Clarke, Clifton; T. Carwardine, M.B., Clifton; Coonoor; Dr. W. Calwell, Belfast; Mr. J. P. N. Casey, Pietermaritzburg: Messrs. Corbyn, Stacey, and Co., London; F. H. Clarke, M.B., Dumfries. **D** Dentist; Dr. C. Douglas, Glasgow; Daimler Motor Company, Manager of, London; Deputy Public Vaccinator; Mr H. J. Dunn, London; Decem. **E** Messrs. Elliott and Fry, London; Dr. A. Erdos, London; Mr. H. R. Emms, Birmingham. **F** Fellow; Dr. J. Finlayson, Glasgow; Messrs. J. S. Fry and Sons, Bristol. **G** Miss Gill, London: Guardian; Mr. B. W. Gowring, Basingstoke: Mr. J. E. Gordon, Salisbury; Mr. A. Godley, London; Dr. C. B. Gunn, Peebles; Dr. W. A. Gibb, Ipswich; Dr H. G. Graham Chicago; Dr. A. Greene, London; Dr. L. Grant, Ballachulish; Dr. A. W. Gilchrist, Nice. **H** Dr. W. Hutchinson, Portland, U.S.A.; Dr. A. Haig, London; Dr. J. P. Hedley, London; Dr. J. R. Harris, Ruthergien, Victoria; Dr. W. J. Horne, London; H de B. D.; Mr. R. C. B. Hall, Chard; Dr. S. H. Habershon, London. **J** Mr. S Jackson, Walthamstow; Mr. R. Jones, Eaglehawk, Victoria; Dr E. L. Jones, Cambridge; Dr. W. M. Jones, Torquay. **K** Dr G. N. Kreider, Springfield, Ill.; Mr. J G. Kenyon, London: J. F. Keenan, M.B., Edgeworthstown. **L** Dr. R. J. Lee, London; Mr. S. G. Longworth, Woodbridge; T. D. Luke, M.B., Edinburgh. **M** Mr. C. D Marshall, London; P. F. Moline, M.B., London Dr. A. W. Mackintosh, Aberdeen: Dr. C. A. Macmunn, Wolverhampton; F. V. Milward, M.B., Birmingham; Aberdeen: Dr. C. A. Macmunn, Wolverhampton; F. V. Milward, M.B., Birmingham; Dr. J. Macnamara, London; Mr. J. McKay, London; M.D.; Dr. D. W. K. Moody, London; J T. J. Morrison, M.B., Birmingham; P. Mathews, M.B., Edinburgh: Dr. J. A. MacWilliam, Aberdeen; W. J. McCardie, M.B., Birmingham. **N** Dr. P. A. Nightingale, London; Nitram; Nismir. **O** Old Bart.'s Man. **P** Mr. G. Pernet, London; Dr. C. Pinkerton, Southport; Provincial A.M.O.; Mr. J. E. Pilcher, Carlisle, Pa.; Dr. J. Priestley, London; Dr. A. J. Patek, Milwaukee; J. Pardoe, M.B., London; Dr. L. S. Pilcher, Brooklyn, N.Y.; Perplexed; Mr. J. R. Preston, Fleetwood; Procul; Mr. N. R. Phillips, Canterbury; Mr. J. M. Pickthall, Bournemouth; Dr. M. Prickett, London; Mr J. K. Pickford, Cleethorpes. **Q** Mr. E. Quayle, Urmston. **R** Dr. T. W. Reid, Canterbury; J. D. Robson, Maxwelltown; Mr. H. M. Raven, Broadstairs: Dr. J. W. Roe, Ellesmere. **S** Dr. J. F. J. Sykes, London; K Scott, M.B, Cair; Dr. W. Sykes, Exeter; Shepherd: Mr. A. Sanderson, Roqueville; Dr. R. P. Smith, London; E A. Saunders, M.B., London; Scholastic. **T** Temporary Assistant; J. H. Targett, M.B., London; J. A. Turner, M.B., Bombay; J. Tennant, M.B., Belfast; Mr. N. W. Thomas, London; T. J. G.; Dr. E. F. Trevelyan, Leeds. **V** Mr. S. Vines, Mossley. **W** Mr. T. Wakley, jun., London: Mr. J. H. Weiss, London; Dr. F. Willcocks, London; Mr. W. R. Williams, Clifton; Dr. A. J. Wallace, Liverpool; Mr. H. Waite, Leeds; Mr. A. L. Woodward, London: Dr. H. Woods, London. **Z** Zenrol.

BOOKS, Etc., RECEIVED.

A Practical Handbook of Midwifery. By Francis W Nicol Haultain M.D., F.R.C.P.E. Second Edition. London: The Scientific Press. 6s.

Allgemeine Semiotik des Erbrechens. Von Dr med. W. Jaworski. Jena: Gustav Fischer. 1903. M.2.40.

Die Technik der speziellen Therapie. Ein Handbuch fur die Praxis. Von Professor F Gumprecht. Dritte umgearbeitete Auflage. Jena: Gustav Fischer. 1903. M.9.

Abdruck aus "Acta Societatis Scientiarum Fennicae" Tom XXX. Arbeiten aus dem Pathologischen Institute zu Helsingfors (Finnland). Herausgegeben von Professor Dr. E. A. Flemén. Die Wirkung einiger Bakterien und ihrer Toxine auf Verschiedene Organe des Körpers. Jena: Gustav Fischer. 1902. M.30.

Cours de Minéralogie Biologique. Par J. Gaube (du Gers). Quatrième série. Paris: A. Maloine. 1903. Frs.4.

Hazell's Annual for 1903. A Cyclopaedic Record of Men and Topics of the Day. Revised to December 31st, 1902. Edited by W. Palmer, B.A Lond. Eighteenth year of issue. London: Hazell, Watson, and Viney. 1903. 3s. 6d.

Die Krankheiten des Kehlkopfs. Von Dr. M. Rukofzer Berlin: August Hirschwald. 1903. M.6.60.

Physiologische und sozial-hygienische Studien über Säuglings-ernährung und Säuglings sterblichkeit. Von Dr. W. Prausnitz. München: J. F. Lehmann. M.3.

Etudes de Médecine Coloniale. I. La Fièvre Quarte. Par le Dr. Emile Legrain. Paris: A Maloine. 1902.

Physiology of the Vocal Registers. By G lan E Hoole Glasgow: Paterson, Sons, and Co. 2s. 6d.

The Parish Doctor. By Alec Cook. London: John Long. 6s.

Pharmacopoeia of St. Thomas's Hospital. Compiled by Edmund White, B.Sc Lond., F.I.C First enlarged edition. 1.02. London: H. H. G Grattan. 2s 6d.

Inebriety and How to Meet It. By C. E. Macnamara. London: Elliot Stock. 1902. 1s.

Hypnotism and the Doctors. II. By Richard Harte. London: L. N Fowler and Co New York: Fowler and Wells Co. 1903 12s. 6d. net.

De la Uremia. Por el Doctor D. José Codina Castelvi. G. precedido de un prol go del Doctor D Juan Manu l Mariani. Madrid: Nicolás Moya. 1903.

Hudens Sygdomme og deres behandling. Af C Rasch. Forste Levering Köbenhavn: F Hegel and Son. 1902. 6kr.

Spirals in Nature and Art. By Theodore Andrea Cook, M.A., F.S.A. London: John Murray. 1903. 7s 6d.

The Diagnosis and Modern Treatment of Pulmonary Consumption, with special reference to the early recognition and the permanent arrest of the disease. By Arthur Latham, M.A., M.D Oxon., M.A. Cantab. London: Bailliere, Tindall, and Co. 1901. 5s.

Anatomie des Nervensystems Bearbeitet von Professor Dr. Ziehen und Professor Dr. Zander. Zweite Lieferung: Makroskopische und mikrosk pische Anatomie des Gehirns. Von Professor Dr. Th. Ziehen. Jena: Gustav Fischer. 1903. M.6

Beiträge zur Klinik der Tuberkulose. Herausgegeben von Dr. Ludolph Brauer. Heft 1. Wurzburg: C. Kabitzsch 1903. M.5.

The Surgical Treatment of Ulcer of the Stomach. By C. Mansell Moullin, M.D. Oxon., F.R.C.S. London: John Bale, Sons, and Danielsson, Limited. 1902. 2s. 6d.

*** In forwarding books the publishers are requested to state the selling price.

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A Clinical Lecture

ON

ASTEREOGNOSIS IN TABES DORSALIS.

Delivered at Prince Alfred Hospital, Sydney.

By GEORGE E. RENNIE, M.D., M.R.C.P.Lond.,

Assistant Physician to the Hospital and Tutor in Medicine, University of Sydney.

As I have in the wards at the present time two cases of tabes dorsalis which are a little out of the common, I propose to bring them before you to illustrate some points in the sensory disturbances met with in this disease.

Case I. *History.*—J. McA., aged 31, married, a fitter in the tramway sheds, was admitted to Prince Alfred Hospital under my care on April 3rd, 1902. He complained of difficulty in walking, loss of sensation in the left hand, and some difficulty in micturition. He had been ill for about two years. He had had syphilis at the age of 18 years, and had been a heavy smoker since then but a total abstainer from alcohol.

State on Examination.—His intelligence is good, and he presents no symptoms of mental disturbance. He has no headache, no giddiness, and is not subject to fits. The special senses are all normal; his sight is good, and the fields of vision are normal. The pupils are small, equal, and react on convergence but not to light. There is no affection of the other cranial nerves. The muscles of the trunk and limbs show no weakness or wasting. There is a slight degree of muscular hypotonia. His gait is strained; he requires to keep his attention fixed on the ground to enable him to walk steadily, and he cannot walk along a narrow plank. There is distinct Rombergism. His handwriting is becoming feeble; he can only write a few words, and then has to stop and rest.

Sensation.—Tactile sensation is fairly good over all the body with the exception of the ulnar side of the left forearm, hand, and wrist. It is completely absent over the little finger of the left hand. He cannot recognize two touches or pricks made at different points of the fingers and hand at the same time as two distinct sensory impressions. When the left hand is placed on his knee, with the palm upwards, he does not recognize pressure made on the palm of the hand or thumb, but thinks he is being touched on the back of the hand. There is analgesia over the trunk about the level of the seventh dorsal nerve roots on both sides, it is rather more marked on the left side than on the right. This band of trunk analgesia extends for a distance of 3 or 4 inches. There is also some analgesia on the ulnar border of the left arm, and ulnar side of the left hand. Elsewhere the painful sensation is acute. Thermal sensation is diminished over the left ulnar area and left hand, the area of this thermal anaesthesia being somewhat larger than the area of analgesia. There is distinct impairment of his muscular sense. He is unable to recognize the position of his fingers when they are passively moved. He is unable to place the finger accurately on the tip of the nose or bring the two forefingers into accurate apposition at the tips with the eyes closed. He is unable to distinguish between different weights placed in the two hands, the left hand being most at fault in this respect. He is quite unable to recognize the nature of objects placed in his left hand; for example, he cannot tell the difference between a match-box and a half-crown piece, nor can he recognize a knife, a pencil, a pen, or a key. His sensation is good in the feet, and he can tell the nature of objects placed on the sole of either foot—that is, he can tell whether an object is round or square, large or small. In the right hand this power of recognition of different objects is perfect.

Reflexes.—His elbow-jerks, wrist-jerks, and knee-jerks are quite absent; the cremasteric and abdominal are present; the plantar gives the flexor response on both sides feebly. There is a delay in starting the act of micturition, but no incontinence of either bladder or bowel. There is loss of sexual desire.

The combination of symptoms in this case clearly pointed to the diagnosis of tabes dorsalis.

Case II. *History.*—A. M., a single woman, aged 26, a machinist, was admitted to Prince Alfred Hospital under my care on March 4th, 1902. She complained of weakness of the knees, shooting pains in the legs and a staggering gait. Her symptoms had begun some six years ago, but these had become aggravated during the last year or so. She had an attack of pneumonia eight years ago, but no other previous illness. There was no history of acquired syphilis, but her teeth were distinctly suggestive of congenital syphilis, although careful inquiry failed to elicit any family history supporting this opinion. There was no history of exposure to cold, or any other possible cause of tabes dorsalis.

State on Examination.—Her intelligence is normal; she has no headache, and sleeps well. The pupils are equal, medium, react feebly to light, and well on convergence. There is some impairment of hearing in both ears. No other cranial nerve affection. The muscles of the trunk and limbs are strong, but she shows a marked degree of muscular hypotonia. Her gait is distinctly ataxic.

Sensation.—Tactile sensation is blunted over the left foot, especially over the outer side and on the sole. This area of tactile anaesthesia extends upwards a short distance on the leg; over the right leg and over the right foot there is only a slight blunting of tactile sensation. Painful sensation is impaired over the left leg and foot; she cannot always distinguish between the head and point of a pin, and the painful sensation is delayed. She cannot tell when she is pricked at two points simultaneously on the foot, even when these points are over two inches apart. Thermal sensation is dulled and delayed over the same area.

Muscular Sense.—She can touch the tip of the nose with her finger tip with fair degree of precision with the eyes closed, and she can tell the position of her fingers when passively moved. She is unable to describe the position of her left foot or toes when her eyes are closed. She is unable to tell the nature of objects placed against the sole of the foot or under the toes; for example, she cannot distinguish between the shank of a wooden stethoscope and the large earpiece, nor can she tell the difference in size between the larger earpiece and the chest piece of such an instrument. She has marked Rombergism. There is loss of elbow-jerks, wrist-jerks, and knee-jerks on both sides, and no plantar reflex was obtained on either side. She has had some delay in micturition for the last six months.

In this case, too, the diagnosis of tabes dorsalis seems pretty clear, although it is somewhat unusual to meet with this disease in a young woman, without a definite history of either congenital or acquired syphilis.

The sensory disturbances of tabes are both subjective and objective. Among the subjective sensations we note the occurrence of the lightning pains, which, though they may occur in all parts of the body, are most common in the legs. Then we have the various forms of crises, such as the gastric, laryngeal, and vesical crises. Another subjective disturbance of sensation which is not so well known is the loss of the feeling of weariness and tiredness after prolonged muscular exertion, such as a long walk. This would appear to depend upon the degeneration of the muscle sense nerves.

Among the objective disturbances of sensation we have anaesthesia, analgesia, thermal anaesthesia, loss of muscle sense, and astereognosis. It is important to bear in mind that dissociation of sensation may occur in disease of the peripheral nerves, though it is best seen in the central disease of the cord known as syringomyelia, and, as has been recently shown, also in cases of compression of the cord in the cervical region by a tumour. It is, however, to the latter form of sensory disturbance that I wish to direct your attention this afternoon. The term "astereognosis" was first used, I believe, by Dercum, though the term stereognostic sense was first used by Hoffmann in 1884. The occurrence of this sensory disturbance in tabes has not, however, received very much notice, so far as I have been able to ascertain from the literature. Dercum, in a paper in the *Journal of Nervous and Mental Disease*, on studies in astereognosis, records the investigation of 16 cases of tabes, in 5 of whom this symptom was found; the hands alone were studied. Byrom Bramwell, in a recent article in *Brain*, on an analysis of 155 cases of tabes, "states that the stereognostic sense was examined in a few cases only; in 1 case it was defective, in all the other cases in which it was examined it was unaffected." In a paper by Fulton in the *Journal of Nervous and Mental Disease*, on observations on 54 cases of locomotor ataxia, with special notes on etiology, this symptom is not mentioned.

To understand this symptom, it is necessary to consider what special forms of sensation are concerned in the recognition of the shape, size, and consistence of objects when they are invisible; for example, how is it that one can tell, on putting one's hand into the pocket, whether one has hold of a key, a knife, a coin, or what not? Careful examination reveals the fact that the recognition of the physical characters of objects is a judgement acquired by education, by the comparing of visual and tactile sensations, based upon a number of different sensations co-ordinated together.

The special sensations which are concerned in the recognition of the physical characters of objects felt with the eyes closed are as follows: (1) The spacing sense; (2) the localizing sense; (3) muscular sense, and sense of posture; (4) pressure sense; (5) temperature sense; (6) pain sense. The retention of all of these at once is not absolutely essential for the stereognostic sense. Let us look at them a little more in detail. (1) The spacing sense. By this is meant the power of recognition of two sensory impressions made at some short distance from each other on the surface of the body or limbs as two distinct sensations. We know by the use of the aesthesiometer that on some parts of the hands and fingers two points very close to one another can be differentiated as two in normal individuals; in other parts the points must be farther apart before they can be recognized as distinct. So that in the recognition of the size of an object such as a pencil it is necessary that the points of contact of the ends of the pencil on the hand or fingers must be recognized as two distinct sensations. (2) The localizing sense is the power of referring to the exact spot the sensation of touch or pain. If the power of differentiating two distinct sensory impressions be present, but the power of re-

ferring those sensations to their exact position on the surface of the body be lost, it is obvious that an incorrect conclusion will be drawn as to the size of the object handled. In the patients before you these two forms of sensation are defective, in the male the spacing sense is lost in the left hand; in the female it is lost in the left foot. (3) The next important sense is the muscular sense and the sense of posture of the extremities in space. A patient may have absolutely no tactile anaesthesia, and yet be quite unable to accurately describe the position of the fingers or toes, the hands or the feet in relation to one another or to space. If this sense be lost it is clear that the patient will be unable to state whether an object handled is 2 or 3 in. thick or only the thickness of paper. He will be unable to tell whether the object is round or square. This sense is lost in both of these patients. Involved in the true recognition of posture of the extremities is the sense of muscle tension or tone, and hence with the loss of sense of muscle tension there is loss of recognition of the different weights of objects handled. (4) Pressure sense. Apart, however, from the differentiation of the weights of objects placed in the hand, there may be a loss of sense of pressure upon the extremities. This implies an anaesthesia of the deeper structures such as occurs in hysterical anaesthesia, where the anaesthesia appears to extend to all the structures of the limb. If this be so, astereognosis must be present. Note that this sense of pressure is much more important for the stereognostic sense than the retention of tactile sensation. The latter may be quite absent, but if the pressure sense be retained there will not necessarily be any astereognosis. This sense is also necessary to enable one to recognize the consistence of an object. (5) Temperature sense. The retention of the power of differentiating between heat and cold is necessary to enable one to recognize a metal object, such as a coin as distinct from a piece of wood or cardboard. And (6) the pain sense will be necessary to enable one to differentiate between a sharp edge or a blunt one, between a prickly object and a smooth one.

The loss of one or more of these different "senses" may determine an error of judgement or an entire loss of this faculty. To arrive at an accurate judgement, or in other words for the complete normality of the stereognostic sense, it is clear that the cerebral cortical centre or centres, the conducting paths, and the peripheral receptive sensory mechanisms must be intact. Disturbance of either of these parts of the nervous system may lead to the manifestation of "astereognosis." By clinical investigation it has been proved pretty conclusively that astereognosis may be present in a complete form in disease of the superior parietal lobe of the brain, so that we may reasonably assume that this part of the cerebral cortex is concerned in the co-ordination or elaboration of the special sensations received from the periphery. Cases recorded by Williamson, Dercum and Teller, C. K. Mills, and others support this localization. Further, reasoning *a priori*, we should expect that if the paths of conduction of sensory impressions in the spinal cord be impaired by compression, or disease within the cord itself, some dissociation of sensations would result, and probably astereognosis be manifested. This we know now to be a fact as this symptom has been observed in some cases of compression of the spinal cord by a tumour. Further, it is obvious that if the peripheral receptive mechanisms or the peripheral nerves be diseased, astereognosis may be developed.

How are we to explain the loss of the stereognostic sense in these cases of tabes. It is obvious that there is a dissociation of these special "senses," and since I have shown that there is not the smallest evidence of any cerebral cortical disease in either of these patients such as would lead to the defective co-ordination of sensory impressions received from the periphery, we must conclude that the dissociation takes place either in the spinal cord from defective conduction, or in the peripheral sensory receptive mechanism. In tabes we know that the poison exerts its influence *par excellence* on the afferent sensory neuron, and specially on the muscle sensory nerves, since we sometimes find in early cases of this disease loss of sense of posture and pressure, and loss of muscle sense, when no tactile anaesthesia or analgesia can be detected. Later on we find evidence of involvement of the cutaneous nerves, the distribution of the anaesthesia corresponding to the sensory root areas as mapped out by Head. Starr, Thorburn, and others. Hence we conclude that when astereognosis occurs in tabes, it is a manifestation of dissociation of these special sensory perceptions, which in a normal person are all co ordinated in the higher sensory centres in the brain. The fact that it does not occur in every case of tabes is but another proof of the, comparatively speaking, random action of the toxin, which, while it affects the afferent sensory neuron as a whole, in different cases appears to affect more particularly different peripheral sensory structures or afferent nerve fibres.

SUTURE OF THE BRACHIAL PLEXUS IN BIRTH PARALYSIS OF THE UPPER EXTREMITY.

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IN the third edition of his work, entitled *De l'Electrisation Localisée*, published in 1872, Duchenne described under the heading, "Paralysies obstétricales infantiles du membre supérieur, sans complications," four cases of infants who at birth presented paralysis of certain muscles of the arm and shoulder. The muscles affected in these cases were identical, consisting of the deltoid, the infraspinatus, the biceps, and the brachialis anticus. He states that in all but one of the cases the electrical reactions in these muscles were abolished, and that cutaneous sensation was normal. In consequence of this paralysis, the arm showed the same defects in function in each of the infants. Thus the arm hung powerless by the side and could not be abducted, the forearm was extended and could not be flexed, and the hand was pronated, in consequence, Duchenne states, of the inward rotation of the humerus. The muscles affected did not therefore belong to the distribution of any single nerve trunk of the arm, and also the entire distribution of no single nerve trunk of the arm was involved. Duchenne concluded that the lesion was rupture or compression of nerve fibres in the brachial plexus, before they entered the nerve trunks of the arm. The exact nature of the lesion he left to others to investigate, but concluded that, whatever it was, it was brought about in an identical way by force applied during the birth of the child.

In 1874 Erb described a form of paralysis in adults which presented almost exactly the same characters as that described by Duchenne. His investigations enabled him to indicate the exact spot at which the nerve lesion would most probably be found, as he discovered a point on the skin of the supraclavicular region, about two fingerbreadths above the clavicle and about one fingerbreadth outside the sternomastoid, on stimulating which by the electrode contractions were evoked of all the muscles which were found to be affected in the form of paralysis under consideration. This point corresponded to the position of the anterior primary divisions of the fifth and sixth cervical nerves, where they unite to contribute to the brachial plexus. In Erb's cases the muscles affected were the deltoid, biceps, brachialis anticus, supinator longus, and sometimes the brevis.

Much has since been written on the subject of birth paralysis and of the identical form of paralysis originating in adult life, so that it is now a well-recognized form. Research has also shown that the motor nerve fibres which run in the anterior divisions of the fifth and sixth cervical nerves at their point of junction are those which supply just the muscles which are found to be affected.

In some way, therefore, during the birth of the child, tension or compression of the upper part of the brachial plexus has been caused, with the result that the nerve fibres of the fifth and sixth nerves have had their conductivity destroyed. Some maintain that the lesion is caused by a compression of the nerves between the clavicle and the transverse processes of the vertebrae, while others think that the damage is caused by the nerves being crushed between the clavicle and the first rib. As a rule, there is the history of considerable force having been applied during the birth of the child. In some of the cases the presentation has been cranial, and after the birth of the head the finger of the accoucheur has been hooked into the axilla, and considerable traction exerted. In other cases the presentation has been of the breech, or transverse in which version has been performed, and the arm has slipped up over the head and required considerable force to dislodge it, or the body has been at the same time pulled on, in order to hasten delivery in such a way that the head has been extremely rotated and bent to the side. The nerves are in this way over-stretched, causing rupture of the nerve fibres, or even complete rupture of the nerve trunks themselves. Whatever may be the presentation of the child at birth, the chief factor in producing the lesion is, I believe, forcible de-

pression of the shoulder, while the head is bent to the opposite side and rotated.

When the child is born the effects of the injury are at once evident, as the arm does not take part in the usual active movements of the child, but remains hanging by the side. On examination it is found that the attitude of the arm is very characteristic. It cannot be abducted at the shoulder on account of the paralysis of the deltoid and supraspinatus; the forearm cannot be flexed on account of the paralysis of the biceps, brachialis anticus, and supinator longus. The forearm is usually in extreme pronation on account of the usually present paralysis of the supinator brevis, and the entire arm is rotated inwards, so that the palm of the hand may be directed outwards, this being caused by the paralysis of the external rotators of the humerus (infraspinatus and teres minor), the unopposed action of the internal rotators thus bringing about the characteristic position. In rarer cases other muscles are affected, but in the great majority of cases the paralysis is limited to the muscles which have been mentioned. In young infants it is very difficult to test the condition of the cutaneous sensibility, and I have not been able to determine the absence of sensation in any of the cases which I have seen, although I believe that there must be disturbances of sensation in certain areas, judging from the analogy with cases of Erb's paralysis originating in adults. This, then, is the clinical picture which cases of birth paralysis present, the atrophy which ensues in the affected muscles being added after the lapse of some time.

The usual treatment adopted in such cases is the routine one of massage, application of electrical currents, and employment of passive movements, and in certain cases the muscles recover. There is doubt, however, whether the recovery of the muscles is due to the treatment, but there is no doubt that the treatment often fails, as partial restoration may be all that is obtained, or there may be no improvement at all. There is also no doubt that certain cases recover without treatment. The results, therefore, in cases of birth paralysis are just what might be expected from the analogy with cases of nerve injuries in general, and from a study of many of these cases I have formed the opinion that the employment of electrical treatment is of little use in achieving recovery of the muscles. When the recovery of the muscles takes place under electrical treatment in my opinion that recovery, although perhaps somewhat hastened by the treatment, would ultimately have occurred without the use of electricity. I therefore employ electrical currents merely for diagnostic purposes and to ascertain the progress of a case.

The prognosis in cases of birth paralysis is as follows: Some cases recover rapidly, others make partial recoveries after the lapse of a year or more, while many cases practically never show improvement. This is what might be expected in consideration of the nature of the lesion. Supposing that the nerves are merely overstretched, possibly with rupture of the nerve fibres within the sheath, the recovery is almost certain. If the nerve trunks are completely torn across, complete recovery is possible, but the recovery may also fail completely or take place only partially. Recovery may even then be complete if there is nothing to hinder the reunion of the nerves, but if there is cicatrization in the neighbourhood as the result of the injury this will cause a partial or complete failure of the reunion. That there may be injury of neighbouring structures also is to be expected, seeing that force sufficient to rupture the nerves has been exerted. That this damage to surroundings is often very great one of my cases showed, as there was at the same time torticollis present due to the rupture of the sterno-mastoid.

From these considerations I hold that the only rational way to treat cases of birth paralysis is to deal with them just as injuries to the peripheral nerves in general are treated. The lesion to the nerve in birth paralysis is, of course, unaccompanied by a cutaneous wound, and in consequence the condition of the nerves cannot be examined before operation. As there is therefore the possibility that the lesion is a slight one which may be spontaneously recovered from, it is right to delay operation until the lapse of a certain time to see if the developing electrical reactions will indicate an approaching recovery of the muscles. When this period of time has elapsed without sign of improvement there must be no further delay and the seat of injury must then be exposed and the nerve lesion dealt with on general principles. During the first few weeks of the child's life, the electrical reactions are, of course, unsatisfactory, but by two months, before which age I do not think the operation should be undertaken, it is possible to obtain good contractions of the muscles by the faradic current. If these are obtained, then the case ought to be left for a further period, and if after the lapse of another month good contractions are obtained with the faradic current in all the affected muscles, then the case may be expected to recover naturally. In one of the cases which came under my observation that is what happened. If, however, after two months no responses can be got in the muscles with the faradic current, although, of course, the galvanic current evokes good contractions, it is safer to proceed with the operation than to put off further time in the hope that recovery will eventually be the result.

Few secondary operations on the brachial plexus have been published. Thorburn[1] described the case of a girl, aged 16, who presented brachial plexus paralysis due to an accident. The nerve trunks of the plexus were torn, and the ends were involved in a cicatrix, which, seven and a-half months after the accident, he excised, and then united the nerves by suture. The result was, when reported four years subsequent to the operation, that sensation and certain movements in the shoulder and arm had recovered in an imperfect degree. Lexer, according to a notice by Oppenheim,[2] sutured the nerves in a case of Erb's paralysis, but no details are given, and I can find no further reference to the case in the literature. I also[3] published a case in which the brachial plexus was involved in cicatricial tissue, causing total paralysis of the arm. The nerves of the plexus in that case were liberated from adhesions, and a practically complete recovery was recorded when the case was published fourteen months after the operation.

In cases of birth paralysis of the upper extremity the operation is performed as follows:

The patient lies on his back with a pad placed underneath the shoulders, so that the head is well thrown back. The head is then inclined to the opposite side, and the face also directed to the opposite side. In this position the supraclavicular space is well exposed. An incision is then made, extending from the outer border of the sterno-mastoid, commencing at the junction of its middle and lower thirds, passing outwards and downwards to the junction of the outer and middle thirds of the clavicle. On dividing the superficial fascia, platysma, and the deep fascia between the sterno-mastoid and the trapezius, the omo-hyoid muscle is exposed just under the lower edge of the wound. Above the omo-hyoid a little dissection exposes the nerve trunks emerging from under the cover of the scalenus anticus. The junction of the fifth and sixth nerves is easily found by tracing the two upper trunks outwards. Having found the junction, the various branches are to be recognized and freed from adhesions. In the cases on which I have operated there was no difficulty in exposing these nerves, and the nerves were found thickened, as is usual in nerves which have been damaged. When the junction is reached, it is found adherent, and these adhesions must be carefully separated, and the further course of the nerves traced beyond the junction. The separation is first made along the upper border, and this is carried on until the suprascapular nerve is reached, and it is then ascertained by following this nerve that it is free from adhesions. The division destined to contribute to the outer cord of the plexus is then traced out in a similar manner, and its freedom from adhesions ascertained. Similarly the third offset from the junction is traced downwards towards the posterior cord of the plexus. Care must be exercised not to damage any of the small twigs which are given off from the fifth nerve previous to its junction. The nerve to the subclavius coming off so near the junction, and therefore from the damaged part, has not been recognizable except in one of my cases. Having cleared the affected part of the plexus it remains to deal with the damaged part of the nerve. This in all my cases has been so evidently cicatricial that it appeared hopeless to deal with it other than by excision. I therefore divided the fifth and sixth nerves well above the cicatricial tissue. When this is done, there ought to be the appearance presented of fasciculi of nerve fibres projecting from the perineurium, and if this appearance is not obtained, but instead a cicatricial appearance, an additional slice must be removed from the central end, and a second slice, if necessary, removed until normal fasciculi are seen. To omit this precaution would be to risk failure. The cicatricial mass is then seized and pulled inwards, so as to put the three peripheral divisions on the stretch, and these three divisions—namely, suprascapular nerve, branch to the outer cord, and branch to the posterior cord, divided at a point which appears to be distal to the cicatricial area, and in healthy nerve. Each of these three sections must also expose nerve fasciculi, and, if not, additional slices must be removed until this appearance is seen. The three peripheral ends are then sutured to the two central ends by means of a single thread of fine chromicized catgut, which is passed through the entire thickness of the nerves. When the single suture is in place, but before it is tied, the shoulder is pushed upwards, and the head inclined to the side which is being operated upon. This enables the nerves to be sutured without tension. The suture is then tied, bringing the three peripheral ends into contact with the two central ends. From the time that the suture is tied the nerves must be kept relaxed by keeping the head and shoulder approximated as much as possible. While this position of relaxation is being maintained, the wound is sutured and dressings are applied. On account of the head being approximated to the shoulder the neck is thrown into folds, and care must therefore be taken that these folds are

separated by gauze, as otherwise cutaneous irritation would result and endanger the aseptic course of the wound. The child is then bandaged to a posterior splint of poroplastic felt which fixes the head and body, thus rendering movements of the neck impossible. The arm is fixed across the chest, and the bandages are so arranged that the head and shoulders are kept as much approximated as possible. The dressings remain undisturbed until the fourteenth day, when the cutaneous stitches are removed, and the splint is not then reapplied. After this no further treatment is adopted, the muscles being left to recover under the influence of the nervous impulses, which owing to the restoration of the nerves are now able to reach them.

In all the cases which I have operated upon the junction of the fifth and sixth nerves was, as already mentioned, apparently cicatricial. If, however, the junction was apparently nerve tissue, and cicatricial surroundings had been found and separated, no doubt it would be right to refrain from excising the junction; but if there should be any suspicion of a partial cicatricial condition of the nerve trunk it would, I think, be safer to excise the entire segment on which the damage is seated than to trust to restoration of conductivity occurring in the damaged area.

In my cases, after excision of the affected area, there was no difficulty in getting the central ends to meet the peripheral ends when the shoulder and head were approximated. In the event of the length of nerve requiring to be excised proving so extensive that the union by suture could not be effected, I should approximate the ends by means of suture as much as possible without undue tension, and still be confident of adequate reunion by means of the newly-formed nerve fibres bridging the gap in an aseptic wound. I should hesitate to implant the ends into one of the neighbouring nerves in this region, on account of the importance of the only nerves into which the implantation could be made with prospects of success; for, in the event of failure, the result might be that additional muscles would participate in the paralysis.

I have operated on three cases, but in only one has sufficient time elapsed for recovery to be well advanced, and the following is a synopsis of the reports of these cases.

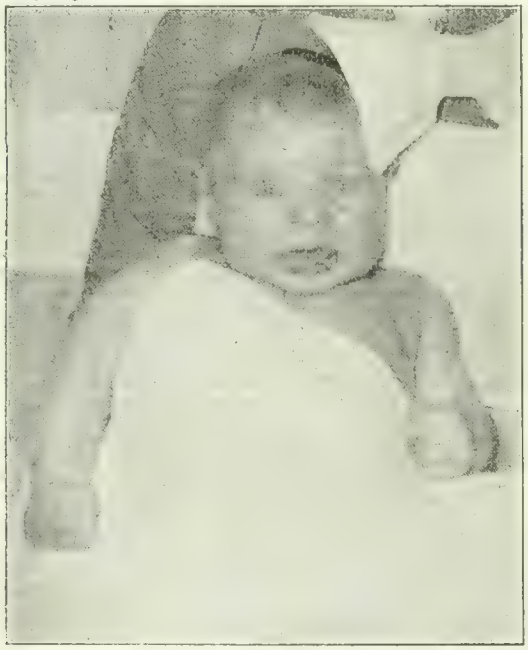


Fig. 1.—Case I. Duchenne's paralysis of right arm. Before operation.

Case I.—J. W., male, born December 12th, 1901. First child; cranial presentation; forceps used and considerable force required. As soon as child born the defect in the right arm noticed. Sent to me on January 23rd, 1902. Typical birth paralysis in right shoulder and arm (Fig. 1). Inward rotation, pronation, inability to flex forearm, supinate, or abduct arm. Examination of case on February 12th, by faradic current, the child being anaesthetised; no responses. Good contractions in all the affected muscles by galvanic current. Operation on February 15th in Western Infirmary. Excision of cicatricial junction of anterior primary divisions of fifth and sixth cervical nerves, together with portions of the nerves before their junction, and portions of the three peripheral divisions. Suture of the three peripheral ends to the two central ends with chromicized catgut. Cutaneous stitches removed on fourteenth day, wound healed; child sent home. No improvement was exhibited till early in May (two and three-quarter months after operation), when it was noticed that the child was commencing to make movements with the arm which were not previously attempted. These movements gradually became more pronounced, and by August (six months after the operation) the child was using the arm in a fairly normal manner. When last seen (November 15th), nine months after the operation, the child was able to abduct the arm more than 90 degrees, was able to flex the forearm almost normally, and was using the arm constantly. The inward rotation had disappeared. The most defective movement remaining was supination, but this movement in an imperfect degree was also noticed. Fig. 2 shows the child as when last seen, making use of the arm.



Fig. 2.—Case I. Nine months after operation. Showing restoration of power to abduct arm and to flex at elbow-joint.

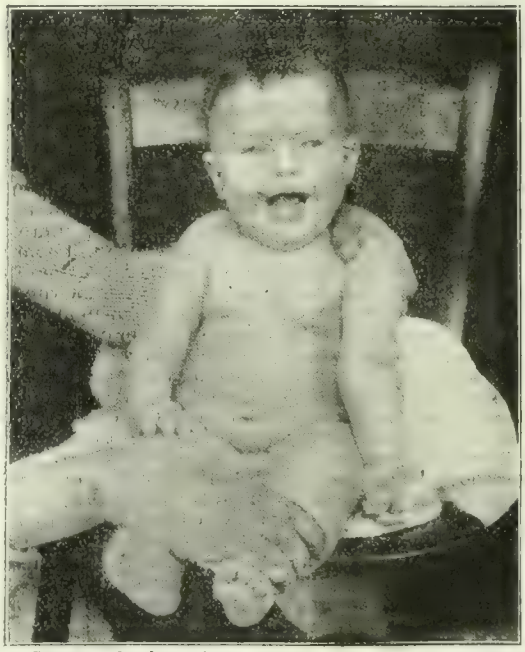


Fig. 3.—Case III. Duchenne's paralysis of left arm. Before operation.

Case II.—T. B., male, aged 14 years, first child. Breech presentation. Torticollis due to cicatricial contraction of the right sterno-mastoid. Right arm presented typical Duchenne's paralysis. Wasting of infra spinatus, deltoid, biceps, and supinator longus evident. No abduction of arm, slight flexion of forearm, supination impossible, inward rotation only slightly marked. Right arm somewhat shorter than left, right hand smaller. Electrical examination showed galvanic irritability in deltoid and biceps. Faradic current induced slight contractions in a few of the muscular fibres of the deltoid. Sensation normal. Operation in Western

Infirmary June 26th, 1902. Torticollis dealt with, and at same time brachial plexus exposed. Cicatricial mass at junction of fifth and sixth cervical nerves. Mass excised and suture of fifth and sixth nerves to the three distal ends. On November 13th (five months after operation) distinctly improved contractions in deltoid by faradic stimulation. Faradic irritability also present distinctly in biceps. No improvement in movements.

Case III.—M. T., female, born February, 1902, fifth child. Transverse presentation, version. Arms slipped above head, and in bringing them down, left arm fractured at middle of humerus. Arm placed in splints on account of fracture. After splints removed arm hung useless by side. Defect attributed to the fracture involving nerves in the arm. Sent to me in June. Typical Duchenne's paralysis; extreme inward rotation, no abduction, no flexion of forearm, no supination, no loss of cutaneous sensation. Involvement of nerves at seat of fracture therefore excluded. Operation delayed till child six months old, by which time there was still no sign of faradic irritability in the affected muscles. Operation in Western Infirmary on August 14th. Junction of fifth and sixth cervical nerves found cicatricial and excised together with affected portions of the nerves centrally and peripherally to the junction. Wound healed in fourteen days. Examined November 10th (twelve and a-half weeks after operation). Arm no longer rotated inwards, but no apparent improvement in the voluntary movements. Electrical reactions showed distinct faradic irritability in deltoid and biceps. Fig. 3 (p. 300) shows the child previous to operation.

The degree of recovery which has taken place in the first case is so nearly perfect in the nine months which have elapsed since the operation was performed that complete restoration may be anticipated. The commencing restoration of movements was first noticed about twelve weeks after the operation. In the third case the recovery cannot be expected to commence so soon as in the first case, on account of the longer interval which was allowed to elapse between the birth of the child and the performance of the operation. Yet already—at twelve and a-half weeks from the date of the operation—signs of improvement are exhibited in the development of the faradic responses in the affected muscles, and in the disappearance of the very marked inward rotation of the arm, although so far no improvement is exhibited in the voluntary movements. This case, therefore, will probably also be successful.

The second case belongs to a different category, as the operation there was performed so long after the injury—namely, fourteen years. The operation was undertaken in this case on the ground that there was evidence from the electrical examination that the affected muscles were not totally destroyed, as good contractions were obtained by stimulation with the galvanic current, and therefore it was decided to restore the affected nerves by operation. Improvement in the electrical reactions is now, at five months from the date of operation, undoubted, but whether any appreciable voluntary control will be required is, I admit, doubtful. At best this case can only be expected to make slow progress, on account of the profound alteration in the muscles caused by the long interference with their nutrition. Judging, however, from the recovery which has taken place in the first case, and the improvement exhibited in the electrical reactions in the third case in so short a period, operative intervention has certainly been fully justified; and in consideration of the hitherto unsatisfactory prognosis of these cases and of the safety of modern surgical procedure, I think that operation is the right course to follow in all cases which do not very early show spontaneous improvement.

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[1] British Medical Journal, May 5th, 1900. [2] *Lehrbuch der Nervenkrankheiten*, 3rd Edition, 1902. [3] *Glasgow Medical Journal*, October, 1900.

SPINAL HYDATID CYSTS CAUSING SEVERE "COMPRESSION MYELITIS."

OPERATION, WITH SUCCESSFUL RESULTS.

BY

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"Compression myelitis" due to spinal hydatid cysts is an extremely rare affection; but, if recognized early, it is a disease particularly suitable for surgical treatment. A case of this disease has been under our care at the Ancoats Hospital, Manchester, and, as two and a-half years have elapsed since the operation was performed, we are now in a position to judge fairly of the permanent results. The following is the report of the case:

"Compression Myelitis" in the Dorsal Region: Complete Paralysis of Both Legs: Anaesthesia of the Legs and Lower Half of the Trunk: Complete Paralysis of Bladder and Rectum.—Removal of Fifteen Spinal Hydatid Cysts (Extradural): Gradual Improvement: Complete Recovery of Sensation and o Control of Bladder and Rectum, marked Recovery of Motor Power in Legs: Two and a-Half Years after the Operation Legs Spastic, but Patient able to Walk Alone with the Aid of One Stick.

Sarah A. M., aged 27, was admitted as a medical in-patient at the Ancoats Hospital, June 29th, 1900, on account of paralysis of both legs.

Previous History.—About three or four years previous to admission a swelling had developed on the back, just to the inner side of the lower angle of the left scapula. This was removed by Dr. Tytler, and found to be a hydatid cyst. She remained quite well until May, 1900. She then began to suffer from severe pain in the back (mid-dorsal region), and in the region of the base of the right lung. The pain continued more or less for two or three weeks; it then diminished, and there has only been occasional pain since. There had been no girdle sensation. Two weeks before admission she first noticed weakness of the legs when coming home from her work. The weakness gradually increased, and at the end of two days she was unable to continue her work on account of difficulty in walking. By the end of one week she was quite unable to walk, and the legs remained paralysed. There had been no pain in the legs. There had been loss of control over the rectum for four days, and difficulty in micturition for two days; the latter symptom had gradually increased.

State on Examination.—On July 1st, the day after admission to the hospital, the condition was as follows: The patient was fairly well nourished, and the general appearance was healthy. The temperature was normal. Both legs were completely paralysed. There was no wasting and no rigidity of the legs. The knee-jerks were present and slightly increased. There was no ankle clonus. The plantar reflexes were present, and of the "extensor" type. The abdominal and epigastric reflexes could not be obtained. The movements of the chest appeared normal. The bladder was distended. The urine could not be passed voluntarily, and had to be drawn away with a catheter. There was incontinence of faeces. The touch with the head of a pin was not felt on the legs and abdomen and lower part of the chest up to the level of the fifth rib. In the fourth intercostal space on each side the touch with a pin's head was felt distinctly; but in the fifth space on each side it was not recognized. Over this anaesthetic region of the legs and abdomen a light touch with the finger was not felt, but a firm touch was just recognized. Below the fifth rib (on legs and trunk) a pin prick was felt if deep, but the sensation was much less distinct than on the body above the level mentioned. Also on the anaesthetic part of the trunk and on the legs the patient was unable to distinguish between heat and cold. Above the fifth rib, on each side, sensations of heat, cold, and pain were recognized normally. The arms and cranial nerves were not affected. No signs of disease of the heart, lungs, liver, or abdominal organs could be detected. There was no spinal curvature, no localized spinal pain or tenderness on percussion. Just to the inner side of the lower angle of the left scapula was a small scar at the region where the hydatid cyst had been removed three or four years previously. In the dorsal region, just to the left of the third and fourth vertebral spines, was a small round swelling about the size of a half-penny. This could be moved slightly under the skin and felt like a sebaceous cyst. On July 7th the swelling just mentioned was punctured, and a small amount of clear colourless fluid withdrawn. On microscopical examination the fluid contained scolices and hydatid hooklets. The urine was alkaline; specific gravity, 1015; no sugar; no albumen; deposit of triple and amorphous phosphates. July 11th. Urine ammoniacal; it contained a few pus cells and a deposit of phosphates. July 12th. Anaesthesia more marked. Below the fifth rib, sensation lost to tactile and painful impressions, to temperature, and to the faradic current. Above the fifth rib, on each side all the forms of sensation just mentioned were preserved.

Diagnosis.—From the history of the development of the symptoms—the localized pain in the back, followed by loss of power in the legs which gradually increased until there was complete paraplegia, with anaesthesia, and bladder and rectal symptoms—it appeared probable that the case was one of "compression myelitis." From the presence of the small subcutaneous hydatid cyst, which was found to contain clear colourless fluid and scolices, and which was situated on the back just to the left of the third and fourth dorsal vertebral spines, it appeared probable that there was another hydatid cyst within the vertebral canal which was causing the compression myelitis. The upper limit of the anaesthesia also indicated a lesion at this part—at the fifth spinal segment and at the level of the third dorsal spinous process. Operative treatment was strongly recommended. After considerable hesitation the patient consented and the operation was performed by Dr. Tytler on July 14th, 1900.

Operation.—Chloroform was administered, and the patient was placed prone on the table. An incision was made from the seventh cervical spine along the spinous processes of the vertebrae, to about an inch below the upper level of the anaesthesia of the trunk. The skin was reflected to either side, and then the fasciae and muscles filling the grooves. The spinous processes were next nipped off with a pair of bone forceps. Then an attempt was made to divide the laminae with a Hey's saw, but the ligaments and soft tissues so clogged the teeth of the saw that it was laid aside. A ½-in. trephine was then applied to one of the laminae, and a piece removed. Then with a gouge forceps the vertebral canal was easily unroofed for about 2 in. Fifteen hydatid cysts were found outside the dura mater, and situated at the posterior aspect. These cysts were easily scraped out. The dura mater was not divided. The largest cyst was about the size of a gooseberry; two others were about half that size, and the rest were about the size of peas. The muscle flaps were then replaced.

and stitched together; a loop of catgut was inserted at the lower end to prevent the accumulation of oozing. Then the skin was sutured, and a small gauze drain inserted at the top of the wound. The wound healed satisfactorily, the only incident being the appearance of a dampness on the bed sheet about the third day, which gradually extended down to the level of the loins. It was colourless, there were no constitutional symptoms, and, being aseptic, the dressing was not interfered with; only the sheet was changed. It never gave any trouble afterwards.

After-progress.—July 21st. The temperature has remained normal since the operation. General condition good. Urine no longer ammoniacal. Urotropin prescribed. Patient is able to flex each thigh slightly; she could not do so before the operation. The prick of a pin is felt on each leg as a tactile sensation, but is not painful. The touch of a finger is felt on the right leg but not on the left. July 23rd. Knee-jerks present, no ankle clonus. Patient has still no control over the urine. July 26th. Urine drawn off by catheter three times a day and bladder washed out with boric acid lotion. Urotropin given internally. She can feel the touch of a finger on the right leg but not on the left. The head of a pin is not felt on either leg. August 25th. Operation wound quite healed. She can flex at the hip and knee on each side, but cannot move the feet or toes. September 3rd. The catheter is still used; but the urine is occasionally passed spontaneously. She has now a slight sensation at the anus when faeces are passed. September 20th. Considerable rigidity of the legs has developed, and there is a great tendency for them to be flexed at the hips and knees. October 15th. Patient can now dorsiflex feet and extend the toes. There is great rigidity of the legs to passive movements. January 20th, 1901. Catheter passed for the last time. January 25th. Urine and faeces passed normally. Urine only contains a few pus cells. Legs very rigid. She can feebly flex and extend at all of the joints of the leg, but she is quite unable to stand. The knee-jerks are increased: ankle clonus is present on both sides; the plantar reflexes are present, and of the extensor type. The abdominal and epigastric reflexes are absent. The sensation, which has gradually improved since the operation, is now practically normal. The touch with the head of a pin, the prick of a pin, the sensations of heat and cold are felt in the normal manner all over both legs, and all over the abdomen and chest. The patient was discharged from the hospital on January 25th, 1901. She remained at home until the end of the year, when she was again admitted to the hospital. On January 7th, 1902, the patient is able to stand on the toes when supported with both hands on a table or chair back: but she is not able to walk alone. The movements of the right leg are feebler than those of the left. She cannot get the heels to the ground when standing supported. The right leg is very rigid; the left slightly rigid; both knee-jerks are increased; there is ankle clonus on the right side, but not on the left. Sensation normal. The patient left the hospital in a few weeks, and remained at home until June, 1902. June 26th, 1902. Patient can walk alone with the assistance of a walking stick in each hand. She can perform all the coarse movements of the legs, but the legs are still spastic, especially the right. The movements are much better than when she was in the hospital last. In July, 1902, a small cyst, about 1 in. in diameter, was found at the upper end of the operation scar where the gauze drain had been inserted. The cyst contained clear fluid. To remove this cyst the skin was punctured at about an inch distance, and the cyst wall ruptured subcutaneously. The fluid removed was clear and water-like. The cyst was so opened to allow of interstitial drainage afterwards, a method considered by one of us (P. T.) to be safer than the excision usually recommended in meningocele. On December 2nd, 1902, the patient could walk alone with the aid of one stick. She was able to walk about the ward and to walk for a short distance in the street with the aid of one stick. She could perform all the coarse movements of the legs. There was, however, considerable rigidity of the legs, with increase of the reflexes. But sensation was normal. There was no affection of the bladder or rectum, and the patient felt quite well.

Owing to the spastic condition of the legs the recovery cannot be regarded as quite complete: but when we consider that before the operation there was total paralysis of both legs, paralysis of the bladder and rectum, and anaesthesia of the legs and lower part of the trunk, the results must be regarded as very satisfactory.

With reference to surgical treatment, the pathological anatomy of spinal hydatid cysts has revealed two points of great importance concerning their situation: (1) That the cysts causing the "compression myelitis" are usually external to the spinal dura mater (20 out of 24 cases, Colman[1]); (2) that in the majority of cases the cysts are on the posterior surface of the spinal dura mater (Maguire[2]). In the majority of cases, therefore, the cysts are situated on the surface of the dura (posterior) which is most easily exposed surgically; also the cysts, being usually extradural, can be removed without the dura mater being opened. Further, according to Schmaus and Sacki and other pathologists, the cause of the paralysis at first is localised oedema of the cord; at a later period degeneration of nerve elements and softening occur. Hence by early removal of the cysts there are good prospects of recovery from the "myelitic" symptoms. In 10 out of 25 cases analysed by Colman, the dorsal region of the cord was the seat of the "compression myelitis" caused by the cysts.

In many of the cases recorded the cysts have first developed in the subpleural or subperitoneal connective tissue, or in the muscles of the back (as in the case here recorded). Afterwards they have extended through the intervertebral foramina into the vertebral canal, and then have spread in the longitudinal direction in the adipose tissue external to the spinal dura mater.

In most of the cases recorded symptoms of compression of spinal nerve roots—radiating pains—have occurred first, and later paraplegia, anaesthesia, and bladder, and rectal symptoms have developed. The onset of the paraplegia has usually been gradual.

As regards diagnosis, the symptoms just mentioned may be attributed to spinal hydatid cysts when examination reveals the presence of hydatid cysts in some other part of the body, and no other cause of "compression myelitis" can be detected. In some cases (as in that here recorded) a small cyst has been felt in the back close to the vertebral spines, and when this has been punctured the fluid has had the characters of hydatid fluid, and has contained scolices or hooklets.

The only treatment of service is removal of the hydatid cysts. But usually when the operation has been performed the compression has been of long standing, the cord has never recovered its functions, and the case has terminated fatally. By early recognition and operation many cases could be saved.

We have found references to four successful operations for spinal hydatid in medical literature, and probably a few others are on record. Putnam and Warren quote a case recorded by Lloyd,[3] and another reported by Szekeres.[4] In both the cysts were extradural. The results of operation are stated to be "recovery," but we have not been able to obtain the original articles. Hahn[5] has recently mentioned a case in which recovery followed his operative treatment. Sir William Gowers[6] mentions a case in which Sir Victor Horsley removed a number of hydatid cysts compressing the cord, "but the damage was too great to allow the recovery of the extensive atrophic paralysis produced in the right thigh and hip muscles."

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[1] Colman, W. S., *St. Thomas's Hospital Reports*, vol. xxviii, p. 362. [2] Maguire, R., *Brain*, vol x, p. 451, 1888. [3] and [4] Lloyd and Szekeres, quoted by Putnam and Warren, *American Journ. of the Med. Sciences*, October, 1899. [5] Hahn, *Centralblatt f. Chirurgie*, No. 14, p. 398, 1902 (Society Report.) [6] Gowers, Sir Wm., and Taylor, J., *Diseases of the Nervous System*, 3rd edition, London, vol. i, p. 306. [7] Ransom and Anderson, BRITISH MEDICAL JOURNAL, vol. ii, 1891, p. 1144.

CASE OF HYDATID OF THE PLEURA.

BY

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Medical Notes by DR. W. B. RANSOM.

History.—Miss T., aged 43, consulted me first in September, 1901. She had been out of health for two years, her illness having begun with symptoms that suggested gastric ulcer to her doctor. Thus, she had had severe and sudden attacks of pain in the epigastric region, sometimes independently of food and not associated with vomiting or jaundice. She had been kept on milk diet for three months, and ultimately the gastric symptoms subsided. In January, 1901, however, she felt new pains in the chest between the left breast and clavicle. In March she consulted two eminent medical men in the North of England, who appear to have suspected a new growth of the lung. There had been some cough during the whole of the year, and a considerable quantity of phlegm since June, but no haemoptysis. She had lost a good deal of flesh in the earlier part of the year, but had gained 6 lb. between April and September.

State on Examination.—The chest was found to be normal except for an area of absolute dullness at the left apex in front, extending from the clavicle to the third intercostal space, and inclining slightly downwards towards the axilla. The area was continuous with the cardiac dullness, and in it breath and voice sounds were extremely faint, but no *râles* or crepitations were heard. There was no enlargement of glands, no abnormal pulsation, and the heart, larynx, and abdomen appeared normal. In the sputum, which was abundant and muco-purulent, neither tubercle bacilli, actinomyces, nor fragments of new growth or hydatid were discovered. The patient was ordered potassium iodide, and sent away to the country.

Progress.—In a month all expectoration stopped, she gained

4 lb. in weight, and was able to walk ten miles a day, while her temperature remained normal. The physical signs, however, were unaltered, except that the breath sounds were now quite absent in the dull area. By Christmas she had gained 8 lb., in spite of a febrile attack of "bronchial catarrh" in November—for which she was attended by Dr. Fraser, of Carlton—and felt very well, but was again spitting large quantities of phlegm. Suspecting hydatids, I repeatedly sought for fragments of membrane in the sputum, but in vain. During the whole of February she was in bed, under Dr. Fraser's care, with signs of general catarrh of the left lung, fever, and incessant cough. When I saw her again in April she was, therefore, not so well, had lost flesh, and complained of pains in the front of the left half of the chest and in the axilla, while she coughed a good deal of frothy, watery fluid. There was now heard pleuritic friction in the axilla outside the dull area, which had slightly extended. Although there was no history of syphilis, she had been taking potassium iodide in large doses for nearly four months.

Diagnosis.—Feeling that hydatid cyst in the pleural cavity in front of the left lung was a probable diagnosis, I now urged her not longer to postpone surgical treatment, which Mr. Morley Willis after consultation agreed to carry out, deliberate operation being considered preferable to a preliminary exploration by a trocar.

As will be seen by Mr. Willis's account the operation confirmed the diagnosis. It is probable that the epigastric pains, which occurred a year before the thoracic troubles and at first appeared to have no connexion with the latter, may have been due to hydatids in the neighbourhood of the stomach and liver.

It should be added that the patient before consenting to the operation consulted Dr. Lauriston Shaw, who agreed with the diagnosis and proposed treatment.

[January 31st, 1903.—Since these notes were sent to the British Medical Journal, I have had in hospital a man in whom the symptoms and signs were identical with those above-mentioned, with two exceptions. On the one hand there has been no expectoration, on the other there is paralysis of the left vocal cord. This week Mr. Hogarth explored the second left intercostal space and revealed a solid mass of growth, probably sarcoma. The patient has had no visibly enlarged glands, no fever and but slight wasting. The involvement of the recurrent laryngeal nerve was the one positive sign pointing to new growth.]

Surgical Notes by Mr. W. M. Willis.

The foregoing are Dr. Ransom's notes of this interesting case. My connexion with it began on May 6th, 1902, when I saw the patient with Dr. Ransom with a view to operation.

Having heard the history, I carefully examined her chest and found the conditions described still present, namely, an area of absolute dullness at the left apex in front, extending into the axilla, and continuous below with the heart dullness. Over this area were to be heard breath sounds and vocal resonance only very faintly, and there were no *râles* or other adventitious sounds.

I failed to satisfy myself completely on this examination, which was the first I had made of the patient, whether the area of dullness was due to a condition of the lung itself, or to a condition of the pleura and not in communication with the lung, or of an affection of the pleura plus a communication with the bronchus. However, I expressed my willingness at the patient's request, and on the suggestion of Dr. Ransom, to explore this dull area.

She was admitted to a private nursing home in this town, and a day or two before operating I took the opportunity of again very carefully examining her chest. The conditions were unaltered, but I observed that there were distinct signs that the heart was slightly displaced downwards and to the right, so that the apex beat was felt in a space lower than is usual, and somewhat internal to the normal position. I therefore felt justified in concluding that there was a condition of the pleura, with or without a small communication with the bronchus, and that exploration was entirely justifiable. With regard to an exact diagnosis, I did not feel that it would be possible to affirm much. That we could exclude a condition of the lung itself was an opinion that the examination warranted, but what condition of the pleura existed was by no means certain. The length of the history of the condition was opposed to new growth, at least of a malignant variety, and the exceeding uncommonness of a localized pleurisy or empyema in this situation rendered such a diagnosis improbable.

The fact of the patient having been resident in Australia was worth bearing in mind, and, having excluded other conditions, this somewhat favoured the idea of hydatid cyst. I was therefore, before operating, in this position—that the patient had a condition of the left apical pleura which was probably not inflammatory, probably not new growth, and that there was reason for supposing, at least, that it might be a hydatid cyst. This will appear sufficiently vague, but I felt that it was enough to justify an exploratory operation.

Operation.—Accordingly, on May 17th I proceeded to investigate the condition. Chloroform was administered, and the arm was extended at a right angle with the chest. An incision was then made some 4 in. in length, the centre of which corresponded with the second intercostal space in the mid-clavicular line. The fibres of the pectorals were separated and held aside with retractors, and the intercostals of the second space were then defined. The intercostals were incised and the parietal pleura exposed. The needle of an exploring syringe was then thrust into the dull area at the point indicated, and, the piston of the syringe being withdrawn, perfectly clear fluid filled the syringe. The opening in the intercostal space was now enlarged, and the finger was inserted into the cavity, from which a large quantity of fluid was issuing. The downward limit of the cavity could be reached, and the pericardium felt with the heart pulsating within it, but the upward limit could not be reached, it appearing to occupy the whole apex of the thorax on this side. The whole cavity was smooth-lined, and was a hydatid cyst of the pleura, with apparently no communication with the lung; but the lung was displaced by the pressure of the cyst, which contained upwards of a pint of fluid. A large-size drainage tube was inserted, and the skin incision closed except where the tube issued.

After-progress.—The wound was dressed daily, and in the course of ten days or a fortnight the whole of the cyst wall was expelled through the opening aided by traction as it presented. The bulk of it was expelled on one day entire, and was as large as the human urinary bladder. Vomiting was extremely troublesome for two or three days, so much so that for twenty-four hours she was fed per rectum. The lung has gradually expanded, and the present condition of the patient is as follows: There is no cough, she can walk ten or twelve miles with ease, eats and sleeps well, has put on flesh. There still remains, however, a sinus in the chest wall, leading into a cavity which appears to be as large as a good size orange; so that, though there has been some recovery of the lung and it has expanded considerably, it has by no means completely done so. From the sinus there issues a thin sero-purulent fluid in small quantity, but necessitating daily dressing by the patient. It is probable that the cavity will only be obliterated by allowing the chest to fall in, and to this end it will be necessary to perform another operation, and remove portions of several ribs probably of the second, third, and fourth.

[February, 1903.—Since the above was written I have removed some 2½ in. of both the second and third ribs in front, and as the parts removed constituted the entire bony boundary of the remaining cavity there is every reason to believe that in time it will become quite obliterated by the falling in of its front wall. This was done on January 15th and the patient is progressing well.]

THE EFFECTS OF VACCINATING DURING A MENSTRUAL PERIOD.

By E. RUMLEY DAWSON, L.R.C.P.Lond., M.R.C.S.,
Leyton.

The following case, in which haematemesis was associated with menstruation, appears to be of interest:

R. R., aged 20, single, hotel chambermaid, had been primarily vaccinated as an infant. She was a robust, healthy, and not anaemic woman, who had always been very regular in her menstruation. Each menstral period normally lasted six full days, during which the discharge was profuse, and of a bright red colour. The periods recurred every twenty-eight days with great regularity. She suffered occasionally, perhaps two or three times during a year, from slight indigestion, which was not sufficiently severe to cause her to consult a doctor. She was not a regular dyspeptic, and did not have pain after her food; she was not a bilious subject, and was not liable to vomiting. She was of very abstemious habits.

She was, and had been for some time past, very well indeed, when about

4 p.m. on October 26th, 1901—the second day of her menstrual period—she was revaccinated. She fainted at the operation, so she lay down for two hours. When she got up she felt dizzy, and then fainted again. She then noticed that her period, which had been flowing freely as usual, had stopped completely and did not return again. The vaccination "took well." She had, to use her own expression, "a bad arm with a lump in the armpit."

The next period (November, 1901) came exactly to time; it consisted of the slightest possible show, only a smear on one diaper on the one day only; it was not a proper "period" as "blood was almost absent." The December period was exactly similar, and so were the periods corresponding to the early months of the year 1902 up to and including the April period.

She had not felt really well since the vaccination and the consequent practical cessation of menstruation, her symptoms being those of a premature menopause She could not sleep, was troubled with hot flushings; was always feeling giddy, and felt inclined to fall, so that she often had to sit down while at her work. She, too, complained greatly of palpitation since the new year.

On April 28th she began to have headache and to feel tired and heavy; on the night of the 29th she fainted and vomited once; on the 30th she vomited during the forenoon, bringing up food; she felt faint after doing so; later she brought up a little glairy fluid.

About an hour later she was again sick, when she brought up into a clean empty chamber utensil two full pints of very dark-looking blood, after which she fainted and was put to bed; she was then given a little brandy for the faintness. Her fellow servants thought it was "those things coming upwards." A doctor found her to have some epigastric pain, and diagnosed gastric ulcer. About 3 p.m., that is, soon after being put to bed, her menstrual period came on; it was profuse, and like her periods before the revaccination in October.

She was allowed nothing but ice and iced milk and water. On May 4th, not having again vomited, she was moved from the hotel to her home. She travelled by ordinary train and stood the journey well; she was in no way collapsed, Examination showed she was quite free from any organic disease; she did not look anaemic; there had been no return of either vomiting or haematemesis. There was not, and had not been, any purpuric rash on the body; her feet and legs were not swollen; there was only very slight epigastric tenderness. She was ordered bread and milk, cocoa and milk, and beef-tea and bread.

The next day, May 6th, the menstruation stopped—that is, on the sixth day of its flow; it was, therefore, her first normal period since her revaccination, more than six months previously. She was allowed fish this day, and thenceforward she ate meat and other solid food regularly without discomfort.

Her next period began at 3 p.m. on May 27th, 1902—that is, exactly twenty-seven days since the former period began; there was more pain than she had had for years past. The period lasted four days only, but was so profuse each day that she lost as much as she did usually in the six days.

The subsequent periods up to the end of July have been normal, both as to amount and time. She is now (August 10th) quite well.

I have not been able to find any reference to the influence of vaccination on menstruation. This patient, however, fainted at the operation of vaccination, and the menstrual period was arrested long before the vaccination took, therefore the cause of the arrested menstruation may be ascribed to the shock of the operation and not to the action of the vaccine *per se*.

Shock is known to be one cause of amenorrhoea; as Herman[1] says: "Causes of ill-health—such as chill, shock, fatigue, etc.—acting about the time at which menstruation ought to come on, may prevent its doing so, or during the flow may stop it."

It is to be noted that the amenorrhoea did not follow as a result of the haematemesis, but, in fact, preceded it; while haematemesis, which, when due to gastric ulcer especially, is often followed by amenorrhoea, was in this case followed by profuse menstruation.

The case raises the point as to whether the amenorrhoea led (as shown by the haematemesis) to a gastric ulcer. Such a causation for gastric ulcer has been suggested by some authorities. Against the diagnosis that the haematemesis was due to a gastric ulcer are the facts that the patient had been quite well for some time, and had had no recent dyspeptic symptoms or gastric pain. She was in good general condition and not wasted, and she was neither anaemic nor chlorotic. The fact, too, that she was able to make a journey of some seven miles four days after without being collapsed, or inducing vomiting or haematemesis, goes to show that such a severe lesion as an ulcer of the stomach wall was not present. The haematemesis being looked upon as due, not to an ulcer but as symptomatic of incipient menstruation, she was allowed solid food within the week, and this was eaten without any subsequent discomfort. What then was the cause of the vomiting of blood which ushered in the return of her normal menstrual periods?

Dr. Wilks used to say the four causes of haematemesis were, two common, gastric ulcer and cirrhosis of the liver; two uncommon, cancer of the stomach and vicarious menstruation. Was this, then, vicarious menstruation? or, as her fellow servants termed it, "those things coming upwards?" It certainly shortly preceded a menstrual period, which was a profuse one; and so the haematemesis did not actually replace the menstruation, but it certainly seemed symptomatic of its incidence.

Vicarious menstruation is a subject which the obstetric specialist discredits but which many general practitioners believe they have seen cases of.

The lesson of the case seems very evidently to be that it is not advisable to vaccinate at or during a menstrual period except under circumstances of great emergency.

REFERENCE.
1 Herman, *Diseases of Women*, p. 580.

PRELIMINARY ACCOUNT OF THE INVESTIGATIONS OF THE LIVERPOOL EXPEDITION TO SENEGAMBIA (1902).

BY
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With a Note by H. E. ANNETT, M.D., D.P.H.

As has already been reported in these columns, one of us in December, 1901, found a trypanosoma in the blood of a European, at that time under the care of Dr. R. M. Forde, Principal Medical Officer at Bathurst, Gambia, West Africa. A description of the parasite, which was named T. gambiense, and of the case in which it occurred, was published in the last number of the *Thompson-Yates Laboratory Report*. The patient returned to England in July, 1902, and placed himself under the care of one of us, but since our departure for West Africa has been under Dr. H. E. Annett's observation at the Liverpool Laboratory.

As pointed out previously in the BRITISH MEDICAL JOURNAL of September 20th, 1902, the most notable features presented by this case were:

1. Its chronic course.
2. The general wasting and weakness.
3. The irregular rises of temperature, never very high and of a relapsing type.
4. The local oedemas.
5. The congested areas of the skin.
6. The enlargement of the spleen.
7. Constant increased frequency of pulse and respiration, associated with no definite organic lesion.

The extraordinarily chronic course of the disease in this case, and the possibility of easily overlooking the parasite which is to be regarded as its cause, and which had never been previously accurately described as occurring in man, combined with the discovery of a parasite apparently identical with that found in the European, in a blood preparation taken from a native child at Cape St. Mary, near Bathurst—these considerations led the Committee of the Liverpool School of Tropical Medicine to appreciate the possible importance of this disease of Europeans and natives to tropical medicine, and accordingly dispatched a second expedition with the object of determining the incidence, distribution, and etiology of trypanosomiasis in Senegambia.

The expedition arrived in Bathurst early in September, and remained there for three weeks. During this time many natives were examined for trypanosomata with negative result. T. lewisi was frequently seen in rats, and T. sanguinis in frogs. An unidentified trypanosoma was seen in several African canaries, and others, also unidentified, were observed in frogs and tortoises.

The members then proceeded to Cape St. Mary, about seven miles from Bathurst, in British Kommbo, where all the horses in the native town, six in number, were found to harbour trypanosomata. One of these horses when seen was almost *in extremis*, and the native in charge said that it had been in this condition for twenty days. It died six days later. The symptoms were briefly as follows: Marked emaciation, extreme weakness, general lassitude, laboured breathing, and constant fever, usually about 103° F. No oedema, haemorrhages, nor discharge from mucous membranes was observed. Trypanosomata were very numerous, as many as 29,000 per cm. The day before death the temperature dropped to 98·4°, and no parasites were seen in two moist cover-slip preparations.

The other horses were in constant use, and showed no sym-

ptoms beyond thinness, some weakness, and occasional rises of temperature.

In fresh and stained preparations the organism does not resemble that of Nagana; nor do its reactions in white rats, native dogs, and rabbits suggest that parasite. One rat, indeed, has lived after inoculation with this trypanosoma for more than five weeks; and during all this time the parasite was constantly found in the tail blood. Only one rat (this a very young animal) died on the sixth day after inoculation, and the majority lived for over three weeks.

More than one hundred natives from the Cape village, most of them children, were examined for trypanosomata without result.

The parasite was, however, found in the blood of a white trader who has been in Gambia for over twenty years, and has spent most of this time in the interior, living in close association with the natives. Seven organisms in one moist cover-slip preparation were the most observed. Owing to the patient's business affairs, it is unfortunately impossible to make a careful study of his case at present. He first noticed that he was not in his usual health about a year ago, and since he has steadily lost weight—45 lb. in all. He complains at present of weakness, breathlessness on exertion, loss of flesh, lack of energy, and constantly recurring slight fever, not checked by quinine. He has in addition pain at the loins, and from time to time over the spleen. On examination on October 19th patient was seen to be a sturdily-built, middle-aged man, 5 ft. 6 in. in height, weighing 156 lb. Muscles were well developed. Temperature was 101° F. There was increased rapidity of both pulse and respiration while at rest. Heart and lungs were normal. Liver was slightly enlarged, but not tender. The spleen extended 3.5 cm. below the costal margin, and was rather tender. Alimentary system normal. Slight pitting of ankles and shins on pressure was seen, but no puffiness of the face was observed. The skin was everywhere much darkened, probably by exposure, and on the trunk much marked by recent insect bites. His legs were deeply scarred and pigmented by former "bush boils and ulcers." The parasite in this case is identical in appearance with the one observed in Dr. Forde's patient.

On November 3rd one of us left the Cape on a tour through Kommbo with the District Commissioner, Captain G. H. Sangster, to whom we are greatly indebted for his assistance. Three weeks were spent in the "bush" visiting the native towns, two days as a rule being spent in each. At every town the sick were treated, and their blood, together with that of as many children and young adults as possible, was examined.

The method employed was to take from each individual one film and one moist cover-slip preparation, the latter being examined at once. Some 220 persons were examined in this way. Of these, 4 were found to be infected with trypanosomata; 3 of these cases were found in a small riverside village—Lammin—situated near a mangrove swamp; only 35 persons in all were examined here. The remaining case, a native Mohammedan student, resident in this country only for a year, was seen at Gunjar, an inland town. He originally came from Rufisque. The number of parasites present in the blood varied from one to as many as twenty-three in a single cover-slip preparation, and the parasites appeared to be identical with the organism seen in the European cases. The age of the patients, male and female, varied from 6 to 35. The symptoms were most indefinite, and were entirely absent in the case—a girl of 18—which showed the largest number of parasites. Loss of strength and weight and "fever" during the rainy season were complained of by the remaining 3 cases. Physical examination revealed in the younger patients the ordinary enlargement of the spleen. In one instance only was there any oedema, and this occurred over the shins. The only constant symptoms observed were increased frequency of pulse and respiration. Once only was a slight rise in temperature recorded.

These cases will be more fully described in a subsequent communication.

The imperfections of the method employed in examining natives are fully recognized, both because the trypanosomata in an infected person may be, as was shown by one of us, for days absent from the peripheral circulation and because of the necessarily small quantity of blood thus examined.

When it is possible the centrifuge should be employed in examining suspected blood; the trypanosomata are deposited from citrated blood solution in a central whitish layer along with the leucocytes. Naturally while in the bush it is impossible to employ this method. Had it been used it is probable that the percentage of cases seen in Kommbo would have been much larger.

A similar tour through a district further up the river is about to be made.

We shall not give here a thorough description of the organism found in the human cases, and of its reactions in animals. Two points, however, may be remarked upon: first, its pathogenicity to white rats is not marked; secondly, the parasite may disappear from the blood of an infected animal for several consecutive days. Both these facts were observed this spring at home in rats infected from the first described European case.

Bathurst, November 24th, 1902.

Note by Dr. H. E. Annett.

The case of the European in whom the trypanosoma gambiense was first discovered since the departure of the members of the expedition on August 21st, 1902, continued to follow the chronic course which apparently characterizes the disease in man, until December 29th, when acute symptoms developed, and death rapidly followed. The increased frequency of pulse and respiration, the peculiar congested areas of the skin, the local and fugitive oedemas, the enlargement of the spleen, and the irregular rises of temperature continued until the end. But under treatment which after the apparently useless administration of quinine and arsenic in large doses, consisted of the administration of urotropin in doses increasing from 5 to 10 gr. three times a day, the patient increased in weight (from 158 to 168 lb.), and improved considerably in muscular strength. Slight rises of temperature, reaching sometimes 102° F., at intervals of from one to ten weeks, lasting only a few hours, and occasionally some increased difficulty in breathing produced some distress. During this time parasites were very scanty in the peripheral blood, and at some examinations appeared to be entirely absent, at others two or three only could be discovered after a long examination of several blood films. But the inoculation of animals (white rats and monkeys) demonstrated their presence.

On the morning of December 29th acute symptoms developed, ushered in by an indefinite rigor, the temperature being stated to be 99.6° F. In the evening the temperature was 104°, the pulse 126, and respirations 28. On the morning of the next day the temperature, which had continued high during the day, was 105°, pulse 130, respirations 30. There was some delirium, and the patient recognized his friends with difficulty. The respiration became of Cheyne-Stokes character, and there was some difficulty in utterance; the pupils appeared normal. An examination of the patient revealed nothing to account for the acuteness of the symptoms, which indicated some cerebral disturbance. The patient seemed to be *in extremis* but rallied considerably during the next day, the temperature gradually falling to 102 5°, while the pulse and respirations remained about the same, and there was no delirium. On the morning of January 1st the temperature fell further to 101°, but the respirations became still more frequent, reaching 60-70, until death occurred, the patient remaining conscious almost till the end.

The examination of several blood preparations taken during the last two days did not demonstrate the presence of any parasites in the peripheral blood. No *post-mortem* examination was possible.

The results of investigations as to the pathogenicity of the parasite for animals so far confirm the experience of the members of the present expedition to the Gambia. The disease is very chronic in white rats; some appear to be refractory, others died in two or three months. Similarly also in monkeys the infection only proves fatal in about two months, and, as remarked by the members of the expedition, parasites may be for long periods entirely absent, at least microscopically, from the peripheral circulation. Dogs seem to be entirely refractory, but further investigations are in progress.

It is remarkable that no case of infection with a trypanosoma is recorded as occurring in districts of Africa and India, where infection of animals is very common (nagana, surra, tsetse fly disease). It appears possible, if the symptoms and course of the disease in the cases of human trypanosomiasis already recorded afford any indication, that the chronic character of the disease, the scantiness of parasites and their apparent absence from the peripheral blood for long periods at a time, and the occasional rises of temperature, may all combine to cause the true nature of the disease to be overlooked, or even to be ascribed to a malarial infection.

A NOTE ON THE TREATMENT OF PUERPERAL INSANITY.

By ERNEST W. WHITE, M.B.Lond., M.R.C.P.,
Resident Physician and Superintendent, City of London Asylum, Dartford, Kent.

The late hour of the evening, and the short space of time allotted to each speaker in consequence, at the discussion at the Obstetrical Society on January 7th, prevented me from saying what I had hoped to have said regarding the treatment of puerperal insanity proper in asylums, for, as a member of the Society observed, it is in asylums that by far the larger number of cases are treated.

When the premonitory symptoms are observed, that is, change of manner and feelings with excitability, extreme quietude of surroundings must be ensured, and careful skilled supervision of patient enforced, to guard against infanticide or suicide by impulse. The bowels must be attended to, regular action being obtained by enemata and and mild aperients. If there be early insomnia, a sedative draught of potassium bromide ʒss and chloral hydrate gr. xv must be given at night. The diet should be liberal and sustaining. For instrumental feeding a mixture of equal parts milk and strong beef-tea, one pint in all at first, with two or three eggs beaten up in it and a little brandy, if indicated, administered thrice daily with oesophageal tube and funnel. Later on we feed twice a day with one pint and a-half each time and two eggs at each meal; lime juice or concentrated extract of green vegetables must be added. If the temperature be high the relative amount of milk must be increased at the expense of the beef-tea, and diarrhoea or sickness indicate excess of food administered, which must be diminished accordingly. Most patients will be sick after the first feeding, and perhaps after the second, until the stomach becomes accustomed to the means adopted.

A thorough examination of the uterus and its surroundings must be made, and any altered lochial discharge dealt with. In all cases the urine must be tested for albumen. In the medicinal treatment we must avoid as much as possible any free use, or rather abuse, of sedatives and hypnotics. If there be acute maniacal excitement with insomnia, we give potassium bromide ʒss and chloral hydrate gr xv twice or thrice daily, carefully watching the effect, and never continuing it for any lengthened period. Subsequently sulphonal ʒss, or, better, trional gr.xx, may be given at night, or on alternate nights, with ʒjss to ʒij of paraldehyde, when a mild ferruginous tonic may be given by day to treat the concurrent anaemia and albuminuria (if present). In all cases in the maniacal form opium and its preparations are to be avoided. The child of course is weaned at once, and any tendency to mammary congestion or abscess, which is rare, dealt with in the usual way.

If the mental symptoms when fully established are of the melancholic type, the preparations of opium and diffusible stimulants are indicated. We give liq. morph. acet. ♏xx sp. etheris ♏xv in aq. camph. ʒj thrice daily, and enemata to relieve constipation. Iron must be given also, and every effort made to re-establish—by hot baths, aloes, ergot, etc.—the menstrual function, which is suppressed. All patients with puerperal insanity lose flesh rapidly, therefore regular weighing records must be kept, and after the first few weeks ol. morrhuae given. A gain in weight, except when dementia has supervened, is a favourable sign. Stimulants, carefully regulated, are indicated in all cases, as the disease is of an asthenic type; at first brandy with the artificial feedings; later on port wine during convalescence. In severe cases there is an early tendency to bedsores; therefore, if the patient be confined to bed for any length of time, we paint the back and hips with equal parts of liq. plumbi subacet. and tinct. catechu once a day. For moral treatment, when the patient's physical health will permit, change of scenery is indicated. As soon as there is no marked febrile temperature, and if the strength be fairly maintained, she should, weather permitting, be got up, dressed, and taken out daily for from half an hour to two hours, but carefully guarded against all excitement. This course will often induce natural sleep. Faulty habits must be corrected. Fresh air and sunshine out of doors, gentle exercise, amusements, and all forms of diversion materially aid recovery, and indoor occupation of a light nature should be encouraged.

The relatives and friends should not see the patient until she has definitely improved, and even then the effect of the visits of the husband and child should be carefully watched. In the melancholic form these visits are less harmful than in the maniacal. Recovery in all cases is gradual and protracted, and in the early stages the mental state of the patient varies much, but the final result is eminently satisfactory, for about 80 per cent. recover.

ON THE BILBERRY (VACCINIUM MYRTILLUS)

AS A REMEDY IN TYPHOID FEVER AND OTHER INFECTIOUS DISEASES OF THE INTESTINE.*

By MAX M. BERNSTEIN, M.B., M.R.C.S., L.R.C.P.

Although scarcely another subject in medicine is so fiercely beaten upon by the light of publicity and general interest as that of enteric fever, it is rather discouraging to admit that whatever there is of brilliant achievement in it does not belong to the medical man. The disease has of late years become pre-eminently the domain and almost the exhibition ground of trained nursing, and the more the latter excels the less resolute and significant apparently is the part taken by medicine.

This is far from satisfactory in the interests of public health, for as often as the highly-complicated machinery of trained nursing is unobtainable, or as soon as for some reason it breaks down, the mortality from typhoid in hospital and camp rises. Still less satisfactory has this state of things been from the standpoint of scientific therapeutics, as the latter has seemed wholly powerless to draw any practical advantage from the great pathogenetic demonstrations of bacteriology. The only direction in which an effort in the latter sense has been made is that of prophylaxis, but the outcome of preventive inoculation is as yet an unknown quantity.

As in tuberculosis, the specific bacillus, the primary cause, has been left to develop, thrive, and work havoc in the human body whilst the fight was being carried on solely against the secondary causes of the malady, the toxins. It has seemed to me, however, that the chances for the more direct method of combat, for the fight against the bacillus itself and during the acute stage of the illness, would not be as unfavourable as one has hitherto thought if a reliable drug could be provided to effectively act on the infectious material in the whole of the intestinal canal. My reasoning was as follows:

Although the typhoid bacilli multiply in the walls of the intestine, in the mesenteric glands, in the spleen, etc., and are in exceptional cases not found in the stools until the end of the second week,[1] it is an indisputable fact that the bowel is the place of entrance and one of the channels of exit of the bacilli. Is it not probable then that this place is also the seat of the continuation of the infection? At the present moment scarcely anybody will assert that the illness of four and more weeks' duration is the sum and outcome of the poisonous effects of one dose only of the virus: on the contrary nothing is clearer than that it is the expression of a continuous cycle of growth of the bacillus, which cycle goes on even after the end of the illness, that is, even after the body has become immune to the toxins. In this connexion the extraordinary case recorded by Dr. Gwynn and mentioned by Dr. A. C. Houston[2] at the annual meeting of the Association in Cheltenham of dissemination of typhoid bacilli by a man in his urine five years after an attack of typhoid is not easily forgotten. For all we know, may not similar discharges take place from the bowel after the disease has clinically ceased?

At any rate, their continuous evacuation from the bowel during the disease is a certain proof that they are present there in great numbers. What is therefore to prevent their reabsorption during the acute stage of the disease? Proofs are not wanting of this; as in ulcers in various stages of development and disseminated infarcts of various age. And I am inclined to reason that this constant reinfection is the source of prolongation of the acute stage of the disease right up to the moment of full immunization of the body, and if measures were taken to keep the intestine in the most unfavourable state for the bacilli and in the most favourable condition for healing of the ulcers, the duration and the severity of attack might be diminished, complications lessened, and consequently many lethal issues avoided.

As it happens, a splendid drug has already been found for typhoid bacilluria in urotropin, and the excellent results obtained with it in chronic cases[3] point to the greater urgency of, and also possibility of equally good results by, another specific disinfectant for the intestinal canal.

* Read before the Hunterian Society.

I believe I am justified in saying and able to prove that such a specific remedy, capable of meeting all the indications of typhoid in the intestine during the disease, will be found in the fruit of the bilberry shrub (vaccinium myrtillus, Cl. *Ericaceae*).

The small, almost black, and sweet berries of this well-known shrub (bilberry, blaeberry, or whortleberry) growing all over the Continent, Great Britain, and Ireland—preferably in heathy woods, bogs, moors, and mountains—have in this country never had any medicinal application,[4] and have been only used in jams and tarts.[5]

In France (*airelle*, *myrtille*, *brembelle* or *brinbelle*, etc.), and especially in the northern provinces, the berries are very popular for eating, and are sometimes used as a light astringent.[6]

In Germany (*Heidelbeeren*, *Bickbeeren*) they are a favourite popular remedy for diarrhoeas, and are used either in the form of dry berries, tinctures, extracts, or fruit wines (*Obstwein*), or syrups.[7] During the last ten years they have claimed greater attention on the part of the medical profession, and have been recommended by Winternitz for skin affections and burns,[8] and by others for superficial chronic glossitis,[9] and as injections and suppositories in colitic conditions,[10] etc. In other countries the bilberries have likewise been known only as a popular remedy, and are mentioned in the older editions of the pharmacopoeias of Finland, Belgium, Sweden, and Spain,[11] but have nowhere at any time attained to the position of a recognized drug.

When I started prescribing bilberries fourteen years ago it was in their capacity as astringent only. In combination with the tincture of opium I gave the jam of bilberries in fermentative diarrhoeas with flatulence and cases of cholera nostras. Their promptness as an antifermentative was striking, and the first stools laden with the dark pigment and the débris of the berries, were free from putridity and flatulence, and often formed. In 1892, in London, I employed a concentrated decoction in a severe case of chronic ulceration of the bowels subsequent on acute dysentery. The patient, a young man, aged 20, was extremely emaciated, and had to spend most part of the day and night on the commode. The number of motions, as far as they could be counted by the nurse, amounted to thirty-six, and their character was mucous and putrid, and they were accompanied by great suffering. Although the decoction was used in conjunction with other measures (enemata, ointments, and sedatives), I think I was justified in ascribing the favourable result mainly to the berries, when in the course of five weeks the number was reduced to two or even to one in twenty-four hours, as the sedatives had been freely used already before the myrtillus treatment.

In 1897 for the first time I tried a weak infusion in a case of typhoid in a child, and it seemed to me that the disease took a milder course, and that convalescence started earlier than I had anticipated. The second case was also a child of 8 or 9 years; the main symptom for the first ten days had been severe headache, and the disease had remained not diagnosed. At the end of this time it came under my observation, when I put it on decoction of V. myrtillus and a proper diet, and although prognosis had been dubious on account of the preceding injudicious feeding, the patient's temperature went down, and the disease was over in a fortnight. Two more cases of typhoid in adults were treated with V. myrtillus with similar good results, but unfortunately I am not in possession of the records.

I was convinced for myself that the favourable action of the drug could not be solely due to its slightly astringent properties, but must be based on some other quality.

The analysis of the slightly acid, yet sweet and aromatic juice of the bilberry, as hitherto recorded, did not afford me much to go upon. Herman Hager, the well-known German pharmacist, the only authority that mentions the subject,[12] gives as the constituents "sugar, malic acid, limonic acid, a pigment containing tannin, pectins, etc.," and I do not think that there is another or a more recent investigation available, as the berries never gained attention otherwise than as an occasional article of food.

Convinced as I was of their antifermentative action, I decided to test whether they had any specific effect on the typhoid bacillus and other pathogenic bacteria of the intestine, and Dr. F. A. Andrewes, of the Pathological Laboratory of St. Bartholomew's Hospital, kindly consented to guide and assist me in the matter.

I prepared a decoction of the dried berries in the ordinary way, making the weight of the liquid equal to that of the material employed, filled some tubes with it, and sterilized them. A pipetteful of cultures of B. coli communis and B. typhosus was then added each to a tube of sterilized bilberry juice and subcultures in broth, made after five minutes, one hour, twenty-four hours, forty-eight hours, and seventy-two hours. The subcultures were examined after twenty-four hours, and, where necessary, tested on gelatine. The result is shown in the following table:

Growth of Bacteria under the Action of Bilberry Juice (Acid).

	After 5 mins.	1 hour.	24 hours.	48 hours.	72 hours.
Typhoid bacillus ...	+	+	+	—	—
B. coli communis ...	+	+	—	—	—

Thus the typhoid bacillus was killed by the action of bilberry juice at some point of time exceeding twenty-four hours but not later than forty-eight hours after commencement, whilst the bacillus coli communis showed less resistance, failing to grow even after twenty-four hours.

Reassuring as this experiment was, it was necessary to eliminate the action of the acids contained in the bilberry (malic, limonic) before forming a definite opinion. I therefore repeated the test in 1901 in the same laboratory, with the kind assistance of Dr. J. H. Drysdale. This time the decoction, prepared as in the first case, was carefully neutralized with a solution of sodium carbonate and sterilized. At the same time the range of the experiment was widened, including, besides the B. typhosus, the B. Gaertner and three different kinds of B. coli. Among the latter, one type was derived from a case of cystitis (Ryder), a second from a case of endocarditis (Dulieu), and the third was from the old laboratory stock (lab. type). Subcultures on broth were made after six, twenty-four, and forty-eight hours, on agar after twenty-four and forty-eight hours. All subcultures were examined twenty-four hours after their preparation. Besides these, Dr. Drysdale also tested the effect of bilberry on cholera vibrio.

The results of this second experiment can be tabulated as follows:

Growth of Bacteria under the Action of Bilberry Juice (Neutralized).

	Typhoid Bacillus.	B. Gaertner.	Cholera Vibrio.	B. Coli (Com. (Ryder)	B. Coli Comm. (Dulieu).		B. Coli Comm. (lab. type).	
Medium ..	Broth.	Broth.	Broth.	Broth.	Broth.	Agar.	Broth.	Agar
After 6 hrs.	+	+	+	+	+	—	+	—
After 24 hrs.	—	—	—	—	+	one colony	+	+
After 48 hrs	—	—	—	—	+	more colonies	+	+

The results of this test are quite striking, and speak for themselves. The typhoid bacillus, Gaertner's bacillus, the cholera vibrio, and one kind of the pathogenic species of the B. coli communis, were killed by the neutralized decoction of bilberry within twenty-four hours, whilst another kind of pathogenic B. coli was inhibited in its growth for twenty-four hours, and only the laboratory type (probably non-pathogenic) retained its vitality unimpaired. It is quite reasonable to assume that if the standard infusion prepared by me for these tests gives these positive results in twenty-four hours, a stronger preparation will have a prompter action still, and there is no reason why its strength should be limited in therapeutical use, as the berries are not poisonous.

Having by these tests established the bactericidal action of the myrtillus, and bearing in mind my experience with it in ulcerative processes in the bowels, and also the chemical analysis as quoted above, the special considerations that recommend it very strongly in the treatment of typhoid and other diseases of the intestine (infectious and ulcerative) can be conveniently preceded here by a few remarks on those qualities of the drug that apply to all cases.

The berries are first of all non-poisonous, a very important feature which enables the free administration of frequent and large doses if desirable, and allows a wide range in its concentration. Secondly, the infusion or the jam has a pleasant, fragrant, and refreshing taste, can be sweetened to the patient's liking, can be taken hot or cold, and easily mixed

with mineral waters, lemon water, tea, milk, custards, cream, barley water, and fine porridge. Thirdly, as my tests establish, neither the acid juice of the stomach nor the alkaline contents of the bowels will interfere with the action of the drug; and, fourthly, this action reaches down to the lowest portion of bowel, and therefore I am justified in looking on the drug as a suitable means for local treatment within the intestine.

Coming now to the special indications in

Enteric Fever,

V. myrtillus can claim to keep the intestine aseptic (as far as B. typh. is concerned) to prevent reabsorption and reinfection, and thus prevent and cut short the duration of the infection; secondly, its astringent and antibacillary effects combined cannot act otherwise on the ulcers already formed than in a soothing, cleansing, and healing manner; in other words, it supplies the drug for local action on the sores so desired to check their spread in width and chiefly in depth. But in this connexion another consideration will perhaps be found of great importance. The immediate causes of perforation of the ulcerated walls of the intestine are by no means very easy to determine, and occur independently of the strictest diet, etc. Whether due to muscular action or any other cause, the final moment must evidently be one of an intra-intestinal pressure too great for the weakened wall. Now I am inclined to think that in the cases of dietary mistakes so frequently leading to perforation, it is not the food *per se* but the flatulence generated by it that raises the pressure within to the point of bursting through the weak spot, and I believe that the anti-fermentative action of myrtillus will certainly be of great use in avoiding these sad complications.

Among other infectious diseases,

Dysentery

is that in which I expected very favourable results from V. myrtillus, being led to think so by my practical experience with it in the chronic variety of the disease.

It was therefore a matter of great regret to me that a laboratory test was, for obvious reasons, impossible; but nevertheless my tests with the various types of B. coli are very encouraging, if one considers the direction which the developments of the knowledge of acute dysentery have taken of late. The amoeba as a recognized primary cause of dysentery is fast losing its position in favour of bacterial organisms.

Roger, who has devoted to this subject his special attention,[13] after subdividing the disease into amoeboid dysentery, a coli-bacillary dysentery, and forms of enteritis resembling dysentery, among whom one form seems to be caused by a special bacillus described by him, goes on to say: "The B. coli dysentery seems to me to be very frequent. On investigating the stools of the patients the microscope reveals many varieties of bacteria. But inoculations on animals demonstrate the existence of but a single species which is pathogenic. This is a bacillus which has all the features of the ordinary B. coli. In favour of its pathogenic character speaks the virulence, which is very great, and varies in proportion to the gravity of symptoms observed in the patients."

But whilst Roger still admits the existence of amoeboid dysentery, though only as one of the types of that disease, others go already further, and Scheube[14] says: "One has probably to look on the amoebae now not as the causal agents of dysentery, but as concomitants which enter into the mucous membrane only subsequently to its having been softened and ulcerated by the primary pathological process."

"Arnaud, Celli and Fiocca, Galli-Valerio, and others consider as the cause of dysentery the bacterium coli communis, which under the influence of circumstances yet unknown, or perhaps of other bacteria present at the same time in the intestine, change into a virulent variety. Celli considers that the toxin he prepared from that bacterium produces the dysenteric infection, whilst the deep lesions of the tissues are caused by the pyogenic bacteria which, being present in the bowel, settle in the affected mucous membrane, etc."

It is evident then that these views bear very favourably on the potentialities of V. myrtillus as a remedy in dysentery as my tests with B. coli communis seem to point to the fact that it inhibits or kills all pathogenic species of that bacillus.

It is therefore certainly very advisable to employ it in acute dysentery and its effects are likely to entirely supersede the other fruit, once strongly recommended, for example, the bael-fruit,[15] because of its bactericidal action. In chronic dysentery the excellent opinion I formed of it is borne out by Fisch[16] who also recommends it for the chronic variety.

Other Diseases of the Intestine.

As far as these are concerned it should be given a serious and extensive trial in true cholera the vibrio of which is killed by it and, with due regard to its astringent properties, it should be employed in all diseases of which ulceration of the mucous membrane is the main symptom, in those with an excessive secretion, and in all cases of abnormal fermentation.

In conclusion may I be permitted to express my gratitude to Dr. F. W. Andrewes and Dr. J. H. Drysdale for the ready kindness with which they have assisted me in this investigation and likewise the hope that those in control of special fever hospitals in this country and medical men in the Colonies and India who have frequently to deal with typhoid, acute dysentery and cholera will not fail to avail themselves of this new remedial means in the direct fight against the infectious virus and give it a wider clinical application and test than it has been possible for me to do?

NOTES AND REFERENCES.

[1] W. Osler, *Principles and Practice of Medicine*, 3rd ed., pp. 46 and 47. [2] A discussion on Enteric Fever in its Public Health Aspects, BRITISH MEDICAL JOURNAL, 1901, p. 389. [3] See Dr. P. Horton-Smith's photographs illustrating its action, BRITISH MEDICAL JOURNAL, 1900-1, p. 833. [4] Bentley and Trimen, *Medicinal Plants*, London, 1880, do not mention the shrub. [5] (a) *English Botany*, Syme, Lankester and Sowerby, 3rd ed., vol. vi, pp. 24 and 25; (b) Contribution towards a Cybele Hibernica, More, Colgan and Scull, Dublin, 1898, p. 219, plate 879; (c) Cybele Britannica, by H. C. Watson, 1870. [6] Dorvault, *L'Officine de Pharmacie Pratique*, 11ieme ed., Paris, 1886, p. 228. [7] G. A. Buchheister, *Handbuch der Droguistenpraxis*, 4th ed., 1895, vol. i, p. 180. [8] Winternitz, *Blätter f. klin. Hydrotherapie*, 1891, No. 3: 1892, No. 2; and 1895, No. 4. [9] Preuss, *Centralbl. f. Chir.*, 1893, p. 204. [10] H. Strauss, *Therapeutische Monatshefte*, March, 1900, p. 143. [11] Hirsch, *Universal Pharmacopoeia*, quoted by Fr. P. Foster, illustrated *Encyclop. Med. Dictionary*, 1892 and 1894, vol. iv, art. Myrtillus. [12] *Handbuch der pharmaceutischen Praxis*, Berlin, 1878, vol. ii, pp. 491-493. [13] Les Toxines du Coli-bacille de la Dysentérie, Paris, 1900, quoted by Dieulafoye, *Manuel de Pathologie Interne*, vol. ii, p. 554, Paris, 1901. [14] Dr. B. Scheube, *Die Krankheiten der warmen Länder*, 2nd ed., 1900, p. 517 et seq. [15] J. Fayrer, On Tropical Dysentery and Diarrhoea, BRITISH MEDICAL JOURNAL, January 15th, 1881. [16] Fisch, *Tropische Krankheiten*, 1894, p. 107.

FATAL CASE OF PEMPHIGUS ACUTUS MALIGNUS.

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THE following case of pemphigus acutus is worthy of note from the severity of the symptoms and the acuteness of its course.

A farm labourer, aged 21, came on September 17th, complaining of a "rash" on his arms which, he said, had appeared on the previous day. On examination the "rash" was found to consist of a large number of bullae, situated on the extensor surfaces of the forearms and backs of the hands, and, and almost uniformly of the size of half a small hazel nut. The surface of the arms was extremely red and hot, and somewhat painful on palpation. There were then no bullae on any other situation, and the patient said he felt quite well. The pulse and temperature were normal. A mixture containing liq. arsenicalis in 5-minim doses and liq. ferri perchlor. was ordered. At the end of four days the amount of arsenic was increased, and the symptoms seemed to be abating. Two days later, however, the patient was again seen, when the eruption of bullae was found to have extended over the internal surface of the upper arms, anterior surface of the neck, chin, anterior surface of thorax and abdomen, and both groins. On these situations the bullae were very numerous, and their size varied from that of a pea to that of a pigeon's egg. On the back were a few isolated bullae. The face, with the exception above mentioned, and the legs from the groins downwards were then absolutely free from bullae. (The photograph reproduced (p. 309) was taken on that day.)

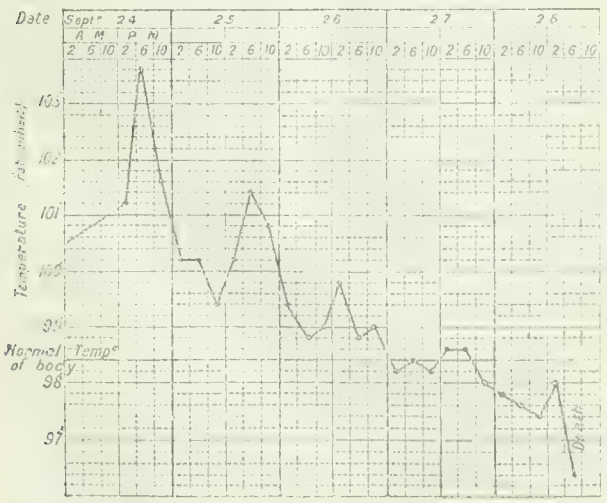
Next day the patient was feeling very ill and was unable to sit up. The temperature was 101°, and the pulse 120 per minute. Most of the above-mentioned bullae had ruptured and the surface of the skin below was exposed, producing much discomfort. One or two bullae were now found on the backs of the knees, while here and there the liquid contained in the still unruptured bullae was opaque and purulent. Owing to the nature of his surroundings the patient was removed to the Suffolk General Hospital, where he was under the care of Dr. C. S. Kilner.

On September 25th and subsequent days the patient had severe haematemesis, with occasional attacks of epistaxis, and on the following day there developed an erythematous eruption all over the body with the exception of the backs of the thighs and legs. The temperature was now persistently falling, accompanied by hiccough, dry, brown tongue, and partial coma, which condition got progressively worse till the evening of September 28th, when he died.

This appears to be a case of pemphigus acutus malignus, described by Whitfield as occurring among those who are in the habit of handling the skin and flesh of animals, with history of a preceding wound. The victim in this case was working among cattle, though not handling meat or skins, and there was elucidated the history of a small wound in the forearm, occurring about a month previous to the onset of the disease; also a prick on the hand which patient received while engaged in sheep washing.



The eruption of bullae, as already noted, commenced on the extensor surfaces of the forearms, the flexor surfaces being entirely free, while subsequent crops were confined to the flexor surfaces of the upper arms, where the bullae were very numerous, as is well seen in the photograph. On the back the bullae were rare, while the lower half the face and anterior surface of thorax and abdomen were profusely covered. The thighs and legs almost entirely escaped, there being only a few bullae on the backs of the knees, which developed fairly early in the disease. On the abdomen they attained their maximum size—namely, that of a hen's egg, being nowhere else larger than a hazel nut. The reddening of the skin, which is often said to be manifested round individual bullae, was almost entirely absent. Until two days prior to his removal to hospital, the patient's temperature was normal, and the acme—namely, 103 6°—was reached on the day of his admission, after which it showed a steady decline to 96.2°, a few hours before death (see chart).



The functions of the kidneys were normal, albuminuria—which is often present in such cases—being absent. There was marked constipation all through the attack. As has been already noted, there appeared, two days before death, an erythematous eruption for which the full doses of arsenic may have been responsible.

As already observed, the patient was treated with arsenic, which was increased in amount till mx of liq. arsenicalis were given thrice daily. Full doses of alcohol were also given in the form of brandy and champagne, while the raw surfaces left after the rupture of the bullae were dressed in the usual way.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

DIABETIC COMA.

L. P., aged 13, a young servant girl, was brought to my surgery on the evening of November 20th, 1902, complaining of a sudden feeling of weakness. The temperature was normal, and she did not seem very ill, so I sent her home, and said I would call to examine her more thoroughly in the morning, but I was sent for at 2 a.m., as she was having the most severe convulsions, which continued at intervals for three hours. On now trying to find a cause of illness, the mother said the only thing she had noticed was that during the last six weeks the child had been getting thin, although she ate well, and she had latterly been drinking large quantities of water, and been passing a great deal of urine. For the convulsions, amongst other treatment, I administered chloral hydrate (gr. xxx) per rectum.

November 21st. Urine examined. Clear, pale, acid; specific gravity 1024, small quantity of albumen, decided sugar reaction with Pavy's solution. The patient was conscious, felt weak, and said she ached all over. Temperature 102°. Heart, lungs, nervous system, and all organs apparently healthy. No puffiness of face or oedema of feet or legs.

November 22nd. The patient was very restless and often sighing. The pulse was regular, small, 120 per minute. The urine was not passed naturally, but a small quantity (about 8 oz.) was drawn off by the catheter, giving a slight albuminous reaction, but no reduction of copper solution, and no acetone reaction with perchloride of iron solution.

November 23rd. She was more restless and semiconscious, but when roused would answer questions. There was no headache and no paralysis; the knee-jerks and plantar reflex were absent. No urine was passed naturally, but the catheter specimen showed slight albumen, no sugar, but well-marked acetone reaction. The patient gradually got weaker, muttering and moaning, and died on November 25th from quite typical diabetic coma.

In the above case the points of interest seemed to me the severe convulsions which first drew attention to serious illness. Next day sugar was found in the urine, but convulsions are said to be very rare in diabetic coma. This made me review my diagnosis, and, to perplex me more, the next specimen of urine gave no sugar reaction at all, and in Taylor's *Medicine* I read that the administration of chloral gives one of the fallacious tests with copper solution; but I still had the history of wasting, great thirst, and passing of large quantities of urine in favour of my diagnosis. Nothing else in the way of acute illness developed, and the subsequent course and final acetone reaction I think justified me in calling the case one of diabetic coma.

Cobham, Surrey. Arthur B. Hudson, M.R.C.S., L.R.C.P.

FOUR FETAL MALFORMATIONS IN ONE FAMILY.

The following unusual history seems to me worth recording: Mrs. L., aged 24 years, a strong healthy woman, the wife of a collier, has been married six years. In that time she has had five children, four of whom have shown very pronounced abnormalities.

1. Early in 1897 a male was born, with large spina bifida in the lumbo-sacral region, and only lived three weeks. There was no difficulty in the labour.

2. In August, 1898, another boy was born quite free from

any abnormality. He is alive, and looks a fine well-developed lad.

3. About the end of November, 1900, a third son was born, apparently healthy, but with very marked phimosis and complete occlusion of the preputial orifice. On slitting the prepuce there was found congenital stenosis of the urethra, rendering micturition almost impossible. As the mother remarked, "the child was never able to pass more than a drop of water at a time." Death took place in five weeks, probably from some cystic disease of the kidneys. May we consider this rare condition one of the anomalies of volume?

4. On January 21st, 1902, a female was born with an occipito meningocele about the size of a small orange. The child lived six months. There was no difficulty in the birth.

5. Lastly, the unfortunate woman was delivered of an anencephalic monster on November 26th, 1902. There was not only complete absence of brain substance, but exposure of the spinal cord as well. Labour was tedious owing to excess of liquor amnii, but was otherwise normal. The face presented and delivery was hastened by slight forceps traction.

All the pregnancies were at full time, except the last, which was only eight months. The mother has a roomy pelvis, and always enjoys good health. What then can account for these anomalies? There is no history of syphilis, nor of falls or blows. The patient informed me that her mother had a child born "with its back broken;" so that we may conclude there is some show of hereditary tendency. But will that explain all?

ALEX. I. ESSLEMONT, M.B., Ch.B.Aberd.

Wrexham, N. Wales.

ASSOCIATION OF DISLOCATED LENS AND LOSS OF HAIR.

THE following case seems of sufficient interest to deserve publication:

A. E., a clerk, aged 25, came to me with the history that three hours previously without any injury severe pain began in the right eye and vision was almost abolished. I found he had complete dislocation of the lens into the anterior chamber of the eye. The lens had the characteristic appearance of a drop of oil and the iris was pushed back into a funnel shape.

The conjunctiva was injected and the cornea hazy. He was put to bed and I thought it probable that the lens would require breaking up and removal, but when I visited him next day the lens had slipped back into its natural position, and the pain had disappeared. The iris was tremulous. He stated that a few weeks previously he thought the same thing must have happened to his eye. I had noticed that the patient wore a wig and, except for a few eyelashes, his face was quite devoid of hair. On inquiry he stated that he lost his hair after an attack of typhoid fever five years previously, and that since then the vision of the right eye had not been good and that vision of both eyes had been getting worse during the last eleven months, especially that of the right. Examination of the left eye showed that the iris was distinctly tremulous in the lower part.

There can be no reasonable doubt that the pathology of the disease of the lens must be the same as that causing the loss of hair, and it is to be noted that developmentally the structures are identical.

The vision a week after the dislocation was—right eye, $\frac{6}{6}$ c.Hm. 0.5, J. No. 14; left eye, $\frac{6}{5}$ c.Hm. 0.5, J. No. 1, at 8 to 14 in.

Kimberley, Cape Colony. H. SYMONDS, M.D.

THE GLYCOSURIA OF LACTATION.

IT is a well-known fact that a "physiological" glycosuria occurs sometimes in women during the puerperium, and occasionally during pregnancy and lactation. As to its causation there are two views held:—(1) That it is due to the absorption again into the blood of the milk sugar secreted by the breasts; (2) that it is due to the elimination of sugar formed in the liver for the formation of the milk but not so utilized. It is liable to occur at the beginning of lactation before the child has "learned" the art of suckling, the breasts not being properly relieved. It may occur afterwards if the breasts become over full, or at weaning if the flow of milk be then copious and the weaning be forced. The following case, which came under my notice some time ago, seems to favour the view that resorption of milk sugar is the cause of the glycosuria.

A young lady, Mrs. T., who in two previous lactations had a very copious supply of milk, and had at weaning very distended and painful breasts requiring medical treatment, wished to wean her 11 months old child, although the flow of milk was still copious. When the suckling was stopped the breasts became as before, very distended and painful, and the usual treatment of belladonna painting and firm bandaging was resorted to. At this stage she came under my notice with per 3 cent. of sugar in the urine (13 gr. to 1 oz.), the specific gravity being 1039. Under the usual treatment in four days the breasts were much improved, softer and not so tender, and the urine contained a trace of sugar only, the specific gravity being 1026. Four days later the breasts were normal in consistence and size, the tenderness had disappeared, and the urine was free from sugar, with specific gravity 1021. Now the sugar fall corresponded exactly with the stages of recovery of the breast trouble, and it is scarcely likely that the production of sugar in the liver would be so finely adjusted in sympathy with the breast changes as to drop from a large production to none in the short space of eight days. The breasts were distended with milk and firmly bandaged, so that the same condition held as in a knee distended with synovial fluid which has been bandaged firmly to cause absorption of the fluid. Absorption does occur in the knee, why not in the breasts under the same conditions?

I may be pardoned adding a word of advice which may be of use to some. If sugar be found in the urine of a pregnant or suckling woman look to the state of the breasts before diagnosing "diabetes." How often have I seen cases of transient glycosuria diagnosed "diabetes" for want of sufficient care in investigating the case!

Matlock. GEORGE C. R. HARBINSON, M.B., B.Ch.

TREATMENT OF SUPPURATIVE OTITIS MEDIA.

A FAIRLY good idea of the aural cavities in the human skull can be obtained by chiselling away the lower wall of the meatus. Anyone who studies these cavities, knowing the elaborate operations that have been devised for dealing with disease in or about them, may well be struck with the consideration how small they are, and how accessible through the meatus. For practical purposes the middle ear may be considered a continuation of the meatus, the chief offshoot having a relatively large opening into the main cavity. The success of my system of antiseptic irrigation is dependent upon the possibility of reaching the diseased cavities with the solutions employed, and where there is little obstruction in the passage irrigation will generally effect a cure.

But though in the dry skull we find ready access to the aural cavities through the meatus, there are in the living subject structures that may obstruct the passage. When a case of suppurative otitis does not rapidly improve under irrigation, it will generally be found that there is not a free passage to the diseased parts. In such cases it is advisable to clear a way. The middle ear, when it has been the seat of chronic suppurative disease, is very tolerant of interference. My assistants have carried out many thousands of irrigations, and in no case have I observed any extension of mischief or serious disturbance.

During the last few years I have gone a step further, and, in cases that seem to require it, I now remove the remains of the membrane with the malleus. I further scrape away diseased granulations from the middle ear and attic. The reaction after this operation is usually very slight, and little pain is complained of. In a few cases there has been some giddiness following the operation. The general results have been gratifying, and, with the cure of the otorrhoea, hearing has sometimes shown improvement. It is a mistake to suppose that such operations must increase deafness. The steps taken should be regarded in the first place as a preparation for antiseptic irrigation, though some good may be effected by the removal of diseased tissues. Chronic suppurative otitis is a curable disease, and bone implication may almost always be prevented; yet I still see patients from time to time who have been professionally advised that nothing could be done for them. In my opinion there are few cases in which we can do so much towards cure and relief.

Coventry. F. FAULDER WHITE, F.R.C.S.Eng.

CASE OF PARESIS OF RETRO-CERVICAL MUSCLES FOLLOWING DIPHTHERIA.

A. M., aged 2, was first seen on March 21st, 1902, complaining of sore throat. Next day the case was notified as diphtheria and 4,000 units of serum injected. Convalescence was speedily assured, and a final visit paid on March 30th. On April 26th she was brought "because she could not hold her head up."

This had been noticed about a week. The head drooped towards the sternum, and could be held up voluntarily only for a few moments by inducing her to make a special effort; it could, however, be rotated from side to side without so much effort. There was no rigidity, and the head could be placed passively in any position without difficulty. There was no pain nor tenderness and no sign of disease about the spinal column. The thoracic vertebrae showed a flexible curve convex backwards, and the abdomen was protuberant.

The mother stated that the child had always stooped about the shoulders, but that the drooping of the head was something quite new. The patellar reflexes were absent, the gait extremely ataxic, and there was marked "nasal" phonation with regurgitation of fluids through the nose; the pupils reacted very sluggishly to light and accommodation. It was found impracticable to keep the child lying down as advised, and she resolutely refused to take the strychnine prescribed. Phosphate of iron and manganese in small powders was therefore given instead. By May 6th a slight improvement had taken place in the gait, the control of the head, and swallowing. On May 10th the mother and a friend said they had noticed squint. Three months later, except for a slight stoop about the shoulders, the child was apparently quite well.

Dr. Newton Pitt, consulted by letter on April 27th, kindly informed me that he had seen other similar cases due to diphtheria, and thought this form of paralysis was often overlooked. Arthur J. Sharp, M.D.Lond., F.R.C.S. Eng.

Whitby, Yorks.

REMOVAL OF FOREIGN BODIES FROM THE OESOPHAGUS BY AN IMPROVED METHOD OF USING THE ROENTGEN RAYS.

I have adopted of late for the above purpose a plan which it seems to me should be the one universally followed as being the least dangerous to the patient's life. It may have been practised by others, although I have not seen it recorded. The usual procedure, I think, is to locate the coin with the screen or a photograph, after which the patient is removed to an operating room and a process of "fishing" is undertaken. This always appeared to me to be a dangerous proceeding, and, although I have had no accident myself, I know of two cases where the coins, which had been some time in the gullet, were driven through its walls with the coin-catcher. For some time I have passed the coin-catcher down while the patient sat on a chair, the Roentgen rays being placed behind him. In this way I have removed a number of foreign bodies, and my friend Dr. Raw recently related a case where he could see the plate of some false teeth, and was able to follow the shadow of the forceps and remove them.

I cannot illustrate the improved plan I suggest better than by relating the case of a very fractious little child aged 2 years and 3 months, who was brought to the infirmary having swallowed a halfpenny five days previously.

The child was placed in the horizontal position on the canvas couch, and the tube being placed below the couch, the halfpenny was seen to be behind the second piece of the sternum. The tracheotomy instruments were placed ready and a student was stationed at the ordinary electric light ready to turn it up. The child was put under chloroform, the coin-catcher was passed and seen by means of the screen to go 2 or 3 in. past the coin. The hook was then carefully adjusted to the middle of the coin, and the very first attempt brought out the halfpenny.

Liverpool. George Hamilton, F.R.C.S.

INTESTINAL SAND.

With reference to the case of intestinal sand, published in the British Medical Journal of December 6th, 1902, I venture to suggest an explanation of this rare condition. This explanation occurred to me some years ago when I had two cases of the sort in my practice. Looking at the condition from an evolution point of view, I suggest that the excretion of "sand" by the rectum or colon is a reversion in the mammal to the egg-shell-forming function of the bird. The egg-shell is secreted by glands in the uterine dilatation of the oviduct. Now, the cloaca of the bird into which the oviduct enters is the homologue of the mammalian rectum; and it would be only in accordance with other biological facts if the structures about the rectum should occasionally revert to the functions of their homologues in the cloaca and its continuation—the oviduct.

This suggestion is supported by comparing the composition of an egg-shell with that of the so-called "intestinal sand." An egg-shell consists of an organic basis hardened by calcium carbonate with some magnesium carbonate and calcium phosphate. Now, Dr. Bedford (loc. cit) has shown that "intestinal sand" has an almost identical composition, namely, organic matter, with calcium carbonate, calcium phosphate, and magnesium phosphate.

As many of the patients who have suffered from "intestinal sand" have also suffered from gout, it has been suggested that there is some relation between the two conditions. This relation cannot be any resemblance of "intestinal sand" to the deposits of gout which consist of sodium biurate. If there is a relationship I suggest it is this—that gout itself results from a reversion of human metabolism to the metabolism of the bird. The kidneys of a bird excrete urea in the solid form of uric acid. The mammalian kidney cannot excrete urea in a solid form, and hence, when human metabolism, like the metabolism of a bird, ends in the formation of urea, in an insoluble form, this is deposited in the tissues as sodium biurate, that is, there is an attack of gout.

Kensington. J. McNamara, M.D.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

ST. MARY'S HOSPITAL.

Surgical Cases.

(Under the care of Mr. A. Q. Silcock, B.S., F.R.C.S.)

[Reported by Hugh M. Raven, M.R.C.S., L.R.C.P., House-Surgeon.]

Case of Fracture Dislocation of Astragalus.

O. M., aged 17, a waiter, was admitted to St. Mary's Hospital on June 5th, 1902, complaining of an injury to the left foot.

The history that he gave was that while cleaning a window that morning he slipped and fell 10 ft. to the ground, landing upon his feet; the left foot bore the brunt of his weight, the heel touching the ground first,

On examination he was found to be a heavily-built young man, 5 ft. 10½ in. in height, and 11 st. in weight. The left foot and ankle were greatly swollen, and there was distinct increase in the measurement from above downwards when compared with the opposite foot. The whole foot was somewhat displaced inwards, and there was also some inversion. A small, movable, bony mass was felt below the internal malleolus, deeply situated and giving crepitus. The lower ends of the tibia and fibula showed no signs of injury, and it was considered that he had fractured his astragalus, and also, perhaps, the sustentacular process of the os calcis. In a few hours all physical signs were obscured by the large amount of blood effusion which had taken place.

The *x*-ray photograph (p. 312) taken by Mr. Fowler, the hospital photographer, shows a partial dislocation forwards and inwards, with a fracture of the body of the astragalus without displacement. The end of the sustentaculum tali seems broken off and displaced backwards.

The foot was kept at rest for a week, and when the blood had been more or less absorbed the deformity was partly reduced by manipulation under an anaesthetic, but this was found very difficult. The foot was put up in plaster-of-paris in its improved position.

Eight weeks later he was found to have fair movement in the ankle-joint and could walk fairly well. The foot still remains a good deal thickened from above downwards.

Case of Septic Osteo-myelitis of Both Ends of Femur.

N. H., aged 16, a poor anaemic girl, was admitted to St. Mary's Hospital on June 30th, 1902, for pain in her right knee.

She gave the following history: About the end of May, 1902, she had a poisoned finger which took four weeks to get well. About June 6th she first began to complain of pain in her right knee, and a few days later her leg began to swell; the pain became worse, and she had to keep her limb quiet, but could walk upon it a little.

On June 22nd she saw a doctor, who gave her some medicine for rheumatism for a week; during that week, the mother says, she was very feverish and delirious at night; she had several shivering fits and refused to touch her food.

The pain, which had increased, was referred to just above the knee, but she could still walk a little.

There was no history of tuberculosis or rheumatism in the family, and no history of any recent illness beyond that of the poisoned finger.

On examination, she was found to be a thin, anaemic girl, looking very ill, and being able to just hobble along. She complained of great pain and tenderness just above the right knee-joint. The temperature was 101°, the pulse-rate 130 per minute. There were signs of fluid in the right knee-joint and some oedema of the leg. The structures round the lower two-thirds of the femur were markedly thickened, but no symptoms were referred to the upper end of the bone.



No further joints were affected, nor were there any other symptoms of rheumatism and no signs of scurvy. The lungs and heart were apparently normal: the urine, specific gravity 1023, was free from albumen and sugar.

She was taken to the operating theatre the same evening, and the lower end, epiphysis, and medulla of the femur explored. The tissues were thickened and oedematous, but there was no pus either under the periosteum or in the medullary cavity. Some lymph which exuded from the trephine hole was examined and found to contain inflammatory cells and staphylococci. There was also a little inflammatory lymph on the periosteum. The wound was packed with gauze, dressed antiseptically, and a splint applied.

The notes of the case taken by Mr. Field, the dresser, for the next few days were as follows:

July 1st (the day following the operation).—The temperature has fallen to 99°. The pulse to 120. She feels better and the leg is easier.

July 2nd.—The thickening round the lower end of the femur has practically gone, the wound is discharging freely, and the fluid has almost disappeared from the knee-joint and the oedema of the leg has gone. The pulse, however, still keeps over 100 and the temperature between 99° and 100°.

July 6th.—She is not quite so well in herself. Temperature 101°, pulse 120. There is some tenderness and a little thickening round the upper third of the femur.

By July 8th this fresh swelling and tenderness were more marked, and as the pulse and temperature were still elevated an incision was made down upon the upper end of the femur, and an abscess opened in connection with the upper epiphysis. The wound was dressed as before.

From this date all went well; both wounds soon began to granulate and heal, and by July 23rd both had quite healed up and there was no resulting necrosis of the femur, which is remarkable.

A few days after she went down to a convalescent home, walking quite well.

ABBASSIYEH GENERAL HOSPITAL, CAIRO.

IMPERFECT DESCENT OF TESTICLE: BOTH TESTICLES IN THE SAME INGUINAL CANAL, ONE BEING RUDIMENTARY.

(Reported by J. B. Christopherson, M.A., M.D.Cantab., F.R.C.S.Eng.; Surgeon attached to Egyptian Army, Khartoum; late Surgeon Seamen's Hospital, Albert Dock.)

An Egyptian cavalry man, aged 22, came to the hospital with a swelling in the right inguinal region extending from the external abdominal ring into the scrotum. It had a distinct impulse on coughing, and some of it seemed to disappear on taxis. There was no testicle in the left side of the scrotum, and it was thought to be a case of imperfect descent of the left testicle with a hernia into the right processus vaginalis containing irreducible omentum. No reliable history was to be obtained.

As it was painful and rendered it possible for the man to become "sick" when he chose, I operated on him. Making an incision over the inguinal canal to the top of the scrotum, I discovered the following unusual state of things, which seems worthy of record.

The mass which came through the canal and descended into the scrotum consisted of jelly-like material suggesting Wharton's jelly. It was about the thickness of three fingers, and unencapsuled. Embedded in it were a number of tortuous veins about the thickness of a crow's quill, and dilating at intervals of about 1½ in., but not intercommunicating. On opening up the canal there was no hernial sac beyond a very well marked digital bulging through the so-called internal ring. There were two spermatic cords coming through the same (right) canal, one of which, traced downwards, ended in the epididymis of the descended and very much enlarged tesicle. The other cord ended in frayed-out ends which were lost in the embryonic jelly-like tissue at the top of the scrotum, this cord lay to the inner side of and behind the other cord, both cords felt and looked natural, and they were easily separable from each other.

I cut down on the other inguinal canal and found an ill-developed external ring with nothing coming through it; in fact, there did not seem to be a canal at all. The abdominal wall on either side was well developed, the arching fibres of the internal oblique on the right side being well marked. There was no cavity in the left half of the scrotum, nor was there any trace of a descended processus vaginalis.

I dissected off the rudimentary testicle with the cord together with the jelly-like tissue, and was hardening it for microscopical examination, but the specimen was thrown away after a few days. The scrotum on the right side was well developed and contained a testicle half as large again as normal, the left side, although small and undistended, seemed well developed judging from the number of rugae, the raphé, of course, was very much towards the left, and the penis, though well developed, was distinctly deflected towards the left. There were no other developmental peculiarities about the patient, who had been married two years, and had one (female) child. He had been in the army one year and a-half.

I tried to ascertain whether the fully-developed and descended testicle was the right or the left, and I can only say that I think it was the left because the prostate per rectum was well marked on the left side but seemed absent on the right. The vesiculae could not be felt.

I have seen described both testicles coming through the same canal, but being so far from all sources of reference I cannot do more than record this case.

In Egypt developmental lesions are common. Rudimentary nipples are common. I have seen as many as five, besides the normal structures, in one man, and one or two are quite common. He has often mammary development, which alone would make the question of sex difficult. His general development is feminine often. I have seen a rudimentary mamma on the right axillary border of the pectoralis major. The first degree of hypospadias is very common, and I believe hermaphroditism also. Congenital herniae are common. Supernumerary digits and webbed fingers and toes also. His type of mind is that which is often associated with the female character. He is contented

and unambitious in his own simple village life, and although he dislikes being taken away to serve his country in the army his fine physique and patient submission make him capable of becoming a well-disciplined soldier when well led, if not a good fighting man.

REPORTS OF SOCIETIES.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

W. Lang, F.R.C.S., President, in the Chair.

Thursday, January 29th, 1903.

Hyaline Bodies at the Optic Disc.

Messrs. A. Stanford Morton and J. Herbert Parsons read a paper upon hyaline bodies (*Drusenbildungen*) at the optic disc, with drawings and notes of two cases and lantern slides. Out of 42 cases in the literature 7 had retinitis pigmentosa, others were associated with injury, nervous disorders (from simple headache to chronic hydrocephalus and insanity), and chronic interstitial nephritis, but a large number of patients were normal, with normal vision. The condition usually commenced in early life, and was extremely chronic. In nearly all cases both eyes were affected, but often unequally. The prognosis was good. The pathological anatomy of the condition was discussed, and various allied conditions demonstrated. It was shown that *Drusen* were not ordinary colloid bodies, such as are found upon the choroid, though these too might occur near the disc. Exudates similar to the hyaline nodules might become metamorphosed into true bone, such as was frequently seen in the choroid in shrunken globes. The fate of exudates in the disc and in other parts of the eye, and its dependence upon environment, were discussed.

Primary Extradural Tumours of Optic Nerve.

Mr. J. Herbert Parsons read a paper on primary extradural tumours of the optic nerve, with clinical and pathological notes of a case illustrated by lantern slides. There were 18 cases on record as compared with 102 cases of primary intradural cases. The disease usually commenced before the age of 10 years, and the prominent symptom is exophthalmos, the protrusion being being most marked in the axis of the orbit. The failure of vision was slow, slower than with intradural tumours, and was accompanied by optic neuritis of the "choked disc" variety, to be followed by postneuritic atrophy. Later changes in the eye resulted from lagophthalmos. In no case was the globe invaded by the growth. Eight of the growths were undoubtedly endotheliomata, several having the characteristics of psammomata. The fibromatosis present in most cases was a feature of importance. The growths were slow and of relatively low malignancy, giving rise neither to glandular dissemination nor to metastasis. Considering this fact and that the point of danger was at the apex of the orbit, Krönlein's operation, with retention of the globe, was indicated wherever possible.

Tumour of the Optic Nerve: Krönlein's Operation.

Mr. L. Werner reported two cases of this condition and referred to another under the care of Mr. Swanzy.

The first, a woman of 45, noticed swelling of the inner canthus for one year before coming under observation. When seen the left eye was 2 centimetres in advance of the right and directed downwards; there was no pulsation or *bruit*, and though the eye was blind the patient was unaware of it. The eye was anaesthetic, tension normal, and there was marked optic atrophy seen through the clear media. Tumour of the optic nerve was diagnosed, and it, with the optic nerve, was removed by Krönlein's method, the eye being left in its place. A semicircular incision with the convexity forwards and extending to near the outer canthus was made exposing the outer wall of the orbit. The bone was removed as widely as possible by dividing it with a chisel at the external angular process of the frontal and just above the zygoma, extending the incision backwards to the spheno-maxillary fissure and turning the mass back with the soft parts. The tumour was then isolated and removed; there was a clear portion of optic nerve in front, but posteriorly the growth extended into the apex of the orbit and required removal piecemeal. There was some haemorrhage, causing temporary protusion of the eyeball after replacement of the flap. No sutures were put in the periosteum and no drainage tube was inserted. The lids, which were temporarily attached, became oedematous, but on removing the dressing on the fifth day union was complete, and though anaesthesia of the globe persisted, the eye assumed a normal appearance, and movements, except lateral, were free. The tumour, enclosed in the dural sheath, was an alveolar sarcoma; the grouped cells being arranged concentrically, suggested endothelioma. The second case was a girl of 11, whose eye for fourteen months had been prominent and divergent. The eye was removed with the growth, the inner aspect of the lid was scraped and the orbit cleared out. The growth proved to be a myxosarcoma surrounding the nerve which had entirely degenerated.

Krönlein performed this operation first in 1886 and published an account in 1889. It was not difficult and had many advantages. The wedge of bone freed should be as large as possible, and the division of the outer orbital plate should be accomplished before completely freeing the anterior part to avoid splintering. The risk was practically *nil*: of 73 cases 1 only had died. The limitation of lateral movement was temporary only and in cases where the nerve was not involved sight might be preserved.

Formation of Bone in the Choroid.

Dr. Thomas Snowball read a paper on the formation of bone in the choroid. Notes were given of a series of seven cases in which ossification had taken place in eyes that had become blind and shrunken as the result of old perforating injuries or long-standing inflammation with or without perforation. In the choroid a chronic inflammation with plastic exudation was set up, leading to degenerative changes in the various layers of this coat; the outer pigmented stroma became more or less fibrous, the inner layers, the choriocapillaris, and membrane of Bruch were to a large extent replaced by fibrous tissue which had become organized from the exudation poured out towards the inner surface of the choroid. In this fibrous tissue the bone had developed. At the areas of bone formation the chorio-capillaris when present was never a continuous layer, but was represented by only a few vessels here and there. The lamina vitrea, when seen, near the focus of bone, was never found external to it. This was contrary to the observations of Brailey, Fontan, and others, who described cases where the membrane of Bruch was seen as a distinct line external to the plate of bone. In most of his own cases the bone formed a layer in the usual situation, namely, around the optic nerve entrance. In one case where colloid bodies were undergoing ossification, the bone in the choroid had evidently arisen independently of them, and was a more advanced stage of development. In none of the cases was there a trace of sympathetic disease in the other eye. From a study of his own cases and those described by Knapp, Whiting, Legrange, and many others, it was concluded that ossification in the choroid arose most commonly in fibrous tissue developing in the chorio-capillaris, and either replacing it or lying immediately external to it.

Card Specimens.

The following card specimens were shown:—Mr. L. Werner: Coloboma of the optic nerve.—Mr. F. A. C. Tyrrell: Congenital malformation of the lower eyelids.—Major M. T. Yarr, R.A.M.C.: Changes in the macular region following contusion of the eye.—Mr. E. Treacher Collins: A case of favus of the upper eyelid.—Mr. Holmes Spicer: Sections from naevus of the orbit.—Mr. J. H. Fisher: Aneurysmal dilatation of the retinal vessels in a boy suffering from heart disease.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Rickard Lloyd, M.R.C.S., L.R.C.P., President, in the Chair.

Friday, January 2nd, 1903.

Baths and Exercises in Chronic Heart Weakness.

Dr. Nevill Wood read a paper on the treatment of chronic heart weakness by baths and exercises in family practice. Chronic heart failure might be divided into four stages. First, a period when compensation was efficient; secondly, a stage when the heart worked well under favourable conditions, but failed under those of medium stress; in the third period, the circulation was never quite efficient, and a slight stress might turn the scale; in the fourth stage, cardial enfeeblement was extreme and irremediable. In the first stage, as a rule, no treatment was necessary except a general warning against overstrain. But occasionally there might be excessive arterial tension or excessive pulse rate. Such symptoms might well be treated by the method to be described. In the second stage Dr. Wood considered baths and exercises unequivocally to hold the place of pre-eminence. The earlier the treatment was begun in this stage the greater the value of mechanical methods. In the third stage mechanical methods tended to become useless, and finally were contraindicated, while drugs might still retain their potency. The application of mechanico-balneological treatment by the family physician was advocated, because he was more likely to see the patient at the time when it was of greatest value. In endeavouring to assist an overtaxed heart it was necessary

first to lighten its load and then to nourish its muscular substance and give the organ just as much work as it could beneficially perform. Where cardiac dilatation and arterial tension were prominent, relief must be afforded by arterial relaxation. In cases of less severity gentle stimulation might be adopted. These effects could be brought about by varying the temperature, composition, and duration of the baths. A temperature of from 92° to 95° F. produced moderate dilatation of the vessels, with slowing of the pulse-rate. When the temperature was lowered to 85°F., contraction of the peripheral vessels was caused, with great increase in the force of ventricular systole, the total effect being one of stimulation. The most useful constituents of the bath were the chlorides of sodium and calcium and carbonic acid gas. The greater the proportion of these the greater the stimulating effected. The duration of the bath should be longer when a sedative action was required. When the first indication was heart relief, to a bath of 50 gallons 5 lb. of common salt should be added, and 5 oz. of calcium chloride, together with half the contents of one of Sandow's boxes. The bath was given at 95° F., and lasted about fifteen minutes; the patient then remained recumbent for two hours. After a few days the temperature was gradually reduced to 92° F., while the proportion of saline constituents was doubled. As the patient improved stimulating treatment was introduced by lowering the temperature of the bath still further and increasing the added solids. Very gradually the temperature of the bath was lowered to 85° F., and the strength of the saline solution increased to 6 per cent. Beyond this it was rarely necessary to go. Systematic exercises were chiefly of service in the early part of stage 2, or when relief had already been obtained from baths. They could be carried out without a specially trained assistant by the following method. Instead of the reversal of each exercise being a continuation of the initial part, an intermediate pause was introduced. Thus the first portion was made to last 15 seconds, the part moved was retained in the position it had reached for 5 seconds, and the reversal was made to occupy 15 seconds. In very muscular subjects, extremely light weights might be placed in the hands. The pulse was counted immediately before the exercises and again after three minutes had elapsed, by which time its rate should have fallen. This was the simplest test as to the prospective value of the exercises. During the exercises the breathing should be even and continuous. Instead of the Nauheim exercises, a system of weights and pulleys might be used. At the end of a series of exercises it was well to examine the area of cardiac dullness and the position of the apex beat. If the area of dullness was enlarged, it might be taken that the dosage was too high. To sum up: The cases in which most benefit was derived were those of moderate dilatation, accompanied, and in great part caused, by general malnutrition. Cases presenting minor degrees of arterio-sclerosis might be accepted for treatment. Supposed cardiac neuroses, such as tachycardia and arrhythmia, often did well. There were many failures among elderly persons. Cases in which the imagination alone was at fault should not be treated, as they certainly detracted from the reputation of the method. As to whether treatment was most satisfactory at home, or abroad, the advantages of the climate of Bad-Nauheim, the experience of the local physicians, and the current enthusiasm, were counterbalanced by the shortness of the season, the poorness of the meat, and the usual foreign habits.

Dr. C. W. CHAPMAN was glad that Dr. Wood had limited the scope of the treatment. The patients suitable for Nauheim treatment were: (1) Convalescents from acute cardiac disease after prolonged rest had been taken; (2) patients presenting cardiac symptoms, but devoid of organic disease; (3) patients in the early stages of cardio-vascular degeneration; (4) the large class known as neurotics. The treatment was contraindicated in: (1) All advanced cases of heart disease; (2) marked cases of cardio-vascular disease, especially with albuminuria; (3) the labouring classes, who require rest above all things.

Dr. A. MORISON remarked that had the limited scope laid down by Dr. Wood always been observed, less discredit would have been thrown upon the Nauheim treatment. Although he believed that quite as good results could be obtained from drugs and hygienic measures, yet baths and exercises were often useful in the initial breakdown of compensated hearts, or those regaining compensation.

Dr. ALDERSON instanced himself as showing the advantage of exercise in commencing cardiac failure. He had derived great benefit from cycling, although he had been told previously that he showed evidence of cardiac weakness.

Dr. RICE OXLEY asked whether graduated walking was used in the Nauheim treatment.

Dr. NEVILLE WOOD, in reply to Dr. Rice Oxley, said the *Terrainkur* was being less and less used, while the so-called Schott exercises seemed to be less esteemed than formerly. The systematic use of the cycle was gaining ground.

EXAMINATION OF THE BLOOD AS AN AID TO PROGNOSIS AND DIAGNOSIS.

Dr. OTTO GRÜNBAUM read a paper on this subject. After showing diagrams illustrating the various types of leucocytes he dealt with the organisms which cause suppuration. Many but not all pus-producing organisms caused leucocytosis, but the toxins of some organisms which did not produce pus might lead to the same condition. In appendicitis, if the symptoms were not definite in showing the presence of pus, the enumeration of the white cells might be of great assistance to the surgeon. If 30,000 were found instead of the normal 8,000, it would be very probable that pus was present. After operation for an abscess an increase in the number of white cells would be a sign of inefficient drainage. An increase in the number of white cells accompanied many forms of malignant disease and nearly all fevers. But when pus was present there was generally also an increase in blood platelets and in the amount of fibrin. In certain doubtful cases of syphilis the method introduced by Justus might assist the diagnosis. Justus found that in this disease, as soon as the lymphatic glands were affected, the intravenous or intramuscular injection of mercury caused the disintegration of a considerable number of red cells. This disintegration was detected by estimating the haemoglobin of the patient's blood. When the reaction to the injection was positive, a fall of from 10 to 20 per cent. of haemoglobin would be noted within forty-eight hours, returning to the normal a few days later. After a few injections the percentage ceased to fall, and ultimately might actually increase. The reaction did not occur when mercury had been given by the mouth. The diagnosis between hysteria and disseminated sclerosis might be assisted by estimating the quantity of cholin in the blood. Recently Halliburton and Mott had shown that when nerve cells degenerated, the increase of cholin in the blood might be so marked that it could be isolated from 10 c.cm. of blood. When, therefore, a recognizable amount of cholin could be isolated from the blood, it might be concluded that active degeneration of nervous matter was taking place. Cryoscopy, or the estimation of the freezing point of blood, might be of use in supplying information as to the state of the kidneys. In renal disease the quantity of salts and of urea in the blood was greater than normal. The greater the amount of these substances in the blood the lower would be its freezing point. The average freezing point of normal human blood was 0.56 C. If it fell to 0.6, or lower, grave doubt as to the efficiency of the kidneys must be entertained. With regard to the agglutination reaction in enteric fever, the method was often discounted by carelessness. Serum from the patient ought to be diluted fifty times with normal salt solution, and a fresh culture of actively motile bacilli added. If the reaction was positive clumps ought to be formed within the hour, and no motile bacilli should then be present. Agglutination without paralysis of the flagella might occur in other conditions, such as jaundice and pyaemia. A negative reaction did not contraindicate enteric fever. The examination of the blood for micro-organisms was still in the experimental stage. When the preparation of the antitoxins had been improved, the isolation of organisms from the blood might possibly be of vital importance. The examination for parasites could be carried out efficiently in fresh films of blood kept at 37° C. Dr. Grünbaum pointed out that except in leukaemia and certain parasitic diseases no diagnosis could be founded on the examination of the blood alone.

Mr. R. LLOYD asked in what stage of syphilis Justus's test could be applied. Its importance would be chiefly in the primary stage.

Dr. WHITFIELD had used Justus's test in a number of cases of syphilis, and except in a single undoubted case of syphilis had never found it fail. He instanced a patient in whom the symptoms were so slight that diagnosis was not easy. Finding a drop of 12 to 15 per cent. in haemoglobin in twenty-four hours after inunction he adopted the usual treatment. The man had ultimately a very severe attack. The test was only of use in cases which had reached general constitutional infection, and had not recently been under treatment with mercury. Dr. Whitfield also advised that the delicate manipula-

tions required in haematology should be carried out entirely by experts. Without special education many errors might be due to faulty technique.

Mr. McAdam Eccles asked where the increased number of leucocytes was derived from in suppuration. Would the entrance of a toxin into the blood cause that increase apart from the actual local collection of cells found in the abscess? In some cases of rapid gangrene of the appendix without suppuration there appeared to be a more marked leucocytosis than even when there was a distinct collection of pus.

Dr. Longridge had investigated haematologically some fifty cases of appendicitis. He had invariably found leucocytosis when the condition of the appendix called urgently for operation. The highest leucocytosis was in the gangrenous cases, and next in those with a large extent of peritoneum involved. He would regard leucocytosis as an indication of toxaemia. In only one case with a perforated appendix and general septic peritonitis had he failed to get a very high leucocytosis.

Dr. Grünbaum said that most of the points raised had been answered by Drs. Whitfield and Longridge. In leucocytosis the leucocytes which appeared in the blood were supposed in the first instance to migrate from the bone marrow.

LIVERPOOL MEDICAL INSTITUTION.

Rushton Parker, B.S., F.R.C.S., President, in the Chair.

Thursday, January 29th, 1903.

Suture of Nerves.

Dr. Nathan Raw showed a case in which he had successfully united the severed median and ulnar nerves several months after division. The point to which he wished to draw special attention was the return of sensation within twenty-four hours of the operation.

Mr. Damer Harrisson had performed many experimental operations with Professor Gotch, and had several successful cases. He had found experimentally that impulses never passed through the nerve before the tenth day. Sensation returned first, then the trophic lesions passed away, motor power followed, and finally electrical reactions were obtained.

Sir William Banks recalled cases, which he had shown to the Society, where he had employed the sciatic nerve of the dog and sheep to repair the injured median and ulnar in man. At the great St. Helen's Glassworks division of the latter nerve was of no infrequent occurrence; and in former days, when no attempt at primary suture was made, it was very curious what an amount of sensation and motion gradually returned after two or three years. This was explicable on the "loop-line" theory, but in Dr. Raw's case the immediate return showed that the nerve current had at once found its way back through the old route. Viewing a nerve in the light of an electric telegraph cable, with each thread of the nerve corresponding to each wire of the cable, it was known that when a broken cable was repaired it was necessary to unite the broken ends of the identical wires; whereas, when a nerve was joined, either immediately or through the intervention of some piece of indifferent tissue, it was not possible to join the identical nerve fibres, and yet messages were transmitted? Might not the principle of Marconi's wireless telegraphy explain this? Let the divided ends of the fibres of a nerve be supposed to be attuned to each other like Marconi's masts, then any impulses sent along the proximal end from the electrical battery—the brain—could be conceived as travelling through a suitable medium to reach the distal end without the necessity of intervening fibres (wires) at all.

Mr. G. G. Hamilton had operated on a number of cases by simply suturing the divided ends, and the results had been quite satisfactory. Two cases were mentioned where division of the nerves was overlooked by chemists. In 7 cases a few hours after the divided nerve was sutured sensation returned for about twenty-four hours, and then completely disappeared.

Dr. Gullan asked as to the appearance of the distal portions of the nerves. After fourteen weeks separation he would have expected complete degeneration. In this case we could not explain the immediate return of sensation. Dr. Gullan also thought a considerable amount of the improved muscular power and movement was dependent on the long flexors, whose nerve supply came off about the seat of section of the nerves, and whose tendons Dr. Raw united at the operation.

Mr. Keith Monsarrat had recently seen a similar case, in which sensation was re-established twenty-two hours after operation. He thought this rapid restoration showed that even in the absence of the integrity of axis cylinders the nerve, as a whole, was capable of conducting sensory impulses, and that the analysis of these impulses took place entirely in the cerebrum.

Dr. Alexander and the President also spoke; and Dr. Raw replied.

Glasgow Obstetrical and Gynaecological Society.—At a meeting held on January 28th, Dr. Nigel Stark, President, in the chair, Dr. Gibson showed an extrauterine pregnancy (tubal) with an ovarian tumour, and a large uterine myomatous tumour which had caused great disturbance from pressure on bladder, bowel, and especially on the veins. Hysterectomy was performed, and on examination of the tumour the uterus was found to be double (uterus septus). On vaginal examination two openings in the cervix (which was left) were found. Both patients made uninterrupted recoveries.—Dr. J. M. Munro Kerr showed a multilocular ovarian tumour where adhesions had been very intimate, and a very large placenta from a case of labour complicated with maternal ascites necessitating tapping. The placenta was not oedematous but was a real hypertrophy.—Dr. Scott Macgregor showed a uterus removed by the vagina for carcinoma of the cervix.—Dr. Carstairs Douglas read a paper on some points in infant feeding. While recommending maternal nursing as the best, he pointed out that in certain cases where the child did not thrive an analysis of the milk might indicate the error. He had found in some cases a reduction in the percentage of fat, and in others a diminution in the sugar or an increase in the amount of proteid. Cow's milk used without dilution was not recommended as a routine, but a dilution to 1-3 without the addition of cream and sugar (preferably lactose) was too much. The reduction in the fats might interfere with the absorption of the lime salts (as lime soaps), and might thus have some bearing on the etiology of rickets. With the recent statements of Koch and the deductions to be drawn therefrom Dr. Douglas did not agree. He cited the experiments of Orth in support of his opinion that the sterilization or pasteurization of milk was still necessary. He therefore stated that for the infant fed with cow's milk the milk ought to be pasteurized, and ought to be absolutely free from preservatives. The treatment of certain cases of infantile indigestion was touched upon, and a number of the artificial foods received comment. Dr. Jardine said he strongly approved of sterilization of milk. Dr. Borland always advised that cow's milk should not be sterilized. He drew attention to the cause of trouble with infants suckled as being in many cases due to irregularity in feeding, and noted that if the child were fed at too short intervals the milk was apt to become condensed, while if fed at too long intervals the milk became thin and watery. Dr. Kerr was inclined to give undiluted cow's milk, and to dilute it down if necessary. He mentioned one case where an analysis of the mother's milk showed that it was too rich in proteid. He prescribed a little barley water to be given shortly before each feed, and the result was very satisfactory; on interrupting this treatment the indigestion returned, to be recovered from on resumption of the dose of barley water before food. Dr. Parry asked about the standard of Glasgow milk. The President, while thanking Dr. Douglas for his interesting paper, stated that he agreed with Dr. Kerr in his statement regarding the unsatisfactory nature of the artificial feeding of infants. He had not found that undiluted cow's milk always agreed. In some cases he had found marked benefit from the use of a little raw beef juice. Dr. Douglas, in reply, recommended the pasteurization of milk, as this did not interfere with the antiscorbutic property of milk, which was probably due to the living leucocytes which it contained. In reply to Dr. Parry he said that he had analysed a number of specimens of milk, and had found them quite up to the standard.—Dr. Alexander MacLellan read a short note on a case of large adenomatous polypus, and showed sections of the tumour, and of some other types of polypi. Drs. Kelly and Balfour Marshall remarked upon the case.—Dr. Kerr read notes on a case of carcinoma of the cervix at term. Caesarean section was performed (giving a living child), and was followed by supravaginal hysterectomy. This was performed to prevent the very probable onset of sepsis. The woman recovered from the operation, but died from the effects of the carcinoma six weeks after leaving hospital. During the course of the pregnancy Dr. Kerr had seen the patient, and on finding that the carcinoma was inoperable, had decided to perform Caesarean section in order, at least, to save the child. Dr.

Parry instanced a case where he had scraped away the carcinomatous tissue, and had delivered the child, which was known to be dead, by craniotomy. The mother had recovered from the confinement. Drs. Kelly and Russell agreed with the line of treatment carried out by Dr. Kerr. Dr. Scott MacGreggor referred to a case where at four and a-half months he had performed a vaginal hysterectomy for a cancer of the cervix. Dr. Kerr replied.—Dr. Russell reported a case of advanced carcinoma of the rectum complicating pregnancy. An inguinal colostomy had to be performed, and to avoid the danger of performing a Caesarean section after an artificial anus had been established, the uterus with the child in it was removed at the sixth month. Dr. Russell did not think that it would have been justifiable to have delivered the fetus by the vagina on account of the risks of tearing the rectum; the disease had also invaded the vagina. Dr. Parry, who had performed the hysterectomy on this patient, concurred with these views, and did not think any other treatment would have been advisable. The foregoing papers and reports of cases will appear *in extenso* in the April number of the *Glasgow Medical Journal*.

Therapeutical Society.—The first general meeting of the Therapeutical Society was held on January 20th, Mr. W. Parson, Master of the Apothecaries' Society, being in the chair. Dr. Gordon Sharp read a paper on dita bark (*Alstonia scholaris* R. Br.) and Australian bitter bark (*Alstonia constricta* F. v. M.), two drugs belonging to the dogbane order. He also showed specimens of the barks, and demonstrated the chemical and pharmacological actions of the crude drugs and their alkaloids. Dita bark was found in India, Malay, and Australia. It contained three alkaloids—ditamine, echitamine, and echitenine—all belonging to one series. The first was the chief, and on frogs it was found to act like curare in some respects. It likewise paralysed muscle by coagulating its substance. Dita was a good bitter tonic, but it must not be forgotten that it had an action like curare. The neglect of this point might explain why in large doses it had often been found to produce collapse. The tree yielding Australian bitter bark was found in Eastern Australia. The bark itself was brown, very bitter, and aromatic in odour. It contained four alkaloids—alstonine (formerly known as chlorogenine), porphyrine, porphyrosine, and alstonidine. Alstonine was the most important. Commercial alstonine was mixed with resinous matter and was non-crystalline, but the pure alkaloid could be made to crystallize. In its pharmacology it resembled both nux vomica and quinine, but it had not so much resemblance to curare as dita bark or its alkaloids. Like quinine, it paralysed amoeba, rotifera, etc. On beetles (*Blaps mortisaga*), crickets (*Acheta domestica*) and wasps it acted like quinine; on frogs in medium doses it was like strychnine, only tetanus was not so marked nor so universal. For the full play of symptoms both vessels and nerves must be intact. Its final action was a complete paralysis, evidently due to excessive activity. The therapeutics of the drug had been worked out by the Bancrofts, of Australia, and by Bixby, of Detroit. It was quite distinct in its action from dita bark, and acted on the skin, producing a mild diaphoresis. It also acted on the kidneys and increased the volume of the urine, and it toned up the pulse and slowed it. The tincture was especially useful in influenza immediately after the acute symptoms had passed off. The pharmacopoeial dose was too large, one-half the amount being enough, and when prescribing the tincture that made from alstonia constricta should be ordered.—Dr. F. W. Tunnicliffe read a paper on certain new purgatives, their history and uses. He said that most vegetable purgatives were more or less coloured dyes also, and this had led to the employment of derivatives of anthraquinone as purgatives, some of which were very useful, and especially an allied substance, phenolphthalein, which had been used to colour certain wines; but it was found to produce diarrhoea in those who drank them, hence he had employed it as a purgative and found it very useful, as it caused no pain or disturbance. Dr. Paramore, Dr. Vinrace, and Dr. Lee took part in the discussion.—It was then proposed by Dr. Ince, seconded by Dr. Vinrace, and agreed to unanimously, that the Society be properly constituted by the name of the "Therapeutical Society," and that the rules of the Society should be considered at the next meeting, and the Council and officers elected; also that this should appear on the agenda for the meeting.

Laryngological Society of London.—At a meeting held on January 9th, Mr. E. Cresswell Baber (President) in the chair, the following officers were appointed for the year: *President:* Dr. P. McBride. *Vice-Presidents:* Mr. A. A. Bowlby, Dr. J. Dundas Grant, Dr. P. Kidd, Mr. C. J. Symonds. *Treasurer:* Mr. W. R. H. Stewart. *Librarian:* Dr. StClair Thomson. *Secretaries:* Dr. J. Donelan and Dr. E. Furniss Potter. *Members of the Council:* Sir Felix Semon, Mr. E. Cresswell Baber, Mr. C. A. Parker, Dr. W. Permewan, Mr. R. Lake, and Mr. L. A. Lawrence.—Sir Felix Semon showed a case (previously shown at the November meeting) of ulceration of the left tonsil, with enlargement of numerous cervical glands, in a man aged 70, on both sides of the neck (? malignancy). It was now seen that the ulceration had quite disappeared, and the tonsil had become much smaller-whilst the enlarged cervical glands had considerably dimin, ished. Malignancy was completely excluded. The case was shown again as affording valuable evidence that ulceration of a tonsil in old people with enlarged glands must not necessarily be looked upon as malignant.—Dr. P. Watson Williams exhibited new designs for sphenoidal sinus cutting forceps, and a laryngeal spray.—Dr. A. Bronner showed a drawing and read notes of a case of suppurative ethmoiditis and frontal sinusitis after radical operation for nasal polypi. —Dr. H. L. Lack showed (1) a man, aged 58, with aphonia of six months duration, who had had a similar attack last year; the patient could sing with a natural voice; (2) a microscopic section from a large ulcer of the tonsil in a woman aged 25, showing (?) tubercles; (3) a microscopic section of cyst of ventricle of larynx opened when operating on a case of malignant disease of the larynx.—Mr. R. Lake exhibited specimens showing new growths; (1) of posterior extremities in a man aged 52; (2) of septum and inferior turbinal in a male aged 28; and (3) of inferior turbinal in a patient aged 72 (an old lupus case).—Dr. H. Tilley showed a case of large hypertrophy of mucous membrane in the arytenoid region (so-called interarytenoid pachydermia) in a robust-looking man aged 48.—Dr. J. Donelan showed a specimen of large naso-pharyngeal fibromyxoma, with prolongations extending to the anterior nares, in a youth aged 18. —Dr. Barclay Baron showed a case of naso-pharyngeal malignant disease in a man aged 50, which was discussed by the President, Dr. McBride, Mr. Spencer, Dr. Tilley, and Dr. Pegler.—Mr. Atwood Thorne showed a case of epithelioma of larynx in a man aged 60, which was discussed by the President, Dr. Lack, Sir Felix Semon, Mr. Waggett, Dr. Dundas Grant, and Dr. McBride. The view was expressed that the case was not suitable for operation.—Dr. Fitzgerald Powell showed: (1) A case of infiltration of the pharynx and post-nasal space in a man aged 45, probably syphilitic; (2) a growth in the post-nasal space appearing below the soft palate in an infant of eighteen months, for diagnosis.—Mr. W. G. Spencer showed a case of symmetrical swellings of gum at the posterior end of the alveolar border of each upper jaw in a man aged 37.—Dr. W. H. Kelson showed: (1) A woman suffering from aphonia due to a rounded growth originating in the left ventricle, which had been removed and examined under the microscope, and found to be a fibroma undergoing mucoid degeneration; (2) a case of recurrent fibrous polypus of the nose in a man aged 26.—Dr. Dundas Grant showed a case of chronic laryngitis with interarytenoid pseudo-pachydermic swellings, probably due to purulent rhinitis, and also a case of hereditary specific perforation of the left anterior pillar of the fauces.

Dermatological Society of Great Britain and Ireland. —At a meeting held on January 28th, Dr. J. H. Stowers, President, in the chair, Mr. G. Pernet showed a private patient who, in addition to lupus vulgaris of the neck, suffered from deep-lying nodules on the forearm and on other parts. These he regarded as tuberculo-gummata; but several members expressed the view that they were lipomata.—Dr. T. D. Savill showed: (1) A case of morphoea in a woman; and (2) a case of facial hemiatrophy (morphoea facialis) associated with trophic disorder of the eyeball on that side, and sclerodermia of the scalp.—Dr. Graham Little showed: (1) A case of morphoea on the leg; (2) a case of congenital urticaria pigmentosa of the nodular type; (3) a case of urticaria pigmentosa of the macular type, also dating from birth: (4) a case of urticaria bullosa in an infant (many members objected to this name, and regarded the case as an erythema); (5) a girl suffering from an eruption on the legs, which he placed in the tuberculide class; (6) a boy suffering from extensive leucodermia and melanodermia, the greater part of the

scalp being affected.—Dr. Alfred Eddowes again showed the case of extensive lichen planus presented at the last meeting, together with microscopic sections of the skin.—Dr. N. Meachen showed (for Dr. Abraham) a case described as urticaria with pigmentation. The view was expressed that a scraping should be examined for the microsporon furfur.—Mr. T. J. P. Hartigan showed a case of tuberculous folliculitis.—Mr. A. Shillitoe showed: (1) Extensive nodular syphilide; (2) a case of lichen planus circinatus.—Dr. W. Warde showed an old man with lupus vulgaris affecting nearly the whole of the face and scalp.

Pathological Society of London.—At the Laboratory meeting of this Society, held at the Jenner Institute, on Tuesday, February 3rd, Dr. Allen MacFadyen in the chair, the following demonstrations were given:—Dr. H. G. Plimmer: The trypanosoma of tsetse-fly disease; Dr. S. G. Hédin: Certain spleen enzymes; Dr. J. O. Barratt: Demonstration on rabies: Dr. G. Dean: Tuberculosis; Dr. MacConkey: The detection of the colon and Gaertner bacillus; Mr. Barnard and Dr. Morgan: Some light experiments; Dr. Leathes: A form of drying apparatus; Mr. S. Rowland: Dark ground illumination; Professor R. T. Hewlett: Suppurative lymphangitis in the horse.

Midland Medical Society.—At a meeting held on January 21st, Mr. J. W. Taylor in the chair, Dr. Douglas Stanley showed the heart of a man, aged 47, who had complained for some time of recurring precardial pain, also extending down the left arm, with a tendency to faint and dyspnoea. The cardiac sounds were feeble and short; the pulse was frequent, irregular, and weak. The patient died suddenly on the day he was admitted to hospital. At the necropsy there was extensive chronic aortitis, with degeneration of the valves of the left side. The myocardium was abnormally tough and showed fibrotic changes. At the apex the wall of the left ventricle was very thin, and showed a slight tendency to bulge, forming early cardiac aneurysm. Mr. Christopher Martin asked if a heart with such a lesion would be likely to rupture. Drs. Edge, Charles, and Atkins discussed the relationship between arterio-sclerosis and myocardial disease and their bearing on sudden death.—Mr. Christopher Martin showed a specimen of unruptured tubal pregnancy removed by operation. There was a history of two months' amenorrhoea, followed by three weeks' irregular losses, cramp-like pains in the right side of the pelvis, and the passage of a decidua. On examination, a large sausage shaped swelling could be felt behind and to the right of the uterus. Mr. Martin opened the abdomen, and found the right Fallopian tube much enlarged and distended with clot. The fimbriated end was occluded and glued to the ovary. There was no trace of old or recent blood in the peritoneum. The case was evidently one of tubal pregnancy with intratubal haemorrhage. The patient made an excellent recovery from the operation.—A paper by Mr. Higginson (read in his absence by one of the Secretaries) dealt with the treatment of status epilepticus. The writer drew attention to the use of chloral in repeated doses, and referred to cases that came under his own observation where lives had been saved by this method. In the absence of the writer the paper was not discussed.—Dr. Purslow read a paper on some cases of abdominal hysterectomy, with special reference to the indications for operation. The paper was discussed by the Chairman, Mr. Christopher Martin, and Dr. Edge.

Bradford Medico-Chirurgical Society.—At a meeting held on January 20th, Dr. Angus, Vice-President, in the chair, Mr. C. F. M. Althorp showed the following specimens:

(1) Growth of sigmoid flexure removed from a case of intestinal obstruction fourteen days after ovariotomy had been performed; (2) ovarian tumour, which had been so closely incorporated with the uterus that a portion of the latter organ had been removed with the tumour; (3) broad-ligament cyst and vermiform appendix containing a concretion, from the same patient; (4) uterus showing cancer of cervix and fibroid tumour of body, removed by vaginal hysterectomy; (5) cyst of thyroid removed from isthmus; patient shown.

Mr. Althorp read notes on a case of spinal caries with paraplegia, in which laminectomy had been performed.

The patient was a lad of 18, admitted to the Bradford Royal Infirmary in December, 1901, on account of difficulty in walking. There was no pain, but there was stiffness of the left hip and knee-joints. In 1898 he had been in hospital, and had an abscess opened in the loin; the wound had healed up and kept dry. Patient had been in good health till November, 1901, when he began to have stiffness in the left leg and difficulty in walking. On admission there were two projections of the dorsal spine, one in the upper and one in the lower region. There was no local tenderness. The scar of the lumbar abscess was sound. Patient could stand alone, and walked a little with great difficulty. The left hip and knee-joints were at times rigid, and at other times freely movable. Sensation was normal. Knee-jerks were increased on both sides, and ankle clonus was present. There was no affection of bladder or rectum. The patient was kept in bed, with extension to the spine. The weakness increased, so that he was unable to stand. Laminectomy was performed January 7th, 1902. Four spinous processes were removed over the lower projection; the laminae were divided on each side, and flaps of bone turned upwards and downwards, exposing the dura for three inches. The space between the dura and the bone was filled with granulation tissue. The dura was not opened. The granulation tissue was removed. The cord did not appear to be flattened. The bone flaps were replaced; gauze drainage was employed. The wound healed well. At the end of a month he could sit up, and the rigidity had passed off, but he was unable to raise the limbs from the bed. Three weeks later he could stand with assistance, but could not walk. He left the hospital, and was taken out in a bath chair during the summer, his condition remaining stationary till September. He then began to walk a little. In November he walked up to the infirmary from his home (about a mile). He still complained of weakness in the back, but was unable to wear a plaster jacket.

Mr. Althorp remarked on the rapid improvement in the patient's condition after a long period of quiescence. Drs. Wood, Eurich, and Hall discussed the case; and Mr. Althorp replied.—Dr. Rabagliati read notes on the medical treatment of a case of ovariotomy.

The patient was a woman, aged 30, who imagined herself to be pregnant but who proved to be suffering from an ovarian cystoma. The tumour was a large multilocular cyst, and the case pursued a pretty normal course, except that the abdominal wound was rather slow in healing. The patient had suffered a good deal from dyspepsia and "bilious attacks," which were due, Dr. Rabagliati considered, to her habitually taking more food than she could assimilate; he thought the growth of the tumour directly due to the ingestion of an excessive amount of nutriment. For two or three weeks before the operation the patient was put on a scanty diet, consisting chiefly of liquids, and after the operation a similar dietary was enjoined. During convalescence she took food twice a day only, and towards the end of the year one meal a day was all that was taken.

A report six months after the operation stated that she was doing well and gaining weight. The President and Drs. Miall, Wood, and Eurich made remarks; and Dr. Rabagliati replied.

Society for the Study of Disease in Children.—A meeting was held on January 16th, Dr. G. E. Shuttleworth in the chair. Dr. G. A. Sutherland and Mr. Thomson Walker read a paper on a case of syphilitic endarteritis and nephritis in an infant. The child presented evidence of congenital syphilis, and there was paralysis, and later rigidity of the right arm, the lower extremities also becoming rigid, and the head retracted. Albumen was present in the urine. At the necropsy there was endarteritis of the cerebral arteries and softening of the left frontal lobe of the brain. The kidneys showed diffuse interstitial nephritis. A second case of interstitial nephritis, due to congenital syphilis, was also described. The authors considered that the most important change in this form of arteritis took place in the adventitia, and that syphilitic arteritis was a secondary and not a tertiary manifestation of the disease. The etiology of nephritis in children was often obscure, and the importance of syphilis as a cause was greater than was usually supposed. Many of these cases were probably unrecognized owing to the slight naked-eye changes. Dr. Leonard Guthrie considered that the view expressed by the authors bore out his own opinion, namely, that chronic interstitial nephritis in children was often due to syphilis. Dr. G. Carpenter mentioned two cases of the kind that had been under his care. The paper was also discussed by the Chairman and by Dr. R. Hutchison. Dr. Sutherland, and Mr. Walker replied to the discussion.—Mr. Thomson Walker showed specimens of (1) traumatic cephalhydrocele, (2) punctured fracture of the skull.—Mr. Sydney Stephenson described a case where paralysis of the cervical sympathetic on one side had closely followed the evacuation of a retropharyngeal abscess by Hilton's method. The symptoms were characteristic, and included ptosis, contraction of the pupil, enophthalmos, and lowered intraocular tension. No changes in the state of the blood vessels or the function of sweating were noted. The case was discussed by Dr. Edmund Cautley and Dr. G. A. Sutherland.—Dr. Leonard Guthrie showed an infant, aged 5 months, suffering from an unusual kind of microcephaly. The occipital bone showed a beak-like projection, and overlapped the two parietal bones. There was, in addition, spasticity of all the

limbs. The child's features did not suggest imbecility. Mr. A. H. Tubby entered a protest against operating in such cases. His experiences in that direction had been uniformly unfortunate. Craniectomy appeared to be powerless to cure the condition. The case was further discussed by Drs. Cautley and Hutchison, Mr. G. Pernet, the Chairman, and Dr. G. A. Sutherland.—Dr. Charles W. Chapman read notes of a case of dilatation of the stomach in a girl 8 years of age, who had been accustomed to unsuitable food, taken at irregular intervals. Under suitable treatment, she made a complete recovery. The case was discussed by Drs. Sutherland and Cautley, and Dr. Chapman replied.—Dr. George Carpenter read notes of a case of acute primary thyroiditis in a rachitic infant, aged 14 months. The disease went on to suppuration, the abscess was opened, and the patient recovered. The author called attention to the rarity of the condition, even as a complication of the specific fevers, and pointed out that in some reported cases induration of the gland and not suppuration had resulted as the sequel of inflammation.

Pathological Society of Manchester.—At a meeting held on January 21st, Dr. Broadbent being in the chair. Professor Hickson described some deformations of corals produced by animal parasites, and exhibited specimens and photographs illustrating the various phenomena mentioned. Mr. Smith showed the specimens from two cases of intussusception of the small intestine, one of which had originated as an intussusception of a Meckel's diverticulum.—Mr. Rodocanachi exhibited and described a specimen of Paget's disease of the nipple.—Dr. Prebble and Dr. Fothergill described the specimen from a case of calculous pyonephrosis.

Nottingham Medico Chirurgical Society.—At a meeting held on January 7th, Mr. J. Mackie, President, in the chair, Mr. W. M. Willis showed: (1) A young woman after removal of congenital tumours from head and neck (with photographs); (2) uterus removed by abdominal hysterectomy for carcinoma of cervix; (3) prostate removed completely by enucleation after suprapubic cystotomy; (4) vesical calculus removed by suprapubic cystotomy.—Mr. R. G. Hogarth showed: (1) A tumour of prostate, together with the bladder, in a boy aged 8 (with microscopical specimen); (2) enlargement of left foot in an infant, no specific history.—Dr. J. W. Noble showed a young woman with aneurysmal swelling behind left auricle.—Dr. W. B. Ransom showed microscopical specimens of primary carcinoma of the liver occurring in a boy, and read notes upon the case, commenting on its extreme rarity; no other growths were found at the necropsy.—Dr. C. H. Cattle showed microscopic specimens of carcinoma uteri.

REVIEWS.

THERAPEUTICS.

The sixth volume of the *System of Physiologic Therapeutics*,[1] edited by Dr. Solomon Solis Cohen, bears the title "Dietotherapy and Food in Health." The first part deals with the general principles of diet and diet in health. In these chapters the author, Dr. Nathan S. Davis, jun., has collected a large number of facts relating to the physiology of diet and the composition of individual foods, the usefulness of which, however, is largely neutralized by a lack of logical arrangement. Here and there, too, there is a want of precision in the use of scientific terms. He fails to distinguish, for instance, between the large and the small "calorie," and refers on one page to "protein" and on another to "proteid." This would be likely to confuse the ordinary reader. It seems unfortunate, too, that in a work of this sort there should be no references to original authorities except in the case of a few well-known textbooks, and of the investigations of the American Department of Agriculture. The second and larger division of the book deals with the therapeutic application of dietetics. The 172 pages or so which make up this part of the volume might with advantage be greatly diminished by the omission of much irrelevant material, such as descriptions of methods of treating disease by other than dietetic means. Nor can we think that any good purpose is served by describing separately and at great length the methods of feeding a patient suffering from typhus, yellow fever, small-pox, scarlatina, and other febrile diseases. Surely it would be sufficient to lay down some general principles to guide the practitioner in selecting a diet for a febrile patient and leave the rest to his common sense. Taken as a whole we are bound to confess that the book strikes us as a compilation not well conceived and very badly written, and one which is not likely to be a valuable addition to the literature of the important subject of which it treats.

As the new edition of Dr. Burney Yeo's *Manual of Medical Treatment*[2] is, we believe, the tenth, it has passed beyond the stage at which any general criticism can affect its fortunes. The plan of the book is probably well known. Under the head of each disease a short account is given of its pathology, and this is followed by a more detailed account of its treatment. The latter does not consist merely of the author's own opinions, which are generally sound; these are supplemented by a number of extracts from the writings of other persons who have dealt with the subject during the last few years. Some of the persons quoted may justly be called authorities, but others are not known to us as having any special weight and we think the effect is rather weakened than strengthened by the number of suggestions and the balancing of opinions for and against particular plans of treatment. The book reveals the weakness of modern therapeutics; it shows that we have too many remedies, and that they crowd upon us at a rate far greater than our capacity for testing their value so that an author in the position of Dr. Yeo must either incur the reproach of ignoring new suggestions or admit them to his pages together with the statements made in their favour without expressing any opinion upon their value. While stating the dilemma we do not think that Dr. Yeo has found a complete solution. A book of this kind should not be a catalogue of new remedies but should aim at being a real guide to the inexperienced. Such a work could be presented in one volume instead of in two and, perhaps, would not be so popular, but it would bear a stamp of individuality which the present work lacks. We can testify, however, that Dr. Yeo has sought to incorporate in his book all new ideas, and we do not notice many omissions, either of subjects or of suggestions.

OBSTETRICS.

The small work on *Abdominal Examination and Manipulation in Pregnancy*,[3] by Dr. Maclennan, of Glasgow, treats of a subject which is very important, and which is probably not appreciated or practised by the bulk of general practitioners as it ought to be. We are therefore glad to see one of the younger generation of obstetric teachers making it the subject of a monograph, and pressing it, as he doubtless does, upon the attention of his students. We hope that several editions of this book may be called for, and that each edition will be better than the preceding. The present—the first—edition is mainly a compilation. The pages bristle with French and German names. The quotations are often from authors that we have never heard of; though this, perhaps, only shows our ignorance. When authors of established reputation are quoted the quotations are not always from the monographs which they themselves would wish read and referred to; they are often mere casual expressions of opinion, thrown off in discussion, and not supported by evidence. The author relies very little upon his own judgement. With increasing experience he will be able better to appraise the value of what he reads. Thus, for instance, he quotes a French writer on turning an occipito-posterior vertex position into a breech, and then back again to a vertex in order to get the dorsal aspect of the child in front. The author seems not to have heard of the simpler plan of rotating the child by external manipulation about its long axis for a quarter of a circle, although this is advised in an English textbook of repute. If he will weigh, and practically test, each statement that he quotes he will greatly improve his book.

Professor J. W. Taylor's pamphlet on *The Treatment of*

[1] *A System of Physiologic Therapeutics.* Edited by S. Solis Cohen, A.M., M.D. Vol. VI. *Dietotherapy and Food in Health.* By Nathan S. Davis, jun., A.M., M.D. London: Rebman, Limited. 1901. (Demy 8vo, pp. 372. 12s. 6d.)

[2] *A Manual of Medical Treatment or Clinical Therapeutics.* By I. Burney Yeo, M.D., F.R.C.P. New Edition. In 2 volumes. London: Cassell and Co. 1902. (Crown 8vo, pp. 1,525. 21s.)

[3] *Abdominal Examination and Manipulation in Pregnancy.* By Alexander Maclennan, M.B., C.M.(Glasg.), L.M(Rotunda, Dubl.), Clinical Assistant to the Professor of Obstetrics and Gynaecology, University of Glasgow, etc., with an introduction by Professor Murdoch Cameron. London: Rebman, Limited. 1902. (Demy 8vo, pp. 257. 6s.).

Abortion[4] is designed to instruct the general practitioner in the management of one the commonest cases of emergency to which he is liable to be called. If its teaching should be widely assimilated and acted upon it will be to the benefit of the community. Mr. Taylor's instructions to the practitioner are those which are now inculcated in the best medical schools. His surgical precepts are faultless, but from a medical point of view he is open to criticism. He speaks of abortion being due to struma, to gout, and to drugs. We know of no evidence that women who have suffered or are suffering from scrofulous disease are more liable to abort than any others. Gout is hardly ever met with in women during the child-bearing period, and a relation between gout and abortion has yet to be demonstrated. Lastly, we know of no drug that will induce abortion, and it were well if the public knew this.

Dr. RALPH VINCENT'S small volume, *The Wife and Mother*,[5] is clearly written, and contains advice suitable to the kind of wife and mother that a high civilization is apt to produce; we mean a person whose sensory nervous system is better developed than her organs of animal life. There are, however—chiefly at the extreme ends of the social ladder, among the labouring classes and among the aristocracy—women to be found who would not incline to the author's advice. He holds that a woman should remain in bed for four weeks after childbirth, and should not take up the burden of her household duties for six weeks. He recommends a special "belt corset" for wear during pregnancy. He holds it inhumane to let a patient have a child without chloroform, which enables the doctor to perform "many manipulations which facilitate the birth of the child," so that, generally speaking, labour ought not to last more than six hours. The natural process of lactation he finds attended with many disadvantages, while the so-called infant foods upon the market do not meet with his approval. He thinks that the best way to bring up a child is upon milk supplied by the Walker-Gordon laboratories. To a certain class of patient this kind of advice will be very appropriate. But how would the author get on if he practised in a district in which it was the custom for women to go to work the day after delivery?

REPORTS AND ANALYSES

AND

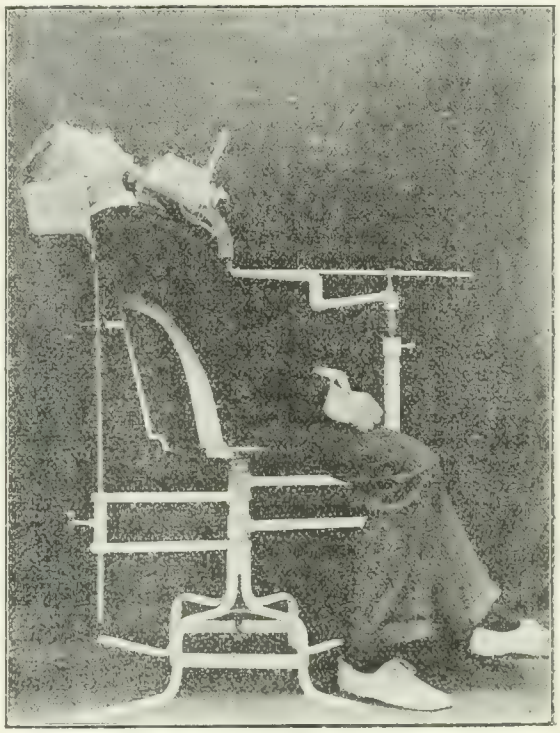
DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEDICAL AND SURGICAL APPLIANCES.

Inhaler for Formaldehyde Inhalation.—Dr. CHOWRY MUTHU, the Resident Physician of the Mendip Hills Sanatorium for Consumptives, has for several years employed inhalations of formaldehyde in the treatment of pulmonary tuberculosis. He uses an inhaler of perforated zinc, pyramidal in shape, which covers both mouth and nose, and contains a layer of cotton wool on to which the mixture for inhalation is sprinkled. The edges of the inhaler are bound with black velvet, and it is provided with elastic on each side to fasten behind the ears. The inhaler appears to be essentially the same as that introduced twenty years ago by Dr. Yeo, but it is said to differ materially from this in being larger, and fuller, and nickel plated. It is manufactured by Messrs. S. Maw, Son and Sons, Aldersgate Street, E.C., and the wholesale price is 2s. 6d., or with bottle of solution 3s.

Small Finsen Lamp.—Dr. STOPFORD TAYLOR has designed the lamp shown in the accompanying illustration to meet the demand for a very small lamp, automatic in its action, burning iron or carbon electrodes and working direct from the electric supply main. These conditions are fulfilled by making the shell of the lamp a water jacket of very small proportions, mounted on a frame which permits motion in all directions, and at the same time is rigid when in working position. It is imperative that the diseased area to which the lamp is applied be rendered anaemic, so that the rays can penetrate the tissues, mere application of the lamp being futile unless sufficient pressure be exercised to produce this effect. For this purpose Dr. Taylor obtained the chair from Berlin, and had the lamp attached to it by means of a powerful bracket, steady pressure of the lens against the patient being maintained by a rack-and-pinion adjustment and counter-pressure by the head rest. Fifteen to twenty minutes is sufficient to produce a good reaction. It is noiseless. On the score of economy this lamp is, Dr. Taylor states, a distinct advance on all modifications of Finsen's apparatus. The current is 2 ampères at a pressure of 40 volts across the arc. Dr. Taylor expresses his indebtedness to Messrs. John Hunter and Co., of Liverpool, for their skill in carrying out his suggestions.



The lamp applied under the chin. This is one of the most difficult positions to reach, but the illustration shows that it can be easily treated with this lamp.

MEDICINAL AND DIETETIC PREPARATIONS.

Milk-Chocolate.—We have received a sample of milk-chocolate prepared by Messrs. Cadbury, of Bournville, Birmingham. The makers claim that the article is a superior form of milk-chocolate manufactured by the most modern methods from high-class cocoa, loaf sugar, and full-cream fresh milk. The results of our analysis of the sample submitted to us are compatible with the claims made in regard to the composition of the chocolate, and those claims may therefore be accepted as justifiable. The chocolate contains only a small percentage of moisture—between 1 and 2 per cent. and on this ground it is stated that it will not undergo deterioration in any climate. The total fat present was found to be 27 per cent.—a figure only slightly below that claimed—and a portion of this consists of milk-fat. The total sugar—consisting of ordinary "sugar" (sucrose) and milk-sugar amounts to 54 per cent. The chocolate examined was free from added starches and from chemical "preservatives," and our results prove that the sample was a well-prepared milk-chocolate of very good quality.

THE HOUR OF BIRTH OF JAPANESE CHILDREN.—Professor Masanaka Kinoshita, of the Imperial University of Tokyo, as the result of a careful study of the hour of birth in a series of 691 cases, has found that more Japanese children are born between 12 and 3 a.m., and fewer between 12 and 3 p.m., than at any other hours of the twenty-four. More Japanese babies are born in the day than in the night, the proportion being 55 in the day to 45 in the night.

[4] *The Treatment of Abortion.* By John W. Taylor, F.R.C.S., Professor of Gynaecology, Birmingham University, and Surgeon to the Women's Hospital, Birmingham: Cornish Brothers. (Fcap. 8vo, pp. 43. 6d.)

[5] *The Wife and Mother:* a Book of First Principles for the Guidance of Young Married Women. By Ralph Vincent, M.D., M.R.C.P., late Resident Medical Officer, Queen Charlotte's Lying-in Hospital, London. London: The Walter Scott Publishing Company, Limited. 1902. (Crown 8vo, pp. 171. 5s.)

THE IRISH EDUCATION COMMISSION.

II.

QUEEN'S COLLEGE, BELFAST.

THE statement made by certain witnesses that this college is a sectarian (Presbyterian) institution appears to be founded on the fact that two-thirds of the students belong to that denomination; the college has no tests or sectarian bias.

Queen's College has an annual Government grant of £7,000. In addition, necessary repairs in the building are provided by the Board of Works; it also receives from the Royal University £676 per annum in salaries of Fellows. The president and professors are appointed by the Crown, the local affairs of the college being in the hands of the council, which consists of the president and six representatives of the professors. There are four faculties—arts, law, medicine, and engineering. The faculty of medicine is the largest, and contained, in 1900, 226 students. About half that number belonged to the faculty of arts. The number of students in the college reached its highest from 1880 to 1890, when the average number of matriculated students was 442. In the following decennium it was 374.

The number of students annually entering the faculty of medicine shows little fluctuation, varying between 40 and 50, of whom about half graduate at the Royal University, a large number going to the licensing colleges. The medical faculty is well equipped for the teaching both of the scientific and clinical subjects. In chemistry, anatomy, physiology, and pathology there is excellent accommodation for practical study, and a great deal of attention is paid to post-graduate work. The anatomical museum is a very fine and well-ordered collection.

The general hospital about to be opened contains about 300 beds, and students receive clinical instruction at several hospitals devoted to special departments, as well as at the very large Union Infirmary. It is thus seen that Queen's College, Belfast, contains all the necessary elements of a successful medical school.

The faculty of arts has not increased commensurately with the increase in this faculty of the Royal University. This is entirely attributable to the existence in Belfast of tutorial establishments which prepare students for the arts examinations. Between the years 1895 and 1900 the average number of students who took the B.A. from the college was 16.6; but the combined average of two other institutions was over 28; taking all the candidates from Belfast together, it appears that there is material in Belfast for an arts faculty of three times the present size, if collegiate education should be made obligatory for graduation.

The chief defect that has been pointed out in the Belfast College is the want of autonomy in its government and courses of study, the former being dependent on the Chief Secretary for Ireland, and the latter on the Royal University. It is considered desirable, in the interest of the college, that various local public bodies and also benefactors and former students should be represented on its governing body. It is certainly true that in the past the public has been somewhat apathetic towards this college, regarding it as a Government institution. Until recently almost the only exception was the endowment ten years ago of a Chair of Physiology. Recently a public movement for the better equipment of the college has resulted in the endowment of the Chair of Pathology, and the promise of new physical and engineering laboratories (the plans for which are under consideration), besides a considerable sum in hand for general purposes. The allocation of this money is in the hands of a committee on which the subscribers and the college are equally represented. Another step in the same direction is the proposal to found a school of commerce in the college, in the government of which the Chamber of Commerce should be represented. This proposal has been warmly advocated by the Chamber of Commerce as well as by the authorities of Queen's College, and is one that can be carried out with moderate additions to the present staff of the college. It is also anticipated that extensions of the work of the scientific departments will take place in connexion with the new municipal technical school. The higher branches of technical education are only theoretically distinguishable from scientific university education, and by providing for those in the Queen's College it is hoped to effect an economy both in teachers and apparatus. This department of the college will, of course, be subject to the joint control of the corporation and college.

These new movements indicate the commencement of an alliance between the State college and various local interests, and give reason to hope that if the government of the Belfast college were suitably modified, the people of Belfast would exhibit the foresight and liberality which have done so much for the Scotch and younger English universities.

Another impediment to the progress of the college is the insufficiency of funds. For the expenses of those departments in which practical teaching is conducted about £250 per annum is available. Those professors who employ an assistant or assistants have to pay them out of their own income, as there was no provision made and relatively little necessity for assistants when the present stereotyped arrangements were made. In general the sum available for the adjuncts of teaching—museums, library, and scientific apparatus—is the same as it was twenty years ago, while it is hardly necessary to point out that the expenditure in these items necessarily increases with the progress of knowledge.

Deficient accommodation is another drawback severely felt in the scientific departments, especially in chemistry and natural history.

The remedies for these disadvantages are all obvious, and are not likely to be long delayed in an institution so successful and in a community so enterprising as that of Belfast.

UNIVERSITY COLLEGE, DUBLIN, AND THE ROMAN CATHOLIC SCHOOL OF MEDICINE.

These were the only colleges of the "Catholic" University founded in the Fifties selected by the senate of the Royal University for "recognition" by the allotment of Fellowships. The exclusion of other colleges at this time led to the resignation of an eminent Roman Catholic prelate from the senate.

The college, which is the property of the bishops, has been leased by them to the Order of Jesus. The rector of the college is a priest of this order, and the control of the affairs of the college is entirely in his hands. The college admits students of all denominations (and in fact 10 per cent. of its students are non-Catholics), and the general teaching is conducted with respect for the faith of the minority. For the Roman Catholic students separate religious exercises are provided. Of the staff of nineteen professors and tutors, all but one are Roman Catholics, five being Jesuits, but the rector declares his intention to employ Protestants freely when he cannot find Roman Catholics suitably qualified.

It is agreed upon all hands that the building and equipment of these institutions are insufficient. No accounts are published, and the statements of the rector are somewhat obscure, but the income of University College appears to consist of students' fees amounting to about £800 per annum, with the emoluments of the five Jesuit Fellows (£2,000), which are devoted to maintenance. There was at one time a deficit of £6,000, now reduced to £2,000. By the judicious expenditure of this sum, University College for the last twenty years has trained students with increasing success for the examinations of the Royal University. The average number of its students is about 200; the number who take the B.A. is much smaller than the corresponding figure for Belfast; but, as regards the M.A., this college is the most successful in passing its students.

The Roman Catholic Medical School is the only one of the medical schools considered by the Commission that shows an increasing attendance of students. The roll has been doubled since 1886, and the total for 1900-01 is 260, as compared with 226 in Belfast. The average number who graduated in the Royal University yearly is only about ten. In proportion to their numbers, these two colleges are able to point to a gratifying degree of success on the part of their students, and altogether the promoters of the college and school of medicine are to be congratulated upon the flourishing condition which has been reached by this part of the Catholic University with very little outside help.

QUEEN'S COLLEGE, CORK.

This college has the same constitution and endowment as Queen's College, Belfast. During the existence of the Queen's University, of which it was a constituent college, it was a very successful and flourishing school; but since 1881 the number of its students has steadily declined to their recent average of about 180. Of the faculties, the medical is by far the largest, the annual entry being about 40, and the number of students who pass the final examination of the Royal University being each year about 10. The medical school is well provided with clinical material, and the results, as seen in the examinations of the Royal University and of the public services, compare well with those of the other colleges. The only circumstances in connexion with the Cork

Medical School which call for unfavourable comment are the absence of a salary for the teacher of pathology, and the union of the Chairs of Anatomy and Physiology. It has been seen that, but for private munificence, Queen's College, Belfast, would also be subject to this disability, as is Queen's College, Galway. It is regrettable that these institutions, which are maintained by the State, and therefore supposed by the public to receive a proper provision, are the only medical schools in the United Kingdom where the advances made in medical teaching since their foundation fifty years ago are not recognized. But in Cork, as in Belfast, all the scientific departments suffer by want of space and want of money for working expenses. The library particularly is in a bad condition.

Queen's College, Galway.

It must be confessed that by the criterion of numbers Galway College is not successful. Connaught is the poorest province of Ireland, with few natural resources and a bad railway system. There are not many large secondary schools. The population is almost entirely of the Roman Catholic faith. Unquestionably there is no part of the country where the need for facilities for higher university and technical teaching is more obvious, and if the labours of the Royal Commission result in any modification which will render the Galway College acceptable to the population for whom it was intended, we may look for great improvement in the social and economic conditions of the West of Ireland.

Objections to the Present Colleges.

The changes that have been introduced into the Irish university system by successive Governments since 1795 have all arisen in response to demands of the Roman Catholic population. The work of the Royal Commission has largely consisted in inquiring into the exact nature of these demands and of the measures which would satisfy them.

The demand is for educational equality. It is said that the Protestants have endowed university education in Trinity College and the Queen's Colleges which are not available for Roman Catholics, and that the latter are entitled to the same.

The reasons why the Roman Catholics are unable conscientiously to avail themselves of these colleges may be summarized under two headings: (1) The absence of religious teaching, and (2) the Protestant atmosphere, and the absence of sufficient safeguards against teaching dangerous to faith and morals.

1. The Roman Catholic ideal of education is the union of secular and religious teaching. The authorities of Trinity College state that they have offered to provide facilities for the religious exercises of Roman Catholic students, but no advantage has as yet been taken of the offer. A reference to the constitution of the Queen's Colleges shows that they contain an elaborate mechanism for the religious instruction of students of any denomination as well as for the supervision of their lives outside the college. This provision, however, does not act automatically, but only upon the motion of the authorities of the Church concerned.

2. The Protestant atmosphere of the colleges and the insufficiency of safeguards are objected to. Trinity College contains a theological faculty for the training of clergy for the Protestant Episcopalian Church, and naturally a large proportion of its students and fellows belong to that church. Episcopalian students attend chapel in the college. So far as the religious persuasion of the majority of the students and teachers constitutes an atmosphere, it may be fairly said that the atmosphere of Trinity College is Episcopalian.§ But Trinity College has a most liberal constitution. Students of all persuasions are admitted to all its privileges, and prizes, and degrees (except theological), and its Fellowships are conferred after competitive examination, while its government is in the hands of Fellows. It will thus be seen that the presence of a divinity school is the only factor which of necessity perpetuates a Protestant atmosphere, and the partial retort is open that the Roman Catholics themselves possess an endowed divinity school at Maynooth. If we consider the Queen's Colleges in this relation, we find that religious tests are rigidly excluded from their constitution. The religion of a student is only inquired into in order to facilitate the deans of residence in the supervision of his spiritual welfare. The deans of residence are clergymen appointed, not by the college, but by the Crown upon the recommendation of the constituted authorities of the religious denominations in whose interests they act. They are entitled to have rooms in college set apart for their use in imparting religious instruction to the students under their charge. There were at one time two Roman Catholic deans of residence in connexion with the Queen's Colleges, but they resigned after the Synod of Thurles, when Roman Catholic clergymen were forbidden to hold any office in the colleges. The professors, whose religion is not a subject for official inquiry, are obliged by an oath to avoid any teaching which may be subversive of faith or in certain other respects offensive to the students. The first offence in this respect leads to an admonition from the president; the second to suspension by the president, followed by dismissal by the Crown. An appeal from the president to the Board of Visitors is allowed. The latter is a body whose function is to enforce the statutes of the college. Roman Catholic bishops are not placed *ex officio* on the Boards of Visitors. In this appears to be the germ of the matter. The Roman Catholic Church recognizes no ecclesiastic but one exercising the power of a bishop as having authority to decide questions of doctrine. The Crown has no such authority. And this view has been consistently put forward by the Roman Catholic bishops in the numerous controversies and inquiries on the Irish University question, that they will have no confidence in any college or university where they are not officially recognized as arbitrators on any question of religion and morality. It is a question of principle rather than of detail, and the exact mechanism is indifferent provided that the Episcopal authority exercises a veto on the appointment and an initiative in the dismissal of professors.

The witnesses are willing to grant that the Queen's Colleges were founded with an honest intention of providing university education for Roman Catholics, and it even appears that a minority of the bishops were in favour of accepting them.

Suggested Solutions.

The Roman Catholic witnesses assert their right to have either a college of their own within Dublin University (that is, co-ordinated with Trinity College) or a Roman Catholic University in Dublin, or, as a minimum, a Roman Catholic college within a reformed Royal University. The first two solutions they prefer as giving their college a sentimental equality with the ancient Dublin College. The last they would regard as a substantial boon, though probably not a final settlement of the question. In any case the contemplated university or college is to have an endowment out of public funds comparable with that of Trinity College, and is to have a Roman Catholic atmosphere. The latter would be secured in the following manner. The governing body should be predominantly, not exclusively, Roman Catholic, and should be at least partly representative. It is suggested that it might consist of Crown nominees and representatives of the graduates and of the bishops, possibly of other public bodies. The professional staff should not be appointed solely by the Crown, but either by the Senate or by the Crown from names selected by the Senate. There should be no religious tests either for students or for professors, but the mechanism for dealing with teaching subversive of religion and morals should be controlled by the bishops. Finally, there should be provision for the religious training of students, and residence should be enforced. The Roman Catholics should have the right of establishing a theological faculty out of their own funds. The witnesses estimate that an institution founded on those lines would have immediately 500 students, and within a few years 1,000, and probably many more. The students would be drawn from the nucleus of University College and the Roman Catholic School of Medicine, and would also include a number from Maynooth and Roman Catholics who at present are educated in other colleges, besides many who at present forego the advantages of a university education.

To these suggestions certain corollaries are attached. In the event of a Roman Catholic university or a college within Dublin University being founded, the Royal University, which was created for the benefit of the Roman Catholics, would almost certainly be demolished. In that event the Belfast College would necessarily become a university, a change for which little desire is expressed in Belfast. The college in Cork is hardly ripe to become a university, but in this event some alteration in its condition would be required. Affiliation of it and the Galway College to the proposed Catholic university has been suggested. Another suggestion is that both colleges should be utilized for purely technical and scientific education (only the medical faculty of the present Cork College being retained). Several other proposals for dealing with the Cork and Galway Colleges in the event of

a Roman Catholic university being formed have been made, but the question is very difficult. On the other hand, if the Roman Catholic college and school of medicine were adequately endowed and the Royal University retained or modified so that the colleges could be incorporated in it, the changes would be less numerous and fundamental. Provision ought in that case to be made for the crying needs of the Queen's Colleges, and for their connexion with higher technical training in their districts, and their constitutions might be so modified as to bring them into closer relations with the people.

It must be noted that the Royal University has now existed for twenty years, and its graduates in many quarters resent deeply the proposal that it should be dissolved. It may be said that the principle of denominational university teaching is denounced not only by Protestants connected with the Royal University, but by eminent representatives of Trinity College, and that not only on political but also on educational grounds. The Queen's Colleges were devised by Sir R. Peel for the express purpose of providing university colleges acceptable to the Roman Catholic population of Ireland. Their constitution contains safeguards against sectarian or irreligious teaching; they have an elaborate mechanism for the provision of religious observances and instruction, as well as for the general supervision of the students. Modifications in the details of their constitution might be devised which would meet all the objections that any witness has urged from the Roman Catholic point of view and in a country where three-fourths of the population are Roman Catholic, the establishment of a Roman Catholic atmosphere might be safely left to time and the majority.

Collegiate Education in Dublin.

Dr. F. Isdell (London, W.) writes: In the article on University Education in Ireland you speak of the absence of collegiate training in Dublin University. This is an error. In Trinity College there is as full and complete a college life as can be found in either Oxford or Cambridge. I forget now the exact figures, but some hundreds of the men live in; and all who live in the city, within a radius of a mile and a half, are technically in residence, and must obey certain regulations accordingly. No doubt it is possible to obtain a degree in Dublin University without residence, as defined above; but it is unusual to do so.

*** It is very well known that in Trinity College there is a full collegiate life; it is not so well known that it is possible to obtain a degree in the University of Dublin without residence.

LUNACY AND LAW.

Sir William Gowers's address on the Prevention of the Insanity, delivered before the Medico-Psychological Association of Great Britain on November 20th, 1902, and published in the British Medical Journal of November 22nd, 1902, has been issued in pamphlet form by Messrs. J. and A. Churchill. To this reprint he has appended the following note, dated January, 1903:

In the preceding address little has been said of the importance of securing proper conditions for the welfare of patients received in private residential care, because this was outside my special subject. I feel most strongly the extreme importance of such security, but I am sure that it can never be obtained by the compulsory certification of every case on, or just over, the verge of mental soundness. To endeavour thus to ensure public safety, under central governmental direction, is to attempt the impossible, to fail inevitably, and in the course of failure to produce varied harm, direct and incidental.

Moreover, such provision would leave unsecured all those who cannot be regarded as unsound in mind. The only plan that seems likely to deal effectively with all cases taken for payment is that suggested by Sir W. Church in a letter to the *Times*. In this he recognizes the need for an alteration in the present system, and also the difficulty occasioned by a great increase of the work of the Lunacy Commissioners. He says:

> This difficulty would be greatly lessened if the notification of persons not needing, in the opinion of their medical attendants, removal to an asylum or definite detention, but separation from their home surroundings and the care of skilled and responsible persons, was made in the first instance to the local authority, as is done in the case of infectious disease. The medical officer of health for the county or borough, or some other official appointed by the local authority, should have the particulars of each case sent him, and should have power to visit them and ascertain that they were in proper hands and suitably cared for. He should keep a register of all such cases and their place of residence, and forward it from time to time to the Commissioners in Lunacy, to whom there should be power to appeal both by the patients and their friends.

I know that some medical officers of health see no difficulty in the plan; the local authorities could, moreover, provide for special help if necessary. Such devolution to local control of work that cannot be efficiently performed by a central authority is in harmony with modern tendencies. If such a change seems at first sight formidable, it may become less so when once attempted.

It has been suggested that the need I have urged is already provided for by the provision for the reception of border-line patients as voluntary inmates of public asylums. There are a few patients whom such an arrangement suits. That most sufferers on the verge of mental derangement should place themselves in lunatic asylums is a suggestion which must seem to those who know the cases to have been made in pure sarcasm.

It is earnestly to be hoped that any measure for immediate relief which may be proposed will not be rendered ineffective by provisions and limitations brought forward in the name of public safety, but really needless. One such limitation existed in the Bill which the Lord Chancellor introduced, in 1900, to legalize in England a system analogous to that in Scotland, for the reception under private care of a case of incipient insanity, for six months "with a view to recovery," on a simple medical certificate. The limitation referred to is contained in the words of the Bill, "No person shall under this section receive more than one patient at the same time." It is not clear whether it is intended that the words "under this section" are intended to qualify "patient," or that the limitation to one patient is to be absolute. Some of those whose help with such cases is most precious have arrangements for more than one patient, and their help would be impossible under such an absolute restriction. In either case it is difficult to perceive what benefit can result. No such restriction exists in Scotland. Nor is any sanction there necessary analogous to that of a Justice of the Peace in England. Such a sanction could be only a useless formality; it would be so even if it involved examination of the patient, when it would be also harmful. It would lessen the apparent difference from certification and gravely diminish the utility of the system.

Two objects, and those only, should be in view in any measure that is proposed for remedial care. One is to secure that no patient should be thus treated for whom certification is necessary in his or her own interest. The other is to secure that the conditions under which the patient is placed are such as are likely to promote recovery.

In regard to the latter, it is of interest to note the questions in the Scotch Visitors' Book for "Private Patients in Private Dwellings," although it does not apparently apply to the cases received for six months "with a view to recovery." One question is, "Are the circumstances in which the patient is placed suitable for the promotion of comfort and the carrying out of medical treatment?" Another is, "Does the provision made for the patient fairly correspond to the rate of board paid?" It would be well if the supervision indicated by these questions could be exercised in the case of patients of every kind received for payment.

Letters which this address has brought me from several of the highest Scotch authorities on lunacy breathe a profound commiseration for the inferiority of the English system. But there are reasons for the difference. The Scottish system has come into being as part of the social arrangements in which mental unsoundness is regarded as a disease, and the sufferers are in the hands of an acting Board composed of doctors, with legal members only to deal with the legal points that so often arise. In England the active Board consists of an equal number of legal and medical members, who perform the same duties for the most part, so far as an outsider can discern. This arrangement has its roots far back in the past. For six centuries the King has been the guardian of all those of unsound mind, first perhaps because their incomes added to his revenue. For the last four centuries at least the Lord Chancellor has been his special substitute. The share of control given to doctors is a modern innovation, dating back less than 100 years. The Lord Chancellor and the legal Commissioners represent the dead hand of a distant past, but are not therefore to be assumed hastily to be valueless. If the Lord Chancellor had less to do, a better head could not perhaps be found, and even a figure-head has more real influence than may be at first discerned. But the need for a much larger proportion of medical effective work can scarcely be denied.

I am sure also of another fact. It would contribute greatly to the efficiency of the Lunacy Commissioners if they had

previous training in subordinate work of the same kind. In this, again, the Scottish system presents an example worth consideration. The Assistant Commissioners are acquiring the experience which must make them far more efficient when they attain the higher rank. In England an able outsider has to begin by learning his work; the process is not a pleasant one, and the ultimate result varies more than it should do. So I have learned from many quarters, and so, I believe, would be clearly discerned by any Commission which conducted a thorough investigation.

All that has come to my knowledge since this address was given, and in consequence of it, serves to emphasize the double need urged in it—the need for some relief, as speedy as may be, and the need for augmentation of the controlling authority, perhaps with rearrangement, without undue delay. The vast improvement achieved under the present system should not prevent discernment of its defects. Every organization, to be adequate, must grow and develop in the same degree as that with which it deals.

THE ANNUAL REPORT OF THE MEDICAL OFFICER OF THE ADMINISTRATIVE COUNTY OF LONDON.

I.

Mr. Shirley Murphy's annual report on the vital statistics of the metropolis and sanitary work carried out by the London County Council always embodies a large amount of information which possesses a much more than local interest. The present report, dealing with the year 1901, and forming the tenth of its series, is no exception to the rule. In the present article we propose to summarize and discuss Part I, dealing with vital statistics and preventive medicine.

Population.

Several pages are devoted to a summary of the recent census report. Of the 29 metropolitan boroughs, Bermondsey has the greatest density of population—182 persons to an acre, Shoreeditch coming next with 180, then Finsbury with 172, and Bethnal Green with 171 to an acre. At the other end of the scale are Wandsworth and Greenwich with 25, Lewisham with 18, and Woolwich with 14 persons to an acre. As is pointed in the report, the average density is greatly surpassed in certain constituent parts of each borough. Thus, in the Borough Road registration subdistrict there are 266 persons to an acre, as compared with 182 in the whole of Southwark. The proportion of persons in each borough has formed the subject of an exhaustive inquiry in these columns,[1] and we need not, therefore, more than briefly summarize Mr. Murphy's figures under this head. He shows that the borough having the smallest proportion of the population living in overcrowded tenements of one room was that of Lewisham (0.34 per cent.), the borough having the largest proportion being that of Holborn (8.28 per cent.). For overcrowded tenements of two rooms the extremes are found in Lewisham (0 75 per cent. and Finsbury (16 72 per cent). Considering tenements of under five rooms as a whole the smallest proportion of the population living more than two in a room is in Lewisham (2.67 per cent.) and the largest proportion in Finsbury (35.22 per cent.

The figures as to the proportion of the entire population of London living in tenements of less than five rooms, and the proportion of the population in each of these forms of tenements which is overcrowded, that is, has more than two persons to each room, are shown in the following table taken from Mr. Murphy's report:

		1 Room.	2 Rooms.	3 Rooms.	4 Rooms.	All Tenements under 5 Rooms
Percentage of	(*a*) Population in each group of tenements	9.2	16.4	15.8	14.1	55.5
	(*b*) Total population in each form of tenement which is overcrowded	5.1	7.8	4.6	2.2	19.7

Thus 55.5 per cent. of the total population lives in tenements of less than five rooms, and 9.2 per cent. in one-roomed tenements. Of the entire population living in tenements of less than five rooms, 19.7 per cent. are overcrowded, the proportion of overcrowding being greatest in two-roomed tenements. So far as these results can be compared with corresponding results for 1891, considerable improvement in housing is displayed. The total number of tenements of less than five rooms has diminished in London, this diminution being most marked in the case of tenements with one room, and being wholly confined to tenements of one and two rooms. Mr. Murphy promises that in his next annual report he will be able to give complete comparable figures for each of the metropolitan boroughs in 1891 and 1901. At the present time, owing to changes in administrative areas, these figures are inaccessible.

Marriages.

The number of persons married in London in 1901 was 17.6 per 1,000, which is lower than in the five preceding years, but not so low as in the years 1892-95, when it varied from 17.0 to 17.4. In 1851-60 it was as high as 20.6. The percentage of marriages of minors among both males and females has slightly declined.

Births.

The birth-rate in London in 1901 was 29.0 per 1,000 living, which is the lowest since civil registration began. It is noteworthy in connexion with the diminishing birth-rate in London that, although at the last census the population of registration London had increased 7.7 per cent. in the ten years 1891-1901, the number of children under 10 years of age had declined 1.8 per cent. There is an excellent addition to the statement of birth-rates in the present report, the desirability of which for all sanitary reports has been pointed out in these columns on a previous occasion. This is the statement of births per 100 married females aged 15 to 45. By this means the influence in wealthy districts of the excessive number of unmarried domestic servants is eliminated. The results thus obtained are very suggestive; and, to illustrate the importance of this reformed statement of birth-rate, we give the metropolitan boroughs in the order in which they would stand according to the old and the improved method:

Order of Metropolitan Boroughs in Accordance with a Statement of Birth-rate.

(*a*) Per 1,000 of Population.	(*b*) Per Thousand Married Females aged 15 to 45.
Finsbury (37.7)	Finsbury (295)
Stepney (37.2)	Stepney (294)
Bethnal Green (35.6)	Bethnal Green (284)
Shoreditch (34.7)	Poplar (280)
Poplar (34.6)	Bermondsey (276)
Bermondsey (34.2)	Shoreditch (275)
Southwark (33.4)	St. Marylebone (275)
Fulham (33.3)	Southwark (252)
Deptford (30.8)	Greenwich (245)
St. Marylebone (30.2)	Holborn (244)
Lambeth (30.2)	Lambeth (240)
Woolwich (30.1)	Hackney (239)
Battersea (29.7)	Deptford (238)
Greenwich (29.0)	Fulham (233)
Hackney (28.9)	Camberwell (232)
Holborn (28.4)	Woolwich (227)
Camberwell (28.2)	Battersea (221)
Islington (27.6)	Islington (217)
Hammersmith (26.9	Wandsworth (215)
St. Pancras (26.9)	Hammersmith (215)
Wandsworth (26.2)	St. Pancras (214)
Lewisham (25.7)	Lewisham (212)
Paddington (23.4)	Chelsea (206)
Chelsea (22.1)	Paddington (204)
Stoke Newington (21.6)	Kensington (200)
Kensington (20.4)	Stoke Newington (184)
Hampstead (18.0)	Hampstead (175)
Westminster (17.8)	Westminster (169)
City of London (13.7)	City of London (162)

The preceding table, which we have based on Mr. Murphy's table, does not show any marked changes of relative position, whether the birth-rate is stated in terms of the total population or of the married women of child-bearing ages. It, however, corrects the erroneous views which might otherwise be entertained as to the magnitude of the difference between the birth-rate in the boroughs at the two ends of the scale. Thus, stating the proportion arithmetically, the proportion of the birth-rate in Finsbury to that in the City of London is not 377 : 137, but 295 : 162. In other words, it is not as 275 is to 100, but as 182 is to 100. Similarly, the birth-rate of Battersea is to that of Hampstead as 126 is to 100, and not as 165 is to

[1] British Medical Journal, March 8th, 1902.

100; and the birth-rate of Bethnal Green is to that of Kensington as 142 is to 100, and not as 175 is to 100.

Deaths.

The death-rate of London per 1,000 living was 17.1 in 1901, the lowest hitherto recorded. In the period 1891-1901 the London death rate was lower than that of Paris, St. Petersburg, Vienna, Rome, or New York; but the death-rates in Brussels, Amsterdam, Copenhagen, Stockholm, and Berlin were lower than that of London.

The death-rates of the metropolitan boroughs corrected for age and sex distribution varied in 1901 from 13.4 for Lewisham and 11.9 for Hampstead to 22 6 in Southwark, 22.7 in Holborn, 23.1 in Finsbury, and 24.5 in the City of London. Taking London as a whole, the death-rate in 1901 was considerably lower than that of the period 1891-1900 at each age-period of life and for each sex. Stated in terms of "life capital" it follows that during the year 1901 there was, as compared with the average death-rate of the preceding decennium, a saving of 9,289 lives, or a gain to the community of 337,635 years of "life capital."

Infant Mortality.

The deaths of infants in London in 1901 numbered 148 per 1,000 births, the lowest in preceding years having been 143 in 1894. The lowest infantile death rates in metropolitan boroughs were 104 in Hampstead, 107 in St. Marylebone, and 115 in Stoke Newington, the highest 169 in Bermondsey, 175 in the City of London, and 197 in Shoreditch.

A consideration of the chief causes of mortality, especially as to epidemic diseases, must be postponed to a subsequent issue.

THE ASSOCIATION OF CERTIFYING FACTORY SURGEONS.

The annual report of the Honorary Secretary of the Association of Certifying Factory Surgeons, which has just been issued, shows that it is an active organization. During the year a salaried assistant to the Honorary Secretary has been appointed, and sixty-six members have been added to the roll as the result of the efforts by the new official. Manchester, as the centre of a great industrial community, is naturally in the midst of a large number of the most important administrative factory districts, and has therefore become the headquarters of the Certifying Factory Surgeons' Association, but its activities extend to other centres, and a branch has recently been formed in London. The wisdom of this cannot be questioned: the Association is mainly concerned with Parliamentary and departmental matters, and the existence of an affiliated organization on the spot will be a valuable addition of strength in view of the possibility or probability that an Industrial Accidents Bill will be one of the measures under consideration during the next session of Parliament.

The report contains some very interesting statistics, in tabular form, showing the results of the examinations made by the members during the year. In 1890, when Government made an attempt to abolish the office of certifying surgeon, the weakness of the defence lay in the non-possession of proper statistics, salvation, in this respect, coming through one or two surgeons who had fortunately been at the pains to keep an account of all their work. To prevent the repetition of such a contingency, the members are expected to forward to the assistant secretary abstracts of their annual reports to the Home Office, and it is from this source that a valuable series of records is being compiled. It has been asserted that those certifying surgeons whose interest in their office has been sufficient to impel them to join the Association show by results that they carry a like interest into their work, and this is supported by the first set of figures tabulated. They show that whilst the members, or such of them as make returns, account for about half the total examinations throughout the country, their rejections amount to almost two-thirds of the total for the country.

In another table the relative physical incapacity of the different sexes and of the different age-periods of examinees is exhibited. Boys between the ages of 14 and 16 are the most fit, the percentage of rejections for medical reasons being 0.35, whilst female half-timers show a rejection percentage of 0.89. More females are refused than males, and the rejection rate increases in inverse ratio to the age of the applicants. From a further table it appears that 20 per cent. of the applications are refused on account of eye or ear disease, and that skin disease accounts for 15 6 per cent. of the refusals, uncleanliness (including pediculi) 14 8 per cent., developmental disease 12.2 per cent., unsuitability for dangerous processes 10.3 per cent., constitutional disease 10 per cent., respiratory disease 4.1 per cent., and diseases of circulation 3.7 per cent.

THE PLAGUE.

Prevalence of the Disease.

India.

During the weeks ending December 27th, 1902, and January 3rd and 10th, the deaths from plague in India amounted to 15,827, 15,686, and 16,197 respectively. During the first week of January last year the mortality from plague stood at 10,386, showing the disease to be more widespread at the commencement of this year than in any previous year. There has been a marked decrease of deaths from plague in the Punjab during the week ending January 10. They fell from 2,238 in the previous week to 1,756 There was also a noticeable fall in the Central Provinces during the week ending January 10th, and in Central India, Hyderabad, and Berar.

In the Bombay Presidency during the three weeks in question plague steadily increased, the returns showing 7,025, 7,295, and 8,440 deaths respectively.

In the North-West Provinces and Oudh and in Bengal plague is increasing. The worst places in Bengal are Saran, Monghyr, Patha, and Sharabad.

In the City of Poona plague is increasing to a serious extent. On January 15th 118 fresh cases were reported and 98 deaths from plague. Hundreds of people have left the city for the segregation camps.

Mauritius.

During the weeks ending January 22nd and 29th the fresh cases of plague reported were 8 and 0 respectively; the fatal cases were returned as 4 and 5.

South Africa.

Cape Colony.—During the weeks ending January 3rd and 10th the number of fresh cases of plague reported at Port Elizabeth were 1 and 0. No death from the disease was reported. Two cases of plague remained under treatment in hospital on January 10th.

Natal.—Plague continues to prevail in Durban, but the scare is subsiding. On January 26th 42 cases of plague were reported in the town, of which number 27 had ended fatally. On that date, 2 Europeans, 7 natives, and 3 Indians were under treatment. In consequence of the spread of the disease the native servants and labourers are leaving the town in thousands.

Japan.

In the city of Tokio plague appeared during the second week of January last. On January 20th it is reported that the threatened epidemic had apparently been checked. The total number of cases of plague reported amounted to 11, of which number 9 died. The infected area, some 300 acres in extent, on which are some 2,000 houses, is to be surrounded with a sunken zinc fence 4 feet deep in the ground, and all rats within the area are to be exterminated.

CONTRACT MEDICAL PRACTICE.

Female Lodges.

Shepherd, who has been asked to become surgeon to a Female Lodge of the Order of Ancient Shepherds, wishes to know what he should charge: (1) For medical attendance exclusive of midwifery; (2) for medical attendance and medicine, per member, per annum.

*** It has often been pointed out how little profit can be obtained from such appointments, which are never desirable. Our correspondent will probably not be able to get more than the club rate in the district where he resides, but he can insist on being paid as much as for similar male lodges, and not only confinements but all illnesses connected with pregnancy ought to be charged for extra. In all cases, we believe, medicine is included in medical attendance.

THE PREVENTION OF CONSUMPTION.

United States.

Ohio.—An Act has recently been passed by the Ohio State Legislature "to appoint a Commission to investigate the feasibillty of erecting sanatoria for tuberculous patients in Ohio." The preamble states that the State of Ohio suffers an annual loss from tuberculosis of fully 6,000 citizens. The Act provides that a State Tuberculosis Commission be appointed by the Governor to investigate and report upon the feasibility, considering climatic conditions, altitude, etc., of successfully treating persons suffering from tuberculosis, and especially consumption, in sanatoria located within the State of Ohio; also upon the desirability of establishing such institutions. This commission is to consist of seven persons, who shall report to the Governor on or before May 3rd, 1903, and their report is to be transmitted by the Governor to the next session of the General Assembly. The sum of £100 is appropriated to pay the actual expenses of each of the Commissioner and for clerical help, postage, and stationary.

Pennsylvania.—The Pennsylvania Society for the Prevention of Tuberculosis proposes, it is said, to organize the whole State into a society of many thousand members. The hospital at White Haven is to serve as a centre, and it is intended to establish like institutions and also dispensaries throughout the State.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1903.

Members of the British Medical Association are reminded that commencing with January 1st, 1903, the annual subscription is a uniform one of 25s., inclusive of the Branch, and that all subscriptions should be paid direct to the General Secretary, 429, Strand, London, W.C., and not to a Branch Secretary.

British Medical Journal.

SATURDAY, FEBRUARY 7TH, 1903.

RESTORATION OF FUNCTION AFTER SUTURE OF NERVES.

Dr. Kennedy, in his paper on the suture of the brachial plexus in birth paralysis of the upper extremity (p. 289), has made a further important contribution to our knowledge of this interesting subject. He deals naturally with the motor results following nerve suturing, as in children it is almost impossible to determine sensory impressions exactly. In Duchenne's paralysis the lesion is due to the rupture or compression of the nerve fibres in the brachial plexus before they enter the main nerve trunks of the arm. The part injured is generally the fibres of the fifth and sixth cervical nerves, which are either compressed between the clavicle and transverse processes of the vertebrae or between the clavicle and the first rib. In some cases entire nerve trunks are ruptured, in others only a few fibres. The resultant paralyses are at once evident. Massage and electricity are almost useless, but it appears that early suture of the ruptured ends of the nerves gives promise of perfect recovery. The prognosis in these cases has not hitherto been good. Recovery was generally incomplete. In Dr. Kennedy's first case the child was two months old, and the cicatrical junctions of the anterior primary divisions of the fifth and sixth cervical nerves were excised together with portions of the central and peripheral ends. Movements were first observed two and three-quarter months later, and the child used the arm quite normally six months after the operation, except in supination, which, although present, was imperfect.

In another case distinct signs of improvement were noticed three months after the operation. Operative interference delayed for fourteen years does not permit the hope of much result from atrophied muscles, but under these conditions there was distinct improvement in electrical reactions. Altogether, Dr. Kennedy has made out a good case for operative treatment in this form of paralysis, and it will be interesting to learn the further results. He does not recommend the implantation of one nerve upon another, but when the central and peripheral ends cannot be brought into apposition he thinks that if the ends are approximated by means of suture there would be adequate reunion "by means of the newly-formed nerve fibres bridging the gap in an aseptic wound."

An interesting discussion on suture of nerves which took place at a recent meeting of the Liverpool Medical Institution is also reported in this issue. It turned chiefly on the early date at which in some cases sensation has been observed to return after suture. There seems to be little doubt that the mechanism for the transmission of sensation is much more facultative than that for motor impulses. How the sensory impulse is conducted through degenerate or newly-formed tissues is not very clear. Mr. Keith Monsarrat urged that the rapid restoration of sensation showed that the nerve as a whole was capable of conducting sensory impulses, their analysis taking place in the cerebrum, while Sir William Banks threw out the suggestion that the process of transmission might be analogous to wireless telegraphy. This point as well as the further question as to what tissue alterations are necessary for the efficient conduction of motor impulses sufficient to provoke contraction may, it is to be hoped, be cleared up by laboratory researches now in progress. Henriksen has just published a good summary[1] of the recent work on this subject, and relates a series of twelve clinical cases in which nerve suture was undertaken. These comprise almost every variety; direct severance of the nerve, forcible tearing, severe contusion, primary suture, and secondary suture.

The more completely a nerve is severed the more sharply the exact extent of lost function can be gauged. A man forty-five days after accidental section of the ulnar nerve at the wrist showed paralysis and slight atrophy of the muscles and anaesthesia of the corresponding skin area, but sensation returned soon after suturing. In another case sensibility returned three days after primary suture, but twenty days elapsed in a third patient before sensation was regained. Under such conditions it is fair to conclude that impulses passed along the suture as a nervous path. Resection of the median and dorsal branch of the radial sixty-two days after an accident, which was followed by anaesthesia and paralysis of the part supplied, led to a return of sensibility within three days. Primary suture of the peroneal nerve produced lessening of the anaesthesia within twenty-four hours.

From a consideration of the lesions resulting from the several wounds, Henriksen concludes—although in opposition to the views of Bernhardt, Gowers, and Leegard—that the radial nerve supplies a well-defined skin area unassociated with other terminal nerve endings. It is possible that a nerve may be injured in such a way that it permits sensory impulses to pass, but does not transmit those necessary for muscular contraction. If the radial nerve does not apparently fulfil such a proposition, the deficiency may be due to anatomical conditions which expose it to the severer forms of injury. The fact that compression of a nerve may cause motor paralysis, without impairing its sensory functions, was illustrated in a case of complicated fracture of the forearm, and other cases showed that it required a serious nerve lesion to produce loss of sensation. Similarly, the results of operation in relation to the time elapsing between the accident and the subsequent treatment prove that the return of sensibility is quite distinct from the return of motility.

SEWAGE-FED COCKLES AND OYSTERS.

Dr. Collingridge's report to the Sanitary Committee of the Corporation of the City of London contains an important contribution to the knowledge of this subject, and furnishes valuable testimony to the rapidity with which remedial action follows detection of an evil in the sanitary administration of the City. A number of cases of enteric fever were traced to cockles purchased in the City. Samples

[1] *Norsk Mag. f. Laegevidenskaben*, January, 1903.

of these cockles were submitted to Dr. Klein for bacteriological examination, and meanwhile Dr. Collingridge visited, along with Dr. Williams, the Port Medical Officer, the creek where the cockles are laid, which is within the jurisdiction of the Corporation, as the Sanitary Authority for the Port of London. The creek was evidently filthy from sewage, and it is not surprising, therefore, that Dr. Klein found sewage organisms in the interior of the cockles submitted to him. In a later sample he recognized the presence of the typhoid bacillus. His examination of the water of the creek showed at least 500,000 microbes per c.cm., the water being "practically dilute sewage." Previous outbreaks of enteric fever traceable to cockles from the same source have been described by Drs. Allan, Nash, and Thresh; and it appears to be clear, therefore, that Dr. Bulstrode, as quoted by Dr. Collingridge, was too optimistic when in his valuable report to the Local Government Board in 1896 he stated, "there are certain considerations which serve to show that contraction of waterborne diseases by the ingestion of cockles is a somewhat remote contingency."

These facts were laid by Dr. Collingridge before the Worshipful Company of Fishmongers, "which has extensive powers over the fishing industry throughout the country." The Company at once put its powers into operation, and declined to receive cockles for sale in London from the Leigh estuary. The restriction was on further investigation extended to cockles from the present beds on the Maplins and elsewhere. This is obviously not only a serious matter for the Leigh cocklers, but it raises, as Dr. Collingridge points out, a question of far wider importance. There is clear evidence of extensive pollution of the whole estuary of the River Thames and the consequent contamination of such shellfish and fish as are found in it. Dr. Collingridge urges that an investigation should be put in hand at once to ascertain to what extent this pollution affects the food supply of the metropolis, "as undoubtedly the whole of the Thames fishery is under grave suspicion."

The action of the Fishmongers' Company as regards oysters is not less worthy of commendation. Immediately after the facts relating to the outbreaks of enteric fever in connexion with the Mayoral banquets at Winchester and Portsmouth became known the company sent an inspector to the Emsworth oyster layings. He reported that the sewage outfall was in close proximity to the oyster pits, and that practically sewage was pouring over the pits. The proprietors of these pits and of the oyster layings at Emsworth were then informed that the Company would not allow the sale in London of any oysters coming from these respective places. Dr. Klein shortly afterwards ascertained that the bacillus coli communis, which he has previously shown not to be present in oysters not polluted by sewage, was present in oysters from this source along with the bacillus enteritidis sporogenes. The oysters were clearly contaminated with excrementitious matter.

The Fishmongers' Company now extended its investigation with the following results: Of the relays from Bosham 40 per cent. were polluted, of oysters from beds in the bay at Mumbles 25 per cent. were polluted, while purchased samples from Mumbles showed pollution in 10 to 15 per cent. Of oysters from Southwick pit 40 per cent. and of the oysters from Southwick beds 25 per cent. were polluted. Of the samples from Whitstable a large proportion were free from pollution, but a few from the market pits were polluted. The chairman of the Whitstable Oyster Fishery Company has stated that the use of these market pits has now been entirely discontinued on the initiative of the company itself. The Fishmongers' Company at once stopped the sale in London of oysters from Bosham, from Mumbles (except so far as the deep-water beds are concerned), and from Southwick. This action must command the warm commendation and thanks of the public, who are indebted to the Company for having at last placed this important subject on a practical basis.

It is sincerely to be hoped that the Company will persevere, notwithstanding the indirect coercion and the threats of legal proceedings to which under these circumstances it must necessarily be subjected. By so doing it will have gone far towards securing the protection of the public against this serious source of disease, and will have succeeded where the Local Government Board has so far failed. The Board indeed instructed Dr. Klein to examine oysters and other shellfish from various layings Evidence of contamination was afforded, but appears to have been regarded rather as a matter of scientific interest than as one to be followed by attempts at administrative control. When examinations are made by the same expert on behalf of the Corporation of London and the Fishmongers. Company, restriction of the sale of the contaminated shellfish at once follows.

The Fishmongers' Company is happily in a position of exceptional power; why should not the Local Government Board insist on legislation which will give to sanitary authorities throughout the country the same powers as have been recently exercised with such beneficial effect by the Fishmongers' Company? The power to restrict the sale within their districts of shellfish proved to be capable of causing disease would meet the requirements of local authorities. It has been argued that this would imply the necessity of permitting outbreaks of disease due to this cause to occur before preventive measures could be adopted. The accumulated experience of local authorities would, however, enable the restriction to be enforced without waiting for the occurrence of further outbreaks. The restriction of the sale of shellfish from a particular source in one town would awaken other towns to the possibility of evil, and thus, as in the recent action of the Fishmongers' Company, the good achieved would extend far beyond the immediate area of administrative control involved in the action taken. It can hardly be doubted that the Local Government Board will now be compelled to introduce legislation, for the combined pressure of local sanitary authorities, who at present are without effective control over a serious source of disease, of the growers of oysters and other shellfish, who find their trade seriously damaged by the recurrent publicity given to shellfish outbreaks of disease, and of the public on whom a gigantic experiment of protracted duration has been made, cannot be resisted.

The public-spirited action of the Fishmongers' Company was preceded by an outbreak of enteric fever due to contaminated oysters, which appealed very strongly to public sentiment. Would it have acted as it did in the absence of such a graphic illustration of the damage done not only to the public health but also to trade interests? It is necessary that remedial action should in the future be taken not only when the evil is manifest on a large scale, but also when smaller and more sporadic outbreaks of enteric fever from the same cause occur. For this reason, if for no other, it is indispensable that the control

of the sanitary condition of layings of oysters and other shellfish, and the power of preventing the sale of sewage-contaminated shellfish, should be in the hands of the councils of counties, county boroughs, or large boroughs, as the case may be, acting as local sanitary authorities, who will act as soon as action is called for by the occurrence of disease traceable to this source. The interests of the trade involved would be amply protected by providing for an appeal to the Local Government Board, or to a judicial authority whenever those engaged in the controlled trade thought this desirable.

MEDICAL EVIDENCE AT CORONERS' INQUESTS.

We have found it necessary on several occasions recently to comment on the course which Mr. Troutbeck, the newly-appointed Coroner for the South-Western district of London, has taken with regard to *post-mortem* examinations and on the attitude which he has thought fit to assume towards the members of the medical profession practising in that district. We regret to observe that the coroner not only perseveres in the course which we have felt bound to condemn as contrary to public policy and the statute law, but has even permitted himself to use expressions and to be betrayed into a course of conduct clearly contrary to the principles of fairness for which it is generally assumed that British tribunals are conspicuous.

If anybody is disposed to think these expressions unnecessarily strong we would ask him to read the report published at page 344, and, if that is not found convincing, to pursue his investigations in the local press of South London, which has published recently very full reports of this and other inquests held by Mr. Troutbeck. In the case to which we particularly refer the coroner accepted the statement of the mother that the medical man who attended her in her confinement had sanctioned or advised the use of a certain proprietary food, and although he did not allow the jury to add a rider to their verdict censuring the medical man, he observed that the expression of the jury's opinion would be sufficient, and thought "the press might take notice of the kind of pressure which is brought to bear to make a coroner exercise his discretion in favour of a particular class against the interests of the public."

Now, in "the interests of the public," let us see what really happened with regard to this inquest, which concerned the death of "a rather plump child," the proper way of feeding infants, and the reputation of a medical practitioner alleged to have advised or approved improper food for the child, and involved the assembling of a jury and the expenditure of public money. In the first place, Dr. Freyberger, the coroner's witness, who at another recent inquest described himself as "a toxicologist and a pathologist," gave evidence that death was due to exhaustion following convulsions while suffering from inflammation of the lungs and general bronchitis. The coroner told the jury that death was due to a fit of convulsions. The infant was fed at 5 a.m. and found lying on its back dead at 9 30 a.m., so that nobody is in a position to know whether it had convulsions or "a fit of convulsions" or not. So much for the failure in the primary object of an inquest—to ascertain the cause of death. Next the coroner spoke of the medical man being biassed in the case to prove his own treatment the right one, and said that it was necessary to have evidence of a really skilled and unprejudiced character. Most people would have assumed that a judicial official, believing that the blameworthy conduct of a medical man had brought about the death of the child, so that the medical man was as it were on his trial, would have considered it mere elementary justice to have called him as a witness. Mr. Troutbeck did not.

Next, the coroner told the jury that he did not blame the mother in the least, as she had medical authority for giving the child improper food. Now the medical man, who was not called as a witness, states in a letter published elsewhere, that there is no foundation whatever for this allegation, that he had not seen the child since his attendance on the mother in her confinement, and that he had never throughout his professional career ordered or recommended any patent or starchy food for an infant. We believe this statement; but it must be clear to every one that Dr. Badcock, as his reputation was to be attacked, ought to have been called to testify on oath so that the jury might arrive at a true verdict, and "the interests of the public" be conserved. Next, while we do not presume to blame the mother, we must observe that she went to bed at 3 a.m., that the child was dead six or seven hours later, and that the cause of death as stated by the toxicologist and pathologist was inflammation of the lungs and bronchitis. Now broncho-pneumonia very seldom causes death within six or seven hours of its onset, and it is at least conceivable that the infant may have presented symptoms during the course of the previous evening, if not for some days, which might have aroused suspicion that all was not well. On the whole, therefore, we cannot congratulate the coroner on the result of this inquest, on the manner in which he conducted it, or on the remarks which he made on the conduct of the medical practitioner. If we were in the way of using as strong language as Mr. Coroner Troutbeck we might even be disposed to use the words "biassed" and "prejudiced."

The fact is that, as we have pointed out on several previous occasions, Mr. Troutbeck has committed himself to a course which, in "the interests of the public," cannot be defended. He has resolved to call in to make necropsies one particular medical practitioner, to the exclusion of the local medical men who have attended to deceased persons during life, or have seen the body immediately after death. This policy pursued by the coroner, even it seems in the most ordinary, uncomplicated, and simple cases, has naturally caused considerable annoyance to the medical practitioners in the district, who resent what appears to be a distinct disparagement of themselves, and an intimation to their patients and the public generally that they are incompetent to perform a necropsy or give evidence concerning the cause of death.

It is hardly, therefore, to be wondered at that this course of procedure has led to scenes of discord and dispute in the open Court, and that protests from medical men, as well as from jurymen, have diversified the usual course of proceedings. The coroner has now shifted his ground to some extent, and endeavours to justify his action by asserting that the medical man who may have attended the deceased and prescribed for him before death, would be biassed in giving evidence.

The course of justice is likely to suffer owing to the illogical and illegal action the coroner has taken in ignoring the evidence of the medical witness most competent to elucidate the true cause of death, not only from *post-mortem* results, but from his previous knowledge of the case and its surroundings.

We have already on more than one occasion called attention to, and fully commented upon, the legal aspect of these proceedings. As Mr. Troutbeck evinces a determination to continue in the course he has lately adopted, in apparent contravention of the direction laid down in the statute law regarding the calling of medical witnesses at inquests, we would advise that a petition be carefully prepared by counsel, with a statement of facts, and forwarded to the Lord Chancellor, who alone is empowered to deal with the conduct of coroners. The matters in dispute will, no doubt, be carefully considered by him, and his judgement will be authoritative on the subject. County councils and borough councils have no jurisdiction in the matter.

THE NEW "SUPPLEMENT" TO THE "BRITISH MEDICAL JOURNAL."

THE development of the British Medical Association and the constant expansion of its sphere of activity make ever-increasing demands on the space of the JOURNAL which it becomes more and more difficult to meet. Every week important communications have to be held over, and every year the sifting of matter offered for publication has perforce to be more vigorous. The JOURNAL is the mouthpiece of the Association, but it has also gained a place in the very front rank of the medical journals of the world. This twofold character, though to many readers it gives the JOURNAL its chief value, has in it an element of weakness that might easily become a serious danger to its usefulness. Those responsible for the conduct of the JOURNAL have felt more and more acutely the pressure of a divided duty. So great indeed had the congestion become that it was clearly necessary to find a means of relief if the JOURNAL was to be saved from dying "of its own too much." The question was carefully considered by the Journal and Finance Committee, which, on October 10th, 1901, recommended that the difficulty should be met by the issue from time to time, after the new constitution had come into operation, of supplements containing matter relating to the work of the Association and the numerous questions of medico-political interest with which it has to deal. The recommendation was adopted by the Council and effect is given to it for the first time this week. The SUPPLEMENT contains reports of the proceedings of Council, and of the Committees which are at work on various questions affecting the interests and dignity of the profession and the public welfare. It also contains reports of the meetings of Branches. By the issue of such supplements it will be possible for members of the Association to follow every phase of its work in all directions, and by this means it is hoped that a wider interest may be taken in its efforts for the furtherance of reforms within as well as without the profession, and that in time the whole Association may become so vitalized that it may be able to bring effective pressure to bear on the Government to secure legislation which it may consider necessary in the public interest.

The SUPPLEMENT will, we are confident, be found a great convenience to all who take an active part in the work of the Association. The grouping of medico-political matter will make reference much easier, and the SUPPLEMENT being detached can be filed for separate use. The scientific part of the proceedings of Branches will as far as possible be published among the reports of societies. This arrangement will, it is believed, give greater prominence to these proceedings, and thus encourage members to read papers and join in the discussions at Branch meetings.

THE UNIVERSITY OF LONDON.

THE Senate of the University resumed its sittings last week after the Christmas vacation. As yet no move appears to be contemplated in the direction of an appeal on behalf of the University for funds, though appeals for various constituent colleges are being vigorously prosecuted. On Monday a special general meeting of the members of University College was held, at which, without opposition, resolutions were passed committing the College to "incorporation" in the University of London (p. 336). The precise effect of such incorporation on the College and on the University respectively is not quite clear, nor can the effect of the operation upon the medical school (in its advanced courses) and on other medical schools at present be foreseen with any degree of certainty. We confess we are left with a somewhat uncomfortable feeling that no adequate conception embracing the symmetrical development of the University of London as a whole is at the back of the many new departures which the last three or four years have witnessed. Meanwhile we are assured that the old examining external side of the University is going on as before, though we hear of instances by the score in which students are admitted to the external degree examinations without being required to pass the matriculation examination even in its new and attenuated form. We understand, moreover, that for the present, at any rate, there is to be no attempt at co-operation in the professional examinations between the University and the Royal Colleges of Physicians and Surgeons. We trust that time may bring cosmos out of chaos, but at present we fail to find any presiding conceptions in the reconstruction of London University at all commensurate with the magnitude and importance of the work that needs to be done.

CONVALESCENT HOMES IN CITY PARKS.

THE article upon this subject which appeared in the BRITISH MEDICAL JOURNAL on December 6th, 1902, has excited a good deal of attention, and several references have appeared in the daily and weekly papers to the proposal to which we then invited attention. It was suggested that it would be a great boon, especially to the poor children of our great cities, if some means could be contrived for utilizing as convalescent homes some of the derelict mansions which had been acquired in connexion with our public parks and open spaces. Our contemporaries, the *Hospital* and the *Christian World* have emphasized the principle in regard to some of the parks under the London County Council. We understand that the Parks Committee of that body is now engaged in considering which, if any, of the empty houses in the Council's parks might be used for this purpose. Last Friday an influential deputation of residents in Hampstead waited upon that Committee to assure it that public opinion in Hampstead is far from being unanimous in opposing such use, even in the case of the mansion at Golder's Hill. We are of course aware that the County Council has no power itself to run a hospital or a convalescent home, but as in the case of the Guards who have just vacated Golder's Hill House after more than two years' tenancy, an intervening lessee would no doubt be forthcoming to make all necessary arrangements between the Council on the one hand, and any hospitals desiring to use the home on the other. We can conceive no line of treatment better calculated to relieve and cure the many cases of chronic joint disease in children which throng our hospital wards, and which need the combination of surgical intervention with access to the unused air of the country. Such a fortunate conjunction of general and local treatment would mean to hundreds of lives all the difference between chronic invalidism and complete restoration to active life.

THE SANATORIUM TREATMENT OF PAUPER CONSUMPTIVES.

IN a recent report, Dr. T. Orme Dudfield, M.O.H. Kensington, has drawn attention to the question of sanatoria for pauper consumptives. The Borough Council in a recent letter to the Metropolitan Asylums Board advocated

the desirability of using some of the empty small-pox hospitals for the treatment of persons suffering from consumption. In connexion with this letter the Asylums Board resolved, on December 13th, "That the Kensington Borough Council, and the Chelsea, Holborn, and Poplar guardians, be informed that in the absence of unanimity of opinion among the authorities of the metropolis the Board has adjourned for twelve months the question of the provision of accommodation for persons suffering from consumption." As is pointed out by Dr. Dudfield, the managers of the Metropolitan Asylums Board, as to three-fourths of their number, are the nominees of the Boards of Guardians, and the representatives of these bodies met in conference at the St. Martin's Town Hall, on October 15th, 1900, on the initiative of the managers of the Poplar and Stepney Sick Asylum District, and declared by a unanimous resolution that the time had come when provision should be made for open-air treatment of the consumptive sick poor of the metropolis. At this conference a deputation was appointed to wait upon the President of the Local Government Board to request that steps might be taken for carrying out this proposal, the Asylums Board being indicated as the proper authority for providing hospital accommodation for the purpose. The conference was convened with the approval and at the suggestion of the Local Government Board, and was attended by delegates from twenty-six out of thirty-two Boards of Guardians in the metropolitan district. Thus the large majority of the authorities who elect the managers of the Metropolitan Asylums Board have unanimously decided that steps should be taken to provide for the open-air treatment of pauper consumptives, and that the Asylums Board is the proper authority to provide the accomodation. Yet two years have elapsed since that expression of opinion without any action having been taken, and the Asylums Board has now resolved to adjourn the question for another twelve months. The need for prompt action was abundantly shown at the Conference in 1900 by Dr. Downes, the Medical Inspector of the Local Government Board, who attended the Conference unofficially. He then stated that there were on July 7th, 1900, 1,562 consumptive patients in the metropolitan workhouses and infirmaries. Of these 1,000 could have been moved to a sanatorium, and 400 were in the initial and therefore curable stages of the disease. Nothing it would seem can be done in the matter without legislation, and the Local Government Board, which is the proper authority to introduce a Bill, is apparently waiting for a clear indication of the views of the sanitary and Poor-law authorities. All that would appear to be necessary to enable the managers of the Metropolitan Asylums Board to undertake the care of persons suffering from consumption is a single clause Act based on the precedent of the Act of 1889. Dr. Dudfield suggests that the Gore Farm Hospitals of the Metropolitan Asylums Board are admirably suited for the purpose of providing the required accommodation.

THE CEYLON BRANCH AND MR. FRANCIS FOWKE.

In the Supplement to this week's issue of the British Medical Journal there will be found an account of a particularly gracious recognition of the long and distinguished services of the late General Secretary of the Association, Mr. Francis Fowke. The President and members of the Ceylon Branch have presented him with an illuminated address expressing their deep regret at his retirement, recalling the fact that it was during his term of office that the Branch was formed, and thanking him for his kindness and sympathy to the Branch and to its representatives in England. The illumination, which is of great beauty, is the work of a local artist. The painting is on vellum mounted on white satin, and represents with exquisite delicacy of colouring different features of Ceylon scenery. Dr. Albert J. Chalmers, the Honorary Secretary of the Branch, in forwarding the address to Mr. Fowke, gives the following description of the illumination: "The flowers at the top of the border are lotus lilies. In the lower border is the celebrated Thufaraina Dagabo, under which one of Buddha's collar bones is said to be buried, and an elephant. The leaves of this border are cocoanut leaves. The left tree is the cocoanut, and the right is the talipot tree in flower. At the top and in the middle are your initials, and below that C.B.B.M.A. Below that is the address. On the left side of the address there is a view of the shore near Colombo, extending from Mont Lavinia to Colfelty. Then comes the hall in which the meetings of the Branch are held. Then a seascape, then Kandy Lake, and, lastly, Colombo Lake. On the right hand side is Adam's Peak, the celebrated mountain of Ceylon on which is the imprint of an enormous foot said to be Adam's." We congratulate Mr. Fowke on this additional testimony to the value of his faithful and strenuous work for the Association which he served so well.

THE ORIGIN OF THE LIQUOR AMNII.

We are glad that the leading article on the origin of the liquor amnii, published a couple of weeks ago,[1] has been the occasion of eliciting from Mr. Henry Morris a letter[2] recalling to the memory of the profession his researches on this interesting subject, which were carried out in 1876. We are perhaps too prone in these days to go to foreign sources for our information on the scientific and experimental aspects of medicine, and to neglect researches carried out within the four seas. Mr. Morris's case of congenital hydronephrosis[3] was a very interesting one, and from it the author drew this conclusion, *inter alia*, that the liquor amnii is in part composed of fetal urine. There is no information whether the liquor amnii was diminished or increased in amount in this instance, and unfortunately in most of the reported cases of hydronephrosis no mention is made of this important fact. At the same time, Mr. Morris's conclusion does not depend for its proof upon the coexistence of oligohydramnion and hydronephrosis, for it is possible that before the development of the hydronephrotic condition urine may have passed in sufficient quantity into the cavity of the amnion to prevent any noticeable scarcity of the liquor amnii, or the hydronephrosis may have been intermitting. It is true that Dr. Ballantyne[4] describes a case of bilateral hydronephrosis with hypertrophic dilatation of the bladder in a fetus in which the liquor amnii was estimated at not more than 1 fluid oz.; but he also refers to an observation made by F. Fabris,[5] in which the bladder had no communication with the exterior, and contained 2½ litres of fluid, and yet there was marked hydramnios. Professor A. R. Simpson, also, some years ago,[6] showed an anencephalic fetus with functionally useless kidneys, whose birth had been accompanied by a great flow of liquor amnii. It cannot, therefore, be maintained that the reported cases of fetal hydronephrosis have demonstrated the renal origin of the liquor amnii, but the occurrence of a considerable number of instances of this antenatal malady, in all of which there was scarcity of the amniotic fluid would go far to prove the participation of the fetal kidneys in its production. Chemical analyses of the liquor amnii, and of the fetal urine, such as were made for Mr. Morris by Mr. William Foster,[7] have shown the marked resemblance which exists between the composition of these two fluids; but it must be remembered that urea may be met with in transudates, and does not of necessity indicate a renal origin. All such investigations, as well as the information derivable from the morbid fetuses referred to in our previous article, support the view that the liquor amnii is of fetal origin, but they do not absolutely prove it, neither do they certainly point to the fetal kidneys as the only or constant source of the fluid. The complexity of the problem of the metabolism of the unborn infant is very great.

[1] British Medical Journal, January 24th, 1903.

[2] British Medical Journal, January 31st, 1903.

[3] Details were published in the *Obstetrical Journal of Great Britain*, vol. iv, p. 267, 1876-7.

[4] *Manual of Antenatal Pathology*, p. 381.

[5] *Annali di Ostetricia*, xvii, p. 329, 1895.

[6] *Trans. Edin. Obstet. Soc.*, vii, p. 122, 1882.

[7] Morris's *Surgical Diseases of the Kidney*, p. 334, 1885.

HERMAPHRODITISM.

Hengge has prepared a full report of a case of great medico-legal interest.[1] The eldest (aged 32) and the youngest (19) of six were in outward appearance females. The hair of the head was long, the breasts well developed, the external parts of the female type. The eldest had been married nine years, and was subject to irregular attacks of headache with giddiness, though she had never menstruated; coitus was effected as there was a short vagina. The younger also had never seen any vaginal show, but from the age of 14 had suffered every month from severe headache, giddiness, and, she declared, epistaxis. These symptoms called for urgent relief. She was over 5 ft. 7 in. in height. There was one very significant point concerning both. No distinct internal organs could be detected, whilst the genital glands had left the abdominal cavity in both. There was in the right labium of the elder a body feeling exactly like a testis or epididymis; the opposite gland lay immediately outside the external ring, and could be pushed back into the inguinal canal. In the younger both glands lay in the labia majora. Professor Martin operated on her and removed both genital glands. They proved to be true testicles with well-formed tubuli seminiferi (yet no sperm cells), ill-developed epididymides and vasa deferentia, each bearing a large cystic dilatation. There was also distinct evidence of old inflammation, which in part accounted for the pain. Thus this "woman" must be reckoned as a male, and presumably her "sister" is also a man. One lesson, taught repeatedly by clinical experience during the past fifty years, is further impressed upon us by the case of these "sisters" who are brothers. We must always be suspicious about hernia of the "ovary" in a childless reputed female, however feminine her appearance and external parts may be. In the case of an infant error is exceedingly easy, whilst Neugebauer has shown on collective evidence that the true sex of a patient hitherto unsuspected has repeatedly been discovered at an operation. In over forty instances that operation was for the relief of hernia. When the "ovary" is removed the naked eye is insufficient to verify its character, for a Fallopian tube and even a rudimentary uterus has been found associated with a herniated "ovary," yet the microscope has proved the organ to be a testicle. We may add that on Wednesday night the President of the Obstetrical Society, Dr. Horrocks, mentioned in his annual address the late Dr. Oldham's case of "ovarian" hernia in a married "woman" who proved on *post-mortem* examination of the herniated genital glands to be a man.

THE ETIOLOGY OF BERI-BERI.

One of the most important contributions to the study of the etiology of beri-beri that has appeared of late is the Government report by Dr. E. A. O. Travers, State Surgeon, Selangor. The report deals with the occurrence of beri-beri in one of the gaols. Dr. Travers shows that, of a large number of institutions, the inmates were attacked in only one, and in that one for several years whilst the rice was supplied by the same contractor, and was obtained from the same sources for all the institutions. From 1892 to 1894 there were no cases of beri-beri acquired in any of the institutions. Prisoners were then transferred to a new gaol, and in this institution beri-beri broke out. The number of cases from 1895 to 1897 averaged some 300 cases a year. It was found that of the prisoners affected with the disease who were taken back to the old gaol a larger proportion recovered than amongst those treated in the new gaol. A number of healthy prisoners were kept in the old gaol, but all the food was cooked in the new gaol for prisoners in both institutions, and carried twice daily to the old gaol. In every respect the diets in the two gaols were precisely the same. During the three months that this system was practised there were no cases of beri-beri in the old gaol, but 9 per cent. per month acquired the disease in the new gaol. For the next six months the food for both gaols was from the same source, but was cooked separately; still the high rate of beri-beri continued in the one gaol, whilst there was none in the other, nor in any other institution receiving food from the same service. This report appears to be careful and thorough, and it is difficult to see where any possibility of error can exist. If correct, it in itself disproves all the various theories based on the belief that beri-beri is a dietetic disease. It is to be hoped that further observations on similar lines may be forthcoming.

[1] *Monatsschrift für Geburtshülfe und Gynaekologie*, January, 1903.

THE TREATMENT OF INEBRIATES IN CANADA.

The proposed legislation for the treatment of inebriates in Canada, which was shelved last year by the Ontario Government, is coming up again, and there appears to be a good prospect of its becoming law. All the large medical associations in Canada, together with the Prisoners Aid Association, have endorsed its provisions and urged the necessity of its passing. The following is a summary of the principal provisions of the Bill: (1) Placing all cases of drunkenness, except the confirmed gaol "rounder," experimentally on approbation on suspended sentence, and under the supervision of a probation officer; (2) imposing a fine, and permitting the fine to be paid by instalments to the probation officer; (3) in cases in which the inebriety has become a disease, the probation officer be given authority to place the dipsomaniac for a few weeks' treatment in a cottage hospital or in an inebriate department in a general hospital; (4) the cost of treatment to be considered as a loan, to be repaid after treatment and while still on probation; (5) cases of able-bodied inebriates not reformed or not reformable by these simple and inexpensive methods to be sentenced to prison on cumulative sentences: (6) old and feeble confirmed inebriates to be provided for in county or city poorhouses; (7) a special per capita Government grant made to hospitals to promote the treatment of dipsomaniacs; (8) a medical officer appointed by Government to organize inebriate wards in general hospitals, and special cottage hospitals for the treatment of dipsomaniacs in Ontario where such hospitals are necessary, to provide for and supervise the medical treatment in said hospitals, and also to provide for home medical treatment for probationers in proper cases; (9) three physicians of standing in the province to be appointed as a committee of consultation to co-operate (without salary) with the medical officer.

DRACONIAN BY-LAWS AGAINST TUBERCULOSIS.

The Municipal Council of Buenos Aires has recently passed a series of enactments for the prevention of consumption which, in their Draconian severity recall the legislation of certain Italian and Spanish authorities on the same subject in the seventeenth and eighteenth centuries. Any house in which a sufferer from tuberculosis has been allowed to stay for one day is to be regarded as contaminated. A fine of 200 pesos is imposed on the owner or tenant of a house who fails to have any premises in which a tuberculous patient has stayed disinfected in accordance with the instructions laid down by the proper authority. Spittoons are to be provided in all places of public resort, and any one who expectorates elsewhere than into these receptacles is subject to a fine of 2 to 5 pesos. Any one spitting in a tramway car is fined 10 pesos, and may be ejected by the conductor, who can call in the help of the police if necessary. A conductor who does not see that the order is obeyed is subject to a fine of 5 pesos. The use of tickets torn out of a book with counterfoils is forbidden; a "mechanico-automatic machine" must be used for the purpose. Public vehicles must be disinfected from top to bottom once a month, the floors of the vehicles twice a week. The floors of theatres, etc., must be disinfected after every performance. In churches the same rule holds good, and, in addition, kneeling benches and confessional grills must be washed daily with sublimate solution. Every day the holy water must be renewed in all stoups, which must first be washed out with some disinfecting solution. Notices must be affixed to the walls along the streets stating that "Spitting on the pavements

is forbidden." Sufferers from tuberculosis are forbidden to exercise the occupations of valet, cook, domestic servant, vendor of food, butcher, or in general any trade involving contact with alimentary substances. Banks and exchanges must disinfect all paper money before they put it in circulation again. The same regulation applies to managers and owners of public and circulating libraries in regard to all books returned. Every breach of any of these regulations is punishable by a fine, which is doubled in case of a second offence.

A PSYCHICAL RESEARCH SCHOLAR.

Sir Oliver Lodge, F.R.S., Principal of Birmingham University, having been elected for the third time President of the Society for Psychical Research, delivered a third presidential address at a meeting of the Society on January 30th. He said that a few friends, who desired to remain anonymous, had started an endowment fund which already amounted to £2,000, in order to begin to set the Society upon a sound and permanent basis. As soon as a capital sum of £8,000 had been obtained, it was proposed to offer a research scholarship in psychical science to which a holder, irrespective of sex or nationality, might be appointed for one year and from year to year, as might seem good, to devote the whole of his or her time to the work of psychical investigation. The business of science was not belief but investigation, and when a prima facie case was made out for a fact or theory, investigation was necessary to examine or extend it. The object of investigation was the ascertainment of law, and while the Society existed to curb rash and inexperienced novices, it sought to support trusted and experienced climbers by roping them together so that they might advance safely and in unison, guarding themselves from foolhardy and dangerous enterprises, but facing all the legitimate difficulties which lay in their path. When practical benefits could be definitely foreseen, people felt justified in spending money even on science, though as a rule science and education were matters about which they were particularly economical. But even psychical investigation might lead to practical results. Was the treatment of criminals satisfactory, he asked? Ought a civilized people to be content with producing a perennial class of habitual criminals and to keep them in check only by methods appropriate to savages, hunting them, flogging them, locking them up, and exterminating them? As it was an advantage to medical men to have their patients collected compactly in a hospital, so much so that without such collections medical practice would languish, so it ought to be an advantage to have criminals brought together in goals, and lunatics in asylums. It was unwise and unscientific to leave prisoners merely to the discipline of warders and the preaching of chaplains. The problems deserved careful study on the psychical side. Experiments designed to detect the existence of slight traces of telepathic power, the existence of which Sir Oliver Lodge assumed to have been proved, would, he thought, prove to be of great value. The aim of the Society was nothing less than the investigation and better comprehension of human faculty, human personality, and human destiny. The meeting was well attended, the large room of the Royal Medical and Chirurgical Society being quite full, and the President was occasionally interrupted by discreet applause.

SYPHILIS, TABES, AND GENERAL PARALYSIS.

Professor von Düring Pacha's recently-published paper on endemic syphilis[1] contains some references to the causal connexion between syphilis and tabes dorsalis. The view that the latter morbid condition is a syphilitic manifestation has been especially insisted on by Fournier, Gowers, and Erb, and it is one which is becoming more and more accepted. As far as this country is concerned, it is hardly necessary to do more than call attention in passing to the able and painstaking work of Dr. Mott in the same direction. And certainly the evidence brought forward in support of the syphilitic etiology is prima facie convincing enough. In any case, special work on this point undoubtedly demonstrates how important a factor syphilis is. That other factors, however, such as alcoholism, nerve stress, predisposition to nervous diseases, etc., also play a part cannot well be gainsaid. In the course of his investigations in Asia Minor, Professor von Düring did not see a single case of tabes among the peasants, notwithstanding the fact that syphilis is endemic among them. He points out that, as far as the country districts are concerned, although poverty is great, there is practically no struggle for existence, no brain or nerve stress. They want but little; and a roof, a shirt, bread (such as it is), and firewood are within the reach of all. Political and social questions, and the excitement they give rise to, are quite unknown. The eyes are not strained by artificial light or by study. In winter time people sit in their dark dwellings round a big fire—and think! He points out also that one very injurious factor—alcohol—is practically unknown. As a result of his experience, in Turkey as well as in Asia Minor, he concludes decidedly against the syphilitic etiology of tabes, although he is ready to admit that syphilis may be a factor. A further point of interest is the fact that he considers the chronic-intermittent exhibition of mercury by the mouth is bad treatment. He bases this conclusion on personal observation of cases treated in this way. Dr. von Düring saw only a few instances of general paralysis, but he points out that where 15 to 20 per cent. of the population are, or have been, syphilitic, it is not to be wondered at that syphilis and general paralysis should be coincident. Although it is becoming generally accepted that both tabes and general paralysis are etiologically connected with syphilis, it seems only fair to state the position of an opponent.

[1] *Archiv für Dermatologie und Syphilis*, Band lxi, Heft 1.

HAVANA LEPER HOSPITAL.

At a meeting of the Orleans Parish Medical Society not long ago, Dr. Isadore Dyer gave an account of a visit paid by him to the Havana Leper Hospital. The Hospital San Lazaro was founded in 1681, but it was not till 1861 that an imposing building was erected, occupying a prominent position on one of the main thoroughfares only a few hundred yards removed from the bay front, and opening on a broad plaza. The entrance from the street discloses a large chapel for the use of the public, to which the patients in the hospital have access in a reserved space off the chancel, separated on each side by high iron railings, one side being reserved for females, the other for males. At the time of Dr. Dyer's visit there were in all 114 patients, mostly native, the number of males and females being about equal. There were only a few children, the youngest about 8 years, and only a few negroes. Quarters for the two sexes are arranged separately, and a distinct infirmary is provided for those lepers who become ill of some concurrent malady. Seven sisters of charity are in charge of the nursing and domestic departments, and help is received, not required, from those patients who are able to render it. The whole establishment is cleanly, and strict attention is given to ventilation and hygiene. As in all Cuban establishments, the bathing facilities are meagre. According to Dr. Dyer, treatment at the Havana Leper Hospital shows about the same results as are seen elsewhere. Dr. Alfonso, the head of the hospital, believes that his best results are obtained with chaulmoogra oil. Experimental work has been done for the past eight months with red mango bark, but as yet without result. Baths of benzoinated water, sulphuretted water, etc., are employed in some cases. Carasquilla serum has been used and given up. Arsenic and mercury bichloride are among the other remedies chiefly employed. The salicylates and ichthyol are also used. Strychnine as a regular treatment did not seem to be in favour. Dr. Dyer was struck, in the short time at his disposal for observing these patients, by the large number of pure atrophic types, the sort of cases found in Brittany and in Constantinople, which led to the separation of Morvan's disease as an entity. Of all the cases shown him at the San Lazaro Hospital, there were few of the tuberculous

type, in which the bacilli are found freely colonized. Dr. Dyer thinks that the fact that so many of the patients were natives, and that they presented for so large a part the evidences of what Zambaco Pacha has called "effete" leprosy, possibly explains the fact that there is no instance recorded of contagion having occurred among the attendants of this institution. Altogether Dr. Dyer was favourably impressed by the Havana Leper Hospital, which seemed to him a well-organized and well-managed institution.

THE EPIDEMIC OF INFLUENZA.

The epidemic of influenza which is prevailing widely throughout Europe is everywhere apparently of a mild type; in some Continental cities thousands of cases have been reported without the occurrence of a single death directly attributable to the disease. We are glad to learn that the attack from which the King has been suffering since last Saturday is of this mild type. Though it has been, of course, necessary to cancel His Majesty's arrangements for visiting Chatsworth, and to recommend him to remain in his room, the illness has not been sufficiently severe to confine him to bed. For some time, however, care will be necessary. On the occasion of several previous epidemics the House of Commons has acted as a focus for the dissemination of the disease, and there were cases among members during the autumn session, but, as far as we have been able to ascertain, no special steps have been taken to disinfect, or even thoroughly cleanse the chamber itself, the lobbies, tea rooms, committee rooms, and other apartments frequented not only by members of Parliament, but also by other persons having business in the House. There is, we believe, divided authority, but the matter is really one of considerable importance; and it would seem advisable that a joint committee of the two Houses should be appointed to investigate the present administration. This investigation might, we hope, result in the appointment of a permanent cammittee, with a medical officer of health, if Parliament objects to the jurisdiction of the Board of Works or of the local sanitary authority.

THE VACCINATION OF "CONTACTS."

Seventy cases of small-pox are reported in Leicester. Not very long ago, we believe, hospital accommodation was provided for some fifty small-pox cases, but now the isolation hospital has been cleared of other infectious diseases like scarlet fever and diphtheria, the patients being sent home to make room for small-pox. At the same time the medical officer of health is making most strenuous efforts to secure the vaccination of "contacts," and these efforts are said to be meeting with extraordinary success. Is this the "Leicester method" of which we have heard so much? In the past four weeks three cases of small-pox have occurred in Dublin, of which one has died. The first was detected at the out-patient department of the Richmond Hospital and was at once detained and transferred to an isolation ward. It was found that the disease had been contracted in Liverpool. On Monday last another case was detected at the same hospital and was dealt with similarly, and the public health authorities were at once informed of the circumstances. Precautions have been taken to prevent the spread of the disease, the persons with whom the man was in contact having been isolated and vaccinated. The intercommunication with Liverpool, however, renders very special care necessary if Dublin is to be saved from another outbreak.

LECTURES AT THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

The following are the arrangements for the courses of lectures before the Royal College of Physicians of London: The Milroy Lectures on the Causes, Prevalence, and Control of Tuberculosis will be given by Dr. H. T. Bulstrode on March 5th, 10th, and 12th; the Goulstonian Lectures on Theories of Immunity and their Clinical Application, by Dr. A. S. F. Grünbaum on March 17th, 19th, and 24th; and the Lumleian Lectures on Infective Endocarditis mainly in its Clinical Aspects, by Dr. T. R. Glynn, on March 26th, 31st, and April 2nd. The hour on all occasions will be 5 p.m.

THE BELFAST MATERNITY HOSPITAL.

On January 27th, at a meeting of the Governors of the Belfast Maternity Hospital, Dr. John W. Byers, Professor of Midwifery in Queen's College, Belfast, was appointed Attending Physician. As it is at this hospital that the students of the Belfast Medical School obtain their knowledge of practical midwifery, the Governors were anxious that systematic lecturing at Queen's College, Belfast, should be correlated with clinical teaching at the Maternity Hospital, and their action in electing one with such experience as Professor Byers has given great satisfaction in the medical school. It is a return to the state of matters which existed many years ago when Dr. Burden, the first Professor of Midwifery at Queen's College, was on the staff of the Belfast Maternity Hospital.

ST. BARTHOLOMEW'S HOSPITAL.

As has been already reported it was resolved, at the meeting at the Mansion House on January 19th, to appoint a Committee to consider (1) whether it is desirable, in the public interests and on financial grounds, to retain St. Bartholomew's Hospital on its present site; (2) in the event of the retention of the hospital on its present site, whether any better scheme of rebuilding than that suggested by the Governors can be devised; (3) upon any other matters affecting the hospital that the Committee may think it desirable to inquire into. The names of the members of this Committee have now been published. The Lord Mayor has nominated nine members: Lord Sandhurst, who was Chairman of the Lords Committee on Metropolitan Hospitals in 1891, and is now Chairman of the Middlesex Hospital, the Hon. Alban Gibbs, M.P., Sir William Hart Dyke, M.P., Sir Savile E. Crossley, M.P. (Secretary of the King Edward's Hospital Fund and Chairman of the Metropolitan Hospital Saturday Fund), Sir Thomas Jackson, Bart. (late chief manager of the Hong Kong and Shanghai Bank), Sir William Emerson (late President of the Royal Institute of British Architects), Mr. R. B. Martin, M.P. (Secretary of the Hospital Sunday Fund), Dr. Pye-Smith, F.R.S. (Consulting Physician to Guy's Hospital), and Mr. Arthur Hill (a member of the Stock Exchange, and formerly High Sheriff of London). Sir Trevor Lawrence, as Treasurer of St. Bartholomew's Hospital, has nominated the following six Governors: Sir William Church (President of the Royal College of Physicians), Mr. Alderman Alliston and Alderman Sir William Treloar (both ex-Sheriffs of the City of London), Mr. Benjamin L. Cohen, M.P., Mr. John Cary Lovell, and Mr. Frederick Morris Fry (late Master of the Merchant Taylors' Company). The Committee is to get to work at once, but meanwhile it looks as though Mr. Sydney Holland had attained his object—in part at least—for the appeal of the London Hospital must now have a good start in the race for subscriptions and donations.

SOME SANITARY DEFICIENCIES IN ITALY.

The following facts and figures are given on the authority of Commendatore Bodio, Director of the Italian General Statistical Bureau: There are in Italy 1,454 communes where drinking water is bad in quality and scanty in amount; and 4,877 where there are no drains and where excrementitial and refuse matters are thrown into the street. There are 37,203 underground dwellings with over 200,000 inhabitants. There are 1,700 communes where meat is scarcely ever eaten except in illness or on festal occasions; and 4,965 where the eating of meat is unknown except in well-to-do families. There are 600 communes in which the law making the engagement of a medical officer for the poor compulsory is not complied with. There are 336 unprovided with cemeteries, and where all the dead are buried in the churches. There are 194 districts infested with malaria, which extends its ravages over 90,000

square kilometres, with a population of six millions. Lastly, each year there are reported a hundred thousand cases of pellagra which might speedily be cured if proper food were available for the people.

TWO RICHARDS IN THE FIELD.

Dr. Leander Starr Jameson, C.B., has hitherto stood alone in name as in fame in South Africa. Now, however, there are two Richards in the field. Dr. Adam Jameson, who till lately held the office of Minister of Lands under the Western Australian Government at a salary of £1,000 a year, has been transferred to the Transvaal as Commissioner of Lands at £2,000 a year. The Governor of Western Australia, Sir Arthur Lawley, had previously been promoted to the Transvaal. Dr. Adam Jameson, who is 40 years of age, is the son of a minister of the Free Church of Scotland. He graduated M.B., C.M., at the Edinburgh University in 1883, and in the following year went out as superintendent of 150 emigrants to Western Australia. He took his M.D. degree in 1897 with a thesis on malaria. It is not likely that the identity of name will cause much confusion, for however many Dr. Jamesons there may be, there will never be more than one "Doctor Jim" in South Africa.

THE "SLEEPING SICKNESS" IN UGANDA.

The Committee of the Royal Society appointed to investigate this subject has received reports from the observers sent by the Society to Uganda in July, 1902. The researches so far made not being considered conclusive, the Committee, in view of the great gravity of the situation, has obtained the consent of Lieutenant-Colonel Bruce, R.A.M.C., M.B., F.R.S., himself a member of the Committee, to proceed at once to Uganda to superintend further investigations as to the nature, mode, and spread and means of prevention of the disease. The Secretary of State for War has granted Lieutenant-Colonel Bruce leave to proceed to Uganda, and the Secretary of State for Foreign Affairs has afforded facilities for the conveyance to Uganda, and maintenance of Lieutenant-Colonel Bruce and D. N. Nabarro, M.D., B.Sc., of the Pathological Laboratory of University College, London, who will accompany him. Dr. Castellani, a member of the original expedition, is still in Uganda continuing his investigations. We understand that he claims to have discovered the parasite which is the cause of the "sleeping sickness."

CANCER RESEARCH FUND.

The work of the Cancer Research Fund has begun in earnest. The Statistical Committee—consisting of Dr. J. F. W. Tatham, of the General Register Office, Somerset House; Dr. Arthur Newsholme, M.O.H. Brighton; Dr. B. Arthur Whitelegge, C.B., Chief Inspector of Factories; Mr. H. J. Read, of the Colonial Office; Sir Francis Lovell, C.M.G., Dean of the London School of Tropical Medicine—held its first meeting on January 27th, Dr. Tatham being in the chair. The Committee has already, we understand, collected some important information. The Pathological Committee, which is composed of Professor Sims Woodhead, Dr. McFadyean, and Dr. Rose Bradford, met on January 26th. The names of the members of these Committees are a sufficient guarantee of the thoroughness with which the work will be carried on, and there is solid ground for hope that under such auspices it will be prosecuted to a successful issue.

THE MEDICAL STAFF COLLEGE.

As will be seen by a formal announcement elsewhere in this issue another step has been taken in the organization of the Medical Staff College by the appointment of a panel of clinical teachers. It will be remembered that captains before presenting themselves for the examination for promotion are required to pass through a course of six months' special instruction for the purpose of clinical instruction. The present class is divided into two subclasses of thirteen members each; one subclass will attend for clinical instruction in medicine under Dr. Sharkey at St. Thomas's Hospital, and the other subclass under Dr. Hale White at Guy's Hospital. In the same way one subclass will attend for clinical instruction in surgery under Mr. Pearce Gould at the Middlesex Hospital, and the other subclass under Mr. Stanley Boyd at Charing Cross Hospital. In these two subjects attendance will be made three times a week. In addition each captain is required to choose a special subject and will attend the instruction of the appointed teacher on that subject. On other days and at other hours the members of the class will attend the other hospitals on the list of associated hospitals for post-graduate teaching. The courses will not be special for the officers, but the clinical teachers will in some measure supervise their attendance. In addition the class will attend lectures by the professor of military surgery at the Examination Hall on the Embankment. This course lasts for three months. There is also a two months' laboratory course given by the professors of the Medical Staff College in the laboratories at the Examination Hall; the sixth month of the course will be devoted to recapitulation and examination.

THE EXAMINATION OF TRAINED NURSES.

It will be seen from a letter published in another column, signed by the President and Secretaries of the British Gynaecological Society, that the Council of that Society, feeling that the present system—or rather absence of system—of certificating and controlling nurses leaves much to be desired, has resolved to institute an examination at once, and to grant its own certificates in monthly and gynaecological nursing. A Board of Examiners has been appointed, and the examinations of the Society will be held every quarter. This letter should be carefully read by those—and they are many—who are dissatisfied with the present condition of nursing. The principles laid down for the guidance of the examiners will commend themselves to those who desire more systematic training and control of all who act as sick nurses, but it is questionable whether a satisfactory solution of the problems involved can be reached by a series of unconnected efforts by individual societies.

A NEW HOSPITAL FOR SOUTH LONDON.

It is stated that the governors of the Bolingbroke Hospital, Wandsworth Common, have formulated a scheme for founding, in connexion with the present institution, a large general hospital for the free treatment of all kinds of diseases. A local Committee, consisting of the governors of the hospital and tradesmen, has been formed to further the scheme, and an appeal will shortly be issued to the general public for funds.

TEMPORARY ANNEXES TO ASYLUMS.

We understand that an examination of the "temporary" buildings at the London County Asylum, Hanwell, has revealed that they are constructed on the same dangerous principle as those of Colney Hatch. They are of corrugated iron, with an internal lining, but there is a packing of highly inflammable fibrous material between the outer and the inner skin. The buildings are connected by a corridor, as at Colney Hatch, where the fire spread rapidly along the corridor, which acted like a flue.

A medical group has, as is now the custom in France, been formed in the new French Senate. Professor Pozzi was the chairman of the group in the last Senate, but as he failed to secure re-election, Professor Labbé has been elected chairman in his place.

A Sessional meeting of the Sanitary Institute will be held at the Parkes Museum, Margaret Street, W., on Wednesday, February 11th, at 8 p.m., when a discussion will take place on the present shortage of water available for supply. The discussion will be opened by W. Whitaker, B.A., F.R.S., F.G.S., Assoc.M.Inst.C.E., and general discussion is invited. The chair will be taken by Sir Alexander Binnie, M.Inst.C.E. Tickets for admission of visitors may be had on application.

TO PREVENT THE POLLUTION OF SHELLFISH.

ROYAL COMMISSION ON SEWAGE DISPOSAL.

SINCE the appearance of our last article,[1] some interesting evidence has been given by two witnesses before the Royal Commission on the Disposal of Sewage. Captain Andersen, Chairman of the Whitstable Oyster Fishery Company, emphasized the facts that a very large amount of capital had been sunk in the oyster, mussel, cockle, and whelk fisheries, and that such "scares" as had recently taken place did an immense amount of damage. He was of opinion that these industries would never occupy the position they formerly occupied, "unless drastic steps were taken to allay the alarm which had been created in the public mind."

While holding these views, he was not in favour of the Oysters Bill of 1899 of the Government, because it placed the control of oyster layings absolutely in the hands of the county councils, and these would be "likely to be guided to a great extent by the advice of their medical officers." The oyster merchants desired a Fishery Board, composed of persons in whom the public and the oyster planters would equally have confidence. The remedy for the pollution of shellfish was, in his opinion, that "all sewers discharging crude sewage near any oyster bed should be removed, or, if this is impossible, the oyster bed should be removed" (mark the order of the alternatives). Compensation should be given if the oyster bed existed prior to the sewage outfall.

Alderman Petrie, ex-Mayor of Liverpool, who had been for twenty-five years in the oyster trade, said that there had been a great falling-off this season in the sale of oysters, due to the recent scare. He advocated that no crude sewage should be allowed to discharge into the estuary of rivers, the sea, or in proximity to any oyster layings, and that in small places sewage should be chemically treated. The Bill of 1899 was objected to by the oyster merchants on account of its drastic provisions, and because it "threw the whole responsibility upon the oyster planters to remove their beds from contamination, whereas these beds had existed long before drainage was thought of." Furthermore, the oyster planters were uneasy because the County Council had the power, through their medical officer, of saying which beds were pure and which were not, and the trade would much rather be in the hands of the Local Government Board.

From the above summary of the evidence given by these gentlemen, and from collateral evidence, several facts are clear:

1. The attempt at legislation by the Local Government Board was thwarted by the influence of the "trade," which succeeded in persuading a Parliamentary Committee of the House of Lords that a Fishery Board, representing the trade as well as local authorities, was a more suitable controlling authority than local authorities alone. Thus to their distrust of local authorities and of their medical officers the oyster trade is indebted for the present calamitous condition of the entire shellfish industry. If the cases of sickness ascribed to shellfish were erroneously ascribed to them, and if, as has been contended by the trade up to a recent date, the "scare" is a mere fad of the medical profession, this course would have been not only justifiable but statesman-like. But even the trade itself is now obliged to admit the essential truth of the statements consistently made by medical officers of health during the last eight or nine years; it is now as clamorous as the latter for legislative enforcement of reform.

2. The shellfish trade, and we fear also the general public, have a very erroneous notion as to the possibilities of sewage treatment and purification. They labour under the misapprehension that it is "crude" sewage which alone can cause the present evils, and that the provision of chemical or bacteriological treatment before discharging the sewage into an estuary will render it innocuous to any shellfish that may be deposited in its sand or mud. We hope that the Royal Commission on the Disposal of Sewage will shortly give an authoritative opinion on this point in an interim report. Meanwhile, we have quoted authority for the statement that effluents from bacterial beds (much less effluents from beds for chemical treatment) are not conspicuously safer in their possible relation to disease than is crude sewage.[2] Are we to insist that every local authority before discharging its sewage into a stream or the sea shall irrigate it broadly over a large farm? We have no certain knowledge of the bacterial contents of the sewage effluents from such sewage farms. But assuming (a very improbable assumption) that they are uniformly and without exception free from pathogenic bacteria, the conditions of a very large proportion of towns make this remedy impracticable.

3. The relative responsibility of oyster growers and of local authorities who pollute their beds by pathogenic sewage (treated or untreated) is one of some difficulty. The remedy which the oyster trade still insist on is that the sewage shall be removed from the layings, not the layings from the sewage. As we pointed out in a former article,[3] this position cannot be sustained. The shellfish trade is after all a relatively small interest, and it is the business of those engaged in it to find safe places for carrying on their trade, especially as they still maintain that such places are numerous. The position of the oyster grower who was on the spot before the sewage was discharged into the estuary near his beds is not dissimilar from that of many others who have found that the convenience or good of the majority of the community may necessitate inconvenience or even injury to a small minority.

Even were the attempt made to secure a general exclusion of sewage—treated as well as well as untreated—from estuaries and the sea, years must elapse before it could be achieved. Meanwhile, what will the oyster growers do? And when the millions of money which would be required for this purpose have been expended, what guarantee is there that oysters and other shellfish derived from layings near the mouths of rivers over which the sewage previously treated by the best possible scheme has passed, will be materially freer from pathogenic microbes than at present? There is no such guarantee, and the evidence at present available does not justify the expenditure of the enormous sums of money involved in the desired reform, unless it can be shown to be needed for other reasons than the protection of shellfish layings. So far as the growers of shellfish and the merchants supplied by them who distribute these shellfish to the public are concerned, we venture to put the matter as follows: They now know that a proportion of the shellfish supplied by them causes disease in those consuming them. What do they propose to do? Will they go on supplying them so long as they are allowed, and incur the grave responsibility of destroying health and life, or will they discontinue growing shellfish wherever they are exposed to contamination? The merchants as represented by the Worshipful Company of Fishmongers (see page 325) have set a good example. If the growers will follow it, knowing, as they now must, that effective remedies cannot be applied to contaminated layings *in situ* within a reasonable time, they will deserve well of the public, and their trade will be rehabilitated. If they do not follow it, they may have a partial immunity from legal prohibition for several years. When arsenical beer was sold by publicans, these publicans were fined although they were quite unwitting of the contamination. The machinery of the Food and Drugs Act and of the Public Health Act is too clumsy to be successful in the present case. Hence there are at the present moment only two remedies: first, refusal of the public to purchase shellfish; secondly, refusal on the part of all vendors of shellfish to sell such shellfish unless they are assured by an independent and authoritative judgement that these are derived from sources where contamination by sewage is impracticable.

LONDON COUNTY COUNCIL.

At the meeting of the London County Council on February 3rd, the Public Health Committee presented a long report reciting the action which had been taken with a view of preventing the laying down of edible forms of shellfish in sewage-polluted creeks, or other dangerous localities, and suggesting a course of future action. From a diagram prepared by the Medical Officer, based on the number of cases of enteric fever notified each week in Southend, West Ham, London, East London, and Liverpool, it appeared that there was a distinct increase of prevalence of typhoid fever at a time corresponding with an outbreak at Southend, and as an increase at that period of the year in London was exceptional suspicion of some special cause being operative arose. The Committee recommended the Council to adopt the following resolution:

That a letter be addressed to the Local Government Board expressing the Council's hope that in the interests of the public health the Board will as soon as possible take steps to obtain an amendment of the law, so as to prohibit under heavy penalties the laying down of all edible forms of shellfish, in sewage-polluted creeks or other dangerous localities, and

[1] BRITISH MEDICAL JOURNAL, January 17th, 1903, p. 161.
[2] Ibid.
[3] Ibid.

the sale of such shellfish for human consumption, and that all unpolluted layings, fattening beds, and storage ponds at present in use may be protected from pollution by sewage by any person or sanitary authority.

During the discussion on this resolution Mr. Sankey pointed out that the Council was responsible for some of the pollution of the Thames estuary, although such towns as Leigh, Chatham, Rochester, Sheerness, and Southend were the chief offenders, and observed that the effluent from the north and south outfalls at Barking and Crossness contained a large amount of putrescent matter. He moved an amendment to refer the report back with the view to a conference between the main drainage and public health committees and the chemist to the Council.

The amendment was seconded by Dr. Longstaff, who said that the question involved included the risks attending the consumption of smelts, sprats, and whitebait, as well as shellfish.

Mr. Alderman Alliston suggested co-operation with the City of London, but eventually the amendment was lost, and the recommendation of the Committee adopted.

The Main Drainage Committee also presented a report defending the system of disposing of the sludge. It was discharged on the ebb tide from a vessel travelling at the average speed of about ten knots into Barrow Deep, about twenty miles below Southend, and practically in the open sea: no cargoes were discharged westwards of an imaginary line from the Maplin Light Ship to the North Knob Buoy, about five miles eastward of the Mouse Lightship. There was no foundation for the statement that, especially in foggy weather, sludge was dumped in other parts of the river estuary; each vessel was signalled as it passed the Mouse Lightship, and independent reports were made to the Thames Conservancy of the time of passing the lightship on both journeys, as well as of the number of times each vessel was loaded at the outfall works. As to the nature of the sludge the solid matter varied from 12 to 6 per cent., and was on the average for the whole year 8 per cent. Examination of the navigable channels around the Barrow Deep in former years had shown no indication of sewage deposit, and the foreshores generally were not affected. The consideration of this report was adjourned.

City of London.

The able report by Dr. Collingridge, M.O.H. for the City of London, is analysed elsewhere (p. 325).

Southend.

Dr. J. T. C. Nash, M.O.H. Southend, has issued a special report on the outbreak of typhoid fever in June, July, and September. A brief review of the history of typhoid fever in the borough indicates, Dr. Nash states, that the more closely inquiries were made into the causative influence of shellfish from doubtful layings, the larger became the percentage of cases in this connexion, and also showed that the inquiry should not be limited to oysters. Further, it appeared that the handling as well as the eating of shellfish must be taken into consideration. During the months of June and July, 1902, 39 cases of typhoid fever were notified in the borough, with a residential population of about 31,000. Dr. Nash came to the conclusion that 4 of these cases probably acquired infection through uncooked vegetables, and 1 from handling sewage-polluted oysters, while 1 was probably due to direct infection from a previous case. With regard to the other cases, inquiry showed that the eating within a month of the onset of disease of cockles which had been laid in a sewage-polluted creek in another district was the one feature common to the majority of the cases notified. It was ascertained that during June 9 cases of typhoid fever had occurred in the district from which the cockles came; its population was about 4,000. The medical officer of health for this district had found reason to suspect cockles as the source of the disease.

Dr. Nash found that the usual practice in this district was for the cockles to be brought in by boat, and laid on the banks of a narrow creek for a day or two. The banks of this creek showed an unsavoury looking mud, black in places, and a subsequent examination in company with the County Medical Officer showed that about a quarter of a mile above the cockle laying a dirty, imperfectly purified effluent was being discharged into the creek. As several cases of typhoid fever had recently occurred in the district from which the sewage came, there was a possibility of specific contamination of the cockle laying. Dr. Nash thus describes the manner of collecting cockles from this creek:

> The cockles were scraped up with an ample amount of mud attaching to them; they were placed in a sieve, and then washed in the creek water. They were then taken to the cockle shed on the bank and partially cooked by being plunged into an open copper containing very hot water. A minute or two later, when the shells opened and a frothy scum formed on on the surface of the water, the cockles were removed and shaken in the sieve to separate the shells. They were then either immediately sold, or pickled in a brine solution to be exported to Southend or elsewhere, or to be exposed for sale the following day.

Dr. Thresh, the County Medical Officer, carried out experiments with cockles taken from the banks of the creek. He washed them twice in pure water, and then plunged them into boiling water, so that the experiment was really more stringent than the trade treatment of the cockles. Nevertheless lively sewage bacteria were found in the liquid draining from them. It therefore appeared that neither washing, nor cooking, nor both combined, as ordinarily carried out, removed all dangerous bacteria from the cockles laid on the bank of this sewage-polluted creek.

Thirteen additional cases of typhoid fever were notified in Southend during September, and eleven of these occurred in shellfish eaters. Dr. Nash comes to the conclusion that the incidence of typhoid fever in Southend has been much greater on persons eating shellfish than on others; he estimates it as at least six times as great, but possibly or probably as thirty-six as great. He quotes also from Dr. Thresh's report for 1901 the statement that "Typhoid fever is about three times more prevalent in the districts bordering on the Thames than in the rest of the county of Essex, and in this area of excessive prevalence the greatest excess is constantly in the districts at the mouth of the river."

LITERARY NOTES.

With its issue of January 6th the *Münchener medizinische Wochenschrift* entered on the fiftieth year of its existence. Born at a time of storm and stress, when the profession in Germany was striving to organize itself for the promotion of its interests, our Munich contemporary has borne its share in the struggle. During its half century of life it has steadfastly maintained the highest scientific and ethical standard, and we heartily wish it continued prosperity.

Mr. George Pernet contributes an interesting note on the number of leper houses in Europe in mediaeval times to *Lepra*, vol. iii, fasc. 3, 1902. He calls attention to the fact that it is stated, on the authority of Matthew Paris, by one writer after another on leprosy, that there were 19,000 leper houses in Christendom in the thirteenth century. For instance, among others, Dr. C. Creighton makes this statement in the *Encyclopaedia Britannica*, 1882, vol. xiv, art. Leprosy; and the most recent authors of monographs on the subject say the same thing. Mr. Pernet quotes the following examples: Babes, *Die Lepra*, 1901, p. 9:

> Wie gross muss die Zahl der Leprosen gewesen sein, wenn von 19,000 Leproserien in den christlichen Landern richtet wird.

Dr. Dom Sauton. *La Leprose*, 1901, p. 5:

> En 1244, on comptait dix-neuf mille léproseries dans la chrétienté et deux mille en France, ainsi que nous le rapporte Mathieu Pâris.

Jeanselme et Sée, Lèpre, *La Pratique Dermatologique*, 1902, vol. iii, p. 2:

> A la mort de Louis VIII (1226) on en comptait 2,000 en France et 19,000 dans la chrétienté, d'après Mathieu Pâris (1244).

Now the author of the article on Leprosy in Rees's *Cyclopaedia*, vol. xx, long ago pointed out (1819) that this was an error of translation. He wrote:

> Several authors have, by an error of translation, quoted Matthew Paris (Hist. anglorum ad annum 1244) for an assertion that nineteen thousand lazarettos existed in Christendom; but that author only states that the hospitalers were at that period possessed of 19,000 manors. "Habent hospitalarii novem decim maneriorum in Christianitate."

A reference to Matthew Paris's works shows that the passage should really read as follows:

> Habent insuper Templarii in Christianitate novem millia maneriorum. Hospitalarii vero novemdecim, praeter emolumenta et varios prouventus ex fraternitatibus et praedicationibus provenientes, et per privilegia sua accrescentes. (Matthaei Parisiensis Opera, Parisiis, MDCXLIV, p. 417, col. 1.)

The passage must be taken as meaning that the hospitalers possessed 19,000 manors, the word "millia" not being repeated by Matthew Paris. This was in 1244. In an editorial note to Mr. Pernet's communication, Professor Ehlers of Copenhagen points out that a few years ago Professor Polotebnoff in the *Berl. klin. Woch.*, No. 25, 1899, made a similar rectification. It may be added that both the error and its source were pointed out by Sir James Y. Simpson in his valuable "Antiquarian Notices of Leprosy and Leper Hospitals in Scotland and England" published in the *Edinburgh Medical and Surgical Journal*, October 1st, 1841, and January 1st, and April 1st, 1842. These articles are a mine of information as to leprosy in the Middle Ages from which

later writers have freely drawn, not always with due acknowledgement. Simpson traces the origin of the error to a misapprehension of the meaning of the passage by no less a scholar than Ducange. The whole thing is a curious illustration of the enduring vitality of a blunder or a lie. Many historical legends rest on no better foundation than this oft-corrected error about the mediaeval leper houses. But they will continue to be believed and repeated. There never was a falser maxim than that which assures us that the truth will prevail. It is error that prevails and will continue to prevail, for error is somehow more adapted to the brain of this foolish-compounded clay, man, than truth.

Professor Ehlers, however, contends that the number of leper houses was not much inferior to that of the manors of the knights of St. Lazarus (Hospitalarii). To nearly every manor there was attached a leper house. In the thirteenth century 3,000 leper houses in Europe were attached to the chief commandery of Boigny, near Orleans, which was the headquarters of the order. In the reign of St. Louis there were in France at least 1,502 leper houses. *L'Estat des Maladreries en France* of that time shows that 123 of these establishments were of royal foundation, 252 of seigneurial foundation, 530 founded by communes, others by the bishops and clergy. The closure of leper houses in France, which was decreed on August 24th, 1693, affected 1,133 establishments in 1,130 communes. The possession of the leper houses was placed at the disposal of the authorities for the care of sick persons of all kinds and the hospitals of St. Lazarus were transformed into general hospitals.

We published recently an epitaph composed for himself by a Dublin worthy of the eighteenth century, Boyle Godfrey, "Chymist and M.D." The epitaph reads like a mere play of fancy, and we do not know whether it was placed on Dr. Godfrey's tomb. Quaint pathological epitaphs are, however, found inscribed on gravestones. One of the best known is that of Dame Mary Page, which was published in the JOURNAL many years ago. Mr. Algernon Ashton recently called our attention to it in the following letter:

The other day, after an absence of twenty-three years, I once more happened to visit the highly interesting old Bunhill Fields Burial Ground. It is situated in the City Road, just opposite the house where John Wesley lived and died, and contains, among other memorable tombs, the graves of John Bunyan, Daniel Defoe, and Isaac Watts. But there is one monument upon which is inscribed so curious and remarkable an epitaph that I cannot refrain from quoting it.

South Side:

"Here lyes Dame Mary Page,
"Relict of Sir Gregory Page, Bart.,
"She departed this life March 11, 1728,
"In the 56 year of her age."

North Side:

"In 67 months she was tap'd 66 times;
"Had taken away 240 gallons of water;
"Without ever repining at her case,
"Or ever fearing the operation."

In the *St. Bartholomew's Hospital Journal* for September, 1902, Mr. E. H. Hunt quotes the following, without indicating where it is to be found:

Here lies the body of Susan Peg
Who had no issue but one in her leg;
And what made the old lady appear so cunning,
While one leg kept still, the other kept running.

This may perhaps appear too aptly epigrammatic to be genuine, but gravestones seem in old days to have been favourite places for the display of grim humour. Mr. Hunt also refers to the well-known sufferer who

Had two sore legs and a baddish cough,
But her legs it was that carried her off.

The second volume of the *Archives of Neurology*, edited by Dr. F. W. Mott, F.R.S., Pathologist to the London County Asylums, is now in the press, and will probably be issued in the course of a week or two by Messrs. Macmillan. It will contain about 900 pages, and will have a large number of beautiful plates, photomicrographs and other illustrations.

THE INCORPORATION OF UNIVERSITY COLLEGE IN THE UNIVERSITY OF LONDON.

A SPECIAL general meeting of the members of University College, London, was held on February 2nd, under the chairmanship of Lord REAY, President of the College, to consider the proposal for the incorporation of the College into the University of London.

The Senate of the University and the Council of the College have come to an understanding as to the conditions and mode of incorporation, and a circular has been issued giving the history of the movement and explaining the decision now reached on the recommendations of the Joint Committee. The following are the main lines of the scheme:

College Property.

The value of the site, buildings (including four houses in Gower Street subject to ground leases), and equipments of the College is estimated to be about half a million, and it has the administration of the income of trust funds of about £300,000, most of which would be available for education.

Preliminaries to Incorporation.

The incorporation of the College in the University would necessitate new arrangements (1) for the hospital and its funds, (2) for that part of the medical school which deals with advanced medical studies, (3) for the management of University College School, (4) for the adjustment of the College finances. The estimated cost of carrying out these preliminaries, including the probable cost of procuring a site in place of the houses in Gower Street for the School of Advanced Medical Studies (estimated to cost £70,000) would be £200,000. It was also agreed that a large sum is needed to develop the teaching work of the University to be done by the College, and an appeal to the public has brought in subscriptions of upwards of £62,000, including £30,000 given through Sir Michael Foster by a former student of the College. As the Drapers' Company had previously promised £30,000 on condition that incorporation was carried out the total of the subscriptions received or promised is £92,000, leaving £108,000 still to be raised to defray the preliminary expenses.

General Conditions of Incorporation.

On the one hand the University undertakes, as far as possible, to maintain and develop the College, and promises that the College, in common with other incorporated institutions, shall be represented on the Board of Advisors appointed for the election of professors primarily associated with such institution. On the other hand, the College agrees that the Senate of the University shall have the control of the land, buildings, and property of the College, a committee being appointed to advise the Senate under specified conditions and with powers to be delegated by the Senate.

Method of Carrying out the Incorporation.

The Government is to be asked to bring in a Bill to appoint a Statutory Commission of five members—two representing the University, two the College (with the Chairman), with the following powers:—

(*a*) To determine what property and trust funds shall be transferred to the University, the Boys' School Corporation, and the Hospital and School of Advanced Medical Studies Corporation respectively; and to make any such alterations in the terms of the trusts as may be necessary in consequence of the transfers; (*b*) to determine at what time or times the newly-constituted Corporations of the Boys' School and of the Hospital and School of Advanced Medical Studies shall come into existence; and at what time or times the transfers of property and trust funds shall take effect; and if necessary to provide for the use for a reasonable period by the Boys' School and School of Advanced Medical Studies of parts of the College which are to be transferred to the University and to prescribe the terms on which such temporary use shall be allowed; (*c*) generally to make all such arrangements as may be necessary or convenient for giving effect to these proposals, with due regard to the continuance of the work of the College, of the Boys' School, and of the School of Advanced Medical Studies respectively.

Sir JOHN ROTTON, in moving a resolution endorsing the action of the Council, recalled the fact that at the general meeting in February, 1902, a resolution of the Council in favour of incorporation had been carried. The scheme proposed that the College as a Corporation should cease to exist, the Senate of the University to which its property would be transferred becoming the governing body. The University, however, would not take over the Boy's School, nor the School for Advanced Medical Studies. The funds in the possession of the College would have to be transferred to a new governing body for that school, a matter at present under the consideration of the Medical Faculty and the Hospital Committee. It would be necessary to find a new site in the neighbourhood where ampler provision could be made for this medical school. It was also intended that a new corporation should be constituted to which the hospital funds could be transferred. The hospital would thus become independent, and its prosperity would, it was hoped, be increased; this matter also was still under consideration.

The resolution was seconded by Professor E. H. STARLING, who said that the incorporation would be the first real step towards the creation of a great teaching university in London.

Sir ARTHUR RÜCKER, Principal of the University of London, said that it was of the highest importance that all the higher educational authorities in London should co-operate, working together as a single whole. He welcomed the movement for the incorporation of University College, because the co-operation between colleges could best be effected when they became constituent members of a university, affording one complete method for obtaining the opinion of the majority of those qualified to speak.

Professor J. ROSE BRADFORD agreed that the concentration

of the preliminary and intermediate studies in medicine and surgery which would be afforded by the incorporation would be of the highest advantage to medical education.

Lord Justice Cozens Hardy said that the proposal was in strict accordance with the wishes of the founders and the traditions of the College; the movement was in the interests of the University, and all who contributed money to the incorporation were benefiting at once the College and the University.

Sir Thomas Barlow said that while the members of the College rejoiced in the movement there could not fail to be some feeling of sadness at the breach of old associations. On the medical side there was some danger to the College and the risk of the loss of students during the period of transition, but the scheme had been accepted because it was believed that it was for the good of education in London, and that in spite of the temporary drawbacks the advantage in the long run would be immense. He believed that with proper safeguards the department of advanced medical studies would flourish more than ever.

The Chairman said that the proposal only affected the internal side of the university work; those who supported it did not wish to interfere with the external work of the University. On its internal side the object was to teach those who regarded their work as a preparation and discipline of life, the teaching should be of the highest, and addressed only to those fit to receive it. He felt some regret and a little apprehension at the impending changes, but central control and consolidated machinery, such as could only be realized by incorporation, were needed, and he hoped that the *genius loci* would not be lost under altered conditions.

The resolution was carried unanimously.

The following resolution was then proposed by Mr. Henry Cunynghame, and seconded by Mr. A. G. Tansley:

That this meeting of the members of University College, London, while approving of the proposed incorporation of the College in the University on the lines proposed both on the general grounds of educational expediency and as being in accord with the aims of the founders of the College, desire to convey to the Council their strong feeling that, in giving effect to incorporation, nothing that is of value in the traditions and organization of the College should be lost. The traditions and organization of the College have been built up during the last seventy-six years, and they are of such great value that, in the interests of historic continuity not less than of the university of the future, they ought to be made use of and preserved, and that consideration should be given to the position and privileges of the Fellows of the College.

The Chairman said that the Council had not lost sight of the matter, but believed that vested rights and privileges had been sufficiently safeguarded. The Council had not for many years received any proposals from the Fellows, whose activity had been latent.

The resolution was carried.

A further resolution by Dr. Morris Travers dealing with the status of Fellows, Governors, and Life Governors was, after some discussion, withdrawn.

ASSOCIATION NOTICES.

BRANCH MEETINGS TO BE HELD.

Metropolitan Counties Branch: North London District.—The next meeting of this District will be held at the Royal Free Hospital, Gray's Inn Road, on Wednesday, February 11th, at 4.30 p.m. Dr. Wynn Westcott will preside. Mr. James Berry, F.R.C.S., will read a paper on the Diagnosis of Caries of the Spine, illustrated by numerous museum specimens and living cases. Cases of interest will be shown by the staff of the hospital. The District Committee will meet at 4.15 p.m.—F. Dill Russell, F.R.C.S., Osman House, Fortis Green, N., Honorary Secretary.

Metropolitan Counties Branch: South London District.—The next meeting of this District will be held at the Court Room at Guy's Hospital, on Friday, February 13th, at 4 p.m. Dr. Beddard will read a paper on the Use of Expectorants. Clinical cases will be shown from the wards of the hospital.—Maurice Craig, Bethlem Royal Hospital, S.E., Honorary District Secretary.

Metropolitan Counties Branch: East London and South Essex District.—The next meeting of this District will be held at Brooke House, Upper Clapton, on Thursday, March 19th, at 8.30 p.m. The chair will be taken by Mr. Powell, Vice-President of the District. Members desiring to read short papers or to show cases are requested to communicate with the Honorary Secretary as soon as possible.—C. J. Morton, 56, Orford Road, Walthamstow, Honorary Secretary.

Edinburgh Branch.—The winter meeting of the Edinburgh Branch, in conjunction with other Branches, will be held in the Royal Infirmary, Edinburgh, on Friday, February 20th. The museum will be open from 2 p.m. onwards. Clinical meeting in the Large Theatre at 3.30 p.m.; dinner in the North British Station Hotel at 6.30 p.m., morning dress, dinner ticket, 5s. Members who can be present at the meeting and dinner, and who have patients, specimens, etc., for exhibition, are requested to communicate with one of the Secretaries not later than February 11th.—James Hodsdon and Norman Walker, Honorary Secretaries.

SPECIAL CORRESPONDENCE.

PARIS.

Académie de Médecine: Discussion and Revision of the Diseases for Compulsory and Voluntary Notification in the New Public Health Act.—A Poster on the Dangers of Alcoholism.—Medical Senators.

After full discussion, the Académie de Médecine has slightly modified the lists of diseases placed under the two headings for compulsory and voluntary notification as recommended by the Special Commission, and as printed in the British Medical Journal of January 24th, 1903, p. 223. The matter was urgent, as the law comes into force on February 15th next. The revised lists now finally stand as follows:

A.—*Diseases for Compulsory Notification.*

1. Typhoid fever.
2. Typhus.
3. Variola and varioloid.
4. Scarlet fever.
5. Measles.
6. Diphtheria.
7. Miliary fever.
8. Cholera and choleriform diseases.
9. Plague.
10. Yellow fever.
11. Dysentery.
12. Puerperal infections and ophthalmia neonatorum (when professional secrecy of the confinement shall not have been demanded).
13. Epidemic cerebro-spinal meningitis.

B.—*Diseases for which Notification is Optional.*

1. Pulmonary tubercle.
2. Whooping-cough.
3. Influenza.
4. Pneumonia and broncho-pneumonia.
5. Erysipelas.
6. Mumps.
7. Leprosy.
8. Ringworm.
9. Purulent conjunctivitis and granular ophthalmia.

It will be noticed that pneumonia and broncho-pneumonia have been removed from among the diseases for compulsory, and are placed among those for voluntary notification. As M. Laveran pointed out in discussion, if a practitioner meets with epidemic pneumonia or severe influenzal pneumonias, he can notify these pneumonias of abnormal gravity, as he notifies the serious cases of influenza. In an ordinary case not much good would result from compulsory notification, if the disinfection is only carried out when the patient is convalescent, as the pneumococcus is not very resistant, and will already have disappeared. Broncho-pneumonia following measles, which has a high mortality, will already have been notified as the notification of measles itself is compulsory. Ophthalmia neonatorum has been placed along with puerperal fever for compulsory notification of cases in which professional secrecy as to the confinement shall not have been demanded.

The following is a translation of a notice as to the dangers of alcoholism posted up recently all over Paris by the Assistance Publique. It is extracted from a report on the subject laid before the Conseil de Surveillance of the Assistance Publique in December last:

ALCOHOLISM: ITS DANGERS.

Professor Debove, Dean of the Faculty of Medicine, Dr. Faisans, Physician to the Hôtel Dieu, reporters.

Alcoholism is chronic poisoning resulting from the habitual use of alcohol, even when this does not produce drunkenness.

It is an error to say that alcohol is necessary for workmen who are occupied in fatiguing labour, that it gives courage for the work, or that it repairs the strength; the artificial excitement it produces soon gives place to nervous depression and feebleness; in reality alcohol is of use to nobody, it is harmful for everybody.

The habit of drinking spirits leads rapidly to alcoholism, but the so-called hygienic drinks also contain alcohol, there is only a difference in the dose. The man who drinks each day an immoderate quantity of wine, cider, or beer becomes alcoholic as surely as he who drinks spirits.

Drinks called *apéritifs* (absinthe, vermouth, bitters), aromatic liquors (wound-wort, eau de melisse, or eau de menthe, etc.) are the most pernicious, because they contain, in addition to alcohol, essences which are themselves also violent poisons.

The habit of drinking brings in its train disaffection in the family, forgetfulness of all social obligations, distaste for work, misery, theft, and crime. It leads, at least, to the hospital, for alcoholism engenders the most varied and the most deadly diseases—paralysis, madness, diseases of the stomach and liver, dropsy; it is one of the most frequent causes of tuberculosis. Lastly, it complicates and increases the gravity of all acute diseases—a typhoid fever, a pneumonia, and erysipelas which would be mild in a sober man, kill rapidly the alcoholic drinker.

The errors in hygiene of the parents fall on their children, if they live through the early months they are threatened with idiocy or epilepsy, or else they are carried off a little later by tuberculous meningitis or phthisis.

For the health of the individual, for the existence of the family, for the future of the country, alcoholism is one of the most terrible scourges.

N.B.—The General Administration of the Assistance Publique in Paris, 3, Avenue Victoria, Printing Department, Staircase A, ground floor, keeps copies of the notice "Alcoholism: its Danger," at the disposal of directors of yards, shops, or workrooms who would wish to post them in their establishments. Demands may also be sent by letter addressed to the Director of the Assistance Publique.

The wide circulation of the above poster has caused a great commotion among the retailers, and the wine merchants' syndicate has drawn up a protest addressed to the Prefect of Police, calling attention, if the above is true, to his inconsistency in permitting them to have a licence to sell these poisons.

At the recent senatorial election the following eighteen doctors were elected members of the Upper House: Drs. Goujon (Department of Ain), Vagnat (High-Alpes), Frézoul (Ariège), Gauthier (Aude), Ouvrier (Aveyron), Turgis (Calvados), Combe (Charente), Combes—the Prime Minister—(Charente Inférieure and Corsica), Dellestable and Labrousse (Corrèze), Villard (Creuse), Denoix (Dordogne), Saillard (Doubs), Gérente (Alger), Gacon (Allier), Ricard (Côte d'Or), Peyrot (Dordogne), Bayol (Bouches-de-Rhône).

INDIA.

Tetanus after Plague Inoculations in the Punjab.—New Year Honours for the Medical Services.

The sad news of the occurrence of nineteen deaths from tetanus following very shortly after inoculation against plague in the Punjab will have reached you by wire some weeks ago. From such accounts as have yet appeared in the papers it seems that all the fatal cases were injected with the contents of a single bottle. Inoculations were at once stopped, but have since been resumed with a fresh supply of vaccine, although it is to be feared that the success of the great scheme for the protection of the Punjab against plague will be materially interfered with by this unfortunate failure. The families of the sufferers are being liberally compensated by the Government, and less excitement has been caused among the local populace than might have been expected. Within the last week a strong committee has been appointed to inquire into the facts of the case, composed of Sir Lawrence Jenkins, Chief Justice of Bombay, Lieutenant-Colonel G. Bomford, Principal of the Medical College, Calcutta, and Major Semple, R.A.M.C. of the Kasauli Institute, so their report must be awaited before further comments are made on the subject. The usual cold-weather increase of plague is now with us, the total mortality in India for the week ending December 27th, 1902, having reached the high figure of 15,897 against 8,005 for the same period last year. New districts are becoming involved, so that the disease is still making headway in India and shows no sign of abatement. The unfortunate Bombay Presidency still heads the list with over 7,000 deaths a week, the Punjab being second with 3,000, while Bengal and the North-West Provinces each show about half the last mentioned figure. The Central Provinces has now been invaded and the Hyderabad State and Berar in Central India also each show a number of deaths.

On January 1st a large honours list is connexion with the coronation celebrations at Dehli was published in which the medical services figure. The popular Director-General of the Indian Medical Service becomes a K.C.I.E., while Surgeon-General W. R. Hooper, President of the Medical Board at the India Office gets the K.C.S.I. Lieutenant-Colonel Gerald Bomford has been given the C.I.E. for his long and valuable services as Principal of the Medical College, Calcutta, an institution which has made rapid strides as an important medical school during his term of office; the anatomical and chemical departments have been entirely rebuilt and greatly extended, while the physiological and pathological sections are now undergoing a similar transformation. If the proposal, which has recently been made, to build a new surgical hospital in connexion with the college as a memorial to Sir John Woodburn, the late Lieutenant-Governor of Bengal, is carried out another greatly needed improvement will be effected, and the Calcutta College will be in a position to more than maintain its high reputation as the premier medical school in India. The other C.I.E. has fallen to Major Alcock, F.R.S., I.M.S., the Superintendent of the Indian Museum and Professor of Zoology at the Medical College, whose brilliant researches on the deep-sea fishes of the Indian Ocean have won him a European reputation, while his recent book is a most lucid and interesting popular account of the subject. Lastly, Major D. Semple, R.A.M.C., Director of the Kasauli Institute, has been awarded the gold Kaiser-I-Hind medal for his excellent work in organizing and successfully conducting that important addition to the bacteriological laboratories of this country, while a similar distinction has fallen to the lot of Lieutenant-Colonel W. S. Lyons of the Bombay Medical Service, who has done good work in connexion with plague.

NEWCASTLE-ON-TYNE.

University of Durham College of Medicine: Dinner of the Past and Present Students.

The dinner of the past and present students of the College of Medicine, held at the County Hotel, Newcastle-upon-Tyne, on January 30th, was not only most successful as a banquet, but a meeting of which pleasant memories will long be retained. Upwards of 170 sat down to dinner. Professor Howden occupied the chair, and Sir George H. Philipson the vice-chair. The company included, among others, Dean Kitchin (Warden of the University), Mr. W. A. Watson-Armstrong (Chairman of Committee, Royal Infirmary), the Deputy Mayor of Newcastle, the Mayor of Gateshead, Professor Annandale (Edinburgh University), Professors Page, Oliver, Bedson, and Potter, Drs. Hume, Drummond, H. E. Armstrong, McBean, McDowall, Rankin Lyle, Buckley, Bolam, Hardcastle, Arnison, Selby Plummer, Outterson Wood (London), Ramsay (Bournemouth), William Slater, Braithwaite (Buxton), Nathan Raw (Liverpool), Wardale, Muirhead, William Turnbull, Henry Smith (Durham), Messrs. Ridley, T. A. Dodd, Rutherford Morison, Leech, H. B. Angus, etc.

After the loyal toasts had been given from the chair and duly honoured, Sir Geo. H. Philipson proposed "The Newcastle and Gateshead Corporations," and in doing so he alluded to the important hygienic undertakings upon which the two municipal bodies had embarked, a remark which drew from the Deputy Mayor of Newcastle-upon-Tyne and the Mayor of Gateshead very spirited and hopeful replies. In proposing "The University of Durham," Mr. Watson-Armstrong spoke in eulogistic terms of the important part played in the North of England, particularly by the Faculties of Medicine and Science, and of the teaching facilities offered by the Colleges in Newcastle. Dean Kitchin, in acknowledging the toast, stated that the present University of Durham was the outcome of the Great Reform Bill of 1831. He expressed the hope that the Federal University might long prosper and continue. In very pleasing terms the Chairman proposed the health of "Our Guests," and in doing so coupled with the toast the names of Professor Annandale of Edinburgh, a most successful surgeon, Mr. Watson-Armstrong, a benefactor to the Royal Infirmary, and Dr. Buckley, who, mindful of the health of the students, had promoted the Association Football Club. To this toast these gentlemen replied in appropriate terms. To Professor Annandale was given the toast of "The College of Medicine." In giving it he alluded to the early instruction he had received in anatomy and surgery at the Royal Infirmary, Newcastle, and of the friendships he had formed there, to the energy with which the College of Medicine was conducted, and the success of its students in the various fields of practice. The President of the College of Medicine gracefully responded for the members present. The other toasts were: "The Honorary Staff of the Royal Infirmary," proposed by the Deputy Mayor of Newcastle-upon-Tyne, and responded to by Dr. Hume; "Past and Present Students," given by Professor Page and acknowledged by Dr. Nathan Raw, of Liverpool. Mr. H. B. Angus proposed "The Health of the Chairman." During the evening songs and recitations were given by Mr. T. Dunn, Dr. de Lacy, Mr. Pearce, and Mr. Shaw.

CORRESPONDENCE.

CERTIFIED MILK.

Sir,—All will, I am sure, heartily agree with Dr. J. A. Coutts as to the need for improving the quality of the milk supplied by the ordinary vendor, and all of us can endorse his experience that many failures in infant feeding are due to the use of unsound milk. May I, however, say in passing that he has been scarcely just to some of the municipal authorities—notably the Corporation of Manchester and I believe also of Liverpool—in ignoring the efforts they have made to improve the milk supply? In this city, milk arriving at the railway stations has systematically been taken for examination, and if tuberculous bacilli or streptococci have been

found, the source has been traced, in some cases many miles away, and prosecutions have followed. Dirty milk contaminated with faeces has been declared unfit for human food. I do not say that this is all that can be done to improve our milk supply, but short of adding another chapter to the story of municipal trading I hardly see what more we can expect of our corporations. The efforts of the authorities may prevent the worst milk from being used as food; they cannot demand the high standard which most of us would insist on if we could.

My hopes certainly rose high when, a few years ago, through the efforts of a few public-spirited citizens, a "Pure Milk Supply Company" was established in this city. Contracts were made with the better class of farmers, sanitary rules were made, byres were rebuilt or set right, herds were freed from tuberculosis, and a system of cooling by means of ice and filtration was adopted. The company put on the market a reliable milk, which was used by the Royal Infirmary and the Children's Hospital, and it obtained a fair retail trade; but the business was worked for some years at a loss, and last year went into voluntary liquidation. The causes of its failure were the low price they were obliged to take for their milk on account of the competition of the dealers, and the difficulty they had with the farmers. In any such scheme it seems to me imperative that the vendors should own the cows and supervise the collection of the milk from the very first, and they must obtain a higher price than for ordinary milk to make the business a commercial success.

My own impression undoubtedly is that this difficulty, namely, that of controlling and supervising the farms, often far distant from the city, would be fatal to the value of a "certificate." An examination from time to time of the percentage of fat, and number of bacteria per c.cm., would be of slight value without supervision of the foddering of the cows, the cleanliness of the animals and the sheds, and the care taken in the collection. Would the certificate certify that the cows were free from tuberculosis? In the milk trade above all others it is so easy to live upon a name. Eternal vigilance is the price of success. I doubt if certification would give us the high standard of milk we require for infant feeding.

My own belief most certainly is that the true solution lies in establishing scientific dairies or milk laboratories, in which the milk is under scientific control from the first. Such laboratories were first advocated by Dr. T. M. Rotch, of Boston, and are linked with the names of Messrs. Walker and Gordon. Every detail is under scientific supervision, and while the laboratories are conducted on commercial lines they are controlled by a medical committee, and no advertisement allowed except in the medical press. Against such establishments has been urged the cost of their milk and the complication of their methods. But need it be so?

A quart of milk, with a guarantee of purity and (say) a 4 per cent. fat, need cost only a few pence more than the same quantity of ordinary milk, and when diluted with whey or barley water, and given unboiled, would surely compare very favourably from every point of view with the mixture so much in evidence, containing burnt sugar, disintegrated proteids, and butter oil, known as "humanized milk." Such a laboratory could supply—though, of course, at a greater cost—a cream of a definite strength to be diluted in the household, and modified milk in feeding bottles made up according to the direction of a physician. Stress should certainly be laid on the importance of keeping such a laboratory entirely distinct from an ordinary diary, and that it should work with and through the medical profession. The details and aims of these laboratories have been so recently fully set forth in the Journal[1] that any further remarks of mine are superfluous.

Finally, let me say I believe that the most practical lines on which to work for improving our milk supply are:

1. To urge our municipal authorities to use all their powers, or if necessary obtain others, for the supervision of the milk supply to our large towns and cities.

2. The establishment of milk laboratories for the purpose of supplying milk for infants and invalids from cows scientifically foddered and cared for, which do not advertise their products, but trust to the support of and are controlled by the medical profession.—I am, etc.,

Manchester, Feb. 1st. Henry Ashby.

Sir,—Will you allow me to express my hearty agreement with Dr. J. A. Coutts's letter in the British Medical Journal of January 31st, page 287, on the subject of "certified milk"? No one trained in the ways of modern surgery can watch the processes of milking and of storing milk as practised in even the more cleanly of ordinary cowhouses without some feeling of uneasiness.

In these days, when we set asepsis so much higher than antisepsis, we have surely little cause to rest satisfied with the way in which our milk supply is treated before it reaches our nurseries, or to trust that all its defects will be cured by the subsequent application of heat.

Although we cannot but admire the "milk laboratories" of our American brethren, they do not seem likely, for various reasons, to become practicable in this country—in the near future, at any rate. A scheme, however, such as that described in Dr. Chapin's book on *Infant Feeding*, whereby reasonably clean milk can be certified as such by a responsible and impersonal medical authority, and supplied at moderate prices, seems a real step in the right direction. I should like, therefore, to join Dr. Coutts in urging that the possibility of starting such a scheme here is well worthy of the fullest consideration by the British Medical Association.—I am, etc.,

Edinburgh, Feb. 3rd. John Thomson.

Sir,—Dr. J. A. Coutts, in his letter in the British Medical Journal of January 21st, has raised a question of the greatest importance to the whole community. The supply of pure whole milk is, practically, non-existent in this country. It is possible to obtain a milk clean and of excellent quality, delivered under proper conditions, that is, in sealed bottles. But the amount thus delivered constitutes the smallest fraction of the total supply. In general, the "milk" supplied in town and country is milk *plus* filth. In this connexion I may especially refer to Mr. G. L. Eastes's article on the pathology of milk in the Journal, vol. ii, 1899, in which he showed that 80 per cent. of the specimens examined were unfit for human consumption.

With Dr. Coutts's reference to the percentage-feeding of infants I am very far from being in agreement. This method is, in my opinion, the only one that enables the management of infant feeding to be carried out in an accurate and scientific manner. Indeed, with this method available, I should be very sorry to resort to the old "rule-of-thumb" methods which are so much out of harmony with our present knowledge.

But whatever our view may be as to the methods of modification, we must all be agreed on the prime necessity of a pure milk supply. Having regard to what Dr. Coutts so truly describes as "the present hopeless condition of our milk supply," is it not the urgent duty of the British Medical Association to take all possible steps to remedy this?—I am, etc.,

Harley Street, W., Jan. 30th. Ralph Vincent.

COW'S MILK AND TABES MESENTERICA.

Sir,—So deeply-rooted in the mind of the profession is the idea that tabes mesenterica is the result of the ingestion of the tubercle bacillus in cow's milk that it seems as if a miracle were needed to change the current of thought. Yet despite the chorus of disapprobation which greeted Koch's pronouncement, further strengthened by his recent lecture, his view still holds the field, but only a grudging acquiescence is here and there accorded it, or perhaps only a doubt expressed.

I have been led to appeal for a hearing by the perusal of Dr. Nathan Raw's paper on human and bovine tuberculosis, in the British Medical Journal of January 31st. While Dr. Raw admits a change of mind as to the identity or interchangeability of these two diseases, he yet quotes with apparent acceptance the late Sir Richard Thorne Thorne in support of the doctrine regarding which he admits a change of mind.

I have elsewhere[1] given some attention to this subject, and now need only state the case as concisely as I can. Every general practitioner and I presume every out-patient hospital physician—will bear me out when I affirm that tabes mesenterica occurs chiefly, if not wholly, amongst the children of the poor and indigent, who scarcely ever get milk as an article of their food, or, if at all, in very small quantity. Mr. R. Henry Rew, in a paper read before the Royal Statistical Society, gave a table showing the proportion of milk per head consumed by different classes of the people, and in nine different localities.

From this table it will be seen that the proportion bears a

[1] British Medical Journal, September 6th, 1902.

[1] *The Modern Doctrine of Bacteriology*; etc.

distinct relation to the power of the purse. Thus, in the West-End of London the average annual consumption per head comes out at 34 218 gallons (or 0.750 pint per day) that it descends through the middle and working classes until it reaches the lowest ebb in the East-End of London, where the proportions are 3,923 and 0 086 respectively. He adds: "With reference to the East-End of London it is necessary to explain that the figures are based on the fact that a gallon of milk is divided on an average into thirty-seven portions. I have assumed that each family consumes one of these portions every morning and evening. It will be seen that even on this assumption the consumption per head is infinitesimal, and it reveals, incidentally, a significant fact in connexion with the dietary of the poor."

These are the words of a man who had "no axe to grind." Need I say more?—I am, etc.,

Granville Place, W., Jan. 31st. GEO. GRANVILLE BANTOCK.

DEATH UNDER CHLOROFORM.

SIR,—The letters of Professor MacWilliam and Dr. Luke, in the BRITISH MEDICAL JOURNAL of January 31st, regarding Dr. Pennell's case of accidental death from overdosing with chloroform in India, are examples of the errors into which those physiologists and anaesthetists may be led whose teaching is founded on the antiquated doctrine that chloroform directly affects the heart and circulation. Curiously enough, these gentlemen are not in agreement amongst themselves, as, for instance, the following extracts from the two letters under consideration show:

Professor MACWILLIAM.	Dr THOMAS D. LUKE.
The noteworthy case of death under chloroform recorded by Dr. T. L. Pennell is a marked example of an uncommon variety of collapse under chloroform which is not well recognized.	The fatality under chloroform recorded by Dr. T. L. Pennell is in no way remarkable, but raises a point of some importance in the treatment of failing circulation under this anaesthetic.

Which of these expert opinions is to be our guide? That of the physiologist, who contends that Dr. Pennell's case is a marked example of an uncommon condition; or the anaesthetist's, who declares that it is in no way remarkable? In the second place the dominating feature, according to Professor MacWilliam, in Dr. Pennell's case of accidental death, was the loss of tone in the muscular coats of the small arteries. But is not loss of tone in the muscular coats of the small arteries, which Professor MacWilliam appears to consider peculiar in some unexplained manner to death from chloroform poisoning, common to all forms of collapse and death? Professor MacWilliam further states that

> In Dr. Pennell's case the temporary recurrence of breathing when restorative measures were employed shows that there was no direct or fatal paralysis of the respiratory centre by the anaesthetic, while the continuance of recognizable heart action for nearly an hour is sufficient proof that cardiac failure was not the determining factor.

Professor MacWilliam seems to attribute the paralysis of the respiratory centre and the consequent stoppage of the breathing, as well as the failure and stoppage of the heart, to depression and loss of tone of the small arteries. Death does not occur in this manner, according to my experience, in experimental chloroform poisoning in animals, and I venture to ask whether—excluding haemorrhage—it is possible under any conceivable circumstances for mere loss of muscular tone in the small arteries to cause death without primary respiratory paralysis or heart failure? My own opinion is that it is impossible, but it will be interesting to have Professor MacWilliam's more detailed views on the point. Professor MacWilliam says again:

> Precisely similar instances occurring in animals have from time to time come under our notice in this laboratory, and the treatment we adopt, with almost invariable success, is compression of the abdomen—*in addition, of course, to artificial respiration.*

The italics are mine. The aim and object of all of us must be to restore natural breathing when it stops from accidental overdosing with chloroform, and I put it to Professor MacWilliam that compression of the abdomen does good, apart from any mechanical effect which it may produce on the capacious abdominal blood vessels, simply by pressing up the diaphragm and increasing the efficiency of the artificial respiration which he "of course" employs along with it. That abdominal compression does materially increase the effect of the all-important artificial respiration in restoring natural breathing when a patient is overdosed with chloroform, every one who has had occasion to carry out Partridge's modification of Howard's method will acknowledge, since it constitutes one of its most striking features. In the face of this commonsense explanation of a very ordinary phenomenon, it is somewhat surprising to be told that abdominal compression acts by producing results "similar in their nature to, but more effective than, inversion," that is, "the blood pressure in the more immediate vital parts (brain, heart, etc.) is raised." Surely Professor MacWilliam cannot be ignorant of the fact that the change in the blood pressure in the carotids when an animal is inverted is due entirely to the effect of gravity and in no way increases the tone of the small arteries. If therefore abdominal compression does raise the blood pressure, it can only be in the manner I have indicated—by increasing the effect of artificial respiration in restoring natural breathing. The return of natural breathing restores first the muscular tone of the heart, which is the source of the blood pressure, and then that of the small arteries by which it is maintained, and as the heart recovers the blood pressure rises until, with the complete recovery of muscular tone in the small arteries, it becomes normal again. Would it be too much to say that such changes as are produced in the carotids, the brain, heart, etc., by gravity in inversion, or in the abdominal blood vessels by compression, are totally ineffective in restoring the blood pressure in poisoning by chloroform, especially if the overdosing has been pushed so far as to cause dangerous failure or weakening of the heart?

Dr. Luke appears to consider that ether is an antidote for overdosing with chloroform, though his plan of substituting a drachm of ether for chloroform when signs of overdosing become urgent amounts to nothing more than stopping the chloroform. He would probably obtain more satisfactory results if he stopped it before this stage is reached. Would he not, on the whole, be better advised to teach his students to give chloroform in such a way, for example, mine, as to avoid all risk of overdosing, instead of following a method which is liable to produce grave symptoms of circulatory failure, and then trusting to inhalations of ether, hypodermic injections or strychnine, and other traditional remedies, to put them right?—I am, etc.,

Harley Street, Feb. 2nd. EDWARD LAWRIE.

SIR,—In my letter on the above subject in the last issue of the BRITISH MEDICAL JOURNAL there are two printers' errors on p. 288. In line 20 "drawing" should be "driving," and in line 24 "immediate" should be "immediately."—I am, etc.,

February 2nd. J. A. MACWILLIAM, M.D.,
Physiological Laboratory,
University of Aberdeen.

THE SALE OF POISONS IN OPEN SURGERIES.

SIR,—In the BRITISH MEDICAL JOURNAL of January 24th I see there is an account of a meeting of the Scottish Poor-law Medical Officers' Association in Glasgow. Unfortunately I had not the honour on that occasion of being asked to be present, although I am an old Poor-law medical officer, and as far back as 1860, 42 years ago, took part in an agitation to obtain the same privileges as our brethren in England and Ireland, namely, that there should be the right of appeal against wrongful dismissal to the Board of Supervision, as it was then called, now the Local Government Board. Unfortunately the Board could not be made to look at the matter in its proper and just light, and it was allowed to drop. But it is more particularly in reference to another portion of the proceedings of the Association referred to I wish you to grant me space for a few words. The report of its proceedings, which is evidently authoritative, states:

> The action of the Pharmaceutical Society, in its recent prosecutions, was such that no medical man having an open surgery was safe from prosecution (with its attendant terror of being brought before the General Medical Council and being found guilty of conduct infamous in a professional respect). It was pointed out that in the Highlands and Islands and country districts it was impossible because as there were no druggists medical men must of necessity supply the public with all the drugs, poisonous or otherwise, and in the event of the medical man being absent if any one in his surgery supplied the smallest quantity of a scheduled poison to a member of the public, the medical man was held guilty of breaking the law, and found guilty of infamous conduct by the General Medical Council. This clause was keenly discussed, especially by the country members who felt their position very acutely in view of the action of the Pharmaceutical Society and especially of the General Medical Council.

I venture, sir, to request leave to answer this serious accusation against the General Medical Council, and by implication against myself as the representative of Scottish general practitioners to whose ranks for thirty years of my professional life I had the honour to belong.

The law of the land authorizes medical practitioners, in virtue of their legal qualifications, to dispense poisons by their own hands or under their own immediate supervision; but I think it must be allowed by every right thinking person

it very properly forbids dispensing of scheduled poisons by all unqualified substitutes. Does habitual breaking of such an Act of Parliament constitute infamous conduct in a professional respect on the part of the practitioner who is aware of this wrongdoing and happens to profit by it? The General Medical Council holds that it does amount to infamous conduct in a professional respect, and as representing the medical profession the Council has advertized its determination to defend the public from danger and to guard at the same time our own good name by doing what it can to put an end to such practices. In the name of all that is reasonable how can this resolution affect Poor-law medical officers in remote districts in Scotland where it is said chemists' shops are conspicuous by their absence? I can speak from my own experience in this matter. For twelve years I kept and dispensed drugs and poisons in a remote part of Scotland. But nobody came to my house to procure a sixpenny worth of laudanum and certainly, if he had applied for the same in my absence, he would not have got it from my servants. The idea of such thing happening is entirely absurd and preposterous. I made up my own medicines by my own hands or by those of a qualified substitute and there never was and never will be any real necessity or even the remotest chance of an unqualified assistant having to do what is suggested. Is it fair then to bring forward such wild improbabilities? I quite see, and I hope sympathize with the difficulties of the Glasgow practitioner who keeps an open shop. But the able champion of those men who fulfil, and may even honourably fulfil, what is at present a necessary and useful function in supplying medical aid in that large and diverse congeries of human beings, has himself suggested a simple and straightforward way out of any possible chance of prosecution which would involve his own moral guilt or suggested connivance in such wrong doings. Let every such practitioner have all poisons under lock and key and put up a prominent notice in his shop that such articles can only be dispensed at certain hours and under his immediate personal supervision.

Then, if by any chance and in contravention of such a rule his dispenser breaks the law, I can assure all concerned, from my knowledge of the General Medical Council and its usual course of action, that they may be absolutely certain no proceedings will ever be taken against any medical practitioner in such circumstances.

The General Medical Council is not only not in the leading strings of the Pharmaceutical Society, but it is entirely in sympathy with the whole body of the profession, whether practising amongst the poor or the rich. Personally I think the Council should have waived all points of etiquette, and have heard the large and influential deputation which went up from Glasgow to appear before it to represent the aspect of the case as it appeared to them and their fellow practitioners, more particularly as the Council's solicitors had bungled the libel by inserting the words "drugs and poisons" instead of "scheduled poisons" in accordance with the Pharmacy Act. I say this, while I repeat it was and is a case, in my opinion, of entirely ill-founded panic and alarm, tinctured very naturally with some jealousy and antagonism to those chemists and druggists who poach every day twenty times as much on our domain by prescribing for patients as if they were bona fide doctors.—I am, etc.,

Wm. Bruce,
Direct Representative for Scotland in the General Medical Council.

Dingwall, N.B., Jan. 30th.

AN IMPROVED HYPOBROMITE PROCESS FOR THE ESTIMATION OF UREA.

Sir,—In an article in the British Medical Journal for January 24th, under the above heading, Dr. Pechell describes a method which, although he is unable to find evidence of its previous publication, is by no means new, and I think I may add that it is questionable whether it should be called an improved method.

I have used this modification of the hypobromite process some considerable time ago, and if Dr. Pechell will refer to Allen's *Chemistry of Urine*, published in 1895, he will find the subject dealt with somewhat fully. The author after describing the usual method with non-saccharine urine goes on as follows:

> An alternative plan is to add some simple syrup or honey (from 3 to 5 c.cm.) to the urine in the sample tube. Under these circumstances 40 c.cm. of nitrogen (as against 37.1 c.cm. in the absence of sugar) are yielded by 0.1 gram of urea. Hence if 5 c.cm. of urine be the volume employed each c.cm. of gas evolved represents 0.05 per cent. of the urea of the sample.

It will be noticed that syrup or honey may be added, that is, either cane sugar or grape sugar may be used. Méhu[1] suggested the addition of the former in approximately the proportion of ten to one of the supposed quantity of urea present. Grape sugar, however, appears to give a more perfect evolution of gas compared with cane sugar, but the latter, according to Esbach, has the advantage that when in contact with hypobromite it does not itself yield any gas, whereas grape sugar has been found to do so.

Most authorities seem agreed that with the addition of glucose the maximum evolution of gas is equivalent to 99 per cent. of the urea present.

As regards the actual cause of the increase of gas evolved when sugar is added, Allen states that when solutions of urea are decomposed by hypobromite in the presence of sugar great heat is evolved, and to this attributes the higher results obtained. This may act in two ways: (1) By the gas being given off at a higher temperature and the results read off with the gas in an expanded state unless time is allowed for it to reach a standard temperature; (2) to greater chemical action with corresponding actual increase of yield of gas due to increased heat. If, however, it be as stated that urea added to true diabetic urine only yields 92 per cent. of its nitrogen, then this theory appears inadequate.

Dr. Pechell suggests that the modification he describes might be applied to any form of apparatus in use. There is an error to be guarded against here. Gerrard's ureometer, and I believe Southall's, are graduated to allow for the loss of nitrogen sustained in the process as performed in the usual way, and consequently if the "sugar addition" method be employed in these instruments an excess in the results will be obtained.

I have said that it is questionable whether this can be called an improved process, for it is agreed that when the hypobromite is worked without the addition of sugar the deficit in the gas evolution is constant; so, therefore, if our apparatus is graduated to allow of this error, there is no advantage in the modified method advocated by Dr. Pechell.

A method, however, suggested by J. R. Duggan[2] appears to yield nitrogen equivalent to 99 per cent. of the urea, and only consists in a variation of the manner in which the ordinary hypobromite reagents are used. He mixes the urine with the caustic soda solution and subsequently adds the bromine; this modification I am unable to speak of from personal experience.—I am, etc.,

Stephen G. Longworth.

Suffolk County Asylum, Jan. 21st.

A DEGREE FOR LONDON STUDENTS.

Sir,—Into the propriety of granting further facilities for the obtaining of degrees I am not desirous of entering. But amongst the many letters that have appeared on the subject there has occasionally been a tone of contempt for provincial, and especially for so-called Celtic degrees, which is to be regretted. Speaking particularly for the Glasgow degrees, these being the ones I hold, and the requirements for which I know thoroughly, I beg to say that this contempt is wholly undeserved, and is probably the result of ignorance. This will be apparent to an unprejudiced observer on two main considerations: (1) The course of instruction undergone; (2) the quality of the examinations.

I admit, to begin with, that quantity does not necessarily mean quality, but in the former property Glasgow compares all through more favourably in the minimum study required with that for the Conjoint diplomas as set forth, say in the prospectus of Guy's Hospital, or of St. Bartholomew's.

In the preliminary scientific subject comparison sinks into contrast. In the more strictly professional subjects, letting (*a*) stand for the London courses, and (*b*) for the Glasgow University, the facts are these:

Anatomy	(*a*)	6 months,	4 days a week.	
... ...	(*b*)	5 ,,	5 ,,	
Physiology	(*a*)	6 ,,	3 ,,	
... ...	(*b*)	5 ,,	5 ,,	
Materia Medica and Therapeutics...	(*a*)	3 ,,	3 ,,	
... ,, ...	(*b*)	5 ,,	5 ,,	
Practical Pharmacy	(*a*)	3 ,,	2 ,,	
... ...	(*b*)	2½ ,,	3 ,,	
Forensic Medicine	(*a*)	3 ,,	3 ,,	
,, ...	(*b*)	2½ ,,	5 ,,	

In the London courses, midwifery and diseases of women are crushed into a three months' course of five days a week, whilst at Glasgow midwifery gets five months, five days a week, and diseases of women two and a half months, three days a week. These facts speak for themselves.

[1] *Journ. Chem. Soc.*, vol. xxxviii.
[2] Ibid., vol. lxii.

As regards the examinations, I would premise that there is no evidence that northern intellect is strikingly deficient. Yet the standard is so high that a "pluck" of over 50 per cent. is not uncommon in the First Professional, whilst at the Final quite 40 per cent. fail, and that after the weeding-out of previous examinations. Also be it noted there are four examinations, including two separate trials in anatomy, distinct from the surgical anatomy required in the Final.

As to the quality of the teaching comparisons are proverbially odious, but whilst I have friends who have benefited by a visit to the London schools, I have also others from metropolitan schools who have learned something during a sojourn across the Celtic fringe.—I am, etc.,

January 28th. M.B.Glasgow.

Sir,—I quite agree with all "Undergraduate of London University" stated in his letter in the Journal of January 17th.

The examinations for the London University degrees are generally admitted to be harder than those required for the London Conjoint diplomas or any other university in the United Kingdom and through this greater severity and the comparative ease with which the degrees of other universities can be obtained, the London diplomate, educated at a London medical school, is most undoubtedly placed at a great disadvantage.

I do not, however, think the London diplomates, educated in London, will ever obtain any concessions, in the way of a degree from the reconstructed London University, as their brethren at the newest universities, Birmingham and Victoria, have most correctly received.

Hence if they require a degree I would suggest their obtaining the M.D.Durh. for practitioners of fifteen years' standing and 40 years of age, or the M.D.Brux., the examinations of which are of about equal severity, and in both a sound knowledge of the subjects of examination is required. —I am, etc.,

January 19th. "Justitia."

THE TRAINING OF GYNAECOLOGICAL AND MONTHLY NURSES.

Sir,—We are directed by the Council of the British Gynaecological Society to request the favour of your insertion of the following:

It is generally conceded that the present condition of the nursing world is in many respects unsatisfactory. There is, apparently, neither any accepted standard nor system of education, nor any reliable method of distinguishing well-trained from untrained nurses. Women are now able to term themselves "nurses," and thus may obtain most responsible work in that capacity, when their education and training have been quite insufficient to qualify them to undertake it. There is no means by which trained nurses can be controlled, or of freeing their ranks from those who prove themselves dangerous to the public and discreditable to their calling.

For these reasons, the Gynaecological Society has resolved to move in the direction of establishing such examinational tests as will have the effect of bringing about those improvements which are obviously necessary in the education and supervision of gynaecological and monthly nurses. The Society is strengthened in this determination by the excellent results achieved by the Obstetrical Society of London in the elevation of the education of midwives, and by the Medico-Psychological Association in the improvement of the training and work of asylum nurses and attendants, in consequence of the systems of examinations and certificates instituted and carried on by those two societies respectively.

The special attention of the Gynaecological Society has been lately drawn to the nursing question. Its Fellows employ nurses chiefly for maternity or gynaecological cases; and constant complaints are made of the unsatisfactory character of the present education of such nurses. A most careful investigation of the whole subject on behalf of our Society has proved, *inter alia*, that a great number of nurses pass through the larger general hospitals, and in still greater proportion through the smaller, without having had any training in the nursing of gynaecological patients; while that of monthly nurses varies from six weeks to three months in duration, and is quite inadequate for the responsible duties they are called upon to discharge.

The British Gynaecological Society has, therefore, decided at once to institute examinations, and to grant certificates, in monthly and gynaecological nursing. The three cardinal principles which will be enforced are:

1. That every nurse certificated by the Society must work only and entirely under the directions of qualified medical practitioners.
2. That no woman will be eligible for the Society's examination unless she has had sufficient training both in general and special nursing.
3. That the Society's certificate be withdrawn from any nurse, who, at any future time, proves to be unworthy of professional trust.

Medical practitioners employing such certificated nurses will thus not only have a guarantee that they are of good character and competent to perform the duties required of them, but also that they are under professional control, and subject to rules of professional ethics which, it would seem, nurses generally are at present free to disregard.

A representative Board of Examiners has been appointed, and the examinations of the Society will be held in future once in every quarter.—We are, etc.,

Heywood Smith, *President.*
J. H. Swanton } *Honorary*
S. Jervois Aarons } *Secretaries.*

20, Hanover Square, W., Jan. 31st.

THE VALUE OF PHYSIOLOGICAL REST.

Sir,—Mr. Willis in his interesting communication on a case illustrating the value of physiological rest, is good enough to mention my recent lectures on diagnosis and treatment of diseases of the rectum.

The condition for which Mr. Willis operated on his patient —and I should like to sincerely congratulate him on the admirable method and result—is one which occurs not infrequently in a less severe degree than in the case he describes. Although in these cases eventually the result is due to septic ulceration, they do not come under this heading in my lectures.

The ulceration or abrasion which is described in Lecture I as the most common, almost only, cause for pruritus ani and fissure, as well as, in my belief, the origin of all ischio-rectal abscesses and fistulae, was almost certainly the original cause of the ultimate distressing condition of his patient.

I find this shallow ulcer present in considerably over 50 per cent. of the patients I examine, and after demonstrating it in some hundreds of cases, I am glad to say that its frequent occurrence is gradually being recognized.—I am, etc.,

Harley Street, W., Feb. 2nd. Fred. C. Wallis.

THE TREATMENT OF OCCIPITO-POSTERIOR PRESENTATIONS.

Sir,—Mr. Stainton Mercer, in the British Medical Journal of January 31st, p. 250, recommends turning in these cases, and I venture to disagree with him on account of the danger to the child.

My practice for many years has been to replace the occiput into either the first or second position with short straight forceps. The proceeding is perfectly easy, and absolutely safe, provided: (1) That the diagnosis is correct: (2) that no force is used; and (3) that the body is felt to follow the movement of the head. The labour is often terminated naturally as soon as the head engages. The risk to the infant with an after-coming head is not to be disregarded.—I am, etc.,

Liverpool, Feb. 2nd. W. Macfie Campbell, M.B.

REPRESENTATION OF DUBLIN UNIVERSITY.

Sir,—It may be of interest to the medical electors of Dublin University to know that Mr. Samuels, if elected, has pledged himself to act independently of any party for the benefit of the university generally, and also to look after the interests of the medical profession and their representatives serving in the Royal Army Medical Corps. In a letter I received from him on this subject he shows he has grasped our interests in every detail, and has them at heart.—I am, etc.,

E. Blake Knox, M.D., T.C.D.,
Captain Royal Army Medical Corps.

Aldershot, Jan. 31st.

Cholera in Egypt.—During the week ending January 12th no fresh cases of cholera nor any deaths from the disease were reported from any part of Egypt. During the week ending January 19th 4 cases of cholera were reported in Alexandria, and 3 deaths from the disease. During the week ending January 26th no case was reported and no death occurred. The last case occurred on January 18th. A British ship arrived at Malta from Alexandria on January 14th with 9 cases of cholera on board. At Damascus a few fresh cases of cholera continue to occur daily. At Bender-Abbas, on the Persian Gulf, a case of cholera was reported on January 3rd.

OBITUARY.

SOYETSU KUMAGAWA,

Vice President of the Sei-I-Kwai.

Dr. Soyetsu Kumagawa, who died recently at Tokyo was one of the foremost physicians in Japan, and for many years had devoted himself to the advance of medical science in his native country. He was born in 1839. When he was 14 years of age his mother died of a disease the nature of which her medical attendants were unable to recognize. This made so deep an impression on his mind that he determined to study medicine. With this object he bought some Chinese treatises, but quickly discovering their worthlessness he went to Nihommatu in order to study Western science. There he worked for three years at anatomy, physiology, and therapeutics, and acted as assistant to a Japanese practitioner. In 1860 he went to Tokyo, where he prosecuted his medical studies and learnt Dutch and English. In 1862 he became medical attendant to Tarozayemon Yegawa, a famous Governor of that time, and some time afterwards he entered the service of the Tokugawa Government as Surgeon on board a man of war. He saw some active service, and in 1867 was appointed Director of the naval hospital which was built at that time in the European style.

In 1867 the Tokugawa Government was abolished, the Emperor becoming supreme ruler of Japan. Dr. Kumagawa's occupation being gone, he betook himself to Yokohama, where he studied therapeutics under an American physician. In 1869 he settled in practice at Tokyo. At that time the condition of the medical profession in Japan was very low, and Dr. Kumagawa determined to reform it. He founded an association under the auspices of which a dispensary was established where the poor were treated gratuitously. This was the germ of the Tokyo Charity Hospital, which was founded ten years later. In 1874 he opened an ophthalmic hospital in Tokyo.

He was a member of the Committee of the Sanitary Association of Tokyo, and of many other hygienic and philanthropic societies. Dr. Kumagawa was also a Vice-President of the Sei-I-Kwai, or Society for the Advancement of Medical Science in Japan. He was a man of great organizing capacity, and so ably did he manage the finances of the societies with which he was connected that he more than once saved some of them from ruin.

It is with regret that we record the death of Mr. William Bishop, of Elham, Canterbury, which occurred on January 14th. He had suffered from cardiac weakness for a considerable time, but he continued to discharge his professional duties until four days from his death. He received his medical education at University College, and obtained the diploma of M.R.C.S.Eng. in 1868, and L.R.C.P.Edin. and L.S.A. in 1871. For upwards of thirty years he was engaged in practice in Canterbury. He was a member of the South-Eastern Branch of the British Medical Association. One who knew him well writes: Bishop was a good genial type of the old fox-hunting general practitioner that is fast dying out. A good fellow well met, a keen sportsman, a first-rate wicket-keeper, a man who had broken or dislocated "most of the bones in his body," as he used to say. He was kind to the poor, and most thoroughly appreciated in his district. A fine boxer: a surgeon, too, of some determination, and of a very practical turn of mind. Though he was not much given to attending our medical society meetings, I remember on one celebrated occasion he turned up late with a common stable pail in his hand containing the largest tumour (a sarcoma) I had ever seen, which he had removed from the back of a girl's neck, and as he said it was twice the size of her head. He was Secretary to the East Kent Foxhounds, and will be greatly missed in the neighbourhood.

On January 19th died Mr. William Greaves Johnson, one of the oldest practitioners in Bedford. He received his medical education at St. Thomas's Hospital, and obtained the diplomas of M.R.C.S. and L.S.A. in 1855. For seventeen years he was House-Surgeon and Secretary to the Bedford General Infirmary, and then started private practice in the town in partnership with the late Dr. Couchman. He was one of the Consulting Surgeons to the Bedford County Hospital, and continued in active practice until nineteen months ago when he was laid aside by the consequences of an apoplectic seizure. A brother practitioner in Bedford writes: A man of sound common sense, keen observation, earnest in his professional duties, courtly and sympathetic in manner. He was always most anxious to keep his knowledge "up to date" and throughout his life was a painstaking student. It is no wonder that with such qualifications as these that among the older families of Bedford his name is a household word. His habits were most retiring, and he never took any active part in local public affairs. His private opinion on current events was much valued by those who intimately knew him. His relaxation was gardening, and he was a keen observer of nature. His popularity was shown by the many acts of sympathy shown by his patients during his tedious illness and the number of medical men present at his funeral testified the esteem in which he was held by the members of his profession.

Dr. Emma Constance Stone, who is said to have been the first Australian lady to adopt the profession of medicine, has just died in Melbourne at the age of forty-six. She was the daughter of a London contractor of scientific tastes, who settled in Tasmania. She studied first at the Women's Medical College, Philadelphia, afterwards in London, and finally in Melbourne, where she started in practice. She had many difficulties to encounter, but she overcame them all. She set on foot a movement for gratuitous medical attendance on the poor women of Melbourne by competent medical practitioners of their own sex, and this brought about the establishment of the Queen Victoria Hospital. Dr. Stone was a strong advocate of female suffrage.

We regret to have to announce the death on January 31st of Mr. George Browning, M.R.C.S., L.S.A., of Harrogate. He received his medical education at Guy's Hospital, and for over thirty-eight years was in practice at Oughty Bridge, near Sheffield. He was a medical officer of health and parochial medical officer, and did much work throughout the rough moorland country round Bradfield. He retired about eight years ago to Harrogate, where by his urbanity, geniality, and sociability he endeared himself to a large circle of friends, medical and others. He was a member of the Yorkshire Branch of the British Medical Association and ex-President of the Sheffield Medico-Chirurgical Society. He died suddenly after an apoplectic seizure; the funeral took place at Oughty Bridge on February 3rd.

Dr. M. Victorino, a prominent physician and surgeon of Rio, who died recently at the age of 47, was for some years Professor of Surgery in the Medical Faculty of Bahia. Embarking on a political career he was appointed Governor of the State, then Senator, and finally Vice-President of the Republic of Brazil. He was the author of several works on tropical parasitic affections, which were translated into French.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. Gessner, Professor of Gynaecology and Director of the Clinic of Women's Diseases in the University of Breslau, aged 38; and Dr. Dante Cervesato, Lecturer on Children's Diseases in the University of Bologna.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVY MEDICAL SERVICE.

The following appointments have been made at the Admiralty: Everard H. Saunders, Fleet Surgeon, to Deptford Victualling Yard, February 2nd; Frederick J. Lilly, Fleet Surgeon, to the *Vivid*, for Keyham Naval Barracks, February 2nd; Thomas C. Meikle, M.A., M.B., Surgeon, to the *Pactolus*, January 23rd; Edward F. Power, Surgeon, to the *Caledonia*, January 23rd; George E. Macleod, Surgeon, to the *Wildfire*, February 7th.

Compound Titles.

R.N. writes: In view of the possibility of a change of titles for naval medical officers taking place, I would suggest, instead of giving compound titles such as Surgeon-Lieutenant, Surgeon-Commander, etc., that the titles be Lieutenant ———, R.N., M.D. (Royal Navy Medical Department), Commander ———, R.N., M.D. (Royal Navy Medical Department), etc. The compound titles were tried for the Army Medical Department, and signally failed to satisfy the wishes of the officers of that department. The cabin accommodation for senior officers is a vexed question; a fair way would be to have all cabins numbered and allotted according to seniority. It is generally felt that the question of pension should receive attention, and it would be well were the rates amended, and, instead of the stated periods after twenty years as at present, give an additional 1s. a day for each year of service after completion of twenty years' full service.

RANK AND TITLES.

SENIOR SERVICE writes: Naval medical officers are both doctors and naval officers. To support the latter there is nothing but the sham relative rank, which the army have rightly abolished. That our coming surgeons will be content with this I cannot believe, and it is only a matter of time when the navy will follow the lead of the army in this matter. We want no *imperium in imperio*, as one of your correspondents remarks, but simply an officer's rank in the service plainly stated—the only rank understood in the "fighting" services.

MEDICAL STAFF COLLEGE.

THE Secretary of State for War has approved of the appointments of the following physicians and surgeons as clinical teachers to the Medical Staff College:

Medicine.—Dr. Sharkey, St. Thomas's Hospital; Dr. Hale White, Guy's.
Surgery.—Mr. Pearce Gould, Middlesex; Mr. Stanley Boyd, Charing Cross.
Dental Surgery.—Mr. Badcock, Guy's.
Dermatology.—Dr. Colcott Fox, Westminster.
Laryngology.—Mr. Steward, Guy's.
Midwifery and Gynæcology.—Dr. Dakin, St. George's.
Ophthalmology.—Mr. Treacher Collins, Royal London Ophthalmic.
Otology.—Mr. G. Cheatle, King's College.
Pediatrics.—Dr. Garrod, Hospital for Sick Children, Great Ormond Street.
Psychological Medicine.—Dr. Craig, Bethlehem Royal Hospital.

MAJOR W. B. LEISHMAN, M.B., Royal Army Medical Corps, to be Professor of Pathology, *vice* A. E. Wright, M.D., who has resigned the appointment, February 1st.

ROYAL ARMY MEDICAL CORPS.

THE undermentioned gentlemen are appointed Lieutenants on probation, dated January 31st, 1903: JOHN G. BELL, M.B., MAURICE G. WINDER, FREDERICK W. W. DAWSON, JOHN M. M. CRAWFORD, ROBERT M. RANKING, THOMAS S. COATES, M.B., ALBERT E. B. WOOD, M.B., ROLAND H. BRIDGES, JOSEPH GATT, M.D., JAMES C. G. CARMICHAEL, M.B., FRANCIS C. LAMBERT, JAMES B. MELDON, REGINALD C. WILMOT, CHARLES W. HOLDEN, JAMES A. W. WEBSTER, CHARLES BRAMHALL, THOMAS E. HARTY, HENRY H. SWANZY, KENELYM C. EDWARDS, JOHN H. DUGUID, M.B., HARRY B. KELLY, M.B., GEORGE H. J. BROWN, M.B., EDWARD M. PENNYGATHER, BENJAMIN H. V. DUNBAR, M.D., JOHN E. SKEY, HENRY T. STACK, M.B., DONALD G. CARMICHAEL, M.B., DAVID AHERN, BURNET G. PATCH, GEOFFREY W. G. HUGHES.

The undermentioned Lieutenants on probation are seconded under the provisions of article 349 of the Royal Warrant of March 24th, 1902, dated January 31st, 1903: W. W. DAWSON, G. W. G. HUGHES, F. C. LAMBERT.

The name of Lieutenant EDGAR FRANCIS QUINLAN L'ESTRANGE is as now stated, and not as described in the *London Gazette* of December 28th, 1900.

IMPERIAL YEOMANRY.

TEMPORARY CAPTAIN T. J. S. SUFFIELD, Medical Officer, 30th Battalion, relinquishes his commission, and is granted the honorary rank of Captain in the army, retaining his uniform, February 4th.

MR. GEORGE F. M. CLARKE is appointed Surgeon Lieutenant in the City of London (Rough Riders), January 20th.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

SURGEON-LIEUTENANT T. KAY, M.B., 1st Lanarkshire, is promoted to be Surgeon-Captain, February 4th.

VOLUNTEER RIFLES.

SURGEON-CAPTAIN F. V. ADAMS, 1st Lanarkshire, is promoted to be Surgeon-Major, February 4th.

MR. FREDERICK W. JOHNSON, M.B., is appointed Surgeon-Lieutenant in the 4th (Nottinghamshire) Volunteer Battalion the Sherwood Foresters (Nottinghamshire and Derbyshire Regiment), February 4th.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

LIEUTENANT A. GRANVILLE, the London Companies, is promoted to be Captain, September 20th, 1902.

COLONIAL ALLOWANCE IN SOUTH AFRICA.

ANXIOUS writes: The writer, and probably many other officers of the R.A.M.C. who have not yet been to South Africa, but who may have to go there, would be very interested to know if the present Colonial allowance covers the extra expense of living in that country. From all accounts this is very heavy. It is a question which is specially interesting to medical officers, since they of all others have more frequently to live within the bounds of their pay.

"INDIA REMAINS THE CRUX OF THE R.A.M.C."

A MARRIED MAJOR writes: That the War Office has again deceived the medical profession by not carrying out its promises is well shown by the letter of "Real Crux in India" in the BRITISH MEDICAL JOURNAL of January 24th, p. 230, the increase of pay given to all officers at home or in the Colonies being in India only given to captains and lieutenants. The strength of majors and lieutenant-colonels is now 450, of whom over 140 are in India, and reaping no benefit from the new Warrant during a five or six-year tour in India. Rumour says that there were not 50 candidates at the last examination for 30 commissions in the corps; so, unless the War Office compels the Government of India to recognize the King's Warrants in full, and gives all medical officers fair treatment, it is not impossible that there will be shortly no competition and possibly insufficient candidates, and thus the new Warrant will be spoilt for want of the proverbial "ha'porth of tar." The R.A.M.C. owes a depth of gratitude to the Association and the profession for the improvement the new Warrant promises, and we trust that it will see that full justice is done to us all.

MEDICO-LEGAL AND MEDICO-ETHICAL.

THE CORONER AND THE MEDICAL PROFESSION IN SOUTH-WEST LONDON.

WE learn from the *Borough News* of January 30th, that on the previous Saturday Mr. Troutbeck held an inquest in the Wandsworth Town Hall, touching the death of a child, aged 11 weeks, the son of an actor named Harvey.

The father stated that the child had been in excellent health never having required the attentions of a doctor, and was apparently in the same condition when he and its mother retired shortly after 3 a.m.

The mother, in reply to the coroner, stated that she had fed the child on Dr. Allinson's food and milk. She had suggested doing so to Dr. Badcock by whom she was attended at the birth, and he had said it was all right. She had never been told not to feed the child on the food mentioned. She gave it food at 5 a.m., and at about 9.30 a.m. found it lying on its back dead.

The coroner questioned a police constable who stated that he had taken a letter from the coroner to Dr. Badcock who had said that if any further information was required he would have to be summoned as a witness.

Dr. Freyberger stated in evidence that he had made a *post-mortem* examination, and that Dr. Badcock had put in an appearance during the course of it. The body was that of a rather plump child with commencing rickets. Death was due to exhaustion following convulsions while suffering from inflammation of the lungs and general bronchitis. The improper feeding affected the child's general health; the food given was absolutely unsuitable.

The coroner, in addressing the jury, said that the case illustrated the difficulty which had hitherto existed in getting the best evidence as to the cause of death to place before a jury. The child, who had had no previous illness, was found dead in bed, and there was therefore ground to suspect that the cause of death was suffocation. The doctor called in was the doctor who attended at the birth, and he, the mother stated, authorized the improper feeding. These circumstances would constitute a special reason why it would be most inadvisable that the person whose evidence the jury was asked to rely on should be a medical man already biassed in the case to prove his own treatment the right one. The coroner stated that on the previous evening he had written to Dr. Badcock informing him that Dr. Freyberger would be called, and that if there were any special circumstances connected with the case he (Dr. Badcock) should state them so as to enable the coroner to decide whether it was necessary that Dr. Badcock should be called as a witness. The coroner added that he had received a letter from Dr. Badcock protesting against his (the coroner's) action in not calling him to be a judge in his own case. The thing was impertinent. It was not the first time that a doctor of that kind had been impertinent, but the coroner said that he was certainly not going to call in doctors who obviously were prejudiced to be judges in their own case. It was a matter of great importance that skilled evidence, which could not be checked, should be unprejudiced. In this case death was due not to overlying, but to a fit of convulsions. The mother was not to be blamed; she seemed to be speaking the truth when she said she had medical authority for giving the child what was very improper food. It was monstrous that she should have been allowed to think that she was safe in giving the child this improper food. The doctor in the case had had the opportunity of being there; "his notion of attending is to send me an impertinent letter."

The foreman of the jury inquired whether the doctor in his letter confirmed that statement in any way, and the coroner replied that he had had the opportunity of attending the inquest; he had not done so, and must take the consequences.

The foreman observed to the jury that he supposed the verdict would be one of "Death from natural causes," and inquired whether the jury wished to couple with it a censure on the doctor.

A juror thought he should be spoken to about advising the parents to give the child that food.

After some remarks from the coroner on the improper feeding of infants and the impropriety of prescribing a patent medicine, the foreman said there was a strong wish to censure the doctor; but the coroner said that the expression of opinion would be sufficient, and thought the press might take notice of the kind of pressure brought to bear to make a coroner exercise his discretion in favour of a particular class against the interests of the public.

The inquiry closed with a verdict of "Death from natural causes."

The same issue of the *Borough News* contains the following correspondence addressed to the editor:

Sir,—At an inquest held last week on the body of the child Harvey, I was censured by Mr. Coroner Troutbeck and jury for two things:

1. For my absence from the inquest.
2. For having helped to cause the death of the child by allowing it to be fed on a patent food.

I was absent from the inquest because I did not receive a subpœna from the coroner, in spite of the fact that I was the doctor who was first called to the child after death.

My answer to the second censure is that there is no foundation whatever in the accusation. I had not seen the child since my attendance on the mother at childbirth until I was called in and found the child dead. I have never in the whole course of my professional career ordered or recommended any patent or starchy food for an infant of that age.

It must be obvious to the most casual observer that it is of importance in the interests of justice that the doctor who is first called to the case, and who is, therefore, acquainted with all the circumstances anterior to death, should be also called at the inquest.

I hear that the coroner was pleased to term my letter of protest "impertinent." I therefore ask you to be good enough to insert a copy of the same.—I remain, Sir, yours faithfully,

January 29th, 1903. ERNEST R. BADCOCK.

COPY.

Sir,—I cannot allow to pass, without protest, your misguided action towards me, with regard to the inquest on the body of the child Harvey.

Surely it is of importance in the interests of justice that the medical man who is first called to the case be called at the inquest.

It was a frequent question of your much respected predecessor, the late Mr. Braxton Hicks, "And, doctor, what do you know of the character of these people?" How is it possible that a stranger coming in can further

the ends of justice in this way, however much he may be able to teach the general medical practitioner about his work?

I must apologize for using this paper; it is the only writing paper I find available at the moment.—I am, sir, your obedient servant,

ERNEST R. BADCOCK.

Mr. Coroner Troutbeck, Town Hall, Wandsworth.

RECOVERY OF WITNESSES FEES.

JAY in a recent case was promised by the managing clerk of the plaintiff's solicitor a fee of a guinea a day for attendance at court. The plaintiff lost his case, and the solicitor now refuses to pay. Our correspondent wishes to know what he can do in the matter.

*** We are advised that our correspondent has no legal redress against the plaintiff's solicitor unless he can produce evidence in writing that he made himself personally responsible for payment of the fees. In the absence of such evidence "Jay's" remedy lies against the plaintiff by action in the county court.

FEE FOR SPECIAL ATTENDANCE AFTER CONFINEMENT.

COUNTRY PRACTITIONER attended a lady in her confinement. Eleven days later mania set in, and in the next following nine days thirteen visits were paid. After this, for fifteen days the practitioner remained in the house day and night by special request, and had to obtain a *locum tenens* to do his ordinary work. He asks what fee he can properly charge. The fee for the confinement is 5 guineas.

*** We think that our correspondent might charge his usual fees from the date when the symptoms of mania commenced down to the date when he commenced to remain in the house day and night, while he might charge 10 guineas a day during the time for which he was compelled to give up his whole time to the case.

THE USE OF NOSTRUMS.

DR. E. LLOYD JONES.—We know nothing of the composition or mode of preparation of the nostrum described in the pamphlet sent, but the explanation given seems to be absurd. If the case is one in which it is desirable to give phosphorus it would be far better to give the drug in a form in which the composition and dose are known.

AN ASSISTANT'S CLAIM FOR NOTICE.

J. J. E. B.—We think our correspondent had better accept the month's notice at his present salary, as it is doubtful if he can legally claim any more.

TUNLEY.—British law recognizes only registrable diplomas and degrees.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Appointments.—L. E. Shore, M.D., St. John's, has been appointed a Governor of Hartley University College, Southampton; Miss I Sollos, Newnham College, has been appointed to work at the University table in the Plymouth Marine Biological Laboratory

Demonstrators.—The grace for the appointment of two additional demonstrators of anatomy was opposed in a fly-sheet by Dr. P. W. Latham. In the Senate it was carried on January 29th by a large majority, the minority consisting apparently of the late Downing Professor alone.

Degrees.—At the congregation on January 29th the following medical degrees were conferred: *M.D.*—A. M. Ware, Pembroke. *M.B.*—G. R. Wilson, Trinity; E. S. Scott, Pembroke. *B.C.*—W. M. Strong, Trinity; E. S. Scott, H. C. Williams, Pembroke; R. Butterworth, E. T. Harris, W. W. Holtzmann, Christ's.

Obituary.—The Master of Gonville and Caius College, Dr. N. M. Ferrers, F.R.S., died on January 31st, aged 73. The Master of Pembroke College, Sir George Gabriel Stokes, Bart., F.R.S., died on February 1st, aged 83. The public funeral of Sir Gabriel Stokes takes place on Thursday, February 5th, in the University Church, as we go to press.

UNIVERSITY OF EDINBURGH MASONIC LODGE.

IN a paragraph under this heading, which appeared in the BRITISH MEDICAL JOURNAL of January 31st, p. 292, the address of Dr. F. J. McCann was erroneously given as "Cursitor Street, Mayfair," instead of Curzon Street.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THE ordinary quarterly comitia was held on Thursday, January 29th, the President, Sir W. S. Church, Bart., K.C.B., in the chair.

Membership.

The following gentlemen, having passed the required examination, were admitted as Members: A. H. Hayes, L.R.C.P.; G. W. Rowland, B.A., M.B.Toronto, L.R.C.P.; F. W. Price, M.B.Edin.; H. E. Symes-Thompson, M.A.Camb., L.R.C.P.; G. L. Thornton, M.A.Camb., L.R.C.P.; J. A. Willett, M.B.Oxf., L.R.C.P.; H. Williamson, M.A., M.B.Camb., L.R.C.P.

Licences.

The licence to practise physic was granted to 94 gentlemen. Of these 9 were under regulations dated October 1st, 1884.

Diplomas in Public Health.

In conjunction with the Royal College of Surgeons the diploma in Public Health was awarded to the following gentlemen: B. L. T. Barnett, M.B., B.C.Camb., L.R.C.P., M.R.C.S.; H. J. Barratt, L.R.C.P., M.R.C.S.; J. Bell, L.R.C.P., M.R.C.S.; J. Bennett, L.R.C.P., M.R.C.S.; E. C. Bousfield, L.R.C.P., M.R.C.S.; E. H. Brown, M.D.Brux., M.R.C.P.Lond., L.R.C.S.Edin.; R. F. Clark, L.R.C.P., M.R.C.S.; A. G. Davidson, M.D., C.M.Edin.; A. B. Dunne, M.B., B.C.Cantab; L.R.C.P., M.R.C.S., L.S.A.; E. G. Hill, L.R.C.P., M.R.C.S.; G. P. W. James, L.R.C.P., M.R.C.S.; W. C. Lodwidge, L.R.C.P., M.R.C.S.; T. S. Logan, L.R.C.P. & S.Edin., F.F.P.S.Glasg.; L. Milburn, L.R.C.P., M.R.C.S.; D. J. Morgan, M.B., B.C.Cantab., L.S.A.; W. Murray, M.B., Ch.B.Edin.; J. M. Petrie, M.B., Ch.B.Aberd.; W. J. Shannon, M.B., B.Ch.R.U.I.

Announcements.

The President announced that he had nominated Dr. E. F. Trevelyan, Leeds, as Bradshaw Lecturer for 1903; and that the Council had nominated Dr. William Williams, Cardiff, as Milroy Lecturer for 1904. The President also announced that the Gilbert Blane medals had been awarded to Christopher L. W. Bunton, M.B., Surgeon, R.N., H.M.S. *Forte*, and John F. Hall, M.B., Staff Surgeon, R.N., Naval Brigade, China.

Appointments.

Upon the nomination of the Council, Dr. Lees, Dr. Ormerod, Sir Isambard Owen, and Dr. Percy Kidd were elected Councillors in the room of Dr. Frank, Sir William Gowers, Sir Thomas Barlow, Dr. Coupland, retiring by rotation. Dr. Stevenson was elected a Councillor for two years in the place of Sir R. Douglas Powell, appointed Censor. Dr. Theodore Williams was reappointed as the representative of the College on the Court of Governors of the University of Birmingham.

Communications.

Communications were received from:

1. The Clerk of the Privy Council, announcing the opening of the International Medical Congress at Madrid on April 23rd next.

2. The Controller of H.M. Stationery Office, stating the terms of an agreement with the College to print and issue a new edition of the *Nomenclature of Diseases*.

3. The Board of Trade, Marine Department, in reply to the College, informing the College that a translation of the report of the Norwegian Government on beri-beri was being prepared.

4. The Secretary of the Royal College of Surgeons, reporting certain proceedings of their Council on December 11th, 1902, and January 15th, 1903.

5. A Committee in Munich for erecting a memorial to Professor Pettenkofer, inviting the co-operation of the College, dated October 31st.

The Harveian Festival.

Upon the motion of Dr. Poore, seconded by Dr. Kingston Fowler, it was resolved: "That the President be requested to nominate a small Committee to consider and report to the College as to whether or not any change be desirable in the date and arrangements for the annual Harveian Festival," and the President, the Treasurer, Dr. Pavy, Dr. Whipham, Dr. Poore, and Dr. Kingston Fowler were nominated by the President to serve on such Committee.

Reports.

The following reports were received and adopted:

1. From the Committee of Management, dated December 29th, 1902, recommending:

a. That the Rotunda Hospital, Dublin, be recognized as a place of instruction in midwifery and gynaecology, for the certificates required by Clauses 5 (*b*), 6 (*d*), and 11, par. ii, Section 1 of the Regulations of the Examining Board in England.

b. That the University of Minnesota, United States, be added to the list of universities at which the curriculum of professional study required for the diplomas of the Royal Colleges may be pursued, and whose graduates may be admitted to the Final Examination of the Examining Board in England, on production of the required certificates of study.

2. From the Laboratories Committee, dated December 5th, 1902, reporting:

a. That during the last three months 8,275 doses of diphtheria antitoxin, each containing 3,000 units, have been supplied to the hospitals of the Metropolitan Asylums Board, making a total of 24,825,000 units.

b. That during the quarter further batches of antitoxin supplied by Messrs. Parke, Davis, and Co. have been tested in the laboratory, and a certificate granted showing its strength, sterility, and freedom from excess of antiseptic.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

A QUARTERLY meeting of the Royal College of Physicians, Edinburgh, was held on Tuesday, February 3rd, 1903, Sir Thomas R. Fraser, Vice-President, in the chair.

Admission to the Fellowship.

David James Galloway, M.D.Edin., M.R.C.P.E., Singapore, was admitted by ballot to the Fellowship of the College.

Admission to the Licence.

The Registrar reported that since the last quarterly meeting 37 persons had obtained the licence of the College by examination.

Parkin Prize Award.

The Parkin Prize, which is in the gift of the College, was awarded after competition to Dr. Charles James Lewis, F.R.C.P.E. The subject of the essay on the present occasion was, in terms of the deed of bequest, "On the Curative Effects of Carbonic Acid Gas or other forms of Carbon in Cholera, for different forms of Fever and other Diseases."

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

Election of Fellows.

AT a meeting of the College held on February 3rd the following gentlemen were elected Fellows: Arthur Greene Brinton, M.R.C.S.Eng., L.R.C.P. Lond., Birmingham; and Raghubardayal Saigol, L.R.C.S.E., Birmingham.

CONJOINT BOARD IN SCOTLAND.

THE quarterly examinations of the above Board, held in Edinburgh, were concluded on January 28th, with the following results:

First Examination: Four Years' Course.—H. G. Campbell.

First Examination: Five Years' Course.—J. S. J. Stenhouse, Nena Beatrice Jevers, G. G. Swanson, H. McIlroy, T. McClure, A. P. Dias, A. P. O'Connell, D. Steele-Perkins, and T. C. Dykes.

Three passed in Physics, 2 in Elementary Biology, and 4 in Chemistry.

Second Examination: Four Years' Course.—A. C. M. Macrae, J. H. Allan, and J. S. Cooper.

Second Examination: Five Years' Course.—W. Barclay, C. G. Dyer, T. P. Cox, R. Wearing, S. E. Mangenie, N. S. Sodhi, W. Watson, S. S. Anlia, and D. C. Neir.

Two passed in Anatomy.

Third Examination: Five Years' Course.—S. Newmark, A. S. McNeil, G. A. Charter, C. R. Whittaker, J. Walsh, J. A. Robertson, J. F. Webster, E. H. E. Coghlan, Elizabeth Saunders Graham, A. L. Johnston, M. Rajabahdur, S. P. Joseph, J. D. Jones, C. S. Hunter, and R. Baranov.

Three passed in Pathology.

Final Examination.—S. Newmark, W. H. Burnhill, W. B. Chapman, J. L. M. Govan, J. O'Regan, C. M. Begg, L. Beesly, J. Wilson, W. J. Shorten, D. W. Purkis, W. E. O'Hara, Helen Stephen Baird, G. Harrison, E. G. Taylor, P. F. Doorly, R. A. Lockhart, A. Wood, O. W. Haist, J. Ellul, T. T. Smith, D. Cameron, D. S. Mackay, J. A. D. Rome, M. S. Mallick, M. M. Ali, S. G. Ranaday, B. B. Bharncha, J. H. Contractor, H. J. Patchett, A. L. Howard, S. M. Hodiwallu, F. H. Maberly, S. R. Scott, F. R. Bremner, E. F. Cox, N. Lipscomb, and M. Rajabahdur.

Fourteen passed in Medicine and Therapeutics, 1 in Surgery and Surgical Anatomy, 17 in Midwifery, and 14 in Medical Jurisprudence.

CONJOINT BOARD IN ENGLAND.

THE following gentlemen passed the First Examination of the Board in the subjects indicated:

Part I. Chemistry.—W. S. Alderson, Firth College, Sheffield, and Bradford Technical College; R. N. W. Biddulph, University College, Bristol; J. W. Bintcliffe, Owens College, Manchester; C. W. G. Bryan, St. Mary's Hospital; A. G. H. Buckby, Guy's Hospital; M. B. S. Button, London Hospital; P. J. Chissell, Middlesex Hospital; H. D. Clapham, Birkbeck Institute; W. W. Cook and M. M. Earle, Guy's Hospital; G. H. Dive, St. Bartholomew's Hospital; L. Edwards, London Hospital; R. Eyton-Jones, University College, Liverpool; J. S. Farnfield, L.D.S.Eng., Guy's Hospital; E. W. Gandy, Cambridge University and Westminster Hospital; H. Gibson, London Hospital; H. Granger, St. Thomas's Hospital; G. E. Green, University College, Liverpool; S. G. Greene, St. Bartholomew's Hospital; M. Greer, University College, Liverpool; J. G. Ivers, Owens College, Manchester; T. R. L. Jones, London Hospital; A. R. Littlejohn, St. Mary's Hospital; T. F. Lumb, Cambridge University and Polytechnic Institute; R. H. McGillycuddy, University College, London; W. B. Martin, Owens College, Manchester; C. H. Mills, Guy's Hospital; J. Morris, Middlesex Hospital; C. P. L. Petch, St. Thomas's Hospital; J. L. Rankine, Guy's Hospital; J. S. Robertson, London Hospital; J. A. Somerville, Owens College, Manchester; R. H. E. Stevens, University College, London; W. P. Tindal-Atkinson, St. Thomas's Hospital; E. G. Treharne, University College, Cardiff; H. T. Treves, St. Thomas's Hospital; and L. C. Wilkinson, St. Bartholomew's Hospital.

Part II. Practical Pharmacy.—J. Armstrong, University of New Zealand and University College, London; J. Aylen, St. George's Hospital; H. O. M. Beadnell, Guy's Hospital; E. J. H. Bowen, London Hospital; J. R. A. C. Hall and A. G. V. Elder, St. George's Hospital; R. Compton, Owens College, Manchester; T. Evans, Glasgow University and London Hospital; F. Forrest, Owens College, Manchester; L. W. Forsyth, Cambridge University and Middlesex Hospital; E. S. Goss, University College, Bristol; M. Greenwood, London Hospital; W. E. Haigh, private study; R. H. Hardwick, St. Thomas's Hospital; D. R. Harris and J. C. L. Hingston, Middlesex Hospital; F. F. L. How, Edinburgh University and University College, London; H. L. Howell, Charing Cross Hospital; W. J. D. Inness, St. Mary's Hospital; J. S. Le Fevre, University of Sydney and London Hospital; F. B. Lowe, Guy's Hospital; J. Macarthur, St. Mary's Hospital; P. J. Marett, Westminster Hospital; E. P. Minett and J. O. Musson, Guy's Hospital; C. C. Morrell, University College, Liverpool, and London Hospital; J. C. A. Norman, London Hospital; M. Onslow Ford, St. Bartholomew's Hospital; A. R. Phelps, Cambridge University and St. Thomas's Hospital; G. M. Sanderson, London Hospital; F. M. W. South, Westminster Hospital; W. A. Tatchell, London Hospital; S. C. Thompson, University College, London; F. H. Wallace, Guy's Hospital; H. F. Warner, London Hospital.

Part III. Elementary Biology.—E. M. Adam, Charing Cross Hospital; W. S. Alderson, Bradford Technical College; R. C. Allen, Mason College, Birmingham; S. H. Andrews, B.A.Camb., St. Bartholomew's Hospital; A. Angell, Guy's Hospital; R. E. Apperly, Middlesex Hospital; T. H. C. Benians and A. J. Brown, London Hospital; J. Browne and G. Comyn, King's College Hospital; J. A. Byrne, Owens College, Manchester; W. W. Cook, Guy's Hospital; G. H. Dive, St. Bartholomew's Hospital; F. Dunphy, Westminster Hospital; J. B. Fairclough, Yorkshire College, Leeds; H. Gallowa, Westminster Hospital; J. R. Gyllencrentz and F. B. Hicks, St. Thomas's Hospital; C. F. L. Leipoldt, Guy's Hospital; T. R. L. Jones, W. E. Lloyd, and E. MacEwan, London Hospital; P. W. Mathew, Middlesex Hospital; M. Maher, Cairo and Guy's Hospital; J. Morris, City of London College; L. A. B. Moore, Guy's Hospital; R. Mugliston, London Hospital; R. M. Peake, Middlesex Hospital; C. H. L. Petch, St. Thomas's Hospital; W. J. Petty, University College, Cardiff; W. P. Pinder, Yorkshire College, Leeds; J. S. Robertson, London Hospital; R. W. Starkie, Owens College, Manchester; L. St. Vincent-Welch and E. L. Taylor, St. Bartholomew's Hospital; W. P. Tindal-Atkinson, St. Thomas's Hospital; A. D. Vernon-Taylor and J. N. Watson, Guy's Hospital.

SMALL-POX IN ENGLAND AND WALES.—In the Midlands small-pox is becoming increasingly prevalent. The fresh cases are nearly all among workhouse casuals. There were 14 cases under treatment in the Birmingham Isolation Hospital on January 25th; 7 new cases had occurred during a few days at Walsall; new cases are reported at Coventry, and many are said to be under treatment at Aston and in the King's Norton District. For over five months cases of small-pox have occurred at Merthyr, but the number has been much less during the last two months. Four cases of small-pox are reported from Glyncorrwg; all four have been removed to the isolation hospital at Cymmer. Six cases in Maesteg.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

A SIMPLE METHOD OF ADJUSTING RATES OBTAINED FROM RETURNS FOR "FIFTY-THREE-WEEK" YEARS.

By REGINALD DUDFIELD, M.A., M.B., F.S.S.,
Medical Officer of Health, Metropolitan Borough of Paddington.

THE majority of medical officers of health are in the habit of tabulating returns relating to vital statistics and other matters on a weekly basis, using the totals for the (usually) fifty-two weeks for the calculation of annual rates. Last year, however, was a "fifty-three-week" year, and in consequence it is necessary to adjust the results obtained by the usual method to allow for the extra week. The error which would be introduced by neglecting such adjustment is not exactly negligible, as it amounts to 0.40 in the rate of 25 per 1,000, and is, of course, greater for higher rates.

The method adopted at Somerset House is, I am informed, to increase the estimate of the population at the middle of the year, in the proportion of 365 : 371. Such a correction, if applied to all the subdivisions of the population, entails a very considerable amount of work. In the case of my own borough and the subdivisions of the population which I require, it would involve over 200 separate calculations. Consequently I sought a simpler method, and have devised a small table which serves all my needs, not only in connexion with the rates for last year, but for all years containing fifty-three weeks.

It will be apparent, from the usual construction of logarithmic tables, that the top line of figures in the appended table normally represent units, and the first column tens. By shifting the decimal point to the left in the lower rows, the top line of figures can be taken as decimals with any number of ciphers preceding the significant digit. In a similar manner, by shifting the decimal point to the right, the first column can be taken to represent hundreds, etc. In its present form, calculated to the third place of decimals only, the table is not available for use with standards or bases exceeding 1,000,000, and it is advisable that such standard should not exceed 100,000.

The use of the table is as follows: Rates are calculated in the usual manner from the totals for the fifty-three weeks. By the addition of two figures taken from the table, the adjusted rate will be obtained. Suppose the rate obtained be 25.37 per 1,000. To adjust it, find the figure corresponding to 25. It is 24.595. Then find the figure corresponding to 37. It is 36.400. In the present case the latter half of the rate is not "37," but "0.37," and consequently the second figure must be written "0.36400." Then 24.595+0.364=24.959, the adjusted rate required.

I have in preparation similar tables for applying corrections to rates derived from the totals for fifty-two, or fifty-three, weeks to reduce them to a uniform standard of 365 days. These tables will be calculated to five places of decimals. In the meantime I have published the present table in the hope that it will be found useful for the preparation of reports relating to last year.

Table for Correcting Rates for a 53-Week Year.

—	0	1	2	3	4	5	6	7	8	9
0	—	0.983	1.967	2.951	3.935	4.919	5 902	6.886	7.870	8.854
1	9.838	10.821	11.805	12.789	13.773	14 757	15.740	16.724	17.708	18.692
2	19.676	20.659	21.643	22 627	23.611	24.595	25.578	26 562	27.546	28.530
3	29.514	30.497	31.481	32.465	33 449	34 433	35.416	36.400	37.384	38.368
4	39.352	40.335	41.319	42.303	43.287	44.271	45.254	46.238	47.222	48.206
5	49.190	50.173	51.157	52.141	53.125	54.109	55.092	56.076	57.060	58.044
6	59.028	60.011	60.995	61.979	62 963	63.947	64.930	65.914	66.898	67.882
7	68.866	69.849	70.833	71.817	72 801	73.785	74.768	75.752	76.736	77.720
8	78.704	79.687	80.671	81.655	82.639	83 623	84.606	85.590	86.574	87.558
9	88.542	89.525	90.509	91.493	92.477	93.401	94.444	95.428	96.412	97.396

ENGLISH URBAN MORTALITY IN THE FOURTH QUARTER OF 1902.

[SPECIALLY REPORTED FOR THE BRITISH MEDICAL JOURNAL.]

THE vital statistics of the seventy-six large towns dealt with in the Registrar-General's weekly returns are summarized in the accompanying table. During the three months ending December last, 115,829 births were registered in these towns, equal to an annual rate of 29.0 per 1,000 of their aggregate population, estimated at 14,862,880 persons in the middle

Analysis of the Vital Statistics of Seventy-Six of the Largest English Towns during the Fourth Quarter of 1902.

Towns.	Estimated Population middle of 1902.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Infectious Diseases.	Deaths from Principal Infectious Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Fever.	Diarrhoea.	Deaths of Children under one year of age to 1,000 Births.	Rate per cent. of Uncertified Deaths.
76 Towns	14,862,880	115,829	71,265	29.0	17.9	2.14	8,565	74	2,359	802	1,153	1,053	754	2,370	166	1.2
75 Provincial Towns	10,283,773	81,679	49,497	29.6	17.9	2.31	6,366	73	1,788	668	830	639	540	1,822	169	1.7
London	4,579,107	34,150	21,768	27.8	17.7	1.79	2,199	1	571	134	317	414	214	548	157	0.3
Croydon	137,917	934	493	25.2	13.3	1.11	41	—	2	1	8	15	2	13	146	—
Willesden	121,611	988	428	30.3	13.1	1.53	50	—	1	—	7	13	3	26	177	1.4
Hornsey	75,565	380	178	19.2	8.8	0.75	15	—	—	—	2	6	2	5	111	—
Tottenham	106,535	844	427	29.5	14.9	1.36	39	—	1	4	7	13	8	6	171	0.2
West Ham	275,408	2,450	1,337	33.1	18.1	3.58	264	1	64	13	42	29	19	96	169	0.7
East Ham	104,023	1,002	357	35.9	12.8	1.92	54	—	7	4	6	10	6	21	130	1.4
Leyton	103,479	819	286	29.5	10.3	1.26	35	—	1	3	14	5	5	7	98	0.7
Walthamstow	101,318	940	358	34.6	13.2	1.25	34	1	9	1	6	3	5	9	139	0.3
Hastings	65,893	312	245	17.6	13.8	1.64	29	—	13	4	4	2	—	6	103	1.2
Brighton	124,539	797	508	23.8	15.2	1.29	43	—	—	—	15	1	6	21	151	0.8
Portsmouth	191,909	1,383	864	26.8	16.8	2.02	104	—	18	3	19	13	15	36	140	1.5
Bournemouth	61,628	238	197	14.4	11.9	0.36	6	—	—	—	3	1	—	2	92	—
Southampton	107,756	798	419	27.6	14.5	1.36	54	—	5	5	9	17	7	11	130	—
Reading	73,802	521	281	26.3	14.2	1.05	21	—	8	—	7	—	1	5	115	1.4
Northampton	88,592	561	369	23.6	15.5	1.22	29	—	—	1	3	8	—	17	162	0.8
Ipswich	67,840	493	256	27.1	14.1	1.37	25	—	—	—	1	9	8	7	136	0.4
Great Yarmouth	51,610	366	220	26.4	15.9	2.32	32	—	—	7	7	8	1	9	137	—
Norwich	113,178	866	562	28.5	18.5	2.27	69	—	1	13	3	25	3	24	166	0.9
Plymouth	110,057	766	458	25.9	15.5	0.84	25	—	—	1	2	—	1	21	141	0.7
Devonport	72,307	558	304	28.7	15.7	1.50	29	—	6	5	5	—	3	10	145	—
Bristol	334,632	2,399	1,741	26.7	19.4	3.80	341	1	172	23	10	31	20	34	108	0.5
Hanley	62,486	567	422	33.8	25.2	5.78	97	2	38	—	17	11	4	25	280	1.9
Burton-on-Trent	50,973	356	171	20.0	12.5	1.10	15	—	1	5	2	4	—	3	93	0.6
Wolverhampton	95,712	766	481	29.8	18.7	2.41	62	—	9	5	6	2	4	39	205	0.6
Walsall	88,338	795	396	33.5	16.7	2.52	60	—	16	9	2	5	8	20	162	0.8
Handsworth	55,491	376	170	25.2	11.4	0.81	12	—	5	3	3	1	—	—	154	4.1
West Bromwich	65,938	576	383	32.5	21.6	4.52	80	—	37	10	3	1	1	19	224	1.8
Birmingham	528,181	4,199	2,621	29.6	18.5	2.37	335	—	47	55	45	59	25	144	180	2.9
Kings Norton	60,779	439	187	26.9	11.5	0.84	14	—	3	3	—	3	3	2	139	2.1
Smethwick	56,893	524	261	34.3	18.4	1.59	24	—	13	5	3	2	1	1	193	3.9
Aston Manor	78,481	609	267	28.9	12.7	1.34	28	—	—	5	1	1	5	16	140	2.6
Coventry	71,475	510	251	26.6	13.1	1.25	24	—	—	3	6	—	2	13	118	1.2
Leicester	216,389	1,677	991	28.9	15.5	1.41	82	—	4	7	10	5	2	54	178	1.9
Grimsby	64,596	487	265	28.1	15.3	2.08	35	—	—	4	2	12	8	9	164	0.8
Nottingham	243,190	1,785	1,208	27.3	18.5	1.83	119	—	1	8	15	15	23	62	197	0.4
Derby	116,982	850	475	27.1	15.1	1.08	34	—	—	2	2	3	3	24	173	—
Stockport	94,422	663	554	26.2	21.9	3.00	76	9	10	11	1	19	8	18	261	0.4
Birkenhead	112,396	909	580	30.1	19.4	2.15	65	1	[illegible]	11	9	10	10	16	197	0.5
Wallasey	56,173	395	208	26.2	13.8	1.14	17	—	6	2	1	1	6	1	124	2.9
Liverpool	692,495	6,107	4,509	32.8	24.3	3.76	701	12	258	106	62	35	73	155	170	3.5
Bootle	59,776	528	355	32.9	22.1	4.24	68	3	40	5	4	—	3	13	180	3.4
St. Helens	85,986	833	445	36.1	19.3	2.16	50	—	8	16	7	1	5	13	180	4.5
Wigan	61,587	640	341	38.7	20.6	3.26	54	—	8	10	5	9	6	10	164	0.6
Warrington	65,419	607	309	34.6	17.6	1.47	20	—	—	5	2	2	1	10	194	4.8
Bolton	171,082	1,152	815	25.1	17.7	2.51	116	6	18	35	14	7	12	24	190	0.1
Bury	58,182	302	275	19.3	17.6	2.12	33	6	4	1	17	—	3	2	175	3.0
Manchester	549,169	4,480	2,907	30.4	19.7	2.48	366	—	104	42	41	47	21	111	184	0.4
Salford	224,007	1,917	1,234	31.9	20.5	4.11	247	—	112	17	26	28	10	46	201	0.3
Oldham	138,091	947	705	25.5	19.0	2.35	87	6	11	18	18	9	9	16	160	0.7
Rochdale	84,957	530	391	23.5	17.3	0.52	12	—	—	—	3	1	—	8	136	5.8
Burnley	98,383	772	497	29.2	18.8	2.23	59	3	5	20	15	—	4	12	185	1.4
Blackburn	130,318	814	599	23.3	17.1	2.95	72	2	19	6	5	5	2	26	190	3.5
Preston	113,766	878	672	28.7	22.0	3.60	112	—	1	3	12	10	8	28	230	4.5
Barrow-in-Furness	58,371	498	295	31.8	13.1	0.64	10	—	—	—	[illegible]	[illegible]	2	2	114	4.4
Huddersfield	95,000	653	441	25.6	17.3	1.27	32	1	2	0	5	11	2	5	137	2.5
Halifax	105,932	566	447	19.9	15.7	0.75	21	—	1	[illegible]	[illegible]	2	4	6	173	1.8
Bradford	281,770	1,684	1,104	21.9	15.8	1.17	85	—	0	8	34	13	10	17	140	0.3
Leeds	437,036	3,280	2,141	28.0	18.2	2.31	272	4	93	20	32	17	30	76	172	3.7
Sheffield	418,177	3,740	1,900	33.3	17.5	1.49	167	—	29	17	17	10	18	76	152	2.9
Rotherham	55,934	489	287	32.6	17.1	1.84	20	1	[illegible]	1	6	4	3	5	180	3.1
York	79,114	634	312	29.8	14.7	1.13	24	1	[illegible]	3	3	1	6	10	93	3.6
Hull	245,448	2,085	1,313	31.6	19.9	4.49	296	—	[illegible]	6	30	13	12	35	161	1.4
Middlesbrough	93,355	843	505	35.6	20.1	2.84	71	—	0	9	21	2	8	23	186	2.8
Stockton-on-Tees	51,745	424	222	30.5	16.0	1.37	19	—	9	6	[illegible]	—	—	3	193	1.8
West Hartlepool	65,161	503	302	32.2	17.3	2.11	37	—	18	2	20	—	2	3	181	
Sunderland	148,007	1,160	780	35.7	19.6	1.82	72	—	6	8	4	9	11	24	183	4.7
South Shields	103,330	1,005	571	36.2	20.6	3.61	100	—	78	5	1	2	3	9	173	0.5
Gateshead	113,024	1,004	498	35.1	16.4	1.66	32	1	[illegible]	12	3	1	1	12	134	0.4
Newcastle-on-Tyne	219,150	1,889	1,193	32.1	20.3	1.96	115	—	50	20	11	8	4	22	137	1.2
Tynemouth	52,009	472	207	33.8	21.3	3.01	42	—	16	2	2	10	1	11	159	2.0
Newport (Mon.)	68,901	593	362	32.1	19.6	3.02	67	2	53	2	1	1	3	3	120	
Cardiff	168,909	1,414	886	31.6	19.4	4.34	107	—	118	5	22	41	1	10	182	0.2
Rhondda	117,011	1,323	513	42.1	17.0	2.93	94	—	1	3	24	4	3	24	116	5.9
Merthyr Tydfil	70,568	773	451	40.8	23.8	3.23	61	10	7	2	6	6	1	28	200	0.4
Swansea	95,059	813	404	31.9	18.2	1.40	38	—	4	4	8	—	2	20	180	0.6

of last year. In London the birth-rate last quarter was 27.8 per 1,000, while it averaged 29.6 per 1,000 in the seventy-five large provincial towns, among which the rates ranged from 14.4 in Bournemouth, 17.6 in Hastings, 19.2 in Hornsey, 19.3 in Bury, 19 9 in Halifax, 21.9 in Bradford, 23 3 in Blackburn, and 23.5 in Rochdale to 35.1 in Gateshead, 35.6 in Middlesbrough, 35.7 in Sunderland, 35.9 in East Ham, 36.1 in St. Helens, 36.2 in South Shields, 38.7 in Wigan, 40.8 in Merthyr Tydfil, and 42.1 in Rhondda.

During the quarter under notice 71,265 deaths were registered in these seventy-six towns, corresponding to an annual rate of 17.9 per 1,000 persons living. The death-rates in the several towns ranged from 8.8 in Hornsey, 10.3 in Leyton, 11 4 in Handsworth, 11.5 in King's Norton, 11.9 in Bournemouth, 12.5 in Burton-on-Trent, 12.7 in Aston Manor, and 12.8 in East Ham to 21.3 in Tynemouth, 21 6 in West Bromwich, 21.9 in Stockport, 22.1 in Bootle, 22.3 in Preston, 23 8 in Merthyr Tydfil, 24.3 in Liverpool, and 25 1 in Hanley. In London the rate of mortality was 17.7 per 1,000, which was slightly below the mean rate in the seventy-five large provincial towns.

The 71,265 deaths from all causes in these seventy-six towns last quarter included 8,565 which were referred to the principal infectious diseases; of these, 74 resulted from small-pox, 2,359 from measles, 802 from scarlet fever, 1,153 from diphtheria, 1,053 from whooping-cough, 754 from "fever" (principally enteric), and 2,370 from diarrhoea. The death-rate from these diseases averaged 2.14 per 1,000 in the seventy six towns; in London this death-rate was equal to 1.80 per 1,000, while it averaged 2.31 in the seventy-five large provincial towns, among which the death-rates from these infectious diseases ranged from 0.36 in Bournemouth, 0 52 in Rochdale, 0.75 in Hornsey and in Halifax, 0.81 in Handsworth, 0 84 in Plymouth and in King's Norton, and 1.05 in Reading to 3 76 in Liverpool, 3.80 in Bristol, 4.11 in Salford, 4 24 in Bootle, 4.34 in Cardiff, 4.49 in Hull, 4.52 in West Bromwich, and 5.78 in Hanley. The 70 fatal cases of small-pox registered during last quarter included 12 which belonged to Liverpool, 10 to Merthyr Tydfil, 9 to Stockport, 6 to Bolton, 6 to Bury, 6 to Oldham, 4 to Leeds, 3 to Bootle, and 3 to Burnley. The 2,359 deaths from measles were equal to an annual rate of 0.59 per 1,000; in London the death-rate from this disease was 0.46 per 1,000, while it averaged 0.65 in the seventy-five large provincial towns, among which measles showed the highest proportional mortality in Bristol, Hanley, West Bromwich, Bootle, Salford, Hull, South Shields, Newport (Mon.), and Cardiff. The 802 fatal cases of scarlet fever corresponded to an annual rate of 0.20 per 1,000; in London the scarlet fever death-rate was only 0 11 per 1,000, while it averaged 0 24 in the seventy-five other large towns, and was highest in Great Yarmouth, Liverpool, St. Helens, Wigan, Bolton, Oldham, and Burnley. The 1,153 deaths from diphtheria were equal to an annual rate of 0.29 per 1,000; in London the death-rate from this disease was 0.26 per 1,000, while it averaged 0.30 in the seventy-five other large towns, among which diphtheria was proportionately most fatal in West Ham, Bristol, Hanley, Bury, Burnley, Middlesbrough, West Hartlepool, and Rhondda. The 1,053 fatal cases of whooping-cough registered in the seventy-six towns last quarter corresponded to an annual rate of 0.26 per 1,000; in London whooping-cough caused a death-rate of 0.34 per 1,000, while the mean rate in the seventy-five large provincial towns was 0 23 per 1,000, the highest rates being recorded in Southampton, Great Yarmouth, Norwich, Hanley, Grimsby, Stockport, Tynemouth, and Cardiff. The 754 deaths referred to different forms of "fever" were equal to an annual rate of 0.19 per 1,000, which was slightly higher than the "fever" death-rate in London; among the seventy-five large provincial towns the greatest proportional mortality from "fever" occurred in Ipswich, Walsall, Grimsby, Nottingham, Wallasey, Liverpool, Wigan, and Merthyr Tydfil. The 2,370 fatal cases of diarrhoea corresponded to an annual rate of 0.59 per 1,000; in London the death-rate from this disease was 0 45 per 1,000, while it averaged 0.66 in the seventy-five other large towns, and was highest in West Ham, Hanley, Wolverhampton, West Bromwich, Birmingham, Preston, Middlesbrough, and Merthyr Tydfil.

Infant mortality, measured by the proportion of deaths under 1 year of age to registered births, was equal to 166 per 1,000; in London the proportion was 157 per 1,000, while it averaged 169 per 1,000 in the seventy-five other large towns, and ranged from 92 in Bournemouth, 93 in Burton-on-Trent and in York, 98 in Leyton, 103 in Hastings, 111 in Hornsey, 114 in Barrow-in-Furness, and 115 in Reading to 201 in Salford, 205 in Wolverhampton, 206 in Merthyr Tydfil, 208 in Middlesbrough, 224 in West Bromwich, 239 in Preston, 261 in Stockport, and 280 in Hanley.

The causes of 886, or 1.2 per cent., of the deaths registered in the seventy-six large towns last quarter were not certified, either by a registered medical practitioner or by a coroner. The causes of all the deaths were duly certified in Croydon, Hornsey, Bournemouth, Southampton, Great Yarmouth, Devonport, Derby, West Hartlepool, and Newport (Mon.); while the highest proportions of uncertified deaths were registered in St. Helens, Warrington, Rochdale, Preston, Sunderland, South Shields, Gateshead, and Rhondda.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 8,880 births and 5,229 deaths were registered during the week ending Saturday last, January 31st. The annual rate of mortality in these towns, which had been 18.5, 17.5, and 20.1 per 1,000 in the three preceding weeks, declined again last week to 18.1 per 1,000. Among these large towns the death rates ranged from 7.6 in East Ham, 8.2 in Handsworth, 9.2 in Devonport, 10.1 in Burton-on-Trent, 10 8 in Wolverhampton, 11.5 in Barrow-in-Furness, 11.6 in Wallasey, and 12 0 in Swansea, to 23.1 in Hanley, 23.3 in South Shields, 23.5 in West Bromwich, 23.7 in Norwich, 24.0 in Oldham, 24.6 in Rotherham, 25.1 in Newcastle-on-Tyne, and 26.0 in Wigan. In London the rate of mortality was 17.7 per 1,000, while it averaged 18 2 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.7 per 1,000 in the seventy-six towns; in London this death-rate was also equal to 1.7 per 1,000, while among the seventy-five other large towns the highest rates were 3.1 in West Bromwich, 3 3 in Croydon and in King's Norton, 3.4 in Manchester, 3.5 in Walsall, 4.1 in Hanley, and 4 5 in Newport (Mon.). Measles caused a death-rate of 1.0 in South Shields, 1.1 in Middlesbrough, 1.2 in Manchester, 1.3 in Hull, and 3.7 in Newport (Mon.); diphtheria of 1.1 in Middlesbrough, 1.4 in Reading and in Coventry, and 1 6 in Hanley; and whooping-cough of 1.2 in Bristol, 1.5 in Oldham, 1.7 in Northampton, 1.7 in Smethwick, 1.9 in Tottenham, 2.2 in Stockport, 2.5 in Hanley and in King's Norton, and 3 3 in Croydon. The mortality from scarlet fever, from "fever," and from diarrhoea showed no marked excess in any of the large towns. Of the 13 fatal cases of small-pox registered in these towns last week, 6 belonged to Liverpool, 3 to Leicester, and 1 each to Walsall, Birmingham, Bury, and Manchester The number of small-pox patients under treatment in the Metropolitan Asylums Hospitals, which had declined from 21 to 4 at the end of the six preceding weeks, had risen again to 7 at the end of last week; 6 new case were admitted during the week, against 4, 2, and none in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on Saturday last, January 31st, was 2,019, against 2,219, 2,125, and 2,074 on the three preceding Saturdays; 227 new cases were admitted during the week, against 223, 192, and 227 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, January 31st, 930 births and 696 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 22.6, 23 4, and 24.6 per 1,000 in the three preceding weeks, declined again to 21.3 per 1,000 last week, but was 3.2 per 1,000 above the mean rate during the same period in the seventy-six large English towns. The rates in the eight Scotch towns ranged from 12.4 in Perth and 17.8 in Edinburgh, to 23.0 in Aberdeen and 24.8 in Greenock. The death rate from the principal infectious diseases averaged 2 5 per 1,000 in these Scotch towns, the highest rates being recorded in Glasgow and Aberdeen. The 342 deaths registered in Glasgow included 2 from measles, 2 from scarlet fever, 4 from diphtheria, 27 from whooping-cough, 3 from "fever," and 6 from diarrhoea. Two fatal cases of measles and 4 of whooping-cough were recorded in Edinburgh. Fourteen deaths from measles and 3 from diarrhoea occurred in Aberdeen; 2 from diarrhoea in Dundee; and 2 from measles in Leith.

THE COST OF VACCINATION.

THE SCALE OF FEES.

WE learn from the *Birmingham Gazette* that at a meeting of the West Bromwich Union on January 19th a resolution was moved expressing regret at "the enormous increase in vaccination expenses," and earnestly requesting the Local Government Board to take the necessary steps immediately to bring about a reduction of such expenses. The mover of the resolution stated that the cost of vaccination in the Union had risen from £304 in 1890 to £1,099 in 1900; he estimated that the cost for the present year would reach £1,500. After some discussion an amendment was adopted simply bringing the matter under the notice of the Local Government Board, and respectfully asking for a revision of the vaccination fees.

The best comment which we can make upon this discussion and the resolution is contained in the following letter from Dr. Langley Browne, of West Bromwich, which was read to the meeting of the Guardians on January 26th:

"Moor House, West Bromwich, January 26th, 1903.

"Dear Sir,—I have read the report of the discussion at the Board of Guardians about the present expenditure upon vaccination, and I should like to put before your Board some observations on this point. Many years ago your Board estimated their annual expenditure for vaccination at a sum which was based upon the knowledge of the cost incurred in previous years. For a great many years nothing like this estimated amount was spent upon vaccination, and at the time of the passing of the Act of 1898 there were 5,000 unvaccinated arrears in the Union. The Act of 1898 established domiciliary visits, and relieved the parents of the necessity of leaving their home and their work to attend at the vaccination stations. Surely this is a boon to the labouring classes, and it has certainly been attended by an increase in the amount of vaccinated children. The fees now paid average about 2s. for each journey. For a large proportion of journeys the public vaccinators are only paid 1s., namely, those in which they have to call but do not succeed in persuading the parents to have their children vaccinated; when vaccination does take place you pay a fee of 5s, but this has to cover another journey for inspection, and also any other visits which may be necessary, and all medical treatment; antiseptics also have to be provided. Notice by post has to be sent to every parent of the intended visit, and three different registers have to be accurately kept—the vaccinators' register, the form 'H,' and the weekly return to the lymph department of the Local Government Board. Surely no thinking man will consider these fees excessive for the work done. The cost of efficient vaccination can never equal the cost of treating by isolation and disinfection an epidemic of small-pox. If there is any change of vaccination authority it would be far better to transfer the control to the Local Government Board than to give it to another authority already overworked.—I am, dear Sir, yours very truly,

"H. LANGLEY BROWNE.

"H. Ward, Esq."

No discussion took place on Dr. Langley Browne's letter.

VACCINATION OF WORKMEN.

One of the auditors to the Local Government Board has recently given a decision of considerable importance in relation to the cost of revaccination. It appears that between May 28th and June 6th of last year, some 493 men employed at certain waterworks were revaccinated. The operation took place at the different stations at Lambeth, Chelsea, and Surbiton, where the men were employed. The charge made by the public vaccinators was 7s. 6d. a head. At the audit which was recently opened at Kingston-on-Thames, it was objected on behalf of a ratepayers' association that this charge was excessive. According to the scale, public vaccinators are permitted to make a charge of 2s. 6d a head for vaccinations performed at the surgery or at a proper vaccination station, and 7s. 6d. when at the person's house. Deeming the question to be one of importance, the auditor (Mr. Sidney Jerrold) reserved his decision until January 29th, when he said that he had come to the conclusion that the fees paid for vaccination performed at any place other than at the home of the person vaccinated must be paid for on the lower and not on the higher scale. The question was whether vaccination was performed at home or not. It was scarcely arguable that when a large number of people were vaccinated at a factory, or in works in or out of doors, they could be said to be at home. He should, therefore, disallow the difference between the lower and higher scale—2s. 6d and 7s. 6d.—which would amount to a very considerable sum, and would take some time to arrive at.

VACCINATION IN INSTITUTES.

DEPUTY PUBLIC VACCINATOR asks: May institutions such as boarding schools, lunatic asylums, etc., in which the inmates sleep on the premises, be considered the "homes" of such inmates and the higher fee

charged for their successful vaccination when it is performed in the building? The question has arisen with respect to an asylum for the deaf and dumb.

*** The "home" is generally taken to be the place where a person sleeps. Until a definite legal decision or definition of "home" is producible this will have to remain the basis of division of cases vaccinated. Inmates of institutions, boarding schools, and such places would probably be held to treat their "homes" within the meaning of the Vaccination Acts; the governors, or masters, being *in loco parentis* to those under their charge, and being "persons having charge of" the inmates. At the same time it is wiser not to strain the Act, and one can easily imagine circumstances under which it would be advisable to waive the claim to a higher fee. A cause of action may be lawful and yet not always expedient, and in these matters each must decide on the merits of the individual case.

Vaccination Arrears.

P. V., who was appointed public vaccinator in July, 1902, finds that his predecessor had not vaccinated nor called on the parents of children whose names appeared on the lists sent in by the vaccinating officer. A new vaccinating officer has been appointed, and he is sending to "P. V." lists of children born before 1902, and is sending the notice "K" to the parents. "P. V." asks whether he should send notices in the ordinary way, or call without notice, or wait until the parents request him to call, and also if he calls in the ordinary way whether he is entitled to charge the usual fee of 1s. for calling.

*** We think that our correspondent's best course will be to send due notice, to call and offer to vaccinate, and to make the entry of the result on the "H" list in every case exactly as if the children were only 4 months old. If the names have been previously placed on the "H" list, and the guardians have paid the shilling fee to the previous public vaccinator, the present public vaccinator cannot claim a second payment of the shilling, and must be content with the fee for domiciliary vaccination only. If the names have not appeared in a previous "H" list, the shilling fee may be claimed.

PORT SANITATION.

T. J. G.—So far as we can ascertain there is no manual published for the use of port medical officers. Our correspondent might consult the article on marine hygiene by Dr. Armstrong in Stevenson and Murphy's *Treatise on Hygiene and Public Health*, vol. ii, and also articles on allied subjects in the *Transactions* of the International Congress of Hygiene and Demography, Buda Pesth, 1894. The reports of the Medical Officers of Health for the ports of London and Newcastle contain much valuable information, and would probably be supplied on application.

SANDGATE SANATORIA.

We learn from the *Birmingham Gazette* that at a meeting of the King's Norton Board of Guardians, held on January 14th, a report was read from Dr. Hora, Medical Officer of the Infirmary, upon a visit of inquiry which he was instructed by the Board to make to the Sandgate Homes for the open-air treatment of consumption in which the Board had a female patient. Dr. Hora stated that Poor-law patients formed the third of the three classes into which those under treatment were divided. He found the sanatoria for this class clean and tidy, but in regard to the food, the Board's patient complained of the margarine served at tea. He tasted it, and in his opinion it was not suitable for consumptives, especially females whose appetites were most delicate. The proprietor promised that the patient should be given butter. The dinner meat consisted of American beef and New Zealand mutton. The patient complained also of the eggs, but at this time of the year they were very difficult to obtain fresh. The milk was very good, and the supply very liberal. At the invitation of the proprietor he asked several male patients if they had any complaints, but they were all quite satisfied. The patient shared a bedroom with three others; the windows were kept open, but the room is small and light somewhat scanty. He recommended the Board to transfer the patient to the infirmary as a preliminary to her being sent to the Worcestershire County Sanatorium, as he considered the Sandgate Sanatoria were not suitable for the Board's patient to be sent to. After some discussion Dr. Hora's recommendation was unanimously agreed to.

MEDICAL NEWS.

A Committee has been appointed to revise the Portuguese *Pharmacopoeia*. Dr. Eduardo Motta is the President.

The recently-founded German Society for the Prevention of Venereal Diseases will hold its first Congress at Berlin on March 8th to 10th.

A Chinese Hospital has been established in New York, where Chinese patients are treated according to the methods followed in their own country.

German Balneological Congress.—The German Balneological Congress will hold its twenty-fourth annual meeting this year in Berlin from March 5th to 9th, under the presidency of Professor Oscar Liebreich.

The Berlin Hygienic Institute is to be rebuilt on a new site. Building will be begun in the spring of the present year, and it is expected that the work will be completed in the autumn of 1904.

Small-pox at Leith.—A third case of small-pox was reported by the Leith Medical Officer on Sunday, January 25th. The patient was a boy who had not been vaccinated. A fourth case was reported on Tuesday, January 27th, a child who also had not been vaccinated.

Presentation.—Dr. Everitt Norton, Medical Superintendent of the Shoreditch Workhouse and Infirmary, was recently presented by the Board of Guardians with a silver table service on the occasion of his marriage.

Mr. W. Whitaker, F.R.S., will open a discussion at a meeting of the Sanitary Institute at the Parkes Museum on Wednesday next on the present shortage of water available for supply. The chair will be taken at 8 p.m. by Sir Alexander Binnie.

French Congress of Scientific Societies.—The French Congress of Scientific Societies will hold its forty-first annual meeting this year at Bordeaux from April 14th to 18th. One Section of the Congress is allotted to medicine.

Mr. C. Luxmore Drew has appointed Mr. S. Ingleby Oddie, M.B., M.S., Barrister-at-Law of the Middle Temple, to be Deputy Coroner for the Western Division of London, *vice* Mr. H. R. Oswald, recently appointed Coroner for South-East London.

Bequests for Cancer Research.—Mrs. Mary Ann Snow, Maida Vale, who died on October 6th, and whose estate has been valued at £87,541, has, in addition to other bequests for charitable purposes, bequeathed to the cancer research fund of the Middlesex Hospital £700, to the cancer wards of the Middlesex Hospital £500, and to the research fund of the Cancer Hospital at Brompton £500.

The Fédération des Oeuvres Antituberculeuses Françaises, which was founded about a year ago under the auspices of President Loubet, has just been dissolved. Of the 125 bodies forming the Federation five or six have united to form a new association entitled Fédération Antituberculeuse Française, with Professor Brouardel as President.

A meeting of the Medico-Legal Society will be held on Tuesday next, February 10th, at 8 p.m., at 20, Hanover Square, for the adjourned discussion upon Dr. H. Littlejohn's paper on medico-legal *post-mortem* examination, and a paper to be read by Dr. G. Brown on the Whitechapel murders. The meeting is open to all.

Examination for Sanitary Inspectors.—At the examination for sanitary inspectors, held by the Sanitary Inspectors Examination Board under the Public Health (London) Act last month, 20 candidates were successful; the number of candidates who applied is not stated. We observe that of the candidates 9 were women.

The League of Mercy.—We are requested by the Organizing Secretary of the League of Mercy to state that Dr. Randall Davidson, Archbishop elect of Canterbury, having read Sir Henry Burdett's Address, just published, entitled *In the Days of Health*, explaining the work of the League, has spontaneously written, "May God's best blessing attend your devoted labour for the sick and suffering."

Professor Ernest Gardner, M.A., who is giving a course of lectures at University College, London, this term on Greek Religion, Art, and Archaeology, announces that the lectures of the third term will be given in Greece. The provisional dates are: March 24th to April 1st, lectures in Athens; April 1st to 14th, cruise in special steamer; April 14th to 18th, lectures on other sites in Greece. Further particulars can be obtained from Professor Gardner at the College.

The Study of Tropical Medicine in America.—The trustees of the Michigan College of Medicine and Surgery have established two new chairs in tropical diseases with the object of preparing medical practitioners to deal with such affections in the Philippines and in Cuba. Dr. Robert S. Linn and Dr. V. J. Hooper have been appointed to the chairs. Both served as medical officers in the war with Spain, and thus acquired a practical knowledge of the subjects which it will be their duty to teach.

Representation of Dublin University.—A Committee of electors resident in or near London has been formed to promote the candidature of Mr. James H. Campbell, Solicitor-General for Ireland, for election as Parliamentary representative of the University of Dublin. Among the Honorary Secretaries is Dr. P. S. Abraham. Mr. Campbell pledges himself to be guided in reference to any question directly affecting the University of Dublin by the opinion and expressed wishes of the constituency; he is opposed to the establishment and endowment of a Roman Catholic University for Ireland. The circular issued by the London Committee contains no reference to the grievous abuses which exist with regard to the Poor-law medical service in Ireland.

THE annual Hunterian Oration before the Hunterian Society of London will be delivered at the London Institution on Wednesday next by Mr. T. H. Openshaw, C.M.G., M.S., at 8.30 p.m.; the subject will be John Hunter, his influence on surgery, with some remarks on the treatment of appendicitis. Members of the profession are invited to attend. The annual dinner of the society will take place on Friday, February 13th, at 7 p.m., at the Trocadero Restaurant.

BEQUESTS.—Under the will of the late Mrs. Snow, of Maida Vale £700 has been bequeathed to the Cancer Research Fund of the Middlesex Hospital, £500 to the cancer wards of the same hospital, and £500 to the Research Fund of the Cancer Hospital at Brompton. Under the will of the late Mr. G. H. Hide, of Southampton, it is expected that the Royal South Hants and Southampton Hospital will benefit to the extent of at least £10,000.

AT the annual general meeting of the Royal Meteorological Society the retiring President, Mr. W. H. Dines, B.A., delivered an address embodying the results of his meteorological observations conducted off the West Coast of Scotland by means of kite flying. The temperature gradient over the sea, it was found, was considerably less than its average value over the land, being about 1° for every 300 ft. of height. As a general rule the humidity increased up to a level of about a mile and then decreased.

AT the annual meeting of the Matrons Council of Great Britain and Ireland, Miss Isla Stewart, Matron of St. Bartholomew's Hospital, in the chair, a resolution was adopted protesting against the proposal of the Departmental Committee of the Local Government Board to grant a certificate and the title of "qualified nurse" to probationers after one year's training. This matter has already been referred to on several occasions in the BRITISH MEDICAL JOURNAL, and it is hoped that the proposal will be withdrawn.

THE twenty-first congress of the Sanitary Institute will be held in Bradford from July 7th to July 11th next. There will be three sections—(1) Sanitary science and preventive medicine, (2) engineering and architecture, (3) physics, chemistry, and biology, and eight conferences of municipal representatives, on industrial hygiene, medical officers of health, engineers and surveyors to county and other sanitary officers, veterinary inspectors, sanitary inspectors, domestic hygiene (ladies), hygiene of school life. An exhibition of sanitary appliances will be arranged.

USURPATION OF TITLE IN FRANCE.—The *Progrès Médical* of Paris states that M. Evans, a dentist, and a nephew of the well-known Dr. Evans who helped the Empress Eugénie to escape from Paris in 1870, has been prosecuted for illegal practice of dentistry and usurpation of the title of doctor. In reply to the first count, M. Evans contended that he had not contravened the law. With reference to the second, he explained the plate on his door inscribed "Docteur Evans" was that of his uncle. He was acquitted on the first charge, but he was fined 200 francs for usurpation of title.

A GENERAL meeting of the Medico-Psychological Association of Great Britain and Ireland will take place at the County Asylum, Mickleover, Derby, on Thursday, February 12th, at 3 p.m., under the Presidency of Dr. Wiglesworth. Dr. Stuart, Assistant Medical Officer, Berrywood Asylum, Northampton, will propose that a committee be appointed to reconsider and to report on the statistics obtained by the late Tuberculosis Committee. Papers will be read by Dr. W. Lloyd Andriezen on the stereoplasm of the nerve elements, by Dr. Ernest W. White on the care and treatment of persons of unsound mind in private houses and nursing homes, and Dr. T. Outterson Wood on lunacy and the law. Dr. Legge has invited the members to lunch at the asylum at 1.30 p.m.

A BUREAU OF MEDICAL INFORMATION IN PARIS.—The Paris Municipal Council has accepted in principle the proposal of Dr. R. Blondel, General Secretary of the International Medical Press Association, who for the last two years has urged the advisability of establishing a bureau of medical information. A first grant of £120 has been voted for the purpose, and the bureau, which will be under the control of the fourth Committee of the Municipal Council, will be installed either in the buildings of the Faculty of Medicine or in the Sorbonne or the Hôtel de Ville. The bureau will be a centre where foreign medical visitors to Paris will find polyglot clerks, whose duty it is to supply all requisite information as to teaching, hospital services, clinics, operations, etc. Information will also be obtainable as to the working of municipal departments having relation to medicine—hygienic laboratories, water supply, drainage, cremation, etc. Foreign practitioners will be able to procure lists of practitioners of their own nationality settled in Paris, with their addresses.

ANNUAL DINNER OF THE BRITISH GYNAECOLOGICAL SOCIETY.—The annual dinner of this Society was held on January 29th at the Café Monico, Piccadilly Circus, London. The President of the Society, Sir John Halliday Croom, who is President of the Royal College of Surgeons, Edinburgh, was in the chair. After the usual loyal toasts had been honoured, Dr. Godson, in a humorous speech, proposed the toast of "The Visitors," to which Dr. T. W. Eden replied. Dr. S. Buckley, President of the North of England Obstetrical and Gynaecological Society, who gave the toast of "The Society," said that in the list of officers of the Society there was the time-honoured name of Robert Barnes, who had done more to advance the scientific position of gynaecologists and obstetricians than any one. The list of Fellows contained the most distinguished and famous men in gynaecology, and it could be seen at once how widely the Society was known by observing the geographical distribution of their Fellows. The meetings of the Society had three objects—to impart knowledge, to gain knowledge, and to promote good fellowship. The President (Sir John Halliday Croom) made a sympathetic reply. The next toast was that of "Universities and Medical Corporations," which was given by Dr. Macnaughton-Jones, and acknowledged by Mr. W. Parson, the Master of the Society of Apothecaries. Dr. F. F. Schacht also responded to the toast. Mr. Howard Marsh, President of the Clinical Society of London, replied to the toast of "The Sister Societies," which was proposed by Dr. Heywood Smith. He considered the Societies were a means of recreation for professional men after a tiring day's work.

MEDICAL VACANCIES.

The following vacancies are announced:

BIRMINGHAM CORPORATION WATERWORKS, Elan Valley, Radnorshire.—Resident Surgeon for the hospital. Salary, £250 per annum. Applications to Mr. E. A. Lees, 44, Broad Street, Birmingham, by February 28th.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon, unmarried. Salary, £150 per annum, £30 per annum for cab hire, with furnished rooms, etc. Applications to the Secretary by February 7th.

BIRMINGHAM GENERAL HOSPITAL.—Resident Pathologist. Salary, £100 per annum, with board and residence. Applications to the House Governor by March 6th.

BRADFORD POOR-LAW UNION.—Resident Assistant Medical Officer for the Hospital and Workhouse; unmarried. Salary, £125 per annum with rations, apartments, and washing. Applications to the Clerk to the Guardians, 22, Manor Row, Bradford, by February 10th.

BRADFORD ROYAL INFIRMARY.—Dispensary Surgeon, unmarried. Salary, £100 per annum, with board and residence. Applications, endorsed "Dispensary Surgeon," to be sent to the Secretary.

BRISTOL ROYAL INFIRMARY.—(1) Resident Obstetric Officer. Salary, £75 per annum. (2) Resident Junior House-Surgeon and Anaesthetist. Salary at the rate of £50 per annum. (3) Resident Casualty Officer. Salary at the rate of £50 per annum. Board, lodging, and washing provided in each case. Appointment for (1) for one year, and for (2) and (3) for six months. Applications to the Secretary by February 10th.

BURY INFIRMARY.—Junior House-Surgeon. Salary, £90 per annum, with board, residence, and attendance. Applications to the Secretary, Dispensary, Knowsley Street, Bury.

BUXTON: DEVONSHIRE HOSPITAL.—Assistant House-Surgeon. Salary, £70 per annum, with furnished apartments, board, lodging, and laundry. Applications, endorsed "Assistant House Surgeon," to be sent to the Secretary.

GLASGOW: DUKE STREET PRISON.—Assistant Medical Officer. Attendance required one and a-half hour each weekday afternoon. Salary, £50 per annum. Applications to the Prison Commissioners, 11, Rutland Square, Edinburgh.

HAMPSTEAD HOSPITAL, Parliament Hill, N.W.—Resident Medical Officer. Appointment for six months, but eligible for re-election. Salary at the rate of £120 per annum, with rooms, coal, and gas. Applications to the Honorary Secretary by February 9th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Clinical Pathologist and Bacteriologist, non-resident. Honorarium, 50 guineas. Applications, on forms provided to be sent to the Secretary by February 17th.

LANARK COUNTY ASYLUM, Hartwood, Glasgow.—Third Assistant Medical Officer and Pathologist. Salary, £120 per annum, with fees, board, washing, and attendance. Applications to the Medical Superintendent.

LEEDS: GENERAL INFIRMARY.—Resident Medical Officer. Salary, £100 per annum, with board, residence, and washing. Applications to the Secretary to the Faculty by February 11th.

LIVERPOOL: WEST DERBY UNION.—Senior Medical Officer (Resident) for the Workhouse and Hospital, Walton, unmarried. Salary, £150 per annum, with board and apartments and fees for vaccination. Applications to the Clerk to the Guardians, Union Offices, Brougham Terrace, Liverpool, by February 12th.

LONDON COUNTY ASYLUM, Hanwell.—Junior Assistant Medical Officer, between 23 and 30 years of age. Salary, £150 per annum, with board, furnished apartments, and washing. Applications, on forms provided, to be sent to the Clerk of the Asylums Committee, 6, Waterloo Place, S.W., by February 12th.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer at the White Oak Ophthalmic School, Swanley. Salary, £150 per annum, with allowance of £100 per annum in lieu of residential allowances. Applications, on forms provided, to be sent to the Office of the Board, Embankment, E.C., by February 14th.

METROPOLITAN HOSPITAL.—Casualty Officer to act also as Pathologist and Registrar. Salary at the rate of £150 per annum. Applications to the Secretary by February 16th.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—House Physician. The present Junior House Physician is a candidate, and applicants should state if willing to accept either appointment. Salary for Senior £100 per annum, and that of Junior £50, with board and apartments. Applications to the Secretary by February 23rd.

NEWCASTLE-ON-TYNE DISPENSARY.—Two Visiting Medical Assistants. Salary, £100 for the first year, £180 afterwards. Applications, on forms provided, to be sent to the Honorary Secretary, Mr. J. Carr, 41, Mosley Street, Newcastle-on-Tyne, by February 17th.

NORTH RIDING LUNATIC ASYLUM, Clifton, York.—Senior Assistant Medical Officer; unmarried, and not exceeding 35 years of age. Salary, £200 per annum, rising to £400. Applications to the Medical Superintendent by February 10th.

ROTHERHAM HOSPITAL AND DISPENSARY.—Senior House-Surgeon. Salary, £110 per annum, with rooms, commons, and washing. Applications to Mr. E. S. Bayliss, J.P., 19, Moorgate Street, Rotherham, by February 24th.

VENTNOR: ROYAL NATIONAL HOSPITAL FOR CONSUMPTION.—Assistant Resident Medical Officer, unmarried. Salary, £100 per annum, with board and lodging. Applications to the Secretary, 34, Craven Street, Charing Cross, W.C., by February 13th.

WHITTINGHAM: COUNTY ASYLUM.—Assistant Medical Officer, unmarried, and not over 30 years of age. Initial salary, £150. Applications to the Medical Superintendent.

MEDICAL APPOINTMENTS.

BIRCHALL, Ernest H., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of the Aston Union Workhouse.

CROCKER, J. M., M.R.C.S., L.R.C.P.Lond., appointed District Medical Officer of the Keighley Union.

DOWDING, A. W. W., M.D.Durh., M.R.C.P.Edin., appointed District Medical Officer of the St. Columb Major Union.

EMANUEL, J. G., M.D., B.S., B.Sc., M.R.C.P.Lond., appointed Second Physician for Outpatients at the Queen's Hospital, Birmingham.

EVANS, O. E. A., M.R.C.S., L.R.C.P., appointed District Medical Officer of the Honiton Union.

HUTCHINSON, Hy., L.R.C.P.I., L.F.P.S.Glas., L.S.A.Lond., appointed Surgeon to the London and India Docks Employes for the Districts of East Ham, Upton, and Manor Park.

JOLLIFFE, W. E., L.R.C.P., L.R.C.S.Irel., appointed Resident Assistant Medical Officer to the Southampton Union.

LEE, C. Howarth, M.B., Ch.B.Vict., appointed Resident Medical Officer to St. Mary's Hospital, Manchester.

MARSHALL, R. Prunne, M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer to the Third District of the St. Olave's Union, and Certifying Surgeon to the Bermondsey Borough Council.

MERRALL, H., M.B., Ch.B.Vict., appointed Medical Officer of the St. Anne's District of the Fylde Union.

PERRY, E. V., M.R.C.S., L.R.C.P., appointed District Medical Officer of the Mitford and Launditch Union.

REITH, W. R., M.D., C.M.Aberd., appointed Medical Officer for the Erdington District of the Aston Union.

SAWYER, James E. H., M.A., M.B., B.Ch.Oxon., appointed Honorary Physician and Referee for Birmingham and the Midland Counties Home for Incurables, Leamington.

STEWART, G. N., M.A., D.Sc., M.D.Edin., D.P.H.Camb., Professor of Physiology, Western Reserve University, Cleveland, U.S.A., appointed Professor of Physiology in the University of Chicago.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Society of London, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Discussion on the Treatment of Epilepsy, to be opened by Dr. J. S. Risien Russell and Sir Victor Horsley, F.R.S.

TUESDAY.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Professor W. D. Halliburton: On the Chemistry of Muscle and Nerve.

Royal Medical and Chirurgical Society, 20, Hanover Square, W., 8.30 p.m.—Mr. Philip R. de Santi: A Report on Four Cases of Acute Septic Inflammation of the Throat, with Bacteriological Examination of each. (A sequel to a similar paper read by Sir Felix Semon, April, 1895.)

WEDNESDAY.

South-West London Medical Society, Bolingbroke Hospital, Wandsworth Common, S.W., 8.45 p.m.—Mr. W. E. Miles: On the Diagnosis and Treatment of certain Common Affections of the Rectum met with in General Practice.

Dermatological Society of London, 11, Chandos Street, Cavendish Square, W., 5.15 p.m.—Demonstration of cases of interest.

THURSDAY.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Dr. T. G. Brodie: On the Circulation.

British Gynaecological Society, 20, Hanover Square, W., 8.0 p.m.—The President, Dr. Heywood Smith, will give his Introductory Address, and Specimens will be shown by Dr. Macnaughton-Jones and others.

FRIDAY.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Dr. A. D. Waller: On Experimental Pharmacology: The Action of Anaesthetics and Narcotics.

Clinical Society of London, 20, Hanover Square, W., 8.30 p.m.—Mr. H. L. Barnard: Treatment of Suppurative Arthritis. Dr. Stanley Barnes (introduced by Sir William Gowers): A case of Local Panatrophy. Mr. A. A. Bowlby, C.M.G.: A case of Acute Pancreatitis. Dr. Frederick Taylor: A case of Acute Pancreatitis.

POST-GRADUATE COURSES AND LECTURES.

Charing-cross Hospital, Thursday, 4 p.m.—Gynaecological Lecture.

Hospital for Consumption and Diseases of the Chest, Brompton, S.W., Wednesday, 4 p.m.—Lecture on the Abdominal Manifestations of Thoracic Disease.

Hospital for Sick Children, Great Ormond Street, W.C., Thursday, 4 p.m.—Lecture on the Sequelae of Diphtheria.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C. Demonstrations will be given at 4 p.m. as follows:—Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, throat. Lectures will also be given at 5.15 p.m. as follows: Monday, Diseases of the Breast; Tuesday, Defects of Refraction; Wednesday and Thursday, The Visual Field in Disease; Friday, Purulent Nasal Discharges.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., Tuesday, 3.30 p.m.—Lecture on Degenerative Diseases.

Post-Graduate College, West London Hospital, Hammersmith Road, W.—Lectures will be delivered at 5 p.m. as follows: Monday, Affections of the Bronchi; Tuesday, Plaster-of-Paris Splints; Wednesday, Pelvic Pain; Thursday, Treatment of some Injuries and Emergencies; Friday, States of Mental Depression—Melancholia, Katatonia.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning in order to ensure insertion in the current issue.

MARRIAGE.

AGNEW—THOMAS.—At St. Denys Parish Church, Ibstock, Leicestershire, on January 29th, by the Rev. S. Flood, M.A., Rector, assisted by the Rev. H. E. Broughton, M.A., Vicar of Hugglescote, Colville Smith Agnew, M.R.C.S.Eng., L.R.C.P.Lond., son of the late Edward Agnew, Esq., Fleet Engineer, R.N., to Maude Evelyn, younger daughter of Richard Henry Thomas, M.R.C.S.Eng., L.S.A.Lond.

DEATHS.

DENTON.—On February 1st, at 36, Highfield Street, Leicester, Edward Rawson Denton, M.R.C.S., L.S.A., aged 75.

HOBAN.—On February 1st, at St. Thomas's Hospital, London, Thomas Hoban, M.B., M.R.C.S., L.R.C.P., of Newport, Isle of Wight, aged 30 years. R.I.P.

TURNER.—On February 1st, 1903, at 53, Queen Anne Street, Cavendish Square, Martha Orr Turner, formerly of The Bays, Oakhill Road, Putney, widow of the late Frederic Turner, of Nizels, Tunbridge, Kent, aged 74. Service at St. James, Westmorland Street, Weymouth Street, W., on Thursday, February 5th, at 2.15 p.m.

WATKINS.—On January 30th, at Kirkby, Newton-le-Willows, suddenly, John Webb Watkins, M.D., aged 69.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

SURGEON asks for information regarding the occurrence of vesico-vaginal fistula after the operation of vaginal lithotomy.

LICENTIATE asks for details of the practical and *viva voce* Examination in Anatomy and Materia Medica for the Intermediate M.B.Lond.

MEMBRANOUS DYSMENORRHOEA.

DR. GEORGE WILLETT (Keynsham, near Bristol) writes: In a case of membranous dysmenorrhoea, with extreme pain and subsequent depression, I have after various forms of treatment—for example, mechanical dilatation, curetting, intrauterine medication, intrauterine stems, faradization, etc., with no result—managed to procure a perfectly painless period by inserting a laminaria tent just before the latter is expected. I should like to get from other members their advice as to the future treatment. Would it be advisable to repeat this at each period, or every alternate one? I propose the latter plan, and if this is carried out regularly is such a course likely to produce contraction of the os uteri, by favouring the production of cicatricial tissue? And, again, would the constant irritation of the tents have any chance of inducing new growth—epithelioma, for instance—in later life? The patient is a married nullipara, aged 37, menstruation always normal in point of time, and except for the pain in her periods, and the constant passage during them of intrauterine mucous membrane, in perfect health.

ANSWERS.

J. K. P.—It is probable that in the case mentioned (one of three or four volunteers suffering from haematuria, who have recently returned from South Africa) the haemorrhage is due to infection by bilharzia. Some information on the subject will be found in the report of the Egyptian Congress of Medicine published in the BRITISH MEDICAL JOURNAL, January 31st, 1903, p. 262. The disease is also described in most modern textbooks of medicine, but fuller particulars will be found in Manson's *Tropical Diseases.*

H. S.—There are two laryngological journals published at Berlin; the one is the *Internationales Centralblatt für Laryngologie, Rhinologie, etc.*, edited by Sir Felix Semon, 19, Wimpole Street, London, W., the other one is the *Archiv für Laryngologie*, edited by Professor B. Fraenkel, 4, Bellevuestrasse, W. Berlin. Both journals are published by August Hirschwald.

A. K. H.—The degree of M.D. obtained by examination from a French university (Paris, Montpelier, Nancy, Bordeaux, Lyons, Lille, or Toulouse) is required of all persons who wish to practise medicine within the territory of the French Republic. The degree, however, confers the right to practise only if it has been obtained on precisely the same conditions as those to which French students are subject—that is to say, before registration as medical students they must produce evidence of having passed the examination for the French diploma of Bachelor in Classical Education (Arts and Philosophy) and the certificate in Physical, Chemical, and Natural Science, and they must go through the regular curriculum of professional study, and must pass all the five professional examinations required of French students. The degree of M.D. is still obtainable by holders of British diplomas under the old conditions of exemption at the discretion of the Minister of Public Instruction, from any preliminary examination in arts or sciences and from portions of the professional curriculum and examinations. The degree obtained in this way is, however, purely ornamental, and gives no right to practise in France.

COMPOSITION OF COLLAPSIBLE TUBES.

IGNORAMUS.—Collapsible tubes are understood to be made of tin. We have examined a few specimens, and find that they consist of tin with traces of copper. No part of any of those examined contained any trace of lead.

"DIAGNOSIS AND TREATMENT WANTED."

T. D. F. E. writes: The attacks described by "Boomerang" are probably due to muscular cramps affecting the dorsal, pectoral, and possibly the intercostal muscles. In a similar case in which the cramps came on after influenza, a grain of opium given every night for a week or so, in a soft pill, gave permanent relief. The patient also took ammoniated quinine, nux vomica, and red lavender in sweetened milk thrice daily.

DR. FORTESCUE FOX (Weymouth Street) suggests in reply to "Boomerang" that his patient probably suffers from habitual auto poisoning, and that

his attacks of pain are in the nature of a myalgia determined by "chill." In some similar cases he has found benefit from (1) exercises for the trunk muscles by means of the "home exerciser" night and morning; (2) Turkish or other hot-air baths; (3) thorough lavage of the large bowel, by gravitation, in the recumbent position. About half a gallon of water should be so used every second evening. These measures are stated in the inverse order to their importance; for if the diagnosis be correct, the treatment essentially consists in establishing a sufficient elimination from the intestine (the internal superficies) and the skin.

DR. HOWARD WISTIN, M.B. (Enfield) writes: The case, concerning which "Boomerang" asks for hints as to treatment and diagnosis in the BRITISH MEDICAL JOURNAL of January 31st, reminds me somewhat of one I saw some years ago. A man of about the same age (42) suffered for a long time from severe pain in the lumbar region, which was of a more or less intermittent nature. He went from doctor to doctor, but was unable to obtain any relief. Indeed, by some he was looked upon as a thorough malingerer. He finally went into one of the large London hospitals, and was found dead in his bed after he had been there a few days, no definite diagnosis having, I believe, been made. Necropsy revealed a ruptured aneurysm of the abdominal aorta, with considerable erosion of the upper lumbar vertebrae. Not one of the many doctors who had examined him during his illness had been able to discover its origin, so one might safely conclude that the aneurysm was quite undiagnosable. I merely relate this case as "Boomerang" asks for "hints."

LETTERS, NOTES, Etc.

TOUTING MONEY LENDERS.

A CORRESPONDENT, who has received several of the usual circulars offering to lend money privately and promptly without any security whatever except a simple written promise to repay, thinks that members should be warned against entering into any dealings with persons issuing such circulars. Apparently, in spite of all the revelations which have been made, the business flourishes, but it is difficult to understand how any persons of ordinary intelligence can fall into a net so obviously spread in the sight of the bird.

ALCOHOL AND TYPHOID INFECTION.

E. B.—Our impression is that the "eminent medical practitioner"—who stated that the majority of cases of typhoid fever following a certain banquet occurred among teetotalers, and expressed the opinion that this was due to the fact that a weak solution of alcohol is sufficient practically to destroy the typhoid germs—possesses a sense of humour which he was probably gratifying at the expense of his interviewer. If our correspondent wishes us to treat his question seriously, we may inform him that alcohol certainly has very considerable bactericidal properties, but that in the very dilute form in which it is likely to be found in the alimentary tract it is extremely improbable that this power is retained to any appreciable degree. Our main safeguard against bacterial infection introduced by food is the healthy secretion of gastric juice; it would be unwise medicine and bad physiology to rely upon alcohol as an intestinal antiseptic.

MEDICAL PRACTICE IN CANADA.

KEEWATIN sends us a long letter with reference to an article in the BRITISH MEDICAL JOURNAL of December 6th, 1902, dealing with the proportions of medical practitioners to population in Canada. In the course of this he makes the following remarks: The excessive proportion of medical practitioners may be said to be due to a multiplicity of causes, the main items of which I will endeavour to enumerate. As is well known, small colleges and medical schools are to be found in many of the cities of the United States, recognizing no higher authority than the Government of each State, and each striving by a well-advertised reduction of the medical course to attract a large number of students. A practitioner graduated in one State cannot practise even in a neighbouring State without passing a rigorous examination before a self-constituted Board of Examiners; and it is very probably due to the evils of this dog-in-the-manger policy that so many irresponsible schools should have sprung up. A school is created in each State to obviate the necessity of passing a further examination after qualification. The same law with regard to interprovincial registration—doubtless engendered of interprovincial jealousy—holds good in Canada; and in Western Canada we see the further imitation of American methods in the foundation of the Manitoba Medical School, with the prospect of the uprising of further schools, should Dr. Roddick's Bill prove unacceptable. Multiplicity of general schools will increase the standard of a nation's education, but multiplicity of medical schools is likely to lower the individual standard while numerically increasing the product. As a rule I may say that British qualifications are recognized in Canada, except in the case of British Columbia and Ontario, which refuse to recognize as sufficient qualification any degree in the world.

Again, a shorter curriculum is responsible for a larger output. The course in Manitoba Medical School is three years for a graduate in arts, and four years for others, with an eight months session in the year. The total college fees would amount to about £30. The expense of living would be reduced by the fact that the students—and to their credit be it said—in many cases supplement their savings by teaching or assisting in harvest work during the summer months.

As regards the value of the degrees conferred in Canada, I am not in a position to judge; but I am not far wrong if I state that McGill College, Montreal, and Toronto University have the only two medical schools in Canada which are sufficiently well endowed to be able to support an efficient teaching staff.

Many men having followed the career of a school teacher until middle age take up the profession of medicine, presumably from the consideration that it will prove a more lucrative calling. My readers will doubtless agree with me that this is neither the age nor the spirit in which the profession should be entered.

Then, again, the general public are in a more prosperous condition, or, rather, I should say that, owing to the comparative youth of the country, money is more evenly distributed and more freely spent, and thus a large percentage of medical practitioners can be supported.

Clubs and societies have not as yet begun to make their influence felt, though they are springing up rapidly; and unless the practitioners of Western Canada recognize the evils which follow in their train, they are likely to become as great a source of discontent as they are now in England. Undoubtedly, taken at the moment, the proportion of medical practitioners in Western Canada is too high; but we must take into account the unparalleled growth of the country; and should that rate of growth continue during the next three years, without a corresponding increase in the number of practitioners, the people of Manitoba would suffer from lack of medical attendance.

Finally, the reason why the larger proportions should preponderate in Western Canada over Eastern, with perhaps the exception of Toronto, is merely a repetition of what has happened in the States. The tendency of the flow of population has been towards the west, and medical men along with others have been tempted to try their luck, forgetting that the west is turning out a number of qualified men sufficient for its own needs.

LETTERS, COMMUNICATIONS, ETC., have been received from:

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A Clinical Lecture

ON MY

UNSUCCESSFUL OPERATIONS FOR CANCER OF THE TONGUE, AND ON THE EARLY DIAGNOSIS OF THE DISEASE.

[WITH COLOURED PLATE.]

Delivered at St. Bartholomew's Hospital.

By H. T. BUTLIN, F.R.C.S., D.C.L.,
Consulting Surgeon to the Hospital.

Successful Operations.

Gentlemen,—Nearly four years ago[1] I gave an address at the Hunterian Society on what operation can do for cancer of the tongue, and I showed then that the success of operations for cancer of the tongue is really very much greater than it had been previously thought to be. To-day I intend to make a continuation of that address, and have all my results collected up to the present time; and with the help of Mr. Young, my junior house-surgeon, who has carried out the work excellently, I have been able to collect the results of all my operations for cancer of the tongue performed up to three years ago. The cases are 129 in number. And out of those 129, 32 may be regarded as absolute successes. And if you take away from the total, as we do in making up these statistics, the cases of 12 patients who died of some other disease within three years after the operation, the totals then are 32 in 117 cases; that is a proportion of successes of over 27 per cent.—a very considerable proportion when the severity of many of the cases is taken into account. Then I was not satisfied about three or four of the cases, and I thought that, although I had not the least doubt myself that the disease was malignant, yet other people might have taken a more favourable view of them, and said that they were on the border-line of cancer. So I cut out 4 cases, and on that account the totals are 28 out of 113; thus the proportion is nearly 25 per cent. Three years ago it was only 20 per cent. I put these figures before you now—and I put them before myself with very considerable satisfaction—because, as far as I know, no more successful statistics have been published of any large number of cases of operation for cancer of the tongue. I was more particularly gratified, too, on account of the nature of the disease in some of these cases, and the length of time which had elapsed since the patient was operated upon. Take, for instance, an old man who is now between 80 and 90, on whom I operated in this hospital nineteen years ago. The case was very bad, because I removed not only a large part of the tongue, but the glands (which were malignant) on the same side of the neck.

Mr. Young received a letter from his daughter to say that he was still in perfect health, that he had never had any further trouble in his tongue or in his neck, and that he would have come up to see me if he had not been stricken by apoplexy three or four years ago, so that he was not able to travel to London.

There was another case of a very bad kind indeed. A gentleman came to me four years ago. Just at that time he had a very badly ulcerated cancer on the right side of the tongue, extending into the floor of the mouth, and he had more than one enlarged gland, and this state of things had been going on for a long time. In his case I was obliged to remove the entire tongue, and in the course of two or three weeks I removed all the contents of the anterior triangle; and, fearing that I had not taken out sufficient of the floor of the mouth, I cut away a portion at the second operation, so that I left a large cavity from the mouth almost to the clavicle. He made a very good recovery; he was a very determined person, and from both operations he made admirable recoveries.

Then the firm of which he was a very active member sent to ask what my opinion was—first, as to whether he should go back to his work; and secondly, what I thought would be likely to be the duration of his life. I replied to the first question that if he was inclined to go back to his work—and I could not conceive that he could do anything better—he could do so, because he was an extremely valuable man of business to his firm. To the second question I answered that in my opinion he would not live a year, and I should not be surprised if he was incapacitated for work in six months.

Last November (1901) he came to see me on a certain day and he said, "Do you know, Mr. Butlin, why I come to-day?" I said "No." He said, "Because it is exactly three years to-day since the second operation was performed." I have seen him again within the last two or three months, when he came previous to taking a voyage I think to China or Japan, where his firm have large interests. And I was very gratified, because I looked upon his as a case that was well-nigh hopeless. I speak strongly about these successful cases, because an opinion prevails in the minds of even eminent surgeons that no operation for cancer of the tongue is ever permanently successful. That is an opinion which is not merely incorrect, it is most mischievous. As to the nature of the disease, in almost all these successful cases it was proved by microscopic examination, and the microscopical examination in the case of the patients operated upon in the hospital was made in the pathological department; therefore I am not responsible for it. And in some of the successful cases, not only was the disease in the tongue epithelioma, but the glands which were removed were also epitheliomatous; in fact they were transformed into epitheliomatous tumours.

Unsuccessful Operations.

So far, so good. But one day, not very long ago, I was sitting and working out these results on pieces of paper, and was in a really happy frame of mind at the number of successful cases and the kind of case in which success had attended operation, when, as it were by chance, I cast my eye on the other side, and then saw to my horror—for it dawned upon me suddenly—that out of the 129 patients on whom I had operated for cancer of the tongue, nearly 100 are dead. And I assure you that from a state of satisfaction I became quite despondent, and I began to wonder, considering what all these people had been through in the way of pain and suffering, not only from the disease but from the operation, whether the game after all was worth the candle. When I had recovered myself a little, I began to consider whether things ought to be as bad as they certainly are at the present time, because the results I put before you are not what would be called bad results for cancer of the tongue. They would be called good; indeed I do not know any large statistics which are better, so that the proportion of unsuccessful cases is really very large.

When I came to look into them I found that out of the 97 patients 12 died of some other disease than cancer of the tongue within three years, and 14 died of the operation, not a large mortality when the severity of many of the operations is remembered. Unfortunately it is quite certain that some of these people, if they had not died of the operation or shortly after it, would have died from recurrence of cancer in the mouth or in the glands. Of the remainder, 29 patients died with recurrence in the mouth. The disease recurred in most of them very quickly, and all those patients went through the same suffering before death which they would have had if no operation had been performed. Therefore we must regard those particular operations as absolutely unsuccessful. One patient is said to have died of secondary disease, and 41 patients died from affection of the lymphatic glands without recurrence in the mouth. So here you have 84 people who died either of recurrence in the mouth or of affection of the lymphatic glands, or of the operation itself out of 129 persons operated upon for cancer of the tongue. Truly it is a deplorable state of surgery. I have no hesitation in saying it is pitiable; and if we cannot do better than that in the future it seems to me to speak very badly either for the art of surgery or for something connected with it.

Naturally when first I began to consider these results I tried to discover what I might call extenuating circumstances. I mean in this way: I said, Very well; if I were to perform these operations over again, upon the same people or on similar cases, I do not think I should lose so many patients from the operation. I think now, with the experience I have, and particularly with the routine practice of preliminary laryngotomy, that I could operate with a very much smaller mortality.

Again, I should know better now than to operate on some of the patients on whom I operated years ago; for many of the cases were extremely bad, almost hopeless; but in this hospital our rule in cases of malignant disease and it is the rule of all my colleagues is to operate if there seems to be the smallest chance of relieving the patient. It is a rule which is very destructive to good statistics, but it is a good rule, and I hope we shall adhere to it.

On the other hand, I had to acknowledge that several of the patients who died of the operation, or who died shortly afterwards from some other disease than cancer of the tongue,

would certainly, had they lived, have suffered from recurrence of the disease within the mouth or of affection of the lymphatic glands. And even this was not all; for, as I thought, I remembered how many people I had seen in public and in private practice suffering from cancer of the tongue which had passed beyond the reach of operation. I assure you, by the time I had finished the study from this point of view, I felt very miserable about the future of the operative surgery of cancer of the tongue. Nor should I have cared to lecture on the subject to-day, had it not, on still further consideration, presented itself to me in another form.

Diagnosis of Cancer: Predisposing Causes.

In this way. There is, perhaps, no part of the body in which early operation for cancer is called for so urgently as in the tongue; and there is no part of the body in which early operation is likely to be attended by better results. So that, if the disease could be diagnosed at an early period of its existence, and if the patients could be induced to undergo operation during the early period of the disease, it might and would be possible to exhibit far other results than those which are before you to-day. Now, I venture to say that there is no part of the body, unless it be the face—certainly, there is no internal organ of the body—in which the early diagnosis of cancer is so easy as the tongue. Is there any internal organ which is so easy to observe, or which is more frequently observed? People look at their tongues whether there is anything the matter with them or not. The first thing a doctor does when he comes into the house is to look at the patient's tongue; it is before him; there is no difficulty in examining any part of the tongue except the posterior part, where cancer certainly does sometimes occur, but where it is rarely within the reach of successful operation. So if you come to consider the ease with which the tongue can be examined, and every change which it undergoes can be observed, you will see at once that a diagnosis of a surface disease ought to be comparatively easy, and that certainly it ought to be made very early. Then, again, the tongue is a part of the body in which the preparation for cancer is made in the most elaborate and deliberate fashion. Here I have for your inspection some drawings which are well worth looking at and bearing in mind. Here is a condition of chronic superficial glossitis, with red patches on the dorsum and borders of the tongue; and if you examine such a condition as this you will find cracks and fissures, and excoriations, and chronic ulcers. Take another variety—for instance, this, in which the tongue looks at first to be covered with bluish fur, a sort of film, perfectly smooth. There are no appendages of papillae on it at all. Here is another which looks as if a thick daub of white paint had been placed upon the middle of the tongue. Here is another, in which a similar condition exists, but in which you have the association of chronic superficial glossitis, and this white material which is called leukoplakia. All these are *predisposing* conditions to cancer of the tongue; they are predisposing so far and to such an extent that I believe if you take 100 cases of cancer of the tongue, in about 90 of them the cancer will have been preceded by one or other or a combination of these conditions. We speak of all these conditions as being due to chronic superficial inflammation. I do not know whether that is quite correct. I believe some of them are degenerative changes. In any case they are so frequently associated with chronic superficial inflammation that you may class them all together under the general term of chronic superficial glossitis and its results. Now, whether this be due to past syphilis, or whether it be due to rheumatism and gout, or whether it be due to much smoking or to much drink, is of small consequence; nor does it make much difference which variety of these superficial troubles the patient suffers from. All the people who have them are much more liable to cancer of the tongue than other people are; it is a preparation for the occurrence of cancer at some later period. You must not suppose that everybody who has a tongue in one or other of these conditions is sure to have cancer. A man may have a tongue like this for fifteen, twenty, or thirty years, and yet never have cancer; but the man who has this condition is more liable to cancer of the tongue than a man whose tongue is healthy. Again, when once these conditions have been established, no matter what they are, never again, by any means that I know of, can the tongue be made like it was before; so that these conditions of tongue, once established, remain throughout the patient's life.

The knowledge of the relation of these conditions to cancer is not limited to a few people; it is common knowledge. Every medical man who sees these conditions has in his mind the possibility that his patient may be the subject of cancer of the tongue; and not only the medical man but often the patient is perfectly aware of his liability to cancer, especially if he be educated and well-informed; so that it is very rare indeed, when a person comes to see me with one of these conditions of the tongue, that he does not ask me whether he has cancer or whether I think he is likely to have it.

Pre-cancerous Conditions.

Then there are certain *pre-cancerous* conditions—conditions which lead up from one of the states I have just described to the actual existence of cancer. These pre-cancerous conditions, I am sorry to say, are not so well known as they ought to be; and I am still more sorry to say that I am to a certain extent responsible for that, for in the first edition of my book on *Diseases of the Tongue* (page 269) I wrote thus:

> The first appearance of a carcinoma may vary within very wide limits. It may commence as a blister, as an excoriation, an ulcer, a fissure, a pimple or tiny tubercle, a wart or warty growth, or a lump or nodule in the substance of the tongue.

And a little further down the page I say,

> It is not, therefore, so important to remember the number of instances in which carcinoma has first appeared in each one of these forms as it is to bear in mind that each one of these forms of disease is capable of becoming carcinomatous.

Well, that was written at a time when I had not had a very large clinical experience of cancer of the tongue. Within a few years of that time I had seen many cases, and had seen some of them in a comparatively early stage and had watched them. At a meeting of the Harveian Society I brought forward what may be termed a correction of this view. I pointed out that there are certain conditions which are so likely to pass into cancer of the tongue that they may be regarded as absolutely precancerous conditions. I point them out to you now. If you look at this picture you will see a warty growth on a tongue predisposed to cancer. Here is another of a larger size which probably has actually just become cancerous. Here is a picture in which there are warty growths scattered about upon the tongue. These warts and warty growths so certainly become cancer in the course of time that directly they form you may regard them as really pre-cancerous conditions. I can say for myself, I have never known one of these warty growths on a tongue of this kind get well, nor have I known it successfully treated except by destruction or excision; and, as far as my experience goes, it is the most common form in which cancer begins upon these tongues.

Description of Coloured Drawings.

Fig. 1.—Thick areas of leucoplakia or leucoma on the right border of the tongue of a woman, one of which is warty and fluffy. Epithelioma afterwards developed in the white areas.

Fig. 2.—White warty growth on the right side of the dorsum of the tongue of a man, the surface of whose tongue had been the seat of smooth leucoma and glossitis for years. The warty growth shows the pre-cancerous stage.

Fig. 3.—The tongue of a man, who had for years suffered from glossitis and leucoma. On the left border is a fully-developed epithelioma and on the dorsum are several small warty growths, in the pre-cancerous stage.

Fig. 4.—Showing a flat chronic ulcer on the under aspect of the right border of the tongue of a lady, in the pre-cancerous stage. It had commenced from the rubbing of a rough tooth, and, after the removal of the tooth, continued to increase in size.

The first three drawings are from the originals in the museum of St. Bartholomew's Hospital, and Mr. Butlin has kindly been permitted to use them. Mr. Mark has lately made Fig. 4 for Mr. Butlin.

Here is another condition which Mr. Mark drew for me the other day. Underneath the border of a tongue which is not in the least predisposed to cancer is a flat ulcer, which was ascribed to the rubbing of a tooth, and probably was due to the rubbing of a tooth. The tooth was taken out, but the ulcer, instead of getting better, slowly spread on the surface of the border of the tongue, and its edge became a little raised and was found to be a little hard. I have seen cancer begin in that form on several occasions, perhaps eight or ten times, and I look upon it as a very dangerous condition which is almost certain to become cancerous. Again, some of these white plaques become cancerous in this fashion: A small or larger area of leucoma or leucoplakia becomes thicker and a little more prominent, and then tends to break down and soften in the centre. Here are white plaques which became cancerous in this fashion. That is a warning; it is a pre-cancerous condition, for out of that condition cancer will almost certainly develop. As to lumps and nodules in the



Fig. 1.



Fig. 2.



Fig. 3.



Fig. 4.

To illustrate Mr. Butlin's Clinical Lecture.

substance of the tongue, they rarely become cancerous, and the old chronic ulcerations of the tongue rarely become cancerous; they are not nearly so dangerous as the white thick plaques or as the indolent ulcer which makes steady progress in the course of a few weeks or months. Now note again—and it is very important as far as early diagnosis is concerned—all these conditions are on the surface; they are not hidden; they do not lie in the substance of the tongue; they are where anybody can see them. And they are watched. The patient watches them and the doctor watches them, and the doctor applies sometimes one thing and sometimes another, and the disease makes slow progress from week to week.

You will ask why it is—and I have asked myself over and over again—that medical men watch these dangerous conditions for weeks and months until the cancer is absolutely established? Why do not they deal with them earlier? Why do they treat them with nitrate of silver, and washes, and lotions, and dose the patient with potassium iodide, when cancer is developing and growing under their eyes? And why does not the patient press for radical treatment at an earlier date? I believe that the reasons are of several kinds. First, there is a great lack of knowledge, not of the predisposing conditions, but of the actual pre-cancerous conditions, and a lack of knowledge of the changes which indicate the transition from a pre-cancerous into a cancerous condition; that little induration about the base of an ulcer, or a little more raising of its border, a little hardening somewhere, or a little more fixation of the pre-cancerous condition. Even worse than this is the lack of knowledge of the deadly nature of the disease itself and of the very short time it takes to obtain such a hold upon the individual that operation is absolutely hopeless. Three months is an immense time, and even half that time—six or seven weeks—may be fatal to the hope of a successful operation. Yet patients are often watched for many months. You would be surprised if you were to see my notebooks; it is not that men act to their patients otherwise than they act to themselves, for there are doctors who come to me and show me the worst cancers in their own mouths or in the mouth of some relative or friend, and many of these doctors tell me the same thing. Dr. John comes to me with a horrible cancer in his mouth, and at the first glance I know how bad a case it is. He says, "I showed it to my friend Dr. William, and he said, 'My dear boy, that is nothing, you just apply a little caustic and don't bother any more about it.' A few days later I met Dr. James and he had a look at it. He said, 'My dear fellow, that is nothing; don't you bother about that.'" And then, poor wretch, when he cannot sleep at night because of the pain, and the growth has attained a considerable size, he at last comes to me or to some other surgeon—I am sorry to say a good many such patients come to see me—and by that time all hope of doing him good by operation is past. Within the last year certainly, a doctor consulted me about a small warty ulcer upon his tongue. He was a capable person, but I had great difficulty in persuading him to have it removed, and even then I could not persuade him to give me permission to do what I wanted; he would only allow me to remove a small portion of the tongue. At the end of four or five months he came back with what I told him he would have—a new formation, in another part of the tongue, where I had pointed out to him it was very likely to occur. I removed the fore part of the tongue, and he returned to his practice. I wished to remove his glands after the second operation, but he would not hear of it. A few months later he came back with a mass of glands behind the angle of the jaw, fixed, and beyond the reach of operation. And, would you believe it? he told me he had noticed them three or four months? Can you conceive an able medical man playing thus with such a horribly dangerous disease?

Secondly, there is a great prejudice against operations on the tongue. I do not mean to complain that there should be prejudice in the mind of any man against an operation being performed upon himself. It is only natural he should be prejudiced against it. But there is an excessive prejudice both on the part of patients and their doctors against operations on the tongue, however trivial; they fear that death may be the result even of the simplest operation. Therefore I have great difficulty in persuading doctors and their patients that the patient is not in the least likely to die from a small operation on the tongue. I have only lost three or four cases from operation where the whole of the fore part of the tongue, or one half of it, was removed. Two of these patients were of the worst class of hospital alcoholics; and one patient had been subject to haemophilia all his life, and purposely concealed the fact from me, although he had been told to warn me of his weakness. Generally, you can say to a patient who is otherwise in good health that the operation of removal of one half or of the fore part of the tongue will be attended by no danger to life.

Another prejudice is that the patient will ask you, with all earnestness, Shall I ever be able to speak again? That is in cases where the removal of only a portion of the tongue is necessary. Both he and his doctor think that he will be incapacitated for his business by the removal of a portion of the tongue, and that, at all events, he will not be able to take part in any social functions. I beg of you presently to ask the three patients who are here some questions; large portions of their tongues have been removed, and you will find that they can talk so well that you would hardly be conscious from their conversation that they had ever had a serious operation performed upon the tongue. Another prejudice which presses very much on the minds of some people is that they think if half the tongue is removed they will never be able to take solid food again. I can tell you that, unless the entire tongue has been removed, the patient will take his food quite well; he may have a little more trouble at first in the management of it; but in the course of time he will be able to take the same food and in the same manner as other people. These fears and prejudices produce a want of courage on the part of the patient to undergo an operation on the tongue, and a want of courage on the part of the doctor to advise it at a time when it might be carried out with the best possible result. Hence the delay; hence the trivial treatment of a serious disease until, in 7 or 8 cases out of every 10, the opportunity is allowed to pass, and the patient's life is sacrificed. Seeing the mischief which is wrought by ignorance and prejudice, I determined that you who heard have me lecture to-day should not leave this hospital without at least the chance of knowing better. Bear in mind that the predisposing conditions to cancer of the tongue are as well known as anything in surgery; bear in mind that cancer of the tongue begins on these predisposed tongues in such a manner that anybody and everybody can see it. Bear in mind, too, that a small operation at the right time is worth more than the largest and most admirably designed and conducted operation when the disease is advanced; and, bear in mind that not only the life but the saving of the patient from a hideous death depends upon your knowledge and advice.

Now let me lay down certain rules for your guidance in regard to these matters. In the first place, if you are consulted about warts and warty growths, particularly on tongues which are the seat of one of these predisposing conditions, see that no time is lost in removing them. This should be done by two elliptical incisions which include the healthy tissues around the wart into the muscular substance. The edges are brought together and the wound is healed in four or five days. In the second place, in regard to indolent ulcers upon the surface or under the border of the tongue, which are ascribed to the rubbing of a tooth, see that the cause of the irritation is removed at once. And if, at the end of a week or ten days from that time, the ulcer is not well or healing rapidly, cut it out in precisely the same fashion. Do not hesitate for a moment. The operation is trivial, and may save the patient from great misery, and often from a horrible death. If white patches or plaques become thicker, and if they become a little more prominent, and particularly if they show a tendency to break down in the centre or soften, let them be cut with as little delay as possible. Of late years I have gone further than this, and have advised patients suffering from bad superficial glossitis, where the tongue is constantly irritated, where the patient consequently is always suffering and always in dread and danger of cancer, to have that portion of the tongue removed, even when there is no sign of cancer or of a precancerous condition. I have given that advice particularly when the under-surface is in a healthy condition, so that the mucous membrane can be turned up to make a good covering for the stump. It is very difficult indeed to persuade patients to undergo an operation of that kind. But such patients are infinitely better off and happier for the operation. They speak well enough to carry on their business and to go about like other people, so well that few people would have the least notion that an operation had been performed upon them. They are relieved not only of the fear but of the danger of cancer; and they are able to take all kinds of food which had been

previously denied them on account of the constant irritation which such food produced.

REFERENCE.
[1] BRITISH MEDICAL JOURNAL, 1898, vol. i, p. 541.

A Contribution
TO THE
STUDY OF CANCER MORTALITY.

An Address delivered to the Dundee and District Branch of the British Medical Association,

BY CHARLES TEMPLEMAN, M.D., D.Sc., M.O.H.,
President of the Branch.

I HAVE first of all to thank you for the honour you have done me in appointing me President of this important Branch of the British Medical Association. With such an energetic Secretary as we possess in Dr. Buist the duties of the Chairman are very light, and the only thing calculated to give rise to serious embarrassment is that it entails the delivery of an address on some subject likely to prove of interest to the members of the Branch.

I have been at a loss to hit upon a subject suitable for such an occasion and such an audience as this, but it occurred to me that in these days, when the subject of cancer was so much in the air, it might be profitable to investigate the incidence of this disease in a manufacturing city such as Dundee, more especially as we possess a record, extending over a quarter of a century, of all certificates of deaths registered in the several districts of the city. From these it has been possible to obtain details as to parts of the body affected, etc., which are not available in the returns of the Registrar-General.

One is constantly being asked why it is that cancer is so much more prevalent now than it was wont to be, and if one were to judge solely by statistics, more especially those of our hospitals, one could not but admit that the question is a very pertinent one.

I propose, therefore, from a study of the cancer mortality in Dundee during the past 25 years—that is, from 1877 to 1901 inclusive—to consider the following questions:

1. Has the mortality from cancer increased?
2. Is the increase real or apparent?
3. If real how is it to be accounted for?

In making such an inquiry one has to bear in mind that the value of a statistical investigation such as this has its limitations. The only data available are the death certificates; and, apart from the fact that the diagnosis of cancer is often very obscure, it must be admitted that only too frequently medical men perform this duty of death certification in a very perfunctory manner, without regard to the important part such returns play in the solution of public health problems. Another fact to be remembered is that these statistics only apply to our own city, and that therefore the conclusions cannot be accepted as of universal application.

It will be apparent to you all at the outset that the comparison of the crude cancer death-rate—that is, the proportion of deaths to the total population—is of little value. Cancer is a disease of adult and later life. As Sir James Paget says: "It is a disease of degeneracy, the frequency of which increases as age advances." It is therefore obvious that a city in which a large proportion of the population are of an age at which cancer does not prevail—that is, in childhood and youth—will give us a low crude death-rate for this disease, while another in which a large proportion of its population are of mature years will give a high cancer death-rate, although the actual incidence of the disease in both be the same. In the same way, as the death-rate from cancer in females is higher than in males at all ages, this death-rate in any locality will vary according to the proportion of the sexes living there.

The manner in which this investigation has been carried out is as follows:

All the deaths from cancer have been extracted from the registers in the Public Health Department. Persons who have died in the infirmary but who resided outside the city boundaries have been excluded, but we have not the information necessary to allow us to include persons belonging to the city who have died from cancer elsewhere. The former class has of late years been considerable, but the latter class has never been so large as to materially affect our figures. The deaths included are those of persons over 20. The few deaths in earlier years are certified as due to "sarcoma."

For the purpose of comparison the period over which the inquiry extends has been divided into five quinquennia. The rates given are the mean annual death-rate per 10,000 of the population over 20, unless where otherwise stated. These deaths have been carefully classified according to: (1) Sex, (2) age, (3) part of the body affected (in each sex).

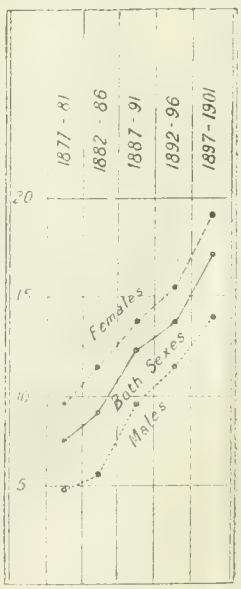
TABLE I.—*Showing the Total Number of Deaths from Cancer in Persons over 20 Years of Age.*

	Males.	Females.	Total.
1877-1881	72	202	274
1882-1886	84	250	334
1887-1891	162	337	499
1892-1896	196	390	586
1897-1901	258	510	768

TABLE Ia.—*Showing Death-rates per 10,000 of Persons of each Sex over the Age of 20.*

	Males.	Females.	Total.
1877-1881	4.97	9.25	7.27
1882-1886	5.45	11.46	8.77
1887-1891	9.83	13.87	12.24
1892-1896	11.27	15.27	13.65
1897-1901	14.02	18.90	16.92

These tables show us three facts: (1) that the total mortality during this period has more than doubled; (2) that the cancer mortality in males has during the whole of this period been considerably less than that of females; and (3) that the increase during this time has been almost the same in both sexes—namely, 9.05 per 10,000 in the case of males, and 9.65 per 10,000 in the case of females, though proportionately the increase in males is much the greater, having nearly trebled, while that of females has little more than doubled. The following chart shows this graphically:



Dundee
Cancer Death rate per 10000 of Population over twenty years of age

TABLE II.—*Showing the Rates per 10,000 Persons Living at each Corresponding Age Period:*

Males.

Age.	1877-81.	1882-86.	1887-91.	1892-96.	1897-1901.
20—25	—	—	0.34	0.64	0.63
25—35	0.98	0 47	0.21	0 62	1.17
35—45	0.91	2.01	6.19	5 94	3 02
45—55	11.44	7.06	14.92	16 57	22.73
55—65	18.33	20.32	24.35	33.22	40 92
65—75	10.80	21.61	64.22	52.08	70.52
75 upwards ...	11.00	29.01	51.16	55.73	52.25

Females.

Age.	1877-81.	1882-86.	1887-91.	1892-96.	1897-1901.
20—25	0 25	0 24	0.23	0.22	0.21
25—35	2.37	1.06	1.59	1.84	2.16
35—45	8.87	13.49	10.11	12.59	14 47
45—55	20.45	14 87	24.10	23 42	31.49
55—65	19.76	34 20	24 59	42.71	45.31
65—75	21.55	26.67	52 91	51 00	66 55
75 upwards ...	19 49	34.95	61.68	49.71	68.69

These tables show:

1. That in males there has been an increase at all ages; in females only over the age of 35.

2. That this increase becomes greater as age advances.

3. That from 1877 to 1887 the mortality in females was greater than in males at each age period.

4. That since 1887 the mortality in males has exceeded that in females at the age of 65 to 75, but except from 1892 96 it has been lower at all ages over 75.

At first sight these figures would seem to justify the most pessimistic views on the subject, but before we consider to what extent we believe this increase to be more apparent than real, let us first examine the figures relating to the parts of the body affected, so as to determine in what regions this increase is most evident.

Here I must premise that the numbers we have to deal with in most cases are small, and the value of the statistical method of investigation under such circumstances must be somewhat discounted. I think, however, the general conclusions to which they lead us may be regarded as reliable, although the proportions may not be strictly comparable.

TABLE III.—*Showing the Cancer-rates per 10,000 of the Population of both Sexes above the Age of 20, except in the Case of Cancer of the Uterus and Breast, where the Rates are per 10,000 Females over 20.*

—	First Quinquennial Period.	Second Quinquennial Period.	Third Quinquennial Period.	Fourth Quinquennial Period.	Fifth Quinquennial Period.
Uterus	3.89	3.22	4.36	5.20	5.22
Breast	1.23	1 85	2.05	1.64	2.07
Mouth, etc.	0.19	0.44	0.66	0.58	0.83
Jaw	0 08	0 13	0 19	0.30	0.44
Rectum	0.24	0.49	0.39	0.51	0 55
Face and neck	0.44	0.49	0.44	0 46	0.39
Prostate and bladder ...	0.08	0.08	0 20	0 21	0 22
Abdomen	0.22	0 09	0.26	0 28	0.61
Stomach and gullet ...	1 60	1.85	2.89	2 91	4.21
Liver	0.48	0.76	1.52	1.81	1.74
Bowel and omentum ...	0.30	0.29	0 69	1.04	1.76
Not specified	0 51	0.76	0 53	0.67	0.63
Other parts	0.24	0.39	0.89	0 76	1.16

In considering these it will be convenient to group them in two classes, namely:

1. *Accessible* cancer—that is, cancer of parts which can be seen or felt, and where, therefore, the diagnosis is comparatively simple; and

(2) *Inaccessible* or deep-seated cancer, where the diagnosis is more obscure and difficult.

One would naturally expect that the great advance of recent years in clinical and pathological diagnosis would be more apparent in the latter class than in the former, and that in the case of "accessible" cancer any great increase in the mortality would less likely be attributable to improved diagnosis, though it might to a certain extent be explicable by more careful certification.

FEMALES.

Genital cancer in the female shows an increase of from 85 in the first quinquennium to 141 in the last—that is, an advance of the mean annual mortality from 3.89 per 10,000 females over 20 to 5.22, or about 34 per cent. Cancer of the breast also has increased from 27 to 56, or from 1.23 per 10,000 females to 2.07—an increase of 60 per cent. in the mean annual mortality.

Cancer of the mouth, throat, pharynx, etc. has increased by 0.64 per 10,000 of both sexes; of the jaw by 0 36.

Cancer of the rectum has more than doubled (10 cases in the first period against 25 in the last)—that is, 0 24 against 0.55.

Cancer of the face and neck, which remained fairly stationary during the first three quinquennia showed a slight decrease in the last.

Cancer of the bladder and prostate show an increase of 0.14 per 10,000. In all the other cases this increase is more substantial.

Cancer of the abdomen (the exact seat not being specified) shows an increase of mortality equal to 0 39 per 10,000.

The death-rates from cancer of the stomach and oesophagus have multiplied nearly three times, of the liver nearly four times, and of the bowel and omentum nearly six times, the numbers and rates being as follows:

TABLE IV.—*Death-rates from Cancer of Stomach and Oesophagus.*

	First Quinquennium.	Last Quinquennium.
Stomach and oesophagus	58 (1.60)	191 (4.21)
Liver	18 (0.48)	79 (1.74)
Bowel and omentum	11 (0.30)	80 (1.70)

Cancer of the bones and joints, spleen and kidney, lung, mediastinum, etc., have also increased from 0.24 to 1.16 per 10,000.

Regarding the part of the body most frequently affected in females, it is interesting to note that in the first ten years (that is from 1877 to 1887) the deaths from cancer of the uterus and of the breast together exceeded those of cancer in all other parts of the body.

Since then, however, the latter have outnumbered the former, the difference gradually becoming more marked. During the same time cancer of the abdominal viscera in the same sex (including stomach and oesophagus, liver, bowel, and omentum) show an enormous increase from 48 (2.29 per 10,000) to 201 (7.44 per 10,000). The figures are as follows:

TABLE V.—*Deaths from Cancer of Abdominal Viscera.*

	Uterus and Breast.	All other Parts.	Of these, there were from Cancer of the Abdominal Viscera.		
1877-81 ...	112	75	48	25	per cent. of the whole (excluding those not specified.
1882-86 ...	115	110	65	28	,, ,, ,,
1887-91 ...	156	165	124	38	,, ,, ,,
1892-96 ...	173	198	132	35	,, ,, ,,
1897-1901 ...	197	295	201	41	,, ,, ,,

MALES.

If we examine closely the parts of the body affected in males, we find that cancer of the abdominal viscera is the most prominent factor in this mortality.

TABLE VI.—*Showing the Relation of Cancer of those Organs to the Total Mortality (exclusive of the Cases not specified). The Proportion has remained fairly constant.*

	Total Deaths from Cancer in Males.	Deaths from Cancer of Abdominal Viscera.
1877-81	67	39 = 58 per cent. of the whole.
1882-86	80	44 = 55 ,, ,,
1887-91	150	84 = 54 ,, ,,
1892-96	184	116 = 63 ,, ,,
1897-1901	240	149 = 60 ,, ,,

These figures represent in the mortality-rate an increase from 2.67 per 10,000 males (1877-81) to 8.09 (1897-1901). The great increase in abdominal cancer is thus common to both sexes, and is equivalent to 5.42 per 10,000 in the case of males and 5.25 in the case of females, and throughout the whole of the period under consideration this mortality has been higher in males than in females.

Organs Affected.

The part of the body, however, showing the greatest increase in males is the mouth and the upper part of the digestive tract—including tongue, throat, and pharynx—in which the numbers were 2, 10, 22, 18, and 30 in the respective quinquennia, an increase of from 0.13 to 1.63 per 10,000 males. In females this part is not nearly so liable to attack, the highest recorded being 8 (1897-1901).

How is this to be accounted for? Some persons dismiss the subject by explaining that it is due to the fact that the expectation of life in the early years of life has increased so much by the diminished death-rate from infectious disease, etc., that therefore a large number are carried over to what might be called the "cancer" age, and that, as every one must die of something or other, the increase of cancer deaths is at once accounted for. In this investigation this explanation is entirely discounted by the fact that, in calculating the death-rates, regard has been paid to age and sex distribution, the rates being given for those of each sex living at the different age-periods.

Another and more plausible explanation is found in the more exact diagnosis of recent years and the more careful and correct certification of deaths. Let us see to what extent this has influenced our cancer mortality. In the first place the great increase in visceral cancer cannot be accounted for by the more careful returns as to the site of the disease. Many deaths are certified as due to "cancer" without reference to the part of the body affected, but such in Dundee, instead of having diminished during the 25 years under consideration, have actually increased from 0.51 per 10,000 during the first quinquennium (20 cases) to 0.63 during the last (29 cases).

Throughout this period the number of such returns in females has considerably exceeded those in males. In females these varied from 15 to 17 in each year given (except 1882-87, when they numbered 25), and in males the highest number of such returns in any year was 12, and the lowest 5.

On the other hand, there is no doubt that a certain proportion of the increase in this cancer mortality is accounted for by improved diagnosis and certification—by the transference of ill-defined to more definite causes. The most important of these are the following: "Old age," "dropsy," "disease" of stomach, "disease" of liver, "disease" of uterus, and "causes not specified or ill-defined."

The deaths from "old age" calculated on the number of persons of both sexes living at the age of 60 and upwards, have decreased during the quinquennia under record, as follows:

Table VII.—*Deaths from Old Age: Death-Rate per 10,000 Persons over 60.*

	Both Sexes.	Males.	Females.
1877-81	165	140	180
1882-86	144	136	154
1887-91	105	92	118
1892-96	94	81	102
1897-1901	94	81	100

This shows a steady decline in both sexes equivalent to 43 per cent.—42 in males and 44 in females; and I think it must be conceded that a certain proportion of these cases—probably a considerable proportion—should, especially in the earlier years, have gone to swell the cancer death-rate.

The returns of deaths from "dropsy" have also decreased from 1.71 per 10,000 (over 20) to 0.08 (from 63 in the first quinquennium to 4 in the last). Dropsy, however, is not a symptom which is prominently associated with malignant disease. One would expect that these cases should be referred rather to affections of the heart and kidney, and on examining the returns of deaths from affections of these organs we find that diseases of the circulatory system show an increased mortality from 27.03 per 10,000 (over 20) in 1877-81 to 33.30 in 1896-1901, while disease of the urinary system has also increased from 5.67 to 8.70 during the same period. The fact that such diseases have increased, while deaths from "dropsy" have decreased, points rather to an improved diagnosis in diseases of these organs than in affections of a malignant character.

As regards those deaths classified by the Registrar-General as "not specified or ill-defined," they are not sufficiently numerous to make much practical difference. In 1877-81 they numbered 28, but during the subsequent quinquennia only 3, 4, 5, and 12 respectively.

As I have already mentioned, cancer of the female genitals shows an increase of 34 per cent. during the twenty-five years under consideration.

Table VIII.—*Showing the Total Number of Deaths from Diseases of the Generative Organs during the Five Quinquennia, and also the Number and Rates per 10,000 Females of Deaths from "Disease" of Uterus and Vagina (without specifying its nature).*

	Total Deaths from Diseases of Generative Organs, and Rate per 10,000 Females.	Deaths from "Disease" of Uterus and Vagina.
1877-81	39 (1.78)	27 (1.23)
1882-86	35 (1.54)	13 (0.57)
1887-91	45 (1.85)	16 (0.66)
1892-96	35 (1.36)	16 (0.62)
1897-1901	29 (1.07)	14 (0.51)

This shows that the mortality from diseases of the generative organs (exclusive of cancer) has decreased, but with the exception of the first quinquennium, when 27 of the 39 cases were returned as due to "disease" of the uterus—the actual number and proportion of cases returned without proper specification has varied very little since 1882, showing no improvement due to better diagnosis or certification.

If we were to assume that the normal death-rate in females from such "disease" of the uterus (other than cancer) was that which prevailed during the last quinquennium, namely, 0.51 per 10,000, and if we presume that in the earlier years all above this proportion were really cases of cancer, then, making the correction for these we should have the death-rate from genital cancer during the five quinquennia as follows: 4.57, 3.31, 4.49, 5.3, and 5.22, still showing a slight increase.

It is, however, in the internal forms of cancer that the increased mortality is most apparent, so we must now look at these a little more closely.

The death-rate from "cancer" of the stomach and oesophagus during the five quinquennia was as follows:

In males ...	1.58	1.94	3.40	3.50	4.51
In females...	1.60	1.72	2.53	2.50	4.00

showing practically all through a higher rate in males than in females, and an increase of 2.93 in the former and 2.40 in the latter.

Cancer of the liver shows the following:

In males ...	0.68	0.51	1.09	2.12	1.74
In females...	0.36	0.92	1.81	1.60	1.74

an increase of 1.06 in males, and 1.38 in females.

Cancer of the bowel and omentum gives the following rates:

In males ...	0.41	0.39	0.60	1.03	1.84
In females...	0.23	0.22	0.74	1.05	1.70

an increase of 1.43 per 10,000 males, and 1.47 per 10,000 females.

To what extent can this great increase in cancer of the abdominal viscera be accounted for by more accurate diagnosis and certification?

The Registrar-General's returns show that the total number of deaths from diseases of the digestive system has declined from 12.92 per 10,000 in 1877-81 to 9.91 in 1897-1901, but during the same period the number returned as due to "disease" of the stomach (including haematemesis and melaena) has increased from 1.95 per 10,000 to 2.77. No evidence here of better diagnosis or certification!

The following table shows the relation of such cases of "disease" of the stomach and liver to the total deaths from affections of the digestive system (exclusive of cancer).

Table IX.—*Diseases of the Digestive System.*

	Total Deaths and Death-rates.	Deaths from "Disease" of Stomach and Death-rates.	Deaths from "Disease" of Liver and Death-rates.
1877–81	469 (12.92)	71 (1.95)	123 (3.39)
1882–86	461 (12.11)	63 (1.63)	122 (3.20)
1887–91	580 (14.22)	93 (2.28)	107 (2.62)
1892–96	425 (9.90)	93 (2.16)	75 (1.74)
1897–1901	450 (9.90)	126 (2.77)	50 (1.10)

In connexion with the belief that many of these cases in which an exact diagnosis has not been made should be referred to the "cancer" group, it is interesting to observe that while the death-rate from cancer of the stomach in males has all along been higher than that in females, the deaths from "disease" of the stomach have been correspondingly lower. These have increased in males from 27 (1.86) in 1877 to 33 (1.89) in 1896 (detailed statistics for the whole of the last quinquennium not being as yet available), and in females from 44 (2.01) to 60 (2.35) during the same period.

The returns, however, from liver disease show a very different result. These, apart from malignant disease, are returned as (in the earlier returns) jaundice, hepatitis, "disease" of the liver, or as cirrhosis or "other diseases of the liver."

Thus, while the returns from cancer of the liver show an increase of 1.26 per 10,000, those from other diseases of the liver show a decrease of 2.29 per 10,000.

This cancer mortality in males has increased 1.06 per 10,000 during the twenty-five years under review, while the deaths returned as due to "disease" of the liver have decreased from 4.07 to 1.66 between 1877 and 1896. In females during the same period, while the cancer death-rate has increased 1.38 per 10,000, the return of deaths from "disease" of the liver has decreased by 1.13 (from 2.93 to 1.80).

Here I think we may fairly claim that the apparently large increase in the cancer mortality, especially in the male sex, is to a considerable extent accounted for by more correct diagnosis.

Conclusions.

A summary of these results seems to me to lead to the following conclusions as regards cancer in the city of Dundee:

1. That the death-rate from cancer as a whole during the twenty-five years under review has more than doubled, having increased from 7.27 to 16.92 per 10,000 of the population over the age of 20.
2. That this increase is greatest at ages over 45, is common to both sexes, but more marked in the male sex, though the actual mortality is higher among females.
3. That in females this is chiefly due to an increase in malignant affections of the abdominal viscera.
4. That uterine cancer and cancer of the breast in females have increased, though not in any marked degree.
5. That cancer of the rectum also shows a slight increase in both sexes.
6. That in males the highest mortality is from cancer of the abdominal viscera.
7. That in males cancer of the mouth and upper digestive tract has also greatly increased.
8. That therefore cancer of regions which may be described as "accessible" has increased, as well as that of parts which are not so accessible, and where the diagnosis is more difficult, but the increase in the latter is out of all proportion to that in the former class.
9. That during the same period there has been a great improvement both in clinical and pathological diagnosis, as well as in death certification, and consequently a considerable diminution in returns from such indefinite conditions as "old age" and "disease" of the various organs (without any specification of its nature).
10. That this must to a considerable extent have helped to swell the returns of death from "cancer."

I am of opinion, however, that this is by no means sufficient to account for the great increase in cancer mortality, and that this increase is a real and substantial one, though by no means so great or so alarming as the general public believe or as a superficial glance at statistics would seem to indicate.

These conclusions do not altogether coincide with those expressed by some other investigators dealing with the cancer mortality of whole countries (including both urban and rural districts) where the statistics are obtainable only from the Registrar-General's reports.

Dr. Newsholme, for example, whose investigations into this subject are well known, and who is justly regarded as an authority on all matters pertaining to vital statistics, inclines to the belief that "statistics, as far as they go, do not justify the conclusion that an increase in cancer mortality has occurred within recent years. They rather tend to the conclusion that the increase in cancer is only apparent, and is due to improved diagnosis, and more careful certification of the causes of death, especially the latter."[1]

Professor De Bovis, of the Reims School of Medicine, has published a report of an exhaustive inquiry into the same subject.[2] From a study of the cancer statistics of different countries he came to certain conclusions which coincide in some respects with those to which our statistics have led, namely:

That cancer of the uterus and of the female breast have declined.

That cancer of the rectum appears to be stationary.

That cancer of the mouth and upper digestive tract has greatly increased.

That the most important element in the rise of cancer death-rate is that from visceral cancer.

I consider that my statistics, in which the necessary details in each individual case have been obtained, and proper allowance made for age and sex distribution, so as to allow of comparison between the different periods under consideration, justify us in believing that the conclusions arrived at apply at all events to the city of Dundee.

In the present state of our knowledge it is difficult to assign any specific cause for this increase. It is idle to speculate as to how much of it is due to the increased tension under which life is now carried on, or how much it is affected by our mode of living—by smoking, alcoholism, or by the increased consumption of flesh food. The former theory gets no countenance from an examination of the occupations of the cases under review. It is impossible to tabulate the female cases with reference to their occupations, as the returns in the case of married women and widows give only the occupation of the husband, but an examination of the returns in the case of males does not indicate that "cancer" is more prevalent amongst that class of the community whose occupations are likely to entail anxiety or worry.

It has not been possible to obtain statistics of the number of persons in the city following the occupations concerned, so that the "occupation"-rates cannot be ascertained, but, as might have been expected considering the large proportion of the population engaged in the mills and factories, by far the largest proportion of the cases are referable to this class.

The death returns from the class certified as "labourers" numbered 6, 15, 21, 25, and 32 in the different quinquennia; but a survey of the list does not indicate any special prevalence in any particular class of occupations, though this may probably be due to the fact that the numbers are too small to enable one to generalize.

Before we can solve this problem of the increase of cancer we must have a more accurate knowledge of its etiology, and if parasitic in its nature we must know something of the life-history of the organism which gives rise to it. We are not without hope that the present earnest and combined effort which is being put forth to solve these problems will result in a fuller and clearer knowledge of the causes and of the methods of preventing or curing cancer. If such hopes be realized it will prove one of the greatest boons which has ever been conferred on suffering humanity.

References.

[1] *Practitioner*, April, 1899. [2] *Semaine Médicale*: an excellent and full summary appeared in the British Medical Journal of October 4th, 1902.

New Hospitals in Russia.—On the initiative of the Empress Alexandra, an orthopaedic institute has recently been erected in St. Petersburg. Dr. Horn has been appointed Director. The Municipal Council, for some reason, was at first strongly opposed to the scheme and refused to grant a site. Finally, however, it gave a space of 400 metres square in the Alexandrinski Park, and the new hospital will shortly be opened. A Russian millionaire, M. Soldatenkoff, who has been most liberal in gifts of money for the promotion of the arts and sciences, has recently given more than £120,000 for the erection of a general hospital in Moscow, for the treatment of sufferers without regard to their religion.

TWO CASES OF CARCINOMA OF THE LIVER PRESENTING SEVERAL POINTS OF CLINICAL AND PATHOLOGICAL INTEREST.

BY

HERBERT R. VACHELL, M.D., Physician, and W. MITCHELL STEVENS, M.D., M.R.C.P., Assistant Physician and Pathologist, Cardiff Infirmary.

AMONG the cases of malignant disease of the liver which have recently been admitted into the Cardiff Infirmary the two following are of particular interest from their bearing on the occurrence of primary cancer of that organ.

The first case is one of primary infiltrating carcinoma, in which the liver weighed over 17 lb., and the other is one of extensive nodular cancer, which was secondary to a small primary growth at the pylorus, and in which the clinical features pointed to alcoholic cirrhosis of the liver.

CASE I.

H. S., a negro, aged 36, was admitted into the Cardiff Infirmary on June 2nd, 1902, complaining of "swelling of the stomach."

History.—He said that he felt quite well, and was working as a dock labourer, until eight weeks before, when he first noticed that his "stomach was swollen." He suffered neither from pain nor any other discomfort except that a week before admission he had felt sick one day, but had not vomited. He had never had malaria or syphilis, and there was no history of alcoholic intemperance.

State on Admission.—He was a well-built, fairly well-nourished man, with deeply-jaundiced conjunctivae, tongue clean, appetite poor, no digestive disturbances. Bowels regular: stools very pale and offensive, but containing some bile. There was no pyrexia. Pulse 112, respirations 20. The abdomen showed well-marked signs of ascites. The liver was greatly enlarged, and occupied the whole of the upper part of the abdomen to beyond the level of the umbilicus. Its surface was very hard and nodular, but there was no tenderness. Its lower edge was sharp and freely movable with respiration and its upper limit of dullness was normal.

The gall bladder was not palpable. The spleen could not be felt. The urine contained a slight cloud of albumen, and was loaded with bile pigment. The other organs were normal.



Fig. 1.—Primary carcinoma of the liver.

After-history.—On June 3rd the abdomen was aspirated, and 18 oz. of a deeply bile-stained fluid drawn off. The patient rapidly sank and died on June 7th, five days after admission.

Necropsy.—The peritoneal cavity contained a considerable quantity of bile-stained ascitic fluid. The liver was enormously enlarged, weighing 272½ oz. (over 17 lb.) The enlargement was of a uniform character, involving the whole organ, and there were no adhesions to surrounding parts. Its surface was everywhere nodular (as shown in photograph), and the nodules were of a soft, semi-elastic consistence, though the bulk of the liver generally was remarkably tough. On section the liver showed a uniform appearance throughout of thick, strong, whitish bands of fibrous tissue, enclosing in their meshes islets of a deeply bile-stained soft substance. The gall bladder was distended with thick bile, but otherwise normal. The main bile ducts were quite free, and there were no enlarged glands in the portal fissure. The spleen was somewhat tough, and weighed 6 oz. All the other organs were quite normal, and a patient and thorough search failed to discover any growth elsewhere, except three small white nodules, rather larger than a pin's head, on the visceral pleura of the middle of the outer surface of the lower lobe of the left lung, and a small nodule in one of the bronchial glands. Microscopical examination of the liver showed an infiltrating spheroidal carcinoma with very marked cirrhotic changes throughout the whole organ.

CASE II.

C. S., a man aged 56, was admitted into the Cardiff Infirmary on June 19th, 1902, complaining of "swelling of the stomach."

History.—He said that he was in good health till a month ago, and that the abdominal swelling had come on suddenly, and reached its present state within a few days. He gave no history of pain, jaundice, or of any other symptoms. He had been a very heavy spirit drinker for many years, but had always before the present illness enjoyed good health except for pneumonia three months previously.

State on Admission.—He was a fairly well nourished though anaemic man. Tongue furred, breath very foul, appetite poor. No digestive disturbance. Bowels regular; stools were pale and extremely offensive. There was well-marked ascites. The liver was not palpable, and dullness normal; no jaundice; no pain or tenderness. Spleen not felt. Urine contained a slight trace of albumen, but no bile. The temperature for the first ten days after admission varied up to 100° at night, but afterwards remained normal. Circulatory System: Pulse 104, regular, and compressible; heart not enlarged. There were soft haemic murmurs over the mitral and pulmonary areas. Respiratory System: Slight dyspnoea and a troublesome cough, but very little expectoration. There were a few crepitations at the right base.

After-history.—On July 16th there was slight haematemesis, but no melaena. The patient sank rapidly, and died on July 19th.

Necropsy.—The peritoneal cavity contained a considerable amount of straw-coloured ascitic fluid. Liver enlarged, weighing 78 oz., and everywhere invaded by numerous large nodules of cancerous growth. No enlarged glands in portal fissure. Bile passages and gall bladder normal. Spleen enlarged and very tough, weighing 23 oz. Kidneys slightly cirrhotic. Stomach not dilated, veins in mucous membrane engorged. At the under aspect of the pylorus was a small growth measuring ½ in by ¼ in.; it did not project, and was covered by intact mucous membrane, and was white and fairly firm, and could not be felt from the outside. It was, in fact, a small, thin, white "plaque" of growth situated in and almost entirely confined to the submucosa, and might easily have been overlooked.

Both of these cases present several points of interest both from a clinical and a pathological point of view. The chief in connexion with Case I are:

1. *Duration of Illness.*—The history of the illness was a very short one, the patient being apparently well until eight weeks before his death.

In this connexion it may be stated that primary carcinoma of the liver is always rapidly fatal, the average duration being only twelve weeks from the occurrence of the first symptoms. In this case no history was obtainable of the duration of the jaundice, though if it had been present for some time previous to the other symptoms it would probably have been noticed, even though only observable in the conjunctivae, as the presence of a deep yellow colour in this situation in a negro would probably have attracted attention.

2. There was no marked wasting.

3. The only symptoms present were jaundice and ascites. The enlargement of the liver was a painless one, and there was no tenderness. In this connexion it is to be observed that there were absolutely no adhesions to surrounding parts, and that the liver was removed at the necropsy with ease.

4. At the necropsy, notwithstanding a most careful search, no primary source of infection could be found, and the case was undoubtedly one of primary carcinoma of the liver.

5. The enormous size of the liver. The organ weighed 272½ oz. (over 17 lb.).

6. The naked-eye appearances of the liver, which at first sight suggested a cirrhotic condition.

Primary carcinoma of the liver is rare, only about 4 per cent. of all cases of cancer of the liver being really primary. No doubt many cases described are really secondary to growth in the gall bladder or in connexion with the bile ducts. Before assuming that a case is "primary," it is very necessary to make a most careful and detailed search for a primary source in other parts as it is easy to overlook it.

We have introduced Case II to illustrate how small a primary growth may be which nevertheless gives rise to very marked malignant disease in the liver. In such a case, supposing death to have taken place at an earlier period when the primary pyloric growth was probably even smaller, it is not at all unlikely that it would have passed unobserved, and more particularly so if it happened to have been in some other situation than the pylorus, which would not perhaps be so closely scrutinized.

The extent of involvement of the liver in a secondary growth bears no relation to the size of the primary growth, and this point is not without interest in connexion with the operative treatment of carcinoma of the stomach. At a necropsy one not infrequently finds what appears to be a

most suitable case for removal of a carcinoma of the pylorus, and the liver, as far as it can be seen or felt before removal, presents a perfectly healthy appearance, and yet there are nevertheless, a few small nodules of growth on its upper surface, while in other cases of a much less promising appearance no secondary growth in the liver or other parts are to be found. This form of primary cancer of the liver, in which the cancer cells are uniformly diffused throughout the organ, and in which there is a great increase of fibrous tissue, closely resemble a coarse cirrhosis, and no doubt some cases which have been described as cirrhosis would have proved to be "cancerous" in nature if the microscope had been used.

In regard to Case I it is to be noted that small secondary nodules were found on the pleura, a rare condition in this class of case, but one which fixed the diagnosis in the *post-mortem* room, even without the use of the microscope. There are certain other points which may now be briefly alluded to.

Pyrexia.—It is stated that pyrexia is commoner in primary than in secondary carcinoma of the liver, and that therefore this fact might be of some use in diagnosis. In our case there was no elevation of temperature during the time the patient was under observation; it was at no time above 98.6°.

Jaundice.—In recorded cases this symptom is sometimes absent, and when present generally slight. In our case it was well marked.

Enlargement of Liver.—The enlarged liver is generally painful and tender. In our case it was quite painless. In recorded cases the average weight of the liver is 120 to 130 oz., the largest recorded weight in primary cancer of the liver being 200 oz. The weight of the liver in this case was 272½ oz. As to its diagnosis during life from hypertrophic cirrhosis the following points may be noticed. The absence of pyrexia, the rapidly fatal issue, the presence of marked ascites, the increase of size while under observation, the size of the nodules on the surface of the liver, and, of less importance, the absence of any enlargement of the spleen. The absence of any history of alcoholic excess was not trustworthy.

Case II has been introduced for the purpose of illustrating two points:

1. The small size of the primary growth in the stomach, and, therefore, the importance of not assuming carcinomatous growth in the liver to be primary, especially if it be nodular, until after a most careful necropsy, as the primary source may be an insignificant one, and consequently apt to be overlooked.

2. The difficulties of diagnosis during life of some cases of carcinoma from alcoholic cirrhosis. In this case there was a very marked history of alcoholic excesses; there was no jaundice, but well-marked ascites; the liver was not palpable, and there was an abscence of both pain and tenderness; the spleen could not be felt, and there were no other symptoms except slight haematemesis on one occasion.

CASE OF PRIMARY CARCINOMA OF THE OVARY.*

By MAY THORNE, F.R.C.S.I.

The following notes on a case of primary carcinoma of the ovary are of interest, as they show two unusual points—intense localized pain due to salpingitis and absence of fluid in the pelvis or abdomen.

History.—M. L., single, aged 46, stated that she had had pain for several weeks low down on the left side of the body, that the onset of the pain had been sudden while doing a heavy wash, that she had never been free from the pain since, and that it was always worse when the bowels were moved. She had been treated by hot applications, but had not received any benefit. The bowels had been opened every two or three days. The menopause had been established fifteen months previously.

Condition When First Seen.—The abdomen moved freely, and nothing was felt on deep palpation. Bimanually the uterus and right appendages were felt to be normal and caused no pain on manipulation. The left ovary was enlarged to about the size of a walnut in its shell, was somewhat irregular in outline, and very tender. The patient was sent to bed and the bowels freely opened. There was much pain just before and during defaecation, but considerable relief from severe pain for three or four days afterwards.

Progress.—A week later the vagina was hot, and the swelling had considerably increased, so that there was now a rounded thickening at about the level of the internal os, running out to the pelvic wall. The part was so tender that a complete bimanual examination was difficult, and the upper limit of the swelling was not well defined. No fluctuation was detected and the vaginal mucous membrane was freely movable. The swelling was so low and so close to the side of the uterus that it suggested being between the layers of the broad ligament. There was no vaginal discharge at any time, nor was there at any time tenderness over the uterus or right appendages. A week later the swelling was harder, and more irregular. It seemed probable that the case was one of pelvic cellulitis though the cause was uncertain. The history of the sudden onset of pain while doing heavy work seemed to point to the possibility of some slight rupture and leakage from a diseased tube into the broad ligament. The pain and tenderness were so localized that it seemed as if there must be some definite focus of infection. The temperature was about normal all this time, and the patient's general condition was somewhat improved by rest and treatment. At the end of three weeks the temperature began to rise at night, the mass in the left side increased, being now the size of a large orange, and as exquisitely tender as ever. I decided that an exploratory laparotomy must be done, and Miss Aldrich Blake, M.S., who kindly saw the case, agreed that operation was desirable.

Operation. The peritoneum was healthy. On the left side of the uterus the pelvis was filled with an irregular mass with numerous small cysts on its surface. The mass was hard and densely adherent to the pelvic wall. The growth was felt to extend between, and to distend, the broad ligament. The left round ligament was enlarged to the size of the little finger, and intensely congested. The right appendages were slightly thickened, but quite free. The uterus was not enlarged, quite smooth, and movable to some extent, being anchored on the left side. The anterior layer of the left broad ligament was adherent to the bladder, obliterating the utero-vesical pouch in that area, and the growth had infiltrated through the posterior aspect of the broad ligament. There was very little bleeding throughout the operation, and no fluid was found in the abdomen or pelvis.

Description of the Growth.—It consisted of a mass the size of a tangerine orange, together with the intensely inflamed left Fallopian tube. The surface of the mass was irregular from the presence of numerous small cysts, the largest of which had ruptured during the manipulation of the tumour. On section the growth was pale, yellow, and dense. No area of suppuration was seen. Mrs. Flemming, M.D., kindly examined the growth, and reported "Solid growth of ovary, carcinoma, groups and masses of cells in a fibrous stroma. The cells are in parts arranged around a lumen (adenomatous type), and in parts form solid masses. The Fallopian tube shows small-celled infiltration throughout the coats, but no new growth seen."

After-history.—The patient made an uneventful recovery, and for a couple of months was relieved. Then a plaque of growth appeared on the abdominal wall, beginning at the lower angle of the scar, where a gauze drain had been placed for twenty-four hours. There was rapid emaciation, and she died four months and a-half after the operation.

Necropsy.—The report kindly supplied to me by Dr. Myler, of the Middlesex Hospital, was as follows:

A large carcinoma of the left ovary; there was also a deposit in the right ovary. To the primary growth the ileum was adherent and had ulcerated through, so that even during life gas had been escaping from the upper part of the growth which came through the abdominal wall. There was some localized peritonitis leading to matting of the coils of the ileum. There were several secondary nodules in the liver.

*Read before the Association of Registered Medical Women.

A CASE OF PRIMARY SARCOMA OF THE LUNG, SIMULATING EMPYEMA.

WITH REMARKS ON THE NATURE OF PRIMARY MALIGNANT DISEASE OF THE LUNG.

BY

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History.

A little girl, aged 13, "caught cold" and suffered from sharp pain in the right side of the chest, which was made worse on inspiration, about March 14th, 1902. Under medical advice she stayed in bed for three weeks, and improved so much that she got up and went out. About April 10th she caught another cold, and the pain returned with greater severity than before, and she came into St. George's Hospital.

Condition on Admission.

On admission the case appeared to be a clear one of empyema. The temperature was 101° in the morning, the pulse 140, respirations 48. The whole of the right side of the chest was dull on percussion, the dullness extending well to the left of the sternum. There was a limited area of bronchial breathing over the right bronchus in front and behind, but elsewhere breath and voice sounds and vocal vibrations were deficient or absent. The intercostal spaces were bulged, and there was slight oedema in the right axilla; the subcutaneous veins were somewhat dilated, especially on the right side, and the measurement of the right side was more than that of the left. The heart's apex was displaced outwards into the anterior axillary line in the fifth space, the liver was displaced downwards. Neither on admission or at any time were there any enlarged glands in the axillae or above the clavicles. The urine contained a trace of albumen, but never any albumose.

After-history

On April 26th, the day after admission, an exploring syringe was introduced in two places, but nothing was withdrawn; two days later the chest was aspirated, but only a little blood was obtained. At the time it was mentioned that the only condition other than pleural effusion which could produce these signs was a new growth of the lung, but it seemed so much more likely that it was a pleural effusion, probably purulent, which the exploring needle and aspirator had failed to reach, that Mr. Marmaduke Sheild was asked to resect a rib and open up the pleural cavity. This he did on May 1st, and found a solid growth. The wound healed, and the patient lived until June 4th, with gradually increasing weakness and dyspnoea, the latter being relieved by comparatively frequent doses of tincture of opium and belladonna. There was a good deal of pain over the right hypochondrium, which was prominent and resistant, but did not present any definite nodular tumour. There was never any expectoration. The whole duration of the illness was twelve weeks.

Necropsy.

At the necropsy, performed by Dr. Trevor, the whole of the right lung, except the apex of the upper lobe, was replaced by soft growth of the consistence of gruel. It was variegated in colour, the white growth being mottled with haemorrhagic areas. The growth was very firmly adherent to the ninth and tenth ribs in the axillary region, the ninth rib showing a solution of continuity with growth between the ends of the bone. It may be mentioned that this rib was not the one which had been resected five weeks before death. The right lung together with the trachea weighed 5 lb. 1 oz. There were no growths elsewhere in the body; dissection of the cervical glands showed that there was no enlargement of any of them. The liver was pushed down and showed evidence of chronic venous engorgement. Microscopic examination showed that the growth was a small spindle-celled sarcoma with numerous haemorrhagic areas.

Clinically the interest of the case is in the close imitation of an empyema as shown by the physical signs on the right side of the chest, the oedema of the chest wall in the right axilla, the displacement of the heart, and the raised temperature.

Primary malignant disease of the lung is a very rare disease, as will be shown later, and the signs present are neither constant or characteristic (Hilton Fagge and Pye Smith),[1] while the symptoms are usually compatible with the existence of some comparatively common intrathoracic disease such as pleural effusion, chronic interstitial pneumonia, or chronic tuberculosis. The resemblance to pleural effusion is by no means rare, and we have seen several cases where exploration with a needle was undertaken. But though a raised temperature may occur, empyema is rarely diagnosed. Taylor[2] reported a case where the growth was described as suppurating, which very closely imitated an empyema.

In addition to those already mentioned we have seen two conditions which clinically closely resembled a primary new growth of the lung. The first, observed at St. Bartholomew's Hospital while one of us (R.) was house-physician for Dr. (now Sir William) Church, was a very large aortic aneurysm which stretched the lung over it, rendered the whole side of the chest dull, did not pulsate, and only yielded a little blood on exploration with the syringe. In the second case, examined after death at St. George's Hospital and diagnosed during a brief stay in the hospital as primary malignant disease of the lung, a squamous-celled carcinoma of the oesophagus had completely occluded the left bronchus.

In the absence of any external growths or enlarged glands the diagnosis of primary malignant disease of the lung is most difficult. In one such case examination of material withdrawn in an exploring syringe showed the presence of large cells such as are met with in an endothelioma, but in our experience examination of fluid withdrawn in such cases is not conclusive. Stress has been laid on the occurrence of expectoration of a mucoid red-currant-jelly-like character, but this is by no means constant.

From the standpoint of morbid anatomy, primary malignant disease of the lung may be classified as follows:

Primary malignant disease (1) of lung, (*a*) carcinoma, (*b*) sarcoma; (2) of bronchi, (*a*) carcinoma, (*b*) sarcoma.

It must, however, be borne in mind at the outset that there are many cases in which such a distinction, if not impossible, is at any rate extremely difficult.

Speaking of primary carcinoma of the lung, Pässler[3] concludes from a careful criticism of the literature that, in the majority of cases, it can be shown that the new growth has its origin in the bronchial system; and, further, that no incontrovertible proof is forthcoming as to the existence of carcinoma arising from the alveolar epithelium of the lung proper, though the existence of such, in view of published cases, cannot be regarded as impossible. On the other hand, West, in his recent work on *Diseases of the Organs of Respiration*, vol. i, p. 97, definitely states that primary tumours of the bronchi are of two kinds—enchondroma and carcinoma, but gives a detailed description of primary sarcoma of the lung.

It may be that these varying views have their explanation in differences of nomenclature—as, for example, whether the adventitial tissue of the bronchi, intimately connected as it is with the interlobular septa of the lung, should be regarded as wholly belonging to the bronchi or as part of the general lung structure; or, again, whether the terminal bronchioles, with their change in structure and blood supply, should be considered part of the bronchial tree or part of the lung proper. Be this as it may, there are undoubtedly cases in which the new growth can be seen to implicate the lung substance more especially, and to only affect the bronchi secondarily, and vice versa.

Before going into details, and as germane to the subject of differences in nomenclature, it may be mentioned that some of the statistics show apparent inconsistencies. This is, in all probability, due to the fact that primary malignant disease of the lung is no longer vaguely described as "cancer," but is spoken of according to its microscopic structure as sarcoma, endothelioma, or carcinoma; and further, that many alveolar growths which would formerly have been spoken of as carcinoma are now called endothelioma and classed with the sarcomata.

The lungs and bronchi are but rarely the seat of primary malignant disease. The *post-mortem* records of St. George's Hospital from January 1st, 1890, to July 8th, 1902, comprising 3,983 cases, furnish only 8 instances. Of these 8 cases, 3 were primary sarcomata of the lung, 2 were primary sarcomata and 2 primary carcinomata of the bronchi. There was no case of primary carcinoma of the lung. The origin of the remaining case—a sarcoma—could not be definitely decided. Thus:

Primary carcinoma of the lung	occurs	0	time	in	3,983	cases
,, sarcoma ,, ,,	,,	1	,,	,,	1,328	,,
,, carcinoma ,, bronchi	,,	1	,,	,,	1,991	,,
,, sarcoma ,, ,,	,,	1	,,	,,	1,991	,,

Pässler[4] finds in the records of the Breslau Pathological Institute out of 9,246 necropsies, in which there were 1,000 cases of malignant disease, namely, 130 of sarcoma and 870 of carcinoma, 16 cases of primary carcinoma, and only 4 cases of primary sarcoma of the lung; but no distinction is made between cases primary in the lung and those primary in the bronchi. In Breslau, at any rate, primary sarcoma of the lung is exceedingly rare, for, including cases primary in the bronchi, it only occurs once in 2,312 cases. On the other hand, the same author's figures, 16 cases out of 9,246, or 1 case per 578, are too high for primary carcinoma of the lung in the strictest sense; for in his paper on this subject he includes in the cases he has collected many which, as he himself states, would be considered by others as pure bronchial carcinoma.

With other observers primary cancer of the lung is much rarer. Fuchs (quoted by Pässler) found it once in 1,538 cases, and Reinhard[5] once in 1,743 cases. As we have mentioned, there was not one case among 3,983 necropsies in St. George's Hospital.

In order to obtain a more complete picture, and one embracing a wider range of detail, we have put together and analysed the following material:

1. *Primary Carcinoma of the Lung.*—Fifty-eight cases out of 74 collected by Pässler, which, in our opinion, may fairly be considered as originating in the lung.

2. *Primary Sarcoma of the Lung.*—Three cases from the St. George's Hospital records, and 5 cases collected by West (loc. cit.)—8 in all.

3. *Primary Carcinoma of the Bronchi.*—Two cases from the St. George's Hospital records, and 14 from Pässler's collected cases—16 in all.

4. *Primary Sarcoma of the Bronchi.*—Two cases from the St. George's Hospital records.

The results of this analysis are set forth for better comparison in tabular form:

Analysis.

—	Number of Cases.	Sex. Stated in— Male.	Sex. Female.	Age. Stated in—	Age. Over 40 Years.	Age. Under 40 Years.	Age. Limits.	Side Affected. Right.	Side Affected. Left.	Side Affected. Both.	Side Affected. ?	Nature of Growth.	Sites of Metastases in order of Frequency.	Remarks.
Lung: Primary carcinoma	58	53	41	12	52	46	6	19-86	27	22	5	4	(*a*) Of body of lung, soft in consistency. (*b*) Of root of lung, hard in consistency. Cells: Cylinder and polymorphous and polyhedral cells occur with equal frequency. Flat epithelial cells are described in 5 cases	Bronchial and mediastinal glands; liver; lung; pleura; kidneys; bones; suprarenals; spleen and brain; cervical glands; axillary glands, thyroid, dura mater, muscles of diaphragm; skin, pancreas, gall bladder, peritoneum	
Lung: Primary sarcoma	8	7	6	1	8	4	4	15-65	4	3	—	1	In the 3 cases from St. George's Hospital records: (1) M., aged 34; large round-celled sarcoma undergoing mucoid degeneration. (2) Case described. (3) M., aged 65; endothelioma of root of right lung. Weights of affected lungs: 10 lb. 7 oz., 5 lb. 1 oz., and 1 lb. 3 oz. respectively	Present in one case only; bronchial glands, abdominal lymphatics, portal glands extending into liver	In cases 1 and 2 the growth had involved the lower ribs by direct extension, possibly owing to fixation of the diaphragm to the affected lung, which would permit extension along it to its point of attachment on the chest wall.
Bronchi: Primary carcinoma	16	15	8	7	15	12	3	27-73	11	3	2	—	Large polygonal cells, 6 cases; cylinder cells, 2 cases; partly small polyhedral and partly cylinder cells, 3 cases; pavement epithelium, 1 case	Bronchial glands: lungs; liver; mediastinal glands, kidneys; pleura, mesenteric glands	The origin of the growth with pavement epithelium in the right main bronchus—one of Rössler's own cases—is attributed by him to some fetal inclusion at the time of the splitting off of the alimentary and respiratory tracts.
Bronchi: Primary sarcoma	2	2	1	1	2	2	—	41-53	1	1	—	—	(1) Large-celled sarcoma showing myxomatous degeneration of the intercellular substance. (2) Small spindle-celled sarcoma	Posterior mediastinal glands, infra-tracheal glands, liver	

There is one remarkable fact in connexion with primary malignant disease of the lung in general, namely, that, of the recorded cases, the vast majority are described as cancer or carcinoma, and only a few as primary sarcoma. Since, as has been shown, primary carcinoma of the lung is not in reality more common than primary sarcoma, the conclusion is forced upon us that some of the older writers at any rate have wrongly named their cases. From the few cases which we have collected from the St. George's Hospital records, and of which the microscopical appearances in every instance have been examined either originally or subsequently by one or other of us, it may be concluded (1) that primary malignant disease of the lung proper, whether of the body or of the root, is of the nature of sarcoma; (2) that primary sarcoma of the body of the lung is of the spindle-celled variety; (3) that primary sarcoma of the root is of the nature of endothelioma. The very close morphological resemblances between endothelial and epithelial cells, and the similarity in the amount and disposition of the stroma, account for the confusion between endothelioma and carcinoma. Further examination of root "cancers" from this point of view is needed.

REFERENCES.

[1] *A Textbook of Medicine*, vol. ii, p. 159. Edition 4, 1902. [2] Quoted by Pye-Smith, ibid. [3] *Virchow's Archiv*, Band cxlv, s. 191, 1896. [4] Loc. cit. [5] *Arch. f. Heilkunde*, xix, s. 369, 1878.

SCIRRHOUS CARCINOMA OF THE MALE BREAST.

BY W. BLAIR BELL, M.D.LOND., M.R.C.S.ENG.,
Aigburth, Liverpool.

SCIRRHUS of the male breast is a sufficiently rare condition to make a report of any fully-established case interesting, not only because of the rarity of this disease in the male breast, but also because it is probable that, in the study of these more or less anomalous cases and of such malignant conditions as deciduoma malignum, we shall find the secret of the origin of cancer, since many hundreds of thousands of eyes have examined an even larger number of sections of more typical forms with no definite result.

The history of this case is as follows:

J. O'B., aged 56, of no occupation, consulted me in November, 1900, for an "ulcer on the right breast." He said that he had first noticed a small hard lump, the size of a pea, behind the nipple, four and a-half years previous to the date on which I first saw him. This had gradually enlarged, he said, until it was the size of a hen's egg. He then consulted a doctor, who told him that it was nothing serious, and gave him some ointment—evidently intended to produce counter-irritation, for it blistered him.

Shortly afterwards, it being then two and a-half years from the time he had first noticed anything, the growth commenced to ulcerate on the surface. On questioning he was quite certain that there had never been any discharge of blood from the nipple. Further, up to this time he was certain that the growth was freely movable, and that, beyond occasional shooting pains, he had suffered no discomfort. From this time onward the ulceration gradually extended, causing the pain to be more frequent and severe. Apparently he saw several doctors, but, according to his own account, the condition was not recognized—a statement I am unwilling to believe, as the growth was, when I saw him, obviously malignant. To complete his story, I may say that he had done no work for many years, but had amused himself with amateur carpentry, and when so occupied he had been in the habit of pressing heavy chisels against his right breast. This I presume set up chronic mastitis, to which the cancer was a sequel. Mr. F. T. Paul has shown how commonly breast cancer follows chronic mastitis.

The patient had been a fairly heavy drinker, but was then (November, 1900) in good health, and did not think that he was losing weight very rapidly, although he had been gradually getting thinner. He was unaware of any cancer in the family.

On examination, a large excavating ulcerated surface was seen involving the right breast (Fig. 1). The area of ulceration was 4 by 3 in. The edges were hard, raised, and everted. There was a foul discharge from the surface, which bled easily. The surrounding skin was oedematous, but no glands could be detected in the axilla or above the clavicle. Further, a careful examination failed to reveal any metastasis. I therefore decided to remove the growth in spite of the fixation.

The patient was admitted to the Wallasey Hospital, and on December 7th, 1900, I excised the growth widely, removing at the same time all the underlying fascia and muscle, together with a few small glands from the axilla, which were, as far as one could judge, unaffected. The uncovered area after operation was formidable; it measured 9 in. by 7½ in. I treated this surface with 20 per cent. formic aldehyde. It afterwards occurred to me that this proceeding may have

been somewhat rash, but he did not have pneumonia, and, beyond a universal erythema with slightly elevated temperature for three days, he suffered no inconvenience. He was up on the tenth day and out on the twenty-second.

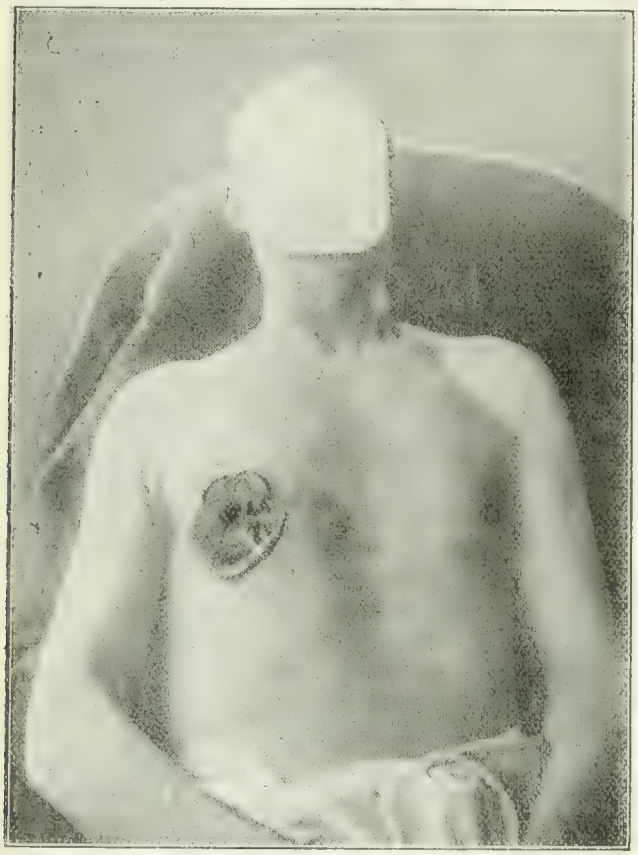


Fig. 1.—Cancer of male breast.

A day or two later he was again anaesthetised, and the clean granulating surface was skin-grafted with grafts from the front of his thigh. These grafts did moderately well, and I see from my notes: "February 9th, 1901. Uncovered area is 5 in. by 4 in. The two upper grafts 'took,' and one has joined the margin. Skin is rapidly growing in from the edges." On this day six fresh grafts from the leg of a man on whom I was doing a radical cure for hernia were applied. These all did well, and the whole surface was healed by April, when he was discharged.

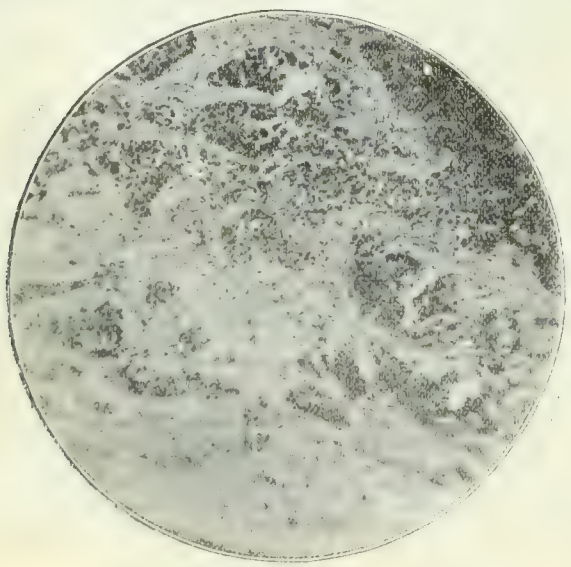


Fig. 3.—Section of primary growth.

I saw the patient from time to time, and he remained for some months in excellent health. I see that the last note I have of a satisfactory nature is dated August 7th, 1901, exactly eight months after operation. I did not see him again



Fig. 2.—Cancer of male breast—after operation.

for seven months—that is, fifteen months after operation, when he came to me looking thin and ill. There was a small growth the size of a hazelnut above the scar in the upper portion of the pectoralis major which had been left. Further, there was a deposit in the fifth rib on the left side. I naturally gave a grave prognosis.

Fig. 2 shows a photograph which I took of the patient in the above condition, fifteen months after removal of the primary growth. It shows how well the skin grafting had covered the large area, with little or no contraction. The small recurrence can also be seen as a slight elevation above the scar. It will also be noticed that the sebaceous cyst, which is seen on the left side of the neck in Fig. 1, has disappeared. This was removed at the same time as the growth.

Soon after I last saw him the recurrent(?) growth in the pectoralis major was removed—not by me—but he gradually got weaker, and eventually died on September 8th, 1902, one year and nine months after the removal of the primary growth, with deposits in the liver and elsewhere. No necropsy was made, but from inquiries I learn that there was no evidence of pulmonary deposits.

A section of the primary growth—now preserved in the Liverpool College Museum—was made by Dr. E. E. Glynn, and the photomicrograph shown as Fig. 3 was kindly made for me by Mr. Keith Monsarrat. It will be seen at a glance that this growth was of a true scirrhus carcinomatous nature.

From the statistics of Roger Williams and T. W. Nunn it appears that cancer of the male breast occurs in about 0.5 per cent. of all cases of breast cancer, but I have been unable to find any illustration of such a well-marked case as this.

Medical Magistrates.—Mr. Ralph C. Bartlett, M.R.C.S., L.R.C.P., has been appointed a Justice of the Peace for the Borough of Romsey, Hants. Mr. J. Lynn Thomas, C.B., F.R.C.S., of Cardiff, has been placed upon the Commission of the Peace for his native county, Cardiganshire.

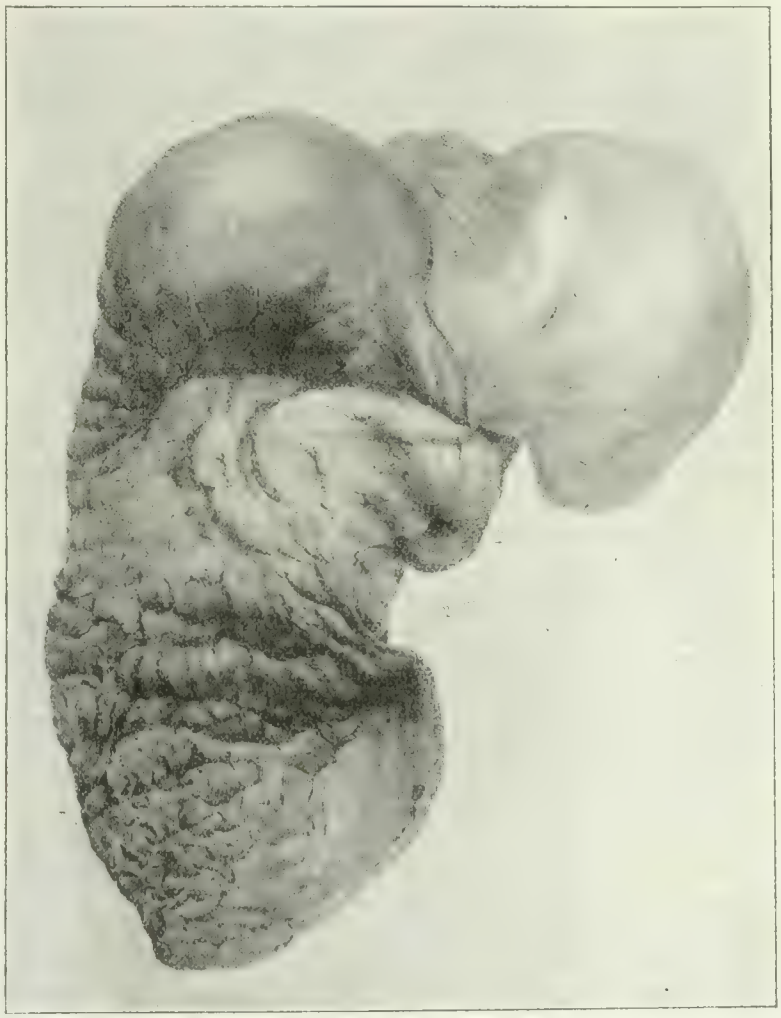
AN UNUSUALLY LARGE ANGEIOMA OF THE LIVER.

By ALFRED MANTLE, M.D., M.R.C.P.Lond.,
Physician to the Royal Halifax Infirmary.

The following case appears suitable for publication on account of its rarity:

History.—The patient was admitted into the Royal Halifax Infirmary on March 31st, 1902. He first noticed an increase in the size of the abdomen two years before but did not suffer any discomfort, and did not seek medical advice at the time. The abdomen steadily increased in size until admission, but beyond a little shortness of breath the swelling did not cause any discomfort. About the middle of March, 1902, he began to have a little sickness at times after food but did not suffer any pain. He had always lived in Yorkshire, had been a temperate man, and had never had any illness previous to this. He had no specific history. He had lost his left eye through an accident.

Condition on Admission.—A fairly healthy-looking man and well nourished; says he has not been losing flesh; eyes slightly jaundiced, but had not noticed this himself. No bile in the urine. Bowels have been somewhat constipated, stools normal in colour. Temperature normal; pulse 80, good volume. Artery not appreciably thickened; no tortuosity. Lies flat in bed, no hurrying of respiration, no cough or expectoration. Appetite good, no vomiting since admission. Urine, specific gravity 1020, no albumen or sugar. Extremities not swollen. Chest well covered and moves well; except towards the bases of the lungs, there does not appear to be any bulging in the intercostal spaces. Apex beat beneath the left nipple in the third interspace. Actual cardiac dullness not increased in size, but displaced (?). Heart sounds rather muffled, but normal. On percussion on the right side the note is good as far as the upper border of the fourth rib, when it becomes impaired, and in the fourth space the note is dull. This is continuous below with the liver dullness. The dullness extends outwards into the axilla, but at a somewhat lower level, whilst behind it commences just below the angle of the scapula. Voice sounds are present over the whole lung, and bronchial sounds can be heard down to the base, though somewhat faint at the base. Vocal resonance good. There are a few crepitant sounds from the angle of the scapula downwards. The lung appears from the physical signs to be somewhat collapsed. The left lung at the base presents the same physical signs. Abdomen very distended; the distension appears to be general. There is not much movement on respiration, and there is definite bulging at the intercostal angle. Feels somewhat firm on palpation, but there is no tenderness anywhere. Liver not felt, neither is the spleen. On percussion the note is dull all over, except in the left flank, where the note is almost tympanitic. This band of resonance persists even when the patient turns over on the left side. The note is also very slightly resonant over the lower part of the abdomen. No thrill obtained, but on the right side the abdomen has a distinct fluctuant feel.



As the nature of the tumour was very doubtful I asked my surgical colleague, Dr. Priestley Leech, to make an exploratory incision.

Operation.—An incision was made starting from the ninth costal cartilage, extending directly downwards for 2 in., and on opening the peritoneum a small amount (about 3ij) of clear serous fluid escaped. This being sponged away a soft, deep-red coloured mass could be seen; it appeared lobulated, and resembled very deeply-congested coils of intestine. On percussion it was dull; to the touch it felt like a thin-walled cyst; there was no pulsation, but the tumour moved up and down with respiration. Its extent could not be defined, but it appeared to be directly continuous with the right lobe of the liver. A fine exploring needle was then put in, and it was found to contain blood. On removing the needle a spirt of blood followed. A pair of clips stopped this, and it was decided to ligature the part and sew up the wound, as the tumour was thought to be a huge angeioma of the liver. The ligature, however, only tore the wall of the tumour and more and very alarming haemorrhage followed which could not be controlled. The wound was plugged with several yards of gauze, which, however, did not appear to be effectual. The patient was sent back to bed, only to die some two hours later with all the symptoms of internal haemorrhage.

Necropsy.—The abdomen was quite flat, contrasting strongly with the distension previous to operation. On percussion the abdomen was resonant all over with the exception of the right flank. On opening the abdomen and washing out the blood the right side of the liver was found to consist of an enormous tumour, extending right into the right iliac fossa. The tumour was of the consistency of a placenta in its collapsed condition, resembled one springing from the right lobe of the liver. Its length from the edge was 12 in., and in its widest part it was 8 in. It was an angeioma involving only the right lobe. The weight of the liver and tumour was 6 lb. 13 oz. Both lungs showed collapse of their lower lobes. The other organs were healthy.

Pathological Report by Charles Powell White, M.A., M.D. Cantab., F.R.C.S.Eng., Demonstrator of Pathology, St. Thomas's Hospital.

This specimen consists of the liver, the right lobe of which is involved in a large cavernous angeioma. The left lobe is unaltered macroscopically. The lower portion of the right lobe is converted into a flattened disc-shaped mass which extends 8 in. below the level of the gall bladder which is adherent to its left margin. This mass, in the hardened condition, measures 12 in. in the vertical diameter and 6½ in. in the transverse; it is 1⅝ in. in thickness. Above the main mass the liver is seen to be involved for some distance, but the upper portion of the right lobe and the Spigelian lobe are apparently healthy. The surface of the growth is much wrinkled, but the capsule is not thickened. On section, the growth presents the spongy appearance characteristic of cavernous angeioma and the adjacent portion of the liver shows dilatation of the vessels.

Microscopic Examination.

Left Lobe.—There is some dilatation of the branches of the portal vein in the portal canals, but the liver substance itself is healthy.

Main Mass of the Growth.—This is composed of irregular spaces lined by endothelium separated by septa of dense fibrous tissue. The spaces are very large and are crossed by numerous fibrous tissue trabeculae. In the fibrous tissue are a large number of bile ducts with well-formed epithelium, and here and there are seen collections of hepatic cells which are apparently healthy except that some of them are undergoing atrophy. These hepatic cells and bile ducts are found even in the lowest margin of the tumour; they nowhere show any degenerative changes.

Margin of the Growth.—There is no capsule separating the growth from the adjacent portion of the liver. Numerous dilated vessels can be seen in the liver for a considerable distance from the actual margin of the growth. These dilated vessels are mostly situated in the portal canals but some of them seem to be in the lobules. There is a considerable amount of small cell infiltration and cirrhosis extending for some distance into the liver substance, but the hepatic cells show no change except atrophy.

This growth had apparently originated in a dilatation of pre-existing vessels rather than in a new formation. This is shown by the presence of hepatic cells and bile ducts throughout the growth and by the dilatation of the vessels in the left lobe. The presence of bile ducts in the lowest margin shows that they had undergone considerable elongation, and the number of them, sometimes amounting to 12 or more in one

field of the high power of the microscope, would suggest that they had increased in number.

REMARKS BY DR. MANTLE.

There is no doubt that a cavernous angeioma of the liver of the size of the one described is very rare indeed. In Frerich's well-known work on the liver,[1] he describes the condition as being generally found on the surface of the liver, the size of a hazel nut or walnut, and penetrating the organ as a wedge-shaped or globular tumour. He concludes his description of it by saying: "The pathological and clinical importance of the cavernous tumour is very slight. I know of no case in which it has given rise either to local or general derangements."

In Allbutt's *System*[2] Dr. Hale White, the writer of the article on tumours of the liver, dismisses angeioma in these words: "Cavernous angeioma of the liver is common, but produces no symptoms during life."

Osler[3] says: "Occasionally in children angeiomata have developed and produced large tumours."

Sims Woodhead[4] writes of it thus: "This tumour is not very frequently met with in the human subject, but in the liver of the cat is of common occurrence."

Ziegler thinks the cavernous tumours begin to develop after middle age, when the cells begin to atrophy. This patient was only 33, and there were no signs of tissue degeneration anywhere else.

The photograph is taken from an excellent water-colour painting executed by Miss Wright, of Leeds. It only shows the tumour in a collapsed condition owing to the escape of blood, the amount of which was estimated at about 8 pints.

I have to express my thanks to Mr. Turner, the house-surgeon, for very carefully-taken notes of the case, and to Dr. Powell White for his valuable pathological report as to the nature of the tumour.

REFERENCES.

[1] *A Clinical Treatise on Diseases of the Liver*, vol. ii. [2] Allbutt's *System of Medicine*, vol. iv. [3] *Practice of Medicine*. [4] *Practical Pathology*.

A CASE OF PROLAPSE OF THE BOWEL WITH LOSS OF CONTROL,

TREATED BY INJECTION OF PARAFFIN UNDER THE MUCOUS MEMBRANE.

BY STEPHEN PAGET, F.R.C.S.,

Surgeon to the West London Hospital and the Throat and Ear Department of the Middlesex Hospital.

GERSUNY and other surgeons have obtained good results, in prolapse of the bowel, by the injection of paraffin under the prolapsed mucous membrane. The paraffin, once set, remains as a hard smooth nodule in the submucous tissue, holding up the prolapse, and acting as a valve to prevent any leakage from the bowel. It is essential for the success of the treatment that the paraffin should not stray outside the bowel, but should be deposited just under the mucous membrane, and that the prolapse should be reduced so soon as the paraffin has set. The following case, which was entrusted to me by Mr. Swinford Edwards, may serve to call attention to this very useful method.

The patient, 65 years old, was a tall, thin, rather feeble man, who eight years ago, in April, 1897, had undergone excision of the rectum for cancer. A few weeks after the operation, he began to be troubled with prolapse of the bowel and partial loss of control over its contents. He has worn a plug ever since to keep the prolapse up. The use of this support has prevented him from sitting comfortably, and has made him stoop in walking; and he says that he has never been comfortable by day, only at night, when he can do without his support. From time to time, even while he was wearing this plug, the prolapse would come down, and he would be soiled by the discharge of mucus. He had control over solid motions; only, after taking hot food or tea he would be compelled to go very quickly to the closet, or he would be soiled; and, if the bowels were at all relaxed, it was impossible for him to keep himself clean.

On January 8th, 1903, he was admitted to the West London Hospital; and Mr. Edwards very kindly let me have charge of him. The opening into the bowel lay at the bottom of a deep cup-shaped fossa; the walls of this fossa were soft and healthy, not rigid or cicatricial; the ring round the end of the bowel was lax, and easily admitted three fingers; and there was no feel of a sphincter. The prolapse was slight; only, if he walked about, or bore down gently, about two inches of healthy mucous membrane were everted. When he was in bed there was no prolapse.

On January 15th Dr. Shuter gave an anaesthetic; and, with the help of Mr. Speirs, my house-surgeon, I injected paraffin at several points into and around the prolapsed bowel. I have to confess that some of the paraffin went wide of the mark, and did no harm but no good; and that the whole procedure, for want of experience, was not all that it ought to be. But I succeeded in raising the mucous membrane at two points, one lateral, the other posterior, so that two hard round hummocks or nodules, about 1 in. in diameter, and half or three-quarters of an inch in height, could be felt, like tumours growing in the submucous layer of the bowel: and these two swellings, one lying a little above the other, so narrowed the bowel that it would admit only one finger. The lower swelling lay just within the anal ring, and had the appearance of blocking it right across, but was easily pushed aside by the finger. Thus, by the two swellings together, the lower end of the bowel was held up, and made valvular. A morphine suppository was given, and the patient was put back to bed. He had no pain or tenesmus, only very trivial discomfort for a few hours. The bowels were kept quiet for five days with opium, and then acted of their own accord. He was allowed to walk about the ward on the tenth day.

The result of the treatment is very good. There is no prolapse, and no escape of the contents of the bowels. He has no difficulty in keeping himself clean; he walks erect, instead of stooping; and he is thankful to be rid of his rectal plug, after wearing it for seven and a-half years. Of course, sooner or later, another injection may be needed; but there is at present no reason to expect anything of the kind. Anyhow, it could easily be made under cocaine. So far as things have gone at present, he appears to have been cured, by a very simple method, of all the miserable discomfort that these cases suffer for years.

The points to be noted are that the paraffin must be injected immediately under the mucous membrane of the prolapse, not outside the bowel, but into the fold of everted mucous membrane; that numerous punctures must not be made, but only one or two, lest a vein should be wounded; that the prolapse, with the nodules of paraffin in its submucous layer, must be put back at once, and kept back; that the bowels must be kept inactive for several days after the operation; and that the patient must be kept in bed for ten or more days till the tissues are thoroughly contracted.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

A CASE OF PROLAPSUS UTERI TREATED SUCCESSFULLY BY INJECTION OF QUININE.

ONE of the subjects selected for discussion at the meeting of the British Medical Association last year was that of the operative treatment of prolapsus uteri. The different views expressed then by many operators make it apparent that there is no one direct route to success in the treatment of this troublesome condition. Inglis Parsons has for the last few years been practising with success his ingenious operation of injection of the broad ligaments with a solution of quinine sulphate. Having seen some of his results at the Chelsea Hospital for Women I determined to try this method in the case of a lady who recently consulted me for persistent prolapse.

The patient, aged 38, who looked strong and healthy, had had three children, the youngest of whom was 3 years old. She complained of the ordinary symptoms of prolapse, which prevented her from performing her usual household and social duties, and her life had become a burden.

History.—She had had no previous gynaecological trouble; her labours had been easy. About three or four months after her last confinement she began to notice a bearing-down down sensation, which came on more severely after any exertion; there was no actual pain, and the discomfort was so slight that she did not consult a doctor till about a year ago, when the os began to protrude from the vulvar orifice. A variety of pessaries were then tried, but without much benefit, as they caused her discomfort and she was unable to retain them.

Treatment.—I first saw her about the middle of May, and found that the vaginal walls were very lax, that the uterus was enlarged (a sound passing 3½ in.), and retroverted, and the cervix soft and hypertrophied. On straining there was marked procidentia. I also found that the left ovary was enlarged, tender, and prolapsed into the pouch of Douglas, and that this was a source of discomfort when a pessary was introduced. I advised injection of the broad ligaments with quinine. This I did on June 16th, injecting 50 minims of quinine sulphate solution (1 in 5) into each broad ligament, and, replacing the uterus, inserted a Napier's pessary. There were no bad symptoms beyond a slight buzzing in the head on the second

day, the temperature the same day rising to 99.5°, but the following day it was normal, and the patient was very comfortable. On the fourth day the pessary was removed, and a distinct effusion could be felt in each broad ligament. I had intended to give her a second injection three weeks after, but family reasons intervened, and prevented her from lying up any longer. I therefore, at the end of the third week, inserted a Hodge pessary, and allowed her to get up and resume her ordinary mode of life. The uterus was then somewhat smaller, and on severe straining was absolutely supported. At the end of three months I again saw the patient, who reported that she had had no pain or discomfort whatever, and that she had resumed all the duties and pleasures of life which previously she had been forced to give up. On examination the uterus was found to be lying in a good position, and considerably reduced in size, and on straining there was no tendency to prolapse of either the vaginal walls or uterus.

This is such a satisfactory result of a somewhat recent mode of procedure that I have thought well to record it. I have requested the patient to report herself to me at regular intervals, so that any tendency towards a recurrence may be met by a second injection.

G. Crewdson Thomas, M.D., M.R.C.P.Edin.
Sydenham, S.E.

MILD UNSUSPECTED NASAL DIPHTHERIA AS A LINK IN THE CHAIN OF INFECTION.

Case I.—On November 11th, 1902, I was asked by Dr. —— to see M. H. W., aged 4, S. J. W., aged 2, and H. S. W., aged 4—brother and sisters—with a view to confirming the diagnosis of diphtheria before removal to hospital. This I had no hesitation in doing, but at the same time I observed a brother, A. C. W., aged 16, with soreness and running at the nose. His throat was normal. I was informed, however, that two weeks before he had had a slight sore throat, for which he had stayed away from school for half a day. A swab was taken of the nasal discharge, and found to contain diphtheria bacilli. It was obvious that this boy, who probably had not had any clinical pharyngeal diphtheria and had not been ill in himself, had infected his brothers and sisters with the disease. No other cases were notified at the school he was attending.

Case II.—On September 17th, W. W., aged 4, was taken with diphtheria, moved to hospital on September 19th, and died on September 30th. On November 1st, M. W., aged 13, sister of W. W., commenced with the same disease, and on November 2nd and 3rd respectively E. W., aged 6, and M. W., aged 1¼, brothers of W. W. On visiting the house, I discovered a lad, A. W., aged 15, with a soreness and scab in the left nostril; throat normal. He was said to have had a slight sore throat for a week at the beginning of October; he had only stayed away from work for half a day. A swab was taken both from the throat and the left nostril, and the latter was found to contain diphtheria bacilli. There appeared little doubt that A. W. had been infected by W. W., and had, after four weeks, transmitted the infection to his remaining brothers and sisters.

Case III.—On November 22nd, R. B., aged 15, commenced with diphtheria, and on November 23rd her brother, W. B., aged 17. These persons were not attending school, but their brothers attended a school where several cases of diphtheria had recently occurred. I accordingly suspected an undetected case in the house, and on visiting discovered that V. B., aged 6, attending the school referred to, had had, on November 15th, cold, slight sore throat, earache, and was feverish, and had been kept at home since. I found that he had a slight mucous discharge from both nostrils, which under ordinary circumstances I should not have regarded as more than a common catarrh. I took, however, a swab, and diphtheria bacilli were found to be present.

These cases illustrate the importance of medical practitioners being on the look-out for mild cases of nasal diphtheria.

Sidney Davies,
Public Health Department, Woolwich. Medical Officer of Health.

TEST FOR BILE PIGMENT.

The methylene blue test for bile pigment, noticed in the British Medical Journal for October 25th, 1902, seems fairly reliable and very speedy. The methyl colours also give reactions. Methyl blue and methyl violet give each a red. Paul's test, a solution of methyl aniline violet, gives a red. Loeffler's blue solution, containing methylene blue, gives a green. It is likely that the homologues of these colours also give reactions. The green with Loeffler's blue can be made to vanish on heating, and reappear on cooling. Thus carbol fuchsin, one part, Loeffler's blue solution and dilute hydrobromic acid, each two parts, heated to boiling, and cooled, give a blue. A few drops of this to 2 in. of urine in a test tube give green in jaundice cases, and blue in others. Heating the top of the liquid so got causes vanishing of green and blue, while a fuchsin colour comes in. On cooling, the green or the blue comes back.

A mixture of carbol fuchsin, Loeffler's blue solution, and absolute alcohol is reduced, etc., by heating with a mixture of nitric acid, hydrochloric acid, and sodium nitrite in the presence of a bit of iron—for example, a tack. The almost colourless resulting fluid becomes red with jaundice urine, and crimson lake with others.

Another test, a "ring" test, is as follows: Take 2 in. of urine in a test tube, and shake with 20 drops of dilute hydrobromic acid, and then run on top about ½ in. of spirit of nitrous ether. A green ring is seen at the junction of the fluids. Shaking the fluids together gives a green throughout. Another still is got by adding a drop or two of old sodium nitro-prusside solution to Ehrlich's bile pigment test, when a dirty coffee-brown is got.

John W. Duncan, M.A., M.B., Ch.B.
Hockley, Birmingham.

SOME ASSOCIATIONS OF RHEUMATOID ARTHRITIS.

The following cases, recently in the Bath Mineral Water Hospital, may be of interest, especially as my predecessor, Dr. Llewellyn Jones, has already called attention in the British Medical Journal to the intimate relationship between vasomotor changes and joint mischief in rheumatoid arthritis. The patients were under the care of Dr. Carter who has kindly permitted me to publish their cases. The first one shows how that when a functional disturbance like asthma supervenes the joint trouble subsides to a certain extent, only to reappear when the asthma disappears.

A dressmaker, aged 35, was admitted suffering from obvious rheumatoid arthritis of the hands of some six years' duration. Her family history disclosed rheumatic fever on her mother's side, and a brother dead of phthisis. Her relatives were said to be "nervous," but there was no gross insanity and no gout. The personal history gave pleurisy twelve years ago and attacks of asthma from childhood. The attacks were worse in the daytime, and were apt to appear after excitement, which in other cases dispelled the trouble. The last attack but one ushered in pains in the hands, and was followed by joint manifestations which became chronic. I was called to see her suffering from asthma one morning, and gave great relief by administering amyl nitrite inhalations, though the respirations only became natural after two days. Next morning the patient gave me the gratuitous information that her joints were more swollen and painful, in fact a former attack of asthma had treated her similarly by relieving joint swelling and pain, which returned after it had subsided. The small swollen joints of the knuckles certainly appeared less swollen.

The second case is interesting as showing some eye symptoms simulating an obscure attack of Graves's disease associated with rheumatoid arthritis. A woman of 44, with a history of "rheumatic gout" on her mother's side and a sister who died of insanity at Banstead Asylum, was admitted suffering from rheumatoid arthritis. The attack came on after a severe illness from "rheumatic fever" in the summer of 1882. After the fever left her she noticed that her hands were stiff and in the winter they became painful. The arthritis has slowly progressed ever since, being especially worse in winter. The hands were typically crippled and the right knee was sometimes stiff and painful. On looking at the woman's face one noticed her forehead to be deeply wrinkled horizontally and both eyes were prominent, especially the right one. The upper eyelids lagged behind the eyeballs on making the patient roll her eyes downwards. The sclerotics could be distinctly seen between the upper part of the cornea and the eyelids during this movement. Apparently all ocular movements were limited, especially those of the right eye. The hands were tremulous as if the patient were convalescing from a continued fever. The thyroid was not more prominent than usual. Pulse-rate 80 and regular, but there was a persistent systolic murmur over a normally placed apex, probably due to some slight lesion following the rheumatic fever.

Dr. Llewellyn Jones has often called my attention to the tendency that "rheumatoid" patients have to possess coincidently peculiar and often fleeting ocular palsies. It seems reason-

able to consider a toxaemic exacerbation which might affect certain nerve centres in such a manner as to produce these symptoms.

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Royal Mineral Water Hospital, Bath.

CEREBELLAR HAEMORRHAGE IN A GIRL AGED 9½ YEARS.

ON November 18th I was called at 9.30 a.m. to a little girl, A. E., aged 9½ years. She was dead. On the previous day and on the morning in question her health had been apparently perfect, and at 8 30 a.m. she prepared to go to school. After running upstairs to get a book she came down saying, "Oh, my head aches," and was sent to lie on the bed. She was seen in a quarter of an hour to be asleep. This sleep deepened into coma, and death occurred in half an hour. I could get absolutely no clue as to the cause of death. The one noteworthy feature about the body was the intensest pallor of face, lips, and tongue.

On necropsy I found a large haemorrhage, which had practically excavated the entire left lobe of the cerebellum. The cerebrum and the right lobe of the cerebellum were normal. The source of the bleeding I could not define, but I ascertained after a very prolonged examination that the lesion was certainly quite recent; there was no sign of abscess or any chronicity in the neighbourhood, and no meningitis, tuberculous or otherwise. The base of the brain, base of the skull, sinuses, and the vessels of the neck all gave negative signs. The tympanic cavities I thoroughly explored, and they were above suspicion. As to whether there was a preceding embolism I cannot say, but I could find no other sign thereof elsewhere, nor could I find any source for an embolic plug. The cardiac valves were normal. All other organs were normal, with the exception of the lungs, which were involved in a kind of acute oedema, the result, I imagine, of the lesion. The kidneys were normal. The urine I was unable to examine as the bladder was practically empty.

Penge, S.E. H. H. PHILLIPS, M.R.C.S., L.R.C.P.

FRAMBOESIA IN FOWLS.

I HAVE not observed in the accounts of framboesia that I have read any record of the occurrence of that disease in fowls, but as this is by no means uncommon the oversight is most probably mine. However, as the disease in man and fowls appears identical, I have thought it possible that they might be not merely one disease but might be mutually infective.

The histological features of the disease in fowls are identical with those seen in the human variety. The disease attacks chickens mostly, and its chief seat is the head, rarely the feet or legs. It is interesting to observe that the disease thrives best in the young of both species of animal. In the fowl the disease is of a more virulent type, and unless treated usually causes death.

As regards the transmissibility of the disease, I have not been successful in careful endeavours to transfer the disease from man to fowl nor from fowl to man. In the case of human yaws, not having any chickens I tried inoculating full-grown fowls but always failed. The fowl variety I have also failed to convey to man. In this case I emulsified the framboesia scale and at the same time tried the purulent discharge and also the blood from the raw surface left after removing the horny outgrowth, but with none of these was there the slightest trace of inoculation, the marks drying up and leaving a healthy surface. I am, however, of the belief that the diseases are identical, and intend to renew the experiment on the chicken. Any connexion of yaws and syphilis otherwise than a mimicry of the former by the latter is, in my opinion, accidental. Framboesia is not syphilis.

Port Maria, Jamaica. JAS. A. L. CALDER.

SUPRAPUBIC CYSTOTOMY.

H. U., aged 5, came to the dispensary on account of urinary symptoms, but it was very difficult to obtain a history as the parents were villagers. He complained of pain at the end of the penis, which he was constantly pulling. He had never passed any blood. On passing a No. 4 sound a rough stone was detected. After preparatory treatment suprabubic cystotomy was performed on May 26th, 1901. The bladder was washed out with warm boracic solution and distended with 3 oz. of the same, and a ligature was fastened round the root of the penis. The usual incision was made, the bladder fixed with two silk sutures and incised. On opening the bladder and introducing the finger no stone could be felt, but as I was certain of having struck a stone, the sound was reintroduced and a stone was felt in the prostatic urethra. Reinserting my finger and feeling carefully I could detect the sharp point of a stone jutting into the bladder, the opening was carefully enlarged with the finger tips and the stone easily removed with a pair of dressing forceps. The bladder wound was only partly closed and a small drain tube inserted in the lower angle of the wound. The stone was almond-shaped and weighed 55 gr. This case resembles that reported by Dr. Horner in the BRITISH MEDICAL JOURNAL of May 18th, 1901.

JOSEPH SCOTT, M.B.,
Assistant Medical Superintendent, Indo-European Telegraph Department.
Shiraz, Persia.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

LANARK MIDDLE WARD COUNTY HOSPITAL.

CASE OF NEPHRO-TYPHOID FEVER.

(By ALEX. LEDINGHAM, M.A., M.B., Ch.B., D.P.H.Aberd.; late Physician to the Hospital, Assistant M.O.H., County of Lanark.)

[With a Bacteriological Report by DAVID MCCRORIE, L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg., Bacteriologist to the Glasgow Royal Infirmary.]

AMONG English writers the term "nephro-typhoid" has been considered superfluous, it being generally impossible to draw a hard-and-fast line between enteric complicated by acute nephritis and the so-called nephro-typhoid. This term, according to the Continental idea, is applied to those cases characterized by the early appearance and predominance of the renal symptoms. Curschmann would recommend that nephro-typhoid be employed as a convenient term only for those cases in which nephritis is an early and prominent symptom, and he would include in his category, also, those cases in which the abdominal symptoms are little marked or even absent. He has found that in cases of the latter variety abdominal symptoms may appear later on, or signs are recognized *post mortem*. As yet, the cases recorded in this country are few, and exact microscopical and bacteriological reports are not always available.

The case now described seems to belong to the nephro-typhoid class.

Case.—W. Y, male, aged 20, by occupation a miner, was admitted to the hospital during a severe outbreak of enteric fever due to an infected milk supply. On admission the following notes were obtained regarding his illness. Seven days previously he had been suddenly seized with headache, shivering, and vomiting, which necessitated his immediate recourse to bed. There had been no diarrhoea. Blood was observed to be present in his urine on the date of onset of illness, and continued so up to the date of admission. Physical examination revealed the following: Tongue was brown, tending to be dry. Two typical rose spots were observed on the abdomen. No meteorism; spleen found to be enlarged by percussion, but not palpable. There was nothing in his general appearance suggestive of typhoid fever. Heart and lungs were normal. Temperature on the evening of admission was 102.6°. A serum diagnosis test gave a positive reaction. The interesting feature of the case lies in the condition of the urine. Blood and albumen were both present in considerable quantity on the day of admission, and continued so in varying quantity even up to the ninety-ninth day of illness, when he was discharged, and in this connexion I may mention there was no suspicion of kidney disease prior to his illness.

Progress.—On the fourteenth day of illness the temperature became normal and continued so with very slight oscillations till the seventh week of illness, when it commenced to show a decided evening rise, pulmonary symptoms making their appearance at this time. At no period of his illness were there any abdominal symptoms. There was no diarrhoea, and enemata required to be administered every fourth day. Soon after admission his tongue regained its normal condition, and his appetite returned. He commenced having Benger's food on the twenty-fifth day of illness, and by the thirty-seventh he was having a light fish diet. The quantity of urine passed daily was very large. Taking, for example, the quantities passed on the last day of every week, they were: 50, 83, 80, 71, 71, 68, 74, 53, 56, 46, 67, 73, and 70 oz. Repeated microscopical examinations showed blood corpuscles, pus cells, epithelial casts, and numerous actively motile bacilli. Prolonged administration of urotropin seemed in no way to affect the number of micro-organisms present in the urine. Specimens of urine as passed into a sterile vessel on March

17th (twelfth week of illness) and on April 2nd (the day of discharge) were forwarded to a bacteriologist for examination.

Further Progress.—About the eighth week of illness there were signs of commencing phthisis, which made rapid advance, ending fatally a fortnight after discharge from hospital. No necropsy was made.

Remarks.—Had this case not occurred during a severe epidemic, it is probable that the true nature of the disease would have escaped notice, as the symptoms were strongly suggestive of a simple acute nephritis. The chief points to be noted as distinguishing this case from one of acute nephritis complicating typhoid are the following: (1) The early appearance of the renal symptoms and their predominance throughout the entire course. Nephritis as a complication of typhoid fever generally occurs about the third week at the height of the disease. (2) The absence of any marked abdominal symptoms clinically. However, as has been previously pointed out, abdominal lesions are reported to have been observed *post mortem* in similar cases. (3) The long duration of the renal trouble—nephritis complicating typhoid generally clears up in two or three weeks. (4) The peculiar condition of the urine. Specially to be noted is the large quantity daily passed, so different from ordinary acute nephritis.

Bacteriological Report.—The two specimens of urine, one taken on March 17th and the other on April 2nd, in the above case were examined for bacillus typhosus. A specimen of blood also taken on April 2nd was tested for Widal's reaction.

Urine (specimen taken on March 17th).—Four quantities were taken from the first sample of urine and centrifugalized. From the sediments thus obtained agar and Elsner plates were prepared. In the agar plate cultures, colonies which were afterwards easily proved to be those of Fraenkel's so-called pneumococcus (streptococcus lanceolatus) were fairly abundant. In the search for the typhoid germ thirteen suspected colonies were picked up and sub-cultured. All of these resembled the typhoid germ in their growth on agar and gelatine, their staining properties, their motility, etc., but in applying the special tests all were found to be varieties of the bacillus coli communis. The typhoid germ was not found. The results of these tests are presented in tabular form, thus:

No.	Gas Formation.	Milk Coagulation.	Indol Reaction.	Widal Reaction.
1	—	—	+	—
2	—	—	+	—
3	—	—	+	—
4	+	+	+	
5	+	+	+	
6	+	+	+	
7	—	—	+	—
8	—	—	+	—
9	—	—	+	—
10	+	—	+	
11	—	—	+	—
12	—	—	+	—
13	—	—	+	—

The Widal test was not applied to cultures 4, 5, 6, and 10.

Specimen taken on April 2nd.—This specimen was treated in the same way as the first. Again, the streptococcus lanceolatus was found to be present, and the colonies suspected as being those of typhoid gave the following results so far as the special tests are concerned:

No.	Gas Formation.	Milk Coagulation	Indol Reaction.	Widal Reaction.
1	—	—	+	—
2	—	—	+	—
3	—	—	—	+
4	—	—	+	—
5	—	—	+	—
6	—	—	+	—
7	—	—	+	—
8	—	—	—	+
9	—	—	—	+
10	—	—	+	—
11	—	—	+	—
12	—	—	—	+
13	—	—	+	—
14	—	+	+	—
15	—	+	+	—
16	—	—	—	+
17	—	—	—	+
18	—	—	—	+
19	—	—	—	+
20	—	+	+	—
21	—	—	—	+
22	—	—	+	
23	—	—	+	—
24	—	—	—	+
25	—	+	+	—
26	—	—	—	+

glance at this table shows that cultures 3, 8, 9, 12, 16, 17, 18, 19, 21, 24, and 26 were those of bacillus typhosus. The other cultures were varieties of the colon germ, and in all of these the indol reaction was most pronounced. The Widal test was applied to the whole twenty-six cultures. Serum obtained from a case of undoubted typhoid was used. The dilution was 1 in 25, and the agglutination, where obtained, took place within thirty minutes.

Blood (specimen taken on April 2nd).—The blood was diluted fifty times with sterile bouillon and then centrifugalized to throw down the corpuscles. Agglutination of germs obtained from a twenty-four hours agar culture of undoubted typhoid was obtained in twenty-five minutes. Hanging drops were also made from the same dilution, inoculated with the typhoid germs obtained from the urine (that is, cultures 3, 8, 9, 12, etc.), and the agglutination took place very speedily, some in ten minutes, a few in fifteen, and the remainder in twenty minutes.

Remarks.—From a bacteriological point of view the points of interest in this case are: (1) The fact that it was a mixed infection, the pneumococcus, the typhoid, and the colon germ being present; (2) the failure to discover the typhoid germ in the first specimen of urine, while it was fairly abundant in the second; (3) the varieties of the colon germ present. While all of these gave the indol reaction, only four in the first urine and not one in the second formed gas, and only three in the first and two in the second coagulated milk. It would have been of considerable interest to have compared the colon bacillus in the bowel of the patient with those found in the urine; but an attempt to obtain the faeces failed, as the patient had meanwhile left the hospital. Both urines were examined for bacillus tuberculosis, but this germ was not found.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Alfred Willett, F.R.C.S., President, in the Chair.

Tuesday, February 10th, 1903.

Four Cases of Acute Septic Inflammation of the Throat, with Bacteriological Report.

Mr. Philip de Santi read a paper on this subject, which he described as a sequel to a contribution by Sir Felix Semon to the Fellows of the Royal Medical and Chirurgical Society of London, April, 1895, entitled On the Probable Pathological Identity of the Various Forms of Acute Septic Inflammations of the Throat hitherto described as Acute Oedema of the Larynx, Oedematous Laryngitis, Erysipelas of the Pharynx and Larynx, Phlegmon of the Pharynx and Larynx, and Angina Ludovici. Since the publication of that paper the author had determined to keep careful records of any cases of acute septic inflammations of the throat that might present themselves to his notice, particularly as to their bacteriology. Since 1895 he had been able to observe four such cases, and the notes of these cases were given in their order of ascending severity.

Case I was a man aged 48, who came under Mr. De Santi's care at Westminster Hospital in 1899 with a deep-seated and extensive abscess of the right cervical region, and a discharge of pus from the right external auditory meatus. Pressure on the abscess caused pus to well out of the external auditory meatus; a perforation of the deep—digastric—aspect of the right mastoid was diagnosed, and the mastoid and abscess in the neck were opened up and the diagnosis verified. The patient went on well for nearly three weeks, when he suddenly developed cutaneous erysipelas of the left cheek; this rapidly spread to the rest of the face and neck on the left side, and then across the midline to the right face and neck; he also had extensive patches over the dorsal aspect down to the lumbar region. Soreness of the throat was complained of, and examination revealed a bright red swelling of the posterior pharyngeal wall, soft palate, and uvula. Cultures from the throat showed streptococci pyogenes and a few staphylococci. Ten c.cm. doses of antistreptococcus serum were given three times during the ensuing twenty-two hours, when the rash had almost entirely disappeared, the throat condition cleared up, and the temperature had fallen to 99.2°. The patient made an excellent recovery. Case II was a man who came to Mr. De Santi's out-patients' in 1898 for sore throat and swollen cervical glands. Examination revealed intense redness and swelling of the right tonsil, the whole of the soft palate and uvula and dark red swelling of the posterior pharyngeal wall, also slight oedema of the epiglottis. The temperature was 104 6°, and his general condition bad. There was no history of anything likely to cause the throat trouble. Urine, heart, and lungs normal. The patient refused admission. Swab cultures from the throat showed streptococcus infection; the further history of the case was unknown. Case III was a man who attended Mr. De Santi's out-patients' in 1902 complaining of sore throat, loss of voice, and dysphagia of two to three days' duration. Examination revealed acute gangrenous inflammation of the lower half of the uvula and acute oedematous inflammation of the soft palate and to a less degree of the tonsils. There was also extensive oedema of the left ary-epiglottic fold. The patient's general condition was bad; temperature 101.2°. Patient was admitted. Swab cultures showed the presence of streptococcus pyogenes. A dose of 20 c.cm. antistreptococcus serum was at once injected and pure carbolic acid rubbed into the uvula; five hours after injection the patient, who could not swallow before, was able to do so, and felt

much better in himself. No further injections were necessary, and the patient made an uneventful recovery. Case IV was a man under Mr. W. G Spencer, but Mr. De Santi had the opportunity of seeing him whilst in the hospital. The patient was 21 years of age, and was admitted with sore throat, followed by a swelling in the neck. When seen by Mr. Spencer the patient was partly unconscious, had great pain and difficulty in swallowing and great pain over his heart. The temperature was 101.4°, having been 103° during the night. His general condition was very bad. Examination showed acute septic pharyngitis, deep glandular inflammation, and pericarditis. The mucus from the throat and the fluid evacuated from the glands showed on examination, both in cover-glass specimens and upon cultivation mainly streptococcus pyogenes. Ten c.cm. of antistreptococcus serum were injected three times during the first twenty-four hours, and once during the next twenty-four hours. The effect was remarkable, the patient beginning to rally at once. He made an excellent recovery.

Mr. De Santi pointed out that the first of these cases would be called by some cutaneous erysipelas of the pharynx, the second oedematous or possibly phlegmonous pharyngitis, the third gangrenous uvulitis, and the fourth phlegmonous pharyngitis. Yet they were all of the same nature—namely, acute septic inflammations of the throat; in all the streptococcus pyogenes was present, and in three out of the four treatment by injections of antistreptococcus serum was successful. In Sir Felix Semon's paper, four objections were advanced by him as likely to arise with regard to his views on acute septic inflammations of the throat and neck.

No. 1. That he had given no proof that the milder cases in his series were really of septic origin, and that they might well have been simple catarrhal inflammations.

As no bacteriological examination was made of his cases, it was open to any one to deny the certainty of their septic origin. Of Mr. De Santi's four cases, No. 1 was certainly of a mild, local character, and No. 2 fairly so; at all events, it was analogous to No. 4 in Semon's series; yet in both these cases streptococcus pyogenes was present, and the clinical symptoms were far greater than in simple catarrhal inflammation. The bacteriological examination of Mr. De Santi's cases tended to prove, therefore, that these milder cases were of a septic nature, and this was strengthened by their clinical character and course.

No. 2. That the different localization in Semon's cases—namely, whether originating in the pharynx, larynx, or cellular tissue of the neck—spoke against their being identical.

This objection did not hold good: the different localization of these septic inflammations of the throat depended on the resisting powers of the parts attacked, an accidental breach of surface, or a pre-existing condition of catarrh rendering the parts more susceptible to infection.

No. 3. That the variations in the fever curve in Semon's individual cases also seemed to point in the direction that this fever was caused by different and not identical processes.

Mr. De Santi considered that the temperature in these cases was bound to vary as in other diseases, according to the resulting inflammation, whether oedematous, suppurative, or gangrenous and according to the amount of poison absorbed. He did not therefore consider objection No. 3 valid.

No. 4. That the fact that the exudation sometimes being of a serous and sometimes of a purulent character most powerfully combated the view that these inflammations were identical in nature.

This perhaps the most important objection had to be combated mainly from a bacteriological point of view. The present-day opinions as far as Mr. De Santi could gather of the streptococcus pyogenes amounted to the following conclusions: (1) That the streptococcus pyogenes and other pyogenic cocci could produce, apart from purulent inflammations, all other forms of inflammation such as serous, fibrinous, haemorrhagic, and gangrenous inflammation. (2) That the variety of inflammations resulting depended (*a*) on the quantity; (*b*) the virulence of the organism introduced into the system; (*c*) the resisting powers of the subject inoculated. It seemed to him therefore that these conclusions were amply sufficient to account for the differences in not only the fever curve of these acute septic inflammations of the throat, but also for the differences in the kind of inflammation resulting, namely, oedematous, purulent, or gangrenous. Mr. De Santi therefore entirely agreed with Sir Felix Semon's conclusions regarding the probable pathological identity of these acute septic inflammations of the throat, and held that the four objections referred to could be refuted in the light of the four cases brought forward by himself. He had adduced evidence of the presence of the streptococcus pyogenes in all his cases, of the identity clinically of his series with that of Semon, and had stated the excellent results that had occurred from the injection of antistreptococcus serum. As regarded the treatment of acute septic inflammations of the throat with antistreptococcus serum, he pointed out that unless the streptococcus pyogenes were found, it might be worse than useless, indeed dangerous, to give these injections.

Dr. de Havilland Hall alluded to the importance of a bacteriological examination in such cases. They were particularly distressing from the rapidity of onset and the fatal result if not suitably treated. In one of the cases recorded in the paper which he had seen the prognosis seemed in the highest degree grave, and yet recovery occurred. It was difficult when the former paper was read to fall in with the idea of a pathological identity, but now a bacteriological identity had been established the unity of the cases was more manifest. Was it not possible that other micro-organisms than the streptococcus pyogenes might be concerned in producing clinically similar results? Allusion was made to a case of throat inflammation in a child, resembling diphtheria, but no diphtheria bacilli were found, only staphylococci; this was followed by two other cases in the same house, one of which proved fatal.

Sir Dyce Duckworth considered that Sir Felix Semon's original paper opened a new chapter in throat inflammations, and now that bacteriological evidence of their unity had been brought forward the subject assumed great importance. The specificity of the antitoxin treatment raised the question of polyvalency and the need for a mixed antistreptococcus serum. He had never seen any harm come from its injection. There was little doubt that septic inflammations of the throat might arise from many varieties of streptococci, differing both morphologically and in virulence.

Mr. E. Waggett observed that in each of the cases quoted the subject was a man in the prime of life; in his own cases the same thing was observed, and not only so, but the subjects were in excellent health. Details were given of some of his cases. In one case arising without obvious cause the patient became practically moribund, the fauces were almost completely blocked but the larynx was not affected, when evacuation of inoffensive pus was followed by speedy recovery without injection of antistreptococcus serum. The case emphasized the necessity for operating immediately. The streptococcus pyogenes was found in almost pure culture. The serious character of the disease seemed to be due to th virulence of the organism concerned.

Dr. Dundas Grant held that the importance of recognizi these cases was enormous. It was necessary to deci whether the local or constitutional symptoms were mc urgent in regard to the management of the cases. In mate, the morbid appearances in the throat were comparativore slight, but danger was present from blood poisoning. As the diagnosis, with a sore throat and bodily illness and a vogall suggesting peritonsillar abscess but with ability to open tion mouth and with nothing to be seen in the throat—with sinds conditions the danger to life was great. A case was descration which proved fatal from laryngeal obstruction and canding failure. Too great precaution was hardly possible. Thaucing stitutional symptoms might suggest a correct diagnosis of the throat changes were all but absent. Certain cases simpatient diphtheria were on the whole the most favourable. streptococcus serum was of great value in this group o'ent, who he had not himself seen any harm from it, and hoigastric inject it early in cases of doubt. It was of the utmost otember, ance to keep up the patient's strength, and especially r of the off heart failure. Cold treatment was, in his o dilated advantageous. vnwards

Dr. F. J. Poynton thought the paper had an imt of the bearing on the unity of streptococcus infections, bhis, and was such a thing as a false bacteriological clearness. ombined doubtful whether the organism described was really ld's test coccus pyogenes. It was impossible to distinguish at the morphological or cultural characters. If it were held to present sible, it must be assumed that there were varieties of arrived coccus pyogenes. The difficulty of keeping up the va. was very great. There were other biological and clin cases tests which were of value in distinguishing the vat. He Experiments were described bearing on the specific violent of the streptococci. Rice, of

Sir Felix Semon alluded to the discussion of nine ystomach and the changed position the subject now held. Now, attribute it was clear that it was impossible to draw a sharp line ted, after the different clinical varieties of acute septic inflamploratory the throat. Any of the group of pyogenic organis elongated he had contended, produce inflammation of this tywas brought the identity of the pathological processes producwhite calculi kinds of organisms that he had upheld. While inIr. McArdle

for his views on the question of complete closure of the gall bladder in these operations and the frequency of ventral hernia after suture of the gall bladder to the parietes.

HARVEIAN SOCIETY OF LONDON.

W. Winslow Hall, M.D., President, in the Chair.

Thursday, February 5th, 1903.

The Treatment of Congenital Dislocation of the Hips.

Mr. Noble Smith read a paper on this subject, with especial reference to Lorenz's method of bloodless reduction. He said that successful treatment depended on the condition of the bones, and this was stated to be more favourable at early ages. X rays had shown that this was not absolutely the fact, as the bones had been found in a favourable condition even at the age of 30. It had also been stated that sufficient time had not elapsed to judge of the results of getting the head of the femur into the acetabulum. This also was not the fact, as similar but not so efficient treatment as Lorenz's had been adopted for some years past. He mentioned a case in which, six years ago, there was 2½ in. shortening. By means of a Liston splint and extension a natural position was obtained in three weeks. The patient was kept on the back for eight months, and then got about with the weight off the joint. At the end of two years the bone was very near the acetabulum, and the legs were exactly the same length. Three years after getting about, the child was walking naturally, and there was only a quarter of an inch shortening. The result was excellent, though not so thorough as by Lorenz's method. Mr. Noble Smith then gave a description of Lorenz's method, illustrating the procedure on a child suffering from the disease. The adductors of the thigh were first put on the stretch, and manipulated by chopping with the edge of the hand and rubbing. After a time the muscles give way. Then the posterior muscles were dealt with until the foot could be brought up to the side of the head. The anterior muscles were next stretched by bending the thigh backwards with the knee bent, the patient lying on the opposite side of the body. With the patient once more on the back, and the knee bent, the head of the femur was gradually worked down into the acetabulum. In many cases the head of the bone could be heard slipping into the socket. The front of the capsule was then stretched by working the thigh outwards with the knee bent, until with full abduction the hollow in the front of the thigh was filled up, and the head of the bone could not escape. The limbs were finally fixed in a position of abduction by means of plaster of paris. Lorenz had shown that this position must be retained for six months. The thighs were then brought down half way and put in plaster again, and were gradually straightened at the end of two years. As to the suitable age for reduction, for double dislocation the best results were obtained up to six years. For a single dislocation the time might be extended to 9 years of age. Older patients must be prepared by preliminarary stretching and exercise. Lorenz had cured a patient of 28 years. Mr. Noble Smith thought that the advantages of the bloodless method were: That it was a perfectly safe procedure, even such accidents as a fracture of the femur leading to no ill-effects; that there was no risk of a stiff joint, with consequent crippling for life; that young children were not affected by being kept off the feet for two years, and, as a matter of fact, patients were not kept lying down the whole time, but pushed themselves about on a stool, which was shown. A block was also shown which was very useful for placing under the thigh during manipulation.

Mr. Openshaw had used methods of manipulation for seven years, and in 30 cases had had good results in about a third of that number. Lorenz's method had been gradually improved, especially in the retention of the fully abducted position for six months. In this time probably the glutei and other muscles became shorter and prevented redislocation. Possibly the head of the femur might ultimately make its way through the capsule into the joint, but often the bone could not be got into the acetabulum. In the open operation, if the cartilage was not interfered with, there was no ankylosis.

Mr. Jackson Clarke quoted a necropsy on a child which had died of diphtheria one month after Lorenz's operation, to show that the head of the femur could be replaced in the acetabulum. The glenoid ligament was sometimes so thick as to make replacement very difficult. He called attention to friction bands underneath the plaster splints, whereby the skin could be kept in good order. Difficulties in the treatment were due to parental neglect and indifference to this kind of work. In cases difficult of reduction much ecchymosis might be caused. It such cases it was better to do a preliminary operation of stretching or dividing muscles.

Mr. Daniel said that much improvement had taken place in Lorenz's methods, and instanced the thoroughness of the work of applying plaster-of-paris splints. He thought that cases treated by Lorenz's method contrasted most favourably with the results of the open operation.

Mr. Peyton Beale wished to know what happened to the ligamentum teres after reduction. Did it shrink or did a new ligament form?

The President said that the subject was of importance to the general practitioner, with whom the fact that Lorenz's method did not endanger life or limb would have great weight.

Mr. Noble Smith, in reply, said that the condition of the ligamentum teres had not been verified. He also protested against the imaginative descriptions of the newspaper reporter.

The Immediate Regulation of Misplaced Teeth.

Mr. Sidney Spokes pointed out that an irregular arrangement of the teeth led to interference with their normal function, to possible disfigurement, and to a tendency to caries. Normally the cutting edge of the front upper teeth should overlap that of the lower. Irregularity might be caused by overcrowding of the upper teeth, or undue retention of the temporary teeth, or the eruption of a lower tooth outside the arch. The deformity was commonly dealt with by means of a vulcanite plate with a wooden peg to push the misplaced tooth gradually into line. But, although the operation was not yet perhaps regarded as orthodox, there was an increasing tendency forcibly to advance the misplaced tooth at once into its proper position. Mr. Spokes showed an instrument invented by Dr. Grevers, of Amsterdam, by means of which this could be done. The instrument resembled forceps in which the anterior blade had been modified to fit into a slot in a curved metal bar covered with rubber. This bar rested against the front of the alveolus, while the posterior blade of the forceps pushed the misplaced tooth forwards as the alveolar wall gave way. Sometimes the tooth had to be supported in its new position by means of silver wire. The method was particularly suitable to children in whom the bone yielded readily, and the blood supply to the pulp was not easily interfered with.

Mr. Sefton Sewill had performed the operation on patients at various ages up to 17, always with complete success. It had been said that the blood supply might be ruptured. He had never seen this occur. The amount of discomfort following the operation was remarkably slight.

The President asked whether much pain attended the operation, and what age was most suitable.

Mr. Sidney Spokes, in reply, said that so little pain was caused that the operation might be done without an anaesthetic. As regarded age, he had operated on a patient of 25 with satisfactory result, but children were the most suitable patients.

HUNTERIAN SOCIETY.

A. L. Galabin, M.D., President, in the Chair.

Wednesday, January 14th, 1903.

Nasal Discharges.

Dr. Henry Kelson read a paper on this subject. He divided nasal discharges into three parts: (1) Watery, (2) purulent or muco-purulent, (3) sanguineous. In watery discharges, they were all familiar with the profuse watery discharge of the common cold in the head, lasting a few days and then either disappearing or becoming thick and opaque. The fluid at first was serous in character and alkaline in reaction. Added to this was the watery discharge occurring in influenza, and that following paroxysmal sneezing and hay fever. Whatever the exact pathology might be, a reflex vasomotor disturbance through the medium of the fifth nerve was a leading factor. There were certain cases, however, in which a continuous watery discharge occurred from the nose which were of a different character, and StClair Thomson had collected and analysed the evidence on this subject. Attacks of sneezing with watery discharge were common in gouty persons. Watery discharges might also occur due to the ordinary nasal polypus formerly considered to be a myxoma, now looked upon as an oedematous suppuration of the mucous membrane, considered by Woakes, Lack, and others as due to underlying diseased

bone. Drugs such as potassium iodide also caused watery discharges, and a watery discharge from the nose due to chronic catarrh occurred in children suffering from adenoids. Any irritant such as dust was apt to produce a similar discharge. Certain odours, such as that of roses, for some people, and the pollen of some of the *Graminacea* in hay fever were also accountable for a like flow. In some fevers, as measles, this was notable. Passing to purulent discharges, the author said that a purulent discharge in a child, especially if chronic and confined to one side of the nose, should always arouse the suspicion of a foreign body. Beads, buttons, and small toys were the commonest articles. Should an ordinary cold be neglected, it was apt to pass into a condition of chronic rhinitis, and the discharge changed from a clear fluid to one of a more purulent character. Diphtheria and fibrous rhinitis must also be borne in mind, as well as the fact that after scarlet fever nasal discharge, more or less purulent, was apt to hang about for a long time, and might contain the elements of contagion. Gonorrhoea in rare cases affected the mucous membrane of the nose, and glanders also—fortunately in man a very rare disease. In eczema, syphilis, and tuberculous disease of nasal cavities there was more or less purulent discharge, but it was not profuse, and dried quickly into crusts, as also did that of fetid atrophic rhinitis or so-called ozaena. Mucous polypi were often associated with the discharge of pus. The occurrence of a persistent purulent discharge from the nose should always, however, awaken the suspicion of sinus disease, the anterior being that most commonly affected, either alone or associated with either frontal or posterior ethmoidal cells. The pus from the sphenoidal and posterior ethmoidal cells made its way chiefly down the pharynx, and the probability of antral disease was increased by the presence of carious teeth, and it should be remembered that pus from the frontal sinus and anterior ethmoidal cells ran most freely with the head erect, and in antral disease it ran most freely when the head was lowered. Transillumination should also be used. As a differential point between atrophic rhinitis and sinus disease, in both of which the discharge was apt to be offensive, it might be noted that patients with sinus disease noticed the bad odour themselves more than others, whereas in rhinitis the sufferers smelt nothing, but the loathsome odour was only too apparent to friends. The discharge of blood from the nose might be either symptomatic, occurring in healthy persons, especially young adults, and there might be some small point situated commonly on the septum at its anterior part, or on the corresponding part of the inferior turbinate, which bled freely on the slightest provocation; or it might be due to some serious disease, either general or local, such as chronic interstitial nephritis, with vascular degeneration, cirrhosis of the liver, haemophilia, leukaemia, or scurvy or local disease, such as in old persons cancer, in the young the fibrous polypus. After an injury to the cranium the question of punctured skull must be considered, and one must never forget that bleeding from the nose was common at the commencement of enteric fever and in suppression of menses. Discussing the treatment, Dr. Kelson said that as regarded the watery discharge of acute nasal catarrh, rest and warmth were essential; some soothing inhalation might be used: menthol, cocaine, and camphor were palliatives; Dover's powder was useful, and snuffs containing bismuth and morphine had been recommended. When the acute stage had passed but the discharge continued, much benefit would be derived from an alkaline collunarium of carbonate, biborate, or sulphate of soda, with a little sugar or glycerine, to which if desired a little antiseptic might be added. If this was not efficacious some form of cautery should be tried; the actual cautery gave best results. In hay fever, quinine, arsenic, and other drugs had been vaunted. In the discharge of cerebro-spinal fluid no treatment was likely to be successful, though doubtless before long surgeons would find the hole in the dura mater and repair it when present. Care must be taken when searching for a cause not to overlook polypi and remove such with the snare when found. For foreign bodies in a young child a general anaesthetic was necessary, and a bent probe should be passed under a good light gently behind the object and drawn forward. If there were any sign or history of membrane, or if more than one person were affected, diphtheria must be thought of and search made for the Klebs-Loeffler bacillus, and the patient isolated. Gonorrhoea and glanders would be recognized by the gonococcus or bacillus mallei in the pus; suitable constitutional treatment should be adopted, and the nose kept clean. If sinus disease were suspected, any polypi present having been removed, the antrum should be washed with boric lotion and sterilized water, the nose having been first carefully cleaned to avoid fallacies as much as possible. If there were a useless molar or tricuspid stump, it should be removed, and the antrum tapped through the alveolar process; if no pus was found in the antrum and the frontal sinus and anterior ethmoidal cells were suspected, the anterior end of the middle turbinate should be removed to give better drainage, and the parts washed out with alkaline lotion. If discharge still continued, and was profuse, a more radical operation on the affected sinus might be performed, having for its object either (1) effective drainage, or (2) obliteration of the sinus. The treatment of haemorrhage from the nose varied with its cause. For simple cases, rest with cold and hazeline, tannin, or suprarenal extract locally would probably suffice; if not, and there were a definite accessible bleeding, the galvanocautery should be used; and, finally, a carefully applied plug of cotton wool, lint, or gauze so applied as to press properly on the bleeding spot; blindly plugging the posterior nares could not be recommended. If restlessness were present, morphine, if not contraindicated by the patient's constitutional condition, would do good. The value of ergot was very uncertain. Immersing the feet in hot water, and so reducing the flow of blood to the head, had been found useful. Perchloride of iron was a powerful haemostatic, but was apt to produce sloughing, and the author had seen one case in which death was due to that cause after its use.

Practical Obstetrics and Gynaecology in Berlin and Vienna.

A paper on this subject was read by Dr. Henry Russell Andrews. The methods described were freely criticized by Dr. Herman, A. W. Galloway, T. Stevens, and the President; and Dr. Andrews, in reply, said it was impossible to compare the results of the German and English methods.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Rickard W. Lloyd, L.R.C.P., M.R.C.S., President, in the Chair.

Friday, February 6th, 1903.

The Sequelae of Enteric Fever and their Treatment.

Dr. Seymour Taylor, in opening a discussion on this subject, defined sequelae as conditions occurring after the end of the febrile process, when the temperature had been normal for two days and two nights. After mentioning the difference in type of epidemics occurring in Great Britain and in other climates, he called attention to the fact that many patients stated that their health was much improved after an attack of typhoid. Dr. Taylor then analysed 56 cases of relapse, and pointed out that in many cases a change of diet, starchy food, or an enema or purge seemed to bring about the relapse, although in many cases no cause could be assigned. Under respiratory sequelae tuberculous disease was mentioned, latent trouble being frequently aroused to activity. Laryngitis with necrosis might occur, leading sometimes to emphysema of the neck, and a condition resembling angina Ludovici. As regards the circulatory system, thrombosis—nearly always of the lower limbs—was fairly common. The extent of thrombosis was often large, and the clot might extend into the vena cava. Dilatation of the heart with valvular incompetence was also a sequela. Nervous sequelae were not uncommon, such as definite insanity or some moral obliquity. Aphasia might occur, and also peripheral neuritis. Besides constipation and meteorism, peritonitis and perforation might be sequelae, peritonitis being possibly started by bacilli in a gland or by infection from the appendix or from the gall bladder. Perforation might be suspected when with a falling temperature the pulse becomes rapid, associated with the characteristic facies. Sequelae affecting the skin, subcutaneous tissues, or bones were such as noma, gangrene, and necrosis. These were not necessarily due to the intensity of the fever, but to the condition of the individual.

Dr. William Hunter took a wider view of the definition of sequelae. He regarded them as complications which occurred apart from the ordinary course of typhoid fever, and with causes different from typhoid fever. He analysed the cause of death in 50 cases; 48 per cent. died from perforation, 20 per cent. from pneumonia, 8 per cent. from asthenia, 6 per cent. from heart complications, including pulmonary thrombosis, heart thrombus, and fatty heart. In 10 per cent. lung troubles other than pneumonia caused death, haemorrhage in 6 per cent., and erysipelas in 2 per cent. He said that the mortality was greater formerly, probably in consequence of insanitary conditions. These would account for

the greater severity of epidemics in some German towns. As regarded the influence of treatment on recovery, probably 75 per cent. of patients would recover without treatment, another 15 per cent. would recover in good hygienic conditions, and 2 per cent. more might recover under strict hydrotherapeutic treatment. It was remarkable how very little inflammation occurred in connexion with typhoid ulceration. Peritonitis hardly happened except as the result of perforation. As regarded treatment almost all the benefit resulting from pathology went to the prevention of the disease. The operation for perforation was a great departure, with a considerably increasing percentage of recoveries; intestinal antisepsis was important; and baths, which were a colossal task, might diminish the mortality by 2 per cent.

Dr. A. Elliot said that from the military point of view the most important sequela of the epidemic in South Africa was disability, physical and mental. In slighter cases men were able to do light work at the base, but for a long time the hardships of trek were quite beyond their powers. In commissioned ranks the greatest stress was on the nervous system, producing slowness of cerebration and lack of decision, often rendering the patient unfit for responsible duty in the field. Of specific sequelae, the most common and perhaps the most important was phlebitis, variously estimated as occurring in 5.6 per cent. to 25 per cent. of the cases. In epidemics in England and America the frequency was estimated at from 1.9 to 3.8 per cent. As regarded the cause of the trouble, Washbourn suggested that it was due to tinned food and want of fresh vegetables. But these led rather to scurvy and deficient coagulation of the blood. Another suggestion was the wear and tear of marching. But an equal proportion of cases occurred in the cavalry and artillery. Professor Wright found that the coagulability of the blood was increased during convalescence from typhoid, which he thought to be due to an excess of lime salts from the exclusively milk diet. But in South Africa there was a notable lack of fresh milk. Probably all that could be said was, that this sequela was due to bacterial invasion of the vein walls under conditions of lowered resistance. Embolism, although comparatively frequent in thrombosis associated with influenza and gout, was markedly absent in the thrombosis following typhoid. Bradycardia occurred in one case, but might possibly have been due to an excess of digitalis. Tachycardia was a much more frequent and persistent trouble. As regarded the alimentary system, hepatitis with enlargement of the liver without suppuration occurred in one case. There was jaundice in one case associated with fatal pneumonia. Suppurative appendicitis closely followed enteric in one case; probably it was due to an enteric ulcer in the appendix. Two cases of enteric immediately followed appendicitis. There was late perforation in one patient who had been on ordinary diet for a fortnight. A recent ulcer in the ileum was found to have given way. Two cases of parotitis occurred during convalescence; in both there was suppuration. As regarded dysentery, out of 13 cases occurring during the disease or convalescence, 6 proved fatal, while 6 patients who had had dysentery before enteric all recovered. There were 9 cases of joint affection, including 6 arthralgias, 2 cases of arthritis with effusion, and 1 case of purulent effusion.

Mr. Garry Simpson did not consider it safe to say that a patient was convalescent till the temperature had been normal for three weeks, as the bacillus might still be found in the stools and the urine. He objected to the treatment of haemorrhage by large doses of opium, as thereby the bowels were confined, and the growth and virulence of the bacilli favoured.

Dr. J. E. Squire had no hesitation in saying that enteric fever seen by him at Suakin was identical with that seen in England. Climatic and other conditions might modify the course and symptoms of the disease, but these modifications were not in essential points. He thought it debatable whether two days of normal temperature could be taken as the sign that the illness proper was over. In many cases in Suakin the febrile condition continued for two or three months, but was probably due to malarial complications. He regarded thrombosis as a comparatively frequent sequela. Pneumonia was more often a complication, and haemorrhage and perforation also rather accidents occurring during the disease. Joint affections occurred after several cases in the Soudan, chiefly those resembling malarial fever, with enteric symptoms rather than true enteric fever.

Dr. Aldren Turner called attention to certain sequelae affecting the central nervous system, such as hemiplegia and myelitis, which were clearly due to arterial changes comparable to those occurring in syphilis. Obliterating endarteritis was not uncommon. Peripheral neuritis, similar to that resulting from alcoholic poisoning, was a sequela. Another condition might be described as typhoid spine. In one case this came on two months after convalescence and lasted for four months.

Dr. E. A. Saunders said that it was of great importance to separate the sequelae due to the bacillus typhosus from those due to other micro-organisms. There was very little doubt, for instance, that there existed a true typhoid appendicitis. The case of hepatitis referred to by Dr. Elliot was probably also a true typhoid infection. Other sequelae might be due to staphylococci and streptococci, or to the bacillus coli. Such post-typhoid affections were abscesses, for example, in the larynx, parotitis, boils, bedsores, etc. It seemed probable that many of the symptoms of severe cases of typhoid were attributable to simultaneous affection with the bacillus coli communis. Dr. Saunders thought that the increased prevalence of thrombosis after typhoid in South Africa might perhaps be due to the existence of this organism in a condition of increased virulence. The recognition of such compound infection might help in interpreting many of the anomalous symptoms of typhoid fever.

Dr. A. Whitfield drew attention to the frequency of severe and persistent furunculosis after enteric fever. It generally made its appearance between six and twelve months after the attack. It might be worth while to try to prevent it by systematic treatment of the skin in the early stage of convalescence, and by attempts at intestinal antisepsis during the course of the primary disease.

The President remarked that the effect of the typhoid poison would be added to any other disease that the patient might be suffering from at the time, and that what might appear to be sequelae of typhoid might be more properly ascribed to the previous constitutional state. Thus anaemia or malaria might predispose to thrombosis in an attack of typhoid, and gonorrhoea or syphilis to pseudo-rheumatism of joints or other tissues.

Cardiff Medical Society.—At a meeting held on February 5th, Dr. R. Prichard, President, in the chair, Professor Dixon exhibited the new projection lantern of the anatomical department (by Mr. John Gordon, of Glasgow), and demonstrated its methods of working. He then showed in the lantern Drs. Bryce and Teacher's photographs, illustrating the maturation, fertilization, and segmentation of the ovum of echinus esculentus from the preparations of Dr. Bryce, Glasgow.—Mr. William Sheen gave a lantern-slide demonstration of fractures of the lower end of the humerus in children. He first showed a series of *x*-ray photographs of normal elbow-joints in children between the ages of 1½ and 16. He demonstated from these the situation of the different epiphyses, their size and shape, and the times at which they appeared, and called attention to the importance of not mistaking a normal epiphysis, not yet joined on, for a fracture. He then by means of a diagram indicated the common types of fracture, and showed that they usually involved the diaphysis, pure epiphysial separations being extremely rare. A series of *x*-ray photographs of cases recently under his care was then shown to demonstrate fracture of the external condyle and transverse fracture above the condyles. The importance of taking photographs of both the injured and normal elbow, and also of taking a lateral as well as an antero-posterior view, was also alluded to. The symptoms and course of such cases, the possible complications, particularly deformities and nerve injuries, and the line of treatment to be adopted were briefly described. The President, Drs. Rhys Griffiths and Treasure, and Professor Dixon commented on the demonstration; and Mr. William Sheen replied.—Professor A. F. Dixon exhibited, on behalf of Dr. W. S. Haughton (Dublin) and himself, a series of stereoscopic radiographs illustrating the structure of each of the bones of the skeleton. The pictures showed in a striking manner the arrangement of the lamellae in the shafts of the long bones and in the cancellous tissue. A distinct spiral arrangement of the lamellae could be made out in all the long bones in man, and was especially marked in bones like the humerus and femur. The lamellae in question formed right-handed and left-handed spirals which intersected one another. They could be seen to undergo a change in direction near the articular surfaces in such a manner as to bring the ends of the lamellae into planes perpendicular to the surfaces of pressure. Although perhaps best marked in the bones mentioned, the spiral lamellae were also to be seen in all bones with a tubular formation, and in each case they were

very well developed in positions of curvature, where they undoubtedly gave greater rigidity to the skeleton. Their arrangement was easily demonstrated in the ribs, and also in structures like the transverse processes of the vertebrae.

SOUTHERN BRANCH OF THE BRITISH MEDICAL ASSOCIATION: SOUTH-EAST HANTS DISTRICT.—The first clinical evening meeting of this District was held at Portsmouth, on February 4th.—Dr. A. LLOYD OWEN (President) in the chair.—The PRESIDENT showed a man who by falling from aloft on board ship had dislocated both shoulder-joints and fractured the left clavicle. The patient now had fair joint movement. Radiographs were exhibited.—Mr. C. P. CHILDE showed (1) a case of necrosis of the frontal bone in a young woman who had previously been under treatment for an ulcer of the thigh and a suppurating cervical gland, both of which had healed. The diagnosis lay between syphilis and tubercle or a combination of these diseases. (2) A case of excision of the floor of the mouth for epithelioma. This case had been shown some months previously and continued free from recurrence of the disease. (3) A case of fixation of the left vocal cord in a man aged 45 years. Mr. Childe regarded the case as one of malignant growth in the mediastinum or lung. This view was shared by Drs. COUSINS and LEON. Drs. CLAREMONT and BLACKMAN, however, believed the fixation of the cord to be due to malignant infiltration of the upper part of the oesophagus.—Dr. L. MAYBURY showed a microcephalic idiot—a girl who had two brothers who were idiots, but her twin sister was fairly intelligent.—Dr. J. G. BLACKMAN showed a case of appendicitis in which the resulting abscess was successfully drained through the right loin.—Mr. CHILDE showed a pair of fine curved forceps which he had had made to take the place of a blunt needle in ligating pedicles, etc.—Dr. J. WARD COUSINS made some remarks on accidents resulting from toys. The first was a fatal case of shooting by a toy pistol, the bullet lodging in the right occipital lobe, having entered the head in the region of the right temple. The second case was the lodgement of a small leaden soldier in the ventricle of the larynx, which was successfully dislodged, although not recovered.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a meeting held on January 21st, Mr. J. MACKIE, President, in the chair, Mr. W. M. WILLIS showed a young man after operation for thrombosis of the lateral sinus and general septic infection.—Miss S. GRAY read notes on a case of Menière's disease occurring in a woman aged 44 in whom considerable improvement took place after administration of small doses of pilocarpin hypodermically and prolonged rest.—Mr. W. M. WILLIS read a paper on chronic middle-ear suppuration, thrombosis of lateral sinus, and general septic infection, and the diagnosis and treatment of these conditions. Mr. Willis first spoke strongly of the apathy of many medical men in the matter of treatment of chronic purulent otitis, which constituted a continual menace to the life of the patient unless properly treated by the establishment of free drainage and regular use of antiseptic solutions in the removal of granulations, and mastoidectomy might be necessary in certain cases. Mr. Willis read an account of the case shown during the evening in whom he had performed an extensive operation, and subsequently treated by transfusion with saline solution after removal of some ounces of blood.

REVIEWS.

CANCER.

WE are not aware that since the appearance of Virchow's pioneer and classical work so comprehensive a treatise on the subject of tumours as that published recently by Dr. MAX BORST[1] has been placed in the hands of the medical profession. The work is partly the outcome of original observations on the exceptionally rich supply of material which has been available to the author as assistant in the Pathological Institute of the University of Würzburg; but he has also set himself the herculean task of collecting and collating all the important work on the subject to be found in modern medical literature. A general comparison of this book with Virchow's work is highly interesting and instructive. On that aspect of the study of tumours which overshadows all others (their etiology) the intervening years have added much theory but little actual knowledge; the advance in other directions, however, on questions of morphology and biology, has covered large tracts unexplored when the earlier work appeared. Researches on histogenesis and extension have been numerous and successful, various "new formations" have been separated from the "true tumours," and the classification of the latter is now far more accurate and detailed. All these advances are reflected in Dr. Borst's treatise, and he has filled a gap in medical literature in a way that earns our gratitude and congratulation. The interest of the first—the special—part centres round the discussion on etiology, and in this Dr. Borst sides with most pathological anatomists in holding the parasitic theory unproven. The definition of the term tumour is interesting, "a growth of cells and tissue without assignable cause, local in origin, independent and arbitrary, without function or purpose, resulting in a product more or less atypical morphologically and biologically." Dr. Borst is inclined himself to accept a modified form of Cohnheim's theory, and speaks of a "disposition to blastomatosis" as the basis from which new growths arise in response to some unknown factor. The most obvious objection to this theory is that it is built on the very scantiest of foundations, and has gained little or no solidity since first enunciated. One of the most interesting sections in the first part is that on malignity and benignity. Dr. Borst appears to agree with those who would confine these terms to clinical observations rather than extend them to the wider pathological sense. He prefers to speak of the simple growths as tumours of mature tissue structure, and of the malignant as tumours of immature elements, and these titles are certainly anatomically sound. It is in a sense a relief to turn from general questions, overgrown as they are with theory and shrouded in obscurity, to the second and special part of the book. From this part we single out the chapter on endotheliomata for special commendation. The ordinary textbook has little to say on the subject of these growths. Dr. Borst devotes a hundred pages to their consideration, and brings together in the group various growths which have been the subject of some confusion in the past—angiomata, angiosarcomata, certain carcinomata of the kidney, and others too numerous to mention. Equally welcome to the pathological anatomist is the chapter on mixed tumours. Under this heading are grouped the teratomata, the mixed growths of the kidney, testicle, etc., and the dermoid and other cystic growths. The author does not bring forward any new general classification, and until etiological questions are cleared up no good purpose is to be served by the introduction of new schemes. At present many groups are ill-defined, and a histological classification invulnerable to criticism is probably impossible. The work will be found more after the heart of the pathologist than of the clinician. Its usefulness to both is seriously impaired by the absence of an index. The clinician will also regret that more consideration is not given to the types of growth as they variously occur in the different organs; the search for detailed information on a specific type in a specific organ is somewhat bewildering. The index of literature at the end of the second volume is a very valuable addition to the book, and we also wish to praise highly the histological atlas. The plates of the latter are all drawn in colour from original preparations, and are very clear, instructive, and beautifully reproduced. We have already expressed some admiration for the author's phenomenal industry in undertaking a task so extensive in its range. It remains to say that Dr. Borst appears to us to have carried out this task with discrimination and thoroughness. We commend the work to the medical profession of this country, and believe that it will win for itself an honourable place in medical literature.

A treatise on cancer of the stomach from the pens of two physicians must, unless they travel beyond their personal experience and their particular point of view, provide but a partial review of the subject. After reading *Cancer and other Tumours of the Stomach*[2] by Dr. SAMUEL FENWICK and Dr. W. SOLTAU FENWICK, we are left with the impression of incompleteness; only the half has been told us, and the practitioner of to-day wishes to hear more than the half when he reads or consults a monograph. For the work as a clinical study we have nothing but praise; it is based on a large number of cases, studied evidently with great care and

[1] *Die Lehre von der Geschwülster, mit einem mikroscopischen Atlas* [Treatise on Tumours, with Microscopic Atlas]. Zwei Banden. Von Dr. Max Borst. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1902. (Roy.8vo, pp. 1,022, 63 plates. 50s.)

[2] *Cancer and other Tumours of the Stomach*. By Samuel Fenwick, M.D., F.R.C.P., and W. Soltau Fenwick, M.D., M.R.C.P. London: J. and A. Churchill. 1902. (Demy 8vo, pp. 378. Figs. 70. 10s. 6d.

acumen, and on an extensive acquaintance with the writings of others. It is also richly illustrated with macroscopic photographs of the different types of gastric new growths, which form a most effective accompaniment to the authors' exhaustive consideration of symptoms and diagnosis corresponding to the differences in site and directions of extensions. The authors accept a histological classification of carcinoma of the stomach into "glandular or spheroidal-celled," "cylindrical-celled or adeno-carcinoma," and "colloid carcinoma." They state that the cells of spheroidal-celled carcinoma are similar in shape and size to those which normally line the gastric tubules, and that the cells of the cylindrical-celled type are like those which exist in the pyloric glands. We presume, although it is not so stated, that the peptic cells are referred to. Both statements are open to criticism, as is also the contrast drawn between glandular carcinoma and adeno-carcinoma, commonly used as interchangeable terms. We may also ask why no reference is made to the squamous-celled carcinoma of the cardia. It is of interest to find that the experience of the authors is opposed to the belief that total abstainers are seldom affected by the disease, and they also consider that simple ulcer is without any particular relation to the malignant affection. In the investigation of stomach contents they attach importance to the presence of the Oppler-Boas bacillus and the examination of fragments of growth. It is, however, doubtful whether any specific value attaches to the one, or whether the information to be derived from the other is of any great weight in the absence of other and more definite evidence. In the four pages devoted to the discussion of surgical treatment, the surgeon is relegated to a position which few, if any, would accept; he is apparently to stand aside until it is decided by the physician whether or not operation is called for and justifiable; in the interests of the patient, the surgeon, who has gained much experience in this field during recent years, should take a large share of this responsibility. Part II contains a valuable chapter on sarcoma of the stomach, from which it would appear that this is not so infrequent a variety of new growth as has up till recently been supposed; its relative frequency is estimated at 5 to 8 per cent. of all primary gastric neoplasms. In this part of the work are also discussed the benign tumours, syphilis, and gastric concretions. The criticisms which we have made on certain points of pathological and surgical interest do not obscure our opinion that as a clinical treatise this book is accurate, exhaustive, and highly to be recommended.

Dr. Lewers has collected his numerous reports and essays on *Cancer of the Uterus*,[3] and welded them into the convenient literary form of a treatise. He did well to submit the details of his work to competent tribunals for judgement and criticism, but the archives of such tribunals are, on the whole, less convenient means for the diffusion of knowledge than are their periodical assemblies. In short, if such work be interred in *Transactions* much of it will be wasted, and the rest chiefly employed by others for casual reference to adorn similar society work. For much of the details which build up the volume the *Transactions of the Obstetrical Society of London* must be consulted, but the most important record of the author's work previously issued is his After-results in 40 Consecutive Cases of Vaginal Hysterectomy performed for Cancer of the Uterus, read in November, 1900, and published in vol. lxxxiv. of the *Medico-Chirurgical Transactions*, where it is accompanied by a most important discussion, in which leading authorities in the treatment of uterine cancer took part. The great result of Dr. Lewers's labour is the establishment of a clinical truth which surprises both the pathologist and the general surgeon so familiar with the peculiarities of malignant disease of the breast. The mammary gland is so placed as to allow of free removal of tissue, and important structures far beyond its area, without great difficulty if not without risk, yet after-results remain far from satisfactory. The uterus is so placed as to be surrounded by structures dangerous to wound, their free excision is all but impossible, and the field of operation is inconvenient for manipulation; yet the results of hysterectomy for cancer are relatively encouraging. As a very conservative teacher observed in the discussion on Dr. Lewers's paper on after-results, "the author's statistics quite negative the view that vaginal hysterectomy is an operation which should not be performed or is of no use." Vaginal hysterectomy, as usually understood, may give permanent immunity from recurrence, or at least a long interval of freedom from symptoms, provided that it be undertaken solely in cases in which, as far as physical examination can ascertain, the malignant growth has not spread beyond the anatomical limits of the uterus. Dr. Lewers is an opponent of the extensive "radical" operations deliberately undertaken in many instances when the operator is aware that the disease has extended into the broad ligaments and vagina. In doing justice to Cullen's great work, Dr. Lewers at the same time shows, upon the American authority's own evidence, how useless it is to extend the operation to infiltrated pelvic and vaginal tissue. He gives short summaries of 15 of Cullen's cases in which the extirpation of involved structures, though very extensive, proved to be incomplete, and in some cases the operation was complicated by profuse haemorrhage, damage to ureters, etc. In one, where the patient was well six years after the operation, the evidence that the cancer had extended beyond the uterus was not clear; in several the patient was soon lost sight of. Lastly, 2, if not 3, out of the 15 died directly from the effects of the operation, 1 operation was incomplete, and in 6 early recurrence was known to have occurred. The author, it will be seen, practises the usual vaginal operation with the most encouraging results. Consistently with his principles he lays great stress on early diagnosis, and suggests practical efforts to make women familiar with the earliest symptoms. The distribution of leaflets amongst matrons, nurses, and district visitors is proposed, and there is much to be said in its favour, though it is open to obvious abuses. Dr. Lewers has practically given up supravaginal amputation of the cervix, and practises vaginal hysterectomy in all cases of cancer of the cervix in which complete removal of the infiltrated tissue seems at least possible. By this definition he signifies cases in which the growth has not spread beyond the uterus itself. He describes his manner of operating, without any diagrams; no doubt vaginal operations are very difficult to explain by plates, and some authors have overloaded their pages with not very instructive illustrations. He applies the pressure forceps freely, but trusts to the ligature, and avoids, if possible, leaving the forceps attached to the vessels for several days. The experience of ovariotomists has proved the great advantage and safety of haemostasis by forcipressure, followed a few minutes later by ligature. The objections to permanent forcipressure are numerous. The greater part of this book consists of clinical reports of cases, with statistical tables and fine pathological illustrations. Dr. Lewers's notes on after-results are very carefully prepared. He claims 23 per cent. of cases known to be free from recurrence from four to more than fifteen years. His close analysis of his statistics demands careful study by the reader. Over eighty pages are devoted to cancer and sarcoma of the body of the uterus, diseases which must not be overlooked because they happen to be rare. The book is a treatise, pathologically, surgically, and clinically, of standard value, and deserves to be widely known and studied.

[3] *Cancer of the Uterus*: A Clinical Monograph on its Diagnosis and Treatment. With the After-results in Seventy-three Cases treated by Radical Operation. By Arthur H. N. Lewers, M.D.Lond., F.R.C.P., Obstetric Physician to the London Hospital; Examiner in Obstetric Medicine to the University of London; etc. London: H. K. Lewis. 1902. (Demy 8vo, pp. 328; 51 illustrations; 3 plates. 10s. 6d.).

ART AND NATURE.

Mr. T. A. Cook's *Spirals in Nature and Art*[4] is a book which will appeal to artists and men of science alike. The author describes it on the title page as "A Study of Spiral Formations, based on the manuscripts of Leonardo da Vinci, with special reference to the architecture of the open staircase at Blois, in Touraine, now, for the first time, shown to be from his designs." The book will be found extremely interesting, not only because its subject centres in Leonardo da Vinci, that wonderful painter, man of science, engineer, biologist, mathematician, and architect, but also because, as Professor Ray Lankester in his preface points out, "the training which he (Mr. Cook) received in Paris has emboldened him to enter upon a course of speculative generalization which a more restricted method of study might have prevented. He looks, in fact, upon the results of others' labours with a mind that is more ready to perceive its general value than are those intellects which have concentrated a unique energy upon a single set of problems." When Mr. Cook compares certain architectural beauties with certain natural forms—for example, the spiral staircase at Blois (attributed to

[4] *Spirals in Nature and Art*. By Theodore Andrea Cook, M.A., F.S.A., author of *Old Touraine, Rouen*, etc., with a Preface by Professor E. Ray Lankester, F.R.S., etc., Director of the British Museum of Natural History. With illustrations; 200 pages. London: John Murray

Leonardo da Vinci) with the spiral structure of the shell of a mollusc—the resemblance is seen to be obvious, and the beauty and fitness of each is perceived at once. This suggests that the artist, in striking out this spiral form, has been moved or inspired by some deeply underlying natural law, the coincidence implying that there is a rational basis for aesthetics to be discovered; the artist or architect should endeavour, as did the best minds of da Vinci's day, to grasp the problems of proportion in architecture, reflecting the laws of construction and growth exemplified throughout organic life. They should go to Nature and study the ways in which she has solved problems of an allied if not directly comparable kind, and solved them always in a way which gratifies the aesthetic sense of man. If this be true, then the human aesthetic sense is shown to have its place in the true order of Nature—to be a reflex of, or part of, that order. Da Vinci evolved his theory of spirals not only from shell forms, but also from climbing plants: in the dressing of women's hair, as in the study for the "Leda," he closely follows the coils of the ammonite; he noted that the spiral formation of a screw suggested the movements of a flying bird; and among his drawings are studies of the curves of waves and of the effects of currents upon the banks of the mainland and of islands. The spiral form was noted even in the structure of the human and insect frame. Mr. Cook writes: "He even investigated the structure of intestines, and it may be noticed that the drawings in Fig. 50 (longitudinal section of intestine of raia) of the section of a shark's intestine gives a peculiarly interesting example of a dextral helix, the prime use of which is to ensure that the food passes slowly round and round the tube in order that every atom of nourishment may be extracted. A very beautiful parallel to this exists in the internal formation of auricula auris midae, and still more plainly in that of turritella lentiginosa." As the author points out, "one of the chief manifestations of good taste, then, is the appreciation of the truth that beauty, like life and growth, depends not on exact copying, but on those subtle variations to which the scheme of creation, as we know it, owes those great laws of the origin of species and the survival of the fittest." Mr. Cook's book is altogether interesting, and the pictures really illustrate his argument.

NOTES ON BOOKS.

MALARIA AND MOSQUITOS.

THE first part of the pamphlet on the *Causation and Prevention of Malarial Fever*,[5] compiled by Captain JAMES, I.M.S., for the use of members of the subordinate medical service in India, consists of a clear and concise account of the life-history of the parasites of malaria and the parts played by mosquitos and men respectively in the cycle of their life. The remainder is devoted to the study of mosquitos, their breeding grounds and life-histories, and the methods that should be adopted for the destruction of these insects. A table of Indian species of *Anopheles* is given, with descriptions both of adults and larvae and the favourite breeding places of each species. We are glad to find that in India, as elsewhere, the importance of running water as a breeding place under common circumstances for *Anopheles* larvae is at last fully recognized. The author points out that the *Anopheles* which in India are known to carry malaria all breed in running water. The pamphlet, though more specially useful in India, will be of decided value to medical men and administrators in other countries.

A considerable part of Dr. BERKELEY'S book is hardly correctly described by the title *Laboratory Work with Mosquitos*,[6] for the commoner species of mosquitos are described, and an outline given of the part played in the propagation of disease by these insects. The part which deals with the purely laboratory work is practical, and conveys much useful information. It includes methods for rearing mosquitos and feeding them, as well as good methods for carrying and keeping them alive. The methods advocated for the dissection of the mosquitos, so as to display the intestine and its appendages and the salivary glands, are simple and effective. For sections the author prefers embedding in paraffin, and insists on the importance of using the sharpest of knives. Sections made in this manner serve well the purpose of demonstrating structure, but for some work, particularly the more advanced stages of the filarial embryo, celloidin sections are better. The last chapter, by Dr. Agramonte of Cuba, gives an excellent account of the life-history of *Stegomyia*. He shows that the larvae can withstand neither cold nor desiccation—facts of considerable importance in the study of the epidemiology of yellow fever.

[5] *The Causation and Prevention of Malarial Fever.* Drawn up for the use of Assistant Surgeons and Hospital Assistants by Captain S. P. James, M.B.Lond., I.M.S. Issued under the authority of the Director-General, I.M.S. Simla: Government Central Printing Office. 1902. (Demy 8vo, pp. 18; 5 plates.)

[6] *Laboratory Work with Mosquitos.* By William N. Berkeley, A.B., M.D.New York. New York: Pediatrics Laboratory. 1902. (Crown 8vo, pp. 120, 65 illustrations. $1.)

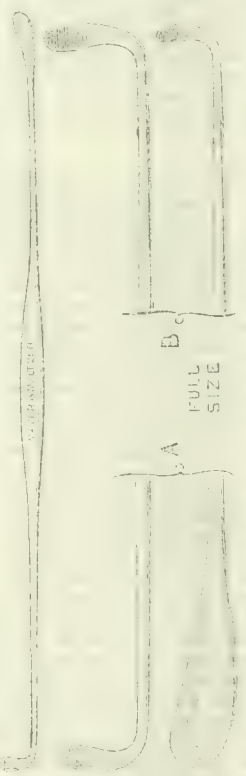
Hazell's Annual for 1903[7] was published on January 20th, and is stated to have been revised down to December 31st, 1902. The volume, which seeks to give a record of the topics, occurrences, and people of the day at home and abroad, thus covers the whole of the year 1902, and we are inclined to agree with the editor, Mr. WILLIAM PALMER, that its value for reference during the present year will be enhanced by the delay in its issue, more particularly as last year there was an autumn session of Parliament which dragged on into December. A long list of new articles shows that the editor takes every opportunity of keeping the work up-to-date for the purpose which it seeks to serve—that is to say, a cyclopaedia of current events; in this respect we know of no work of reference which rivals it.

[7] London: Hazell, Watson, and Viney. 1903. 3s. 6d.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEDICAL AND SURGICAL APPLIANCES.

Impacted Stone Extractor.—Mr. G. LENTHAL CHEATLE, Surgeon to King's College Hospital, writes to the effect that the hooks shown in the accompanying illustrations have proved useful in cases where gall-stones were impacted in the cystic or biliary ducts. They may, he thinks, prove useful in cases of stone impacted in the ureter or in the urethra. The hook is flattened laterally, and so curved that it can be insinuated between the duct wall and the impacted stone. When past the stone the hook (in order to allow extraction) must be brought to the middle of the duct by rotating the handle. The method described by Mr. Mayo Robson of pulling the gall bladder upwards, thereby converting the cystic and common bile ducts into a straight passage, extends the range of usefulness of this instrument. Even when the conversion of the angular passage into a straight one is impossible, the hook may be inserted through a small incision ($\frac{1}{8}$ in.) made by a sharp-pointed tenotomy knife, and the stone hooked up to a more accessible part of the passage, and dealt with accordingly. Mr. Cheatle adds that whatever merit this instrument possesses is due to its likeness to the hook invented by Lord Lister for extracting foreign bodies from the external auditory meatus.



DR. APELLES DEI, Professor of Comparative Anatomy in the University of Siena, has been the victim of a singular accident. A heating apparatus which he had placed in his bed set fire to the bedclothes, and burnt him so severely that he has died from the effects.

THE ANNUAL REPORT OF THE MEDICAL OFFICER OF THE ADMINISTRATIVE COUNTY OF LONDON.

II.

Chief Causes of Mortality.

Of the single causes of mortality in London during 1901, phthisis heads the list with 7,735 deaths, next come bronchitis with 7,317 deaths, pneumonia with 6,121 deaths, cancer with 4,203 deaths, apoplexy with 2,278 deaths, and convulsions with 1,536 deaths. All zymotic diseases together were responsible for 11,805 deaths.

Small-pox.

This disease caused 229 deaths in 1901, or a death-rate of 0.051 as compared with 0.001 per 1,000 living in the two preceding years. The general cause of small-pox mortality in London since 1840 is given in an excellent diagram. The number of cases of small-pox notified since notification of this disease became compulsory in London in 1889 has varied from 29 in 1899 to 2,815 in 1893. The number in 1901 was 1,700. A very instructive diagram of small-pox mortality in London, Paris, and Berlin is given opposite page 18. The contrast between Berlin and London, and still more between Berlin and Paris, in relation to the enforcement of vaccination, is clearly indicated in this diagram; while corresponding diagrams for Vienna and St. Petersburg illustrate the same lesson. During 1901 Holborn suffered more severely than any other metropolitan borough from small-pox; St. Pancras and Hammersmith next most severely. The highest number of cases was notified in the week ending November 2nd. Of the total number of cases notified as small-pox and removed to the wharves, the cases incorrectly diagnosed amounted to 13.3 per cent. of the total. It is impossible to summarize here the excellent summary given by Mr. Murphy of the course of small-pox in London during 1901, but it is of the utmost value as a historical account, apart from its practical importance, to have such an account on record. The number of children not finally accounted for as regards vaccination per cent. of total births increased from 5.7 in 1881 to 33.0 in 1898, and 27.7 in 1899. In the three years 1897-99 certificates of "conscientious objection" to vaccination were obtained in less than 1 per cent. of the total births.

Measles.

The death-rate from measles in London in 1901 was 0.43 per 1,000, the highest in recent preceding years being 0.82 in 1896. This rate was higher than that of any of the eight European capitals for which returns are given. The death-rate from measles varied from 0.01 in Hampstead to 0.78 in Battersea and Southwark. Inasmuch, however, as 94.8 per cent. of the total deaths in London from this disease in 1901 occurred among children aged 0.5 years, the death-rate is given for each borough per 1,000 living at these ages. Thus stated, it varied from 0.16 in Hampstead to 6.34 in Battersea and 6.19 in Southwark. Mr. Murphy gives a comparative table of the relative position as regards measles, according as the death-rate from this disease is stated in the ordinary way or in terms of the population under 5 years of age, similar to the table we gave on page 323, relating to the birth-rate. He shows that the order of the boroughs is considerably altered by the more accurate method of statement. Kensington, which was thirteenth in the list in the "all ages" comparison, is only two places removed from the worst in the more accurate comparison, while Holborn and Westminster occupy more favourable positions than was theirs before the correction was made.

Scarlet Fever.

This disease caused in 1901 a death-rate of 0.13 per 1,000, as compared with 0.08 in 1900; and a case-rate of 4.1 as compared with 3.1. Taking the average mortality for 1891-1900, the London scarlatinal death-rate was lower than that of Copenhagen, Stockholm, Berlin, Vienna, and New York, only one-third that of St. Petersburg; while it was higher than that of Brussels, Amsterdam, and Paris. Had the same correction been applied for scarlet fever as for measles, the apparent paucity of scarlet fever in Paris would have been shown to be partially due to the smaller proportion of children in its population than in that of London. The highest case-rates from scarlet fever were 7.2 per 1,000 in Bermondsey and 6.5 in Bethnal Green; the lowest, 2.7 in Hampstead and Kensington and 2.6 in Chelsea, Westminster, and Woolwich.

The outbreak of scarlet fever due to milk infection, and implicating Shoreditch, Bethnal Green, and Finsbury is described in this report, and the necessity for power to insist on further powers in investigating milk outbreaks, and in stopping infected milk supplies, is emphasized.

The influence of school attendance on scarlet fever prevalence is indicated by the fact that comparing the thirty-second to thirty-fifth weeks (weeks of holiday influence) with the four preceding weeks, the decline of scarlet fever is greatest at the ages of school attendance (3 to 13). Similarly the increase of scarlet fever in the four weeks following the weeks of holiday influence was 14.2 per cent. at ages 0-3, 56.3 per cent. at ages 3-13, and 35.9 per cent. at ages 13 and upwards.

A very valuable table, showing the age and sex incidence of attacks of and deaths from scarlet fever, is given on page 33. The highest case-rate was in the population aged 4-5 for both sexes, the next highest at ages 3-4. The highest death-rate was at ages 2-3, the next highest at ages 3-4. The case-mortality (fatality) was highest in infants, next highest at ages 1-2, decreasing rapidly with increasing years. Although the fatality was highest in the first year of life, the total effect on the death-rate was greatest at ages 2-3, owing to a combination of high prevalence and high death-rate at this period of life.

Diphtheria.

The death-rate from diphtheria in 1901 was 0.29 per 1,000, as compared with 0.34 in 1900 and a maximum of 0.74 in 1893. The highest death-rates from this disease occurred in Bethnal Green, St. Pancras, and Hackney. A very useful table is given on page 35, which enables the relative incidence of cases of diphtheria in each metropolitan borough since 1890 to be readily understood; the years of maximum incidence and the recurrence of epidemic maxima in each borough can easily be ascertained from this table. We are greatly struck with the sparcity of use made in London of bacteriological diagnosis in diphtheria. During 1901, in St. Pancras 246 specimens were examined. No other district had so large a number of specimens examined, and the majority of boroughs appear to have made no use of this valuable aid in the prevention of disease. The case mortality of diphtheria was 12.1 per cent. among males, 10.3 among females. The incidence of diphtheria was greatest among males aged 4-5, the death-rate highest at ages 2-3.

Typhus.

Typhus caused 4 deaths in London during 1901, and 20 patients were certified to be suffering from this disease.

Enteric Fever.

This caused a death-rate of 0.11 and a case-rate of 0.7 per 1,000. It was highest in Bermondsey, Fulham, and Poplar. A number of cases were traced to infected cockles and oysters. The table giving the age and sex incidence of enteric fever shows the highest case-rate to occur at ages 15-20 among males, at 10-15 among females; while the highest death rate was among males aged 20-25, among females at 10-15. The incidence of enteric fever was much lower in the female than on the male sex.

Diarrhoea.

The death-rate due to diarrhoea was 0.86 per 1,000, as compared with 1.85 in Manchester, 2.11 in Sheffield, and 0.45 in Bristol. Over 81 per cent. of the total deaths from diarrhoea occurred among children under 1 year of age. This fact diminishes the value of the comparison of the death-rate from diarrhoea per 1,000 living in each metropolitan borough, which shows that it varied from 1.31 in Fulham and Shoreditch, and 1.26 in Poplar to 0.38 in Westminster, 0.32 in Hampstead, and 0.30 in the City of London.

Phthisis.

Pulmonary consumption caused a death-rate of 1.71 per 1,000 as compared with 1.79 in 1900 and 2.02 in 1891. The death-rate from phthisis varied from 2.81 in Holborn, 2.51 in Southwark, 2.29 in the City of London, and 2.23 in Shoreditch to 1.10 in Paddington, 0.91 in Hampstead, and 0.90 in Lewisham. The magnitude of the problem of the proposed provision of sanatoria for phthisis is indicated by the fact that over 7,500 persons died in London from phthisis in 1901. Mr. Murphy is clearly rather in favour of indirect than of direct measures against phthisis, and lays stress on the importance of taking no steps which will be prejudicial to the sufferer.

Cancer.

The death-rate due to cancer was 0.93 per 1,000 as compared with 0.95 in the two preceding years, and with 0.68 in 1881-90. There is given on p. 49 a very valuable table showing for each metropolitan borough the number of deaths from cancer at

several age-periods corrected for public institutions. This will serve as time advances an important basis for calculating the true incidence of cancer in different parts of London.

THE POSITION AND PROSPECTS OF THE MEDICAL PROFESSION.

IN the course of his Presidential address to the Harrogate Medical Society, Dr. CHARLES GIBSON, Physician to the Royal Bath Hospital and Rawson Convalescent Home, Harrogate, made the following observations:

His Most Gracious Majesty the King is an Honorary Member of of our profession, and has shown his sympathy with it by his Hospital Fund, which has so magnificently assisted the hospitals of London in their great need. He has also shown much interest in the great movement of stamping out the ravages of tuberculosis. What an immense saving of life and relief of suffering have been achieved through the instrumentality of hospitals? For the real poor they are an inestimable boon, a godsend, a haven of mercy, and they deserve all our sympathy. The poor fellow from the docks or in a railway accident, without a penny in his pocket, is watched over with the tenderest care, and has the advantage of the highest skill. Is there any other profession which does so much for our common humanity without hope of remuneration, and where return is impossible? Philanthropy exerts itself in many and varied forms, but in no profession so much as in the medical. It follows, unfortunately, that our hospitals are much abused, and the well-to-do man or woman without a conscience may obtain medical aid in almost any of our large towns without risk of his circumstances becoming known.

The original purpose of hospitals was to provide medical or surgical treatment gratis to those who by reason of insufficient means were unable to obtain for themselves the treatment necessary. Multitudes obtain relief under the plea of poverty, but it is the poverty of self-respect and conscience. Pauperism and crime have both decreased considerably. Improved sanitation has lessened disease. Wages have largely increased, yet people seeking gratuitous medical charity at our hospitals have increased enormously. Indiscriminate charity blesses neither the giver nor the receiver. Such abuse discourages thrift and demoralizes the recipients, and is dishonest. If a man is able to pay for advice, and goes to a charity, he is nothing more or less than a thief; he is stealing the advice and medicine that were intended for others, and defrauding the benevolent subscriber as well as the medical profession.

It is hardly possible to exaggerate the vital importance of preventive medicine: it has a most intimate relationship with the social well-being, the prosperity and future development of the empire as a whole, and of the individual as a unit; and as civilization advances it is bound to assume a more and more important position in our social government and as a power in the State.

The profession of medicine is the study of man, his life habits, and all that pertains to maintain the life, to preserve the health, and to prevent disease. Therefore the practitioners of the science and art of medicine should be honoured by man. The doctor's influence is of the widest character, yet he has no power in the State, and his isolation is taken advantage of by the public, and commercial combinations have endeavoured to farm him and to sweat him, as in the medical aid societies, artisan clubs, and hydros.

Doctors are proverbially jealous and sensitive in their professional relations with each other. This is due more or less to the personal and private nature of their work, and the public, in consequence of such sensitiveness, and medicine not being an exact science, do their best to pit one doctor against another. Sickness, both in amount and duration, has decreased, because the skilled labourers in medical science have increased, and the spur of rivalry stimulates each person to do his utmost. No one ought to complain of honest, courteous, conscientious rivalry, for it creates emulation; but unfortunately, with so much over-production, there is not work sufficient to employ all, and many worthy aspirants to fame languish, and then there is a tendency to practices which are not authorized or not creditable, and the profession is lowered in the estimation of the public.

The advancement of the profession to that high position of influence in which it can best serve the State, whose health is in its hands, is of the utmost importance, not only to the profession, but also to the nation. The preservation of the lives and the health of the people and their development physically and mentally, the prevention of disease and the removal of dirt by improved sanitation, will be found to be of at least equal importance to the guardianship of their property, for it is now beginning to be recognized that the "Mens sana in corpore sano" elevates the tone of the people, thereby developing a race strong and active in body, firm in character, and ever ready and alert in mind. "A nation's health is a nation's wealth," and increased sanitary measures will not only increase length of life, but will tend to elevate and conserve public morality, and so develop a people healthy and vigorous, who will thereby become a safeguard to the nation.

In the late war a very large percentage of men were rejected as being physically unfit for service, showing the tendency of the nation to deteriorate. The public does not yet recognize the deep debt of gratitude it owes to preventive medicine. There is no evil which can be compared to the neglect of sanitation. Doctors think of their patients, but do not consider their profession and its rights, and so are ignored by the State. Is there anything more precious than human life? Then, Why is there not a Minister of Health?

Dr. Farr created and organized the science of vital statistics which made the reports of the Registrar-General so valuable; he rendered eminent services to his country, to science, and to mankind; and although about forty years Deputy Registrar he was passed over for the office of Registrar-General, so retired disgusted with the injustice. The returns are a kind of barometer of the health of the nation, dealing with the vital statistics and professional technicalities. Ought not the Registrar-General, therefore, to be a doctor? And if the returns are to be accurate and of scientific value, should not every registrar of births and deaths have a medical education?

We have to teach the value of the purity of air, of water, and of food, to teach the laws of Nature, which are the laws of God. Will any one say that this is of less importance to the welfare of society than any work which has been done by ecclesiastics or lawyers or statesmen or warriors who have been exalted to the highest rank?

Think of the miserable pay of the Poor Law. Many an artisan has better wages, no risk to health, not liable to be called up at night, no anxiety, no appearance to keep up. I cull this paragraph out of the *Yorkshire Evening Post*:

> Three visiting physicians are wanted for Limerick Workhouse at a weekly salary of 19s. 3d. each.

Surely that should kindle any latent pride we may have in our profession, and show us the urgent necessity for reform. The utilitarian aspect of life must be considered, because doctors have to live like other men. Professional men do not enjoy a high reputation for thrift, and in no profession is there so much need for what is called "keeping up appearances," because nobody will go to a poor doctor; so being afraid of what the world may say, he possibly lives beyond his means, and in the struggle to make ends meet his life becomes a constant heart-breaking effort, and sooner or later he sinks down, broken in health and spirit, leaving possibly a wife and family unprovided for. The mortality among medical men in practice is abnormally high compared with that of other professions, and our West Riding Medical Charitable Society is a sad record of what a trifling provision many have been able to make for their families.

Medicine is not and never can be, except to a favoured few, a money-making profession. It has been stated that not more than 1 per cent. of medical men can obtain a moderate competence by their profession. Their social status is not high compared with their abilities, but their expenditure is higher compared with other professions. Mr. Lawson Tait showed the average income of medical men in England to be about £200 per annum. The peculiarity of the profession is that the conscientious doctor is working to prevent disease, although he lives by treating disease.

The application of the skill of the physician or the art of the surgeon is more immediate, more personal, and more direct than that of any other profession: it may save a life in imminent danger upon whom a nation's hopes may be centred; it may assuage great suffering, or perhaps relieve pain which renders life a never-ceasing torture. But the point is: Our work is with the individual, not with the community. The medical profession has certain advantages and disadvantages. There is no profession like it if you wish to do honorary or unremunerative work for the happiness of doing it, or for the satisfaction of helping your fellow-creatures. But it is hard upon a doctor, who has perhaps spent years in doing good, to be publicly upbraided and held up to scorn because he declines to give evidence or to give a certificate for a court of

law unless he is paid his fee, when possibly such evidence or certificate may compel him to be bound over to attend a further court of law, perhaps at some neighbouring town and at great inconvenience and loss of time. Oftentimes the expenses incurred exceed the fees payable, without taking into consideration, it may be, the loss of patients through absence from home.

Doctors are always willing to do charitable work and deeds of kindness to the poor, but why should they be penalized for so doing? A doctor has ample opportunity for the exercise of philanthrophy outside the courts of law. If a witness has not been paid his lawful expenses he may refuse to be sworn, but if he has been sworn, he is then in the position of a witness whose fee depends upon the success of the party on whose behalf he is giving evidence. Some solicitors will not pay a fee after the evidence is given if they can possibly avoid it.

Why should a lawyer's fee or any other professional man's be greater than a doctor's? The medical profession has displayed the most profound apathy concerning legislation, even though it interfered with their work and remuneration. It is too divided and weak. If its united influence were utilized, its rights would be respected and its position assured.

It has been stated that the General Medical Council is only for the improvement of medical education. If that be the case why cannot its sphere of usefulness be extended and enlarged, or strengthened? Unfortunately, it is composed for the most part of representatives of commercially competing corporations, which take no responsibility for upholding the honour, the dignity, or the status of the profession. What does the General Medical Council do for the profession? It receives our £5 5s. as a registration fee, but affords no protection to those registered, and its financial position is now most unsatisfactory. Would it not be wiser to have an annual registration fee as the lawyers have, and to have protection afforded against impudent quacks and medicine vendors? The public as well as the profession would gain by it, as the people know nothing about medical skill or science. It ought to protect both the public and the profession against irregular practice. If a man pretends to be or does the work of a solicitor he is prosecuted by the Incorporated Law Society, and is subjected to heavy penalties, but if a charlatan trades on the ignorance of the people and ruins their health or shortens their lives, he might possibly be censured if prosecuted.

Quacks calling themselves oculists and aurists ought to be prosecuted. Parliament has shown itself unsympathetic to the medical profession, but it has a tender regard for the liberty of the subject in quacks, bonesetters, and herbalists. If it were the property of the individual that was in question there would be stringent regulations, but when it is only the life or health of the human being, which he ought to know how to take care of himself, it is of comparatively little importance.

The law will prevent an industrial worker from working a certain number of hours, and be very stringent in regard to the ventilation of workshops, etc., but it will not protect the worker against unscrupulous charlatans, ruining health or life. The sooner the profession realizes that it must take care of its interests, the better it will be for the nation. We shall never make the public understand the true position of medicine until we set a higher value on our services, and take a higher position in the social scale.

Competition among the licensing bodies is the real source of weakness in the profession, and overcrowding of its ranks has been one of the main causes in lowering the status and reducing the fees; but there are many other agencies at work, as the prevalence of quackery, the abuse of hospitals, medical aid societies, etc. The value of a coroner's court is the detection of crime, or criminal neglect, and to make it public, so that it shall not go unpunished.

In cases in which a death cannot be registered, as duly certified by a registered medical practitioner, the coroner should hold an inquest unless he feels certain that death is due to natural causes. Now, is it reasonable to suppose that a lawyer, with no medical training, would be able to decide such a point? Yet nine coroners out of every ten are lawyers. Why should not all coroners be medical men?

Why should medical men alone be compelled, under penalty, and without remuneration, to perform an important duty to the State—that is, to give a certificate of death? In any other profession it would be paid for, then, "Why do we not receive payment?" Is it just?

It is of the utmost importance that there should be uniformity in the preliminary entrance examination in Arts, and that a high standard should be maintained, greatly superior to that which is sufficient for a skilled trade. The enforcement of a more thorough preliminary education will produce a lessening of our members, but better men, which will be a gain to the profession in status and to the public in efficiency. There can be no doubt that the progress and prestige of the profession is to some extent in ratio to the general education of its members, and that something must be done to prevent a learned profession from degenerating into a skilled trade or a mere dealer in drugs. Nothing is gained by turning out men who cannot maintain the respect of the public by their scientific requirements, and five years seems little enough to study the science and master the art of Medicine.

There is no doubt that the old apprenticeship system limited the supply, and in the days of apprenticeship a student was taught almost unconsciously the time-honoured traditions of the profession, by example as well as by precept; but now it is a perfectly open profession, which from its peculiar circumstances is capable of being turned into a trade. Articled clerkship is nothing more or less than apprenticeship to the law. It used to be accepted as an axiom that a doctor was a gentleman and not a mere dealer in nostrums. Now that apprenticeship is a thing of the past, should there not be at least one lecture upon the ethics of the profession?

There is a teadency in all professions to become overstocked from the class immediately below them, thus affording a rise in the social scale, for the sake of which pecuniary emoluments are willingly sacrificed. To my mind no student should enter a medical school till he is 18 years old. There should be only one portal, a State examination, which should maintain a high standard, for every one will acknowledge that the avenues to the profession at the present time are too numerous. Why should not the various specialities be made honour subjects, as gynaecology, ophthalmology, dermatology, etc. When the profession increases in status by higher education the better educated will be attracted to it, its importance will be more recognized, and, in consequence, its emoluments will increase.

The newspaper is at the present time one of the necessities of life, and wields an enormous power for good or for evil. It is difficult to realize what an awful amount of evil and demoralization is caused by quack advertisements, and also by sensational gossip. An enlightened press ought to uphold all that is good and noble, and it is most unsatisfactory that for gain it will insert disgraceful quack advertisements, which exercise such a baneful effect upon the weak-minded and foolish, who are unable to discriminate. If the number of quack advertisements be regarded as a measure of the intelligence of the readers of newspapers, then they must certainly merit Carlyle's description as "mostly fools."

Society may be credulous, but the law should protect the foolish and weak from being swindled by impudent scoundrels whose advertisements are deliberately designed to entrap the ignorant and the unwary.

The German Medical Association has succeded in obtaining the removal of an objectional quack advertisement. The Viennese Medical Chamber has a promise that all doubtful advertisements will be refused. Is this ignoble trading on human folly beyond the reach of the law in England? It is a disgrace to an intelligent press, and makes one ask, Should there not be a Censor?

Many of the drawbacks of professional life arise from want of union. If the profession were in agreement upon the questions which concern their welfare, and would show some practical interest in what is termed medical politics, there would soon be a change for the better. The British Medical Association was founded in 1832 and owes its existence to a desire for union and organization, it embraces all reputable members of the profession, willing to work together for the common good. The object is the promotion of the medical and allied sciences, and the maintenance of the honour and of the interests of the profession. Its aim is to consolidate and extend the influence of its members on public opinion, and of legislation in the interest of the profession as well as the public. It is of advantage to every member of the profession that they should join the Association, for its influence is now far reaching, and its power is increasing. Since its inception it has grown gradually both in power and in work. It has justified its existence. But there is much work to be done if we are to improve our status, and there should be united action, which will require individual as well as corporate energy.

REPORTS ON TROPICAL DISEASES.

Malaya.

We are glad to see the first number of a new publication, *Studies from the Institute for Medical Research, Federated Malay States*.[1] In a tropical country the study of malaria and its local aspects must be considered as a necessary preliminary to future work. The volume before us deals fully with the prevalence of the different forms of the malaria parasites found in these native States. Dr. Hamilton Wright finds benign tertian and quartan fairly generally distributed, and subdivided the other parasites into malignant tertian, pigmented quotidian, and, doubtfully, unpigmented quotidian. This subdivision is to a large extent disused, and we do not find any new arguments advanced in its favour. It is satisfactory to learn that European quarters in the larger centres are practically free from malaria, though *Anopheles* are common. Europeans usually contract fever after expeditions into the jungle. The coolies working on settled plantations only suffer a little, but amongst the Tamil coolies employed in the mines and in railway extension malarial fever is both common and fatal. Dr. Wright describes in detail the conditions under which these labourers work, and shows how the overcrowded quarters close to the numerous *Anopheles* breeding pools made in the course of the work favour the spread of malaria. Some seven species of *Anopheles* are mentioned by Dr. Wright, but few of these seem to have been identified. The articles on prophylaxis are eminently practical, and a sanguine view is taken of the possibility of mitigation even under unfavourable circumstances, by destruction of *Anopheles* breeding places, better selection of sites, and more general use of quinine.

Amongst the other papers in the report the last article—on treatment of malaria, by Dr. E. A. O. Travers—is well worthy of attention. He advocates quinine in solution by the mouth in all but the most severe cases, and in adequate doses in children as well as in adults.

Gold Coast.

The half-yearly medical report of the health of Mantraim (Wassau), by Dr. F. Hudson Evans, is of interest as showing the conditions as regards health of a mining station on the Gold Coast, West Africa. During the half year commencing October, 1901, 7 out of the 13 European residents had malaria, and 1 had dysentery. Four are returned either as having good health or no illness. It is highly satisfactory to find that in spite of the considerable amount of climatic disease there were no deaths, no patients were invalided home, and the average time off duty per man from ill-health was only 1.923 working days for the half year. The mortality amongst the native labourers, who averaged 200, was at the rate of 3 per cent. for the half year, or at the rate of 60 per 1,000 per annum. This rate is high, and indicates one of the serious difficulties met with in mining enterprise in unhealthy places, as most of the labour has to be imported, and is expensive. Half the deaths were stated to be from "epidemic dropsy." Further particulars of this obscure disease would be of interest. The suggestions made for improved house construction and sanitation are thoroughly practical, and will, we hope, be acted on by the company.

Uganda.

The medical report of Dr. A. D. Milne, Acting Principal Medical Officer for the Uganda Protectorate for the quarter ending September 30th, 1902, is mainly of interest as showing the continued increase in the number of cases of sleeping sickness, and the steady spread of this recently-imported disease. Small-pox is shown to be very prevalent. Amongst Europeans malaria and blackwater fever were, as usual, of most importance. Dr. Milne has not seen endemic cases of plague himself, nor were any reports of its present existence received from the other medical officers throughout the Protectorate.

[1] *Studies from the Institute for Medical Research, Federated Malay States.* No. 1, vol. i. The Malarial Fever of British Malaya. By Hamilton Wright, M.D., B.Sc. Cantab. Singapore: Kelly and Walsh. 1901. (Demy 8vo, pp. 68. 3s.)

Cats as Vehicles of Infection.—The Board of Health of Rockford, Illinois, having come to the conclusion that cats are largely responsible for the spread of contagious and infectious diseases, has issued an order that all cats living in the houses in which there are cases of scarlet fever, diphtheria, or other contagious diseases shall be put to death.

THE PREVENTION OF CONSUMPTION.

The London Open-Air Sanatorium.

On February 7th a deputation of the National Friendly Society Conference, which represents nearly 4,000,000 members, visited the London Open-Air Sanatorium near Wokingham. The deputation last autumn visited Germany for the purpose of inspecting the various sanatoria provided by the State Sick Insurance Fund, and, as they hope to establish institutions on somewhat similar lines in connexion with their Friendly Societies, they were anxious to see the London Open-Air Sanatorium which was inspected by the three winners of the King's prizes, and the plan of which closely resembles that laid down in Dr. Latham's essay. The members of the deputation were received by Mr. Malcolm Morris, the Vice-Chairman; Dr. Alfred Hillier, one of the visiting physitions, and Dr. C. C. Chidell, the Medical Superintendent. The sanatorium, which was opened about twelve months ago, and was built at a cost of £36,000, and is mainly intended for the middle and the poorer professional class. It provides treatment for 64 patients at an inclusive charge of three guineas a week. The buildings are in the midst of 80 acres of pine woods, and stand on sandy soil, at an altitude of 220 ft. Each patient occupies a separate bedroom with a southern aspect, and shelters, some of them lighted by electricity, are placed about the grounds. The average length of treatment is from three to six months, and it is stated that the percentage of those who have left and been able to return to their work is very high. Two resident medical officers are in charge of the patients in the sanatorium. The inspection finished, the deputation was entertained at luncheon, at which Mr. Malcolm Morris presided. The visitors declared themselves highly pleased with all they had seen. They explained that anything done by the Friendly Societies must be on a similar basis, though not on so costly a scale. Their idea was to aim at a cost per patient of 10s. or 12s. a week.

New South Wales.

An Open-air Sanatorium.—We learn from the *Australasian Medical Gazette* that the sanatorium at King's Tableland, near Wentworth Falls, New South Wales, which has been erected by the Committee of the Queen Victoria Home for Consumptives, is now practically completed. It was arranged that it should be opened by his Excellency Sir Harry Rawson, K.C.B., on February 6th. Dr. McIntyre Sinclair, late Assistant Medical Officer at the Cotswold Sanatorium, near Gloucester, has been appointed Resident Medical Officer. The sum of £3,535 has been expended on the site and buildings, and £400 is to be spent on the erection of a cottage for the resident medical officer. Messrs. David Jones and Co. have volunteered to furnish the wards.

United States.

New York.—The committee on the prevention of tuberculosis of the New York Charity Organization Society has decided to erect a sanatorium for the special and exclusive treatment of consumptives belonging to that city. The sanatorium will not be situated within the limits of the city, but will be easily accessible. The expense of establishing and maintaining the hospital will be met by private subscriptions. It is stated that a sufficient sum is already promised to ensure the success of the undertaking.

CONTRACT MEDICAL PRACTICE.

Fleetwood.

As was stated in the British Medical Journal of January 31st, p. 266, the medical men of Fleetwood recently notified the members of the Friendly Societies in the town that they could no longer accept the club rate of 2s. 6d. a year, and that in future the rate for medical attendance must be 4s. a member, with a fee of 1s. for each adult member examined on entrance to a lodge. The clubs acting together met and offered 3s. 3d. a member, and this we learn from the *Fleetwood Gazette* was accepted by the medical men subject to a guarantee from each society that the amount should be raised to 4s. in twelve months. It appears from a recent issue of the *Fleetwood Gazette* that this condition was not accepted by the Friendly Societies, and that they appointed a medical officer. This gentleman has since had an interview with the medical practitioners in the town, and on learning the full particulars of the case has declined to take up the appointment.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1903.

Members of the British Medical Association are reminded that commencing with January 1st, 1903, the annual subscription is a uniform one of 25s., inclusive of the Branch, and that all subscriptions should be paid direct to the General Secretary, 429, Strand, London, W.C., and not to a Branch Secretary.

British Medical Journal.

SATURDAY, FEBRUARY 14TH, 1903.

MEDICINE AND MATRIMONY.

It has been said that marriages would be at least as happy were they made by the Lord Chancellor as they generally prove to be under our present system of sexual selection. Certainly those who know the average French *ménage*, not as it is pourtrayed by novelists, whose sole idea of love is adultery, but as it is seen in quiet provincial towns and in the country, can testify to the happiness of marriages which have been arranged for the contracting parties by their parents or guardians.

There is not, we think, much chance of the Lord Chancellor taking the place of Cupid as a match-maker in this country. It would be well, however, if in negotiations with a view to matrimony the doctor were to be called in as an assessor to the God of Love, who is proverbially blind, and therefore regardless of consequences. It need not be explained in a medical journal how serious the consequences of the marriage of the unfit are likely to be for their offspring, and ultimately for the race. The matter is one of the most far-reaching importance not only to particular nations, but to human society. So strongly has the conviction of this truth impressed itself on social reformers in some foreign countries that, as was stated in a previous article,[1] Bills for the State regulation of marriage have been introduced into the Legislature of several States of the American Union. In North Dakota, the Creed Bill, which became law in 1899, provides that, before a couple can marry, they must obtain a licence which is granted only to such as are able to produce a certificate from a Medical Board stating that they are free from infectious venereal disease, tuberculosis, epilepsy, hereditary insanity, and confirmed inebriety. How this law works in practice we are unable to say. In Europe a proposal of the same kind was submitted some time ago to the Bohemian Reichsrath; as nothing seems to have been heard of it since, it may be assumed that it was relegated to the limbo of legislative abortions. Academic suggestions in the same direction have been made in Germany, France, and Italy, but till lately wisdom as to this matter has, as Falstaff says, cried out in the streets and no man has regarded it. Now, however, for the first time, as far as we are aware, a European Government has undertaken to deal with the question. At the reopening of the Spanish law courts in Madrid not long ago the Minister of Justice, in speaking of certain reforms which he proposed to introduce, mentioned among these the need for medical sanction of marriage contracts. He stated that the documents to be produced by all candidates for the estate of matrimony would in future include a medical certificate of constitutional soundness. The marriage of the unfit said the Minister, only helped to fill the hospitals, asylums and prisons, and as a means of preventing this it was necessary that the magistrate should refuse to recognize unions which on scientific grounds seemed likely to have evil consequences. We are unable to say whether any definite measure of the kind has yet been submitted to the Cortes, and we await news of its fate with interest.

It may incidentally be mentioned that the prohibition of the marriage of the unfit is no new idea. The canon law recognizes certain physical infirmities as impediments to the contraction of marriage, or as rendering it null if already contracted. Quite recently we came across a reference to a case, the record of which is said to be preserved in the archives of the town of Lugon, in which epilepsy was adjudged to be a valid reason for the cancellation of a betrothal. This was in 1533. Nearly twenty years earlier Sir Thomas More, in his *Utopia*, had written as follows: "Farthermore, in chuesing wyfes and husbandes, they observe earnestly and stratelye a custome whiche semed vs very fonde and folyshe. For a sad and an honest matrone showeth the women, be she mayde or widdowe, naked to the wower. And likewise a sage and discrete man exhibyteth the wower naked to the woman. At this custome we laughed, and disalowed it as foolishe. But they, on the other part, doo greatlye wonder at the follye of al other nations, whyshe, in byinge a colte, whereas a lytle money is in hazard, be so charye and circumspecte, that though he be almoste bare, yet they wyll not bye hym oneles the saddel and all the harneies be taken of, leaste under those coverynges be hydde som galle or soore. And yet in chuesinge a wyfe, whyche shalbe either pleasure or displeasure to them all theire lyfe after, they be so recheles, that al the resydewe of the woomans bodye beinge covered with clocthes, they esteme her scarselye be one handebredeth (for they can se no more but her face), and as to joyne her to them not without greate jeoperdye of evel agreinge together, yf any thing in her body afterward should channce to offend and myslyke them. For all men be not so wyse, as to have respecte to the vertuous conditions of the partie. And the endowments of the bodye cause the vertues of the minde more to be esteemed and regarded: yea even in the marriages of wyse men. Verely so foule deformitie may be hydde under these coveringes, that it maye quite alienate and take awaye the mans mynde from his wyfe, when it shal not be lawful for theire bodies to be saperate agayne. If such deformitie happen by any chaunce after the mariage is consummate and finyshed, wel, there is no remedie but patience. Every man muste take his fortune wel a worthe. But it were wel done that a lawe were made wherebye all suche deceytes myghte be eschewed, and advoyed before hande."

Not long ago a German physician suggested that the Roentgen rays should be employed to ascertain whether a bride was fit for the chief end of marriage—the reproduction of the species. There would, he says, be no indignity in such an examination, which would be the means of detecting any pelvic contraction that would make delivery difficult or impossible. With what we suppose to be Teutonic jocularity, he suggests that the bride should be required to supply such a radiograph to any suitor for her hand. He thinks this method would be invaluable to members of royal and noble families to whom the birth of an heir is a matter of great importance.

[1] British Medical Journal, July 19th, 1902, p. 199.

Neither the canon law nor Sir Thomas More, however, seem to have given any heed, except indirectly, to the healthiness of the offspring, which is the object aimed at by modern reformers. With that object every lover of his kind must have the fullest sympathy. But in regard to the means to be adopted for its attainment there is room for doubt. We have already expressed a strong opinion that the absolute prohibition of marriage to the diseased and the degenerate would be not only cruel but futile. However strong the law of the land may be, the laws of Nature are stronger still. At any rate, as other countries are disposed to make the experiment, we may well be content to await its results. When Walt Whitman's dream is fulfilled, and the States where Edwin and Angelina are properly certificated before they are made one are peopled by "magnificent persons," it will be time to think of asking our Government to make the medical referee the arbiter of love's destiny. In the meantime the family doctor can do much to prevent unwholesome marriages, and we look with greater confidence to the fruits of his teaching and persuasion than to legislative enactments, which would necessarily tend to place him before the public which marries and gives in marriage in the position of a peculiarly odious devil's advocate, and thus nullify his power for good.

DAMAGES FOR NERVOUS SHOCK.

THE case of Rickard and Wife *v.* the Plymouth Mutual Co-operation and Industrial Society, which was heard by Mr. Justice Bigham and a special jury at the Exeter Assizes on February 2nd, raised an interesting question of law as to whether "nervous shock," as distinct from physical injury, can be the proper subject-matter of an action for damages. The facts of the case were shortly as follows. Excavations were being made on land adjoining the plaintiff's house, and some apprehension was felt that the walls might be undermined. Early one morning Mrs. Rickards was roused by some one who drew her attention to its tottering condition. She hastily dressed and went out to consult a relative as to what she should do, leaving her children in bed. While she was returning the side of the house fell out. Seeing this happen, and imagining that her children might be buried in the ruins, she sustained a shock which permanently impaired her health. As a matter of fact, the children had been removed to a place of safety. An action was brought to recover *inter alia* damages in respect of the shock so sustained. The learned judge directed the jury that they were not entitled to give damages in respect of the shock caused by fear for the safety of the children, but that they might do so for that received in consequence of the plaintiff's fear for her personal safety. In the event the jury found a verdict for £250 damages, for which amount judgement was entered, a stay of execution being granted. There is a curious conflict of judicial opinion as to whether damages for nervous shock are not too remote to be recovered.

In the case of the Victorian Railways Commissioners *v.* Coultas (13 A. C. 222), the plaintiffs alleged that while driving over a level crossing they were placed in imminent peril of being killed by a train owing to the negligence of a servant of the railway company who was in charge of the gate. The medical evidence showed that the female plaintiff, although not physically injured, had received a severe nervous shock from the fright, and that the illness from which she afterwards suffered was the consequence of the fright. The jury awarded damages, and the Supreme Court of Victoria entered judgement for the plaintiffs. On appeal to the Privy Council this decision was reversed. Sir Richard Couch, in giving the opinion of the Court, said: "Damages arising from mere sudden terror, unaccompanied by any actual physical injury, but occasioning a nervous or mental shock, cannot, in the circumstances of this case, their lordships think, be considered a consequence which, in the ordinary course of things, would flow from the negligence of the gatekeeper. If it were otherwise, not only in such a case as the present, but in every case where an accident caused by negligence had given a person a serious nervous shock there might be a claim for damages on account of mental injury."

In a more recent case,[1] however, which came before the Divisional Court, two of the judges of the King's Bench Division took a different view. In that case the plaintiff was behind the bar in her husband's public-house, when the defendants so negligently drove a pair-horse van as to drive it into the house. In the result the plaintiff, who was pregnant at the time, was prematurely delivered of a child which was born an idiot. The question was whether damages could be recovered. Both members of the Court, refusing to be bound by the decision of the Privy Council, held that "damages which result from a nervous shock, occasioned by fright unaccompanied by any actual impact, may be recoverable in an action for negligence if physical injury has been caused to the plaintiff."

In a large percentage of actions for negligence the mental shock forms a large part of the damage in respect of which compensation is claimed; the fact that no immediate physical injury has been occasioned should not prevent the plaintiff from recovering.

CANCER MORTALITY.

DR. TEMPLEMAN'S address on cancer mortality in Dundee which is published in another column, is an excellent example of the way in which local vital statistics when carefully handled may be utilized in studying this subject. The chief interest attaches to that part of his address dealing with parts of the body affected by fatal cancer. Cancer of the female genital organs has increased 34 per cent. between 1877-81 and 1897-1901; cancer of the breast 60 per cent. Cancer of the rectum has nearly doubled. These results are in conflict with those given by M. de Bovis,[2] who found that in Paris cancer of the breast and uterus has declined; that in Christiania cancer of the breast has remained about stationary; and that uterine cancer has declined, as has also cancer of the rectum. These instructive differences are well worthy of closer study, if the data admit of it. The explanation, so far as Dundee is concerned, does not consist in the more general statement in death certificates of the organ attacked by cancer, as the deaths referred to cancer without the part of the body attacked being stated have actually increased from 0.51 per 10,000 in the first to 0.63 during the last quinquennium under comparison. Clearly, if any such transference were operating in the foreign statistics it would tend to increase cancer of defined organs, as the breast, uterus, and rectum. One is almost driven to conclude therefore that unless the statistics are essentially untrustworthy from their paucity or from other unknown causes, cancer of certain organs is decreasing in some civilized countries, while it is increasing in others. If this

[1] Dulieu *v.* White (1901) 2 K. B. 669.
[2] BRITISH MEDICAL JOURNAL, October 4th, 1902, p. 1067.

result can be established, it will form a useful basis for further investigation.

Dr. Templeman is of opinion that the steady decline in deaths ascribed to old age is responsible for a considerable proportion of the increase in the cancer death-rate, and that, speaking generally, the apparently large increase in the cancer mortality, especially in the male sex, is to a considerable extent accounted for by more correct diagnosis. He thinks, however, that there has been a real and substantial increase in cancer mortality, though not so great or so alarming as the general public believe.

Although there may be differences of opinion as to the validity of this conclusion, our thanks are due to Dr. Templeman for having furnished what is probably the best local study of cancer hitherto published in this country. We have only one criticism to make in the interest of both accuracy and simplicity. The comparative statement for each sex of the death-rate at each group of ages, 25-35, 35-45, etc., in successive quinquennial age-periods does not lend itself to easy and complete comparison; and the statement of the death-rates from cancer per 10,000 living at all ages over 20 makes no allowance for the enormous differences which may be caused by the varying proportion living at ages over and under 40 years of age in the populations compared. Although the task would be very laborious, the value of his contribution would be still further enhanced if Dr. Templeman would give us, not only for cancer as a whole, but for cancer of the chief organs, death-rates for standard populations, so that the results for successive quinquennia would be in the strictest sense comparable. It is to be hoped that Dr. Templeman's example will stimulate others to publish detailed studies of local cancer mortality.

THE POLLUTION OF SHELLFISH.

Professor Herdman, Professor of Zoology in University College, Liverpool, has presented a report on the examination of Mumbles oysters undertaken for the Glamorgan Sea Fisheries Committee. Specimens were taken by Mr. Scott, Assistant at the Biological Station, Port Erin, Isle of Man, on January 14th, and the examination in Liverpool began on the morning of the following day. The bacteriological examination was carried out by Dr. A. Griffith in Professor Herdman's laboratory. Oysters brought in from the bay, and laid for one day on "perches," showed evidence of bacilli related to the colon group in two out of ten specimens examined, whereas oysters which had been on the perches for a week showed in eight out of ten cases marked evidence of sewage pollution, both bacillus coli communis and bacillus pyogenes fetidus being present. Out of twelve oysters, which had been on the plantations for a year, six were found to contain B. coli in addition to bacilli of the paracolon group. Sea water taken from near the end of the sewer pipe, which was not discharging at the time, contained fifty colonies of bacillus coli per cubic centimetre. The deposit and refuse from the shore around the oysters all contained B. coli, and one sample of Gaertner's bacillus in addition. Professor Herdman concludes that there can be no doubt that the shore and the sea water are polluted by sewage, and that oysters laid on the perches and plantations are liable to be infected by any organisms in the sewage. The condition of the oysters taken from the bay and laid for one day on the perches indicated that on the natural bed the oysters were living in clean water, but became polluted when brought into the shore. He thinks it clear that oysters ought never to be laid in such close proximity to a sewer as at Mumbles, and recommends that the sewer pipe should be removed, or the practice of depositing oysters on this part of the shore discontinued. A meeting under the presidency of Sir F. Dixon-Hartland, and attended by members of Parliament and representatives of the London County Council and of the Thames and Medway Conservancies, was held at the Guildhall, London, on February 9th, when a report from Dr. Klein on the Barking sewage effluent discharged into the Thames was considered. He reported that the effluent contained 1,300,000 to 2,400,000 microbes per 1 c.cm., over 45,000 B. coli communis per 1 c.cm., over 45,000 streptococci per 1 c.cm., and over 900 B. enteritidis sporogenes per 1 c.cm. The London County Council last week, on the recommendation of its Public Health Committee, resolved to express to the Local Government Board its desire that that Board should take steps to obtain an amendment of the law so as to prevent the laying down of all forms of edible shellfish in sewage-polluted creeks; and further, they recommended the prohibition under heavy penalties of the sale of such shellfish, and the protection by local authorities of existing layings, fattening beds, and storage ponds from any new source of pollution. Last Tuesday a further report of the Main Drainage Committee recommended the publication of the researches of Dr. Clowes and Dr. Houston on the bacterial treatment of sewage. In the discussion which took place Sir William Collins remarked that the publication of this work was doubtless the forerunner of some considerable changes in the methods at present in vogue in dealing with London sewage. That system had been in 1896 pronounced to be superior to anything of the kind in this country or anywhere else. He was anxious to know whether the intention was to abandon chemical and physical agencies, and to rely exclusively upon bacterial agency. He observed that the effluent of bacterial coke beds was not by any means harmless, as inoculations upon animals had shown, and he inclined to the view that as yet we did not know enough of the action of our unseen friends and foes to rely implicitly upon their unaided action in the purification of sewage. The whole question, we understand, will shortly be further reported upon to the Council.

THE SLEEPING SICKNESS IN UGANDA.

We are informed that both Dr. G. C. Low and Dr. Castellani have made preliminary reports to the Royal Society on their observations on the sleeping sickness in Uganda. Dr. Castellani has found a streptococcus in pure culture both after death and by lumbar puncture during life. He believes that the organism is not identical with that described by the Portuguese Commission, and states that its cultures are agglutinated by the serum of persons suffering from the disease. We understand also that Dr. Castellani has recently infected a monkey with the streptococcus, and recovered the microbe in a pure state after death, but we are not acquainted with the nature of the symptoms observed in the animal. Dr. Low appears to have disproved the suggestion that the disease has some relation to filaria perstans. He found this filaria in many healthy natives, and also ascertained that it was not found at all in areas within which numerous cases of sleeping sickness occurred. Observations on the spread of sleeping sickness among natives made it evident that it was of an infectious nature. Before leaving Uganda Dr. Low drew up a scheme for the prevention of the further spread of the disease by isolation, the scheme was approved by the Commissioner and by Dr. Moffat, the Principal Medical Officer. Lieutenant-Colonel Bruce, R.A.M.C., who will be accompanied by Dr. Nabarro, is leaving for Uganda this week, and the report which he will doubtless make to the Royal Society at an early date after his arrival will be awaited with much interest. Should he be able to confirm Dr. Castellani's observations it will be felt that a considerable step will have been made towards a better knowledge of the disease.

THE NEW PROFESSOR OF ANATOMY IN THE UNIVERSITY OF EDINBURGH.

The Curators of Patronage met on the afternoon of Tuesday last, February 10th, to consider the vacancy in the

Chair of Anatomy caused by Sir William Turner's promotion to the Principalship, to which he had been formally inducted on January 24th. The Curators having ascertained that Dr. D. J. Cunningham, F.R.S., Professor of Anatomy in the University of Dublin, was willing to accept appointment, unanimously decided that, in view of his pre-eminent qualifications, it was unnecessary to consider other applications, and that he should be invited to succeed Sir William Turner. Dr. Cunningham was born at Crieff, Perthshire, on April 15th, 1850, the youngest son of John Cunningham, D.D., LL.D., Principal of St. Mary's College, St. Andrews. He was educated at the Crieff Academy and at the University of Edinburgh, where he had a brilliant career, and graduated M.B., C.M., with first class honours, in 1874. In 1876 he took the degree of M.D., and received a gold medal for his thesis on the Anatomy of the Cetacea. From 1874 he acted as Junior Demonstrator of Anatomy under Sir W. Turner, and in 1876 he became Senior Demonstrator, in which position he remained till 1882, when he was appointed Professor of Anatomy in the Royal College of Surgeons in Ireland. In the following year, 1883, he became Professor of Anatomy in the University of Dublin. He has acted as an Examiner in Anatomy in the University of Edinburgh for eight years, in the University of London for ten years, in Cambridge for three years, in Oxford for one year, in Victoria University for three years; and is now an Examiner for His Majesty's Services. For eight years he was Secretary of the Royal Zoological Society of Ireland, and is now President. He was a member of the South African Hospitals Commission in 1900, and also of the Viceregal Commission on the Inland Fisheries of Ireland in the same year; and of a War Office Committee to report on the Physical Standards required for Candidates for Commissions and for Recruits. The new Professor has been a prolific writer. Apart from numerous papers in the *Journal of Anatomy and Physiology*, of which he is now acting editor, and in other scientific journals, he has published *A Manual of Practical Anatomy*, *A Monograph on the Marsupials* (*Challenger* Reports); and many other monographs. In 1902 he delivered before the Anthropological Institute the third Huxley memorial lecture on Right-handedness and Left-brainedness. His most recent work was to act as editor and joint-author of the *Textbook of Anatomy*, published in 1902 by the pupils of Sir William Turner. His appointment to succeed Sir William Turner appears to meet with universal approval.

PUERICULTURE.

Professor Pinard, who like every other thoughtful Frenchman, is seriously concerned about the threatened depopulation of France, sees one of the chief causes of it in the terrible mortality among newborn children. A partial remedy for it is, he holds, to be found in "puericulture." It is not enough, he says, to bring up a child in good hygienic and moral conditions; it must have healthy progenitors and must itself be surrounded with every care during the fateful months which it spends in its mother's womb. The care of the teeming mother therefore is a duty which society owes to itself. How many women, compelled by dire necessity to work throughout the time of gestation bring prematurely into the world weak and sickly children! Overwork in Professor Pinard's picturesque phrase, is the gust of wind which makes the sound but unripe fruit fall untimely from the tree. He maintains that every woman earning her living has a right to rest during the three months preceding her confinement. His teaching has already been carried into effect to a certain extent; private charity has created in the Avenue du Maine, Paris, a refuge for women awaiting delivery, and the city of Paris has built some homes for the same purpose. But M. Pinard maintains that it is the duty of the State to provide a solution of this pressing social problem. Vast sums are spent in building sanatoria for sufferers from tuberculosis; would not the money be more profitably spent in promoting the birth of healthy children with constitutions sufficiently robust to withstand the attacks of the bacillus? M. Pinard, who has preached this doctrine from his professorial chair for twenty years, has now undertaken a mission of evangelization *in partibus infidelium*. He lectures to boarding-school girls on their duties as the mothers of the next generation of Frenchmen. These lectures, to which all the qualified female teachers of Paris can bring their pupils, received what may be called their official consecration on February 9th, when the Rector of the Academy and the Director of Primary Instruction were present and expressed their approval of Professor Pinard's philanthropic efforts.

PROPOSED SECTION OF TROPICAL DISEASES.

We learn that much disappointment is felt by members specially interested in tropical medicine at the absence from the programme of the annual meeting of the British Medical Association in Swansea this year of a Section of Tropical Diseases. We understand that strong representations have been made to the President-elect and the Chairman of Council from influential quarters and that the suggestion to reinstate this Section will be brought before the next meeting of the Council. There is no doubt that the work done in the Section since it was first constituted at the annual meeting in Edinburgh has been of a high standard and it has since then afforded an annual opportunity, such as does not otherwise exist, to members living and working in the tropics to bring their results to the test of discussion, and to present them for the criticism and information of the profession at large. Much of the most important work done in this department of medicine has been brought before this Section at the annual meetings, and the early encouragement given to these studies by the British Medical Association has had a great part in stimulating inquiry and fostering clinical and pathological research. It would be a matter of regret to many if the absence of the Section from the annual meeting this year should be interpreted as indicating a decline in the interest it takes in a matter of Imperial importance.

DRUGS AS SUBSTITUTES FOR DRINK.

The abuse of alcohol is unquestionably a most pernicious thing, but mere abstinence from alcohol does not constitute temperance. It has often indeed been found that if the devil of alcohol is driven out his place may be taken by others worse than himself. Father Mathew's crusade against drunkenness in Ireland was on the whole extraordinarily successful; but in certain parts of the country many found a substitute for the whisky which they had forsworn in ether. In many places in America the drug store and the grocer's shop have largely replaced the drinking saloon, and morphine, cocaine, and other "oblivious antidotes" are consumed instead of whisky and beer. Mr. H. P. Hynson has analysed the statistics of the importation of cocaine and morphine into the United States, and finds that that of cocaine has increased more than 400 per cent. since 1898, and that of morphine and opium more than 600 per cent. There is reason to believe that the medicinal uses of these drugs have lessened rather than increased. Mr. Hynson also investigated the number of customers of the drug stores in New York addicted to the use of these drugs, and he estimates that there are five known to each pharmacist. We can say from our own experience that persons who look upon alcoholic intoxication with horror see nothing wrong or degrading in seeking forgetfulness or ease in the artificial paradises whose gates are opened to them by narcotic drugs. In this country the law as to the habitual use of such drugs is somewhat illogical. As will be seen from a communication from the Home Office printed at p. 406 the term "intoxicating liquor" in the Habitual Drunkards Act, 1879, is held to include liquors other than alcohol if their habitual intemperate use brings the consumer into the condition of a habitual drunkard. But if instead of drinking the intoxicating liquor the victim takes it by hypodermic injection the Act does not apply, though the results may be equally disastrous. He is an habitual inebriate but not an habitual drunkard. The new

Licensing Act does not affect him, for it applies only to the sale to habitual drunkards of intoxicating liquor at licensed premises or clubs.

THE BRAIN AS AN ORGAN OF VISCERAL REPRESENTATION.

Little is still known as to the part played by the brain in visceral representation, as compared with the large amount of knowledge accumulated by clinical and experimental work on the sensorial and so-called motor areas of representation in the brain. Two recent observers, Parbon and Goldstein, of Bucharest, have published in the *Revue Neurologique* a critical summary of work done on the subject of visceral representation in the brain, and have added interesting observations of their own. Lepine had shown that excitation of the "face area" in the cerebral cortex gives rise to the secretion of saliva, and Bufalini demonstrated that stimulation of many parts of the "motor" cortex produced a secretion of gastric juice. In hysterical subjects Paul Sollier's very careful and minute clinical investigations showed that visceral trouble was always correlated with a zone or point of tenderness (*point douloureux*) at the surface of the skull. Recently, Pawlow of Moscow has shown by his brilliant researches that the secretion of gastric juice can be promoted in dogs by the agency of purely psychical causes, as also by local excitation of the sigmoid gyrus of the hemispheres. Finally, Bechterew and his pupils have shown, in several published articles, that centres for contraction of the pupil, bladder, and rectum were present in the cortex of dogs and other animals. Schiff, von Monakov, Nothnagel, and Horsley had shown that in a hemiplegic limb there was vasomotor paresis with a tendency to oedema, while the skin over the affected organ was red and the temperature elevated. The authors, after repeating and confirming the experiments of Bechterew, gave at great length the result of the studies of two cases. The first was that of a man aged 67 years, who had a cerebral haemorrhage affecting the basal ganglia, and producing symptoms of hemiplegia. There was nothing in his history which had any bearing on the case. There was marked vasomotor paresis of the hand and also trouble of deglutition (pharyngeal) in this case. In the second case, which was that of a woman aged 60 years, and of alcoholic parentage, an attack of left hemiplegia was also followed by marked symptoms of local vaso-paresis and weakness in swallowing. The authors cite a little-known observation of Pierre Marie that in left hemiplegia the pharynx is affected and deglutition rendered difficult, while this does not occur in right-sided hemiplegia. The authors agree that such functions as gastric and and salivary secretion are influenced by cortical centres, as also movements of the pupil, bladder, large bowel, and rectum, and, in short, that a fair degree of representation of visceral function is still attributable to the cerebral hemispheres.

VOLUNTARY NOTIFICATION OF PHTHISIS IN LONDON.

The voluntary notification of phthisis is becoming more general in London since the Congress on Tuberculosis in 1901 advocated its extension. Finsbury adopted the system in 1900. In the following year the Corporation of the City of London adopted a similar system, and voluntary notification is now in operation in Greenwich, Hammersmith, Hampstead, Kensington, Lambeth, Southwark, Stoke Newington, Wandsworth, and Woolwich. The most recent borough to adopt the system is Wandsworth. A report has just been presented to the Borough Council for this district by Dr. Caldwell Smith, who points out that out of a total of 27,761 deaths in the borough during the ten years 1892-1901, consumption of the lungs was the cause of 2,183, and, if all other diseases of a tuberculous nature are included, 3,037 deaths; while from the five principal zymotic diseases the total number of deaths was 2,477. During the ten years 1892-1901 the average death-rate from all causes was 14.2, while from consumption the rate was 1.13, and, if all other tuberculous diseases be included, 1.5 per 1,000. From the five zymoties—measles, diphtheria, scarlet fever, enteric fever, and whooping-cough—the death-rate was 1.27 per 1,000. The three chief notifiable diseases—scarlet fever, enteric fever, and diphtheria—yielded a total number of deaths of 944, compared with 2,183 from consumption. Dr. Smith furnishes a chart showing that the mortality from phthisis for the ten years 1892-1901 to every 100 deaths from all causes was 7.8, while from the five principal zymotics the mortality only shows an increase of 1 per 100. From all tuberculous diseases, including consumption, the mortality was 10 9, so that from these a little more than one-tenth of all the deaths are due—a sufficiently serious condition to warrant action, which may, and undoubtedly will, be productive of some benefit to the community. The system is to be accompanied by payment of the ordinary notification fees. Dr. Harris, M.O.H. Islington, has also furnished a report to his authority on the same question. But we understand that its consideration was adjourned without arriving at a decision. Dr. Harris's report is a most convincing statement accompanied by abundant facts and figures. An appendix is devoted to a statement of the legislation against spitting now in force in various countries, and in Manchester, Liverpool, Glasgow, and Glamorganshire in this country.

THE COST OF TUBERCULOSIS.

Dr. Herman Biggs, of New York, we learn from *American Medicine*, after a careful estimation, places the expense of tuberculosis to the people of the United States at 330,000,000 dollars (£66,000,000). He first calculates the loss to New York City by putting a value of 1,500 dollars (£300) upon each life at the average age at which deaths from tuberculosis occur. This gives a total value of the lives lost annually of £300,000. But this is not all. For at least nine months prior to death these patients cannot work, and the loss of service at 1 dollar a day, together with food, nursing, medicines, attendance, etc., at 1½ dollar a day, results in a further loss of 8,000,000 dollars (£1,600,000), making a yearly loss to the municipality of 23,000,000 dollars (4,600,000). For the whole country the 150,000 deaths from tuberculousis represent in the same way a loss of 330,000,000 dollars. Dr. Biggs also says that the total expenditure in the city of New York in the care of tuberculous patients is not at present over 500,000 dollars (£100,000) a year, that is, it does not exceed 2 per cent. of the actual loss by death, etc. "If this annual expenditure were doubled or trebled it would mean a saving of several thousand lives annually, to say nothing of the enormous saving in suffering." Further evidence of this is afforded by the fact that in the last twenty years the total number of deaths from tuberculosis in New York has decreased instead of increasing, although there has been an increase of 70 per cent. in the general population.

BERI-BERI ON BOARD SHIP.

In July, 1901, the Norwegian Government appointed a Commission to inquire into the causes of the increasing frequency of beri-beri in Norwegian steamers and sailing ships, and to formulate rules in regard to the food, drugs, instruments, and bandages such boats should be compelled to carry. The Committee concluded its labours in May, 1902, and its report has just been issued.[1] It contains a thorough and detailed description of the etiology, pathology, and symptoms of the disease. During the investigation Professor Uchermann (the president) visited London, the Hague, Amsterdam, and Hamburg. Extended inquiries were made as to the course of all the known cases during the last decade with particular regard to the length of voyage, ports touched at, and food and drug supplies in each ship on which beri-beri appeared. Evidence was also taken from the Consuls at Rio de Janeiro, Havre, Cork, and Falmouth. The report from Mr. Howard Fox, of Falmouth, relates to nineteen boats. An appendix contains previously printed papers on beri-

[1] *Indstilling fra Beri-beri Komiteen*, pp. 162, quarto. Kristiania: Marius Stamme's Boktryckeri. 1902.

beri by Dr. Cecil Bullmore, of Falmouth; Dr. Nocht, Hamburg; Dr. Saneyoshi, Tokio; a case from the London Seamen's Hospital, and tables showing the marine mercantile food regulations of England, Germany, Italy, Sweden, Denmark, and Finland. The Committee apparently concludes that the beri-beri met with in tramp steamers is not identical with the beri-beri endemic in tropical countries, as in the discussion of the new regulations which they recommend scorbutus and beri-beri are frequently mentioned together. Their proposed changes will bring the Norwegian marine food regulations into line with those of Great Britain. The importance of the commissariat at sea leads the Commission to urge upon the Government the necessity for better educated and fully trained stewards on sailing boats and steamers. The responsibilities the stewards must assume entitle them to better remuneration, as their office is only second to that of the captain. One of the new proposals directs that the food stores shall be inspected at least every fourteen days by the mate and steward, and entries of the conditions present entered on the ship's log.

ITALIAN OBSTETRICS.

THE progress which Italy has made in science since she shook off the yoke of the foreigner is phenomenal, and it has been especially marked in obstetrics. Professor Arturo Guzzoni degli Ancarani, of the University of Messina, and Director of the Obstetrical and Gynaecological Clinic there, has prepared under the direction of the Committee of the Fourth International Congress of Obstetrics and Gynaecology, held in Rome, a report upon the present position of obstetrics and obstetric teaching, which has been issued in a volume bearing the title *L'Italia Ostetrica*.[1] Sicily has three full faculties of obstetrics, at Palermo, Messina, and Catania; there are two such institutions in Sardinia, at Cagliari and Sassari; and twelve on the mainland, namely, Turin, Pavia, Genoa, Padua, Parma, Modena, Bologna, Pisa, Florence, Siena, Rome, and Naples. Besides these are special schools of obstetrics at Milan, Novara, Vercelli, Venice, Ferrara, Urbino, and Perugia. There are also university schools at Aquila, Bari, and Catanzaro, educational establishments reconstructed after the annexation of the kingdom of Naples, where obstetrics are taught to students and midwives. Lastly, excellent maternities are to be found in many towns where there are no universities. Professor Guzzoni's report consists of short notes on the history of each of these educational establishments, some of which are most venerable, indeed the University of Bologna claims on good grounds to be the oldest in the world, jurisprudence being apparently taught there in the year 980, whilst it was undoubtedly in full swing as an educational centre in the eleventh century. An account is given of the facilities for the study of obstetrics and gynaecology afforded at each of the schools of Italy. The awakening in the past century is no doubt a thing to admire, but we are not sure that the teaching of obstetrics in the days when the Peninsula was parcelled out amongst Austrian, Spanish, and French princelets was quite so defective as it was in England at the same period. There was at least a little instruction in Italy, whilst there was practically none to be had in our country where bishops granted licences to midwives. One feature of the work of special interest to the foreign student is the full list of the works of eminent contemporary professors, La Torre, Curatulo, Morisani, Bossi, Acaria, Porro, etc.

INSTRUCTION IN DISEASES OF CHILDREN IN ITALY.

THE first number of the *Revista di Clinica Pediatrica*, founded and conducted by Professor Mya, of Florence, and Professor Concetti, of Rome, contains a note on the arrangements at present existing in Italy for instruction in the diseases of infants and children. It appears that at five Italian universities the subject is officially recognized; at Naples, Florence, and Bologna there is a Professor, and in Rome and Padua an Extraordinary Professor. In each of these universities the Professor has a special clinical department under his direction. The subject is not regarded as a speciality, but as a part of general medicine which can best be taught in a special department. At Genoa there is not yet a professor, but it is believed that the Chair will shortly be created, and that Professor Iemma, who already gives instruction in the subject, will be the first occupant. In many other Italian universities instruction is given by Liberi Docenti. Professor Cattaneo gives instruction at the children's hospital in Parma, and Professor Bordonaro has a small ward and an out-patient department at the general hospital at Catania. In Turin, Professor Muggia has a department at the Policlinico, while Professor Mensi gives instruction at a foundling institution; at Palermo, Professor Carini teaches in the children's hospital, and Dr. Gagnoni, of Florence, gives an annual course at Siena. The students attend at all the universities when instruction is given in considerable numbers, and are said to desire that attendance should be made compulsory.

[1] *L'Italia Ostetrica* (Obstetrical Italy). Por Arturo Guzzoni degli Ancarani. Catania: Di Mattei and Co. 1902. (Royal 8vo, pp. 497.)

THE EVIL EFFECTS OF THE CORSET.

GENERATIONS of medical men and some few enthusiastic reformers have repeatedly protested against the use of corsets, and have ascribed to them many of the ailments which are relatively common amongst women who wear them, but no more comprehensive accusation has been brought against the use of these articles of female attire than that contained in a paper by Dr. W. Williams of Liverpool, published in the *Reports* of the Royal Southern Hospital. Dr. Williams asserts that the injurious pressure of the corset on the lower ribs and the abdominal viscera interferes with digestion and assimilation, and produces dilatation of the stomach and gastric ulceration with subsequent anaemia, whilst at the same time by compressing the base of the thorax corsets throw the diaphragm out of action, and thus are responsible for the thoracic respiration of females which is described as both abnormal and insufficient. In addition, however, to these injurious results, lateral curvatures of the spine are also said to be due to the injurious pressure of the corset upon the spinal muscles, and Dr. Williams concludes his heavy indictment with the statement that by the use of corsets the majority of women are permanently deformed as to their skeletons at 24 years of age, and permanently crippled at 30. Most observers will admit that numerous evils result from the abuse of corsets, nevertheless it is a fact that many women live to old age in good health, in spite of the compression to which they subject themselves, and it is difficult to see how the use of corsets is to be dispensed with so long as it is the custom to wear skirts and petticoats, which are most conveniently suspended from a structure which has a basis of support upon the hips. It is true that some method might be devised for suspending the dress from the shoulders during the day, but this would be impossible in the evening in many cases, and it is by no means certain that the traction of heavy skirts and petticoats upon the shoulders would not have a maleficent effect upon the thorax and its contents. Experience has shown that skirts worn without corsets and without suspension from the shoulders, must be drawn so tightly above the hips that their pressure is just as injurious as that of the tightest corsets. Those who have made the experiment find that female dress with corsets is much more comfortable than female dress without corsets; if the corsets are well built to rest upon the hips there need be no injurious pressure upon the waist. In other words, it is the abuse rather than the use of corsets which is to be deprecated whilst custom prescribes skirts and petticoats as female garments. Until some series of garments is devised for female wear as becoming and comfortable as those which are at present customary, but capable of being worn without corsets, there is little hope that the latter article will be dispensed with. It would appear, therefore, that possibly the best way to avoid the evils corsets cause would be to educate females to the appreciation of the fact that not only is the normal waist the most graceful, but also that properly-built corsets resting well upon the hips will display the normal waist to the greatest advantage, and obviate the necessity for any injurious compression.

HOUSES LET IN LODGINGS.

The medical officer of the London County Council has just issued a special report on the question of houses let in lodgings, accompanied by a full return of particulars from all the metropolitan boroughs. The report is a result of an inquiry made at the end of November, 1902. It is well known that under Section xciv of the Public Health (London) Act, 1891, powers are given for the registration and supervision of tenement houses, or, in other words, of houses let in lodgings. Under this section it is the duty of the sanitary authority to make by-laws, confirmable by the Local Government Board, and put them into force in their district. From time to time houses are newly entered on this register, and so come within the by-laws. The advantage is, of course, that registered houses shall be cleansed periodically, and kept in good sanitary repair, and that a greater control may be maintained in the matter of overcrowding. Owing to inquiries instituted by the Royal Commission on Alien Immigration as to tenement houses, and also owing to the new by-laws brought into operation by the new borough councils, this question has recently come into prominence. A test case in the High Court of Justice—Weatheritt *v.* Cantley—has accentuated the present position, and no doubt these various circumstances have had their part in calling forth a full statement from the medical officer of the London County Council. The case of Weatheritt *v.* Cantley had relation to the registration of a block of dwellings which the local authority had proposed to register under the by-laws for houses let in lodgings. The Lord Chief Justice, however, held that such premises could not be so registered or come within such by-laws, and his judgement has been taken by certain interested persons to apply in a much wider sense than was indicated. Consequently the plea is now being advanced by owners of tenement houses, when called upon to submit the particulars required for registration, that their properties are not registrable. So much is this said to be the case in Bethnal Green, for instance, that no registration of houses let in lodgings is now being done. In Finsbury, on the other hand, a test case has been taken and judgement given in support of the sanitary authority. From January to November, 1902, therefore, Bethnal Green registered no houses and Finsbury registered 522. It is obvious that these by-laws are a valuable means of enforcing sanitary conditions in tenement house property. From Mr. Shirley Murphy's report we gather that in the first eleven months of 1902 as many as 3,944 such houses have been registered and come within the by-laws in London as a whole. This brings the total number of registered houses in the metropolis to 16,433. There is some guarantee, therefore, that these 16,000 houses are being maintained in cleanliness and sanitary order, and are not being overcrowded. In 19 out of the 29 cities and boroughs, it appears that during 1902 no legal proceedings were necessary, or, at all events, undertaken. In the remaining 10 the law was enforced by summonses and penalties. In a few instances sanitary authorities have special inspectors for the purpose of these houses, but, as a rule, the inspectorial work is carried out by the ordinary sanitary inspectors, who are also on the outlook for the registration of suitable tenement houses. It is well known that there is usually an "exemption clause," frequently based, as in the model by-laws, upon rent limits, exempting certain houses from the by-laws. From the report before us it appears that this clause is by no means the same in all districts, and that some difficulties arise in relation to it. Eleven boroughs have rent-limit exemption clauses, and six boroughs have no exemption clauses at all. In several cases new by-laws are under consideration. It is satisfactory to learn that much has been done for the supervision of this class of tenement house property, and it is earnestly to be hoped that the position already gained will be more than maintained.

THE PREVENTION OF CONSUMPTION IN SPAIN.

The Spanish Government has submitted to the Cortes a Bill dealing with the prevention and treatment of consumption, which causes over 8,300 deaths every year in Madrid alone and 47 000 in the whole of Spain. It provides for the creation by the State of sanatoria intended solely for the poor, and for this purpose it is proposed to allocate in each year's budget a sum of 500,000 pesetas (£20,000). Of this sum 200,000 pesetas (£8,000) will be ear-marked for the purchase and maintenance of the sanatorium of Porta Coeli, which would thus become national property. The Bill further includes a detailed scheme of social defence against tuberculosis to be carried out under the direction of the department of public health. We congratulate the Spanish Government on having grappled with the most difficult part of the tuberculosis problem in a manner which at any rate shows it is in earnest, and which gives promise of success. The money required for the scheme of social defence has still to be voted by the Cortes, but a Legislature which has already shown such enlightened liberality in dealing with the question is not, we venture to think, likely to spoil a measure of vital interest to the national prosperity by ill-judged economy or wrongheaded opposition.

NURSING IN IRISH UNIONS.

The guardians of the Granard Union, co. Longford, have asked the Local Government Board to hold a sworn inquiry into certain allegations made by the medical officer, Dr. Kenny. The nursing being in his opinion inefficient, a trained nurse was obtained, but some of the guardians regarded her aid as unnecessary and she was sent away. Another was required, and Dr. Kenny now writes: "I now beg to inform your Board that if the present temporary nurse be sent away I will decline to again requisition one. When the fatality that I anticipate by the continued maltreatment of children under your charge results (one has already resulted, January 2nd, 1903), I will refuse to certify to the cause of death, and will feel bound to report to the authorities fully on the matter. . . . I found the covering of the children's beds in a filthy condition on three separate occasions last week." This is a very serious charge, and must of course be investigated. Pending the result of such an inquiry it is impossible to do more than narrate the circumstances which have been so far made public.

THE IRISH POOR-LAW SERVICE.

The medical officers in the West Cork district have adopted the resolutions which have been accepted in many parts of the country defining the terms of remuneration which ought to prevail in the dispensary and the workhouse hospital service. They believe that the minimum salary for the dispensary doctor should be £200 a year; for the hospital appointment £120; for both combined, £300; and for a *locum tenens* 4 guineas a week. It has taken many years to attain to the present firm front presented in Ireland. Practically, so far as the payment of substitutes goes, the battle has been won. The consistent refusal to take less, even by young men, has forced the position of the guardians and they have yielded. But the end is not so clear in reference to permanent appointments. Temptations of even a small income as a beginning to professional life may be too strong for the younger men to resist, and it will need all the encouragement of their elders to make them realize the need of resistance. The Local Government Board has failed to recognize what is a fair salary, even in the case of the poorest and largest districts, where there is no practice. The remedy, however, now lies in the hands of the profession itself.

THE MEDICAL STANDPOINT OF TO-DAY.

In an address[1] delivered to commemorate the anniversary of the Kaiser Wilhelm's Academy for Army Medical Students, Professor von Leyden traced the advancement and gradual unification of the guiding principles of medical theory and practice. After paying a patriotic tribute to the work done by some of his fellow countrymen in emancipating pathology and clinical medicine from the dogmatism and pedantry characteristic of the older teachers of the deductive school, he lays especial stress

[1] *Das Denken in der heutigen Medicin.* Von. Dr. E. von Leyden. Berlin: August Hirschwald. 1903. Demy 8vo, pp. 28, Pfg. 50.

upon the enormous advances which recent scientific discoveries have rendered possible in the field of therapeutics. "*Nisi utile est quod faciamus*," said Cicero, "*stulta est gloria*." And so, too, with medicine. Its scientific achievements must prove their title to renown by their practical applicability for the alleviation of human suffering. The bacteriological discoveries which have led to the introduction of serumtherapy, and the clinical value of the recently-discovered physiological properties of thyroid and suprarenal extracts naturally form excellent illustrations which show that medical science and research have not lost sight of the standard test of utility, and are able to justify their work by the victories they have gained in the struggle against disease. Professor von Leyden concluded his address by exhorting his audience to remember that it was not the study of disease in general but the actual care of the sick which gave to medical work its highest ethical value, and formed the connecting link between the personality of the physician and the personality of the patient.

MEDICAL PRACTITIONERS IN GERMANY.

ACCORDING to statistics given by Professor Schwalbe in his *Medizinalkalendar* for 1903, the total number of medical practitioners in Germany at the end of 1902 was 29,133, being 959 or 3.4 per cent. greater than in the previous year. The increase in 1901 was 800, and in 1900, 685. Since 1876 the number of practitioners has more than doubled. They were distributed as follows: Prussia, 17,616; Bavaria, 3,178; Saxony, 2,149; Württemberg, 948; Baden, 1,201; Grand Duchy of Hesse, 726; Alsace-Lorraine, 819. The ratio to population in the German Empire as a whole was 5.17 per 10,000. In the several States of the Federation it was as follows: Prussia, 5.11; Bavaria, 5.15; Saxony, 5.11; Württemberg, 4.37; Baden, 6.43; Hesse, 6.48; Alsace-Lorraine, 4.76. In the large cities the proportion of practitioners was as follows: Berlin, 1 to 766 inhabitants; Breslau, 1 to 731; Cologne, 1 to 1,046; Frankfort-on-the Main, 1 to 814; Königsberg, 1 to 667; Hanover, 1 to 851; Kiel, 1 to 476; Halle, 1 to 735; Magdeburg, 1 to 1,222; Stettin, 1 to 1,151; Düsseldorf, 1 to 1,187; Danzig, 1 to 873; Posen, 1 to 854; Aix-la-Chapelle, 1 to 1,186; Cassel, 1 to 930; Altona, 1 to 1,755; Elberfeld, 1 to 1,764; Essen, 1 to 1,382; Dortmund, 1 to 1,720; Barmen, 1 to 1,868; Crefeld, 1 to 1,645; Munich, 1 to 608; Leipzig, 1 to 994; Dresden, 1 to 884; Stuttgart, 1 to 829; Strassburg, 1 to 621; Nürnberg, 1 to 1,466; Chemnitz, 1 to 1,682; Brunswick, 1 to 1,270. In Berlin there were 2,467 practitioners; in Cologne, 356; in Hanover, 277; in Munich, 740; and in Dresden, 448. It was estimated that at the end of 1900 about one-eighth of the whole medical profession in Germany were "specialists." This ratio has somewhat increased during the last two years. In Berlin nearly every fourth practitioner is a specialist. The number of medical students in German Universities at the end of 1902 was 7,745. A steady decrease has taken place in the last twelve years. In 1890 the number was 8,986; in 1893-4 it had fallen to 7,882. The number of candidates admitted to the profession also shows a steady decrease. While in 1890-1 it was 1,570, in 1896-7 it was 1,295; in 1898-99, 1,364; in 1899-1900, 1,384; and 1900-1, 1,344. Of this number 873 were marked "good" and 148 "very good." Of the whole number 34 were foreigners, 11 being Russians, 6 Austrians, 2 Swiss, 2 Dutch, 2 from Cape Colony, 2 Americans, 1 Italian, 1 Englishman, 1 Belgian, 1 from India, 1 Syrian, 1 from the "Orange Free State," 1 Mexican, 1 Cuban, and 1 Peruvian.

INCREASE OF LONGEVITY IN CHICAGO.

DR. REYNOLDS, the Health Officer of Chicago, has published some interesting statistics showing, despite the adverse testimony afforded by the increasing number of suicides, that the inhabitants of Chicago are, on the whole, enjoying gradually-increasing length of days. A tabulation of the ages of 443,920 residents of Chicago who died between January 1st, 1869, and December 31st, 1898, enabled the health department in its bulletin for April, 1899, to show that the duration of human life in that city had increased from an average of 13.9 years at the beginning of the thirty-year period to an average of 29.4 years at the close. This is an increase of duration of life of considerably more than double—111.5 per cent.—in less than a single generation. It was further shown that if those who died in 1898 had lived only to the same average age as those who died in 1869 their aggregate ages would have amounted to 318,268 years; whereas their aggregate ages actually amounted to 672,540 years—a gain of 354,272 years in the lives of the 22,897 persons who died in Chicago in 1898. Dr. Reynolds also shows that people live longer in the city itself than formerly. Nearly one-fifth of those who now die have survived to be upward of 60 years of age. Out of the total of 453 deaths recorded during the week ending July 5th, 87 averaged 72.2 years each, the youngest being 60 and the oldest 94 years, 6 months, and 9 days. The aggregate lives of these persons was 6,272 years. There were 46 between 60 and 70, 21 between 70 and 80, 14 between 80 and 90, and 6 over 90 years, and their average length of residence in the city was 32.7 years. The longest period of residence was seventy-two years, the person being 85 years 5 months 14 days old at the date of death. The proportion of those who live to reach three-score and beyond is steadily increasing, while the proportion of those who die under 5 years of age is even more rapidly decreasing.

"INTERNATIONAL CATALOGUE OF SCIENTIFIC LITERATURE."

THE latest addition to the *International Catalogue of Scientific Literature* is the first annual issue of the volume on *Bacteriology*. We have already expressed our appreciation of the recent volume on *Physiology*, and have no doubt that the present publication also will gain wide recognition as fulfilling a useful purpose. The new volume consists of three parts: (*a*) Schedules of classification and Indexes of the Subject Matter in English, French, German, and Italian; (*b*) an authors' catalogue; (*c*) a subject catalogue, which is arranged according to the classification drawn up in (*a*). Under the main headings of this classification we find arranged the references to (1) general matters of interest and sources of information, such as textbooks, dictionaries, collections, institutions, etc.; (2) methods of technique and apparatus; (3) general bacteriology, and (4) special bacteriology. Under the third of these titles, morphology, systems of classification, and the physiology of bacterial life are dealt with, each with its appropriate subdivisions, whilst the fourth comprises the literature concerning the relations of bacteria to non-living and to living surroundings. The sections, found under the last heading, which are devoted to immunity and general infectious diseases, will no doubt be most frequently consulted for medical purposes. Since it is necessary, for the prosecution of scientific research, to know what work upon a subject has already been published, a catalogue is obviously useful, and the best illustration of the urgent need for a work of this kind is furnished by the fact that although the present issue only begins with the bacteriological literature of 1901, and owing to difficulties of organization, the records of that year have not yet been completely tabulated, the mere enumeration and classification of the articles already available has filled a volume of 300 pages. A work such as this involves an immense amount of labour and organization, and will, no doubt, increase in bulk from year to year; but we are confident that its organizers will be rewarded and encouraged by the knowledge that they are constantly placing more readily within the grasp of scientific investigators the material requisite for the elaboration of further discoveries.

THE PHIPPS INSTITUTE FOR THE STUDY OF TUBERCULOSIS.

IT has already been mentioned in the BRITISH MEDICAL JOURNAL that Mr. Henry Phipps, of New York, intends to establish in Philadelphia an institute for the study, prevention, and treatment of tuberculosis. Further details of

the scheme are given in the New York *Medical Record*. It is proposed to erect buildings in the centre of the poor quarter of the city, at a cost of from £40,000 to £60,000. An endowment of £200,000 is to be provided, yielding an income of £8,000 annually, which is to be devoted to maintenance. The institute, which is to be named after the pious founder, is intended to be a centre for the diffusion of knowledge concerning tuberculosis, with the object of stamping out this disease. There will be an administration building containing a Finsen light department, a hydrotherapeutic department with baths and electric appliances, and also pavilions with a capacity of 100 beds for the treatment of advanced cases of pulmonary tuberculosis. There will, further, be a dispensary for the treatment of walking cases. From this source assistance will be given to poor tuberculous patients in their homes, and a general supervision will be kept over them for the purpose of instructing them in methods of preventing the spread of the disease. They will be supplied with disinfectants, sputum cups, and paper napkins, and be taught their use. Their homes will be disinfected when necessary, and the clothing of the extremely poor will be disinfected and washed, and they will be supplied with food of the proper kind when necessary. Lectures will be given and conferences held on the subject of tuberculosis, and steps have been taken for the holding of the International Congress of Tuberculosis at Philadelphia in 1905. An effort will be made through the institute to correlate the various forces of the United States engaged in the crusade against tuberculosis, and make this movement more effective through united endeavour. It was intended to begin the work at once in a temporary building rented for the purpose, but an obstacle has been found in a Pennsylvania law which forbids the erection of hospitals in the built-up parts of any city in that State. Dr. L. F. Fick, who is to be medical director of the institution, says that, unless the law mentioned is repealed, the idea of establishing the institution in Philadelphia will be abandoned, since one of the chief purposes of the institution is to keep it in close touch with the poorer classes, and this can be accomplished only by having it in the midst of their homes. It will not be erected in the suburbs of any city, but only in a crowded section. If the Bill for the repeal of the law is defeated in the Legislature, the institution will be established in New York.

CRIME AND INSANITY IN THE UNITED STATES.

In a report recently submitted to Congress, Dr. Arthur MacDonald, of the United States Bureau of Education, Washington, states that within the last thirty or forty years there has been an increase, relative to population, in crime, insanity, and other forms of abnormality. This increase, he thinks, is only partly accounted for by the more stringent methods of collecting information. Statistics show that the North-Atlantic and North-Central States, where the standard of education and intelligence is highest, also occupy a bad eminence in respect of insanity, suicide, nervous diseases, juvenile criminals, and paupers. As society has developed criminality has increased among youths more than among adults. Suicide among children has greatly increased. Dr. MacDonald believes that the emancipation of women has by the strain thrown on their nervous system produced some undesirable results. He says that in Belgium insanity and suicide are increasing more rapidly among women than among men; that in Austria the criminal influx into cities is relatively greater in women than in men, and that in Vienna general paralysis is increasing among women. During the last forty years there has been a much greater increase in the consumption of malt liquors and sugar than in that of wheat, coffee, and other cereals, although the latter has also increased. On the other hand the consumption of meat and potatoes has decreased. Dr. MacDonald attributes the increase in crime, suicide, and other forms of abnormality largely to automobiles, electric cars, and the telephone and other modern inventions, because they put an extraordinary strain on the nervous as compared with the muscular system, causing people to take less physical and more mental exercise. But he also seems inclined to think that vegetarian diet and artificial food may have something to do with the increase of crime, and he recommends a return to meat and potatoes. Dr. MacDonald has the tendency of all doctrinaires to strain facts into accordance with his theories, but his arguments are at least as cogent as those of our vegetarian friends who hold that the human race can be saved only by a diet of nuts.

FOREIGN DENTAL DIPLOMAS.

Several of the leading dental surgeons in Dublin have addressed to the Council of the College of Surgeons of Ireland a letter dealing with a matter of considerable importance. They declare that "efforts are being made through diplomatic channels to obtain registration in the United Kingdom for foreign dental qualifications, and that, failing success in this direction, it is intended to ask the licensing bodies to admit holders of these foreign diplomas to examination *ad eundem*." They do not argue for the exclusion of a candidate on the grounds that he has obtained his professional knowledge abroad, but they object to the acceptance of a curriculum falling short of that required of the British student. The letter further urges the Council to inform itself of the nature of the examinations and of the curriculum which are necessary for the foreign diplomas. The request is a most reasonable one, and we are satisfied that no licensing body will accept any curriculum inferior to that which is demanded of British candidates.

THE LONDON HOSPITAL.

The Lord Mayor will give a dinner at the Mansion House on Monday, May 4th, in connexion with the quinquennial appeal now being made for the London Hospital. It is stated that the visit of the King and Queen to the hospital for the purpose of formally opening the new out-patient department will take place shortly after Easter. This new out-patient department was described in our pages on January 3rd, and is already in use. It is a model of its kind, and we hope that the visit of Their Majesties and the action of the Lord Mayor will have the effect of increasing the interest which the public has always shown in the London Hospital. We are assured that in assuming last week that the energetic chairman of the London Hospital had had something to do with the opposition to the issue at the present time of the appeal proposed to be made by St. Bartholomew's we did him less than justice. Mr. Holland has refrained from appearing to take up a position hostile to another institution.

The honour of knighthood, which it was announced Dr. Charles Bent Ball, Regius Professor of Surgery in the University of Dublin was about to receive, was conferred upon him by the Lord Lieutenant before the recent *Levée*.

We understand that His Royal Highness the Prince of Wales has consented to take the chair at the Festival Dinner of the Royal Medical Benevolent College. It may be of interest to state that the foundation stone of the College was laid about fifty years ago. Our present gracious Sovereign, when Prince of Wales, was present when the late Prince Consort opened the building in 1853.

Female Medical Graduates at Vienna.—Madame Lubinger, who took the M.D. degree at Zurich several years ago, was on December 20th admitted to the same degree of the University of Vienna. There are now two female medical graduates of that University, Madame von Possaner having been admitted some years ago.

Professor Czerny, son-in-law of the late Professor Kussmaul, has had the house at Kandern, where Kussmaul lived in his early years, marked with a tablet with the following inscription: "Adolf Kussmaul, later Professor at Erlangen, Heidelberg, Freiburg, and Strassburg, practised here, 1850-1853."

NOVA ET VETERA.

THE MEDICAL SCHOOL OF THE UNIVERSITY OF SYDNEY.

THE Medical School of the University of Sydney attained its majority last year, and Dr. T. P. Anderson Stuart, Professor of Physiology and Dean of the Faculty of Medicine in the University, gave an interesting account of its rise and progress, in an address delivered on the occasion of the jubilee of the University on October 2nd, 1902.

THE FOUNDERS OF THE UNIVERSITY.

The chief part in the foundation of the University was taken by Dr. Henry Grattan Douglass. In a letter printed for private circulation, written by Mr. Francis Merewether, Chancellor of the University in 1865, it is stated that Dr. Douglass had been a resident and an official in the colony, and that he was a physician of long standing, who had practised his profession in France, in which country Mr. Merewether had known him. Dr. Douglass had left the colony for a time, but returned in charge of an immigrant ship, and from that time the foundation of a university became apparently the chief object of his thought. After some time the support of the Legislature was obtained, and in due course an Act to Incorporate and Endow the University of Sydney was passed.

The first Senate consisted of sixteen Fellows, nominated by the Governor in 1850. A vacancy having occurred in 1853, Dr. Douglass was elected by the remaining members of the Senate. Dr. Douglass appears to have been a man of great activity of mind and body, and there were few things of public concern that happened under Governors Brisbane, Darling, and Gipps in which he had not a share. As a young man he was in charge of a regiment in the Peninsular war. Then he saw service in the West Indies until 1812, when he returned to his native Ireland. He next joined a band of philanthropists who sought to ameliorate the condition of prisoners, and it was this association which brought him to Sydney, where he probably thought he might find an ample field for his zeal and plans. It was he who introduced into the colony the law of limited liability in commercial partnerships, and that which abolished public executions, long before these measnres were adopted in the old country. He took a prominent part in the organization of most of the charitable and educational institutions of the colony, and his last effort was a project for taking better care of the blind. He was a member of that Building Committee of the Senate which settled the plans of the University and rejected the first design, which was for a brick building with stone facings; and in this connexion it is interesting to record what is known to few, that one of the two coats-of-arms carved on the south side of the Great Hall is that of Dr. Douglass (the usual Douglass arms, man's heart, etc., with motto "Forward"), and on a boss in the stringcourse over it, and on the end of the label mould, are carved his initials "H. G. D." Dr. Douglass's share in the University seems to have been deliberately ignored for many years after his death. Professor Anderson Stuart's attention was directed to it by a chance conversation with a lady. William Charles Wentworth, however, beyond all question, was the man by whose eloquence the Legislature was moved. Three other members of the profession of medicine had to do with the actual founding and organization of the new University. One is Sir Charles Nicholson, Bart.; the others were Professor John Smith, and the first Registrar, Dr. Richard Greenup. Sir Charles Nicholson, now in his ninety-sixth year, is still with us, and quite recently we had occasion to congratulate him on the length of days which had been his portion. He delivered the first "annual address" at the opening of the University. Soon after this Sir Charles became Provost in name, as he had been in fact, and the Amendment Act, which changed the title of Provost to that of Chancellor, having been passed in 1861 he was the first to bear the title of Chancellor, as he had been been the first officer of the University. During a visit to England in 1858 he succeeded in obtaining a charter for the University from Queen Victoria. Professor John Smith, a Doctor of Medicine of the University of Aberdeen, was the first Professor of Chemistry and Physics, and was one of the first group of three professors, the other two being Professors Woolley and Pell. Dr. Richard Greenup, whose wife was a niece of Sir Benjamin Brodie, was the first Registrar, and rendered valuable services in the administrative arrangements of the young University.

THE MEDICAL PROFESSION AND THE FOUNDING OF THE UNIVERSITY.

The connexion of the profession of medicine with the earliest days of the University was thus very intimate. Dr. Douglass moved Mr. Wentworth, who himself was the son of the Surgeon at Norfolk Island, and was born there; Mr. Wentworth moved the Legislature, and "Dr. Nicholson moved heaven and earth." From the days of Sir Charles Nicholson no medical man occupied the position of Chancellor until 1896, when the present distinguished occupant of the office, the Honourable Sir Normand MacLaurin, was elected to the chair. There was at first a great deal of public discussion as to whether the University should be a teaching or merely an examining body in arts, law, and medicine, like the then newly established University of London. But in the end the Legislature appointed a Select Committee in 1849 to consider and report on "the best means of instituting a university for the promotion of literature and science, to be endowed at the public expense." This Committee recommended the institution of the University and five Chairs to commence with. Of these one was "Anatomy, Physiology and Medicine." The Act of Incorporation received the Royal assent on October 1st, 1850. The devotedness of the founders stands out in high relief when we read the report and evidence of the '59 Committee. This was a Select Committee of the Legislature, which sat in 1859-60, and which was appointed with hostile intent towards the young University.

BEGINNINGS OF THE MEDICAL SCHOOL.

It is quite clear from the continual mention of teaching and degrees in medicine, that a medical school was in contemplation from the very beginning, and the Act of Incorporation and the Charter empowered the University to grant medical degrees. These degrees were granted by the Senate upon the report of a Board of eight examiners, one of the first members of which was Dr. Charles Nathan, father of Lady MacLaurin. The other seven members of the original Board were Dr. à Beckett, who had been staff surgeon to the British Legion in Spain; Dr. George Bennett, the well known author of *Gatherings of a Naturalist*; Dr. Greenup; Dr. James Macfarlane; Dr. James Robertson, Professor Smith, and Dr. George West. On the establishment of the present medical school the granting of such degrees was discontinued. In 1859 Sir Charles Nicholson said in his commemoration address that it was hoped that professorships in medical science might be speedily established, and that systematic instruction might be communicated in a manner and with a completeness essential to the proper training of those desirous of obtaining a degree in either of the Faculties of Law and Medicine. The Registrar gave evidence before the 1859 Committee that steps towards this end had been taken, and the Senate was so anxious to give effect to its views at this time that it instructed the architect to prepare plans for an anatomical school, and appointed a committee to confer with the management of the Sydney Infirmary with regard to arrangements for clinical teaching. The entire scheme, however, owing to the vigorous opposition of the Professors, fell through. The Senate, however, declared that it was unable to depart from its resolution to establish a medical school. In 1866 a further scheme was prepared to give instruction only in the first two years of the medical curriculum. This, too, came to nothing. Between that time and 1873 various proposals kept the matter alive, and then the establishment of the Prince Alfred Hospital really brought the school into existence, for the first definite step towards the establishment of the school was the power given to the directors in the Hospitals Act of Incorporation to provide for the school. It was, indeed, the inauguration of this school at the hospital and in connexion with the University which justified the University in giving a site, over twelve acres in area, to the hospital, for the land had been granted to the University exclusively for educational purposes. The establishment of the school was, therefore, cardinal to the existence of the hospital. On July 3rd, 1878, Sir William Manning invited the Senate to consider whether there should be established at first a complete course, or a preliminary two-year course only. The Senate passed a unanimous resolution in favour of the complete course, and then the matter was only a question of ways and means. In 1880 Mr. Challis died, and his great bequest was announced as a complete surprise to the authorities in Sydney. The opening of the Prince Alfred Hospital actually did take place on September 25th, 1882, and in the same year the increased endowment so frequently asked for was voted by the Legislature, and

steps were immediately taken to make the necessary appointments. Dr. Anderson Stuart was appointed to the combined Chair of Anatomy and Physiology in 1882, and in the beginning of 1883 the work at the school began. No steps were taken to provide accommodation for the medical school until just before the new professor landed, and he recalls the dismay with which, on his arrival, he saw the foundations of the modest, unpretentious, four-roomed cottage out behind in the paddock, which he was told was, when finished, to comprise two rooms for the medical school, and two for Professor Stephen, and his department of biology. Within some ten days after his arrival the walls of the cottage were up, though there was no roof, or any windows or doors, and in such curious surroundings, with workmen lolling over the window-sills wondering what it was all about, the actual commencement of the school took place, on the day appointed in the calendar. Of this cottage, the original medical school, no vestige remains to-day, all having been removed to make way for the department of geology. The first step in advance was to add three rooms behind this cottage, and the next was to absorb the two rooms which Professor Stephen occupied, he being also anxious to get away to less "fragrant" quarters. The first difficulty as to *personnel* was to find a man who would consent, for any reasonable wage, to come as attendant; but soon there arrived Mr. John Shewen, who had served with Professor Stuart in Professor Rutherford's laboratory, and by the same ship came Dr. A. MacCormick, as Demonstrator, who also had been with Professor Rutherford's department. From that day forward the teaching arrangements have never gone backward. Dr. MacCormick held office as Demonstrator until he was appointed Lecturer in Surgery. He was succeeded by Dr. A. E. Wright, until lately Professor of Pathology at Netley, and Dr. Wright by Dr. C. J. Martin, now Professor of Physiology in Melbourne. Professor Wilson arrived as Demonstrator of Anatomy in 1887, and in 1890 became Professor of Anatomy. The passage of the School from "Log Cabin to White House" was gradual, as portion after portion of White House was completed, but it was in and about 1890. The preliminary scientific subjects are each now housed in its own building, so that this building accommodates only the purely medical subjects. The clinical subjects are provided for at the Prince Alfred Hospital. The Museum of Anatomy now possesses 24,000 specimens. To the magnificent building Professor Anderson Stuart thinks that much of the success of the Medical School is due. Student, and graduate, and teacher alike feel proud to belong to it, and its influence in creating an *esprit de corps* and good traditions cannot be overestimated.

Teaching Arrangements.

The two most important changes in the teaching arrangements since the school began have been the creation of two new chairs—Anatomy and Pathology. Midwifery and gynaecology have been separated as independent lectureships, and five new courses have been established—namely, medical ethics, diseases of children, diseases of the ear, nose, and throat, diseases of the skin, and demonstrations on psychological medicine and neurology. A new and important class, suitable for graduates and advanced students, is about to be established—namely, special bacteriology. Professor Anderson Stuart in his address further expressed a wish to see established one other short course—namely, the history of medicine, and it is gratifying to note that such a course has since been established in consequence of his address. In designing the building places for stained-glass windows were provided in which the pictures of great men of the past should appear; and by the generosity of Lady Renwick, of the late Dr. George Bennett, of Dr. Sydney Jones, and of Mr. John Harris (at that time Mayor of Sydney), these window spaces have, all but one, been appropriately filled. Moreover, the five theatres have been named after—(1) Hunter, (2) Cullen, (3) Haller, (4) Harvey, (5) Vesalius, and reproductions of the busts of a great number of celebrated men adorn the walls. A department of dentistry has recently been opened, and the university has established a Public Dental Hospital. Steps have been taken towards the establishment of a department of veterinary medicine and surgery.

Things Still Wanted.

A Chair of Botany is still wanted, for the present association of the subject with zoology in one department is not satisfactory. Another thing wanted is a well-stocked library of scientific medical books, especially serials.

The Curriculum.

There have already been three curricula, and a fourth is now under consideration. The continuous advance in knowledge, changes in the relative importance of subjects, and improvement in the quality of textbooks, all render a revision of the curriculum necessary every few years.

Some Statistics.

The school started in 1883 with four students. The number has increased every year, without exception, and in the current year stands at 204 in attendance. Altogether the names of 522 students have appeared upon the rolls. Of these 207 men and 11 women have graduated, while 100 have not graduated, although they have attended long enough to do so. Roughly, therefore, one in three has failed, from all causes, to complete the curriculum. Putting these figures in another way they show that of the 318 who have attended long enough to get a degree, only 45 per cent., or less than one-half, have graduated in the minimum time, a fact which indicates that candidates have not slipped through too easily. Professor Anderson Stuart has made an estimate as to how the graduates have fared since they took their degrees. Of the 218, 11 have died, and 2 have relinquished practice, so that there remain 205 at work to-day. In his estimate, those who have died or who have given up have been classed according to what they were apparently doing when their professional career closed. Such is the demand for their services that immediately upon their graduation the medical graduates can always earn a living; but those whose graduation has been too recent to enable one to judge what they are likely to do in after-life are in number 54, and have been left unclassed, except where they have married, when they are classed as "doing well." Obviously men of education do not usually marry unless they think they are doing well enough to support a wife and consequences. There thus remain 164 who have been classed. Of the 164, 14 have been classed as doing "excellently well," 68 "very well," 52 "well," and 27 "fair." Thus 134 out of 164 are doing well. To gauge the extent to which Sydney graduates have permeated the profession and influenced it numerically, Professor Anderson Stuart analysed the *Register of Medical Practitioners, 1902*, and found that, of 798 practitioners at work in the State, only 133, or 16⅔ per cent., were Sydney graduates. As a matter of fact, these graduates are absorbed as quickly as they are produced, and there is a good reason for this. The losses to the profession in New South Wales by death, departure, and retirement amount to 40 per annum, so that the number of the graduates is annually less than one-half of the waste of the profession in New South Wales alone, and it must not be forgotten that 10 per cent. of the graduates belong to or reside in Queensland, and over 7 per cent. elsewhere.

Post-graduate Study.

Owing, on the one hand, to the tendency of moneyed families to leave the State; and, on the other, to the attractions of private practice in Australia, there has as yet been an almost total absence here of young medical graduates, who, as in Europe, are content to go on with their studies after graduation. It is possible that when the four Macleay Fellowships of £400 a year each become available they may help in this direction, for animal physiology and pathology, anthropology and organic chemistry are among the specified subjects, and these are all subjects which might be worked at by the young medical graduate.

CANCER IN NORTH BEDFORDSHIRE.

Mr. Gifford Nash, F.R.C.S., Senior Surgeon to the Bedford County Hospital, has published as a pamphlet[1] the Presidential Address delivered by him at the annual meeting of the South Midland Branch of the British Medical Association, held at Bedford on June 12th, 1902. The subject he selected was Cancer, with special reference to its distribution in North Bedfordshire. He pointed out, in the first place, that in any discussion of the causes of cancer we must consider (1) what evidence there is that cancer is infectious, that is, due to a parasite; and (2) what other explanation there is as to its origin.

The idea that cancer may be infectious was not, he said, modern, but dated back at least 130 years. The evidence in support of the parasitical theory was based upon a series of facts, namely, the presence of a parasite in the tissues, the spread of cancerous disease by contact or inoculation, the

[1] London: Mitchell and Hughes, 1903.

occurrence of cancer in persons who lived together or attended to one another, and the occurrence of groups of cases in certain houses or localities. Mr. Nash discussed each of these subjects, and urged that striking evidence of inoculability was obtained in the dissemination of cancer and sarcoma by the lymphatics and blood vessels, by which secondary foci were set up.

After referring to Behla's investigations at Luckau in Germany, and somewhat similar inquiries instituted in the midland counties, at Cambridge (by Dr. Lloyd Jones), and in East Essex (by Dr. Scott), he turned his attention to North Bedfordshire during the decennial period 1890-9. In this period there occurred in this district, among a population of 102,409, as many as 872 cases of cancer (according to death certification). Biggleswade Union with 221 cases yielded a percentage of 0.86; Ampthill 245 cases, and percentage 1.10; Bedford Rural District 209, and percentage 0.87; and Bedford Urban 206 cases, yielding a percentage of 0.65. The percentage for the whole was 0.85, which was equal to a rate of 850 per million per annum, as compared with 741 for the same period for England and Wales.

As to increase during the decennium, Mr. Nash, like other investigators, is disposed to accept apparent increase with caution, owing to indefinite or incorrect certification in the past. The average age of the males (354) in North Beds at the time of death was 62 years, and of the females (518) 61 years. The digestive system was attacked in an extremely large proportion of the total cases (524), yielding a percentage of 66. In males the proportion was even larger, no less than 81 per cent. being in the digestive system. In females the digestive system was affected in 54 per cent., the breast in 19 per cent., and the uterus in 18 per cent. The distribution of cancer in 96 towns and villages in North Beds was set out in detail, with population, number of cases, percentage, elevation in feet above the sea, and the soil on which the village stands. Mr. Nash reports 30 cases of cancer which occurred in houses in which there had been previous cases. He considers such occurrence of cancer, two or more cases in a house, or in relation to one family, strong evidence in favour of its infectivity.

From an examination of the materials collected as applying to North Beds, Mr. Nash arrives at the following conclusions:

1. That the occurrence of cancer in that district is a little above the average for England and Wales.
2. That statistics showing the increase of cancer must be received with caution owing to very imperfect certification in the past.
3. That cancer appears to be less common in the urban than in the rural districts.
4. That the liability of the disease to attack the alimentary system is very great.
5. That the percentage of cases at an elevation of 300 ft. is considerably greater than that under 150 ft., and also greater than that of the villages adjacent to the River Ouse.
6. That the nature of the soil appears to have very little influence on the occurrence of cancer.
7. That the large number of instances in which two or more cases occurred in the same house or in persons intimately associated points to the disease being infectious.
8. That infection, if it exists, is a very slow one, the usual interval between two cases in the same house and family being about two years, and the liability to infection increases with age, very few cases occurring under 40 years.

The prevention of cancer is summarized as disinfection of all clothes and bedding of a cancer patient after death; hygienic life for cancerous patients; moderation in respect to food, alcohol, and tobacco; and improved sanitation.

THE RECENT EPIDEMIC OF SMALL-POX IN LONDON.

THE following notes upon the reports of medical officers of health of metropolitan boroughs on the recent occurrence of small-pox are in continuation of those published in previous issues.

ISLINGTON.

The Medical Officer of Health for the Metropolitan Borough of Islington (Mr. A. E. Harris) has now furnished his final report on the epidemic of small-pox in his district, which lasted from August 27th, 1901, to August 29th, 1902. In all 354 notifications were received, 317 of them proving to be genuine cases of small-pox. Ten per cent. of the notifications were therefore inaccurate, and the proportion of persons attacked was 9.4 per 10,000 persons living in the borough. This compares favourably with the surrounding district. Of the 317 persons attacked, 74 per cent. were vaccinated, 20 per cent. unvaccinated, and 5 per cent. were persons whose condition as to vaccination could not be ascertained. Among the 236 vaccinated cases 29 deaths occurred, representing a fatality of 12.29 per cent.; among the 65 unvaccinated cases 30 deaths occurred, representing a fatality of 46.15 per cent. The fatality of cases of unknown vaccination was 12.50 per cent.

The ages of the attacked persons are also interesting. It appears that of the vaccinated 10 were under 10 years of age, and of these none died; 38 were between 10 and 20 years and 3 died, 188 were above the latter age, and 26 died. Of the unvaccinated 36 were under 10 years of age, and 17, or 47.2 per cent. died; 15 were between 10 and 20 years, and 8 died, and 14 were over the latter age, and of these 5 died.

The cost of the epidemic to the borough, irrespective of vaccination, was £761 16s. 3d. The threepenny rate for the raising of the £500,000 expended by the Metropolitan Asylums Board would be for Islington £23,857. The fees paid to the public vaccinators in 1902 were £5,204. The usual preventive methods were adopted throughout the epidemic.

CAMBERWELL.

Dr. Francis Stevens, the Medical Officer of Health, has furnished a special report to his borough council on the 376 cases of small-pox occurring in that district. Of this number a definite source of infection was traced in 137 instances, and Dr. Stevens mentions a number of illustrative cases in his report. Turning to vaccination we find that 107 were unvaccinated and 10 had "no marks," the remainder had been vaccinated, and 9 had been revaccinated at some period in their lives. Under 10 years of age there were 77 cases, 63 of whom were unvaccinated. The total number of deaths was 69, and of these 33 had not been vaccinated. Under 10 years of age there were 32 deaths, 27 of these were unvaccinated and 2 had "no marks." Between 20 and 60 years there were 28 deaths, of whom 22 had been vaccinated in infancy. Dr. Stevens also points out the relationship existing between vaccination and the period of detention in hospital. For example, under 10 years of age the vaccinated cases were retained 29 days and the unvaccinated 56 days. The expenses of the local authority in preventive measures was £311 13s. 11d.

LITERARY NOTES.

WE are informed by Messrs. Baillière, Tindall, and Cox, that the King and the Prince of Wales have been graciously pleased to accept a copy of the King's Prize Essay for the Erection of "The King Edward VII Sanatorium" for the Treatment of Tuberculosis, by Arthur Latham, M.A., M.D.Oxon., M.A.Cantab., Assistant Physician at St. George's Hospital, and at the Brompton Hospital for Consumption, in association with A. William West, architect.

A new edition of *The Uniform System of Accounts for Hospitals and Institutions*, by Sir Henry Burdett, K.C.B., will shortly be issued by the Scientific Press, Limited. We are informed that this system has now been adopted by all the principal hospitals and great institutions throughout the United Kingdom, and accepted by the Governments of the Colonies of Victoria and Queensland for introduction into every recognized institution within their jurisdiction.

The following new books will shortly be issued by Messrs. J. and A. Churchill: The seventh edition of Sir William Moore's *Manual of Family Medicine and Hygiene for India*, published under the authority of the Government of India.—The new edition has been thoroughly revised by Major J. H. Tull Walsh, I.M.S.; volume i of a *System of Clinical Medicine for Practitioners and Students, giving an account of the Diagnosis, Prognosis, and Treatment of Disease*, by Dr. T. D. Savill; the second edition of Corbin and Stewart's *Handbook of Physics and Chemistry*, adapted to the requirements of the first examination of the Conjoint Board; a new work entitled *The Microscopical Examination of Food and Drugs*, by H. G. Greenish, Professor of Pharmaceutics to the Pharmaceutical Society; and volume iv (Electric Lighting and Photometry) of Groves and Thorp's *Chemical Technology*. The writers of this volume are Messrs. A. G. Cooke and W. J. Dibdin.

M. de Lanessan, formerly French Minister of Marine, has been appointed Editor-in-Chief of the *Siècle*, so long one of the leading daily papers of France. M. de Lanessan, who was

Governor-General of Cochin China, is a member of the medical profession.

The *Bulletin*, a quarterly medical review, which has been published since 1892 by the American Medical Temperance Association, has been consolidated with the *Journal of Inebriety*. The latter journal, which first appeared in 1876 under the editorial care of Dr. T. D. Crothers of Hartford, Connecticut, was the first, and we believe is still the only, medical periodical in the world devoted exclusively to the scientific study of the neuroses and psychoses of spirit and drug diseases.

It is always interesting, though not always soothing to our professional self-love, to have the opinion of intelligent outsiders on the healing art. Mr. Herbert Spencer has more than once played the part of a candid friend towards us. It may amuse some of our readers to compare his views with those of an equally great philosopher, Leibnitz. A recent number of the *Revue Française de Médecine et de Chirurgie* gives some extracts from a correspondence between Leibnitz and Denis Papin, the inventor of the "digester" which bears his name. Papin was the son of a physician practising at Blois and was born in 1647. He took his doctor's degree in 1671. The revocation of the edict of Nantes made it necessary for him to leave France, and although he was afterwards titular physician to the Landgraf of Hess he never seems to have given himself seriously to the practice of his profession. Indeed, if we may judge from what he says about it, he seems to have held it in contempt. Writing to Leibnitz he says:

In regard to medicine, since you do me the honour of asking my opinion, I will say that in the way it is practised I believe it is a very harmful thing, and I approve greatly a comparison which I heard made by a physician of Venice: That whilst Nature prepares with the time necessary all that is needed almost to cook and then to drive out the evil humours, a physician who prescribes a remedy of any strength acts as if one were to give a slap in the face to a watchmaker whilst he is carefully putting together several small detached pieces, and thus make him let the whole fall to the ground and lose a part. The man who said that to me nevertheless practised like the others, and excused himself by saying that one must take the world as it is, and that if he did not do so others would. And indeed it is better that persons such as he should practise the profession than many others who do not even know what it is to know anything, so that they accept as oracles all the rubbish found in their authors.

It is not surprising that Papin, holding these views, does not deal tenderly with an erring professional brother, even though the patient was his mother-in-law:

Not long ago we saw here an example on the occasion of an illness of my mother-in-law, then 75 years of age. She urgently asked to be given a little wine. The physician, in a magisterial tone, absolutely forbade it, and said that if we wished to spoil everything we had only to give her wine, since she was in a high fever. In spite of this we gave her some without saying anything to the doctor, and in the evening, when he came back, he found her much better, and she recovered.

In reply, Leibnitz wrote:

You are right in looking upon surgery as the most certain part of medicine. There one sees what one is doing. As regards internal medicine, I hold that it is an art like that of playing ninepins or backgammon. I have often wished that a skilful physician should write a book *De curandis per diaetam morbis*. I also think it desirable that in all cases of prolonged illness nothing should be given that is very disagreeable, or likely to disgust the patient; it is in such cases that the *jucunde* should be practised, the *cito* being out of the question. For the rest, I have recommended at Berlin that orders should be given in the States of the King that by the instrumentality of the doctors who are paid out of public funds a *Historia anni medica* should be drawn up based on observations collected in the provinces.

Leibnitz seems to have held much the same opinion of medicine as Voltaire, who said that the art of physic consisted in pouring substances of which we knew little into bodies as to which we knew less.

The assertion, supposed to be very damaging to the alleged evolution of the higher races of man from the lower, has been made by certain authorities that there is no instance on record of a savage people raising itself unaided from barbarism to civilization. Dealing with this statement in the February number of *Knowledge*, Mr. J. Collier asks if the criticism might not be generalized. Can it not be affirmed, he says, that there is no recorded example of any people rising considerably in the scale of culture otherwise than by receiving stimulation, amicable or hostile, from other peoples? This may happen in two ways. Nations have been brought to the point of self-conscious individuality, as happened to England and France, to France and Germany, by mutual animosity. French and English historians agree that the later stages of the French Revolution were initiated by the hostility of the banded nations of Europe. But wrath and hatred are not at the base of collective any more than of individual life; the chief social regenerator is love, and in its primary form. Mr. Collier points out that the floral world has been shown to owe its beauty and magnificence to cross-fertilization; and he suggests that the animal world might likewise be shown to be indebted for its vigour and variety to intercrossing. So might it, he thinks, be proved that most great advances in civilization have been originated by the blending of two stocks, the immigration of individuals from one society to another, the temporary migration of individuals to other societies, the transmission of germs from one society to another by various agencies or by the reaction of one portion of a community on another, or of one form of social life on another. These are, says Mr. Collier, all of them, robust or "degraded" modes of intercrossing or cross-fertilization.

The *Edinburgh Review* for January contains a somewhat belated survey of the progress of medicine in the nineteenth century. The subject may fairly be said to have been exhausted two years ago, when the medical press of the whole world gave itself up for a time to looking backward. The article in the *Edinburgh* adds nothing to the materials for the history of modern medicine then collected, nor is the record of the progress achieved marked by special breadth of knowledge or literary grace. The author is not even always accurate in his facts. Speaking of the introduction of anaesthesia, he says that "in 1844 a dentist, Horace Wells, used it (ether) several times, and in 1846 it was given by him in the Massachusetts General Hospital while Dr. Morton removed a tumour from the neck." Even Macaulay's schoolboy might know by this time that Morton, to whom we owe anaesthesia, was not a surgeon, but a dentist who had perseveringly experimented with ether on his patients, on animals, and on himself, till he was sure that he had found a means of taking the prisoned soul of a sufferer, and lapping it in Elysium while his flesh was on the rack of surgery. Horace Wells had nothing to do with the introduction of ether; such fame as rightly belongs to him is connected with nitrous oxide. It was John Collins Warren who performed the first operation under ether on October 16th, 1846. The report of the case as given in the Record Book of the Massachusetts General Hospital was published in the British Medical Journal of October 25th, 1902. In dealing with ovariotomy, the author, after referring to McDowell's operation in 1809, says that "an Englishman, Dr. Robert Houston, had operated successfully on a similar case." It is perhaps a trivial detail, but Houston was a Scot, and the late Mr. Greig Smith made out a good case for believing that his operation was not an ovariotomy, but merely an incision of a cystic ovary. The writer seems inclined to claim for Sir James Paget the glory of having been the Moses of antisepticism on the strength of some "almost prophetic words which were uttered by him in 1862." The words were: "I can only suspect that there are as yet some things hidden." But surely an equally valid claim might be made for Hamlet, who gave even stronger expression to a like suspicion. Paget's prophecy is made to look absurd by the writer's admission that five years before it was uttered Pasteur had revealed some of the things which the English surgeon suspected to be hidden. We say this in no depreciation of Sir James Paget, but simply in the interest of historical truth. In the reference to the splendid work of Semmelweis (whose name is twice misspelt Semmelweiss) on the prevention of puerperal fever, no mention is made of Oliver Wendell Holmes, who first taught that the disease is contagious.

The *Proceedings of the Anatomical and Anthropological Society of the University of Aberdeen (1900-1902)* contain an account by Professor R. W. Reid, of a Hausa barber-doctor's outfit presented to the Anthropological Museum of the University by Sir William MacGregor, Governor of Lagos. Hausaland occupies practically the central third of the Soudan; it is estimated that about twenty millions of persons speaking the Hausa language dwell there. The Hausas are large, well-developed negroes; they are an intelligent, peaceful, and industrious people. When trained and led by British officers they are brave and trustworthy soldiers. The description of the outfit is quoted from Sir William MacGregor, who says:

The knife, made by an African bush blacksmith, he uses for shaving. He employs no soap to soften the skin or roughen the hair, only a little water. He sharpens his razor on a black leather strap, turning the knife on the back so deftly that the eye cannot follow the movement; the few last touches he gives to it by turning it with splendid dexterity on the front of the left arm, where the skin is worn and bare by this manipulation. He shaves the whole face except the nose. He leaves a fine line of eyebrow. The hair is cut short. The outline of the hairy part of the scalp in front is very clearly demarcated by shaving back about a half

to an inch and a-half. Then he turns the front edge by a marvellous stroke. He holds the knife horizontally, and with a downward stroke cuts off all the projecting ends of the hair round the forehead. No European barber could do it without burying his razor in the skin. He never draws blood. I saw he had a cupping apparatus, and got a man to have himself cupped, for which I paid a fee of sixpence. You will see the cup is made of horn. The lancet is made by a bush blacksmith. He had a little fragment of dried sheep's "tripe." From this he detached a bit about ½ in. square, and put it into his mouth. The patient had a swelling above the malleolus. The doctor put his cup on the foot just below it. He then applied his mouth to the end of the horn, and by suction through a small hole produced a vacuum. Before he removed his mouth from the end of the horn he put the fragment of sheep tripe membrane by the tip of his tongue on the end of the horn to prevent the entry of air. Then he sat still for about five minutes, until the pressure of the air drove the venous blood into the bit of skin covered by the horn. He got his lancet ready, removed the horn, and very rapidly touched the tumid skin five or six times with the edge of the lancet, deep enough to draw blood. Then he replaced the cup, extracted the air, reapplying the valve of membrane before he removed his mouth. Then he left it to bleed, which it did freely into the cup.

The *Proceedings* of the same Society contain a paper by Miss Nora Macdonald, the Conservator of the Archaeological Museum of King's College, Aberdeen, on the manners and customs of the ancient Egyptians. Speaking of the doctor, she says he was a very important member of society. In Egypt two kinds of diseases have always been prevalent, those of the eye and those of the intestines. As a consequence, the greater number of doctors of whom we hear were authorities on these, though, of course, they were also supposed to have a general working knowledge of the other branches of their profession. With anatomy the doctor's acquaintance was of the slightest, as he was forbidden to cut up and thus disfigure the human body. He had, however, realized that the great vessels were all connected with the heart, and so he called the latter "the beginning of all the members." According to him, "the head contains twenty-two vessels which draw the spirits into it, and send them thence to all parts of the body. There are two vessels for the breast which communicate heat to the lower parts. There are two vessels for the thighs, two for the neck, two for the arms, two for the back of the head, two for the forehead, two for the eyes, two for the eyelids, two for the right ear, by which enter the breaths of life, and two for the left ear, which in like manner admit the breaths of death." Death itself he very pertinently diagnosed as "want of breaths." The doctor was his own dispenser, and very fearful and wonderful were the mixtures he compounded. They really contained everything that could be swallowed as liquid or solid. Sometimes he describes a certain medicine as a *real* cure, which shows that he had doubts about some of the others. Again, we find something not unlike the Christian Scientists, doctors who did not pin their faith to drugs, but believed in exorcising the illness of the patient by words only. The Egyptian doctor was consulted on points which a modern medical man would scarcely consider as lying within his sphere. He had to have a sound practical knowledge of magic, and had to be able either, for example, to prevent baldness in his patient or to cause it in that patient's enemy. Some of the prescriptions are very amusing. We note that the "tooth of a donkey crushed in honey" is *really* strengthening to the hair, while to restore white hair to its original colour "the blood of a black calf that has been boiled with oil" is very efficacious.

The longevity of the first generation of men as recorded in the Bible forms the subject of a work entitled *Medicine according to the Bible and the Talmud*, by Dr. A. A. Piasetski, a Russian physician, which has recently appeared in Russia. The book may be described as an attempt to prove the literal accuracy of the statements made as to the ages of the patriarchs. Dr. Piasetski attributes their longevity to their great strength, quoting in proof of this the text "There were giants in those days." Then the climate of Mesopotamia is even now mild, warm and favourable to longevity. And besides, says our author, men led different lives. "They lived under the smiling sky; needed no buildings to shelter them and undermine their vitality; there was food in abundance on every hand, to be had practically without exertion. The trees were laden with fruit; the rivers teemed with fish, and the meat of one animal sufficed for weeks. Marital life was the natural condition, and apparently offspring were equally divided between males and females, so that neither sex had a preponderance. There was no vice, nor prostitution, nor violation of natural law. To all this must be added the entire freedom from the diseases due to congestion and the sundry other evils of dense population. There was no rivalry, no anxiety, no 'struggle for life,' and no tax upon the nervous system. But after the Deluge the whole aspect of life changed. With the multiplication of Noah's descendants the unproductive lands in the neighbourhood of Ararat ceased to be capable of supporting the population. A nomadic existence became necessary and hunger compelled dispersion. With hunger, exertion, new climatic conditions, etc., came diseases before unknown, and the duration of individual life was necessarily reduced." The author also discusses the development of medical science and practice in biblical times. Prior to the Deluge, the author aims to show, there was neither medicine nor surgery. In the episode with Tamar we read for the first time of the regular practice of midwifery. In Joseph's day medicine had become a distinct profession. Moses was a skilled and ingenious practitioner and cured many diseases, and the author concludes that practically all the diseases known to-day affected mankind in the time of Moses.

Dr. George Parker has reprinted from the *Proceedings of the Clifton Antiquarian Club* an interesting account of *Cooke's Supplementum Chirurgiae*, which he was lucky enough to pick up on a Bristol bookstall. The author, James Cooke, of Warwick (1614-1688), was a surgeon of note in the Parliamentary army, and the writer of a well-known treatise, *Mellificium Chirurgiae*, or the *Marrow of Surgery*, which ran through several editions. The *Supplementum* is a treatise on medicine, and was intended as a companion to the *Marrow of Surgery*. Professor H. E. Clark, in the *Glasgow Medical Journal*, October, 1899, mentions that only one copy outside of the British Museum could be found in this country. The book contains 431 duodecimo pages and is entitled:

Supplementum Chirurgiæ | OR THE | SUPPLEMENT | to the | MARROW | OF CHYRURGIE. Wherein | Is contained Fevers, Simple and | Compound, Pestilential, and not, | Rickets, Small Pox and Mea | sles with their definitions, Causes | Signes, Prognostics, and Cures, | both general, and particular. | As also The Military Chest, containing all necessary medicaments, fit for Sea, or Land-service, etc. By JAMES COOKE, Practitioner in Physick and Chirurgery.

Cooke defines a fever as

a hot distemper of the whole body arising from preternatural heat kindled in the heart and diffused with the spirits and blood through the veines and arteries into the whole body. Secondly, it is caused by anything that kindleth heat in the body as motion, putrefaction, etc. Thirdly, it is absolved, first by altering, wherein [you should] so proceed that the cause be not nourished, secondly by mitigating the symptoms.

His definition of a tertian intermittent (malarial) fever may be interesting to the students of the School of Tropical Medicine:

It's a fever arising from excrementitious choler putrified in the mesaraick veines afflicting every third day with shaking, after which followes hotnesse..... If it be exquisite the shaking is vehement and pricking arising from most thin and few vapours and humours without the veines, the heat is much, sharp and biting, the Pulse in the beginning of the fit is small and slow, in the progresse vehement and quick. Sometimes there is intolerable thirst, pain in the head, delirium, vomiting..... The causes of an exquisite are choler heaped up *in primis viis*.

He teaches that bleeding is harmful in influenza—"that epidemic catarrh which wandered through Europe in anno 1580, in which scarce one of a thousand troubled of it died, yet almost all who were let blood perished." The chapter on rickets gives a very good picture of that disease. Dr. Glisson had, five years before, published a treatise on the subject, and from the fame of this book it has long been known abroad as "the English disease;" but Cooke says

it has received several names, as Paedaesplanchnosteocaces; this I saw in print in a thesis long before the Doctor's tract on the subject; others cachexia scorbutica, and the doctor's—the rhachitis, nearly bordering on the vulgar name rickets, and signifying the spinal disease, the spine being the first and principal among the parts affected in this evil.

He states that the disease "invades chiefly the cradles of the gentry, especially those who live at ease and fare deliciously," which is quite the reverse of the popular belief of to-day.

A CAVE SANATORIUM IN AMERICA.—According to the *Scientific American*, the air from limestone caves has characteristics which resemble those of mountain air. This discovery has just been made use of in the location of a sanatorium near one of these caves, and the air for the institution is supplied from the underground caverns. This establishment is at Luray, Virginia, and the system of ventilation is arranged so that each room gets its own supply direct from the cave. The air of these caverns is of a uniform temperature, and remarkably pure and free from all germs and dust particles. In the warmest weather the doors and windows of this institution are kept closed, and a comfortable temperature of 75° is maintained, in spite of one of 90° or more encountered outside.

ASSOCIATION NOTICES.

COUNCIL.

NOTICE OF MEETING.

There will be a Special Meeting of the Council on Wednesday, February 25th, at 10.30 o'clock in the forenoon, in the Council Room of the British Medical Association, 429, Strand, London, W.C.

February 12th. Guy Elliston, *General Secretary.*

ELECTION OF MEMBERS.

Any candidate for election should forward his application upon a form, which will be furnished by the General Secretary of the Association, 429, Strand. Applications for membership should be sent to the General Secretary not less than thirty-five days prior to the date of a meeting of the Council.

Guy Elliston, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

Border Counties Branch.—The next meeting of this Branch will be held at Penrith on February 27th. Gentlemen desirous of contributing papers, etc., are requested to communicate at once with the Secretary.—Francis R. Hill, 12, Bolton Place, Carlisle.

Metropolitan Counties Branch: East London and South Essex District.—The next meeting of this District will be held at Brooke House, Upper Clapton, on Thursday, March 10th, at 8.30 p.m. The chair will be taken by Mr. Powell, Vice-President of the District. Members desiring to read short papers or to show cases are requested to communicate with the Honorary Secretary as soon as possible.—C. J. Morton, 56, Orford Road, Walthamstow, Honorary Secretary.

Edinburgh Branch.—The winter meeting of the Edinburgh Branch, in conjunction with other Branches, will be held in the Royal Infirmary, Edinburgh, on Friday, February 20th. The museum will be open from 2 p.m. onwards. Clinical meeting in the Large Theatre at 3.30 p.m.; dinner in the North British Station Hotel at 6.30 p.m., morning dress, dinner ticket, 5s.—James Hodsdon and Norman Walker, Honorary Secretaries.

South-Eastern Branch: West Kent District.—A meeting of this District will be held on Friday, March 6th, at St. Bartholomew's Hospital, Rochester. Mr. F. W. H. Penfold in the chair. Members desirous of reading papers or of bringing any business before the meeting are requested to communicate without delay with the Honorary Secretary, Mr. Ludford Cooper, 19, Victoria Street, Rochester.

SPECIAL CORRESPONDENCE.

NEWCASTLE.

The Work of the Royal Infirmary: its Finances.—Lying-in Hospital.—Hospital for Diseases of Women.

The 152nd annual report of the Royal Infirmary has just been published. The amount raised by the public for the Queen's Commemoration New Infirmary Fund is £108,884. In recognition of the services rendered by Sir Riley Lord in initiating and carrying to a successful issue this fund, the Governors of the infirmary elected him a Vice-President of the Royal Infirmary. The above sum, with the munificent donations of Mr. Watson-Armstrong and the late Mr. John Hall, gives a total of upwards of £300,000 for the new infirmary. So far as the building of the new Royal Victoria Infirmary is concerned satisfactory progress is announced. During the month of December last 357 men were employed at the works. The Nurses' Home is already well advanced. In commemoration of the King's Coronation, the Chairman of the House Committee, Mr. Watson-Armstrong, presented each of the nurses with a silver St. Cuthbert Cross, while the sheriff, Councillor W. I. Sanderson, presented a beaker to each patient in the institution. During 1902, 4,568 patients were admitted as against 4,559 during 1901. The out-patient department of the infirmary is still abused by the public. Including casuals, 46,964 patients received treatment, or 3,683 more than in 1901. The total ordinary income of the year was £13,166 4s. 10d., a decrease of £377 19s. 11d. compared with that of the previous year. The working men subscribed £5,069 0s. 11d., an amount less by £461 10s. 8d. than in 1901. The expenditure was £17,372 1s. 2d., or £133 3s. 1d. less than in preceding year. The excess of expenditure over income in the year was £4,155 16s. 4d. This deficiency was met by the use of legacies and donations. The average cost of each in-patient was £3 16s. 0¾d., while the gross cost per occupied bed was £64 1s. 10½d. At the annual meeting the Mayor of Newcastle (Sir W. H. Stephenson), in moving the adoption of the report, said that the financial condition of the infirmary required looking into; £4,000 was a large deficit for the year, and but for legacies having been taken into the current account the deficit would have been greater. Legacies, he thought, were not intended for this purpose. The Mayor alluded to the fact that many persons took advantage of the benefits of the infirmary who could either pay a medical practitioner outside or give something to the funds of the hospital. He hoped that steps would be taken to make ends meet better in the future than had been the case during the past two years. The remarks of Sir William H. Stephenson naturally gave rise to considerable discussion. The Newcastle Royal Infirmary is not worse than many other charitable institutions in being in debt. Indeed, it is believed that this condition makes an appeal to the public more likely to be successful than when an infirmary is too well off. It would appear that the medical and surgical work of the Royal Infirmary was unusually heavy last year. Taking the surgical operations alone, there were 3,143, or an increase of 156 on 1901. While the need of a larger income is admitted by all, it is a debateable point in the financial administration of an infirmary as to whether legacies should not be consumed during a straitened year, and whether the burden of maintaining charitable institutions should not fall upon the generations that make use of them.

Mr. W. A. Watson-Armstrong some time ago commissioned Mr. A. T. Garvie to paint a portrait in oil of the late Dr. T. Nesham. This is nearly completed, and is a good likeness of the deceased physician and late Lecturer on Obstetrics at the College of Medicine. Mr. Watson-Armstrong intends to present the picture to the Lying-in Hospital, where it will probably find a place in the ward recently erected to the memory of Dr. Nesham.

The Hospital for Diseases of Women, which was founded in 1866, and which for several years has been located in Blackett Street, has now, on account of the premises being required for business purposes, removed to Higham Place, where, with greater accommodation, the Committee hope to be able to receive a few in-patients.

CORRESPONDENCE.

CERTIFIED MILK.

Sir,—Allow me to thank the three gentlemen who commented in the British Medical Journal of February 7th on my letter in your issue of January 31st for the courteous tone of their remarks.

Dr. Ashby, in passing, accuses me of being "scarcely just to some of the municipal authorities—notably, the Corporation of Manchester and, I believe, also, of Liverpool—in ignoring the efforts they have made to improve the milk supply." May I say that there would have been more point in the accusation had it been probable that the knowledge regarding these efforts would have been in my possession? The energy and ability of the medical officer of health to the first-named city is known to most of us, and I am pleased to learn that he has turned his attention to a subject so badly in need of supervision and improvement.

A purer milk supply, then, it would seem, is another point in which the lead is given to London by some of the larger cities in the North. Dr. Ashby is of the opinion that the difficulty of controlling and supervising the farms, often far distant from the city, would be fatal to the value of a "certificate." I acknowledge the difficulty, but cannot admit it to be insurmountable. Efficient supervision has been apparently established in several States in America, and this in farms so distant that it takes more than twenty-four hours for the milk from them to reach the cities. The difficulties, then, in supervision and control that would be met with here are less than those that have been overcome in America.

Dr. Ashby's remedy for the present unsatisfactory nature of our milk supply lies in the establishment of scientific dairies or milk laboratories. Personally, I should expect but little benefit from such establishments. For several years past a Walker-Gordon milk laboratory has been established in London, and, however successful it may have been, it cannot be contended that it has benefited any but a small portion of the more wealthy members of the community.

Dr. Ashby speaks lightly of the addition of "a few pence" per quart to the ordinary cost in order to procure a milk of guaranteed purity and strength. If an equal disregard to expense was displayed by the managing body, I am not surprised at the failure of the company at Manchester. The question of price, of course, lies at the root of the whole matter. In my proposed scheme the association would have a large voice, not necessarily an absolute one, in settling the price at which the "certified" milk should be sold. Advertisement, too, which Dr. Ashby decries in the case of milk laboratories would, in my alternative for them, seem to me permissible and just, and might prove the very salvation of the scheme. With his condemnation of the so-called "humanized milk" I am heartily in accord.

With Dr. John Thomson's unqualified approval of my suggestion I am much gratified. Coming from one of his experience and reputation, his letter should have great weight with the authorities concerned.

I am pleased, too, to have Dr. Ralph Vincent's support. Into a discussion on the merits or disadvantages of percentage feeding of infants I cannot enter at the present moment. If he will read the later American writers on the subject he will find I am far from alone in condemning such systems. The explanation of the failure of percentage feeding given by more than one authority—the changes wrought in the milk by the use of the centrifugal machine—is far from satisfactory to me. The explanation of such failures lies, I consider, much nearer at hand. Whilst Dr. Vincent and myself differ as to what is "rule of thumb" and what is "accurate and scientific," we are agreed on the necessity for a purer milk supply for the metropolis.

In conclusion, I would beg to reiterate my opinion that the consideration of a scheme of certified milk by the authorities of the Association would meet with the hearty approval of the profession and the public at large.—I am, etc.,

London, W., Feb. 11th. J. A. COUTTS.

MIDWIVES FOR COUNTRY DISTRICTS.

SIR,—The passing of the Midwives Act of 1902 devolves a grave responsibility on the nation, in order that as the untrained midwife vanishes the poor who either cannot or will not be attended by doctors may not be left without necessary assistance. A clergyman writes to me:

> We have no maternity charity or help of any sort towards doctor or nurse.....it is sad to see the suffering from neglect and ignorance, and feel utterly at the mercy of these untrained women. How the Act will affect us I cannot guess; if it stops the present dangerous system and gives us nothing in its place I am not sure that it will be an advantage. I am sure our poor women will not consider it so. They cannot afford to engage a trained monthly nurse, especially from a distance, or to send for a doctor.

Now, it is to help these remote scattered parishes, as well also as the crowded provincial towns where these untrained women are so numerous and prosperous, that I am anxious to gain the sympathy of those able to help.

First of all, I would enlist the co-operation of the local doctor, who feels that the village midwife, working under proper supervision, would be a help rather than a hindrance to his work; of the busy and often overworked family practitioner, who recognizes the fact that such women will relieve the pressure by taking those cases that use up his most valuable time and pay so little, if at all, and whom he may trust to send for him in good time when surgical skill is required.

Then I would—where nursing associations exist or could be started—have one or two midwives attached, and thus make use of existing organizations where possible. I have done this in my own case, the woman prepays an extra fee of 5s. to 10s., which is returned to her if the doctor is not required. If he is sent for the association guarantees the payment.

In very sparsely populated districts one or two might join together to provide a midwife, and the midwife might be encouraged to combine with her work some occupation not detrimental to her calling. In towns the work would become quickly self-paying, and I feel that a very moderate outlay would start a sound substantial work.

I cordially invite those interested, and especially doctors who approve of this scheme, to communicate with me, and I would ask others to help me with funds to make a good beginning.—I am, etc.,

Bignor Park, Pulborough, Feb. 7th. (MRS.) JOSEPHINE JOHNSTONE.

DEATH UNDER CHLOROFORM.

SIR,—Dr. Lawrie's views on the action of chloroform have been so frequently reiterated, and so conclusively shown to be erroneous, that it is not necessary—or advisable—to deal with them at any length here. That these views are not scientific generalizations based upon accurately observed facts has been made very clear by many investigators; amongst others Drs. Gaskell and Shore (in the BRITISH MEDICAL JOURNAL some years ago,) and Mr. Leonard Hill have fully criticized the fallacies in method and the looseness of reasoning upon which they were founded. My recent letter[1] had reference not to the general question but to a specific case. Permit me to make a few remarks upon some assertions and suggestions which Dr. Lawrie offers with reference to my letter.

1. Dr. Lawrie asks whether loss of arterial tone is not common to all forms of collapse. Certainly not. Is he unaware that in asphyxial collapse, for example, the tonic contraction of the arteries is maintained up to the moment of death, the final fall of blood pressure being due, not to arterial relaxation, but to cardiac failure? He ascribes to me an opinion that loss of arterial tone is peculiar to death from chloroform poisoning. I have never held any such absurd opinion.

2. I did not affirm that in the case in question loss of arterial tone was the sole cause of the collapse. On the contrary, I stated definitely that both heart and respiratory centre were also involved. What I emphasized was that the essential cause of non-recovery was obviously the loss of arterial tone, persisting after the heart and respiratory centre had shown very marked evidence of vitality. As to which factor was predominant in *initiating* the collapse I expressed no opinion; there was no evidence on which to form one.

3. Dr. Lawrie inquires whether under any conceivable circumstances "mere loss of muscular tone in the small arteries" is capable of causing death, etc. It is somewhat surprising to find it necessary to repeat that this is a physiological fact. Dr. Lawrie's opinion is that it is impossible; but such questions are settled, not by opinions, but by experiment.

4. Dr. Lawrie suggests that abdominal compression does good by "pressing up the diaphragm and increasing the efficiency of the artificial respiration." There is not the slightest evidence that steady pressure on the abdomen helps respiration in a direct sense at all; on the other hand, there is clear proof that it proves useful, in suitable cases, apart from any mechanical improvement of respiration.

5. Dr. Lawrie is good enough to inform us that the change in carotid blood pressure caused by inversion is due to gravity. This important piece of information is not exactly new, and is not a discovery of Dr. Lawrie's. Is it not a very familiar fact in elementary physiology? What relevance it can have to the case in question I cannot surmise.

6. Dr. Lawrie affirms that if it does raise the blood pressure it can only be by increasing the effect of artificial respiration. It is quite unnecessary to comment on this further than to say that the direct effects of abdominal compression on the vascular system are matters of familiar knowledge in physiology.

7. Dr. Lawrie suggests that inversion or abdominal compression would be ineffective in certain conditions. It is hardly necessary to remark that this is obviously so if the heart is paralysed. If Dr. Lawrie will refer to my letter, he will find a very definite statement on this point. I explicitly stated that it is in cases where the heart is not directly paralysed or is only affected in a minor degree that this method is specially applicable. In the case in question (Dr. Pennell's) there was clear evidence that the heart was not paralysed. The effectiveness of the method in such conditions is not a matter of speculation but of experimental proof.

Dr. Lawrie's methods of discussion are hardly such as are usual among scientific men and are not calculated to further the elucidation of a scientific question.—I am, etc.

J. A. MACWILLIAM, M.D.

Physiological Laboratory, University of Aberdeen, Feb. 7th.

[1] BRITISH MEDICAL JOURNAL, January 31st.

THE POSITION OF MEDICAL OFFICERS IN THE ROYAL NAVY.

Sir,—The position of the medical officers in the Royal Navy is worthy of the most careful attention of the British Medical Association.

I think the following statement as to existing conditions in that service is simple lamentable:

1. *Position of the Director-General Medical Department of the Navy towards his Officers.*—This official seems to be entirely without power or authority over his officers. These officers are appointed to ships and hospitals not by the chief of their own branch of the service, but by a naval sea-lord who knows nothing of their efficiency or inefficiency. Whatever power or authority Sir Alexander Armstrong, Sir John Watt Reid, Director-General Dick, or other chiefs of the medical service R.N. enjoyed these now seem to be quite withdrawn, and the medical service is prostrate at the feet of a non-medical naval officer. How does this deplorable condition arise?

2. *The Sick-berth Staff.*—The Director-General of the medical department of the navy is quite powerless to move or allot a single man of the sick-berth staff. All this is done by the naval executive authorities and the title "Director-General" is entirely a misnomer. What interest can any officer or man of the Naval Medical Service take in his service under these conditions? A special inquiry seems called for.

3. *Medical Boards in the Navy.*—When Medical Boards assemble in the Royal Navy to report on the invaliding of sailors, however senior the medical officers may be—even if an inspector-general of hospitals—this officer cannot preside at the Board, and a young commander, perhaps about half the age of the inspector-general, may be presiding, and may be very unpleasant if he cares to be so to the Board. Such a condition of mistrust is lamentable, and is injurious not alone to the naval medical service but to the whole profession of medicine, for these naval executive officers, on retirement as admirals, etc., carry with them into civil life the same wretched opinion of the status of the medical man which they have seen in the navy. As the spirit of independence of the medical profession advances, not a single medical man of any character will enter such a retrograde and old-world service, and the matter is becoming one of national importance, and calls for reform. In the army the medical officers not only preside over their own Medical Boards, but sit as president if senior over all junior combatant officers on all classes of Boards.

4. *Salutes.*—It is very painful to see the neglect shown to naval medical officers as to salutes. They are constantly passed by by junior naval executive officers without being saluted. This greatly breaks down self-respect. In the army a medical officer of general's rank is entitled to the "turning out" of the guard like any other general, but an inspector-general of hospitals going on board a warship is not so saluted. Why? Simply because he is a naval doctor.

You will thus see that as great a reform is needed in the medical service of the navy as was effected in the military service between the quarter of a century from 1873 to 1898. I hope the British Medical Association will also work for naval doctors.—I am, etc.,

February 1st. Naval Medical Reform is Urgent.

THE FAILURE TO RECOGNIZE CIVIL SURGEONS IN SOUTH AFRICA.

Sir,—In the British Medical Journal of January 17th an "Ex-Civil Surgeon (Local)" complains, and rightly, of the way in which the Colonial civil surgeons were treated and left unrecognized. This is not to be wondered at, for the civil surgeons from home, several hundred in number, were almost passed over in the last honours list—for there were only two mentioned, and neither of these were University men. Out of the officers of almost every regiment there were two or three who received decorations; the medical officers of the Imperial Yeomanry were proportionately fairly well recognized, and the officers of the R.A.M.C. better than the civil surgeons; but the best of all were the consultants, the staffs of volunteer hospitals, of whom I should say more than half were well compensated. It cannot be said that these latter gentlemen saw more work or as much warfare as the civil surgeons, some of whom were killed, some wounded, and a good number suffered from disease, several dying.

The civil surgeons were the most uncomplaining class of officers in the war, and wherever they went they did the real practical medical and surgical work: on transports, in the hospitals, and on the field. For instance, No. 1 General Hospital, Wynberg, the largest and probably the best managed in South Africa, was practically run by the civil surgeons, the administrative work being done by officers of the R.A.M.C. Wherever I went it was the same, and we civil surgeons with columns in the field did the practical work, the executive being done by officers of the R.A.M.C. as a rule.

I feel sure that most of us joined from motives of pure patriotism, and voluntarily went to the war and endured hardships we should never have dreamed of undergoing under any other conditions, whilst there were plenty of stay-at-home critics, only perhaps taxed a few pounds a year extra.

The civil surgeons were as intelligent as any other class of officers in the war, and it would not have been too much if a representative of each university and of each diploma had been selected and placed in the honours list instead of being ignored.

I dare say that some were passed over because they had returned before the end of the war. Some did so after serving their term of agreement and after having been dangerously ill, and when they reapplied and were willing to return until the end, and although physically fit, they were not permitted to do so. Far from receiving any honours most of us have not as yet received the medals due to us.

The medical profession will receive due recognition when it learns to employ political influence.—I am, etc.,

February 3rd. Ex-Civil Surgeon.

THE SALE OF POISONS IN OPEN SURGERIES.

Sir,—In the British Medical Journal of February 7th Dr. William Bruce, Dingwall, has a letter on the above subject. As a member of the profession in Glasgow, I may say that we do not object to the law of the land, but we object to the action of the General Medical Council.

The General Medical Council administers the Medical Acts, and has nothing to do with the Pharmacy Acts. Its corporate conscience has not been burdened with any duties regarding the dispensing or selling of scheduled poisons. That duty rests with the Pharmaceutical Society, who, under its Acts of Parliament, has been empowered to exact certain penalties for breaches of these Acts.

It is nothing but impertinence on the part of the General Medical Council to assist the Pharmaceutical Society in its administration of the Pharmacy Acts, and in so doing it is simply acting as a catspaw to that Society. If the penalties under the Pharmacy Acts are not sufficient it is the duty of the Pharmaceutical Society to apply to Parliament for further penalties. The Pharmaceutical Society itself is not so deeply impressed as the General Medical Council with the necessity that the dispensing of scheduled poisons should be left entirely into the hands of qualified persons. It has not advertised to those on its own register a notice equivalent to that published by the General Medical Council, nor has it placed the names of those members on its own register whose unqualified assistants have been found guilty of selling scheduled poisons before the Privy Council for erasure. In fact, the General Medical Council has exhibited a zeal in the administration of the Pharmacy Acts far in excess of the legal administrators.

In 1899 the General Medical Council dealt with this question of employing unqualified assistants as dispensers. The Executive Committee, in replying to a communication from the Privy Council, state:

> That whilst they fear that occasional accidents may arise from the employment by qualified medical practitioners of careless or incompetent dispensers, the cases, in their opinion, are very rare, and it appears to the Committee that probably the best protection is afforded to the public by the responsibility of the practitioner for the acts or defaults of the servants whom he employs.

This was endorsed by the General Medical Council, and they appointed a committee, of which Dr. Bruce was a member, who reported on December 5th, 1899. This report states

> That, setting aside the minor dispensing which medical men carry out themselves without outside help, there is the dispensing on a larger scale (and on old-fashioned lines) which exists chiefly in the practice of the older members of the profession, and in outlying districts. This is carried on sometimes by unqualified dispensers who have been trained in the work for years and have become from long experience expert and safe. .....The Committee.....believe that the transition from the small amount of dispensing which a medical man can without difficulty perform himself, to the larger amount requiring the services of a special dispenser is so gradual that it would be impossible to draw a line and say at what point a qualified person becomes indispensable. Under these circumstances the committee do not see their way to recommend any course to be taken by the Council at the present time in reference to this question, but they endorse the reply sent by the Executive Committee to the Privy Council.

Exactly a year after this (December, 1900) without the slightest notice, a medical practitioner in this district was summoned before the General Medical Council for having an unqualified pharmaceutical assistant. In another year seven men were summoned, and one of the cases which was then brought before the General Medical Council occurred in March, 1897, two years before they had come to the above resolution.

The fact is the General Medical Council seems to have no fixed idea as to the nature of infamous conduct in a professional respect.

The Pharmacy Act, in which the General Medical Council has taken so much interest, is one that is sadly in need of revision. The whole Act is ambiguous, and, while the Act remains, there have been so many legal decisions which have altered to a large extent its meaning, that really when a conviction occurs the delinquent has rather the public sympathy in his misfortune than otherwise. According to Section XVII of the Pharmacy Act, it was quite competent for an apprentice or servant to make a sale of a scheduled poison, and it is within comparatively recent times that the Pharmaceutical Society obtained a decision of an opposite tenour. To show this, we quote the Editor of the *Pharmaceutical Journal* of January 9th, 1895, where he states that "very important changes have taken place in the views entertained as to their powers under the Pharmacy Act of 1868."—I am, etc.,

Govanhill, Feb. 10th. JOHN BROWN, M.D.

SIR,—I am not a Poor-law medical officer, but agree with the statement in their report that while it is possible in cities and towns to keep within the reading of the Pharmacy Act, it is quite impossible to do so in the Highlands and islands and country districts where there are no druggists. I know the West Highlands fairly well, and take the Island of Arran as an example. There are four or five medical men in the island, but no druggist. The medical men must of necessity not only supply their own patients but also the general public with drugs. Would it be at all reasonable that if any member of the public should suffer from, say, such a common complaint as colic or toothache, and called at the doctor's surgery and asked for a little laudanum, that he should be refused because the doctor was not at home and might not be for many hours?

From short paragraphs which have appeared in the public press lately, I believe that the Poisons Committee report will recommend that all poisons used in agriculture, horticulture, etc., may be sold by storemen, the argument being that many sheep farmers, etc., are long distances from the nearest druggist, and so would have great difficulty in procuring such. Is the convenience of the general public not of infinitely greater importance than that of a few farmers?

I should like to ask Dr. Bruce what authority he has for the assurance he gives in his letter to the BRITISH MEDICAL JOURNAL on February 7th. At the time of the prosecutions against medical men whose unqualified assistants had sold scheduled poisons I took a legal opinion on my position. I suggested that I would get an agreement signed by my shop assistant that scheduled poisons were not to be sold on pain of instant dismissal. This I was assured would in no way protect me, but, on the contrary, would look like conniving at a defeat of the Pharmacy Acts.

If chemists and druggists would keep to their legitimate business and cease poaching on our domain by prescribing, then I think medical men in the West of Scotland would be able to close their open surgeries to-morrow.—I am, etc.,

February 9th. M.D.

DIAGNOSIS AND ADMISSION TO FEVER HOSPITALS.

SIR,—On January 30th a patient was brought up to this hospital certified diphtheria. On examination he showed a well-marked measles rash, clean fauces, slight laryngeal stridor, and some swelling of the neck. From these symptoms a diagnosis of measles was made and the child was sent back home. On the following day the practitioner who had certified him called upon me and showed me a certificate from a laboratory stating that diphtheria bacilli had been found in the material taken from the child's throat. I accordingly admitted the child, and had the certificate been sent in the first instance the case would not have been refused.

May I use the publicity of your correspondence columns to ask two things of practitioners who send cases to the fever hospitals?

First, that in certifying a case as diphtheria, where the evidence is bacteriological, not clinical, they should state the fact on their admission certificate.

Secondly, that if a patient is to their knowledge suffering from two infectious diseases, as diphtheria and measles, or scarlet fever and whooping-cough, both should be stated. For if the rash is just coming out the case might be thought at the hospital to be erroneously diagnosed, or if the rash is nearly faded the patient might be sent to a diphtheria ward to the danger of the other inmates.—I am, etc.,

F. M. TURNER,
Medical Superintendent, South-Eastern Hospital.

New Cross, S.E., Feb. 7th.

"THE SPITTING NUISANCE."

SIR,—Your article of January 24th vigorously advocating the suppression of the spitting nuisance I, for the most part, fully endorse; but it appears to me that the end sought is the more likely to be attained if too comprehensive a suppression policy is not adopted.

While urging the public not to spit on the pavement, they might surely be allowed—perhaps, as things are, even encouraged—to spit into the gutter, until at least it be proved that any practical danger arises from the habit. "The trailing edges of ladies' skirts" have no right in the gutter at all, whatever may be said in their favour elsewhere.

You state that Dr. H. E. Annett has shown that "of 105 specimens of sputa collected from some of the principal streets of Liverpool during the winter months five were proved to contain virulent tubercle bacilli." In the BRITISH MEICAL JOURNAL of February 6th, 1897, p. 351, it was pointed out that the experiments of no less an authority than Cornet, of Berlin, showed that "the dust in streets obtained from places where consumptives were wont to spit might be neglected so far as any risk of tuberculous infection is concerned."

It is pretty obvious, therefore, that there is no risk of tuberculous infection from spitting in the streets, since in a crowded town like Liverpool the sputa is rarely infected (5 per cent.), and the dust never.

Urban and county councils may well be urged to suppress spitting in public cars and buildings for sanitary and other reasons, but their advisers should explain to them that the objection to spitting in the gutter is an aesthetic one only, since air (and it is with this we have to do) has never been proved to be contaminated in the open in consequence of spitting on the ground.

The temperance movement suffered much from fervid advocates whose zeal has lately been eclipsed by that of the enthusiasts for fresh air, pocket spittoons, and crude suppression policies. I think it is time to protest against the pseudo-scientific tyranny of men, who, filled with one idea, and outpacing the science which they vaunt, impatiently force their hobbies on their fellows, or run them, however excellent, to impossible and useless extremes.—I am, etc.,

Mentone, Jan. 29th. D. W. SAMWAYS, M.D., D.Sc., M.R.C.P.

A DEGREE FOR LONDON STUDENTS.

SIR,—From the first it was only too easy to predict the ultimate destiny of the memorial presented last November by the deputation of the London Licentiates' and Members' Society to the Royal Colleges, as also to forecast the "reasoned objections" to be appended thereto by the Senate of the University of London. The policy of the former Faculty may be regarded as notably elusive, as that of the latter is exclusive. I hope your correspondent, Mr. Elliot-Blake, will forgive me a certain twitching of the risorius when I read his naive consolation that "the Colleges themselves, luckily, are in entire accord and sympathy with our acknowledged disabilities." Quite so; they are, they were, and they ever will be; but *quousque tandem*, etc.? A pious utterance of academic sympathy will, however, scarcely remove those disabilities. To any one like myself having long known of the resolution adopted by the Royal Colleges in July, 1885, with the late Sir William Jenner himself both advocate of the scheme and Chairman of the Board of Delegates, it must afford no mean sense of the facetious when, after eighteen years, we hear that, having deliberated, the Royal Colleges promise only "reasoned objections" against a scheme concerning which Sir William Jenner reported in 1885: "Should the two Colleges approve the foregoing resolutions, means could be found for giving effect to them." Now, in 1903, we are told in the same breath that the Colleges do so approve and promise "reasoned objections" to its accomplishment.

The *rationale* of this is beyond me, and once more—*pace* Mr. Elliot-Blake—I must own to a *risus incredulus*.

So much wordy warfare has of late invested the appeal that controversy, leavened with no small amount of prejudice, has considerably obscured the sole purport of the petition, which asks only that Conjoint men may be permitted, by virtue of their college examinations, to offer themselves for university graduation in medicine by examination of such standard as the University may think fit to appoint. I hold that no Conjoint man would think so meanly of his training—many, like myself, having taken out the full University curriculum, and even passed the First M.B. at a provincial university—or indeed so depreciate the Conjoint Board standard of qualification that he would scruple to "face the music" of a fairly rigorous Final M.B. But in some quarters it seems to be held rather good form to make a sort of "Hyperion to a Satyr" contrast between graduates and diplomates, based, perchance, less on exceptional professional ability than on the smug complacency of prefixing "Dr." to their names. The disabilities or the advantages of this titular designation are neither of them *per se* so great as to warrant such a clamour for its possession as if it were the *ens entium* of medical proficiency. But that in nowise affects the principle whereon Conjoint practitioners found their appeal for a University degree, namely—their claim to having received the highest and costliest professional training in the kingdom, the unification and standardization of medical education by the proposed "one-portal" system, and, lastly, the example of Continental Governments, which exact university graduation for State appointments. Founded on such claims as these, no one has a right to impute to the petitioners a snobbish desire to be dubbed "Dr.," but rather a worthy aspiration to practise their profession under the most accredited State recognition possible.

Now that a new era has dawned on the recreated University of London, when, moreover, a superior standard of preliminary education for entrance to the profession of medicine is to be inaugurated, and when the march of national progress in every branch of science is exhorted—even from the Throne itself, what more fitting season for the metropolitan Faculties of Medicine to coalesce for the purpose of conferring on those starting their professional career a qualification which shall be honourable alike to the recipient and to the imperial centre where he was trained?

Should, however, the appeal pass still unheeded, as in years gone by, and the stenopia of tradition so narrow their view that the London Faculties behold only their individual prestige, then, indeed, it were best to seek pastures new, and approach those provincial universities whose more venerable past may perchance wisely extend a view to the more progressive present. The University of Durham has for many years admitted to its M.D. degree practitioners of fifteen years' standing, and were this regulation to be now so modified as to include the fifteen years intervening between the amalgamation of the Royal Colleges and the first year of the new century, doubtless many Conjoint men qualified within that period would gladly avail themselves of the privilege. The organizers, therefore, of the recent deputation would be well advised, failing any definite promise of success in London, to bestow their efforts more effectually by ascertaining the views of the provincial universities, whose interests, both facultative and fiscal, would proportionately benefit by the influx of those whom the offer of graduation would necessarily attract.—I am, etc.,

Windsor, Jan. 28th. W. Lisle Goodridge.

THE POWERS OF THE CORONER.

Sir,—Your leader in the British Medical Journal of February 7th should draw attention to the aggressive attitude of the modern coroner, and sound the note for united action to resist his encroachments.

And the action of Mr. Troutbeck has its analogue in the decision of the coroner for this district, a lawyer, who maintains that "a death the result of a surgical operation is not a natural death, and therefore comes within the cases set out in Section 1 of the Coroners' Act, 1887, in which a coroner should hold an inquest," and on the assumption that "the general practice is for the registrar to report all such cases to the coroner to enable him to come to a decision as to whether an inquest is advisable or not," he insists on the registrar of deaths reporting to him "any cases, although certified, in which death follows a surgical operation within fourteen days."

The result is that certificates given in good faith by qualified men who have had a special training to fit them for the duty are to be reviewed by a lawyer, with the possibility that the intelligence of a coroner's jury may be brought to bear upon them. And the knowledge that deaths where an unqualified man or no man at all has been in attendance can be registered as "uncertified" deaths does not tend to allay the sense of injustice under which myself and my colleagues here are labouring.

A deputation from the local medical society waited upon the coroner and pointed out to him that there was no evidence whatever that his innovation was the general practice, inquiry in different parts of the country having discovered no trace of such a practice; that refusal of the registrar to register valid certificates could not fail to rouse suspicions in the minds of surviving relatives that there had been some neglect on the part of those responsible for the treatment of the deceased; that in the case of the infirmary such a restriction was quite unnecessary, as by the rules no capital operations are done, except in urgent cases, without previous consultation, and that the same rule almost universally obtains in private practice; that with the fear of an inquest over his head a surgeon will refrain from operating in critical and dangerous cases where operations often save life; whilst the innovation is quite contrary to the spirit of the instructions given for the guidance of practitioners in certifying deaths.

The interview was practically barren of result, but as a concession the coroner said if the certificates were first sent to him he would initial them for registration by the registrar of deaths. Now the persons "to whom only this certificate should be given" are stated at the beginning of each death certificate book, and the name of the coroner does not appear amongst them. So that this request of a legal coroner is an invitation to medical men to do something which by law they are forbidden to do.

But when I tell your readers that the coroner lives in Halifax, and has his office there, the practical inconvenience of such a procedure—apart from other considerations—will be apparent. And quite recently a case has occurred where it was impossible to catch the coroner, and where his Honour, having declined to give an order for burial unless the circumstances were explained to him personally, left a form signed in blank, which in his absence his wife filled up, when at great inconvenience a messenger went over to Halifax at his own request to see him.

Although in this case the operation was performed on the advice of a well-known specialist, it was not till half an hour after midnight, on the morning of the funeral, that anxious relatives, after much running about and trouble, knew that the funeral would be allowed to take place. So long as the coroner maintains his present attitude irritating delays will arise; and what guides him in deciding for or against an inquest passes comprehension.

The question has been before our medical society, and there is a unanimous feeling that it should be brought before the profession at large. We regard it as a serious menace to our rights, whilst the threat of an inquest is a hindrance to the proper discharge of our duties to our patients in surgical cases.

The relationship of coroners to practitioners is one which especially touches the busy, struggling men in the lower walks of the profession. They have neither the influence, the time, the money, nor the cohesion to take up questions and agitate, like the men in the higher ranks; and it is on their behalf that I venture to suggest that the power of the Association may in this matter be most beneficently exerted.—I am, etc.,

Huddersfield, Feb. 10th. Norman Porritt.

THE FIELD OF VIEW OF THE ANAESTHETIST.

Sir,—In a leading article of the British Medical Journal of January 31st you very kindly noticed my presidential address before the West London Medico-Chirurgical Society, entitled "The Field of View of the Anaesthetist," and as your remark—

> Mr. Lloyd gives his own views, which, curiously enough, do not harmonize—if, as we gather, he refers to chloroform—with the accepted views of dilatation in the second and fourth degrees (Snow) and contraction in the third—

may be misleading, you will greatly oblige by publishing this extract of the address:

> The conditions mentioned which influence the size of the pupil will account for its behaviour not being constant or uniform during the administration of anaesthetics. While the pupil is contracted, medium, or mobile it is satisfactory. In the early stage of chloroformization the pupil should not be dilated. A dilated pupil may be observed from

some cause occasionally in the early stages of general anaesthesia. It is commoner in the later stages, and, I believe, constant in the dangerous conditions in which death is impending, unless influenced by drugs—for example, opium—or pathological conditions, such as adhesions, or disease of the nervous system. A dilated pupil should be a signal (not necessarily of danger) to the anaesthetist to make doubly sure of the exact condition of the patient. While respiration and circulation are effectually proceeding, a widely-dilated pupil may soon contract on temporarily discontinuing the anaesthetic. Besides the conditions referred to it may be evidence of excess of anaesthesia, or exhaustion from shock or haemorrhage, and is frequently observed as a precursor of vomiting. A contracted pupil is always reassuring unless produced by drugs, for example, opium or morphine, or by disease. Dilatation of the pupil during chloroform administration may arise from any of the various causes already suggested, but when it is due to too high a percentage of chloroform in the system it is perilous to ignore it.

By implication a dilated pupil is not a *necessary* accompaniment of any part of chloroformization for *operations*, and dilatation generally occurs when the anaesthetic is pushed beyond that, and probably always when death is impending. *Vide* the address, there are many circumstances influencing the phenomena appearing during anaesthetization and operation besides the anaesthetic. The pupil is no reliable guide to the state of anaesthesia although a useful signal of the condition of the patient. Let me quote Snow, Hewitt, and Gill upon the "pupil," and I hope to do them no injustice in observing necessary brevity.

Snow spoke of five degrees[1] of chloroform anaesthesia, the fifth terminating as in death from asphyxia. Snow *specially* draws attention to his use of the word *degrees* rather than *stages*. He says "the pupils are dilated in the fourth degree.....They are occasionally dilated, however, under the slighter effects of chloroform, and even as the patient is recovering from its effects.....In the third degree of narcotism.....the pupils are usually, if not always, contracted.....The pupils are acted on by other causes, both internal and external, as well as the chloroform.... Some writers have entered into a good deal of detail about the pupils, but their statements are very conflicting."

Dr. Hewitt[2] describes first, second, and third "degrees or stages" of chloroform anaesthesia, his last being the stage of deep surgical anaesthesia. He says:

The pupils during this part of the administration (second degree) are as a general rule mobile and more or less dilated. They react sluggishly, or possibly not at all, to light.

Of his third degree he says:

All observers agree that it is usually contracted in deep chloroform anaesthesia, but ,the term "moderately contracted" seems to me to be more appropriate.....Occasionally, as with ether, it remains widely dilated throughout this stage, even though the anaesthetic has not been pushed too far.

Mr. Gill, in the *St. Bartholomew's Hospital Reports*, says:

The normal type (of) the effects of chloroform finds expression in a contracted pupil.....If chloroform be present in an overdose, the pupil is always dilated, the degree of dilatation corresponding to the degree of chloroform narcosis.

I think Mr. Gill says that in 2,000 administrations the pupil was contracted throughout in 96 per cent. He says of one of his exceptional cases:

With the difficult breathing brought about by an encroachment on the upper aperture of the air channels, the complexion became in a slight degree livid, the pupil commenced to dilate, and the pulse got feebler. As soon as oxygen was allowed to enter freely, all the gravity of the case disappeared forthwith.

Of another:

In the case above related "there was no dilatation of the pupil. Why? Because the accumulation of CO_2 was not allowed to reach that degree of CO_2 poisoning associated with a dilated pupil." To obtain clear and distinct ideas of the action of this anaesthetic we must enumerate all the causes operating with it, and isolate as accurately as we can their effects. Only thus shall we avoid the error of ascribing to $CHCl_3$ what is in reality not of $CHCl_3$.

Of a child aged 8 suffering from adenoids he says:

After a little while the pupil became pinpoint, indicating the anaesthetic degree of unconsciousness. Operation performed. Vomited. Pupil remaining pinpoint. But with the advent of returning consciousness the respiration was observed to become shallow, the face pale and covered with perspiration, and the pupil was widely dilated. This condition continued for a few minutes, when, before a second attack of vomiting, the breathing was arrested in full inspiration. When the second act of vomiting ceased, the little patient became conscious very quickly.

Mr. Gill also remarks:

The measure of anaesthesia—and the term anaesthesia is used to denote the lowest degree of unconsciousness which is needed for all operations, both large and small—is the contracted pupil. And so long as the case remains one of normal anaesthesia, the contracted pupil is the sign which gives confidence to the administrator.

Thus the sign of security in anaesthesia is the contracted pupil. There is inferred from that statement that all the other signs of the constant anaesthetic state are present.

Thus no universal proposition can be made concerning the contracted pupil; and the same applies also to the dilated pupil.

An anaesthetist has two chief aims: (1) The safety and comfort of the patient during and after the operation; (2) the attainment and continuance of surgical anaesthesia, that is, a sufficient depth of anaesthesia to allow of the smooth performance of the operation. He watches the signs of these, and does not identify each of the "degrees" any more than a surgeon operating upon a hernia identifies each of its anatomical coverings.—I am, etc.,

Kensington, W., Feb. 9th. RICKARD W. LLOYD.

[1] Snow, *On Chloroform and Other Anaesthetics*, 1858.

[2] Hewitt, *Anaesthetics and their Administration*, 1901.

THE BILBERRY IN TYPHOID FEVER.

SIR,—I have read with great interest in the BRITISH MEDICAL JOURNAL of February 7th, an article by Dr. Max Bernstein on the bilberry as a remedy in enteric fever and other infectious diseases of the intestines.

I heartily join with Dr. Bernstein in his contention that a highly important principle in the treatment of enteric fever is the neutralization in the intestinal canal of the specific bacilli which develop and multiply there. So long as those bacilli are left unharried, there will be material for fresh infection of the blood, and thereby, as Dr. Bernstein argues, an undue prolongation of the fever.

In the JOURNAL of May 14th, 1898, I published a paper on enteric fever in India, and its treatment on the antiseptic principle. In that paper will be found the following observations, which I wish to quote as bearing directly on the principle which underlies Dr. Bernstein's article:

I at once admit that it is not possible for the antiseptic agent we employ to enter the blood current in sufficient abundance to exert there any influence of importance, on the product of the bacilli, that is, the typhotoxin, which we assume to be the prime cause of the group of symptoms which, taken together, make up our conception of enteric fever. But we must remember that the bacilli which produce the typhotoxin grow and multiply in the intestinal canal. This being admitted, it is reasonable to suggest that while in the intestine the potency of the bacilli can, to a large extent, be neutralized by the free administration of some reliable antiseptic; on doing so we cut off a large dépôt, so to speak, for the production of the specific fever element. Looked at from that standpoint, the production and maintenance of intestinal antisepsis is, I submit, a remedial measure of high importance. It renders harmless, to a great extent, the bacilli in the intestinal canal: in other words, it cuts off "the reserves" which supply to the blood the fever poison.

The publication of Dr. Bernstein's very suggestive article gives me an opportunity for once more pressing on the readers of the JOURNAL the claim for favourable recognition of a method of treating enteric fever which must ever be specially associated with the advocacy of its pioneer, Dr. Burney Yeo.—I am, etc.,

R. H. QUILL, M.D.,
Dover, Feb. 8th. Colonel R.A.M.C.

RESTORATION OF FUNCTION AFTER SUTURE OF NERVES.

SIR,—On reading your leader in the BRITISH MEDICAL JOURNAL of February 7th on the above subject it occurred to me that an explanation of the varying period after suture requisite for the restoration of sensation might be found in the fact that the operation has been performed at varying intervals after the injury. After section of a nerve degeneration takes place in the peripheral end whether the cut ends are immediately sutured or not, but Ballance and Stewart[1] have given proof that after an interval of about three weeks regeneration begins in the peripheral portion of the nerve quite independently of the central, and the two processes of degeneration and regeneration go on together. Complete restoration of structure does not, however, take place unless the ends are sutured. It may be expected, therefore, that after suture the return of sensation will occur the earlier the more advanced the process of regeneration in the peripheral end, that is, within limits, the longer the period that has elapsed after the injury. If, however, the ends of the nerve are sutured immediately after the injury sensation may return almost at once and remain for a short time, owing to the fact that the peripheral portion retains its excitability for a period, but one would expect anaesthesia to follow later.

With regard to the manner in which the nervous impulse is transmitted between the two ends of the sutured nerve before organic union has occurred, I venture to suggest an alternative explanation to that advanced by Sir William Banks. It might be accounted for in a similar way to that of "secondary

[1] BRITISH MEDICAL JOURNAL, September 27th, 1902.

contraction" in muscle. Although the fibres in the peripheral end are not structurally perfect, one may assume that they possess a certain amount of conducting power, and if an impulse be started at the skin it will travel along the regenerated portion, accompanied, as is known, by an electrical change. The electrical change, on reaching the region of the suture, will stimulate the hyper-excitable (because recently trimmed) central end placed in apposition, whence an impulse will be transmitted to the spinal cord. The electrical change is very minute, much less than in muscle, but it seems more reasonable to explain the transmission of the nervous impulse in this way than to assume a process analogous to wireless telegraphy. It would thus be a matter simply of electrical conduction.

I do not know if Ballance and Stewart believe that motor as well as sensory fibres are regenerated peripherally, but Fleming[2] states that the evidence is all against the regeneration of the motor fibres in this way. If the latter is correct it is easy to understand why motor power is restored much later than sensation.—I am, etc.,

Hull, Feb. 9th. E. E. Laslett.

THE COLNEY HATCH FIRE.

Sir,—Every one in any way responsible for asylum management must feel that everything possible should be done to prevent a recurrence of such a catastrophe.

When I was in the United States two years ago inquiring into the insane and epileptic hospitals there I found that in the wooden buildings they had had frequent fires; these usually broke out in the laundries and inquiries carefully carried out showed that in many cases the cause was the dust that had accumulated on the hot pipes becoming ignited. Looking at the view in the *Graphic* and remembering the high wind prevailing at the time this may possibly have been the cause at Colney Hatch.

Wooden buildings have now been prohibited in the United States and thin embossed steel is largely used for ceilings and dados in the hospitals for the insane and epileptic, it certainly gives a more finished appearance and does not chip off like plaster.—I am, etc.,

Didsbury, Feb. 4th. Jno. Milson Rhodes, M.D.

AN IMPROVED HYPOBROMITE PROCESS FOR THE ESTIMATION OF UREA.

Sir,—As Dr. Pechell left for South Africa on January 30th perhaps you will allow me, shortly, to reply to the letters of Dr. Gilchrist and Mr. Longworth.

1. I acknowledge our ignorance that Dr. Pechell had made a rediscovery. Nevertheless, a considerable amount of time was spent by him at the Library of the College of Surgeons, after we had exhausted the half-dozen books in the Laboratory that were likely to help him, and subsequent to the appearance of Dr. Gilchrist's letter I spent an afternoon at the library of the Medical and Chirurgical Society investigating the point. As a result of these and other inquiries I can unhesitatingly say that the fact contained in Dr. Pechell's paper is not a matter of common knowledge amongst medical writers. The best reference that I have found is in a paper by Noël Paton in the *Practitioner* for 1886.

2. All who have had much to do with research are aware how difficult it is to be certain that one has not overlooked a paper by one's own countrymen, to say nothing of foreign literature. Dr. Gilchrist is exceptionally placed with regard to the work of French authors, but I made inquiries of Dr. Pechell with regard to his knowledge of French and German before he commenced to search for literature. Probably his failure to find the papers of Méhu and others is partly due to the fact that he is a comparative novice in research.

3. To Dr. Gilchrist's complaint that English investigators are unacquainted with French scientific work, I would only say that if he were resident in England he would soon find that there is another and a very different side of the question.—I am, etc.,

W. S. Lazarus-Barlow.

The Clinical Laboratory, Westminster Hospital, Feb. 7th.

*** This correspondence is closed.

THE MAGNESIUM WIRE TEST FOR LEAD.

Sir,—I have read with much interest the article on the magnesium wire deposition test for lead in the British Medical Journal of January 31st, p. 242, by Dr. Jacob and Mr. Trotman. As one who was responsible for much of the chemical work in the communication referred to in Dr. Abram's paper[1] quoted by Dr. Jacob, perhaps you will be good enough to allow me a little space to discuss this.

The process put forward by us in 1896[2] was a clinical method whereby the presence of lead in small quantities could be ascertained with accuracy and dispatch, and was in no way meant to be anything beyond this. We were perfectly familiar with the process of electrolytic deposition of lead by which an accurate determination of the quantity of the metal in a given volume of liquid could be estimated, in fact this is referred to in both our above-mentioned papers.

In our hands the simple method we put forward has always worked satisfactorily. Using pure magnesium foil there is no precipitate of lead iodide in a control experiment with distilled water, or normal urine treated as we suggest; upon the addition to either of even so small a quantity of lead as one in fifty thousand, however, a canary-yellow precipitate of lead iodide is produced.

There is no doubt that in urine not containing lead the magnesium becomes stained a yellowish-brown colour, but this is very different from the characteristic colour of lead iodide.

The ordinary magnesium ribbon being frequently contaminated we used for our experiments a pure foil which we obtained from Messrs. Johnson, Matthey and Co., and this has proved most satisfactory.

With regard to the conclusion of Dr. Jacob that "a test having a limit of 1 in 50,000 will fail," we did not think it necessary to mention to any one familiar with analytical work that a very weak solution of lead in an organic fluid might be concentrated by evaporation before applying our test. We are aware that the lead is excreted in an organic combination, and it was a knowledge of this fact which led us to employ an electrolytic method for the detection of the metal.

Since reading Dr. Jacob's paper I have repeated the experiment with normal urine treated as we describe, and in no case did I obtain any yellow colour indicative of lead iodide.

In conclusion, may I say that I consider the process put forward by Dr. Abram and myself in 1896 is still the most satisfactory one for the clinical detection of lead in pathological organic fluids.—I am, etc.,

Prosper H. Marsden, F.C.S.,
Lecturer in Pharmacy and Demonstrator in Materia Medica, University College, Liverpool, Feb. 3rd.

[2] Allbutt's *System of Medicine*, vol. vi, p. 627.

[1] Three Cases of Lead Poisoning, with a note on a Simple Method for the Detection of Lead in Organic Fluids, by John Hill Abram, M.D. London, M.R.C.P. The *Lancet*, January 16th, 1897.

[2] The Detection of Lead in Organic Fluids, by John Hill Abram, M.D. London, M.R.C.P., and Prosper H. Marsden, F.C.S.—British Association, Liverpool, 1896.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE WAR COMMISSION.

At the meeting of the War Commission last week evidence was given by Sir Frederick Treves, who expressed his views as to the over-organization of the Army Medical Service at the date of the war, the need of decentralization, and of giving to the individual officer more freedom of action and emancipation from merely clerical work. He gave evidence as to the inadequacy or unsuitability of much of the stores, instruments, and ambulance at the date of the war, as to the training of army medical officers, and as to military hospitals generally. He also gave explanations as to the recent action of the Medical Advisory Board at the War Office and the steps which have been taken since the war, or are now in contemplation, to reform the defects of the Army Medical Service.

THE SOLDIER'S SHIRT.

Army Order 28 authorizes the issue of an extra shirt to the infantry in June next. Hitherto the men have had only two shirts; it is satisfactory to find that an end is to be put to this uncleanly arrangement. Another move in the same direction was made some little time ago, when orders were given that the sheets of the beds should be changed every fortnight instead of once a month.

MALE NURSES IN THE ARMY.

A comprehensive scheme of reorganization aiming at a differentiation of the duties of non-commissioned officers and men of the Royal Army Medical Corps has been under consideration at the War Office.

It has been decided to recommend that the non-commis-

sioned officers and men of the corps should be divided into four distinct sections:

1. Nursing Section.
2. Cooking Section.
3. Clerical Section.
4. General Duty Section.

Special attention has been paid to the training of men for the Nursing Section, who will in future be employed in nursing duties only. A very complete scheme for nursing instruction is being drawn up, and every effort is being made to develop this section.

Her Majesty has signified her wish that the most proficient and best-conducted male nurses should be admitted to her nursing service, and a scheme for carrying out this object, including extra remuneration to such selected non-commissioned officers and men, and the granting of a special badge to denote the distinction that has been conferred upon them, is under consideration.

To the general duty section will be allotted those duties in hospitals only indirectly connected with the care of the sick.

Advancement to a higher grade of orderly and promotion (except to a limited extent in the clerical and cooking sections) can only be obtained through the nursing section.

Revised rates of pay are under consideration with the view of making the nursing section the most important and attractive.

It is believed that the employment of specially-selected men in nursing only with adequate remuneration will attract to the corps the best class of men, while the courses of instruction for which officers commanding hospitals and matrons are responsible should enable men to qualify themselves for posts in civil life on retirement.

A MOUNTED BEARER COMPANY.

By Lieutenant-Colonel H. HATHAWAY, R.A.M.C.

MY first article on this subject (October 11th, 1902) has received due notice in the service papers, and has also elicited the valuable experiences of several medical officers well qualified to discuss and also to organize what is required in this matter.

I find from the *Army and Navy Gazette* of December 6th, 1902, that Colonel Williams, the Principal Medical Officer of the New South Wales military forces, went fully into the details of a mounted ambulance service as far back as 1892. I yield to him, therefore, all credit for having first proposed this service. The object of my paper is arrived at in that you facilitate discussion of the subject. It has given us the valuable experiences of Colonel E. B. Hartley, V.C., C.M.G., P.M.O., Cape Colonial Forces. Sir Frederick Treves, in his speech at Manchester on December 22nd, 1902, mentions the necessity of a galloping field outfit to follow a rapidly-moving cavalry corps. We are apparently all agreed about the necessity of a mounted bearer company, that it should be well horsed, that the *personnel* should all ride and be, if possible, good horse masters; but there is a diversity of opinion about the form the carriage should take, and this is only natural, considering that no form of carriage could be suitable for every country that we operate in, or even in different parts of South Africa: that country has given us valuable experience that confirms the opinion that a mounted bearer company is required wherever mounted troops operate quickly, but we must not organize our ambulance to suit South Africa only. Our carts must not be drawn by a long team of mules because they want less food than horses and can survive almost anything. The difference between an ambulance moving rapidly or slowly is dependant on lightness of weight to carry, and efficiency of men and horses; the former must be secured by a suitable cart and the latter by proper style of horses sufficiently fed, and the due recognition by all the Corps that the *raison d'être* of their existence as a mounted corps to be largely dependant on the care of their horses.

I have discussed the cart with a large number of officers since writing my last paper, and I hope soon, with assistance in India, to describe a vehicle that will satisfy the critics.

The Mounted Bearer Company provides for the "lying down" cases of mounted corps, but by far the larger number of sick and slightly wounded can without detriment to their condition ride their own horses.

Cavalry out on patrol, or in small parties, have often the greatest difficulty in withdrawing their wounded. The majority of these could be taken away if well supported in their own saddles. The field hospitals in India are provided each with 80 riding ponies for cases not severe enough to require lying down accommodation. The majority of these cases have never ridden in their lives; a support in the saddle would enormously increase their comfort. For all such cases I have for many years been trying to devise a support in the saddle, and I will now describe an apparatus I have invented, which has stood a severe test and answers requirements admirably. It is simple, inexpensive, fits all military saddles without any alterations, makes a saddle feel like a comfortable armchair, and will prevent an unconscious man from falling from his saddle when his horse is galloping. A semicircle of light metal, padded inside and leather-covered, has two large D's at front extremities and a metal leather-covered upright fixed at right angles to middle of semicircle behind. When the patient has been assisted to his saddle this upright is placed in the crupper D of saddle, a stirrup leather is



Front view.

threaded through the two D's in front and through the middle of the saddle between the wallets, then the strap is buckled. The whole process takes a few seconds only. The weight of the patient is supported partly by the saddle and partly by the ring pulling against the fixture in front; the upright only keeps the ring at the proper height and prevents lateral swaying. A padded head rest can be put above upright with protection from sun. Six of these supports can be carried face downwards on saddle of a spare horse secured by the leather straps, and would be ready at once for use with a patrol.

ARMY MEDICAL SERVICE.

SURGEON-GENERAL EDWARD BAILEY TUSON died at Torquay recently, aged 83. He was appointed Assistant Surgeon, August 20th, 1844; Surgeon, November 10th, 1854; Surgeon-Major, August 20th, 1864; Deputy-Surgeon-General, July 24th, 1872; and Honorary Surgeon-General on retirement, March 4th, 1879. He served in the Crimea in 1855 as Surgeon of the 12th Lancers, and received the medal with a clasp for Sebastopol and the Turkish medal.

Surgeon-Major WILLIAM VENOUR died at Saundersfoot on February 4th, aged 68. He was appointed Assistant Surgeon, September 22nd, 1858; Surgeon, March 1st, 1873; and Surgeon-Major, January 30th, 1875; retiring

from the service July 14th, 1889. His war record comprises—the Ashanti war, 1873-4 (medal); the Afghan war, 1878-80, including advance on Khelat-i-Ghilzai and action at Takht-i-Pul (medal); the Soudan campaign in 1884 in charge of a hospital ship at the base (mentioned in dispatches, medal, and Khedive's bronze star); and the Burmese expedition in 1886-7 (mentioned in dispatches, medal with clasp).

ROYAL ARMY MEDICAL CORPS.

THE undermentioned Captains are promoted to be Majors, dated January 31st: E. E. POWELL, M.D., J. W. JENNINGS, D.S.O., E. McK. WILLIAMS, J. C. CONNOR, M.B., F. W. HARDY, W. A. GRAHAM, D. D. SHANAHAN (Brevet Major), C. W. H. WHITESTONE, M.B., A. PEARSE, and C. DALTON. Their first commissions are dated January 31st, 1891. Their war records are as follow: Major Powell—Chitral Relief Force, 1896 (medal with clasp). Major Jennings—Dongola Expedition, 1896 (British and Egyptian medals); Nile Expedition, 1897 (clasp to Egyptian medal); Nile Expedition, 1898, including battle of Khartoum and defeat of Ahmed Fedil's army (mentioned in dispatches, D.S.O., 4th Class of the Medjidie, and clasp to Egyptian medal); South African war, 1899-1900 (mentioned in dispatches). Major Williams—Chitral Relief Force, 1895 (medal with clasp). Major Connor—South African war, 1899-1900. Major Graham—Nile Expedition, 1898 (British and Egyptian medals). Major Shanahan—North-West Frontier of India, 1897-8, with the Malakand Field Force (medal with clasp); South African war, 1901 (severely wounded). Major Whitestone—North-West Frontier of India, 1837-8, with Malakand Field Force (medal with clasp). Major Pearse—North-West Frontier of India, 1897-8 (medal with clasp). Major Dalton—Karene Expedition, Sierra Leone, 1898-9 (mentioned in dispatches, medal with clasp); North-West Frontier of India, 1897-8, including action at Landakai (medal with clasp); South African war, 1899-1900, as Special Service Officer at relief of Ladysmith and operations of January 17th to 24th (severely wounded, mentioned in dispatches, medal with three clasps).

Captain H. N. DUNN, M.B., from the seconded list, to be Captain, January 22nd.

Lieutenant M. G. STERLING is seconded for service with the Egyptian army, January 17th.

MEDICAL STAFF COLLEGE.

THE name of the clinical teacher in otology at the Medical Staff College should have been given as Mr. Arthur Cheatle, and not as printed at p. 344.

INDIAN MEDICAL SERVICE.

DEPUTY-SURGEON-GENERAL JAMES GILBERT, late Bombay Establishment, died on January 28th, aged 80.

IMPERIAL YEOMANRY IN SOUTH AFRICA.

TEMPORARY CAPTAIN A. RICKETTS, M.B., C.M.G., Medical Officer 29th Battalion, relinquishes his commission, and is granted the honorary rank of Captain in the army, retaining his uniform, February 7th.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

SURGEON-CAPTAIN L. G. DILLON, M.D., 2nd Durham (Seaham), is promoted to be Surgeon-Major, February 7th.

ROYAL ENGINEERS (VOLUNTEERS).

SURGEON-CAPTAIN H. HAY, M.B., Submarine Miners (the Forth Division), is promoted to be Surgeon-Major, February 7th.

VOLUNTEER RIFLES.

SURGEON-MAJOR W. SNEDDON, M.D., 1st Volunteer Battalion the Royal Scots Fusiliers, is promoted to be Surgeon-Lieutenant-Colonel, February 7th.

Surgeon-Lieutenant T. G. MATTHEWS, M.D., 3rd (Cumberland) Volunteer Battalion the Border Regiment, and Surgeon-Lieutenant N. B. COLQUHOUN, 1st Volunteer Battalion the Hampshire Regiment, have resigned their commissions, February 7th.

Surgeon-Lieutenant H. N. A. TAYLOR, M.D., 3rd Volunteer Battalion the Essex Regiment, is promoted to be Surgeon-Captain, February 7th.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

SUPERNUMERARY LIEUTENANT E. W. HERRINGTON, the London Companies, is promoted to be Captain, January 27th.

THE ADMINISTRATION OF ARMY INSTITUTIONS.

WE have received from the *Army and Navy Gazette* an advanced proof of a paragraph which appears in its issue of February 14th. Our contemporary writes:

"A remarkably anomalous condition of things is noticed in scanning the Army List, which is that although among the *ex-officio* members of the Commissioners for the Royal Hospital, Chelsea, a military medical member—namely, the Director-General of the Army Medical Service—finds a place, yet among the *ex-officio* members of the Commissioners of the Duke of York's Royal Military School no military medical member has been appointed. Surely one is quite as necessary in the latter institution as in the former. This will have to be remedied without delay, and we understand that a question on the subject will arise when Parliament assembles. If the Chaplain-General and the Judge-Advocate-General take places as *ex-officio* members of the Duke of York's School, surely a military medical member of rank and experience should be appointed, for the sanitation of the institution and matters connected with the health of the boys must come up now and again for consideration. It is now well known that the sanitary condition of the Duke of York's School has been recently investigated, and it is not unlikely that the Secretary of State for War is by this time in possession of the report thereon, the particulars of which will be called for on the reassembly of Parliament."

*** The omission is, of course, absurd, but it is apparently a relic from a state of things which there seems good reason to believe is rapidly passing away. At one time, shortly after the Crimean war, it seemed as if the army was going to show the way in all matters relating to hygiene and sanitation to the country at large; and it is a fact that for a time military was in advance of civil administration in certain respects. Unfortunately, the military runner in the race fell away just at the period when the civilian made his effort. We believe that we are now at the beginning of a new epoch of rapid progress. The present constitution of the Army Sanitary Committee and the fact that the Director-General is its president give good grounds for hope that in all matters relating to sanitation the War Office will in future be guided by expert opinion.

MEDICO-LEGAL AND MEDICO-ETHICAL.

ACTION AGAINST A HERBALIST.

WE learn from the *Nottingham Guardian* that an action was brought recently at the Nottingham County Court by the Pharmaceutical Society of Great Britain against Herbert Brown, of Hucknall, for selling a preparation of morphine contained in an article of medicine, not a patent, medicine, called Kay's Compound Essence of Linseed, and also for selling laudanum. Evidence was given as to the purchase, and Mr. T. Tickle analyst for the city of Exeter, said that he found in Kay's Essence morphine in the proportion of not less than 0.072 gr. per fluid ounce, and in the laudanum morphine in the proportion of not less than 1½ gr. The solicitor who appeared for the defendant said that he was a young man who had purchased a drug store, but had never dispensed drugs or acted as a chemist. There was a little laudanum in the establishment when he took it over, and it was being sold off. There was no desire to deliberately infringe the Pharmacy Act, and he urged that it was a case where there might have been a technical offence, but which did not call for a full penalty. It was urged on behalf of the Society that anybody who committed the offence should be liable to the penalty of £5 for each offence, and that the judge had no power to reduce the penalties. His Honour said the defendant had practically committed a technical offence, and he therefore had no option but to give judgement against him; at the same time he was satisfied that the defendant had not an intent to break the law, and he thought that the Pharmaceutical Society might see their way to consent to a reduction of the penalty; in reply to the defendant's solicitor he expressed the opinion that the Society should reduce the penalties to £1 in each case.

MEDICAL ANNOUNCEMENTS.

A CORRESPONDENT draws our attention to a paragraph in a Welsh newspaper which announces the transfer of the practice of a local practitioner to a newcomer whose name, qualifications, and previous appointments are given. While we deprecate such announcements we think it unfair to assume that the gentleman mentioned has had anything to do with the matter. In the case of county newspapers these local paragraphs are almost invariably due to some local correspondent of the newspaper who supplies local news, for which he is paid.

RELATIONS OF MEDICAL OFFICERS OF HEALTH.

A CORRESPONDENT who is medical officer of health for a borough writes to complain that the county medical officer of health, after calling upon him and finding him out, hunted up the inspector of nuisances and paid a visit to the hospital grounds. Our correspondent complains that the county medical officer of health should have entered the hospital grounds without his permission.

*** Is this not making much ado about a small matter? It would doubtless have been better if the county medical officer of health had written to announce his arrival, but it would seem that he merely looked at the hospital building. As we have repeatedly stated (BRITISH MEDICAL JOURNAL, November 10th, 1900, p. 1414; April 6th, 1901, p. 853; September 28th, 1901, p. 932; April 5th, 1902, p. 870), we think that in all cases where a medical officer of health desires to inspect an institution or a patient in the charge of another practitioner, he should give his colleague due notice of his visit.

THE MEDICAL MAN, THE CORONER, AND THE PATHOLOGIST.

DR. W. PIERCY FOX (Clapham Road) writes: I was called last Saturday night at 10 p.m. to see a man supposed to be dead. On arrival I find a man seated in a chair, and dead—evidently an ordinary case of heart failure. He had only just lost his wife, leaving him with several children. In addition there were two lodgers. The man was a very poor working member of the community and there were three rooms for the accommodation of the household. I recognized that the man could not be left in the sitting posture in the chair all night, so I communicated with the police who declined to remove the body—the reason given being that they were powerless to remove any body from inside a dwelling. I then at 10.45 wrote to the coroner's officer and sent a messenger to him. I spent all this time near midnight without, of course, any earthly semblance or chance of receiving any fee. I next heard from Dr. Freyberger that the necropsy would be held at 4 p.m. to-day and that he would be very glad to meet me at the mortuary if I so desired to attend. This case is one of the most simple and ordinary cases of sudden death. Comment is needless.

THE CORONER AND THE MEDICAL PROFESSION IN SOUTH-WEST LONDON.

STUDENS LEGIS M.B. writes: In the unfortunate episode which you report this week between Mr. Troutbeck and Dr. Badcock two things appear which a law student who had passed his examination in evidence and procedure would at once notice.

1. Dr. Badcock had notice from the coroner that an inquest was to be held on a former patient of his. He was asked whether he could give evidence which would assist the Court. In reply he appears to have sent a letter suggesting that he should be called as of right, and going on to comment on the late Mr. Braxton Hicks. This letter was quite inadmissible. *Res inter alios actae* are not evidence, and it was not for him to instruct the Court in its duties.

2. It is clear that not having done anything in the nature of entering an appearance, although he know or could have learned the results of the necropsy and the parents' views, he must be deemed to have had, at least constructive if not actual notice of the attack which would be

made upon him. With such notice Dr. Badcock let judgement go by default. In a higher court this would amount to estoppel by record, and his mouth would be closed on the matter.

I think few recognize that the coroner has very considerable powers, and that if any one is aggrieved by his exercise of them he has his remedy at law, but will not improve his position by writing to the local newspapers.

DRUG ADDICTION AND THE LAW.

A CORRESPONDENT recently addressed to us a letter raising the question whether the new Licensing Act, 1902, would apply to drug cases. He pointed out that under the Act of 1879 a habitual drunkard is defined as being "a person who is by reason of habitual intemperate drinking of intoxicating liquor at times dangerous to himself or herself or to others, or incapable of managing himself or herself and his or her affairs." Our correspondent adds that superintendents of some inebriate homes state that the Secretary of State has advised that intoxicating liquor may include liquors other than alcohol if their habitual intemperate use bring the consumer into the condition of an habitual drunkard. He enquires whether it would not, therefore, be possible under the new Act to prevent patients from obtaining laudanum, chloral, etc., from chemists and stores. He further inquires whether the phrase "the habitual intemperate drinking of intoxicating liquor" could be legally interpreted to include hypodermic injection?

*** We have made inquiries at the Home Office and have received a reply from the Under-Secretary of State from which we quote the following:

"I am directed by the Secretary of State to say that he is advised that 'intoxicating liquor' within the meaning of the Habitual Drunkards Act, 1879, may include liquors other than alcohol if their habitual intemperate use brings the consumer into the conditions of a habitual drunkard. But the article consumed must be a liquor, and must be intoxicating, and cannot, therefore, include a drug taken by injection. Persons consuming drugs are not affected by the Licensing Act, 1902. That Act is directed to be construed as one with the Licensing Acts, 1828 to 1885, and by Section LXXIV of the Licensing Act, 1872, 'intoxicating liquor' is limited to mean any fermented, distilled, or spirituous liquor, which cannot be legally sold without an excise licence. Section VI of the new Act is expressly concerned only with the purchase by or sale to habitual drunkards of intoxicating liquor at licensed premises or clubs."

NECROPSIES IN HOSPITALS.

P. M.—In many hospitals it is the custom to make an examination in all deaths except in the case of Hebrews or of those whose friends lodge an objection. It would be extremely imprudent to make a necropsy where the friends objected, as public sentiment would be on their side, and the committee of the hospital would probably pass some stringent regulation requiring in future the written permission of the friends to be obtained.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Appointments.—Mr. T. Manners-Smith, Downing, and Dr. H. W. Marett Tims, King's, have been appointed Demonstrators of Anatomy. Mr. W. A. Cunnington, Christ's, has been appointed to the University table in the Naples Zoological Station. Dr. D. MacAlister, Professor Woodhead, and Dr. Nuttall have been appointed representatives of the University at the International Congress of Hygiene and Demography to be held at Brussels in September. The following have been appointed Electors to the respective Chairs specified:—Chemistry: Dr. T. E. Thorpe; Anatomy: Dr. Allbutt: Botany: Mr. A. Sedgwick; Downing (Medicine): Dr. A. Macalister; Zoology: Dr. D. MacAlister; Physics: Lord Rayleigh; Physiology: Professor G. S. Woodhead; Surgery: Dr. A. Macalister; Pathology: Dr. W. H. Gaskell.

CONJOINT BOARD IN ENGLAND.

THE following gentlemen have passed the First Examination of the Board in the subjects indicated:

Anatomy and Physiology.—E. A. W. Alleyne, St. Mary's Hospital; R. D. Barron, Otago University and Guy's Hospital; F. J. C. Blackmore, University College, Sheffield; S. L. Brimblecombe, St. Mary's Hospital; J. F. Broughton, University College, London; N. H. Bye, D. A. Chamberlain, B.A.Camb., and S. B. Couper, B.A.Camb., London Hospital; C. E. Clay, Yorkshire College, Leeds; T. B. Davies, St. Bartholomew's Hospital; A. H. Davis, St. George's Hospital; R. Davies-Colley, B.A.Camb., Cambridge University; H. C. Devas, St. Thomas's Hospital; L. Doudney, Guy's Hospital; C. H. J. Fagan, B.A.Camb., St. George's Hospital; J. E. Foreman, London Hospital; W. E. L. Fowler, St. Bartholomew's Hospital; A. E. G. Fraser, St. Mary's Hospital; H. W. Gooden, University College, Bristol; F. W. Goonetilleke, Licentiate Ceylon Medical College and King's College, London; H. E. Gotilee, St. Thomas's Hospital; A. S. Graham, Charing Cross Hospital; R. S. Harper, Guy's Hospital; J. H. Iles, B.A.Camb., Cambridge University; E. C. Jones, St. Thomas's Hospital; W. W. King, University College, Bristol; C. N. Le Brocq, B.A.Camb., Cambridge University and St. Bartholomew's Hospital; M. Leckie, Guy's Hospital; W. Lennox, University College, Bristol; T. S. L. Leyshon, London Hospital; A. L. Loughborough, St. Thomas's Hospital; M. Maher, Cairo and Guy's Hospital; E. C. Lowe, H. C. Malleson, B. B. Metcalfe, T. Norman, and E. L. R. Norton, Guy's Hospital; C. B. Mora and E. W. M. Paine, St. Bartholomew's Hospital; H. S. Ollerhead, St. Mary's Hospital; F. W. Parfitt, Guy's Hospital; B. J. Phillips, University College, Cardiff; E. D. Richardson, St. Mary's Hospital; T. R. Roberts and L. P. Sanders, London Hospital; J. E. Smith, St. Bartholomew's Hospital; E. C. Sprawson, L.D.S.Eng., and J. O. Tilley, L.D.S.Eng., Charing Cross Hospital; W. H. R. Streathfield, B.A.Camb., St. George's Hospital; A. J. Turner, London Hospital; J. G. Watkins, St. Bartholomew's Hospital; E. D. Whittle, University College, London; E. Wight, Cambridge University; H. F. Wight, Guy's Hospital; C. O. O. Williams, E. L. Wright, and H. N. Wright, St. Bartholomew's Hospital; and A. P. Wright, University College, Liverpool.

Anatomy only.—A. F. Palmer, Cambridge University and Middlesex Hospital.

Physiology only.—N. H. Oliver, Guy's Hospital.

TRINITY COLLEGE, DUBLIN.

THE following candidates have passed the Previous Medical Examination in the subjects indicated:

Anatomy and Institutes of Medicine.—R. A. Askins, C. Scaife, J. B. B. Whelan.

Physics and Chemistry.—H. H. A. Emerson, J. C. A. Ridgway, J. E. N. Ryan, W. E. M. Armstrong, C. H. M'Comas, J. Murdock.

Botany and Zoology.—T. P. Dowley, W. M. Johnston, W. H. Kennedy, C. Ff. Rolleston, J. G. M. Moloney.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 9,220 births and 5,164 deaths were registered during the week ending Saturday last, February 7th. The annual rate of mortality in these towns, which had been 17.5, 20.1, and 18.1 per 1,000 in the three preceding weeks, further declined to 17.9 per 1,000 last week. The rates in the several towns ranged from 7.4 in Bournemouth, 8.0 in East Ham, 9.8 in York, 11.1 in Willesden, 11.3 in Hornsey, 11.9 in Grimsby, 12.0 in Devonport, 12.2 in Halifax, and 12.4 in Barrow-in-Furness, to 22.3 in Bootle, 22.4 in Bury, 22.5 in Bradford, 23.0 in Newcastle-on-Tyne, 23.3 in Liverpool, 23.5 in Wigan, 24.2 in Preston, 24.8 in Tynemouth, and 31.3 in Hanley. In London the rate of mortality was 17.6 per 1,000, while it averaged 18.0 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.8 per 1,000 in the seventy-six large towns; in London this death-rate was equal to 1.9 per 1,000, while it averaged 1.7 per 1,000 in the seventy-five other large towns, among which the highest death-rates from the principal infectious diseases were 3.1 in Salford, 3.3 in Tottenham, in King's Norton, and in Hull, 3.6 in Rotherham, 5.1 in Merthyr Tydfil, 5.8 in Hanley, 6.0 in Great Yarmouth, and 7.5 in Wigan. Measles caused a death-rate of 1.2 in Manchester and in Salford, 1.5 in Newport (Mon.), 2.2 in Merthyr Tydfil, and 3.4 in Wigan; scarlet fever of 1.2 in St. Helens, and 3.4 in Wigan; diphtheria of 1.2 in Salford, 1.4 in Coventry, and 2.5 in Hanley; whooping-cough of 1.2 in Northampton, 1.3 in Hornsey, 1.4 in Preston, 1.5 in Croydon and in Merthyr Tydfil, 1.6 in Hanley and in Stockport, 1.8 in Rotherham, 2.0 in Tynemouth, 2.4 in Grimsby, 2.9 in Tottenham, and 5.0 in Great Yarmouth; "fever" of 1.2 in Rochdale; and diarrhoea of 1.2 in Walsall. Of the 14 fatal cases of small-pox registered in the seventy-six towns last week, 7 belonged to Liverpool, and 1 each to Birmingham, Bootle, Bolton, Leeds, Sheffield, Rotherham, and Hull. The Metropolitan Asylums Hospitals contained 6 small-pox patients on Saturday last, February 7th, against 5, 4, and 7 on the three preceding Saturdays; 4 new cases were admitted during the week, against 2, none, and 6 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 1,941, against numbers declining from 2,528 to 2,019 at the end of the six preceding weeks; 189 new cases were admitted during the week, against 192, 227 and 227 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, February 7th, 961 births and 711 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 23.4, 24.6, and 21.3 per 1,000 in the three preceding weeks, rose again to 21.7 per 1,000 last week, and was 3.8 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scotch towns the death-rates ranged from 13.9 in Perth and 18.2 in Dundee to 24.8 in Leith and 27.0 in Greenock. The death-rate from the principal infectious diseases averaged 2.5 per 1,000 in these eight towns, the highest rates being recorded in Aberdeen and Leith. The 357 deaths registered in Glasgow included 2 which were referred to measles, 3 to scarlet fever, 7 to diphtheria, 22 to whooping-cough, 5 to "fever," and 6 to diarrhoea. Two deaths from measles and 2 from diarrhoea were recorded in Edinburgh. Two fatal cases of whooping-cough and 5 of diarrhoea occurred in Dundee: 9 of measles and 3 of diarrhoea in Aberdeen: 3 of measles and 2 of whooping-cough in Leith; and 2 of diarrhoea in Greenock.

EPIDEMIC MORTALITY IN LONDON.

[SPECIALLY REPORTED FOR THE BRITISH MEDICAL JOURNAL.]

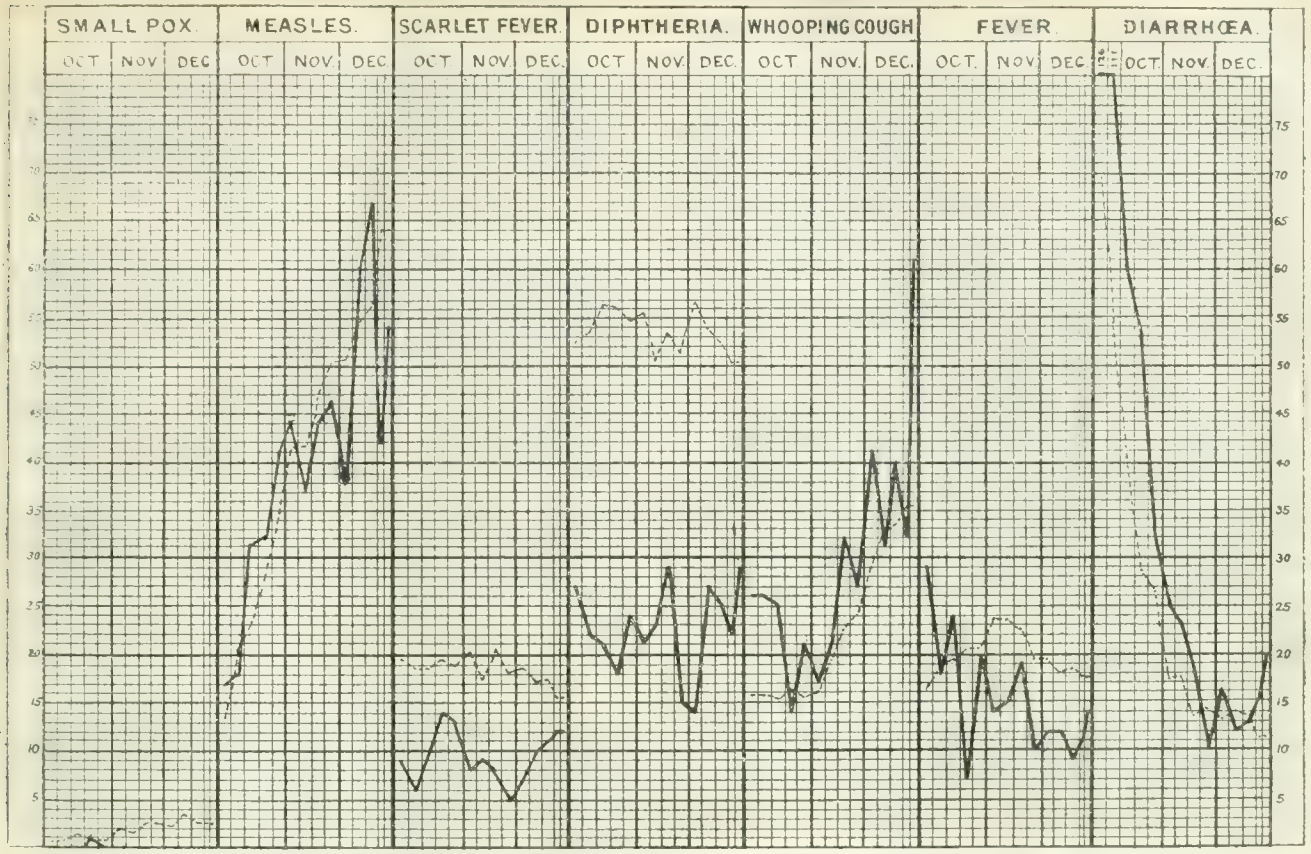
THE accompanying diagram shows the prevalence of the principal epidemic diseases in London during the fourth, or autumn, quarter of last year. The fluctuations of each disease, and its relative fatality as compared with that recorded in the corresponding periods of recent years, can thus be readily seen.

Small-pox.—Only 1 fatal case of small-pox was registered in London last quarter, against 734, 507, and 73, in the three preceding quarters of the year; the average number in the fourth quarters of the ten preceding years was 26. The death last quarter was that of a person belonging to Camberwell. The number of small-pox patients admitted into the Metropolitan Asylums Hospitals during the quarter was 42, against 4,873, 3,215 and 325 in the three preceding quarters; the number remaining under treatment at the end of last quarters was 14, against 1,526, 837, and 42 at the end of the three pre-ceding quarters.

Measles.—The deaths from measles, which had been 730, 714, and 346 in the three preceding quarters, rose again last quarter to 571, but were slightly below the average number in the corresponding quarters of the ten preceding years. Among the various metropolitan boroughs measles showed the highest proportional fatality in Fulham, St. Pancras, Bermondsey, Camberwell, Deptford, and Greenwich.

Scarlet Fever.—The fatal cases of this disease, which had been 154, 136, and 139 in the three preceding quarters, declined again last quarter

Deaths from Zymotic Diseases in London during the Fourth Quarter of 1902.



Note.—The black lines show the *recorded* number of deaths from each disease during each week of the quarter. The dotted lines show the *average* number of deaths in the corresponding weeks of the ten preceding years, 1892-1901.

to 134, and were 123 below the corrected average number. Scarlet fever was proportionally most fatal in Hackney, Holborn, Lambeth, Battersea, Wandsworth and Deptford. The number of scarlet fever patients at the Metropolitan Asylums Hospitals, which had been 2,113, 2,439, and 2,656 at the end of the three preceding quarters, had declined again to 2,327 at the end of last quarter; 4,179 new cases were admitted during the quarter, against 3,299, 3,571, and 4,084 in the three preceding quarters.

Diphtheria.—The deaths referred to diphtheria in London, which had been 365, 256, and 244 in the three preceding quarters, rose again last quarter to 317, but were 422 below the average number in the corresponding periods of the ten preceding years. The greatest proportional mortality from diphtheria last quarter was recorded in Fulham, Chelsea, St. Pancras, Poplar, and Wandsworth. The number of diphtheria patients under treatment in the Metropolitan Asylums Hospitals at the end of December was 927, against 1,123, 975, and 981 at the end of the three preceding quarters; 2,053 new cases were admitted during the quarter, against 2,075, 1,888, and 1,972 in the three preceding quarters.

Whooping-cough.—The fatal cases of this disease, which had been 465, 532, and 469, in the three preceding quarters, further declined last quarter to 414, but were 87 in excess of the corrected average number. Among the various metropolitan boroughs, this disease was proportionally most fatal in Hammersmith, Fulham, St. Marylebone, Islington, Finsbury, and Stepney.

"*Fever.*"—Under this heading are included deaths from typhus, from enteric fever, and from simple and ill-defined forms of continued fever. The deaths referred to these different forms of "fever," which had been 110, 69, and 197, in the three preceding quarters, further rose last quarter to 214, but were 63 below the average number in the corresponding periods of the ten preceding years. No death from typhus occurred during the quarter under notice, and only one from simple continued fever. The mortality from enteric fever was highest in Hampstead, St. Pancras, Islington, Hackney, Shoreditch, Poplar, and Wandsworth. The Metropolitan Asylums Hospitals contained 210 enteric fever patients at the end of last quarter, against 121, 195, and 359 at the end of the three preceding quarters; 593 new cases were admitted during the quarter, against 249, 314, and 650 in the three preceding quarters.

Diarrhœa.—The 535 deaths from diarrhœa registered in London during the quarter ending December last showed an excess of 189 over the average number in the ten preceding fourth quarters. Among the various metropolitan boroughs this disease was proportionally most fatal in Hammersmith, Shoreditch, Stepney, Bermondsey, Deptford, Lewisham, and Woolwich.

In conclusion it may be stated that the 2,186 deaths referred to these principal infectious diseases in London last quarter were nearly 15 per cent. below the corrected average number in the corresponding quarters of the ten preceding years, 1892-1901. The lowest death-rates from these diseases in the several metropolitan boroughs were recorded in Paddington, Kensington, the City of Westminster, Hampstead, Stoke Newington, and the City of London; and the highest rates in Fulham, St. Pancras, Finsbury, Poplar, Bermondsey, Camberwell, and Deptford.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

[Specially Reported for the British Medical Journal.]

The Registrar-General has just issued his return relating to the births and deaths registered during the fourth quarter of 1902, and to the marriages during the three months ending September last. The marriage-rate during that period was equal to 17.2 per 1,000, and was 0.6 per 1,000 in excess of the mean rate in the corresponding quarters of the ten preceding years.

The births registered in England and Wales during the quarter ending December last numbered 232,455, and were equal to an annual rate of 28.0 per 1,000 of the population, estimated by the Registrar-General at 32,995,614 persons in the middle of last year. This rate was 0.6 per 1,000 below the average rate in the fourth quarters of the ten preceding years. The birth-rates in the several counties ranged from 18.5 in Rutlandshire, 21.3 in Sussex, 21.7 in Westmorland, 22.0 in Somersetshire, and 22.1 in Herefordshire, to 31.4 in Nottinghamshire, 32.5 in Staffordshire, 32.6 in Northumberland, 32.9 in South Wales, 34.5 in Monmouthshire, and 35.3 in Durham. In seventy-six of the largest towns, including London, the birth-rate last quarter averaged 29.0 per 1,000, and exceeded by 1.0 per 1,000 the general English birth-rate. In London the rate was 27.8 per 1,000, while it averaged 29.6 per 1,000 in the seventy-five large provincial towns, among which the birth-rates ranged from 14.4 in Bournemouth, 17.6 in Hastings, 19.2 in Hornsey, 19.3 in Bury, and 19.9 in Halifax, to 36.1 in St. Helens, 36.2 in South Shields, 38.7 in Wigan, 40.8 in Merthyr Tydfil, and 42.1 in Rhondda.

The births registered in England and Wales during the quarter under notice exceeded the deaths by 94,135; this represents the natural increase of the population during that period. From returns issued by the Board of Trade it appears that 90,048 emigrants embarked during the last three months for places outside Europe, from the various ports of the United Kingdom at which emigration officers are stationed. Of these 90,048 emigrants, 37,619 were English, 6,194 Scottish, and 8,051 Irish, while 38,184 others were of foreign nationality. Compared with the averages in the corresponding quarters of the three preceding years the proportion of emigrants to the total population showed an increase of 43.8 per cent. in England, 48.4 in Scotland, and 26.2 per cent. in Ireland.

During the fourth quarter of last year the deaths of 138,320 persons were registered, equal to an annual rate of 16.6 per 1,000 persons living, being 0.8 per 1,000 below the average rate in the fourth quarters of the ten preceding years. The lowest county death-rates last quarter were 11.9 in Westmorland, 13.0 Dorsetshire, 13.1 in Rutlandshire, 13.3 in Oxfordshire, and 13.4 in Sussex; while the highest rates were 18.0 South Wales, 18.1 in Durham, 18.3 in Staffordshire, 18.6 in Monmouthshire, and 18.9 in Lancashire. In seventy-six of the largest towns, with an aggregate population of nearly fifteen millions, the death-rate averaged 17.9 per 1,000; in 103 smaller towns, containing about three and a-half millions, the rate of mortality averaged 15.8 per 1,000; while in the remaining, and chiefly rural, parts of England and Wales, with a population of nearly fourteen and a-half millions, the death-rate was 13.4 per 1,000. In London the rate

was 17.7 per 1,000; while among the seventy-five large provincial towns the rates ranged from 8.8 in Hornsey, 10.3 in Leyton, 11.4 in Handsworth, 11.5 in King's Norton, and 11.9 in Bournemouth, to 21.9 in Stockport, 22.0 in Preston, 22.1 in Bootle, 23.8 in Merthyr Tydfil, 24.3 in Liverpool, and 25.2 in Hanley.

The 138,320 deaths from all causes registered in England and Wales during the three months ending December last included 3,796 which were referred to diarrhoea, 2,135 to diphtheria, 1,807 to whooping-cough, 1,361 to scarlet fever, 1,285 to "fever" (principally enteric), and 103 to small-pox. The mortality from measles and diarrhoea was above the average for the fourth quarter of the ten preceding years; while that from small-pox corresponded with it, and that from each of the other principal infectious diseases showed a decline. Of the 103 deaths from small-pox registered last quarter 11 belonged to Liverpool, 10 to Merthyr Tydfil, 8 to Chatham, 7 to Stockport, 6 to Oldham, 6 to Bury, 5 to Bolton, 4 to Leeds, and 4 to Chorley.

The rate of infant mortality in England and Wales last quarter, or the proportion of deaths under 1 year of age to registered births, was equal to 149 per 1,000, against an average rate of 148 per 1,000 in the corresponding quarters of the ten preceding years. The lowest rates of infant mortality in the various counties were 83 in Herefordshire, 84 in Westmorland, 88 in Huntingdonshire, 94 in Dorsetshire, and 95 in Oxfordshire; while the highest rates were 164 in Durham, 175 in Derbyshire, 177 in Lancashire, 179 in Staffordshire, and 181 in Nottinghamshire. In seventy-six of the largest English towns the mean rate was 166 per 1,000; in London the proportion was equal to 157 per 1,000, while it averaged 169 in the seventy-five other large provincial towns, among which the rates ranged from 92 in Bournemouth, 93 in Burton-on-Trent and in York, 98 in Leyton, and 103 in Hastings, to 208 in Middlesbrough, 224 in West Bromwich, 239 in Preston, 261 in Stockport, and 280 in Hanley.

The mortality in England and Wales last quarter among persons aged between 1 and 60 years was equal to 8.4 per 1,000 of the population estimated to be living at this group of ages, and was 0.7 per 1,000 below the mean rate in the ten preceding fourth quarters. In the seventy-six large towns the death-rate at this group of ages averaged 9.5 per 1,000; in London this death-rate was 9.5 per 1,000, while it also averaged 9.5 per 1,000 in the seventy-five large provincial towns, and ranged from 3.9 in Hornsey, 4.7 in Handsworth, .9 in Willesden, 5.2 in Kings Norton, 5.5 in Aston Manor, and 5.6 in Leyton, to 12.3 in Hanley and in Merthyr Tydfil, 12.5 in Newport (Mon.), 13.7 in Bootle, and 15.0 in Liverpool.

Among persons aged 60 years and upwards the death-rate last quarter was equal to 66.6 per 1,000 of the estimated population at this age-period, being 1.0 per 1,000 less than the average rate in the corresponding quarters of the ten preceding years. In the seventy-six towns the death-rate at this age-group was 70.0 per 1,000; in London the rate was 70.4 per 1,000, while in the seventy-five large provincial towns the mean rate was 60.9 per 1,000, the lowest rates being 37.4 in Leyton, 47.7 in Coventry, 47.8 in Kings Norton, and 50.5 in Hornsey, and the highest rates 81.9 in Huddersfield, 83.9 in Sunderland, 84.4 in Bury, 85.6 in Hanley, and 90.2 in Preston.

The mean temperature of the air at the Royal Observatory, Greenwich, was 45.2°, the highest reading of the thermometer being 67.1°, and the lowest 24.5°. The amount of rain measured during the quarter was 4.03 in., of which 1.24 in. fell in October, 1.29 in. in November, and 1.50 in. in December.

THE LAW AND INFECTION.

We learn from the *Eastern Morning Gazette* that a plaint has been tried before Judge Willis against the Corporation of Lowestoft to recover the sum of £50 as compensation for damages sustained through the negligence of the defendants or their servants in discharging the plaintiff's daughter, Amy Porter, from the Lowestoft Isolation Hospital on August 29th last in a verminous and infectious condition. In the claim the plaintiff stated that the child had been an inmate of the Isolation Hospital for nine weeks and three days suffering from scarlet fever, and in consequence of being discharged in the condition alleged she infected two other children of the plaintiff with scarlet fever, whereby plaintiff had suffered loss as represented by the amount of the claim. The case was tried at the Shire Hall, Norwich.

Mr. W. H. Stevenson, instructed by Mr. H. R. Everitt, appeared in support of the plaintiff's claim, and the defence was undertaken by the Town Clerk of Lowestoft.

The evidence of the plaintiff, who is a clerk in the office of the Registrar of the Lowestoft County Court, was to the effect that his child had been discharged from the isolation hospital in an unclean condition and still infectious, which had involved him in various expenses and prevented him letting his house for summer lodgings. He called his wife and several other witnesses in support of his evidence. For the defence four medical witnesses were called, including Dr. Marshall, M.O.H., Lowestoft. After the case had been argued judgement was entered for the defendants for the following reasons: First, the judge held that there was no contractional relationship between the plaintiff and the defendants. No doubt the Corporation were under obligation to exercise reasonable care on receiving a patient, but that was not a contraction. Secondly, there was no damage to the plaintiff caused by any breach of duty, for no breach of duty had been proved. If it had been argued that the child had been sent home not free from scarlet fever or not sufficiently recovered, there might be cause of action against the Corporation. But that was not urged. It was admitted that she was perfectly well again and free from scarlet fever, but infectious because lice or nits had been found in her hair, and these had transmitted infection to the two other children. That was a proposition he was unprepared to accept after hearing the expert evidence as to the transmission of infection in scarlet fever. It was possible that the Corporation through its servants was to blame for some negligence, but that was not argued. He was satisfied the infection was not conveyed by lice. If the action had been instituted by the child, a claim might have been brought against the Corporation for improper treatment whilst she was under care of the servants of the Corporation, but then the damages would have had to be confined to compensation for the suffering of the patient, and perhaps any little expense for extra treatment and attention required. The judge expressed the opinion that there was no want of care or attention on the part of Dr. Marshall or the nurses of the Isolation Hospital. The case was then dismissed, and judgement given for the defendant with costs.

MEDICAL APPOINTMENTS IN THE HIGHLANDS OF SCOTLAND.

We have received further communications on the subject of the Applecross parochial medical officer vacancy, in which the statements of "Cuaig" and the parish minister given in the BRITISH MEDICAL JOURNAL of January are controverted. We do not consider it advisable to go further into this matter.

SMALL-POX HOSPITALS.

DR. MANLEY (West Bromwich).—We think if our correspondent will look into the matter further and communicate with the Local Government Board he will find that that Board has not laid down any definite standard for the distance which should intervene between a small-pox hospital and (*a*) any dwelling house or (*b*) any public road, except that any building to contain infected persons or things should be at least 40 ft. distant from the boundary of the site, which is, of course, quite a different matter. The Board has certain requirements for small-pox hospitals sanctioned and built by their loans, but that also is not the question which was asked.

VITAL STATISTICS FOR ENGLAND AND WALES.

A COUNTRY MEDICAL OFFICER OF HEALTH writes with reference to the provisional statistics published under this head in the BRITISH MEDICAL JOURNAL of January 31st, p. 293, to ask which are the seven chief epidemic diseases there referred to. He also asks what diseases it is customary to include as the diseases from which the death-rate from zymotic disease is prepared.

*** From inquiries made at the General Register Office we find that the term "epidemic" is now used in place of the obsolete term "zymotic." The "chief epidemic" diseases used to calculate the deaths given in the table published on January 31st are: (1) Small-pox, (2) measles, (3) scarlatina, (4) diphtheria, (5) whooping-cough, (6) fever (including typhus, enteric, and ill-defined fevers), (7) diarrhoea.

PAYMENT TO MEDICAL OFFICERS FOR MIDWIFERY ATTENDANCE.

LEX, who is a district medical officer, states that a woman in his district applied to the relieving officer for a medical order for attendance on herself in confinement. She was told she could have it on payment of 5s. She paid this amount, and held a receipt for it. "Lex" asks whether this proceeding is legal.

*** We are not aware that it is illegal for a Board of Guardians to adopt this system; but, if it were to become general, it might be unfair to a district medical officer paid by a fixed salary to include attendance on midwifery.

FEES FOR ATTENDANCE AFTER CONFINEMENT.

A. writes to ask what fees he can charge for the following cases: (1) For attendance on a patient, by order given twenty-four or forty eight hours after confinement, a midwife having previously attended. (2) For attendance on a patient after confinement suffering from puerperal fever, pelvic cellulitis, or phlegmasia dolens.

*** (1) This question cannot be correctly answered without some information as to the cause which led to the medical order being granted. (2) Any of these serious conditions carry a fee of £2.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE LIVERPOOL ROYAL INFIRMARY.

We have recently received a printed circular in the following terms:

"Royal Infirmary, Liverpool,
"January 30th, 1903.

"At a mass meeting of medical students, held in the Royal Infirmary, Liverpool, at 12 o'clock, on Monday, January 26th, the following resolutions were passed:

"1. That this meeting considers the results of recent elections unsatisfactory, inasmuch as the existence of a Medical School and a large number of students has been lost sight of; and further, it considers that the attention of the Medical Faculty should be called to this state of affairs.

"2. That this meeting emphatically condemns the system under which the Committee of the Royal Infirmary carries out its elections."

This circular has been published in the Liverpool daily papers, and has been freely commented on.

The honorary staff of the Liverpool Royal Infirmary consists of three physicians, three surgeons, a gynaecological surgeon, and a surgeon to the lock department, who together form the Medical Board, and are also members of the Managing Committee. There are also two assistant physicians and three assistant surgeons, who are not on the Medical Board. Further, there are the medical officers to the special department, the anaesthetists and the pathologist, who hold office by a different tenure from the others, being appointed and re-elected annually by the Managing Committee. Until the completion of the present infirmary in the year 1801 the members of the Medical Board and the assistant surgeon—the other assistants' posts have been created since—were elected by the whole body of trustees, who numbered about 2,000. This system was found to be open to grave objections. Not the least was the labour and expense to which candidates were put in circularizing and canvassing so large an electorate. It was also believed that such a large body of voters might not be animated by the same sense of individual responsibility as would a smaller body; and it was felt that the practice of printing addresses in the newspapers, and sending out addresses broadcast, which was probably unavoidable in order that the candidates' claims should be brought before the electors, was scarcely conducive to the honour and dignity of the medical profession. Accordingly, in 1902, the subscribers and other trustees agreed to depute their electoral powers to an "election committee," consisting of the managing committee, including the Medical Board, together with sixty other trustees. Of the latter twelve retire annually, but are eligible for reappointment, and their places are filled by election at the annual meeting. Elections are regulated by very strict laws. A candidate is disqualified who advertises his application in any newspaper, or who canvasses any elector either personally or by writing. Candidates are, however, at liberty to send a copy of their applications, together with not more than ten testimonials, to each member of the electoral body.

The electors must attend personally to record their votes, which are taken by ballot. No voting by proxy is allowed. The electoral committee includes representatives of the chief interests of the community, including University College.

The students appear to be anxious that it should be understood that their resolutions are not intended to reflect on any particular member of the staff but rather on the present system, which they are of opinion is not calculated to give due prominence to the claims of candidates who have gained a reputation as teachers. It would appear that the candidates who have gained the confidence of the students have not always commended themselves to the electors, and that this is the reason why the students have passed the resolutions above quoted.

THE MONMOUTHSHIRE ASYLUM.

During the year 1901 217 patients were admitted into this institution—115 males and 102 females. The total number under treatment was 1,282, curiously an equal number of both sexes—641. The average number daily resident was 1,078; 95 patients were discharged, and the recovery-rate among these, calculated upon the number of admissions, was 32.7 per cent. In this connexion Dr. Glendenning, the medical superintendent, calls attention to the great influence early treatment has in determining the recovery-rate, and pertinently states that of the 217 admissions 87 were suffering from an attack of insanity of less than three months' duration, and that 39, or nearly 45 per cent., of such patients recovered, whereas of the 57 patients whose mental disorder had lasted for more than twelve months, only 7 per cent. were discharged recovered. The deaths, calculated on the average number of patients resident, was 8.2 per cent. of both sexes, 2.2 per cent. lower than the rate in county asylums in England and Wales for 1900. The deaths were all due to ordinary causes, except a man who died from perforation of the bowel caused by the fibre of a bass broom. The cause assigned for the insanity in those admitted was in 57 debilitated bodily health, in 22 intemperance in drink, in 17 senile decay, and in 34 there was hereditary predisposition. There was an increase of 33 patients during the year. The systematic training and teaching of the male and female nurses continues, and those who successfully pass the examinations held for proficiency in nursing are presented with medals by the Visiting Committee and an increase of salary as well.

ROYAL ASYLUM OF MONTROSE.

An increase of four patients only was found at the end of the statutory year, on May 14th, 1902, when the total number under treatment was 864; 189 were admitted, 164 discharged, 74 being recovered, and 16 relieved. The recovery-rate was 30.15 per cent, calculated upon the admissions. A large number of the patients were admitted in very frail bodily health, and many others in the last stages of incurable disease or senile decay. Dr. Havelock thinks that there is an increasing tendency among the poorer classes to send such cases to the asylum because the provision made in the hospital of the institution for efficient nursing and kindly care therein provided is now more generally known and appreciated. The medical profession, too, as he truly says, "with the knowledge that these patients live longer, and receive an amount of supervision and nursing which could not be attained in a private dwelling, are more ready to suggest asylum treatment, and find the proposal is, as a rule, thankfully received by the friends."

This spread of knowledge, and the consequent breaking down of old prejudices, must also account for a large proportion of the accumulation of chronic cases swelling the great mass of the insane under care and treatment in our public asylums; and Dr. Havelock adds the opinion that "the meshes of the net which fills the asylums are always imperceptibly narrowing, but there is no proof that the disease itself (insanity) is increasing."

The question of wards for mental cases attached to an infirmary does not escape notice in this report, and the opinion is expressed that the cost per head being double that in an asylum will be largely prohibitive, while the prospect of the patient's recovery from mental disease if cooped up in the wards of an infirmary situated in the midst of a densely populated city will be seriously endangered, compared with the treatment in an asylum in the country with a well-equipped hospital and all the facilities for out-door exercise, which is absolutely essential.

INDIA AND THE COLONIES.

SOUTH AUSTRALIA.

Insanity.

From an abstract of the annual report of Dr. W. T. Cleland on the Hospitals for the Insane in South Australia, published in the *Australasian Medical Gazette* of November 20th, 1902, it appears that on December 31st, 1901, there was 988 patients in the lunatic asylums, showing an increase of 10 patients. The average number resident during 1901 was 983, showing a decrease of 7 patients as compared with 1900. When the numbers are considered as individuals and not cases, and are compared with those of 1900, it is seen that there were 12 individuals less under care during 1901. The official insane population is, therefore, practically at a standstill, and has been so for the past two or three years. The ratio of lunatics to the population is also stationary, keeping at 2.67 per 1,000 of the population. The same relative proportion between the sexes also continues, there being about 0.8 more males than females.

Admissions.

The total admissions for 1901 were 214. Of these 164 were fresh cases who had never, as far as known, had an attack of insanity before; 95 were males and 69 were females. This is almost the same as for 1900.

Age.

As regards the age of the patients admitted, 30 patients were over 60 years of age—being 18 males and 12 females. There were only 2 below the age of 15 years.

Causes.

Amongst the predisposing and exciting causes of insanity, adverse circumstances and mental anxiety to the extent of 86, previous attacks and hereditary influence to the extent of 65, and the effects of other bodily diseases to the extent of 50, are mentioned as exerting the greatest influence.

Form of Disease.

The form of insanity was not of such a depressant type as in 1900, there being 84 patients, as compared with 63 in 1900, whose mental condition was more or less excited and delusional; the depressed forms were about the same in number, whilst the senile cases of both conditions showed a marked increase.

Ratio of Admissions to Population.

The ratio per 10,000 of admissions to population was lower than it had been during the two preceding years. For 1899 it was 6.98, for 1900 it was 6.04, and for 1901 it was 5.8, showing a progressive decrease. This is due to a greater proportionate decrease on the male side, whilst on the female side a marked increased ratio is noted.

Recoveries.

The percentage of recoveries among those admitted was low, which is due to a number of the female cases being old and helpless from the beginning. The percentage of recoveries on the male side was nearly up to the average, namely, 55.1, as compared to 55 8; whilst on the female side it was only 46, as compared to 50.6. Of the patients admitted during 1901, 31.6 per cent. were discharged as recovered, 33 6 per cent. being males and 29.3 being females. Of the 55 patients whose mental condition partook of the nature of excitement or mania, 87.3 per cent. were discharged as recovered or improved; whilst of the 36 admissions suffering from mental depression or melancholia, only 63.9 per cent. were able to be discharged.

Deaths.

During 1901, 82 patients died, giving a percentage of deaths on the average number resident of 8.3; this is slightly below the average for the past forty years, which is 8.7 per cent. Rather more than half of these deaths occurred amongst the admissions of the past three years, namely, 30.5 per cent. of those of 1901, 15.8 per cent. of those of 1900, and 7.3 per cent. of those of 1899.

Expenditure.

The total expenditure on the lunatic asylums shows an increase of £3,048 over that for the year 1900. Of this, £2,049 is due to the increased price of provisions, especially meat; the sum of £725 is due to increases to the pay of attendants, and £200 to increased consumption of water for irrigation, and higher price for fuel. The fees for maintenance received during 1901 were £3,593; those for 1900 were £3,697.

MEDICAL NEWS.

An antimosquito campaign has begun in Honolulu.

The anniversary dinner of the Medical Society of London will be held at the Whitehall Rooms, Hotel Metropole, on Saturday, March 7th, at 7.30 p.m.

The will of the late Dr. Samuel Fenwick was proved at £26,056 gross, including net personalty of the value of £25,897.

Influenza is said to be very prevalent at Bale, where no fewer than 18,000 cases are said to have occurred. So far there has been no death.

The London Hospital.—The past and present students of the London Hospital are organizing a concert and dance at the Holborn Town Hall on February 17th in aid of the quinquennial appeal. Further particulars can be obtained from Mr. W. H. Forshaw at the hospital. As the use of the hall and band have been granted free the whole proceeds will go to the funds.

A State Drug Testing Department in America.—A new drug laboratory has recently been established in the Chemical Bureau at Washington, with the object of investigating adulterations, testing drugs, and establishing uniformity in the standard of medical substances for future State and national legislation. The American Pharmaceutical Association has passed resolutions approving of the new bureau. Mr. L. F. Kebler, of Philadelphia, has been appointed director.

Sanitation in Cuba.—The Lower House of the Cuban Congress has voted $400,000 to aid the city governments in the island to maintain the high standard of sanitation reached under American occupation. The rumours of backsliding in Havana are denied, but there have been some painful lapses from sanitary righteousness in the interior and east coast towns. It is alleged, however, that this is not due to apathy, but to lack of funds. A sufficient sum has now been voted for the remedy of existing defects.

Drug Adulteration in America. An illustration of how patented medical preparations are adulterated has recently been furnished by the New York Board of Health. Agents sent out by the Board purchased in different drug stores 373 samples of phenacetin. On analysis it was found that only 58 of the samples were pure. The other 315 were adulterated, and a considerable number of them contained no phenacetin whatever. This drug is patented, and is made in Germany and sold through one house in New York. One article worth 2½ cents an ounce was sold as phenacetin at only 3 20 dollars an ounce.

The muzzling order has been applied to Llandovery and the adjacent district of Carmarthen, while the South-West of Wales Muzzling Order has been revoked.

Bradford and West Riding Medico-Ethical Union.—At the annual dinner of the society which took place at Bradford on February 5th, nearly sixty ladies and gentlemen were present. Dr. Dunlop, the retiring President, was in the chair. After the customary loyal toasts, Dr. Horrocks proposed "the Bradford and West Riding Medico-Ethical Union." This was responded to by the President (Dr. Shackleton) and the Secretaries, Drs. Metcalfe and Mitchell. The toast of the "Ladies," was proposed by Dr. Bronner, and responded to by Dr. Handcock. An excellent musical programme was then given by the members and ladies present.

Medical Practice in Ecuador.—To any of our readers who may be contemplating practice in South America the following information may be of interest. In a report recently published the late Consul-General of the United States, Mr. Thomas Nast, of Guayaquil, writes: "As numerous letters are received from parties desirous of practising medicine in this country, asking if they will be allowed to practise without passing an examination in Spanish, I wish to say that the law of this country requires all medical men arriving in the Republic to pass an examination before the Medical Board in Spanish before permission is granted them to practise. I may add that there are so many doctors here that unless the physician is a specialist his chances of obtaining much practice are very doubtful—the market is overcrowded."

St. Petersburg Institute of Medical Women.—The Institute of Medical Women which was opened two or three years ago in St. Petersburg has recently conferred diplomas on several students for the first time. In reply to an address by the Council of the Institute, the Czar has telegraphed the following gracious message: "The Czarina and myself sincerely thank the Council of the St. Petersburg Institute of Medical Women for the sentiments which it has expressed. May God bless the medical women who are accomplishing a generous and philanthropic task by working sincerely and honourably for those who suffer, with that lofty self-abnegation which is characteristic of the Russian women." Eleven women received diplomas qualifying them to practise medicine.

Zoological Society.—At a meeting of the Zoological Society of London on February 3rd Dr. Walter Kidd read a paper describing the arrangement of hair on four mammals, the otter, domestic dog, ox, and horse, considered as typical from the point of view of hair-slope. The rising complexity of these phenomena in the four forms was shown to be closely related to their differing habits and environments, and a division was made of adaptive and non-adaptive modifications of hair. It was maintained that the facts dealt with were closely connected with the problems of heredity. A communication from Captain F. Wall contained an account of all the snakes hitherto recorded from China, Japan, and the Loo Choo Islands, together with notes on those obtained by himself during the time he was attached to the China Expeditionary Forces in 1900-2.

Proposed Union of Rush Medical College with the University of Chicago.—It has lately been announced that the trustees of the University of Chicago have agreed to receive the Rush Medical School as an organic part of the University, provided that the trustees of the medical college succeed in raising 1,000,000 dollars by July 1st, 1903. It is believed the sum required can be obtained in the specified time. It will be used for the erection of new buildings, the endowment of chairs of instruction, and the purchase of additional equipment. The Rush Medical College was founded in 1837, and is one of the oldest institutions of learning in the West. For a considerable time the College has been affiliated with the University of Chicago, and this year the first and second years' studies of the medical course have been taken at the University. It is not proposed that the name of Rush Medical College be lost, but that it be incorporated in the official designation of the University in some such way as "Rush Medical School of the University of Chicago."

Medical Sickness and Accident Society.—The usual monthly meeting of the Committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 429, Strand, London, W.C., on January 30th. There were present Dr. de Havilland Hall (in the chair), Dr. G. A. Heron (one of the trustees), Dr. J. B. Ball, Dr. Frederick S. Palmer, Dr. Walter Smith, Dr. M. Greenwood, Dr. F. J. Allan, Dr. W. Knowsley Sibley, Dr. Alfred S. Gubb, and Mr. Edward Bartlett. It has been the practice of the Committee to devote a portion of their time at the first meeting of each year to the discussion of the chronic cases, those in which the members, being totally and permanently incapacitated from professional work, are drawing an annuity from the Society. The list has grown year after year until it now forms about one-third of the entire sickness claim list, and as the annuity is usually 100 guineas, the amount paid in this way is considerable. There are now over 20 members on the chronic list, and a careful consideration of the special reports furnished on this occasion leaves little doubt that few, if any, will ever be able to resume their professional avocations. Special reserves for these chronic illnesses have been made at each valuation of the Society's business. The general claim list, as is usual during the winter months, was somewhat heavy, and a large proportion of the common claims are traced to influenza. The reserves of the Society now amount to over £170,000. Prospectuses and all information on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

MEDICAL VACANCIES.

The following vacancies are announced:

BANBURY: HORTON INFIRMARY.—House-Surgeon. Salary, £80 per annum, with board and residence. Applications to the Honorary Secretary, 21, Marlborough Road, Banbury.

BIRMINGHAM CORPORATION WATERWORKS, Elan Valley, Radnorshire.—Resident Surgeon for the hospital. Salary, £250 per annum. Applications to Mr. E. A. Lees, 44, Broad Street, Birmingham, by February 28th.

BIRMINGHAM GENERAL HOSPITAL.—(1) House Physician. Appointment for six months, but eligible for re-election. Salary, £50 per annum, with residence, board, and washing. (2) Resident Medical Officer. Salary, £70 per annum, with residence, board, and washing. (3) Honorary Obstetric Officer. Applications to the House Governor for (1) and (2) by February 28th, and for (3) by February 23rd.

BISHOP AUCKLAND RURAL DISTRICT COUNCIL.—Medical Officer of Health. Salary, £350 per annum. Applications to the Clerk to the Council, Union Offices, Bishop Auckland, by February 25th.

BURY INFIRMARY.—Junior House-Surgeon. Salary, £90 per annum, with board, residence, and attendance. Applications to the Secretary, Dispensary, Knowsley Street, Bury.

CARDIFF.—Bacteriologist to the Joint Committee of the Glamorgan County Council and Cardiff Corporation and Lecturer in Bacteriology in the University College, Cardiff. Salary, £300 per annum. Applications to be sent to Mr. W. E. R. Allen, Clerk of the Joint Committee, Glamorgan County Offices, Cardiff, by February 23rd.

BUXTON: DEVONSHIRE HOSPITAL.—Assistant House-Surgeon. Salary, £70 per annum, with furnished apartments, board, lodging, and laundry. Applications, endorsed "Assistant House Surgeon," to be sent to the Secretary.

DORCHESTER: DORSET COUNTY ASYLUM.—House-Surgeon, unmarried. Salary, £100 per annum. Applications to the Chairman of the Committee by March 2nd.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—(1) Medical Officer for the Casualty Department. Appointment for six months, but renewable. Salary at the rate of £100 per annum, and luncheon (2) House Surgeon. Board, residence, etc., provided, and honorarium of £25 on completion of six months' approved service. Applications to the Secretary by March 14th.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Two Physicians to outpatients. Applications to the Committee of Management by March 5th.

FARNBOROUGH URBAN DISTRICT COUNCIL.—Medical Officer of Health. Salary, £60 per annum. Applications, endorsed "Medical Officer of Health," to be sent to the Clerk, Town Hall, Farnborough, Hants, by March 2nd.

FRENCH HOSPITAL AND DISPENSARY, Shaftesbury Avenue, W.C.—Junior Surgeon, must be F.R.C.S. Applications to the Secretary.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) Clinical Pathologist and Bacteriologist, non-resident. Honorarium, 150 guineas. (2) House-Surgeon, unmarried. Appointment for six months; salary, £20; washing allowance £2 10s., with board and residence. Applications, on forms provided, to be sent to the Secretary, for (1) by February 17th, and for (2) by March 4th.

KENT COUNTY ASYLUM, Barming Heath, Maidstone.—Fourth Assistant Medical Officer, unmarried, and not over 30 years of age. Salary, £175 per annum, rising to £200, with furnished quarters, attendance, etc. Applications to Dr. F. Pritchard Davies, Superintendent.

LANARK COUNTY ASYLUM, Hartwood, Glasgow.—Third Assistant Medical Officer and Pathologist. Salary, £120 per annum, with fees, board, washing, and attendance. Applications to the Medical Superintendent.

MIDDLESEX HOSPITAL MEDICAL SCHOOL.—Lecturer on Physiology. Applications to the Secretary to the Council by February 26th.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—House Physician. The present Junior House Physician is a candidate, and applicants should state if willing to accept either appointment. Salary for Senior £100 per annum, and that of Junior £50, with board and apartments. Applications to the Secretary by February 23rd.

NEWCASTLE-ON-TYNE DISPENSARY.—Two Visiting Medical Assistants. Salary, £160 for the first year, £180 afterwards. Applications, on forms provided, to be sent to the Honorary Secretary, Mr. J. Carr, 41, Mosley Street, Newcastle-on-Tyne, by February 17th.

PRESTWICH: COUNTY ASYLUM.—Junior Assistant Medical Officer, unmarried, and under 35 years of age. Salary commences at £150 per annum, increasing to £250, with board, furnished apartments and washing. Applications to the Medical Superintendent.

ROCHFORD UNION.—(1) Medical Officer for the Rochford District. Salary, £64 per annum and fees. (2) Medical Officer of the Workhouse. Salary, £50 per annum and fees. Applications to the Clerk by February 16th.

ROTHERHAM HOSPITAL AND DISPENSARY.—Senior House Surgeon. Salary, £110 per annum, with rooms, commons, and washing. Applications to Mr. E. S. Bayliss, J.P., 19, Moorgate Street, Rotherham, by February 24th.

SOUTH SHIELDS: INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Junior House-Surgeon. Salary, £75 per annum, with residence, board and washing. Applications to the Secretary, 74, King Street, South Shields, by February 23rd.

STOCKPORT INFIRMARY.—House-Surgeon. Salary, £100 per annum, with residence, board and washing. Applications to the Secretary by February 25th.

TORQUAY BOROUGH.—Medical Officer of Health. Salary, £400 per annum, rising to £500. Applications on forms provided, and endorsed "Medical Officer" to be sent to the Town Clerk, Town Hall, Torquay, by February 21st.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Assistant House Physician. Appointment for six months. Honorarium at the rate of £75 per annum, with board, lodging, and washing. Applications to the House Governor by February 25th.

MEDICAL APPOINTMENTS.

BERKELEY, A. F. M., L.R.C.P., L.R.C.S. Edin., appointed Medical Officer to the Sixth District and Public Vaccinator for the Third District of the Bath Union.

BUTCHER, W. J., M.R.C.S. Eng., L.R.C.P. Lond., D.P.H. Vict., appointed Assistant Resident Medical Officer of the Salford Union.

CAMPBELL, Alfred, M.R.C.S., appointed Visiting Surgeon to the Gaol at Young, New South Wales, *vice* Dr. Heeley.

CORLIS, J., M.D., Ch.M. McGill, appointed Health Officer for Menzies, West Australia.

MARSHALL, R. P., M.R.C.S. Eng., L.R.C.P. Lond., appointed Medical Officer of the No. District of the St. Olave's Union.

MISKIN, L. J., M.R.C.S., Eng., L.R.C.P., Lond., appointed District Medical Officer at Koolkynie, West Australia.

MITTON, J. P., M.R.C.S. Eng., L.R.C.P. Lond., appointed Medical Superintendent to the Devon and Cornwall Sanatorium for Pulmonary Tuberculosis, Didworthy, S. Brent, Devon.

NAYLOR, A. G., M.B., C.M. Edin., appointed District Medical Officer of the Southwell Union.

OLIPHANT, Frank, M.B., C.M. Edin., appointed Government Medical Officer, Antigua, Leeward Islands, West Indies.

OSBORN, E. C., L.R.C.P. Lond., appointed Medical Officer to the Holborn Union Schools at Mitcham.

PATRICK, J. King., M.B., Ch.B. Glas., appointed House-Surgeon (out-door) to the Glasgow Maternity Hospital.

PRICE, Arthur Thomas, M.B., Ch.B Edin., appointed Assistant Medical Superintendent at the Hospital for Insane, Toowomba, Queensland, *vice* John B. McLean, M.B B.S. Melb., resigned.

REDMAN, William Edward, L.S.A., appointed a Port Medical Officer for the Port of Picton, New Zealand, *vice* Dr. Claridge, resigned.

SAVAGE, G. H., M.D., F.R.C.P. Lond., appointed Consulting Physician in Mental Diseases to Guy's Hospital.

STAPLETON, Edward Fitzgerald, M.D., B.Ch. Dub., appointed Surgeon to the Jervis Street Hospital, Dublin, *vice* Austin Meldon, F.R.C.S.I., resigned.

TARGETT, J. H., M.S. Lond., F.R.C.S. Eng., appointed an Obstetric Surgeon to Guy's Hospital, *vice* Dr. Galabin.

WALLACE, Arthur J., M.D. Edin., appointed Surgeon to the Hospita for Women, Liverpool.

DIARY FOR NEXT WEEK.

MONDAY.

Royal College of Surgeons of England, 5 p.m.—Professor Sir C. B. Ball: On Adenoma and Adeno-carcinoma of the Rectum, Erasmus Wilson Lecture I.

Medical Society of London, 11, Chandos Street, Cavendish Square, W., 9 p.m.—Dr. H. Radcliffe Crocker: Lettsomian Lectures on the Conditions which Modify the Characters of Inflammations of the Skin, and their Influence on Treatment. Lecture I. Introductory. Local Modifying Conditions: (1) The Irritant; (2) the Microbe; (3) the Local Origin of many General Inflammations.

TUESDAY.

Therapeutical Society, Apothecaries' Hall, Water Lane, Blackfriars, E.C., 4 p.m.—Dr. Hutchison: On the Use of Acid Sodium Phosphate in Alkalinity of the Urine. Dr. Burnet (Edinburgh): On Ichthyol in the Treatment of Pulmonic Disease.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Professor W. D. Halliburton: On the Chemistry of Muscle and Nerve.

Pathological Society of London, 20, Hanover Square, W., 8.30 p.m.—Mr. Barnard: Trauma and Infection at the Epiphysial Line. Dr. O. Grünbaum: Membranous Gastritis. Dr. Churton: Chronic Pancreatitis with Calculi. Dr. Batty Shaw and Mr. T. W. P. Lawrence: Abscess of Septum Auricularum; Stenosis of Superior Vena Cava and of Right Pulmonary Veins. Dr. Bainbridge: Card Specimen.

WEDNESDAY.

Royal College of Surgeons of England, 5 p.m.—Professor Sir C. B. Ball: On Adenoma and Adeno-carcinoma of the Rectum, Erasmus Wilson Lecture II.

Royal Meteorological Society, 70, Victoria Street, Westminster, S.W., 7.30 p.m.

THURSDAY.

Harveian Society of London, Stafford Rooms, Titchborne Street, Edgware Road, W., 8.30 p.m.—Clinical Evening. Cases will be shown by Dr. E. Cautley, Mr. F. Jaffrey, and others.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Dr. T. G. Brodie: On the Circulation.

FRIDAY.

Royal College of Surgeons of England, 5 p.m.—Professor Sir C. B. Ball: On Adenoma and Adeno-carcinoma of the Rectum, Erasmus Wilson Lecture III.

Society for the Study of Disease in Children, 11, Chandos Street, Cavendish Square, W., 5.30 p.m.—Clinical Cases by Mr. H. J. Curtis, Dr. G. A. Sutherland, Dr. James Taylor, Dr. Alex. Morison, and Dr. Leonard Guthrie. Dr. G. Carpenter: On Cases of Uncomplicated Myocarditis.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Dr. A. D. Waller: On Experimental Pharmacology: The Action of Anaesthetics and Narcotics.

POST-GRADUATE COURSES AND LECTURES.

Charing-cross Hospital, Thursday, 4 p.m.—Demonstration of Medical Cases.

Hospital for Consumption and Diseases of the Chest, Brompton, S.W., **Wednesday,** 4 p.m.—Lecture on Cases of Laryngeal Tuberculosis.

Hospital for Sick Children, Great Ormond Street, W.C., **Thursday,** 4 p.m.—Demonstration of Selected Cases.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C. Demonstrations will be given at 4 p.m. as follows:—Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, eye. Lectures will also be given at 5.15 p.m. as follows: Monday, Diseases of the Breast; Tuesday, Defects of Refraction; Wednesday, Insanity of Development; **Thursday,** Tuberculous Disease of the Spine; Friday, Acute Appendicitis.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., Tuesday, 3.30 p.m.—Lecture on Cerebral Tumours.

North-East London Post-Graduate College, Tottenham Hospital, N., Thursday, 9 p.m.—Lecture: Some Remarks on Hernia.

Post-Graduate College, West London Hospital, Hammersmith Road, W.—Lectures will be delivered at 5 p.m. as follows: Monday, Affections of the Lungs and Pleura; Tuesday, Plaster-of-Paris Splints; Wednesday, Pelvic Pain; **Thursday,** Treatment of some Injuries and Emergencies; **Friday,** Shellfish Culture in Relation to Disease.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning in order to ensure insertion in the current issue.

BIRTHS.

BONNER.—At Carr Lane, Shipley, Yorks, on February 5th, Mrs. T. Irvine Bonner, of a daughter.

PATERSON.—On the 9th inst., at Dartford House, Felixstowe Road, Ipswich, the wife of A. W. Paterson, M.B., C.M., of a daughter.

STEAD.—On the 9th inst., at Moor Lodge, Hawkhurst, the wife of C. Clement Stead, M.B., etc., of a son.

TURNER.—On the 6th February, at Plympton House Plympton, S. Devon, the wife of Alfred Turner, M.D. Edin., of a daughter.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

QUERIES.

A. G. W. asks how celluloid thread is best sterilized for use as suture material, and whether it is satisfactory.

P. writes: Can any member help me to identify an author named Kennedy, whom Eichhorst, writing in 1881, referred to as having recently stated that he found the respiratory murmur loudest at the left (!) apex in 80 per cent. of cases examined by him?

MEMBRANOUS DYSMENORRHOEA.

DR. ALEXANDER DUKE (London) writes to inquire with reference to a note published under this head in the BRITISH MEDICAL JOURNAL of February 7th, p. 351, whether the tent was in or out during the period.

DOCTORS OF THE ELIZABETHAN PERIOD.

SIR W. WHITLA (Belfast) wishes to know if is there any easily accessible work on the doctors of the Elizabethan period, giving some account of their personal characteristics and their domestic or social lives.

HOW LONG SHOULD MERCURIAL TREATMENT BE CONTINUED?

LUX asks: A patient of mine contracted syphilis early in 1902. For the first six months mercury was administered daily, and has been taken with periods of intermission down to the time of writing. He has now been under treatment nearly nine months, and beyond a slight secondary rash, which disappeared in about a week, he has had no other symptoms. Should the drug still be continued; and, if so, for how long, or should it now be stopped?

ANSWERS.

MOTOR CARS.

IN reply to several correspondents, we desire to say that we cannot recommend the motor cars of particular makers, and that it appears to be undesirable to insert requests for opinions on particular cars.

MEDICAL ATTENDANCE ON SOLDIERS ON FURLOUGH.

R., a civil practitioner who has attended a soldier on furlough, must apply for payment on Army Form 1667, which can be obtained from the principal medical officer of the military district in which the practitioner resides. This form contains instructions as to the amount which may be charged—from 1s. 6d. upwards according to circumstances. When filled in it must be sent to the officer commanding the soldier's regiment, who will fill in the certificate required from him, and forward the form to the principal medical officer. The following is paragraph of the *King's Regulations* by which the practice is governed:

"Para. 1945.—Soldiers on furlough who require medical aid should apply for it to the officer commanding the nearest military station. When this is impracticable they may apply to a civil practitioner, to whom they will show their furlough paper, and who will be allowed to charge for attendance at the rate laid down on A. F. O. 1667."

DIAGNOSIS AND TREATMENT WANTED.

DR. F. W. JORDAN (Heaton Chapel, Manchester), writes: In reply to "Boomerang," I would suggest that his patient is gouty, that his pain is myalgic, and is due to uric acidaemia, and that treatment on these lines will relieve him. *La Grippe* four or five years ago would be a likely cause of the onset of the symptoms as described by "Boomerang," though in my opinion the backache was really a fresh manifestation of a pre-existing condition. It would be interesting to know whether the patient ever has tremors of the hands after exertion, or fibrillary contractions in various parts of the body without apparent cause. I think it likely that any of his muscles will become stiff and painful on movement after being for a long period in a state of tonic contraction; for instance, stooping for a length of time, as in gardening or carrying a bag or parcel without changing position. The muscular pains all over the body after playing golf by one who is out of practice are of the same character. This man lies in one position for a length of time and gets a backache, aggravated, I have no doubt, by something which causes an excessively acid condition of the urine. I daresay he has acid dyspepsia sometimes, which probably was the beginning of his troubles, unless we go back to his parents. I should begin treatment with a liver pill, which I should repeat occasionally. I should give for a week a mixture three times a day of potassium bicarbonate with taraxacum. But the main treatment is vegetarian diet, with white fish or chicken, and all intoxicants, including cider, to be cut off. I should recommend a heaped-up teaspoonful of potassium citrate dissolved in half a pint of water each night on going to bed, and each morning on rising a good dose of Carlsbad salts (say Bishop's effervescing) in a tumbler full of water, followed by ten minutes' exercise with the dumb-bells done conscientiously. An occasional visit to Harrogate would do this patient good. I think "Boomerang" would derive some useful information from Haig's *Uric Acid*.

LETTERS, NOTES, Etc.

THE CASE OF DR. RAINSBURY.

MR. GEORGE S. O'ROURKE, Secretary, Midland Medical Union (Albion Chambers, King Street, Nottingham), writes: I am desired by the Council of the Midland Medical Union, and by Dr. Rainsbury to acknowledge the receipt of further donations to the fund raised to assist Dr. Rainsbury in discharging the judgement which was given against him at the last Nottingham Assizes, and which was deemed to be a great hardship upon him. The judgment was for £25, and the costs were taxed at £152 6s. 2d., making together the sum of £177 6s. 2d. Of this members of the profession have generously contributed £77 0s. 9d. I have to express Dr. Rainsbury's gratititude to the contributors for their assistance, and the thanks of the Council for the liberal response which has been given to the appeal. Will you kindly insert this letter in your next issue?

	£	s.	d.
By contributions already acknowledged	71	15	9
,, Dr. J. F. O'Meara, Walsall	1	1	0
,, Dr. M. A. Ruffer, Alexandria	1	1	0
,, Dr. F. Cassidi, Derby (second donation, making £4 4s.)	2	2	0
,, Dr. E. Vaudrey, Derby	1	1	0
	£77	0	9

THE LATE MR. LUND OF MANCHESTER AND LISTERISM.

DR. F. W. JORDAN (Heaton Chapel, Manchester) in the course of a letter on this subject, writes: In the Lister number of the BRITISH MEDICAL JOURNAL I am surprised no mention was made of the part the late Mr. Lund took in connexion with the antiseptic treatment of wounds. He was an enthusiastic disciple of Lister, and sacrificed trouble, time, and money to his convictions. I had the privilege of being Mr. Lund's dresser at the Manchester Royal Infirmary for six months. The trouble Mr. Lund took over his cases, for he dressed them all himself, was something phenomenal; the yards of gauze that he applied in order to make sure that the air which reached the wound was properly filtered would cause the onlookers to smile. It was a common impression that the object of the dressings was to make an airtight casing in order to prevent the access of air. In the early days the effect of the malign influence of disease germs, contrasted with the good results of Listerism, ought to have been convincing, as these results formed an exceptional circumstance in surgical work at that time. But now the contrast lies the other way; it is the exception to see bad results due to the absence of surgical cleanliness. Mr. Lund, to avoid putting the hospital to expense, made all his own cere-cloth, as he called it; this was no light addition to the labours of a popular surgeon and lecturer. His belief in Listerism never faltered, and I think some credit for diffusing a knowledge of its principles and practice in the North of England is due to Edward Lund for the persistent way in which he persevered with the treatment in face of much discouragement. Confidence in his belief rendered him indifferent to the jests of others, and he was always a gentleman.

INGUINAL ADENITIS DUE TO STRAIN AND PRECEDED BY GONORRHOEAL INFECTION.

LIEUTENANT-COLONEL E. G. ERSKINE RISK, R.A.M.C. (Station Hospital, Belfast) writes: I have noticed amongst soldiers in a great number of instances how often a patient comes into hospital with inguinal adenitis, with no apparent source of local infection. On inquiry into its etiology, I have found an antecedent gonorrhoeal infection within eighteen months previously; the patient, however, attributing his condition on admission to a strain at gymnasium, or to a route march. I think that without a previous gonorrhoeal infection, a strain would not be likely to produce this adenitis. I would suggest that some of the gonococci remain permanently in the fixed cells of the lymph glands, the majority being destroyed by phagocytes; the strain lowers the resisting power of the host cells to retain the gonococci, the parasite becomes free and sets up inflammatory adenitis. Rest and the usual necessary local treatment are then sufficient to effect a cure. In these cases there is no history or symptoms of tuberculous or syphilitic infection.

CASE OF VOLVULUS OF THE CAECUM.

DR. E. WHARMBY BATTLE (Handsworth) writes: Seeing how rarely volvulus of the caecum occurs, it may be interesting to add another case of that condition to that described by Dr. Bisshopp and Mr. Fripp. This case was recorded by me in the *Lancet* (ii, 1899) in an article on septic peritonitis. It was that of a man, aged 49 years, who was admitted to hospital in a state of extreme collapse, and died twelve hours later. On necropsy the caecum was found enormously dilated. It extended from the right flank upwards and to the left, across the abdomen, occupying the umbilical and left hypochondriacal region. At its junction with the remainder of the large intestine it was twisted, and this twisted portion was bent at an acute angle on the rest of the gut. Round this part a loop of small intestine had wound itself, so tightly that one could not say whether the volvulus or the constriction by the loop of small intestine was the primary condition.

THE ART OF PRESCRIBING.

HONESTY writes with reference to the article published under this title in the BRITISH MEDICAL JOURNAL of January 10th, p. 91, to express the opinion that the majority of men who are "let loose to practise" become assistants with practitioners with a large amount of club work paid for by contract at the rate of 1d. a week, and in many cases less. These practitioners do their own dispensing, and it is generally the lot of the assistant to do most of the club work. What chance, he asks, do these assistants get of applying the little knowledge they possess in the art of prescribing? If they prescribe a mixture well-combined and palatable, they are told by their principal that they cannot afford such mixtures for patients who only pay him 1d. a week. The assistant, therefore, has to fall back on stock bottles—solutions of potassium nitrate, magnesium sulphate, sodium bicarbonate, burnt sugar, and so on. Our correspondent believes that the General Medical Council must be aware that such things happen in contract work at low rates of pay, and he thinks the Council should have the power to fix such a rate of pay for contract work as would place practitioners in a position in which they could earn a living, and yet be able to treat patients as a medical man would wish to be treated himself.

LETTERS, COMMUNICATIONS, ETC., have been received from:

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BOOKS, Etc., RECEIVED.

International Catalogue of Scientific Literature. First Annual Issue. Vol. viii. 1902. R. Bacteriology. London: Harrison and Sons. 21s.

Specielle Muskelphysiologie oder Bewegungslehre. Von Dr. R. du Bois-Reymond. Berlin: August Hirschwald. 1903. M.8.

Sammlung klinischer Abhandlungen über Pathologie und Therapie der Stoffwechsel und Ernährungsstörungen. Herausgegeben von Prof. Dr. Carl von Noorden. 3 Heft. Berlin: August Hirschwald. 1903. M.80

Klinisches Jahrbuch. Unter Mitwirkung der Herren Prof. Dr. M. Kirchner und Dr. Naumann. Herausgegeben von Prof. Dr. Freih. v. Eiselsberg, Prof. Dr. Flügge, Prof. Dr. Freih. v. Mering, und Prof. Dr. Werth. Zehnter Band. Zweites Heft. Jena: Gustav Fischer. 1902. M.6.

Die physikalisch-diätische Therapie in der ärztlichen Praxis. Von Dr. Med. Bernhard Presch. Lieferung 4. Wurzburg: C. Kabitzsch. 1903. M.2.

Research on the Eucalypts, especially in regard to their Essential Oils. By Richard T. Baker, F.L.S., and Henry G. Smith, F.C.S. Sydney: William Applegate Gullick. 1902.

Mission Scenes in the Bannu (Edwardesabad) District, North-West Frontier Province, India. By E. F. Pennell. Bannu: Church Missionary Society. 1902. 1s.

Lunacy and Law. An Address on the Prevention of Insanity, delivered before the Medico-Psychological Association of Great Britain and Ireland. By Sir William R. Gowers, M.D., F.R.S. With an appended Note. London: J. and A. Churchill. 1903. 1s.

A System of Physiologic Therapeutics. Edited by Solomon Solis Cohen, A.M., M.D. Vols. V and IX. London: Rebman, Limited. 1903. 12s. 6d. each.

Index-Catalogue of the Library of the Surgeon-General's Office, United States Army. Authors and Subjects. Second Series, Vol. vii. Hernia—Inquiry. Washington: Government Printing Office. 1902.

Chirurgie Intestinale d'Urgence. Par Albert Monchet. Paris: J. B. Baillière et Fils. Fr 1 50.

The Truth and Error of Christian Science. By M. Carta Sturge. London: John Murray. 1903. 6s.

Die Krankheiten der Nase und des Nasenrachens mit besonderer Berücksichtigung der rhinologischen Propädentik für praktische Aerzte und Studirende. Von Dr. Carl Zarniko. Zweite gänzlich umgearbeitete Auflage; Erste Hälfte: Propädentik. Berlin: S. Karger; London: Williams and Norgate. 1903. 5s. 9d. net.

Grundriss der pathologischen Histologie des Auges. Von Dr. Siegmund Ginsberg. Berlin: S. Karger; and London: Williams and Norgate. 1903. 13s. net.

Handbuch der pathologischen Anatomie des Nervensystems. Herausgegeben von Dr. E. Flatau, Priv.-Doc. Dr. T. Jacobsohn, Priv.-Doc. L. Minor. I. Abtheilung (Bog. 1-20). Berlin: S. Karger; and London: Williams and Norgate. 1903. 10s. net.

Cancer: With Special Reference to its Distribution in North Bedfordshire. By W. Gifford Nash, F.R.C.S. London: Mitchell and Hughes. 1903.

Biographic Clinics. The Origin of the Ill-health of De Quincey, Carlyle, Darwin, Huxley, and Browning. By George M. Gould, M.D. London: Rebman, Limited. 1903. 5s. net.

The Doctor's Handy Reference List of Asylums, etc. London: George Putnam's Sons, Limited. 1902. 6d.

Die Entwicklung des Glaskörpers. Von Dr. M. v. Lenhossék. Leipzig: F. C. W. Vogel. 1903. M.12.

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An average line contains six words.

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The Erasmus Wilson Lectures

ON

ADENOMA AND ADENO-CARCINOMA OF THE RECTUM.

Delivered before the Royal College of Surgeons of England.

By Sir CHARLES B. BALL, M.Ch., F.R.C.S.I.,
Hon.F.R.C.S.Eng.,
Regius Professor of Surgery in the University of Dublin.

Lecture I.—Simple, Multiple, and Congenital Adenomata.

The selection of a subject worthy of the Erasmus Wilson lectures and of the audience to which they are addressed, was to me a matter of considerable difficulty. In the choice that I have made I have been influenced by two considerations. 1. The relations of purely benign to malignant adenoma of the intestine is a matter of considerable scientific interest, some pathologists apparently believing that adeno-carcinoma is from its inception essentially different from the benign variety of adenoma, and that the transition of the latter into the former does not occur, a view which I find it difficult to suppose from a somewhat extended clinical experience. 2. The good results obtained by the surgical treatment of cancer of the rectum, if operated on in the very earliest stage, and the difficulties of making a diagnosis at a sufficiently early period, appeared to me to make the subject one of interest to the practical surgeon.

Having had the advantage of the assistance of Professor Scott in making a number of lantern slides, I have thought that these lectures would prove more interesting if they largely took the form of lantern demonstrations.

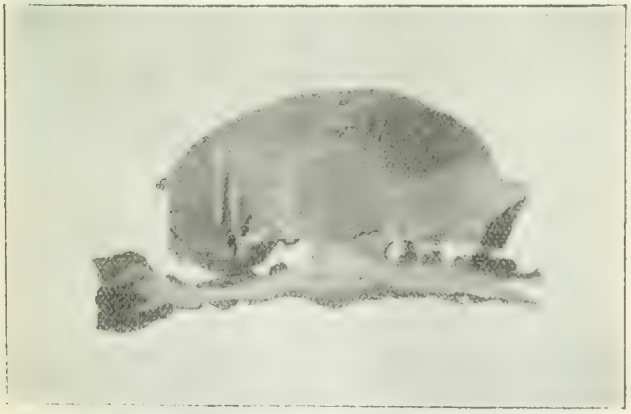


Fig. 1.—Pedunculated lymph adenoma springing from the mucous membrane of the rectum (× 5).

By the word adenoma we understand a tumour which is largely composed of epithelial tissue similar to that formed in secreting glands, and when occurring in the intestinal tract the epithelial elements of the new growth correspond with those normally found in the follicles of the intestinal mucosa. If the epithelial proliferation is simply a surface development, even though it may produce a tumour of considerable dimensions projecting into the lumen of the bowel, we speak of it as a simple adenoma; and if, on the contrary, the epithelial development grows through its basement membrane, invades the submucosa, infiltrates the muscular coat, and even the tissues outside the intestinal tunic, the case is one of infiltrating adenoma or adeno-carcinoma, which is the typical form of intestinal cancer, and is characterized by all the clinical evidence of malignancy. We occasionally meet with small tumours which clinically resemble closely simple adenomata, but which upon microscopic examination prove to be composed of lymphoid tissue instead of the epithelial elements so characteristic of the ordinary adenoma; these lymph-adenomata originate in the solitary glands of the intestine; they are very rare, but few cases having been recorded. Personally, I have only seen one such case which presented all the clinical characteristics of an ordinary pedunculated adenoma, its real nature only being apparent when a section had been examined.

Unlike haemorrhoids, which are confined to the rectum, adenomata, both the simple and infiltrating varieties, are found throughout the entire length of the intestinal tract, but are much more frequently met with in the rectum; no doubt this is in part due to the greater facilities for diagnosis afforded by the lower bowel, but allowing fully for this consideration, it is certain that the actual frequency of occurrence of these growths in the rectum is much greater than it is in the other portions of the intestine.

There is a close analogy between the growth of adenomata of the intestinal mucosa and cutaneous warts, the increase of the papillae of the skin and overgrowth of epithelium on the surface of a wart has its exact counterpart in the formation of a small adenoma; both occur more frequently in children; there is a tendency in both for the surface to be increased by tuberculation and fission; the tendency to become pedunculated, although more frequent in intestinal adenoma, is not uncommon in cutaneous papilloma; and as the cutaneous wart, after existing for many years without apparent change, may spread into the deeper tissues and become a malignant epithelioma, so we find that cancer of the rectum may have been preceded for a long time by a purely benign adenomatous growth, particularly if the tumour is one of the sessile and not pedunculated varieties of simple adenoma.

In that portion of the anal canal which is covered by scaly epithelium we occasionally meet with papillomatous growths which may grow to a considerable size, and which resemble closely the "villous" adenomatous growths in the bowel above, except for the character of the epithelial covering. These anal papillomata are of similar structure to the venereal warts so common upon the prepuce, and, like them, are probably due to the maceration of the skin by irritating discharges.



Fig. 2.—Papillomatous warts (villous tumour) of the lower portion of the anal canal, the surface entirely covered with scaly epithelium.

The relation of the simple to malignant adenoma is a question of great interest. Pathologists have from time to time thought that, from the way in which the protoplasm of the epithelial cells stain, from the presence or absence of goblet cells, from the fact that the epithelium lining the acini was disposed in one or more layers, and from other characters of the epithelial cells themselves, they have been able to discriminate between the benign and malignant forms. It, however, appears that none of these characters are sufficient alone to make the diagnosis, there is one, and one only, positive evidence of malignancy, and that is the perforation of the muscularis mucosae and the development of the epithelial elements in the deeper structures of the intestinal tunic, once this has occurred the growth of epithelium becomes rampant; it invades all structures in its neighbourhood, and reproduces itself in distant parts. What the explanation is of this increased growth, once the basement membrane is penetrated, is the enigma which the large army of cancer researchers at present working have set themselves to solve.

There is little doubt but that the origin of certain cases of

adenoma can be traced to local irritation. In cases of prolapsus recti in young children we often find small sessile adenomata on the exposed mucous membrane, these, which are quite too small to have had anything to say to the production of the prolapse, are in all probability caused by friction against the child's clothing, and upon the exposed mucous membrane of a colotomy wound in like manner, we not infrequently can watch the development of similar

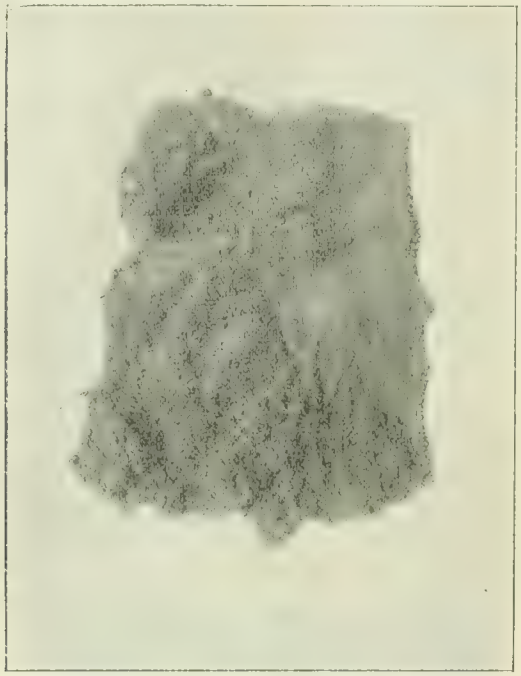


Fig. 3.—Widely diffused adenomatous growth of the rectum. One-fourth natural size, probably caused by hairball. At one point the intestinal tissue was penetrated by an infiltration of the growth.

growths. Again, in cases of cancer of the rectum attended with copious discharge we occasionally find adenomatous growths at a distance from and below the cancer, which are obviously confined entirely to the mucous membrane. In a case of widely diffused adenomatous growth of the rectum—which I saw with Dr. Gordon and was the most extensive I have ever seen—a hairball, composed apparently of the patient's own hair which she had swallowed, was also present.



Fig. 4.—Commencing adenoma of the rectum from a case of prolapse, probably due to friction against child's clothing. On the left the healthy mucous membrane has been cut horizontally and on the right vertically; the section also passes through a solitary lymph follicle. Photomicrograph by Professor Scott (× 5).

Lastly, in a case recorded by Belleli,[1] the ova of bilharzia were found in one of these growths removed from the rectum, which suggests the possibility that the liability of children to suffer from intestinal worms may explain the greater frequency with which simple adenomata are met with in early life.

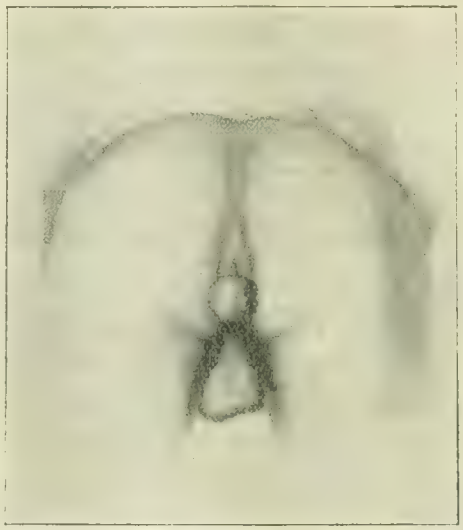


Fig. 5.—Prolapsed adenoma attached by a narrow pedicle.

The first appearance of an adenoma is as a wart-like projection from the mucous membrane. If this is examined microscopically, it is found that the secreting follicles have become elongated and increased in number, and that the projection is caused by their being crowded together. This nodule soon becomes more prominent and rounded, while its base becomes narrowed into a pedicle producing the so-called "polypus" of the rectum. This word as used to express a tumour attached by a single more or less narrow pedicle has always appeared to me to be one of those etymological conundrums which we so frequently meet with in medical history, and which it is high time to replace by a more exact nomenclature. The pedicle once having formed tends to elongate, so that a growth which originated some distance up the rectum may eventually come to be extruded from the anus. This pedicle is sometimes thin and round, while at others it is broad and strap-like. It consists only of the mucous and submucous coats of the bowel with the vessels for the nutrition of the growth.

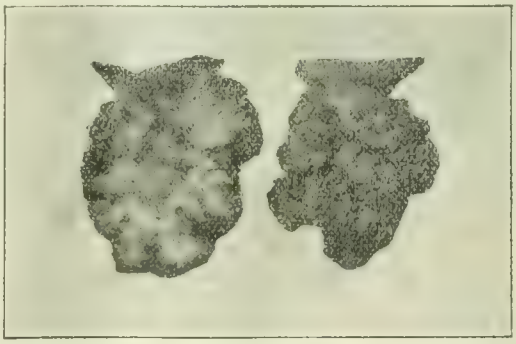


Fig. 6.—An adenoma of the rectum attached by broad pedicle, and with surface much tuberculated, to the left seen in section, half natural size. Case seen with Mr. Swan.

In the large majority of cases pedunculated adenomata are single, but occasionally they are multiple, and in rare instances large tracts of mucous membrane are completely covered with them. The shape of a simple adenoma is usually more or less globular, but it frequently manifests a tendency to increase its surface by tuberculation, while in others the surface area is still more largely increased by more or less deep divisions; under these circumstances, these papillary adenomata become what have been usually described separately as villous tumours, but an examination of a large number of specimens will show that there are all possible gradations between the simple ovoid and smooth-surfaced adenoma and a villous tumour with a pile almost as fine as velvet, it is more accurate, therefore, to consider all these tumours as varieties of adenoma.

Under the term congenital sacro-coccygeal tumour, a number of entirely distinct growths have been described, and in many of them the characters and method of origin are widely distinct; amongst these may be mentioned (1) tumours originating in connexion with the termination of the spinal canal; (2) dermoids, in some instances apparently due to



Fig. 7.—Multiple adenomata of rectum, prolapsed through anus. Mr. Swan's case.

implantation of epiblast during the disappearance of the fetal tail; (3) tumours containing more highly-specialized tissues evidently due to fetal inclusion; and (4) growths which, although frequently somewhat complex in character, show distinct evidence of having originated in adenomatous tissue. It is with the last class alone that we have to deal upon the present occasion; and, as pointed out by MM. Hermann et Tourneux,[2] the most plausible theory for the origin of this adenomatous tissue is a failure in the complete obliteration in one or other of those remarkable embryonic structures, the neurenteric canal or the post-anal gut. As indicating their origin, it is convenient to speak of them as embryonic adenomata.

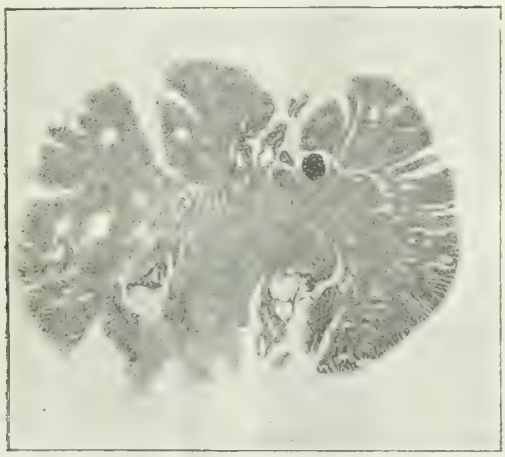


Fig. 8.—Rectal adenoma much split up. Dr. Earl's case. (× 3.)

Although in some instances these tumours are directly connected with the rectum, in the majority the relation to the coccyx and sacrum is much more intimate, and the tendency is for the direction of greatest growth to be more frequently outside than inside the pelvis, while in some the growth appears to be entirely extrapelvic. I have, however, seen one case in which the tumour was altogether within the pelvis, and at the age of 2 years had increased so much in size that it had produced intestinal obstruction and retention of urine by direct pressure, although the external enlargement was but little noticeable. I removed this tumour with considerable difficulty, but it recurred and grew with great rapidity, proving fatal in two months, and at the necropsy we found metastatic tumours of similar character both in the liver and lungs, although the local recurrence did not infiltrate surrounding structures in the way that is so characteristic of adeno-carcinoma.



Fig. 9.—Rectal adenoma very finely split up. Photomicrograph by Professor Scott (× 5).

The surgical treatment of these cases of embryonic adenomata, except when of very small size and extrapelvic, is not satisfactory.

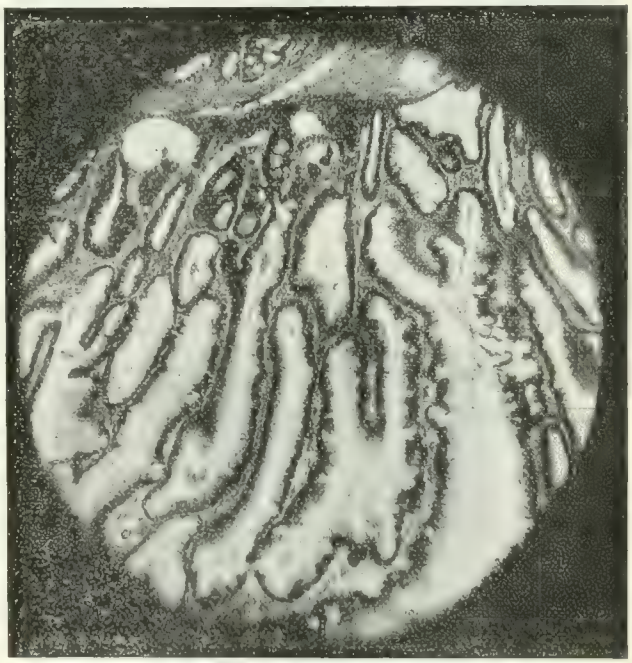


Fig. 10.—Same as Fig 9 (× 100).

The symptoms of simple adenoma of the rectum when of small size and not involving the sphincteric zone are of a trivial character; when, however, the pedicle becomes sufficiently long to allow of the growth being protruded through the anus, it becomes congested, and the surface is liable to be abraded; bleeding is therefore a common symptom. It is a clinical maxim that haemorrhage from the rectum in young children always raises the suspicion of adenoma, as piles, which are the commonest cause of such bleeding in the adult, are excessively rare in early life. Another symptom which is common where the adenomatous growth is extensive is the discharge of glairy mucus. In cases of villous adenomata this may be very considerable, causing frequent desire to evacuate the bowel, and even escaping almost continuously, causing much discomfort to the patient. This abundant formation of mucus is due to the great increase of secreting surface, and is remarkable as showing that the adenomatous tissue of the new growth remains functional. The mechanical effects produced by pressure of unusually large adenomata of the rectum occasionally give rise to important symptoms such as intestinal obstruction and retention of urine; they have also been known seriously to obstruct parturition; but usually, except in embryonic adenoma, the size is so inconsiderable that pressure effects are trivial. In other instances, when situated some distance up the bowel, the continued

peristaltic action evoked has given rise to intussusception or prolapse.

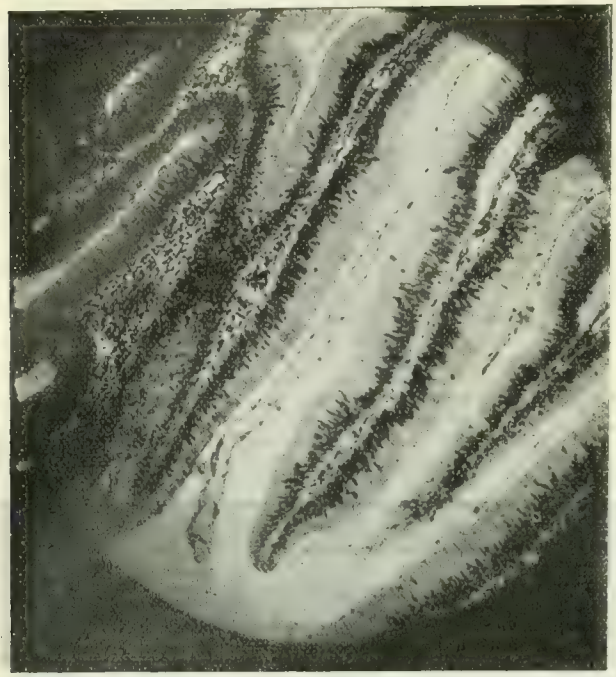


Fig. 11.—Same as Fig. 9 (× 300).

Adenomata sometimes of considerable size occasionally undergo spontaneous cure, when the pedicle becomes long enough to permit of extrusion at the anus the retraction of the bowel after defaecation tears through the thin pedicle, but whether like cutaneous warts they disappear without any apparent cause we have no knowledge.



Fig. 12.—A case of extensive embryonic adenoma. (I am indebted to Mr. Heuston for the opportunity of seeing and reproducing this remarkable case.)

Treatment of simple adenoma consists in the removal of the pedunculated forms after ligature of the pedicle, and when this is at all broad and strap-like it is a wise precaution to transfix and ligature it in sections, the sessile varieties, especially if there is any tendency to infiltration of the deeper structures, are best excised. Where a considerable area is covered by villous growths they may be removed with the curette in the same way that venereal warts are so successfully dealt with.

References.

1 *Progrès Médical*, No. 30, 1885. 2 *Comptes Rendus de l Académie des Sciences*, 1887.

The Lettsomian Lectures

ON

THE CONDITIONS WHICH MODIFY THE CHARACTERS OF INFLAMMATIONS OF THE SKIN, AND THEIR INFLUENCE ON TREATMENT.

Delivered before the Medical Society of London.

By H. RADCLIFFE CROCKER, M.D., F.R.C.P.,

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Lecture I.—(*Abstract*).

Inflammation of the Skin.

The lecturer began by stating that it was just about a century ago that Dr. Robert Willan issued his treatise on inflammations of the skin, founding his classification of them on their most prominent clinical feature, dividing them into papular, scaly vesicular, bullous and pustular forms.

Inflammations of the skin comprise more than half of all skin cases, six out of every ten patients having some form of dermatitis, and of these five-sixths come under eczema, psoriasis, impetigo contagiosa, lichen planus, erythema, and urticaria in hospital practice, but in private practice there are a very few impetigo contagiosa, and twice as many of lichen planus.

The inflammations set up by irritants differ according to the strength of the irritant. A strong irritant will set up a dermatitis in any one exposed to it, and its character is usually recognizable, and perhaps even the kind of irritant which was the cause of it. Examples were shown of the crowded vesicular eruption on the palms from the dye called "aurantia"; an irregular bullous eruption from the application of a caustic liquid; Roentgen ray burns, the latter being characterized by the obstinately unhealing character of the ulceration produced, and by the close network of dilated vessels over the whole injured area.

The mild irritants usually require a special vulnerability on the part of the patient, and the eruption produced often resembles an ordinary inflammation of the skin such as an erythema or an eczema, and the cause is often not ascertained unless it is several times repeated, and always commences in an exposed part. Occupation eczemas, such as those of bakers, barmaids, french polishers, etc., are the type of this kind of dermatitis, and frequently inflammation, starting at the irritated part, develops on distant parts, often symmetrically. Vulnerability to certain irritants once acquired often increases till the very slightest exposure is sufficient to bring on an attack. Iodoform dermatitis was given as an example, and it was pointed out that handling the gauze was enough to start it in the predisposed.

Eczema.

In discussing the pathology of eczema the papulo-vesicular type was taken, and of it the pathology is still a matter of dispute, and probably the safest line was not to ask, Is eczema parasitic? is it a blood dyscrasia? is it a neurosis? but to acknowledge that all these were factors and to endeavour to estimate in what proportion each played its part in any particular case. Once the inflammatory process was started pus cocci, either the staphylococcus aureus or the streptococcus pyogenes, might, and often did, modify considerably the character of the inflammation, in some cases by the cultivation into virulence of a previously harmless organism, in others by the secondary invasion of one or other of these pus cocci. The change of a vesicular into a pustular eczema was instanced. The following list of inflammations due to the staphylococcus aureus was given:

Boils.
Carbuncles.
Coccogenic and lupoid sycosis.
Impetigo of Bockhardt.
Quinquaud's "folliculitis decalvans."
Dermatitis papillaris capillitii.
Pemphigus neonatorum.
Pemphigus contagiosus.
Cutaneous abscesses.
Superficial whitlows.
Erysipelas.
Granuloma pyogenicum and other papillary growths
Acne varioliformis.

Those due to the streptococcus of Fehleisen were:

Impetigo contagiosa and its varieties, including ecthyma, but excluding Bockhardt's impetigo.
Erysipelas.
Erysipeloid.
Superficial whitlows.

There were also pustular inflammations due to pyogenic organisms such as those of trichophyton megalosporon, the tubercle bacillus, blastomyces, etc. A mixed infection of pus cocci might occur, streptococcus impetigo being invaded and modified by the staphylococcus aureus.

Bockhardt's impetigo was a frequent precursor and concomitant of boils, and it should be promptly treated as a prophylactic measure against them. An untreated streptococcus impetigo led to a rapidly spreading erysipelas in an infant, and endangered the child's life. In the treatment of boils and carbuncles the aim should be the local destruction of the pus cocci as early as possible, and therefore an early incision and disinfecting the cavity with carbolic acid solution before the pus cocci had travelled along the lymphatics and set up a fresh boil some distance off.

In *pemphigus neonatorum* the bullae had perfectly clear contents, and both the staphylococcus and the streptococcus had been found by different observers, the staphylococcus being the most frequent. It was generally a sign of unhygienic surroundings, but unless neglected, or derived from puerperal fever in the mother, it was readily amenable to treatment. under modern asepticism it was now never seen in lying-in institutions where formerly it was endemic.

Fungating papillary growths were apt to form on all chronic suppurating surfaces and after some acute suppurations less generally recognized conditions dependent on pus organisms occurred. They were all pyogenic granulomas with different names according to the underlying diseases on which they developed, they might be tuberculous, syphilitic, and in the axillae and groins form part of the symptomatology of pemphigus vegetans. The so-called botryomycosis hominis was an example of a fungating granuloma after acute suppuration. Hypertrophic scars also were probably avoidable by excluding pus organisms during the healing process of an open wound.

This diversity of lesion from the same organisms was largely due to the mode and depth of implantation in the skin, of the pus cocci and showed how far we had advanced on Willan's classification according to the primary lesion.

Dermatitis and Seborrhoea.

The modifications of dermatitis produced on a seborrhoeic basis or the seborrhoeides were then discussed, and it was pointed out that seborrhoea oleosa was now again regarded as excess of secretion from the sebaceous glands, and not from the sweat glands as Unna advocated, and that Sabouraud ascribed it to a special micro-bacillus, the comedo also being due to the same bacillus. While the former fatty incrustation so common on the scalp was no longer regarded as a true seborrhoea, but a cell proliferation chiefly of the horny layer, due it was said to be the bottle bacillus and the seborrhoeic micro-bacillus in combination, the secondary invasion of the staphylococcus aureus and a grey coccus produced, if Sabouraud was correct, the various seborrhoeides. That is to say, the apparently trivial seborrhoea afforded a favourable breeding ground for other more actively mischievous organisms. An example was given of the active dermatitis which might suddenly spring up under mental emotion on a scalp on which this fatty pityriasis had been present for years without any symptoms beyond general thinning of the hair.

The seborrhoeides were described as imitators of different forms of eczema, lichen, and psoriasis, and other inflammations, and it was added that Sabouraud ascribed to mixed infections of the pus and seborrhoeic organisms the production of the pustular eruptions—acne varioliformis, acneic furunculosis, chronic furunculosis of the neck, sycosis, acne keloid, and dermatitis papillaris capillitii. If these views of mixed infection were confirmed, and they were highly probable; it was an important generalization which ought to lead to improved conceptions both of the pathology and treatment of many forms of dermatitis.

Local Origin of General Eruptions.

The lecturer then passed on to the consideration of the local origin of many general and symmetrical eruptions, and showed that while it was first pointed out by Brocq in relation to the somewhat acute disease called pityriasis rosea, it was capable of extension to other diseases, such as psoriasis and lichen planus, in their primary attacks. In pityriasis rosea there first appeared a single patch, generally in some part of the trunk, which slowly enlarged peripherally for eight or ten days, and then a widespread symmetrical outbreak occurred which might in a few days cover the whole body and upper segments of the limbs, the lower segments seldom being much involved, and after lasting three or four weeks the eruption gradually disappeared. In less typical cases the development might be slower, might stop more or less short of generalization, and the tendency to spontaneous involution be much less, so that sometimes cases lasted for several months.

In first attacks of psoriasis, the lecturer had frequently been able to trace the same mode of development, though, owing to the slower course of the disease, it was less obvious than in pityriasis rosea. For weeks, months, and occasionally even years, there might be only one or two patches, then they began to multiply: if slowly, perhaps on the same limb only, and not very far from the original patch or patches, but either with or without the local extension, generalization eventually took place, and in recurrences this sequela of events could no longer be traced. In lichen planus development from a single focus could not often be proved, but it was common for a few foci of the chronic form of the disease to be present for months or even years, and then suddenly for a generalization of the more acute miliary form to occur sometimes from a traceable and sometimes without a traceable exciting cause.

The most feasible explanation was that there was first an invasion of a microparasite from without, and that this underwent local multiplication, or perhaps a toxin was formed, and then internal absorption into the circulation and generalization from within outwards.

The moral was that every effort should be made both to get rid as soon as possible of the beginnings of disease, and that in a recurrent disease like psoriasis it was not sufficient to remove the bulk of the eruption, but efforts should be made to clear up every remnant of it.

THE BACTERIOSCOPIC DIAGNOSIS OF SEWAGE POLLUTION OF SHELLFISH.

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It appears from various published accounts that those who have worked at the bacteriology of shellfish are disinclined to attach any precise significance to the occurrence in them of certain microbes which come under the term of bacillus coli and coli-like bacteria. It is therefore with the object of inviting reconsideration of the subject with a view to obtaining unanimity in the matter of a standard for diagnosis, that I offer here the following remarks. After a considerable experience, I have arrived at the conclusion that, due consideration being given to all the facts as to the conditions of the precise locality whence shellfish have been derived, the presence in greater or less amount in such shellfish of certain bacteria affords a trustworthy indication as to whether or not such shellfish have been recently exposed to undesirable fouling (sewage pollution).

It is an important question—important from the public-health point of view—whether, in the event of a small amount only of fouling being demonstrable, such shellfish are to be rejected as unfit for consumption. It will be admitted, I think, that oysters which are laid down in a locality to which sewage discharged at a distant point into the tideway has access in very small amounts only and occasionally stand in a different position—*qua* possible disease production from oysters which are practically continuously exposed to, at times are actually flooded by, crude sewage discharged in their immediate neighbourhood; and, further, it is obvious that there is an important distinction to be made between the latter and other oysters which are miles removed from a sewer outfall, but which, owing to being laid down in a shallow part of a bay, may still be, and at intervals only are, brought into contact with matters that have long before, perhaps many days previously, been discharged from sewage outfalls. This last category of oysters could only in a very remote degree be considered as potential disease producers.

Oysters, moreover, stand in a different position from cockles; for, whereas the former when they have imbibed the B. typhosus soon (after ten to fourteen days) discard it again when placed

in clean sea water, the latter (cockles) retain this microbe, and, as I have shown (*Report of the Local Government Board*, 1900-1, p. 570), are capable even of becoming a nidus for its multiplication.

By estimating, having due regard to the above considerations, the relative proportion between the number of shellfish yielding positive as compared with those yielding negative results on bacterioscopic examination, I consider, from a large experience, that it is possible to diagnose approximately the percentage value of probable sewage pollution in a given instance. To this end, and in a positive sense, the presence of B. coli communis, or the typical B. coli, together with the spores of B. (enteritidis) sporogenes is all-important. Latterly, in addition, the presence of streptococci (Houston) which stain by the Gram method have been found to afford valuable confirmatory evidence.

THE COLON GROUP.

B. coli communis or the typical B. coli, as is well known, belongs to a tribe of bacteria comprising many and different species and their varieties; indeed, with increase in the number of workers and with multiplication of methods, the members of the great tribe of coli bacilli become more numerously recognized and identified. All coli bacilli and coli-like bacilli have certain characters in common. But there are other characters by which they differ from one another in a more or less definite manner.

All coli bacilli and coli-like bacilli, including the typhoid bacilli, have the following characters in common:[1] (*a*) They grow well on gelatine at ordinary temperature, although they grow, of course, better at 37° C.; (*b*) they cause, when growing in broth culture at 37° C., in twenty-four hours uniform turbidity due to their rapid multiplication; (*c*) they are capable of growing in broth, gelatine, or agar to which 0.05 per cent. phenol had been added; (*d*) they are capable of growing in the depth of the culture media (are in effect facultative anaërobes), although their growth on the surface—that is, exposed to oxygen of the air—is quicker and more copious; (*e*) they do not at any time liquefy gelatine—namely, do not peptonize gelatine. [This latter character—namely, not liquefying the gelatine—is of importance, since there have become known certain microbes which in morphological and some cultural characters resemble the coli bacilli in a marked degree, but which on continued observation, owing to their more or less slow liquefaction of the gelatine can with certainty be distinguished from them][2]; (*f*) growing on the surface of gelatine their young colonies are flat, dry-looking, more or less translucent expansions which can be best compared with a vine leaf, that is, a prominent excentric or sometimes central thickened part and a filmy crenate irregular peripheral portion; (*g*) in streak culture on gelatine they form a rapidly-expanding, flat, dry, more or less translucent band with irregular crenate margin; (*h*) under the microscope they are cylindrical rods, showing more or less pronounced motility; they do not stain by the Gram method.

In some species the motility is great, and is observed on most individuals in the hanging-drop preparation, in other species only few individuals show this motility; but in all cases the motility is observed only in the microbes of recent or fairly recent cultures in broth, on gelatine or agar; and (i) when stained by suitable methods it can be shown that they possess flagella—instruments of their motility—and in this respect there exist very great differences amongst the different groups and even amongst the different species. Thus while some have few flagella attached to their ends, others have numerous flagella distributed over the whole surface of the bacilli; and while in some species the flagella are, comparatively speaking, thick, coarse, and slightly wavy, in others they are thin, long, and spiral.

These are the characters which may be said to belong to all the known species of coli bacilli and coli-like bacilli, including the typhoid bacilli, and it must be obvious that if the examination of a particular microbe under investigation does not extend beyond ascertaining the above characters in part or as a whole, the identification of the species or variety to which the microbe in question belongs cannot safely be made. This is a point which too often is lost sight of, and accordingly some serious mistakes are liable to be committed.

I shall show presently, as regards coli-like bacilli, that a good many more characters have to be ascertained before any definite opinion as to exact species can be offered, but I will here anticipate by stating that so far as our present knowledge goes—and it unfortunately does not go very far as yet—we can do no more than assert that there exist certain groups which are fairly well separated from one another, and similarly we are constrained to admit that between some of the well-defined species within the groups there are others which, whether they be called varieties or species, must be considered intermediary or transitional. In illustration I would note that most bacteriologists who have devoted particular attention to this subject are agreed that three[3] groups of these bacilli stand out fairly well, having fairly-well defined boundaries, although each group may, and does, contain several species or varieties. The three groups in question are (1) the group of B. coli communis, (2) the group of B. (enteritidis) Gaertner, and (3) the group of B. typhosus.

I.—*Bacillus Coli Communis.*

Bacillus coli communis, or the typical B. coli,[4] belongs to a group which possesses, besides the above general features, the following additional characters:

(*a*) It ferments—that is, forms rapidly acid and gas in glucose, as well as in lactose. A very useful mode of glucose culture is the one first introduced by Dr. MacConkey—namely, litmus, glucose, taurocholate of soda, peptone, and water. Inside the fluid is a fermentation tube—that is, an inverted small test tube—so as to indicate the presence of gas, if any, during incubation. But while this MacConkey tube is very useful, it is not a short cut to success any more than any other more or less reputed material or method. If B. coli communis be introduced into a MacConkey tube, and this be incubated at 37° C. for twenty-four hours, it will be found strongly acid, that is red, and showing copious gas, while the inner small inverted tube will be lifted out a long way above the level of the fluid owing to the presence of copious gas. But this condition, although suggestive, is no proof (does not suffice to indicate) that the change is necessarily due to B. coli communis or to excremental pollution, because bacteria may produce the same change—that is, acid and gas—bacteria, for instance, not necessarily connected with sewage. Another culture tube containing litmus, lactose, peptone water with a small inverted tube inside the fluid may afford important corroborative testimony. If both the MacConkey tube and this other litmus lactose peptone tube show after twenty-four hours' incubation at 37° C. strong acid production and copious gas, it may be taken almost for certain that there is present B. coli communis, or some coli bacillus very nearly allied. I said advisedly "almost," because in some few instances the microbe which produced the above change was upon further test found after all not to be *the* typical B. coli. In the majority of instances, however, the preliminary diagnosis will on further test cultures be found correct. As stated just now, if a positive result in the MacConkey tube as well as in the lactose peptone tube is evident already in twenty-four hours at 37° C. incubation, there is afforded presumptive evidence of the presence of gas-forming coli-like bacteria, although not necessarily B. coli communis, and for this reason subcultures are essential.

(*b*) The B. coli communis usually curdles milk at 37° C. in twenty-four to forty-eight hours.

(*c*) It forms indol in broth culture incubated at 37° C. for three to four days.

(*d*) It bubbles, that is, forms numerous gas bubbles in shake culture in beef broth peptone gelatine with or without special addition of glucose.

(*e*) It gives positive result when cultivated in broth to which neutral red has been added, namely, causing in twenty-four to forty-eight hours incubation at 37° C. distinct change of the original red into fluorescent green.

(*f*) It possesses a limited number of flagella, two, three, or more often attached endwise, the flagella being relatively coarse and a little wavy.

(*g*) On steamed potato B. coli communis forms a moist, more or less brownish growth.

While these are special characters of the B. coli communis group, there are differences between different varieties of this

[1] It will be understood that the account here given is a summary of the results of investigations by many observers.

[2] In the oyster this kind of liquefying "coli-like" microbe is occasionally met with.

[3] I do not mean that these three groups exhaust the whole tribe, but only that we have better knowledge of them than of others; for example, of the group of B. lactis aërogenes, of the group that cause haemorrhagic septicaemia, etc.

[4] In my papers in the *Report of the Medical Officer of the Local Government Board*, 1892-3, and also in that on Oyster Culture and Disease, 1894-5, pp. 110 and 111, I have carefully noted the characters of this microbe, as also of the B. typhosus.

group, for instance, as regards some of those varieties the colonies are less translucent than others; in some the bacilli are more cylindrical than in others, of course cultivated under precisely the same conditions; and in some the bacilli are distinctly more motile in the hanging drop than in others, and the flagella in one variety more numerous than in another; further, one variety forms indol more distinctly and more quickly than in another.

A considerable experience enables me to state that if the following tests are positive: Glucose as well as lactose (red and full of gas in 24 hours); shake gelatine (ordinary beef broth gelatine full of gas bubbles in 24 hours); litmus milk (red and curdled in 24 to 48 hours); neutral red positive; indol formed in broth culture, there is every probability that the observer is dealing with the true B. coli communis.

II.—*The Bacillus (Enteritidis) Gaertner.*

This group comprises coli-like bacilli with the following special characters which separate it from the group of B. coli communis: (*a*) It ferments glucose but does not ferment lactose; (*b*) after a short acid stage it forms alkali distinctly in litmus milk, the medium turns slate colour after several days' incubation at 37° C., while the milk remains fluid; (*c*) it does not form indol in broth; (*d*) it forms a translucent colourless growth on steamed potato; (*e*) it is more motile than B. coli communis in the hanging drop and possesses numerous thin spiral flagella distributed over the whole surface of the bacilli, like those of the typhoid bacilli (see below). It, like B. coli communis, bubbles gelatine in shake culture and gives positive neutral red test.

III.—*The Bacillus Typhosus.*

This is the microbe of typhoid fever and the best-known representative of this group. It possesses the following characters: (*a*) It is very motile, and in recent cultures (gelatine) very cylindrical, many forms thread-like; it grows slower than the two former on gelatine, and forms thereon a more translucent growth; (*b*) it forms a colourless translucent film on potato; (*c*) it forms acid slowly; (*d*) it does not curdle milk and does not produce indol; (*e*) it does not ferment glucose or lactose; (*f*) it does not bubble either ordinary gelatine or glucose gelatine; (*g*) it does not give the neutral red test; (*h*) it possesses numerous flagella, thin, long, and spiral, distributed over its surface; (*i*) the bacilli of an emulsion are distinctly agglutinated (clumped) by the blood of a typhoid-immunized animal in higher dilutions than any members of the other two groups.

There are several additional means by which the three groups can be distinguished, but these means are less reliable and are not essential—for example, growth in Proskauer and Capaldi's medium, growth in litmus glucose agar plates (Horrocks), in litmus lactose phenol agar plates (Chantemesse), in Elsner's potato gelatine, in Weyl's medium, and others.

As with the first group, namely, that of B. coli communis, so with the Gaertner and the typhoid group varieties or strains are comprised within them which differ from one another slightly, both in morphological respects (some are more cylindrical than others, some have more flagella than others), and in action on rodents when inoculated into them, some being more virulent than others.

Other Bacilli of the Colon Group.

These three groups, as already mentioned, do not by any means exhaust the list of observed coli bacilli. Some aberrant forms approach more to one of these groups than to another; in fact, every one who has experience in the matter knows that in the various animal tissues and the most various other materials which are assumed to be directly or indirectly polluted, or at any rate are open to be polluted, with filth of all kinds, microbes are met with which must needs be referred to the tribe of B. coli. But it is extremely difficult to judge, and is only possible to do so after prolonged examination, whether they belong to the group of B. coli communis or to that of B. Gaertner or to some other group, some partaking of certain, but not all, the characters distinctive of B. coli communis, others again partaking of some, but not all, the distinctive characters of B. Gaertner, or again of B. typhosus. Some are poisonous and virulent when introduced into rodents, while others are not.

This seems to explain why it would be unjustifiable to draw any conclusion as to the exact derivation of any material from the presence in it of such insufficiently defined coli-like microbes. These being present in many substances in Nature, their exact habitat not being defined, and it not being sufficiently known whether, and to what extent, they bear relation to filth, cannot at present be used for diagnostic purposes in the same sense as B. coli communis.

Conclusions.

The detection, therefore, of the presence of coli-like bacilli bearing no near resemblance to B. coli communis does not permit any definite expression of opinion as to the probable or even possible derivation from sewage, or as to probable pollution with filth, of the material from which such microbe has been isolated. It is different, however, with the microbe above referred to in detail as B. coli communis—that is, the typical B. coli. As to this micro-organism, it is known for certain that its common habitat is the bowels of man and of the higher animals, and that domestic sewage and excremental matter and everything directly or indirectly polluted with these matters contains the B. coli communis—that is, the typical B. coli. In domestic sewage this microbe is present to the extent of 100,000 to 800,000 per 1 c.cm. of the sewage, and Dr. Houston and myself have shown that sewage added to sterile water in such small quantities as to defy chemical analysis is readily detected by the bacterioscopic test—namely, the detection of B. coli communis.

To summarize, then, the foregoing, the following propositions hold good:

1. The circumstance that a microbe shows the characters common to all groups of the coli tribe does not suffice to identify it for useful purposes. For proof that it is B. coli communis, or that it belongs to the group of B. Gaertner or B. typhosus group, it has to comply with the several tests agreed by all observers as characteristic of one or other of these groups.

2. The fact that a microbe owing to insufficient response to certain presented tests, can only be described as a coli-like microbe, is at present of indeterminate value in making a definite diagnosis of sewage or other pollution.

3. B. coli communis is a microbe which has its habitat in bowel discharges, that is, excremental matters, and is contained therein in enormous numbers; its presence, therefore, in any material in appreciable and relatively large amounts is highly suggestive of sewage and excremental pollution.

The Colon Group in Relation to Shellfish.

Passing now to the examination of shellfish—namely, cockles, mussels, and oysters—the question of the greatest importance to the bacteriologist is, Do these animals contain normally B. coli communis? In my report to the Medical Officer of the Local Government Board, 1894-5, I have shown that many oysters are free from B. coli communis, and that oysters retained in localities polluted with sewage are liable to contain the typical B. coli, that is, the B. coli communis. Professors Herdman and Boyce[5] have shown by their examinations that except in two out of a large number of shellfish (19 batches of oysters, 18 batches of cockles, and 18 batches of mussels) the B. coli communis was found absent.

Analysing their Tables II, III and IV (p. 48 and 49) which give a summary of the results of the analyses of shellfish by them, it will be seen that with the exception of oyster 32 and oyster 36 (Table II, p. 48) which *might* have contained the B. coli communis—the tests employed were insufficient to afford a positive diagnosis—none of the oysters (19 batches) showed the B. coli communis; nor (Table III, p. 49) did any of the 18 batches of mussels; nor (Table IV) did any of the 18 batches of cockles contain the B. coli communis, as indeed must be obvious to any one who knows what the reactions of B. coli communis are. Professor Boyce in subsequent reports on the analysis of shellfish for the Corporation of Liverpool, mentions in a general way the frequent presence in the shellfish bought in Liverpool shops, of B. coli, but not giving the details of the examination it is not possible to draw any conclusion as to the kind of B. coli.

Recently I have again had further opportunity of analysing a considerable number of various kinds of oysters and as a result I am in a position to affirm:

1. That the B. coli communis, or the typical B. coli, is not a natural inhabitant of these shellfish. Fifty-six oysters examined in one week, 24 in another, 20 in a third, 22 in a fourth week, and five batches of ten oysters each in a fifth week—some derived from deep-sea layings, others from layings to which practically no sewage has access—failed to show the presence of B. coli communis, although as much as

[5] *Thompson-Yates's Laboratory Report*, vol. ii.

½ c.cm. of the juice and liquor of the interior of each oyster was subjected to the special analysis.

2. The nearer to sewage outfalls, that is, the more exposed oysters and cockles are to sewage pollution, the greater the percentage of these shellfish polluted with B. coli communis.

3. The further away from sewage outfalls, or the smaller the amount of sewage accessible to the oysters or cockles, the smaller the number of these shellfish that are found to contain in the interior of their shells the B. coli communis.

Method of Examination.

The analysis of cockles and oysters for the purpose of detecting the presence of B. coli communis was carried out by me in the following manner: Of each batch of cockles, 12 to 24 individuals were examined, and of each batch or sample of oysters, 10, 12, and sometimes 16 or 18 individuals. In all cases the shell of the fresh and living mollusc was thoroughly brushed with a clean brush under the running tap; then it was dried with clean cloth, opened with sterile instrument, and with the juice and liquor within the shell, cultures were established. Of each of six or eight oysters, about ½ c.cm.[6] of this liquor was added to one MacConkey tube and the same amount to one lactose tube; of further two, sometimes four, oysters, ½ c.cm. of this liquor was added to each of two, or in some cases four, phenol broth tubes, or in lieu (in the earlier analyses) about three big drops of the juice of each of two animals to establish two litmus glucose agar surface plates. Next day, that is, after twenty-four hours' incubation at 37° C., the necessary subcultures were made from the original tubes and plates in order to demonstrate the presence of B. coli communis: streak and shake gelatine cultures, MacConkey and lactose peptone tubes, litmus milk, ordinary broth (with and without neutral red), litmus, lactose phenol agar plates, etc. From the turbid phenol broth also microscopic specimens stained by Gram method were made in order to detect the streptococci. Cultures on solid media may also be employed for their detection.

BACILLUS ENTERITIDIS SPOROGENES.

Investigation of shellfish in the above sense has not been limited to the demonstration of B. coli communis. Examination has sought also the demonstration of the spores of B. enteritidis sporogenes. Spores of this bacillus are constantly present in domestic sewage to the number (as shown by Dr. Houston and myself) of from between 100 to 2,000 per 1 c.cm. These spores, as I have repeatedly shown, are present also in manure (consequentiy in street dust), and in all substances exposed to pollution with filth, manure, sewage, etc.

The presence, therefore, in shellfish of the spores of B. enteritidis sporogenes as well as B. coli communis may serve as an additional indication of possibly recent sewage pollution: at least, it is tolerably certain that oysters and cockles not laid down in sewage-polluted waters are free from the spores of this anaërobe, and also that the further away from definite sewage pollution the smaller the number of these shellfish which contain these spores.

Since the spores of B. (enteritidis) sporogenes are, in sewage, greatly inferior in numbers to the B. coli communis, it is necessary to use a larger quantity (0.5 c.cm.) of the shellfish material (juice and liquor) for each anaërobic milk-culture tube if that anaërobe (B. enteritidis sporogenes) is to be demonstrated. Although, as I have repeatedly described, the milk culture may be typically changed by the twenty-four to thirty-six hours' growth of the above anaërobe, it does not follow that the so changed milk culture must be that of the B. (enteritidis) sporogenes; and in this connexion I cannot do better than illustrate by a reference to the already quoted papers by Professors Herdman and Boyce, that even experienced observers are liable to mistake some other anaërobe for the B. (enteritidis) sporogenes. On p. 55 (loc. cit.) these observers state among their conclusions:

17. We have shown the frequent presence, in various shellfish, of anaërobic spore-bearing bacilli, showing the characteristics of the B enteritidis sporogenes recently described by Klein.

Now, examining the evidence on which this conclusion is based (see the table on p. 51), it is found that the authors have had before them the real virulent B. enteritidis sporogenes in cockle 1, and possibly also in oyster 4. But that in all other shellfish examined by them (10 oysters, 6 mussels, 3 cockles, 1 periwinkle) the resulting growth was decidedly not that of B. enteritidis sporogenes (Klein), and for the sufficient reason that this latter microbe *does not at any time form spores in milk culture.* The authors referred to, be it noted, describe the microbes cultivated by them in the milk cultures as either short or large spore-bearing bacilli.

It is quite clear, therefore, from Professors Herdman and Boyce's table that with the exception of 1, or at most 2, shellfish out of the 22 bought by them indiscriminately in town shops, the shellfish examined by them did not contain the B. (enteritidis) sporogenes. This is quite in agreement with what I find from my own recent investigations: out of 56 oysters analysed within a week, 1 only contained the spores of this anaërobe. But out of other 8 oysters coming from a distinctly sewage-polluted laying, 4 contained these spores. Again, in a batch of 12 oysters coming from a laying in deep water far out from the shore, not a single one contained the microbe, whereas 4 out of 10 in one batch, 5 out of 20 in another batch of oysters of the same locality, but laid comparatively near the sewer outfalls, contained the spores of B. (enteritidis) sporogenes, using always of each oyster 0.5 c.cm. for a culture tube.

It must, however, be obvious that the presence of the spores of B. (enteritidis) sporogenes alone—that is, without the simultaneous presence of B. coli communis—cannot be held sufficient proof that the oysters or cockles have been subjected to recent sewage pollution. For the spores of B. (enteritidis) sporogenes being, like other spores, highly resistant, may have found their way to the locality in which the shellfish had been kept any time (long or short) previous. But found together with B. coli communis (and with streptococci) in oysters, the spores very probably had arrived in the locality recently, and in direct association with sewage and excremental matters.

[6] In the case of cockles a lesser quantity is used, because there is not sufficient in many of them to supply the required number of tubes.

A NOTE ON BOSSI'S DILATOR IN ECLAMPSIA.

BY J. W. BALLANTYNE, M.D., F.R.C.P.E., F.R.S.EDIN.,

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THE management of cases of eclampsia in labour is still so unsatisfactory that obstetricians are glad to welcome and test any new plan of treatment which may seem to promise success. The rapid dilatation of the cervix uteri with Bossi's four-bladed dilator and the early termination of the labour by forceps or naturally is perhaps the newest method of management which has been placed before the profession. I have now dealt with three cases of albuminuria in pregnancy, two of which went on to eclampsia, by this method, and I place the results on record in the hope that others who have experience in this direction may be induced to do so also.

1. My first case was that of a primipara, aged 23, who was admitted to the Edinburgh Royal Maternity Hospital on the evening of November 13th, 1902. She had had three convulsions before coming in, there had been marked vertex headache for two days previously, and the os uteri was about 1 in. in diameter. The position was R. O. P. and the anterior fontanelle was felt presenting. She had a bad convulsion just after being brought into hospital. The pelvis was somewhat narrow, and there was a large amount of albumen in the urine (24 grams per litre). I inserted the Bossi dilator at 10 p.m., and obtained full dilatation of the os in twenty minutes. I then applied forceps, but could not get rotation of the head. There was evidence that the child was dead, so I performed basilysis and rapidly extracted. The child weighed 7 lb. without the brain and cranial vault bones. The mother made a slow but complete recovery. There was no laceration of the cervix. The diagonal conjugate was just over 4 in.

2. My second patient was a 4-para, 32 years of age, who was admitted to the Maternity Hospital on January 3rd, 1903, having been forty hours in strong labour in the first stage. She was given three successive hypodermic injections of morphine in the hope of suspending the uterine action and allowing the patient to get some sleep and rest, but after 1½ gr. had thus been given without any result, and as it was now discovered that there was albuminuria, I decided to dilate the cervix with the Bossi dilator. She had by this time been fifty hours in strong labour, and the os which was about 2 in. in diameter had been of the same size for many hours. The presentation was the vertex, the position R.O.P. In half an hour, with the help of the Bossi dilator, I completed the dilatation of the cervix, put on forceps, and delivered a living male infant weighing 7 lb. 7 oz. Both the mother and child made good recoveries.

3. I saw my third case in consultation with Dr. George Dickson, of Ardmillan Terrace, Edinburgh, on February 10th. Dr. Dickson had not been engaged to attend this patient, a 1-para of about 24 years of age, but had been suddenly sent for as convulsions had supervened. She was six and a-half months advanced in pregnancy, and had had five fits in rapid succession before I saw her. There was much albumen in the urine, and the cervix was very rigid, the os being barely an inch in diameter. I dilated with the Bossi dilator in thirty-five minutes to a little over 3 in. diameter. As it was a premature labour I did not try to obtain full dilatation. In about half an hour afterwards the fetus was delivered with forceps; it was not viable. The mother has thus far (February 18th) made an uninterrupted recovery.

In none of these three cases had I any opportunity of dealing with the condition by prophylaxis, as all the patients were in labour when I was summoned; in all of them morphine was given, but only to a small extent in the first and third ($\frac{1}{4}$ gr.), and in one of them (the first) the saline infusion was injected below both breasts.

I have dealt with many cases of eclampsia since I published my first cases in 1884, and I think that if we accept the principle of early completion of labour as the treatment of the condition, then the Bossi dilator enables us to do this more quickly than any other means; further, it would seem to do so with safety if properly used.

IS RUPTURE OF THE AORTIC VALVE AN ACCIDENT UNDER THE WORKMEN'S COMPENSATION ACT?

By THEODORE FISHER, M.D., M.R.C.P.,
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In the British Medical Journal for January 3rd, 1903, is an annotation in which the question is raised whether rupture of the aortic valve can be considered an accident under the Workmen's Compensation Act. Probably few will deny that it appears possible that a healthy aortic valve segment may be ruptured under exceptional circumstances. For example, there seems to be some evidence to show that one or more coats of a healthy aorta may, in rare instances, rupture, and it must be supposed that an aortic valve segment has far less resisting power than the coats of a large artery; yet, although it may be admitted that a healthy aorta may rupture, it is scarcely necessary to remark that the number of cases in which the vessel wall gives way as the result of disease is immeasurably greater. But while this cannot be disputed and while it has long been known also that the aortic valve may be affected with the same disease or diseases as the aorta, yet the fact that, like the wall of the arterial trunk, a valve segment may yield and rupture as a consequence of such disease, appears to have been overlooked.

Difficult though it is to draw hard-and-fast lines between different forms of inflammation of the aorta, if there are not distinct diseases, at least there seem to be one or two varieties of disease. In one variety the formation of fibrous tissue is the leading feature, and in another the deposition of calcareous salts. The aortic valve may be affected by either of these varieties. There may be extensive deposit of calcareous salts or deformities of various kinds may be the result of fibroid thickening of the valve segments. Where fibroid changes are present in the aortic valve, and are associated with similar disease in the aorta, the disease has apparently spread from the aorta to the valve. In support of this view, it may be mentioned that a case may occasionally be seen where the disease of the aorta is limited to one sinus of Valsalva, and the valve segment below it alone of the three is affected. Usually the fibroid changes in the aortic valve result in diminution in size of the segments allowing regurgitation, and occasionally the regurgitation may be rendered more marked by the retroversion of one of them. At other times, however, a valve segment, when softened by inflammation spreading from the aorta, yields before the arterial blood pressure, and bulges towards the ventricle, as can be well seen in a specimen in the museum of Guy's Hospital. In other cases a valve segment ruptures. In the Bristol Royal Infirmary Museum is a specimen (see illustration) showing an aortic valve segment which has ruptured, and above it the sinuses of Valsalva are affected with disease of the fibroid variety. Similar specimens may be seen in the Museum of the Royal College of Surgeons and of St. Bartholomew's Hospital, and another is figured in the work on *Diseases of the Heart*, by Dr. Byrom Bramwell (p. 502). Perusal of records of cases of rupture of an aortic valve segment shows that the presence of disease of the aorta is invariably mentioned. Sir Walter Foster has recorded 3 cases in all of which the aorta was diseased ([1], [2]). The same is true of cases recorded by Frew,[3] Orlebar,[4] and Burney Yeo.[5] One of the cases mentioned in Dr. Peacock's lectures is obviously the same as that from which the specimen in the Museum of the Royal College of Surgeons was obtained. It has already been mentioned that in that specimen the aorta is diseased. In the second case of Dr. Peacock the aorta is not mentioned, but the same case is recorded in the *Medical Times and Gazette*, 1859, vol. i, p. 171; and there patches of atheroma are said to have been present in the ascending aorta.



Rough sketch of a specimen showing ruptured aortic valve segment associated with disease of the aorta.

One other point of interest may be referred to. Whatever may be the cause of the disease or diseases of the aorta classified under the name atheroma, there can be little doubt that the more fibroid type occurs most commonly in men who have been abroad. Clinical notes do not always record all the more important details of a man's history; but, judging not only from history, but from the characters of tattoo marks on the arms or elsewhere on the bodies of men who died of thoracic aneurysm and have come down to the *post-mortem* room of the Bristol Royal Infirmary, at least three out of four give evidence of having been soldiers or sailors, and have therefore presumably been in warmer climates. It is interesting to note in this connexion the previous history of the patients in those recorded cases of rupture of an aortic valve segment which have been referred to above. In four out of the five cases in which the previous history is mentioned the men had been to the tropics. The disease of aorta and of the aortic valve may be the result of untreated syphilis, or possibly it may be the result of some infection of the blood vessels which is more common in warmer climates than with us; but, whatever the cause of the disease may be, the fact seems to me to be clear that rupture of an aortic valve segment is, in the majority of instances, a result of the same disease as that which produces aneurysm of the aorta.

References.

[1] *Med. Times and Gazette*, 1872, vol. ii, p. 657. [2] *Path. Soc. Trans.*, vol. xviii, p. 49. [3] British Medical Journal, 1879, vol. i, p. 936. [4] *Path. Soc. Trans.*, vol. xxxi, p. 97. [5] Ibid., vol. xxix, p. 63.

A NOTE ON THE THERAPEUTIC VALUE OF ADRENALIN.

By J. GRAY DUNCANSON,
Woolwich.

This is claimed to be the active principle of the suprarenal gland, and is conveniently supplied in an aseptic solution as adrenalin chloride solution 1 in 1,000, by Parke, Davis, and Co.

It is in my experience altogether more practicable and efficacious than a solution of crushed suprarenal gland tabloids.

The three cases I report are taken from a large number in which I have used this preparation, and in all with marked improvement.

The cases are chosen because I had previous medical knowledge of each patient; their clinical features are so dissimilar, and the results of previous treatment unsatisfactory.

CASE I.—H., male, 5 years. In May, 1901, falling on a sharp stick held in his hand, the right tonsil was penetrated, making a ragged wound, which would admit the end of a black lead pencil, but was of no great depth. Bleeding was profuse, and the blood, pale brown in colour, did not coagulate. The child an hour after the accident was pallid and inclined to faint. Tr. ferri perchlor. 2 parts and liq. hamamelis 1 part on wool was applied freely and held in position; plugging was impossible, the bleeding being a rapid oozing, it was not possible to ligature any vessels. With local and general treatment, the boy made a good recovery in eight weeks; at first his condition was very critical, with profound anaemia and constitutional disturbance. Latterly he took Hommel's haematogen with marked advantage. Some months later he had a severe attack of epistaxis, which was easily controlled by plugs of gauze soaked in adrenalin solution 1 in 1,000.

On September 13th, 1902, he collided with a perambulator, and the pointed end of a brass rod struck him at the middle of the upper orbital ridge on the left side. The mother thought the wound insignificant, and having some adrenalin solution, applied it on linen and, as the bleeding almost at once ceased, did nothing further.

On September 16th, alarming bleeding occurred, and the child was seen by me on September 17th at 1 a.m. The upper and lower left eyelids were swollen and deeply ecchymosed; there was a small irregularly-shaped punctured wound, with edges showing no signs of healing, in the middle of the left eyebrow; from this blood was pouring out in a steady stream. There was little or no coagulative power in the blood. A plug of gauze packed into the wound passed in a downward direction for ¾ in., and in no way controlled the haemorrhage; to pack tightly was impossible owing to the situation. I then soaked a piece of double cyanide gauze in adrenalin solution 1 in 1,000, and passed it round the wound, packed in a fresh portion treated in the same manner, and bandaged tightly with a pad over all. In sixteen hours I renewed the plug, and again in another twenty-four. No further bleeding took place, and the wound granulated up in ten days. The boy is a haemophilic, and the history of the two accidents treated by the old and the newer methods is striking.

It is, however, in bleeding from the urinary organs that we expect to find the best results, and experience shows that it is so.

CASE II.—W., male, aged 32 years, suffered from haematuria three years ago. I sent him to Guy's Hospital, when a nephrotomy was performed without any obvious cause being discovered for his trouble. He remained fairly well, with some renal pain but no haematuria until he was revaccinated by a public vaccinator. He had a very bad arm, and on the tenth day there was alarming haematuria; this is interesting, for we know haematuria is sometimes a complication of small pox, and evidently was induced by the vaccination in this case. I immediately gave him 5-minim doses of adrenalin sol. every hour for four hours, and afterwards every two or three hours; the bleeding ceased in twenty-four hours and never returned.

CASE III.—T., male, aged 34, had acute gonorrhoea three years ago, and had eight months' internal treatment without success. I saw him then, and by a combination of injections and internal medication succeeded in improving his condition but could not cure him though I employed every local measure.

On November 21st, 1902, he had a persistent greyish, white discharge of mucous material, occasional pain referred to the point of the penis, and forking of stream of urine on micturition. Catheter No. 9 passed easily to the membranous portion of urethra, then there was conveyed to the hand a sensation of passing through a spongy structure, the instrument was gripped by muscular spasm, but finally passed painfully into the bladder; there were a couple of drops of dark blood in the eye of the catheter on withdrawal. The same instrument was again passed till the point reached well into the prostatic urethra, and then on withdrawal 3ij of a 1 in 8,000 solution of adrenalin chloride was left behind by means of a pipette attached to the catheter; this caused warmth, a little pain which continued for some hours, and was followed by no blood. He was given an injection 1 in 20,000 adrenalin chloride to be used daily; no internal treatment.

On November 28th micturition was less frequent, and there was no scalding, no pain, and the discharge was less. Left in by same means 3 ss of a 1 in 1,000 solution. Instrument passed easily, no pain. The injection was given as before, and there was the same feeling of warmth afterwards.

December 12th. Discharge practically ceased; 3 ss solution (1 in 1,000) left at seat of trouble. There was a little pain and tingling at the end of the penis. Gave internally 3 ss doses of saw palmetto and santal co. three times a day.

June, 1902. He has had no further urethral trouble, gained flesh, and has no discharge whatsoever.

December, 1902. There is now absolutely nothing to be discovered about the urethra; micturition is easy and painless, no discharge.

In this case not only has the eroded mucous membrane been relieved, but an appreciable effect has been exercised upon the stricture itself.

A NOTE ON SOME FURTHER USES FOR PICRIC ACID.

BY F. VICTOR MILWARD, M.B.CANTAB., F.R.C.S.,
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THE merits of picric acid in the treatment of burns are now so well known that it is surprising that its use in other surgical conditions has not received greater recognition. The lesions in which it is particularly helpful are those in which the loss of superficial epithelium has produced a raw and painful sore, discharging serum and sero-pus. This "weeping" surface is best seen in acute eczematous conditions, but it is also very noticeable after slight traumatic abrasions. From the length of time that these take to heal, they may easily become infected, and produce a lymphangitis and its sequelae. Picric acid, which is a coagulant and an analgesic, is a simple and effective remedy, and promotes rapid healing. It is best used as a saturated solution, 1 in 95, of distilled water. The *rationale* of the treatment seems to be the formation of a pellicle of coagulated albumen over the wound, and so the protection of the ruptured superficial lymph spaces and exposed nerve endings.

Should active inflammation be present, there is a danger of confining micro-organisms under the protective coating, and of giving rise to further inflammatory trouble. I have tried picric acid in many lesions, and find that in acute eczema, for instance, where pus is actually present, it is not a suitable remedy. An example of this was the case of a young soldier in whom a wound on the back of the hand had caused an acute eczematous condition to break out. After mopping away all visible pus, I applied picric acid. The result was a lymphangitis and development of a small abscess in the forearm. Picric acid must therefore not be used indiscriminately.

Calvelli[1] claims that it is of use in erysipelas, lymphangitis, eczema rubrum, and erythema; and Allen[2] speaks of good results in ulceration and eczema of the legs, recent wounds with much loss of skin, and in capillary and haemophiliac haemorrhage.

It is, however, to its use in the very minor and trivial cases of loss of superficial epidermis, and in cases of quite superficial infection, that I wish to call attention.

A troublesome affection of the fingers which is especially prone to occur in dressers, house-surgeons, and practitioners who come much into contact with pus, is a peri-onychia affecting the roots of the nails. It usually arises as a redness and tenderness of the soft parts overlying the lunula and sides of the nail. If the free margin of the soft tissue where it extends over the base of the nail be separated from the latter, a bead of pus will exude and a little cavity be discovered, where this has been confined. Wet dressings appear to encourage the suppuration, and dry dressings cause the pus to become still further pent up, until very frequently it will burrow under the very root of the nail and attain its deep surface. Here it is still more difficult to reach. This trouble may be speedily cured by a little attention and the use of picric acid. By the aid of the head of a large needle (a probe is too thick) the soft parts are thoroughly separated from the nail. A few threads from plain white gauze, or a wisp of cotton wool, are then soaked in a saturated solution of the acid, and pushed to the very bottom of the cavity. The soft parts and the root of the nail are thus kept entirely separate by this application, which should be renewed about three times daily. If this is done pain, inflammation, and discharge rapidly subside, and the further destruction of the young nail in its bed by the pyogenic organisms is prevented.

I have also found the remedy to be of use in the treatment of soft corns. Two or three applications will quickly dry them up, and render them painless.

Ingrowing toenail may be successfully treated by excising the offending sharply-pointed corner of the nail which is digging deeply into the ulcerated soft parts. Picric acid freely applied will subsequently harden and render the latter insensitive, and I scarcely ever find it necessary to remove the nail as a whole.

In some cases, that form of eczema known as intertrigo will be greatly benefited by the acid, and I have had particularly good results by applying it to this condition when affecting the interdigital clefts of the toes. It is, however, more suitable for adults than children.

Treatment by dry powders—such as zinc oxide, starch, boric acid, and iodoform—are equally useful in some of these affections, but they have more tendency to form a crust under

which pus will subsequently form. Picric acid has more antiseptic and penetrating qualities, and, if the lesion is quite superficial, will completely rid it of offending organisms. At the same time, unlike other antiseptics, it appears to cause no irritation to the tissues. Its only drawback is the deep staining it produces. When used at all it should be applied very thoroughly, the acid being renewed frequently until the coagulated lymph completely covers the sore. I generally place the well-soaked lint on the wound and cover this with non-absorbent wool or gutta-percha tissue. The dressing may be left on from twelve to forty-eight hours according to the asepticity of the original wound.

These few remarks may possibly suggest the use of this remedy in other and similar lesions.

References.
[1] British Medical Journal, 1889, vol. i, p. 678. [2] Ibid., 1897, vol. p. 457.

MANSON'S TROCAR AND CANNULA FOR THE TREATMENT OF LIVER ABSCESS.

By Inspector-General ALEXANDER TURNBULL, M.D., R.N. (Retired).

The three following cases illustrate this method of treating hepatic abscess:

Case I.—At Hong Kong, early in 1893, a marine officer came under my care convalescent from fever. He was taken ill at Singapore on December 17th, 1892, and on the 19th was jaundiced; he was confined to bed for only a few days, and, as a rule, slept well, and had a good appetite; he stated that his temperature, as a rule, was normal in the day, but rose to 102° in the evening, with sweating.

In January, 1903, he had a rigor, and suffered from hepatic and right shoulder pain; the hepatic region was frequently examined, but with negative results.

On February 6th he left Singapore as a reputed convalescent for Hong Kong, and on the 14th of that month came under my care. His conjunctivae were icteroid, and there was marked enlargement of the liver, with slight tenderness; but the appetite was good, the bowels relaxed, and the tongue clean.

On February 18th fine crepitations were noted immediately below the right nipple, with pain on coughing or laughing.

From February 20th to 26th the bowels were relaxed, the stools bilious, with mucus, partially digested food, and a trace of blood. Friction crepitus was noticed, and a liver dullness slowly ascending, increased hepatic tenderness; his spirits were good, also his appetite, and his tongue clean, but there were night sweats; he was emaciated and wan looking, with variable temperatures, some days normal and sometimes slight fever. Though hepatic abscess was suspected, his *bien-être* and, as a rule, excellent spirits, caused the diagnosis to be thought—even by an expert in liver abscess, who saw the patient with me—to be questionable.

On February 27th the stools were healthy; there were no night sweats, definite hepatic pain or tenderness on percussion, manipulation, or exertion, and convalescence was anticipated.

On February 28th and March 1st the temperature was normal; the following days slight fever recurred in the evening, with apyrexia in the morning.

On March 5th he was aspirated in the sixth intercostal space, 2 in. below the right nipple, and an abscess was discovered 1½ in. from the surface, immediately below the friction crepitus area. The operation was followed by severe spasm of the right rectus muscle, and slight febrile disturbance for forty hours, when the temperature became normal, and continued so for two days.

On March 10th the abscess was evacuated by means of Manson's trocar and cannula, with indiarubber drainage tube, and a glass tube inspection-insert some distance down it, draining into an antiseptic solution. The patient's pulse was feeble, but the thirty minutes operation under ether followed by chloroform was borne well. From 1½ to 2 pints of pus were evacuated.

For ten days after the operation there was slight fever, but the patient took nourishment well, slept well, and suffered little or no discomfort; the discharge now appeared as pure bile, about 3½ fluid ounces passing in twenty-four hours. The drainage, I consider, might have been discontinued in this case on the sixth day.

On March 19th the tube was cut and secured close to the surface of the body, dressing antiseptically.

On March 25th the patient sat up in the ward.

On March 29th the drainage tube, previously reduced by replacement with one smaller in calibre, was found in the dressing

On April 5th the operation wound was healed.

After April 28th there was uninterrupted convalescence, with normal temperature.

On May 3rd he proceeded to England via Japan and Canada, spending some days en route at the Chicago Exhibition. Shortly after his arrival in England he was appointed a gymnasium instructor for the army. In 1897 he proceeded to join the Egyptian forces advancing to Khartoum, was wrecked on passage up the Nile, and suffered considerable exposure, but enjoyed excellent health during those military operations, and subsequently. He has now returned to England in perfect health and has again been appointed gymnasium instructor.

Case II.—Shortly after treating this patient, a storehouseman in the Naval Dockyard, Hong Kong, was similarly treated by me; the abscess tapped and drained in a similar manner. The same uncertainty as to the existence of a liver abscess was experienced in this case, and was only removed by exploratory puncture; the patient made an uninterrupted recovery. Strongly advised to quit Hong Kong, he positively refused to abandon his appointment. I saw him in excellent health, as he said, better than for a long time previous to the operation, about a year and a-half afterwards, on my returning to England, and a few years later, Mr. Cantlie left him in Hong Kong in excellent health.

Case III.—A third case, a naval petty officer, was treated in the same manner with Manson's trochar and cannula, and associated drainage, proceeded, convalescent, to England, and doubtless returned to his duty.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

ANTITYPHOID SERUM AS A CURATIVE AGENT.

W. S., aged 28, a farm labourer, was seized on July 14th, 1902, with abdominal pain and sickness. He called in medical aid on July 16th. The symptoms at first pointed to appendicitis, later to generalized peritonitis. But, after a few days of high temperature and noisy delirium, all abdominal tenderness disappeared. The temperature rose gradually to the neighbourhood of 104°, at about which point it remained up till July 26th. He had by this time fallen into a condition by day entirely apathetic, from which he could but be roused to answer questions, though at night he generally woke up to noisy and violent delirium. Having made a provisional diagnosis of enteric fever, and, having had a confirmatory report from the County Council's laboratory based on Widal's test, on July 26th I injected 10 c.cm. of Burroughs and Wellcome's antityphoid serum which I had by me. Next day, being Sunday, I was unable to get more serum from London, but on July 28th I injected another dose of 10 c.cm. After the first dose the temperature fell to 99.8° on the morning of July 27th. The distension of the abdomen, which had been marked for the last two days, had disappeared; he was quite sensible, in marked contrast to his condition for the last seven days. The morning temperature on July 28th was 100°; after a second injection on that day it fell to subnormal, and never afterwards was raised above the normal limits. By August 20th the man was well, though he had not wholly recovered his strength. In confirmation of the reaction to Widal's test the urine was found to show swarms of bacilli having the appearance and character of typhoid bacilli. I finished up by giving him a course of urotropin in the interests of the public health.

This is the fourth case in which I have used antityphoid serum alone, the first one being of average severity. The other three (all of which I have published) have all been desperate cases in which I only used it because there seemed nothing else left to be done. This man would probably have lived in any case, unless one of the unhappy complications of enteric had supervened. Of the other three cases, I am positive (as were all who saw the cases) that the serum was the means of saving two lives; the third case was that of an elderly woman with

very marked congestive pneumonia superadded to all the classical symptoms of enteric fever. Even in her case diarrhoea, fever, distension of the abdomen, and delirium all ceased after the second injection. Her death within thirty-six hours after was pretty obviously due to the lung condition, which, it is fair to state, was threatening life before, and in a final effort to avert which, in fact, I obtained leave from the relatives to use a remedy still on its trial. But in this case, as in all the others, the disease itself, *qua* enteric, it would seem, was aborted at once. In the first case, a child of 7 years, I had had the patient packed in ice for days. The moment the ice was removed the temperature ran up and never ceased to tend above 105°; after the first injection I never had even to sponge.

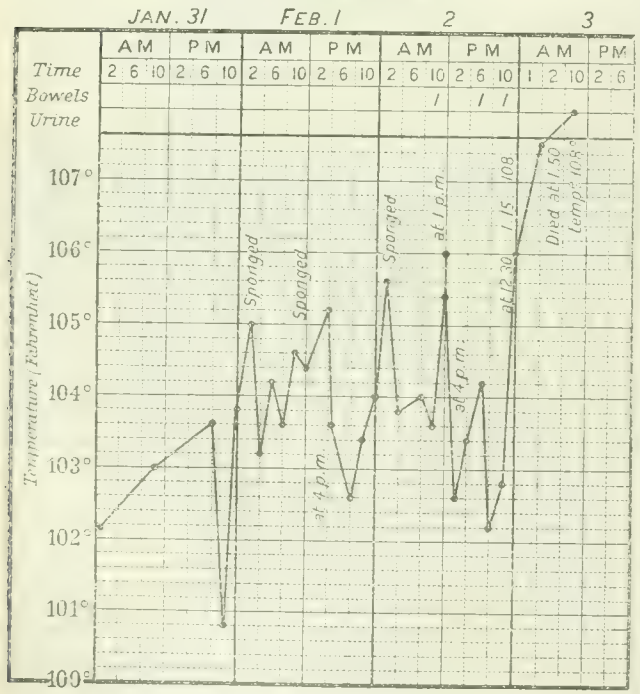
For me at least the results have been encouraging enough to indicate its trial, at any rate, in any very bad case that may come under my care in the future. The dose I have used has uniformly been 10 c.cm., except for the first case, when I had a syringe badly graduated (as I found afterwards). Exactly what I used I do not know, but it was certainly a much smaller dose than 10 c.cm,, repeated several times daily for two days, and gradually diminished in frequency. Its results certainly exceeded all expectation, almost all hope.

Halton, near Leeds. B. BASKETT, M.B.Oxon.

CASE OF HYPERPYREXIAL INFLUENZA.

DR. HARMAN BROWN'S report of a case of influenzal hyperpyrexia in the BRITISH MEDICAL JOURNAL of December 27th, 1902, p. 1949, leads me to record a similar case which I attended last January.

On January 29th, 1902, I was called in to see Mrs. C., who had felt ill for a day, and was complaining of headache and slight pains in the back and limbs. The conjunctivae were somewhat injected; there was some coryza, and there were a few rhonchi audible over the chest. The temperature was 100.5°, pulse 100, and respirations 24. I prescribed a febrifuge mixture, and ordered a liquid supporting diet.



On January 30th there was considerable prostration, the pulse was 110 and weak, and the temperature 101°; pains were more severe, and there were slight cramps in the legs. The bowels were moved naturally; the urine was somewhat concentrated, but contained neither albumen nor sugar. I diagnosed influenza. Towards evening the headache increased somewhat and slight deafness supervened. I prescribed acetanilidin (5 gr.) every two hours for six hours. Benefit resulted therefrom; but after a fair night there was no improvement in the general condition, and a little patch of pneumonia had appeared at the left base; the deafness had increased and vision had become somewhat impaired. I ordered brandy (½ oz.) every four hours, and 7 gr. of acetanilidin every two hours for eight hours. The temperature was 103.6°, and in four hours fell to 100.8°. In the next eight hours the temperature reached 105°, the respirations were 64, and the pulse 130 and inclined to run. I ordered strychnine and digitalis, cold sponging to the body, and an icecap for the head.

On February 2nd the deafness became complete, and vision was much diminished, but there was no increase in the pneumonia. The aspect of the patient became earthy, sordes appeared on the lips, and a condition of coma vigil supervened. Several times the temperature was reduced by sponging, but at 1 a.m. on February 3rd it reached 108°F. and became irreducible, and in fifty minutes ran up to 110°F., and death supervened. I have no doubt there was double optic neuritis.

The patient took nourishment well till a few hours before death.

The typical points of the case are—the well known predilection of the influenza toxin for the basal ganglia and the bulb, as evidenced by the deafness, amblyopia, tachypnoea, and hyperpyrexia. I gave no quinine partly on account of the deafness, but principally because I believe it to have no specific influence on severe influenzal intoxications. I should be interested to know the result of the antistreptococcus serum, if it has been tried, in such cases.

I append the temperature chart from the third day.

Tamworth. CHARLES H. JOY.

CASE OF OEDEMA OF THE FACE.

FOR some time I have had under observation a man who suffers from oedema of the face; he is married, aged about 30, has had two children, and is a market gardener by occupation. His physique is good, but he is inclined to be stout. He has no signs of disease, and all his organs are healthy, except that he has always suffered from a mild form of dyspepsia.

About twelve months ago he sent for me one morning, as his face had suddenly swollen during the night. I found him suffering from acute oedema of the face, especially of the lower part, and the lips. His face was so swollen that his features were quite changed; but he had no pain or discomfort, except that he felt, as he said, "very tight about the skin, and that his tongue was too big for his mouth." The temperature was normal; he had no difficulty in swallowing. His tongue was swollen and indented by the teeth, but it was clean; the urine was normal; his bowels acted regularly, and he felt quite well except for the discomfort.

The oedema disappeared in a few days with rest and treatment, but since then he has had occasional attacks of the same sort, which have lasted a few days and then subsided.

The curious thing about his case is that the oedema was entirely confined to the face, that it occurred without any definite cause as far as I could find out, but it seemed to have some connexion with the dyspepsia, because he was always free from the latter for some time after an attack of oedema.

Mickleton, Gloucestershire. A. V. GEOGHEGAN, M.D.

FETAL MORTALITY IN INDUCED LABOUR.

IN the EPITOME of November 29th, 1902, an abstract of a report on the above subject, published by Gilman, is given. His conclusions, based on nine cases, seem to be unhappy, and tempt me to narrate my experience of the operation. I have performed this operation ten times and on two women only:

I first saw H. F. in 1890; she had had at that time three pregnancies, and craniotomy was necessary in every instance. The pelvis was of the generally contracted type, and the true conjugate was decidedly less than 4 in., but having no means of measuring it I cannot give the exact dimensions. I advised induction of labour at the thirty second week. This I did, but the child only survived about twelve hours. In 1893 under the same conditions a dead child was born, and from that date to the present year she has been pregnant five times, and has borne five living children, who have all done well.

E. B. had four children, all born naturally, before 1893. In that year I was called to her, and found that she had been in labour for eighteen hours. I failed to deliver the child with forceps, and finally had to resort to craniotomy. After delivery I found that the promontory of the sacrum was con-

siderably enlarged, apparently due to an exostosis, but there was no history of any trouble from it. The following year craniotomy was again necessary, and I then told her that if she became pregnant again it would be advisable to induce labour at the seventh month, and during the next year this was done. The child only survived one month, and the prematureness of its birth was undoubtedly the primary cause of its death. The child born in 1897 did well, but died from broncho-pneumonia at the age of 3 months, and the last child, born in 1899, was malformed. It had congenital heart disease, and the metacarpi and metatarsi were symmetrically divided, causing the extremities to closely resemble lobster claws. This child died soon after delivery, but as its death cannot be ascribed to its premature birth, I shall not include it in my figures. The total result is therefore 9 cases, 6 of which lived and 3 died, giving a percentage of 33.3 deaths per cent.

I always used the largest-sized bougie *a boule* to effect delivery, and on two occasions I left it in the uterus for seventy-two hours without the slightest ill result.

Personally I should not have the slightest hesitation in advising induction of labour in preference to Caesarean section. The former operation is much more frequently performed in the country than is apparent from reports; not necessarily as an alternative to Caesarean section, but often as an alternative to craniotomy. With due precautions the risk to the mother is practically *nil*, it can be easily performed singlehanded, and the chances of the child surviving are decidedly good.

Rugeley, Staffs. RICHARD FREER, M.A., M.D.Cantab.

NYSTAGMUS IN THREE GENERATIONS.

In connexion with Dr. Theodore Fisher's article published in the BRITISH MEDICAL JOURNAL of September 6th, 1902, I may, perhaps, be permitted to record a somewhat similar experience.

The patient, a girl of 15 years, came under observation some years ago when she was recovering from an attack of chorea. It was noticed that she exhibited marked horizontal nystagmus, and also that the same condition was present in the mother; in neither case was there defective sight or other clinical fact capable of being regarded as an explanation of the oscillation of the eyeballs. Further, according to the mother's statement, her own father (who was a miner), several of her brothers and sisters, and two of her children (other than the above) had the same peculiarity. In regard to the children, she was sure that the jerking movements of the eyes were present within a few days of birth. The evidence of the existence of nystagmus in three successive generations, and of the congenital nature of the condition at least in the third generation, is therefore fairly convincing.

Whether the occupation of the grandfather is merely an interesting coincidence, or is in any way responsible for later developments in the family history, are questions for those skilled in the problems of heredity.

Weymouth Street, W. C. O. HAWTHORNE.

CASE OF GONORRHOEAL GINGIVITIS.

On March 22nd, 1902, I saw a middle-aged working man, suffering from a gonorrhoea contracted five days previously. He had been intermittently crippled by chronic rheumatism for many years. A recrudescence held him bedfast at that time. For this reason, and in that he was a married man and the father of a family, local treatment consisted only of antiseptic wool and a weak lotion of mercury perchloride. Internal medication was on the usual lines. The disease ran an ordinary course, until on April 16th he complained of soreness of the mouth and of having to spit often.

On inspection, the gums were red, swollen, and spongy, and there was an over-abundant flow of saliva. The condition was suspicious of commencing mercurial stomatitis. He denied having drunk any of the lotion, so that it seemed not unreasonable to suppose that he had been poisoned by absorption, though such a degree of susceptibility was almost inconceivable. The lotion was stopped, and a mixture containing potassium chlorate given.

By April 20th he presented an appalling spectacle: huge, incapable, with a big head of the bull-dog sort, the lower jaw drooping, and saliva unceasingly trickling from the angles of the mouth. Every tooth loose and bathed in pus which oozed from every socket. He could not eat, and drank with difficulty, vomiting frequently. His temperature was 101° F. The atmosphere of the bedside was very offensive. The true nature of the condition was now evident. Visions of consecutive disease of the stomach and bowels obtruded themselves. A solution of silver nitrate (gr. x ad ℥j) was applied locally twice daily, and a mouth wash of potassium permanganate ordered. The dyspepsia was treated appropriately.

On April 22nd it was ascertained that gonococci were present in a swab taken from the gums. By April 26th symptoms were abating. Tonics were exhibited, and the patient ordered to paint his gums many times a day with equal parts of glycerine and the strong solution of perchloride of iron.

Matters improved progressively, and by May 10th the mouth appeared normal.

When the patient learned the state of affairs he volunteered a satisfactory explanation: He was in the habit of religiously picking his teeth after meals with a wooden match wittled to a point. He was kind enough to add that though I had warned him of the danger of carrying infection to his eyes, I had said nothing concerning his mouth.

I have seen cases of conjunctival, rectal, and nasal gonorrhoea, but never anything so revolting as this gonorrhoea of the gum.

Mossley, Manchester. SIDNEY VINES, L.S.A.

IMPERFORATE ANUS.

MAHOMED ALI, aged 22 hours, was brought to the dispensary on May 22nd, 1902. A slight elevation, with median furrow, indicated the site of the anus; there was no depression. The abdomen was greatly distended. An operation was requested at once, to which I agreed. A perineal incision was carried through the site of the anus upwards and backwards to a depth of 1 in. in the middle line, without finding the bowel; when the child cried, however, a distinct bulging could be seen. A little further dissection enabled me to seize the *cul-de-sac*, which was freed and pulled down and opened on the posterior aspect, a free escape of meconium taking place. The bowel was carefully sutured to the margins of the skin incision.

JOSEPH SCOTT, M.B.,
Assistant Medical Superintendent, Indo-European
Shiraz, Persia. Telegraph Department.

VULVAR ERUPTION OCCURRING AFTER VACCINATION.

A YOUNG female farm servant about 21 years of age was seen first by me about December, 1901. She was then suffering from severe chlorosis. Between December and the following March she was periodically under my treatment, and during it markedly improved, but in the intervals she relapsed somewhat. In the district at that time there were a considerable number of cases of small-pox, and in consequence her employers were anxious that she should be revaccinated. I was first consulted regarding vaccination about January, but on account of her poor condition of health, and in consideration of the fact that she had good "primary" scars, I advised that she should not then be done. However, in March, as small-pox was on the increase, her employers again urged vaccination, and as she was then in rather better health, although still markedly anaemic, I vaccinated her—three insertions.

From the time the arm began to take she felt very unwell. She called on me about the fifth day, when she was looking ill and had severe headache; I prescribed some analgesic powder to relieve her headache. The next day, however, I found the girl in considerable pain. The vulva was markedly swollen, oedematous, and very tender. The mucous membrane of the labia majora and minora was dotted with small pustules. The eruption looked exactly like a localized variolous eruption in the pustular stage, excepting that perhaps the pustules were mostly smaller. The surrounding mucous membrane was red and angry. Although there was much swelling of the vulva there was little or no induration. Her pulse was 110, and the temperature 100° F. I ordered hot fomentations to relieve the pain and weak antiseptic douches to keep the parts clean. The following day the affected mucous membrane was discharging profusely and some of the pustules had burst. The swelling and discharge continued for some days, and then the whole condition gradually cleared up. The vulvar eruption when first seen by me was the result of only twenty-four hours' development, as the girl told me distinctly that she had no discomfort till the evening of the day previous.

The vesicles on the arm were just at their height when the

vulvar eruption appeared; they were well developed, of good size, and causing considerable local reaction.

The case certainly surprised me considerably, but I take it that it was probably a case of accidental auto-inoculation. I could get no direct clue, however, as to how the inoculation occurred. Still, allowing that it was a case of auto-inoculation, it was somewhat peculiar, I think, both as to a situation and character. It was not a single large vesicle with an indurated base that was present, nor yet a few small vesicles, but a profuse eruption of discrete pustules. Again, I would lay stress on the fact that the eruption was distinctly pustular within twenty-four hours.

Naturally the question of venereal infection crossed my mind, but I do not think there was any justification for such a suspicion in the case.

Dr. Theodore Dyke Acland in his article on vaccinia in Allbutt's *System of Medicine* mentions cases of vaccinal vulvar infection, and points out the importance of not mistaking such for venereal infections. He, however, evidently refers to cases of ordinary accidental vaccinations, and mentions none similar to the above.

Fulham, S.W. A. BANKIER SLOAN, M.D.Glasg.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

KENT AND CANTERBURY HOSPITAL.

RENAL CALCULUS IN CONNEXION WITH A "HORSESHOE" KIDNEY.

(Reported by N. R. PHILLIPS, M.R.C.S.Eng., L.R.C.P.Lond., House-Surgeon.)

THE following case is chiefly of interest on account of its rarity:

W. M., aged 41, was admitted under the care of Dr. Whitehead Reid on the afternoon of May 31st, 1902, having been brought some distance by train from the country.



Fig. 1.—Front view.

History.—At the age of 3 he passed with his urine a stone about the size of a barley-corn. At 20 he passed a "mulberry" calculus the size of a haricot bean (both preserved). He only once passed blood with his urine; that was at the age of 21. He became a metropolitan postman the same year. At the age of 28 he became ill with "cystitis," and had never been "properly well" since. His urine became very thick and sticky; there was pain in the loins and both groins especially the right, which was worse after exercise. He was discharged from the Post Office when 31 for the same complaint. The patient had been getting very much worse, and during the last twelve months had lost flesh and become very weak. His body was also considerably drawn over on to his right side.

Condition on Admission.—The patient was sent in for "obstruction of the bowels." He was very sallow and in an extremely debilitated condition, the pulse was rapid and of very low tension. There was some indefinite resistance to be made out in the right hypogastric region, but no bulging in the loins. There was a history of nine days' constipation, and vomiting had become almost incessant. The urine was neutral in reaction, viscid, and contained half pus. The bowels were moved after repeated enemata. The bladder was sounded, but no stone could be detected.

An operation on the kidneys was considered inadvisable on account of the great state of exhaustion the patient had reached. His wife says he had frequently within the last thirteen years been advised to go to the hospital for operation before it was too late, but he had always refused.

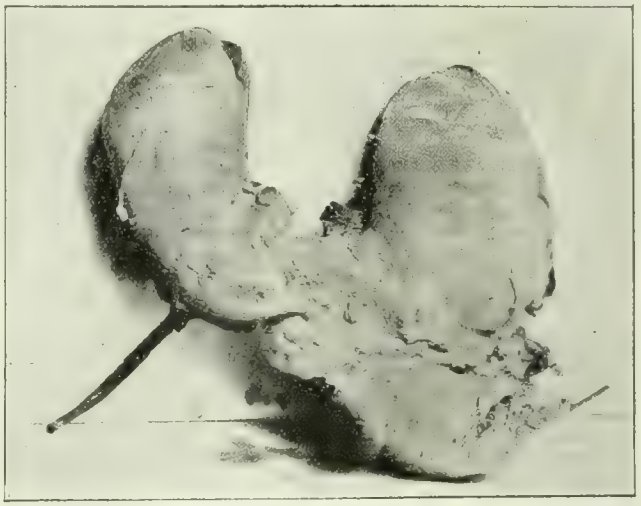


Fig. 2.—Back view.

Necropsy.—The kidney was found to be "horseshoe" shaped, the two lateral portions being united below. On the right side the kidney was greatly distended, and formed a large cystic swelling. Both sides were firmly bound down by adhesions to the posterior abdominal wall. The right ureter was embedded in a large mass of fat. On section of the right half a large quantity of pus escaped, and nothing remained of the kidney substance but a thin-walled sac. Two facetted calculi were lodged in the commencement of the ureter. The left half, on section, was also found to contain pus; the pelvis was greatly dilated and occupied by a very large branching calculus, which extended into the kidney substance, so that the latter merely formed a thin coating for the stone. The weight of the kidney, including the three calculi, after removal of the pus, was 22½ oz.

STATION HOSPITAL, PESHAWAR, NORTH-WEST PROVINCES, INDIA.

DISLOCATION AT CALCANEO-ASTRAGALOID AND SCAPHO-ASTRAGALOID JOINTS OF LEFT FOOT, COMPOUND: REDUCED AFTER ENLARGING THE WOUND UNDER CHLOROFORM: RECOVERY.

(Reported by Captain W. E. HUDLESTON, R.A.M.C.)

PRIVATE W., 1st Wiltshire Regiment, was admitted to hospital on the evening of August 8th, 1902, for injury of the left foot. He stated that whilst walking down a steep khud in the dark his left foot twisted under him, and he fell.

State on Admission.—The left foot was in the position of equino-varus and considerably foreshortened. On the outer side of the dorsum there was a hard bony swelling about the size of a walnut, between which and the external malleolus was a vertical wound about 1½ in. long, from which there was fairly free haemorrhage.

Treatment.—The wound was thoroughly irrigated with 1-40 carbolic lotion, and the skin of the whole foot thoroughly washed, cleansed with turpentine, and soaked in 1-40 carbolic lotion. An attempt which was made to reduce the deformity failed, the foot being firmly locked in the faulty position. A pad of boracic lint was fixed over the wound, and the whole foot enveloped in boracic wool, bandaged, and fixed on a MacIntyre splint.

August 9th. The man having been prepared for an anaesthetic in the usual manner, chloroform was administered. When the dressings were removed, it was seen that there had been considerable oozing during the night; the wound was again irrigated, and the skin of the foot very carefully cleaned as before. Even under chloroform reduction was impossible; the wound was therefore enlarged, disclosing the head of the astragalus completely dislocated from the scaphoid and perched on the upper surface of the cuboid. The malleoli were unfractured, but there had been very severe laceration of the muscles, tendon sheaths, and synovial sacs. The limb having been firmly grasped round the ankle by an assistant, the forepart of the foot was grasped in the left hand, and drawn very forcibly forward, the right hand meanwhile manipulating the head of the astragalus; after prolonged trial the dislocation was reduced, the head of the astragalus entering the scaphoid cup with a snap, and all deformity entirely disappearing. Two small arteries were tied, and the wound, except for half an inch in the centre, closed with silk sutures; it was not considered advisable to close the remainder of the wound, as it would have entailed great tension on the already bruised skin. A boracic lint and wool dressing was applied, and the limb fixed on a back splint with footpiece.

August 10th. Temperature 100.8° last night; wound dressed, some oozing still.

August 11th. Wound dressed, looked well; temperature normal.

August 16th to 21st. No pain, no fever, wound dressed; there was a little pus from sloughing fascia.

September 22nd. Wound firmly healed.

October 19th. Walks without help, and has no pain; arch of foot good; movements of ankle-joint good.

Remarks.—Points of interest in this case were: (1) Absence of fracture of the malleoli as a result of a twist so violent as to cause the above lesion: (2) the comparative ease with which the dislocation was reduced after enlarging the wound sufficiently to see what was being done; (3) the complete success of the antiseptic measures in spite of the extremely dirty condition of the foot at the time of the injury, and the severe laceration of the soft parts; (4) the usefulness of the foot, as compared with the result which might have been expected had the deformity been left unreduced, or the astragalus excised: (5) the advantage of trusting to antiseptic precautions, and making an opening sufficiently large to enable the exact impediment to reduction to be seen.

TYNEMOUTH VICTORIA JUBILEE INFIRMARY, NORTH SHIELDS.

CASE OF PERFORATING GASTRIC ULCER: OPERATION: RECOVERY.

(Reported by Lachlan Fraser, B.S., Surgeon to the Hospital.)

E. M. L., aged 24, single, domestic servant, was admitted to the hospital under my care on December 6th, 1902.

Family History.—She is one of a family of eleven, five boys and six girls. Three of the boys died in infancy, the other two, aged 39 and 29, are strong and healthy. Of the girls two died in infancy, a third died, aged 20, from a "sudden attack of inflammation," which from its description was probably perforating gastric ulcer. The remaining two girls, aged respectively 22 and 20, are both anaemic and troubled with symptoms of gastric ulcer. Father (66) and mother (62) are robust people, who have not known a day's illness.

Previous History.—Severe attack of scarlet fever, followed by diphtheria, when she was 3 years of age. Since then she has enjoyed good health till five years ago. At that time she left home to go into service, and shortly afterwards began to be troubled with pain in the region of the stomach, coming on after meals. She always felt hungry, but eating pained her and made her sick. She has been under various doctors, and has also attended at the Newcastle Infirmary, and everywhere she was told she had an "ulcerated stomach."

Menstrual History.—Unimportant.

History of Present Illness.—She noticed that the stomach pain became suddenly worse on December 3rd, 1902, and after each meal the pain increased. She felt sick, but could not vomit. On December 6th the pain was very severe on rising in the morning; at 1 p.m. she had a large bowl of chicken broth, half an hour afterwards the pain became almost unbearable, but it abated a little after lasting for an hour. She then went up to change her dress, and as she was lacing up her corsets (5 p.m.) the pain suddenly returned, and was worse than ever. As there was no one at home she staggered downstairs and out of the house; here she met a friend, who assisted her into a neighbour's house, put her to bed, and sent for me.

Present Condition (9 p.m., December 6th, 1902).—I found the girl lying in bed, her knees drawn up, and moaning with pain, which she felt "all over the stomach and under the left shoulder blade." She had just had a large dose of castor oil, which had rather upset her, but beyond this she did not complain of feeling sick. Respirations 20, very shallow and thoracic; no movement of the diaphragm; pulse, 80; temperature normal; tongue dry but clean.

Local Condition.—Extreme retraction of the recti and all other abdominal muscles; the belly wall was absolutely motionless. Palpation elicited most exquisite tenderness everywhere, but, if anything, it was more marked on the left side. Percussion showed liver dullness present, and no dullness in either flank.

Diagnosis.—Perforating gastric ulcer, its position probably not far from the cardiac orifice. I ordered her to be taken at once into the Tynemouth Infirmary. She stood the journey well, and on admision her condition was unchanged. With the assistance of Dr. Baker I operated at 11 p.m. (two hours after first seeing the case).

Operation.—Chloroform was given. Hot-water bottles were applied to the feet and sides of the chest. An incision was made in the mid-line from the ensiform cartilage to the umbilicus. As soon as the muscular layer was divided the peritoneum, distended with gas, bulged out through the wound. On dividing the peritoneum an ulcer was at once seen on the anterior surface of the stomach, close to the lesser curvature and midway between the cardiac and pyloric orifices. It was in close contact with the diaphragm, but fell away on opening the belly wall. Gas and stomach contents began bubbling out through the opening, and we at once shut this part off with large swabs of sterilized gauze. The ulcer was as large as a sixpence; the parts around were indurated and unhealthy, and a second ulcer near by had perforated as far as the peritoneal covering; I therefore took in the whole area in three pursestring sutures. The stomach and surrounding parts were carefully inspected and wiped with dry gauze swabs. The abdominal incision was then closed in three layers and the patient put to bed. She stood the operation well, her pulse afterwards was only 85, and she settled down into a quiet sleep which lasted all night.

Progress.—December 7th. Ice to suck. Nutrient enemata of peptonized milk every two hours. Been sick five times. Pulse and temperature normal. December 8th (visiting day). Temperature rose to 102.5° this afternoon; nurse discovered this was due to a difference of opinion with her young man. By means of diplomacy the matter was settled; her temperature fell to 99° and remained normal afterwards. December 12th. Peptonized milk and beef-tea by mouth. December 23rd. Bread and butter; boiled fish. December 25th. The ordinary Christmas dinner, including a large slice of plum pudding. From that date onwards her history was uneventful, and she left the hospital cured on January 2nd, 1903.

Remarks.—The family history is rather striking; it is uncommon to find three sisters suffering from gastric ulcer and to hear that a fourth has died from what was apparently the same condition, though I believe gastric ulcer is one of those complaints that "run in families." With regard to the diagnosis, the typical history, combined with the sudden exacerbation of pain and extreme retraction of the abdominal muscles, made the nature of the illness obvious, though vomiting, haematemesis and localized tenderness were absent. It was a great advantage getting the case so early. I suppose the rupture occurred when the girl was adjusting her corsets at 5 p.m.; I saw her at 9 and operated at 11, or only six hours after the accident had happened. This is my third case and it is my first success. Of the other cases, the first was sent in with a doubtful diagnosis and an evident general peritonitis of thirty hours duration. Suspecting appendix mischief, I operated, only to find a perforating ulcer on the posterior wall of the stomach. The girl left the table alive, but died just outside the door of the theatre. The second case I saw twenty-four hours after perforation had occurred; the girl had general peritonitis, and she died a few minutes after my examination and before any operative treatment had been attempted. An interesting point in the present case is that the tight retraction of the abdominal muscles held the ulcer firmly against the immovable diaphragm, and I feel certain that before the operation there had been no escape of gas or stomach contents, suggesting the possibility of recovery without operation.

The Relief of the Tubercolous Poor.—One of the most difficult problems in dealing with tuberculosis among the poor is undoubtedly the supply of suitable and sufficient food. This question has been grappled with by an organization for the improvement of the condition of poor sufferers from tuberculosis, which has recently been formed by some ladies among the "leaders of society" at Cambridge, Massachusetts. In order to make the work practical all the medical practitioners in the city have been asked to co-operate with the organization by sending to the members designated the names of those who lack the means to provide themselves wholesome and nutritious food. The dietary which the practitioner prescribes will be indicated by a diet card, and this food will be supplied at the expense of the organization. The organization will also be aided by district nurses, who will visit the patients in their homes. It is intended that the work of the organization shall be educational as well as remedial.

REPORTS OF SOCIETIES.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Sir Thomas R. Fraser, President, in the Chair.

Wednesday, January 21st, 1903.

The Inefficacy of Disodic-methyl-arsenate (Arrhenal) as a Therapeutic Agent.

The President read a paper on this subject. He referred to his former paper on the recently introduced and much lauded cacodylates, in which he showed that large and even enormous quantities might be received by human beings either without the manifestation of any toxic symptom whatever, or of only slight toxic symptoms, which were not the symptoms of arsenical poisoning. It was also shown that in several diseases in which the older arsenical compounds were administered with advantage no therapeutic results assignable to arsenic were obtained, and further that when cacodylates were administered they passed through the body, and were eliminated in such stable combination with organic bodies that they failed to react to the usual tests for arsenates, and failed to yield arsenium when subjected to the dissociating influence of Marsh's process. A number of observations had been published since that paper was read, and these were in the direction of confirming the statements contained in it. Further experience of cacodylates had also shown that, especially when given in large doses by stomach administration, they frequently caused inconvenient effects, such as a disagreeably alliacious odour of the breath and skin, gastric disorder and even congestion of the kidneys, which had been attributed to cacodylic oxide or binoxide being generated in certain conditions. Both these bodies were organic compounds of arsenic and methyl, having a special and distinctive action, which, however, was not the action produced by the ordinary compounds of arsenic and well recognized as that of the arsenic in these compounds. To obviate these inconveniences, Gautier had recently introduced another organic compound of arsenic — disodic-methyl-arsenate, $AsCH_3O_3Na_2ZH_2O$, as a substitute for the cacodylates or dimethyl arsenates. He claimed for this salt that while it was non-toxic it possessed the therapeutic potency of arsenic, and that it had an advantage over cacodylates in that it might be used not only by subcutaneous or intra-muscular injection, but also by stomach administration without producing the inconveniences or disorders caused by the generation of minute quantities of cacodyl-oxide or binoxide. To prevent confusion from the similarity of the chemical names of these two and other methyl compounds of arsenic, Gautier had introduced the name "arrhenal" for the disodic-methyl-arsenate, which he derived from ἄρρην, an archaic form of ἄρσην, the root of the word arsenic. This arrhenal was a colourless crystalline salt, easily dissolved by water and alcohol, non-hygroscopic and alkaline in taste and reaction. Nitrate of silver caused a white and not a yellow or brick-red precipitate in its solutions, thus failing to produce the reaction of an arsenite or arsenate, although it contained 34.5 per cent. of its weight of arsenium, representing 45.5 per cent. of arsenious acid. It was given in doses varying from 0.2 gram to 0.025 gram (=3 gr. to 0 38 gr.) daily. It was said to have produced good results in tuberculosis, bronchitis, chorea, syphilis, anaemia, and pernicious anaemia, adenitis, leukaemia, influenza, and the vomiting of pregnancy, and it was even stated to have established for itself the position of being the most efficient of all remedies for malaria. It had also been said by Gautier to have more powerful therapeutic effects than the cacodylates. This claim had evoked hostile criticism from several physicians. The extreme statement of it regarding malaria had produced a rejoinder from M. A. Laveran, who pointed out that the original claim was now being modified, and instead of being recommended as more valuable than quinine, the more modest claim was now made that when combined with quinine arrhenal was a valuable adjuvant; and he adduced the experience of physicians in Marseilles, Algiers, and Saigon, which indicated that it had no specific action whatever in malarial infection. The enthusiastic praise of the preparation and the diversity of results of its therapeutic applications appeared to justify an examination similar to that which had previously been made of the cacodylates. The President then read notes of two cases, one of chronic eczema in a woman of 60, and the other of strongly-developed chorea in a girl of 13. As to therapeutic result, no appreciable influence was noticed in the first case. In the second, after administration for twenty-one days, it was noted that the patient was more restless than usual, and that, even during the night, in contrast with her previous condition, she was wakeful and moved about restlessly. This patient was next treated with sodium salicylate for six days and with potassium bromide for the following ten days. Only a slight amelioration in the symptoms occurred. Liquor arsenicalis was then administered, the commencing dose being 3 minims thrice daily, and this was gradually increased to 5, 8, 12, 15, and 20 minims. In ten days, when 5-minim doses were being taken, the movements had become lessened, and the patient succeeded in threading a needle, though with difficulty. Four days later she was nearly motionless when at rest, but under voluntary efforts some choreic movements occurred in the fingers and feet. The patient left the hospital cured. In order to determine if an explanation of these two failures was to be found in the chemical conditions of the compound, several observations were made of the same kind as those previously undertaken with the di-methylarsenates or cacodylates. The tests were of such extreme delicacy that a millionth part of a gram of arsenium in ordinary combination was revealed by them. It might therefore be assumed that no special retention of arsenic in the body occurred after di-sodic-methyl-arsenate was administered. The President added that at the conclusion of his former paper he referred to the use by subcutaneous injection of one of the older preparations of arsenic—namely, sodium arsenate, in the form of the official liquor. A favourable experience, which in the mean time was not large, of this neglected method of administering an efficient preparation of arsenic, led him to recommend it for adoption. He hoped, however, to return to this subject on another occasion. That night he would content himself with a brief account of a recent case which had some bearing upon the subject of this communication. A man of 33, who during ten years had suffered from chorea with frequent acute relapses, was treated with subcutaneous injection of sterilized solution of sodium arsenate. The injections were made daily for nearly five weeks, commencing with 3 minims and attaining, by gradual increments, to the large dose of 90 minims. Improvement very soon was observed, and the symptoms had practically disappeared in three weeks. While the patient was receiving 90 minims of solution of sodium arsenate, 200 c.cm. of urine was evaporated and Marshed, but without oxidation: and a large deposit of arsenium was obtained. Accordingly, in contrast both with the di-sodic and di-methyl arsenates, an arsenical compound which was capable of producing the therapeutic effects of arsenic revealed itself, after absorption into the blood, by the ordinary chemical methods employed to identify that substance; and, further, it did not form in the body any combination with organic matter which obscured this identification. The general results of the observations brought forward were that di-sodic-methyl-arsenate, or arrhenal, though containing much arsenic, was practically an inert substance; that, even in enormous quantities, it was incapable of producing the well-defined pharmacological action and the well recognized toxic effects of the arsenic ion; and that, as might in that case confidently be anticipated, it was also incapable of exerting the remedial or therapeutic influences which were those of the older and commonly used compounds of arsenic.

Excision of Carcinoma of the Rectum and Treatment of Inoperable Carcinoma of the Sigmoid Flexure.

Mr. F. M. Caird read a paper on this subject. He said probably most cases of rectal carcinoma occupied a site above the level of the sphincter, within reach of the finger. To remove this growth, to retain the sphincter, to restore the canal, and to preserve all its normal functions, should be the aim of the surgeon. It was with this object in view that the sacral or parasacral method of resection had been introduced. To gain more room, it might be necessary to remove or displace the coccyx or portions of the sacrum, as in Kraske's method. When the growth lay high, and did not encroach on the sphincteric canal, this route was especially applicable, and the less the evidence of adhesions to surrounding structures, the more favourable was the outlook. Posterior fixation could readily be dealt with; anterior adhesions were more formidable. If in the male there was fear of involvement of the prostate and floor of the bladder, an examination under an anaesthetic with an instrument in the urethra was helpful. The neoplasm was long in breaking through the pelvic fascia,

and much of the surrounding thickening was inflammatory. Too much stress should not be laid on glandular enlargement. Sepsis was the chief danger of these operations. The various steps of the operation were described. Of 10 cases, one man, aged 36, rapidly succumbed to the disease within six months. Three died within a year. In none was a normal anus established. The others were alive and well, 1 four months, 1 ten months, 3 one year, 1 eighteen months, and 1 five years respectively after operation. The cases subjected to the perineal and to the parasacral excision were reviewed. The questions of age, sex, history, local conditions, choice of operation, preparation of patient, preliminary exploratory laparotomy or colostomy, the advantage of opening pelvic peritoneum, removal of neoplasm, sutures, after-treatment, results, combined abdominal and pelvic route, palliative operations of inguinal colostomy, urgent cases, preventive cases, difficulties, and results were in turn referred to.

Several members of the Society having spoken on the surgical aspects of Mr. Caird's paper,

The President said that he should like to known what test or tests Mr. Caird referred to for discovering iodoform in urine. He believed that rather an elaborate process not adapted for clinical work was required. However introduced, iodoform appeared to undergo some decomposition with liberation of iodine, and no doubt the iodides afterwards produced could be found in the urine without difficulty. Their detection or the detection of iodine would not, however, necessarily indicate any dangerous absorption, for only minute traces of iodine easily gave a well-marked blue reaction with starch, and some decomposition of iodoform probably always occurred. Both the local and general effects of iodoform, therefore, depended on the combined action of iodoform and liberated iodine, the quantity of the latter varying much; but generally the predominating poisonous symptoms were those of iodoform.

Retinal Haemorrhages as a Diagnostic Feature in Fracture of the Base of the Skull and in Subarachnoid Haemorrhage.

Dr. R. A. Fleming read a paper on this subject. He described briefly the structure of the optic nerve; the vascular supply of the nerve, the optic papilla, and the retina; and referred to the closed circulation of the latter excepting for the free anastomosis with the vessels which supplied the papilla and limited only to the region of the disc. He also referred to the very extensive perivascular network of lymph spaces, all of which communicated more or less directly with the intersheath space which was, in turn, in free communication with the subarachnoid space of the brain. The intersheath space was divided somewhat incompletely by the arachnoid membrane; just behind the eyeball the arachnoid was closely applied to the dural sheath, with which it was connected by many strong trabeculae. The subarachnoid space of the brain was relatively large, because the arachnoid membrane did not follow the pia into the fissures, and in addition there were several sinuses or cisterns, with one of which this paper had specially to deal. The sinus subarachnoidea basalis stretched from the anterior part of the pons over the corpora albicantia to the optic chiasma, and there was no median raphé if the stalk of the pituitary body, which from its position must divide the sinus anteriorly into two halves, were excepted. In 12 cases of fracture of the skull, all of which were fractures of the base except one, Dr. Fleming noticed that where the haemorrhage into the subarachnoid space was acute retinal haemorrhages were almost invariably present; and further that where there was a unilateral subarachnoid haemorrhage the retinal haemorrhages were mostly confined to the affected side. All the cases which showed no retinal haemorrhages were less acute, excepting in one in which there had evidently been pressure on the sheaths of the optic nerves occluding the intersheath space; 7 out of the 12 cases showed retinal haemorrhages, and no fewer than 5 of these were limited to the side of the subarachnoid effusion. Desirous of eliminating error, and of testing how far retinal haemorrhages were actually dependent on acute or sudden increase of pressure in the subarachnoid space, Dr. Fleming examined the eyes in 4 cases of intracerebral haemorrhage, in none of which fracture was responsible for the condition. In 3 out of the 4 there had evidently been a very sudden and considerable haemorrhage into the subarachnoid space associated with retinal haemorrhages, while in the remaining case the subarachnoid space contained much less blood, and presumably the increase of pressure had not been so sudden. In this small group of 4 cases, 2 out of the 3 of which showed retinal haemorrhages, the condition was unilateral and associated with a subarachnoid effusion which was mainly on the one side. Marked flattening of the brain was noted on the side opposite to the effusion in these unilateral effusions. All the observations were made in the *post-mortem* room, mostly during the writer's term of office as one of the pathologists to the Royal Infirmary. The communication was illustrated by a microscopic and lantern demonstration.

Cases, Etc.

Patients were shown by Mr. Alexis Thomson, Dr. Norman Walker, Mr. Stiles, and Mr. Cathcart; apparatus by Dr. Logan Turner; and card specimens by Mr. Alexis Thomson and Dr. Chalmers Watson.

CLINICAL SOCIETY OF LONDON.

G. Vivian Poore, M.D., F.R.C.P., Vice-President, in the Chair.

Friday, February 13th, 1903.

Treatment of Suppurative Arthritis.

Mr. H. L. Barnard related the notes of nine cases illustrating the drainage of the knee-joint in acute suppurative arthritis. He pointed out that few cavities of the body were so difficult to drain as the knee-joint. The usual method by lateral anterior incisions drained only the anterior half of the joint. An instrument could not be passed from before back between the femur and tibia so as to make a counter-opening behind, as recommended by some surgeons, unless the joint were flexed or the ligaments softened and disorganized by suppuration, which was not usually the case. In 1888 Sir Frederick Treves advocated continued irrigation, and published two cases of free mobility after its use.[1] These cases appeared to have been mild infections, as seven subsequent cases treated by other surgeons in this manner gave two deaths and only one mobile joint. The "open method" by a transverse incision, dividing the patella, and fully flexing the knee, was a forlorn hope of conservative surgery. A successful case of its use was narrated by Mr. Walter Whitehead.[2] The anatomy of the knee-joint showed two capacious pouches behind. They reached above the condyles posteriorly, where they were covered by the heads of the gastrocnemius. They were separated from one another by a complete septum formed by the crucial and other ligaments. The external pouch sent a bursal extension down the leg along the popliteus tendon. When the knee-joint was extended these two pouches were shut off from the front of the joint by the tight coaptation of the femur and tibia. When distended with pus they ruptured into the depths of the popliteal space where the sepsis was liable to involve the vein. The abscess then tracked down the calf and up the thigh, making drainage of both tracks almost impossible. The pouches should be freely opened by 2-in. incisions in the line of the leg made by cutting on the condyles where they could be felt projecting on either side of the popliteal space when the leg was fully extended. In order not to wound nerves when the skin was being divided a blunt instrument should be used to scrape down to the capsule; this might be freely divided with the knife. The knee was then flexed to relax the structures, and tubes were inserted on each side. In 8 of the 9 cases treated by this method the temperature fell to normal in from thirty-six hours to a week. Massage—downward in front and upward behind greatly assisted the evacuation of pus from the deep pockets. An instructive case was then narrated where the posterior pouches were not drained; they burst round the popliteal vein and pyaemia followed. The 9 cases given in this paper were consecutive; the 4 traumatic cases gave the best results. Two had good movement, 1 had some movement when he left the hospital, and 1 had fibrous ankylosis. The 5 cases of auto-infection were most unsatisfactory; 2 were amputated, 1 for feeble repair and persistent sinuses in an old woman of 65, the other for a tuberculous cavity in the end of the femur infected with erysipelas. The 2 cases apparently due to leucorrhoea were most unsatisfactory. Sinuses persisted although the temperature was soon reduced to normal. It was claimed that the method of posterior drainage would cope successfully with the immediate dangers of sepsis. The final condition for the joint depended rather on the cause of the suppuration. Subacute cases of suppurative arthritis of the knee due to auto-infection should be treated by the usual lateral patellar incisions and irrigation. Should the temperature remain above normal the posterior pouches

[1] British Medical Journal, July 7th, 1888.
[2] Ibid., June 21st, 1902, p. 1525.

might be incised later. All acute cases, especially if due to punctured wounds, should be laid open freely at once, both in front and behind.

Mr. W. G. SPENCER remarked that the knee-joint emptied itself fairly easily upwards through incisions by the side of the patella. But, if the posterior pouches of the joint had to be opened, a probe or sinus forceps should, if possible, be first passed into them from the front to lessen the chance of injuring the popliteal nerves; and the popliteal incisions should, for the same reason, be kept as far as possible to the front. In the case of a publican with suppurative arthritis following injury, and who had delirium for five or six weeks, he had opened the joint by the side of the patella, and drained it through to an incision in the popliteal space. Recovery ensued with ankylosis. The open method in that case saved the patient from amputation.

Mr. CLUTTON would first lay the joint open by a small incision on each side of the patella, wash the joint out, and resuture; and had seen cases so treated recover, even when the pus contained the streptococcus and gonococcus. Multiple incisions should be the *dernier ressort* of the surgeon, the stage anterior only to that of amputation of the thigh.

Mr. MARMADUKE SHEILD thought that at the present day patients with acute suppurative arthritis usually recovered with movement of the joint, particularly if they were young. The pouched condition of the synovial membrane in the popliteal space became more complicated as life advanced. He related 5 cases of acute gonorrhoeal infection of the knee-joint, treated by him at an early stage by one long incision on the inner side of the patella, through which the joint was in each case washed out with a solution (1 in 1,000) of biniodide of mercury, and the joint at once closed; all of which did remarkably well, recovering with more or less movement of the joint. Formerly these cases always resulted in fibrous ankylosis. Dr. O'Connor, of Buenos Aires, had introduced this method, and treated in the same way joints which passed as cases of rheumatic effusion, but were due to sepsis; such were the cases that occurred in puerperal women, and after neglected abortion, or in badly-drained houses. Such joints he (the speaker) would flush frequently, and drain through an incision of small extent, but with a large drainage tube. Biniodide of mercury solution was the best for the irrigation, though the mechanical washing out of the joint with water alone was oftentimes of great service.

Mr. WALLIS had treated 3 cases of gonorrhoeal infection (2 of the knee and 1 of the shoulder) in the manner advocated by Mr. Clutton with extremely good results; all had good movement. Suppuration of the knee-joint should be treated by a small incision. He preferred to irrigate the joint with a mild solution, as of Condy's fluid; and disliked strong antiseptic solutions, except for very serious cases, as they tended to irritate the synovial membrane.

Mr. BARNARD, in reply, said that the posterior incisions should be reserved for very severe cases, especially of wounds of the joint, such as cases of suturing of the patella which "went wrong," and were the horror of the surgeon. He asked Mr. Sheild if in all his 5 cases there was suppuration in the knee-joint; and asked Mr. Spencer if he or any one else had succeeded in passing a probe or forceps from the front of the knee to the synovial pouches at the back, as it was impossible to do it even in the *post-mortem* room.

Mr. SPENCER said it was only possible when the joints were disorganized and relaxed from severe disease.

Mr. SHEILD said his 5 cases were treated at a fairly early stage; that all contained turbid serum, in which were flakes and lumps of lymph loaded with streptococci.

LOCAL PANATROPHY.

Dr. STANLEY BARNES, introduced by Sir WILLIAM GOWERS, read a paper on a case similar to the one shown by Dr. Harry Campbell at the Clinical Society on October 24th, 1902. Nothing of importance could be ascertained in the family history of Sir W. Gowers's case, no relatives of the patient were similarly affected. She had led a healthy, open-air life, and had been free from disease except for an attack of "intermittent fever" as a child. She was thrown from a horse at 24, and a year later fell on to the back of her head whilst skating, but neither accident was severe enough to keep her in bed. At the age of 32 she first began to have facial neuralgia, which had persisted at intervals ever since; the pain had always been worse just before the onset of menstruation, and with the onset of the climacteric the neuralgia had been less severe, and the intervals of freedom from pain had been longer. At the age of 34 she noticed that she had difficulty in raising the left arm, and this weakness became more pronounced for the next two months. A friend then happened to see the shoulder, and thought she had dislocated it. A few weeks later, in 1884, she was seen by Sir W. Gowers in consultation, and it was found that besides atrophy around this shoulder various other patches of atrophy were present. Despite treatment little improvement occurred, but no further progress of the disease was noticed till 1892 when, at the age of 42, the nose appeared to be becoming deflected. At the age of 50 a slowly progressing right facial paralysis came on, becoming almost complete in twelve months; considerable recovery had since occurred. The patient was a well-educated woman of 52, with no sign of visceral disease. There was no sign of old hemiplegia, etc. The bones of the skull were not asymmetrical, but there were several patches of atrophic skin on the face (both sides) and behind the temporo-maxillary articulations. There was a partial right facial palsy of the peripheral type, possibly due to implication of the facial nerve in the atrophic patch near the mastoid. Many remarkable patches of atrophy were present elsewhere. Over the largest and most severe of these skin, subcutaneous tissue, and muscle were wasted, and in one case the subjacent bone was also atrophic. The skin in these patches was soft, very thin, devoid of hairs, and of natural colour. Isolated patches of muscle tissue had wasted, the patches corresponding to the atrophic skin covering them. The patches were mainly present on the trunk behind the left shoulder and right arm and leg; they were asymmetrically placed, and were of very irregular shapes. There was no anaesthesia over them, nor could the reaction of degeneration be found in the muscles involved.

Dr. SAVILL considered that the case belonged to the class of morphoea atrophica. He referred to the case of a woman who eight years ago had patches of morphoea lardacea (Erasmus Wilson), or scleroderma (of the Germans), which had since become atrophic. These cases usually followed injury. He questioned the existence of facial paralysis in the author's case, and thought it possible the muscles were bound down rather than that the motor nerves of the face were affected.

The CHAIRMAN alluded to a case in which he found atrophic patches of the skin, together with dilatation of the vessels of the part, present at a certain hour of the day and absent at other times.

Dr. BARNES, in reply, said that in his case there was neither sign nor history of any vascular defects. The neuralgia had not yet quite ceased: and had nearly always been bilateral. The signs of right facial paralysis were marked. There was no sign whatever of sclerosis, the skin was loose rather than bound down.

PATHOLOGICAL SOCIETY OF LONDON.

RICKMAN J. GODLEE, M.S., Vice-President, in the Chair.

Tuesday, February 17th, 1903.

THE RELATION OF TRAUMA TO ACUTE EPIPHYSITIS.

MR. H. L. BARNARD read the above communication, commencing with the statement that the growing end of a diaphysis was divisible into four layers, namely: (1) The layer of cartilage cells arranged in columns; (2) the layer of calcification; (3) the layer of invasion by osteoclasts; (4) the layer of commencing osteoblastic bone formation. The two last layers were mechanically weak, and particularly vascular. The periosteum, as Mr. J. Hutchinson, jun., had shown, was thickened opposite the epiphysial line, and compensated for the weakness of the bone; it was closely adherent to the epiphysial cartilage. When traumatic detachment of an epiphysis took place the layer of developing bone remained in connexion with the epiphysis, which thus grew back to the shaft along the stripped periosteum. The author described three degrees of trauma through the juxta-epiphysial line: (*a*) Separation with dislocation; (*b*) separation without dislocation ("sprain"); (*c*) strain—that was a degree of violence producing minute haemorrhage without separation. Clinically a "strain" constituted a "growing pain." The author proceeded to state that probably micro-organisms circulated in the blood in cases of such primary local infections as furuncles, tonsillitis, etc., and referred to the cases of the passage of colon or typhoid bacilli by the urine, the primary source being intestinal. The suppurative process might start in the juxta-epiphysial disc, either in its middle or its outer part, or at an intermediate position; if at the middle, the infection would readily reach the adjacent medullary cavity; if at the outside, the suppuration would

strip up the periosteum, perhaps widely; if at an intermediate spot, the epiphysial disc would be mostly separated, and the medulla, joint, or periosteum secondarily involved. Pyaemic infections did not necessarily attack the juxta-epiphysial line, as they were not located by trauma.

Dr. O. Grünbaum referred to the experiments of Ford showing the presence of micro-organisms in normal tissues.

The President asked how far the haemorrhages at the epiphysial line were pathological. From a practical side, under what circumstances should a bone be perforated in cases of suppurative periostitis?

Dr. Lazarus-Barlow thought the vascularity and cellularity at the growing end would rather tend to obviate than favour infective processes. In leukaemia haemorrhages might occur anywhere, and from those shown by the author little could be deduced.

Mr. S. G. Shattock was anxious to learn whether Mr. Barnard held, with certain French writers, that acute infective periostitis never arose except in connexion with an osseous lesion at the epiphysial line. [Mr. Barnard did not hold this.] As to the infection of the bone, it was the red marrow in which pathological interest centred, and he did not follow the author in limiting the name osteomyelitis to inflammation of the fatty marrow in the medullary canal; the disease should include the lesions arising in the red marrow. He recalled what were now the somewhat old experiments of Wyssokowitch, which showed that the bone marrow was a special site of election for microbes introduced into the blood. In the case of tuberculous bone disease, it must be held that the bacillus was already in the osseous tissue before the trauma which acted as the other factor in producing a tuberculous osteitis arose. The involvement of the marrow was known clinically and experimentally in typhoid infection; and in some pyococcus infections the micro organisms were doubtless present in the bone in a latent condition before the incidence of the trauma.

A Case of Membranous Gastritis.

Dr. O. Grünbaum recounted an example of this condition which arose in a rickety child. Considerable portions of the membrane were vomited up. No diphtheria bacilli were found in the fibrinous casts, but cocci. The author noticed that such membranes adhered later about the pyloric end than elsewhere, and suggested that this might be due to the secretion here being less acid, the membrane being less rapidly softened.

Pancreatitis with Calculi.

Dr. T. Churton recorded a case in which the above condition was found (the pancreas being fibrosed and shrunken) associated with diabetes. There was much emaciation, no thirst, and not extreme glycosuria; no acetone was present in the urine.

Dr. J. F. Broadbent had seen three cases of pancreatic glycosuria; in one the patient was young and the disease rapid in course.

Stenosis of the Superior Vena Cava.

Mr. T. W. P. Lawrence and Dr. H. Batty Shaw reported a case of stenosis of the superior vena cava below its junction with the vena azygos major, and also of the right pulmonary vein. The patient was a man aged 36 years. Five years before death he began to suffer from palpitation, dizziness, faintness, dyspnoea, haemoptysis; was sick after every meal and was thought to be suffering from phthisis; after about three months treatment he improved so much that he was able to resume his duties. A second attack occurred eighteen months after the first one, and the same symptoms supervened; in addition the face had become very swollen and large veins had developed on the front of the chest and abdomen: a right-sided serous pleural effusion was found, which recurred after aspiration; no further aspiration was performed and the patient was sent to convalesce in the country. He improved somewhat and later was treated with potassium iodide, presumably because he had contracted syphilis fifteen years before the onset of his first attack. He was, however, unable to return to work for the next eighteen months, but in the summer of last year he was able to resume light duty in the City. At this period he was unable to lace his boots owing to the dyspnoea produced by stooping; he was often sick after meals, and rested at night propped up against pillows. On December 8th, 1902, he was suddenly seized with great pain in his chest, and was admitted into University College Hospital under Dr. Bradford's care. Whilst in the hospital he grew steadily worse, and died on December 30th. The oedema, which had been confined to the upper part of the body, spread to the abdomen and legs, and there was a return of the right pleural effusion. The veins on the front of the body were very much dilated, and filled from above downwards. Necropsy: The portion of the superior vena cava reaching from its junction with the vena azygos major to the auricle was converted into a thick cord through which a small probe could be passed with difficulty, showing that the lumen was not quite obliterated. The entrance of the superior vena cava into the auricle was marked by dense white scar tissue. The single right pulmonary vein showed an auricular stenosis, where it was involved in an indurated mass, which also caused considerable thickening of the anterior wall of the left auricle, the anterior and upper part of the septum auricularum, and the inner wall of the right auricle. This mass of indurated tissue was continuous with that already noticed at the lower end of the superior vena cava. There were pericardial adhesions at the base of the heart, and the right orifice of the transverse sinus of the pericardium was closed by adhesions; there was a further occlusion of this sinus towards its left end, so that a closed cavity was formed of the right portion of the sinus. The wall of this cavity was thick and composed of dense fibrous tissue; its inner surface of a dull red colour, and coated with a loosely adherent inflammatory exudation of a purely fibrinous character. The rest of the heart was normal. Both lungs were free from any sign of tuberculous disease, and the mass of indurated structures above mentioned was continuous with the thickened pleura overlying the right lung, and attaching the organ to the pericardium and chest wall, and forming, in the latter case, an interpleural cavity, from which a thin turbid fluid was removed. On section the right lung showed consolidation and collapse, the left lung being normal. The areolar tissue of the mediastinum was normal except where it was in relation with the pulmonary adhesions and the induration around the great veins above described; in these situations it was thickened, but there was no general chronic indurative mediastinitis. The case should, apparently, be classified as one of indurative mediastino-pericarditis, but it presented the peculiarity of being one in which the change was markedly localized, and in view of the previous history of syphilis, the possibility presented itself of the disease having originated in a gumma around the great veins of the heart.

Dr. A. E. Garrod noticed that in one case of obliteration of the superior cava he had seen there had been no swelling of the head and neck, though the veins were distended; in another case of narrowing by malignant growth the swelling of these parts was remarkable.

Card Specimen.

Dr. Baumann and Dr. Bainbridge: Primary sarcoma of lung.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, February 4th, 1903.

Annual Meeting.

Peter Horrocks, M.D., President, in the Chair.

Fetal Ascites.

Dr. Eden showed a specimen of this condition. The history of the labour was as follows:

The patient, an unmarried primipara, aged 18, was admitted to one of the workhouse infirmaries in London on January 17th, having then been for some hours in labour. On admission, it was noted that the external os was about the size of half-a-crown, the membranes were ruptured, and the presentation was a footling. Pregnancy had advanced to about the end of the eight month. The progress of the labour was very slow, and on the morning of January 18th the practitioner in charge of the case administered 1 drachm of liquid extract of ergot with 1 oz. of brandy, and repeated the dose twice during the course of the day. At 8 p.m. he found on examination the foot of the child in the vagina; in his own words, it was "quite black and putrid." He made traction upon the limb to deliver the breech, but the foot separated at the ankle. He then seized the remainder of the limb, which soon separated at the hip-joint. Traction upon the other leg failed in the same way. He then attempted to seize the breech with a pair of craniotomy forceps, but, in his own words, "every time traction was made they came away with a piece of putrid skin." Being unable to make out the cause of the obstruction he sent for assistance. On examining the patient the first thing that struck one was the large size of the uterus; although labour was a month premature, and part of the body of the fetus had been delivered, the uterus was quite as large as an ordinary full-time pregnancy. The patient felt no pain, but the uterus was firmly moulded around the fetus, the parts of which could not be felt. Upon vaginal examination there was some difficulty in recognizing any anatomical landmarks in the presenting part; but at length the sacrum was made out lying high up posteriorly. It was therefore clear that the

distended abdomen formed the presenting part and was the cause of the obstruction to delivery. It was opened with a pair of scissors, and between two and three quarts of thin yellowish fluid escaped. The body of the child was delivered naturally within a few minutes. The placenta was adherent and had to be removed by the fingers. The body of the fetus showed marked signs of maceration. On laying the abdomen open, the peritoneal cavity was seen to be enormously enlarged; the liver, stomach, and intestines were crowded into the vault of the diaphragm; there were no peritoneal adhesions and no sign of peritonitis in any part. The bladder was distended to a moderate extent; the external genitals were absent, having been torn away by the forceps during the unsuccessful attempts at delivery. A probe, passed from the bladder into the urethra, showed this channel to be impervious. From the absence of the uterus, it was clear that the sex of the fetus was male. The heart was normal in all respects; owing to its macerated condition, the liver and portal circulation could not be thoroughly examined, but appeared normal. There was no distention of the ureters and the kidneys were normal.

The cause of the ascites in this case remained obscure. Dr. Ballantyne[1] spoke of peritonitis and syphilis as the commonest causes. The former could in this case be excluded, and although exclusion of syphilis was more difficult, there was no positive evidence of its existence in either parent. It was curious that only one case had been recorded in which fetal ascites was caused by portal obstruction; it was recorded by Dr. Herman in 1881, the cause of the obstruction being a tumour of the adrenal body. The association of ascites with distension of the bladder appeared to be common, for Dr. Ballantyne had collected 58 cases in which these conditions coexisted. The patient made a good recovery.

Dr. HERBERT SPENCER had met with about six cases of fetal ascites. In some of these the amount of fluid was small, but there was a large amount of lymph binding the intestines together, and the absence of any obvious cause for this peritonitis and the presence of bone disease, and the history, had led him to think that in these cases the ascites was due to syphilis; but in other cases, where there was a large quantity of fluid present, as in Dr. Eden's specimen, he had not been able to discover the cause of the effusion.

Dr. MALINS said that the specimen exhibited was interesting for two reasons: The difficulty in diagnosis, and the probable origin of the large accumulation of fluid in the peritoneal cavity. Sir James Simpson many years ago called attention to this form of embarrassment and mentioned some cases of its occurrence. Dr. Malins remembered one instance in which similar difficulty in delivery had happened: in this instance the origin of the fluid was at the time believed to be due to tuberculous disease. The evidence of syphilis and the manner in which it acted in the production of this condition was not easy to obtain or to prove. He was inclined to think that it was adduced generally in the absence of other known or ascertained causes.

The case was also discussed by Dr. HUBERT ROBERTS and the PRESIDENT.

OTHER COMMUNICATIONS.

Dr. SIKES presented a short communication on a case of profuse meningeal haemorrhage during labour, and this was discussed by Dr. HERBERT SPENCER and the PRESIDENT.—Dr. RUSSELL ANDREWS read the notes of a case of primary carcinoma of the Fallopian tube, and some interesting points in regard to the disease were brought forward by Mr. ALBAN DORAN and Mr. INGLIS PARSONS.—Mr. HANDLEY showed a specimen of a solitary interstitial fibroid removed by abdominal myomectomy, and Dr. INGLIS PARSONS read the notes of an unusual case of sarcoma of the ovary.—Dr. HERBERT SPENCER exhibited Kurz's ingenious needle holder.

REPORTS.

The report of the Treasurer having been read, it was moved by Dr. DAKIN and seconded by Mr. HENRY BRIGGS that the audited report of the Treasurer just read be received, adopted, and printed in the next volume of the *Transactions*, and that the most cordial thanks of the Society be given to Dr. Champneys for his valuable services during his term of office.—It was moved by Dr. MALINS and seconded by Dr. HERBERT SPENCER that the report of the Honorary Librarian be received, adopted, and printed in the *Transactions*. Dr. CHAMPNEYS moved and Dr. LEWERS seconded that the report of the Chairman of the Board for the Examination of Midwives be received adopted, and printed in the *Transactions*.

PRESIDENT'S ADDRESS.

The PRESIDENT in delivering his address referred to the passing of a law whereby legally qualified ladies were made eligible for the Fellowship of the Society, and the names of ten ladies, who had been elected during the past year were given. It was also pointed out that a new rule had been made to enable authors of papers to have their work published in journals other than in the *Transactions* of the Society if they so desired. The financial condition of the Society was satisfactory. Now that the Midwives Act had been passed the necessity for continuing the examination held for midwives by this Society would shortly cease to exist. Dr. Champneys was congratulated on being elected chairman of the first Board appointed by the State, and the State was to be congratulated on having secured the services of one who knew the work so well, and who was second to none in ability for organizing the new State examinations on a thoroughly satisfactory basis. The new Pathological Committee instituted twelve months ago had done excellent work. Allusion was made to the excellent material provided by the exhibition of 59 specimens during the past year. Nine papers had also been read during the year, and a brief summary of each paper was given, the salient points of each subject being commented upon, together with the general opinions, which were given during the discussions. Obituary notices of Fellows who had died during the preceding year were given, namely, of John Griffith Lock, of Tenby; John James Tweed, of London; Thomas Robert Lombe, of Torquay, who was elected a Fellow in the year of the foundation of the Society, 1859; James Neal, of Birmingham; and Henry Oldham, Consulting Obstetric Physician to Guy's Hospital. Dr. Oldham was one of the first Vice-Presidents of the Society and was its third President and its second Treasurer, and one of its first three Trustees. He held the latter post up to his death, that was, for a period of over forty years. Dr. Champneys had been appointed in his stead. Dr. Oldham was appointed Obstetric Physician to Guy's at the same time as Lever. He was one of the best lecturers that Guy's ever had. Interesting details of his life, obtained from Sir Samuel Wilks, Dr. Constantine Holman, Colonel Oldham (his surviving son), and others, were given. Thanks were given to the Senior Honorary Secretaries, Dr. Herbert Spencer and Dr. Amand Routh, who had greatly assisted the President during his first and second years of office respectively.

LIST OF OFFICERS.

The list of officers for 1903 recommended by the Council was read.

VOTES OF THANKS.

A vote of thanks to the President was moved by Mrs. SCHARLIEB and seconded by Mr. ALBAN DORAN, and carried unanimously.

A vote of thanks to the retiring Vice-President and members of Council was moved by Dr. HUBERT ROBERTS and seconded by Dr. BLACKER.

Dr. CULLINGWORTH moved and Dr. EDEN seconded that the cordial thanks of the meeting be given to Mr. Alban Doran for his valuable services to the Society as Editor of the *Transactions*, which office he had now resigned.

This was carried with acclamation, and acknowledged by Mr. DORAN.

PATHOLOGICAL SOCIETY OF MANCHESTER.—At a meeting held on February 11th, Dr. H. A. G. BROOKE, President, in the chair, Dr. JOSHUA J. COX showed a boy, aged 9 years, a typical achondroplasic dwarf. The stunted and deformed condition of the long bones of the limbs, the "trident hands," and the narrowed pelvis were very evident. A series of skiagraphs of the skeleton of this boy was exhibited, along with skiagraphs of the skeleton of a dwarfed child suffering from infantile myxoedema, and of a normal child of 9 years.—Dr. CHARLES MELLAND and Dr. ORR gave a demonstration, illustrated by coloured photomicrographic lantern slides, of the blood in health and disease. The former described the process of fixing and staining the films, and explained that although a complete knowledge of the blood could only be obtained by making a count of the corpuscles, red and white, and an estimation of the haemoglobin, with a thorough inspection of a large area of blood film, it was still possible with care to select portions of the film, which presented, as it were, an epitome of the condition met with, as well as to pick out special fields which showed the presence of peculiar or unusual conditions of the corpuscles. Such a procedure had been followed in the present instance; the selected fields had then been photographed and the corpuscles then coloured by hand, the colours of the stained films being reproduced as closely as possible, and in those cases in which there was any ambiguity in the uncoloured photograph the colouring was undertaken with the original microscopic field at hand for comparison and guidance.—Mr. E. STANMORE BISHOP showed two tubo-ovarian cysts removed from a woman, aged 34, with one child 10 years old. The os uteri had been split. There were no symptoms for four years; then flooding occurred and continued for seven weeks, followed by metrorrhagia, which had lasted more or less ever since. The physical signs pointed to fibromyoma. Both cysts were firmly adherent, and had developed under pressure. After discussing the three modes of origin of tubo ovarian cysts,

[1] *Antenatal Pathology.*

and Bland-Sutton's views on the production of hydrosalpinx, he mentioned another case and showed the specimen, in which the same symptoms of metrorrhagia had accompanied the development of a cyst under pressure of firm adhesions, which had converted Douglas's pouch into a closed cavity. Both women recovered perfectly.—Mr. G. Robertson Mill showed a preparation from a fatal case of acute obstruction. The terminal loop of the ileum was strangulated by an appendix, which completely encircled it, and its extremity was in turn imprisoned between the free border of the meso-appendix and the termination of the ileum.—Dr. Bury showed a specimen of sarcoma of the lung which caused a pulmonary systolic murmur.—Other preparations were exhibited as card specimens.

Bath and Bristol Branch of the British Medical Association.—At a meeting on January 28th, Dr. H. Waldo, President, in the chair, Dr. J. Lacy Firth gave a demonstration on a dummy bladder of a method of catheterizing the ureters in the male and female.—Dr. J. O. Symes showed a case of chlorosis with double optic neuritis in a girl, and remarked on the diagnosis. Drs. Watson Williams, Edgeworth, Michell Clarke, E. Walker Dunbar, and Mr. Walker discussed the case.—Mr. H. G. Kyle showed a patient from whom he had removed the entire prostate by suprapubic cystotomy with completely successful result. The prostate was also shown. The President, Messrs. Carwardine, Monro Smith, Mole, Harsant, and Drs. Lansdown, Edgeworth, Fisher, Groves, and Stack joined in the discussion which followed.—Dr. Watson Williams read a paper on the rhythmical contractions of the bronchial tubes as a factor in pulmonary diseases. Drs. Walker Dunbar, Markham Skerritt, and Fisher discussed the paper.—Dr. Michell Clarke showed a boy of 13, the subject of Friedreich's ataxia. The patient was the only member so affected in a large family.

Glasgow Pathological and Clinical Society.—At a meeting held on February 9th, Mr. A. E. Maylard, President, in the chair, Dr. J. R. Riddell demonstrated eight cases of rodent ulcer, which had been treated or were undergoing treatment in the electrical department of the Glasgow Royal Infirmary.—Dr. T. K. Monro and Dr. A. N. Macgregor showed a marine engineer, aged 26, who for about five years had suffered from paroxysms characterized by severe pain, with swelling and haemorrhages, in many parts of the body, including the skin, mucous membranes, viscera, and articular and periarticular structures. The case will be reported fully at a later date.—Dr. J. Wainman Findlay showed a patient, the subject of rheumatoid arthritis, with multiple subcutaneous nodules of fibroid character.—Dr. R. Barclay Ness showed a case of "head nodding," which had been present for about two years in a girl 9 years of age.—Dr. E. Arthur Gibson showed the following specimens: (1) cancer of the body of the uterus; (2) uterus septus with multiple myomata; (3) specimen of tubal pregnancy about the second month, with cystoma of the corresponding ovary.—Dr. John Anderson showed an acephalic monster (at five months), with numerous developmental defects.—The Secretary (for Professor Muir) showed as a fresh specimen a carcinoma of the stomach, which presented unusual characters.—As card specimens Dr. Anderson showed specimen of cancer of the stomach, which presented unusual macroscopic appearances; and Dr. Hugh Maclaren a fracture of a rabbit's femur, in which malunion had occurred with great deposition of callus.

Ulster Medical Society.—At a meeting on February 5th, Dr. John Campbell, President, in the chair, Dr. Calwell gave a demonstration of the method of making a clinical examination of the stomach and its contents. A patient with a dilated stomach was examined, and the great advantage of the full clinical examination over the ordinary superficial method was shown.—Mr. A. B. Mitchell read a paper on 29 cases of operations on the stomach; 11 of these were for perforated ulcer, and had been dealt with in a previous paper. Of the remaining 18, there were 6 cases of hour-glass stomach, with 5 recoveries and restoration to health after long years of suffering. There were 6 cases of pyloric obstruction with dilatation; 3 of the patients died, including 1 from ether and 1 from septic pneumonia. The remaining 6 included 1 of excision of ulcer, 1 of separation of adhesions, 1 of simple infolding of an extensive ulcer, 1 of gastro-enterostomy for duodenal ulceration, and 2 cases of exploratory laparotomy in which no abnormal condition was found, though both patients were greatly relieved of their symptoms. Mr. Mitchell had on only one occasion diagnosed hour-glass stomach with any approach to confidence. He advocated posterior gastro-jejunostomy. Professor Sinclair expressed a preference for anterior gastro-enterostomy. The regurgitation of bile in his experience was not frequent. He also deprecated operation for haematemesis. Dr. Tennant discussed the bacteriological aspect of these cases, and the effect of starvation on the growth of bacteria in the bowel. Professor Symington asked as an anatomist what was a normal stomach, and did the stomach when dilated ascend as well as descend? In the dissecting room he had found stomachs slightly hour-glass, although otherwise normal. After remarks from Dr. McConnell, Dr. Calwell, referring to his demonstration, said that the difficulty of carrying out a full clinical examination of the stomach varied much, but that it was becoming more and more evident that the size, position, and powers of digestion should be ascertained in all doubtful and obscure cases. The chemical examination of test breakfasts made no claim to exact chemical accuracy, but relatively were reliable for all clinical purposes. With regard to Mr. Mitchell's paper, he said such work proved conclusively that patients ought not to be allowed to drift into hopeless invalidism; and a wave of scepticism had passed over the profession, so that it was thought no form of "indigestion" existed, but depended on an organic lesion. This was now disproved, and the problem of the physician was to classify the forms of indigestion in which no organic change was visible in the stomach. In answer to Professor Symington, he said the rule laid down by most reliable authorities was the best working one—namely, that if the lower curvature went below the umbilicus, it was pathologically dilated. A stomach might be pressed up, but it did not enlarge upwards. There were two other important pathological conditions which ought to be studied, the condition of gastroptosis, especially when associated with nephroptosis; and the myasthenic dilatation that was apt to occur in any exhausting disease. Professor Lindsay laid emphasis on circumscribed local tenderness. He leant to the opinion that dilatation of the stomach should be judged more from the length of time food stayed in it than from its size, and considered five hours as the limit. Mr. Mitchell replied.

Nottingham Medico-Chirurgical Society.—At a meeting held on February 4th. Mr. J. Mackie (President) in the chair.—Dr. Stanley Green (Lincoln) showed *x*-ray photographs of (1) Spiral fracture of tibia; (2) congenital malformation of foot; (3) empyema of left chest; (4) impaction of surgical neck of humerus.—Mr. W. A. Howitt showed *x*-ray photograph of spiral fracture of first phalanx of ring finger—right hand. The cases were discussed by the President and Drs. W. Hunter and F. H. Jacob.—Dr. F. H. Jacob read a paper on quacks and quack medicines, compiled by Mr. S. R. Trotman and himself. Mr. Trotman doing the greater part of the analysis of many well known patent medicines, a large number of which had been analysed and their formulae presented to the meeting. Patent food stuffs, electric and other appliances were also dealt with. A discussion followed in which the President and Drs. W. M. Willis, T. Geraty, C. H. Cattle, W. Hunter, A. Fulton, S. Green, J. Thompson and Parry Jones took part; Dr. Jacob replied.

Rochdale and District Medical Society.—At a meeting on February 5th, Dr. W. Hirst Bateman read notes on two cases of extrauterine pregnancy. The first occurred in a recently-married woman, and was treated by operation at a very early stage of the pregnancy on account of severe pain. Abdominal section was performed, and the sac was found protruding from the fimbriated extremity of the Fallopian tube. The patient made an uninterrupted recovery. In the second case the patient had been married four years, and there had been no previous pregnancy. Rupture of the sac apparently occurred in the second month, but the symptoms were not so urgent as to necessitate immediate operation, and expectant treatment was adopted. The patient was kept at rest in bed, and gradually improved. Four months later she was practically well. Dr. Bateman urged that operation was not always necessary in early cases. Mr. W. Stanwell (President), Mr. H. Hitchon, and Dr. W. J. Kerr believed it was better to operate before symptoms became urgent.

DERMATOLOGICAL SOCIETY OF LONDON.—At a meeting held on February 11th, Mr. MALCOLM MORRIS in the chair, Dr. J. J. PRINGLE showed (1) a man, aged 38, suffering from a syphilitic eruption on the flexure of the right knee, the face, and the lips. The individual lesions consisted of deep-seated nodules which were softening in the centre. The duration of the oldest portion of the eruption, that on the knee, was ten weeks, and there was a history of a sore on the penis thirteen weeks ago. The question arose as to whether this was a relapsing syphilide from a previous attack of which no history could be obtained, or whether it was a precocious nodular syphilide. (2) A man, aged 46, who had appeared before the Society before suffering with fungoid lesions of the face, and had been diagnosed as mycosis fungoides. The reason for again presenting him was that he had developed persistent erythematous patches on the front and back of the right thigh, thus strengthening the previous diagnosis.—Dr. J. H. SEQUEIRA showed a man, aged 44, with no history of syphilis, who exhibited a large, red, annular patch of infiltration on the left cheek close to the nose. The duration of the eruption was seven months, and the question was whether it was a syphilide or lupus vulgaris.—Dr. RADCLIFFE CROCKER thought it was certainly lupus vulgaris; most of the other members hesitated in expressing an opinion.—Dr. E. G. GRAHAM LITTLE showed: (1) A case of lichenoid eruption, possibly lichen planus, in an infant. The eruption consisted of an irregular patch on the inside of the right knee, and two annular patches on the right lower abdomen and left groin respectively. (2) A case of Hebra's prurigo in a woman. The features of the original trouble were obscured by the immense amount of chronic eczema present, and there was very little sign of the initial lesion visible at the time of exhibition. (3) A well-marked case of the acneiform tuberculide on the legs of an infant.—Dr. EDWARD STAINER showed a case of morphoea in small patches over the sternal ends of the clavicles and round the back of the neck at the level of the last cervical and first dorsal vertebrae.—Dr. RADCLIFFE CROCKER showed a young woman suffering from ulceration of the legs, the ulcers being of about the size of sixpenny pieces, and showing no infiltration of the base, but being surrounded by pigmented skin. There were scars of former ulcers, and the patient gave a history of wandering from hospital to hospital in search of relief. The diagnosis offered was dermatitis artefacta, and this was agreed with by all the members. (2) A man suffering from a pruriginous eruption scattered over the body and extremities. The individual lesions appeared to be infiltrated follicular papules which became pustular, necrosed, and healed with scarring. The patient had multiple enlargement of the lymphatic glands, and the diagnosis offered was that of pseudoleukaemia also affecting the skin.—Mr. ARTHUR SHILLITOE showed a case of unusually wide spread morbilliform erythema in early syphilis. A careful inquiry had excluded any drug eruption, and the rash had already persisted for some weeks.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.—At a meeting held on February 3rd, Mrs. STANLEY BOYD, M.D., President, in the chair, a discussion on tuberculous kidney was opened by Miss VAUGHAN, M.D., B.S., who read a paper on the pathology of the disease, and showed specimens. The PRESIDENT read a paper on the diagnosis and surgical treatment of the chronic caseous form, illustrated from cases treated in the New Hospital for Women. Specimens were shown of a tuberculous kidney recently removed by primary abdominal nephrectomy from a woman of 29, where there was marked thickening of the ureter in relation with the affected kidney, and of a kidney with a localized caseous focus, much thickening of the ureter and bladder removed *post mortem* from a married woman of 36. This patient had symptoms of severe cystitis and great exhaustion from pain and sleeplessness. She was treated by a preliminary nephrotomy and died fourteen days later, apparently from septicaemia. The President gave the after-history of two other cases—one a primary the other a secondary nephrectomy, done five or three years previously. Both patients had improved greatly in health and were able to work hard, but both continued to suffer from frequency of micturition though in a less degree than before operation. Miss ALDRICH BLAKE, M.S., M.D, read notes of a case of tuberculosis in which blood, pus, and tubercle bacilli appeared in the urine while the patient was under observation, associated with pain and swelling of the right kidney; all renal abnormality subsiding spontaneously after ten days, the urine showing no trace of pus or albumen during the last six weeks of her stay in the hospital. Also a case of tubercular pyonephrosis treated by nephrectomy after preliminary nephrotomy.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.—At a meeting on January 30th, Dr. WYATT WINGRAVE, President, in the chair, the following cases were shown:—By the PRESIDENT: (1) A case of laryngeal tuberculosis in a man, aged 45; (2) specimen and slides of a cystic cholesteatoma from the supratonsillar fossa; and (3) microscopical section of epithelioma of the nostril.—Mr. CHICHELE NOURSE: A case of laryngeal tuberculosis in a woman, aged 35.—Mr. STUART-LOW: Cases showing the beneficial action of mucin in atrophic rhinitis.—Dr. P. H. ABERCROMBIE: Two cases of adhesion between the soft palate and the posterior pharyngeal wall, the result of tertiary syphilis, operated on with good results.—Dr. HEMINGTON PEGLER: Cases of deflected septum treated by Moure's operation, together with the septotome devised and used by the contributor.—Dr. JOBSON HORNE: Section of a new growth in the larynx shown at the last meeting; it proved to be an endothelioma.—Dr. JOHN STEWART MACKINTOSH: Coloured drawing of naevus of the throat, shown at the last meeting by Dr. P. H. Abercrombie.—Dr. HEMINGTON PEGLER: A case of attic suppuration successfully treated by simple incision and irrigation; in this case the suppuration had unfortunately set in again.—Dr. DUNDAS GRANT read notes of several cases of radical mastoid operation, in one of which facial paralysis occurred the day after the operation, with ultimate almost complete recovery from the palsy.—Dr. WYATT WINGRAVE then delivered his Presidential address on tobacco deafness.

LARYNGOLOGICAL SOCIETY OF LONDON.—At a meeting held on February 5th, Dr. P. MCBRIDE, President, in the chair, Mr. R. LAKE showed (1) a microscopic specimen of pseudopachydermia from *processus vocalis* in a tuberculous subject; (2) a case of tuberculous laryngitis.—Mr. CHARTERS SYMONDS showed a case of paralysis of the left vocal cord in a girl, aged 18, the result of lead poisoning.—Dr. PEGLER exhibited a septotome for Moure's and other operations for deflected septum.—Mr. DE SANTI showed a woman with unilateral enlargement of the thyroid gland and marked displacement of the larynx.—Dr. BROWN KELLY showed microscopical sections of nasal growths of the type of "bleeding polypus of the septum."—Sir FELIX SEMON showed a case of tabes with early and unusual implication of various cerebral nerves.—Dr. DONELAN showed a case of ankylosis of the left crico-arytenoid articulation in a woman, aged 23.—Mr. HUNTER TOD showed a case of polypoid tumour of the nasal septum.—Mr. W. H. R. STEWART showed a case of laryngeal obstruction previously shown in 1897.—Mr. F. J. STEWARD showed a case of frontal sinus disease with great expansion of both sinuses.—Mr. WAGGETT showed a man, aged 69, with a growth in the nasopharynx.—Dr. FURNISS POTTER showed a case of disease of both frontal sinuses in a man, aged 29.—Dr. DUNDAS GRANT showed a case of persistent oedema of the larynx amyloid (?) in character.—Dr. W. HILL showed a case of tuberculosis of the larynx.

BRITISH ELECTRO THERAPEUTIC SOCIETY.—The annual meeting of this Society was held on January 23rd, Dr. W. S. HEDLEY (President) in the chair.—Mr. Edmund Owen was elected an honorary member.—Dr. HEDLEY then delivered his presidential address on Medical Electrology and Radiology in 1902, and also showed a double high-frequency installation.—The following members were duly elected officers for 1993:—*President:* Dr. Lewis Jones. *Vice-Presidents:* W. F. Brook (Swansea), Donald Baynes. *Council:* W. Armstrong (Buxton), J. Allan, David Arthur, G. B. Batten, James Barr (Liverpool), J. A. Codd (Wolverhampton), Samuel Sloan (Glasgow), George Herschell, C. R. Lyster, R. Morton (Taunton), Milne Murray (Edinburgh), S. Sunderland, E. W. Shenton, E. Solly (Harrogate), Hugh Walsham. *Treasurer:* H. McClure. *Honorary Secretaries*: Chisholm Williams, Hall-Edwards (Birmingham).

WIGAN MEDICAL SOCIETY.—The annual meeting was held on February 12th, Mr. T. M. ANGIER (President), in the chair.—The following gentlemen were elected office-bearers for 1903:—*President:* Matthew Benson, M.D. Brux. *Comm'ttee:* Messrs. Matthew Benson (President), T. M. Angier (ex-President), W. Mitchell Rocroft, R. P. White, C. M. Prady, John Blair, Ferdinand Rees, George Wolstenholme, Richard Winstanley. *Treasurer:* E. H. Moules, J.P. *Honorary Secretary:* William Berry, F.R.C.S.I.

REVIEWS.

OTOLOGY AND LARYNGOLOGY.

The historical classification of diseases of the ear into the ceruminous and the non-ceruminous no doubt formerly sufficed for the teachers and the taught. Great additions have been made to our knowledge, and an acquaintance with otology is daily being felt to be a matter of necessity by the general practitioner. There must be few who will not sadly acknowledge the truth of this, and who have not to mourn the lost opportunities of their school curriculum. The truth is borne in by the necessity for post graduate instruction, and is further emphasized by the demand for systematic works on the subject. The appearance of a second edition of Mr. Mark Hovell's *Treatise on the Diseases of the Ear*[1] written a comparatively few years ago fully justifies the favourable opinion we expressed when reviewing the volume in 1895.[2] Since then a good deal has happened to stimulate the study of otology. In 1899 the Sixth International Otological Congress was held in this country, and afforded an opportunity for an important stocktaking. The Otological Society of the United Kingdom was brought into existence by the Congress, and has done much to diffuse a knowledge of a science which it found—so far as the general profession were concerned—very much where Toynbee had left it nearly half a century ago. In view of gains such as these, the appearance of a new edition of the work under review must be most welcome to the busy practitioner who has not the time to make his own way through *Transactions* and periodicals to obtain the most recent information. The chapter on diseases of the nose, pharynx, and naso-pharynx connected with diseases of the middle ear gives a worthy representation of views generally held about such disorders. The author justly condemns the primitive method of tearing polypi from the nostrils with forceps, and without the aid of reflected light. Reference to the curetting operations under the guidance of the finger—a reversion to the primitive type—designed for the care of nasal polypi, is wisely omitted. The value of this chapter is increased by an important section on general anaesthesia in nasal and naso-pharyngeal operations, especially written for the work by Dr. Hewitt. The views expressed in the several paragraphs under this heading will, we believe, be fully endorsed by all experienced in performing operations in these regions. Mr. Hovell rightly insists upon general anaesthesia for the removal of adenoids, and consistently advocates the recumbent posture, no mention being made of nitrous oxide gas anaesthesia and the sitting posture. The selection of an instrument lies between one or other of the numerous modifications of the original forceps and curette, but an instrument for scraping, whether attached to a handle or fitted to a finger, is to be regarded as unsuitable. The chapter dealing with affections of the mastoid process has received careful revision. Inasmuch as it deals mainly with affections of the mastoid antrum, its title might perhaps be amended. A chapter on cranial and other complications of middle ear suppuration has also been revised. Local and general affections liable to cause disorders of hearing are discussed in a separate chapter, the importance of which it is difficult to over-estimate when we remember that the book serves as an excellent guide to practitioners. The British school of otology has not ranked within recent years on an equal footing with the Continental schools in the production of textbooks. Since the brilliant work of Toynbee the textbooks in use in this country have been largely translations of those by Politzer, Gruber, and Hartmann. The balance is now being readjusted. The book before us we can recommend as a sound introduction and trustworthy guide to the study of modern otology.

A highly interesting monograph by Dr. Friedrich Röpke, of Solingen, on *Professional Diseases of the Ear and Upper Respiratory Passages*[3] forms the second volume of the "Otology of the Present Day" edited by Professor Körner of Rostock. In this volume the main stress is laid on ear affections. No special attention is given to the larynx, professional diseases resulting from the use of the voice being omitted. Even with this limitation, however, the book contains an abundance of highly interesting material arranged in a systematic fashion. The whole subject is treated under six main headings: A. Professional diseases of the ear and upper respiratory tract amongst industrial workers; B. amongst agricultural labourers, etc.; C amongst soldiers and sailors; D. amongst the employés in public conveyances and post-offices; E. amongst sportsmen (using the term in a wide sense); and F. in various avocations. Section A. is again subdivided into sixteen groups of occupations, and fills 113 pages. In Section B. the rare disease—actinomycosis of the ear—is alluded to as occurring in harvesters and threshers. The fact that ear diseases are commoner amongst sailors than soldiers is mentioned, and attention is drawn to the frequency with which tonsillitis occurs in the former, the proportion being as high as from 51.6 to 101.5 per 1,000. Section E. comprises not only sportsmen in the strict sense of the word, but also aëronauts, cyclists, footballers, pugilists, wrestlers, and acrobats. Whether Sexton's paper on boxing the ears, to which reference is made, applies to pugilists seems to us doubtful. The different vocations included in Section F. are nuns, musicians, seafaring folk, sponge and pearl divers, apothecaries, chemists, men employed in sewers, chimney sweeps, and members of fire brigades. The book has two indexes, one of the different diseases and the occupations in which they occur, the other of authors. The work contains such an enormous number of facts and references that it is impossible in a short notice to give an adequate idea of its contents. It must be read in the original, and forms, in fact, a necessary book of reference for any one interested in the subject.

Dr. Holbrook Curtis, of New York, has translated the volume on *Rhinology, Laryngology, and Otology, and their Significance in General Medicine*, by Dr. Friedrich, of Leipzig, the German edition of which was reviewed in the British Medical Journal of December 23rd, 1899. As we then stated, the author had deserved well of his brethren, both general and special, and Dr. Curtis, in placing a translation of the work at the disposal of English-speaking readers, has earned some reflected praise.

HISTOLOGY AND PHYSIOLOGY.

The position of histology has for many years been a subject of debate. Some maintain that it is a mere branch of anatomy, while others regard it as more closely identified with physiology. In this country the latter view has been in the main acted upon, and histology has been fostered under the physiological wing. Dr. Gustav Mann's admirable *Physiological Histology, Methods and Theory*[4] will do much to justify the claims of English physiologists on this point, and to rivet still more firmly the links which bind histology in their province. As a matter of fact, histology is both anatomical and physiological according to the point of view from which it is approached. In its early days it was almost purely anatomical, but those who have followed its recent progress will have noted how increasingly important its physiological side has become. A study of secreting cells with the microscope has taught us much concerning the physiology of secretion; the study of the nervous system by all the improved microscopic methods at present in use has revealed to the physiologist as useful information regarding function as it has to the anatomist regarding structure. The title of Dr. Mann's book shows that it is the physiological aspect of the science that interests him most, and the point which he works out is the way in which chemistry shows itself as the all-important go-between in cementing histological to physiological endeavours. In the olden days of, say, twenty years ago, the histologist of course recognized what were the chemical reactions which underlay the effects produced by such simple reagents as silver nitrate and osmic acid; but as a rule his hardening and staining reagents were chosen, we will not say without discrimination, but at any rate, purely empirically. With the advance of chemistry all this is now changed. Organic chemistry is teaching us the chemical constitution of dyes; and physical chemistry the true nature of solutions, of colloids, and of gels. The reasons are now becoming clear why certain fixatives are better in

[1] *A Treatise on the Diseases of the Ear, including the Anatomy and Physiology of the Organ, together with the Treatment of the Affections of the Nose and Larynx which conduce to Aural Disease.* By T. Mark Hovell, F.R.C.S.Edin., M.R.C.S.Eng., Aural Surgeon to the London Hospital, etc. London: J. and H. Churchill. Demy 8vo, pp. 808.

[2] British Medical Journal, vol. i, 1895, p. 653.

[3] *Die Berufskrankheiten des Ohres und der oberen Luftwege.* Von Dr. Med. Friedrich Röpke in Solingen. Wiesbaden: J. F. Bergmann, and Glasgow: F. Bauermeister. 1902. (Demy 8vo, pp. 147. 5s.)

[4] *Physiological Histology, Methods and Theory.* By Gustav Mann, M.D., C.M.Edin., B.Sc.Oxon., Senior Demonstrator of Physiology in the University of Oxford. Oxford: Clarendon Press. 1902. (Demy 8vo, Pt. 5.6, 15

certain cases than others, and the microchemical meaning of staining reactions is being elucidated. All this and much more will be found fully discussed in Dr. Mann's manual, and we most heartily commend the book as the first successful effort to render the physiological basis of histology a proved fact. The book is written with the lucidity which we like to flatter ourselves is one main character of English writing; there is combined with this that admirable thoroughness which is so typical of those who hail from the Fatherland.

About four years ago, when we had occasion to notice the appearance of the fifth edition of Professor SCHÄFER'S well-known textbook, *The Essentials of Histology*,[5] we congratulated the author on the continued popularity and success of his work. We have little to do now but to repeat our congratulations. Any lengthened review of a book which has seen six editions is superfluous. We may be content with calling attention to the numerous new illustrations which are inserted, and which add to the value and beauty of the work. The part that relates to the central nervous system has been rewritten, and this portion of the book forms a model of lucid and terse writing. The intricacies of the cord, bulb, and brain, as revealed by recent research, are rendered clear by most excellent diagrams, and the new account given of the cranial nerves strikes us as being specially valuable.

The demand for Professor STARLING'S excellent *Elements of Human Physiology*[6] is shown by the fact that the last edition was published only about a year ago. Few alterations have been made in the present edition. We note the inclusion of Bayliss's and Starling's recent researches in connexion with the secretion of pancreatic juice. The curve (given on p. 400) of the percentage saturation of haemoglobin with oxygen at different pressures is out of date, for it has recently been considerably modified by Hüfner. On p. 71, in describing the origin of the white corpuscles, Professor Starling does not mention the marrow. Considering its clinical importance, Ehrlich's work on myelogenous leucocytosis surely deserved mention. The book is undoubtedly most suitable for the use of medical students.

In the preface to his *Physiology for Beginners*[7] Dr. LEONARD HILL says that he has set himself the difficult task of putting in simple language the essential facts concerning the structure and function of the human body. His success would have been greater had he allowed himself more space. As it is, his book suffers from compression, and although such language as the "hotness.....of a healthy man's body" is simple enough for a suckling, it is probable that the beginner will be a little bewildered by making such rapid acquaintance with new facts and new names. Considering its concentration as necessary, Dr. Hill's work, however, could not easily have been better done. The numerous illustrations are a great help to the text, though many of them might have been more diagrammatic, with advantage to the beginner.

NOTES ON BOOKS.

SOUTH AFRICA.

WE have received a copy of the *South African Year Book, 1902-3*[8] which appears for the first time. The claim contained in the preface that there is a need for a general and comprehensive work of reference dealing with the new South Africa will be generally admitted. The first part of the book contains lists of officials, articles on the climate and health resorts of South Africa, notes on laws affecting trades and professions, and some general articles on the natives, the fauna and the flora of South Africa, particulars as to public institutions, Government loans, steamboat and railway service, etc. This miscellaneous collection of articles is followed by a series of essays on the various colonies—including Rhodesia and Basutoland—and short notes upon Portuguese East Africa and German South-West Africa. Next come essays on various industries and the remainder of the book is made up of lists of members of stock exchanges and particulars of mining and other companies. There are seventeen maps large and small, and a number of illustrations. Among the maps are a pair contrasting Africa in 1802 with Africa in 1902; the contrast is striking and shows the rapid progress made during the past century in the partition if not in the civilization of the dark continent.

We have also received the tenth edition (for 1902-3) of the *Guide to South Africa*[9] edited by Messrs. A. SAMLER BROWN and G. GORDON BROWN for the Union Castle Mail Steamship Company. This is a handy volume containing a good deal of practical information and is blest with a good index.

The fifth annual volume of the *Jahresbericht über die leistungen und fortschritte auf dem Gebeite der Neurologie und Psychiatrie*[10] has just reached us. It deals with the year 1901 and is edited by Professor MENDEL and Dr. JACOBSOHN. It is a massive volume of over eleven hundred pages, and represents an enormous accumulation of material. The articles are classified according to the parts affected; prefixed to each section is a bibliography, and this is followed by abstracts of papers. The work has an index to names and subjects and will be found extremely valuable for reference.

The *Scottish Students' Song Book*[11] is a collection of songs from many sources well adapted for the delectation of students, or others *ejusdem generis*, in their symposia. It is published for the Songbook Committee of the Students' Representative Councils of Scotland, and the generosity of the various publishers and authors who have permitted their works to be reproduced in this form must be recognized. Failing this liberality it would have been impossible to issue this large mass of music at the very moderate price for which it is sold. Many of the songs find a place on account of their catchy attractiveness, not a few are inspired by the circumstances of University life, Scotch or German, and there are some which are essentially medical. "Chancellor Inglis" and "The Clinical Examination" are examples of the best known from the pens of Professor Douglas Maclagan and Dr. John Smith respectively. This is the sixth edition, and no doubt another will soon be in demand by those who adopt the motto of the book "*Gaudeamus igitur*," alike "*juvenes dum sumus*," and afterwards. In the next edition there might well be introduced "The Autocratic Doctor at Nordrach," a parody on the "Absent-minded Beggar," and also a recent parody on "Gaudeamus," from a German source.

The Report of the Proceedings of the Third International Congress for the Welfare and Protection of Children,[12] which was held in London under the presidency of Earl Beauchamp last July has been edited by Sir WILLIAM CHANCE, Bart., Hon. Treasurer, and forms a volume of some 350 pages. It is well printed, and contains, not only the papers, but also reports of discussions which took place on them.

MANCHESTER MEDICO-ETHICAL ASSOCIATION.—The fifty-fifth annual report of the Manchester Medico-Ethical Association shows that during the past year a paper was presented by Dr. A. W. W. Lea on the advantages of a daily medical inspection of schools. The system was heartily approved of by the Association in the interests of public health. Professional Ethics, and the Scope of the Medico-Ethical Association, was the title of a paper read by Mr. F. H. Westmacott, who pointed out that many advantages accruing to the profession generally were due to the efforts of this Association in the earlier years of its history. The following office-bearers were elected for the year 1903:—*President:* D. Lloyd Roberts, M.D. *Vice-Presidents:* C. Macfie, M.D.; J. W. Hamill, M.D.; W. Thorburn; J. C. Eames, M.D. *Honorary Treasurer:* J. Ferguson, M.D. *Honorary Secretaries:* F. H. Westmacott; S. Bagley. *Committee:* C. R. O. Garrard; W. E. Sawers Scott, M.D.; A. Stewart, M.D.; T. Harris, M.D.; A. B. Ritchie, M.B.; J. J. Fox, M.D.; E. Vipont-Brown, M.D.; D. Owen; T. W. H. Garstang; H. Lancashire, M.D. *Auditors:* E. Annacker, M.D.; J. G. Clegg, M.D.

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[5] *The Essentials of Histology.* By E. A. Schäfer, LL.D., F.R.S. Sixth Edition. London: Longmans, Green, and Co. 1902. (Demy 8vo, pp. 416, 463 illustrations. 9s.).

[6] *Elements of Human Physiology.* By E. H. Starling, M.D., F.R.C.P., F.R.S., Professor of Physiology, University College, London. Fifth Edition. London: J. and A. Churchill. 1902. (Demy 8vo, pp. 702, 321 Illustrations. 12s. 6d.)

[7] *Physiology for Beginners.* By Leonard Hill, M.B., F.R.S. London: Edward Arnold. 1902. (Cr. 8vo, pp. 124, 58 illustrations. 1s.)

[8] London: 64, Finsbury Pavement. Cape Town: Darter Brothers and Walton.

[9] London: Sampson Low, Marston and Co. 1902. 2s. 6d.

[10] Berlin: S. Karger. London: Williams and Norgate.

[11] London and Glasgow: Bayley and Ferguson. Sixth edition. 3s.

[12] London: P. S. King and Son. 1902. 2s. 6d.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEDICAL AND SURGICAL APPLIANCES.

An Assilini Forceps with a Hinged Handle.—Dr. Chas. Augustus Beck (Langsett) writes: Messrs. Weiss and Son, of London, have made, after my design, a pair of Assilini forceps, with a hinged handle. Fig. 1 shows an Assilini forceps,



Fig. 1.



Fig. 3.



Fig. 2.

with both blades fixed. A small lever on the left handle (= the upper one in use) firmly locks the hinged joint. Fig. 2 shows the same blade with deflected handle. On the sides of the joint there is seen a shoulder that limits its extension, hence there is no possibility of this blade extending beyond its lower fellow when strong traction is applied. The shoulders of this joint are made purposely small to prevent any entanglement of the pubendal hair, or "nipping" of the maternal structures. Fig. 3 shows the method of introduction. The object of having a hinged joint is to shorten the blade whereby its introduction is greatly facilitated, without the edge of the bed interfering. It cannot be denied that the introduction of the upper blade is less easy than its fellow, chiefly on account of its length. There are many ways of overcoming this difficulty, namely, by posturing or by a rotary movement of the blade from beneath the patient's left thigh—a method that is not without its dangers, especially with an incompletely dilated os uteri. When the handle of this forceps is deflected its length scarcely exceeds that of an ordinary tablespoon, and it becomes at once apparent that its introduction is much easier than a forceps having a long fixed handle, no special posturing of the patient (in most cases) being necessary. When introducing the blade the deflected handle is gradually extended to its full limit; the handle then becomes automatically and rigidly locked and fixed. The small locking lever can, at times, be disengaged, which causes the fenestrated part of the blade (= its upper portion) to become mobile (both handles being *in situ*, and fixed externally), thereby assisting intrapelvic rotation. This mobility is of great service in the lateral rotation of breech cases and simplifies the liberation of the after-coming head, the forceps in the latter case adapting itself to the shape of the head, and finding its own *point d'appui*. The makers of this forceps have turned out a well-finished and strongly-made instrument, of which all parts are well bevelled; they can instantly be detached, thoroughly cleansed, and sterilized.

An Aseptic Mechanical Bedstead.—We have recently had an opportunity of inspecting a mechanical bedstead introduced and registered by Messrs. J. and A. Carter, of 6A, New Cavendish Street, W. It is intended to facilitate the nursing of bedridden patients and other more or less helpless invalids, and has been named the "Surcar aseptic mechanical bedstead." By its use one nurse can without effort, by merely turning a handle, change the position of the heaviest patient, so that, as will be apparent from Figs. 1 and 2, it



Fig. 1.

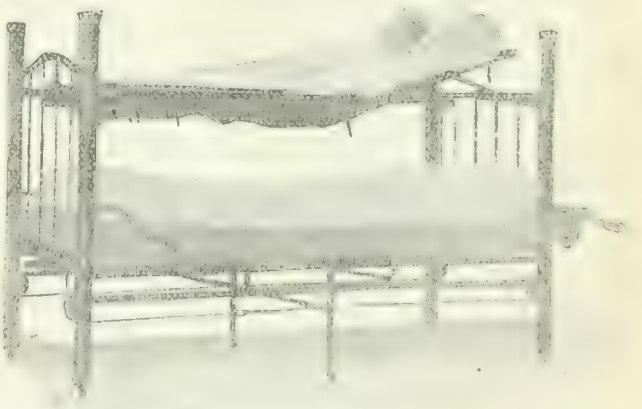


Fig. 2.

would seem to be especially useful in such cases as fracture, paralysis, and rheumatic fever, and also in the lying-in room. The bedstead is constructed of tubular iron frames; the wire mattress on which the bed rests is made with special springs, so as to afford support in every change of posture; the elevating portion is a frame across which bands of webbing are stretched, and on these, when covered by a sheet, the patient immediately rests. A greater or lesser number of the sections of this webbing can be instantly removed so as to give free access to the patient for washing, the dressing of wounds, or the introduction of the bedpan. An extension pulley and bracket is easily adapted to the main framework. While practically lying in bed the patient may be allowed to securely rest in a comfortable sitting posture, the footpiece being easily lowered to any angle and the backpiece as readily raised. The bedstead is readily taken to pieces, and can be packed in small compass for travelling.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The Hunterian Festival of the Royal College of Surgeons of England took place on February 14th.

The Hunterian Oration.

Sir Henry Howse, President of the College, delivered the Hunterian Oration in the afternoon. He said that the trust deed under which the Oration was endowed stated that the money was put aside by John Hunter's nephew, Dr. Matthew Baillie, and by his brother-in-law, Sir Everard Home, partly to endow this Oration and partly to provide a dinner "on St. Valentine's Day for the master, governor, and several members of the said Court of Assistants of the said Royal College of Surgeons." The Oration had been delivered on sixty occasions since 1814, and its object was defined in the deed as follows: It "shall be expressive of the merits in comparative anatomy, physiology, and surgery, not only of the said Mr. Hunter, but also of all such persons as are or shall be from time to time deceased, whose labours have contributed to the improvement or extension of chirurgical science."

Sir Henry Howse sketched the life of John Hunter, directing particular attention to the enthusiasm with which Hunter prosecuted investigations in all directions into natural history and then gave the following account of the museum which had its origin in Hunter's collection.

The Museum.

The museum, which he had spent his life and income in accumulating, was found after his death to be almost the only asset which he had left behind for the benefit of his wife and family. Commenced shortly after his return from the war, he gradually accumulated the specimens around him at his house at Earl's Court (which he bought in 1766 with some ground attached, for the purpose of observing the habits of the live animals he had collected), and in his town residence in Jermyn Street, until the preparations grew all too numerous to accommodate in this way. He then built a special museum for them in Castle Street, Leicester Square, and here they remained until the time of his death. During his life he is said to have spent £70,000 upon his museum, and if the story is true that he spent £500 upon obtaining the skeleton of the Irish giant, O'Byrne, we can well believe that the amount is not exaggerated. Indeed, on every hand there is evidence to show that where the interests of the musum were concerned he used his money with no sparing hand. Thus, he sent one young trained assistant to the North Seas on a whaling expedition to procure the bones of a large whale, and any other parts of interest. This, however, proved a failure, and his money was thrown away, only a piece of whale skin with barnacles upon it rewarded his outlay.

The museum, therefore, was the only really valuable thing which Hunter left behind. His house and the collection of pictures, etc., in it, were sold to meet the necessities of the hour, and they appear to have gone at a very low price. The time, indeed, was not favourable for the realization of any large sums. We were on the eve of the commencement of the Napoleonic wars, when the nation engaged in a death struggle with one of the greatest military despotisms that the world has ever seen. For some years the fate of the museum trembled in the balance. I have always thought it wonderful that in those years of supreme trial men were found so far sighted as to recommend and press on the purchase. Mr. Pitt's saying when applied to is well known: "What! buy preparations? Why I have not enough money to purchase gunpowder!" Yet it truly represented the nation's needs and straits. To Lord Auckland's initiative and perseverance we owe the final purchase of the collection—though even he probably scarcely knew the immense value of the boon he was conferring on humanity, and the lustre it would bring to his own name. At length, in 1799, for the sum of £15 000 the purchase was completed. Two other sums, amounting together to £27.500, were afterwards voted by Parliament for housing the preparations, and, after some negotiations with other bodies, the care of the museum was placed in the hands of this College, and it is said that our predecessors on the Council had up to 1833 spent £36,000 in maintaining and augmenting the collection. How much has, in addition, been spent in the course of the last seventy years it is very difficult to estimate. But it will be safe to say that the space allotted for the museum has during the time been at least quadrupled, and that, with the exception of £15,000 granted by Parliament in 1852 in aid of the new buildings, the whole expense has been borne by this College.

In estimating Hunter's character we must remember, in the first place, that he began his museum with the true instincts of a collector. This has been greatly overlooked in the various memoirs of him I have read, but it comes out strongly in his letters to Jenner, where he shows himself a collector of many other things (pictures, for example) besides natural history specimens. It is probable that this instinct first started him on the career of investigation which he afterwards pursued. Otherwise it is difficult to understand how anybody with so defective a general education should have so rapidly developed into the trained investigator he ultimately became. To the collector's instinct he added, however, great desire to know as much as possible about the various specimens his friends forwarded to him. Here his anatomical skill stood him in good part. Every fresh dissection suggested new subjects for inquiry, and soon we find him in his letters suggesting to his friends the direction which he wishes their inquiries should take. In this way Hunter seems to me one of the most admirable experimentalists that has ever existed in our profession. As he says of himself: "My head is like a beehive." So it was—full of ideas, questionings, and possible answers, and modes of investigation, as to the truth of his theories. For he was never satisfied with merely theorizing; he tried to put everything to the proof of investigation as far as he could. Nothing was too great, nothing was too small, for investigation. Many things, especially in biology, he studied, without knowing or seeing any particular importance in them, but impelled thereto by his desire for knowledge. Often afterwards he was able to correlate these facts with others which he had observed at a later date, and to make deductions from them. His studies in biology led him in this way, but he also pursued it in pathology and surgery with the greatest benefit both to his patients and to the general practice of surgery. That he made many errors in his deductions from observed facts is doubtless true, but no one was more ready to acknowledge the mistake when he found it was such, and to commence investigating anew. That he owed much of his success in investigating to the skill with which he dissected is undoubtedly true, and he admired the same skill in others. He rages, for instance, against his brother-in-law's "clumsy fingers," and admires Carlisle for his deftness in dissection and his skill in putting up preparations.

No man who had worked so long and patiently, who had seen so much of nature, and had thought as deeply as Hunter had done, but must have had inklings of things beyond the ken of his time. Hunter certainly had. Thus we find him communicating a paper to the Royal Society on fossil bones from caverns about Bayreuth, in which he speaks of the vastness of the geologic record, amounting to thousands of centuries—a matter of everyday knowledge now. But it created so much stir and opposition then, even amongst the learned men of the Royal Society, that Hunter was advised to substitute thousands of years for thousands of centuries. Hunter refused, however, to sacrifice his convictions, and withdrew his paper, which was not published till after his death.

Again, Professor John Marshall showed in his Oration in 1885, by extracts from Hunter's writings, that he had also dim previsions of the Darwinian law. And when we remember that at the time of his death there were over 3,000 palaeontological specimens in his museum out of a total of about 14,000, we see that he must have studied deeply the geological record. Indeed I do not think I can do better, in concluding this part of the lecture, than show you what I believe to have been one of the main forces which inspired Hunter's life and work—namely, the pleasure he had in associating structure and function—than by demonstrating to you two of the most recent acquisitions of the museum during the past year. And I hope you may all feel the same pleasure as I have done in them, and as I believe the shade of John Hunter, if he is now looking down upon us, also feels.

The first is the head of Rhinoceros antiquitatis, the woolly rhinoceros from Siberia, of the same period as the mammoth, but it is a specimen of incomparably greater rarity. The association of structure and function in this case lies in the fact that this huge beast was, like the mammoth, an inhabitant of cold climates, and that it is found imbedded in the ice and frozen soil of Siberia, with the hair and skin and internal parts perfectly preserved. As you know, all the rhinoceroses at present existing are inhabitants of hot climates, and are smooth-hided. Here we have one which, from its association with the mammoth, evidently lived in a cold climate, and,

like it, was covered with hair, from which it receives its name.

The second series of specimens, which are, of course, by no means new, though they are new acquisitions in this museum, are mostly only casts or models. They represent the evolution of the horse from Eocene times till now. Most of you know much more about them than I do myself, but some of you may not know what this museum is capable of in the way of demonstration.

First, then, I draw your attention to this model or cast of Phenacodus primaevus. It is found embedded in a slab from the Lower Eocene of America, and is a copy from those in the possession of the American geologists, Professors Cope and Marsh, who have done so much work on this subject. It is believed to represent the earliest horse form. Not much like a horse, you will say. But note the little space between the incisor and premolar teeth, the diastema, as it is called. The fossil is a five-fingered quadruped, about the size of a small leopard; it is probably plantigrade, walking on broadly spread out feet on the soft, wet soil about estuaries of rivers, etc.

Next we have the Hyracotherium group (or Protorohippus of the American geologists) from the Upper Eocene of America (therefore more recent in time), in which the number of digits is reduced to four, as in this model of Hyracotherium (Pachynolophus?). The size of these beasts in about that of a moderate sized dog.

The next in order is this Anchitherium group from the Miocene (the Mesohippus or Miohippus of the American geologists). Here we have the digits reduced to three, but in the Anchitherium of the Lower Miocene (therefore the earlier) we still have the fourth digit represented by a kind of splint, which is absent in the Anchitherium of the Upper Miocene. Thus, as we pass from the Lower to the Upper Miocene, we see there is a distinct step towards the horse form in the same genus of animals. These were beasts about the size of sheep.

Next in order we have the Protohippus from the Pliocene of America, and the Hipparion of the same formation in Europe (often called the three-toed horse). The number of digits is still three, but see the greatly diminished size of the lateral digits, and the great increase in the central digit, which is now truly a horse like structure. These were animals the size of donkeys.

Finally, we have the horse as it exists at the present day. And we may note that the Pleistocene horse, of which such abundant remains are found in the midden heaps of Europe, presents very much the same characters as the existing horse. Here the lateral digits have entirely disappeared, or are only represented by splints, while the central digit has been greatly hypertrophied, and supports all the weight of the animal on the horny hoof.

We have now traced the series from Early Eocene times down to our own. It forms a sufficiently remarkable progression, but these animal forms were separated, it may be, by thousands of centuries. Are there any other characters connecting them? The answer is, Many. But what always seems to me most remarkable throughout the series is this condition of the mouth, this gap or interval between the incisor and premolar teeth, called the "diastema," which permits the introduction of the "bit" into the mouth, and the consequent subjugation of the horse by man. Now, throughout all this series, in animals separated from each other individually probably by thousands of years, this diastema or gap is present in varying conditions of development. Small in the Eocene (as I showed you in this Phenacodus), it gradually increases in width until it reaches its full size in the horse, thus giving us another link of connexion between all these animals of the very greatest importance.

Can we not fancy the pleasure which additions such as this to his museum would have given to Hunter? He delighted in associating structure with function. Here we have a series of animals, plantigrade in the Earliest Eocene, probably because they lived in river land, even frequenting the mud and water, as the tapirs do at the present time (to which some of them are very closely allied). In the course of countless ages the foot gradually differentiating cut into the soliped form, supporting all its weight upon a single greatly-enlarged and strengthened digit, terminated by a hoof—this change being coincident with a change in the habitat of the animals from the soft, muddy estuarial lands about rivers to the hard prairies and savannahs of America, where this kind of foot would be infinitely more suitable for rapid movement and protection from enemies than the five-fingered foot. The change corresponds to a similar one in the mouth and teeth, which enables the present horse to consume and live on the hard, harsh, and often dry herbage of the plains.

The intense pleasure which the recognition of associated facts such as these would have caused John Hunter, together with the acquisition of the specimens illustrating them for his museum, were, I believe, the real motive forces of his life, which enabled him to work so hard and so long. With each new acquisition, with each new discovery, he saw boundless possibilities opening out before him, urging him continually to greater efforts for the improvement of his own knowledge, and for the good of mankind. I think we obtain a truer insight into Hunter's life and work through the pleasure which we also feel in knowledge acquired in this way. Not to the same degree as Hunter did, I fear, or we also would work as Hunter did. Nevertheless, we all glory in the museum, and in its development since Hunter's death. In the future we hope it will still grow and prosper, and indeed have every reason to believe that it will do so. During this last year we have notice that, owing to the action of our excellent Conservator, Mr. Stewart, a considerable bequest has been left to the museum, partly for the purchase of specimens, partly (and this I regard as most important) to enable the Council to pay the expenses of the Conservator when sending him to various foreign museums to examine them, or possibly to arrange for the purchase or exchange of duplicates—a negotiation which can always be better carried out on the spot than at a distance. This I look upon as a most important development, and I hope it will result in great things for our museum.

Sir Henry Howse concluded his oration by reference to two members of the profession officially connected with the College who had died since the last oration was delivered—Mr. Spencer Smith and Sir William MacCormac.

The Banquet.

The banquet took place in the evening in the library of the College. After dinner the President admitted Lord Roberts to the Honorary Fellowship of the College.

Lord Roberts, in acknowledging the toast of his health, thanked the College for the honour which it had done him, and paid a tribute to the services in South Africa of the Royal Army Medical Corps. Only those who were present in South Africa could thoroughly appreciate the devotion of the officers and men of that corps to their work and could exactly estimate the difficulties with which they had to grapple and the admirable manner in which they succeeded in mastering them. He also expressed the thanks of the army to the distinguished men who had gone out to South Africa as consulting surgeons.

The toast of "The Visitors," proposed by Mr. John Tweedy, was acknowledged by the Bishop of Rochester and Sir Harry Johnston, who said that he thought the Government might well do deliberately what it had sometimes done accidentally, and employ medical men as administrators of little-known regions. The admirable results that many doctors had achieved in Africa had been arrived at accidentally. Dr. Livingstone was a doctor of medicine, so was Sir John Kirk, and so was Sir William MacGregor, one of the best governors of tropical dependencies. If from time to time this course were followed the tropical colonies would benefit by what would seem to be something out of the common, but would only repeat the successes attained in the past by surgeons who had become administrators.

The toast of "The President and Orator," given by Sir Arthur Rücker, was briefly acknowledged by Sir Henry Howse.

International Temperance Congress.—The International Congress for the Suppression of Alcoholism will hold its ninth meeting at Bremen from April 14th to 19th. Among the communications promised are the following: Alcoholism and tuberculosis, by Dr. Legrain of Paris; alcohol in the life process of the race, by Dr. Plotz of Berlin; alcohol as a food, by Drs. Fraenkel of Halle, and Forel of Morges; and alcohol in the budget of civilized peoples, by Drs. Helenius of Helsingfors, and Blocher of Basle.

The Expenditure of Health Departments in the United States.—It is stated that New York expended last year $754 909 in salaries and $233,691 in expenses for the health department, while Chicago spent $150,688 in salaries and $75 998 in expenses. The health department of Philadelphia cost that city $168,842 and $97,150.

LUNACY AND LAW.

The Care and Treatment of Persons of Unsound Mind in Private Houses and Nursing Homes.

Two important papers dealing with lunacy law and practice in so far as they were related to the treatment of persons of unsound mind in private houses and nursing homes were read before the meeting of the Medico-Psychological Association of Great Britain and Ireland, held at Derby on February 12th, by Dr. Ernest White, Medical Superintendent of the City of London Hospital for the Insane, and Dr. T. Outterson Wood, Senior Physician to the West-End Hospital for Nervous Diseases.

Dr. White, in introducing the subject, said he proposed to treat the subject by a series of questions and answers, with illustrative cases as occasion required.

What was Certified Single Care?—It was the care and treatment of a duly certified person of unsound mind in a private house. The forms for admission were identical with those for the admission of a private patient to an asylum. There was a like order made by a judicial authority. The medical attendant took the place of the medical officer in institutions, he visited at stated intervals, and made the customary reports to the Commissioners in Lunacy. A registered practitioner with whom a single patient resided could not act as medical attendant. The residence was approved by the Commissioners in Lunacy, and the patient visited periodically by them. Chancery patients were visited by the Lord Chancellor's Visitors in Lunacy. Facilities of access were given to friends by the statute. Thus abuses were guarded against and there was efficient official supervision.

What were the Advantages of Certified Single Care?—They seemed to be:

1. Privacy and the avoidance of publicity, which the rich as well as the poor desired alike.
2. Domesticity and home-like surroundings, especially provided for in the modern system of villa-like residences for patients.
3. Privacy of visits of friends.
4. Avoidance of the stigma of treatment in a lunatic asylum. The sting of certification lay in the magisterial inquiry. Young and inexperienced justices often investigated the cases more fully than was necessary. They placed too little reliance upon the facts contained in the medical certificates. The terrors of certification were thereby increased. The form of the medical certificate needed revision, the term "alleged lunatic" should be removed. "Lunacy" should be removed from the statutes, "persons of unsound mind" and "insanity" taking their places. For years past the terms "lunatic, lunacy, and pauper" had been forbidden at the City of London Asylum, and the word "asylum" was only used for statutory purposes.

What were the Disadvantages of Certified Single Care?

1. The absence of skilled medical treatment, since general practitioners knew, as a rule, relatively nothing of the treatment of mental diseases, for it did not enter into their medical curriculum; and such experience, moreover, could not be gained in general hospitals or in the course of consulting practice.
2. Unskilled nursing.
3. Monotony, and the absence of recreations and amusements.
4. Insufficient Moral Control.—The moral decadence of the upper and upper middle classes when insane was far greater than that of the agricultural and industrial classes. Sedentary life, luxury, and high living tended to bad habits. Self-abuse was far more common amongst private patients than the rate-paid. The moral control Dr. White would rather term "school discipline" of our institutions; it was one of the most potent means we possessed for successful treatment. The day was apportioned out to meals, employment, recreation, and amusements. The will was made subordinate to others, bad habits were corrected, and, in many instances, the return to normal conduct facilitated.
5. Interference of Friends.—With single patients the friends either got them removed as far from home as possible, satisfied themselves that they were well housed, well clothed, well fed, and kindly treated, and visited them only when obliged, for sympathy for the insane relative generally died quickly. Sometimes the patient was visited too often, the treatment of the medical attendant, and management by the nurse were interfered with, and the chances of recovery lessened.
6. Limited Supervision.—Certified single patients were taken for profit by needy practitioners, poor ladies, etc. The official supervision of these custodians was limited, and skilful nursing was difficult to obtain under the circumstances. It was an absolute fact that in a great number of cases the nurses in charge of such patients had not had any training whatever as regards mental cases, being ordinary hospital nurses who were sent out by institutions to whatever cases might turn up. He had heard also of asylum laundry maids posing as mental nurses on the books of such institutions.

What was Uncertified Single Care?—It was taking charge of a person of unsound mind (not under certificates) in a private house or nursing home. He believed hundreds of insane patients of the upper and upper-middle classes were at the present time under care and treatment, without being certified, in the various counties of England and Wales, not to mention the Channel Isles. The following was the history of such a case: A patient in the early stages of insanity would be taken to a neurologist for advice. He duly prescribed and advised. After a short time the symptoms would become more pronounced, and home treatment became impossible; the patient must go away. Then the assistance of the decayed gentlewoman was sought, or a "nursing home" was selected, with which some practitioner in a suburban or rural district was connected. The neurologist saw the case from time to time in consultation. He considered himself well qualified to treat this form of disease, and in the interests of humanity, as he tells us, he thus became accessory to an evasion of the law. Ultimately in many instances, owing to an exacerbation of the symptoms, or to some attempt at suicide or homicide, etc., certification became imperative, and to a recognized institution for mental diseases the patient was sent. It was from these cases that many of them had to glean "recoveries," and a difficult task it was at so late an hour in the day of disease. (Dr. White here cited two or three illustrative instances of the above practice.)

One of these cases was as follows: Six years ago he was asked to visit in consultation Mrs. C., suffering from "puerperal mania." The attack had occurred five weeks after parturition, and the symptoms at first were a blend of mania and melancholia. The patient had a very bad family history of insanity and neuropathy. The patient's home was a large old manor house with extensive grounds, surrounded on all sides by a wall some 10 ft. to 12 ft. high. A suite of rooms on the ground floor was converted into quarters for the patient, who took exercise for hours daily in the old-world gardens; and there were trained nurses for night and day duty (one had been trained at the City of London Asylum). The family medical attendant visited twice a day, and Dr. White met him in consultation three times a week. This went on for two months. Sometimes the patient was better, sometimes worse. At last Dr. White thought, "This patient won't get well here. She knows she is at home, in the home of which she has been mistress for years; she does not therefore subordinate her will to others. She must be certified and go to a private asylum." The husband agreed with this view at once, and after consultation with another alienist it was agreed that the patient should be removed to a private asylum. This was done, after which she improved quickly, and her recovery was completed in about three months.

What were the Disadvantages of Uncertified Single Care?

1. Insufficient general and moral control of the patient. There was no legal power of detention, for the patient was in full possession of civil rights.
2. The patient's property was not safeguarded from unworthy relatives, solicitors, doctors, caretakers, and nurses.
3. Frequently there was unskilled medical treatment, or none at all.
4. The nursing was as a rule unskilled.
5. Monotony and unsuitable surroundings.
6. Interference of friends.
7. Want of official supervision.
8. Incapacity of the custodian.

The want of official supervision was perhaps the most serious of these disadvantages, for inhumane and cruel forms of personal restraint had been known to be used upon unfortunate patients even since the passing of the Lunacy Acts, 1890-91, and was not this what we should expect with no official supervision? In 1893 he sent two nurses to a well-known southern seaside resort for a Miss P., a private patient, who had been acutely insane but uncertified for seven weeks. The nurses found the patient roped by the wrists and ankles to the four corners of the bed. She was in a filthy state, as she had been tied down for days. Men had been called in to assist in the roping process. The patient's wrists and ankles were much bruised and abraded. The hos-

pital nurses in charge of the case were afraid of their lives, but upon our nurses clearing the room and removing the ropes, the patient accompanied them without a murmur, and gave no trouble on the journey.

He had heard of another lady being roped to a bedstead like a monkey to a pole, with just sufficient rope to allow her to attend to the calls of nature. Recently there was admitted to the City of London Asylum a lady who for months had been at a seaside resort with a caretaker in whose house a room had been fitted up as a strong room, with iron bars in place of the lower panels of the door. An occasional peep at the patient was taken through the "grille," a dreadful example of "curative treatment" under single care. The physician who was an eyewitness in the last two cases was present, and would verify these statements. He could not disguise the fact that mechanical restraint of an injurious character was often resorted to with uncertified patients in single care by unskilled nurses and heartless caretakers, and he felt he must raise his voice in no uncertain strain, in the interests of suffering humanity, against any relaxation of the law which would open the gates wider for such misdeeds.

What was the Suggested Notification of Mental Cases?—It was that in all cases of mental unsoundness in which certification and compulsory detention seemed needless, and in border-line cases, there should be a system of notification to the Commissioners in Lunacy by any one receiving payment, to the effect that "A. B. is a person of unsound mind, and is not a proper person to be detained." It had been also suggested that this notification should be to the local authority. It was presumed in the first instance that such notification would be followed by the visit of a Commissioner in Lunacy or some one deputed by the Commissioners, and in the second by a medical officer appointed by the local authority.

What would be the Advantages of Such Notification?—They would be the same as those given under the heading "uncertified single care" (*vide* above).

What would be the Disadvantages?—These, again, would be identical with those given under "uncertified single care" (*vide* above), with an addition. Increased official expenditure would be incurred from the necessary appointment of Deputy or District Commissioners to inquire into the numerous class of cases just alluded to which would rapidly crop up. In an article on Lunacy Law Reform in the *Lancet* of December 27th, 1884, Dr. White had suggested the appointment of Deputy Commissioners in the following terms: "District experts as medical officers of insanity, occupying analogous posts with those of coroner and medical officer of health, with fixed salaries, these officers to be elected from their experience in the speciality, and to be allowed to practise as pure physicians. Their duties would be to examine all supposed lunatics in consultation with the medical man in attendance, to sign all necessary certificates, to visit all single patients and patients in private asylums in their districts, to report thereon from time to time to the Commissioners in Lunacy, and so act as district agents for the Commission or Deputy Commissioners. They would have power to order the discharge of any single patient, or any patient from any private asylum in the district, should such a course be desirable on account of recovery or otherwise. They would also have authority to prevent the removal of any patient by his or her friends, when such removal was calculated to be fraught with danger to the patient or others." Many of the suggested reforms in that article were adopted in the Lunacy Acts, 1890-91. This was not, for the obvious reason—expense. Dr. White concluded that notification, unless under the most efficient official supervision, would encourage a continuance of the evasion of the law, or at least would delay proper remedial treatment in consequence of the patient not being under proper moral control.

What Cases were Suitable for Care and Treatment as Certified Single Patients?

1. Quiet and harmless tractable imbeciles.
2. Quiet and harmless chronic dements.
3. Certain general paralytics in the last stage.
4. Hypersensitive patients convalescing from melancholia.

What Cases were Unsuitable?—All others.

What Cases were Suitable for Care and Treatment Uncertified?

1. Transient cases of mania and melancholia dependent upon drink.
2. Certain borderland cases where the symptoms were undeveloped.
3. Other cases in which the symptoms were not severe, and which had a definite exciting cause not likely to be long operative.

How should they be Protected against Abuses?

By proper and complete official supervision. Dr. White had been for years past and still was in favour of the appointment of Deputy Commissioners for districts as defined above, such appointments to be made from those skilled in the treatment of mental diseases.

What was the Suggested Temporary Care and Treatment of the Incipient Insane?

In 1899 the Joint Committee of the British Medical and Medico-Psychological Associations, of which Dr. White had been a member since its formation, waited upon the Lord Chancellor at the House of Lords. They urged the necessity of early legislation for the incipient insane. They told him that numberless borderland cases were smuggled away in the country, the Channel Isles, and on the Continent to avoid legal certification, that their chances of recovery were imperilled thereby, and that the possibilities of inhumane treatment existed. As a consequence, the Lord Chancellor introduced into the Lunacy Bill of 1900 the following clause, adapted from the existing clause in Scottish Lunacy Law.

1. If a medical practitioner certifies that a person is suffering from mental disease but that the disease is not confirmed, and that it is expedient, with a view to his recovery, that he be placed under the care of a person whose name and address are stated in the certificate, for a period therein stated, not exceeding six months, then during that period the provisions of Section cccxv of the principal Act shall not apply.

2. The certificate must not be signed by the person under whose care the patient is placed.

3. Where a medical practitioner signs any such certificate he shall within one clear day after signing it, send a copy of it to the Commissioners, and the Commissioners may visit the patient to whom the certificate refers.

Dr. White believed that this clause, with its three sections, would meet all the requirements of the case for the insane of the upper and upper middle classes, provided the Deputy Commissioners above named be appointed.

Passing on to the subject of public asylums, Dr. White argued that, as several of the county and borough asylums were at the present time admitting private patients in large numbers, it would be well if the "voluntary boarder" system appertaining to the registered hospital and private asylums should be extended to public asylums. There were many patients, incipient and border-line melancholic cases, who lacked self-confidence, and who, if they could place themselves under the sheltering wing of an institution giving them medical and general supervision, would rapidly regain their mental balance, and thus escape certification. Those who had had ample experience of the voluntary boarder considered the legislation regarding him had been productive of much benefit.

Dr. White next proceeded to consider the various points not already discussed, to which allusion had been made by Sir William Gowers in his recently-published paper on Lunacy and the Law.

The contemplation from the train of the "wall" of Hanwell Asylum, they are told, prompted Sir William Gowers to lead a crusade against the existing Lunacy Laws. Sir William thought of those the wall excluded, and those it included. Now the wall of Hanwell (the oldest of the London County asylums) was, argued Dr. White, an anachronism. The asylums of to-day had no walls, and while the buildings "included" those committed to the humane and skilled care of the medical officers for treatment, they did not "exclude" those who desired to gain knowledge regarding mental diseases.

They did not acknowledge the "walls" as part of their treatment to-day, nor were "iron bars" necessary in institutions for the insane. They appeared to be only required, so far as Dr. White was aware, for uncertified patients in single care.

Sir William Gowers told them that in many cases certification was harmful and unnecessary. Many of them differed from him upon this point. They recognized in certification the means of placing the patient under proper control for treatment, and they were satisfied that the chances of recovery in most instances were greatly increased thereby. The cases quoted by Sir William Gowers as suitable for treatment without being duly certified were peculiarly unfortunate. They all had delusions of persecution, and these patients, as alienists knew, might at any time become actively homicidal or suicidal by impulse. Such patients

should certainly have been under certificates, both in the interest of the public and of themselves. Sir William Gowers stated that every patient received for payment and uncertified was a free agent, and could leave or be removed at any time. Such was not Dr. White's experience with uncertified insane patients in single care. Furthermore, he did not admit that certification was in any way disastrous to the patient, or was the "painful distress" to the friends it was stated to be.

Sir William spoke of the "divorce of psychological medicine from general medicine." There was, added Dr. White, no divorce. These branches of medicine had always been separate and distinct, and must remain so from the very nature of mental disease and the nature of the treatment demanded. The moral side of this treatment was all-important, the purely medicinal accessory. The days of chemical restraint and of the exhibition of medicinal nostrums for insanity were past and gone.

They were told by Sir William that the "master of method" was necessary for the full and proper development of the normal mind of youth, that a scholar who had not had training as a schoolmaster was unequal to perfecting a student's education in classics, mathematics, or the higher sciences. How much more, then, argued Dr. White, must the "physician of method," trained by long experience and daily contact with the insane, be essential for the re-education of the abnormal mind, for the replacing of the unhinged mind upon its hinges, for the dispelling of the hypochondriacal delusions of the melancholiac, and for the calling back to mental life again of the *quasi*-demented patient in mental stupor?

Speaking after thirty years' experience as a public asylum physician, and thirteen as a lecturer on mental diseases, Dr. White concluded that to comprehend the vagaries of the mind diseased, to lead that errant mind back to health, and to recognize the means by which this end could be effected, were problems only to be solved by those who had made the insane their intimate and lifelong study.

Dr. White, in conclusion, referred to the new title given by Sir William Gowers to his paper as just published in pamphlet form. He observed the title was altered. It now read, an address on the prevention of insanity. Would not on the evasion of insanity be more appropriate? Sir William Gowers drew attention approvingly to Sir William Church's suggestion that notification should be to the local authority, the facts of each case to be subsequently investigated by the medical officer of health or some other official appointed by the local authority. What, asked Dr. White, did the medical officer of health know of mental diseases? Was he qualified to decide such a case? and who was the "other official" suggested? Who but one skilled in the treatment of insanity was qualified to decide whether the conditions under which the patient was placed were such as were likely to promote recovery, or whether certification was necessary in the patient's own interest? Sir William Gowers was in error when he stated that provision was already made for the reception of borderline patients as "voluntary inmates of public asylums." At present voluntary boarders could not be taken in "county or borough asylums," but only in "registered hospitals and private asylums." Sir William, moreover, said that it was a sarcasm to suggest that patients on the verge of mental derangement would place themselves in lunatic asylums. Was he not conversant with that large class of cases of incipient melancholia in which the patient lacked self confidence and self-reliance, was imbued with a sense of impending trouble, and consequently eagerly sought admission into a private asylum as a voluntary boarder, and expressed a feeling of relief when under the sheltering wing of the institution? The limitation Sir William Gowers took objection to in connexion with the clause for the treatment of incipient insanity "that no person under this section shall receive more than one patient at the same time" was in accordance with the principle and spirit of the Lunacy Acts 1890-1, that private asylums were to die out by gradual extinction, for no new licence could be granted. To receive more than one patient would constitute a private asylum. Sir William Gowers objected also to the sanction of the justice of the peace being necessary, and added that "such a sanction could only be a useless formality." Sir William forgot that it was right that the liberty of the subject should be taken only by some mode of judicial procedure.

Dr. T. OUTTERSON WOOD, in his opening remarks, said that it augured well for the success of the action taken by the Conjoint Committees of the British Medical Association and Medico Psychological Association with regard to the amendment of the lunacy law, to enable cases of incipient and unconfirmed insanity to be legally treated in private care without certification, that the Lord Chancellor had inserted into his Lunacy Bill a clause to meet the requirements mentioned.

With regard to the section which dealt with cases of incipient insanity, he would divide the cases into two classes: A, those who were amenable to reason and advice, who were absolutely uncertifiable, and those who could to a great extent take care of themselves; and B, those recent cases of a mild type in which the mental warp was more pronounced, who might require removal from home, who were almost certifiable, or those who might even have harmless delusions, who required a certain amount of moral restraint, and who might object to the control necessary for their proper treatment. With regard to Class A, no alteration of the law was necessary: these patients were as capable of treatment outside the lunacy law as any ordinary medical case. Dr. Wood had to deal with a large number of them as out-patients at the hospital, and he had no difficulty whatever with them.

It was with regard to Class B that the law required amendment, and a system of notification seemed to be the best to meet the requirements of such cases. This, however, was no new idea. He had for four years advocated a relaxation of the present law in order that incipient, doubtful, or undeveloped cases of insanity might, under suitable conditions, and at the earliest moment, be brought under that skilled care and treatment which the experienced alienist physician knew to be necessary for the arrest of the disorder and the cure of the patient. Upon this point he was glad to think they were all agreed. It was the adoption of a principle that had worked well in Scotland for many years, and he knew of no reason why, under proper conditions, and with the necessary safeguards of skilled supervision, it should not work equally well in England and Wales, the order of a magistrate on this side of the border taking the place of the order of the sheriff as in Scotland for the legal detention of the patient for a definite period. There was, however, one point upon which they must insist, and it was that wherever these cases were so placed, whether it be in a doctor's house or not, they should be at once notified to the Commissioners, and be placed under their official supervision, as well as under that of some skilled and independent physician appointed by the Board or by the local authority.

Above all they must be certain that it should not be merely a matter of boarding patients out in so-called medical homes or private houses, kept by unqualified, inexperienced, and untrained persons, but that they should have some guarantee that the patients would be cared for and looked after by persons who had been trained in some recognized institution for the insane and had been approved of by the Commissioners. He further contended that such nurses as were in charge should be asylum trained, and should hold the certificate of the Medico-Psychological Association for proficiency in the nursing and care of those of unsound mind.

It was absurd to imagine for one moment that such cases as these could be properly treated by persons with no special knowledge of or experience in all the details of the moral control and special medical treatment which insane patients required. The periodic visits of a consultant were practically useless as regards the supervision of these details of treatment which were of daily, even hourly, importance for the cure of the patient. This, of course, they could not expect hospital physicians, however eminent otherwise, to appreciate who had not had special and adequate experience in the care and treatment of mental disorders. It was the absence of this special knowledge on the part of the hospital physician which permitted him on the one hand to place these—the most difficult of all cases to manage—under the care of inexperienced people of limited means, or of hospital nurses without asylum training, ignorant of the requirements of such patients, and unaware of the constant supervision and the unceasing vigilance which insane patients required, who were unable to anticipate a suicidal impulse, or an outbreak of homicidal violence, and who would either rush in terror from the room at an outburst of excitement, or would resort to the injudicious and unnecessary use of mechanical restraint. In his opinion, instead of the law being made more elastic with regard to such cases of laxity and of inadequate care, it should step in and compel every nursing home or institution receiving such cases as these to be placed under some official supervision. If this were done they should hear less of the fatalities which were of such frequent occurrence,

and which helped to fill the columns of the daily press. While, therefore, he advocated the early treatment of cases of incipient insanity without certificates, he thought that lunacy law should be so framed that care and treatment of the patient should be carried out in such an efficient manner, and that there should be no excuse or loopholes afforded in future for the smuggling away of so-called "borderland cases," or those deliberate evasions of the law which have been alluded to, and even boasted of, before the members of the Association.

Passing on to the second section of the subject, he thought that the suggested extension of this system of notification for incipient cases, so as to make it applicable to "chronic certifiable cases of insanity," and to those already certified and living in institutions for the insane would be a dangerous innovation. It was melancholy to reflect that at this time of day they were compelled to reiterate the arguments of their predecessors in this Association against the unwisdom of such a retrograde step, and that the cruelties of mechanical restraint must again be brought forward to steady the minds of well-meaning but ill-informed philanthropists, and bring into bold relief the danger of giving a free hand to those impecunious persons who bombarded physicians with applications for the care of this class of patient. One of those individuals who was anxious to obtain the care of uncertified patients endeavoured, added Dr. Wood, to impress upon him that "blindness and being crippled" would not matter. He presumed, if the unfortunate patient was blind, he could not see and criticize his food and surroundings, and if crippled, he could not escape, and would require less expensive supervision.

It had been suggested that the relatives of many certified patients should take them out of asylums because they were not dangerous to themselves or others, and that they could undertake the care of such cases as well or even better than they could be cared for in an asylum without the "stigma" attaching to them of being certified lunatics. This to his mind was largely sentiment; nothing could alter the fact that the patients were insane, whether they are certified or notified, and whether the fastidious friends like it or not, the fact remained. His experience through a long series of years spent among the insane was that more downright cruelty and neglect were often inflicted upon such patients by friends and relations owing to their ignorance and incompetence, and through judgement giving way to feeling, than was possible under the humane treatment of such cases in modern institutions for the insane, private as well as public.

In support of this statement. Dr. Wood gave an account of a case which came under notice a short time ago. A refined young lady, of some 20 years of age, who, to save the stigma of certificates, was placed in charge of a hospital nurse in a so-called "medical home," and who, because she was anxious to leave her room, had an ingenious waistband buckled round her, to which was attached a half-inch rope, sufficiently long to allow her to attend to the calls of nature. This rope was firmly fastened to the bedstead. The nurse explained to Dr. Wood that, but for this contrivance, she would not have been able to leave the patient alone. Comment upon this case, which was one of certifiable insanity—"and I certified her," added Dr. Wood—was needless. Another case, whom he also certified and sent to an asylum, was a young lady, aged 22 years, who was kept in a private house to save certification, in charge of a hospital trained nurse. She was in a state of acute mania; she had bitten the hand of the hospital nurse in whose home she was detained because the latter endeavoured to hold her down by force. This hospital nurse had an untrained young woman as an assistant. The patient was curled up in bed, jabbering incoherent nonsense, her hair unkempt, and she was unwashed and dirty; the room was barely furnished, and most uncomfortable, and the window was strongly barred. As Dr. Wood was leaving the apartment he found each panel of the door, excepting the one below the lock, was protected by a stout ½ in. deal board screwed securely over it, and the door showed evidence of violence. On examining the door from the outside he found the panel under the lock was made to slide in a groove, with a knob on the outside to draw it backward and forward, and over the space left when the panel was withdrawn were three strong iron bars. On inquiring of the nurse the use of this ingenious device she informed him that it was to enable any one sitting outside the room to see what the patient was doing inside—a convincing confession of incompetence. He confessed to being somewhat shocked at such a condition of things occurring in the closing months of 1902. "But, gentlemen," continued Dr. Wood, "these are the evasions of the law we must expect to increase and multiply if the law is made 'more elastic'"

With regard to cases of certifiable insanity without adequate official supervision, he would not weary the audience with a recapitulation of further instances of the inhumanity of ignorance which were only too well known; but he ventured to say that if the supervision of the certifiable insane in single care by the Commissioners was in any way relaxed, they would soon have a recrudescence of those scandals which brought on to the Statute Book the lunacy law as it now stands. No perfunctory visitations of the physician could prevent them. Only within the last month he had three applicants for the post of nurse to a mental case, and in view of the question of asylum-trained nurses being so necessary for the care of mental cases, he would attempt to describe the kind of persons these three applicants were:

No. 1. A lady, quite untrained, but with some years' experience in private cases, wonderfully self-confident, and largely possessed of the audacity of ignorance. When asked if she was trained, she said, "Oh, no!" She didn't believe in trained mental nurses, they only irritated the patients. When asked what she would do if the patient happened to become violent, she said, "I would look at her, that would be quite enough."

No. 2 Another lady, untrained, who, when asked what she would do if the patient became violent, said, "I would pull her arms back and tie them with a towel." On suggesting that that might not be enough, then said this untrained lady with a knowing look, "I would get a strap with hooks on it, and hook them back."

No. 3.—A tall, strongly-built lady, very much satisfied with herself and her powers, who would take any case, male or female, was a trained hospital nurse, whose only knowledge of mental training was gained by three months in a county asylum some years ago, and a few months in the insane ward of a workhouse. When asked what she would do if the patient became violent, she said very decidedly, "I am quite competent to do some 'policemaning' if necessary." Dr. Wood thanked that lady for the word "policemaning"; it was so suggestive of truncheons and handcuffs, and such-like trifles. It was into the care of ladies such as these—untrained and impecunious—that the friends of patients were asked to deliver them, yet they all had testimonials from the friends and relations of former patients. Then there was a further view of the subject which the following incident illustrated, and it was a pretty example of another method of evading the law. A friend of Dr. Wood, at the request of his patient's relatives, called a physician in consultation upon a mental case, which required certification to legalize the necessary control. "Oh, you must not certify it," said the physican; "call it hysteria, and you can do what you like with it." "That is all very fine," said his friend indignantly, "but the woman is a lunatic, and ought to be certified." "Call it hysteria," reiterated the physician, and away he went, leaving Dr Wood's friend to treat a case of acute mania as hysteria. But very soon the crockery ware began to fly about, and the "hysterical" patient had to be promptly certified, and sent to an asylum. "Call it hysteria," indeed! They had arrived at a serious state of things if consultants, either unable or unwilling to recognize a case of acute mania, could bring themselves to call it "hysteria" in order that they might pander to the pride and prejudice of relatives who looked upon insanity, one of the most serious disorders that could afflict a fellow creature, as a crime or something to be ashamed of. Was it not rather the duty of a consultant to support the medical practitioner in his endeavour to induce the relatives of the sufferer to take a sane view of the malady, and do their best for the patient, rather than hand the patient over to such untrained and unreliable people as he had described, to be "policemaned" as a case of "hysteria."

Those who had spent their lives in endeavouring to ameliorate the condition of the insane, must not stand by without protest and allow a reversion to those methods of barbarism which would be bound to follow any relaxation of the law, without something more to protect the unfortunate patients than the mere visits of a physician who had no special knowledge of the care and treatment and of the requirements of an insane patient. Above all they must be satisfied that those who were allowed to take charge of insane patients were properly trained and competent to do justice to their charge.

The point upon which the whole question hinged was that of adequate supervision. It was a very simple one. The Commissioners in Lunacy had all the facts in their posses

sion. There was no need for any commission of inquiry about the lunacy laws. They knew quite enough about them already. The appointment of Deputy Commissioners, together with local expert representatives of the Board in centres of the population, would, in his opinion, meet every requirement. By these means the vagaries of those who took charge of cases of doubtful or confirmed insanity would be held in check, and the friends and relatives would be assured that patients were controlled and guided by the firm but kindly supervision of trained mental physicians, who were qualified by long experience to guide and direct them in the right way.

At the conclusion of the above two papers the discussion of the subject was commenced by Dr. Seymour Tuke, who touched upon the importance and the necessity of legislation in the matters referred to—namely, the question of single care and its abuse, and the question of notification without certification of incipient cases of insanity.

Owing to the lateness of the hour, however, and in view of the range and importance of the subject, it was resolved that further discussion should be postponed to the next quarterly meeting of the Association.

THE ANNUAL REPORT OF THE MEDICAL OFFICER OF THE ADMINISTRATIVE COUNTY OF LONDON.

III.

Sanitary Administration.

Part II of Mr. Shirley Murphy's report contains a valuable summary of the different branches of the sanitary administration of the London County Council and in each borough of the metropolis.

Dairies, Cowsheds, and Milkshops.

The duty of registering these devolved on the several borough authorities under the London Government Act, 1899, while the administration of the provisions of the Order other than those relating to registration remains with the County Council. This is only one of several examples of an attempt, though incomplete, towards local devolution in recent legislation. It is significantly noted in Mr. Shirley Murphy's report that "some of the reports of medical officers of health give particulars of the work done in their districts." The veterinary inspector of the Council made four inspections of all the cows in London cowsheds. The number of cows examined was about 4,200, which means, we assume, that this is the total number of cows kept in metropolitan cowsheds. At these inspections he found 25 cows with suspected tuberculous disease of the udder. These were subsequently slaughtered, except in one instance in which the cow was sent to Romford and sold in the market, but the purchaser could not be traced.

Offensive Businesses.

The by-laws regulating these are enforced by the borough sanitary authorities. There is but little information on this subject in the reports of the borough medical officers of health. During 1901 the London County Council granted 381 licences out of 384 applications received for slaughter-houses. That it should still be necessary to license new private slaughter-houses is a serious blot on the sanitary reputation of the metropolis.

Nuisances.

Smoke nuisance appears to have received considerable attention throughout London.

The removal of stable manure has been a matter of increasing difficulty. A conference of London sanitary authorities has recently expressed the opinion that each sanitary authority should be empowered to employ, if they thought fit, scavengers, or to contract with scavengers, for collecting and removing the manure and other refuse matter from stables and cowhouses within their district, at a charge to be fixed by the local authority, or, in the event of dispute, by a police magistrate. Dr. Dudfield is of opinion that it ought to be made the duty of the sanitary authority to remove the refuse at the reasonable cost of the owner.

The removal of house refuse is another difficult problem. During the year under report the London County Council had remitted to the various local authorities for their observations a new by-law requiring the removal of house refuse twice a week. As the local authorities will have to bear the additional expense involved by this very proper by-law, it will be interesting to note next year their comments upon it.

Part I of the Housing of the Working Classes Act.

Particulars are given of improvement schemes under Part I of this Act in Poplar and in Drury Lane. Under Part II the Council are erecting buildings in the Ann Street, Poplar, area for 440 persons, in 65 tenements of 2 rooms, and 30 tenements of 3 rooms. They have also approved plans for the erection of a lodging-house on the Mill Lane site, to cost £51,500, to provide accommodation for 804 lodgers. In the whole of London the ridiculously small number of 95 houses were represented under Part II of the Act as unfit for human habitation. Of these, 48 houses were brought before magistrates, and in respect of 22 closing orders were obtained. These figures, showing, as they do, how unwilling magistrates are to perform their duty under this Act, afford some excuse for the paucity of action under the powers of this Act.

The enforcement of by-laws relating to houses let in lodgings is very unequal in different parts of London, and there is evidently much hesitation on the part of local authorities to carry out their duties under this head. There are 514 common lodging-houses registered in London, the duty of supervising them belonging to the County Council. The parts of Mr. Murphy's report dealing with workshops and workplaces and with bakehouses do not call for special comment. Under the head of "Unsound food" one is painfully struck with the slightness of evidence of efficient control over the food supply of the largest city in the world.

Appendices.

Appendices to this report comprise a London Life Table, 1891-1900, which has already been discussed in these columns; a report on a milk outbreak of scarlet fever in Shoreditch, etc.; an account of experiments on disinfection; and a report on sanitary staffs.

A joint report by Drs. Klein, Houston, and Gordon contains some valuable information as to the relative merits of various disinfecting agents.

As regards gaseous disinfectants, both formalin and sulphurous acid failed in killing spores of bacilli on wood. As regards liquid disinfectants, carbolic acid 1 in 20 failed to destroy anthrax spores after twenty-four hours' exposure. The typhoid bacillus was killed by all the disinfectants except Condy's fluid and bleaching powder. The diphtheria bacillus was killed by formalin and sulphurous acid. For tubercle bacilli carbolic acid and perchloride of mercury were the only disinfectants efficacious on each occasion. Bleaching powder (1 per cent.) was not uniformly successful.

Sanitary Officers.

This term is used in Mr. Murphy's report as a synonym for sanitary inspector. In this sense there is no serious objection to it, but when used as a term to include medical officers of health and sanitary inspectors, it is, we consider, derogatory to the former. The number of sanitary inspectors in London in 1893 was 188; in 1901 it had increased to 275. Stated in terms of population the City of London is the best staffed, there being 1 sanitary inspector in 1901 to every 1,921 of population. Next comes Southwark with one inspector to 11,452, Bethnal Green 1 to 11,789, Kensington 1 to 13,586, and Hammersmith 1 to 14,031. At the other end of the scale are Fulham with 1 to 22,881, Lambeth 1 to 23,221, Paddington 1 to 23,992, and Stoke Newington 1 sanitary inspector to 25,623 of population.

Mr. Shirley Murphy's annual report is perhaps the most important official document relating to the Public Health which we have to review year by year, not only because it relates to the largest city in the world, but also because it embodies vital statistics which are invaluable for reference and comparison. We congratulate Mr. Murphy on the issue of his report, which year by year steadily increases in usefulness and importance.

Decrease of Tuberculosis in Prussia.—Official statistics recently published show a great diminution in tuberculosis mortality in the Prussian States between the years 1876 and 1901. In 1876 the death-rate from tuberculosis was 31 per 10,000 of population; in 1891 it was 27; in 1896, 22; and in 1901 it was 20.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1903.

Members of the British Medical Association are reminded that commencing with January 1st, 1903, the annual subscription is a uniform one of 25s., inclusive of the Branch, and that all subscriptions should be paid direct to the General Secretary, 429, Strand, London, W.C., and not to a Branch Secretary.

British Medical Journal.

SATURDAY, FEBRUARY 21ST, 1903.

THE BORDERLAND BETWEEN GENIUS AND INSANITY.

Many men of talent have been characterized by a highly neurotic temperament, and not a few of their number have travelled beyond the elastic limits of that borderland wherein eccentricity is granted the asylum of indulgence and arrived at a mental condition which was unmistakably insane. For every student of mind this ill-defined borderland has a fascination of its own which challenges further exploration, since the popular notion that there is something of kinship between genius and madness merely states the problem without helping to its solution. To penetrate the subject more deeply the guidance of medical knowledge is indispensable, and therefore a treatise such as that by Dr. Möbius[1] on the mental pathology of the speculative writer Nietzsche is of particular value.

Nietzsche's case is of especial interest to medical men, because it presented clinically the well-marked features of progressive general paralysis, and we have therefore good reason for believing that the mental deterioration exhibited in his writings provides in its downward course the psychical counterpart of the physical lesion which was simultaneously progressing in his central nervous system. Dr. Möbius also hopes that his book will be of help to the layman who is impressed with the poetical imagery and stormy enthusiasm of Nietzsche's writings, and needs a warning voice to tell him that when the author's sayings become so marvellous as to be incomprehensible, they are probably only "transcendental" in the sense that they have passed beyond the limit which separates sound intellect from sheer insanity. The average sober-minded Englishman, we believe, is not in much danger of confusing poetical inspiration with delirious nonsense, and is capable of detecting the morbidly neurotic taint even in the saner of Nietzsche's writings; at the same time, he should not neglect the opportunity afforded by this strange personage, with his curious medley of enthusiasm and madness, of studying the differences between the eccentricities of exuberant genius and the vagaries of mental degeneracy.

In dealing with this subject generally it is advisable to take as our standard the normal intellectual plane of sober mediocrity, and then note the points of resemblance and difference between those types of intellect which occupy a higher and those which occupy a lower level in relation to our normal. In relatively small departures from the normal, for instance, we very frequently find that both the upper and the lower level are characterized by a state of mental depression; the man ceases to regard his stock-in-trade of ideas with complacent self-satisfaction; they seem inadequate and inconsistent; they crowd in upon him and oppress him with an insistent demand for readjustment. We have here a condition of mental pain due to the conflict between the man's individuality and his environment as it mentally presents itself to him. If the former triumphs in the struggle, we recognize the man of strong character and creative power, who proves himself superior to his fellows because he can overcome circumstances in which ordinary men would quietly acquiesce. If, on the other hand, the depressing circumstances gain the ascendency and crush the man's power of initiative, the mental pain tends to perpetuate itself with cumulative effect, and a state of mind supervenes which is a strong predisposing cause of melancholia.

We may again compare with one another two still wider divergences from the normal—the elation and sense of well-being which is characteristic of mania with the brilliance and enthusiasm of the successful genius who carries everything before him, conscious of his power and keenly enjoying his work. In both cases we have a state of consciousness in which there is an exalted sense of control over circumstances, and a feeling of emancipation from ordinary restraints; the difference lies in the range and character of the environment upon which the man's energies are directed. The genius marks the impress of his will upon an ever-widening sphere of objective reality; the maniac's sense of freedom and power is due to the fact that almost the whole of the vast complexities which make up the environment of which we are normally conscious has become blotted out for him, and he has been left with a barren supremacy over little but his own phantasies.

By pursuing this method of comparison we may perhaps arrive at a helpful criterion for the judgement of our borderland cases. In dealing with a man who is dissatisfied with ordinary methods of arranging the data of his experience, we must first ask ourselves, Does he still retain his grasp of the normal standpoint? If he does, then his dissatisfaction may be the prelude to new discoveries; but if he does not, there is the suspicion that his efforts at reform may prove to be the dying struggles of a drowning intellect. True originality is the salt of the earth, and the homage we pay its possessor is but his due; but let us first scrutinize him with some discrimination, for if eccentricity is all that he can rightly claim, the allegiance we pay him is a degradation to ourselves. A new idea, whether in poetry, art, or science, implies concentration of effort; but there is a vast difference between the concentration of the well-stored mind which voluntarily brings its attention to focus upon a particular point and the concentration due to a narrowing of interests which is helpless to prevent a single idea from usurping the entire mental field; and though the difference may often be far from easy to recognize it is in principle the same as the very obvious difference between the inspiration of genius and the obsession of the monomaniac.

From his constant association with morbid conditions of body and mind the medical man is particularly well fitted to study these problems; he alone can interpret the lessons of disease with a sympathy which is never repelled, and deduce from a study of Nature's failures the safeguards of intellectual progress.

[1] *Ueber das Pathologische bei Nietzsche.* Von Paul Julius Möbius. Wiesbaden: J. F. Bergmann: and Glasgow: F. Bauermeister. 1902. (Royal 8vo, pp. 106. 3s.)

THE DISRUPTION OF VICTORIA UNIVERSITY.

A committee of the Privy Council, consisting of the Lord President, the Earl of Rosebery, Lord James of Hereford, Lord Balfour of Burleigh, and Sir Edward Fry heard, last December,[1] the petition of University College, Liverpool, for a charter incorporating a university in Liverpool, and the petition of Owens College, Manchester, that in the event of the Liverpool petition being granted a charter should be issued incorporating the Victoria University in Manchester as an independent university. Its report, which was in favour of both petitions, was approved by the King in Council on Monday last. Although the report is not final, it would seem that the main point at issue is practically settled, since the matters reserved, though raising important principles, do not affect the decision that the creation of a university in Liverpool should be sanctioned. Counter-petitions were presented against the disruption of Victoria University by the Yorkshire College, Leeds, the City of Leeds, and the Ridings of Yorkshire, and certain graduates of the Victoria University. The representations made on behalf of the Yorkshire College and Yorkshire, though they failed to convince the Committee that the prayer of Liverpool should be refused, have not been without effect upon the tenour of its report. There is evidence of this in two of the recommendations of the Committee. The first of these is that before the draft charters for Liverpool and Manchester are settled the authorities of the Yorkshire College, Leeds, should have the opportunity of submitting a draft charter incorporating a university in Yorkshire. Secondly, the Committee expressed the opinion that in framing the clauses of the charters of the three proposed new universities and of any similar charter hereafter granted, the effect of the multiplication of universities should not be lost sight of. The Committee, therefore, recommends that all three Colleges should be invited to consider the points upon which joint action is desirable, and the methods by which it can best be secured "without unduly restricting the liberty or circumscribing the responsibility that ought to attach to independent universities." We must confess to finding this a somewhat hard saying, and it almost suggests that the clause is the result of a compromise. How joint action is to be ensured between three responsible and independent universities it is a little difficult to understand. If, however, the recommendation is to be understood as having special reference to the medical faculty and the granting of registrable medical degrees, then we think that it will have the approval of the general body of the medical profession, who do not desire to see the portals of admission to the profession increased in number, and additional representatives added to the already unwieldy numbers of the General Medical Council.

Another recommendation which will meet with general approval is that the charters granted should contain careful provision to secure an effective voice to external and independent examiners in all examinations for degrees. This principle is already recognized in the Victoria University, and is thoroughly sound, more especially in its application to examinations which entitle the successful candidate to have his name entered upon the *Medical Register*. The knowledge required from the candidates should not be tinged by the traditions or predilections of any school or professor, and the results should be quite unaffected by personal bias, conscious or unconscious.

[1] British Medical Journal, December 27th, p. 1957.

The decision to grant charters for independent universities in Liverpool and Manchester appears to have been received with general satisfaction in those cities, and the appeal, for so it must be recognised to be, to Yorkshire to organize a university for that great county has been met in a courageous if not an enthusiastic spirit. Professor Bodington, Principal of Yorkshire College, Leeds, is reported to have stated that the task of drafting a charter incorporating a university in Yorkshire would be at once undertaken, and as will be seen from the letter by Professor de Burgh Birch, Dean of the Medical Faculty of the Yorkshire College, which is published in another column, that Faculty, looking backward to a long period of prosperity antecedent to the formation of the Victoria University, looks forward to the future without apprehension. The letter from our special correspondent in Sheffield shows that the University College in that city, which has funds in hand for the extension and better equipment of its teaching departments, will claim to stand on an equal footing with Leeds in the Yorkshire University of the future. Many details will have to be adjusted, but we have no doubt that their discussion will be approached in a broad-minded way, and with an earnest desire to evolve the best possible scheme for the advancement of higher education in the great industrial centres of Lancashire and Yorkshire.

FRIGHT AND CHLOROFORM DEATHS.

The letters which are constantly appearing in current medical journals indicate very plainly the views which are held in this country on the vexed subject of chloroform *versus* ether as an anaesthetic, but less is generally known of the opinions of the profession in America on this matter. It might perhaps be hastily assumed that in the United States, the home of anaesthesia by ether, no other drug, and least of all chloroform, would be habitually used. To those who are of this opinion the statements[1] made by Dr. J. A. Bodine, Adjunct Professor of Surgery at the New York Polyclinic, will come as a surprise. In a recent lecture he admits freely that chloroform possesses many advantages over ether, but points out that the administration of the former has been followed by a considerably larger proportion of deaths from the anaesthetic than when the latter was employed. He thinks, however, that this unfortunate fatality might be offset to some extent by the deaths which take place some time afterwards, from kidney irritation and lung involvement after ether.

He contends that most chloroform deaths are due to vasomotor paralysis, and that deaths from fright occur just in the same way. Two instructive and suggestive cases are cited. In the first, the patient, a very nervous individual, became so frightened before the operation that the rhythm of his breathing was seriously disturbed; the anaesthetist, in consequence of this, gave him some preliminary training in deep breathing before the administration of the chloroform; the cone was placed over his face, and he was told to breathe deeply; after a few gasps he ceased to breath and could not be resuscitated. Not a single drop of chloroform had been administered. In the second case, the patient, who was also a very nervous man and very fearful of the result of the operation (for haemorrhoids), was given an

[1] *Internat. Clinics*, twelfth series, vol. iv, p. 153, January, 1903.

enema before any anaesthetic was administered; he thought this was the first step of the operation, ceased breathing, and died. In both these cases the necropsy revealed no morbid state except the tense abdominal veins in which nearly all the blood of the body had collected as a result of the vasomotor paralysis consequent upon the fright. Dr. Bodine, therefore, concludes that fright may be an element in the production of death in cases in which chloroform is used. He states that seven out of every ten deaths reported from chloroform anaesthesia occur during the preliminary stage when only a few drops up to a drachm have been given. There is negative evidence also in the fact that in obstetric practice chloroform is the anaesthetic of choice; this is due to almost complete absence of a chloroform mortality during labour. As an explanation of this freedom from danger we have the circumstance that women are not fearful about the anaesthetic in their confinements, but ask freely for it. Children, also, are not frightened as adults are, and consequently suffer little from chloroform as an anaesthetic. Dr. Bodine refers, in addition, to the interesting fact that the negro of the Southern States stands chloroform very well; he has a child-like faith in his physician and does not fear any of the measures that he may adopt. Yet the negro may die from fright, as a graphic story of a student trick told by the writer proves. The conclusion is therefore reached that we must for the safe administration of chloroform eliminate fright. Dr. Bodine tells his patient to put his hands tightly together, the fingers interlacing, and to grip them firmly; he asks him to fix his mind upon that action, to listen to the voice of the anaesthetist and to do what he tells him, and to breathe deeply and quietly and not to mind the sensations which come over him. General conversation in the neighbourhood of the patient should not be allowed. The writer, in conclusion, thinks that if deaths from fright could be eliminated, chloroform would be a much safer anaesthetic than ether, and says: "If I had to choose an anaesthetic for myself to-morrow, I should take chloroform, but I should want it administered by a careful expert anaesthetist."

These views, although perhaps optimistic, are well worthy of being kept in mind by the profession on this side of the Atlantic.

THE OMISSION FROM THE KING'S SPEECH.

From the point of view of the physical welfare of England an ominous feature of the King's Speech is its omission of all mention of legislation relating to vaccination. An optimist might urge in explanation that the King's silence is only a maintenance of the policy indicated by Mr. Long of not publishing any new proposals too soon. No such suggestion seems reasonable, however, and we appear to be face to face with the fact that the President of the Local Government Board has not yet succeeded in persuading the Cabinet that a Vaccination Bill ought to be introduced during the session which has just opened. But to remove all doubt on this point it would be very desirable that Mr. Long should be invited to make a statement in Parliament.

The case for legislation is unanswerably strong. The five years' experiment instituted by the Act of 1898 comes to an end with the close of the present year. During the past four years a great deal has been learned, and to this new knowledge effect should now be given by law. We want to have an end put to the constantly increasing need for the erection of small-pox hospitals. We want the supply of calf lymph established on a proper basis. We want the administration of the Acts placed in the hands of bodies better suited for the work than the Poor-law guardians. We want the disorganization of trade by recurring small-pox epidemics brought to an end. The need for systematic revaccination has become so obvious, that a great corporation like that of Glasgow has passed a unanimous resolution in favour of it. Glasgow has had recent experience of small-pox and conclusive evidence of the efficacy of revaccination in protecting the individual against the disease and the community from its epidemic prevalence. The Corporation has now formally recorded its "conviction that a national system of revaccination, on the lines on which infantile vaccination at present proceeds, would render recurring widespread epidemic prevalence of the disease impossible." A series of notes published elsewhere in this issue (p. 455) shows how widespread is the infection of small-pox throughout almost the length and breadth of England at the present time. To combat it the most strenuous efforts are being made, and great expense is being incurred in carrying out hurriedly, and often imperfectly, measures, the proper accomplishment of which demands time and forethought, and other measures which, were national revaccination in force, would not need to be entered on. The Prime Minister well knows that the Bill of 1898 would have been rejected by the House of Lords had not the members been led by the Government to believe that the following session of Parliament would bring with it a Revaccination Bill. And yet now, when the Act of 1898 is in its fifth and last year of operation, the session has opened without the word vaccination being even mentioned in the speech from the Throne.

One thing is absolutely certain. The session cannot pass without the question being raised. It is inconceivable that there will be a reversion to the *status quo ante* 1898. At the very least, therefore, the Act of that year will find a place in the expiring laws continuance Bill, and that Bill will be open to discussion. But, indeed, we can hardly imagine that such a miserable makeshift of a policy will be adopted by a Government which has such enormous power in both Houses of Parliament, and which includes in its Cabinet a public health Minister so strong and so clear-sighted as Mr. Walter Long. The position is a most remarkable one, and we shall await with much interest any explanation which may be elicited either during the debate on the Address, or in answer to specific questions as to the Government's intentions.

THE ROYAL MEDICAL BENEVOLENT COLLEGE.

It was announced in the British Medical Journal last week that His Royal Highness the Prince of Wales has graciously consented to take the chair at a festival dinner in aid of the funds of the Royal Medical Benevolent College, and we are pleased to be able to state that a serious effort is to be made to place the finances of the charitable side of the work on a satisfactory footing. For years past money has had to be borrowed from the bankers, in order to meet current liabilities, and at the end of 1902 the amount thus owing was £2,900, being £400 more than the amount due at the end of 1900. We are informed that, in order to repay a part of this loan, and to meet urgent liabilities, a portion of the small funded property belonging to the institution has just been sold; and it is to enable the Council to repurchase this stock, to repay the balance of the loan, and to meet liabilities now

necessarily being incurred through repairs, etc., in connexion with the buildings at Epsom, that an effort to raise £10,000 is being made. If this sum could be collected, there would, after payment of the liabilities above indicated, be a balance in hand upon which the Council could draw from time to time, instead of having to apply for advances from the bankers. All charities have occasionally to put up with a lean year, but those with a large endowment manage to tide over their pressing needs until a return of a time of plenty. In the case of the Royal Medical Benevolent College, however, the greater portion of the £6,000 required annually for the benevolent side of the work is derived from voluntary contributions, and the extraordinary calls upon the pockets of the charitable during the past few years have materially affected the income of this as of most other charities. The work of the College should be well known to our readers; it need only be stated here that annuities of £30 are given to fifty aged medical men or to the widows of those deceased, and free education, clothing, and board are given to fifty sons of necessitous medical men. The ordinary paying pupils at Epsom College are absolutely self-supporting, and aid is asked only for the benevolent side of the institution. July 6th will be the fiftieth anniversary of the laying of the foundation stone of the College, and we would urge all members of the medical profession to do what in them lies to make the Jubilee Special Appeal successful. They can help in the collection of the £10,000 required, not only by their own contributions, but by bringing the claims of the institution under the notice of wealthy patients. There are many practitioners who could without much difficulty collect the sum of £100 for the charity; but there are very many more who could quite easily collect 20 guineas, a sum which would constitute them life-governors of the College. It is to be hoped that the special favour which the Prince of Wales has conferred upon the College by acceding to the application of its Council in preference to those of numerous other institutions, will stimulate all to support His Royal Highness in a serious endeavour to relieve the Council from financial embarrassments which cripple its usefulness. The date of the dinner is Wednesday, June 10th.

COLLECTIVE INVESTIGATION OF ECLAMPSIA.

PUERPERAL eclampsia is the opprobrium of obstetrics. Deaths from this cause are constantly occurring, and even when the malady does not prove fatal it brings with it so much anxiety as seriously to increase the burden which the practitioner has to bear. In the BRITISH MEDICAL JOURNAL for December 13th, 1902, we noted the prevalence of eclampsia in Edinburgh, pointing out that the Royal Maternity Hospital there had to deal with 6 cases in five weeks, and although in all these instances the mothers made complete recoveries, yet every one who knows anything of hospital management can realize what all this meant to the physicians on duty. In private practice the incidence of eclampsia brings with it a still greater weight of responsibility to the medical attendant by whom a death in midwifery is always regarded with dread. It is, therefore, with gratification and hopefulness that we welcome the proposal of the Clinical Society of Manchester to make a collective investigation on eclampsia. In a circular sent out by the Society, practitioners within the British Isles are invited to report cases occurring in their practice, especially with a view to finding out the most successful methods of dealing with eclampsia. In order to facilitate this end a form has been drawn up with headings to guide the practitioner as to the most important facts to be noted with regard not only to the treatment adopted, but also as to the previous history of the patient and clinical details of the attack. Forms will be sent to any practitioner who has cases to report if he will apply by postcard to Dr. J. Price Williams, Swinton, near Manchester, who is acting as the Honorary Secretary for the investigation. If this inquiry is to lead to any good result, it is essential in the first place that fatal cases be reported as well as recoveries, and in the second place that threatened attacks of eclampsia which were warded off by prophylatic treatment be also put on record. In regard, for instance, to the second point, we are informed that during the prevalence of eclampsia in the Edinburgh Maternity above referred to, 5 further cases of marked albuminuria in pregnancy and labour were dealt with: in all of them prophylaxis was successful in warding off the more serious consequence — eclampsia. After all, the best plan of dealing with eclampsia is to prevent it; this, as a rule, means recognition of the albuminuric state in pregnancy. Hence the importance of practitioners filling up the paragraph in the form which asks for information regarding the state of the urine during the pregnancy; it is to be hoped, also, that they will not withhold information about the cases in which the analysis of the urine was not made before the onset of labour or eclampsia. The Clinical Society of Manchester merits the support of the profession in this work which it has undertaken; and Dr. T. Arthur Helme is to be congratulated that it is during his term of office as President that the investigation has been commenced.

ROYAL VISIT TO THE HERBERT HOSPITAL.

ON February 16th the King and Queen paid a visit to Woolwich in fulfilment of a promise made some time ago that the Queen would open a new nursing department in the Herbert Hospital. Their Majesties were received by the Commander-in-Chief and Countess Roberts, Surgeon-General Sir William Taylor, Director-General of the Army Medical Service, Lieutenant-General Sir T. Kelly-Kenny, General Sir Mansfield Clarke, and many more of the head quarters staff, in addition to Colonel H. T. S. Yates, commanding the garrison at Woolwich. Miss Sidney Browne, the Matron-in-Chief, in the full-dress uniform of her rank, with its facings of scarlet and braiding, and upon her scarlet cape an array of medals won in Egypt and South Africa, as well as the decoration of the Royal Red Cross, was conspicuous in the little group that awaited their Majesties. Of the Advisory Board of Queen Alexandra's Imperial Military Nursing Service, there were present Surgeon-General A. Keogh (Vice-Chairman), Sir Frederick Treves and Major Macpherson (medical members), Viscountess Downe and the Hon. Sydney Holland (the nominees of the Queen), and Miss Monk and Miss Cave (representatives of nursing schools). The foundation of the hospital was due mainly to Lord Herbert, Sir Douglas Galton, and Miss Florence Nightingale. In the course of the recent war the hospital has made provision for no fewer than 10,000 men invalided from South Africa and 1,500 invalided from India and the Colonies. These men have for the most part been under the care of retired army surgeons temporarily employed, among whom may be mentioned Lieutenant-Colonel N. J. Burke, Lieutenant-Colonel Lamprey, Captain Hunt, and Captain Merritt who will now give place to permanent officers. In an address presented by the Mayor, Aldermen, and Councillors of Greenwich, graceful recognition was made of the fact that the support which is accorded to hospital and other institutions for the relief of human suffering is to be attributed in no small degree to the patronage and aid which have ever been shown by their Majesties. In his reply the King expressed the satisfaction which it afforded the Queen and himself to show by their presence their appreciation of the excellent provision made in the Herbert Hospital for the sick and wounded soldiers. He said their Majesties prayed that during their reign they might ever see the hospitals and other charitable institutions of the country advancing in prosperity and beneficence. After a number of presentation to their Majesties had been made, Master Eric Leake, son of Colonel Leake, Principal Medical Officer, Woolwich District Command, presented to the Queen a bouquet of lilies of the valley and roses, tied with ribbons of the R.A.M.C. colours. The Queen then formally opened the new buildings. The west wing of the front colonnade, formerly used as officers' quarters and orderlies' dormitories, has been reconstructed and transformed into nurses' day rooms, cubicles, and recreation rooms for the accommodation of the

new nursing staff. Here about fifty sisters and nurses will superintend the nursing of patients in the hospital, and give instruction to orderlies of the Royal Army Medical Corps. There are just now about 540 patients in the Herbert Hospital, a large number of whom are invalids from South Africa. After opening the new wing the Queen conferred on a number of matrons, sisters and nurses, the badge of the new nursing service, designed by Her Majesty herself. In the centre it has the Danish Cross, in which is inscribed the Queen's cypher "A," and it is surrounded by a bordering, on which are the words "Queen Alexandra's Imperial Military Service," the whole being surmounted by the Imperial Crown. The matrons' badge is in gold, that of the sisters in silver, and that of the nurses in bronze. Afterwards their Majesties visited two surgical wards in the hospital and inspected the operating theatre. Their Majesties then proceeded to the parade ground where the King presented South African medals to Major Braddell, R.A.M.C., and twenty-seven orderlies of the Royal Army Medical Corps.

FAMOUS MILITARY SURGEONS.

On Wednesday evening an audience, which included many civilian members of the profession as well as officers of the Royal Army Medical Corps, assembled at the invitation of the Director-General to hear a lecture on some famous military surgeons by Dr. Norman Moore. It was given in the theatre of the laboratories of the Conjoint Colleges on the Thames Embankment, and Dr. Moore held the attention of his audience for an hour while he sketched the life and work of some of those who had earned distinction as military surgeons. After a brief reference to Machaon at the siege of Troy, to Phillip, the physician of Alexander the Great, and to an Irish surgeon, of whom it was related that he cured his chief, and fitted to his maimed arm a silver hand, Dr. Moore passed on to deal more at length with William Clowes, who served with the Earl of Warwick in 1562, became surgeon to St. Bartholomew's Hospital in 1575, and afterwards served again as a surgeon in the fleet which defeated the Armada; with Woodall, who in 1589 served with the English force under Lord Willoughby in the wars of Henry of Navarre, afterwards settled in London, became Surgeon-General to the East India Company, and was the first officially to recommend lime juice in scurvy; with Wiseman, and with Petty, more celebrated as a political economist and administrator than as a surgeon. Of Petty's career and of how he founded the house now represented by the Marquis of Lansdowne, some account was given in an article published in the British Medical Journal a few years ago. Dr. Moore recalled the fact that it was the duty of the sergeant-surgeon to attend the King on the field of battle, and said that the last occasion on which this duty was discharged was when Ranby attended George II. at the battle of Dettingen. He then referred to Cleghorn, who in 1776 was appointed surgeon to the 22nd regiment of foot in Minorca, wrote an admirable work on the climate, resources and diseases of the island which at that time was a part of the British dominions, and was probably the first to register the degree of fever by means of the thermometer. Finally he gave some account of Richard Brocklesby, physician to the army, the school fellow and life-long friend of Burke and friend of Johnson, whom he attended on his death-bed. Dr. Moore illustrated his lecture by reading passages from the works of Clowes, Woodall, Wiseman, and Brocklesby, who in 1764 published a work in which he laid down sound principles of hygiene for the army, showed that soldiers in barracks must have plenty of air, and drew up regulations for field hospitals, in which he pointed out that it was necessary that the doctor should have absolute command in the hospital. Brocklesby befriended Thomas Young, his great nephew, and on his death bequeathed him £10,000. The close of the lecture was marked by much applause, and Sir William Taylor, after thanking Dr. Moore, dwelt on the opportunities which officers of the Royal Army Medical Corps had of making and recording observations of the climate and diseases of many little-known parts of the world. He considered that work in this direction was a duty which the military medical service owed to the profession, and expressed the hope that the meeting which had taken place on that evening might be followed by others, and that the opportunities thus afforded for friendly intercourse would serve to promote a stronger feeling of fellowship between the military and the civil branch of the medical profession.

CARNEGIE SCHOLARSHIPS, FELLOWSHIPS, AND SCIENTIFIC GRANTS.

The Executive Committee has issued regulations for Carnegie scholarships, Fellowships, and grants, defining the purposes for which these are offered, and the conditions under which they may be held. The scholarships are intended to afford graduates of Scottish universities opportunities of training and proving their powers in higher studies and research in some department of science or medicine by which they may qualify for the Fellowships. Nominations for scholarships by persons conversant with the nominee's fitness for the work proposed and applications for Fellowships and grants must be lodged with the secretary not later than May 1st in each year. All scholarships, Fellowships, and grants will date from October 1st, unless expressly stated otherwise. A student who intends to graduate at the close of the summer session or opening of the winter session may be nominated for a scholarship or may apply for a research grant on or before May 1st preceding, but he will not be eligible to receive either until he has graduated. The Executive Committee is also prepared to make grants in aid of scientific research to professors, lecturers, or assistants in a Scottish university, teachers in Scotland recognized for the purpose of graduation by a Scottish university, or a Scottish university graduate resident in Scotland. The applicant must produce evidence of his capabilities, stating the nature of the research in which he desires to engage, the period over which the research is likely to extend, the special requirements for the research, with a detailed estimate of the cost. He must also state whether he has received or is receiving any grant from any other source for the same object, and if so what results have already ensued. The recipient of a grant will be required to furnish the Executive Committee with a brief statement showing the results arrived at or the stage which his inquiry has reached, a statement of the expenditure incurred, and copies of or references to papers in which results of the research have been printed. Instruments of permanent value purchased by means of the grant will, at the conclusion of the research, be placed under the care and at the disposal of the institution in which the research has been conducted. All communications are to be addressed to the Secretary of the Carnegie Trust, the Merchants' Hall, Hanover Street, Edinburgh.

A CENSUS OF THE EMPIRE.

At a meeting of the Royal Statistical Society on February 17th, Mr. J. A. Baines, C.S.I., read a paper in which he urged that the time had come when a central office in London should prepare a review of the censuses of the United Kingdom and of the Colonies so as to produce something of the nature of an imperial census review. Instances were given of information which might be gathered on a uniform basis and utilized on recognized statistical lines. The examples taken were the relative strength of the white and coloured population, the distribution of that population over the country in such a way as to exhibit its real character, and not a bare figure of an enormous aggregate of varied circumstances; the cognate question of the tendency towards "urbanization" or concentration of a comparatively small population into comparatively large cities (a tendency the strength of which is very marked in Australia, and of weaker influence in Canada); the composition of the population of the various colonies, whether recruited from outside, or increasing by native growth, or

again, as in parts of the West Indies, relieved by emigration, where the population was being crowded out—for part of the year—of its own island. There was, further, the linked question of the proportions of the sexes, with the gradual increase of that of the women, and, again, connected with this, the remarkable tendency of the younger portion of the community to fall off relatively to the rest, a feature of the returns not only of the fully-peopled countries of Western Europe, but of the sparsely-inhabited tracts of Australasia, and, to a considerable extent of Canada also.

SANITARY PROGRESS AT HULL.

In October last and on two previous occasions we have made reference to the exceptional state of affairs existing at Hull. The Corporation has an omnibus Bill on the stocks, concerning a number of required powers, similar to many of the Corporation Bills which have recently aroused discussion in Yorkshire. The Bill contains several provisions respecting sanitary matters, for example, to make further and better provision in regard to streets, buildings and sewers; to make further provision in regard to sanitary conditions generally and the prevention of infectious diseases in particular; to confer upon the medical officer of health and others further powers both within and beyond the city with respect to the supply of milk within the city; to make better provision as to the management and control of any lodging-houses, and so forth. Amongst the clauses of the Bill is one to effect the conversion of privies into water-closets in houses which have no secondary means of access and also in new property. We gather that public opinion in Hull and the opinion of the City Council are in favour of the Bill as a whole. But a vigorous opposition has arisen against the water-closet clause, mainly we doubt not on the part of small property-owners who having built, or become interested in, houses with privies are now unwilling to be put to further outlay to convert the privies into water closets. In consequence of this opposition a town's meeting was held last week presided over by the Mayor and largely attended. The Town Clerk explained the Bill and a public discussion ensued. We gather from the *Eastern Morning News* of February 12th, that the discussion centred chiefly round what is termed "the water-closet clause." This part of the report is certainly very sorry reading. Would it be believed that any responsible person could oppose the water carriage system because it created diphtheria? or because it "drove sewer gas, that deadly insidious gas, into the houses," or because the introduction of the water-carriage system would be an expense to "thrifty and frugal" persons who had built the houses or had interest in them? Yet these are the arguments, so we read, seriously set forth in Hull. Everybody knows that water-closets, like all other appliances, may get out of order, but that is a fault in the apparatus, not in the principle. Everybody recognizes that earth closets, privies, pails, etc., may be, and frequently are, suitable and satisfactory in rural districts, and may even be useful in a secondary sense from an agricultural point of view. It is a very different matter in a city like Hull, with a population of 241,000 people, and an infant mortality-rate of 176 per 1,000 births. We wonder if the eloquent opponents of this great sanitary reform have privies to their own houses, and that their houses have only one means of access. We wonder if they have considered the facts respecting the relationship of privies and typhoid fever, as pointed out several years ago by Dr. Boobbyer of Nottingham, and confirmed again and again by others. We see in the annual report of the medical officer of health for Hull for 1901 that 66 tons of disinfecting powder were used during the process of the collection of excreta in twelve months. It was probably all required. But such a proceeding is not sanitation, and it is idle to suppose it is. At the town's meeting an able and sensitive speech was made by Dr. Robinson. On a vote being taken, the Mayor ruled that the majority were against the proposal. We understand a poll is to be taken in the city as to this "water-closet clause," and we trust the intelligence and common sense of the public will support the recommendation of the Subcommittee of the City Council in favour of the abolition of the privies, and substitution of the water-carriage system.

MEDICAL MORTALITY IN THE UNITED STATES.

During 1902 the deaths of 1,400 regular practitioners of the United States were recorded in the *Journal of the American Medical Association*. This, says our contemporary, is probably within 5 per cent. of the total mortality in the profession of the United States. The total number of professors of the healing art in the States is probably about 105,000, that of regular practitioners being about 95,000. Consequently the death rate for the year was about 14.74 per 1,000, a lower rate than is usually supposed to obtain in the profession. The statistics of American life insurance companies show a mortality-rate per 1,000 among physicians of 7 at the age of 25, 15 at the age of 35, 21 at the age of 45, 34 at the age of 55, and 112 at the age of 65. The statistics of the United States census of 1900 show figures closely parallel with the estimate given by the *Journal of the American Medical Association*. Of the 1,400 deaths recorded, in 616, or 44.7 per cent., no cause of death was given, or the cause alleged was so manifestly incorrect or incomplete as to be valueless. The principal causes of death were heart disease, 111; pneumonia, 107; paralysis, 63; tuberculosis, 61; accident, 60; nephritis, 47; typhoid fever, 45; apoplexy, 42; malignant disease, 31; appendicitis, 25; septicaemia, 25; suicide, 23; and homicide, 13. Of these causes it is thought probable that "heart disease" includes a number of cases of so-called heart failure; under "paralysis" are probably classed various nervous diseases terminating in that condition, while "apoplexy" may comprise several causative conditions. The extreme limits of age were 21 and 96. Between the ages of 21 and 30, 67 deaths occurred; between 31 and 40, 137; between 41 and 50, 159; between 51 and 60, 173; between 61 and 70, 212; between 71 and 80, 220; between 81 and 90, 94; and 6 deaths occurred in individuals above 90. The age of greatest mortality was 75, with 30 deaths; then followed 70 and 78, with 29 each; 80, with 28; 64, with 27; 63, with 26; and 35, with 25 deaths. The minimum of deaths, 1, occurred at the ages of 21, 91, 93, 94 and 96. A graphic curve representing the deaths of the year in numbers by decades would show a rapid rise to 35, a slight rise thence to 65, a very slight increase from 65 to 75, the maximum. From that point there is a rapid drop, the minimum being reached at 95. A similar graphic curve based on the statistics of deaths of practitioners in the United States census, shows distinct parallelism, but the curve of the mean annual death-rate of England and Wales for 1881-1890 rises symmetrically, reaching its maximum at 75. The mean average age of deaths among American practitioners in 1902 was 58 years, 7 months and 29 days. The number of years during which the deceased had practised also varies within wide limits. The recorded limits varied between the year of graduation and 70 years, each with two deaths. In the first decade of practice 219 died; in the second, 246; in the third, 229; in the fourth, 235; in the fifth, 199; in the sixth, 143; and in the seventh, 21. The average duration of practice was 28 years, 10 months, and 28 days. The greatest number of recorded deaths was 40 in the twentieth year of practice; 32 in the fifth and twenty-fourth years; 31 in the tenth, thirty-fifth, and forty-second years; 30 in the fourteenth year; and 29 in the sixth, twelfth, and thirty-sixth years. A graphic representation of the length of practice would show a rise in the first and second decades; a slight decline in the third decade, and a slight rise in the fourth, followed by a sudden and progressive increasing angle of decline. Our contemporary concludes that, as far as these necessarily incomplete statistics go, they show that medical practitioners lead a relatively healthy life, warranting the inference that they practise what they preach.

QUACKERY IN GERMANY.

The laws against quackery in Germany are generally believed to be more stringent than they are in this country. Moreover, we are often told that the average

German is so well educated that he is not likely to fall a prey to quacks. Yet the Fatherland swarms with quacks, who evidently do not suffer from any lack of victims. A case now before the courts in Berlin is an illustration of the widespread credulity that exists in the native land of the Higher Criticism. A chemist is charged with having carried on extensive operations as a quack doctor. His *modus operandi* was to send out immense numbers of circulars, in which he promised patients relief from their sufferings, even in cases held to be incurable. The pamphlet gave statistics purporting to show the proportion of cures effected, of which many were described as miraculous. Intending patients had first of all to forward a preliminary payment of 5s., in response to which they received a letter stating that the packing department was forwarding medicine suitable to the case, and that the cure would take from two to three months. When the medicine arrived, however, the patient found that he had to pay on delivery a further sum, varying from 4s. to 19s., and on opening the packet he discovered a detailed bill amounting to several pounds for medicine, consideration of the case, chemical and microscopic investigations, etc. While in the circular it was alleged that no narcotics or drastic remedies calculated to injure the body's organism were used, quantities of such drugs were found on the premises, and the President of the Court, in the course of the proceedings, remarked that the accused had made up preparations containing mercury, iodine, arsenic, and other poisons sufficient to kill all the inhabitants of Berlin. The ingredients of the remedies appear to have been mixed together in a most promiscuous manner, some in a bath and others in saucepans, and the like kitchen utensils. It was stated in court that the quack had made about £600 a month by the sale of his mixtures, and that his gains were larger than those of the most eminent German physicians, with the exception, perhaps, of two. At the request of the Chamber of Medicine, Dr. Saatz has investigated the doings of quacks. In Berlin alone the police have 600 on their list, and in the district to which Berlin belongs the police know the names of 383 men and 86 women. Among the women there are a clergyman's wife, the wife of a school teacher, 4 wives of manufacturers, 6 certificated nurses, and 24 belonging to the working classes. Among the men, there are 38 Government school teachers and clergymen, 10 Government officials, and 48 farmers, besides medical students and dentists. In 185 cases last year the consequences of the treatment of such quacks were serious; 24 cases resulted in death, in 151 wrong treatment was proved, and in 10 cases extortion was proved whereby the patients had parted with large sums of money.

HYGIENE IN EGYPTIAN SCHOOLS.

The Principal Medical Officer of Schools in Egypt has presented a report on the hygienic reforms necessary in Government schools to the Minister of Public Instruction, an abstract of which appears in the *Morning Post*. The report states that the elementary schools are overcrowded. The time tables in many cases provide for recreation, but the children are listless, and the native teachers do not seem to possess the requisite initiative to organize games; it follows that nervous troubles, nasal haemorrhage, giddiness, and other ills are rife. It is suggested that physical exercises should be introduced into the curriculum, or even lessons in Arabic singing introduced to give the necessary relief from continuous brain work. The sanitary condition of the schools is stated to be in need of further reform. The weekly medical inspections have been of value, but, where the general surroundings promote disease, the mere fact that the schools are so inspected does not remove the causes of health. The insanitary position of many schools and the abundance of flies, coupled with the glare and dust of Egypt, make ophthalmia far too prevalent. It is interesting to note that in the new schools, where presumably more care has been taken to secure hygienic conditions, the disease affects a much smaller percentage of the children. It is also remarked that cleanliness on the part of the teachers is very necessary both to avoid infection and for the sake of example, and to attain this the schools must be provided with a sufficient water supply. It is, moreover, considered to be advisable that where two or three native elementary schools are in close proximity, another should be created for healthy pupils only. The whole document constitutes a severe indictment of the habits of the lower classes in Egypt.

OYSTERS AND ENTERIC FEVER IN NEW ZEALAND.

It is interesting, in the light of recent experience respecting oyster-borne typhoid fever in this country, to peruse the last report of the Chief Health Officer of New Zealand (Dr. Malcolm Mason) for the year ending July 28th, 1902. To this report Dr. Makgill contributes an account of an outbreak of enteric fever in Auckland, comprising 23 cases. Of these, 18 occurred between June 10th and June 17th. In addition to the uniformity in the dates of attack, all ate oysters, the outbreak occurred at an unusual time of year, persons were attacked who came from localities far apart, and at least two of the persons attacked were engaged in the oyster trade. As to the source of pollution, Dr. Makgill addressed himself to the investigation of three possible origins—namely, at polluted oyster beds, during picking and shipment, or in the hands of retail dealers. Whilst the oyster beds and the picking and shipment were both open to a good deal of criticism, it was decided that the weight of evidence implicated the dealers. In this country the chief outbreaks of enteric traced to oysters have been supposed to be due to their being kept on polluted beds. It is therefore instructive to note that oysters may run great risks of contamination in the hands of the retail dealer. It appears that in Auckland oysters are stored in sacks in cellars or the back premises of shops. When required they are taken out and opened on a rough and often dirty block of wood, and then placed in basins, tins, or bottles, none of which have been thoroughly cleaned. Foul cellars, dirty pails and bottles, and unclean handling afford ready means of infection. Most of the cases were traceable to oysters derived from a particular shop at which a large retail trade was done. Although the proprietor conducts his trade with evident efforts after cleanliness, certain marked sanitary defects existed. The cellar, for example, where oysters were stored was subject to flooding with sewage from the main sewer when there was a heavy fall of rain during high tide. The cellar was below the sea level, and this appears to be a somewhat common defect in Auckland. It is one which certainly demands immediate attention. "I am convinced," writes Dr. Makgill, "that much of the typhoid which annually breaks out in the district could be traced to this cause." The cellar of the oyster shop and the cellar next to it were both used for food storage purposes, and both were "damped" by sewage flooding. At the back of the oyster shop further nuisances existed. These insanitary conditions led Dr. Makgill to conclude that this was in all probability the source of contamination. The infection was evidently received after delivery in Auckland, and must have occurred in one of these ways: (1) Oysters may have been "smuggled" into Auckland from closed beds along the city frontage, or deposited for concealment near a sewer outlet; (2) infected bottles may have been used by the dealer; or (3) the insanitary surroundings of the oyster shop might have been the origin, especially as the majority of the cases were traced to oysters derived from his shop. The report is not, in our opinion, conclusive as to the exact channel of infection, although it appears to be so as regards oyster-borne infection, and as regards the grossly insanitary condition of some of the houses in Auckland.

ROYAL COLLEGE OF SURGEONS, IRELAND

The annual charter dinner of the Royal College of Surgeons, Ireland, was held in Dublin on February 12th, when the chair was occupied by the President, Mr. L. H. Ormsby. His Excellency Earl Dudley, Lord Lieutenant, was present, and there was a very large general company, amongst whom

were the Lord Chancellor, Lord Plunkett, Major-General Morton, K.C.I.E., Sir Philip Smyly, Sir George Duffey, Sir Antony MacDonnell, G.C.S.I., Dr. Macan, President of the Royal College of Physicians; Sir William Thomson, C.B., Sir Howard Grubb, F.R.S.; Sir J. Dougherty, Colonel Fawcett, P.M.O.; the Solicitor-General; Sir Thomas Myles; Mr. Arthur Chance, V.P., etc. His Excellency responded to the toast of his health in an interesting speech; and the other speakers were the President, Sir William Thomson, Captain Hart Dyke, R.N., General Sir Gerald Morton, Colonel Fawcett, Sir Charles Cameron, Dr. Macan, Mr. Chance, Mr. Horace Plunkett, Sir Antony MacDonnell, and the Solicitor-General.

CANCER IN IRELAND.

THE following paragraph, which appeared in the *Irish Times* of February 17th, has been widely quoted in the lay press. Our Dublin contemporary states "on strong authority" that, owing to reports which have been laid before the King, as to the alarming increase of deaths from cancer in Ireland, His Majesty has given special instructions that further inquiries should be made on the subject, and the report handed to him at the earliest possible moment. It is added that, as compared with some years ago, the number of deaths has increased threefold, and that the figures for 1902 are much in excess of those for 1901. We think it right to quote the statement, but we must leave the responsibility for its accuracy with the *Irish Times*.

THE INTERNATIONAL MEDICAL PRESS CONGRESS.

As already stated a meeting of the International Congress of the Medical Press will be held in Madrid on April 20th, 21st and 22nd, the days immediately preceding the International Medical Congress. The inaugural meeting will be presided over by the King of Spain, and an address will be delivered by the Minister of Public Instruction in the name of the Spanish Government, by Professor Cornil, the President of the International Association of the Medical Press, and by representives of the Spanish Organizing Committee. It is hoped that the final meeting of this Congress may be the first meeting of the International Association of the Medical Press, which by that time ought to be legally constituted. The Rector of the University of Barcelona will read a paper on the education of the medical journalist, and Dr. Pulido, member of the Cortes, will discuss the relation of the medical press to public authorities. Among the other subjects set down for discussion is the too great importance given by the general medical journals to the reports of meetings of medical societies. The text of the statutes adopted at the conference last year at Monaco will be submitted for rectification, and Dr. Blondel, the Secretary-General of the Medical Press Association, will introduce a proposal for the creation of an international office for the exchange of abstracts of scientific articles between the journals belonging to the Association.

SUICIDE AMONG SOLDIERS.

THE *Matin* has recently published some statistics as to the relative frequency of suicide in Continental armies. Self-destruction is becoming less common in all of them with the single exception of the Russian, in which the annual average of suicides is said to be 133 per 100,000. The proportion is 18 per 100,000 in France, 24 per 100,000 in Italy, 36 per 100,000 in Germany, and 105 per 100,000 in Austria. The different arms of the service commit suicide in different proportions. The Foreign Legion is the most suicidal branch of the French army, with 99 suicides per 100,000, whereas there are only 14 suicides per 100,000 in the Garde Républicaine. In general it appears that the cavalry commit suicide more frequently than the infantry, the infantry more often than the artillery, and the artillery more often than the engineers. In the British army at home the rate is probably about 23 per 100,000, in India the rate is believed to be higher probably about 30 per 100,000 although in the Army Medical Report for the year 1900 the total number of suicides in India was given as only 17, and in three instances, of men found drowned, it was not absolutely certain that the deaths were suicidal, but there were in addition 23 cases of attempted suicide. It is stated, but we do not know with what truth, that the introduction of better ventilation and electric fans in India tends to reduce the disposition towards suicide. In a review of the statistics of the French army for 1899, published on March 22nd, 1902, we pointed out the fact that suicide was twice as common among non-commissioned officers as among commissioned officers or privates; there is, we are informed, reason to believe that a similar rule holds good in the British army.

MALARIA IN THE ROMAN CAMPAGNA.

THE Italian Red Cross Society recently issued its annual report on work done by it for the cure and prevention of malaria in the Roman Campagna. Dr. Postempski, the chief of the medical staff, has, says the Roman correspondent of the *Morning Post*, been received at the Quirinal by the King of Italy, who takes the greatest interest in the doings of the Society, and who has just contributed out of his private purse a sum of 10,000 lire towards the expenses entailed. Dr. Postempski states that the infection is caused entirely by mosquitos, and if only the inhabitants would take the requisite precautions against the bites of these insects they would remain free from all ill effects. That the air in the infected parts is perfectly good is proved by the fact that the officers of the Society remain for whole nights exposed to the air of the Agro Romano and suffer no harm. The six zones in which the Red Cross Society has been at work are Santa Maria di Galera (with a population of 2,460 inhabitants), Castel di Guido (1,630), Carano (2,450), Practica di Mare (1,780), Torre Nuova (2,680), and Marcigliana (1,630). Help, therefore, has been brought to a total population of 12,630. The number of malarial cases cured amounted to 2,581, and other patients numbered 1,103, making a total of 3,684. Dr. Postempski stated that a scheme was on foot for the erection of four permanent hospitals in the Agro Romano itself.

ANAESTHESIA AND SWEARING.

OUR armies, as we learn from My Uncle Toby, swore terribly in Flanders; and if the testimony of Mr. Kipling is to be accepted they do the same at the present day in India and elsewhere. In civil life the strong language of our ancestors has to a large extent been replaced by meaningless slang. It would have been impossible to damn every one and everything more comprehensively or more consistently than Lord Melbourne, the political mentor of our late gracious sovereign, Queen Victoria. Fifty or sixty years ago surgeons, like other folk, swore freely; and if they are now less full of strange oaths, that is due partly to what Matthew Arnold called the stream of tendency and partly to a wider diffusion of training in the liberal arts which has softened the ferocity of our manners. In the Hunterian Oration delivered the other day Sir Henry Howse expressed the opinion that the disuse of profane language among surgeons might be regarded as one of the blessings of chloroform. Anaesthesia, according to the President of the Royal College of Surgeons of England removed "the necessity for the surgeon to express himself in such forcible and inelegant terms as was necessary previously for the control of his patient." We venture to think that this theory is unfair to the surgeons of pre-anaesthetic times. Men are apt to use strong language when they are strongly moved, and in the old days many surgeons may have sworn during operations, as boys whistle in going through a graveyard at night, to give themselves courage. We know what men like Cheselden, Charles Bell, and Astley Cooper suffered when they had to undertake a serious operation, and how they had to nerve themselves for the task. In the old days surgeons as a class unquestionably were rougher in manner and language than they are nowadays, but that is because only men of blood and iron could have practised the art of chirurgery under the conditions then existing. We decline to believe, however, that our predecessors were brutal enough to swear at the

patients who were shrieking under the knife, and we cannot admit that the introduction of anaesthesia removed "the necessity for strong speech and roughness of manner in the veterans who have gone before us." The implied doctrine that strong language can ever be "necessary" for the control of patients in the hands of surgeons strikes us as liable to misinterpretation by the ingenuous youth, who naturally accept the utterances of a man in the position of Sir Henry Howse as authoritative.

LEAD POISONING AND WATER SUPPLIES.

A Supplement to the Report of the Medical Officer to the Local Government Board Report (1900-1) has been published, which deals with the question of lead poisoning in its relation to water supplies. The work has been entrusted to Dr. Houston, who has devoted several years to a study of moorland waters, with especial reference to their action on lead. The first part of the volume contains records of a series of observations, made at the selected moorland gathering area at Burnmoor, of the condition of typical pools and springs, and of mixed water in streams and reservoirs, in regard to chemical composition and "plumbo-solvency." The second part deals with the results which were obtained when the experience of Burnmoor was applied to the moorland gathering grounds of 23 important waterworks in Lancashire and Yorkshire. Out of 58 reservoirs serving these various gathering grounds, 35 were found to contain acid water which possessed in greater or less degree a solvent action upon lead. The after-history of each of these supplies has been investigated. The steps have been traced by which this dangerous property was eliminated before the water reached the consumer. The report is valuable, and we shall hope to refer to it more at length in a subsequent issue.

MR. CARNEGIE'S GIFT TO A MEDICAL LIBRARY.

Mr. Andrew Carnegie is known throughout the world as a founder of libraries, but hitherto, we believe, no medical library has been the object of his benefaction. Now it is announced that, largely through the efforts of Dr. S. Weir Mitchell, Mr. Carnegie has made a gift of £10,000 to the College of Physicians of Philadelphia, on condition that the College raises an equal amount. About £3,600 has already been collected; of this sum, £2,000 has been given by Mr. F. W. Vanderbilt, and £1,000 by Mr. Clement A. Griscom. A part of the gift will probably be used to enlarge and improve the college building, especially the capacity for library purposes. The medical library, in respect of the value and number of the volumes which it contains, is second only to the Surgeon-General's library, Washington.

THE ROENTGEN RAYS IN THE TEACHING OF ANATOMY.

For some years a lantern has been used to illustrate lectures in the Anatomical Department of the University of Aberdeen, and recently a complete x-ray equipment has been introduced to familiarize students with the normal appearances presented by different parts of the body as shown by this method of observation. Besides this, Professor Reid foresees a further field of usefulness for the apparatus in anatomical research. He is to be congratulated on having taken this step, considering the importance of skiagraphy in medical and surgical work.

MEDICAL NOTES IN PARLIAMENT.

[From our Lobby Correspondent.]

The Opening of Parliament on Tuesday was a very picturesque ceremony. Long before the King and Queen arrived the House of Lords was well filled with peers in their scarlet and ermine, peeresses in their coronation dresses, and judges and bishops in their special robes. Members of the House of Commons were mostly accommodated in the galleries, but about 100 followed the Speaker to the Bar when he appeared in answer to the summons of Black Rod. The speech from the Throne was read by the King in a clear strong voice, which lasted well to the end, and was heard distinctly all over the Chamber. The chief Bills announced for the session were the Irish Land Bill, the London Education Bill, the measures necessary for carrying out the Sugar Convention and the loans for South Africa. The London Docks Bill was also mentioned, but will hardly pass this session. Of the smaller measures mentioned, the Bill for dealing with the sale of adulterated dairy produce and that for regulating the employment of children have some medical interest.

Unmentioned Bills.—The exigencies of a speech which was unusually long probably accounted for the omission of some measures. For example, no reference was made to the Vaccination Act, which must be renewed during the session, and will no doubt be introduced some time after Easter. Some surprise was expressed that no promise was made as to legislation for preventing the pollution of shellfish, especially after the tragedy of the last few months, and the fact that a Bill on this subject was almost passed a year or two back. The Home Secretary, who is responsible for the working of the Factory Acts, is known to be favourable to legislation with regard to industrial accidents, and, if a non-contentious measure can be framed, may introduce it later on in the session. There were some hopes that the registration of deaths might have engaged attention, but as no reference was made to the matter in the King's Speech, this subject, which urgently demands attention, may have to wait for another session.

The Course of Business.—The debate on the Address, which opened rather quietly before the dinner hour on Tuesday, will probably occupy all next week, and may possibly run into the week after. Some half-dozen amendments were put down at once and by Wednesday twenty-four in all were on the notice paper. On that day the House gave four hours to the discussion of an amendment moved by Dr. Macnamara calling attention to the hardships suffered by the working classes by reason of the lack of proper housing accommodation. The mover laid special stress on the desirability of extending the period of repayment of loans, and of stiffening the rehousing obligations of railway companies and other bodies. Major Rasch and Colonel Kenyon-Slaney drew attention to the want of decent housing accommodation in agricultural districts; and Sir John Gorst urged that greater powers should be given to local authorities, and the obstacles to the exercise of the powers which they already possessed removed. Mr. Long said that he proposed to introduce a Bill to improve the law in several important directions, he would probably ask Parliament to extend the time for the repayment of loans raised for housing purposes to 80 years, and to facilitate the purchase of insanitary property by local authorities by giving them power to refer the question of value to a jury in place of arbitration. The debate was continued by Sir William Harcourt and Sir A. Rollit, and a strong feeling was shown on both sides of the House in favour of early legislation, but in view of the declaration of the President of the Local Government Board the amendment was rejected on a division. The reform of and expenditure in the army is to be discussed, and will probably provoke an important debate. When the Address is finished, the new rules of procedure, supplementary estimates, and possibly other financial questions are likely to occupy much of the time that remains before Easter. The principal legislative work will therefore probably come on later than usual, and even private members' Bills may in this way be prejudicially affected.

Private Members' Bills always excite much interest on the opening days on account of the ballot for places. There were some 350 members in the House at the opening, and before the sitting was concluded more than 250 names had been entered for the ballot. Large groups of members are balloting for Bills on labour questions, a number for the Deceased Wife's Sister Bill, while others are acting together to promote the rating of machinery, and some to bring about female suffrage or to make women eligible for positions on local authorities from which they are now excluded. The Medical Acts Amendment Bill is in charge of Sir John Tuke, and he hopes, if successful in the ballot, to introduce the Bill at an early date. The places will not be drawn till Thursday, and the Bills cannot be introduced till Friday's sitting.

THE URBAN HOSPITAL TREATMENT OF EXTERNAL OR SURGICAL TUBERCULOSIS: ITS DEFECTS AND A SUGGESTION FOR THEIR REMEDY.

By A. H. Tubby, M.S., F.R.C.S.,

Surgeon to Westminster Hospital, Senior Surgeon to Evelina Hospital for Children, and Consulting Surgeon to the Hip Hospital, Sevenoaks.

For a good many years past, but in London especially during the last six years, the attention of the public has been steadily directed by appeals and by articles in the press to the needs of hospitals, with the result that funds have flowed in and councils have been formed to administer the charity thus bestowed. These councils have granted funds proportionately to the requirements of the hospitals and the nature of their work, taking certain criteria upon which to determine the amount of the grant to each hospital. The object of the councils is of course to obtain through the hospitals the greatest relief from suffering and pain consistently with economy in expenditure.

The mere statement that a certain number of patients have entered a hospital and have been "relieved" and discharged and that so much money has been spent by no means necessarily implies that the greatest good has been done by the sums expended. The main object of a hospital must be to cure and not to relieve, and one cured case is of much greater value to the community than a dozen cases "relieved," and especially is this the case, if the patients be children. More particularly does this hold true of surgical tuberculosis in childhood. By "surgical tuberculosis" we understand tuberculous disease of the bones, joints glands, and skin.

Those surgeons who work in children's hospitals in large cities and towns find themselves constantly face to face with problems arising from difficulties in the treatment of this form of disease, so much so that they have felt that it baffles their efforts, and have expressed themselves as being unable to stem the tide of work due to the frequent recurrence of the disease in the same patients. A poor little mortal so afflicted returns time after time to the hospital for further operative procedures, and the net result on each occasion is only temporary "relief." Such children return to insanitary homes, the disease breaks out again, until too often they finally succumb, the victims of acute tuberculosis.

If these cases are seen at the onset of the disease, if they are taken in hand early, and if the treatment be thorough, they can be cured. By thorough treatment, we mean admission to a hospital not on a crowded city site, but placed either in the country or at the seaside, and where matters are so arranged that the child can stay until he is perfectly cured.

We may briefly review what takes place at present. Most surgeons will agree that one of three things happens. Let us take as examples (1) a child, the subject of early tubercle in one of the phalanges or metacarpal bones, is brought to an out-patient's department and operated upon, his admission being impossible on account of the demand for beds for acute cases. He continues to attend for the wound to be dressed. In his home he is a source of contamination to others, while he himself does not improve. The disease spreads to the glands, and this condition being now somewhat urgent he may be so fortunate as to have a bed found for him. An operation is performed, and the wound may or may not heal. In either case he is sent off to a convalescent home for a period of three weeks or so. This period is in most cases totally inadequate. When discharged from the convalescent institution he returns to his own home to be subjected to the same pernicious influences as heretofore with the result of another outbreak. He has not been thoroughly cured. (2) Another is seen for the first time at a hospital with a tuberculous joint in an acute stage. He is operated upon but the wound fails to heal, and it seems that the longer he remains in an urban hospital the less likelihood there is of healing taking place. He is therefore forthwith relegated to a seaside establishment, and may or may not recover. (3) The disease is recognized early, the child is sent away at once to a hospital at the seaside equipped in every particular, officered by a skilful staff, the whole treatment including the operation is carried out there, and the child is not allowed to leave until it is quite clear either that he is cured, or that the disease has gained such a hold upon him that no cure can be expected. This course is followed more often abroad, especially in France, than in England.

The first and second courses are both wasteful and dangerous, wasteful because the financial resources of the hospital are not used to the best advantage, and there is loss both of money and time; and dangerous because patients are too often not cured, and may become a source of dissemination of tubercle both in the hospital and out of it. Such patients occupy beds for a long period, which might with greater advantage be devoted to more acute cases. Indeed, we have known such cases to be sent away from the hospital to make room for other cases more pressing. So that these cases do not appear to be of the proper type to be admitted to or derive benefit from urban hospitals. Now come further mischief and waste of money and opportunities. When the effects of prolonged confinement in town are abundantly manifest, and the disease has obtained a firm hold, the case is sent away to the country or the seaside. The result is that the resources of that establishment are exhausted in dealing with cases which are not suitable because they have been sent there too late.

It is on this point that we feel justified in urging that there is in the administration of children's hospitals a waste of resources and a leakage of money. The problem is a large one, and much energy will be needed to tackle it successfully. In a general way every one will conceive that the present method is evil, but specific instances may help to bring the lesson home. We have been at some pains to collate statistics from some of the children's hospitals in London, and we have to thank the staffs and committees of management of the Belgrave, Evelina, Paddington Green, and Victoria Hospitals. For the actual compilation of the statistics we are indebted to Mr Francis Jaffrey, Mr Penry W. Rowland, Mr. Archibald Mahomed, and Mr. Maynard Smith respectively. It has been difficult to define "relief" and "cure." In the cases of two of the hospitals the compilers have been compelled to rely upon the statement in the casebooks as to relief or cure, but in the two others postcards were sent out to the parents, and they have been asked to answer two questions: How is the child now? and Are there any discharging wounds? It appears from the replies that, in some cases which have been discharged as cured, a recrudescence of the disease has taken place, attended by the formation of sinuses. In other cases where the patient has

Total Number of In-Patients Admitted (all Causes) in the Year 1901 (2040); *Number of In-Patients Admitted for External Tuberculosis (Glands, Skin, Joints, Bones)* (218).

Hospital.	No. of Cases.	Sex. F.	Sex. M	Age. Average.	Duration of Treatment Previous to last Admission. Average.	Site of Main Lesions. Glands: Neck.	Skin: Face and Legs	Joints: Hip, Knee, and Elbow.	Bones.	Duration of Last Stay in Hospital. Minimum.	Maximum.	Average.	No. of Operations. Average.	Result. Relief.	Cure.	Doubtful or Unchanged.	Death.
Belgrave ..	19	10	9	5	1 yr. 7 mos.	3	2	9	5	7 days	112 days	36 days	3¼	10	5	4	—
Evelina ..	64	36	28	6⅓	1 yr. 3 mos.	11	0	31	22	6 ,,	200 ,,	61 ,,	2⅖	33	24	—	5
PaddingtnGn.	54	27	27	5 11/12	1 yr. 3 5/6 mos.	10	4	21	10	3 ,,	112 ,,	34 ,,	1⅓	37	14	—	3
Victoria ..	81	42	39	—	1 yr. 3 mos.	21	4	29	27	3⅔ ,,	280 ,,	32 ,,	2¼	46	25	9	1

been discharged as "relieved" he has subsequently improved with closure of the sinuses. And this occurrence as a rule has taken place after a visit to the seaside.

Taking the returns from these four children's hospitals for the year 1901, the total number of children admitted as in-patients for all causes was 2,040, and of these no less than 218 were admitted for external tuberculosis—that is, tuberculosis affecting the skin, glands, bones, and joints. The average age of these children was 5 years and 8 months, the average duration of the disease previous to admission in 1901 was 1 year and 4 months, and the average duration of the last stay in the hospital was 6 weeks; the total number of operations performed upon these 218 children was 429—that is to say, that most cases were operated on twice, and some three times; three had been operated upon 18, 12, and 11 times respectively. This last fact alone constitutes a strong indictment of the present system. If such patients are treated from the first in the country, operations are comparatively seldom called for. In one hospital, where the number of times the patients had been in that hospital was quoted, we find that 81 cases had been in the hospital 153 times; and some had been admitted as often as 6, 5, and 4 times into that hospital. But it appears that the patients are not always taken to one particular hospital, but go the "round," hence the total number of times they are admitted must be much greater.

As a result of all these efforts, only 69 out of 218 are stated to have been cured, 128 are said to have been "relieved"—a very unsatisfactory term, because we know by experience that such cases are probably still requiring care and attention, and are very likely to be readmitted.

It is evident that there is great lack of system in the present method of treating these cases, so that money is now spent largely in giving temporary relief; and it is certain that it can be more wisely used in boldly attacking the disease, and conquering it in its early stages by placing the patients in those natural surroundings which are admittedly of great therapeutic, and therefore of economical, value. Taking the cases of external tubercle as one-tenth, as the statistics show, of the total number of children admitted to the hospitals, is it not advisable to set apart one tenth of the present income of urban children's hospitals for the purpose of treating surgical tuberculosis in a systematic and thorough manner, and away from large centres of population?

For this purpose it is essential that cases of surgical tubercle should be excluded from the wards of the hospitals. These should be merely "receiving" centres, and each hospital should have its branch establishment away from the city, supported by the one-tenth of its income, as above mentioned; or, if this sum be too small to maintain a separate establishment, two or three or more hospitals should unite to support a branch hospital, the beds being divided according to the sums contributed by each urban hospital. The country hospitals must be conducted on definite lines. The cases which are pre-eminently suitable for admission being early ones and capable of cure, not simply of relief. Further, it must be clearly understood that the patients are to remain under treatment until the cure is firmly established. Difficulties may arise in connexion with the surgical administration of the branch hospitals, but these may be met in one of two ways. For the general attendance on the children a staff of local practitioners should be appointed, while the more urgent surgical calls may be met by delegating one member or more of the surgical staffs of the hospitals in London for visiting and emergency duties. If this plan be not feasible that which is carried out at the Hip Hospital, Sevenoaks, may find favour. A local staff deals with the general wellbeing and the ordinary surgical treatment of these cases, while a consulting staff of operating surgeons in London is called in from time to time as necessity arises.

Finally, it should be recognized that there are situated in the midst of parks and other open spaces, recently acquired by such bodies as the London County Council, mansions which could easily be adapted for the purposes of branch hospitals for the treatment of the disease. This last-mentioned plan will be a step in the right direction, but it admits of further development.

The Consul-General for Mexico in Liverpool has received official notification that the Mexican Government proposes to give an annual grant of money to the Liverpool School of Tropical Medicine. The Mexican Government has from the formation of the School taken a deep interest in its operations.

THE EPIDEMIC OF SMALL-POX.

The provincial newspapers contain many references to small-pox, especially in the north of England. The part played by tramps in the spread of the disease, and the circular of the Local Government Board calling on Boards of Guardians to give special heed to the vaccination of tramps, are receiving increasing attention. In two or three places all vagrants obtaining admission to casual wards are being medically inspected to ascertain whether any of them are suffering from small-pox. That is a useful precaution which might, along with vaccination of vagrants, be adopted by all Boards.

Even then, however, the danger will not be fully met, as many tramps go to common lodging-houses instead of to the casual wards of workhouses. The systematic offer of revaccination in common lodging-houses, accompanied if necessary by the offer of a few days' board to let the vaccinated arm get a rest, would greatly reduce the possibilities of spread of the disease by vagrants. That practice has been followed in Glasgow for a number of years now, and the comparative infrequency of the disease in common lodging houses was a notable feature of the recent Glasgow epidemic. To aid in preventing the spread of the disease from the north of England into Scotland, the Scottish Local Government Board has issued a circular to county clerks and town clerks in the Border Counties and boroughs, calling attention to the danger from vagrants, and asking these officials to bring the matter under the notice of inspectors of poor, parochial medical officers, chief constables, inspectors of common lodging-houses, and all officials who have relation to the class in question.

England.

The following data are culled from newspapers, up to about the beginning of the present week. They show how widely spread the disease is throughout a great part of the country.

Northumberland.

At Newcastle, 5 cases have occurred among the employés of the Newcastle Waterworks Company at Matfen.

Lancashire.

In Manchester, on February 10th 3 more cases were notified, in Wigan 4 cases, and Salford had on that day reached its 59th case. In the Holywell Union a case has occurred in the workhouse, and a temporary hospital is being erected in the parish of Whitford, but ratepayers are protesting, there being four schools and five chapels in the immediate neighbourhood. In Rossendale Hospital there were 19 cases on February 7th, and preparations were being made to extend the hospital. At Maghull, near Liverpool, the infection of 4 persons was attributed to a visitor from Liverpool. At Bacup there are some cases in hospital. In Bolton 4 more cases were met with on the 11th. At Widnes, a man from Oldham who had been distributing "patent medicine" advertisements, was found suffering from small-pox and taken to hospital. The Ormskirk Hospital Board has charged the local guardians 4 guineas per week for each of 4 cases of small-pox treated in their hospital, the patients having been removed from a common lodging house. After some grumbling it was agreed to pay the account. A case has been reported at Warrington, another at Haslingden, 3 more in the Longdendale Valley, and a fifth at Northwich. At Brimington 3 or 4 cases have occurred, and there have been additional cases at Oldham. At Burnley 4 new cases were announced on February 11th.

Cheshire.

There was a case also at Stockport. Dr. Meredith Young, Medical Officer of Health for Stockport, declared to a meeting of the Sanitary Institute at Manchester that if he were compelled to select only one of all the preventive measures known to science, he would have no hesitation to throw to the winds notification, isolation, disinfection, quarantine, the Leicester system, and join his faith wholly to universal vaccination.

Staffordshire.

At Hanley 7 more cases were notified on February 13th. In Wolverhampton on February 11th 2 cases were found at a lodging-house. The other inmates were vaccinated without delay. At Walsall there had been 3 cases in the fortnight ending February 10th, and on that date there were 19 in hospital. At Nuneaton on February 9th a tramp was discovered suffering from the disease.

Yorkshire.

At Rotherham there had been, by February 12th, 32 cases since the beginning of the outbreak.

In Leeds, on February 11th, there were 3 cases, on February

12th 2 cases, and on February 13th 1 case, making about 46 in hospital. Of about 100 cases reported since the beginning of the outbreak, not one had been successfully vaccinated during the past ten years. Only two children had been attacked, one of them never having been vaccinated, while in the other the operation had failed. In Batley isolation hospital there are several cases. At Wyke there was 1 case. Bradford had 2 new cases on February 11th, Doncaster 1, making 4 or 5 in the hospital at Dalby, and Selby Workhouse 1—a tramp from Wakefield gaol. At Bradford, on the 13th, there were 3 more cases, each from a different district of the town. Doncaster also had an additional case on the 13th. At Halifax opinion increases that Hollin Heys Hospital is the source of the small-pox in its vicinity. A question has arisen whether Stainland School should be closed, but Dr. Kaye, the County Medical Officer, and Dr. Dickson have advised to the contrary. In the Elland district there were a few more cases, mostly children. At Huddersfield a tramp from Leeds was found with the disease, and removed to hospital. In Wakefield and district proposals for a joint small-pox hospital were under consideration, but nothing definite had been arranged. At Colne a school was closed, owing to 6 cases, all children, having been reported. At Sheffield another case was discovered on the 12th. The man had come from Leeds, and he made the twelfth "importation" of the disease into Sheffield. At Dewsbury there were 4 cases in hospital, 1 being from Soothill Upper, near Batley. At South Bank, near Middlesbrough, there were 2 cases.

Durham.

A case in Durham Union was alleged to have come from Worksop Union.

Derbyshire.

In Derby, on the 11th, another case was notified, and yet another on the 12th. We gather that the Leicester expedient of devoting to small-pox the accommodation intended for scarlet fever is being followed in Derby. At Chesterfield, on the 11th, there were 2 more cases, making the total 33. About the same date 4 cases were discovered in Staveley and district. At Glossop a case was found in a common lodging-house. A tramp has brought the disease to Grimsby.

Leicestershire.

In Leicester 3 cases were found on February 7th and 1 on February 10th. From February 10th to the 13th inclusive there were no cases. On the 7th there were in hospital 6 cases of enteric fever and 55 of small-pox. In the previous week there were 17 cases of scarlet fever and 9 of diphtheria, none of which appear to have been sent to hospital. In the month of January in Leicester the primary vaccinations of infants were 213, as compared with 68 in January, 1902. Both figures are much short of the possible.

At Enderby, near Leicester, according to a newspaper report, a meeting of the National Antivaccination League was held two or three weeks ago, but the intended chairman was unable to be present, he being summoned to a hurriedly called meeting to consider what steps should be taken owing to the occurrence of a case of small-pox in the village. Dr. Berridge strongly recommended that all should be vaccinated, and offered to vaccinate the inhabitants for nothing if the authorities objected to pay. At a meeting of the sanitary authority, the chair being occupied by the gentleman who was to have presided at the antivaccination meeting, it was decided to take "every precaution" to stamp out the disease in the village. Looking to the expressed opinion of Dr. Berridge and Dr. O'Connor (the medical officer) there seems little doubt as to what "every precaution" includes.

At Ashby-de-la-Zouch a tramp from Loughborough Workhouse was found to have the disease.

Warwickshire.

In Birmingham 7 cases were discovered on the 10th, including 5 in one house, making a total of 29 in hospital; another case was found on the 11th. It was decided to erect two more small-pox pavilions for 50 patients, at a cost of £2,000. The Health Committee has asked the guardians to do all they can to promote vaccination and revaccination.

Nottinghamshire.

At Nottingham it was stated on the 11th that there had been no fresh cases since the 8th. A case had, however, occurred at Ashbourne. Three cases were notified at Carlton. At Basford arrangements were being made for isolation and vaccination, and at Retford a small-pox hospital is being provided. At Worksop by the evening of the 11th 5 cases had been found in the workhouse, and on the 13th a nurse developed the disease. It was agreed to issue throughout the district posters recommending vaccination and revaccination.

Shropshire.

At Shrewsbury a further case was reported about the 7th, and at Bridgnorth there were 2 cases in hospital on the 10th.

WALES.

At Swansea there was another case at the water-works at Cray. About the beginning of the month a tramp was found with the disease at Cardiff; at Brecon 3 cases are known of, two being tramps, and at Oswestry a similar case. A Montgomeryshire newspaper records a case at Newtown which had much interfered with business by making people from the surrounding country afraid to come to market. At Congleton in Cheshire there was 1 case; in the Flint Hospital there are 2 cases.

SCOTLAND.

In Scotland a case has been imported into Grangemouth from Spain, and several of the crew have refused revaccination and have gone into England, most of them to South Shields. Glasgow has also received a case from Spain. Another case has occurred in Leith.

Glasgow Town Council on the Vaccination Acts.

At a meeting on the 12th inst. the Glasgow Corporation arrived at a very notable decision as to the vaccination law. So long ago as July last Mr. Steele, Convener of the Hospital Committee, gave notice of the following motion:

That, in view of the experience obtained during the late prevalence of small-pox in Glasgow of the complete protection against the disease which recent successful revaccination affords to adults, and of the insignificant number of cases occurring in persons who had been revaccinated in former years, the Corporation desires to record its conviction that a national system of revaccination, on the lines on which infantile vaccination at present proceeds, would render recurring widespread epidemic prevalence of the disease impossible, and resolves that a copy of this resolution be forwarded to the President of the Local Government Board.

Ample time having thus been allowed for consideration by the Council of this important motion, Mr. Steele now pointed out that the Government would be dealing with the matter very soon, and that Glasgow's conclusion on the subject should be recorded. Both in Glasgow and in Germany revaccination had been a success. The motion was seconded by Mr. Dick, lately convener of the Public Health Committee, and was carried without a single dissentient. Looking to the fact that, exclusive of London, Glasgow is the largest city in the three kingdoms, and that it has recently had ample experience both of the evils of small-pox and of the value of revaccination, such a pronouncement as the above cannot but have the effect of strengthening the hands of the President of the Local Government Board in drafting a measure to deal with revaccination, and of indicating to the Government how ripe the whole question is for solution on the lines urged by the Imperial Vaccination League.

MILK AND OTHER FOOD POISONING AND EPIDEMIC DIARRHOEA.

At a meeting of the Epidemiological Society on December 12th last, Professor Sheridan Delépine read a paper on the bearing of outbreaks of food poisoning upon the etiology of epidemic diarrhoea, with special reference to diarrhoea produced by contaminated milk. The paper was discussed at a meeting on January 16th.

Professor Delépine said that by epidemic diarrhoea was generally meant an infectious disease, the most constant symptom of which was diarrhoea, affecting a number of persons at the same time, more especially during the warm season. One of its special features was its tendency to occur in certain poor populous districts, where it caused a great mortality among children. After discussing the symptoms as described by Dr. Ballard in his report, and observing that the difficulty of diagnosis in isolated cases was very considerable, he stated that the *post-mortem* lesions were not characteristic. He then briefly reviewed the bacteriological investigations which had been published, and observed that, though the subject was by no means clear, the bacteria suspected on good grounds to be the cause of outbreaks of summer diarrhoea belonged chiefly to types which were the inhabitants of the alimentary canal; the virulence of several of these microbes had been shown to be capable of considerable variation. The bacilli of the colon group appeared to be most intimately connected with the epidemic diarrhoea both of adults and children. Though these bacilli resembled each other closely, yet when

the colon bacilli obtained from the intestinal contents of a number of cases of diarrhoea were subjected to the series of tests usually employed for diagnostic purposes it was found that one or more of the reactions associated with the bacillus coli communis of Escherich were frequently absent. The resemblance between many outbreaks of food poisoning and epidemic diarrhoea was very great, and would be even closer if certain special forms of food poisoning, such as botulism, were excluded. Under the term "botulism" Van Ermengen had described a state brought about by the ingestion of various articles of food, such as ham, tinned or preserved foods, oysters, mussels, etc. It was characterized by comparatively slow onset (twelve to twenty-four hours after infection) secretory troubles, paralysis of certain muscles, constipation, retention of urine, and absence of fever; he had found these symptoms produced by a bacillus which he had named bacillus botulinus. While there was good evidence that some outbreaks of food poisoning were due to ingestion of the flesh of animals suffering from certain forms of septicaemia, enteritis, or pneumo-enteritis, whose flesh owed its noxious properties to various bacilli resembling more or less closely the bacillus enteritidis of Gaertner, Professor Delépine held that the mode of infection was usually different. The most common forms of food poisoning produced symptoms closely resembling those of epidemic diarrhoea; outbreaks of food poisoning might occur at any time of the year, but were most frequent at the time when epidemic diarrhoea was most prevalent. That they affected adults as well as infants appeared to be due chiefly to the kinds of food which produced them; certain foods, such as milk, which were partaken of both by adults and infants, gave rise in both to attacks of diarrhoea similar to typical attacks of epidemic diarrhoea of unknown origin. On the supposition that epidemic diarrhoea was generally the result of a more widely disseminated and less massive form of bacterial infection of food than in the more definite outbreaks of food poisoning, it ought to be possible to utilize the occurrence of certain outbreaks of food-poisoning for the purpose of elucidating the etiology of epidemic diarrhoea. With this object he had for the past eight years investigated the bacteria, which had given rise to outbreaks of food-poisoning and also the pathogenic properties of the cow's milk supplied to town, which was responsible for much of the infantile mortality due to epidemic diarrhoea. The food-poisoning outbreaks had included instances due to milk, cheese, pork pies, tinned salmon, and other foods, while the pathogenic action of over two thousand samples of milk had been examined. By comparing the properties of bacilli obtained from noxious articles of food with those from animals suffering from the effects of inoculation with various samples of milk, he had been able to satisfy himself that these bacilli, with a few exceptions belonged to the colon group. Professor Delépine then related the circumstances of an epidemic of diarrhoea at Victoria Park, Manchester, in 1894, due to the consumption of milk. Although this outbreak was attributed at the time to the milk from a cow suffering from disease of the udder, Dr. Delépine had come to the conclusion that the infection of the milk was more probably due to pollution with excreta of a specially virulent kind. Among the three varieties of bacilli of the colon group found in the milk one which had most of the characteristics of the bacillus enteriditis of Gaertner was pathogenic, a single loopful of pure culture on agar producing death in a guinea-pig within twenty-four to thirty hours. That faecal contamination of milk frequently occurred could easily be ascertained by inspection of badly-kept dairy farms, and by the microscopical and bacteriological examination of milk. It was indeed difficult to conceive how slight faecal pollution of cow's milk could entirely be prevented under ordinary conditions, though this contamination was apparently without serious effects. But when some animals in the herd were affected with intestinal inflammation, virulent bacilli must frequently escape from their bowels, and infect a portion of the milk more or less directly when that fluid was not collected under conditions of strict cleanliness. Preliminary investigations made in 1896-7 showed that milk coming from a distance and transmitted without special precautions for keeping it cool was infectious in a large proportion of cases; investigation was therefore directed subsequently to the examination only of specimens collected in sterilized bottles and packed in refrigerating boxes. Of the samples taken before the refrigerating system was instituted, 10.7 per cent. were pathogenic to animals, whereas after refrigeration was instituted the percentage fell markedly, the highest percentage in any year being 3.6 and the lowest 1.14. The difference would have been still greater if the milk had invariably been cooled at the farm immediately after the milking of the cows, and the high percentage of 3.6, which occurred in 1900, was found to be in great part due to the fact that the veterinary inspector had got into the habit of keeping a certain number of samples over night before delivering them in the morning. Investigations were undertaken for the purpose of comparing the effects produced by mixed milk generally collected at railway stations with those produced by milk obtained from single cows affected with disease of the udder. When cases of tuberculous infection were excluded it was found that the fatal infection produced in as many as 19.2 per cent. of the animals inoculated with milk could be attributed to disease of the udder in a very few, if any. The conditions which favour the development of infectious properties are illustrated by the following tables:[1]

TABLE I.—*Mixed Milk coming from a Distance of over 40 Miles, and generally kept for from 24 to 60 Hours, and even longer in a few Cases. (Tuberculous Samples excluded.)*

Mean Temperature Fahr. in the Shade (Manchester) during Time the Specimens were kept.	Specimens producing no Noxious Effects.	Noxious Specimens.	Totals.	Percentage of Good Specimens.
30° to 35°	7	5	12	58.0
35° to 40°	7	11	18	38.5
40° to 45°	2	3	5	40.0
45° to 50°	1	4	5	20.0
50° to 55°	—	—	—	—
55° to 60°	0	2	2	0.0
	17	25	42	39.0

TABLE II.—*Mixed Milk coming from a Short Distance (generally under 20 Miles), most of them kept for Less than 10 Hours (with the exception of 5 out of 7 Bad Specimens, and 4 out of the 22 Good Specimens which had been kept somewhat longer. (Tuberculous Samples excluded).*

Mean Temperature Fahr. in the Shade (Manchester) during Time the Specimens were kept.	Specimens producing no Noxious Effects.	Noxious Specimens.	Totals.	Percentage of Good Specimens.
50° to 55°	1	0	1	100.0
55° to 60°	8	1	9	[illegible]
60° to 65°	11	4	15	73.3
65° to 70°	—	—	—	—
70° to 75°	2	2	4	[illegible]
	22	[illegible]	[illegible]	[illegible]

TABLE III.—*Unmixed Milks kept for various Lengths of Time, but collected from the Udder in Sterilized Vessels (Tuberculous Samples excluded)*

Mean Temperature Fahr. in the shade (Manchester) during Time the Specimens were kept.	Specimens producing no Noxious Effects.	Noxious Specimens.	Totals.	Percentage of Good Specimens.
35° to 40°	[illegible]	[illegible]	[illegible]	[illegible]
40° to 45°	[illegible]	[illegible]	[illegible]	[illegible]
45° to 50°	[illegible]	[illegible]	[illegible]	[illegible]
50° to 55°	[illegible]	[illegible]	[illegible]	[illegible]
55° to 60°	[illegible]	[illegible]	[illegible]	[illegible]
60° to 65°	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]

[1] These tables are extracted from the *Journal of Hygiene*, vol. iii, No. 1, 1903, where Professor Delépine's paper is published in full.

The influence of time was shown by the number of specimens remaining good even in warm weather, when the milk had been kept only half a day, but Professor Delépine pointed out that what was produced in a few hours in summer might occur in winter, when the milk was kept for a long time. The bacillus enteriditis sporogenes described by Dr. Klein had no relation to the colon group, but was apparently introduced into milk in the same way, through faecal pollution. In Professor Delépine's experience Klein's bacillus was not so frequently the cause of lesions as the colon bacillus; he had found Klein's bacillus in two samples per 1,000, while pathogenic bacilli of the colon group were present in from 100 to 200 per 1,000 samples. Streptococci did not seem to be responsible for a greater proportion of cases than bacillus enteriditis sporogenes. The facts with regard to the recent outbreak of food poisoning in Derby showed that the infected pork pies had increased in virulence on being kept, just as would milk when sent from a distance to a town. Professor Delépine concluded, from an examination of all the circumstances, that the infectious properties which food acquires frequently in summer, and which give rise to the ordinary or common type of epidemic diarrhoea, are generally due to bacilli belonging to the colon group, of which the B. coli communis (Escherich) and the B enteritidis (Gaertner) were probably two extreme types. He believed that the varieties of most importance were those resembling the bacillus of Gaertner; they did not produce permanent acidity, coagulation, or distinct smell when grown in milk. The absence of acidity and marked smell in milk therefore was not, as generally believed, an index of safety. Such infection of food or milk did not generally lead to serious consequences unless it were massive from the first, or unless the food was kept for a sufficient length of time, and under conditions of temperature favouring the multiplication of these bacilli. Milk, the commonest cause of epidemic diarrhoea in infants, was frequently infected at the farm or through vessels in transit; the preventive measures which Professor Delépine considered to be most clearly indicated were:

1. Measures securing cleanness of cows, dairy hands, cowsheds, milk vessels, etc.[2] Similar measures with regard to persons or things coming in contact with any other article of food, manufactured or not. Absolute cleanliness was most difficult to obtain, if not practically impossible. Infection must therefore occur now and again.

2. To guard against the worst effects of accidental faecal infection, the food should be consumed fresh when possible.

3. When the food cannot be consumed fresh, it should be refrigerated—that is, kept at a temperature below 4° C.

4. Where the food cannot be eaten fresh or refrigerated whilst it is kept, it should be thoroughly sterilized—that is, by thorough cooking.

Dr. NEWSHOLME, in opening the discussion, expressed the opinion that the two most important facts in Professor Delépine's paper were: (1) that the bacilli in food poisoning were of the B coli group; and (2) that such milk was pathogenic to guinea-pigs before reaching the consumer, its virulence increasing with the distance the milk had travelled and the temperature at which it had been kept. He had suggested that the infection was due to faecal contamination, and possibly to enteritis in the cow, in which case the veterinary aspect of the disease became important in relation to prevention. But one link was missing in the chain of evidence; the serum reaction of the blood of patients suffering from infection by the colon-typhoid group of bacilli gave a possible clue to the particular species of bacillus concerned in the infection, and it would have been interesting to compare the serum reaction of the blood of the children suffering from diarrhoea apparently caused by this pathogenic milk with that of the guinea-pigs and of the known varieties of the B coli, especially those allied to the Gaertner bacillus. Lesage, for example, found that the B coli from a child in the acute stage of epidemic diarrhoea was agglutinated by the serum of the same child in 40 out of 50 cases, and the serum of each of these 40 agglutinated the bacilli of the other 39, the reaction disappearing in a few days. According to Lesage, the B. coli of normal children were not agglutinated by the serum of those suffering from epidemic diarrhoea, nor did normal serum react on pathogenic forms of B. coli. He was glad that Professor Delépine had not found evidence to support the view advanced by Klein that the B. enteritidis sporogenes was the cause of epidemic diarrhoea, for it was possessed of so persistent a vitality that it could hardly be destroyed by heat without spoiling the milk as food. He could not, however, accept the view that milk was infected usually on the farm or in transit, though he admitted that the chances of faecal contamination on the farm were very great. He had inquired into the history of 226 fatal cases of epidemic diarrhoea in Brighton in the three years 1900-02. In 35 the milk supply could not be traced, but of the 191 in which it was known, 18, or 9·4 per cent., were breast fed, and 84, or 44 per cent., were brought up on condensed milk. The greatest care had been taken to exclude cases in which ordinary cow's milk was given occasionally. In over 53 per cent. of those cases in which the source of the milk was known, the infection must have occurred in the house, unless it were assumed that condensed milk before the tin was opened was pathogenic. In Liverpool, in the third quarter of 1899, over 20 per cent. of the deaths from diarrhoea were of breast-fed children. These figures did not give the relative proportions of children fed on each kind of milk, and it was therefore impossible to say whether cow's milk were more productive of diarrhoea than condensed or mother's milk, but the figures showed either that the infection of the milk did not always take place on the farm or that diarrhoea was caused otherwise than by milk. Professor Delépine's views explained the outbreaks of diarrhoea in which a large proportion of those who partook of these foods were attacked. These milk epidemics resembled those of typhoid due to milk in which every susceptible person who drank the milk was attacked. In such outbreaks the infection doubtless occurred at the farm or dairy. But it was otherwise with the sporadic cases of diarrhoea; in these the cases were distributed over a large number of milk supplies, and Dr. Newsholme felt convinced that the milk was infected at the home. He had made an analysis of the 191 fatal cases mentioned above in which the nature of the milk used could be ascertained, and found that while 88 had had their milk from thirty-eight dairies, 103 had obtained it from other sources; 18 infants were at the breast, 1 was fed on sterilized milk, and 84 on condensed milk. No deaths occurred among the customers of 31 dairies. In the 103 cases the infection must necessarily have taken place at home; the 88 were fairly equally distributed among a large number of dairies. Again, he had divided the dairies into classes according as to whether there were and were not any fatal cases among their customers, and according as the milk was railborne, roadborne, or both, but obtained almost identical results. In short, he was convinced that the home conditions of the urban poor, the storage of milk and food in living or sleeping rooms, and the opportunities for its infection by flies fresh from organic refuse, or the liquid diarrhoea stools of a patient accounted for the prevalence of autumnal diarrhoea quite apart from the infection of milk at its source which undoubtedly gave rise to epidemic outbreaks of diarrhoea in some instances. Dr. Newsholme pointed out that if his contention was correct the reduction of diarrhoeal mortality must be looked for by way of (1) exact instruction, as suggested by Dr. Niven, of older girls in day schools in the art of preparing infant's food: in the principles and practice of sterilization of food and of bottles; and in the minutest cleanliness in connexion with the storing and handling of food. (2) Greater domestic and municipal cleanliness, leading to the reduction of dust both in houses, courts, and streets, and the substitution, both domestically and municipally, of wet and more frequent cleansing for the dry and infrequent cleansing now in vogue. (3) A crusade against the domestic fly, which was most numerous at the season and in the years when epidemic diarrhoea was most prevalent, and probably played a large part in spreading infection. With regard to the relation between soil temperatures and diarrhoea, Dr. Newsholme observed that earth temperatures at a depth of 4ft. had become widely accepted as an important index of the possibility of prevalence of epidemic diarrhoea. It had been accepted almost as an axiom that diarrhoea must be expected to prevail when the four-foot earth thermometer reached Ballard's critical point of 56° F. The experience of the summer of 1902 showed the fallaciousness of this indication. In Brighton the four foot earth thermometer reached 56° F. on June 24th. On June 30th it was 58.4° F.; during the second half of July it remained between 60° and 61° F.; in August it reached 61.8° F. It reached its maximum of 62·6° F. on September 10th, and then slowly fell, but kept above 56° F. until October 19th, when it was 55.8° F. But no deaths from diarrhoea occurred in the weeks ending with Saturday, July 5th.

[2] See in this connexion a paper by W. H. Park (1902), The Great Contamination of the Milk of Cities. Can it be Lessened by the Action of Health Authorities? *Journal of Hygiene*, vol. i, p. 391.

In the six following weeks only three deaths from diarrhoea occurred; and, contrary to Ballard's rule, the highest number of deaths from diarrhoea in any one week did not occur in the week in which the four-foot earth thermometer attained its mean weekly maximum, but three weeks later. Similarly, in Croydon—for information concerning which he was indebted to Dr. Meredith Richards—no deaths from diarrhoea occurred in the five weeks ending August 2nd; the highest four-foot earth temperature during this time ranged from 56.8° F. to 59° F., while the weeks of the maximum number of deaths from diarrhoea coincided with a second maximum of the earth temperature, which was lower than the maximum 59° F. in the week ending July 26th, when no deaths from diarrhoea occurred. The key to the anomaly was, he thought, to be found in the fact that in each week of the third quarter in 1902 more or less rain fell. The temperature conditions were favourable to diarrhoea, the rainfall prevented it. Hence, also, the excellent records of Huddersfield and Halifax. If Oldham, and in a much higher degree Liverpool, did not stand so well, it was because there were social and sanitary conditions tending to counteract the beneficent influence of Nature's operations.

Dr. Meredith Richards said that both before and since his appointment to Croydon he had studied the question of milk and diarrhoea, and the percentages of fatal cases among children brought up on cow's milk on the one hand and at the breast or on condensed milk and artificial foods on the other, fully bore out Dr. Newsholme's contention that food infection mostly occurred at home, those brought up at the breast averaging 10 to 12 per cent., and the artificially fed, mostly on condensed milk, 30 to 40 per cent. He had urged his authority to seek powers to forbid the sale of acid milk, of milk containing an excess of alkali, milk that had not been chilled, and, as in New York, of milk with more than a fixed number of bacilli in the cubic centimetre.

Dr. Nash referred to his observations at Southend on the relation between dry or wet weather, the prevalence or absence of flies and the prevalence of diarrhoea. He maintained that all milk kept in shops or houses should be covered.

Major Firth, R.A.M.C., did not expect any good from agglutination experiments, since he was more than doubtful as to there being any connexion between the B. coli and diarrhoea, for in India the milk supplies were abominable, but there was little diarrhoea. He, however, fully agreed as to the danger of flies.

Mr. Goadby was as doubtful as Major Firth as to the value of agglutination tests, and even as to the part played by B. coli, most of the group being absolutely harmless.

Dr. Reginald Dudfield observed that the condition of cowsheds was often such that infection of the milk with B. coli must be inevitable, yet no one was the worse. He had had evidence in Paddington of the spread of both diarrhoea and enteric fever by flies, and had also been able to confirm Dr. Hope's observation of the occasional increase of diarrhoea during heavy rains.

Professor Delépine, in reply, said that he wished it to be understood that he did not ascribe all or even most outbreaks of epidemic diarrhoea to infected milk, much less to milk infected at the farm, for he fully agreed with Dr. Newsholme as to the frequency of infection in the house. Dr. Newsholme had accepted his thesis that (1) food infection was the chief source of epidemic diarrhoea; (2) milk the food most often infected; and (3) faecal contamination and inoculation with bacilli of the colon group the most usual form of infection. Time or time and temperature were factors second only in importance to the actual infection. Dr. Newsholme contended that the incidence of the diarrhoea followed inversely but more closely the rainfall than the temperature. This connexion he attributed to the removal of surface filth and the ill-understood disappearance of flies. Any estimate of the influence of rainfall on diseases based on yearly averages was misleading; if the cases occurring daily or weekly were compared with the temperature and rainfall, it would be found that, though diarrhoea did not become prevalent until a summer temperature had been reached, it afterwards varied directly as the temperature. It was true that several consecutive days of rainfall were followed by a reduction in the number of cases, but there was a consequent cooling of the air by clouds, rainfall, and evaporation, and the reduction occurred far too soon to be accounted for by changes in the subsoil. Rainfall quickly cooled sheds, vans, etc., retarding the proliferation of the bacilli in the milk in store or transit. Ballard's critical temperature was misleading, and the curves of temperature of the four-foot thermometer, though of value over long periods, were useless for the rapid fluctuations on which the phenomena of epidemic diarrhoea depended. Dr. Newsholme, he thought, attached too much importance to the distribution of the milk supplies, from which little could be learned save in special and exceptional infections, as enteric. He found nearly all milks more or less infectious on arrival, and many that were drunk with impunity when fresh caused illness some hours later, no special opportunity of infection being required; the method of transport was of little importance save as regarded the duration and time of day. Children said to be breast-fed probably received other milk from time to time, and as to condensed milk it was rash to speak of it as sterile. Many samples contained numerous bacilli that had entered during the filling of the tins, not killed, but held in the syrupy mass in a state of suspended animation. When he and Dr. Brindley began the inquiry they entertained great hopes of serum reactions as tests, but though they succeeded in immunizing numerous small animals against B. enteriditis and several of the B. coli group, and obtained agglutination with the blood of these and of human patients, the phenomena, as to distinctness, time of appearance, and duration were so incomparably less satisfactory than in the case of enteric fever that they were greatly disappointed. Even when dealing with so marked an outbreak as that at Derby, not all the individuals reacted, and when they reacted best the reaction often persisted but a short time. He did not wish to imply that the use of sour milk, or milk about to become so, was free from danger, but that the neutral or amphoterous milk, being often the most poisonous, the reaction was no safe indication of wholesomeness. He recommended cooling down to 4° C., at which temperature all objectionable bacteria ceased to grow; for though 10° C. was generally safe enough, it was too near the point (15° C.) at which the most dangerous began to grow vigorously.

THE SALE OF POISONS.[1]

Report of the Privy Council Committee.

In June, 1901, the Lord President of the Council appointed a Committee under the chairmanship of Sir Herbert Maxwell, M.P., to consider the schedule of poisons annexed to the Pharmacy Act, 1868, to report on any alterations in it which they deemed expedient, and also to consider whether a third subdivision might not properly be added to the schedule containing substances which, whether sold by a pharmaceutical chemist or not, should be labelled or otherwise distinguished, and if so to enumerate the substances which in their opinion should be so treated.

The report of the Committee, together with a supplementary report by Mr. Alexander Cross, M.P., a member, and a minority report signed by Mr. Walter Hills, who was appointed in the place of Mr. William Martindale on his lamented death in February, 1902, has now been presented.

Evidence was taken from pharmaceutical chemists, including representatives of the Pharmaceutical Society; from manufacturing chemists including the makers of disinfectants; from a consulting chemist, from representatives of agriculture and horticulture; from Dr. Muir, Secretary of the Scottish Poor-law Medical Officers Association; Dr. Selby, of Portwilliam, Wigtownshire; and from Dr. Westcott, Coroner for North-east London; from representatives of ironmongers and dealers in photographic materials, and from patent medicine vendors.

The Committee's report states that their attention was forcibly drawn to the great increase of the use of poisons in agriculture and horticulture, especially sheep dips, weed killers and parasiticides for application to growing crops. The Committee was convinced that the industries of agriculture and horticulture could not be conducted effectively on modern principles without the extensive use of poisonous materials, and found that inconvenience had been experienced by farmers and gardeners owing to the restriction of the sale of poisonous material to registered chemists and druggists in districts where there was no such qualified tradesman within easy reach.

The Committee recommends a revision of the Schedule (A) of poisons, and the addition to this schedule of a third part. The list of substances, which it suggests should be inserted in Part I, that is to say substances which cannot be sold unless the purchaser is known to or is introduced by some person known to the seller, unless the proper entry is made in

[1] Committee on Poisons. Report, Part I [Cd. 1442], price 2d.

the poison-book and unless the package be labelled with the name of the article, the word "poison" and the name and address of the seller, is as follows:

Arsenic and its preparations.
Alkaloids: All poisonous vegetable alkaloids and their salts and all poisonous derivatives of vegetable alkaloids.
Aconite and its preparations.
Atropine and its preparations.
Cantharides.
Cocaine and its salts.
Corrosive sublimate
Cyanide of potassium, and all metallic cyanides and their preparations.
Emetic tartar.
Ergot of rye and its preparations.
Morphine and its salts and preparations containing 1 or more per cent. of morphine.
Picrotoxin.
Prussic acid and its preparations.
Sabin and its oil.
Strychnine and its preparations.
Vermin killers containing poison included in Part 1.

Special exemptions are recommended with regard to arsenic and alkaloids; as to arsenic it is recommended that the regulations should not apply to any preparation of arsenic prepared exclusively for use in connexion with agriculture or horticulture; as to alkaloids that the regulations should not apply to preparations of tobacco or the alkaloids of tobacco prepared expressly for use in connexion with agriculture or horticulture provided that in either case the poisonous substance is contained in a closed vessel or receptacle duly labelled with the word "poison," the name and address of the seller, and a notice of the agricultural or horticultural purpose for which the preparation has been made.

The list of substances recommended to be placed in Part II of the Schedule, any one of which must be sold in a package labelled with the name of the article, the word "poison," and the name and address of the sender, is as follows:

Acetanilide (antifebrin) and its preparations.
Almonds, essential oil of (unless deprived of prussic acid).
Belladonna and its preparations.
Cantharides, tincture, and all vesicating liquid preparations of.
Carbolic acid and liquid preparations of carbolic acid and its homologues, containing more than 2 per cent. of those substances, except any preparation prepared for use as sheep wash, or for any other purpose in connexion with agriculture, horticulture, or sanitation, and contained in a closed vessel distinctly labelled with the word "poison," the name and address of the seller, and a notice of the special purposes for which the preparations are intended.
Chloral hydrate and its preparations.
Chloroform.
Cocaine, preparations of.
Corrosive sublimate, preparations of.
Digitalis and its preparations.
Morphine, preparations of containing less than 1 per cent.
Nux vomica and its preparations.
Opium and all preparations of opium and poppies.
Oxalic acid and its soluble salts.
Precipitate, red.
Precipitate, white.
Mercuric iodide.
Mercuric sulphocyanide.
Strophanthus and its preparations.
Sulphonal.

The Committee recommends that preparations for use in connexion with agriculture, horticulture, or sanitation may be placed in a new third part of the Schedule, and they should be sold only by licensed persons subject to regulations to be made by the Privy Council. The articles proposed to be placed in this new Part III of the Schedule are (*a*) preparations containing arsenic exclusively for use in connexion with agriculture or horticulture; (*b*) preparations of tobacco or the alkaloid of tobacco exclusively for use in connexion with agriculture or horticulture, and (*c*) preparations of carbolic acid or its homologues for use as sheep wash or for any other purpose in connexion with agriculture, horticulture, or sanitation. In each case the preparation must be contained in a closed vessel distinctly labelled with the word "poison," the name and address of the seller and a notice of the special purposes for which the preparations are intended.

A minority report is presented by Mr. Walter Hills, an ex-President of the Pharmaceutical Society of Great Britain, who alleges that a survey of the evidence conveys the impression that a strong agitation against the salutary principle underlying the Pharmacy Act, namely, the competent technical training of the vendor, has been organized on behalf of manufacturers, proprietors, and agents of specifics containing poison; and that the demand for relaxation of the statutory restrictions emanates not from agriculturists or from horticulturists, but from those persons whose natural desire it is to promote the sale of their own particular preparations. Only two witnesses, he states, who might probably be described as users of poisonous compounds furnished evidence, but neither of them stated that he had had any practical difficulty in procuring what was necessary for his own requirements, though one of them desired to have the liberty of selling poisonous compounds without formality of any kind. Mr. Hills adds that "The point is strikingly exemplified by the remark of a witness, who stated as a reason for objecting to the Pharmacy Act that he could not readily introduce poisonous novelties through chemists and druggists. That objection is distinctly a manufacturer's objection, and is the predominant note throughout the inquiry." Mr. Hills contends that the administration of the Pharmacy Act by the Pharmaceutical Society of Great Britain has not interfered with the legitimate use of poisons for technical or manufacturing purposes, and does not prejudice or harrass either agriculture or horticulture, but that there is an urgent necessity for an efficient registration and supervision of every open shop in which poison is sold by retail.

He expresses the opinion that Part III of the Schedule, as suggested above, is unnecessary, and would be impolitic and unworkable. He concurs in the suggestions of the Committee with regard to the additions to the schedule of the Pharmacy Act only in respect to the following:

Part I.

Atropine and its preparations.
Cocaine and its salts.
Morphine and its salts, and preparations containing 1 per cent. or more than 1 cent. of morphine.
Picrotoxin.

Part II.

Acetanilide.
Cocaine, preparations of.
Digitalis and its preparations.
Mercuric iodide.
Mercuric sulphocyanide.
Morphine, preparations of, containing less than 1 per cent. of morphine.
Oxalic acid and its soluble salts.
Strophanthus and its preparations.
Sulphonal.

The supplementary report by Mr. Alexander Cross, M.P., who signs the majority report, deals with two points. He considers (i) that the control of the sale of such poisonous substances as may be required in trades and manufactures should be taken out of the hands of the Pharmaceutical Society, that power should be conferred on some public authority to deal with the list of articles under the new Part III as necessity may require, and to control, prescribe, and vary the regulations under which the sale of such substances shall be carried on. This he recommends because it is impossible to foresee the developments of trade or draw up an exhaustive or permanent list of articles proper to be placed in Part III. He considers that the Privy Council is the proper body to exercise these powers. (ii) He considers that country medical practitioners and their assistants should be exempt from the operations of the Pharmacy Act. It has, he states, been brought out in evidence (1) that a doctor's surgery in many districts is the only place where drugs can be obtained, some of which are poisons: (2) that a doctor could not always be in attendance, and could not afford to keep a fully-qualified man always on his premises; (3) that occasions frequently arise in which the doctor's assistant is compelled during the doctor's absence to dispense prescriptions containing articles which are called poisons: that this is a general practice unavoidable in the circumstances, and for the public convenience. He therefore considers that power should be given to local authorities to grant licences to suitable persons to assist medical men in dispensing prescriptions when it becomes necessary to do so in the absence of the medical man, whether such persons have passed the Pharmaceutical Society's examination or not.

PRESENTATION.—At a recent dinner-meeting of the Court of the Worshipful Company of Makers of Playing Cards, Past Master Dr. Alderman Theophilus Hoskin, J.P., was presented with a handsome silver salver bearing an inscription testifying to the valuable services he had rendered the Company as Master during 1901.

LITERARY NOTES.

Dr. G. Vivian Poore has won for himself a well-deserved reputation as a singularly independent and suggestive thinker on sanitary subjects. It has been, we learn, represented to him that a volume collected from his larger works on this subject might meet the wants of people living in remote places in the Colonies or elsewhere by furnishing them with correct principles of sanitation. Accordingly, Dr. Poore has prepared such a selection, which Messrs. Longmans will issue under the title *Colonial and Camp Sanitation*.

We learn that Dr. A. J. Ewart's treatise on *The Physics and Physiology of Protoplasmic Streaming in Plants*, of which an abstract was communicated to the Royal Society, is about to be issued from the Oxford University Press. The work contains seventeen illustrations.

The Scientific Press, Limited, announces a cheap edition (10s. 6d. net.) of Dr. Sisley's book on the London water supply.

In a recent issue of *Notes and Queries* Dr. J. A. H. Murray, Editor of the *New English Dictionary*, writes that he has had more letters as to the omission of the word "appendicitis" from that work than about any word in the language. He explains that as words in "-itis" are not (in origin) English in form but Graeco-Latin, they do not come within the scope of an English dictionary unless, like bronchitis, they happen to be in English use.

Messrs. W. B. Saunders and Co. will issue at once two new volumes in *Saunders's Medical Hand Atlas Series*—Atlas and Epitome of Diseases of the Mouth, Pharynx, and Nose, by Dr. L. Grunwald, of Munich, edited with additions by Dr. James E. Newcomb; Atlas and Epitome of Human Histology and Microscopical Anatomy, by Professor Dr. J. Sobotta, of Würzburg, edited with additions by Dr. G. Carl Huber. Messrs. Saunders have in preparation for early publication the following: *The Vermiform Appendix and its Diseases*, by Howard A. Kelly, of Johns Hopkins University; *A Textbook of Legal Medicine and Toxicology*, by Dr. Frederick Peterson, of New York, and Dr. Walter S. Hayne, Rush Medical College, Chicago; *A Practical Application of the Roentgen Rays in Therapeutics and Diagnosis*, by Dr. W. A. Pusey, and Dr. Eugene W. Caldwell; *Saunders's Year Book of Medicine and Surgery for 1903: A Textbook of Gynaecology*, by Barton Cook Hirst, M.D., University of Pennsylvania; *Tuberculosis*, by Dr. Norman Bridge, of Rush Medical College, Chicago; *A Textbook of Obstetrics*, by Dr. J. Clarence Webster, F.R.C.P.E., of Rush Medical College, Chicago; also two new volumes in their English edition of *Nothnagel's Practice*, namely, Diseases of the Pancreas, Suprarenal Capsules, and Liver, and Diseases of the Stomach.

We have received the first number of the *Stethoscope*, described on the title page as a "journal devoted to the cure or prevention of consumption." The object thus indicated is most excellent and praiseworthy, but we venture to doubt whether its attainment is likely to be promoted by the publication of portraits of the winners of the King's Sanatorium Prize or of interviews with physicians under the heading of The Man of the Moment. We will not say of the *Stethoscope*, as Dr. Johnson said of *The Rehearsal*, "that it has not vitality enough to preserve it from putrefaction," but regard for truth compels us to say that it has not the appearance of vigorous health. Weakly children, however, sometimes grow up into robust manhood, and the same may be true of journals.

Reference has already been made in the British Medical Journal to Professor von Düring Pacha's Report on Endemic and Hereditary Syphilis in Asia Minor. In an interesting review of that report which appeared in the *British Journal of Dermatology* Dr. George Ogilvie points out that von Düring is strongly opposed to the doctrine of the syphilitic origin of tabes and of "parasyphilis." The "chronic-intermittent" treatment with mercury as practised by Fournier he denounces as dangerous; to it indeed he attributes the frequency of nervous disorders in the statistics published by Fournier's school. Commenting on this subject Dr. Ogilvie says:

> The present tendency of the French school towards parasyphilism seems itself to be a kind of professional neurosis. One is certainly reminded of Mr. Lemuel Gulliver, surgeon, who, when reporting on his trip to Glubbdubdrib, indulges in "melancholy reflections," and observes, "how much the race of human kind was *degenerate* among us—(namely, the British nation)—*within these hundred years* past, how the *pox* under *all its consequences and denominations* had altered every lineament of an English countenance, shortened the size of bodies, unbraced the nerves, relaxed the sinews and muscles, introduced a sallow complexion, and rendered the flesh loose and rancid." This was written in 1727. It is the phantasmagoria of an embittered morbid mind, the "melancholy reflection" of a despondent sad man weighed down with the foreboding that he was to "die by top." Yet it reads very much like a passage occurring in a modern French address on "Parasyphilis," with its "stigmates dystrophiques," "infantilisme," "neurasthenie," "rabougrissement général," "un des facteurs les plus actifs et les plus rapides de la dégénérescence," "la grande corruptrice de la race humaine." Two centuries have elapsed since Dean Swift wrote the above, yet the English "now have thewes and limbs like to their ancestors."

The journal of a tour in the Highlands and western islands of Scotland made in 1800 by Dr. John Leyden, whose early death is referred to in the prelude to Scott's *Lord of the Isles*, will shortly be published for the first time. Leyden was a very remarkable man. He was born in 1775, and being intended to "wag his pow" in the pulpit, studied the arts, theology, and science at the University of Edinburgh. He had a marvellous aptitude for the acquisition of languages, and in the vacations he studied modern languages, including the Scandinavian, besides Hebrew, Arabic, and Persian. In due course he was licensed as a preacher, but his appearance was uncouth, and he was not successful in the pulpit. Leyden's name occurs frequently in Lockhart's *Life of Sir Walter Scott*. He was keenly interested in the ballad literature of Scotland, and placed his knowledge of it at the service of Scott when he was collecting materials for the "Border Minstrelsy." He contributed to Lewis's *Tales of Wonder* a ballad entitled The Elf King, and he edited the *Complaynt of Scotland*, with a preliminary dissertation and a glossary. He published a volume entitled *Scottish Descriptive Poems* in 1802, and for a time edited the third series of the *Scots Magazine*, to which he was himself a contributor both of verse and prose. As his prospects of ecclesiastical preferment were gloomy he accepted an offer of a commission as assistant surgeon at Madras, subject to the condition that he should get a medical diploma within six months. It is right to state that among his multifarious studies at Edinburgh he had given some attention to medicine, but even taking this into account, his success in obtaining the M.D. degree from the University of St. Andrews within the prescribed period must be taken to show an almost superhuman capacity for "cramming" or a decidedly accommodating disposition on the part of the authorities of that ancient seat of learning. Leyden, however, seems to have somehow gained sufficient knowledge to acquit himself creditably of his professional duties. In January, 1804, he accompanied as surgeon and naturalist the Commissioners over the Mysore provinces taken from Tippoo Sultaun, and prepared a report on the geology, crops, diseases, and languages of the districts traversed. In India he studied Sanscrit, and after a voyage to Penang he wrote a *Dissertation on the Languages and Literature of the Indo-Chinese Nations*. In 1807 he submitted to the Indian Government an elaborate essay on the Indo-Persian, Indo-Chinese, and Dekkan languages which led to his appointment as Professor of Hindustani in the Calcutta College. Soon afterwards he accepted the post of judge of the twenty-four pargunnahs of Calcutta, and later he was appointed Commissioner of the Court of Requests in Calcutta. In 1811 he was appointed assay master of the mint at Calcutta, and in the same year he accompanied Lord Minto to Java "to assist," as he said in a letter to his father, "in settling the country when conquered, and as interpreter for the Malay language." In Java, however, he found his death, for he got fever in an unventilated native library, and died after three days' illness. It was claimed for him that in eight years he had done almost as much for Asia as the combined scholarship of centuries had done for Europe; he had "nearly effected a classification of its various languages and their kindred dialects" He wrote grammars of the Malay and Pacrit tongue, and translated one or more of the gospels into Pashtu, Maldivian, Ballosh, Macassar, and Bugis. There seems to have been some ground for his boast that he was able to excel the famous Orientalist Sir William Jones in his particular sphere.

THE RECENT EPIDEMIC OF SMALL-POX IN LONDON.

The following note upon the report of the Medical Officer of Health of St. Pancras on the recent occurrence of small-pox is in continuation of those published in previous issues.

St. Pancras.

Dr. Sykes, the Medical Officer of Health of St. Pancras, has furnished his final report on the small-pox outbreak as it affected St. Pancras. There were 615 cases notified, with 122 deaths, yielding a fatality per cent. of 19.8. Dr. Sykes sets

himself to answer two leading questions: First, what was the reason for the decrease in the mortality from small-pox in London from 1886 to 1889? and, secondly, what was the reason for the increase of the prevalence of small-pox in London from 1900-2? In reply to the first, after furnishing various data, he concludes that the decrease subsequent to 1885 was due to the removal of the small-pox hospitals of the Metropolitan Asylums Board out of London, and to the improved system of ambulance removal assisted subsequently by the Infectious Disease Notification Act of 1889, and the consequently increased vigilance and activity of the sanitary authorities. As to the increase in 1900, he believes that to be due to the gradually accumulating number of susceptible persons reaching such a proportion as to outweigh the advantage gained by the removal of the small-pox hospitals out of London. With these two opinions most medical officers in London will find themselves in agreement, and the same conclusions have already been expressed many times in other terms. Dr. Sykes, however, furnishes in support of the unvaccinated condition of the community some striking figures for St. Pancras. In 1881 7.9 per cent. of the children born were unaccounted for as regards vaccination, and this percentage increased with more or less regularity to 1899, when it had reached the figure of 43.9. In 1900 there were 35 per cent. of the children born unaccounted for as regards vaccination. These figures, particularly for 1899, were in excess of the same percentage for London as a whole, which in the same period had risen from 5.7 to 27.7. The methods and procedure for the prevention of small-pox adopted in St. Pancras are discussed in the report, which also contains many figures relating to London generally.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

DURING the weeks ending January 17th and 24th, the deaths from plague in India numbered 19,224 and 22,954 respectively. During the two weeks in question the deaths from plague in the several districts were returned as follows: Bombay districts, January 17th, 8,969; January 24th, 10,747; Bengal, 2,142 and 3,060; the North-West Provinces and Oudh, 2,291 and 2,954; the Punjab, 2,442 and 2,627; Mysore State, 806 and 926; the Central Provinces, 605 and 850; Madras districts, 683 and 848; the Berars, 411 and 596. In Bombay city the deaths rose from 443 during the week ending January 17th, to 495 during the week ending January 24th. The issue of railway tickets for intending pilgrims from Allahabad and Cawnpore districts to Garhakota in Sangor district have, owing to the prevalence of plague, been prohibited until March 13th. It will be seen from the above statements that plague has increased in all the most seriously-affected centres. Plague appears to be established all along the Nerbudda Valley, and at Jubbulpore especially the disease is particularly virulent.

EGYPT.

During the weeks ending January 25th, February 1st, and 8th, the number of fresh cases of plague in Egypt were returned as 7, 4, and 4 respectively, and the deaths from the disease in the corresponding weeks amounted to 3, 2, and 0. The reappearance of the disease, in the opinion of the Director-General, Sanitary Department, is probably due to infection which has been perpetuated since last year amongst rats. The village of Barshouni-el-Koubra, in which the disease reappeared, is in the Toukh district of the Galioubieh province, and the outbreak is probably due to the migration of infected rats from the adjacent village of Sayapa, where plague prevailed last summer. The sanitary authorities in Egypt are aware of the possibility of similar outbreaks in or near towns or villages where plague existed last year, and a careful watch is being kept accordingly. Two of the cases occurred in the adjoining village of Tant-el-Ghesireh. Since November 19th, 1902, no cases of plague have been met with in Alexandria.

MAURITIUS.

During the weeks ending February 5th and 13th the fresh cases of plague in Mauritius numbered 5 and 4 respectively, and the deaths from the disease 4 and 1.

SOUTH AFRICA.

Cape Colony.—During the weeks ending January 17th and 24th no fresh cases of plague were reported from any place in the Colony. Plague-infected rats have been found in Port Elizabeth during the period in question, the last being discovered on January 18th. There is no report to hand as to the course of plague in Durban, Natal.

HONG KONG.

During the week ending February 7th 12 deaths from plague occurred in Hong Kong. During the week ending February 14th 2 fresh plague cases and 2 deaths from the disease were reported.

SHIPPING.

A Reuter telegram, dated Palma, February 17th, states that an Italian barque, coming from the United States and bound for Marseilles, has arrived there with several cases of a malady believed to be plague on board. Two men died on the voyage.

CHOLERA IN EGYPT. It is satisfactory to be able to state that during the week ending January 26th there were no fresh cases of cholera recorded in Egypt. During the previous week 4 cases of cholera were notified in Alexandria, the last case being met with on January 18th.

ASSOCIATION NOTICES.

COUNCIL.

NOTICE OF MEETING.

THERE will be a Special Meeting of the Council on Wednesday, February 25th, at 10.30 o'clock in the forenoon, in the Council Room of the British Medical Association, 429, Strand, London, W.C.

February 12th. GUY ELLISTON, *General Secretary.*

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1903.

MEETINGS of the Council will be held on April 22nd, July 8th, and October 21st in the Council Room of the British Medical Association, 429, Strand, London, W.C.

ELECTION OF MEMBERS.

ANY candidate for election should forward his application upon a form, which will be furnished by the General Secretary of the Association, 429, Strand. Applications for membership should be sent to the General Secretary not less than thirty-five days prior to the date of a meeting of the Council.

GUY ELLISTON, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

THE Council Room will be required for the purpose of a meeting of the Council on Wednesday next, February 25th, and therefore the Library will be closed on that day.

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The next meeting of this District will be held at Brooke House, Upper Clapton, on Thursday, March 19th, at 8.30 p.m. The chair will be taken by Mr. Powell, Vice-President of the District. Members desiring to read short papers or to show cases are requested to communicate with the Honorary Secretary as soon as possible.—C. J. MORTON, 56, Orford Road, Walthamstow, Honorary Secretary.

BORDER COUNTIES BRANCH.—The next meeting of this Branch will be held at the George Hotel, Penrith, in the afternoon, on Friday, February 27th. The following papers and communications will, amongst others, be submitted to the meeting:—Dr. Edington (Penrith) will read Notes on Three Cases of Tumours of the Brain. He will show two of the patients and some microscopical preparations of the blood in pernicious anaemia. Dr. Livingston (Dumfries) will give his Notes on a Complicated Case of Rupture of the Bladder. Dr. Altham (Penrith) will read Notes on a Case of Induced Abortion with an Unusual Complication. Dr. Donald (Carlisle) will read a Preliminary Note on the Treatment of Prolapsus Uteri. Dr. Thomson (Penrith) has also promised a paper. Dinner will be held in the hotel after the meeting.—FRANCIS R. HILL, 12, Bolton Place, Carlisle, Honorary Secretary.

EAST ANGLIAN BRANCH.—*Preliminary Notice:* The spring meeting of this Branch will be held at the Green Dragon Hotel, Wymondham, on Thursday, March 26th. Lunch at 1.15. Any member wishing to show cases or specimens, or to read a paper at the meeting, should communicate with Mr. H. A. Ballance, Norwich.—B. H. NICHOLSON, Colchester, General Secretary.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.—A meeting of this District will be held at St. Bartholomew's Hospital, Rochester, on Friday, March 6th, at 3.30 p.m.; Mr. F. W. H. Penfold in the chair. Agenda:—Minutes of previous meeting. Place, date, and Chairman of next meeting. Mr. F. Jaffrey, Assistant Surgeon to St. George's Hospital, will read a paper on the Symptoms and Treatment of Acute Appendicitis. Dr. E. J. Edwardes (Imperial Vaccination League) will read a paper entitled The Position of this Country as regards Vaccination Legislation.—LUDFORD COOPER, 19, Victoria Street, Rochester, Honorary Secretary.

BATH AND BRISTOL BRANCH.—A meeting of this Branch will be held at the Royal United Hospital, Bath, on Wednesday, February 25th, at 8 p.m.; Dr. H. Waldo, President. The following communications are expected: Dr. E. W. Hey Groves: A specimen of Diffuse Carcinoma of the Stomach (microscopic slides). Dr. Chas. Begg: Climates for Invalids and Convalescents. Dr. J. W. Malim: A Case of Lichen Planus. Dr. Preston King: Missing Links in Joint Disease. Mr. W. M. Beaumont: A Portable Sterilizer.—W. M. BEAUMONT, Bath; J. MICHELL CLARKE, Clifton, Honorary Secretaries.

THE "PROTECTION" OF PROFESSIONAL NURSES.—A Bill has been presented by the Illinois State Association of Graduate Nurses to the State Legislature, providing for the licensing and protection of professional nurses. It is proposed to submit all nurses to a State test, in order to prevent untrained persons from assuming and working under the title of "graduate" or "trained" nurse.

SPECIAL CORRESPONDENCE.

PARIS.

Académie de Médecine: Regulations for carrying out Compulsory Vaccination and Revaccination under the New Public Health Act: The Organisation of the Vaccine Service in France.—Visit of the President of the Republic to the Broca Hospital.—The Crusade against Alcoholism.

By the new Public Health Act vaccination becomes compulsory in France during the first year of life, and revaccination during the 11th and 21st years, parents or tutors being held personally responsible for the carrying out of the law. The Comité Consultatif d'Hygiène Publique de France and the Académie de Médecine are charged with the duty of advising the Government as to the necessary measures to be adopted for carrying out the Act.

It has not been found necessary to create an entirely new organization for the provision of calf lymph, as the sources of animal lymph are numerous in France. In addition to the Académie de Médecine, regional vaccination institutes exist already at Bordeaux, Lyons, Marseilles, Lille, St. Etienne; military institutes at Algiers, Bordeaux, Châlons, Lyons, Marseilles, and at the Val-de-Grâce Hospital in Paris. There are also private establishments at Montpellier, in Paris, and at Tours, which provide vaccine for numerous departments, to the Assistance Publique in the Department of the Seine, and to several of the large administrative bodies. Already several departments have organized free vaccination most successfully, and distribute vaccine to doctors and midwives. The vaccine institutes in working order at the present can cope with the extra demands consequent on the application of the new Act, without the State being obliged to establish other vaccine institutes.

The Vaccination Commission of the Académie de Médecine, after consideration of the views expressed by the Comité Consultatif d'Hygiène Publique, has recently presented a very interesting report to the Académie. M. Kelsch was the reporter, and the report, with certain modifications, was adopted at the meeting of the Académie de Médecine on February 10th. The question is treated in two main divisions: (1) Measures concerning vaccine; (2) measures concerning vaccination.

The organization of the service as regards the vaccine is such an important subject that the following portion of the regulations will be found interesting:

I.—*Measures Concerning the Vaccine.*

Article I.—Vaccination and revaccination shall be practised exclusively with animal vaccine. The animal vaccine is taken directly from the inoculated calf, or used in the state of glycerinated pulp. But direct vaccination from calf to arm nevertheless remains the method of choice, and can be employed in every town which possesses an institute for the preparation of vaccine.

In cases in which any new method may be proposed, it cannot be applied without the approval of the Académie de Médecine and the Comité Consultatif d'Hygiène Publique de France.

Article II.—Animal vaccine must only be provided by official institutes or their branches, or private institutes placed under State control. No vaccine shall de delivered more than three months after being taken from the calf.

Vaccinating physicians keep for this purpose a special register with a series of columns in which are successively inscribed the numbers of the actual service in numerical order, the date of receipt of the vaccine, the name of the institute which provided it, the number of the delivery book of this institute, the quantity of the product sent, the day and the sitting at which it was used, the number of children vaccinated with it, the results obtained. An extra column is kept for remarks. This register must always be brought to the *seances* of vaccination.

Article III.—The vaccination service shall be organized on a uniform plan throughout the extent of the territory, in order that the scientific and practical results may be compared, and in consequence utilizable for the amelioration and perfecting of the service. This organization shall include notably the provision of vaccine, the method of appointing and paying the vaccination officers, in fact the control of the institutes and the vaccination service.

Article IV.—The vaccine service of the Académie de Médecine is transformed into the "Superior Vaccine Institute" charged with (1) keeping up research for and the distribution of the best vaccine cultures; (2) improving the production of vaccine and vaccination; (3) examination of the vaccine put on the market.

The Director of the Superior Vaccine Institute is named by the Minister on the proposal of the Académie from among its own members. He shall submit each year to the Académie, to be addressed to the Minister, and with the documents furnished by the latter, a report on the working of the vaccination services in each department, and exact statistics of the cases of small-pox which have been notified in each department. (This is the best means of having an exact idea of the rigour with which the new law is carried out.)

In the report as originally presented, Article I contained a clause by which in cases when it was absolutely impossible to obtain animal vaccine the human vaccine might be used as an exceptional measure. This gave rise to a discussion, in which MM. Proust, Landouzy, and Pinard, who called attention to the dangers of syphilitic inoculation, took part. M. Roux said if one foresees that a public vaccinator may be obliged to use human lymph, one must suppose that the vaccination service will be so badly organized that animal lymph will be wanting. But the Academy by Article IV takes the responsibility of meeting all needs for vaccine. In the second division of the report ("measures concerning vaccination") it was decided that the vaccinating officer shall be nominated by the authority and have an official character. Each person, however, is free to be vaccinated by a physician of his choice on condition that he produces when demanded a medical certificate stating the results of the operation. A foreigner who comes to live in France must produce proof that he has been vaccinated, and if an adult that he has been revaccinated at the latest during the course of his 21st year.

The President of the Republic, continuing his series of visits to the Paris hospitals, recently visited the Broca Hospital. This, the old Lourcine Hospital, was opened in 1836, being reserved for women suffering from venereal diseases. The President found the old buildings in which are the medical wards to be unworthy of Paris. M. Felix Faure, when as President he visited the hospital in 1898, made the same remark, and thought they should be pulled down and new wards erected. The President was then conducted through the more modern surgical wards by Professor Pozzi.

The question of alcoholism continues to give rise to much heated discussion. The Académie de Médecine is considering the dangerous essences used in the manufacture of "apéritifs," such as absinthe, vermouth, etc., with a view to proscribing their use. The wine merchants' syndicate has replied to the poster of the Assistance Publique on the dangers of alcoholism[1] by a counter-poster calling attention to the enormous quantities of rum and spirits bought annually by the Assistance Publique for use in the hospitals; they also make great capital out of an article in the *Annales de l'Institut Pasteur* by M. Duclaux, in which he quotes experiments showing the nutritive value of alcohol to be greater than that of sugar and starch. The poster says: "Alcohol is not a drink, it is a food; use but do not abuse it."

ABERDEEN.

The Finances of the Royal Infirmary.—The Treatment of Consumption.—Cessation of Notification of Measles and Whooping-Cough.

The annual meeting of the managers of the Aberdeen Royal Infirmary was held on February 11th. The accounts for the year again show a deficit of over £1,500. That such a condition is accounted for by the fact of the legacies for the year being more than that amount less than those received in the previous year is only a partially satisfactory answer to the question of how such a loss occurs. By Lord Mount Stephen's beneficence the debt on the institution was removed. Again he has given, we are told, the revenue amounting to £1,000 a year or thereabouts on securities which he has transferred for an endowment to the infirmary, and yet the financial status is not what it should be. While legacies have to come in as revenue the financial status will not be sound. There is some reason to take a somewhat brighter outlook, however, than in past years. The subscriptions from trawl owners, ship owners, and especially from country parishes, have increased markedly, and the official collector has been received cordially on approaching the working classes in the town. The subscriptions from patients, though slightly above those of last year, are deficient. On the other hand more work than ever has been done in the institution, and the average cost per bed (£49 6s. 5d.) shows that due attention has been paid to economy. Mr. Bryce, M.P., who seconded the report, alluded warmly to Lord Mount Stephen's benevolence, and spoke of the efficiency of hospitals as a test of the civilization of communities.

An important feature of the Chairman's report was his mention of the consideration which must be given in the early future to some plan for a separate establishment for the treatment of consumption.

[1] British Medical Journal, February 7th.

The Town Council has removed whooping-cough and measles from the infectious diseases notifiable in the city of Aberdeen under the Infectious Diseases Act of 1889. The recent epidemics of these diseases have been a source of considerable expenditure by the town.

MANCHESTER.

Independent University for Manchester.—Royal Infirmary.—Northern Hospital.—Lead in Water derived from Peat Moss.—Death of Sergeant Nish.

EVENTS of great moment affecting the future of medical education in Manchester have either occurred or are about to occur. One of the most important, which cannot fail to have far-reaching results on medical education, not only in Manchester but also in Lancashire and Yorkshire, is the decision of the Committee of the Privy Council that separate charters should be granted to Manchester and Liverpool, a decision confirmed by His Majesty in Council. The document setting forth this decision and recalling the history of the movement is singularly able, and is drafted in a statesman-like fashion. After the preamble comes the pregnant clause as to the interests of higher education in the north of England and the expediency of co-operation between universities of a common type and with cognate aims. Liverpool and Manchester have already submitted draft charters for their respective universities, and the Privy Council Committee, before settling the charters, practically invites the Yorkshire College to submit a draft charter incorporating a university in Yorkshire. The last clause of the report is important. It reserves power to the Crown to direct an inspection of the universities, buildings, examinations, etc., and recommends the appointment of external and independent examiners in all examinations for degrees. External examiners have always formed a prominent feature in the system of examinations of the present Victoria University. The safeguards of inspection are amply provided for. It is too soon to forecast when the new universities will come into being; that will, in part, depend on the progress made by Yorkshire in framing its charter, and in securing the necessary funds. Manchester has had to wait many years for its independent university, but its pioneer work has brought forth much good. It has taken over fifty years for the first and largest provincial college in England to develop into an independent university. Great as has been the progress and influence of Owens College as a college, its influence as a university will be far greater.

The other event—still in the womb of time, but undergoing rapid maturation—is the solution of the infirmary question as regards rebuilding on a new site. The new Board of Management has only been in office about three months, and it has been most energetic. Two Committees are working concurrently, one for the sale of the present site, and the other to secure a new site. The difficulties of the latter Committee are far from insuperable. If the Stanley Grove site be considered the best available, it should not be impossible to come to terms with the Southern Hospital.

"What's in a name?" Evidently the governors of the Manchester Clinical Hospital for Women and Children believe in the virtue and augury of a new name, for they have resolved that henceforth this hospital shall be called "the Manchester Northern Hospital." The hospital was originally founded in 1856, largely, if not mainly, by the exertions of German residents. It serves the northern part of the city and some outlying towns, and has done a large amount of valuable work, although the present hospital was not built until 1867. It is hoped that under the new auspices it may soon be freed from burdensome debts, and have an income worthy of its usefulness and sufficient for its needs.

A very important report on "plumbo-solvent" waters has been issued by the Local Government Board. It deals with twenty-three gathering grounds in Lancashire and Yorkshire. It has long been known that certain moorland areas yield water which may be a potential source of danger to the consumer. This is due to the fact that many of these waters dissolve the lead of water pipes whether old or new. This faculty of dissolving lead depends on acidity, and the acidity in turn upon the presence of peat in the gathering area. When the drainage from the peat reaches the water supply there may be water obtained from other areas that may neutralize the acidity of the peat area, and thus the bad effects of plumbo-solvency may be counteracted. Dr. Houston found a few years back that in Sheffield, which has a "high" and a "low level" supply, the high level water had acidity, and the low was neutral. On treating the high level water with limestone, lead poisoning was no longer observed.

Many generations of students of Owens College will recall the well-known figure of Sergeant J. Nish, who for many years was chief porter. Sergeant Nish retired some years ago on a pension; he had long since passed even four-score, and died peacefully on Tuesday last.

SHEFFIELD.

The Proposed Yorkshire University.—The Position of University College.—Its New Buildings.

THE decision of the Privy Council to recommend the grant of a charter for a University in Liverpool and as a corollary to suggest the foundation of a Yorkshire University was not altogether unexpected, and the local opinion now is that every effort should be made to press the claim of Sheffield to be considered along with Leeds in the formation of a University for Yorkshire. They are both Yorkshire cities, each having well equipped University Colleges, and with a population nearly alike. Any claim, therefore, if it should be set up, for preference of Leeds will be stoutly resisted in Sheffield.

This position was clearly set forth in the report of the Council of University College to the Court of Governors in November last, and there is no reason to expect that it will in any way be departed from. The disruption of the Victoria University was held to be undesirable in the interests of higher education. Should however, this event take place the Sheffield University College would claim participation on equal terms with the Leeds College in the creation of a Yorkshire University. The union of the two colleges would make them strong enough worthily to sustain University prestige, and the exclusion of the Sheffield College would be prejudicial to the true interests of higher education in the county. The Council further petitioned the Privy Council to the effect that in the event of separate Universities being incorporated for Liverpool and Manchester, a separate university should be granted jointly to the Yorkshire College of Leeds and the University College of Sheffield, and not to the Yorkshire College of Leeds alone. Though the Sheffield University College is not specifically named in the order of the Privy Council, it is clearly referred to in this paragraph: "The authorities of the Yorkshire College at Leeds should have the opportunity of submitting a draft charter incorporating a University in Yorkshire, and that the institutions concerned should be invited to consider," etc. The University College, Sheffield, is the only other University College in Yorkshire, and is without question an "institution concerned," and the Sheffield authorities will carry out the policy outlined in the report just mentioned. It should be stated that the representatives of the Sheffield College attended a meeting of Yorkshire educational authorities, convened by the Leeds College. This meeting was held in London, and it was decided to leave the question of a University for Yorkshire for consideration at a county meeting in Yorkshire to be convened after the petitioners for the break-up of the Victoria University should have been heard and decided.

The question of the creation of a University for Yorkshire comes at a time when the citizens of Sheffield have made great efforts to provide funds for the erection of suitable college buildings, in consequence of the inadequacy of the old buildings to the present needs of the College. It is satisfactory to be able to state that funds have been forthcoming sufficient for the erection of a college replete in all departments, and well able to hold its own among similar institutions in this country. The site was procured some considerable time since. Plans have been proposed and adopted, and every effort will now be made to press forward with the buildings. It may be noted in conclusion that the medical department of the new college buildings is well up-to-date, and eminently fitted for an increasing and progressive medical school.

PHYSICAL TRAINING IN NEW YORK SCHOOLS.—At a recent meeting of the New York Board of Education Dr. Luther H. Gulick was appointed Director of Physical Training for the public schools in the City of New York. Dr. Gulick has for fifteen years been in charge of the physical training department of the Young Men's Christian Association of New York, and in 1900 was elected President of the American Association for the Advancement of Physical Education.

CORRESPONDENCE.

DISTRIBUTION OF HOSPITALS IN LONDON.

Sir,—With the view of preventing the unnecessary formation of hospitals and institutions for the gratuitous treatment of sick and injured persons, and the depletion of public charity arising out of this, I drew attention to this subject in the following letter which appeared in the *Times* of February 4th. I know that the letter has escaped the notice of many of my professional brethren who share with me a great interest in this subject, and I therefore venture to ask your permission to reproduce it:

Sir,—I read with satisfaction in your paper of to-day the letter from the secretaries of King Edward's Hospital Fund stating that an endeavour is to be shortly made to amalgamate or absorb some of the smaller special hospitals. If this proposal is carried out in a liberal spirit it is likely to be successful and productive of good results.

My object, however, in asking for space in your columns is to raise the question as to what may happen when the "combine" is completed. What is to prevent any one starting a hospital in a house with a medical staff (both perhaps unfitted for the purpose), and scattering broadcast by circulars and advertisements pitiful appeals to the public for the new institutions with the old, old story as meeting "an urgent demand"? How is this often unnecessary depletion of the charitable offerings of the public, invariably in some degree practised with success, to be continuously provided against? Surely the time has arrived when the necessity for the existence of all hospitals should be determined in some other way than that of private enterprise, often unfortunately of a very questionable nature. Some legislation upon this point seems necessary. All hospitals should be registered or State-approved either imperially or locally before individuals are permitted to launch them and the public are urged to support them. In some countries I understand it is illegal to start a hospital without the permission of a responsible Government or municipal department. Something of this kind is required in England, otherwise the amalgamation or absorption by existing hospitals is useless.

Though I am no advocate for the support of hospitals by the State or the municipality I am strongly in favour of their being legally licensed or registered as I have described. Further, I think the removal of a hospital from one locality to another should be the subject of a carefully conducted investigation by official representatives not only in the interests of the general public, who will have to pay for it, but in those of the medical profession and the patients who are to be benefited by it. A matter of this kind should not be left solely to private enterprise.

I am led to offer these remarks by a statement made in the British Medical Journal of February 7th, to the effect that it is proposed to convert the Bolingbroke Hospital into a free general hospital. It appears to me that this is an unnecessary addition to the London hospitals and is not warranted so far as I can gather from either facts or figures.

Relative to its area, London is over-hospitaled and its population unnecessarily pauperized. Look at the position of the eleven hospitals with schools attached at present in existence, and then at the advertising columns of the *Times*. To judge from the latter, they are all, with the exception of one or two, approaching, from their own descriptions, a state of chronic bankruptcy or mendicancy. Surely it would be better to widen the area of the existing teaching hospitals by the transference of one of them, rather than to provide an additional hospital for which "an appeal will shortly be issued to the general public for funds."

Looking at the map of London, would it not be advisable, judging from its propinquity to other hospitals and the somewhat restricted nature of its site, to transfer King's College Hospital to the south of the Thames than to make further demands on the charity of the public?

Before the creation of a new general hospital in London is sanctioned, I think its necessity should be clearly determined by a more representative body than as stated in the Journal, —the governors of the Bolingbroke Hospital.

These are matters in which public interests are seriously concerned.—I am, etc.,

Lower Berkeley Street, W., Feb. 13th. Reginald Harrison.

CERTIFIED MILK.

Sir,—Will you let me contribute a few words to the recent discussion of this subject in the British Medical Journal in support of Dr. Coutts's proposal that the scheme he suggests should be taken up by the authorities of the British Medical Association? With almost all that Dr. Coutts and Dr. Ashby have said in this matter I am in accord. With the former I only disagree when he, as it seems to me, under-estimates the value of milk supply according to the methods of Dr. Rotch as carried out at the "Walker-Gordon" laboratories; and with the latter, when he says that the difficulties of supervising the farms would render valueless such certification as Dr. Coutts desires. Some, at least, of the more crying evils of the present neglect of milk supply would doubtless be lessened or abolished by the institution of such a system as has been found possible in the United States, and efforts made in this direction should certainly not be blocked by the objection that such a system is not ideally the best. At present, even if the Rotch method were generally accepted as approximately perfect in affording the best substitute for mother's milk, the additional cost of milk so supplied is prohibitive in many cases, and notably in those which are nationally of the highest importance—the children of the masses. In a serious difficulty like this surely the principle of the "half-loaf" comes in; and the desirability of London and the provinces generally of Great Britain and Ireland following in the wake of the pioneers of reform in the United States and Lancashire appears to be incontestable.

Dr. Coutts rightly regards the question as one of national interest; he might well have used the magic word "imperial." If the members of the British Medical Association could in their corporate capacity thus secure even approximately wholesome food for infants who cannot be properly suckled, and in their individual capacity convert to righteousness the hosts of mothers who refuse to suckle their infants at all, they would indeed deserve well of the commonwealth.—I am, etc.,

Harley Street, W., Feb. 15th. H. B. Donkin.

THE VIRCHOW MEMORIAL.

Sir,—Allow me to inform your readers that the subscription for the Virchow Memorial will close at the end of the present month.

So far, 97 subscribers have contributed £225 1s. 6d.

Further contributions ought to be sent before February 28th to the Honorary Treasurer of the Virchow Memorial, care of Messrs. Robarts, Lubbock and Co., 15, Lombard Street, London, E.C.—I am, etc.,

Felix Semon,

Wimpole Street, W., Feb. 16th. Honorary Secretary.

THE PROPOSED UNIVERSITY FOR YORKSHIRE.

Sir,—Although the Yorkshire College has consistently maintained that the dissolution of the Victoria University is against the best interests of higher education in the North of England, yet the decision of the Privy Council has caused no sort of alarm for the future. Nor does the Department of Medicine feel its foundations attacked, since the Leeds Medical School had an independent reputation for fifty years before the Victoria University was contemplated.

The decision of the Privy Council to defer further action until the Yorkshire College has presented its draft charter is a definite acknowledgement of its just claims to recognition.

The feeling here is that the federation of colleges into a university has shown itself of insufficient stability in the past to warrant its repetition in the future, and therefore there must naturally be a new university in Leeds.

The recommendation of the Privy Council in regard to future co-operation in the matter of examinations causes no surprise. We have no misgiving but that Yorkshire will place at the disposal of the College authorities funds to satisfy its legitimate aspirations in the direction of our new university.—I am, etc.,

De Burgh Birch,

February 18th. Dean, Department of Medicine, Yorkshire College.

THE SALE OF POISONS IN OPEN SURGERIES.

Sir,—Will you kindly give me space in your next issue to reply briefly to two letters in the British Medical Journal of February 14th?

Dr. Brown, in his very able letter, accuses the General Medical Council of being the catspaw of the Pharmaceutical Society—indeed, of going beyond that body in regard to prosecutions for the illegal sale of poisons. I have said before, and I assert again that the Council took special pains to be sure that it was taking action against certain medical practitioners on totally different grounds than from any consideration whatever for the interests of pharmaceutical chemists.

The law of the land is absolutely clear, in so far that it forbids the sale of scheduled poisons by the hands of any one except those of a qualified doctor or qualified druggist. So much no one can deny. Neither can it be supposed by any

reasonable person that Parliament will be likely to relax such restrictions deliberately made for the public safety.

When a medical practitioner knowingly allows an unqualified assistant to dispense or sell scheduled poisons, whatever may be the technical or strictly legal view of his conduct on the broad principle of justice that *qui facit per alium facit per se*, that practitioner is guilty of breaking the law. The General Medical Council has declared that wilful breaches of the law of this kind amount to infamous conduct in a professional sense, and I defy any thoughtful, unprejudiced person belonging to our profession, or outside of it, not to say that the General Medical Council in so acting is right.

But partly, I frankly allow, by the blundering of the General Medical Council's law advisers, the further question has been raised of the right of medical men to dispense by the hands of unqualified dispensers drugs outside the category of scheduled poisons. The Council no more forbids the dispensing of ordinary drugs than it attempts to proclaim the sale of a tooth brush or a tablet of soap in an open shop, "infamous conduct in a professional respect." With such practices the General Medical Council, as a Council, takes no concern, whatever individual members may think of them. They may be a disreputable means of making a livelihood, or they may be carried on from the most philanthropic motives.

As a legal court concerned with medical morals it has no right to inquire into the motives of any one carrying on a business on lines which satisfy the law; and so all Dr. Brown's strictures are really beside the one single question. Did the gentlemen he mentions allow the law against the sale of poisons by unqualified persons to be knowingly broken? That was and is the question—and the sole question—as far as the Council, as administrators of the Acts of Parliament under which it is constituted and acting in the public interests, was concerned; only one answer was possible, namely, to prosecute those who apparently offended against the law.

Concerning "M.D.'s" letter (I wish he had signed his name, though if it were necessary I might make a good guess at it). He asks me what authority I have for the statement I made in my letter in the JOURNAL as to whether a medical practitioner was not likely to be prosecuted by the General Medical Council, if he took pains to prove that he had absolutely forbidden his assistants to dispense scheduled poisons in his absence. I confess at once I have no authority for such, but after serving for so many years in the Council, I think it may be allowed that I was not likely to say what I did say, unless on substantial grounds. Why getting his assistant to "sign an agreement (*sic*) that he was not to sell scheduled poisons on pain of instant dismissal" should look like conniving at a defeat of the Pharmacy Acts "beats Banagher."—I am, etc.,

Dingwall, N.B., Feb. 16th. WILLIAM BRUCE.

DEATH UNDER CHLOROFORM.

SIR,—My views on chloroform were first placed before the profession in their complete form in a book which was published in the year 1901. They were founded upon the well-known principles of Syme, and their confirmation by the experiments of the Hyderabad Commission, and were backed up by extensive clinical experience. Drs. Gaskell's and Shore's criticism of the work of the Hyderabad Commission was published in advance of a report by them to the Hyderabad Government in the BRITISH MEDICAL JOURNAL of November 21st, 1891. Their report was based mainly on six cross-circulation experiments with chloroform on dogs. On February 11th, 1893, I published an account of several cross-circulation experiments which were performed in Hyderabad for the purpose of verifying or disproving Drs. Gaskell's and Shore's results. On March 2nd, 1893, Lord Lister, then Sir Joseph Lister, wrote to me regarding what he termed "the very striking results of your cross-circulation experiments," and, he added, "they seem to me to admit of no other interpretation than that which you have placed upon them." This interpretation was that they completed the proof that chloroform has no direct action on the heart and circulation. On July 7th, 1894, Drs. Gaskell and Shore performed a standard cross-circulation experiment in my presence at Cambridge, in order to demonstrate to me that their experiments were correctly carried out. Next day, July 8th, Dr. Gaskell wrote me a letter, a copy of which is to be found in my book, to inform me that on *post-mortem* examination of the "fed" dog he had discovered that one vertebral artery had accidentally been so imperfectly ligatured that some of the blood, which was supposed to be going to the heart alone, had access to the animal's brain. The discovery of this flaw vitiated the results of Drs. Gaskell's and Shore's previous cross-circulation experiments, and it established without one word more from me the accuracy of mine, and consequently of my view of the action of chloroform on the heart. This retrospect is necessarily most imperect, but it sufficiently demonstrates that Professor MacWilliam is flying in the face of facts when he asserts that my views have been shown to be erroneous.

It seems to me that Professor MacWilliam in his interesting remarks about asphyxia has somewhat missed the point when he adduces the collapse in the final stage of this condition as evidence that loss of arterial tone is not common to all forms of death. Can it be said that collapse occurs before the final fall of the blood pressure which is due to cardiac failure? Whatever the state of the small arteries may be up to the moment of dissolution it is generally possible, experimentally, to revive an asphyxiated animal up to the time of failure of the heart, and when this failure does take place death follows with its usual signs, among others dilatation and loss of tone of the arteries.

Professor MacWilliam admits that the effect of inversion in raising the blood pressure is due to gravity. Since he also states that he never held such an absurd opinion as that loss of arterial tone is peculiar to death from chloroform, it is clear that there was nothing in any way remarkable in Dr. Pennell's case. It appears to have been an ordinary example of death from accidental overdosing with chloroform, in which the respiration stopped first. This was followed by failure of the circulation and death from stoppage of the heart.—I am, etc.,

Harley Street, Feb. 14th. EDWARD LAWRIE.

SIR,—It is somewhat surprising to read in Mr. Rickard W. Lloyd's letter that he advocates the administration of chloroform for the removal of adenoid growths in the nasopharynx. The disagreeable symptoms and after-results could easily have been avoided if nitrous oxide gas had been given, for in such cases it is generally admitted that deep narcosis is neither safe nor indeed necessary.

Few anaesthetists can administer chloroform with such accuracy as to retain the cough reflex to the exclusion of the deeper ones—a matter of the greatest importance in operations on the throat (adenoids and tonsils).

During a period which extends over 10 years I have given nitrous oxide gas, supplemented on rare occasions by the addition of a small quantity of ether vapour, to over 6,000 patients, with every satisfaction to the operator, and, moreover, happily without untoward results.

Would it, therefore, not be better and more advantageous in every respect to endeavour to diminish the period of anaesthesia, by increased dexterity and expertness on the part of the surgeon, rather than to subject the patient to the extra danger of an uncertain and necessarily prolonged narcosis under chloroform?—I am, etc.,

W. G. HOLLOWAY, M.D.Camb.,
Assistant Surgeon, and late Anaesthetist to the Central London Throat and Ear Hospital.

Mayfair, Feb. 16th.

THE POOR-LAW MEDICAL SERVICE IN IRELAND.

SIR,—It is a strange circumstance, and one thoroughly characteristic of the Irish Poor-law Medical Service, that so little has been heard of the great increase in the duties of the dispensary medical officers since the passing of the Local Government Act without any increase in salaries. All other Poor-law officials were compensated for increased duties, but as usual the doctors were forgotten.

Some of these extra duties are:

Requisitioning a supply of drugs at least four times a year, weighing each drug and comparing weight with invoice, taking at least three samples from each consignment of drugs and forwarding them to the analyst, packing the empty bottles and packages securely, and leaving them ready for removal by the contractor, for whose benefit a complete list of same must be made out.

Packing up and transmitting the dispensary books to the Board of Guardians monthly.

Reporting all infectious cases to the Local Government Board as well as to the district council, with full particulars as to age, residence, etc., of patient, cause of disease, and steps taken to prevent its spread. Keeping a special register of all sanitary reports.

Visiting all midwifery cases for which a ticket is presented. Formerly this was necessary only in cases which upon inquiry appeared to be abnormal in some way, which meant those alone which the dispensary midwife found she was unable to conduct unaided—a very small number.

All these extra duties entail an enormous amount of work

for absolutely no remuneration. But not only are the duties increased, the privileges are also curtailed. Formerly the Board of Guardians was bound to provide at the expense of the rates a *locum tenens*, so long as a man was incapacitated from duty from sickness or other cause. Now a man, if sick, can only draw full salary for six months, and half salary for a further six months; if not better then, he may be dismissed without a halfpenny of compensation or pension, or may be allowed to hold the appointment for six more months without salary, and at the end of that period he must resign, even should the cause of his incapacity be an accident or illness contracted in the course of his dispensary duties. As a set off against this curtailment the Local Government Board granted a month's holiday annually, found they could not legally do so, and withdrew their rule although they could without the slightest difficulty have got it legalized in the Act amending the Local Government Act passed last autumn. Have they also acted illegally in curtailing sick leave and in imposing extra duties without extra remuneration? This is a point which should be tested.

Formerly the unlimited sick leave was as good as a pension to many a man worn out and broken in both health and spirit in the Poor-law service. Now the Poor-law medical officer broken down by hardship and infirmity must, if too poor to relinquish his miserably inadequate salary, drag out a miserable existence trying to do work which none but a strong man can do.

A small point (and there are many such), but sufficient to show "how the wind blows"—until lately the Local Government Board held, in spite of opposition on the part of numerous Boards of Guardians, that a man subpoenaed to attend any lawsuit as an expert witness was incapacitated from duty, and must have a *locum tenens* supplied for him by the Board of Guardians. Now they hold that while this is so as regarding a Crown case, it is not so as regarding a private case. Next year they will decide against him in Crown cases also if sufficient pressure is applied by the Boards of Guardians.

Again (and this seems to have escaped the notice of not only the Irish Poor-law doctors, but also that of our medical M.P.'s), whereas a moiety of the dispensary doctor's salary is paid by the Treasury and a moiety by the rates, by the recent Act amending the Local Government Act any increase of salary which may be given in the future will come entirely from the rates. I need not say that increases in the future will be even rarer than they have been in the past, especially as rates have risen everywhere since the passing of the Local Government Act, owing to extravagance and mismanagement on the part of the new Boards of Guardians and in spite of the relief afforded by the Agricultural Grant.

Amid this extravagant and lavish expenditure the Poor-law medical officer receives the miserable remuneration of about sixpence a head per annum of the population who are eligible for Poor-law medical relief, and for this he is on duty night and day and seven days a week. And yet the Local Government Board expect a highly efficient medical service and visit any apparent slight lapse from duty on the part of the medical officer with extreme severity.—I am, etc.,

February 16th. POOR-LAW MEDICAL OFFICER.

NICKEL CARBONYL POISONING.

Sir,—My attention has been drawn to a note on nickel carbonyl poisoning in the British Medical Journal of January 24th. As some time will elapse before any further publication upon this subject, it will probably interest your readers to know that in the case of the last patient the rapid breathing observed during life was considered to be dependent upon lesion of the central nervous system. As a result of this diagnosis, at Dr. Plimmer's and my suggestion, the brain was sent to Dr. Mott, who examined it microscopically, and found capillary haemorrhages throughout the brain, chromolytic changes in the nerve cells of the medulla and pons (especially of the cardio-respiratory centres), great excess of polymorphonuclear leucocytes in the blood contained in the capillaries of the medulla, and degenerative changes of their endothelial cells.

It is needless to say that these results obtained by Dr. Mott are of the greatest importance, and their discovery exactly explains the symptoms exhibited by the patient.—I am, etc.,

King's College, London, Feb. 17th. F. W. TUNNICLIFFE.

AMERICAN ADVERTISING PAMPHLETS.

Sir,—Like all other practitioners, I almost daily receive selections of American pamphlets many of which are so unprofessional in every sense of the term, that I am surprised to find them coming with persistent frequency. If every one would simply tear them up and find a place for them in the waste-paper basket, as I do, we would see and hear less of these quack nostrums. Some people—rather many men—must use the drugs referred to or it would never pay our American cousins to mail us so very frequently the rubbish which they do. The remedy is in our own hands, and the more we apply it the less will we be troubled with this style of advertising.—I am, etc.,

February 11th. WM. SEMPLE YOUNG, M.D.

TENURE OF OFFICE OF MEDICAL OFFICERS OF HEALTH.

Sir,—I have noticed with much pleasure in the Supplement to the British Medical Journal of February 7th that Sir Francis Powell is once more intending to introduce the Public Health Amendment Bill.

Considering what an important measure this is, advantageous both for medical officers of health and the public generally, I write to ask if something cannot be done to help its passing into law.

It is well known that the present insecurity of tenure is the cause of want of progression in many sanitary districts, medical officers being given to understand that nothing is to be done, and that if this hint is disobeyed, retribution will follow when the annual reappointment comes round.

Considering that London medical officers of health possess security of tenure, it seems anomalous that their brethren in the provinces should not.

If the Government would help the Bill as they did the Midwives Act last year its passing would be ensured, and I beg to suggest that a petition signed by every provincial medical officer of health in the country be sent to the President of the Local Government Board asking him to support Sir Francis Powell's Bill. If there is not time for this, perhaps some other suggestions may be made by members, but I am strongly of opinion that we should not remain passive.—I am, etc.,

February 14th. A PROVINCIAL M.O.H.

THE REPRESENTATION OF DUBLIN UNIVERSITY.

Sir,—I do not consider it right that a professional journal like the British Medical Journal should be used for electioneering purposes, and I should not ask you now to let me encroach upon your valuable space were it not that statements have already appeared in your columns calculated to raise a false impression among the medical graduates of the University of Dublin as regards the attitude of Mr. Campbell, K.C., towards the medical profession.

The friends (gentlemen and ladies) of his competitors evidently consider that "everything is fair" in contesting a parliamentary election; and having succeeded in ousting from the competition, or helping to do so, one of the ablest candidates that the University could have put forward, they are now seeking to prejudice the minds of the medical graduates against the Government candidate, Mr. Campbell, who many of us believe to be by far the better representative of the two now in the field, and whose influence in the House of Commons would be of the greatest benefit to our University.

It has been stated in your Journal that because Mr. Campbell is "Solicitor-General for Ireland," he would be "muzzled," and unable to act independently. A careful perusal of his addresses, and of the recent correspondence which has passed between Sir Edward Carson and Mr. Samuels, will fully disprove that allegation. At any rate this talk about "muzzling" is little better than nonsense. We all know what aspiring lawyers hope for when they enter Parliament; and I take it that the prospect of a seat on the Judicial Bench would be a very effectual "muzzle"—even for Mr. Campbell's competitor—if the Government wished to use it!

Many graduates deplore the fact that a representative distinguished in science or letters has not come forward to replace Mr. Lecky—but as it is, those who know Mr. Campbell are perfectly aware of the fact that he has always sympathized with and worked materially in the interests of medicine and not merely by promises! If he be returned to Parliament, the medical graduates may be assured that they will have an influential representative in the House who will

do everything possible to improve the position of our profession.—I am, etc.,

PHIN. S. ABRAHAM,
Henrietta Street, Feb. 11th. M.A., M.D. (Univ. Dubl.).

SIR,—A persistent effort is being maintained by a connexion and supporter of Mr. Samuels to misrepresent in the BRITISH MEDICAL JOURNAL the position of Mr. Campbell, His Majesty's Solicitor-General for Ireland, in reference to the claims of the Irish Poor-law medical officers. Mr. Campbell was a member of the House of Commons in 1898, having been elected for one of the divisions of his native city of Dublin, and during the debates in that year upon the Irish Local Government Bill he fought in the most courageous and vigorous way for the insertion of clauses intended to protect the position and privileges of the medical officers, and he was, in fact, the only member upon either side of the House who moved any amendment with that object. But, unhappily, he was then only an "independent" member, and in the absence of any support he necessarily failed to carry any of his proposals. He did, however, by personal entreaty and intercession with the Chief Secretary of the day succeed in obtaining an instalment of justice for the medical officers on the vital matter of superannuation, and his loyal services in both respects have recently been on several occasions gratefully and publicly acknowledged by the responsible officers of the Irish Poor-law Medical Association. Surely the medical profession is more than justified in accepting Mr. Campbell's past record as an earnest of his zeal and sincerity in its interests, which, by reason of his position as a member of the Government, he will now, if elected, be able to assert with much greater power and effect.

It is a striking commentary upon the argument of your correspondents that while they are engaged in an effort to persuade the English medical electors that as Sir Edward Carson must be assumed by reason of his position as Solicitor-General for England to be unable to defend the interests of the University of Dublin, Mr. Campbell, as Solicitor-General for Ireland, would be similarly hampered, Mr. Samuels has been compelled to publish in the Dublin press a letter of apology to Sir Edward Carson for the circulation of this statement, which he disavows and withdraws. The medical profession in Ireland was never misled by this suggestion, nor by the attempt to represent Mr. Samuels, in contrast with Mr. Campbell, as an independent candidate, especially after they had the advantage of reading the published correspondence in which Mr. Samuels predicted what his policy would be in the event of his promotion to the position of Solicitor-General, at present so ably filled by Mr. Campbell.—I am, etc.,

FRED. WM. KIDD, M.D.,
Dublin, Feb. 13th. Member of Council, Irish Medical Association.

*** As the election is expected to take place next week, and as the facts on both sides appear to have been fully stated, it seems unnecessary that this correspondence should be continued.

OBITUARY.

THOMAS HOBAN, M.B.Lond, M.R.C.S., L.R.C.P.

ON February 1st, in his 31st year, Thomas Hoban died of asthenia in St. Thomas's Hospital, whither he had been removed from his home at Newport, Isle of Wight, suffering from gastritis.

Dr. Hoban received his medical education at St. Thomas's Hospital. He qualified in 1898, and graduated at the University of London in 1899. He interested himself especially in ophthalmic work, and was Ophthalmic House-Surgeon at St. Thomas's. The ophthalmic statistics in the *St. Thomas's Hospital Reports for 1899* were supplied by him. He was also Clinical Assistant in the *x*-ray department of that hospital, and at the Royal London Ophthalmic Hospital. For a time he was House-Surgeon to the Bath Royal United Hospital, and subsequently was in the employment of the British Indian Steam Navigation Company, serving as Surgeon on the transport *China* during the expedition of 1900. He was a member of the British Medical Association and of the Ophthalmological Society.

He settled at Newport in 1901, where he soon became known as an ophthalmic and general operating surgeon. Of amiable disposition, and devoted to his work, his success would have been assured in a much wider sphere than the one he had chosen had his life been spared.

Amid evidences of affection from many old and new friends, his body was laid at rest in the cemetery at Mortlake on February 4th.

JAMES CROCKER, M.R.C.S. & L.S.A.,
Bingley.

IT is willingly, although in sadness, that, complying with a suggestion made to me, as one who had known him long and intimately, I offer the following brief appreciation of the character and career of James Crocker, who passed away on February 8th, in his 68th year. Such a notice, however, from myself must be but a very inadequate memorial, while it is one dealing chiefly with the personal side of my old and valued friend. The incidents of the funeral ceremony on February 11th, when, amidst every manifestation of respect on the part of all classes in Bingley Mr. Crocker was carried to the grave, furnishes the most eloquent testimony to the esteem and affection in which he was held. And, assuredly, of such regard our departed colleague was well worthy.

Thirty-two years had passed since Mr. Crocker commenced practice in Bingley, and during that long period his life had been one of consistent devotion to his professional work. In his medical practice Mr. Crocker had endeared himself to his patients. Always attentive, gentle, and sympathetic, he was not only their trusted medical adviser, but in numerous instances their trusted friend. A man, moreover, of deep religious feeling, he had been an influential and a zealous worker in the Wesleyan Methodist body to which he belonged, and in which he had been selected for various offices of honour and responsibility. As he was to others generally, so he did not fail to be towards his medical brethren—ever kind, courteous, and true. During the whole of the writer's intimacy with him upon no single occasion did an expression of detraction of another escape Mr. Crocker's lips. Not that he was wanting in firmness or would hesitate to speak out if necessity demanded, but under the influence of his native gentleness and his large-hearted charity he was so patient and just. Thus also, finally, under the trials and private sorrows from which he was not spared, his outward cheerfulness, his fortitude, and resignation never, as I believe, failed.

The immediate cause of Mr. Crocker's death was cerebral haemorrhage, but for some little time previously he had been in failing health and had been compelled materially to reduce his work, being assisted by his eldest son, Mr. Meadmore Crocker, M.R.C.S.

James Crocker has thus passed away, but it must be long indeed ere the recollection of his consistent goodness—of the small figure, yet striking personality—shall fade from the memory of the people of Bingley. Mr. Crocker was twice married, and leaves a widow, a daughter, and four sons to mourn his loss. H. C. M.

WE regret to have to announce the death of Miss ELLEN MARY SHARP, M.B.Lond., on February 9th. As a student of the London School of Medicine for Women, she took certificates of honour in most subjects; and at the final examination for the M.B. of London University she won the Scholarship and Gold Medal in Forensic Medicine, and obtained Honours in Medicine and Obstetric Medicine. Her teachers, who thus had occasion to think well of her work, naturally anticipated a most successful medical career for her. After qualifying, she obtained the post of Senior House-Surgeon to the Victoria Hospital for Children, Hull, in March, 1902. Her work there was characterized by the same scientific thoroughness and conscientiousness which she had previously exhibited, and earned the fullest appreciation from the rest of the staff. No trouble seemed too great for her, and it is to be feared that in her keenness for work she neglected her health to the extent that, when attacked by influenza she was unable to contend against a secondary pneumonia, to which she succumbed. As a member of the British Medical Association, she took a strong and growing interest in the different movements for reform in the medical profession, and would doubtless, ultimately, have taken a prominent position in furthering such projects. Marked traits in her character were her abhorrence of anything savouring of quackery of any description, either in the profession or out of it, and her fearlessness in giving expression to it. We feel assured that, in voicing the regret at her death of all who came in contact with Miss Sharp, the medical profession has lost one, who, if spared, would have left her mark in it, no matter in which direction her energies were expended.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE undermentioned Surgeons have been advanced to the rank of Staff Surgeon, February 11th: T. C. MEIKLE, M.A., M.B.; J. C. WOOD, H. B. MARRIOTT, N. L. RICHARDS, E. A. PENFOLD, M.B.; E. J. FINCH, M.D.; J. K. ROBINSON, M.B.; H CLIFT. Their commissions as Surgeon bear date February 11th, 1891. Staff Surgeon FINCH was Surgeon of the *Alecto* during the operations against Chief Nanna of Brohemie, and landed with Naval and Niger Coast Protectorate forces at the destruction of Efferowhim and Liverpool, and also with the naval expedition against the Chief Nanna of Brohemie, on the Benin River, resulting in the capture of his stronghold at Brohemie, September 25th, 1894 (medal with clasp). Staff Surgeon CLIFT was Surgeon of the *Magpie* and served in the Naval Brigade at Bathurst, on the River Gambia, West Coast of Africa, in February, 1894, for the punishment of Fodi Silah, a rebellious slave-raiding chief (medal with clasp); landed for defence of Malindi, East Coast of Africa, against the rebel chief M'baruk, 1895; present at capture of M'baruk's stronghold. The other officers cited have no service record.

The following appointments have been made at the Admiralty: RICHARD C. MUNDAY, Staff Surgeon, to the *Hermes*, on commissioning, undated; JOHN S. LAMBERT, Fleet Surgeon, and NORMAN L. RICHARDS, Surgeon, to the *President*, additional, for the survey of stores at the Royal Victoria Victualling Yard, Deptford, February 17th; PATRICK B. HANDYSIDE, M.B., Staff Surgeon, to the *Vengeance*, February 15th; CHARLES S. WOODWRIGHT, Staff Surgeon, to the *President*, additional, for a three months' course of hospital study, February 16th; HENRY E. TOMLINSON, Surgeon, to the *Egeria*, additional, March 2nd, and on recommissioning, undated; CHARLES A. G. PHIPPS, Surgeon, to the Plymouth Marines for temporary service (lent), March 2nd; HERBERT A. JULINS, Surgeon, to the *Pembroke*, February 17th.

Mr. COSMO GRANT, M.B. civil practitioner, has been appointed Surgeon and Agent at Haven Hole, February 10th.

ROYAL ARMY MEDICAL CORPS.

CAATAIN HUBERT A. BRAY has received the Royal authority to accept the Order of the Third Class of the Medjidieh conferred upon him by the Khedive of Egypt.

Lieutenant-Colonel JAMES ANDERSON, M.B., retires on retired pay, February 14th. His commissions are dated: Surgeon, February 3rd, 1878; Surgeon-Major, February 3rd, 1890; and Surgeon-Lieutenant-Colonel, February 3rd, 1898. He has the Frontier medal with clasp for service with the Burmese Expedition in 1885-6.

Lieutenant-Colonel W. C. T. POOLE retires on retired pay, February 14th. He was appointed Surgeon, February 5th, 1881; Surgeon-Major, February 5th, 1893; and Lieutenant-Colonel, February 5th, 1901.

Captain J. H. FARMER retires from the service with a gratuity, February 14th. He joined as Surgeon-Lieutenant, January 30th, 1893, and became Surgeon-Captain, January 30th, 1896. He was with the Tirah Expeditionary Force, on the North-West Frontier of India in 1897-8, receiving a medal with two clasps. He was also in the recent South African war.

Lieutenant-Colonel J. F. WILLIAMSON has been appointed Principal Medical Officer Somaliland Field Force, and enters upon his duties forthwith.

CHANGES OF STATION.

THE following changes of station amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during the last month:

	From.	To.
Colonel (Temporary Surgeon-General) W. F. Stevenson, M.B., C.B.	Netley	M. S. College.
Colonel J. M'Namara, M.D.	Cork	Gibraltar.
,, W. B. Allin, M.B.	South Africa	Bombay.
,, C. H. Swayne, D.S.O.	Bengal	Cork.
Lt.-Col. W. O. Wolseley	Madras	Edinburgh.
,, R. D. Hodson	Dublin	Ceylon.
,, J. I. Routh	Bengal	Aldershot.
,, H. R. Whitehead	Punjab	Woolwich.
,, J. Watson, M.D.	Bengal	Canterbury.
,, R. D. Donaldson, M.D.	Bermuda	Dublin.
,, D. L. Irvine	Bombay	Punjab.
,, E. R. Cree	South Africa	Malta.
,, D. F. Franklin	Parkhurst	Bengal.
,, A. G. Kay, M.B.	India	Netley.
,, R. Porter, M.B.	South Africa	Woolwich.
,, R. P. Hetherington, M.D.	,,	Egypt.
,, T. E. Noding	Bengal	Parkhurst.
,, W. L. Reade	Colchester	Weedon.
,, W. Dick, M.B.	Netley	Str'ts Sl'ments.
,, H. E. R. James (temp. Colonel)	Aldershot	M. S. College.
,, R. Kirkpatrick, M.D., C.M.G.	South Africa	Punjab.
,, J. Hickman	Woolwich	Gravesend.
Major A. Baird, M.B.	South Africa	Madras.
,, T. W. O'H. Hamilton, M.B., C.M.G.	South Africa	Malta.
,, J. Riordan, M.B.	Cork	Waterford.
,, R. H. Firth	London	M.S. College.
,, T. B. Winter	South Africa	Bombay.
,, W. Turner	,,	Punjab.
,, S. E. Duncan	,,	Bengal.
,, S. Powell, M.B.	Madras	China.
,, J. Meek, M.D.	South Africa	Tower of Lndn.
,, R. L. R. Macleod, M.B.	,,	Dublin.
,, G. G. Adams	Madras	Bengal.
,, R. I. Power	South Africa	Madras.
,, J. S. Green, M.B.	,,	Bengal.
,, M. O'Halloran, M.D.	Curragh	Dublin.
,, T. G. Lavic	South Africa	,,
,, H. W. Austin	St. Helena	,,
,, M. J. Whitty, M.D.	Hong Kong	,,
,, G. F. H. Marks, M.D.	Madras	Dover.
,, W. J. Trotter	Bengal	Dublin.
,, F. J. Morgan	South Africa	Punjab.
,, W. H. Horrocks, M.B.	London	M.S. College.
,, E. M. Hassard	Portsmouth	Jamaica.
,, W. B. Leishman, M.B.	London	M.S. College.
Major J. Thomson, M.B.	Ceylon	Madras.
,, C. W. Reilly	South Africa	Newbridge.
,, C. A. Stone, M.D.	,,	Bombay.
Captain J. C. Connor, M.B.	,,	Punjab.
,, O. L. Robinson	Straits Sttlmts	Chester.
,, F. W. Begbie	South Africa	Ceylon.
,, S. H. Withers, M.B.	,,	Bengal.
,, J. Hennessy, M.B.	,,	Bombay.
,, J. F. M. Kelly, M.B.	South Africa	Punjab.
,, T. McDermott, M.B.	,,	Kildare.
,, G. A. Moore, M.D.	,,	Warley.
,, F. G. Faichnie	,,	Bengal.
,, F. M. Mangin	Aldershot	M. S. College.
,, C. E. Pollock	Woolwich	,,
,, W. J. Taylor, M.B.	Bombay	,,
,, B. W. Longhurst	Maidstone	,,
,, C. T. Samman	Woolwich	,,
,, C. E. P. Fowler	Bengal	,,
,, A. E. C. Keble	,,	,,
,, St. J. B. Killery	Madras	,,
,, H. C. French	South Africa	,,
,, E. M. Williams	Bulford	,,
,, J. R. McMunn	Aldershot	,,
,, H. V. Prynne	Hong Kong	,,
,, K. B. Barnett, M.B.	Bengal	,,
,, M. Boyle, M.B.	Punjab	,,
,, H. A. Berryman	Colchester	,,
,, C. M. Fleury	Bombay	,,
,, A. C. Fox	Bengal	,,
,, S. F. St. D. Green	,,	,,
,, W. Tibbits, M.B.	Worcester	,,
,, P. Evans, M.B.	Devonport	Gren. Guards.
,, G. St. C. Thom, M.B.	Dover	M. S. College.
,, C. W. Profeit, M.B.	Aldershot	,,
,, F. Kiddle, M.B.	Bombay	,,
,, S. J. C. P. Perry	Madras	Dublin.
,, A. F. Heaton	Aldershot	M. S. College.
,, F. E. Gunter, M.B.	Madras	China.
,, J. Grech	Aldershot	M. S. College.
,, R. M. Le H. Cooper, M.D.	Gren. Guards	,,
,, E. C. Hayes	China	Bengal.
,, A. W. Hooper, D.S.O.	Aldershot	M S. College.
,, W. A. Ward	South Africa	Madras.
,, G. E. F. Stammers	—	Mauritius.
,, M. MacG Rattray, M.B.	South Africa	Dover.
,, C. H. Hopkins	Devonport	Bengal.
,, R. D. Jephson	South Africa	Punjab.
,, A. E. Thorp	Bengal	Madras.
,, A. R. O'Flaherty	South Africa	Bombay.
,, E. P. Hewitt	Chester	Bermuda.
,, G. M. Goldsmith, M.B.	South Africa	Bengal.
,, D. Harvey, M.B.	Bombay	M.S. College.
,, A. O. B. Wroughton	Woolwich	Coldstr'm Gds.
,, G. G. Delap, D.S.O.	South Africa	Bombay.
,, H. H. Norman	,,	,,
,, A. L. A. Webb	,,	,,
,, S. G. Butler	,,	Madras.
,, L. F. F. Winslow	Aldershot	Gibraltar.
,, J. W. Longstaff	South Africa	Bombay.
,, L. W. Harrison, M.B.	,,	Punjab.
,, H. M. Morton, M.B.	,,	Madras.
,, J. Matthews	,,	Bombay.
,, B. F. Wingate	,,	Madras.
,, J. F. Martin, M.B.	Scots Guards	Aldershot.
,, C. S. Smith, M.B.	South Africa	,,
Lieutenant T. Biggam, M.B.	Hounslow	Bombay.
,, J. Powell, M.B.	South Africa	Punjab.
,, L. L. G. Thorpe	Canterbury	Bombay.
,, W. S. Crosthwait	South Africa	Madras.
,, C. E. Fleming, M.B.	Aldershot	Barbados.
,, E. F. L'Estrange	South Africa	Aldershot.
,, R. B. Black, M.B.	,,	,,
,, W. R. P. Goodwin	Bombay	Punjab.
,, W. Riach, M.D.	South Africa	Egypt.
,, A. J. W. Wells	,,	Madras.
,, M. W. Falkner	,,	Bengal.
,, E. Ryan	Cork	Malta.
,, E. E. Parkes, M.B.	South Africa	Gibraltar.
,, J. V. Roche	,,	Bengal.
,, J. H. Barbour, M.B.	,,	Halifax, N.S.
,, F. E. Robinson, M.B.	,,	Bombay.
,, M. F. Foulds	Aldershot	Punjab.
,, A. J. Williamson, M.B.	South Africa	Bombay.

Lieutenant-Colonels A. P. O'Connor, C.B., G. T. Goggin, J. M. Jones, and F. B. Maclean have been selected for increased pay under Article 362 of the Royal Warrant.

Lieutenant-Colonel T. B. A. Tuckey, retired pay, has been transferred from Aldershot to the Military Prison at York, and Captain P. G. Ievers, retired pay, has exchanged from Dorchester to Fort Staddon.

Lieutenant-Colonels J. Langdon, R. Batho, M.D., and A. Anderson, all on retired pay, have relinquished their medical charge at Brecon, Jersey, and Galway respectively.

Lieutenant-Colonel G. W. Robinson has assumed charge as Officer Commanding at the Depôt and Training School, Aldershot.

ROYAL ARMY MEDICAL CORPS EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 8s. 6d., which should be forwarded in stamps or post-office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.

MAJOR, R.A.M.C., full tour to serve at home, will exchange to India. No money wanted. Address, No. 893, BRITISH MEDICAL JOURNAL.

ARMY MEDICAL RESERVE.

CAPTAIN W. K. CLAYTON, South Yorkshire Volunteer Brigade Bearer Company, to be Surgeon-Captain February 14th.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL (temporary Colonel) M. D. MORIARTY, M.D., Bengal Establishment, is promoted to be Colonel from October 25th, 1902. His first commission is dated October 1st, 1872; that of Brigade-Surgeon-Lieutenant-Colonel, July 27th, 1898.

Lieutenant-Colonel P. A. WEIR, Bengal Establishment, is made Agency-Surgeon 1st class, and is confirmed in the appointment of Administrative Medical Officer in Central India, from October 30th, 1902.

Surgeon-General JOHN BRAKE, late Bengal Establishment, died at Southsea on February 8th, aged 75. He was appointed Assistant-Surgeon January 14th, 1855, and became Surgeon-General September 2nd, 1886, in which year he retired from the service. He was in the Indian Mutiny campaign in 1857-9, being present at the siege of Delhi, in the operations in Oude, the action of Biswah, the pursuit of Ferozeshah, and the operations in Bundelcund (mentioned in dispatches, received the thanks of the Government of India, medal).

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

SURGEON-CAPTAIN H. R. BRAMWELL, M.B., the Tynemouth, to be Surgeon-Major, February 14th.

VOLUNTEER RIFLES.

SURGEON-LIEUTENANT-COLONEL J. S. HOLDEN, M.D., 2nd Volunteer Battalion the Suffolk Regiment, resigns his commission, retaining his rank and uniform, February 14th.

Surgeon-Lieutenant T. THOMPSON, 1st Volunteer Battalion the South Staffordshire Regiment, to be Surgeon-Captain, February 14th.

Surgeon-Lieutenant Colonel J. ADAMS, 21st Middlesex (the Finsbury), to be Brigade-Surgeon-Lieutenant-Colonel on appointment as Senior Medical Officer of the 5th London Volunteer Infantry Brigade, February 3rd.

Brigade-Surgeon-Lieutenant-Colonel W. PATERSON, 4th (Donside Highland) Volunteer Battalion the Gordon Highlanders, resigns his commission, retaining his rank and uniform, vacating at the same time the appointment of Senior Medical Officer to the Gordon Volunteer Infantry Brigade, February 14th.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

LIEUTENANT J. WRIGHT, M.B., the Glasgow Companies, resigns his commission, February 14th.

MORTALITY IN ARMIES.

THE question of the relative mortality in the French and German armies, originating in a statement by a German newspaper, lately gave rise to an interpellation in the French Senate, and has provoked comparison and animadversion between both and our own army.

M. Gotteron asked whether the French army mortality was not four times that of the German; and General André, in reply, admitted that in 1899 it was three times greater. In a recent article, *La Semaine Médicale* appears to have shown that there was some misunderstanding, and gives the mortality-rate of the French army in 1899 as 5.43, and that of the German army in the same year as 2.1 per 1,000. The German statistics, however, refer to an army serving at home, while the French include the army corps serving in Algeria and the division in Tunis; deducting these so as to compare the figures for the armies serving at home, we get the following, to which the rate of the British troops in the United Kingdom has been added:

French army at home	...	...	4.72 per 1,000
British army	,,	...	4.46 ,,
German army	...	...	2.10 ,,

It is, however, unsafe to draw conclusion from a comparison of a single year. The *Semaine Médicale* calculates that the mortality-rate of the French and German armies for the years 1874-1901 (a period chosen to avoid the disturbing influence of the Franco-German war) was: French 4.85, German 2.4 per 1,000. For British troops in the United Kingdom the death-rate for the decennial period 1890-9 was 4.29 per 1,000. The death-rate for the whole British army at home and abroad in this decennial period was 8.89.

The following table shows the death-rates, taken from official reports, for each of the years of this decennial period in British troops in the United Kingdom and in the French army, excluding troops employed in Algeria and Tunis:

	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	Decennium.
British	5.53	4.94	4.38	5.13	3.70	4.32	3.58	3.42	3.59	4.46	4.29
French	5.81	6.77	5.59	5.23	5.29	6.08	4.57	4.57	4.41	4.72	5.60

When comparing the vital statistics of the British army with those of the French and still more with those of the German army, it must be remembered that practically all British soldiers who do not break down at a very early stage of their military training serve abroad during part of their service, that they are frequently exposed to conditions more or less unhealthy for Europeans in tropical and subtropical stations, and that a large part of the army at home is composed of men who have been in this way exposed to unhealthy influences abroad.

In 1900, the last year for which statistics for the British army have been published, was for the troops at home 6.62, and for the whole army (excluding South Africa, statistics for which have not yet been given) 9.05 per 1,000. There was therefore a very remarkable rise—nearly 50 per cent.—in the death-rate among troops at home. This was due, there can be little doubt, to the effects of the war in South Africa, for it is well known that in normal times many of the deaths of soldiers on the home establishment can, directly or indirectly, be traced to previous foreign and especially tropical service.

It is thus that the strain of foreign service is felt and becomes apparent in our army mortality; the French have only a moderate experience of this kind, the Germans still less.

THE NEW UNIFORM, R.A.M.C.

MAJOR H. N. THOMPSON, R.A.M.C. (Officer Commanding Delhi Station Hospital), writes: Having noticed some adverse criticisms in the BRITISH MEDICAL JOURNAL about our new uniform, I should like to say that during the recent Durbar celebrations there have been here in the fort, either in my R.A.M.C. camp or attached to the British General Hospital, upwards of twenty of our officers. The universal opinion was that at last we had got a smart, neat, and quite distinctive dress, and many hopes were registered that there would be no further change. The only suggestion I heard was that the colour of the belts should be cherry instead of black to render it more distinctive still. Several of the officers, not in possession of the new uniform, had their tunics, mess jackets, and overalls altered immediately, which, I may add, can be done easily and cheaply, the only articles required new being the cap, frock coat, and mess waistcoat.

MEDICO-LEGAL AND MEDICO-ETHICAL.

ADVERTISING APPLICATIONS FOR HOSPITAL APPOINTMENTS.

MEDICAL ETHICS sends us the advertisement of the letter of application of a candidate for the post of Consulting Surgeon to the Lincoln General Dispensary. We drew attention to this question in the BRITISH MEDICAL JOURNAL of January 18th, 1901, in connexion with a hospital contest at Sheffield. On that occasion we pointed out that a generation ago it was a very common practice to insert such letters of application in the public newspapers, the excuse being that the candidates had to address a vast body of Governors scattered over a large area. Such advertisements were not the only objectionable feature of the old form of election, as testimonials were distributed broadcast and paid canvassers were employed, an election sometimes costing each candidate several hundreds of pounds. The evils were so patent that most, if not all, hospitals have appointed election committees, consisting of a limited number of Governors selected by ballot, and the old electioneering practices have happily for the most part disappeared. We regret to see that in Lincoln there should be a survival of some of them. We hope the local medical profession will, as it very easily may, put a stop to advertisements in all future contests.

THE CORONER AND THE PROFESSION IN SOUTH-WEST LONDON.

BARRISTER-AT-LAW writes: The letter of "Studens Legis, M.B.," on this subject is one that would hardly have been expected from a writer using such a pseudonym. Every medical practitioner knows, or ought to know, that a coroner has no jurisdiction over him outside his court. To bring him under that jurisdiction he must issue a formal subpoena. If he chooses, instead, to write to a practitioner, the latter is under no obligation to take any notice of it, and where the letter takes the form of that reported to have been sent to Dr. Badcock by Mr. Troutbeck, he may properly ignore it. No doubt it was a mistake on Dr. Badcock's part to have written an answer to the coroner, for it gave that official an opportunity of commenting on it to the jury, but to suggest that Dr. Badcock's refusal to attend the inquest without being subpoenaed justified the improper pseudo-censure passed on his conduct is preposterous. What your correspondent means by "Dr. Badcock letting judgement go by default," and "estoppel by record," is only known to himself. It seems to me unintelligible legal jargon, and suggests a doubt whether the writer has quite mastered the meaning of some of the terminology he has been studying. It may possibly also be another example of the truth of Pope's well-known line:

"A little knowledge is a dangerous thing."

THE CORONER AND MEDICAL WITNESSES.

CRYPTO writes to complain that at a recent inquest the coroner summoned the Divisional Surgeon of Police to give evidence concerning the cause of death and dispensed with the services of our correspondent, who had previously attended the deceased and was the first medical man called to see the dead body.

*** By Section XXI (Clause 1) of the Coroners Act 1887 it is enacted that, "where it appears to the coroner that the deceased was attended at his death or during his last illness by any legally qualified medical practitioner, the coroner may summon such practitioner as a witness; but if it appears to the coroner that the deceased person was not attended at his death or during his last illness by any legally qualified medical practitioner, the coroner may summon any legally qualified medical practitioner who is at the time in actual practice in or near the place where the death happened, and any such medical witness as is summoned in pursuance of this section may be asked to give evidence as to how in his opinion the deceased came to his death," and this is what is usually done. The failure to continue this practice has lately caused much dis-

satisfaction in the South-West district of London, and our correspondent will notice that in recent numbers of the BRITISH MEDICAL JOURNAL considerable discussion and comment has taken place on this subject.

A PARISH NURSE.

BUSHBURY writes to say that in the small parish in which he resides, chiefly occupied by well-to-do railway employés and mechanics, there is a parish nurse maintained by subscriptions from the people. "Bushbury" is the parish medical officer, and he states that the nurse has visited his patients without consulting him, and has recommended and provided remedies of her own. He has written to the Secretary of the Nursing Committee, and the Committee, after consultation with its medical referee, has decided that the nurse has not exceeded her duties.

*** We have no hesitation in saying that the nurse ought to work under the parish doctor and not independently of him, and that she should not interfere with the treatment of cases under his care.

THE ETHICS OF SURGICAL PRACTICE.

APPETITUS RATIONI PAREAT.—Our correspondent asks the following question: "Is a young practitioner, qualified in 1895, justified in undertaking the operation of abdominal pan-hysterectomy in a small country town, in an artisan's dwelling-house, without a second opinion and without an assistant except the anaesthetist?"

*** We cannot presume to limit the responsibility and discretion of any duly-qualified medical practitioner in the way suggested by the question. It cannot be admitted that young men, because they are young, must hand over all important cases to their seniors, who may possess greater experience and greater skill, or that operations should be undertaken only by men who occupy certain positions connected with hospitals, or who have passed higher surgical examinations. Many young men on starting in practice have been full of surgical enthusiasm, and have performed operations upon their poorer patients without payment, even finding all the expenses out of their own pockets. As a rule this kind of enthusiasm does not last, but here and there we have known men beginning in this way, to become surgeons of eminence. Every operator is bound to take all the precautions in his power for the safety of his patient, but these must be left to his judgement. If he is unsuccessful his reputation will suffer. We think all these circumstances taken together afford adequate guarantees to the public, and that a rule which forbade the undertaking of major operations, except under specified conditions, would be impracticable.

MEDICAL ETIQUETTE.

T. A. E.—Our reading of the letter sent to us is that the patient desired to change his medical attendant on account of the distance and that he caused this rather wordy letter to be written to our correspondent in order to break the announcement gently. It must be admitted that the patient had a perfect right to make the change, and that Dr. B. had an equal right to accept the case. We do not see that the letter contains evidence that the change was due to Dr. B.'s suggestion.

G. C. T.—A. may certainly accept the engagement if he pleases.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

ON February 16th, at a general meeting of all the Fellows, the Rev. E. S. Roberts, Senior Tutor, was elected Master of Gonville and Caius College, in succession to the late Dr. N. M. Ferrers.

Degrees.—The following medical degrees were conferred on February 12th:—*M.B*: H. C. Williams, Pembroke; E. B. Leech, Christ's; A. F. Elliott, Emmanuel. *B.C.*: H. Davies-Colley, Trinity; T. St.Clair Smith, Trinity Hall.

UNIVERSITY OF LONDON.

Teaching of Public Health.—At the last meeting of the Senate the Laboratory for Bacteriology and Parasitology at Guy's Hospital was approved for the purposes of the M.D. in State Medicine in these subjects. The laboratory is fully equipped for teaching and has accommodation for twenty-five students. There is also a research laboratory with accommodation for six workers. At the same meeting it was announced that the Privy Council had approved the McGill University, Montreal, and University College, Dundee, as places from which the University may receive certificates for the degree of M.D. in State Medicine.

Library of Economic Literature.—The Goldsmiths Company purchased two years ago the library of economic literature formed by Professor Coxwell. The Company has now presented it, with many additions, to the University, and has endowed it with £200 a year for five years.

Physiological Laboratory.—Dr. J. S. Macdonald, Professor of Physiology at the University College, Sheffield, will lecture on "Nerve as a Concentration Cell" on Friday, February 27th, at 5 p.m., in the Physiological Laboratory. Professor Sherrington, Professor Starling, Dr. Waller, and other physiologists are expected to join in the discussion of the subject.

VICTORIA UNIVERSITY.

THE following is the text of the report—dated February 10th—made by the Committee of the Privy Council which heard evidence on December 17th and 18th last as to the petitions of Liverpool for the creation of a Liverpool University, and of Manchester for a University in Manchester, and as to the counter petitions.[1]

The report was approved by the King in Council on February 16th:

Your Majesty having been pleased by Your Order of the 24th April, 1902, to refer unto this Committee, together with other petitions on the subject, the humble petition of the University College, Liverpool, praying for the grant of a Charter incorporating a University in Liverpool, and the Owens College, Manchester, having also petitioned, in the event of Your Majesty being advised to grant such a Charter, for the grant of a Charter incorporating the Victoria University in Manchester as an independent University, the Lords of the Committee, in obedience to Your Majesty's said Order of Reference, have taken the said petitions into consideration, and, having heard counsel and witnesses on behalf of the said petitioners and sundry other bodies affected, do agree humbly to report, as their opinion, that such charters ought to be granted.

The Committee, however, consider that the step involves issues of great moment which should be kept in view and for the solution of which due preparation should be made, especially in respect to those points upon which, having regard to the great importance of the matter and the effects of any change upon the future of higher education in the North of England, co-operation is expedient between universities of a common type and with cognate aims.

The Committee are further of opinion that in framing the clauses of the Charters now proposed to be granted, and of any similar Charter that may hereafter be granted, the effect of the multiplication of such universities should not be lost sight of.

To these ends the Committee concur in recommending that before they finally settle the draft Charters under review, the authorities of the Yorkshire College at Leeds should have the opportunity of submitting a draft charter incorporating a university in Yorkshire, and that the institutions concerned should be invited to consider in greater detail not only the points upon which joint action is desirable, but also the methods by which it can best be secured, without unduly restricting the liberty or circumscribing the responsibility that ought to attach to independent universities.

The Committee likewise consider that there should be expressly reserved to Your Majesty as Visitor the right from time to time and in such manner as Your Majesty shall think fit to direct an inspection of the University, its buildings, laboratories, and general equipment, and also of the examinations, teaching, and other work done by the University; and further that in any Charter granted careful provision should be made to secure an effective voice to external and independent examiners in all examinations for degrees.

And the Committee would humbly propose in due time to submit a further report to Your Majesty.

[1] BRITISH MEDICAL JOURNAL, December 27th, 1902, p. 1937.

ROYAL UNIVERSITY OF IRELAND.

Examiners.—The following appointments of Examiners have been made: In Natural Science, Michael Curran, M.A., M.B., Gregg Wilson, D.Sc.; in Medicine, James A. Lindsay, M.D., Joseph F. O'Carroll, M.D.; in Pathology, Edmond J. McWeeney, M.D., J. Lorrain Smith, M.D., *A. C. O'Sullivan, M.D.; in Midwifery, John W. Byers, M.D., Alfred J. Smith, M.B., *Henry Jellett, M.D.; in Medical Jurisprudence and Sanitary Science, Antony Roche, M.R.C.P.I., Patrick T. O'Sullivan, M.D.; in Materia Medica, Martin Dempsey, M.D., Sir William Whitla, M.D.; in Ophthalmic Surgery, Arthur W. Sandford, M.D., Louis Werner, M.B.; in Physiology, T. H. Milroy, M.D.; in Sanitary Science, Sir Charles A. Cameron, C.B., M.D.; in Mental Diseases, Conolly Norman, F.R.C.P., George Rivington, M.D.; in Surgery, *Charles Stonham, F.R.C.S.E.; in Ophthalmology, *William G. Sym, M.D.

* Extern Examiners.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN Ordinary Council was held on February 12th, Sir Henry G. Howse President, in the chair.

Diplomas.

Ninety-six diplomas of Membership were granted, and 18 in Public Health, the latter being granted by the Royal College of Physicians in conjunction with the Royal College of Surgeons.

Hunterian Lectures.

Arrangements were made for the delivery of six Hunterian lectures in November next; and it was determined that an advertisement be issued inviting candidates to apply for election to the office of Hunterian Professor.

Board of Examiners in Dental Surgery.

Mr. Bernard Pitts was elected a member of this Board in the vacancy caused by the retirement of Sir William H. Bennett, K.C.V.O.

Bradshaw Lecturer.

Mr. Henry Morris was appointed Bradshaw Lecturer for the ensuing collegiate year.

Conjoint Examinations.

A report was read and adopted from the Committee of Management of the two Colleges, formulating a reply to the report of the Visitor and Inspector of the General Medical Council upon the Examinations in Chemistry, Physics, and Biology of the Conjoint Board.

TRINITY COLLEGE, DUBLIN.

THE following candidates have passed the Final Examination in Surgery:

S. S. Pringle, T. L. Sands, D. Jacovides, J. Wallace, J. T. M'Entire, W. Wiley, T. F. Manning, E. V. Collen, J. F. Nicholson.

Section A.—J. G. Wallace, J. Cunningham, A. A. M'Neight, K. R. C. Hallowes, W. Mitchell, J. A. Sibthorpe, J. H. Waterhouse, G. B. M'Caul, R. Magill, J. H. Thompson, J. Chambre, C. E. Fawcett, W. Hassard, C. A. Boyd, F. S. Crean.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

AT the stated examination of registered medical practitioners for the Licence in Medicine of the College held on Monday, Tuesday, and Wednesday, February 9th, 10th, 11th, Mr. W. R. Wilson, L.S.A. (1898), L.R.C.S.I. (1900), was successful.

CONJOINT BOARD IN IRELAND.

MESSRS. W. H. HORNIBROOK, L.R.C.P. and S.I., J. M. Keegan, M.A., M.B., etc., R.U.I., J. M'Liesh, M.B., B.Ch., etc., R.U.I., and J. B. Stephenson, M.B.Durh., have passed the examination for the Diploma in Public Health.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE DEATH-RATES OF METROPOLITAN BOROUGHS DURING 1902.

[SPECIALLY REPORTED FOR THE BRITISH MEDICAL JOURNAL.]

IN the accompanying table will be found summarized the vital statistics of the City of London and of each of the metropolitan boroughs, based upon the Registrar-General's returns for the year 1902. The mortality figures relate to the deaths of persons actually belonging to the various boroughs, and are the result of a complete system of distribution of the deaths occurring in the public institutions of London among the boroughs in which the deceased persons had previously resided.

The 132,810 births registered in London during 1902 were equal to an annual rate of 28.5 per 1,000 of the population, estimated at 4,579,110 persons in the middle of last year; this rate was lower than that recorded for any of the ten preceding years, 1892-1901, during which the birth-rate averaged 30.1 per 1,000. In 1899, 1900, and 1901 the rates were 29.7, 29.1, and 29.0 per 1,000 respectively. Among the various metropolitan boroughs the birth-rates showed the usual wide variations, which are mainly due to the differences in the age and sex distribution of the populations: the rates ranged from 13.1 in the City of London, 17.9 in the City of Westminster, 18.2 in Hampstead, 19.3 in Kensington, 22.0 in Stoke Newington, and 22.4 in Paddington and in Chelsea to 32.9 in Fulham, 33.9 in Shoreditch, 34.2 in Poplar, 34.8 in Bethnal Green, 36.2 in Finsbury, and 38.0 in Stepney.

The deaths of persons belonging to London registered during last year numbered 80,105, and were in the proportion of 17.2 deaths per 1,000 persons living, against 19.5, 18.6, and 17.1 in the three preceding years: the mean death-rate during the ten years, 1892-1901, was 18.8 per 1,000. The lowest death-rates last year among the various metropolitan boroughs were 10.8 in Hampstead, 12.4 in Stoke Newington, 13.5 in Wandsworth, 13.6 in Lewisham, 14.6 in Paddington, and 15.0 in Hackney and in Battersea; the highest rates were 20.6 in Stepney, 20.7 in Shoreditch, 20.8 in Bethnal Green, 21.3 in Holborn, 21.4 in Southwark, and 22.9 in Finsbury.

During the year under notice 10,280 deaths were referred to the principal infectious diseases; of these, 1,314 resulted from small-pox, 2,360 from measles, 560 from scarlet fever, 1,159 from diphtheria, 1,876 from whooping cough, 537 from enteric fever, 4 from simple continued fever, and 2,470 from diarrhoea, but not one from typhus. These 10,280 deaths were equal to an annual rate of 2.21 per 1,000, against 2.49, 2.23, and 2.22 per 1,000 in the three preceding years; in the ten preceding years, 1892-1901, the mean death-rate from these principal infectious diseases was 2.65 per 1,000. Among the various metropolitan boroughs the death-rates from these diseases ranged from 0.81 in Hampstead, 1.17 in Stoke Newington, 1.28 in the City of Westminster, 1.38 in the City of London, 1.49 in Kensington, and 1.59 in Greenwich, to 3.06 in Bermondsey, 3.10 in Southwark, 3.15 in Fulham, 3.18 in Finsbury, 3.31 in Stepney, and 3.53 in Shoreditch. Compared with the averages in the ten preceding years, the mortality from small-pox was greatly in excess, while that from each of the other principal infectious showed a considerable decline. Among the various boroughs the greatest proportional mortality from small-pox occurred in Holborn, Shoreditch, Bethnal Green, Stepney, and Poplar.

The number of small-pox cases admitted into the Metropolitan Asylums Hospitals during the year was 8,455, against 1,788 in the preceding year; of these 8,455 cases, 8,088 were admitted during the first six months of the year; only 4 cases remained under treatment at the end of the year. Measles showed the highest proportional fatality in Fulham, Chelsea, Finsbury, Shoreditch, Southwark, and Bermondsey. Scarlet fever was proportionally most fatal in St. Pancras, Finsbury, Southwark, Lambeth, Camberwell, and Deptford; 15,133 scarlet fever patients were admitted into the Metropolitan Asylums Hospitals during the year, and 2,327 remained under treatment at the end of December last. The greatest proportional mortality from diphtheria occurred in Fulham, St. Pancras, Finsbury, the City of London, Poplar, and Lewisham; the number of diphtheria patients admitted into the Metropolitan Asylum Hospitals last year was 7,988, and the number remaining under treatment at the end of the year was 927. Whooping-cough was proportionally most fatal in Finsbury, Shoreditch, Bethnal Green, Stepney, Poplar, and Southwark. The highest "fever" death-rates last year were recorded in Hampstead, St. Pancras, Islington, Hackney, Shoreditch, and Poplar: 1,806 enteric fever patients were admitted into the Metropolitan Asylums Hospitals during the year, and 210 remained under treatment at the end of the year. Diarrhoea showed the highest proportional fatality in Fulham, Finsbury, Shoreditch, Stepney, Southwark, Bermondsey, and Deptford.

The deaths from phthisis in London registered during the year under notice numbered 7,424, and were equal to a rate of 1.60 per 1,000, against 1.85, 1.74, and 1.66 in the three preceding years. Among the various boroughs the death-rates from this disease ranged from 0.85 in Hampstead, 0.90 in Wandsworth, 1.05 in Paddington, 1.06 in Lewisham, 1.12 in Deptford, and 1.19 in Greenwich, to 1.88 in Southwark, 1.90 in Stepney, 1.92 in Marylebone, 1.97 in Bethnal Green, 2.28 in Finsbury, and 3.01 in Holborn. In the Central and East districts the mortality from this disease was considerably higher than in any other part of the metropolis. In the West districts the phthisis death-rate was 1.40 per 1,000, in the South 1.52, and in the North 1.56, while in the East it was 1.85, and in the Central 2.43 per 1,000.

Infant mortality in London last year, measured by the proportion of deaths of children under one year of age to registered births was equal to 139 per 1,000, and was 19 per 1,000 below the mean rate in the ten preceding years. The lowest rates of infant mortality were 87 in Hampstead, 107 in St. Marylebone, 115 in Stoke Newington, 119 in Hackney, and 125 in Lewisham and Woolwich; and the highest rates were 154 in Finsbury and in Poplar, 155 in Bethnal Green and in Bermondsey, 166 in Southwark, and 174 in Shoreditch.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 8,806 births and 4,984 deaths were registered during the week ending Saturday last, February 14th. The annual rate of mortality in these towns, which had been 20.1, 18.1, and 17.0 per 1,000 in the three preceding weeks, further declined last week to 17.1 per 1,000. The rates in the several towns ranged from 5.7 in King's Norton, 8.0 in Barrow-in-Furness, 8.2 in Handsworth, 9.1 in Bournemouth, 9.2 in Derby, 9.3 in West Hartlepool, 9.4 in East Ham, and 10.0 in Coventry, to 21.4 in Newcastle-on-Tyne, 21.5 in Rochdale, 22.4 in Wallasey, 23.1 in Manchester, 23.2 in Bootle, 24.2 in Huddersfield, 26.4 in Hanley, and 28.8 in Tynemouth. In London the rate of mortality was 17.0 per 1,000, while it averaged 17.2 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged

Analysis of the Vital Statistics of the Metropolitan Boroughs and of the City of London after Distribution of Deaths occurring in Public Institutions during 1902.

BOROUGHS.	Estimated Population middle of 1902.	Births.	Deaths.	Annual Rate per 1,000 Living.			Deaths from Principal Infectious Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Typhus.	Enteric Fever.	Simple and Ill-defined Fever.	Diarrhoea.	Phthisis.	Deaths of Children under 1 year of age to 1,000 Births.
				Births.	Deaths.	Principal Infectious Diseases.												
COUNTY OF LONDON	4,579,110	132,810	80,105	28.5	17.2	2.21	10,280	1,314	2,360	560	1,159	1,876	—	537	4	2,470	7,424	139
Paddington	145,107	3,304	2,156	22.4	14.6	1.74	256	20	83	9	33	23	—	13	—	75	155	133
Kensington	177,605	3,488	2,768	19.3	15.3	1.49	265	11	93	21	19	21	—	19	—	81	232	149
Hammersmith	114,210	3,192	1,895	27.5	10.3	1.90	222	13	77	7	23	27	—	11	—	64	166	143
Fulham	143,102	4,789	2,488	32.9	17.1	3.13	454	13	168	19	51	65	—	8	—	129	200	148
Chelsea	74,018	1,685	1,354	22.4	18.0	2.06	155	7	67	8	13	14	—	6	—	40	109	145
City of Westminster ...	180,800	3,286	2,053	17.9	16.1	1.28	234	39	42	15	29	34	—	20	1	54	328	136
St. Marylebone ...	132,145	3,976	2,455	29.6	18.3	1.98	267	24	97	14	27	23	—	15	—	67	258	107
Hampstead	83,743	1,549	920	18.2	10.8	0.81	68	3	15	7	10	10	—	11	—	12	72	87
St. Pancras	235,521	6,452	4,450	27.0	18.6	2.46	550	81	113	49	107	113	—	44	—	83	450	147
Islington	337,270	9,217	5,634	26.9	16.4	1.80	614	54	116	40	104	156	—	46	—	98	513	133
Stoke Newington ...	51,700	1,134	702	22.0	13.4	1.17	61	8	5	5	6	14	—	4	1	18	66	115
Hackney	221,926	6,382	3,378	28.3	15.0	1.98	443	70	78	15	61	92	—	31	—	96	323	119
Holborn	58,535	1,647	1,206	27.7	21.3	2.44	146	46	30	8	10	27	—	6	—	19	179	129
Finsbury	100,487	3,097	2,334	36.2	22.9	3.18	325	35	83	15	38	75	—	9	—	69	233	154
City of London	25,598	340	530	13.1	20.4	1.38	36	7	10	1	10	4	—	2	—	2	44	126
Shoreditch	118,004	4,069	2,488	33.9	20.7	3.53	425	76	88	8	25	76	—	22	—	130	217	174
Bethnal Green	129,865	4,589	2,747	34.8	20.8	2.50	339	64	59	19	33	89	—	14	—	61	260	155
Stepney	300,551	11,590	6,285	38.0	20.6	3.31	1,069	260	104	30	85	199	—	34	—	237	579	147
Poplar	169,214	5,850	3,326	34.2	19.3	2.77	476	93	69	21	57	99	—	27	—	110	293	154
Southwark	206,825	6,897	4,495	32.8	21.4	3.10	653	78	164	42	63	114	—	23	—	169	550	166
Bermondsey	130,218	4,346	2,753	32.8	20.8	3.06	405	31	155	18	30	69	—	13	—	89	249	155
Lambeth	305,102	9,067	5,384	29.2	17.4	1.86	581	60	83	48	53	118	—	38	1	180	526	127
Battersea	171,401	4,944	2,618	28.4	15.0	1.98	346	27	101	24	18	63	—	16	—	97	229	127
Wandsworth	241,810	6,380	3,306	25.9	13.5	1.62	402	25	97	23	67	64	—	29	—	97	221	127
Camberwell	262,775	7,487	4,345	28.0	16.3	2.23	596	63	121	41	84	110	—	31	—	146	402	138
Deptford	111,577	3,391	1,873	29.9	16.5	2.44	277	33	74	19	20	41	—	13	1	76	127	138
Greenwich	98,013	2,802	1,532	28.1	15.4	1.59	159	22	41	6	15	20	—	9	—	46	119	138
Lewisham	132,432	3,466	1,883	25.7	13.6	1.79	241	12	27	19	45	65	—	9	—	64	143	125
Woolwich	119,556	3,734	1,837	30.7	15.1	1.93	235	38	40	9	23	51	—	13	—	61	181	125

1.6 per 1,000 in the seventy-six large towns; in London this death-rate was equal to 1.8 per 1,000, while it averaged 1.5 per 1,000 in the seventy-five other large towns, among which the highest death-rates from the principal infectious diseases were 2.7 in Smethwick and in Rotherham, 3.0 in Tynemouth, 3.2 in Blackburn, 3.3 in Stockport, 3.6 in Merthyr Tydfil, 4.0 in Grimsby, and 6.7 in Wigan. Measles caused a death-rate of 1.0 in Manchester and 5.9 in Wigan; scarlet fever of 1.1 in Stockport and 1.3 in Aston Manor; diphtheria of 1.2 in Northampton and in Blackburn, 1.5 in Merthyr Tydfil, and 2.5 in Hanley; whooping-cough of 1.6 in Willesden and in Stockport, 1.8 in Rotherham, 2.0 in Great Yarmouth, 2.4 in Grimsby, and 2.7 in Smethwick; "fever" of 1.2 in Walsall; and diarrhoea of 1.6 in Middlesbrough. Of the 9 fatal cases of small-pox registered in these towns last week, 6 belonged to Liverpool, and 1 each to London, Manchester, and Leeds. The Metropolitan Asylums Hospitals contained 6 small-pox patients on Saturday last, February 14th, against 4, 7, and 6 on the three preceding Saturdays; 1 new cases was admitted during the week, against 6 and 4 in the two preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 2,528 to 1,941 at the end of the seven preceding weeks, had further declined to 1,919 at the end of last week; 246 new cases were admitted during the week, against 227, 220, and 189 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, February 14th, 904 births and 594 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 24.6, 21.3, and 21.7 per 1,000 in the three preceding weeks, declined again last week to 18.1 per 1,000, but was 1.0 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scotch towns the death-rates ranged from 10.8 in Perth and 14.9 in Edinburgh, to 22.2 in Leith and 22.3 in Aberdeen. The death-rate from the principal infectious diseases averaged 2.6 per 1,000 in these eight towns, the highest rates being recorded in Aberdeen and Greenock. The 278 deaths registered in Glasgow included 2 from measles, 4 from scarlet fever, 22 from whooping-cough, 10 from "fever," and 8 from diarrhoea. Two deaths from measles and 3 from whooping-cough were recorded in Edinburgh; 2 from whooping-cough and 3 from diarrhoea in Dundee; 11 from measles in Aberdeen; 2 from scarlet fever in Paisley; 2 from whooping-cough in Leith; and 2 from diarrhoea in Greenock.

THE CENTRAL LONDON RAILWAY.

The Public Health Committee of the London County Coucil has issued a report giving the results of chemical and bacteriological examinations of the atmosphere in the stations, lifts, passages, and tunnels of the Central London Railway ("Twopenny Tube"). Over 100 samples of air taken at different periods last year were examined. The general result of the chemist's examination shows that the quantity of carbonic acid was highest in the air of the carriages, and that the largest quantity, 14.7 volumes in 10,000 volumes of air, was not found in the carriages where smoking was allowed, but in an ordinary passenger carriage. The smallest quantity found (9.6 volumes in 10,000 of air) was in an empty carriage. The air in the passages leading from and to the stations was generally better than in the lifts. On one occasion the air in the lifts at the Oxford Circus Station contained 15.2 volumes of carbonic acid in 10,000 volumes of air, or about four times the quantity found in the fresh air outside the station. Several samples of air were collected at midnight or early in the morning after the tubes had been ventilated by the passage of air, and before the morning traffic had commenced. The examination of these samples showed in most instances that a very fair condition of the air had been produced by the ventilation, although it was still somewhat inferior to that of the outside air. Generally, about 78 per cent. of the samples collected contained more than twice as much carbonic acid as that found in outside air, and 66 per cent. contained more than 2½ times as much. The chemist considers that samples of air taken at any point on the railway should not contain more than 8 volumes of carbonic acid in 10,000 volumes of air—that is, not more than twice the amount generally found in the streets. He suggests this standard of purity in view of the fact that all the additional carbonic acid found in the air of the tunnels has been produced by respiration, and is, therefore, of a more objectionable character than that produced by the combustion of fuel in the locomotives, or of gas or oil for lighting purposes.

A few samples of air were collected from other railways, and their examination gave the following results in volumes of carbonic acid in 10,000 volumes of air:—City and South London Railway, at London Bridge station, 7.6; in an empty carriage, 14.1; Metropolitan Railway, empty carriage, between Edgware Road and Portland Road stations, 16.0; empty carriage between Baker Street and Gower Street stations, 28.8; District Railway, empty carriage, between Mansion House and Temple stations, 15.1.

Bacteriological examinations made by Dr. Andrews showed that while micro-organisms are present in tube air in a somewhat greater proportion (13 to 10) than in fresh air, the excess is not so considerable as to cause the tube air to compare unfavourably with the conditions known to exist in inhabited rooms generally; and, although there was considerable excess of organisms capable of growing at the temperature of the body, this excess was due to non-pathogenic sarcinae and allied species, and no pathogenic organisms were found in the tube air. The highest averages were found in carriages and lifts—that is, in the most crowded places examined—while the platforms and passages came out actually better than the fresh air, and the tunnels were only a little worse.

In concluding their report, the committee state that they have been informed that the Central London Railway Company are taking steps to improve the ventilation of the tunnels.

"Health Day" in Chicago.—A Bill is now before the Illinois Legislature which provides for the establishment of an annual holiday, when the houses, offices, factories, stores, theatres, and public buildings will be swept, dusted, scrubbed, and disinfected. This day will be called "Health Day," and for those who fail to observe it in a way satisfactory to the health authorities there will be a penalty sufficiently severe to teach the most refractory backsliders from sanitary grace the error of their ways.

HOSPITAL AND DISPENSARY MANAGEMENT.

CHARING CROSS HOSPITAL.

The annual general court of Governors of Charing Cross Hospital was held on February 18th, the Earl of Kilmorey, K.P., in the chair. The report of the Council showed that substantial progress had been made in the erection of the new buildings. The nurses have been installed in their new home. The grand staircase, with the four isolation wards above it, is approaching completion. The new out-patient and casualty departments, and the new wards and quarters for the resident staff, are making good progress. The two notable events of the year were the laying of the foundation stone of the new building on June 20th, with full Masonic ritual, by the Grand Master of England, H.R.H. the Duke of Connaught, K.G., and the festival dinner on March 19th, at which the Duke of Fife took the chair. The total amount subscribed amounted to £5,477, the subscription list being headed by a munificent donation of £1,000 from Lady Wantage, in memory of her husband, the late President of the hospital. The hospital has been open throughout the year. The work, however, has been carried on with considerable difficulty owing to the building operations. The number of new patients treated amounted to 20,959. There were 1,086 in-patients and 18,073 out-patients, including 8,929 cases of accident and emergency. The total of attendances was 44,772. Among the donations to the general fund during the year was one of 50 guineas from the Right Honourable Joseph Chamberlain, who, it may be remembered, was under treatment for some time in the hospital, for a serious injury caused by a cab accident. An analysis of the expenditure, after deducting 1,807 as the estimated cost of 18,073 out-patients and casualties, gives the following results: £12,839 ÷ 159 = £85 11s. per bed; and £12,839 ÷ 1,986 = £6 9s. cost of each in-patient. Owing to the postponement of the Coronation, the amount realized by the sale of the seats to view the procession was only £106, and the Council owe this sum to the generosity of most of the seat holders, who declined to receive their money back. The report concluded with an appeal for funds. It was pointed out that the year 1903 begins with a deficit of £14,000. The amount required for the maintenance of the hospital and convalescent home is £17,000, of which £15,000 has to be raised from benevolent sources. In 1902 the extraordinary expenditure amounted to £33,000, and it is not likely that a less sum will be required this year, making a total of £62,000. The report was adopted, and, after the transaction of some formal business, the meeting was brought to a close with votes of thanks to the various committees and the medical staff.

INDIA AND THE COLONIES.

BRITISH GUIANA.

ANNUAL REPORT.

The report of Dr. J. E. Godfrey, Acting Surgeon-General of British Guiana, for the year 1901-2 is of considerable interest. It is a good example of the large amount of medical and administrative work that is done often by an insufficient staff in the British Colonies.

The Medical Department.

The report commences with an account of the changes in the Medical Department and the amount of leave obtained by the medical officers. The leave granted appears to have been a reasonable amount, but we note that nine private practitioners had to be employed in a year that seems to have been fairly healthy and free from zymotic disease to enable twelve medical officers to obtain their leave. There is no statement as to the payment of these practitioners except that it was "without extra cost to the Government."

Hospitals and Asylums.

The large provision made for the indigent sick is shown in the statistical tables. During the year in the general hospitals 13,370 in-patients were treated, and 70,410 out-patients. The administration and medical care of these patients devolved on nine medical officers. In addition to these patients there is a leper asylum with an average of 405, and a lunatic asylum with an average of 730 inmates, prison hospitals (670 patients), and almshouse or infirmaries. On the sugar estates accommodation is provided for 8 per cent. of the indentured immigrants. In all there were 37 Government medical officers for these institutions, the estates hospital, and to provide medical attendance for paupers. Reports from the various institutions and districts are published, and the institutions appear to be conducted with efficiency and also economy, as the average daily cost at the largest institution of each resident patient, including the cost of medicine for out-patients, was 29.8 cents, or rather under 1s. 4d.

Diseases and Mortality.

Statistical tables of the diseases treated are appended. Malaria, including malarial cachexia, was responsible for the largest number of admissions; and tuberculosis, Bright's disease, pneumonia, and dysentery in the order named for the greatest number of deaths. Of zymotic disease, whooping-cough, chicken pox, diphtheria, and enteric occurred, but only caused 5 deaths in all.

A list of surgical operations at the public hospitals is given. This list is not subdivided into major and minor operations, and consequently the mortality—3.0 in Georgetown and 1.2 per cent. at New Amsterdam—conveys little information. From the list of operations, however, it can be seen that much excellent work is done.

Medical Societies and Taxation.—A Bill has been introduced by Mr. McCabe in the Senate of the New York Legislature to exempt from taxation all personal property situated within any city of the first class, and belonging to any incorporated medical society of any county, which county is wholly or partly within such city, provided that the property is used for the purposes of the society and not otherwise, and provided that such exemption should not exceed 150,000 dollars (£30,000) in New York or King's County, and 50,000 dollars (£10,000) in any other county in the State. The Bill has been referred to the Committee on Taxation and Retrenchment.

MEDICAL NEWS.

DONATIONS.—The Lincoln County Hospital has received donations of £500 from both Mr. Coningsby C. Sibthorp, of Sudbrook Holme, and Mr. Montagu R. Waldo Sibthorp, of Canwick Hall, Lincoln.

BEQUESTS.—Under the will of the late Mr. Nicholas Harrison, of Chester, the sum of £2,000 has been bequeathed to the Chester General Infirmary and £1,000 to the Convalescent Home at Parkgate, Chester.

ULSTER MEDICAL SOCIETY.—The President, Dr. John Campbell, entertained the members at a smoking concert in the Medical Institute on the evening of February 12th. A large number accepted the invitation, and a most enjoyable and successful evening rewarded the kindness of the President. Some excellent singing and recitations were given, both by members and by a few friends.

THE New York School of Clinical Medicine has established a special department at Hartford, Connecticut, for the study of the neuroses and psychoses of alcoholism and of drug habits. This department is to be under the supervision of Dr. T. D. Crothers, who will deliver a course of clinical lectures on Inebriety caused by Alcohol, Opium, Chloral, Cocaine, and other Narcotics.

DR. DEMPWOLFF, who succeeded Professor Koch as head of the German Expedition for the Investigation of Malaria in German New Guinea, states, according to the Berlin correspondent of the *Standard*, that he has discovered an aquatic insect which destroys the *Anopheles* mosquito. He proposes to cultivate these insects by artificial means, and in this way hopes to exterminate the malaria mosquito.

AN AMERICAN MEDICO-HISTORICAL SOCIETY.—A proposal has recently been made in America for the establishment of a national society devoted to the history of medicine. The proposal is meeting with much favour, especially in Baltimore, where the Johns Hopkins Hospital Historical Club, the Medical and Chirurgical Journal Club, and the College of Physicians and Surgeons Medical Society have received the suggestion with enthusiasm. Among those who have warmly welcomed the proposal are said to be Drs. William Osler, William H. Welch, Stewart Paton, Henry M. Hurd, and John C. Hemmeter.

INDUSTRIAL DISEASES IN ITALY.—Professor Baccelli, the Italian Minister of Agriculture, has sent to provincial medical officers, sanitary officials, medical directors of hospitals and industrial establishments a schedule of questions as to the hygienic conditions in which labour is carried on, and as to the diseases peculiar to various industries. Among those mentioned are mineral works; brick, ceramic, and glass works; metallurgical works; chemical works; tobacco factories; industries having to do with animal materials; cloth factories, tailoring; agricultural labour; transports, etc., and sanitary services.

HUNTERIAN SOCIETY.—On February 11th the Annual Oration was delivered by Dr. T. H. Openshaw, C.M.G., Dr. A. L. Galabin, President, in the chair. The subject was John Hunter: his Influence on Surgery, with some remarks on the Treatment of Appendicitis. At the same date the following officers were elected:—*President:* F. H. Appleford, M.D. *Vice-Presidents:* W. A. Dingle, M.D., F. Wallace, J. Adams, F.R.C.S., J. H. Targett, M.S. *Treasurer:* R. Hingston Fox, M.D. *Trustees:* F. M. Corner, J.P., F. Gordon Brown, R. Clement Lucas, M.B., F.R.C.S. *Honorary Librarian:* T. H. Arnold Chaplin, M.D. *Orator:* J. F. Woods, M.D. *Secretaries:* T. Glover Lyon, M.D., H. L. Barnard, M.S., F.R.C.S. *Editorial Secretary:* E. W. Goodall, M.D. *Council:* H. R. Andrews, M.D., Sir Hugh Beevor, Bart., M.D., A. T. Davies, M.D., Fortescue Fox, M.D., A. W. Galloway, A. L. Galabin, M.D., F. R. Humphreys, W. Rawes, M.D., Ernst Michels, M.D., F.R.C.S., J. W. Oliver, M.D., F. J. Smith, M.D., J. F. Woods, M.D. *Auditors:* F. Gordon Brown, F. J. Smith, M.D., A. T. Davies, M.D., J. F. Woods, M.D.

MEDICO LEGAL SOCIETY.—At a meeting of this Society, held on February 10th, Sir William Collins, President, in the chair, the adjourned discussion upon Dr. Harvey Littlejohn's paper on Medico-legal *Post-mortem* Examinations was continued. The speakers were unanimous in support of calling in a skilled pathologist, and a comparison was made between the English and Scottish methods of procedure in matters under investigation. Dr. Gordon Brown, who was employed by the police at the time, read a paper upon the Whitechapel murders, which took place between August and November, 1888. After relating in detail the terrible story of murder and mutilation, he endeavoured to draw an inference as to the nature of the murderer. His motive, he argued, could not be robbery or jealousy, because of the depraved class of his victims; nor could it be the satisfaction of sexual passion alone, for in no case had there been violation. He concluded that the murders were the acts of an insane man, with the anatomical knowledge of a slaughterer, and that they should be classed under the head of Sadism.

MEDICAL VACANCIES.

The following vacancies are announced:

BISHOP AUCKLAND RURAL DISTRICT COUNCIL.—Medical Officer of Health. Salary, £350 per annum. Applications to the Clerk to the Council, Union Offices, Bishop Auckland, by February 25th.

CITY OF LONDON ASYLUM.—Second Assistant Medical Officer and Pathologist unmarried and under 30 years of age. Salary, £150 per annum, with board, furnished apatments, washing, and attendance. Applications, on forms provided, to be sent to the Clerk to the Visiting Committee, Guildhall, by March 12th.

DURHAM COUNTY ASYLUM.—Second Assistant Medical Officer. Salary, £180 per annum, rising to £220, with rooms, board, laundry, and attendance. Applications to the Medical Superintendent, Durham County Asylum, Winterton, Ferryhill.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—(1) Medical Officer for the Casualty Department. Appointment for six months, but renewable. Salary at the rate of £100 per annum, and luncheon. (2) House Surgeon. Board, residence, etc., provided, and honorarium of £25 on completion of six months' approved service. Applications to the Secretary by March 14th.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Two Physicians to outpatients. Applications to the Committee of Management by March 5th.

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—Assistant House-Surgeon. Salary, £75 per annum, with board, residence, and laundry. Applications to the Honorary Secretary.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) House-Physician, unmarried. Appointment for six months; salary, £20; washing allowance £2 10s., with board and residence. Applications, on forms provided, to be sent to the Secretary by March 4th.

HULL: VICTORIA CHILDREN'S HOSPITAL.—(1) Lady House-Surgeon. Salary, £50 per annum. (2) Lady Assistant House-Surgeon. Salary, £40 per annum. Board and laundry provided in each case. Applications to the Honorary Secretaries by February 26th.

KENT COUNTY ASYLUM, Barming Heath, Maidstone.—Fourth Assistant Medical Officer, unmarried, and not over 30 years of age. Salary, £175 per annum, rising to £200, with furnished quarters, attendance, etc. Applications to Dr. F. Pritchard Davies, Superintendent.

LONDON THROAT HOSPITAL, 204, Great Portland Street, W.—House-Surgeon (non-resident). Honorarium at the rate of £50 per annum. Applications to the Honorary Secretary of the Medical Committee by March 7th.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Assistant Resident Medical Officer. Appointment for six months. Board, residence, and washing provided, and honorarium at the rate of 50 guineas per annum. Applications to the Secretary by March 5th.

NEWCASTLE-UPON-TYNE SCHOOL BOARD.—A male and female Medical Officer. Salary attached to each post to be determined by the Board. Applications, endorsed "Medical Officer," to be sent to the Clerk, School Board Offices, Northumberland Road, Newcastle upon Tyne, by March 4th.

NORTH EASTERN HOSPITAL FOR CHILDREN, Hackney Road, N.E.—(1) Assistant Physician; must be F. or M.R.C.P.Lond. (2) Casualty Officer. Appointment for six months. Salary £80 per annum, with lunch. Applications to the Secretary by March 9th.

OWENS COLLEGE, Manchester.—Junior Demonstrator in Physiology. Stipend, £100 per annum, rising to £150. Applications to the Registrar by March 16th.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road, N.W.—Assistant Resident Medical Officer. Appointment for four months. Salary at the rate of £50 per annum, with board, residence, and washing. Applications to the Secretary by March 2nd.

ROTHERHAM HOSPITAL AND DISPENSARY.—Senior House Surgeon. Salary, £110 per annum, with rooms, commons, and washing. Applications to Mr. E. S. Bayliss, J.P., 19, Moorgate Street, Rotherham, by February 24th.

ROYAL DENTAL HOSPITAL OF LONDON AND LONDON SCHOOL OF DENTAL SURGERY, Leicester Square, W.C.—(1) Demonstrator, to attend 9 to 1 in the morning and 2 to 5 in the afternoon. Honorarium, £200 per annum. (2) Demonstrator, to attend 9 to 1 daily. Salary, £100 per annum. Applications to be sent to the Dean for (1) by March 22nd, and for (2) by March 19th.

STOCKPORT INFIRMARY.—House-Surgeon. Salary, £100 per annum, with residence, board and washing. Applications to the Secretary by February 25th.

WALSALL AND DISTRICT HOSPITAL.—House-Surgeon; unmarried. Salary, £100 per annum, with apartments, board, and laundry. Applications to the Chairman, Leicester Street, Walsall, by March 3rd.

WARWICK UNION.—Medical Officer for the Warwick District. Salary, £140 per annum. Will also be appointed Public Vaccinator for the District. Applications, endorsed "Medical Officer," to be sent to the Clerk to the Guardians, 48, Bedford Street, Leamington Spa, by March 3rd.

WEST LONDON HOSPITAL, Hammersmith Road.—Assistant Surgeon. Applications to the Secretary-Superintendent by March 25th.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Assistant House Physician. Appointment for six months. Honorarium at the rate of £75 per annum, with board, lodging, and washing. Applications to the House Governor by February 25th.

WOLVERHAMPTON EYE INFIRMARY.—House Surgeon. Salary, £70 per annum, with rooms, board, and washing. Applications to the Secretary by March 10th.

MEDICAL APPOINTMENTS.

ANDERSON, William, M.A., M.B., B.Ch.Aberd., appointed Second House-Surgeon to the Royal London Ophthalmic Hospital, City Road, E.C.

BERRY, H. G., M.R.C.S., L.R.C.P.Lond., appointed District Medical Officer of the Aylsham Union.

BLAKE, A. F., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Grange District of the Orsett Union.

BROWN, W. F., M.B., M.S.Glasg., appointed Medical Officer of Health and Police Surgeon for the Burgh of Ayr, *vice* John Riddell, L.F.P.S.Glasg.

BRYAN, Frank, B.C.Cantab., appointed House-Physician to the Derbyshire Royal Infirmary.

CAMPBELL, Colin A., M.D.Toronto, appointed Third House-Surgeon to the Royal London Ophthalmic Hospital, City Road, E.C.

CARR-WHITE, Major P., M.B., Indian Medical Service, appointed Clinical Assistant to the Samaritan Free Hospital for Women.

CLAPHAM, Lucy B., M.B.Lond., appointed Assistant Anaesthetist to the New Hospital for Women, London.

DICK, George, M.B., Ch.B.Edin., appointed Medical Officer of Health for the Counties of Sutherland and Caithness.

DUFFETT H. A., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer to the School Homes of the Greenwich Union.

HOPE, C. M., M.B., Ch.B.Glasg., appointed House Surgeon to the Derbyshire Royal Infirmary.

INMAN, William S., M.B.Lond., L.S.A., appointed Senior House Surgeon to the Royal London Ophthalmic Hospital, City Road, E.C.

LYELL, J. H., M.D.Glasg., C.M., appointed Outdoor Surgeon to the Perth Royal Infirmary *vice* Parker Stewart, M.B., C.M.Edin.

MAGUIRE, C. E., M.D.Aberd., appointed a Government Medical Officer, Fiji, on transfer from Southern Nigeria.

MARSHALL, R. P., M.R.C.S.Eng., L.R.C.P.Lond., appointed District Medical Officer of the St. Olave's Union.

MYERS, A. A., L.R.C.P., M.R.C.S.Eng., appointed Assistant House Surgeon to the Derbyshire Royal Infirmary.

PALMER, H. J., L.R.C.P., L.R.C.S.Edin., appointed District Medical Officer of the Caxton and Arrington Union.

PATON, E. L., M.A., M.B., C.M.Glasg., appointed Visiting Surgeon to the Perth Royal Infirmary, *vice* James Ferguson, M.B., C.M.Glasg.

STIRLING, Robert, M.A., M.D., F.R.C.S.Edin., reappointed Visiting Surgeon to the Perth Royal Infirmary.

TAYLOR, W., M.B., C.M.Edin., appointed Visiting Surgeon to the Perth Royal Infirmary, *vice* D. S. Kennedy, M.D.Glasg.

WETHERED, Ernest, M.B.Lond., L.R.C.P., M.R.C.S.Eng., appointed House Surgeon to the Derbyshir Royal Infirmary.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Society of London, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Dr. J. Kingston Fowler: Haemorrhagic Enteric Fever, with an account of two cases. Dr. S. H. Habershon: The Causes, Diagnosis, and Treatment of Spasmodic Contraction of the Pylorus.

Odontological Society of Great Britain, 20, Hanover Square, W., 8 p.m.—Casual Communications by Mr. C. Robbins and Mr. Golding Bird. Paper by Mr. J. B. Parfitt.

Royal College of Surgeons of England, 5 p.m.—Mr. J. H. Parsons: On Ocular Circulation. Arris and Gale Lecture I.

TUESDAY.

Royal Medical and Chirurgical Society, 20, Hanover Square, W., 8.30 p.m.—Dr. Vere Pearson: Latent Emphysema in Infants. Mr. C. W. Ensor and Dr. J. O. Wakelin Barratt: Paroxysmal Haemoglobinuria of Traumatic Origin.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Professor W. D. Halliburton: On the Chemistry of Muscle and Nerve.

WEDNESDAY.

Dermatological Society of Great Britain and Ireland, 20, Hanover Square, W., 5 p.m.

Epidemiological Society, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Discussion: On The Panama Canal and the Introduction of Yellow Fever into Asia, to be opened by Dr. Patrick Manson, C.M.G.

Hunterian Society, London Institution, Finsbury Circus, E.C., 8.30 p.m.—Mr. Clement Lucas: The Second Hunterian Lecture on The Symptoms and Diagnosis of Stone in the Kidney.

Royal College of Surgeons of England, 5 p.m.—Mr. J. H. Parsons: On Ocular Circulation. Arris and Gale Lecture II.

THURSDAY.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Dr. T. G. Brodie: On the Circulation.

FRIDAY.

Clinical Society of London, 20, Hanover Square W., 8 p.m.—Exhibition of Clinical Cases followed by Discussion. Patients will be in attendance from 8 to 9 p.m.

Royal College of Surgeons of England, 5 p.m.—Mr. J. H. Parsons: On Ocular Circulation. Arris and Gale Lecture III.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Dr. A. D. Waller: On Experimental Pharmacology: The Action of Anaesthetics and Narcotics.

POST-GRADUATE COURSES AND LECTURES.

Charing-cross Hospital, Thursday, 4 p.m.—Demonstration of Surgical Cases.

Hospital for Consumption and Diseases of the Chest, Brompton, S.W., Wednesday, 4 p.m.—Lecture on Diastolic Murmurs.

Hospital for Sick Children, Great Ormond Street, W.C., Thursday, 4 p.m.—Lecture on Mental Deficiency in Children (Lantern Demonstration).

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C. Demonstrations will be given at 4 p.m. as follows:—Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, ear. Lectures will also be given at 5.15 p.m. as follows: Monday, Diseases of the Breast; Tuesday, Defects of Refraction; Wednesday, Certain Abdominal Affections; Thursday, Postures in Hysterical Paralysis; Friday, Acute Appendicitis.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., Tuesday, 3.30 p.m.—Lecture on Effects of Pressure on Laryngeal Nerves.

Post-Graduate College, West London Hospital, Hammersmith Road, W.—Lectures will be delivered at 5 p.m. as follows: Monday, Ocular Symptoms in General Diseases; Tuesday, Anterior Displacement of the Uterus; Wednesday, Diagnosis and Treatment of Valvular Disease of the Heart; Thursday, Fractures in and near the Elbow and Wrist Joints; Friday, Some Factors of Infection.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning in order to ensure insertion in the current issue.

BIRTHS.

FELCE.—On the 15th instant, at 1, Cricklewood Villas, N.W., the wife of Stamford G. Felce, M.A., M.D., B.C.Cantab., of a daughter.

LAWTON.—On February 12th, at 18, Hamilton Square, Birkenhead, the wife of William Lawton, M.B., of a son.

MCGEAGH.—On January 31st, at Gransden Hall, Sandy, the wife of William McGeagh, of a daughter.

STEVENS.—On the 14th February, at 8, St Thomas's Street, London Bridge, the wife of Thos. G. Stevens, M.D., F.R.C.S., M.R.C.P., of a son.

MARRIAGE.

MARSHALL–HIGGINSON.—On the 8th instant, at St. Jude's Church, South Kensington, by the Rev. Salter St. George John Hartley, M.A., Vicar of Eston, Rutland, assisted by the Rev. William Millar, M.A., Vicar of Tillingham, Essex, and the Rev. Prebendary Eardley Wilmot, M.A., Vicar of the Parish, Thomas Bingham Marshall, M.R.C.S., L.R.C.P., of the Limes, Tillingham, Essex, elder son of the late Thomas Alexander Marshall, to Ruth Forbes, youngest daughter of Arthur Higginson, of 16, Pembroke Road, South Kensington.

DEATH.

DAVIES.—On February 15th, Alison Paxton, widow of the late Edward Davies, M.D., of Plas Darland, Wrexham, aged 59 years.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

DR. J. J. REYNOLDS (Cheriton Fitzpaine, Crediton, N. Devon) desires to know the address of a medical benevolent society in the west of England.

PODAGRA asks for suggestions for the treatment of gouty pruritus in a gentleman, aged 50. It affects the genitals and inner side of the thighs, and is of many years' duration. There is intolerable itching at night—very little by day, except on going near a fire. A slight papular rash is always present. The patient is otherwise in excellent health, takes plenty of exercise, and is careful as to diet, etc. All the usual forms of treatment, external and internal, have been given a prolonged trial, and as a cure seems to be out of the question, what is urgently required is something to relieve the irritation on going to bed so that sleep may be obtained.

WAR asks: (1) Has the Riberi prize of the Turin Academy of Medicine been awarded yet? Competitions were to be sent in by December 31st, 1901. (2) Where can the list of names of the committee of the Cancer Research Fund be found?

*** The Riberi Prize is advertised in the Italian journals. It will be awarded to the author of the best work in the field of medical science produced (printed or MS.) between 1902 and 1907. The last day for sending in works in competition is December 31st, 1907. We presume the prize for the previous quinquennium has been awarded, but we do not know to whom. (2) The list of the committee was published in the BRITISH MEDICAL JOURNAL, August 2nd, 1902, p. 336.

ADDISON'S DISEASE.

F.R.C.P. will be glad to hear of a case of Addison's disease in any of the London hospitals or Poor-law infirmaries with the view of being allowed to test a certain point in connexion with that disease. Address, F.R.C.P., Hotel Windsor, Victoria Street, London, S.W.

THE DIAGNOSIS OF OBSCURE ABDOMINAL TUMOURS.

DR. ALEX DUKE (London) writes: In cases of abdominal tumours difficult to diagnose, may I inquire, with a true desire for information, why the exploring needle or aspirating needle is not oftener used? Surely in these aseptic days no injury should accrue from the puncture made, and the contents of tumour, if any, would help to confirm or refute the diagnosis, and perhaps be the means of preventing more serious mischief later on. I trust those in a position to reply will consider my query pertinent, not impertinent.

CONTRACT PRACTICE CLUB RATES.

A. T. writes: It reads as extraordinary news that the Fleetwood doctors should have ever attended club members for 2s. 6d. a year. How did they possibly suppose that they could make anything out of such a contract? What great difficulty is there to hinder lodge doctors from all striking on a prearranged date (say January 1st or July) for at least 5s. instead of allowing the clubs to deal with them in detail.

ANSWERS.

F. A. W.—We are advised that it is practically impossible to estimate correctly blood (total counts of white and red corpuscles) from specimens sent in tubes or pipettes.

LABOR.—The fees payable for the Paris M.D. amount to about £69. The extent to which exemption is granted varies, we believe, according to circumstances. Application for such exemption must be addressed to the Minister of Public Instruction, to whom the documents showing the examinations passed by the candidate in his own country and the degrees or qualification possessed by him must be submitted. It certainly would be advisable for the candidate to study for some time in Paris. Several examinations have to be passed, and a thesis must be presented. The examinations are conducted in French. The *Progrès Médical* (14, Rue des Carmes, Paris) publishes a "Student's Number" every year about November, in which full information is given as to teaching and examinations in every medical school in France.

LETTERS, NOTES, Etc.

A DEGREE FOR LONDON STUDENTS.

MR. F. W. COLLINGWOOD (London) writes: I would like to remark that though I have been endeavouring for some years past to relieve

London diplomates from the disabilities under which they suffer. I personally regret that any writer, whilst trying to help our cause, should have used any contempt for provincial degrees. That there is a real grievance is shown by the almost universal regret amongst Conjoint men that they did not betake themselves to a university town where a degree is the reward of sound knowledge and studious application to work. The fact that the College of Physicians prohibits its diplomates from styling themselves "Dr." causes bitter resentment, but that should be no reason why provincial graduates should be groundlessly discredited.

THE ASSOCIATION OF CERTIFYING FACTORY SURGEONS.

DR. CHARLES F. MOORE (Dublin) writes, with reference to the notice of the annual report of the Honorary Secretary of the Association of Certifying Factory Surgeons in the BRITISH MEDICAL JOURNAL of February 7th, to point out that the attempt of the Government to abolish the office of certifying surgeon was made in 1891 and not in 1880. He also states that the only report available from certifying factory surgeons on the critical evening was the Dublin report, which was quoted by Sir Lyon Playfair. Sir William Houldsworth, Mr. J. A. Campbell, and other speakers.

*** As the Bill containing the "abolition" clause did not actually come before Parliament until February, 1901, Dr. Moore is technically correct. It would be wrong, however, to credit the early part of that year alone with the great efforts put forth in defence of the office, as much had been done long anterior to that time. Dr. Moore's Dublin statistics were collected after the agitation against medical examination had commenced, and, though valuable, could not be expected to have the same weight as a list of 2,946 rejections compiled by one particular surgeon during the whole 23 years of his office.

THE SWISS MINISTER TO FRANCE.

DR. REIN KOENIG (Maternité, Geneva) writes: Will you permit me to correct a statement which appeared in the BRITISH MEDICAL JOURNAL of January 10th, although the matter has hardly any importance for your readers? I read on p. 98, second column, "Not only has the Swiss Republic.....a medical President (which is true), but its diplomatic representative in France is Dr. Lardy, who is also a member of the medical profession." In fact, the Swiss Minister in Paris, Dr. Lardy, as well as the Swiss Minister in London, Dr. Carlin, and the former one in London, Dr. Bourcart, is a "doctor *juris*," but does not belong to the medical profession. His brother, however, is a medical man, was formerly surgeon to the French Hospital at Constantinople, and is now practising at Geneva.

THE EVIL EFFECTS OF THE CORSET.

F.R.C.S.I. writes: As a member of the medical profession, and a woman who has not worn corsets for many years, I wish to make a protest against your editorial in the BRITISH MEDICAL JOURNAL of February 14th. Modern dress can be worn with comfort, and without undue pressure and the aid of corsets, by the simple arrangement of buttoning the skirt-band to the bodice, thus distributing the weight of the skirt evenly over the shoulders; this method is much simplified by wearing knickers instead of several useless petticoats.

I do not think that, even with the making of corsets to individual measurements, their harmful influence can be avoided; the very principle on which corsets are fastened ensures a considerable pressure being exerted in order to keep them fastened, and corsets made to measure are only possible to the few. We all know that the support given by corsets to the back and to the abdominal walls leads to ill-development of the muscles of these parts and disinclination or inability to take exercises which involve movement of the trunk. This may not be of very serious importance to the woman who leads a drawing-room existence; but to the woman who needs all her health and strength to fight the battle of life—and too often goes to the wall for want of them—I need not say how important it is that her physique should be developed to the utmost. Is it not one of the bitterest of our modern cries that the men of our nation—and still more so our women—are physically degenerate?

I cannot say that I have been able to follow cause and effect in all such cases as Dr. Williams cites, but I would like to mention one case of cause and effect that I have met with in practice. I recently attended a considerable number of confinements in a cotton spinning district in Lancashire where the women all wear very stiff stays, which are laced on instead of having the ordinary catches. I was at first surprised to find it the custom to wear these corsets during the confinement, and not to remove them till labour was completed, but I soon found that it was a choice generally between corsets or gradually tightened binder on the one hand, or a lingering labour or forceps on the other, the normal expulsive efforts unaided by the pressure of the tight corset being quite inadequate. I also found that splitting of the recti muscles was a much more frequent occurrence than is usual in other districts. I may add, it is customary in that part of Lancashire for girls to wear corsets from babyhood onwards.

Whatever harm, however, may be done in mature years by wearing tight corsets is, I feel sure, slight in comparison to the injury inflicted by their use by children and young girls whose frames are fast developing, and to whom freedom of movement is of such vital importance.

If we could only persuade mothers to prohibit the wearing of corsets by their daughters till they reached the age of 20 years, deformed waists and their attendant evils would soon be a thing of the past.

THE PREVENTION OF CORNS.

DR T. D. COOK (Torquay) writes: Judging from the number of people who suffer from corns, it does not appear to be known that they can be prevented by properly fitting boots. A bootmaker explained this to me, and I sent him twelve months ago a patient who suffered greatly from corns, so much so that at times he was too lame to walk. Boots were made so as to avoid pressure on the outside or inside of the foot, and since that he has had no further trouble.

BERI-BERI.

DR. W. LOUDON STRAIN (Saõ Paulo, Brazil) writes: Only now have I had an opportunity of reading the discussion which took place on the above subject at the annual meeting, and I write to correct a statement made by Mr. Cantlie, but not given on his own authority. He mentioned Brazil as a country where rice formed no part of the diet. This is a mistake. Brazil consumes large quantities of rice; indeed, with black beans, it forms the staple diet of the people. Rice is grown largely in the country, but is also imported from Burmah and elsewhere.

LETTERS, COMMUNICATIONS, ETC., have been received from:

A Dr. J. A. Arkwright, Haywards Heath; Appetitus Rationi Pareat; Artizan; A. T. J. W. Allan, M.B., Glasgow. **B** J. E. Blomfield, M.B., Sevenoaks; Mr. H. Birbrige, Hereford; Dr. H. T. Bulstrode, London; Mr. J. Bell, London; Barrister-at-Law; Mr. R. J. Bland, London; Mr. W. Berry, Wigan; Dr. W. Bruce, Dingwall; Messrs. Baxter and Son, London; A. H. Burgess, M.B., Manchester; Mr. L. A. Bidwell, London; Mr. W. M. Beaumont, Bath. **C** Mr. L. Cooper, Rochester; Crypto; Dr. H. R. Crocker, London; L. B. Clapham, M.B., London; Dr. M. Craig, London; Mr. F. B. Cutler, Leicester; Cider. **D** Mr. W. F. Dearden, Manchester; Dr. A. Duke, London; Messrs. De Beer Bros. and Co., London. **E** Mr. H. Elliot-Blake, Bognor. **F** Mr. W. H. P. Fox, London; Messrs. F. H. Faulding and Co., London; F. C. Fox, M.B., London; F. A. W.; Mr. H. Frowde, London. **G** Dr. J. Groves, Carisbrooke; Mr. A. Granville, Alexandria; H. M. W. Gray, M.B., Aberdeen. **H** Dr. T. A. Helme, Manchester; Dr. E. W. Hope, Liverpool; Dr. A. Hillier, London; Dr. W. G. Holloway, London; F. R. Hill, M.B., Carlisle; Messrs. C. J. Hewlett and Son, London; Mr. R. C. B. Hall, Chard; Mr. H. Hilliard, London. **I** Independent Spectator. **J** Dr. E. L. Jones, Cambridge; J. B.; Jacobus. **K** Dr. F. W. Kidd, Dublin; Mr. F. Kleemann, London; Mr. R. Kirkpatrick, London. **L** T. D. Luke, M.B., Edinburgh; Dr. T. G. Lyon, London; Dr. C. F. Lillie, San Remo; Mr. P. A. Longhurst, London; Mr. A. C. A. Lovegrove, Ripon; Dr. R. W. Leftwich, London; Mr. J. Lilwall Cormac, Exeter; L.R.C.P.; Liverpool Medical Institution, Secretary of, Liverpool; Mr. J. B. Lamb, London; Dr. G. H. Lancashire, Manchester; Dr. E. Lawrie, London; Lucina. **M** W. Martin, M.B., Cardiff; Mr. J. H. Mummery, London; D. Morgan, M.B., Liverpool; Mr. W. R. Miller, Dumfries; Dr. D. McKenzie, London; Dr. C. J. R. McLean, Doncaster; A. S. Mellor, M.B., London; Mr. E. Montefiore, London; M.D., D.P.H.; Dr. T. Mitchell, Gorseinon; Mr. J. B. Maxwell, Southend-on-Sea. **N** Ir. J. T. Neech, Halifax; B. H. Nicholson, M.B., Colchester. **O** Dr. G. Oliver, Tiefenkastel. Odin Syndicate, Managing Director of, London; S. I. Oddie, M.B., London; Obstetrical Society, Secretary of, London; Otological Society of the United Kingdom, Secretary of, London. **P** Dr. M. Prickett, London; Dr. E. F. Potter, London; Mr. E. J. C. Palmer, Gloucester; Provincial M.O.H.; P.; P. P.; Park; Podagra. **R** J. H. Ray, M.B., Manchester; Dr. W. Russell, Edinburgh; Dr. J. J. Ridge, Enfield; J. D. Russell, M.B. London; Mr. J. J. Reynolds, Crediton. **S** Mr. P. de Santi, London; B. Strachan, M.B., Sunderland; Staff Surgeon; Dr. H. Smith, London; Dr. R. McC. Service, Glasgow; Dr. A. W. Smith, Chicago; Mr. A. L. Scott, London; Salt pack; Spinal Cord; Stenson; Miss M. S. P. Strangman, Beverley; Dr. G. Sharp, Leeds; Messrs. W. B. Saunders and Co., London; Scientific Press, Manager of, London; Dr. W. M. Stevens, Cardiff. **T** A. Thomson, M.B., Stratford-on-Avon; J. H. Teacher, M.B., Glasgow; Dr. J. C. Thresh, Chelmsford; Mr. J. M. Tabor, London; Dr. S. Taylor, Liverpool; "Threecis" Plug Company, Manager of, London; Mr. C. W. Thies, London; Dr. F. W. Tunnicliffe, London; J. H. Targett, M.B., London. **V** Mr. E. D. Vinrace, London. **W** Dr. A. Whitfield, London; Sir H. Walpole, K.C.B., London; Dr. W. B. Warde, Tunbridge Wells; Mr. C. Williams, London; Dr. F. Willcocks, London; Dr. C. T. Williams, London; J. W. T. Walker, M.B., London; L. Wheeler, M.B., London. **Y** D. Young, M.B., Newcastle-on-Tyne.

BOOKS, ETC., RECEIVED.

Aids to Sanitary Science. By Francis J. Allan, M.D.Edin., D.P.H.Camb., etc. Second edition. Revised and edited by Reginald A. Farrar, M.A., M.D.Oxon., D.P.H.Camb., etc. London: Baillière, Tindall and Cox. 1903. 4s. 6d.

The Practical Details of Cataract Extraction. By H. Herbert, F.R.C.S.Eng., Major I.M.S. London: Baillière, Tindall and Cox. 1903. 4s.

The Errors of Accommodation and Refraction of the Eye and their Treatment. A Handbook for Students, by Ernest Clarke. London: Baillière, Tindall and Cox. 1903. 5s.

St. Bartholomew's Hospital Reports. Edited by Norman Moore, M.D., and D'Arcy Power, F.R.C.S. Vol. 38. London: Smith, Elder and Co. 1903.

A System of Clinical Medicine. By T. D. Savill, M.D. In Two Volumes. Vol. I. London: J. and A. Churchill. 1903. 12s. 6d.

A Textbook of Anatomy. By American Authors. Edited by Frederic Henry Gerrish, M.D. Second Edition. London: Henry Kimpton. 1903. 28s. net.

Transactions of the Association of American Physicians. Seventeenth Session, held at Washington D.C., April 29th and 30th, 1902. Vol. xvii. Philadelphia: Published for the Association. 1902.

Diseases of Women. A Clinical Guide to their Diagnosis and Treatment. By George Ernest Herman, M.B.Lond., F.R.C.P. Revised Edition. London: Cassell and Co., Limited. 1903. 25s.

Massage and the Original Swedish Movements; their application to various Diseases of the Body. By Kurre W. Ostrom. Fifth Edition. London: H. K. Lewis. 1902. 3s. 6d.

The Erythrocytes and the Leucocytes. London: Rebman Limited. 1903. 1s.

The Royal Army Medical Corps (Volunteers) (Glasgow Companies) Annual. No. 2. January, 1903. Edited by Captain R. T. Halliday and Lieutenant G. H. Elrington. Glasgow and Edinburgh: W. Hodge and Co. 6d.

An Atlas of Illustrations of Clinical Medicine, Surgery and Pathology. Fascículus XV. (Double Number) or III. and IV. of new series. Xanthelasma and Xanthoma with especial reference to their association with functional and organic diseases of the Liver. Compiled by Jonathan Hutchinson, F.R.C.S., F.R.S., LL.D. London: The Newsydenham Society (H. K. Lewis). 1902. Price to non members, 21s.

Education: Disciplinary, Civic and Moral. By Llewellyn Wynn Williams, B.Sc. London: Simpkin, Marshall, Hamilton, Kent and Co., Limited. 1903. 2s. 6d.

North London or University College Hospital, Gower Street, W.C. A Record of Events from 1882 to 1901 inclusive. By Newton H. Nixon, Secretary. London: Jas. Truscott and Son, Limited. 6d.

The Nurse in Hot Climates. Revised and Reprinted from the "Hospital Journal." By Edward Henderson, M.D., F.R.C.S. Edin. London: Scientific Press, Ltd. 1903. 1s net.

International Clinics. A Quarterly. Edited by Henry W. Cattell, A.M., M.D. Philadelphia, U.S.A. Vol. iv. Twelfth Series. 1903. London: J. B. Lippincott Co.

Ueber die Wirkung der Borsäure und des Borax. (Ein zweites Gutachten) Von Dr. Oscar Liebreich. Berlin: August Hirschwald. 1903. M 4.

*** In forwarding books the publishers are requested to state the selling price.

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A Clinical Lecture

ON

SOME CASES SIMULATING ACUTE APPENDICITIS.

Delivered at University College Hospital.

By ARTHUR E. BARKER, F.R.C.S.,

Professor of Surgery at University College, and Surgeon to University College Hospital.

THE case before you is one of those which remind us in a way that to my mind is most salutary of the difficulties often met with in diagnosing appendicitis. I venture to think that a feeling is growing up rather too widely that affections of the vermiform appendix are on the whole very easy to diagnose. But I do not think that this is the view held by those who have had the largest experience. These affections may in many cases be easily recognized, yet one has only to look back through any long series of them to see in how many cases they have been simulated by other intra-abdominal conditions.

I propose now to ask any or all of you who have seen difficult cases where the diagnosis of epityphlitis was either doubtful or actually incorrect to mention them, and I will write them down on the board, and I think you will find that the resulting list will be a long one. I know that you have recently had opportunities of seeing several such cases, and I will, if necessary, suggest to you others which you may have forgotten or missed. Besides this, I shall add other cases, either from hospital or other practice, which I have had to operate on and which have impressed me much. In the constant succession of appendix cases occurring here it is probable that I have mentioned these cases before, but to allude to them again and write them down in our list will not be unprofitable.

Now let us see what we have got from the various gentlemen round the bed, including myself. The list of conditions which have closely simulated appendicitis, you see, is a long one, and yet I have not written up a single one which has not been seen by either you or myself, and which has not been particularly embarrassing to the diagnosis. Our list stands thus:

1. Ruptured pyosalpinx.
2. Ovarian cyst strangled by twisted pedicle.
3. Twist and strangulation of omentum.
4. Perforated gastric ulcer.
5. Retrocaecal hernia.
6. Broken-down caseating glands.
7. Ileocaecal cancer with abscess.
8. Haematoma of broad ligament.
9. Reduction of hernia *en masse*.
10. Intussusception.

As to the first on the list, you have had several opportunities lately of realizing how very difficult it is to distinguish between a pyosalpinx with localized peritonitis and an inflammation starting in the vermiform appendix. I recall one, not long ago, which I was asked to see in the medical wards. The woman had been sent in as a case of acute appendicitis, and I was asked to see her with a view to operating. I was not satisfied as to the diagnosis, and arranged to see her again in the morning with the physician in charge. She had then so much improved that it was decided to wait still. After this I did not see her again, but I heard afterwards that she had left the hospital much better, then had another attack and was taken to another hospital, where a most perfect pyosalpinx was removed. More recently another case was admitted into this ward for appendicitis. My own diagnosis was pyosalpinx, and on operating I found this condition and removed the diseased parts with the best results. In the case before you a great deal of doubt existed in both Dr. Martin's and my own mind up to the time at which I opened the abdomen. We were both prepared for either condition. It turned out, however, to be an appendicitis, and the patient is now convalescing.

Two or three cases have also occurred here in which an ovarian cyst of small size, strangled by torsion of its pedicle, has closely simulated the disease in question. The first I have seen was that of a child of 13, and the symptoms were typical of appendicitis in its acute form. It had the sudden onset of pain in the right iliac region, followed by vomiting, rise of temperature, and with a defined swelling in the pelvis, very tender to palpation. It was only on opening the abdomen that I recognized the nature of the tumour, which was easily dealt with, the patient making an excellent recovery. The next case was one of a woman of 23, to whom I was called here late one evening. She had been admitted into the gynaecological ward, but was there diagnosed to be suffering from an acute attack of appendicitis, and was transferred to my ward for operation. The symptoms were precisely similar to those in the last case, and, besides, there was much abdominal swelling. On operating, I found an ovarian tumour, with a twisted pedicle, and thereby so strangled that it had burst, and a quantity of intracystic growths had escaped from it with much fluid. These were removed with the rest of the tumour, and the patient made a good recovery.

As to No. 3, I have only had one case of omentum twisted on itself and strangled, but several similar cases have been since recorded. The patient, a man aged 24, was admitted some years ago with a history and symptoms wonderfully like those of acute appendicitis. He had had for a long time a right reducible omental hernia. On admission he stated that he had been seized with a sudden pain in the right groin, and had vomited. His abdomen was distended, and there was a hard, tender lump above Poupart's ligament. The temperature was considerably raised, and he looked hot and flushed. Regarding the trouble as due to appendicitis, I opened the abdomen over the swelling. Immediately a black mass was seen covered with lymph and adherent to the surrounding small intestines. On separating it from the latter, and drawing it into the wound, it was seen to be a mass of omentum as large as a fist, in a semigangrenous condition, due to torsion of its proximal portion, which formed a kind of pedicle. This had been twisted round and round until it formed a hard cord. Twelve half-turns were necessary from left to right before it was released. The healthy portion above was tied firmly, and the black mass was removed. Recovery was good. This is a curious condition, and has excited some notice abroad, where the causes of the torsion have been more or less explained by some ingenious hypotheses.

You may think it strange that a perforated gastric ulcer (No. 4) should give symptoms capable of being confounded with those of appendicitis. But this has been my experience. Perhaps I ought to be ashamed of having found a difficulty in the diagnosis, but I am afraid I am not in the least ashamed, though I do regret my inability. The patient was a parlour-maid, aged 24, and of the very healthiest appearance. I happened to have seen her at about 9 p.m. putting her mistress into a cab, and apparently in perfect health. I was called to see her a couple of hours later, and found her groaning with pain, which had suddenly attacked her at about 10.15 p.m., when she was turning over in bed to go to sleep. The pain had begun in the right iliac fossa and spread over the whole abdomen. When I saw her the walls were rigid and very tender; there was a slight absence of resonance in the right flank. She had been sick. The temperature was only 100°, and the pulse good and about the same figure. There was no shock. As she suffered from a reducible right inguinal hernia which she had put back on getting into bed, I thought at first that it might have gone back *en masse*, but there were no clear signs. I gave opium and fomentations for the night, but in the morning, as the temperature and pulse had risen and the distension was greater, I removed her here and prepared for an exploration. I thought the choice of diagnosis lay between a reduction of the hernia *en masse* and an attack of appendicitis. This being so I opened as for the latter. Immediately there ran out of the wound a large quantity of glairy thin fluid which welled up from the pelvis. The appendix was healthy, and the sac of the hernia was found only filled by the fluid mentioned. This was sponged out in large quantities, but where it came from was the mystery. I thought for a moment it might be derived from a ruptured ovarian cyst. At last, on pushing a sponge on a holder upwards on the right side towards the liver, a gush of gas and an extra quantity of fluid came down from above, and I recognized the gastric perforation. I left a flat sponge in the iliac wound opened in the middle line above the navel, closed the perforation in the stomach wall, and then closed the iliac wound and part of the other. The patient made an excellent recovery, and I heard of her in service not long ago.

In No. 5 we have a very rare condition, which I have never seen in hospital. But some years ago I was summoned to the country to see a lady of about 35, said to be suffering from an attack of acute appendicitis. She had been seen by a consultant physician, who had confirmed this diagnosis on apparently good grounds. I can only say that it seemed in its history and present symptoms to be a fairly straight-

forward case in a rather desperate condition. An incision was at once made over the caecum, and a quantity of greenish gangrenous fluid at once escaped with flakes of lymph. I then drew gently on a mass presenting in the wound, and at once a knuckle of small intestine came forward from behind the caecum in a state of advanced gangrene and quite rotten. This was secured in the incision and opened there, or rather it could be wiped away. All this was done in a very short time; but the relief came too late to arrest the general abdominal sepsis, and the patient died. Cases are, of course, on record where this condition has been suspected or diagnosed and relieved successfully by operation.

Broken-down caseating glands in the right iliac fossa (No. 6), simulating a subacute appendicitis, are not so uncommon. Here the patient has probably had antecedent attacks of pain and more or less trouble with the bowels from the localized tuberculous peritonitis. One case from among a number will illustrate the difficulty of diagnosis. Some years ago I was asked to see a little girl, 10 years of age, in the country, who had been ill for some time with all the symptoms of subacute epityphlitis. The temperature was up and down: there was a diffused swelling in the right iliac fossa, not very painful. On opening over the caecum, I at first thought that I had really found a thickened appendix containing concretions lying among adherent intestines and omentum. But on closer examination this proved to be a chain of caseating glands running from the caecum through the mesentery. Some had burst, some were just breaking down. I removed as many as I thought could be safely taken away, and the patient recovered after a tedious convalescence.

No. 7 (ileocaecal carcinoma with abscess) must be a fairly uncommon condition, and yet I remember such a case several years ago here. It seemed typical, and there was a large abscess over the anterior iliac spine. This I opened and drained. It was not until the woman's death a long time afterwards that the necropsy revealed the fact that there was a ring of cancer in the valve and a perforation which had led to the abscess.

But I remember a much more puzzling case which I had to operate on two years ago down in Kent. It was that of a lady of 55 who had a round and perfectly movable tumour in the right iliac fossa with some symptoms of obstruction not acute and little or no fever. Here I was uncertain until I had opened the abdomen as to whether we had not to deal with a malignant growth of the ileocaecal valve. And even while I was clearing the puckered and hard mass I was preparing for an enterectomy. It turned out, however, that the mass was a chronically inflamed appendix included in tough adhesions. Finally I cleared the appendix, which was very long, thick, and hard removed it, and closed the abdomen. Recovery was perfect, and I have heard within the last few days—while seeing another case in her town—that she is quite well. Other cases I have seen suggested the same difficulty.

Remember that there are cases of appendical inflammation which are quite latent. A patient may have a lump in the iliac fossa with few or no symptoms of appendicitis, with little or no tenderness and no raised temperature, and it may last for months in this condition and yet after all turn out to be a suppurating appendix. Some of you must remember a strong, healthy, country labourer, aged 26, from Surrey, who has just left the hospital. He looked perfectly healthy but had for some time had an occasional pain in the right iliac fossa. When he arrived here he had no trouble except the lump and no fever at all, and yet he had a considerable abscess containing three stercoliths behind the caecum. And at the present time, and since this lecture was delivered, I have a still more striking case under my care in private. A particularly healthy, ruddy, and well-nourished gentleman of 45 came to me a couple of weeks ago at his doctor's request to consult me about a lump in his right groin the size of a large egg. This he had had for many months. It was smooth and painless, and very hard. It could be moved easily from side to side, and only when pressed far inwards was there a sense of dragging. His temperature was steadily a little *under* normal. Beyond dyspepsia and an occasional attack of flatulence and diarrhoea he had no symptoms of intestinal derangement, and he went about his ordinary work without trouble. I was quite prepared at his age to find a new growth, but when I operated five days ago I found an appendical abscess containing about half an ounce of pus.

In reference to No. 8 you might ask how could a haematoma of the broad ligament simulate appendicitis? And yet it can closely. Some years ago I was called up here to operate on a case of acute appendicitis in a little girl, aged 10 years. She had been seized some hours before with violent pain in the right side of the pelvis, had vomited, become distended and tender, and her temperature was high. There was a considerable swelling on the right side above Poupart's ligament, which was very tender. Every one of those who saw the case thought it was a typical appendicitis. When I opened the abdomen on the right side there ran out a quantity of blood-stained fluid, of which the pelvis was full. The appendix was perfectly normal, and there was no peritonitis. But the right broad ligament was distended with a large black haematoma, from which the serum had exuded. I only wiped the pelvis dry, and returned the broad ligament to its place, and all went well. I suppose this was an abortive attempt at menstruation. The case is fully recorded in the *Transactions* of the Clinical Society.

As to No. 9, I only recall one case in which reduction of a hernia *en masse* had to be considered in this connexion. It has already been alluded to in discussing the case of perforated gastric ulcer. But in that case it was certainly not out of the question.

No. 10 (intussusception) ought never to be mistaken for appendicitis. And yet I was called into Surrey some years ago by a very shrewd practitioner, whose telegram ran, "Intussusception case; please come at once prepared to operate." I went, but found the case to be one of acute appendicitis in a boy of 6. On this I operated with an excellent result, the appendix was removed, and a quantity of inflammatory fluid drained off, recovery following without much trouble.

I cannot follow up this subject further just now. The mere enumeration of the conditions which may simulate appendicitis and the relation of one or two cases illustrating each has led us far enough to-day. On some future occasion I may try to sift the cases and offer you clues which may help in differential diagnosis. But just now my aim has been to remind you that the diagnosis of appendicitis must be approached with great care. In these days when we are operating on very large numbers of typhilitic cases in a routine way I think we need to be reminded of this from time to time. The ultimate diagnosis will in many cases only be arrived at when the abdomen is opened. But if we do not recognize the possibility of finding perhaps any of the conditions mentioned above and have not prepared our minds beforehand to deal with any of them, valuable time may be lost and mistakes in manipulation may occur. Moreover, we may not have made proper preparations for the operation beforehand, and so be landed in difficulties.

The Erasmus Wilson Lectures

ON THE

PATHOLOGY AND SYMPTOMS OF ADENO-CARCINOMA OF THE RECTUM.

Delivered before the Royal College of Surgeons of England.

BY SIR CHARLES B. BALL, M.CH., F.R.C.S.I.,
HON.F.R.C.S.ENG.,
Regius Professor of Surgery in the University of Dublin.

LECTURE II.—ADENO-CARCINOMA.

PATHOLOGY.

As in a simple adenoma, the essential element in adeno-carcinoma is the fact that it springs from and involves the mucous membrane, it has already been pointed out that the only positive difference is that the malignant form penetrates the basement membrane and becomes widely diffused, it is therefore possible to assert positively that a tumour of the rectum which does not involve the mucous membrane is not an ordinary cancer; and as quite 95 per cent. of the cases of rectal carcinoma are of the adenomatous type, the importance of this clinical point is obvious.

The degree of malignancy of a cancer as indicated by the tendency to recur after operation we know well varies greatly with its situation; for instance, an epithelioma of the lip is less malignant than the same disease occurring in the tongue; and epithelioma on the scrotum less malignant than when it occurs upon the penis. What then is the relative malignancy of cancer of the rectum to similar disease in other parts of the body? If the case comes under notice before the disease has completely penetrated the intestinal tunic, the prospect of permanent cure by removal is very good indeed, unfortunately, however,

it is usual to find when the case is first diagnosed that the disease has already extended beyond the limits of the rectal tunic and then it must be admitted the malignancy is as great as in any other region of the body.

There are occasionally to be found within the rectum malignant growths which are not adeno-carcinoma, such are the various forms of sarcoma and in the lower portion of the anal canal squamous epithelioma is sometimes seen, all are rare, and put together probably do not make up 5 per cent. of the entire number of cases of malignant disease met with in this region.

Adeno-carcinoma, like the benign variety, is so easily diagnosed in the rectum as compared with other portions of the intestinal tract that its relative frequency in this region appears to be greater than it really is; it is, however, probable that it is actually much more common in the lower bowel than elsewhere.

Like other forms of carcinoma, adeno-carcinoma of the intestine is met with more frequently after middle age, but quite a number of cases are recorded in which it commenced in comparatively early life. I have myself seen cases at the age of 16 and 18 years respectively. When met with before middle age it is usual for the case to be highly malignant and run a rapid course.

Both sexes appear to be equally affected: recent large statistics tend to show that the incidence of malignant disease of the intestines in males and females is practically identical.

It is hard to estimate usefully the probable duration of these cases, as owing to the trivial early symptoms it is usually quite impossible to fix the date of commencement, while in the latter stages death frequently ensues from the onset of what may be called accidental complications. Roughly speaking, however, it may be said that from the first occurrence of symptoms sufficiently marked to justify a diagnosis until death, the average duration in unoperated cases is two years.

Clinical Types.

Clinically adeno-carcinoma, as met with in the rectum, presents one of two tolerably distinct types: (1) Commences

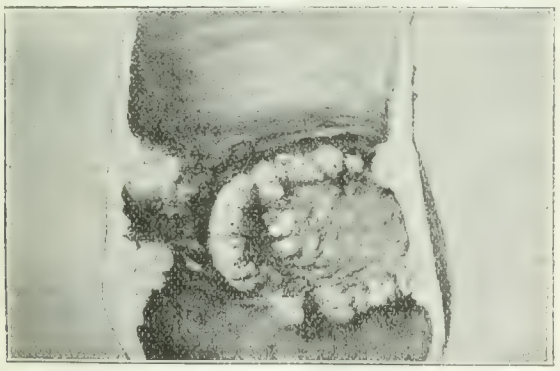


Fig. 1.—Tuberous adeno-carcinoma of the rectum, which has in the centre broken down into a craterform ulcer, and spread almost round the entire circumference of the bowel, but has not as yet extended to the perirectal tissues.

as a flat tubercle in the mucous and submucous tissue; it increases somewhat rapidly by exuberant growth at the margin, while the centre breaks down and forms a craterform ulcer; it tends to spread round the circumference of the bowel somewhat more rapidly than it extends in the vertical direction, thus making an oval ulcer. Perforation of the muscular coat occurs early, with involvement of the surrounding structures and pelvic lymphatics, and the disease runs a somewhat rapid course. This is the form more commonly met with in comparatively young subjects. (2) Commences as a more superficial ulceration, and has not the exuberant edges met with in the other variety; the adenomatous tissue of the new growth is less in quantity and more atrophic, but there is a considerable formation of dense connective tissue surrounding the ulcerated surface, which tends to contract and narrow the lumen of the bowel, producing intestinal obstruction, which indeed may be the first symptom to draw attention to the disease; this apparently is the schirro-contracted rectum of the older writers, it runs a much more chronic course, and is usually met with at a more advanced age than the first variety.



Fig. 2.—Atrophic adeno-carcinoma of the rectum producing tight stricture; on the right side enlarged lymphatic glands are seen beneath the peritoneum.

Morbid Histology.

If a section be made of the growing edge of an adeno-carcinoma it will be found that there is a considerable pro-



Fig. 3.—Photomicrograph of the edge of a tuberous adeno-carcinoma (× 20); to the left normal mucous membrane is seen and in the centre the growth of adenomatous tissue in the submucosa, the basement membrane having been perforated.

liferation of the mucous glands, that the adenomatous tissue breaks through the muscularis mucosae and spreads in the submucous tissue separating the bundles of muscular fibres, the essential characteristic by which adeno-carcinoma is distinguished from the non-malignant form, it eventually perforates the entire thickness of the intestinal tunic and spreads in the tissues of the pelvis, any of which may become implicated in the growth.

The lymphatics soon become involved, first the glands at the back of the rectum, then those along the great iliac vessels, the glands in the groin escaping involvement except where the skin of the anal canal is encroached upon, or at a late period where there is a widely diffused contamination of the lymphatic system. Next in

order of frequency to the lymphatic system, metastatic growths are met with in the liver, and they occasionally have been observed in the lung and elsewhere, but wherever found

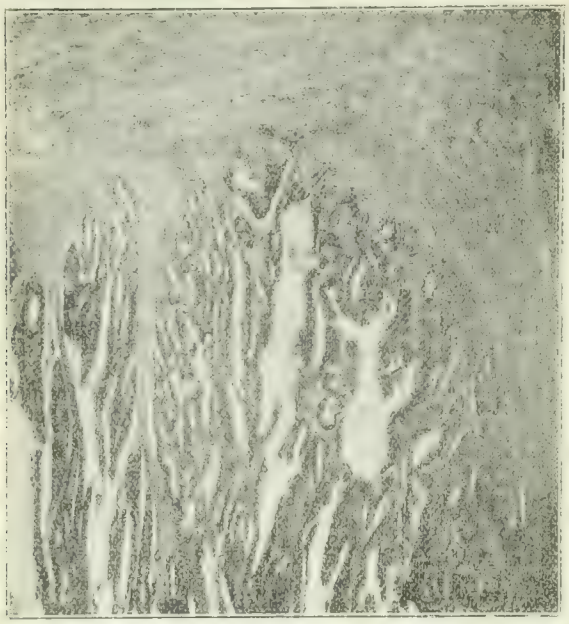


Fig. 4.—Photomicrograph of adeno-carcinoma of rectum (× 30) the adenomatous tissue is seen invading the circular muscular coat of the intestinal tissue.

they reproduce accurately the original type of disease—namely, an arrangement of adenomatous tissue similar to that met with normally in the Lieberkühn follicles of the intestine (see Fig. 5).

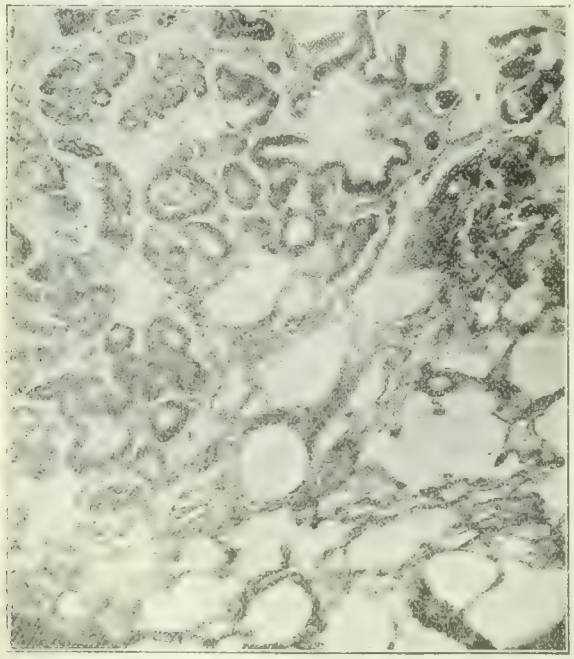


Fig. 5.—Photomicrograph (× 50) of secondary adeno-carcinoma in lung, the primary disease having been situated in the rectum. To the left above, the characteristic adenomatous tissue is seen.

Associated with adeno-carcinoma, it is not uncommon to meet with polypoid growths (Figs. 6 and 7) which, from their pedunculated growth and freedom from involvement of the deeper structures are essentially benign tumours, these may either be of the tuberculated sur ace commonly found, or the tumour may be split up so as to be formed of a mass of filiform processes—the so-called villous growth—it appears probable that these neoplasms are the result of the direct irritation of the discharge from the cancerous ulcer.



Fig. 6.—Simple adenoma found in connexion with a typical adeno-carcinoma. The benign character of the growth is seen by the way the muscular coat has separated from the mucous coat in preparing the specimen.

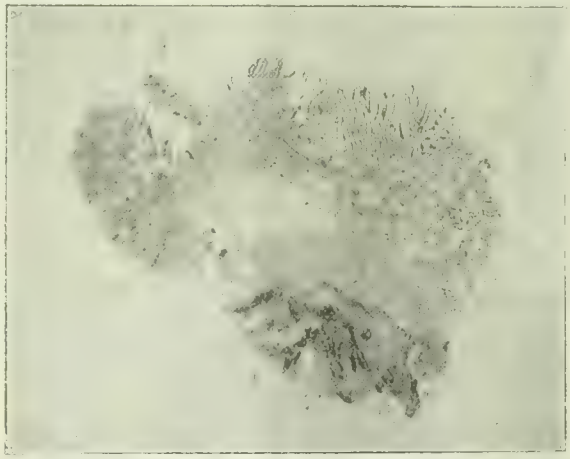


Fig. 7.—Simple villous adenoma in connexion with a typical adeno-carcinoma of the rectum. Photomicrograph (× 5).

COLLOID DEGENERATION.

In a small percentage of cases it will be found that adeno-



Fig. 8.—Colloid adeno-carcinoma of rectum producing tight stricture, the dilatation of the intestine above the stricture is well marked.

carcinoma of the rectum has undergone colloid degeneration, which is characterized by a somewhat wide infiltration of the tissues by a smooth gelatinous material; clinically the importance of this condition is that it is liable to be mistaken for tertiary syphilis, but the latter is usually characterized by much greater density and firmness to the touch, and it more frequently implicates the anal canal.



Fig. 9.—Photomicrograph (× 15) of colloid adeno-carcinoma of rectum, showing penetration of the muscularis mucosae and infiltration of the submucosa with colloid material.

Symptoms.

Diarrhoea.—The early symptoms of cancer of the rectum may be of the most trivial character, and as the hope of successful surgical treatment depends altogether upon early diagnosis, it is important to pay great attention to the slightest indications of this terrible disease; unfortunately a large proportion of cases when they first consult a surgeon are so advanced that complete removal is impracticable. Usually the first symptom to attract attention is a slight chronic diarrhoea, more marked in the morning. If the stools are inspected the motion is found mixed with mucus, which later on is generally blood-stained, and not infrequently the small motion will be found to consist of mucus and blood only. This large increase of mucus is due to the great increase of gland tissue which is such a characteristic of the disease, and as soon as the surface becomes ulcerated the mucus is mixed with blood. It is essential that all cases of diarrhoea lasting more than a few days, especially if mucus or blood is present in the dejecta, should be submitted to a careful digital examination of the rectum. In this way only can early diagnosis be arrived at.

Obstruction.—As the lumen of the bowel becomes encroached upon, obstruction becomes marked, and if the disease is situated low down the motions are never properly formed, being tape-like or in little pieces; and although there may be slight discharge of bloody mucus with thin faeces several times daily, increasing doses of purgatives become necessary to effect a satisfactory faecal evacuation, the abdomen becomes distended, and the colon loaded with masses of scybala. As the disease progresses more positive symptoms become prominent, but at the same time they usually indicate such extension of disease that complete removal has ceased to be possible.

Pain.—In the early stages pain is not a prominent symptom, unless the lower section of the anal canal is involved, when it may be acute; but this is extremely rare. In the latter stages, when the disease has spread into the other pelvic structures, pain may be severe, especially if the sacral plexus of nerves be encroached upon, or the bladder opened. Involvement of the bladder is first indicated by frequent micturition, which becomes extremely painful once fistula has formed, the escape of faeces into the bladder setting up a violent cystitis, while the masses may be sufficient to block the urethra and so cause retention of urine, or the first symptom may be passage of flatus per urethram: a truly miserable condition urgently demanding the operation of colotomy. In like manner in the female the vagina or uterus may be opened into, forming faecal fistula, while an opening up of the loose areolar tissue of the pelvis may set up stercoral abscess, demanding external opening in either buttock. Among the rarer complications due to the spread of the disease in the pelvis may be mentioned oedema of one leg from involvement of the iliac vein, or hydronephrosis from blocking of one of the ureters.

Digital Examination.

In all cases where the remotest suspicion of cancer of the rectum exists digital examination should be insisted upon, and for this purpose it is desirable to have the bowel as completely emptied as possible. The well-lubricated finger is to be introduced as far as possible, and each portion of the surface of mucous membrane carefully searched, in the large majority of cases when the characteristic symptoms are present the disease will be readily detected, as the most common situation is easily within reach of the finger in the lower portion of the rectal ampulla, a rough irregular mass can usually be felt obviously originating in the mucous membrane, sometimes confined to one aspect of the bowel but more often surrounding the entire tube, and when this is the case the sensation conveyed to the finger is like that of an irregular and craggy cervix uteri, with an opening in the centre like the os, if in an early stage of obstruction the tip of the finger can be passed through this, and possibly feel healthy mucous membrane above. If the disease is situated higher up more difficulty may be experienced in the diagnosis, sometimes the surgeon may feel that there is a mass a little higher up that can be actually touched with the finger, folds of mucous membrane intervening and preventing the characteristic sensation being obtained. In these cases additional information may be obtained by getting the patient to stand up and strain down, or, still better, by the bimanual method used by gynaecologists, conducted, if necessary, under an anaesthetic. An adeno-carcinoma which originates high up the bowel may sometimes be found in the rectum having produced an intussusception, as in the case from which Fig. 10 is taken. A woman, aged 75, came under notice for complete intestinal obstruction, and a digital examination of the rectum revealed the presence of a malignant mass, as the finger could be readily passed round the circumference of the tumour without feeling any attachment to the wall of the rectum. The diagnosis of intussusception was readily made, and with little difficulty the growth was drawn down through the anus and removed by circular excision. The first intimation of the site of origin was the

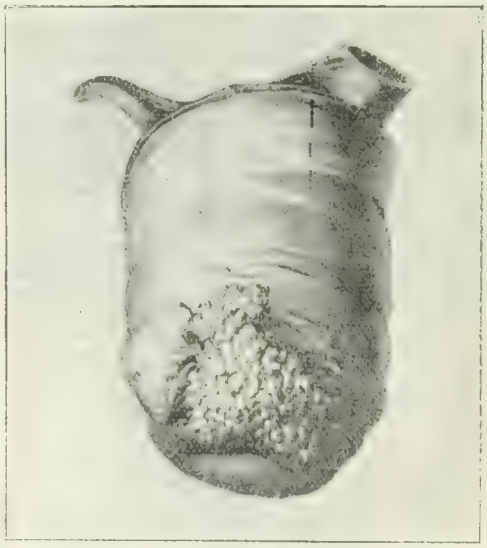


Fig. 10.—Adenocarcinoma of ileocaecal valve producing an intussusception which extended to the rectum, and was removed by excision after protrusion through the anus. The vermiform appendix and divided ileum are seen above.

appearance of the vermiform appendix when the peritoneum was opened. The intussusception had evidently been a very chronic one as there were no inflammatory adhesions. The divided ileum was sutured to one angle of the divided colon and the rest of the colon wound closed, the line of junction being returned into the rectum. The patient, who appeared to be little disturbed by the operation, suddenly sat up in bed some ten hours afterwards, and fell back dead.

Besides the mere recognition of the disease, much more must be made out at the preliminary examination. First, as to mobility: We can recognize three degrees of mobility of the tumour. First it is freely mobile, and can be pushed up and down in the pelvis; this is highly important, as indicating that the disease is still confined to the rectal tunic, and is eminently satisfactory for surgical treatment. Secondly, it can be moved to a more limited extent, apparently carrying with it some of the other pelvic structures; this indicates that the disease has spread through the coats of the bowel, and if this has occurred to only a limited extent there is a possibility of removing the tumour, but the prognosis is not at all as good in reference to recurrence as in the first case. In the third case the disease is absolutely fixed, indicating that the disease has spread so far that the bony pelvis has become involved; when this has occurred, it usually means that attempts at complete removal will be quite futile.

Next to the character of the growth itself, the condition of the surrounding structures in the pelvis have to be examined —notably the hollow of the sacrum searched for enlarged lymphatic glands, the condition of the prostate in the male, and the uterus and adnexa in the female. Lastly, as the finger is being withdrawn, the length of healthy tissue below the disease and the condition of the anal canal should be estimated. Having completed the digital examination of the rectum, the abdomen should be carefully palpated, secondary tumours in the liver sought for, and also enlarged glands along the course of the iliac vessels; finally, the patient's general condition, especially the state of the kidneys, is to be inquired into, and having completed this the surgeon is in a position to express an opinion as to whether the case is one suitable for excision. If freely movable, and no enlarged glands or metastatic growths can be felt, no matter how high up the disease is situated, provided the general condition of the patient is good, the case is one eminently suitable for removal. If there is limited adhesion to the vagina, or portion of the pelvic diaphragm, or if lymphatic involvement is confined to a few small glands in the hollow of the sacrum, operation may be undertaken although the prognosis as to recurrence must be estimated as unfavourable, while if the disease has involved the prostate, bladder, or uterus; has widely involved the lateral or posterior aspects of the pelvis; is attended with extensive involvement of the lymphatic system; or still more if metastatic growths can be detected in the abdomen, operation must be absolutely declined.

School Hygiene in France.—The French League of Medical Practitioners and Families for the Improvement of the Physical and Intellectual Hygiene of Schools, the formation of which was announced in the British Medical Journal some time ago, recently held its first annual meeting, under the presidency of Dr. P. Le Gendre, who was assisted by Dr. A. Mathieu, the General Secretary. The Minister of Public Instruction was represented by M. Rabier, Director of Secondary Education. The meeting passed the following resolutions: (1) That an official organ of the League, to be entitled *L'Hygiène Scolaire*, should be founded; (2) that a National Congress of Physiological Paedagogy should be organized; and (3) that the Committee of the League should be instructed to urge on the Departmental Councils the need for the effective organization of medical inspection of schools in all departments in which, notwithstanding the obligation imposed by the law of 1886 and a decree of 1887, no such inspection exists. M. Rabier congratulated the organizers of the League on the success of their undertaking, and assured them that their representations would always receive favourable attention.

An Irish patriotic banquet will be held at the Trocadero Restaurant, W., on Monday, March 16th, the eve of St. Patrick. The chair will be taken by Dr. C. J. Barry, who has practised in London for the last twenty-five years, and is a member of the Fulham Board of Guardians. Tickets for the banquet, at which the usual loyal toasts will be given, may be obtained at Keith, Prowse, and Co.'s box office; or from Mr. David Barry, 449, Fulham Road, S.W. The price of letters to admit lady or gentleman is half a guinea.

CASE OF DILATATION OF THE PYLORUS FOR SIMPLE STRICTURE.

By HORATIO P. SYMONDS, F.R.C.S.Edin.,
Surgeon to the Radcliffe Infirmary, Oxford.

The case to be described was that of a man, aged 40, who was admittted to the Radcliffe Infirmary, Oxford, on March 15th, 1902, suffering from dilatation of the stomach. He had been ill, off and on, for eleven years, suffering from great flatulent distension of the stomach, with sickness. The latter symptom did not occur frequently, but when it did, the vomit was great in amount, and had a very putrid smell. When it happened it usually came on a little time after taking food. The patient also suffered from chronic constipation; the bowels never being properly relieved except after the use of an enema. He had constantly to leave off work. He was a fairly well nourished man. No tumour could be felt in the abdomen, but by percussion the stomach was found to be very much distended. There was no history of vomiting of blood. This last fact, together with the long continuance of the symptoms, appeared to exclude malignant disease and to point to a simple stricture of the pylorus.

The man's condition of discomfort was so great that he asked if no operation could be undertaken for his relief, and I therefore determined to try the effect of dilatation of the pylorus. For a week previous to the operation the patient was kept on a bland diet, and received 8 gr. of benzo-naphthol every four hours.

On March 25th the abdomen was opened through the rectus muscle below the xiphoid cartilage. The stomach was found markedly distended. The pylorus was steadied with the left hand, and with the index and middle fingers of the right a portion of the anterior wall of the stomach was invaginated through the pyloric orifice, and dilatation of the latter was carefully accomplished by separating the fingers. The anterior wall of the stomach was then drawn out through the abdominal wound, and a longitudinal tuck was run in it by a continuous suture of the applied peritoneal coats. This tuck included that part of the stomach which had been used in the invagination manipulation. The abdominal wound was then closed. The following day the patient vomited a little blood, but otherwise made an uneventful recovery. He remained in hospital for a month on a careful diet, and then went home. Since the middle of August he has been at work, has had no stomach symptoms, and expresses himself as feeling a different man.

The operation for dilatation of the pylorus for simple stricture is usually associated with the name of Loreta, who seems to have used two procedures. In the operation as usually attributed to him the viscus is opened and the pylorus dilated by the direct introduction of the finger into it. Wharton and Curtis in their *Surgery*, however describe Loreta's operation as having been performed by him in the manner in which I operated in the above case. Loreta is said to have performed the operation thirty times. It has been twice performed with a fatal result in New York, and Mr. Hagyard has recorded a successful case in which the operation was performed by himself. In this case the stomach was opened and there was some troublesome bleeding from the dilated pylorus. The patient made a good recovery, but there appears to have been little relief of symptoms. Cheyne and Burghard, in mentioning the operation, condemn the invagination method on account of the serious results which may follow in that part of the stomach which has been pushed through the pylorus. As I performed the operation, however, the invaginated part is included in the tuck which is run in the stomach wall, and as it no doubt becomes digested and thus destroyed, no evil effects can follow so long as the suturing of the peritoneum in the tuck has been properly performed.

A SIMPLE METHOD OF OPERATING ON PILES.

By A. B. MITCHELL, M.B., F.R.C.S.I.,
Surgeon to the Royal Victoria Hospital, Belfast, and to the Ulster Hospital for Children and Women.

The following method of operating on haemorrhoids, which I have employed for the past four years, has in my hands proved both simple and efficient. It is quite possible that other operators have adopted the same principle, but I have never seen it described.

The sphincter having been dilated and the piles brought fully into view, the mucous membrane is sponged with a solution of corrosive sublimate 1 in 1,000.

(*a*) A pile is then clamped in a long narrow-bladed forceps (Fig. 1) (Kocher's artery forceps answer admirably).



Fig. 1.

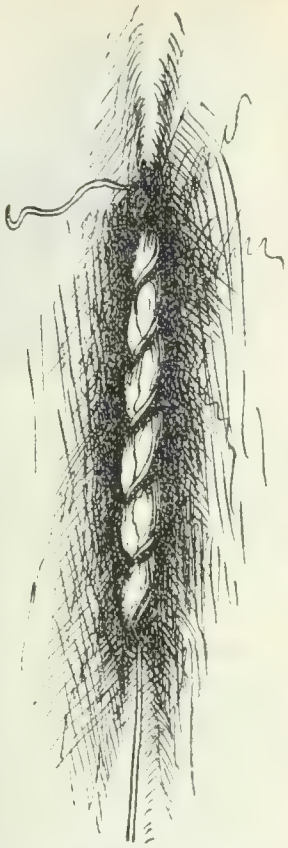


Fig. 4.

(*b*) The redundant mucous membrane and pile is cut away by scissors (Fig. 2).

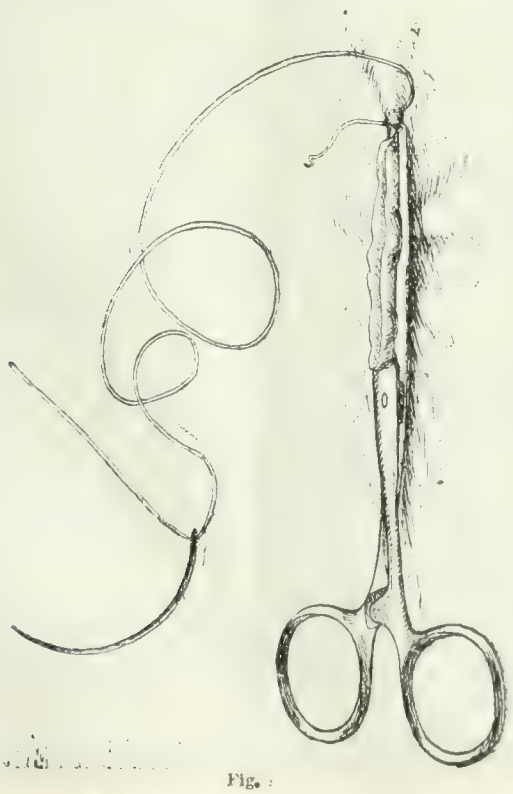


Fig. 2.

(*c*) A curved needle threaded with catgut hardened in formalin is then inserted immediately above the clamp and the end of the catgut secured by a knot (Fig. 2).

(*d*) A continuous suture is next rapidly applied round the clamp (Fig. 3).

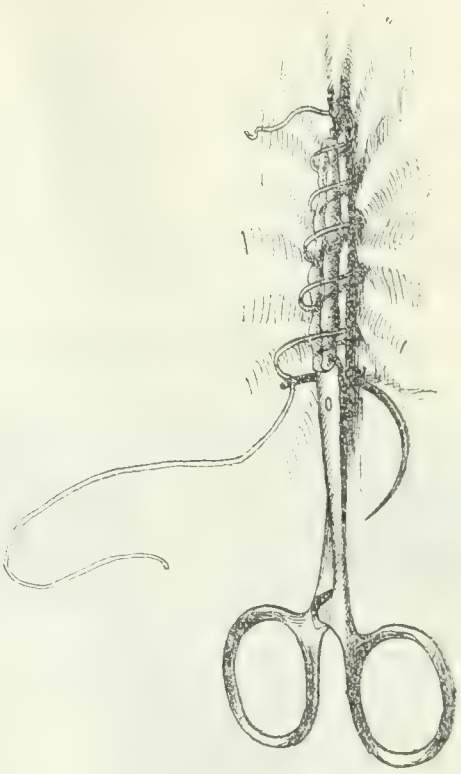


Fig. 3.

(*e*) The clamp is withdrawn (this can be done without the slightest difficulty) and the suture tightened, leaving a vertical line of continuous sutures within the rectum (Fig. 4). The upper end of the ligature, which is left long for the purpose, should be held firmly in the left hand whilst the lower end is being tightened, so as to prevent puckering.

(*f*) Each pile is treated similarly in turn.

The advantages of this method are that it can be very rapidly carried out; there is no loss of blood; the suture, being continuous, is an efficient haemostatic after the forceps have been removed; it cannot possibly slip, so there is no danger of subsequent haemorrhage. No raw surface being left, the bowels are encouraged to act regularly from the first. As a rule patients are up and about at the end of a week. The catgut is absorbed in eight to ten days and does not require removal.

NOTE ON INTESTINAL ANASTOMOSIS: SPECIAL FORCEPS.

By T. CARWARDINE, M.S., F.R.C.S.,
Assistant-Surgeon, Bristol Royal Infirmary.

THE accompanying illustrations represent some anastomosis forceps which were made for me by Messrs. Down Brothers, and which other surgeons may find useful. They consist of two forceps each 6½ in. long, with very slender well-tempered spring-arched blades three-sixteenths of an inch wide. These may be covered with indiarubber tubing, and the compressing force is so slight and yielding that the gut is not injured by their application. To one forceps a thumbscrew is attached, concave on the surface, and ¾ in. in diameter. It is so made as not to become completely detached and therefore cannot be mislaid. The other forceps has a slot and depression corresponding to and receiving the thumbscrew when the two forceps are combined (Fig. 1).

For use, the gut beyond the part for removal is clamped by the separate forceps and the diseased bowel excised, leaving



Fig. 1.

sufficient gut beyond the forceps to admit convenient suturing (Fig. 2). Then the two forceps are clamped together in



Fig. 2.

parallelism, as in Fig. 3, the combination being conveniently held in one hand. For suturing, a posterior peritoneal stitch



Fig. 3.

may be first inserted (1), and then the mucous and muscular coats united (2). This stage is seen half completed in the figure. Finally, the posterior peritoneal stitch is again picked up and used to unite the anterior peritoneal surfaces. The union is shown completed in Fig. 4, the bowel contains water without leakage, and the union is secure.

The chief advantages of this instrument are the possibility of union in layers, the steady approximation of the ends of bowel for anastomosis, the use of only one hand for holding the approximated ends, the absence of any marked internal



Fig. 4.

diaphragm when the union is complete, and the availability of the independent forceps for use as intestinal clamps.

THE PRESENCE OF DIPHTHERIA BACILLI IN ATROPHIC RHINITIS.

[A PRELIMINARY COMMUNICATION.]

BY J. ODERY SYMES, M.D., D.P.H.,
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THE presence of Klebs-Loeffler bacilli in the nasal cavities of persons suffering from atrophic rhinitis was first noticed by Bellfante and Vedova[1] in 1895, and these observers expressed the opinion that the disease was caused by an attenuated form of the diphtheria organism. Their observations were subsequently confirmed by Attilio.[2]

Fraenkel and Loewenberg[3] have ascribed the causation of the disease to a diplobacillus (closely resembling Friedlaender's pneumo-bacillus) which they have named the bacillus mucosus. The constant presence of this bacillus has been confirmed by Abel and others, and I mention it here as it was frequently present in the cases dealt with in the present paper. The bacillus mucosus is, however, generally believed to be the cause of the fetor and not the direct exciting cause of the disease "atrophic rhinitis."

Atrophic rhinitis has to be distinguished clinically from disease of the nasal fossae resulting from congenital or acquired syphilis, from rhinitis sicca, and from a form of atrophy which follows hypertrophic rhinitis such as is common amongst the tobacco workers of this city. Ozaena is a symptom common to all these conditions but it is only a symptom, and the correct diagnosis of the disease must be made from a consideration of the history and the rhinoscopic appearances. True atrophic rhinitis is distinguished by the pallor of mucous membrane, the shrinking of the bony structures, the formation of crusts, the penetrating character of the ozaena, the cachexia induced in the sufferer, and the presence of a leucocytosis.

Excluding as far as possible other diseased conditions of the nose such as I have already named, I have made bacteriological examinations of the nose in 23 cases of atrophic rhinitis. Twenty of these cases were females and one a male: in two I have no note of the sex. The ages varied from 9 years to 57 years, the average age being 22 years, only three of the patients being more than 25 years of age. The average duration of symptoms was seven years, but in one case the condition had been present forty-five years. In 75 per cent. the sense of smell was absent or defective, and with one exception ozaena was noticeable in all the cases either by the patient or other persons.

The material for bacteriological examination was taken from the nose by means of sterile cotton-wool swabs, and from these films were prepared and cultures made. The films were stained by methylene blue, Gram's or Meisser's stains. The culture media employed were glycerine agar, serum agar, and occasionally broth. Many of the cases were examined on several occasions.

In twenty of the twenty-three cases (87 per cent.) a bacillus was found resembling in morphological and cultural

characteristics the Klebs-Loeffler bacillus. In seventeen the organism was described as the "long" and in three as the "short" variety of the diphtheria bacillus. The only other organisms frequently present were B. termo, various micrococci, and the B. mucosus, the last being noted in sixteen cases (69.5 per cent.).

Two questions naturally arise in connexion with this organism: (I) Is it present in the normal nose or in diseased conditions of the nasal mucous membrane other than atrophic rhinitis? (II) Is it a true diphtheria bacillus?

I.

In order to determine the first point a series of examinations of healthy noses of children and adults was made at the Bristol General Hospital. In no instance was a bacillus detected in any way conforming to the type of the long diphtheria-like bacillus found in cases of atrophic rhinitis. In 58 per cent. of young children and adults a short diphtheria-like or pseudo-diphtheritic type of bacillus was present in the nose. In this connexion I should like to emphasize the fact that so common is this type of organism in the healthy nose that a report of its presence should never lead to a diagnosis of diphtheria unless well-marked clinical symptoms are also present.

A series of cultures was also taken from the noses of persons suffering from ozaena secondary to congenital or acquired syphilis, rhinitis sicca, and lesions other than atrophic rhinitis. In none of these were diphtheria-like bacilli present, but the B. mucosus was found in more than half the number. From these observations we may conclude that the type of "diphtheria-like" bacillus to be described is peculiar to the condition—atrophic rhinitis.

II.

The second question is not so easily answered. There are a large number of bacteria closely resembling the diphtheria bacillus, and at least twenty different types of the true Klebs-Loeffler bacillus, so that the possibility of error is very great.

In morphological and cultural characteristics the bacillus of atrophic rhinitis closely resembles the Klebs-Loeffler bacillus, and they cannot be differentiated by mere microscopical examination. In this statement I am supported by several competent authorities, to whom I have submitted specimens.

There are certain distinctive features, however, in the organism as seen in stained films taken directly from the exudate. The bacillus is more curved, thinner, and more highly metachromatic than the Klebs-Loeffler organism, in size, shape, and beading, closely resembling the tubercle bacillus. There is sometimes difficulty in obtaining a growth on agar or Kanthack's medium, as the colonies are inhibited or obscured by the abundant spreading growth of B. mucosus. For the same reason the process of isolation is tedious and difficult.

On Kanthack's medium short-sheathed varieties are common, and in broth and old agar cultures involution forms arise. The metachromatism is well brought out by Neisser's stain, and the bacilli are stained by Gram's method.

The most satisfactory test as to whether a given organism is the diphtheria bacillus or not is undoubtedly the inoculation test. Our University College is not licensed for this purpose, and there is consequently some difficulty in getting the work done. Cultures from two of the cases have, however, been submitted for examination, the one to a private laboratory and the other to the Jenner Institute of Preventive Medicine. In both instances the report has stated that the morphological and cultural characteristics are those of the diphtheria bacillus, and that the organisms were pathogenic to guinea-pigs, producing the same lesions as the Klebs-Loeffler bacillus. As a control, a culture taken from a case of tobacco-worker's rhinitis was submitted to the Jenner Institute, but neither by microscopical examination nor by inoculation could the diphtheria bacillus be found.

The constant occurrence of the diphtheria-like bacillus in cases of atrophic rhinitis is by no means conclusive evidence that it plays any part in directly exciting the disease. Possibly this might be demonstrated by means of special local inoculation experiments upon animals. The point I wish to emphasize is that this type of bacillus is found in atrophic rhinitis only, and in this respect it is unlike the B. mucosus which we have demonstrated in cases of rhinitis sicca and syphilitic disease.

Conclusions.

If the foregoing facts can be substantiated, and the identity of this bacillus with the Klebs-Loeffler bacillus can be established, then we may regard atrophic rhinitis as a chronic form of nasal diphtheria.

In addition to the bacteriological evidence the following points may be considered in support of this theory:

1. In diphtheria the accessory sinuses of the nose are constantly infected. Bacilli may remain in the sinuses for prolonged periods, exciting a purulent, sero-purulent, or serous discharge.[1]

2. Chronic suppuration in the accessory sinuses is, in the opinion of many eminent rhinologists, the direct exciting cause of the conditions of ozaena and atrophic rhinitis.

3. Multiple cases of atrophic rhinitis in the same household occur from time to time, as one would expect if the process were a true infection. Thus Terez[5] records twelve instances in which there were two or more sufferers in the same family. This is a point I have not inquired into amongst my own series of cases.

4. An attack of diphtheria may be the starting point of atrophic rhinitis. Only two patients in the present series dated the onset of symptoms from an attack of diphtheria, but the history of all was not inquired into.

5. Atrophic rhinitis, like diphtheria, attacks females more than males; it is a disease of early life, and induces a pronounced anaemia and leucocytosis.

6. Atrophic rhinitis has been successfully treated by diphtheria antitoxin. With regard to this point my experience has been so limited that I do not feel justified in saying more than that if repeated moderate doses of antitoxin are administered regularly, amounting in all to 20,000 units, marked relief of symptoms results.

7. In atrophic rhinitis the type of diphtheria bacillus does not alter during the progress of the case, a fact which Woodhead[6] has recently found to hold true in acute faucial or nasal diphtheria.

Apart altogether from the theory that atrophic rhinitis is a chronic form of nasal diphtheria, there is a point arising out of this investigation which is of great practical importance, namely, in cultures taken from the nose, throat, or ears of persons suffering from atrophic rhinitis there may be found bacilli which on microscopical examination may be pronounced to be diphtheria bacilli, and this may lead rightly or wrongly to the patient's notification and detention. This is well illustrated by the following case:

D. R., aged 10, a schoolgirl, came under my care early in 1901, suffering from atrophic rhinitis of seven months' duration. Cultures from the nose showed the long diphtheroid bacillus I have described as present in such cases. At about the same time an outbreak of diphtheria occurred in the school which she was attending, and the health authorities took cultures from the nose and throats of all suspected children. Finding what they considered to be typical long varieties of diphtheria bacilli in the nose of the child, D. R., they excluded her from school on the grounds that she was suffering from diphtheria. In addition, I may remark they had the culture tested by Dr. Klein, who pronounced the organism to be a virulent diphtheria bacillus. As the organisms persisted in the nose the child was excluded from school for nine weeks, when I believe on my representations she was allowed to return. I have had subsequently the opportunity of making frequent bacteriological examinations from the nose of this case, and when last seen, sixteen months after first coming under observation, the long diphtheria-like bacillus was still present.

I mention this case simply as an example of what may and does happen. Further investigation is required in order to show whether the organism described is the true Klebs-Loeffler bacillus or a bacillus closely resembling this, and having pathogenic properties when injected into certain animals.

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THE BILBERRY.

By Sir James Sawyer, M.D.Lond., F.R.C.P., F.S.A.,
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Well may we pause over the bibliography of the bilberry in view of the interesting communication of Dr. Bernstein, published in the British Medical Journal for February 7th, 1903. His paper is attractive of interest and excitant of thought. Long have some of us dwelt with affection, and with hope of finding modern uses for some old drugs which were being lost to sight and to memory in the limbus of the past, and perhaps not without some practical success, upon

the archaeology of our medicinal "simples," upon the histories and lore, upon the forms, virtues, and renown of many old-time medicinal plants, upon plants called simples because each of them has been held to enshrine its particular curative virtue, and so to furnish a simple remedy for some symptom of disease, or for some individual morbid manifestation. Perhaps we have loved to walk, as Evelyn did, "into a large garden, esteemed for its furniture one of the fairest, especially for simples"; or perhaps we have followed our own Garth, "when simpling on the flowery hills he strayed."

Dr. Bernstein has adduced a body of valuable evidence, at once striking and suggestive, upon the remedial uses of various preparations of the bilberry shrub, in the alleviation and cure of several morbid intestinal conditions, which conditions include some of the pathological manifestations of enteric fever, of dysentery, and of some other maladies in which the intestines are affected either primarily or incidentally. It will surely become us to investigate his conclusions in our practices. It seems likely we may find in the therapeutic uses of the bilberry perhaps even a simple remedy of almost specific efficacy, or, at the least, a useful succedaneum to more established remedies in the treatment of many conditions of disorder or disease affecting the intestinal membranes, coats, contents, or functions.

Meanwhile, until our experience shall ripen upon the subject, I venture to draw the attention of my brethren to some references to the virtues of the bilberry, which are close to my hand in the books I know by my own reading. Nicholas Culpeper, writing in 1653, recommends blue bilberries to stay "vomitings and loathings," and he says they "do somewhat bind the belly."[1] Anne Pratt quotes an old herbalist who praised bilberries as a remedy for many maladies, and wrote: "It is a pity they are not more generally used."[2] The *Rural Cyclopaedia* points out that the leaves of the myrtle bilberry contain a considerable quantity of tannin, and have been used as an astringent medicine in the same way as those of uva ursi.[3] The *Medical Lexicon* of the New Sydenham Society gives the vaccinium myrtillus as antiscorbutic and astringent. Another old herbal refers to an ancient use of bilberry juice as an astringent and antipyretic, recording that "a syrup made out of the juice of bilberries, when not over-ripe, is cooling and binding; it is a pleasant and gentle medicine where an astringent is required."[4] Dr. Fernie has recently reported that this myrtle bilberry has some remedial use in the treatment of chronic diarrhoea, and even in the cure of severe dysentery. He writes: "The bilberry (vaccinium myrtillus) is an admirable astringent..... If some good brandy be poured over two handfuls of the fruit in a bottle, this will make an extract which continually improves by being kept. Obstinate diarrhoea may be cured by giving doses of a tablespoonful of this extract taken with a wineglassful of warm water, and repeated at intervals of two hours whilst needed, even for the more severe cases of dysenteric diarrhoea. The berries contain chemically much tannin."[5]

True is it to-day as when Sir Thomas Watson so declared a third of a century ago that "the greatest gap in the science of medicine is to be found in its final and supreme stage—the stage of therapeutics."[6] Therapeutics advances by our increasing knowledge of the nature of morbid processes and of the physiological effects of remedies, and also by studying again many a good old drug by the light of later scientific methods, and also by judicious selection from the traditions of popular medicine. Such selection gave us digitalis.

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CASE OF RUPTURED URINARY BLADDER: OPERATION AND RECOVERY.

BY HUGH LAWRIE, M.B., C.M.,
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THE following case is of interest and some rarity:

History.—B. C., aged 29, a cotton factory operative, and unmarried, came under my care on March 30th, 1902, suffering from what appeared to be rupture of the urinary bladder. She had been out late on the previous night with some friends, and to reach her home had to proceed along a narrow, badly-lighted road for about half a mile alone. About halfway in this walk she was attacked by two men and knocked down. Her cries for help speedily brought several persons to the rescue, who found her in a dishevelled condition and covered with mud, supporting herself against the wall on one side of the road. She was alone, and two of these persons assisted her to walk home. She complained of pain in the lower part of the abdomen; and did not get any sleep that night. Sitting in a chair was the most comfortable position, any attempt to lie down being accompanied by increase of pain.

State on Examination.—When I was called to see her I found her sitting up in a chair. She complained of pain in the abdomen and inability to micturate. She had not passed water since the assault, although she wanted to do badly before it. There was a bruise on the left side of the face, the skin over it being rubbed off by some rough surface, probably the ground. She refused to be examined further, declaring that she had not been outraged—which was quite true—and I left her, contenting myself with advising sitz baths to promote urination. Later in the day I drew off from the bladder with a gum elastic catheter 8 oz. of bloodstained urine. There were no marks whatever of external violence on her body except the mark on the face and a very small bruise on the left knee. In the evening I passed the catheter again, and withdrew about 2 oz. or 3 oz. of urine. This urine was clear, but under the microscope it was seen to contain red blood corpuscles. Her temperature and pulse were normal. Percussion over the abdomen showed an ill-defined area of relative dullness immediately above the pubes. Palpation was painful.

Progress.—On the morning of March 31st her condition was about the same. I had to attend the police-court on this day, and did not see her again until the evening, when the pulse had risen to 100. On April 1st her temperature had slightly risen and the pulse was 120.

First Operation.—She was conveyed to the Aitken Memorial and Jubilee Cottage Hospital, Ramsbottom, and at 4 p.m. (on April 1st), after her depositions had been taken before a magistrate, I made an incision in the middle line above the pubes about 3 in. in length. The deeper tissues of the abdominal wall were infiltrated with urine, and when the transversalis fascia was reached it was seen to be dark-grey in colour. This was easily torn, and then there welled out of the wound two to three pints, roughly speaking, of dark-coloured fluid smelling of urine. With the left index finger I explored the wound and found behind the pubes on the right anterior surface of the bladder a hole which would admit three fingers. This rent was extraperitoneal, and no further injury to the bladder could be detected. Considerable separation of the transversalis fascia from the outer peritoneal layer had taken place as a result of the escape of urine from the bladder, between these membranes extending on either side almost as far as the superior anterior spines of the ilia and upwards towards the umbilicus. The whole region was irrigated with gallons of warm boric acid lotion, and it was agreed by all present that to further prolong anaesthesia would be decidedly dangerous. The pulse before the operation was 150, and it was now almost imperceptible, so drainage tubes were hurriedly inserted, one passing from the abdominal wound right through the bladder and out at the meatus. Two deep stitches were inserted in the upper part of the abdominal wound and iodoform gauze was packed into the lower part over which were placed thick pads of cotton wool. A woollen body bandage with elastic fastenings secured the lot. She was given hypodermically ½ gr. of morphine sulphate and ½₀ gr. of strychnine nitrate and put to bed with hot bottles placed round her in convenient positions. At 10 p.m. she was sleeping quietly; temperature 100°, pulse 140.

After-progress.—April 2nd. She had a fairly good night's sleep, temperature 100°, pulse 144. Wound irrigated with boric lotion. At 4 p.m. the bowels moved naturally. During the first week, despite the frequent irrigations (three times a day) with boric lotion and mercury perchloride solution 1 in 5,000, the wound became very septic, and large sloughs of transversalis fascia, dark in colour and very fetid, came away with considerable quantities of pus. A counter-opening was made near the left superior anterior spine of the ilium, and drainage through this opening was promoted through a drainage tube by tilting the patient towards that side. About the end of the second week the condition of things was much improved, healthy granulations were appearing in all directions, so it was decided to suture the bladder.

Second Operation.—On the afternoon of April 16th she was anaesthetised with chloroform, the condition being continued with ether, and I made a transverse incision on the right side, beginning in the abdominal wound an inch above the pubes, and carrying it outwards to Poupart's ligament through the right rectus and abdominal muscles. This enabled us to pull a triangular flap downwards, and thus expose the rupture in the bladder. It was found to be larger than at first anticipated, extending from the middle line close to the peritoneal reflexion downwards, and slightly to the right behind the pubic bones for a distance of about 2 in. Five strong silk sutures were inserted in the more accessible region, including muscular and submucous coats only. Traction was exerted upon these, and with the greatest difficulty two more were inserted at the lower part of the rent, taking in as much of the bladder wall as possible, without respect to the different layers. Considerable haemorrhage took place with the insertion of these last two stitches, on account of the needle having to pass through a plexus of veins near the neck of the bladder. The stitches were tied in the usual fashion from the middle towards either end, and then 4 oz. of boric lotion were introduced into the bladder without any leakage taking place. The abdominal wound was packed loosely with iodoform gauze, and a few stitches were inserted to hold the edges of the wound apposed to one another, but these were removed in a few days as they were useless. A large rubber catheter was fixed in the bladder by strapping it to the thigh. Two hours were occupied in this operation, and the patient was very collapsed when she was put to bed. Pulse 144, small, and thin. Hot-water bottles were placed all round her, and she was given ½₀ gr. strychnine nitrate hypodermically. During the night following she vomited slightly several times.

Further Progress.—April 17th, 9.30 a.m. About half a pint of urine had

collected in the vessel in bed, and there was no urine in the dressings. The abdominal wound was thoroughly irrigated with 1-6,000 perchloride solution, and strips of iodoform gauze were packed into it. The bladder was also irrigated with boric lotion. Her condition was favourable; temperature 98.4°, pulse 108. She complained of thirst. On April 24th a small fistula appeared between the two outer stitches at the left end of the rupture, and a condition of cystitis was also present. She was put upon urotropin and the bladder, in addition to the daily irrigation, had 4 oz. of a 4 gr. to the ounce solution of silver nitrate injected and held in for a minute or two. Two further sutures were easily inserted to close the fistula, and no further trouble from leakage took place. Some pus was still found to come from small pouches underlying the muscular walls of the abdomen, no doubt due to the agency of the decayed transversalis fascia, and these had to be kept clean and packed with iodoform or cyanide gauze until they healed from the bottom outwards. As these pouches were healing up the bladder wound also healed, and all the stitches that had been inserted in the bladder were removed. Granulations had formed rapidly, and considerable contraction of the abdominal wound had taken place. Micturition was re-established, the urine was clear, contained no albumen, and was faintly acid. Her appetite was good, and she was regaining flesh. Urotropin was not considered necessary.

Third Operation.—On May 25th I essayed to close the abdominal wound, and for this purpose she was anaesthetised, and several stitches were introduced after paring the edges. Two of these sutures of stout silk were passed through the whole thickness of the cut rectus ends, and fastened through the eyes of two buttons of solder prepared for the purpose. The buttons were each 1½ in. long, ¾ in. broad, with ½ in. between the eyes, and strong enough not to bend. Sickness and vomiting for twenty-four hours followed this attempt, and the result, which one might have expected, was vitiated by the vomiting, for it tore the rectus ends apart. The wound became septic again, and all the sutures were removed in a week. The urine became cloudy and alkaline, chiefly from phosphates and mucus, but contained no albumen. Salol in 10-gr. doses was administered every three hours until the urine was dark-coloured. On June 2nd the temperature shot up to 104.2°. On June 4th large quantities of albumen appeared in the urine, as well as proliferating epithelium from the bladder, ureter, and probably also from the pelvis of the kidney, but no tube casts were found. Urotropin was substituted for salol on June 6th, of which she took in two days 1 oz. Her usual quantity was 1 oz. in four days. The urine had a decided smell of formalin. On June 13th the urine contained albumen, but only a faint cloud; there was more on June 14th, and on the 15th there was a considerable quantity with tenderness all along the right ureter to the kidney, but no tenderness on the left side. These symptoms gradually subsided under the influence of urotropin, until at the end of the month there was only a faint cloud given with nitric acid (contact method). On June 20th I scraped the abdominal wound, pared the skin thoroughly off the edges, washed with oil of turpentine, and carbolic lotion and then inserted two strong steel skewers parallel to one another, one in the lower, the other in the upper lip of the wound ¾ in. from the edge and deep in the tissues (the original vertical incision was practically closed). With sutures I brought the edges of the wound into apposition, then bound the skewers together at their extremities firmly in order to secure a good broad union. There was no sickness afterwards, and the temperature and pulse in the evening were respectively 98° F. and 84, just as they had been for several days previously. Union took place rapidly and in a week I removed the skewers. The result is excellent, and so far as one can make out by palpation, the body wall is quite intact, there being at present no thinning of the tissue over the scar and no bulging. She went for a prolonged holiday on leaving the hospital, and when she returned she looked as well as ever she did in her life. I examined the urine on November 18th, and there was not a trace of albumen or anything to indicate that the urinary organs were not in perfect condition.

It is to be regretted that the rent in the bladder was not closed at the first operation, as this would in all probability have prevented the subsequent septic condition of the urinary tract. Still, it is difficult to see how this could have been done with the patient in such a collapsed state, for it would have entailed a prolonged anaesthesia, which she was too weak to undergo. The operation might have been done earlier, but this was a criminal case, and it took a long time to get through with the necessary legal proceedings, as well as to procure the consent of the patient and her parents to any operative interference. It is also to be regretted that the administration of urotropin was stopped when it was, for if it had been continued some time after it was thought to be unnecessary, it is just possible that the second incidence of sepsis of the urinary tract might not have occurred, and the first operation for closure of the abdominal wound might have been successful. However, it is fortunate that the patient could stand the urotropin in large doses so well; she took altogether of this substance 24 oz., and at no time was there any irritation caused by it. If haematuria had resulted upon taking urotropin, it would have been next to impossible to find another drug which would have had such a potent influence for good upon the septic condition of this system.

In conclusion, I would like to express my thanks to Drs. B. and C. Crawshaw—Dr. C Crawshaw was the anaesthetist on each occasion—and to Drs. William and H. Deans, who by their counsel and assistance rendered every aid in what was a most trying and wearying case; and in addition I would tender my thanks to Miss Horsfield (matron of the hospital), whose vigilance and unremitting care so materially added to the success of the case.

THE OPEN-AIR TREATMENT OF SYPHILIS.

By E. H. DOUTY, M.A., M.D.Cantab., M.D.Lausanne,
Davos-Platz.

I CANNOT remember ever to have seen the open-air treatment of syphilis advocated in any of the many journals of our own country or of other countries; and yet there is, I venture to think, no argument brought forward in favour of the open-air treatment of tuberculosis that is not equally to the point with regard to early syphilis. I suppose that there are a great many, medical men and others, who because they have not thought about it have an idea that the open air has some direct influence on the lung tissue in consumptives, just as, I find, there are very many who believe that the cold of these Alpine heights has direct effect on the lung tissue, and on the bacilli in it.

But a little thought will show them that it is not the influence of open air on the lungs which brings about the cure of pulmonary tuberculosis, but that it is the influence of the pure air and sunlight on the blood, and through it on all the other tissues of the body, and chiefly the nervous tissues, that the good results are obtained. Fresh air heightens metabolism in every way, and raises all the tissues to their highest point of resistance, so that they do not succumb to the persistent attacks of the poisons constantly carried hither and thither by the circulating blood.

The nervous system responds the most readily to the purer and richer pabulum brought to its inmost recesses by the blood, and as its cells are better nourished, so its trophic influence is maintained, and the metabolism and growth of all tissues, including the all-important haemopoietic, is ensured and maintained at its highest, and they are thus enabled either actively to beat off, or passively to refuse to succumb to, the specific poisons of any disease. Open-air life improves the appetite, and, again, the additional food ingested improves the blood pabulum, with the results referred to above. Carefully graduated exercise, again, increases the appetite and stimulates the emunctories, and helps the elimination of their excreta. Rest—much rest—carefully prescribed at suitable times and under correct conditions, again helps much.

And if this can all be done away from home surroundings and worries, in a high, dry, bracing climate, with the purest possible air, with pleasant companions and environment, the greater will be the efficacy and permanency of the whole treatment.

Open air, then, rest, high feeding, graduated exercise, and, if possible, a bright, dry, bracing climate, are our means for enabling an individual to escape the eventual horrors of consumption. But all and each of these are, in my opinion, as important in enabling the individual to escape the eventual horrors of syphilis (with the help of small doses of mercury maintained for many years).

The parallel is strict. The poison—whether it be a bacillus, or a ferment, an enzyme, a toxic albumose, or we know not what—is there, in the individual. It is somewhere in the system. It may be weak, it may be strong. Or the resisting power of the individual's tissues may be weak, or may be strong, or the idiosyncrasy of the individual may be such as to render him well-nigh immune or particularly susceptible. The poison may be causing actual physical signs and symptoms, or it may be apparently latent but powerful for evil, and perhaps gaining strength wherewith to strike with Thug-like precision and force when long forgotten and least expected, and when inadvertently the unwary victim has laid himself open to attack by being run down through worry, overwork, or neglected ill-health.

It matters not whether the poison be the syphilitic or tuberculous; it may suddenly seize upon the lungs, larynx, nervous system, or connective tissues. Surely if the open-air treatment is called for at the beginning for the one it is equally so for the other to avert the staggering consequences of the original infection, and yet I have never seen it advocated equally for both.

In syphilis, mercury undoubtedly does good. Probably until the last thirty years it has, I think, done more harm

than good. It is not an antidote to the syphilitic poison any more than potassium iodide is. It probably helps the tissues of the syphilitic, much as I find that arsenic sometimes seems to help the tissues of the tuberculous. I do not feel that it is a "specific," and Diday, whose work on the subject seems to me to carry much weight and conviction, certainly seems to teach the same.

During ten years in a busy practice in the University town of Cambridge I saw many young men with early syphilis, and I often kept in touch with them for many years after they had gone down from the University. And one thing impressed me much: that whereas a poor, underfed scholar, if infected, was hit painfully hard, the well-to-do hunting or athletic undergraduate generally suffered lightly. The latter led an open-air life, he ate meat three times a day, his tissues were well nourished and therefore at a high resistance pitch. But the scholar, often poor, trying, because of the *res angusta domi*, to live on his scholarship, who generally had porridge for breakfast, bread and jam for lunch, and a poor dinner in hall, sometimes at a dreadful time of day, badly served and hastily eaten or left, he, I noticed, often suffered badly. And this, too, in spite of the fact that the sporting undergraduate was often very casual about taking his mercury. He very often, however, got off cheap, had but slight secondaries, and heard no more of his trouble. For, later on, he continued to live a well-fed, open-air life, often as a country gentleman or in some other easy-going position in life.

I remember some ten years ago remarking on my observations to Sir George Humphry, before the "open-air treatment" had come to stay, and he said that throughout the enormous experience of 50 years' practice in Cambridge he had always noticed the same thing—that the well-fed sportsman, in spite of his being casual about his mercury, did not hear much of his trouble in the afterwards, and I remember his adding: "Ah! I used in the old days to salivate them to pints a day! but they would'nt stand it, and they seemed to do very well without." He remarked, too, how heavily the poor student often suffered, although he was conscientious and regular in taking his mercury. Perhaps he was given too much, and became miserably ill with his throat, and rash, and aches, and fever, and early skin affections, and horrible melancholia. I can think of four such now. One has spastic paraplegia, and is living; another is dead of general paralysis of the insane; the third has locomotor ataxy; and the fourth is insane, also with ataxia, and I hope by this time dead. Three out of the four became Fellows of their college.

If the athlete chronically poisons himself with alcohol, and leads a dissolute life (I mean when syphilitic) he goes to grief—but later on. I have seen six such cases within the last three years—magnificently developed men, and with grand records as athletes. One died of phthisis, the second of appendicitis (tuberculous), the third of cerebral haemorrhage, the fourth of arterio-capillary sclerosis and kidneys, the fifth is just alive, and has phthisis, the sixth died of phthisis, and chronic Bright's disease. They had all drunk hard, and had led unhealthy town-loafing and dissolute lives. All the five died here in Davos, at or near forty years of age.

During the five years' observation of patients in these high Alpine altitudes I have come to the conclusion that 30 per cent. of the men patients here who have phthisis are syphilitics—and perhaps more. They are, as a rule, men of the upper middle class, who have led hard-working business lives. They are a type of case that clinically one can recognize, and their want of healthy carmine colour, and their thin hair or baldness, lead one to suspect them. It is wonderful how this class of case improves here, if not too far gone. Mercury gently given certainly does them good. I notice that they are specially liable to ischio-rectal abscess and fistula in ano, and to ear trouble and deafness, more so than other phthisical patients. They are generally between 30 and 40 years of age, and though they yield quickly to treatment and improve much, they seldom are quite cured. If only they had undergone a long open-air cure directly the character of their syphilitic infection was recognized, I believe they would not have had to come here for the open-air cure of their phthisis.

I have asked many directors and assistants of sanatoria and hospitals on the Continent, and they have put the proportion of the syphilitics among the phthisical men as 30 and 40 per cent., and twice lately I have been told 50 per cent.

Dr. Klause, Assistant to Professor Koch, and chief of the phthisical wards at the Charité at Berlin, told me recently that fully 50 per cent. of the men were syphilitic. He also told me that when in charge of the venereal diseases department he noticed that more than 50 per cent. of the patients showed physical signs of lung disease.

The German mutual benefit and insurance societies find it pay to establish open-air sanatoria for their phthisical members. I think they do would do well to do the same for their early syphilitic cases.

But the trouble is that the man who finds he has contracted syphilis is only too anxious to conceal the fact that there is anything the matter with him. He is depressed, he loses his spirits and mopes indoors, loses his appetite, pins his faith on the mercury, takes fully much of it, and then when the ill-feeling of the secondaries comes he goes from bad to worse, and is for months in the worst possible condition for resisting the invading poison at the most critical time. He is sent, it may be, to Aix-la-Chapelle or Wiesbaden, where he leads an unhealthy hotel life. Far better, if he were sent at once to an open-air sanatorium, to lead the same life as is laid down for a patient with slight tuberculosis. Or better still, if he were sent to a high, dry, bracing climate, such as the African veld or the high Alpine plains of Central Europe, where he can amuse himself gently out of doors for six months or a year, under supervision, and then take to sport to keep him happy and healthy, amongst numbers of other people all busy in the pursuit of health or pleasure. For I notice that early syphilitics do extraordinarily well in these Alpine heights. Blood changes here are rapid; metabolism throughout is heightened, and the patients rapidly regain health, their throat affection and rash disappear very quickly, and their pains and fever rapidly go, when they have acquired the appetite which the dry, cold air seems to force on them. And I find that very little mercury goes a long way.

He should devote certainly one year to an open-air life, and, if he can afford it, two years. I believe that then we should not have the 30 per cent. of men syphilitic phthisical patients, and the million of lives per annum which tuberculosis at present costs Europe would also be very much reduced.

Of course, with the labouring classes, it is probably useless to dream of their getting a year or two. But they might get, as they do for tuberculosis, three or four months, though very few of them would take it if they could get it, I feel sure. But how about compulsion? We use compulsion in case of small-pox, why not for great-pox?

This leads me to the question whether our national and international associations and leagues against tuberculosis should not, in considering the prevention of tuberculosis, attack this great source of it, namely, syphilis. And should they not advocate the open air treatment of syphilis, and should they not agitate ceaselessly for rational legislation on the point? I see great authorities speaking sanguinely of "stamping out this scourge (tuberculosis) of the human race." I believe there is no hope of stamping out "this scourge" without also taking means to stamp out the other even greater scourge—syphilis. We should consider the soil not the seed. The tubercle bacillus will always be amongst the flora of damp, dark countries, and while syphilis is plentiful, ever providing a suitable soil, tuberculosis also will flourish.

I do not believe that our National Association against Tuberculosis will ever start a crusade against syphilis unless the King, or some other strong, sensible man, or some independent members of committee were to take a strong line on the subject.

Many, I know, will say that my estimate of syphilitics among phthisical men is too high. I feel confident that when they have made as full inquiries and observations as I have made, they will not be of that opinion. I refrain from offering the usual meretricious attempt at proof by plastic statistics. The last five years have sickened me with their rich supply of lying half-truths.

I only hope that the open-air treatment for early syphilis may become more usual, and I only hope that the National Association against Tuberculosis may advocate it. It need not be known whether the patient has tuberculosis, or early syphilis, let the treatment be the same. By helping him to live down his syphilitic poison, we can prevent the chronic inflammatory processes which undoubtedly afterwards provide the soil for the tubercle bacillus. Surely this is not only a wise, but a very necessary policy. I firmly believe that half a million deaths a year in Europe would be prevented by this policy.

But I fear that by taking a strong line and striking at the root of much of the evil, the National Association would run the risk of alienating much valuable sympathy.

I do not remember having seen the open-air treatment of syphilis advocated in our journals. And yet it has long been clear to me that it is absolutely as loudly called for as the open-air treatment of tuberculosis.

When a patient who comes to us is proved to have early tuberculosis we say to him, "This is serious. If you can afford it, you must give up your work, and go away for six months and be overfed and live in the open air in the best possible climate. After that, if you can afford it, you had better live for another year or two in the open air." I contend that we should do well if we did exactly the same with an early case of syphilis.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

RUPTURE OF THE RIGHT AURICLE.

Death from rupture of the right auricle is so rare that the following notes of a case may be of interest.

Joseph M., a well-nourished muscular negro, aged about 45, left his home at 6 a.m. on October 4th, 1902, and went to work. By 3.30 p.m. his work was completed, and he was returning home, when he met his son, and the two went into a Chinaman's shop to have a drink. The deceased drank absinthe mixed with water, picked up a couple of sucking pigs which he was taking home, joined his mate, who was waiting outside, and went on. He had not gone much more than 200 yards when he fell on his face, and when he was picked up he was found to be dead. The body was brought to the hospital that evening, and on the morning of the 5th Dr. de Gundry, Assistant Medical Officer, and I, did a partial necropsy.

The chest was opened, and at once the pericardium was seen to be distended with what appeared to be a somewhat excessive amount of fluid; when the sac was opened, however, and the fluid allowed to escape, it was seen that this was serum covering a dark clot, which entirely enveloped and concealed the heart. The contents of the thorax were carefully removed, and the lungs, which were healthy, were separated from the heart, the vessels being divided as far as possible from the latter organ.

The walls of the aorta were thickened, and the calibre of the vessel was widened for an appreciable distance, giving the impression that a fusiform dilatation existed in its first part. The valves, like all the other valves, were to all appearance healthy.

The heart itself was enlarged in all directions, both ventricles being about equally above the average size, and the heart, though a large one, was almost equally enlarged. The right auricle, however, was, or had been, out of proportion, and was rent right across from one side to the other, and at right angles to the direction of the muscular fibres. The edges of the tear were ragged and thin, and the wall at this part showed an almost complete absence of muscular fibres.

Judging from *post-mortem* appearances, there is no doubt that there existed during life an aneurysm of the right auricle, and, from what was left of the walls, it was evident that the aneurysm was not a small one—in fact, the auricle appears to have become a mere sac of thickened pericardium attached to the rest of the heart by a few elongated and starved muscular fibres.

I learnt later from the relations of the deceased that on September 29th, a few days only before his death, he had begun to complain of a pain in the middle of his back, and that he had been to see a doctor, who had given him a bottle of medicine, which he is said to have taken regularly. Apart from this pain, which was more annoying than severe, he did not suffer much, as death must have been very sudden. He fell literally on his face, not even letting fall the pigs which he carried tucked one under each arm. Nor did he make any attempt to break his fall with his hands. There were no lumps or stones on the road where he fell, yet his face struck the ground with sufficient force to graze his right cheek, and to drive his teeth through his lower lip. The presumption is that the man was dead before his head reached the ground, and from the size of the rent in the auricle this is not unlikely.

Between 6 a.m. and the time of his death deceased had walked twelve miles or more, always carrying something. For the last few hours he carried two pigs, each weighing about 10 or 12 lb.—a respectable load even for a healthy man, when the fidgetty character of his burden is taken into consideration.

Robert Denman, M.R.C.S.Eng., L.S.A.,
Seychelles. Chief Medical Officer.

CASE OF INTERNAL STRANGULATION THROUGH A HOLE IN THE MESENTERY.

The patient, a boy aged 14, was seized with pains in his abdomen about 12.30 a.m. on September 29th, 1902, and about 1 o'clock he vomited and passed a small motion. The pain became worse, and I was sent for about 6 a.m. I found him somewhat blanched and lying on his back, with a pulse-rate of 110 and a temperature of 99° F. There was no distension of the abdomen and no dullness on percussion, but there was pain on deep palpation over the right iliac fossa. The vomit was not faecal.

I ordered the boy to be kept in bed, and that nothing should be given except a sip of water. I saw him again about 11 a.m., when the symptoms were pretty much as they were before, but the boy felt easier and had slept a little.

At 3 p.m. there was some distension of the abdomen, most marked to the right of the middle line and towards the right iliac fossa. I then told the parents an operation was necessary, but they would not give consent that night. Next morning there was marked tympanites and greater resistance to the right of the middle line.

The pulse was 144, and the lad more blanched. I obtained consent for an operation, and had the patient removed to the Oldham Infirmary, with a provisional diagnosis of perforative appendicitis.

He was operated upon later on in the day, and by the kind permission of Dr. Martland, who operated, I am able to give the following particulars:

After chloroform was given, an incision about 3 in. in length was made in the right iliac region. As soon as the peritoneum was cut through a large amount of deeply blood-stained serum escaped, suggesting internal haemorrhage, and the coils of small intestine which presented had the appearance of being filled with blood. The appendix was found perfectly normal, as was the lower end of the caecum.

The incision was extended upwards as the coils of distended bowel were traced both ways, and after some difficulty the two portions of bowel were found to pass through a narrow opening in the mesentery and were very tightly constricted. This opening was situated at the base of its attachment where it crosses the second lumbar vertebra. The bowel on the distal side of the constricted loop was normal and empty.

After great difficulty a director was passed through the constricting ring, which was then enlarged and the bowel pulled back into its normal position, the opening being closed by a suture. The opening had a firm, rounded edge, and appeared to be a natural one. After the abdominal wound was closed the boy was put to bed. The pulse was weak and running and the temperature 97.8° F. Transfusion was done, but the boy died about 12 o'clock the same night.

At the necropsy there was very little sign of peritonitis. The abdomen contained some blood-stained serum. The bowel was still somewhat distended, deeply injected, and showed the marks of constriction. The length of strangulated bowel was a little over 3 ft., and was ileum. The opening in the mesentery was found sutured up, and seemed in every way to have been a natural opening. Everything else was normal.

The only suggested exciting cause was that the boy had been trying to ride a bicycle two days before, but he had not complained of hurting himself.

Stretford. A. Anderson, M.B., M.R.C.S.

CASE OF ECLAMPSIA FATAL AFTER DELIVERY.

At 6.45 a.m. on December 25th, 1902, I was called to Mrs. E., three miles from my residence. She was 25 years of age, and had had one child previously three years ago, when the labour was a natural one, with the exception of an adherent placenta. She appeared a strong, healthy woman, and was quite well the evening before, which she spent at her mother's house in the same village. I arrived at 7.30 a.m., and found a midwife had been called in an hour earlier. The patient was unconscious, and the midwife informed me that she had had three fits during the last hour. The child's head being already in the vagina, there was no time to administer an anaesthetic, and with the third pain a living healthy child at full time was born, and the placenta immediately expelled.

The patient regained consciousness, and improved sufficiently to be able to speak, and take a draught of ergot and bromide. There was no post-partum haemorrhage. I then returned home. At 1.30 p.m. I received an urgent message saying the convulsions had returned. On arriving at 2.30 a.m. the patient was quite unconscious, and had a convulsion as I entered the room. The pupils were minutely contracted, and would not react to light, the breathing was stertorous, with much frothy expectoration. Pulse 130, temperature 104° F. The bowels had been well opened, and the urine was loaded with albumen. There was no apparent oedema in any part of the body.

I immediately injected ½ gr. pilocarpin hydrochlor. with ½ gr. morphine acetate. The patient was quieter for about an hour, and sweated profusely. She then had another convulsion, after which I injected ½ a drachm of chloral hydrate with ½ a drachm of potassium bromide into the rectum, which was retained. As matters did not improve at 4.30 p.m. I repeated the pilocarpin and morphine hypodermic injection. At 8 p.m. I saw her again, when she was much worse. She was in a deeply comatose state, and died shortly after.

Sydney. C. NELSON THOMAS B.A., M.B., B.C.

BILHARZIA IN INDIA.

IN reporting a case of bilharzia from the West Indies, Dr. Manson says: "With the exception of Mesopotamia, Cyprus, and Mauritius, bilharzia disease has hitherto been supposed to be peculiar to Africa."[1]

I now report a case in a native of Bombay. When I saw he case my first impression was that the bilharzia was a gift from our friend the Boers, many of whom have been kept in this Presidency as prisoners of war. Major Childe, I.M.S., informs me that he also has seen a few cases in Bombay, but his patients were Iranis or Persians.

Bilharzia has, however, been found in cattle in Bengal by Lieutenant-Colonel Bomford, I.M.S., and recorded in the *Scientific Memoirs of the Medical Officers of the Army in India* about eight years ago. I regret I cannot give the date more accurately as the volume is missing from our college library. I recollect, however, that the animals were Indian bred transport bullocks who had never been outside India.

Dr. Manson's patient had suffered for five years from lumbar pain and headache, but these symptoms are not definitely attributed to the parasite. The patient left the West Indies in July last. Is it possible the infection of the West Indies is a legacy from the Boer prisoners?

My patient's only symptom was a painless haematuria, which caused him some alarm, but produced no constitutional effects. Numerous ova with the spine always terminal were found in the urinary sediment.

ARTHUR POWELL, B.A., MCh.,
Professor of Biology, Grant Medical College,
Surgeon to the Police Hospital, Bombay.

RECOVERY FROM TUBERCULOUS MENINGITIS.

I WAS much interested in the par. 339, Recovery from Tuberculous Meningitis, in the EPITOME of the BRITISH MEDICAL JOURNAL of December 6th, 1902. A striking case came under my care in March, 1902.

A little girl aged 8, whose brother had died some years previously of tuberculous meningitis, developed the characteristic symptoms of the disease.

The treatment of symptoms gave only temporary relief, and the patient's condition became steadily worse, occasioning me great anxiety. I then decided to put her under a course of creosote-vasogen, 20 per cent., commencing with 5 to 7 drops in milk, gradually increasing the dose to 12 drops. After ten days' treatment the symptoms commenced to abate, the headache became less, the pathognomonic cry was less piercing. In a month my anxiety about her ceased. I continued the treatment for four months. After six weeks' change of air the child was able to return to school, and has continued well ever since.

Vasogen is a valuable medium for the exhibition of creosote. It renders the latter non-irritating without diminishing its therapeutic effects.

In Dr. Thomalla's case the remark is made that 15 drops of Nanning's extract of china were taken to overcome the bad effects of the creosote on the stomach. Creosote-vasogen in milk does not irritate the mucous membrane of the stomach. I have given it in 15 to 20-drop doses in phthisis pulmonalis without irritation.

The preparation I used is manufactured by Vasogenfabric, Pearson and Co., Hamburg.

On February 4th I saw the child returning from school and spoke to her. To all inquiries said she was very well.

Bournemouth West. A. HUMPHREY DAVY, M.D.

SEQUEL TO REMOVING TUBERCULOUS GLANDS.

THE following cases as occurring in the ordinary course of practice may be of interest: A. B., aged 35, had worked of late on tramways as guard and formerly in an engineer's shop. Ten years previously tuberculous glands of the neck had been removed; the operation was an extensive one. He developed acute meningitis and was removed to Leeds Infirmary, where he died.

B. C., a man, aged 21, had had enlarged glands of the neck removed at Leeds Infirmary a year before his last illness. He died of acute meningitis at home.

C. D., aged 22, a cleaner on the Midland Railway, was operated on in private for enlarged glands of the neck. After a year of health and work he commenced rather suddenly to show signs of acute meningitis, and died within a few days.

D. E., an unmarried woman, aged 31, had had a small gland removed from the neck. She developed some months later what appeared to be an ordinary attack of pneumonia, but this very soon was found to be an acute attack of pulmonary tuberculosis, from which she died after an illness of three weeks.

These cases occurring in a not very extensive practice, and all within a period of two years, are not without significance.

Leeds. H. DE C. WOODCOCK,
M.R.C.S.Eng., L.R.C.P.Edin.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

NO. 24 STATIONARY HOSPITAL, ALIWAL NORTH, SOUTH AFRICA.

WOUND OF THE JAW BY A SOFT-NOSED BULLET.

(By PHIL. E. MILLARD, M.B., Civil Surgeon.)

THE rapidity with which severe wounds frequently heal among certain savage races has often been remarked upon. The following case well illustrates this observation:

Native "Boy" Koss, a Basuto, came under my care on April 7th, 1902. While out scouting near Zastion, in the Orange River Colony, he was hit at close quarters by a bullet, evidently of the soft-nosed or expansile variety. It struck the lower jaw from below slightly to the left of the middle line, narrowly missing the facial artery. It was then deflected directly upwards, slightly damaging the tongue and crashing through the hard palate, and ploughed its way out just below the right nostril. His conveyance to the hospital at Aliwal North occupied nearly four days, during which time he received no efficient treatment.

On admission the patient was suffering considerable pain, and had hyperpyrexia owing to septic poisoning present, The whole fearful wound was one suppurating mass of tissue, in which loose teeth and broken pieces of bone could be detected. The tongue on the right margin appeared to be more or less gangrenous. The odour emanating therefrom, as may be imagined, was something terrible.

He was placed under an anaesthetic, and with the assistance of Major Elderton, R.A.M.C., and Civil Surgeon Randall. I scraped away as much necrosed tissue as possible, removing all loose pieces of bone and teeth. The lower jaw was badly smashed, over an inch of bone in the neighbourhood of the symphysis menti being destroyed, and only a few teeth remained in the lower jaw. In the upper jaw, though three or four teeth were lost, and the hard palate fractured, there was not much loss of substance. Lint soaked in antiseptic lotions was then constantly applied to the mouth, and the buccal cavity was irrigated frequently during the day. At the end of three days the temperature became normal, and the danger of septic pneumonia was over.

Three weeks after admission the first plastic operation was attempted. I found that owing to the excessive loss of tissue wiring the fragments of the jaw together was impossible; so I contented myself with bringing the skin surfaces below the

[1] BRITISH MEDICAL JOURNAL, December 20th, 1902, p. 1894.

mouth together. To do this I had to draw largely upon the right cheek, and thus for a time obliterated the right side of the mouth.

A fortnight later I made an incision over an inch in length, so as to increase the buccal orifice on this side, stitching the mucous membrane to the skin surfaces. At the same time I treated the gaping wound in the upper lip as an ordinary hare-lip case. The fractured extremities of the lower jaw were then becoming more or less fixed by a firm fibrous union, and he was able to eat soft food, talk, laugh, and even attempt to whistle with comparative ease.

KIMBERLEY HOSPITAL.

CASE OF FREYER'S OPERATION.

(By Arnold H. Watkins, M.D., C.M.Edin., Senior Visiting Surgeon.)

R., a Dutchman, aged 60, came under my care in the Kimberley Civil Hospital at the end of March, 1902. He was suffering from complete retention of urine, which had come on almost suddenly a week or two before. His urine had to be drawn off by catheter every few hours or he suffered intense pain; there was considerable difficulty in passing the catheter, and it was usually accompanied by free bleeding. There was no evidence of cystitis. He was otherwise in good health.

As his condition did not improve, and it seemed unwise to wait till the bladder became septic and other troubles developed, I operated on April 9th, following the directions published by Mr. Freyer in his articles in the British Medical Journal.

There was a very distinct third lobe the size of a cherry or rather larger, and feeling some doubt as to my ability to deal with the case on the heroic lines indicated by Mr. Freyer, I attacked this first, making an incision over it and proceeding to enucleate it with my finger. I found, however, that the finger passed almost of itself beyond the limits of the small third lobe, and that there was no difficulty in enucleating what appeared to be the whole prostate gland weighing 2½ oz. There was no haemorrhage worthy of the name, no shock, and no pyrexia. The suprapubic wound healed in about a month, and the patient on its closing at once began to pass water naturally. For some time he was troubled with leaking of the urine per urethram, but this has now practically ceased. On June 28th, 1902, there were two or three ounces of residual urine still, for which he passed a soft catheter once a day; this gives him no trouble, and will, I believe, soon cease.

I have no intention of adding my quota to the somewhat academic discussion as to whether I removed the whole prostate gland or a tumour which had replaced the whole prostate gland; nor of offering any opinion as to whether Freyer's operation is a new operation or not; I am quite satisfied that the man has been cured by an operation comparatively simple and easy of performance which has been brought by the labour of Mr. Freyer within the reach of general practitioners like myself, who do a little surgery from time to time, and that our gratitude is due to him.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Alfred Willett, F.R.C.S., President, in the Chair.

Tuesday, February 24th, 1903.

Latent Empyema in Infants.

Dr. Vere Pearson, in communicating a paper on this subject, said that empyemata were latent in infants sometimes because of the meagreness of pulmonary symptoms; or an empyema cavity might be overlooked because it was the second of two such cavities. Besides these latent empyemata there was another variety of empyema which was particularly likely to be overlooked; it was with this variety that the present paper dealt. The cases which belonged to this group were characterized by the occurrence of a small saccu.ated empyema, giving rise to progressive wasting and anaemia and to secondary complications of a grave nature. Usually the onset was gradual and the course of the disease long. An irregularly-raised temperature with few symptoms pointing to disease of the respiratory system was common. In an uncomplicated case the physical signs were either (1) not well marked which depended on the size, chronicity, and site of the empyema. The commonest situation was at the extreme posterior base in the vertebral groove. There ill-defined signs tended to be obscured by the liver or the stomach interfering with the normal pulmonary resonance. Or (2) they varied, often from day to day. Or (3) a slight impairment of resonance to percussion was sometimes the only sign present. The physical signs in a case with secondary pulmonary complications, and the physical signs in a case with complications other than pulmonary, were discussed. In regard to the differential diagnosis from marasmus, it was pointed out that digestive derangements were common, but were not so severe as to account satisfactorily for the progressive deterioration in the general condition of the patient. A continuously irregularly-raised temperature, often reaching 103°, was not common in chronic "wasters." The diagnosis from tuberculosis was often extremely difficult. But the variability of the signs, the signs themselves, and the long delay of the fatal issue in spite of high fever were points of difference between these cases and the majority of cases of tuberculosis in infants. The differential diagnosis of cases with complications from chronic broncho-pneumonia, or from purulent pericarditis, and other such conditions arising primarily or secondarily to diseases other than empyema was usually very difficult. The effects were indirect or toxaemic, the result of the presence of localized pus, such as general anaemia, wasting, pyrexia, pulmonary complications, etc., or such local effects as thickened pleura, etc.; or direct or bacterial, the result of the spread of the infective agent either locally or by the blood, such as local purulent pericarditis (and peritonitis), or by blood infection such as purulent meningitis, peritonitis, arthritis, and other pyaemic abscesses (and pericarditis). The prognosis was bad; the majority died. The cause of death was usually one of the serious complications. The high mortality depended partly on the infrequency of correct diagnosis, and partly on the difficulties of treatment. The questions to decide with respect to treatment were when to explore, where to explore, and how often. Much depended upon the certainty of the diagnosis and the progress of the case. The advisability of exploratory rib resection must be considered under certain circumstances.

Dr. de Havilland Hall alluded to the frequency with which empyema in children was overlooked. He endorsed the importance of repeated examination. In regard to the interlobular form of empyema in childhood the diagnosis, he thought, would usually be impracticable. Such was hardly saccular, but really a layer of pus between the lobes. The diagnosis in basic cases was easier, but except for the use of exploratory puncture it would often be hardly possible, the signs were so indefinite. He agreed as to the risk of resecting a rib in a child, and quoted a case with a fatal termination apparently caused by the operation. However, in cases which were going downhill with a reasonable supposition of pus, more than an exploratory puncture should be undertaken. The confusion of the diagnosis arising from an initial pneumonia was emphasized, the dullness being attributed to a thickened pleura. Repeated puncture should be employed; it gave really very little discomfort. Reference to the use of the *x* rays in differential diagnosis was made; in one case alluded to these allowed of the recognition of a subdiaphragmatic abscess. In the cases described in the paper had the urine been examined for albumose?

Dr. French asked how in the primary cases the micro-organisms got into the pleural cavity. Apart from the physical signs leucocytosis was a valuable differential sign.

Dr. G. A. Sutherland alluded to overlooked cases in his own experience. The term "latent" seemed to include more than one class of case—those in which, at any rate, suggestive symptoms existed, the others in which the condition was not suspected until it was discovered at the necropsy. In the former the exact position of the pus was the doubtful point. A sign in practice sometimes useful was to rest the children on the sound side when after full inflation an area of dullness might be detected. He deprecated the making of numerous punctures, and thought that if two or three incisions were made ineffectually no more should be done. He considered that resection of a rib was a proper measure of treatment. An operation on a localized abscess could be completed at one operation and recovery might be expected.

Dr. F. E. Batten considered that from an exploratory incision it was not possible to investigate the whole condition of the lung on account of the thickened pleura. He referred to a case in which there was no leucocytosis, and yet an empyema was found at the necropsy. When the pus was between

the middle and lower lobes on the right side he believed a diagnosis of interlobular abscess was possible. The form of organism present was not always the pneumococcus; in some it was the streptococcus when the pus was thin, not cheesy. In regard to diagnosis, caseous pneumonia of the whole of one lung from ulceration of a tuberculous gland into a bronchus was apt to mislead. In his experience the onset was commonly acute, unlike the onset in the cases of tuberculosis. Had a bacteriological examination been made in all of the cases mentioned in the paper?

Dr. HECTOR MACKENZIE thought the majority of cases of empyema were of a latent character. He agreed that the onset was frequently acute. The symptoms were often like those of acute pneumonia. In regard to treatment, exploratory puncture was very unsatisfactory; if a clear opinion of the probability of empyema was arrived at he would have resection of rib performed at once. In one case of interlobular empyema the pus was evacuated with difficuty after resection.

Dr. NEWTON PITT alluded to the cases in which the temperature remained normal throughout. Two cases were described in which the abscess was drained and recovery occurred. In diagnosis, the slight oedema of the skin over the empyema was of help—a difference in thickness on the affected side on pinching up the skin. The cause of the overlooking of these cases probably depended on a preconceived idea of the probability of pneumonia. Another error was the idea that very loud breathing might occur in empyema. There was clinical evidence that recovery might occur in the pneumococcus cases by absorption; this did not apply to the streptococcus cases. The value of leucocytosis was great in facilitating a diagnosis of pus in the pleural cavity. The ordinary exploring needles in use were far too small for the pneumococcus empyemata; a large needle he had found to discover pus when a small needle had given negative results.

Dr. VERE PEARSON, in reply, acknowledged the value of leucocytosis in diagnosis. He had met with a case in which there had been leucocytosis, and pus was found, but it proved to be a case of caseating tuberculosis with secondary pneumococcus infection. Of the use of the *x* rays he had had experience, with great satisfaction in such cases. In regard to unresolved pneumonia, the diagnosis from empyema was often very difficult—time and repeated examination would clear up the diagnosis. He had never examined for albumose. He had almost always found in his cases a deliberate onset in this group of cases. Some of the empyemata were certainly due to streptococcus infection, not all were of pneumococcus origin. He had never found any oedema of the skin in the cases of empyema he had observed.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Sir THOMAS R. FRASER, President, in the Chair.

Wednesday, February 4th, 1903.

DOUBLE PARALYSIS OF THE LATERAL CONJUGATE DEVIATION OF THE EYES.

DR. ALEXANDER BRUCE read a paper on this subject. The facts of the case were as follows:

The patient, an unmarried woman of 23, was stunned by a blow on the head from a fall, and on recovering consciousness complained of giddiness. Subsequently there developed, first, a paresis of the left internal rectus muscle on looking to the right, with complete conservation of all all other ocular movements; then a difficulty and eventually impossibility of turning the eyes to the left, and a degree of left facial paresis. When first seen by Dr. Bruce there was complete loss of the lateral deviation of both eyes to the left; slight impairment of the movement of the left eye during the attempt to look to the right, in addition to the facial condition already noted. Other ocular movements were conserved. Crossed diplopia was found on looking to the extreme right. There was no optic neuritis. All other motor and sensory functions were perfectly normal. A small lesion destroying the left sixth nucleus, infiltrating the facial nerve, and partially involving the connexion between the right sixth and the left third nucleus, was diagnosed. Subsequently pain on the left side of the face and head developed. The feeling of vertigo increased, and the eyes could not be directed either to the right or to the left, although the up-and-down movements remained. The patient died with symptoms indicating a localized meningitis, which was regarded as probably of a tuberculous nature. The necropsy showed a limited posterior basal tuberculous meningitis. This evidently originated from a tuberculous tumour of the size of the kernel of a hazel nut, situated under the ependyma of, and nearly filling up, the fourth ventricle. The tumour in which the two nuclei of the sixth nerves, as well as the facial nerves, especially on the left side; secondary degenerations were traced by Marchi's method along both posterior longitudinal fasiculi into the third nuclei. The third nerves themselves, however, remained intact. Degenerated fibres were traced downwards into the antero-lateral columns of the cord.

This examination demonstrated that the connexion between the sixth nucleus and the internal rectus of the opposite side was an indirect one through the intermediation probably of the third nucleus.

CASES.

Patients were shown by Drs. GEORGE GIBSON, JOHN THOMSON, and MELVILLE DUNLOP, and by Mr. ALEXIS THOMSON; specimens by Mr. COTTERILL; a demonstration of skiagraphs illustrating various bone affections in children by Dr. HARRY RAINY and Mr. STILES.

MEDICAL SOCIETY OF LONDON.

A. PEARCE GOULD, M.S., F.R.C.S., President, in the Chair.

Monday, February 23rd, 1903.

HAEMORRHAGIC TYPHOID FEVER.

Dr. J. KINGSTON FOWLER and Mr A. G. R. FOULERTON communicated a paper in which two cases of this disease were described, and in each of which a careful bacteriological examination had been made. In the first case pure cultures of the bacillus typhosus were obtained from the blood and urine during life and from the blood of the spleen after death. In neither case was Widal's reaction obtained during life. Pure cultures of the bacillus typhosus were obtained in the second case from the blood of the heart and spleen, and the bacillus was identified in cultures from the lungs, liver, and kidneys, and this and the bacillus coli communis were obtained from the gall bladder and the rectus and gluteus maximus muscles. Reference was made to the views of others as to etiology. It was pointed out that in the majority of recorded cases presenting this complication the disease had been of a severe character, but it might appear in cases of a mild type. There was nothing in the early history of the two cases described in the paper to indicate that they would be exceptionally severe, but as regards the tendency to haemorrhage it was to be noted that in the first case during the early stage of the disease epistaxis was unusually copious. In cases recorded by Eshner and Weisenberg, and by Nicholls and Learmonth, Widal's reaction was obtained; its absence was not therefore peculiar to cases of this variety. It was noteworthy that Ehrlich's reaction was absent in both cases. The gravity of the prognosis depended chiefly on the extent of the haemorrhage. Alcoholism, although not important as a factor in etiology, was probably so in prognosis. The astringent drugs administered in these cases—ergotinin and turpentine—were those used by Gilman Thompson in a case which recovered. Calcium chloride was not given. The application of adrenalin solution to the gums certainly checked the haemorrhage. The first case showed that in an example of the most intensely severe form of haemorrhagic typhoid fever no other organism than the B. typhosus might be present, and that the mixed infection which had been observed in other cases, and which was present in Case 2, was not an essential feature. The lesions observed *post mortem* were such as were common in enteric fever. It appeared from a review of all the facts that, as stated by Eshner, the haemorrhages were probably due to changes in the blood, or in the vessels, or in both; and that such changes were induced either by the infective or toxic activity of the typhoid bacilli, or by both of these factors combined. It was pointed out that the failure to obtain Widal's reaction was in cases of typhoid fever of grave prognostic importance. An active agglutinating process had no bearing on prognosis.

Dr. A. E. WRIGHT said that in his experience also the absence of Widal's reaction either meant that the case was not one of typhoid fever, or that it was one of very severe type. The cases seemed to show that the haemorrhagic typhoid fever had nothing to do with the haemorrhagic diathesis. As to etiology he believed it depended on a vice of the blood. Intoxication by the typhoid bacillus itself was probably the underlying cause. The haemorrhagic tendency might have been due to a diminution in the alkalinity of the blood, and it would have been well if observations had been made on this point. Calcium chloride only caused clotting by combining with the fibrinogen of the blood, and this had probably been destroyed by the typhoid toxin in the cases described.

Dr. ARTHUR VOELCKER remarked that it would have been interesting if observations had been made as to the coagulability of the blood in these cases, and referred to a case of gastric ulcer in which the haemorrhagic tendency manifested itself without any diminution of the coagulability of the blood.

Mr. FOULERTON, in reply, said that in the first case the blood did coagulate readily.

SPASMODIC CONTRACTION OF THE PYLORUS.

Dr. S. H. HABERSHON read a paper on this subject, describing certain cases of acute and subacute dilatation of the stomach in which pyloric spasm was considered to be probable. An important group of cases was especially referred to in which a gastric ulcer or malignant disease in its early stages in the neighbourhood of the pylorus produced a peculiar group of symptoms. The immediate cause of these symptoms was pyloric spasm, and they often failed to meet with recognition. A variable dilatation of the stomach was always present. Symptoms of pain, discomfort, or even vomiting were especially manifest in the evening or some hours after food. Pain was usually relieved by food, and this was considered an important element in the diagnosis. The distinction between these symptoms and those of pyloric obstruction was emphasized. In the treatment lavage was of value, but gastro-enterostomy was invariably successful, and produced brilliant results. Several cases were recorded in which successful gastro-enterostomy had been performed with complete remissions of all the acute symptoms. Malignant disease and duodenal ulcer occasionally produced the same group of symptoms, which could be always ascribed to irritative spasm of the pylorus. The question of diagnosis was discussed.

Dr. KINGSTON FOWLER remarked on the relief of pain by food in certain cases of gastric ulcer, which in his experience was usually more a sinking sensation that was often associated with dilatation of the stomach. It was not conceivable that the irritation of the surface of the ulcer by food could do other than cause pain. When there was contraction of the bowel rom a duodenal ulcer the pylorus was dilated.

Sir ISAMBARD OWEN had met with a fair number of cases in which an acute pain had been relieved by the taking of food, and in these the pain usually came on an hour after food. The explanation of this was probably that the contraction of the pyloric portion of the stomach prevented the contact of the food with the ulcer. The causation of the pyloric spasm was alluded to; in one case it appeared to be reflex from a colitis.

Mr. A. E. BARKER also referred to the contraction of the pylorus due to an ulcer at a distance. He also had seen dilatation of the pylorus in association with duodenal ulcer. He thought the trend of opinion was to discard mechanical devices in performing gastro-enterostomy; simple suture was preferable.

Dr. WALTER BROADBENT referred to a case of gastric pain associated with dilatation of the stomach, relieved by lavage with a solution of tannic acid, which was believed to remedy the hyperchlorhydria. Such pain might often, too, be relieved by massage of the abdomen.

Dr. W. J. TYSON thought that rest in bed for at least two months should be tried before an operation was undertaken.

The PRESIDENT said that in the cases described in the paper which he had seen rest had been tried. For acute dilatation gastro-enterostomy should not be too readily adopted; there were certain great difficulties and risks. For chronic dilatation of the stomach gastro-enterostomy gave such splendid results that it was, perhaps, had recourse to too quickly. Reference was made to the use of Murphy's button and other mechanical appliances.

Dr. HABERSHON replied.

OTOLOGICAL SOCIETY OF THE UNITED KINGDOM.

URBAN PRITCHARD, M.D., President, in the Chair.

Monday, February 2nd, 1903.

TUBERCULOSIS OF THE EAR, THE NOSE, AND THE NASO-PHARYNX.

A DISCUSSION on this subject was opened with papers read by Dr. WYATT WINGRAVE, Dr. JOBSON HORNE, and Dr. WILLIAM MILLIGAN.

Dr. WYATT WINGRAVE read a report upon the microscopical examination of the discharge in 100 cases of middle-ear suppuration, with an analysis of the results, having special reference to the presence of tubercle and "acid-fast bacilli." He arrived at the following conclusions: That acid and alcohol-fast bacilli were demonstrable in a large proportion of chronic purulent ear discharges. That in 17 cases they were presumably tubercle bacilli, in so far that they conformed to the recognized morphological and staining characters, and were for the most part associated with reliable clinical evidence of tuberculosis. That in 7 (pseudo-tubercle bacilli) cases, while conforming in a greater or less degree to the staining requirements, they were morphologically unlike tubercle bacilli, yet 5 of them had either a family or personal history of phthisis. That success in their demonstration in a great measure depended upon the methods of collecting and staining, together with perseverance in search. That in the peculiar selective action of the squames—a property specially attributed to certain bacilli—there was a possible source of error in diagnosis and an explanation of the peculiar affinity of other bacilli for fuchsine.

Dr. JOBSON HORNE's paper was entitled the Clinical Diagnosis and Surgical Treatment of Tuberculosis of the Temporal Bone considered with Reference to the Pathology and Morbid Anatomy of the Disease. The paper, so far as it related to the clinical diagnosis, after taking into account the characteristic features of tuberculosis of the ear, dealt mainly with two points (1) the value to be attached to circumstantial evidence in the absence of positive proof of the nature of the disease, and (2) the necessity for discriminating between primary and secondary infection of the ear. The surgical measures, and the limitations to be put upon such measures, were to be decided by ascertaining this second point. Caution was expressed against regarding suppurative disease of the middle ear occurring in a tuberculous subject as necessarily tuberculous in nature. It was held that the detection of the bacillus tuberculosis was the only proof positive of the disease being tuberculous. The existence of a group of "acid-fast" bacilli other than the bacillus tuberculosis did not invalidate the microscopic diagnosis of the disease provided the ordinary requirements of bacterioscopic technique were complied with. Negative evidence was of no value. Failure to detect the bacillus tuberculosis did not prove the disease to be non-tuberculous nor did it disprove the possibility of it being tuberculous. The difficulty in detecting the bacillus in the discharge was discussed. A theory was advanced which would at once explain both this difficulty and a well-known clinical feature of the disease—absence of pain—and also the correlation of these two clinical phenomena. The theory was based upon the fact, demonstrated by Drs. Bulloch and Macleod, that the "acid-fast" property was due to a wax-like body in the bacillus and not to a fat and that the wax when broken up set free an alcohol which was an essential factor in the staining property. It was suggested that the decomposition of the wax was accountable for the difficulty in detecting the bacilli, and the resulting product possessed anaesthetic property. The differential diagnosis between the primary and secondary infection could be made partly by the exclusion of tuberculosis existing in other organs, but more particularly by the condition of the glands adjacent to the affected ear; in the primary infection the glands were more often and more extensively involved. As regarded treatment, the surgical ablation of disease when secondary to pulmonary disease was generally to be avoided, but in the primary form it was to be undertaken by removing, in the first instance, the infected glands; the possibility of the occurrence of a blood infection, and of death from miliary tuberculosis, was to be kept in view.

Dr. W. MILLIGAN read a paper entitled The Diagnosis and Treatment of Tuberculous Disease of the Middle Ear and its Accessory Cavities. It dealt fully with the subject, and the conclusions arrived at were as follows: (1) That in all cases of middle-ear disease of suspected tuberculous origin search should be made for tubercle bacilli either in the discharge, in tufts of exuberant granulation tissue, or in enlarged periotic glands; (2) that inoculation experiments (either subcutaneous or intraperitoneal) afforded a ready and reliable means of proving or excluding the tuberculous nature of the disease; (3) that a final and exact diagnosis was imperative both from the point of view of prognosis and of treatment; (4) that tuberculous disease of the middle ear and accessory cavities was a frequent disease amongst infants and young children; (5) that the disease was most frequently found as secondary to tuberculous processes in other regions of the body; (6) that primary tuberculous disease of the middle ear was probably of more frequent occurrence than was usually supposed; (7) that the prognosis was always grave, but that in a certain proportion of cases suitably planned surgical intervention would eradicate the disease; (8) that in many cases it was advisable to conduct the operative treatment "in stages"; (9) that when less than 10 per cent. of hearing power remained no attempt should be made to preserve the organ as an organ of special sense; (10) that when more than 10 per cent. of hearing power remained in a patient, in otherwise approved health, a

definite attempt should be made to preserve what amount of hearing power still existed; (11) that where the tuberculous origin of the disease had been scientifically demonstrated, the case should be regarded as infectious and precautions taken accordingly.

The PRESIDENT remarked that the theory put forward by Dr. Jobson Horne did not quite get rid of the chief cause of the pain, namely, pressure on nerve endings; in tuberculous cases there was not very acute inflammation, nor very great pressure, and therefore absence of acute pain. In selecting cases for operation he thought the important point was not the amount of local damage, but the general condition of the patient.

Mr. C. A. BALLANCE thought tuberculosis of the temporal bone region should be treated and thought of, both pathologically and surgically, exactly as tuberculosis of any other bone was. He agreed that where the lesion was extensive the operation should be done by stages. He believed that in a considerable number of cases the temporal bone was the seat of the primary disease, and it was in these cases, if the primary focus were entirely ablated, that the patient was very likely to be able to deal with the secondary focus. He referred to two remarkable cases in which tuberculous disease of the temporal bone was successfully treated by him, in both of which cases surgeons had removed in previous years glands from the neck which were tuberculous, but the disease in the temporal bone had been left. He felt sure it was the primary source of the disease which it was the surgeon's duty to attack at the earliest possible moment, and that it should be removed completely.

Mr. A. E. CUMBERBATCH considered it should not be a question of operating upon them or leaving them simply because they were tuberculous. The question was whether it was possible to remove the disease. If so, it should be done.

Dr. H. L. WHITEHEAD referred to a series of records of fatal cases of ear disease occurring in the clinique to which he was attached. Of the last 100 cases there were only 12 which were distinctly tuberculous, and of these all but 3 were under 2 years of age. Of the 3 over that age all had advanced tuberculous mischief elsewhere, chiefly in the lungs. Of the 9 cases under 2 years of age in only 1 was there another focus of infection, that was, in 8 of the cases the disease was apparently primary in the temporal bone. Two of the 8 died, apparently from miliary tubercles in the meninges only. Of the others 6, or 50 per cent., died of general miliary tuberculosis.

Dr. HUGH JONES said it was worthy of consideration whether bovine tuberculosis might not be responsible for the primary mastoid affections. It had recently been suggested that it was accountable for primary bone and joint affection. It should cause attention to be directed to the question of the milk supply.

Mr. A. CHEATLE remarked that many times in young children with profuse discharge from the ear which was suspected to be tuberculous the smell had been characteristic. He agreed with the President that painlessness of tubercle in the middle ear was due to the fact that there was no tension, and that there was not much inflammation, and, therefore, little pressure on the nerve endings. That was quite sufficient to explain the comparative absence of pain.

The discussion was adjourned till March 2nd, at 4.30 p.m.

LIVERPOOL MEDICAL INSTITUTION.

RUSHTON PARKER, F.R.C.S., President, in the Chair.

Thursday, February 19th, 1903.

PATHOLOGICAL AND MICROSCOPICAL SECTION.

MALIGNANT DEGENERATION OF PAROTID TUMOURS.

SIR WILLIAM BANKS exhibited a number of casts, drawings, and specimens of parotid tumours. He remarked that with regard to the innocent variety, the commonest were of the mixed type. Of the malignant varieties he thought sarcoma rare, but carcinoma not at all uncommon, and he showed a patient from whom he had removed a large growth of this type. The intention of the note was to point out the frequency with which apparently innocent parotid tumours became malignant; details were given of three cases in which this had occurred, in spite of the fact that the growths had remained small, painless, and movable for long periods. He thought that there should be no delay in the removal of parotid tumours, however harmless in appearance; he had been taught to consider parotid tumours as among the least dangerous in the body, but he now regarded them with grave suspicion. He considered it undoubted that there was a great general increase in cancer among civilized nations, and it seemed not improbable that this proneness to degeneration in parotid tumours was part and parcel of that tendency.

RINGWORM OF THE CAT INFECTING CHILDREN.

Dr. LESLIE ROBERTS read a note on an example of trichophyton in the cat. The animal was infected in Egypt; twenty days after leaving that country the cat was taken to a house in Cheshire where there was a large family of children. A few days later ringworm was observed on the neck of the eldest daughter; within a month fourteen individuals were accidentally infected with the fungus, in addition to a kitten and a Skye terrier. The infection was subsequently communicated to a school.

SPECIMENS.

Dr. ALEXANDER exhibited specimens from a case of abscess of the liver following dysentery, and also the organs of a second case of liver abscess secondary to an appendicitic abscess.—Dr. R. G. HENDERSON showed the anterior half of a tongue spontaneously amputated by a rapid ulcerative process which examination showed to be epitheliomatous.—Dr. BUCHANAN showed specimens of bilharzia haematobia from urine.—Sir WILLIAM BANKS exhibited sections from a case of spindle-celled sarcoma of the breast, and also photographs of two patients with large tumours of this description. He remarked that they were not as a rule clinically malignant, and for the most part there was no recurrence after removal.—Mr. NEWBOLT showed a liver with tropical abscesses from a patient with dysentery, and a tuberculous kidney in the early stage of the disease successfully removed by lumbar nephrectomy.—Mr. SHEARS and Mr. STOCKDALE showed a melano-sarcoma of the choroid which had perforated the sclerotic: the growth was of the spindle-celled variety.—Mr. C. G. LEE and Mr. STOCKDALE showed sections from two cases of epithelioma of the pinna.—Dr. J. WIGLESWORTH showed a brain with numerous melano-sarcomatous nodules; these were merely part of a very wide diffusion of similar deposits all over the body. Dr. Wiglesworth also showed a specimen of horseshoe kidney.—Dr. J. E. GEMMELL exhibited the ovaries of a patient both the subjects of carcinoma and also cystic disease.—Mr. R. J. HAMILTON showed an eyeball containing a leuco-sarcoma of the choroid and microscopic sections of the same.—Mr. R. C. DUN showed a sarcoma of the kidney removed by operation from a child aged 3 years.—The following members took part in the discussion of the specimens: The PRESIDENT, Dr. BRADSHAW, Dr. ALEXANDER, Mr. R. HAMILTON, Mr. THELWALL THOMAS, Mr. LARKIN, Mr. STOCKDALE, Dr. BUCHANAN, Mr. MONSARRAT.

HARVEIAN SOCIETY OF LONDON.—At a clinical meeting held on February 19th, Dr. W. WINSLOW HALL, President, in the chair, Mr. T. CRISP ENGLISH showed a case of Paget's disease of the left nipple in a woman aged 56, who was under the care of Mr. Dent at St. George's Hospital. The disease started eighteen months ago as a red spot just above the nipple, and now showed an oval red patch surrounding the nipple, 1½ in. by 1 in. in diameter. The margin was well defined and the surface covered with fine scales. There was distinct induration, but no enlarged glands in the axilla. Mr. ROUGHTON said that Paget's disease was so frequently a precursor of carcinoma of the breast, that he considered it the duty of the surgeon to remove the breast with a wide area of skin, and to clear out the axillary contents. Dr. HENRY DUTCH suggested treatment by the *x* rays, with free removal of any enlarged glands in the axilla. Mr. JAFFREY agreed with the diagnosis, but he felt some thickening in the axilla, which he thought due to enlarged glands. He recommended free removal of the breast, and of the contents of the axilla. Mr. CAMPBELL WILLIAMS also agreed with the diagnosis, and recommended radical treatment, particularly as the disease had already existed eighteen months.—Dr. E. CAUTLEY showed a man, aged 28, with pseudo-hypertrophic paralysis. Apparently no symptoms were noted until he went into the Russian army seven years ago. He was thought to be malingering; but as "kicking" did not prove curative he was given six months' leave. He did not improve and was finally discharged. He complained of inability to do his work on account of weakness. He stumbled a little, and had great difficulty in getting upstairs. The calves measured 17½ in. in diameter, and were very hard. Knee-jerks were absent. The vasti were a little wasted, but no other muscles were involved. The case was interesting on account of the age of the patient, the limitation of the disease, and the comparatively slow progress. Dr. JAMES TAYLOR remarked that the case was very interesting as forming a link in a chain. He himself had known one case in which the signs and symptoms had only developed at the age of 18. Previous to this the patient had not only been able to walk, but had actually been an athlete, and had won prizes for running. Another case he had seen at the age of 43, and the patient had never been able to run. He remained practically unchanged, a typical case of pseudo-hypertrophic paralysis, until his death from pneumonia at the age of 50. These cases seemed to illustrate a condition

in which there was probably an inherited weakness or defect in the muscular tissue, which might become obvious at any age, and progress with varying rapidity.—Mr. JAFFREY showed a man, aged 56, with an injury of the elbow of long standing, with very great deformity, but with good movement. He was able to carry on his work without difficulty as a Covent Garden porter. Mr. P. LOCKHART MUMMERY thought the case interesting, as showing how complete the recovery might be as regarded movement and utility after injuries of joints in which malunion has occurred. He also drew attention to the treatment of fractures of this nature near the elbow-joint, by full flexion with fixation in that position with or without splints.—Mr. ROUGHTON showed a youth with dislocation of the right shoulder and right hip, and deformities of many bones, including the lower jaw. There were scars in the region of all the bones affected, and the condition was probably due to chronic septic infection as an infant. The case was discussed by the PRESIDENT.—Mr. JAFFREY showed a specimen of a testicle, which before removal had been diagnosed by every one who saw the patient as one of tuberculous epididymitis, but which proved on removal to be rapidly-growing sarcoma. A secondary deposit in the lumbar glands was recognized within a fortnight of removal of the organ.

BRITISH GYNAECOLOGICAL SOCIETY.—At a meeting on February 12th, Dr. HEYWOOD SMITH, President, in the chair, Dr. H. MACNAUGHTON-JONES related two cases of cysts in the inguinal canal. The first simulated a hernia and had been kept up by a truss, but became irreducible and increased in size, and on operation was found to be a cyst containing blood, and intimately connected with the round ligament in a patent canal of Nuck. The diagnosis in the second case also was difficult, but at an operation for salpingo-oöphorectomy and ventrifixation, the round ligament was found spread out over and intimately attached to a cyst in an otherwise normal canal. Dr. Macnaughton-Jones quoted a case of double inguinal hernia, ultimately fatal, mistaken for hydrocele of the round ligaments, he concluded that every doubtful swelling in the inguino-labial region in women indicated operation.—Mr. BOWREMAN JESSETT described an operation for the removal of a dermoid cyst of the right ovary; the appendix had been adherent to the tumour, and was much thickened, and was removed after double ligature without turning back the peritoneum. Mr. Jessett had found, from experiments on the cadaver, that by ligaturing the appendix in its entirety the mucous coat was completely divided just as the inner coat of a tied artery. Mr. Jessett also showed a uterus removed for haemorrhage due to a submucous fibroid some two years after a ventrifixation for retroversion and prolapse. Chromic gut sutures had been passed through peritoneum, fascia, and muscular tissue, but at the second operation there were merely some peritoneal attachments to the abdominal parietes, from $\frac{1}{2}$ to 1 in. long, sufficient to prevent the recurrence of the retroversion, and some omental adhesions, but nothing to interfere with pregnancy had it occurred—certainly there was no such support as would have prevented recurrence in a case of complete prolapse. After some remarks by the PRESIDENT, Dr. L GARRETT ANDERSON, and Dr. F.A. PURCELL, Mr. JESSETT replied.—The PRESIDENT delived his inaugural address. He said that in 1884, after consultation with the leading gynaecologists of the day, he had had the honour to draw up a plan and rules for the Society, and to convene the meeting at which it was constituted. Dr. Robert Barnes accepted the position of Honorary President, and happily was still with them, and Sir J. Halliday Croom, their late President, was a member of the first council elected From the first it had been felt that the exhibition of specimens and the reading of cases should take precedence of more formal papers. In a comprehensive review of the work done by the Society since its commencement he mentioned that 738 specimens had been shown, nearly all from operations and very few from necropsies. Of these, 243 were examples of fibroid tumours, in the removal of which up to the year 1894, clamps and the *serrenoeud* were almost invariably employed, but since that date, the prevailing method had been subperitoneal hysterectomy, and he congratulated the members of the Society on the share they had taken in the improved method of treating the stump. Of ovarian tumours 140 had been exhibited, chiefly in the earlier years, for ovariotomy had come to be regarded as no longer an operation to be deferred till a tumour had developed to an inconvenient or dangerous size, and probably only the rarer forms were now thought worthy of being brought before the Society. Of those shown, 26 were dermoid and 19 malignant growths, while 14 were instances of twisted pedicle. While this mass of material proved the vast importance of surgical methods in the relief of the diseases of women, it must not be forgotten that medical methods afforded no "chips from the workshop" for exhibition, though in medical gynaecology so-called there was no doubt much minor surgery. Their past work had, he believed, taught them that it was not the most anomalous cases that cast most light upon any form of disease, and that each Fellow should bring forward any case that might show the advantage or otherwise of any special treatment; that it was well to follow up some particular subject till something definite had been obtained, and that vast fields for research remained for diligent investigation—for instance, the etiology of cancer. He gave details of the Society's scheme for the examinination of monthly and gynaecological nurses already published in the BRITISH MEDICAL JOURNAL of February 7th, p. 333.

METROPOLITAN COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION: NORTH LONDON DISTRICT.—At a meeting of this District held on February 11th, Dr. WYNN WESTCOTT, Vice-President, in the chair, Mr. JAMES BERRY read a paper on the diagnosis of caries of the spine. He divided the signs and symptoms into three groups: (1) Those referable to the bony vertebral column; (2) those due to the presence of abscess; (3) those due to involvement of the spinal cord. Under Group (1) he discussed (*a*) the shape, (*b*) the flexibility (*c*) the existence or otherwise of pain on movement. *Shape.*—Apart from caries, the well-known shape of angular curvature could only be produced by injury or malignant disease (sarcoma or carcinoma, of cases of which he read notes and showed pathological specimens). Aneurysms eroded the bodies of the vertebrae but not the discs, and therefore did not as a rule cause deformity or angular curvature. Mr. Berry laid prominence on the straightness of a portion of the spine, which should be curved, obliteration of the normal cervical or lumbar hollow, or the existence of a single prominent vertebra. The last he noted was better brought out by viewing the spine laterally. *Flexibility.*—Stiffness was of more value as a sign of caries in children and young people than in the middle-aged and in old people in whom rheumatoid arthritis has a tendency to attack the spine and cause lessened flexibility. The spinal joints reacted towards disease, as did the hip, knee, etc. *Pain.*—This might be completely absent or only present in other parts of the body—namely, stomach, chest, thighs, etc., and thus lead to errors in diagnosis such as hysteria, gastritis, hip disease. In every case of supposed hip disease, the spine should be carefully examined. Spinal caries likely to be mistaken for hip disease fell into three classes: (*a*) The early cases where the chief symptoms were pain in hip and thigh, flexion of hip, and lameness; (*b*) cases with abscess extending into the upper part of the thigh under Poupart's ligament or through the sacro-sciatic notch; (*c*) advanced cases with numerous sinuses about hip and thigh, and where the thigh itself was flexed upon the abdomen. The paper was illustrated by skiagraphs, museum specimens, and many living cases.—Dr. WALTER CARR showed a case of a man suffering from deafness, giddiness, and headache, without any other cerebral symptoms, supposed to be due to an acute affection of the labyrinth. He was being treated with pilocarpin hypodermically.

METROPOLITAN COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION: SOUTH LONDON DISTRICT.—At a meeting of this District held at Guy's Hospital on February 13th, 1903, Dr. THEO. B. HYSLOP, Vice-President, in the chair, Dr. BEDDARD read a paper on the use of expectorants, and the following gentlemen joined in the discussion which followed:—Dr THEO B. HYSLOP, Dr. BRYANT, Dr. BIGGAR, Dr. MAURICE CRAIG, Dr. COWPER CRIPPS, and Dr. DENNY; and then Dr. BEDDARD replied.—Dr. BRYANT showed fresh *post-mortem* specimens from (1) a case of deciduoma malignum (this was the first time a case of this disease had been recorded at Guy's Hospital); (2) a case of pulmonary embolism following operation for appendicitis; (3) a very acute case of pericarditis and endocarditis.

PERTHSHIRE BRANCH OF THE BRITISH MEDICAL ASSOCIATION.—At a clinical meeting held in the Royal Infirmary, Perth, on February 13th, Dr. LIDDELL (President) in the chair, Dr. TAYLOR read a short paper on meningocele, and showed a specimen which had complicated labour. The meningocele

was a little larger than the child's head, and was attached by a short pedicle to the posterior fontanelle. The tumour, filled with bloody serum, presented and caused great uncertainty as to diagnosis. The child was born dead. A discussion followed on these cases, and hydrocephalus, also hydramnios and other abnormalities.—Dr. R. STIRLING read notes on two unusual forms of hernia: (1) Hernia of the ovary at the age of 35, resembling a cyst in the right inguinal fossa. Reduction was impossible, severe sickness supervened, and operation was called for at once. The ovary was removed, with part of the Fallopian tube; (2) scrotal hernia; the pain was very severe, and immediate operation was necessary; a large omental oedematous swelling, somewhat resembling a lipoma, was found and reduced; (3) a man complained of anaesthesia, accompanied by severe pain in the orbit, and giddiness; the temperature was subnormal; there were right facial anaesthesia and anaesthesia of the left side of the body; nystagmus was present, though not very marked: there was ankle clonus on both sides, exaggerated reflexes, Romberg's symptom present in slight degree; there was severe sickness, controlled by morphine; there was loss of taste on both sides of the tongue, more marked on the right than on the left; no paralysis and no optic neuritis; the duration of symptoms was three weeks; no exciting cause was known, but formerly the patient had suffered from tuberculous glands in connexion with bones; the right tympanum was congested, the hearing good; there was old standing perforation; a provisional diagnosis was made of chronic abscess in the temporo-sphenoidal lobe owing to auditory or tuberculous disease; (4) a case of spinal injury in a boy aged 17; two years ago the lower dorsal region was injured; there was muscular atrophy and weakness in the gluteal and quadriceps extensor muscles; the upper extremities were normal: the bladder and bowel also normal; reflexes were absent; electrical reactions were normal; the patient was treated by electricity and massage; in walking his knees went inwards, the right leg crossed the left; when sitting down the boy had to assist himself with his hands; pain in region of the external cutaneous nerve was now present; it was intended to use the *x* rays to assist diagnosis.

THERAPEUTICAL SOCIETY.—At a meeting held on February 17th, Mr. W. PARSON, Master of the Apothecaries Society, in the chair, the SECRETARY read a brief sketch of the formation of the Society, which was started in July last. The Apothecaries Company agreed to give the use of their rooms free of charge. Rules were drawn up, and officers and Council chosen; 107 Fellows had joined the Society during its first year, and papers were arranged for the meetings, at which more than 30 Fellows were present. The rules were then considered, and after some amendments were accepted; the rules were passed by the meeting, and the election of the officers and Council was confirmed.—Dr. R. HUTCHISON read a paper on the use of acid sodium phosphate in alkalinity of the urine. The alkalinity of the urine was estimated either by precipitating the alkaline phosphates by barium chloride, and then estimating the acid phosphates by adding uranium nitrate solution, or by adding phenolphthalein and titrating with a standard solution of alkali. He found that mineral acids, even in large doses, had very little effect in rendering the urine acid, nor did organic acid have more than a slight effect, but the acid sodium phosphate had a marked influence on the reaction as shown in the table sent round. At the same time there was an increase of the ammonium phosphate, though less than the increase of the same salt with a mineral or organic acid. Acid sodium phosphate had been tried with very satisfactory results in cases of cystitis, and it had been found to be particularly useful after operations on the bladder to keep the urine acid. Its dose was from 30 gr. to 60 gr. every three hours, but it was best given by dissolving 2 drachms in a pint of water, and allowing the patient to drink it from time to time. If diarrhoea was produced the drug should be stopped for a short time. Dr. SAINSBURY inquired how it was that acid sodium phosphate produced greater action on the urine than organic or even mineral acids. Dr. HUTCHISON explained that as it was a normal constituent of the urine it probably passed through the circulation with less neutralization than acids did.—Dr. JAMES BURNET read a paper on ichthyol in the treatment of pulmonary disease. He had used ichthyol with great success in 11 cases of pulmonary tuberculosis. The ages of the patients varied from 18 to 39. Four were females. The tubercle bacillus was present in the sputum in every case at the commencement of treatment. All the patients were under observation for at least six months, so that definite statements could be made as to the benefits derived from this form of treatment. The first sign of improvement was in respect to the cough. In the majority marked improvement showed itself at the end of the first month of treatment. With lessening of the cough came improvement in the expectoration, which not only became less in amount, but also became less viscid and consequently easier of expulsion. Night sweating was never noticed in any of the cases after the end of the fourth month of treatment. Gain in weight was not as a rule observed until the patient had been under treatment for a considerable period. The graver the lesion and the greater the lack of nutrition, the longer did ichthyol take to exert its beneficial influence. The author did not claim to have cured any of his cases by administering ichthyol. It had arrested the disease but had not eradicated it. Good results were also obtained in two cases of bronchiectasis. In the chronic pulmonary fibrosis of stone hewers the author also saw marked benefit follow its administration. He also used it with success in acute and chronic bronchitis, and in pneumonia during the resolution stage. The mode of administration was by means of capsules, the dose varying from 8 to 20 gr. four times a day. Ichthyol might act in three distinct ways: (1) As an antiseptic; (2) as a nutritional influence; (3) as an anti-inflammatory agent. It did not act much as an antiseptic. It did, however, favour nutrition. Its chief action, however, was locally as an anti-inflammatory agent. By constricting capillaries it reduced inflammation and removed any exudation that might be present. Above all the action of ichthyol was not solely dependent on the amount of sulphur it contained. This was an entirely fallacious theory as to its action. It was as an anti-inflammatory agent that it did good not only when used externally, but also when administered internally. In pulmonary tuberculosis it was to be preferred to creosote because it never caused any gastric derangement, whereas the latter often did. To be of any service ichthyol must be used for a long period and the dose be carefully regulated.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.—At a meeting held on February 20th, Dr. EDMUND CAUTLEY in the chair, Mr. H. J. CURTIS showed a specimen of a congenital periosteal sarcoma which apparently sprang from the acromion process of the left scapula of a boy, from whom it had been successfully removed at the age of 5½ months. At birth it was the size of a small hen's egg. It was a mixed spindle and round-celled growth.—Dr. G. A. SUTHERLAND showed a child aged 5 years with marked ataxy, which had been present from the time he commenced to walk. He considered that possibly the condition might be due to a congenital cerebellar lesion. The superficial and deep reflexes were normal. There were no changes in the fundus oculi or paralysis of the ocular muscles. Dr. FLETCHER BEACH considered that since the labour had been a difficult one the possibility of a cerebellar haemorrhage could not be excluded. Dr. JAMES TAYLOR, although he agreed in some respects with Dr. Beach, nevertheless considered it possible that cases similar to those described by Marie which manifested themselves later on in life might occasionally occur in children at this early age. Dr. SUTHERLAND replied.—Dr. JAMES TAYLOR showed a case of well-marked achondroplasia in a child aged 8 years. She was the seventh child, the others being healthy. She presented a characteristic deformity of the head, the humeri and femora were remarkably short, and trident-like hands were present. Her intelligence was not defective. As was frequently the case, her weight was increased for her size. Dr. TRAVERS SMITH remarked on the shape of the head. Dr. EDMUND CAUTLEY thought the condition should be kept distinct from fetal rickets, and remarked that it had been suggested the condition might be due to osteomyelitis. Dr. TAYLOR, in reply, referred to a similar disease in some animals.—Dr. A. MORISON showed a case of Raynaud's disease in a boy of 8 years which first manifested itself at the age of 4½ years. He did not suffer from haemoglobinuria and there was no evidence of congenital syphilis. Some of the attacks, as in the present case, were attended by the presence of blood-filled bullae. Examinations of the patient's blood showed nothing abnormal. Dr. BEACH mentioned a case in which a successful result had been obtained by the use of Esmarch's bandage. Mr. GEORGE PERNET called attention to the fact that sclerodermia and sclerodactylia might follow Raynaud's disease. Dr. THEODORE FISHER mentioned a case in which a condition similar to that of Raynaud's disease appeared in one hand as a sequence to a blow. He thought a strong peripheral stimulus might induce central nervous disturbance.

Mr. LEONARD GUTHRIE thought the child syphilitic. He was also of opinion that paroxysmal haemoglobinuria and Raynaud's disease were syphilitic manifestations. Dr. TAYLOR could not accept Dr. Guthrie's dictum that haemoglobinuria and Raynaud's disease were necessarily syphilitic. Dr. CAUTLEY agreed with Dr. Taylor, but referred to a case of symmetrical gangrene which quickly responded to antisyphilitic treatment. Dr. MORISON replied.—Dr. LEONARD GUTHRIE showed a slightly rickety infant, aged 2 years, whose ligaments were unduly lax and whose muscular system was wanting in tone. He could not make up his mind whether it was in the nature of rickets or of a congenital defect or want of development. Dr. SUTHERLAND considered it a case of rickets in which the stress had fallen upon the ligaments and muscles rather than any special congenital defect. Dr. CAUTLEY suggested that the condition was one of maldevelopment rather than rickets. —Dr. GEORGE CARPENTER read a paper on four cases of heart disease, two of which clinically could have been mistaken for mitral valvular disease. In one a presystolic murmur was present suggesting mitral stenosis. In three of these cases after death the valves and pericardium proved healthy, but the hearts were hypertrophied and dilated and disease of the myocardium was present. In the fourth case, one of heart failure following diphtheria, in which a mitral murmur was present associated with a pulsating liver, complete and rapid recovery took place with disappearance of the murmur. Dr. A. E. SANSOM thought the subject of myocarditis required further investigations, and that clinically at present it was almost impossible to diagnose such affections of the heart muscle, seeing that not only mitral systolic *bruits*, but presystolic murmurs also were present in such cases. Dr. FISHER expressed his interest in Dr. Carpenter's observations, and referred to his own pathological experience of complicated myocarditis. He also commented upon the presence of presystolic murmurs in cases in which there was neither mitral stenosis nor aortic valvular disease. Dr. CARPENTER replied.

OBSTETRICAL SOCIETY OF LONDON.—The following is the list of officers for 1903:—*President:* *Edward Malins, M.D. *Vice-Presidents:* *William Japp Sinclair, M.D. (Manchester); *A. H. Freeland Barbour, M.D. (Edinburgh); John Phillips, M.A., M.D.; Herbert R. Spencer, M.D. *Treasurer:* *George Ernest Herman, M.D. *Chairman of the Board for the Examination of Midwives:* W. R. Dakin, M.D. *Honorary Secretaries:* Amand Routh, M.D.; Montagu Handfield-Jones, M.D.; *Honorary Librarian:* Robert Boxall, M.D. *Other Members of Council:* Comyns Berkeley, M.B., B.C., *John M. Biggs, Henry Briggs, M.B. (Liverpool), *Murdoch Cameron, M.D. (Glasgow), Charles Owen Fowler, M.D., Charles Arthur Goullet, Walter Spencer Anderson Griffith, M.D.; David Berry Hart, M.D. (Edinburgh), Arthur Corrie Keep, M.D., C.M.Edin., *Arnold W. W. Lea, M.D. (Manchester), Arthur H. N. Lewers, M.D., William Rivers Pollock, M.B., B.C., Harry Campbell Pope, M.D., Edward Reynolds Ray, Thomas George Stevens, M.D., *Walter C. Swayne, M.D. (Bristol), Francis T. Tayler, M.B., *Charles J. Wright (Leeds). Those gentlemen to whose name an asterisk is prefixed were not on the Council, or did not fill the same office last year.

REVIEWS.

DRUGS AND PRESCRIPTIONS.

IN the *Science and Art of Prescribing*,[1] by Drs. E. H. COLBECK and ARNOLD CHAPLIN, we have a work which should be of real value in an age when the writing of prescriptions is rapidly becoming a lost art. If excuse for its appearance were necessary, the following extract from the preface would answer admirably:

> Under the influence of the present system of medical education and of the growing habit of using ready-made formulae, the student and practitioner of medicine are afforded few opportunities of acquiring a knowledge of the principles and methods which underlie the administration of drugs. The therapeutical action of medicinal substances and the indications for their use are commonly well understood, but the practical application of drugs in the treatment of disease is far too much of a stumbling-block both to the practitioner and the student of medicine.

And again, from the text (p. 30):

> It is seldom impossible to prescribe medicines in an acceptable, or at least, tolerant, form even to children, and there is little room for doubt that neglect of the attempt to do so conduces to the use of proprietary articles, and in this way to the habit of self-drugging.

The book is divided into two parts. Part I treats of methods of prescribing, and shows considerable pharmaceutical knowledge. A good chapter on incompatibility is followed by one on the administration of drugs, in which the different forms of administering drugs (as mixtures, pills, lozenges, etc.) are carefully explained. Useful tables are given showing the solubility of chemical substances, the best means for correcting the nauseous taste of drugs, and the vehicles best suited for exhibiting different substances as gargles, sprays, and pigments, with a statement of the strength usually employed. Part II is devoted to the application of the methods of prescribing, and is divided into chapters dealing with the treatment of diseases in the different systems—for example, the alimentary, the cardio-vascular, the respiratory, the nervous system, etc. In each of these chapters a table of the most important diseases is given, and the treatment of each is then described, and prescriptions are written in full Latin, showing the best means of prescribing the drugs indicated. These prescriptions form one of the chief features of the book, and, considering the large number given, they are remarkably free from error. We might point out an obvious mistake on p. 112, where turpentine is regarded as synonymous with terebenum. A case of incompatibility also occurs on p. 138, where syrup of lemons is ordered with sodium salicylate; owing to the presence of citric acid in the syrup, the dispensing of such a mixture is followed by the gradual separation of crystals of salicylic acid. As we have indicated, however, these are exceptions, and we have no doubt the book will be cordially welcomed both by students and practitioners.

It has probably struck most of us that while instruments of precision, such as the thermometer and the hematocytometer, are available for diagnosis, there is some want of exactness about our means of treatment. The existence of a *Pharmacopoeia* is an evidence of the need, and the improvements in successive editions show the efforts that have been made to meet it. Any help to this end is naturally welcome, and Mr. MOOR'S *Suggested Standards of Purity*[2] is especially so. It is astonishing how much even the most approved methods of assaying of the last edition of the *Pharmacopoeia* leave yet to be desired. Take, for instance, that most useful preparation, the tincture of nux vomica. Unless we are prepared to follow the practice of our homoeopathic brethren, and use it in such weak solutions that it can at any rate do no harm, we must wish to have some better test of its potency than the mere weight of a variable seed. The compilers of the *Pharmacopoeia* recognizing this, have improved from time to time on the method of preparation, by first directing the tincture to be made from a liquid extract, and then requiring the extract itself to be standardized for strychnine. Great as this improvement undoubtedly is, the method of testing proposed still leaves something to be wished for, as it takes no account of the varying amounts of brucine and strychnine present in different specimens of the seed. Many practitioners, indeed, prescribe only the liquor strychninae in order to secure definiteness of dose, but those who regard the other ingredients of the drug as having some therapeutic value have to submit to take it with all its variations of alkaloids and extractives, or simply standardized according to the amount of the most powerful of the former. In the case of opium the various alkaloids and other constituents must also vary in their proportions, though it is doubtless better to standardize in regard to morphine alone than not to standardize at all. Mr. Moor's book will help to draw attention to many of these matters, and will be of service also to the analyst and the medical officer of health in deciding when to recommend a prosecution under the Food and Drugs Acts. A good deal of the work is his own, but, as we think wisely, he has quoted freely and given ample references to authorities. The book is admittedly an essay. We hope the larger edition will receive a little more attention as to the arrangement of its contents.

For the first time Dr. KRAUCH'S *Chemical Reagents*[3] has

[1] *The Science and Art of Prescribing.* By E. H. Colbeck, B.A., M.D.Cantab., M.R.C.P.Lond., D.P.H.Cantab., and Arnold Chaplin, B.A., M.D.Cantab., M.R.C.P.Lond. London: Henry Kimpton. 1902. (Fcap. 8vo, pp. 185. 5s.)

[2] *Suggested Standards of Purity for Food and Drugs.* By C. G. Moor, M.A., F.I.C., F.C.S. London: Bailliere, Tindall, and Cox. 1902. (Crown 8vo, pp. 258. 7s. 6d.)

[3] *The Testing of Chemical Reagents for Purity.* By Dr. C. Krauch, chemist to the firm of E. Merck, Darmstadt. Authorized translation of the third edition by J. A. Williamson, F.C.S., and L. W. Dupre, with additions and emendations by the author. London: Maclaren and Sons. (Roy. 8vo, pp. 350. 12s. 6d.)

been presented in English, the translation being that of the third German edition. The list of reagents treated is extremely comprehensive, and includes every substance likely to be pressed into service by the expert chemist. The arrangement is alphabetical, and in each monograph we have a description of the reagent, with stringent tests for impurities and a method for quantitative estimation; notes on its uses and storage, and on the principal commercial varieties are also given, together with any general information likely to be of value. The whole subject is treated in a concise and practical manner such as might be expected from the author's position as chemist to the great firm of E. Merck, Darmstadt. The translators have added greatly to the value of the work by giving references to English abstracts from the original communications referred to by the author; similarly, they give references to English textbooks on chemical analysis instead of to the corresponding German works. For ordinary medical use the cost of absolutely pure chemicals is out of all proportion to any advantages they may possess, and the *Pharmacopoeia* is very rightly contented with fixing limits of impurity, but to the research worker and the analyst they are necessities, and to such the work will be of great value.

Messrs. JARROLD AND SONS (10 and 11, Warwick Lane, E.C.) send a copy of *The Concise Chemical Analysis Chart* (3d., post free 3½d.), which they have just published. This is intended as a guide for the separation and detection of basic radicles, and is a summary of the methods usually advocated in textbooks. A student would gain much useful knowledge by compiling such a chart for himself, but for those who will not do this, it is useful when hung on the chemical bench, but is not intended to replace the textbook.

ALCOHOLISM AND NARCOMANIA.

THE book on *Morphinism and Narcomanias from other Drugs*,[4] by Dr. T. D. CROTHERS, Superintendent of Walnut Lodge Hospital, Hartford, Conn., who is well known from his writings on alcoholism, is one of the best that has been published on the subject. The author has put his exceptionally large experience to excellent use, and has given us in this book a clear and full account of the etiology and treatment of some of the more important drug narcoses, including morphinism, cocainism, chloralism, chloroformism, as well as other less usual forms of drug addiction. An important feature of the book is the careful diagnosis made in each class of case, which cannot fail to be of great value. Dr. Crothers gives a very comprehensive sketch of the treatment of the various conditions, and commands our admiration by the resource and perseverance with which he deals with these most difficult cases. His careful study of the medico-legal relations of those cases is exceedingly interesting. The book is a masterly presentation of the whole question of narcotism, and on account of its practical and scientific value deserves to be widely studied by medical men.

Dr. MAX KASSOWITZ has reprinted from the proceedings of the eighth International Congress against Alcoholism[5] the exposition of his views founded on his experience as Director of the Imperial Institute for Sick Children at Vienna as to the effect of alcohol in the early years of life. From statistics given, it would appear that alcoholic drinks are commonly partaken of by school children in Austria and Germany, only 22.6 per cent. of those attending a school at Vienna being abstainers, while at an elementary school at Bonn it was found that of 247 children between 7 and 8 years of age only a single one had not tasted strong drink in some form, and 25 per cent. only had not taken brandy or liqueur; of the latter group, 110 were habitual wine or beer drinkers, 20 also taking a daily nip of cognac to "strengthen them!" It is not, therefore, surprising that Dr. Kassowitz finds illustrations at hand for his thesis as to the injurious effects of alcohol in childhood, whether in health or disease. First he points out the futility of the popular notion that alcoholic drinks are useful for the suckling woman, attributing the occasional occurrence of convulsions and other nervous disorders in the infant to the milk of alcoholic mothers. He goes on to describe forms of alcoholic delirium which he has noticed in the course of febrile disorders in the case of young children to whom alcoholic drinks had been given either by injudicious parents or, as alleged, by medical advice, citing a sad case of a little girl of 6, who developed during an attack of measles distinct symptoms of delirium tremens. It was found that from 3 years of age she had been given three glasses of wine daily besides a glass of beer. Cirrhosis of the liver and Bright's disease had been noted in several infantile cases as the result of alcoholic abuse. Combating the views that alcohol can in the case of growing children ever act as nutritive or preventive of tissue waste, as a digestive agent, as an antipyretic or beneficial stimulant in disease, or as an antiseptic in diphtheria and other septic affections, he concludes by avowing himself a consistent and decided adversary to the employment of alcohol in the treatment of disease in infancy and childhood. Yet the brandy bottle is still to be found in the wards of most children's hospitals. Is it not time that the practice of prescribing brandy to little children as a "stimulant" was reconsidered?

It is difficult to understand why a second edition of Dr. PIRIE'S booklet, *Notes on Health and Temperance*,[6] should have been published. The subject-matter may or may not have been acceptable to the Board School scholars for whose benefit the lectures were originally compiled, but the anatomical and physiological data upon which are based the hygienic rules which the author advocates are sketchily and imperfectly stated. It is not desirable to enter into much detail in regard to such matters when addressing a lay audience, but the greatest care should be taken to preserve accuracy. As regards the hygiene which Dr. Pirie advocates, it resolves itself into a diatribe against what he believes to be the wholly pernicious influence of alcohol, accompanied by lurid glimpses of its woeful effects on every tissue of the body; "it brings on a form of consumption which is quite incurable.....it causes fatty changes in both heart and vessels, which seriously interfere with the proper circulation of the blood, and may at any moment stop it altogether.....it is brought into close contact with the delicate structure of the liver, which it generally destroys.....it lessens co-ordination of the muscles for a time after a single dose, and permanently if regularly indulged in .....its effect on the kidneys is a slowly-advancing inflammation, which completely reverses their action." Such a wholesale indictment as these quotations indicate stamps the author as an uncompromising partisan. Even School Board scholars deserve a fairer exposition of views on an important social and hygienic problem.

BACTERIOLOGY.

DR. EYRE'S book on bacteriological technique[7] fulfils a distinctly useful purpose. The many excellent manuals of bacteriology which are available for the use of students very properly lay the main emphasis on the theoretical and scientific aspects of their subjects, and consequently can only discuss details of technique in a brief and imperfect fashion. Hence the need arises for a book which shall confine itself to these details of laboratory routine and deal with them thoroughly. Both on account of its wide scope and its careful consideration of minute detail Dr. Eyre's work meets this requirement very satisfactorily, and therefore ought to hold a prominent place amongst practical guides to the work of the bacteriological laboratory. The selection and preparation of glass apparatus, sterilization, and the preparation of culture media are all treated in the thorough manner which indicates wide practical experience. Still more valuable are the systematic descriptions of the various methods available for the identification of micro-organisms and the chapter on experimental inoculation of animals. It must of course be recognized that, although a book of this sort makes it much easier for a student to learn the details of laboratory routine, it needs to be supplemented by actual demonstrations. Dr. Eyre is no doubt fully aware of this fact; but it is a little surprising, after reading his elaborate descriptions of many simple manipulations, to find that in a few instances important matters of technique are dismissed with most unsatisfactory brevity. The treatment of section cutting, for example, is very inadequate; none of the microtomes employed for the paraffin method are described, and the account of the freezing method seems to miss the main point. The great practical value of the latter method is that

[4] *Morphinism and Narcomanias from other Drugs, their Etiology, Treatment and Medico-Legal Relations.* By T. D. Crothers, M.D. Philadelphia and London: W. B. Saunders and Co. 1902. (Crown 8vo, p. 351. 9s.)

[5] *Alkoholismus im Kindesalter.* [Alcoholism in Childhood.] Von Professor Dr. Max Kassowitz. Berlin: S. Karger; London: Williams and Norgate. 1902. (Demy 8vo, pp. 32. 1s.)

[6] *Notes on Health and Temperance.* By George A. Pirie, M.A., M.D. Second Edition. Dundee: William Kidd. 1902. (Crown 8vo, pp. 70. 7d.)

[7] *The Elements of Bacteriological Technique.* By J. W. H. Eyre, M.D., M.S., F.R.S.Edin. Philadelphia and London: W. B. Saunders and Co. 1902. (Medium 8vo, pp. 371; 170 illustrations. 10s. 6d.)

with suitable material a diagnosis can be made with great rapidity, so that when necessary a section can be cut and stained within about half an hour from the removal of the tissue from the operating theatre or *post-mortem* room. But Dr. Eyre tells his students that they must "impregnate the tissues with mucilage for twelve to twenty-four hours, according to size." In the account of flagella staining it is directed that the emulsion of bacteria should be made in distilled water. Does not Dr. Eyre find that organisms are apt to shed their flagella much more readily in distilled water than in tap water? We think, moreover, that the bacteriologists who are accustomed to obtain very beautiful results with van Ermengem's method will be surprised to find that method condemned as unsatisfactory. But we wish it to be understood that the instances we have given of points which seem open to criticism are not sufficiently serious to detract from the utility of the book as a whole.

In preparing the new edition of their *Manual of Bacteriology*[8] Professors Muir and Ritchie have found it necessary, owing to the numerous and important advances in the science during the last three years, to make many modifications and additions. We have already, in reviewing the earlier editions, fully expressed our appreciation of the general excellence of their work, and we are glad to say that the present volume amply confirms our original impression. Turning to some of the new matter which they have incorporated, we find an interesting discussion of the relation of human to bovine tuberculosis, in which the authors, while recognizing that there are still many doubtful points which need clearing up, indicate that they see no reasons, so far, for accepting Koch's startling assertion. The pathology of plague and of malaria are also brought well up to date, and, in view of the constantly increasing importance of the subject, the chapter on immunity will be read with special interest. The particular value of the work as a textbook for students is that it is both compact and readable, attractive and stimulating; whilst not overburdening the beginner with too much detail, it presents the salient facts and problems of the science so cogently that he cannot fail to recognize that it is a subject of intrinsic interest, impelling to the acquirement of further knowledge.

ANATOMY.

If the number of books published upon any given subject may be taken as a criterion of the amount of work which has been expended upon it, then the labour devoted to the study of the interior of the human body has enormously exceeded that which has been given to the consideration of its external form, and our scientific knowledge of the latter is relatively small. We, therefore, welcome the attempt which is being made by Dr. Paul Richer and M. Paul Gaultier to encourage the study of the external form of the human body by the publication of a series of monographs dealing with the subject both from a scientific and an artistic point of view, some of which are to be written by scientists and others by artists. The first two of this series of volumes are an introduction to the study of the human form, by Dr. Richer[9], and female beauty, by Dr. Stratz, the latter being a translation from the German. It can scarcely be doubted that a perfect external form is merely the outward expression of a healthy body, and that any deviation, beyond certain limits, from the perfection of external form, whether due to external or internal causes, is an indication of an injury to the individual which may eventually have maleficent effects upon the race. Therefore, these books will be valuable to the artist and physician, for Dr. Richer's volume is devoted to a study of the manner in which the subject should be approached, whilst Dr. Stratz deals more particularly with the female body, and with its modifications by disease and custom. Both authors are agreed that the Greeks, who had ample opportunities, in daily life, of studying the forms of healthy bodies, have, almost invariably, in their most ideal representations of the human form, been true to Nature as revealed by recent scientific observations, whilst some of the artists of the Renaissance and their followers have accepted forms modified by disease as ideal types, and have, therefore, failed to convey a true conception of the perfect beauty of the healthy human body. Both volumes enter on a justification of the study of the nude, but no such justification is needed, for, as Dr. Stratz says, clothing has nothing to do with morality; it is merely associated with conventions and fashions, and few will be found prepared to contradict Dr. Richer's statement that "the highest ideas of probity, devotion, right, and justice, have never been more expanded and put into practice than in the present day, in those modest spheres from which the majority of artists and scientists are recruited," and the study of the human form is almost limited to these two sections of the community. There can be no doubt that the knowledge scientists possess should be more widely distributed, for if parents could but realize that it is their duty to know what the proper proportion of the bodies of their children should be at various periods, and if they would properly utilize that knowledge, more cases of serious disease might be brought to the physician and surgeon, during the periods in which they are still amenable to treatment, and much trouble and sorrow would be avoided.

Though surface anatomy is more or less completely considered in all textbooks which deal with dissections, the third edition of Professor Windle's *Handbook*[10] will be as welcome as its predecessors, for in it all the main facts of surface anatomy and localization are summarized, and not only will the student of anatomy find it a useful adjunct to his manual of dissections, but the busy practitioner who wishes to recall to mind quickly the relation of the surface of the body to the parts beneath will also appreciate it as a useful and compact guide. No fault can be found with the greater part of the text, which, indeed, is most excellent, but here and there statements appear which many will agree might well be modified. Thus we think that many gynaecologists will differ from the opinion that, in nulliparae, the os uteri is circular and the hymen most commonly a crescentic fold, with the concavity directed forwards; that many surgeons must have noted that the outer border of the mammary gland does not always stop at the anterior boundary of the axilla, but frequently extends beyond it; and that not a few anatomists and physicians will be inclined to doubt the accuracy of the position assigned to the tricuspid orifice of the heart. It is expressly mentioned that the book is intended for junior students, and it is therefore somewhat surprising to find that the main statement regarding the fungiform and filiform papillae of the tongue is that a good idea of their distribution may be gained by looking at them in a patient who is suffering from scarlet fever. The statement is obviously correct, but it is unlikely, under the prevailing conditions of medical education, that the opportunity for such an observation will be presented to the junior student. The text is well printed on good paper, and the book is of a convenient size, but its utility would be greatly increased if the figures were improved and increased in number.

The object of Dr. Berry's work on *Regional Anatomy*[11] is obviously to place in the hands of the author's senior students a considerable part of the contents of a textbook, arranged in regions and without illustrations, blank pages being interleaved with the text, on which the student may if he chooses make his own illustrations, or on which he may copy the diagrams which his teacher has drawn upon the blackboard. It is not apparently designed for the use of the junior student, for although the text is arranged so that it may be read in association with the ordinary dissections, it contains no directions as to the methods by which the various structures are to be exposed; and as a textbook of regional anatomy it can only be of use to those who can obtain access to specimens and dissections, on account of the absence of illustrations. As a matter of fact it is an amplification of the plan, often adopted in Edinburgh, of giving to the student abstracts of the lectures and demonstrations which he attends; but in this instance the notes are more complete than usual; they are bound together into three volumes, and the student pays for them. As regards the volumes themselves, they are nicely bound and printed, their contents on the whole are well arranged, but, so far as they deal with muscular actions, they are incomplete, and as a result of the method adopted there is a considerable amount of repetition.

[8] *Manual of Bacteriology.* By Robert Muir, M.A., M.D., F.R.C.P.Edin., and James Ritchie, M.A., M.D., B.Sc. Third Edition. Edinburgh and London: Young J. Pentland. 1902. (Cr 8vo, pp. 548, 150 illustrations. 12s. 6d.)

[9] *Introduction à l'Etude de la Figure Humaine.* Par Dr. Paul Richer. Paris: Gaultier, Magnier et Cie. (Demy 8vo, pp. 190. Fr. 10). *La Beauté de la Femme.* Par Dr. C. H. Stratz. Traduit de l'Allemand par Robert Waltz. Paris: Gaultier, Magnier et Cie. (Demy 8vo, pp. 344, 178 illustrations. Fr. 20.)

[10] *A Handbook of Surface Anatomy and Landmarks.* By B. C. A. Windle, F.R.S., Sc.D., M.D. Third Edition. London: H. K. Lewis. 1902. (Cr. 8vo, pp. 141; figs. 16. 4s.)

[11] *Regional Anatomy.* By R. J. A. Berry, M.D., F.R.C.S.E. In three volumes. Edinburgh: W. Green and Sons. 1902. (Demy 8vo, pp. 680. 15s.)

PATHOLOGICAL ANATOMY.

PROFESSOR RIBBERT'S reputation for wide pathological experience and accuracy of observation is fully upheld in his new volume on special pathological anatomy.[12] The book deserves to rank amongst the standard works on the subject apart from its value as a textbook for students, for whose needs it is primarily designed. But it is for the latter purpose that the book is to be especially recommended, because there are very few pathologists who, though they may be equally well informed, possess in such a high degree as Professor Ribbert the natural gift of clear and incisive exposition. He has a special facility for laying the main stress on the main point, and his illustrations, which are for the most part drawn by himself from his own preparations, though they may occasionally be a little rough and are never overburdened with a multiplicity of detail, always carry instant conviction as being diagnostic. The present volume is concerned entirely with macroscopic anatomy; histological details are only referred to in so far as is necessary for explanatory purposes, with an occasional diagrammatic sketch. The subject matter is on the whole very good, but the treatment of renal tumours is not quite satisfactory. The main emphasis is laid on that type of tumour which arises from aberrant suprarenal tissue, and it is the only kind of solid renal tumour of which illustrations are given. But this class of growth though interesting is not particularly common; and, as was pointed out by Grawitz, who first described them, we must be very careful that we really have satisfactory proof of the suprarenal character of the tissue. Later writers, especially in German periodicals, have conspicuously and frequently neglected this wise precaution, the result being that many kidney tumours have been called suprarenal which are nothing of the kind. An undue exaggeration of the importance of this type in a student's textbook is likely to lead to repetitions of the same mistakes.

Professor ZIEGLER states in his introduction to the second volume of his handbook of pathological anatomy[13] that he has carefully revised each section, and a perusal has convinced us that the revision has been most thorough. The total number of pages has not been increased—a result arrived at by rewriting many of the chapters; a much more satisfactory manner of dealing with new information than simply adding it to the old. The earliest notable changes are in the chapters on the blood and the blood-forming organs. In the former the newer nomenclature of Ehrlich and Lazarus is introduced; we miss, however, any reference to cytolytic changes in general diseases and morbid conditions, the literature of which has been considerable during the last two years. The chapter on bone marrow is transferred from the section on bone diseases to that on the blood-forming organs, and is practically new; a noticeable omission is the subject of myelopathic albumosuria. The section on bones and joints is the best and the most complete in the book, both in text and illustrations; that on the diseases of the lungs is enlarged, to include new work on tuberculosis and the inflammatory affections. Considerable attention has recently been paid to the pathological anatomy of renal growths, and we find here the mixed tumours classed anew as teratomata, following the views of Birch-Hirschfeld and others; in the chapter on the bladder the researches of Stork on the epithelial changes associated with cystitis are incorporated. As in previous editions, after each subsection the literature of the subject is tabulated; these tables appear to require revision; recent additions to them seem to have been drawn from a somewhat narrow field. There are two outstanding features in this textbook—the excellence of the illustrations and the simplicity of the style. The additions to the illustrations are over sixty in number, and fully maintain the standard. We do not know of any medical textbook in the German language with a style more easily followed by an English reader: if textbooks in all languages were written on this pattern, the demand for a universal language would have diminished force.

[12] *Lehrbuch der speciellen Pathologie und der speciellen pathologischen Anatomie.* Von Dr. Hugo Ribbert. Leipzig: F. C. W. Vogel. 1902. (Demy 8vo, pp. 802; 474 illustrations. M. 18.)

[13] *Lehrbuch der allgemeinen und speciellen pathologischen Anatomie.* [Handbook of General and Special Pathological Anatomy.] Von Dr. Ernst Ziegler. Zweiter Band: Specielle pathologische Anatomie. Zehnte Auflage. Jena: Gustav Fischer. 1902. (Roy. 8vo, pp. 1,116, 723 illustrations. M. 16.)

SUCCESSFUL VACCINATION.—Dr. W. F. Sheard, Public Vaccinator for the Putney District, has been awarded for the ninth time the Government grant for successful vaccination.

NOTES ON BOOKS.

TRANSACTIONS.

THE *Transactions* of the Royal Academy of Medicine in Ireland, the twentieth volume of which for 1902 has been edited by Mr. JOHN B. STORY, M.B., F.R.C.S.,[14] contains the full records of papers, abstracts of many of which have already appeared from time to time in the BRITISH MEDICAL JOURNAL. There are in addition several well-executed full-page or half-page illustrations belonging to the different papers.

The eighth volume of the *Transactions* of the Dermatological Society of Great Britain and Ireland, edited by Mr. ARTHUR SHILLITOE and Dr. WILFRID WARDE,[15] except for a set discussion on lupus erythematosus and a presidential address by Dr. A. J. Harrison on the Accident of Disease Dermatologically Considered, is taken up with records of individual cases shown before the Society, with the remarks made on them by its members.

HOSPITAL REPORTS.

The thirty-eighth volume of *St. Bartholomew's Hospital Reports* for 1903, edited by Dr. NORMAN MOORE and Mr. D'ARCY POWER,[16] contains little of very special interest, except perhaps to those who are Bartholomew's men. The leading contribution is a staccato paper of two pages by Dr. Samuel Gee, whose love for aphorism and dogmatic statement receives somewhat conspicuous illustration in the first sentence of his Haematemesis due to Alcoholism. He begins: "Haematemesis most frequently occurs in young women, and is due to gastric ulcer: next most frequently in middle-aged men, and is due to drink." The former part of this compact dictum will probably need alteration in the light of recent investigation. The definite, not to say bald, statement that large chronic ulcers in middle-aged persons usually depend upon drink would probably please no one so much as the more intemperate of the teetotallers. In addition to two obituary notices and some records of individual cases, the volume contains papers on gastric and intestinal perforation, by Mr. D'Arcy Power; on the diagnostic value of melanuria, by Dr. A. E. Garrod; on the influence of hereditary syphilis on the nervous system, by Dr. J. G. Forbes; on the causation of the first sound of the heart, by Dr. O. Inchley; on purpura, by Dr. W. P. Herringham; on sudden death in infants with large thymus gland, by Dr. H. Thursfield; and on the reserve forces of the animal organism, by Dr. Harry Campbell. The volume includes the reports for 1901 of the medical and surgical registrars.

A new edition of the *Descriptive Catalogue* of specimens illustrating surgical pathology in the museum of University College, London, has followed the first edition after an interval of about eight years, and has been made necessary by the large number of specimens bearing on the subject that have been added to the museum. The first edition was prepared by the late Mr. Marcus Beck with the assistance of Mr. S. G. Shattock and Mr. C. Stonham. The present edition, which has been prepared by Mr. Raymond Johnson and Mr. T. W. P. Lawrence, is to appear in three parts, two of which have already been received. The first part is concerned with injuries and diseases of bones and joints; the second deals with injuries and diseases of the muscles and bursae, the circulatory and lymphatic systems, the nerves, the alimentary canal, the air passages and the thyroid gland. It is interesting to note that the specimens illustrating the morbid anatomy of bones and joints have had to be considerably rearranged, because since the first edition was published the tuberculous nature of the chronic inflammatory affections of these structures has been fully recognized.

[14] Dublin: Fannin and Co. 1902. (Demy 8vo, pp. 528.)
[15] London: H. K. Lewis. 1902. (Demy 8vo, pp. 84.)
[16] London: Smith, Elder, and Co. 1903. (Demy 8vo, pp. 500.)

PRESENTATION.—Dr. H. O. Procter was in October last, on the occasion of giving up practice in Ladysmith, presented by his old patients with an address and a handsome purse.

DR. RICHARD CHANDLER ALEXANDER PRIOR, an obituary notice of whom appeared in the BRITISH MEDICAL JOURNAL of January 31st, has left his collection of plants to Kew Gardens.

THE offices of the Yarrow Convalescent Home for Children have been removed to Terminus Chambers, 6, Holborn Viaduct, E.C.

REPORTS AND ANALYSES

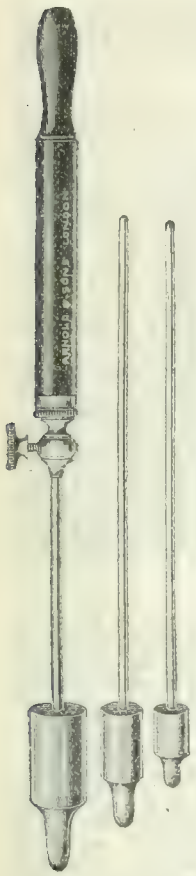
AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEDICAL AND SURGICAL APPLIANCES.

Pocket Reservoir Cautery.—Dr. J. F. Russell has devised a cautery to which the term "reservoir" is applied, because, on heating, its body acquires sufficient heat to feed its point for a considerable time. It can be heated in a gas jet or spirit lamp. It has been specially designed to destroy naevi where the use of acid would be undesirable. In using the cautery the rod is extended through its handle to the full length, the screw tightened, and the cautery made red hot; the screw is then loosened, the cautery dropped back through its handle to the desired length, and the screw re-tightened, when it is ready for use; afterwards it is dropped into water. It is made by Messrs. Arnold and Sons, West Smithfield, London.

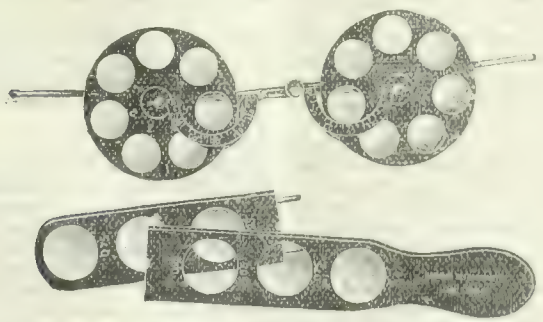


A Bottle for Eye-drops, etc.—Mr. William Lang, F.R.C.S., has devised the bottle shown in the illustration to hold oily solutions, ointments, or powders which are kept on the consulting room desk, to be applied to the eye with a glass rod. The cap, which acts as a stopper, prevents dust settling down on the neck of the bottle and contaminating the contents. The edge of the cap is so cut that it rests on three points when placed on a flat surface, and, therefore, cannot pick up much dust if it is set down. The bottle, which is useless for carrying about solutions or powders, can be cleaned easily, as it is large enough to admit a finger; its sides are straight, and the bottom is rounded. It can be had in various colours, for different solutions, from Mr. Martindale, of 10, New Cavendish Street, W.





A Portable Refractometer.—Mr. N. Bishop Harman, M.A., M.B.Cantab., F.R.C.S.Eng., writes: From a model of a refractometer which I showed recently before the Ophthalmological Society,[1] Messrs. Maw, Son and Sons have made a



standard pattern shown in the accompanying figure. The instrument was designed to save the time and labour expended in lens-changing during retinoscopy; but it will doubtless prove of value to surgeons in the country and abroad for subjective examinations when the larger test cases may be impracticable, for the whole face-piece, rule, and eight complementary lenses and stops packed in its case measures 9×3½×1¼ in. and weighs 11 oz.—a less bulk and weight than the common yellow-backed novel. To each outer extremity of the face piece of a skeleton trial-frame is affixed a pivot; upon each pivot there rotates a disc. The discs (3 in. in diameter) are perforated by seven holes (¾ in. in diameter); one is open, and six are glazed with lenses from 1 D. to 6 D., the disc of one side with + lenses, the other with − lenses. By rotating the discs the lenses come in succession before the eye-hole, and, since the instrument is reversible, either disc may be placed before the eye to be examined. If a higher sphere than 6 D. is desired, a 7 D., or if necessary 14 D., lens is placed in the cell hanging in front of the eye-hole, so that by rotating the disc as before from 1 D. to 20 D. are obtained. For fractions of a dioptre an independent flat rule, carrying six lenses + and − 0.25, 0.5, 0.75, with a space, is provided; this "fraction rule" is held vertically before the eye first at the central space, then raised or lowered as + or − fractions may be desired. The "cells" in front of the discs for the reception of additional lenses are held in such a manner that on reversing the instrument each cell automatically retains the pendant position, so is ready to receive lenses. They bear the usual degree markings. The frame is adjustable for binocular interpupillary distance from 2¼ in. to 2¾ in., by a sliding bar bridge and thumbscrew; for monocular use from 2 in. to 3 in. I.P.D. can be obtained, by simply displacing the bar bridge from right to left, or reversely, as needed. The lenses provide all values from 0 25 D. to 20 D., + and − spheres, for monocular purposes, and for binocular vision all values from 0.25 D. to 14 D., both + and − spheres. For the determination of astigmatism by retinoscopy the value of each meridian is determined by its spherical correction. In cases where subjective correction alone is sought, it is best estimated by the use of the stenopoeic slit, the method to which Donders in his classical work[2] accords premier position (retinoscopy was then unknown). I believe the arrangements of the instrument so far follow natural habit in procuring handiness of those lenses most commonly required—under 6 D.—that it will be useful to those frequently practising retinoscopy. Its value to surgeons away from their normal base, or in the services, will, I think, be unquestioned. It is neatly and strongly made, and there is nothing likely to get out of order.

[1] *Trans. Ophthal. Soc.*, vol. xxii, p. 272.

THE ASSILINI FORCEPS WITH A HINGED HANDLE.

Dr. James MacMunn (London, E C.) writes: Will you be good enough to allow me to say that the above device as applied to midwifery forceps is not new? I always regret trespassing on your space, but in fairness I beg to say I described such a device in the *Lancet* of May 29th, 1886, which was made for me by Messrs. Arnold. Readers of the notice will form their own ideas of respective merits.

THE EPIDEMIC OF SMALL-POX.

England.

Northumberland.

At Matfen, 3 more cases were reported on February 14th, making 9 in hospital.

Lancashire.

At Middleton an erroneous statement was made at the Town Council meeting that the town was free from small-pox. Another case had occurred the day before the meeting, but two councillors who knew of it kept silence, apparently to prevent public alarm. The case was removed in mistake to Oldham Workhouse, whence it was sent to the small-pox hospital.

At Blackburn a member of the Board of Guardians moved the deletion from the minutes of a previous resolution by the guardians to the effect that the Local Government Board should get powers for the compulsory vaccination of vagrants. The motion was defeated, so that the original resolution in favour of compulsory vaccination of vagrants remains in force.

At Oswaldtwistle a first case has been reported. In the Chorley district a fourth case has occurred at Wheelton. There has also been a case at Chorley Workhouse.

At Holywell the medical officer is to make a daily inspection of tramps in the casual ward. At the workhouse 126 inmates had accepted vaccination, and 28 had refused.

On February 10th 5 cases were reported in Manchester, 4 in Salford, and 2 in Preston. There were then nearly 20 patients in the hospital for Preston. On February 18th another case was notified at Salford, 1 at Irlam, and 2 at Manchester from Chorlton-on-Medlock. At Darwen 5 new

[2] The Anomalies of Accommodation and Refraction of the Eye, *Sydenham Society's Transactions*, p. 481

cases were reported, making 12 in hospital. There were also 4 suspected cases located at the isolation house. About 50 lodgers were "quarantined" at the model lodging-house, and claims for compensation were expected in consequence. They were released on February 19th. At Haslingden a second case came to light on February 17th—a well-known racing cyclist. At Liverpool on February 19th Dr. Hope reported that during the week ending February 14th there had been 54 cases reported, as against 45 in the previous week. The cases in hospital were now 314, and during the week there had been 6 deaths. At the weekly meeting of the Toxteth Guardians it was stated that small-pox had been reported from twenty streets. The manager of a working man's hotel has been fined 20s. and costs with respect to each of two cases of small-pox which he failed to notify. At Warrington a female tramp was knocked down by an electric car and taken to hospital, where she developed small-pox three days afterwards. A sixth death has occurred at Bury.

Cheshire.

At Dukinfield a second case has occurred and been sent to hospital.

At Arclid, Sandbach, the hospital has now two cases. Most of the inmates of the workhouse have accepted vaccination.

At Macclesfield a case was found in a prison cell, and other three prisoners are being kept under observation.

At Stockport a farm labourer has been fined £5 or a month's imprisonment for wilfully exposing himself while suffering from small-pox. He went to prison. He had already been in hospital seven weeks.

Staffordshire.

The *Northern Daily Telegraph* (February 14th) states that in consequence of the extraordinary spread of small-pox in North Staffordshire the patients are now sleeping two in a bed at the Bagnall Hospital, and that the number of cases in the Potteries has mounted to 80. A case was removed to hospital from Leek on February 13th.

At Burton-on-Trent a tramp from Leicester and Ashby was found ill with small-pox. A meeting of the North Staffordshire Joint Hospital Board was held on February 16th. Dr. Phillips stated that 35 small-pox patients were sleeping in 27 beds in a ward which should hold only 15, and that there were only 2 beds for 3 nurses. Up to January 23rd 52 cases had been admitted, and since then 29 cases in 24 days, namely, from Hanley 12, Uttoxeter 1, Stoke 2, Burslem 4, Wolstanton 4, Cheadle 3, Fenton 1, Leek 1, and Longton 1. The disease had now spread into 9 districts. Arrangements were discussed both for temporary and permanent accommodation.

Difficulty had arisen owing to the Bagnall authorities absolutely refusing to allow interment of persons dead from small-pox in their cemetery unless cased in lead coffins, which cost £16 each, besides the outer coffin; and a letter was read from the Bagnall Parish Council protesting against any small-pox burials in their churchyard. Another case has occurred at Smethwick, and another at Dividy Lane near Longton, in the Cheadle Union.

Yorkshire.

At Pontefract a second case was reported on February 14th.

At York 2 cases were found on February 6th in a common lodging-house, in which there were 30 other inmates. The two had been in various public-houses in the city, performing as travelling musicians. It was decided by the City Council to erect a temporary wooden hospital at an estimated cost of about £300.

At Leeds there were 2 more cases on February 16th, at Bradford 1 and at Wombwell 1.

At Halifax the inmates of Flanagan's lodging-house are being kept under observation, owing to a case of small-pox having occurred there.

At Sheffield on February 16th a case was found in a common lodging-house.

At Bradford there were 2 more cases on February 18th and 1 on February 19th. A female prisoner charged with felony was found to have small-pox and was taken to hospital, her trial being deferred.

The Keighley guardians, by 10 votes to 8, have declined to give effect to the Local Government Board's circular regarding the vaccination of tramps, on the ground that it would be an infringement of the liberty of the subject.

At Retford a man from Manchester, who is recovering from a mild attack, is confined to his lodgings in Grove Street, there being no small-pox hospital available.

There are 2 cases in the Penistone district. In Doncaster and the neighbourhood on February 19th there were 9 cases. Addingham had its first case on February 19th.

The Guiseley District Council is much dissatisfied with the site selected for a hospital by the Wharfedale Union, and is complaining to the County Council and the Local Government Board.

At Scarborough all vagrants are to have the offer of vaccination.

At a meeting of the Barnsley guardians on February 17th it was reported that 3 inmates of the workhouse had been removed to hospital with small-pox since the previous meeting.

Derbyshire.

At Ashborne the Local Government Board's circular regarding the vaccination and supervision of tramps has been approved of. Another small-pox case has been admitted to the hospital at Bradley Wood from Waterhouses. The patient was the daughter of a navvies' hutkeeper. The other small-pox cases in this hospital had been removed from the Mayfield district.

At Clowne a case occurred in a lodging-house, and 9 other inmates consented to remain under observation at a salary of 10s. per week each, which had been paid in kind.

A case has occurred at Alfreton and been removed to Belper Hospital, where there are now 3 cases.

At Ilkeston a tramp from Derby was discovered ill with small-pox on February 13th in a lodging-house. He was removed to the sanatorium, where he died on February 15th.

At Glossop one nurse in the hospital seems to have been an antivaccinationist, and she refused the protection which the others accepted. Like 5 of the 6 Leicester nurses who made the same experiment some years ago, she is now nursed instead of nursing, having developed small-pox in due course.

A Nottingham newspaper reports on February 20th that 4 cases had been reported in Derby within the previous few days.

Leicestershire.

In Leicester there have been 9 fresh cases, one on February 18th, two on February 19th, one on February 20th, one on February 21st, and four on February 23rd. Dr. Emms is reported as having jocularly stated that vaccinationists and antivaccinationists are tumbling over each other in their anxiety to get vaccinated.

Warwickshire.

At Birmingham a case was removed to hospital on February 13th and 2 on February 14th, making 36. Including the Aston cases there were over 50 under treatment. Two cases were admitted to hospital on February 19th. At Bridgnorth the guardians have instructed the medical officer to examine all tramps before leaving the workhouse. In the fortnight ending February 14th, 224 tramps had been in the workhouse and many of them had been vaccinated.

At Atherstone Workhouse a case was discovered on February 14th. He had been in a common lodging-house in Birmingham and then in Meriden Workhouse. A tramp with the disease, from Evesham, has been admitted into the Alcester Workhouse, where tramps are now to be medically examined every day.

At Coventry there were 5 cases in hospital on February 16th. At two private houses connected with cases the offer of vaccination met with considerable success, but at two lodging-houses it was refused, though 1s. was offered to each lodger to consent.

Nottinghamshire.

At Nottingham 3 more cases were notified on February 14th or 15th. Two of them were the children of a "conscientious objector," the father having refused to permit their vaccination even after exposure to infection, though repeatedly warned of the risk of neglect. The third case was a tramp.

At Worksop on February 14th a case was found, being the seventh within ten days. The hospital can accommodate 10 cases, but on February 19th the cases had mounted to 11.

A small-pox hospital of wood and iron, for 17 beds, was completed at Hucknall on February 17th, when 5 patients were waiting for admission, 3 from Carlton and 2 from Stapleford. The hospital is 500 yards from the nearest house. A tramp from Nuneaton was found ill at Hucknall on February 18th and was taken to hospital.

Worcestershire.

Kidderminster wants to know where its small-pox is coming

from, and why other local authorities are not attending to their duty. The Stourbridge guardians, in reply to an inquiry by Kidderminster, have stated that no tramp of a given name had been known of at Stourbridge; and the Wolverhampton guardians, in reply to a similar inquiry regarding the same tramp, averred that it was practically impossible for the disease to have been detected while the man was with them. At Kidderminster, however, the opinion seems to be that the eruption must have been visible when the man was in Wolverhampton. A motion was carried in favour of special legislation regarding tramps. Meantime, it was decided that all be medically inspected before leaving Kidderminster workhouse.

Herefordshire.

At Leint Wardine there has been a case in a lodging-house. On February 12th a labourer was admitted with the disease to the isolation hospital of the Hereford workhouse. He had been sleeping in a lodging-house at Presteigne, and in a barn on the road.

Gloucestershire.

At Bristol two cases resulted from the introduction of small-pox into Redcliffe, one through neglect of infantile vaccination, the other through refusal of revaccination. A case from Horfield prison had not spread the disease.

Shropshire.

In Shrewsbury a man who had been sleeping in a lodging-house went on to Atcham Workhouse, where he was found to be suffering from small-pox. He had come to Shrewsbury from the Elan Valley waterworks. Intimation of the case was sent to Shrewsbury, and 26 of 30 occupants of the lodging-house were immediately vaccinated.

At Oswestry the two patients in the workhouse isolation ward at Morda are convalescent.

A case has occurred at Cleobury Mortimer, and has been taken to the joint hospital.

At Ellesmere a nurse has refused the request of the guardians that she should be vaccinated

Wales.

There has been no further outbreak at Newtown. At Dolgelly in Merionethshire a tramp was recently found with the disease, and the medical officer, Dr. Hugh Jones, has urged the necessity of concerted action for hospital accomodation.

At Festiniog the medical officer has been authorized by the guardians to revaccinate vagrants. At Pwllheli a tramp with small-pox has been removed to Gwyrfai Hospital and the guardians by a majority of one have agreed to offer revaccination to future tramps. The Prestatyn Council has petitioned the Flint County Council to provide a small-pox hospital.

THE CRUSADE AGAINST TYPHOID FEVER.

The following is a summary of the address on the means of suppressing typhoid fever,[1] delivered by Professor Koch at the Kaiser Wilhelms Academy on November 28th, 1902.

The Incidence of Typhoid.

The ravages of typhoid fever in time of war are well known. During the Franco-German war the disease was responsible for 73,000 cases of illness in the German army and 9,000 deaths. In the recent Boer war, too, the death roll from typhoid was very heavy. In peace, also, the mortality returns of the German army show that, with the exceptions of tuberculosis and pneumonia, typhoid is responsible for more deaths than any other cause. During the last ten years, fortunately, the number of cases has fallen considerably, thanks to the improvements in the water supply and drainage systems of German towns. In the country, however, the difficulties in the way of sanitary reform are greater; the water supplies are frequently unsatisfactory and the practice of using human excreta as manure for the soil is a constant danger; hence, typhoid is still endemic in many places and it is a notable fact that after the period of military manœuvres is over the troops, on returning to garrison, usually bring back typhoid with them.

Preventive Measures.

How is this danger to be eliminated? The doctrines of cleanliness, pure water, and good sanitation are excellent to preach, but in dealing with country districts it is not always possible, under present circumstances, to put them into practice. We must therefore avail ourselves of more readily feasible methods, and here past experience of cholera will guide us, for in cholera as in typhoid it is the faecal matter which is responsible for the spread of the disease. In combating the former malady we were content until recently to rely upon merely defensive methods; we did what we could to ensure cleanliness and a good water supply, hoped for the best, and prepared our minds for the worst. Now we adopt offensive measures as well. Whenever a case of cholera arises bacteriology has given us the means of establishing the diagnosis of it with certainty; thereupon we isolate the case, disinfect the excreta, and so, with the destruction of the infective organisms, the spread of the disease is rendered impossible. A similar instance is afforded by our treatment of malaria. Having established our diagnosis from the examination of a blood film, we administer quinine as a "blood disinfectant," and, thereby destroying the infective parasite, eliminate the possible source of future contagion. Attacking typhoid on lines similar to those employed for dealing with cholera and malaria, we must seek to fulfil two conditions: First, we must be in a position to discover the infective material easily and with certainty; and, secondly, we must be able to destroy it.

An Obligatory Parasite for Man.

But, it may be asked, does the analogy really hold for typhoid? The organisms of cholera and malaria, we have good reason to believe, cannot continue their existence for long outside a human host; but the typhoid bacillus, many people think—and Professor Koch admits that he was formerly of this opinion himself—is capable of a saprophytic life as well, retaining its vitality for a long time in water, and, when it reaches the soil, lodging and multiplying there for years while retaining the power, if disturbed, of starting afresh a parasitic career in human hosts. As his experience of the etiology of typhoid increases, Professor Koch finds himself compelled to abandon this view. It is true that outbreaks of typhoid are often caused by infected water; but the period of vitality of the organisms in this medium is very limited; cultures of a contagion-bearing stream made when the mischief has already been done rarely yield the typhoid organism, and when they do the reason probably is that fresh infective material is still finding its way into the stream. So, too, with soil. Under the favouring conditions of a moist soil and a free admixture of excremental matter, typhoid bacilli may retain their vitality for a week or two, a month, or even a whole winter, but not for much longer periods. When small epidemics attributable to this source of infection arise in the country, the later cases have derived their infection from the earlier ones and not from the primary focus. For these reasons the typhoid bacillus, although retaining its vitality outside the body somewhat longer than the cholera vibrio, particularly in soil, must be regarded like the latter as an obligatory parasite, and dealt with accordingly.

Early Diagnosis.

The first problem therefore is, in order to secure efficient prophylaxis, to devise the readiest method for detecting the bacilli in infected persons. For this purpose Professor Koch holds the much employed Widal reaction to be inadequate, since it makes its appearance too late, a positive result not generally being obtained before the second week; and, moreover, the Widal reaction often fails in mild cases. Nor does he approve of those methods of diagnosis by bacteriological culture which follow the principle of using a medium which delays the growth of the typhoid organisms until after the colonies of bacillus coli communis, which it is most important to separate, have attained a vigorous growth. In order to establish a distinction on this principle some days must elapse, and this delay is a serious obstacle to the taking of prompt prophylactic measures. He has therefore instituted further research on the subject, and finds the method recently elaborated by Drigalski and Conradi the best. Instead of retarding the development of typhoid colonies, these bacteriologists have made it their object to accelerate their growth, and have devised a culture medium which has a restraining effect upon the larger number of intestinal bacteria other than those belonging to the coli group. Cocci and various other organisms which may have succeeded in growing can be readily excluded by obvious differences in the appearance of their colonies, and it then remains to distinguish between the typhoid and coli organisms. For this purpose the nutrient medium is tinged

[1] *Die Bekämpfung des Typhus.* Von Professor Dr. Robert Koch. Berlin: August Hirschwald. 1903. (Demy 8vo, pp. 22. M. 0 50.)

with litmus solution which gives a ready colour distinction between the strongly acid-forming colonies of coli and those of bacillus typhosus, which retain an alkaline reaction in this culture medium. Finally, the presence of typhoid colonies is confirmed, and their possible confusion with other intestinal bacilli excluded, by the serum agglutination test. In this way Professor Koch finds that he can within twenty to twenty-four hours give an absolutely reliable diagnosis, and thus has been able to recognize the presence of typhoid organisms in patients as early as the second day of the disease.

INFECTION FROM CASES NOT CLINICALLY RECOGNIZABLE.

The practical value of this method of rapid diagnosis is that it enables a decision to be made, whilst the clinical symptoms are still obscure, as to whether sanitary precautions and disinfection of the excreta ought to be carried out. The test has been utilized in Berlin for suspected as well as for manifest cases of the disease, and has also been applied, on the analogy of cholera, to persons apparently in good health who have been in contact with the disease. The result has been that typhoid bacilli have been discovered in the evacuations of many persons whose symptoms were quite trivial, and even where no clinical symptoms were observable at all. As these are the persons who are most liable to spread the infection, unless the necessity for placing them under supervision is discovered, the possibility of establishing a prompt bacteriological diagnosis ought to be of great service in the cause of hygiene.

THE SUPPRESSION OF AN EPIDEMIC.

Professor Koch has tested the applicability of this method for dealing with an actual epidemic. Having obtained the necessary assistants, and fitted up a laboratory at Trier, a locality where typhoid had got a firm hold, he commenced work by investigating the cases notified as typhoid by the local doctors. Following up the clue which these cases afforded, he soon began to realize that the disease prevailed to a much greater extent than the notifications indicated. First the cases with clinically obvious symptoms were investigated and then followed an examination of the various members of families who had come into contact with these cases, the services of the village authorities being enlisted to facilitate the discovery of suspected cases. The result was that, whereas only 8 cases had been notified, 72 were proved to be actually suffering from typhoid infection. These figures indicated a serious and very significant discrepancy, for which, however, the local doctors were not held to be responsible. It is believed that they faithfully notified every case which actually came into their hands. The conclusion to be drawn is that the lists of certified cases give a very inadequate notion of the true extent of the disease and do little to facilitate any serious efforts towards stamping it out. An interesting point brought to light was the large proportion of children affected, namely, 52 out of the total 72: 3 only had been notified. The explanation suggested is that in the neighbourhood of Trier typhoid had been endemic for many years and that, many of the older generation having recovered from an attack and become immunized, the incidence was proportionately greater on the young.

All the cases were traceable to direct infection from person to person, and, although each cottage was in close proximity to some brook, and infection by this source was theoretically possible, no indication of a relationship of water to the spread of the disease could be demonstrated. When several cases occurred in one house the rule was first for one person to fall ill, two or three weeks later a second, a few weeks later a third, and so on. Children—especially school children who came a good deal into contact with one another—were largely instrumental in the spread of the disease. The careless disposal of contaminated excreta in exposed places, where they were liable to be trodden under foot, and so carried into the houses, was also responsible for many cases.

The method of diagnosis above described was found to be eminently successful. As soon as the nature of a case was established, isolation and rigorous disinfection were practised, with little resistance on the part of the villagers as soon as they discovered that it did not involve them in any pecuniary loss; the result was that in three months no more typhoid bacilli were discoverable, the patients were cured, no fresh cases arose, and, so far as that group of villages was concerned, typhoid was exterminated. Since in other groups of villages, situated under strictly comparable conditions, but where these methods of dealing with the disease were not practised, typhoid continued to be prevalent, it may reasonably be inferred that its disappearance at Trier was not spontaneous, but due to the methods of identification and disinfection which were carried out.

THE EXTENSION OF THESE METHODS.

But though they have proved successful in a particular epidemic of small dimensions, are these preventive measures capable of application on a large scale? There are obvious difficulties in the way, and the stamping out of typhoid over a large area of country is an ideal which is not likely to be achieved for many years to come. We must be content to commence our reforms on a small scale and carry them gradually forwards. Work of this kind needs special laboratories, and special assistants skilled in the finer details of bacteriological research. The organization of such institutions must necessarily be a very gradual process, and attention must first be directed to those epidemics which constitute the most serious menace to the public safety.

In conclusion, Professor Koch points out that the principles he advocates are applicable not only to cholera, malaria, and typhoid, but to all other infectious diseases in which an early diagnosis can be made with certainty, and where it is in our power to destroy the germs of infection. In the war against diphtheria and consumption in particular, he holds, we shall find in an observance of these guiding principles our best prospects of achieving any substantial success.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—The annual dinner of this Society was held at the Trocadero Restaurant, W., on February 19th. The President, Mr. R. W. Lloyd, was in the chair. The usual loyal toasts having been duly honoured, Mr. T. R. Atkinson proposed "The Imperial Forces" which was acknowledged by Sir William Taylor, K.C.B., who said that his department was deeply indebted to the civil members of the medical profession for their great help in the time of trouble. He particularly wished to emphasize the fact that those members of the medical department of the army who had spent many years abroad appreciated very fully the privilege of enjoying the good fellowship and esteem of their civil brethren, which they prized greatly. It was unfortunate that members of the medical profession who had served in the army had been dissociated to a certain extent from the general profession, but he could assure them that since he had come home he had received nothing but kindness and the best of good advice concerning the most satisfactory way of carrying out the great object they all had at heart, namely, good provision for the care and comfort of the sick and wounded in war. The toast of "The West London Medico-Chirurgical Society" was given by Mr. Swinford Edwards, who related how the Society was founded by Mr. Keetley in 1882, and now had over 600 members. Its success, he thought, was due to its connexion with the West London Hospital, for the meetings were held within its walls, so that there was always plenty of matter to bring before the members for discussion. The success of the Society was also due to the principle of decentralization. He thought it would very promptly cease to exist if it had its meeting place in the neighbourhood of the old Societies. The President, in responding for the Society, sketched its history, and said that that was the anniversary dinner of the twenty-first year of the Society. Mr. C. B. Keetley, in a humorous speech, proposed the toast of "The Kindred Societies," which was acknowledged by Mr. Howard Marsh, President of the Clinical Society. Dr. Seymour Taylor then proposed the toast of "The Guests," which was acknowledged by Dr. Silk. The toast of "The President" having been proposed by Dr. Schacht and duly replied to, Mr. Alban Doran submitted the toast of "The Officers of the Society," which was acknowledged by Mr. T. G. Alderton, Treasurer; by Dr. E. A. Saunders, Senior Secretary; by Mr. H. P. Dunn, Editor of the *Journal* of the Society; and by Mr. W. McAdam Eccles, the Editorial Secretary of the *Journal*.

DISTRIBUTION OF HOSPITALS IN LONDON.—At a meeting of the Hospitals Association, to be held at the Caxton Hall, Westminster, on Tuesday next, Sir Henry Burdett, K.C.B., will open a discussion on "hospital sites and population in London; ought any, and if so which, of the large hospitals to be moved from their present sites to new ones situate in (*a*) more congested districts, or (*b*) the country?" The chair will be taken by Sir Trevor Lawrence, Bart., Treasurer of St. Bartholomew's Hospital, at 5 p.m. Tickets can be obtained on application to Mr. Sydney Phillips, St Thomas's Hospital.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1903.

Members of the British Medical Association are reminded that commencing with January 1st, 1903, the annual subscription is a uniform one of 25s., inclusive of the Branch, and that all subscriptions should be paid direct to the General Secretary, 429, Strand, London, W.C., and not to a Branch Secretary.

British Medical Journal.

SATURDAY, FEBRUARY 28th, 1903.

SOME HOSPITAL QUESTIONS IN LONDON.

The two articles published elsewhere in this issue on hospital questions now pressing for solution in the metropolis will, we believe, be read with interest by all those who have received their medical education in London, and especially by those who were students at St. Bartholomew's or King's College Hospitals.

A glance at a map of modern London on which the position of the chief general hospitals is marked will show that they are distributed with regard rather to what London was a century ago, than to the gigantic province of houses into which it has grown. The condition of affairs thus brought about has long engaged the attention of those who take a lively interest in the effective and economical administration of medical charities, and we are glad to see that the matter is receiving serious consideration at the hands of the Council of King Edward's Hospital Fund for London.

The fact that the question of hospital redistribution in London has been in the air has to some extent confused the issue with regard to the reconstruction of St. Bartholomew's Hospital. The two matters, we venture to think, have little or no connexion. St. Bartholomew's Hospital has claims on the gratitude of the City, founded on a beneficent career of some eight centuries, which fully entitle it to remain within the City confines, and on its present site, unless it can be proved that its usefulness in the future must be diminished if it be not removed. No proof has been advanced that the hospital ought to be moved owing to the change which has taken place in the population of the surrounding districts. Although the City is partly depopulated by night, its streets, offices, warehouses, and markets are swarming by day; there is a large and closely aggregated poor population within a mile of West Smithfield; and the position is central with reference to railways and omnibus routes. The considerations which are leading many persons who have studied the question to the opinion that the wisest course for St. Bartholomew's to adopt at the present moment may be to remove to another site are of a different order. It has long been recognized that extensive alterations and reconstruction are urgently needed to place the hospital in a position to fulfil modern ideas of what a great general hospital ought to be. The opinion of the medical staff on the defective nature of many of the existing buildings has been freely expressed to the Governors at various times for many years past, and when the Governors of Christ's Hospital resolved to remove the Bluecoat School into the country, the medical staff urged that the whole site should be purchased and added to the site now occupied by St. Bartholomew's Hospital. This advice was not accepted, owing, as was understood, to the immense price which would have had to be paid, and the Governors contented themselves with obtaining powers to purchase rather less than an acre and a half at a total cost of a quarter of a million. When the site, with this addition, came to be considered as a whole, the wisdom of the recommendation made by the medical staff became apparent. The assumption upon which the Treasurer and Governors acted appears to have been that the addition of an acre and a-half would render it possible to carry out all the necessary improvements and extensions. This has now been very seriously called in question, and as any one who will read the list of requirements given at page 513 and will study the sketch plan in the British Medical Journal of January 17th may see, not without good reason.

On the whole, it appears that unless the present site can be enlarged by a further purchase of land from Christ's Hospital, the alternatives are a reduction in the hospital or its removal to another site. On the financial question involved in the proposal to buy more land from Christ's Hospital we are not in a position to speak with any authority, but it would be a very large undertaking, and grave doubts may well be felt as to whether it would be at all prudent for the hospital authorities to contemplate it. The Lord Mayor's Committee which is now sitting will not be justified in recommending this course unless at the same time it is in a position to give some guarantee that the funds can be found without hopelessly crippling St. Bartholomew's, a hospital which by prudent management has hitherto enjoyed the proud position of being the only one in London not dependent on the annual charity of the public. To add to the existing calls on that charity the annual sum required for the maintenance of St. Bartholomew's Hospital is a very serious proposition, and ought not to be made until every other solution of the existing difficulties has been shown to be impossible.

As a medical journal we are only interested in seeking to ensure that St. Bartholomew's Hospital shall not fall behind its past record. That it will inevitably do so, if the result of the present controversy should be the adoption of an inadequate scheme to meet the minimum requirements of to-day without regard to the future can hardly be doubted. A duty and responsibility rests upon the medical staff at the present time to take care that the medical and surgical considerations, by which the decision should finally be governed, are clearly stated for the information of the Lord Mayor's Committee, and eventually of the public. We have no doubt that such representations will be or have been made, and we have reason to believe that the medical staff are unanimous, although there may be individual differences in the depth of conviction with which the necessity for the immediate rebuilding the ward blocks is held. Upon the essential point that the ward blocks must be rebuilt, if not at once, at least before many years are passed, the medical staff are, we believe, completely unanimous. If they unite in representing to the Lord Mayor's Committee that, should it be impossible to increase the area of the present site beyond six and a half acres, they are of opinion that it will not be justifiable to carry out the plans now before the Governors, the Committee will be compelled to face the facts and take steps to find a practical remedy. If the present opportunity be allowed to slip it is safe to predict that St. Bartholomew's Hospital

will gradually cease to occupy the eminent position which it now holds among the hospitals and teaching institutions of London. Should this happen the medical staff must share the responsibility and censure unless they make it clear that the Governors in failing to maintain the efficiency of the hospital have acted in opposition to the advice of the medical staff. We are confident, however, that if they make this clear at the present moment the evils feared will be averted.

The proposed removal of King's College Hospital from its present site behind the Royal College of Surgeons of England to some site to be acquired in London south of the Thames is a suggestion upon which the authorities of the hospital are to be congratulated. Owing to the great changes which have taken place during the last twenty or thirty years in that neighbourhood, and to the demolitions for the new Kingsway from the Strand to Holborn, the poor population requiring the assistance of medical charity has greatly diminished, and as Charing Cross Hospital is only about half a mile away, those who may remain are not likely to suffer. The Lords Committee on Metropolitan Hospitals, which reported in 1892, pointed to "the densely-populated district of Camberwell as a place where further accommodation for the sick in London might properly be made," and it is understood that it is to this district that the authorities of King's College have turned their eyes. The Lords Committee condemned the suggestion that a hospital should be moved on the ground that it was not practical. It is therefore the more satisfactory to find that the authorities of an important hospital are prepared to prove that such a reform is practicable.

THE SUPPRESSION OF TYPHOID FEVER.

We publish elsewhere (p. 503) a summary of Professor Koch's recent inquiries into the applicability of bacteriological methods and principles to the suppression of typhoid fever. The main lesson which he desires to inculcate is that we should attack the cause of the disease, as far as possible, at headquarters. The headquarters of the typhoid organism are neither in water nor in infected soil, but in the human subject; the bacillus must, in bacteriological language, be regarded as an obligatory parasite for man. Our primary object should therefore be to disinfect the excreta of every person, whether recognized clinically as suffering from typhoid fever or not, whose stools are proved bacteriologically to contain typhoid bacilli. Once this object is attained, we render it impossible for the specific germs to find their way into intermediate channels of infection, and may rest assured that any typhoid bacilli which have previously found access to water or soil cannot in those media retain or propagate their power for mischief for an indefinite period, but must, within a relatively short space of time, die. If we are to destroy the bacillus immediately it leaves its human host it is essential that we should secure an early diagnosis. We must not lose valuable time in waiting until the clinical symptoms become definite, or the Widal reaction gives a positive result, because it is precisely in the preliminary stage and in the latent forms of the disease that the danger is greatest of the necessity for disinfection being overlooked and the infection spread in consequence.

Professor Koch and his assistants have therefore been engaged upon an extensive research into the best bacteriological methods available for securing prompt diagnosis. They have adopted the method elaborated by Drigalski and Conradi, the employment of which has proved successful in demonstrating the presence of typhoid infection as early as the second day of the disease. Apart from laboratory experiments, the utility of this method has been demonstrated by its successful employment in the suppression of a troublesome epidemic, the details of which form an interesting and very instructive portion of Professor Koch's treatise.

It cannot be doubted that failure to disinfect excreta containing the typhoid organism is a most important cause of the spread of typhoid fever; negligence of this kind is an especially fertile source of danger in country places where there is no proper sanitary provision against contamination arising from the diposal of faecal matter in exposed places. The unsuspected or "ambulatory" cases, as both Professor Koch and many other authorities on hygiene have pointed out, do the most mischief. Professor Gaertner has laid stress upon this point in his recent monograph on the subject, and many officers of Indian experience have expressed a similar view. There is, again, the danger, which has also been recognized by the Indian Medical Service, that the urine of convalescents from typhoid may contain the bacilli for a long time, and, if the need for disinfection be overlooked, prove a source of further infection. It must, therefore, be recognized that the more we can enlist the services of bacteriology in aiding us to detect these dangers, the greater will be our success in stamping out the disease. If the method advocated by Professor Koch can be utilized on a larger scale for practical purposes, it will be a valuable acquisition to sanitary methods.

But in enforcing the distinction between the offensive and the older defensive method of dealing with infectious disease, Professor Koch appears to us to push his antithesis a little too far. It is admittedly an error in etiology to regard typhoid as a disease primarily due either to water or to soil. But though the organisms may not live for very long in water, there is plenty of evidence to prove that virulent bacilli can be carried a very considerable distance in that medium, and often by very circuitous routes. Although much research has been made recently to show that under ordinary circumstances typhoid bacilli do not continue their existence in soil for an indefinite period, the mere fact—admitted by Professor Koch—that they may persist in manure throughout the winter is enough to show that soil contamination is a danger. Whilst undoubtedly aware of these dangers, Professor Koch seems to overshadow their importance by his reiterated assertions that typhoid is a disease essentially carried from person to person, that the bacillus is very rarely discoverable in water, and that in epidemics it travels in a chain from case to case rather than radiates from a primary focus. It would be unfortunate if these observations of his were misconstrued into an encouragement of the dangerous view that water and other intermediate channels of infection might, in country places such as he describes, be treated as negligible, or at least relatively unimportant factors in the spread of the disease.

Nor is it altogether easy to understand his argument from the analogy of cholera. Of course if all the excreta of every person infected with cholera were promptly disinfected the infection would not be disseminated by water supplies; but since we cannot in every outbreak satisfy ourselves that this complete disinfection of every case has

been attained, the question of efficient filtration of water from every source which may possibly have been contaminated is extremely important, as experience has proved. The comparison of typhoid with malaria seems still less apposite if it is intended as a reason for devoting our energies mainly if not exclusively to attacking the infective organisms at headquarters. In a malarious district it is rarely possible to secure, as Professor Koch recommends, that in every infected inhabitant we shall diagnose the presence of the parasites by means of a blood-film, and then kill them all *in situ* by the disinfectant action of quinine. It has been found very useful, in the suppression of malaria, to attack the intermediate host as well, the mosquito, and therefore our experience with this disease can hardly be regarded as proving a general theory that it is more important to attack the primary sources of infection by an obligatory human parasite than the intermediate ones.

To pass from theoretical to practical considerations, the utility of bacteriological diagnosis is excellently illustrated by the epidemic at Trier. But it is not the whole of the matter. When a case was diagnosed it was isolated and the infected premises were thoroughly disinfected—a procedure which, judging from the apparently filthy condition of the locality and constant liability to contamination from excreta, was obviously called for. It seems, therefore, reasonable to suggest that efficient sanitary measures, on ordinary common-sense principles, would, alone, have contributed very considerably towards the suppression of this particular outbreak, although, no doubt, the promptness of the success attained was partly due to the bacteriological detection of obscure cases. It will be found, we imagine, that what Professor Koch describes as the new method of combating disease on offensive principles is, in so far as it can be carried into practice, not so much a departure from as an improvement upon older methods. We can never afford to neglect intermediate channels of infection, but in our efforts to exclude them we must not rest content until, tracing them back step by step, we have arrived at the primary source from which the contamination arose.

FREE TRADE IN POISONS.

An abstract of the report just issued by the Departmental Committee appointed by the Lord President of the Privy Council to consider Schedule A of the Pharmacy Act was printed in the British Medical Journal of February 21st (p. 459), but as the report is important, we were about to say valuable, it may be well to recall attention to its origin and purpose. A few farmers, tired of girding at the weather, have discovered that the fall in agricultural prices is to some extent due to the restrictions placed, for the protection of the general public, by the Legislature on the free sale of arsenic and other poisonous substances. Corydon has also confided to his Phyllis that next to her love he most desires the reduction in the price of sheep-dip which would inevitably follow the removal of liquid carbolic acid from the Schedule to the Pharmacy Act, to which the united efforts of the coroners and the medical profession have so recently consigned it. Not dimly outlined in the background is the enterprising manufacturer and novelty-monger who foresees a little profit could he but deal directly with Agrestis and Meliboeus without the intervention of the dreadful middleman and the formalities of keeping a register of small quantities of dangerous drugs sold across the counter.

Only two witnesses, says Mr. Walter Hills, who took the place on the Committee rendered vacant by the death of Mr. Martindale—only two witnesses who may properly be described as users of poisonous compounds—furnished evidence, but neither of them stated that he had any practical difficulty in procuring what was necessary for his own requirements, though one of them desired to have the liberty of selling poisonous compounds without formality of any kind. A witness stated as a reason for objecting to the Pharmacy Act that he could not readily introduce poisonous novelties through chemists and druggists. Mr. Hills naturally does not see the difficulties quite in the same light as the commercial gentleman. The concern of the medical profession is naturally for the protection of the public. The present system, uncertain as it is, does, in many places where the Act has not been allowed to become a dead letter, afford a slight amount of protection to the public.

There are still some drugs which it would have been wise on the part of the Pharmaceutical Society to have moved the Privy Council to include in Schedule A, but on the whole the restrictions have benefited the community. The introduction of a third part to Schedule A, including, as the Committee proposes in its Majority Report, preparations containing arsenic, tobacco, and carbolic acid securely packed and labelled with the name and address of the seller—marked distinctly "poison," and distinguished, in all three cases, as for horticultural or agricultural, and in the last case alternatively for sanitary purposes, is perhaps not very objectionable. The Committee also suggest, even for these novelties that they should be sold only by licensed persons. We wish it had added, "and under restrictions as to registration of sale similar to those of the existing Act." Such restrictions, so far relaxed as to certain articles, might be still made probably sufficiently stringent to minimize, though we fear they would not altogether prevent, poisoning by misadventure. What we are less sure of is whether the ease with which under these proposals deadly substances could be procured might not lead to their use for criminal purposes. Poisonous weed killers, left about in the plant shed, might readily enough find their way into the porridge pan. We have only too much experience already of how the free distribution of carbolic acid as a disinfectant has been abused. Many sanitary authorities now decline to distribute it to householders at all. Arsenic is certainly not less dangerous unless some of the old restrictions be revived and enforced. The matter requires much mature consideration.

In his supplementary report Mr. Alexander Cross makes a suggestion so extraordinary that it may be doubted whether it need be taken seriously. He starts with the proposition that "in many districts a doctor's surgery" is the only place where drugs can be obtained, that the doctor cannot afford to keep a fully-qualified assistant always on his premises, that occasions frequently arise in which the assistant is compelled during the doctor's absence to dispense prescriptions containing articles which are called poisons, and finally that this practice is general, unavoidable, and for the public convenience. We do not think that the custom is general or that there are many districts in which it exists. It is not the custom of medical practitioners to dispense prescriptions other than their own, and we believe that the public convenience is met by the provisions of the existing Pharmacy Acts and by the regulations of the General Medical Council. But even if this were not so we cannot think that the proposal to give local authorities

power to grant licences to suitable persons to assist medical men in dispensing prescriptions is one which can be entertained. Such a system would create a new body of unqualified assistants, with a kind of legal status, contrary to the intention of the Medical Acts and to the policy of the General Medical Council. Mr. Cross refers to the dispensing of prescriptions, but, judging from the general tone of his supplementary report, the suspicion must arise that he has in view also the sale of poisonous substances for use for other purposes than as medicines, and that in fact his supplementary report is a further plea in favour of the oppressed farmer and gardener.

"RUS IN URBE."

WE published on February 21st a most instructive and suggestive paper by Mr. A. H. Tubby on the "Urban Hospital Treatment of Surgical Tuberculosis." It presented a lamentable picture of preventable suffering and ineffectual treatment. To those acquainted with the practice of children's hospitals Mr. Tubby's story will recall many a disappointing recurrence of chronic bone or joint disease after apparently successful operation, and the statistics he adduces confirm the tale in the unimpassioned language of figures. "A poor little mortal," afflicted with some one or other form of surgical tuberculosis, he says, "returns time after time to the hospital for further operative procedures, and the net result on each occasion is only temporary 'relief.' Such children return to insanitary homes, the disease breaks out again, until too often they finally succumb, the victims of acute tuberculosis." Indeed, 218 such cases gathered from four metropolitan children's hospitals, on whom no fewer than 429 operations were performed, resulted in only 69 cures. Moreover, cases of this kind form some 10 per cent. of all in-patients in children's hospitals. The dreary round of operation, temporary relief, return to the insanitary slum with or without a brief, often all too brief, trip to a convalescent home, must stand for a vast amount of child suffering and chronic invalidism alike of mind and body.

We agree with Mr. Tubby in believing that much of this is needless and preventable. The soil as well as the seed must be studied. To excise the tuberculous tissue is good, but successfully to obviate recrudescence something better than the environment of the overcrowded tenement and the used-up air of the blind alley and the squalid court is demanded. The combination of the best surgical intervention with country air and influences is the desideratum which the latest pathology indicates, and which hospital administrators are in search of.

We are glad to observe that public bodies which have done so much already to improve the housing of the poor and the removal of sources of infection from their dwellings are giving earnest attention to the needs of overthronged hospital wards whose urban surroundings are incapable of giving all that such patients require, while the demand upon their beds for acute cases of medical and surgical nature renders them unsuitable for the prolonged treatment demanded by the class of case with which we are dealing.

The Metropolitan Asylums Board is considering the propriety of utilizing some of its small-pox hospitals, when not required for that disease, for the purpose of treating cases of phthisis. The effect of such an experiment in improving the environment of the consumptive, and at the same time partially securing a voluntary segregation of such persons will be watched with the greatest interest. The London County Council, on the other hand, is considering whether it should not make the experiment of placing some of the disused mansions in some of its more rural open spaces at the disposal of convalescents from the London hospitals. If such proposal finds favour we cannot conceive any class of case which is more likely to receive great and lasting benefit from treatment in such places than that of the little sufferers from chronic joint and bone diseases which are alike the curse and consequence of our overcrowded town dwellings.

RUMOURED ADMIRALTY SCHEMES.

THERE is at present common talk, we are told, in naval and military clubs relative to revolutionary schemes in regard to the Royal Navy Medical Service, naval chaplains, and naval accountant officers. As to medical officers, the idea apparently is to engage them temporarily for service, in times of peace, as well as in war, an arrangement similar to that which exists in merchant passenger ships. So serious a revolution in an important department of the public service must be further elucidated before it can be advantageously discussed, but the Admiralty should understand that any scheme of the kind will be carefully scrutinized, and that the medical profession will withhold its support if it cannot be shown conclusively to be likely to conduce to the health and welfare of the men of the Royal Navy. As regards the chaplains, the statements current are to the effect that the Admiralty contemplates a sort of missionary or circuit system, with possibly temporary ministrations from various denominations. In the opinion of experienced naval officers, the paymaster's department might well be recruited from the executive class, as in the army, assisted as they would be in their clerical work by writers, and in the provisioning and clothing work by ship's stewards and their assistants. So far as we have heard, the proposals do not affect those already in the service. Economy is the reason assigned for these revolutionary proposals. The Admiralty will be well advised to remember that it does not educate chaplains or medical officers. The Church and the medical profession will jealously watch every departure from existing arrangements; neither profession is dependent on the navy for a career, and the members of the medical profession will demand not only "market" pay, but due consideration. As we have said, the position requires elucidation, and no scheme of the kind can, so far as it affects the medical service of the navy, be launched with any prospect of permanent success unless the views of the medical profession are first ascertained. The veil must be drawn aside, and the reasons for the proposed change, and the motives which actuate its proposers, must be brought to light. To this end we would strongly insist that a public inquiry should be held by a Royal Commission, on which the medical profession must be represented, and before which not only medical officers of the Royal Navy, but also representatives of the medical schools and of the chief organizations of the profession should be called to give evidence.

THE "ARCHIVES OF NEUROLOGY."

WE have received an advance copy of the second volume of the *Archives of Neurology*, containing reports of researches carried out in the Pathological Laboratory of the London County Asylums at Claybury. The *Archives* form a large volume of nearly 900 pages, with numerous beautifully-executed plates, photomicrographs, and other illustrations. The editor is Dr. F. W. Mott, Director of the Laboratory and Pathologist to the London County Asylums. In addition to a preface containing suggestions of important administrative reforms, Dr. Mott contributes a masterly monograph on tabes in asylum and hospital practice, a valuable paper on the prevention of dysentery in the London County Asylums, and a note on the choline test for active degeneration of the nervous system. He has also

collaborated, with Professor Halliburton, in a paper on the coagulation-temperature of cell-globulin and its bearing on hyperpyrexia. In the first volume of the *Archives* Dr. Mott showed that there was good ground for the belief that the most important, and possibly the essential, cause of general paralysis is syphilis, and in the present volume he shows that etiologically general paralysis is identical with tabes dorsalis, and that thus a large part of these and other organic nervous diseases affecting the community are due to syphilis. The article is based on the clinical records of 120 cases, with notes of the results of the necropsy, and a complete microscopic examination of the nervous system in 30 of these cases. With regard to dysentery in asylums, Dr. Mott dwells with natural satisfaction on the fact that the recognition of the infective nature of the disease, as proved by himself and Dr. Durham, and the adoption of some of the recommendations made by them, have been the means of diminishing the death-rate at Claybury, where it was prevalent in an endemic or epidemic form for years. He thinks it not too much to hope that if all their suggestions and the additional precautions set forth in the article contained in the new volume of the *Archives* are carried out, the disease will in future occur only in sporadic cases. Important papers are contributed by Dr. A. F. Tredgold, who writes on amentia (idiocy and imbecility); Dr. J. S. Bolton, who deals with the histological basis of amentia and dementia; Dr. George A. Watson, who describes the pathology and morbid histology of juvenile general paralysis: Dr. W. G. Smith, who discusses the range of immediate association and memory in normal and pathological individuals; Dr. Charles Bolton, who gives an account of the pathological changes in the medulla oblongata in acute diphtherial toxaemia, and Dr. Sydney J. Cole, who records the results of the systematic examination of the central and peripheral nervous system and muscles in a case of acute alcoholic paralysis with mental symptoms. We have not had time to do more than survey in the most cursory way the vast territory covered by this volume, but we have seen enough to enable us to say that it is a notable addition to the literature of neurology. We hope to give a full analysis of its contents, and to discuss some of the important practical questions raised by the researches of Dr. Mott and his assistants in future issues. In the meantime we heartily congratulate him on the production of a volume which is in itself a convincing proof of the great value of the work done in the laboratory maintained by the enlightened liberality of the London County Council.

WORKMEN'S COMPENSATION ACTS.

Under French law, notice of any accident occurring to workmen during or in consequence of their employment must be sent by the employer to the mayor of the commune within four days of the date of the accident. With this notice must be sent, also, a medical certificate, indicating the condition of the injured person at the time of the accident, the probable effects of the injury, and the time at which a definite diagnosis may be made of the resulting disablement. If the injured person intends to make a claim, he or his representative has also to forward a declaration and a medical certificate. Acknowledgements of the receipt of these notices and certificates are given at once to either party and the first medical certificate is sent on to the magistrate who will open the inquiry as to the nature and circumstances of the accident. The employer has to pay the cost of obtaining the certificate forwarded with the notice, and he is also responsible for the cost of medical attendance upon the injured person. He may send his own appointed doctor or if the injured person prefers to do so he can select his medical attendant, but in the latter case the employer cannot be called upon to pay higher fees than those customary in each department under the tariff adopted for gratuitous medical attendance. The medical certificate is considered to be of much importance, and a circular has been sent by the Minister of Commerce to all prefects (and by the latter to all employers and workmen) asking the prefects to draw the attention of medical men and medical societies to the necessity of exercising great care in the first examination of an injured person, so that the certificate may be an accurate report of the injuries sustained. If the certificate is not considered to be sufficiently ample the magistrate directs another medical examination and report to be made. Expert medical evidence is habitually required in cases arising under the Act in the different Courts of Justice through which they may pass, and regular fees are fixed which are paid, except in the case of the first medical examination and report, by the State. The workman pays only for the medical certificate which accompanies the notice of claim. In England, in cases occurring under the Workmen's Compensation Act, medical certificates are seldom required. The notice of accident must be in writing, and may be sent to the employer by the workman or by any one else; it must contain the name and address of the person injured, the date, and—in ordinary language—the cause of the injury, but no medical certificate has to accompany the notice. An employer may at his own expense require a workman to submit himself for examination by a medical practitioner, and if the workman refuses to do this all proceedings are suspended until the examination takes place. Only the employer can require the workman to undergo a preliminary medical examination, but, after an order has been made by an arbitrator for weekly payments, a subcontractor, a stranger, or any other person who is made liable by Sections IV and VI of the Act to indemnify the undertaker or employer, has the right to insist on a periodical examination of the workman who is in receipt of the payments by his own medical practitioner. The workman, if dissatisfied with the result, can demand to be examined by one of the medical referees specially appointed for the purposes of the Act, and his certificate is conclusive and binding upon both the workmen and the employer or the other parties liable to indemnify the employer. In cases of dispute the medical referee can be called upon to report by any committee, arbitrator, or judge (subject to the regulations made by the Secretary of State), and the fees of such medical referees are then paid by the Treasury, but if the workman himself consults a medical referee voluntarily (without an order of the Court), which he has the right to do, then the workman has to pay the fee himself. Actually the medical referees exist but are very seldom called upon to act. They are generally ignored by the courts, and as many of them had to resign valuable appointments before they could hold the office of medical referee, their position is not very enviable. How different it would be if the English Act were carried out in the same spirit as the French one! Another great difference between the two Acts is that in France medical attendance has to be paid for by the employer as part of the compensation due to the workman, whereas in England no provision is made for medical attendance. Any medical man who has much to do with compensation cases might study with much advantage a little book, *Les Accidents du Travail*,[1] lately published by Dr. Georges Brouardel of Paris. He not only points out the duties of medical men under the French law, but in some very interesting chapters notes the influence of various pathological conditions such as tuberculosis, diabetes, and hysteria, and the part they play in the development of morbid conditions; he concludes by publishing tables from many countries and sources, showing the *évaluation des infirmités permanentes*, from the loss of both eyes or of two limbs down to that of a little finger.

MR. TROUTBECK AND MEDICAL WITNESSES.

In the South-western district of London the conflict between the coroner and the local medical practitioners seems to be by no means abated: indeed the records of the past week, as given in the various local newspapers, seem to show that the contest is reaching rather an acute stage, for they are full of reports of inquests at which open discord and retort seem to have been the order of the day, thus

[1] *Les Accidents du Travail: Guide du Médecin.* Par Georges Brouardel. Paris: Baillière et Fils. Pp. 16-56. Fr. 1.50.

bringing the Coroner and the Court into contempt and ridicule. The medical men residing in the district feel incensed at the policy the coroner still thinks it fit to pursue by which a practitioner not residing in the district, and having no previous knowledge of the cases, is summoned to give evidence and make necropsies to the exclusion of the practitioner who may previously have attended the case, or who may have been called in at the time of the death. The statute law bearing upon this matter has already been referred to in previous issues of the BRITISH MEDICAL JOURNAL, and as recently as last week we quoted it in full in answer to a correspondent who made an inquiry on the same subject. Mr. Muir Mackenzie, whose opinion has also been published, confirms that previously expressed in these columns, and we consider that Mr. Troutbeck, in attempting to carry out what he calls "a general policy advised by the London County Council," is following a mistaken course, and is not acting in accordance with the spirit or the intentions of the statute law for the instruction and guidance of coroners. The London County Council has no authority for attempting to dictate to the coroner, who is an independent officer of the Crown not of the Council, and who should carry out his duties as directed by the statute law. He should not allow himself to be influenced by the opinions of councils or corporations in matters over which they have no authority or concern. A deputation from the South-west London Medical Society has had an interview with the Control Committee of the London County Council, and Dr. Mark Robinson, the President, expressed the views of the Society as to the policy lately carried out by the coroner. After Dr. Robinson's address the deputation withdrew, and the Committee will doubtless make a reply in due course. We would strongly advise that the Medical Society should approach the Lord Chancellor on this subject and lay the facts of the case before him, pointing out the present state of the law and the course that is now being pursued by the coroner. The Lord Chancellor will, it may be anticipated, give an authoritative opinion which we trust will have the effect of settling a grievance which is likely to continue unless the policy of the coroner is considerably modified.

KING EDWARD'S HOSPITAL FUND FOR LONDON.

THE annual meeting of the General Council of King Edward's Hospital Fund for London was held on February 24th at York House, St. James's, the Prince of Wales being in the chair. Twenty-eight members of the Council were present, including the President of the Royal College of Physicians, the President of the Royal College of Surgeons, and Sir W. J. Collins. Lord Rothschild presented the account of receipts and expenditure during the past year, and referred to the large gifts that had been added to the Fund during the year, among which were those from Lord Strathcona and Lord Mount Stephen, from Mr. Edgar Speyer and from Mrs. Lewis. During the year there had been a decided increase in the success of the Fund; £604,802 had been received, including £28,729 in annual subscriptions, £433,878 in donations, £8,000 from the League of Mercy, £3,000 in legacies, £11,397 income from investments, and the Coronation Gift of £118,663. The sum of £101,000 had been distributed in gifts to the hospitals. At the end of the year there was a balance of £76,724. The Lord Mayor, in seconding the adoption of the accounts, said that it was quite impossible to overrate the good work that was being done by the Fund. The time was coming when it would be absolutely necessary to stop the institution of new foundations until those already existing had adequate support. Sir John Aird, who supported the resolution, said that it behoved every good right-thinking Englishman to do all in his power to uphold and help the benevolent institutions which did so much good in alleviating the condition of the sick and suffering poor. The Prince of Wales, after expressing satisfaction with the financial position and work of the Fund during the year, again expressed the hope that the income of the Fund would be increased by at least £50,000; and this involved an addition of £870,000 to the capital. The completion of this sum was a matter in which the King and he took the deepest personal interest. The motion for the adoption of the accounts was then put and carried unanimously. The report of the General Council for the past year was next read by Sir Savile Crossley, in which, after referring to the continued interest and sympathy of His Majesty the King, it was acknowledged that the increased success of the Fund was largely due to the personal influence of His Royal Highness the President. It was intimated that a form of hospital balance sheet had been drawn up by a Committee of chartered accountants, which had been submitted to the Sunday and Saturday Funds, with whose co-operation it was hoped that it would be accepted by all the hospitals. In view of the fact that hospitals had not always been established where most needed, and in some cases that faulty arrangements existed, a resolution was sanctioned that in future any new hospitals, or those making considerable reconstructions or extensions, within the area dealt with by the Fund should be requested before taking action to submit their proposals to the Fund. The Distribution Committee was considering what could be done to bring about desired results in regard to the amalgamation of certain hospitals and the removal of others to places where they were more needed. It had been decided to extend the scope of the Fund beyond the seven-mile radius, so as to include the whole of the London County Council area. It was pointed out that inasmuch as 25 per cent. of the patients in London hospitals came from outside the metropolis, contributions might reasonably be expected from those who lived outside London. The report of the Organizing Committee was read by Lord Duncannon. The adoption of the reports was moved by the Prince of Wales, who said that any one who looked into the management of the Fund would see that no trouble was spared to expend the money to the best possible advantage. In reference to the amalgamation and removal of certain hospitals, he was convinced that the general public would appreciate the high sense of duty which had actuated representatives of these institutions to subordinate their private interests to those of the entire hospital system at large. The adoption of the report was seconded by Sir Joseph Dimsdale and supported by Lord Reay. The report, on the motion of the Prince of Wales, was received and adopted. A vote of thanks to His Royal Highness was moved by Lord Strathcona, seconded by Sir Henry Burdett, supported by Sir John McDougall, and graciously acknowledged.

THE NORTH STAFFORDSHIRE INFIRMARY.

The centenary of the North Staffordshire Infirmary has been well commemorated in an unpretentious *Concise History*,[1] written by Mr. Ralph Hordley, who was secretary from 1856 to 1899. The facts are accurate, and there are interesting illustrations of the old buildings, as well as valuable lists of the various persons who have held official positions in the institution. The North Staffordshire Infirmary was established at a meeting held at Hanley on July 28th, 1802, in consequence of the mortality due to epidemic fevers, which had spread rapidly through the workhouses of the district. It was at first a dispensary with a ward for convalescent patients, and was built on a piece of land bought from Mr. Josiah Wedgwood for the sum of £320. Such good work was done in the building that in 1814 it was decided to add an infirmary. The site of the Dispensary and House of Recovery, as the original building was called, proved inadequate, and as fresh land had to be obtained the infirmary was not opened until 1819, at a time when Josiah Spode was Chairman of the Governors. The building then erected was made to suffice, though with various additions and alterations, until 1869, when the main block of the present building was opened by the Prince and Princess of Wales. The name was altered at the same time to that by which it is still known, the North Staffordshire Infirmary and Eye Hospital. Many additional buildings have since been

[1] *A Concise History of the Rise and Progress of the North Staffordshire Infirmary and Eye Hospital from 1802 to 1902.* By Ralph Hordley. Newcastle (Staffs.): G. T. Bagguley. 1902. (Demy 8vo, pp. 71, illustrated. 5s.)

erected, for the infirmary has been kept well up to date by the requirements of an active medical and surgical staff, aided by the munificent bequests of public-spirited Governors and the business capacity of the Committee, which has maintained the finances of the institution at a high level of prosperity.

THE MEDICAL MISSION TO LABRADOR.

Dr. Wilfrid T. Grenfell, the Medical Superintendent of the Medical Mission to Deep Sea Fishermen in Labrador and on the coasts of Newfoundland, is now lecturing in Canada and appealing for funds to enable him to prosecute his work more successfully. This mission, which is of a purely medical character, seeking to reach cases of sickness which cannot possibly be reached by any ordinary practitioner of medicine, was started by English philanthropists in 1892. In that year 900 patients were treated; in 1902 the number attended reached 2,774. Dr. Grenfell is assisted in his work by two medical men and two trained nurses. There are three hospitals in different settlements and twenty-four cots are endowed. There are, moreover, two hospital ships to ply along a coast line some 1,500 miles in extent. One of these was given by Lord Strathcona and the other by a lady of Toronto. The population of the mission is 30,000. Last year it cost £4,000, and of that amount £400 was contributed by Canadians.

THE NESTOR OF MEDICINE.

The oldest member of the medical profession now living is said to be Dr. Jean David of Montpellier, who on February 8th entered on his 103rd year. He was born at Murviel-les-Montpellier on the 19th Pluviôse, Year IX of the Republic one and indivisible, which in the ordinary calendar is February 8th, 1801. He practised his profession for three-quarters of a century at Grabels, a country district near Montpellier, making his daily rounds on horseback. In his youth he is said to have witnessed the march of Wellington and the Peninsular army through Southern France after the battle of Toulouse. His first serious illness—an attack of typhoid fever—occurred when he was 63 years of age. When he was 91 he was attacked by congestion of the lungs, but promptly recovered. Dr. David, who retired from practice a good many years ago, enjoys excellent health, and age has in no way dimmed the brightness of his intelligence. His only infirmity is failing eyesight. On being asked recently by an interviewer to reveal the secret of his length of days, Dr. David replied: "Sobriety in all respects. The human body is a wonderful machine whose organs should never be overtaxed. For my part I continue living much as I have always lived. I am only worried by one thing—the idleness to which failing eyesight has now condemned me." He speaks with enthusiasm of the wonderful progress which he has seen achieved by medicine and surgery in the course of his career.

THE SECTION OF TROPICAL MEDICINE.

At the special meeting of the Council of the British Medical Association held on Wednesday last it was unanimously resolved on the motion of the President-elect, Dr. Griffiths, of Swansea, seconded by Mr. James Cantlie, that there shall be a Section of Tropical Medicine at the next annual meeting which begins at Swansea on July 28th. We are glad to be able to make this announcement, as from communications which have reached us we know that much disappointment has been caused by the fact that in the arrangements originally made for the meeting the Section of Tropical Medicine did not appear.

LEGISLATORS AS "AWFUL EXAMPLES."

A Bill is now before the New York Legislature providing for the appointment of a State Board of Examiners to inspect the conditions of barbers' shops and to enforce sanitary regulations. In support of this Bill, says the New York *Medical Record*, several members of the Assembly, who are suffering from barbers' itch, appeared before the General Laws Committee, which has the measure under consideration, as living examples of the dangers of even well-appointed and seemingly-clean barbers' shops, where the necessary sanitary measures are not strictly enforced. If a few of our own legislators could only be got to live in the slums long enough to contract any of the countless brood of diseases born of dirt, cold, want, and wretchedness, their self-sacrifice would not be in vain, and the question of dwellings for the poor might more speedily be settled.

THE COVENTRY DISPENSARY.

We are glad to be able to state that there seems to be some prospect of the long controversy between the medical profession and the Coventry Dispensary being adjusted in a manner satisfactory to the profession. At a meeting held on February 18th, a resolution was adopted to the effect that no member of the profession in Coventry should act as medical officer to a Friendly Society at a less remuneration than 4s. per member per annum. We propose to publish a full report of the meeting in an early issue.

Mr. Mayo Robson has been elected an honorary Fellow of the American Surgical Society.

Professor Koch has been elected a Foreign Associate Member of the French Academy of Sciences in place of the late Professor Virchow.

At the meeting of the Society of Anaesthetists on Friday next, March 6th, Mr. A. Vernon Harcourt, F.R.S., will show and explain a chloroform regulating inhaler designed by him to control the percentage of chloroform in the vapour inhaled. All members of the profession are invited to be present at the meeting, which will be held at 20, Hanover Square, and will commence at 8.30 p.m.

The Johnston Laboratory at University College, Liverpool, built and equipped by Mr. William Johnston, of Bromborough, will be opened by Mr. Walter Long, President of the Local Government Board, on May 9th. It contains the following departments: Bio-chemistry, under the direction of Professor Benjamin Moore; Tropical Medicine, directed by Professor Ronald Ross, C.B., F.R.S.; Experimental Medicine and Comparative Pathology, directed by Dr. A. S. Grünbaum, who will also have charge of the cancer research, for which Mr. T. Sutton Timmis recently provided a gift of £10,000. Mr. William Johnston has also endowed the Professorship of Bio-chemistry and three Fellowships in various branches of medical research.

The 130th anniversary dinner of the Medical Society of London will be held at the Whitehall Rooms, Hotel Metropole, on Saturday, March 7th, at 7.30 p.m., Mr. A. Pearce Gould, President, in the chair. In addition to the Presidents of the Royal College of Physicians, of the Royal College of Surgeons, and the "Sister Societies," the President and Council will have the honour of including among their guests the Lord Chancellor, Lord Sandhurst, the Hon. Robert Porter, late U.S.A. Commissioner in Cuba, Mr. Montague Lush, K.C., Mr. Balfour Browne, K.C., Sir Thomas Smith, Bart., and Sir Thomas Barlow, Bart.

MEDICAL NOTES IN PARLIAMENT.

[From our Lobby Correspondent.]

Government Bills. On Thursday in last week the several Ministers in charge of the Government Bills gave notice that they would introduce them on early days. The Bill first on the list was that for the regulation of the employment of children which is in charge of the Home Secretary. Mr. Gerald Balfour came next with the Sugar Convention Bill, and Mr. Hanbury third with the Bill dealing with the adulteration of dairy produce. These three Bills may be introduced any time after the debate on the Address is over, but the other Bills of which notice was given—the Irish Land Bill, the Licensing Bill for Scotland, and the London

Education Bill—will probably be introduced after Easter. The Irish members may press for their Bill, and may possibly succeed in getting it advanced to an earlier date.

Private Members' Bills, which depend upon the fortunes of the ballot, have come out in unexpected fashion this session. Over 360 members balloted and only 100 were drawn. The first on the list was Mr. McIver, and the last Mr. Disraeli. The medical members of the House were very unlucky, only two getting into the first hundred, namely, Dr. R. Ambrose, who was thirty-sixth, and Dr. Farquharson, who drew eighty-seventh place, both practically useless for obtaining any precedence. On Friday in last week Mr. David McIver utilized his good fortune by introducing a Bill to amend Church discipline, and fixed the second reading for March 13th. Mr. Chapman, who drew second place, introduced a Bill to deal with the rating of machinery, the second reading to be taken on March 20th. The Deceased Wife's Sisters Bill was introduced by Sir Gilbert Parker, and put down for May 1st, while on May 8th a Bill dealing with trade disputes, introduced by Mr. Shackleton, will be discussed on second reading. Bills to provide old age pensions were introduced by Mr. Renwick and Mr. Channing, and Mr. Markham introduced a Coal Mines Regulation Act Amendment Bill, which will probably deal with the employment of young persons under ground. Among other Bills introduced are some of medical interest, namely, one by Mr. Heywood Johnstone to amend the Elementary Education (Defective and Epileptic Children) Act, 1899, put down for second reading on March 20th, a Bill to amend the law relating to the qualification and tenure of medical officers of health and inspectors, and to make further provisions relating to superannuation allowances for such officers and inspectors and for other purposes, by Sir Francis Powell, who also introduced the Rivers Pollution Bill and put both down for second reading on March 17th; and one by Mr. Channing to provide that no prosecution under the Vaccination Acts shall be commenced without the authority of the guardians. These Bills will be put down from time to time on the best available days, but not being among the first half-dozen have not any great chance of success.

The Potters' Assurance Association, an institution for giving compensation to potters injured by lead, has been joined by 72 firms, so the Home Secretary informed Sir Charles Dilke on Friday in last week. Three other firms are insured on the same lines in other ways. Most of the firms, the Home Secretary said, were of importance in the trade, and as far as his information went the scheme appeared to be working well, with the exception that in 8 factories the men had refused to submit to the necessary medical examination.

The Medical Acts Amendment Bill to amend the Acts of 1858 to 1886 was introduced by Sir John Batty Tuke on February 23rd and put down for second reading on Friday, April 24th. The Bill is backed by Sir John Gorst, Mr. James Campbell, Sir Richard Jebb, Mr. Talbot, and Sir Michael Foster, who are all University representatives and act together in supporting the Bill of the General Medical Council. General Laurie has two Bills down to amend the Medical Acts of 1858 and 1886, which are backed by Mr. Rothschild, Sir Howard Vincent, Mr. Middlemore, and Sir Mancherjee Bhownagree, and which when printed will no doubt be found, like General Laurie's Bill of last year, to seek to facilitate the registration of Canadian and other Colonial medical degrees.

Pure Air in Factories.—Mr. Shackleton on Tuesday last asked the Home Secretary what number of employers were reported during the year 1902 by the inspector under the Cotton Cloths Factories Act as having exceeded the nine volumes of carbonic acid (carbon dioxide) in every 10,000 volumes of air (Factory and Workshop Act, 1901, Clause 94, Section 111): and whether he could state the number of prosecutions which had been instituted by the Home Department in consequence of these reports. Mr. Akers-Douglas replied that there were 63 cases in 1902 in which the inspector reported that an employer had exceeded the standard referred to; but in many cases the excess was found only in one part of the shed, while in other parts the proportion of carbonic acid was found to be below the prescribed limit. No proceedings had been instituted on these reports. He did not think the inspectors were called upon to prosecute unless a contravention of the Act in this matter was continued or repeated after notice from the inspector.

The Ventilation of the House.—Mr. Wylie asked the hon. member for North Hunts, as representing the First Commissioner of the Board of Works, when the report of the Select Committee appointed to inquire into the ventilation of the House of Commons building would be issued, and what steps, if any, had been taken during the recess to remove some of the insanitary conditions. Mr. Ailwyn Fellowes replied that the Select Committee had found it impossible to conclude their inquiry last session, and it was proposed to ask the House to reappoint the Committee at an early date. During the recess the authorized improvements in the ventilation of the Commons Committee Rooms had been completed, and new fittings had been supplied to the sanitary offices on the ground floor terrace front, and mechanical ventilation had been introduced into them with excellent results. Other sanitary offices in the building would be dealt with in the same way, as opportunities arose during recesses.

The Physical Training of Children.—Dr. Macnamara asked the Secretary of the Board of Education on Monday last as to the desirability of replacing the recently issued Model Course of Physical Drill for Children by a course more suited to the needs of young children than the present compilation from the Soldiers' Drill Book. Sir William Anson answered that the Board of Education had no present intention of replacing the Model Course of Physical Training. But they were considering the desirableness of issuing a kind of introduction to the Model Course, showing the steps by which the series of exercises in it might be progressively acquired. This would greatly assist the managers of the smaller schools in introducing it. He reminded the honourable member that though the Board strongly advocated a uniformity of system, both in the interests of the teachers (on whom falls the burden of imparting the physical training) and in those of efficient instruction, they were prepared to consider (and had in many cases approved) alternative schemes having the same scope and aim as the Model Course.

The R.A.M.C. Militia.—On Wednesday last Captain Jessel asked the Secretary of State for War whether the Royal Army Medical Corps Militia was under orders for immediate disembodiment, and if so, whether employment would preferentially be given to officers of the Militia in cases where officers of the Royal Army Medical Corps were not available. Mr. Secretary Brodrick replied that five companies of the Royal Army Medical Corps Militia would be disembodied on February 28th, and the remaining four on March 31st. Preference would be given to officers of the Royal Army Medical Corps Militia who had applied and were recommended for employment in cases where officers of the Royal Army Medical Corps were not available.

Business for Next Week will depend on the length of the debate on the Address, which most probably will be concluded this week, as some of the most interesting and widely-supported amendments have been disposed of. The Prime Minister may take a day for finishing the new rules of procedure which have been left incomplete, and then Supply (Supplementary Estimates) will be taken. This postpones the introduction of Government Bills for a week or more. On Tuesday Mr. Hoult may move a resolution in favour of the formation of a Ministry of Commerce, and on Wednesday, at the evening sitting, Mr. Pemberton has a motion down to call attention to the law as it affects trade unions, while Mr. Price follows with one dealing with the early closing of shops. On Friday the Innkeepers' Liability Bill has first place, and other Bills dealing with the sale of intoxicating liquors in Ireland follow, so that the Vaccination Prosecutions Bill of Mr. Channing, which is eighth on the list for that day, has no chance of coming on.

MASSACHUSETTS CREMATION SOCIETY.—At a recent meeting of the Massachusetts Cremation Society it was stated that there were 217 cremations in 1902 at the Forest Hills Crematory, an increase of 45 over 1901. In Mount Auburn there were 134 cremations in 1902, as against 119 in 1901. Altogether 1,749 persons have been cremated in and about Boston since this method of disposing of the dead was introduced there. The late Dr. John Homans, clerk of the Society at the time of his death, left 1,000 dollars to be used for improvements in the building and its approaches at Forest Hills.

THE FUTURE OF ST. BARTHOLOMEW'S HOSPITAL.

It is a matter of regret that the inquiry by the Committee brought together by the Lord Mayor into the question whether St. Bartholomew's Hospital should be removed, rebuilt on its present site, or reconstructed without rebuilding the main ward blocks, is being held with closed doors. St. Bartholomew's Hospital is the great city hospital with a long and honourable history of nearly eight hundred years, but the maintenance of its efficiency is a matter which concerns not merely the city but the whole of northern London and indirectly the whole country. It is a great medical school, and as such its future is of interest to the medical profession.

A series of events slowly maturing during the last ten or fifteen years has now brought about a crisis in its history which can only be successfully surmounted if the existing difficulties are impartially studied, and boldly faced with the determination to find a solution which will not only satisfy the minimum requirements of the moment but will provide for the future.

In an article published in the British Medical Journal of January 17th, p. 159, some particulars were given of the proposal then before the Governors. By the purchase of adjacent land from Christ's Hospital the total area available had been raised to nearly six acres and a half. The plan published in illustration of that article showed the manner in which the architects proposed to utilize the additional ground and the space obtained by pulling down certain old buildings containing at present the out-patient and casualty departments and the dispensary.

That St. Bartholomew's Hospital is in some of its buildings altogether out of date, and that for the efficient working of the hospital with its present number of patients extensive additions are necessary is admitted on all hands. Strong evidence on this matter was given by Sir Thomas Smith, Sir William Church, and Mr. Bowlby before the House of Lords Committee on Metropolitan Hospitals which sat ten years ago.

Representations have from time to time been made by the medical staff to the Treasurer and Governors, pointing out the necessity for extensive alterations and improvements in the hospital buildings, and it has been all along realized that these extensions could not be carried out unless some considerable addition to the site available could be obtained. When the adjacent site occupied by Christ's Hospital came into the market owing to the removal of the Bluecoat School to the country, an opportunity was afforded which it was felt could never recur, and the hope was entertained that it might be possible for the hospital to acquire all the site about to become vacant. This plan was, we believe, urged by the medical staff upon the Governors, but at a meeting in July, 1900, the Governors decided to obtain parliamentary powers to purchase a part of the site measuring rather less than 1½ acre. The total area thus made available is a little less than 6½ acres, but the greater part of it is occupied by the four ward blocks, by the buildings of the medical school, by the church, gateway, and administrative offices, by the out-patient and casualty departments, and the dispensary. As soon as the site came to be considered with the view to supplying the urgent needs of the hospital, it became evident that great difficulty would be found in erecting all that was immediately necessary upon the available land. These necessities may be enumerated as follows:

1. New casualty and out-patient departments.
2. New dispensary and apothecary's laboratory.
3. Buildings for eight special departments—eye, throat, ear, teeth, skin, gynaecology, orthopaedics, and electricity.
4. Five new operating theatres.
5. An isolation block.
6. A block to contain clinical laboratories, *post-mortem* room, and mortuary.
7. Quarters for residents.
8. New nurses' home.
9. A new ward block containing a number of beds equal to those displaced by the demolition of some of the old buildings.
10. A new incinerator, etc.

The sketch plan published in the British Medical Journal of January 17th shows how, after much discussion and experiment, the architects suggested that these requirements might be met, the attempt to find a site for the residential college having been abandoned. But the more the plan is examined the more evident does it become that the ingenuity of the architects has been taxed to the utmost, and that the result is after all only a makeshift. For instance, the best plan which could be devised for the five new operating rooms which are required was to place them on the top of one of the four ward blocks (the north wing).

But a more serious and far reaching consideration has arisen. As the question has been more fully and thoroughly studied under the pressure of recent events the conviction appears to have grown that the time must soon come when all the existing ward blocks will have to be replaced by others designed and constructed more in accord with modern medical requirements, which include a much more liberal allowance of light, air, and space in proportion to the number of patients than was considered necessary when the present hospital was planned 160 years ago. The main defects in the present ward blocks appear to be that they do not provide sufficient cubic space, that they have no through ventilation, that they are not provided with detached sanitary towers, and that there are no isolation rooms for infectious cases. Other arrangements are old-fashioned; and in an old building with wooden staircases, and many wooden fittings, the danger of fire must be borne in mind. The conclusion appears to be inevitable that the existing ward buildings cannot by any alterations furnish modern ward units.

A similar conclusion is reached if the matter is approached in a different way. Experience appears to show that when plans come to be worked out for the erection of a general hospital with all its subsidiary departments and administrative offices fully equipped according to modern requirements the average number of beds which can be got upon the acre is abouty seventy. St. Thomas's Hospital stands upon eight acres and a half. This at the rate of seventy beds to the acre would provide 595 beds; it actually has 603. The Liverpool Royal Infirmary is returned as providing 295 beds; it stands on about four acres of land so that the average comes out at about seventy-four beds an acre. The General Hospital, Birmingham, provides 346 beds on three and three quarter acres, an average of nearly ninety-three beds to the acre, but there is a large open space to the north.

Broadly speaking, there would appear to be four courses open to the authorities of St. Bartholomew's Hospital:

1. To increase the present site by the purchase of more land immediately adjacent.
2. To retain a part of the present site for an emergency hospital, residential college, and medical school, and to build a branch hospital somewhere in the north of London, or otherwise materially to reduce the number of buildings on the site.
3. To reduce the number of beds.
4. To remove to another site.

The first course would be from many points of view the best if it were found feasible. The medical staff has, we believe, all along recommended the purchase of the whole of the Christ's Hospital, but the financial difficulties have been considered insuperable. Apparently as an alternative it has been suggested that more land should be purchased from Christ's Hospital. The piece of ground rather less than an acre and a-half purchased recently from Christ's Hospital cost St. Bartholomew's altogether a quarter of a million; and it is stated that another acre or acre and a half would be sold at the same rate. The question is a financial one, but it seems clear that St. Bartholomew's could not meet such an additional expense out of its own resources, and unless those who are responsible for the financial administration of the hospital are confident that the public would be prepared to give St. Bartholomew's in response to the appeal about to be made a sum approaching a million sterling, the plan hardly appears to be feasible. Further, it must be remarked that if this additional land is taken it will become all the more imperative to consider the site, of some seven and a-half or eight acres, thus provided as a single whole. There can be very little doubt that it would be found that the only wise and prudent course would be to clear the whole site, and to design an entirely new hospital, the general plan of which would be governed by the necessity of disposing the ward blocks to the best advantage, the position of other buildings being determined by that assigned to the wards.

The proposal to erect a branch hospital has not, so far as we are aware, been seriously considered, and will apparently not be likely to meet with much support. An alternative proposal under this head is to reduce the number of buildings on the site by erecting the nurses' home and residential college elsewhere, and if the final decision should be to rebuild on the present site this will probably prove to be inevitable.

If it be decided to carry out the plans for building on the

present site of six and a-half acres now before the Governors, and illustrated by the sketch plan published in the BRITISH MEDICAL JOURNAL of January 17th, and if the view that the rebuilding of the ward blocks should be undertaken in the near future—a view which we believe those best acquainted with the circumstances of the hospital now generally entertain—then it appears to be admitted that there must be a material diminution in the number of beds provided, a diminution of a hundred or possibly of two hundred. This is a very serious prospect, serious in that it will materially diminish the scope of the institution's work as a medical charity, and serious also in its effect upon the prestige of the hospital and its medical school.

The fourth course—removal to another site—is one upon which the public and the profession will look for guidance to the medical staff. If financial considerations render it impossible for the hospital to acquire an adequate area of ground on the present site, and if careful inspection and consideration of the existing ward blocks show them to be so much out of date that they must be rebuilt at an early date, as we believe to be the case, then we think that the medical staff will do well to make public their views at an early date, even if the logical application of these views should render necessary the removal of this historic hospital to another site, whether in St. Luke's or still further to the north.

HOSPITAL SCHEMES FOR SOUTH LONDON.

IN a recent number of the BRITISH MEDICAL JOURNAL (January 17th, page 148) the irregular distribution of London hospitals was discussed in some detail, and among other things it was shown that hospital provision south of the Thames amounted only to some 1,800 beds, against over 8,000 north of that line. It appears likely that, within a measurable space of time, this disparity may be somewhat decreased by the realization of one if not two schemes, both of which are of much interest.

THE FLITTING OF KING'S COLLEGE HOSPITAL.

The first of them, and the more important, is a proposal to remove King's College Hospital from Portugal Street to a site somewhere in or near Camberwell, the district to which special attention was drawn, both in the article referred to and in the report of the Committee of the House of Lords in 1892.

The removal of an important hospital and medical school is a much more difficult matter than the public in general recognizes, and will demand for its accomplishment no little self-sacrifice, enterprise, and hard work, on the part of the staff and authorities. Although a final decision has not yet been made, and it is as yet too early to publish any statement as to the precise site in view, and the date of commencement of the necessary building operations, there seems to be every probability that the move will be made. A good deal still depends upon the amount of financial support the authorities receive in their effort. There can be little doubt, however, that, when the scheme becomes more widely known, offers of assistance towards the expenses of removal, and of support in the future, will be freely forthcoming. Many wealthy people are specially interested in South London, and it is only a year or two ago that an offer of £10,000 down was made by one philanthropist towards any hospital started in the special area now in view.

Any idea of moving King's College as well as its hospital seems to have been definitively rejected.

THE BOLINGBROKE HOSPITAL, WANDSWORTH.

The other hospital scheme for South London concerns "the Bolingbroke Home Hospital and Free Accident Hospital" on Wandsworth Common, and is of quite a different character. This hospital, originally started for paying patients, though on a semiphilanthropic basis, gradually changed its plan of work, until, a few years ago, under some pressure it is said from labour leaders in Battersea, it definitely opened its doors to all cases of accident and started work on somewhat unique lines. It is registered by the Board of Trade for the purposes shown in its title as an association, does not cater at all for general medical cases, does not allow any case to remain in after first emergency treatment if it can safely be sent out for completion of cure under the care of the patient's family medical man, endeavours to exact payment if the latter reports that the patient is able to pay, and treats no out-patient more than once except upon request of the patient's own medical attendant. So far it has been administered with much tact and equal success, and is, we believe, a popular institution both with its patients and the medical men around. It is situated in a good class neighbourhood occupied by people who, if not wealthy, are at least a very long way removed from being obviously poor. The necessity, therefore, for any hospital at all is not very conspicuous. It is, however, so very much nearer than any other existing hospital to the factories of Battersea, where accidents occur with some frequency, that it no doubt fills a gap and certainly gets more work offered than it can at present cope with. A very good out-patient block has recently been opened with departments for diseases of the throat and for *x*-ray work, and if, in addition to this, it were merely proposed to substitute proper wards for the present transformed dwelling house, and to raise the number of beds to about fifty, there would be very little comment to make beyond wishing the plan good luck. The ambitions of the managing body, however, go far beyond this, and it is proposed at once to raise funds to create a general hospital of 150 beds and to keep in view the probability of eventually doubling that number.

This is a very different matter: one that can scarcely be carried through by local effort alone, and one which, it may be hoped, its advocates will most seriously reconsider from—so to speak—a non-parochial point of view before appealing to the general public and the profession for support. In its present form, and with its existing limitations, the hospital undoubtedly does very good work, and even if slightly enlarged, would with these limitations preserved, form a useful annexe to some larger and more centrally-situated institution. But the necessity, or even desirability, of a large general hospital at this particular spot is very much open to question, and the enthusiasm of the promoters should not blind them to the immense difficulty in carrying out in a large general hospital the unique principles which have worked without friction, and helped to promote success in a hospital of 30 beds devoted to a special line of work.

A general consideration of the scheme from an outside point of view will lead most people to the conclusion that its conception is either belated or premature. Belated because hospital redistribution is now in the air, and insistence upon this particular scheme might interfere with such a scheme for removal as that of King's. Premature, because it will be quite time enough to talk of building a new hospital when it is certain that the needs of South-west London will not be met by the removal of an old one, and possibly one with a ready-made reputation and some funds at its back. It is fresh distribution of beds, coupled with more stringent rules as to admission of patients, not addition to the very large number of hospitals, that is called for.

The two plans are not, perhaps, essentially antagonistic, but their coincidence serves to punctuate the importance of the whole question of hospital distribution in London being investigated afresh by some central authority. If hospitals are to be redistributed (and to some extent they certainly should be), it should be upon some general plan drawn up by a body which has received and considered evidence with regard to present and probable future requirements of all parts of London, and has also considered the grounds upon which the continued existence of any hospital on its present site is justified. Still more should the approval of some such body be required before any appeal to the public is permitted to be made for assistance in adding a fresh institution for medical relief to the very large number already existing.

The principle upon which many hospitals have been started in the past and are likely still to be started in the future, unless some check is established, is financially immoral. Build your hospital, beat the drums, and trust to luck and the public to pay for it; the greater your debt, the greater your deserts. This plan has paid well in the past, but ought not to be allowed to pay in the future; for after all the amount of money that can be extracted from the public for hospital work has its limits, and every fresh call upon it means loss of efficiency elsewhere.

BEQUESTS.—Under the will of the late Miss Barbara Matthew Ross, of Belsize Park, N.W., in addition to several other charitable bequests, the sum of £200 each has been bequeathed to the Royal Sea-bathing Infirmary at Margate, St. Mary's Hospital, the Samaritan Free Hospital for Women and Children, and the New Hospital for Women.

NOVA ET VETERA.

LINNAEUS AS A PHYSICIAN.

Dr. Ludvig Hektoen recently delivered an interesting address on Linnaeus as a Physician before the Scandinavian Medical Society of Chicago, an abstract of which may be of interest. Born in 1707, Carl von Linné was destined by his father for holy orders, but showed such distaste for scholastic studies and such eagerness to ramble in search of plants and flowers that his father was urged to apprentice him to a tailor or shoemaker. Through the kind efforts of a physician, however, Linnaeus was encouraged in his study of plants and physiology, and eventually admitted to the University of Lund as a student of medicine. While pursuing his studies he acted as assistant to a medical practitioner. At that time there was no real clinical instruction in Sweden, and it was customary for the young men to work under preceptors. When Linnaeus went to Upsala in 1729 the medical faculty consisted of two professors and one assistant. One professor taught pathology, dietetics, surgery, pharmacy; the other physic, chemistry, anatomy, physiology and botany, each constituting by himself a whole faculty. In 1730 Linnaeus began to lecture on botany but he was deprived of his *venia docendi* through the intrigues of jealous rivals, and on the advice of friends he went to Harderwick, in Holland, where he obtained his doctor's degree in 1735, the title of his dissertation being "Hypothesis nova de febrium intermittentium causa." Linnaeus was befriended by Boerhaave, who had a great love of botany, and remained three years in Holland working at the subject. He soon secured the regard of all in Holland who cultivated any branch of medical science, among them being Van Swieten and Lieberkühn.

His First Success in Medical Practice.

In spite of flattering offers to remain in Holland, and also from the Universities of Oxford and Paris, Linnaeus in 1738 returned to Sweden and settled in Stockholm, where, after a period of waiting for patients, he achieved his first success by his treatment of gonorrhoea. Ever afterwards he showed much interest in the treatment of gonorrhoea and syphilis. He became a naval physician, and in that position utilized his opportunities to study diseases and the action of drugs. He also obtained permission to make necropsies, which had rarely been granted before, and Hjelt states that from this time the interest in pathological anatomy increased in Sweden.

Appointment to a Chair of Botany.

In 1739 he married; his practice increased rapidly, but he felt himself irresistibly drawn to botany and natural science. He was offered a professorship in Göttingen, but in May, 1741, he accepted a chair at Upsala. There he made himself and the University which he adorned so celebrated that he was said to have "shifted the scientific centre of gravity to a small town in Sweden." Students flocked to hear him from Finland, Norway, Denmark, Germany, Russia, England, and even from America.

His Interest in Medical Education.

Notwithstanding his devotion to botany, Linnaeus continued to be deeply interested in the development of medicine in all its phases. He urged its establishment upon a rational basis of theory and observation. He held strongly that rational medicine is to a large extent the result of the co-ordination of anatomical, physiological, botanical, cheminal, and mechanical truths. His interest in the methods of medical education proved of great importance to the study of medicine in Sweden. The course of instruction in the University of Upsala was modified and improved; the requirements for final examinations were raised and their character materially improved. Practical and public examinations in the hospital were introduced. Linnaeus wrote popular articles on medical subjects, and did much to disseminate useful knowledge. He aided veterinary medicine and helped it to secure recognition in Sweden. His writings on alcohol unquestionably had considerable influence in checking the abuse of that substance.

His Medical Works.

In 1763 he published a work entitled *Genera Morborum*, in which the diseases are classified into orders, classes, and species (11 classes, 37 orders, 325 species). A fundamental concept of his medical doctrine seems to have been that equilibrium in Nature depends on a constant struggle between opposites. "The human body may be considered as a balance, and when it equilibrates we feel well, but so soon as any overweight appears on either side, then we are sick." His principle of *contrariorum e contrariis curatio* is a further therapeutic application of this theory. Materia medica was his favourite branch of medicine. He published a highly esteemed *Materia Medica* (1749), which ran through several editions in Germany. For a long time it remained as a model for other authors. The pharmaceutical plants were arranged according to his botanical system, and a careful description given of those drugs used in medicine with a brief statement of their therapeutic value. He endeavoured to include only useful drugs, and warned strongly against complex formulae. Another noteworthy book is his *Clavis Medicinae*, which contains his fundamental pathologico-therapeutic theories in the most concentrated form. Linnaeus was interested in dietetics and hygiene, and his lectures on this topic were largely attended, and served to create marked professional and popular interest in hygiene, which thus got an early start in Sweden.

Etiological Theories.

He paid special attention to the question of the etiology of disease. Perhaps the most remarkable of Linnaeus's medical theories is the one concerning "exanthemata viva," or that contagious diseases depend upon the entrance of small living animals into the body. This assumption he regards as fully warranted, both by analogy and experience. Of such diseases he mentions scabies, epidemic dysentery (scabies intestinorum interna), pertussis, small-pox, pest; later, leprosy, phthisis pulmonum, and the malarial fevers were added to this category. While the small animals Linnaeus had in mind had not yet been seen or described, he saw in the manner of the spread of infectious diseases a remarkable similarity to the mode of reproduction and increase of many animals, especially insects. The smaller an animal, the more numerous and rapid its progeny; hence it is not difficult to conceive that some of these minute organisms, by their excessively rapid multiplication, may in a short time totally fill, as it were, the whole human body. As an illustration of this fact he cites the inoculation of small-pox, in which the quantity of pus used is of no importance in securing the development of good pustules. The drugs that destroy insects of various kinds—musk, camphor, mercurials, sulphur, etc.—were useful also in contagious diseases. Intermittent fever was attributed to absorption by the skin of foul particles in the air—namely, miasms from quiescent waters, closed cellars, graves, decomposing animal and vegetable materials. Air, he urged, must contain some form of acid, because vegetable and animal tissues and fluids become sour under its influence. Was it not, therefore possible that intermittent fever was caused by a coagulation of the serous part of the blood under the influence of "animalculae infinite parvae" in the atmosphere which carry this acidifying substance? Consumption he believed to be caused by the inhalation of fine particles in the air, which is permeated by minute floating substances of diverse kinds; this he illustrated by referring to the frequency of "tussis calculosa" among the stone-cutters in Orsa, Dalarne. He frequently makes mention of the contagiousness of tuberculosis.

In 1746-47 and 1754-55 he was engaged in studying a peculiar disease then appearing in the southern parts of Sweden (*dragsjukan*). His observations were summarized as follows: The disease attacks only the lower classes, but never children. It occurs only in the autumn, and may show itself in domestic animals also; it lasts for two or three months, generally attacking several persons in the same household, but nevertheless it is not contagious. He concluded that the disease, which we now know as ergotism, is due to the use of freshly-gathered corn; and as it occurred mostly after wet summers, when weeds abounded, he assigned the real cause to the weed predominating in the fields, namely, *Raphanus raphanistrum* (jointed charlock or black radish), and suggested the name "*raphania*." The disease was known under this term until the correct name arose from a more exact knowledge of its etiology. Much of Linnaeus's work is contained in dissertations by his pupils, and many of them were expanded notes of lectures. A collection was made in a series of ten volumes, of which seven are by Linnaeus and three by Schreber and Erlangen.

Some Points of his Medical Teaching.

Linnaeus laid great stress on the diagnostic and prognostic importance of the pulse. He attributed irregular pulse to any of the following conditions: Inflammation of the heart, dilatation of its muscle, aneurysms, tumours, polypi, the abscesses of the heart, inflammation of the valves, obliteration

of the pericardial cavity and other lesions of the pericardium, irregular action of the cardiac nerves. Further, it may depend on paralysis or spasm of the vessels, inflammatory stasis, ossification of the arteries, aneurysms, and polypoid concretions. Finally, the cause may be in the blood itself. Linnaeus suggested that fibrinous polypi within the vessels may become detached and cause death from sudden suffocation. In other words, he recognized to some extent the mechanism of pulmonary embolism. He distinguished correctly between cerebral haemorrhage and congestion. His description of hemicrania is excellent, as he was himself a sufferer from this affection. In 1742 he described a typical case of aphasia, under the title of Failure to Remember Substantives, especially Names. Matthew Baillie described aphasia first in English, and that was in 1806. In conjunction with Rosen, Linnaeus made many important observations concerning parasitic worms; among those described is taenia solium (Linné, 1756). He taught that taenia had no head, and that it might grow *ad infinitum*. Dr. Hektoen concludes that Linnaeus is entitled to a place among the founders of the scientific school of medicine whose object it is to understand the nature of disease, and to remove its causes. He recognized the importance of unprejudiced observation at the bedside, anatomical inquiry, and rational therapy. Finally, he saw glimpses of great etiological truths in regard to infectious diseases at a time when the great and populous microscopic world was indeed a *mundus invisibilis*.

Extracts from His Diary.—Linnaeus's one foible was love of fame, and this weakness is freely exposed in his diary, the part of which concerning medicine is transcribed as translated from the Swedish manuscript in Pulteney's work,[1] second edition, edited by Maton:

Linnaeus practised physic at Stockholm from 1739 to 1741; he was physician to the great naval hospital there, and had, besides, as much practice as all the other physicians collectively; but, on being made Professor, he relinquished the whole of it, because either that or his duties as a Professor must otherwise have been neglected. From this period, therefore, he attended only his friends and the poor. Physiology derived from him an important discovery, namely, Generationem ambigenam. Harvey maintained that the rudimentum futuri fetus lies in ovi puncto saliente; Leeuenhoek, that it lies in genituraе verminulus spermaticis; Linné, on the other hand, that from the mother comes carina Malpighii, rudimentum encephali, and from the father punctum saliens cordis, et indetotum corpus. This he proved by observations on hybrid animals, hybrid plants, etc. Thus, sense and temper, with tenaciousness of life, proceeded from the mother, but external appearance and habit, with strength of constitution, from the father. The medulla spinalis would grow in infinitum if it were not confined by the spina dorsi tandem ossificata in pubertate; et a retropressione libido. The contrary happens in taeniae, and in vegetables which have no bone in their composition. Ossea crusta will grow infinitum, caeteris paribus. The object of respiration, he thought, is to extract the electric fluid from the air by the lungs, and thus to transmit it to the medulla, becoming the spiritus animalis, as it were; and hence, that the chief office of the lungs is not to accelerate the motion of the blood. Some foreigner has considered this as a hypothesis only, but Linnaeus as an axiom.

Pathology is a subject on which he corresponded more than thirty years with the learned Sauvages, above 100 of whose letters are in his hands. Genera morborum have not been so clearly defined by any one; there is not a single word in them that is not useful: his work on this subject is an excellent compend for a tyro. He has divided fevers into three classes, after a method entirely his own: Exanthematicae typo scabiei ad exanthematibus vivis contagiosis; Criticae typo rheumatico (Fluss), ab acido serisanguinis; Phlogisticae, typo inflammatorio, a putrido cruoris sanguinis. He was the first to explain that taenia had no head, and grows *ad infinitum*, and also that fragments of this creature sprout again. That Lepra is caused by a species of Gordius, found principally in herrings, has since been confirmed by the Norwegians. To show that Raphania is occasioned by the Raphanistrum required his thorough acquaintance with natural history. He maintained the Scorbutus is caused by culinary salt. Diet nobody has treated of in a more solid and satisfactory manner, though he did not publish anything on the subject. His doctrines, like those of the maturer natural philosophers, are deduced from experience, and his system, like theirs, may therefore be called experimental. Everything was deduced from occurrrences in common life, cited in their proper places as examples, on which account his auditors were never more numerous than when he lectured on this subject. Several persons took notes at these lectures, but all the notes I have seen are incorrect. Pathology, the foundation of the whole medical art and of all medical theory, has been more improved by Linnaeus, in his *Clavis Medicinae* of eight pages (which is a masterpiece in its way, and one of the greatest treasures in medicine) than by a hundred authors and books in folio. The Mechanical Physicians, indeed, had shown that the action of the Sapida consists in relaxing or constringing, according to the nature of their taste: but neither the species saporis nor their contraries were explained, much less the nature of the Olida. Linné was the first who saw that Nature was balanced by contraries, and acted upon numero quinario. He saw that the Creator had given to animals two senses—namely, taste and smell; that the Sapida act only on the fluids and solids, or on the fibres; that the Odora act only on the brain and nerves. He found that Vitia Corporea, as well in the fluids as the solids, are only five in number; that the Vitia Encephali vel Systematis Nervosi are likewise five; each with the same number of contraries. He likewise found that the Sapida and Odora are also five, with as many contraries, and that the right indication results from a comparison of contraries with contraries. He proved this by examples. What can be stronger? For this was required all the knowledge that Linnaeus possessed of diet, natural history, medicine, materia medica. Few physicians had been conversant with all these branches together. Fortunate were those students who, before his time, could acquire this knowledge. Not to mention that Linnaeus was the first who said that all our principal medicines are poisons; that physicians ought not to condemn poisons, but to use them, as surgeons their knives, cautiously. The Materia Medica likewise was in a confused state, and many articles were imperfectly known until Linnaeus reformed it. He introduced the genus, specific difference, select synonyms, place of growth, cultivation; deduced their medicinal effects and uses from the impressions they produce on the organs of taste and smell, and lastly, described the several compositions, all of which had been either confounded or superficially treated of before, but by Linnaeus were distinctly explained in his *Materia Medica*. He was the first person who determined Sarcocolla, Balsam of Tolu quassia. He introduced several new articles; revived the use of others which had been forgotten: Ophiorrhiza, Fungus Melitensis, Senega, Dulcamara. Linnaeus was the first who brought this plant into general use in Sweden. He cured Syphilis and Scorbutus with it.[2] Virgo scorbuto summo afflicta, quum omnis generis remedia frustra essent adhibita ejusque gradus ad summum pervenisset, Medicus Razout, consilio Sauvagesii, eam perfecte curavit solo usu decocti Dulcamarae, quod remedium Sauvages ab illo Linnaeo acceperat. Dulcamarae decocto multos syphiliticos curavit Sauvages hujus usu a Linnaeo edoctus. Sauvagesium paucis ante obitum annis lippum, ut vix legeret librum, curavit Linné infuso caryophyllorum, ut ipse in literis fatetur "tibi debeo oculos meos." Ledum. He was the first person who taught that it was the chief specific against the whooping-cough. Moschus. He was the first who introduced it for the cure of contagious diseases, and as a preservative or expellens horum, ex principio febrium contagiosarum ab exanthematibus vivis—now common. R. Britannicae (Rumicis Aquatici radix) applied to ill-conditioned ulcers; he was first informed of from America, and by him it was communicated to Europeans. D'Ailland's powder he asserted to be (Pulvis) Baccarum Rhamni. Guy's powder against cancer Foliorum Acteaeae.

It is easy to smile at Linnaeus for jealously claiming credit for the discovery of the therapeutic virtues of ledum and moschus. The weaknesses of great men afford satisfaction to little men, because they seem to bring them down nearly to their own level. But in addition to their psychological interest, they are valuable as enabling us to understand the mental *ethos* of great men, and as often throwing most useful sidelights on the real meaning of their scientific teaching.

[1] Richard Pulteney, F.R.S., *A General View of the Writings of Linnaeus*. The second edition, which appeared in London in 1805, was edited by William George Maton, M.D.

LEAD POISONING AND WATER SUPPLIES.

THE following are the main points of general interest in Dr. Houston's report on lead poisoning and water supplies, which has been published as a *Supplement* in continuation of the *Report of the Medical Officer to the Local Government Board for* 1900-1.[3]

MOORLAND WATER AND LEAD POISONING.

Lead poisoning in epidemic form has, in many instances, been traced to the water supply, and in these cases it has generally been found, notably in the North of England, that those towns have been the greatest sufferers which derive their water from moorland sources. It has also been made evident that the association with lead poisoning was confined to certain kinds of upland water. Sheffield, for example, has a "high" and a "low level" supply, both of which are derived from upland gathering grounds, but with the important difference that the former supply was found to be rich in acid peaty water, and to contain very little spring water, whilst the latter contained a large proportion of neutral spring water and very little peaty water. The lead poisoning, it was found, occurred chiefly if not entirely amongst the consumers of the "high-level" supply; thereupon the acidity of this "high-level" water was neutralized with lime, the consequence being that lead poisoning was no longer observed. A similar instance was afforded by Mossley, which suffered from an epidemic of lead poisoning in 1893. The reservoir supplying a particular district was found to contain acid water which

[2] Act. Paris, 1791, p. 53.

[3] To be purchased, either directly or through any bookseller, from Eyre and Spottiswoode, East Harding Street, Fleet Street, E.C., and 32, Abingdon Street, Westminster, S.W.; or Oliver and Boyd, Edinburgh; or E. Ponsonby, 116, Grafton Street, Dublin. 1903. [Cd. 1343.] Price, 8s. 10d.

had a solvent action on lead; after the neutralization of this water with lime the epidemic disappeared.

The Relation of Peat to Plumbo-Solvency.

In order to determine by exact scientific methods whether peat is the sole or mainly responsible factor in conferring plumbo-solvent properties upon a moorland water, Dr. Houston has made exhaustive analyses of the various water sources in the Burnmoor district, which was selected as being a typical example of a moorland gathering ground. A complete analysis was made at weekly intervals of samples collected from diverse sources, and their solvent property upon lead was tested by allowing the water to filter slowly through washed lead shot, prepared free from arsenic and other impurities, and then making a quantitative estimation of any lead found in the filtrate. The conclusions drawn from these experiments were as follows:

1. The chemical composition of spring water, peaty water, and moorland spring (mixed) water was very similar in respect of total solids, organic matter, oxydized nitrogen, chlorine, hardness, and dissolved oxygen, although peaty water gave the highest results as regards organic matter.

2. In a series of examinations of these waters continued for many months it was found that variations in the chemical characters above specified were in no case accompanied by corresponding variations in plumbo-solvent ability.

3. In respect of acidity, however, there was a marked contrast between the several waters which corresponded to observed difference in their lead-dissolving powers. Moreover, in the case of samples of the same water examined periodically for a series of months, it was found that variations in acidity were accompanied by corresponding variations in plumbo-solvent ability.

4. Moorland spring water was found to be neutral and free from plumbo-solvent ability. Commonly it possessed as well a slight, but distinctly appreciable, degree of acid-neutralizing ability.

5. Moorland peaty water was found to be usually distinctly acid and possessed of a vigorously solvent action on lead.

6. Mixtures of peaty and spring water were found to be sometimes acid and sometimes neutral, dissolving lead in the former case, but not in the latter.

It was found, moreover, that acid peaty waters have the power not only of dissolving bright lead, but old-coated lead, and that the action was a very rapid one. Considerable light was thrown on the cause of the acid-producing properties of peat by the discovery that certain microbes isolated from peat possess the power of rendering by their growth a sterile neutral decoction made solely from peat both acid and possessed of plumbo-solvency. In addition to his work at Burnmoor, Dr. Houston has examined the moorland gathering grounds of 23 other waterworks in Lancashire and Yorkshire, and found that out of 58 reservoirs serving them, 35 contained acid water which was plumbo-solvent. The source of acidity could in many cases be traced to peaty streams or feeders, which either contributed acid water habitually or were liable to do so in time of flood.

Variations in Degree of Plumbo-Solvency.

The degree of plumbo-solvency of a water was found to be chiefly determined by the amount of its acidity. Moist peat being always acid, the amount of acidity of the water depends largely on the amount of peat and the length of time the water has been in contact with it. When peaty water receives an admixture of spring water its acidity is diminished in a greater or less degree, varying with the amount of the latter, and may, if the latter is added in sufficient quantity, be completely neutralized. The reaction of a moorland water as it passes into the reservoir is dependent to a very considerable extent upon the weather. In dry weather it consists chiefly of spring water and is generally, especially towards the end of a dry period, neutral in reaction and possessed of no action upon lead. In wet weather the reverse is the case. The water is then chiefly surface water draining from peaty soil and, during storms especially, is strongly acid. It thus frequently happens that when heavy rain comes after drought millions of gallons of acid peaty water are allowed to enter the storage reservoirs and the reaction of the water in these reservoirs may from this reason continue to be strongly acid during periods of dry weather when all or nearly all the "inlet" streams are found to be neutral.

Other Causes of Acidity.

It was found that the amount of the acidity in the rain falling on moorland gathering grounds was quite insufficient to explain the acidity of moorland waters. If, however, water drains from rock rich in iron pyrites it may, owing to oxidation of that substance, become acid to a highly dangerous degree. An example of this kind was found in one of the sources of supply, no longer used, to the Rochdale Waterworks. This water drained from a disused mine very rich in iron pyrites. An artificial filter was made up of large and small portions of the rock, and neutral water was filtered continuously through it for several weeks. The filtrate was always exceedingly acid, and when sufficiently diluted with water dissolved lead to an enormous extent. But, so far as he could ascertain by personal inspection and on inquiry, Dr. Houston finds that this is quite an exceptional case, whereas the acidity produced by peat is an invariable and constant factor.

Methods of Treatment.

It would of course be impracticable to require, in the case of a water supply of moorland origin, that flood water should be excluded under all circumstances and at all times: but Dr. Houston points out the importance of adopting mechanical contrivances, already in use at some waterworks, to prevent access to the supply of the "first washings" of peaty soil after periods of drought. He also recommends the adoption of methods designed to exclude from the supply contributory waters which investigation has shown to be conspicuously and uniformly acid. When the acid sources of supply cannot be excluded, artificial treatment of the water must be adopted, and experience has shown that there are many such methods of removing plumbo-solvency with eminently successful results. Wakefield Corporation Waterworks use a solution of sodium carbonate. Five hundred gallons of this solution, containing about 1 lb. per gallon, are mixed with 1,000,000 gallons of acid water, the result being that the plumbo-solvency is completely removed. At Sheffield the acid water is treated with lime (2 grains to the gallon) in an apparatus which works automatically, and thoroughly mixes the lime and water together. At Keighley the water is filtered through coke, then through filter beds containing ground sandstone, broken sandstone, and limestone, and finally through beds of polarite. And in other waterworks other varieties of treatment are adopted. In considering which form of treatment is the best, Dr. Houston inclines to the belief that ordinary sand filtration, with the addition to the filter of some neutralizing material, for example, a thin coating of lime on the surface of the sand, with limestone underneath the sand, and the subsequent addition of a trace of sodium carbonate to the neutral filtered water, is most satisfactory.

"Erosive Power."

The report deals almost entirely with "plumbo-solvency," which is to be distinguished from the "erosive power" inherent in water containing dissolved oxygen. The latter property, in the absence of the former, is not regarded as an intrinsically dangerous quality except under special conditions, and in the presence of bright lead.

LITERARY NOTES.

According to the *New York State Journal of Medicine* there are at present 266 medical journals published in the United States, 11 weekly and 209 monthly. Of these, 45 are published in New York, 21 in Chicago, 21 in St. Louis, and 19 in Philadelphia.

The *Birmingham Medical Review* now appears in a new and enlarged form. The publishers are Messrs. Percival Jones, Limited. We are pleased to note that the changes do not affect the editorial conduct of the *Review*, which will continue to be in the able hands of Drs. Russell and Douglas Stanley.

A medical journal for South Africa, under the title of *South African Medical Record*, will, we understand, shortly be commenced, under the editorship of Dr. W. Darley Hartley. The new periodical will be a monthly, and will be published at Capetown; the first number will appear in March. Dr. Darley Hartley acted as one of our special correspondents during the recent war. He was editor of the pioneer medical paper of South Africa, the old *South African Medical Journal*, for five years. He has also had extensive experience in other branches of journalism, having edited a Masonic paper, and at different times two general Colonial papers. At present, we believe, he is the principal leader writer of one of the

Capetown papers. As a student Dr. Darley Hartley edited the *Guy's Gazette*. We heartily wish him success in his new undertaking.

In the *Philadelphia Medical Journal* of February 7th Dr. Henry Leffmann calls attention to the curious discrepancies in the evidence as to Lord Byron's lameness. There is no doubt that he was lame, for he himself refers to a deformity of his foot, and he attributes it to some accident at birth, due to the excessive modesty of his mother. But which foot was deformed? The following note, which is quoted from the definitive edition of the poet's works issued two or three years ago by John Murray, shows how difficult it is to get at the simple truth, even when there is abundance of first-hand testimony and the witnesses have no conceivable interest in misrepresenting facts:

> The nature and extent of Byron's lameness have been the subject of a curious variety of opinion. Lady Blessington, Moore, Galt, and the Countess Albrizzi never knew which foot was deformed. Jackson, the boxer, thought it was the *left* foot. Trelawney says that it proceeded from a contraction of the back sinews, and that the *right* foot was most distorted. The lasts, from which his shoes were made by Swift, the Southwell bootmaker, are preserved in the Nottingham Museum, and in both the foot is perfect in shape. The last pair of shoes modelled on them was made when the poet was about 19. Mrs. Leigh Hunt says that the *left* foot was shrunken, but was not a club-foot. Stendal says the *right* foot. Thorwaldsen indicates the *left* foot. Dr. James Millingen, who inspected the feet after the poet's death, says that there was congenital malformation of the *left* foot and leg, with club-foot. Two surgical boots, made for the use of Byron when a child, are in possession of Mr. Murray; both are for the *right* foot, ankle and leg, and, assuming that they were made to fit the foot, they are too long and thin for a club-foot. Mrs. Byron, in a letter written when the boy was 3 years old, says: "George's foot turns inward; it is the right foot. He walks quite on the side of the foot."

The editor states that Byron suffered from infantile paralysis affecting the inner muscles of the right foot and leg, but cites no professional evidence. Well may Hippocrates say that experience is fallacious if those who knew most intimately a man of the greatest celebrity cannot agree as to a simple matter of fact.

Dr. W. W. Johnston, of Washington, has reprinted an interesting essay contributed by him to the *American Anthropologist* on the nature of Charles Darwin's ill-health and its relation to his work. In the *Reminiscences* of the great naturalist written by his son it is said to have been a principal feature of his life that for nearly forty years he never knew one day of the health of ordinary men, and thus his life was one long struggle of the weariness and strain of sickness. Darwin's letters to his scientific friends are full of references to persistent suffering and to the interruptions and delays that were caused by continued illness. Various opinions have been expressed as to the nature of his illness. His continued sufferings were said to have been the result of prolonged sea-sickness and of inherited dyspepsia; but Dr. Johnston says that no rational or complete diagnosis of his disease with an explanation of its causes is on record. Darwin inherited a strong constitution and a large frame from his father's family, and in early life he was strong and so fond of outdoor sports that his father reproached him with caring for nothing but "shooting, dogs, and rat catching." The three years which he spent at Cambridge were, he said himself, the most joyous of his life, because "he was in excellent health, and always in high spirits." It was at Plymouth, while waiting for the sailing of the *Beagle*, to which he had been appointed naturalist, that he began to suffer from palpitation and pains about the heart. He was then 22 years of age. He thought he had heart disease, but would not see a physician lest he should be pronounced unfit for the voyage. During the five years of the voyage he speaks occasionally of being ill, and of having to take rest; but there is no definite statement of symptoms, and his power of endurance was greater than that of the majority of his shipmates. Some five or six years after his return his health became so seriously impaired that he could not attend scientific meetings or even meet his friends, and he determined to leave London and live at Down, his country seat. Here his symptoms became more definite. They followed the excitement of receiving and conversing with friends and consisted of violent shivering with vomiting and giddiness. At times he was so giddy as to need an alpenstock to steady him even in the house. He was very sensitive both to heat and cold; if anything went wrong with his work he would complain of a sense of oppression from heat. Insomnia was one of the most constant and most distressing of his symptoms. As the years went by all invitations were refused; social life was practically given up and he rarely felt well enough to receive visits from scientific friends. In 1859 he wrote that his health had "quite failed" that he had great prostration of mind and body, bad headaches, with frequent attacks of acute exhaustion; his work is spoken of as a burden from which he would gladly be freed. He was then often confined to the house for weeks at a time; he feared that he would soon entirely fail and believed that he must husband the little strength left in order to finish his work. The calm and well-balanced mind of Darwin does not justify the belief that the symptoms were imaginary, and there is the positive testimony of his son that he suffered from insomnia, vertigo, an abnormal sensibility to heat and cold, dizziness, vomiting, sensations of distress about the heart, chronic indigestion, and prostration chiefly affecting the nervous system after mental strain. In 1872, at the age of 63 years, for the first time since the beginning of his illness, a marked change for the better appeared, and during the last ten years of his life—from 1872 to 1882—"the condition of his health was a cause of satisfaction and hope to his family:" there was less distress and discomfort, and he was able to work more steadily. This improvement was in great part due to the wise counsel of Sir Andrew Clark, who was at that time frequently consulted. The symptoms connected with the nervous system were less distressing, but there was a certain loss of physical vigour, with more frequent attacks of pain or uneasiness about the heart. On December 13th, 1881, he had the first series of attacks of angina pectoris. Irregularity of the pulse followed, with attacks of faintness. In April, 1882, these symptoms were aggravated, and fainting attacks, from which he recovered with difficulty, occurred. After much suffering from nausea and faintness, death came on April 19th, 1882. Dr. Johnston thinks Darwin's ill-health had its origin in mental overstrain caused by the work which he had to do on the *Beagle*. Added to this were the physical discomfort, hardship, fatigue, and exposure entailed by his life at sea, and the long exploring expeditions in every variety of climate in which he took part. When he returned to England he was in urgent need of rest, but he continued to tax his nervous system beyond its strength. From the evidence supplied by Darwin's own letters and the biographical details given by his son, Dr. Johnston concludes that his disease did not consist of any gross lesions of the brain, spinal cord, or nerves, nor of any organic change outside of the nervous system. The chronic indigestion and disturbances in the action of the heart were the usual well recognized accompaniments of loss of the normal nerve supply to the digestive organs and the heart. The symptoms that preceded death were manifestly due to senile arterio-sclerotic changes, leading ultimately to heart exhaustion and angina pectoris, and hastened no doubt by the life of excessive labour. They did not exist, however, before the oncoming of old age. The early symptoms connected with the heart were the result of the disease of the nervous system, not of any organic change in the heart or arteries. The final conclusion is that Darwin's disease was chronic neurasthenia of a severe grade due first to the overstrain of the *Beagle* voyage and secondly to the life of hard intellectual work begun in 1837 and continued until 1882.

In the February issue of *Vectis*, a monthly journal, "literary, social, dramatic," edited by Dr. G. H. R. Dabbs, there is an account of the editor's professional relations with Tennyson, which extended over a quarter of a century. He says that he read at the time of the late Laureate's death a statement that he was not a very kindly critic of the medical profession, and allusion was made to that terrible pen description (for he himself assured Dr. Dabbs that it is no portrait) of the surgeon who seemed to rejoice in the use of his deadly tools. Dr. Dabbs can recall, though it is many years ago, Tennyson's distress of mind that he should have been thought to be drawing the portrait of, as he put it, "a mere butcher," and his passionate assertion that he had no individual in his mind. Dr. Dabbs continues:

> When his death came somewhat suddenly in October, 1892, we were asked at that time a good many questions as to his bearing towards his doctors. The writer was for twenty-five years closely associated with him in the capacity of medical attendant, and there were very few weeks that he did not see him, though not always professionally. Of course, there was always the barrier between them as to the vivisection question, which the writer could not regard from the same uncompromising standpoint as the late Poet Laureate, and there was often the lesser barrier of differences of opinion as to the agnostic side of vital things, as there must be differences between the ordinary mind and the extraordinary when circumstances shall so act and react as to bring individuals of different mental calibres into the con-

tinual interchange of opinions. But, all that conceded, there was no limit to the writer's admiration for the wholehearted loyalty of the poet towards those who advised him. He was absolutely incapable of any sly deception as to other advice; if he did not like your treatment he said so, and in remarkably plain language. If he thought your estimate of his condition was erroneous he asked you for your reasons, and when you gave them he put them through a furnace of criticism which was of the most biting prose, in no sense idyllic. But he was true and straight. He might not always be complimentary, but he *was* always a man who thought and spoke as a man. And the subterfuge of a hidden meaning or a deluding impression he would have scorned. He might to your face try your sense of personal dignity now and then, but he never allowed himself to discuss your opinion or his opinion of you with others behind your back, and he would have resented "the sly mendacity of hints" if ever tried in your despite by any of the carrier pigeons of society. No doubt he was a man of strong opinions. He could not fail to be. When a man regards the mildest evasion or trick as a minor form of treason against his honour, he is very apt to be exacting as to the code of other people. He did not understand, and would not have forgiven, the clinical deception or the tactful deceit of the sick room. He asked for the truth, and he meant to have it. "This is what I believe to be your condition, and this is what I fear, and this is what I hope," we once said to him, and he listened and quite appreciated the distinctions, and had perfect reverence for any reticence based on such a protocol. He was not an easy patient, but he never said a word to you except to your face; he did not know, and would not have tolerated, slander of any kind. We recall an incident even now with a shudder in which his kindness smoothed away, and his common sense reconciled all doubtful and disturbing issues. It happened that a neighbour of his—a patient of the writer's—had an unsuspected and unknown predisposition against any form of belladonna. In fact, belladonna was poisonous to him, just as mutton, and strawberries, and shellfish, and (unfortunately) chloroform are to a few people. He was attacked one night with agonising pain, but begged the writer not to inject morphine, as he dreaded it. A form of belladonna (in a very small dose) was exhibited, and it was hours and hours before the anxious doctor could leave his patient. Asked next day what had caused the dangerous collapse, the writer stated that it was due to the belladonna, and to that alone. In conversation with Lord Tennyson a few days after, the patient told the Poet Laureate the story, and said to him: "Would you employ the man again?" And Lord Tennyson (to whom the writer had not breathed one word of the incident) replied: "Certainly, I would. A man who can tell the truth and chance the consequences, when he might have put you off with any lie, *is* a man to be trusted!" And naturally the writer, when he heard of the conversation, did not omit to thank his true friend for a conclusion at once so noble and so just. But that was the man exactly. He might be brusque and occasionally use an uncomplimentary word, but he was as just as the sunlight. In fact, he was a big man—a big man in all ways—a man who scorned (and did not understand) littleness, and would not consort with any equivocal conduct or equivocal means.

The following interesting pen picture of Laënnec which we borrow from the *Albany Medical Annals* for February is taken from the *Recollections of a Lifetime*, by Dr. S. G. Godrich (Peter Parley):

Went to the hospital of La Charité. Saw Laënnec, with his pupils, visiting the patients. He makes great use of the stethoscope, which is a wooden tube applied to the body and put to the ear; by the sound the state of the lungs and the vital organs is ascertained. It is like a telescope, by which the interior of the body is perceived, only that the ear is used instead of the eye. It is deemed a great improvement. Laënnec is the inventor, and has high reputation in the treatment of diseases of the chest. He has learned to ascertain the condition of the lungs by thumping on the breast and back of the patient and putting the ear to the body at the same time. He is a little man, 5 ft. 3 in. high, and thin as a shadow. However, he has acute features and a manner which bespeaks energy and consciousness of power. The whole hospital was neat and clean; bedsteads of iron. French medical practice very light; few medicines given; nursing is a great part of the treatment. Laënnec's pupils followed him from patient to patient. He conversed with them in Latin.

The following entries about the influenza epidemic of 1837, from the diary of John Acton, an old Sheffield druggist, were recently published by Mr. John Austen, a pharmacist of Sheffield, in the *Sheffield Daily Telegraph* and quoted by the *Chemist and Druggist*, from which in turn we take the liberty of "lifting" them, as they have a special interest at the present time:—

January 25th, 1837.—I have not had such a brisk physic trade for years. Nearly every house in Sheffield is visited with the influenza. It is so bad in Glasgow that many shops are entirely closed with an inscription posted on the shuts intimating that business will be resumed in a few days. Every newspaper I look into has a remedy for it. Paregoric, sweet nitre, and ipecacuanha wine are all the go, and the people buy freely, and I daresay they take nearly all they buy, for medicine differs materially from nearly every other commodity. I believe I have a touch of it myself. All I have taken for it as yet is a little theriaca et butyrum (treacle and butter).

February 1.—I am so very busy with the influenza that I have had time for nothing else.

February 4.—I saw in the paper a most alarming account of the influenza in Sheffield and other parts of England. It is very fatal both here and elsewhere. I have been at the physic business rather better than twenty-one years, but I never knew half such a physic trade as there is now.

THE PREVENTION OF CONSUMPTION.

WESTMORLAND COUNTY SANATORIUM.

THE Earl of Derby, who presided at the third annual meeting of the subscribers to this institution, said that the report for the year was in itself evidence of the excellence of the work that had been done. The sanatorium showed what could be done on a small scale without a large building and numerous staff. Knowing as he did a good many of the large establishments all over the country, he was not sure that these large palaces did not go to the other extreme. He believed there was a good future before the smaller institutions, provided the proper treatment was carried out in them. Another important feature about the Meathop sanatorium was the manner in which the different wards and districts in the county had taken up beds and contributed funds. He understood that there was a proposal on foot to set up an establishment for the reception of the more chronic and advanced cases, and although this project was not necessarily connected with the Meathop institution, it would be well worthy of support. Dr. Paget Tomlinson, Honorary Secretary, then read the report for the year 1902, showing that the number of patients in the sanatorium at any one time was 19 or 20—three more than a year ago, and that the beds were nearly equally divided between the two sexes. The average length of stay varied from twelve weeks in the early cases to twenty-four weeks in the advanced cases. The cases admitted had been sent in in an earlier stage and more hopeful condition than in either of the preceding years. The institution had now been in existence sufficiently long to be able to test the value of the treatment, and it was shown, as was anticipated, that the vast majority admitted in the earliest stage recovered so satisfactorily that they were able to return to some years of useful work. Heavy expenditure had been necessary in connexion with the water supply, a pipe having to be laid for a distance of over a mile to tap the Grange-Arnside main. Extension of the accommodation was required, and with a deficit on the year's balance-sheet of about £250, between £500 and £600 was needed. The Mayor of Kendal (Alderman J. Monkhouse) moved the adoption of the report; this motion was seconded by Captain Bagot, M.P., and unanimously accepted.

SCOTLAND.

Dundee.—It is stated that permanent notices are to be attached to the lamp-posts in the main streets of Dundee forbidding spitting on the footways.

CONTRACT MEDICAL PRACTICE.

MOTHERWELL, LANARK.

THE medical men in the Motherwell district have hitherto been receiving from the Friendly Societies payment at the rate of 2s. 6d. a member per annum for attendance and medicine. An association of the local medical men was formed recently, and on December 19th last a circular letter was sent to all the societies stating that no appointment would be accepted at a lower fee than 4s. a member per annum. With two or three exceptions the societies have refused to pay this fee and the medical men have severed their connexion. Eleven societies, representing about 2 400 members, have now formed a medical aid association, which is advertising for a medical officer. These facts should be known to any member of the profession who may notice the advertisement. We trust that no one will be found ready to place himself in opposition to the local medical profession in this matter.

CLUB RATES.

Dr. F. W. WATERS (Sheerness-on-Sea) writes with reference to the letter from "A. T." published in the BRITISH MEDICAL JOURNAL of February 21st, p. 475, in which surprise is expressed at the rate of contract pay in Fleetwood, to point out that in Sheerness the local medical benefit society pays 3d. a week, or 2s. 2d. per annum. Dr. Waters recalls the fact that in September last a letter from him was inserted in the JOURNAL inviting any medical man thinking of applying for the post of medical officer to this society to write to him first. Dr. Waters states that there were a large number of applicants for the post, but that he received very few letters on the subject. He was loyally supported by prominent members of the local Branch of the British Medical Association, but the medical benefit society obtained a medical man at the old rate. Dr. Waters regrets the absence of combination and

the fact that so many members of the medical profession appear to play each for their own hand. This may be due, he thinks, to poverty, but is none the less regrettable.

SWANSEA.

We are indebted to Dr. Rhys Davies, of Swansea, for the following note with regard to the satisfactory conclusion of the conflict which had arisen in Swansea with regard to the arrangements between the medical profession and the clubs:

"I am glad to say that the battle of the clubs is over in Swansea. A great attempt was made to form a medical aid society here, but the large majority of the members of the Friendly Societies refused to support such a movement, stating that the requests of the doctors were very reasonable, and that the importation of medical men into the town would be a direct and flagrant violation of the principles of trades-unionism.

"The doctors make one concession. They are willing that the members should adopt the principle of single payments. In other words, no member of two or more societies need pay in future to more than one doctor. Probably only a few will take advantage of this concession, as many of the most thoughtful members of the various clubs are of opinion that, if freely adopted, it may seriously affect the financial condition of their societies.

"The battle of the clubs may have its risks and its catastrophes; and no society of medical men, however firmly combined, should enter this arena without being well prepared. They should know the rates of payment of the various Friendly Societies throughout the country. They should have a fairly complete list of medical aid societies, and of their working expenses. They should be led by firm, tactful, and reliable men, thoroughly respected by their professional brethren, and trusted by the Friendly Societies. Before giving a general notice of the demand for an increased rate of payment, it is almost essential that the reasons for taking this step should be put clearly before each society by its own medical officer.

"The Swansea practitioners received prompt and valuable assistance from many medical men throughout the country, for which they are deeply grateful."

ASSOCIATION NOTICES.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1903.

MEETINGS of the Council will be held on April 22nd, July 8th, and October 21st in the Council Room of the British Medical Association, 429, Strand, London, W.C.

ELECTION OF MEMBERS.

ANY candidate for election should forward his application upon a form, which will be furnished by the General Secretary of the Association, 429, Strand. Applications for membership should be sent to the General Secretary not less than thirty-five days prior to the date of a meeting of the Council.

GUY ELLISTON, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.—A meeting of this District will be held at St. Bartholomew's Hospital, Rochester, on Friday, March 6th, at 3.30 p.m.; Mr. F. W. H. Penfold in the chair. Agenda:—Minutes of previous meeting. Place, date, and Chairman of next meeting. The following papers will then be read:—Dr. W. J. Tyson, F.R.C.P.: Some Thoughts on Food and Exercise. Mr. F. Jaffrey (Assistant Surgeon to St. George's Hospital and to the Belgrave Hospital for Children): The Symptoms and Treatment of Acute Appendicitis. Dr. E. J. Edwardes (Imperial Vaccination League): The Position of this Country as regards Vaccination Legislation.—LUDFORD COOPER, 19, Victoria Street, Rochester, Honorary Secretary.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.—The next meeting of this District will be held at the Queen's Hotel, Upper Norwood, on Thursday, March 12th, at 4 p.m., Dr. B. N. Dalton, of South Norwood, in the chair. Dinner at 6 p.m.: charge 7s., exclusive of wine. Agenda: Minutes of Reigate meeting. To decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. Election of Honorary Secretary. The following papers, etc., will be read:—Dr. F. Taylor: The Treatment of Chlorosis. Dr. Newton Pitt: On the Value of the Examination of the Blood for Diagnosis. Mr. R. Clement Lucas: Cases of Influenzal Orchitis. Mr. A. H. Tubby: Some Deceptive Abdominal Conditions and when to Operate. Dr. A. P. Allan: Some remarks on Enlarged Cervical Glands in Children. Members desirous of exhibiting specimens or reading notes of cases are invited to communicate at once with the Honorary Secretary. All members of the South-Eastern Branch are entitled to attend and to introduce professional friends, and the Honorary Secretary would be much obliged if members would kindly inform him by post card whether they intend, if possible, to be present at the meeting, and if likely to remain to dinner.—HENRY J. PRANGLEY, Tudor House, Anerley, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The next meeting of this District will be held at Brooke House, Upper Clapton, on Thursday, March 19th, at 8.30 p.m. The chair will be taken by Mr. Powell, Vice-President of the District. Members desiring to read short papers or to show cases are requested to communicate with the Honorary Secretary as soon as possible.—C. J. MORTON, 56, Orford Road, Walthamstow, Honorary Secretary.

EAST ANGLIAN BRANCH.—*Preliminary Notice:* The spring meeting of this Branch will be held at the Green Dragon Hotel, Wymondham, on Thursday, March 26th. Lunch at 1.15. Any member wishing to show cases or specimens, or to read a paper at the meeting, should communicate with Mr. H. A. Ballance, Norwich.—B. H. NICHOLSON, Colchester, General Secretary.

SPECIAL CORRESPONDENCE.

EDINBURGH.

Unusual Death-rate.—Annual Dinner of the Royal Medical Society.—Morison Lectures.—Queen Victoria's Jubilee Institute of Nurses.—Honorary Degrees at the University.

THE mortality of Edinburgh for the week ending February 21st was 69, and the death-rate 11 per 1,000—an unusually low rate. Thus, in the corresponding week of last year the mortality was 127 and the death-rate 20 per 1,000; or, to compare the week in question with the four preceding weeks of this year, we have to compare 69 with 108, 104, 105, and 82 respectively. As in so many other parts of the kingdom there has been a prevalence of high winds, comparatively mild weather mainly, and a good deal of rain. The direction of the wind was WSW. for the most part. The rainfall for the month up to February 21st has been 3.06 in. The monthly average rainfall is 1.63 in.

The annual dinner of the Royal Medical Society is to take place at 129, Princes Street, on Tuesday, March 3rd, at 7 p.m., when the guest of the evening is to be Mr. Mayo Robson.

The Morison Lectures of the Royal College of Physicians will be delivered in the College Hall, 9, Queen Street, by Dr. George A. Gibson, D.Sc., F.R.C.P.Ed., at 5 p.m., on Monday, March 2nd, Wednesday, March 4th, and Friday, March 6th.

The fourteenth annual report of Queen Victoria's Jubilee Institute of Nurses indicates that the work continues to progress and to develop satisfactorily. The Scottish Council were responsible for the maintenance of 51 nurses and probationers during the year; 18 candidates entered the Training Home for the required month of probation before receiving hospital training, of whom 5 failed; 34 probationers who had received hospital training entered the Home for six months' district training, of whom 1 failed; 31 nurses completed training; and 31 nurses had, on the completion of their training, been engaged from the Home by local committees. Thirty nurses resigned, eleven new branches affiliated, and four branches disaffiliated. There are now 224 Queen's nurses in Scotland, under 150 affiliated branches. During the year, 5,053 cases had been seen, involving over 103 000 visits, a marked increase over the preceding year. The year's income was £2,334 and the expenditure £3,164, an excess of the latter amounting to £830.

The Senatus Academicus has offered the honorary degree of LL.D., to be conferred on April 9th, to Arthur Gamgee, M.D., F.R.S., Emeritus Professor of Physiology, Owens College, Manchester; to Sir John Jackson, F.R.S.E., London; and to Sir John Usher, of Norton and Wells, Bart.

MANCHESTER.

Lectureship in Clinical Neurology in Owens College.—How Small-pox is Spread.—Potted Shrimps and Boracic Acid.

A LECTURESHIP in Clinical Neurology has been instituted by by the Council in Owens College, and Dr. Judson S. Bury has been appointed the first Lecturer.

The epidemic of small-pox in and around Manchester still keeps on its way; and, indeed, it is stated that the disease is becoming of a more severe type, and more difficult to control. The officials and inspectors are indefatigable in endeavouring to trace all contacts. One illustrative case is given where one man is known to have infected seventeen persons.

A very important judgement has just been delivered by the stipendiary of Manchester on the question of the use of preservatives in potted shrimps. A fish dealer was summoned at the instance of the Lancashire County Council for selling a pot of shrimps. It contained $7\frac{1}{2}$ gr. of boracic acid, which was admitted to have been added as a preservative, this being at the rate of 58 gr. to the lb. This was held by the prosecution to be injurious to health. Much evidence was given on both sides. The real question in effect was whether the added ingredient was innocuous and added of necessity so as to make the article in a state fit for commerce, and to be carried, or whether it is added fraudulently to conceal the inferior quality of the article. The stipendiary after reviewing all the evidence—scientific and otherwise—came without hesitation to the conclusion that the boracic acid used was not injurious to health since it appeared that this substance had been used for the last ten years as a preservative for shrimps, and no case of injury to health arising from its use had been proved by the prosecution. He was also of opinion upon the balance of testimony that a preservative was requisite for the preparation of potted shrimps as an article of commerce in a state fit for carriage. It appears that Dutch shrimps are caught and picked under more sanitary conditions than English ones, in consequence of the Dutch laws.

LEEDS.

The Victoria University: A Federal University for Yorkshire Impracticable: Proposed Yorkshire University in Leeds: The Future of the Medical Faculty.

THE announcement of the decision of the Privy Council upon the question of the disruption of the Victoria University has been received in Leeds with little or no surprise. Though the authorities of the Yorkshire College had consistently and strenuously opposed dissolution they recognized that the success of the Liverpool petition was, to say the least, not improbable.

When the decision was made public the Yorkshire College had not considered the framing of a charter for a separate University to be established in Leeds. The time has now arrived, however, when they must take stock of their position and determine upon their attitude in the future.

In the first place, the existence of a federal university for Yorkshire is impracticable and impossible. Federalism is dead, and Liverpool has killed it. To attempt the foundation of a federal University for Yorkshire is to build upon sand. There could be no confidence in the stability or in the permanence of such a structure.

A new charter for the Yorkshire University in Leeds is therefore to be sought. In the framing of this charter it is hoped that the most liberal spirit will be displayed. There are many institutions of varied character in the larger Yorkshire towns which might usefully be affiliated to the University in Leeds. Affiliation benefits both the institutions concerned.

It has been learnt by sore and frequent experience that federation involves cumbersome and slow-working machinery; and that in the settlement of many of the questions which must continually arise the waste of time was annoying and purposeless, and constituted a legitimate reproach to the business methods of the University. In a Yorkshire University at Leeds this machinery for government is ready made. It has been working well for many years, and when set free from the entanglements of sister colleges will work expeditiously and more effectively than before. It must be borne in mind that what can be easily managed if all the staff are on the spot becomes much more difficult and more intricate when they have to be summoned from a distance. Cumbersome committees always militate against the rapid and effective discharge of the managerial duties of any institution. Committees must be rendered as light and as easily managed as possible, for most serious inroads upon the time of the teaching staff result from their having too much of the duty of organization thrown upon them.

Of the future of the Medical Department, in particular, in Leeds, there can be little doubt. A school with such a reputation—a reputation which was matured before the Yorkshire College and the Victoria University were conceived—must continue to do good work. If financial aid in the work is necessary—and it probably will be necessary—the students of the old Leeds Medical School will doubtless respond to any demands that are made upon them.

CORRESPONDENCE.

TENURE OF OFFICE OF MEDICAL OFFICERS OF HEALTH.

SIR,—During the past few years I have been brought in contact with a great many medical officers of health and have been struck with the unanimity of opinion among them as to the necessity for obtaining security of tenure of office. Especially is this the case with those who are connected with small urban or rural districts and your correspondent "A Provincial Medical Officer of Health" is only giving expression to the views of his colleagues when he says that the present insecurity of tenure is the cause of want of progression in many sanitary districts. Sir Francis Powell has been most unfortunate with his Bill; time after time it has been down for second reading, but has been blocked usually by Mr. John Burns or by one of the Irish members, so that we have not even the advantage of knowing why the opponents of the measure object to it.

One way in which the passing of the Bill can be hastened is by medical officers of health making a point of interviewing members of Parliament, and explaining to them the provisions of the Bill. I myself have been amazed to find how many members do not know that our position is insecure. They are aware that Poor-law medical officers can only be dismissed with the consent of the Local Government Board, and they conclude that medical officers of health hold office under similar conditions.

As long ago as 1895, when he was Parliamentary Secretary to the Local Government Board, Sir Walter Foster said that the Board considered these appointments for short periods and precarious tenure injurious to the public health, and had decided to encourage local authorities to make the appointments for long periods, and if possible permanent. There are about 1,400 medical officers of health in the English and Welsh provinces, but the number who, during the past eight years, have been appointed permanently in response to the encouragement of the Local Government Board is quite insignificant. Surely the time has come, therefore, for the Board through its President to give some assistance to Sir Francis Powell in connexion with his Bill. I should like to say how grateful medical officers of health are to the British Medical Association for promoting the Public Health Bill.—I am, etc.,

Hereford, Feb. 24th. HERBERT JONES.

DISTRIBUTION OF HOSPITALS IN LONDON.

SIR,—In reference to Mr. Reginald Harrison's letter in the BRITISH MEDICAL JOURNAL of February 21st, to which you have called my attention, it may be helpful to point out that everything seems to be shaping in the direction of the transplantation of one or two hospitals from their present sites to neighbourhoods where there is at present an urgent demand for a great general hospital.

I have long advocated a plan whereby it would be rendered impossible for any building to be acquired by private or other people and called a hospital, however unsuitable it may be for the purpose, without first obtaining the sanction of the municipality which is charged with the duty of protecting and conserving the health of the citizens. Why the Medical Officer of Health of the County Council, or the County Council itself, has never touched this question is a mystery which, perhaps, Sir William Collins or Mr. Shirley Murphy may be able to explain.

I think we have a right to look to Sir William Collins, as the able leader of many new departures in County Council government in connexion with the housing of the people, and the convalescent and hospital care of the citizens, to see that a clause is introduced into an Omnibus Bill of the County Council without delay, giving it authority to remove the existing abuses connected with private adventure hospital schemes in London once and for all. How any medical officer of health can be content to permit such buildings as the Royal Ear Hospital in Soho, the Queen's Jubilee Hospital in-patient's department at Brompton, and the St. Francis Hospital in the

New Kent Road to continue to treat patients under existing conditions without protest is, as I have said, a mystery.

I will not anticipate what I have to say on the subject of the redistribution of hospitals, which will be fully dealt with at the meeting of the Hospitals Association at Caxton Hall, Westminster, on Tuesday, March 3rd, at 5 p.m., which I hope many members of the medical profession will make it their business to attend.—I am, etc.,

Porchester Square, W., Feb. 21st. HENRY C. BURDETT.

SIR,—Mr. Harrison, in his letter of February 12th, falls into an error, for which he is not altogether to blame. It has never been intended to convert the Bolingbroke Hospital into a free general hospital, in the usual acceptation of the term, and no appeal on those lines has ever been issued by the Governors. It is hoped and intended, so soon as funds will allow, to increase its utility enormously, but strictly on the lines of its foundation, which I venture to say are unique of their kind, and pioneer to hospital reform. We are not keen on being converted into a teaching hospital with a special staff imbued with a sense of their own importance, and a well-marked contempt for the general practitioners, as such, and if a central hospital wishes to come on to our ground it will have to fall into line with our ideas. I may say that, so far from pauperising the population, we allow the family doctor, if he wishes, to attend his cases in the hospital, and, if they are in a position to pay, charge them the usual fees for attendance. All cases of accident which may have to come again to be dressed are given a card, which must be signed by the family doctor to say they are eligible, thus weeding out those patients who can pay. On the other hand, no case is refused, if urgent, and inhabitants of the neighbourhood—the hospital caters for over half a million souls—have a place where a strangulated hernia or a compound fracture can be promptly treated at any hour of the day or night.

So thoroughly do the inhabitants of Clapham Junction and district appreciate these benefits conferred by the hospital that the local Friendly Societies, numbering some thousands of working men, have formed a Committee of help and are issuing an appeal, of which I enclose you a copy.

It is a distorted report of one of their meetings, which, gravitating through the local papers into the general press, gave rise to the supposition which misled Mr. Harrison.—I am, etc,

LEONARD S. MCMANUS, M.D.,
President, Clapham Junction and District Bolingbroke Hospital Aid Committee; Governor of Bolingbroke Hospital.

St John's Hill, S.W., Feb. 25th.

INCOME-TAX ASSESSMENTS.

SIR,—So many of my medical friends and neighbours have complained to me of the manner in which the income tax is being collected in the medical quarter in London, that I feel that some reform should speedily be brought about. I find that this inopportune moment, when the tax is higher than it has been for many years past, has been chosen for putting up the assessments and thereby largely increasing the contributions paid by medical men. The amounts at which many have been assessed are what the public believe to be those of medical incomes, whereas every one inside the profession is well aware that these supposititious amounts should be always divided by two, sometimes by three, and even by four, in order to arrive at the net income at which we should be assessed. Few members of the profession seem to have any idea of the many reductions which they are entitled to make from their gross income; some are not even aware that they can claim to deduct their life-insurance premiums. The forms sent out by the Income-tax Commissioners seem to be solely intended for business and commercial men, and of a nature to puzzle and confuse men not brought up to business. I cannot learn that any Income tax Commissioners belong to the medical profession. In the case of barristers, their appeals are heard by members of their own profession, who are naturally better acquainted with their earnings.

It has also come to my knowledge that men whose incomes are partly derived from investments in our colonies pay a colonial income tax and are again assessed here in England, thereby paying double. We sometimes justly complain that the colonists bear too small a share in the cost of imperial defence; but if the present unjust system is continued, it would be only fair that they should receive credit for the amounts thus contributed. I am informed also that the public officials employed in the work of collecting the income-tax are paid a percentage on the amounts they gather, which is opposed to all our ideas as to how an English civil servant should be remunerated. With a view to remedying the above abuses, I would suggest (1) that our Association should get its legal adviser to draw up a paper of directions as to what deductions we are entitled to make from our gross income, and all information as to filling up the forms usually sent us, or to petition the commissioners for special forms suitable to medical men. (2) That if we are not to be placed on an equality with lawyers, and have our appeals heard by medical men, at least one of the commissioners in the medical quarter of London, and in all the great centres over England, should be nominated by the College of Physicians or the College of Surgeons. (3) That representations should be made to the Government for some consideration to be shown to those of our colonial brethren who at present are doubly taxed. (4) That all members of the Association should urge their representatives in Parliament to impress upon the Government the desirability of the income-tax officials being paid adequate salaries, and not allowed a percentage on the amounts they gather.—I am, etc.,

Harley Street, W., Feb. 21st. J. FLETCHER LITTLE.

TREATMENT OF SUPPURATIVE ARTHRITIS.

SIR,—In an interesting communication to the Clinical Society[1] on the treatment of suppurative arthritis my colleague, Mr. H. L. Barnard, draws attention to the treatment of acute cases of this affection by the "open method by a transverse incision dividing the patella, and fully flexing the knee," and quotes a successful case recorded in 1902[2] by Mr. Walter Whitehead. I have found this procedure valuable in the treatment of acute suppurative arthritis of the knee-joint in young children, and published[3] in 1897 two successful cases. It is especially applicable to this affection, because it permits of exposure and erasion of the primary osseous lesion, usually situated in the end of the diaphysis or the epiphysis. The joint is afterwards flushed, the patella united with silver sutures, the wound closed, and a drainage tube left in for a short time. In both the cases referred to primary union took place and a good recovery followed.

Previously I had employed the same method for a very septic tuberculous knee in a child. The joint was laid open by a transverse incision, flexed, and packed with iodoform gauze. After packing for about ten days the condition was so much improved as to permit of removal of the synovial membrane and excision.—I am, etc.,

Harley Street, W., Feb. 22nd. FREDERIC EVE.

FRAMBOESIA IN FOWLS.

SIR,—In reference to Dr. Calder's note in the BRITISH MEDICAL JOURNAL of February 14th, p. 368, will you allow me to say that the occurrence of yaws in fowls and cattle has been recorded? For example, Dr. Numa Rat, in his memoir on Framboesia (1891) wrote as follows: "Fowls are subject to a disease the eruption attending which is similar, both macroscopically and microscopically, to that of human yaws." "Though the tubercles may break out over any part of the body, they are most plentiful and conspicuous about the head and beak, the eyes being almost or entirely closed by the scaly eruption. Cattle also may be similarly affected, the disease being apparently limited to bulls and cows, for I have never observed it in sheep and goats."

Dr. Calder says that "the histological features of the disease in fowls are identical with those seen in the human variety." If this is a correct observation, it is a very important one, and it would be interesting if Dr. Calder would publish a picture of a section. Some years ago I received from the West Indies a number of sections of supposed yaws in fowls, but the growths were undoubtedly those of molluscum contagiosum, and corresponded with those recognized in fowls and other birds in Europe. The molluscum contagiosum growths I described about the head and legs of a chicken in the Pathological Society's *Transactions* were very different in appearance from the growths in the human body, and resembled flattish brown warts.

In many of the affected chickens in this country the growths are associated with a diphtherial-looking exudation in the mouth which seems to be the cause of a considerable fatality. An investigation into the nature of this condition should prove of interest.

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[1] BRITISH MEDICAL JOURNAL, February 21st, p. 429.
[2] Ibid., June 21st, 1902, p. 1525.
[3] *Clinical Journal*, October 13th, 1897.

I do not remember that molluscum contagiosum has been observed in cattle in Europe.—I am etc.,

Harley Street, W., Feb. 15th. T. Colcott Fox.

FINSEN'S TREATMENT OF LUPUS.

Sir,—My attention has been called to a popular article, "Science in British Hospitals," appearing in the February number of the *World's Work*. Speaking of the Finsen method of treating lupus the writer says, "No other method can approach this for cosmetic results. Even the *x* rays, when successful, leave a most unsightly and prominent scar. This light leaves nothing recognizable as scar tissue. Finsen will soon have made extensive cases of lupus as rare as Lister has made the surgical fevers or Jenner small-pox."

This, Sir, is the kind of writing which one expects from the enthusiastic layman, but it is somewhat disconcerting to find this particular author to be a medical man. The passage teems with inaccuracy, as any one who has had experience of this class of work will know. The *x* rays, when successful, leave results which cosmetically compare very favourably with any other plan. Scar tissue is always recognizable to some extent even after Finsen's method has been employed. Finally, the gifted and modest author of the Finsen method would himself be the last to claim such extravagant praise for his discovery—a discovery which has proved a most valued addition to our armamentarium, but which perhaps finds its limitations most of all in dealing with "extensive cases."—I am, etc.,

Manchester, Feb. 6th. G. H. Lancashire.

THE URBAN HOSPITAL TREATMENT OF EXTERNAL OR SURGICAL TUBERCULOSIS.

Sir,—Since the year 1898 we have in Liverpool been driving home the very points concerning which Mr. A. H. Tubby has so ably written in the British Medical Journal of February 21st, with reference to the treatment of children suffering from surgical tuberculosis, and in the Journal of November 11th, 1899, and August 17th, 1901, you were good enough to refer to the work done in the Liverpool Country Hospital for chronic diseases of children. There are many conditions besides surgical tuberculosis, however, requiring prolonged, uninterrupted, and active treatment in the fresh air of the country, and the Liverpool Hospital has been founded on comprehensive lines which permit of its dealing with every case, whether medical or surgical, which requires the conditions referred to by Mr. Tubby.

The work of the Liverpool Country Hospital will soon be greatly extended, and a building capable of accommodating 200 children will ultimately be erected at Heswall, where a site comprising nine acres of land has been secured for the purpose.—I am, etc.,

Liverpool, Feb. 23rd. Charles J. Macalister.

THE POSITION AND PROSPECTS OF THE MEDICAL PROFESSION.

Sir,—I read with pleasure your report of the able and outspoken address given by Dr. Charles Gibson before the Harrogate Medical Society. We are so accustomed to having the prospects and present position of the profession represented to the public in glowing and optimistic terms that it is refreshing to have the other side of the picture also held up to view. I cannot ask for sufficient space to deal, even summarily, with the many important points to which Dr. Gibson refers, but I should like to dwell for a moment on his remarks on over-competition and the danger of a lowering of the status of the profession. Every medical man must be aware that for years past the influx into the ranks of the profession has been steadily outgrowing the legitimate demand for its members' services.

In London especially the multiplication of medical men has been proceeding at a rate which would be ludicrous if it were not also more than a little pathetic. It must be borne in mind in this connexion that the demand for medical advice cannot be considered to grow proportionately to the increase of population. With the improvement of sanitation and the general dissemination of hygienic and elementary medical knowledge the requirements of the public from a professional point of view are showing a steady tendency to decrease, and are likely to do so to a still greater extent in the near future.

In what way, then, can the ever-growing increase in our already overcrowded ranks be checked? Dr. Gibson has made some suggestions which well deserve serious consideration; but I should like to add that, in my opinion, this evil can only be adequately combated by enabling students and prospective students to obtain a fuller and clearer insight into the conditions, financial, social, and general, which prevail in the profession than they can now in most cases procure.

If fuller details were provided of the emoluments, duties, requirements, and necessary qualifications of the various branches of medical work, candidates would be in a better position to gauge their suitability for a medical career; and those who decided to take the plunge would at least do so with a clear perception of the true facts of the case. I trust that some of your readers may be able to make practical suggestions as to the many important points raised in Dr. Gibson's address, as I feel that those of us who have achieved some degree of success in our vocation will be doing a good work in endeavouring to obviate some of the dangers which, as he has ably pointed out, are likely to threaten the welfare of the profession in the not distant future.—I am, etc.,

Alexander Square, S.W., Feb. 16th. Dennis Vinrace.

TRANSPLANTATION OF PANCREAS IN DIABETES, AND OF SUPRARENAL GLAND IN ADDISON'S DISEASE.

Sir,—Can any of your readers inform me if cases of diabetes have been treated by implanting the pancreatic gland of an animal into the patient? I have at present in my wards a case of diabetes mellitus of the "bad" type—that is, it does not respond to dietetic treatment like the mild or "gouty" type of the disease. We have not been able to get rid of the sugar by medicines or dieting, and, as regards the latter, we are afraid to exclude the carbohydrates too rigorously lest we should induce diabetic coma.

I need not enter into details of the case at present, but would put the problem in this way: We cannot get rid of the sugar by drugs or dieting; the man cannot remain in the hospital for an indefinite period, and if he is dismissed he will not be able to get special treatment outside or take much care of himself, for he is a poor working man. Under these circumstances I have requested that the transplantation of pancreas shall be tried in his case. I have based my request on the following grounds:

In some cases of diabetes the pancreas is found diseased. Experiments by Minkowsky and others have shown that extirpation of the pancreas in animals gives rise to glycosuria. And the remarkable fact has been established by experiment that if the extirpation of the pancreas is preceded by the implantation of another animal's pancreas no glycosuria results.

Now it may be argued that I have not proved that my patient's pancreas is diseased, and we know that diabetes is due to other causes than diseased pancreas. But, admitting this, the fact remains that the implanting of pancreas before the extirpation of an animal's own pancreas prevents the development of glycosuria, which points to the view of Lépine, namely, that the pancreas produces a sugar-destroying substance, which is not contained in the ordinary pancreatic secretion which flows into the duodenum but may possibly be absorbed from the gland itself. By implanting pancreas we might get a bigger supply of this sugar-destroying substance, which would be helpful in cases when the patient's pancreas was normal but unequal to the task of coping with the surplus sugar in diabetes.

I understand that thyroid gland has been implanted in cretin children with good results. Might we not expect a similar beneficial result by implanting pancreas in diabetes? Weighing all things, I consider that the experiment should be tried in a case which otherwise seems beyond cure, and is always more or less in danger.

Again, I should like to ask if any of your readers can tell me if the suprarenals have been transplanted into cases of Addison's disease? If this has not been done, I certainly think the experiment is not only justifiable, but strongly to be recommended.—I am, etc.,

James W. Allan, M.B., C.M.,

February 16th. Physician, Glasgow Royal Infirmary.

MIDWIVES FOR COUNTRY DISTRICTS.

Sir,—The minds of Mrs. Johnstone and her friend the clergyman seem considerably exercised respecting the prospective working of the Midwives Act. While sympathizing to the full in her laudable intent to provide skilled attendance for parturient women, it may be as well to point out that her scheme with its appeal, as it stands, to medical practitioners

at least, entails various issues, which viewed either from a logical, ethical, or philanthropic standpoint, can hardly be said to commend themselves.

Logically, one fails to see how the co-operation of either the local doctor or the family practitioner is to avail such as "will not be attended by doctors." If, however, by his co-operation Mrs. Johnstone means an alliance not so much with her scheme as with the village midwife in the rôle of itinerant aide-de-camp, erstwhile known as "following the midwife," then the "proper supervision" of such would prove a doubtful factor either in helping his work or relieving the pressure of professional calls.

Again, to be told that by such co-operation he might rely on the village midwife to faithfully summon him for any obstetric operation on those patients who "pay so little, if at all," can likewise scarcely be regarded as a lightening of his day's—or, more likely, his night's—toil.

Next, from an ethical standpoint, such relationship, as advocated by Mrs. Johnstone, of the doctor to the midwife, would easily drift into the perilous shoals, charted "covering" by the General Medical Council, whose warning beacon flames ever luridly against coasters. We are told that the Nursing Institution, to which the midwife is attached, is to be prepaid an extra fee of 5s. or 10s. by the applicant for confinement, and such deposit is refunded if no doctor is required. Should he, however, be required, presumably for complications either inter-partum, post-partum, or praeter-post-partum, the Institution guarantees him the payment by inference of the aforesaid deposit. I leave it to your readers how far such remuneration and exploiting are cognate. Finally—as a philanthropic scheme.

If, as Mrs. Johnstone asserts, Parliament has saddled the nation with a grave responsibility by passing the Midwives Act—and that, too, in direct opposition to the feeling of the medical profession at large with regard to its most essential limitations—it is hardly fair to expect medical practitioners to subsidize Government with practically gratuitous co-operation in a second "tremendous experiment," which aptly—"tremendous" in its Latin sense—described the Vaccination Act of 1898. Let the "grave responsibility" be rather undertaken by the State, and State-aided through the Poor-law guardians guaranteeing the adequate remuneration of practitioners specially enrolled for attendance on the parturient poor in abnormal cases.

This system, as has been shown, works excellently in the Irish dispensaries and district maternity institutions, and by making it a rate-supported benefaction its ministrations are practically restricted to the right class, namely, the deserving poor. And this class forms but a small proportion of the *soi-disant* poor, for by far the larger number, whom it suits to be poor, will continue to be poor, so long as assistance and relief are to be got for the asking. With the wages of the British workman so largely increased during the last generation, it has been well and truly said that any sober, industrious, and thrifty workman, granted his health and regular employment, should be able to put by a penny a day during his wife's gestation, which reckoned at 280 days, would more than suffice to pay a guinea midwifery fee to the doctor. It is, however, the absence of the above qualities which begets the penury, claiming relief under the guise of genuine poverty undeserved, and demoralizing the applicant, if granted, subverts every principle of self-reliance and industry.

Any organization founded by Mrs. Johnstone and her friends having as its object the alleviation of genuine distress in approved cases will not fail to command the practical sympathy of the medical profession; but an appeal, based on so indiscriminate and compromising an altruism as that projected in her letter can scarcely merit professional approval.—I am, etc.,

February 17th. LUCINA.

AN INTERNATIONAL MEDICAL MANIFESTO ON ALCOHOLISM.

SIR,—I was hoping an abler pen than mine would answer what I consider a very impudent manifesto. I strongly object to the title, it should be a "teetotal" manifesto, not "medical." It certainly would take up too much space in the BRITISH MEDICAL JOURNAL to discuss it, but briefly it amounts to this: that it accuses by far the greater number of the most learned physicians and surgeons, members of the British Medical Association, who recommend their patients alcohol in any form, that they are really advising them to take poison which interferes with the functions of the cells and tissues of the body, impairing self-control by producing progressive paralysis of the judgement, and of the will. Hence alcohol must be regarded as a poison.

Why could not these gentlemen have prefixed the manifesto stating it was only the opinion of a very small minority of the most learned of the medical profession and the worth of that opinion must rest upon its merits. I am very pleased to learn there is only one Frenchman's name attached to this manifesto of a number of faddists; it clearly shows what a sound-headed man the French scientist is.

My father, who was a keen observer of human nature and had every opportunity of forming a correct opinion, used to say "the teetotaller is a canny man without any geniality in his soul who would rob you of your good name as soon as he would of your beer." Certainly the British Medical Temperance Association wish to rob us physicians of our good name who order alcohol because we maintain their conclusions are not correct by practical experience. Even in last week's JOURNAL that shrewd practical physician, Dr. Hanson Keyworth, in his address to the Branch used the saying, "Milk is the wine of infancy, so wine is the milk of old age," to illustrate the use of wine in old age, and Dr. Keyworth's experience is that of nearly every impartial practical intelligent physician who has carefully studied the question. I was very pleased to read the remarks of one of our shrewdest and most experienced police magistrates the other day where he stated drink did not cause crime, the drunkard was not a criminal, he generally injured himself and not others. Take ten cases of recent murderers or forgers, and analyse if drink had anything to do with the crime. I protest against these total abstainers recklessly placing all crime upon the shoulders of alcohol.

The faddist I dislike; he is never convincing either in theology, medicine, politics, and certainly not in alcohol.—I am, etc.,

Manchester Square, W., Feb. 3rd. THOMAS DUTTON.

*** The manifesto was published in the BRITISH MEDICAL JOURNAL of January 10th, 1903, p. 107. Reference may also be made to the poster mentioned in our Paris Correspondent's letter, February 7th, p. 337.

USURPATION OF TITLE IN FRANCE.

SIR,—My attention has been called to an article which appeared in your estimable JOURNAL, February 7th, p. 350, headed "The Usurpation of a Title in France." Now, that article is calculated to place me in a false position before the English medical fraternity, and I therefore request you, as an act of justice, to publish in your next number this letter of rectification, and put me right in the estimation of your readers.

I am the oldest nephew of the late Dr. Thomas Evans, and during twenty years his collaborator. I have been practising in Paris the profession of dentist since nearly fifty years. My medical and dental diplomas are perfectly *en règle* with the faculty and the law. A younger member of our family here has lately met with misfortune on account of not being *en règle*, and, I am sorry to state, has been confounded with me. I have already been called upon to rectify the same report and mistake here, and the journals led into error by the similitude of name have kindly righted me.—I am, etc.,

Avenue de l'Opéra, Paris, Feb. 24th. DR. EVANS.

OBITUARY.

OUR special correspondent in Sydney, N.S.W., writes: Dr. E. F. Ross, a well-known medical man in Sydney, died on December 26th, 1902, at the age of 45, after an illness of seven months' duration from ulcerative endocarditis. He was a native of Sydney, and after a preliminary school education he proceeded to London, and studied medicine at University College and Hospital. He obtained the qualifications of M.R.C.S.Eng. and L.R.C.P.Lond. in 1884, and subsequently the degree of M.D. of Brussels. He was a House-Physician to the late Dr. Wilson Fox. He returned to Sydney at the end of 1884, and was soon appointed Honorary Physician to St. Vincent's Hospital. In later years he devoted his attention more especially to gynaecology, and at the time of his death was one of the Honorary Surgeons to the Lewisham Hospital for Women and Children. From a very early age he suffered from some cardiac trouble, and he used to say that he was several times advised to give up the study of medicine and go back to Australia to die. He, however, stuck

manfully to his work, and was highly respected as a practitioner by his fellow medical men, and beloved by his patients. He was essentially a straight man, and despised any underhand or mean actions; the profession in Sydney is the poorer for the loss of Elsey Fairfax Ross. He has left a widow and three sons.

Mr. W. J. C. Miller, B.A., who was Registrar of the General Medical Council from 1876 to 1897, died from influenza and bronchitis on February 11th. Mr. Miller received his early education at the West of England College, Taunton, and was afterwards mathematical master there; subsequently he was appointed Professor of Mathematics, and finally Vice-Principal of Huddersfield College. At this time he became connected with the *Educational Times*, and was its Mathematical Editor for nearly forty years. In the discharge of his duties as Registrar of the General Medical Council, Mr. Miller was punctual, methodical, and courteous. He introduced many improvements in the business of the office, and when ill-health compelled him to resign, the Council placed on record its high appreciation of his services, and voted him a gratuity of £1,000. In the same year his mathematical friends and correspondents in England, America, India, and the Continent of Europe presented him with a testimonial, accompanied by a purse of gold. During his tenure of office at the General Medical Council Mr. Miller resided at Richmond, where he found many opportunities of gratifying his taste for the study of natural history.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. Morrill Wyman, of Cambridge, the oldest physician of Massachusetts, formerly Adjunct Professor of the Theory and Practice of Medicine at Harvard, and author of several works, aged 90; Dr. Harrison Augustus Lemen, of Denver, some time President of the Denver Medical Association, and Emeritus Professor of the Principles and Practice of Medicine in the University of Denver, aged 63; Dr. Ferdinand Losch, some time Professor of Medical Diagnosis in the University of Kieff, aged 62; and Dr. Carlo Gallozzi, Director of the Surgical Clinic and Rector of the University of Naples, aged 83.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVY MEDICAL SERVICE.

Compound Titles, Relative Rank, and Disciplinary Power.

We have received from an active naval medical officer in touch with a large number of his brother officers a letter giving expression to opinions to the following effect:

He states that all the many medical officers R.N. to whom he has spoken on the question of compound titles are dead against them. Medical officers in the navy have no disciplinary authority over any one, and what is more to the point, they have a distinct profession of which they are all justly proud and desire no hybrid titles. Opinion, he states, is strongly in favour of relative rank, which should be insisted upon; it must be real and effective.

Principal medical officers should have the power to award minor punishments in hospitals and sick quarters; it is ridiculous that a senior medical officer cannot legally stop leave, award extra duty, or stop pay for misconduct among the staff of a hospital that he may be head of. It is not wonderful it under such circumstances irregularities occur in large naval hospitals. It is humiliating that, say, the deputy inspector-general at Haslar or Plymouth Hospitals—of relative rank with a colonel in the army—should have to put off ward duties, buckle on his sword and go to the dépôt to give evidence against a young sick berth attendant for some offence which could very easily have been settled by the inspector-general if he had legal power.

Another grievance is that inspector-generals alone are granted charge pay; all principal medical officers of hospitals and sick quarters are equally entitled, even if at a lower rate, or it might be granted in proportion to the number of beds as done in the army.

Our correspondent advocates also promotion of younger men to the rank of deputy inspector-general.

*** We believe that the importance of the last point mentioned by our correspondent is appreciated at the Admiralty and that effect is being and will be given to this policy.

ROYAL NAVY MEDICAL SERVICE.

The following appointments have been made at the Admiralty:—Arthur F. Fraser, Surgeon, to the *Landrail*, February 17th; Edward R. D. Fasken, Staff Surgeon, to the *Europa*, for medical charge on voyage out, on commissioning, March 17th and to the *Ocean* on recommissioning, undated; James L. Smith, M.V.O., Staff Surgeon, to the *Europa*, for medical charge on voyage home, undated; Daniel J. P. McNabb, Staff Surgeon, to Plymouth Hospital, March 17th; Hugh Clift, Staff Surgeon, to the *Spartiate*, for medical charge on the voyage out, on commissioning, March 17th, and to the *Algerine*, on recommissioning, undated; James W. W. Stanton, Surgeon, to the *Spartiate*, for medical charge on voyage home, undated; Leslie M. Morris, Surgeon, to the *Mars*, March 17th; William R. Treythall, Surgeon, to the *Vivid*, additional, for Devonport Yard; James Mowat, M.B., Surgeon, to the *Europa*, on commissioning, March 17th, and to the *Ocean*, on recommissioning, undated; Richard F. Clark, Surgeon, to the *Europa*, on commissioning, March 17th, and to the *Rosario*, on recommissioning, undated; Moyle Breton, Surgeon, to the *Spartiate*, on commissioning, March 17th, and to the *Phœnix*, on recommissioning, undated; Richard R. Horley, Surgeon, to the *Spartiate*, on commissioning, March 7th, and to the *Water Witch*, on recommissioning, undated; Arthur La T. Darley, Surgeon, to the *Sandpiper*, additional, March 16th, and on recommissioning; Charles K. Bushe, B.A., M.D., Surgeon, to the *Woodlark*, additional March 16th, and on recommissioning; William Bantian, Surgeon, to the *Woodcock*, on recommissioning; Alfred H. Jeremy, B.A., M.B., and Kenneth H. Jones, M.B., Surgeons, to the *Europa*, for duty on voyage home; Edward Haines and Francis Bolster, B.A., M.B., Surgeons, to the *Spartiate*, for duty on voyage home, undated. Percival K. Nix, B.A., M.B., Surgeon, to Plymouth Hospital, February 19th; George Gibson, Surgeon, to the Royal Marine Dépôt, Deal, February 19th; Ernest S. Reid, M.B., to the Royal Marine Artillery, February 19th; Harry Spicer, M.B., Surgeon, to the *Royal Oak*, February 19th; John Boyan, Surgeon, to the *Vernon*, for the *Niger*, on commissioning, February 18th; John H. Stenhouse, M.B., Staff Surgeon, to the *Boscawen*, additional, February 22nd; Robert R. Fasson, M.B., Surgeon, to the *Vivid*, for Keyham Yard, February 24th.

Staff Surgeon Herbert Canton died at Hong Kong on February 21st. He joined the Royal Navy as Surgeon, August 21st, 1883, and became Staff Surgeon twelve years thereafter.

ARMY MEDICAL SERVICE.

The King has been graciously pleased to give orders for the following promotions, dated October 18th, 1902, in recognition of services during the operations in South Africa, such services having been rendered elsewhere than in South Africa:

Surgeon-Captain W. O. Evans (2nd Volunteer Battalion the Royal Welsh Fusiliers, temporary Surgeon-Captain in the army), to be Surgeon-Major.

Lieutenant-Colonels R. Batho, M.D., B. B. Connolly, M.D., F.R.C.S.I., C.B., F. W. L. Hodder, M.B., P. K. Ray, and W. F. Ruttledge, all on retired pay, to be Colonels.

Majors G. M. H. Colman, M.B., H. F. Dent, D. Elcum (late Indian Medical Service), and E. R. Da Costa (late Indian Medical Service), all on the retired list, to be Lieutenant-Colonels.

Captain H. L. G. Chevers, retired list, to be Major.

ROYAL ARMY MEDICAL CORPS.

Entrance Examination.

The following is the final list of appointments as Lieutenants R.A.M.C.:

A. B. Smallman.*	G. W. Smith, M.B.
W. F. Tyndale, C.M.G.†	J. W. S. Sucombe.
P. Davidson, M.B., D.S.O.	J. M. H. Conway.
J. McKenzie, M.B.‡	S. M. W. Meadows.
W. B. Taylor.§	H. V. Bagshawe.
N. D. Walker, M.B.	D. S. Skelton.
A. H. Hayes.	C. V. B. Stanley, M.B.
H. J. Crossley.	H. G. S. Webb.
R. B. Ainsworth.	W. W. Browne.
C. A. J. A. Balck.	R. Rutherford.
R. Storrs.	W. D. C. Kelly, M.B.
R. L. V. Foster.	N. E. J. Harding, M.B.
F. A. H. Clarke.	W. C. Rivers.
G. A. K. H. Reed.	R. J. Franklin.

* Gained the Herbert Prize and the Parkes Memorial Bronze Medal.

† Gained the prize in Pathology.

‡ Gained the De Chaumont Prize and prize given by D.D.G. for Aldershot course.

§ Gained the Marshall Webb Prize.

The date of retirement of Lieutenant-Colonel T. B. A. Tuckey is January 6th, and not as stated in the *Gazette* of January 2nd.

Lieutenant-Colonel F. W. Trevor is promoted to be Colonel, *vice* J. L. Notter, retired, January 14th. He was appointed Surgeon, September 30th, 1874; Surgeon-Major, September 30th, 1886; was granted the rank of Lieutenant-Colonel, September 30th, 1894; and made Brigade-Surgeon-Lieutenant-Colonel, August 22nd, 1897. He served in the Afghan war of 1878-80 with the Kandahar Field Force, and was at the action of Ahmed Khel and in the march from Kabul to the relief of Kandahar and the battle on September 1st (medal with two clasps and bronze decoration); with the Nile Expedition in 1884-5 (medal with clasp, and Khedive's bronze star); and in the South African war in 1899-1901 as Principal Medical Officer of a Division (mentioned in dispatches).

Major D. M. Saunders, M.D., has been appointed Staff Officer to the Principal Medical Officer, Third Army Corps.

The undermentioned Majors are promoted to be Lieutenant Colonels, dated February 3rd: W. G. Macpherson, C.M.G., R. J. S. Simpson, C.M.G., E. V. A. Phipps, A. Baird, T. W. O'H. Hamilton, C.M.G., D. Semple, J. R. Stuart, and R. P. Bond. Their previous commissions, which were simultaneous, are—Surgeon, February 3rd, 1883; Surgeon-Major, February 3rd, 1895. Their war records are as follow: Lieutenant Colonel Simpson, South African war in 1899-1900 (mentioned in dispatches, C.M.G., King's medal with two clasps). Lieutenant-Colonel Phipps, operations in Zululand in 1888; South African war in 1900, including the relief of Kimberley; operations in the Orange Free State, actions at Paardeberg, Poplar Grove, Driefontein, Houtnek (Thoba Mountain), Vet River, and Zand River; operations in the Transvaal, including actions near Johannesburg, Pretoria, and Diamond Hill; in the Transvaal west of Pretoria, including action at Elands River; in Orange River Colony, including action at Wittebergen; and in Cape Colony south of Orange River (Queen's medal with six clasps). Lieutenant-Colonel Baird, Bechuanaland expedition in 1884-5; operations in Zululand in 1888; with the Chitral Relief Force in 1895 (medal with clasp); South African war in 1899-1901 and relief of Ladysmith (mentioned in dispatches). Lieutenant-Colonel Hamilton, South African war in 1899-1900 (mentioned in dispatches, C.M.G., Queen's medal with six clasps). Lieutenant-Colonel Stuart, Nile expedition, 1898, including the battle of Khartoum (British medal and Khedive's medal with clasp). Lieutenant-Colonel Macpherson and Semple have no war records in the Army Lists.

Lieutenant-Colonel R. D. Hodson has been appointed Senior Medical Officer, Ceylon.

Lieutenant-Colonel W. Dick, M.B., has been appointed Senior Medical Officer, Straits Settlements.

ARMY MEDICAL RESERVE.

Surgeon-Major G. F. England to be Surgeon-Lieutenant-Colonel, February 21st.

Surgeon-Lieutenant W. O. Evans to be Surgeon-Captain, February 21st.

INDIAN MEDICAL SERVICE.

A competitive examination for appointment to His Majesty's Indian Medical Service will be held in London about midsummer next. The number of vacancies and the date of the commencement of the examination will be notified hereafter. Further particulars can be obtained from the Military Secretary, India Office, S.W.

The Secretary of State for India has sanctioned the following conditions in order to place the probationers of the Indian Medical Service on the same footing as those of the Royal Army Medical Corps: (1) Their title is changed from Surgeon on probation to Lieutenant on probation; (2) their pay, exclusive of allowances, is raised to 14s. a day; (3) their commission as Lieutenant bears the date on which their course of instruction in England commences; they will not, however, be gazetted until they pass the final examination; (4) a Lieutenant on probation who at the time of passing the examination for admission to the Indian Medical Service holds, or is about to hold, a resident appointment in a recognized civil hospital, may be seconded for a period not exceeding one year during which he holds the appointment. While seconded he will receive no pay from the Indian funds, but his service will reckon towards promotion, increase of pay, and pension.

IMPERIAL YEOMANRY.

Temporary Captains R. J. McClelland, M.B., 32nd Battalion, and F. W. Jackson, Medical Officer, 37th Battalion, relinquish their commissions, are granted the honorary rank of Captain in the army, and allowed to retain their uniforms, February 7th.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

Surgeon-Lieutenant-Colonel J. S. Cumming, M.D., 1st Lanarkshire, resigns his commission, February 21st; he retains his rank and uniform.

VOLUNTEER RIFLES.

Surgeon-Major F. J. Walker, M.D., 3rd Volunteer Battalion the Lincolnshire Regiment, is promoted to be Surgeon-Lieutenant-Colonel, February 21st.

Supernumerary Surgeon-Lieutenant R. W. Michell, M.B., 4th (Cambridge University) Volunteer Battalion the Suffolk Regiment, is promoted to be Surgeon-Captain, February 21st.

Surgeon-Captain R. C. Lees, M.B., 1st Lanarkshire, is promoted to be Surgeon-Major, February 21st.

Mr. St. John F. Blake-Campbell is appointed Surgeon-Lieutenant in the 1st Cadet Battalion the King's Royal Rifle Corps, February 10th.

VOLUNTEER INFANTRY BRIGADE BEARER COMPANY.

The transfer to the 2nd London Company of Captain J. N. Brown, M.D., and Lieutenant T. C. Montgomery-Smith, from the 5th (West) Middlesex Volunteer Rifle Corps, announced in the *London Gazette* of January 6th, bears date April 16th, 1902, and not as therein stated.

MEDICO-LEGAL AND MEDICO-ETHICAL.

HOSPITAL ADVERTISEMENTS.

A correspondent draws our attention to an advertisement of the Dispensary and Cottage Hospital at Ripon, which contains the name of the "surgeon for the week" and of the "surgeon for the next week," and adds the information "out-patients seen at surgeons own surgery 9 to 10 a.m., and 6 to 7 p.m." We have already twice commented upon this practice of similar institutions elsewhere see British Medical Journal, December 20th, 1902, p. 1936, and January 3rd, 1903, p. 55), and, as in those cases, we think the practitioners concerned should take steps to put a stop to it.

INQUEST ON A HULL HOUSE SURGEON.

Suggestion of Improper Treatment Refuted.

A somewhat extraordinary inquest held in Hull is reported in the *Eastern Morning News* for February 12th and 19th, of which report the following is an abstract:

The Coroner for the City of Hull (Mr. A. Thorney) stated that the inquiry was into the circumstances attending the death of Ellen Mary Sharp, 28, late Senior House Surgeon of the Children's Hospital, Park Street, Hull. He believed there was very little doubt that Miss Sharp had died from natural causes, but a suggestion had been made by the family which almost amounted to a charge that Miss Sharp had not been properly attended to, and it was in consequence of that suggestion that he had, after very grave consideration, decided to hold an inquest. The Coroner stated that the suggestion had been made by a member of the deceased's family. He had requested the doctors who had attended the deceased to be present at the necropsy, which had been made by Dr. Pigeon and Dr. J. Wright Mason, Medical Officer of Health for Hull.

Mr. T. L. Locking, who represented the relatives of the deceased, declined to associate himself with any suggestion of "want of treatment" in the case.

The Coroner said the suggestion had been made.

Mr. Locking said he did not suggest that "if it were a case of medical treatment as to whether doctors differed or not it was a matter for inquiry, but so far as the relatives were concerned he did not feel justified in associating himself with any charge."

The Coroner again stated that the inquiry was being held solely in consequence of what had been said to him by the relatives of the deceased.

Miss Eleanor Henderson, Assistant House-Surgeon, having given evidence of identification, Dr. Pigeon described the results of the necropsy, which showed that there was pleurisy on the right side, and the whole of the right lung was inflamed and quite useless for breathing purposes. These changes were consistent with the development of the disease which had begun as influenza.

With these statements Dr. J. Wright Mason concurred.

The inquiry was then adjourned for a week for the attendance of other witnesses.

On the resumption of the inquiry the Coroner stated that he had had a letter from Messrs. Locking and Holdich, solicitors, to say that as their views did not coincide with those of the father of the deceased lady, their instructions had been withdrawn. The Coroner then read the following letter:

St. Stephen's Club, Westminster,
February 16th, 1903.

A. J. Thorney, Esq.,
Coroner for the borough of Hull.

Sir,—*Re* Miss Ellen Sharp, M.D., deceased. Referring to the adjourned inquest to be held on Wednesday next, relative to the death of my daughter, Miss Ellen Mary Sharp, M.D., I think you, as coroner, should be informed of the facts. I send you herewith the defectively kept original charts, showing as far as they go the history of the illness, and also four letters and two telegrams from Miss E. R Henderson, Assistant House-Surgeon at the Victoria Hospital for Children, Hull. You are probably aware that my daughter was taken ill on the 31st January last, and you will see from the charts enclosed, above referred to, that on the very first night of her illness her temperature all but touched 104°, and was then daily at or above that figure. In spite of these high temperatures you will observe that no notes of pulse or respiration were taken until the eighth day of the illness, when the disease had been allowed to run into a malignant form. I regret to trouble you, but I think that in the circumstances greater care should have been taken in the record of the disease, and this might have enabled the honorary staff generally to have become earlier acquainted with the fact of their senior house-surgeon's serious illness, and that from the first special and proper nursing should have been afforded instead of only the spare moments of the hospital matron by day and of the ward sisters by night having been given to the patient. Alone in her own bedroom, she, the most valuable life of the paid staff, would, it almost seems, have received better attention as a ward patient; but it does not appear that a single member of the honorary staff, except Miss Murdoch, ever saw her until the sixth day of her illness On the tenth day she died, and I think this should be fully inquired into, and the reason for such abstention obtained, and the medical officials should one and all be called upon for an explanation of conduct so contrary alike to professional tradition and hospital custom. On consideration, I feel it right to leave the inquiry in your hands, and I shall not be represented at the adjourned inquest by either solicitor or barrister. Will you be good enough to return the enclosed letters and charts after the inquest? and oblige,

Yours, etc., (Signed) Henry Sharp.

Miss Eleanor Russell Henderson, Assistant House-Surgeon, stated that the deceased was taken ill on Saturday, January 31st, and that in the evening she expressed a desire that Miss Murdoch, L.R.C.P., L.R.C.S. Edin., Assistant Physician to the hospital, should attend her. Miss Murdoch took over the case the same evening, and attended her constantly. The chart which had been received from Mr. Sharp was not the original one, and was not a complete copy. Miss Murdoch visited the deceased daily, and sometimes twice a day. On Thursday, February 5th, the relatives were warned of Miss Sharp's serious condition. Witness saw that Miss Murdoch's instructions were carried out by the nurses. Two nurses were in charge of the case; both were fully qualified, and one was always in attendance on the deceased until her death. Dr. Elliott saw the case, in consultation with Miss Murdoch, on Thursday, February 5th, and on Saturday Dr. Parkin also saw her with Dr. Elliott and Miss Murdoch. Dr. Molson arrived on Saturday night. She believed that the methods of Dr. Molson acted as a check upon the stimulating treatment which had been administered. She did not think that the pneumonia was of a septic kind as certified by Dr. Molson.

Dr. Pigeon, in reply to the Coroner, said that the necropsy did not show septic pneumonia.

Miss Mary Charlotte Murdoch, Assistant Physician to the institution, said that she first became aware of Miss Sharp's illness on January 31st, about 4 o'clock. She saw her at 6 o'clock and found her suffering from an acute attack of influenza. She produced the original chart of the illness. Deceased's pulse and temperature variations were telephoned to her every four hours by Miss Henderson, who assisted her extremely well in the case. She first thought it necessary to call in assistance on February 5th on account of pleurisy having developed Dr. Elliott approved of the treatment and suggested the application of poultices to relieve the pain. Miss Sharp did not improve, and on Friday witness and Dr. Elliott saw the patient again. On Saturday Dr. Parkin was also present. She had examined the lungs and heart daily, but until Friday definite physical signs of pneumonia were not present. On Thursday witness sent a telegram to the father saying that Miss Sharp was dangerously ill, and another was dispatched on Saturday. In response to the first message Miss Madeline Sharp, sister of the deceased, came and she thanked witness repeatedly for the attention given to the patient. Two extra nurses were ordered by witness especially for Miss Sharp. Witness would say that the diminution of stimulants was harmful; had she gone on with the case she would have increased the stimulants. About 10.30 or 11 o'clock on Saturday morning a telegram was received from Mr. Sharp, father of the deceased, saying he was sending his medical adviser, Dr. Cavendish Molson. Witness met Dr. Molson at 8.30 p.m. at the hospital, at which time deceased was delirious. Witness was shown a copy of the letter written by Mr. Sharp instructing Dr. Molson to take entire charge of the case. Witness was sorry she had not a copy of the letter. Witness consented to work with Dr. Molson for the sake of the patient, but not under him. Dr. Molson had explained his theories to her; he described them as eclecticism and bio-chemistry. The eclecticism he defined as "drops of the best." Bio chemistry was the method by which plants received microscopical quantities of salts from the soil, and, working by analogy, he wished to adopt the process by givine minute doses to the human frame. His chief dose was one billionth of a grain of common salt. The salt was titrated with sugar of milk. He used potassium chloride and potassium sulphate in the same way. Witness had never heard of the treatment before, but as Dr. Molson made a compromise and allowed some of the other remedies to go on, she consented, for the sake of Miss Sharp, to continue her attendance. Dr. Molson expressed the opinion that the deceased had been very well attended to. If witness's treatment had been continued the deceased might have lived a little longer, but it was doubtful whether she would have recovered. She was perfectly satisfied with the attention that had been devoted to the case by the officials of the institution. It

was not the custom of the profession to met irregular doctors, and Dr. Molson informed her that he had been refused interviews with many medical men under such circumstances.

Dr. Elliott and Dr. Parkin stated that the deceased was properly treated and attended to in every way.

Miss Emily Caroline Halliday, Matron of the hospital, gave corroborative evidence.

The Coroner asked the jury if they desire Dr. Molson to be subpoenaed, but this was not considered necessary. After reading further correspondence on the matter the Coroner said that Mr. Sharp had apparently had some communication from Dr. Molson to the effect that his daughter had been ill-treated. It looked very much as though Dr. Molson was somewhat ashamed and had tried to gloss it over by making charges against the staff and *personnel* of the hospital. Mr. Sharp had not the slightest justification of any kind for the charges he had made. The jury would agree with him that the honour of the institution was entirely vindicated. He thought that Dr. Molson was to be blamed, and that if it was possible for the authorities to get any satisfaction from Mr. Sharp for the way in which he had traduced the institution and its officials it would be a very good thing, and he had no doubt that the matter would have the consideration of the Hospital Board. Miss Sharp was attended to and cared for in an excellent manner, and the jury would have no difficulty in coming to the conclusion that death was due to natural causes, and that not one shadow of imputation rested upon anybody connected—he would not say with the case—but with the hospital.

The jury returned a verdict of death from natural causes, exonerated the hospital staff from any blame whatsoever, and expressed the opinion that Mr. Sharp and Dr. Molson should have been present at the court, and that they be strongly censured.

The Coroner said that he would convey the intimation of the jury to the proper quarter.

PROFESSIONAL RELATIONS WITH A BONESETTER.

A CORRESPONDENT writes to say that the little son of some good patients of his has fractured his thigh and that they have called in a bonesetter to set it, but wish our correspondent to continue in attendance to look after the child's general health. He asks our advice as to his conduct under the circumstances.

*** We think he will consult his own dignity and that of the medical profession by refusing to take any part in the treatment of the case. If it turned out badly he would be responsible.

THE DUTIES OF A HOUSE-SURGEON.

T. W. S. P.—We have no doubt that the authorities of a hospital can compel their resident officers to sign such certificates for patients of the hospital, and we cannot advise our correspondent to resist the orders of the Committee. We quite agree that many of the railway companies get far more work from the hospitals than the value of their subscriptions, and that the system is unsatisfactory.

AN UNPAID *LOCUM TENENS*.

ORCHARD.—We do not think the collection of debts can be made part of the ethical work of the Association. We should advise our correspondent to consult a solicitor.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Examinations for Medical and Surgical Degrees.—The third examination (Part II) for the degree of M B. will commence on Tuesday, April 28th, and the M.C. examination on Thursday, April 30th. The names of candidates for these examinations must be sent to the Registrary on or before Thursday, April 16th.

ROYAL COLLEGE OF PHYSICIANS.

AN extraordinary comitia was held on Thursday, February 19th, the President, Sir W. S. Church, Bart., K.C.B., in the chair.

Laboratories Committee.

A report from the Laboratories Committee dated December 5th, 1902, was received and adopted.

Annual Returns of Examination.

The annual return by the Examiners of the results of the Examinations for the Licence in the year 1902 was received and ordered to be entered upon the Minutes.

Library.

A list of books and other publications presented to the library during the past quarter was received from the Harveian Librarian, and the thanks of the College accorded to the donors.

TRINITY COLLEGE, DUBLIN.

THE following candidates have passed the Final Examination in Medicine:

S. S. Pringle, J. M. Holmes, T. L. Sands, T. F. Wilson, J. M'Cutcheon, A. H. Marks, W. P. Ringland.

Section B.—H. R. Nelson, W. M Wade, A. L. Otway, J. F. W. Leech, H. O'H. H. May, W. S. S. Berry, R. W. T. Clampett, R. C. Hallowes, R. Bailey, Rev. R. B. Bryan, S. H. Vickery.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

Fellowship Examinations.—The following candidates having passed the necessary examination have been admitted Fellows of this College: G. R. Boyce, J. M. M. Crawford, R A.M.C., A. Harris, J. M. Keegan, R. McCombes, and Miss A. M. Thornell. The following passed the primary part of the examination: E. Sheridan and R. F. C. Talbott.

Medical Students' Guide.—The Royal College of Surgeons in Ireland has just issued a medical students' guide, giving full particulars of "how to become a doctor," commencing with the preliminary entrance examination, giving specimens of previous questions set, the fees payable for each term. The entrance examination will be held this year on March 23rd and September 21st. The guide will be forwarded post-free on written application to the Registrar, Royal College of Surgeons, Dublin.

SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST, February, 1903.—The following candidates passed in:

Surgery.—E. F. Beaumont (Section I), Middlesex Hospital; E. M. Beverley (Sections I and II), Royal Free Hospital; C. A. Campbell (Sections I and II), Trinity University, Toronto; O. Gutermann, Berlin and Rostock; J. P. Nettell (Section II), London Hospital; S. Riley (Section I), Manchester; H. P. Shanks, St. Bartholomew's Hospital.

Medicine.—E. M. Beverley (Sections I and II), Royal Free Hospital; A. E. Bird, (Section II), Manchester; C. A. Campbell, (Sections I and II), Trinity University, Toronto; G. M. Crockett (Section II), Royal Free Hospital; G. J. Humphreys (Sections I and II), St. Bartholomew's Hospital; P. J. Pagonis, Athens; L. S. Shoosmith (Sections I and II), St Mary's Hospital.

Forensic Medicine.—E. M Beverley, Royal Free Hospital; C. A. Campbell, Trinity University, Toronto; G. A. Crowie, London and Westminster Hospitals; T S. Davies, St. George's Hospital; G. J. Humphreys, St. Bartholomew's Hospital.

Midwifery.—K M. Betts, E. M. Beverley, Royal Free Hospital; W. H. Bush, Guy's Hospital; C. A Campbell, Trinity University, Toronto; A. D. Edwards, Cardiff and London Hospital; N. S. Finzi, University College Hospital; A. B. Gosse, Royal Free Hospital; J. M. Wall, St. Thomas's Hospital.

The diploma of the Society was granted to E. M. Beverley, C. A. Campbell, G. M. Crockett, T. S. Davies, O. Gutermann, G. J. Humphreys, and J. P. Nettell.

INDIA AND THE COLONIES.

CAPE COLONY.

The Health of Cape Town.

DR. JASPER ANDERSON, the Medical Officer of Cape Town, in his first annual report on the health of that city for the year ending June 30th, 1902, has some striking facts to report. The general health of the Europeans, if we may judge from the death-rates, has been steadily improving during the last eleven years. The European death-rate has been as high as 27.5, and now stands at 16 3. But the same cannot be said of the coloured population, whose death-rate is 43.7. The death rate of all classes is 26 8, as against 35.1 for 1900-1. It will be remembered that Dr. Anderson was until recently medical officer of health of Blackpool, and his first work on arrival at Cape Town was concerned with organization. The population of Cape Town itself is 64,104, and the area has been subdivided into 10 districts, supervised by the sanitary inspector. Special inspectors have also been appointed, to the number of ten, for special purposes, such as disinfection, food and drugs, dairies, etc., including one lady inspector. The latter will have abundant scope for the infant death-rate, though comparatively low among Europeans, is 254 per 1,000 births among the coloured people, and Dr. Anderson is of opinion that this is largely due to "erroneous methods of feeding." Diarrhoea, dysentery, and measles carry off a large number of children.

One of the striking facts of the report is the high death-rate from phthisis, which is 2 8 amongst Europeans and 9 5 amongst coloured people. Even the European rate would be considered high in London, and of course the coloured rate is exceptional. Yet the climate of Cape Town is in many ways favourable to low phthisis-rates. The air is not polluted by many industries, and there is plenty of sunshine. Dr. Anderson thinks the cause of the prevalence is to be found in the quantity of dust carried from the surface of the streets by the high winds which at times occur, by the habits of expectorating on the pavements by damp dwellings, and by the exclusion of fresh air and sunshine from the rooms of the houses by the ingrained practice of the people. After such a formidable list of predisposing agencies it is little wonder that the yearly death-rate of phthisis is greater than from any other single cause. Dr. Anderson advises paving and cleansing of streets, avoidance of expectoration, and similar remedies He also recommends compulsory notification and sanatorium treatment for cases in the early stages.

There were 11 cases of plague during the year, and the Government took measures to stamp it out by means of port regulations and the use of Danysz's virus for exterminating rats. A professional ratcatcher was employed by the corporation, and the sum of 6d. was paid for each rat brought dead or alive. The medical officer has accomplished a good deal of sanitary work in dwelling-houses and advocates municipal building of suitable dwelling-houses. A constant water supply is also a desideratum. Sanitary matters are evidently improving in Cape Town, but much apparently remains to be done.

Texas Fever of Cattle.

Texas fever, or red water fever, of cattle is always interesting to students of human pathology from its close analogy to some of the diseases of man. A report on this disease in Rhodesia, by Charles Gray, M.R.C.V.S., Chief Cattle Inspector, and William Robertson, M.R.C.V.S., Bacteriologist to the Veterinary Department, though of more importance to stock owners and breeders of cattle, will nevertheless repay a perusal by the medical man. In addition to the double pyrosoma form and small spherical form of parasite found by Smith and Kilborne in South America in the blood of the diseased cattle, they claim to have seen forms resembling bacilli which may be curved to such an extent as to form ring-like shapes. They believe these to be deformed types of the parasite. Methods of inoculation and temperature charts fill up a large part of the report.

HOSPITAL AND DISPENSARY MANAGEMENT.

DEVONSHIRE HOSPITAL, BUXTON.

ACCORDING to the annual report of the Devonshire Hospital at Buxton, during the year 1902 3,163 in-patients have been admitted, of whom 2,671 were discharged as improved During the same time 241 out-patients were under treatment. The average number of patients daily in the hospital was 198.8, as compared with 130.2 in 1882.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

PROPOSED VACCINATION LEGISLATION.
Poor-law Medical Officers' Association.

At the last Council meeting of the Poor-law Medical Officers' Association of England and Wales, Mr. D. B. Balding, F.R.C.S., J.P., in the chair, a discussion took place on the working of the Vaccination Acts, and various propositions as to their amendment were considered.

1. The question of "conscientious objection" first came under review, and finally, with some difference of opinion, it was resolved that the Council should recommend that the present conscience clause should remain in any future enactment; but the following addition was unanimously agreed to, namely: That the magistrate's exemption certificate should only be in force till the child reached school age; that then it should be made necessary to get another certificate if vaccination were still refused. It was also recommended that the procedure for obtaining a magistrate's exemption certificate should be made more intelligible.

2. The Council was of opinion that, in the event of the Local Government Board declining to administer the Vaccination Acts, it was desirable that such administration should be in the hands of the sanitary authorities throughout the country rather than as at present in the hands of the guardians.

3. That in enforcing revaccination indirect would be more advantageous than direct measures—that is, all public services, schools, etc., should be closed to those refusing to be vaccinated or revaccinated.

4. The Council was further of opinion that private practitioners, who furnished the vaccination officer with certificates of successful vaccination, should be paid a suitable fee for each certificate, provided that it was proved that the operation had been done in accordance with the regulations of the Local Government Board.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,433 births and 4,841 deaths were registered during the week ending Saturday last, February 21st. The annual rate of mortality in these towns, which had been 18.1, 17.9, and 17.1 per 1,000 in the three preceding weeks, further declined to 16.7 per 1,000 last week. The rates in the several towns ranged from 4.1 in Burton-on-Trent and in King's Norton, 7.4 in Willesden, 7.9 in Aston Manor, 8.0 in East Ham, 8.7 in Birkenhead, 8.9 in Smethwick and in Tynemouth, and 9.1 in Handsworth, to 20.4 in Burnley, 21.0 in Wigan, in Salford, and in Oldham, 21.2 in Liverpool, 21.4 in Hanley and in Rhondda, 23.3 in South Shields, and 24.1 in Great Yarmouth. In London the rate of mortality was 17.6 per 1,000, while it averaged 16.4 per 1,000 in the seventy-five other large towns. The average death-rate from the principal infectious diseases was 1.6 per 1,000 in the seventy-six large towns; in London this death-rate was equal to 1.9 per 1,000, while it averaged 1.4 per 1,000 in the seventy five other large towns, among which the highest rates were 2.5 in Manchester, 2.7 in Preston and in Rotherham, 2.8 in Devonport, 3.3 in Middlesbrough, 3.4 in Wigan, 4.4 in Stockport, and 4.9 in Oldham. Measles caused a death-rate of 1.1 in Middlesbrough, 1.4 in Salford, 1.7 in Wigan, and 2.1 in Devonport; scarlet fever of 1.5 in Oldham and 1.6 in Stockport; diphtheria of 1.6 in Hanley and 1.8 in Bury; whooping-cough of 1.3 in Hornsey, 1.4 in Southampton and in Preston, 1.7 in Rhondda, 1.8 in Rotherham, 2.0 in Great Yarmouth, 2.2 in Stockport, and 2.3 in Oldham; and "fever" of 1.1 in Middlesbrough. Of the 13 fatal cases of small-pox registered in these towns last week, 6 belonged to Liverpool, 2 to Manchester, 2 to Leeds, and 1 each to Birmingham, Oldham, and Rotherham. There were 8 cases of small-pox under treatment in the Metropolitan Asylums Hospitals Saturday last, February 21st, against 7, 6, and 6 on the three preceding Saturdays; 7 new cases were admitted during last week, against 6, 4, and 1 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 2,017, 1,941, and 1,910 at the end of the three preceding weeks, had further declined to 1,803 at the end of last week; 206 new cases were admitted during the week, against 226, 189, and 246 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, February 21st, 918 births and 592 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 21.3, 21.7, and 18.1 per 1,000 in the three preceding weeks, was again 18.1 per 1,000 last week, and was 1.4 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scotch towns the death-rates ranged from 11.3 in Greenock and 12.4 in Leith, to 22.6 in Aberdeen and 24.8 in Perth. The death rate from the principal infectious diseases averaged 2.3 per 1,000 in these towns, the highest rates being recorded in Aberdeen and Paisley. The 297 deaths registered in Glasgow included 3 from scarlet fever, 20 from whooping-cough, 7 from "fever," and 8 from diarrhoea. Two fatal cases of measles, 2 of diphtheria, and 3 of diarrhoea were recorded in Edinburgh. Two deaths from whooping-cough and 5 from diarrhoea occurred in Dundee: 10 from measles and 2 from diphtheria in Aberdeen; and 2 from scarlet fever and 2 from whooping-cough in Paisley.

MEDICAL ATTENDANCE ON SMALL-POX ISOLATION HOSPITAL.

A. T. asks for information as to medical attendance on cases of small-pox in a small isolation hospital which has been instituted to serve three districts (one borough and two rural). There is a workhouse in the borough from which cases of infectious disease are by special arrangement sent for treatment to the hospital. At the present time there are three cases of small-pox in the hospital, all being tramps sent there from the workhouse. There has hitherto been no one appointed as medical officer to the hospital, but the M.O.H. (of the three districts) has by verbal arrangement with the Local Hospital Board undertaken the patients without any terms having been fixed. "A. T." asks: (1) Is it reasonable to expect the M.O.H. to attend them, when he does not wish to do so? (2) Is it advisable for any one in general practice to attend small-pox? (3) If men in practice are to attend small-pox would it not be reasonable to expect that each doctor should follow his patients to hospital, for example, that a workhouse doctor should continue to attend his tramps? (4) When the number of small-pox patients exceeds two or three in a hospital is it a reasonable expense to install a resident medical man in such hospital? (5) What is a reasonable fee for attending cases of small-pox one and a-half mile from home?

*** 1. We are not aware that it is the duty of the medical officer of health to undertake the treatment of these cases if he does not wish to do so; but if no other medical attendance can be procured, we should think the Conjoint Board would have a strong claim upon him, with, of course, proper remuneration for his services. 2. This has been the usual practice up to the present time, but it is not unlikely that in the near future it may become the exception. 3. It is certainly not the duty of a private practitioner or of a workhouse medical officer to attend patients in an isolation hospital if they do not wish to do so. 4. We can quote no example of a medical attendant being specially engaged for attendance on so small a number as two or three patients in any hospital. 5. This is a very difficult question to answer. Perhaps 10s. 6d. for each visit to one patient, and 5s. each for all others visited at the same time, might be regarded as fair remuneration.

THE TREATMENT OF PATIENTS IN A PUBLIC ISOLATION HOSPITAL.

M.D., D.P.H., asks when a child is removed to an isolation hospital (1) can the parents demand to have the patient attended by their own medical man? Or (2) can they demand permission for him to visit the case occasionally at reasonable times, either in consultation with the medical superintendent or otherwise?

*** (1) The answer to both the above questions is determined by the regulations of the sanitary authority relating to the hospital in question. In the absence of regulations it is determined by the medical superintendent of the hospital. The parents cannot, unless conditions were made before admission, demand either to have their child treated by their own medical man, or to have a consultation respecting their child with the medical superintendent. We can scarcely conceive, however, that any such superintendent would decline a consultation with any registered practitioner whom an anxious parent wished to see his child. In the hospital referred to by our correspondent a special rule (No. 12) is made to meet this case. This rule certainly does not give the medical superintendent power to refuse a consultation. There are valid administrative difficulties in permitting every practitioner to continue to attend his own patients in an isolation hospital. It is not economical in administration, and may occasionally defeat the objects of the institution. There should, however, be no difficulty as to consultations.

P. H. will probably find *The Practical Guide to the Public Health Acts*, by T. W. Hime, B.A., M.D., second edition (London: Baillière, Tindall and Cox. 1901. 12s.) suit his purpose.

ENGLISH URBAN MORTALITY DURING 1902.
[Specially Reported for the British Medical Journal.]

In the accompanying table will be found summarized the vital statistics for the year 1902 of the seventy-six large towns dealt with in the Registrar-General's weekly returns.

The 452,909 births registered in these towns during last year were equal to an annual rate of 30.0 per 1,000 of their aggregate population, estimated at 14,862,880 persons in the middle of the year. In London the birth-rate was equal to 28.5 per 1,000, while it averaged 31.1 per 1,000 in the seventy-five large provincial towns. The lowest birth rates in these towns were 17.1 in Bournemouth, 18.2 in Hastings, 20.8 in Hornsey and in Bury, 21.3 in Halifax, 23.0 in Bradford, and 24.0 in Rochdale; the highest rates were 36.4 in East Ham, 36.5 in South Shields, 36.7 in Gateshead, 37.5 in St. Helens, 37.6 in Wigan, 39.4 in Merthyr Tydfil, and 41.5 in Rhondda.

During the period under notice 263,091 deaths were registered in these seventy-six towns, corresponding to an annual rate of 17.4 per 1,000 living. In London the rate of mortality was 17.7 per 1,000, while it averaged 17.6 in the seventy-five other large towns, among which the rates ranged from 8.6 in Hornsey, 10.9 in Handsworth, 11.5 in Walthamstow, 11.6 in King's Norton, 11.9 in East Ham and in Leyton, and 12.4 in Bournemouth to 20.0 in Hanley, in St. Helens, and in Manchester, 20.2 in Middlesbrough, 20.6 in Wigan, 22.5 in Liverpool, and 23.1 in Merthyr Tydfil.

The 263,091 deaths from all causes registered in these seventy-six towns last year included 32,021 which were referred to the principal infectious diseases; of these, 1,764 resulted from small-pox, 7,441 from measles, 2,870 from scarlet fever, 3,024 from diphtheria, 5,578 from whooping-cough, 2,336 from "fever" (principally enteric), and 8,108 from diarrhoea. The death-rate from these diseases averaged 2.12 per 1,000 in the seventy-six large towns; in London this death-rate was equal to 2.23 per 1,000, while it averaged 2.10 per 1,000 in the seventy-five other large towns, among which the death-rates from these infections diseases ranged from 0.63 in Hornsey, 0.78 in Bournemouth, 0.82 in Hastings, 0.85 in Handsworth, 1.06 in Ipswich, 1.07 in Halifax, 1.12 in Burton-on-Trent, and 1.13 in King's Norton, to 3.02 in Wigan and in Rhondda, 3.08 in Liverpool, 3.14 in Bootle, 3.20 in West Ham, 3.61 in Burnley, and 3.84 in Hanley. The 1,764 deaths from small-pox were equal to an annual rate of 0.12 per 1,000; in London the death rate from this disease was 0.28 per 1,000; while it averaged 0.04 in the seventy-five other large towns, a mongwhich this disease was proportionally most fatal in Tottenham, Willesden, West Ham, East Ham, Leyton, Walthamstow, Swansea, and Merthyr Tydfil. The 7,441 fatal cases of measles corresponded to a rate of 0.49 per 1,000; in London the death-rate from this disease was 0.51 per 1,000, while in the seventy-five other large towns the highest rates were recorded in Burnley, Barrow-in-Furness, Hull, South Shields, Newport (Mon.), Cardiff, and Rhondda. The 2,870 deaths from scarlet fever were equal to an annual rate of 0.19 per 1,000; in London the scarlet fever death-rate was only 0.12 per 1,000, while it averaged 0.22 per 1,000 in the seventy-five other large towns, among which this disease showed the highest proportional mortality in West Bromwich, Birmingham, St. Helens, Wigan, Bolton, Burnley, and Middlesbrough. The 3,024 fatal cases of diphtheria corresponded to an annual rate of 0.26 per 1,000; in London the death-rate from this disease was 0.25 per 1,000, while

Analysis of the Vital Statistics of Seventy-Six of the Largest English Towns during 1902.

Towns.	Estimated Population middle of 1902.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Infectious Diseases.	Deaths from Principal Infectious Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Fever.	Diarrhoea.	Deaths of Children under one year of age to 1,000 Births.	Rate per cent. of Uncertified Deaths.
76 Towns	14,862,962	452,909	263,091	30.0	17.4	2.12	32,021	1,764	7,441	2,870	3,924	5,578	2,336	8,108	145	1.2
75 Provincial Towns	10,283,852	320,099	180,551	31.1	17.6	2.10	21,628	450	5,080	2,307	2,743	3,098	1,740	5,604	146	1.6
London	4,579,110	132,810	82,540	28.5	17.7	2.23	10,393	1,314	2,361	563	1,181	1,880	596	2,504	141	0.3
Croydon	137,917	3,955	1,957	28.1	14.0	1.31	185	11	30	9	20	21	9	99	132	—
Willesden	121,611	3,922	1,615	31.7	13.1	2.14	264	13	67	11	52	26	10	85	135	1.8
Hornsey	75,565	1,596	659	20.8	8.6	0.63	49	4	7	1	7	9	5	10	84	—
Tottenham	106,535	3,418	1,573	31.6	14.5	2.29	243	75	25	14	37	41	19	37	123	0.7
West Ham	275,408	9,549	4,782	34.1	17.1	3.20	868	150	142	46	128	115	79	238	149	0.6
East Ham	104,023	3,853	1,261	36.4	11.9	2.14	225	25	25	10	33	51	24	57	119	0.8
Leyton	103,479	3,213	1,255	30.5	11.9	1.82	192	11	14	7	37	60	10	47	110	0.8
Walthamstow	101,318	3,491	1,188	33.9	11.5	1.20	122	13	14	7	17	24	14	33	115	0.4
Hastings	65,893	1,222	968	18.2	14.5	0.82	54	1	14	4	10	8	1	16	112	1.1
Brighton	124,539	3,071	2,001	24.3	15.8	1.26	160	—	30	3	36	28	14	49	125	0.2
Portsmouth	191,909	5,284	3,269	27.1	16.8	2.32	452	—	66	15	67	93	55	150	132	1.1
Bournemouth	61,628	1,074	774	17.1	12.4	0.78	48	—	18	—	10	11	1	8	113	0.4
Southampton	107,756	3,154	1,667	28.8	15.2	1.54	169	1	52	5	23	44	19	25	123	—
Reading	73,802	1,938	1,024	25.8	13.7	1.35	102	3	25	8	25	1	1	39	122	2.1
Northampton	88,592	2,279	1,371	25.3	15.2	1.58	142	—	42	2	13	27	16	42	138	1.5
Ipswich	67,840	1,908	989	27.7	14.3	1.06	73	—	—	2	7	13	33	18	118	1.2
Great Yarmouth	51,610	1,439	886	27.4	15.9	1.71	90	—	17	7	18	15	7	21	143	—
Norwich	113,178	3,204	1,919	27.9	16.7	1.83	211	—	33	25	10	66	5	72	107	0.6
Plymouth	110,057	3,015	1,902	27.0	17.0	1.78	199	1	47	11	14	25	5	96	155	0.4
Devonport	72,307	2,137	1,118	29.1	15.2	1.31	96	—	21	6	15	11	10	33	121	—
Bristol	334,632	9,357	5,905	27.5	17.4	2.82	958	1	415	63	185	108	58	126	131	0.3
Hanley	62,486	2,239	1,271	35.3	20.0	3.84	243	2	63	8	81	29	12	48	174	1.8
Burton-on-Trent	50,973	1,392	711	26.9	13.7	1.12	58	—	19	14	6	9	1	9	114	1.8
Wolverhampton	95,712	3,071	1,592	31.6	16.4	1.73	168	—	21	16	19	23	13	76	134	0.2
Walsall	88,338	3,115	1,425	34.7	15.9	2.07	186	1	33	26	16	16	23	66	141	0.9
Handsworth	55,491	1,444	614	25.0	10.9	0.85	48	—	10	12	7	13	5	1	109	0.4
West Bromwich	65,938	2,336	1,285	34.9	19.2	2.81	188	—	55	66	10	10	6	41	162	1.2
Birmingham	528,181	17,079	9,997	31.8	18.6	2.53	1,358	4	182	290	131	267	103	381	157	2.9
Kings Norton	60,779	1,859	718	30.1	11.6	1.13	70	—	4	17	12	16	8	13	111	1.5
Smethwick	56,893	1,974	834	34.1	14.4	1.36	78	—	16	20	7	11	16	8	129	3.5
Aston Manor	78,481	2,339	1,078	29.3	13.5	2.00	159	—	26	22	7	48	26	40	132	2.8
Coventry	71,475	2,073	1,017	28.5	14.0	1.25	91	—	—	11	32	10	6	32	105	1.0
Leicester	216,389	6,410	3,275	29.1	14.9	1.54	339	4	75	12	34	71	53	130	153	1.5
Grimsby	64,596	1,974	966	30.1	14.7	2.03	133	—	23	10	13	20	28	30	145	0.7
Nottingham	243,191	6,867	4,121	27.8	16.7	1.32	324	—	4	24	29	57	52	178	159	0.9
Derby	116,982	3,326	1,656	28.0	13.9	1.28	152	—	39	8	12	29	14	58	125	—
Stockport	94,422	2,636	1,823	27.5	19.0	1.84	177	0	29	24	8	29	13	55	179	0.5
Birkenhead	112,396	3,731	2,024	32.7	17.7	2.27	257	1	56	20	27	60	45	08	148	0.3
Wallasey	56,173	1,602	791	28.1	13.9	1.23	70	—	12	5	5	18	23	17	107	1.4
Liverpool	692,495	24,087	15,815	34.2	22.5	3.08	2,175	22	241	320	210	404	219	659	163	3.7
Bootle	59,776	1,991	1,108	32.8	19.7	3.14	191	5	46	15	11	25	18	71	180	3.2
St. Helens	85,986	3,279	1,751	37.5	20.0	2.72	238	—	59	48	21	18	27	65	167	5.5
Wigan	61,587	2,308	1,291	37.9	20.6	3.02	189	—	21	34	23	39	15	57	157	1.6
Warrington	65,419	2,376	1,091	35.7	16.4	1.31	86	1	12	9	6	14	7	57	140	5.8
Bolton	171,082	4,736	2,943	27.2	16.9	2.04	355	7	90	117	43	56	34	68	134	0.2
Bury	58,182	1,232	969	20.8	16.4	1.44	86	8	18	5	34	8	4	11	130	1.9
Manchester	549,170	18,301	11,143	32.8	20.0	1.99	1,113	—	246	147	118	242	65	295	152	0.8
Salford	224,007	7,699	4,393	33.8	19.3	2.67	605	—	157	50	174	118	61	145	157	0.4
Oldham	138,091	3,659	2,677	26.1	19.1	2.00	282	7	104	36	47	31	14	44	148	0.3
Rochdale	84,057	2,048	1,561	24.0	18.3	1.27	109	—	70	1	8	53	3	14	130	2.7
Burnley	98,383	2,914	1,946	29.1	19.5	3.61	361	4	143	70	45	15	19	59	177	1.4
Blackburn	130,318	3,387	2,243	25.6	16.9	1.79	237	2	96	31	23	26	22	53	159	3.8
Preston	113,766	3,341	2,205	28.9	19.1	2.79	317	—	57	21	28	29	22	106	189	4.0
Barrow-in-Furness	58,372	1,963	920	33.1	15.6	2.87	170	—	93	2	11	51	9	13	130	3.7
Huddersfield	95,084	2,354	1,716	24.4	17.8	1.57	152	1	57	11	13	46	6	18	138	1.5
Halifax	105,932	2,286	1,691	21.3	15.7	1.07	116	—	39	11	9	15	15	23	144	2.0
Bradford	281,771	6,575	4,530	23.0	15.8	1.43	406	—	159	46	83	33	38	51	139	0.5
Leeds	437,037	13,240	7,797	29.8	17.6	1.99	885	5	167	53	94	200	78	265	150	0.5
Sheffield	418,177	14,182	7,257	33.4	17.1	1.67	720	—	193	56	114	71	48	238	150	0.5
Rotherham	55,934	2,007	889	35.3	15.6	1.74	99	1	42	4	13	9	9	21	139	0.6
York	79,114	2,320	1,250	28.9	15.5	1.35	108	1	40	7	7	16	13	24	116	0.4
Hull	245,449	8,000	4,286	32.1	17.2	2.27	569	—	208	18	88	109	43	103	137	1.8
Middlesbrough	93,355	3,413	1,915	36.0	20.2	2.66	254	—	119	46	61	31	24	82	169	3.1
Stockton-on-Tees	51,745	1,741	895	33.1	17.0	2.38	125	—	43	14	8	30	9	21	111	3.9
West Hartlepool	65,101	2,393	1,003	30.1	15.1	1.01	106	—	—	7	27	19	9	1	1	—
Sunderland	148,007	5,393	2,928	36.9	19.5	1.87	281	1	83	25	15	48	35	31	152	0.7
South Shields	103,330	3,830	2,045	36.5	19.5	2.67	280	3	100	43	6	104	7	12	147	0.7
Gateshead	113,013	4,220	2,033	36.7	17.7	2.01	231	4	81	35	12	51	6	18	136	1.1
Newcastle-on-Tyne	219,150	7,259	4,428	32.6	19.9	1.76	391	1	140	59	23	3	3	3	170	1.5
Tynemouth	52,009	1,784	1,029	33.7	19.5	1.87	98	2	17	8	5	41	7	11	130	1.1
Newport (Mon.)	68,901	2,295	1,103	32.8	15.7	1.56	109	2	11	7	8	11	11	11	111	0.1
Cardiff	168,909	5,408	2,885	31.5	16.8	2.69	462	—	184	37	89	57	47	146	0.1
Rhondda	117,011	4,037	2,223	41.5	18.7	3.02	357	1	138	27	81	39	24	78	178	0.9
Merthyr Tydfil	70,568	2,824	1,659	39.4	23.1	2.77	199	10	78	21	26	13	26	59	185	1.4
Swansea	95,084	3,605	1,756	37.1	18.1	1.40	135	1	7	1	1	1	7	47	115	1.2

it averaged 0.27 per 1,000 in the seventy-five other large towns, among which the highest rates were recorded in West Ham, Bristol, Hanley, Bury, Middlesbrough, Cardiff, and Rhondda. The 5,578 deaths from whooping-cough were equal to an annual rate of 0.37 per 1,000; in London the death-rate from whooping-cough was 0.40 per 1,000, while the mean rate was 0.36 in the seventy-five other large towns, among which this disease was proportionally most fatal in Leyton, Norwich, Aston Manor, Liverpool, Wigan, Barrow-in Furness, Stockton-on-Tees, South Shields, and Tynemouth. The 2,336 deaths referred to different forms of "fever" corresponded to a rate of 0.15 per 1,000; in London this death-rate was 0.13 per 1,000, while it averaged 0.17 per 1,000 in the seventy-five other large towns, among which the highest "fever" death-rates were recorded in Ipswich, Grimsby, Birkenhead, Liverpool, Bootle, St. Helens, and Merthyr Tydfil. The 8,108 fatal cases of diarrhoea were equal to an annual rate of 0.54 per 1,000, which was also the rate in London: among the seventy-five other large towns this disease showed the highest proportional mortality in Plymouth, Liverpool, Bootle, Wigan, Preston, Middlesbrough, and Merthyr Tydfil.

Infant mortality, measured by the proportion of deaths under 1 year of age to registered births, was equal to 145 per 1,000; in London the proportion was 141 per 1,000, while it averaged 146 in the seventy-five other large towns, and ranged from 84 in Hornsey, 105 in Coventry, 107 in Wallasey, 109 in Handsworth, 110 in Leyton, 111 in King's Norton, and 112 in Hastings, to 174 in Hanley, 177 in Burnley, 178 in Rhondda, 179 in Stockport and in Middlesbrough, 185 in Merthyr Tydfil, and 189 in Preston.

The causes of 3,208, or 1.2 per cent. of the deaths in the seventy-six towns last year were not certified either by a registered practitioner or by a coroner. The causes of all the deaths were duly certified in Croydon, Hornsey, Southampton, Great Yarmouth, Devonport, and Derby; while the highest proportions of uncertified deaths were registered in St. Helens, Warrington, Preston, Sunderland, South Shields, and Gateshead.

MEDICAL NEWS.

THE ROYAL VISIT TO THE HERBERT HOSPITAL.—In an account of the visit paid to the Herbert Hospital at Woolwich on February 16th, which appeared in the BRITISH MEDICAL JOURNAL of February 21st, it was stated that the sick and wounded sent home during the war, besides a number of others invalided home from India, had been for the most part under the care of retired army medical officers temporarily employed. It is right to state that, in addition to these officers, a number of civilian surgeons were employed, without whose co-operation the work could not have been carried out. Last week we were not in possession of the names of these gentlemen. We have since been supplied with a list, which we have much pleasure in publishing. The civilian surgeons who did duty at the Herbert Hospital during the war were Drs. Eames, Hartington, McMurragh, Corfield, Corcoran, Bartlett, Donald Anderson, Hopewell, Grey, Grimshaw, Kershaw, Thomas Prior, Keays, Towse, Henchley Moyles, and Wermet. We do not know whether Court or military etiquette may have stood in the way of the civilian surgeons being presented to their Majesties with the military officers, but we think it a pity that men who had done good work at a time of national emergency should not have received an honour which they had well earned.

AT the last meeting of the Royal Meteorological Society Mr. E. Mawley presented his report on the phenological observations for the year ending November 30th, 1902. Though the year was for the most part cold and sunless, the weather favoured the growth of all crops except potatoes and hops. Wheat, barley, oats, beans, peas, turnips, mangolds, and grass were alike abundant, the fruit growths, on the other hand, were more or less deficient, with the exception of strawberries; wild plants were everywhere behind their mean dates in coming into flower, and this was especially noticeable after the middle of May; at that period the dates of blossoming were later than in any year since the present series of records was instituted in 1891.

AT a general meeting of the members of the Co-operation of Trained Nurses, Glasgow and West of Scotland, Dr. David Newman, the Chairman of the Executive Committee, moved the adoption of a new constitution and rules. The objects and powers were, he said, similar to those contained in the old constitution, but had been enlarged and more definitely expressed so as to meet the requirements of the growth of the Co-operation. The power is now taken to appoint trustees and to receive subscriptions and bequests. The motion was seconded by Mr. Hedderwick, Chairman of the House Committee of the Glasgow Royal Infirmary, who congratulated the Co-operation on its efficiency and success. It benefited not only trained nurses, but the public in Glasgow and the West of Scotland. The new constitution was accepted. The Co-operation was founded eleven years ago, and the nurse members now number close upon two hundred; they have a home in Glasgow and a seaside residence at Gourock. The commission at present paid by the nurses is 7½ per cent., but the Executive Committee contemplates some reduction at an early date. No nurse is admitted who cannot show three years' continuous and systematic training in a recognized hospital, and no monthly nurse can join who has not also had the same general medical and surgical training as the others.

WATER SUPPLY AND THE WEATHER.—From meteorological observations made at Sevenoaks in 1902 by Mr. W. W. Wagstaffe it appears that in spite of the bad weather of last summer and the wet spring, there was a deficiency of rain throughout the year. This makes the eighth successive year in which less rain than the average amount has fallen, although the rainy days have been rather in excess of the average. The total deficiency in the last eight years has amounted to nearly 34 in., and as there have been no less than twelve unnaturally dry summers in eighteen years, the effect on the wells has become somewhat serious.

MEDICAL VACANCIES.

The following vacancies are announced:

ABERDEEN CITY DISTRICT LUNACY BOARD.—Medical Superintendent for the Kingseat Lunatic Asylum. Salary to commence, £400 per annum, rising £50 yearly for four years, with house, etc. Applications to the Clerk, 20, Union Terrace, Aberdeen, by March 13th.

BIRMINGHAM: CITY FEVER HOSPITAL, Little Bromwich.—Assistant Resident Medical Officer. Appointment for three months. Salary at the rate of £120 per annum. Applications to the Medical Superintendent.

CARLISLE: CUMBERLAND INFIRMARY.—Resident Medical Officer, to act as House-Physician for first six months and House Surgeon for ensuing six months. Salary at the rate of £80 and £100 per annum respectively, with board, lodging, and washing. Applications to the Secretary by March 10th.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY.—Resident House-Physician and Surgeon. Salary, £120 per annum, with board, apartments, and laundry. Applications to the Secretary by March 4th.

DEVONPORT: ROYAL ALBERT HOSPITAL.—Assistant House Surgeon. Appointment for six months. Salary at the rate of £50 per annum, with board, lodging, and washing. Applications to the Chairman of the Medical Committee by March 12th.

DURHAM COUNTY ASYLUM.—Second Assistant Medical Officer. Salary, £180 per annum, rising to £220, with rooms, board, laundry, and attendance. Applications to the Medical Superintendent, Durham County Asylum, Winterton, Ferryhill.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Two Physicians to outpatients. Applications to the Committee of Management by March 5th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Physician, unmarried. Appointment for six months; salary, £20; washing allowance £2 10s., with board and residence. Applications, on forms provided, to be sent to the Secretary by March 4th.

LEITH HOSPITAL.—(1) House-Physician. (2) Assistant House-Physician. (3) House-Surgeon. (4) Assistant House Surgeon. (5) Surgeon for the Outdoor Department. Appointments for six months. Applications to the Secretary, 33, Bernard Street, Leith, by March 14th.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Assistant Resident Medical Officer. Appointment for six months. Board, residence, and washing provided, and honorarium at the rate of 50 guineas per annum. Applications to the Secretary by March 5th.

MANCHESTER CHILDREN'S HOSPITAL.—Junior Resident Medical Officer. Appointment for six months, but eligible for election as Senior Medical Officer for another six months. Salary at the rate of £80 and £100 per annum respectively, with board and lodging. Applications to the Secretary, Dispensary, Gartside Street, Manchester, by March 2nd.

MANCHESTER ROYAL INFIRMARY.—Assistant Medical Officer to the Convalescent Institution, Cheadle; unmarried. Appointment for six months. Salary at the rate of £80 per annum, with board and residence. Applications to the General Superintendent, Royal Infirmary, Manchester, by March 14th.

NORTH EASTERN HOSPITAL FOR CHILDREN, Hackney Road, N.E.—(1) Assistant Physician; must be F. or M.R.C.P. Lond. (2) Casualty Officer. Appointment for six months. Salary £80 per annum, with lunch. Applications to the Secretary by March 9th.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Two Hunterian Professors. Applications to the Secretary by March 23rd.

ROYAL EYE HOSPITAL, Southwark.—House-Surgeon. Appointment for six months, but renewable. Salary, 50 guineas per annum, with board and residence. Applications to the Secretary by March 9th.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—House-Physician. Appointment for six months. Salary at the rate of £60 per annum, with board, lodging, and washing. Applications to the Secretary by March 14th.

ST. MARK'S HOSPITAL FOR FISTULA, City Road, E.C.—House-Surgeon. Salary £80 per annum, with board, lodging, and washing. Applications to the Secretary by March 14th.

SALFORD ROYAL HOSPITAL.—Junior House-Surgeon. Appointment for six months. Salary at the rate of £70 per annum, with board and residence. Applications to the Secretary-Superintendent by March 18th.

STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to the House Surgeon.

WESTMINSTER GENERAL DISPENSARY.—Resident Medical Officer. Salary, £120 per annum, with rooms, etc. Applications to the Secretary, 9, Gerrard Street, Soho, W., by March 26th.

WOLVERHAMPTON EYE INFIRMARY.—House Surgeon. Salary, £70 per annum, with rooms, board, and washing. Applications to the Secretary by March 10th.

MEDICAL APPOINTMENTS.

D'EWART, John, M.R.C.S., L.R.C.P., appointed Third Resident Assistant Medical Officer at the Crumpsall Workhouse, Manchester.

EMERY, W. d'Este, M.D., B.Sc.Lond., appointed Clinical Pathologist to King's College Hospital.

FERGUSON, R. Bruce, M.A., M.D., B.C.Cantab., M.R.C.S., L.R.C.P., appointed Medical Officer and Public Vaccinator for the Seventh (New Southgate) District of the Barnet Union.

FLETCHER, J. H., M.R.C.S., L.R.C.P.Lond., reappointed Medical Officer of Health for the Ince District Council.

GRAYSON, Francis D., M.R.C.S. Eng., L.S.A., appointed Medical Officer of Health for the Rochford Rural District.

HUTCHINSON, Hy., L.R.C.P.I., L.F.P.S.Glasg., L.S.A.Lond., appointed Surgeon to the Metropolitan District Railway Provident Society for the suburbs of East Ham, Upton, and Manor Park.

IVATTS, Edgar Reginald, M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Mellor District of the Blackburn Union, *vice* Dr. Pollard.

JARVIS, John, M.R.C.S., appointed Surgeon to the Western Dispensary, Bath, *vice* John Davies, M.R.C.S., resigned.

LEWYS-LLOYD, E., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer of Health for the Towyn District.

PEDDIE, C., M.A., L.R.C.P., appointed Medical Officer for the Union and Public Vaccinator for the Brindle District of Chorley, *vice* Dr. Blacklock, resigned.

ROBERTS, E. H., M.R.C.S., L.R.C.P., appointed District Medical Officer of the Anglesey Union.

SANDALL, T. E., M.B., B.C.Cantab., M.R.C.S., L.R.C.P., appointed Certifying Factory Surgeon for the Alford District of the County of Lincoln.

SPRIGGS, Edmund Ivens, M.D.Lond., M.R.C.P.Lond., appointed Physician to Outpatients to the Victoria Hospital for Children, and Physician to Out-patients to the City of London Hospital for Diseases of the Chest, Victoria Park, E.

WALKER, Tom, M.R.C.S., L.R.C.P., appointed Second Resident Assistant Medical Officer at the Crumpsall Workhouse, Manchester.

WATSON, C. Gordon, F.R.C.S.Eng., appointed Casualty Officer, Registrar, and Pathologist to the Metropolitan Hospital.

WILKINS, Arthur G., M.B., Ch.B.Vict., appointed Medical Officer to the West Ward Union of Westmoreland, and Public Vaccinator and Certifying Factory Surgeon for the Hartsop and Patterdale District.

WILLIAMS, J. O., M.R.C.S., L.R.C.P.Lond., appointed District Medical Officer of the Dolgelly Union.

WOOD, C. H., M.R.C.S.Eng., L.R.C.P.Lond., appointed Second House-Physician to the City of London Hospital for Diseases of the Chest, Victoria Park.

MANCHESTER ROYAL INFIRMARY.—The following appointments have been made:
Resident Medical Officer: H. J. Crompton, M.B., Ch.B.Vict.
Assistant Medical Officer: W. Riddell Matthews, M.B., C.M.Aberd.
House-Surgeons: E. B. Leech, M.R.C.S., L.R.C.P., *vice* W. S. Wrigley, M.B., Ch.B.Vict., resigned; W. Stansfield, M.R.C.S., L.R.C.P.; and C. Mackey, M.B., Ch.B.Vict.
House-Physicians: H. B. Wyman, L.R.C.P., L.R.C.S.Edin., and J. S. Smith, M.R.C.S., L.R.C.P.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Society of London, 11, Chandos Street, Cavendish Square, W., 9 p.m.—Dr. H. Radcliffe Crocker: Lettsomian Lectures on the Conditions which Modify the Characters of Inflammations of the Skin, and their Influence on Treatment. Lecture II: General Modifying Conditions: The Man; his Tissues, his Toxins, and his Nervous System.

Royal College of Surgeons of England, 5 p.m.—Professor A. Keith: On the Position of Abdominal Viscera and Glénard's Disease. Lecture I.

TUESDAY.

Pathological Society of London, 20, Hanover Square, W., 8.30 p.m.—Drs. Herringham and Hurtley: On the Excretion of Alkalies in Certain Conditions of Renal Disease. Mr. H. W. Armit: On Ehrlich's Dimethyl (p)amido-benzaldehyde Reaction. Dr. O. K. Williamson: On the Relation existing between Uric Acid Excretion and the Breaking-down of White Blood Corpuscles.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Professor W. D. Halliburton: On the Chemistry of Muscle and Nerve.

WEDNESDAY.

Royal College of Surgeons of England, 5 p.m.—Professor A. Keith: On the Position of Abdominal Viscera and Glénard's Disease. Lecture II.

Obstetrical Society of London, 20, Hanover Square, W., 8 p.m.—Specimens will be shown by Drs. Blacker, Hubert Roberts, Lewers, Tate, Amand Routh, Handfield-Jones, and Mr. Bland-Sutton. Inaugural Address by the President (Dr. Malins): Some Aspects of the Economic and of the Antenatal Waste of Life in Nature and Civilization.

THURSDAY.

Roentgen Society, 20, Hanover Square, W., 8.30 p.m.—Mr. F. H. Glew: Spark Phenomena.

Royal College of Physicians of London, 5 p.m.—Dr. H. T. Bulstrode: On the Causes, Prevalence, and Control of Tuberculosis. Milroy Lecture I.

Harveian Society of London, Stafford Rooms, Titchborne Street, Edgware Road, W., 8.30 p.m.—Mr. P. Lockhart Mummery: The Value of Arthrotomy in the Treatment of Certain Joint Lesions. Paper by Dr. Sidney Phillips.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Dr. T. G. Brodie: On the Circulation.

North-East London Clinical Society, Tottenham Hospital, N., 4 p.m.—Dr. F. J. Tresilian: Some of the Vagaries of Syphilis.

FRIDAY.

Royal College of Surgeons of England, 5 p.m.—Professor A. Keith: On the Position of Abdominal Viscera and Glénard's Disease. Lecture III.

West Kent Medico-Chirurgical Society, Royal Kent Dispensary, Greenwich Road, S.E., 8.45 p.m. Cases will be shown by Dr. Morgan Dockrell, Mr. Charles Ryall, Dr. F. S. Toogood, Mr. Chisholm Williams, and Dr. R. E. Schofield.

Society of Anæsthetists, 20, Hanover Square, W., 8.30 p.m.—Mr. A. Vernon Harcourt, F.R.S., will read a paper on and show his New Chloroform-regulating Inhaler.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Dr. A. D. Waller: On Experimental Pharmacology: The Action of Anæsthetics and Narcotics.

Laryngological Society of London, 20, Hanover Square, W., 5 p.m.—Cases, specimens, and instruments will be shown by Mr. F. J. Steward, Mr. Cresswell Baber, Dr. Tilley, Dr. Kelson, Dr. Bronner, and others.

SATURDAY.

Medical Society of London, 7.30 p.m.—130th Anniversary Dinner, Whitehall Rooms, Hotel Metropole.

POST-GRADUATE COURSES AND LECTURES.

Charing-cross Hospital, Thursday, 4 p.m.—Dermatological Demonstrations.

Hospital for Consumption and Diseases of the Chest, Brompton, S.W., **Wednesday,** 4 p.m.—Lecture on Pneumothorax.

Hospital for Sick Children, Great Ormond Street, W.C., **Thursday,** 4 p.m.—Lecture on Deformities of the Chest in Children.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C. Demonstrations will be given at 4 p.m. as follows:—Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, throat. Lectures will also be given at 5.15 p.m. as follows: Monday, Albuminuria; Tuesday, Defects of Refraction; Wednesday, Systematic Examination of Joints in Disease and Injury; Thursday, Insanity of Decay; Friday, Acute Appendicitis.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., Tuesday, 3.30 p.m.—Lecture on Cases in the Wards.

Post-Graduate College, West London Hospital, Hammersmith Road, W.—Lectures will be delivered at 5 p.m. as follows: Monday, Anæsthetics in Cases of Empyema, etc.; Tuesday, Posterior Displacement of the Uterus; Wednesday, Diagnosis and Treatment of Valvular Disease of the Heart; Thursday, Rectal Stenosis; Friday, General Paralysis of the Insane and the Legal Aspects of Insanity.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning in order to ensure insertion in the current issue.

BIRTH.

DIXON.—On February 8th, at 3, Florence Terrace, Ealing, the wife of R. Halstead Dixon, M.B.Lond., M.R.C.S. and L.R.C.P., of a son.

MARRIAGES.

CRAIG—MILLER.—At the Windsor Hotel, Glasgow, on February 12th, by the Rev. P. McAdam Muir, D.D., Glasgow Cathedral, assisted by the Rev. D. Dickie, St. Luke's Parish, and the Rev. A. Maclellan, James Craig, Physician and Surgeon, to Agnes Waddell (Cissy), elder daughter of E. Miller, H.M. Inland Revenue. At home, 6, Annfield Place, Dennistoun, March 25th, 26th, and 27th.

DOBSON—MILLINGTON.—On February 24th, at the Parish Church, Davenham, Cheshire, by the Rev. J. J. James, M.A., Joseph Faulkner Dobson, M.S.Lond., F.R.C.S.Eng., eldest son of Joseph Dobson, M.D.Lond., of Burley, Leeds, to Minnie, youngest daughter of the late Thomas Millington, of Hope, Flintshire.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

Queries, answers, and communications relating to subjects to which the special departments of the BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

M.O.H. would be glad to know of any cases where a dionin habit has been caused by that drug being used in the cure of the morphine habit.

AJAX asks what significance should be attached to a systolic cardiac murmur which is heard only at the apex, and disappears completely in the recumbent position.

R. H. asks: What would be the best form of electric treatment for a hemiplegic patient, aged 60, in whom all cerebral symptoms have disappeared, the weakness of muscles alone remaining? The case is very slowly improving under potassium iodide.

*** The method which would be most likely to be beneficial would be the application of gentle faradism to the paralysed muscles, the antagonistic muscles to those especially affected by contracture, for example, the extensors of the wrist, receiving more treatment than the others. From five to ten minutes to each limb on alternate days should be sufficient.

ANSWERS.

CIDER.—We can hear of no monograph on the connexion between cider drinking and gout or rheumatism. Dr. Arthur P. Luff, however, has been good enough to inform us that in his opinion "rough cider" can be taken with impunity in most cases of gout and rheumatism, but that this does not apply to bottled cider.

J. S. R.—The Income-Tax Repayment Agency, of 6, Chichester Road, Paddington, expresses the opinion that the appointment of medical officer to a Foresters' club is certainly not a "public appointment;" the receipts therefrom should therefore be returned for assessment in the usual way under Schedule D.

P. P.—The appointment of certifying factory surgeon is terminable at any time under Section CXXII of the Factory and Workshops Act, from which the following is taken: "Subject to appeal to the Secretary of State all appointments shall be made in writing by the Chief Inspector of Factories, who may at any time revoke the appointment . . . . . ." It would, however, only be fair and reasonable for any holder of the office on resigning to offer to continue the work until a successor be appointed. Where there is a contract for regular visits at a yearly rate the resignation should be made to take effect at quarter day.

TREATMENT OF PRURITUS.

PRURITUS writes: In answer to "Podagra," it would be interesting to know if his "gouty pruritus" case has ever lived in or visited the tropics? I suffered for years from the same condition as he describes, due to neglected or insufficiently-treated "dhoby itch." An ointment of tar and sulphur soon cured me; for temporary relief to the irritation I would suggest solution of liq. detergens or carbolic acid; failing this, ice.

Dr. NORMAN MEACHEN (London, W.) writes: The antipruritic effect of strong heat, locally applied, is by no means sufficiently recognized. "Podagra" might let his patient sit in a bath, the water of which should be as hot as can be borne, immediately before going to bed. The temperature at first may be 90° F., and should be gradually increased to 120, or 130 if it can be endured. When the greatest heat which can be comfortably borne is reached relief will be generally obtained and will last for some little time. On coming out of the bath the parts can be sprinkled, after drying, with a dusting powder composed of 10 gr. of menthol, 20 gr. of bismuth subnitrate to 1 oz. of the oleo-palmitate of zinc. Free action of the bowels should be strictly enjoined.

Dr. T. CHARTERS WHITE (London, S.W.) writes to suggest the use of ichthyol ammonia, in the proportion of 30 minims to the ounce of cold boiled water, used as a lotion and applied on soft old linen, kept on by a bandage, and renewed night and morning.

W. S. writes: I have found the following treatment effective in a case similar to the one "Podagra" describes: Urosine, three tablets three times a day after food. Calomel, gr. iij twice a week at bedtime. Ung. hyd. nit. dil., locally applied night and morning.

WORKS ON HYPNOTISM.

HYPNOTISM.—One of the following works would probably meet our correspondent's requirements: *Hypnotism,* by Dr. Albert S. Moll; Walter Scott, Limited, 1897. *Hypnotism and its Application to Practical Medicine,* by Otto G. Wetterstrand, M.D., translated by H. G. Petersen; G. P. Putnams Sons, 1897. *Suggestive Therapeutics,* by H. Bernheim, M.D., translated by C. A. Herter; Young J. Pentland, 1890. *Psycho-Therapeutics,*

or Treatment by Hypnotism and Suggestion, by C. Lloyd Tuckey, M.D., third edition; London, 1891. *Neurypnology*, by James Braid; London, 1843. We are not aware that hypnotic suggestion is regularly employed as a curative agent in any London hospital at the present day, though we have heard of its occasional use in certain cases of nervous disorder.

LETTERS, NOTES, Etc.

A Warning.

DR. W. KNOWSLEY SIBLEY (Duke Street Mansions, W.) writes: On February 19th a German, representing himself as a Dr. Osten, an M.D. of Berlin, and now a student at the London Hospital, presented himself at the North-West London Hospital, professing to be interested in medical work. In accordance with Continental etiquette I gave him my card. The same evening he called at my private residence, and after fully apologizing for his untimely visit, on so short an acquaintance, wished to borrow some ready cash. I explained I never lent money, but was willing to make him a small gift, which I did. I have since heard that when this man left the hospital properly belonging to the house-surgeon left it too. I feel it my duty to warn the profession against this individual, as I fear he may make use of my card as an introduction.

Aseptic (?) Instrument Cabinets.

M.B. writes: Having recently purchased from a well-known London firm a glass instrument cabinet described as aseptic and advertised recently in the BRITISH MEDICAL JOURNAL, may I offer a word of warning to intending purchasers, namely, to see the article before buying it? The one sent to me has a space of at least ¾ in. between the door and the framework, and forms an excellent dust trap; in fact, after standing for a fortnight in my consulting room I was able easily to trace the word "sold" with the end of my finger in the dust on a partially empty shelf. A polite note to the makers expressing dissatisfaction has not elicited any reply.

An Appeal to Masons.

DR. HEATON C. HOWARD (Clapham Road, S.W.) writes: May I ask any of my brother medical practitioners who have votes to spare for the coming election at the Royal Masonic Institution for Boys to give them to the case of C. P. Hines? His father was a young doctor who died five years ago, leaving a widow and son very inadequately provided for. Any votes will be thankfully received by me at 281, Clapham Road, S.W. It is the last application.

The Choice of an Anaesthetic for Operations on the Naso-Pharynx.

DR. RICKARD W. LLOYD (Kensington, W.,) writes: In a letter to the BRITISH MEDICAL JOURNAL of Feb. 21st Dr. W. G. Holloway makes the "surprising" statement that I "advocate the administration of chloroform for the removal of adenoid growths of the naso pharynx" in my letter which appeared in the JOURNAL of February 14th. I beg you will kindly call the attention of your readers to the fact that there is no reference to my selection, use, or advocacy of any anaesthetic for an operation of any kind in that letter. My views upon the choice of anaesthetics to be used under various conditions in operations for "adenoids" are set forth in a lecture on the administration of anaesthetics in operations about the nose, mouth and throat, delivered by me at the West London Post-Graduate College on October 21st, 1901, and published in the *Lancet* of November 16th following.

DR. G. A. H. BARTON (Anaesthetist, City Orthopaedic, North-West London and Female Lock Hospitals) writes: Though I do not claim to have the special experience which Dr. Holloway's connexion with a throat hospital must have given him, I venture to think that he is somewhat too dogmatic in his advocacy of nitrous oxide gas as the anaesthetic for operations on post-nasal adenoids. I think there is something to be said on the other side. Operators in these cases may be divided into two classes—the rapid and the deliberate. For the former, the sitting posture and gas—or, in my experience (which in these cases is principally confined to private work), gas and ether—do very well. The disadvantages are the cumbersome—and to children somewhat alarming—nature of the apparatus, the increased bleeding under ether, and the slightly increased risk of blood finding its way into the trachea. For a deliberate operator, who wishes to ensure that the operation is thoroughly done, or for the non-specialist who has not acquired the dexterity necessary for a rapid operation, I feel sure that chloroform, or a mixture of chloroform and ether, give equally satisfactory results. The patient should, of course, be in the lateral or dorso-lateral position, and anaesthesia having been induced by the ordinary method, may be maintained with the Junker's apparatus and Probyn-Williams's modification of Doyen's gag. This method allows of deliberate operation and frequent spouging, if required, and carries with it a smaller chance of blood entering the trachea. I must add that I do not find any great difficulty in maintaining the right degree of narcosis. With the exception of the initial dangers of chloroform administration I am not at all sure that its disadvantages are less than those of the other method. Without minimizing this risk, which of course every careful man must take into consideration in choosing an anaesthetic, I am still of opinion that every anaesthetist should acquire facility in both methods, leaving the choice to the operator, who is the sole judge of what he has to do and the time it will take him.

MR. ATWOOD THORNE, M.B.Lond. (Assistant Surgeon, London Throat Hospital), writes: In the BRITISH MEDICAL JOURNAL of February 21st, 1903, two widely-different opinions on this subject are given. On page 435, in a review of Mr. Mark Hovell's book, you say: "Mr. Hovell rightly insists upon general anaesthesia for the removal of adenoids, and consistently advocates the recumbent posture, no mention being made of nitrous oxide anaesthesia and the sitting position," while on page 466 (Correspondence) Dr. Holloway advocates nitrous oxide anaesthesia, and refers to 6,000 cases. As I was formerly Registrar and Assistant Anaesthetist at the hospital where many of Dr. Holloway's 6,000 cases were derived, and I am now on the staff of a hospital where nitrous oxide anaesthesia and the sitting position are never employed, my views may be of some general interest. I consider the sitting position with nitrous oxide anaesthesia to be the best: (1) If the operator is particularly adept; (2) if the anaesthetist is so, too, and is used to working with the operator; (3) if there are plenty of skilled assistants (at the very least two besides the anaesthetist); (4) if the gag does not slip, and so waste valuable seconds; (5) if everything goes well and smoothly; and (6) if a suitable chair (with straps) and good artificial light are available. If the above conditions cannot be ensured, and they seldom (? never) can, even in the best regulated hospital, then the recumbent position, with complete anaesthesia, must be resorted to. A great temptation to use the nitrous oxide sitting method in hospital practice is that the patients can be treated as out-patients, but personally I consider that the recumbent position should be adopted in all cases.

The Association of Certifying Factory Surgeons.

IN the note on this subject published in the BRITISH MEDICAL JOURNAL of February 21st, page 476, line 22, the year 1901 is a misprint for 1891. Dr. Moore desires it to be known that he had been in the habit of recording the work done before the early part of that year, and the statement that the Dublin statistics were collected after the agitation had commenced is, in Dr. Moore's opinion, erroneous.

LETTERS, COMMUNICATIONS, ETC., have been received from:
A J. A. Allwood, M.B., Kingston, Jamaica; Another M.O.H.; Aiax; Mr. J. McK. Ackland, Exeter: A. M. M. **B** Dr. De B Birch, Leeds; Mr. A. H. Buck, Brighton; Mr. J. P. Bush, C.M.G., Clifton: Dr G. A. H. Barton, London; Mr. S. I. Baker, Abingdon; Dr. T. E. B. Brown, C.I.E., London; Dr. C Butter, London: Dr. J. Brown, Glasgow; Mr. L. A. Bidwell, London. **C** Dr. J. R. Clemens, St. Louis; Mr. D. Crichton, Dundee; Dr. T. Churton, Leeds; Messrs. J. and A. Carter, London; Dr. G. Carpenter, London; Mr. L. Cooper, Rochester; Mr. E. Carnall, Liverpool; Mr. W. Clapham, Hull; Mr. H. W. Carson, London. **D** Mr. W. F. Dearden, Manchester; Dr. K. Das, Calcutta; Dr. W. Darley-Hartley, Capetown; Dr. T. Dutton, London. **E** Ex-Parish Doctor; Mr. H. Elliot Blake, Bognor: Dr. Evans, Paris. **F** Dr. W. T. Freeman, Reading; Dr. H. Finlay, Mulwarrie; J. Flynn, M.B., Sydney, N.S.W.; Dr J. T. Faulkner, Manchester. **G** Dr. H. L. Gordon, Florence; Mr. W. C. Goodden, Bristol; Mr. A. E. Garrod, London. **H** Mr. H. C. Howard, London; Mr. W. H. Hall, Tunbridge Wells; Dr. J. Highet, Workington; Mr. A. Hannan, London; Hypnotism; Dr. R. Hutchison, London; Mr. H. Hilliard, London; Mr. R. C. B. Hall, Chard; Dr. J. P. Henry, London; Hope Deferred. G. Hailey, M.B., Dundee. **I** India. G. W. Isaac, M.B., London. **J** Mr. R. W. Jolly, Peterborough; Mr. J. O. Jones, Holywell; E. Jeaffreson, M.B., Rouxville; Mr. J. H. Johnstone, M.P., Pulborough; R. L. Jones, M.B., Hull; Dr. J. H. Jones, Newport. **K** Mr. F. Kleemann, London; Dr K. Kamann, Greifswald; Messrs. Kassler and Wolff, London; Kidderminster Medical Society, Secretary of, Kidderminster. **L** G. R. Livingston, M.B., Dumfries; J. F. Little, M.B., London; Mr. R. W. Lloyd, London Liverpool Medical Institution, Secretary of, Liverpool. **M** Dr. H. C. Major, Bedford; C. H. Milburn, M.B., Hull; Mr. H. May, London; M.O.H.; A. M. Martin, M.B., Newcastle-on-Tyne; M.B.; G. N. Meachen, M.B., London; Messrs. S. Maw, Son, and Sons, London; Mr. J. C. McWalter, Dublin; Mr. J. MacMunn, London; Dr. J. E. Moorhouse, Stirling; Dr. C. W. M. Moullin, London; Dr. C. P. Moore, Dublin; Marmite Food Extract Company, Chairman of Directors of, London; Dr J. McCaw, Belfast; Mr. V. StC. Mackenzie, Ashstead; Myopic; Dr. C. J. Macalister, Liverpool; M.D. **O** Oliver Twist; Orchard; One Who Knows. **P** Messrs. H. S. Persse, Ltd., London; Mr. F. E. Pirkis, Nutfield; Mr. S. Phillips, London; Puzzled; Mr. E. J. C. Palmer, Gloucester; Mr. J. H. Potter, Porlock; T. W. S. Paterson, M.B., Colchester; Mr. E. Peters, London; Dr. W. R. Parker, Kendal; Dr. G. C. Purvis, Grahamstown; G. M. Pittock, M.B., Margate; Dr. W. M Parham, Reading; P. H.; Pruritus. **Q** Mr. C. T. Quiller, London. **R** Messrs. Reynolds and Branson, Leeds; Mr. R. Rauschke, Leeds; Mr. W. H. Rowthorn, Rotherham; R. H.: Dr. W. R. Rice, Coventry; Mr. H. M. Rainsford, Billinghay. **S** Dr. D. Stanley, Birmingham; Mr. A. G. L. Smith Crick: Messrs. Schacht, Warner, and Co., London; F. A. Southam, M.B., Manchester: Mr. P. B. Spurgin, London; Mr. W. T. Sheard, London; Dr. J. W. Summerhaye, Johannesburg; Dr. W. K. Sibley, London: Dr E. W. Selby, Doncaster. **T** Dr. J. W. Taylor, Birmingham: Mr. W. Thorburn, Manchester: A. Thorne, M.B., London. **V** Vision. **W** Mr. P. S. White, Bugbrooke; J. Weir, M.B., Glasgow; Dr. A. O. Ward, London; Mr. T. C. White, London; Dr. F. Willcocks, London; Mr. W. R. Williams, Clifton; Mr. F. W. Waters, Sheerness-on-Sea: Dr. T. J. Wood, Bradford; Mr. C. E. Winckworth, Shefford; Mr. L. W. Williams, Glasgow; Messrs. J. Woolley, Sons, and Co., Manchester W. S.; etc.

BOOKS, ETC., RECEIVED.

The Elements of Pathological Anatomy and Histology. By W. S. Lazarus-Barlow, B.A., B.C., M.D., F.R.C.P. London: J. and A. Churchill. 1903. 21s.

Port Wine. By J. L. K. Cockburn. Edinburgh: H. and J. Pillans and Wilson. 1901. 6d.

Some Food Dangers. New Year's Address given before the Sanitary Inspector's Association at London, January, 1903. By Sir James Crichton-Browne, M.D., LL.D., F.R.S. London: P. S. King and Son. 1903. 6d.

Le Diabète et l'Alimentation aux Pommes-de-Terre. Par A. Mosse. Paris: Felix Alcan. 1903. Fr. 5.

Ersatz ärztliche Hülfe bei plötzlichen Erkrankungen und Unfällen. Bearbeitet und herausgegeben von Professor Dr. George Meyer. Berlin: August Hirschwald. 1903. M.8.

Die Neuronenlehre und ihre Anhänger. Von Dr. Franz Nissl. Jena: Gustav Fischer. 1903. M.12.00.

Surgical Anatomy. By John B. Deaver, M.D. In three volumes. Vol. iii. London: Rebman Limited. 1903. Three vols. £6 6s.

Cancer: Its Causation, and its Curability without Operation. By Robert Bell, M.D.Glas., F.F.P.S.G., etc. London: Bailliere, Tindall and Cox. 1903. 5s. net.

A Manual of Toxicology. By Albert H. Brundage, A.M., M.D., Phar.D. Second edition. New York: The Henry Harrison Company and London: Bailliere, Tindall and Cox. 1902. 6s. net.

A System of Practical Therapeutics. Edited by Hobart Amory Hare, M.D. Second Edition. In Three Volumes. Vols. I, II, and III. London: Williams and Norgate. 1903.

A Treatise on Diseases of the Anus, Rectum, and Pelvic Colon. By James P. Tuttle, A.M., M.D. New York and London: D. Appleton and Co. 1903. 25s.

Variation in Animals and Plants. By H. M. Vernon, M.A., M.D. London: Kegan Paul, French, Trübner, and Co., Ltd. 1903. 5s.

*** In forwarding books the publishers are requested to state the selling price.

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Post-Office Orders should be made payable to the British Medical Association at the General Post-Office, London. Small amounts may be paid in postage-stamps.

N.B.—It is against the rules of the Post Office to receive letters at *Poste Restantes* addressed either in initials or numbers.

An Address
ON
SOME MISCONCEPTIONS WITH REGARD TO DISEASES OF THE LIVER.

Delivered before the Oldham Medical Society.

BY W. HALE WHITE, M.D.,
Physician to, and Lecturer on Medicine at, Guy's Hospital.

GENTLEMEN,—I think it is due to you that I should apologize for the title of this address, but I can assure you I do not mean to imply that any of you have any misconceptions. I have, however, in teaching and examining found certain misconceptions exist, and I thought they might interest you.

THE CAUSE OF CIRRHOSIS.

The first hepatic disease I propose to take is cirrhosis of the liver, and by that I mean the disease which is characterized by the liver which we all of us know so well on the *post-mortem* table; the hard liver with a great deal of increase of uniformly-distributed fibrous tissue, which is easily recognizable to the naked eye.

Alcoholic Drinks.—In the first place, we will take its etiology. This is commonly set down to alcohol, and the disease is called alcoholic cirrhosis. Now, I find that in 100 cases of this disease it is quite easy to obtain a history of alcoholic excess in 60, so that probably there is such a history in 80 or more per cent.; for it is obviously not possible to obtain an accurate history in every case. But, striking as this high percentage of alcoholic histories is, I hope to be able to suggest to you reasons why we should not regard alcohol as the cause of this condition of liver. In the first place, no one has yet succeeded in producing cirrhosis of the liver by giving absolute alcohol to animals. At the most, a little fatty degeneration of the liver can be produced in that way. In the next place, there is this striking fact: that although an excess of alcoholic drink is very widely spread over the world, yet cirrhosis is not by any means widely spread. It is a common enough disease in London; it is uncommon in Scotland. Take, for instance, the experience of a friend of mine who was on the staff of a London hospital for some time, and is now on the staff of a large hospital in Scotland. After he had been many years on the staff of the Scottish hospital he had only seen 2 cases of cirrhosis of the liver, and one of those was in a woman who had come from Sussex. And another Scotch physician has told me that in Glasgow cirrhosis of the liver is not nearly so common as in London. Many other observers have noticed the same fact: that while an excessive consumption of alcohol appears to be distributed over a large area, cirrhosis of the liver is not coextensive with it.

Then, again, cirrhosis of the liver is sometimes found in children. Now very often, I quite admit, these children have taken alcohol. I have come across cases myself where the mother has boasted that she has given the child spirits. But there are other cases in which however carefully you go into the question, you cannot make out that alcohol has been given to the child. Only the other day I heard of a case in which the physician was driven to conclue that it was the alcohol contained in five minims of tincture of perchloride of iron three times a day that had caused the cirrhosis of the liver in the child I think these facts do suggest that alcohol *per se* is not the cause of the cirrhosis. And lastly, the epidemic that occurred around Manchester of arsenical neuritis in people who were drinking beer opens our mind in the same direction. For the first few cases which were observed were set down to alcohol, and then, as the cases multiplied, the matter was gone into, and it was found not to be the alcohol in the beer that had caused the trouble, but arsenic. So I would suggest to you that it is not the alcohol alone in alcoholic drinks which causes cirrhosis of the liver, and that in order to be accurate we ought to say that it is the alcoholic drink and not the alcohol which causes cirrhosis. Or it may be that there are two factors present: one is alcohol, and the other is a factor which we have not yet got hold of. But it is clearly very important, if we are going to discover the cause of cirrhosis of the liver, to be accurate as to whether alcohol alone can cause cirrhosis, and I hope I have been able, if not to convince you, yet, at any rate, to suggest to you that something else must act in these cases.

The next so-called misconception that I want to draw your attention to, still connected with cirrhosis of the liver, is this. The books give many causes of cirrhosis of the liver, sometimes as many as twenty causes. It is true they put alcohol first, but I shall try and show that the disease which we recognize with the naked eye on the *post-mortem* table as cirrhosis of the liver, that we all know so well, has no other cause than alcoholic drinks. I believe the confusion has arisen in this way: that many other causes than alcohol will increase the fibrous tissue in the liver; and so the man writing a book in his study, and not writing from what he sees in the *post-mortem* room, lumps together all the conditions of increased fibrosis of the liver as cirrhosis, and great confusion ensues, because when it is said that a man has cirrhosis it is generally meant that he has alcoholic cirrhosis.

Syphilis.

I think all will agree with me—that if you see on the *post-mortem* table any condition of liver that can be put down to syphilis, you would expect a student who was only even a beginner to know that such an appearance of the liver was not due to alcoholic drinks. As far as I know syphilis can do the following things to the liver.

Acquired Syphilis.—There is that rare jaundice which occurs in the secondary stage, in which, in the very exceptional cases of death occurring while the patient is in this condition of jaundice from secondary syphilis, the liver is found to have a uniform increase of fibrous tissue throughout it. But there is none of the puckering and scarring and hobnailing that is so characteristic of the disease commonly known as alcoholic cirrhosis. This syphilitic cirrhosis is so rare as to be of little clinical importance. So leaving it aside, what do we usually see in the *post-mortem* room in the liver indicative of acquired syphilis? We sometimes see great fibrous bands cutting the liver up into areas; sometimes gummata, sometimes the liver is lardaceous, and sometimes we see a perihepatitis. All these things may be due to acquired syphilis. Not one of them ought, by the merest beginner, to be confused with what is commonly called alcoholic cirrhosis of the liver. They are all quite distinct from it. First, many of the fibrous bands are big and broad, often one-third of an inch wide, cutting the liver up into areas, and as big, sometimes, as the back of one's hand; and never little hob-nailed areas which are so characteristic of the ordinary cirrhosis of the liver. Further, none of these results of acquired syphilis ever cause the symptoms of alcoholic cirrhosis.

Congenital Syphilis.—We may see a liver hard, flint grey, full of fibrous tissue, but not puckered. But that is of very little clinical interest, for the children are usually stillborn, or only live a little while. Also, we may get in congenital syphilis gummata and fibrous bands, and very rarely lardaceous disease. I have never known the hard fibrous, steel-grey liver of congenital syphilis diagnosed during life. As to gummata and fibrous bands, I cannot help thinking that they must tend to get well in the natural course of events, for the latest age at which I have seen gummata and fibrous bands in the liver due to congenital syphilis was 12 years. I have spoken to many friends, and the oldest I have been able to hear of from them was a patient of 18. Rarely if ever do you see congenital syphilis of the liver producing fibrous bands and gummata which persist into adult life in the same way as you see the deep scarring about the mouth. Lardaceous liver due to congenital syphilis I have only seen once, in a child, aged 4 years, who died of diphtheria. We see, therefore, that syphilis does not cause symptoms or *post-mortem* appearances resembling alcoholic cirrhosis.

Malaria.

The next cause given in the books for cirrhosis of the liver is malaria. One French author enumerates nineteen varieties of cirrhosis of the liver due to malaria. I have never seen a cirrhosis of the liver at all like that due to alcoholic drinks, which could be certainly attributed to malaria; and many with a much larger experience than myself, for instance, Professor Osler, have no knowledge of such a malarial cirrhosis. Professor Osler would not allow cirrhosis of the liver to be malarial unless melanosis of liver and spleen was present also. Partly, I should think, malarial cirrhosis is largely imaginative. Probably it was so in the mind of the gentleman who described nineteen varieties, but chiefly the mistake has arisen from the fact that many people with malaria have taken more alcoholic drink than they should and the doctor perhaps has kindly wanted to whitewash them, and

consequently the cirrhosis of the liver has been attributed to malaria rather than to the alcoholic drink.

Other Alleged Causes.

Those are the principal causes of cirrhosis which are given; and you see that so far we have no genuine cause for that entity easily recognized during life and after death, and usually styled cirrhosis, except alcoholic drinks. But I take a recent textbook, in its second edition, and the following causes for cirrhosis are given: Rickets, diabetes, gout, cancer, tubercle, passive congestion from heart or lung. And another book adds lead, dyspepsia, and scarlet fever. Well, surely that is a misuse of histological knowledge as applied to clinical medicine. I quite admit that occasionally you may find in some of those conditions a slight increase of fibrous tissue in the liver, but it is not right in a book on clinical medicine to ascribe the condition clinically known as cirrhosis to all those causes. There is in these conditions only a little histological increase of fibrous tissue observable under the microscope; but there are none of the symptoms of cirrhosis, and the liver does not appear like it. Among these conditions increased fibrosis of the liver is most seen after passive congestion from heart or lung disease, commonly called nutmeg liver, for all passive congestion means sooner or later an increase of fibrous tissue. But the increased fibrous tissue in the liver under those circumstances, even after the longest standing heart case, never leads to anything which on the *post-mortem* table can be compared with cirrhosis of the liver due to alcoholic drinks. For my own part, if any student about to qualify could not separate by the naked eye a nutmeg liver from one diseased as a result of alcoholic drinks, I think he ought to be rejected.

Biliary Cirrhosis.

It is said that obstruction of the bile duct will cause cirrhosis of the liver. That is true experimentally. The bile duct has been ligatured in animals, and as a result there has been an increase of fibrous tissue in the liver. But common as obstruction of the duct is in man, all observers are agreed that cirrhosis of the liver due to it is very rare. Out of a considerable *post-mortem* experience I have only twice seen obstruction to the bile duct causing cirrhosis of the liver, and yet think how common cancer and other tumours pressing on the bile duct are. Therefore it is clinically of very little importance. To show you that I am not alone in this expression of opinion, let me give the figures by Ford, who has collected his cases very carefully. He searched through the Surgeon-General's Library at Washington from 1882 to 1900, and yet he could only find in those years 21 cases of cirrhosis of the liver associated with obstruction to the bile duct. He adds 3 which he observed himself, which makes the total 24. Of those, 13 were adults; in 8 the obstruction was due to gall stones, in 3 it was due to cancer; once it was caused by a band, and once by an undescribed tumour. All the rest were infants with congenital obstruction of the duct.

It is possible, he says, that in some of the thirteen adults alcoholic drink may have been the cause of the cirrhosis. So the sum total of the largest amount of evidence we can obtain on the subject is, inasmuch as clinically we can put aside infants with congenital obstruction to the duct—because they soon die—an exhaustive collection of cases from 1882 to 1900 only shows 13 adults in whom cirrhosis of the liver was associated with biliary obstruction; and even in some of them alcoholic drinks may have been the cause. The liver in these very rare cases is at first enlarged a little, and later it comes to look like ordinary alcoholic cirrhosis. The cirrhosis is usually at first interlobular, and later on it becomes perilobular and intralobular, and there are new ducts formed. I think that if it is as rare as I hope I have shown, all attempts to separate the clinical symptoms of biliary cirrhosis from the symptoms of the disease causing obstruction of the duct, must be futile, because no one can have had a sufficient experience of such a very rare condition. Take, for instance, cancer of the liver obstructing the bile duct, and causing cirrhosis of the liver—one man cannot have sufficient experience of such rare cases for him to be able to dissociate the symptoms due to cancer from those due to biliary cirrhosis. "But," you will say, "you said biliary cirrhosis can be easily produced in animals." That is true. It may be produced by ligaturing the common bile duct in animals; but undoubtedly it is very rare in man, although obstruction of the duct is so common. Clearly in man some other factor is wanting to produce it; there must be obstruction to the duct together with something else, and what that something else is we do not at present know.

I hope to have shown you that the disease which we recognize clinically by its symptoms, and *post mortem* by the well-known condition of the liver as cirrhosis of the liver, and which we clinically call cirrhosis of the liver, really has only one cause, and that is alcoholic drinks. And I use the phrase alcoholic drinks rather than alcohol, because I hope to have suggested to you that alcohol by itself does not cause it, but is a very important contributory factor, and that there is some other contributory factor at present unknown.

Hypertrophic Cirrhosis.

The next misconception, if I may so call it, which I will take is one which is very frequently met with in textbooks. It is the attempt to draw a sharp distinction between atrophic cirrhosis of the liver and hypertrophic cirrhosis. In the first place, we must, in discussing this matter, put aside Hanot's hypertrophic cirrhosis of the liver. That has nothing to do with the subject under discussion now. It is a rare disease, in which the liver becomes markedly enlarged; the spleen is enlarged; it occurs almost exclusively in children, mostly in males, is very chronic, and the patient becomes deeply jaundiced. It is a rare and quite a separate disease, and it is better to leave it quite out of our discussion.

Leaving that aside, is there, as many people imply, any valid distinction in ordinary cirrhosis of the liver between hypertrophic and atrophic cirrhosis? Can we divide the cases into atrophic and hypertrophic? My argument will be that there is no distinction. I hope to be able to show that, as you would expect, the first stage is for the liver to become large; if an irritant acts upon it, the vessels dilate, the fibrous tissue hypertrophies, and more fat is laid down. Later on the fibrous tissue contracts and the organ becomes small. The following are the alleged points of difference between the hypertrophic and the atrophic forms. It is said that the hypertrophic form is smooth and not hobnailed, and that the atrophic form is hobnailed. But that is just what you would expect. First the growth of fibrous tissue enlarges the organ; then it contracts here and there and makes the organ hobnailed. That is only a restatement of the case that the disease is progressive. Then it is said that hypertrophic cirrhosis is perilobular and intralobular, whereas the atrophic is multilobular and extralobular. But this is only a question of degree: it is not a fundamental difference.

Again, it is urged that the hypertrophic liver is large, and the atrophic liver is small; that is obvious from the mere names. But let us look at some figures on this matter. A friend of mine, Dr. J. A. Price, found that the weight of the liver varied in 142 cases of cirrhosis of the liver, all so-called alcoholic cases, between 30 and 200 oz. In 29 it was under 50 oz., in 33 between 50 and 60 oz, and in 80 it was over 60 oz. If you are going to group the cases of the disease into atrophic and hypertrophic, where are you going to put the 33 between 50 and 60 oz. which is the normal weight of the liver? Surely the interpretation is that in 80 it was, at the necropsy, over 60 oz. and therefore was in the big stage. Some patients lived long enough for the fibrous tissue to contract, and so you get 33 between 50 and 60 oz. And if the patient survived the contracting stage in which the liver was the normal weight, it contracted below the normal weight, and so you get the 29 in which it was under 50 oz. These figures strongly suggest that there is no difference between the hypertrophic and the atrophic forms of cirrhosis of the liver. What they suggest is that the case is first hypertrophic and then atrophic, and so you have the largest number with heavy livers, for as some die fewer reach the stage of normal weight, and fewer still survive till the atrophic stage. In Guy's Hospital there was a case sufficiently long under my colleague, Dr. Frederick Taylor, for it to be observed that the liver contracted gradually, and the patient died of an ordinarily so-called atrophic cirrhosis of the liver. Then it is urged that ascites is slight or not present in hypertrophic cirrhosis, and there is much ascites in the atrophic form. This again is what would be expected, for ascites is usually a late symptom of the disease.

Again it is said that the jaundice is deep if the liver is big, and that there is little jaundice if it is small. I went through a number of cases in the hospital, and found that that distinction does not hold. I found that jaundice is common when the liver is small, and it is as common when the liver is big. And I was not able to find out that the statement that the spleen is large when the liver is hypertrophic, and small

when the liver is atrophic, held good. Again, I am sure your own experience will bear me out when I say that the assertion that an alcoholic history is given more often in the hypertrophic than in the atrophic form does not hold. Nor does the distinction that you get albumin in the urine less often in the hypertrophic form than in the atrophic. Then with regard to the distinction that the hypertrophic kind is found more in the young, and the atrophic more in old people: again that is what would be expected, for the hypertrophic is the early, and the atrophic is the late stage. Naturally people who die in the late stage on the average are older than those who die in the early stage. Moreover, the distinction has been made that the hypertrophic lasts longer than the atrophic. Of course it does, because a large number of people with the hypertrophic form pass into the atrophic form, and therefore they live longer after the diagnosis is made than those in whom the liver is small when they are first seen. So this part of my contention has been that there is no proper distinction between hypertrophic and atrophic cirrhosis of the liver in the cirrhosis of the liver due to alcoholic drinks: it is simply that they are different stages of one and the same disease.

Symptoms.

Ascites.

We find that from half to one-third of all the cases that are entered in the *post-mortem* records as examples of cirrhosis of the liver presented no symptoms of it during life. An apparently healthy man is killed by an accident, and when he is brought into the hospital he is found to have a liver which is markedly cirrhotic. You inquire into the history and you find he has been intemperate. So we learn that a man may go on for many years with a cirrhotic liver without having any symptoms of it at all.

Now let us inquire what are the symptoms which may more or less rapidly develop in a man who has got this cirrhotic liver. He gets dilated venules and acne rosacea on the face, morning vomiting, loss of appetite, and indigestion and constipation. I shall not detain you over those symptoms, because it is difficult to say that they may not be attributed to the alcohol causing gastro-enteritis. But let us come to some symptoms which are not quite so easy to understand, taking first the ascites. Many books lead us to infer that the ascites is due to pressure on the portal vein by the fibrous tissue. I propose to bring forward reasons to show that that is an incorrect opinion. First, ascites may develop very rapidly. In one instance sixteen days after the patient first noticed distension of the abdomen twelve pints of fluid were drawn off. In a second case twenty-one days after distension was noted 23½ pints of fluid were drawn off. I am sure, from watching many cases, that the patient complains of some distension as a rule after he gets three or four pints in his abdomen. So, allowing that he does not complain until a little fluid has collected, we must remember that the fluid must have collected at the rate of about a pint a day, possibly more than that, because probably we do not get it all off. If the disease were due to fibrous tissue pressing on the portal vein why should the onset be so sudden? There is no reason. You would expect it to occur gradually. The very last two cases of cirrhosis I have seen have not been tapped, but, judging by the great rapidity of the distension, the fluid must have poured out at the rate of quite a pint a day. Professor Starling and I have ligatured the portal vein in animals and yet no ascites has followed. This, which has been done (with the same result) by others, produces a great increase of pressure in the portal vein, but there is no ascites. In other parts of the body if you ligature veins you do not find oedema. Again, the portal vein is commonly pressed upon in malignant disease of the liver by enlarged glands in the portal fissure, but ascites is a comparatively rare symptom in malignant disease of the liver. Again, I have not been able to confirm the statement that ascites is most marked in those cases in which the branches of the portal vein in the stomach are most easily seen *post mortem*. We know that in cases of cirrhosis of the liver many branches of the portal vein are obviously dilated, but those are not particularly the cases in which you find most ascites. Lastly, if the ascites were due to pressure on the portal vein, it is difficult to understand why fluid is poured out from the peritoneum and not from the mucous membrane of the bowel. For these reasons we cannot regard ascites as merely a local result in the peritoneal cavity of pressure on the portal vein by an increase of fibrous tissue in the liver. What I would suggest is, that because of the disease of the liver there is some toxin circulating in the blood, that it leads to an effusion into the peritoneal cavity, and that the effusion into the peritoneal cavity is more free than into the other serous cavities of the body, because the slight increase of pressure in the portal vein caused by the disease of the liver, determines the effusion there.

Jaundice.

Jaundice is often thought to be due to the pressure of the fibrous tissue on the bile ducts in the liver; but that will not hold for a minute, because we see jaundice commonly quite early. In the last two cases I have seen the patients had huge livers. The fibrous tissue had not begun to contract, but the patients were deeply jaundiced. The jaundice therefore is not due to simple obstruction of the bile passages by fibrous tissue, and I suggest again that it is probably toxic; the liver is diseased, its internal secretions are upset, and thus a toxin is poured into the blood, and consequently the patient becomes jaundiced. We may adopt the fashionable belief that there is no such thing as a purely haematogenous jaundice, and then you will probably accept the haemo-hepatogenous view, that when the toxin gets into the blood it destroys the blood cells, and that for a time the bile can deal with this excess of pigment in the blood and excrete it, but that the same toxin produces a catarrh of the bile duct, which leads to thickening of the biliary secretion and hence the bile gets held back and jaundice results. But whatever view we adopt of the cause of jaundice, I do not think we can maintain that the jaundice of cirrhosis of the liver is due exclusively to pressure of the fibrous tissue on the duct.

Swelling of the Feet.

The next symptom to which I want very particularly to direct your attention and try to explain, because it is so often overlooked, is swelling of the feet. If you take a large number of cases of cirrhosis of the liver, especially the bad cases, you will be surprised in what a number of them the patient complains of swelling of the feet. I have known this swelling extend up to the thighs and affect the penis and scrotum. Books which mention it dismiss it airily by saying it is due to the pressure of a big liver or ascitic fluid on the vena cava. Let us examine this theory. Over and over again I have cross-questioned patients, and I could bring you individual cases to show that the swelling of the feet has begun before the patient has noticed the abdomen enlarged. Indeed, we have had necropsies on patients with swollen feet in cirrhosis of the liver and there has been no ascitic fluid in the abdomen. Pressure of the ascitic fluid, therefore, will not explain it. Again, it certainly is not due to pressure of the big liver on the vena cava, for I have seen it when a liver has been small. Then it is said that when the liver is small it is contracting on the inferior vena cava, and so we get oedema of the feet. The objection fatal to that view is that in those cases the flow in the superficial viens of the abdomen is found to be in the normal direction, showing that the vena cava is not pressed upon. We cannot, therefore, explain the swelling of the feet which happens in cirrhosis of the liver by the notion that it is due to pressure on the inferior vena cava. I suggest again that it, like ascites and jaundice, is really toxic; that the internal secretion of the liver is upset and as a consequence the patient gets these general symptoms.

Anaemia and Haemorrhages.

Of the remaining symptoms we have, for instance, the sallow anaemia, with a tendency to epistaxis and purpura. No amount of ingenuity can maintain that they are due to a local disease in the liver. They are probably toxic in some way. And let me, in passing, remind you of the great importance of the tendency to bleed in diseases of the liver. It is no uncommon thing to be asked to see a man covered with purpuric spots and bleeding from his nose, and for this trouble to be solely due to cirrhosis of the liver. Only a few week ago one of my clinical assistants, because I had been urging this, when he saw a man who applied for admission to the hospital with a haematoma in his knee, examined the patient for cirrhosis of the liver and found it. People with cirrhosis of their liver, like people with Bright's disease, are liable to bleed from any part of the body. Again, we could hardly maintain that the coma is not evidence of a general toxaemia. If a man with cirrhosis of the liver die from it, certainly he usually dies comatose. Again, you will remember that very often people with cirrhosis of the liver get effusion into the pleural cavities quite apart from any tubercle. This again shows that you have to regard cirrhosis of the liver as more or less of a general, and not a local disease. And even

the piles and the haematemesis, although no doubt largely due to the dilated veins, may possibly be rendered more likely by the general liability to haemorrhages.

Cirrhosis in Cattle.

The last thing that I would bring forward as trying to prove my point that we must not look upon cirrhosis of the liver too much in the light of a purely local condition, is that in the remarkable disease of cattle which Adami worked out in Newfoundland the liver looks like that seen in human cirrhosis, and he draws attention to the fact that the cattle which may appear to have nothing the matter with them, suddenly show severe symptoms, and are dead within a few days. Their cirrhosis of the liver must have been present for weeks, and then quite suddenly these cattle got fatal symptoms.

HEPATIC CIRRHOSIS NOT A LOCAL DISEASE.

What I have tried, however imperfectly, to put before you with regard to the disease under consideration is this—that we must regard the disease we call alcoholic cirrhosis, because it is so frequently associated with the consumption of alcohol, although some other factor is present as a cause, not as a local disease of the liver any more than granular disease of the kidney is a local disease of the kidney, for mere increase of fibrous tissue in the liver—as, for example, that which we see in the big bands of syphilis—will not produce the symptoms which we are accustomed to see associated with the disease we call cirrhosis of the liver any more than heart disease causing an increase of fibrous tissue in the kidney leads to the symptoms of Bright's disease. Both in the disease of the liver and the disease of the kidney this fibrous change may exist for a long time without symptoms, and in both we must suppose that the chief trouble is not the mere development of the fibrous tissue but perversion of function, probably a perversion of internal secretion, so that the body gets filled with a toxin, causing in the case of the granular kidney uraemia, oedema, pleuritic effusion, and the many other well-known symptoms of chronic granular kidney; and in alcoholic cirrhosis of the liver the symptoms just mentioned—ascites, jaundice, coma, swelling of the feet, and a tendency to haemorrhages. If cirrhosis of the liver be regarded in this light, it is brought into line with the fibrous atrophic pancreas, in which, associated with fibrous atrophy, there is such a perversion of internal secretion as to lead to diabetes.

PROGNOSIS.

I want to urge that, in giving a prognosis, you must pay great attention to the ascites. If, in an uncomplicated case of cirrhosis of the liver, the patient has ascites he is near his end. I took from our hospital records a number of cases. Ten were cases of cirrhosis of the liver, with ascites, in which the patients died before paracentesis was necessary; and on analysing the history I found that the average interval between the time when the ascites probably began and death was only two months. Twelve were cases in which paracentesis was performed, and in which the data were sufficient to enable us to estimate the time of the collection of fluid. It worked out in these twelve cases that the time from the patient first noticing his distension to death was as follows: 12 days, 23 days, 30 days, 70 days, 84 days, 130 days, 56 days, 91 days, 140 days, 42 days, 63 days, 25 days; giving an average of 63 days, or two months from the time at which the patient first noticed enlargement of the abdomen to death, although paracentesis was performed.

As to the length of survival after tapping I have notes of 14 cases which survived the first and only tapping: 2 days, 9 days, 12 days, 11 days, 4 days, 8 days, 30 days, 2 days, 7 days, 4 days, 6 days, "a few days," 14 days, and 5 days. They do not survive tapping long, and this clearly proves that tapping is of little good, for if the patients only live about nine days or so after the tapping you can hardly contend that it does them good. I believe the only benefit which will follow tapping of the abdomen in cirrhosis of the liver is when the distension from the fluid is so great that it hampers respiration and the heart's action; in such case the withdrawal of the fluid will do good; otherwise it appears to cause no benefit at all. In passing let me remind you that these cases I have just read confirm my previous statement that the fluid may collect at the extraordinary rate of about a pint a day.

If you have a case of supposed cirrhosis of the liver, and you tap and the patient gets better, but the fluid re-collects and again you tap, such a case appears to contradict the statement that when the patient is ill enough to require paracentesis it means he is near his end, but at the necropsy it is nearly always found that the diagnosis has been wrong, and that the patient has not got uncomplicated cirrhosis of the liver, but has chronic peritonitis. It is a very common mistake to confuse cirrhosis of the liver with non-tuberculous, non-cancerous, chronic peritonitis. My point is that patients with cirrhosis of the liver, if they have ascites due to it, are near their death, and tapping will not benefit them, except mechanically. I have been for many years trying to urge this at the bedside, and within the last few months Dr. Campbell Thomson has published a number of cases from the Middlesex Hospital which quite confirm what I have been telling you. Let me read you what he says: "Cases support these conclusions"—that is, the conclusions I have given—"entirely; of 18 cases, 12 died before tapping was necessary, or soon after it had been performed, 6 survived more than one tapping, and in all other cause than cirrhosis of the liver was found for the ascites." So that if the ascites is due to uncomplicated cirrhosis of the liver, that is to say, if there is no other cause for the ascites, the presence of the ascites means that the patient is near his end. But that is not the only confirmatory evidence I can give. Let me quote what Dr. Fagge said many years ago: "Moreover, when by means of diuretics and purgatives, one is able to clear the peritoneal cavity of this fluid, the successful action of such remedies seems often to avail the patient very little, for he presently becomes stupid and unconscious, and dies, although his abdomen may be perfectly flat and empty. The question has even been raised whether the removal of the fluid by medicines may not be sometimes concerned in the production of the fatal issue." Again, Murchison says, "When once it appears it persists and gradually increases." He holds out no hope of amelioration. Again, Wickham Legge says that the end soon arrives after tapping. As long ago as 1863 Austin Flint said "cirrhosis of the liver being an incurable lesion, when the dropsy is dependent thereon recovery is hardly to be expected." Taking all his cases of ascites together, Austin Flint says of 46 cases 24 ended fatally under his observation, or are known to have died subsequently. Of the remaining 22, there was in 8 no improvement, and after analysing the remaining cases he concludes by saying that "out of the 46 cases analysed I can positively state that recovery has taken place in but a single instance." I hope I have brought forward sufficient evidence to show the extreme gravity of ascites in cirrhosis of the liver. The reason I have brought it under the heading of misconceptions is that I am constantly having cases quoted to me which are supposed to show that the view is wrong. But whenever, or almost whenever they come to be examined *post mortem* it is found that some other cause than cirrhosis of the liver is present.

PERIHEPATITIS.

There was a man under my care in the hospital, 29 years of age, who had had syphilis. During the eighteen months preceding his death he was tapped thirty-five times, and on the average nearly 23 pints of fluid was taken away, giving a total of 790 pints of fluid. Sometimes the fluid recollected at the rate of 2 pints a day. *Post mortem* the liver had a white jacket—a thick white jacket which could be peeled off. Sometimes by the contraction of the jacket the edge of the liver is turned up, so that it gets folded on itself. And that condition, as in this case, you will almost always find associated with a general chronic peritonitis. It is the *Zuckergussleber* of the Germans, and this is a very good name, for the white jacket looks very like the icing of a cake. I took from our hospital records 40 cases of perihepatitis for analysis. There were 18 cases of perihepatitis of partial character, and 22 complete. Of the 18, in 6 it was due to tubercle or to cancer, and of the remaining 12, in only one was peritonitis present; 9 of the 12 had capsulitis of both liver and spleen; in 10 of the 12 there was heart or lung disease, causing backward pressure. So we learnt that partial periphepatitis is comparatively unimportant, and that it is not associated with a general peritonitis, but usually with backward pressure from the heart or lungs. A much more important condition is shown in the 22 cases of complete perihepatitis, 22 cases of thick white jacket over the liver; 17 of those had general chronic peritonitis, never due to tubercle or growth. In regard to 3 there was no mention of the peritoneum; in respect of 2 it was stated there was no peritonitis. Those figures, I think, prove my point that perihepatitis, with a big thick white capsule over the liver, forming a great shell over the organ, is nearly always a part of a general chronic peritonitis not due to tubercle or to growth. The peritoneum gets thick and opaque, and

the intestines are all matted together, so that you can take them out as a whole, and when you cut across the mass, the intestines are held open by the thickening of the peritoneum around them, the mesentery shrinks and draws the intestines back, and the omentum gets puckered up into a great band which lies transversely across the colon. In these cases usually there is universal thickening of the capsule of the spleen as well, and in many of them granular kidneys are present, so that it must sometimes be regarded as a complication of granular kidney; sometimes there is an alcoholic history, and occasionally the patients have had syphilis.

You will say, "What is the misconception in regard to that?" It is this, there is a tendency to lump together the partial perihepatitis and the general. The partial is unimportant; in it there are little patches here and there; it is not part and parcel of a general peritonitis. But the universal perihepatitis, with thick white capsule over the liver is a much more important condition, for it is part of a general chronic peritonitis. For want of time I have had to confine myself to the peritoneum, but sometimes a zuckergussleber is associated not only with chronic peritonitis but with chronic pericarditis and chronic pleurisy. To this condition the term multiple progressive hyaloserositis has been applied by Nicholls.[1] He, I may add, quite supports my contention that general perihepatitis is usually merely part of a chronic peritonitis.

Primary Malignant Disease of the Liver.

There is a wide divergence of opinion as to the frequency of primary malignant disease of the liver. Friedreichs gives the proportion of primary to secondary malignant disease of the liver as one to two. On the other hand, you come across people who doubt whether there is such a thing as primary malignant disease of the liver. I went through our necropsy records. Among 10,000 necropsies we had 10 cases of undoubted primary malignant disease of the liver. That is to say every part of the body was carefully searched, but no other part of the body was found to contain malignant disease at all, except that sometimes the portal glands were a little affected by secondary deposits; and sometimes the few glands there are by the diaphragm on the upper surface of the liver. To show the care with which the cases were examined, I may say that in one case in which the patient had moles on the skin every mole on the body was subjected to a microscopical examination, to make sure that it was not the primary seat of the disease, because the growth was melanotic. The figures worked out in this way. Taking 10,000 necropsies, we had 1 case of undoubted primary malignant disease of the liver to every 24 in which the malignant disease was secondary to growth elsewhere. If we take the cases in which there could be no real doubt that the malignant disease in the liver was primary, but in which a few deposits secondary to the malignant disease of the liver had occurred in other parts of the body, it works out as 1 case of primary malignant disease in the liver to 17 in which the disease of the liver is secondary to malignant disease elsewhere. These figures, therefore, strike the balance between believing that it rarely, if ever, occurs, and the very high estimate given by Friedreichs of 1 to 2. I suspect that one cause at least of the mistake is that it has been overlooked that primary disease can occur in the gall bladder and biliary passages, and that malignant disease of the liver may be secondary to primary disease in those parts. While we are on the subject, I might point out a few clinical symptoms of primary malignant disease of the liver. It usually occurs at the same age as other malignant disease. In 17 cases, 10 were men and 7 women. After the first symptom was observed in those in which the date was sufficient to draw deductions, 2 lived four months, 2 lived three months, 1 lived two and a-half months, 2 lived two months. Therefore it is a disease very rapidly fatal, much more so than secondary malignant disease of the liver. Pain and tenderness were usual, and unless the primary malignant disease was of that very rare variety, scirrhus of the liver which contracts the organ, the liver was always enlarged, and weighed usually between 120 and 130 oz.; once the enormous weight of 267 oz. was attained. Now this is important; out of 10 cases there was no jaundice in four, and in two jaundice did not appear until just before death; in three of those affected it was slight. That is a very striking contrast to secondary malignant disease of the liver, in which jaundice is such a prominent feature. Never in primary malignant disease of the liver did jaundice become deep olive green, probably because the patient did not live long enough; and the absence of the jaundice could not be entirely attributed to the fact that there was not time for the glands in the transverse fissure to be enlarged secondarily to the disease in the liver, because sometimes they were enlarged and no jaundice was present. Ascites was present in about half the cases. The temperature was often raised. We know it is raised occasionally in cirrhosis of the liver and in cancer of the liver, but it appeared to be particularly raised when the disease was primary in the liver. So I suggest that in attempting to diagnose whether malignant disease of the liver is primary or secondary we should pay attention to the following points: Is the disease very rapid? You see no patient lived more than four months after it was recognized. If it is rapid that fact is an argument in favour of the disease in the liver being primary. In the next place, if there is no jaundice it is an argument in favour of the disease being primary in the liver, and so perhaps also is an unusually high temperature.

Since I wrote the above many of the points urged have been confirmed by a paper by Acland and Dudgeon.[2]

Local Peritonitis due to Gall Stones.

The only other point to which I have time to direct attention is a condition which I do not think we sufficiently often bear in mind in thinking of liver disease, and that is one of the after-effects of gall stones. It is not by any means an uncommon thing at a necropsy to find a good deal of local peritonitis around the gall bladder, and that may well cause the stomach and duodenum to become adherent to the gall bladder, and then the patient will have all sorts of vague pains in the abdomen, sometimes very severe, sometimes making life a misery and causing her to be called a hypochondriac and a valetudinarian. If we go carefully into the history, and find there is a distinct history of gall stones it may help us to come to a diagnosis. Perhaps I can best illustrate this point by two cases. In one case which I saw there was dilatation of the stomach, and inasmuch as a mass could be felt, it was thought that the dilatation was due to growth. *Post mortem* I found that the patient had much matting around the gall bladder, in which there were some stones, and that the gall bladder was adherent to the duodenum, and that all this matting around the first part of the duodenum and the pylorus had led to constriction at the pylorus and the consequent dilatation of the stomach, and all the symptoms of which the patient complained. In the next case, an old woman complained of great pain in the abdomen, which was much worse after food. She complained that she had indigestion, and sometimes she rolled about in pain. She gave a history of gall stones. The diagnosis made was that there were adhesions about the gall bladder implicating the end of the stomach and the duodenum. The abdomen was opened and the diagnosis was found to be correct. The adhesions were freed and the patient's pain was relieved.

References.

1 *Studies from the Royal Victoria Hospital, Montreal*, vol. i, No. 3. 2 *Lancet*, November 15th, 1902.

The Erasmus Wilson Lectures

ON

ADENOMA AND ADENO-CARCINOMA OF THE RECTUM.

Delivered before the Royal College of Surgeons of England.

By Sir CHARLES B. BALL, M.Ch., F.R.C.S.I.,
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Regius Professor of Surgery in the University of Dublin.

Lecture III.

Surgical Treatment of Cancer of the Rectum.

Having determined that a given case of cancer of the rectum is suitable for removal, that is, that it is freely movable or at any rate only slightly invades the perirectal tissues; it is necessary to consider in the first place what route is the best adapted to the individual case, and this will largely depend upon the situation of the disease: (1) the growth may involve the anal canal only; (2) it may be situated low down in the rectal ampulla; and (3) it may originate high up above the peritoneal reflection; it must, however, be remembered that the disease may be so extensive as to occupy situations 1 and 2 or 3 and 4, while in some rare cases the entire rectum including the anal canal may be implicated. The routes we

have to select from are: (1) the perineal; (2) the sacral; (3) the vaginal; and (4) the abdominal.

Preparation of Patient.

Before undertaking any of these procedures, a thorough and intelligent preliminary preparation of the patient is probably of greater importance than in almost any other surgical operation; four or five days before free purgation should be commenced, and continued till the day previous to operation, when a copious enema should suffice to completely empty the colon, the patient is to be well fed with food that will leave but little residue, and the night before operation a full opiate is to be administered to check peristalsis. Another enema may be given a couple of hours before operation, and when the patient is well under ether, a thorough washing-out of the rectum and lower part of the colon with a 2 per cent. solution of creolin or other antiseptic solution should be employed; this preliminary preparation is a matter of very real importance. It is well known that the septicity of the intestinal contents increases the longer they are retained, and that a thorough evacuation, carried out during several days previously, tends largely to diminish the risk of wound contamination in these cases; but it may not be possible to effect this thorough evacuation, large masses of scybala may block the colon above the seat of disease or the stricture may be so tight that complete obstruction has supervened, these are cases in which

A Previous Colotomy

is clearly indicated; some surgeons, indeed, recommend colotomy previous to all excisions of the rectum, but where the bowel can be efficiently evacuated, I am satisfied that it is unnecessary and objectionable, as it causes delay and subjects the patient to a double operation; where, however, complete evacuation is impossible without colotomy, it should be certainly undertaken as a preliminary, or if obstruction is complete and attended with much meteorism, the method of intestinal drainage, introduced by the late Mr. Greig Smith, is probably preferable.

Perineal Excision,

formerly the only method employed for the removal of rectal cancer, is now not so frequently undertaken, and should, I believe, only be adopted in cases which involve the anal canal, as incontinence of faeces is a necessary result of excision of cancer in this way; when, however, the anal canal is implicated, the incisions necessary for complete removal must so involve the musculature that incontinence will certainly follow. If only portion of the circumference of the bowel is infiltrated, an incision is to be carried round that portion of the anus corresponding with the disease, and the levator ani divided to a similar extent. Vertical incisions are then to be made on either side, but well free of the growth, and carried up the rectum to a point sufficiently above the cancer, the flap thus formed is to be freed from its connexions, drawn down, and a clamp applied to the healthy tissue above; the disease is then cut away, any vessels bleeding are to be ligatured and the cut end of mucous membrane attached to the skin by deep and superficial sutures. In passing the deep sutures care must be taken that they are passed not only through skin and rectal wall but also under all the perirectal tissues and in sufficient number to obliterate any cavity outside the rectum in which blood or serum may collect; this is a matter of high importance in the prevention of sepsis. The contrast between wounds of the anal canal alone, such as pile and many fistula operations, and those wounds which penetrate the entire rectal tunic and so open up the superior pelvirectal space is very marked, sepsis to any serious extent being excessively rare after pile operations, but common after wounds such as excision of the rectum which open through the rectal wall above the pelvic diaphragm, yet both these wounds are exposed to the same sources of infection from intestinal contents; there can, I think, be no doubt that the difference is due to the fact that once the superior pelvirectal space is opened up, blood and serum are likely to be widely diffused and form a suitable culture medium for the growth of bacteria: it is, therefore, imperative to close the deeper portion of the wound efficiently by deep sutures, or if this is found to be impracticable, to ensure free drainage by means of tubes or iodoform gauze packing.

When the disease extends round the entire circumference of the anal canal, excision can be carried out in like manner, the amputated rectum being sutured to the skin.

In connexion with perineal excision, it is well to remember that, in some rare instances, it may be possible to prolapse the entire disease through the anus. This may be the case in single nodules occupying portion of the circumference of the bowel low down, and also when the disease completely surrounds the intestine, either rectum or colon, an intussusception may be induced which becomes long enough for the cancer to reach the anus; when it is possible thus to extrude the entire growth through the anus, excision can be very easily accomplished, the wound carefully sutured being returned within the anus; such cases usually do well, as the fact that the disease can be protruded indicates that the perirectal tissues are not as yet involved.

Sacral Route.

In the early days of perineal excision it soon became evident that this route was unsuitable for cancers which extended a considerable distance up the rectum; it was therefore sought to obtain more room, first by posterior incision, then the coccyx was removed, and finally, by Kraske's sacral incision, a great impetus was given to the efficient treatment of extensive cases. Kraske's original incision has been much modified by other surgeons; the method which appears to be best is as follows:—The skin over the sacrum is to be cleansed antiseptically, and an incision made from the middle of the sacrum to within about an inch of the anus (Fig. 1); this

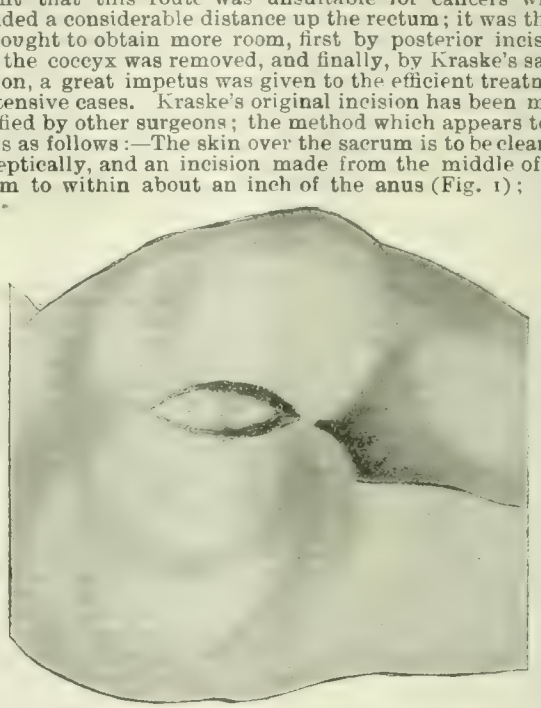


Fig. 1.—First incision in trans-sacral excision of the rectum, exposing the coccyx and portion of the sacrum, with their muscular and ligamentous connexions.

exposes the fibrous coverings of the bone with the attached ligaments, and the connexions of the levatores ani to the coccyx, and to one another in the middle line. An incision is now made through the musculature below the tip of the coccyx, and with American pruning shears the ligaments, first on one side of the coccyx and then on the other,

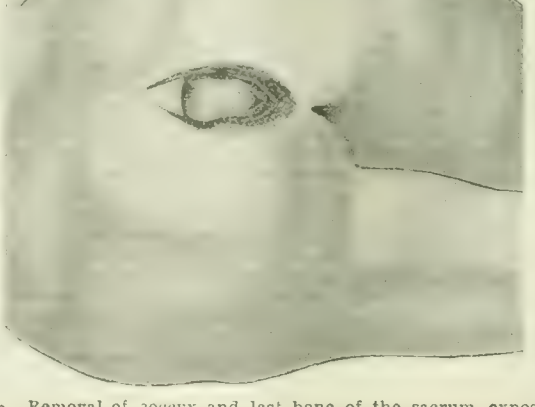


Fig. 2.—Removal of coccyx and last bone of the sacrum, exposing posterior surface of the rectum.

are severed, while a third section is carried transversely through the fifth sacral vertebra, and the triangle of bone thus separated from its attachments is easily removed. This transverse division of the sacrum is practically that recommended by Bardenheuer, which I consider far the best line of section (Fig. 2). When made through the fifth sacral vertebra, sufficient room is usually secured, but a further bone section can readily be made if required; it is, however, of great importance to keep it as low as possible, so as to ensure the safety of the nervous supply of the sphincteric apparatus. The removal of the entire piece of bone is unattended with subsequent trouble, and is, I think, vastly to be preferred to any of the osteoplastic operations which have been recommended. The American pruning shears cut the bone cleanly without much bruising, and much more rapidly than any other instrument.

The posterior surface of the rectum is now exposed and separated with care, bleeding of course being arrested, but usually only the mid-sacral artery requires attention. With the finger now an attempt should be made to free the anterior surface so as to clear the entire circumference of the rectum; in the female this can sometimes be done with ease, but it is usually difficult in the male. No force or bruising is permissible, so, if difficulty arises, the bowel should be divided circumferentially before the anterior connexions are separated. When the disease is tolerably low down, this incision is best made above: when high up, below; while occasionally in cases of very severe disease it may be wiser to make the incision through the infiltrated intestinal wall, subsequently removing the diseased structure from each end. This incision should be made with a pair of scissors bit by bit, pressure forceps being applied to the bleeding points, irrigation is to be carried out during the whole procedure. As soon as the entire circumference is freed, the upper lumen of the bowel is closed by a suitable clamp, and we now have to decide whether the case is one in which a sacral anus should be made; an end-to-end resection be performed; or the lower portion completely removed without injuring the pelvic diaphragm or sphincteric apparatus, and the upper portion brought out and fixed at the normal anus. Formerly a very large proportion of cases were completed by the formation of a sacral anus; and in my own series a large number of the earlier cases were thus terminated, although I now know that many of them were suitable for an operation that would retain sphincteric control with an anus normally situated. I believe that a sacral anus is necessary only in a very small proportion of cases—namely, those in which the disease is extremely extensive, and involves the anus to such an extent that it is impossible to retain the surrounding musculature in any useful condition, and also in those rare cases in which it is found impossible to free the upper segment sufficiently to bring it down for a resection or normally-situated artificial anus. Such cases are, however, exceptional. Should, however, the case be considered one in which a sacral anus is necessary, the upper segment is to be freed above the disease which is to be removed, making sure that the section traverses the bowel well free of infiltration. The free lumen is now to be brought out over the divided sacrum and sutured to the skin and the large cavity left by the removal completely closed by deep and superficial sutures.

A resection with end-to-end junction, if a fair amount of healthy bowel exists below the disease, may sometimes be a possibility, and in the rare case in which it succeeds the result is very perfect, the conditions under which this operation are performed, however, being extremely unfavourable for good union. In the first place, there is not a uniform covering of peritoneum; secondly, the solid faeces of the colon exercise a considerable tension upon the bond of union; while to dilate the anus for the passage of faeces, even under normal conditions, necessitates a very considerable strain, and if, as is usually the case, the bowels are kept confined for many days after operation, this strain will be so great as almost certainly to tear through the new bond of union even if tolerably firm. It is well, therefore, if the surgeon attempts this method, to commence free saline purgation after the second day, and in this way as far as practicable to assimilate the case to that of the small intestine with its fluid contents, where we know the results of end-to-end junction are so much better than they are in the colon. The method of junction may be by suture, decalcified bone ring, or Murphy's button, at the discretion of the surgeon.

In three cases in which I attempted to get end-to-end junction, a posterior fistula formed, and although a good result was finally obtained after closure of the fistula, I now think it better to suture only the front and sides of the bowel in the first instance, leaving the posterior portion open, and close this posterior opening by a subsequent plastic operation. In a case in which I adopted this method the line of union was more satisfactory.

The method which promises the best results in a very large majority of cases is undoubtedly that of Moulonguet.[1] He dissects out the lower portion to the upper surface of the pelvic diaphragm, and the entire mucous membrane down

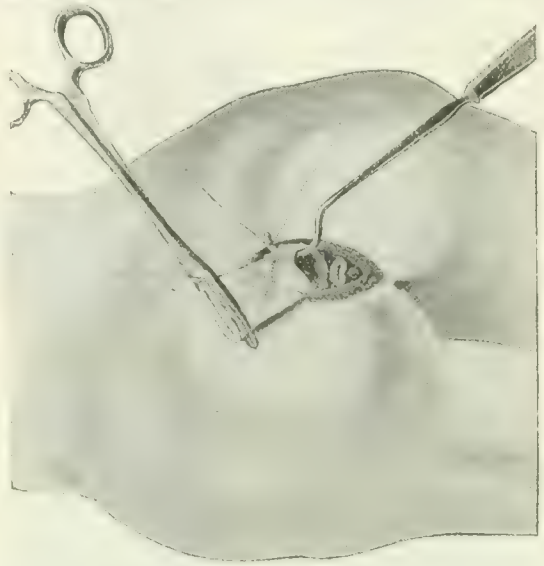


Fig. 3.—The way to pass sutures so as to tie off the attachments of the upper portion of the rectum before dividing them with scissors.

to its junction with the scaly epithelium of the anal canal, but carefully preserves the entire sphincteric apparatus from injury, and then frees the upper end sufficiently to bring it out at the anus, without tension, and suture it there, thus making an artificial anus at the normal position, completely provided with an efficient sphincteric control. There is usually no great difficulty in freeing the upper portion sufficiently to bring it down to the anus, even where an extensive excision has taken place, and in doing so it is well to open the peritoneal pouch early, as the subsequent steps are thus much simplified, the lateral reflections being tied off and divided with scissors in the same way that broad ligaments are treated in vaginal hysterectomy (Fig. 3).

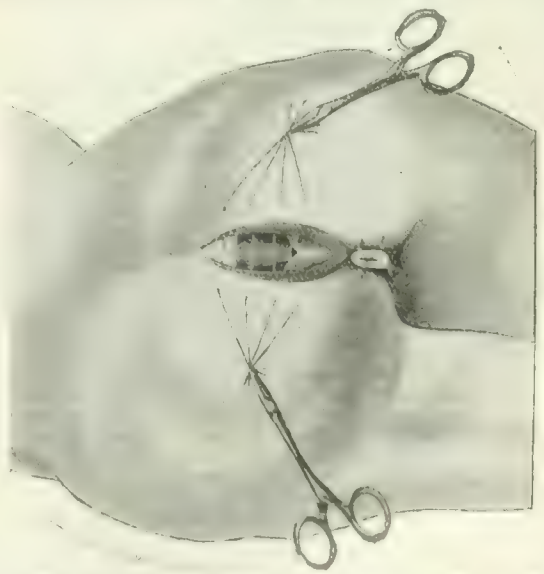


Fig. 4.—The deep sutures placed in position. The upper one passes through the periosteum of the sacrum, the next two pick up small portions of the muscular coat of the bowel, and the lower one passes through the divided attachments of the levator ani muscle on each side. The upper lumen of the bowel is shown sutured to the anus.

The abdominal cavity can be subsequently efficiently closed by uniting the free anterior edge of peritoneum by fine continuous catgut suture to the serous covering of the rectum. Posteriorly it is desirable to keep as far from the muscular tunic of the bowel as possible, remembering that the mass of vessels for the supply of the rectum pass down in the loose areolar tissue in the hollow of the sacrum, and must as far as possible be preserved. As, however, the vascular supply of the rectum is by vessels which run down vertically, many of them in the submucous tissue of the gut, the vitality of the rectum can generally be assured if great care is taken to prevent undue bruising and lacerations, and to retain as many of the vessels in the posterior areolar tissue as is possible. The danger of necrosis of the intestine is the one drawback to the employment of this method. In my own cases, a small portion of the gut sloughed in two instances, but not sufficiently to prevent an excellent result from being eventually obtained. Four or five deep sutures are now passed through the entire thickness of tissues divided, the centre ones including a few fibres of the external muscular coat of the rectum (Fig. 4). Before closing these the edges of the wound are brought together by a fine continuous suture, and the deep sutures finally closed over lead plates (Fig. 5), no

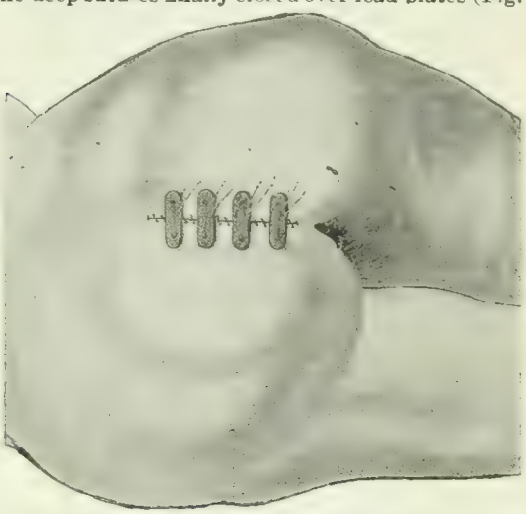


Fig. 5.—The wound finally closed, the superficial parts by continuous sutures, the deep sutures tied over lead plates.

drainage being employed. By this operation all the advantages, without the dangers, of end-to-end junction are secured, and an opening directly external controlled by an efficient sphincter is obtained.

My personal experience of trans-sacral excision of the rectum extends to 26 cases; 2 died of sepsis; the remaining 24 recovered. In 9 (mostly early cases) sacral anus was formed: in 5 end-to-end junction; while in 12 the upper lumen was fixed to the normal outlet which I now feel tolerably certain is the best and most usually applicable method.

VAGINAL ROUTE.

As involvement of the recto-vaginal septum occurs early in many cases, excision of portion of the posterior vaginal wall with the cancer has been tolerably frequently practised and in three cases under my own care this was done without difficulty, the vaginal wound being closed by sutures, but in my cases, although the operation was primarily successful, recurrence was rapid, and such must very frequently be the case where the perirectal tissues are so much invaded. The excision of cancers confined to the rectal tunic by incision through the healthy vagina appears to present a better prospect, and has been put in practice by many surgeons, especially by Murphy, of Chicago, and in suitable cases it is no doubt a good method, but I am unable to speak of it from personal experience.

ABDOMINAL ROUTE.

Excision of the rectum from above appears first to have been performed by Czerny in 1883 in a case in which he found the perineal route to be impracticable, and although its claims have been strongly advocated by Quénu and Hartmann, it has not yet assumed the position in surgery which I believe it will eventually hold. The advantages are (1) after the abdomen is open it is possible to estimate exactly the extent of disease and the degree, if any, of lymphatic and peritoneal involvement, so that if the disease is found to be too extensive the operation can be terminated as an ordinary colotomy, or if this is considered to be unnecessary, the abdominal wound may be closed and the case allowed to run its course; (2) as the meso-colon is divided the superior haemorrhoidal artery is secured, and also the two middle haemorrhoidal arteries at an early stage, so that the operation is almost bloodless; (3) a complete removal of the lymph glands and ducts most likely to be involved is quite possible; (4) as the bowel is securely tied above and possibly below the disease, wound soiling from intestinal contents is reduced to a minimum.



Fig. 6.—Sacral anus six years after the entire rectum and anal canal had been removed by trans-sacral excision for adeno-carcinoma.

There are very important advantages which appear to me sufficient to extend largely the scope of the operation; many cases which have been treated by trans-sacral incision would, I believe, have given a better result by this method, which has hitherto only been adopted in very extensive cancers of the rectum, and usually terminated by bringing out the divided colon either at the original abdominal wound or through a separate incision in the iliac region. If, of course, it is necessary to terminate the case by a permanent colotomy, this must be considered a very serious objection, but I am convinced that is possible to bring the divided colon down to and fix it in the anus in a large proportion of cases, without any wound whatever of the anal canal or pelvic diaphragm, and so obtain a perfect sphinteric control. The operation is best conducted as follows:—The preliminary preparation having been carried out as previously indicated, the patient is placed in the Trendelenburg position, as nearly vertical as

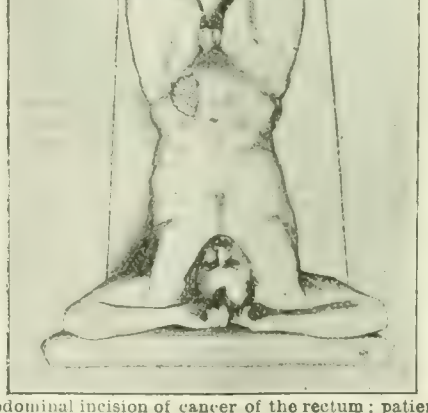


Fig. 7.—Abdominal incision of cancer of the rectum; patient in high Trendelenburg position; the summit of the loop of pelvic colon is drawn out at the wound and ligatured in two places.

possible (Fig. 7), in order that the intestines may fall out of the pelvis, and so give plenty of room; the abdomen is opened by a long vertical incision, which separates the fibres of the left rectus muscle and the extent of disease determined, if movable, and the peritoneum free from infection, excision may be proceeded with, a loop of pelvic colon is drawn out and the point at which the meso-colon is longest determined, the average greatest length is about six inches, and if found as long as this the divided colon can be brought to the anus without undue tension. If, however, it proves to be considerably shorter than this limit, the case will probably have to be terminated in colotomy, the colon is ligatured in two places firmly, and divided, the cut ends being tied up in aseptic gauze, it will be observed that the point selected for division has no direct reference to the seat of disease, it is chosen so as to give as long a meso-colon as possible. The meso-colon is now divided between clamps down to its attachment (Fig. 8), and if the Paquelin cautery is

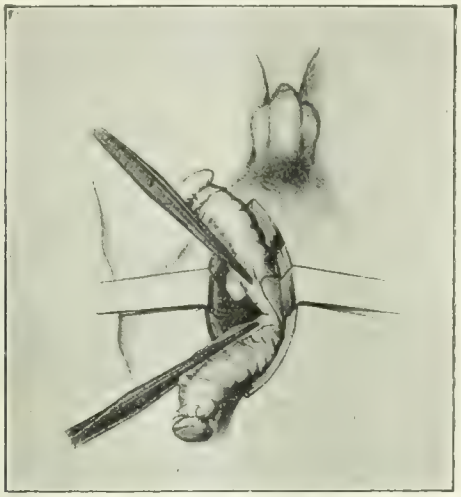


Fig. 8.—Abdominal excision of cancer of the rectum; the colon has been cut across, and the ends covered by sterilized gauze; the meso-colon has been divided between clamp forceps down to its attachment by means of the Paquelin cautery.

used, top sewing of the divided edge is rendered unnecessary, the attachments of the lower portion are ligatured piece by piece, and divided until a point is reached at which the posterior surface of the rectum ceases to be covered by peritoneum; the superior haemorrhoidal artery will have been ligatured in the lower portion of the meso-colon thus tied; the lateral ligaments are then tied with the peritoneum covering them and divided; these will include the middle haemorrhoidal artery upon each side; the peritoneum in front, as it is reflected off the front of the rectum, is now divided, thus completing the separation of the peritoneum from the rectum.

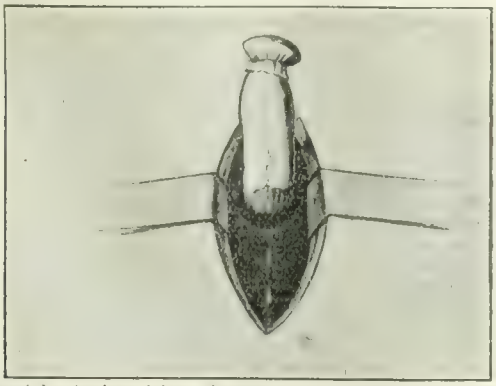


Fig. 9.—Abdominal excision of cancer of the rectum; the lower segments of colon and rectum have been separated from peritoneal attachments; the superior and both middle haemorrhoidal arteries have been tied.

By blunt dissection the bowel can now be cleared right down to the pelvic diaphragm, and, if possible, firmly ligatured below the seat of disease; an assistant should now thoroughly wash out the anal canal and rectum up to the point at which it is ligatured, after which it may be divided from above, below the seat of ligature; the end of the colon is now brought out at the anus and fixed there, after the mucous membrane of the lower segment has been dissected away after the method of Moulonguet, this appears preferable to any attempt at end-to-end junction for reasons already given. If it is thought desirable to employ drainage, an

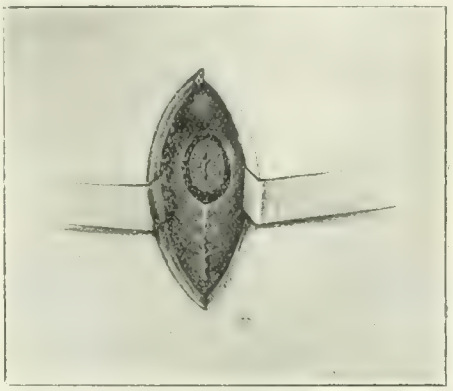


Fig. 10.—Abdominal excision of cancer of the rectum; the rectum has been cut across immediately above the anal canal.

incision for the insertion of a tube of iodoform gauze can be made through the pelvic diaphragm at the apex of the coccyx. I have so far only had personal experience of two cases of the above operation, both were very extensive; there was no difficulty in bringing down the pelvic colon to the anus as above described. The first was a case in which there had been long standing obstruction, and the patient died of gangrenous inflammation of the buttock and lower portion of the abdominal wall, and although the other case only lived 5 weeks, union of the colon to the anus was good and functional result perfect. I believe, however, in less extensive cases good results will be obtained.

Where the meso-colon is too short, the operation must be completed by colotomy as in Fig. 11.



Fig. 11.—Abdominal excision of cancer of the rectum; the upper end of the colon, not having a sufficiently long meso-colon to allow of its being brought down to the anus, is formed into an artificial anus in the groin.

REFERENCE.
[1]Soc. de Méd. d'Amiens, July, 1890.

"SMALL-POX HERE."—Three cases of small-pox in coloured men employed as restaurant waiters were recently detected in Chicago. The restaurant keepers were expostulated with for employing unvaccinated attendants, but protested that they could not enforce vaccination as a condition of employment. In consequence the chief medical inspector was instructed to post a placard, "Small-pox here," at the entrance of the next restaurant in which a small-pox case is found, and to place a sanitary officer at the door to warn people away until all necessary preventive measures of disinfection, vaccination, etc., had been enforced.

The Lettsomian Lectures

ON

THE CONDITIONS WHICH MODIFY THE CHARACTERS OF INFLAMMATIONS OF THE SKIN, AND THEIR INFLUENCE ON TREATMENT.

Delivered before the Medical Society of London.

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Lecture II.—*(Abstract).*

The Personal Factor.

The lecturer pointed out that in his previous lecture he had discussed the influence of the microbe only, but in the majority of cases the state of the man when he encountered the microbe was equally important. Even age was often an important factor. Thus pus cocci easily infect children, and free suppurations are therefore often induced in them, and if they are not treated at an early stage the cocci may penetrate deeply, and infect the general system. In a newborn infant a surface lesion would probable take the form of a bulla, with clear contents; but in older children the vesicular and pustular forms of impetigo contagiosa usually occur. Adults often resist it altogether, or the lesion may only appear as an excoriation; and the lecturer did not remember ever to have seen a typical impetigo contagiosa in a very old person. Ecthymatous sores did, however, occur in severely itching diseases, like pediculosis corporis; but though deep they were seldom abundant. They were, however, vulnerable to both boils and carbuncles, and the latter might spread to a fatal extent. Suppuration in the aged was also liable to go on to gangrene. The latter might also occur without previous suppuration, as might be seen frequently in ophthalmic herpes zoster.

Gangrene was also frequent in infants in multiple patches, which might supervene upon any pustular eruption, such as a miliaria, but the most common cause was varicella, and it occasionally developed on recent vaccination lesions. It was supposed to be due to the bacillus pyocyaneus. This liability ceases after the age of 3 years. Formidable as these cases may be, and many are fatal if allowed to run their own course, the extension of the gangrene can be checked if at an early stage injections of carbolic acid solution are made in the neighbourhood of each lesion, as in the treatment for carbuncle. These latter are rare in the young, fairly common in middle age, and still more so in the old. Boils, on the other hand, have no age restrictions. The predisposing influence of sewer-gas poisoning and glycosuria on these suppurative diseases is well known, and glycosuria also predisposes to gangrene. Nevertheless, in a large number of cases no special departure from health is found in recurrent boils, unless they are so large or so numerous as to excite septic fever from their own toxins.

Old age is of itself a strongly disposing factor for ordinary eczema, and it often spreads rapidly and extensively in a senile skin, partly from the defective nutrition of the skin itself, partly from the defective elimination of the tissue-worn viscera, especially the liver and kidneys. The indications for treatment, therefore, are to assist these worn-out organs as far as our means permit. On the other hand, the seborrhoeides are rarely seen in old age Attention was drawn to the congenitally dry skin as a predisposing cause of eczema, and the importance and mode of recognizing slight degrees of it pointed out, and also that the treatment thereby suggested was the administration of thyroid extract and the local application of oily remedies. On the other hand, hyperidrosis of the palms and soles also predisposed to inflammation of those parts with keratosis sometimes highly developed. Heredity plays an important part in this and other tissue proclivities to certain forms of inflammation, such as psoriasis.

Toxin Absorption.

Turning now to other causes the lecturer said that his experience led him to regard toxin absorption as one of the most powerful factors in the production of skin inflammations. While he regarded auto-intoxication from the intestines as the most frequent source of these toxins and ptomaines he thought it probable but more difficult to demonstrate that absorption of injurious substances from other viscera might also occur, he related cases in support of this view and also brought forward cases suggesting that where dermatitis appeared to be excited by sudden chills to the surface, the explanation was that these produced sudden contraction of the surface vessels followed by dilatation and that during the latter toxins were absorbed from the intestine and other organs and were distributed peripherally and excited eruptions the particular kind apparently depending more on the individual than on the toxin.

The Nervous System.

The influence of the nervous system was admitted in many of the examples, the toxins probably producing the eruptions in many cases through their action on the vasomotor nerves both central and peripheral and cases in which nerve shocks were the immediate cause of eruptions were cited, but while its influence is important it is in great part indirect except in such a disease as herpes zoster, which might be the direct outcome of either central or peripheral nerve lesions, though those due to inflammation of the nerve ganglion of the posterior root were more common than those from lesions of other parts of the nervous system. Apart from these, the diversity of the skin lesions in apparently similar nerve lesions suggested that the nervous influence was indirect, and required some other exciting factor. Further, in most cases of lesions of the nervous system there were no skin lesions at all. At the same time, cases of the exanthemata were related showing that if all innervation was abolished no inflammation could occur. That, if cerebral influence only was abolished, that the eruption was violent and severe, that in partial vasomotor injury the eruption was slight and perhaps fugacious, while in partial cerebral or spinal damage the eruption would probably develop at the defectively innervated part first and most severely. The protective influence of the nervous system was exemplified in the liability to bullae, perforating ulcer, and other lesions in the late stage of the nerve form of leprosy.

The influence of the nervous system on the distribution of eruptions was much greater, and many examples of such influence were given where the eruption was in the domain of one or more nerves both in congenital lesions such as ichthyosisohystrix, naevi, etc., as well as in dermatitis, as in zoster, and in some cases of eczema, lichen planus, etc.

Still mere important was the distribution in vasomotor areas, of which the bust and arm distribution of xerodermia pigmentosa was a good example, and the advantage of counter-irritation in recurrent inflammations over the governing centres such as the cervical or lumbar enlargement was emphasized.

In speaking of pregnancy as a cause of eruptions, chief stress was laid on the variety of dermatitis herpetiformis known as "herpes gestationis," and its general behaviour in regard to pregnancy, parturition, and lactation was discussed; and it was shown how in some cases it became the earliest sign of pregnancy, and how after parturition there was frequently an exacerbation of explosive violence, followed by a gradual decline in the severity of the successive outbreaks, and finally, complete subsidence occurred in the majority of cases.

The Influence of Seasons.

This was shown as regards erythema multiforme, psoriasis, urticaria, and prurigo, and then a description was given of recurring summer and winter eruptions which begin in early childhood and persist to adult age, and then usually subside. The type called by Hutchinson "summer prurigo" was especially described, and it was pointed out that a precisely similar eruption might occur in winter, but much more rarely, and that in those cases ointments, always increased the irritation, while astringent lotions, especially those of the organic silver salts, gave most relief. It was also shown that while the general behaviour as regards exciting causes, evolution, duration, and eventual subsidence was very similar, the morphology of these eruptions varied considerably, and that they might be papulo-erythematous, papulo-vesicular, and vesiculo-pustular, but that pale red conical papules, with or without a little clear fluid at the apex, were the most common, while in hydroa aestivalis with its sub-variety, vacciniformis, the lesions were scar-leaving bullae which led to great disfigurement and even mutilation which similated lupus vulgaris. The whole class might be regarded as angioneuroses with a congenital vulnerability of the skin something like that of epidermolysis bullosa.

DRUG ERUPTIONS.

These were chiefly discussed as regards bromide and iodide eruptions, which are the only ones which are distinctive, other drug eruptions not being recognized as such unless it was known that one of the possibly eruption-exciting drugs had been given. Bromide and iodide agminated eruptions could always be recognized, and it was pointed out that while in infants they might occur from very small doses even through suckling when the mother was taking the drug, in adults if an eruption occurred from a moderate dose, it was an indication of defective elimination due to either heart or kidney disease or both. It was also pointed out that both bromide and iodide eruptions often attacked scar tissue and the fact that their diagnosis was missed sometimes because they often did not come out one or two weeks or more after the drugs had been stopped. This was explained by their having a diuretic action which ceased soon after the drug was stopped, and then the salt which was left in the tissues produced the eruption.

THE INFLUENCE OF GOUT.

The lecturer said he had left this to the last because there was no need to emphasize a factor which in the past had been overrated both by the doctor and the public. But while he did not doubt that gout was a strongly predisposing cause of inflammation of the skin, it was not possible to diagnose gout by the skin lesion alone; moreover, experience often showed that frequently when we had done our best to neutralize the supposed uric acid element by alkalies and other antigouty remedies, the eruption was still too often recalcitrant, and he believed that in a large proportion of cases it was again another example of toxin absorption from the intestine. The tendency of gouty persons to chronic intestinal catarrh, and the readiness with which intestinal fermentation was set up being the real factors requiring attention, intestinal disinfectants of the salol class, and a dietary which would not be likely to disagree and produce further intestinal fermentation were the real indications.

CASE OF APPARENT SECONDARY ABDOMINAL PREGNANCY IN A RABBIT AFTER PRIMARY RUPTURE OF THE UTERUS.

BY KURT KAMANN, M.D.,
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AT the necropsy on a rabbit, which had been used for experimental purposes, a complete fetal sac was found in the abdominal cavity containing a full-time fetus which had only recently died. The sac was attached to a very vascular portion of the great omentum which had been drawn out in the form of a pedicle.

The placenta was situated on the wall of the sac opposite its point of attachment to the omentum, which was the only means of connexion between the fetal sac and the mother. The internal genital organs lay at some distance from the sac, and appeared to me to be free of any marked changes. At first I considered it to be a case of primary abdominal pregnancy.

In the course of further investigation, however, this hypothesis appeared to me to be untenable. On examining the uterus by means of sections (the examination being carried out in the laboratory of Professor Martin) I found that the left uterine horn, which macroscopically appeared quite smooth, on microscopical examination presented a tear in its wall, which was filled with fresh granulation tissue.

The discovery of a recent cicatrix in the uterine wall proved conclusively that the fetus had not developed primarily in the abdominal cavity, but in the uterus, and that the full-time fetal sac, together with the placenta, had passed out of the uterus through the tear in its wall into the abdominal cavity.

I believe that its secondary attachment to the omentum did not occur suddenly after a complete expulsion through an extensive uterine rupture, but that it took place during the course of a gradual protracted rupture of the uterus (*protrahierten Uterusruptur*), so that the fetal sac, becoming adherent to the omentum, received its blood supply from it before being completely expelled from the uterus.

Although one must be careful in drawing comparisons between corresponding conditions in men and animals, yet I think I shall not be wrong in comparing the uterus of the rabbit with the Fallopian tube of the human female in this case. With this proviso, I believe the events which occur in most of those cases of so-called abdominal pregnancy in the human female may be described as a gradual rupture of the Fallopian tube and the adhesion of the fetal sac, which is slowly expelled, to the neighbouring abdominal organs.

The microscopical sections also showed an interesting condition. On the internal surface of the uterine cicatrix I found a peculiar body, which was in all probability a fertilized ovum that had failed to develop. If this were in reality an ovum, it would be justifiable to suppose that the expulsion of the fetal sac into the abdominal cavity had brought the pregnancy to an end, and that the rut in the animal had returned. This supposition was supported by the presence of comparatively recent corpora lutea in both ovaries and a condition of evolution of the uterine mucous membrane.

A complete report, extensively illustrated, of this case will appear shortly in the *Monatschrift für Geburtshilfe und Gynaecologie*. The above presents in an abbreviated form the chief points of interest in this case.

CASE OF RHEUMATIC FEVER COMPLICATED BY CHOREA, IRITIS, AND ENDOCARDITIS: RECOVERY.

BY FRED. C. FORSTER, M.R.C.S.ENG., L.R.C.P.LOND.,
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A BRIGHT young girl, aged 12½, was first seen by me in the summer of 1901 complaining of sore throat and slight aching pains in the right knee and along the right tibia. The knee was not swollen, nor was there any sign of inflammation in the joint. The tonsils were inflamed, the fauces congested, and the tongue furred. The pulse was 90 and the temperature 99° F.

I was told that three days previously she had been caught in a heavy shower coming home from school. Suspecting the tonsillitis to be rheumatic in nature, I at once advised the child being put to bed, to be kept on a strictly milk diet, ordering a saline purge and sodium salicylate mixture in gr.x doses four-hourly.

In spite of thus trying to anticipate the disease, I found next morning the right knee joint much swollen and inflamed and also the right elbow and left ankle, whilst the temperature had risen to 101° F., and the pulse-rate to 120. For the next fortnight the case was a fairly typical one of rheumatic fever, the temperature rising on two occasions to 104° F., and both shoulder-joints becoming affected.

At the end of the fortnight the temperature had fallen to normal, and the inflammation in the attacked joints had quite subsided. The cardiac condition at this time was satisfactory, the pulse was 80, soft and regular and at no time in the illness had there been any evidence of commencing dilatation.

Three days later, whilst looking at the child's tongue, I noticed that it was tremulous: on being asked to hold out her hands above the bed clothes and to extend her fingers, slight, purposeless, jerky movements were noted—so suggestive of chorea. The child was still on a careful diet and was taking 5-gr. doses of sodium salicylate with ℥xx of aromatic spirits of ammonia thrice daily.

During the next four weeks the choreic movements became more developed and continued extremely typical, involving the muscles of the face and upper extremities, but not the trunk nor lower limbs.

Whilst the movements were slowly decreasing and the child making a steady convalescence she one day complained of pain "like a needle" in her right eye and inability to see clearly. This was the starting point of an attack of acute iritis which was presumably "rheumatic" in origin, and clinically resembled that variety in the severity of the congestion, pain, and photophobia.

For some time the patient, who had borne up with wonderful cheerfulness, was very ill, and my anxiety was increased by the insidious onset of a cardiac lesion. This was first noted shortly after the onset of the iritis, in the shape of a blurring of the first sound at the apex, with an increased and irregular pulse. Later there developed a loud grating systolic *bruit* audible all over the left axilla and back, whilst the heart's impulse could be felt 1 in. outside the vertical nipple line. Cyanosis and oedema accompanied the dilatation, and for several days the issue was doubtful, but I am pleased to report that she successfully pulled through, owing not a little to her excellent nursing and her own splendid pluck.

After spending the winter in the South of England she went abroad with her mother in the spring, and I have recently heard that she has "had no return of her rheumatism and

can take long walks and cycle rides without getting blown," which speaks well for her cardiac condition. I have omitted the details of her treatment as the chief interest of the case, and its claim to be recorded lies in the unusual severity and persistence of the rheumatic invasion as shown by the sequelae. The associations between rheumatic fever, chorea, iritis, and endocarditis are well recognized, but it is rare for these complications to occur consecutively in one patient. I may add that the child had never previously suffered from rheumatism in any of its manifestations, and the only point of note in her family history was that a maternal aunt had had chorea as a child.

BRIGHT'S DISEASE: ANURIA: INTESTINAL HAEMORRHAGE: DEATH.

BY LYSTER COLE-BAKER, M.D.,
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THE following case is of interest from its suddenness, the difficulty of diagnosis, and the confusing symptoms.

Miss B., aged 43, unmarried, had previously enjoyed good health, except that she occasionally, perhaps, had felt more tired than could be accounted for by the amount of exercise taken, and except for an attack of meningitis six years previously. On November 1st, 1901, she went to see H.M.S. *Ophir* come in, standing in an exposed position on the top of a building in the dockyard for some three hours. Next day she went for a bicycle ride of about twelve miles, and after a rather heavy meal went to bed at 11 p.m. At 12.30 a.m. she woke up in great pain in the abdomen, and vomited two or three times. I was sent for, and saw her at 4 a.m. She then complained of great pain in the epigastrium, just beneath the xiphoid cartilage, and on palpation there was distinct tenderness. Her pulse was normal, and temperature slightly subnormal—98°. In a basin beside the bed was some mucus tinged with bile which she had brought up. I injected morph. hydrochlor. gr. ½ hypodermically, and, as her condition improved, left her. During November 3rd she was still in pain, though not so severe, located in the same place; the vomiting had ceased. She had a feeling of nausea, so was kept on water and ice all day. The pulse and temperature were as on the previous night. Calomel gr. v was given twice at intervals of six hours.

On November 4th I saw her at 10 a.m., when the pain had shifted, and was referred to the hypogastric region between the pubes and umbilicus. I was told she had not passed urine for twenty-four hours, and on palpation a distinct tumour could be felt, pressure causing great tenderness and pain. On percussion this tumour was dull, with very pronounced resonance above and in both flanks, presenting in a most remarkable manner all the symptoms and signs of a full bladder. On passing a catheter, however, no urine was obtained, although four different ones were tried. Per vaginam the bladder was felt to be empty, the uterus and tubes and ovaries normal. Therefore one had to come to the conclusion that the kidneys had ceased to secrete. A hot bath was ordered. I saw her almost immediately after it, and then her condition had changed very seriously. She was very cold; the lips, nose, and finger tips were blue or livid. Her breathing was very rapid, 46: her pulse could not be felt at the wrist. In fact she was moribund, and died an hour afterwards. Ether and strychnine had been injected hypodermically, champagne administered by the mouth, and she had been entirely enveloped in blankets and surrounded with hot bottles.

Necropsy.—On opening the abdomen in the hypogastric region there was a coil of intestine, livid or plum-coloured, 4 ft. in length. This was found filled with dark coloured blood, 2 pints in quantity. The mesentery for the whole length of this part of the intestine was of the same colour as the intestine, swollen to a thickness of 1 to 1½ in. On cutting into the mesentery, it was found to have all its meshes filled with blood clot; there was about 1½ pint of bloody fluid in the peritoneal cavity. The kidneys were enlarged and heavy, presenting the typical characteristics of large white kidney. All the rest of the abdominal organs were normal and healthy, and all the rest of the intestine was of a pale pink colour. There was no strangulation or twisting of the intestine, and no point could be found from which the bleeding had occurred.

Among other points of interest are the following:

1. Death occurred forty hours after the onset of pain.

2. The pain in the epigastric region was the only prominent symptom for about thirty hours. Pain in this region is so very common, no matter where the lesion, that its occurrence is of little help in diagnosis. I have myself noticed that pain has been located there on the onset of perforating gastric ulcer, perforation of the appendix, simple appendicitis, and hepatitis; in fact, so common is it that one is tempted to neglect it entirely in trying to arrive at a diagnosis.

3. The patient had passed water on November 3rd. On November 4th she complained that she had not passed any for twenty-four hours and was suffering from pain in the region of the bladder. The coil of intestine filled with blood lying in the hypogastric region gave all the subjective and objective symptoms of a full bladder; indeed, I venture to say that, had such a case occurred in a male subject into whose bladder there was difficulty in passing a catheter from stricture or false passage, one would have been sorely tempted to try suprapubic aspiration.

My interpretation of this case is that the severe cold on November 1st, combined with the bicycle ride on November 2nd, caused the kidneys to cease secreting, or almost so, and that the increased blood pressure in consequence caused rupture of a small intramesenteric vessel, which blood slowly oozed and clotted as it flowed, till the bath on November 4th, when the collapse set in from excessive haemorrhage. The urine voided on November 3rd was, I think, secreted some time on November 2nd, previous to the rupture of the vessel.

4. It was impossible to diagnose the anuria till six hours before death, and when diagnosed there was no urgency or gravity in the case.

5. Remedial measures for the anuria only aggravated the bleeding and precipitated the end.

DIABETIC COMA TREATED BY TRANSFUSION.

BY DAVID YOUNG, M.B.EDIN.,
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SINCE Studelmann recommended the treatment of diabetic coma by alkalies administered intravenously, several recoveries have been recorded. In the case to which I refer the temporary improvement after transfusion was very marked, and it appeared as if the patient would be tided over his attack of coma, till pericarditis supervened, and apparently closed the scene.

History.

J. McW., aged 39, was admitted to the Edinburgh Royal Infirmary on June 11th, 1902, suffering from diabetes of nearly three years' duration. He had been treated in Glasgow Royal Infirmary in 1899, and again in 1901. On each occasion he improved, but relapsed after leaving the institution. Three weeks before admission to the infirmary he restarted work as an ironmonger, and this appeared to lead to his symptoms becoming aggravated.

Condition on Admission.

On admission, patient was put on ordinary diet, and no drug administered, in order that his condition might be observed before active treatment was commenced. The day after admission he passed 136 fluid ounces of urine containing 310 grams of sugar. No diacetic acid was present.

Treatment.

On the morning of June 13th he complained of pain in the abdomen relieved by fomentations, and headache. He was sick after dinner, and at 7 p.m. complained of lightness in the head. An enema and purgative were ordered, also sod. bicarb. ʒj every three hours, and diuretin gr. xv. four times daily. At 9 p.m. he was becoming drowsy, and had vomited twice. Breathing was noisy, and the breath had a sweetish odour. The urine contained diacetic acid and had fallen for the day to ʒlxxx. and the sugar to 200 grams. The case at this time appeared to be one of diabetic coma, progressing rapidly.

On June 14th, at 1 a.m., he was very drowsy, and could be roused only with difficulty. The pulse was 130 and the respirations 26. I then injected ʒxxx normal saline solution intravenously after withdrawing ʒviii blood from the same vein. Two hours later he had revived to a remarkable extent but said his head felt light. He was able to answer questions intelligently but did not remember anything about the transfusion: the pulse 102 and the respirations 22. At 11 a.m. he felt better and had taken a fair breakfast. During the day he was seen by Dr. Byrom Bramwell, in whose ward he was, and to whose kindness I am indebted for permission to publish these notes. Dr. Bramwell confirmed the diagnosis and approved of the treatment. At 4 p.m. he was again tending to become drowsy. He bled to ʒv, and ʒxxx saline solution again injected. At 10 p.m. he was quite conscious.

On June 15th, in the morning, he looked better than on the previous day. The pulse was 93 and the respirations 20. At 5 p.m. the pulse was feeble and he was again transfused with ʒxx of sterile fluid made to the following formula (from Tirard's *Medical Treatment*): Sodium chloride, 93 gr.: liquor sodii 20 drops; water, 2 pints. An hour later his pulse indicated the beneficial result. Potassium citrate was ordered instead of the sodium bicarbonate, as the latter appeared to be causing flatulence.

He again received ʒxx of the above solution intravenously on June 16th. There was no diacetic acid in the urine.

On June 17th he was much better, asked to be allowed to get up, and was able to write a letter in the afternoon. He was not drowsy, breathing was quiet, and the breath had no peculiar odour. On the following afternoon he was drowsy and sick twice. He was transfused, ʒxxx being given.

On June 19th he was sick three times, and was again transfused ʒxxx. He had headache on the following morning, but was not sick. A hot vapour bath was given, but he did not sweat till he had been in one hour. He was then left in ten minutes. Later he was transfused, receiving ʒxxx.

On June 21st his condition had improved, and he looked brighter. He said he had not felt better since admission to hospital, and asked for

increase of diet. He was not transfused; he passed ℥cxl urine, which did not contain diacetic acid.

On June 22nd he had a hot vapour bath, and later was transfused to ℥xx.

On June 23rd he was sick in the morning, but not drowsy. In the evening the temperature was 100.5° F. and the pulse 116. He was drowsy, but able to speak. He remained in this condition for a few hours, not appearing to become worse. He died quite suddenly however early on the morning of June 24th, while instruments for transfusion were being prepared.

Necropsy.

An examination of the body was made on the following day by Dr. Beattie, Assistant Pathologist to the infirmary. There was oedema of lungs and brain. The pancreas showed extensive cirrhosis, and there was also a monolobular cirrhosis of the liver. There was a recent patch of pericarditis on the posterior auricular wall. Fuller particulars will be published subsequently by Dr. Beattie.

The patient was from the first weakly and unable to stand heroic treatment by purging and hot-air baths. His pulse and general condition called rather for stimulants, and he responded to transfusion in a very remarkable manner. The coma from the rapidity of its progress appeared to be of unusual severity, and to fall under the group of cases described by Frerichs, in which after exertion patients are suddenly attacked with weakness, somnolescence, and gradually deepening unconsciousness, death occurring in a few hours. Yet the patient lived for nearly eleven days after the onset of the coma, showing marked improvement after each transfusion, and at times he was able to talk intelligently, and even to write letters.

During the eleven days ℥ccx of fluid were injected intravenously, including 75 drops liquor sodii, and ℥xiij of blood withdrawn. On the first two occasions normal saline solution was used, and the liquor sodii solution for the subsequent transfusions. The immediate stimulating effect after each appeared to be equal, but I thought the benefit more lasting when the latter was employed. The transfusion could always be carried out painlessly after a hypodermic injection of a weak cocaine solution. When the patient was first transfused, the circulation was so poor that I had difficulty in getting the solution to run. This was overcome by taking hold of the transfusion tube high up, and expressing the fluid by running the fingers down the tube. After about ℥j had passed in this way the flow went on easily.

The only other case of diabetic coma in which I have tried transfusion was in a boy aged 9 years, who was brought to the hospital moribund, and never showed any response to the treatment.

Previously I had tried injecting a large quantity of saline solution into the pectoral regions. Though the patient had lost much flesh, and the tissues were loose, the injection was attended with much pain, and absorption was slow. The improvement was much less marked than after the intravenous method, and not sufficient to encourage one to repeat the injection.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

INTRATRACHEAL INJECTIONS.

I HAVE used the method of intratracheal injections in conjunction with the open-air treatment, for which the climate of Wei-Hai-Wei is eminently suitable, for some months past, and with marked benefit to my patients. In one case of commencing tuberculous phthisis, the bacilli disappeared from the sputum; the evening temperature remained normal, and the patient put on weight. Finally, after 160 days' treatment he was discharged to his ship, which was shortly leaving for England, apparently cured. In a case of gangrene of the lung, the horrible odour of the breath and sputum completely disappeared, and though death eventually took place after twelve weeks illness, the patient's general physique for a time greatly improved.

The bugbear of the treatment, which I think would prevent many practitioners from carrying it out who otherwise would do so, is the supposed necessity of the laryngoscopic mirror. At first I attempted to make the injections by its aid, but finding it more of a nuisance than a help, gave it up, and attempted to carry out the treatment without the laryngoscope. Somewhat to my surprise, I found this to be perfectly possible. The patient expires as much as he is able, the charged syringe meanwhile being held in his mouth; on his then taking a deep inspiration it is passed rapidly behind the tongue, and the solution shot out, the patient drawing it into the trachea and lungs with the inspired air. I find this method almost invariably succeed. The syringe I use is an ordinary glycerine enema syringe, the vulcanite nozzle of which is bent to nearly a right angle by simply dipping it in hot water. The solution is medicinal izal ♏xx to glycerine ℥j. Occasionally I have added guaiacol ♏x, but I have not yet made up my mind as to whether this addition adds to the efficiency of the solution or not.

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CIRCUMCISION FOR CONGENITAL PHIMOSIS.

FOR some time I have not been satisfied with the ordinary operation of circumcision as performed for congenital phimosis. Latterly I have performed a much simpler operation which I think gives much better results.

In all cases of congenital phimosis the condition which prevents retraction of the prepuce is due to tightness of the mucous membrane, and not to any contraction of the skin itself. In the majority of cases there is no redundance of skin, and the removal of any part of it is not necessary and is not justifiable.

I have now performed for some time a small plastic operation; the penis is held between the thumb and forefinger of the left hand, and the prepuce retracted as far as it will go. With a pair of sharp-pointed scissors held in the right hand I now cut through the constricted mucous membrane, retracting the prepuce as the constriction is relieved. I go on snipping the mucous membrane as far as the corona. If the mucous surface of the prepuce is adherent to the glans it is separated, and any smegma removed. This incision, which is longitudinal, is now, by the introduction of suture, made transverse. The first suture connects the commencement of the incision at the orifice with its termination at the glans. Two or three sutures are now introduced on either side, bringing the mucous surfaces into close apposition. I use an ordinary sewing needle with fine chromic gut.

The advantages I claim for the operation are:

1. That no tissue is removed.
2. Small size of wound.
3. The facility with which it is performed.
4. The result is much better than that of circumcision, the glans often being left covered by skin, which is seldom the case after circumcision.

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HYDROXYLAMINE IN PSORIASIS.

HYDROXYLAMINE (NH_3O) has been recommended for use in psoriasis and allied dermatoses as a reducing substitute for chrysarobin and pyrogallol. I have found it of very much less use than either of these valuable remedies. It requires some time before any kind of benefit is perceptible. The following formula is used: ℞ Hydroxylamine, 1; spt. vini, glycerin., āā 500. M. sig., poison. This should be rubbed in once or twice daily, and it is convenient to do so by means of a bristle brush. The frictions should be steady, not rough, and should be continued till some degree of smarting is felt. During the first few applications this does not readily occur, but on succeding occasions it is usually complained of.

I find that hydroxylamine does not in any way take the place of the better known remedies. One good point is that it does not produce discoloration of the skin, and hence may be useful for lesions situated upon the face. The drug is, however, volatile and poisonous, causing, among other symptoms, haematuria. It is better, therefore, to avoid its use near the air passages. Salicylic acid in ointment or plaster seems a better application for psoriasis on exposed parts.

Leamington. LESLIE PHILLIPS.

OEDEMA OF THE FACE.

THE following cases may possibly suggest some further explorations, if not already made, into the etiology of Dr. Geoghegan's case related in the BRITISH MEDICAL JOURNAL of February 21st, p. 424.

1. A merchant, residing at Harrogate, but having his office and business in Leeds, found some years ago that about half-an-hour after arriving at the office his lower lip became greatly

swollen and very painful, saliva dribbled constantly, and he was utterly incapacitated. This occurred several times. Nothing did him any good if he remained at the office, but at home the swelling gradually subsided. Investigation showed that there was a very free leakage of sewer gas into the building; this was stopped, and the attacks immediately ceased.

2. A young man consulted me concerning the cause of an obstinately recurring stomatitis. His home was clearly healthy, every one else being well there; but at his office and throughout the building all the men were pale and headaches were frequent. A long disused watercloset with waterless trap was found in the cellar; upon its removal there was no further recurrence of the disease.

The freedom from symptoms of dyspepsia in Dr. Geoghegan's patient for some time after an attack of oedema may perhaps be due to the increased care which is usually taken by a dyspeptic person after any acute illness, but which is at length relaxed or forgotten. Toxaemia due to imperfect digestion would, of course, be a potent co-factor with any other existing causes of oedema.

Leeds. T. Churton, M.D.

THE AGGLUTINATION TEST IN ENTERIC FEVER.

This test is often of very great value in confirming the diagnosis in doubtful cases of enteric fever. It seems, however, that there is a certain proportion of cases in which though the symptoms are so well marked that there is no reasonable doubt of the diagnosis, nevertheless the bacteriological test is negative. Such a case has just come under my observation. The patient, aged 61, after exposure to cold developed symptoms of influenza. On the sixth day of his illness pneumonia set in. By this time I had begun to suspect that the case was one of enteric fever. Characteristic spots soon appeared, the abdomen became distended, and there was more or less diarrhoea. Gradually the patient sank into a comatose condition, and died on the thirteenth day of the illness. I have no doubt the disease was enteric fever, and this view was also taken by Dr. James Finlayson, who saw the patient several times with me in consultation.

On the eleventh day a specimen of blood was submitted to the City Corporation Bacteriological Department for examination. The report was that it gave no reaction of enteric fever. On the following day another specimen was sent, and the report was that it gave an indefinite reaction. Next day the patient died.

In talking over the case with Dr. William Wright of the Bacteriological Department, he remarked that he had observed that in very severe cases of enteric fever the bacteriological blood reaction is frequently absent. This I consider a most important observation. The absence of the reaction is due, I suppose, to the insufficiency of antitoxin in the blood, accounting both for the failure of the test and for the severity of the disease itself. The obvious deduction is that in severe cases of enteric fever where the symptoms are well marked and there is no dubiety as to the real nature of the disease, the absence of the blood bacteriological reaction should not cause us to doubt the accuracy of the diagnosis, but should rather be considered as confirmatory.

Glasgow. Wm. G. Dun, M.D.

CAUSE OF REPEATED ABORTIONS.

Mrs. N., aged 25, had had, as she informed me, "a fast afterbirth" with her first confinement, and had afterwards repeated abortions, with prolonged haemorrhage. She was aborting at the sixth or eighth week when she came under my care. As the haemorrhage was pretty free I plugged the vagina with iodoform gauze to give the uterus plenty of time to expel its contents. As this did not succeed, she was put under chloroform, and after dilating the uterus with my fingers I removed the fresh soft placenta without much difficulty. But while exploring to ensure that the uterus was quite empty, I came across a rough flat ridge, firmly adherent to the fundus, which was removed with some considerable difficulty by scraping and sawing with the finger-nail. This was quite different from the other, being hard, fibrous, organized, and of a light chocolate-brown colour, and had obviously been lodged within the uterus for some considerable time. Whether a trace of the first confinement, or a relic of a subsequent immature conception, there was no doubt it was the irritant cause of all the trouble, for after its removal she again presently became pregnant, going on to her full period. She thereafter passed from under my observation.

Sunderland. B. Strachan, M.B.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

GLASGOW WESTERN INFIRMARY.

FATAL CASE OF POISONING WITH NAPHTHA VAPOUR.

(Under the care of Dr. Finlayson.)

[Reported by James Davidson, M.B.]

History.—On the evening of September 23rd, 1902, there was brought to the infirmary a patient in an unconscious condition, said to be due to naphtha poisoning. He was 24 years old. It seems that the man had been a seaman, but had worked in a rubber and guttapercha factory for several weeks; his special occupation consisted in dipping the crude rubber in naphtha obtained from petroleum wells and subsequently refined. On the day in question, he was engaged at this work, alone, in an outhouse which was barricaded off from the rest of the buildings. He was last seen between the hours of 1 and 2 o'clock, and, from the amount of work he had completed, it is supposed that he was working up to 4 p.m., but from that time onwards till 6.20 p.m., when he was found lying unconscious, nothing is definitely known of his movements. When discovered by the foreman, he was lying on the floor, not beside the naphtha vat, but some distance off, and in close proximity to a water-pipe which had been leaking. The leak was partly covered with red lead, and it is believed that he was in the act of repairing the pipe, as indeed he had been told to do, when he was overcome by the fumes. The danger of prolonged inhalation of naphtha vapour seems to be one well recognized in such works, and besides having the buildings well ventilated, the workmen are warned that whenever they begin to feel a slight giddiness or swaying sensations in the head, they must at once go out into the open air, and stay there for a few minutes, when the symptoms usually pass off, and they can with safety return to the work.

September 23rd was a dull, muggy day, and although both windows and doors of the building in which this particular accident occurred were wide open, there was in all probability but little movement in the air of the place; further, the leaking water-pipe was on the floor of the room which was about 3 ft. below the ground, window, and door level; it was stated that this place had been passed as satisfactory by the inspector of the local authority. It is conjectured that as the density of naphtha vapour is about five times greater than that of air, the vapour may have been so concentrated at this level, that, on stooping to mend the leak, the workman had been so quickly overpowered by the fumes that he had not time to try to save himself.

It was expressly stated at an official inquiry held on the death, that no other chemical whatever was being used along with the naphtha on this day, and in particular no carbon bisulphide.

When the foreman found this worker lying unconscious, he immediately had him removed to the open air, and various means, including artificial respiration, were tried, in vain, to restore him; he was then brought to the Western Infirmary, where he arrived about 7.40 p.m.

State on Admission.—At that time he was unconscious and lay breathing heavily, the respirations numbering 24 per minute. The face was slightly cyanosed, and the lips were covered with a white froth, while the breath had a sweet, heavy odour not unlike that of amyl nitrite. The pupils were slightly dilated, but they responded to the stimulus of light, and the conjunctival reflex was also present. The limbs were not limp, rather slightly rigid, and the jaws were tightly clenched, a feature which had also been noted at the works when an attempt was made to get him to swallow some stimulant. The radial pulse could not be felt, and the thermometer in the axilla registered 98.2° F. Blankets and hot bottles were applied over and around the patient, liq. strych. hydrochlor. ♏ x injected, and later brandy ℥j was injected per rectum. About 9 p.m. he began to show signs of regaining consciousness, the cyanosis of the face disappeared, and the spasm of the masseter muscles relaxed. He afterwards became very restless and almost maniacal; he tried to get out of bed, saying that he was late for his work. He vomited several ounces of greenish fluid, but no odour of naphtha

could be detected in this. The temperature rose, and at 1 a.m. on September 24th it was 103·4° F., the pulse 140, and the respirations 42 per minute, while diarrhoea began and continued all next day. At the morning visit the day after admission fine moist *râles* were heard over the base of the left lung, and from the rapid breathing Dr. Finlayson suspected an incipient pneumonia. The temperature fell to normal on the morning of September 25th, but it rose again the same evening, and indubitable signs of consolidation of the lower lobe of the left lung manifested themselves: the respirations continued to number between 50 and 60 per minute, and the expectoration now became almost black in colour, evidently from altered blood. For the most part the patient continued exceeedingly restless, with diarrhoea and vomiting at intervals, and, although he was able to give his name and address, no information could be elicited from him regarding his accident. The urine was passed into bed at first, but on the 25th it was found to be albuminous, and on the 27th blood as well as albumen was noted. He was now apparently suffering from a severe, almost it might be said malignant, type of pneumonia, with diarrhoea and prune-juice expectoration as ominous symptoms, and, although the temperature during the last two days was rather below than above 101° F., the pulse became imperceptible, and the patient died at 1.15 a.m. on the morning of September 27th, his whole illness having lasted a little over three days.

Necropsy.—The necropsy, made by Professor Muir, showed that the lower portions of both lungs were consolidated, of a reddish grey colour, and at parts coated with a thin film of fibrin. In the upper part of the left lung there were a number of small ragged cavities where the lung tissue was beginning to break down; both lungs showed signs of an acute bronchitis. Films and cultures revealed the presence of a diplococcus, probably the pneumococcus, in addition a diplococcus of larger size (? diplostreptococcus). The stomach and intestines were oedematous, and here and there were patches of congestion, but there were no erosions of the mucous membrane. The spleen was large, 24½ oz., but this seemed due to malaria from which patient was supposed to have suffered while at sea. The liver and kidneys showed some slight changes: the former was described as having cloudy swelling, and the latter catarrhal changes in the tubules. The heart and brain were nearly normal.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Annual General Meeting.

Alfred Willett, F.R.C.S., President, in the Chair.

Monday, March 2nd, 1903.

Report of Council.

Mr. T. Clinton Dent, Senior Secretary, read the report of the Council. The financial position of the Society was now in every way satisfactory. A late highly-esteemed Fellow—Mr. E. U. Berry—had bequeathed to the Society the sum of £300. On the recommendation of the Special Committee appointed to consider the award of the Marshall Hall Prize, the Council proposed that the prize, together with the diploma, be presented to Dr. Henry Head, and that he be requested to take an early opportunity of submitting to the Society a communication upon his recent work on the Functions of the Afferent Nervous System. The Committee appointed to consider the subject of Suspended Animation in the Drowned, had arrived at some highly important results, which it was hoped would shortly be submitted to the Society. The report of the Committee on Climates and Baths was now completed.

The President put the report of the Council to the meeting, and it was carried.

Marshall Hall Prize.

Dr. Henry Head was presented with the diploma and a cheque for £81, constituting the Marshall Hall Prize, as having been adjudged pre-eminent during the last five years in that part of science with which the prize had been associated.

Election of Officers and Council.

The following were unanimously elected officers of the Society for the ensuing year:—*President:* Mr. Alfred Willett. *Vice-Presidents:* Sir Richard Douglas Powell, Bart., M.D., K.C.V.O., Sir Dyce Duckworth, M.D., LL.D., Mr. N. Macnamara, and Mr. Edgcombe Venning. *Honorary Treasurers:* Sir William Selby Church, Bart., M.D., K.C.B., and Mr. J. Warrington Haward. *Honorary Secretaries:* Dr. Newton Pitt and Mr. Clinton Thomas Dent. *Honorary Librarians:* Dr. Norman Moore and Mr. Rickman J. Godlee. *Members of Council:* Dr. Radcliffe Crocker, Dr. A. E. Garrod, Dr. J. F. Goodhart, Dr. W. P. Herringham, Dr. Amand Routh, Mr. A. Boyce Barrow, Mr. Anthony Bowlby, C.M.G., Mr. R. Marcus Gunn, Mr. G. R. Turner, and Mr. E. J. Spitta.

Presidential Address and Votes of Thanks.

Mr. Alfred Willett delivered the annual address, in which, after reference to the forthcoming centenary of the Society in 1905, and the proposals of the Council in regard to its celebration, obituary notices of Fellows, whose names had been removed from the roll of the Society during the year, were given, including those of Sir William Guyer Hunter, Dr. J. W. Washbourn, Professor Virchow (which included an appreciation of his power as a teacher by Sir Felix Semon), and Sir George Gabriel Stokes.

Votes of thanks were passed to the President for his address, and to the retiring members of Council.

CLINICAL SOCIETY OF LONDON.

Howard Marsh, F.R.C.S., President, in the Chair.

Friday, February 27th, 1903.

Volkmann's Contracture.

Dr. L. S. Dudgeon exhibited three children, aged 5, 8, and 9 years respectively, all of whom had at different times suffered serious injury to the arm, for the treatment of which splints had been employed. One for fracture of the humerus near the elbow wore plaster splints for four days, though at the end of one day the fingers were swollen, cyanosed, and cold. When the splints were taken off there was a large pressure sore, and the hand and fingers were in the typical position. After two years of treatment by passive movements, daily massage, and faradism, thrice weekly, there was very slight improvement; the forearm was shortened and strongly pronated, and the position of the hand and fingers was still quite typical. In each of the two other cases where there had been injury to the forearm, after ineffectual treatment by electricity and massage, Mr. Clutton had excised ¾ in. of both radius and ulna, and wired the ends, and great improvement had resulted.

Mr. Bowlby drew attention to the shortness of the period—only twenty-four hours—during which the splints in one case had been applied before the symptoms of contracture were manifest; and mentioned a case in which the same result had occurred after the application of Esmarch's bandage for only an hour and a-half.

Dislocation of the Long Tendon of the Biceps Flexor Cubiti.

Mr. H. Betham Robinson showed a man, aged 27, who had had the head of his left humerus excised by the late Mr. Anderson for recurrent dislocation. Six months ago he fractured his right clavicle which united rapidly. In January last he fell and struck the right shoulder, and was subsequently unable to bring the arm to his side, though the ability to do this varied on different days. The humerus was abducted, and the head of the bone was felt in the axilla; but by fixing the scapula, and bringing the elbow forward (thus relaxing the biceps), and rotating outwards, the malposition could be easily rectified; and the reverse could be brought about by abducting the bone. There was apparently abnormal laxity of the joint capsule, and increased play of the tendon in its groove; and in abduction with inward rotation the tendon appeared to slip over the great tuberosity.

Mr. Gould thought the abnormality might be due to a hypertrophied synovial fringe.

The President said that when dislocation of the long tendon of the biceps occurred it usually slipped inwards and not outwards.

Mr. Robinson, in reply, thought the joint might be explored, and possibly the long tendon removed.

Varicose Internal Saphena Vein in a Child.

Mr. T. H. Kellock exhibited a healthy girl, aged 7, in whom for a year past this condition had been noticed in the right saphena vein. There was slight varicosity in other parts of the same leg. Nothing abnormal could be detected in the abdomen or heart; and the varicosity had caused no pain or inconvenience.

After some remarks from Mr. WALLIS,

Mr. GOULD described some cases of varicocele he had seen in young boys. The case gave support to the view that varicosity was not due to venous obstruction, but rather to over-development of the venous tissue, as in venous naevus.

Mr. CLUTTON remarked that the affected limb was slightly longer, and the foot somewhat bigger than its fellow. He suggested, therefore, that it was a case of giantism in a minor degree.

Mr. KELLOCK said the limb was certainly about a quarter of an inch longer than the other, but there was no sign of lymphatic obstruction. He proposed to remove a part of the vein.

ACUTE LYMPHATIC LEUKAEMIA.

Dr. W. L. ASCHERSON and Dr. H. D. ROLLESTON exhibited a girl, aged 7, who was in good health previous to the present illness, which had come on somewhat rapidly. She had debility, pallor, shortness of breath, temperature 102.8°, and enlarged spleen. The following was the condition of the blood:

Red blood-corpuscles: Per c.mm. 2,320 000; some poikilocytosis and irregularity in size of the individual corpuscles. One normoblast seen in a stained film. Haemoglobin: 30 per cent. Leucocytes: Total per c.mm. 60,000, of which polymorphonuclear numbered 3.3 per cent., hyaline leucocytes 1.8 per cent., lymphocytes 95 per cent. No other forms were detected. The lymphocytes were for the most part large; showed characteristic fraying of the edges. In some cases budding and great irregularity in shape. Many particles (free in the blood) of lymphocytic protoplasm.

Dr. ROSE BRADFORD questioned if it should be considered an acute case; there was no marked stomatitis or evidence of grave illness. Possibly it was a case of some standing, in which the symptoms had suddenly become more prominent.

Dr. ROLLESTON agreed with this criticism, as the symptoms had markedly lessened during a week's treatment. All cases of acute lymphatic leukaemia, however, were not exactly of the same type.

SYRINGOMYELIA WITH DISSOCIATIVE ANAESTHESIA, TROPHIC JOINTS, MUSCULAR ATROPHY, AND EXAGGERATED KNEE-JERKS.

Dr. A. E. RUSSELL exhibited a man, aged 50, who presented these symptoms.

Mr. BOWLBY referred to a case exhibited the previous session, in which the *x* rays had discovered disease of bone in the joints similar to that in Charcot's disease.

Dr. RUSSELL, in reply, said that a radiograph had showed that the whole of the carpal bones were indistinct. After going to work the patient's shoulder had become distended, but painless; but after resting one week the swelling had subsided.

CEREBRO-SPINAL MENINGITIS, AND OPTIC NEURITIS, WITH COMPLETE LOSS OF SIGHT, FOLLOWED BY PARTIAL RECOVERY OF VISION OF UNUSUAL CHARACTER.

Dr. W. PASTEUR exhibited a woman, aged 22, in whom the loss of sight was apparently due to pressure on the optic nerves. She could locate the ward windows correctly, and see the electric light, as readily as a more feebly-illumined object, but that perception was only momentary, and immediately lost unless the light was moved, whereas her perception of the hand gained in distinctness as she continued to look at it.

Dr. R. BRADFORD referred to a patient of Mr. Tweedy, who could not distinguish between light and dark, though he could distinguish form. He thought this special defect had been described by some German observers.

OTHER CASES.

The following cases were also exhibited:

Mr. RAYMOND JOHNSON showed a boy, aged 6, with a webbed arm, the anterior fold of the right axilla being prolonged downwards from the inner side of the elbow to the chest at the level of the third costal cartilage. Further, the four inner digits of the corresponding hand were webbed.—Dr. H. BATTY SHAW showed a man, aged 46, and his son, aged 21, both suffering from Graves's disease. The son had had chyluria for nearly 5 years antecedent to the onset of Graves's disease. The chyluria had disappeared nearly two years ago.—Sir HUGH BEEVOR showed skiagraphs of a case of pneumothorax, which demonstrated the absence of lung from the lower portion of the chest on the affected side; the lung, in fact, was suspended at its root "in mid-air" in the chest.

BATH AND BRISTOL BRANCH OF THE BRITISH MEDICAL ASSOCIATION.—The fourth ordinary meeting of the session was held at Bath on February 25th, Dr. H. WALDO, President, in the chair.—Dr. E. W. HEY GROVES showed a specimen of diffuse carcinoma of the stomach (microscopic slides); and remarks were made upon it by Dr. SHINGLETON SMITH, Mr. PAUL BUSH, and Dr. PARKER.—Dr. CHARLES BEGG read a paper on climates for invalids and convalescents; and in the discussion which ensued Dr. WALKER DUNBAR, Dr. PARKER, Dr. SHINGLETON SMITH, and Dr. G. C. TAYLER joined.—Dr. J. W. MALIM read a paper on lichen planus and showed a case, and observations were made about it by Dr. SHINGLETON SMITH, Dr. PARKER, Dr. WILLS, Dr. DUNBAR, Dr. CAVE, and the PRESIDENT.—Dr. PRESTON KING read a paper on missing links in joint disease. The discussion, which was initiated by Dr. SHINGLETON SMITH, was maintained by Dr. WALKER DUNBAR, Dr. PARKER, and the PRESIDENT.—Mr. W. M. BEAUMONT showed a portable form of sterilizer.

PATHOLOGICAL SOCIETY OF LONDON.

Professor W. D. HALLIBURTON, F.R.S., Vice-President, in the Chair.

Tuesday, March 3rd, 1903.

THE EXCRETION OF SODIUM AND POTASSIUM IN RENAL DISEASE.

DR. W. P. HERRINGHAM read a paper on the excretion of sodium and potassium in cases of renal disease. In experiments on the toxicity of urine when injected into the blood of animals, an account of which was given to the Society three years ago, he had been led to disbelieve Bouchard's explanation, and to conclude with Seltz and Ritter, Astachewsky, and others, that all the symptoms seen in rabbits might be accounted for by the potassium salts held in solution. There was no necessary connexion between the toxicity of urine and uraemia. Indeed, it seemed to him probable that uraemia was not due to the retention of any normal product but to something abnormal. Nevertheless, he had thought it advisable to examine the excretion of sodium and potassium in renal disease to see if it varied from the standard of health. The standard of health was not, however, very certain, but varied within considerable limits. He had expected that if any marked change occurred in cases of nephritis it would be in the excretion of potassium. He found on the contrary that the great variation was on the side of sodium. In cases which died there was found a great, in some cases a complete, retention of sodium. He had made sixteen analyses in 11 cases of chronic interstitial nephritis. Of these 6 were fatal. In every one of these the excretion was *nil* or very small. It was not so in any of the 5 cases which did not die. He had made twenty analyses in 9 cases of diffuse or parenchymatous nephritis. Of these 2 were fatal. Both showed complete absence of sodium from the urine on one or more days. None of the 7 cases which recovered exhibited this. Thinking it might be due to diet, or that the sodium might be passed in the faeces, he had in one case of interstitial, and in one case of parenchymatous nephritis, analysed diet, urine, and faeces for a series of days. These were included in the numbers given above. A man, aged 47, who died of chronic interstitial nephritis with a dilated, hypertrophied, and fibrous heart, took during the last four days of life food containing about 10.2 gr. potassium, 6 gr. sodium, and excreted over 13 gr. potassium, but no sodium at all. A girl, aged 17, the subject of severe parenchymatous nephritis, took during eight days food containing 13 gr. potassium, 5 gr. sodium, and excreted 13 gr. potassium (so close a correspondence was accidental and beyond the limits of accuracy attainable in such an investigation) and 2.4 gr. sodium. On three days she excreted no sodium whatever by the urine. She did not die till thirty days after the end of the experiment. A man, aged 38, recovering from pleurisy, was used as a control. In eleven days he took food containing 23.9 gr. potassium, 9.3 gr. sodium, and excreted 20.9 gr. potassium, and 10.1 gr. sodium. The sodium was wholly excreted by the urine, the faeces containing none. That in renal disease the kidney lost its rapid power of accommodation to change of diet had been shown by v. Noorden and his pupils. This did not, however, apply in the present cases where the diet had been the same for a long time before the experiments. These results were very remarkable, and if the absence of sodium was proved by further researches to be really a mark of fatal cases, the analysis would be of importance in prognosis. Sodium retention was not, however, peculiar to Bright's disease. Salkowsky had already shown it in several acute fevers. Dr. Herringham also found it in two cases of ascites, repeatedly tapped to large amounts. In one of them there was no sign whatever of kidney disease, but the other was a doubtful case. The latter had left the hospital, and could not be traced. The former was still an in-patient. The retention could not be supposed to be due to renal

impotence, seeing that potassium was excreted freely. It must be caused by some need of sodium within the organism. In the case of a large ascitic effusion, yielding roughly 20 pints every fortnight of a fluid containing about 0·3 per cent. of sodium, the need was obvious. But this did not seem to apply to cases of interstitial nephritis which had little or no oedema. The author owed special thanks to Dr. Kennedy Orton and to Dr. Hurtley, who had invented and elaborated the analytical process used, and to Dr. Hurtley for his co-operation, without which the analyses, which were very long and laborious, could not have been performed.

In answer to the Vice-President, the speaker stated that the diminution in sodium could not be related to uraemic poisoning, as the cases did not die of uraemia.

Dr. G. C. Garrat observed that diminution of chlorine excreted in various diseases was an old observation (Prout 1827), and this probably meant diminished sodium excretion, the chlorine being combined with sodium. Certain French observers had found an increased amount of sodium chloride in the muscles and brain in cases where its excretion was lessened. Of the two views that the retained sodium neutralized acid, and that it was related to altered osmosis, the speaker inclined to the second. In renal disease the osmotic tension of the blood was increased, and the retention of the sodium seemed adapted to balance this. Bouchard had found good results follow the administration of sodium chloride.

Dr. R. Hutchison inquired whether vomiting was present in Dr. Herringham's cases, or excessive sweating, as these would reduce the amount of sodium chloride. If retained the sodium would remain in the tissues, and he considered the osmotic view the most likely to be true.

Dr. Herringham, in reply, had considered the question of osmosis, but the difficulty was that in the cases of interstitial nephritis on which the observations had been made, there was no oedema. No vomiting or excessive sweating had been observed. The diminished excretion was not confined to cases of renal disease.

Ehrlich's Dimethyl (*p*) Amido-benzaldehyde Reaction.

Mr. H. W. Armit read a paper on the above, which did not run parallel with the diazo-reaction. The phenomenon consisted in the appearance of a red colour in the urine resulting from the combination of the substance named with a body of unknown composition. In its full degree it was of some importance; slight grades of coloration had no significance. The speaker had applied the test in a great variety of diseases. His conclusion was that it indicated tissue destruction, and that this was mostly due to toxaemic conditions such as those met with in pneumonia and endocarditis. If it arose in other diseases it was when such were complicated with infective processes. A marked positive reaction was of grave prognostic significance, though not necessarily fatal. The unknown body occurred, also, in small quantity in other secretions than the urine, and could be obtained, moreover, in the cartilages of the body. He did not hold, with certain authors, that the substance was urobilin. (In this Dr. Garrod agreed.) In answer to Dr. Horton-Smith, he said the reaction was marked in the later stages of pulmonary tuberculosis, but the gravity in such circumstances was as obvious clinically as by this reaction of the urine.

The Relation between Uric Acid Excretion and the Destruction of Leucocytes.

Dr. O. K. Williamson read a paper on this subject. Previous workers had arrived at divergent conclusions. Horbaczewski showed the fact experimentally, whilst of clinical observations, those of Kühuan alone carried conviction. Isolated observations of uric acid excretion and of the white blood count at a corresponding time were of less value than continuous observations extending over a considerable period of time showing the corresponding variations. The observations recorded were therefore carried out on the latter lines. The object aimed at was to determine whether an increased destruction as opposed to a diminished production of the white blood corpuscles was followed by an increase in the excretion of uric acid. This increased destruction would seem to be taking place first when a fall in the white corpuscle curve was followed by a rise in the amount of phosphoric acid excreted. Secondly, a diminution in absolute number of the older forms of the white corpuscles, the young cells not correspondingly diminishing, would also point to an increase in destruction. If, however, the young cells diminished markedly in number this would indicate a diminished production. In order, then, to determine the times of increased destruction, daily estimations of the amount of phosphoric acid excreted in the urine were made, and corresponding to the daily white blood counts, differential counts from stained films. Eleven patients, most of them suffering from pulmonary tuberculosis, were chosen for the observations which were recorded in tables and curves. It was found from an examination of these: (1) That in nearly every case in which a rise of the phosphoric acid curve followed a fall in the white corpuscle curve this rise corresponded with a rise in the uric acid curve; (2) that in the majority of cases confirmatory evidence of increased destruction could be obtained from a study of the differential counts; (3) that in those cases in which there were sudden and marked variations in the white corpuscle curve there were similar variations in the curves of uric and phosphoric acid; (4) that in the case of children the amounts of uric acid and phosphoric acid excreted were relatively greater than in adults, and that the rises in the curves of phosphoric and uric acid followed more rapidly on the fall of the white corpuscle curve than in the case of adults.

The Vice-President remarked that the relation of uric acid formation and nuclein disintegration was fairly well proved, the nuclein either being taken as food, or being furnished by the body cells. He pointed out, however, that too much stress appeared to him to be laid upon the part taken by the leucocytes. Were all the blood leucocytes collected into one mass the resulting organ would be not larger than a marble, and the daily total destruction of such a volume would not furnish the amount of uric acid excreted in normal urine. The blood was only a sample of tissue, and showed disintegration that affected organs of much larger bulk, the nuclein of all of which doubtless underwent similar change.

Dr. D'Este Emery asked why the increased excretion of phosphorus should be held a necessary part of the proof of increased nuclein disintegration; the phosphorus might be again used up, and

Dr. R. Hutchison observed that the converse condition of leucopenia should be accompanied with diminished excretion of uric acid.

LIVERPOOL MEDICAL INSTITUTION.

Rushton Parker, B.S., F.R.C.S., President, in the Chair.

Thursday, February 12th, 1903.

Congenital Glaucoma.

Mr. Edgar Stevenson showed a case of congenital glaucoma in a child aged 5, and described in detail the etiology and pathology of the condition. The patient presented all the typical appearances, the eyes being uniformly enlarged, with the corneae 18 mm. in horizontal diameter. The optic discs were cupped and atrophic, and the visual fields much contracted. Out of 65,000 patients seen in recent years at the Eye and Ear Infirmary, the disease had appeared four times.

Dr. Grossmann and Mr. E. G. Lee commented upon the case.

Treatment of Adherent Soft Palate.

Dr. J. E. McDougall showed a case of adherent soft palate, which had been successfully treated by a new method. A thin plate of metal was attached to the patient's artificial tooth plate, and to the extremity thereof a tube was soldered. The tube was passed through an opening in the soft palate, made to admit its passage. Healing had taken place, and the edges had become covered with epithelium. The patient removed and replaced the arrangement as readily as she did the ordinary tooth plate before any addition was made to it. When no tooth plate was worn, a carrier for the tube could be fixed to the teeth. The apparatus gave no trouble, and the result was most satisfactory. Nose breathing was carried on comfortably, the sense of smell had returned, and that of taste had regained its full value.

Dr. Philip Nelson spoke.

Chorio-epithelioma Malignum.

Mr. Hawkins-Ambler read a note on this subject. He thought Marchand's work had proved the origin of the growth from the whole of the epithelial covering of the chorionic villi. Mr. Hawkins-Ambler gave in detail the history of a woman, aged 39, the mother of twelve children, who had suffered from the disease. The last of three abortions occurred in May, 1900, and was accompanied by severe haemorrhage. The uterus was curetted and packed. Six weeks later furious bleeding occurred; the uterus was again packed, and subsequently thoroughly scraped with a sharp spoon. The uterus was

smooth, and measured 3 in. On June 17th, 1902, a uterine swelling was present, extending to within 1½ in. of the umbilicus. There was a steady, chocolate-coloured discharge, and the patient was anaemic and breathless. No radical treatment was possible. No regular necropsy was obtained, and no metastatic growths were found. The case was interesting owing to the long interval since the last pregnancy, and the thorough curettage then done. Packing with gauze and adrenalin solution had been less effective than with gauze soaked with hamamelis extract.

COLOTOMY AND COLECTOMY.

Mr. F. T. PAUL read a short paper on colotomy and colectomy. He considered the former operation was becoming more popular, chiefly owing to the better artificial anus now generally obtained. In regard to the latter, he still strongly advocated bringing the ends of the bowel out with subsequent restoration of continuity, in preference to end-to-end union. The latter was more satisfactory to the surgeon when his patient recovered, but the risk was much greater. Patients illustrating the results of the operations were shown, and also the plug and belt used by Mr. Paul for colotomy cases.

The PRESIDENT, Sir WM. BANKS, Drs. ALEXANDER and BRIGGS and HEATHERLEY, Messrs. MONSARRAT and HAWKINS-AMBLER spoke; and Mr. PAUL replied.

MIDLAND MEDICAL SOCIETY.—At a meeting held on February 4th, Dr. LANGLEY BROWNE, President, in the chair, Mr. W. EDWARD BENNETT showed a specimen of perforated typhoid ulcer, which had been operated upon by him.

A married woman, aged 23, was admitted into the workhouse infirmary on August 12th, 1902, being then in the second week of the disease. She progressed favourably until September 8th, when a relapse occurred, the symptoms indicating perforation. On the 10th, at noon, some fourteen hours after perforation was supposed to have occurred, the abdomen was opened, and a perforation about four inches from the ileo-caecal valve was found and stitched up. The perforation was the size of a small pea, the gut in its neighbourhood being united to its margin by recent adhesions, and thus much extravasation of the contents of the bowel had been prevented. The patient progressed very favourably until the fifth day after the operation, when a severe haemorrhage from the bowel resulted in death. At the necropsy two other large ulcers were found in the ileum, below the seat of perforation, one of which had apparently eroded a large vessel in its immediate neighbourhood. There was no peritonitis.

Mr. Bennett also showed a specimen of perforated gastric ulcer from a girl, aged 18 years, who was admitted to the Homoeopathic Hospital, under Dr. Craig, on January 2nd, 1903, with anaemia and symptoms of gastric ulcer, dating back for twelve weeks.

The pain and vomiting had been severe, but only on one occasion—the week before admission—had any blood been noticed in the vomited matter. On the morning of the 4th, when being raised in bed, she had very severe pain at the pit of the stomach and in the neck. She became collapsed, and although the pain in the abdomen did not trouble her, the pain in the neck on both sides, just over the clavicles, persisted. Mr. Bennett was asked to see her at 11 p.m. the same evening, and found her collapsed, with a rigid abdomen, legs drawn up, and all the classical signs of a perforated intestine. He opened her abdomen at midnight, sixteen hours after the perforation, and found the abdomen full of gastric contents and a slit-like perforation at the pyloric end of the stomach, just below the junction of the gastro-hepatic omentum and the lesser curvature of the organ. This was stitched up, and an opening was made above the pubes. The abdomen was irrigated; a tube was left in the Douglas pouch. She died at 8 a.m. on the 5th. At the necropsy a large ulcer was found on the posterior wall and lesser curvature of the organ, the perforation having occurred at its upper and anterior margin. There was general peritonitis.

Mr. LEEDHAM-GREEN showed a patient from whom he had removed a Gasserian ganglion by a modification of Virausi's method.—Mr. JAMESON EVANS read a paper on the occurrence of neuro-retinitis in anaemia.

BORDER COUNTIES BRANCH.—At a meeting held at Penrith on February 27th, Dr. R. MACLAREN (Carlisle) in the chair, Dr. D. C. EDINGTON (Penrith) read notes of three cases of tumour of the brain which had recently come under his notice: (1) A man of 46, in whom the earliest symptom noticed was a sudden attack of twitching in his left leg, then his left arm and hand and left side of face. He recovered in a few hours; but other attacks followed, accompanied by vertigo, necessitating his leaving his employment as engine driver. Eight years later he was found to be hemiplegic, had lost memory; double choked disc, but no other ocular defect. Put upon specific treatment, he very rapidly improved. In two months he was going about and his mind was clear. He was shown to the meeting, and appeared smart and intelligent, showing no special features; this after one year of treatment. (2) A boy of 16 was shown, whose first complaint had been giddiness: his gait became reeling; the temperature rose at night; there was headache and occasional vomiting; he fell backwards the moment he shut his eyes. Double optic neuritis was present: the reflexes were all normal. On treating on general constitutional lines, his improvement was marred, though there was still a tendency to fall when the eyes were shut, and there was also a trace of the optic neuritis in the left eye. (3) A boy of 8 showed nothing more than paresis of the right palate. This was at first followed in a few weeks by exophthalmos, squint and double optic neuritis. Six weeks later all the symptoms were much exaggerated, the voice was husky, and the speech sliding; deafness also supervened. The temperature began to rise and pulse to fail. Ultimately collapse occurred and he died, having at the time to all appearance a complete Bell's paralysis. The localization of the tumour in this case was difficult to decide positively, but was probably springing from either the bones or the dura mater at the base of the skull, and in all likelihood was sarcomatous in character. Dr. MACLAREN quoted a case which had presented very few and indefinite symptoms, and referred to the relative sizes of skull and brain in these cases.—Dr. G. R. LIVINGSTON described a case of rupture of the bladder in which a large opening occurred into the peritoneal cavity. The diagnosis was quite masked by the absence of any history of injury, and also by the fact that the patient was perfectly able to urinate, nor did the urine contain blood when examined. The patient suddenly collapsed a few hours after coming under treatment, and the nature of the injury was discussed *post mortem*. Drs. MAXWELL ROSS and MACLAREN mentioned cases.—Dr. C. W. DONALD (Carlisle) read a short paper upon the treatment of prolapsus uteri. He pointed out that it was of the utmost importance to preserve the obliquity of the passage and the strength of the abdominal and pelvic walls. If this could be satisfactorily carried out he believed there should be no necessity for ventrifixation or the injection of irritating fluids into the broad ligament. Dr. THOMSON (Penrith) referred to the necessity for immediate repair of the perineum, and mentioned cases in which he had performed ventrifixation with satisfactory results. Dr. MACLAREN pointed out the comparatively small number of cases requiring ultimate operation, and advocated more patience in the employment of less drastic measures.—Dr. ALTHAM (Penrith) gave an account of a case in which he had had to induce abortion at the fourth month. It was the fourth pregnancy, but owing to the patient's mental condition the operation was unavoidable. The placenta was difficult of removal, and indeed was difficult to find on account of the operator making the unpleasant discovery that the uterus was bicornuate, and the finger sometimes entered the one cavity and sometimes the other. The condition had apparently not been recognized in the previous labours, though they had been exceptionally painful and protracted.—Dr. MACLAREN related a case in which a patient of his had been found to have a double vagina—a condition quite unsuspected—on complaining of dyspareunia after many years of marriage. She had had one child, born alive, and in this case the labour had been induced on account of slight pelvic contraction.—Dr. D. G. P. THOMSON (Penrith) then gave notes of two cases in which large abdominal tumours had been present, causing great discomfort and rapid emaciation. They presented all the appearances of malignancy. Both were operated on, colotomy being performed, and in both cases the patients made uninterrupted recoveries, and were now to all intents and purposes in excellent health. Some discussion took place, in which the feeling seemed to be that there was a class of tumour whose character was ill-defined, but where operation was generally remarkably beneficial.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.—At a meeting held on February 12th, Mr. M. A. MESSITER in the chair, Mr. J. W. TAYLOR showed a specimen of fungating cancer of the cervix uteri, myoma of the body, and early pregnancy, all present in a single uterus, removed by vaginal hysterectomy from a married woman, aged 38. There had been a history of metrorrhagia for some months preceding operation, but no history definitely pointing to the pregnancy. Mr. Taylor also read a paper on "Recurrent Abortion, with special reference to that form due to deficient vitality of one or both parents, and often associated with some history of tuberculosis." He

briefly reviewed the literature of the subject, and dealt first with cases of recurrent abortion due to syphilis, to chronic appendicitis, to kidney disease, and to criminal causes. He then considered an important group designated by the title of his paper, presenting a table of twelve cases, contrasting the features of this group with those of the group due to syphilis, and showing the remarkable results obtained by hygienic, dietetic, and medicinal treatment.—Dr. SMALLWOOD SAVAGE, Dr. MILNER MOORE, Mr. A. FREER, Dr. MELSON, Dr. KIRBY, and Mr. HIGGINSON took part in the discussion: and Mr. TAYLOR replied.—Dr. S. H. PERRY read a paper on the Diseases common to Brassworkers. The following is a synopsis:—The history of the inquiry into brass poisoning: the processss of the manufacture: acute brass poisoning: chronic brass poisoning: an analysis of the brassworkers in 3,000 out-patients: the relative incidence of pulmonary tuberculosis in brassworkers and other patients: the cause of brass poisoning: want of evidence in favour of zinc: evidence that copper may give rise to a chronic poisoning: the acute attack not caused by either zinc or copper. Dr. MURRAY, Dr. KIRBY, and Dr. EDGINTON took part in the discussion; and Dr. Perry replied.

SOCIETY OF ANAESTHETISTS.—At a meeting on February 6th, Mr. WALTER TYRRELL, President, in the chair, Dr. BLUMFELD read a paper entitled The Relation of Anaesthetics to Shock. He was aware that exactly opposite opinions were held upon this point, some observers believing that the shock present after certain operations was certainly due to the anaesthetic and others that it was due entirely to the operative procedures, and would be much worse without the anaesthetic. There was also a difference of opinion with regard to shock and the depth of anaesthesia, some anaesthetists holding that shock was more commonly met with in light than in deep anaesthesia, while others held exactly contrary views. To avoid confusion, Dr. Blumfeld stated that in speaking of shock he also included collapse, for both were conditions of prostration in which failure of the circulation played a prominent part. Death from shock of the operation was much less frequent now than it was in the old days, partly because anaesthetics had abolished pain, which was an important factor in the causation of shock, and partly by protecting the central nervous system from receiving impressions of the serious damage being done to the tissues by the operation. Besides the well-known "bleeding," so to speak, of the patient into his splanchnic area during shock, there was also the general reflex paralysis affecting, besides all the other functions of the body, especially the normal interchange between the blood and tissues, which was characterized occasionally by patients suffering from shock not responding to such stimuli as strychnine and alcohol at the time of the exhibition of these remedies, but subsequently manifesting symptoms of overdose. Dr. Blumfeld was strongly of opinion that since both shock and deep chloroformization were characterized by marked fall in blood pressure, a deep degree of anaesthesia should as far as possible be avoided in operations upon patients already suffering from shock or likely so to suffer as a result of the operation. There was no evidence, however, to show that ether produced shock in the same way as chloroform, although it often gave rise to collapse after a prolonged administration of large doses in the kind of case referred to. The surgeon was apt to forget the immense importance of economizing time during which parts of the body, such as the bowels, for instance, were being subjected to manipulation, for the longer such procedures lasted the more easily was shock induced. The purely nervous element had also to be taken into consideration, and added greatly to the difficulty in determining the cause of shock. Dr. Blumfeld here quoted undoubted cases of shock from nervous influence. In discussing the paper, Mr. CURTISS said he had seen Caesarean section performed under local anaesthesia with no pain or trouble except when the vessels were caught in the clip forceps. Mrs. DICKINSON BERRY and Miss ALDRICH BLAKE said they had seen many operations for goitre performed under local anaesthesia without any symptom of shock. Mr. CROUCH thought shock was far more likely to supervene under light than under deep anaesthesia. Dr. LOW constantly observed that when the fear of the operation which caused symptoms of shock was removed by the administration of an anaesthetic the symptoms of shock disappeared; this was especially the case under ether. The PRESIDENT said that after an experience of twenty-five years there were cases where shock was produced under light anaesthesia and also cases where shock was more marked under profound anaesthesia, the fact being that they all had to use their judgement and treat each case on its own merits. Drs. COLLINGWOOD, BAKEWELL, NORTON, and PROBYN-WILLIAMS also spoke.—Dr. MAUGHAN reported a case of death following the administration of nitrous oxide gas. The patient was a young woman who was suffering from tonsillitis but in whom the constitutional symptoms were marked, and the pulse-rate out of all proportion to the physical signs. He administered gas as the patient would not allow him to incise the tonsil without an anaesthetic. She was placed in an easy chair in her night-dress with a prop between the teeth. Anaesthesia was quietly induced to the stage of loss of light reflex, two breaths of air having been given with the gas. At this point the facepiece was removed, but precisely at this moment the patient was observed to have stopped breathing. She was immediately placed on the floor with the forceps upon the tongue. Howard's method of artificial respiration was tried for about fifteen seconds, ammonia being held to the nostrils meanwhile, but no air entered. Dr. Maughan promptly performed laryngotracheotomy, when a full deep inspiration was taken, the lips and cheeks quickly returning to their normal colour. The corneal and conjunctival reflexes were, however, absent, and never returned. The radial pulse was small, quick, and barely perceptible: the respirations about 12 per minute, and so continued for about fifteen minutes, when the intervals began to enlarge, and the respirations to become shallow. The breathing became more and more irregular during the next ten minutes, when the patient died: the pulse during the last ten minutes of life becoming imperceptible at the wrist, although the heart sounds could be heard up to the last moment. The necropsy revealed nothing beyond extensive angina Ludovici and some oedema of the glottis. The mitral orifice of the heart was rather smaller than normal, but there was no evidence of structural damage either recent or remote. Dr. Maughan regretted that he had not used a local or a very light chloroform anaesthesia, but he thought that in a rapidly progressive disease of this kind affecting the respiratory organs no anaesthetic could be deemed harmless. Dr. PROBYN-WILLIAMS could not see that death was due to the gas, since the patient lived for nineteen minutes after the administration was stopped and the airway was rendered clear by the operation of tracheotomy. Dr. Low related a similar case in which he had been called upon to give chloroform. He was using the lightest possible degree of anaesthesia, but the patient got so bad that he stopped the administration, and the patient recovered sufficiently to be able to answer questions, only to die a few minutes later. If the patient had not spoken the death would have been attributed to the chloroform. The PRESIDENT agreed that this case could not be attributed solely to the anaesthetic, and there was no doubt that these acute cases of septic throat died very suddenly. He could not see what more Dr. Maughan could have done for his patient. He thought that probably the true explanation was that the patient died of heart failure due primarily to the septic infection, but hastened by the anaesthetic, the strain thrown upon the heart from the right-sided engorgement being just too much for it to cope with in its condition of septic poisoning, although such strain would have no effect on the same heart in a condition of health.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—At a meeting held on February 25th, Dr. J. H. STOWERS, President, in the chair, Dr. T. D. SAVILL showed a case of (?) tinea imbricata with a microscopic section of the affected skin. Dr. SAVILL and Mr. A. SHILLITOE exhibited photographs of typical cases of the disease.—Dr. P. S. ABRAHAM showed (1) a case, presenting a vesiculo-varioloform eruption with tendency to leave punctate scars. The disease was contracted in South Africa and was of twelve years' duration; (2) a case of ichthyosis in a baby; (3) a case of lupus erythematosus; (4) a case of tinea tonsurans in an elderly woman.—Dr. GRAHAM LITTLE showed (1) a case of pemphigus foliaceus (?); (2) a perforating ulcer of the foot in a man who showed no signs of locomotor ataxia; (3) a case of urticuria papulosa presenting a nearly universal eruption of flat, shining papules of fourteen days' duration (L. planus infantum): (4) a man suffering from seborrhoea with alopecia of the scalp and a ringed eruption of the limbs.—Mr. A. SHILLITOE showed (1) a case labelled tertiary roseola. The man contracted syphilis six years previously and was fully treated. In September, 1902, he developed small sores on the penis which had constantly recurred since and were still present in the form of herpetic blisters and small round abrasions. The roseola appeared in November. It was considered by some

members that this was a case of reinfection; (2) a case presenting syphilomata of the tongue and lip; (3) a recent case of syphilis in which the eruption on the neck tended to form very distinct hollow squares.—Dr. A. EDDOWES showed a case of vest rash and a section of a sebaceous cyst taken from the patient.

NORTH OF ENGLAND OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.—At a meeting held at the Medical Institution, Liverpool, on February 20th, Dr. J. E GEMMELL, President, in the chair, the following card specimens were shown:—Dr. W. E. FOTHERGILL: Hyperplasia of thyroid gland, from fetus in a case of eclampsia. Dr. E. T. DAVIES: A series of fibro-myomata of uterus. Professor A. M. PATERSON: Uterus from a dissecting-room subject, showing a utero-vaginal septum.—Dr. LLOYD ROBERTS (Manchester) showed an ovarian tumour which, with its contents, weiged 30 lb. It was removed from a woman, aged 60, who fifteen years previously had suffered from a fibroid polypus. After the removal of the latter, menorrhagia had persisted for some years. Clinically, there appeared to be both uterine fibroid and an ovarian cyst. Operation revealed a large ovarian tumour, containing 16 pints of brownish, grumous fluid. The more solid part of the tumour was simply a thickened part of the fibrous cyst wall. Dr. E. T. DAVIES (Liverpool) remarked that the case resembled that of a patient whose tumour was shown on the table. Dr. LLOYD ROBERTS, in reply to the PRESIDENT, said that no ascites was present.—Dr. W. E. FOTHERGILL (Manchester) recorded a case of hyperpyrexia associated with thrombosis of the vena cava inferior.

The patient was delivered by a midwife on March 21st, 1902. Fever set in and increased until removal to hospital on the fifth day. Improvement followed intrauterine douching at first, but a relapse occurred on the 31st, so the uterus was curetted, several pieces of placenta being removed. On April 6th the temperature reached 111.2°, but was reduced to 107° by hot sponging. Thrombosis of the right femoral vein was quickly followed by involvement of the left, and from that time onwards till death on May 14th there were no symptoms except increasing weakness, though the temperature continued high and remittent, with repeated rigors. There was no sign of suppuration or embolus in any other organ. The immediate cause of death was oedema of the lungs. On necropsy the uterus and other pelvic organs were normal; no sign of general or pelvic peritonitis; inferior vena cava and its tributaries filled with *ante-mortem* clot from the heart downwards.

The PRESIDENT inquired how long the temperature remained at 111.2°, and whether there was any oedema of the lower extremities. Dr. RABAGLIATI (Bradford) referred to cases in which temperatures of as much as 120° had been recorded, and held that mere elevation was not so important as variability of temperature. He suggested that the thrombosis might have been due to some general condition, for example, hyperinosis of blood. Dr. GLYNN WHITTLE (Liverpool) asked if there was any spasm of the uterine muscle. Dr. E. T. DAVIES (Liverpool) denounced the use of all curettes, and of sharp ones in particular, in puerperal conditions. Dr. LLOYD ROBERTS (Manchester) considered the intrauterine condition responsible for all the trouble. Dr. FOTHERGILL, in reply, said that oedema was absent, and the only symptom that might have indicated thrombosis was violent lumbar pain. The finger had been employed before the use of the curette, and no spasm was found. He was inclined to regard the curetting as the cause of the thrombosis.—Dr. J. B. HELLIER (Leeds) related a case of double pregnancy in a double uterus.

The patient, aged 34, had had three normal labours previously. During the fourth pregnancy the uterus was larger than usual. After a normal labour a female child was born, head first, its placenta following. The presence of a second child was discovered, but the medical attendant on introducing his hand found the uterus empty. Dr. Hellier found a second os lying high up, in front of and to the left of the other, and delivered a male child by podalic version. The uterus was bicornuate, a fairly thick septum dividing the two cavities, and there were two separate ora opening into a single vagina.

Dr. BRIGGS (Liverpool) had seen three cases of the kind, and he confirmed Dr. Hellier's account of the relative positions of the two ora. The condition should be thoroughly investigated under anaesthesia. Dr. LLOYD ROBERTS also spoke; and Dr. HELLIER replied.—Dr. T. ARTHUR HELME (Manchester) read a short communication on dilatation of the cervix uteri in eclampsia of pregnancy by means of Bossi's dilator. He found that this dilator could effect full dilatation in twenty minutes, another ten being required for complete delivery with forceps. He had been surprised by the ease and comfort with which the instrument could be used without any laceration of the cervix, and thought this means afforded a marked contrast to manual dilatation and its frequently accompanying discomfort and cramp. He propounded two questions for considerations: (1) The advisability of ending pregnancy when once convulsions had occurred; if the existence of pregnancy was a vital factor in the production of the eclamptic state was not the termination of that pregnancy a vital factor in treatment? (2) The wisdom of administering large doses of morphine by the hypodermic method. The drug was given in acute and recent forms of nephritis, and withheld in more chronic forms. Did not the same apply to eclampsia? In conclusion the author referred to the collective investigation just commenced by the Clinical Society of Manchester on the subject of eclampsia. The President held that there was undoubted shock associated with eclampsia, and asked whether there was not much more shock when the cervix was dilated rapidly. Dr. RUMBOLL (Leeds) had used Bossi's dilator in a case at the sixth month, and he preferred it to fingers and Barnes's bags. It was easily used and did not tear the cervix. Drs. A. STOOKES and GLYNN WHITTLE (Liverpool) also spoke, and Dr. HELME replied.

ULSTER MEDICAL SOCIETY.—At a meeting held on February 19th, Dr. AGNEW (Lurgan), Vice-President, in the chair, Dr. R. L. BELL was elected a Fellow of the Society.—Dr. H. L. MCKISACK showed a case of spastic paraplegia probably due to primary lateral sclerosis.—Dr. JOHN MCCAW read a paper on a case of paroxysmal haemoglobinuria in a child, and showed the patient. The disease was probably a manifestation of hereditary syphilis.—Dr. SINGLETON DARLING (Lurgan) and Dr. MCKISACK read notes of a case of pericardial effusion.—Dr. THOMAS HOUSTON (Secretary) showed a mounted specimen of the head of taenia solium, and the body of taenia mediocanellata, 21 ft. in length, lent by Sir William Whitla. He also showed some bronchial casts from a case of plastic bronchitis under the care of Dr. T. R. Davison.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—At a meeting held on February 17th, Dr. CAMPBELL, President, in the chair, Dr. F. W. EURICH discussed the treatment of epilepsy. He dealt chiefly with the theory that there was in epilepsy an excessive storage of sodium chloride in the body. He related a number of cases which had been very successfully treated by comparative privation of salt and its replacement as an article of diet by sodium bromide. About ½ oz. of sodium bromide per week was thus taken, and no more bromides were given. In one case intermission of the fits had been procured when the patient began taking salt again freely. The fits at once recommenced, but were stopped again when the ingestion of salt was discontinued. Trinitrin in occasional doses was useful in relieving headache. The PRESIDENT remarked on the connexion between migraine and epilepsy, and recommended privation of salt in the treatment of the former disease. He suggested that in some cases of epilepsy at least the bromides acted by displacing chlorides in the blood, and thought that privation of chlorides might be equally efficacious without the administration of bromides. Drs. ROBINSON, RHODES, BAMPTON, and METCALFE made remarks, and Dr. EURICH replied.—Dr. R. E. LANKESTER read a paper on the administration of anaesthetics with some remarks on somnoform. After discussing the relative safety of ether and chloroform the conclusion was stated that ether was undoubtedly the safer. The preliminary administration of nitrous oxide was strongly advocated in ether cases. In prolonged operations the sequence of nitrous oxide, ether, and chloroform was advocated, the change to chloroform not to be made during struggling or during deep ether anaesthesia. Ether was quite suitable for children of six years and upwards. If nitrous oxide were not available as a prelude to ether a few whiffs of chloroform or mixture of ether and choroform might be given till the patient was partly unconscious. Oxygen might be an important adjuvant to ether in cases of spasm such as might occur in alcoholic or asthmatic patients, also in patients who were profoundly collapsed as in cases of severe injury and strangulated hernia. Mixtures of ether and chloroform were of value in old persons, very fat subjects, and those with severe emphysema and bronchitis. In patients with valvular disease of the heart, not well compensated, or in those with fatty hearts, they were borne better than any other form of anaesthetic. These mixtures were wasteful and had many of the dangers of chloroform. Chloroform was the only practicable anaesthetic in operations about the face and mouth, and in infancy. In cases of renal

disease and in patients with atheromatous arteries it was pre-preferable to ether. It was also taken safely by parturient women. It should be given without closed apparatus of any kind, so that there might be no doubt about the admission of plenty of air. Somnoform was a mixture of ethyl chloride 60 parts, methyl chloride 35 parts, ethyl bromide 5 parts. The components had been arrived at by physiological experiments. The advantages claimed were: No cumbersome apparatus was required; its action was very rapid; return to consciousness was rapid; it was very safe. It was administered by spraying it into a mask which fitted closely on the face. The colour remained good; the respirations were regular and deep, and became sonorous when the patient was under. The pulse was slightly quickened and the tension increased. There was slight rigidity, which passed off as the anaesthetic was pushed; the conjunctival reflex was lost, and the pupils became dilated and fixed. When this point was reached the mask was removed, as the patient was fully under. The period of anaesthesia was a good minute and a-half. It was available for cases requiring a rather longer period of anaesthesia than could be obtained by gas, and where otherwise chloroform or ether would be used. The patient was usually able to walk away a few minutes after the administration. There was not usually any vomiting. The paper was discussed by several members, and Dr. LANKESTER replied.

Specimens were shown by Mr. C. F. M. ALTHORP, Dr MOFFATT, Dr. CROWLEY, Dr. JASON WOOD, Mr. F. MEADE, and Dr. WM. CRAIG.

REVIEWS.

OPHTHALMOLOGY.

PROFESSOR LENHOSSEK'S description of the development of the vitreous body of the eye[1] differs essentially from the majority of the accounts which have hitherto been published, but it is obviously based upon a most careful series of observations, and it is well worthy of the serious consideration of all who are interested in the development and the anatomy of the organ of vision. The descriptions of the specimens are extremely good, the accompanying illustrations are beautifully executed, and although the conclusions at which Professor Lenhossek arrives are opposed to long-established beliefs, there seems to be no reason to doubt their accuracy. For many years the development of the vitreous from mesoderm cells which entered the optic cup through the choroidal fissure was accepted as an established fact; but in 1900 the observations of Rabl, and at a later period, those of Tornatola pointed to the conclusion that the vitreous body was more essentially ectodermal than mesodermal in nature, and that it was formed from the cells of the outer layer of the primitive retina. Now Professor Lenhossek states that the fibrillar portion of the vitreous is undoubtedly ectodermal in origin, being formed by outgrowths from the cells of the lens, and not from the cells of the inner layer of the retina. Moreover, he asserts that, after their formation, the fibrils of the vitreous become separated from the lens and closely attached to the retina which produces the hyaloid membrane. The cells of the vitreous are, however, of mesodermal nature, and they are derived from the cells which lie in the early stages of development between the lens and the optic cup. Fibrils exactly similar to those of the vitreous are also formed from the anterior surface of the lens, and for a time they occupy all the interval between the lens and the surface ectoderm, but by the sixteenth day in rabbit embryos they entirely disappear, and are replaced by mesoderm. The material used by Professor Lenhossek in the investigation which has led him to such interesting conclusions was a series of rabbit embryos from ten to sixteen days old, and a few human, cat, and calf embryos. From a pathological point of view, perhaps one of the most interesting of the results of the investigations of this material is the discovery that the fibrils formed as outgrowths from ectodermal cells can increase and divide after being separated from their parent cells, the significance of this capability being associated with the fact that the sustentacular tissue of the central nervous system and the retina also consists of fibrils which are outgrowths of ectodermal cells.

A collection of papers read before the Ophthalmological Section of the American Medical Association at Saratoga (N.Y.) in June, 1902, has been published in a separate volume with the title *Uveitis*.[2] The subject is treated from different standpoints. Thus, Dr. de Schweinitz discusses the symptomology and etiology of certain types, describes cases, and gives the fields of vision, and in some the appearance of the eyes themselves. Hiram Woods analyses 37 cases, and gives diagrams of the fields of vision. Friedenwald discusses the diagnostic value of keratitis punctata interna, and describes numerous cases, with drawings of the condition met with. Diseases of the uveal tract arising from injuries, syphilis, diabetes, and tubercle are treated by Hansell, while an interesting paper from a pathological standpoint is contributed by Wilder, who gives also several excellent ophthalmoscopic drawings. Dr. Woodruff gives the technique of the treatment of the disease with pilocarpin, and describes illustrative cases, while Marple discusses the treatment from a general standpoint. The volume forms an excellent synopsis of present knowledge of the disease, and is the most complete treatise on the subject in existence, while the discussion at the end is interesting and instructive.

Major Herbert, of the Indian Medical Staff, has published a book on *The Practical Details of Cataract Extraction*[3], which contains some original observations. Major Herbert is so well known as an energetic ophthalmic surgeon by the numerous papers of great value he has contributed to the Ophthalmological Society, that it is hardly necessary to say that the experience he has had is very large; this book is written, he tells us, as the result of between 2,000 and 3,000 cataract operations performed since 1895. The first chapter is devoted to the study of lenses, both clinically and pathologically, and to general and local considerations regarding the indications and contra-indications for extraction. A full and detailed account of the ordinary operation of extraction is given; the section with a conjunctival flap is the one he recommends, and he usually inclines to iridectomy. Alternative operations and technique and the after complications are described, and the last chapter is given up to the consideration of complicated and soft cataracts, and to the removal of lenses in high myopia. The book is very complete, and is the work of one who, from large practice, is well able to weigh the considerations of operative procedures. We can thoroughly recommend it to all ophthalmic surgeons.

A pamphlet on the influence of *Age and Study on Eyesight in General and Myopia in Particular*[4] has recently been published by Dr. S. V. RAMASWAMY IYENGAR, of Bangalore. His statistics have been drawn from patients belonging to different tribes, and their ages varied from 4 to 30 years. The method of examination is accurately described, and for the most part consists of the use of Snellen's types, the distant vision being tested at 20 ft. The chief remarks are directed to the development of myopia, and from the study of these cases he has come to the conclusion that the vision of school children is constantly declining, owing to the fact that the eye is unequal to the strain to which it is subjected. Out of 486 boys who had never used the eyes for reading, and who had lived an out-of-door life, the percentage of abnormal vision was 18, while in the first grade colleges it was 82. Hypermetropia became less and less frequent as age advanced, and in the highest classes it was found in a very low percentage. In order to counteract this growing evil, he recommends that all children should be placed in a good light, and that the habit of looking too closely into books should be avoided, and that the light must be carefully arranged so that the children get the full benefit of it. Desks should be carefully adjusted to the size of the children and backs to the seats are essential. All books should be well printed, and too much writing is to be deprecated. Physical exercises must be encouraged, such as tennis, shooting, and flag signalling. School work should not be commenced before 6 years of age, and it should not be pushed at first. The treatment is divided into (1) hygienic, (2) optical, and (3) therapeutic. Children rarely require glasses for near work with less than 2 D of myopia. If the error is above 4 D the glasses should be worn constantly when

[1] *Die Entwicklung des Glaskörpers.* By Dr. M. v. Lenhossek, Professor der Anatomie an der Universität Budapest. Leipzig: F. C. W. Vogel, 1903. (Demy 4to pp. 106, 2 plates, 19 figs. M 12.)

[2] *Uveitis.* Symposium of papers read before the Ophthalmological Section of the American Medical Association at the Annual Meeting at Saratoga (N.Y.), June, 1902. Chicago: Published by the Society. 1902. (Demy 8vo, pp. 91.)

[3] *Practical Details of Cataract Extraction.* By H. Herbert, F.R.C.S., Major I.M.S., Professor of Ophthalmic Medicine and Surgery of Grant College, etc. London: Bailliere, Tindall, and Co. 1903. (Crown 8vo, pp. 117, 45.)

[4] *The Influence of Age and Study on Eyesight in General and Myopia in Particular.* Statistics collected in the Madras, Bombay, and Bengal Presidencies, the North-West Provinces and the Punjab. By S. V. Ramaswamy Iyengar, M.D.Madras, M.B., C.M.Edin., Government Oculist, Bangalore. Bangalore: Central Gaol Press. 1902. (Demy 8vo, pp. 29.)

the patient is 13 or 14 years of age. If above 6 D correct vision is not to be expected, and there is often great peril to the sight. When above 8 D the cases are grave, and the worst cases are those which progress after 20 years of age or in which there is in adult life a sudden increase.

In a thesis for an Italian diploma in medicine, Dr. H. Danvers has discussed the subject of *Spring Catarrh of the Eyes*,[5] a disorder which he states is more common in wet seasons than in dry. It comes on generally at the end of spring and during the ensuing hot weather, and attacks all grades of society, but chiefly males. It never leads to trichiasis, as does trachoma. Several cases are described, from some of which material for histological examination was obtained. Several photomicrographs are given. No specific bacillus was found, but polyadenitis was always present. The condition is best treated by cold lotions and ice-packs, whereas strong applications always do harm. Dr. Danvers has provided a full bibliography, and his book elucidates a somewhat obscure and rare condition.

Mr. Ernest Clarke's Ophthalmic Hospital book, *Errors of Accommodation and Refraction*[6], contains numerous illustrations and one coloured plate of the myopic fundus. It is based on lectures delivered by the author. A somewhat extensive bibliography is first given, consisting of books and papers which have been made use of. The usual reference is made to optics, and the use of such instruments as the "ophthalmoscope," "ophthalmometer," etc., and a chapter is devoted to a description of the normal eye. The old term, "hypermetropia," seems now to be giving way to the modern American abbreviation "hyperopia," but, as far as we have seen, this is the first English textbook to adopt it. Much attention is given to asthenopia of all varieties. There is a useful chapter at the end on the tests required for the public services, and there are the usual number of "illustrative cases." Books on refraction have been so multiplied of late years that there is really nothing fresh to add to the well-known older ones by Morton, Hartridge, and many others. This book is quite reliable, and may take its place with the many other first-class books on the subject that are already in existence.

The second edition of Stephenson's *Ophthalmic Nursing*[7] is very like its predecessor both in size and in general plan. There are a few alterations in accordance with the further development of ophthalmic science, but otherwise there is nothing fresh to notice. Mr. Stephenson is an experienced clinical observer, and has given much time to diseases of the eye in children. The book is thoroughly practical, and contains just enough of the scientific side of the subject to render intelligent the rational treatment of disease. The book can be thoroughly recommended for the use of nurses engaged in eye work, while the practitioner who is not always working at ophthalmic surgery will find in it many useful hints.

Dr. Ohlemann's book on recent ocular remedies[8] will be useful to the ophthalmic surgeon, who will find in it information on the uses of drugs and on methods of treatment which have come into use or been more particularly applied in the last few years. Chemical agents are considered under five headings: (1) Astringents and antiseptics, (2) subconjunctival injections, (3) alkaloids (mydriatics and myotics), (4) anaesthetics and narcotics, (5) tonics. Further, there are chapters on mechanical treatment (massage, tattooing, paraffin injections), on thermal measures, on asepsis and antiseptics, on the various applications of electricity, and on serumtherapy and organotherapy, with a final chapter on general treatment. References to the original papers are numerous.

[5] *Spring Catarrh of the Eyes.* By H. Danvers, M.D. Illustrated with 3 plates; 57 pages. London: John Bale, Son, and Danielsson. 1902. (Crown 8vo, pp. 68, 3 plates, 4s.)

[6] *The Errors of Accommodation and Refraction of the Eye, and their Treatment.* By Ernest Clarke, M.B., B.S.Lond., F.R.C.S. London: Bailliere, Tindall, and Cox. 1903. (Crown 8vo, pp. 235, 84 illustrations. 5s.)

[7] *Ophthalmic Nursing.* By Sydney Stephenson, M.B., C.M., F.R.C.S.E. Second edition. London: The Scientific Press. 1902. (Crown 8vo, pp. 205, 3s. 6d.)

[8] *Die neueren Augenheilmittel.* Von Dr. M. Ohlemann. Weisbaden: J. F. Bergmann, and Glasgow: F. Bauermeister. 1902. (Demy 8vo, pp. 171, 3s. 9d.)

At the annual meeting of the Cancer Hospital, Fulham, special attention was directed to the enlargement of the pathological department, which had been carried out during the year.

NOTES ON BOOKS.

Garden and Greenhouse.

We would commend to those of our readers who, though not experienced gardeners, have the opportunity of cultivating a small garden in a town or its outskirts, a volume entitled *Easily Grown Hardy Perennials*,[9] by Mr. George H. Vos. The author's object has been to give a list of hardy perennials, which may be planted with some confidence that they will grow well, with a reasonable amount of care and attention, in an open garden. The source, habit, and uses of each species or variety are adequately explained, and reproductions of excellent photographs to the number of 255, are inserted in the text, so that the amateur may be able to judge the general character of the plant which he may be ambitious to grow. The text is arranged alphabetically under the botanical names, but there is an index of common English names which will be found useful by the less experienced. The text has been revised by Mr. T. W. Sanders, F.L.S., and the hope expressed by Mr. Vos in his preface, that his work will stimulate the cultivation of hardy perennials, ought to be fulfilled. We have received from the same publishers a copy of the *Amateur's Greenhouse*,[10] by Mr. T. W. Sanders, F.L.S. This volume is intended to replace the late Mr. Shirley Hibberd's well-known *Amateur's Greenhouse and Conservatory*. Owing to the great increase in the choice of plants for growing in conservatories, and to the fact that a greenhouse is no longer only a rich man's luxury but has become the hobby of thousands of dwellers in suburban neighbourhoods and even within city boundaries, Mr. Hibberd's book was found to have passed altogether out of date. The present volume is addressed especially to small growers. It contains introductory chapters on the construction, heating, and general management of small greenhouses, on plant propagation, and on greenhouse pests. This is followed by a long series of articles arranged alphabetically on all the best known and most commonly grown greenhouse plants. The descriptions are well illustrated by photographs, and full cultural instructions are given as well as hints on the choice of varieties. There is also an index of common English names. The volume appears to us to be thoroughly practical and to fulfil exactly the object with which it was written.

THE PATHOLOGY OF INSANITY.

The first volume of the *Archives of Neurology*, which was reviewed in the British Medical Journal of November 25th, 1899, contained an account of the researches carried out in the Pathological Laboratory of the London County Asylums, established at Claybury in the summer of 1895 during the first four years of its existence. The larger part of the work therein recorded was done by the distinguished Director of the Laboratory, Dr. F. W. Mott, and the same statement holds good with regard to the second volume of the *Archives*,[11] which has just been issued under his editorship.

In addition to much valuable work in other directions, Dr. Mott has set himself the task of investigating the relation of syphilis to insanity. The problem is one of vital and far-reaching importance in regard to the prevention of mental disease, for in Dr. Mott's words, "of all the causes of insanity none writes with such a broad and indelible hand as syphilis." In the first volume of the *Archives*, Dr. Mott showed that there was good ground for believing that the most important factor in the pathogenesis of general paralysis, and possibly the essential cause of a disease "which affects a large class often of the best and ablest minds of our town population" is syphilis. In the volume under review he brings forward a large body of carefully sifted evidence which goes to prove that etiologically general paralysis is identical with tabes dorsalis. Dr. Mott's conclusion is that a large part of these and other organic nervous diseases affecting the community are the result of syphilis, acquired or inherited. The same disease is found to play a leading part in the production of lesions of the brain and eye, which bring about loss of vision. The importance of

[9] *Easily Grown Hardy Perennials.* London: W. H. and L. Collingridge. Pp. 490, 5s. net.

[10] *The Amateur's Greenhouse*, pp. 398, price 5s. net.

[11] *Archives of Neurology*, from the Pathological Laboratory of the London County Asylums, Claybury, Essex. Edited by Frederick Walker Mott, F.R.S., M.D., F.R.C.P., Director of the Laboratory and Pathologist to the London County Asylums; Physician in Charge of Out-patients, Charing Cross Hospital. Vol. II. London: Published for the Asylums Committee of the London Council by Macmillan and Co., Limited. New York: The Macmillan Company. 1903.

Dr. Mott's researches as to the relation of syphilis to insanity lies in the fact that syphilis being a communicable disease is preventable. Here we can only sorrowfully echo our present Sovereign's still unanswered question with regard to typhoid fever and other "preventable" diseases: "If preventable, why not prevented?"

Dr. Mott recalls the fact that at the last annual meeting of the British Medical Association, after a discussion opened by him on the relation of syphilis to insanity, a resolution was unanimously passed by the Section of Psychological Medicine, urging the authorities to take some steps to prevent the spread of a disease which is the cause of an incalculable amount of physical suffering and disability, of which blindness and paralysis are two principal examples, and which is accountable for a considerable proportion of the cases of mental incapacity which crowd our asylums and burden the rate-paying community. But as far as we know, the "authorities" have done nothing.

The evidence accumulated by Dr. Mott in support of his thesis that general paralysis is etiologically identical with tabes dorsalis is given in an article, which is really an exhaustive monograph extending to 327 pages, on Tabes in Asylum and Hospital Practice. His position as pathologist to the London County Asylums and as physician to a general hospital gives him altogether exceptional opportunities of studying nervous disorders both in their mental and in their physical manifestations. Thus he is able to study all types of tabes from cases presenting purely spinal symptoms to those presenting mental symptoms which would lead to a diagnosis of general paralysis.

To enlarge his field of observation he has visited a number of infirmaries in order to study cases of tabes dorsalis in the paralytic stage or presenting premonitory mental symptoms. He has been able to obtain thirty necropsies, and a systematic macroscopic and (in the great majority of instances) microscopic examination of the brain and spinal cord has been made in each case. The facts submitted by Dr. Mott are deductions from his personal observations on many thousands of sections of the central and peripheral nervous systems. On the clinical side his conclusions are based on more than 60 cases of tabes dorsalis and 60 of the tabetic form of general paralysis. He has systematically examined the sensory disturbances in 50 cases of tabes dorsalis, and in a number of cases of tabetic general paralysis in which it was possible to obtain trustworthy answers. Owing to the vast amount of material at his disposal, Dr. Mott found it advisable to limit his observations to one class of disease. He thought it possible to associate some of the mental disturbances with the changes met with in the nervous system, and to show that the illusions, delusions, and hallucinations have an organic basis, and that there is a great analogy between the paroxysms of pain, the visceral crises of tabes and the epileptiform fits, attacks of mania, delirium, hallucinations and other mental disturbances which occur in general paralysis. In the study of these cases, says Dr. Mott, just as one can trace all grades of organic lesions from the purely spinal, through spinal with slight cerebral change, to extreme cerebral change and slight spinal change, so one can trace corresponding clinical symptoms. Many cases begin with marked spinal change and accompanying spinal symptoms; there is then a sudden or gradual outburst of mental symptoms and the spinal sink into the background. To such an extent may the cerebral symptoms overshadow, obscure, and even obliterate the spinal symptoms that they may be overlooked and disregarded. Dr. Mott's contention is that etiologically and pathogenetically there is *one tabes*, which may begin in the brain (especially in certain regions) or in the spinal cord in certain regions, or in the peripheral nervous structures connected with vision, or in nervous structures connected with the viscera. Hence there are different types of the disease corresponding to the point of origin. The disease may manifest itself in any of these typical forms, and any type may be associated with any one or all of the others. The doctrine of the unity of tabes and general paralysis is now admitted by most of the leading authorities in this country, and the majority of neurologists in England and Germany believe that syphilis is the chief factor in the causation of polymorphic disease.

It is impossible to summarize the enormous mass of clinical and pathological evidence which Dr. Mott brings to the support of this doctrine. It need only be said that no statement is made without proof supplied by facts observed by himself, critically compared with others gathered from a comprehensive study of the literature of the subject. The article is so abundantly "documented," and so closely reasoned that it carries conviction to the mind while the facts are marshalled in such admirable order, and so lucidly are they made to illustrate every point dealt with, that the reader is borne along through the solid mass of argument and exposition feeling no weariness, but only the pleasure of healthy intellectual exercise.

Dr. Mott's contention as to the all-important part played by syphilis in the production of general paralysis is supported by the investigations of Dr. Joseph Shaw Bolton and Dr. George A. Watson. The former contributes an elaborate paper on the histological basis of amentia and dementia. Of 83 cases of dementia paralytica (general paralysis of the insane) studied by the author, syphilis was proved to exist in 59, as to which personal details could be obtained. The existence of the disease was highly probable in 11 others; there was no evidence for or against in 11, while it was definitely stated by the relatives to be absent in 2. Hence, of the 72 cases of which use could be made, syphilis was certain or highly probable in 70 (97 per cent.) and certain in 59 (82 per cent.). Of the 2 in which the existence of the disease was denied by the friends, Dr. Bolton is inclined to say, as St. Augustine said of the small number to be saved, *Quin et de his dubito*. His view as to general paralysis is that it is "a progressive dementia occurring in a syphilized, actual or potential lunatic possessing the type of hereditary insufficiency of the cortical neurones, which is prone to result in premature degeneration." Dr. Watson's careful investigation of a series of cases of juvenile general paralysis has led him to the conclusion that the chief factors in its genesis are heredity and syphilis. Among hereditary factors is included syphilis, which has thus to be taken into account twice. Both Dr. Watson's paper and that of Dr. Bolton contain a large amount of original work. We have special pleasure in mentioning that Dr. Watson now holds the British Medical Association Scholarship.

Dr. Joseph Bolton also deals with the morbid anatomy of mental disease in general. From the evidence as to the clinical symptoms and morbid changes found in 200 cases of mental diseases of various kinds, excluding general paralysis, he concludes that neuronic insufficiency (as regards development, durability or both) is the necessary antecedent of mental disease. Many cases are never sufficiently developed to pass as normal individuals, and many cases probably pass all their lives as normal individuals. In other cases, again, "stress," in the most general sense, is the determining cause of the time of onset of an attack of insanity. The lower the degree of neuronic development, the less is the "stress" which is required to precipitate the attack, and the less is the damage which is done, and *vice versâ*. The influence of "stress" in overcoming the durability of insufficient neurones, even of the highest types, is, however, limited, for the resulting damage, or, in clinical terminology, the ensuing dementia, is probably very rarely more than moderate in degree, unless one of two additional factors supervene. Of these, the more common is the ordinary vascular degeneration, which frequently accompanies senility, and rapidly causes the transformation of moderate into gross dementia. Vascular degeneration has, however, relatively little influence even on worn-out neurones, whether of deficient or normal development, so long as the limit of their durability has not by other means been reached, and in some degree of dementia has not developed. The other factor which is capable of developing gross out of moderate dementia is the neuroglial and vascular reparative proliferation which may follow syphilitic infection, and which continues to increase, *pari passu*, with neurotic degeneration, till gross dementia and death ensue.

In an excellent paper on amentia Dr. Tredgold shows the importance of alcoholism and tuberculosis as etiological factors in the production of idiocy and imbecility. Syphilis, according to his observation, plays a less important part, but the influence of syphilis in the production of general paralysis is seen in the fact that imbeciles who were the subjects of congental syphilis were affected with dementia paralytica during adolescence. Dr. Sydney J. Cole records the results of a systematic examination of the central and peripheral nervous system and muscles in a case of acute alcoholic paralysis with mental symptoms. He says that a review of the lesions as a whole tends to suggest that alcoholic paralysis is something more than a mere peripheral neuritis, and that it is, in general, a manifestation of an affection of whole neurones of various orders. That it is not a mere peripheral disease is shown by the coexistence of a more or less characteristic mental disorder, by the atrophy of tangential fibres, the cortical cell affection, and the degenerations in the

pyramidal system, in the anterior limb of the capsule, in the cerebellum, and in the posterior columns of the cord.

In an article on the pathological changes in the medulla oblongata in acute diphtherial toxaemia, based on a study of 13 cases in which death occurred during the acute toxic stage of diphtheria, Dr. Charles Bolton shows the effect of a specific poison in the production of degenerative changes in those nuclei of the medulla oblongata which are composed of the smaller variety of nerve cells, including the sensory nucleus of the vagus. He concludes that the amount of degeneration varies with the degree of toxaemia. In those cases which die as a result of the severity of the toxaemia, the degeneration is very gross; but in those which die from an accidental complication, there may be little or no degeneration. It is probable that in the moderately severe cases which do not die, but in which the toxaemia is rendered evident by an irregularity of the pulse, there are degenerative changes of a similar character, but of a slighter nature than is seen in the more malignant forms of the disease.

In a paper entitled The Coagulation Temperature of Cell Globulin and its bearing on Hyperpyrexia, Professor Halliburton and Dr. Mott record a series of experiments which confirm their hypothesis that the physico-chemical cause of death from hyperpyrexia is the coagulation of cell globulin. When this constituent of cell protoplasm is coagulated, the protoplasm as such is destroyed. The temperature at which such coagulation is most easily produced is 47° C. (117° F.). But temperatures as low as 42° C. (108° F.) will have the same effect, provided the heating is continued long enough.

In a Note upon the Choline Test for Active Degeneration of the Nervous System, Dr. Mott describes a method of applying the test for clinical purposes. In conjunction with Professor Halliburton he had already shown experimentally that there is a proportional relationship between the presence of choline in the blood and the amount of nervous tissue undergoing active degeneration. From this fact it seemed warrantable to infer that a relatively large amount of choline in the blood of patients suffering from nervous disease may be taken as pointing to extensive and active destruction. Dr. Mott examined the blood in fourteen cases of organic disease of the nervous system, and in all these choline was found present in abnormal amounts, and in many instances in great abundance and proportional to the extent and activity of the destruction of nervous tissue. The test is of no use to decide whether a case is organic or functional, unless the organic disease is active at the time the blood is drawn; it would therefore be especially applicable after the onset of new symptoms indicative of irritative or destructive processes.

Dr. W. G. Smith contributes a paper on the range of immediate association and memory in normal and pathological individuals which is a valuable contribution to the pathology of the insane. This province of investigation is still almost virgin soil, but we are glad to note that Dr. Smith's work has received recognition by his appointment to a lectureship on psycho-physics in King's College, London.

In the preface to the first volume of the *Archives*, Sir William J. Collins remarked "that various momenta have contributed to the recognition of the need of more determined, more systematic and exhaustive research into the causes of insanity." In the preface to the present volume, Dr. Mott points out that it has since been found that it is also within the scope of the pathologist to promote the better treatment of the insane by showing how they may be safeguarded against the contraction of communicable disease during their residence in an asylum. He adds that an inquiry which he undertook, with the aid of Dr. Durham, into the means of preventing the occurrence of dysentery in the London County Asylums, and the issue of a report on the subject, have been in great measure the cause of delay in the publication of the second volume. In consequence of that report a system of notification of all diarrhoeal and dysenteric cases was adopted in the London County Asylums. The Commissioners in Lunacy have also adopted this form of notification, and have officially accepted the doctrine that dysentery is a communicable and, therefore, a preventable disease. In a short paper contained in this volume of the *Archives* Dr. Mott makes some practical suggestions based upon a further clinical and pathological study of asylum dysentery. He is convinced that the continuance of notification, with relief of overcrowding and its dependent sanitary defects, the treatment of the cases like typhoid, with constant and minute attention to recognized modes of isolation on the part of the staff, attendants, and nurses in asylums where dysentery exists, will much abate the disease; and when cases do arise, either within the asylum or from transfers or admissions, the spread of the disease will thereby be arrested. Moreover, since the system of notification has been in practice, and attention thereby continually called to the disease, the number of cases reported from all the asylums has considerably diminished. It has not now for some time occurred in an epidemic form at Claybury, and a considerable number of the cases which have been reported have been old recurrent cases.

Had Dr. Mott done nothing else but demonstrate the infective nature of asylum dysentery, and force, in the face of much opposition, the recognition of this truth on the administrative authorities and on the profession, he would have fully shown the practical value of a skilled pathologist in bringing about improvements in the care of the insane. But, as has been seen, this is a comparatively small and almost incidental part of his work in the laboratory at Claybury. His researches have already shown how a large proportion of the insanity which is already a cause of grave concern to administrators may be prevented; and there is every hope that his future work will not be less fruitful than that which he has done in the few years he has been engaged in investigating the pathology of insanity.

HOSPITAL SITES AND POPULATION IN LONDON.

At a meeting of the Hospitals Association at the Caxton Hall, Westminster, on March 3rd, Sir Trevor Lawrence (Treasurer of St. Bartholomew's Hospital) in the chair, Sir Henry C. Burdett gave an address with the following title:—Hospital Sites and Population in London: Ought any, and if so which, of the large hospitals to be moved from their present sites to new ones situate in (*a*) more congested districts or (*b*) the country?

Sir Henry began by showing a map of Greater London with the sites occupied by the general, women, and children's hospitals marked. The simplest way of bringing home the facts briefly and forcibly was to take the City of London as the centre, and then to divide the area into five districts round and including this centre. District 1 included the City of London alone, where the population had decreased from 50,569 in 1881 to 26,923 in 1901—that was, upwards of 46¾ per cent. In this district the ratio of beds to population in 1901 was as 1 to 40. District 2 comprised Stepney, Shoreditch, Finsbury, Holborn, City of Westminster, Southwark, and Bermondsey. Here the population had fallen from 1,166,897 in 1881 to 1,098,056 in 1901—that was, by nearly 6 per cent., whilst the ratio of beds to population was as 1 to 418. District 3 included Poplar, Bethnal Green, Hackney, Islington, St. Pancras, St. Marylebone, Kensington, Paddington, Chelsea, Battersea, Lambeth, Camberwell, and Deptford. Here the population had increased from 2,088,884 in 1881 to 2,456,368 in 1901—that was, by rather more than 17½ per cent. The ratio of beds to population in 1901 was as 1 to 1,054. District 4 included Stoke Newington, Hampstead, Fulham, Wandsworth, Lewisham, Greenwich, and Woolwich. Here the population had increased from 508,898 in 1881 to 955,194 in 1901, or by nearly 87¾ per cent. The ratio of beds to population in 1901 was as 1 to 1,877. District 5 lay well outside the metropolitan boundary; part of it was in the County of London. It included Essex (West Ham and Romford), Middlesex (Tottenham and Edmonton, Barnet, Hendon, and Brentford), Surrey (Croydon, Kingston, and Richmond), Kent (Bromley and Dartford). Here the population had increased from 899,768 in 1881 to 1,740,271 in 1901, that was by nearly 93½ per cent. The ratio of beds to population was as 1 to 2,482. Dealing with the districts as a whole the ratio of beds to population was as 1 to 922. By following this plan it had been possible to include populations who individually resided at about the same distance from the general hospitals situated near the centre, to which all the lines of traffic tended to converge. Accessibility was the most important consideration when selecting a site for a great general hospital in a large town. In this connexion every one of the great hospitals of London was probably more accessible to each one of the 6,276,812 persons who represented the population in 1901 than any county hospital throughout the country was accessible to the inhabitants of the county in which it might be situated. So far as the first three districts were concerned, comprising the heart of London, each one had within its confines general hospital beds in due proportion to the population, which fulfilled the requirements laid down by experts. District 4, where there was only one bed to

each 1,877 people, would present equally satisfactory results, providing South London had exhibited the same interest in hospitals and the same desire to provide the population residing therein with hospitals as had been manifested by other divisions of the metropolis. Why the people of Lewisham, Greenwich, and Woolwich displayed relatively so little regard for the requirements of their population as to be content to continue without a great general hospital was a question not easy to answer. His view was that habit governed such questions to a very great extent, and the people of South London had grown up in the habit of relying upon Guy's Hospital, for two centuries at least, to provide them with hospital accommodation, and as Guy's Hospital was an endowed institution they had never felt the need, nor had they realized the duty, of contributing their share of the expenditure entailed by the upkeep of hospital beds for the accommodation of the population residing within their borders. The fifth district was well outside London proper, for it extended considerably beyond the seven-mile radius. The fact that its population had increased by nearly 100 per cent. in twenty years marked the fashion of the day in regard to the habit of an increasing number of citizens to reside outside the metropolitan area. In any case there was evidence that the growth in population of a place like Tottenham, to which the London County Council were moving from the central and congested quarters of London upwards of 40,000 people, should render the authorities fully alive to the necessity of providing additional hospital beds. He hoped that the Tottenham Hospital authorities would continue to press the London County Council, and that as a result of such action a scheme might be possible whereby the County Council would consent to provide the money necessary to build additional wards upon the excellent site which the Tottenham Hospital authorities possessed. Was it right for the municipality to plant a population of over 40,000 souls in an outlying district of the metropolis without making any provision whatever for the hospital accommodation of the people, who had been removed from centres where they could readily obtain such relief, to a new centre where the existing population had already provided themselves with a reasonable number of hospital beds? The question of the removal of certain large hospitals in London to new sites in relatively congested districts was one which could be briefly dealt with. The districts where the population was congested which were without adequate hospital accommodation were practically three: South London, Battersea, and Tottenham. The last had been inferentially dealt with already, and in all the circumstances it would not be wise to move any great hospital into the Tottenham district, because the Tottenham Hospital was reorganized a few years ago; it had extended its hospital accommodation 200 per cent. since the reorganization; it had a most active and energetic committee, capable of tackling the requirements of the district, and was backed by the unanimous confidence of the residents within it. There were, therefore, left two districts to which a great hospital might be transplanted; one of them, South London, was said to be in negotiation with the authorities of King's College Hospital with a view to the removal of that hospital to a site in Camberwell, where additional hospital accommodation was undoubtedly badly needed. When this had taken place, there would remain the district of Deptford, Greenwich, and Woolwich, where the hospital work was divided at present between the Miller Hospital, the Seamen's Hospital which admitted local cases under protest, and a few cottage hospitals. Here the whole hospital situation would well repay reconsideration and rearrangement, and, having regard to the residential population within the area referred to, the people of the three districts should through their representatives meet in conference with the object of reorganizing the Miller Hospital, possibly finding for it a new site, and erecting thereon buildings for the accommodation of 250 to 300 in-patients. Lastly, there was Battersea. At Battersea was situated the Bolingbroke Hospital, which was the only hospital in London managed largely on a self-supporting basis, where the managers had exhibited so much tact that it had behind it the united support of the people and the medical profession. The needs of the increasing population of Wandsworth and Battersea should excite the sympathy of the wealthy, and secure for the residents, who belonged mainly to the artizan class, an adequate and fully-equipped hospital of the best type, managed on a self-supporting basis. As to which of the large hospitals might be transferred from their present sites to new sites in more congested areas, there had been much discussion in recent years, and it seemed to him that the only hospitals to which it could apply were the Westminster Hospital and King's College Hospital, in which case Charing Cross Hospital might be left where it was. Rumours had been heard that St. George's Hospital might seek a new site, and having recently made a thorough inspection of that hospital, he was conscious of the very large sums which had been spent upon it, and the high average of its efficiency, structurally and otherwise, at the present time. Such defects as it had might be disregarded, or were capable of amendment without very great cost, therefore there was not any urgent demand for its removal to a new site, but rather the contrary. Still it might become a question whether St. George's or Westminster should move. Westminster Hospital was one which deserved well of Londoners, for it had for years occupied the proud position of being the most economically administered as well as one of the most efficient of the general hospitals. Its site at the present time was very restricted, but to enable it to move it had been stated, that some £500,000 would have to be provided; it was not reasonable to hope that its existing site, if sold, would realize more than one-third of that amount at the very outside. If, however, the Westminster Hospital could be moved to Wandsworth and amalgamated with the Bolingbroke Hospital such a step had many advantages, and should be capable of being successfully carried out, providing one or more capitalists who were interested in the hospital provision of London would come forward and support such a step in the interests of the artizans especially. The North-West London Hospital was urgently in need of modern hospital buildings, it was influentially supported, and was now situated in a district which had too large a ratio of beds to population—that is, 1 to 327 people. This gave a great opportunity to unite with the Miller Hospital, Greenwich, and build a good modern hospital in a district where one was badly required. St. Bartholomew's Hospital was the only general hospital situated within the City boundaries, and it was difficult to conceive the City of London ever consenting to permit so representative an institution, with eight centuries of history, to be removed from its present site to any site except one which was closely adjacent to, or only just outside, the City boundaries. The proposal to remove large hospitals from cities to the country seemed impracticable, if due regard was to be paid to the interests of the patients, and the circumstances which affected city populations and the great hospitals which ministered to their needs. The Poor-law infirmaries, in the interests of the patients they contained, should be thrown open to medical instruction. Under the present system of the admission of in-patients to the great hospitals of London preference was given to acute and surgical cases, so that patients with relatively chronic affections were now relegated to the Poor law infirmaries. Having regard to the necessities of medical education and the claims of the suffering poor, the present system of admitting patients must be reconsidered, or chronic hospitals for the reception of the cases under discussion must be considered. In summing up Sir Henry Burdett pointed out that with the exception of the south-west district, that was, Wandsworth and Battersea, where the ratio of general beds to population was only as 1 to 13 364 people; and the south-east district, including Deptford, where there was not a single hospital bed for upwards of 110,000 people, Greenwich, Lewisham, and Woolwich, a district where the ratio of general beds to population was as 1 to 2,126 people, the population within the whole of the postal districts of London were, in fact, well supplied with general hospital beds. Indeed, if the beds in special hospitals were added, then every district, with the two exceptions just mentioned, showed that the ratio of all hospital beds to population was infinitely greater than that laid down by the accepted authorities as a basis for calculation, namely, one hospital bed for every 1,000 people in a given district. If, therefore, King's College Hospital were removed to a site situated conveniently for the population of Deptford and Camberwell; if the North-West London Hospital united its forces with the Miller Hospital, and erected modern buildings on a site convenient for the residents in Greenwich, Lewisham, and Woolwich; and if the Westminster Hospital moved, the question of hospital sites and population in London would be placed upon a basis adequate to supply efficiently all the needs of the residents within the county of London.

The Hon. Sydney Holland criticised the figures Sir Henry Burdett had given in regard to East London. In his opinion the proposals in reference to the Tottenham Hospital amounted

to the municipalization of the institution. He did not think that the Poor-law infirmaries were of any use to the education of medical students.

Sir HENRY BURDETT explained how he had arrived at his statistics. In regard to Tottenham Hospital the proposal amounted merely to a pecuniary transaction and did not imply municipalization. He considered that medical students could learn much from chronic cases in the infirmaries.

Mr. B. CAMPBELL (Westminster Ophthalmic Hospital) pointed out that the views and prejudices of subscribers to hospitals needed recognition.

Mr. F. S. FRANKLIN said that they had not been told how the King Edward's Hospital Fund had brought pressure to bear on certain hospitals to move from their present site. He had heard that such was the intention of the fund.

Mr. C. L. THIES (Royal Free Hospital) said that Poor-law infirmaries should be used for the education of the students. He pointed out that 23 per cent. of the so-called "interesting cases" in the general hospitals were sent up from the country.

Dr. GILBART SMITH said that not only must the needs of populations in outlying districts be considered, but also the actual needs of the hospitals. It was the duty of the London County Council to supply hospital accommodation for the populations which they moved from one place to another.

Sir E. HAY CURRIE feared that if hospitals were moved some subscriptions would not be continued. While he thought some hospitals should be moved no pressure should be brought to bear to induce them to do so. If in the South of London 300,000 inhabitants were allotted to Guy's Hospital and three-quarters of a million to St. Thomas's Hospital, there yet remained three-quarters of a million of people in Camberwell, Woolwich, and Deptford unprovided with hospital accommodation. He had driven about Camberwell on a motor car and was amazed to see the enormous resident population unprovided with hospital accommodation.

The CHAIRMAN said that with regard to the suggested removal of St. Bartholomew's Hospital he found that the gentlemen who had brought the matter forward were as ignorant of the circumstances connected with hospitals and of the considerations affecting hospitals as it was possible to imagine. With regard to Sir Henry Burdett's statistics of population, he wished to point out that the census was taken on Sunday night, when everybody who could was out of London. If the census had been taken on a Monday morning the position of affairs would have been different. He could not conceive any worse service to the poor than to put obstacles in the way of patients from the country receiving medical advice in hospitals in London. The Poor-law infirmaries had greatly improved, and in the course of a few years would be almost equal to the large general hospitals. He deprecated most strongly any contributions by the London County Council, because, knowing the ambitions of that body, he thought it would be the first step towards their acquiring control over the hospitals.

Mr. TIMOTHY HOLMES, in moving a vote of thanks to Sir Henry Burdett for his address, said that the question of moving St. George's Hospital had been so strongly urged on the Governors that they had thought it necessary to bring the matter before the public. He would assert that these questions were discussed by people who had no knowledge of the difficulties which their plans entailed.

Sir HENRY BURDETT acknowledged, and moved a vote of thanks to the Chairman, which was seconded by Mr. T. BRYANT, and duly replied to by the CHAIRMAN.

THE RECENT EPIDEMIC OF SMALL-POX IN LONDON.

FINSBURY.

DR. NEWMAN, the Medical Officer of Health of Finsbury, has just presented to his authority his special report on the small-pox epidemic as it affected the borough of Finsbury in 1901 and 1902. There were in all 275 cases and 40 deaths. More than 100 of these cases appeared in eight groups, and as many as 90 out of the 275 were first detected by the medical officer of health. Dr. Newman furnishes statistics from the vaccination returns showing that Finsbury was less vaccinated at the beginning of the outbreak than it had been for 30 years previously. During the two years 1901 and 1902 no less than 40,000 persons were vaccinated or revaccinated.

Under 10 years of age the vaccinated cases numbered 7, and there was no death. These 7 children had come into close personal contact with cases of small-pox in the pustular stage. At the same age-period the number of unvaccinated cases was 43, and there were 16 deaths, yielding a mortality percentage of 37.2. Under 20 years of age there were 57 vaccinated cases, of whom 1 died, a frail invalid child of 11 years old, one of a family of whom 10 children had died in infancy of constitutional disease. The mortality-rate per cent. was therefore 1.7. There were almost the same number of unvaccinated cases—namely, 66. Out of this number, 22 died, yielding a mortality percentage of 33.3. Over 20 years of age the vaccinated cases numbered 137, and there were 9 deaths, or 6.5 per cent. The unvaccinated cases numbered only 11, but there were 4 deaths, or 36.3 per cent. The larger number of vaccinated cases, from 20 to 70 years of age, is of course due to the fact that by far the larger part of the population at that age-period have, at some time or the other in their lives, been vaccinated. Not one of these 137 vaccinated cases had been vaccinated within ten years. It will be seen that the mortality percentage of vaccinated cases was 5.1, and that of unvaccinated cases 33.7. Three well-known facts are admirably illustrated by the Finsbury returns:

1. That small-pox among the vaccinated is nowadays mainly a disease of adults, because children are protected by primary vaccination and adults are not protected by revaccination. (88 per cent. of the vaccinated cases were over 15 years of age.)
2. That among the unvaccinated, small-pox is still, in great measure, a disease of the young, as it was in prevaccination days. (73 per cent. of the unvaccinated cases were under 15 years of age.)
3. That the mortality-rate among the vaccinated is at all ages much less than among the unvaccinated, and that this difference is very striking and complete in children because of their recent vaccination.

Dr. Newman also shows that the average length of stay in hospital was on the average 25 days for each case occurring in a vaccinated person, and 49 days for each unvaccinated case. The usual preventive methods were taken. The sanitary authority's expenses for the epidemic were £342 2s. 1d., and public vaccination cost £2,698. The report contains particulars of each case of small-pox as to source of infection, vaccination, etc., and of the various groups, one of which, it will be remembered, had its origin in an unrecognized case of small-pox which went to the hop gardens in Kent and acted as a centre of infection.

REGULATIONS UNDER THE CREMATION ACT, 1902.

THE Cremation Act of last year, by Section VII, provided that the Secretary of State should make regulations as to:

1. The maintenance and inspection of crematoria.
2. The cases in which, and the conditions under which, cremations may take place.
3. The disposition of the ashes after cremation; and
4. The registration of cremations.

To enable this to be done satisfactorily, the Home Secretary appointed a Committee consisting of Mr. C. E. Troup, C.B., and Mr. W. P. Byrne, C.B., of the Home Office; and Dr. H. Franklin Parsons, of the Local Government Board, to prepare a draft of the regulations to be made. Mr. Troup was Chairman, and Mr. W. Wheeler, of the Home Office, acted as Secretary to the Committee.

The report of the Committee and the proposed regulations have now been issued; there are also condensed notes of evidence taken; the regulations for existing crematoria in this country and the regulations in force in certain foreign countries are also printed. The report may, as the Committee say, be regarded as a preface to the regulations, and is a very interesting piece of reading.

The Committee examined a good many witnesses. The great advocate of earth burial, Sir Francis Seymour Haden, F.R.C.S., at great personal inconvenience, attended and gave evidence, the effect of which appears to be that, as no regulations can be devised which will altogether exclude the possibility of cremation being used for the purpose of destroying the evidence of crime, no regulations at all should be made. The statute, however, imposes imperatively on the Secretary of State the duty of making regulations; and if he failed to do so the result would be, not to stop cremation, but to allow it to be carried on as at present without any legal restriction whatever. This point—the danger of cremation being used to destroy evidence of crime—had, therefore, to be faced in the first instance, and the report meets it very candidly and fairly. It is admitted that no regulations can be framed which would entirely eliminate the risk; but, says the Committee, the Cremation Society under the guidance of Sir Henry Thompson has met the difficulty by requiring two medical certificates of death, a detailed one from the medical attendant and a confirmatory one from another medical man. These were in all cases carefully examined and studied by Sir

Henry Thompson himself and afterwards by his successor, and if there was the slightest reason for doubt further inquiries were made before cremation was permitted.

The Committee reports in favour of a somewhat similar plan and recommends that "the person to decide on the cremation should be a medical referee, specially qualified for the work and appointed by the cremation authority." The medical officer of health and the coroner both naturally seemed as suitable public officials to discharge this delicate and responsible duty, but the committee thought it best while not disqualifying such persons to insist on the medical referee for cremation being a distinct appointment. The Committee does not propose that the medical referee so appointed should in all cases make the inquiry necessary in addition to the certificate of the medical attendant. In many cases he might do so, in others he could not do so on account of distance or other causes. The second certificate from an independent source must in such case be obtained from a medical officer of health, police or certifying factory surgeon or a medical referee under the Workmen's Compensation Act. Hospital physicians and surgeons are also included in the list. If the certificates so given are not satisfactory as showing definitely the cause of death, so as to exclude the possibility of violence or poison, a necropsy must be made by a pathologist named by the cremation authority who may or may not be the medical referee. If suspicious circumstances still remain the coroner after holding an inquest is to be empowered to give his certificate for the cremation. Some minor recommendations are made as to unidentified bodies, deaths on board ships from plague, Asiatic cholera and yellow fever, and for the cremation of bodies which have been exhumed. The Committee says:

> We do not anticipate that these requirements will in ordinary straightforward cases prove troublesome. They require not more and in some cases less than what is now insisted on by the Cremation Society. In cases where the cause of death is not clear, they may lead to inquiries which may be unpleasant to the friends of the deceased, and in some cases to inquests in open court; but it is impossible to avoid this if cremation is to be allowed, and if the relatives prefer it, they have the alternative of withdrawing their application and burying the deceased. We are anxious that the precautions taken should not be excessive, but we repeat that it must be borne in mind that if they are insufficient, and that if one or two cases should occur where cremation has been used to conceal murder or maltreatment, the progress of cremation will be seriously checked.

With commendable care the reporters, after drafting the regulations, "attempted to test them to some extent by considering" their application to cases in which bodies have been exhumed for examination in recent years. In the nine years from 1893 to 1901 there were in England and Wales 95 cases of exhumation. In 55 the object was to obtain evidence in suspicious cases, and in 9 of these in respect to a criminal charge. The outcome of these cases was conviction for murder in 3 cases and for manslaughter in a fourth. The Committee considers that cremation would have been impossible in these 4 cases under their regulations. They devote some pages of their report to this question, and conclude that the system of regulations proposed would prove more effective than the present system of burial as a check upon crime, and also be more effective in guarding the innocent from unfounded suspicions. The regulations are to be treated as provisional, for the Committee "looks forward to the possibility that ultimately the whole question of death certification and of the disposal of the dead may be brought in every district under the control of some public officer, either the coroner or the medical officer of health."

The draft regulations and very elaborate forms of certificates are appended to the report, and have by the Act to be laid before Parliament, and only after forty days, during which objection may be raised, do they come into force.

MIDWIVES FOR THE RURAL AND PROVINCIAL POOR.

A CONFERENCE to discuss schemes for the supply of midwives to the rural and provincial poor, in accordance with the Midwives Act of 1902, was held at the Grosvenor Crescent Club, London, on March 3rd. The conference was convened by Mrs. Heywood Johnstone, and the chair was occupied by Sir MICHAEL FOSTER, M.P. There was a large attendance, the majority of those present being ladies.

The CHAIRMAN said that the present supply of trained midwives was not adequate for the wants of the poor. The permissive part of the Midwives Act of 1902 would soon pass away, and it was their duty to lose no time in supplying the necessary number of midwives. There were present no less than twenty-six representatives from English counties, showing that they were a truly representative meeting.

Mrs. HEYWOOD JOHNSTONE quoted statistics to show the necessity for midwives for the rural and provincial poor, and advocated the formation of associations throughout the country for the supply of midwives and the training of nurses, at the same time providing for the employment and payment of medical men where necessary. By this method no outlay on building was involved. Special help would be required to start some of these associations, and the county councils, under the new Education Act, would be able to help more than before.

Dr. R. BOXALL said that in the country there was pressing need for midwives sufficiently instructed to deal with cases where all was going well, and who could be relied on to send for medical aid when the necessity arose. The Duchess of Sutherland, in starting an association for midwives, had said that all the nurses in Sutherland were, by the desire of the doctors, being trained as midwives. Midwives were most required in the country districts. But it was found most difficult in those districts to train and maintain midwives.

Mrs. RICKMAN said that in the country there was no possibility of a midwife earning enough to maintain herself decently on midwifery alone. She suggested training some of the married women in the villages; they would not move away, and would be available when wanted.

Mrs. SOWNDES described how, at her nursing home at Hackney, poor people paid a certain small sum towards the expense of their confinement; and mentioned that the medical men, though offered payment for their services, had returned the fees.

Mr. HEYWOOD JOHNSTONE, M.P., said that the Midwives Act of 1902 might be a blessing to those whom it was intended to benefit or it might be the reverse. It would be a blessing if, instead of the untrained and occasionally non-sober attendant of former days, a poor woman in her hour of necessity found herself with a clean and capable nurse. It would be the reverse if the large number of women who preferred the ministration of their own sex were deprived of the assistance of any midwife at all. Therefore, those who had laboured for this measure had asked those present to meet and consider the various ways in which this Midwives Bill might be made an Act of utility and genuine service to those whose interest they had at heart. The aim and object was to consider the interests especially of the rural poor and of those provincial towns which had not the advantages of the larger centres of population. The attention of the meeting had been mainly directed to those plans which involved no expenditure on bricks and mortar, which required no time to bring into operation, and which by the use of existing machinery and of existing instruments could be turned at a small expense into an organization of practical utility. The response which Mrs. Heywood Johnstone had met with was satisfactory, especially the response by those County Councils who had shown their sympathy by sending representatives to the meeting. They had great responsibility under the Midwives Act, they had great opportunities and great powers under the new Education Act and the work could hardly have commenced under more favourable auspices than with the realization of the sympathy of so many of them. The start must be made at the bottom of the ladder. There was much value in the suggestion made by Mrs. Rickman that it was possible in a small country village to take some woman who was already at work, some woman who had some other occupation, and particularly so if it was an employment which would keep her resident in the district, and give her training and make her a valuable member of the village in which she lived. That was the lowest step, taking the existing midwife, training her not too severely, and making her an efficient, useful, and inexpensive agent for adapting the Act to the use of the poor. In some places small sums had been collected, showing how the poor liked to make these institutions self-supporting, and at Winchester the trained midwife went with a pupil among the people. The pupils were also instructed by resident medical men. Two things must be borne in mind. The first was that the supply of midwives would be limited if the training were made too protracted. It was not every person who wished to become a midwife who could manage the long absence from home which the training might require, and there was besides the question of expense. The second point to be borne in mind was that the demand would be limited if the

training unfitted the woman for cottage life. It was the requirements of the poor in cottage and tenement life with which they were dealing. If the women were trained too highly, they would be unfitted for the existence and dull monotony of cottage life. What was really wanted was that the nurse must be a cottage woman, so that she understood the needs of the poor, so that they would confide in her, and feel she had sympathies with them. The ideal plan was to have a self-supporting organization, and that was not impracticable; but, though self-supporting, these schemes were not self-starting, therefore people anxious to help should give that charity beyond all price—the charity which consisted in taking pains in thinking out the best plan for each separate locality. It had been found that it was of assistance in practical working if provision were made for the payment of the fee of the medical man by associations providing midwives. If a midwife called in a medical man there should be no extra charge to the patient, and the medical man should not be in doubt as to the payment of his well-earned reward. He hoped it was a point which those who had adopted plans for their localities would if possible bear in mind. Therefore it was proposed to form an association to advise and to assist in carrying into operation the various plans which had been briefly indicated that afternoon. By that means those who wished might have the advantage of the experience of others, and might know what had been successful and also what had failed, and why it had failed. It was easy to start an association with many names; but what was wanted was a real practical working association which would be of use in every locality. He concluded by proposing the following:

That it is desirable to form an association to carry into operation the plans suggested for the supply of midwives to the rural and provincial poor, with such modifications as may be found expedient.

The resolution was seconded by Lady CAMOYS.

Mr. A. P. HUMPHRY (Chairman of the Public Health Committee of the Cambridge County Council) pointed out that midwives should also be trained nurses.

The CHAIRMAN drew attention to the enormous value of women of a village being trained to attend the other women in their own village. He hoped the examiners would not look for an exalted class of midwives but would have regard to their usefulness.

The resolution was then put to the meeting, and carried with one dissentient.

A vote of thanks to the Chairman was moved by Lord CAMOYS, seconded by Mrs. HEYWOOD JOHNSTONE, and carried with acclamation.

Before the meeting dispersed Dr. F. R. HUMPHREYS stated some technical difficulties in the way of midwives being trained at infirmaries, and suggested that Poor-law guardians should be influenced in the direction of removing the obstacles.

THE PREVENTION OF CONSUMPTION.

CUMBERLAND.

AT the quarterly meeting of the Cumberland County Council held recently, it was announced that the General Purposes Committee, with the approval of the Finance Committee, had decided to contribute £500 towards the cost of the sanatorium for the treatment of consumption which the Cumberland and Westmorland branch of the National Association for the Prevention of Consumption proposed to erect at Threlkeld, provided it were legal to make such a contribution. The Clerk of the Peace now stated that, in reply to a telegraphic request to the Local Government Board for its opinion on the question, he had received the following reply: "Board unaware of any statutory authority under which the County Council can make such a contribution as that referred to."

GLOUCESTERSHIRE.

The Gloucester City Council has resolved to contribute to the Winsley Sanatorium scheme.

UNITED STATES.

New York.—At the ninety-seventh annual meeting of the New York State Medical Society, held in Albany at the end of January, the Committee on Hygiene presented a report upon tuberculosis and recommendations as to means of checking its ravages. A resolution was adopted deprecating any weakening of the present tenement house laws, urging the Legislature not to allow any change to be made that would in the least degree diminish the amount of light and air available for the people living in such houses, or in any way take a backward step in regard to their sanitary conditions. Tuberculosis was declared to be epidemic in New York city, there being from 8,000 to 20,000 cases annually. The Society recommended that in the effort to stay the spread of the disease every senior student in every grammar school and high school should be required to pass an examination in the methods of preventing the spread of tuberculosis. Societies for the prevention of tuberculosis should be organized in every community. Public lectures in each school district should be frequently given by one who understands the facts and has the gift of teaching them to minds of ordinary intelligence. By these educative efforts much could be done to teach the teachable the sanitary science of every-day living. The Society recommended compulsory registration by medical practitioners of every case of tuberculosis, the opening of dispensaries for the treatment of the poor, and the establishment in every city of a receiving hospital for patients suffering from tuberculosis. The State was urged to hasten the building of the hospital, for which an appropriation of 100,000 dols. was secured two years ago.

CANADA.

Montreal.—The Montreal League for the Prevention of Tuberculosis met recently and appointed a special committee to arrange a plan of active campaign. Dr. A. J. Richter and Dr. J. G. Adami will serve on this committee. The following are the officers of the League:—*President:* Senator George A. Drummond. *Vice-Presidents:* Sir William Hingston and Dr. E. P. Lachapelle. Dr. J. George Adami was named as Chairman of the Executive Committee.

OPEN-AIR TREATMENT FOR POOR PATIENTS

From time to time inquiries have appeared in our columns as to the existence of institutions where patients of the poorer classes can have the advantage of the open-air treatment of pulmonary tuberculosis. Dr. Noel D. Bardswell, physician to the Mundesley Sanatorium, Mundesley, Norfolk, writes to inform us that in connexion with his colleague, Mr. Chapman, he has arranged for the reception of twelve early cases in a home near the Mundesley Sanatorium. The charge will be 17s. a week, which, it is estimated, will cover the cost of board and lodging; the only extra will be for personal laundry; no fee will be charged for professional attendance and drugs. The patients must be of the class unable to pay for treatment at even the cheapest sanatoria, and must be genuine early cases. The house stands on sandy soil, has a south-west aspect, and will accommodate twelve men: the furniture and fittings are similar to those likely to be found in the patient's own home, and this will allow special attention to be given to the education of the patient. The house is in charge of a competent woman and her husband, and the general administration is supervised by Mr. J. E. Chapman, M.R.C.S., L.R.C.P. Each patient on admission is given printed rules and directions, which are strictly enforced. A medical visit is paid once a week, or more frequently if necessary; and each patient is required to report himself daily. The following shows the general routine:

7.30 a.m.—Temperatures taken and patients rise.
8.30 a.m.—Breakfast. (After every meal patients rest for an hour in the open air.)
10.0 a.m.—Exercise taken as directed.
12.30 p.m.—Patients rest on their chairs till 1.30, when the temperature is taken.
1.30 p.m.—Dinner. An hour's rest.
3.0 p.m.—Exercise as directed.
5.0 p.m.—Tea.
7.0 p.m.—Rest on chairs for an hour. The temperature is taken at 8.
8.0 p.m.—Supper. Recreation till bedtime.
10.0 p.m.—Bedtime.

Patients are advised to spend as much time out of doors as possible; at the same time they should be sheltered from the wind. The sitting room must only be used in the evenings and when there is much wind.

Spitting.—Patients are informed that consumption is spread by the matter coughed up from the lungs. Under all circumstances, therefore, they must spit into the flasks provided. Neglect of this regulation is liable to be followed by summary dismissal.

No patient is allowed to take alcohol in any form during his stay at the cottage under penalty of dismissal.

The diet is an essential part of the treatment and must be entirely taken. Definite amounts of food are given to each patient, and the consumption of the whole is insisted upon. The following is the dietary table:

Dietary: Sanatorium Cottage Mundesley.

Day.	Breakfast.	Dinner.	Supper.
Sunday ...	Fresh fish, an egg	Roast mutton, gingerbread pudding	Cold mutton, rice pudding.
Monday ...	Bacon and egg	Roast beef, suet pudding	Cold beef, sago pudding.
Tuesday ...	Bloater, egg	Fish, mince, marmalade pudding	Cold beef, tapioca pudding.
Wedn'sday	Bacon and egg	Boiled mutton (onions, carrots, &c.), date pudding	Cold mutton, ground rice pudding.
Thursday..	Kipper, an egg	Roast beef, treacle pudding	Cold beef, rice pudding.
Friday ...	Bacon and egg	Fish, mince, fig pudding	Cold beef, sago pudding.
Saturday...	Herring, an egg	Roast pork, jam roll	Tripe and onions, tapioca pudding.

No patient is taken for a shorter period that eight weeks, and clinical records are kept and will be published. It is intended that the hous should be entirely self-supporting.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1903.

Members of the British Medical Association are reminded that commencing with January 1st, 1903, the annual subscription is a uniform one of 25s., inclusive of the Branch, and that all subscriptions should be paid direct to the General Secretary, 429, Strand, London, W.C., and not to a Branch Secretary.

British Medical Journal.

SATURDAY, MARCH 7TH, 1903.

THE EXECUTIVE COMMITTEE OF THE GENERAL MEDICAL COUNCIL.

The Executive Committee practically exercises the functions of the General Medical Council in the intervals between the plenary sessions, and the minutes of the meeting of the Committee on February 23rd contain sundry matters of interest to the profession. The accounts for the year 1902 were presented, and, as was anticipated, show a serious deficit of income as compared with expenditure, amounting to £1,332; indeed for purposes of comparison with other years it is even larger, for to it must be added the amount of the exceptional receipt of £408, arising from the surrender of the sinking fund instituted with an insurance company; but for this the deficit would have been £1,740. While the expenditure is increased by some few exceptional items, the receipts are somewhat diminished, owing to the fact that the total number of new registrations effected have been fewer. This diminution has been going on for some years past.

The tables relating to the competitions for the Naval Medical Service and for the Indian Medical Service are worthy of some scrutiny, and do not justify the persistent refusal of the Education Committee to analyse and comment upon these official statistics. Without seeking to attach too much importance to the results of a single examination, it may be pointed out that the navy did not attract many candidates in excess of the vacancies advertised, possibly not even an adequate number, for every one of those who qualified, that is to say, all but three of the candidates, received commissions, nor did it attract many candidates possessed of university degrees. The majority of those who passed held the English Conjoint diploma. The highest of those candidates who held the Scotch and Irish Conjoint diplomas was placed below those who held degrees of Scottish and Irish universities and the diplomas of the English Conjoint Board. In the competition for the Indian Medical Service the university candidates, with a single exception, monopolized the vacancies, though a good many of them held also the diplomas of the English Conjoint Board. There were 40 entries for 13 vacancies 24 candidates qualified, of whom 18 held English degrees or diplomas (1 had also a Scottish degree), 5 held Scottish, and 2 Irish. Of those who failed to qualify, 3 held English, 11 Scottish, and 2 Irish degrees or diplomas. Classified from a different point of view, out of the candidates who possessed University degrees, 50 per cent. obtained commissions and 70 per cent. qualified, while of the candidates without university degrees only 1 obtained a commission and only 44 per cent. qualified. This is a practical comment on the assertion sometimes made that the examinations of the licensing corporations reach a standard as high as that of the universities.

An inquiry was addressed to the Council respecting the position of a medical practitioner who should administer anaesthetics for a dentist who is upon the *Dentists' Register*, but who is in the employment of a company consisting of unregistered persons, and, further, as to the position of the registered dentist so employed. The matter was a little complicated by the circular which the particular company referred to had sent round to the medical men of the locality. In this document it was claimed (without mention of any registered assistants) that medical men might with propriety give anaesthetics for the company owing to the registration of the company as "surgeon-dentists, etc.," at Somerset House. This claim appears to confuse registration of a company at Somerset House with registration of individuals upon the *Dentists' Register*. It might mislead, and adds another argument to those which prove the necessity for the regulation by statute of medical and dental company practice.

The reply of the Executive Committee was confined to a recital of the Council's resolution on the subject. The Committee probably felt that it could not properly give an abstract opinion upon a matter which might come before the Council for judicial inquiry. The Committee, however, published in the minutes a letter to the Registrar from Mr. Tomes, the Dental member of the Council, in which the matter was discussed at greater length. We understand that it is not unusual to refer matters to individual members for comment, and it appears that this case had been referred to Mr. Tomes. Possibly no significance is to be attached to the publication of his letter, but, on the other hand, it seems a fair inference that it would not have been placed on the minutes had the Executive Committee disagreed with its general purport. If this be so, it may be taken to be an unofficial indication of the views of the Committee. It is curious that the next entry on the minutes should have reference to a new Act regulating the practice of dentistry in South Australia, which expressly extends the provisions of the Act to companies, societies, or other pluralities of persons. Elsewhere we read in the minutes that the President communicated to the Committee the steps which had been taken in regard to a Bill dealing with this subject, but the nature of the steps taken is not stated. The object of this minute therefore remains obscure.

A curious state of things has arisen with regard to the manufacture of a pastille made from a formula of the Liverpool Throat Hospital. It appears that a firm of chemists has entered into an agreement with the Attorney-General to pay a sum of money annually to the hospital so long as they alone manufacture this pastille. It is stated that the Attorney-General seeks to place the hospital under a bond of secrecy as to this formula. To this the medical staff very properly object. They refuse to serve under any such pledge, and ask the support of the General Medical Council in their attitude. It is a somewhat strange outcome of circumstances that the chief law officer of the Crown, should be seeking to impose upon members of his former profession conditions which they deem to be contrary to professional ethics. The Executive Committee expressed its agreement with the view that professional men should not pledge themselves to secrecy in regard to the composition of any remedy which they may use or authorize in the treatment of patients.

THE LONDON COUNTY ASYLUMS LABORATORY.

Among the many achievements of that enterprising body, the London County Council, there is none of greater importance to the well-being of the community for which it works than the foundation of the Pathological Laboratory at Claybury. All who are interested in the progress of medical science—and who, unless it be Mr. G. B. Shaw and a few faddists of his complexion, is not?—owe a heavy debt of gratitude to Sir William J. Collins, who was the initiator of the scheme and who took the chief part in carrying it into effect. He doubtless had to educate his party, who are somewhat mistrustful of science as being not always in harmony with the "democratic idea." He has all the more reason to be proud of the success which has crowned his far-seeing policy. The Laboratory under the able direction of Dr. Mott has fully justified its existence. Although it is not yet eight years since it was established, it has returned, in the form of practical benefit to the unfortunate sufferers under the care of the Council, more than can be estimated in terms of money. Moreover, it seems likely to yield such an output of new knowledge as to the causation of insanity as may lead to the prevention of some of its commonest forms, and thus to the saving of much money which might be applied for the greater good of the people in other directions. The immense practical importance of the work done in the Claybury Laboratory is shown by the researches pursued by Dr. Mott and his assistants, some account of which is given in a review of the second volume of the *Archives of Neurology*, published elsewhere.

The outbreaks of dysentery in asylums, which used to be looked upon alike by Boards of Management, superintendents, and Commissioners as something in the nature of "visitations of God," have been shown by the investigations of Dr. Mott and Dr. Durham to be due to avoidable causes. The doctrine was naturally unacceptable to those responsible for the sanitary condition of asylums; but Dr. Mott has borne down all opposition by the sheer weight of facts, and in their last Report the Commissioners in Lunacy have adopted the term "dysentery" instead of the misleading "colitis," and have initiated "a plan based on that adopted by Dr. Mott to ensure the registration and notification of cases of dysentery and diarrhoea in asylums amongst members of the staff as well as patients." The Commissioners now also recognize the fact that the disease is communicable. As a result of the recommendations made in the report of Drs. Mott and Durham, the death-rate from dysentery at Claybury has already diminished. In the new volume of the *Archives* additional precautions are suggested by Dr. Mott, the adoption of which will, he thinks, stamp out the disease as an epidemic scourge in asylums.

Scarcely less fruitful have been the labours of Dr. Mott in the field of pathological research. He has shown the preponderant part played by syphilis in the production of general paralysis of the insane; that disease, too, he has pretty conclusively proved to be etiologically and pathologically identical with tabes dorsalis. This will serve to give an idea of the far-reaching activity of the syphilitic poison in the production of nervous and mental diseases, and points the moral that these could to a large extent be prevented by the limitation of the ravages of syphilis. Dr. Mott's conclusions on this subject are confirmed by the researches of Dr. Watson and Dr. Joseph Bolton. Dr. Tredgold shows that heredity is the most important cause of idiocy and imbecility, and the observations of Drs. Bolton and Watson illustrate the large share taken by the same factor in the production of mental disease. Here, too, we have what is strictly speaking a preventable cause, for if persons of diseased stock could be induced to refrain from marrying, there would be no inheritance of the conditions which engender madness. Alcoholism and tuberculosis, the influence of which in the causation of idiocy and imbecility is well shown by Dr. Tredgold, are also preventable factors. So, too, in some degree are "stress" and worry. Dr. Mott is of opinion that old-age pensions, or a plan for the benefit of working people such as exists in Germany, and is beginning to come into operation in Birmingham and Sheffield, would do much to keep a number of people out of asylums.

Enough has, we think, been said to show the importance to London, to the nation, and, indeed, to the whole human race, of the work done in the Laboratory at Claybury. But the value of such an institution cannot be measured by the immediate utility of the results there obtained. Truths which seem to have no practical application to-day may later become the starting points of inventions which will profoundly modify human existence, and apparently trivial improvements in methods of research may become the means of most important discoveries.

Excellent, however, as is the work already done in the Claybury Laboratory, we cannot help feeling that its range of usefulness might be greatly enlarged if it were in a more accessible situation. The reason advanced for placing it at Claybury was that the pathologist might be able to supplement his *post-mortem* researches by clinical observation. This advantage might be even better secured if the laboratory were transferred to London. There he would be at the centre, and could thus utilize the clinical opportunities offered by the other county asylums more easily than he is able to do at present. A few eager students have at considerable inconvenience worked at Claybury, but we are sure that the almost limitless material available at the Laboratory would attract a much larger number of investigators—among them doubtless many officers of the other county asylums—if it were in London. Situated where it is, the Laboratory cannot be recognized by the University of London, as it lies outside its area. This is unfortunate, for connexion with the University would not only give prestige to the Laboratory, but would greatly increase its usefulness, both for teaching purposes and for research, while filling a gap in the organization of the University itself. We venture, therefore, to urge on the serious consideration of the County Council the expediency of transferring the Laboratory to London. It might thus, in the words of Dr. Mott, "be made a centre of neuro-pathological science," and its light would shine before all men, attracting students from every part of the civilized world.

PRIMARY ABDOMINAL PREGNANCY.

Witthauer[1] claims to have observed a genuine case of primary abdominal pregnancy. Ten years ago it was taught that all ectopic gestations were primarily tubal, so that there could be no such thing as a primary ovarian or abdominal pregnancy. But Van Tussenbroek has demonstrated the possibility of primary ovarian pregnancy, and several genuine cases have recently been recorded. As for a fertilized ovum developing in the abdominal cavity between the ovary and the tube, such a condition has not

[1] *Centralbl. f. Gynäk.*, January 31st.

been demonstrated until the publication of Witthauer's case. Mr. J. W. Taylor, of Birmingham, considers that "arrest in the abdominal cavity between the ovary and tube is probably fatal at once to the unprotected ovum, and consequently may be eliminated from discussion." He describes abdominal pregnancy as always secondary. A tubal sac ruptures, and the ovum manages to escape into the abdominal cavity without damage to the placenta. The fetus may in such a case continue to develop, but the placenta always remains connected in part with the tube. Dr. Giles and Mr. Bland-Sutton do not recognize a primary abdominal pregnancy in the last edition of their manual.

Witthauer takes up another challenge. Referring to a passage in Mr. Alban Doran's paper on a fetus found in the peritoneal cavity,[2] he remarks that the author admits that when a minute but recent and entire fetus is to be seen lodged in a true gestation sac inside the ovary or on the peritoneum away from the tube, then we shall begin to believe in primary ovarian and abdominal gestation. Since those words were written a gestation sac has been detected in the ovary more than once. Witthauer insists that in his case, though the fetus had disappeared owing to the early stage of the pregnancy, he found abundant products of gestation in a blood clot wrapped up in a corner of the free edge of the omentum.

The patient was 23; the period returned six weeks after her second pregnancy, but ceased ten months later. In about six weeks irregular discharge of powdery dark blood was noted, followed by violent pains and anaemia. The patient was taken into hospital; a tumour was detected in Douglas's pouch and the right fornix. Next day symptoms of internal haemorrhage were observed. Abdominal section was therefore performed; over two pints of blood and clot were found free in the peritoneal cavity. A tag of omentum was found adherent to the pelvic viscera to the right of the uterus. The right ovary was converted into a cystic tumour of the size of a hen's egg, and was removed with the tube, which was perfectly normal. The left appendages were healthy; the uterus was not appreciably enlarged. No source of haemorrhage could be detected in the uterus or its appendages, but rolled up in the piece of omentum which adhered to the pelvic organs was a small haematoma, described as of the thickness of a thumb. The patient recovered, and has recently become pregnant for the fourth time. The haematoma was found to contain abundant chorionic villi, enclosed in a capsule of clot itself encapsuled in omentum. The ovum itself had escaped. The corresponding Fallopian tube was quite healthy, patent, but undilated, and no chorionic villi could be detected in its walls.

In association with this case we may turn attention to Dr. Kamann's communication (p. 543) on apparent secondary abdominal pregnancy in a rabbit after primary rupture of the uterus. He gives his reasons for believing that the fetal sac did not originally develop in the omentum. Mr. J. W. Taylor, whilst declaring as above stated that the unprotected ovum in the peritoneal cavity is speedily killed, considers that secondary abdominal pregnancy may be established when a fetus escapes from a tubal sac enclosed in its unruptured membranes; not only must the membranes be intact but the placenta must retain its attachment to the tube and receive sufficient blood supply from the maternal blood vessels. In Witthauer's and Kamann's cases the fetal sac had no connexion of any kind with the tube or uterus.

Witthauer's explanation of his case, which deserves careful study, will not absolutely convince sceptics, for he admits that tubal abortion was suggested by some of the symptoms, yet relies on the fact that the tube was perfectly healthy. We know that when a gravid tube discharges an ovum, it becomes reduced to its normal size very rapidly. Still the total absence of any histological products of conception in the tube supports Witthauer's opinion; in other words, it is probable that in this case a fertilized ovum became primarily implanted on the omentum. It is singular that haemorrhage so severe proceeded from so small a body as this haematoma; the same phenomenon is observed when a tubal gestation sac ruptures. This case must be borne in mind for medico-legal reasons, when a case of death from intraperitoneal haemorrhage occurs in a woman, and the ovaries and tubes are found free from any gestation sac. Such a sac may possibly be found elsewhere, and it may be very small, though the seat of origin of the fatal loss of blood.

[2] *Transactions of the Obstetrical Society of London*, vol. xxxv, p. 237.

RUMOURED ADMIRALTY SCHEMES.

We felt it to be our duty last week to call attention to rumours which were in circulation in military clubs in London to the effect that the Admiralty had seriously under consideration a scheme to provide the Royal Navy with medical officers by temporary engagement. We pointed out that any scheme revolutionizing the system upon which the medical service of the navy is established would be closely scrutinized by the medical profession. We are very glad to be able to publish elsewhere an official denial of the circumstantial and widespread rumours to which we have called attention, and to learn that the Admiralty has no such scheme now under its consideration. We hope that this may convince everybody that though there was smoke there was no fire, and that the rumours, though they may not have originated in the smoke room, may be allowed to end in smoke.

THE CREMATION ACT REGULATIONS.

The Home Secretary, with commendable promptitude, has issued a Blue Book containing the report of the Departmental Committee appointed to prepare a draft of the regulations to be made in pursuance of Section vii of the Cremation Act, 1902. We elsewhere give an abstract of the report, and the regulations will be found, we think, quite stringent enough to satisfy those most strongly exercised about the risk of cremation being likely to cover crime. The regulations are, indeed, drawn with an almost morbid anxiety to meet this risk. It is, perhaps, well that this feeling should have actuated the Committee, for the whole future of cremation in this country would be imperilled if any good cause was shown to justify the fear that crime might be less easy to detect on account of its adoption. The very elaborate and exhaustive report of the Committee, covering all the exhumations during the last nine years, by which they have tested their proposed regulations, will go far to convince every one that under the very careful system of death certification proposed, crime which escapes under the present defective law is almost certain to be detected in a case in which cremation is adopted for the disposal of a body. The only criticisms we feel inclined to make is that the regulations are too minute, and that the precise and plentiful details to be observed may be a check to the adoption of cremation. It is, however, an error (if it be an error) on the right side. We observe with pleasure the many references of the Committee to the Report on Death Certification, 1893, and we hope the very candid exposure of the defects of the present system brought out in this report will cause the Government to take steps

to consider the amendment of the present system of death certification, which has been delayed, in our opinion, most unjustifiably.

MISTAKEN DIAGNOSIS OF INFECTIOUS DISEASES.

THE Hospitals Committee of the Metropolitan Asylums Board has just issued a statement of the numbers of cases of mistaken diagnosis sent to the Board's hospitals as notifiable during the last three years. It appears that in 1899, 1,583 cases of disease were sent which were not in reality notifiable diseases; this gave a percentage of mistakes on the total cases of 6.3. In 1900 the number was 1,706, yielding a percentage of 7.9; and in 1901 the number reached 2,365, or a percentage on total cases of 9.2. The largest number of cases in 1901 thus admitted to any one hospital was at the Park Hospital, where the percentage was 11.9 of the total (436 cases out of 3,643). It appears that the percentage on the total cases was, for scarlet fever 5.6, diphtheria 12.8, and enteric fever 25.5. Amongst the diseases diagnosed as scarlet fever were measles, rubella, tonsillitis, erythema, "and 168 had no obvious disease." Measles and tonsillitis were also returned as diphtheria in 47 and 880 cases respectively "and 21 had no obvious disease." Amongst the cases wrongly certified as enteric fever were 13 of influenza, 22 of febricula, 9 of bronchitis, and 86 of pneumonia. Twelve had no obvious disease. As to notified small-pox 13 per cent. of the cases turned out not to be suffering from that disease. All these returns are very instructive and raise a number of speculative questions. Doubtless the proportion has risen during the three years in part owing to the increased facility of removal, medical practitioners finding it more convenient under all the circumstances to send the case to hospital if in doubt. On the other hand, in respect to typhoid fever and diphtheria, free bacteriological diagnosis is now available in most of the metropolitan boroughs, and as it comes to be more generally resorted to we may expect to see some decline in the number of cases of mistaken diagnosis. The further question is raised by the Hospitals Committee as to whether or not more assistance can be rendered in doubtful cases by the medical officer of health for each district. That question can only be decided in each district on the merits of the case and local circumstances. It is no doubt very annoying to everybody—and not least to the medical men themselves—that these mistakes should occur, but it sometimes seems to be forgotten that the whole system of notification is comparatively new, and that the still newer diagnosis by bacteriology is not infallible, even in those diseases to which it is applicable. We should like to see the Metropolitan Asylums Board giving greater facilities for undergraduate and post-graduate instruction and study in the diagnosis and treatment of notifiable diseases.

BRITISH MEDICAL BENEVOLENT FUND.

THE annual general meeting of the subscribers to this Fund was held on February 24th. The President, Sir William Broadbent, Bart., was in the chair, and the Treasurer's financial statement and the report of the Committee for the past year were presented and adopted. The latter stated that, owing to the falling off in subscriptions, the grant department had been a source of constant anxiety and that it had been necessary to spend a reserve of £200 which had been set aside from a legacy to meet any exceptional crisis. Subscriptions amounting to £1,026 19s. 4d., and donations amounting to £488 16s. 2d. had been received, and the sum of £1,503 10s. had been distributed to 152 applicants in grants varying from £5 to £18, and payable, in most cases, by monthly instalments. In the annuity department the interest from investments had yielded an income of £2,450 6s. 7d., and £2,291 10s. had been received by the annuitants, who numbered 115. The working expenses of the fund had been only just over 5 per cent, and the accounts had, as usual, been subjected to a strict investigation by chartered accountants, the audit this year having been most kindly undertaken by Messrs. Deloitte, Dever, Griffiths and Co. Hearty votes of thanks were accorded to the President and other officers, who were unanimously re-elected, and the meeting concluded with a warm acknowledgement of the support always given to the charity by the medical Press.

THE FUTURE OF ST. BARTHOLOMEW'S HOSPITAL.

THE following official account of the proceedings of the Lord Mayor's Committee on the question of the removal, rebuilding, or remodelling of St. Bartholomew's Hospital was issued after the meeting on March 2nd. It is stated that a proposal to recommend that the whole of the Christ's Hospital site should be acquired was made but rejected:—"A further sitting of the Lord Mayor's Committee of Inquiry into the Affairs of St. Bartholomew's Hospital was held at the Mansion House. The Lord Mayor presided, and the Committee, after a careful consideration of the evidence taken at the four previous sittings, and after a prolonged discussion, passed the following resolution by fourteen votes to one: 'That, in the opinion of this Committee, it is desirable in the public interest to retain St. Bartholomew's Hospital on its present site.' It was then decided, on the proposition of the Lord Mayor, to form two subcommittees, the first to deal with buildings, and the second with administration and finance, in order to investigate thoroughly the best means of providing a hospital perfect in every detail, and brought up to the latest requirements of modern scientific knowledge, on the present site of the hospital in Smithfield. These subcommittees will meet, the former on Mondays and the latter on Fridays, until their investigations are complete."

DEATH-RATES AMONG ITALIANS IN LONDON.

SOME interesting figures were laid before the Royal Commission on Alien Immigration last week by Dr. Newman, the Medical Officer of Health of Finsbury, in respect to the Italian colony, half of which is situated in the Borough of Holborn and half in the Borough of Finsbury. A special enumeration of the Italians now resident in the Finsbury part of the Italian colony has been made, with the result that the total reaches a little more than 750. In the Holborn portion of the colony there are probably double the number. In addition to the 750 Italians, there are about 700 English people living in the courts and alleys constituting the real Italian quarter of Finsbury. The two peoples do not intermix, but live alongside each other under precisely the same conditions, except the social standard and manner of life adopted. It appears that, contrary to expectation, or at all events to what is commonly supposed, the Italians have a higher standard of personal cleanliness than the same class of English people living in the same immediate locality, and have greatly improved during the last ten or twenty years. The various rates have been taken out for each of those two bodies of persons living alongside each other, with the result that the Italians compare favourably with the English. For 1901 and 1902 respectively Dr. Newman finds that the death-rate for the English is 40.3 and 35.8, and the infant mortality for the two years 259 and 242 per 1,000 births. For the same two years for the Italians the death-rates were 19.2 and 21.9 respectively, and the infant mortality 106 and 192 per 1,000 births. It is pointed out that the figures are small, and yield rates proportionately large. Death-rates for small areas may readily assume incorrect proportions, but that is not the point raised, which is a comparative illustration for the two nationalities living side by side under the same conditions. Three facts as to the manner of life of the Italians in London throw some light on the subject, and they perhaps furnish sufficient explanation of the marked difference. First, it appears the children are fewer per thousand of the population among the Italians. Naturally enough the immigrant family contains few, if any, children, and it is only after settlement that the children increase in proportion. A second fact is that the Italian in London is a bird of season, is here to-day and in Italy to-morrow, and, when ill, has an irresistible tendency to gravitate homewards.

The third fact which doubtless operates in producing a comparatively low death-rate is that the Italian in London leads a simpler and more abstemious life than his English neighbour. Although there is a good deal of overcrowding and various disabilities, there is also not a little quiet prosperity which flourishes on the ice-cream trade in the summer, and on roast chestnuts and barrel organs in the winter.

EXPERIENCE OF A WOMAN DOCTOR IN THE ORKNEY ISLANDS.

In the February number of the *Women Students' Medical Magazine* Miss C. E. O'Connor, M.B., B.Ch.Edin., gives an interesting account of her experience as medical officer to the Parish Council and Medical Association of Eday and Pharay, Orkney. She was met at Eday by the Clerk of the Parish Council, who took her to his house, where his wife gave her an excellent cup of tea, while he went to borrow a trap to drive her to the "docthor's hoose," about four miles off. The doctor's house, she says, consists of drawing room and dining room, a good-sized kitchen, a dispensary, and two bedrooms, off one of which is a little closet in which her servant slept, in a kind of berth. There is a stable for one pony, and a small coach-house. The doctor provides the pony and harness, and the Medical Association provides the gig. The doctor's duties are to visit all the paupers in the two islands once every quarter, and to attend them free whenever they are ill. If any medicines are supplied to paupers the Parish Council pays for them. While Miss O'Connor was in Eday the paupers consisted of six old women in different parts of the island. They never were ill, so she saw them only quarterly, and they were always grateful for a visit, as they were all lonely old widows except one epileptic girl. The salary is paid by the Parish Council and by the Eday and Pharay Medical Association. The former now pays £60 per annum, and the latter £20, and the doctor's house is now rent free, which it was not in Miss O'Connor's time. All the members of the Medical Association (practically every one in the island) are entitled to the doctor's services at the following rates: First visit, 2s.; every subsequent visit, 1s.; visit between 10 p.m. and 6 a.m., 3s.; tooth extraction at doctor's house, 1s., at patient's house, 3s.; vaccination, if successful, 2s. 6d.; midwifery cases, 15s. If members of the Association have visitors staying with them, the fees for attending them are half as much again as for members. Non-members may be charged twice as much, or according to doctor's discretion. Miss O'Connor made on an average £20 a quarter from fees and the sale of drugs alone. Of course the doctor can charge what she likes for drugs, but she made it a rule to charge 2d. an ounce, so that a 6-oz. bottle cost a shilling. This paid well with most ordinary mixtures. Powders and pills she charged for according to ingredients. She did not make up her own pills, but did every other kind of dispensing herself. On the whole, she says, the experience is very good. One learns to be absolutely self-reliant, as there is no help to be had. It may or may not be possible to send a boat to a neighbouring island for another doctor, but as a rule it is not possible, for either the sea is too rough for small boats to go out, or the other doctors are too busy to come. She had twenty-one midwifery cases during her sixteen months in Eday. All were normal except one placenta praevia with a transverse presentation, and one face case, both of which did well. The chief disease there, as elsewhere, is dyspepsia, commonly called "bad stomach." Miss O'Connor had some cases of cancer, some pneumonias, one empyema ending in phthisis, and a good deal of phthisis pulmonalis. She was never idle, but was out from morning till night, and sometimes all night too. She found a pony necessary. A good one could be obtained for about £10. A very good cyclist might manage without one. The roads are fairly good, but it is too often too stormy to cycle. The chief drawbacks are the expense of furnishing the house and providing a supply of drugs. About £20 worth of drugs is the least amount to start with. Servants are not very easy to get. There is little society, as the ministers, schoolmasters, and their families are the only educated people on the islands. In the North Isles there are only two posts in and out weekly in winter, and three in summer. There is a telegraph office in Eday. Three months' notice has to be given on either side, but the parish council can dismiss their doctor without giving any reason, though Miss O'Connor never heard of such a thing being done in Orkney. The people are very easy to get on with, and are invariably good mannered and grateful for every little service. There is no public-house in Eday or Pharay, so there is no drunkenness, but this does not apply to other islands. Living is cheap. Other Orkney islands which have or have had women as medical officers are Longhope in Hoy, Flotta, and Papa Westray. Longhope or South Walls is more in the world than the North Isles and has a daily post.

PUBLIC HEALTH IN NEW ZEALAND.

The second annual report of the Health Department of New Zealand (1901-2) is an interesting document. It consists of a report by Dr. Malcolm Mason, the Chief Officer, together with several local reports of his colleagues. There is an appendix on the Maoris and another on pathological work done during the year. Amongst the principal subjects dealt with by the Chief Medical Officer are the precautions instituted against the plague, the investigation of cases of leprosy, and some particulars respecting sanitation and infectious diseases and outbreaks. As many as 40 or 50 cases of leprosy were reported among the native population. These were investigated and only two were found to be leprosy, excluding those found to exist in some of the recently annexed South Sea Islands. The majority of the cases turned out to be a mixture of syphilis and tuberculosis. Of the 2 cases of leprosy 1 was a Chinaman, a gold seeker, living alone and isolated from other persons, and the other was a Maori. It is proposed to survey Penrhyn Island at an early date with the object of ascertaining the existence or otherwise of any considerable amount of leprosy there. Dr. Mason also reports at length on an outbreak of food poisoning due to infected whipped cream which was consumed at a dinner at an hotel. Fifteen persons were poisoned and one died. The symptoms were those of ordinary gastric poisoning, including severe abdominal pain, vomiting, diarrhoea, and great prostration. Analyses were made but nothing was found. Most of the implicated food had been destroyed and the outbreak was concealed for two days, so that the investigation was almost hopeless. There were various defects in the dairy and cowshed, but in comparison with conditions generally obtaining in these places not exceptional. The report of the pathologist, who is a veterinary surgeon, more than justifies the establishment of a Government bacteriological laboratory. Four hundred and thirty-one specimens have been forwarded for examination, including 98 sputa for examination for the presence of B. tuberculosis; 35 diphtheria swabs; 49 tumours, etc.; 30 waters for analysis, and 6 bloods for Widal reaction. In addition to these routine matters a number of special investigations have been made in relation to plague, etc. The report is illustrated by four well-known plates of small-pox cases and three of leprosy. It should be added that an interesting note in the report deals with "returned troopers" from South Africa, many of whom seem to have brought back malaria and measles.

LUNACY IN NEW YORK STATE.

The annual report of the New York State Commission in Lunacy for 1902 stated that during that year the number of insane persons in the State hospitals was 24,061, and in the private asylums in the State 931. The net increase in all institutions during the year was 678. The new cases committed to the State hospitals numbered 4,566; cases discharged as cured 1,125, discharged as improved 1,358, discharged as unimproved 2,655, deaths 1,808. Fifty-seven patients were discharged as not insane, these including cases of alcoholism, drug habit, etc. The percentage of

recoveries, based on the original commitments in the State hospitals, was 24.6, a proportion somewhat below that of 1901, but higher than that of the three preceding years. The percentage of deaths was 39.6, a marked decrease as compared with the previous year. The Commission recommends the establishment of a reception psychopathic hospital in a quiet neighbourhood readily accessible from all parts of Manhattan, so as to suit the convenience of patients and consulting physicians as well as of the students of the various medical schools, who may there have the opportunity for obtaining a practical knowledge of insanity and its treatment. It urges the necessity of the immediate establishment of a new State hospital to which insane patients belonging to Albany, Rensselaer, and contiguous counties may be sent. The purchase of 1,000 acres of land and the erection of buildings to accommodate from 2,000 to 3,000 inmates are recommended, and in connexion with this hospital the establishment of a pavilion for patients suffering from tuberculosis. It is pointed out that a self-supporting industrial colony might gradually be put in operation here. Among the other recommendations of the Commission are five-day commitments of emergency cases to the State hospitals without the formality of legal commitment pending a determination of sanity, and the extension of the system of voluntary patients to the State hospitals. Since 1898 private licensed institutions have been permitted to receive such cases, and the number of these on October 1st, 1902, was 155. The number of private licensed asylums in the State is now 23.

THE GUINNESS AND PEABODY MODEL DWELLING COMPANIES.

THE annual reports of these two companies for 1902 have now been issued. The Guinness Trust was established in 1890, with a capital of £335,559, £200,000 of which was given by Lord Iveagh. The surplus income on the workings for 1902, after providing for depreciation, amounted to £11,467, £1,694 of which has been added to the contingency fund and the rest to capital. Additional buildings, containing 55 tenements, were opened in the autumn in Fulham Palace Road. All the buildings continue to let well. At the end of the year there were 9,517 persons living in these dwellings; the birth-rate was 47.6, and the death-rate 15.6 per 1,000. Lord Iveagh, it will be remembered, also gave £50,000 in 1889 for the establishment of a similar trust fund in Dublin; the net income in 1902 was £1,237, and 1,066 persons are living in the dwellings. A Bill is now being promoted for the amalgamation of the Guinness Trust Dublin Fund and the Dublin Improvement (Bull Ally area) scheme, so that all the property of the Guinness Trust shall be visited in "Iveagh Trustees," and hence the annual report of the Trust will relate in future only to the London Fund. The Governors of the Peabody Donation Fund report a net income of £32,673 for 1902, which is the lowest on record. The total capital of the Fund up to December last was £1,392, 470, and the capital expenditure on land and buildings to the same date was £1,358,173. During 1902 £15,978 was expended on repairs, etc. To the end of last year the governors had provided 11,918 rooms, besides bath rooms, laundries, and lavatories. These rooms comprised 5,387 separate dwellings, 101 of four rooms, 1,828 of three rooms, 2,572 of two rooms, and 886 of one room. The twelve blocks in Rosendale Road, Herne Hill, opened in February last, did not let satisfactorily, and the rents of the two-room and three-room tenements were reduced 6d. a week from the beginning of 1903. The average weekly earnings of the head of each family in residence in Peabody Dwellings at the close of last year was £1 1s. 9d. The average rent of each dwelling was 4s. 4½d. a week, and of each room 1s. 11½d. in respect of those estates where the rates are now paid, as by arrangement made in 1902, direct to the local authorities by the tenants. In cases in which the governors still pay the rates the average of each dwelling was 4s. 9½d. and of each room 2s. 3d. The rent in all cases includes the free use of water, laundries, sculleries, and bath rooms. The birth-rate for 1902 reached 32.3 per 1,000, and the death-rate was only 13.6. The infant mortality was 97 per 1,000 births.

DRINKERS IN THE UNITED STATES ARMY.

INSPECTOR-GENERAL SANGER of the United States army in the Philippines has made an investigation into the drinking habits of the troops, the result of which is published in the *Quarterly Journal of Inebriety* for January. Of 342 companies in the service, in 60 every man used spirits; in 130 companies from 90 to 100 per cent. used it; in 58 companies there were from 80 to 90 per cent.; in 26 companies from 70 to 80 per cent.; and in 20 companies from 60 to 70 per cent. used spirits. On the other hand, during the Civil War there were regiments and divisions in which not more than 20 to 30 per cent. were drinking men, and it is somewhat remarkable, if true, that the modern army contains more drinking men than the volunteer service in the Civil War. It is estimated that of the 20,000 railroad men in the transport service of the great railroads less than 10 per cent. are drinking men. One of the great trunk lines, employing several thousand men, reports that less than 3 per cent. of its employés use spirits. Another startling statement is made by Colonel Sanger, that in 71 of the companies in the Philippines from 10 to 35 per cent. were chronic inebriates, who drank at all times and places to excess.

STEREOTYPED ATTITUDES AND GESTURES IN INSANE PATIENTS.

THE attitudes and gestures of a stereotyped character which occur in the various forms of insanity have an undoubted pathological significance and importance. In the domain of neurology the classical work of Charcot and Richer on *Hystero-epilepsy* has familiarized us with the gestures, attitudes, and poses characterizing the various phases of that disease. Dr. Albert Cahen, of the Bicêtre,[1] has dealt recently in a lengthy paper with the attitudes and gestures of a stereotyped character which occur in the insane, and points out their practical importance as regards prognosis. These attitudes and gestures should not be confounded with the tics and rhythmic movements exhibited by idiots, or with spasms, choreic movements, or impulsive acts. The movements and attitudes in question have been described as automatic, of long duration, and repeated frequently in the same way, whence the epithet "stereotyped" has been applied to them. They have nothing of a convulsive character about them, but have a "pseudo-intentional or professional manner," and include attitudes or postures, utterances, gestures, and other acts, including locomotion. Dr. Cahen gives a number of such instances as follows: crouching or other attitude of resting maintained persistently, standing or sitting in a fixed pose, buttoning and unbuttoning the clothes incessantly, gestures of stamping, walking a few paces forward and then backwards, repeated lispings or whistlings or the uttering of mystic words and neologisms, mutism, etc. When a *stéréotypé* is observed at the onset of his illness, inquiry generally reveals that the cause of his peculiar conduct is generally a delusion. Ideas of grandeur, and especially of defence against some agency are the commonest causes. Next in order of frequency are delusions of a mystic, persecutory, or hypochondriacal character. Hence the patient, when acting as he does in response to delusions in an early stage, is acting consciously, but, later by repetition, the reaction becomes automatic and subconscious. This stage marks a condition of fixity of the original delusion whose pathways through the brain to the bulbo-spinal "motor" centres have become organized, so that the circuit is automatically completed. Such stereotyped acts are present in dementia praecox, catatonia, dementia secondary to the vesanic psychoses, *délire de négation*, paranoia, and in secondary mental enfeeblement generally. Hence they may be also observed in general paralysis and in the insanity of obsessions. In order to make the study

[1] *Archives de Neurologie*, December, 1901.

of symptoms more precise, such clinical manifestations as athetosis, tremblings, and convulsive tics were excluded, but it is more difficult sometimes, says the author, to distinguish stereotyped movements as above described from those of hysteria, and especially hystero-epilepsy. Such movements and symptoms, however, are of bad prognosis as indicating some degree of permanent mental enfeeblement—at any rate, as indicative of chronicity and incurability.

THE ROYAL ORTHOPAEDIC HOSPITAL, LONDON.

WE publish elsewhere a letter from Mr. H. A. Reeves, which requires some explanation. For some years past there has been a proposition to sell the site upon which the Royal Orthopaedic Hospital now stands in Oxford Street, next door to the offices of the General Medical Council, and erect a new hospital on another site elsewhere. The proposal was strongly resisted by some of those responsible for the conduct of the hospital, including certain members of the surgical staff, of whom Mr. Reeves was one. This difference of opinion has led to a good deal of bitterness, which found expression during a somewhat heated discussion at the annual meeting in April, 1902. Mr. Reeves, who took part in this discussion, appears to have been led into making a statement which was incorrect, at least in form, but for this he subsequently apologized, and the apology was published. Nevertheless, the Committee of the hospital shortly afterwards passed a resolution inviting Mr. Reeves to resign. Strong in what he conceived to be the justice of his cause Mr. Reeves did not take this course, and, as will be seen from the letter published elsewhere, the annual court of Governors held on February 26th last did not re-elect him either as a member of the Committee of Management or as honorary surgeon to the hospital, which thus loses the services of one who has been connected with it for nearly thirty years, and has devoted his best energies to the advancement of its interests and the welfare of the patients which it exists to serve. This appears to us a most unfortunate incident. We have not been able to sympathize with the view which Mr. Reeves took with regard to the proposed removal of the hospital; the arguments in favour of removal to a larger area and cheaper site appear to us to be overwhelming, and the sale of the present site has been sanctioned by the Charity Commissioners. We had hoped that the controversy was at an end, and we extremely regret that the governors should have thought fit to stir it again into activity by practically dismissing Mr. Reeves for resisting a plan which he conscientiously held to be opposed to the best interests of the institution. We hope they may still find an opportunity for reconsidering their recent action.

PHYSICAL AND MENTAL DEVELOPMENT.

ON the occasion of his address delivered before the Berlin Veterinary College in commemoration of the German Emperor's birthday, Dr. Hermann Munk chose as his subject the influence of practice in the evolution of physical and mental powers. The dictum of the old Greek philosophers that *πάντα ῥεῖ*, or everything is in flux, he thought especially applicable to the science of living matter. The living organism, he said, was essentially dependent for its development on the ceaseless processes of anabolism and catabolism carried on through the intermediate agency of the blood stream; specialized development in particular directions was determined at the outset by the increased blood supply which flowed to an organ in response to the increased demand for the exercise of its function. This law not only held good for physical growth, but also served as a general principle by which to explain the more complex processes of development, which determined the differentiation of the central nervous system as regards both its motor and its sensory functions. The concluding portion of the address was occupied by an elaboration of this theme, and the history of mental development from infancy to manhood was described, in more or less popular language, from the standpoint of physiological psychology.

TUBERCULOSIS IN SCHOOL TEACHERS.

A PUBLIC school teacher of Chicago has recently, we learn from *American Medicine*, been debarred by the Board from entering her schoolroom on the recommendation of the city superintendent, because it is believed that she is suffering from advanced pulmonary tuberculosis. The teacher is said to be a Christian Scientist, and asserts that she has no disease, though she is being treated by a Christian Science healer. Medical members of the Board of Trustees have been appointed a Committee to draw up appropriate resolutions to be adopted by the Board requiring all teachers under suspicion of tuberculosis or other infectious diseases to submit to medical examinations by the Board's physicians before continuing their school work.

SUICIDE AND MODERN CONDITIONS OF LIFE IN AMERICA.

THE recent census returns for some of the cities and districts of the United States serve to throw an interesting light on the relations of population and modern conditions of life to suicide. In Chicago the population amounted to 1,699,000, or one forty-fifth of the total population of the States in 1900, but the suicides numbered 385 as against 5,340 for the whole of the United States. Thus Chicago claims one-thirteenth of the suicides—that is, three and a-half times the average suicide-rate of the rest of the country. According to the *Philadelphia Press* the suicide-rate for Chicago is four times as great as that for London. "Life in all its phases," says the same paper, "is fast and furious in Chicago, and these melancholy figures help to tell the story." Two other peculiarities are shown in the recent returns of suicides in American cities, namely, the recession of natives of Germany from the head of the list, and an increase in the number of suicides among the coloured people. Thus, in New York city there were more suicides by native-born Americans than by Germans, though the disparity was small. An interesting fact is revealed as regards German men and women. While the number of German men who commit suicide is larger than that of male suicides of any other nationality, suicide among German women is comparatively rare. The suicides of coloured people have been more numerous in the large cities of the Southern States, where they abound, than in the North. It is stated that coloured residents of farms or small towns seldom commit or attempt suicide. It is in the larger cities, where the struggle for existence is attended by conditions unfavourable to them, that suicide prevails among the coloured inhabitants. In proportion to their relative numbers in the United States, Englishmen resident in the States have a higher suicide-rate than Irishmen. Among males of French and Swiss nationality resident in the States the ratio of suicide is high, but among the women suicide is comparatively unknown. In respect of the total number of suicides compared with the population, Chicago and San Francisco have the unenviable notoriety of ranking highest among American cities, while Baltimore and Richmond come low down in the list. The difficulty of eliminating fallacies in regard to statistical returns of suicide is known to be great, but the broad facts seem to show clearly that increase of suicide goes side by side with the growth of population and the increase of competition and pace in living, that the suicide-rate is therefore high in populous and growing cities, that the Saxon is, *caeteris paribus*, more prone to suicide than the Celt, and that the negro element, in entering the arena of the fierce struggle for life in the States, is more liable to suffer from stresses which drive him to suicide than his coloured brother who dwells on the farm or is employed in agricultural labour.

EGYPTIAN OPHTHALMIA.

THE recent generous gift of £40,000 entrusted to Lord Cromer and his successors in office, by Sir Ernest Cassel, for the relief of ophthalmia and eye diseases and for the training of qualified men for work in their prevention and treatment in Egypt, was the direct outcome of the expression of the Khedive's interest in the subject, as

contained in the proposal for an ophthalmic research hospital which had been submitted by Mr. Kenneth Scott, of London, in the hope that the funds required for starting it might be provided. The officials of the Sanitary Department, Egyptian Government, into whose hands the expenditure of the sum has virtually passed, have decided to employ it in establishing a "travelling dispensary" in the form of a tent, to suffice for all purposes of operation and treatment, and to work solely in the provinces. They will appoint an additional English inspector for a temporary period to travel with it, accompanied by a native Egyptian doctor, a post-graduate local medical student, two male hospital attendants and two servants. Beyond the initial cost of about £250, its annual maintenance, inclusive of salaries, is estimated at £900.

THE Senate of the United States passed a Bill on February 4th granting a pension of 125 dollars (£25) a month to the widow of the late Dr. Walter Reed, in recognition of his eminent services in connexion with the yellow fever investigations in Cuba.

THE conclusions of the Committee appointed by the Royal Medical and Chirurgical Society of London to investigate the subject of suspended animation in the drowned will be brought before the Society by Professor E. A. Schäfer, at a special meeting of the Society to be held on April 28th.

AT the Graduation Ceremony of the University of Glasgow on April 21st, the honorary degree of Doctor of Laws (LL.D.) will be conferred on Sir William Tennant Gairdner, K.C.B., M.D., Emeritus Professor of Medicine in the University of Glasgow; and Dr. Thomas Oliver, Professor of Physiology in the University of Durham.

ON February 4th last Sir James Grant, K.C.M.G., M.D., celebrated the completion of fifty years of active continuous practice by entertaining in St. Andrew's Hall, Ottawa, a hundred of his friends, including Sir Frederick Borden, Minister of Militia, Dr. Montizambert, Dr. Coulter, Deputy Postmaster-General, and Dr. J. G. Rutherford, Chief Veterinary Inspector, Department of Agriculture.

THE health authorities of New York seem to be in earnest in their endeavour to suppress the spitting nuisance. Quite recently forty sanitary policemen were sent out in one day to arrest persons found violating the ordinance regarding expectorating in cars and other public places. The officers made thirty-nine arrests. It is stated that there will be no relaxation in the vigilance of the police in regard to this matter until the public show a proper respect for the law.

MEDICAL NOTES IN PARLIAMENT.

[FROM OUR LOBBY CORRESPONDENT.]

The Vaccination Acts.—Mr. Coghill on Wednesday asked the First Lord of the Treasury what course the Government proposed to take on the expiration of the present Vaccination Act, and whether legislation would be proposed this session to make vaccination generally compulsory. Mr. Balfour, in reply, said that the President of the Local Government Board proposed to renew the existing Acts for a year, and to defer any further legislation to a later session. In reply to a further question, the Prime Minister declined to say that the Vaccination Act would be put into the Expiring Laws Continuance Bill, but the inference generally drawn was that the idea was in the minds of the Government.

The Prevalence of Small-pox.—At the end of last week Sir Michael Foster asked the President of the Local Government Board, whether he could state the number of districts in England and Wales in which small-pox was now prevalent, and the number of cases; and whether in any district the number of cases had been so great as to lead to special measures on the part of the local authority. Mr. Long replied that since the beginning of the year 2,397 cases of small-pox had been reported to the Local Government Board as having occurred in 212 urban and 59 rural districts. The outbreak was practically confined to England and Wales north of Birmingham, but it was chiefly in towns of Lancashire, Yorkshire and North Midlands that the disease was prevalent. Seventeen of the larger towns in those districts had had a considerable number of cases. He was glad to say that the sanitary authorities of the places concerned had been very active in taking measures with a view to stamping out the disease. Many of the places affected had been visited by a medical inspector of his department, and in most of the other cases he had communicated with the sanitary authority on the subject. He should continue to watch the course of events and to urge on the local authorities the adoption of any measures which may appear to the medical advisers of the department to be desirable.

The Debate on the Address collapsed unexpectedly on February 25th, and so the House was able to get to private members' Bills the following day. The interest in the debate on the Address lessened after the amendments on army expenditure and the Irish land conference, and the exclusion of Canadian cattle and the exclusion of aliens failed to excite much attention. Then came Indian expenditure and Irish railway rates, which closed the matter for debate, and the Address was agreed to before dinner on Thursday. This sudden termination was due to the failure of the Bethesda Quarry debate to come on as had been expected. At nine o'clock, when the House resumed, two private members' Bills, both relating to Ireland, the one to make St. Patrick's Day a bank holiday and the other to authorise the international automobile race in Ireland, passed their second readings in a record time, and the House adjourned at two minutes past nine.

The Cruelty to Animals Bill was down for second reading on Friday in last week, but as the House was counted out it did not come on for discussion. The Bill is intended to amend the Act of 1876, and is introduced by Sir Frederick Banbury and backed by Colonel Lockwood and Mr. MacNeill. It consists of fourteen clauses and a schedule of form of report as to experiment. The third clause deals with general restrictions as to the performance of painful experiments on animals, and runs as follows:

The performance upon any living animal of an experiment calculated to give pain shall be subject to the following restrictions, that is to say:

1. The experiment must be performed with a view to the advancement by new discovery of physiological knowledge, or of knowledge which will be useful for saving or prolonging life, or alleviating suffering;
2. The experiment must be performed by a person holding such licence from the Secretary of State as is in this Act as amended by the Cruelty to Animals Act, 1902, mentioned;
3. The animal must, prior to the commencement, and thenceforth during the whole course of the experiment be under the influence of a general anaesthetic of the nature of a respirable drug or gas, such as chloroform, or ether, or alcohol, chloroform and ether combined, of sufficient power to prevent the animal feeling pain;
4. The animal must be killed while it is so under the influence of such general anaesthetic as aforesaid, and before it recovers therefrom sufficiently to feel pain;
5. The experiment shall not be performed as an illustration of lectures in any medical or surgical school, hospital, college, or elsewhere;
6. The experiment shall not be performed for the purpose of attaining manual skill;
7. The substance known as curare shall not be used or administered for the purpose of or during the experiment;
8. There shall be present during and throughout the whole course of the experiment an inspector appointed under the provisions of this Act as amended by the Cruelty to Animals Act, 1902, for the purpose of ensuring that the provisions of this Act and the Cruelty to Animals Act, 1902, are fulfilled, and no such experiment shall at any time be performed or continued save in the presence of such inspector as aforesaid:

Provided that subsections (3), (4), and (8) of this section shall not apply to an experiment not calculated to give pain from the act or operation by means of which the experiment is initiated; and in lieu of such subsections the following provisions of this section shall apply to such experiment as last aforesaid, if and whenever and in so far as it shall give pain to the animal at any stage of the experiment.

(a) Directly the animal begins to feel pain it must be placed, and thenceforth while it suffers or is likely to suffer must be kept, under the influence of a general anaesthetic of the nature of a respirable drug or gas, such as chloroform or ether, or alcohol,

chloroform and ether combined, of sufficient power to prevent the animal feeling pain; or, if the animal is not so placed and kept under the influence of such anæsthetic as aforesaid, it must be forthwith killed.

(*b*) For the purpose of ensuring that the provisions of the principal Act as amended by this Act are fulfilled, an inspector appointed thereunder shall from time to time visit all places where an animal is being experimented on by a method or methods not calculated to give pain from the act or operation by which the experiment is initiated.

Clause 4 proposes that "there shall not be applied to the eye of an animal by way of experiment any matter or substance for the purpose of absorption through the conjunctival membrane." By Clause 5, Sections IV and V of the Act of 1876 are to be repealed. Clause 6 proposes to omit from Section 7 of the Act of 1876 the portion beginning with the words "provided that every place" down to the end of the section. Clause 7 proposes to substitute for Section VIII of the existing Act the following:—

The Secretary of State may license any person whom he may think qualified to hold a licence to perform, subject to the restrictions aforesaid, experiments upon living animals calculated to give pain, provided that—

(1) No licence granted hereunder shall authorize the performance of more than one experiment to be specified in such licence, or one series of not more than six connected and consecutive experiments of a nature to be so specified;

(2) Every licence granted hereunder shall specify the time and place at which the experiment or series of experiments is or are to be performed, and shall also state whether the licensee is licensed to perform experiments under Section IV of this Act, and whether such experiments as last aforesaid are licensed alone or in conjunction with any other experiment or experiments;

(3) A licence granted hereunder may be revoked or suspended at any time by the Secretary of State if he shall think fit.

Section IX of the old Act is to be replaced by Clause 8 of the Bill which reads:

The Secretary of State shall direct every licensee performing an experiment to make forthwith a detailed chronological report to him in writing of the description, course, and result of the experiment. Such report shall be made in a form in accordance with the form of report in the schedule annexed to the Cruelty to Animals Act, 1902, with such variations as circumstances may require, and it shall be transmitted to the Secretary of State within seven days after the completion of each experiment.

Clause 9 of the Bill is as follows:

Three copies of every such licence as aforesaid granted by, and three copies of every such report as aforesaid made to the Secretary of State shall be filed, and shall forthwith after the grant or receipt thereof respectively by the Secretary of State be deposited respectively in the Library of the House of Lords, in the Library of the House of Commons, and in such place accessible to the public as the Secretary of State may determine; and any person shall, subject to such regulations as may be prescribed, be entitled at all reasonable times to search the files of the copies of such licences and reports deposited in the last-mentioned place upon payment of a fee of one shilling, or such other fee as may be prescribed.

As regards inspection, the Bill proposes to replace Section X of the Act by the following Clause:

The Secretary of State shall, with the assent of the Treasury as to number, appoint a sufficient number of inspectors to carry out the provisions of this Act as amended by the Cruelty to Animals, Act, 1902, or he may from time to time assign the duties of any such inspectors, either permanently or temporarily, to such officers in the employment of the Government who may be willing to accept the same, as he may think fit.

Further, it is proposed to omit from Section XI of the present Act the words "and a certificate given as in this Act mentioned," and the portion beginning with the words, "Provided that where any person" down to the end of the Section. From Section XII of the Act as now in force it is proposed to omit the words "or giving a certificate," and from Section XIII the words "by an unlicensed person" and the words "not registered under this Act." Clause 14 of the Bill provides for its coming into operation on October 1st, 1903. The Bill was put down for second reading on Monday last and the second reading was moved a minute or two before midnight when the matter stood adjourned till Wednesday. It came up again at midnight on Wednesday and was put down for Thursday.

The Public Health Bill.—This Bill, which was introduced by Sir Francis Powell, and is backed by Sir Walter Foster, Mr. Talbot, Dr. Farquharson, Mr. Henry Hobhouse, Mr. Cripps, Mr. Heywood Johnstone, Sir Michael Foster, and Sir John Batty Tuke, is down for March 17th, but only by exceptional good luck is it likely to get a second reading on that day. The main objects of the Bill are explained in the memorandum prefixed to the Bill, the full text of which is published in the Supplement to this number of the BRITISH MEDICAL JOURNAL.

The Medical Acts Amendment Bill, introduced by Sir John Tuke, has been printed and issued. It is practically the same Bill as that introduced last year, and seeks to give the General Medical Council power to erase from the *Medical Register* the name of a medical practitioner for a limited period. It also proposes to give power to the medical authorities to deprive of his diploma any practitioner whose name has been erased from the *Medical Register*. The Bill is fourth on the list on Friday, April 24th.

Dangerous Shellfish.—Last week Sir Joseph Dimsdale asked the President of the Local Government Board whether his attention had been called to a recent report of the Medical Officer of Health for the City of London on shellfish and sewage; and whether he would take any, and if so what, action in the matter. Mr. Long, in reply, said that his attention had been called to this report. The Royal Commission on Sewage Disposal was taking evidence and making investigations on the subject of dangerous contamination of shellfish by sewage, with a view of ascertaining the measures necessary for obviating risk to the public health from this cause. He had caused a copy of the report referred to, and of other reports relating to this matter, to be sent to the Commission.

The Treatment of Incipient Insanity.—Dr. Farquharson asked the Attorney-General, on Tuesday, whether the Government would consider proposals to legalize in England a system similar to that which was in operation in Scotland for the private care of persons showing symptoms of incipient mental derangement who could not be certified as insane. Sir Robert Finlay replied that the Government had already assented to the principle of such legislation, and a clause dealing with the subject was contained in the Lunacy Bill of 1900. That Bill was introduced by the Lord Chancellor into the House of Lords at the beginning of the session, and was passed; it came down to the House of Commons on March 8th, 1900, but had to be withdrawn on July 16th.

A Pasteur Institute for Southern India.—On Tuesday Colonel Lockwood asked the Secretary of State for India whether he was aware that it had been proposed that half of Mr. Henry Phipps's gift, intended for the benefit of the Indian people generally, should be applied to the establishment of a Pasteur Institute in Southern India; could he state whether any official sanction had been given to this scheme, and whether, before any definite decision was arrived at for the allocation of Mr. Phipps's contribution, the correspondence relating thereto would be placed before Parliament. Lord George Hamilton, in reply, said that he had not received any official communication on the subject from the Government of India, but he believed that, in view of the great benefits conferred on the European and the native community in India by the Pasteur Institute in the Punjab, the Viceroy proposed to apply half Mr. Henry Phipps's munificent gift to the establishment of a similar institute in Southern India. He could not give the undertaking asked for in the latter portion of the question.

Cancer in India.—Mr. Weir asked the Secretary of State for India last week whether he was now in a position to give statistics in regard to the prevalence of cancer in India. Lord George Hamilton replied that he had ascertained from the Viceroy that in the existing condition of death registration in India he was unable to furnish information which would justify any conclusions as to the prevalence or distribution of cancer among the general population. The Government of India was considering the advisability of requiring cases of cancer to be recorded separately in future in the dispensary and hospital returns.

The Health of Hong Kong.—Mr. Weir asked the Postmaster-General, as representing the Secretary of State for the Colonies, in view of the fact that some time since Mr. Osbert Chadwick, C.M.G., and Professor Simpson, M.D., were deputed to visit Hong Kong for the purpose of inquiring into the sanitary condition of the Colony, if he would state whether it was proposed to introduce legislative measures to consolidate and amend the health and building ordinances at present in force in the Colony. Mr. Austen Chamberlain replied that a Bill to consolidate and amend the laws relating to public health and buildings had been recently under consideration in the Legislative Council of Hong Kong, and would no doubt be submitted very soon for sanction.

INDIAN SANITARY REPORTS FOR 1901.

BENGAL.

THE population of the province has undergone an increase of 5.1 per cent. during the decennium 1891-1900. The rainfall of 1901 was scanty and unevenly distributed, and the agricultural outturn below the average in many districts. The birth-rate of the year was 38.57, and the death-rate 31.04 per 1,000. The former was above the average, and the latter, though much less than that of 1900, still slightly above the normal. There was a great abatement in cholera mortality—1.48 against 4.64. A severe outbreak occurred in Puri which originated at a large fair. Preventive inoculations were fewer on account of a decrease in the number of emigrants, but figures are given to indicate success. Small-pox was in excess, the mortality being 0.5 per 1,000. The number of cases of plague returned was 90,762, and of deaths 78,629, against 40,294 and 38,412 in 1900. Evacuation, disinfection, and inoculation were the measures employed to combat it; 27,453 inoculations were performed during the year, and apparently with satisfactory results, though better evidence is desirable. Fever mortality was about the average, and bowel complaints caused fewer deaths than in 1900. There was a considerable increase of expenditure on conservancy drainage and the treatment of the sick in municipalities. The Sanitary Board only met once during the year, but a good deal of business was conducted by correspondence. The report has been drawn up by Major J. Dyson, F.R.C.S., Sanitary Commissioner.

Bengal Veterinary Department.—The report for the year 1901 by Veterinary-Major F. Raymond, F.R.C.V.S., indicates progress. The number of veterinary dispensaries in the province has undergone increase from 12 to 19, and the number of animals treated has been more than doubled. The veterinary assistants in charge are getting more private practice, and the local Boards and public are contributing more largely to the erection and support of dispensaries. The prevalence of glanders continues to occasion concern. Rinderpest was less deadly than in 1900, but killed a large number of cattle: 12,829 head of cattle were immunized. The operations are reported to have been "very successful in putting a stop to the spread of rinderpest," and encountered no opposition. The Bengal Veterinary College and Hospital are flourishing: 47 students attended, of whom 5 were Mahommedans. The results of the examinations were pronounced good, and nine men were passed out at the final examination. Efforts are being made to improve the breed of horses and cattle in Bengal.

CALCUTTA.

Dr. J. Neild Cook's report is very brief but interesting. The population of the town has undergone an increase of 19.6 per cent. since 1891. Females are very nearly half as numerous as males. The birth-rate of 1901 was 10.7, and death-rate 38.2. The former, Dr. Cook thinks, is about half the real rate, and the latter was swelled by plague and small-pox. Plague deaths amounted to 7,883, against 8,353 in 1900. The disease prevailed mostly in the hot season. Small-pox mortality amounted to 2,097, against a decennial mean of 408; 35,630 vaccinations were performed. In other respects the mortality was not excessive. A considerable number of cases of cerebro-spinal fever and enteric occurred, and an outbreak of "epidemic dropsy" was observed in June. A good deal of useful chemical and bacteriological work was done in the municipal laboratory, and praiseworthy activity shown in the condemnation and destruction of unwholesome food. The water supply of the town was regularly tested and found satisfactory, and a goodly number of tanks and wells containing impure water filled in.

UNITED PROVINCES OF AGRA AND OUDH.

This is the new title of what used to be known as the "North-Western Provinces and Oudh." The recent census has revealed an increase of 1.6 per cent. since 1891, against an increase of 6.2 per cent in the preceding decennium. The reason assigned for the diminished increment is the famine. The year 1901 was a normal and healthy one. The birth-rate was 41.35, and the death-rate 30.3, both favourable figures. A high and increasing rate of infantile mortality (232.7 per 1,000 of births) is recorded. Cholera deaths were fewer than in 1900, but above the quinquennial average. Small-pox mortality only amounted to 0.02 per 1,000—a satisfactory circumstance attributed to efficient vaccination. Fevers and bowel complaints were below the average. The sale of packets of quinine is increasing. Plague caused 10,190 cases and 9 778 deaths in the districts of Allahabad, Benares, Ballia, and Jaunpur. Evacuation and disinfection were the measures resorted to. The Sanitary Board met five times, and the sanitary engineer reports favourably on the working of waterworks which have been constructed, and gives information regarding other water and drainage projects in contemplation. The local government's review of the report, which is written by Major J. Chaytor White, M.D., D.P.H., Sanitary Commissioner, is very brief and somewhat casual.

THE PUNJAB.

The area of the province has been diminished by the transfer of some districts to the new North-West Frontier Province. Comparisons with previous years have been adjusted accordingly. No information is given regarding the results of the census of 1901, which, however, is taken as the basis of calculation of rates. The birth-rate of the year was 35.4, and the death-rate 36.1. The rates for 1900 were 38.8 and 46.1. The depression of the birth-rate is attributed to the unhealthiness of the preceding year. The year 1901 was, on the whole, normal and salubrious. Fevers abated, there was very little cholera, small-pox mortality was small, and there was a marked decrease in bowel complaints. Plague, however, prevailed severely, causing some 17,000 deaths. The incidence of the disease was extensive, and preventive measures were practically in abeyance owing to the attitude of the people. Infantile mortality is high—270 per 1,000 among male and 279 among female infants. The abnormally high mortality among female infants is suggestive of the lingering of infanticide, which is to be made a subject of special scrutiny in the light of census revelations. The Sanitary Board held five meetings, and the report of the sanitary engineer indicates considerable activity in regard to sanitary works. This report has been compiled by Lieutenant-Colonel C. J. Bamber, I.M.S., and the review on it by the Local Government is full and discriminating.

BOMBAY.

The report is compiled by Lieutenant-Colonel J. W. Clarkson, I.M.S. Famine conditions prevailed throughout the year 1901 in Gujarat and the Northern Deccan. Plague was also more prevalent than ever, especially in Bombay city and the districts of Belgaum, Dharwar, and Satara. The sanitary record of the year resembles that of the Punjab. The birth-rate was diminished—25.19 against a decennial mean of 34.15: the death-rate, though lower than in 1900, was very high—37.12 against 35.43. The year, except for plague, was comparatively healthy. There was a great decrease in cholera, fevers, and bowel complaints, and small-pox was about the average, but 28.259 deaths from plague were registered—by far the highest number since the outbreak of the disease in 1896. Sanitary work was much impeded by the prevalence of famine and plague, but municipalities expended a large share of their revenues on cleansing, and the sanitary engineer dealt with many projects for water supply and drainage. An interesting report by Major Crimmin, V.C., Health Officer of the Port of Bombay, is appended, showing that 34.637 vessels were inspected and 886,310 persons examined, among whom were found 73 cases of plague, 5 of cholera, 34 of small-pox, 159 of measles, 67 of chicken-pox, 46 of jigger, 3 of leprosy, 4 of enteric, and 1 of scarlatina.

The City of Bombay.—The report for 1901, compiled by Dr. J. A. Turner, executive health officer, is comprehensive and detailed. The birth-rate—17.42 per 1,000—though low, was in excess of that of the preceding year and quinquennium. Females between the ages of 15 and 45 constitute only 22 per cent. of the inhabitants; 2,153 stillbirths were registered; the death-rate was 76.66 against 96.56 in 1900; 18,736 deaths were due to plague, or 61 per cent. of the whole mortality. Overcrowding, poverty, and insanitary conditions are held responsible for the great prevalence of the disease; evacuation and disinfection of houses and "camping out" were the principal measures adopted to combat it. There was a great reduction in cholera and small-pox mortality. Fevers were somewhat in excess, but bowel complaints much less fatal. Respiratory diseases caused a mortality of 10 05 and phthisis of 8.39; 1,560 deaths were caused by relapsing fever, or 466 more than in the previous year. Excluding plague and relapsing fever the mortality was moderate and the year healthy. The sanitary administration of the city is active and searching.

A MOVEMENT is on foot for the erection of a monument to Federico Rubio, for many years the foremost surgeon of Spain.

LITERARY NOTES.

MR. HOWARD MARSH'S important and suggestive Bradshaw Lecture on Septic Arthritis delivered at the Royal College of Surgeons of England, and published in our Lister Number (December 13th), has just been issued in book form by Messrs. Smith Elder and Co.

In its March number the *Revista Ibero-Americana de Ciencias Medicas* will begin the publication of a reprint of such of the original works of the late distinguished Spanish surgeon, Federico Rubio, as are out of print.

We congratulate the *Boston Medical and Surgical Journal*, which on February 19th completed its seventy-fifth year of existence. In another form it may claim a considerably greater length of days. It was the result of a combination of the *New England Medical Journal*, a quarterly, begun in 1812, under the control of Drs. John C. Warren, Walter Channing, and John Ware, and the *Boston Medical Intelligencer*, which was started as a weekly journal in 1823, by Dr. Jerome V. C. Smith. These two periodicals were in 1828 consolidated into the *Boston Medical Journal*, under the control of the former managers of the *New England Journal*. The *Boston Medical and Surgical Journal* was for many years the only weekly medical journal in the United States. Before its appearance thirty-one medical journals had been started in the United States, twenty-three of which had been absorbed into other journals—or into the infinite.

The name of Kano, which till lately was probably known in these islands only to omniscient Board School teachers, is now familiar to all. Those who would like to know something more about it may be recommended to read an article contributed to the March number of the *Empire Review* by Mr. T. J. Tonkin, of Hanley, Staffordshire, who visited Kano as medical officer and naturalist to the Hausa Association Central Soudan Expedition (1893-5). Kano, it appears, may be called the Manchester of Africa. Mr. Tonkin describes it as follows:

> It is a town that by itself, without any more highly-cultured community that we know of to show it the way, has started manufactures and attracted to itself a commerce which has given it a pre-eminence in its own region in many respects similar to that enjoyed by Manchester in relation to Europe and America. I do not mean to say that the cotton growing which is carried on in the neighbourhood, and the spinning, weaving, and dyeing that go on in the town are processes which have originated on the spot, but they have not been introduced from any modern, and almost certainly from no European source, and their maintenance is due to the energy of the people and the security afforded them.

Mr. Tonkin expresses a doubt whether there is any town, unless it be Jenné, between Senegal and Khartoum, that in any way approaches Kano in size or in civilization.

Microbiology in its growth has become a science, a knowledge of which is indispensable to medical practitioners, pharmacists, chemists, and biologists. The literature of the subject has become so vast that it is now quite impossible for any individual worker to keep himself acquainted, in the words of Matthew Arnold, with "the best that is being thought and done throughout the world" in this particular field. To help investigators in some degree abreast of the progress of bacteriology in all directions, the younger members of the staff of the Pasteur Institute in Paris have founded a *Bulletin de l'Institut Pasteur*. This new publication will appear under the editorial direction of MM. G. Bertrand, A. Besredka, A. Borrel, C. Delezenne, A. Marie, and F. Mesnil. The *Bulletin* will be published fortnightly, and will contain reviews and analyses of all the latest publications relating to bacteriology. The first number (February 28th), which is now before us, contains a sympathetic preface by M. Duclaux. Authors of writings on bacteriology, especially of such as do not appear in journals specially devoted to the subject, are requested to send copies to the editors of the *Bulletin*, Institut Pasteur, 25, Rue Dutot, Paris.

We have received the following letter from Mr. Charles Corfield, Casualty House Surgeon, Bristol General Hospital, and editor of the *Stethoscope*, the Bristol Medical Clubs' Union Journal:

> Seeing in your issue of February 21st you had given notice of a publication called the *Stethoscope*, we have ventured to send you our journal, which bears a similar title, and has done so for five years. As we did not deem it necessary to register the name of so modest a journalistic enterprise, we can of course have no ground for complaint. Seeing, however, that we have had some inquiries from our readers, we trust you will be able to spare us a few lines of comment and criticism in your next issue.

If we may judge from the two numbers which have been sent to us, the Bristol journal is a well-edited periodical which satisfactorily fulfils the modest purpose of its existence. An interesting feature is a series of "Medical Men in Public Life." The subject of the article in the February number is Sir William MacGregor, M.D., K.C.M.G. In the same number are some useful "tips" for students of anatomy and materia medica. One of the anatomical "tips" comes from no less an authority than Huxley. A candidate had stated that the mitral valve was on the right side. Huxley let him pass with the remark "Poor beggar! I never got them correctly myself till I reflected that a bishop was never in the right."

The library of the College of Physicians of Philadelphia, to which Mr. Andrew Carnegie recently promised to give £10,000, was founded in 1787, and is one of the oldest medical institutions in America. On July 1st, 1788, a plan for forming a library was suggested, and this was formally adopted on March 3rd, 1789. In December, 1788, John Morgan sent a donation of twenty-four volumes to this library, and in 1759 he added other volumes. In the latter year the College ordered 133.33 dollars to be expended for additions to the collection. From this humble beginning the library of the College has grown to be, in point of numbers, the third or fourth medical library in the world. In the value of its collection the library stands second in the United States, being surpassed only by the library of the Surgeon-General's Office at Washington. In January, 1903, it contained, in round numbers, 61,000 bound volumes, 13,000 unbound volumes, and 64,000 unbound theses, dissertations, pamphlets, etc. This large collection of valuable medical books has reached a point at which it is necessary to provide for its better housing and for its future growth. Mr. Carnegie's promised donation is conditional on the Fellows of the College succeeding in raising another £10,000. Already nearly half of the sum required has been promised. A Committee of the College has now under consideration plans for the extension of the library, two feasible methods having been brought before it.

In *Physician and Friend*, which was reviewed in the BRITISH MEDICAL JOURNAL a few weeks ago, the author gives some account of Dr. A. Grant's friends, among others of Simon Nicolson, a well-known Calcutta practitioner of the Thirties and Forties. It is mentioned that Dr. Nicolson is introduced by Sir John Kaye into his novel *Peregrine Pulteney*, under the title of Dr. Nicolas Fitzsimon, where he is thus described:—

> Everybody knows him in India—finest fellow in the world—kind, generous, trump of a fellow. Go to him—give you breakfast, tiffin, dinner, shelter, advice, everything. If you are sick go to him—sure to cure you—sure to be kind to you—save more lives than the invention of the lifeboat, a most excellent fellow—good Samaritan—sure to love him.

The *Indian Medical Gazette* adds the following information about Simon Nicolson. He entered the Indian Medical Service on February 2nd, 1807, and he lived in the house which is now the United Service Club, Calcutta. It is said that the diagonal road leading from the Club to the Government House was made for Dr. Simon Nicolson's special benefit. Another interesting discovery has recently been made about Nicolson. Visitors to the big room of the Asiatic Society of Bengal may remember a painting, entitled "A Poet in His Study." It is said that this picture has recently been found by Professor Wilson to be the portrait of Simon Nicolson, and not that of an unknown poet. A copy of it has been put up by Major D. M. Moir, I.M.S., in the Presidency General Hospital, of which Nicolson was for twenty years superintendent.

In the *Indian Medical Gazette* for February "K.McL." gives, in the course of an appreciative notice of our Lister Number, an interesting account of the introduction of the antiseptic system into India. He says that Listerism, for various reasons which can be readily understood, encountered difficulties in its introduction into Indian practice. He is competent to write only of Calcutta in regard to this matter, but he thinks it probable that his experience there is fairly descriptive of other parts of India. He was appointed Second Surgeon to the Medical College Hospital in April 1874, and continued to act in that capacity till June 1875. The hospital had been a hotbed of every kind of septic disease, and the mortality following surgical operations was deplorable—not far short of 50 per cent. He found the system of dressing in use to be a mixture of carbolic acid and linseed oil applied by means of lint or cotton wool. No means were adopted to protect the wound from the acid, which often caused symptoms of poisoning. Septic complications continued to manifest themselves, though to a less extent and in less severe forms. Dr. Edward Lawrie, who had recently joined the service after having been indoctrinated by Lister and Syme in the antiseptic system in the Edinburgh Infirmary, was the resident surgeon. He tried to introduce the system

in Calcutta, but appliances were wanting, skilled assistance not obtainable, and his efforts did not have the success they deserved. "K. McL.'s" experience during these fifteen months did not inspire a warm admiration of the use of "modified antiseptics." During 1876-7 he was at home on furlough, and spent nine months in studying Lister's work in the Edinburgh Infirmary, spending two or three hours daily in watching his proceedings. He soon found that Lister's results were infinitely superior to anything he had previously seen. On rejoining the College Hospital in April, 1879, he endeavoured to carry out the Listerian method as faithfully as he could, but found great difficulty in obtaining suitable appliances, and had to contend with unsatisfactory assistants and refractory patients. In time the system came to be understood and more and more efficiently applied, and the better it was worked the better did the results become. He was greatly assisted by his colleague, Dr. Daniel O'Connell Raye, who soon came to appreciate the value of the system, and most ingeniously adapted local materials to its purpose. In the *Indian Medical Gazette* for September, 1897, "K. McL." published a table showing the results of his practice during the quinquennia 1879-83 and 1886-90. The case-mortality of the first period was 14.7 and of the last 8.1. The improvement was shown as regards all the principal operations. The death-rates of amputations were, for example, 26.2 and 7.1. Surgical statistics in other large Indian hospitals have undergone a corresponding improvement, doubtless from the same cause.

In the current number of the *Archives de Parasitologie* attention is directed to a work by a Chinese Buddhist named I-Tsing, who in the latter part of the seventh century travelled in India and the Malay Archipelago in order to study the true Buddhist doctrine. His travels lasted more than twenty years. He carried back with him to China some 400 Sanscrit books, most of which were afterwards translated into Chinese. I-Tsing wrote an account of his travels which a few years ago was translated into English by a Japanese scholar, Dr. J. Takakusu under the title *A Record of the Buddhist Religion as Practised in India and the Malay Archipelago* (A.D. 674-695). The work contains a chapter on the examination of drinking water for insects which all good Buddhists are bound to make. This precaution is not taken by way of avoiding the entrance of the *Anopheles* into the drinker's body, but is dictated solely by the fear of hurting the mosquitos that may be in the water. We quote the passage relating to "The Morning Inspection of Water" because it is interesting in itself, and also for the edification of Mr. Stephen Coleridge and his brothers and sisters of the "zoophilist" persuasion:

Water must be examined every morning. According as it is found in different places—that is, in jars, in a well, in a pond, or in a river. The means, also, of examining it differ. Early in the morning jar water is first to be examined. After pouring about a handful of it, by inclining the jar, into a bronze cup, a ladle made of bronze, a conch-shell, or a plate of lacquer-work, pour it slowly on a brick. Or, by means of a wooden instrument made for this purpose, observe the water for some moments, shutting the mouth with the hand. It is likewise well to examine it in a basin or in a pot. Insects even as small as a hair-point must be protected. If any insects are found, return the water again into the jar, and wash the vessel with other water twice until no insects are left in it. If there is a river or a pond in the neighbourhood, take the jar there, and throw away the water containing insects; then put in fresh filtered water. If there is a well, use its water after filtering it, according to the usual manner. In examining well water, after some has been drawn, observe it in a water vessel, taking about a handful of it in a bronze cup, as stated above. If there is no insect, then the water can be used through the night, and if any be found it must be filtered according to the process mentioned above. As to the examining of the water of a river or pond, details are found in the Vinaya. The Indians use fine white cloth for straining water; and in China fine silk may be used, after having slightly boiled it with rice-cream; for small insects easily pass through the meshes of raw silk. Taking a piece of softened silk about 4 ft. of the Hu-ch'ih (name of a common measure), lay it lengthwise by taking its edges, then double it by taking both ends, and sew them together so as to form them into the shape of a net. Then attach cords to its two corners, and loops to both sides; and put across it a stick about 1 ft. and 6 in. long, in order to stretch it wide. Now fasten its two ends to posts, while placing a basin under it. When you pour water into it from a pot, its bottom must be inside the strainer, lest some insects drop off together with the drops of water, and should hardly escape destruction by falling on the ground or into the basin. When water comes out through the strainer, scoop and examine it, and, if it contains some insects, then return the water, and, if it is clean enough, use it. As soon as enough water has been obtained, turn up the strainer, which is to be held at both ends by two persons, put it into the "life-preserving vessel," rinse it with water three times, and again pour water over it outside. Pour in water once more in order to see, by means of straining it, whether some insects still remain in it. If no insects be found, remove them in any manner. Even after being thus filtered, the water, when a night has passed, is liable to need examining again; for one who neglects to examine the water that has stood through a night, whether it contains insects or not, is said, in the Vinaya, to be guilty.

There are many ways of protecting life while drawing water. The strainer just described is suitable in case of drawing water from a well. In a river or a pond you may filter the water by a double jar within the willow vessel safely placed in the water. During the sixth or the seventh month the insects are so minute, and different from what they are in the other seasons, that they can pass even through ten folds of raw silk.

Those who wish to protect life should try to set the insect free by some means or other. A plate-like tray may be used for the purpose, but the silk strainer is also very useful. The tray is generally made of copper, in Indian, in accordance with the rules laid down by the Buddha; one must not neglect these points. The life-preserving vessel is a small waterpot with an open mouth as wide as the vessel itself. It has two knobs on the sides of the bottom part to which cords are fastened. When it is let down into water it is turned upside down, and, after having been plunged into water twice or thrice, it is drawn up.....

There are some who use the strainer, but let the insects die within it. Some are desirous of preserving life, but few know how to do it. Some shake (or "upset") the strainer at the mouth of a well, and do not know the use of the life preserving vessel. The insects will, no doubt, be killed when they reach the water of a deep well. Others make a small round strainer, which only contains one quart or two pints. The silk of which it is made is raw, rough, and thin; and, in using it, one does not look for the insects at all, but after hanging it at the side of the jar, others are ordered to do the actual inspection. Thus one pays no attention to the protection of life, and commits sins from day to day..... It is proper for every person to keep a vessel for examining water, and every place must be furnished with a life-preserving vessel.

I-Tsing says that if a priest is aware of the fact that the residents in a temple where he happens to be staying do not strain their water, he must not partake of food there. Even if a traveller dies on his way from thirst or hunger, this is to be regarded as a splendid example of virtue. The Buddhist teaching, like that of the antivivisectionist, is, Let man die rather than mosquitos or guinea-pigs should suffer inconvenience.

THE EPIDEMIC OF SMALL-POX.

During last week the newspaper records of small-pox are pretty much as before. In some places the disease tends to spread, and in others to diminish.

Northumberland.

At Newcastle a case was removed to hospital on February 16th. The Hexham Rural District Council have before them the question of building a hospital. The great difficulty is to obtain a site.

Lancashire.

In Manchester there have been 166 cases since the end of September. Dr. Niven, in a recent report, recorded a marked decrease in the disease—19 cases against 36 in the previous week. One overlooked case had been responsible for 17 known cases. Three cases were from a private house where the head of the household had declined to allow revaccination. In all cases effort has been made to discover and revaccinate contacts. The type of small-pox was becoming more severe. Additional cases are reported at various places in the county besides Manchester—at Newtown, Salford, Ashton, Listerhills, Pendlebury, Mossley, etc. Since August the Bolton cases have been nearly 100. A meeting of the Chorley Guardians on February 24th was informed by the clerk that accounts received for small-pox cases in hospital amounted to £824. St. Helens has had 5 new cases. In Liverpool, owing to prevalence of small-pox in Toxteth Park, the Southern Hospital has been closed to visitors. The local guardians are desirous to reopen vaccination stations. Newspapers of February 27th report that there were 105 cases notified in Liverpool during the week, as compared with 54 the previous week. The Chorlton Guardians have now vaccinated 900 out of a total of 920 inmates of the workhouse, and it is proposed to appoint two deputy vaccination officers.

Cheshire.

The Stockport Isolation Hospital had only 12 patients on February 26th, the number having fallen from 58.

Staffordshire.

An inquiry by the Local Government Board has been held regarding a proposed combination hospital for small-pox for Wolverhampton, Smethwick, Amblecote, etc., and it is understood that a provisional order will be issued. Most of the authorities have meanwhile made temporary provision. On February 20th Dr. Malet stated there had been 40 cases in the neighbourhood of Wolverhampton during the previous week. On February 24th it was reported that the disease was increasing in the Potteries. Five more cases had been removed from Burslem, and 1 each from Hanley and Tunstall, making the total for North Staffordshire 91 since the beginning of the outbreak.

Yorkshire.

Cases continue to occur at Leeds. A third case has been removed from the Lower Wortley Board Schools. On February 21st there were 7 cases in hospital at Dewsbury, 2 being from outside townships. The lodging-house in which the disease broke out has been reopened. The guardians

have been informed by the Local Government Board that the vaccination officer is within his rights in claiming legal expenses incurred by him in prosecutions. Cases are reported at Bradford, Bury, Doncaster, Banbury, Huddersfield, and North Wingfield. Hunsworth and Cleckheaton have agreed to join in providing a temporary small-pox hospital. A 16-bed small-pox hospital for the Bury district has been formally opened. The place was a farmhouse, and the nurses will be accommodated in two cottages. At Retford a hospital is being built to cost £650.

Derbyshire.

At Chesterfield on February 21st the medical officer reported that there were 21 cases in the Newbold Hospital. In the Spital Hospital there were 9 cases. No revaccinated person had taken the disease unless already in the incubation stage. In Derby a case was found on the 25th. There were 19 in hospital, and the total during the past few months had been 36. On the 21st several navvies were found suffering from the disease at Wetton, in the Mayfield district. The Shardlow Guardians have rejected by a large majority a motion to instruct the medical officer to offer vaccination to all tramps. The cost—6s. per case—was objected to. At Chapel-en-le-Frith, where there has been a case, the medical officer, Dr. Anderson, reported that he had been able to persuade only 7 vagrants out of 40 to accept vaccination. It was decided to inform the Local Government Board that compulsory vaccination of vagrants is most important.

Warwickshire.

Birmingham.—A case was admitted on February 21st, another discharged, and proved fatal. On February 24th one case was admitted, and three discharged, leaving the total in hospital at 41. A fresh case was admitted on February 26th. In the West Bromwich Isolation Hospital there were nine cases on that date. A new small-pox hospital, to cost with furniture about £2,300, is proposed. In the Aston Union another case was reported. Three had been removed from the infirmary to the isolation hospital.

Nottinghamshire.

Newspaper letter writers have been protesting against the situation of the small-pox hospital at Bulwell Forest. The enclosure is said to be quite alongside a very public road. At Mansfield also there has been some objection to extension of the small-pox hospital there, but a proposal to add a 6-bed ward was carried. At Nottingham a case was notified on February 24th.

Herefordshire.

A tramp was found to have small-pox at Ludlow Workhouse on February 20th and was taken to hospital.

Shropshire.

At Shrewsbury a resident in the borough was discovered to have small-pox on February 17th and was sent to hospital. There has been another case at Cleobury Mortimer, and one at the Ludlow Union Workhouse.

Wales.

Cardiff.—On February 18th a sailor from a steamer trading between Cardiff and London was removed to the small-pox hospital. There has been some small-pox at Connah's Quay, and hospital accommodation is to be provided. On February 21st there were four cases under treatment at the Brecon Hospital and three at Sarnau, near Brecon. Merthyr Union was reported free from small-pox on February 21st. At Barry Dock, near Cardiff, a Lascar was found with the disease, and was taken to hospital, the rest of the crew being vaccinated. The Neath Board of Guardians have received an account of £73 from the town council for treating three small-pox cases at their hospital. It is to be paid, but a sum of 12 guineas for medical treatment is to be refunded.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

DURING the two weeks ending January 31st and February 7th the number of deaths from plague in India amounted to 24,500 and 25,780 respectively. The principal figures are: Bombay City, 498 and 612; Bombay District, 11,708 and 11,922; Bengal, 2,757 and 2,817; North West Provinces and Oudh, 2,510 and 2,699; the Punjab, 2,882 and 3,735; Madras Presidency, 793 and 502; Mysore State, 829 and 694; the Berars, 505 and 462. For the week ending February 2nd the deaths from plague in Hyderabad State numbered 932. From Poona a very virulent outbreak is reported, and the Medical School has been closed; the latest statements, however, give a more hopeful account of the state of affairs, the increase in heat seemingly accounting for the diminution of the number of cases. It will be observed from the above figures that in the southern parts of India plague is decreasing with the increase of the heat, but until the temperature increases in the north we cannot look for a marked diminution in the plague returns. The rule of the decrease in plague with the advance of the spring, and beginning first in the south, has now been observed for several years in India.

EGYPT.

During the week ending February 15th the Director-General, Sanitary Department, reports that no cases of plague occurred, nor were any deaths from the disease reported from any part of Egypt.

SOUTH AFRICA.

Cape Colony.—During the weeks ending January 31st and February 7th the fresh cases of plague at Port Elizabeth numbered 2 and 2 respectively, and the deaths from the disease were returned as 2 and 1 respectively. No other cases of plague have been notified from any part of the Colony, but on January 31st, at Graaff Reinet, rats were found to be suffering from plague.

Natal.—The latest report from Durban is dated February 23rd, and states that the plague is abating in the city, and that 18 cases only are under treatment, including 2 Europeans. Since the beginning of the outbreak 83 cases of plague have been notified, distributed as follows: Europeans, 7; natives, 33; and Indians 43. Fifty deaths from plague have occurred, including 2 Europeans.

MAURITIUS.

For the weeks ending February 10th and 26th the fresh cases of plague in Mauritius numbered 4 and 3, and the deaths from the disease 1 and 1 respectively.

HONG KONG.

During the weeks ending February 14th, 21st, and 28th the fresh cases of plague in Hong Kong were notified as amounting to 2, 3, and 12 respectively; and the deaths during the same periods were returned as 2, 3, and 12 respectively.

CONTRACT MEDICAL PRACTICE.

CONSULTATIONS.

A CORRESPONDENT asks whether the medical officer to a Friendly Society who is required by a member of a Friendly Society to meet a consultant is entitled to charge a fee for the consultation, or whether it is included under medical attendance which he is bound to furnish under his contract.

*** The medical officer cannot charge an extra fee for a consultation which he considers necessary for the patient's treatment. If the patient desires a consultation for his own satisfaction the medical officer should have an understanding with the member in writing that he is willing to pay this fee in addition to his club subscription.

ASSOCIATION NOTICES.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

SOUTHERN BRANCH: SOUTH-EAST HANTS DISTRICT.—A Practical Demonstration of Photomicrography will be given at 5, Pembroke Road, Portsmouth, on Wednesday, March 11th, at 8.30 p.m., by Mr. J. A. Foster, F.I.C. All members are invited to be present.—J. G. BLACKMAN, Poplar House, Kingston Crescent, Portsmouth, Honorary Secretary.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.—The next meeting of this District will be held at the Queen's Hotel, Upper Norwood, on Thursday, March 12th, at 4 p.m., Dr. B. N. Dalton, of South Norwood, in the chair. Dinner at 6 p.m.; charge 7s., exclusive of wine. Agenda: Minutes of Reigate meeting. To decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. Election of Honorary Secretary. The following papers, etc., will be read:—Dr. F. Taylor: The Treatment of Chlorosis. Dr. Newton Pitt: On the Value of the Examination of the Blood for Diagnosis. Mr. R. Clement Lucas: Cases of Influenzal Orchitis. Mr. A. H. Tubby: Some Deceptive Abdominal Conditions and when to Operate. Dr. A. P. Allan: Some remarks on Enlarged Cervical Glands in Children. Members desirous of exhibiting specimens or reading notes of cases are invited to communicate at once with the Honorary Secretary. All members of the South-Eastern Branch are entitled to attend and to introduce professional friends, and the Honorary Secretary would be much obliged if members would kindly inform him by post card whether they intend, if possible, to be present at the meeting, and if likely to remain to dinner. —HENRY J. PRANGLEY, Tudor House, Anerley, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The next meeting of this District will be held at Brooke House, Upper Clapton, on Thursday, March 19th, at 8.30 p.m. The chair will be taken by Mr. Powell, Vice-President of the District. Members desiring to read short papers or to show cases are requested to communicate with the Honorary Secretary as soon as possible.—C. J. MORTON, 56, Orford Road, Walthamstow, Honorary Secretary.

EAST ANGLIAN BRANCH.—*Preliminary Notice:* The spring meeting of this Branch will be held at the Green Dragon Hotel, Wymondham, on Thursday, March 26th. Lunch at 1.15. Any member wishing to show cases or specimens, or to read a paper at the meeting, should communicate with Mr. H. A. Ballance, Norwich.—B. H. NICHOLSON, Colchester, General Secretary.

SPECIAL CORRESPONDENCE.

PARIS.

Académie de Médecine: Dr. Charles Rayer on Some Methods in Diagnosis of Predisposition to Phthisis.—Discussion on Alcoholism.—The Consumption of Alcohol in Paris Hospitals.—The New Sanitary Regulations of the City of Paris.

ON February 24th M. Albert Robin presented to the Académie de Médecine an interesting work by Dr. Charles Rayer (of Audelys) "on some methods having as their object the discovery of subjects predisposed to pulmonary tubercle."

M. Rayer took as his starting point the fact, demonstrated by MM. Albert Robin and Maurice Binet, that the respiratory exchange is always exaggerated in phthisical patients, and that it might be considered as one of the stigmata of the predisposition to phthisis. M. Rayer measured the vital capacity of the lungs by means of an instrument which he presented to the Académie, and proved that this was always more or less diminished in the predisposed. In calculating the results, he took into account the age, the height, the circumference of the thorax and the circum-longitudinal index—that is, the ratio between the circumference of the chest and the height. The tables drawn up from numbers of observations would serve for reference by the practitioner. Secondly, the measure of the inspiratory and expiratory intensities showed by comparison the elasticity of the lung. Physiologically, the difference between the intensities was 3 centimetres of mercury, measured by a manometer, in favour of expiration, 18 millimetres being the pulmonary elasticity. In those predisposed to phthisis this difference in the intensities tended to diminish, pointing to a diminution of pulmonary elasticity. Moreover, these intensities were in ratio to the muscular force of the subject, measured by the dynamometer; they equalled 10 centimetres of mercury per 100 kilograms for the expiratory intensity and 7 centimetres for the intensity of inspiration. Thirdly, M. Rayer studied the elimination of carbonic acid in the predisposed by a different method than that of Drs. A. Robin and Maurice Binet. Five litres of air expired by the subject were shaken in baryta water, and the height of the precipitate of carbonate was measured. Normally, this was 3 to 4 cubic centimetres of the salt, but in the predisposed to tubercle it might reach 5 cubic centimetres. In confirmed tubercle it tended to diminish, but this was more than compensated for by the increased pulmonary ventilation.

The discussion on alcoholism and the alcohol-containing essences, which are dangerous to health, still continues. On the motion of M. Laborde the Académie unanimously passed a resolution:—

That this notice indicating the danger of alcoholism, posted up in Paris by the Prefect of the Seine and the Director of the Assistance Publique, should also be posted up in all the communes of France.

M. Mesureur, the Director of the Assistance Publique, has replied in the Press to the poster of the Wine Merchants, Syndicate on the quantities of wines and spirits for consumption in the Paris hospitals. He says that

Wine, of which the quantity bought varies but little, is given to the personnel by measure of, on the average, 65 centilitres daily, and 35 centilitres to aged patients. It will be seen that, far from abusing it, we use it in moderation. Rum is reserved for pharmaceutical preparations, and alcohol for many uses other than consumption. In 1902 for 29,000 persons each day in hospital, the consumption was 23,000 litres of rum and 45,000 litres of alcohol, figures much smaller than those quoted on the wine merchants' poster. Notice should be taken of the 5,200,000 litres of milk consumed by the patients. This comparison well shows the tendencies of the chiefs, physicians, and surgeons, who are unanimous on the dangers of alcohol. To the economy realized in 1902 by the Assistance Publique, which amounted to 135,000 francs on alcohol and rum, will be added in 1903 a fresh economy of 50,000 francs, and the expense under this head would be still further reduced were it not dangerous for certain patients to deprive them suddenly of their habitual aliment.

The Municipal Council is at present considering the report by Dr. Navarre, containing the new sanitary regulations for the City of Paris, in accordance with the Public Health Act which came into force on February 15th. In his report Dr. Navarre points out that by the increasing efforts of the Council the average number of cases of infectious diseases has ranged from 1.97 per 1,000 in 1891 to 0.09 per 1,000 in 1902. The new regulations comprise 136 articles dealing with the salubrity of the streets and the buildings in regard to air space, window space, etc., the disposal of household refuse, the notification of disease, disinfection, etc.

EDINBURGH.

The Ear and Throat Department of the Royal Infirmary.—Scarlet Fever in Edinburgh.—The Carnegie Trust for the Universities of Scotland: Circular Letter to Parents.

THE managers of the Royal Infirmary have appointed Dr. R. Mackenzie Johnston to be Surgeon to the Ear and Throat Department, in place of Dr. P. McBride, whose term of office is about to expire. It is held by many members of the medical profession that the managers would have shown more wisdom had they retained the services of Dr. McBride until the new pavilion for diseases of the ear, throat, and nose had been opened and fairly set into working order. As this opening is expected to take place within the present year, no great extension of Dr. McBride's term of office would have been required. It is an excellent rule to avoid indiscriminate extensions of terms of office; but in the present case the circumstances were sufficiently exceptional to have justified a departure from the rule.

During the week ending mid-day, Saturday, February 21st, 22 cases of scarlet fever were notified to the public health authorities of the City of Edinburgh. During last week, that ending Saturday, February 28th, no less than 59 cases were reported, well-nigh three times the number of cases of the preceding week. The greatest increase occurred in the southern district of the city, where the increase was more than threefold. Although no official pronouncement has yet been made, it is obvious that an increase of this kind is almost certainly due to milk supply. The authorities are, we understand, thoroughly investigating the matter. The general mortality last week was 92, equivalent to a death rate of 16 per thousand, as against 69 and 11 in the preceding week.

The Committee of the Carnegie Trust have issued a circular to parents of beneficiaries giving regulations regarding the payment of class fees by the Trust. Briefly, these are—(1) The student must make account of his attendance and work in each class, any distinctions he may have gained, and any degree examinations he may have passed. (2) He must refund the fee of any class in which he has failed to give regular attendance, and to do the work of the class. (3) If, at the beginning of the session immediately following the expiry of a year from the time he has become eligible for admission to examination in any subject or group of subjects required for the degree, a student has not passed the Degree Examination in such subject or group of subjects, no further payment of class fees shall be made until he has so passed, provided (*a*) that he shall have had two opportunities of presenting himself; (*b*) that if he is proceeding to honours, the rule does not apply: and (*c*) that the executive shall have full power to deal with exceptional or special cases. (4) An application for payment on a second course of lectures on any one subject must be accompanied by a statement of the reason for such re-attendance. This last regulation does not apply to honours classes, or to practical or laboratory courses.

MANCHESTER.

Sanitary Association: Physical Unfitness for the Army.—Small-pox Epidemic.—Victoria University in Manchester.

MUCH useful work has been done by the Sanitary Association during the past year in disseminating a knowledge of the importance of revaccination, and educating the public mind on the question of vaccination generally. At the annual meeting a very important address was given by Sir F. Maurice on the subject of National Health. It appears that in Manchester, of 11,000 men who offered themselves to the recruiting sergeants 8,000 were rejected on the ground that they were unfitted for soldiering, and that number was further reduced on medical examination. In the country generally three-fifths of the men ready to enlist had to be rejected because of physical inefficiency. Some of the causes of this sad deterioration were referred to. In this regard the lecturer placed first improper feeding—more especially in infancy—largely due to the ignorance of mothers. The whole question of physical unfitness in large urban centres receive far too little attention. It was one not merely of sanitation and health, but of whether the country was to retain its place among the nations. It was a question more important than any one of party politics.

Small-pox still keeps itself only too well in evidence. Representatives of the Lancashire County Council and other authorities held a meeting at Wigan this week, and passed a resolution in favour of the establishment of a general hospital for the isolation of small-pox patients for a group of districts near Wigan.

The Court of Governors of Owens College met on Tuesday and transacted some most important business. Several members of the staff were nominated by the Court as Lecturers of Victoria University, namely, Mr. Joseph Collier, M.B., B.S., F.R.C.S., Lecturer in Practical Surgery; Mr. J. E. Platt, M.S., F.R.C.S., Assistant in Systematic Surgery; Mr. C. H. Tattersall, M.R.C.S., D.P.H., Lecturer in Public Health; Mr. William Thorburn, M.D., B.S., F.R.C.S., Lecturer in Operative Surgery. These nominations have, of course, to be confirmed by the Court of the University. Great satisfaction was expressed at the early establishment of an independent University in Manchester. There seems to be

some misapprehension as to the purport of the Order in Council issued with His Majesty's approval. A new university will, of course, be set up in Liverpool, but as regards Manchester the real point is that it will maintain the corporate existence of Victoria University, modifying the charter so as to suit the needs of the College and the community. Those who are graduates of Victoria University will still remain her graduates. Owens College, as the oldest of the three Colleges, will thus still have seniority amongst the new universities that are to be. It was stated that committees of the three Colleges will meet so as to determine in what respects it will be possible to have joint action between the three universities. Some misapprehension seems to have arisen as to the following phrase in the charter, "and independent examiners in all examinations for degrees." This, it seems, means that the independent examiners are not to be appointed by an outside independent body, but by the several courts. In fact, it is just the system that is in action at present. Satisfaction was also expressed that there will be inspection of buildings, laboratories, teaching, etc. As a matter of fact, Owens College has gained largely by the excellent and laudatory reports issued by the Commissioners of His Majesty's Treasury from time to time.

LIVERPOOL.

The Liverpool Abattoirs Question.—The Health Committee of the Denbigh County Council and its Health Reports.—The Hospital for Women.

IT may be remembered that about twelve years ago the authorities of the Royal Infirmary and of University College approached the Corporation of Liverpool with a view to obtaining the removal of the abattoirs from their present situation near those institutions. At that time the lease under which the Abattoir Company held their property from the Corporation had about twenty years to run, and after a prolonged discussion, in which the various interests concerned were fully brought under review, the Corporation declined to renew the lease for any further term of years. An influential deputation representing the Royal Infirmary, University College, and the medical profession of Liverpool lately approached the Estate Committee with regard to this matter. Mr. John Lawrence, in introducing the deputation, stated that it was understood that the Estate Committee were contemplating the renewal of some leases in connexion with the Liverpool abattoir, and referred to various reports and resolutions of the Council disapproving of the neighbourhood as a site for abattoirs. Sir William Banks quoted from reports by Dr. French and Dr. Stopford Taylor, former medical officers of health for Liverpool, and also by Dr. Hope, the present medical officer, tending to show that the existence of an abattoir, however well conducted, was injurious to the health of the neighbourhoood, besides being offensive to the senses. Mr. Kewley (Chairman of the Royal Infirmary), Dr. Barr, Professor Paterson, and others also addressed the Committee. The Chairman of the Committee (Mr. R. A. Hampson) stated that the Committee and the Council were in sympathy with the views of the deputation, and were concerned as to the best way of dealing with the question. The Corporation would never seek to continue the abattoirs in the centre of the town after the expiration of the leases. The Committee had already successfully negotiated with the Abattoir Company to arrange the termination of the various leases affecting the company's premises at a common date, namely, the end of 1911. The Committee had no intention of renewing any of the Abattoir Company's leases, but recently some lessees of the Corporation had assigned a timber yard adjoining the Abattoir Company's premises to the company for lairage purposes. The Corporation were unable to prevent this assignment, but had been able to arrange with the Abattoir Company that the assigned leases should terminate on the date fixed in respect of the remainder of the Abattoir Company's premises, and that the premises should not be used for the purpose of slaughtering.

At the quarterly meeting of the Denbigh County Council a recommendation was received from the Public Health Committee that £25 be paid to the Clerk of the Council for tabulating and summarizing the reports of the different medical officers of health in the county. The recommendation was adopted. It is obvious that the preparation of such a document should be undertaken by the medical officer of health for the county, and the natural inference is that no such officer exists. If this be so, it is difficult to understand what useful object can be expected to follow from the preparation of such a table and summary as is here proposed, as in the absence of a competent adviser the county council will scarcely be in a position to frame and adopt any useful measures founded upon the information supplied.

The annual meeting of the Hospital for Women in Shaw Street was held recently, when it was announced that the Queen had graciously intimated her willingness to become Patron of the hospital. Dr. J. E. Burton, who has been on the staff of the institution since its formation, has retired from the active staff, having completed his term of office, and has been appointed Consulting Surgeon. Dr. Arthur J. Wallace, who has for some years held the position of assistant surgeon, has been appointed Surgeon in place of Dr. Burton. Dr. James H. Willett, a graduate of Victoria University, and a former student of the Liverpool School and the Royal Infirmary, has been appointed Assistant Surgeon in place of Dr. Wallace. The number of in-patients treated at the hospital during the year was 808, as compared with 798 during the year 1901. The number of out-patients was 2,515, as compared with 2,648 during the year 1901, and the number of new cases and attendances was 7,595, as compared with 7,356, the corresponding figures for the year 1901. The total number of cases treated was 10,918, as against 10,802 in the previous year.

SHEFFIELD.

The Attitude of University College towards the Proposed University for Yorkshire.—Health Lectures.—The New Buildings of the Jessop Hospital.—The Children's Hospital.

THE Council of the University College are taking active measures to assert the claims of Sheffield to be included in a university for Yorkshire should such be constituted. They have decided to oppose the creation of a university for Yorkshire which would consist of a single college, and a committee has been appointed to follow up the petition already before the Privy Council, and to take the steps necessary to make opposition effective. The conversion of the college at Leeds alone into a university for Yorkshire will be objected to, and the pretension that it should be made into a university for Yorkshire when it comprises only one of the many populous cities and towns of that county, will be resisted. As well might Manchester in past days have sought to make its college into a university for Lancashire, excluding Liverpool. The only city which could represent Yorkshire would be York but it has no college. If, therefore, Leeds is desirous of having its own university it must be a university for Leeds, not Yorkshire, just as there is a university for Manchester, Liverpool, and Birmingham. In this way, if the contention that Sheffield and Leeds should together form a university for Yorkshire be rejected, Sheffield, which possesses a population nearly equivalent to that of Leeds and a well-constituted university college, would be free either alone or in combination to form a university, and would retain its county position.

During January and February a series of health lectures were delivered in the hall of University College weekly. They were organized by the Nether Hallam Health Association, a body recently formed to encourage an interest in sanitary matters. The lectures have been given each Friday evening, and all of them have been presided over by prominent public men, including the Lord Mayor and Master Cutler, and among the other chairmen were no less than four past Lord Mayors. The lectures attracted very large audiences. The hall has been packed, fully 800 people being present, and some hundreds who were unable to obtain admission were turned away. The subjects of the lectures were as follows:

Our Lungs, and How we Abuse Them	Dr. Robertson, M.O.H.
Sight, and its Perils	Mr. Simeon Snell.
Matter, in the Wrong Place	Mr. R. J. Pye-Smith.
The Use and Abuse of Athletics	Mr. C. Atkin.
Victuals and Drink	Dr. Arthur Hall.
Why Children Die	Dr. Wilkinson
Disasters of Amateur Medicine	Mr. A. M. Connell.
Health, and How to Retain it	Dr. Porter.

The lecture by Mr. Connell, in consequence of his plain speaking with regard to prescribing chemists, has provoked a shoal of letters in the local press, more important from their numbers than anything else.

The new buildings and extensions of the Jessop Hospital have been completed, and last week were thrown open to the public for inspection. They comprise new maternity and out-

patients' departments, a nurses' home, and the rearrangement which is thus enabled to be made provides a large increase in the number of beds available for gynaecological cases. A new operation theatre has been erected, and the operating table and other furniture has been given by Mrs. Laver, in memory of her husband, Dr. Laver, who for many years was Surgeon to the hospital. The completion of the alterations at the Jessop Hospital brings towards a conclusion the very extensive hospital additions which have been made in Sheffield during the last few years.

At the Children's Hospital much steady progress is being made, and the new buildings will soon be completed.

CORRESPONDENCE.

RUMOURED ADMIRALTY SCHEMES.

Sir,—With reference to the paragraph headed "Rumoured Admiralty Schemes," which appeared in the British Medical Journal of February 28th, I am authorized by the Board of Admiralty to state that the paragraph in question must have been inserted under a complete misapprehension, since no such schemes as those described are under their consideration.—I am, etc.,

Hy. F. Norbury,
Director-General of the Medical Department of the Navy.
Craven House, Northumberland Avenue, W.C., March 4th.

TENNYSON'S POEM "IN THE CHILDREN'S HOSPITAL."

Sir,—In the British Medical Journal of February 28th you notice a new journal edited by Dr. Dabbs, and you quote his remarks about his patient, Tennyson. Amongst these, allusion is made to the abominable poem called "In the Children's Hospital." It seems that the poet admitted that he had no knowledge of such a brutal surgeon as he describes, and this had caused him some distress of mind, so that it may be inferred that he regretted ever having written the verses. It is a pity that he did not openly avow this, as the poem was published a dozen years before his death.

I might mention that Dr. Moxon and some other leading men began almost to execrate the name of Tennyson, and were continually talking of calling an influential meeting of the medical profession to protest with indignation against the obloquy which had been thrown upon it by a public man.

Although it is true that *litera scripta manet*, yet some slight reparation might now be made, if it is possible, to declare, on the authority of Dr. Dabbs that Tennyson disavowed any knowledge of such a surgeon as he describes, and regretted very much the publication of the poem.

If this be true it should be so stated in any new edition of his life or issue of his poems, although many of his admirers believe it would be better for his memory if this indiscreet production were altogether omitted.—I am, etc.,

Hampstead, Feb. 28th. Samuel Wilks.

THE DISPOSAL OF THE SEWAGE OF LONDON AND THE CONTAMINATION OF SHELLFISH.

Sir,—It is interesting to one who from the first condemned the method of disposal of the sewage of London which was adopted by the Metropolitan Board of Works, in defiance of the recommendations of the Royal Commission on Metropolitan Sewage Discharge, and has been continued since, to find that the Conservators of the Rivers Thames and Medway, and also a Joint Committee of the Port Sanitary and Sanitary Committees of the City Corporation have adopted a resolution, stated in the *Times* of February 26th as follows:

That the present system of discharging sewage into the Thames estuary is dangerous to health and detrimental to an important food supply, and that representations be made to the Local Government Board with a view to legislation being initiated to effectually deal with the matter.

In my Presidential Address to the Society of Medical Officers of Health in October, 1888, after stating the recommendations of the Royal Commission, and pointing out that the Metropolitan Board of Works and its advisers were flouting them, I concluded as follows:

I protest in the name of the Society of Medical Officers of Health of this country against such a state of things, and against the further carrying out of a scheme which, while being enormously costly, will not only not settle the question, but will rather increase the difficulties of settling it effectually, and will be pointed out by succeeding generations as a disgrace to the sanitary work of the nineteenth century.

In the discussion on papers by Messrs. Worth and Santo Crimp on the main drainage of London, and by Mr. Dibdin on the purification of the Thames, before the Institution of Civil Engineers in February, 1897, I stated that:

I could not help thinking that if the money which had been spent in trying to purify the sewage of London by means of precipitation and filtration had been spent in taking it out further, as had been proposed, to the Maplin Sands or some other suitable place, and disposing of it by irrigation, that money would have been very much better spent, and I thought that would be resorted to in the end, however much money might be spent on experiments.

On that occasion Dr. Dupré, one of the former chemical advisers of the Metropolitan Board of Works, "expressed sympathy with Professor Corfield, who had predicted that the river would be more foul after the scheme had been in operation than before."

This statement was not strictly correct, but that may pass; and it is now my turn to sympathize sincerely with Dr. Dupré on the condemnation of the scheme he advised and defended by the most important sanitary authorities connected with the River Thames.—I am, etc.,

W. H. Corfield, M.A., M.D.Oxon., F.R.C.P.Lond.,
Consulting Sanitary Adviser to His Majesty's
Savile Row, W., March 2nd. Office of Works.

THE DISTRIBUTION OF HOSPITALS IN LONDON.

Sir,—This subject, I venture to think, should attract much more attention on the part of the medical profession than it does.

There are already far too many hospitals struggling for a living in London, and most of these are crowded together in one locality; all ever appealing to a tender-hearted, but foolish, public, to help them to prolong their bankrupt existences.

For instance, take a central institution such as University College Hospital. Within one mile radius of this there exists, besides the Middlesex Hospital, no less than five other minor general hospitals (such as the London Homoepathic, the St. Saviour's, and the Temperance) and twenty-six special ones (as recognized by the *Medical Directory*), some of which, especially those treating genito-urinary diseases, are inappropriately dedicated to the saints of old. In addition to all these there are a still larger number of charitable dispensaries, which have not yet had the presumption to call themselves hospitals, but whose reputation is much of the same character.

Under existing circumstances, any private individual is at liberty to advertise himself by starting a fund to build a new hospital for any particular speciality or fashionable fad. More than half a century ago Balzac said, "If you can give your money to some idiotic philanthropic scheme, you will be regarded as a coming man." How much truer is this of the present day? The founder of a new hospital or the supporter of a broken reed soon has a small following of well-meaning, charitably-disposed persons of both sexes, and a much larger number of self-advertising philanthropists, who have no old-fashioned traditions, of not letting their left hand know what their right hand is doing, and whose sole *entrée* into the "smart set" is through the vulgarity of their purse strings. Some men having made their money through company promoting in the City, come West and regain their reputations by promoting charities in this quarter of the town.

All this time the medical profession, who should be the chief body interested, and competent to express an opinion, keeps silent, and is not even consulted, but openly exploited by these hospital promoters. Surely, sir, it is time we awoke from our lethargy, and made our voice heard, not as one crying in the wilderness, and on barren ground, but as a united, and, therefore, a strong body, and one aroused from its apathy. The profession appears to exist, at the present day, to be exploited in every direction for the benefit of the man of business, to the detriment of itself. We receive daily an ever-increasing number of advertisements of new proprietary preparations (especially of late from the other side of the Atlantic and often of a most questionable character), in which we find paragraphs from articles published in the medical journals, often perverted and used to advertise merchandize to which they were never intended to apply, and there appears to be no redress.

In another direction the honorary medical staffs are used by business men, trading under the guise of philanthropy, in the running of so-called hospitals, dispensaries, homes, and endless other more or less useless and pauperizing institutions.

The first move must be to take the necessary steps to remove the petty jealousies and competition which exists between the numerous hospitals themselves, and to compel them to combine and work together for their common good,

which must be in the best interests of the public at large. Then to eliminate all those superfluous, and many of them institutions of doubtful utility, which take the bread from the mouths of the deserving ones.

To commence with: there are obviously more medical schools in London than can be efficiently equipped, either with men or material. The result is the teaching at some leaves much to be desired, especially at those where the reputation of the lecturers themselves is unknown and unheard-of outside their own hospital walls. For these reasons, we see the number of students steadily decreasing year by year at many of the metropolitan schools, with a corresponding increase at some of the provincial ones.

If the profession as a body continues to prove itself incapable of protecting the public and its own interests over the hospital question, we must appeal to the Government of the country to protect us against the machinations of Hospital Boards and their hirelings.—I am, etc.,

W. KNOWSLEY SIBLEY, M.D.

Duke Street Mansions, W., March 1st.

SCARLET FEVER AFTER THE CLOSURE OF THE LEICESTER FEVER HOSPITAL.

SIR,—The following facts seem of sufficient interest to merit publication.

On January 21st, 1903, owing to the prospect of a serious outbreak of small-pox and to the fact that the available accommodation at the small-pox hospital was almost exhausted, the Sanitary Committee of the Leicester Corporation decided to empty the fever hospital in order to be prepared for any emergency. On the date in question (January 21st) the Fever Hospital contained 98 scarlet fever, 16 diphtheria, and 10 typhoid patients. By January 26th all the scarlet fever patients, 15 of the diphtheria patients, and 3 of the typhoid patients had been sent to their homes; 7 of the typhoid and 1 of the diphtheria patients, who were too ill to be moved, alone remaining.

As it happened, the outbreak of small-pox was quickly got under control, and the necessity to admit small-pox patients to the fever hospital never actually arose. The admission of fever or diphtheria patients has not, however, as yet been resumed.

The object of this note is to call attention to the sequel of the abrupt cessation of the hospital isolation of scarlet fever cases in a large manufacturing town, and of the hasty turning out of hospital of so many patients in all stages of the disease.

The following table gives the number of cases of scarlet fever notified, and the number removed to hospital each week for the 13 weeks preceding the closure of the hospital, and for the 5 weeks following that event.

Scarlet Fever in Leicester.

Week ending	Number of Scarlet Fever Cases Notified.	Number of Cases Removed to Hospital.
October 30th	25	19
November 6th	27	15
,, 13th	30	22
,, 20th	19	15
,, 27th	28	14
December 4th	19	14
,, 11th	26	16
,, 18th	17	13
,, 25th	28	16
January 1st	29	13
,, 8th	29	16
,, 15th	23	12
,, 22nd	30	2
,, 29th	10	—
February 5th	21	—
,, 12th	16	—
,, 19th	13	—
,, 26th	10	—

The average number of cases notified weekly during 13 weeks preceding closure of hospital was 25.4.

On January 21st the Committee decided to empty hospital; 98 scarlet fever patients sent to their homes on January 22nd, 23rd, 24th, and 26th.

The average number of cases notified weekly during the five weeks following the closure was 14.0.

The above figures are certainly remarkable. Apart from the closure of the hospital to fresh cases, the mere fact of turning out so many patients, very many of whom must still have been highly infectious, would have sufficed, one would have thought, to cause at least a temporary increase in the prevalence of the disease.

The houses to which the patients were returned have of course been kept under surveillance, being visited from time to time by the inspectors, and in only two instances has a further case of scarlet fever occurred. One of these, curiously, was in a girl who had already had scarlet fever, and who had been a patient in hospital for six weeks two years previously. Moreover, in no other instance has any case of scarlet fever which has since occurred in the town been even indirectly traced to the cases sent home from hospital.

This experience tallies with that of one of my predecessors, Dr. J. Priestley. When the Leicester Fever Hospital was emptied in 1892, and 144 scarlet fever patients sent to their homes, Dr. Priestley states that not even one "return case" occurred. The hospital was closed on October 31st, 1892, and was not reopened for fever cases until February 13th, 1894. During the remaining two months of the year 1892 (just the worst time of the year for scarlet fever) only 192 cases were notified, as compared with 733 cases during the preceding ten months—by no means an excessive proportion. The following year, 1893, proved to be an epidemic one, but as it was eight years since the previous epidemic, and as the epidemic did not begin until April, it can scarcely be attributed to the closure of the hospital in the previous October. Speaking of this experience in his annual report for 1893 (page 10) Dr. Priestley guardedly says:—"If conclusions were to be drawn . . . . they would certainly be against the immense importance and value of strict hospital isolation in such a disease as scarlet fever, somewhat similar conclusions, I think, being deducible from the experience of the Asylums Board hospitals."

In this connexion it may be well to quote the experience of Oldham, another large town which has tried the experiment of temporarily abandoning hospital isolation in scarlet fever. Owing to an outbreak of small-pox, the fever hospital had to be reserved for that disease, and no cases of scarlet fever were admitted during the whole of 1892, and only a few cases towards the close of 1893. Yet the disease fell off to such an extent that during 1892-3-4 there was less scarlet fever in Oldham than in any other three consecutive years during the twenty-two years for which records are available.

These facts certainly suggest that the value of hospital isolation in controlling the spread of scarlet fever is very much less than is usually supposed. It is reasonable, indeed, to question whether it has any influence at all, or whether the influence, if any, may not (as is being urged by some) be in the wrong direction. In any case, it cannot be denied that the spread of scarlet fever (which in some respects should be regarded as an endemic rather than as an epidemic disease) depends upon causes of which, as yet, we know very little. This explains why hospital isolation, devised and advocated under the belief that personal infection was the principal factor in its spread, has failed so conspicuously to accomplish what was expected of it.

I may add that since the Leicester Fever Hospital was closed on January 21st to diphtheria as well as scarlet fever, the former disease has also declined. The average number of cases notified weekly during the five weeks since the closure of the hospital was 5.4, as compared with an average of 10.2 during the five preceding weeks, during which time 45 per cent. of the cases were removed to hospital.—I am, etc.,

C. KILLICK MILLARD,
Medical Officer of Health, Leicester.

February 26th.

TENURE OF OFFICE OF MEDICAL OFFICERS OF HEALTH.

SIR,—Dr. Herbert Jones's letter is very opportune. A new session of Parliament is commencing; Sir F. S. Powell has reintroduced his Bill; with the aid of Government (Mr. Walter Long) it can be easily passed; without it it must as inevitably fail.

I have nothing new to state. The case always seems to me to be finally summed up and proved when it is remembered that security of tenure is guaranteed to the Poor-law medical officer, who is responsible for the lives of individual paupers, but is refused to medical officers of health who are responsible for the health of whole communities.

In my own case, I was formerly appointed for five years at a time. Recently the period has been reduced to one year; and my authority reminds me annually that I shall not be reappointed again if I dare to do my duty either to the public or to the Local Government Board, and that I hold office at their pleasure only so long as I do nothing and keep my mouth shut.

Enclosed you have my card. For obvious reasons I dare only sign myself in public

HOPE DEFERRED.

March 3rd.

THE SALE OF POISONS IN OPEN SURGERIES.

SIR,—Dr. Bruce, in his reply to my letter, states that "the General Medical Council took special pains to be sure that it was taking action against certain practitioners on totally different grounds than from any consideration whatever for the interests of pharmaceutical chemists." If the General Medical Council did so, there is no evidence of this in the minutes of that body. They came to one decision on December 5th, 1899, and a totally different decision in December, 1900. This decision of 1899 was founded on the report of a special Committee, of which, as I have already said, Dr. Bruce was a member. There is no evidence in the General Medical Council's minutes of the appointment of any Committee between these two dates, and no report agreeing with the assertion of Dr. Bruce that the General Medical Council took the "special pains" he refers to. There is no note of complaint by the Pharmaceutical Society in the minutes of the General Medical Council. If there is such a communication I think the General Medical Council should have dealt with it in the same way as they dealt with the communication from the Privy Council. A committee should have been appointed and their report entered in the minutes. The Council could then have heard what a deputation had to say on the subject without interfering with their judicial functions. To come to a decision from a communication from any one body without hearing the other side is not worthy of a corporation. It indicates that the General Medical Council is a secret tribunal. When the case was dealt with, the Pharmaceutical Society were the complainants, and from this itself it may be fairly taken that their appearance was in the interests of pharmaceutical chemists.

Dr. Bruce has failed to see my point. My objection is wholly against the action of the General Medical Council and its proposed infliction of an extra-judicial penalty upon medical practitioners which is not applicable to the pharmaceutical chemist, and more particularly so as the Pharmaceutical Society are the complainants. The penalty under the Pharmacy Act is mild, the penalty which the General Medical Council proposes to inflict is simply atrocious. Parliament considered the penalties under the Pharmacy Act quite sufficient for the purpose, and they are the guardians of the public interest. These penalties are applicable to all delinquents, whether they are the servants of medical practitioners or pharmaceutical chemists. It cannot be supposed by any reasonable person that Parliament will be likely in any new Pharmacy Bill to enact that for such offences medical practitioners will be subject to one penalty of a very severe character, and the pharmaceutical chemist subject to a much milder one. We are accustomed to hear of the impartiality of the law. To say that a judge is partial in his judicial capacity is to say that he is guilty of infamous conduct. I, therefore, do not agree with Dr. Bruce when he says that the General Medical Council is doing what is right. Dr. Bruce says that the Council administers the Acts of Parliament under which it was constituted, but I would remind him that the Pharmacy Act is not one of these. The General Medical Council has the Medical Acts to administer; and the sale of scheduled poisons by unqualified assistants does not come within their scope. The public interests in this matter have been placed by Parliament in the hands of the Pharmaceutical Society. That they are in good business hands is shown by the fact that this Society could persuade a sister corporation (the General Medical Council) to use its ethical powers against medical practitioners, while those on its own register were unaffected. This shows the astuteness of the one and the simplicity of the other.

I certainly differ in opinion from Dr. Bruce as to the absolute clearness of the law. I think the Pharmacy Act is most ambiguous. I have already quoted Section XVII. I would like Dr. Bruce to look over a list of scheduled poisons, and say if ung. hydrarg. oxidi rubri is one of them. If Dr. Bruce supplied many of his patients with medicine, I am inclined to think that in many instances he did not fulfil all the requirements of the Pharmacy Act. I find very few men do.

What rights we possess in pharmacy are conserved to us by the Pharmacy Acts, and therefore we claim we are only amenable to the penalties under these Acts. The Faculty of Physicians and Surgeons of Glasgow and the Royal College of Surgeons of Edinburgh still grant a qualification in surgery and pharmacy. It is only the surgical qualification that the General Medical Council registers. We therefore claim that we are only subject to "the law of the land," and not to the extra-judicial penalty of the General Medical Council. The money penalty provided in the Pharmacy Acts is quite sufficient to stop all such sales, and the threatened action of erasure from the *Medical Register* by the General Medical Council only indicates that that body has no idea of the fitness of things.—I am, etc.,

Glasgow, Feb. 24th. JOHN BROWN.

SIR,—Dr. Bruce's reply to my letter in the BRITISH MEDICAL JOURNAL of February 14th truly "beats Banagher," for it reveals the fact that he had no authority for the assurance he then gave. As a member of a judicial body armed with penal powers, I think he should be very careful in making statements from which he is forced to resile when challenged. His covert sneer I treat with the silence it deserves, but can assure him I place much more confidence in the opinion of a first-class city lawyer than I do in his. As I do not know Dr. Bruce, have never seen him, and he has never seen me, his guess at my identity must be very far out.—I am, etc.,

February 25th. M.D.

PUERPERAL ECLAMPSIA.

SIR,—In the BRITISH MEDICAL JOURNAL of December 13th, 1902, you comment on the prevalence of eclampsia in Edinburgh, where six cases occurred in thirty-six days. The occurrence is said to be unprecedented.

In Calcutta we see a very large number of cases of eclampsia, and it is quite usual to see cases occurring in quick succession.

In 1894 I read a paper before the Obstetrical Section of the Indian Medical Congress, where I drew particular attention to the prevalence of eclampsia, with special reference to the influence of atmospheric conditions. Since then I have had repeatedly two or three within twenty-four hours. On one occasion, within thirty hours I saw five cases!

You draw attention to the rainfall and sunshine as causative factors. I think the combined effect of temperature and humidity of the place has a great deal to do with the occurrence of cases. It would be interesting to note the conditions I allude to.—I am, etc.,

KEDARNATH DAS, M.D.,
Campbell Hospital, Calcutta, Feb. 5th. Teacher of Midwifery.

THE NASAL TREATMENT OF ASTHMA.

SIR,—I regret that I did not see Dr. Watson Williams's interesting letter on the nasal treatment of asthma in the BRITISH MEDICAL JOURNAL of November 8th, 1902, until my return to Brisbane last week. In consequence of the limited time allowed for the reading of my paper on this subject,[1] I was obliged to pass over many points of interest, and it seemed to me of greater importance especially to draw attention to the extraordinary effect of cauterizing certain areas of the nasal mucosa, as seen by me in over 400 cases of asthma, than to take up the time of the meeting with explanations, for the most part theories, of the *modus operandi* of the effects produced, and with minor details of treatment. For although Dr. Watson Williams has shared my view "that some part of the nasal apparatus has a controlling influence upon the respiratory centre, and there is in the nose, as it were, an agency through which afferent impulses must pass"; for many years still I failed to find any one, before reading my paper, who attempted to put the view into practice, in the treatment of asthma, in cases where the nose was apparently normal. I consider it hardly consistent in Dr. Watson Williams to confess that he has found "the nasal treatment in asthma is often beneficial, and the relief thus obtained affords an opportunity for entirely discontinuing the antispasmodic and sedative remedies, which are at best palliative, and which, while giving relief to the asthmatic paroxysm, always leave the patient's nervous system in a more unstable condition," and then to go on to state that he thinks "it would be deplorable if Dr. Francis's contribution led to the general adoption of intranasal cauterization as the panacea for paroxysmal asthma." In a fuller report which I intend publishing on my return to London next May, I hope to dispel the misunderstanding that seems to exist in Dr. Watson Williams's mind, and which evidently has arisen from the shortness of the paper I read, and the still shorter abstract that appeared in the JOURNAL of October 18th, 1902—namely, that I advocated cauterization of a limited area of the nose as a "panacea" for all asthma, and so added one more to the many "cures," as Dr. Watson Williams infers, possibly with excuse under the circumstances.

[1] BRITISH MEDICAL JOURNAL, October 18th, 1902, p. 1248.

When I advocated cauterization of the septal mucosa in the treatment of asthma, I no more wished to infer that one was to neglect other possibly necessary treatment of the nose and general hygienic and tonic measures, than when I stated that I had seen the dyspnoea in cardiac cases relieved by intranasal cauterization did I wish to imply that nasal treatment was a "panacea" for heart disease, and was to take the place of rational measures. I merely wished to emphasize that the cardinal point in the treatment of asthma was cauterizing the nasal septum. With this treatment, in conjunction with other accessory measures, I have found few cases that have not yielded, however severe, and relapses extremely rare, although many have stood the test of five and six years. It is curious to note that in nearly every case where a relapse has taken place it has occurred after an attack of influenza, and has been speedily relieved by further treatment.—I am, etc.,

Brisbane, Dec. 29th, 1902. ALEXANDER FRANCIS, M.B.Cantab.

FINSEN'S TREATMENT OF LUPUS.

SIR,—With reference to Dr. Lancashire's letter in the BRITISH MEDICAL JOURNAL of February 21st, p. 523, I am entirely in agreement with him that the publication of exaggerated statements in lay papers is much to be deplored. There are, however, one or two points on which I venture to differ. The first statement to which Dr. Lancashire objects is that, "No other method can approach this (Finsen's method) for cosmetic results. Even the *x* rays, when successful, leave a most unsightly and prominent scar. This light leaves nothing recognizable as scar tissue."

In a paper published in the JOURNAL by Mr. Malcolm Morris and myself, we referred to a case in which both methods were applied to different parts of the face; and said that "the scar resulting from the *x*-ray treatment was more discoloured, denser, less supple, and more tense than the other, which was so fine and smooth as almost to resemble normal skin." This scar (from the *x* rays) has now become still further disfigured by marked telangiectases, and such a result has been reported in other cases. May not the writer quoted by Dr. Lancashire—being a medical man—have had this eventuality in mind?

With regard to the second point, that "Finsen will soon have made extensive cases of lupus as rare as Lister has made the surgical fevers or Jenner small-pox," I agree with Dr. Lancashire that "Finsen's method perhaps finds its limitations most of all in dealing with extensive cases"; but I imagine that the writer meant to imply that lupus will now be treated in its early stages by this method, and that extensive cases will therefore become a thing of the past, and to this statement, I think, little exception can be taken.—I am, etc.,

Wimpole Street, W., Feb. 27th. S. ERNEST DORE.

AN INTERNATIONAL MEDICAL MANIFESTO ON ALCOHOLISM.

SIR,—I occasionally prescribe alcohol in my practice. I am not a total abstainer. I am a member of the British Medical Association. I am, therefore, one of those whose "good name" is threatened by the above manifesto, according to Dr. Thomas Dutton's letter of February 28th.

Most of us also doubtless occasionally prescribe arsenic. If some "faddist," or association of "faddists," ventured to suggest that arsenic is a poison, would that be a reflection on our good name? That, however, is the only reflection on the good name of those of us who prescribe alcohol in the manifesto. It obviously deals with, as it says, "the prevalent use of intoxicating liquors as beverages." It does not say a single word about the properly restricted medicinal use of alcohol. Dr. Dutton's defence—or rather, onslaught—therefore appears not a little quixotic.

I certainly hold no brief for the authors of the manifesto, but when Dr. Dutton protests against the manifesto as "recklessly placing all crime on the shoulders of drink," he either deliberately or inadvertently misquotes the manifesto, which makes no such assertion.

It does, however, affirm that drink is "the cause, direct or indirect, of a very large proportion of crime, poverty, etc." And to that proposition, I venture to assert, "by far the greater number of the most learned physicians and surgeons" will heartily subscribe, not because of this "impudent" (?) manifesto, but because such a conclusion is inevitable to any medical practitioner of average intelligence and power of observation.

Dr. Dutton supports a somewhat extravagant position by a quotation from "one of our shrewdest and most experienced police magistrates" to the effect, among other things, that "a drunkard generally injures himself and not others." Such a statement, if strictly limited to the semi-paralytic stage of drunkenness, is probably true; but if it be meant in a general sense, the net result of such an assertion is merely to suggest grave doubts as to the "shrewdness" of the experienced official. *Audi alteram partem*—ask a drunkard's employer; and perhaps a few queries addressed to the drunkard's wife and children would not be irrelevant.—I am, etc.,

Manchester, March 2nd. J. STAVELEY DICK, M.B.

A DEGREE FOR LONDON STUDENTS.

SIR,—In the BRITISH MEDICAL JOURNAL of February 14th Mr. Goodridge questions the *rationale* of a conciliatory attitude towards the Royal Colleges; but in my letter it was obviously meant to show that without a measure of their Council's sympathy it would be next to impossible to further pursue anything in this reform. It should also be remembered that even Commissions are thrown over, and then subsequently their aims are in turn reconsidered and successfully carried through; so, doubtless, Mr. Goodridge's risus sardonicus, if continued all that time, would become intolerably painful. Then, again, this is really a London question, and can have no reflection on provincial degrees. It is to get a more serviceable degree for the standard of work done in London; and on that account it would be superfluous to shift the venue to Durham, except for the purpose of any temporary measures. There has been no lugubrious Avatar to make us discouraged, and dissolve some of our hopes, or to make us fly to other centres for redress; and an all-important Act of Parliament actually aids the London view, whilst it does not aid any other. Of course, the examinations would be faced legitimately but advantageously at the beginning of our careers, when pursuing a liberal education towards a college and university degree, and not with the burden on us, in later life, to skurry about after altering, patchy, and artificial degrees, when all examination levels, and the possibility of practical training are upset by life's mischances, favours, and toils.

It certainly looks as though the encouragement to adopt the courtesy title of "Dr." outside the precincts of the Royal College of Physicians makes their opposing by-law a dead letter, and it might well enough be deleted. Unless regarding others as surgeons we use that title commonly amongst ourselves, and do not suffer by it; our leaders do, too. The public are profuse in its use, because they expect that standard, and have grown out of recognizing the alternative and mediaeval licence. There is thorough expert support in the lay press, and often—non-technically—it is adopted by the medical press; all indicating some necessity for this reform. If, then, outside its Shakespearean meaning "smug" is cast in contravention to that public position and confirmation, then it is, at the least, abusive and immature, for the facts are unaltered, and it is only like a small tilt at a windmill. As we serve the public so they have an inalienable right to portray, as above, the current standard they desire, and in upholding this, it is a better argument to the College of Physicians than to say their by-law is "unfair," which they can correctly repudiate, for the "licence" unless followed up is not a "doctorate."—I am, etc.,

Bognor, Sussex, Feb. 24th. H. ELLIOT-BLAKE.

THE ROYAL ORTHOPAEDIC HOSPITAL, LONDON.

SIR,—I enclose copy of a letter which the Secretary of this hospital was directed to address to me, and which sets forth that at the recent annual meeting of the Governors I was not re-elected. I was not present at this meeting, nor were any of the Governors who are opposed to the sale of the site, several of them having resigned, disapproving of that policy. I am not aware that any reason was given for my non-election, nor have I received any complaint about my work.

It remains to be seen if this unprecedented action will be in the interest of the hospital or to the credit of its management, but it is undoubtedly contrary to the laws of the hospital applying to the medical staff, and in that sense illegal. Law 40 provides "that no medical officer shall be removable except by the vote of a general or special court on the report of the Committee of Management," but the Committee made no report that I have heard of or seen. Hence, a serious step has been taken against me, and I have suffered injury un-

heard and without sufficient or any cause assigned. As this is a matter which affects the position of the medical and surgical staffs of all hospitals, it is one which, I venture to think, will attract the attention of medical journals, and, through them, of the profession at large.—I am, etc.,

Grosvenor Street, W., March 3rd. H. A. Reeves.

[Copy.]

Royal Orthopaedic Hospital.
February 27th, 1903.

Dear Sir,—I have to inform you that at the annual Court of Governors held yesterday you were not re-elected upon the Committee of Management, from which you some time ago gave notice of your intention to retire.

The Governors did not re-elect you either as one of the Honorary Surgeons, but thinking you would prefer to finish the treatment of certain of your patients no immediate steps have been taken regarding the appointment of a successor.

I am, dear Sir,
Yours faithfully,
Tate S. Mansford.

H. A. Reeves, Esq.

TRANSPLANTATION OF PANCREAS IN DIABETES.

Sir,—In reply to Dr. Allan's request for information on this question, I would refer him to a case of diabetes treated by grafting sheep's pancreas reported by myself in the British Medical Journal, 1894, vol. ii, p. 1303. The procedure failed, unfortunately, but this might be attributed to my reluctance to resort to any operative treatment in a bad case of diabetes until it was very evident that the patient was approaching a fatal termination. I cannot help feeling that an attempt to graft sheep's pancreas might be successful if resorted to while the patient is still in a fair condition of general health.—I am, etc.,

Clifton, Bristol, March 1st. P. Watson Williams, M.D.

OBITUARY.

We regret to record the death of an old and honoured member of the profession, Dr. George Wigan, of Portishead, Somerset, on February 15th. George Charles Henry Wigan was born in 1820 in Tipoo Sahib's palace, Seringapatam, India, where his father, Colonel Thomas Wigan, of the H.E.I.C., was then in command of the military dépôt. At the age of 3 he was sent to England, and was brought up by his grandparents. He was educated privately, and entered early at St. George's Hospital, where he was a successful student, being Bloxam's Prizeman in Midwifery and Diseases of Women and Children. He obtained the diploma L.S.A. (London) in 1841 and of M.R.C.S. (Eng.) in 1843. He was taken into partnership by Mr. Bloxam, and practised in Somerset Street, Portman Square; but his health breaking down, he went out to Australia to an official appointment. He remained ten years in Australia, and was for some years Consulting Surgeon to the Maitland Hospital, N.S.W., and had a large practice in that town. He returned to England in 1863, and went to Aberdeen University, where he obtained the degree of M.D., C.M. in 1864. In 1864 he returned to the old home at Portishead, and practised there for thirty years, when he retired in favour of his son. He leaves four daughters and three sons, the latter all in the profession—one at Armidale, N.S.W., one at Portishead, and one at Chelsea. His wife died in 1899. He was buried with every mark of respect in Portishead Parish Churchyard on February 21st.

We regret to have to report the death, at the early age of 49, of Dr. Fletcher, of Crosshills, Yorks. He commenced his medical career as a pupil, and afterwards entered at the Leeds School, subsequently completing his studies at Edinburgh, where he obtained the diplomas of L.R.C.P. and L.R.C.S. in 1876. He settled at Crosshills immediately afterwards, and continued to practise there with great success, and to the great advantage of his patients, by whom he was held in highest esteem. For the past two or three years he had suffered from renal cirrhosis, but had managed to keep on with his work till about ten months ago, when increasing weakness compelled him to give up. He was a man of handsome presence, and his friends and patients alike deeply regret his death. He leaves a widow and four children. The eldest son is a student at the University of Edinburgh.

Our Aberdeen Correspondent writes: Deep regret is felt in University circles at the death of Mr. Charles W. Mitchell. He was a director of Armstrong, Whitworth, and Co., and other large concerns; he devoted much of his time throughout his life to artistic pursuits, and as a painter won marked distinction by his work, especially in portrait painting and in figure pieces. In Aberdeen, however, his name and that of his father will always be remembered for their munificent gifts to the University. It is estimated that Mr. Mitchell, senr., gave something over £30,000 to the University, the result being the Graduation Hall, the Students' Union, and the Mitchell Tower. Mr. Charles Mitchell carried on the beneficence of his father, and added £20,000 to the Extension Fund. His modesty caused him to decline the honour of the degree of LL.D. which the University offered him, but he received the Freedom of the City of Aberdeen in 1901. His encouragement of substantial support of artistic and philanthropic undertakings in Newcastle and Durham are well known, and his death at the age of 48, on the last day of February, will be a cause of sadness to many.

We regret to have to record that Dr. Samuel Alexander died at his residence in Belfast on February 25th at the early age of 40. About seven weeks ago he was attacked by pneumonia, which was followed by empyema. He graduated M.D. in the Royal University of Ireland in 1885, and was a member of both the British and Irish Medical Associations and a Fellow of the Ulster Medical Society, to whose *Proceedings* he from time to time made contributions. He was Medical Officer and Medical Officer of Health of No. 5 Dispensary District, and was Surgeon to the Belfast Boilermakers' and Iron Ship Builders' Society and of the Amalgamated Society of Joiners. A friend who knew him well writes that he possessed medical abilities of a high order, and was most conscientious in the discharge of his onerous duties. He was a man of a quiet and retiring disposition, highly esteemed by those who knew him for his sterling honesty and contempt for underhand or mean actions. He leaves a widow and one child, with whom the deepest sympathy is felt in their bereavement.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. Herman Mynter, a prominent physician of Buffalo, who was one of the medical attendants of the late President McKinley after the receipt of the wound which caused his death: Dr. Salomon, Vice-President of the Union of Medical Syndicates of France, and author of monographs on medical relief for the poor, alcohol and the depopulation question, the French lunacy law, etc.; Dr. Ferdinand Weyert, Director of the St. Petersburg Ophthalmic Institution, aged 66; and Dr. Gaspar Sentimon, of Barcelona, a physician who, by his remarkable linguistic attainments, was able to keep his countrymen informed of the progress of medicine as reflected in English, French, German, Greek, and Russian periodical literature.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE PROSPECTS IN THE HIGHER RANKS OF THE ARMY MEDICAL SERVICE.

[From a Correspondent.]

What are the prospects at present held out to the senior officers of the Army Medical Service, namely, the colonels and the surgeon-generals? What are the boons or prizes open to these officials? I think you will say very few indeed. Let us take colonels R.A.M.C., for example.

Prospects of Colonels R.A.M.C.

By an egregious War Office blunder these officers, by far the most important individual group in the R.A.M.C., are entirely excluded from the increases of pay granted to the executive medical officers R.A.M.C. by the recent warrant (1902).

A colonel R.A.M.C. remains to-day the worst paid "colonel on the staff" in the army, his pay being below that of the ordinary "colonel on the staff," and very far below that of the engineer colonel on the staff, who draws at once on appointment 10s. per diem more pay than the medical colonel (Pay Warrant, par. 116).

Yet the whole hope of the future of the R.A.M.C. is in the efficiency and hardworking character of its colonels, who are the chiefs of Districts in peace, and Divisions in war, and are very responsible officers—none more so in the army.

Formerly many of the P.M.O's. of districts were notoriously easy-going. Their idleness, even in an idle army, was the

joke of that army, and they made up for coming to their offices late by going away early. This is now changed. But while their responsibility and their work has changed, their pay and emoluments remain the same as in 1879, and one may see in the garrisons the grotesque condition of a junior medical officer with a good rate of hospital charge pay drawing more pay than the district P.M.O. who inspects and commands him. As a result, there is in every military district to-day a P.M.O. grumbling at his defective pay, and acting as a most effective wet blanket to all enthusiasm amongst his officers. What more injurious condition could exist in any corps than this? and their influence in deterring young medical aspirants from entering the R.A.M.C. service must be considerable.

Surgeon-Generals.

These officers draw less emoluments than the major-generals with whom they rank. I use the word "emolument" to cover all sources of official income and allowances. They are restricted from rising to lieutenant-general's rank, and have really little or no outlook, being retired at 60 years of age. Surely the Director-General A.M.S. should have the full rank of "General," and the Deputy Director General and the Surgeon-General in India that of Lieutenant-General. We recently saw the P.M.O. of the South African army serving throughout that most trying campaign as a major-general only, while temporary or substantive rank as lieutenant-general was very freely given to the combatant major-generals, who were not doing more responsible duties for the State than the P.M.O.

Until perfect equality of careers with the combatant service is granted to the Army Medical Service it is hopeless to expect medical recruits to come in any numbers, as it is a defective and warped career.

RECOMMENDATIONS.

Already the weak points of the new warrant are being found out, notably as to India. We want therefore for the Army Medical Service reforms on the following equitable lines:

1. *A Director-General*, with general's rank and pay of at least £2,500, with table money added. Even this is no lavish income for so responsible a post.

2. *A Deputy Director-General*, with lieutenant-general's rank and £2,000 a year pay. We need also the right to claim the grant of lieutenant-general's rank for a P.M.O. when he is serving in the field in command of the medical service for any force exceeding one Army Corps, namely, 40,000 men.

3. *Surgeon-Generals.*—The pay and allowances of surgeon-generals is also defective. A staff allowance of 10s. a day should be added to their income, and furniture allowance as granted to combatant major-generals commanding should be allowed, as they are shut out from general command. Something needs to be done to offer high rewards to the medical service, so that it may compare better with the combatant side, with its well-paid Army Corps commands, and higher appointments.

4. In the same way an increase of the K.C.B.s. allowed to the medical service is needed. Baronetcies are now freely given to the civil profession of medicine and knighthood is freely bestowed. But the Army Medical Service is outside the shower of higher honours and the K.C.B.'s were withheld entirely from the medical officers in the recent war. Although in 1815 McGrigor was made a Baronet for his war services, no medical officer has ever yet attained the G.C.B. for medical services in peace or war.

5. The right to succeed in turn to the Governorship of Chelsea Hospital is needed and other similar appointments, and the conferring of real military rank as major-general instead of the present sham military title of surgeon-general. Thus the Director-General who now ranks as a lieutenant-general has the same title as a surgeon-general ranking as a major-general—a very invidious classification leading to mistakes. Even when appointed on the staff of the army all P.M.O.'s are still not so gazetted—a lingering remains of the departmental days when the medical officers were hangers-on to the army and not in it. The change that took place in titles and status in 1898 should be followed logically by the gazetting of P.M.O.s. in the usual army way to their appointments on he staff of districts and divisions in war.

6. The right to be nominated as Governors of Colonies in due proportion with other military officers.

7. And the right to certain posts of honour about the Court and to the Corps of Gentlemen-at-Arms or Equerries to the King.

Every vestige of differentiation between the boons granted to the combatant service and the medical service must be removed to ensure a good supply of eligible men.

Relation to the Sovereign.

It will be found absolutely essential for many reasons to approach the Sovereign and ask him to assume the position of Colonel-in-Chief of the R.A.M.C., and to appoint some twelve Colonels-Commandant R.A.M.C. as honorary appointments by which retired surgeon-generals may keep up an honorary connexion with the R.A.M.C. as is done in the Royal Artillery and the Royal Engineers. This latter boon will cost nothing, but would be appreciated by old officers who have spent their life in the service of the State in that medical service which still remains the socially neglected portion of the army.

India.

The pay of the surgeon-generals and District P.M.O.s. in India needs also to be revised, being in every case below the real value of the officers' services.

Conclusion.

Whatever there may be of old-world traditions or ideas about the medical service lingering in the official military combatant mind, every trace of them must be eliminated; a "clean slate" is needed on which to inscribe a series of pay, rewards, honours, and general treatment for doctors as good as the best corps in the army receives—

Only this and nothing more.

ROYAL NAVY MEDICAL SERVICE.

STAFF SURGEONS T. J. CROWLEY, M.D., D. T. HOSKYN, M.B., R. H. NICHOLSON, and J. L. BARRINGTON are promoted to be Fleet Surgeons, February 26th. Their previous commissions are dated: Surgeon, February 28th, 1883; Staff Surgeon, February 26th, 1895. Fleet Surgeon Hoskyn, when Surgeon of the *Curacoa* on the Australian station in 1894, at Apia, in Samoa, received an address from the people of Apia for his generous and devoted services to the sick. It said, "In a time of war and sickness you became a benefactor to these islands. Your rare skill enabled you to save the lives of many whose loss we should otherwise be mourning," etc. A graceful letter was also written to the wife of Dr. Hoskyn, and he received the thanks of King Malietoa and the Samoan Government for services rendered to the wounded during the rebellion in Samoa in 1894.

The appointment of Staff Surgeon HUGH CLIFT to the *Spartiate* on commissioning, and to the *Algerine* on recommissioning, has been cancelled.

The following appointments have been made at the Admiralty: WALTER G. AXFORD, Staff Surgeon, to the *Duke of Wellington*, additional, for Haslar Hospital (temporary), February 28th; BERNARD LEY, Surgeon, to the *Spartiate*, for medical charge on the voyage out, March 17th, and then to the *Algerine*, on recommissioning, undated; WILLIAM J. STITT, Surgeon, to the *Duke of Wellington*, February 19th; ALEXANDER K. SMITH SHAND, M.B., Surgeon, to the *Revenge*, for the *Hebe*, lent, undated; ALFRED CROPLEY, Staff Surgeon, to the *Pembroke*, additional, to be lent to the *Mersey*, February 28th.

ARMY MEDICAL SERVICE.

SURGEON-LIEUTENANT-COLONEL EDWARD EUSTACE, M.D., late Army Medical Staff, died at Cheltenham on February 16th, at the age of 61. He entered the service as Assistant Surgeon, September 30th, 1864; became Surgeon, March 1st, 1873; and Surgeon-Major, September 30th, 1876. He retired with the honorary rank of Brigade Surgeon, April 25th, 1885.

ROYAL ARMY MEDICAL CORPS.

COLONEL W. B. ALLIN, M.B. who is serving in the Bombay command, is appointed Principal Medical Officer, Bombay and Nagpore Districts.

Lieutenant-Colonel WALTER CROKER THOMAS POOLE, R.A.M.C., B.A., M.B., F.R.C.S.I., has retired on retired pay. He served in the recent Boer war, 1899-1902, including Spion Kop, for which he receeived the Queen's medal with five clasps and the King's medal with two clasps. Lieutenant-Colonel Poole also served in the Tirah campaign in India.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

SURGEON-MAJOR L. G. DILLON, M.D., 2nd Durham (Seaham), resigns his commission, March 4th; he retains his rank and uniform.

ROYAL ENGINEERS (VOLUNTEERS).

SURGEON-CAPTAIN J. R. ATKINSON, 2nd Cheshire (Railway) resigns his commission, March 4th.

VOLUNTEER RIFLES.

SURGEON-LIEUTENANT T. F. DEVANE, 1st Volunteer Battalion the Queen's (Royal West Surrey Regiment), to be Surgeon-Captain, February 17th.

Acting Surgeon W. EVANS, 1st Cadet Battalion the King's (Liverpool Regiment), resigns his appointment, March 4th.

Surgeon-Lieutenant W. E. M. CORBETT, 2nd (Prince of Wales's) Volunteer Battalion the Devonshire Regiment, resigns his commission, and is appointed Captain, March 4th.

ROYAL ARMY MEDICAL CORPS VOLUNTEERS, LONDON COMPANIES.

DISTRIBUTION OF PRIZES AND MEDALS BY THE GENERAL OFFICER COMMANDING THE HOME DISTRICT.

ON February 21st, at the Headquarters, Calthorpe Street, Gray's Inn Road, Major-General L. J. Oliphant, C.B., C.V.O., General Officer Commanding the Home District, in the presence of a large assembly of past and present members and friends, distributed the Prizes, the further issue of South African medals, the Coronation Police Ambulance Medals

and several good services certificates to members of this, the parent stock, of the R.A.M.C. Volunteers.

Among the officers and visitors were Colonel Gubbins, P.M.O., Home District, and Captain Douglas, V.C., D.S.O.; Lieut.-Colonel G. W. Robinson, Commanding Depôt, R.A.M.C., Aldershot; Brigade Surgeon Lieut.-Colonel W. R. Smith, Major J. J. de Z Marshall, Mr. A. D. V. Mackellar, Chief Surgeon Metropolitan Police; Major V. Matthews, Major Openshaw, C.M.G., and the Rev. Sir Borradaile Savory, Chaplain to the Corps, and Captain T. M. Gibbard, R.A.M.C. (Adjutant).

A Guard of Honour by No. 5 Company (holding the Challenge Shield for the year), under Captain B. Waggett, lined the corridor from the entrance gate to the platform.

The Commanding Officer, Lieutenant-Colonel J. E. Squire, V.D., in making his annual statement as to the position of the corps, had to report a diminution in numbers, the strength of the corps being 440, with 28 non-efficients as against 471, with 6 non efficients, on November 1st, 1901. The falling off in numbers was to some extent due to the lesser military enthusiasm when the war was over, and partly also to the increased requirements of the new regulations for efficiency. The latter cause seemed particularly to affect the medical students who had always formed an important part of the corps, but who now joined in smaller numbers. This would necessitate compressing the three medical companies into two, and a new non-medical company was in process of formation. At the Coronation the corps had a detachment on ceremonial duty, about 70 of all ranks on professional duty with the troops, and 120 on ambulance duty with the police. The corps has on all occasions—such as the two Jubilees, the Queen's funeral, and other public events bringing large numbers together—performed ambulance duty, the recognition accorded to their services being a matter of which the corps may be justly proud.

Major-General Oliphant expressed his pleasure at being present, and congratulated the corps on all he had heard from Colonel Squire, with the one exception of the diminution in numbers. The new regulations were framed with a view to efficiency, and he felt sure that every endeavour would be made to work up to their standard, but if they were found to be too severe, he was quite sure that modifications would be made, and to a corps such as this, whose services were highly appreciated, modifications would be sure to be made which would avoid any further diminution in numbers. Having been closely associated with the Volunteers when in command of the East London Volunteer Infantry Brigade, he knew their feelings and would do his best in passing on any recommendations which might be made to him. Referring to the services performed by members of the corps at home and abroad, General Oliphant said that he had frequently seen the work done by the corps on occasions when large and unwieldy crowds had been assembled, and he assured the members that their services, long and heavy on those days, were always gratefully appreciated.

A vote of thanks to General Oliphant, proposed by Major Matthews and seconded by Captain Harper, was carried with hearty cheers.

After the presentations were completed the hall was cleared for dancing.

THE "Y" FUND.

SURGEON-GENERAL H. S. MUIR (26, Kensington Garden Terrace, Hyde Park, W.) begs to acknowledge subscriptions from Colonel McGann, I.M.S., and Captain Heffernan, R.A.M.C. Also further contributions from the officers I.M.S. in civil employment, kindly collected by the Director-General I.M.S. (Sir B. Franklin, K.C.I.E.) making a total from that source of £313 6s. 2d. The gross amount collected was nearly £918. Of this sum £750 has been invested in the names of trustees (Surgeon-General Muir, Surgeon-General Keogh and Lieutenant-Colonel Babtie,) for the benefit of the infant. Of the remainder a portion has been devoted to establishing "Y" in a position which gives her congenial employment; and the balance, after deducting necessary legal and other expenses (which will not exceed £12), will be handed over to her. She is extremely grateful and returns her sincere thanks to all who have come forward with their generous assistance.

THE ALEXANDER MEMORIAL PRIZE.

THE prize of £50 and the gold medal of the Alexander Memorial Fund for 1902 has been awarded to Major F. Smith, D.S.O., R.A.M.C. The subject for the next competition is syphilis in the army and its influence on military service, its causes, treatment, and the means which it is advisable to adopt for its prevention. Essays must reach the President of the Committee on or before December 31st, 1903, must bear a brief motto, and be accompanied by a sealed envelope similarly superscribed, containing the name and address of the author. No essays should exceed about 20,000 words exclusive of tables, which may be added in the form of appendices. The competition is limited to executive officers of the Army Medical Staff on full pay, and professors and assistant professors at Netley are not eligible while so employed.

MEDICO-LEGAL AND MEDICO-ETHICAL.

POST-MORTEM EXAMINATIONS FOR CORONERS IN LONDON.

THE following report from the Public Control Committee was presented to the London Council on March 3rd, and the recommendations contained therein were adopted by the Council:—

Post-mortem Examinations in Inquest Cases of a Special Nature.

1.—On 1st July last the Council decided that coroners should be informed that, in the opinion of the Council, it was desirable that *post-mortem* examinations in inquest cases of a special nature should be entrusted to a specially skilled pathologist, and our attention has recently been directed to the manner in which this resolution has been given effect to in the South-Western coroner's district. We have received two deputations on the subject, one from the Council of the South-West London Medical Society, who complained that the coroner had not confined himself to special cases, but had employed a pathologist in cases of an ordinary nature. The deputation pointed out that this was not only a loss to the medical practitioners of the district, but that it to some extent reflected on their competency to perform work of this nature. The other deputation, which was from the medical and surgical staff of St. Thomas's Hospital, complained that the coroner had entrusted two hospital *post-mortem* examinations to the special pathologist, as they considered, without due cause. Both deputations expressed approval of the principle of the Council's resolution to employ a pathologist in special cases, but they objected to the manner in which that resolution had been given effect to by the coroner. We have also conferred with Mr. Troutbeck, the coroner in question, who has satisfied us that he is desirous of fully carrying out the wishes of the Council in this matter, and that he has acted in the interest of the public.

Mr. Troutbeck is coroner not only for the South-Western district, but also for the Westminster district, and during the six months ended December 31st last he has held 523 inquests in the two districts; in 496 of which *post-mortem* examinations were made. 116 being hospital cases. Out of the 496 cases in which *post-mortem* examinations were made, 80 were considered by the coroner to be special cases, and were entrusted to a special pathologist, while in the remaining 416 cases the *post-mortem* examinations were made by the medical practitioners concerned in the cases or by the staffs at the hospitals. It would therefore appear that the proportion of special cases in the whole of Mr. Troutbeck's districts was 16·1 per cent. on the total *post-mortems*, and 15·2 per cent. on the total number of inquests. Mr. Troutbeck does not consider this proportion excessive. It may be pointed out that in 55 out of the 80 cases in which the pathologist was employed no medical practitioner was in attendance, and that in only 16 of the cases referred to the pathologist, or 3·2 per cent. of the total number of *post-mortems*, was a private medical practitioner in attendance, the 9 remaining cases having occurred at public institutions such as prisons, asylums and hospitals.

After full consideration we think that the grievances complained of could be to some extent removed in cases where a medical practitioner had been in attendance, if it is intimated to coroners that whenever they are of opinion that the evidence of the medical attendant is material to the proper elucidation of the case he should be invited to be present at the *post-mortem*, and summoned to give evidence at the inquest, although a pathologist may have been employed, and indeed such a course has been suggested to us by Mr. Troutbeck. In any such case the medical attendant would of course be paid the statutory fee for his evidence.

We believe that the adoption of the practice suggested will to some extent meet the views of the profession on the question of fees, though we do not anticipate that it will materially add to the cost of inquests, having in view the fact that in such a small proportion of special cases there has been a medical practitioner in attendance. Both deputations, while fully agreeing with the views of the Council that a special pathological examination was desirable in special cases, were of opinion that the appointment of a pathologist should be a salaried appointment. It was pointed out to them that such appointments of special pathologists have been urged by the Council and approved in principle by successive Lord Chancellors, but that in the present state of the law such appointments are impossible. The only course at present open to the Council is that which has been adopted, for example, to intimate to coroners that the Council is prepared to repay a fee of two guineas for the employment of pathologists in special cases, where such fees have been disbursed at the holding of the inquests. The Council has no power whatever to make appointments for this duty, but it may ascertain and intimate to coroners the names of pathologists who would be prepared to undertake the duty for the fee named.

The practice of entrusting *post-mortems* to such pathologists in special cases has been adopted by coroners for many years, and pathologists such as the late Dr. Bond, Dr. Luff, Dr. Pepper, Dr. Creighton, and others, have carried out the work for the fee of two guineas. Dr. Freyberger was, under this arrangement, originally suggested by the Committee to do toxicological work which was previously done by Mr. Womack, who had carried out such examinations for some years past. Finding that Dr. Freyberger was also willing to make *post-mortem* examinations and give evidence for the usual fee, the Committee, in intimating to coroners his selection as toxicologist, also mentioned that he would be prepared to make *post-mortems* in special cases. We think, however, that it would be desirable to obtain the names of other experienced pathologists who would be prepared to undertake this work, and in making the selection we hope to have the co-operation of the Royal Colleges of Physicians and Surgeons and the leading hospitals.

With regard to the representations made to us by the deputations from St. Thomas's Hospital, we are satisfied that the coroner was justified in seeking further assistance in order to arrive at the cause of death. We recommend: (*a*) That an intimation be given to coroners that in those special cases where a pathologist is employed to make a *post-mortem* examination, and where a medical practitioner had been in attendance on the deceased, such practitioner may be summoned to give evidence and paid the statutory fee, whenever the coroner is satisfied that his evidence will be material. (*b*) That the Public Control Committee be authorized to obtain the names of several competent pathologists who will be prepared to make *post-mortem* examinations and give evidence in special inquest cases at the fee of £2 2s. per case.

CHARGES AGAINST MEDICAL MEN AND DENTISTS.

IN the course of his practice, it frequently falls to the lot of a medical man or a dentist to be left alone with a female patient, and, however much the practitioner may desire the presence of some third person, it is not possible to arrange that an independent witness shall be present on every occasion.

A case which has recently been brought to our notice emphasizes the risks. A dentist, practising at Margate, was charged, in July, 1902, before the Borough Bench with an assault upon a girl, which he was alleged to have committed when she came to him as a patient to be treated for toothache. Upon the sole testimony of the girl, who was a stranger to Margate, the magistrates committed the accused for trial before the Recorder, Mr. Bargrave Deane, K.C., at the Michaelmas Quarter Sessions. The prisoner does not seem to have been represented.

The girl repeated her statement before the Recorder, and said that she told two ladies what had happened to her immediately afterwards, and that they had advised her to go to the police. The ladies were not called at the trial as they could not be found. On this occasion the jury disagreed, and were discharged. The prisoner was released on bail to appear at the next sessions. At the next trial no further evidence was put forward. The prisoner was again unrepresented; but his sister protested in open Court against his conviction on the unsupported evidence of one girl. He was found guilty, and sentenced to six months imprisonment with hard labour; the judge commenting strongly, in passing sentence, on the heinousness of the offence.

Taking this short statement of facts as an accurate representation of

what took place, we have grave doubts whether the jury were justified in coming to the conclusion that the prisoner was guilty. Of course the newspaper report of an indecent case necessarily omits much of what transpires in the court; but there is nothing to show that the accused was convicted upon anything except the unsupported testimony of the prosecutrix, who was apparently a stranger to the town, and to the jurors unknown.

Of course it may be said that crimes of this nature are generally committed in circumstances which would exclude the possibility of corroborative evidence; but in the case under notice, although the prosecutrix alleged that she had complained to two ladies immediately after the fact, no serious steps appear to have been taken to secure their attendance.

The high character and great ability of the learned Recorder who tried the case convinces us that the prisoner was tried in strict accordance with the law; what appears to us to be a miscarriage of justice must have arisen from the fact that the jury were prejudiced, or from some inherent defect in the law of evidence as applied to this class of case. To quote the words of a correspondent to the *Saturday Review* (February 7th) in commenting upon this case: "What is there, if this is a fair sample of the present state of the law, to protect any medical man or dentist under such a charge? Most medical men know that there are, unfortunately, some prurient-minded women who, under the influence of hysterical excitement, will not hesitate to assert that some impropriety has taken place, or some vile suggestion has been made to them by their medical attendant, although such has never taken place, but has only existed in their own depraved and diseased imagination."

We do not wish to advocate the adoption of a hard and fast rule to the effect that a girl's statement, when appearing as a prosecutrix, must always be corroborated in some material respect before the accused can be found guilty. But where the prisoner has borne an exemplary character, and the prosecutrix is but little known, it ought, in our view, to be the duty of the judge to warn the jury to exercise their function with the greatest caution, giving the prisoner the benefit of any reasonable doubt. The rules which Blackstone in his *Commentaries* declares ought to be observed upon the trial of a charge of rape, should in our view be acted upon by the jury in every case of alleged indecent assault. That learned author says (Vol. 4, p. 213): "The party ravished is a competent witness to prove this and every other part of the case; but the credibility of her testimony and how far she is to be believed must be left to the jury upon the circumstances of fact that occur in her testimony. For instance, if the witness be of good fame; if she presently discovered the offence and made search for the offender; if the party accused fled for it—these and the like are concurring circumstances which give greater probability to her evidence. But, on the other hand, if she be of evil fame and stand unsupported by the testimony of others; if she concealed the injury for any considerable time after she had opportunity to complain; if the place where the act was alleged to have been committed were such that it was possible she might have been heard and she made no outcry—these and the like circumstances carry a strong but not conclusive presumption that her testimony is false or feigned."

THE NOTIFICATION OF INFECTIOUS DISEASE.

On Monday, March 2nd, the Court of Appeal (Vaughan Williams, Mathew, and Stirling, L.JJ.) heard an appeal in the case of Salisbury *v.* Gould from an order of Mr. Justice Walton striking out the plaintiff's statement of claim on the ground that it disclosed no cause of action. The action was brought by a Mrs. Salisbury, claiming damages against the defendant, Dr Gould, L.R.C.P., L.S.A., on the ground that he had wrongfully given a certificate to the effect that the plaintiff's child was suffering from small-pox. Mr. Swan and Mr. Pocock appeared for the plaintiff; Mr. Colam (instructed by Mr. W. E. Hempson, the Solicitor to the Medical Defence Union) represented the defendant.

It appeared from Mr. Swan's statement on behalf of the plaintiff, that on September 1st, 1901, the defendant was summoned by the plaintiff to see a little girl. After examining the child the defendant came to the conclusion that she was suffering from small-pox. He thereupon gave the usual notice to the Medical Officer of Health of the Holborn District, in accordance with Section LV (1) (*b*) of the Public Health (London) Act, 1891. As a result of this notice, the medical officer visited the child. He came to the same conclusion, and granted a certificate in accordance with Section LXVI (1) of the Act of 1891, which led to the child being removed to Rotherhithe upon a magistrate's order. After a few days it was found that the child was not, in fact, suffering from small-pox, and she accordingly returned home. The action, counsel explained, was originally brought against the defendant and Dr. Bond, but the name of the medical officer was struck out by the order of Mr. Justice Walton. The plaintiff, by her statement of claim, alleged that the damage which she had suffered was traceable to the defendant's negligence, and that the medical officer had acted solely upon the defendant's diagnosis.

Lord Justice Vaughan Williams: What is the nature of the damage which she has sustained?

Mr. Swan: It seems that the plaintiff lost her customers owing to the report getting abroad that there was small-pox at her house. She also had to pay for disinfectants.

Lord Justice Vaughan Williams: As I understand it, this case does not fall within Section LXVI.

Mr. Colam: That is not so. Section LXVI is the only section which gives power to grant the certificate. The actual order is made by the justices.

On the order of the justices being produced, Lord Justice Vaughan Williams said that he saw nothing in the justice's order to show that they were not convinced by the production of the defendant's certificate.

Continuing, Mr. Swan said that the substantial question was whether the defendant came under the Public Authorities Protection Act, 1893. This point had not yet been expressly decided in any court.

At this point Lord Justice Vaughan Williams asked Mr. Colam to show why the statement of claim disclosed no cause of action.

Mr. Colam: The defendant certified to Dr. Bond, and he examined the child for himself. The damage if any, flowed from his negligence, and not from that of the defendant. The only certificate the defendant has signed is the one which he is bound to sign under Section LV. He would have been liable to a penalty if he had not signed it. The statement of claim does not allege that the defendant signed a certificate under Section LXVI. It was admitted by the plaintiff's counsel when before the Master that her case was based upon the issue of a wrongful certificate under Section LXVI, and the claim is so framed.

Lord Justice Vaughan Williams: We cannot decide this case upon any alleged admission.

Mr. Colam: It is also contended that the defendant is protected by the Public Authorities Protection Act, 1893, inasmuch as the action was not commenced until eighteen months after the cause of action arose.

Lord Justice Mathew: This is neither the time nor the place to discuss that point. In the event the appeal was allowed, the plaintiff being ordered to give certain particulars of the claim, the summons for which had stood over pending the hearing of the appeal.

A CHEMIST CONVICTED OF MANSLAUGHTER.

On February 22nd, Henry Atken Gibson, a chemist, was charged before Mr. Justice Kennedy, at the Lincolnshire Assizes, with the manslaughter of Thomas Stevenson, at Spalding, on December 5th. Mr. Appleton prosecuted; Mr. Stanger, K.C., and Mr. Walker defended the prisoner.

It appeared that early in December, 1902, the deceased, who was a small farmer, went to the prisoner's shop to purchase medicine for a cold. The prisoner, who was not a qualified chemist by examination, but conducted his business by reason of his having been so engaged prior to the passing of the Pharmacy Act, 1868, gave the deceased some liquid in a bottle with instructions how to take it. On returning home the deceased took one dose, as the result of which he fell to the ground in agony. He died the same night. It appeared that the prisoner had mixed the medicine under the impression that he was using sal volatile, whereas he was in reality using the strongest liquid ammonia. It was alleged on the part of the prosecution that this constituted gross negligence. As further evidence of negligence it was proved that the defendant had supplied the medicine, not in an ordinary medicine bottle, but in one which had contained a hair preparation. It also appeared that after the deceased was taken ill the prisoner wrote the words "in water" on the label, whereas he had said nothing about the addition of water when the medicine was supplied in the first instance.

It was urged on the prisoner's behalf that the occurrence was a blunder and an accident, but not a criminal act. The jury found him guilty with a strong recommendation to mercy. Speaking in mitigation of sentence, counsel stated that his client was 63 years of age, and that the circumstance had so upset his wife that she was quite prostrate. He was sentenced to fourteen days imprisonment in the second division.

THE MEDICAL MAN, THE CORONER, AND THE PATHOLOGIST.

Dr. W. Piercy Fox (Clapham Road, S.W.), in the course of a letter on this subject, writes: The following case exemplifies very clearly the impossible attitude Mr. Troutbeck has taken. I was called to a woman at 3 p.m. on February 21st. I was out, but, returning at 4 p.m., went over, and found that she had been confined about an hour. The infant was dead. The woman was fully dressed, having just returned in a hurry in time to get home, and she was all alone. The infant's face was on the bed, with the mother's leg on top of the head, and the cord tightly turned twice round the neck. I tried my best to revive the child, and left at 4.30 p.m. The nurse arrived about 6 p.m.—an old woman. The father returned at 8 p.m. The case was certified by me as a death resulting from inattention at birth. The coroner was notified, and his officer, to whom I declined all information, called on me. Dr. Freyberger was given the necropsy. The coroner called the father, the nurse, and a young girl, all of whom said they knew absolutely nothing of the matter.

I venture to say that in this case the inquest legally is null and void, and a farce, inasmuch as a primary fact—identification—was absent. I was the only one possible as a witness, and yet the coroner called Dr. Freyberger, and ignored me.

VALUE OF DEATH VACANCY.

A. M. M. asks what percentage of profits ought to be paid to the relatives of the deceased, when a practitioner succeeds to a death vacancy, and for how long.

*** The relatives of the deceased are entitled to the market value of the practice. This may be estimated in a lump sum or commuted to an annual payment out of the profits. The latter will of course vary with the estimated value of the practice in question.

A DISPUTED BILL.

J. G. B. C. deserves our sympathy. We think his charges perfectly reasonable. From the lady's letters we suspect that she is either in straitened circumstances or excessively near. Our correspondent, therefore, should either waive the claim altogether, or adhere to his charges in their entirety.

A MATTER OF TASTE.

Form.—As a matter of taste we should have thought the billhead "To Dr. —— and Mr. ——" the best, but we should leave out the display of qualifications at the top left-hand corner. If, however, the partner who does not possess a degree cannot allow himself to be called plain Mr. ——, perhaps the form C. should be adopted.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Appointments.—Mr Joseph Larmor, St. John's, Secretary of the Royal Society, has been elected Lucasian Professor in succession to the late Sir G. G. Stokes. Dr. Norman Moore has been appointed one of the University representatives at the International Congress of Historical Studies to be held in Rome in April. It is understood that the Mastership of Pembroke has been offered to Professor E. G. Browne, M.B., now in Cairo.

Degrees.—At a congregation on February 26th, the following medical degrees were conferred:—*M.D*: A. E. Bodington, Caius. *M.B.* and *B.C.*: A. W. Izard and E. A. Ross, Trinity; H. Wacher, St. John's; L. B. Aveling, Christ's. *M.B. only*: N. F. Tiechurst, Clare. *B.C. only*: D. Holroyde, Clare.

UNIVERSITY OF LONDON.

The following candidates have passed the Intermediate Examination in Medicine:

Entire Examination—First Division: T. C. Clare, Birmingham University; C. Clarke, St. Bartholomew's Hospital; A. D. Griffith, King's College; G. S. Morse, St. Bartholomew's Hospital; J. M. O'Meara, University College; W. J. H. Pinniger, University College, Bristol; Lilian T. Rowland, London School of Medicine for Women; A. Salmon, London Hospital; R. A. Veale, Yorkshire College. Second Division: E. H. Adams, Guy's Hospital; W. B. Attenborough, King's College; J. S. Avery, University College, Bristol; T. H. Barton, Guy's Hospital; R. J. Bentley, Guy's Hospital: V. H. Blake, St. George's Hospital; H. D. Clementi-Smith, St. Bartholomew's Hospital; D. K. Coutts, St. Thomas's Hospital; C. H. Cross, St. Bartholomew's Hospital; I. J. Davies, University College, Cardiff; A. S. Hahn, University College, Sheffield; G. Hamilton, Guy's Hospital; E. M. Harrison, Guy's Hospital; H. Isaacs, University College, Cardiff; H. S. Knight, Guy's Hospital; E. F. Milton, Guy's Hospital; C. L. Morgan, St. Thomas's Hospital; T. C. Pocock, Guy's Hospital; N. B. Powell, St. Bartholomew's Hospital; W. P. Purdom, Guy's Hospital; E. J. Roberts, London Hospital; E. L. Sandiland, London Hospital; F. A. Sharpe, Guy's Hospital; Olive Bertha Smith, London School of Medicine for Women; E. J. Sunnacks, University College; A. A. Sutcliff, St. Thomas's Hospital; Violet A. Turkhud, London School of Medicine for Women; H. A. Watney, Guy's Hospital; A. G. Wells, University College; F. T. H. Wood, B.Sc., Guy's Hospital.

Excluding Physiology.—First Division: Mary O'Brien, London School of Medicine for Women. Second Division: A. Barber, St. Bartholomew's Hospital; H. H. R. Bayley, Charing Cross Hospital; L. F. Cope, St. George's Hospital; E. V. Dunkley, St. Thomas's Hospital; A. H. Gifford, King's College; Ll. Llewelyn, London Hospital; Bessie W. Symington, London School of Medicine for Women; A. G. Tresidder, London Hospital; Ruth Helen Western, London School of Medicine for Women; D. Wilson, St. Thomas's Hospital.

Physiology only.—Second Division: L. C. Blackstone, University College; I. R. Cook, Guy's Hospital; R. J. H. Cox, St. Thomas's Hospital; J. H. Drew, St. Thomas's Hospital; G. S. Earl, St. George's Hospital; H. O. Gough, University College, Bristol; A. W. Hooker, St. Thomas's Hospital; F. D. Roberts, London Hospital; H. S. Vivian, Middlesex Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following gentlemen having passed the necessary examinations and conformed to the by-laws have been admitted Members of the College:

E. B. D. Adams, St. Bartholomew's Hospital; W. M. Anderson, L.D.S.Eng., Charing Cross Hospital; E. E. Argles, St. Mary's Hospital; W. S. Armstrong, St. George's Hospital; O. F. H. Atkey, King's College Hospital; G. W. Badgerow, M.B.Toronto, Toronto University and University College Hospital; F. Barker, Medical Department, University of Birmingham; C. J. Battle, St. Thomas's Hospital; K. H. Beverley, University College and Royal Infirmary, Bristol; F. M. Bishop, St. Bartholomew's Hospital; W. F. Box, Guy's Hospital; D. Bridges, Charing Cross Hospital; H. M. Burroughes, B.A.Camb., Cambridge University and St. Bartholomew's Hospital; A. R. Brailey, B.A.Camb., and S. Child, B.A Camb., Cambridge University and Guy's Hospital; N. Carpmael, St. Thomas's Hospital; V. A. Chatelain, London Hospital; W. H. Cole, Guy's Hospital; H. E. Corbin, B.Sc.Lond., St. Mary's Hospital; P. T. C. Davy, University College Hospital; W. H. Dickinson, Cambridge University, Liverpool, and St. George's Hospital; R. Donald, M.A., B.Sc.New Zea., University of New Zealand and London Hospital; N. E. Dunkerton, King's College Hospital; D. C. Evans, University College, Cardiff, and St. Bartholomew's Hospital; F. W. Fawssett, Guy's Hospital; C. B. Fowler, Aberdeen University and Charing Cross Hospital; J. D. H. Freshwater, Cambridge University and St. George's Hospital; W. T. Frizzell, M.B.Toronto, Toronto University and University College Hospital; G. B. Gill, Bristol, Durham, and Westminster Hospital: W. L. M. Goldie, St. Mary's Hospital; P. Gow, University of New Zealand and Middlesex Hospital; A. M. H. Gray, University College Hospital; T. Guthrie and W. L. Harnett, B.A.Cam., Cambridge University and St. Thomas's Hospital; G. Hamel, C.V.O., M.D. Brux, Kiel, Berlin, and Bern Universities; A. F. Hamilton and T. H. Harker, St. Bartholomew's Hospital; P. W. Hammond, Guy's Hospital; W. T. Harris, L.S.A.Lond., and L. S. Hooper, St. Thomas's Hospital; N. G. Harry and A. G. Harvey, Cambridge University and Middlesex Hospital; H. W. J. Hawthorne, L.D.S.Eng., Medical Department, Birmingham University; G. S. Hett, University College Hospital; T. L. Ingram, Cambridge University and London Hospital; W. J. D. Iness, St. Mary's Hospital; A. W. Iredell, Guy's Hospital; J. D. Jones, Middlesex Hospital; H. M. Joseph, B.A Camb., B.Sc Lond., Cambridge University and Charing Cross Hospital; R. M. Kalapesi, L.M.and S.Bombay, Grant Medical College, Bombay; H. W. Kaye, B.A., Oxon., Oxford University and London Hospital; K. H. A. Kellie, Cambridge University and St. George's Hospital; E. H. Kenderdine, Medical Department, University of Birmingham; H. R. Kidner, B.Sc.Lond., St. Bartholomew's Hospital; R. O. Lee, B.A.Camb., Cambridge University and Middlesex Hospital; R. R. Lewis, Middlesex Hospital; A. D. Low and N. Low, St. Mary's Hospital; G. H. Latham, C. De Z. Marshall, and A. F. Miskin, St. Thomas's Hospital; S. H. McCoy, B.A., M.B.Toronto, Toronto University; H. R. Minkley, St. Mary's Hospital; R. V. G. Monckton, St. Bartholomew's Hospital; A. T. Moon, London Hospital; D. Morrow, L.S.A.Lond., Queen's College, Belfast, and Middlesex Hospital; S. P. Mummery, L.D.S.Eng., St. George's Hospital; H. B. Mylvaganam, L.M. & S.Ceylon, Ceylon Medical College and London Hospital; J. S. New, University College Hospital; E. J. O'Neill, M.B., Ch.B.New Zealand, Otago University, New Zealand; E. Parsons, St. Thomas's Hospital; C. B. Penny, Guy's Hospital; A. Pick, M.D.Germany, M.D.Austria, Breslau University; L. L. Pope, B.A.Kingston, Canada, M.D., C.M.McGill, University of McGill College, Montreal, and University College Hospital; J. H. Porter, London Hospital; J. L. Pritchard, Royal Infirmary, Liverpool and Glasgow; G. H. Richard, St. Mary's Hospital; E. A. Roberts, King's College Hospital; L. F. Robertson, B.A., M.D., C.M.McGill, University of McGill College, Montreal; J. N. Robins, M.A.Camb., Cambridge University and London Hospital; T. Rose, Middlesex Hospital; C. W. Sharpley, Yorkshire College and General Infirmary, Leeds; W. Stansfield, Owens College and Royal Infirmary, Manchester; J. B. Stephens, St. Mary's Hospital; E. F. A. Sthamer, M.D. Leipzig, Leipzig University; W. M. Strong, M.A.Camb., Cambridge University and St. Thomas's Hospital; L. R. Tosswill, St. Bartholomew's and Devon and Exeter Hospital; E. D. Townroe, St. George's Hospital; C. W. Turner, Durham University and Owens College and Royal Infirmary, Manchester; J. C. Velenski, M.D., B.S Durh., Durham University, St. George's and University College Hospital; V. M. Wallis, Guy's Hospital; J. Wells, Medical Department, University of Birmingham; A. L. W. Whitehouse, L.D.S.Eng., Westminster Hospital; F. C. Whitmore, Dublin, University College and Royal Infirmary, Bristol; C. W. T. Woods, Cambridge University and St. George's Hospital; H. G. K. Young, B.A.Camb., Cambridge University and Middlesex Hospital.

TRINITY COLLEGE, DUBLIN.

THE following candidates have passed the Final Examination in Midwifery:

R. J. Fleming, W. G. Harvey, W. R. P. M'Neight, C. E. Moore, J. Wallace, D. B. Thomson.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

GOSPORT WATER SUPPLY.

ON January 3rd and 17th we called attention to the unsatisfactory condition of the Gosport water supply and the supineness of the local authority in respect of the matter. On January 17th we were able to give some particulars received from the engineer of the Waterworks Company. These particulars included a denial on the part of the company that the water was impure from a bacteriological point of view, but an admission that the degree of salinity was exceptionally high, due to filtration through the chalk from Fareham Creek. The engineer further informed us that measures were being adopted by which the directors of the company hope to render the water all that could be desired.

We are now informed by a correspondent that the measures referred to consist in attempts to fill up the chalk crevices in the sides of the Foxbury well with clay, and thus block out the sea from Fareham Creek. Such palliative treatment is scarcely likely to prove successful, seeing that the well is deep and its bottom much beneath the sea level, so that the pressure must be considerable.

We cannot believe that the local authority or the authorities responsible for the Royal Marines at Forton and the troops in the various forts, or indeed the water company itself, quite realize the gravity of the issues raised by the facts previously quoted and by the more recent information which we have now received. True the Admiralty, which formerly had ships watered from the Gosport supply, ceased doing so some six months ago, and now, we understand, take water from the Portsmouth Company. But troops still remain dependent upon the Gosport supply. Up to the present it appears that the local authority and the water company have together taken two steps. Possibly there is some mutual interest between these two bodies. If there be we can only remark that under the circumstances it is a very dangerous mutual interest, unless it places public interest before its own. The two steps are these: First, samples of water have been analysed; secondly, there has apparently commenced some puddling of the Foxbury well as a result of the revelations of the analyses. But this is not, in our opinion, sufficient to safeguard the consumers of the water.

Now we learn that advantage was recently taken of the Local Government Act, 1894, by several ratepayers, who entered the district council's offices and demanded the right to inspect certain analytical reports of the Gosport water supply which were believed to be in possession of the officials, but which had not been made known to the public. Several were produced and others were admitted to have been received but could not be found.

In a report by Dr. Stevenson, of Guy's Hospital, dated January 11th, 1898, it is stated that: "This water is not of satisfactory composition for a public water supply. ..... It abounds in chlorides, and having regard to the proximity of the sea, I fear it will be found on examination that the chlorides percolate through some fissure in the chalk into the well. ..... I regard the excess as a matter of grave suspicion. A thorough examination of the surroundings of the well is needed." But apparently the advice to have a thorough examination of the surroundings was not followed.

In a report from the Clinical Research Society dated September 29th, 1900, is the following statement: "There can be little doubt that there is a connexion between the source of the water and the sea. ..... The water is distinctly dangerous. This opinion is strengthened by the fact that our bacteriologist has isolated the bacillus coli communis from 50 c.cm. of the water." And yet the engineer declares the water is bacteriologically pure.

There is a further report dated October 6th, 1900, which says the water remains "in our opinion highly suspicious, one sample yielding strong presumptive evidence of recent sewage contamination." A sample was sent to King's College for examination on June 10th, 1902, and the report states that "the amount of ammonia is very high, and if this were to be ascribed to the breaking down of organic nitrogenous substances under bacterial influences it would indicate a decidedly objectionable amount of organic contamination. ..... From the extent and nature of its mineral constituents, the water cannot be described as a good one for drinking purposes."

Our remarks need not be further prolonged. These various reports speak for themselves, and they speak also of the serious risk which is run by all persons drinking this water unboiled or unfiltered. We venture to urge the district council to bestir itself in its own interests, if for no higher reason, and we would respectfully suggest that the military authorities institute an inquiry of their own.

STATE VACCINATION BY ALL REGISTERED PRACTITIONERS.

AT the last meeting of the Stockport and District Medical Society the following resolution was carried unanimously: "That this Society endorse the memorial of the Leicester Medical Union, as sent to the

President of the Local Government Board *re* Vaccination (see BRITISH MEDICAL JOURNAL, January 3rd, 1903), and that a copy be sent on behalf of this Society to the same quarter."

THE ASSOCIATION OF PUBLIC VACCINATORS.

AT a meeting of public vaccinators in South Devon and North and East Cornwall a District Council was appointed to assist the Association of Public Vaccinators of England and Wales. Mr. George Jackson was elected Chairman, and Dr. Gill, of St Germans, Secretary.

Resolutions were adopted recommending that the Local Government Board should be the vaccination authority; that pending the transference public vaccinators should be as independent in position as vaccination officers; that all children should be vaccinated before being entered on the register of an elementary school, and should be revaccinated between the ages of 10 and 14; that successful vaccination should be defined in any future legislation; that all institutions for the provision of calf lymph should be open for Government inspection; and that no imported lymph should be used from any institution not recognized by the English Government; that there should be a Government vaccination station for the supply of lymph in all large centres of population; that efficient vaccination should be defined as at present fixed by the Local Government Board; that every medical practitioner not acting as a public vaccinator who forwarded a certificate to the vaccination officer of efficient vaccination should be paid a fee for the certificate, provided that it is stated the number of insertions and successful pustules, and that such fee should not interfere with that charged for the operation. Further, the meeting resolved that the minimum fees cannot be fairly reduced, that in many country districts they are inadequate, and that an additional minimum fee of 1s. a mile should be paid for each journey over two miles for each mile or part of a mile.

We are informed by Mr. Charles Greenwood, Secretary of the Association of Public Vaccinators, that within the past month five other meetings of public vaccinators in the respective districts of Surrey, Monmouth, Glamorgan, West Riding of Yorkshire, and North and East Devon, have been held, when district councils were formed and resolutions passed.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 8,608 births and 4,789 deaths were registered during the week ending Saturday last, February 28th. The annual rate of mortality in these towns, which had been 17.9, 17.1, and 16.7 per 1,000 in the three preceding weeks, further declined last week to 16 6 per 1,000. The rates in the several towns ranged from 8.2 in Handsworth, 8.8 in Walthamstow, 9.3 in Hornsey, 9 8 in King's Norton, 10.4 in Reading, 10.9 in East Ham, 11.6 in Wallasey, and 11.7 in Leyton, to 20.5 in Plymouth, 20.7 in Birkenhead and in Liverpool, 20.9 in Manchester and in Middlesbrough, 21 8 in Swansea, 23.0 in Salford, 23.2 in Bury, and 24 3 in Wigan. In London the rate of mortality was 16 3 per 1,000, while it averaged 16.7 per 1,000 in the seventy five other large towns. The death-rate from the principal infectious diseases averaged 1.6 per 1,000 in the seventy-six large towns; in London this death-rate was equal to 1.7 per 1,000, while it averaged 1.5 per 1,000 in the seventy five other large towns, among which the highest death-rates from the principal infectious diseases were 2.7 in Northampton, 3.0 in West Ham and in Manchester, 3.4 in Oldham, 4 2 in Wigan, 5.4 in Bury and 6 6 in Hanley. Measles caused a death-rate of 1.1 in Middlesbrough, 1.2 in Manchester, 1.6 in Swansea, and 3.4 in Wigan; scarlet fever of 1.2 in St. Helens, 1.5 in Oldham, 1.6 in West Bromwich, and 1.7 in Bootle; diphtheria of 1.2 in Northampton, 2.2 in Coventry, 2.7 in Bury, and 5.8 in Hanley; whooping-cough of 1.2 in Northampton, 1.4 in Preston, 1.6 in Grimsby, and 2 0 in Hornsey; and diarrhoea of 1.1 in West Ham. The mortality from "fever" showed no marked excess in any of the large towns. Of the 17 fatal cases of small-pox registered in these towns last week, 7 belonged to Liverpool, 4 to Manchester, and 1 each to Aston Manor, Birkenhead, Bootle, Oldham, Burnley, and Preston. The Metropolitan Asylums Hospitals contained 5 small-pox patients at the end of last week, against 6, 6, and 8 at the end of the three preceding weeks; 1 new case was admitted during the week, against 4, 1, and 7 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 2,528 to 1,893 on the nine preceding Saturdays, had further declined to 1,851 on Saturday, February 28th; 197 new cases were admitted during the week, against 189, 246, and 205 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, February 28th, 927 births and 581 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 18.1 per 1,000 in each of the two preceding weeks, declined last week to 17.7 per 1,000, but was 1.1 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scotch towns the death-rates ranged from 9.3 in Perth and 10 5 in Leith, to 18.8 in Glasgow and 22.0 in Aberdeen. The death-rate from the principal infectious diseases averaged 1.8 per 1,000 in these towns, the highest rates being recorded in Aberdeen and Leith. The 284 deaths registered in Glasgow included 1 small-pox, 2 from diphtheria, 10 from whooping-cough, 2 from "fever," and 6 from diarrhoea. Three fatal cases of whooping-cough were recorded in Edinburgh. Two deaths from whooping-cough and 3 from diarrhoea occurred in Dundee; 4 from measles, 2 from diphtheria, and 2 diarrhoea in Aberdeen; 2 from scarlet fever in Paisley; and 4 from measles in Leith

POOR-LAW CHILDREN.

THE Local Government Board in England has issued a circular pointing out that the number of children emigrated to Canada by Boards of Guardians, has, during the last few years, considerably diminished. The Commissioner of Emigration under the Dominion Government, states that at no previous time have there been so many opportunities in Canada as at present for absorbing in a satisfactory manner young emigrants of the class sent by Boards of Guardians. The circular further states that on the average of the last three years, the cost of sending a child to Canada, and providing for its inspection by the Dominion Government, does not exceed £15. Further information can be obtained from Mr. W. T. R. Preston, Commissioner for Emigration, 17, Victoria Street, London, S.W.

CONSTITUTION OF THE POPULATION OF ENGLAND AND WALES.

DR. A. CODD (Bromley, Kent) asks where particulars can be found of the normal constitution of the population of England and Wales according to age and sex in urban and rural districts, and as to the normal death-rate at each age-period.

*** The census reports for each county are being steadily issued from the Census Office. Those for London, Yorkshire, Lancashire, Sussex, and some other counties have already appeared, including that for Kent, in which our correspondent is interested, has appeared (Cd. 1171), price 1s. 3d. In each county census report the age and sex distribution of the population is given for (*a*) county boroughs, municipal boroughs, and other urban districts; and (*b*) rural districts. It is also given (*c*) for registration counties and registration districts. The death-rate for England and Wales in 1891-1900 in various age-periods of life and for the two sexes has not yet been published. The decennial supplement of the Registrar-General giving this information will probably appear in about two years.

EXAMINATION OF TRAMPS BY M.O. OF WORKHOUSE.

W. M. O. writes saying that by a recent resolution of the guardians he has been requested to visit the workhouse daily at 8 a.m. and to examine the tramps each day on account of the small-pox epidemic. He asks whether this is a part of his duty as medical officer and if not what remuneration he ought to claim.

*** The term used by our correspondent, "examine the tramps," does not fully explain what he is expected to do. It is his duty to examine all paupers once within a reasonable time of their admission to the house, but having done this, and having found no medical attendance requisite, we should regard re-examination, except any such made on account of apparent or real illness, as being a duty which by regulation he is not called on to perform. We are disposed to think that our correspondent's best course will be to comply with the directions of the guardians and to charge 2s 6d. for the re-examination of every tramp who is found not to require medical attendance when such re-examination is made.

ASSISTANT MEDICAL OFFICER OF HEALTH IN SCOTLAND.

MYOPIC asks if a parish medical officer in the north of Scotland can apply for the post of district medical officer of health for that district, although he does not hold a diploma in public health. He states that the parish has a population of less than a thousand, and that he can find nothing definite under the Act, but has been told that the Local Government Board will give no grant unless the diploma is held.

*** All county local authorities in Scotland, that is to say district committees, are bound to appoint a chief district medical officer of health who must hold a diploma in public health. The local authorities can, if they desire, appoint assistant or parish medical officers of health to act under this official, but they are simply his assistants, they can perform no statutory duties, and the local authority cannot participate in the Government grant in aid of the cost of medical officers of health as far as these assistants are concerned.

MEDICAL NEWS.

THE annual general meeting of the Medical Graduates' College and Polytechnic will be held at 22, Chenies Street, W.C., on March 31st, at 5 30 p.m.

A CONVERSAZIONE will be given at the West London Hospital by the Post-graduate College on Wednesday, March 18th, at 8.30 p.m. All past residents and past and present post-graduates are invited to be present.

AT the matriculation examination of the University of London, held in January, 524 candidates were successful: 4 were placed in the Honours list, 273 in the First Division, and 247 in the Second Division.

DR. GEORGE REID, M.O.H. Staffordshire County Council, will open a discussion at the Sanitary Institute on Wednesday next on Sewage Disposal and the Qualities essential in a Sewage Effluent. The chair will be taken at 8 p.m.

MEDICAL SOCIETY OF LONDON.—We are requested to state that the meeting of the Medical Society of London, to be held on March 23rd, will be a "clinical evening," and that the papers on Diseases of Children are unavoidably postponed.

A DISCLAIMER.—Dr. Dundas Grant desires us to state that the report of an interview which appeared in the *Daily Telegraph* of March 3rd was published entirely without his authority. Dr. Grant was unaware that the gentleman who engaged him in conversation in the office of the secretary of the hospital was a reporter.

A MEDALLION of the late Dr. T. Woodhouse, M.D., F.R.C.S., of Putney, who was for thirty-six years visiting medical officer of the Royal Hospital for Incurables, Putney Heath, was unveiled in the assembly room of that institution on February 27th. The medallion, which is by Mr. Hewms of Exeter, is of alabaster, measures 2 ft. 9 in. by 2 ft. 3 in., and is

mounted in walnut. The memorial is the gift of Mrs. Woodhouse, the widow, by whom the unveiling ceremony was performed in the presence of a numerous gathering. Tributes to the memory of Dr. Woodhouse were paid by Dr. Small, who, as the oldest member of the Board of Management, presided. Mr. J. Dicks, another member of the Board of Management, and others.

WE have received, by the courtesy of the Registrar of the General Medical Council, the volume of the Minutes of the Council and its various Committees and Branch Councils for the year 1902. The volume, with its 22 appendices and general index, contains 862 pages, and its price is 12s. 6d.

POST-GRADUATE INSTITUTE IN GERMANY.—According to a Central News telegram from Berlin Professor von Bergmann's scheme for the erection of an Empress Frederick Institute for post-graduate courses for physicians has been approved by the Emperor William.

A TUBERCULOSIS CAMP.—The New York City Board of Health has recommended the establishment of a tuberculosis camp somewhere outside the city. The plan is to select a piece of ground away from any village on high land, about fifty miles from the city, and there to set up substantial but comparatively inexpensive tents. Each tent will hold two or three people, and will cost approximately £20.

A FESTIVAL dinner in aid of the funds of University College Hospital will be held at the Hotel Métropole on Wednesday, March 18th. The chair will be taken by Lord Strathcona and Mount Royal, G.C.M.G., at 7 p.m. The annual general meeting of Governors will be held on the following afternoon, when a report of the condition of the hospital will be presented and other business transacted.

THE FIRST MEDICAL COLLEGE FOR WOMEN IN CHINA.—The Medical College for Women in Canton was formally opened on December 17th, 1902, by the United States Consul. Addresses were delivered by a number of missionaries, who paid a high tribute to Dr. Mary Fulton, who has done so much for the Chinese. Thirteen young women are studying medicine in the institution, while the applicants for admission next year number 60.

THE HERBERT HOSPITAL.—In the list of civilian surgeons who served in the Herbert Hospital, Woolwich, during the war, the name of Dr. R. N. De Beauvais, was accidentally omitted. Dr. de Beauvais served there for eight months and afterwards was transferred to Devonport, where he was stationed for a year. Dr. de Beauvais was at the Herbert Hospital at the time of the late Queen Victoria's visit on March 22nd, 1900, and his wards in "B" block were among those inspected by Her Majesty.

A LEPER COLONY IN THE PHILIPPINE ISLANDS.—A Philippine leper colony is to be established at a central point in the island of Camalian. The colony will be to a certain extent self-governing in its internal affairs, some of the lepers being persons of high standing and ability. No marriages will be allowed. Recent and mild cases will be separated from those that are severe and of long standing. Relatives will be allowed to live near and see the patients at stated times. Each person will be given a plot of ground and tools, and it is intended that all vegetable produce necessary shall be grown on the island.

THE MEDICAL GUILD.—The recently published annual report of the Council of the Medical Guild for 1902, whose Chairman is Mr. R. H. Wolstenholme, M.R.C.S., and Secretary, Mr. David Owen, M.R.C.S., contains evidence of much activity in the direction of organization of the profession in the Manchester district. In regard to club practice, several cases are referred to in which the minimum tariff of 4s. per member has been obtained. The Council has notified its intention to take action in any case of employing unqualified assistants or *locum tenentes* when satisfactory documentary evidence is forthcoming. It has addressed a communication to the Owens College in reference to advertisements appearing in the lay press of lectures to practitioners and senior students, giving the names of the lecturers, in which the opinion is expressed that the pr per channels for making known the lectures are the medical press and private circulars. A suggestion has been received from outside the Guild to extend the *Medical Guild Quarterly* to other towns, and to make it a medical monthly. The consideration of this suggestion has been deferred. The Honorary Treasurer's account of receipts and payments for 1902 is appended.

MEDICAL VACANCIES.

The following vacancies are announced:

ABERDEEN CITY DISTRICT LUNACY BOARD.—Medical Superintendent for the Kingseat Lunatic Asylum. Salary to commence, £400 per annum, rising £50 yearly for four years, with house, etc. Applications to the Clerk, 20, Union Terrace, Aberdeen, by March 13th.

BRACEBRIDGE ASYLUM, near Lincoln.—Junior Assistant Medical Officer, unmarried, not over 30 years of age. Salary £125 per annum, with furnished apartments, board, attendance, etc. Applications to Mr. W. T. Page, jun., Solicitor and Clerk to the Visiting Committee, 5 and 6 Bank Street, Lincoln, by March 3 st

BRIGHTON: SUSSEX COUNTY HOSPITAL.—House-Physician; unmarried, and under 30 years of age. Salary, £80 per annum, with board, residence, and washing. Applications to the Secretary by April 1st.

DERBY BOROUGH ASYLUM.—Assistant Medical Officer. Salary, £120 per annum, with board and washing. Applications to Dr. Macphail, Rowditch, Derby, by March 16th.

DEVONPORT: ROYAL ALBERT HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Salary at the rate of £50 per annum, with board, lodging, and washing. Applications to the Chairman of the Medical Committee by March 12th.

DUBLIN: TRINITY COLLEGE.—Professorship of Anatomy. Applications to the Registrar by June 6th.

DURHAM COUNTY ASYLUM.—Second Assistant Medical Officer. Salary, £180 per annum, rising to £220, with rooms, board, laundry, and attendance. Applications to the Medical Superintendent, Durham County Asylum, Winterton, Ferryhill.

GLOUCESTER: GENERAL INFIRMARY AND THE GLOUCESTERSHIRE EYE INSTITUTION.—Assistant House Surgeon. Appointment for six months, but eligible for re-election. Remuneration at the rate of £30 per annum, with board, residence, and washing. Applications to the Secretary by March 18th.

LEEDS PUBLIC DISPENSARY.—Honorary Physician. Applications to the Chairman by March 16th.

LITTLEMORE PAUPER LUNATIC ASYLUM, near Oxford.—Second Assistant Medical Officer. Salary, £120 per annum, with lodging and board. Applications to the Medical Superintendent before March 13th.

LONDON FEVER HOSPITAL, Liverpool Road, N.—Assistant to the Resident Medical Officer. Salary, £120 per annum, with board, and lodging. Applications to the Secretary by March 14th.

LONDON THROAT HOSPITAL, 204, Great Portland Street, W.—House-Surgeon; non-resident. Honorarium at the rate of £50 per annum. Applications to the Honorary Secretary of the of the Medical Committee by March 7th.

MANCHESTER ROYAL INFIRMARY.—Assistant Medical Officer to the Convalescent Institution, Cheadle; unmarried. Appointment for six months. Salary at the rate of £80 per annum, with board and residence. Applications to the General Superintendent, Royal Infirmary, Manchester, by March 14th.

MIDDLESBROUGH-ON-TEES: NORTH RIDING INFIRMARY.—Assistant House-Surgeon, unmarried. Salary £75 per annum, with lodging, board, and washing. Applications to the Secretary by March 25th.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Junior House-Physician. Salary, £50 per annum, with board and apartments. Applications to the Secretary by March 23rd.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, N.E.—Resident Medical Officer. Salary, £120 per annum, with board, residence, and washing allowance. Applications to the Secretary by April 6th.

POPLAR AND STEPNEY SICK ASYLUM DISTRICT.—Second Assistant Medical Officer for the Asylum at Bromley. Salary, £100 per annum, with rations, furnished apartments, and washing. Applications on forms provided to be sent to the Clerk to the Managers, Bromley, E., by March 9th.

PRESTON ROYAL INFIRMARY.—Assistant House-Surgeon. Salary, £60 per annum, with board, washing, etc. Applications to the Secretary, 5, Winckley Street, Preston, by March 20th.

QUEEN'S JUBILEE HOSPITAL EXTENSION, Earl's Court, S.W.—Honorary Physician; must be F.R.C.P. or M.R.C.P.Lond. Applications to the Secretary by March 18th

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—House-Physician. Appointment for six months. Salary at the rate of £60 per annum, with board, lodging, and washing. Applications to the Secretary by March 14th.

ST. PETER'S HOSPITAL FOR STONE, Henrietta Street, W.C.—House-Surgeon. Appointment for six months but eligible for re-election. Salary at the rate of £100 per annum, with board, lodging, and washing. Applications to the Secretary by March 25th.

SEAMEN'S HOSPITAL SOCIETY, "Dreadnought," Greenwich, S.E.—(1) House-Surgeon, salary, £65 per annum. (2) Junior Resident Medical Officer. Salary £40 per annum. Board, residence, and washing provided in each case. Applications to the Secretary by March 7th.

VENTNOR: NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Assistant Resident Medical Officer, unmarried. Salary, £100 per annum, with board and lodging. Applications to the Secretary, 34, Craven Street, Charing Cross, W.C.

WEST LONDON HOSPITAL, Hammersmith Road.—(1) House-Physician. (2) House-Surgeon. Appointments for six months. Board and lodging provided. Applications to the Secretary Superintendent by March 25th.

WOLVERHAMPTON EYE INFIRMARY.—House-Surgeon. Salary, £70 per annum, with rooms, board, and washing. Applications to the Secretary by March 10th.

MEDICAL APPOINTMENTS.

BARBOUR, J. M., M.B., appointed Medical Officer of Health for Ramsey, Isle of Man.

BARTON, G. A. H., M.D.Brux., L.R.C.P.Lond., M.R.C.S., L.S.A., appointed Anæsthetist to the Female Lock Hospital.

DRINKWATER, J. P., M.R.C.S.Eng., reappointed Medical Officer of Health to the Llangollen Urban District Council.

HINE, Hugh F., M.B.Lond., F.R.C.S.Eng., appointed Honorary Surgeon to the Newark-on-Trent Hospital.

NOLAN, W., L.R.C.S.I., L.R.C.P. & L.M., appointed Clinical Assistant to the Chelsea Hospital for Women.

PRING, H. Reginald, M.R.C.S., L.R.C.P., L.D.S.Eng., appointed Honorary Dental Surgeon to the City of London Asylum.

RINGROSE, Ernest, M.R.C.S., L.R.C.P.Lond., appointed Honorary Surgeon to the Newark-on-Trent Town and District Hospital.

STALLARD, Harry, B.A.Cantab., M.R.C.S., L.R.C.P.Lond., appointed Honorary Surgeon to the Newark-on-Trent Town and District Hospital.

TAUNTON, E., M.R.C.S., L.R.C.P.Lond., appointed First Assistant Medical Officer to the Whitechapel Union Infirmary, *vice* F. H. Brown, resigned.

WALLACE, Arthur John, M.D.Edin., C.M., appointed Surgeon to the Hospital for Women, Liverpool, *vice* J. E. Burton, L.R.C.P.Lond., M.R.C.S.Eng., appointed Consulting Surgeon.

WICKS, Spencer, B.A., M.R.C.S., L.R.C.P., appointed Medical Officer to the Premier, Bultfontein, and Dutoitspan Mines, Kimberley, S. Africa.

WILLETT, James Hayward, M.B., Ch.B.Vict., appointed Assistant Surgeon to the Hospital for Women, Liverpool.

WILSON, Thomas, M.D., F.R.C.S., appointed Honorary Obstetric Officer to the General Hospital Birmingham, *vice* Dr. Edward Malins, resigned.

ST. THOMAS'S HOSPITAL.—The following gentlemen have been selected as House Officers from Tuesday, March 3rd, 1903:

House-Physicians.—C. N. Sears, L.R.C.P., M.R.C.S.; A. E. Boycott, M.A., M.B., B.Ch.Oxon., B.Sc.Oxon.

Assistant House-Physicians.—O. Hildesheim, B.A., M.B., B.Ch.Oxon., L.R.C.P., M.R.C.S.; H. W. Sexton, L.R.C.P., M.R.C.S.

House-Surgeons.—J. W. Rob, B.A., M.B., B.C.Cantab.; T. B. Henderson, M.A., M.B., B.Ch.Oxon.; J. P. Hedley, M.A., M.B., B.C.Cantab.; A. B. Bradford, M.B., B.S.Durh., L.R.C.P., M.R.C.S.

Assistant House-Surgeons.—J. E. Adams, L.R.C.P., M.R.C.S.; H. Uycott, L.R.C.P., M.R.C.S.; C. Wheen, B.A.Oxon., L.R.C.P., M.R.C.S.; N. Carpmael, L.R.C.P., M.R.C.S.

Obstetric House-Physicians.—(Senior) G. A. C. Shipman, M.A., M.B., B.C.Cantab., L.R.C.P., M.R.C.S.; (Junior) W. M. C. Glanville, B.A., M.B., B.Ch.Oxon.

Opothalmic House-Surgeons.—(Senior) A. E. A. Loosely, B.A.Oxon., L.R.C.P., M.R.C.S. (Junior) A. C. Hudson, M.A., M.B., B.C.Cantab.

Clinical Assistants in the Special Department for Diseases of the Throat.—R. E. H. Lerch, B.A.Oxon., L.R.C.P., M.R.C.S.

Clinical Assistants in the Special Department for Diseases of the Skin.—T. Guthrie, B.A.Cantab., L.R.C.P., M.R.C.S.; W. M. Strong, M.A., B.C.Cantab., L.R.C.P., M.R.C.S.

Clinical Assistant in the Special Department for Diseases of the Ear.—A. Bevan, M.B.Lond., L.R.C.P., M.R.C.S.

Clinical Assistant in the Electrical Department and in X-Ray Department.—W. M. Strong, M.A., B.C.Cantab., L.R.C.P., M.R.C.S.

Several other gentlemen have received extensions of their appointments.

DIARY FOR NEXT WEEK.

MONDAY.

Royal College of Surgeons of England. 5 p.m.—Professor W. McAdam Eccles: On the Vermiform Appendix; some Points in its Anatomy and Pathology. Lecture I.

Medical Society of London. 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Mr. F. S. Eve: Certain Conditions which may be mistaken for Appendicitis, and Unusual Cases of that Affection. Dr. A. H. N. Lewers: A Case of Abdominal Hysterectomy for Retroperitoneal Cervical Fibroid weighing 15½ lb.

TUESDAY.

Royal College of Physicians of London. 5 p.m.—Dr. H. T. Bulstrode: On the Causes, Prevalence, and Control of Tuberculosis. Milroy Lecture II.

Royal Medical and Chirurgical Society, 20, Hanover Square, W., 8.30 p.m.—Dr. F. Parkes Weber: A Case of Multiple Myeloma (Myelomatosis) with Bence-Jones Proteid in the Urine (Myelopathic Albumosuria of Bradshaw, Kahler's Disease), and a Summary of Published Cases. (With a Report on the Chemical Pathology by R. Hutchison, M.D., and J. J. R. Macleod, M.B., Ch.B.)

Chelsea Clinical Society, Jenner Institute, Chelsea Gardens, W., 8.30 p.m.—The annual Clinical Debate on Diabetic and Non-diabetic Glycosuria. The following will take part in the discussion: Drs Hale White, Pavy, Saundby, and Rose Bradford.

University of London Physiological Laboratories. South Kensington, 5 p.m.—Professor W. D. Halliburton: On the Chemistry of Muscle and Nerve.

WEDNESDAY.

Royal College of Surgeons of England. 5 p.m.—Professor W. McAdam Eccles: On the Vermiform Appendix; some Points in its Anatomy and Pathology. Lecture II.

Dermatological Society of London, 11, Chandos Street, Cavendish Square, W., 5.15 p.m.—Demonstration of Cases of Interest.

South-West London Medical Society. Bolingbroke Hospital, Wandsworth Common, S.W., 8.45 p.m.—Mr. Marmaduke Sheild: Some recent experiences in Diseases of the Breast.

THURSDAY.

Royal College of Physicians of London. 5 p.m.—Dr. H. T. Bulstrode: On the Causes, Prevalence, and Control of Tuberculosis. Milroy Lecture III.

British Gynæcological Society, 20, Hanover Square, W., 8.0 p.m.—Mr. Stanmore Bishop: Procidentia Uteri, with special reference to an operation upon the Sacro-uterine Ligaments. Discussion continued. Specimens will be shown by Dr. Inglis Parsons and others.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Dr. T. G. Brodie: On the Circulation.

FRIDAY.

Royal College of Surgeons of England. 5 p.m.—Professor W. McAdam Eccles: On the Vermiform Appendix; some Points in its Anatomy and Pathology. Lecture III.

Ophthalmological Society of the United Kingdom, 11, Chandos Street, Cavendish Square, W., 8 p.m.—Card specimens by Mr. C. B. James, Dr. Leslie Buchanan, Mr. S. Mayou, Mr. Arnold Lawson, and Dr. W. E. Thomson. 8.30 p.m.—Papers.—Messrs. E. T. Collins and J. H. Parsons: Anophthalmos in a Chick. Mr. S. Mayou: Treatment of Trachoma by X Rays. Dr. W. E. Thomson and Dr. Leslie Buchanan: An account of certain cases of Injury to the Eye of the Child during Labour. Mr. J. B. Lawford: Notes of a case of Dislocation of the Eyeball.

British Laryngological, Rhinological, and Otological Association, 11, Chandos Street, W., 4 p.m.—Papers will be read and cases shown by Dr. Jobson Horne, Dr. J. E. McDougall, Dr. Lodge, Mr. Mayo Collier, and Dr. Dundas Grant. Annual Dinner at the Imperial Restaurant, 8 p.m.

Clinical Society of London, 20, Hanover Square, W., 8.30 p.m.—Mr. T. S. Ellis: Skin Sliding. Dr. W. H. B. Brook: Spinal Caries with Total Paraplegia; Costo-transversectomy with Complete Recovery. Mr. Stephen Paget: Successful treatment of Prolapse of Bowel with Incontinence by Injection of Paraffin under the Mucous Membrane.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Dr. A. D. Waller: On Experimental Pharmacology: The Action of Anæsthetics and Narcotics.

POST-GRADUATE COURSES AND LECTURES.

Charing-cross Hospital, Thursday, 4 p.m.—Demonstrations of Surgical Cases.

Hospital for Consumption and Diseases of the Chest, Brompton, S.W., Wednesday, 4 p.m.—Lecture on Mitral and Tricuspid Stenosis.

Hospital for Sick Children, Great Ormond Street, W.C., Thursday, 4 p.m.—Lecture on The Management of Growing Children.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C. Demonstrations will be given at 4 p.m. as follows:—Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, eye. Lectures will also be given at 5.15 p.m. as follows: Monday, Cancer of the Uterus; Tuesday, The Ophthalmoscope as an aid to general diagnosis; Wednesday, Early Diagnosis and Treatment; Thursday, Insanity of Climacteric; Friday, Injuries of the Head and Neck.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., Tuesday, 3.30 p.m.—Lecture on Neuritis.

Post-Graduate College, West London Hospital, Hammersmith Road, W.—Lectures will be delivered at 5 p.m. as follows: Monday, Mediastinal Disease; Tuesday, High Frequency Electrical Currents with Treatment of Some Diseases; Wednesday, Diagnosis and Treatment of Valvular Disease of the Heart; Thursday, Conjunctival Affections; Friday, Cases of Skin Disease.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning in order to ensure insertion in the current issue.

BIRTH.

RIMELL.—On February 24th, at Long Sutton, Lincolnshire, the wife of Alfred Tom Rimmell, M.D., of a daughter.

MARRIAGES.

DAVIDSON—NAYLOR.—On March 3rd, at Christ Church, Lancaster Gate, by the Rev. K. Jameson, of Chislehurst, assisted by the Rev. H. G. Bird, Vicar of St. Andrew's, Hillingdon, John Davidson, M.B.Lond., of Uxbridge, to Clarice Helen Metcalfe Naylor, daughter of the late F. A. Naylor, D.S.P., Central Provinces, India.

SUTTER—MILNE.—On February 27th, at the Caledonian Church, Holloway, N., by the Rev. J. Milne, M.A., R. Ross Sutter, M.D., "Ferndale," Warboys, Hunts., son of J. H. Sutter, Timaru, New Zealand, to Susan, daughter of A. Milne, Montrose, N.B.

DEATHS.

FLETCHER.—On February 28th, at Holly Bank House, Cross Hills, Leeds, Frederick Alexander Campion Fletcher, L.R.C.P. & S. Edin., aged 49.

GIDDINGS.—On March 1st, at 206, Mansfield Road, Nottingham, Lucy, the beloved wife of R. Ritchie Giddings, M.B.

WIGAN.—On January 11th, at Portishead, Somerset, George C. H. Wigan, M.D., aged 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which the special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

NEISSER'S STAIN FOR THE DIPHTHERIA BACILLUS.

C. F. L.—The following is the formula for Neisser's stain: (1) One gram of Grubler's methylene blue is dissolved in 20 c.cm. of 96 per cent. alcohol and 950 c.cm. of distilled water with 50 c.cm. of glacial acetic acid are added. (2) Two grams of benzoin are dissolved in 1,000 c.cm. of boiling distilled water, and the solution is filtered. Cover-glass preparations of fresh serum cultures are stained in No. 1 for one to three seconds, then rinsed in water and stained for five to ten seconds in No. 2. They are then washed, dried, and mounted in Canada balsam.

ANSWERS.

AINSWORTH.—We are not aware that the *x* rays have been used in the treatment of enlarged spleen. The decision whether a large spleen should be removed is one upon which we would recommend our correspondent to consult an experienced surgeon.

DR. SANDERS WORBOYS.—Federico Rubio's novel, *La Mujer Gaditana*, can be obtained from Don Brigido Sebastian, Manager of the Revista Ibero-Americana de Ciencias Medicas, Instituto Quirurgico de la Moncloa, Madrid; or through Messrs. Williams and Norgate, Mr. David Nutt, or any other foreign bookseller in London. The price is 5 pesetas.

VISION.—The following schools seem to be the most suitable for the case mentioned: Gardner's Trust for the Blind, 1, Poet's Corner, Westminster; the Royal Normal College for the Blind, Upper Norwood, S.E.; School for the Indigent Blind, St. George's Fields, Southwark, S.E. It may, however, be objected that a patient who can see 8 hardly comes within the limits of the rules usually made with regard to the admission of patients into these institutions.

DEVON AND EXETER BENEVOLENT MEDICAL SOCIETY.

DR. J. M. ACKLAND (Exeter) writes in reply to Dr. Reynolds's question in the BRITISH MEDICAL JOURNAL of February 21st. There is the Devon and Exeter Benevolent Medical Society. All information can be obtained from the Secretary, Mr. G. F. Webb, Moretonhampstead.

TREATMENT OF PRURITUS.

DR. C. E. WINCKWORTH (Shefford, R.S.O., Beds.) writes: In reply to "Podagra," I should attribute the "pruritus" to "tinea marginata," due to a fungus favoured by warmth and moisture. The treatment should, of course, be antiparasitic. The parts should be carefully washed with tar soap, dried, and dusted over with boric acid and pulv. cretae gallic., or zinci oleat. every night and morning. In very obstinate cases Dr. Hilton Fagge used ung. pyrogallic. (5ss. ad 3j) with excellent effect. It is of the greatest importance to keep the skin dry, and the scrotum should be prevented from touching the thighs.

LETTERS, NOTES, Etc.

A WARNING.

DR. J. H. STOWERS (Harley Street) writes: It will interest Dr. Sibley and others to know that the German giving the name of "Dr. Richard Osten, of Berlin and the London Hospital," was arrested in my presence on Sunday evening, the 22nd ultimo, having succeeded in obtaining further sums of money from two of my acquaintances. He was brought up before the magistrate the following morning and remanded.

A CORRECTION.

DR. G. A. H. BARTON (Bayswater, W.), writes: In my letter which you were good enough to insert in last week's BRITISH MEDICAL JOURNAL I should have been described as anaesthetist to the Female Lock Hospital and assistant anaesthetist to the City Orthopaedic and North-west London Hospitals.

A SIMPLE METHOD OF OPERATING FOR PILES.

DR. STANLEY BARLING (Lancaster), writes: I was much interested to read in the BRITISH MEDICAL JOURNAL of February 28th a description by Mr. Mitchell of a method of excision of haemorrhoids. As he rightly surmises, many other surgeons have adopted the same procedure. For the last ten years I have done the exact operation, almost to the entire exclusion of any others. I got the idea from one of my former "honoraries," Mr. W. H. Folker, of Hanley, who, by means of his clamp, had then been doing a similar operation for some time. I quite concur with Mr. Mitchell as to the absence of discomfort and the excellence of the results obtained. Retention of urine is almost uncommon, and it is

rarely necessary to keep the patient in bed for more than two or three days. I should imagine that most surgeons treat piles as they would varicose veins in other parts, by excision and suture.

THE TYPHOID CULTURE MEDIUM OF DRIGALSKI AND CONRADI.

IN view of Professor Koch's adoption of the method devised by Drigalski and Conradi for the early diagnosis of the presence of typhoid bacilli, the following account, derived from Dr. Ramen's recent *Anleitung zur Durchführung bacteriologischer Untersuchungen*, of the method of preparing and using the requisite culture medium, may have some general interest: Minced beef, 1½ kilog., is added to 2 litres of water and allowed to stand for twenty-four hours in the ice chamber; the fluid is then poured off and the juice squeezed out of the meat. The entire fluid is then boiled for one hour; then it is filtered, and after the addition of 20 grams of Witte's peptone, 20 grams of "nutrose," and 10 grams of salt, again boiled for one hour. It is then filtered, 3 per cent. of agar is added, and the whole again boiled for three hours; during the boiling it must be made faintly alkaline; after the boiling it is again filtered. Meanwhile a saturated solution of litmus in hot water has been prepared and the solution filtered; a portion of this is diluted with distilled water until it becomes quite transparent; dilute sulphuric acid is then added until it assumes a wine-red colour. The next step is to add the concentrated solution to this until the fluid assumes its original blue colour; 200 c.cm. of the solution so obtained is then boiled for ten minutes; 30 grams of chemically pure milk sugar is now added, and the mixture boiled for fifteen minutes; the whole is then mixed whilst hot with the agar and the latter neutralized. Finally, there are added to the medium 4 c.cm. of a hot, sterile, 10 per cent. solution of pure sodium carbonate, and 200 c.cm. of a 1 per 1,000 solution of crystal violet. For preparing the culture plates Petri dishes of 15 to 20 cm. in diameter are used and filled with the liquefied agar to a depth of at least 2 mm. The material to be investigated is spread on the plate by means of a glass rod bent at right angles, the short limb of which is dipped into it and then drawn over several plates in succession, so as to secure a diminution of the number of organisms in the plates last inoculated. To avoid the condensation water the plates remain half an hour uncovered (the medium does not favour the growth of airborne organisms). They are then covered and incubated for twenty-four hours. Typhoid colonies have a glassy, bluish-violet appearance; coli colonies are bright or dark wine-red, and not translucent.

A SUPPLEMENTARY TEST FOR INTOXICATION.

DR. C. GRAHAM GRANT (Police Surgeon H Division, London) writes: In my, not inconsiderable, experience of police surgeon's work, I have found more difficulty and doubt in deciding upon cases of alleged alcoholic intoxication, than in any other duty.

To write your name with a steady hand, to toe a line, to thread a needle, to stand with your heels together and your eyes shut, are physical impossibilities to many nervous men; especially after a one-sided argument with a couple of stalwart policemen. As for "truly rural" and "British constitution" I cannot say them without taking careful aim when I am sober, and the only occasion on which I remember being sufficiently otherwise I did not think of trying. I proceed now in the following manner: I sit down for ten minutes or a quarter of an hour to chat with the prisoner. I ask him (it is seldom a woman) his opinion on present general topics, about his business, what his movements have been up to his arrest, and, if I am still in doubt, I ask him the time. It is to this last point I especially wish to draw the attention of police surgeons; because I believe that persons "on the drink" quickly lose their appreciation of the passing hours. Any sober man (I have often asked a policeman) can make a shot at the time of day and will be correct, certainly within the limit of an hour; but drunken persons I have repeatedly found give positive answers of wild absurdity, being often three or four hours out. I do not know if this test is original, or if the profession will attach value to it; but I shall be glad to hear any opinions its publication may invoke, and trust it will be considered worth a trial.

INCOME-TAX ASSESSMENTS.

THE INCOME-TAX REPAYMENT AGENCY (6, Chichester Road, Paddington, W.) writes with reference to the letter from Dr. Fletcher Little published in the BRITISH MEDICAL JOURNAL, February 28th, p. 522: Dr. Fletcher Little's suggestions would, we fear, be of little use; the persons to blame are the medical profession themselves, who pay rather than appeal. Your correspondent is evidently not aware of our income-tax balance-sheets for medical men, as he suggests that the legal adviser to the Association should draw up something of the same kind. We are confident that no better could be devised, and they are approved of by the Commissioners. Dr. Fletcher Little is under a misapprehension when he states that the income-tax officials are allowed a percentage on amounts gathered. This commission system was abolished several years ago, with the result that we find surveyors of taxes, when approached by persons they can trust as being honest and straightforward, are ready to listen to argument. We can only add that we have now nothing to complain of save the apathy of the taxpayer who pays and grumbles.

OPEN-AIR TREATMENT OF SYPHILIS.

DR. JNO. FAULKNER (Stretford), in the course of a letter on this subject, writes: Dr. Douty's robust and welcome paper explains to me a fact which I have constantly observed for the last twenty years—namely, how well farm labourers and other outdoor workers stand syphilis. I can recall numbers of instances where the wives and children of such men have suffered most severely, while the man himself has hardly suffered at all. And this has been particularly noticeable in those cases in which the man has had to turn out to work in the early morning hours.

Allow me a word about sanatoria in general. For the middle and lower classes I regard the sanatorium as a great evil. After a prolonged sojourn there, the so-called cured returns home an inveterate loafer, selfish and demoralized. He spends his whole time in eating, trying his temperature and talking about himself; he will not work at anything. His food costs as much per diem as should keep the rest of the family for a week, and he generally succeeds in using up the whole resources of the family. Far better for him to have died earlier.

OEDEMA OF THE FACE.

DR. A. OGIER WARD (London) writes: Dr. Geoghegan's case attracted my notice as I have a patient similarly affected at the present time. The complaint, if it must have a name, appears to conform to that described in Clifford Allbutt's *System of Medicine* as "urticaria oedematosa," and it is doubtless dependent upon some autotoxin. Periodicity seems to have been manifest in Dr. Geoghegan's case—it is in mine. Dr. Geoghegan says "all the organs are healthy," but I should much like to know whether the urine on boiling and then adding a drop or two of acetic acid does not show at least a faint cloud: gardeners are liable to lumbago, and Fagge's *Medicine* asserts that that condition is always associated with renal inadequacy.

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BOOKS, ETC., RECEIVED.

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A Lecture

ON

THE DIAGNOSIS OF PULMONARY TUBERCULOSIS.

Delivered at the Medical Graduates' College and Polyclinic.

By C. THEODORE WILLIAMS, M.D., F.R.C.P.,

Consulting Physician to the Hospital for Consumption and Diseases of the Chest, Brompton.

Pathology.

Gentlemen,—According to modern pathology, pulmonary tuberculosis is due to attacks on the lungs by the tubercle bacillus. Whatever other organisms there may be mixed up with the tubercle bacillus they do not begin the original attack. There is no doubt that it is the invasion of the lungs by the tubercle bacillus that causes pulmonary tuberculosis. The tubercle bacillus enters the bronchi, passes down the terminal bronchioles, and, after increasing and multiplying, gives rise to irritative and pneumonic processes. In time a large amount of the various products of the bacillus are to be found, and when the process has continued some time, we are able to distinguish giant cells and the small celled infiltration which are characteristic of tubercle. I show you a very pretty sketch of the more acute process, where the masses of tubercle bacilli and the resulting cell proliferation are breaking through the wall of the alveolus. In an attack of tuberculosis, what is the first defence of the organism? The idea is that human beings must inhale tubercle bacilli, just as they inhale other bacilli, whether derived from the dried sputum in the streets or whether from the wards or out-patient department of a hospital containing consumptives, or in places of public resort. It has been demonstrated that tubercle bacilli exist occasionally in the nasal secretion of healthy people, such as medical students in the wards. But why do not these people get tuberculosis? They do not; at all events, it is very rare for it to occur among them. Why do a certain number of people get tuberculosis through this inhalation? Beginning with the mouth, we must not forget that one of the defences against lung infection is the fact that there is a great deal of absorption from the mouth into the salivary and other glands; and there is no doubt that in a very large number of these children whom you see with enlarged glands, not only enlarged sub maxillary glands but also cervical glands, they are due to absorption of tubercle bacilli from the mouth. I have seen children with enlarged cervical and sub-maxillary glands, and I have seen those glands removed, and sections prepared from them in which the tubercle bacilli could be clearly shown, and yet the lungs have never been affected. There is no doubt therefore that in such cases the disease of the lungs has been prevented by absorption into the glands. And we must never forget to examine the tonsils. Tuberculous disease of the tonsils is not very common, but every now and then one comes across a case, and I do not question the fact that the tonsils act as diverticula to the air passages, and receiving the bacilli, become infected. In the same way disease of the soft palate and of the pharynx takes place and results in ulceration, and also ulceration of the tongue of a tuberculous nature. These regions are often attacked by the tubercle bacilli primarily, and they may, like the glands, localize the disease for a time, but they may also be affected secondarily from the lungs. We must also remember the defences of the air passages themselves to protect the lungs. There is no doubt that the nose protects to some extent, and the larynx must never be forgotten as a defence. Sometimes the bacilli attack the larynx first, though this is a rare event. But the greatest protection of all is the trachea, and to a certain extent the primary bronchi. These have three layers of epithelium which have to be penetrated, and we know that the top layer of all is armed with ciliae, the ciliary movement promoting a strong current outwards, thus tending to prevent the tubercle bacilli from descending, and we can explain the disappearance of much dust from the lungs in that way. These defences must be taken into account when considering why it is that some people do not get tuberculosis, and why, although people are in the midst of infection, the disease is not so common as might be expected. We know that a large number of persons, certainly among those in consumption hospitals, must inhale a large number of tubercle bacilli. For instance, take the out-patient department of Brompton or Victoria Park Hospitals. Of the out-patients themselves, two-thirds are consumptives, and many of them have cavities, with much secretion, and though they are not allowed to spit about, yet handkerchiefs are brought out, with the sputum dried on them, and these are flicked about the room, so that some tuberculous dust must be disseminated in the air. Flügge's experiments showed that consumptives often during coughing ejected droplets of phlegm which contained tubercle bacilli. I think, therefore, you may take it for granted that the bacilli must be inhaled. In olden times, at the Brompton Hospital, before the infectious nature of the disease was known, there were not so many precautions taken as at present, and yet the carefully-taken statistics of the hospital during sixty years hardly show a case of tuberculosis which could be traced to infection at the hospital among the nurses, medical officers, house-physicians, and other residents. I think the figures show a smaller number of cases of tuberculous disease among the residents than in general hospitals, where the cases admitted are not chiefly those of consumption. So, if the disease is infectious, which, no doubt, it is to some extent, it must be very slightly so, and the lungs are probably protected in the way mentioned.

Another important question with regard to this disease is, How does the patient become weakened so as to be vulnerable? It is very difficult to say; but I think if you will inquire into the history of many of these cases of phthisis you will find that, especially among the poorer classes, the weakening is due more to general than to local causes. The chief predisposing causes of tubercle among the Brompton patients appear to be two. One is impure air. Life in the very unhealthy atmosphere of crowded rooms, such as those occupied by milliners, seamstresses, and printers, especially in the old days, was a very prolific cause of tuberculosis. Parliamentary and private inquiries, such as those of the late Dr. Guy, show that it is a matter of experience that where the cubic space was below a certain limit for each worker, there was sure to be consumption. If these people are given plenty of fresh air, the amount of consumption either diminishes or disappears altogether. We know that in London the mortality from consumption depends almost entirely on the amount of crowding. The death-rate from consumption is not specially large in the districts where the great consumption hospitals like Brompton and Victoria Park are situated. In those districts the mortality is comparatively small. But in places like the Strand district and Southwark, where there is great crowding and very few open spaces, and where the cubic space in which people work is very small, the mortality from the disease is much greater. So the question of the prevalence of consumption rests very largely on the question of fresh air.

The other great predisposing cause is the lack of proper food. Over and over again you will find people whom you have known in good circumstances, doing well, and in good health, but who suddenly have a reverse in business and the previous prosperity gives place to poverty. When they lose their money they often have to take to unhealthy occupations. Moreover, in addition to this they often do not get enough food. Whereas they probably previously had two good meat meals a day, perhaps they are reduced now to one or no meat meals. One finds instances of poor women who have lost their money and who are living on tea and buns and such like horrors. In such cases you sometimes find the young man or the young woman who was apparently previously in good health, comes to you and on examination you note the lungs are the seat of tubercle. A very interesting example of that was given by the late Professor Peter, of Paris, in the case of a perfectly healthy man who had stricture of the oesophagus due to swallowing sulphuric acid. This led to starvation and he died after lingering for some months. When the lungs were examined *post mortem* they were found to be stuffed with recent tubercle. No mention is made of the treatment employed to introduce food. I do not know a more striking case to demonstrate how important is the question of food in this disease. There are, of course, other predisposing causes of tubercle, and one of these is the influence of those occupations in which the lungs are prevented from acting properly and fully. I mention this because I want to refer to Freund's researches on the matter. Dr. Freund[1] states that certain changes take place in the upper ribs of consumptives, which are shown in the diagrams on p. 590 copied from his work. Freund says that what takes place is an ossification of the cartilages of the first and second ribs, and the consequence is that they shrink up and become much shorter, and sometimes the

size of the cartilage from the end of the bone to the sternum is diminished two-thirds. But the great feature is that the cartilage gradually becomes ossified. It is the membranous form of ossification, the same as that which takes place in connexion with the tables of bone in the skull. This deposit of bone is not at first all over the cartilage, but over its anterior surface and gradually extending encloses



Fig. 1.—Section of normal rib cartilage.

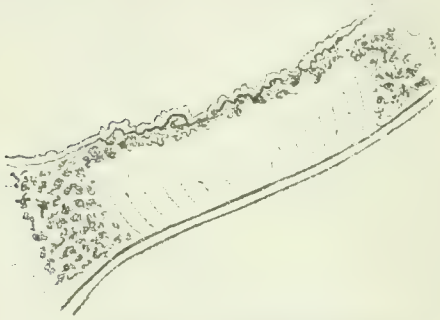


Fig. 2.—Ossification of rib cartilage proceeding.

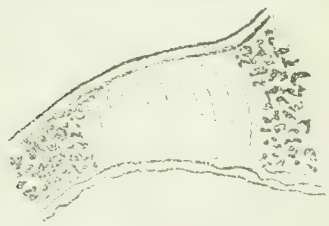


Fig. 3. Shortening of rib from partial ossification of cartilage.

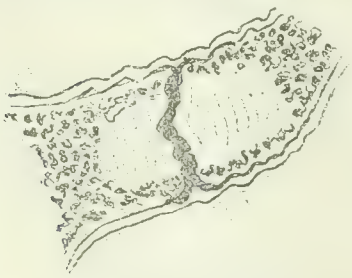


Fig. 4. Formation of false joint (pseudo-arthrosis) in ossified rib cartilage.

it in a bony sheath. Both upper ribs becoming thus rigid, the upper opening of the thorax is stenosed and immovable, and all expansion upwards ceases, a condition of affairs which is very serious. But Nature comes to the rescue and forms a joint (pseudo-arthrosis), which you will see represented in Diagram 4, and thus some movement is restored to the thorax—a good example of the compensatory powers of Nature beneficently exerted in the present instance. These investigations have been carried on for years by Dr. Freund, and he possesses a large number of specimens of the ribs and cartilages in this condition. Out of fifty necropsies at Leipzig and Berlin on phthisical patients he found that joint present in thirty, which is a very large proportion; it was also found in different stages of development in most of the remaining cases. It is not difficult to perceive that the fixity of the thorax would give rise to local congestions and exudations in the lungs, and thus render them specially vulnerable to bacillary attack. Other authorities in Germany have followed in the same direction, and they practically confirmed all his conclusions. When I was in Berlin lately I was introduced to Dr. Freund by Professor Oscar Liebreich, when he kindly went into the subject with me, and showed me some of his preparations.

There are many other causes which may bring about this condition. Pleurisy may cause it; pleuritic adhesions and anything which prevents the proper movements of the upper parts of the chest may give rise to it, and such cases are not rare among those who follow sedentary occupations.

Another important question is, Why is it that we find the apices attacked first in lung tuberculosis? The prevailing belief is that it is closely related to the comparative want of movement of the apices. But some recent writers say no, and urge that if that were so you ought to have more tuberculosis in men than in women, at any rate at the apices, because respiration in women is of the thoracic type, whereas men's respiration is chiefly abdominal. But this argument hardly applies to the apices, which are just as little used in women as they are in men. There is another theory which has been advanced by the late Professor Birch-Hirschfeld,[2] based on the anatomy of the bronchi of the upper lobe. The bronchi of the upper lobe in both lungs come off at almost a right angle, which causes some obstruction to both inspiratory and expiratory currents, and it is probable that the expiratory currents of the lower lobes meet the inspiratory of the upper, causing a certain amount of obstruction and stagnation in the upper lobes. The course of the bronchi to the lower lobes is more direct, and there would therefore be less chance of obstruction by the meeting of currents.

When you get tuberculosis of the lung how does it commence? Suppose the tubercle bacilli enter the trachea, and passing all these fine obstacles which we have been describing, they then go down into one of the bronchi. It appears from Birch-Hirschfeld's useful researches that it is in the terminal branches of the bronchi and the alveoli that you get the tubercle bacilli lodging and setting up pneumonic processes, with cell proliferation and a certain amount of exudation. The next thing which happens is that these bacilli break through the alveolar wall and enter the next alveolus, and carry their work of destruction further, until in time a cavity is formed. The question is, Where does the disease commence in the lungs? These preparations which I have brought for your inspection give you some idea (series of lung sections shown). I am sorry to say I have never seen what ought to exist in most of the hospitals, certainly in chest hospitals, a series of preparations showing you how the tuberculous attack starts and grows, from the primary lesion onwards. Such a set can be obtained from necropsies in various hospitals, not only from Brompton, but from the general hospitals, from patients who die from other diseases, such as fevers. In such cases very often there are found lesions of early tubercle in the lungs. A complete and most instructive series of that sort could be formed without much trouble. I have here a specimen which shows you very well how the tuberculous lesion is formed. The primary lesion is about 1½ in. below the apex. I will indicate by the marking pencil on this patient's chest where you may expect to find the first evidences by physical signs of tubercle.

The first place I should be likely to find a tuberculous lesion is in the upper lobe, 1½ in. below the posterior apex in the supra-scapular region. Here is a case where it was noted there. The next most likely place would be above the clavicle. And, lastly, you will be likely to find it in the first intercostal space. The focus might remain limited to the upper lobe for some time before spreading elsewhere. Next, in what direction does the mischief spread from the primary lesion? Generally anteriorly downwards to the level of the third rib, and the signs are limited to that spot for a long time, showing the upper lobe only to be affected. The physical signs remain for a time above the supra-scapular ridge, another boundary of the upper lobe. With regard to the further advance of disease, as Dr. Fowler has well pointed out, the advance is commonly along the interlobar septum, and the reason I draw your attention to that is because very often medical men examine the chest anteriorly and posteriorly without examining the axilla. But it is when the attack is going on in the way I have described that you are apt to get axillary cavities. When you have been listening for some time and not heard anything fresh below the third rib in front, you may think everything is perfectly quiet, but to your surprise you discover a large amount of crepitation down in the axilla; and, indeed, there may be a cavity forming there, which you have hitherto overlooked. There are many curiosities about the attack. For instance, the top of the lung may be attacked, and then you may get

the corresponding portion of the upper part of the lower lobe attacked very soon afterwards. Why that is I cannot tell you. It may be due to circulation or to inhalation; but there is the fact; and you sometimes find in a lung a curious condition of things, namely, that in the apices, or in one apex, the disease is in a condition of arrest, but you may find fresh tubercle at the base of the top lobe. I have noticed that fact more than once. But the usual thing is, that the apex becomes affected, and then the disease spreads down along the interlobar septum to the axilla. Next, you find that it will spread in front, the crepitation extending down to the third rib, or from the third to the fifth ribs; and then it goes almost to the base of the lung. In most of these cases you get in the upper part a cavity formed, and racemose tubercle extending down to the base. The question arises, why in some cases you get both apices affected quickly, and the rest of the lung remains unaffected for some time. That leads me to the other point—namely, how tubercle spreads? There are four ways in which it spreads. The first way we will call spread by continuity. That is very much like the picture I send round. You can see how they spread from one point to another. Spread by continuity is the commonest form. The second form of extension would be by means of the lymphatics. I refer to the lymphatics of the lungs themselves. You get a cavity formed in the lung, and then there are a series of small nodules of tubercle forming round it; just like the solar system, with the sun in the centre and the planets around. The disease is always very limited round that cavity. A caseous mass has been absorbed by the lymphatics around and given rise to all these fresh centres of tuberculosis. Dr. Arthur Latham[3] holds that the spread of tuberculosis in the body is by the lymphatic vessels and the lymphatic lacunae. The third form of spread is by means of the circulation. That is a dreadful and irresistible form, and that is the form when you see tubercle connected with some vessel in the lung, by means of which the bacilli are carried to different parts of the body. That is the form which causes tuberculous meningitis, where you see a chronic case of phthisis in a middle aged man with a cavity in his lung not very large, and the patient is apparently going on quietly, but one day develops head symptoms. When you go to him you find he has symptoms of acute meningitis from which he dies. After death it is found that the meninges of the base of the brain are scattered with fresh tubercle. Remember that when both apices of the lungs are affected with tubercle, the cause must be through the circulation, certainly in the early stage. Now and then that is very strikingly seen. I have seen patients going on quietly, then something acute has taken place, there is a breaking down of one lung and some of the bacilli are carried to the other lung which quickly becomes infiltrated with fresh miliary tubercle. The fourth form is from the reinhalation of sputum. I have so often talked about that in this room that I shall not dwell upon it very much now, because I have already shown you plenty of specimens. But remember the great feature is this: suppose there is a cavity in the lung which does not empty itself completely, and the patient is weak and cannot expectorate properly, the expectoration rises to the junction of the two bronchi, and then perhaps an inspiration will carry it the wrong way: at any rate it falls into the other bronchus and sets up another focus of tuberculous disease. This probably goes on to cavitation and then these are described as secondary cavities. That process may take place in any part of the lung.

Diagnosis.

How do we diagnose a case of phthisis? We must look at it in all its aspects, and we must not forget the history, the initial signs in most of the cases are crepitation and slight dulness in the supra-scapular region. Many of the diagrams taken from my hospital patients exemplify to some extent the march of tuberculosis in the lung. In one, for example, the anterior portion of the left upper lobe was first affected, there being dullness and crepitation to the third rib, and no other signs. Other diagrams illustrate crepitation in various parts of the lung, where the disease started from above and spread downwards; also the way in which crepitation is found in the two inter-scapular regions, and where crepitation has extended to the base of one lung without the other lung being affected, which is a rare event. Another diagram illustrates a case in which there was acute emphysema, which is always a difficulty in connexion with phthisis and its recognition. But I have one diagram which shows how, in spite of the emphysema, dullness appeared in the supra-scapular region, and was the key to the diagnosis. In another case the supra-scapular region was early effected, the mischief spreading by continuity downwards. Yet another shows tuberculization of the whole lung without any breaking down to speak of, so that no cavity could be made out.

History.

Now to return to the question of diagnosis, of course, you must go into the history of the patient. If you can discover that there has been fever and night sweats and so forth, it will be easier. But you will often find that although the whole symptoms are suspicious there are none which you can absolutely rely upon in the history. Take the one symptom which was long relied on—fever. There are plenty of cases of early tuberculosis which have no fever at all. If there is anything characteristic in such patients, it is that the temperature is below normal. Some of the lowest temperatures which have been recorded have been in early cases of phthisis. I remember a case of mine which I recorded in which the temperature was taken most carefully, and was found to be 91.8° F. But the late Professor Lebert went one better than that, for he recorded one of 89° F., and you know he was a very careful observer. So you can rely upon the temperature. If I were asked what was the characteristic temperature of phthisis I should say that it was one of extremes, but that a low temperature is quite as indicative of phthisis as a high temperature. But if there is pyrexia in phthisis then it follows certain rules, which I need not go into now. With regard to wasting, that may arise from various causes. Continuous cough is a very important item, especially in conjunction with night sweats and *malaise* and wasting.

Examination of the Sputum.

The important item nowadays is the sputum, which has to be examined carefully and frequently. In the early stages of phthisis you may examine the sputum of an undoubtedly phthisical patient for some time without finding any tubercle bacilli, but you will be successful in the long run. If you find tubercle bacilli in the sputum, there is no doubt about the diagnosis. But the quantity of bacilli found in the sputum is no measure of the severity of the disease process. Where the bacilli are plentiful, there is probably a cavity, on the walls of which they multiply and are easily expectorated. Therefore, for diagnosis, we have to depend very largely upon physical signs, which after all have served their purpose wonderfully well. It is interesting to remember the time when physicians had little idea of diagnosing phthisis, when it was confused with bronchitis and pneumonia. We now know that many of the cases which were called bronchitis in the early days were really instances of consumption. I remember my father once telling me that, on his return from studying auscultation under Laennec at Paris, he was entrusted by two leading London physicians of the day with a patient suffering from something in the throat and a little bronchitis, as it was described. My father said he suspected from the look of the patient that there was something more the matter. The physicians had not examined his chest, as they did not believe in the new methods of examination, but decided to send this patient off to Madeira for bronchitis and sore throat. Before starting for Madeira, my father examined the patient's chest, and found considerable infiltration of a tuberculous nature of one apex and a large cavity in the other. So he very properly reported to the physicians what he had found, and stated that he would be very much surprised if he brought that patient back alive from Madeira. There was not much treatment of consumption in those days, most consumptive patients died in a few months. In this case it only proved too true. The patient was fairly happy at Madeira, but he gradually dwindled away and died there. That looked rather bad for the doctors who originally sent him there. It shows also what an enormous amount of knowledge we have gained by the introduction of physical signs.

Physical Signs.

We must bear in mind about the physical signs that it is their locality rather than their character which is of importance. Signs which you would think nothing of at the base of the lungs are very serious at the apex. For instance, a friction sound occurring at the apex is very common. The question arises; is that pathognomonic of tubercle? Apical pleurisy has been long a matter of discussion. There is no doubt that every now and then you may get a case where a well marked pleuritic rub is heard at one apex, and yet

nothing comes of it. I suppose some adhesion takes place, and beyond the fact that the apex is not expanding as well as the other portions of the lung, and the breathing is somewhat obstructed, you can hear nothing abnormal. I think most of these cases are tuberculous. The few I have been able to follow out have undoubtedly been cases of tuberculosis. I always look upon apical pleurisy with some suspicion. It is more especially suspicious if you find it at one apex only. If you find it at both apices, with a good deal of friction, I think it probably accompanies pneumonia, or it might be simply pleurisy.

Bronchophony.—Bronchophony is sometimes very characteristic, and when it is heard over the apex it is of serious import, as it means that the consolidation is extensive. It is very seldom you detect bronchophony at the apex. When you hear it anywhere else in the lung it generally means consolidation, and if heard over the upper lobes, consolidation of a tuberculous nature. Where bronchophony is most useful in diagnosis is in a case with highly resonant chest, and where crepitation is audible over the whole of one side, and perhaps is a little more marked on coughing. If bronchophony be also present, you may be fairly certain that the case is tuberculous. Very often these are secondary cases, cases in which the patient is suffering from some other serious illness, such as typhoid fever, and you are called in to offer an opinion on the lungs, and you find to your horror a lot of crepitation in one lung, and the patient much wasted with fever. You ask, is it tubercle or is it pneumonia? If you find no dullness at all and no other signs, but the combination of scattered crepitations and bronchophony, you may be sure the case is tuberculous. I have never known an exception to that in my experience. Otherwise bronchophony is not so very valuable, and I will tell you why it is not so. There are certain people who have vibrating bronchi, or at all events vibrating walls of the chest. It is most extraordinary, but they always have vocal vibration and bronchophony, and in such people if you put your hand on to their backs with their clothes on, you can feel the vibration right through, and if you auscultate them you will hear bronchophony. These sounds are heard again and again over most of the thorax, and it is obvious that in such patients you cannot talk about vocal vibration and bronchophony. There is no reason to suppose that these people have consolidated lungs. They are generally nervous and highly-strung people, and in them I know I must not use the voice sounds when examining them for tubercle.

Different Forms of Respiration.—Much is said about prolonged expiration, and also about tubular breathing and bronchial breathing. The term I generally use is "tubular breathing." I think it was Laënnec who used it first: but I learnt it from my father, Dr. C. J. B. Williams, and found it very useful. The cavernous breath sound is hollower and louder, and prolonged expiration is simply a long-continued expiration. Tubular breathing is something between the two. Patients, unless instructed how to breathe noiselessly, often make a sound with their mouths which might be mistaken for tubular breathing, but this can easily be avoided.

Obstructed Respiration.—But there is another sign which ought to be remembered, and which you do not often see mentioned in books. You listen over a spot, particularly the apex, when respiration ought to be clear, and you hear nothing, or hardly any breath sound; and that surely means something; because if after the patient has coughed and taken big breaths, and you cannot hear anything except a very feeble distant sound, you are sure there is something abnormal and that the bronchus must be blocked.

Crepitation.—In regard to other sounds, some of the books tell you that one of the early sounds of phthisis which you detect on auscultation is prolonged expiration or tubular sound at one apex. That is not my experience. My experience is that the earliest sound in most cases is that of a crepitation, or the crepitation which you hear on coughing. Very often you do not hear it until the patient coughs. If after the patient has coughed you hear this liquid sound or *râle*, generally accompanying expiration, at one apex, and it persists in spite of all the coughing, that is a very serious sign indeed, and I know no auscultatory sign which is so pathognomonic of tuberculous disease as that. I should not say it would be pathognomonic in other parts, but certainly in the apices I look upon it as being an indication of the presence of tubercle. In fact liquid sounds are more important in these cases than dry sounds. You should not auscultate any patient without making him cough freely, and many of my patients complain that they are rather exhausted after examination, chiefly because of the amount of coughing I make them do. You may percuss these people and make them breathe and so on, but if you do not make them cough you may not hear this *râle*.

Dullness.—I have left dullness till nearly the last because, although when it is present it is very important, still, in many cases of phthisis, there is no dullness at all. Where are you to look for dullness? If you find it over the supra scapular region, that is at once something decisive. It is all very well when it is at one apex, for that is a proof that there is consolidation and that it is probably tuberculous; but very often it is present in both apices, and you may get confused and think that there is no dullness after all. You may argue that the supra-scapular region is never very resonant, and that you have laid too much stress on its lack of resonance. But very often there is consolidation at both apices in such cases. If you find the first interspace on both sides dull, all you can do is to compare it with the nipple region. Thus you get a second or third spot and compare them with the first. Now, where is the dullness to be found? This is a point I want to lay great stress upon. You may find it on the clavicle itself. Percuss the clavicle carefully, for undoubtedly on the outer half of the clavicle you may find it. This clavicular region is also where you can sometimes detect bronchiectasis. But even there you may go wrong, because if you have a chain of strumous glands they reach down under the clavicle and give rise to dullness. But you very seldom find an enlarged gland here without finding the glands in the neck enlarged also. Never forget in doubtful cases to percuss the clavicle itself. I have known cases where the only place at which dullness could be elicited was over the clavicle. We must not forget that hyper-resonance is quite as often present in the front portions of the chest as dullness, owing to the existence of emphysema. I am not now speaking of cavities, for the physical signs of cavities is a large subject, and which I shall deal with in another lecture. In examining a patient in the early stages of phthisis the great points are to make him cough, and be on the look out for the crepitation or *râle*. Bronchophony is valuable up to a certain point. If you find dullness in any of the upper regions, that fact is very suspicious. I remember having a case of prolonged expiration which deceived me, in which the sound was heard in the supra-scapular region. I thought it probably occurred in connexion with tubercle, but there was no dullness at all. It was in a child. I treated the child with potassium iodide, as I had some suspicion of enlarged bronchial glands. At the end of a month that prolonged expiration disappeared, so I concluded it was due to enlarged bronchial glands.

The Diagnosis of Tubercle from Pneumonia.

It is not very difficult to distinguish tubercle from pneumonia. The position of the consolidation is so very different in the two conditions. In pneumonia the consolidation is at the base of the lung, not at its apex, and the crepitation is of a different character. What you hear is a number of crepitant sounds crowded together, not one sound but many sounds. But in tubercle you hear one *râle* at a time. Then there will be the history and the examination of the sputum to help you.

The Diagnosis from Bronchitis.

But there is a great difficulty in regard to cases of what is called catarrhal phthisis. A patient comes with a history of phthisis, and you examine the chest, but you find nothing but hyper-resonance and catarrhal sounds, and this is where the sputum examination comes in very usefully. But in addition you have to watch the bronchitic signs, the sonorous rhonchi, sibilant sounds, and so on, and ascertain whether they are all over the chest or whether they are limited to one side. Where you have bronchitic sounds limited to one side, particularly to the posterior region, and the upper portion, they are suspicious of phthisis. These are most troublesome cases, because you watch day after day, but still the signs of the acute bronchitis mask everything. After the signs of bronchitis have passed away you examine the chest carefully, and find to your horror that there is a cavity which you have not been able to detect previously, and have not been able to trace the steps which led up to its formation. These are not only troublesome, but they are very unfavourable cases, which you do not get much credit by. I have had cases in which the patient's friends complain that the family doctor said it was bronchitis, and when I see the patient I find evidence of a considerable cavity. I, of course, point out that it is very difficult to recognize such cases in early stages, and as long as the signs of bronchitis are present they are likely

to mask the tuberculous lesion. But you should always be suspicious of such a case if the signs are on one side only. One point which you may note is that the sonorous rhonchus frequently ends with a prolonged expiration. If you hear that, you may take it as pathognomonic of phthisis. With regard to enlarged bronchial glands, there is not much trouble, because they never cause *rales* at the apex, and generally speaking the sounds due to bronchial glands are found in other regions.

The Diagnosis from Mediastinal Tumours.

The question of mediastinal tumours I need not go into fully here. The symptoms of these tumours are so very different from those of tuberculosis, and the same may be said of aneurysm. I have seen cases in which aneurysm has been overlooked, and I have seen cases of supposed aneurysm in which the signs were produced by consolidation, which had been overlooked.

The Diagnosis from Typhoid Fever.

The question of typhoid fever from a diagnostic point of view has more bearing on acute tuberculosis than ordinary pulmonary phthisis. The history of such cases does not tell you very much, but when you watch the temperature charts in the two conditions you will find them very different. The typhoid-fever chart shows a higher and more continuous temperature. As a rule, the consumptive chart shows a low temperature in the morning, rising towards mid-day and up to 2 or 5 o'clock, or it may rise to as late as 8 o'clock, and then falling rapidly from then till the next morning. That is the general run of temperature in a phthisical patient. Of course the temperature varies according to the amount of suppuration present, the pyaemic chart being mingled with the tuberculous. Anaemia is the last condition which it is necessary to bear in mind; here the absence of wasting and the presence of physical signs will settle matters.

References.

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THE NATURE OF THE INFECTIVITY OF PHTHISIS: A STUDY OF THE VIEWS OF KOCH, FLÜGGE, AND OTHERS.

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Although views as to the infectivity of phthisis attained no scientific measure of accuracy until within quite recent years, there are historical records of such views being held long before the bacteriological period of pathology. For instance, in the eighteenth century, principally owing to the teaching of Morgagni, both in Italy and Spain, phthisis was recognized as an infectious disease, against which most stringent precautions were taken.

Inhalation of Tubercle Bacilli.

Klencke and Villemin[1] both demonstrated the inoculability of tuberculosis, but to Robert Koch is due the crowning honour of having in 1882 isolated the tubercle bacillus. The results of the experiments which led to this discovery are set forth at length in the masterly essay entitled The Etiology of Tuberculosis.[2] These researches are too well known to need recapitulation; but as having a special bearing on the subject of this paper I will briefly call attention to what the essay has to say on inhalation experiments. Experiment 26 is thus described:

A very roomy box, having on one side an opening for the orifice of the spray apparatus, was placed in a garden at a good distance from any habitation. The spray apparatus was placed outside the box, with its orifice projecting into the interior. The apparatus was connected by means of elastic tubing and a suitable length of lead pipe, which passed through the woodwork of a closed window, with the indiarubber bellows, and so could be worked from the room beyond the region of the spray.

Pure culture from a phthisical lung in the human subject, No. 1 (carried through twenty-three generations in fifteen months), rubbed up with distilled water, and the fluid diluted to such an extent that it looked almost clear. Any visible fragments present in the fluid subsided after standing a short time; the upper layer, which showed hardly any opacity, was poured off and used for inhalation. Fifty c.cm. were dispersed in the course of half an hour on three successive days, and inhaled by the animals in the box as follows: 8 rabbits, 10 guinea-pigs, 4 rats, and 4 mice. After the inhalation the animals were kept in separate roomy cages and well looked after. In some of the animals dyspnoea appeared after ten days, and 3 rabbits and 4 guinea-pigs died in the course of fourteen to twenty-five days. All the remaining animals were killed twenty-eight days after the last inhalation. All the rabbits and guinea-pigs had numerous tubercles in the lungs, the size of the tubercles being proportionate to the length of time the animals had lived after inhalation.

A more convincing proof of the highly-infectious character of sprayed tubercle bacilli could scarcely be asked for. But at this still early stage of research Koch was not led to draw any strong distinction between the effect of the inhalation of sprayed tubercle bacilli and the inhalation of tuberculous dust. Nevertheless, Professor Koch's comment on the results obtained by Experiment 26 call for note and consideration here. Thus he says:

There can likewise be no doubt as to the manner in which the tuberculous virus is carried from phthisical to healthy subjects. By the force of the patient's cough particles of tenacious sputum are dislodged, discharged into the air, and so scattered to some extent. Now numerous experiments have shown that the inhalation of scattered particles of phthisical sputum causes tuberculosis with absolute certainty, not only in animals easily susceptible to the disease, but in those also which have much more power of resisting it. It is not to be supposed that man would be an exception to this rule, but, on the contrary, we may surmise that any healthy person brought into immediate contact with a phthisical patient, and inhaling the fragments of fresh sputum discharged into the air, may be thereby infected. But probably infection will not often take place in this way, because the particles of sputum are not small enough to remain suspended in the air for any length of time. Dried sputum, on the contrary, is much more likely to cause infection, as, owing to the negligence with which the expectoration of phthisical patients is treated, it must evidently enter the atmosphere in considerable quantity. The sputum is not only ejected directly on the floor, there to dry up, to be pulverized and to rise again in the form of dust, but a good deal of it dries on bedlinen, articles of clothing, and especially pocket handkerchiefs—which even the cleanliest of patients cannot help soiling with the dangerous infective material when wiping the mouth after expectoration—and also is subsequently scattered as dust.

From this it will be seen that while Koch from the outset recognized the possibility of infection occurring both from bacilli coughed out by the consumptive and from the dried pulverized expectoration, he regarded dried sputum as the most fruitful source of infection.

The view with regard to the danger of pulverized sputa here enunciated has in one form or another been adopted by a series of writers down to the time of Flügge.

Tappeiner, Thaon, Cornet, and Straus have all supported this view. At this stage it is interesting to note that we now have on record two unintentional but nevertheless crucial experiments on man. The one showing the danger of inhaling artificially sprayed tuberculous sputum; the other showing the deadly character, when inhaled, of powdered tuberculous material.

In the one case Tappeiner lost a servant, who, after carelessly handling the apparatus for spraying tuberculous sputum, was attacked with an acute onset of pulmonary tuberculosis and died. In the other case, Nocard[3] relates that Thaon, while experimenting on the effect of tuberculous dust upon animals, himself fell a victim to it, and was seized with an attack of tuberculous broncho-pneumonia, which proved rapidly fatal.

Space will not allow of my dealing with all the experiments made. Many of them are described at great length in Straus's[4] large work, and I will refer to a few as illustrating this point. Thus Tappeiner used the spray experiments in 1877, in Buhl's laboratory at Munich, and was followed in this form of experiment by Weichselbaum[5] and Veraguth,[6] who all obtained positive results.

In 1883[7] Dr. Arthur Ransome stated that he had discovered by microscopic examination the presence of tubercle bacilli in the expired air of advanced phthisical cases, the vapour of which had been condensed by a freezing mixture. Dr. Theodore Williams[8] also detected a certain number of tubercle bacilli in the air of the wards of Brompton Hospital.

I now pass on to a series of experiments conducted in the years 1897 and 1898 by a group of observers, the results of whose work are dealt with by Flügge. In 1899 Flügge[9] published a summary of a series of experiments on the infectivity of phthisis (*a*) through the inhalation of powdered desiccated tuberculous sputa; (*b*) through the inhalation of the minute drops sprayed by the coughing, speaking, or similar breath movements of a consumptive patient. In these experiments Flügge was assisted by Sticker, Heymann, Laschtschenko, and Beumde, who worked in his laboratory at Breslau under his directions.

Sticker, after failing in several instances to secure infection by inhalation of tuberculous dust, at length succeeded in animals, almost without exception, when he rubbed fully-dried sputum on a rag or a board and blew with powerful puffs, producing an air current of 1 m. or more per second, and forced the air visibly dust-laden into a confined inhalation space. On the other hand, if he lowered the speed of the current of air to from 10 cm. to 30 cm. per second, although thereby producing an appreciable draught, he did not succeed in any case in creating tuberculosis by inhalation in the animals experimented on.

Cornet[10] also produced tuberculosis by inhalation of dry sputum dust by blowing the infected dust with a pair of bellows into the mouths of some of the animals experimented on, and also by holding others in clouds of dust raised by the sweeping of a carpet covered with dried sputum. The infection of guinea-pigs by inhalation of pulverized phthisical sputum, when certain conditions are observed, is now indisputable. But Flügge maintains that

> These conditions differ widely from those obtaining in human dwellings. The sputum is scientifically dried; the mass of sputum is relatively large; the pulverization of the dust is effected by exaggerated artificial operations; and very strong artificial currents of air, which are by no means present in living-rooms, transport the dust through a short course into the animals experimented on.

Sticker laid great emphasis on the absolute dryness necessary, and Beninde confirmed this by showing that handkerchiefs soiled with sputum and carried in the pocket for twenty-four hours after use, were not dry enough to yield bacilli when rubbed and exposed to strong currents of air.

On the other hand, it is certain that on dusty floors of insanitary dwellings, offices, and workshops dried sputum dust can be formed, though Flügge urges that this condition does not often obtain to a sufficient extent in dwellings. On this point, Cornet wrote in his first work:

> Any one who has himself tried to rub the well-dried sputum into atoms and to pulverize it very finely will agree with me that it is no easy task to produce a really fine powder which remains suspended in the air for some time. The strong statements that have been made up to now—that one has only to rub with the foot on the dried sputum to raise immediately a cloud of dust of infectious germs—are absolutely false.

Experiments with Sprayed Sputum.

Turning now to the experiments with sprayed sputum the results are very different. Numerous experiments by Koch, Gebhard, Preeys, and others were carried out so that the artificially sprayed sputum was introduced into the breathing space of the animals experimented upon—generally guinea-pigs. Infection took place in this way with great certainty, and even with very much thinned sputum. It is interesting here again to recall that Koch, (original essay on the Etiology of Tuberculosis) obtained, in his inhalation experiment with sprayed tubercle bacilli (Experiment 26), tuberculosis in every animal out of 8 rabbits, 10 guinea-pigs, 4 rats, and 4 mice exposed to an infected spray for a period of half-an-hour on three successive days. This deadly effect upon animals of an artificial spray carrying tubercle bacilli has been confirmed by many other observers since.

The next set of experiments deal directly with drop infection. Laschtschenko held a solution containing B. prodigiosus in his mouth, and found that by speaking, coughing, and sneezing, these germs were sprayed out and deposited on agar plates which he had placed in front of him at various distances, Laschtschenko then got phthisical patients to cough over object glasses on which, in some cases, tubercle bacilli were deposited.

Similar results were obtained in leprosy by Schäffer. Heymann experimented with object glasses on 35 phthisical patients, and out of that number 14 (or 40 per cent.) deposited on the object glasses placed half a metre from the coughing patient drops containing tubercle bacilli. The size of some of these bacilli-laden drops was as low as 30 μ in diameter. By several other experiments it was then shown that these drops contained virulent infective tubercle bacilli; and, finally, the "direct infection of experimental animals, through the coughs of a phthisical subject" was attempted. Flügge felt the difficulties of this experiment to be so great that he anticipated a negative result. Thus, he points out that

> The breath volume of the guinea-pig is at least 100 times less than that of man; if, therefore, here in one infectious bacillus in the quantum of air that a man breathes in the time unit, I shall only have a prospect of attaining with the same air the infection of a guinea-pig when I let 100 guinea pigs breathe that air.

In spite of this and other objections, positive results were obtained. Out of 25 guinea-pigs, coughed at in a repeatedly disinfected room by phthisical patients, whose clothes were previously disinfected, at distances from 20 to 25 cm., for three hours every other day, 6 died showing symptoms of inhalation tuberculosis. Of these, 2 died in four weeks, 2 in seven weeks, 1 in two months, and 1 in four months.

In conclusion, while admitting the danger of infection from tuberculous dust, Flügge states that infection will occur

> Through living together with coughing and drop-disseminating phthisical subjects, if frequent proximity to the cougher up to less than 1 metre occur.

In 1901,[11] Flügge published a second paper entitled Further Contributions on the Dissemination and Combating of Phthisis. In this he states that since his previous publication further experiments had been made by Fränkel, Weissmayr, Engelmann, Möller, and others, confirming the fact that minute drops containing tubercle bacilli are sprayed by consumptives while coughing. Möller also succeeded in infecting guinea-pigs by exposing them to the coughs of tuberculous patients. On these grounds, together with those already referred to, Flügge states that, in his opinion, the minute drops sprayed forth by the cough of consumptive patients have been shown, as fully as demonstration without actual experiment on man can be carried, to be a most fruitful source of the infection of phthisis. He also attributes to the inhalation of dried tuberculous dust a certain amount of infection.

On both drop and dust infection, further experiments by Heymann, Nenninger, and Steinitz, acting under the directions of Flügge in his laboratory, have been made. Heymann[11] made a series of experiments to ascertain how the drops sprayed in coughing are distributed in a room. Thus he found that virulent tubercle bacilli were deposited on object glasses up to as far as 140 c.m., in front of the mouth of the patient. Occasionally microbe-bearing drops were also found deposited on plates behind the patient.

Heymann next endeavoured to ascertain how long the minute sprayed drops were capable of remaining suspended in the air. This he did by placing a coughing phthisical subject into a glass case. In this glass case he put twelve small shallow glass bowls filled with sterile bouillon, they were closed with lead-covered glass tops, lightly sealed with plaster. To these tops strings from outside were attached and the bouillon vessels exposed at different intervals after the patient had left the case. The patient remained in the case, coughing at intervals from an hour an half to two hours. In two of the bowls opened thirty minutes after the patient had left the case, and which remained exposed for several hours, the proof of the presence of tubercle bacilli was demonstrated by intraperitoneal injections into guinea pigs. This result is the more noteworthy in that the area of bouillon exposed was small.

Heymann next tried to ascertain how long these minute drops remained suspended in moving currents of air. The mouth of an aspirator was inserted into the case, and the air of the case was drawn out and passed through bottles containing sterilized water in a vacuum. The micro-organisms deposited in the water were either examined microscopically, cultivated, or injected into guinea-pigs. The speed of the air current used was 3 m. per second. The aspirator used was furnished with three funnels of entrance, all opening into the case. These funnels by a mechanical contrivance were opened from outside, only one being opened at a time. Through the first air was drawn for an hour while the patient was seated inside, one cubic metre of air being removed from the case in the course of the hour. The result was that out of seven experiments with four patients, virulent tubercle bacilli were twice found in the water. Through the second funnel air was drawn for an hour from the case, the aspiration beginning ten minutes after the patient had left the case. This also was tried on seven occasions. With the third funnel the same experiment was made on four occasions. In neither of the last instances were tubercle bacilli found.

These aspiration experiments, which undoubtedly deserve repetition, still further confirm the fact that tubercle bacilli are to be found in the atmosphere immediately surrounding a coughing tuberculous patient, but as far as they go they do not appear to suggest that a considerable number of the minute drops containing tubercle bacilli remain suspended in the air for an appreciable length of time. As against this, however, we must set the result obtained in the former experiments referred to, which at any rate show that some suspension of these drops occurs.

The next set of experiments were addressed to ascertaining how long the bacilli retain their vitality in (*a*) artificially-

sprayed drops; (*b*) in the naturally-sprayed drops of tuberculous patients.

In the artificially-sprayed drops, the bacilli retained their vitality in bright light for two days, and in darkness for seven days. In the naturally-sprayed drops the bacilli retained their vitality in bright light for three days and in darkness up to eighteen days. From these experiments, Heymann concludes that, under ordinary circumstances, the bacilli in naturally-sprayed drops do not usually retain their virulence for more than four or five days.

Experiments with Dried Sputum and Dust.

A second group of experiments made by Heymann deals with the genesis and the air-floating properties of pulverzied particles of dried tuberculous sputum. Inside the glass case already referred to, Heymann placed carpets soiled with tuberculous sputum and dried. These were beaten and rubbed with a stick, inserted through a cambric screen let into the glass case. Two small cups of bouillon placed in the case were opened while the rubbing was going on, two ten minutes afterwards, the others at intervals of 30, 45, 60, 90, and 120 minutes after the rubbing was finished. The two cups of bouillon opened during the beating gave positive results. All the others were negative.

Similar experiments made with sputum-soiled and dried pocket-handkerchiefs, however, gave positive results with bouillon exposed as late as 60 minutes after the rubbing had ceased—the reason, in Heymann's opinion, being that the particles from handkerchiefs were small and light enough to continue floating in the atmosphere for some time.

A set of aspiration experiments on dust, conducted on the lines already described for the spray, gave the following results: Dust particles beaten up from carpets and boards rapidly fall to the ground, and after ten minutes, with one exception, in thirteen experiments negative results were obtained. With sputum soiled and dried pocket-handkerchiefs on the other hand, positive results were obtained half an hour after the rubbing had ceased in one out of two experiments made.

From these experiments it would appear that soiled fibres of such materials as cotton or linen are among the most readily floating and dangerous forms of dust. As a matter of fact this experiment fully confirms the statement made by Koch[2] in his original essay on tuberculosis.

Dust of Rooms and Wards Occupied by Phthisical Patients.

The third group of experiments deals with the presence of tubercle bacilli in the dust of rooms and hospital wards occupied by phthisical patients. Dust was collected with a camel-hair brush from the contact area, that is, the area within reach of the patient, and from beyond that area. For practical purposes the contact area may also be taken as approximately that of the cough infection area. Dust was also collected from these two areas by a wet sponge, which was the method employed in experiments by Cornet. The use of the camel-hair brush ensured the removal of only the lightest and most minute dust particles, while the wet sponge gathered coarser and also adherent particles.

The result of these experiments taken from fifteen different private rooms was that in the case of dust removed with the brush five out of fifty-nine tests gave positive results. Of these two were within the contact area and three outside. From sixteen different hospital wards out of sixty-one tests with the brush five were positive. Of these two were within the contact area and three outside. In the foregoing cases a spittoon was in use in all the hospital cases and in the great majority of the private cases, only one out of the five positive results from the private cases referred to being from a room where no spittoon was used.

In the next set of experiments, where sponges for collecting bacilli were used, many more positive results were obtained, but, as Flügge points out, this is hardly a fair way of estimating the infectious quality of dust, as only dust capable of floating can infect by inhalation, and the sponge removes both coarse and adherent particles. Flügge points out further, though perhaps it is hardly necessary to do so, that the danger in individual cases from tuberculous dust must vary with individual conditions, such as the use or non-use of spittoons, the expectoration on to a dusty workshop floor, and other similar factors.

One practical lesson which the foregoing experiments with tuberculous dust teach is of considerable importance. The experiments in the glass case show that it is only the lightest and finest dust particles which remain suspended and are capable of inhalation, and such particles as these are formed very largely from the minute traces of tuberculous sputum left on a patient's mouth, beard, handkerchief, bed linen, or clothes, which dry perfectly and readily, thus keeping up some danger of dust infection even where the spittoon is carefully used.

INFECTION IN HUMAN TUBERCULOSIS.

Turning now from this summary of researches and experiments, let us see how the latest views of Flügge, with which Professor Koch personally assured me he was quite in accord, bear upon actual statistics of phthisical cases. For this purpose I have been unable to find any more valuable records than those compiled by different medical officers of health in this country. It is impossible to deal with more than one or two such reports, and for the purpose of this paper I have selected the splendid body of evidence afforded by Dr. Niven's Manchester Report for 1901. In Dr. Niven's work he had the co-operation of four medical assistants—Drs. Coates, M'Leary, Beatty, and Cowie, and from the evidence contained in the Report of the Health of the City of Manchester for 1901, I take the following extract:

The investigations tabulated by the medical assistants on forms which were drawn up as the result of previous investigations show that, corresponding to the scientific facts, there is abundant evidence of exposure to an adequate amount of infection in the case of a large proportion of the consumptives, both at home and in the workshops.

From the report made by Dr. Beatty to the Medical Officer of Health for Manchester (February 2nd, 1902), it appears that out of 1,455 cases visited by the assistant medical officers, there were 1,006 cases in which there was some information available.

A source of infection was detected in 652 out of these 1,006 cases, that is, in 64 8 per cent. Of these 652 sources 467 may be described as probable sources, that is, 46.4 per cent. of the 1,006; and 185, or 18.4 per cent., were more doubtful sources, but still with some degree of probability attached to them.

Among these 1,006 cases, 123 were cases where neither the patient nor a close relative nor an intimate friend was seen, and the information obtained was altogether inadequate to explain the occurrence of the disease; these being deducted leave a total of 883 in which a cause might be found. A source was found in 73.8 per cent. of these 52 8 per cent. having a probable source and 21 per cent. a more doubtful source.

There remain 281 cases in which no source of infection could be detected. In many of these cases the patient himself was seen, so that all the information required was obtainable, but in others the patient was not seen, and the relative or intimate friend interviewed could not give the requisite particulars as to the patient's workplace or workmates, and thus an important possible source of infection was left without investigation.

Sources of Infection.

The most common source of infection is a consumptive relative. The cases where this was the presumed source numbered 303. As a rule the patient lived in the same house as the relative mentioned, but examples are given where patient and relative lived in different houses. In most cases the probabilities are decidedly in favour of this being the source of infection, but in others this cannot be said.

Then follow a long list of cases from which I have made an illustrative selection:

Patient Probably Infected by Living in the same House as a Consumptive who was not a Relative.

Case 392.—F., 43. Ill six months. (Investigated, April 16th, 1901). Patient spent a good deal of time sitting with a consumptive patient (case 291, 1899), in this house, who died on November 13th, 1899. (Coates).

Patients who have been intimately associated with Consumptive Relatives though not actually living in the same house.

Case 552.—F., 5. Ill six months. Two aunts have phthisis at present, living in different houses. Patient is constantly visiting one or other aunt. (Coates).

Case 782.—F., 30. Ill six to seven years. Sister-in-law died two years ago after a prolonged illness. She had had cough for many years. Patient often visited her. (B.).

Patients who had been intimately associated with Consumptives who were not Relatives.

Case 231.—F., 56. Ill ten months. A friend died of phthisis a few months ago; she had been ill two years. Patient and she often visited each other. (McCleary).

Case 307.—M., 33. Ill nine months. Patient frequented race meetings. While away from home at these meetings he slept with a man who died of phthisis nine or ten months ago. (Coates).

Immediate Neighbours.

Certain cases appear to have been infected by living next door to a consumptive. As mentioned in the annual report for 1899, this may be due to the fact that "in the processes of removing dust, shaking carpets, and so on, from an infected house, probably the air becomes sufficiently

impregnated with tuberculous dust to infect persons in an adjacent dwelling." It would appear that in New York, which especially suffers from this mode of infection, it is customary to put the bedclothes on the open window to air them. In this group there are 23 cases.

Case 851.—M., 39. Ill four years. Case lives next door, ill eight years. There has been no intercourse between the families, this patient not even knowing of the existence of the other one. (B.)

In all the foregoing cases, with the exception of the last group, of which only 23 instances are given, it will be seen that frequent and actual contact with some one suffering from phthisis was a condition common to them all—in other words, whatever part pulverized sputum may have actually played in the spreading of the infection, there is a history in all but the last 23 cases referred to of the actual respiration of an atmosphere sprayed into in the actual presence of the case by the cough and speech of a phthisical subject. The views held by Professors Koch and Flügge—that infection by "Tropfchen-infektion" is a more potent factor in spreading the disease than the infection which arises from desiccated and pulverized sputa—is supported to a considerable extent by this record of Manchester cases.

For instance, let us turn to what Dr. Beatty has to say about house infection. Surely if pulverized, desiccated sputum were the main factor—no one doubts that it is a factor in spreading infection—the record of house infection among these 1,006 cases would be somewhat higher than the following:

House Infection.

In 12 cases patients may have contracted the disease by living in houses which had been infected by previous consumptive tenants. It is rarely that anything is known by the patient or his relatives of the previous occupants of a house in which they have lived Hence the infrequency with which the disease can be attributed to this cause. A special report on an investigation into the subject was made by Dr. Beatty to the medical officer of health during the year, but this report had no reference—save in one case—to the cases quoted here.

In reference to even these cases it is right to observe that in some there is also the history of contact with a phthisical subject to be noted.

Such then are some of these striking Manchester cases compiled by a body of impartial medical men. They stand like the record of a long series of experiments, and, read with impartiality, in the light of the latest researches, how striking is their testimony. In the laboratory it is true we may set the conditions of experiment, but science should also teach us how accurately to estimate the conditions set by human life and its environment.

CONCLUSIONS.

I will now state briefly my own view of the evidence adduced in this paper.

I hold it conclusively established that both dried tuberculous sputum dust and the minute drops coughed out by the consumptive are capable of conveying infection. The precise proportion which each factor plays in this infection it is difficult to estimate, but there are two points in connexion with the cough infection which, I think, are of special importance.

In the first place, the minute cough-sprayed drop which contains a tubercle bacillus probably in the majority of instances contains that bacillus in a condition of a high degree of virulence. The bacillus contained in the minute sprayed drop comes straight from its natural soil, and is probably more potent as an agent of infection than that contained in the dust particle which had been exposed to desiccation, and in the majority of instances to some degree of light.

Secondly those sprayed drops which fall to the ground, or are deposited elsewhere, although they may not carry with them a large number of bacillli, nevertheless deposit such bacilli as they do carry, under conditions which ensure their rapid dessication and formation into the smallest particles of dust. These minute drops thus add their quota of bacilli to that quantity of minute dust which alone is capable of inhalation.

With reference to the extent of the infectivity of phthisis, while I hold it to be an infective disease, I do not consider that the degree of this infectivity is a high one. But as against this we must set the fact that phthisis is a chronic disease, and that the chance of conveying the disease often extends over years.

Of those exposed to infection for brief periods only a very small minority are infected. Of those exposed for days, weeks, even months in a small confined atmosphere many escape. Why many escape and others do not escape, has not yet been scientifically demonstrated. But this we know, that be the causes of apparent immunity what they may, no person can develop tuberculosis who is not exposed to the possibility of invasion by the tubercle bacillus.

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HUMAN AND BOVINE TUBERCULOSIS:

THE POSSIBILITY OF HUMAN INFECTION FROM CATTLE.

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DURING the last few years I have had under observation over 2,000 cases of phthisis pulmonalis, and I have been particularly impressed with the fact that the tuberculous process is nearly always confined strictly to the lungs. I have only seen the glands and the joints affected in six cases, and in the late stages one sees the intestine and peritoneum involved. Phthisis pulmonalis is essentially a disease of young adult life. On the other hand, strumous or tuberculous joints, enlarged glands, spinal disease, and abdominal tuberculosis with tabes mesenterica, are essentially diseases of infancy and childhood, and are only rarely seen in adult life. It is very rare to see a patient with enlarged glands, strumous joints, or spinal disease develop true phthisis pulmonalis.

Again, I have had the opportunity of seeing over 500 necropsies on cases of tuberculosis, and I have noticed that even the lungs are attacked by two distinct varieties of tuberculosis—one of a slow and insidious nature, the other rapid and acute and generally associated with tubercle in other parts of the body. If one compares the appearances seen in cattle dying with tuberculosis with those of children dying of tabes mesenterica and abdominal tubercle the almost exact counterpart is seen: in fact, as Creighton observes, there is an exact mimicry of disease.

From these general clinical and pathological observations I am inclined to think that primary intestinal tuberculosis, tabes misenterica, and other tuberculous affections of the serous membranes in children are probably bovine tuberculosis conveyed by milk, and are not related to human tuberculosis, although the bacillus of Koch is found in them all, and is indistinguishable.

Tabes Mesenterica.

Infants and children suffer from tuberculosis of the intestines and glands, but it is perhaps more common before the age of 1 year than afterwards. In 103 consecutive necropsies of children dying of tuberculosis at the Manchester Children's Hospital, there was tuberculous ulceration of the intestine in 62, cheesy mesenteric glands in 71, and both ulcers and cheesy glands in 55. Ashby states that in at least 70 per cent. of children dying of tuberculosis, disease of the mesenteric glands was present, and in rather more than 55 per cent. tuberculous ulceration was associated with it, and, as he says, primary tuberculosis of the intestine is suggestive of infection by means of tubercle bacilli taken in milk from a tuberculous cow. At the Great Ormond Street Children's Hospital, London, of 254 tuberculous children examined *post mortem*, 151, or 59 per cent., showed cheesy mesenteric glands, and Dr Still found that in 29 per cent. of cases of tuberculosis in children, primary infection had taken place through the intestine. Woodhead records 127 cases of fatal tuberculosis in children with involvement of the mesenteric glands in 100.

I grant it is extremely difficult to exactly diagnose the onset of tabes mesenterica, and it is not to be assumed that a great many of the cases of diarrhoea, wasting, and general inanition in children are tuberculous, as they certainly are

not; but I believe that tabes mesenterica is a great deal more common than is generally believed, and, what is more, a great number of children who receive a mild infection which is confined to the mesenteric glands, recover absolutely. I have seen this frequently in the hospital, where enlarged palpable mesenteric glands have slowly subsided, and under proper treatment the child has quite recovered.

If we consider for a moment the remarkable diminution in human phthisis during the last fifty years amounting to over 45 per cent., we would naturally expect that other forms of tuberculosis would have fallen in the same ratio were they all caused by the same bacillus. But this is not so; on the contrary, the death-rate from abdominal tuberculosis in children, as shown by Sir Richard Thorne Thorne, has greatly increased, amounting to over 20 per cent.

Veterinary authorities, such as Nocard, Bang, Dollar, and McFadyean, agree that about 30 per cent. of dairy cattle suffer from tuberculosis, and recent official figures from different parts of England show that in London dairies 25 per cent., in Edinburgh 40 per cent., Midlothian 23 per cent., Durham 19 per cent., and Yorkshire 25 cent. of the cows are tuberculous. It is, however, now generally admitted by experts that only cows with a tuberculous affection of the udder (2 to 3 per cent.) are really dangerous.

Nocard says "the ingestion of a virulent milk is only dangerous when the milk contains a great number of bacilli and is ingested in considerable quantity." Bollinger found that 16·6 per cent. of samples of commercial milk contained tubercle bacilli; Martin, in Paris, 33 per cent.; Bang, in Copenhagen, 15·5 per cent.; Delépine, in Manchester, 25 per cent.; and Professor Boyce informs me that in his opinion about 5 per cent of Liverpool milk contains tubercle bacilli.

It is my custom at the Mill Road Infirmary to inquire into the milk history of all children admitted with abdominal tuberculosis, and the usual history is as follows: Child fed on the breast for a few months, afterwards cow's milk, which is generally bought in halfpennyworths or pennyworths at the milkshop. I have made most careful inquiries during the last five years, and I have never seen a case of tabes mesenterica which had not been fed for some weeks or months on cow's milk.

With a view to excluding infection from parents or family at home I have made a most careful inquiry on this point, and of the 34 deaths only 1 child had a phthisical parent, so that the probability of infection in this direction is extremely small.

It is argued by some observers that the tubercle bacilli are not primarily introduced into the body through the mesenteric glands, but that they become affected later on from some other part. If this is so I ask, How is it that adults suffering from phthisis do not become affected in the mesenteric glands in the same way? It is very unusual to see the mesenteric glands affected in phthisis pulmonalis, except as a late affection following secondary intestinal ulceration.

The next link in the chain is the clinical history of a case of tabes mesenterica. In a Poor-law infirmary we often see the child from the commencement of the illness, chronic intestinal catarrh with diarrhoea of offensive yellow stools with perhaps streaks of blood, a general wasting and distension of the abdomen. I have invariably found the chest quite healthy in the early stages of the illness. As the disease slowly progresses, and the atrophy and wasting consequent on the diseased mesenteric glands continues, the general tuberculous symptoms are more pronounced, the temperature becomes hectic, the child begins to cough, and on examination the lungs are found to be tuberculous, and the child invariably dies. The infection commences in the mesenteric glands from the intestine, slowly spreads to the retro-peritoneal glands, then through the diaphragm to the glands in the posterior mediastinum, and finally to the lungs.

In nine cases the lungs were not attacked at all, the disease being confined to the abdomen. If we compare the course of this infection with that seen in the calf which is fed on tuberculous milk we see an exact mimicry in every detail. The direction of the lymph stream would certainly be strongly in favour of infection from the intestine to the thoracic organs.

If the various tuberculous lesions in the body are carefully examined the bacillus of Koch is usually found, and, in my opinion, this has led to error in assuming that we were dealing with one bacillus. Koch has shown, I think conclusively, that human and bovine tuberculosis are distinct and different diseases, but the bacillus of both is morphologically identical and cannot be distinguished under the microscope. On the other hand, the cultures of the two diseases are different, and Professor Ravenel affirms that "the tubercle bacillus from bovine sources has in culture fairly constant and persistent peculiarities of growth and morphology by which it may tentavively be differentiated from that ordinarily found in man." Several observers have performed experiments bearing on this matter:—

Ravenel in 1902 inoculated a calf with a culture of bacilli taken from the mesenteric gland of a child. The calf died seventeen days afterwards, and the necropsy showed great numbers of tubercles in the lungs and caseous areas in the bronchial glands. A second inoculation from the mesenteric glands of a child was found to be very virulent for the calf. With this culture a calf was inoculated intravenously in March, 1902, and it was killed when at the point of death forty-six days afterwards. The necropsy showed most extensive disease of the lungs and thoracic glands.

Fibiger and Jensen have reported a number of experiments on the lines suggested by Professor Koch. During a period of six months 12 necropsies on children dying in the Copenhagen Children's Hospital from tuberculosis were made, and in 2 of these the primary infection was certainly in the intestine, a third was probable. From the probable case a guinea-pig was inoculated, and the tuberculous spleen of the animal was used to inoculate a calf into the peritoneum. The calf was killed about three months afterwards, and extensive peritoneal tuberculosis was found. One of the two cases in which it was certain that infection had taken place by way of the bowel was that of a child aged 10 months, and a calf was inoculated from the spleen. It was killed three months afterwards and found to have extensive generalized tuberculosis. In the second case of certain primary intestinal infection the patient was 4 months old, and material from one of the caseous mesenteric glands was used to inoculate two calves under the skin of the neck. The calves were only 10 days old, and both died in less than three weeks from septic pneumonia. At the time of death the tuberculous process had already spread to the nearest lymphatic gland. Part of this gland from calf 1 was used to inoculate a cow on the side of the neck, and a third calf was inoculated from the gland of calf 2. The cow was killed in four months, and the necropsy showed a large tuberculous tumour at the point of inoculation, caseous nodules in the nearest lymphatic gland, and tubercles in the lungs and liver. The third calf was killed eight weeks after, and was found to have generalized tuberculosis with lesions in the lungs, heart, thoracic glands, spleen, liver, and kidneys, as well as at the point of inoculation in the neck and nearest lymphatic gland.

Spronck and Hoefnagel recently recorded the case of a veterinary surgeon who, whilst making a necropsy on a cow which had died of general tuberculosis, wounded the little finger of a man who was assisting him. The wound soon healed, but subsequently a nodule developed, and the lymphatic gland at the elbow was affected. The skin from the finger and the lymphatic gland were removed, microscopical examination showed them to be tuberculous. A few days after, a yearling heifer was inoculated with the gland after its passage through a guinea-pig, and when two months later it was killed it was found to have a large tuberculous tumour at the place of inoculation, caseous areas in the nearest lymphatic glands, and tubercles in the lungs, pleura, spleen, liver and kidneys.

Professor Wolff also inoculated a calf 5 months old from the spleen of a man 63 years of age, who had been infected by the intestine. The calf was killed and found to have extensive disease of the lungs and thoracic glands.

If we accept the statement of Koch that cattle are not susceptible to human tuberculosis then these experiments show beyond doubt that these mesenteric lesions must have been bovine in origin, as the cattle were very quickly affected with general tuberculosis. Taking all these facts into consideration and after a careful study of tuberculosis in all its forms during the last ten years, I am of opinion that bovine tuberculosis is very virulent for children, and is accountable for tabes mesenterica and other varieties of abdominal tuberculosis, in fact I believe it to be more virulent to children than human tuberculosis.

Scrofula.

Out of over 2,000 cases of phthisis I have only seen enlarged cervical glands in three, and although one occasionally, but very rarely, sees phthisis pulmonalis follow operation on these glands, it might be explained by direct extension of the deep cervical lymphatic glands to the apex of the lung.

The most reasonable theory is that scrofulous glands in the neck are produced by the absorption of tubercle bacilli in milk through the tonsils and pharynx. This view is supported by feeding experiments on animals. If pigs are fed on tuberculous milk they develop enlarged tuberculous glands of the neck and throat which on inoculation produce bovine tuberculosis in cattle, and tuberculous lymphatic glands from the human when injected into calves have produced a general tuberculous infection. This is strong presumptive evidence of their being bovine in origin.

If this view is correct it would help to explain the occurrence of acute general tuberculosis occurring in those suffering from an unhealed focus, such as a gland, a strumous joint, or a psoas abscess. If we observe closely this acute general tuberculosis we find it closely resembles that seen in cattle,

affecting chiefly the serous membranes and the lungs, a condition which rarely accompanies phthisis pulmonalis.

Bones and Joints.

For the same reasons it is possible that the numerous joint and bone lesions so frequently seen in children and so rarely in adults are due to bovine infection. The general mode of death from long-continued suppuration of tuberculous joints and carious spines is sheer exhaustion and waxy disease of the viscera, rarely tuberculosis of the lungs.

Tuberculous Meningitis.

It is often difficult to explain the onset in a previously healthy child of tuberculous meningitis. Sometimes it is confined to the brain, at others it is part of a general infection. Perhaps it is a bovine tuberculosis, as I have seen several necropsies on such cases where there has been no other discoverable evidence of tubercle in the body. We have all seen cases of tuberculous peritonitis completely recover after opening and draining the abdomen and nothing more. So far no satisfactory explanation of this result has been given. My own opinion is that it is a localized bovine tuberculosis which has died out, and that relief of the fluid is sufficient to cure the patient.

Post-nasal Adenoids.

Again, it is inexplicable why perfectly healthy children of healthy parents should be so frequently affected with chronic enlargement of the tonsils and with adenoids. It is quite conceivable that tuberculous milk should be absorbed from the fauces and pharynx, producing enlarged tonsils, adenoids, and extending even into the middle ear, causing tuberculous otitis media. There is much evidence also to suggest that acute miliary tuberculosis, especially that of the typhoid form, is in reality a bovine tuberculosis produced by food ingestion. I have only suggested bovine tuberculosis as the pathology of the latter affections. I have no proof to offer, but hope that other workers will direct their efforts to prove or disprove my opinion.

Suggestion.

Clinical appearances would suggest that there is a distinct difference between the tuberculous manifestations in childhood and adult life, and that they are antagonistic to each other. We know that animals are practically immune against human tuberculosis or phthisis, but not to tabes mesenterica and abdominal tuberculosis. Since the two diseases cannot exist together in cattle, may it not be that they cannot exist together in man? and that the serum of a cow affected with tuberculosis might have a curative effect in a case of pulmonary phthisis exactly on the same lines as small-pox and cow-pox? Who knows!

Remedy.

The milk-drinking period of a child is, on an average, from birth to 14 or 15 months. Fortunately, a fair percentage of infants are fed on human milk and thus escape danger, whilst a very large number of children in England are brought up on proprietary artificial foods and condensed milk, which, as far as tubercle is concerned, are generally safe. The remainder—and they are usually the children of the poor—are given cheap cow's milk, bought in small quantities from the milk shop or the street. When we consider the extreme delicacy of an infant's digestion, and the small resistance it is able to offer to any infection, it is not surprising if tubercle bacilli are introduced in the milk, that absorption will take place, and tuberculosis follow.

It has been pointed out before that the danger is greatest when cow's milk is used exclusively and tubercle bacilli introduced day by day, as it is only when large numbers of bacilli are used that infection is likely to become general. It would appear, therefore, that infants and young children with a feeble power of resistance are susceptible to bovine tuberculosis, more especially if fed for a prolonged period on infected milk; that, as age advances, the susceptibility is decreased, until at adult life there is little risk to more than a purely local affection of the glands of the neck, which, however, may occasionally extend directly to the lung, and even a general miliary tuberculosis.

Legislation.

Considering that tuberculosis is so common and even increasing in this country amongst dairy cows, something ought to be done by the Legislature to prevent the wholesale distribution of tuberculous milk to the public. I do not advocate any harsh measures, as I am quite sure that every farmer and dairyman in the country would assist in every way to stamp out tuberculosis in cattle. But I would make it a penal offence for any person knowingly to supply milk to the public from a cow suffering from tuberculosis of the udder. A more rigorous inspection of dairy cattle should be made by the health authorities; and, as it is perfectly easy and certain by the tuberculin test to diagnose a tuberculous cow, there should be no difficulty in at least eradicating the disease from dairy cattle. The onus of responsibility of supplying pure milk to the public should not rest on the health authority, but on the producer; and, although the health authority can do a splendid and humane work by providing the community with sterilized milk at a cheap rate, still the real responsibility must lie with the man who actually delivers milk for sale to the public. Liverpool, as usual in all matters pertaining to the public health, is in the forefront in this respect, and at the present time is delivering to the public over 63,000 bottles of sterilized milk every week at a small charge which is not remunerative monetarily.

It can only be when large commercial companies undertake throughout the country to eradicate tuberculous cows from their herds that any substantial improvement will result and poor innocent children will be protected.

At the present time I believe I am right in saying that the majority of educated mothers do boil milk before it is given to children, and I sincerely hope they will continue to do so.

Although I believe the facts which I have recorded completely establish the truth of my theory, I am glad to hope that there will be before long further evidence to corroborate these views. Professor Boyce a few days after the publication of my preliminary note in the British Medical Journal of January 31st, 1903, called upon me at Mill Road Infirmary, and spent a considerable time in examining clinical cases, as well as specimens illustrating my views. I placed everything at his disposal, and supplied him with materials for inoculation of cattle at the experimental farms of the Royal Commission. Dr. Ernest Glynn was appointed to make a careful inquiry with regard to tabes mesenterica in Liverpool, and I sincerely hope, with the opportunities which Professor Boyce has at his disposal that we shall receive the results at an early date.

I conclude by expressing the opinion, based almost exclusively on clinical and pathological evidence, that human and bovine tuberculosis are separate and distinct diseases, as shown by Professor Koch; *but* that the human body is susceptible to both, and especially to bovine tuberculosis in the early periods of life.

The two diseases are so rarely seen together in man that there seems to be some ground for presuming that they are antagoniscic to each other, and that bovine tuberculosis may possibly confer an immunity against human tuberculosis. If this opinion should prove correct, I venture to submit that it would entirely reconcile the conflicting opinions which have been so frequently expressed during the last two years on this most terrible of all disease.

PHTHISIS AND HOUSE INFECTION.*

By J. R. JOHNSON, M.R.C.S., L.R.C.P.,

Richmond.

This brief paper contains notes of some cases of phthisis which have come under my observation in Richmond. I have been struck with the bearing of these few cases upon modern ideas of the causation and prevention of this disease.

According to the report of the medical officer of health, there were 30 deaths from phthisis in Richmond during the year 1901. This, with a population of 31,000 gives a phthisis mortality-rate of 1.6. The total death-rate is 13.5. Thus with a death-rate of 13.5, we have a phthisis mortality-rate of 1.6. This, though not high, is higher than it should be in a town where there is little or no overcrowding, and which is practically in the country. Eccles, a fair sample of a similarly-situated suburb, has a death-rate of 16.5, with a phthisis-rate of 1.3, a higher death-rate, that is to say, than Richmond, with a lower phthisis mortality.

The notes upon the following cases help, I think, to throw a little light upon the prevalence of the disease in Richmond. They have occurred in my practice during the past five years. I wish in sketching the cases to lay stress

* Read before the Thames Valley Branch of the British Medical Association.

upon certain particulars, whether, as far as one can ascertain, the cases arose *de novo* in Richmond or were imported—whether they occurred in old or modern houses. By old houses I mean houses not recently erected; such houses in Richmond have often changed tenants frequently, and it is difficult to trace occupants beyond the immediate occupiers. The old houses occur principally in the lower and more crowded part of the town; the modern ones are for the most part situated upon the hill.

Richmond is built upon clay, and being an ancient town contains a large number of old houses, some of them centuries old.

Case 1.—R. E. B, an infant, died, aged 10 months, of pulmonary tuberculosis.

The parents lived in one of a row of small, and for the most part dirty, ill-kept houses. Two families at least occupied each house, and some were quite insanitary.

The case therefore arose *de novo* in an old house.

Case 2.—T. H., died, 35 years of age, of typical phthisis; he also had tuberculous disease of the testicles.

His sputum contained tubercle bacilli in abundance. He had resided in Richmond two years before his death, coming from Twickenham already ill with the disease. It is therefore an imported case. He, with his wife and child lived in one room in a house situated in the midst of one of our worst areas. It almost deserves the epithet squalid.

Case 3.—E. H. L. D., died, aged 4 months, of acute pulmonary tuberculosis.

This was a case arising in an old house, The houses in this street on both sides are old. They are low-roomed, small-windowed, basemented, with extremely narrow, winding, dark stairs. Most of them are badly kept, some are actually insanitary from collections of refuse and garbage in their basements.

Case 4.—G. T. W., died at the age of 26 of acute phthisis of three weeks' duration, in a house a few doors above Case 3.

This is an instructive case. The man, a delicate-looking fellow, but with a story of always being quite well, arrived from Ealing to open a draper's shop. He spent one week knocking the interior of the place about, making alterations, doing his own carpentering and fitting, and so stirring up the septic dust of an old and dark house. Exactly a week after his arrival he suddenly developed pleuro-pneumonia, became dangerously ill and died in three weeks of acute pulmonary tuberculosis.

The case arose in an old house.

Case 5.—T. B. died at the age of 49 of phthisis. He was a very typical example of rapid phthisis with diabetes. The sputum, which was very profuse and was generously distributed, contained tubercle bacilli in very large numbers. The man had resided two years in Richmond. He stated that he ailed nothing on his arrival, but attributed his illness in the first place to a chill contracted at Yarmouth twelve months prior to his death.

The house is an an old one of a bad type—narrow, small windows, basemented, and insanitary. The business carried on on the ground floor is that of an eating-house. Anything more dangerous to public health it would be difficult to conceive.

Case 6.—S. M., aged 19. This was a quickly-progressing case, its special features being the extreme prostration and rapid wasting. He lost 8¾ lb. in three weeks. I have never seen such profuse night sweats as in this patient. I sent him to South Africa. He was dangerously ill for three days on the voyage out, but is now, four years after, in excellent health and has ridden sixty miles on horseback in a single day.

The house is old and sunless. This young man's father died of phthisis in 1896, but not in the same house. The father appears to have contracted the disease in Twickenham. It is possible that the son became infected from contact with the father or with some of his belongings. At any rate, the case arose in an old house.

Case 7.—M. C., a girl, aged 20, was a case of incipient phthisis.

The mother brought her to me in great distress, the girl being the last child left to her. The physical signs were not pronounced, but I felt no doubt as to the nature of the disease. She is now in Brompton Hospital, and Dr. Hector Mackenzie, under whose care she is at present, informs me that there is tubercle in the right upper lobe. No tubercle bacilli have, however, so far been found in the sputum. A brother and two sisters have died of phthisis in the same house.

The case therefore arose in an already infected house.

Case 8.—L. A., aged 42, came to Richmond quite well, and resided two years. She has advanced phthisis; the larynx is so extensively affected that the voice is almost inaudible.

The sputum contains tubercle bacilli in extraordinary numbers. The affection of the larynx is interesting, since with the patient resided her old mother almost stone deaf. The incessant strain upon the larynx of the patient to make her mother hear accounts for the laryngeal trouble. She is at present in a sanatorium, but is much too far gone to hope for great improvement.

This old house has frequently changed tenants. This is a case arising apparently in an old house.

Case 9.—A W., 56 years of age, is a case of chronic phthisis of thirty years' standing. He had severe haemoptysis when 25 years of age, and had resided in Richmond for the last eight years only. Tubercle bacilli were always present in the expectoration in small numbers. He was subject to occasional attacks, accompanied by a temperature of 102° and quick pulse, with much cough and expectoration. These attacks always supervened after a night at a theatre or some similar mild dissipation. They subsided in the course of a few weeks, and the patient resumed his ordinary condition of non-progressive phthisis. The case is an imported one, residing in a modern and luxurious house.

Case 10.—S. R. B., aged 32, has resided in Richmond four months only. Ten years ago he went to Davos for haemoptysis, and says his life was then saved. He came to Richmond comparatively well, and quite able to work. He is now dangerously ill. He remained well until he undertook a week's stocktaking in the shop in which he is manager. This entailed shifting stock long undisturbed in dark and dusty holes and corners. He became suddenly dangerously ill, with patches of acute pneumonia, and has gone from bad to worse. The sputum contains tubercle bacilli in fair numbers, but also pneumococci, streptococci, and staphylococci in large numbers.

In my opinion this man's dangerous illness arose from the inhalation of the inhalation of the septic dust stirred up in the stocktaking lighting upon lung already broken down from the presence of tubercle bacilli. It is a case of mixed infection, in which the danger lies not so much in the phthisis as in the presence of other septic organisms. It is a case of phthisis imported into an old and septic house.

Case 11.—P N., aged 32, is a case of incipient phthisis.

He has resided in Richmond over three years, was perfectly well on arrival, and lives in large, modern, up-to-date house on the hill. Two months ago he had a slight attack of haemoptysis, and tubercle bacilli were found in small numbers in the sputum. He has offices in a very old house. The offices are low-roomed, sunless, and piled up with books and papers of a very old established firm, upon which the dust and dirt of years remains undisturbed. The walls, wainscoting, and floor, particularly of the back office, have the appearance of never having been cleansed nor even swept. An employé died on September 2nd, and a necropsy revealed extensive pulmonary tuberculosis, the remains of the left lung weighing but ten ounces. I found on inquiry that this man constantly expectorated in or about the office fireplace. He was intemperate, and his habits careless. My patient therefore became infected in old offices in which a case of phthisis was in quick progress. The case arises *de novo* in a house known to have been infected.

Classifying the 11 cases we find:

Six arose in old, ill-ventilated, narrow-windowed, sunless, or dusty houses.

Two arose in houses known to have been tenanted by persons suffering from phthisis.

Two are imported cases living in, and the disease rapidly accelerated by, old houses.

One is an imported case residing in modern house.

In not a single instance does a case arise *de novo* in a modern, decently-kept house.

It is impossible to ignore the danger lurking in house-dust, and particularly the dust of ill-ventilated, dark, and basemented houses.

The stirring up of house dust, possibly containing tubercle bacilli, may easily account for the cases which appear to arise in the old or unclean houses. Cases IV and VIII particularly point this moral.

The inhalation of septic house-dirt by patients already phthisical, although the disease may be more or less dormant, is of the gravest consequences, as seen in Cases IX and X.

The danger of persons coming of phthisical stock using and living in rooms or houses which are known to have been occupied by persons suffering from phthisis is shown in Cases VII and XI.

The prevalence of phthisis in Richmond is due, I venture to think, to the large number of old, dusty, insanitary, narrow-windowed, ill-ventilated houses in Richmond, many of which have had occupiers infected with the disease, and in which no attempt has been made to disinfect the rooms. Richmond is an old town, and large numbers of the houses were built at a bad period. Many are let to people of reduced circumstances who again take in lodgers. Such people are unable to afford proper servants and the proper cleansing of the houses. Hence such houses are septic from accumulations of dust and dirt, and present considerable danger to their inhabitants, particularly if such happen to possess phthisical tendencies. The modern or well-cleansed house offers no risk whatever.

It is apparent that the mere fact of a town being built upon a clay soil can have little or nothing to do with the prevalence of phthisis there. It is clear that a single house already infected with tubercle bacilli would account for any number of cases whether upon sandy soil or upon clay soil. An examination of the history of the houses would throw a different light upon the question of the prevalence or otherwise of the disease. But all this has been absolutely set at rest by the complete and convincing investigations which Dr. Harold Coates carried out in Manchester in 1901. Dr. Coates examined the dust of houses inhabited by people suffering from phthisis. He found it impossible except in two cases to demonstrate tubercle bacilli by the ordinary methods of staining and the microscope, but by inoculating guinea-pigs under the most scrupulously careful conditions

with the dust from infected houses, he was able at the end of a very large number of experiments to demonstrate the presence of the tubercle bacilli in all houses where phthisis was known to have been present. His paper should be read by every medical man, and his conclusions acted upon.

Dr. Crocker (M.O.H. Richmond) in his report for 1901, suggests, among other measures for preventing the spread of phthisis in this town, the notification of the disease. I think the brief notes I have read show the value of such notification, especially if followed by proper disinfection of the rooms or house by the sanitary authorities. Were such measures made compulsory, the present high rate of mortality from phthisis in Richmond would, I believe, be promptly lessened.

THE DIETETIC TREATMENT OF PULMONARY TUBERCULOSIS FROM THE POINT OF VIEW OF ITS HAEMATOLOGY AND HISTOPATHOLOGY.

By J. J. GALBRAITH, M.B.EDIN.,

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In studying the reaction of the tissues to the stimulus of bacteria and their products, the tendency has been recently to turn to the blood as being the only tissue which can be fixed while still alive and undergoing these changes. The histological condition of the blood may be taken as an indication of the state and activity of the solid tissues, of which it is at once the product and the pabulum. The indications derived from the serum are as yet too vague to warrant any conclusion being drawn; it can only be regarded as the vehicle for the conveyance of the secretory products of the various cells which it contains, or with which it comes in contact. The cell elements, setting aside the red corpuscles, which have at least one definite function, play various parts in the resistance of the body to disease. That all the varieties of leucocytes, although they may have a common origin, have not the same part to play, is evident from their different behaviour in response to stimuli; thus, the digestive leucocytosis is mostly lymphocytic, while that of sepsis is polymorphonuclear. If a leucocytosis can be taken as the evidence of a reaction of the blood cells to the presence of toxins, the extent of the reaction varies with the acuteness of the infection, though this rule is not universal, for, in typhoid and measles, leucocytosis appears to be absent.

A marked feature of uncomplicated tuberculosis is the total absence of a leucocytosis. This would seem to indicate either a chronic toxic state, in which the stimulus is too slight to elicit a response, or, what is more likely, a state of equilibrium which is gradually produced, the reaction to the poison not exceeding its production. The importance of this consideration, from a therapeutic standpoint, is perhaps not realized.

From this point of view, cases of pulmonary tuberculosis naturally group themselves under two headings: Those in which the recuperative power of the system is sufficient to produce a reaction, capable, when properly guided and sustained, of stopping the progress of the disease; and those in which the system is incapable of stimulation by the ordinary means and the disease progresses towards a fatal issue.

The recuperative power itself also falls naturally under two headings: The physiological tissue reaction, which is the main factor in recovery, and the physical capability of the infected organ for repair. The former, in many cases, is sufficient to arrest the progress of the disease, while the latter may be unable, owing to the extent of the lesion, to bring about a healthy condition with total extirpation of diseased tissue and its replacement by a sound scar. A lung may be so involved as to render this physical shrinkage impossible for anatomical reasons, even where the physiological reaction has been sufficient to check the advance of the disease. Hence the importance of maintaining the tonicity of the tissues in chronic cases after the active treatment is at an end, and the frequent relapses following apparent recovery.

The physical repair being dependent on and necessarily preceded by the physiological reaction, the artificial production of a reaction is the aim of all treatment. In the tuberculin treatment a small amount of toxin is introduced into the system, producing a reaction characterized by local phenomena at the seat of the lesion, and, what is most important from the point of view of the present article, by a rise of temperature and a leucocytosis accompanied by an eosinophilia (Bischoff)[1] The reaction produced by the sudden access of toxin persists after the actual toxic increase stops. Cases in which no benefit results are those in which the toxic action has exceeded the reaction, or where the reaction itself has not persisted, that is where the requisite response is not forthcoming.

The benefit of a nitrogenous diet lies in the production of a general tonicity of the tissues. In the blood marked changes in the numbers of the leucocytes following the absorption of certain constituents of the food occur, and an increase in weight is the evidence of an improved metabolism in the tissues generally, making a physiological use of the foodstuffs supplied, rather than of the plethoric storage of excess material.

The specific substances which produce the leucocytosis are nuclein and its various derviatives. The leucocytosis so produced is a true increase in the number of leucocytes in the circulation, and therefore of the number of cells functionally active. This, as one would expect, entails an increased leucocytic death-rate, if one may put it so, and therefore an increased excretion of the products of cellular metabolism. The nuclein derivatives which cause this action themselves contain those products, but the increase in excretion is greater than would be accounted for even were the total quantity of nuclein absorbed and excreted as such. To quote Milroy and Malcolm, "there is absolutely no doubt that nucleic acid (one of the nuclein derivatives) produces a hyperleucocytosis within four hours after its ingestion, and an accompanying or subsequent leucolysis."[2]

Early stages of pulmonary tuberculosis are characterized by the total absence of leucocytosis, while the later stages invariably show a leucocytosis, caused probably by a mixed infection.[3] In the cases observed the leucocytes, after twelve hours' fasting, showed only a slight increase, though all were cases of cavity formation, and therefore, presumably cases of mixed infection. The morning count varied from 10,000 to 13,000.

In cases treated by the open-air method and on a diet rich in animal nitrogen, the characteristic features of the blood counts are: (1) A moderate constant leucocytosis, (2) a large absorptive lymphocytosis, and (3) an almost constant eosinophilia; the eosinophile cells varying from 4 per cent. to 5 per cent. of the total leucocytes. The cases selected for observation all had a subnormal temperature and in none of them, so far as could be ascertained, were there intestinal parasites.[4] The total number of the leucocytes varied in one case from 10,000 at 8 a.m. to 19,000 at 3 p.m. This exceptionally large increase occurred after two meals consisting mainly of nitrogenous food. The ordinary digestive leucocytosis ranged from 1,000 to 4,000.[5] Under these conditions migration of eosinophiles into an artificial blister occurs, but probably only accidentally, as the number is small compared with the number of eosinophiles present in the blood and of polymorphonuclears present in the blister serum. The eosinophile leucocytes seem to have a special relation to the toxins of the diseases in which eosinophilia occurs. Pemphigus, for example, is characterized by a leucocytosis with marked eosinophilia. The vesicle contents, which presumably have some relation to the toxins of the disease, are found to contain eosinophile leucocytes in large numbers, while an artificial blister contains few as compared with the numbers in the blood and in the serum of the specific vesicles.[6]

In the blood may be seen at any time all gradations of cells, from the lymphocyte with a single nucleus and little protoplasm to the polymorphonuclear with or without specialized granules. These cells may have different functions at different periods, but they are all essentially similar in nature and origin. Thus a stimulation of lymphogenic tissue and a consequent production of a leucocytosis cannot but be beneficial in furthering the action of cells which are known to be inimical to foreign bodies, using the expression in its widest sense.

In septic diseases the leucocytosis is mostly polymorphonuclear and the exudation contains chiefly polymorphonuclear leucocytes. The circulating toxins exert a chemiotaxic action on the leucocytes in the circulation, while the invading organisms cause a local exudation of polymorphonuclears or exert through toxins a positive chemiotaxic action on those leucocytes. Both these phenomena are to be regarded as the response of the tissues to the stimulation of the toxins. In tuberculosis the rapid softening and digestion of the tissues associated with the presence and action of suppurative organisms are replaced by a slow degeneration of the cells and tissues round the nidus of the bacilli. Instead of an exudation

of polymorphonuclear leucocytes into a liquid mass of digested material there occurs a positive chemiotaxis for mononuclear leucocytes or lymphocytes resulting in the encapsulation of the toxin-secreting organisms by a surrounding zone of cell, mostly lymphocytes (Baumgarten).[7] The slowness of the toxic process or the toxic equilibrium produced probably prevents an evident variation in the number of leucocytes in the circulation.

The lymphocytes which surround a tubercle nodule must have some function to perform in protecting the tissues from the spread of the disease. The exact nature of the protective action has not yet been determined. It may be antitoxic, antibacterial, or simply mechanical, producing in time a fibrous envelope shutting in the focus of disease, and by contraction tending to obliterate it. It may be interesting to note here that a process of reasoning starting from an entirely different point of view has led us to the same point as the strictly anatomical study of the disease, namely, that all healing in pulmonary tuberculosis is brought about by a fibrous cicatrization and obliteration of the diseased areas.

The importance of this aspect of the histopathology of the tubercle nodule lies in the fact that a digestive leucocytosis as shown above is a true increase in the number of those cells which possess a direct chemiotaxic attraction for the tubercle bacillus or its toxins. It would be absurd to suppose that this selective action of the tubercle bacillus on the lymphocytes is without significance, or that it is not in some way beneficial in preventing the further spread of the disease. If the difference in rapidity between the two processes of tuberculous infiltration and pus formation be excluded, the processes are very similar in nature, each being a positive selective chemiotaxis exerted on certain specific cells. The process ends in destruction of the cell elements; in the former case by slow toxic poisoning and caseation, and in the latter by a more rapid poisoning and degeneration.

If it be true that the leucocytes have a special antibacterial action, and that changes in them are the evidence of a reaction to poisoning, which may be common to all tissues, but is demonstrable only in the blood, then only those constituents of the diet which are known to produce or favour this reaction need be in excess of the normal. The remainder is increased as the capability for making a proper use of it is gradually restored.

The digestive leucocytosis is produced, not by the absorption of nitrogenous food indiscriminately, but by the action of the nuclear constituents, and is in proportion to the amount present. A diet mainly animal furnishes the largest amount of nuclein derivatives in proportion to the quantity taken, while, if properly administered, it throws least strain on the organism.

As the leucocytosis may only be an indication of a general tissue stimulation, so the mere production of an artificial leucocytosis by the administration of pure nuclein derivatives, apart from the other nutrient constituents of the meat, would not be likely to produce so successful a result.

Tuberculosis is characterized by widespread toxic changes. All the tissues which are affected by ordinary starvation either directly waste or undergo fatty degeneration with subsequent waste. Tissues in such a state of intoxication are incapable of elaborating foodstuffs satisfactorily. Cases under treatment very commonly present the features of an increase in weight with at first an undiminished, or even an increased, amount of sputum secretion. Such a phenomenon would indicate an improved metabolism dependent on a tissue reaction and not on a diminution of toxin secretion. Such cases commonly exhibit a slowly rising weight curve, with the physical signs of stationary, as opposed to retrogressive, disease. If the case is to end favourably, the toxin production, as evidenced by the sputum and physical signs, subsequently diminishes, and a rapid increase of weight consequent on diminished toxin production takes place. It is quite possible that one of the factors in the tissue reaction is the secretion of antibodies acting on the bacilli or their toxins. Wassermann and Takaki have shown that tetanus emulsions of the central nervous system contain bodies with antitoxic properties. In certain animals other tissues than the central nervous system have the property of combining with the tetanus toxin.[8] This proves that the production of bodies antagonistic to invading organisms is not limited to the blood cells, but that other tissues take part in the action, whether they are directly affected by the disease or not. Tubercle differs from tetanus in not having a single toxin which produces its own antitoxin. In typhoid and cholera, where the antitoxin is a compound body, Wassermann has brought forward evidence that one constituent, the "immune body," is produced in the spleen, lymph glands, and bone marrow.[9] The relation of the blood condition to the tissue reaction in tubercle would then be that the "complement" necessary for the formation of the complete antitoxin would be produced by the lymphocytes.

One advantage of a meat diet, in addition to its directly curative value, is that it supplies organically combined iron, and renders the administration of other organic haematinics unnecessary. The percentage of haemoglobin rapidly rises from 50 or 60 to 100 or 130, according to sex. This must considerably facilitate gaseous interchange, and thereby lessen the work of both heart and lungs, thus helping to bring about a state approximating to the ideal physiological rest, which is unattainable in a vital organ.

From a histopathological point of view, rational dieting consists, not in indiscriminate stuffing, nor in indiscriminate lessening of the food, but in furnishing a diet rich in the appropriate albuminous constituents. The diet in tuberculosis is to be regarded as possessing a directly curative value, and its chemical composition is of as paramount importance as the constitution of the active principles of any mixture, however indifferent may be that of the vehicle. The special advantage of a meat diet in this relation is that, besides containing the nuclear bodies which have a directly stimulant action, it contains also proteids which have a high nutrient value. Sufficient fat and carbohydrate must be given to meet the physiological needs, and increased later, as metabolism and absorption improve, to the maximum which can be elaborated.

Such a diet supplies, ready made, unless destroyed in the cooking, the materials for rebuilding the muscular system. Malnutrition and degeneration, the direct results of toxic poisoning, involve the heart as well as the skeletal muscles. In helping to rebuild the muscles we directly contribute to the maintenance of that organ on the efficiency of which the fate of the patient depends. Circulatory disturbance is one of the first signs of tuberculosis, and as the disease progresses the state of the pulse becomes of increasing prognostic value. A change in the character of the pulse-beat is the first evident sign of a satisfactory reaction. As Dr. R. W. Philip has pointed out, the reaction to the treatment as evidenced by an improvement in the circulation and temperature precedes the establishment of a satisfactory lung condition. "Within a day or two ..... and with few exceptions within a week or two, the rapid, soft pulse is replaced by a slowed and comparatively resistant beat. I regard the less or greater degree to which this is established as immediately of great prognostic value."[10] The improvement, in fact, is an immediate result of the treatment and not the remote effect of a diminished activity of the local lesion. It accompanies the increase in weight, and is capable of the same explanation as that offered above.

A meat diet supplies a direct physiological want. Fat and carbohydrate are known clinically to be more or less interchangeable, an excess of the latter causing an increased formation of the former. Nitrogenous food is also convertible in the one direction, but with difficulty, while no excess of any other constituent can furnish organic nitrogen. In tuberculosis it is doubtless true that there is a wasting of subcutaneous fat, but the main feature is a waste of the nitrogenous element of muscle. A great part of the remaining tissue forming the muscular masses is changed into fat, while there is extensive storage of fat in the viscera. What the exact factor is which produces this change need not be discussed, but the important point is that in the body of a patient there is a diminution of the nitrogenous element, both relative and absolute, out of all proportion to the diminution in the other elements, it is true that fat in certain localities is diminished, but there exists a vast store which would be drawn upon were it the physiological item that is wanting. It is no wonder that the breathlessness of the overfed, or rather the improperly overfed, consumptive has become proverbial, and that his metabolism suffers. Even with an enormous diet of the "suet pudding" variety, his tissues may be suffering from proteid starvation, seeing that he has to replace so great a quantity of muscle substance. The restoration of muscle, as indicated by the improvement in the circulatory condition and increase in weight, causes no dyspnoea, even when the meat diet is pushed to its extreme limit. Dyspnoea, on the contrary, diminishes with the elimination of the fatty element from the heart and muscles.

It is not within the scope of the present paper further to discuss the clinical value of the diet, but I have rather

endeavoured to follow out the indications derived from the more purely scientific study of the conditions.

The late Dr. W. P. Mears, guided by the previous clinical experience of himself and others, three years ago adopted a diet the important element in which was meat. As accumulating experience indicated its superiority in one form or another to other diets for all classes of cases of pulmonary tuberculosis, he more and more insisted on its adoption in this sanatorium, especially in cases commencing treatment. Since his death results have amply justified his methods, and they are adhered to if possible more closely than ever.

I have to thank Dr. W. R. Philip for affording me the opportunity of examining the blood of the dispensary cases quoted above, and for many valued suggestions in the course of my work.

NOTES AND REFERENCES.

[1] Von Limbeck Clinical Pathology of the Blood, p. 231, New Sydenham's Society's *Transactions*. [2] Metabolism of the Nucleins, *Journal of Physiology*, vol. xxiii, p. 229. [3] Von Limbeck, loc. cit., p. 231. [4] I examined blood films taken from tuberculous patients at the Victoria Dispensary who had undergone no treatment. In these cases the highest number of eosinophiles was 5 per cent. All the films were taken in the afternoon, when food absorption was going on, or had recently taken place, and when the numbers of eosinophiles would probably be relatively or absolutely diminished. The number of cases was too small to warrant any conclusions being drawn. [5] Only those counts which agreed with the general appearance of films taken at the same time were accepted as correct. [6] Neusser, *Wien. klin. Woch.*, 1892, p. 42. [7] Muir and Ritchie, *Bacteriology*, 1902, p. 226. [8] Ibid., p. 458. [9] Ibid., p. 465. [10] BRITISH MEDICAL JOURNAL, December 14th, 1901.

THE SANATORIUM TREATMENT OF PULMONARY TUBERCULOSIS WITH ESPECIAL REFERENCE TO NORDRACH METHODS.*

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AFTER some preliminary remarks on the history of the treatment Dr. Hichens said: I propose to discuss the details of the open-air or sanatorium method of treating consumptives; to put before you briefly the results obtained by this method at a few of the chief sanatoria in the British Isles, to compare these results with those obtained at high altitudes, and finally to see if we can draw any conclusion as to what advice we should give our patients.

In Germany the lines of treatment adopted divide themselves into two somewhat opposing camps. In all cases the patients have or are supposed to have abundant fresh air and a nourishing and abundant diet but a difference of opinion has arisen as to how much rest or exercise should be given. One camp advocates what may be called the "Rest-Cure" or "Liege-Hallen" method, the other rest combined with gradual and increasing exercise. The latter method I feel no doubt from personal experience is far the best. We owe it in its details in the first place to Brehmer, of Goerbersdorf, and then to Walther, of Nordrach, and it is the details of Walther's method, which I propose now to describe.

The Nordrach method of treatment consists of three simple remedies judiciously applied.

1. Abundance of fresh air at all times and in all weather.
2. Abundance of nourishing food, one might call it superabundance.
3. Rest and exercise graduated according to the state of the body temperature.

EXERCISE.

With rare exceptions no exercise is allowed in the Nordrach method unless the body temperature is within normal limits and has remained so for at least a week. The temperature is taken in the rectum regularly four times a day—on waking in the morning about 7 a.m, at noon, at 6 p.m., and after getting into bed at night about 9.30 p.m. In health the rectal temperature may vary between 98.6° F., or considerably below it in the morning, and attain to 100 4° F. after exercise or occasionally in the evening after meals. After violent exercise the temperature may rise to as much as 102° F. or even higher. There is no doubt that the rectal temperature gives a much nearer approximation to the real temperature of the blood than can be obtained in any other way, and in a prolonged insidious disease like consumption it is most important to know the smallest variations above the normal.

* Read before the South Midland Branch of the British Medical Association.

Many objections have been offered to taking the temperature in the rectum, most of them too trivial to discuss, but there is one that must be answered, and that is that it is unnecessary. It is urged by many that mouth temperatures give a sufficiently true indication of the range of the body temperature, and that even if it were best to know the rectal temperatures, these can be inferred by observing the ratio of difference between the mouth and rectal temperatures for a few days. It can easily be shown by experiment that both these statements are entirely wrong. In the first place, a patient may have active tuberculosis going on with definite slight pyrexia every day, and yet the mouth temperatures may give no indication of this at all. In the second place there is no definite ratio between mouth and rectal temperatures. This is no doubt due to the fact that the rectum is a closed cavity and the mouth is not. As a rule—though there are many exceptions even to this—the mouth and rectal temperature approximate fairly closely to one another after the night's rest, when the mouth has been closed in sleep, but during the day there may be a difference of as much as 1°, 1.5°, or even 2° F. Some times the mouth temperature will go down while the rectal temperature rises. In my own mind there can be no doubt whatever that rectal temperatures should be taken in all cases of tuberculosis which are being systematically observed and treated, and I believe this view is now accepted by the majority of the heads of sanatoria. If the temperature were taken for 15 to 20 minutes in the mouth a fairly accurate result might probably be obtained, but I think it will generally be found that a patient will prefer to spend 20 minutes a day with a thermometer in the rectum to an hour a day with a thermometer in the mouth.

Of the four temperature records taken in the day most importance is attached to that taken before rising in the morning. In the quiescent and obsolescing stage of pulmonary tuberculosis this is not only as low as 98 4° F., but generally very much lower, somewhere between 97° and 98° F. If the morning temperature remains persistently at 98 8° or 99°, or more, it nearly always means that the tuberculous disease is not quiescent, even though during the rest of the day the temperature does not rise above the normal limits. As far as my own experience goes, the chief exceptions to this rule seems to be in women, who often have slight elevations of temperature due to their monthly periods, and also in neurotic patients, who seem to be capable of raising their temperatures from 0.2° to 0 6° F. above normal by lying in bed and worrying over what it is going to be.

When the temperature has been shown by observation to be within normal limits, the patient is allowed to leave his bed. At first he only moves on to a couch, later he begins to take carefully graduated exercise broken by stated periods of rest. In the Nordrach method of treatment no form of exercise is allowed other than slow walking at about two miles an hour at the most, with frequent stoppages to sit down and rest. The walks, too, are best taken in hilly country with the chief ascent of the walk at the beginning, so that when the patients are tired they may come home down hill. It would appear that slow hill climbing up graduated paths is a very valuable form of exercise for consumptives. Without undue effort the muscles of the heart, and the body muscles generally, are strengthened, and the healthy portions of the lungs are expanded.

The length of the walk is exactly regulated by the physician according to the patient's strength and progress. The intention is that the patient should get sufficient exercise, stopping short of fatigue, and that the temperature after exercise should not be raised above 100.4° F. At Nordrach the chief walk of the day is taken in the morning between breakfast and dinner, and in the afternoon only a short walk, in which more time is spent in sitting about than in walking, The patients are all expected to lie down on their couches for an hour before dinner and supper. They all go to bed at 9 p.m. and get up about 7 a.m., so that even the most robust patients gets much rest every day, from nine to ten hours in bed, two hours on their couches, and much sitting about during their walks. The length of the walks allotted to the patients varies from a few yards to several miles, in some cases as much as six or seven.[1]

No other form of exercise is permitted. Some advocate allowing early cases of phthisis to dance, play tennis, cricket, fives, row, and bicycle, but this advice is undoubtedly most harmful. During such active forms of exercise violent respiratory efforts are made, freshly-formed scar tissue in the lung is broken down, and tubercle bacilli which had been shut off by adhesion from the general lung tissue are

disseminated into parts of the lung hitherto healthy. These evil effects may possibly be shown at once by a rise of temperature and a fresh outburst of cough, but frequently untoward symptoms are delayed for two or three weeks until the bacilli have gained sufficient hold to give rise to constitutional disturbance.

The only way to estimate the effect of exercise on consumptives is by the systematic taking of rectal temperatures. If medical men would do this in cases of early phthisis they would soon see the evil results of excitement and violent exercise. As it is, when bad symptoms do ensue, perhaps some two or three weeks afterwards, they are attributed to some hypothetical chill, to anything, indeed, but the unwise exercise which they have themselves sanctioned.

Fresh Air.

The fresh air is obtained in a perfectly simple manner, by having the bedroom windows of the patients wide open in all weathers, day and night, and also the windows of the sitting-rooms. At Nordrach there are no Liege-Hallen and very few of the bedrooms have balconies. The fresh air is obtained on the walks which are taken regardless of weather, winter and summer, and in the patient's own rooms. In Dr. Walther's opinion it is best that when the patients are resting they should be segregated and quiet, and not have the excitement of conversation and argument, which are so often inseparable from taking the air resting in large covered balconies.

Diet.

As regards the last point of importance, the nourishing and abundant diet, this at Nordrach is given in only three meals a day, and not in the frequent, small meals which some adopt.

Breakfast is at 8 a.m., and consists of large quantities of bread and butter with some cold meat, tea or coffee, and in many cases 0.5 litre of milk.

Dinner is at 1 p.m., and consists of three courses. The first, either fish or meat; the second, meat of either animal or bird; the third, fruit with biscuits, or cream ices or pudding of various kinds accompanied with coffee. With the first two courses are served large quantities of potatoes and other vegetables, and gravies and sauces containing much butter. In many cases also 0.25 or 0.5 litre of milk is taken.

Supper is at 7 p.m., and consists of two courses, the first of some hot meat with potatoes, the second usually of some cold meat with bread and butter, but occasionally a thick soup, pancakes, or cheese is given instead. Tea is allowed at this meal, and in many cases another 0.25 or 0.5 litre of milk.

With the exception of breakfast, at which the patients are allowed to help themselves, they are helped by the doctor in person, and are expected to finish everything that they are given on pain of dismissal from the sanatorium. I cannot make any exact statement as to the actual amount of food given at Nordrach.[1] Dr. Kingston Fowler says, "the quantity of food, solids and liquids, prescribed to and eaten by each patient daily varies from 2 lb. 9 oz. to 5 lb. 5 oz., of this quantity 1 lb. 5 oz., to 1 lb. 8 oz. are solids." The amount was very considerable and sometimes seemed rather overwhelming, but it was not often much more than an active healthy man would have relished.

In managing a sanatorium myself I used to allow 4 oz. of butter a head a day, 3 pints of milk, and 2 lb. of uncooked meat, including bone and fat, or an equivalant in fish, poultry and game, and bread, potatoes, and other vegetables *ad libitum*. The open-air patients at the Northampton Infirmary are allowed 4 pints of milk a day, about 1 lb. of cooked meat, 4 oz. of butter, bread and potatoes *ad libitum*, and milk puddings. On this diet they make admirable gains in weight.

All patients, however, should not be given exactly the same amounts of food. The actual help should be to a certain extent individualized to the needs of each patient. The object to be borne in mind is not to make the patient enormously fat, but to make him moderately fat and thoroughly robust and muscular. It is one of the great merits of the Nordrach method of treatment that the patient is not converted into a flabby mass of fat, but into a robust and muscular specimen of humanity.

In the Liege-Hallen, or "rest-cure" method, patients often become enormously fat, breathless, and quite unfit for any exertion. It is not possible to give any table of weights that should be attained according to the patient's height. The proper weight depends not only on his height but on his breadth and depth, his general physique. The estimation of the proper weight must depend on the judgement of the physician. The point to be borne in mind is, I think, that the patient should not only attain to the weight he was before his illness, but to very considerably over that weight, so that he may have reserved stores to fall back upon. As soon as the required weight is reached the milk is diminished and left off, and then the butter and potatoes are diminished, the object being to keep the patient in a state of equilibrium at a high level of nutrition.

If an endeavour is made to gain too much weight, the patient is apt to fall into a state of anorexia and vomiting. Some interesting experiments have been made on this matter by Drs. Bardswell, Goodbody, and Chapman. It would seem from their investigations that in many cases patients have been overfed, and that though they gain more weight and more rapidly on the very large diets, yet they do it at the expense of their general well-being.[2] It must not be inferred from these experiments that an abundant and nutritious diet is unnecessary. It is the duty of every medical man treating a consumptive case to use all his influence and, as far as possible, insist upon his patient eating large amounts of food, however much fever, anorexia, and vomiting there may be. It is the only way of breaking through the vicious circle of anorexia, dyspepsia, progressive emaciation, and weakness. These symptoms gradually disappear with increased nutrition, and it is wonderful how much weight may be gained, even with the most persistent vomiting. I had one very serious case in a patient who vomited once and very often twice a day for months, and yet during that time he gained 32½ lb., and finally lost his dyspeptic symptoms. A gain in weight, however, is not everything. With an abundant diet a patient may gain in weight without an improvement in the pulmonary condition. The converse, however, is very rarely true; if there is no gain in weight, there is very rarely any improvement.

The plan adopted at Nordrach of giving the food in three large meals a day is, I think, good. There is a prolonged rest between each meal both to the individual and the digestive organs, and this I think is better than constantly worrying the stomach with little snacks. Further, each meal is taken after a bodily rest in bed or on a couch, and this is also important.

Drugs.

As regards drugs, the patient must be treated on general principles. Cod-liver oil is not necessary with this abundant food; night sweats generally disappear rapidly with the full adoption of the open-air life, but a course of zinc oxide and belladonna in pill may be necessary; digestive adjuvants may be advisable, such as bismuth and soda, or gentian, soda, and nux vomica; cough sedatives may be necessary, and so on, but, speaking generally, the less drugs the patients have the better.

The Daily Routine.

The daily life of an afebrile patient treated on the Nordrach system, then, is briefly somewhat as follows:

He gets up soon after 7 a.m., and about 8 is visited by the doctor, who inspects his temperature chart and apportions him his morning walk. At 8 he breakfasts, and somewhere between 8 and 9 starts out on his morning walk, which lasts till between 11.30 and 12, no matter whether there is frost or snow, or rain or fog. By noon he returns to his room, takes his temperature, and lies down on his couch for one hour, until dinner, at 1 p.m. Before dinner the doctor visits him again, inspects his temperature chart and apportions his afternoon walk. After dinner, and a good deal of sitting about and conversation, he starts on his short afternoon walk: any time between 4.30 and 6 p.m. he comes back to his room, takes his temperature again and lies down for an hour, before supper at 7 p.m., and the doctor pays him another visit. After supper the day's duties are at an end, and after conversation, and perhaps some music, the patient goes to bed about 9 p.m. Each day is a repetition of the preceding one, and the life may seem very monotonous, but in fine weather, in beautiful country, and with pleasant companions and books, the time passes happily enough. Quiet and absence of excitement are an essential part of the treatment. The gaieties of Davos are a most unfortunate and pernicious snare for consumptives. Pyrexial patients lead a still quieter life, entirely confined to their rooms and their beds.

Comments on the Nordrach System.

I do not think it is necessary to send out patients to sit for hours in the woods in the worst weather. It is perfectly true that they never seem to get colds, even if they get thoroughly wet, but, judging from my own experience, they certainly often

feel miserable, and may suffer severely from rheumatism as I did. I think large open sheds should be provided, where they may be thoroughly out of doors and yet dry while they are sitting down.

I think again small balconies or shelters for a few patients together should be provided, so that patients who have lost their fever and are yet not strong enough to walk, may, during the walking hours be able to repose in company, and have the mild stimulus of a little conversation and society.

I think lastly that the diet should to a certain extent be modified for patients with great digestive disturbance. At Nordrach the food—much of which is indigestible—is given to all alike. It is essential, it is true, that patients should be made to eat whether they wish to or not, and should not be permitted to be fanciful and refuse what is set before them, but the doctor should exercise a wise discretion in dieting his worst patients. I made these small alterations while I was conducting a sanatorium in Ireland, and I do not think they in any way militated against the beneficial results of the treatment, while they certainly made for the comfort of the patients.

Results.

As far as I know the results obtained at Nordrach have never been published, but it only takes a little observation to see that they are very good, and it is really due to the results there obtained that the idea has taken shape, that probably with the same system equally good results might be obtained in the climate of the British Isles. The reason of this is that the climate of the Black Forest is much like the climate of the British Isles. It is not that High Alpine air and abundance of sunshine is not valuable; they are, and possibly the best results of all are obtained in high altitudes or in Arctic cold, but I think I shall be able to show by statistics that the results obtained at low levels and in our own climate are only little inferior, which proves that the main point in all cases is an abundance of pure fresh air.

Some of the following statistics have been published before; some others I have obtained through the kindness of the managers of certain British sanatoria, namely, Dr. Jane Walker and Miss Chesney, of the East Anglian Sanatorium; Dr. Thurnam, of Nordrach-upon-Mendip; and Dr. Burton-Fanning and Dr. W. J. Fanning, who have until recently managed the Mundesley Sanatorium. I have not added the different results obtained at the English sanatoria together to produce a grand total, because, owing to the difference in terminology, it is impossible to exactly correlate them.

The Results of Dr. Thurnam.

The results of Dr Thurnam, of Nordrach upon-Mendip, for the first two years of his sanatorium, are as follows. He uses the following terminology:—

Absolute cure means no fever, no tubercle bacilli in the expectoration: lung signs very much diminished, and fitness for locomotion great; able to return to work, and, after a year's caution, to live like ordinary men.

Relative cure means no fever; much fewer tubercle bacilli in the expectoration: much diminished lung signs, and fitness to return to work with caution. The tendency is to get quite well after a year or so.

Amelioration means improvement, but the patient is unable to return to work or life as he used to live it, and has to carry on treatment strictly at home.

Absolute cure	24 %	= cured 45 %, and improved 82 %
Relative cure	21 %	
Ameliorated	37 %	
Not improved	18 %	

The Results of Dr. Jane Walker and Miss Chesney.

Dr. Jane Walker and Miss Chesney send me the following results and interesting remarks in answer to certain questions:—

I. *Cheshunt's Sanatorium*, from May, 1899, to March, 1900.

Total cases	58	
Recovered	9, or 15½ %	about = total improved nearly 57 %
Improved	24, or 41⅓ %	
Going back	1, or 1⅔ %	
Died	15, or 26⅔ %	
Under treatment	9	

II. *Brookside Sanatorium*, October, 1899, to June, 1900.

Total cases	30.	
Recoveries	8, or 25 %	about = total improved, 75 % about.
Improved	16, or 50 %	
Gone back	6, or 20 %	
Died	1, or 3 %	

III. *Poor patients*, men and women.—February, 1900, to present date. Total, 100 cases.

15 under treatment still.
62 left much benefited.
4 became so ill they had to be removed, and died immediately after leaving.
16 no improvement.
3 stayed a very short time.

Of the 85 patients who have left—

10 have died.
18 are still going on well.
15 were better when last heard of.
43 have not been heard of.

General Remarks.—The earlier cases are taken under treatment the better they do. The less nervous and highly strung the patients are the better they do. The younger the patients are as a rule the longer they take before the disease is arrested. Poor patients are most apt to go back after treatment, as of course they have to return to bad surroundings, insufficient food, and hard work. Bronchitis and asthma are complications which make the treatment of phthisis in England difficult during the spring months, but, even with these drawbacks, Miss Walker considers that patients do quite as well under the open-air treatment in England as they do in foreign sanatoria.

The Results of Dr. Burton-Fanning and Dr. W. J. Fanning.

Dr. Burton-Fanning and Dr. W. J. Fanning, who have until recently managed the Mundesley Sanatorium, have sent me the following results and remarks:

"Arrest"=total disappearance of fever and fitness to work restored.

Arrests	55.95 %	=total improved 83.92 %
Improved	27.97 %	
No improvement	6.29 %	
Worse or died in sanatorium	9.79 %	

Arrest maintained in 86.25 per cent. of arrested cases. Improvement maintained or increased in 49 per cent., in which improvement could be recorded on discharge. Percentage of deaths on admission, including those who died in the sanatorium and those whose deaths we have heard of after they left, amount to 22.31 per cent in three years.

In 1901, at the Tuberculosis Congress, Dr. Burton-Fanning summarized the results obtained at British Sanatoria as follows (*Tub. Transactions*, vol. iii):

716 patients have been treated.
Average duration of stay, 4 months.

Quiescence or relative recovery	37.4 %	= improved 77.6 %
Amelioration	40.2 %	
No amelioration	22.3 %	

History of patients only covers two years or less; but, so far, all patients with quiescence have remained well: and of the ameliorated all but 8.0 per cent. have maintained their improvement. In selected early cases 88.4 per cent. of quiescence was obtained.

Compare with these English results Dr. Theodore Williams's table of his cases treated in the High Alps:—(*Tub. Transactions*, vol. iii.)

Cases.	Absolute Rest.	Diminished Physical Sign.	Improved Total.	Stationary.	Worse.
	174	129	303	20	59
385	or	or	or	or	or
	45 %	35.5 %	79 %	5.2 %	15 %

And Dr. Turban's results obtained by sanatorium treatment at Davos.

408 cases of various stages.
48 % gave lasting results.
34.3 % died.

	Patients.	Lasting Results.
Stage I	97	80.4 %
Stage II	205	48.8 %
Stage III	106	17.0 %
	408	

He also gives the following table as giving probably the truest summary;

	Lasting Results.
Stage I	97.5 %
Stage II	54.6 %
Stage III	17.4 %

The difference between this and the foregoing table is due to losing sight of patients, which happens mostly in the first stage.

The difference in terminology in all these tables of results is unfortunate, as it renders an exact comparison between them impossible. There is possibly a very slight balance in favour of High Alpine resorts, but if the relative and absolute cures obtained by Dr. Thurnam be added together they come to 45 per cent., the exact number of absolute arrests in Dr Theodore Williams's statistics. It must always be remembered that the results obtained at a sanatorium depend not only on the proper carrying-out of the treatment, but also on the classes of cases admitted. In England we are making up arrears, and taking in for treatment advanced cases.

Conclusions.

These statistics, I venture to think, point very clearly to certain definite conclusions of great importance to all of us as practitioners.

1. Of paramount importance to our patients is our absolute duty as practitioners so to cultivate our powers of observation and skill in diagnosis that we are capable of recognizing the earliest signs of pulmonary tuberculosis. Dr. Burton-Fanning's statistics from British sanatoria, show that in selected early cases, quiescence was obtained in 88.4 per cent., whereas in cases of all degrees of severity quiescence was only obtained in 37.4 per cent., a difference of 51 per cent.

2. As soon as we have made our diagnosis of pulmonary tuberculosis, it is our duty at once to put our patient on the most thorough open-air treatment that his circumstances will allow. Let there be no half hearted measures. No windows a little open in the day and just a crack open behind blinds and curtains at night. No little meals sent away half eaten; no going away for change of air, which merely means a change from one stuffy room to another and from one set of injudicious friends to another set still more injudicious. If your

patient is poor, if possible send him away to an open-air sanatorium; if that is not possible do your best for him at home with windows wide open day and night in all weathers, with a deck chair in the garden or under a shed and with a nourishing and abundant diet, which must be eaten. I have known wonders done with no better means. If your patient is not poor then I believe your duty is still much the same. The patient should if possible be sent off to a sanatorium at the earliest opportunity. If the patient is only moderately well off, then I believe the best plan is certainly to select a sanatorium in our own islands. Such patients will in after life have to work winter and summer in our own uncertain climate, and far their best chance of permanent recovery is to go through the treatment in the climate in which they will have permanently to live. If, however, the patient is rich, the question may arise as to whether he should be sent abroad. With our short experience of the treatment in the British Isles there is possibly a slight balance in favour of the results obtained at High Alpine resorts such as Davos, so, if the patient is rich and in other respects a suitable case for high altitude treatment, it may be well to send him to Davos or some other Alpine resort. Let it be understood, however, that a patient sent to an Alpine resort should be sent to a sanatorium, unless he is exceptionally self-controlled. I have seen too much of patients who have spent winter after winter in Davos at hotels. Their time is spent in a round of the most pernicious gaieties, in dancing and concerts, in tobogganing and skating. They do everything they ought not to do, and finally, despite the splendid air, come away no better than they came, or haply worse, sometimes to die, sometimes to the opprobrium of Davos, to be cured readily at a low-lying sanatorium.

3. It is essential that even in the slightest case, a very long period should be devoted to treatment and rest from work. Every one who has studied the pathology of pulmonary tuberculosis is aware that many tubercle bacilli are left in the lungs, shut off by adhesions and fibrosis even after apparent cure. If possible the patient should spend many months at a sanatorium, but even one or two months will be useful as a training. After leaving the sanatorium, if counsels of perfection can be followed, the patient should live a modified open-air life for one and a half to two years. With the poor this is a very serious difficulty. One must do the best one can by inducing them if possible to take up some light outdoor occupation.

References.

[1] *Med.-Chir. Trans*, vol. lxxxiii. [2] British Medical Journal, February 22nd, 1902.

SANATORIA *PLUS* HOMES FOR CONSUMPTION.

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Three years' experience at the Westmorland Consumption Sanatorium shows that consumptives admitted in the advanced stage (with cavitation or extensive consolidation, often with considerable fever, and with abundance of bacilli in the sputum) gain very little permanent benefit from six months' residence, and usually die within a year of their discharge. Those admitted in the earliest stage (with no evident consolidation, very little fever, and bacilli rarely found in the sputum) by three months' residence regain their ability to earn a living for many years. Those admitted in the intermediate stage (with limited consolidation) are by four and a-half months' residence considerably benefited for some years, though a few soon relapse and die.

It appears, therefore, that if all consumptives could be treated in sanatoria for three months during the earliest stage of their disease, and taught how to preserve the health there regained, very few would reach the advanced stage, so dangerous to the general community, and thus a great public benefit would be gained. Under such circumstances sanatoria might well be erected and maintained out of the rates for the general good.

But three years' experience also shows the great difficulty of securing the admission of even a majority of cases in the earliest stage; a large number reach the intermediate stage, and very many even the advanced stage, before coming under observation. Although as each year passes by a smaller proportion suffer this fatal neglect, probably for many years to come a large number of consumptives will first come under observation in the advanced and practically hopeless stage.

It seems obvious, therefore, that we shall need all over the kingdom not only sanatoria for the arrest of the disease in its early stage, but also homes for the isolation of advanced cases from the rest of the community.

In any district where the adoption of only one of these plans is proposed, help should be forthcoming from rating bodies, for example, county councils, town councils, urban and rural district councils, and Boards of Guardians, on the ground that either plan benefits the community by protecting it from persons suffering from the disease in a dangerously communicable form—sanatoria effecting this by arresting the disease in a comparatively harmless stage, while homes effect it by isolating cases which have already reached the dangerously communicable type.

But in any district where the adoption of both plans is contemplated, rating bodies should support homes for advanced cases in preference to sanatoria for early cases, on the ground that the community benefits more obviously and immediately by the isolation of those dangerously infective than by the problematical arrest of the disease in its early stage. Indeed, some may argue that the mere arrest of the disease in its early stage, as distinct from a real and permanent cure, is of no benefit to the general public. Our aim, therefore, should be for homes supported out of the rates, and sanatoria supported by the individual.

As two-thirds (or, strictly, 70 per cent.) of any population usually belongs to the working-class, and as during the last ten years there have been about 42,000 deaths annually from consumption in England and Wales, we may assume that 28,000 persons will annually qualify for admission into such homes. At those which already exist (for example, Firs Home, Bournemouth; Mildmay Home, Torquay; St. Catherine's Home, Ventnor; St. Michael's Home, Axbridge; Gloucester Place Home, London) the applications for admission far exceed the vacancies; the duration of stay is about six months; and the annual cost of maintenance is about £65 per bed. We may assume, therefore, that we shall require 14,000 beds, at an annual cost of £1,000,000 a year. About one-sixth of the cases would be paupers; so that one-sixth of the cost would be chargeable to the guardians. As it has been calculated that one eleventh of all the pauperism of the country, costing in England and Wales £11 500,000 a year (1900-1901), arises from consumption, the million pounds a year proposed to be so spent should produce much more profitable results than the million pounds a year already spent in merely relieving the pauperism caused by neglected consumption.

In every population of 100,000, about 120 die annually of consumption, of whom 80 require accommodation in a home of 40 beds, at a cost of £2,800 a year, roughly equivalent to a penny rate for such population.

Were such a system generally adopted, the spread of consumption should be very greatly checked, while other preventive measures were being gradually undertaken—for example, better housing, ventilation of factories and workshops, creation of open spaces in crowded towns, etc., so that, in time, the disease should be gradually exterminated.

In Westmorland the Consumption Sanatorium has had the good fortune to be liberally supported by the county council, by nearly all the town councils, urban district councils and rural district councils, and by all the Boards of Guardians, so that the withdrawal of this support would be a serious loss to the institution. Nevertheless, as a home for advanced cases is now proposed, it seems inevitable that all the above bodies may consider it incumbent upon them to transfer their help to the new institution.

The Flannel Shirt Club, which is in the seventh year of its existence, undertakes to distribute, with the co-operation of hospital sisters and nurses, flannel underclothing to necessitous working men on their discharge from medical wards in the general hospitals of London. The need for such assistance, as all who have worked among hospital patients well know, is often as urgent as the need for medical treatment or for food. During the past year 369 shirts were provided by this Society. Gifts of flannel, of which about four yards are required for each shirt, the making of which costs about 1s. 6d., or of men's flannel shirts, made to close well over in front, will be gladly received by the Honorary Secretary, Miss Gethen, Stanley House, Bow Road. Working members of the club subscribe 1s. annually, and undertake to provide at least one flannel shirt each year. Honorary members subscribe 2s. 6d., and undertake to provide two shirts.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

A CASE OF HYDRAMNIOS.

MRS. B., who was confined on November 7th, 1902, had menstruated last in the middle of February, and had not expected the onset of labour until November 21st. She was engaged constantly during the first seven months of pregnancy in machining, and carrying heavy weights of 56 lb. and upwards. She had had three children, the youngest being 6 years old, and her previous pregnancies had all been normal. She began to increase in size in June, 1902, when the movements became first perceptible, and got more and more incommoded by her progressive bulk, until in October walking became difficult, her legs commenced to swell, and breathing was short. The fetal movements continued as long as the last week of October.

I examined her first on November 4th, 1902. She was enormously distended, and the abdomen felt like a full waterskin. The measurements were: at umbilicus, 42 in.; at the rib border, 30 in.; from the ensiform to the pubes, 16 in. Two days after labour the umbilical circumference was 28 in., and bore the same proportional relation to her previous girth that a sixpence bears to a florin. The skin was glazed and looked as though it would burst. No part of the child could be felt internally or externally, owing to this tense condition. The chief factors in the differential diagnosis were: (*a*) the history of the case; (*b*) the position of the os uteri, drawn up almost out of reach.



Photograph taken one hour before confinement.

Labour commenced naturally with a rush of water, which saturated her clothes, and when I arrived she had lost a considerable quantity of fluid, estimated by herself at between 1 and 2 quarts. Five and a-half quarts were afterwards caught and carefully measured. The child presented vertex, but the uterine contractions were inefficient, although ergot was freely administered. The head was delivered with forceps, but the body stuck, and the cause of obstruction could not be detected. The child was dead and macerated, and the head came off in the efforts to extract the trunk. When the fetus was delivered the obstacle to delivery was found to have been a large abdomen, full of fluid. This fluid, confined within the soft and yielding abdominal walls, acted as a wedge, increasing its resistance in proportion to the pull that was made upon it. The child was a male, and appeared to be at about the eighth month, but was larger than the average fetus at term. The placenta, which was difficult to remove, was thin, stretched out, and stringy. The amniotic fluid was straw-coloured, highly albuminous, and had a specific gravity of 1018. There was no albuminuria. The patient made an uninterrupted recovery, and is now in good health.

Droylsden, Manchester. J. EDWARD GODSON, M.B., B.Ch.Birm.

TRANSPOSITION OF VISCERA.

H. L., aged 9, was brought to me on October 14th, 1902, suffering from chronic bronchitis. His mother stated that he had coughed and expectorated more or less for four years.

Upon examining the boy who was much emaciated, I observed the apex beat exactly in the nipple line, in the fifth interspace, on the right side. There was no history or sign of pleurisy or empyema. Further examination showed that the heart occupied a position on the right side of the thorax corresponding to its normal situation on the left side. The liver was found on the left side, but slightly displaced downwards owing to an emphysematous condition of the lung. The stomach was on the right side; and in the right hypochondrium the splenic dullness could be detected though its limits could not be accurately defined owing to the condition of the lung. For curiosity I sought for a sensitive spot in the left lower abdomen corresponding to Munro's point, but, as might be expected, could not come to any definite conclusion regarding it.

Dr. Whitton and Dr. McAdam, of Oamaru, subsequently examined the boy and verified the diagnosis of this unusual condition.

ALEXANDER DOUGLAS, M.A., M.B., C.M.Edin.

Oamaru, N. Zealand.

A CASE OF CALCULOUS NEPHRITIS.

ON September 6th, 1901, R. M., aged 56, met with an accident whilst at work. He was going down some stone steps when his foot slipped, and he fell and hurt his back. About six weeks afterwards he consulted me; he complained of pain on pressure over the middle of the spine about the upper part of the lumbar region. There were no signs of bruising, nor marks of any description; his only complaint was of increasing weakness; he could not walk far without being tired.

Some weeks after this I saw him in conjunction with another doctor, owing to proceedings being taken under the Compensation or Employers' Liability Act. His only complaint then was of weakness; but my friend suspecting kidney mischief, his urine was examined, although the patient stated he never had a headache nor frequency of micturition. I saw him about a fortnight ago, when he was delirious, and the following morning he died.

A necropsy was made with the following results: Every organ in the body was normal except the left kidney, in which was found a large calculus about the size of a walnut, of irregular shape, occupying a considerable part of the kidney, causing atrophy of that organ. The peculiar feature of the case was the entire absence of symptoms. The specific gravity of the urine was 1007 to 1012, and on boiling became cloudy, but there was no albumen nor sugar; urates were in excess. There was never any increase of temperature, but slight hypertrophy of the heart. The quantity of urine was normal.

Darwen. F. G. HAWORTH, M.B., C.M.

MITRAL STENOSIS COMPLICATED BY PREGNANCY.

IN connexion with the two cases published in the BRITISH MEDICAL JOURNAL of January 17th, related by Dr. Wilkes, the following may be of interest.

Mrs. C., aged 25, came under observation in June, 1901, with symptoms of mitral stenosis. No history of rheumatism could be obtained, and the patient was quite unaware that her heart was other than sound. The usual symptom of shortness of breath on exertion led to her seeking medical advice. On examination the pulse was quickened, feeble, and irregular. The apex was normally situated, but there was an auricular systolic murmur heard best at that point, with marked accentuation of the first sound at the apex, and the second sound over the pulmonary area. The usual signs of dilatation of the left auricle and hypertrophy of the right ventricle were also present. The patient was in the seventh month of her first pregnancy, and was warned that labour would be attended with exceptional risk. Under appropriate treatment compensation was restored in a short time.

On August 18th I was summoned to attend her in labour. On examination the head was presenting in the L.O.A. position and the first stage about half completed. There was no sign of loss of compensation. As soon as practicable forceps were applied under chloroform and the child delivered. The perineum was slightly torn. This was sutured and the placenta expressed with very slight loss of blood.

At this time the patient expressed herself as "all right" and pleased that it was well over, and the only sign of cardiac

strain was slight bronchial wheezing suggesting basal congestion; $\frac{1}{30}$ gr. digitalin with m 4 strychnine were administered hypodermically. Half an hour later breathing was more laboured, moist *râles* heard all over the chest, and there was commencing cyanosis of the lips and face. The hypodermic injection of digitalin and strychnine was repeated. The unfavourable symptoms however increased, until the patient had to be supported in the sitting position; cyanosis became extreme, and all the veins replete and over distended.

Venesection was performed and 14 oz. to 16 oz. of blood withdrawn from the left arm. The adverse symptoms were quickly relieved, and in an hour and a-half the patient was left without anxiety. Further progress was uninterrupted and complete.

The following points in this case seem noteworthy. Forceps were applied early to save the heart as much strain as possible. The symptoms becoming quickly aggravated as long as an hour after the third stage of labour was complete may perhaps be explained by the sudden lowering of the intra-abdominal pressure after delivery. The diminished pressure would be most readily felt in the abdominal veins, and thus possibly relieve the right heart temporarily and stave off failure in compensation. Immediate relief of the right heart by venesection was the only practical way of saving the patient's life under the circumstances. The effect was even more rapid than in those cases of bronchitis with oedema of the lungs which are perhaps the commonest in which venesection is now employed. Certainly it would seem that mitral stenosis is the most unfavourable lesion in cases of heart disease complicated by pregnancy.

E. Kaye Le Fleming, B.A., M.B., B.C.Cantab.,
Wimborne. M.R.C.S., L.R.C.P.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

LEEDS GENERAL INFIRMARY.

A CASE OF CAESAREAN SECTION FOR CONTRACTED PELVIS IN A RACHITIC SUBJECT.

(By J. B. Hellier, M.D., Obstetric Physician to the Infirmary.)

B. R., aged 28, married, primigravida, was sent to this hospital on the evening of January 12th, 1903, by Mr. A. Hawkyard of Hunslet, because she was in labour and there was extreme pelvic contraction.

The patient was 51 in. in height, and showed marked rickety deformity in the lower extremities. The femora were bowed, and the tibiae much curved in an antero-posterior direction, the crest of each tibia forming a sharp keel. The chest was fairly well developed. The heart and lungs and other organs appeared to be healthy. The patient was in good condition. There was vigorous uterine action, pulse 100, temperature 99°. On vaginal examination the sacral promontory was found to be between $1\frac{3}{4}$ in. from the pubes, thus most seriously obstructing the pelvic inlet, and affording "absolute" indications for Caesarean section. A hand presented in the vagina, together with a loop of cord in which no pulsation could be felt. The membranes had ruptured spontaneously.

External conjugate about	$6\frac{1}{2}$ in.
Interspinous distance...	$9\frac{1}{2}$ in.
Intercristal distance	$10\frac{1}{2}$ in.

The child lay in transverse position, dorso-anterior, and head to right. The patient stated that her father and mother were both of medium height, and strong and healthy. She had four brothers and three sisters, all healthy, and of medium stature. She used to wear leg-irons in childhood. She had had no serious illness. Menstruation ceased on April 6th, 1902. Her health during pregnancy was very good. Caesarean section was performed within half an hour after admission by Dr. Hellier, assisted by Mr. Collinson, Resident Surgical Officer, and Mr. H. Brown, Resident Obstetric Officer. Chloroform was administered by Mr. Radcliffe. An incision $6\frac{1}{2}$ in. long was made through the thin abdominal wall, and the womb was opened by a 6-in. incision corresponding with this. It was subsequently found that owing to the rotation of the womb the incision was to the left of the middle line. The child was easily extracted, and then the uterus was drawn forwards through the abdominal wound, and the abdomen was packed with a very large swab behind it. The placenta was attached to the posterior wall, and was easily separated. At this stage it was found best to place an elastic cord round the cervix to control the haemorrhage from the placental site. About eight deep silk sutures were passed through the whole thickness of the uterine wall except the mucosa, and four or five superficial silk sutures were passed between them. Before securing the two lowest sutures the uterus was washed out with water at 115°. After tying all the sutures, hot water was poured over the outside of the womb, which made it contract well. On relaxing the tourniquet no haemorrhage occurred either from the incision or per vaginam. The edges of the uterine serosa were now united by a continuous catgut suture, thus burying the silk sutures. An inch was then excised from each oviduct. This sterilization was carried out with the patient's consent and at her desire.

The abdomen was closed in the usual way. The child was dead on delivery, all efforts to induce respiration being futile. Death was no doubt due to the prolapse of the cord and the compression of the same by reason of the vigorous uterine action before operation. It was a fairly well developed male.

The patient stood the operation exceedingly well, and made an excellent recovery without complications. The mammae gave no trouble. The wound healed entirely by first intention. She was discharged cured on February 7th, 1903.

When the abdomen was opened in this case some free ascitic fluid was found in the peritoneum. This was also noticed in our last case.[1]

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Alfred Willett, F.R.C.S., President, in the Chair.

Tuesday, March 10th, 1903.

Case of Multiple Myeloma with Albumosuria.

Dr. F. Parkes Weber communicated this paper, to which was added a report on the chemical pathology of the condition by Dr. R. Hutchison and Dr. J. J. R. Macleod. The patient, a man aged 50, had complained of rheumatoid symptoms from about the end of the year 1899. About February, 1900, he began to suffer from pains in his loins and stiffness in the small joints of his hands. Soon afterwards the upper part of his back began to bend, so that he acquired a stooping attitude. Previously to this illness the patient had been strong, but as a young man had had gonorrhoea and a chancre on the penis. One of his sisters suffered from diabetes mellitus. The urine of the patient was found to contain the Bence-Jones proteid. The daily amount of the urine was about 2,000 c.cm., and it contained about 7 per mille of the proteid as measured by Esbach's albuminometer. By a more exact method (precipitation with alcohol, drying, and weighing) Dr. R. Hutchison found that about 15 grams of the proteid were excreted daily. The reactions of the proteid were the typical ones described by Bence-Jones, Kühne, Bradshaw, etc. For some time his condition remained fairly stationary, and at first, by the use of local hot baths, massage, etc., the power of bending his fingers was improved. Afterwards, however, the general weakness, cachexia, and anaemia greatly progressed, and gummatous disease of the tongue and of one rib made its appearance. Examination of the patient's blood showed slight leucocytosis. In January, 1901, it was found to contain about 23 per cent. of the normal haemoglobin. In the cubic millimetre there were 2,980,000 red cells and 11,000 white cells (25.6 per cent. lymphocytes, 3 per cent. large mononuclear, 70.3 per cent. polymorphonuclear, 1 per cent. eosinophile). No myelocytes or atypical cells were detected amongst the leucocytes. On January 25th the patient died after copious haemorrhage from the intestines, which *post-mortem* examination showed to be due to chronic ulceration of the duodenum. The albumosuria persisted to the last. At the necropsy the bone marrow of all the bones examined was found to be more or less affected by a diffuse sarcoma-like growth of rounded or polyhedral mononuclear cells, a form of "multiple myeloma" or "myelomatosis." A report on the microscopic characters of the new growth by Professor R. Muir was quoted.

[1] British Medical Journal, January 3rd, 1903.

The presence in the tumour cells of certain granules and globules of various sizes constituted a striking histological feature in the present case. The new growth was confined to the bones, and formed no localized tumours projecting from the bones, such as had been noted in some cases of multiple myeloma. In fact neither by direct extension nor by metastasis were any other parts of the body involved. Dr. R. Hutchison and Dr. J. J. R. Macleod made a careful chemical investigation of the bones, blood, and organs, but failed to find in any of these tissues and organs a body giving exactly the same reactions as those of the Bence-Jones proteid in the urine. From the vertebrae and ends of the femur, however, they obtained a proteid giving very similar reactions, differing somewhat in the temperature at which it coagulated, and in not being redissolved on boiling. Moreover, no proteid like that they detected could be derived, by employing the same methods, from normal red bone marrow. They argued that in the present case the bone marrow was probably the seat of production of the proteid excreted in the urine, and that this proteid was not a non-assimilated digestive proteid as suggested by Magnus-Levy. Though the case was complicated with syphilitic gummata, chronic ulceration of the duodenum, and a generalized rheumatoid affection of the joints, it was a typical one of multiple myeloma with Bence-Jones proteid in the urine, the "myelopathic albumosuria" of Dr. T. R. Bradshaw. When the diagnosis was first made it was probably the second case of the kind recognized during life in England, the first one being that of Dr. Bradshaw in 1898. Multiple myeloma was regarded as a convenient term to include various forms of myelogenic new growth. Two types at least were to be distinguished: (1) A growth like the present, in which the bone marrow only was involved; (2) a growth in which nearly all the cells resembled small or large lymphocytes, and in which lymphatic glands as well as bone marrow might be affected. Taking all the data he could obtain into consideration, Dr. Weber thought it possible (1) that Bence-Jones albumosuria was always the result of disease of the bone marrow; (2) that it was due to an abnormal metabolic or degenerative process in the myelocytes, or in tumour cells derived from the myelocytes or their predecessors; (3) that the reason why it was generally associated with myelogenic tumour formation was that the tumour cells derived from bone-marrow cells, however much they might morphologically resemble true bone-marrow cells, were more prone to abnormality than real myelocytes; (4) that non-myelogenic tumour cells were not affected in the same way, and therefore metastatic tumours in the bone marrow did not give rise to albumosuria like myelogenic tumours.

Dr. T. R. BRADSHAW referred to the cases he had communicated to the Society in the past, and gave notes of 2 cases which had not been published, and were not therefore included in the paper. In one case the patient experienced sudden pain in the back, followed by complete paraplegia. In regard to whether the proteid was an albumose or an albumin, in its chemical behaviour it seemed intermediate, the coagulum by heat was much more soluble than that of albumen; its nitric acid reaction was purely that of albumose, on the other hand, it did not dialyse. The essential idea of an albumose was a proteid derived from albumin, but having a less molecular weight and a less complex molecule. He thought it should be classed as an albumose. It seemed to be settled that the new growth in the bones was the seat of the formation of the albumose. The evidence was strong that the Bence-Jones proteid had never been found except in association with the tumours of bone. In all cases examined the change in the urine was marked before any bone symptoms had appeared. The disease showed a marked prevalence for the male sex. Its relation to antecedent syphilis was not clear; in one of his cases there were tertiary symptoms and in another there was a specific history. The condition did not seem to be identical with sarcoma, and in one case the condition had persisted for eight years.

Dr. R. HUTCHISON, speaking from the chemical point of view, said the chief point was where was this large amount of proteid produced. After an examination of all the organs an identical proteid was not found with it in any of the organs, and one only somewhat like it was found in the diseased portion of bone marrow alone. This seemed the most likely source, and it raised the question whether the curious granules seen in the sections were not this proteid and whether they might not be compared with the granules of eosinophile cells.

Dr J. J. R. MACLEOD remarked that the chemical reaction indicated that the body was rather an albumin than an albumose. The biuret reaction was invariably violet and not pink like that of the albumoses. To differentiate this from other native proteids was at the present time impossible. It might be well to inject the substance into the blood of an animal, so as to observe the formation of a precipitin; it might be advisable also to put a patient on a proteid-free diet which would exclude the alimentary origin of the substance.

Dr. LEE DICKINSON thought that Dr. Weber had established two points: that the condition occurred only or mainly in tumour of the bones, and that it was probably produced in the bone marrow. The absence of the substance in osteomalacia was remarkable, as also in lymphadenoma of the bones—cases of these diseases were quoted. Diabetes, like osteomalacia, was sometimes associated with a great excretion of lime in the urine. Was much lime excreted in the present case?

Dr. HUTCHISON said he had not estimated the amount of lime present, but the proportion of the earthy phosphates to the other was unusually high.

Dr. WEBER, in reply, said that one hoped that in every case of metastatic implication of the bones, the urine would be examined for Bence-Jones proteid. The diet test he had made was not quite satisfactory, but it was a great dietetic change which resulted in no change in the amount of Bence-Jones proteid in the urine. The cases of Bence-Jones albumosuria could hardly at present be considered to be precisely identical with each other. It was a difficult matter to say when a bone growth was actually commencing. In one undoubted case of lymphatic leucocythaemia, Bence-Jones proteid was found in the urine, and in this it was to be presumed that the bone marrow was implicated.

MEDICAL SOCIETY OF LONDON.

A. PEARCE GOULD, M.S., F.R.C.S., President, in the Chair.

Monday, March 9th, 1903.

SOME CONDITIONS SIMULATING APPENDICITIS, WITH CASES OF APPENDIX ABSCESS IN UNUSUAL POSITIONS.

MR. FREDERIC EVE communicated a paper on this subject in which he related five cases of tuberculosis of the caecum, the symptoms of which closely simulated appendicitis. All gave a history of recurrent attacks of pain, sometimes commencing suddenly. One patient was supposed for years to be suffering from gastric ulcer, the pain being referred to the epigastrium. In nearly all the cases constipation existed, but vomiting was not marked except in one instance. The chief point in which they differed from appendicitis was in the slight character of the local tenderness. A swelling of firm consistence due to a thickened, indurated, and contracted caecum was observed in all. The appendix was only found once and was not tuberculous. In one case of the group observed in 1901, there was evidence of chronic obstruction, and a short-circuiting was performed with good result. The condition described had been mistaken in one recorded case for carcinoma, from which it could be distinguished clinically by the absence of leucocytosis. Allusion was made to the difficulties in diagnosis in some instances between appendicitis and affections of the gall bladder, kidney, and intestine, such as carcinoma, colitis, and obstruction by a band in the right iliac fossa, and some cases were quoted in illustration. In appendicitis the localization of the pain and the position of the abscess were subject to great variations owing to modifications in the length and position of the appendix itself and vagaries in the position of the caecum. In one case the pain was referred to the right loin owing to the tip of the appendix being attached beneath the liver, and in another the pain was always localized in the left flank. Cases of appendix abscess beneath the liver and about the umbilicus, owing to non-descent of the caecum, or unusual length of the appendix, were related. Great difficulty might be experienced in distinguishing appendix abscess within the pelvis from inflammatory and suppurative affections originating in the genital organs. A case of pyosalpinx was quoted in which the pain and tenderness were referred to the right iliac fossa; and a case of suppurative ovarian cyst, that had for three years given rise to attacks which were believed by several good observers to be due to appendicitis. In conclusion, a case of appendix abscess, deep in the pelvis, was referred to, which was opened by an incision, as for external prostatectomy, through the perineum between the urethra and rectum.

The PRESIDENT referred to cases of tuberculous disease in the neighbourhood of the appendix which had in his experience led to errors in diagnosis—particularly tuberculosis of the caecum. In one case recovery occurred without any operation beyond laparotomy. Other cases of ovarian tumour

with twisted pedicle were alluded to, in which a wrong diagnosis of appendicitis had been made. Perforated duodenal ulcer was also mentioned as having been a source of mistaken diagnosis. As examples of interesting cases of appendicitis, two cases were instanced—one which had been mistaken for ovarian tumour, in which complete severance of the distal end of the appendix had occurred without leading to general illness; and another in which two concretions were found lying free in the peritoneal cavity, without any fluid.

Mr. Alban Doran had often seen cases in which twisting of the pedicle of a small heavy ovarian tumour had caused a suspicion of appendicitis, and even although such a tumour had been on the left side. The adhesion of an appendix to inflamed appendages was very frequent, and two such cases were described—particularly one illustrating the causation of suppurating tubes from appendicitis.

Dr. De Havilland Hall alluded to a case of a woman with a lump in the femoral region, believed to be hernial, which proved to be the appendix having passed down the femoral canal. Other misleading cases were those of hysterical young women with pain, pyrexia, and tenderness in one iliac region, probably not due to appendicitis; probably in such there should not be too much hurry to operate.

Dr. H. A. Caley referred to a case with symptoms of colitis of some years' duration, in which the appendix had been removed without any improvement. Also to a case with acute abdominal symptoms, terminating in a local abscess, which was operated on. This was found to be due to a perforated caecal ulcer, although the symptoms were characteristic of appendicitis. In doubtful cases of this character the possibility of colon affection should not be overlooked.

Mr. Eve replied.

Case of Abdominal Hystectomy for Large Retroperitoneal Cervical Fibroid.

Dr. Arthur Lewers contributed an account of this case, the tumour from which weighed 13½ lb. The duration of the abdominal swelling was three or four years. There had been swelling of the legs of late. At the operation the left ureter was found tightly stretched over the tumour and was freed. The patient made a good recovery after the removal of the tumour. The cases of fibroids of the cervix formed a distinct class. The body of the uterus in them was not deformed. Remarks were made on the technique of the operation for the removal of cervical fibroids.

Mr. Alban Doran alluded to the large size of the tumour as not necessitating shock. Enucleation was however intrinsically a cause of shock. In removing all large tumours the patient was in great danger while ligaturing the vessels on the side of the tumour first attacked. What were called fibroids of the cervix were often not cervical, but of the broad ligament low down. It was sometimes possible to leave the uterus when the cervical tumour was small.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of State Medicine.

Ninian Falkiner, M.D., President, in the Chair.

Friday, February 20th, 1903.

Nomenclature of Diseases and Causes of Death.

In a brief address the President reviewed the nomenclature of diseases and causes of death, from the period of William Cullen, of Edinburgh, up to the year 1901, when Dr. Tatham's modification of the nomenclature of the diseases (1896) was adopted for the official reports on vital statistics for these countries. He appealed to the medical profession to consider the importance of giving a well-defined and accurate "cause of death" when framing the certificate, as it was on this testimony, and this testimony alone, that the value of the medical statistics of the nation depended.

After the conclusion of the address, the following resolution was proposed by Dr. Bewley, seconded by Dr. Parsons, and passed unanimously:

That in the opinion of the Section of State Medicine of the Royal Academy of Medicine in Ireland, it is advisable that the department of the Registrar-General of Ireland should be represented on the Nomenclature of Diseases Committee at present sitting in London.

Specimen.

Dr. Martley exhibited a specimen of soup made in a tin-lined copper boiler, which, owing to the tin having worn away in places, was largely contaminated with copper. There was a thick black precipitate in which alone the copper was found, the clear fluid above it being quite free from it.

LIVERPOOL MEDICAL INSTITUTION.

Rushton Parker, F.R.C.S., President, in the Chair.

Thursday, February 26th, 1903.

Human and Bovine Tuberculosis.

Dr. Nathan Raw read a paper upon human and bovine tuberculosis, which is published at p. 596.

The President said opinions formed upon a question of that kind were based partly upon clinical impressions, and partly upon scientific considerations. He had not himself gone much into the intimate pathology of the question, having originally operated for the purpose of removing the local disease. An experience of thirty years had satisfied him as to the correctness of this point of view; he had met with phthisis pulmonalis only 4 times out of about 300 patients.

Dr. Carter recognized the ingenuity of Dr. Raw's suggestion of two different diseases, but considered the view that true human tuberculosis could not be communicated by bovine tuberculosis too absolute, and as disproved by recorded facts. If the words had been "is not generally communicated," he, like every one else, must have assented. The difference of results probably depended on difference of soil, the seeds being identical. Ravenal in the very paper quoted by Dr. Raw, while admitting the general resistance in both directions, that was, from man to cattle, and from cattle to man, gave not a few examples of deviation. Thus he injected human tuberculous sputum intraperitoneally into four calves, of which three soon presented evidence of infection with true general tuberculosis. Again, the same observer pointed out that bovine tubercle accidentally planted in human skin developed effects entirely indistinguishable from true human tuberculosis; and one case at least in the contrary direction had been related where a child was bitten on the lower eyelid by a dog which had just eaten the tuberculous placenta of a cow. All the after-effects were those of a disease indistinguishable from true human tuberculosis. They were probably all familiar with the numerous successful inoculations by Arloing of human tubercle into cattle. These and many similar cases must make them cautious in too hastily accepting a theory however fascinating, as this theory certainly was, till the proof had been made absolute.

Dr. Caton admitted that apparently two forms or types of tuberculosis occurred in the human subject: (1) pulmonary phthisis, (2) tubercle of glands, bones, and nervous organs, and that usually the course and termination of the two types presented marked differences. This fact supported Dr. Raw's generalization. Dr. Caton narrated instances in which the second form of tuberculosis had followed the use by children of raw milk from tuberculous cows. He had been much impressed by the large proportion of cases of bovine tuberculosis which he had himself observed when visiting rural districts of England and Scotland, and by the disregard of the disease manifested by the dairy farmer. Dr. Raw's theory, if fully demonstrated, would have most important practical results.

Dr. Alexander had had 62 cases in the last three years, and out of 885 babies in the Liverpool Workhouse Hospital 82 were diagnosed as marasmus or tabes mesenterica. A good many cases of tabes mesenterica recovered completely, so that it was probable in many cases the disease was not tuberculous. The children who suffered from that disease belonged to the lowest class of society, and their diet left much to be desired. They lived on small quantities of milk, bought from a low milkshop, which was used without being sterilized. Many of them suffered from attacks of intestinal and gastric catarrh through improper quantity or quality of food, and these attacks produced enlargement of the glands in the same way as eruptions of the scalp and discharge from the ear produced enlarged glands in the neck. If what Dr. Raw said was true they would have to go back to the sterilization of milk.

Dr. Grünbaum agreed with Dr. Raw that tabes mesenterica was due in many cases to milk carrying bovine tubercle bacilli. Experiments on anthropoid apes tended to confirm this view. Dr. Raw's isolation of the bovine bacillus from a mesenteric gland was the first-published confirmation of Ravenel's results in the same direction. But that was no reason for considering the diseases produced as separate and distinct. For the following reasons it seemed probable that the disease was one and the same whatever the source of the bacillus, although undoubtedly more virulent when of bovine origin. The lesions produced by the inoculation of either form were practically the same, and *Perlsucht* could not be

caused even by inoculating cattle with bovine bacilli. A bacillus with human morphology might have almost bovine virulence, as shown by Ravenel's second case, and cattle reacted to tuberculin of human origin.

Sir William Banks said it was his conviction that children who suffered from glandular and articular diseases did not suffer in later life in any marked degree from phthisis. He therefore was opposed to the tremendous and sometimes dangerous dissections of the neck practised by some surgeons. These children died from exhaustion and waxy disease when they did succumb. For himself, he found a difficulty in looking upon bovine and human tuberculosis as two absolutely distinct diseases. He would prefer to call them variants of the same disease, each affecting their own localities. Soil in this question probably had much to be reckoned with.

Dr. Macalister referred to the 109 fatal cases of tuberculosis in children, in which careful *post-mortem* examinations had been made (*Pendlebury Abstracts*), and in no less than 84 of these there was involvement of the mesenteric glands. It could not, however, be said of all of them that infection had taken place through the alimentary canal, because manifestly in a certain proportion the mesenteric infection was of later date than the pulmonary, in almost every case the tuberculosis was general. It seemed highly probable that, however introduced into the system, a large number of children constituted a suitable soil for the growth of tubercle, but it appeared to him that to attempt to differentiate the tuberculosis of childhood into two different diseases was extremely difficult. He referred to the explanation which had been adduced, concerning the relative immunity of cattle to human tuberculosis, being possibly due to the passing of the bovine organisms through the human subject. He also referred to cases of pulmonary phthisis and to abdominal tuberculosis existing in the same house, and he considered also that careful investigation would be required concerning the feeding of infants, as to whether all cases of primary mesenteric diseases were hand-fed. He had an impression, although he could not specify an instance from memory, when he had seen tuberculosis arise in breast-fed infants. His general conclusion with reference to the origin of the disease in childhood, as compared with adult tuberculosis, was that there was a distinction without a difference.

Dr. R. J. M. Buchanan understood that Dr. Raw held tuberculous infection of the human body to be of two distinct kinds—one a pulmonary infection distinct from all other other diseases, and due to a special tubercle bacillus; and the other primarily affecting glands and structures other than pulmonary, due to bovine tubercle bacillus. He contended that Dr. Raw could not classify tubercle bacilli *per se* by clinical methods, as so much depended not on general "soil," but local "soil" in respect of different organs, this meaning a low potential, want of resistance, or vulnerability. Further, that account must be taken of the accessibility of entrance of the organism to the body, such being influenced by a variety of circumstances. For instance, in children fed on cow's milk, the alimentary canal offered distinct points of vantage to the invasion of bacilli. Dr. Buchanan held that the clinical manifestations of tuberculosis depended upon the organ attacked, and offered no means of distinguishing between so called bovine and human tubercle bacilli. He asked Dr. Raw what evidence he had to offer in proof of the tuberculous nature of his cases of tabes mesenterica, and especially of their being due solely to bovine tubercle. In reference to the statement made by Dr. Raw, that of his 38 cases of tabes mesenterica confirmed by necropsy there was only one instance of maternal pulmonary tuberculosis, and given in favour of his distinction between "bovine and human" tubercle, Dr. Buchanan judged the fact as a coincidence only.

Dr. J. Hill Abram had never been convinced of the soundness of Koch's position. He would like to draw attention to the following point: Koch's great dividing characteristic between bovine and human tubercle was the non-communicability of the two organisms to human and bovine respectively—that is, human to cow, bovine to man. Ravenel's and now Dr. Raw's case shattered Koch's position and restored the unity of tubercle.

Drs. Permewan, Gullan, Logan, Barr, and Mr. G. G. Hamilton spoke; and Dr. Raw replied.

Paper.

Dr. Gordon Little read a paper upon Moorish Spain.

MANCHESTER MEDICAL SOCIETY.

A. M. Edge, M.D., President, in the Chair.

Wednesday, February 4th, 1903.

President's Address.

The President took for the subject of his address "Diagnosis and some of its Difficulties." He commented on the necessity, when examining a case, of using the knowledge which might be gained by careful observation of the patient's expression, attitude, etc. He deprecated having recourse to bacteriological methods of diagnosis until a thorough examination of the patient had been made and an opinion formed thereon. An exception was made, however, in the case of suspicious sore throats, in which he advised an examination for Loeffler's bacillus at the earliest possible moment. The President went on to say that the term diagnosis when used in its widest sense included etiology, prognosis and treatment, and gave illustrations in support of the statement. He enumerated some of the causes of failure in diagnosis, such as absence of previous history, haste, carelessness, and the attaching too much importance to a single symptom. Incomplete diagnoses were also referred to, and several cases were mentioned as instances. But after excluding all such causes of difficulty and failure, he stated that there would always remain a large number of cases in which diagnosis was frequently impossible from their very nature, giving, as an example, the group of affections termed, from an important symptom, obstruction of the bowels.

An Unusual Case of Stupor.

Dr. Thomas Harris related a case of unconsciousness which presented difficulties in diagnosis.

The patient, a man aged 50, was first seen on December 4th, at 6 p.m., in consultation with Dr. Vernon Davies, of Shaw. He was then sitting in a chair quite unconscious, and could not be roused, although pricking him caused some resentment. His colour was natural. His respirations were natural, and his pulse 80 per minute. When the eyelids were raised both pupils were at first minutely contracted, but when re-examined about a quarter of an hour later they were of normal size, and slowly responded to light. The heart and blood vessels appeared healthy, and the urine was free from albumen and sugar. There was no evidence of paralysis of the ocular or facial muscles. The arms and legs when lifted and let go fell in a flail-like manner. Five hours later Dr. Davies was astonished to find him sitting up and in ordinary conversation with some friends. He said he felt a little drowsy, and as though he had lost count of things. Dr. Davies stayed with him until 3 a.m., until which time he persisted in talking and smoking. At 3 a.m. he was persuaded to lie down, and he went to sleep. At 6 a.m. he was roused and given some nourishment. His bowels were moved at this time, but there was nothing peculiar in the motion. At 10 a.m. (December 5th) he was in much the same condition as on the previous evening, but more easily roused. At 12.30 p.m. he was again awake, talking and smoking. He then had another motion, which was very green and offensive. From that time until December 7th he slept for a few hours at a time and then woke up for a few hours, but since December 7th up to the present time (February 4th, 1903) he had enjoyed his usual health. When he had recovered he gave the following account of his illness: On December 3rd he was in his usual health, and at 6 p.m. he had tea, at which he partook of a dish of cockles, which were cooked by boiling in the usual way. No one else in the house partook of any cockles. At 8.30 p.m. he did not feel very well. He was, however, able to attend a directors' meeting, returned home, and went to bed at 11.30 in apparently good health. At 5.30 a.m. on December 4th he got up to go to his work as a mill manager. On getting out of bed he felt all right, but then had a shooting pain in the right eye, followed by loss of sight of that eye. He proceeded to dress himself in a dazed sort of way, and then called his son as he was accustomed to do. He said his legs at this time felt a bit queer, as though they did not belong to him. He walked downstairs. The eyesight had now returned to the right eye, and he lit the gas in the kitchen. Immediately after he felt, as he expresses it, "as though he were running his head into a corner." He walked towards his armchair, and then became unconscious, that is, "remember nothing after getting my head into the corner." At 7.10 a.m., his wife came downstairs, and as she could not rouse him sent for Dr. Davies, who found him much in the same condition and still as he was when Dr. Harris saw him. Dr. Davies, thinking he might have taken some narcotic drug, as he had been subject to asthma, tried to rouse him, and with assistance walked him about. By this means in the course of a few hours he was roused sufficiently to be got to walk about alone. He talked in a somewhat incoherent manner, and like a man who was drunk. There was, however, difficulty in keeping him awake, and about 3 p.m. he relapsed into complete stupor and remained so until Dr. Harris saw him at 6 p.m. It appeared that the patient had been subject to asthma for the last 18 years, but had otherwise enjoyed good health. He had never had any kind of fit, and had not been subject to dizziness or headaches just previous to or some time prior to the attack.

The patient was a very intelligent man, and not at all a neurotic subject. His field of vision when tested after the attack was normal, and the attacks of asthma appeared to have

been true bronchial ones, and not attacks of hysterical dyspnoea. Considering the long interval (nearly twelve hours) between taking the cockles and the onset of the attack, together with the recurring attacks of stupor, whilst between times he was quite awake and with a clear intellect, it does not seem probable that the shellfish had anything to do with producing the attack. That it was some form of auto-intoxication arising from the absorption of some toxic substance from the bowels was worthy of some consideration, but the attack appeared more probably to have been a manifestation of the *petit mal* of epilepsy. The sudden onset, with pain in one eye and loss of sight, was very suggestive of that being the real nature of the attack. Nevertheless the absence of any previous attack which could suggest epilepsy in any form rendered the case unusual.

Some Toxins in their Relation to the Eye and its Appendages.

Dr. P. Mules presented a communication on this subject. He related a case of retrobulbar neuritis, with complete blindness of the right eye, in a woman, aged 28, who nineteen years previously had suddenly and persistently lost her hearing on the same side. The toxins of inherited syphilis were considered to be the cause. Mercurial inunction and full doses of quinine were followed by return of visual acuity to $\frac{6}{9}$ with persistent disc pallor. The hearing returned $\frac{1}{4}$ normal, diagnosis confirmed by family history. He also related three cases of paralysis of ocular muscles following herpes zoster frontalis. The constant pathological condition of the sensory ganglia in cases of zoster was almost conclusive of a bacterial infection; therefore, these paralyses were considered to be due to resulting toxins. Absence of the herpetic eruption in two was interesting as allowing many obscure cases of neuritis with pareses to be referred to zoster for their origin.

Exhibits.

A interesting collection of radiographs was shown by Dr. A. H. Marsh (Northwich), and Dr. Knowles Renshaw exhibited a series of throat instruments.

Epidemiological Society.—At a meeting held on February 25th, Mr. Shirley F. Murphy in the chair, Dr. Patrick Manson read a paper on the Panama Canal and the introduction of yellow fever into Asia. He said the recent inclusion of yellow fever among the diseases propagated by mosquitos gave a far less hopeless aspect to the question of its prevention. He would confine his remarks to (1) the risk of the extension of the fever to the populous regions of Asia involved in the opening of the Panama Canal to which the Government of the United States was pledged, and (2) the means to be adopted for lessening the risk. Shiploads of labourers from China, Japan, and India would soon be plying between Panama and the seaports of Asia, and if the traffic were unrestricted the disease would inevitably be introduced into the populous, densely crowded and insanitary cities of China and India, where its ravages would be incomparably greater than they could be in the sparsely peopled countries and smaller cities of South America. The freedom from yellow fever hitherto enjoyed by Asia was, like that of America from cholera, and the plague until recently, due not to any conditions unfavourable to its spread, but to the absence of direct communication with the localities where it was endemic, California and Chili lying beyond the fever zone on either side. It was true that the parasite was present in the blood for a few days only at the commencement of the fever, but if taken from the patient during this period by a mosquito it underwent its metamorphosis in fifteen days but retained its vitality in the body of the insect for eight or ten weeks, and might be at any time communicated by its bite to previously healthy individuals. The mosquito *Stegomyia fasciata* or other species were very retentive of vitality so long as they had access to water, as in the holds of vessels, in the tanks of which the larvae might be seen in thousands. The yellow fever patient was in himself no more dangerous to others than was the sufferer from malaria, and it was the *Stegomyia* that like the *Anopheles* conveyed the germs from him to others, infecting them in turn. It was thus quite possible for a ship, the crew of which were perfectly healthy, not only on sailing, but throughout the voyage, to convey the disease provided the passage did not exceed say ten weeks. *Stegomyiae*, that had recently bitten a fever patient, got on board in the harbour, and might or might not attack the crew; when she put out to see they sought shelter in the hold, and probably did not leave their hiding places, if sugar, fruit or other food were accessible, until disturbed by the discharge of the cargo at the port of arrival, when the infected insects attacked those who, whether members of the crew or labourers belonging to the port, were engaged in the work of unloading. The disease had spread to every seaport on the eastern coasts of America between lat. 38 N. and 38 S., as well as of Peru. In Africa it was still limited to the west coast north of the equator, and in Europe, though it had never become endemic, the footing it temporarily obtained at Lisbon in 1853 proved that such a contingency was not impossible. The *Stegomyia fasciata* was the most widespread, but other species could serve equally well as hosts, so that no country in the tropical or warmer temperate zones was safe. Quarantine and disinfection of cargo were alike useless, the sole means of prevention being the extermination of the *Stegomyiae*, for which, so far as shipping was concerned, sulphur fumigations of the hold and between decks was the most efficient with the destruction of the larvae in tanks. It was as insecticides, not as germicides, that sulphur fumigations had been found successful. On land the work must be conducted on the same lines as had been employed against the *Anopheles*. That this was feasible had been amply proved by General Wood, M.D., and Dr. Gorgas, at Havana. There the mortality for the past ten years had averaged 467 per annum, but between March, 1901 and March 1902, there had only been five deaths, and since that time there had not been one. He trusted that the Americans, though they had no direct interest in Asia, would carry out the sanitary control of the canal with equal thoroughness, but it would be advisable for the civilized Powers most concerned, as England, France, Germany, Holland, Italy, Japan, and Siam, should constitute an International Board of Supervision. Every vessel coming from or having called at a port within the yellow fever zone should be boarded on entering the eastern end of the canal by an officer and assistants, whose duty would be to destroy by fumigation and other means all *Stegomyiae* on board, and before leaving the canal, by others who should satisfy themselves of the completeness of the work. To prevent the infection of a vessel in its passage through the canal the country for half a mile on either side should be cleared of trees, standing water, and everything that could afford shelter for mosquitos or their larvae. Dr. Manson remarked that all that was known of the etiology of yellow fever was due to a band of American epidemiologists. The pioneer, Dr. Reed, though he never saw the haematozoon itself, having satisfied himself of its transmission by the *Stegomyia*, applied this knowledge with the brilliant results at Havana, he and Dr. Lazear dying martyrs to their work.—Dr. Nuttall remarked that the extinction of yellow fever in Havana had removed a great danger from the United States, since in every epidemic in Florida and the valley of the Mississippi the disease had been introduced from that port.—Dr. Strong stated that yellow fever had recently been very prevalent in Panama, and was constantly carried from one port to another on the east coast of South America. He described the several importations into Western and Southern Europe, and said that at least six instances had been recorded recently of its conveyance by ships on which no cases had occurred. The distance between Panama and Honolulu was less than that between Rio and Naples.—Dr. Bousfield, who had been through several outbreaks in the West Indies, complained of the apathy of the British authorities, even when convinced of the truth of his representations. The only preventive work in respect of malaria—that at Sierra Leone—was due to private enterprise; the Colonial Government would do nothing.—Dr. L. Sambon also made some remarks.

"Patent Medicines" in Pennsylvania.—A Bill has been introduced into the Pennsylvania Legislature which provides that any and all proprietary or patent medicines prepared, sold, or offered for sale in Pennsylvania shall contain upon the label a true and correct copy of the formula, ingredients or constituents of the medicines, together with a true and correct printed statement in English of the several and respective quantities or proportions thereof. No person shall be employed or engaged in the manufacture and the mixture, compounding, or preparation of any proprietary or patent medicine who is not a regular graduate in pharmacy, and so registered under the laws of the State of Pennsylvania. Persons violating the Act are liable to a fine of 1,000 dollars (£200) and imprisonment for one year, or both, one-half the fine to go to the person furnishing the information.

REVIEWS.

THE CONSTRUCTION OF OPEN-AIR SANATORIA.

THE *Essay*,[1] by Dr. ARTHUR LATHAM and Mr. A. WILLIAM WEST, on the erection of a sanatorium in England for tuberculosis, which won the first of the three prizes offered, by His Majesty's commands, by the Advisory Committee of the King's Sanatorium, has been published in a handy volume which deserves the careful study of all those who may be concerned in proposals for the erection of such sanatoria.

By the terms of the competition the essays were to be directed to laying down the conditions which were to be fulfilled in the planning of a sanatorium for 100 patients, an equal number of either sex; each patient was to have a separate comfortable room, but twelve of the rooms designed to be used by "more wealthy patients" were to be superior to the others. The competitors were instructed to assume that the sanatorium was to be erected on an elevated sloping site, with a sunny exposure, well sheltered from cold winds, with extensive well-wooded grounds, allowing space for exercise, and its own farm.

The essay before us is divided into two parts. Part I, which is, we presume, the work of Dr. Latham alone, contains a discussion of the principles to be followed in the erection of a sanatorium for patients suffering from tuberculous disease of the lungs. In Part II. written, as we assume, in conjunction with Mr. West and illustrated by plans, an attempt is made to carry out the principles laid down in Part I.

The appendices (20 in number) show an immense amount of work and research, and contain valuable statistical information, both medical and architectural. In an historical introduction Dr. Latham states that in 1747 a Scotch physician brought forward incontestable evidence of the good results to be obtained by hygiene and diet in the treatment of tuberculosis. In 1791 the first special hospital for tuberculosis was established—the Royal Sea Bathing Infirmary for Scrofula at Margate. The Royal Hospital for Diseases of the Chest was established in London in 1814, and the Brompton Hospital for Consumption in 1841. Dr. Latham recognizes that the first man who carried out the treatment on the basis we now adopt, was an Englishman, Mr. George Bodington, of Sutton Coldfield in Warwickshire, who wrote an essay on The Cure of Pulmonary Consumption on Principles Natural, Rational, and Successful, and emphasized his view by carrying them out practically, but that the man who must be regarded as the founder of the sanatorium treatment of tuberculosis is Hermann Brehmer, to whom great credit is due for his persistence in spite of fierce opposition. His methods were more systematic and thorough than those of his predecessors, and he finally convinced the world of their soundness and importance. The essential principles of Brehmer's treatment are enumerated as follows:

1. A life spent in the open air under conditions which gave immunity from tuberculosis.
2. Complete freedom from any debilitating circumstances or anything which may lead to an exacerbation of the disease.
3. Methodical hill climbing as an exercise when the condition of the patient renders this advisable.
4. Constant and unremitting medical supervision.
5. An abundant diet in which milk, fatty food, and vegetables occupy an important place.
6. Various hydrotherapeutic measures.

The opinion is expressed that reasonable precautions with regard to the sputum practically do away with the danger of infection, and the beneficial effects of the open-air treatment are then discussed, and it is maintained that exposure is no drawback, and that if patients are well nourished, sufficiently clothed, and sheltered from the wind, any degree of cold may be defied. The points demanding special consideration in the erection of a sanatorium are enumerated as follows:

1. The buildings should be so situated and so constructed that dust should be as far as possible avoided.
2. The dust which inevitably collects can be readily removed.
3. All infected material must be readily and effectually destroyed or disinfected.
4. The atmosphere of buildings should be free from all source of contamination, and should rival the outside air in point of purity.
5. The number of recreation rooms and other places of assembly should be limited and everything avoided which is calculated to tempt patients to stay indoors.

[1] *The Prize Essay on the Erection of a Sanatorium for the Treatment of Tuberculosis in England.* By Arthur Latham, M.A., M.D.Oxon., M.A.Cantab., in association with A. William West, Architect. London: Baillière, Tindall and Cox. 1903. (Demy 8vo, pp. 274. 5s.)

Complete freedom from any debilitating circumstances is essential, while anything which increases the fever or leads to exhaustion assists the progress of the disease. All forms of excitement, whether mental or physical, encourage and intensify tuberculosis, whilst nothing is so harmful as overexertion of mind or body. In short, what is required is quiet and repose so that the damaged tissues may have time to heal. For this reason visitors must be introduced to a sanatorium with great caution, and Sir William Broadbent's opinion that the visits of friends should be restricted as far as possible, and that all visitors should be received in the open air, is quoted. The question of amusements is another subject which requires much discretion at the hand of the physician. The authors summarize their conclusions thus:

1. That in a sanatorium the bedrooms of the sexes should, as far as possible, be in separate blocks.
2. That the accommodation for visitors should be strictly limited.
3. That no special provision should be made for exciting amusements, but a well-stocked library and other forms of harmless recreation should be provided.
4. The means of heating employed should be easily regulated, and of such a kind that it does not interfere with the humidity of the atmosphere.
5. Although there must be free circulation of air, draughts should be avoided.
6. Effective shelter should be provided against wind, sun, and heavy rain, not only in the sanatorium itself, but in the grounds.

The authors seem to have an objection to verandahs. We agree that there are many structural objections to the *Liegehalle* as constructed abroad in front of the bedrooms, but balconies and verandahs can be so constructed as not to block out light, can be kept perfectly clean and full of fresh air, and in a well-designed sanatorium each bed on the verandah or balcony would have the width of the bedroom as its own space, and therefore the beds would be placed 12 ft. to 14 ft. apart, and if necessary might be screened from the adjoining patients by low movable screens which would not seriously obstruct the circulation of air.

The authors next treat of the question of food, and advise an abundant and varied diet in which milk, butter, fat, and vegetables occupy an important place, and quote Sir R. Douglas Powell's opinion that in a sanatorium the cook should be only second in importance to the physician. Dettweiler, when asked whether he used drugs much in the treatment of consumption, pointed to the kitchen and exclaimed, "That is my pharmacy, there is my chemist's shop." Their conclusions on this subject are:—

1. The equipment and sanitary arrangement of the kitchen, larders, etc., must be of the most modern type.
2. Every precaution must be taken in the dairy to ensure a large supply of milk and butter which is pure and free from tuberculous bacilli.

Emphasis is laid on the well-known axiom that one of the essentials of sanatorium treatment is the constant supervision by a skilled physician, who so orders the patient's life that he avoids everything which is harmful, and takes advantage of everything which is helpful to the progress of repair and the development of the power of resistance. The daily routine in a sanatorium is described, and Part I concludes with a table of the requirements for a sanatorium.

Part II is headed "An attempt to carry out the foregoing principles by the construction of a suitable building." Existing sanatoria are divided into two groups—the sanatoria which consist of one large building and those which consist of several. Both systems have their advocates, but we think it is now generally recognized by those medical men and architects who have studied the subject thoroughly that a large building of many stories is unsuited to consumptives, and that a building of two stories in more or less detached blocks with open-air corridors between each as a means of communication is the ideal building for an open-air sanatorium. We would qualify the question of stories by saying, if it is necessary to construct very economical sanatoria, say for Friendly or Working Men's Societies, three stories might be permissible on the ground of cheapness.

The authors point out the advantages and disadvantages of a large building, and in their first drawing show a block plan of the building in which the administration and the patients' rooms are detached and surrounded by fresh air, and only connected by corridors. This is a good plan, and one frequently adopted, varied in conformity with the site. As regards aspect, the authors advise that the main front should be SSE. or SSW., and not direct south; the patients' rooms are apt to become unpleasantly hot if the rays of the sun stream directly into them. Remembering the smal

amount of sunshine we obtain in England, it is a question whether the best aspect is not due south to take advantage of all the sunshine obtainable, as the bedrooms can always be kept cool by electric fans and blinds. If we should have weather so exceptionally hot as to make the bedrooms uncomfortable, the beds could be placed in the northern corridors.

The details of construction are well thought out, and with some few exceptions the recommendations may be accepted. While we do not see any difficulty in constructing the building so as to avoid noise, it must be recognized that, however noise-proof we make the building itself, the very nature of an open-air sanatorium, with open corridors and open bedroom windows, prevents the possibility of shutting out sound from the adjoining rooms.

We agree that it is not possible to have a better bedroom floor than teak or oak laid direct on to cement concrete, but we are doubtful as to the advice to line the walls of bedrooms with glazed tiles to a height of 3 ft. 6 in., as the difficulty of the numerous joints cannot be got over.

In the treatment of ceilings, we cannot see the great advantage of a zinc as suggested, a plaster ceiling, well painted, and finished with an enamelled surface, gives a ceiling without joints, which we must have with zinc. Of course, there should be no right angle junctions in ceilings, walls, or floors, or in the joinery and furniture of the rooms as a lodgement for dust. This is a well recognized principle in hospital construction. The building should also be made as fire-resisting as possible, and every precaution should be taken against fire, the upper floors having fire-exit staircases. While agreeing with the doctrine that the cubic space up to a certain point of patients' bedrooms is of less importance than the size and position of the fresh-air openings, and that the larger the openings the less cause for draught, we do not think a bedroom should have less cubic space than 2,000 ft. The height need not exceed 10 feet if the doors of corridor and bedroom and the window opposite are, say, 4 ft. wide to allow the bed to pass easily, and open from floor to ceiling. There is great objection to windows and doors being less than this, as they are likely to create draught, and do not properly ensure a continuous current of fresh air.

The authors suggest that the windows on the south should be 2 ft. 6 in. from the floor, so that the patients will not be overlooked, but it is a great advantage to carry the windows to the floor level, to ensure more perfect aëration. At the same time privacy of the bedrooms and protection from rain can always be ensured when necessary. The advantages of the bay window suggested for bedrooms is also very doubtful, and in many instances it would be undesirable. The lining of the walls of bedrooms is a very difficult point to decide. We all recognize that a glazed surface is very valuable from a hygienic point of view, and from the fact of its being easily cleaned, but with such materials as enamelled porcelain tiles, or polished glass, there is the great difficulty of the joints to contend with, and there is also the question of condensation to meet. The latter would certainly be reduced by the free circulation of air, but where it does exist it collects dust and dirt, and would certainly be an evil. For the administration block in kitchens, larders, pantries, service, in fact wherever food is kept, we would advise the use of white, glazed tiles to any extent, but not for sick rooms. Of course, wood lining is out of the question, or oil paint on walls, as there is again the difficulty of condensation, and seeing that the bedrooms of consumptive patients must be disinfected after every patient, broadly the question seems best met by distempered walls with a smooth surface, which need not be dreary or wanting in cheerfulness, as we have a scale of most beautiful colours and tints to choose from, and stencil ornament as a decoration, if thought necessary, at the cheapest possible cost, which is a great point, when the surface of the walls may have to be renewed repeatedly.

As a floor covering for patients' rooms linoleum is largely used abroad, but it is not to be compared with hard wood such as teak or oak as a floor surface for sanatoria, and its use can be approved only on the score of economy. The furniture must be of the simplest kind, and without mouldings or any ledges to collect dust. Whether douches should be placed in bedrooms is a doubtful matter. If we have a douche we must have a waste pipe to drain, and even if this empties over a gully outside the building, we cannot avoid a length of waste pipe which is not easily cleaned, and may become a source of contamination. In the designing of hospitals it is now recognized that if a waste pipe is necessary it must be as short as possible, and it is so easy to erect douches in the bathrooms in the sanitary blocks that it will be wiser to omit them from the bedrooms. White porcelain lavatory basins on enamelled iron stands might be admitted into bedrooms, but they should empty into a porcelain open container which can be removed at intervals during the day when necessary, thereby avoiding all waste pipes and connexions with drains.

We agree with the authors that the most perfect artificial light is electricity. For the warming of patients' bedrooms electric radiators may be used, as they give the purest heating obtainable, and, with a copper radiator of simple form, the smallest collector of dust. There is also the great advantage that they can be moved to any part of the room as desired.

As regards ventilation, it is doubtful if anything would be necessary when the windows and doors of rooms and corridors are open from floor to ceiling, but for very hot weather electric fans connected with exhaust flues might be used with advantage.

Coming to the important question of heating and cooking arrangements, we most cordially agree with the authors in eliminating all coal fires so as to prevent smoke, whether for laundry, kitchen, or other administrative purposes. Boilers worked with coke or Welsh coal, with proper smoke-consuming appliances, may be absolutely smokeless. Gas or oil engines will work electric plant, and as far as possible electricity may be used as a motive power, and we fully agree in advising its use for laundry machinery, bedroom radiators and many other purposes, but have grave doubts as to the advisability of using it for cooking purposes at present on account of the great expense; steam, coke, gas, and charcoal can be used most effectually for the purpose at a greatly reduced cost. The present cost of electricity for cooking purposes is prohibitive, especially in large establishments, and we cannot see a corresponding advantage to warrant this excessive cost. The warming of the administrative blocks and the corridors of the patients' rooms might well be economically effected by hot water or low pressure steam, as it must be provided for the baths and lavatories.

The question of drainage is largely a question of site and environment. If there is a water-carriage system of sewerage in the vicinity, this, with a properly designed system of drainage, might be adopted. In the absence of sewers, earth closets may be used with great advantage, and the slop water, after passing through filtration beds, might be used with profit on the soil; but all this entirely depends on the disposition of the site and the character of the soil. We do not like the idea of cesspools in the grounds of a sanatorium, for even slop water is liable to become very foul.

We agree with the authors that no urinals need be provided; they are difficult to keep clean, and as all w.c. seats are now made to lift up, they can be used as urinals. Of course, all baths, lavatories, w.c.'s, and slop sinks for patients must be placed in sanitary towers well detached and disconnected from the building, the planning of which again depends largely on the site. Arrangements must be made for a disinfector for patients' clothes, bedding, etc., and also for an incinerator for the burning of the sputum and handkerchiefs. The sputum flasks must be disinfecting. The contents of the refuse and dust bins should be collected daily and burnt in the incinerator.

We will now briefly notice the plans.

Fig. 2, showing an interior view of a patient's room, cannot be commended, as the furniture is placed too closely together. Fig. 3 shows storerooms in the basement under the patient's rooms. This is of very doubtful advantage, as the rooms may be misused, and become a positive danger by contaminated air being carried into the patient's room above. In Fig. 7, ground floor plan of service block, the disinfector is not well placed. The laundry is badly planned for an establishment of this character. In Fig. 8, ground plan of administration block, the main entrance and hall are poor for an important building. The dining hall should be disconnected from the main building, so that it may be surrounded by fresh air, and thoroughly aërated after every meal. These remarks apply to Fig. 9 also. Fig. 10, block plan for 36 patients, and Fig. 11, block plan for 16 patients, are both good in design. With regard to Figs. 13 and 14, it is a grave question whether sitting rooms should be allowed, as when patients are not in their bedrooms they should be in the open air. The dining room in this plan is well placed, being detached by ventilated lobbies, and the hall can be wind swept. In Figs. 15, 16, and 17 the dining room would be improved by being disconnected from the main building, and the projection of the recreation hall and libraries, so far in front of the façade, would rob

several of the adjoining patients' rooms of the sun during a great part of the day, a serious defect for a sanatorium.

There are twenty appendices giving information as to the construction and management of existing sanatoria which will be most useful to any one—be he architect or medical man—who may be called upon to draft plans for an open-air sanatorium, or form an opinion on plans submitted. The book ends with a very full bibliography, carried down to March, 1902.

In an essay such as this we do not expect to find anything new, but rather a thorough elucidation of the principles of the subject, but we can most cordially recommend this volume to those of our readers who wish to study the subject of sanatoria for consumption.

This essay certainly comprises a large amount of valuable information, collected from all sources, from many books, and from many buildings, arranged in a very readable form, and easy of reference for special subjects, and in many cases of technical particulars not easily obtainable, and we readily believe that Messrs. Latham and West fully deserve the first prize they obtained in this competition, and we congratulate them on having obtained it.

TUBERCULOSIS.

THE flood of literature which has poured forth from successive congresses on tuberculosis must have overwhelmed the reading powers even of the most diligent student, and by the busy practitioner it must have passed unheeded. Dr. LATHAM has done good service in bringing together in his volume on *The Diagnosis and Modern Treatment of Pulmonary Consumption*[1] a concise, readable, and well-arranged account of modern knowledge, as it has emerged from the multitude of counsellors. Dealing first with diagnosis, he puts the case in a form which would be cordially endorsed by most specialists of large experience. Of the diagnostic use of tuberculin he speaks with becoming caution, and clearly indicates the limits which confine its legitimate use. Perhaps the most useful section of the work is that in which he collates the evidence at present available with regard to the infectiveness of tubercle as conveyed by agencies outside the body. Here, as elsewhere, the names of authorities, some of them unfamiliar, are liberally quoted, but a reference to "chapter and verse" would add appreciably to the value of the quotation. His success in the competition for the King's Prize Essay lends authority to his chapters on the arrangements of public sanatoria as having been endorsed by competent judges. Among his ideal conditions he suggests the avoidance of draughts, but in what way this may be realized under the necessary conditions of free admission of air he does not specify. The experience of most observers leads to the conclusion that draughts are rapidly tolerated and do not seem harmful. In the chapter on home treatment will be found a detailed account of all the points that have to be considered in deciding upon adopting it, and his recommendations deserve the most careful study by all who have to advise on the broad question of home or sanatorium treatment. Of special methods, Dr. Latham is content to mention a few only of those which have obtained notoriety, but he shows clearly that they must be subservient to general hygiene. Some, such as tuberculin, he would only use in such cases as have no active symptoms, while other, such as direct injections into air passages, may, he thinks, be productive of serious harm. Of the intravenous injection of formaldehyde or other antiseptics, he prefers to accept results in place of explanations, since the active influence of minute quantities of an antiseptic fluid upon a non-vascular tissue is hard to conceive. The book can be cordially recommended to expert and practitioner alike as a compendium in attractive form of the many details of the immediate subject of which it treats.

At the British Congress on Tuberculosis in 1901 Sir Hermann Weber brought forward "a plea for seaside sanatoria for children especially for the prevention and treatment of scrofulous complaints." Although the Sea-bathing Infirmary at Margate, established in 1791, was the first of such institutions, it remains almost the only one in this country, whilst France has made great progress in this direction. The success of the well-known institution for the children of the City of Paris at Berck-sur-Mer, and of other sanatoria for children on the North Sea coast, and the absence of any institution on the Mediterranean littoral open to all classes, suggested to M. GEORGES LAFARGUE when Préfet of the Department of the Pyrénées-Orientales the idea of founding a children's sanatorium on the south coast. In the pamphlet[2] before us he describes how he was able to carry out this project, and in his description of cases illustrating the excellent results of treatment at the institution at Banyuls-sur-Mer there is abundant evidence that his work has been of the greatest value, and has fully justified his public-spirited action in founding the sanatorium. Banyuls-sur-Mer is situated on the western shore of the Gulf of Lyons close to the Spanish frontier, and posseses an almost ideal climate for such a sanatorium. The institution has accommodation for 200 children, equally divided between boys and girls. Whilst their health is the primary consideration, provision for the education of the children is not neglected. Having started the institution M. Lafargue transferred it to the management of L'Oeuvre des Hôpitaux Marins, reserving in permanency the right to twenty beds for pauper children from the Department of the Pyrénées-Orientales.

The object of the small *Handbook of the Open-air Treatment*,[3] as stated by the authors, is to familiarize the reader with the details of life in a sanatorium, and to give an approximate idea of the results that may be expected, and the cost that must be incurred. Illustrations of various sanatoria in the British Isles occupy, with advertisements, some 70 pages (out of 169). A short description of 28 sanatoria fills 20 pages of the text. Six pages of press notices respecting the first edition are numbered, as though they formed part of the text of the book. The information contained in this *Handbook* should be useful to those who wish to know what the sanatorium treatment of consumptives means, and where it is to be obtained; but the book would be much improved if the advertisements were relegated to their proper place.

Dr. KELYNACK has reprinted from the *Hospital* an essay on *The Selection of Consumptive Cases for Sanatorium Treatment*.[4] All who are connected with such institutions recognize that there is much need for more careful selection than is always exercised at present. The directions given by Dr. Kelynack are of necessity only of a general nature, for, as he points out, no absolute rules can be laid down for the selection of cases. Every case must be the subject of serious study. The position and resources of the patient must be taken into consideration, as well as the condition of his lungs. Dr. Kelynack first sketches the requisites for a comprehensive campaign against consumption such as we have now entered upon. He then gives briefly the principles of sanatorium treatment, and then the points which must guide us in selecting the cases for sanatorium treatment. The conditions which in any case hold out a reasonable expectation of cure are first noted, and then the unfavourable conditions are detailed. A sketch of the auxiliary forces in the combat with consumption completes a very readable paper.

NOTES ON BOOKS.

UNIVERSITY COLLEGE HOSPITAL.

MR. NEWTON H. NIXON, secretary to University College Hospital, published in 1882 the history of the hospital from its foundation to the year 1881. He has now issued a supplementary pamphlet entitled *A Record of Events*,[5] bringing the information down to the year 1901. The new pamphlet is not arranged on the same chronological plan as the history, but follows a general alphabetical order; it is therefore not very readable, but will be of interest to old students and others connected with the hospital or medical school.

[1] *The Diagnosis and Modern Treatment of Pulmonary Consumption*, with Special Reference to the Early Recognition and the Permanent Arrest of the Disease. By Arthur Latham, M.A., M.D.Oxon., Assistant Physician to St. George's Hospital, etc. London: Baillière, Tindall, and Cox. (Demy 8vo, pp. 215. 5s.)

[2] *La Prétuberculose et le Sanatorium de Banyuls-sur-Mer*. Par Georges Lafargue, Ancien Préfet des Pyrénées Orientales: Fondateur du Sanatorium de Banyuls. Paris: C. Naud. 1902. (Demy 8vo, pp. 50. Fr. 1.50.)

[3] *A Handbook of the Open-air Treatment and Life in an Open-air Sanatorium*. By Dr. Charles Reinhardt and Dr. David Thomson. Second Edition. London: John Bale, Sons, and Danielsson. 1902. (Demy 8vo, pp. 176. 1s.)

[4] *The Selection of Consumptive Cases for Sanatorium Treatment*. By T. N. Kelynack, M.D. London: The Scientific Press, Limited. 1902. (Crown 8vo, pp. 26. 6d.)

[5] London: Jas. Truscott and Sons, Limited. (8vo., pp. 23. 6d.)

Dr. WILLIAM DUNBAR, of St. Paul, Minnesota, now Director of the Hygienic Institute in Hamburg, recently announced that a toxin prepared from rabbit serum is an effective cure for hay fever.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEDICINAL AND DIETETIC PREPARATIONS.

Malt-Meal Bread.—We have examined some samples of brown bread in the manufacture of which it is stated that malt-meal is used. On this ground it is claimed that the bread possesses nutritive qualities of a very high order. Without entering into a consideration of these claims which, as is usual in such cases, are somewhat stronger than ascertained scientific facts may be held to warrant, we are able, upon the results of our analysis of the samples submitted to us, to state that they consisted of well-made brown bread of very good quality and texture, free from irritating particles, and containing a substantial proportion of malt. The samples were found to be free from any substances which could be regarded as adulterants. Assuming that the method of manufacture and the quality and proportions of the materials employed remain unaltered, and that adequate guarantees to this effect are given by the makers, we think that this bread would deserve the notice of the profession as a valuable article of diet. The bread keeps remarkably well, and has a very pleasant taste and odour. It may be obtained from Messrs Carr and Co., Limited, of Carlisle.

Cream Chocolate.—We have examined a sample of cream chocolate which is stated to have been prepared with Devonshire cream, and to contain nothing but this in conjunction with cocoa of the best quality and sugar. There is no standard of composition for preparations of this kind. They are "confections," and so long as they contain nothing that is injurious or objectionable, and no substances which can be regarded as adulterants, and when a full and clear statement is made as to their composition, they may be accepted as satisfactory. The results of our analysis show that the sample examined contained 55 per cent. of sugar, 27·9 per cent. of fat consisting largely of milk fat, and that it was free from added starches and chemical "preservatives." We consider that the claims made as to composition are substantially correct, and that the article may be accepted as a genuine preparation of good quality. Such matters as the "selection" and quality of the cocoa and the exact nature of the cream used can, in reality, only be satisfactorily dealt with by independent inspection of the factory and of the materials and processes employed. The chocolate is manufactured by Messrs. John Cleave and Son, Limited, of Crediton, Devon.

Chocolate.—We have examined a sample of "lunch chocolate" submitted to us by Messrs. John Cleave and Son, of Crediton, Devon. The results of our analysis show that the sample was free from added starches, preservative chemicals, and any other substances which could be regarded as adulterants. It may be accepted as a genuine chocolate of good quality.

Granalt.—This is the name given to a dry malt extract which Messrs. Thos. Christy and Co. (Old Swan Lane, Upper Thames Street, E.C.) have recently introduced. It is a granular yellow powder, and is stated to contain 1.8 per cent. of diastase. It is certainly a more elegant preparation than the ordinary viscous malt extracts, has an agreeable taste, and can be readily taken with ordinary food. In addition to the simple preparation, medicated granalts are also prepared containing 5 per cent. quinine ferrocitrate, 3 per cent. calcium hypophosphite, 5 per cent. quinine tannate, 5 per cent. saccharate of iron, 2 per cent. calcium glycerophosphate, and 1 per cent. glycerophosphate of iron respectively.

Compressed Drugs.—Messrs. Arthur H. Cox and Co. (St. Martin's Place, Brighton) submit samples of compressed tablets of their own manufacture. These include thyroid gland, cascara sagrada, bismuth subnitrate, etc., all of which appear to have been carefully prepared, and disintegrate as readily as any others we have examined. In addition to the above we have received samples of tablets for preparing antiseptic solutions. One of the potassio-mercuric iodide or mercuric chloride tablets will make a pint of solution 1 in 1,000; one of the carbolic acid tablets makes an ounce of 1 per cent. solution; since, however, no less than 100 would be required to make a pint of a 5 per cent. solution, the strength usually employed, we do not think these will be so generally useful.

MEDICAL AND SURGICAL APPLIANCES.

Funis Clamp.—Dr. Alexander Duke (London) writes: Cross, from a study of the temperature of 1,000 infants born in the Obstetric Clinic of Buda Pesth, comes to the conclusion "that septic infection from the navel in association with the detachment of the umbilical cord is a frequent cause of fever, and an important element in the mortality of infants." Waddington reports two cases (American Medical Association) of tetanus neonatorum which began to recover immediately after the application of thorough antisepsis to the granulating protrusion at the umbilicus evidently caused by absorption from the sloughing cord before separation. Baginsky declares himself in favour of dry dressing, cotton wool, and iodoform; carbolic acid he states is dangerous, "for only a slight abrasion of the navel is necessary to cause toxic symptoms, and the toxaemia is commonly fatal." Hence the importance of avoiding the close proximity of the sloughing part of cord with navel of infant. The illustration represents a simple form of clamp which I consider will be found in practice a great improvement on the old system. When the infant has been washed, the stump of funis is passed through the hole in flat plate of clamp, which is then placed close to the abdomen (while the spring portion is uplifted by pressure of finger and thumb, the spring is then released and holds the cord firmly. Anything protruding beyond the clamp is cut off with scissors, and the binder and dress put on. The clamp need not be interfered with, dropping off in the usual time with its contents. The small portion of dead tissue it holds can be removed, the clamp dropped into boiling water, and when dry is fit for use when next required. The simplicity and cleanliness of the clamp should give it preference over the old plan of dressing. The fact of having no dead or dying stump of funis in contact for several days with the infant's abdomen is a considerable advantage, the scorched rag being anything but reliable in keeping funis and abdomen from contact. The funis clamp has been made for me by Messrs. Arnold and Sons.



THE TESTING OF THE EYESIGHT OF SCHOOL CHILDREN.

The Medical Officer to the London School Board, Dr. James Kerr, has made a report on the work of the eight temporary oculists appointed last April. Detailed investigation of the results is deferred until the whole of the material is available. Many questions require further examination, and some of the work will have to be checked. In one case all the returns were based on children warned, and the cards will have to be gone through again to get exact figures. The main conclusions can, however, now be stated with an approximation of correctness.

The oculist distinguished the vision in their returns as good ($V=\frac{6}{6}$), fair ($V=\frac{6}{9}$ or $V=\frac{6}{12}$), and bad $V=\frac{6}{18}$ or worse). Dr. Kerr makes reference for comparison to the vision testing done by the teachers in 1900, and continues as follows:

Percentages of Good, Bad, and Very Bad Vision.

The percentage with normal vision in the two series of results is:

Percentage with Normal Vision.

Standards...	I.	II.	III.	IV.	V.	VI.	VII. etc.
Examination by Teachers, 1900	32	40	45	50	53	56	61
Examination by Oculists, 1902	54	61	70	73	75	78	80

The slighter grades of defect are very liable to error in testing by letters, the child's personal equation, and also its inability to make the mental effort of perceiving, coming in.

The results of the oculists' examinations in 1902, and the teachers in 1900, are, in respect to bad vision, almost identical.

Bad Vision ($V=\frac{6}{18}$ or Worse).

Standards...	I.	II.	III.	IV.	V.	VI.	VII., etc.
Teachers, 1900 ...	9·9	9·4	9·3	8·7	8·4	8·7	7·4
Oculists, 1902 ...	11·6	11·5	9·6	9·2	8·9	8·5	8·8

The very bad vision, due to disease and also to spasm or myopia, this analysis of the oculists' returns does not give, but it is marked in the returns of 1900.

Very Bad Vision (included in the above Bad Vision) ($V=\frac{6}{18}$ *or worse*).

Standards...	I.	II.	III.	IV.	V.	VI.	VII.	Ex-VII.
	1.6	1.9	1.9	1.0	2.3	2.7	2.9	3.5

There is an association between defective visual acuity and retarded position in school. If the children be divided into two groups—of precocious children (younger than the average age in their standard), and retarded children (older than the average age for their standard), then, although when considering the whole of the children the younger ones have most defective vision, yet in this grouping the older "retarded" group present more defective vision than the younger "precocious" group.

Percentages with Defect of Vision.

	Age last birthday ...	...	...	8	9	10	11	12
14079 Boys	Precocious (8196)	...	...	29.8	25.5	10.9	20.5	18.7
	Retarded (5883)	...	...	47.2	40.0	29.3	27.5	29.6
13078 Girls	Precocious (8090)	...	...	33.2	27.5	26.9	25.1	24.2
	Retarded (5888)	...	...	57.1	47.0	40.5	35.9	32.4

Probably this means not only that defective vision retards progress in school, but also that the mentally backward children do not respond to the visual tests so well. This last idea is borne out by the fact that the oculists' more experienced testing found less slight defect (fair vision), by about 25 per cent. at each age of all examined, than the teachers; and, in testing very young children, the greater the time and trouble taken the less the proportion of defects found.

The conclusions as to visual conditions in school may be summed up as follows:—

1. The percentage with normal vision increases with every year of age and standard of advance during school life, reaching 80 per cent. with Standard VII.

2. Ten per cent. all through school life have "bad" vision—this remains about a constant proportion.

3. The greater part of the defective vision is due to slight defect, which gives imperfect but fair vision, due probably both to mental and ocular conditions, and of greatest importance educationally in the first half of school life.

4. Very bad visual acuity ($\frac{6}{18}$ or worse), due to accident, disease, and probably also to spasm and myopia, is met with in a small proportion, increasing regularly from 1.5 per cent. in Standard I to 3.5 per cent. in Standard Ex-VII.

The percentages of defect appear to vary more with the social and nutritive conditions of the children, and with racial peculiarity than with any school conditions. School effects from fine work and poor illumination are more likely to show themselves in general nerve strain, and unhealthy, neurotic, nutritional conditions, than in very defective visual acuity during school life.

Educationally, the standard of normal vision need not be adhered to; all children with vision equal to $\frac{6}{9}$ or $\frac{6}{12}$ should, however, be known to the teacher. The 10 per cent. of children with bad vision ($\frac{6}{18}$ or worse) require special arrangements in school, and should be compelled to have attention paid to this, and, if possible, medical advice, with a view to improvement. Such children are detected by the teachers' testing as readily as by an oculist's more careful work; and for practical purposes any future arrangements should be based on each child's distant vision under working conditions, being tested and recorded by the teacher at least once a year. A list of such children ($V=\frac{6}{18}$ or worse) in each class should be suspended in the class-room and kept up to date.

THE RESULTS OF TESTING.

The oculists gave green cards of advice to be taken home, and, in very bad cases, red cards, pressing the need of medical advice in strong terms. The teachers kept a record of the oculists' findings. In the last six weeks of the year this work was checked by finding what steps the teachers had taken. Out of 14 schools with 680 children with visual defect, Dr. Critchley found them arranged in class 27 per cent. in front row, 22 per cent. in next, then 18, 15, 9, 8. The other oculists had similar experience, but when they record class by class it is very obvious how much depends on the teacher, and how necessary hygienic knowledge and instinct is as a part of the teacher's training.

In regard to those who had taken advice, this again, to a great extent, depended on the enthusiasm of the teacher; Dr. Critchley found that 44 per cent. given cards had gone somewhere at least once, Mr. Hanson, 32 per cent., Mr. Hickman 28 per cent., Mr. Snowball 34 per cent., Dr. Henry 31 per cent., and Miss Leney 50 per cent. (72 out of 156). Of these she managed to examine and prescribe for most herself at the New Hospital, but many prescribed for could not afford to get the glasses. Of 2,298 children with defective vision seen at least three months later, 30 per cent. had had some kind of advice, but, as Mr. Snowball remarks, the percentage figures appear much better than the reality, as many never followed up beyond one visit to hospital.

HOSPITAL TREATMENT.

The oculists unite in stating that, so far as could be gathered, the hospital treatment, apart from ophthalmic hospitals, in very many cases was useless, and frequently had the effect of discounting the effects of the school testing. Other reasons why efficient treatment was not pursued were:

1. Children went by themselves, and were rightly refused treatment nothing further being done.

2. Parents refused to lose work, a day, or even half a day per visit, and for hospital treatment two visits are generally necessary.

(*a*) To examine vision, and the eye, homatropine is put in, and after 45 minutes waiting, retinoscopy is done to measure the refraction

(*b*) Second visit, a week later, glasses are prescribed by trial, a third visit is advisable for the surgeon to see the glasses as put in frames and on face, and record vision obtained.

3. After all this trouble parents often plead poverty and refuse to buy glasses, probably too often expensive sphero-cylindrical glasses costing 7s. or 8s. are prescribed. In very many cases such theoretical correction is quite unnecessary in children.

4. Hospitals from press of work or other causes do not always deal thoroughly with the cases. The oculists remark on the many children dealt with who were not submitted to the routine examination involved in thoroughly honest work, some being given lotion, some ointment, until they ceased to attend.

5. Poverty, social conditions, ignorance and apathy result in opposition of many parents.

THE PROBLEM AS AFFECTING HOSPITALS.

The selection of children whose efficiency in school is damaged by dirt, parasites, chronic diseases of ears or impaired visual acuity is just beginning. The treatment of all these matters is tedious, has to be thorough, but is a routine of the most monotonous and uninteresting description. The burden at present falls on the hospitals, and they have not yet adapted themselves to it. Whether even with time they ever can efficiently discharge this public duty is at least doubtful. The vision examinations show 10 per cent. of the 600,000 school children in London so bad, that detailed investigation and possibly treatment are necessary. An equal number with slighter defects would also benefit by this. It is found at hospital or elsewhere that a few of this last class on further examination come out normal as regards acuity, and may require no treatment. No amount of reasonable care can eliminate these in school. Regarding vision only, the conclusion is that from 10,000 to 20,000 children annually in London ought to have detailed medical examination, and, if required, treatment, if the best educational results are to be obtained, and their future efficiency as citizens is to be promoted.

At present the school authorities cannot be advised to go further in individual cases than the detection of defective vision, and advising as to the necessity of seeking improvement. It might ultimately become desirable to examine children as to their refraction, and treat this alone, referring all other cases to seek other medical advice, but for this, even, the time is not ripe.

FUTURE PROVISION.

A first selection by the teachers, to be made annually, and each child to have recorded date, name, age and vision, is the basis for action. The lists of defective children should then be examined by a qualified medical man ("oculist"), and regularly checked; classes or even whole departments may, if necessary, be re-examined by him. Questions affecting school work, light and the effects on the children, require investigation and explanation to the teachers. The following up of the work in regard to the examinations is absolutely necessary, or it will soon be inefficiently done by the teachers. Work equivalent to that of four oculists (half-time) to give five sessions a week in the schools is the smallest amount which will be able to cope with this work, and experience alone will show whether this number will be sufficient.

THE NOTIFICATION OF SMALL-POX IN AMERICA.—A medical practitioner of Atlanta, Georgia, was recently fined between £5 and £6 for failure to report a suspicious case of illness which afterwards developed into small-pox. It is alleged by the city health officer that in consequence of his failure two deaths and at least four cases of small-pox have occurred.

DISTRIBUTION OF HOSPITALS IN LONDON.
A SUGGESTION.

[From a Correspondent.]

The paper read by Sir Henry Burdett at the meeting of the Hospitals Association, and reported in the British Medical Journal of March 7th, was very interesting, but the discussion which followed merely served to prove two things.

The first is that the question of hospital distribution is not one that can be adequately settled by unofficial and more or less *ex parte* discussion, however earnest. The second, that the views of any one individual, however judicially conceived and ably expressed, are not likely to receive that unanimous assent which it is essential they should receive if they are to become effective views, and not remain mere expressions of academic opinion.

Sir Henry Burdett is probably the most generally recognized authority on the lay aspects of all hospital questions, and is certainly in a better position to obtain readily all the information which is essential for the formation of a defensible if not satisfying opinion on such a matter, than is any other private individual. If, therefore, his views fail to obtain general acceptance among those specially interested no one else is likely to be more successful.

The practical consideration of the hospital needs of London and of the better distribution of existing beds, is a problem of great difficulty and intricacy. It involves examination not only of the work and merits of various institutions, of the difficulties under which each would labour if called upon to remove, but also a close study of those factors which tend to populate and depopulate various areas as time goes on. For hospitals cannot be moved to and fro at will, and an estimate would be required not alone of the needs of all districts to day but also of what those needs are likely to be twenty, thirty, and more years hence.

A proper solution of such a problem could not be obtained without collection of an enormous amount of evidence of all kinds, and a very much more extended inquiry than any one man could possibly undertake.

Nevertheless, it is one that is called for at the present time. The position of one pawn upon a board necessarily affects that of all the rest, and the position of each hospital should be fixed in accordance with some authoritative plan drawn up so as to adjust, as far as may be, the total hospital possibilities of London to the needs of the whole metropolitan area. For this reason, also, it is not desirable either that hospitals should be left entirely free to remove or remain where they are *proprio motu, propria voluntate*, or that pressure to remove should be brought upon them by more or less irresponsible persons, as has lately been the case with St. George's and St. Bartholomew's.

Apart, too, from the common interest of all London, it is not even certain that the managing authorities of any given hospital can be absolutely depended upon to form a judicial opinion on what is best even in its own interest, when such a question as removal is under discussion.

Hospital Committees are composite bodies, and the interests represented on them are very complex. They all have for their common and ultimate object the promotion of the interests of the suffering poor, but the views of each individual as to how such common interest will be best promoted are unconsciously biassed by the character of the particular work with which he is charged. Any common decision arrived at, therefore, is likely to be less a true consensus of opinion than the outcome of the force and ability with which the views of the representative of one particular interest have been urged, and the influence he possesses among his fellow-councillors. In any case, therefore, such an issue would be best "tried" before an outside body. St. Bartholomew's wisely adopted this course in its own case by laying its affairs before the Mansion House Committee, and if the Royal Orthopaedic had adopted a similar course the unpleasant incidents which have occurred would have been avoided.

The decision of the latter hospital is also an instance of the great need there is of some general scheme, for if it has to move at all it had better have been moved further away. We shall now have the three orthopaedic hospitals in practically the same area, and within a short mile of one another.

Besides the foregoing questions there are others of an allied nature which press for authoritative consideration even still more strongly. The amount of money that can be raised for hospital charity in London is not unlimited, and there is not the slightest doubt that the way in which it is spent might be materially improved. At present some of it is wasted and some of it absolutely misspent. Any one who takes the trouble to go into matters seriously will be convinced that, apart from certain hospitals which are merely superfluous and others which ought to be amalgamated (what is the sense, for instance, of there being an ophthalmic hospital on one side of a street and a general hospital with an ophthalmic department on the other?), there are some institutions posing as hospitals whose existence is in some ways a scandal and which ought to be suppressed. In some of them the cloak of charity is made to cover a good deal more than it should, and in others the work of the managers, though perfectly honest in its way, is so perfectly futile that the money spent on it would be much better devoted to places with greater possibilities before them.

There are also "dispensaries" which draw funds from the common purse and which require overhauling, and other questions which also require examination are whether it should continue to be in the power of any one to start a fresh "hospital" at will, and whether some legislation is not required for the regulation of all "medical homes," under whatever guise they are carried on.

Most of these points were touched on by the Committee of the House of Lords in 1892, but they were not definitely dealt with, and it is quite time now that they should be. There is, however, no body at present in existence capable of doing so. The various hospital funds can influence matters to a certain extent, and aided by the profession and the general press could ensure the formulated views of any higher authority being duly carried out. But they have neither the machinery required for an inquiry of the scope demanded, nor are they sufficiently "detached" for their views to be bowed to by all parties. In the writer's opinion the questions referred to are sufficiently important, sufficiently intricate, and sufficiently pressing to call for a Royal Commission, to hold another such inquiry as that conducted by the House of Lords Committee in 1891-2.

ETIOLOGY OF SLEEPING SICKNESS.

We have received from the Secretary of the Royal Society the following communication received on November 14th by the Committee of the Royal Society appointed to direct the investigation into the outbreak of sleeping sickness in Uganda from Dr. Aldo Castellani, a member of the Commission sent out to Uganda to pursue the investigation. Dr. Castellani's report, with addenda received subsequently, is in substance as follows:

Several germs have been described as the cause of sleeping sickness. Cagigal and Lepierre in 1897 announced that they had isolated from the blood of a sleeping sickness patient a bacillus which when injected into animals was able to reproduce the disease, but those experiments of the two Portuguese doctors were not confirmed later by Brault and Lapin.

Next Marchoux, basing his statements on the following obervations, is of the opinion that sleeping sickness is due to Fraenkel's diplococcus. At the necropsy of a sleeping sickness patient who was suffering also from pericarditis, he found Fraenkel's diplococcus in the exudation of the pericardium. It is worth noting that he found the germ in the pericardium only, and not in the cerebro spinal fluid, or in any other situation. In a second case complicated with chronic rhinitis and suppuration in the sinus frontalis the secretion of the nose showed the same micro-organism. Besides these two observations, to which I do not think a great amount of importance can be attached, Marchoux was brought to this hypothesis by having noticed that sleeping sickness developed sometimes in people who had suffered from pneumonia.

Lately there have been the bacteriological researches of the Portuguese Commission and those of Dr. Broden. The Portuguese described a germ (a diplo-streptococcus, to use their denomination), which they state they have found constantly in the cerebro-spinal fluid at the necropsy of their cases. They state that they have also found the same organism in patients during life: constantly in the blood of cases examined for this purpose, and very frequently in the cerebro-spinal fluid taken by lumbar puncture. The characteristic of their organism is that it does not usually grow on the ordinary culture media like agar, glycerine-agar, etc., and not at all on gelatine. The Portuguese do not mention having made any attempt to see if the blood of sleeping sickness patients has any agglutination power on their germ.

Dr. Broden, director of the bacteriological laboratory of Leopoldville, describes as the cause of the disease a bacillus, slightly motile, producing a pellicule in bouillon and growing abundantly on potatoes. He was fortunate to find the germ

constantly in the blood of all his cases. The bacillus was not agglutinated by the blood of the sleeping sickness patients.

In this short note I propose to give only a brief account of my experiments and researches. I must state first that I have never been able to find any of the germs described by my predecessors, but on the other hand I have found an organism which I think I have good reason to consider to be the cause of sleeping sickness. I have grown it with absolute certainty (and always pure), from eight out of ten necropsies, from the cerebro-spinal fluid and blood of the heart taken with aseptic precautions. (Counting the last necropsy, I have grown the micro-organism in nine out of eleven necropsies.) *In vitâ* I have found it only once in the blood, but I have grown it in two cases out of three from the cerebro-spinal fluid removed by lumbar puncture.

Description of the Organism—the Germ.—The germ may be considered as a distinct variety of the streptococcus group. The microscopic appearance is very variable, depending on the different media on which the germ has been cultivated, and on the different times of growth, etc., all transitions from long chains to typical diplococci being seen. The form and size of individuals is also, under certain limits, variable.

Frequently about the chains and the diplococci-forms well defined mucoid capsules [*Schleimhüllen*] are seen, and in hang-drop preparations the short chains and the diplococci-forms show a well marked Brownian movement. In old cultures involution forms are produced, frequently single members present larger dimensions, and sometimes (as Stoltz has already observed in streptococcus lanceolatus, *Centralblatt für Bakt.*, xxiv, p. 337) they present the form of a club.

Staining Properties.—It is easily stained with the ordinary solutions of the different aniline dyes.

Cultivation.—Gelatine.—Growth takes place very well on gelatine at a temperature of about 22°, and also below. In a stab culture the stab is generally thread-shaped, although sometimes it may appear a little granular; the surface growth is very slight. In streak cultures the colonies coalesce forming a mass with a fine granular surface, and sometimes wavy borders.

In some few cases, after five or six days, I have noticed a very slight liquefaction of the gelatine.

Agar.—In a stab culture growth takes place luxuriantly along the stab; the surface growth being generally more delicate. In streak culture the growth is generally much more vigorous than the typical streptococcus pyogenes and the streptococcus lanceolatus, the colonies showing a marked tendency to coalesce Still, in some cases, the growth may be much more delicate than usual and the colonies may remain separate.

The water of condensation shows, as a rule, a slight whitish deposit.

Glycerine-agar.—Growth as on agar, but rather more delicate.

Sugar-agar.—No gas formation.

Litmus-agar.—The colour of the medium does not change.

Potatoes,—Very slight growth; sometimes none.

Bouillon.—The appearance of bouillon cultures varies greatly. In the majority of cases the bouillon remains clear, and there is a flocculent and sometimes sandy sediment. In these cultures one finds generally on microscopic examination long chains. In some cases the bouillon is cloudy, with little or no sediment, and in cultures of such an appearance microscopical examination will often show the cocci arranged in pairs and in short chains. The same strain of germ sometimes will make the bouillon cloudy, and sometimes not. I once inoculated a tube of bouillon from an agar culture, and obtained a bouillon-culture with no turbidity, and with a well-marked flocculent sediment. Two weeks after I inoculated another tube of bouillon from the same agar-culture, but this time the bouillon became cloudy, and the sediment was very slight. In a strongly alkaline bouillon it is easier to obtain a diffuse cloudiness. The same observation has been made by Waldvogel with other varieties of streptococci. The bouillon tubes presenting a general cloudiness, on microscopical examination show chains and diplococci forms, sometimes diplococci forms only.

Serum.—Good growth, but more delicate than in agar.

Milk.—No coagulation. This is an important character of differentiation from the streptococcus pyogenes, as well as from Fraenkel's diplococcus, both of which produce coagulation (Kruse, Pansini, Lehman).

Relation to Oxygen.—The micro-organism is a facultative anaerobe.

Agglutination.—Experiments have just been begun to determine if the germ is agglutinated by the blood of sleeping sickness patients. The experiments are still too few for one to come to any definite conclusion, but as far as they have gone the results have been very satisfactory.

Conclusions.

From the description just given, I think this germ must be considered a new variety of streptococcus. Every bacteriologist knows how difficult it is to differentiate sharply the varieties of streptococci on account of the numerous transition forms that occur, even a sharp separation between the streptococcus pyogenes and the streptococcus lanceolatus[1] (Fraenkel's diplococcus) seeming to many authors to be impossible. Still I think the streptococcus I have found can claim to be regarded as a distinct variety. The cultivation on gelatine is sufficient to differentiate it from the streptococcus lanceolatus, as the latter does not grow at all, or only very badly on that medium.

From the streptococcus pyogenes it is differentiated by its much more vigorous growth on all media, and especially on agar, by the tendency of its colonies to coalesce, and by the non-coagulation of milk. As regards the diplo-streptococcus of the Portuguese, I do not think any confusion can arise. The Portuguese state that the culture of their germ generally failed every time on the usual media like agar, gelatine-agar, etc., and with gelatine they never succeeded in obtaining cultures.

The streptococcus that I have described grows very well on gelatine and on all the other usual media. This character differentiates the organism also from the streptococcus intracellularis (diplococcus intracellularis of Weichselbaum), which does not grow at all, or very badly, on gelatine, and also, according to some authors (Lehman), on cow serum.

My experiments are not complete, and they are not yet numerous enough; still, having grown my germ (always pure) from eight out of ten necropsies, and having grown it from the cerebro-spinal fluid taken *in vitâ* by lumbar puncture in two out of three patients, having also had, as far as I have gone, very satisfactory results as regards agglutination, I think I am not wrong in stating that in all probability the cause of sleeping sickness is to be looked for in this germ. I think this organism is a distinct variety of streptococcus to be classed between the streptococcus pyogenes and the streptococcus lanceolatus (Fraenkel's diplococcus), and it might be called the streptococcus of sleeping sickness.

[1] I follow the classification and nomenclature of Lehman (*Lehrbuch der speziellen bakteriologischen Diagnostik*).

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THE SMALL-POX EPIDEMIC IN ORSETT UNION, ESSEX, 1901-2.

Dr. G. S. Buchanan, Inspector of the Local Government Board, has submitted to the Board a valuable report on the small-pox epidemic in the Orsett Union in 1901-2. The union extends from west to east about fourteen miles, and from north to south about seven miles. The Thames forms its southern boundary throughout, and part of the river here consists of Long Reach, in which the Metropolitan Asylums Board's small-pox ships are moored. The Orsett Rural District contains seventeen parishes, and in twelve of these small-pox occurred during the epidemic; the five which escaped were agricultural parishes along the northern boundary of the union. The report contains maps and tables in illustration and explanation of the various points dealt with. The nearest village to the hospital ships is Purfleet, a collection of workmen's houses adjoining three large riverside works. The population of Purfleet is 600, and the figures show that the small-pox attack-rate in ten months, September, 1901, to June, 1902, was much higher in Purfleet than elsewhere in the union, the next highest rate being in "West Thurrock," which is situated just to the east of Purfleet, and in the same parish. The attack rate in Purfleet was 86.6 per 1,000 of the population, and in "West Thurrock" 41. In the other places attacked the rates ranged from a maximum of 30.8 to a minimum of almost nil. Taking houses instead of cases, the number of houses newly invaded in Purfleet in the same period was 40 per cent. of the total; in "West Thurrock" 19 per cent.; and in the rest of the district the range was from 10.7 per cent. as a maximum down to almost nil.

The report gives the usual information regarding the influence of vaccination in preventing small-pox and in modifying its attack at various age periods. It also contains a very interesting and suggestive account of the dealings of guardians with vaccination, and of the effect which the prevalence of small-pox and the manifest influence of vaccination in protecting from small-pox had on the views of the guardians as to their duty in the matter. When Dr. Buchanan first visited the Orsett Union in November, 1901, he found that none of the guardians were particularly desirous to bring vaccination questions forward. In past years they had been

notably lax in administering the Acts. A local antivaccination league had received the marked support of a guardian and local employer of labour, and antivaccination had been made a plank in the platform of guardians at election times. The result was that the vaccination officers were discouraged from prosecutions, and that when cases came before the magistrates it was seldom possible to do more than obtain an order for vaccination, no further action being taken when the order was disobeyed. After 1898 the local league encouraged applications for exemption certificates. In presence of small pox, however, and stimulated by Dr. Buchanan's advice, the guardians became more active. Advertisements were issued urging vaccination and revaccination. House-to-house visits were made, and the demand for vaccination increased. The guardians even sought the co-operation of school authorities for examination of children to ascertain their vaccinal condition, and this request was complied with except in the case of one School Board. "In the above ways, and otherwise," says Dr. Buchanan, "the Boards of Guardians, during the later stages of the epidemic, made considerable efforts to secure the protection of the population of the union. Individual guardians (some of whom in the past had actively opposed the enforcement of the Vaccination Acts) did good work in this respect." Finally, it is very notable that, persuaded by the teachings of experience, this Board of Guardians in March last "adopted a resolution that in their view it was 'absolutely essential that every person should be protected by efficient vaccination and revaccination' in view of prevalent small-pox."

Space prevents us following Dr. Buchanan through all the details of a clearly-written and well-argued report, and so we content ourselves with reprinting his own summary as follows:—

1. Epidemic small-pox in Orsett Union in 1901-2 had its beginning (September-November, 1901) among the small community of Purfleet and in persons living elsewhere in the union whose attack could be referred to infection from others who had contracted infection at Purfleet. From the middle of November, 1901, onwards the disease became prevalent over the whole of the southern portion of the union, its incidence being especially severe upon "West Thurrock" and South Stifford, which lie between Purfleet and Grays, and upon the parish of Aveley, which adjoins Purfleet on the north.

2. Throughout the epidemic small-pox prevailed in Purfleet to a much greater extent than in other portions of the union. The disease continued to occur there even after the end of March, by which date not more than 40 persons are believed to have remained who were neither vaccinated children, revaccinated or recently vaccinated adults, or persons who had suffered from small-pox.

3. When considered along with previous experience of the ability of small-pox hospitals to disseminate infection in their neighbourhood, and with the history of small-pox in the Orsett Union since 1834, the facts of this epidemic give strong grounds for inference that small-pox prevalence in Purfleet was set going, and from time to time throughout the epidemic was reinforced, by infection aërially conveyed from the Metropolitan Asylums Board small-pox hospital ships, just over half a mile away across the water.

4. It is probable that the heavy incidence of the disease on portions of the union nearest to Purfleet was attributable in considerable measure to association of its inhabitants with Purfleet and with Purfleet residents. The facts available do not suffice to indicate whether prevalence of small-pox in inhabited areas distant from two to five miles or further from the hospital ships has been related in material degree, or at all, to infection conveyed aërially from the ships to those areas.

5. Although cases of small-pox occurred among "contacts" (those attacked having in the majority of instances refused to avail themselves of such protection as could be afforded by vaccination or revaccination after exposure to small-pox infection), excessive prevalence of the disease among "contacts" was not a conspicuous feature of this epidemic. In at least four-fifths of the dwellings invaded by small-pox no case of small-pox occurred among the "contacts."

6. There was no failure in provision of hospital isolation for small-pox cases; throughout the epidemic notified cases of small-pox were promptly removed to hospital. Disinfection and other preventive measures adopted by the sanitary authorities concerned were upon the whole efficiently carried out.

7. Prevalence of chicken-pox, and confusion in diagnosis between chicken-pox and small-pox, conduced in certain instances and in certain parts of the union (though not in Purfleet) to spread of small-pox infection.

8. The exceptionally large number of children under 10 in the union who in September, 1901, were unvaccinated; the hesitancy shown by many inhabitants of the union, accustomed to the statements by which local antivaccinators had sought to discredit vaccination, to safeguard themselves and their families by vaccination and revaccination; the reluctance of workmen and artisans to undergo revaccination in consequence of apprehension of loss of pay if a "bad arm" resulted—all these were factors which had an important share in determining the magnitude of the epidemic throughout the union.

9. With the progress of the epidemic and, as a result, in considerable measure, of the action to promote vaccination which after the end of November was taken by the guardians, increasing numbers of persons in the union secured the protection of vaccination and revaccination. By March, 1902, as many as 6,763 persons had been recently revaccinated, and many children over 1 year had been recently vaccinated, by the public vaccinators; much revaccination and vaccination were likewise performed by medical practitioners who were not public vaccinators.

10. No case of small-pox occurred during the epidemic among persons who had been recently revaccinated save those who were already incubating small-pox at the date of the revaccination. No case of small-pox occurred among the communities of the reformatory ship *Cornwall*, or of Purfleet garrison, who in September, 1901, were already well protected by revaccination, and this notwithstanding the proximity of these communities to Purfleet and to the Metropolitan Asylums Board hospital ships

THE RECENT EPIDEMIC OF SMALL-POX IN LONDON.

Paddington.

The special report on the outbreak of small-pox in Paddington in 1901-2 drawn up by Dr. Reginald Dudfield is a comprehensive statement, including a discussion of the subject of small-pox generally. The historical records dealt with furnish interesting reading, and many of the statistics given relate to London as a whole. The outbreak in Paddington extended over fourteen months, and included 117 cases of the disease and 19 deaths. At all ages the fatality of cases in unvaccinated males was 60 per cent., in females 28.5 per cent.; in those vaccinated in infancy the fatality was 8.5 per cent., for males and 12.7 for females; in the revaccinated 40 per cent. for males and *nil* for females. Of the cases of small-pox occurring in vaccinated persons under 15 years of age none died, in the unvaccinated 50 per cent. died; in vaccinated cases between 15 and 30 years of age 4.3 per cent. died; in the unvaccinated at the same period 42.8 died; and in vaccinated cases between 30 and 45 years of age 22.2 per cent. died, whilst in the unvaccinated cases 50 per cent. died. The effect of vaccination is also shown in the period of detention in hospital, being forty-four days for the unvaccinated and twenty-eight days for those vaccinated in infancy.

Dr. Dudfield gives a number of particulars respecting the channel of infection, and also the distribution of the disease in the borough, and the usual preventive measures adopted. An attempt is also made to gauge the condition of the community as to vaccination, which is always a difficult matter.

The medical officer concludes that at the commencement of the outbreak 9,026 were unvaccinated, 118,480 had been vaccinated, and 16,682 had been revaccinated. On this basis the attack-rates of small pox were 1.77 among the unvaccinated, 0.79 among the vaccinated, and 0.41 among the revaccinated. But taking those actually known to have been exposed to infection, the attack-rate was 162.8 per 1,000 unvaccinated, 79.1 vaccinated, and 1.77 among the revaccinated.

THE EPIDEMIC OF SMALL-POX.

There is no material improvement to report as regards the prevalence of small-pox since the notice published last week. The distribution of the disease as regards counties remains very much as before, with the exception that there are now, according to the reports, ten English counties affected instead of nine. The number of counties included in the last notice was also ten, but the statement that a case had been found in Newcastle-on-Tyne on February 16th proves happily incorrect. Indeed, the medical officer of health, Dr. H. E. Armstrong, reports that there has been no case recently in Newcastle at all.

So far as can be gathered from the published, though unofficial records, the number of fresh cases in different towns and localities does not justify any conclusion that the epidemic is fading out.

Cheshire has had 5 fresh cases between February 7th and March 7th, and included among them is Dr. Garstang, Medical Officer of Health of the Bucklow Union.

In Lancashire the disease continues to be widely distributed, while it was found necessary to close the Wolverhampton Road Board School, Walsall, on March 4th, owing to an outbreak of 7 cases in four days among the children.

In Derbyshire cases continue to occur in several localities, and there has been a somewhat threatening outbreak at Welton in particular.

In Gloucester Workhouse one case is reported, and in Lincolnshire 3 cases in one family at Spalding.

In Nottinghamshire 13 cases had been reported altogether up to March 7th; while in Shropshire there is another instance of 3 cases in one house.

In Staffordshire the total number of cases reported up to March 9th was

115, including 5 fresh cases at Burslem, and a tramp who was found walking about the streets at Hanley on March 1st. In Warwickshire the number of cases under treatment at Birmingham on March 8th was 49, including 19 fresh cases reported during the week ending the previous day. At Nuneaton there has also been a fresh case, the patient being a female inmate of the workhouse, who had attended to a tramp, but had refused to be vaccinated.

The part played by tramps in all the reports is striking.

THE IMPERIAL YEOMANRY HOSPITALS.

AMONGST the various benevolent schemes of voluntary aid to the sick and wounded during the late war, pre-eminence must be given to that of *The Imperial Yeomanry Hospitals*.[1] In three handsome and lavishly illustrated volumes, edited by the Countess Howe, who was the energetic and painstaking Chairman of the committee, we find described the origin, progress, and satisfactory results of the undertaking.

Vol. I is devoted to organization and administration, and it consists of the reports of the Chairman, the Hon. Treasurer, the P.M.O. (Colonel Sloggett, C.M.G., R.A.M.C.) of the Deelfontein Hospital, and the medical officers in charge of the "offshoots." These offshoots were stationary hospitals at Maitland, Pretoria, Elandsfontein, and Johannesburg (officers'), besides the Field Hospital (under Major Stonham, C.M.G.) and the Bearer Company (under Major Hale, D.S.O.). The total number of beds, after full expansion, was 1,960, and no less than 18,688 in-patients were treated. We learn that over £145,000 was subscribed in the first instance, and that rather more than this amount was expended; but, as the buildings and equipment were eventually sold to Government, there is a balance remaining of nearly £21,000, the disposal of which is under consideration, a suggestion being that it might aid in the endowment of an industrial school for the children of Yeomen who suffered during the war.

Vol. II consists of a diary of the movements of the field hospital and bearer company kept by Major Stonham, aided by notes by Major Hale and Dr. Green. Very interesting is Major Stonham's description of the wanderings of the combined "units," and it is evident that there is great advantage in having the bearer company and field hospital under one head, which was practically the case, owing to the perfect understanding which seems to have existed between the two commanding officers. Major Stonham was taken prisoner along with Captain Langman (of the Langman Hospital) by General De Wet after the action at Rhenoster, but he speaks well of the treatment accorded them by their captor, who not only soon liberated them, but provided them with sheep for rations. The equipment of the field hospital appears to have been excellent, and the ambulance wagons were an improvement on the regulation pattern. Major Stonham makes some practical suggestions as the result of his experience with regard to the contents of the Field Medical Companion and Surgical Haversack, etc. And he gives his opinion that the only anaesthetic suitable for a hot climate is chloroform, thus endorsing the opinion often expressed by military surgeons.

Vol. III contains the medical and surgical reports as arranged for the Committee by Mr. Raymond Johnson, B.S., F.R.C.S.; Surgeon-Major Kilkelly, C.M.G., Grenadier Guards; Dr. H. D. Rolleston; Major C. Stonham, C.M.G., F.R.C.S., Secretary; and the late Dr. J. W. Washbourn, C.M.G., M.D., F.R.C.P. The work done in the several branches of the I.Y.H. is reviewed by these gentlemen, and the following are a few of the points of interest.

Enteric Fever.—Dr. Washbourn was of the opinion that this disease as "met with in South Africa does not differ, in any essential particular, from that met with in England and America." Amongst minor peculiarities he alludes to the frequency of thrombosis, and the profuseness of the rash. In India, we believe, thrombosis is a somewhat rare complication, and absence of rash is the rule rather than the exception. Constipation is frequent in India, and Washbourn drew the conclusion that it is much more common than is usually imagined both in Africa, England, and America. It would seem, however, that in this there is considerable variation; for at Deelfontein he notes that constipation was present in 100 of the 234 acute cases he deals with; while at Pretoria, he and Dr. Rolleston noted its presence in 90 per cent. of their 307 cases. At Deelfontein it was observed that when diarrhoea did occur, prognosis was bad; for we find that it was present in 29 of the 35 fatal cases. The Pretoria case mortality was 17·5, comparing unfavourably with that of Deelfontein (13.7), but the number of "diarrhoea" cases is not given. There were, however, more cases in which bowel haemorrhage occurred, followed by fatal result. The conclusion arrived at with regard to inoculation are on the whole unsatisfactory; except that at Pretoria, the figures show that though it did not protect from attack, the death rate was lower. We await with interest the statistics which should be available from the army reports, in which larger numbers will be dealt with. As regards causation of the disease, nothing definite is arrived at. That a pure water supply is the principal desideratum all agree; but in one of the reports (that of Mackenzie's Farm, Maitland) it is expressly stated that soiled ground, flies, and dust were responsible rather than water, herein agreeing with the opinion given by Dr. Tooth in *A Civilian War Hospital*.

Dysentery was the disease next in importance. Dr. Washbourn considered its prevalence "due to insanitary conditions," and that it was of "infective" type. At the two largest hospitals there were about 1,000 cases, the case-mortality at Pretoria being 2·75 per cent. The treatment by ipecacuanha appears to have been less successful than was expected from Indian experience, and magnesium or sodium sulphates were often employed in preference. The effect of sulphur and Dover's powder, as described by Dr. Richmond, would seem to warrant further trial.

Surgical Reports.—We find notes taken at Deelfontein by Messrs. Raymond Johnson and H. A. Ballance. The cases of bullet wounds were 185 in number, of which 27 were cases of retained bullets; and Mackenzie Davidson's "cross thread localizer" was found to be of the greatest service (as described in the special x-ray report by Mr. J. Hall Edwards). The surgery of the Field Hospital and Bearer Company is described by Major Stonham, and his report is valuable, containing, as it does, many useful and practical suggestions. The actual admissions to the field hospital were 1,267; of these, 665 were medical cases and 602 surgical. Of the latter, 342 were bullet wounds, and many of the most interesting of these are described. Major Stonham arrives at the conclusion that the "interests of the wounded are best served by allowing them to remain on the field for some time," more particularly in cases of abdominal and chest wounds. In other words, there is nothing to be gained, and much to be lost, by attempting to pick up men before the close of an action; indeed, the succouring parties only attract the enemy's fire, and more casualties are the result. He concurs with previous writers in considering the Mauser and Lee-Metford bullets to be "humane" (and the favourable course run in cases of penetrating chest wounds is an instance in point). The surgery of the Pretoria branch is reported by Messrs. A. R. Douglas and H. Williamson, with a supplementary note by Mr. Douglas Drew. Mr. Howell Davis gives a tabular statement of the work at the Elandsfontein, with which the volume concludes. Worthy of mention are some interesting notes on the ophthalmic department by Mr. Vernon Cargill.

[1] *The Imperial Yeomanry Hospitals in South Africa, 1900-02.* Edited by the Countess Howe. Three vols. London: A. L. Humphreys. 1902. (4to. pp. 734, with numerous illustrations and photographs.)

COUNTRY HOLIDAYS FOR WORKING GIRLS.—From the recently issued report of the Factory Girls' Country Holiday Fund, which is in the fifteenth year of its existence, we learn that 3,200 poor girls and women have been sent away for a country or seaside holiday during the past year; several of these had never been out of London before. When it is remembered for those to whom help is offered by this fund, in so far as its finances permit, a holiday is not so much a pleasure or an amusement as a sorely needed help in the struggle for a precarious existence, all possible assistance to the fund will doubtless be ungrudgingly extended. The secretary is Miss Canney, St. Peter's Rectory, Saffron Hill, E.C.

STATE AID FOR THE BLIND.—It is stated that a movement is on foot among blind persons in the State of Illinois to procure the introduction of a Bill into the Legislature granting to each person afflicted with blindness, who is not under the care of a charitable institution and who has resided in the State for five years, an annual pension of 150 dollars (£30). A circular has been sent out to all senators and representatives of those interested asking them to assist in the passage of the Bill. The plea is put forward that while Illinois maintains an institution for the blind, no provision is made for them after they leave the school, and that they are thrown upon their own resources without a chance to profit by what they have learned. Those unable to obtain employment are forced to rely upon the almshouse, their friends, or public charity.

BRITISH MEDICAL ASSOCIATION.

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British Medical Journal.

SATURDAY, MARCH 14TH, 1903.

PARLIAMENT AND VACCINATION.

As reported in the BRITISH MEDICAL JOURNAL of March 7th the Prime Minister has now definitely stated, in answer to Mr. Coghill, that any new legislation regarding vaccination is to be deferred till a future session and that the Act of 1898 is meanwhile to be renewed. A further question by Mr. Galloway elicited the reply that the renewal is likely only to be for a single year. The position appears to be that in the meantime the President of the Local Government Board has been unsuccessful in getting the Cabinet to give effect to the views which he set forth in his reply to the deputation from the Imperial Vaccination League. It is also somewhat uncertain whether even next session will see the introduction of a new Vaccination Bill, though the fact that the Act of 1898 is to be continued only for a single year instead of for another quinquennium rather indicates that the Government have before them the possibility or probability of dealing with the matter in 1904.

In the interests of the public health the delay and doubt are much to be deplored. The 2,397 cases of small-pox in the North of England[1] since the beginning of the present year are the direct fruits of national neglect of vaccinal protection. The sooner the facts are faced with regard to small-pox prevalence and the need for its prevention by systematic revaccination the better will it be for the country. Down to this year Germany has been the only Power in Europe possessed of sufficient courage and foresight definitely to adopt measures for the stamping out of variola, and the remarkable success which has attended these measures is known to all the world. Germany's experience has been watched here with great interest, and indeed, with envy; but as yet its policy has not been imitated. That, however, is not the case with France. It also has been keeping its eyes open, and has observed the remarkable difference between small-pox prevalence in the German Empire and within its own boundaries. The French, as our Paris correspondent reported to us in an interesting letter published three weeks ago,[2] being wisely willing to learn even from their old enemy, are at present embarking on a system of national revaccination, not only of children before leaving school, but also of all persons on reaching the age of 21 years. France will now proceed to reap from this law the same benefits which Germany has garnered for the last quarter of a century from its law of 1874. Meanwhile, for the time at least, England, which gave to the world the discovery of vaccination, is to stand and look on at Teutonic autocracy on the one hand and Gallic republicanism on the other, protecting themselves against the ravages of small-pox, while we who pride ourselves on possessing a national constitution superior to either seem in this matter to be deprived of the advantages of both.

It is a lamentable position to occupy, but there is this at least to be said, that the medical profession of these realms is in no way responsible. The public and Parliament have had placed before them superabundance of evidence of the need for vaccination and revaccination. The value of these measures has been demonstrated time after time in the history alike of stricken populations, of small-pox hospitals, and of the public services in which the means of prophylaxis have been used. For, though Government does not insist on protection of the nation, it does insist that in its own departments, like the Postal Service and the Army and the Navy, revaccination shall be systematically practised, and the benefits correspond to the thoroughness with which the instructions are carried out. All this being so, the medical profession, having done its own duty, can afford to look on with comparative equanimity while the rulers and the people continue to dilly dally between variola and vaccinia. It is undoubtedly a great pity that small-pox deaths and small-pox disfigurement should still be permitted among us, and that great sums of money should be needlessly squandered in the erection of small-pox hospitals, and that trade should be disorganized, and all the inconveniences experienced which accompany the prevalence of small-pox. These things, however, are, after all, matters for public consideration in the first place. It is the public who elect the House of Commons, and the House of Commons who choose the Government, so that in the end the worst of the punishment falls on the right shoulders. By no means the whole of it, however, for those who take the precaution to render themselves immune to small-pox have still to suffer from the business disturbances, and have still to pay a share of the expenditure incurred in trying to combat its epidemics.

As in the case of other such organizations, anti-vaccinationists are much keener in opposition to vaccination than are the public at large in its support. With the former it is a test question at election times; with the latter it is only one item of general policy. Thus it comes that members of any political party may be tempted to give heed to loss of votes occasioned by resistance to the "anti" side.

We had hoped that the present Government, with its enormous majority in the Commons and its overwhelming strength in the Lords, would have risen above such considerations, and would have recognized in practice that *salus populi* is *suprema lex*. Perhaps it may still do so. By next session Mr. Long may have successfully pressed his claims for the introduction of a new Vaccination Bill. If so, it will not only be good for the country, but also, as we believe, it will in the end be good for the party which shows patriotism enough to withstand fanatical opposition to the protection of the public health.

Meantime the President of the Local Government Board has our hearty sympathy in what we are convinced must be his keen disappointment in this matter, and he may rest assured that if, as we are not at all hopeless will be the case, he attains his object next year, he will have the equally hearty congratulations of all who know what small pox is and what vaccination can do to prevent it.

[1] See Mr. Long's reply to Sir Michael Foster's question in the House of Commons, BRITISH MEDICAL JOURNAL, March 7th, p. 568.

[2] BRITISH MEDICAL JOURNAL, February 21st, p. 463.

IS ALCOHOL A FOOD OR A POISON?

A SOMEWHAT heated controversy is now being waged among scientific men in France on the alimentary value of alcohol. In *La Revue* of February 15th the question is debated by a number of the leading representatives of medicine and chemistry. M. Duclaux, Director of the Pasteur Institute, opens the discussion. On the strength of a number of experiments made on themselves by two American investigators (Messrs. Atwater and Benedict), he declared two or three months ago that alcohol so far from being a poison, has in moderate doses a distinct dietetic value. This profession of faith, made as it was just at the time when the Académie de Médecine was, at the request of the Minister of the Interior, drawing up a list of toxic essences employed in the manufacture of liqueurs, and when the Prefect of the Seine had placarded the walls of Paris with warnings as to the deadliness of alcohol, caused no little scandal among the antialcohol party, who, with the charity characteristic of "anti's" of every hue, even hinted that the opinion of the distinguished successor of Pasteur was not altogether disinterested. This ignoble imputation is mentioned only to show the degree of malevolence and mendacity to which the minds of well-meaning persons can be inflamed by prejudice. In *La Revue* M. Duclaux states that no definitive practical consequences can yet be drawn from the experiments of Atwater and Benedict. He is anxious that the question should be fully discussed, but he awaits the coming of adversaries who will consent to read and reflect before rushing into print. In the meantime he will agree to a truce, accepting as an average one litre of wine a day, an amount which has been shown by the American investigators to be harmless and even useful. The wine must be well diluted with water, and its consumption spread over the day.

Dr. Roux, also of the Pasteur Institute, holds that even if Atwater and Benedict's experiments be accepted, the fight against alcohol must still be continued. He thinks that habitual drinkers will never submit to the restricted allowance which Messrs. Atwater and Benedict imposed on themselves. In regard to wine Dr. Roux admits that the experience of centuries as seen in whole nations shows that moderate drinking does no harm. Dr. Metchnikoff holds that alcohol in any form is a poison. He confesses, however, that he has not made a special study of the question, and his conclusion is based on his personal experience. He never drinks alcohol himself, as he has found that even a small quantity makes him giddy. M. Berthelot is clear that alcohol is not a food. In very small doses it may be useful as a medicine. He thinks alcoholism is a factor in the present decadence of most European nations, and that their only hope of salvation lies in vigorous legislation against the evil. Professor Brouardel gives the guarded reply that from the chemical constitution of a body no conclusion can be drawn as to its alimentary value; experience alone can decide the question. Professor Charles Richet says there is no doubt that alcohol is a food, and that in very small doses, when pure, it is almost harmless. This fact, however, does not warrant the inference that it is a good food. He thinks that men must be angels before alcohol ceases to be a great danger. It is a mischievous delusion to think that alcohol is consumed as a food; it is rather its poisonous effects that are sought by unfortunates anxious to forget their misery. Professor Bernheim, of Nancy, does not think that the use of alcohol should be proscribed. He even holds that many abstainers from "the generous wine of France" are actuated by *snobisme*. Wine, he says, is, like other medicines, poisonous only in large doses. It would be as reasonable to forbid its use on that account as to condemn the eating of meat because is contains ptomaines, or eggs because phosphorus enters into their composition. Like everything that we take, wine suits some and not others.

Dr. Lancereaux also holds that wine is dangerous only if taken in too great quantity—for instance, in a daily dose of 3 litres. Alcohol in every form, however, if taken to excess brings on premature senility and tends directly to tuberculosis and death. Dr. Héricourt holds that to the question, Is alcohol a food? no absolute answer can be given. Every food is toxic in certain amounts, and although the consumption of a litre of wine a day may never have been a direct cause of the death of anyone, it may be so indirectly as by diminishing the power of resistance to disease. Dr. Landouzy is of opinion that natural wine taken in doses suitable to age, constitution, and mode of life does not deserve the uncompromising condemnation of intemperate advocates of temperance; he looks upon spirits and liqueurs, however, as generally speaking pernicious. Dr. Magnan thinks that, whatever chemistry or experimental physiology may appear to show, alcohol can never be recommended as a food. Dr. Garnier, speaking from a large prison experience, says that alcohol is responsible for 70 per cent. of all the crimes committed in France. Dr. Bourneville is not hostile to wine; he holds with M. Duclaux that from the hygienic point of view it is distinctly useful in moderate doses.

On the whole, then, the weight of opinion among leading scientific men in France is in favour of the dietetic value of wine. But the wine must be pure and it must be taken in moderate doses. Those who, like Cassio and Dr. Metchnikoff, have very poor and unhappy brains for drinking ought by all means to avoid looking upon the wine when it is red. They have no right, however, to make this personal idiosyncrasy the measure of other people's tolerance, still less to found upon it a universal law for the governance of mankind.

As to the deadly effects of the abuse of alcohol we are all agreed, and probably all will also agree that its use should be carefully regulated in accordance with individual constitution. The experience of men differs. Mr. Gladstone, who had an "open mind" in most directions, tested the matter for himself. He found that wine helped him when he had to make an extraordinary oratorical effort, and the want of it made the effort more laborious and less successful. On the other hand, some find that wine paralyses their faculties. In regard to alcohol, it may be said with truth that what is one man's meat is another man's poison, and that homely proverb seems to us to sum up the teachings of science and philosophy on the question.

THE DIAGNOSIS OF NOTIFIABLE DISEASES.

WE published in the BRITISH MEDICAL JOURNAL of March 7th, in an annotation, an abstract of the observations on mistaken diagnoses in the last report of the Metropolitan Asylums Board. The point raised, by implication, is of considerable practical importance both to the public and to the medical profession, and will no doubt become more prominent in the near future. It is by no means peculiar to London, but the London statistics afford a convenient

opportunity for discussing it. The only special feature in the circumstances of London is that, while in the great provincial cities the whole of the sanitary apparatus for dealing with notifiable infectious diseases is under the direct control of the municipalities, in London part of the machinery—the removal by ambulance and the isolation and treatment of patients—is in the hands of the Metropolitan Asylums Board. We are not aware, however, that this peculiarity affects the main issue in any way.

The authorities in many provincial and metropolitan boroughs have recently made special arrangements for giving such assistance as bacteriology can afford in the diagnosis of infectious disease. As was briefly noted last week, bacteriological diagnosis is not infallible, even in those diseases to which it is applicable. The list of notifiable diseases includes small-pox, cholera, diphtheria (membranous croup), erysipelas, scarlatina (scarlet fever), typhus fever, typhoid (enteric) fever, relapsing fever, continued fever, and puerperal fever. Now to some of these diseases, such as small-pox and scarlet fever, the bacteriological method is not applicable at all; to others such as typhoid fever it is, in present practice, only indirectly applicable. Diphtheria is an example of a disease in which bacteriology can give the greatest assistance in diagnosis, but even here the bacteriologist is not exempt from error in either direction, and, in any case, an interval of time must elapse between the taking of the specimen and the receipt by the practitioner of the findings of the bacteriologist. In a large majority of cases in which a diagnosis of diphtheria was incorrectly made, the disease from which the officers of the Asylums Board considered that the patients were suffering was tonsillitis. In how many cases the error was due to the bacteriologist and in how many to the practitioner we are not told, but every one with clinical experience knows that while on the one hand diagnosis from clinical appearances is often difficult, there is sometimes a discrepancy between such appearances and the negative results of bacteriological examination. In such cases we hold that the medical practitioner is not only justified in notifying, but is bound to do so by the terms of the Act, and by the general obligation which he owes to the community. Take again the statistics as to mistaken diagnosis in enteric fever, the information given is very incomplete, but we observe that the final diagnosis of twenty-two cases was febricula. What is febricula? We confess we are unable to answer the question, and had supposed that the term had dropped out of use. It never had any definite connotation, and was in fact applied to any undiagnosed febrile condition very much as "simple continued fever" is now, or was until recently, used in army returns. Probably the majority of the cases occurring in young subjects, which used to be so designated were in reality enteric fever, which in children is often very mild—that is to say, the symptoms are neither severe nor characteristic, and may terminate at an early period.

If we now turn to diseases in which bacteriology cannot give any assistance, we find it stated that 168 cases were notified as scarlet fever, which in the opinion of the medical officers of the Asylums Board hospitals had "no obvious disease." Any one conversant with school practice knows that an outbreak of mild scarlet fever may easily present 25 per cent. of cases showing nothing but an evanescent rash or a trifling congestion of the fauces and tonsils, with a rise of temperature lasting only a few hours. But in the presence of an outbreak of the disease no prudent practitioner would allow such cases to remain unisolated. The apparent illness is over in a few hours, and no desquamation follows, and such cases seen a few hours after notification may present "no obvious disease." Again, there are cases of tonsillitis and erythema which might well puzzle the most experienced, and the medical man who does not notify a case in which there are reasonable grounds for making a diagnosis of scarlet fever, even though the evidence is not conclusive, incurs a very serious responsibility, and should it turn out that his hesitation was unfounded, he incurs a serious risk of having this responsibility impressed upon him by legal procedure. The same remark applies with even greater force to small-pox, and it ought to be universally recognized that in a large proportion of cases of scarlet fever, small-pox, diphtheria, and typhoid fever it is impossible to make a positive diagnosis until after an observation extending over several days, and in some cases not even then.

It would be a grave error to lead the public and sanitary authorities to believe that a single sample taken from a suspected case of either disease can give absolutely conclusive results. Numbers of cases of typical diphtheria fail to give cultures from a single swab though subsequent swabs may give pure cultures. The agglutination reaction is not always to be obtained in enteric fever, especially in the early stages; its presence is only one factor in making a diagnosis, and it would be exceedingly imprudent to accept its absence as conclusive evidence that the disease is not enteric fever. It would be folly to neglect the assistance of bacteriology in the diagnosis of these two diseases, and full advantage should be taken of the facilities offered by public health authorities; but these authorities must not suppose that bacteriology is going to put an end to doubtful cases and difficulties in diagnosis.

The public has been taught to send infectious cases as quickly as possible to the public isolation hospitals, and will continue to put more and more pressure on medical attendants to run no risk by keeping such cases in private houses where isolation is impossible. The public are wise in insisting on this precaution under the modern conditions of town life. Small flats, aggregations of shop assistants in large buildings, the close quarters of artizan dwellings, and other well-known conditions incline the public and medical practitioners to err, if at all, on the side of safety, and to send doubtful cases with the best provisional diagnosis possible to the infectious hospitals. The solution of the difficulty is to be found in extended accommodation for suspected cases before they are drafted into the infectious wards. The French have shown more courage in facing facts, and, in Paris, wards for doubtful cases are provided, although not to the full extent required.

None of these things are insisted on in the purely statistical return of the Metropolitan Asylums Board, and it is, perhaps, hardly to be expected that the Board should insist upon them. But we think that medical officers of health have a very serious responsibility towards their authorities and their profession in this matter. We hope that they fully recognize the practical difficulties under which diagnosis has often to be made in cases of suspected infectious disease, but we fear that there is some tendency to assume that the majority of errors are due to carelessness or inexperience. We are prepared to admit that many young medical men are compelled to commence practice with an imperfect acquaintance with infectious diseases, and that they have in the course of private practice to gain the experience, opportunities for

obtaining which ought to be more freely afforded to them during their medical curriculum. For this we are disposed to think that the dog-in-the-manger policy of the Metropolitan Asylums Board is itself largely responsible. Something has been done in recent years to diminish the evil, but much more ought to be done. So far as there is any justification for the accusation that the errors in diagnosis are due to want of knowledge, we must hold the Metropolitan Asylums Board in a large measure responsible, but when all this is admitted the fact remains that there will always be a certain proportion of cases in which diagnosis is difficult. As the Father of Medicine wrote in his first aphorism: "Life is short, and the Art long; the occasion fleeting; experience fallacious; and judgement difficult."

THE CONSOLIDATION OF MEDICAL WORK.

WE publish in another column (p. 631) an interesting and stimulating address given by Sir Victor Horsley on February 12th, at Leicester. The circumstances were in some respects typical. The Leicester Medical Society, to which the address was delivered, is one of the oldest medical societies in the country. It was founded more than a century ago, and its vigorous age proves that it has been able to meet a need. It not only gives opportunities for discussion, but it affords a meeting place for the medical profession in the locality, and maintains an excellent library. There are other medical societies of less antiquity but of like vigour in many other centres in England, including London, where, owing to the great extent of ground which it covers, a tendency towards special organizations for localities has developed with increasing impetus during the last quarter of a century. This tendency towards the formation of local organizations, though a sign of vigour, and of the deep and vital interest which every medical man worth his salt takes in the advancement of his art and of the sciences on which it rests, was not without certain elements of weakness. The local activity was healthy and in every way advantageous to the individual, but it did not provide a means by which the profession as a whole could exert its legitimate influence on the community and on public life. The fact that the British Medical Association has developed as steadily as it has during the last half-century is evidence that the need for unity was becoming more and more clearly perceived. It has now been reconstituted with the one object of making it a more efficient means for promoting the education, the interests, and the influence of the medical profession. The word education is used in its widest sense, for as Sir James Paget and many another master of medicine has said, the true medical man is always a student. If we stand still we go back, and Sir Victor Horsley in the address before us is as strong on this point as any of his predecessors. Indeed, the need for the easy and rapid dissemination of knowledge grows with every year, and the Association has endeavoured, through its JOURNAL, through its library which is yet young, and through its Branch meetings in the past, to respond to this necessity of medical existence—and with conspicuous success. Much has been done; we of this generation have come into a fine heritage, and it is our part to develop it and to hand it on increased and perfected. As we have ventured to say before, the new constitution of the Association is only a means to an end: it is an instrument fashioned with much care and labour, and now nearly finished. The next duty is to use it with effect, and we may be grateful to the Chairman of the Medico-Political Committee for the frank statement of his opinion as to the uses to which it may at once be put.

THE ROYAL SEA-BATHING HOSPITAL, MARGATE.

WE have received a pamphlet descriptive of the aims and objects of this institution, and there are several points which are worthy of comment, more especially in connexion with the articles on the treatment of external or surgical tubercle in children which have recently appeared in the columns of the BRITISH MEDICAL JOURNAL. The Royal Sea-Bathing Hospital is an admirable institution, and has done excellent work in the past in the treatment of tuberculous diseases. In fact it was the first hospital in England to recognize the importance of climatic treatment. But, like many other deserving institutions, it is suffering from want of funds. It is to be noted, however, that a portion of the income is derived from the payments of patients. These are of two classes—"full-pay" patients, from whom a sum of £6 a month is collected, and ordinary patients who pay £2 8s. a month if of 15 years of age and upwards, and £1 12s. a month if under the age of 15. It would appear that in each case these payments are made in respect of four weeks only, but the usual term of residence may be extended on the advice of the Visiting Surgeon, and if a further payment be made and a new letter be presented after each period of eight weeks. Then in the rules there follows a curious proviso—namely, that a patient, presumably an ordinary patient, "failing to procure a fresh letter after eight weeks' residence will be charged as a full-pay patient, or such less sum as the Court of Directors may determine." It would thus seem as if the patient is penalized on account of the length of his illness and in two directions. He is put to the trouble of obtaining a further letter: and when his financial resources are possibly becoming exhausted, he is called upon to pay a larger sum than before, so as to continue to participate in the benefits of the institution. While this plan may act advantageously in respect to the finances of the hospital, and serve as a stimulus to the charitable public, it does not appear to us to work well for the thorough cure of tubercle. The work of the surgeon is cramped by such restrictive regulations, and the beneficent influence of the climatic treatment is minimized. For the treatment of tubercle under favourable climatic conditions no machinery should exist which involves a time limit. We venture to suggest to the governing body that a portion of the beds should be set apart for the use of patients of the middle class who are able and willing to pay a much larger sum than £6 a month to obtain the benefits of the hospital, and that the remaining beds should be free. One other point we venture to criticize. Rule 7, respecting the admission of patients, says: "No child under 6 years of age can, unless under very exceptional circumstances, be admitted as an in-patient." It is quite certain that the incidence of external or surgical tubercle is greater in patients under the age of 6 years than beyond that age. Further, we know that young children affected with tubercle are more amenable to treatment than older children and adults. Again, such cases must be taken in hand early and thoroughly if a cure is to be effected. And yet we find that children under 6 years of age are practically excluded from the hospital. We are somewhat puzzled to know why the situation of the hospital offers "peculiar advantages for the successful treatment of endemic goitre, certain of the graver forms of anaemia, obstinate malarial affections, and a few of the more chronic maladies of the nervous system." The authorities of the Royal Sea-Bathing Hospital might with considerable advantage consider what is being done by the City of Liverpool, where the sum of nearly £30,000 has been subscribed for the treatment at the seaside at Heswall of chronic diseases of children. This institution is to be conducted on the most modern lines. Only early cases and those capable of cure are to be admitted. There is to be no age limit for entrance, and no harassing arrangements about renewal of letters are to be put in force. The patient is to stay until he is cured or found to be incurable. It will be found better economy by the Royal Sea-Bathing Hospital and by the many convalescent homes to cure thoroughly the few cases than to merely patch up the many.

ST. GEORGE'S HOSPITAL.

THE Weekly Board of this hospital has just had printed for the information of the general body of its Governors a statement of the "case" for and against a suggested removal of the existing Hospital and Medical School to some

other site. The case for removal is drawn up in a document of considerable length, and twelve reasons why removal is called for are given in detail. They comprise inadequate accommodation both for the nurses there are and the nurses that it is said there should be, and complaints as to want of space for a large number of different requirements such as servants' rooms, better isolation wards, more operating theatres, ward annexes, separate rooms for casualties and patients waiting admission, and a more spacious and better fitted up out-patient department. It is further stated that other requirements are an "adequate dental department," a proper room for an x-ray installation, and one for the light treatment of lupus. Finally a department is stated to be required for "systematic treatment by baths and inhalations" as well as the "external balconies necessary for the application of the open-air treatment." The difficulties under which the Medical School labours are also referred to, and the desirability of the hospital having a clinical laboratory of its own, pointed out. The ambitions of the advocates of removal are thus seen to be decidedly catholic, and the general style in which the "brief" for removal is drawn up leaves a vague impression that the picture is somewhat overdrawn. The case "against" is presented in a more modest document, which gives six reasons against removal. They are briefly and somewhat weakly displayed, and appear to err, if at all, on the side of understatement. It is suggested that some of the acknowledged difficulties might be met by remodelling the central block, removal of the school buildings to some site hard by, and enlargement of the nurses' quarters in Montpellier Street which were built some seven years ago. The great difficulties in finding a suitable new site for the hospital anywhere in the West End of London are dwelt upon, as well as the financial risks and certain radical alteration of the whole characteristics of the institution as a whole, which would result from its removal to a distance. Finally, it is urged that if nothing else can be done, a limitation of the aspirations of the hospital and some reduction in the number of its beds, however regrettable in itself, would be a better solution of the various difficulties than removal altogether. On the whole, and with no other information before us than that contained in these documents, we must admit that the case for removal seems rather more imposing than convincing. It might also be said that it is doubtful if, in its present stage of development the matter can be usefully discussed at all. The essential basis of the whole idea is a belief that an ample site could be acquired elsewhere, and a hospital and medical school of the most modern description erected without difficulty. This, however, at present is simply a matter of pious belief, and until it can be converted into a definite statement of what sums respectively the existing place will fetch and the new site and new buildings cost, the incidental advantages and disadvantages of removal cannot be seen in their true perspective. What is no hypothesis is that St. George's in its present position, while well away from the area of extreme congestion, is practically the only hospital in the West of London between Charing Cross and the West London Hospital in Hammersmith five miles away.

ST. BARTHOLOMEW'S HOSPITAL.

As we have already observed, it is unfortunate that the Lord Mayor's Committee on St. Bartholomew's Hospital sits with closed doors. What is supposed to be gained by this exclusion of the public is not clear, but there can be no doubt that a good deal is lost. The official statement issued last week shows that the Committee, on the evidence before it, has come to the opinion that the hospital ought to be retained on its present site; but what was the weight and character of the evidence? Sentiment counts for much even in the twentieth century, and every one would rejoice if it could be accepted as proved that the alternative will afford a solution of the difficulty, not merely for to-day but for the future. The short point is, Can a good modern hospital for the same number of beds be got on to the present site? If the architects can design such a building, can it be done without clearing the present site, without sacrificing the north wing containing the great hall and the church of St. Bartholomew's the Less? It is said that a proposal to clear the northern part of the site, involving as it must the demolition of the north wing and the church, and perhaps the entrance gateway, finds most favour at present. This would leave the three main ward blocks intact now, only to be pulled down, perhaps ten years hence, when the difficulty of erecting suitable wards for the same number of beds in the square they now occupy will undoubtedly prove insuperable, for the land to the south will have been occupied by the proposed nurses' home. If the Lord Mayor's Committee insists that the hospital shall remain on the Smithfield site, then that Committee should take upon its shoulders the responsibility of purchasing more land from Christ's Hospital, so that a site may be obtained upon which, to the south of the present north block, well-arranged modern hospital pavilions may be erected. It is too big a financial enterprise for St. Bartholomew's to attempt unaided, but if mere economical courses are to be set aside by the Lord Mayor's Committee, then that Committee should feel it to be incumbent upon it to appeal to the wealth of the city to help the great City hospital to make itself worthy of the greatest city in the world.

SIR WILLIAM BANKS.

We are glad to learn—and the feeling will be shared by every one who knows the success which has attended his teaching—that the active work of Sir William Banks at the Liverpool Royal Infirmary is not to terminate with the expiration of his appointment as surgeon. At the recent annual meeting of the infirmary he was elected Consulting Surgeon, with charge of ten beds. This allocation was made in appreciation of the work which he has done for the institution, and as an indication of the desire of the Governors that his working connexion with the Infirmary should continue. The incident is gratifying from another point of view, as it is an indication of the good relations which exist between the Committee of the Infirmary and the medical staff. Antagonism is not unknown elsewhere, but on the whole it may be said that the bigger the institution and the more distinguished the men who serve it in either capacity the less risk is there of friction. The action of the Committee of the Liverpool Royal Infirmary in retaining the active services of Sir William Banks is a conspicuous instance of the excellent results which flow from such a good understanding. His withdrawal from active hospital work at the present time would have been a serious loss to the Medical Faculty of the Liverpool University of the near future, and a detriment to the progress of surgery.

THE MEDICAL SOCIETY OF LONDON.

The 130th anniversary dinner of the Medical Society of London took place at the Whitehall Rooms, Hôtel Métropole, on March 7th, with Mr. Pearce Gould (the President of the Society) in the chair. The guests numbered over two hundred, and the gathering was a great success. The loyal toasts having been honoured, Sir William Church (President of the Royal College of Physicians) proposed the toast of "The Medical Society of London." He accepted the duty of proposing the toast as a compliment to the College over which he had the honour to preside, and said no speech could describe the force, strength, and influence of the Medical Society more eloquently than the fact of the great gathering assembled that night. He then expatiated on the virtues and merits of Dr. J. C. Lettsom, who founded the Society in 1773. Mr. Pearce Gould, in replying, said that the numbers of the Fellows of the Society, at first 90, had now reached 718, and that year they hoped to add as large a number as had ever been added in any previous year. After complimenting the officers of the Society, Mr. Gould emphasized the fact that though in the past there might have been some friction between the different medical societies at the present time, the only

rivalry that existed was the rivalry of friends. He made an appeal to the so-called special societies to contribute to the Medical Society some of the fruits of their special studies, and he promised them an appreciative audience. The toast of "Our Guests" was given by Sir Frederick Treves, who amused his audience by distinguishing between a medical dinner, a dinner recommended by medical men, and a dinner composed of viands so well known in the advertisement columns of the medical papers as recommended by "The Faculty." After referring to the honour done to the Society by the presence of the Lord Chancellor as one of the guests, Sir Frederick Treves said that the medical profession and the legal profession was certainly united in one way; they represented the two professions against which the public was always warned. Lord Halsbury, in acknowledging the toast, said that at the present time there was greater recognition than there had been in the early history of the world of what each profession in turn had contributed to the general sum of happiness. They were all engaged in working for the great common interest, and when he looked round that room he recognized some of those present who were not soldiers, but had gone to distant lands and braved the dangers not only of war but of climate, because they felt their country needed their services. To whatever profession they belonged, all must recognize that the battle of freedom and of right had been fought in the courts of law as well as elsewhere with as great a courage as had ever been shown in the battlefield. Sir Thomas Barlow, who also replied for the guests, said that in those days of specialism and advertisement it was encouraging to find the Medical Society still maintaining its honourable traditions. The Hon. Robert P. Porter (United States) was then called upon by the President; he assured his hearers that there was no fear of an invasion of the medical profession by an American Trust. Sir Richard Douglas Powell proposed the health of the President of the Medical Society, and was followed by Lord Sandhurst, a former Governor of Bombay, who took occasion to thank the medical profession for the help he had received in fighting the plague. Mr. Pearce Gould having briefly acknowledged the toast, the company dispersed.

THE BALLACHULISH QUARRIERS AND THEIR MEDICAL OFFICER.

THE dispute between the Ballachulish Quarry Company and Dr. Lachlan, the medical officer of the quarriers, reference to which has several times been made in the BRITISH MEDICAL JOURNAL, has entered on a new phase. The men themselves have now taken the field in defence of their right to choose their medical attendant. They have invoked the aid of the law, pleading that the agreement made with Dr. Grant by the company should be declared of none effect, inasmuch as it was made without their knowledge or consent. In an appeal to the public for funds to enable them to fight their battle in the law courts they point out that when the present company became lessees of the quarries in 1894 they found that their workmen, in continuance of a right which they had exercised for over forty years, had appointed Dr. Farquharson, who was then the medical officer at the works. A medical club was in existence, managed by a committee consisting of the master and seven workmen. The committee had control of all matters pertaining to the medical arrangements. The present company recognized the existence of the club. The company's manager acted as its representative on the Committee, while the company took from every workman a mandate to deduct from his wages the contributions required under the club rules to make up the medical officer's salary. On Dr. Farquharson's resignation in June, 1900, the Committee met and unanimously appointed Dr. Grant to be his successor. The manager, who presided at the meeting when the appointment was made, was entrusted with the duty of getting it accepted by Dr. Grant. It was not until the dismissal of Dr. Grant by the company in July, 1902, that the men ascertained that in 1900 he had entered into a formal agreement into which had been introduced conditions that his services in the quarries and his general practice in the district should cease on a month's notice being given. These conditions had never been seen by the Committee, who only learned on the dismissal of Dr. Grant that he had signed them on the manager's representation that such were attached to the appointment. No such conditions were imposed on any of the former medical officers appointed by the men, and the men contend that the manager had no instructions to impose them on Dr. Grant, and that the company had no authority to enter into any agreement whatever with Dr. Grant for medical attendance on the men. These circumstances, combined with the fact that Dr. Grant had been dismissed by the company while the men were most anxious to retain his services, aroused indignation amongst the men at what they considered to be a betrayal of the confidence which they had reposed in the manager. They consequently represented to the company their desire to retain Dr. Grant's services. This, however, having proved useless they reappointed Dr. Grant, proceeded to collect his salary, and declined to permit any interference by the company in the affairs of the medical club. On the day preceding that appointment the company applied to the Court of Session to have Dr. Grant interdicted from practising in the district or from attending on the men and their families. The company's action, it is pointed out, is based on the restrictions which were imposed on Dr. Grant under the agreement, without the knowledge of the men. That action is still pending, and if it be successful the men will be deprived of the services of a doctor in whom they have the utmost confidence, who has performed his duties faithfully and well, earned the respect of all, and endeared himself to many, not only as a medical adviser, but as one who interested himself in the welfare of the entire community. The company now refuse to allow the men to work unless they sign an agreement authorizing deductions to be made from their wages in the same way as when they entered as lessees of the quarries. This paper the men refuse to sign, and they believe that all fair-minded men will approve of their stand against such tyrannical conditions. Since the beginning of the year no work has been done at the quarries. About 150 of the quarriers have left the district, and the exodus still continues. We earnestly hope that the men will succeed in their attempt to vindicate one of the elementary rights of free citizens of a free country.

THE LIGHT CURE AT SOUTHSEA.

A CORRESPONDENT at Southsea has called our attention to the advertisement of a local firm of photographers who are exploiting the Roentgen rays as a special department of their business. We are not disposed to call in question the capacity of this firm for taking *x*-ray pictures, but we take the strongest exception to their being allowed to carry their operations into the field of curative medicine or surgery. We cannot believe that professional men in Southsea will encourage or support any tinkering with a promising method of treatment, and we would strongly urge upon such persons as may unfortunately be suffering from one or other of the disorders to which the light cure is applicable, to look with suspicion on the promises and advertisements of those who, without more skill than the mere capacity to take a photographic negative, presume to pose as trustworthy experts to whom the sick may safely intrust the cure of their ailments. This firm's circular says: "Now that the rays have been proved to be a cure for certain forms of cancer, ulcer, lupus, etc., Messrs. ——— are prepared to undertake all such cases, under medical direction, and appointments for a series of sittings should be made, so as to insure regular treatment." This circular wears the badge of all its tribe. The statement that a cure is likely is first temptingly set forth; the capacity of the advertisers to effect it is next suggested and their willingness made manifest; the sincerity of their solicitude for the welfare of their prospective clients is exhibited by the usual expression of a desire for the co-operation of medical direction; and, with traditional post-

scriptal importance, it is finally hinted that a series of sittings should be arranged for on terms which can be had on application at the studio. The invasion of the field of disease-treatment by enterprising laymen has always been a danger, but is fast becoming, in addition, a nuisance. We trust that wherever pushing tradesmen stray from the field of their legitimate labour into scientific pathways of whose windings and direction they have not the faintest knowledge, they will be left both by the profession and the public to wander blindly—and alone.

THE LATE PROFESSOR YOUNG AND THE HUNTERIAN MUSEUM IN GLASGOW.

THE Committee formed to raise funds to provide some fitting memorial to the late Professor Young, of Glasgow, has received £322 10s., and has resolved that the memorial should embrace the following objects: (1) A medallion in bronze, by Mr. A. Macfarlane Shannan, A.R.S.A., with marble frame, to be fixed with the approval of the University Court, in a suitable place, in the Hunterian Museum, together with two replicas in bronze, framed in oak, one to be placed in Queen Margaret College, and the other to be presented to Mrs. Young; (2) a volume containing a selection of Professor Young's papers and a biographical notice (after setting aside a sufficient number for the use of Dr. Young's family, the subscribers, and certain libraries, the balance to be available for sale); and (3) the catalogue of Hunterian MSS. to be printed. The combination of these three objects will, it is believed, form a memorial of lasting value, alike from the personal and public point of view. In the selection of papers to be printed in the memorial volume preference is given to Professor Young's popular rather than his more severely scientific studies, and while not fully representative of his many-sidedness will, it is believed, afford an adequate representation of his learning and wit. Professor Young devoted years of labour to a great catalogue of the literary, antiquarian, and historic treasures, especially from mediaeval times, numbered among the Hunterian manuscripts. The catalogue is in manuscript, and its publication in a manner comparable with the similar catalogues of other famous manuscript libraries will not only be a boon to the scholars of Europe and America, but a unique monument of Professor Young's zeal as keeper of the Hunterian Museum. The fund at the disposal of the Committee is not sufficient to defray the whole of the cost, but a few gentlemen, who desire to remain anonymous, have expressed their intention of relieving the Committee of all financial responsibility, excepting only the cost of revising the manuscript and seeing it through the press. In order to complete its share of the work the Committee now appeals for additional subscriptions to the amount of £50 or £60; the Honorary Treasurer is Mr. Archibald Craig, 156, St. Vincent Street, Glasgow.

A MEDICAL TEACHER FOR FIFTY YEARS.

DR. UZZIEL OGDEN, of Toronto, completed his fiftieth year as a medical lecturer at the end of 1902. The Dean of the Medical Faculty of the University of Toronto gave a dinner in the Faculty Union in honour of the occasion. Dr. Ogden commenced to lecture in the Toronto School of Medicine in January, 1853. He held the Chair of Materia Medica and Therapeutics from that time until 1870, when he was transferred to the Chair of Obstetrics and Gynaecology. At the time of the re-establishment of the Medical Faculty of the University of Toronto in 1887, he was asked to take either obstetrics or gynaecology. He chose the latter, and was Professor of Gynaecology from 1887 to 1903. After completing fifty years as a public teacher, he decided to give up active college work and tendered his resignation to the University authorities. Dr. Ogden was the first editor of the *Canadian Journal of Medical Science*, which first appeared in January, 1876, and is now called the *Canadian Practitioner and Review*. At a meeting of the Medical Faculty of the University of Toronto held on February 6th, a resolution expressing appreciation of Dr. Ogden's great services was passed unanimously, and the hope was expressed that "the Senate and the Governor in Council may be pleased, in acknowledgement of his long, arduous, and faithful service, to call Professor Uzziel Ogden to the *otium cum dignitate* of the Emeritus Professorship."

AFTER-CARE ASSOCIATION.

THE annual meeting of this Association was held on March 4th at the House of Sir William Church, Bart., K.C.B., M.D., President of the Royal College of Physicians of London, and was largely attended. Sir William Church, who took the chair, referred to the praiseworthy objects of the Association, which he commended to the support of all present. He pointed out that it held out a helping hand to those who were willing to help themselves, but owing to the misfortune of mental breakdown had perforce been separated for a time from their fellows in the work-a-day world. The Society was doing a good work by bridging over the gap which separated such persons when discharged as cured after asylum care from the social life of the general community, and putting them in a position to earn their living. It too often happened that those who had been once insane were ostracized by their former friends, and to give them a new start in life the good offices of the After-care Association were valuable and indeed indispensable. The report of the Council was presented by Mr. Thornhill Roxby, the Secretary, and showed that the work of the year had been most encouraging; 221 cases had been considered by the Council during the last twelve months, and the number successfully helped was greater than in any previous year. The total amount of subscriptions and other contributions amounted to the record sum of £772 17s. 4d., but this was partly due to exceptional sources of income, which could not be relied on for the future. Dr. Savage moved the adoption of the report, and testified to the appreciation of the work of the Society by asylum superintendents, whose anxiety as to the future of their discharged patients was much diminished by its benevolent operations. The beneficiaries themselves were also grateful, and in his experience of insane patients he had found gratitude for benefits received a gauge of recovery. The resolution was seconded by Mr. H. J. Tennant, M.P., and supported by Dr. T. Claye Shaw and by Dr. Sidney Coupland, Commissioner in Lunacy, who said he attended to pronounce the benison of the Board of Commissioners upon the good work of the Association. The election of the council and officers was proposed by Dr. Robert Jones, of Claybury, seconded by the Rev. E. Grose Hodge, and supported by Mr. F. D. Mocatta. The meeting concluded by a vote of thanks to the Chairman and Lady Church for their kind hospitality, proposed by Dr. Rayner, who pointed out that the Association did much for the prevention of insanity by relapse. The motion was supported by the Rev. H. Hawkins, who with the late Drs. Hack Tuke and Bucknill took part in the foundation of the Society. Princess Christian is the Patron of the Association, Lord Meath the President, and Mr. H. Thornhill Roxby the Secretary, the offices being at Church House, Westminster.

CARDIFF AND COUNTY PUBLIC HEALTH LABORATORY.

THE recently issued third annual report of the bacteriologist (Dr. W. G. Savage) shows that the work done in this laboratory has been maintained and increased. The total number of specimens examined during the year was 1,582, showing an increase of 54 on the previous year. Of these, 748 were received from Cardiff and 834 from the administrative county of Glamorgan. The subjects investigated were very varied in character—bacteriological, pathological, and chemical. Of the samples, 217 were suspected diphtheria, 114 blood for serum diagnosis of typhoid fever, 263 sputum for tubercle bacilli, 97 urine examinations, 33 samples of milk, 52 of diseased meat, and 30 samples of blood for pathological or chemical examination. A large number of drinking waters were examined, 298 bacteriological examinations and 218 chemical analyses being made, while 49 sewage and sewage effluents and 75 tinplate effluents were examined. Compared with other municipal

laboratories the number of suspected diphtheria, typhoid fever, and sputa for tubercle bacilli examinations made is small. This is no doubt due to the fact that fees are charged to medical men for such examinations. The usefulness of the laboratory is thus decreased, as is further shown by the fact that the number of examinations for suspected diphtheria decreased by 174 as compared with the previous year. The percentage of positive results were respectively 28.6 (diphtheria), 38.6 (typhoid fever), and 47.1 (tubercle baccilli). Classes have also been held in the laboratory in bacteriology and public health in connexion with the University College of South Wales. The report points out that all the main drinking water supplies of the county were systematically examined chemically and bacteriologically every quarter, and the Cardiff samples every month. Particulars of an investigation of bottles of sterilized milk are given. Of the 33 samples 17 were found not to be sterile. The value of the bacteriological examination of the throats of convalescent diphtheria patients before discharge is insisted upon, and while it is pointed out that one or two authorities in the county have adopted this measure, yet on the whole it is quite neglected. The laboratory is administered by a joint committee, composed of members in equal numbers from the Cardiff Corporation and the Glamorgan County Council, and so constituted has been in full working order for over three years.

DIPHTHERIA ANTITOXIN IN LONDON.

The value of antitoxin treatment in diphtheria is clearly demonstrated in the returns of the Metropolitan Asylums Board. In 1894, 3,042 patients of all ages were treated in the Board's hospitals without antitoxin; 902 died, yielding a mortality of 29.6 per cent. In 1895 the antitoxic serum treatment was inaugurated; 3,529 cases of diphtheria were treated, and 729 died, yielding a mortality of 22.5 per cent. Hence, in the first year there was a fall in mortality of 7.1 per cent. From the Annual Report of the Metropolitan Asylums Board for 1901, recently issued, it appears that in 1901, 6,499 patients suffering from diphtheria were treated with antitoxin in the Board's hospitals; 817 died, yielding a mortality of 12.5 per cent. There has, therefore, been a fall in mortality percentage from 29 6 in 1894, without antitoxin, to 12.5 in 1901, with antitoxin. In other respects the treatment has been substantially the same. The laryngeal cases treated in 1901 with antitoxin numbered 753, and there were 159 deaths, which gives a mortality percentage of 21.1. It has long been known that early administration of antitoxin is important if its real advantages are to be gained. But it would be difficult to furnish more concise or convincing evidence of this well-known fact than the tables printed in the Asylums Board Report from Dr. MacCombie's results at the Brook Hospital. During the year 723 cases of diphtheria were treated with antitoxin, and 78 died, yielding a mortality per cent. of 10.79. The antitoxin treatment was applied in each of these cases, but in some it was possible to begin on the first day of the disease, in others on the second, and so on. The paramount importance of administration at the earliest possible moment is seen in the result. The mortality percentage of the first day cases (38) was 0.0; of the second day (170 cases) 4.1; of the third day (192 cases) 11.9; of the fourth day (137 cases) 12 4; and of the fifth and subsequent days (186 cases) 16.6. For five consecutive years there has not been a death at this hospital among the cases that came under treatment on the first day of the disease, and of those coming under treatment on the second day of the disease the mortality has not exceeded 5.4 per cent. These figures afford striking evidence of the value of antitoxin, and particularly of its early administration.

CANCER IN INDIA.

The reply of the Secretary of State for India to Mr. Weir's question, which we published last week, indicates that some effort is to be made to obtain more accurate information regarding the prevalence of cancer in India. At one time it was thought that malignant disease was rare in the tropics; but this opinion is no longer held, and abundant evidence has been forthcoming that both cancer and sarcoma are common among dark races. Official statistics as at present collected and compiled in India are incapable, as Lord George Hamilton stated, of furnishing any information regarding the prevalence and distribution of cancer in India. Some very general and inexact conclusions may be drawn from the returns of surgical operations presented in hospital reports. It is proposed to render these more explicit and accurate by establishing a distinct entry of "cancer" in hospital and dispensary returns. The success of this would depend on accuracy of diagnosis, which cannot always be reckoned on. A better plan would be to appoint a competent officer to conduct a special inquiry into the subject.

THE LONDON COUNTY COUNCIL.

At the last meeting of the London County Council Lord Monkswell was elected chairman for the ensuing year on the motion of Sir W. J. Collins. Lord Monkswell has shown his interest in the metropolitan hospitals by serving on the Lords Committee which inquired into this subject in 1892, and is President of University College Hospital, to which he devotes much time and energy. He has also, during the fourteen years he has been a member of the Council, served on the Asylums Committee and the Industrial Schools Committee, and shown his practical sympathy with the unfortunate inmates of those institutions. The Housing Committee reported against a proposal to deal with an insanitary area at Backchurch Lane area in Stepney. It appeared that the death-rate in the represented area, which is mainly occupied by an alien population, was only 17 or 19 per 1,000 against a death-rate of 24 or 26 per 1,000 in the district in which the area is situated. We are also glad to notice that the Chairman of the Parks Committee, Mr. Piggott, informed the Council that the principle of using some of the mansions in the parks as convalescent homes had been approved by his Committee, and that certain houses had been suggested as suitable for the purpose. In view of statements which have appeared in the press as to the Parks Committee having decided to take no action in respect of the proposed use of Golder's Hill House for a convalescent home for children, it is good to know that the principle which we have advocated in these columns has commended itself to the Parks Committee, irrespective of the application of this principle in the case of particular houses.

BACTERIA IN METROPOLITAN WATER SUPPLY.

Sir W. Crookes and Professor Dewar, reporting for 1902 on the metropolitan water supply, say:—"The longer our experience of the bacteriological method as applied to the analysis of the filtered supply and the wider its application, the more we are convinced of its primary importance as a safeguard to the public. It enables us to define in a much more delicate way than is possible by chemical analysis what is an efficiently filtered water, and thereby enables the chemist to warn the engineer the moment any one of his filters shows signs of defective working. Whether the supply as regards the organic matter in solution varies more or less according to the season of the year is of relatively small moment as compared with the knowledge that the microbic impurity is reduced to a minimum .... The standard of general organic purity during the past year, as defined by chemical methods, has been maintained." The water supply in December last maintained, on the whole, equal microbic purity to that of November. This somewhat exceptional condition of the supply for the winter months was no doubt due to the absence of floods in the Thames valley and to the unusually mild character of the season. Such, in any case, were the causes to which the condition was attributed by the analysts themselves, who predicted that if the large deficit in the rainfall were made up in January, the bacterial content would increase and the strain on the filters be considerable. Their prediction was fulfilled, for in January, owing to the great increase in the rainfall, the bacteria in the unfiltered Thames water rose from 6,000

per c.cm. to 13,000 per c.cm. The filters proved to be in good working order, and the New River (filtered) water, to take one example, showed (as the mean of 78 samples) only 13 organisms per c.cm. In comparison with December there was a small increase in the soluble organic matter. It is of interest to compare the quality of the supply during January, 1903, which was abnormally wet, with that of January, 1902, one of the driest months of that exceptional year. In January, 1902, the organic matter was about two-thirds of the present amount, while the bacteria amounted to about one-half. In neither case, in the majority of the samples, did the microbic impurity exceed what is allowable in a good and wholesome water.

NOTIFICATION OF MEASLES IN ABERDEEN.

The notification of measles and whooping-cough was made compulsory on the medical practioners of Aberdeen by Section LXXIII of the Aberdeen Corporation Act, 1881, and has therefore been in force for more than twenty years. We have recently received a special report by Dr. Matthew Hay, the Medical Officer of Health for Aberdeen, regarding the advisability of continuing the system. After discussing the statutory and administrative work involved in notification of measles, Dr. Hay points out that the annual cost to the Corporation during the last ten years has averaged £134 for measles notification, and £172 for whooping-cough. The results obtained do not, we gather, in Dr. Hay's opinion, justify the continuance of the system. It appears that while in the first decade (1882-91) there were notified per 100,000 of the population 13,140 cases of measles, there were in the second decade 19,516 cases, or an increase of 48 per cent. The corresponding numbers for Edinburgh, which also had notification in force, were 13,020 for the first decade, and 15,809 in the second decade, or an increase of 21 per cent. The mortality percentage in Aberdeen in the first decade was 4.2 and in the second 2.7. Dr. Hay discusses in some detail the experience of other towns in Scotland which have had notification of measles in force, and on the whole the results show that little has been gained by the system. He recommends an arrangement between the local authority and the School Board in lieu of notification, and he hopes that by house and school disinfection the prevalence of the disease may be restricted.

IRISH DISPENSARY MEDICAL OFFICERS.

The strong attitude which we are glad to say Irish dispensary medical officers have assumed in regard to their unredressed grievances is bearing good fruit. Thus we notice that in Edenderry Union a substitute has been paid £10 10s. for a week's duty at the dispensary and the workhouse hospital, and another has received £4 4s. for four days' duty in Ballyboggan. Then the Enniscorthy Guardians have deputed their Chairman to confer with the County Wexford Branch of the Irish Medical Association on such questions as salaries, superannuation, and holidays. The local Branch finally declared that they could not accept any terms of settlement that would not be made applicable to every union in Ireland.

THE TRAINED NURSES ANNUITY FUND.

The name of Miss C. J. Wood is too well known to need any introduction, and we have no hesitation in inviting the sympathetic attention of our readers to a communication in our correspondence columns from this experienced representative of nurses and nursing. The average pay received by nurses is not very great, and the majority of medical men are to well acquainted with the difficulties under which many of them labour to be surprised that the number of nurses who succeed in making any adequate provision for the future is relatively very small. Besides this, the period of their working life is comparatively short, and the occupation in itself is a trying one. Its followers are also exposed to many risks, and an illness or an accident may at any time throw a nurse out of work for so long that any little savings she has effected are swept away. The Royal National Pension Fund is of immense benefit to those nurses who are in a position to join it, but in all callings there are hard cases which can only be met by charitable organizations. Many members of the medical profession though not able to contribute themselves, may have opportunities of directing the charity of others into right channels, and among these "the Trained Nurses Annuity Fund" may certainly be included.

MEDICAL NOTES IN PARLIAMENT.

[From our Lobby Correspondent.]

Vaccination Bills.—There are two Bills dealing with vaccination down for second reading this week, but they are not likely to come on. The first is the Vaccination Bill introduced by Mr. Thomas Bayley, Sir John Rolleston, Mr. Channing, and Mr. Corrie Grant, which in two clauses proposes to abolish compulsory vaccination. The second is the Vaccination Prosecutions Bill, which proposes that no prosecution under the Vaccination Acts shall be commenced without the authority of the guardians. This Bill is introduced by Mr. Channing, and supported by Sir John Rolleston, Mr. Goddard, Mr. Cremer, Mr. Brigg, Mr. Broadhurst, Mr. Corrie Grant, and Mr. Bell.

The Army Estimates.—In the course of his statement at the beginning of the debate on Vote A, Mr. Brodrick referred in some detail to the Army Medical Department. The year, he said, had been a notable one in the organization of the department, and a great debt of gratitude was due to the eminent civil surgeons and medical men who had given their services and advice during the past year on the Advisory Board. The Board now assisted the Director-General, and had responsibility in selecting candidates, in examining the condition of home and foreign hospitals, and in carrying out changes in the department. The first advantage had been shown in the supply of candidates. Whereas previously a sufficient number did not apply, at the first examination under the new system there were three times as many candidates as vacancies, and the quality was very high. A medical staff college had been established in London, which would enable medical officers returning from foreign service to utilize to the best purpose their study leave, and so keep up their scientific attainments. They had also done their best to encourage specialization in the Army Medical Service. Sanitary officers would be employed on sanitary work alone. Courses of sanitary instruction had been started at Woolwich and at the staff colleges in various districts. The principle of selection by merit had been established. Names were submitted to the Advisory Board and promotion given for scientific merit. He intended to bring the medical equipment up to date, but this must take time. It was impossible to deal with a number of isolated hospitals in a hurry, but he proposed to simplify the machinery by having a small committee with a member to the Advisory Board and an army medical officer to act with the financial secretary in the general administration. The army nursing service had been placed on a new footing, the number of nurses largely increased, more money asked for in the Estimates, and a proportion of the best male members of the Army Medical Corps would be trained as nurses and kept to that work. He hoped these changes would save them from deficiencies in the future, and add to the health and welfare of the army. Dr. Farquharson, speaking later in the debate, congratulated the Secretary of State on his reforms, and said the so-called scandals during the late war had arisen from the undermanning of the Medical Department, and that the work of the R.A.M.C. had, considering the conditions, been admirably done. The results, as regards surgical operations and even the treatment of disease, compared favourably with other campaigns. He had at first regarded the Advisory Board with some suspicion, but he congratulated the Secretary of State on the valued advisers he had selected, and he was glad to find it was working so well. It would, he hoped, keep the Army Department in close touch with the medical schools. He suggested that the inspection of hospitals should not be done by the Advisory Board, but by inspectors, and he praised what had been done to strengthen the position of the Director-General.

Indian Pay, R.A.M.C.—On Wednesday Dr. Farquharson asked the Secretary of State for India whether the rates of pay of officers of the Royal Army Medical Corps in India, sanctioned by the Government of India in accordance with the Royal Warrant of March 28th, 1902, were now being received by those officers; and if not, when the new rates will come into force. Lord George Hamilton replied that increased rates of pay of lieutenants and captains of the Royal Army Medical Corps serving in India "take effect from the 24th November last."

The Adulterated Butter Bill.—In introducing this Bill the President of the Board of Agriculture said that there was now being sold in large quantities as butter an article to which water had been added after the process of churning, and which could in no sense be described as genuine butter. The Parliamentary Committee a year or so ago had fixed at 16 per cent. the standard of water in butter. It was a lenient standard, as the average amount of water in butter properly made was a good deal nearer 11 or 12 per cent. The Bill proposed that no butter containing more than 20 per cent. of water should in any circumstances be allowed to be sold. In the case of butter containing between 16 and 20 per cent. the vendor must show that it was genuine butter, unless he sold the article under the provisions of the Margarine Act as "adulterated butter." An exception was made in favour of Irish salted firkin butter as regarded the 16 per cent. standard, but it might not contain more than 20 per cent. unless the producers could prove that the butter was genuine. The exception met with opposition, and notices for rejection of the Bill have been put down by Mr. Kearley, Mr. Lough, Mr. Dalziel, Mr. Joseph Nolan, and Mr. O'Malley.

The Employment of Children Bill, introduced last week by the Home Secretary, was very favourably received. The Bill gives power to county and borough councils to make by-laws for regulating the employment of children by prescribing the age below which, and the hours beyond which, employment would be illegal, and prohibiting the employment of children in occupations likely to be harmful to health and morals. Employment may also be prohibited in certain dangerous occupations, the carrying of heavy weights, and work likely to be injurious to life or limb. Children protected by the Factory Acts and Mines Acts, or over the age of 12 years under the Half-timers Act, who are exempted from school attendance, do not come under the Bill. The by-laws to be made may regulate street trading in the case of children under 16 years, and such employment was prohibited altogether under the age of 11 years. The passing of by-laws was optional, but once passed they were to receive the sanction of the Secretary of State after consideration, and, if necessary, after a local inquiry. A child is defined as a person under the age of 14 years.

Uncertified Deaths in England and Wales.—On Thursday in last week Mr. Corrie Grant asked the Secretary of State for the Home Department whether he would state the number of uncertified deaths in England and Wales during 1897, 1898, 1899, 1900, and 1901, in completion of the figures given by Sir M. W. Ridley on May 24th, 1897. Mr. Akers-Douglas, in reply, said that the numbers of deaths of which the causes were not certified were as follows:

1897, 11,103; 1898, 10,441; 1899, 10,745; 1900, 11,257; 1901, 9,986.

The matter was dealt with on p. xxix of the Registrar General's Report for 1902. The figures for 1901 represented slightly under 2 per cent. of all registered deaths.

Typhoid Fever in the Highlands and Islands.—Mr. Weir elicited last week from the Lord Advocate that Tolsta public school was closed on July 3rd on account of an epidemic of typhoid fever and was opened only on December 24th, and that at present Tong public school in Stornaway was closed. Mr. Weir also called attention to the fact there was an outbreak of typhoid recorded in the report of the South-Western District Committee of Ross and Cromarty which necessitated the closing of three schools for periods varying from three weeks to two months. The Lord Advocate said the medical officer was unable to state the cause of the outbreak, but assured the Local Government Board that the affected houses had been cleansed and disinfected as carefully as possible.

The Factory Report and Lead Poisoning.—On Friday in last week Sir Charles Dilke asked the Secretary of State for the Home Department when the first part of the annual report of the Chief Inspector of Factories and Workshops might be expected, and whether a return of the analysed numbers of cases of lead poisoning in the potting industry, such as had been given annually for three years was to be published in the present year without being moved for. Mr. Akers-Douglas said that the chief inspector hoped that if the printers were as prompt in their work as last year the first part of his annual report would be ready for issue before the end of May. The return of cases of lead poisoning had been moved for and would be published without delay.

The New Pharmacy Bill.—Colonel Long asked the First Lord of the Treasury last week whether his attention had been drawn to the Report of the Departmental Committee of the Privy Council on Schedule A of the Pharmacy Act, 1868; and whether, in view of its effect on agriculture, the Government proposed to bring in a Bill to give effect to its recommendations. Mr. Balfour said in reply that the Report was under consideration with a view to legislation at the earliest opportunity.

Antivaccinators and Handcuffs.—On Monday Mr. Levy asked the Secretary of State for the Home Department whether he was aware that two men, named Pick and Cokin, were arrested at Hinckley on February 27th for non-payment of fines and costs incurred under the Vaccination Acts, and were handcuffed before being conveyed to prison; would he state by whose authority they were handcuffed, and would he take steps to see that such treatment was not again employed under similar circumstances. Mr. Akers-Douglas replied that on his attention being called to this case he had called for a report from the local police and found that the facts were as stated in the question. No special authority was needed for the use of handcuffs in the case of prisoners when the police had reason to fear that without them they might be unable to carry out the warrant of commitment. In the present instance it appeared that the officers charged with this duty considered that handcuffs were necessary to prevent the execution of the warrant being frustrated. He was not prepared to say that this opinion was not justified. The necessity for handcuffs must depend upon the circumstances of each case, though he was certainly of opinion that they should not be used except for very good reasons.

Ventilation of Factories.—On Monday Mr. Shackleton asked the Secretary of State for the Home Department whether, in the 63 cases reported by the inspector under the Cotton Cloths Factories Act as have exceeded the nine volumes of carbon dioxide in every 10,000 volumes, a previous notice had at any time been issued for defective ventilation, and, if so, would he say in how many cases. Mr. Akers-Douglas said, in reply, that twelve previous notices had been sent within months to the same occupiers in 16 of the cases referred to, and at longer intervals to 35 such occupiers.

The Treatment of Harmless Lunatics.—Mr. Hammond asked the Chief Secretary for Ireland whether, having regard to the restrictions placed upon Boards of Guardians in Ireland in the treatment of harmless lunatics, he would favour the proposal for the assimilation of the law in Ireland to that in Scotland, under which it was practicable to have these persons boarded and cared for in the homes of the peasantry. Mr. Wyndham replied that the question of making better provision for the treatment of harmless lunatics in Ireland was receiving consideration.

The Cruelty to Animals Bill is being put down by its promoters from day to day in the hope of getting a second reading. So far the Bill has been blocked by the vigilance of one member, but there is need for some organized action, for in the present condition of the House an unexpected opportunity may occur any night, and the Bill get a second reading.

MENTAL NURSES IN AMERICA.—A Bill has been introduced into the Legislature of the District of Columbia regulating the hours of service and compensation of nurses and attendants at the Government Hospital for the Insane. It provides that quarters and rations shall be supplied, that eight hours shall constitute a day's work, and that thirty days' sick leave and fifteen days' annual leave shall be granted.

ON THE CONSOLIDATION OF THE PUBLIC AND PROFESSIONAL INTERESTS OF MEDICAL MEN.*

By Sir Victor Horsley, F.R.S., F.R.C.S.

Mr. President and Gentlemen,—I wish at the outset to endorse heartily what has fallen from the President to the effect that the interests of the profession are the interests of the public. Of course, this is a very difficult point for members of the lay public to grasp. They do not realize at the present time how absolutely, whatever helps forward the medical profession, will of necessity help forward their interests to a much wider extent.

Now, as to our interests as members of the profession.

The Needs of the Practitioner.

It seems to me we can judge of those interests best if we consider for a moment what are the requirements of the practitioner.

Now the requirements of all of us as practitioners may be divided under two heads. First social, and secondly scientific.

Social.

As regards our social requirements—that is our requirements in relation to the community at large—we require freedom to practise our profession while at the same time, if possible, we should be defended from unjust attacks. Secondly, we require security for our legal rights to practise. We have legal rights under the Medical Acts, but we have very little security for those rights; and we want also support against illicit competition such as quackery, medical aid societies, and so forth. So much for our social requirements.

Scientific.

In order that we may practise our profession properly we require opportunities of meeting for the discussion of medical and scientific questions, and we require, above all, in addition to those opportunities, a system for the rapid diffusion of knowledge.

Local Medical Societies.

Now, during the last 150 years to meet those requirements various societies and associations have been formed. But the formation of medical societies is a much more modern affair, I think, than is generally understood. I have put together in a diagram the dates at which the learned medical societies in England were founded, and if you begin at 1800, the date on which the Leicester Society was founded, you will find according to this scale, that until 1880 very few were instituted, whereas in the decade from 1890 to 1900 no less than twenty-three societies were formed.

MEDICAL SOCIETIES
(England).

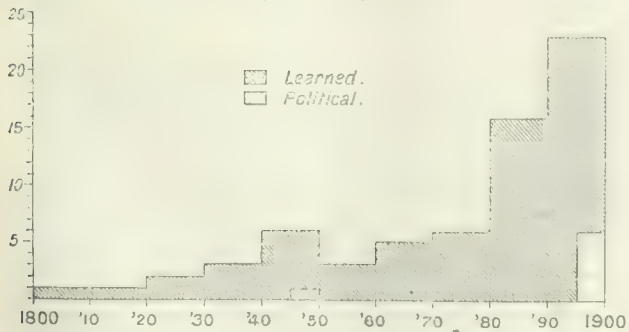


Diagram showing dates of formation of Societies.

So that the general curve shows that for a long time the furtherance of medical interests by way of the formation of medical Societies was almost dormant.

But afterwards—about 1860—that is to say about the time of the passing of the Medical Act of 1858, there began a very gradual rise at first, and then a sudden rise. In fact, the whole development of medical and professional interests is practically concentrated within the last twenty years. On the same diagram I have put on the same scale the formation of medico-political societies.

Medical societies were founded in England for various reasons. The Royal Society, for instance, was founded for the improvement of natural knowledge. The Harveian Society founded in Edinburgh was founded to commemorate the discovery of the circulation of the blood, and to promote good fellowship amongst its members. Probably all those societies were founded with the object of improving the scientific status of the profession, helping as far as possible in the diffusion of knowledge and helping to promote good fellowship among the members of the profession locally.

As a natural result of these efforts to promote instruction there have been founded in connexion with some of the Societies libraries. The Leicester Society has been for nearly a century a striking example of this prescience. Also some of the infirmaries throughout the country have libraries which have been collected from time to time by the medical staffs, and these have been brought into connexion with the local medical societies. But in order to put before you the facts succinctly on this question of libraries I should like to say that of more than 78 medical societies which have been founded in England but 33 have libraries.

The British Medical Association.

Now let us leave the question of the organisation of medical societies throughout England, and let us turn to the alternative system—the British Medical Association, which is the next most important means of organising the profession throughout the country.

The British Medical Association was founded before the middle of last century, and it was established to promote the interests and the honour of the profession.

Formerly its constitution consisted in government by a Council, but this led to erroneous interpretations of the by-laws, and that led naturally to reform. Hence the Association, as you know, has been completely reconstructed.

Now the object of the reconstruction was to render the system of government of the Association no longer one by an executive Council, but to make it what is somewhat foolishly called of a more democratic nature. It was, in fact, devised to make it representative throughout the country of the profession.

Now the only way to accomplish this would be to divide up the profession in small groups, and that naturally led to the formation of Divisions. That was accepted as a fundamental change in the Association, but it was not intended by the promoters of this reform that any central body, for example, in London, such as the executive, should overrule those Divisions, but that it should co-ordinate them. Each Division, in the first place, was to be more or less autonomic in character, but some central body was necessary to collect the expressions of views formed by such Divisions. To this end it was decided that each Division was to contribute to a meeting of representative members or delegates a representative, and this collection of representatives or delegates was in future to govern the Association and to indicate its policy. That is the scheme of the present reconstructed Association, and the first meeting of representatives will occur at Swansea in July of this year.

Now, as regards the furtherance and consolidation of the interests of the profession throughout the country, how do the two systems compare? The system of organisation through medical societies or this system of the British Medical Association.

Now, there is one very striking point of difference between the two systems. The first point of difference is that in a medical society of necessity there are electoral limitations, so that every local society is a restricted body within the district in which it is situated. The membership of a medical society rarely coincides with the number of men practising in the profession in that district. Nay, more, if we turn at this point to the question of actually existing medical societies in the towns of over 40,000 inhabitants in England, we find that there are only two-thirds of those towns which have medical societies of any kind whatever. It was hoped and from evidence it seems certain that it will come—by those who advocate the reform in the Association, that each large town, say, for example, a town with over 40,000 inhabitants, would form the focus of a Division of the Association. In addition, certain Divisions will be equally formed in districts where there are few towns. But, as a rule, each large town will form a centre of medical life.

So that it is clear that on this first point of organization the

* An Address delivered before the Leicester Medical Society; C. J. Bond, F.R.C.S., President, in the chair.

limited system of medical societies of necessity cannot meet our wants as efficiently as a system which provides for foci of the profession co-ordinated in interest and work in every large town throughout the whole country.

Then, again, the constitution of a society is of necessity more or less limited. It can only offer its privileges to those who choose to take them up and make extra payment for the same, but if it be possible to reduce our varied subscription expenditure and, at the same time offer not only similar, but even wider privileges which are open to all within the British Medical Association, we offer an unlimited advantage to the profession. Every member of our profession, it has always seemed to me, if he is a reputable practitioner, should have the opportunity of sharing all scientific privileges with his colleagues. Other material advantages I will refer to directly.

But the most powerful argument in favour of the system of the British Medical Association as against that of separate medical societies is, of course, that it alone provides equally for the co-ordination of the whole medical profession. Medical societies, each standing on their own basis in their own district, are not brought into accord or into a community of interests with medical societies in the neighbouring towns or neighbouring counties, whereas through the meeting of representatives of Divisions the whole of the profession will be brought together in the British Medical Association, and this fact—the co-ordination of the medical profession—is really the most valuable feature of the recent movement within the Association, because it is a gain in principle.

Medical Defence.

Now let me go back to the question of our requirements as practitioners, and above all freedom to practise, with protection from unjust attacks, blackmailing, and so forth. This, of course, means that any system, if it is really to consolidate the interest of the profession, must include the matter of medical defence.

I am not going to weary you with the history of this question, but I must mention some salient points. Inasmuch as the terms of the Memorandum of Association of the British Medical Association did not allow that Association to take up the question of medical defence, the necessary resolutions to alter the Memorandum were passed some years ago. The Council of this Association—the then governing body—did not put these resolutions into effect, but the latter remain unimpaired and in force and it is quite open for any Division to propose at the next meeting of the Association at Swansea next July that these resolutions shall be carried into effect.

If this were done the Council would have to proceed to execute the instruction. But there is another question in connexion with this matter of medical defence, and that is one of finance. Personally, having had considerable experience of the finance of medical defence work, I am quite sure that the British Medical Association has enough material wealth at its disposal to establish and carry on the work of defence of its members.

But many erroneous notions regarding the cost of the work are prevalent, and until these are disposed of we cannot complain of some being so apprehensive as to oppose this essential development of our interests. It is often forgotten that defence work conducted by a large body like the British Medical Association is a very different thing to its being conducted by a smaller body like the Medical Defence Union. A membership of five or six thousand as an insurance basis is a very different thing to defence conducted by a body of 20 000 members. But that is a point that I will not labour further now. All I wish to assert is, that at the present time the Association has within its power and reach the machinery for a system of medical defence, and I hope that within a few years we shall see a suitable defence department organized.

Then the first requirement of a practitioner's life—freedom to practise—would be completely met.

Maintenance of Legal Rights.

As to the second requirement, namely, the security of our legal rights, this is really a case in which medical interests are absolutely identical with those of the general public. And yet it will probably be in the face of considerable opposition from certain sections of the general public that we would obtain this security of our legal rights.

Now let us recognize at once that no system of medical societies can obtain a reform of this kind. It can only be done by an association which has the machinery for combination of effort, the officials to employ, and the money to expend on that purpose. For that reason I hope at the representative meeting at Swansea of the Association in July that the Medical Acts Amendment Bill will be discussed, and perhaps in the following year we shall agree upon a draft Bill which we can press upon the Government and House of Commons.

When this comes, with it will raise a very interesting point in connexion with the general question of the organization of the profession, namely, the attitude of the corporate bodies. Of the corporate bodies let us take the College of Surgeons of England for example—as, perhaps, being the most important, financially speaking, at the present time. The College of Physicians, of course, is the most important historically, but that College is in a bad way financially, and may perhaps be materially unable to interest itself actively in the need of the profession.

No such excuse can be offered for the College of Surgeons. Though in the middle ages the Corporate Guilds may have exercised considerable influence the College of Surgeons only increased its membership with the development of the profession, and, like all other medical corporate bodies, it has become more interested in preserving its existence than justifying it. The members of its Council who, though but twenty four in number, have arrogated to themselves the rights and privileges of their 20,000 colleagues who compose the College, do little more than carry on the administration of the Conjoint Examinations and maintain the buildings and museum of the College.

They have never publicly moved in support of the interests of the profession as a whole. Neither will they move. In fact it is practically certain that the attitude of the Council of the College of Surgeons will be to opoose the Medical Acts Amendment Bill which we require, because they believe that a real reform will threaten their income. So that medical education will be sacrificed to the selfish interests of the Corporations, just as it is at the present moment by the revolt of the Colleges against the authority of the General Medical Council.

From any point of view it is pretty obvious that this question of the security of our legal rights of practice will be the most difficult of our requirements to satisfy, and I think it can only be properly met by the combined strength and work of the British Medical Association.

Scientific Requirements.

As regards the meetings of medical societies, I said before that we would wish naturally that every reputable member of the profession in any district or place should have an opportunity of joining in all medical discussions, not merely as a visitor, but as a matter of right.

This would naturally mean that the privileges of a medical society should not be in any way exclusive. This can only be effected in the great foci of medical work—that is the large manufacturing towns—and can only be accomplished by the amalgamation of the local medical societies like this, with the local divisions of the British Medical Association, so that the scientific work of the medical society should continue as a kind of apostolic succession in the scientific work of the division.

Then we would no longer have the competition of two bodies endeavouring to carry on the same work, a competition which is absurd when we consider the work and the engagements of a man engaged in a busy practice, and consequently how impossible it is to bring medical men together more than a certain number of times per annum.

Then again, I must say that I believe if we could infuse a little less formality into all our scientific gatherings we should be able to make them more successful, and almost more agreeable, if that is possible. I always think when I go to a medical society, and see the formality of a president and a committee, secretary, and so on, that the business of the society might far better be conducted at one time and the scientific meeting at another. The most successful medical society, I believe, is the Physiological Society, which will not have a president at any price, which allows its members to smoke, and where the discussions are very agreeable instructive conversations and not dreary debates.

Meetings are the way in which we acquire knowledge of what our colleagues are doing, but it is only one way in which we learn. Moreover, it is a way that only affords the opportunity of learning at rare intervals.

At the same time, of course, medical work demands that we should have the means and the machinery for a very rapid diffusion of knowledge. Ours is a profession which more than any other requiries a rapid diffusion of knowledge. Directly

something new, something worth learning, or likely to be immediately useful in our work is brought out, it ought to be before us all at the same time. The public occasionally hears of therapeutic remedies before we do, and usually not to the advantage of the public. But it is a very annoying thing if one ought to have known what you are told by a layman.

Now at present there is no organized system for the general diffusion of knowledge amongst the profession. When I moved at Ipswich some years ago that a committee for considering the reform of the Association should be appointed, I said then that it seemed to me that one of the first duties a reformed Association ought to take up should be the rapid diffusion of knowledge among its members. That, in fact, we ought to have in London a bureau of information to which any member of the Association could apply on any subject, connected of course naturally with his professional work, and that he ought to receive an answer, if possible, by return of post.

As a matter of fact, at the present time something of this kind does go on, but the unhappy official upon whom it falls is our Editor—the editor of a Journal who already has enough work to do. He endeavours, as far as he can, very courteously to find the right answers to questions of all imaginable kinds, but it is obviously wrong that we should ask one man to do somebody else's work as well as his own.

I suggest, and still hold, that we should establish a bureau of information in London close to the large centres, libraries and agencies, whence information can be rapidly derived. But that only touches the fringe of this subject.

The early diffusion of knowledge is also connected with institutions of the kind that you possess here, namely, the library. Now, as I said before, there are only 33 medical libraries in England. I would suggest that it would be perfectly possible—especially where we have amalgamation carried out, if that proves agreeable to the members of the various medical societies throughout the kingdom—for each Division of the British Medical Association to have its library—a small one at first, perhaps.

And further, that while the foundation of libraries was going on, the British Medical Association could do a great deal. Mr. Hart, who was himself responsible in founding the library in London, also had in his mind that that library should not be merely a place for people to turn into when they happened to be in London, but that it should be a focus from which books should be distributed to the various branches and units of the Association. This was only one of various ways in which he endeavoured to get the Association to take up this question of the diffusion of knowledge, but it was his especial wish that the central office in London, through its library, should be able to feed medical libraries throughout the country.

Now a large Association can do that sort of work easily, and the result would be that a library already established, like that of the Leicester Medical Society, could be made to extend its great advantages to each practitioner throughout the district, with very little expenditure of money and organization.

But as regards the cost of these proposals, just as we considered the question of finance in relation to the matter of legal defence of our rights, so one must consider the matter of finance in relation to the diffusion of knowledge. If the amalgamation of the medical societies and the Divisions of the Association were effected, expense at first would undoubtedly fall upon the funds of the Association to maintain the existing libraries.

But, as I said before, when this is done from a central institution, instead of money being extracted with difficulty by local subscriptions, it can be done far more economically, and I do not for one moment believe that there would be much extra expense to meet if the medical societies throughout the country amalgamated with their local divisions. The maintenance of the library would then fall upon the Association through the Division.

During the reconstruction of the Association points, of this kind were considered by the Constitution Committee, and the by-laws admit of any local effort being made in this way as being an additional support to the objects of the Association.

One last word on the question of medical libraries, and that is to suggest that many medical men retiring from active work might greatly benefit their profession by donating their libraries to their respective Divisions.

To sum up, gentlemen, what I would desire to lay before you is this. That our local medical societies offer their members certain privileges. That as far as these privileges further our professional work, I should like to see every reputable member of our profession sharing in them without any exclusive election.

I should like to see all extra subscriptions which we pay to such Societies abolished and the work of the societies merged with that of the Divisions of the British Medical Association. And I should like to see the organization of the British Medical Association develop, and by means of its Divisions, working practically automatically in each district, not only preserve those various privileges which we have enjoyed in our various societies, but confer fresh and greater benefits which only a great co-operative institution can bestow on its members.

This amalgamation for the sake of mutual progress means, of course, a certain destruction of sentiment, and I, myself, am keenly interested from an archaeological point of view in the preservation of sentimental feeling so long as it conduces and tends to the progress of humanity. But all organizations, medical or otherwise, are purely temporary—their only purpose is to meet the needs of the moment, and when those organizations fail to keep pace with the natural evolution of the circumstances under which we have to live it is quite clear that we ought to reconstruct the various machines that we have in operation.

If the various medical societies throughout the kingdom amalgamated with the Divisions of the British Medical Association, but one serious question arises, namely: the appropriation as it were of the property of a society. Where property exists, that property would become the property of the local Division of the Association, but vested in trustees, so that it would remain for ever in the locality where that property was accumulated.

I would say here, in parenthesis, that in all social affairs as the destination of property, we are, as a rule, really dealing with accumulations. We pay something here and there for maintenance, but on the whole we are dealing with and enjoying accumulated assets—accumulated by those who are dead and gone before, and in whom, of course, no power of property resides.

So, too, as regards names, very few of us would like to see old institutions disappear, apparently by the loss of the name. But I would like to point out to you that names, however honourable, are not in fact essential. If honourable, the name will live, and it is the work of the societies that we wish to continue, not necessarily the machinery which effected that work.

In conclusion, I think that the opportunity of consolidating our interests and our work is now before us, and that we have only to grasp that opportunity to find that our work and that those who come after us, will be both more useful and more happy.

CONTRACT MEDICAL PRACTICE.

Motherwell, Lanark.

Early in the last century the medical men practising in the district of Motherwell agreed, in view of the rates of wages then prevalent, and in the hope of encouraging thrift and self-help, to give attendance during sickness as well as certificates of inability to work to the members of the Friendly Societies for the sum of 2s. 6d. or 3s. a year a member. Wages have increased, and the financial position of the Friendly Societies has enormously improved. The Friendly Societies having succeeded, now turn round and wish to kick down the ladder by which they climbed. The medical men of Motherwell finding that the Friendly Societies showed no signs of taking any action to recognize the altered state of affairs, decided last December to take action. They perceived that the payment of 2s. 6d. or 3s. had grown to be thought a remuneration for the services rendered; they intimated to the Friendly Societies that they were not prepared to continue this one-sided bargain, but that they were generously ready to go on with the work if the fee were raised to 4s. a year. This, of course, is not a remunerative rate, but the medical profession has always dealt very gently with the Friendly Societies. The proposal, however, has caused an outcry, and most absurd letters have been appearing in the *Motherwell Times*, all written under the delusion that 2s. 6d. a year is a remunerative rate. Some of the writers are either blind to the fact that they and their forbears have been for nearly a century the objects of the philanthropy of the medical profession, or have not sufficient independence to find that position irksome. The officials of the Societies appear to have formed a joint committee and advertised in the *Glasgow Herald* for a medical

officer; there were a number of applicants, and Dr. Stewart of Beith was selected. We are informed, however, that on learning the true conditions he declined the appointment. He is to be congratulated on his decision.

FRIENDLY SOCIETIES MEDICAL AID FEDERATION.

THE Honorary Secretary of the Southampton Provident Medical Association, St. Brannocks, Howard Road, Southampton, would be much obliged if members of the British Medical Association conversant with the question would kindly state what are, in their opinion, the weak points of Friendly Societies Medical Aid Federations.

THE PREVENTION OF CONSUMPTION.

UNITED STATES.

New Jersey.—The first annual report of the Board of Managers of the New Jersey Sanatorium for Tuberculous Disease has recently been issued. The Board has made an approximate estimate of the number of persons suffering from tuberculosis in New Jersey who are in indigent circumstances, and who are suitable subjects for sanatorium treatment. It was found that a building capable of accommodating 250 patients would be sufficient. For the erection of such a hospital, and furnishing it with all needful appliances, it was decided that a sum of at least 300,000 dollars (£60,000) would be required. The last Legislature of New Jersey appropriated 50,000 dollars (£10,000) for this purpose, a part of which the Board of Managers has expended in purchasing a site. An architect has further been invited to draw plans for the construction of plain, substantial, two-story pavilions for the accommodation of 125 men, and a like number of women, if possible, in single rooms, and for the erection of separate buildings for the administration, dining-rooms, recreation-rooms, kitchen, laundry, power-house, and rest-cure shelters. The report points out that there can be no doubt that the establishment of a sanatorium for this class of people is an economic measure, as well as a philanthropic one, since through its agency many will be restored to good health, and thereby placed in a condition to support themselves and those dependent upon them, while without such treatment they would become a burden to the community and an increasing source of infection at no distant date. Amendments to the law establishing the sanatorium are also recommended by the Board of Managers to empower it:

1. To restrict admission to curable cases of tuberculous diseases of the respiratory organs.

2. To designate the physician or physicians upon whose certificate only application shall be made to the Court of Common Pleas, as provided in Section No. — of the Act, and whose certificate shall be taken as a prima facie evidence of the existence of pulmonary tuberculosis in the curable stage.

Pennsylvania.—Two Bills which will be introduced into the Pennsylvania Legislature are, says *American Medicine*, of interest as bearing on the campaign against tuberculosis which it is hoped will be inaugurated in Pennsylvania with the assistance of the State Government. The first Bill asks for 300,000 dollars, to increase the capacity of the Free Hospital for Consumptives, at White Haven, by 200 beds. To establish 100 beds for advanced cases at a location between Philadelphia and White Haven, and five dispensaries for out-door treatment of tuberculous patients in Philadelphia and other large cities in the State. The second Bill, which will be introduced later by the Pennsylvania Society for the Prevention of Tuberculosis, petitions the Legislature for 500,000 dollars for building sanatoria in various sections of the State, beginning with two institutions in the State forestry preserves, one in the Pocono region, in Lackawanna, and the other in Franklin county, near Palo Alto region. Each structure will have a capacity for from 200 to 500 persons. The sites are to be selected by a commission of three, appointed by the Governor.

State Sanatorium for Illinois.—In its biennial report, just submitted to the Governor, the Illinois State Board of Health emphasizes the necessity for the immediate construction of a State sanatorium for consumptives, not only as a means of cure of such patients as are sent to it in the early stages of the disease, but to prevent the spread of the disease in the State. Of the 5,000,000 inhabitants of Illinois, it is estimated that over 700,000 are doomed to die of some form of tuberculosis unless steps are taken to stop the ravages of the disease. The report states that over 8,500 persons die of tuberculosis annually in Illinois. The Board points out that it is impracticable for a city or county to maintain a hospital for consumptives, and insists that it is the State's duty to establish such an institution, and thereby save the lives of thousands of its citizens.

Chicago.—The Visiting Nurse Association of Chicago is about to embark on an energetic campaign against tuberculosis. A committee of ladies has been appointed to arrange the preliminaries, and it has been decided to call a conference, including prominent members of the medical profession, representatives of the Board of Health, to be held in the middle of January. As far as formulated, the plan is to promulgate the doctrine that consumption is a communicable, preventable, and curable disease. The question of founding a hospital for the proper treatment of sufferers from tuberculosis is also under consideration. Other measures for the prevention of tuberculous diseases, such as the improvement of tenement buildings, the creation of parks and playgrounds, public baths, gymnasiums, and the formation of agricultural colonies for the predisposed, incipient, and cured patients, also came within the plan of campaign.

Rhode Island.—A petition, signed by 250 physicians of the State, was presented in the lower branch of the General Assembly of Rhode Island on January 26th, asking that a State sanatorium for consumptives be established. The matter is now before the Finance Committee, waiting for a recommendation for an appropriation of 100,000 dollars. Among the names of physicians signed was that of the Governor, Dr. L. F. C. Garvin, who signed in his capacity as physician, rather than as Governor of the State.

A Hospital for Consumptive Men of the American Navy.—It is proposed to enlarge the army hospital at Fort Bayard, New Mexico, so as to provide accommodation for tuberculous patients from the navy. It is estimated that an enlargement sufficient to provide for one hundred patients will cost 100,000 dollars (£20,000). If the scheme is carried into effect, it is proposed to call the hospital the Army and Navy General Hospital, and patients will be admitted under the same rules as are in force at the Army and Navy Hospital at Hot Springs, Arkansas. Hitherto, consumptives in the American Navy have been kept at some naval hospital without the advantage of proper climatic conditions.

AN INDUSTRIAL SANATORIUM.

Drs. Charles Reinhardt and Frank Fowler have established an open-air sanatorium for patients in the early stage of consumption, where the inclusive fees will range from 32s. to 42s. a week. It is established at Ipsden, near Hailey Sanatorium, and the medical, nursing, and general staff of that sanatorium will be available, and most of the food consumed will be provided by the Hailey farm and gardens. Patients who are considered to be sufficiently well are required to make their own beds, keep their own rooms tidy, and assist in the tending of poultry, pheasant rearing, gardening, and such farming operations as may be prescribed at the discretion of the resident physician. It is believed that this arrangement will be valuable to patients whose former occupations were of an unhealthy character by assisting to fit them for an open-air life after leaving the sanatorium. Patients applying on their own behalf will pay 42s. a week; if the charges are paid for necessitous patients by doctors, clergymen, or charitable societies they will be reduced to 35s a week; patients sent by municipalities or hospitals will be received at 32s. a week, provided that no fewer than four are sent for not less than four months. Further particulars can be obtained on application to the Secretary, the Subscription Sanatorium, Ipsden, Wallingford.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.—The usual monthly meeting of the Executive Committee of this Society was held on February 27th, at 429, Strand, London, W.C., Dr. de Havilland Hall, in the chair. The accounts showed that a large number of sick claims had been received in the first two months of the year, the number having been largely increased by an epidemic of influenza. Though numerous, the claims have not been for the most part of long duration. The accounts for 1902 are now closed, and the balance sheet produced to the committee shows that during last year the sickness fund has grown, while the annuities and life assurance branches, in which no new business has been transacted for many years, are nearly stationary. The investment reserve fund, to which is placed all interest earned over 2½ per cent., has grown considerably. A large sum was paid away during last year to members who are permanently disabled. A valuation of the business will be made at the end of the current year. Prospectuses and all particulars on application to Mr. F. Addiscott, Secretary, Medical, Sickness, and Accident Society, 33, Chancery Lane, London, W.C.

EPILEPTICS AND CONSUMPTIVES IN ILLINOIS.—Bills have been introduced in the Illinois General Assembly, providing for the creation and establishment of the Illinois State Colony for Epileptics, and for the erection, organization, and management of a State sanatorium for persons afflicted with tuberculosis.

THE INDIAN MEDICAL SERVICE.

Pay in the Civil Branch.

In an article on this subject published in the British Medical Journal of January 31st, page 263, it was stated that we were not then in a position to give details with regard to the pay in the civil branch of the Service. We are indebted to the India Office for the following tabular statement showing the salaries at present attaching to the various classes of civil employment. We are informed that a revision of the rates of pay of some of these appointments may not improbably be thought desirable in the near future:

Salaries of Officers of the Indian Medical Service in Civil Employ.

Civil Surgeoncies.

1st Class.

	Rs. per Mensem.
When held by a Lieutenant-Colonel ...	1,050
When held by a Major	850
When held by a Captain over 5 years ...	650
When held by a Captain under 5 years ...	500
When held by a Lieutenant	500

2nd Class.

When held by a Lieutenant-Colonel ...	950
When held by a Major	750
When held by a Captain over 5 years ...	550
When held by a Captain under 5 years ...	400
When held by a Lieutenant	400

Charge of Gaols.

1st Class Central.

Salary of Rs. 700 a month, rising by annual increments of Rs. 50 to Rs. 950; after 16 years in the Department and 20 years service in all, Rs.1,200 a month.

2nd Class Central.

Rs.550 a month, rising by 50 annually to Rs.700.

Lunatic Asylums.

	About Rs.
Lieutenant-Colonels of 25 years service or over, grade pay	+550=1,450
Lieutenant-Colonels of 20 years' service or over, grade pay	+500=1,350
Majors ... ... ,,	+400=1,050
Captains of 5 years and upwards ... ... ,,	+350=750 to 800
Captains of less than 5 years, and Lieutenants... ,,	+300=600

Chemical Examiners.

Salaries of Rs.800, rising by 70 annually to Rs.1,500

Collegiate and Professorial Appointments.

One appointment on Rs.1,800 a month, and two on Rs.1,600 a month.

Other Principal Professorships.

	Rs. per Mensem.
When held by a Lieutenant-Colonel ...	1,250
When held by a Major	1,050
When held by a Captain over 5 years' service...	850
When held by a Captain under 5 years' service	700
Or a Lieutenant...	700

Minor Professorships carry a staff salary of Rs.200 a month in addition to the officers' grade pay.

Various other appointments—of Resident Surgeons and Physicians at hospitals, Presidency Surgeons, District Surgeons, etc.—carry salaries ranging from Rs.500 to Rs.1,050 a month.

Sanitary Department.

Sanitary Commissioners, Rs.1,200 to Rs.1,800.

Deputy Sanitary Commissioners, Rs.600 to Rs.1,000.

Additional allowances, varying in amount between Rs.50 and Rs.200 a month are given for the performance of extra duties by medical officers.

Rates of Pay Compared.

The following table shows the rate of pay of the Indian Medical Service, civil and military, and for comparison the Indian pay of the R.A.M.C.

	I.M.S.				R.A.M.C.		
	Military.		Civil.				
	Pay.	Substantive Charge.	Second Class.	First Class.	Pay.	Charge Allowance.	Total.
Lieutenant	350	450	400	500	420	—	—
Captain, under 5 years	350	450	400	500	475	—	—
Captain, over 5 years	450	600	550	650	—	—	—
Captain, over 7 years	450	600	550	650	530	—	—
Captain, over 10 years	500	600	550	650	650	60	710
Major	640	800	750	850	790	120	910
Major, over 15 years	677	800	750	850	825	180	1,005
Lieutenant-Colonel	852	1,000	950	1,050	1,060	180	1,240
Lieutenant-Colonel (selected)...	—	—	—	—	1,150	240	1,390

In the case of an Indian medical officer in military employ band, regimental, mess, and fund subscriptions are deducted from his pay.

It is satisfactory to know that the propriety of revising these rates of pay is under the consideration of the authorities, but it is a little difficult to understand why, when the pay of the R.A.M.C. in India was being readjusted, that of the Indian Service was not at the same time placed on a more adequate basis. It would have been more equitable to have done so. It cannot be possible that the pay of officers who must spend the whole of their service in India should be permitted to continue to compare unfavourably with the pay in India of officers of another branch of the Medical Service of the State who may spend much of their service at home.

Apart from any comparison with rates of pay considered reasonable for officers discharging duties to a large extent similar, there are solid grounds calling for a revision of the pay of the Indian Medical Service. In days not very long past an officer of the Indian Medical Service who chose to seek private practice might calculate on adding materially to his income from that source. For various reasons these opportunities have very much diminished. Owing to the improved facilities provided in the universities and colleges of India for obtaining a medical education, the number of practitioners of native, or mixed European and native parentage has largely increased. Many of these gentlemen are highly trained, and have justly won the confidence of their compatriots. This development, which is a part of the general policy of the British in India, is a matter for congratulation, but it must obviously have a considerable influence on the prospects of officers entering the Indian Medical Service. Other causes have contributed to reinforce this natural tendency; among these must be reckoned the frequent moves to which I.M.S. officers have been subjected for a good many years past. Plague, famine, frontier wars, and the China expedition, have made great demands upon the service, and officers have been moved about in a bewildering way. We are told of cases in which an officer has had as many as three moves in a year. These moves are expensive, more especially as the medical officer gets no allowance for moving his horse or horses, which it is essential he should have for the discharge of his duties, and must, therefore, either sell in a hurry when ordered to a new station, or pay the charges for a horse-box out of his own pocket. But more important is the fact that such frequent moves are destructive of private practice. Even in India, and with the prestige of a covenanted service, a private connexion is not worked up in a few months.

We have looked into this matter carefully, and have come to the conclusion that the Government of India is treating the Indian Medical Service with a regrettable want of consideration, to use no stronger term, in this respect. The opportunity of private practice is one of the inducements held out in the regulations, and finds a place in the official paper of conditions of service sent to intending candidates. No doubt the warlike operations of recent years, and the chronic emergencies of plague and famine have been a source of embarrassment, and have strained the establishment severely. For years, indeed, all ordinary leave was stopped, in itself is a very serious matter when the effects of prolonged residence in India on the European constitution are taken into account. There seems to be a want of readiness in high quarters to recognize that it is in the interest of the European community in India, and a distinct obligation of the Government towards that community and towards the Medical Service to favour and not to hamper private practice. There would even seem to be a feeling—perhaps unacknowledged to themselves—in the breasts of some highly-placed civil personages that private practice is, as it were, clandestine, whereas it is officially recognized, and always has been so recognized. Yet the privilege would appear to be the last thing which the Government takes into consideration, unless it be to issue somewhat undignified and exceedingly irritating orders with regard to the fees which may be accepted.

Appointments Reserved for Commissioned Medical Officers.

By a general order of the Government of India (November 20th, 1877) it was laid down that:

When once a civil medical charge is enrolled in the list, and provision is made for it by the necessary addition to the strength of one of the commissioned medical services, it is impossible, except for very special reasons, to allow the appointment thereto of any one but a commissioned medical officer. The appointment of an uncovenanted officer to an office for which provision is made in the recruitment of one of the

uncommissioned medical services would be obviously unjust to the officers of this service, and tend to produce organic inconvenience. It is an indispensable condition of the formation of every body of officers organized under covenant or commission to fill certain offices that the monopoly of these offices be jealously and rigidly preserved to them. Any departure from this course involves injustice to, and discontent among, the officers, and needless expense for the pay of officers provided for offices otherwise filled.

An uncovenanted officer, therefore, should never be appointed to any medical charge, whether it be contained in the list of charges for which commissioned officers are allowed or not, until it has been ascertained that no commissioned officer can be spared for the post. Although the pay of a commissioned officer be higher, it will be cheaper and better to employ such an officer if one can be spared, rather than to leave him to draw his military pay for doing duties for which his services are not absolutely required, and to pay an additional uncovenanted officer, though on a lower scale. The departmental medical authorities will decide, in each case, whether a commissioned officer can or cannot be spared. The Government of India does not wish to press for the employment of commissioned officers in any civil charges not included in the list of charges for which commissioned officers are sanctioned and provided; but the heads of the medical department should be guided in their proceedings by the principles herein recited.

Again by a later order (1895) it was laid down that:

Assistant-surgeons should not be placed in medical charge of stations when commissioned officers are available. In considering whether the services of a supernumerary commissioned medical officer should be retained the desirability of having European commissioned medical officers at stations, especially at those where there is a considerable European community, should not be lost sight of.

Again it is stated than an uncovenanted officer should never be appointed to any medical charge, whether it be contained in the list of charges for which commissioned officers are allowed or not, until it has been ascertained that no commissioned officer can be spared for the post. Finally, the policy of the Government of India is summarized as follows:

(1) The Government of India "has no desire to increase the number of the commissioned medical officers: on the contrary so far as the exigencies of the public service will permit, it would be glad, for economical reasons to reduce the number of such officers." (2) "But" the Government of India "must insist upon the commissioned medical officers in the several services at any time being utilized to the utmost, and it expects the heads of the medical department and the local Government to take all precautions not only that there should be no avoidable encroachment by uncovenanted officers upon the appointment for which commissioned officers are sanctioned and provided, but that not a single uncovenanted medical officer be appointed to any civil medical charge, unless no commissioned medical officer is available for duty.'

Our information is to the effect that the Government of India no longer acts upon these laudable sentiments, but that, as a matter of fact, some civil medical charges, formerly always held by a commissioned medical officer, are now assigned to assistant surgeons, while others have been abolished.

Military Administrative Appointments.

The number of these appointments open to officers of the Indian Medical Service has been materially diminished in recent years; this has been due partly to the abolition of some appointments and to others being now allotted to officers of the R.A.M.C. There is consequently a severe block in promotion in the higher grades, especially in Bengal and Madras.

Medical Attendance and Fees.

Civil surgeons are required to give gratuitous medical attendance to officers covenanted, uncovenanted, or military, who are in civil employ, but not in all cases to their families. Officers in military employment, cantonment magistrates, chaplains, honorary commissioned officers, and a somewhat long list of minor employés are, however, entitled to gratuitous medical attendance upon their families. The amount of remuneration for attendance upon the families of public servants is a matter of private adjustment, but the regulations state that "the conduct of any medical officer who makes a demand which, under the circumstances of the case, shall appear to the Government to be excessive will be noticed as it deserves." If, however, an officer or his family entitled to gratuitous medical attendance prefers to obtain the services of a medical officer other than the recognized Government medical attendant, it is considered a matter of private arrangement with which the Government has nothing to do.

Officers holding certain appointments, including certain officers in the medical colleges and in large hospitals, asylums, and gaols, as well as certain sanitary appointments, are not permitted to engage in private practice.

Any medical officer in civil employ who draws house rent in a presidency town is not allowed to engage in private practice; conversely, if he engages in private practice he cannot draw the presidency house allowance.

A great deal of irritation has been caused by recent regulations with regard to fees which officers of the Indian Medical Service can receive for attendance on native chiefs and nobles, and native gentlemen of high position in a native State, and by the way in which these regulations have been interpreted and enforced by the Government of India or under its instructions. The rules are as follows:[1]

(a) When a native chief, or noble, or gentleman of high position desires the professional attendance of any medical officer of Government, the latter will be at liberty to attend him, provided that such attendance does not interfere with the due performance of his ordinary duties. The special permission of the local Government will, however, be necessary when such attendance involves the absence of the officer from those duties for any substantial time.

(b) The local Government will satisfy itself that the fee proposed is not out of proportion to the relief afforded and to the circumstances of the case, and has authority to sanction the acceptance of a fee not exceeding Rs. 2,000. If the proposed fee exceeds this sum, the matter will be submitted with a full report by the local Government, for the consideration and order of the Government of India.

(c) The report prescribed in the preceding clause will not be required from a medical officer when the fee does not exceed Rs. 50 a visit, or Rs. 1,000 in the aggregate for repeated visits in the course of a year.

(Note.—For the purpose of this notification the term "local Government" will be held to include an agent to the Governor-General and a resident of the first class.)

The orders upon which these regulations are founded are contained in the notifications of the Government of India in the Home Department, dated July 25th, 1893, October 8th, 1900, and June 12th, 1901. A further notification bearing date December 2nd, 1901, stated that several cases had recently been submitted to the Governor General in Council which indicated that much uncertainty existed as to what were reasonable and proper fees and that local Governments had in some instances "failed to realize the importance of strictly scrutinizing and controlling the proposals made, and have, therefore, passed on, and occasionally even recommended for sanction, fees which the Government of India have been compelled to regard as excessive and improper." While the notification does not seek "to lay down any precise principles or definite regulations," it states that the rules prescribe that (1) fees should not be out of proportion to the relief afforded or to the circumstances of the case, (2) that they should not be out of proportion to the rank, position, and emoluments of the medical officers concerned, and (3) that "though it may often be right that they should be liberal, they should not exceed, to an extent which may be deemed extravagant, the general standard of the fees which the medical officer accepts in his ordinary private practice." The local Governments are strictly enjoined to investigate the proposals made not only when they sanction the fees themselves, but also when they forward their suggestions for the orders of superior authorities. They are further reminded that they are not expected to refer for orders every case in which the fee offered or claimed exceeds Rs 2,000, but only those cases in which they desire to recommend that the fees should exceed that amount.

This is a distinct invitation to the local Government to interfere, and a very broad hint that no fee of more than Rs.2,000 should be recommended to be sanctioned except under very uncommon circumstances. As the equivalent of Rs.2 000 is about £133, and as it appears that this sum is interpreted to mean the total amount which may be received from an individual native chief, noble, or native gentleman of position in a native State during any year, and as the definition of the last class seems to be elastic, it is easy to see that such rule must operate in some cases very greatly to the disadvantage of the medical officer, more especially when it is observed that by (c) above any fee of Rs.50 for a visit, or Rs.1,000 in the aggregate, for repeated visits in the course of a year, may be thus referred.

Leave Rules.

Officers of the Indian Medical Service below the rank of colonel may be granted privilege leave or leave in India for the period of one year only on full military pay and half the staff salary of appointment. Furlough is granted out of India for not more than one year although the period may be extended to two years' absence from duty on the following pay:

After arrival in India, on first appointment					£200	a year.
After the commencement of the 5th year's service for pension,					£250	,,
,,	,,	,,	10th	,,	,,	,, £300 ,,
,,	,,	,,	15th	,,	,,	,, £400 ,,
,,	,,	,,	20th	,,	,,	,, £450 ,,
,,	,,	,,	25th	,,	,,	,, £500 ,,

[1] We take them from the *Civil Medical Code*, Madras, second edition, 1901, Par. 390.

Extension of leave involving absence from duty for more than two years is not granted except on special urgent grounds and carries no pay, if a special extension is not granted the officer is placed on temporary half pay or the retired list, and an officer is also liable to be placed on half pay or the retired list should his health require an undue amount of leave whether in or out of India. These regulations apply only to officers in military employ, the rates of furlough pay for officers in civil employ are differently assessed, the figures are not before us, but we believe that the furlough pay in the civil branch is higher than in the military, thus the lowest furlough pay drawn by a civil surgeon is £500 a year, whereas in military employ the minimum can be as low as £250 or if the officer is under five years' service even £200. The higher furlough rates, however, apply only to officers in permanent civil employ and not to those in officiating civil employ.

If an officer below the rank of captain is given leave home on medical certificate his passage is paid both ways. This is a great boon to regimental officers of the Indian army who enter young, about 18, but is of little advantage to medical officers who enter at the age of 23 or 24, and are promoted in three years. As a rule, therefore, an Indian medical officer coming home on sick leave or otherwise pays his own passage which is a very serious consideration. It would seem only just that when he has to travel to Europe on sick leave or for the purpose of study, his passage both ways should be defrayed for him. Some concession might reasonably be made on this head when he comes home on ordinary furlough, seeing that this furlough is one of the inducements held out to him on joining the Service.

Privilege leave may be granted for two months a year to officers in military employment, and for one month a year to officers in civil employment, and can be accumulated until the officer is entitled to three months' privilege leave. As a matter of fact, however, owing to the numerous calls upon the Service due to war, plague, and famine, it has been exceedingly difficult to obtain such leave; very seldom has it been possible to spare an officer owing to the Service being short-handed. In military employment the officer taking privilege leave must find a substitute, that is to say, he must find another officer in the same place willing to take on his duty, and the custom is for the substitute to receive the allowances of the appointment. In civil employment the Government makes arrangements for a substitute.

Recruiting.

At the recruiting centres now established in India the recruiting officer (combatant) draws special staff pay (at the rate, we believe, of Rs. 200 a month) and deputation allowance of Rs. 5 a day for travelling. The medical officer who is responsible for passing the recruits, and who may have as many as 40 or 50 sent up to him in a day, while his hands are full with ordinary routine work, gets no staff allowance for this extra duty.

In this connexion it may be mentioned that the duty of examining applicants for the State (postal) life insurance devolves on a civil surgeon, and in his absence upon any Government medical officer. For this duty a fee of Rs. 4 is paid by the postal authorities, or about 5s. 3d. This is an absurdly inadequate remuneration for the services rendered. We are informed that it it has served as a very bad precedent for the private insurance companies, which now tender only Rs. 8, or 10s. 6d. as the honorarium for medical officers who examine private cases for them.

Native Regimental Hospitals.

In the Indian army the system of regimental hospitals, replaced years ago in the British army by station hospitals, is still maintained. It is productive of waste of time, energy, and money.

In large stations it leads to the maintenance of perhaps four or five scattered regimental hospitals, each with its own *personnel* and equipment, and hospital guards have to be detailed to each hospital.

In the majority of instances the native regimental hospital buildings are not adapted to the purpose to which they are devoted, and not a few have been condemned as buildings for sick men by principal medical officers and general officers commanding. Some still have mud floors, others are floored with granite slabs, and gaping spaces between these slabs may often be seen. In many of these buildings ventilation and light are defective. In some the accommodation, such as it is, is inadequate and badly arranged; there may be two main wards, but no isolation room and no special wards for eye cases. Few have an operation room, and, as a rule, no operation table is provided. A paternal Government, however, generally, provides a mortuary and a *post mortem* table. The equipment of the hospitals is very unsatisfactory. This is admitted by the Government of India, for steps were taken some years ago to remedy some of the most obvious defects. It would appear, however, that the remedial process is being applied in a leisurely fashion.

Correspondents, who write from recent experience, inform us that native regimental hospitals are still provided with lint and raw cotton as their only surgical dressings, that the appliances for boiling water are not only quite inadequate but ill-designed, and that the only vessel supplied for holding antiseptic solutions is a dark-green bowl with a capacity of half-a-pint. On manoeuvres, on the march, or on field service, the medical officer has to use the small drinking cup, with which field medical panniers are provided to hold antiseptic solutions. No instruments are provided for the examination of the ear, larynx, or rectum, for sounding the bladder, or for many other minor surgical procedures. Even a modern hypodermic needle is not to be had, and most of the surgical instruments are of most old-fashioned pattern and are packed in velvet-lined cases. The replacement of such instruments by modern sterilizable cases with metal handled instruments, has, we believe, been approved in principle, and we were even informed some time ago that the issue of a new pattern had been commenced, but that lack of available funds rendered the process of replacement slow. It is hardly worthy of the Government of India to boggle over a small matter of this kind, small from the financial but important from the surgical point of view. The change, which ought to have been made at least ten years ago, should no longer be delayed, and the issue of the new instruments should be accompanied by the supply of suitable portable sterilizing apparatus.

As has been said, the ventilation of many regimental hospitals is bad, and, partly as a consequence, the light by day is unsatisfactory. For lighting the hospital by night one dingy kerosene oil lamp is supplied for ward and surgery, and a hurricane hand lantern for the office and surgery. This may seem a small matter, but when sick or wounded men have to be attended after dark it comes to be of importance. There are oil lamps in use in India with incandescent burners, and one small lamp of this pattern would give more light than all the lamps at present in use in a native hospital put together.

The list of drugs supplied is also, we are informed, behind modern requirements. Some time ago certain drugs, including some in general use, were struck off the list, and an allowance of Rs 2½ a month for the purchase of these and of less common drugs was made. This allowance does not seem to have erred on the side of liberality.

If the system of regimental hospitals is to be continued it is clear that the defective buildings ought to be reconstructed or replaced by new buildings properly designed and built. The floors in all cases ought to be ventilated underneath, and should have polished wood or tiled surface. In Burmah the hospital buildings are constructed of teak and the floor surfaces are good. The timber walls and roof, however, are not well adapted to protect the inmates from excessive heat in the hot weather.

The medical officer in charge of a regimental hospital under the present system is responsible both to the district principal medical officer and the officer commanding the corps, and, according to regulations, both of these officers have authority over the administration of the internal economy of the hospital. The medical officer should be made responsible only to the professional authority, the principal medical officer of the district.

There is much to be said for the introduction of the station hospital system into the Indian army on the score both of economy and efficiency. In many cases one station hospital might replace two, three, or even four or five regimental hospitals, and the same expenditure which now fails to provide efficient equipment for four or five regimental hospitals would furnish a single station hospital with all modern appliances.

If the station hospitals are established, it must be clearly understood that there is to be no loss of pay to the officers of the Indian Medical Service. We are led to say this because we are informed that when the station hospital system was introduced for the British army in India the regimental allowances and pay were withdrawn, and no compensating allowance

made for the charge of station hospitals, except to the senior medical officer in charge. In this way the pay received by the majority of medical officers was less than they received under the regimental system, which had been abolished because the station hospital system was considered to give better results.

Clinical Study and Research.

The British War Office has, by recent alterations in the conditions of service for officers of the Royal Army Medical Corps recognized that in the medical as in other special branches of the army it is in the public interest to provide special facilities for officers from time to time to study the development constantly taking place in the sciences which it is their function to apply for the maintenance or increase of the efficiency of the army. In the case of the medical services this necessity is particularly obvious and there is the further obligation, peculiarly strong in the case of the Government of India, to afford opportunities for the prosecution in clinical and research laboratories of scientific inquiry into the cause and prevention of diseases specially prevalent in warm climates, a department of medicine in which great progress is being made at the present time. While we would recognize freely that the Government of India has recently shown a disposition to encourage individual officers who have displayed special capabilities, it does not appear to have grasped the fact that facilities should be afforded to all officers of the Indian Medical Service to keep their medical knowledge up to the mark, and to prosecute inquiries likely to yield results of benefit not only to the army but to the peoples of India. Nor does it appear adequately to recognize the principle that scientific distinction and diligence in scientific inquiry should constitute a strong claim for selection for higher appointments, and for the gift of honorary distinctions.

No doubt the large civil hospitals, especially those connected with teaching schools, afford great opportunities for clinical and scientific investigation and research, opportunities of which admirable advantage has been taken; but in military employment the conditions are very different. One microscope is issued to each command, an absurdly inadequate provision.[2] The simplest bacteriological apparatus is not supplied even at large military stations, for the native hospitals. Leave can be obtained by I.M.S. officers, according to the regulations, for one year, which counts towards service, for the purpose of attending the laboratories of the Medical Staff College in London to study bacteriology. An officer taking this leave receives only English furlough pay, and has to defray the cost of his passage from and to India out of his own pocket. The officer, therefore, who goes through this course does so at a considerable expense to himself. No other provision is made by the Government of India to allow medical officers study leave for practical professional work at Government expense. As a special case an officer may obtain permission to attend the Pasteur Institute at Kasauli, but it must be at his own expense, and while there he does not receive full pay and allowances.

Conclusions.

Pay.—The pay in the military branch, which is at present below the rates sanctioned by the Government of India for officers of the Royal Army Medical Corps, should be raised, and in fixing the rates regard should be had to the facts that the whole of the period of service must be spent in India, and that an officer coming home on leave, even on medical certificate owing to a breakdown in health, or for purposes of study, does not receive a free passage nor any allowance. The pay in the civil branch also should be raised proportionately, and with regard to the diminished opportunities for private practice.

Study Leave.—The opportunities for study leave should be increased, and an officer on study leave should receive minimum duty pay.

Furlough Pay.—Furlough pay should be fixed at a scale at least equal to the furlough pay of the Royal Army Medical Corps.

Private Practice.—The regulations of the Government of India should be withdrawn for revision; the terms of the revised regulations should be purged of expressions calculated to wound the susceptibilities of medical officers, and to lower the status of the medical profession and of the British name in India. Instances of improper charges, when and if they occur, should be matters for internal discipline, but if a maximum is to be fixed, it should be settled in relation to the duration and character of the services rendered.

House Rent.—The niggling regulation with reference to house rent in presidency towns should be abrogated, since it operates to the detriment not only of officers of the Indian Medical Service, but of officers of other services and of their families, who may thus be deprived of a free choice in obtaining the best available medical services.

Horse Allowance.—The Government of India should recognize that in nine cases out of ten an officer of the Indian Medical Service must keep a horse or horses if he is to do his work efficiently. When he is moved he should receive an allowance to cover the cost of transporting one or more horses.

Examination of Recruits.—In recruiting centres the I.M.S. officer who examines recruits should receive a recruiting allowance on the same conditions as those now applicable to combatant recruiting officers.

Administrative Appointments.—A fair proportion of the appointments in the administrative grades in India should be allotted to the Indian Medical Service. Special consideration should be given to the case of officers who, owing to the reduction of such appointments, and the block in promotion due to this and other causes, find themselves debarred from the chances of promotion which appeared open to them when they entered the service.

Appointments Reserved for Commissioned Officers.—The orders of the Government of India with reference to appointments reserved for commissioned officers should be adhered to and civil surgeoncies allotted to I.M.S. officers, and not to members of the subordinate service.

Hospitals.—If the regimental hospital system is continued the hospitals should be properly constructed and equipped. The field equipment should be thoroughly overhauled and its defects remedied. Serious attention should however be given to the question whether it would not be wiser, on the grounds alike of economy and efficiency, to replace the existing by the station hospital system. Owing to the very defective construction and equipment of the native regimental hospitals a decision should be taken without delay.

[2] This does not refer to the R.A.M.C., as arrangements are now being made to have small laboratories attached to each British station hospital in the larger districts.

LITERARY NOTES.

We regret to learn that Mr. Jonathan Hutchinson's valuable publication, the *Archives of Surgery*, has been discontinued. We hope that our information is incorrect, or that the distinguished surgeon may see his way to revive a periodical which contained the fruits of an almost unrivalled experience, and the matured judgements of a singularly subtle and original mind.

The March number of *Public Health*, the journal of the Incorporated Society of Medical Officers of Health, is devoted to tuberculosis. A special article on a model sanatorium is contributed by Mr. A. G. R. Foulerton and Mr. A. Langton Cole, F.R.I.B.A., and another by Dr. Alfred Hillier on the prospect of extinguishing tuberculosis. The measures for dealing with consumption and the compulsory notification of phthisis are among the subjects discussed in editorial articles.

Mr. Elliot Stock has just issued a work entitled *The Victualling of the Royal Navy*, by Dr. Alexander Turnbull, Inspector General of Hospitals (retired). The work is compiled from State papers and other official sources, and shows by tables the relative value of the English sailor's diet from the time of Henry VII to the present day. The question is also discussed with reference to the future.

In an article on servants' service in the eighteenth century which appears in the current number of the *Cornhill Magazine*, the following advertisement from an old newspaper is quoted:

> Wanted, for a family who have bad health, a sober steady person, in the capacity of doctor, surgeon and apothecary. He must occasionally act in the capacity of butler, and dress hair and wigs. He will be required to read prayers occasionally and to preach a sermon every Sunday. The reason of this advertizement is that the family cannot any longer afford the expense of the physical tribe, and wish to be at a certain expense for their bodies and souls.

It is comforting to read that "a good salary" was offered to the possessor of the "physical" and metaphysical accomplishments required to keep the bodies and souls of this frugal-minded family in good health.

An article is devoted to the Position of the Medical Profession in this Country and the Modes of Entering It in *Baily's Magazine of Sports and Pastimes* for February. The writer begins by "reluctantly confessing" that the profession

of medicine in this country does not occupy so high a position as it deserves. It is said to be "distinctly inferior" in prestige to the Church or the Law; it has little or no political influence, and generally we gather that it is the Cinderella of the professions. In "scientific eminence," too, British medicine is inferior to that of Germany, France, and Italy. It cannot, we are assured, be denied that "most, if not all, of the greatest discoveries in medical science have come from the foreign laboratories." In regard to this pronouncement we would ask, What are the "greatest discoveries" of modern times? The answer must surely be, Antisepsis and anaesthesia. The former is wholly, and the latter is partly, ours. What is the greatest recent progress in surgery? Ovariotomy and abdominal surgery and the surgery of the brain. In all these British surgeons have been the pioneers. What is the greatest recent progress in therapeutics? The thyroid treatment of myxoedema. This is a discovery as entirely British as vaccination. The proof of the mosquito theory of malaria, which has already led to such important practical results, is another "discovery" of which this country may well be proud. The writer goes on to consider the profession from an economic point of view. He says the average income of the profession does not probably exceed £600 a year; we fear that £200 would be a good deal nearer the mark. As means of raising the position of the profession, the writer urges one portal for admission; the larger endowment of scientific research by the State; greater facilities for it, and more systematized teaching; a higher standard of preliminary education; and the abolition of the custom of doctors dispensing their own medicine. With this we agree, but the writer is mistaken in thinking that no doctors, even in the rural parts of the Continent, dispense their own physic. As another means of increasing the prestige of the profession he suggests that doctors should leave much of the ordinary midwifery to midwives, as is done abroad. The last words may be said to be the writer's general formula of medical reform. If he knew a little more precisely how things are "abroad" he would be aware that in no country is the medical profession satisfied with its position, social or political, or with its relations either to the public or to the State.

We mentioned not long ago that, although the *Index Medicus* is to be revived under the auspices of the Carnegie Institute, Washington, a gap of nearly four years will be left between the former series, which came to an end on April 30th, 1899, while the "second" series was to begin in January, 1903. We are informed that with the cessation of publication of the *Index* the necessity for keeping the current cards separate from the older cards in the catalogue work of the library ceased. These cards, old and new, found their way into the drawers under subject headings. As large numbers of the cards have been printed in the volumes of the *Index Catalogue*, they are no longer to be found under subject headings, the printed volumes of the catalogue taking their place. The cards which have been thus printed are packed away in the basement of the Surgeon-General's Library at Washington. From these facts some idea may be formed of the enormous labour that would be required to get together the literature of the four years, and it is doubtful whether a thoroughly complete set could be gathered together for the missing period. The work would in any case involve very large expense. It may be added that all the missing literature of the four years will be found in the *Index Catalogue* of the Library; probably half of it has already been printed.

In *Macmillan's Magazine* for March Mr. Andrew Marshall gives an interesting picture of a Mexican plantation. Among the multifarious duties of the manager is generally included the care of the sick. This is a work that has to be done every day, for on a plantation there are always some people sick, and almost always some shamming. The thatched portico of the house, locally named the *corredor*, is the dispensary, and here the sufferers, true or feigned, wait their turn with Indian patience, a picturesque little crowd in the level sunshine of the morning. Those who have fever are wrapped in their gaudy blankets. A man who has a sore head has a bright handkerchief tightly knotted round the base of his skull. A woman with a headache fixes a little bit of sticking-plaster, the size of a sixpence, on each temple. Sore legs are tied up in dirty rags. Women have brought bowls or bottles to carry away the medicine for patients who cannot leave their beds. The treatment is of necessity a little rough and ready, and such common-sense and experience as may be available have to supply the place of professional skill. A good store is kept of Epsom salts and quinine, a roll of sticking-plaster, some phenicated vaseline, a little laudanum, a little ammonia for snakebites and scorpion stings, a little turpentine wherewith to treat the hideous *moyocuil* preparatory to squeezing it out of the great inflamed ball it makes under the skin. A poultice is easily made with hot milk and bread, or, failing these (and they are often failing), the ever clean convenient soap and sugar. Arnica grows wild among the mountains, and the Indians themselves make an infusion of this wonderful healer of wounds. The routine treatment for fever is a big dose of salts followed by a course of quinine; and for wounds washing with carbolized water, followed by the application of arnica, the wound being finally closed with sticking plaster. In some more ambitious plantations they have a full-blown graduate of Mexico, which is described as no mean city in respect of its medical school. The doctor has an imposing diploma bearing the seal of the University, with his photograph incorporated in the text—a fact which shows that the Mexican medical authorities have satisfactorily solved a problem which has severely taxed the intellectual resources of the Conscript Fathers of our Medical Parliament in this enlightened country. The writer says that a doctor when he is new is apt to be very popular there, like any other novelty. His mere presence among them calls people's attention to the state of their health, and makes them imagine they have the symptoms of all sorts of illnesses. Moreover there are motives for an Indian's actions, and the ways in which his ideas work, that are not to be interpreted by analogy with those of white people. He is capable of thinking that the doctor will be disappointed, and even offended, that perhaps he will go away, if patients do not turn up in plenty. He will come for treatment out of curiosity, to increase his knowledge, or out of avarice, fearful lest he may miss a share of anything valuable that may be going. And he will fish cunningly for a suggestion from the doctor's questions as to what kind of pain it may be well for him to have, and where it should be situated.

The *St. Bartholomew's Hospital Journal* for January publishes an interesting and scholarly address on medicine, old and new, delivered before the Abernethian Medical Society by Sir William Church. He divides the history of medicine as follows: (1) The pre-Hippocratic period of unknown length. (2) The period ranging from Hippocrates, 460 B.C., down to the time when Greek learning began to be lost sight of, about 600 A.D.—a period of 1,000 years. (3) From the end of the seventh century after Christ to the time of Harvey, about 1,000 years. (4) From Harvey's time till Pasteur's—220 years. (5) From Pasteur and his followers onwards. Of the pre-Hippocratic period, says Sir William, we know little or nothing, but it is evident that the knowledge embodied in the writings of Hippocrates represents not only his own experience but the accumulated lore of his own age and the times that preceded it. It must be remembered that the Father of Medicine was contemporary or nearly so with the greatest men of Greece—Pericles among statesmen; Æschylus, Sophocles, Euripides, Aristophanes, and Pindar among poets; Socrates, Xenophon, and Plato among philosophers; Herodotus and Thucydides among historians; and Phidias among artists. The medicine of Greece, like its philosophy, owed little to outside influence, and certainly did not depend, as has been ignorantly suggested, in any way on Oriental sources. Scattered through Plato's works are many references to physicians, and it is obvious that they held a high position in the Grecian communities as educated and philosophical men. It is singular that we should be almost as ignorant of the history of medicine between the days of Hippocrates and Galen as we are of the pre-Hippocratic era. For some centuries after Galen, although the decadence of Greek learning may have begun, the medical writings, for the most part commentaries on his works, maintained a high standard. Paul of Ægina was one of the latest, and subject to him Greek medicine, as well as learning rapidly, was lost in the growing darkness which, for the next five or six centuries, covered the Western world. During those years of gloom Europe owed all its knowledge of Greek medicine and philosophy to the Arabians, who translated, transcribed, and borrowed from the Greek authors which came into their possession, and the Arabic MSS. were translated into Latin, generally by learned Jews, and thus it happened that the Arabian physicians were so highly thought of during the Middle Ages. To Mundinus, among the moderns, belongs the credit of reintroducing the study of human anatomy. Mundinus was professor at Bologna, and died in 1326, and his *Anatomy* was the textbook for the next 200 years. John Adolphus, of Strassburg, says of him, "Quem omnis studientium universitas colit ac venerat ut deum." No further advance was made in our knowledge of

anatomy until the sixteenth century, when Vesalius, Fallopius, Fabricius, and others arose and led the way for Harvey to lay the foundation of scientific physiology based on observation and experiment. From Harvey's time to the discoveries of Pasteur, notwithstanding the enormous progress that physiological knowledge made in every direction, our views of diseases were not materially altered, and the actual causation of them was not understood any better than in the days of the Greeks. It may, in fact, be said that the old science and art of medicine remained unchanged in character until Harvey's time, and that the new did not begin until after the discoveries of Pasteur; but there was an intervening period of about 200 years from Harvey to Pasteur, during which our knowledge of physiology and disease was so greatly extended that it prepared the way for the reception of the discoveries of Pasteur and his followers.

Dr. Walter Channing of Brookline, Massachusetts, has reprinted from the *American Journal of Insanity*, an elaborate study of the mental condition of Czolgosz, the murderer of President McKinley. The experts in their official report expressed their conviction that he was neither a paranoiac nor a degenerate, but Dr. Channing thinks this conclusion was arrived at too hastily. His own conclusions are that Czolgosz was not an anarchist in the true sense of the term, and while anarchist doctrines may have influenced his mind, they were not the true cause of his crime. He had been in ill health for several years, changing from an industrious and apparently fairly normal young man, into a sickly, unhealthy, and abnormal one. While in this physical and mental condition of sickliness and abnormality it is probable that he conceived the idea of performing some great act for the benefit of the common and working people. This finally developed into a true delusion that it was his duty to kill the President, because he was an enemy of the people, and resulted in the assassination. His conduct after the crime was not inconsistent with insanity. His history for some years before the deed, and the way in which it was committed, and his actions afterwards, furnish a good illustration of the typical regicide or "magnicide" as described by Régis. The necropsy threw no light on his mental condition, and would not invalidate the opinion that the existing delusion was the result of disturbed brain action. Finally, from a study of all the facts, insanity appears to Dr. Channing the most reasonable and logical explanation of the crime.

In Mr. D'Arcy Power's interesting paper on the Elizabethan Revival of Surgery, an abstract of which has already appeared in the British Medical Journal, reference is made to Master William Clowes, who was surgeon to St. Bartholomew's Hospital in the sixteenth century, served in the English fleet against the Armada, and was afterwards surgeon to Queen Elizabeth. Clowes had a high idea of his profession and a corresponding detestation of quacks, who abounded in his time. He speaks of them with a frankness refreshing to us in these days when the fear of the law of libel makes us careful in our choice of words:

> But now in these days it is the more lamentable to see how so famous an art, and the true professors of the same, are thus spurned, trodden down, embased and defaced, through the wicked behaviour and counterfeit glosses of the above named rude rabble of obscure and unperfect experimenters, and such other prating, proud peasants and ignorant asses. As proud as Icarus, as crafty as Prometheus, and as boasting as Golia, which garrison or beastly band do intermeddle too far into physic and chirurgery to the great slander and discredit of so noble a mystery, and to the reproach of the learned physician and chirurgion; and to the great danger, nay, to the utter undoing of a great number of poor afflicted creatures, whom they do most wickedly practise upon and cruelly torment. And, as it is truly said, they suck up like drone bees with their brave polished colour of counterfeited cunning, filed phrases, and flattering speeches the reward of other men's travails, which, with great study, charges, and pains, have bestowed all their time therein.

Mr. D'Arcy Power gives the following as a fair sample of Clowes's style when his indignation was aroused by the misdeeds of quacks:

> A great number be shameless in countenance, lewd in disposition, brutish in judgement and understanding, as was their learned leader and master, Thessalus, a vain practitioner, who, when his cunning failed, straightways sent his patients to Lybia for change of air . . . This, their grand captain, was by profession a teazler of wool, and also the forerunner of this beastly brood following, which do forsake their honest trades whereunto God hath called them, and do daily rush into physic and chirurgery. And some of them be painters, some glaziers, some tailors, some weavers, some joiners, some cutlers, some cooks, some bakers, and some chandlers, etc. Yea, nowadays it is too apparent to see how tinkers, tooth-drawers, pedlars, ostlers, carters, porters, horse-gelders and horse-leeches, idiots, apple squires, broom-men, bawds, witches, conjurers, soothsayers, and sow gelders, rogues, ratcatchers runagates, and proctors of spittle-houses, with such other like rotten and stinking weeds which do in town and country without order, honesty, or skill, daily abuse both physic and chirurgery, having no more perseverance, reason, or honesty in this art than hath a goose, but a certain blind practice without wisdom or judgement, and most commonly useth one remedy for all diseases, and one way of curing to all persons, both old and young men, women, and children, which is as possible to be performed or to be true, as for a shoemaker with one last to make a shoe to fit every man's foot; and this is one principal cause that so many perish.

The *St. Thomas's Hospital Gazette* for February contains a paper on Egyptian midwifery by "A. W. J." Describing the attitude of the woman in labour, he says she takes her seat on a special chair. A purchase in bearing down is obtained by grasping two poles—part of the apparatus—placed on either side, whilst a friend or servant assists by support from behind. The seat of the chair has a half-circle cut out, so as to correspond more or less to the pelvic outlet, while the mother sits with the knees spread apart. Squatting on a low stool in front is the midwife, reminding one strongly of the pose of an expectant wicket keeper. The ordinary natives of this part of the Sudan adopt a more simple plan. The mother, squatting on the floor in the centre of her hut, and surrounded by an encouraging and enthusiastic crowd of relations and friends, bears down by pulling on a rope which dangles from the roof. The treatment of the umbilical cord, too, is unorthodox. The ligature controlling the cord is left very long, and gracefully tied round the infant's neck. After that the stump is cauterized with the flame of an ordinary candle, bought in the bazaar, and then left without any dressing. Infantile umbilical hernia is common, but apparently always disappears in time. The only native confinement that the author has taken an active part in presented certain features scarcely touched on in modern textbooks. The mother's vulva had (as is the custom) been partially and artificially closed up in childhood. The mother, dissatisfied with the progress that was being made, took up a very crude razor and proceeded to accelerate matters by doing (so to say) an autocolpotomy. This she did with such throughness that her offspring entered the world with a two-inch incised scalp wound, exposing the bone. This was bleeding profusely, and was, in fact, the reason that caused those about her to send for "A. W. J.'s" assistance.

IRISH UNIVERSITY COMMISSION.

The Royal Commission on University Education in Ireland, appointed on July 1st, 1901, issued its report on March 11th. It is signed by all the Commissioners except Professor R. H. F. Hickey, D.D. of Magee (Presbyterian) College, Londonderry. Riders are added by several of the Commissioners, including the Chairman, Lord Robertson, and Archbishop Healy.

Defects of the Royal University.

The Commissioners express the opinion that the present arrangements by which the degrees of the Royal University are obtained by examination alone has lowered the ideal of university life and education in Ireland, and should be abolished; that the system by which in making appointments to the Senate and all the offices of the Royal University account must be taken of the religious profession of the persons to be appointed with the view to maintaining the even balance between the churches is educationally indefensible, and that system by which an indirect State endowment for certain colleges is provided by means of fellowships in the Royal University, held by professors in those colleges who act as university examiners, must be condemned.

Proposed Reconstitution of the Royal University.

They recommend that the Royal University should be converted into a teaching university with four constituent colleges—the three existing Queen's Colleges and a new Roman Catholic college to be established in Dublin. The recommendation, however, is not intended to imply any surrender by the University of the responsibility, in fact as well as in name, to teach through the colleges, and to order and maintain the standard of learning according to which degrees should be conferred. The graduation courses in each college, while proposed by the college itself, should be approved by the governing body (Senate) of the University, which should be aided by a General Board of Studies composed of all the professors in all the constituent colleges and the Dublin College of Science in subjects recognized for graduation. The University should be further empowered to found scholarships and other higher

prizes for the encouragement of research, open to competition to members of all the constituent colleges.

The University examinations counting towards a degree should be held in the colleges by at least two examiners, one being a college professor and the other an extern examiner appointed by the Senate. The matriculation should be a University examination common to all the colleges, and conducted by examiners appointed by the Senate.

It is recommended that the Senate should be reconstituted, and should consist of a Chancellor, Vice-Chancellor, heads of colleges, representatives of professors, representatives of graduates from each college, and persons nominated by the Crown.

Proposed Roman Catholic College.

It is recommended that the proposed Roman Catholic college should be constituted in Dublin, and that the existing Catholic University School of Medicine should form the Medical Faculty of the new college. Though constituted in Dublin, the college should not be a local institution, but should draw students from all parts of Ireland. An elaborate system is recommended to safeguard the doctrinal teaching in the college, the tribunal to define it to consist of two Roman Catholic bishops.

Queen's College, Belfast.

The Commissioners expressed their high estimate of the value and importance of Queen's College, Belfast, which they say "has unquestionably done admirable work and is capable of large developments." They believe that the College would receive more help and support from the community if it were less dependent in matters of administration on the Crown, and have accordingly devised a scheme under which the administration of the property, finance, and general business of the College would be placed in the hands of a governing body to be composed of a president, representatives of professors, representatives of graduates, representatives of local bodies, and persons nominated by the Crown.

Queen's College, Cork.

With regard to Cork the Commissioners state that it is the natural seat of an important collegiate institution, and that the existing buildings of the College are important and appropriate, and the hospitals large enough for the purposes of a medical school. The success of Queen's College, it is added, has been chiefly in medicine, and the medical school is at present a useful and substantial institution. They recommend for the Cork College a governing body similar to that suggested for Belfast.

Queen's College, Galway.

The position of Galway, the Commissioners state, differs from that of Cork in having a weaker basis of operations. If the question now were to establish a college, probably Galway would not be proposed, but the College exists, has admirable buildings, and is doing a certain amount of useful work. They recommend that the governing body should be composed of a president, representatives of professors, representatives of graduates, and persons nominated by the Crown, local representation being omitted, owing to the absence of civic life in Galway. They recommend that the school of medicine should be limited to the two first years of the curriculum.

Endowment.

The report contemplates a liberal endowment, not only of the new Catholic College in Dublin, but also of a liberal addition to the general endowment of Queen's College, Belfast. It does not recommend any addition to the endowments of Cork or Galway, but observes that they are insufficiently equipped, and should be helped as they grow.

Teaching Equipment.

A further recommendation is that attendance at lectures in one of the four constituent colleges of the reconstituted University should be required from all candidates without distinction of sex, and that halls of residence for men and for women students should be provided in connexion with the colleges in Dublin and in Belfast. To avoid the duplication of expensive equipment for the teaching of applied science they recommend that the courses at the Royal College of Science for Ireland should be recognized as qualifying in whole, or in part, for certain of the degrees of the University.

Archbishop Healy's Rider.

Archbishop Healy, who has signed the report, adds a rider in which he states that he is not prepared to commit himself to the definite acceptance of the scheme of a federal university as outlined in the report, since it presents some grave defects which ought to be remedied. In particular, he urges that Maynooth College should be made a constituent college in the proposed University, and if this be not done would prefer the alternative of a Catholic University. He also thinks that the recommendation with regard to the governing bodies of the Colleges in Cork and Galway will not remove "the barrier set up by the hostility of the Roman Catholic Church" or render them "acceptable to the Roman Catholic population," the object at which the Commissioners aim. He thinks that the governing bodies should be of a larger and more representative character.

ASSOCIATION NOTICES.

COUNCIL.

NOTICE OF MEETING.

A Meeting of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 22nd day of April next, at 2 o'clock in the afternoon.

March, 1903. Guy Elliston, *General Secretary.*

ELECTION OF MEMBERS.

Any candidate for election should forward his application upon a form, which will be furnished by the General Secretary of the Association, 429, Strand. Applications for membership should be sent to the General Secretary not less than thirty-five days prior to the date of a meeting of the Council.

Guy Elliston, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

East Anglian Branch.—*Preliminary Notice:* The spring meeting of this Branch will be held at the Green Dragon Hotel, Wymondham, on Thursday, March 26th. Lunch at 1.15. Any member wishing to show cases or specimens, or to read a paper at the meeting, should communicate with Mr. H. A. Ballance, Norwich.—B. H. Nicholson, Colchester, General Secretary.

Metropolitan Counties Branch: West London District.—The next meeting will be held at St. George's Hospital, Hyde Park Corner (by kind permission of the staff) on Wednesday, March 25th, at 8.30 p.m. The meeting will be entirely clinical; some members of the staff will show cases. Mr. J. Brindley James, M.R.C.S., Vice-President, in the chair. Light refreshments provided; smoking allowed. All members of the British Medical Association living in the area of the Metropolitan Counties Branch are now members of the Branch. The Honorary Secretary tenders his apology to any member that does not receive a notice card of the meeting in the West London District.—Thomas Dutton, 7, Manchester Square, W., Honorary Secretary.

Metropolitan Counties Branch: East London and South Essex District.—The next meeting of this District will be held at Brooke House, Upper Clapton, on Thursday, March 19th, at 8.30 p.m., Mr. H. E. Powell in the chair. The following subjects will be introduced for discussion: The Treatment of Placenta Praevia, by Dr. Herman. Physical Qualifications for Tropical Residence or Travel, by Dr. Harford. The Prevention of Puerperal Sepsis, by Dr. Morton. It is hoped that specimens and cases will be shown. Members prepared to do so are requested to communicate with the Secretary, C. J. Morton, 56, Orford Road, Walthamstow.

South-Eastern Branch: East and West Sussex Districts.—A meeting of the above Districts will be held on Thursday, March 26th, at the Hotel Metropole, Brighton, at 4 p.m., Dr. Gordon Dill in the chair. Dinner at 6 p.m.; charge 6s., exclusive of wine. Agenda: Minutes of Hastings meeting, to decide place and date of next meeting, and to nominate a Chairman. Papers, etc., have been promised by Dr. Gordon Dill, Mr. Morgan, Mr. Watson Griffin, Dr. Hobhouse, Dr. Maynard, and Mr. Sanderson. All members of the South Eastern Branch are entitled to attend and to introduce professional friends.—W. J. C. Merry, 2, Chiswick Place, Eastbourne. H. C. L. Morris, The Steyne, Bognor Honorary Secretaries.

SPECIAL CORRESPONDENCE.

EDINBURGH.

Scarlet Fever Outbreak.—Annual Dinner of the Royal Medical Society.—New Lectureship at the University of Edinburgh.—Presentation of Address to Sir William Muir.

AT a meeting of the Town Council held on March 10th, the Convener of the Public Health Committee (Mr. Lang Todd) stated that a particular dairy farm was responsible for the great increase in the number of cases of scarlet fever during the past two weeks. The milk supply of that farm had been stopped, with the result that the number of cases had been considerably reduced, and the Committee was working at the present moment in conjunction with the county authorities to further lessen the risks to the community. The number of cases notified last week was 65, as against 59 in the preceding week, and 22 in the week before that. There were 341 patients in the Fever Hospital, as against 201 on the corresponding day of last year.

The annual dinner of the Royal Medical Society was held on March 3rd, when Mr. Mayo Robson, of Leeds, was the guest of the evening. Dr. A. B. Ross occupied the chair, and there were some eighty gentlemen present, including the Principal of the University, the President of the Royal College of Surgeons, Sir John Batty Tuke, M.D., M.P.; Colonel Warburton, M.D., C.S.I.; Professors Chiene, Crum Brown, Hunter Stewart, A. R. Simpson, and W. S. Greenfield; Drs. Affleck, James, Noel Paton; and Messrs. J. M. Cotterill, and David Wallace. After dinner the toasts of "The King," "The Royal Family," and "The Imperial Forces" were given and honoured. The Chairman then gave "Our Guest." "Robson," he said, "has not touched anything which he has not adorned." He possessed the qualities both of hand and head which went to make up a successful surgeon. His reputation was not confined to England, but extended to the Continent. Mr. Mayo Robson, in reply, said his only claim to recognition was that he had worked hard. He owed much to Lister and Thomas Keith. But for the former much of the surgical work of to-day could not have been done. From the latter he learned the infinite value of personal attention to details. Mr. Robson concluded by giving the toast of "The Royal Medical Society." "The University and Medical Corporations" was given by Dr. Prentice, one of the Presidents, and Sir William Turner, Sir John Batty Tuke, and Sir Halliday Croom replied. Dr. Wilson, another of the Presidents, gave "The Royal Infirmary," and Dr. Alexander James responded. Vocal and instrumental music filled up a most pleasant evening.

Mr. Matheson Shaw, the Librarian of the Royal College of Physicians of Edinburgh, who died the other day, has left funds to endow a lectureship in the University in connexion with medicine and the allied sciences. Details, and the amount of the endowment, have not yet been made public.

Sir William Muir was presented on March 5th with an illuminated address by the students of the University on the occasion of his retirement from the office of Principal. The ceremony took place in the McEwan Hall and there was a large gathering of students. Mr. S. Simpson, Senior-President of the Students' Representative Council, occupied the chair. He had on his right hand Sir William Muir and on his left Sir William Turner. Mr. James Barclay, one of the Presidents of the Students' Representative Council, presented the address. Sir William Muir briefly returned thanks, and Sir William Turner also spoke. A handsomely bound copy of the "Sir William Muir number" of the *Student* was presented to the late Principal by Mr. G. M. Barron. The Secretary of the Senatus, Sir Ludovic Grant, added his tribute to Sir William Muir. The proceedings ended with the National Anthem.

GLASGOW.

The Royal Army Medical Corps (Volunteers).—The Prevention of Consumption: A New Move.

AN interesting function took place on the afternoon of February 28th, at Glasgow Cathedral, when a memorial tablet to the members of the Glasgow Volunteer Companies of the Royal Army Medical Corps, who lost their lives in the South African Campaign, was unveiled. The memorial was erected by the officers and men of the Glasgow companies, and the Director-General, Sir William Taylor, K.C.B., after unveiling the tablet, delivered a brief address to the Medical Corps and the public. He claimed a connexion with Glasgow, being a graduate of the University, and at one time an original member of one of the first Volunteer companies, the Glasgow University Rifle Volunteer Company. He complimented the city on the prompt and cheerful response that had been made when Volunteers were called for for South Africa, and on the good work they had done. Surgeon-Colonel Beatson, C.B., the commanding officer, handed over the memorial to the care of the Corporation.

A new departure that is being made by the Health Department, under the direction of Dr. Chalmers, the Medical Officer of Health, will be watched with interest by the many who think that more active measures should be taken to stamp out consumption. It is still felt by those who are responsible that compulsory notification of consumption is not feasible. For some considerable time, however, a system of voluntary notification has been in force in connexion with all the public dispensaries and infirmaries, and in this way the Health Department becomes acquainted with a fair proportion of the cases in the city. The Corporation have just authorized the Medical Officer to employ an extra professional assistant for a period of six months to follow up the cases that are notified, and so do something towards controlling the conditions under which the patients are living, and limiting the ravages of the infection. The result of this temporary expedient will be interesting, and may help to educate the public for more important measures in the future.

MANCHESTER.

Hospital Reports.—Physical Condition of Children in Salford.—Infirmary Site.

ABOUT this period of the year many hospitals present their annual balance sheets, and most show an adverse balance. It is pleasant to learn that the great Consumptive Hospital, or rather Sanatorium, in Delamere Forest is making satisfactory progress. Mr. W. J. Crossley gave £70,000 towards the project; the endowment fund has reached £50,000. As it will take at least £5,000 to maintain the Sanatorium when finished, this sum must be more than doubled. There was a deficit of over £300 for the past year in working the present hospital. The Southern Hospital also has a difference between income and expenditure of nearly £600. Indeed, owing to lack of financial support, it has been found necessary to keep closed part of the wards, both for women and children.

In 1898 Salford appointed a medical officer to investigate the physical condition of the children attending the Board Schools. Besides attending to defective eyesight and hearing, the Board has gone further, and is following on the lines long ago laid down and practised in American schools of ascertaining the weight, height, chest measurements, and other physical data. The important point will be to ascertain how the physical condition of the children is correlated with their home and other circumstances.

Let us hope that the infirmary site question is coming near its solution. It is stated that the Corporation are likely to offer £400,000 for the whole area of 20,000 square yards.

SYDNEY.

Sydney Hospital for Sick Children.—Oiling the Streets.—Vital Statistics.

THE new Out-patients' Department in connexion with the Sydney Hospital for Sick Children which has been erected in a central part of the city was formally opened by Sir Harry Rawson, K.C.B., the State Governor, on December 17th, 1902. The new buildings have been erected on a site obtained on a fifty years' lease, and the estimated cost of the land and buildings inclusive of fittings is £3,000. The main buildings of the hospital situated at the Glebe are now quite inadequate for the work of the hospital, and in consequence of the great increase in the number of out-patients it was a matter of urgent necessity to provide this central building for the purpose. During the year 1900 there were 9,980 attendances in the out-patient department; in 1901 the number had increased to 15,520, and in 1902 it was nearly 20,000. The hospital has also now a convalescent home at Camden, and it is expected that the annual expense for the maintenance of this Home and of the new department just opened will be about £1,000 per annum.

During the past year in consequence of the prolonged drought the water supply of Sydney began to get rather low, and the Board of Water Supply and Sewerage was compelled

to restrict the use of water considerably. At this time of year with the great heat and traffic on the streets the dust becomes a serious nuisances, and also a source of damage to goods displayed by shopkeepers. The use of the city water for watering the streets was prohibited, and the use of salt water is accompanied by various drawbacks. Hence the expedient of using oil to lay the dust has been tried with beneficial results. The oil used was crude petroleum. It was laid on the streets by means of a special apparatus consisting of a tank and spray pump. The tank holding about 130 gallons was drawn by hand, one man being engaged pumping the oil through a spray. About 300 gallons of oil were used, the cost being 5d. per gallon, and something like 2,420 square yards of street surface were treated. Other streets have since been treated in this way with satisfactory results.

The vital statistics for the month of December and for the quarter ending December 31st shows some interesting features. During the quarter there were 3,272 births, equivalent to a rate of 6.51 per 1,000 of the population, and the deaths were 1,613, or 3.21 per 1,000 of the population. These totals are respectively 283 and 58 greater than the average for this quarter during the previous five years. Numerically the birth list is the greatest since the year 1893, and relatively to population is slightly above the normal rate for recent years. The death roll as to numbers exceeds the record of all years of the decennium excepting those of the years 1893 and 1898. The increase in the death-rate appears to be mainly due to a large increase in the number of deaths from constitutional diseases and diseases of the digestive system. Deaths from cancer have risen from 87 to 109, and from phthisis from 121 to 146. The deaths from disease of the digestive system, which include of course gastro-enteritis in children, have risen from an average of 233 for the past five years to 375, an increase of 61 per cent. Of old persons who have died during the quarter 180 were of ages between 70 and 79, 56 between 80 and 89, three aged 90, and one each died at ages 92, 94, 95, 101, and 102. A comment by the registrar is worth noting, that "the number of deaths reported in the 'ill-defined' class shows a distinct reduction, which points to the pursuit of improved methods by medical men in the issue of death certificates."

CORRESPONDENCE.

COLLECTIVE INVESTIGATION OF PUERPERAL ECLAMPSIA.

Sir,—The request of the Clinical Society of Manchester for reports of cases of eclampsia is meeting with a hearty response from medical men all over the country.

The Committee would like to point out that a diminution in the excretion of urea is coming to be regarded as an important physical sign of the pre-eclamptic state, more important, perhaps, than albuminuria. This vital point is one on which they hope their investigation will throw much light, and reports which give quantitative estimations of urea, and daily quantity of urine will be doubly valuable for this reason.

The use of the hypobromite process with Southall's ureometer is very simple, and the apparatus is inexpensive (it can be obtained through any chemist for about 3s.). It may perhaps be hoped that those who are favouring us with reports of cases will find time to furnish data enabling us to correlate the output of urea with the gravity of the case.—We are, etc.,

T. Arthur Helme, President.
J. Price Williams,
Swinton, Manchester, Hon. Secretary for the Investigation.
J. Howson Ray,
Hon. Secretary Clinical Society.

Manchester, March 4th.

RHEUMATIC IRITIS.

Sir,—The case of rheumatic fever and iritis recorded by Dr. Forster in the British Medical Journal of March 7th is of peculiar interest, as proving conclusively the possibility of a genuine rheumatic iritis.

In a thesis for the M.D.Cantab. in 1901 I analysed 159 cases of primary iritis, with special reference to its causation and association with joint disease. In no single instance was the evidence of true rheumatism conclusive. (These cases were taken from the Ophthalmic Ward Notes of St. Bartholomew's Hospital by kind permission of Mr. Jessop.)

Furthermore, I could find no example of iritis occurring in association with typical rheumatic fever or chorea, although I looked through 250 cases of the former and 100 of the latter in the Medical Notes of the hospital. As a result of my analysis of the 159 cases of iritis I concluded that association with joint affections is very common, and that the chief causes of both are syphilis (acquired and congenital), gonorrhoea, pyaemic and septic conditions, osteo-arthritis, etc.

The great importance of gonorrhoea in this connexion was discussed in the Section of Ophthalmology at the annual meeting of the British Medical Association in August, 1901, and I then read some statistics as to its frequency.[1]

Mr. Holmes Spicer, in an unpublished analysis of 100 cases of iritis, was struck by the lack of scientific evidence of rheumatism in the so-called "rheumatic" iritis and the frequency of gonorrhoea. My analysis certainly convinced me of the rarity of true rheumatic iritis.

Dr. Allan, of Wainfleet, has recorded a case of iritis complicating erythema nodosum,[2] but some authorities deny that this is a real manifestation of rheumatism.[3] I can find no example recorded of rheumatic nodules and iritis, but Dr. Allan tells me that he has seen iritis with acid sweats.

The synovitis associated with iritis is usually fixed, and not fugitive, and especially attacks the knees. Rheumatism is extremely common in children, while iritis is admittedly rare; morever, in children, and especially in girls at puberty, the possibility of congenital syphilis must always be borne in mind.[4]

Morbus cordis is rare in association with iritis. I found 4 cases in 159. In one there was aortic valvular disease, but the joint phenomena were those of osteo-arthritis, and aortic disease is not necessarily rheumatic. Of the remaining three there was mitral disease in two, and "systolic murmur at the apex" in the third. In all these three cases there was the strongest possible evidence of constitutional gonorrhoea.

Lastly the treatment of iritis by sodium salicylate is certainly not specific.

I venture to bring these cases to your notice because there seems to be an impression among medical men that rheumatic iritis is common.—I am, etc.,

Reginald A. Yeld, M.A., M.D., B.C.Cantab.,
(late Ophthalmic House Surgeon St. Bartholomew's).

Hampstead, March 9th.

References.

[1] British Medical Journal, 1901, vol. ii, p. 1331. [2] British Medical Journal, vol. ii, p. 1267. [3] Lees, Allchin's *Manual of Medicine*, vol. i, p. 295. [4] Hutchinson, Treves's *Manual of Surgery*, vol. i, p. 273.

POST-MORTEM EXAMINATIONS FOR CORONERS IN LONDON.

Sir,—Mr. Troutbeck's statistics published in the British Medical Journal of March 7th, p. 582, will not stand analysis as far as Battersea is concerned. The following table shows the number of *post-mortem* examinations performed at the Battersea Mortuary since November 22nd, 1902, to March 5th, 1903.

Date.	Total No. of *Post-mortem* Examinations.	No. Performed by Dr. Freyberger.
November 22nd to March 5th, 1903 ...	58	35
January 1st to March 5th	36	20
February 16th to February 18th ...	5	5
March 1st to March 5th...	5	4

During that period 58 *post-mortem* examinations were performed. Of those Dr. Freyberger performed 35; of the remainder at least 7 were made by the Police Surgeon with whom Mr. Troutbeck naturally would not care to interfere, leaving sixteen to general practitioners. From February 16th to 28th there were 5 *post-mortem* examinations all of which were performed by Dr. Freyberger, from March 1st to March 5th there were 5 *post mortem* examinations, 4 of which were performed by Dr. Freyberger, so that the record is worse instead of better since the deputation to the London County Council.

We are well aware that Mr. Troutbeck makes a difference between aristocratic Westminster and democratic Battersea, but with regard to the latter his figures are erroneous, misleading and not founded on fact.

Dr. Bond, the pathologist employed by the late Mr. Braxton Hicks, was always called in to support or refute the medical man in attendance but never to supplant him, and Dr. Freyberger has made more *post-mortem* examinations in Battersea

in a month than Dr. Bond did in the seventeen years that Mr. Hicks was coroner.

The whole report of the Committee is a mischievous juggle of words and most misleading to the public.—I am, etc.,

LEONARD S. McMANUS, M.D.

St. John's Hill, S.W., March 10th.

SIR,—I have read the report of the Public Control Committee of the London County Council with some measure of amusement, as it is quite evident that its publication was neither necessary nor consistent with the Coroners Act. The Committee apparently assumes that it was necessary for the County Council to grant powers to coroners in order that they might call, in certain cases, additional medical witnesses as pathological experts for the purpose of ascertaining with more exactness the cause of death. Such power was, however, already given to the coroners by the Act under which their duties are delegated to them by Parliament, and required no further extension by the London or any other County Council. The coroner is enabled to call an extra medical witness, should he desire to do so, under Subsection 1 of Section XXI of Coroners Act, 1887, and the remuneration of such witness is regulated under Section XXII of the Act. Further than this, the Lord Chancellor some years since gave a direction to coroners that "they have the authority to examine such medical witnesses whom they deem it expedient to summon, quite independently of Section XXI, Subsection 3, Coroners Act, 1887, which enables the jury to require the coroner to summon further medical witnesses." It will thus be seen that the consent of the London County Council was not required by Mr. Troutbeck before calling in an additional medical witness, and that the report of the said Council is absolutely "gratuitous."

The whole point of the dispute between Mr. Troutbeck and the medical profession has been missed by the County Council Committee. The medical profession has no objection, and could have no objection, to any coroner thus calling in additional medical evidence to assist him and the jury in ascertaining the cause of death in any case when he deemed it desirable. What the profession objects to is the calling in of a medical practitioner to make the *post-mortem* examination and to give pathological evidence in the absence of the medical attendant or the medical practitioner called in at the death, of the person upon whose body the inquiry is held. An additional medical witness may be most desirable; the selection of an "outside" medical witness in place of the medical attendant is most undesirable, and can only lead to grave injustice and, indeed, possible miscarriage of justice. The case mentioned by Dr. W. Piercy Fox in your issue of March 7th is an object lesson, and illustrates fully the evil of the plan adopted by Mr. Troutbeck.

In this case the only person who could have "identified" the body, and explained to the jury the circumstances which led up to the death, was the medical attendant, Dr. Fox. He was not called apparently because he, acting upon legal advice, declined to make a statement outside the witness-box and to the coroner's officer. Had Mr. Troutbeck been a medical coroner he would have at once grasped the importance of calling by subpoena Dr. Fox as a medical witness, and would not have had to be guided as to this desirability by a police-constable. The interference of the Public Control Committee of the London County Council in matters connected with coroner's law is detrimental to the interest of the public, and the attempts made by that body lately, and the City of London at a late election, to require coroners to contract out of the Coroners Act, and to subscribe as candidates to various regulations and requirements quite apart from the Act, is a scandal. Coroners must, if they desire to retain the dignity of their ancient and honourable office, stand by the Coroners Act, and refuse to make terms with any appointing authority. Coroners are officers of the Crown—not servants of any county council—and any coroner who accepts office under terms which are not in accordance with the Coroners Act, is, in my opinion, lowering the dignity of his office, and making his continuance in such office an unwise thing. The Coroners' Association will, I trust, take this matter up, and support those who desire to retain the powers conferred upon their members by Act of Parliament, and not by the grace of the London County Council nor the Aldermen and Common Council of the City of London.—I am, etc.,

Queen Anne Street, March 9th. A. GEORGE BATEMAN.

SIR,—The recommendation of the Public Control Committee is not satisfactory in one important particular. If the practitioner first called to the case is to be invited to be present at the necropsy made by the pathologist, is it proposed to pay him a fee for such attendance? No fee could be claimed unless the coroner ordered him to assist in making such necropsy. To ask a busy practitioner to give up a considerable portion of his time to assist a pathologist in carrying out an important but very unpleasant public investigation without any remuneration seems to me very like adding insult to injury. Besides, in giving his evidence at the inquest, he would necessarily be required to speak of what he observed at the necropsy, so that it would practically amount to his being paid one guinea for what he has hitherto received two. Most practitioners, I should think, would decline such polite invitations.—I am, etc.,

Hackney Road, N.E., March 7th. MAJOR GREENWOOD.

INCOME-TAX ASSESSMENTS.

SIR,—In addition to the grievances of medical men generally, to which Dr. Fletcher Little has directed attention in the BRITISH MEDICAL JOURNAL of February 28th, I should like to draw attention to one which especially affects consultants, namely, that they are not taxed like commercial men upon their profit, but upon their capital, which is really their health and brains. To make my meaning plainer may I give an example? Let us say that two brothers succeed by their father's will to £5,000 each at the age of 21. A. puts his money into business, and at once begins to clear profits which not only enable him to live, but to lay by and to increase his business. At the age of 50 he sells out, and gets, let us say, £10,000 for his business, which sum, with the yearly accumulations of his savings, enable him to retire and spend the rest of his life in *otium cum dignitate*. B. enters the medical profession, and uses his capital to pay his fees and expenses of living. Being, let us say, a man of unusual ability, and having distinguished himself in all his studies, he makes up his mind to become a consultant instead of entering general practice. He uses his capital to keep himself in the long years, during which he is working like a galley slave to store up the knowledge and experience which are to become his stock-in-trade. However fortunate he may be, he can hardly hope to do much more than pay his expenses, and it is not till he reaches the age of 45 or 50 that he actually begins to get back any part of the money he has spent in qualifying himself for consulting work. If he is unfortunate, as too many are, he breaks down under the strain of continuous hard work and worry, and his capital is lost. If he is stronger he may hope to recover, between the ages of 45 and 65, the capital he has expended on his education, *plus* a fair additional sum as recompense for all his hard work in the years of waiting. But his capital is his health and brain, and this capital is not only very uncertain, but liable to deteriorate, and at the best can only last a few years. Yet on the yearly sum which he makes for a limited number of years, and which is really to a great extent returning capital, he is taxed to the same extent as if he was a millionaire, and his income represented merely the interest on invested capital.

I am quite aware of the difficulties attaching to questions of this sort, and on this account I have brought it forward in the hope that any fallacies in my argument might be corrected, and that if real injustice is being done to consultants in the way I have mentioned, the British Medical Association might seek redress for it as well as for the other hardships mentioned by Dr. Fletcher Little.—I am, etc.,

March 4th. A CONSULTING PHYSICIAN.

AN INTERNATIONAL MEDICAL MANIFESTO ON ALCOHOLISM.

SIR,—As one of the signatories to this public testimony to the abuse of alcoholic drinks, I have been waiting to see if the Executive Council of the British Medical Temperance Association would make any reply to the charges which Dr. Dutton brought against us in his letter in the BRITISH MEDICAL JOURNAL of February 28th.

He accuses us of putting forward "a very impudent manifesto." But why "impudent"? Dr. Dutton seems to be ignorant of the fact that fifty-six years ago a declaration in almost precisely similar terms was signed by over 2,000 medical men of the United Kingdom and of India alone. These signatures included many, if not most, of the leading and "learned physicians and surgeons" connected with our metropolitan and provincial hospitals. A copy of this declaration I have before me while writing this letter.

I deny that the manifesto "accuses" any of the "learned physicians and surgeons who recommend their patients alcohol

in any form." We do nothing of the sort. This is a free country, and in view of the obvious evils resulting from "the common use of alcoholic beverages" we "urge the general adoption of total abstinence from intoxicating liquors as beverages." We do not attempt to control our brethren in the administration of alcohol as a remedial measure in the treatment of disease.

Just as antimony and arsenic are cumulative poisons, and have frequently proved destructive of life in small repeated doses, so it is with alcohol. We do not veto the use of these agents in the treatment of disease under proper medical prescription. But we do say that for our patients to have uncontrolled use of any of these beverages is most destructive to health, and shortens the duration of life. Experiments have proved that alcoholic beverages "ought not to be classed as foods" and sold as such in our public restaurants and other places of public resort.

Dr. Dutton deals out to us a liberal donation of explosive epithets. I will not retort. The scientific evidence in support of total abstinence determines us to speak plainly on the nature of alcohol as guardians of the public health, and to persevere in this campaign against intemperance.

If to join the ranks of the British Medical Temperance Association would "rob us physicians of our good name," I pity the man with such a volatile name.—I am, etc.,

Cranley Gardens, S.W., March 8th. F. Churchill.

Sir,—Dr. Staveley Dick's comparison of alcohol to arsenic is very absurd. We do not drink arsenic daily, but many prudent men do drink alcohol in some form or another. I am therefore very glad Dr. Dick points out that the manifesto does not say a word about its restricted medical use.

Now here is my point. Since I wrote my letter I have been to three dinners, nearly entirely composed of medical men; every man present partook of wine or whisky, none drank it in a medical sense, but as an enjoyable, harmless, stimulating beverage; but according to the manifesto as I read it, we were drinking a poison which will bring about progressive paralysis of the judgement and of the will. This makes the manifesto more impudent (without it contained the prefix mentioned in my former letter), because medical men who drink poison daily bringing about such results certainly (if there is any truth in the manifesto) must be nice medical advisers for the lay public to consult.

I may point out to Dr. Dick I never said in my letter the manifesto recklessly placed all crime on the shoulders of drink; what I did say was, "total abstainers" do, and if a careful study is made of papers devoted to teetotalism I am sure I am stating a fact. I am glad I have "average intelligence and power of observation," for I agree with Dr. Dick that drink causes crime and poverty, but here I separate from him, for in my opinion it is not the pure alcohol in the drink that causes the mischief, but the vile substitutes that are put into drink to take the place of pure alcohol; this will answer what Dr. Dick is pleased to call the "extravagant position" I take on the subject when I state the drunkard is not a criminal merely because he takes too much drink. Give a man pure wine, beer, or spirits, he will injure himself when he takes it to excess; in a similar manner he would injure himself if he took too much food; it would not make him a criminal. It is the poison introduced into drink which brings about brain mischief which may produce a criminal, but the same poisons introduced into food would have the same effect.

It is refreshing after again reading the manifesto to read Professor M. Duclaux's experiments showing the nutritive value of alcohol to be greater than that of sugar and starch.—I am, etc.,

Manchester Square, W., March 7th. Thomas Dutton.

P.S.—What I mean by pure wine, beer, or spirits is that made in an orthodox manner.

EXPERIENCE OF A WOMAN DOCTOR IN THE ORKNEY ISLANDS.

Sir,—With reference to the extract from the *Women Students' Medical Magazine* on the above subject, and which appears in the British Medical Journal of March 7th, I desire to point out that although Miss O'Connor in her innocence "never heard of such a thing" as a medical officer being dismissed by an Orkney parish council without a reason being given, yet according to the "return" of medical officers recently dismissed by parish councils throughout the crofting counties of Scotland, ordered to be published last year by the House of Commons, no less than four parochial medical officers in the Orkneys were dismissed by their parish councils, and in two of these cases without any reason being given.

A medical officer of Eday (the island where Miss O'Connor held office) was dismissed so recently as 1899. A reason was given in this instance, but whether it was a just one or not, perhaps Miss O'Connor may be able to say, seeing that her name appears in the *Medical Directory* for 1902 as medical officer for Eday.

This island of Eday is one of those parishes of Scotland which have the uneviable distinction of being "vacant" for a parochial medical officer every other year. It is a great pity, therefore, that the "good mannered and grateful" people of Eday failed to persuade Miss O'Connor to remain longer with them than she did.

The combination of parish council and medical aid association in the payment of "a doctor" is a bad and questionably legal one, yet the parochial authorities in Scotland would appear to wink at such an obnoxious arrangement.—I am, etc.,

March 9th. Just Before Generous.

LICENCES AND DEGREES.

Sir,—As Registrar of the Irish Medical Council before its financial embarrassments became so acute I have had frequent occasions of studying causes which induce students to take collegiate licences instead of university degrees. In most cases I found the college curriculum had been entered upon in entire ignorance of the relative values of licences and degrees.

An announcement in the *Irish Times* of February 26th under the heading Medical Students' Guide must continue to foster misconception in the minds of would-be students. The announcement referred to states that the Royal College of Surgeons in Ireland is issuing gratuitously to any one sending for it a copy of their student's guide—*How to Become a Doctor*.

Of course the publication is really an advertisement to induce pupils to take out the licences of that body under the Irish Conjoint scheme, and obviously will be taken as an orthodox guide by students, parents, guardians, and others, to the proper mode of qualifying. The student forthwith in consequence may enter and pass the Conjoint Preliminary Examination, and thus be committed to a course that leads but to licences instead of degrees—a course which in 99 cases out of 100 is irretraceable.

Personally I feel that *caveat emptor* is a heartless principle for a licensing body to adopt towards young men, and believe that the title *How to Become a Licentiate in Surgery* would be less open to objection than that referred to, granting that it were really necessary for the College to advertise its qualifications in gratuitous pamphlet form.—I am etc.,

Dublin, March 2nd. S. Wesley Wilson.

THE MEDICAL VOTERS OF THE DUBLIN UNIVERSITY.

Sir,—Now that we of Dublin University are again represented in Parliament by two legal gentlemen, either or both of whom may at any time be taken from us to fill that place upon the bench which his talents so eminently fit him to adorn, it may not be inopportune to ask whether it is not possible to obtain a medical candidate for the next vacancy, one whose views upon those questions more peculiarly interesting to the University would be agreeable to the majority of the electors, and yet who would represent the medical portion of the electorate more entirely than any mere lawyer can do. To ensure the return of such a one it will be necessary to organize the medical vote, and my object in writing to you is to ask any of my co-electors who are interested in this, to write to me with a view to arranging such organization. I am, etc.,

Loughton, Feb. 6th. A. Ambrose, M.D., T.C.D.

R.A.M.C. VOLUNTEERS AND CADET COMPANIES.

Sir,—I suggest to officers commanding companies of R.A.M.C. Volunteers and bearer companies of Volunteer Infantry Brigade that if they placed themselves in communication with the local responsible heads of Boys' Brigades and Church Lads' Brigades, they might affiliate in a very loose and easy way some of these companies as "cadet companies" of their units. This would bring a number of growing lads in connexion with the units, and might help towards obtaining future recruits, the lads still remaining in their original organization except for an occasional drill. The

connexion should be of the very slightest, and no financial expense to the State should occur.—I am, etc.,

Salisbury, March 5th. GEORGE EVATT.

UNITED KINGDOM POLICE SURGEONS' ASSOCIATION.

SIR,—Will you kindly allow me to state to all those of your readers who are police-surgeons that I have forwarded a copy of our last annual report, with a form of application for membership, to each police-surgeon whose name I have been able to find in the Constabulary Almanack. As, however, this does not contain a complete list, and as I am anxious to secure the membership of every police-surgeon willing to join, I will send a copy to any who will forward me his name and address.—I am, etc.,

FRED. W. LOWNDES,

40, Knight Street, Liverpool, March 5th. Honorary Secretary.

THE TRAINED NURSES' ANNUITY FUND.

SIR,—May I be allowed to call your attention to the above fund for the assistances of nurses when past work? The fund makes an allowance of £17 per annum: the conditions are that the nurse must prove three years' work in the training school of a hospital or infirmary, she must have been engaged in professional work for fifteen or more years, and be over 50 years of age. The committee are anxious to raise £500 annually at least; this would permit of one additional annuity being granted each year, and we cannot but think that if the fund were better known it would receive more support. It is the only annuity fund for trained nurses; it is not maintained by premiums paid by the nurses; and the whole of the money subscribed, less the small working expenses, is administered for the benefit of the recipients. We have now twelve annuitants, and there are more than twice that number approved by the committee, whose hopes of coming on the list are of the smallest. The Honorary Secretary, Dr. Ogier Ward, 73, Cheapside, is doing his best to arouse interest in the fund.—I am, etc.,

C. J. WOOD.

The Nurses' Hostel, Francis Street, W.C., March 11th.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE ARMY ESTIMATES, 1903-4.

IT is but just to recognize that year by year these Estimates become more lucid and comprehensive, and are so framed that even one who is not an expert can, if he takes a little pains, find full information regarding men, money, and stores to be voted. The table on page 7 shows at a glance the differences, whether increases, decreases, or variations between the ensuing and the previous year.

Estimated Expenditure.

Although the gross estimate in money for this year has fallen about one-half from that for last year—yet the after-effects of the war are still very evident in enhanced charges. The total estimate of £34,245,000 is still five or six millions in excess of a normal estimate for ordinary services, which is reckoned at about £27,500,000, or about one-fourth greater than a decade ago.

Estimate of Men.

While the money estimate has fallen about one half, so also have the numbers of regular troops fallen from last year. The total now to be voted is 235,761, exclusive of 74,450 borne on the Indian establishment. If to these be added Reserves, Yeomanry, Militia, and Volunteers, a grand total of 927,684 is reached, of which 746,365 are reckoned "effectives." These big figures of men under arms at home and abroad suggest some idea of the great and multifarious duties which devolve on the medical services, to which we now turn.

Medical Services.

The total of Vote 2, Medical Services, page 6, is normally estimated at £450,000 which, it is explained (page 8), is a normal increase of £25 000, "mainly due to the addition of 40 officers to the Royal Army Medical Corps and 112 nurses to the Nursing Service." But the net estimate of the Medical Vote (page 5) is £530,000, which includes £80,000 of extra charges for South Africa, China, and Somaliland.

The normal vote, indeed, is now a very substantial increase over the £250,000 which for years in the past was considered a sufficient fixed charge for medical services, and under which increased pay, through successive warrants, to individuals could only be given by cutting down the total establishment of officers.

At page 10 the number of officers to be voted for the R.A.M.C. is placed at 656, which includes 53 quartermasters. From the information given at page 40 the total number of medical officers of the Army Medical Service can be analysed as follows:

On the Home and Colonial establishments: surgeon-generals 6, other ranks 598, household troops 13, total 617. On the Indian establishment: surgeon-generals 3, other ranks 334, total 337: combined total 954. These figures show that the vital question of undermanning is being grappled with, and that in a few years it may be overcome.

But, in addition, there are a number of medical officers for army duties to be voted as follows:—3 for the Royal Malta Artillery; 8 for Native Indian Battalions at Colonial Stations; 92 "acting," that is, retired medical officers doing duty on consolidated pay, which gives a grand total of commissioned medical officers doing duty of 1,057. But, as £39,500 is estimated for civil medical practitioners, and certain other medical men employed on military duties, that sum would hardly represent less than perhaps another 150; which indicates that not less than 1,200 medical officers are constantly required for regular army duties at home and abroad.

We are glad to observe that 17 additional quartermasters are to be voted this year, making a total of 53—not too many for the important duties they have to perform.

We find that this year again army dentists and the clerical staff of the Advisory Board are incongruously lumped together in an estimate of £2,500. There is a substantial addition to the ranks of the Royal Army Medical Corps of 493 non-commissioned officers and men.

Pensions.

The Non-Effective Medical Vote (page 105) for 465 individuals is £189,609, and shows an increase of 26 in numbers, and £7,842 in money—a very moderate addition indeed, when the inevitable wear and tear of the late campaign is taken into consideration.

ROYAL NAVY MEDICAL SERVICE.

STAFF SURGEON B. C. E. F. GUNN is promoted to be Fleet Surgeon, February 26th. He was appointed Surgeon, February 26th, 1883, and Staff Surgeon February 26th, 1895. As Surgeon of the *Alexandra* he served with the Naval Brigade in 1884-5 in the expedition for the relief of General Gordon at Khartoum, receiving the medal with clasp and the Khedive's bronze star.

The following appointments have been made at the Admiralty: ERNEST A. PENFOLD, M.B., Staff Surgeon to the *President*, additional, for three months' course of hospital study, March 9th; EDWARD T. P. EAMES, Surgeon to the *Torch*, April 1st, and on recommissioning, undated; THOMAS W. MYLES, B.A., M.B., to the *Jupiter*, April 1st. The following are lent for the cruising season, to date March 24th: WILLIAM R. HARRISON, Surgeon to the *Boscawen*, for the *Wanderer*; JOHN G. PEEBLES, M.B., Surgeon, to the *Boscawen*, for the *Dolphin*; WALTER G. EDWARDS, Surgeon, to the *Boscawen*, for the *Seaflower*; FRANK E. BOLTON, Surgeon, to the *St. Vincent*, for the *Martin*; STANLEY S. H. SHANNON, Surgeon, to the *Impregnable*, for the *Nautilus*; REGINALD L. JONES, B.A., Surgeon, to the *Impregnable*, for the *Pilot*; ROBERT H. ATKINS, B.A., M.B., Surgeon, to the *Lion*, for the *Liberty*.

JAMES A. DE B. G. GOWEN, L.R.C.P.Edin., late Surgeon, R.N., died at 47, Brompton Square, London, S.W., on the 7th inst, aged 61.

STAFF SURGEON writes: With the letter of "Veritas" in the BRITISH MEDICAL JOURNAL of January 17th I cordially agree. No man of intelligence will under existing conditions compete for the navy when the R.A.M.C. is so much more attractive. Life at sea, even when one is young and hopeful, soon becomes monotonous. With advancing years a small cabin, a wardroom the majority of whose inmates are years younger, and the necessary restrictions of a man-of-war, render life, to say the least, irksome. Naval medical officers are, and to my mind always must be, in the position of the old regimental surgeon, so that substantive rank is out of the question and relative rank a myth. To attract candidates the income in all ranks must be considerably greater than in the R.A.M.C. To lessen the discontent that undoubtedly prevails in the Naval Medical Department I would suggest: (1) The establishment of a "roster" so that all have their fair chance of foreign service and of service in sea-going ships; (2) service in the Home, Cruiser, and Channel Squadrons to be preceded or followed by a period of genuine home service; (3) allow retirement after twenty years' service, whether at home or abroad.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL E. H. FENN, C.I.E., from the seconded list, to be Lieutenant-Colonel, February 19th. [It will be remembered that Lieutenant-Colonel Fenn recently vacated the position of Surgeon to the Governor-General of India.] The undermentioned Lieutenants are confirmed in that rank: A. B. SMALLMAN, W. F. TYNDALE, C.M.G., P. DAVIDSON, M.B., D.S.O., W. F. ELLIS (on probation), J. M'KENZIE, M.B., W. B. TAYLOR, H. D. WALKER, M.B., A. H. HAYES, H. J. CROSSLEY, R. B. AINSWORTH, C. A. J. A. BALCK, E. STORRS, R. L. V. FOSTER, F. A. H. CLARKE, G. A. K. H. REED, G. W. SMITH, M.B., J. W. S. SECCOMBE, J. M. H. CONWAY, S. M. W. MEADOWS, H. V. BAGSHAWE, D. S. SKELTON, C. V. B. STANLEY, M.B., H. G. S. WEBB, W. W. BROWNE, F. L. HENDERSON (on probation), R. RUTHERFORD, W. D. C. KELLY, M.B., N. E. J. HARDING, M.B., W. C. RIVERS, R. J. FRANKLIN.

Lieutenant-Colonel W. C. T. POOLE, M.B., retired pay, has been selected for the medical charge of the troops at Maidstone.

Major VERE EDWARD HUNTER died at Bombay on March 2nd, aged 45. He was the eldest son of the late Brigade-Surgeon G. Y. Hunter, of the Bombay Army, and entered the service as Surgeon February 3rd, 1883, and was made Surgeon-Major, March 25th, 1895.

RESERVE OF OFFICERS.

CAPTAIN O. G. IEVERS, Army Medical Service, to be Major, October 8th, 1902.

ARMY MEDICAL RESERVE.

SURGEON-CAPTAIN H. WAITE, 2nd West Riding of Yorkshire Royal Engineers (Volunteers), to be Surgeon-Captain, March 11th.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL H. HAMILTON, M.D., Bengal Establishment, is promoted to be Colonel, from October 1st, 1902. This cancels the notification of this officer's promotion made in the *London Gazette* of January 16th, 1903.

The promotion of Lieutenant-Colonel A. H. C. DANE, M.D., Bombay Establishment, to be Colonel from October 30th, 1902, has received the approval of the King. (Colonel Dane, however, has since died. See BRITISH MEDICAL JOURNAL, January 31st.)

The retirement from the service of Lieutenant-Colonel A. W. MACKENZIE, M.B., Bengal Establishment, which has been already announced in the BRITISH MEDICAL JOURNAL, has received the approval of the King.

Lieutenant-Colonel MANECKJEE EDULJEE REPORTER, Madras Establishment, has retired from the service, from November 27th, 1902. He joined the department as Assistant Surgeon, October 1st, 1877, and became Surgeon-Lieutenant-Colonel, October 1st, 1897. He was in the Burmese campaign in 1886-8, and has the Frontier medal, with two clasps.

The undermentioned gentlemen are appointed Lieutenants, dated September 1st, 1902:—JOHN H. MURRAY, FREDERIC P. MACKIE, ARTHUR

T. PRIDHAM, JOHN O'LEARY, SAMUEL R. CHRISTOPHERS, HARRY EMSLIE-SMITH, HUGH R. DUTION, VINCENT B. NESFIELD, HENRY M. BROWN, FRANCIS P. VIEYRA, ARTHUR F. PILKINGTON, PHILIP G. EASTON, WILFRID W. JENDWINE, THOMAS C. M'C. YOUNG, GEORGE A. JOLLY, HENRY C. BROWN, ABDURRAHMAN KHAN LAUDDIE, WALTER J. COLLINSON, CUTHBERT L. DUNN, HERBERT M. H. MELHUISH, HORACE H. KIDDLE, RICHARD F. C. TALBOT, RAGHUBER DAYAL SAIGOL, CECIL E. BULTEEL, JOHN L. LUNHAM, FREDERICK C. ROGERS, MAUNG BA-KET, GEORGE F. HUMPHREYS, CLAYTON A. F. HINGSTON.

Captain W. E. A. ARMSTRONG, Madras Establishment, has been appointed Surgeon to Lord Curzon, Governor-General of India, *vice* Lieutenant-Colonel E. H. Fenn, C.I.E.

Surgeon-General W. R. HOOPER, President of the Medical Board at the India Office, late Bengal Establishment, and who in the ordinary course would have vacated his appointment in January last, has received a year's extension of his tenure of office.

THE ALBERT MEDAL.

AT the *Levée* on March 9th, Captain H. C. French, R.A.M.C., was introduced, and received from His Majesty the Albert Medal of the second class for the following service:—While H. M. Transport *Wakool* was steaming at the rate of about twelve knots an hour through the Straits of Malacca on the 17th November, 1902, a native fireman jumped overboard. Captain French, who was a passenger on board, immediately dived off the promenade deck, a height of about 36 ft. from the water, and swam to the place where he had observed the man. Before he reached the spot the man had disappeared, and Captain French was obliged to make for a lifebuoy, as he was exhausted with the weight of his clothing. Subsequently both were rescued by the ship's lifeboat. Captain French incurred considerable risk, as a strong current was running at the time, and he might have been drawn under the propellers of the ship. He was also in danger of sharks and water snakes, which are known to frequent the Straits of Malacca.

VOLUNTEER RIFLES.

SURGEON-LIEUTENANT W. J HESLOP, 3rd Volunteer Battalion the Lancashire Fusiliers, resigns his commission, March 7th.

Supernumerary Surgeon-Lieutenant J. C. TAYLER, M.B., from the 9th Lanarkshire Volunteer Battalion Rifles, to be Surgeon Lieutenant in the 1st Volunteer Battalion the Royal Scots Fusiliers, March 7th.

The undermentioned gentlemen are appointed Surgeon-Lieutenants in the corps respectively specified: ARTHUR J. H. MONTAGUE, M.D., 4th (Nottinghamshire) Volunteer Battalion the Sherwood Foresters (Nottinghamshire and Derbyshire Regiment), March 7th; GEORGE S. MILL, M.D., 1st Volunteer Battalion the King's Own (Yorkshire Light Infantry), March 7th; CHARLES A. C. SMELT, M.B., 21st Middlesex (the Finsbury), February 24th.

Captain D. G. NEWTON, M.B., from the South Yorkshire Volunteer Infantry Brigade Bearer Company, to be Surgeon-Captain in the 1st (Hallamshire) Volunteer Battalion the York and Lancashire Regiment, March 7th.

VOLUNTEER INFANTRY BRIGADE BEARER COMPANY.

MR. EVELYN J. R. EVATT, M.B., to be Lieutenant in the Welsh Company, March 7th.

ORDER OF THE OSMANIEH.

THE King has been pleased to grant to William Hawkins Williams, Esq., M.B., permission to accept the Order of the Osmanieh, fourth class, conferred upon him by the Khedive of Egypt, in recognition of his valuable services as Professor of Physiology at the Egyptian Government School of Medicine.

ORDER OF ST. JOHN OF JERUSALEM.

THE King has been pleased to appoint the undermentioned gentlemen to be Knights of Grace: Surgeon-Lieutenant-Colonel Matthew Baines, M.D. (from Honorary Associate); Reginald Harrison, Esq., F.R.C.S.; Fleming Mant Sandwith, Esq., M.D. (from Honorary Associate).

MEDICO-LEGAL AND MEDICO-ETHICAL.

"ANOTHER MIDWIFERY BUNGLE."

UNDER this heading there is reported at great length in the *Lincolnshire Chronicle* of February 28th, an inquest on a newly-born child, David Robinson. The report is prefaced by the statement that so many deaths of newly-born children occur in the district that the coroners of the city and district have determined to hold an inquest upon every baby whose death seems to have been attended by any unusual circumstances whatever.

The evidence given by Dr. McFarland was to the effect that he had refused to give a certificate as to the death because he had not been called in until several hours after the child was dead; that on necropsy he found that the child, though apparently premature, had not died on this account, but from haemorrhage, that the cord had been tied either carelessly or by a person entirely devoid of skill, and that the child slowly bled to death, the clothes being saturated with blood.

Mrs. Rodgers deposed that the confinement of her daughter, the mother of the deceased baby, had occurred a month before it was expected. When it began, witness thought it was only inflammation, and sent for a Mrs. McCall. The latter saw what the case really was, and said "she would stay and see it through out of kindness." They did not send for a doctor, because Mrs. McCall thought one would not come as it was so late. The child was born in the early morning. After it was born, the child slowly grew weaker and weaker, and in the evening Mrs. McCall, who called in again, advised her to have it baptized at once, and send for a doctor in the morning. Witness had noticed it growing weaker all day, but did not send for a doctor, because she did not know if a doctor could do anything. She had it baptized, however, "to be on the safe side." It was not until about 10 p.m., after the baptism, that she made up her mind it was dying. She told its mother it was sinking all night, but still did not send for the doctor because she did not think he could do anything more than she was doing herself. She put pads on the child's stomach in the morning, and was not surprised to find them saturated with blood, because there had been bleeding when she put them on. She had seen cords bleeding before, but this one was properly tied. She had had thirteen children herself, of whom ten were living. She did not call Mrs. McCall's attention to it when she came in in the evening.

Mrs. McCall said she was a nurse and not a midwife, though she had brought a good many children into the world. She had not attended the case for payment, but out of kindness, as she thought it was doubtful if a doctor would come. When she called the evening after the confinement she attended to the mother, but did not look at the child, as there seemed no need.

The Coroner, in summing up, said the case was serious, as it was evident that the child had not died because premature, but had been allowed to bleed slowly to death. It was the duty of people who were in charge of delicate people, as Mrs. Rodgers was of her daughter, to see that they got proper care, and the attention of a medical man if required. In this case it was obvious that Mrs. Rodgers recognized quite early that the child was not doing well, and that she anticipated it would die; but in spite of this she neglected to call one, either when it was born or when she became so alarmed as to send for a clergyman, or even afterwards when she admitted she saw it was sinking, and all the excuses she gave were unsatisfactory. As for Mrs. McCall, it was clear that she had acted as a midwife. If a woman represented herself to have skill she did not possess, and, by herself undertaking grave responsibilities, dissuaded people from calling in properly-qualified assistance, she did so at serious risk; for it was no excuse to say that she did not do it for payment. If no better assistance were available, that was a different thing; but there was no pretence in this case of that being so. He would have to leave it to the jury to decide whether the conduct of either the grandmother or the woman who acted as midwife was such as to necessitate their being sent for trial.

In the result, the jury found that death was due to improper tying of the cord and neglect in not calling in a doctor. They held both women responsible for the death, but not to a degree sufficient to place them on trial for manslaughter.

On this the Coroner summoned both women before him and explained to them the gravity of the risk they had run and the culpability of their conduct.

MEDICAL PRACTITIONERS AND THE SALE OF NOSTRUMS.

WE have received the papers respecting the sale of "Besorbon." The matter seems to be too serious to be dealt with in these columns and has been referred to the Ethical Committee.

MEDICAL ETIQUETTE.

A CORRESPONDENT asks our opinion in the following case:—A new family comes to a neighbourhood on Saturday, and on Monday one of them is taken ill and a doctor is sent for. There are three doctors in the neighbourhood—A., B., and C. The messenger first goes to A.'s house but he is out; he then goes to B.'s house but he also is out, but Mrs. B. sends the messenger on with a note to C. asking him to attend to the case as her husband is out and she does not know when he will be back. C. visits and treats the patient, and the question put to us is which of these doctors ought to continue in attendance upon the family?

*** As the attendance was entirely fortuitous the family should be allowed to choose which of the three doctors they would prefer to have as their permanent medical attendant.

PRICE OF SHARE.

INQUIRER asks what would be a fair rate to pay for a third share in a mixed practice in a colliery district.

*** The ordinary charge made to an incoming partner for a share of a mixed practice is double the amount of the annual income he will derive from the share which he is purchasing. This is often called a "two years' purchase."

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Appointments.—Dr. S. West and Mr. G. E. Wherry have been appointed Examiners in Medicine and Surgery respectively, in the place of Professor Greenfield and Mr. Edmund Owen, who are unable to examine.

Degrees.—The following medical degrees were conferred on March 7th: *M.D.*: L. C. P. Phillips, Gonville and Caius. *M.B. and B.C.*: J. F. H. Dally, St. John's; J. M. Twentyman, Christ's. *M.B.*: J. Wharton, St. John's; T. St. Clair Smith, Trinity Hall.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

THE DETECTION OF BACILLUS COLI.

IN a report which Mr. Stephen D. Gage, the Biologist at the Lawrence Experiment Station, has presented to the State Board of Health of Massachusetts, there are some interesting particulars with regard to the methods adopted for the detection of bacillus coli communis in water supplies, etc. Some four or five changes in method are reviewed. The principal has been the extension of the final reading on the liquefaction of gelatine to fourteen days instead of ten days, as has been the practice in the past. To wait beyond the fourteenth day has been found of no practical value. It has also become the practice to look for the presence of wrinkles in the surface growth of gelatine in non-liquefying cultures, and to take such wrinkles as a test that the organism is not the colon bacillus. A somewhat similar test is to look for a scum in the fermentation tubes, since B. coli should never form a pellicle in fluid media. With few exceptions the media used in earlier experiments at Lawrence Station is still adopted. The gelatine and agar, however, have been made to

conform strictly with the standards recommended in the *Journal of the American Public Health Association*, 1898. Up to May, 1902, 10,800 samples of water have been examined for the presence or absence of B. coli; over 2,600 samples of water, sewage, etc., for the numbers of B. coli per c.cm.; 260 samples of shellfish and 800 samples of ice have also been examined for this organism. From this experience the Lawrence Station bacteriologists have arrived at six tests which they accept as most satisfactory—namely, characteristic growth on agar streak culture, gas production in dextrose broth, coagulation of milk, production of nitrites in nitrate broth, production of indol in Durham's solution, and non-liquefaction of gelatine. To the beginning of 1901 2,095 cultures had been isolated as suspected of being B. coli, and the above six tests had been applied, and had proved most satisfactory in the order stated.

IRISH DISPENSARY DOCTORS AS WITNESSES.

A MATTER of some importance to Irish dispensary medical officers has just been under discussion between the Londonderry Board of Guardians and the Local Government Board. The guardians had objected to pay the substitute while the medical officer was absent as a witness in a civil case. They maintained that the doctor, being paid for his services at the court, should pay his *locum tenens*: and stated that, if they paid the latter, they would deduct the amount from their own officer's salary. The Local Government Board point out that this can only be done with their sanction. The fact that the medical officer is entitled to a fee as a witness on behalf of the Board of Guardians or the District Council would not warrant the Local Government Board in authorizing a deduction from his salary in payment of the doctor employed to discharge his duties. Further, they could not sanction a deduction in the case of the medical officer's absence on subpœna for the Crown.

PROPOSED VACCINATION LEGISLATION.

BLACKBURN AND DISTRICT MEDICAL SOCIETY.

At a meeting of this Society held on March 6th, the President, Dr. S. A. Davies in the chair, a discussion on the vaccination question was opened by Dr. F. W. Taylor. After various opinions had been expressed, it was agreed that any new Bill should:

1. Remove the authority from the guardians to the sanitary authority.
2. Contain some definition of efficient vaccination.
3. Make revaccination compulsory at the age of 13.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 8,693 births and 4,790 deaths were registered during the week ending Saturday last, March 7th. The annual rate of mortality in these towns, which had been 17.1, 16.7, and 16.6 per 1,000 in the three preceding weeks, was again 16.6 per 1,000 last week. The rates in the several towns ranged from 6.3 in Handsworth, 6.7 in Newport (Mon.), 8.1 in Wallasey, 8.8 in Barrow-in-Furness, 9.3 in Northampton, 10.8 in Smethwick, 10.0 in Hornsey, and 10.1 in Great Yarmouth and in Burton-on-Trent to 21.0 in Wigan and in Rotherham, 21.8 in Tynemouth, 22.1 in Newcastle-on-Tyne, 23.0 in Manchester, 24.2 in Preston, 25.7 in Swansea, and 26.5 in Coventry. In London the rate of mortality was 16.4 per 1,000, while it averaged 16.6 per 1,000 in the seventy five other large towns. The death-rate from the principal infectious diseases averaged 1.7 per 1,000 in the seventy-six large towns; in London this death-rate was equal to 2.0 per 1,000, while it averaged 1.6 in the seventy five other large towns, among which the highest death-rates from the principal infectious diseases were 3.0 in West Ham and in Tynemouth, 3.1 in West Bromwich, 3.3 in Bolton and in Swansea, 3.7 in Salford, 4.1 in Hanley, and 5.9 in Wigan. Measles caused a death rate of 1.1 in Nottingham, 1.4 in Manchester, 1.5 in Bolton, 2.7 in Swansea, and 4.2 in Wigan; scarlet fever of 2.0 in Great Yarmouth; diphtheria of 1.1 in West Ham, in Bristol, in Huddersfield, and in Bradford, 1.2 in Salford, 1.4 in Coventry, and 2.5 in Hanley; whooping-cough of 1.1 in Croydon, 1.5 in Oldham, 1.6 in Hanley, 1.9 in East Ham, and 2.3 in Preston; and diarrhœa of 1.2 in St. Helens. The mortality from "fever" showed no marked excess in any of the large towns. Of the 16 fatal cases of small-pox registered in these towns last week, 6 belonged to Liverpool, 2 to London, 2 to Birmingham, and 1 each to Leicester, Bootle, Bury, Oldham, Leeds, and Cardiff. The Metropolitan Asylums Hospitals contained 6 small-pox patients at the end of last week, against 6, 8, and 5 at the end of the three preceding weeks; 2 new cases were admitted during the week, against 1, 7, and 1 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 2,528 to 1,851 on the ten preceding Saturdays, had further decreased to 1,791 on Saturday, March 7th; 194 new cases were admitted during the week, against 246, 205, and 197 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, March 7th, 946 births and 606 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 18.1, 18.1, and 17.7 per 1,000 in the three preceding weeks, rose again last week to 18.5 per 1,000, and was 1.9 per 1,000 above the mean rate during the same period in the seventy-six large English towns. The rates in the eight Scotch towns ranged from 13.2 in Paisley and 16.8 in Glasgow, to 21.4 in Dundee and 22.1 in Edinburgh. The death-rate from the principal infectious diseases averaged 2.3 per 1,000 in these towns, the highest rates being recorded in Paisley and Leith. The 254 deaths registered in Glasgow included 3 from measles, 2 from scarlet fever, 18 from whooping-cough, and 20 from diarrhœa. Three fatal cases of measles, 2 of scarlet fever, 4 of whooping-cough, and 4 of diarrhœa were recorded in Edinburgh. Five deaths from whooping-cough occurred in Dundee; 7 from measles and 2 from diarrhœa in Aberdeen; and 2 from measles and 4 from whooping-cough in Leith.

THE GOSPORT WATER SUPPLY.

FROM the wording of the first paragraph of a short article upon this subject published in the BRITISH MEDICAL JOURNAL last week, p. 584, it might have been inferred that the engineer of the waterworks admitted that the salinity of the water was due to filtration through the chalk from the Fareham creek. We have received a communication from the engineer, who desires it to be understood that filtration through the chalk is not, in his opinion, the cause of the excessive salinity. He further states that measures have been adopted by the company to remove the excessive salinity of the water, but that they are not such as are described in the second paragraph of the same notice.

WORKHOUSE MEDICAL OFFICER AND POLICE CASES.

J. writes: An inmate of the workhouse, for riotous behaviour in the house, is given in charge of the police. While at the police station he is thought to need medical attendance. In such case, can the police enforce the attendance of the medical officer to the workhouse, he not being the police surgeon?

*** It is no part of the duty of a workhouse medical officer to attend patients at a police station or any other place beyond the precincts of his own institution.

DUTIES UNDER THE FACTORIES AND WORKSHOPS ACT.

FACTORY asks: (*a*) In a population of about 9,000 a factory is the most important industry, but there are also two breweries and a mill (flour). Must these all be visited under the Act? (*b*) What is a "workshop" under the Act? (*c*) Do ordinary tailors' workshops, milliners' and dressmakers' workshops employing anything from four to fifteen people come under the definition? and (*d*) must all of these be "treated" according to the Act? (*e*) If so, it would entail ever so much more work than heretofore, and would a M.O.H. for a township of this population be justified in asking an increase in salary from the £30 now given annually? What would be a fair and reasonable request?

*** Our correspondent will find replies to his questions in any standard work on the Factory and Workshops Act, 1901. Perhaps the best book for him to obtain is *The Law relating to Factories and Workshops*, by Abraham and Davies (Eyre and Spottiswoode, 1902, 5s.). Briefly, we may say that the answers to his questions are as follows: (*a*) Yes. (*b*) A workplace in which no mechanical power is employed. See also Section CXLIX of the Act. (*c*) Yes. (*d*) Yes. (*e*) There can be no doubt that the administration of the Factory and Workshops Act entails increased duties upon medical officers of health.

HOSPITAL AND DISPENSARY MANAGEMENT.

MIDDLESEX HOSPITAL.

AT the annual Court of Governors of the Middlesex Hospital, held on February 26th, under the chairmanship of Mr. Andrew Clark, F.R.C.S., it was reported that during the past year 3,847 patients had been treated in the general wards of the hospital, and 172 in the special cancer wards; while 41,585 patients had been treated in the out-patient department. A completely equipped department with a special staff of officers and nurses had been added to the hospital for electric and light treatment. It was believed that this department would afford considerable aid in the work of research into cancer which was proceeding most satisfactorily. Laboratories for bacteriological work and the clinical investigation of diseases had also been instituted.

DORSET COUNTY HOSPITAL.

NEW OPERATING THEATRE.

SIR FREDERICK TREVES on February 23rd opened a new operating theatre in the County Hospital at Dorchester, in which town he was born. A new theatre has for long been felt to be urgently necessary. The new theatre is on the first floor, and is entered through an anaesthetic room. It is 22 ft. 6 in. long by 14 ft. 6 in. wide, and has a height of 16 ft., and is lighted by windows on three sides, besides a large lantern light in the roof. Outside shutters are provided for use in the summer to do away with the necessity of blinds. A lift has been added from the ground to the first floor, large enough to take a bed. Sir Frederick Treves, in declaring the theatre open, gave an interesting address on the advancement of surgery, and especially on the spread of the practice of operative surgery from the few large towns throughout the country. Formerly the operating theatre was the least attractive part of the hospital building, now it was a positive chamber of hope. It was of no use to have three very brilliant surgeons, it was of enormous service to have 300 first-class surgeons, and a result of the advance in practical surgery was that operative facilities were now spread all over the country.

WALSALL HOSPITAL.

NEW OPERATING THEATRE.

A NEW operating theatre in the Walsall Hospital was opened on February 17th by Mr. T. F. Chavasse, F.R.C.S., Senior Surgeon to the Birmingham General Hospital. Dr. G. A. Phillips, J.P., who presided, said that the hospital was started in 1863 with four beds: in 1878 the old hospital—a cottage—was pulled down and the present building holding 40 beds was erected in its place. In 1895 their number was increased to 70, and recently a new out-patient department had been added. Mr. Chavasse, in declaring the theatre open, remarked that his own grandfather had been a Walsall doctor, and that his father was born there 105 years ago. The requirements of a modern theatre were that the walls, roofs, and floors should be composed of non-absorbent material which could be readily cleaned, which offered no nooks for the lodgement of germs, and that it should be very light. All these requirements were amply fulfilled in the theatre now opened.

EXCLUSION OF CONSUMPTIVES FROM CALIFORNIA.—The California State Senate Committee, appointed to investigate the conditions connected with the influx of consumptives to California from the Eastern States of the American Union, and the proposed establishment of a State institution for the care of such patients, has decided to recommend to the Legislature certain enactments restricting the coming of such persons to the coast. It was also decided not to support the plan for establishing a home for consumptives, the Committee believing that such a move would result in encouraging tuberculous patients to come to California.

MEDICAL NEWS.

Dr. Reginald A. Farrar has been appointed by the President of the Local Government Board a Medical Inspector in succession to Mr. Arnold Royle, C.B., who has retired.

The meeting of the general committee of the English fund for the memorial to the late Professor von Pettenkofer will be held by permission of Professor Corfield at 19, Savile Row, W., on Monday next, at 5 p.m.

At the annual meeting of the Cancer Hospital, Fulham, special attention was directed to the enlargement of the pathological department which has been carried out during the year.

The annual festival dinner of the Irish Medical Schools' and Graduates' Association will take place at the Café Monico, Piccadilly Circus, W., on St. Patrick's Day, March 17th, at 7.30 p.m. Tickets may be obtained from Mr. Charles Ryall, 51, Queen Anne Street, W.

The Lord Mayor of London who, as we have already stated, will give a Mansion House dinner in the interests of the London Hospital on May 4th, now announces that in conjunction with the Lady Mayoress he will endow a bed in the hospital at the cost of £1,000.

The London School of Tropical Medicine announces that the "Craggs Research Prize" of £50 will be awarded in October to a past or present student of the school who during the current year has made the most valuable contribution to tropical medicine. Full information may be obtained from the Medical Tutor, at the School, Royal Albert Docks, London.

Bequests to Hospitals.—Under the will of the late Miss Elizabeth Carnegy, of Trinity, Edinburgh, in addition to numerous other charitable bequests, £1,000 each were bequeathed to the Edinburgh Royal Infirmary and to the Montrose Infirmary, also £1,000 to the Edinburgh Livingstone Memorial Medical Mission.

Nurses for the Public Schools of New York.—The Health Department of New York has lately taken a new departure by appointing nurses to thirty-nine public schools in Manhattan. The nurses are to examine the children as to cleanliness, and to instruct the mothers at their homes how to treat all cases of sickness. Principals are invited to give the nurses as much assistance as possible. The school authorities are said to be pleased with the appointments.

A Baby Hospital for Harvard.—In addition to the infirmary recently presented by Mr. Stillman, Harvard University is, we learn from the *Medical Record*, to have a hospital for the accommodation of fifty babies. The hospital, for which plans have been drawn up, is to be built in connexion with the proposed new Harvard Medical School near the Fenway. It will cost about 140,000 dollars (£28,000), and when finished will be the most complete and perfect of its kind in the world. The hospital will be a gift of the Class of 1901 in memory of Thomas Morgan Roth. A memorial laboratory is contained in the gift.

American Medical Association.—The next meeting of the American Medical Association will be held in New Orleans on May 5th, 6th, 7th, and 8th, 1903. The scientific work of the meeting will be divided among twelve sections as follows:—Medicine; surgery; diseases of children; obstetric and gynaecology; hygiene and sanitary science; nervous and mental diseases; pathology and physiology; cutaneous medicine and surgery; stomatology; materia medica; ophthalmology; otology and laryngology. It is expected that the attendance at the meeting will be about 4,000.

International Congress against Alcoholism.—The International Congress for the Suppression of Alcoholism will, as already announced in the British Medical Journal, hold its ninth annual meeting at Bremen from April 14th to 19th. Amongst the speakers during the six days' discussion will be Lady Henry Somerset, Mr. Bentley of Bradford, Mr. von Diergardt of Mojawola, who will deal especially with the question of public-house trusts and the reform of public-houses in England and Germany, and Mr. Fitger of Gothenburg, who will speak on the subject of the Scandinavian system. Among other communications promised are: Alcoholism and tuberculosis, by Dr. Legrain of Paris; alcohol in the life process of the race, by Dr. Plotz of Berlin; alcohol as a food, by Drs. Fraenkel of Halle and Forel of Morges; and alcohol in the budget of civilized peoples, by Drs. Helenius of Helsingfors and Blocher of Basle. Full details as to the arrangements may be obtained from the Burgomaster, or from the Secretary, Dr. jur. H. Eggers, 30, Osterthorstrasse, Bremen.

The Care of the Insane in Pennsylvania.—A Commission was appointed at the last session of the Pennsylvania Legislature to inquire into the condition of the insane in the State. The Commission has visited all the institutions of Pennsylvania and the principal in New York, Michigan, and Wisconsin. It is understood that it will recommend that all the institutions for the care of the insane be placed under a Board of Control, having the right to buy supplies, transfer patients—keeping those capable of improvement apart from the violent cases—and to exercise a general supervision in the construction of buildings and in the appointment of attendants.

Institute of Chemistry.—At the twenty-fifth annual general meeting of the Institute of Chemistry, Prof. J. M. Thomson, F.R.S., the retiring president, delivered an address in which he sketched the history and work of the institute since its foundation. He said that the real origin of the Institute was in a suggestion put forward in 1872 by the late Sir Edward Frankland, at a dinner given to Professor Cannizzaro on his appointment as Faraday Lecturer. Later, in 1876, he proposed to the Council of the Chemical Society that a class of Fellows, to be styled Licentiates (or some analogous title), should be created for the purpose of distinguishing between competent professional chemists and those who professed an interest in chemistry as a science, and not as a means to earning a livelihood. The idea was not adopted, but it was decided to found a new society, and the Institute of Chemistry was formally incorporated under the Companies Act on 2nd October, 1877. Among those active in founding the Institute were Mr. Carteighe, Prof. Hartley, the late Mr. Frederick Manning, Mr. Charles Tookey, and the late Dr. Alder Wright. Professor Thomson himself was also a keen worker for the Institute in its earliest history. He proceeded to relate its progress under the successive Presidents: Sir Edward Frankland, Sir Frederick Abel, Dr. William Odling, Dr. James Bell, Professor W. A. Tilden, Dr. W. J. Russell, and Dr. Thomas Stevenson. He dealt with the regulations as to training and examination of candidates for the associateship of the Institute, showing how the standard of the requirements for membership had been steadily raised, and he commented on the consequent increasing recognition of the qualifications "A.I.C." and "F.I.C." by Government and municipal authorities and by the leaders of industry throught the kingdom. The annual report of the Institute drew attention to the increase in the number of members, in spite of the fact that there had been heavy losses through death. Attention was also called to the increase in the number of candidates for examination, notwithstanding that within the last few years the standard of admission had been considerably raised. The adoption of the report was seconded by Dr. Thomas Stevenson, and carried. The newly-elected president, Mr. Thomas Howard, then took the chair.

MEDICAL VACANCIES.

The following vacancies are announced:

ALDERSHOT URBAN DISTRICT COUNCIL.—Medical Officer of Health. Salary, £[illegible] per annum. Applications endorsed "M.O.H." to be sent to the Clerk, Council Offices, Aldershot, by March 28th.

BIRMINGHAM: GENERAL HOSPITAL.—(1) House-Surgeon, appointment for [illegible] months. Salary at the rate of £30, with residence, board, and washing; (2) Assistant Obstetric Officer. Applications to the House Governor by March 28th.

BRAUFERRIDGE ASYLUM, near Lincoln.—Junior Assistant Medical Officer, unmarried, not over 30 years of age. Salary £125 per annum, with furnished apartments, board, attendance etc. Applications to Mr. W. T. Page, jun., Solicitor and Clerk to the Visiting Committee, 5 and 6, Bank Street, Lincoln, by March 28th.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—House-Physician, unmarried, and under 30 years of age. Salary £80 per annum, with board, residence, and washing. Applications to the Secretary by April 1st.

BRISTOL: ROYAL VICTORIA HOMES, BRENTRY.—Resident Superintendent to the Certified Inebriate Reformatory; married. Salary, £300 per annum, with house and quarters. If medical practitioner, he will also be appointed Medical Officer for the Joint Offices, £400 per annum. Applications on forms provided to be sent to the Chairman of the Board by April 20th.

BURY COUNTY BOROUGH.—Assistant to the Medical Officer of Health for six months. Salary at the rate of £60 per annum, with board and residence. Applications to Dr. Brindley, Health Office, Bury.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—Assistant House-Surgeon: [illegible] months, and if approved will then be elected Senior House-Surgeon for [illegible] months. Salary at the rate of £40 per annum, with board, lodging, and washing. Applications to the Secretary by March 23rd.

COLCHESTER: ESSEX AND COLCHESTER HOSPITAL.—Honorary Physician. Applications to the Secretary by April 16th.

DUBLIN: TRINITY COLLEGE.—Professorship of Anatomy. Applications to the Registrar by June 6th.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Medical Radiographer. Honorarium, £25 per annum. Applications to the Committee of Management by March 31st.

GLASGOW EYE INFIRMARY.—Resident Assistant House-Surgeon. Salary, £[illegible] per annum, with apartments and board. Will probably be appointed House-Surgeon for six months with increased salary. Applications to the Secretary, [illegible] Street, Glasgow, by March 30th.

GLOUCESTER: GENERAL INFIRMARY AND THE GLOUCESTERSHIRE EYE INSTITUTION.—Assistant House Surgeon. Appointment for six months, but eligible for re-election. Remuneration at the rate of £30 per annum, with board, residence and washing. Applications to the Secretary by March 18th.

HOSPITAL FOR DISEASES OF THE SKIN, Stamford Street, S.E.—Clinical Assistant for Out-patients. Aubications to the Secretary.

HUDDERSFIELD INFIRMARY.—Junior House-Surgeon. Salary, £60 per annum, with board, residence, and washing. Applications to the secretary.

LIVERPOOL: MILL ROAD INFIRMARY.—Assistant Medical Officer; unmarried. Salary, £120 per annum, with board and apartments. Applications to the Clerk to the Guardians, Brougham Terrace, West Derby Road, Liverpool, by March 19th.

LONDON LOCK HOSPITAL.—House-Surgeon to the Male Hospital, Soho. Salary, £80 per annum, with board, lodging, and washing. Applications to the Secretary, Harrow Road, by March 28th.

LONDON PORT SANITARY AUTHORITY.—Boarding Medical Officer to be stationed at Gravesend. Salary, £5 5s. a week. Applications to the Town Clerk, Guildhall, E.C., by March 31st.

MANCHESTER CORPORATION: Fourth Medical Assistant to the Monsall Fever Hospital. Salary, £160 per annum, with board, lodging, and washing. Applications endorsed "Appointment Medical Assistant" to be addressed to the Chairman of the Sanitary Committee, Public Health Office, Town Hall, Manchester, by March 21st.

MANCHESTER AND SALFORD LOCK HOSPITAL, Duke Street, Manchester.—Honorary Surgeon. Applications to the Secretary, 22, St. Mary's Gate, Manchester, by March 31st.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN.—House-Surgeon. Salary, £80 per annum, with apartments and board. Applications to Mr. H. Teague, Secretary, 38, Barton Arcade, Manchester by March 27th.

MANCHESTER: OWENS COLLEGE.—Junior Demonstrator in Physiology. Stipend, £140, rising to £160 per annum. Applications to the Registrar by March 24th.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—(1) House Physician; (2) House Surgeon; (3) Assistant House-Physician; (4) Assistant House-Surgeon. Appointments for six months. Salary for (1) and (2) at the rate of £40 per annum, and for (3) and (4) at the rate of £20 per annum; (5) Anaesthetist. Honorarium, 25 guineas per annum Applications to the Secretary by March 16th.

MIDDLESBROUGH ON TEES: NORTH RIDING INFIRMARY.—Asistant House-Surgeon, unmarried. Salary, £75 per annum, with lodging, board, and washing. Applications to the Secretary by March 25th.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Junior House-Physician. Salary, £50 per annum, with board and apartments. Applications to the Secretary by March 23rd.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, N.E.—Resident Medical Officer. Salary, £120 per annum, with board, residence, and washing allowance. Applications to the Secretary by April 6th.

OXFORD: WARNEFORD ASYLUM.—Assistant Medical Officer. Salary, £100 per annum, with board, etc. Applications to the Medical Superintendent.

PRESTON ROYAL INFIRMARY.—Assistant House-Surgeon. Salary, £60 per annum, with board, washing, etc. Applications to the Secretary, 5, Winckley Street, Preston by March 20th.

RAINHILL: COUNTY ASYLUM.—Assistant Medical Officer: unmarried and not more than 30 years of age. Salary, £150 per annum, rising to £250, with further increase to £350 according to promotion, together with furnished apartments, board, attendance and washing. Applications endorsed "Assistant Medical Officer" to be sent to the Medical Superintendent.

READING: ROYAL BERKSHIRE HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Salary at the rate of £60 per annum, with board, lodging, and washing. Will be eligible for post of House-Physician or House-Surgeon when vacancy occurs. Applications to the Secretary by March 19 h.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Salary, £80 per annum. Applications to Mr. E. S. Baylis, J.P., 19, Moorgate Street, Rotherham, by March 24th.

ROYAL ORTHOPAEDIC HOSPITAL.—Resident House-Surgeon and Registrar; unmarried. Salary, £100 per annum, with board and lodging. Appointmeat for six months but eligible for re-election. Applications to the Secretary, 15, Hanover Square, W., by March 31st.

ST. MARK'S HOSPITAL FOR FISTULA, City Road, E.C.—House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to the Secretary by March 14th

ST. PETER'S HOSPITAL FOR STONE, Henrietta Street, W.C.—House-Surgeon. Appointment for six months but eligible for re-election. Salary at the rate of £100 per annum, with board, lodging, and washing. Applications to the Secretary by March 25th.

SALISBURY: FISHERTON ASYLUM.—Assistant Medical Officer, age about 30 and unmarried. Salary, £150 per annum, with, board, lodging, and washing. Applications to Dr. Finch, Salisbury.

TIVERTON: DEVONSHIRE INFIRMARY AND DISPENSARY.—House-Surgeon. Salary, £80 per annum and all found. Applications to the Honorary Secretary by April 6th.

VENTNOR ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Assistant Resident Medical Officer, unmarried. Salary, £100 per annum with board and lodging. Applications to the Secretary, 34, Craven Street, Charing Cross, W.C.

VICTORIA HOSPITAL FOR CHILDREN, Tite Street, S.W.—House-Physician, appointment for six months. Honorarium, £25, with board and lodging. Applications to the Secretary by March 28th.

WALSALL AND DISTRICT HOSPITAL.—House-Surgeon; unmarried. Salary, £100 per annum, with apartments, board, and laundry. Applications to the Chairman, Leicester Street, Walsall, by March 19th.

WESTMINSTER GENERAL DISPENSARY.—Resident Medical Officer. Salary at the rate of £120 per annum, with rooms, etc. Applications to the Secretary, 9, Gerrard Street, Soho, W., by March 24th.

MEDICAL APPOINTMENTS.

BARCLAY, W. Bowie, L.R.C.P.&S.Edin., D.P.H.Vict., appointed Medical Officer of Health for Farnborough (Hants) U.D.C., *vice* J. Kelland, M.B., C.M., L.S.Sc.

BARKER, C., M.B.Lond., M.R.C.S., appointed District Medical Officer of the Barnet Union.

BERKELEY, A. P. M., L.R.C.P. L.R.C.S.Edin., appointed District Medical Officer of the Bath Union.

BURNELL, Adam G., M.B., M.S.Glas., appointed Public Vaccinator for the District of Raka, New Zealand.

COPE Reginald O., M.R.C.S., L.R.C.P., appointed House-Surgeon to the Rotherham Hospital and Dispensary.

DOUGLAS, Francis John, M.B., appointed Public Vaccinator for Port Victor, South Australia.

DUNLOP, Thomas, M.B., C.M.Edin., D.P.H.Camb., appointed Medical Officer of Health to Torquay, *vice* P. Q. Karkeek, M.R.C.S.Eng., deceased.

ELLIOTT, T. H., L.S.A., appointed District Medical Officer of the Barnsley Union.

EVANS, G. E. A., M.R.C.S., L.R.C.P.Lond., appointed District Medical Officer of the Axminster Union.

GRAHAM Edward Alfred, M.B.Melb., appointed Visiting Surgeon to the Gaol at Deniliquin, New South Wales.

HOLMES, Louis S., L.R.C.P. L.R.C.S., L.F.P.S.G., appointed to the Honorary Medical Staff of the Launceston General Hospital, Tasmania.

KELLY, C. E. M., M.D., M.S.Lond., appointed Certifying Factory Surgeon for the Witney District of the County of Oxford.

LOCKING Benjamin L.R.C.P.Lond., appointed Public Vaccinator for the District of Napier, New Zealand.

MAITLAND, H. L., M.B., Ch.M.Syd., appointed Honorary Surgeon to the Sydney Hospital, New South Wales, *vice* W. H. Goode, M.D. Dub., resigned.

MASON, F. W., M.R.C.S., L.R.C.P.Lond., appointed District Medical Officer of the Boston Union.

MIFSUD Carmelo, M.D., appointed Professor of Medicine at the Malta University, *vice* Professor G. O. Giles, M.D., retired.

MILES, H. W. M., M.R.C.S., L.R.C.P.Lond., appointed Certifying Factory Surgeon for the Bromsgrove District of the County of Worcester.

MURRAY, James, L.R.C.P., L.R.C.S., appointed Certifying Factory Surgeon for the Allendale District of the County of Northumberland.

ORTON, Jno., M.D., Ch.B.Birmingham, M.R.C.S., L.R.C.P., D.P.H., appointed Medical Officer of Health, Tolcshill Rural District, Medical Officer Tolcshill Union Workhouse, and Medical Officer and Public Vaccinator Exhall and Keresley District, Tolcshill Union.

PORTEOUS, H. Llewellyn, M.R.C.S., L.R.C.P.Lond., appointed District Medical Officer of the Cirencester Union.

SCHOLBERG, H. A., M.B.Lond., D.P.H Camb., appointed Bacteriologist to the Glamorgan County Council and Cardiff Corporation, *vice* Wm. Savage, B.Sc., M.D.Lond., resigned.

SHARP, W. A. R., M.B.Syd., appointed Medical Officer of the Coast Hospital, Sidney, New South Wales.

SMITH, John C., L.R.C.S.I., appointed Public Vaccinator for the District of Mangaweka, New Zealand.

SMITHSON, Oliver, M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer to the North Ward of the Luton Union.

SPROTT, A., M.B., C.M.Glas., appointed Certifying Factory Surgeon for the Appleby District of the County of Westmorland.

STACY, H. S., M.D., Ch.M.Syd., appointed Honorary Assistant Surgeon to the Sydney Hospital, New South Wales.

THOMAS, W. H., M.D.Brux., L.R.C.P.Lond., M.R.C.S.Eng., appointed District Medical Officer of the Forden Union.

TUKE, Thomas Seymour, M.B., B.Ch.Oxon., M.R.C.S.Eng., appointed Lecturer on Insanity at St. George's Hospital, W.

WILKINS, Arthur G., M.B., Ch.B Vict., appointed Medical Officer to the Greenside Mining Company and Medical Referee to the Prudential Assurance Company.

WOOD, R., M.D St.And., M.R.C.S.Eng., L.R.C.P.Lond., appointed Certifying Factory Surgeon for the Barmouth District of the County of Merioneth.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Society of London, 11, Chandos Street, Cavendish Square, W., 9 p.m.—Dr. H. Radcliffe Crocker: Lettsomian Lectures on the Conditions which Modify the Characters of Inflammations of the Skin and their Influence on Treatment. Lecture III: Principles of Treatment; Internal and External; Specific and Non-Specific; General Deductions.

TUESDAY.

Pathological Society of London.—The Laboratory meeting fixed for this date will not be held.

Chelsea Clinical Society, Jenner Institute, Chelsea Gardens, W., 8.30 p.m.—The annual Clinical Debate on Diabetic and Non-diabetic Glycosuria. The following will take part in the discussion: Drs. Hector Mackenzie, Hutchison, and Vivian Poore.

Royal College of Physicians of London, 5 p.m.—Dr. A. S. F. Grünbaum: On Theories of Immunity and their Clinical Application. Goulstonian Lecture I.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Professor W. D. Halliburton: On the Chemistry of Muscle and Nerve.

WEDNESDAY.

British Balneological and Climatological Society, 20, Hanover Square, W., 8.30 p.m.—Discussion on the Dietetic Factor in Health-Resort Treatment, introduced by Dr. Mouillot (Harrogate).

THURSDAY.

Harveian Society of London, Stafford Rooms, Titchborne Street, Edgware Road, W., 8.30 p.m.—Clinical evening. Cases will be shown by Drs. S. Phillips, W. J. Harris, L. Guthrie, Mr. Jaffrey, and others.

Royal College of Physicians of London, 5 p.m.—Dr. A. S. F. Grünbaum: On Theories of Immunity and their Clinical Application. Goulstonian Lecture II.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Dr. T. G. Brodie: On the Circulation.

FRIDAY.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Dr. A. D. Waller: On Experimental Pharmacology: The Action of Anaesthetics and Narcotics.

Epidemiological Society, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Dr. Louis Parkes: The Prevention of Diphtheria Outbreaks in Hospitals for Children.

Society for the Study of Disease in Children, 11, Chandos Street, Cavendish Square, W., 5.30 p.m.—Clinical Cases. Papers: Dr. Henry Ashby and Mr. Sydney Stephenson: On a Form of Acute Amaurosis in Infancy following Convulsions. Mr. H. J. Curtis: A case of Congenital Parosteal Sarcoma arising in Connexion with the Acromion Process of the Left Scapula removed from a Boy, aged 5½ Months.

POST-GRADUATE COURSES AND LECTURES.

Hospital for Consumption and Diseases of the Chest, Brompton, S.W., Tuesday, 4 p.m.—Lecture on Arrested Pulmonary Tuberculosis.

Hospital for Sick Children, Great Ormond Street, W.C., Thursday, 4 p.m.—Lecture on Clinical Evidences of Damage to the Myocardium in Rheumatic Fever.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C. Demonstrations will be given at 4 p.m. as follows:—Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, ear. Lectures will also be given at 5.15 p.m. as follows: Monday, Cancer of the Uterus; Tuesday, the Ophthalmoscope as an Aid to General Diagnosis; Wednesday, Neurasthenia, the Wear and Tear of Life; Thursday, the Treatment of Enteric Fever; Friday, Injuries of the Head and Neck.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., Tuesday, 3.30 p.m.—Lecture on Congenital Cerebellar Ataxy.

North-East London Post-Graduate College, Tottenham Hospital, N., 4 p.m.—Demonstration of cases of Ophthalmoscopic Interest.

Post-Graduate College, West London Hospital, Hammersmith Road, W.—Lectures will be delivered at 5 p.m. as follows: Monday, Mediastinal Disease; Tuesday, Pelvic Pain; Wednesday, Rheumatism and Allied Affections; Thursday, On Fractures in and near the Elbow and Wrist Joints; Friday, Some Factors of Infection.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning in order to ensure insertion in the current issue.

BIRTHS.

BASSANO.—March 2nd, at Grove House, Ventnor, Isle of Wight, the wife of Harold F Bassano, M.A., M.B.Cantab., etc., of a daughter.

COWEY.—On March 6th, at Schwebo, Upper Burma, the wife of Reginald Vionnée Cowey, of a daughter.

JOY.—On March 4th, at Bradfield, near Reading, the wife of Norman H. Joy, M.R.C.S., L.R.C.P., of a daughter.

MARSHALL.—On March 8th, at Fairmount, Blackness Avenue, Dundee, the wife of Professor C. R. Marshall, of a son.

DEATHS.

ENNECCERUS.—On February 20th, at Coblenz, Rhein, suddenly while under chloroform inhalation, Amy Margaret, aged 21, the dearly loved wife of Wilhelm Victor Enneccerus, Oberleutnant und Landwehr-Bezirks-Adjutant, Coblenz, only daughter of Charles Hoar M.B., C.M., Robertsbridge, Sussex, and granddaughter of the late Augustus Waller, M.D., F.R.S.

O'SULLIVAN.—On March 5th, at 76, Chatsville Road, West Kensington, London, W., Sarah (Tottie), the dearly-loved daughter of J. F. O. A. and Mrs. O'Sullivan.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Attiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which the special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

BROOM asks for a suitable application for splitting of the hairs of the moustache (trichorrhexis nodosa) which resists thymol, perchloride, resorcin and other antiparasiticide ointments.

ANTIDIPHTHERIA SERUM IN SCARLET FEVER.

W. B. asks whether it is true that antidiphtheria serum has a marked beneficial effect in scarlatinal throats.

THE LARGE INTESTINE AS AN INTERMITTENT SIPHON.

DR. R. W. LEFTWICH (Buckingham Gate, S.W.) writes: I should be glad of the assistance of your readers to solve some side issues of this interesting subject. In my article in the *Edinburgh Medical Journal* I pointed out that the large intestine, regarded as a bent tube with a short ascending limb beginning at the right iliac fossa, and a long descending limb ending in the rectum, could not fail to act as a siphon provided its walls were fairly rigid. In the notes which I appended to the reprint of the article, and again in a paper read on January 29th, an abstract of which was given in the *Lancet* of February 7th, I showed that tonic contraction of the longitudinal bands would afford this rigidity, partly by their own resistance, partly by deepening the dissepiments between the saccules, just as the walls of a concertina are more rigid when nearly closed than when drawn out. And as evidence that the longitudinal fibres are tonically contracted, I pointed to the deep retraction of the anus, and to the fact that the transverse colon, averaging 20 in. in length, occupies a site which measures only 9 in. These and other reasons given made the matter practically certain; but, having no vivisection licence, I was unable to prove it. I therefore wrote to Dr. Brodie, Director of the Examination Hall Laboratories, and asked him to look out for the phenomenon. I received his answer of January 31st, and his conclusion is expressed in these words: "I think there is no question whatever but that the longitudinal bands of the colon are tonically contracted." In the opinion of good judges this settles the matter and proves that the large intestine in the upright position must act as a siphon, provided its contents are sufficiently fluid. The striking success of this appeal impels me to make another to those of your readers who deal with large numbers of necropsies: (1) Does the transverse colon drop V shape in a person who has remained dead for some time in a sitting position? (2) Is the colon elongated and displaced in cases of lead poisoning? These deviations from the normal would be explained by paresis of the longitudinal bands and would account for the constipation partly by the increased capacity of the bowel, and partly by loss of siphonage and diminished lateral resistance of the walls. (3) Do a similar elongation and displacement take place in sigmoid obstruction?

ANSWERS.

INDIAN.—We cannot open our columns to a discussion of the question, but our correspondent will probably find *The Pathology and Treatment of Sexual Impotence*, by Victor G. Vecki, M.D. (London: Rebman, Ltd., 1899, 12s.), useful.

A. T.—The stunting or entire suppression of a lateral incisor or other individual tooth is often a family peculiarity, but is no indication whatever of syphilitic taint. In congenital syphilis all of the teeth are affected in varying degree according to their stage of calcification shortly after birth.

H. P.—A qualified English practitioner wishing to practise in Switzerland, even if he desire to practise only among his own countrymen, is required to pass the Federal examination in that country. The degree of Doctor of Medicine does not give the right to practise. The Federal examination may be passed at Basle, Zurich or Berne, in German, and at Geneva or Lausanne, in French. The applicant is advised to obtain from one of his teachers in this country an introduction to a professor at the university at which he proposes to pass the examination. This proper course would be to call upon the rector of the university. We are informed that all necessary information will be supplied, and that no difficulties are placed in the way of candidates. At the University of Zurich, the three examinations which it is necessary to pass are held, as a rule, at the following periods of the year: *First Examination:* End of January and Mid-September. *Second Examination:* End of January and Mid-September. *Third Examination:* Beginning of January, end of May, and beginning of October. At Basle the next examinations are in October. At Geneva the examinations are held in the third week of October, and in the second week of July, at the opening and conclusion respectively of the winter and summer session. At Lausanne the examinations take place as follows:—*First and Second Examinations:* April and October. *Final Examinations:* February and March, and June and July.

FRIGHT AND CHLOROFORM.

J. T. F.—If our correspondent will refer again to our leading article which appeared under the above title he will see that it was written for the purpose of bringing under the attention of practitioners on this side of the Atlantic the views regarding chloroform anæsthesia held by some of their American cousins. In it no attempt was made to deal in a critical spirit with each step in the reasoning by which Dr. Bodine reached his conclusions; to have done so would have called for a pamphlet rather than a leading article. With regard to the special point which our correspondent criticizes, the vasomotor paralysis and its results, we may here quote Dr. Bodine's own words: "When death takes place from chloroform it is found invariably that the cause of death was a vasomotor paralysis. That is to say, the nervous system lost control over the motor nerves leading to the blood vessels, and especially the veins of the body, and as a consequence the patient bled to death into his own tissues." In regard to the patient who died before any chloroform had been given, Dr. Bodine says: "At the necropsy nothing was found except the vasomotor paralysis and the consequent venous congestion, especially in the large veins of the abdomen, of which we have already spoken of as common pathological results of fright and chloroform." Again, in another place, Dr. Bodine writes: "The necropsy showed perfectly healthy organs and nothing abnormal except the tense abdominal veins, in which nearly all the blood of the body had collected as a result of the vasomotor paralysis consequent upon the fright." We think, therefore, that our correspondent will admit that we have faithfully put Dr. Bodine's views upon the matter before the readers of the BRITISH MEDICAL JOURNAL, as to the cause of the distended state of the abdominal veins it seems to us that Dr. Bodine's explanation is a reasonable one. At the same time our correspondent's suggestion of vasomotor spasm is not unthinkable, although we personally prefer Dr. Bodine's view. We believe physiologists are divided on this question, and we are inclined to believe that too much attention has been paid by both sides to the state of the peripheral circulation and too little to the condition of the great central organ, the heart.

DIAGNOSIS AND TREATMENT WANTED.

SPINAL CORD writes: The case mentioned by "Boomerang" in the BRITISH MEDICAL JOURNAL, January 31st, 1903, p. 295, resembles, in many respects, one which I have had under observation, on and off, during the past eleven years, which has puzzled me and many others. The patient is a man just turned 52, coming of a long-lived and healthy stock, though his father died suddenly at 63 of supposed heart disease (although he had always enjoyed robust health). One of his brothers is said to be gouty, and another one has recently suffered from "neuralgia in the head." He, himself, had no illness until he was 24, when he had a slight attack of left pleurisy. From that time for about ten years he used, during damp weather, to suffer slightly from what he was told was muscular rheumatism, and if, from time to time, he ever had a slight cough, he felt the "rheumatism" in his left side, but this never lasted more than a day or so. At the end of another ten years (during which he says he was in perfect health) he began to complain, generally in damp weather, of an intense itching about his shoulders and in the middle of his back on waking in the morning—this lasted for about four years—with occasional stiffness in the same parts, but no actual pain, nor any eruption. When about 43, he had lumbago, and a similar attack in each of the two following winters; the third lumbago being followed (in November, 1894) by a severe attack of left sciatica, which he did not throw off for four months, and by the end of this time all the nails of his left foot became brittle; they are so still. Ever since then (except in hot and dry weather), he has experienced tingling in the outer half of the left foot and a dull, aching pain across the loins, especially in bed at night, and on waking in the morning. After movement he scarcely notices either; and in very hot and dry weather, or while standing with his back in front of a fire, he his absolutely free from any abnormal sensation in any part of his body. In damp weather, especially in cold damp weather, he is never quite free from the pain in his back and the tingling in the left foot. During the past eight years he has had influenza three times. The first attack was severe, though at the end of about a week he felt perfectly well, but he noticed within the next three months that the hair on his head, which before had been dark brown, became grey, and then turned almost white, and so it has remained. During the last five years or so tingling has been felt in the right foot similar to what occurs in the left, though not to so marked an extent. If exposed to a sudden cold draught or a cold, cutting wind he, within a few minutes, feels pain in the shoulders or in whatever part has received the cold current. A slight blow will sometimes induce "muscular" pain in the part struck, and the next day a similar pain will often appear in some distant part. A tight belt causes "muscular" pain all round. Sometimes, at night, he finds relief from the pain in the back by lying on his face. From his earliest age he has always perspired profusely, even on the slightest exertion, and often without any exertion at all. On this account he has never worn any but woollen clothing. During the past four years he has noticed that his memory for names has become defective, and, from time to time—especially if the backache has kept him awake during the previous night—he experiences an effort, sometimes a painful effort, to think; he locates this "sensation" as being "behind his eyeballs." Violent fits of sneezing immediately follow any sudden lowering of external temperature. He then sneezes purposely with his mouth wide open; as he says that, unless he does so, the sneeze is never effectual in giving relief. With the exceptions above stated, he has always enjoyed robust health. He is remarkably (physically) strong; a great and rapid walker; an ardent cyclist (he notices no pain when in the cycle); he almost lives in the open air; he has a capacious and perfectly sound chest; has never suffered from headache (except during the attacks of influenza), dyspepsia, etc.; has always had a remarkable appetite; a vegetarian diet (continued for many weeks at a time) and ordinary mixed diet are all the same to him; bowels always perfectly regular, no trace of any urinary defect. He is a tobacco smoker, never touches spirits, seldom drinks wines though he drinks about a pint of beer with the 2 p.m. dinner; this he has done during only the last few months. And that is the whole of the case. I have purposely refrained from mentioning the treatment adopted, as all I am anxious to know is what is the probable cause of this backache which has continued for over ten years.

LETTERS, NOTES, Etc.

THE MAGNESIUM WIRE TEST FOR LEAD.

DR. F. H. JACOB (Nottingham) writes: I am much obliged to Mr. Marsden for his letter of February 3rd (BRITISH MEDICAL JOURNAL, February 14th, p. 408), and feel that I owe him in reply a more detailed explanation of our methods and difficulties. I will first quote his original article from the *Lancet*, January 16th, 1897. "A strip of pure magnesium is placed in the fluid to be examined. Ammonium oxalate in the proportion of about 1 gram to 150 c.cm. is added. If lead is present it is deposited on the magnesium. The slip is then washed with distilled water and dried. Confirmatory tests.—(1) Warm the slip with a crystal of iodine—yellow iodide proves lead, cadmium may be ignored; (2) dissolve deposit in HNO_3 and apply usual tests." (1) Examination of the deposit on the magnesium.—After warming with iodine I dissolved the yellow deposited in hot distilled water in a watch glass and then evaporated very slowly to dryness; from the deposit obtained from 1 in 50,000 aqueous solution of lead I was able to obtain the characteristic flat yellow crystals of iodide of lead; from the deposit obtained from the urine, containing excreted—not added—lead, evaporated down to a 1 in 25,000 solution, I have been unable to obtain such crystals. Mr. Trotman has examined the deposit on magnesium by the usual tests for lead and has similarly failed to obtain proof in any case of excreted lead. (2) Purity of the magnesium.—Mr. Trotman has tested this and found a trace of iron, no other impurity. I cannot imagine that this would vitiate our results. (3) Concentration by evaporation.—There is nothing in the original communication to lead one to suspect its necessity, and unless one happened to be aware of the minute quantities in which lead is excreted in urine one would not dream of doing so. Moreover, it has certain practical difficulties. A fume cupboard is necessary on account of the unusually unpleasant odour. This at once removes the test from the category of clinical to that of laboratory tests. Suppose the urine to contain 1 mg. of lead per litre each 1,000 c.cm. must be evaporated down to 50 c.cm. to make a 1 in 50,000 solution. A very tedious process; at 50 c.cm. many of the solids are deposited, and it will not dissolve further solids in the shape of one-third mg. of ammonium oxalate; if the solids be redissolved by acid the magnesium rapidly disappears. I have therefore put the magnesium into the evaporated urine without any doctoring, and have not yet succeeded in proving lead in the resulting deposit. Suppose the urine to contain 0.1 mg. of lead per litre it will now be necessary to evaporte 1,000 c.cm. down to 5 c.cm.; that is, practically to dryness, the test becomes now absolutely unworkable, yet this proportion of lead in urine is not an unusual one. I therefore maintain that this is a laboratory and not a clinical test, that it is not sufficiently delicate to be of use in the detection of such minute quantities of lead as occur in the urine, and, further, that in the experience of Mr. Trotman and myself it will not detect lead excreted in urine even when in a 1 in 25,000 solution. Finally, I should like to ask the rationale of adding ammonium oxalate.

CANCER AND TUBERCLE.

MR. W. ROGER WILLIAMS (Clifton, Bristol) writes: In your abstract of Dr. MacCaskey's essay on this subject in the BRITISH MEDICAL JOURNAL of February 14th, par. 25 of the EPITOME, there occurs the following statement: "In 281 necropsies of phthisical cases (141 by Williams and 145 by Kelynack) cancer was found four times, or in about 1.4 per cent." Will you allow me to point out—since the authority for this statement appears to be my article on the pathology of cancer in vol. xvii. *Twentieth Century Practice of Medicine*—that this representation of the ascertained facts is altogether wrong? As I have not yet seen the original essay, I cannot say whether the mistake is due to the abstractor or to the author. The correct presentation of the subject, as it appears in the article referred to (p. 270) is as follows: "It is very rare to find both diseases in active progress in the same individual. I have met with this conjunction only twice in 136 cancer necropsies. Kelynack, at the Manchester Infirmary, found it only twice in 145 similar necropsies. From what has been stated, it is obvious that there is a certain antagonism between active tuberculous disease and cancer."

A SIMPLE METHOD OF OPERATING ON PILES.

AN ABERDEEN GRADUATE writes: In connexion with Dr. Mitchell's paper on the treatment of piles in the BRITISH MEDICAL JOURNAL of February 28th, permit me to say that practically the same plan was regularly adopted by Professor Ogston in the Aberdeen Royal Infirmary fourteen or fifteen years ago; in fact, I cannot recollect having seen him employ another method. He used a Péan's artery forceps for a clamp, and stitched with, I think, chromic catgut.

AN ASSOCIATION OF WAR "CIVIL SURGEONS."

UNITY IS STRENGTH writes: Why do not the "Civil Surgeons" who served in the South African War form a permanent association, choose a president and secretary, and so keep in touch with each other and the public? Every one who knows their usefulness feels for their neglected status and the wretched way they were sent into the field. Without rank or official status they were at the mercy of any objectionable person who chose to be rude to them, and this condition was entirely owing to want of forethought and want of real sympathy with them in that branch of the War Office which is entirely to blame for the neglect. The association should not include the consulting surgeons sent out, whose condition is quite different.

THE AGGLUTINATION TEST IN ENTERIC FEVER.

DR. ODERY SYMES (Clifton), writes: The case of supposed enteric fever in which no Widal's reaction could be obtained, reported by Dr. Wm. G. Dun in the BRITISH MEDICAL JOURNAL of March 7th, 1903, is of considerable interest, as it illustrates the growing tendency of the present time to cast doubt on the bacteriological test rather than on the clinical diagnosis. In the case reported no *post-mortem* examination was apparently made, so the diagnosis must remain a matter of doubt. It is unfortunate, too, that the blood was not tested with one or more cultures of paratyphoid bacilli, as from a clinical standpoint the case might equally well be one of paratyphoid fever. Before a case of failure of Widal's reaction is reported, it should first be shown that the typhoid bacillus was present; that all precautions were observed in taking the blood and performing the test; and that the blood gave no agglutinating reaction when tested with various strains of paratyphoid bacilli. Hasty and erroneous conclusions as to the limit of error in Widal's test in enteric fever would thus be avoided. I should be glad to test the blood from any suspected cases of paratyphoid fever if sent to me at the Bristol General Hospital.

CORRECTION.

THE counter-stain in the formula for Neisser's stain for the diphtheria bacillus was in the BRITISH MEDICAL JOURNAL of March 7th (p. 587), stated, through what was probably a clerical error, to be a solution of "benzoin," whereas Bismarck brown was meant. Benzoin is, of course, not soluble in water, and has no staining properties.

LETTERS, COMMUNICATIONS, ETC., have been received from:

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BOOKS, ETC., RECEIVED.

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The Goulstonian Lectures

ON

THEORIES OF IMMUNITY AND THEIR CLINICAL APPLICATION.

Delivered at the Royal College of Physicians, London.

By A. S. GRUNBAUM, M.D.Cantab., F.R.C.P.,

Director of the Cancer Research in University College and the Royal Infirmary, Liverpool; Assistant Physician, Liverpool Hospital for Consumption and Diseases of the Chest.

Lecture I.

[After some introductory remarks on the history of the subject of specificity, the lecturer said:]

Immunity may perhaps be defined simply as the power to resist infection. Metchnikoff thinks it at present impossible to give a more precise definition of immunity to infectious disease than "the complex of phenomena by which an organism can resist the attack of the specific pathogenic microbes," and the resistance (we may add) to their products.

The two chief theories of the present day are those promulgated and supported by Metchnikoff and Ehrlich respectively. Originally opposed to one another, like the humoral and iatrochemical theories of the Middle Ages, they are really only rays refracted at different angles from the same source of light, and will ultimately be made to fuse into one brilliant cellulo-humoral theory of immunity. Not that we can accuse the upholders of the modern humoral theory, as we could their predecessors of a period of bacterial supremacy, of neglecting the fundamental ideas of cellular pathology; it is merely a question of distribution.

While on the one hand Metchnikoff and his school believe that the white cells directly attack the invading bacteria, Ehrlich and his followers have laid more stress on the constituents of the body fluids. But even they regard a bacterial toxin as poisonous only in the form of a chemical combination with a cell constituent. If the cell does not possess this constituent the bacterial toxin is innocuous; the cell possesses a natural immunity. On the other hand, these cell constituents coursing in the blood are the protective bodies, and they have had their origin in the cells. As Behring tersely puts it, "That substance in the living body which, when situate in the cell, is a preliminary essential to the toxic process, becomes a curative agent when it enters the blood stream." To take a very gross illustration, suppose a ball of cotton wool to have wrapped up in it some small lumps of sodium carbonate and immersed in an acid fluid, there will be an evolution of gas in the ball, and it will be partly disintegrated. If the ball had previously secreted these lumps, the chemical reaction would have gone on outside.

Congenital and Acquired Immunity.

Immunity may be either congenital or acquired. When congenital, true infection for particular disease is impossible. Into the explanation of this phenomenon we shall inquire later. This form of immunity is always natural. Acquired immunity may be either active or passive. By active immunity we understand that acquired either by an attack of the disease, in which case it is natural, or by inoculation, when it is artificial. In both instances a process of what may fairly be termed infection occurs. Passive immunity is produced by the introduction into one organism of the products of active immunity in another. By the injection of the products of active immunity against diphtheria from the horse into the human subject, the latter becomes passively immunized against the disease. But infection itself is not of a single kind, and immunity will vary with the nature of the infection.

The action of some infective agents—for example, the tubercle bacillus and the leprosy bacillus—is largely mechanical; they produce fibroid and degenerative changes in the tissues which they attack. Others, when introduced into the body, do not multiply extensively, but, remaining at the site of inoculation, perform their malignant functions by secreting poisonous substances to enter the circulation. To this group belong diphtheria and tetanus. Yet others are capable of multiplying in the tissue as well as producing poisons, and so exert their influence in both ways.

A suitable soil is essential for many bacteria. Introduced beneath the skin the comma bacillus is comparatively soon destroyed; if put into the alimentary canal it produces cholera. Cutaneous infection with B. anthracis produces severe illness; taken in the alimentary canal it is practically harmless. The tubercle bacillus by whatever route it may enter the body can settle, multiply, and produce its specific lesions. It must be remembered that the mere presence of a specific bacillus is not evidence either of infection or immunity of the organism in which it is found; the tubercle bacillus has been found in the sputum, the typhoid bacillus in the faeces, and the diphtheria bacillus in the throats of healthy persons. Both are relative terms; there is no certain infection or absolute immunity. Infection may then be due chiefly either to the micro-organism or its products. Corresponding to these two modes we can distinguish two classes of immunity, namely, a bactericidal and an antitoxic immunity. Again corresponding to these distinctions we find a variable duration of immunity—it may be only for months or it may be for years. It may be slight or nearly absolute, and finally it may be either individual or racial.

Theories of Immunity.

Metchnikoff was originally a zoologist who, as he himself tells us, has "strayed into the domain of chemical biology and of medical science," and his theory is essentially that of a zoologist. I should like to make it clear that I say this in no depreciatory sense. On the contrary: nobody, I hope, can be more alive to the interdependence of the several sciences and particular of the dependence of the science of medicine—I say advisedly the science, not the art, of medicine—on the sister sciences. It is rather with the object of directing attention to the way in which a theory based on the broad principles of cellular biology has been applied to the special problems of disease as contrasted with another theory which, starting from the comparatively narrow basis of disease, is finally found applicable and pertinent to many wide biological problems. The starting point of Metchnikoff's theory was the observation that the protozoa habitually ingest and digest bacteria, whether pathogenic or no—that the bacteria form for them an important aliment. On the other hand, the more highly developed organisms with a digestive tract are unable to digest bacteria, but when they enter the circulation, unless they are pathogenic, they disappear, and not by way of the kidneys unless the latter are injured.

The blood of the invertebrates contains but a single kind of amoeboid cell; in the vertebrates, especially warm-blooded vertebrates, there are two kinds, which Metchnikoff designates as macrophages and microphages respectively. They correspond to what the ordinary nomenclature calls large mononuclear leucocytes and the smaller polymorphonuclear white cells. On the introduction of any foreign matter, whether bacteria, metallic granules, or even sterile fluids into the organism, its leucocytes leave their normal habitat, and, passing through the vessel walls, go to the attack and often the annihilation of the intruder.

The macrophages, as befits their larger, slower, and more unwieldy character have, according to Metchnikoff, a preference for animal cells, for example, xanthocytes; for the bacteria of chronic disease, for example, tubercle and leprosy, and for the malarial and other analogous parasites. The microphages, on the other hand, show a preference for the micro-organisms causing acute disease. The phagocytic theory was in this crude condition in 1888, when Nuttall discovered the bactericidal action of serum, and it received further blows by Behring's discovery of antitoxins in 1891, and Pfeiffer's finding of the bacteriolysins in 1894. But Metchnikoff has managed with considerable ingenuity to adapt his theory to these new factors, and with much facility to abandon the purely mechanical explanation at first afforded by his theory.

The real starting point of Ehrlich's side-chain theory was his laborious investigation for the standardization of diphtheria toxin. Certain anomalous results occurred. The standardization of the various samples of toxin was done with a standard serum. To a quantity of this serum able to neutralize 100 lethal doses were added successive quantities of toxin until two limits were obtained; one in which so much toxin was added that the antitoxin was just neutralized and the other in which there was just so much excess of toxin as to produce death in the test animal in four days. Ehrlich found, first, that of various toxins a quantity less than 100 lethal doses often neutralized the standard quantity of antitoxin; and secondly, that the excess of toxin required to be added to the neutral mixture was more than one lethal dose. In order to explain this anomalous phenomenon, Ehrlich assumed, and finally proved, the existence of a modification

of the toxin, the "toxoid," which is nearly non-poisonous, but is, nevertheless, capable of uniting chemically with the antitoxin. The toxoids may again be subdivided into three groups, according to their affinity for the antitoxin, which may obviously be either greater (protoxoid), equal (syntoxoid), or less than (epitoxoid) that of the toxin. When the affinity is less than that of the toxin to the antitoxin, it is obvious that the epitoxoid will first be set free in the mixture, or until they are all set free no toxin will be free, so that the difference between a neutral antitoxin + toxin mixture (L_0) and one just killing ($L+$) will be several lethal doses.

Ehrlich makes the following chemical comparison:—

100 epitoxoid-antitoxin + 100 toxin-antitoxin
100 $NaCH_3COOH$ + 100 NaCl
add 101 units: 101 epitoxoid + 101 toxin
101 CH_3 COOH + 101 HCl

we get—

200 Na Cl + 201 CH_3 COOH + 1 HCl
toxin-antitoxin epitoxoid toxin

that is, the difference between L_0 and $L+$ is enormously increased by the presence of epitoxoid.

The modification from toxin into toxoid may be brought about in various ways, and is perhaps comparable to the allotropic change occurring in the case of phosphorus. When a toxin is kept, some alteration takes place, and its toxic power diminishes; it may apparently occur also by the action of high-frequency currents on toxin solutions. Since the toxoids are not only capable of producing immunity, but are also very much less poisonous, there may be some hope for the clinical treatment of diphtheria and tetanus within the solenoid by the conversion of toxin into toxoid within the living body.

Having shown that the union of toxin and antitoxin occurs in fixed ratios, more rapidly in concentrated solution and in the warm, etc., Ehrlich deduces the following conclusions:—

The capacity of the toxin to saturate the antidotes must depend upon a specific atomic group of the toxin molecule, which group must have a maximal specific relationship to a definite atomic group of the antitoxin molecule, the one fitting easily into the other, as a key into a lock; in the same manner as Emil Fischer] has explained the specific action of ferment.

Various observations tend to verify the statement. Thus tetanotoxin affects primarily the cells of the central nervous system, and Wassermann showed that by previously mixing the toxin with an emulsion of brain substance, it was neutralized.

The affinity was specific; emulsion of other organs were devoid of action. It appears most reasonable to assume that such specific atomic groups of antitoxin pre-exist in small numbers, and that their saturation by the toxin affords a stimulus to the cells for their reproduction. As Ehrlich says:—

In the course of a typical process of immunization the cell become trained, so to speak, to produce the specific side-chains in large quantity. In such processes of regeneration, not compensation but hypercompensation is the rule, and with the enormous increases of the poison dose a point must be reached when there is such an excess of side-chains that the cell is surfeited, and casts them off as useless ballast into the blood. If on the one hand the presence of such receptive side-chains is a necessary condition for the occurrence of the toxic process, this circumstance also explains in the most simple way the production of the antidotes.*

The existence and formation of the toxoids he explains as follows:—

One must assume in the toxin molecule two independent atomic groups. One of these is haptophore, and brings about the union with the antitoxin or the antitoxic side-chains of the cells. The other atomic group is toxophore, namely, is the cause of the specific toxic action.

The toxophore group is unstable and easily decomposed, with its decomposition the toxin is converted into the toxoid. The union of the haptophore group with the cell side-chain enables the toxophore group to act on the cell through the bridge thus formed; when the side-chain is circulating in the blood, and becomes attached to the toxin molecule there is no cell on which it can exert its toxic action; it is neutralized.

Starting from this central point, it has been possible to explain a number of biological phenomena by similar reasoning and similar experiments, which in their turn confirm the correctness of the original theory. Pfeiffer's phenomenon gave the stimulus for this series of investigations. Already before Pfeiffer's observations the bactericidal power of normal serum and its property of dissolving xanthocytes of other species, together with the loss of this power on heating to 56° C., had been observed and recorded. The increased bactericidal power of the serum of an animal immunized against cholera without any antitoxic power was also known. Its bacteriolytic property was yet unknown. Pfeiffer found that either by the simultaneous intraperitoneal injection of a lethal dose of cholera vibrios, together with the serum of an immunized animal, or by the injection of cholera vibrios alone into the abdominal cavity of an immunized animal, the micro-organisms lost their motility, became spherical, and then underwent a granular degeneration, while the animal survived. (Pfeiffer's phenomenon.)

It was shown by Fraenkel and Sobernheim that this result obtained also if the immune serum had been previously heated to 56° C., and its bactericidal power consequently destroyed. It follows that if the bactericidal substance plays any part in this reaction, it must be supplied from the blood of the animal subjected to the experiment. Bordet proved that two substances contributed to Pfeiffer's reaction by showing, first, that it occurred *in vitro*, and, secondly, that if the bactericidal property of the immune serum were destroyed by first heating it to 56° C., the bacteriolytic action could be restored by the addition of a small quantity of normal serum. (It will be convenient to note here that a serum deprived of such a property by heating is called an inactivated serum, and when this property is restored a reactivated serum.) By similar experiments, using xanthocytes instead of bacteria for immunization, Bordet was able to show that the haemolytic power of the immune serum was destroyed by heating, and could be restored by the addition of normal serum, which, by itself, possessed no haemolytic properties.

In order to extend his theory of the formation of antitoxins to that of haemolysins Ehrlich made a long series of experiments. He recognized, of course, that Bordet was right in assuming the existence of two bodies for the production of the phenomenon, and that one body (mediator) (amboceptor) was present in quantity in the serum of immunized animals only, while the other (the complement) occurred in the serum of normal untreated animals.

He reasoned that if the mediator were formed in a similar way to antitoxin, then it ought to be saturated and neutralized by the addition of xanthocytes which would correspond to the toxin in a toxin-antitoxin mixture. This was proved to be so by taking the serum of a goat immunized against sheep's blood, heating the serum to 56°C. to destroy its haemolytic power (by destruction of the complement) and then adding to it sheep's xanthocytes.

After standing awhile they were again separated by centrifugalizing. If the amboceptor had united with xanthocytes, then on the addition of normal serum to the corpuscles haemolysis ought to occur. This was found to be the case. On the other hand, if the mediator had been removed from the immune serum, then on the addition of fresh normal serum and xanthocytes to it no haemolysis of the latter should occur. Nor did it. This proved, as Ehrlich says, "that the amboceptor possesses a specific haptophore group which binds it to the xanthocyte, as required by the side-chain theory."

On the other hand, if to normal goat's serum which contains the second body, the complement, there be added sheep's xanthocytes, then, if they were capable of binding the complement, on centrifugalizing off the xanthocytes and adding fresh xanthocytes and mediators to the removed supernatant serum, no haemolysis should occur. But it does, showing that the complement has not united with the xanthocytes. Moreover, if xanthocytes and immune serum be mixed as before but kept in the cold, no haemolysis occurs.

On centrifugalizing and treating the xanthocytes as just mentioned, one can prove that the amboceptor has united with the xanthocyte, but not the complement with the intermediary body. Since the interposition of the amboceptor is thus shown to be essential, Ehrlich concludes:—

That the amboceptor has two different haptophore groups; one having a great affinity to the corresponding haptophore group in the xanthocyte and a second haptophore group of less chemical energy which can attract more or less completely the complement present in the serum.

Since the action of the complement produces effects which, with Pfeiffer, we must regard as analogous to digestion, we shall probably not be far wrong in regarding the complement as possessed of the properties of a digestive ferment.

Taking a familiar illustration in which, however, the characters are really reversed, we may regard the pepsin in an artificial digestion mixture as the amboceptor and the acid as the complement. That is, the pepsin is the special factor like the amboceptor occurring only in the immune serum, while the acid which may, as we know, be either hydrochloric, or sulphuric, or oxalic, etc., corresponds to the complement to be found in a variety of serums.

* I use this word instead of the hybrid enormity "antibody."

The lock and key simile of E. Fischer affords perhaps the best analogy. The lock is the cell, the key is the amboceptor, and the hand which turns the key the complement. As a rule but one key (or at most a few similar ones, a small number compared with the total) will fit a given lock. But nearly any hand, it may be of a monkey or performing dog, can turn the key in the lock.



The same explanations hold good for the action of the agglutinins, namely, those substances in immune serums which cause agglutinations in the corresponding bacteria; for the action of the precipitins, namely, those substances in immune serums which cause precipitation when added to the fluids or solution of substances used for immunization. In the case of milk they have been called coagulins.

I shall return later to these particular substances. It will suffice here to point out that their occurrence led Ehrlich to expand his hypothesis and apply it to explain also the normal processes of food assimilation. The formation of antidotes to normal foodstuffs is quite analogous to the formation of antitoxins to toxins, so that the generation of antitoxins "is only a reproduction of a process in normal cell-life." Ehrlich believes that the proteid molecule of a food becomes attached to one group of the cell receptor while the other group is already occupied by a ferment (the complement) molecule to make the foodstuff assimilable. In this respect the receptor is more complicated than that for the toxin which has only one group; but is less complicated than that concerned with the formation of haemolysins, cytolysins, etc.

In the last instance separate groups are required for union with the broken-down bacteria or xanthocytes and for the complement circulating in the blood-stream.

This can be most easily explained by reference to the diagrams (modified from Ehrlich).

A PSYCHOPATHIC HOSPITAL FOR NEW YORK CITY.—A Bill has been introduced into the New York Legislature, at the instance of the State Commission in Lunacy, providing for the establishment of a psychopathic hospital in New York City. It is intended that the hospital shall serve as a place for the detention and expert examination of persons suspected of incipient insanity. The hospital would be conducted in connexion with the existing lunatic asylum on Ward's Island, and would probably be situated on the East River, opposite that institution. The Bill appropriates £60,000 for the establishment of the hospital, for which the city is to furnish the site. It will accommodate from 150 to 200 patients.

The Lettsomian Lectures

ON

THE CONDITIONS WHICH MODIFY THE CHARACTERS OF INFLAMMATIONS OF THE SKIN, AND THEIR INFLUENCE ON TREATMENT.

Delivered before the Medical Society of London.

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LECTURE III.—*(Abstract).*
THE TREATMENT OF DERMATITIS.

INTERNAL TREATMENT.

THE internal treatment, as far as our knowledge permits, rests on the same foundation as that of visceral diseases—namely, an accurate diagnosis and full knowledge of the etiology, pathology, and prognosis of the disease in question. Owing to imperfections in the knowledge of these factors, empirical remedies had to be employed to fill up the gaps, and although glimpses of their *modus operandi* were being gradually gained, practical experience in their employment had to be relied upon in great measure. The lecturer did not discuss treatment so far as it depended on the general principles of medicine beyond insisting on the importance of clearing out the alimentary canal, and, by diet and intestinal disinfectants, endeavouring to prevent intestinal fermentations, the generation and absorption of toxins and ptomaines, on which, in his last lecture, he had laid so much stress, as important factors in the production of many inflammatory and other diseases of the skin. The administration of large quantities of feebly alkaline waters, such as was given at many of the spas, had also a flushing effect on the liver and kidneys, and was often an important aid in many inflammatory and urticarial diseases, especially in senile and the so-called gouty eczemas.

ARSENIC.

While the long-established position of arsenic, and its widespread use by the mass of the profession for almost every cutaneous disease, and its undoubted merits for some diseases, entitled it to the first consideration, he thought most dermatologists would agree that it was often a most disappointing drug and that its place became more restricted as experience widened. Its action appeared to be partly direct on the epithelial cells and partly indirect through the peripheral vasomotor nerves. Its local action was shown by its effect on psoriasis patches actually present. It did not prevent others forming even in the neighbourhood, and in rapidly developing eruptions actually made it come out faster. Moreover, there was more pigmentation in the site of psoriasis treated by arsenic than after treatment by other means. He therefore deprecated arsenic being given for very long periods at a time in order to ward off fresh attacks, as it not only failed to do so, but was liable to produce effects of its own, which might not only be disfiguring, but even serious. These were the well-known pigmentation of a sepia colour, which in the early stage was recognizable from its sparing for some time the immediate neighbourhood of the hair follicles so that they appeared as white dots on a dark ground on the abdomen; eventually they also were invaded and a more uniform tint was observed. The other lesion was the thickening of the horny layer of the palms and soles which commenced round the sweat ducts and increased to small warty nodules which at this stage were distinctive, but ultimately the intervals were levelled up to a uniform horny plate covering the whole palmar surface and all the sole which touched the ground in standing. In a few cases epithelioma developed on this warty thickening. An instance of its occurrence thirty-eight years after the arsenic had been left off was related. Besides psoriasis it was also sometimes successful in lichen planus, and in the worst forms of lichen acuminatus, in all of which its action was probably direct on the diseased epithelial cells, but it was always a slow remedy in these affections, often required the dose to be raised to the verge of the patient's tolerance, and many cases were much better treated by other means. It was often advantageous on recurrent angio-neuroses, such as some forms of erythema, especially erythema haemorhagicum in which a toxin origin was often to be inferred, in chronic

urticaria not dependent on digestive disturbances, in all these the dose should be small and long continued. In recurring sweat eruptions, such as the persistent forms of miliaria, of which a case was narrated, in the sweat eczema along the side of the fingers, so common in summer, especially in hyperidrotic persons. In pemphigus and dermatitis herpetiformis, although far from being the specific which some considered it to be, it often had a distinct controlling effect, and sometimes actually cured. In other cases it appeared to be quite powerless. In all these affections its action was probably through the vasomotor peripheral nerves. Its prevential influence on bromide and iodide eruptions had been previously mentioned. The lecturer had no faith in it as an effective treatment in ordinary eczema, and deprecated its use in any disease in which there was already gastric irritation as in acne rosacea, urticaria from indigestion, etc. It should also not be given in the evoluting stage of psoriasis, nor when the patches were much congested, as it generally aggravated the itching and redness, and, with the exception of bullous eruptions, it was seldom advantageous in acute inflammations of the skin, and might act prejudicially.

With regard to the mode of administration, the lecturer preferred the time-honoured Fowler's solution, as it permitted of easy graduation of dose and free dilution, but the portability of Asiatic pills rendered them advantageous sometimes. Sodium cacodylate was a failure for diseases of the skin, and it was not proved that its action was exactly like the other forms of arsenic and its employment in the doses recommended was not free from danger.

Salicin and Salicylates.

For these drugs, which were introduced into dermatological therapeutics by the lecturer, he claimed a large measure of success in many diseases of the skin. Speaking generally, they covered the same ground as arsenic, and had some advantages over that drug, as they disturbed digestion much less frequently, and had a wider range. They could be used in the spreading stage of psoriasis, for example, and often checked extension, and certainly did not favour it as arsenic so often did. They were most likely to be successful in diseases in which there was reason to believe that they were of microbic origin such as psoriasis, lichen planus, especially acute forms, and polyriasis rosea. In psoriasis also it was more likely to be successful in widespread and hyperaemic patches than in a few chronic patches, and it had no effect in psoriasis of the scalp. Under its use, in doses of 15 gr. and upwards the patches became paler, the scales more detachable and soon ceased to reform, while the patch cleared in the centre, and finally the circle broke up. The doses alluded to were for salicin, which the lecturer now used almost exclusively, as it was quite as effectual and less likely to disagree, constipation being the chief drawback of large doses. It was very valuable in bullous eruptions such as pemphigus and dermatitis herpetiformis, often succeeding when arsenic had failed, and in acute and subacute cases of lupus erythematosus, but was of no use in the fixed patches. Finally —and this was inexplicable—he had even seen tumours, presumed to be sarcomata, disappear under its use, and it was often of temporary benefit in that hopeless disease mycosis fungoides. He had not found it of service in eczema. If local treatment in any of the above diseases was simultaneously employed, the applications should not be of a stimulating character, as the internal and external treatment were then antagonistic. Local treatment was more serviceable on the scalp, and to clear up remaining fragments after the bulk of the disease had been removed.

Thyroid Extract.

In the reaction which followed the disappointment in the great expectations which were raised when this substance was first introduced for skin diseases by Dr. Byrom Bramwell, it has almost fallen into disuse except for myxoedema, but this the lecturer considered was not justified. In a selected few cases of extensive psoriasis its action was both rapid and efficacious, but it should not be given in spreading cases, nor in patients debilitated from any cause, especially in persons past 60, or with weak hearts. The initial dose should not exceed 5 gr. once a day, and the increment should be gradual and spread over two or three weeks, and should seldom exceed 15 gr. a day, and then only when the patient was under close observation. It was also very useful in prurigo, in lichen acuminatus, and in eczema in an ichthyotic subject. Finally it was most valuable in and almost the only internal remedy which affected lupus vulgaris (a case was shown), but required to be given for a very long period, when, as in myxoedema, from time to time an interval from the medicament should be given.

Quinine.

Quinine in large doses was lauded in certain forms of extensive dermatitis, especially pityriasis rubra, and Payne advocated it for acute or widespread lupus erythematosus. It might be tried for pemphigus and dermatitis herpetiformis if arsenic and salicin failed. It should be given dissolved in the acid portion of an effervescing potassium citrate mixture in from 5 to 10 gr. doses, and in this form rarely disagreed if the bowels were kept open.

Subcutaneous and Intramuscular Injections.

The value of injections, subcutaneous or intramuscular, was discussed. As regarded mercury, besides using intramuscular injections for syphilis and leprosy, it had also in the lecturer's hands as well as in those of others, proved valuable in some obstinate and extensive cases of psoriasis, where other methods had failed, and it had been recommended in lupus vulgaris, but the lecturer had no personal experience to offer in regard to that disease. He was an advocate for using only the soluble salts, as there was much less chance of serious salivation than with the insoluble salts; he preferred the sozoiodolate of mercury because it was much less painful than the perchloride, the dose being the same; ¼ gr. could be injected once or twice a week, the salt being dissolved with the aid of sodium iodide in 20 minims of distilled water. As all mercurial intramuscular injections were to some extent painful, they should not be resorted to until milder means had failed.

Arsenic had also been recommended by Köbner and others to be used subcutaneously or, better, intramuscularly for diseases in which arsenic was indicated by the mouth, but the potash salt, as in Fowler's solution, was painful, and though the soda salt was less so, it was rarely used for any form of dermatitis, and was almost reserved for new growths such as multiple sarcomata, in which temporary benefit had frequently and cure occasionally, been produced. Sodium cacodylate had also been used for similar conditions, but there had not been any important successes with it. He considered thiosinamin was of great value for keloids and hypertrophic scars. Twenty minims of an 8 per cent. solution in glycerine and water should be injected in divided portions in the neighbourhood of the growth.

The Value of Rest in Bed.

The general indications for all acute and widespread inflammations of the skin, irrespective of the diagnosis, were rest and equability of temperature. Putting the patient in bed without other treatment would cure some and ameliorate many more extensive cases of dermatitis. The prurigo of Willan and Hebra was nearly always greatly improved by a week in bed. Many of the widespread erythemata speedily disappeared, and in pityriasis rubra and other forms of universal dermatitis bed was absolutely essential for their cure, and patients incurred considerable risk by going about. Even less extensive and severe forms of dermatitis were much aggravated by going out in cold winds.

Local Applications.

In all acute inflammations the applications should be continuous, which insured that the medicament would be in close contact with the diseased surface, that microbic invasion was avoided, that it was protected against air and water, and that rest and evenness of temperature was in a large measure assured. Continuous applications must be of a mild and soothing character, while microbicides such as tar mercury and silver salts, chrysarobin, and ichthyol, being more or less irritating, should be applied for a short time only, and diluted so as to suit the character of the inflammation. In choosing the local remedy a definite aim should be kept in view, for example, either to diminish the hyperaemia, to dry up the exudation, to stop suppuration, or to kill some microbe without increasing the local inflammation. The extent of the eruption and its position must also be taken into account.

The idiosyncrasy of the patient had also to be reckoned with, sometimes certain drugs which suited the majority of patients acting as irritants to others. In the acute forms of eczema this was especially the case, even the most experienced making mistakes, and in using tar and similar remedies it was wise to begin on a small part of the affected area.

General Deductions.

The general deductions which might be drawn from the subject they had been considering were:

That a large proportion of inflammatory diseases of the skin were of compound origin.

That there was frequently a microbic element, and that this too might consist of more than one kind of microbe superimposed on another, such as the staphylococcus aureus on the streptococcus pyogenes, the staphylococcus on the seborrhoeic microbacillus, the seborrhoeic microbacillus on the bottle bacillus, etc.

That not only did these several mixtures produce different forms of dermatitis, but that even the same microbe might produce different forms according to its mode of implantation in the skin.

That the microbic element generally required a suitable soil for its successful implantation and propagation; that this soil varied with the age of the individual, the kind of skin he possessed, of which the modifications might be congenital or acquired, and certain of the tissue proclivities to special diseases were probably hereditary.

That intestinal and probably other visceral toxins and ptomaines played an important and often unsuspected part in producing many forms of eruption, and even that many supposed gouty eruptions were really of toxic origin from the generally present intestinal catarrh.

That many of these toxins acted through the vasomotor nerves, central or peripheral, rather than directly on the skin, though they might act directly on that also.

That the cerebral nervous system acted chiefly as a controlling influence over the sympathetic system in regard to the intensity of the eruption.

That with very few exceptions the nervous system, whether vasomotor or cerebral, exercised but little influence on the character of the eruption, though it did on its distribution and intensity.

That the character of the eruption was mainly due to individual peculiarities or proclivities, of which they could often only chronicle the result without being able to explain it.

That while with apparently the same etiology different eruptions might ensue in different individuals, in recurring eruptions in the same individual there was a remarkable constancy in the characters of the eruption and in its time and place of development.

That many general eruptions were for a long or short time of local origin, occupying only a small area before generalization.

That other serious affections started from apparently trivial causes such as seborrhoea, a superficial pustule, etc., and that it was important therefore to treat affections of the skin in as early a stage as possible, as most inflammatory eruptions had a much greater tendency to further development than they had to spontaneous involution.

That the principles of treatment depended on the due appreciation of the relative importance in any one case of the microbic, the personal peculiarities, the nervous system, and the toxic elements, and that as far as their knowledge extended the general principles of medicine applied to them, but that as their power of estimation was often at fault they had to fall back on certain so-called specifics, which experience had shown to be of service in certain conditions.

That the most reliable and comprehensive specifics were arsenic, salicin, thyroid, quinine in large doses, and potassium iodide; the first two had a wide range as compared with any others.

That except as regards pustular eruptions, and those demonstrably of microparasitic origin, the character of the local treatment depended comparatively little on the diagnosis of the particular kind of dermatitis, the extent, intensity, and localization of the inflammation being the most important elements.

That in employing microbicide treatment in superficial and widespread eruptions the microbicide should not be irritating, or at least be capable of being at once neutralized, otherwise the increased inflammation set up defeated the aim of the therapeutist, and afforded a favourable soil for further microbic developments. It was in comparatively few circumscribed microbic diseases, such as impetigo contagiosa, boils, and carbuncles that the microbicide was the sole curative agent.

That in all widespread forms of dermatitis rest and equability of temperature were the most important and often the most essential curative means.

Finally, that in proportion as they studied diseases of the skin in the same manner as they studied diseases of other organs, they would find that their treatment could be successfully carried out on the sound basis of pathology, and that specifics would occupy a diminishing space in their armamentarium.

The statistics given in the first lecture showed that the task of acquiring the power of diagnosis, such as every practitioner should possess, was not difficult in the majority of instances, as three-quarters of all cases of dermatitis were comprised under a very small number of diseases; but a considerable practical experience was necessary to grapple successfully with the variations which even these few common diseases presented according to the several conditions already discussed, but attention to these points would gradually make this easier, and would bring success which would add interest to the further study of a class of diseases which was a sealed book to many otherwise well-informed medical men, because they had not started on their investigation in a systematic manner.

CONGENITAL GOITRE.

By JOHN T. HEWETSON, M.D., F.R.C.S.,
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Congenital bronchocele is sufficiently rare and of such peculiar interest that I am induced to publish the following case. The specimen was sent to the Birmingham University Pathological Museum a few months ago. In this country comparatively few cases have been recorded, and only a small percentage of these have been described in detail. Dr. Ballantyne[1], who has seen one case of congenital goitre, gives a brief summary of our knowledge on the subject, together with a brief bibliography. I would specially draw attention to two cases recorded by Sir J. Y. Simpson[2] in 1855, and Prof. A. R. Simpson[3] in 1886; in both the mother had been taking potassium chlorate during pregnancy. Mr. James Berry[4], in his excellent monograph upon *Diseases of the Thyroid Gland*, refers to several cases met with by him in practice, in literature, and in various museums in this country and on the Continent.

These congenital goitres generally assume one of three great types—

1. *Adenomatous*, being perfectly encapsuled tumours, occurring in the substance of the thyroid gland, containing one or more cysts, and frequently masses of cartilage.

2. *Parenchymatous* goitre, which is similar in all respects to the same variety seen in adults.

3. *Vascular* goitre is probably the commonest variety, in which the acini of the tumour remain fetal in character, showing an entire absence of colloid matter. Large blood vessels and widely dilated blood sinuses are present in considerable numbers. In this type cyst formation does not appear to take place.

Heredity plays a very important part in the causation of congenital goitre. Demme[5] in Switzerland collected 642 cases of goitre, 53 of which were congenital. Of these 53, 14 of them were from parents who both suffered from goitre, 23 in which the mother alone was goitrous, and 16 where neither parent suffered. The male child is more prone to congenital goitre than the female.

Many of these goitrous children are born prematurely or are stillborn. Of those that survive birth a considerable number die soon after birth, due to pressure of the growth upon the trachea, oesophagus, vessels or nerves of the neck. The milder forms of goitre tend to disappear spontaneously or are cured by some form of iodine inunction. The severer forms call for operative interference, and are dealt with on the same principles as acquired goitre. Hitherto operative measures have met with little success, though Schimmelbusch has recorded a successful case.

History.

For the following note bearing upon the reproductive history of the mother I am indebted to Dr. G. A. Gibb, Birmingham, in whose private practice the birth took place:

Mrs S., aged 32, the wife of a working mechanic, has been married six years. During that time she has given birth to six premature children, excluding the child under discussion. The first was born dead at the fourth month, the second lived a few hours and was a seven-months child, the third about the third month, the fourth a stillborn child at the end of the seventh month, the fifth at the end of the third month (placenta calcareous), the sixth at the end of the tenth week. The seventh

child, which furnishes the specimen of congenital goitre about to be described, was born at the end of the seventh month. 'The labour came on unexpectedly. I saw her within an hour of the commencement of her pains, and found the os fully dilated. A tense bag of membranes presented, but no fetus could be felt per vaginam. On the membranes being ruptured, the liquor amnii escaped with great force, and nearly a chamberful was collected, besides what escaped on the bed and floor. The fetal head at once descended into the pelvis, and was born with a few pains. The child cried strongly when born, and continued to do so while the cord was being tied. It was then lifted by the nurse, rolled in flannel, and placed on the bed. On examining it five minutes later, it was found to be dead. The placenta looked healthy, no degenerative patches being visible anywhere. The mother made a good recovery."

No history of syphilis could be obtained, and there was nothing in the condition of the uterus discoverable which could account for the premature births. The mother never had any antisyphilitic treatment during any of her pregnancies until the last. About the fourth week of this seventh pregnancy Dr. Gibb prescribed for her 12 gr. of potassium chlorate and 9 gr. of potassium iodide daily. This amount was slightly reduced when the child became viable, but was continued up to the day when labour set in. She has excellent health and a comfortable home. There is no history of a goitre either upon the maternal or the paternal side of the family. The parents have lived in Birmingham all their lives. None of the previous six fetuses showed any sign of goitre. At the present time the mother is bearing her eighth child, which has had so far about seven months of intrauterine life.

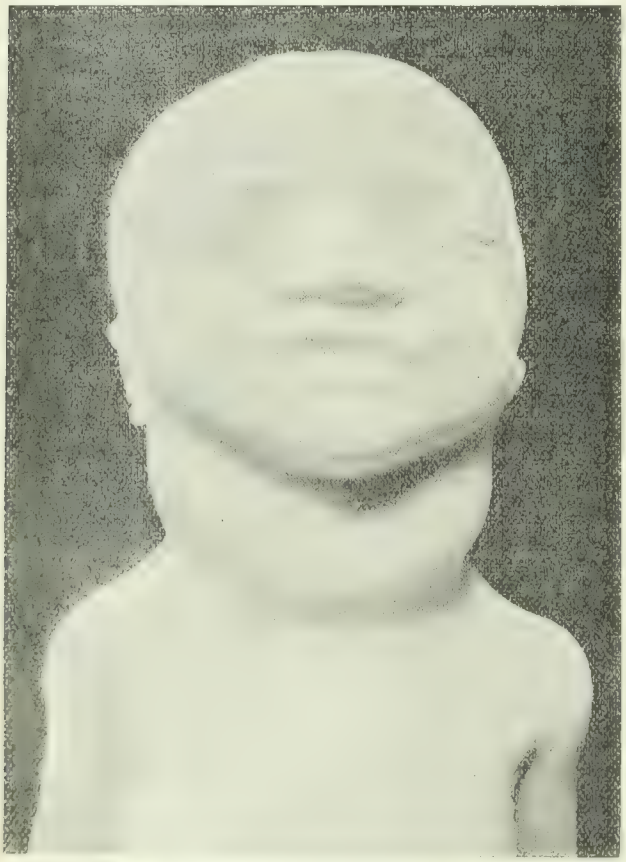


Fig. 1.—From a photograph of a cast of the child.

Description of Tumour.

The specimen is that of a fetus of the male sex, well developed, well nourished, somewhat undersized, with no apparent abnormality other than a bronchocele. The length of the child is 17 in. Its neck presents a distinct tumour identical in appearance with that of an enlarged thyroid gland. It extends as high as the lobule of the ear laterally, and fills up the entire space between the lower jaw above and the sternum and clavicle below. The isthmus between the two lobes extends from the sternum above to the level of the hyoid bone. The tumour is bilobed and in every respect conforms to the clinical condition seen in parenchymatous enlargement of the thyroid gland. The accompanying photograph is that of a cast made from the child. The tumour is movable, smooth on the surface with no palpable nodulation. It is moderately firm in consistence and does not fluctuate at any point. It appears to be in part substernal in position. The right lobe is slightly larger than the left. There is no undue congestion of the head or neck. On passing a soft bougie down the oesophagus it becomes arrested at a point 3 in. from the gums, and it was only after considerable pressure that a No. 6 urethral bougie could be made to pass.



Fig. 2.—Anterior view of thyroid tumour with thymus gland. Right lobe: Vertical diameter, 1¾ in.; lateral diameter, 1¾ in.; antero-posterior diameter, 1 in. Left lobe: Vertical diameter, 1⅛ in.: lateral diameter, 1 in.; antero-posterior diameter, 1 in.

On dissection it was soon evident that the tumour was a bronchocele a little larger than a hen's egg; consisting of two lobes, of which the right was rather larger than the left. It was a general enlargement of the thyroid gland, smooth on the surface, white in colour, and firm to the touch.



Fig. 3.—Posterior view of the specimen showing how the oesophagus was compressed between the two lobes. Thymus gland below.

The vessels supplying the tumour with blood were unusually large. Its capsule was very vascular, being surrounded by a rich network of large veins. The posterior surface of the growth showed the two lobes to be almost touching each

other, and distinct nodular outgrowths from the general surface. One of these nodules growing from the right lobe encroached upon the oesophagus and constricted its lumen very considerably. Similar nodosities projected from the lower lateral margin of the tumour. From the upper margin of the lobes, just in the position where the body of the tumour joined the isthmus, which, however, in this specimen was entirely absent, sprang two peduncles which passed upwards in front of the thyroid cartilage, and became united in a small glandular mass about the size of a hazel nut, the top of which lay in front of the hyoid bone, and was adherent to it. This pyramid was arranged in a foliated manner, and formed the only bond of union between the two enlarged lobes of the thyroid. No colloid matter was visible through the capsule of the bronchocele, as is frequently the case in ordinary parenchymatous growths.

The trachea was entirely surrounded by the tumour, but apart from a little lateral compression its lumen was not encroached upon. The oesophagus, on the other hand, was firmly compressed between the posterior and upper extremities of the two lobes, so much so that even in the dissected specimen a No. 8 urethral bougie could be made to pass this constricting point only after considerable force was used. The carotid arteries and jugular veins were pushed outwards by the tumour but not compressed. The vagus and sympathetic nerves were displaced in the usual way, but were not unduly pressed upon. The lower extremity of each lobe was below the level of the upper margin of the sternum, and firmly attached to it was the upper extremity of a large thymus gland, which passed downwards into the superior mediastinum. A patent ductus arteriosus still existed in the specimen when dissected. Cut sections of the goitre, to the naked eye, are white and solid, showing a few open mouths of blood vessels.

Microscopical Examination.

Sections of the bronchocele under low power (two-thirds objective, No. 4 ocular, 150 diameters) presented an irregular and delicate meshwork of fibrous tissue in whose spaces cells were irregularly scattered. Large blood sinuses were seen here and there throughout the field, as well as large, well-developed arteries and veins.



Fig. 4.—Low power, 150 diameters.

Under high power (objective one-sixth, ocular No. 4, 640 diameters), a very delicate stroma is revealed, arranged in complex and irregular meshes. It does not present the same regularity of shape or arrangement of the acini, as seen in the healthy gland. The meshes representing acini vary considerably in size, though none are very large. They are irregular in shape, and are lined by small round or cubical cells, sometimes in one layer though generally in several layers. Frequently, however, the cells seem to be irregularly scattered in the meshes, more towards the periphery of the acini than towards the centre. The acini are occasionally completely filled by cells, and form solid columns. The cells are often indistinct in outline, and appear to be undergoing degenerative processes. The nuclei are always very distinct, and take on stains very well. No colloid matter is visible anywhere.



Fig. 5.—High-power (640 diameters) showing character of alveoli.

Large blood sinuses are visible throughout the sections; they are lined by a single layer of endothelium, and are full of blood. There is little or no extravasation of blood into the acini. Numerous well-formed blood vessels, with distinct muscular coats, are also present.

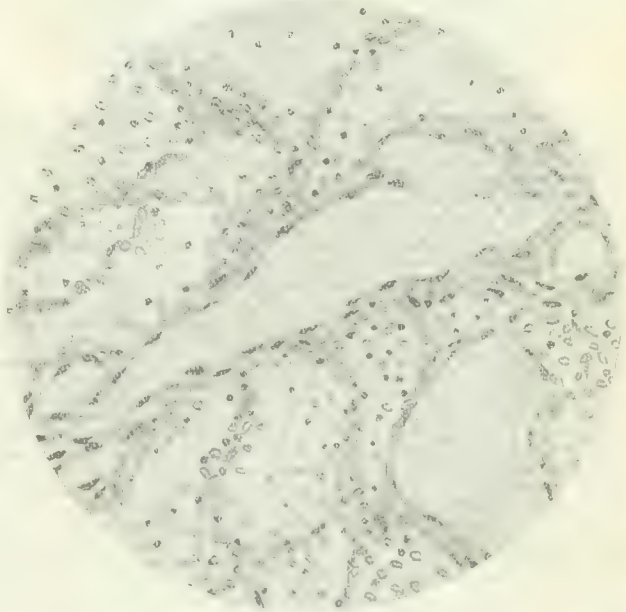


Fig. 6.—Showing large blood sinuses and fetal character of acini. (Magnified 640 times.)

In the character of the alveoli and vascularity the condition resembles very closely that met with in exophthalmic goitre.

Remarks.

This specimen clearly belongs to the congestive or vascular type of congenital goitre; there is an entire absence of cyst formation and colloid matter. The cases recorded by Sir J. Y. Simpson in 1855, and Professor A. R. Simpson in 1866, are very similar to the case just described. They are all from non-goitrous multiparous mothers who never gave birth to goitrous children before. They were all the subjects of numerous premature labours, for which potassium chlorate was given; and in this case potassium iodide also. Sir J. Y. Simpson's case lived eight hours, in Professor A. R. Simpson's case the tumour gradually disappeared, and at 4 years of age the child was perfectly healthy.

The coexistence of hydramnion is of some interest. Other specially noteworthy points illustrated by the specimen are the absence of an isthmus to the thyroid tumour, the very perfect pyramidal process, and the marked compression of the oesophagus between the two lobes.

It would have been valuable if the cases published in 1855 and 1865 had been described in detail, especially with reference to the morbid histology of the goitres. The administration of potassium chlorate in each case is a striking fact; whether this had any causal relation to the goitre or not is difficult to answer. Nevertheless, it is very significant that these almost identical cases of congenital bronchocele should follow the administration of potassium chlorate during pregnancy. Of course the fact remains that potassium chlorate is given during many pregnancies without the appearance of goitre in the child, and yet, through a combination of conditions present in these three specimens, the potassium chlorate may be a very important factor in the production of the thyroid enlargement. By the short description of Sir James and Professor A. R. Simpson's cases I should infer that they belonged either to the congestive or the parenchymatous types of goitre, which are the varieties that might arise from some such cause as the administration of potassium chlorate.

In conclusion, I wish to thank Dr. Thomas Wilson, who kindly sent the specimen to my department of the museum, Professor Leith for placing it at my disposal, and Dr. Miller for making the drawing of Fig. 6 for me.

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SIX CASES OF GOÎTRE,

ONE ASSOCIATED WITH AN ATTACK OF ACUTE MYXOEDEMA AND FIVE SUCESSFULLY TREATED WITH THYROID EXTRACT.

By ED. MARTEN PAYNE, M.B., C.M.ABERD.,
Cricklewood.

I THINK there is reason to believe that goitre is much more common in this country than is usually supposed; at any rate I am constantly meeting with cases in unexpected places and where they appear to have already passed unnoticed. All the following six cases, I think, show some characteristic worthy of recording and all except the first (which I had no opportunity of treating) showed a marked improvement under the influence of thyroid extract.

CASE I.—This case is remarkable for the enormous size of the enlarged gland. The two photographs, Figs. 1 and 2, speak for themselves. The patient was born at Stepney and was 38 years old when the photographs were taken. Nothing of importance could be elicited about the family history. The history of the growth is interesting. When the patient was 3 years old she had "whooping-cough." The whooping-cough was followed by an abscess which was opened and healed up, leaving a small tumour about the size of a pea. By the time the child was about 8 years old this small tumour had grown and was about the size of an egg, and she was taken to the Great Ormond Street Hospital, but nothing was done. When the patient was 12 a growth had commenced on the other side of the neck and she was taken to the late Sir Morell Mackenzie. His treatment, whatever it was, was not persevered with, and at the age of 14 the patient was taken to the Golden Square Hospital. According to the patient Sir Morell Mackenzie's treatment consisted in (1) "making a hole and putting in a tube which was left in nine months;" (2) burning with caustic; (3) putting a cord around the tumour subcutaneously which was tightened every day. The treatment being abandoned nothing had been done since. The patient is bright and cheerful and shows no signs of mental weakness.

CASE II.—This case, a girl aged 13, is chiefly remarkable as showing the improvement under thyroid extract. My notes are best exhibited in a tabular form thus:

Date.	Size of Neck.	Temperature.	Weight.
	Inches.		st. lb.
April 17	13½	—	—
April 24	12⅝	—	—
May 1	12¼	—	5 5½
June 5	12	—	—
July 7	12	—	—
July 14	12	99° F.	—
July 25	12	99° F.	5 4½
August 9	12¼	99° F.	5 7
August 12	12⅛	98.4° F.	5 6½
August 23	11⅞	98.4° F.	5 8½
October	12	99° F.	5 8



Fig. 1.—E. G., aged 38; showing a goitre of thirty-four years' growth.



Fig. 2.—E. G., aged 38; showing a goitre of thirty-four years' growth.

CASE III.—A girl, aged 18, was born at Pentreuchaf, near Pwllheli. Her uncle and aunt died of consumption. There was no family history of goitre. When the patient came to me she complained of pain in the region of the heart's apex. There was a well-marked systolic murmur in the right supraclavicular region and a well-marked goitre measuring 12½ in. The temperature was 98.8° F., the pulse 120. Thyroid gland, gr. 1½ night and morning, was exhibited, and the following table shows the results.

Date.	Size of Neck.	Temperature.	Pulse.
	Inches.		
July 21	12½	98.8°	120
August 7	12	99.0°	120
September 18	11⅞	98.4°	100

In this case the patient attended at very irregular intervals, and the treatment therefore had not a very fair chance.



Fig. 3.—A. G., aged 20; showing swelling of the face during an acute myxoedematous attack associated with chronic goitre.



Fig. 4.—A. G., aged 20; showing swelling of the face during an acute myxoedematous attack associated with chronic goitre.

CASE IV.—A man, aged 29; was born at Penge. His mother and sisters had had "large necks." His began to enlarge when he was about 24. He had had frequent attacks of tachycardia. When he consulted me he was suffering from tachycardia. The heart was enlarged and irregular in its action. He was treated with digitalis and ammonia and gr. 1½ thyroid extract night and morning. The results were as follows:

Date.	Size of Neck.	Pulse.	
	Inches.		
January 3	16½	Irregular	
January 8	—	Regular	
January 14	16	,,	
January 29	15⅝	,,	
March 11	15¼	,,	112

CASE V.—A girl, aged 20. This case showed several very striking characteristics. The father and one sister died of consumption. The patient sometimes goes to stay in Northamptonshire, where there are some ironstone mines. Her aunt and cousin, who live there, have goitre, and so have several people who live in that part. Another cousin of hers who lives in Leicestershire has goitre.

I was called in to see the patient in March, 1901. She was suffering from bronchitis following influenza and measles. I treated her for the bronchitis and discovered the goitre, but the friends were not willing that I should treat it, and took the patient to a hospital.



Fig. 5.—A. G., aged 20: showing normal condition after the acute myxoedematous attack had subsided. Compare Figs. 3 and 4.



Fig. 6.—A. G., aged 20; showing normal condition after the acute myxoedematous attack had subsided. Compare Figs. 3 and 4.

After the patient had been under the hospital treatment some time, she consulted me again on July 11th, 1901. Her face, lips, and eyelids were enormously swollen. There was no albumen in the urine. The patient was treated with a mixture containing digitalis and nitre. On July 12th the swelling of the face was a little reduced. On July 13th the photographs (Figs. 3 and 4) were taken, and I commenced the exhibition of thyroid extract. On July 15th the swelling had almost subsided, and in a few days I took the second photographs (Figs. 5 and 6), which show the normal condition of the patient. When I discovered the goitre, about April 23rd, the neck measured 14½ in. in circumference. On August 10th, the last day when I measured it, it was 13⅜ in. There were no mental aberrations.

CASE VI.—A married lady, about 30, who was born near Luton. Several of her family had had consumption and one had a large neck. I was called in to see the patient on November 19th. She complained of giddiness and singing in the ears. I diagnosed the case as one of Ménière's disease, and treated it with sodium salicylate and digitalis.

By January 27th the giddiness and ringing in the ears had quite subsided, but the patient complained that her neck had suddenly swollen so

much that she could not get her collars on. On examination, it appeared that there was a large goitre. There was no goitre when I made a general examination of the patient in November.

On January 27th the patient's neck measured 14½ in. in circumference, then 1½ gr. thyroid extract were given night and morning, and by March 6th the neck was reduced to 13⅜ in. in circumference, but the goitre could still be felt under the skin on deglutition. There were no mental aberrations.

On analysis we find:

1. That all the cases except No. I improved markedly under treatment with thyroid extract.
2. That Cases III, V, and VI show a strumous family history.
3. That Cases IV, V, and VI show a family history of goitre.
4. That Cases III and IV show cardiac complications.
5. That Case V is an instance of acute myxoedema, which is, I believe, somewhat rare.
6. Case VI is a case of acute goitre.
7. In none of the cases were there any marked mental symptoms.

THE MORBID ANATOMY OF ERYTHROMELALGIA BASED UPON THE EXAMINATION OF THE AMPUTATED EXTREMITIES OF THREE CASES.*

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[From the Pathological Laboratory, University College, London.]

ERYTHROMELALGIA is the name given by Weir Mitchell[1] to a condition of the extremities in which redness and pain are associated. Sir Thomas Barlow[2] in contrasting the disease with Raynaud's disease, summarizes the differences thus: Dependence produces considerable increase of the dusky red or violaceous tint of the extremity affected; the arteries in this position of the limb may pulsate forcibly; pain is common, sometimes constant, and more especially when the limb is dependent or the parts pressed upon; in wintry weather, or on the application of cold, the conditions are relieved; on the other hand, warmth and summer weather increase the pain: there is no loss of sensation, but there may be increased sensitiveness: the local temperature of the affected parts may be raised or lowered; gangrene does not occur: the affection is asymmetrical; there is a certain amount of swelling, sometimes allowing pitting on pressure, sometimes not; incisions over such swelling, even down to the bone, have proved useless; excessive pain on pressure upon the nerves supplying the parts affected is not found: muscular wasting is found, but explainable by the disuse of the limb, and is not at all as severe as in cases of disease of the peripheral nerves; a reaction of degeneration in the nerves of the affected parts has not been found; the deep reflexes, with few exceptions, are not reduced. The disease may occur alone, or may be associated with other grave disturbances of the central nervous system; for example, hemiplegia, general paralysis, tabes dorsalis, myxoedema, disseminated sclerosis, and chronic myelitis.[3] Cases occur which are somewhat similar to the cases described by Weir Mitchell, but which point to a relationship with such diseases as Raynaud's disease and sclerodermia, and Cassirer[4] in a recent monograph has endeavoured to draw clinical distinctions between these three maladies and the affections intermediate between them.

The three cases examined and reported upon in this communication were typical ones of erythromelalgia. The pain was so severe, and the affected extremity so useless that amputation was performed.

Method of Investigation.—The affected parts after removal were hardened in alcohol (Case I and Case II) or in Müller's fluid (Case III). Sections were made of the soft tissues of each digit, the phalanges being resected from the periosteum; in the case of the foot (Case I) the sections made were representative of the whole length of the digit, including the ends of the toes; in the other two cases a ring of tissue was examined, the length of which, measured along the axis of the digit, was about half an inch. The sections were cut in paraffin for the study of the vessels, and in celloidin for that of the nerves. In order to detect any recent nerve degenerations the nerves were stained by a combination of Busch Benda and van Gieson's methods, and in some cases by Marchi's method. In addition, portions of the larger vessels and nerves of the parts affected were dissected from the adjacent tissues, mounted as above, and cut transversely and longitudinally, and subjected to the same method of staining. The special points investigated have been: (1) Arterial and venous changes; (2) changes in the nerves, especially the finer terminal branches with respect both to a replacement of nerve fibres by fibrous tissue, and also to recent changes degenerative in character. In estimating the possible vascular and nervous changes, constant reference was made to sections prepared from the digits of the foot of patients of a similar age dying from some malady not likely to cause peripheral vascular and nervous disease, for example, death from perforation of a gastric ulcer in a young woman.

* Read before the Pathological Society of London.

CASE I.

A. K., a young woman, aged 24 years, was admitted to University College Hospital under Dr. Charlton Bastian's care; subsequently she was admitted to St. Bartholomew's Hospital at Rochester, and amputation was performed for extreme pain. This patient had suffered from her symptoms for five years. The left foot would become reddish blue, especially when held dependent or when it was kept warm; there was also some puffiness and hyperaesthesia. There were brief periods when the foot in parts became doubtfully slightly anaesthetic, but such anaesthesia was never permanent. There were also nutritional disturbances of the nails and skin; there was no reaction of degeneration. The plantar reflex was absent in this foot, and very feeble in the right foot; the knee-jerks were brisk; there was some tenderness in the calf muscles. When the foot was placed in warm water patches of salmon-red colour appeared in the midst of the general blueness of the extremity.

Morbid Anatomy.

(a) Vessels.—Some thickening in the intima was present in all the digital arteries, and in those of the third toe it was considerable. Irregularly disposed thickening was also present in the internal and external plantar arteries, especially in the latter. The most pronounced changes were met with in the venae comites of these vessels. The lumen of the veins accompanying the external plantar artery was almost quite occluded by clot, and marked canalization was present. The dorsal artery and veins were normal.

(b) Nerves.—In no case of a digital or plantar nerve was any recen degeneration discovered. Abundant nerve fibres were seen in the case of the digital nerves distributed to each toe except in the case of the great and second toe, in which the nerve fibrils were very much scattered instead of being collected into coarse bundles; in no case, however, were bundles of fibrous tissue found containing less than a dozen nerve fibres. The plantar and musculo-cutaneous nerves were quite healthy.

CASE II.[5]

P. N., a pointsman, aged 29 years, was admitted to University College Hospital under Dr. Bradford's care. Ten years previous to the onset of his symptoms he had been struck on the back of the left wrist; an abscess developed and slowly healed. Nothing abnormal was noticed till three years before he came under Dr. Bradford's care. As in Case I, the affected hand became blue and was mottled with salmon-red coloured areas; there was pain, increased by warmth, oedema which pitted, and there were nutritional disorders of the skin and nails; the former was quite glossy, and the latter more opaque than natural and showed transverse ridges. Sensation was perfect in every digit and in all parts of the hand, wrist, and forearm; there was no hyperalgesia; there was no reaction of degeneration.

Morbid Anatomy.

(a) Vessels.—The digital arteries and veins of the thumb alone showed extensive thickening of the intima; the arteries of the index finger showed less but obvious thickening of the intima, whereas in the digital vessels of the rest of the fingers the changes in the intima were very slight. Some intimal thickening was visible in the ulnar artery, the deep palmar arch, and in the comes nervi mediani; in these vessels and in the radial artery, the elastic lamina of Henle was very deficient.

(b) Nerves.—There was no trace of recent degeneration in any of the nerves, digital, radial, median, or ulnar, except in the digital nerves of the index finger, in which some nerves and some nerve-endings in the skin showed staining attributable to the osmic acid. This was probably an artefact and due to the fact that the amputated hand had been hardened in alcohol. There was no fragmentation whatever of the medullary sheaths.

CASE III.

E. B., a young woman aged about 20 years, came under the care of Sir Thomas Barlow. Previous to her admission to University College Hospital, she had had symptoms for eighteen months following a slight injury to the right hand. This injury was immediately succeeded by swelling, inflammation, and aching pain. She was treated at various institutions and in one the affected hand was incised and scraped, but with no benefit. The hand continued to be very painful, occasionally the arm throbbed from the fingers to the elbow; sometimes it felt hot at others it was very cold; passive movement of the hand was possible but painful; there was puffiness of the dorsum of the hand and of the fingers, the nails were ribbed and the skin was thin and somewhat polished; pressure caused pitting of the subcutaneous tissues; there were areas of localized tenderness and blotches of purple coloured skin; there was no anaesthesia; the pain was of a "tingling" character; the nerve trunks were not tender. At the time of the amputation it was thought that some of the vessels (anterior interosseous) bled less than usual.

Morbid Anatomy.

(a) Vessels.—The digital arteries of the fingers showed very slight thickening, those of the thumb showed obvious thickening in the internal coat. The ulnar artery showed some thickening of the internal coat but the radial artery showed much more pronounced changes.

(b) Nerves.—There was no definite sign of recent degeneration in any of the nerves, nor was there an apparent deficiency of nerve fibres or increase of fibrous tissue in the larger nerve trunks or in the digital nerves.

No syphilitic history could be obtained in any of the above cases, nor were there any symptoms or signs of central nervous disease.

I should like to include in this analysis the report of a case by Dr. F. Parkes Weber[12] which he has called an "anomalous and asymmetrical case of sclerodactylia with Raynaud's phenomena." Dr. Parkes Weber is not inclined to consider the case one of erythromelalgia and therefore I do not include it in the analysis. However, it has so much in common with several of these nine cases and I am the more wishful to call attention to the case as the morbid anatomy of the vessels and nerves has been investigated.

A patient, A. B., aged 25, a waiter, had considerably wasting and contraction of the muscles of the left leg; the skin of the left foot was tense, shiny, and livid and decidedly cold to the touch; the colour sometimes was dark purple, almost black. When the foot was made warm he suffered from pain in the foot; there was pain also when the foot was cold; dependency did not produce pain. There was an ulcer of the great toe, the fourth and fifth toes were wanting; the nail on the great toe was absent and those of the two remaining toes were quite horny; there was a scar on the heel; the right foot (except for some scars, purpuric spots, and some pigmentation,) was healthy. Both knee-jerks were present; there was no reaction of degeneration and the anterior and post tibial arteries pulsated in both limbs. There were no abnormalities of sensation.

Amputation was subsequently performed. Examination of the internal plantar and dorsal arteries showed decided thickening of the middle coat but no endarteritis obliterans or thrombosis; also some thickening of the intramuscular arterioles was noticed. Dr. F. E. Batten examined the nerves and found they were quite normal. Dr. Parkes Weber looked upon the case as one of "idiopathic obliterative arteritis." There were, however, so many symptoms common to this case and those reported in this communication that it is possible to group them together, more particularly as the microscopic evidence in all cases points to vascular change.

Of the 9 cases of erythromelalgia which have been subjected to examination, 1 case (Weir Mitchell and Spiller)[1] showed what appeared to be a reduction of the number of nerve fibres in a portion of nerve excised with an increase of fibrous tissue; there was, however, no anaesthesia in those parts to which the nerve was distributed; there were changes in the arteries. In another case (Auerbach)[10] there was degeneration of certain posterior nerve roots, but the peripheral nerves were quite healthy. (No mention is made of the morbid anatomy of the vessels in this case.) In Weir Mitchell's first case[6] the nerves showed no change, but changes were present in the arteries; in his second case[7] the nerves removed were quite healthy. Dehio's case[9] showed narrowing of the lumen of the artery, with thickening of the intima, and no changes were found in the ulnar nerve. In Sach's and Wiener's case the vascular changes were probably primary, and the increase of fibrous tissue in the nerve trunks was probably secondary.

In the cases reported in this communication vascular change was present in all (least in Case III). Such change was mostly an increase in the intima of the arteries, and occasionally thrombosis and changes in the inner coat of the veins. The nerves were investigated even to their terminations, and no degeneration was found, nor was there any suggestion of increase of fibrous tissue in the trunk of the nerves.

Dr. Parkes Weber's case, even though it is not called erythromelalgia, at any rate affords proof that many of the leading symptoms, so like those of erythromelalgia, are associated with vascular changes, the nerves being quite normal.

In no case has recent degeneration of nerve fibres been demonstrated, and in not one of the nine cases analysed was anaesthesia ever present. As a result of a consideration of these reported cases, it would appear that erythromelalgia when occurring independently of central nervous change, is associated with but one morbid picture, that of local vascular change.

I desire to express my gratitude to my colleagues for permission to make use of the clinical reports and the material of their cases, and to Mr. Sherstone Baker for sending for examination the foot amputated in Case I.

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PREVACCINATED SMALL-POX.

By J. DUNCAN HOWE, M.R.C.S., L.S.A.,
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THE article in the BRITISH MEDICAL JOURNAL for January 17th, 1903, is very interesting. When it appeared I was about to send my notes on the following cases, believing them to be unique.

The source of infection was the father of the family, who consulted me on December 15th, 1902. He had sickened the day previously (December 14th) immediately after dinner, with vomiting, shivering, and epigastric pain. The pain became general all over the body, particularly in the lumbar region. He now looked very ill; the tongue was furred, and the temperature 101.6°. He was sent home to go to bed, and was given a diaphoretic mixture to be taken every two hours. On December 16th the temperature was 100°; he was perspiring profusely, and felt much better.

On December 18th the patient, whom I had not visited on the previous day, walked into my surgery at 9.30 a.m. Fortunately there was no one else there at the time, and I saw him at once. He expressed himself as feeling quite well, and intended going to work as an extra help at the post office, but thought he had better call in and tell me. As it was rather dark I did not notice his face, but on taking his pulse I immediately saw the rash on his wrist, and then on looking elsewhere found it well marked on his face, head, body, and limbs, including the soles of the feet and the palms of the hands.

He was removed to hospital early the same day. The rash had evidently appeared late on December 16th or early on the 17th, because on the 18th it was observed that it was taking a rapid course. He had been vaccinated once in infancy. I could not trace how he became infected, but there were several cases from other parts of the town in hospital.

On December 20th the wife and three children were vaccinated by me, the two youngest being primary. Four insertions were made in all of them, and all were successful except in the eldest child and the mother, in whom three out of four took. The ages of the children are 7, 9, and 11 years respectively. It will be noticed that the vaccinations were not performed until two days after their father had been removed to hospital, or five days after the appearance of the rash. The mother would not give her consent before because her husband was known to be averse to it. My next visit to the house was on December 25th, and there was nothing unusual to note.

On December 28th, the ninth day of vaccination, and the twelfth or thirteenth day of "contact," one of the primarily vaccinated cases was very ill. It was considered to be due to the constitutional disturbances of vaccinia. A diaphoretic mixture was given, and some simple local treatment. On December 30th, on inquiry at the house, it was found that the patient was "all right." I did not go in and see the case.

On January 6th, 1903—the eighteenth day of vaccination and twenty-first of "contact"—the rash was first seen by me. The temperature was subnormal and the patient apparently quite well. The rash consisted of vesicles on the flexor surfaces of the upper limbs and fronts of the thighs. The other parts of the body showed small scabs. The other primarily vaccinated child was shown to me on January 2nd. I then saw two vesicles in the right popliteal space. There were doubtful abortive spots on the face and body. I gave it as my opinion—scabies having been precluded—that the rash was of a very doubtful nature, but might be a general vaccination rash—that is, cow-pox. I was called in on January 6th to see the eldest girl, and I then formed the opinion that all three had modified small-pox, and reported them accordingly.

The last of the children sickened on January 4th, with vomiting, headache, and pains in the lumbar region. On January 6th, at 11 30 a.m., the symptoms were the same, but there was no vomiting. The temperature was 100.4°, and at 8 30 p.m. 102 2°.

When I visited early in the day the mother was as well as usual. At 8.30 p.m. she was lying down on the sofa with shivering, headache, and general pains. Her temperature

was 99.2°. At 10 p.m. she was much worse, with a dull, heavy appearance and pains all over the body, but most marked in the lumbar region. Temperature 102.2°

On January 7th the evening temperature was 99°. On January 8th the evening temperature was 98.4°, and the patient felt quite well. One spot on the left malar bone, one on the right eyebrow, and a symmetrical grouping of about twenty vesicles, surrounded by a red areola in the lumbar region and upper part of buttocks, were present. This case was also reported. None of the patients presented supernumerary vesicles on the vaccinated arms.

I vaccinated one of my own children, also my wife and a patient's baby with calf lymph from the same source. All were successful and without any secondary rash appearing.

The points of interest are that the two primarily vaccinated cases were the first to become infected, and of these the younger one by preference. That although not fully protected, which may be accounted for by the lateness of the operation, still the beneficial effects of vaccination were borne out by the attacks being very modified in type; and, lastly, the saving of the lives of the two younger children. No traces, moreover, remain to show they have had small-pox.

My cases seem to bear out Dr. Hale's conclusions that vaccinia and variola were both running their clinical course together; also the efficacy of vaccinating previously unvaccinated individuals who have already been infected or brought into contact with variola is established.

NOTE ON THE DETECTION OF RAW MILK AND FORMALDEHYDE.

By J. E. SAUL, Ph.C., F.I.C.,
London.

During some recent investigations I have observed a very striking reaction of raw milk which may prove useful in the examination of sterilized or scalded milk. On treating milk with a solution of orthomethylaminophenol sulphate [(O H). $C_6 H_4$. N H Me]$_2$, $H_2 S O_4$, and then adding hydrogen peroxide solution, a very vivid deep red colour is produced. Milk that has been previously boiled and cooled remains uncoloured, a faint pink only developing on standing. The red colour is so strong and pronounced that so little as 1 per cent. of raw milk, if added to heated milk, may be detected with ease. A convenient way to apply the test is as follows: To 9 or 10 c.cm. of the milk add 1 c. cm. of a recently prepared 1 per cent. aqueous solution of orthomethylaminophenol sulphate and then one drop of commercial hydrogen peroxide solution (*circa* 3 per cent.). The red colour develops within 30 seconds if there is any raw milk present in the sample. Any slight tint which may subsequently appear should be disregarded. It is important to obtain the best results that excess of hydrogen peroxide should not be added, as it tends to weaken and bleach the colour. Dilute acids do not affect, caustic alkali destroys, the colour. The presence in the milk of boric acid, borax, formaldehyde, or sodium carbonate or bicarbonate does not interfere with the reaction. If the milk has become sour, the acid should previously be neutralized.

It seemed interesting to note the temperature at which the active agent in the reaction was destroyed. Milk maintained at 70° C. for one hour still reacted readily; if kept at 75° C. for half an hour it failed to give the colour. It would appear that the milk loses its power to react at about the temperature at which enzymes are destroyed. It will be seen, therefore, that although the test will not prove that a milk has been properly sterilized by heat, yet any sample giving the reaction cannot have been heated sufficiently, or must after sterilization have been mixed with raw milk. The reaction did not appear to be due to the casein. Milk from which all the fat and proteids separable by saturation with magnesium sulphate had been removed still gave the colour. The probability is that it is caused by the presence in milk of an oxidizing enzyme destructible by heat. This test is not open to the objections which have been urged against the potassium iodide[1] and guaiacum[2] tests, and it is equal in delicacy to the paraphenylenediamine[3] reaction.

As difficulty may be experienced in obtaining the aminophenol derivative I have mentioned, it may be found convenient to use the photographic developing agent sold under the name of "ortol." This substance appears to be a mixture of orthomethylaminophenol sulphate with quinol. The latter body may be removed from it by extraction with ether. In practice, however, the presence of a small quantity of quinol may be ignored, as it does not interfere with the reaction—indeed, it may slightly assist it.[4]

The reaction will serve as one method of distinguishing orthomethylaminophenol from its isomer paramethylaminophenol. The latter body gives a pale *café au lait* tint to the milk. Its sulphate is well known to photographers under the commercial name of "metol."[5]

It may be worth while recording the result of some experiments with orthomethylaminophenol sulphate as a test for the presence of formaldehyde in milk. I noticed that on adding nine or ten volumes of milk to a 1 per cent. solution of the salt, and allowing the mixture to stand, a pink colour is gradually produced in the presence of formaldehyde. The reaction is quite distinct where the milk contains 1 part in 100,000 of formaldehyde, or more. The length of time necessary for the tint to develop varies considerably with the temperature. On further investigation it appeared that the reaction is really an acceleration of the development of a colour which ultimately is produced in milk free from formaldehyde. This, and the fact that formaldehyde shares the property with other aldehydes and ketones, seriously diminishes its value as a test. It will not, therefore, compare with the modified sulphuric acid reaction of Hehner[6] or the recent "amidol" (1 : 2 : 4 — diaminophenol hydrochloride) test of Manget and Marion.[7]

References.

[1] *Milch. Zeit.*, 1902, 31, 17-8, 81-2, 113, 145-6. [2] *Journ. Pharm.* (vi), 7, 569 also abstr. *Chem. Centr.*, 1901, ii, 799, 800, 861. [3] Storch, *Bied. Centr.*, 1898 27, 711-4; abstr. *Journ. Chem. Soc.*, lxxvi, ii, 75. [4] *Cf.* Dupouy, abst. *Analyst* 1897, 211. [5] *Zeit. angw. Chem.*, 1897, 171-4. [6] *Analyst*, xxi, 94. [7] *Comptes Rend.*, 135, 584.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

PRIMARY ABDOMINAL PREGNANCY.

In the leading article of the British Medical Journal for March 7th on Witthauer's case of primary abdominal pregnancy, it is stated that such a condition as a fertilized ovum developing in the abdominal cavity between the ovary and the tube has not been demonstrated until the publication of Witthauer's case.

I believe that a specimen shown by me at the Obstetrical Society of London in February, 1896,[1] affords at least as strong evidence in favour of primary abdominal pregnancy as Witthauer's case. As the patient unfortunately died from haemorrhage, a complete examination of all the pelvic viscera was made. The gestation sac was placed between the uterus and the rectum, occupying the whole of the pouch of Douglas, and there was a fetus, 2¼ in. in length after immersion in spirit, its development corresponding to that of the tenth week of normal intrauterine gestation. Both tubes and ovaries, with each mesosalpinx, were normal, with the exception that the right ovary contained two small cysts, and the tubes showed no signs of recent dilatation.

The specimen was examined by a Committee of the Obstetrical Society, which reported that, in its opinion, the specimen was probably an example of primary abdominal gestation. The word "probably" was introduced by the Committee because it was held to be possible that a tubal abortion had occurred at a very early stage of gestation, and that the ovum had been completely transplanted to the bottom of the pouch of Douglas, and continued its development in that situation. Obviously such a possibility cannot be excluded in any apparent case of primary abdominal fetation. It is agreed that after a tubal abortion the tube may very rapidly recover its normal appearance. No primary abdominal pregnancy could therefore be discovered so early that it might not be alleged that the ovum might have been first attached in the tube, and afterwards completely transplanted to its new situation. But it can scarcely be argued that, if an ovum whose villi have been damaged by separation from the tube can establish an entirely new attachment to peritoneum and develop there, it is not possible, and indeed much more likely, that a fresh and undamaged ovum can attach itself, in some conditions, to peritoneum. Such cases therefore as mine and Witthauer's, if they do not afford absolute proof that the individual instance was one of primary abdominal fetation, are very strong evidence that such a condition is possible.

[1] *Obstet. Trans.*, vol. xxxviii.

But another condition was present in my specimen which I believe to afford still stronger evidence in favour of primary abdominal fetation. The fetal sac consisted externally, outside the chorion, of a membrane whose outer surface was smooth and somewhat polished, resembling peritoneum; its inner surface was rough from adherent blood clot. Microscopical examination of the sac revealed interlacing bundles of spindle-celled tissue, having many of the characters of unstriped muscle fibres; the spindle-celled tissue was covered with loose cellular tissue, and a uniform membrane-like peritoneum. The gestation sac thus appeared, at first sight, to be subperitoneal, and it was at first thought possible that the sac of a primary ovarian pregnancy had burrowed between the layers of the broad ligament. There was no part of such sac, however, in the ovary, and a space of fully three-quarters of an inch of normal broad ligament intervened between the ovary and the nearest part of the placental site. The sac wall was adherent to the back and front of the retro-uterine fossa of peritoneum up to within an inch of the fundus uteri, but at the top it was free, and not adherent to intestine. It could not, therefore, even apart from its microscopic structure, be an adventitious sac formed by lymph. I regarded it as being a decidua reflexa formed from the peritoneal surface of the pouch of Douglas. If this interpretation be accepted, it is clear that, since it is known that the decidua reflexa covers in the ovum almost immediately, while it is very minute, and has never been discovered in an incomplete state, the primary attachment of the ovum must have been abdominal, and not tubal.

If primary abdominal pregnancy is possible, it may not be quite so extremely rare as it has hitherto been supposed to be even by those who believe in its possibility. If a decidua reflexa is formed, the tendency to rupture or bleeding would probably be less than in tubal pregnancy. If the pregnancy went on to the later months, the sac wall would become adherent to and blended with the broad ligaments; the sac would appear to be subperitoneal, and the pregnancy would probably be regarded as intraligamentous.

Wimpole Street, W. ALFRED L. GALABIN, M.D.

AFTER-HISTORY OF AN INFANT WEIGHING TWO POUNDS FIVE OUNCES AT BIRTH.

IN the BRITISH MEDICAL JOURNAL of May 17th, 1902, p. 1208, I reported the birth of a female infant at 6½ months weighing 2 lb. 5 oz. I now write to report the progress of the case.

The following is a list of weights at various ages:

	lb.	oz.
January 20th, 1902	2	5
March 20th ,, ...	3	5
July 20th ,, ...	5	10
October 20th ,, ...	8	14
December 20th ,, ...	11	2

The child now (January 20th, 1903) weighs 12 lb. 4 oz. It is a healthy, lively, intelligent child, but somewhat anaemic, toothless, and with the anterior fontanelle still open and as large as a florin. It was ruptured on the left side, and has worn a truss from the first, but the hernia has not come down for the last five or six months. It was fed on the Walker-Gordon modified milk for the first half year, and its digestion gave very little trouble. In June it was taken into the country and the milk was sent down daily until July, when it had a severe attack of indigestion, and the nurse changed the diet to ordinary cow's milk, boiled, with two-thirds water, and a teaspoonful of milk sugar in each bottle, and it remained on this diet gradually strengthened till Christmas. I had urged the child's nurse to give it cream, raw meat juice, and glycerophosphate of lime, but she was a self-opinionated woman and declared they upset the child's digestion, although when a change of nurses was made at Christmas these articles were added to the diet with excellent results. I attribute the present symptoms of rickets to this omission and regard it as an instructive indication of the proper method of feeding these small infants.

For the first month or so the incubator was kept in a corner of the room to avoid strong light, and the temperature was gradually lowered from 90° to 70° F. It was then moved more into the light, and about the third month (Easter) the infant was taken out during warm days and replaced at night. She was taken out of doors for the first time on May 14th, and I enjoined upon the nurse the importance of keeping her in the fresh air and sunshine as much as possible. She has had no medicine of any kind except very occasionally a grain of hyd. c. creta, and no farinaceous foods until last week, when she was given Savory and Moore's food as a preliminary to rusks. Her diet now consists of 3½ oz. of unsterilized milk (Walker-Gordon) and 1 oz. of barley water, with a teaspoonful of cream and milk sugar every two and a-half hours, two tablespoonfuls of raw meat juice, two teaspoonfuls of Savory and Moore's food, and three small doses of glycerophosphate of lime during the day.

London, W. M. PRICKETT, M.D.

PERFORATING BULLET WOUND OF ULNA.

A MAN about 35 years of age, who belonged to one of the irregular corps during the late war, was struggling and fighting with a Boer in hand-to-hand contest, when another Boer came up and shot him with a Mauser rifle, at five yards range, through the left forearm. The accompanying radiograph, taken by Mr. H. W. Macpherson, of Johannesburg, is, I consider, of great interest, because it shows the following facts:

1. The fracture, if any, was only partial, and very little deformity remains.
2. Fragments of the nickel casing of the bullet remain behind and have been causing considerable pain and trouble; these are easily seen in the radiograph.
3. Longitudinal fracture appears absent.



The radiograph also indicates that the pain and weakness of the arm are probably due to the irritating effects of the jagged pieces of nickel, which could be removed by operation.

Johannesburg. J. WARD SUMMERHAYES, M.D.Durh., M.R.C.S., L.R.C.P.,

AN ATYPICAL CASE OF SMALL-POX.

THE following case of small-pox appears worthy of record as so many of the important clinical symptoms were absent.

S. W., aged 59, was admitted an inmate of the workhouse on December 27th, 1902. On January 6th, 1903, feeling somewhat constipated, he took a quantity of common salt, but as this had not the desired effect he next day applied to the nurse in charge of the hospital for an aperient; she gave him a dose of Epsom salts. Purgation followed, and a slight papular rash appeared on his forehead, neck, back of hands, and a few scattered spots on the chest, back, and abdomen, but none on the mucous membrane of the gums, mouth, or throat. No complaint was made of vomiting, headache, rise of temperature, pain in the back, or *malaise*.

On January 10th, 1903, these papules, which were somewhat shotty to the touch, became vesicular, some umbilicated, and on puncturing they were found to be loculated. The temperature was 98° F. Faint scars of vaccination when an infant were visible. The patient was in apparently good health, and taking his food well.

A diagnosis of modified small-pox was made, and his removal to the isolation (small-pox) hospital ordered.

The source of infection was traced to a common lodging-house in a neighbouring town, where the patient had stayed the night of December 26th, 1902, and had been in contact with a person who subsequently developed small-pox in another district early in January, 1903.

Frodsham. THOS. J. SELBY, M.B.

INTESTINAL SAND.

ON reading the interesting explanation of the origin of intestinal sand published in the BRITISH MEDICAL JOURNAL of February 7th, p. 311, it seems hardly necessary to go as far back as the birds, or rather the common ancestors of birds and mammals, for corroboration of the theory which is brought forward. At the present day there exist certain creatures—such as the duckbill and the echidna or porcupine anteater—which, though undoubted mammals, habitually lay eggs. These animals are highly-specialized forms, but nevertheless their organization retains many primitive traits, for not only is the cochlea straight and the sclerotic partly cartilaginous, but, as in birds and reptiles, the body has but one excretory aperture or cloaca. An egg of the common echidna which I examined at Amsterdam last year was about the size of that of a sparrow, and rounded at both ends: when broken into, these curious eggs are seen to resemble those of birds in the relatively small size of the embryo as compared with that of the yolk sac. We thus see that the mammalian genital apparatus still retains the power of producing true eggs enclosed in a definite shell, and that one need not go outside the class to which man himself belongs to find an explanation of the origin of intestinal sand.

Sale, Manchester. GRAHAM RENSHAW, M.B.

A CASE OF RHEUMATOID ARTHRITIS, WITH RAYNAUD'S AND GRAVES'S SYMPTOMS.

THE following case of rheumatoid arthritis is interesting as throwing light on the toxaemic origin of the disease. Dr. Carter has kindly given me permission to publish it.

E. P., aged 52, married thirty-four years, gave the following history: Several uncles and her father died of phthisis. Her mother suffered from asthma and was an epileptic. One of her sons had erythema nodosum when 20, and whilst in hospital here she heard that one of her grandchildren had rheumatic fever. There was no ancestral history of gout or rheumatism.

The patient was always healthy until a year ago, when one morning her left hand felt numb. This was followed by sharp pain in the part. The fingers were noticeably white and "dead" at the time, but the condition only lasted half an hour or so, whilst the pain persisted much longer. Apparently the right hand was not affected until a week later, when it suffered in the same way. Since that time her finger joints have been swollen, but I could not make out how closely the joint condition followed on these symptoms of Raynaud's disease. Whenever the patient is cold now her hands suffer in this way (she was vague about her feet and ears). At the time I took these notes her hands were typically crippled. There was wasting of the small muscles, and her fingers were tremulous and blue at the tips, both states common in rheumatoid arthritis. In addition her eyes showed well-marked irregularly intermittent retraction of the upper lids, and von Graefe's symptom; no proptosis, but slight horizontal static nystagmus. Her visual fields, taken at the Eye Hospital, were slightly contracted.

There was a history of a painless swelling of the lower part of the neck so that her collar could not be buttoned, but this was said to be inconstant and had no true relation to the finger attacks. I noted nothing but slight thyroid fullness. There was no evidence of phthisis. Her heart was sound, the pulse being regular and 80 to the minute.

She had borne fourteen children, and the trouble came on as menstruation was ceasing.

J. W. MALIM, B.A., M.B., B.C.Camb.,
Resident Medical Officer.

Royal Mineral Water Hospital, Bath.

A SIMPLE CAUSE OF PAROXYSMAL SNEEZING.

J. M., aged 30, came to me complaining of irritation just within the nose on the left side, accompanied by paroxysms of sneezing; he had had a coryza recently, and attributed his condition to the after-effects. On examination I found the left nasal orifice narrowed by a deviated septum, and the mucous membrane covering the most prominent part of the septum slightly hyperaemic. I noticed that one or two long hairs, growing from the external wall just within the nasal aperture, stretched across the passage and appeared to touch the mucous membrane of the septum; I removed these with scissors, with the result that all symptoms have ceased.

It seems to me possible that some cases of paroxysmal sneezing, usually ascribed to hay fever, may be due to this simple cause.

London, W. A. SHAW MELLOR, M.A., M.B.Cantab.

A CASE OF SPONTANEOUS CURE OF RECTAL ADENOMA.

INSTANCES of spontaneous cure in cases of so-called polypi of the rectum are so comparatively rare that the following notes of a case recently under my observation may be of interest.

A. W., a child aged 4½ years, was brought to me by her mother, who reported that the patient while straining during defaecation had passed "something like a lump of flesh," followed by some rather extensive haemorrhage. She had brought the "lump" with her for my inspection. It proved to be an adenoma, the size of a large filbert nut, with a long, rounded, and thin pedicle, which, from straining, had become separated from its attachment to the rectal mucous membrane.

Examination of the rectum disclosed a very small raw surface on the mucous membrane about 2 in. from the anus. The child was suffering from threadworms; she was also constipated. This had probably caused the extra straining effort which effected the cure of her condition of adenoma.

Like most of these cases the growth was single. There was no history of symptoms due to the "polypus" obtainable, such as mucous discharge, desire to evacuate, haemorrhage, etc., whatever slight discomfort there had been was credited to the threadworms.

Wimbledon, S.W. PERCY B. SPURGIN, M.R.C.S., L.R.C.P.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

LEICESTER INFIRMARY.

THREE CASES OF PULMONARY EMBOLISM.

(Reported by F. BOLTON CARTER, M.S., F.R.C.S., House-Surgeon to the Infirmary.)

CASE I.—T. A., male, aged 42, was admitted on August 2nd, 1902, with a simple fracture of both bones of the right leg. This was treated with back and side splints. On September 4th the leg was put up in a Croft plaster casing and cut down the middle. On the night of September 5th the leg was examined; no swelling was observed, and the patient was discharged for the next day. On getting up at 6 a.m. on September 6th he suddenly became faint, was helped back to bed, rapidly became cyanosed, and died at 7.15 a.m. At the necropsy it was found that a clot extended from the deep veins at the seat of fracture up into the right external iliac vein. There were clots of blood in both branches of the pulmonary artery and several recent infarcts of the lungs, which were very congested and oedematous. The other organs of the body appeared healthy.

CASE II.—A. B., female, aged 19, was admitted on September 8th, 1902, with a history of seven days' pain in the right iliac fossa vomiting and constipation. An indefinite mass was felt in that region. On September 11th the peritoneal cavity was opened in the iliac region and an intra-peritoneal abscess opened, the general cavity being rapidly shut off with gauze. The abscess cavity was irrigated and drained. The patient made satisfactory progress till 11 p.m. on September 17th, when she was seized with slight pain in the left leg and shortly afterwards suddenly became faint and died in five minutes extremely cyanosed. At the necropsy the appendix was found to be normal; the caecum contained a small ulcer which had caused an inflammation of the serous covering. The inferior vena cava contained a clot 6 in. long extending from the bifurcation below, upwards. In the pulmonary artery was a firm clot extending into both primary branches. There was a very recent infarct in the lower lobe of the left lung. Both lungs were much engorged, as was also the spleen, which weighed 12 oz.

CASE III.—E. C., aged 49, a female, was admitted on

September 5th, 1901, with a large sarcoma of the left clavicle. On September 12th the clavicle was excised, being divided in the centre and each half being then disarticulated. The left innominate vein was pricked, but the aperture was at once picked up, and ligatured. The patient recovered well from the operation, but on September 19th she sat up in bed when she rapidly became cyanosed and died almost immediately. No necropsy could be obtained in this case.

REPORTS OF SOCIETIES.

CHELSEA CLINICAL SOCIETY.

Annual Clinical Debate.

C. C. Gibbes, M.D., M.R.C.P., President, in the Chair.

Tuesday, March 10th, 1903.

Diabetic and Non-diabetic Glycosuria.

Dr. Hale White, in opening a discussion on this subject, said the first thing that naturally attracted attention was the recognition of dextrose in the urine. The universally employed copper reduction test was unsatisfactory. They all knew the difficulty in life insurance work of a dirty greenish-brown precipitate given by boiling urine with a copper solution and an alkali. They had probably all come across people condemned as diabetic who were not and the mistake had arisen either from the use of a stale copper solution or because of an abundance of reducing bodies in the urine which were not sugar. They wanted some one to find a test by which small quantities of dextrose could be detected in the urine as easily as small amounts of albumin. They also wanted to know more about glycuronic acid in the urine. Did some people pass it who later on became glycosuric? Some sufferers from diabetes passed a little glycuronic acid, and it had been stated that minute amounts of this acid might be found in healthy urine. There was every reason to believe that its appearance depended upon its being provided with something with which to combine rather than on any disturbance of carbohydrate metabolism. Allied to this was another subject upon which further information was wanted. They occasionally saw patients suffering from exophthalmic goitre who for a long while passed an abundance of sugar in the urine. Some authors have maintained that glycosuria was particularly easily introduced in patients with exophthalmic goitre but von Schroetter gave such a patient grape sugar in doses of 200 grams without any appearing in the urine. They wanted information about the occurrence of other sugars than dextrose in the urine. Clinically three appeared important—levulose, lactose, and pentose. They wanted definite information about the after-history of women who during suckling passed lactose in their urine. It was stated that of those who developed glycosuria during pregnancy recovery took place in three-quarters with a tendency for the glycosuria to recur in other pregnancies. They wanted to know about the one-quarter who did not recover. Did they become genuine diabetics or continue to pass lactose? Very few, if any, observations had been made in England on pentosuria. He considered that as accuracy of language led to accuracy of thought they should, when they knew the sugar in the urine to be dextrose, speak of dextrosuria, thus harmonizing with levulosuria, pentosuria, and lactosuria. He asked for the more accurate use of the word "diabetes." Even the use of the additional word "mellitus" did not help, for many spoke of alimentary glycosuria as diabetes mellitus. When he now heard of a patient with diabetes he did not know whether he had the comparatively harmless alimentary glycosuria or the dangerous disease diabetes in which he was liable to coma and passed oxybutyric acids and its derivatives in the urine. Dr. Pavy had made an excellent suggestion that they should speak of "alimentary diabetes" and use the phrase "composite diabetes" to indicate the cases which passed sugar and oxybutyric acid and its derivatives. They badly needed to have recorded a series of cases with a view to find out what proportion of these alimentary cases become composite cases. Some would certainly appear to do so, for many an apparent alimentary case was really the early stage of a composite case. To be strictly accurate, they ought to speak of alimentary dextrosuria and alimentary levulosuria. Composite diabetes might be defined as a disease with dextrose present in the blood and urine, in which if the disease was untreated, levo-rotatory β-hydroxy-butyric acid appeared in the blood and urine, and the output of carbohydrates in the urine was greater than could be accounted for by those in the food. It was not sufficiently understood that many diabetics could utilize levulose much better than dextrose. That ability to utilize levulose suggested that experiments might be made to see if diabetics could utilize other sugars—that is, pentose. He had read many articles on diabetes which contained no reference to the extraordinary fact pointed out by Dr. Pavy many years ago, and which he himself had often observed, that a diabetic patient who was on strict carbohydrate-free diet might, if a little carbodydrate was given, excrete far more sugar than that ingested. The administration of sugar, therefore, might act as a direct excitant of sugar formation in the body, and they had no means of knowing whether or not some of that in the urine was not derived from the tissues which had been excited to form sugar by the ingestion of carbohydrates. They also wanted an explanation of the strange disappearance of sugar when coma came on. Dr. Hale White then referred to the researches of Dr. Spriggs, Dr. Beddard, and Dr. Pembrey in the physiological laboratory at Guy's on the subject of coma. It appeared that in diabetes there was a poison which had two effects—namely, the production of coma and the lessening of carbon dioxide in the tissues. It was doubtful if this poison acted merely as an acid, but it appeared to be closely associated in some way with oxybutyric acid. This was supported by the fact that sometimes coma was benefited by the administration of alkalies. In regard to the morbid anatomy, an examination of all the fatal cases of diabetes at Guy's Hospital during fourteen years showed that in a quarter naked-eye disease of the pancreas was present. Passing to the subject of treatment Dr. Hale White urged the advantages of withholding carbohydrates from the food, for by this means the patient gained strength and weight, and the excretion of sugar and oxybutyric acid was diminished. In many cases the dieting was too strict, and often there was no harm in milk. He suggested that when diet did not completely control the glycosuria the patient should be allowed just so much carbohydrate as would not increase the sugar in the urine. When diet would control it the patient should be allowed carbohydrate food up to just below the point at which it led to glycosuria. Levulose was certainly the best for the purpose. It might be given up to any quantity so long as it did not cause or increase the glycosuria. Inulin, the starch corresponding to levulose, might also be given; it occurred in dahlia tubers, that could be cooked and eaten like potatoes. There was a pernicious belief that toast might be taken instead of bread, which practice he condemned. The injection of normal saline solution would sometimes bring a patient out of coma. It was better to give large quantities of alkali, and he recommended 100 gr. of bicarbonate of soda dissolved in one pint of milk, the patient to drink three or four such pints in the twenty-four hours. In conclusion, Dr. Hale White discussed the question whether under the word "diabetes" they were not really describing more than one disease, and he asked were those cases that had so-called fatty blood different from those that had not, and were those in which glycogen was present in the liver different from those in which it was absent.

Dr. F. W. Pavy said the healthy man took carbohydrate food, and all he knew after taking it was the benefit which he had derived from it: the food did not show itself as sugar in the urine nor did it increase the amount of sugar in the blood. There was a certain amount of sugar in the blood and in the urine. Every one was glycosuric but only to quite a small extent, for there was no doubt about the presence of sugar in normal urine. In the case of an ordinary diabetic patient the sugar present in the urine was in proportion to the amount of carbohydrate ingested. In the diabetic carbohydrate food reached the blood as sugar and was excreted in the urine, because there was a want of assimilative power over carbohydrate matter. This defect was seen in the alimentary form of diabetes. Sugar in the diabetic might come from two sources, from the non-assimilation of carbohydrate food and from the breaking down of proteid tissue. Dr. Pavy defined diabetes as "a more or less persistent defective assimilative power over the carbohydrates of food resulting in glycosuria." He particularly emphasized the fact that the assimilative power varied greatly in different cases. To decide whether any given case was one of diabetic or non-diabetic glycosuria he recommended a test meal consisting of bread and butter and marmalade. In the cases in which there was weakness of assimilative power the evidence of that weakness would be brought out on testing the urine. They had also to consider the condition of the patient, which varied from time to time; they must avoid thinking of the patient as if he lived in a

stereotyped condition. Non-diabetic glycosuria was seen in cases where there was obstruction of the breathing. In whooping-cough there might be sugar in the urine after violent convulsions, and so also in cases of coma and under certain other circumstances.

Professor SAUNDBY (Birmingham) said that he particularly wanted to impress upon the meeting that there were a great many cases of glycosuria which were not properly diabetic in which a cause could be found and one of the commonest examples of this was alcohol. Glycosuria might be met with transitorily after the immoderate use of alcohol although in some alcoholics it was persistent. Alcohol, unfortunately, was present so much more often than might be at first supposed that it ought always to be borne in mind. He also drew attention to the fact that people varied very much in capacity to assimilate carbohydrates. To treat a case properly the total amount of sugar passed in the twenty-four hours must be calculated and the total amount of carbohydrate given must be calculated and its elimination must be investigated. At the present time an attempt was made to determine the extent to which each patient might be permitted to take carbohydrate food and great individual differences were found not only in the quantity each could assimilate but in their reaction to particular forms of carbohydrate. Some patients tolerated milk and some took potatoes very well. In regard to potatoes in the treatment of diabetes Dr. Saundby said that he generally allowed about 6 oz. of old potatoes or half a pound of new ones in suitable cases.

Dr. J. R. BRADFORD said that the relation of glycosuria to diabetes had always been a point of considerable interest, and a debate on diabetic and non-diabetic glycosuria suggested that it was now recognized that sugar might not only be present in small quantities in health, but that it might exist in the urine as a result of other morbid processes than those described as diabetic. He thought non-diabetic glycosuria might be correlated with injuries and perhaps functional disturbance of the central nervous system, with the excessive ingestion of carbohydrates in certain persons, and probably also as a result of certain toxic substances; it might perhaps be occasionally associated with the results of muscular fatigue. From a consideration of diabetes itself, and especially from the results of physiological inquiry, some five varieties of diabetic glycosuria might be described, although in the present state of knowledge it was not possible to separate all of these clinically. There was evidence in favour of the existence of glycosuria as a result of disturbed function of the absorptive and other mechanisms of the alimentary canal. Secondly, most authorities would admit that glycosuria might have a hepatic origin dependent perhaps on the liver not arresting the glycogen brought to it, possibly in other instances dependent on the liver forming too much sugar. Thirdly, a pancreatic diabetes might be admitted to exist both from the experimental standpoint and from that of human morbid anatomy. Fourthly, it was probable that a renal glycosuria existed, especially in the light of experimental results obtained with phloridzin. Fifthly, it had been suggested, and should at any rate be theoretically admitted as possible, that a diabetic glycosuria might arise as a result of a primary disintegration of the tissues. In this enumeration of the possible varieties of diabetes he had omitted the nervous system, because although the fact that the nervous system played a part in the production of the disease must be admitted on clinical grounds, there was only evidence from the experimental standpoint that lesions of the nervous system produced glycosuria rather than diabetes.

The debate was adjourned to March 17th.

CLINICAL SOCIETY OF LONDON.

HOWARD MARSH, F.R.C.S., President, in the Chair.

Friday, March 13th, 1903.

SKIN SLIDING AS A MEANS FOR PREVENTING AND REMOVING CICATRICIAL DEFORMITY.

MR. T. S. ELLIS (Gloucester) said he had devised this procedure in the belief that when the skin in the neighbourhood of a cicatrizing wound was made to slide freely, and all adhesion of the cicatrix at the margin of the wound to the tissues beneath was prevented, the contraction of the cicatrix acting on the skin would draw it towards the area over the wound, interstitial growth in the extended skin compensating for the extension it had undergone. Lantern slides were shown of a case of severe burns involving destruction of both ears and of the whole of the integuments from a line across both cheeks and above the chin down to one just above the clavicles. Here the principle had been applied, but only to the lower margin of the neck wound. At the daily dressing the skin was picked up at and below the margin of the wound with the finger and thumb and gently drawn outwards. The wound healed along the line of the lower jaw, the neck being covered with normal skin, having a very sharply defined margin, while above, on the upper side of the same wound, where healing had been allowed to proceed without disturbance, large masses of keloid extended up the cheeks. Keloid also formed on the other wounds. A tattoo mark was now at a much greater distance from the margin of the skin than when it was first made. This and a similar change sometimes seen in the position of stitch marks was suggestive of growth at and from the margin of the skin towards the wound, even if there were also interstitial growth in the skin at a distance. Moreover, if an attempt were made to cover a granulating wound with skin derived from the margin, and this margin consisted of skin mixed up with old cicatrix tissue the result was a failure. If the supply of new skin were entirely due to the traction influence of the cicatrix with interstitial growth in the skin at a distance, then, presumably, the traction influence would be the same whether the marginal skin were free from cicatrix tissue or not. On the other hand it was easy to imagine that the difference would be material if there were really growth at the margin. The keloid on the face had been partially removed by excision, and when the skin had been persistently stretched by the use of cicatrix callipers and by drawing it outwards with the hand, compelling it to freely slide, any remaining scar tissue could, if necessary, be excised. Then even in an extended position, there would be no tension on the cicatrix which, being in a line of folding when the skin was relaxed, would have the full benefit of complete coaptation in the position of rest. Thus a minimum of scar might be predicted. For the effacement of a cicatrix of any kind not only was the attainment of freedom from attachment indicated, but also such mobility and such redundancy of skin around it as should, for a time, give freedom from even the small degree of tension to which, under ordinary conditions of skin, the cicatrix would be liable. This indication might often be completely fulfilled by persistently sliding the adjacent skin towards the cicatrix and using the skin (made redundant) as a handle wherewith to lift the cicatrix from its attachment.

After remarks by Mr. BARKER,

MR. ELLIS, in reply to Dr. W. H. B. BROOK, said that all that was necessary was to pick up the skin over the cicatrix with the finger and thumb for a minute or two daily.

COSTOTRANSVERSECTOMY FOR PARAPLEGIA DUE TO VERTEBRAL CARIES.

Dr. W. H. B. BROOK (Lincoln) described a case of total paraplegia due to caries of the mid-dorsal vertebrae, for which the operation of costotransversectomy was performed with complete recovery.

The patient, a clerk, aged 17, was admitted into the Lincoln County Hospital in September, 1902, suffering from angular curvature of the spine of one year's duration, for which he had worn a plaster jacket. When admitted he presented well-marked angular curvature, the sixth and seventh spinous processes being the most prominent. There was no tenderness, and no sign of any collection of pus. There was well-marked girdle sensation at the level of the epigastrium, with great impairment of sensation below this level. The legs could be moved, but not well; the knee-jerks were exaggerated, and there was incontinence of urine. For six weeks he was treated by extension applied to each leg, but his condition became steadily worse, the paraplegia becoming complete, with incontinence of urine and faeces, and the appearance of bedsores in spite of the greatest care. A skiagraph showed blurring in the region of the seventh and eighth dorsal vertebrae, confirming the diagnosis that tuberculous matter was present. On November 8th the operation of costotransversectomy was performed, the right transverse process of the eighth dorsal vertebra being cut down upon and removed together with the head and neck of the eighth rib, so that access was obtained to the seat of the disease, and the broken-down bodies of the vertebrae were carefully scraped away with a specially-designed, curved, sharp spoon, care being taken not to wound the dura mater or the pleura. The wound was drained, injected with iodoform emulsion containing 2.5 per cent. of carbolic acid, and tightly packed with iodoform gauze. The extension was continued. Sensation began to return on the following day, and movement on the day after. At the end of three weeks sensation was perfect and movement good, but it was seven weeks before the patient regained perfect control over the bladder and rectum. The drainage tube was discontinued on January 8th, the wound was healed by January 25th, and on February 15th the patient was able to sit up, after having been fitted with a steel spinal support. He was now able to walk quite well.

MR. JACKSON CLARKE described the case of a lady, aged 47, whose skiagraph he exhibited. When seen eighteen months

ago she had prominence of the seventh and eighth dorsal vertebrae, with girdle pain, and paraplegia. He performed laminectomy, and with an aneurysm needle opened an abscess situate in front of the spinal cord, and boxed-in in all directions by bone. A week later he removed the transverse process of the eighth dorsal vertebra and the head of the rib attached to it to provide an easy passage for the tuberculous material. The wounds closed, but six months afterwards an abscess was opened under the lateral scar, and an aseptic sinus left. The laminectomy, in fact, had proved unnecessary; and its removal weakened the healthy part of the spine. To take away the head of the rib, without the transverse process, was usually enough to form an outlet for the abscess when its caseous material became liquid, and thus prevent pressure on the cord. The above patient and others to which he referred regained their muscular power. He thought trephining of the spine was dangerous, as the surgeon might easily damage the cord. The removal of the head of the rib was in skilled hands a much less dangerous procedure than laminectomy.

Dr. Brook, in reply, said that straight spoons were preferable to curved ones for scraping away the débris of the diseased bone and the tubercle from the abscess cavity.

Paraffin Injection for Prolapse.

Mr. Stephen Paget read a paper on three cases of prolapse of the bowel and prolapse of the uterus treated by the injection of paraffin under the mucous membrane:

The first was that of a man, 65 years old, who in 1897 had undergone excision of the rectum for cancer. Ever since the operation he had suffered from prolapse of the bowel with loss of control, and had been compelled to wear a rectal plug. On January 15th paraffin was injected into the prolapse, forming two hard round nodules under the mucous membrane, so that the opening into the bowel was closed by a sort of valve. Since then there had been no prolapse; the patient had left off his plug and had kept perfectly clean. The second case was that of a patient of Dr. E. Lycett Burd, of Shrewsbury. She was 70 years old, and had suffered prolapse of the bowel for twenty-two years, and had undergone five operations. Prolapse occurred on the very least effort, and if the motions were loose she had no control over them. On February 15th paraffin was injected under the mucous membrane, forming a hard collar round more than half of the bowel; this produced a great improvement, but there was still a very slight prolapse at times. On March 1st a second injection was made, and the opening into the bowel was also narrowed by Mayo Robson's incision and suture. This second operation was followed by some severe pain, but no prolapse had occurred since it was done. The third case was that of a woman aged 63, who for twenty-eight years had suffered prolapse of the uterus. An operation (? Alexander's operation) had been performed fourteen years ago. The prolapse now occurred even when she was in bed if she only coughed or turned over. By day she supported it with a napkin. The vagina was so greatly dilated that it would not retain a pessary, and there was complete prolapse of both walls and of the cervix, which was greatly enlarged. On February 25th paraffin was injected in various directions under the mucous membrane of the vagina, mostly in the posterior wall, and under the mucous membrane of the cervix. Since this injection she had had no prolapse, not even when she had strained at the closet, or had borne down forcibly in the erect posture. The cervix was high up, both walls of the vagina were indurated, and the recto-vaginal septum was about half an inch in thickness.

Mr. Paget had brought these cases thus early before the Society because he felt sure, from his experience of the use of paraffin in forty cases of sunken nose, that the good results in these cases of prolapse would be well maintained. If it were at any time necessary to add a little more paraffin this could easily be done.

Mr. Barker described a severe case of incontinence of faeces, due to rupture of the sphincter muscle, which he had treated in this way, control being perfectly regained. He had used a mixture of soft paraffin and olive oil. He mentioned that some cases of the injection of paraffin near the uterus and vagina had been followed by fatal results from embolism; and suggested that this might be avoided by taking care that the end of the syringe was not in a vein (which would be shown by the continuous flow of blood through it) before the paraffin was injected.

Dr. G. H. D. Robinson suggested that the operation was hardly suitable for a woman in the childbearing period of life as the vaginal walls were made so tight that they might rupture during parturition.

Mr. Paget, in reply to Mr. Eastes, said that it was not necessary to keep the motion liquid for defaecation to be properly performed. As to the cases of embolism, two of those reported were done under circumstances that obviated any surprise at that result. He used paraffin with a melting point between 111° and 115° F. It would be necessary to work at the subject to discover the risks of the operation; but the results so far had been most encouraging.

OBSTETRICAL SOCIETY OF LONDON.

Edward Malins, M.D., President, in the Chair.

Wednesday, March 4th, 1903.

Tuberculosis of Fallopian Tube.

Dr. Hubert Roberts showed microscopical sections of a case of tuberculosis of the Fallopian tube and ovary, removed by operation from a lady of 32.

The patient had been in failing health since 1899. In December, 1902, she was much worse, with irregular uterine haemorrhage, fever, and wasting. A considerable tumour was found in the lower abdomen. On opening the abdomen both tubes and ovaries were enlarged. The left ovary was 4in. to 5in. long, and adherent to a necrotic ovary, the size of one's fist. The pelvis was rooted in by dense adhesions, and the intestines were adherent to the tubes and back of the uterus. Both tubes were banana-like in shape, and contained pus. Sections of the uterine end of the tube showed distinct tuberculous nodules, giant cells, and breaking-down caseous areas. The ovarian tissue also contained tubercle nodules. The patient sank in thirty-six hours from shock.

The question of the advisability of abdominal section in such desperate cases was discussed. Tuberculous pyosalpinx pointing in the vagina could easily be opened and drained by that route, as in another case under the author's care, though, of course, the tubes could not be removed. In such cases abdominal section might be undertaken when the patient's condition allowed of it.

Dr. Walter Swayne said that three months ago he had to deal with a case which presented many features similar to those described:

The patient had a large mass in the pelvis and much distension of the abdomen, which contained fluid. On opening the abdomen the whole of the peritoneum was studded with what to the naked eye was apparently miliary tubercle. The appendages were embedded in exudation, which formed the mass felt in the pelvis, and the peritoneum was full of ascitic fluid; it was obvious that removal of the appendages was impossible, and the wound was closed after flushing the peritoneal cavity with a hot saturated solution of boracic acid. The patient made a good recovery and at the end of a month had put on several pounds in weight.

Dr. Horrocks, Dr. Griffith, and Mr. Targett also joined in the discussion.

Keratinizing Carcinoma of Uterus.

Dr. Lewers showed a specimen of keratinizing carcinoma of the body of the uterus.

The patient from whom the specimen was removed was a single woman, aged 43. She had suffered from metrorrhagia for two years, and from some pain about the lower abdomen, which came on some time after the commencement of the bleeding. The cervix was dilated and a malignant growth found in the body of the uterus. There was a lump felt to the right of the uterus the size of a tangerine orange. Abdominal panhysterectomy was performed on November 27th, 1902, in the London Hospital. The lump to the right of the uterus proved to be the right ovary enlarged, partly by cystic change and partly by a malignant growth, secondary to that in the uterus. The ovary was not adherent, and there was no evidence of any other secondary deposit elsewhere.

The case illustrated the advantages of the abdominal operation, especially since the exact nature of the lump to the right was ascertained at the very beginning of the operation, instead of towards the end of it, as would have been the case if vaginal hysterectomy had been performed. The patient made a good recovery. The growth was a columnar-celled carcinoma, but over a considerable extent it had become keratinized, so that in parts of the sections the appearances were very similar to those of squamous carcinoma of the cervix.

Mrs. Boyd, M.D., mentioned a case in which she had removed by abdominal panhysterectomy a large uterus the seat both of fibroids and cancer of the body, from a middle-aged lady. The right ovary contained a secondary growth, and was non-adherent and easily removed with the uterus. No other secondary growths were discoverable. The patient died some six months later with cerebral symptoms. There was no evidence of local recurrence or of involvement of abdominal glands.

Dr. Cullingworth had that very morning operated upon the second case of the kind that he had met with within the last two years. Both cases had occurred in his private practice, and were, so far as he could remember, new in his experience. In both patients there was evidence of new growth in the lateral parts of the pelvis, for which abdominal section was performed, but in each case there was irregular uterine haemorrhage of such character and extent as to make it seem desirable to dilate and curette the uterine cavity before opening the abdomen. In the case of the first patient, an ovarian cyst with some obviously malignant papilloma was removed, the scrapings from the uterus being meanwhile

sent for examination and report. The report being to the effect that the uterine disease was carcinoma, the uterus was removed by vaginal hysterectomy a fortnight after the original operation. There was found to be extensive carcinoma of the body of the uterus. The patient was at that moment, eighteen months after the operation, free from any sign of recurrence. In the case of the second patient the preliminary curetting was so conclusive as to the existence of carcinoma of the body of the uterus that the microscopist's report was not waited for, and a week after the first operation, at which both ovaries were removed for soft, rapidly-growing, and already degenerating cystic carcinoma, the uterus was removed by the combined abdominal and vaginal method. The only reason why the uterus was not removed in the first case was that the patient, when the curetting had been done and the universally adherent tumours of the ovaries had been removed, showed signs of having had as long an operation as was compatible with her safety. Dr. Lewers had spoken of the ovarian disease being in his case secondary to the uterine. Dr. Cullingworth said he would like to hear upon what evidence that opinion was based. In the earlier of his own cases the reporter of the Clinical Research Association expressed the opinion that the ovarian disease was in that instance primary and the uterine secondary. In the second case, the one now under treatment, it seemed to him very difficult to say which was primary—the ovarian disease or the uterine.

Dr. Russell Andrews said that Hitschmann of Vienna, who had been studying the histology of carcinoma of the body of the uterus for some time, found that metaplasia, change from columnar to squamous epithelium, was comparatively common in this condition. He had seen a good many sections showing this change, but none in which it was so marked as in Dr. Lewers's specimen.

Vesicular Degeneration of the Placenta.

Dr. Galabin showed a specimen of partial vesicular degeneration of the placenta, in conjunction with a fetus of five months which lived up to time of delivery. He saw the patient in consultation with Dr. Morgan Hearnden.

She was 32 years old, and had had four previous pregnancies, twins once. In the earlier months of the pregnancy she suffered from sickness. For three weeks she had appeared very ill, with weakness, cardiac symptoms, and rapid pulse, and the abdomen had increased rapidly in size. The pulse was 120. The abdomen was found nearly as large as at full term of pregnancy. The uterus contracted as usual, and there was no rigidity or evident tension. Contents seemed mainly fluid, but signs of a living fetus were made out with some difficulty. The finger was passed in through the cervix, and felt the membranes and fetus. Patient looked ill, but not pallid enough to suggest haemorrhage. Dr. Galabin thought the case was probably one of hydrops amnii. He advised induction of labour, and tried on the spot to separate the membranes around the os. The result was that labour pains came on the same night. Next morning Dr. Hearnden ruptured the membranes, and an enormous quantity of blood and clots was expelled. The patient became alarmingly collapsed, but eventually rallied. A number of vesicles came away with the blood. The placenta was cleared out of the uterus by hand. The placenta showed scattered vesicles pretty uniformly throughout, but a large proportion of chorionic villi remained normal. Its uterine surface was completely broken up, no continuous deciduous serotina being visible. The larger vesicles, which escaped separately, were mostly about ⅛ in. in diameter. The patient recovered well, and had had no return of haemorrhage nor indicated suspicion of deciduoma malignum. It was remarkable that not a drop of blood escaped externally, though the patient had what was probably a concealed accidental haemorrhage going on for three weeks.

The case was briefly discussed by Dr. Griffith and Mr. Bland-Sutton.

Other Specimens.

Dr. Blacker showed a specimen of the uterus after vaporization, and Dr. Galabin showed a fibroma of the uterus associated with malignant disease of the endometrium.—Dr. Handfield-Jones exhibited Bossi's dilator, and briefly dwelt upon its merits and risks in the induction of labour.—Drs. Spencer, Russell Andrews, Swayne, and Blacker gave details of cases in which they had used the instrument, and, while dwelling upon its advantages, drew attention to the risks of rupture of the uterus.—Mr. Bland-Sutton showed two specimens which illustrated the changes which had occurred in fibroids after the menopause. The relative frequency of these changes was discussed by Mr. Alban Doran, Dr. Handfield-Jones, and Dr. Griffith.

President's Address.

The President delivered his inaugural address, discussing some aspects of the economic and of the antenatal waste of life in nature and civilization.

A vote of thanks to the President for his valuable and interesting address was moved by Dr. Watt Black, seconded by Dr. Horrocks, and carried by acclamation.

Glasgow Obstetrical and Gynaecological Society.—At a meeting held on February 25th, Dr. Nigel Stark, President, in the chair, a discussion on the diagnosis and treatment of suppurative conditions in the pelvis was opened by Dr. J. K. Kelly. He referred to the methods of classification as determined by causation, situation, or results. He divided the cases into two groups according to their situation. The first was invasion of the connective tissue, the second of a closed cavity either natural or acquired. With regard to division of the cases according to the etiology, those occurring in the puerperium were usually from infection of the cellular tissue, while in the non-pregnant cases the preformed cavities were usually involved. There were exceptions, of course, to the rule. The reason for this selection of tissue was obvious. During the delivery traumatisms were frequent, and injured tissue was easily infected. The cervix being the most commonly injured, the course of the infection was through it to the pelvic cellular tissue. The infection after invading the broad ligaments usually passed forwards and became subcutaneous above Poupart's ligament. Occasionally, however, the route took a posterior turn, and the track extended upwards as far as the kidney; the abscess might point in the loin or even burst into the pleura. It was fortunate that these collections tended to open externally. In the non-pregnant cases the track taken by the infection was along the mucous surface. Progress was slow. After a chronic endometritis the tube was apt to become implicated, and when this took place the abdominal ostium became closed and pus collected in the tube. The ovary, when it became the seat of the disease, formed either a large pus cavity or a number of smaller ones. A number of preserved specimens were exhibited in illustration of the various types of this kind of lesion. Further extension of this infection involved the bowel and the peritoneum, etc. Here also there were exceptions, as the common tuberculous salpingitis did not extend from a rare tuberculous endometritis. The progress of the malady was according to the situation. When the cellular tissue was involved the infection worked its way to the surface, while when in a closed cavity its progress was more difficult. Thus in long-standing cases the virulence of the infection became less, and might disappear altogether. With regard to the differential diagnosis, the history, location, and course were all different in the two types. In cellular abscess there was parturition and injury; the situation of the swelling was lateral, though it might be anywhere. In pyosalpinx there was no injury save gonorrhoea, long-standing endometritis, or the fact of intrauterine medication having been resorted to. Menstruation was increased in amount and frequency. The locality of the swelling was higher, and it tended to get behind the uterus; it was somewhat cystic. The course of the disease was different; the pus tended to open on a mucous surface, usually that of the rectum or the sigmoid. All adjacent organs became adherent. Fistulous openings were apt to develop, and abscess might even develop in the liver. The management of the condition was proportionate to its nature. When the connective tissue contained pus it ought to be evacuated. Sometimes there were large effusions which did not progress to the formation of pus, and it was difficult to say if pus were really present. For the abscess to reach the surface a considerable time was required. When fluctuation was present, the collection was opened from the surface, and no counter-opening was made through the vaginal roof, as there was the danger of opening a fresh area for the spread of the infection. Pus situated in Douglas's pouch was correctly evacuated from the vagina. When the collection existed in a closed cavity the application of the same principle was not so easy. A number of different phases of the disease were to be considered. In certain cases we might expect the trouble to quieten down, while a tubal disease, giving rise to attacks of peritonitis, to adhesions, and tending to wear out the patient from the pain, was a condition definitely requiring operation. As indicating operation were to be placed constant pain and the very acute cases. The uncertain cases were in those whom the disease did not incapacitate from work, in whom the haemorrhage was not excessive and in whom there was no fever. Sterility was in such the most pressing symptom. In all such cases the patient should decide for or against operation. In such cases where operation was performed and the tubes were not found to contain pus the abdominal ostium might be rendered patent. In the affluent class where rest and care could be given there was less necessity for operation—the condition was less urgent. Where an operation was performed the tubes and ovaries ought to be removed; incision and drainage of the sacs was not to be recommended.

The abdominal route for operation was considered best and the uterus was not to be removed. Dr. S. Sloan thought the views expressed by Dr. Kelly were moderate, and he agreed that in the uncertain cases the selection of operation as treatment ought to be left to the patient. In a case where there had been pyosalpinx with intermittent discharge of pus into the uterus a careful curettage had proved curative. Dr. Balfour Marshall thought the prognosis to some extent dependent on the germ. In cases where after operative interference there was a large effusion and sudden onset with an ultimate absorption leaving a tube involved, operation ought to be postponed, as the prognosis was good. In all doubtful cases the operation should be withheld, as through time the pus tended to become sterile (in about 50 per cent. of cases this happened), and treatment resorted to in the meanwhile. Dr. Balfour tended to be conservative in his treatment. In chronically enlarged tubes where the woman was invalided operation was to be recommended; in recent cases local treatment ought to be employed. He did not approve of a vaginal operation, because the field of operation was not in view and there was great danger of haemorrhage. He considered that the uterus should be left. Dr. Alex. MacLennan mooted the question whether an iliac abscess might not be due to the breaking down of an infected gland. The making of a counter-opening in the vagina to ensure drainage was not necessary, and it was not without risks. A case illustrating the course of a neglected pelvic cellulitis where the original condition had been neglected was referred to. The use of the Playfair probe was also deprecated. Dr. Russell referred to cases in which he regretted that resort to surgery had been delayed. He thought that an attempt should be made to locate the mischief definitely, and when that was done treatment followed as a matter of course. Sometimes the use of the Playfair probe was beneficial, and curettage was not free from danger. The President thought the diagnosis of pus in the pelvis difficult; little pockets might be present which were only found at operation. The temperature was no guide in this respect. There were cases where, after removal of the tubes and ovaries, pain still continued, and this was due to adhesions which were the cause of the continuance of the symptoms. In such cases the most that could be said was that the source of danger had been removed by the operation. Dr. Kelly replied.—Dr. Kelly also showed a fresh specimen of two ovarian tumours. The case had been interesting from the diagnostic point of view. Amenorrhoea had been present; there were pigmentary signs of pregnancy; the breasts contained milk. To palpation the shape of the tumour was exceedingly like a fetus. On removal the tumours were solid in most part, and, as no microscopical examination had been possible, it was difficult to say whether the specimens were examples of sarcomatous degeneration of ovarian tumours or not. The papers, etc., will appear *in extenso* in the *Glasgow Medical Journal*.

South-Eastern Branch of the British Medical Association: West Kent District.—At a meeting held at Rochester on March 6th, Dr. Vincent Bell in the chair, Dr. W. J. Tyson read a paper entitled Some Thoughts on Food and Exercise. In the discussion which followed, the Chairman, Mr. Jaffrey, Mr. Albert Bell, Dr. Pye Oliver, and Mr. Cooper made remarks, to which Dr. Tyson replied.—Mr. F. Jaffrey read a paper on the symptoms and treatment of acute appendicitis. Dr. Tyson, Mr. Cotman, and Mr. Cooper joined in the discussion, which followed; and Mr. Jaffrey replied.

Nottingham Medico-Chirurgical Society.—At a meeting held on March 4th, Dr. C. H. Cattle in the chair, Mr. R. G. Hogarth showed: (1) A boy after oesophagotomy for removal of a cogged clock wheel, 1 in. diameter, from the thoracic portion of the gullet, where it had been lodged six days; the oesophagus was opened just above the left sterno-clavicular joint. (2) A boy after extensive operation for excision of tuberculous glands on the right side of the neck before the skin was involved; the glands were very numerous, but only one or two had broken down centrally. (3) Two boys after excision of the hip-joint. (4) A child after erasion of the knee-joint for tuberculous disease. (5) Congenital dislocation of the hip-joint in which the Lorenz operation had been tried unsuccesfully. With skiagraph. (6) A boy after tarsectomy for talipes equino-varus. (7) Several cases after radical cure of inguinal hernia in boys. The cases were discussed by Drs. C. H. Cattle, J. S. Bolton, S. Green, and W. M. Willis; Mr. Hogarth replied.—Mr. R. G. Hogarth read a paper on the diagnosis of affections of the hip-joint, in which he urged that examination per rectum of the condition of the pelvic bones should be more frequently used, and advocated early operation in those cases in which tuberculous disease occurred in the acetabulum or the neck of the femur.

Midland Medical Society.—At a meeting held at Birmingham on March 4th, Dr. Langley Browne, President, in the chair, Mr. Heaton showed a patient after the operation of enucleation of the prostate, one of the cases referred to in a paper on the palliative and operative treatment of enlarged prostate, read the same evening.—Dr. Purslow showed the placenta and membranes from the case of complete placenta praevia. The placenta and membranes formed a complete sac, the only aperture in which was the hole in the centre of the placenta through which the fetus had been delivered. Severe haemorrhage came on in the last month of pregnancy. On examination through the os with two fingers the placenta could be felt. Dr. Purslow also showed uterine appendages with accessory ovary. The appendages were removed from a single woman aged 29 for severe metrorrhagia, which had persisted for two years in spite of every method of treatment. The ovaries presented several small cysts, and on the left side there was a well-marked accessory ovary the size of a pea, situated in the upper edge of the broad ligament about three-quarters of an inch from the ovary proper and immediately beneath the fimbriated extremity of the tube.—Mr. Christopher Martin showed a specimen of the appendages of the uterus and the whole of the vagina removed for extreme prolapse. The patient was a widow past the menopause, and no form of pessary could be retained. The operation was severe, and was only performed as a last resort. The patient made a slow, but a complete recovery.—Mr. Billington showed specimens from a case of neuro-fibromatosis. These specimens were obtained from a case of von Recklinghausen's disease. The patient was a man aged 38, who died shortly after the removal of a large swelling on his lingual nerve, which almost filled up his mouth and seriously interfered with breathing and swallowing. At the age of 3 the patient fell and cut his right cheek. Two years later a lump appeared. This gradually increased in size, and in spite of two successful operations the right cheek remained very much larger than the left. Other lumps appeared in other parts of the body, some of which were subcutaneous. The patient remained in good health and suffered very little inconvenience until the year before his death. The specimens consisted of the lumbar plexus and its branches, with the upper part of the sacral plexus. The nerve showed marked diffused thickening at intervals consisting in a fusiform swelling. A tumour was found in the lower half of the spinal cord rather larger than an almond. This gave rise to no symptoms during life, and was the only lesion present in the central portion of the nervous system.

Laryngological Society of London.—At a meeting held on March 6th, Dr. P. McBride, President, in the chair, Dr. A. Bronner showed a microscopic specimen of columnar-celled carcinoma of the naso-pharynx. The case had been under observation four and a-half years.—Dr. W. H. Kelson showed (1) a man presenting dislocation of the bones of the nose due to polypi; and (2) bleeding polypus in a girl (with slide).—Dr. H. Tilley showed a case illustrating the result of operative treatment of adhesion of the soft palate to the posterior pharyngeal wall in tertiary syphilis.—Mr. F. J. Steward exhibited a case of disseminated sclerosis showing rhythmic movements of the palate and vocal cords.—Mr. Cresswell Baber showed (1) a tongue depressor for exposing the tonsil: and (2) tumour of vestibule from a woman aged 26, with microscopic section.—Dr. D. Vinrace showed a woman, aged about 60, with lupus (?) of the nose and face.—The President showed a case of anosmia for diagnosis and suggestions as to treatment.—Dr. H. L. Lack showed various microscopic specimens, and a case of spastic aphonia shown at the January meeting. Dr. J. Donelan showed a case of perforation of nasal septum (?), trauma or syphilis.

Association of Registered Medical Women.—At a meeting on March 3rd, Miss Cock, M.D., read notes of a case of abortion due to lead poisoning.—Mrs. Berry, M.D., read notes on the work of the London School Board in teaching mentally deficient children.

REVIEWS.

MATERIA MEDICA AND PHARMACY.

WE have received from the Curator of the Technological Museum, Sydney, N.S.W., Mr. R. T. BAKER, a very exhaustive account of a research on the eucalypts and their essential oils,[1] which he and Mr. H. G. SMITH (Assistant Curator and Chemist) have carried out since 1896. The report constitutes the thirteenth number of the Technical Education Series, and is published by authority of the Government of the State of New South Wales. It embodies the results of botanical and chemical researches into the important genus *Eucalyptus*. The collaboration of botanist and chemist has been most happy, and has resulted in such far-reaching generalizations as could never have been arrived at by either working separately. One result of great interest is that the composition of the volatile oil from any particular species which has been found to be constant and appears to be quite independent of habitat. This fact has been of great value in the diagnosis of doubtful species, but it has also great importance from a medical point of view, since by means of rigid pharmacopoeial tests we can be certain of obtaining the oil of any particular species we desire. In discussing the evolution of the genus the authors demonstrate a gradation in morphological characters going on together with a similar change in the nature and proportion of the chemical constituents present in the oil. They have constructed a diagram showing its probable evolution from the allied genus *Angophora* and the lines along which the different species appear to have had their origin. Nearly 200 pages are devoted to the different species: each is treated separately, a description of morphological characters and habitat being followed by notes on the essential oil which has been distilled from fresh material. The yield of oil, and its chemical and physical characters, are given, and as it is in all cases a mixture of several substances, the amount of work entailed must have been enormous. Since the morphological descriptions are written from the materials actually used for oil distillation, the value of the chemical work on the latter is much enhanced, as results of researches on material not properly authenticated are frequently published, thus causing much confusion. Of the 120 species of the genus, no less than 110 have been fully treated in this way; one was found to yield no oil, and sufficient fresh material could not be obtained from the remaining nine. The work contains records of researches on the separate constituents of the various oils examined, the results of which have in many cases formed the subject of contributions by the authors to the Royal Society of New South Wales; some of these constituents have been discovered and described by the authors for the first time. The principal substances thus treated of are eudesmol (stearoptene), aromadendral (aldehyde), piperitone (ketone, the peppermint constituent), and aromadendrene (sesquiterpene). Many of these oils appear worthy of medicinal trial, particularly those containing the peppermint constituent. The value of the official oil is usually understood to depend on its eucalyptol content, but so far nothing very certain is known as to which is therapeutically the most important constituent. The book is capitally illustrated, and the authors are to be congratulated on work well done; so also are the authorities on the far sighted policy which has recognized the value of thorough scientific investigation of a genus which constitutes three-fourths of the whole vegetation of Australia, and whose commercial possibilities appear to be endless.

No important changes have been made in the scope and arrangement of Sir WILLIAM WHITLA'S well-known manual of the *Elements of Pharmacy*,[2] but the text has been thoroughly revised, and there are many additions and minor alterations. The subjects of dispensing, the writing of prescriptions, and materia medica, occupy nearly half the volume, while the Indian and Colonial Addendum to the *B.P.*, the *B.P.C. Formulary*, an index of poisons, and a very full list of non-official remedies, take up about a half of the remainder. The last-mentioned section is most useful, as it deals very completely, but briefly and practically, with a large number of new remedies, information about which is difficult to get elsewhere. We hope this edition may have an even greater success than its predecessors.

According to the preface Dr. WILLIAM WOOD has arranged his *Tables of Organic Materia Medica*[3] "to aid the student in revising his materia medica prior to examination," and no doubt they will be of some value in this connexion as the information is clearly and concisely given. There is, however, an immense amount of detail, and one is tempted to inquire if any examination or examiner exacts a knowledge of it all from the candidates for a degree in medicine. No indication is given of the relative importance and value of the different official drugs, while the arrangement into botanical natural orders is, or ought to be, entirely obsolete. Drugs closely allied in action and uses are widely separated from each other in the text, while no attempt is made to generalize. We hope this volume does not represent the conception of materia medica, pharmacology, and therapeutics, on the part either of students or teachers in our medical schools.

In *Aids to Practical Dispensing*,[4] the author very truly comments on the difficulty of describing in print the technicalities of a practical art. He would have been better advised had he laid down general principles, and illustrated them in the simplest possible manner instead of quoting complex formulae which are only occasionally met with. The method given for dispensing resinous tinctures (p. 13) is bad, and the same remark applies to the mixture containing tragacanth at the foot of the same page; the notes on pill excipients are also poor. We notice that a good deal of the advice given is bad in principle, and in our opinion the subject is treated too empirically. The dispenser is continually called upon to dispense all sorts of novel combinations, and to do this satisfactorily he must possess a good general knowledge of chemistry; without this knowledge such information as is here given will never make an intelligent dispenser.

A RELIGIO MEDICI.

Religio Medici, Religio Scientiae, Religio Vitae, by a Student of Medicine and Science,[5] is the anonymous work of a man who has his subject very much at heart, and who as both a Fellow of the Royal Society and of the College of Physicians, is well qualified by training to grapple with its difficulties. There is sincerity and earnest conviction in every line, and it is rather a pity that pleading, the force of which cannot be justly appreciated without weighing each sentence, should have been printed in type which some readers may not find easy to follow. The free criticism of his arguments, for which the author asks, is impossible within the limits of this review; but a few thoughts to which perusal of the book gives rise may be mentioned, after summing up what the writer's views appear to be. It is not easy to do this briefly, but they may be fairly put as follows: That a just appreciation of the revelations of science, and especially of the microscope during the past fifty years, must inevitably lead to the conclusion that "life" has nothing in common, and is incomparable, with any other phenomenon of Nature, and that so far from obeying any physical, chemical, or other "natural" law, "life" causes the matter in which it is temporarily present to act contrarily to all of them. That, per contra, nothing has been revealed which is inconsistent with persistence in the "faith of our forefathers" and belief in a future state. As regards the first part, the author's arguments will, to many, appear convincing; but as regards the latter two thoughts must occur: (1) That there is a big gap between a simple belief in an "Omnipotent Being" altogether outside and above visible Nature, which is as far as the author's argument takes us, and an acceptance of the Thirty-nine Articles or any denominational equivalent of them; (2) that the author's own description of the characteristics of "life" make a future existence in which any one can take an individual personal interest practically inconceivable. In the course of his argument the author strongly condemns several modern tendencies and lines of thought. Among the former is that of some popular writers to acclaim and spread broadcast any physical or "natural" theory of life propounded, without due sense of responsibility or any real knowledge of

[1] *Research on the Eucalypts, especially in regard to their Essential Oils.* By Richard T. Baker, F.L.S. (Curator and Economic Botanist) and Henry G. Smith, F.C.S. (Assistant Curator and Chemist). Sydney, New South Wales: W. A. Gullick. 1902. (Demy 4to, pp. 306.)

[2] *Elements of Pharmacy, Materia Medica, and Therapeutics.* By William Whitla, M.A., M.D. Eighth Edition. London: Henry Renshaw. 1903. (Cr. 8vo, pp. 632. 10s. 6d.).

[3] *Tables of Organic Materia Medica for Medical Students.* By William Wood, M.B., C.M., M.R.C.P.E. London and Edinburgh: The Medical Supply Association. (Demy 4to, pp. 107. 5s.)

[4] *Aids to Practical Dispensing.* By C. J. S. Thompson. Third edition. Student's Aid Series. London: Bailliere, Tindall, and Cox. 1902. (Fcap. 8vo, pp. 100. 2s. 6d.)

[5] *Religio Medici: Religio Scientiae, Religio Vitae.* 1901. By a Student of Science and Medicine, 1849-99. London: Charles Good and Company. 1902. (Crown 8vo, pp. 216. 3s. 6d.)

what they are talking about. This may be reprehensible, but can scarcely be objected to by the author, for elsewhere he claims a yearning for solution of the "riddle of life," as one of the proofs of his contention that human is different to all other forms of life. The lines of thought which he sets himself to work to overthrow are those for which Haeckel, Darwin, Huxley, and others are more or less responsible. We say "more or less" because the writer seems in some degree to overstate the conclusions to which these philosophers definitely pinned themselves. This is unintentional, and not peculiar, because in nearly all discussions between zealous adherents of different schools there is commonly confusion of terms, a tendency to make much of side issues, and some blindness as to points of common agreement. The man who first said "omne ab ovo," consciously or unconsciously covered the greater part of the ground over which the author goes, and the main question left is whether the ovum, with all its possibilities, was the definite and designed creation of an Omnipotent Being, or, as he infers his opponents to hold, merely the accidental result of physical, chemical, or other interaction between a fortuitous collection of inorganic atoms. Even if that be ever settled against him the author still has the trench "where did the atoms come from?" to fall back on. For his consolation it may even be suggested that the speculations of philosophers have less real effect perhaps on men's lives than the writer fears, and that the real enemy of conventional religion is the intolerance of many of its authorized professors rather than any theory of philosophy yet propounded. In a future edition much of the argument might with advantage be compressed, and a definite "credo" placed at the beginning. At present it is not as easy as it ought to be to get a clear conception of the conclusions up to which the author is leading, and of the deductions that are expected to be made from each statement. Certain digressions might also be omitted. By leaving a vague impression that the writer is one who is irritated by a great many of the common phenomena of modern life, they subtract something from the force of his solemn reasoned protest against one of them. Many of his observations, though not original, are put in a way that makes them fresh and striking—for instance that of the impossibility of analysing any "living" substance unless it is "dead;" and that the greater part of a living body is not "alive" at all, only the bioplasts. To bacteriologists, the stain analogies between nuclei and many bacteria will occur as sort of confirmation on this point.

SYPHILIS AND YAWS.

THE title[6] on the cover is somewhat misleading, as it might make those little acquainted with the subject assume that syphilis and yaws were one and the same disease, a point which is not yet settled, notwithstanding the strenuous advocacy of Mr. Jonathan Hutchinson, who, in the first part of the present work, tries to prove his case with his usual dialectical skill. Indeed, he has gone further, for in a recent number of the *Polyclinic* it is authoritatively laid down that there is no further need for meetings of the Committee on Yaws, as the identity of yaws and syphilis is settled. Now, it should be plainly stated at once that a number of competent observers and writers still hold a contrary opinion. Apart from Patrick Manson, Nicholls, and others, among recent contributors to the subject, Jeanselme (Le Pian dans l'Indo-Chine française), Bennett, of Trinidad, Krämer (Die Samoa-Inseln) and Calder, of Jamaica (BRITISH MEDICAL JOURNAL, February 14th, 1903, p. 368,) may be mentioned here. So cautious a writer as Colcott Fox in his article on Yaws (Allchin's *Manual of Medicine*) considers that the disease is *sui generis*. The reader of Mr. Hutchinson's text must therefore bring an open mind to its perusal and not allow himself to be dominated by the authority of a great name. Nor must he place too much reliance on the opinion of older writers, who looked upon yaws and syphilis as the same disease, for it is a well-established fact that the analytical process in medicine has separated out morbid entities which were at one time classed under one heading. On the other hand, the synthetic process has, thanks to bacteriological advance, co-ordinated diseased conditions which were considered as absolutely different. In this place one or two comments may be permitted. As to Alibert's *pian fongoïde*, this was not yaws at all, but the rare disease, mycosis fungoides. Objection might be raised to the division of the subject of yaws into primary, secondary and tertiary periods, which may be convenient, as Mr. Hutchinson says, but the question is, Is it in accordance with the natural history of the disease? That a framboesia-like syphilide may occur is undeniable, but that does not make syphilis yaws any more than a psoriasiform or lichen planus-like syphilide makes a psoriasis or a lichen planus. And here it may be mentioned that it would be better to drop the use of the term "palmar psoriasis" for syphilides of the palm. It is maintained by some observers that the cicatrical contractions in the so-called tertiary period of yaws are the result of sloughing phagedaena (Manson as very possibly, and Jeanselme as certainly). As to the heredity of yaws the general opinion is against it. With regard to Fig. 19 (Plate F) from Nicholls's report, Mr. Hutchinson has added the following note: "It is briefly described as 'showing lupus and yaws,' so that there is no doubt that this condition was a sequel of yaws." This is peculiar reasoning. The condition figured has every appearance of being a case of lupus vulgaris, and justifies Nicholls's diagnosis. Space prevents a further discussion of a most interesting subject. In conclusion, attention must be called to the fine series of plates illustrating parangi and other diseases of Ceylon, contributed by Sir William Kynsey.

[6] *Framboesial Syphilis* (Yaws and Parangi). Fasciculus XIV (Double Number). (Fasciculus I and II of New Series) of an Atlas of Clinical Medicine, Surgery, and Pathology. London: H. K. Lewis. 1902. (Size, 13½in. by about 11in., with 25 figures partly in text and partly in 8 uncoloured plates, and 16 coloured plates. One guinea to non-subscribers).

THE THEORY AND PRACTICE OF LAUGHTER.

IN the eighteenth century the dignity and state which a large number of the rural squires in Great Britain attained by reason of corpulency was attributed to the habitual perusal of a set of sonnets published in the *Guardian*, entitled, "Laugh and be Fat, or Pills to Purge Melancholy." Yet it is to be presumed that the authors of these sonnets never took the trouble to form any theories as to the "Forms, Causes, Development, and Value of Laughter," such as are set forth in his able *Essay on Laughter*,[7] by Professor JAMES SULLY. They probably drew their conclusions from their own observation that the laughter resulting from pure good temper and good health is nearly always associated with fat people, while the thin take life more soberly, generally laughing satirically, or, as the French say, *du bout des lèvres*—"a forced laughter, when in outward appearance one seemeth well pleased but at his heart is discontented"; or, to use Cicero's phrase, "A laughter far from the heart." Juvenal somewhere says of Democritus, who is always represented to us as a man of enormous size, attributed to his frequent exercise of his risible faculty, "*Perpetuo risu pulmonem agitare solebat.*" The majority of the uninitiated who know nothing more about the value, forms, or development of laughter will still follow Professor Sully with interest through 432 pages of theories very clearly stated and criticized. Analyses of laughter as propounded by Aristotle, Schopenhauer, Kant, Hegel, and other philosophers were not hilarious reading, but Professor Sully has managed to present this scientific aspect of the subject in a delightfully interesting and entertaining manner, so that he proves himself to be a lover of laughter who is possessed of a keen power of observation allied to a marked sense of the ridiculous. The distinguishing characteristic of laughing is the production of the familiar series of sounds; and he observes that as with sighing, sobbing, and some other actions, laughter is an interruption of the natural rhythm of the respiratory process, in which inspiration and expiration follow one another at regular intervals. The obvious feature of this interruption in the case of laughter is the series of short, spasmodic, expiratory movements by which the sounds are produced. These are, however, preceded by a less noticed inspiration of exceptional energy and depth. These interruptions of the ordinary respiratory movements involve an unusually energetic action of the large muscles by which the chest is expanded, those which secure the contraction and so the descent of the diaphragm, and those by the action of which the ribs are elevated. The production of the sounds by the spasmodic expiratory movements shows that the glottis is partially closed. As to the quality of the sounds, Professor Sully considers that it is explained by the particular arrangements at the moment of the cachination of the vocal apparatus, and more particularly the shape of the resonance chambers of the mouth. Familiar though we are with them, we should find it

[7] *An Essay on Laughter; its Forms, its Causes, its Development, and its Value.* By James Sully, M.A., LL.D., Author of *The Human Mind, Studies of Childhood*, etc. London: Longmans, Green, and Co. 1902. (Demy 8vo, pp. 68. 12s. 6d.)

hard to give an accurate description of the sounds of laughter..... Taking the laughter of the adult male, which is perhaps more frank and better pronounced, we find the more common forms of iterated sounds to range from the broad vowel sound *aw* (in "law") to the sharp *a* (in "bat"). The long *o* sound (as in "go"), involving the rounded mouth aperture, seems to me to be far less common. The same applies to the long *ee* and *ai* sounds, and those which seem to be most closely allied to them. These variations appear, so far as I can judge, to go with alterations of pitch. The broader sounds, for example, *aw*, seem naturally to ally themselves to the hardier deep-pitched explosion, the other to the more cackle-like utterances in the higher parts of the register..... These considerations will prepare us to find that the vowel quality of the sound varies in general with sex and age. According to Haller and Gratiolet the sounds of the laughter of women and children, which correspond with their higher vocal pitch, approach in vowel quality to the French *i* and *e*.

After considering the value of laughter in the economy of human life, Professor Sully goes on to say:

Vocal exercises, of which laughter is clearly one, have been recommended by experts from the time of Aristotle as a means of strengthening the lungs and of furthering the health of the organisms as a whole..... The learned Burton (b. 1577) quotes a number of physicians in favour of the custom of enlivening the feast with mirth and jokes. The reader may find reference to the salutary effects of laughter in the latest textbooks of physiology.

Authors who have written on laughter are largely quoted, and the failure to refer to Dr. L. Dugas' valuable work *Psychologie du Rire* (except in the footnotes) is due to the fact that that work appeared while Professor Sully's was in the press. Professor Sully touches on each type of laughter (so pithily classified by Steele under the heads of dimplers, smilers, laughers, grinners, and horse laughers). All these denominations of laughers still exist, although Dr. Sully assures us that laughter is declining in our country. He ascribes this to a growing refinement of manners in all classes, led by "high society," who prohibit loud laughter by their code of proprieties, and are aped by the middle classes. It is evident that studied laughter does not come straight from the heart, and so we run the risk that "the smile of God" may die out altogether.

> How soon a smile of God can change the world!
> How we are made for happiness—how work
> Grows play, adversity a winning fight.

NOTES ON BOOKS.

THE success which attended Mr. LOVETT'S *James Chalmers: His Autobiography and Letters*[8] is shown by the fact that in the course of a few months three editions were exhausted. A cheaper edition, which brings the work within the reach of all readers, has been issued and is now before us. Chalmers was from every point of view a remarkable man, whose personality attracted every one who met him. He was restless, impulsive, courageous, and thoroughly unconventional, though underlying his impulsiveness was a strong will and indomitable purpose. His vigorous personality attracted to him men of widely different characters, and it was this personal magnetism which caused him to go unharmed among cannibals and savages whom no one else dared approach. Much of the book is made up of letters and extracts from diaries of Chalmers. He went to New Guinea at an early age, and spent his whole life there with the exception of two brief visits to Great Britain. When he had returned to New Guinea from his second visit to England, treacherously, without warning, Chalmers was felled to the earth with a stone mallet in the island of Goaribari, together with another missionary named Tomkins. "Directly the heads had been cut off the bodies some men cut the latter up and handed the pieces over to the women to cook, which they did, mixing the flesh with sago. They were eaten the same day." "This closing scene at Dopima," his biographer adds, "is on the one side a cruel revolting tragedy; on the other it is a glorious close to a noble life. For the man who had faced death a hundred times the King of Terrors had no dread..... If in the last moment of life he was conscious of what was happening, the prayer on his lips was that of the Master: 'Father, forgive them; for they know not what they do.' The long, courageous, self-denying life, successfully spent in leading men out of darkness and savagery received its terrible but glorious coronation, when, in the horrific dubu of Dopima, there descended upon Tamata and his colleague (Mr. Tomkins) the bloodstained crown of martyrdom." The book is full of adventure, and deeply interesting. In it are three letters from Robert Louis Stevenson to Chalmers, written in 1890, characteristic and brilliant. There are also portraits of Chalmers and his two wives, and maps.

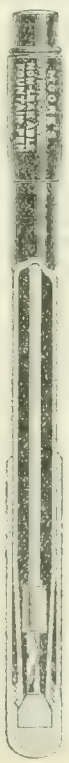
[8] *James Chalmers: His Autobiography and Letters.* By Richard Lovett M.A. Fourth Edition. London: The Religious Tract Society. 1903 (Cr. 8vo, pp. 511. 3s. 6d.)

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEDICAL AND SURGICAL APPLIANCES.

A Dressing Roll.—Dr. H. B. GLADSTONE (Sydenham, S.E.) sends us a description of a "khaki dressing roll" which he has designed. It is made by Messrs. Allen and Hanburys, and contains, he states, supplies of a variety of dressings, antiseptics, materials for skin cleansing and wound closure. It is intended for use in emergency cases and in daily practice, and provides a selection of sterilized dressings, etc., in a compact and portable form. The dressings are contained in white linen bags, with the names of their contents marked on them. These bags are placed in pockets reserved for them in the roll; and thus placed the dressings have every chance of remaining sterile. The whole roll may be sterilized when filled, or the bags may be sterilized before being placed in the pockets. The dressings are as follows: Sterile white and blue gauze, lint, boracic lint, and gutta-percha tissue, absorbent and brown wool, and wood-wool tissue; also bandages and a reel of antiseptic plaster. In addition to these dressings the following articles are lightly attached by rubber rings, at the spaces between the pockets: Bandage scissors, ethyl chloride, tubes of sutures, ligatures, drainage tubes and needles preserved in alcohol, antiseptic tabloids for preparing lotions, scrubbing brush and tincture of soap for skin cleansing (in a sponge bag), an iodoform dredger, bluestone, boracic ointment in a collapsible tube, and picric acid for burns. To keep the roll from being soiled when undone for use, it should be hung up on a wall by passing a loop at the top of it over a nail. It is hoped that this dressing roll may be an aid to correct wound treatment, and the application of antiseptic methods under adverse conditions, such as in emergencies and in treatment of wounds at a patient's house.

Fountain Pen.—We have had the opportunity of trying a fountain pen made by Moore's Non-leakable Fountain Pen Company, 23, Fore Street Avenue, London, E.C., for which it is claimed that it can be carried in any position in the pocket like a pencil case, and will not leak. We have used it in the ordinary wear and tear of work, and can say that the claim appears to be entirely justified by the performance. The construction of the pen is shown in the accompanying diagram. As will be seen, the cap screws on, which is rather an advantage, and when thus closed the pen may be placed in any position without, so far as we observe, any leakage whatever. When about to use the pen, the cap is screwed off and fitted on to the opposite end in the ordinary way; by giving the thimble, on which the maker's name appears, a slight twisting push the nib is carried out and the pen is ready for use. The only precaution which it appears to be necessary to take is to keep the pen upright when pushing forward or withdrawing the nib, and to do this gently. The management of the pen can be easily understood from the instructions, and once mastered it is easily manipulated. One sometimes wonders how anybody ever wrote at all before fountain pens were invented, and we are disposed to think that this pattern is the best yet designed. It can be had in various patterns and sizes, and a nib can be chosen to suit the taste and habits of the user. The price ranges from 12s. 6d. to 26s. 6d.



THE PASTEUR INSTITUTE OF INDIA.

By Major-General Creagh, C.B.

The number of people bitten every year in India by mad dogs, wolves, jackals, and other animals is very great, and for many years persons so bitten had either to take their chance, or go to Paris in the hope of saving their lives by M. Pasteur's treatment for the prevention of hydrophobia. Fortunately many of these people arrived in time, one of them being a son of the sergeant-farrier of my old battery, who was bitten by a dog undoubtedly mad. But the time lost on so long a journey was a source of great danger, especially to any one bitten on the head, face, or neck. Moreover, the fare to Paris and back and subsistence while there amounted to a very considerable sum; for instance, each soldier sent for treatment used to cost the Indian Government Rs. 1,700. However, a remedy for evils of this kind is generally sought and found after a while, so at length all thinking people became convinced that India should have an institute of her own. Accordingly, a strong Central Committee was formed, about Rs. 83,000 were collected from various sources, and a scheme was drawn up and submitted to Government. But, probably owing to the distractions caused by famine, plague, and frontier wars, the project was shelved, the money already collected was invested, and nothing more was done until 1899. The question was then revived, many municipalities and private individuals subscribed, the Indian Government promised Rs. 95,000 a year in consideration of having their soldiers treated; and, finally, on March 13th, 1900, Major D. Semple, M.D., R.A.M.C., was empowered by the Central Committee, of which Surgeon-General Taylor was then President, to start and organize an institute in India.

The man to carry out a work of this kind and to overcome the numerous difficulties inseparable from a new undertaking should be somewhat of an enthusiast, and the Central Committee were very fortunate to find such a man ready to their hand; for Major Semple is not only an officer of the highest scientific attainments, but also an enthusiastic student of bacteriology in all its branches, having been Assistant Professor of Pathology at the Army Medical School, Netley, for more than five years.

He has, moreover, the rare gift of imparting his knowledge in the clearest manner, and of making his subject intensely interesting. Indeed, a visit to the institute is a memorable experience. And while listening to this earnest man as he shows you how the work is carried on, and explains the whole process to you, the conviction is borne in insistently on your mind that of all the arts that of healing is the noblest, and that a man who, like Major Semple, devotes his time, his thoughts, his energies—his whole life—to the alleviation of human suffering, is worthy of all honour and of the highest praise. In short, among the many bright records in the history of philanthropic enterprise, his holds a prominent place, not only on account of the difficulties to be contended with and the attainment of the object which was primarily contemplated in the undertaking, but by reason of the sympathy and kindheartedness with which the work is performed and the patients are treated.[1]

Meanwhile, there was much discussion as to where the institute should be established; but finally Kasauli was decided upon.

Kasauli, the summer head-quarters of the district (where I have been commanding for some time past), is a cantonment in the Simla hills. It has many advantages as the site of an institute, the most important, perhaps, being a temperate climate and easy access from the plains, together with a good hill road, only nine miles long, connecting it with the railway at Kalka. Besides, there is a large station hospital kept up for the use of the troops who form the dépôt there from March to October; so that bitten soldiers who come up can be conveniently accommodated while going through the treatment. There are also two hotels, some boarding houses, and a very comfortable club with residential quarters.

Thus persons of all classes can now easily find accommodation, as a charitable native gentleman—Lala Ghunta Mian—living in Kasauli presented a large house in the bazaar, containing sixteen rooms, for the accommodation of poor natives irrespective of caste; and Khan Bahadur Dhanjibhoy, C.I.E., of Rawal Pindi, has very generously offered to supply blankets, warm clothing and food, if necessary, at his own expense for this class of patients, who often arrive during the winter months with little clothing and no means to buy any.

[1] This is amply attested by the number of grateful letters which Major Semple receives each year from those he has cured.

The building used as an institute is a large bungalow, formerly a private residence, situated on a spur to the NW. of cantonments, and between 800 ft. and 900 ft. below the general level (6,400 ft.) of the station.

It is a one-storied house, containing eleven rooms with extensive grounds and outhouses. The rooms are allotted as follows:

Library and office.
A dark room for drying rabbits' spinal cords.
An experimental room.
A room where inoculated animals are kept for observation.
A surgery where bites are dressed.
Incubating rooms where bacteria are cultivated, etc.[2]
A room for the preparation of media, sterilization, and so on.
A waiting-room.
An inoculating-room.
A room for microscopic work.
And a store room.

The institute was opened on August 9th, 1900, and I believe has the distinction of being the first institute of the kind in the British Empire. So far it has worked admirably, and the results have been most satisfactory in every particular. During the first year (ending August 9th, 1901) 321 patients underwent antirabic treatment; and in the second year (ending August 9th, 1902) 543 persons were treated, making a total of 864 in two years. It must be added that the deaths which occur are not considered failures when there has been delay. That is to say, when the nerve-centres of the patients have become invaded by the virus of the animal that bit them before treatment was begun. The way the matter stands is this: When the virus of rabies introduced by the bite of a rabid animal reaches the nerve-centres (brain and spinal cord) it has an incubation period of fourteen days, that is, fourteen days elapse before the first symtoms of hydrophobia set in. The object, therefore, aimed at in treating a bitten person is to produce immunity against rabies before the virus has time to reach the nerve-centres; and when that can be accomplished the failures rarely exceed 1 per cent., and are sometimes much less. Indeed, of late public interest has been so aroused by the satisfactory results attained at Kasauli, that it has been suggested that a branch institute should be established at Ootacamund, or some other central place of the kind, and also that the various railway companies should allow poor people when coming for treatment to travel free over the lines on producing a certificate, duly signed, to the effect that they had been bitten by a rabid animal.

The period allotted to the daily inoculations, called "the treatment," is from eighteen to twenty-one days, and all the statements and details connected with the process are based upon experiments made with rabies virus on dogs. The treatment is entirely prophylactic, and consists in the daily hypodermic inoculation of rabies virus, which, it must be explained, means the unknown entity that causes rabies, and which is now generally believed to be a living germ, though as yet it remains undiscovered.[1]

In the preparation of this vaccine it is found necessary to use the spinal cords of rabbits which have succumbed to rabies after inoculation with Pasteur's "fixed virus," because in these cords when dried and pulverized the virus is present in its strongest form. But, luckily, whilst they are being removed the little animals are under the influence of ether, and consequently suffer no pain. Moreover, after the operation has been performed they seem as well as ever, and remain so for six days; but on the seventh paralysis sets in, and on the tenth or eleventh they die, quite painlessly.

A large amount of general bacteriological work is carried on at the institute in addition to antirabic treatment, and this work consists chiefly in the preparation of antityphoid vaccine, etc., and in the diagnosis of diseases. During my last visit to the institute a native came for his afternoon inoculation, and I saw the whole process, which was most interesting, carried through. The patient was undergoing the intensive treatment, that is, the strongest form, because he had been badly bitten on the face and had waited a fortnight before coming for treatment. But after the emulsion was

[2] In one of these rooms many contrivances connected with the work are shown. For instance, how to make pipettes (for holding specimens of blood, etc.) out of glass tubes by the aid of a blow flame; how to make hydrogen gas for use in the cultivation of tetanus and other anaerobic germs; and how the bacilli of plague, diphtheria, and typhoid, etc., look when under a powerful microscope.

[1] Very interesting experiments are now being made (August, 1902) in connexion with the disease called "surra," so fatal to horses and mules; and Government has recently given a lakh of rupees to have stables erected, etc., in order to facilitate this useful work.

made, the inoculation was performed in such a short time, a few seconds, that the man seemed much surprised himself when told that it was all over.

The staff consists of the following officers in addition to the Director:—Captain Harrison, R.A.M.C.; Captain Smith, I.M.S.; Assistant-Surgeon C. J. Fox; and Hospital Assistant Nanak Chand, a body of men to whom it is not too much to say that many hundreds of persons—men, women, and children—in India owe their lives.

*** An account of the work of the institute during the first year of its existence was published in the Journal of November 16th, 1901, page 1746, and it may be interesting to add to Major-General Creagh's article some preliminary particulars with regard to the work of the institute during the second year of its existence. The particulars are unofficial, but may be accepted as substantially correct, although the publication of the official report of the director must be awaited for full details.

As is the case at all other Pasteur institutes for the preventive treatment of hydrophobia, the cases which present themselves must be divided into several classes. There are, first, those bitten by animals proved to be rabid, either by experiments or by the development of the malady in other persons or animals bitten by them; secondly, there are those bitten by animals certified by a veterinary surgeon to have had rabies; and, thirdly, those bitten by animals suspected of rabies. Further, it is well known that the risk of infection is least if the bite is inflicted through clothing, greater if on the exposed skin, and greatest if on the skin of the head or face.

Altogether 543 patients, falling into one or other of these classes, were treated during the second year, as compared with 321 in the first year. Of these, 215 were Europeans and 328 natives. The animals which inflicted the bites were in the large majority of cases dogs, but there were nearly a hundred cases bitten by jackals, and a few in which the bite was inflicted by a horse or cat. Of the 543 persons treated to a conclusion, 5, or 0 92 per cent., were failures—that is to say, they succumbed to the disease. All 5 were natives. Two patients, both natives, developed the disease during treatment, and 4 others contracted the disease within fifteen days after the last inoculation; in all these 6 cases, therefore, the nerve-centres had been attacked by the virus of the animals which inflicted the bite before treatment was completed, and they therefore cannot be reckoned as failures.

The number of persons bitten on the exposed skin of the head or face was 40, and no death occurred among them, the number of persons bitten on the bare skin of other parts of the body was 427, and of these 5 died, a percentage mortality of 1.17; there were 76 cases in which the bite was inflicted through the clothing and none of these died. Of the 215 Europeans treated to completion not one succumbed. Among the 328 natives 5 deaths occurred, the majority among a set of cases in which the bite was inflicted by jackals. The treatment given was the same as that for dog-bites of equal severity, but the results were unsatisfactory; since this experience, all cases of bites by jackals have been treated by an intensive method, and not a single death has occurred among the 64 cases thus treated.

The better results obtained among Europeans is perhaps due to the fact that they as a rule apply early for treatment, whereas natives often delay. One reason for this delay is the expense of the railway journey, and as has been pointed out recently in the House of Commons, it would be a great boon to the poorer classes of native patients if the railway companies in India agreed to grant them a free pass to and from Kalka the terminus for Kasauli; the abuse of the privilege could be prevented by a certificate from a medical officer to the effect that the case was one suitable for treatment at the Pasteur Institute.

In addition to the treatment of hydrophobia a good deal of miscellaneous clinical research is carried out at the institute. Serum diagnosis was applied to a number of cases of typhoid and Malta fever, blood was examined for malaria, sputum for tubercle, and various specimens for the plague bacillus. Antivenene of the same strength as that now made by Dr. Calmette, of Lille, has been prepared, and is, we believe, ready for issue. The surra disease also has been investigated, and, in addition to the routine examination of the central nervous system from animals suspected to be rabid, researches in connexion with the treatment of hydrophobia, especially of late cases, has been undertaken.

STATISTICS OF THE INFECTIOUS DISEASES HOSPITALS, GLASGOW.

The report of the Belvidere Hospital, Glasgow, for the year ending May 31st, 1902, has been issued. In an introductory note Dr. Brownlee insists on the difficulty which the close relation of the fever and small-pox hospitals causes, and he is evidently anxious that the two institutions should be quite apart from each other. The total cases treated at Belvidere during the year were 2,977. The fatality-rate was 10.1 per cent., and the average length of residence 35 8 days. This is 6 days less than in the previous year; the difference is due to the large number of small-pox cases in the latter year.

Errors in Diagnosis of Small-pox.

In an appendix containing Dr. R. S. Thomson's report on small-pox, the number of errors of diagnosis by medical men sending in cases is recorded as only 15. The small-pox cases were 481, so that the errors are very little more than 3 per cent. It will be recollected that in London in the recent epidemic the errors were about four times as numerous. In London, however, medical practitioners knew that their diagnosis would be revised at the wharves before the cases were sent down the river to the hospitals at Long Reach, and they were thus rather encouraged to notify doubtful cases. Also, in Glasgow an outbreak about ten years ago gave opportunity for becoming better acquainted with the diagnosis of small-pox.

Seventeen Years' Statistics of Scarlet Fever, Measles, and Whooping-cough.

Interesting statistics are given by Dr. Brownlee regarding scarlet fever, measles, and whooping-cough as removed to hospital in 17 years from 1886 onwards. In scarlet fever the percentage of total cases sent to hospital has ranged from about 60 in the earlier years to over 80 in recent years. The total admissions have been 22,033. Measles is not notifiable, and its age incidence in Glasgow is much affected by immigration from rural districts where the disease rarely appears. Of measles admissions over 18 years old 95 per cent. were in persons of country extraction. The total cases in the tables are 12,462. In some measure these remarks apply also to whooping-cough, of which the cases admitted since 1886 have been 4,965.

Age Incidence.

Of every 1,000 cases of scarlet fever 13 were under 1 year old, while of every 1,000 measles cases 66 were under 1 year, and of every 1,000 whooping-cough cases 137 were under 1 year. In scarlet fever the sixth year of life gave the greatest number of cases, and in the other two diseases the fourth year; and scarlet fever prevalence is prolonged much more into later years than is the case with measles and whooping-cough.

Sex Incidence.

As regards sex, females have more than their share of all three diseases; but in the first three years of life males have more scarlet fever cases, and in measles male preponderance continues till 5 years of age. In whooping-cough, females have most of the disease throughout.

Fatality-rates at Different Ages.

Concerning the fatality of the disease at different ages, it is noted that in all three diseases the fatality is low during the first half-year of life, and that the maximum is found in the second year, after which it falls progressively. In measles there is a temporary rise at puberty. Scarlet fever has its minimum at puberty, but "after this is passed a gradual rise takes place, and the character of the disease in adult life approaches that of the later period of childhood." It would be interesting to compare this Glasgow experience with that of other places.

School Attendance and Scarlet Fever.

In discussing the monthly variation of scarlet fever prevalence and age incidence, Dr. Brownlee argues that school attendance has not much influence. It is true that a rise in scarlet fever begins in the middle of August, after the Glasgow school holidays are over, but this rise is not specially characteristic at the age-period 6 to 12 years, which practically covers elementary school life; and "though the amount of scarlatina varies very markedly with the season, yet the age distribution is little, if at all, influenced, the only really noticeable difference being the greater number of persons of 12 years and upwards who are attacked by scarlatina during

the winter months than in the warmer season," though even this variation is so slight as to be perhaps accidental. July is the Glasgow holiday month, and the difference in the attack-rate of persons of 6 to 12 years of age between July and the three succeeding months is only 2 per cent.

THE BASIL AND THE NEEM.

Captain S. P. James, M.B.Lond., I.M.S. (Lahore, Punjab, India), sends us the following interesting notes in reference to the editorial article published in the British Medical Journal of January 31st, under the title of "A Pot of Basil," on Mr. Shipley's note in *Nature*, to the effect that there is a widespread belief among natives of Africa that the presence of a certain plant (Ocimum viride, Willd.) in a room drives away mosquitos. Captain James writes as follows:

In India several species of the same plant occur, and the following notes, most of which are extracted from Dr. Watts's *Dictionary of the Economic Products of India*, may therefore be of interest:

The leaves of Ocimum gratissimum (Linn.)—the shrubby basil—are said to diffuse a stronger fragrance than do those of any other member of the genus. This plant is cultivated in gardens throughout Bengal, Chittagong, East Nepal, and the Deccan Peninsula, and extending into Ceylon, and in Western India it is said to be a common wild plant. In all these parts mosquitos are very troublesome, but the plant has not acquired any such reputation for driving away mosquitos among the natives as is attributed to it in Africa. The juice of the leaves is used as a remedy for gonorrhoea and in the treatment of rheumatism and paralysis.

Diaphoretic properties are attributed to several species of this plant, and the root of Ocimum sanctum—the sacred basil—is given in decoction as a diaphoretic in malarial fevers. Of Ocimum canum, which is usually abundant in native gardens in India, and of which Dalzell and Gibson say that Africa is supposed to be its native country, the Rev. A. Campbell says: "During fever, when the extremities are cold, the leaves made into a paste are applied to the finger-nails and toe-nails."

In India the tree which is supposed to have most effect in driving away mosquitos and fever is the "neem," or margosa tree. It belongs to the natural order *Meliaceae*, and comprises five species. It is a large tree common wild, or more often cultivated, throughout the greater part of India and Burmah. Almost every product of this invaluable tree is largely employed medicinally in India. The value of the bark in the treatment of periodic fevers is noticed by many old writers, but it was first prominently brought forward in 1803 by Dr. D. White of Bombay. Later Dr. Cornish and others carefully examined and tested it, and the result was to the effect that margosa bark is nearly as effective in the treatment of intermittent fever as cinchona.

The "neem" tree is generally supposed by its presence to materially improve the health of a neighbourhood. Believed to be a prophylactic against malarial fever, it is frequently planted near buildings and villages. Even Europeans believe in this property to a considerable extent, and villages surrounded by neem trees are frequently cited as proverbially free from fever when neighbouring villages suffer severely. F. Parker, M.D., says: "Native travellers whenever possible sleep under the *ném* at night time, as the tree is said to ward off fever."

It is also a popular belief that a leper can be cured if he lives exposed under a *ném* tree for twelve years. The leaves are largely used in India to protect clothes and books from the ravages of insects, but in this respect they are inferior to camphor.

Although it is extremely doubtful whether the popular belief that this tree keeps off mosquitos and fever has any foundation in fact, the leaves, when dried and burnt, are certainly a very effective means by which mosquitos may be killed, and are far superior to the burning of sulphur for this purpose. Experiments in this connexion have been made in Mian Mir Cantonment.[1] The dried leaves burn slowly but effectively, giving off an acrid, irritating smoke which effectually kills all mosquitos in a closed room in about half an hour. A quantity of sulphur burned for the same time has no effect whatever on the mosquitos.

[1] A report on the antimalarial operations at Mian Mir (1901-1903), by Captain S. P. James, I.M.S. Published at the office of the Superintendent of Government Printing, Calcutta.

INDIAN SANITARY REPORTS FOR 1901.

Burmah.

The census has revealed an increase of 21 per cent. in the population of Burmah during the past decade. How much of this increase is due to excess of births over deaths, and how much to excess of immigration over emigration, it is impossible to say. It is probably due to both causes. The year 1901 was very healthy. The birth-rate was 32.07 and the death-rate 21.74; but registration is still far from perfect, and comparison with previous years is vitiated by the new census basis. Cholera mortality was low. It is recognized that the disease is endemic in Burmah. Small-pox deaths were below the average, and the rates for fever and bowel complaints less than usual. Five cases of plague were imported into the port of Rangoon, but the disease did not spread. Municipalities and other bodies spent considerable sums on cleansing and other sanitary purposes, and the sanitary engineer gives a goodly list of water supply and drainage projects under construction or consideration. The report is submitted by Colonel C. C. Little, I.M.S., Sanitary Commissioner.

Assam.

The report for 1901 submitted by Colonel C. W. Carr-Calthorpe, M.D., indicates some improvement in the public health. The birth-rate of the year was 35 98, and the death-rate 27.85, both comparing favourably with previous years and with other provinces; but registration is acknowledged to be very defective, and measures are being adopted to improve it. The reduced death-rate was largely, if not mainly, due to the subsidence of kala-azar, the mortality from which has been much less in the Brahmaputra valley, but the disease has made its appearance in the thickly-populated Surma valley. In the district of Nowgong the census has disclosed a decrease of 24.8 per cent. of population, due to the ravages committed by this disease. Cholera was, on the whole, less prevalent and fatal; but tea-garden coolies suffered in excess of the general population. Small-pox was slightly in excess. Inoculation is blamed for an outbreak in Sylhet. Fevers were about the average, which in this province is high—16 per 1,000—and the mortality from bowel complaints was comparatively low. There are no large towns in Assam, and large sanitary works are not required. Minor sanitary business is as well attended to as the circumstances of a somewhat backward province allow.

Madras.

The sanitary report includes the reports of the Sanitary Board, the Sanitary Commissioner (Lieut.-Colonel W. G. King), and the sanitary engineer. There was a deficiency of rain in some districts and the prices of food-grains were excessive in consequence of this and of the increased demand for food-stuffs in other provinces. The registered birth-rate was 25.1, and the death-rate 21.3. Both are considered to be below the mark, and an extension of compulsory registration has been ordered. Cholera prevailed severely, and caused a mortality of 2.2. The town of Madras suffered badly. Small-pox mortality was also high; 3,960 cases of plague were reported, with a mortality of 77 per cent., mostly in Mysore. Compulsory evacuation is considered the "sheet anchor" of prevention. The "passport system" for the purpose of watching contacts appears to have acted well. Fever mortality was average. Dr. King gives reasons for holding that enteric fever is more common among natives than is generally supposed; he also finds that an improved water supply is followed by a diminution of malarial fever. Bowel complaints were not in excess. Municipal towns showed a marked preponderance in this respect. Several important works for the supply of water are in progress and others in prospect. The report of the sanitary engineer indicates commendable activity in this direction.

Hyderabad Assigned Districts.

During the ten years 1891-1900 the population of these districts has undergone a decrease of 4.5 per cent owing to the famine. The year 1901 was a healthy one. The birth-rate was 30.8 and the death-rate 27 6 per 1,000. Measures are being taken by means of house-to-house inspection to verify the accuracy of the registers. There were only 43 cases and 16 deaths from cholera. The small-pox mortality was moderate, and deaths by fever and bowel complaints below the average; only 1 case of plague occurred during the year. Municipalities spent 36 per cent. of their income on sanitation. The report is submitted by Lieutenant-Colonel C. E. Swaine, M.D., Sanitary Commissioner.

A Report
ON
THE MILK SUPPLY OF LARGE TOWNS:
ITS DEFECTS AND THEIR REMEDY.

I.
INTRODUCTORY.

Milk is a delicate and unstable fluid, yet it is the only animal product which is habitually taken raw unless we except oysters, a food also under suspicion of being sometimes a disseminator of disease. It has long been recognized that typhoid fever may be disseminated by milk, and more recently there have been grounds for believing that diphtheria, and perhaps also scarlet fever, may be distributed in the same way. Recently a great deal of attention has been given to the risk of the production of tuberculosis in mankind by the consumption of the milk of tuberculous cows, a risk which, as is well known, Professor Koch considers to be non-existent. The danger, whatever its magnitude, arises in connexion only with the milk of cows having tuberculous disease of the udder, and even if it were proved conclusively that the bacillus of bovine tuberculosis is absolutely innocuous to man, no one will seriously propose that milk should be taken for human consumption from other than healthy cows.

But, granted that this condition be observed, there are still dangers connected with the use of milk as it is now commonly distributed by the trade and consumed in large towns. A large proportion of the fatal cases in the murderous epidemics of infantile summer diarrhoea are with good reason attributed to the consumption of milk in an infective state.

These dangers are well known, but owing to the supineness of the public are permitted to continue.

Milk may be deliberately adulterated by dishonest traders, but the sanitary authorities of the cities and boroughs where it is distributed have power to deal with such adulterations; numerous prosecutions are, in fact, instituted yearly for the sale of milk which does not reach the official standard—by no means exacting. Milk may be "faked" by adding condensed unsweetened milk diluted with water to fresh milk in such proportions that the final mixture distributed to customers does not fall below the official standard, a falsification more difficult to detect. But apart from dishonesty and the application of "trade secrets," milk from a country farm, though not adulterated, may by the time it reaches the consumer's table or the infant's bottle be a highly dangerous liquid. This is due to want of ordinary cleanliness, and to the carelessness with which any and every operation, from the milking of the cow to the delivery of the milk, is too often carried out. The cow's udders are soiled and the milker's hands are dirty, but neither are washed. The milk pail and churn are inefficiently cleansed. The milk is insufficiently cooled or not cooled at all at the farm. The churns are perhaps left at a roadside station on the platform for hours in the sun. The cans are often not securely closed so that dust can enter, and are commonly not sealed, so that they may be tampered with by dishonest or careless persons. They may opened at the railway terminus in a careless way to allow their contents to be measured. Further opportunities for contamination occur during the manipulation of the wholesale dealer and the small retailer. It is not wonderful that the milk finally delivered swarms with bacteria indicating for the most part excrementitious pollution.

All these dangers can be enormously diminished by reasonable precautions, which experience has proved can be enforced very much to the benefit of the consumer and without unduly hampering the trade.

SOME BACTERIOLOGICAL CONSIDERATIONS.

It would be foreign to our present purpose to go at any length into the subject of the bacteriology of milk. The literature is already very extensive, and is growing rapidly. Some general observations are, however, necessary in order that the risks of bacterial contamination to which milk is exposed before it reaches the consumer may be called to mind.

The bacteria most characteristic of milk are those which produce the lactic and butyric acid fermentations. Of the lactic organisms which for the most part do not form spores the commonest are the bacillus acidi lactici and the oïdium lactis. Most of the organisms producing butyric acid fermentation are sporing species.[1] According to Klein[2] milk received and brought in a sterile vessel from a shop, and kept at 37° C., may the next day, or at latest after two days, "be completely clotted and sour, due to the growth and activity of bacillus coli, or it may be decomposed by proteus vulgaris, or bacillus mesentericus, or it may be full of gas, clotted with a large amount of clear whey caused by the growth of the anaërobic bacillus enteritidis sporogenes."

Other microbes producing characteristic effects such as bitter milk or viscid milk occur, and in milk from cows with inflammation of the udder or parts of the udder pyogenic organisms such as the staphylococcus pyogenes aureus, and the streptococcus pyogenes, s. brevis and s. longus, may be present. Whether these organisms are ever present in any considerable number except in the milk of cows with mastitis does not seem to have been proved, but they may be present in abundance in purulent matter in milk. A specific microbe has been described as the cause of a specific purulent inflammation of the udder by Nocard and Mollereau, who applied to it the name "streptococcus mastitidis." Klein has proposed the name "streptococcus radiatus (pyogenes)" for a microbe associated with a sero-fibrinous mastitis in the cow, and producing abscess in guinea-pigs. Many other organisms frequently found in milk might be enumerated, but it must suffice to refer again to one other, the bacillus enteritidis sporogenes found by Klein in the milk consumed by patients who suffered in an epidemic of diarrhoea at St. Bartholomew's Hospital and in their evacuations, and by Andrewes in other cases of diarrhoea admitted into that hospital. It has been found also in water, sewage, manure, and in other samples of milk. Hewlett[3] states that it is generally to be found in normal dejecta and in dust, and that it is probably ubiquitous. It seems probable, however, that it is evidence of faecal contamination. It is pathogenic to guinea-pigs.

We do not propose to enter here upon a discussion of the occurrence of the infectious agents of tubercle, typhoid fever, cholera, or diphtheria in milk.

Conditions influencing the Number of Bacteria in Milk.

Freshly-drawn milk contains certain germicidal substances which under favourable circumstances, that is to say, when the milk is kept cool and free from gross contamination, will check the development of bacteria, and even sometimes diminish their numbers. When the temperature of the milk is above 50° F., or when the contamination of the milk is gross, the power of the germicidal substances is quickly exhausted.

The whole of the milk drawn at a milking is not sterile, but the number of bacteria is small, and they are contained almost exclusively in the part of the milk first drawn. It is probable that, in the intervals between milking, bacteria on the teats grow into the milk ducts, and are washed out at the beginning of milking. Experiments made by Stone for Rotch[4] show that milk drawn with minute antiseptic precautions both as to the milker's hands and as to the cow's teats may be absolutely sterile after the udder has been half emptied.[5] We cannot ask the ordinary milker to dress himself in a freshly-boiled white suit and cap, to have his hands and arms thoroughly disinfected with a 1 in 1,000 mercury perchloride solution, to wash the cow's udder, teats, flanks, sides, groins, and abdomen with the same solution, to dry these parts with a freshly-boiled cloth, and to draw the milk into carefully-sterilized bottles, as did Dr. Stone for the

[1] Hewlett, *Manual of Bacteriology*, p. 485. London. 1902.
[2] *Journal of Hygiene*, vol. i, p. 79.
[3] Loc. cit. p. 331.
[4] Rotch, *Pediatrics, the Hygiene and Medical Treatment of Children*, London, 1896.
[5] The same rule appears to hold good in the human female.

purpose of this scientific experiment. But the experiment is worth remembering as proving how little the cow is responsible for the extreme degree of bacterial impurity often to be discovered in the milk retailed in large towns.

Refinements of this kind and degree are in fact unnecessary. What we have to aim at is, to quote the words of Dr. Rotch,[5] milk "which, while comparatively sterile, has not been sterilized." That this is not an unattainable ideal is now well established. That it is seldom or never attained is true; that it is commonly departed from so widely that the milk actually consumed, especially in the summer months, literally teems with bacteria is a matter of serious consequence to the public health.

Professor Hallock Park, Assistant Director of the Research Laboratory of the Department of Health of New York City (the Health Department of London, it may be observed in passing, has no research laboratory), published recently[6] a very instructive report on the question whether the great bacterial contamination of the milk of cities can be lessened. His conclusion is that it most certainly can without putting any undue strain upon the trade.

His researches show, as might have been expected and as other investigators have shown, that the number of bacteria in any given sample of milk varies with the cleanliness observed in the cowsheds and during the process of milking, and with the temperature at which, and the length of time for which the milk has been kept before it is submitted to bacteriological examination. The greater the cleanliness of cow, milker, and vessels, the shorter the time, and the lower the temperature, the fewer the bacteria present.

The table given below, constructed from more detailed statistics given by Dr. W. H. Park, shows the number of bacteria per c.cm. under various circumstances, and illustrates the effect of the influences just enumerated. All the results are the averages of numerous observations. Milk obtained under the heading A in the table was from cows which had been roughly cleaned and placed in clean barns before milking. The long hairs on the udders were clipped and the udders wiped; the hands of the milkers were washed and dried, and the pails, which had small (6 in.) openings, were thoroughly cleansed and sterilized before use. In the case of B, the milk was taken during winter in well-ventilated, fairly clean, but dusty barns. Visible dirt was cleaned off the hair of the udder before milking, and the milker's hands were wiped but not washed. The milk pails and cans were clean, but the straining cloths dusty. In the case of C, the milk was taken from cows in the ordinary way; the ground was covered thickly with manure, and the cows were more or less visibly dirty. The teats were cleaned slightly by running the unwashed hands over them once before milking. The pails and cans were thoroughly clean, but not sterilized by heat. The railway samples were taken in March, when the average air temperature of the previous twenty-four hours had been 50° F., and much of the milk had travelled 200 miles. The milk from the shops was obtained in the morning.

In another experiment the rate at which bacteria developed at various temperatures in milk obtained under the best conditions and in the ordinary way was studied. The results after twenty-four hours were as follows:

	Temperature	42° F.	50° F.	55° F.	60° F.	68° F.	86° F.
Best conditions	...	2,600	11,600	18,800	180,000	450,000	1,400,000,000
Usual "	...	43,000	89,000	187,000	900,000	4,000,000	14,000,000,000

When received the milk taken under the best conditions contained 3,000 bacteria per c.cm., that taken in the usual way 30,000.

Mr. Pakes, then Demonstrator of Sanitary Science and Bacteriology at Guy's Hospital, and now Analyst and Bacteriologist to the Transvaal Government, in a paper read before the Society of Medical Officers of Health in January, 1900, on the application of bacteriology to public health,[7] wrote as follows:

"For the purpose of enumeration, milk must be treated as sewage. I have examined many samples of milk, and have found the numbers to vary from 30,000 to 30,000,000 per c.cm. I have examined a few samples which were very carefully taken from the cow, and found only scores. Unfortunately I have never been able to examine milk taken under aseptic precautions direct from a healthy cow. My experience of the ordinary London milk has been very unfortunate, the average of many samples being between 3,000,000 and 4,000,000 per c.cm."

In commenting on his experiments Dr. Park states that while the majority of the bacteria met with in milk grew best at temperatures above 70°, he has found that 42 out of the 60 species he isolated from milk multiplied slowly even at 40° F. Professor Delépine has made a similar observation, pointing out that the change produced in a few hours in summer might occur in winter if the milk were kept for a long time. Dr. Park's general conclusion on this head is that "with only moderate cleanliness, such as can be employed by any farmer without adding appreciably to his expense—namely, clean pails, straining cloths, cans or bottles, and hands, a fairly clean place for milking, and a decent condition of the cow's udder and the adjacent belly, milk when first drawn will not average in hot weather over 30,000, and in cold weather not over 25,000 bacteria per c.cm. Such milk, if cooled to and kept at 50° F., will not contain at the end of 24 hours over 100,000 bacteria per c.cm. If kept at 40° F. the number of bacteria will not be over 100,000 after 48 hours. If, however, the hands, cattle, and barns are filthy, and the pails are not clean, the milk obtained under these conditions will, when taken from the pail, contain very large numbers of bacteria, even up to a million or more per c.cm." In New York, milk purchased in ordinary shops averages in the coldest weather over 300,000, in cool weather about 1,000,000, and in hot weather about 5,000,000.

PATHOGENICITY OF BACTERIA IN MILK.

It will be asked, perhaps, What evidence is there that the presence of large numbers of bacteria in milk—even such enormous numbers as are present in hot weather—is injurious to health? People have for generations been drinking milk obtained without any particular attention to cleanliness, for the milkmaid in her smart petticoat and apron and milk-white arms is a figment of the imagination of poets and painters, yet we survive. Yes, we survive—some of us. The death-rate from diarrhœa among infants under 1 year (per million living) was, according to the last decennial *Supplement to the Report of the Registrar-General for England and Wales*, 16,044.

The mortality produced among infants by epidemic diarrhœa

[5] BRITISH MEDICAL JOURNAL, 1902, vol. ii, p. 660.
[6] *Journal of Hygiene*, vol. i, p. 391.
[7] *Public Health*, vol. xii, p. 385.

Table showing the number of Bacteria in 1 c.cm. (17 drops) of Milk under various Conditions of Milking and Handling (after W. Hallock Park).

Conditions of Milking and Treatment of Milk.	Number of Bacteria. At or shortly after Milking.	After 24 hours.	After 48 hours.
A. Scrupulous cleanliness. { kept at 45° F.	4,333	2,766	10,583
{ " 45° F.-50° F.	4,550	4,500	
B. Cleanliness. Winter. Cooled to 45° F. within two hours	15,500	21,666	76,000
C. Cows dirty. Milk cooled to 45° F. within two hours { Winter	16,650	31,000	210,000
{ Summer	30,366	48,000	680,000
On arrival at New York Railway Terminus, 45° F. (average)		5,669,850	
As retailed. Midwinter { Tenement houses		1,977,692	
{ Well-to-do "		327,500	
" September { Tenement houses		15,163,600	
{ Well-to-do "		1,061,400	

The figures show the number of colonies developing in nutrient peptone agar in Petri plates kept—one set at 20° C. for four days, and another at 37° C. for one day, and at 20° C. for the following day. From 5 to 30 per cent. more colonies developed as a rule in the plates kept at room temperature than in those kept for twenty-four hours at 37° C.

is so large that the aspect of the vital statistics of that period of life would be entirely different were it possible to eliminate this factor. Moreover, the statistics show only the direct consequences of this infection, while there can be no doubt that its indirect effect upon the death-rate is very considerable, since an attack of acute diarrhoea often leaves behind a condition of general debility and impaired nutrition which, if it does not actually favour the development of other maladies, certainly makes the sufferer more prone to succumb to them.

The mortality from this cause is highest in warm weather. The curve lags a little behind the rise in the temperature of the air, but has been shown to follow very closely the rise in the temperature of the soil. A continuous period of hot weather is requisite to produce the full virulence of the disease, and it is doubtless for this reason that it is even more fatal in countries with a more constant and continuous summer than our own, as, for example, in the Eastern American States, where in many of the large cities "summer complaint" is a scourge still more serious than in this country.

That it is an infective disorder, and that the infection is contained in the food, that is to say in milk, is generally admitted, and the conclusion most generally accepted has been that the milk becomes contaminated in transit from the dairy to the purchaser, or during storage in the houses of the poor.

Bacteriological investigations directed to the examination of the organisms present in the alimentary canal in cases of epidemic summer diarrhoea have not yielded concordant or conclusive results. Their general effect has been to make it probable that bacilli of the colon group, but of varying degrees of virulence, are concerned in the epidemic diarrhoea not only of infants but of adults; that certain outbreaks are associated with the presence of the bacillus enteritidis sporogenes (Klein); and that some cases, probably not very numerous, and presenting distinct lesions, are due to infection by pyogenic organisms.

Professor Delépine has attacked the question from the other side, and has recently[8] brought forward direct evidence of the pathogenic properties of some of the bacteria often present in milk. He has examined the bacteria present in samples of milk shown to possess pathogenic qualities. A similar study of foods other than milk which have caused outbreaks of serious diarrhoeal illness has thrown light on the whole problem.

In the case of milk, if it were assumed to be the source of infection, it was evident that it might be contaminated by some disease of the cow, or during the various manipulations through which it passed between the cow and the consumer. Four stages may be distinguished: (1) milking and treatment in the dairy, (2) transit to the city, (3) collection, manipulation, storage and distribution by the wholesale and retail dealers, (4) storage in the house of the purchaser. Great importance has been attached to the danger of deterioration during the last stage. This view has had a depressing effect, for the difficulty of supplying means for the proper storage of milk, even if the knowledge and intelligence necessary to use them to the best advantage existed, has been obvious to all familiar with the conditions of life in the crowded poor quarters of great cities.

In an early stage of his research, which has been carried on during the last nine years, Professor Delépine obtained evidence that the cause could not be looked for in disease of the cow's udder, for of 100 samples of milk taken from such cows none produced in animals an acute infection rapidly fatal (24.96 produced tuberculosis), while of 100 samples of mixed milk from several cows at a farm, 19 produced such an infection. It is true that 38.5 per cent. of the unmixed milks (from a single cow) produced a chronic, not fatal, infection nearly as often as the mixed milks (40.38), but the milk had in all instances been kept without refrigeration for considerable periods before examination, and subsequent investigations showed that this was enough to give chance contaminations time to develop. Of specimens of mixed milk coming from a short distance, and examined for the most part within ten hours of milking, 75.68 per cent. were good, whereas of specimens from a long distance, and generally kept for from twenty-four to sixty hours or even longer before examination, only 39 per cent. were good; when the mean temperature in the shade was 55° to 60° not one of the samples from a long distance was good, whereas 88.8 per cent. of those from a short distance were. In both sets of specimens, however, the higher the temperature of the air the smaller the percentage of milks which could be pronounced good, so that from this point of view the two factors of time and temperature must be taken into account, for "what is produced in a few hours in summer may occur also in winter when the milk has been kept a long time."

These figures, while tending to eliminate disease of the udder in the cow as a cause of a pathogenic condition in milk, show that a great deal of the milk which reaches the town consumer, especially in warm weather, is already infectious when delivered. A feeding bottle will, if once used for such milk, perpetuate the infection unless thoroughly sterilized, and ordinary washing and rinsing will not do this.

The general conclusion, then, is that with milk obtained by the methods which are, unfortunately, those ordinarily followed a certain proportion of samples will be noxious, and that the longer milk is kept and the higher the temperature at which it is permitted to remain, the larger will be the proportion of noxious samples. The result is directly parallel to that obtained by Dr. Park in New York, who found that the number of bacteria present varied directly with these conditions. We are thus justified in drawing the general conclusion, at present, perhaps, rather of the nature of an empirical conclusion, that the larger the number of bacteria in a sample of milk the more likely is it to be capable of producing disease.

Professor Delépine,[9] however, takes us a step further, for he concludes that the changes in milk which give rise to the ordinary or common type of epidemic diarrhoea are generally due to bacilli belonging to the colon group, of which the B. coli communis (Escherich) and the B. enteritidis (Gaertner) are probably two extreme types. He believes that the varieties of most importance are those resembling the bacillus of Gaertner which do not produce permanent acidity, coagulation, or distinct smell when grown in milk.

We are thus brought to the point that the noxious condition of milk which is a cause of epidemic diarrhoea, and probably the chief cause of the epidemic summer diarrhoea of infants, is due to the presence of bacteria which are indicative of faecal contamination. Where does this contamination occur? At the farms and in transit, or in the houses of the consumers? The answer must be: In both. It therefore becomes a duty to guard against both sources of contamination. As to their relative importance, there is not at present agreement. But it is abundantly proved that the contamination may attain very serious importance, both as to quantity and quality, before the milk reaches the consumer's doorstep. Upon this point the results of Professor Park in New York and of Professor Delépine in Manchester are concordant and conclusive; the contamination may be, and usually is, great, and it may be dangerous to health.

In another article we propose to give some account of the conditions under which milk is obtained and forwarded to large towns, and to point out the numerous opportunities for contamination which exist, and might be greatly diminished or altogether avoided if reasonable cleanliness were observed.

(To be continued.)

[8] *Journal of Hygiene*, vol. iii, No. 1, 1903, abstracted in the BRITISH MEDICAL JOURNAL, 1903, vol. i, p. 457.

[9] *Journal of Hygiene*, vol. iii, No. 1, 1903.

SANITARY BETTERMENT IN WASHINGTON.—*American Medicine* states that at a recent meeting of the Washington Board of Trade a resolution was adopted authorizing its committees on public health to co-operate with the Board of Education of the District of Columbia for the improvement of the sanitary conditions of schools and the diffusion of information concerning contagious diseases. The Board recommends that Congress should provide for the medical inspection of schools in the District of Columbia, and appropriate 5,500 dols. for such purpose. It recommends the establishment in the District of Columbia of proper hospital accommodation for persons suffering from tuberculosis. It urges the Board of Health to use its best efforts to obtain the enactment of a law prohibiting spitting upon the sidewalks in the District of Columbia. It further invites the Committee on Appropriations in the Senate to include in the amount necessary for expense in the District of Columbia 35,000 dols. for the collection and disposal of ashes and other refuse from hospitals, apartment houses, restaurants, etc., and also 20,000 dols. to provide for collecting like refuse twice a week during the winter months from private residences instead of once a week as heretofore.

TYPHOID PLASMA FOR THE PREVENTION AND TREATMENT OF TYPHOID FEVER.

IT is believed by physicists that at the absolute zero of temperature, about − 272° C., all action between inorganic bodies would be suspended and all processes of life must cease. At the meeting of the French Academy of Sciences last Monday M. Moissan read a paper giving the results of an inquiry conducted by himself in collaboration with Professor Dewar. Professor Dewar produced liquid hydrogen in large quantities, and M. Moissan isolated fluorine gas in a state of absolute purity, and demonstrated that this most active element did not attack glass when perfectly free from moisture. Combining their results, the two experimenters sealed pure fluorine in a glass tube and immersed it in liquid hydrogen; the fluorine was first liquefied and then solidified, the point of fusion being − 233° C. The question was whether the two elements were inert at this temperature. The experiment to test this was dangerous. It was performed by breaking the fluorine tube in 100 c.cm. of liquid hydrogen; the result was a violent explosion with flame, which shattered the apparatus. It thus appears that at a temperature only 20° C. above absolute zero the reaction between fluorine and hydrogen is rapid.

Other experiments have shown that at the temperature of liquid air the vital processes of certain organisms are suspended, but not destroyed. Last August Dr. Allan Macfadyen, Director of the Jenner Institute, communicated to the Royal Society through Professor Dewar a paper[1] in which, in continuation of his previous communications, he stated that certain non-sporing forms of bacteria, including the typhoid bacillus, the bacillus coli communis, and the staphylococcus pyogenes aureus, when immersed in liquid air (about − 190° C.) for as long as six months, showed no impairment of vitality. The fresh growths obtained were normal in every respect, and the functional activities of the organisms were unaffected. As the organisms at this temperature must have been frozen solid, there is reason to believe that intracellular metabolism must have ceased as a result of the withdrawal of its two cardinal physical conditions, heat and moisture, and, as Dr. Macfadyen pointed out, it is difficult to form a conception of living matter in this new condition which is neither life nor death.

In another paper communicated to the Royal Society through Lord Lister last August, Dr. Macfadyen and Mr. Sydney Rowland pointed out that the specific toxin, which, it may be assumed on the analogy of other organisms, is produced by the typhoid bacilli must be either intracellular or extracellular. The common experience of bacteriologists proved that it did not exist in filtered cultures, but the possibility that this absence might be due to the unsuitability of the soil could not be ignored. In order to test this point the organism was grown on the actual intracellular juices of the intestinal mucous membrane, mesenteric lymphatic glands, and spleen obtained in a fresh condition from the ox or calf. In each case the intracellular juice was brought to the recognized degree of alkalinity and used as a culture soil under the following conditions: (1) Aërobically; (2) anaërobically; (3) with addition of normal human serum; (4) after heating to 55° C. for twenty minutes. After from four to six weeks' growth the organisms were filtered off, and the filtrate tested for toxicity in guinea-pigs. With the possible exception of one spleen juice, none of the fluids thus obtained exhibited any acute toxic power. It thus became necessary to search within the typhoid organism itself for the missing toxin. For this purpose the organisms were grown on ordinary beef-broth-agar, and after careful washing with distilled water were disintegrated in a mechanical contrivance at the temperature of liquid air. This course was taken to satisfy the conditions that (1) no chemical change should take place during the disintegration, and (2) the organisms could be disintegrated alone, without the addition of any triturating substance, the necessary subsequent removal of which might vitiate the composition of the resulting mass. If such a disintegrated mass be freed from whole bacilli (if present) and from other suspended and soluble particles by centrifugalization, an opalescent fluid results, which on inoculation into animals in small doses invariably proves toxic or fatal. It was therefore concluded that the typhoid bacillus contains within itself an intracellular toxin. The method of growing and washing the typhoid bacillus for these experiments was described by Dr. Macfadyen and Mr. Rowland some fifteen months ago.[2] The typhoid organism was grown for twenty-four hours in a flask containing nutrient broth and was then sprayed by an automatic arrangement on to the surface of agar set in flat rectangular bottles. A sufficient number of bottles thus prepared were incubated at blood heat for about thirty-six hours, when the entire surface of the agar was found to be covered with a good growth of the bacilli. This surface growth was washed off from the agar with a minimal amount of normal saline solution, and a quantity of thick emulsion of the bacilli was thus obtained. This emulsion was placed in a cylinder provided with a vertical median diaphragm, and so arranged that it could be rotated on its vertical axis at a very high speed. At the end of an hour the suspended organisms were found to be deposited in a closely adherent film on the inner side of the cylinder, the clear salt solution was siphoned off, and the adherent film of organisms removed with a spatula; if thought desirable the paste of organisms could be again emulsified in normal salt solution, and once more centrifugalized in order to free the micro-organisms completely from any adherent secretions or products. It was then found by experiments that the micro-organisms became so brittle at the temperature of liquid air that they could be triturated without the addition of sand, or any other substance, such as had previously been used.

The object which the experimenters had in view was to obtain from the bacillus the fresh unmodified cell plasma in its highest condition of physiological activity. As has been said, the trituration was originally performed with sand, and the plasma obtained by this method when injected subcutaneously or intraperitoneally in guinea-pigs was found to confer complete immunity against a lethal dose of typhoid bacilli. The protection lasted for a period of about four weeks; it was also found that another immediate effect of the injection of the cell plasma was the appearance of the agglutination reaction in inoculated animals. The blood serum of rabbits which had received one injection of the cell plasma was found at the end of the four weeks to have active specific bacteriolytic properties as regards the typhoid bacillus. The blood serum in doses of 0.1, 0.5, and 0.02 c.cm. caused the complete destruction of the typhoid bacilli in two hours when tested in the peritoneal cavity of a normal guinea-pig. In the same way the blood of monkeys similarly treated exhibited similar agglutinated and bacteriolytic properties.

In a paper upon the immunizing effects of the intracellular contents of the typhoid bacillus as obtained by the disintegration of the organism at the temperature of liquid air, read before the Royal Society on March 12th, Dr. Macfadyen has carried the matter somewhat further; he finds that by repeated injections of the immunizing substance thus obtained the blood serum of the animal is rendered both antitoxic and bactericidal. Further, it was found that if an animal inoculated with a lethal dose of the living bacteria were, after half the time had elapsed necessary to bring about death, injected with the protective substance, it recovered. It would thus seem that the cell plasma prepared in this way holds out hope of affording us both the means of preventing and of treating typhoid fever.

[1] *Proc. Roy. Soc.*, vol. lxxi.

[2] *Centralbl. f. Bakt.*, Bd. xxx, p. 755.

THE Pennsylvania Legislature has repealed the law which forbade the erection of hospitals in the more densely-populated parts of cities. This action will allow the benefaction of Mr. Henry Phipps (recently referred to in the BRITISH MEDICAL JOURNAL) to be carried out in Philadelphia in accordance with his original plan.

A PROPOSED LEPER COLONY IN THE WEST INDIES.—The Havana correspondent of the *Daily Mail* states that the Cuban Government is understood to have received proposals from a German scientific association, which is anxious to acquire the Isle of Pines for use as an international leper colony. As a condition to the transfer of the island the Association guarantees the care of all Cubans affected with elephantiasis and kindred diseases, thus relieving the Government of all expense in connexion with them. Representatives of the Association who have recently visited the Isle of Pines are convinced that the medicinal properties of the mineral springs near Nueva Corona are just what they had long sought, in connexion with a salubrious climate, for a place of retreat for lepers of the civilized nations of the Old and New World. We give this report for what it may be worth.

THE ASYLUM SERVICE OF THE LONDON COUNTY COUNCIL.

Some little time ago a letter was published in the British Medical Journal on the subject of the status and prospects of medical men in the employment of the Asylums Committee of the London County Council. The inference from that letter was that the service was not as popular as it should be, and that the more subordinate medical officers in particular had some ground for discontent.

The Asylums Committee, however, has for some time past been engaged in the reconsideration of all its regulations, including those more particularly affecting its medical staff; and we now hear that matters have so far progressed that the regulations as amended will shortly be laid before the Council for final review. This done and the formal approval of the Home Secretary obtained they will doubtless be promulgated for the information of all concerned.

How far the amendments will alter the existing circumstances of medical officers remains to be seen; but the asylum work of the London County Council has in other ways been so intelligent and active that it may be hoped that the amended regulations will succeed in making its employment the most popular and sought after, as it is already the most important, asylum service in England.

The Committee now has eight asylums under its management, with an aggregate of nearly 17,000 patients, besides some 3,500 attendants and other employés. The number of its medical staff is 48, including in the calculation the 8 superintendents, whose work, of course, is in the main administrative.

The work of an asylum hospital officer in all cases tends to be monotonous, and, when taken as seriously as it ought to be, is distinctly trying. Every officer, of course, has his annual leave, and this under the County Council is twenty-eight days. Whether this is a sufficient period of entire change may be a matter of opinion, but, in any case, it is certain that in all monotonous occupations occasional odd days off, independent of annual leave, are very desirable, and this is especially true where the workers live on the scene of their labours and outside society is not very readily obtainable. Such days of unexpected holiday do much to preserve that tone and vitality without which the best work is never forthcoming, and it should be in the power of superintendents to grant them with considerable freedom. Doubtless they already possess some authority for the purpose, and in well-managed asylums which are not understaffed there should be no difficulty whatever in exercising it. It seems open to question, however, whether the asylums of the London County Council can be considered sufficiently staffed. The average number of patients to medical officers appears to be 351, a large number for one man to take charge of. The calculation, moreover, takes into count the eight superintendents, whose work, as has already been pointed out, is largely administrative. In fact, in very large asylums, such as with one exception are all those of the London County Council, it must be very difficult, if not practically impossible, for the superintendent to take charge of any individual patients. The number of cases, therefore, ought more properly to be considered in relation to the assistant medical officers only, and on this basis the number in charge of each medical officer is well over four hundred. Besides this, in a large asylum there are always a certain number of sick among the attendants, and this again adds to the work. It is difficult, therefore, not to conclude that the L.C.C. asylums are understaffed. The returns from seventy other asylums of the same class show that the average number of patients to each medical officer is only 260, if superintendents are taken into count, but about 360 even if they are left out. In this case, however, they ought to be left in, since the majority of these asylums are small enough to render it possible for the superintendents to undertake a good deal of personal ward work. In whatever way, therefore, the calculation is made, the balance remains against the London asylums, and in the interests of efficiency it is to be hoped that it will be found that this point has been duly considered.

Another point, on which a reform, it is to be expected, will be found to have been effected, is that of the system of promotion. At present the prospects of a junior officer are practically confined to changes by death or other causes in the particular asylum to which he has originally been appointed. To the junior medical officer as time goes on, and when the novelty of receiving £150 a year has worn off, it must be unpleasant to think there are two men in front of him little older than himself before he can hope to rise to £180, two more between that and £220, and that before he can hope for the dignity of being the senior assistant with £300 a year, rising by increment to £400, he will have to see all the others out. The position of superintendent must seem altogether out of sight, but unless he attains to it he will eventually have to retire (and at length be free to marry) on a pension which at best will then only be about £255, and might be only about £160. One is not more certain than the other, for under present conditions any promotion is not a certainty at all. Good work, vacancies, and the tact and other qualities necessary to conciliate the good will of the Visiting Committee are all required.

The prospects before a junior officer are therefore somewhat discouraging. In a service of eight asylums with a staff of forty-eight medical officers this should not be the case. The whole service should be treated as one, and a junior officer have forty-seven chances definitely before him instead of five or six. After a certain number of years in one grade, promotion to a higher should occur irrespective of vacancies, if there is no fault to be found with a man's work, while encouragement to intelligent activity in clinical and other research should be distinctly offered by occasional promotions at even earlier periods. It is, of course, open to men to resign and apply for posts in asylums elsewhere, if not satisfied with their prospects, and in some asylums, but certainly not all, it would be considered a recommendation to have served in the large asylums of London. In any case it can hardly be considered to be to the advantage of London County Asylums that they should serve as training schools for general lunacy work. It is to be hoped, therefore, that the new regulations will prove to be such as will make the service one into which the best men will be anxious to be admitted and fully content to remain.

THE EPIDEMIC OF SMALL-POX.

There is still nothing good to say with regard to the small-pox existing in the provinces, but as regards Central London the number of cases reported lately has been very insignificant. According to the returns, indeed, there have been only 25 cases in all London since the beginning of the year, against over 2,000 in the provinces during the same period.

In Cheshire 8 or 9 cases have been recorded since the notice last week.

From Lancashire it is reported there have now been altogether 203 cases at Manchester, while the number of patients in the Liverpool hospitals is 310, and fresh cases continue to be reported in different parts of the county.

In Lincolnshire Grantham has had its first 2 cases.

In Nottinghamshire there seems to be a tendency to spread of the disease at Hucknall Torkard.

In Northumberland the hopes that the Matfen outbreak had been stamped out have been falsified by the occurrence of 3 fresh cases.

In County Durham there have been a few new cases.

In Leicestershire another tramp was found in one of the workhouses.

In Yorkshire the Brighouse district is reported to be now free, but other cases have occurred at Bradford, Huddersfield, Leeds, Dewsbury, Sheffield, and Barnsley. In Leeds it has been determined to arrange special vaccinating stations, it being admitted that the disease appears somewhat on the increase.

In Gloucestershire Evesham reports another case, and others are notified from Tunstall, Hanley, and Burslem.

In Shropshire fresh cases are reported at Cleobury Mortimer, Ludlow, and Wellington, but Shrewsbury now seems clear.

In Wales, amongst other cases at Cardiff is that of Dr. England, *locum tenens* at the workhouse. Brecon, it is hoped, is now free; but cases have occurred at Caerphilly and Llanddulas.

Metropolitan Asylums Board.—The hospital ships moored off Purfleet in the Thames are now to be removed after a service of eighteen years. During the time they have been there about 10 per cent. of the inhabitants of Purfleet are said to have contracted small-pox.

Hunterian Society.—We are asked to state that the Hunterian Society has decided to hold a discussion upon the present methods of treating consumption. The subject will be divided into sections, the discussions on which will be opened by recognized authorities. The meeting will take place at the London Institute, Finsbury Circus, on Wednesday, April 8th, at 8.30 p.m., and all members of the medical profession are invited to attend and take part in the discussions. There will be an exhibition of plans of sanatoria, and members of the profession willing to lend plans are requested to communicate with the Senior Secretary, 1, Victoria Square S.W., as early as possible.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1903.

Members of the British Medical Association are reminded that commencing with January 1st, 1903, the annual subscription is a uniform one of 25s., inclusive of the Branch, and that all subscriptions should be paid direct to the General Secretary, 429, Strand, London, W.C., and not to a Branch Secretary.

British Medical Journal.

SATURDAY, MARCH 21ST, 1903.

SECRET COMMISSIONS.

On the motion of the Lord Chancellor the second reading of the Prevention of Corruption Bill was carried in the House of Lords on March 10th, and it is thought probable that it will pass without amendment, and be sent to the House of Commons before Easter. The Bill, which is a very short one, penalizes the acceptance by any agent "corruptly," and without the knowledge of his principal of any gift or consideration for doing, or forbearing to do, any act, or for showing, or forbearing to show, favour or disfavour in relation to his principal's business; or for giving, or offering to give, any consideration to an agent as an inducement to do such act or show such favour; and, finally, for giving any false document so as to conceal the giving or receiving of bribes. The Bill defines "consideration" as valuable consideration of any kind; "agent" as any person employed or acting for another; and "principal" as including employer. Prosecutions will need the consent of the Attorney-General or Solicitor-General before being instituted.

In the short discussion which took place upon the second reading, the Lord Chancellor said that the word "corruptly" governed the whole matter. This is a very important statement, as upon it hinges a good deal of the controversy which was raised four years ago when the late Lord Chief Justice introduced his Bill. It will be remembered that, at that time, Sir Edward Fry, an ex-Lord Justice of Appeal, wrote some letters to the *Times*, in which he charged the members of various callings with being the receivers of secret commissions, and asserted that the members of the medical profession received such commissions from druggists, instrument makers, and undertakers, and even went so far as to draw a picture of a medical practitioner going his rounds with a sheaf of undertaker's cards in his pocket, debating with himself whether it would pay him better to help his needy patient to live and take the slender chance of recovering a long bill for medical attendance, or to let him die and accept the prompt cash commission of a prosperous undertaker. It will be remembered also that the Council of the British Medical Association made inquiries at the time, and could find no evidence of the existence of such practices, although in certain instances presents had been sent to medical men for what the tradesmen appeared to regard as a good turn. In one instance known to us a physician of the highest distinction, whose heart is as gentle as his head is wise, had had under his care a gentleman who had come from a remote colony and was a stranger in London. When he died the young wife asked the physician if he would mind sending an undertaker to her, and he in all kindness gave the necessary order and thought no more about the matter. The following Christmas, to his great disgust, he received a turkey from the undertaker, which he promptly sent back; but his surprise and disgust were almost comic, so intense was his indignation at what seemed to him an impertinence. It is certain that every one would not be so sensitive, and we should like to know whether the turkey was "corruptly given," or, if it had been accepted, whether the receiving would also be correctly described as "corrupt."

It can hardly be necessary to say that we have no desire to palliate the giving or receiving of secret commissions which, in the words of the resolution passed by the Council of the Association in its meeting on April 12th, 1899, constitutes "a grave breach of professional good conduct and is inconsistent with membership of the British Medical Association." During the last few years our attention has been drawn to several instances of corrupt offers made by tradesmen and others to members of the medical profession with the object of tempting them to subordinate their duty to their patients to their own pecuniary interests. One of the grossest of these was referred to in the British Medical Journal for October 6th, 1900. A prominent physician sent us a circular received by him from a firm which was organizing a personally conducted tour to the Thermal Springs of New Zealand, for which the first-class return fare was to be 300 guineas and on this sum the members of the medical profession were offered 5 per cent. commission for what was called "successful business" introduced by them. We drew attention to the scheme and denounced the offer, and as we heard no more about it we trust it failed, as it deserved to fail. We have had also to complain of the offers to the profession made by the American Century Thermal Bath Cabinet Company, which promised a royalty to doctors on the sale of their cabinets, and asserted in their circular that 'scores of doctors had accepted the offer." We have been shown a letter from a Parisian maker of orthopaedic instruments offering 30 per cent. upon the price of all instruments ordered of him. About a year ago a correspondent wrote to us to say that an instrument maker who had supplied an appliance upon his recommendation to a patient, had sent him a sum of money called "trade discount."[1] We expressed the opinion that there should be no doubt at all as to the course to be followed; that the money should be returned at once, and the tradesman informed of the impropriety of his proceeding. These are all the cases that have come to our knowledge during the last four years until a few days ago, when we received two communications which call for comment The first contains a letter from an instrument maker in London, written last month, and addressed to a surgeon in Cape Colony, who in his covering letter to us states that he considers the communication to be most insulting. He very properly asks who pays this commission, and suggests the only possible answer, namely, the patient. In the letter the instrument maker says, "Mr. —— therefore believes you will be interested to hear from me, as I understand it was partly to your recommendation I am indebted for the order. Should you in future be able to recommend patients to me I shall be pleased to allow you a medical discount of 10 per cent." The instrument maker is a well known manufacturer of artificial

[1] See British Medical Journal April 5th, 1900, p. 870.

limbs, and we regret very much to have to call attention to such a communication.

The other case we are glad to say does not concern a British tradesman. The communication was sent to us by an English doctor practising in Barbados, and in his covering letter he expresses his regret that it should be possible to entertain so low an estimate of the honour and integrity of the medical profession. The correspondence sent us consists of a letter from the Lincoln Chemical Company, dating from Boston, Mass. The company inform their correspondent that they are making a preparation called "berberina" which is "a positive remedy for catarrh," and are anxious to extend their business to South America and the adjacent islands. In order to do this they require assistance, for which they are willing to pay liberally, and they enclose him a share certificate for five preference shares of ten dollars each in their Company of the "total par value of fifty dollars in return for your co-operation in establishing our goods in your section." "It costs you absolutely nothing, and all we ask you to do is to prescribe our berberina for your catarrhal and debilitated patients." Then follows an account of berberina, of its pharmaceutical nature and therapeutic properties, and under the heading "additional facts" it is stated: "We shall divide the profits with you in return for your efforts to push the goods. Other preparations will be added later, and thus a large business may be established in which you will be an active partner. As preferred stockholders are entitled by law to the first apportionment of the net earnings of the company, the stock issued to you is of certain value, and that value increases with every prescription you write for our goods." We can only regret that the Lord Chancellor's Bill, if it becomes law, will not touch such propositions as this, and that the transatlantic nostrum-monger will still be free to make his insolent offers to the members of the medical profession residing in this country and in British Colonies. At the same time it is only reasonable to hope that respectable British wholesale druggists, who have hitherto acted as agents for some of the worst offenders, will decline to associate themselves with persons who are offering an inducement of this nature.

In fact, one of the most beneficial consequences of the Lord Chancellor's Bill will be to promote a healthier tone in relation to the whole matter. By expressly declaring the illegitimate nature of bribes it will bring home to every one the impropriety of giving or receiving them. The tip system has always been prevalent in England, although it is not so bad now as it was in the eighteenth century, when no one could dine at a great house without, on leaving, passing through a lane of servants, each holding out his hand to receive a vail. There is a story of Sheridan that he had several times refused the invitation of a noble lord to dinner; on being pressed for his reason, he said that he would be very glad to dine with him if his lordship would give him the guinea wherewith to pay the servants on leaving. We have heard of late years complaints of the exaggerated tips expected by gamekeepers from members of shooting parties in certain great houses; but we believe there has been an honest desire on the part of employers to check the rapacity of their servants, and on the whole there is not now much with which to find fault on this account. Nor do we complain of the sixpence expected by a railway porter for calling a cab; probably it would not be possible to get such willing service on other terms, and at any rate there is no country in which the difficulties of railway travelling are alleviated by such obliging and polite assistance as in England.

However, we are sure that the Bill is not brought forward with the object of interfering with such small matters. The disclosures of the Royal Commission on the Government contracts entered into during the war revealed a state of things which has been not too strongly described as "a canker in the trade of England." Its existence has long been known in business circles, and has been struggled against in vain by some of the best men. Occasionally the facts are made public, but, as a rule, they are concealed. Some years ago at the annual meeting of a large iron foundry company it was disclosed that the directors were spending £10,000 a year upon secret service, which, it was admitted, meant bribes. While there can be no doubt of the existence of this iniquitous system, and while we heartily trust that the Bill will pass into law and will be effectual in putting an end to it, we welcome it also as tending to stamp out any traces there may be of similar evils in our own profession.

We have never admitted, and we do not believe for a moment that anything exists which can fairly be called a practice; but it cannot be denied that unprincipled individuals exist, and there is abundant evidence that there are tradesmen sufficiently unscrupulous to attempt to push their business by corrupt means.

Neither is deserving of any sympathy; and we sincerely hope that the measure will make it, if not impossible to give or receive a secret commission, at least impossible to retain the pretence that either is a defensible business transaction.

THE LEGAL ASPECTS OF NOTIFICATION.

In an article published in the British Medical Journal of March 14th some of the practical difficulties attending the diagnosis and certification of notifiable diseases were discussed. It seems desirable to recur to the matter and to consider some of its legal aspects.

In making a notification to the medical officer of health a practitioner is performing a statutory duty, for this he receives a small fee, but should he neglect to discharge it he renders himself liable to a relatively heavy penalty. We publish at p. 706 an article in which the material sections of the Acts of Parliament are set forth, and illustrated by cases which have arisen in the Courts. It is of course clear that a medical practitioner who, in the course of his private practice, comes across an infectious case is bound to notify it without delay to the medical officer of health. He is under no duty to take a second opinion. If he himself considers that his patient is suffering from one of the disorders referred to in the Acts, it is clearly his duty to give effect to that opinion in the certificate. Even if the matter rested there, the performance of this duty ought not, and in our view does not, upon the true construction of the Acts, impose any liability upon the practitioner for the consequences of an incorrect diagnosis. The statutes say, and say plainly, that the "opinion" of the medical practitioner is to be accepted; that opinion honestly given and based upon such skill and experience as the practitioner has acquired has been considered sufficient by the Legislature.

But the statutes go further than this. If it be proved that in a case of a notifiable disease a certificate is not given the practitioner may become liable to a fine not exceeding forty shillings. In these circumstances it would be lamentable

in the extreme if he were to be held responsible, or even exposed to an action for damages which may accrue from a bona-fide, if erroneous, diagnosis. According to the Public Health Acts, it would seem that a medical officer of health is protected from the consequences of acts performed in the execution of his duty, in the sense that he is entitled to be indemnified by the local authority which employs him; but a private practitioner, it would seem, must look elsewhere for protection. We do not think it possible that he can be held responsible for the injury sustained by a patient who may be compulsorily removed to an isolation hospital. In the first place, the removal is carried out, not upon the direction of the certifying practitioner, but upon an order of the justices. The certificate may be granted upon the ground that the patient is without proper lodging or accommodation, and that is undoubtedly a question for an expression of opinion by the medical practitioner, but the order is applied for at the instance of the local authority. How can it be said that the medical practitioner is responsible for the issue of the order? He is merely a witness to facts in respect of which he is bound by statute to express an opinion.

Assuming, however, that an action is commenced against the certifying practitioner, it is difficult to imagine how the plaintiff could succeed unless he proved that the defendant had been guilty of gross negligence. We cannot imagine how it could be established that any medical man, had recklessly issued a certificate to the effect that his patient was suffering from an infectious disease, knowing, as he must know, what the consequences of that certificate might be. Negligence in the performance of such a duty would be the act of a lunatic. If we were to make another wild assumption, namely, that an improper removal order may be traced to the medical certificate—which we cannot for a moment admit—even then it is clear that the practitioner, in granting a certificate, is entitled to the protection of an Act of Parliament which limits the time within which an action can be brought against him to six months, and imposes upon an unsuccessful plaintiff the duty of paying the costs of the defendant, "as between solicitor and client," that is to say, on a much higher scale than that which is usually adopted.

It may be said, with some show of reason, that it is a hardship upon any citizen of a free country who is the unfortunate subject of an incorrect diagnosis, that he should be removed to a hospital where he runs a risk of becoming infected. Further, the knowledge that he has been removed on suspicion may injure his business, or keep people from his house. This is all very true; but the matter has to be looked at not from the private but from the public standpoint. In a thickly inhabited city the welfare, not to say the health, of many must not be jeopardized in the interest of an individual. For the express purpose of preventing the spread of infection the Legislature has decreed that want of proper lodging and accommodation shall be sufficient justification for a removal order; and if in a time of epidemic those who are called upon to perform the duty of granting the necessary certificates, were to flinch owing to the risk of private actions for damages, serious injury would accrue to the community.

The proper execution of an Act of Parliament frequently involves loss and discomfort to individuals. Lands are compulsorily purchased for public improvements; jurors and witnesses are summoned from their private business for the proper administration of public justice. It is true that a removal order is carried out without any provision for compensation to those who may be injured; but this omission—if omission it be—on the part of the Legislature should not be urged in support of claims for damages against those who have the duty of carrying the Act into effect.

CUSTODIAL HOMES FOR FEEBLE-MINDED CHILDREN.

THE question of the permanent care of the mentally-defective, as distinguished from the insane, has of late been much to the front, and at the Central Poor-Law Conference held last week at the Guildhall, London, there was an interesting debate on this subject, following an able paper on the "Treatment of the Feeble-minded," by Mr. W. H. Dickinson, L.C.C. Wherever special instruction classes have been established by school authorities under the Act of 1899, the problem of how to provide for children of feeble mind whose home surroundings are inimical to improvement is sure to crop up, for it soon becomes evident that in many cases what is gained in the five hours spent five days a week in school tends to dissipate itself amidst the evil influences of the 140 hours (or thereabouts) spent elsewhere.

A document, evidently prepared with much care, has recently been presented (through the Special Schools Sub-committee) to the School Board for London by its medical officer, Dr. Kerr, giving an estimate of the needs of the London district as regards residential homes for defective children. In this report, based upon the observations of the medical examiners of defective children, as well as upon those of the superintendent of special instruction, it is stated that the custodial treatment of about one-third of the children passing through the special classes is advisable. This it is proposed to commence at the age of 12 in small experimental homes to be established by the Board under the powers conferred upon it by the Act of 1899. Such homes would be available for children between 12 and 16 whose parents are willing to part with them, for no compulsory powers beyond the requirement of day-school attendance exists with regard to merely "mentally-defective" children. The line between these last and certifiable imbeciles (who can legally be detained) is, however, a very narrow, and sometimes merely sentimental, one; and in any case the question of detention will have to be faced when the age of 16 is attained.

In London the Metropolitan Asylums Board has for thirty years past had in hand the problem of dealing with imbeciles, both children and adults; and more recently has provided homes for less defective children (from the Union schools) capable of benefiting by special instruction at School Board centres. It is to be regretted that beneficiaries under the Metropolitan Asylums Board must needs be marked off as belonging to the pauper class, for the experience gained by this body could not fail to be helpful in aiding in the formation of custodial homes for those who have passed through the School Board special classes, whether technically paupers or not. As the majority of these will of necessity be permanently dependent, and require to be rate-aided or State-aided, it seems highly desirable that forms should be simplified so as to link up all who stand in need of life-long supervision into communities controlled by a single authority responsible for efficient and economical management.

In this connexion the work so well done for upwards of

half-a-century by the voluntary institutions for imbeciles in various parts of the country also deserves consideration; and, although it is hardly to be expected that permanent homes can be maintained from charitable sources, the useful training given to the higher-grade inmates should be taken account of in any scheme for forming industrial colonies for the feeble-minded. There seems to us great need for co-ordination of the efforts of the various philanthropic agencies formed for dealing with the latter class; and we are glad to learn that Government is being approached with a view to the whole subject being considered on comprehensive lines. "'Tis not enough to help the feeble up, But to support him after," is of none more true than of the mentally-defective class; and although the expense of segregation would be a formidable item for a single generation, it would be true economy in view of the benefit to posterity.

THE UNIVERSITY OF LONDON.

We understand that important recommendations are now before the Senate of the University of London in regard to the curricula and examination for internal and external students respectively in the medical as well as in other faculties. To a large extent medical students seeking graduation in London University have practically been internal students, in so far as in their case a prescribed course of study in some recognized school has been required in addition to the examination tests. The difficulties of graduation have been partly due to the time limits insisted upon between examinations, which have precluded those who have already entered upon their medical courses from seeking the M.D. of London, even though willing to face its severe examinations. The matriculation is now no longer compulsory upon all intending graduates. Under Statute 116 graduates of various foreign and Colonial universities, as well as of the chief British universities, are now excused the matriculation on payment of £2 registration fee. Moreover, certain Scottish leaving-school certificates, as well as certain gymnasium certificates from Germany and Austria, are now accepted in lieu of the matriculation examination, which used to offer so formidable a barrier. Even for those who still commence their career at the University by passing the matriculation examination, the road has been made easier than it was. Latin is no longer compulsory, nor is any acquaintance with elementary science a condition precedent to graduation. We are not sure whether in this direction relaxation has not been carried too far, at any rate for the Medical Faculty. Although any co-operation with the Colleges of Physicians and Surgeons in conducting the M.B. examinations has been for the present rejected, we understand that efforts are being made to remove the difficulty which the preliminary scientific examination has hitherto presented, and the proposal formerly advocated to abolish a separate examination for the Bachelor of Surgery is again being revived and urged upon the Senate. Next May a large number of the present Senate will, under the operation of the Act of 1898, retire from office, but they will be eligible for re-election. A meeting of the Faculty of Medicine will be held at the University Buildings, on Friday next, March 27th, at 5 o'clock, to elect two representatives upon the Senate. At the first senatorial election, under the new constitution of the University in 1901, the Faculty elected Dr. Bradford, Dr. Fowler, and Dr. Perry. In accordance with the scheme of rotation laid down in the statutes, the two first-named representatives now vacate their office, but are re-eligible. At this and at all future elections he appointments will be for a period of four years. The other business of the meeting includes the presentation of a report by the Dean of the Faculty upon the progress of the scheme for the concentration of the preliminary and intermediate medical studies, and the consideration of a resolution having for its object the co-ordination of the action of the various Boards of Study in the Faculty of Medicine. The University is now entering upon a critical stage in its development, and the co-ordination of the two sides into which it is divided will require very delicate and sagacious handling.

MEMORIAL TO THE LATE PROFESSOR VON PETTENKOFER.

A meeting of the British Committee formed to co-operate with the Munich Committee for the purpose of contributing towards the memorial to be erected in Munich to the memory of the late Professor von Pettenkofer, was held at the house of Professor Corfield on Monday last. An Executive Committee, consisting of Professor Corfield, Dr. R. D. Sweeting, and Dr. Christopher Childs, was elected, and empowered to complete the arrangements for collecting subscriptions in this country, and to forward the amount to the Bürgermeister of Munich. The subscriptions received up to the present have varied from one to five guineas, but smaller sums would be gladly accepted by the Committee, for it is believed that there are very many in this country who recognize the great services rendered by Pettenkofer to the science of hygiene, who would like to be associated with this act of homage to his memory. In Munich and Germany over £3,000 has been subscribed, and national committees have been formed in Paris, Vienna, and Athens to co-operate with the Munich Committee. The British General Committee comprises many of the highest authorities on hygiene and public health. Subscriptions should be sent to the Honorary Treasurer, Dr. Christopher Childs, 10, Manchester Square, London, W., and the list will be closed on March 31st. It is understood that the memorial will take the form of a monument to be set up in Munich.

THE QUALIFICATIONS FOR THE OFFICE OF CORONER.

By the death of Mr. Sidney Smelt a vacancy has arisen for a coroner at Manchester, and in the interests of efficiency and economy it is to be hoped that the person appointed to succeed him will have had the requisite medical training. Coronerships for many years past have been filled almost exclusively either by medical men or lawyers, and the developments of recent years have been such as to make the appointment of men who primarily belong to the former category more desirable than ever. The activity of the press in reporting at great length any inquests that appear to contain elements of dramatic interest has tended rather to obscure the commoner and more homely functions of coroners, and make it appear as if they were constantly engaged in inquiries of judicial interest involving commitments of persons for manslaughter or murder. Really, however, this is rarely the case, and even when it is the inquests, however picturesque they may appear, are usually merely formal in their effect, the police inquiry and magisterial investigation going on simultaneously. The records, indeed, show that in about 299 cases out of every 300 inquests held the only question to decide has been the medical cause of death and the circumstances under which it occurred. Still more important from the point of view of economy and efficiency is the fact that apart from cases in which the law imposes inquests as a necessity, there are a very large number of conditions under which the question whether an inquest shall be held is left to the coroner's consideration and decision. The points involved in these conditions are simply whether it can be stated from what is already known what was the cause of death, whether it was natural or unnatural and whether a necropsy is required, and if so whether the presence at it of any special expert is called for. Correct judgement of such matters is of the greatest importance because the holding of unnecessary inquests is a great expense to the public purse and a hardship, not only to the individuals who have to act as jurors, but often also to the members of the deceased's family. The power of forming such a judgement is most likely to be found in a man whose

experience and training have been medical whether he has also qualified for the bar, as so many nowadays do, or not.

THE *MEDICAL REGISTER* FOR 1903.

THE *Medical Register* for 1903[1] has been issued this year somewhat earlier than has hitherto been the rule, and a study of its pages reveals several matters of interest. There are now 320 more registered medical men than there were at the date of the last issue, or in other words there are now 37,232 persons admitted by the General Medical Council of Great Britain and Ireland to be entitled to practise, against the 36,912 who had the same advantage last year. This is nearly 1,000 more than the average of the last five years. It also appears that in the forty-four years that have elapsed since registration first became necessary the total number admitted to the *Register* has been 64,813. Of these about 61 per cent. have been registered in England, and the rest in Ireland and Scotland. There have been first and last 81 registrable titles in medicine and surgery, and 20 in public health. Of the former, 33 were titles which *per se* ensured registration, and the rest simply honorary. Eight of them are no longer obtainable, and the powers of some others to ensure registration have now to be combined. So far as this *Register* is a safe guide last year seems to have been a bad one for medical men from the personal mortality point of view, since the number of names removed on account of evidence of death jumped up to over 100 more than in any previous year. The real number of deaths is however probably greater or less. A register published two months after the end of the year with which it deals ought to be perfectly accurate on this point, but unfortunately it cannot be depended on. A short examination which we made a year or two ago showed that, of 234 men whom we happened to know were dead, 17 still appeared in the then freshly-issued *Register*. The number this year suggests that the matter has still not received the attention it demands. Under the penal clauses of the Medical Act of 1858, six names were erased as against an average of three during the last twenty-seven years. The large number of names removed under Section XIV of the same Act suggests that the method in which the General Medical Council carries out this section is capable of improvement. This section makes it "lawful" for the Registrar to address a letter to any person on his list inquiring whether he is still in practice or has changed his address. If no answer is received within six months, it is again "lawful" for the Council to order the erasure of his name. These letters are at present sent out so as to closely resemble circulars. It is thus comprehensible that many of them fail to receive attention. It would be better if they were sent in plain envelopes, and perhaps registered, as other important communications by post commonly are. The strict adherence of the Council in this particular to the bare letter of the law is the more remarkable because even in the new *Register* there is at least one person entered who for several years has neither been in practice nor lived at the address given, nor even borne the same name.

THE SPITTING NUISANCE.

WE note with satisfaction that a man has been fined in Battersea for spitting in a London County Council tramcar. Dr. Cooper, Chairman of the Public Health Committee of the London County Council, has informed a correspondent of the *Daily Chronicle* that the Home Secretary will not confirm a general by-law against spitting, but is willing to confirm one against the practice in omnibuses, trams, halls, and railway carriages. The Committee of the Local Government Board is now considering such a by-law, and will shortly bring it up for the Council to pass. We earnestly hope it will be passed, for the contempt of public decency in regard to spitting that may everywhere be observed in London is a disgrace to our civilization. Nor is it the lower classes alone who are guilty of this abominable offence. Not long ago we saw a man, who from his dress might have been thought a gentleman, go the whole length of Pall Mall, and round the corner into the Athenaeum Club, spitting all the way on the very middle of the pavement. It is of good augury for the future that at the annual meeting of the National Association for the Prevention of Consumption held on March 18th a resolution was adopted on the motion of Sir William Broadbent: "That spitting on the floors of public buildings, on platforms, corridors, staircases, and in public carriages or passenger boats, or in any covered place of public resort should be forbidden by law." A little pressure by local authorities, by railway companies, and other public bodies, and the infliction of salutary fines would, in Sir William's opinion, do much to abate the nuisance. Another encouraging sign of the times is the measure which came into force in Kensington on March 18th, making spitting on the footways of that borough an offence punishable by a fine of forty shillings. As regards public conveyances a correspondent of the *New York Medical Journal* recently made the following suggestion: "Let there be assigned to the service of the health department a small number—say three, or perhaps one would be sufficient for a test—of plain-clothes detectives whose sole duty should be to arrest and bring to prosecution violators of the antispitting ordinance. Let these men, or this man, spend their time travelling upon various public conveyances, varying their circuit constantly so that their effect may be felt everywhere within the city limits. Let there be full warning published in the cars, waiting rooms, etc., that these men are abroad. This knowledge in itself would have a strong deterring effect; a would-be offender would think at least twice before acting if he had the uncomfortable suspicion that the innocent-looking man across the aisle might have a detective's badge under his coat. Let the arrests be published, so that the offenders shall find themselves unpleasantly notorious. Let the punishment be light at first—the minimum fine for those who are in position to pay it, a reprimand for the poor working man. But for a second offence, and as time goes on, and the public becomes educated, let the penalty be more severe." The difficulty at present is to get anyone to enforce the existing ordinances and injunctions against spitting in omnibuses, tramcars and railway carriages. The detective system proposed by our American contemporary's correspondent would meet this difficulty. The fines imposed might be sufficient to defray the expense of the services of the detectives.

THE PREVENTION OF JUVENILE SMOKING.

A BILL is to be introduced into Parliament "at the earliest possible date," under the auspices of the British Anti-tobacco and Antinicotine League, for the suppression of the use of tobacco by young persons under the age of 16. The main provisions of the Bill are the following: No person under the age of sixteen years shall smoke or use tobacco in any form, and any such person so doing shall be liable, on conviction, to a penalty not exceeding ten shillings for each offence. No person shall sell, give, or supply tobacco in any form to, or for the use of, any person under the age of sixteen years, and any person so doing shall be liable: (1) On a first conviction to a penalty not exceeding twenty shillings; (2) on a second or subsequent conviction to a penalty not exceeding forty shillings; and in addition to the foregoing penalties the licence (if any) held by such person for the sale of tobacco shall, in case of a third conviction, become void, and such person shall be disqualified for a term of five years from the date of such conviction from holding any such licence. Who is to introduce the Bill is not stated in the *Beacon Light*, from which we take this information, but Mr. Samuel Smith, Sir Brampton Gurdon, and some other members of the House of Commons are understood to be in favour of legislation for the prevention of juvenile smoking. Some particulars as to the great increase in the sale of cigarettes that has taken place in recent years were given in the January number of *Chambers's Journal*. A single wholesale firm of cigarette manufacturers who used to make and sell only a quarter of a million of cigarettes a week now disposes of five millions in the same period; and another wholesale firm which at one time had prac-

[1] London: Spottiswoode and Co. (Demy 8vo, pp. 1,696, 6s.)

tically no business at all in this article, is now manufacturing no fewer than thirty millions of cigarettes a week. The Americans introduced the little packets of ten or a dozen or even fewer, which now flood the market and bring the "whiff" within the purchasing power of boys with but little pocket money. The Chancellor of the Exchequer has stated that the large increase in the revenue from tobacco is accounted for by the enormous extent of juvenile smoking. According to a writer in the *Daily Mail* special machinery has been devised to cope with the demands of the boy smoker. One firm alone employs fifty machines, and each machine turns out 200,000 cigarettes a day, the weekly output running therefore into millions. Some striking illustrations have recently been given by Mr. P. L. Lord of effects of cigarette smoking upon schoolboys. In an American public school of about 500 pupils it was found that the boys were very much inferior to the girls in every way. It was also found that a large majority of the boys were habitual cigarette smokers. An investigation was ordered to ascertain exactly how far the smoking was to blame for the boys' inefficiency and low moral condition. For several months twenty boys who it was known did not use tobacco in any form, drawn by lot, and twenty boys known to be "cigarette fiends," were closely observed by ten teachers. The ages of the boys were from 10 to 17, the average age being a little over 14. Of the twenty smokers, twelve had smoked more than a year, and some several years. All twenty boys used cigarettes, while some also used pipes and cigars occasionally. The following peculiarities were noticed in the smokers: Twelve of them had poor memories, and ten of the twelve were reported as very poor; only four had fair memories, and not one of the twenty boys had a good memory. Twelve were in poor physical condition, six being subject to "sick spells," and were practically already physical wrecks. Eight were reported as being in a fair or good condition, but none was excellent. In Yale University comparisons were made for eight years between smokers and non-smokers. As compared with the smokers, the non-smokers gained 24 per cent. in weight, 37 per cent. in height, 42 per cent. in girth, and 8.36 cubic in. in lung expansion. In thirty-three of the States of the American Union attempts have been made by the Legislature to grapple with the evil. Enactments against juvenile smoking have also been passed in Canada, Tasmania, Bermuda, and Prince Edward Island. In Norway a similar measure was enacted not long ago. It is high time that something should be done in this country to prevent, or at least diminish, the evil effects of a habit which by undermining the strength of growing boys must, if allowed to continue unchecked, come to be a powerful factor in the decadence of the nation.

THE CONFUSION OF EPILEPSY AND CRIME.

ANOTHER instance of technical assault committed while its perpetrator was presumably in a pre-epileptic state came under notice at the Stafford Assizes on March 9th, with the result that a sentence of two months' imprisonment with hard labour was passed. The assailant, a man called Bagnall, a jug maker at an earthenware factory, who is said to have been a quiet, inoffensive man of good character, received a reprimand from his superior because the handles of the jugs he had made were crooked, making them unfit for firing. On turning away the man Bagnall either struck him on the head with a jug or threw jugs at him, then he threw moulds, and seized a knife and rushed at him, but was prevented from further acts of violence by bystanders. While thus restrained Bagnall had a fit in which he lost consciousness. When he came to himself he asked, "What's up?" and on being told what he had done, said: "God help me, I didn't know I had done it." It is highly unfortunate that no medical evidence was submitted either to the justices or at the assizes, the reason stated by counsel being want of funds. In the opinion of the medical man who had attended the victim of the assault, the description of the mental state of certain patients in the preparoxysmal stage of epilepsy which is to be found in the article on epilepsy and insanity in the eighth volume of Clifford Allbutt's *System of Medicine* applies exactly to the case under consideration. The tendency of the ordinary epileptic to homicidal impulses is thoroughly well recognized, and it is an obvious injustice that such a person where the connexion is established should be classed as an ordinary criminal. The dilemma is a serious one; the accused person is either wilfully criminal, and should be punished, or he is liable to be unconsciously homicidal, and should be treated medically. In this instance, in which curiously enough from the medical standpoint the man was advised, as we are informed, to plead guilty, the bearing of the peculiar psychical state on the man's guilt does not seem to have been adequately appreciated. We hope that the steps proposed to be taken to obtain a reconsideration of the sentence may be successful.

A BACTERIAL LAMP.

IT has hitherto seemed that the place of luminous bacteria in Nature was in the main to delight the eyes of voyagers on tropical seas or on summer nights in cooler latitudes. It is true that they are also the cause of the phosphorescence sometimes seen on decomposing organic matter, but the object, so to say, of the luminosity in this connexion has not been explained. A remarkable demonstration of luminous bacteria cultivated in the bacteriological laboratory of the Jenner Institute of Preventive Medicine was given by Dr. Allan Macfadyen and Mr. J. E. Barnard at the May *conversazione* of the Royal Society a couple of years ago. It was then half jestingly suggested that their luminous properties might be turned to practical account, and we now learn from a Reuter's telegram, dated Vienna, March 15th, that Dr. Hans Molisch, Professor of Botany in the German University of Prague, has described to the Vienna Academy of Sciences a lamp lighted by means of bacteria, which, he claims, will be valuable for work in mines and powder magazines. The lamp is stated to consist of a glass jar, in which a lining of saltpetre and gelatine is placed and inoculated with bacteria. Two days after inoculation the jar becomes illuminated with a bluish-green light, caused by the development of the bacteria. The lamp will give light for from two to three weeks, diminishing in brightness. It renders faces recognizable at a distance of two yards, and large type is easily legible by it. Mr. Barnard and Dr. Macfadyen found that the luminosity of the organisms depended upon an adequate supply of free oxygen, and that the nutritive medium must contain a suitable percentage of soluble chloride. Grown in a fluid culture medium, the luminosity was feeble until the flask was shaken, when the increased rapidity of oxidation rendered the light much more brilliant. When the dissolved oxygen had been used up the luminosity, which is due solely to the vital activity of the organisms, disappears, this was found to take only about fifteen minutes. Further proof that the luminosity was essentially a function of the living cell, and dependent for its production on the intact organism of the cell, was afforded by experiments subsequently made by Dr. Macfadyen at the temperature of liquid air. It was found that this very low temperature did not destroy their luminous properties, and that on thawing they rapidly returned. On the other hand, if the organisms were triturated at this low temperature, the luminosity was abolished. Grown on the surface of gelatine, the colonies were steadily phosphorescent. The rays emitted were shown on spectroscopical examination to be purely light rays, the red and yellow ends of the spectrum being absolutely blank. It would seem, therefore, that if the light in Professor Molisch's lamp is sufficient, it will be perfectly safe, as it would give out no heat.

CHARACTER READING FROM EXTERNAL SIGNS.

IN a lecture given at the Royal Institution on March 13th, Professor Karl Pearson took as his subject character reading from external signs. He and his colleagues had set themselves the task of trying to determine whether it

was possible to associate physical characters with moral attributes. For six years he had been obtaining facts from observations on school children and he had now 6,000 records, half being of boys and half of girls. The observations on boys were, however, the only ones which had been classified. The folk-beliefs of different countries were also worthy of scrutiny. For instance, as far as he was aware, the colour of Judas Iscariot's hair was not recorded, and yet by the old masters Judas was painted with red hair and in directions for passion plays his representative was ordered a red wig. This he supposed was to be connected with the traditional belief that red-haired people were more inclined to vice than others. Similarly blue-eyed people were said to be good, round-faced people to be foolish, and long-headed people to be shrewd. His method was to formulate charts that could be filled in with a great number of selected characteristics, and to circulate these widely among schools of every grade. In some cases the results bore out tradition wonderfully well but in others there was great discrepancy. Conscientiousness was least found among dark-eyed people and most among blue-eyed. In association with the colour of the hair it decreased in the stages of red, fair, brown, dark, and black. Red-haired boys were more quick tempered and more delicate, dark-haired more sullen and less delicate. There seemed to be a good deal in the attempt to read character by handwriting, and the investigation of 600 specimens indicated that bad writing afforded a warning note. In regard to the association of a large head with intelligence, data from 1,000 Cambridge undergraduates showed that on the whole the head was longest in those who took first-class honours and shortest in "poll" men, but there was not enough correlation to render prediction possible. It was definitely found that a capacity for athletics in a boy involved also an appreciably higher intelligence, and the converse also held true. The tendency was for the athletic boy to be healthy, intelligent, quick tempered, self-conscious, noisy above the average, and distinctly popular. The real fool and oaf were, he believed, certainly to be found in the field—but always looking on. Many of Professor Pearson's conclusions would receive strenuous opposition if a plebiscite were taken. Clear handwriting, for example, may signify moral excellence, but illegible penmanship has been more generally correlated in the popular mind with high intellectual development. It is more probably a family trait like an aptitude for outline drawing, and it certainly is characteristic of certain families, not all the members of which are paragons of virtue. Moreover, taking the individual, variations occur in the legibility and especially in the evenness of his writing in correspondence with defects of physical health or with times of mental stress. Similarly it would not be generally held, we imagine, that athletic boys were more healthy than the non-athletic so much as that the healthy boys were more inclined to athletics.

MR. HUTCHINSON *IN PARTIBUS INFIDELIUM*.

WE announced some time ago that Mr. Jonathan Hutchinson had gone to India in search of facts to confirm his doctrine that the eating of salt fish is the cause of leprosy. We call it his doctrine, for although the theory itself has about it "a very ancient and fish-like smell," being, indeed, almost as old as the disease, he is now, we believe, among competent authorities its only adherent. We ventured to hint that Mr. Hutchinson's mission would prove to have more of an evangelizing than an inquiring character. This would seem to be confirmed by a report in the *Indian Medical Record*, for we read that on February 24th he "started his campaign" in Calcutta by delivering a lecture before an audience of some 400 persons, mostly members of the medical profession. Lieutenant-Colonel Bomford, Principal of the Medical College, was in the chair. Mr. Hutchinson maintained that leprosy was a food disease, and not contagious. There was no article of food that could be incriminated except fish. In proof of the baleful effect of fish he pointed to the invasion of inland districts by leprosy which occurred with the advent of Christianity and the observance of fish fasts, and its disappearance when Protestantism threw those fasts into disuse. Mr. Hutchinson may perhaps congratulate himself on having added a new missile to the somewhat worn-out arsenal of theological controversy, but his reading of history is as peculiar as his logic. Leprosy had, in fact, begun to decline more than a century before the Reformation, while fish fasts were observed in England for nearly a century after it. Queen Elizabeth even imposed an additional fish day on her lieges. Mr. Hutchinson went on to say that leprosy has a natural tendency to die out, and in proof of this he referred to the hundreds of vacant leper houses in England. Those leper houses, he said, were places of resort for disabled lepers, and their foundation was not due to a desire to avoid contagion. Mr. Hutchinson has apparently never read any mediaeval literature on the subject of leprosy, or he would know that men's minds were so dominated by the fear of it that they banished the leper as far as possible from civil life, and even excluded him from the public ministrations of religion. If he touched food exposed for sale in a public market, or if on a public road he came between the wind and a casual wayfarer's nobility, he was liable to the penalty of death. There is no record in the world's history of such drastic sanitary legislation as in the mediaeval enactments for the suppression of leprosy. That our forefathers had a very earnest "desire to avoid contagion" is proved by an ordinance of Edward III, passed in 1346, when leprosy was already on the decline. In this ordinance it is stated that lepers actually endeavour "to contaminate others with that abominable blemish," and therefore it is enjoined that all persons having such blemish betake themselves "to places in the country, solitary." This is a comparatively mild enactment; at an earlier day lepers were consigned with the accompaniment of a solemn ritual to a living death. Referring to South Africa, Mr. Hutchinson said there was no leprosy in Cape Colony till the Dutch went there and fed the Hottentots on rice and salt fish. This assertion is a flat contradiction to the statements made in the report of the Cape Leprosy Commission, 1895. Mr. Hutchinson's teaching does not seem to have found much acceptance in an audience composed of men familiar with leprosy. Dr. Bose said his practice lay among a class of people who had never touched meat or fish; yet lepers prevailed among them. He cited the case of the Burmese and Chinese in Calcutta, whose food was salt fish, and who were free from leprosy. Several other speakers, including the Chairman, strongly opposed Mr. Hutchinson's contention. Doubtless their arguments had no influence on his mind, which is already made up. He might say with Croaker in Goldsmith's *Good-Natured Man*, "When I'm determined I always listen to reason, because then it can do no harm." Although we think Mr. Hutchinson's active propaganda in defence of an exploded theory simply mischievous, we cannot help admiring his courage in undertaking so arduous a journey in furtherance of what he believes to be a good cause. He reminds us of Hannibal in his old age wandering about the world seeking to stir up enemies against Rome.

A SUCCESSFUL EXPERIMENT.

THE directors of the Akrokerri gold mines in Ashanti rightly wish to call public attention to a highly interesting and instructive report on the suppression of malaria in the township of the above mine, by their resident medical officer, Dr. Barclay Dick. This report clearly shows how a little well-directed energy, combined with a correct interpretation of the mosquito-malaria doctrine can change an extremely unhealthy place into exactly the reverse in a very short period of time. In August, 1901, the camp of the Akrokerri mine, consisting of one compound for the staff, three compounds for the miners, and the native labourers' village, suffered severely from malarial fever, no fewer than 55 per cent. of the staff being on the sick list from this cause. A search for the reason showed that the place could not be properly drained, the result being numerous pools and collections of water full of *Anopheles* larvae and in view of the serious loss of time and invaliding

amongst the employés Dr. Dick resolved to select a new site for the encampment, where proper sanitary requirements could be adopted and kept going. A locality half a mile from the original township was eventually chosen for the new village, and thoroughly cleared of all vegetation. Roomy houses were built, with plenty of air space around them, the streets being laid out 15 feet wide, with 5 feet between each house. In addition a complete system of drainage was adopted, all mosquito pools were carefully filled up, pawpaw trees, in the hollow stumps of which the larvae of *Culex* were breeding, were removed, and all tin cans and empty bottles were carefully picked up and buried. Some rising ground, cleared all round for a radius of 150 yards, was next selected for the staff and miners' quarters, and here new bungalows, standing 100 yards apart, were erected. The use of mosquito nets was strictly enforced, and attention was also directed to the water supply, which was obtained from an adjacent river, the procedure adopted being to have it well boiled, and then filtered through large Berkefeld filters. The change in the health of the inhabitants after those radical improvements had been carried out was really remarkable. The percentage of those on the sick list from malaria fell from 25 in October to 0 in December, and for the eighteen months the town has now been in use, there has been, Dr. Dick states, only one freshly contracted case of malarial fever. Such a striking example of what a little common sense can accomplish should not be lost on those interested in the improvement of our tropical possessions, and the directors of the Akrokerri mine are to be congratulated on having such an able medical officer to look after the health of their employés in West Africa, and on their wisdom in acting on his advice.

A SCHOOL FOR MOTHERS.

MADAME AUGUSTA MOLL-WEISS has described recently in the *Revue d'Hygiène et de Médecine Infantile*, the working of classes started by her some six years ago at Bordeaux for the teaching of domestic economy to young girls. The work of doctors, she says in calling attention to the sufferings of infants, pointing out remedies, and establishing philanthropic institutions from which poor mothers may get clean milk and be advised as to the management of their babies, is a noble work, but their self-sacrifice and devotion have not been rewarded by results proportionate to their efforts, because an infant must have unceasing care and watchfulness, things which medical men, with the best intention in the world, are powerless to give. Nature has ordained that the mother shall watch over her child; but necessity often compels the mother to work and even when she can stay at home and look after her baby, the chances are she mismanages it owing to ignorance or misdirected love. The object of the classes established by Madame Moll-Weiss is to instil into young girls—as future mothers—a proper idea of what their responsibilities will be and the duties they may have to fulfil some day. This she desires to do, not only for the daughters of the poor, but for every class of society, the children of the rich being often really more neglected than those of the poor. Madame Moll-Weiss holds two classes weekly, one a complimentary class for well-to-do girls, the other a free class of domestic economy and hygiene for the best pupils among those attending free schools. Every Thursday they assemble in a large hall; they may come alone or accompanied by their mothers. The lesson is divided into two parts—theoretical and practical. Theoretically they are taught the rudiments of hygiene and domestic economy, and they are talked to about babies so as to arouse their sympathy and interest. They are taught how helpless infants are, how much they require love and gentleness, and how dangerous cold is for them. Next it is pointed out that they must only get milk to drink. Then the purity and beauty of the child's soul is spoken of, and the elder sisters are warned to keep from the younger ones everything which might sully that soul and its moral beauty. The girl, for fear of contaminating the mind of her young brother or sister, often shuns contamination herself, so that these lessons serve a double purpose. Then comes the practical teaching. As the baby will not always be eighteen months old, the mother must know how to feed it when it is no longer an infant. Simple and cheap foods are cooked and the making of poultices, and tisanes, the sterilization of milk, the preparing of the bottle, and the best manner in which to warm milk economically are explained. When the bottles are sufficiently cooled down in the saucepan, they are taken out and the remaining water in the saucepan is brought to boiling point. The saucepan is then covered carefully and put in a case full of oats—very bad heat-conductors. Water treated thus at 11 in the morning was, on the next day at 8 a.m., at a temperature of 40° C., that is, 104° F. (this experiment was done in summer). The girls are then given a lesson in the making of the child's bed, and shown how to air the room, the mattresses, blankets, and bedclothes. Then comes the dressing of the baby. For this purpose a large doll is used, and the children are taught to dress her with proper baby clothes. The weighing of babies and the making of various foods closes the lesson. Some of the children attending the classes are no more than 12, but the children of the poor are not too young at that age to benefit, seeing how often they are left in charge of several brothers and sisters, and how sharpwitted they are. The expenditure on the classes is only about 300 francs (£12) a year, and out of this the children are supplied with a light meal of bread and chocolate before going home. As most of the children come from a long distance, their names and the date are entered in a book which they bring with them; thus the mothers know where their daughters have been. Out of each school-group a cook is chosen, who stands besides the instructress and sees everything that is done, so that she in her turn can explain it to those who may sit too far off to see properly. Practical examinations take place at the end of the year, and useful prizes, consisting of neat cooking utensils, are given to the deserving pupils. There are monitresses who are entitled to half a franc every day they attend. Madame Moll-Weiss has endeavoured to create sympathy between girls of rich families and the children of the poor by inducing these girls to come and mix with their poorer sisters, if only to distribute to them their bread and chocolate. The usefulness of these classes is obvious, and all lovers of children must joint with Madame Moll-Weiss in hoping that her scheme may obtain success not only in France, but in every country wishing to bring up its daughters as good mothers.

THE EYESIGHT OF LONDON SCHOOL CHILDREN.

THE report published in the BRITISH MEDICAL JOURNAL of March 14th, p. 615, of the Medical Officer of the London School Board, Dr. J. Kerr, in which he gives details of the results obtained by the Board's oculists in the work of testing the school children, is an interesting document. As one might expect, the testing by the oculists, as compared with the results obtained by the teachers who examined the children in 1900, shows a larger proportion of children with good sight; the teachers would not be so likely to distinguish between mere stupidity on the part of the child and real defects of vision. The general results as regards the state of vision are by no means bad. Thus, in the seventh standard 80 per cent. have normal vision. It must be remembered, however, that this probably includes the vast majority of cases of hypermetropia. About 10 per cent. all through school life are shown to have bad vision, that is, $\frac{6}{9}$ or less. Those whose sight is defective are given cards which inform the parents that the child should be sent for treatment to a hospital. The majority of such cases are, of course, errors of refraction. The point, however, which calls for attention on the part of the hospital authorities is the extremely unsatisfactory results that are obtained by attending some of the hospitals, to quote from the report: "The oculists unite in stating that as far as could be gathered the hospital treatment, apart from ophthalmic hospitals, in very many cases was useless, and frequently had the effect of discounting the effects of the school testing." as one reason for this it is alleged that "hospitals, from

press of work and other causes, do not always deal thoroughly with the cases. The oculists remark on the many children dealt with who were not submitted to the routine examination involved in thorough honest work, some being given lotion, some ointment, until they ceased to attend." No one knows better than the surgeons attached to ophthalmic hospitals and the eye departments of general hospitals the immense amount of work involved in having dozens, nay scores, of cases suddenly thrust upon them by the Board, when in all instances the refraction must be worked out; but in hospitals in which such excessively slovenly work as some of that described is done a strict inquiry should be instituted; for although we would by no means commend the action of the Board in suddenly flooding the hospitals with hundreds of refraction cases, yet nothing but discredit to the institution and injury to the patients is likely to arise from such methods. If eye cases come to the casualty department they should be at once referred to the ophthalmic surgeon attached to the institution. We unhesitatingly state, however, that it is not fair to the special departments to thrust upon them without warning shoals of tedious cases, and in our opinion the Board should itself provide and pay oculists to estimate refraction in cases in which the error requires correction. Still, that is no excuse for such rule-of-thumb methods as giving a placebo with the obvious intention of appearing to do something and actually doing nothing, and we can only hope that as attention has been called to the fact provision will be at once made for the adequate treatment of ophthalmic cases in all hospitals which profess to treat them.

URETERAL LITHOTOMY.

Great advances have been recently made in the surgical treatment of injuries and diseases of the ureters. In the course of certain operations, especially hysterectomy for the removal of large fibroids, a ureter may be injured, but its repair by a plastic operation is not so difficult as it would appear to those inexperienced in the surgery of the ducts in question. Sometimes, in nephrectomy for tuberculous disease the corresponding ureter is found to be affected; then it is advisable to dissect up the entire duct down to the bladder. There remains ureteral lithotomy to be considered. The diagnosis of impacted calculus in the ureter is not always difficult when it is the orifice of that duct at the bladder which is the seat of impaction; but it is a very different matter when the stone is jammed into the beginning of the ureter close to the renal pelvis. In the majority of recorded cases of ureteral lithotomy (the condition had by no means been invariably diagnosed) the calculus was extracted by uretero-lithotomy. Mr. Henry Morris has collected twenty-nine cases of that operation. Only four were performed through a peritoneal incision. An interesting case of successful transperitoneal ureteral lithotomy, in which the stone weighed an ounce and a-half, and had probably occupied the ureter for over thirty years, has been published by Jacobs, of Brussels.[1] A woman aged 44 complained of severe attacks of pain referred to the left side of the pelvis. After each attack pus appeared in the urine. These attacks of pain had worried her since the age of ten, but recently they had grown unbearable. A hard mass, not tender on pressure, could be felt high up on the left side of the pelvis. Abscess of the ovary communicating with the bladder was suspected. An exploratory incision was made through the abdominal walls and peritoneal cavity, then the stony hardness of the mass and its position in the ureter proved its character. The calculus was extracted by a longitudinal incision, it weighed 44 grams, and measured 3 in. in length, 1½ in. in width, and over 1¼ in. at its thickest part; it was composed of urates and phosphates, and bore all the familiar characters of a vesical calculus: the concentric stratification of the deposit of mineral salts of which it was composed showed plainly on section. Clear urine could pass in small quantities into the bladder. The corresponding kidney was normal, even its pelvis was undilated. The ureteral walls were united by two layers of interrupted sutures of fine silk, not including the mucous membranes; a continuous catgut suture was applied to the incision in the peritoneum over the ureter. There was a little blood in the urine for two days; no haematuria had ever been observed before the operation. Recovery was rapid, and without any rise of temperature.

[1] *Annales de Gynécologie et d'Obstétrique*, February.

COMMON LODGING-HOUSES.

The genuine letter from "An Artizan" in another column sheds an unpleasant light on the grossly insanitary conditions which persist in common lodging-houses in districts in which official supervision and control are carried out perfunctorily or omitted entirely. The rooms are overcrowded, double beds are still permitted, although forbidden by the model by-laws, a urine vessel is not provided for each person, and this leads to spitting on the floor and other nuisances. Our correspondent also draws attention to the fact that lodgings in small beerhouses and private houses are often more insanitary than common lodging-houses, as the same opportunities for night inspection do not exist. Unfortunately public-houses cannot in the present state of the law, even though nightly lodgers of the vagrant class lodge in them, be brought within the scope of operation of by-laws for common lodging-houses. Such lodgings in public-houses of the lowest type are most pernicious. Drinking goes on in them after the usual hours of closing, and there is no legal power to make night visits. The case of lodgings in private houses can be met if the local authority does its duty in adopting and enforcing by-laws for houses let in lodgings. Our correspondent is mistaken in supposing that any house ceases to be a common lodging-house when the charge per night is increased from 4d. to 6d. The facts vouched for by "An Artizan" deserve the attention of medical officers of health in certain districts, and their publication will, we trust, be followed by the required reform in the small districts to which these facts relate.

THE FUTURE DISTRIBUTION OF HOSPITALS IN LONDON.

In the *Times* this week two letters have appeared which punctuate strongly the immediate and pressing need that exists for the establishment of a tribunal of some sort to settle the question of whether existing hospitals should be moved or new ones established, and, if so, what localities should be selected. Whether it should take the form of a Royal Commission for the settlement of these and a number of allied questions, as urged in the communication from a correspondent which we published last week, is another question. It is true that there are some points involved in the main question which could be most adequately settled by the deliberations of such a body, and that some of the minor questions could scarcely be met in any other way. But, on the other hand, it appears to us that much more speedy settlement of the main question is called for than could possibly be hoped for through a Royal Commission. Propositions for new institutions and removal of some old ones, and great enlargement of others are pouring in from all directions. The latest, contained in a letter in the *Times* signed by Lady George Hamilton and Miss Gregory, is to establish in connexion with a new midwifery scheme, a general hospital of 70 beds with a maternity annexe "in one of those thickly populated outlying districts of London which so greatly need those institutions." The other is the hinted intention expressed by Sir E. H. Currie in the same paper to urge the removal of St. George's Hospital, less as a Governor of that hospital than as a representative of the needs of two districts in South London, which we understood were already earmarked by two other hospitals whose early removal is contemplated. The real interests of the suffering poor of London will not be furthered by the haphazard propositions that are now being made, the only result of which can be to add confliction and confusion of interests to these necessary difficulties in moving which no hospital can avoid. If no

authoritative tribunal can be speedily established to deal with the whole of the questions involved, there should at least be a private conference between the heads of such hospitals as contemplate removal at all, in order that an understanding may be arrived at as to where each is to look for a fresh site. The Council of King Edward's Hospital Fund might take the lead in bringing about such a conference, even if it does not feel in a position to tackle the whole of this large and thorny question itself.

WHAT IS AN ACCIDENT?

THE question, what is an "accident"? within the meaning of an accident insurance policy sometimes comes before the courts for consideration. In a recent case it was the widow of a policy-holder sued an insurance company in respect of the death of her husband, which had taken place under the following circumstances. It appeared that while undressing he scratched his leg just below the knee with his thumb nail. The wound, although slight, did not heal. Erysipelas supervened, septic pneumonia developed, and the man died. Medical evidence having been called to show that the septic pneumonia was traceable to the accident, the Court held that the insurance company were liable, and entered judgement for the plaintiff. Although this finding is in accord with some previous cases, there are other decisions which show that the law upon the subject is not by any means clear. Thus we recall a case in which a man who was liable to epileptic fits was crossing a shallow stream. He slipped and fell, and, being seized with a fit, he was drowned. The Court held the insurance company liable, although the policy contained a clause which expressly exempted the company from liability for death caused by certain diseases which were enumerated, or "from any other disease or secondary cause arising within the system before, or at the time, or following the accidental injury." The question, what is an accident? has also arisen in workmen's compensation cases, and the tendency of the court seems to be to allow the claim even though the accident may have been very remote from the actual cause of death. So when a collier who was employed in working in a narrow seam of coal got a small piece of coal into his knee which set up blood poisoning, it was held that his subsequent death was due to an "accident" so as to entitle his widow to claim compensation.

THE INTERNATIONAL CONGRESS OF MEDICINE, MADRID.

IT is of the utmost importance that members of the Congress who intend to visit Spain next month should comply with the requirements of the railway companies in regard to the issue of tickets at reduced rates. Each passenger must be provided with a letter of invitation, signed personally by the President of the Congress, and he must send this letter of invitation with his card of membership (1) to Messrs. Cook and Son, Ludgate Circus, E.C., who will make all the necessary arrangements through to the destination; (2) to Mons. Sartiaux, Ingénieur en Chef de l'Exploitation, Chemin de Fer du Nord, Paris. Mons. Sartiaux will endorse the letter of invitation, and on its return tickets can be obtained at a reduced rate at Charing Cross or Victoria to Paris. Passengers must rebook in Paris at the Orléans Station and again present their letter of invitation, and it is probable that they must book again at Irun. No letters of invitation have yet been received by members in England so far as is known, and it is desirable therefore that each member should write to the Secretary-General at Madrid, Dr. Fernandez-Caro, (Facultad de Medicina), asking that one shall be sent to him as soon as possible. In the eyes of the railway companies the letter of invitation is a much more important document than the card of membership, and unless it is presented properly *visée* no reduction of fare will be granted. Members who wish to travel from Paris by the Sud express train de luxe should book their places beforehand. Sleeping-car places by the night express from Paris should also be engaged beforehand by writing to the Continental Inquiry Office, S.E. and C.R., Victoria Station, S.W. The supplementary fare in addition to the 1st class fare is rather more than £2 per person. Every member of the Congress should provide himself with a passport and should insure his luggage. Dr. Woodley Stocker, 287, Willesden Lane, N.W., informs us that he has been in communication with the Royal Mail Steam Packet Company, and that the Secretary of that company has written to him stating that it will allow members of the International Medical Congress 25 per cent. abatement from the first-class single or return fares, Southampton to Lisbon. As Dr. Stocker says, many medical men who wish to avoid the long tedious overland journey will probably welcome this concession.

WE regret to announce the death of the distinguished Surgeon, Professor Enrico Bottini, of Pavia, Senator of Italy, which occurred on March 11th, at the age of 65.

ON March 26th, at the invitation of the Northumberland and Durham Medical Society, Professor J. Rose Bradford, F.R.S., will deliver an address on Bright's Disease with especial reference to its Clinical Aspects, in the Medical College, Newcastle-upon-Tyne.

DR. C. F. HUTCHINSON, who has been elected member for the Rye division, Sussex, graduated M.D.Edin. in 1874, and formerly practised at Scarborough and Monte Carlo. He retired from practice about five years ago, and settled in Sussex within the district which he now represents.

WE referred last week to the retirement of Dr. Uzziel Ogden, of the University of Toronto, after a teaching career extending to half a century. We now learn that Dr. Francesco Randacio, Professor of Anatomy in the University of Palermo, has just completed a similar period of teaching activity. The professors and students of the university and the members of the profession in Palermo are preparing to celebrate the occasion with congratulatory rites.

SIR JOHN WILLIAMS was the guest of the Cymmrodorion Society on March 12th, where a large number of other distinguished Welshmen were present under the presidency of Lord Aberdare. In various speeches much regret was expressed that the retirement of Sir John Williams from practice should deprive the Society of his active co-operation in London. In replying, Sir John Williams made one or two suggestions for its future work, and urged the foundation of a Fellowship for the study of early Welsh manuscripts. In an interesting sketch of the thirty years' history of the Society Sir Isambard Owen claimed as the outcome of its work the Eisteddfod, education in the Welsh language, and the University movement.

MEDICAL NOTES IN PARLIAMENT.

[FROM OUR LOBBY CORRESPONDENT.]

Shops (Hours of Closing) Bill.—Last week there was an amusing incident in the House of Lords in connexion with proposals to deal with shop hours. Lord Ribblesdale had a Bill down much on the same lines as the Bill of Lord Avebury (who as Sir John Lubbock did a good deal of work in favour of restricting the hours of labour in shops). When Lord Ribblesdale's Bill came on, the question of vested rights in the subject came up, and the Lord Chancellor became the champion of Lord Avebury's Bill, and moved the adjournment of the debate on Lord Ribblesdale's Bill, in order that the original champion of shop assistants might bring in his Bill. The Lord Chancellor carried the adjournment by the narrow majority of two votes, and then, after a sharp passage of arms between Peers on both sides of the Chamber, Lord Avebury brought in his Shops (Early Closing) Bill. In this measure the mover said the Home Office would be the central authority, and the initiative would be given to the

shopkeepers of a district to move the local authority. Action would be finally taken on an order of the Home Office submitted to Parliament, and not by a provisional order to be embodied in an Act, as in Lord Ribblesdale's Bill. Lord Spencer then moved the adjournment of the debate, and another sharp discussion followed, but finally Lord Avebury's Bill was read a second time, the vested interest theory vindicated, and the Lords adjourned.

General Public Health Legislation.—On Thursday in last week Mr. Brigg asked the First Lord of the Treasury if he would, with a view to lessening the work of Private Committees, and to diminish the cost of promoting Private Bills, introduce legislation in order to bring up to date the general public health legislation of England and Wales, in accordance with the recommendation No. 28 in the Report of the Select Committee on Private Business. Mr. Balfour said, in reply, that the question of what steps should be taken in connexion with the recommendations of the Select Committee on Private Business was one which must be deferred until the Government had had an opportunity of consulting the Chairman of Committees upon his return to the House.

The Police and Sanitary Committee.—This Committee, which for some years did excellent work in supervising and regulating sanitary points in private Bills, was the subject of a question by Mr. D. A. Thomas last week. He asked the Secretary of State for the Home Department if he could state why the Select Committee on Police and Sanitary Regulation Bills was not appointed during either of the past two years, and whether it had been determined to discontinue the Committee. Mr. Secretary Akers-Douglas replied that many circumstances prevented the appointment of this Committee during the past two years. One of the greatest difficulties in the way was to find members willing to serve on this Committee, as the number of attendances which would be required of them was much greater than that on an ordinary Private Bill Committee. Every effort was now being made to overcome this and other difficulties, and he hoped that it would be possible to reappoint the Committee.

Preservatives in Imported Milk.—On Monday Sir Edward Strachey asked Mr. Chancellor of the Exchequer, whether he would state what was the amount of preservatives, and what kinds of preservatives, were found in the samples of fresh and sterilized milk imported from abroad and examined at the Government laboratories during 1902. Mr. Ritchie, in reply, said that the samples of fresh and sterilized milk in question, with the exception of those taken from frozen milk, in which preservatives were not employed, were all examined for boric preservatives and for formalin, but in no case was either preservative detected.

Consumption as an Infectious Disease.—On Monday Mr. Cameron Corbett asked the Lord Advocate, if local authorities in Scotland were empowered to make provision for the treatment of consumption as an infectious disease. Mr. Graham Murray replied that having in view the general scope of the provisions as to infectious diseases contained in the Notification Act and the Public Health Act, the employment of public funds by the local authority in the way suggested by the honourable member would raise a legal question affecting the ratepayers on which, as he had no authority to determine it, he must respectfully decline to give an opinion.

Poor-law Officers' Superannuation (Scotland) Bill.—This Bill has been issued this week, and in its memorandum states that it seeks to extend to Scotland the provisions of the Poor-law Officers' Superannuation Act of 1896. The superannuation allowance is to be charged to the same fund as that to which the salary or wages are chargeable, and the allowance is not in any case to exceed two-thirds of the salary or wages. The percentage of contribution has been graduated with respect to existing officers from 2 per cent. of their total salary and emoluments in the case of officers with less than five years' service, and 2½ per cent. in the case of officers with less than five to fifteen years' service, and to 3 per cent. in the case of officers with more than fifteen years' service. This percentage has been arrived at from the experience of other superannuation schemes, and will practically be found sufficient to meet future claims for superannuation. While, however, an officer in possession of his faculties and capable of discharging his duties is not required to take his superannuation at any age, power is given to a parish council or other authority to require an officer who has attained the age of 65 to retire, when they are of opinion that it would be expedient in the interests of the public service that he should do so. The Bill is backed by Mr. Maxwell, Sir W. Arrol, Mr. Nicol, Dr. Farquharson, Mr. Cross, Colonel Denny, Mr. Ure, and Sir Charles Renshaw, and is down for second reading on March 25th, but is hardly likely to be reached on that day.

Death Certification.—On Tuesday Sir Walter Foster asked the President of the Local Government Board whether his attention had been directed to the recent report of a Departmental Committee on the regulations to be made under the Cremation Act, 1902, and to the views expressed by the Committee as to the defects of the present system of death certification; and whether he would introduce a Bill during the present session to carry out the recommendations of the Select Committee of 1893 on Death Certification. Mr. Long, in reply, said that he was aware of the report of the Departmental Committee referred to. The recommendations of the Select Committee on Death Certification had been under his consideration, but he was afraid he did not see any prospect of being able to introduce a Bill on the subject during the present session.

The Medical Act (1886) Amendment Bill is a measure introduced by General Laurie, Mr. Rothschild, Sir Howard Vincent, Mr. Middlemore, and Sir M. Bhownaggree. In a memorandum attached to the Bill it is stated that the Act of 1886 provided for reciprocity between the mother country and such of the self-governing colonies as might comply with certain conditions, but that Act expressly stipulates that when any colony had a provincial and a federal organization such reciprocal arrangements should be entered into with the federal Government and not the provincial. Unfortunately for the purposes of this Act, in the case of Canada the British North America Act of 1867, enacted by the Imperial Parliament, expressly provides that education shall be entirely under the control of the provincial and not the federal Governments, so that it is impossible to bring the Act of 1886 into force with Canada. It is impracticable to amend the British North America Act of 1867, and to transfer the control of education to the federal authorities, and therefore it is the object of this Bill to amend the Medical Act of 1886 without in any way interfering with the principle, and to enable reciprocal arrangements to be entered into with the provincial Governments. The Bill is down for Friday but it is not likely to come on.

The Medical Act (1858) Amendment Bill.—This Bill, also introduced by General Laurie and the same backers as the measure to amend the Act of 1886, provides that where the examinations and course of education at the principal colonial schools of medicine are in all respects the same as those practised in the United Kingdom and subject to the supervision of the General Medical Council, medical men from Greater Britain should, when proved to be properly qualified, be admissible to serve the empire in the naval and military and civil services of the Crown. Surgeons of the highest standing in Canada, and holding commissions from His Majesty in the militia, volunteered for service in South Africa, and a complete field hospital was offered by Canada, and in both cases the War Office refused to accept such service on the ground that it was contrary to the Medical Act of 1858 to permit a surgeon on the Colonial Register and colonially trained to attend professionally to British troops. The object of the amending Bill is to remove this disqualification. Friday, March 20th, has been selected for the second reading, but the Bill cannot be reached on that day.

Dr. THOMAS LAPRAIK, who has been closely associated with the Glasgow Athenaeum for many years, gave up its chairmanship early this year, and at a special meeting of the Governors recently he was asked to accept his portrait as a token of esteem, and in recognition of his valuable services. A replica of the picture has been prepared, and will be hung in the Athenaeum.

INTERNATIONAL CONGRESS OF DERMATOLOGY.—The fifth meeting of the International Congress of Dermatology will be held at Berlin, September 13th to 17th, 1904. The following questions are proposed for discussion: (1) Syphilitic diseases of the circulatory apparatus; (2) skin affections in anomalies of metabolism; (3) epitheliomata and their treatment.

LITERARY NOTES.

THE 1903 edition of Burdett's *Hospitals and Charities* will shortly be issued by the Scientific Press. This is the fourteenth year of publication of this convenient work of reference in regard to charities, whether British, American, or Colonial.

Mr. George Allen informs us that he will shortly issue the first volume of a complete and uniform edition of Mr. Ruskin's works, to be known as the "Library Edition." It will be published in from thirty to thirty-two monthly volumes; the price of each volume is one guinea net. The first volume will be issued not later than March 31st, 1903. Hitherto, in order to become possessed in some sort of all Mr. Ruskin's works, it has been necessary to purchase some sixty to seventy volumes of various sizes and types, and in addition to "collect," if possible, some thirty volumes and pamphlets, some almost unobtainable, others obtainable only at great cost. The "Library Edition" will be complete and will include: (1) All Ruskin's books now current in other editions; (2) a reissue of all publications by him now out of print or only privately circulated; (3) all his letters, articles, and other scattered writings, not heretofore collected; and (4) a collation of all the different editions, bringing together within the pages of each book everything that he at any time published therein. In addition to collecting material already printed, much new matter has been placed at the disposal of the editors. This is of three kinds: (1) Unpublished MSS. by Ruskin; (2) the author's MSS. of published works; (3) letters and diaries. Each volume is prefaced by an introduction which is at once bibliographical and biographical. In the compilation of these prefaces, Ruskin's diaries, letters, and conversations have been largely used. This edition will include all the illustrations inserted by Ruskin in his books, and all drawings by him which have hitherto been published. In addition to those previously published, this edition gives a large number of the author's drawings which have not hitherto appeared, as well as numerous unpublished plates engraved under his personal superintendence. Some of the best portraits of Mr. Ruskin are inserted as frontispieces, and facsimiles of the MSS. are also given. The editor is Mr. E. T. Cook, whose literary experience and great knowledge of Mr. Ruskin's writings may be regarded as going far to guarantee the manner in which the editorial work will be accomplished. Mr. Cook has also the advantage of the collaboration throughout the edition of one of Mr. Ruskin's literary executors, Mr. Alexander Wedderburn.

Knowledge for March says that Dr. Carl Lumholtz, who spent five years, between 1890 and 1898, in north-western Mexico, recently read a very interesting paper on his explorations and researches before the Royal Geographical Society. Dr. Lumholtz lived for a considerable time alone with various Indian tribes in the Western Sierra Madre. Speaking of the endurance of the members of a tribe called the Tarahumare, he mentions that these people will easily run 170 miles without stopping. They have regular races as a test of endurance rather than speed. As a proof of their insensibility to pain, Dr. Lumholtz mentions that he saw twenty-three hairs pulled out at one stroke from the head of a sleeping child, who merely scratched its head a little and slept on. Many of the Indians of the Sierra Madre are very musical, and Dr. Lumholtz has particularly studied their symbolism. Every little detail and ornament bears not only a religious significance, but often forms an actual prayer. The author referred to certain species of cacti, which are worshipped by two tribes of Indians, a regular cult being instituted, whose main purpose is to promote the health of the tribe as well as to bring rain. The plant is supposed to talk and sing, and to feel joy and pain. It has great exhilarating properties, allays all feelings of hunger and thirst, and does away with all exhaustion; it also produces colour visions. A great feast, elaborate and lengthy preparations for which are made, is held at certain times, at which the plant is eaten. The main feature of the feast is a peculiar kind of dancing by men and women, whose faces are painted with various designs with a symbolic meaning.

Messrs. James MacLehose and Sons, publishers to the University of Glasgow, inform us that they have in the press a complete edition of Hakluyt's collection of "The Principal Navigations, Voyages, and Discoveries of the English Nation." The publication is singularly opportune in view of the Royal Geographical Society's Commemoration of the Tercentenary of the Death of Queen Elizabeth, which occurs on March 24th. Hakluyt's great work, which was described by Froude as "the prose epic of the modern English nation," was first published in 1589, and a second edition, revised and enlarged by Hakluyt, was printed in 1598-1600. The collection was reprinted in limited editions in London in 1809, and in Edinburgh in 1885, but these reprints, like the originals, have become very scarce and costly. The aim of the publishers in the new issue is to render accessible to all interested in early voyages and adventures an accurate and beautifully-printed text from the edition of 1598-1600. Professor Walter Raleigh will contribute an essay on the life and work of Hakluyt, which will complete the whole. It will be illustrated from contemporary portraits and maps, will contain a full index, and will be printed from a Caslon fount at the University Press, Glasgow, on antique paper. The edition will be strictly limited, and sold in complete sets only. The first volume is in the press, and will be published shortly, and it is hoped that the whole will be issued within two years.

The suggestion that Golder's Hill House, Hampstead, should be converted by the London County Council into a children's home has aroused opposition, but is most appropriate, for Golder's Hill has associations that connect it in a special way with the medical profession. It was for many years the residence of Sir Spencer Wells, who might have been seen almost any fine afternoon riding out to it after his day's work in town. The place was also a favourite resort of Mark Akenside, more famous as a poet than as a physician, but yet a prominent man in the medical world of his day. He celebrated Golder's Hill in an ode written after "a fit of illness" in 1758. Addressing the hill, he says:

> How gladly mid the dews of dawn
> My weary lungs thy healing gale
> The balmy west or the fresh north inhale!
> How gladly while my musing footsteps rove
> Round the cool orchard or the sunny lawn,
> Awaked I stop and look to find
> What shrub perfumes the pleasant wind,
> Or what wild songster charms the Dryads of the grove.

According to a writer in the *Westminster Gazette*, it was near Golder's Hill that the poet's friend, Dyson, from whose liberality he enjoyed a large independent income, had his seat, and Akenside has described how he and his patron used often to recite Virgil and Cicero to one another in their "lingering walks" over the scene. Wordsworth declared that he never passed the hill without giving a thought to the learned poet and his friend.

We have received from Messrs. John Bale, Sons, and Danielsson a copy of a poem entitled *In Memoriam: Victoria Regina et Imperatrix*, by "Suvia" (price 1s.). The author is, we are informed, a medical man who does not wish his name to be disclosed. The poem is written in blank iambic verse, a sober measure, but the fine frenzy of the bard is dithyrambic in its intensity. We confess that the sound and fury of his words leave us cold. In Mr. Sidney Lee's life of the late Queen it is said that, although she enjoyed her popularity, the thick fumes of the incense burnt in her honour by the press in the later years of her life began to sicken her, and on some fulsome outburst of praise being read to her she would say, "If they only knew me as I really am!" We cannot help thinking that this would have been her judgement of "Suvia's" effusion.

Some time ago Mr. L. M. Griffiths published an interesting pamphlet entitled Some Things of General Interest in the Bristol Medical Library. An account of the literature relating to the waters of the Hotwells is given. A note on the references to this matter collected by Mr. Griffiths appeared in the BRITISH MEDICAL JOURNAL of April 19th, 1902, p. 995. Among the other contents of the library are two interesting volumes of Harvey's works. The first is a facsimile in autotype reproduction of the MSS. of his *Prelectiones Anatomicae Universalis*. The second is his book *Anatomical Exercitations concerning the Generation of Living Creatures*. In this state, with the portrait, it is said to be very rare. In one of Quaritch's catalogues a copy without the portrait is priced at £7 10s., and the note is added: "Extremely rare. Unmentioned by Lowndes. Mr. Hazlitt remarks, 'It is said that only 150 copies were printed, and of these 115 were destroyed.' A perfect copy fetched £40 10s. at Sotheby's in 1892." The library also possesses several portraits of Edward Jenner as represented by various artists; and two caricatures. One of them is a Dutch reproduction of one of Gillray's caricatures which represents Jenner performing the operation on patients who have previously been prepared by medicine administered by another doctor. The vaccinated patients develop on various parts of their bodies distinct bovine characteristics. On the top of the picture is a cow to

which worship is being paid by the votaries of the new method. The other, a French caricature entitled, "Sept contre un, ou le Comité de la Vaccine," represents an animated scene at one of the meetings of the committee appointed to report to the Government on the merits of the new discovery. In this caricature two smaller pictures are introduced, one representing Jenner discovering vaccination, and the other shows a child being vaccinated. Referring to the difficulties and dangers of subject classification, Mr. Griffiths says that a little experience of them should make us lenient to the errors of others. He adds, however, that it is difficult to forgive the British Museum for placing Ziemssen's *Cyclopaedia of Medicine* in a list of bibliographical works, or for putting Holden's *Landmarks* under the heading of "History of Medicine," or worst of all, for classing under "Obstetrics," a work on "Child Labour" especially as it adds immediately after the entry that it was issued by the American Economic Association. This reminds us of a story told of a theological inquirer who searched the Bodleian in vain for a certain treatise on the Immaculate Conception. At last he was directed by a courteous official to the subject-index where the book was found duly entered under the head of "Obstetric Anomalies."

At the seventy-third meeting of the German Congress of Scientific Inquirers and Physicians, held at Hamburg, Dr. Max Neuburger read a paper on Swedenborg's observations on the brain, a translation of which was published in the *New-Church Magazine* for November, 1902. Dr. Neuburger says that Swedenborg is generally misunderstood as being a spirit-seer, an arch-visionary, and nothing more. He points out that Swedenborg gained some knowledge of anatomy and physiology during his travels in Italy and elsewhere, undertaken for the purpose of scientific study in 1736-9. The result of these travels was the *Oeconomia Regni Animalis*, which was published at Amsterdam (1740-1); neither this work, however, nor the later, and for the most part unpublished, continuation of it, was adequately valued by Swedenborg's contemporaries, or those who came after him. Dr. Neuburger claims for him the priority of the discovery of the coincidence of the motion of the brain with respiration. He also maintains that Swedenborg was the first who placed exclusively in the cerebral cortex the seat of the higher psychical activity. It is in the cortical substance alone, says Swedenborg, that the soul acts with consciousness, and the world is reflected most clearly; it alone unites the brain mass into a whole, and renders feeling, willing, and knowing possible. *In hac unitate, seu in hac substantia, inesse debet superior illa potentia, quam quaerimus. Ergo facultas intelligendi, cogitandi, judicandi volendique animae non in aliqua ulteriori, quia ultima est cerebri, inquirenda est.* (In this unity, or in this substance, there should dwell that higher power which we seek. Therefore the soul's faculty of understanding, thinking, judging, and willing should not be sought for in any further substance, for it is the ultimate substance of the brain.) If the localization of the soul in the cortex, says Dr. Neuburger, appears to us to-day very primitive, he asks whether Sömmering's anatomical investigations, with the conclusion that the water of the brain is the seat of the soul, are to be valued any higher, especially as they originated from a professional man in the year 1796. The conclusions of Haller and of many other authors, that the soul resides in the marrow substance or in the medulla oblongata, because, in the experiments on animals, spasms are caused by exciting the same, are scarcely less absurd than those of Swedenborg. Swedenborg also anticipated the localization of muscular activity in the different parts of the cerebral cortex. He says: "*Substantia corticea et cineritia est fons motuum vitalium, voluntariorum et naturalium.*" He indicated the need of experimental research on the subject: "*Experentiae est et temporis ut erestigetur, qui gyrus et qui serpens tumulus in cerebro hunc aut illum musculum ut correspondentem suum in corpore respiciat. Ergo inquirendum venit, qui tori corticei his aut illis musculis in corpore correspondent; quod fieri non potest, nisi per experientiam in viris animalibus, per punctiones, sectiones, et compressiones plurium, perque inde in corporis musculis redundantes effectus.*"

In connexion with Dr. Neuburger's paper, it may be mentioned that, as we learn from the *New-Church Magazine*, the Swedenborg Society has undertaken to complete the publication of Swedenborg's great work on the brain. Dr. R. L. Tafel, having undertaken to draw together into a synthetic argument all that Swedenborg had written on the subject of the brain, published or unpublished, completed his task so far as to publish two volumes: the first, treating of the cerebrum, in 1882, and the second, on the pituitary gland, cerebellum, and medulla oblongata, in 1887. Dr. Tafel, however, died before he completed his undertaking. He left the manuscript (almost complete) of the remainder of the text, and a large amount of the annotation and editorial work. This manuscript has been in the hands of the Rev. James Hyde for some time. Last year the Swedenborg Society purchased all the stock, rights, and manuscript. Mr. Hyde has been asked to prepare the manuscript for the press. That part of the work treating of the cortical and medullary substances will come next; but there is a section on the diseases of the brain which, after preparation for the press, it is proposed shall be put into the hands of a good pathologist for editing. It was also intended to prepare a book of the plates required for the illustration of the text, but the matter has not yet received further consideration. Indexes will be required, and a considerable amount of labour will be needed before the work is complete. Dr. Neuburger, who does not seem to have known of the work on the brain at the time he wrote the paper from which we here quote, has applied to the Swedenborg Society for permission to translate the work into German at his own expense.

An amusing story about Sabatier, the author of the famous eighteenth-century treatise on operative surgery, is told by Malgaigne. Sabatier was fond of rambling about Paris, and took a special delight in listening to the quacks who, not having in those days the means of publicity now afforded them by the newspapers, proclaimed to such as they could get to listen the infallible virtues of their nostrums, a big drum being used as a "ducdame," which, it may be remembered, is defined by the melancholy Jaques as an invocation to call fools in a circle. One day Sabatier was listening to a quack, dressed from top to toe in red, who, standing up in a splendid carriage, charmed the ears of the bystanders with his discourse. Suddenly the orator, who had just declared that he was not an ignorant charlatan like others, but a man well thought of by the best scientific authorities, caught sight of the solemn-looking person who, with his hands on the top of his cane, seemed to be hanging on his words, and stopped for a moment. Then suddenly he exclaimed, "Look at that venerable man who is listening to me: it is easy to see that he is a man of study and knowledge. I will speak to him in the language of the learned, that is to say, Latin, and you will see that he will agree with what I say." Then, addressing Sabatier, he said, "Sir, this is the statement which I wish to submit to you: *Vulgus vult decipi.*" Sabatier, taken aback by the fellow's impudence, stammered out, "Quite true." "That being so," said the quack, "draw the inference yourself: *Ergo decipiatur.*"

The *St. Thomas's Hospital Gazette* for February records that one of the physicians was recently irritated beyond the possibility of silence when two of his new clerks in succession, in reading the notes of their predecessors, announced "Pat had a better night," and "Pat's headache is better to-day." This reminds our contemporary of a letter that was sent to the hospital. An Irishman, whose name was Patrick, came in very ill, and died. His friends felt rather dissatisfied, and this feeling was increased when they happened to get hold of the notes of the case, and found their relative continually referred to as "Pat." This feeling found expression in a letter from their priest, from which the following is an extract: "The term 'Pat' (his proper name is duly entered on the report) is regarded by all his friends as most offensive, especially at such a time as this, and I am sure you must agree with me that there is no conceivable purpose to be served by such a term being applied to him. I think it is suggestive of a reference to a subject which certainly hospitals should not recognize as existing." We quote this in order to point a moral which we wish to draw. In reports of cases sent for publication in the British Medical Journal the "case" is almost invariably referred to in the way which caused the trouble above related. Our grievance, however, has nothing to do with "Pat's" nationality. What we complain of is the omission of the definite article all through a long report, which entails an amount of needless work in preparing the MS. for the press, of which only those who have done it can form any conception. It cannot be too clearly understood by reporters of cases and societies and by contributors generally that the MSS. with which they favour us should be ready to hand to the printer—that is to say, the sentences should be written out without omissions of articles, pronouns, or verbs, and without abbreviations. Editors, though "infallible," have yet this touch of Nature, making them kin with ordinary humanity, that their tempers are apt to be ruffled by unnecessary demands on their time and trouble.

The Charaka Club was founded in November, 1898, by a group of medical practitioners of New York interested in the literary, artistic and historical aspects of medicine. The Club at present consists of ten members, and in the list of names we note those of Dr. John S. Billings, Dr. Charles L. Dana, and Dr. George F. Shrady, editor of the New York *Medical Record*. There is one honorary member, Professor Osler, of Baltimore. Part of the *Proceedings* of the Club have recently been published in a handsome volume by Messrs. William Wood and Co. of New York. Dr. B. Sachs contributes a paper on Hindu medicine. The oldest extant treatise on this subject is by Charaka, after whom the club is named. The Ayur Veda, the collective title for the Indian medical writings of the greatest antiquity and highest authority, is supposed to have been written between the fourteenth and the ninth centuries before the Christian era. In its original form it consisted of 1,000 sections of 100 stanzas each. Brahma, taking pity on the weakness of mortals, abridged and divided it into eight parts. In the original arrangement the first division treated of the extraction of foreign bodies violently or accidentally conveyed into the human body; the second dealt with the treatment of external organic affections; the third with fevers, dysentery, consumption, diabetes, and internal medicine generally; the fourth with the restoration of faculties from a disorganized state caused by demoniacal possession; the fifth with the care of infants; the sixth with the use of antidotes; the seventh with alchemy and the elixir of life; the eighth with procreation. The following is a summary of the qualities and duties of a physician of "noble descent":

> The physician should possess a healthy body; he should keep his nails and beard short; his body pure; his clothes clean. Should the practitioner not know his duty, the cure of the disease will be tedious and imperfect. It will also be so when the pulse cannot be felt at the root of the neck and when the senses are affected. In such cases the practitioner should always inform the relations and friends of the sick person of the state he is in before prescribing. A good physician will continue to visit his patients diligently, examine them carefully and be not fearful, but give medicines always when the patient can live. But if the physician attempt to treat an incurable disease, it will diminish his reputation, friends and riches.

The ingratitude of patients who have been cured was not unknown in those remote times, but the physician had some compensation in the promise that the "good fortune" of the thankless would become his. We do not see, however, how he could have benefited by the transference to him of an ungrateful patient's "holiness."

> And when the physician has accomplished all that could be expected of him, he is entitled to the usual gifts for the performance of a good action. These will vary with the rank and condition of the patient. Money will be the recompense bestowed by the rich; friendship, reputation, increase of virtue, prayers and gratitude will be that of the poor. His course will insure the admiration and esteem of all men. He will be honoured and respected as a master, and after death he will go to heaven. Should the patient prove ungrateful after being cured, his holiness and good fortune will pass to the physician, but the physician must avoid administering remedies to hunters or great sinners. Such people do not deserve his assistance.

It may be noted that the Ayur Veda contained a description of the structure of the human body as revealed by dissection, showing, as Dr. Sachs points out, that in this respect the Hindus were more advanced than the Greeks. It is enjoined that in the selection of a wife special care should be taken that her family is free from taints. Among these are enumerated haemorrhoids, consumption, indigestion, and epilepsy. Dr. Frederick Peterson contributes some verses entitled, "In the Shade of Ygdrasil"; Dr. Arpad G. Gerster discusses in the light of his surgical experience the Hippocratic doctrine of injuries of the skull; Dr. Joseph Collins tells "the story of a man who wished to hypnotize," and discusses a complex case of matrimonial ethics; Dr. Dana writes learnedly on the Cult of Aesculapius, His Statutes and His Temples, and pleasantly on the evil spoken of physicians; lastly, Dr. Holden treats briefly of Greek ophthalmology. The illustrations which accompany Dr. Dana's paper on Esculapius are admirably executed. We hope the Charaka Club may long flourish, and we shall look forward with all the pleasures of hope to the appearance of further volumes of its proceedings.

Dr. Francis R. Packard, of Philadelphia, in an article on the Resurrectionists of London and Edinburgh, which appeared in the New York *Medical News* of July 12th, 1902, mentions a number of novels in which use is made of incidents connected with resurrectionism as the basis of their plots. It is well known that the body-snatchers found a good market for subjects in America, before the enactment of the present laws with regard to the provision and distribution of anatomical material. In at least one novel that had a considerable vogue about twenty-five years ago, resurrectionism was used as an important part of the plot. The title of the book was *Rosemary*, and the author's name Huntington. The scene was laid in New York, and the plot turned on a conspiracy to get a handsome young woman out of the way. A mysterious drug was administered whereby she was thrown into a trance resembling death. The body was then removed from the graveyard by professional body snatchers, and sold to a dissecting room. Its life-like appearance was so striking, however, that the medical students to whom the body was assigned refused to believe the subject dead, and efforts at resuscitation proved successful. Of course, the young lady married the demonstrator to whom she owed her life. The details of the body snatching are, says our contemporary, given with a precision that seem to show a familiarity with the traditions of the "resurrection" trade in America.

In a recent number of the *Johns Hopkins Hospital Bulletin* Dr. Henry Barton Jacobs gives an account of "Some Distinguished American Students of Tuberculosis." Among these the first in order of time is Benjamin Rush, whose *Thoughts upon the Causes and Cures of Pulmonary Phthisis* appeared in 1783. Many distinguished physicians, says Rush, have agreed that consumption is dependent on contagion. That opinion he had shared in his early professional life, but later he came to doubt the truth of it. The radical treatment of the disease was, he held, exercise in the open air, graduated so as to induce fatigue. After Rush came Samuel George Morton, who studied under Laënnec, and, returning to Philadelphia in 1824, was one of the first to introduce into America the methods of physical diagnosis which he had learnt in Paris. In 1834 he published a volume on pulmonary consumption in which particular stress was laid on the efficiency of an open-air life and exercise. One of the most distinguished students of tuberculosis in America was Henry Ingersoll Bowditch, Professor of Clinical Medicine in the University of Harvard. He urged strongly on the attention of the profession that in certain cases tuberculosis is contagious or at least infectious. This was in 1864, a year or two before Villemin proved the infectivity of the disease. Dr. Jacobs sums up the claims of other American workers as follows: Austin Flint introduced several auscultatory features of value in determining the pulmonary condition, and his influence led to the early acceptance in America of the discoveries of Villemin and Koch. Flick demonstrated that danger lies in the dried sputum collected in infected houses. Vincent Bowditch and others proved that in local sanatoria as well as in mountain resorts the consumptive may recover. Trudeau experimentally demonstrated the value of pure air in resisting tuberculosis, and assisted in demonstrating the almost complete valuelessness of so-called specific drugs.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

DURING the two weeks ending February 14th and 21st, the deaths from plague in India numbered 25,852 and 27,310 respectively. This enormous total indicates the maximum of plague returns since plague appeared in India in 1896. In the third week of February, 1902, the deaths from plague amounted to 14,946, so that the present returns are almost double the death-rate from plague for the corresponding period of that year. The areas in which the recent rise has occurred are chiefly Bombay City, the Punjab, the Central Provinces, and Berar.

In Bombay City the native population for some reason believed that plague was not going to be severe this winter, and they accordingly are quite apathetic in the matter of prophylactic measures. The facts, however, point in the opposite direction; plague has assumed a more acute form than at any period of last year. During the week ending February 21st the plague claimed 1,054 victims in the city, and during 1901 and 1902 the highest figures were not reached until towards the end of March; but even then the number of plague cases was considerably lower than those recorded this year already.

In Poona, since the outbreak in August, 1902, 5,557 persons have died of the disease. As an indication of the difficulties of fighting plague in India, it may be noted that the people of Amritsar are averse to direct killing, so that the Municipal Committee have decided to offer so much for every rat caught alive. These rats will have to be kept alive presumably, until the outbreak of plague has subsided, when they will, it is supposed, be released. This seems going rather far in concession to native prejudice, but it shows the many difficulties which beset the Government in attempting to eradicate plague in India.

In Belgaum, owing to the persistence of plague, the city has assumed an appearance of desolation; houses are falling into ruins, the streets are becoming impassable owing to want of attention of the roadways, and the gutters are choked with filth.

EGYPT.

During the week ending February 22nd no fresh cases of plague were reported in Egypt, nor were there any deaths from the disease. On

February 22nd, 3 cases of plague were under treatment at Toukh, Galioubieh province.

SOUTH AFRICA.

Cape Colony.—At Port Elizabeth 5 fresh cases of plague were discovered during the week ending February 14th. The nationality of the patients was as follows: European, 1 male; Malay, 1 male; natives, 3 males. Plague-infected rats continue to be found in Port Elizabeth. In Graff-Reinet plague-infected rats and mice were found during the week ending February 14th.

MAURITIUS.

During the weeks ending March 5th and 12th the deaths from plague in Mauritius numbered 2 and 2 respectively.

HONG KONG.

During the weeks ending March 7th and 14th the fresh cases of plague in Hong Kong numbered 10 and 17 respectively; the deaths from the disease during the same periods were recorded as 17 and 17 respectively.

ASSOCIATION NOTICES.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 22nd day of April next, at 2 o'clock in the afternoon.

March, 1903. GUY ELLISTON, *General Secretary.*

ELECTION OF MEMBERS.

ANY candidate for election should forward his application upon a form, which will be furnished by the General Secretary of the Association, 429, Strand. Applications for membership should be sent to the General Secretary not less than thirty-five days prior to the date of a meeting of the Council.

GUY ELLISTON, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.—The next meeting of this District will be held at the Lambeth Infirmary, on Friday, March 27th, at 4 p.m. The afternoon will be devoted to clinical work, and cases of interest will be shown from the wards of the infirmary. —MAURICE CRAIG, Bethlem Royal Hospital, S.E., Honorary District Secretary.

METROPOLITAN COUNTIES BRANCH: WEST LONDON DISTRICT.—The next meeting will be held at St. George's Hospital, Hyde Park Corner (by kind permission of the staff) on Wednesday, March 25th, at 8.30 p.m. The meeting will be entirely clinical; some members of the staff will show cases. Mr. J. Brindley James, M.R.C.S., Vice-President, in the chair. Light refreshments provided; smoking allowed. All members of the British Medical Association living in the area of the Metropolitan Counties Branch are now members of the Branch. The Honorary Secretary tenders his apology to any member that does not receive a notice card of the meeting in the West London District.—THOMAS DUTTON, 7, Manchester Square, W., Honorary Secretary.

SOUTH-EASTERN BRANCH: EAST AND WEST SUSSEX DISTRICTS.—A meeting of the above Districts will be held on Thursday, March 26th, at the Hotel Métropole, Brighton, at 4 p.m., Dr. Gordon Dill in the chair. Dinner at 6.30 p.m.; charge 6s., without wine. Agenda: Minutes of Hastings meeting, to decide place and date of next meeting, and to nominate a Chairman. The following papers, cases, and specimens are promised:—Dr. Gordon Dill and Mr. George Morgan: Microscopical specimens of tropical diseases. Mr. Watson Griffin: Cases illustrating corneal and pericorneal affections. Dr. E. Hobhouse: Paper on the significance of wasting in disease. Dr. E. Maynard: Cases and notes of pseudo-hypertrophic sclerosis, lateral sclerosis, and general paralysis. Mr. T. H. Ionides: Notes of a case of albuminuria in pregnancy. Mr. G. Sanderson: Notes and comments of a case of appendical abscess complicating a 7-months pregnancy.—W. J. C. MERRY, 2, Chiswick Place, Eastbourne; H. C. L. MORRIS, The Steyne, Bognor, Honorary Secretaries.

WEST SOMERSET BRANCH.—The spring meeting of this Branch will be held at the Taunton and Somerset Hospital, on Friday, April 3rd, at 3.30 p.m., when the chair will be taken by the President, Mr. E. E. Frossard. Business: In addition to the minutes of the last meeting, etc., it will be necessary to adopt laws for the government of our newly-constituted Branch, and also laws to regulate ethical procedure. Draft model rules suitable for adoption will be found in the Supplement to the BRITISH MEDICAL JOURNAL of March 7th, 1903, pp. xxi and xxiii. It will save much time if members will make themselves conversant with these before the meeting. Clinical cases:—Dr. Rutherfoord will read notes on cases: (1) Caesarean section; (2) excision of elbow-joint (with skiagraph); (3) vaginal hysterectomy (with specimen). Mr. R. Morton will show two cases of lupus which have been treated with x rays. Address: Dr. L. A. Weatherly, of Bailbrook House, Bath, has kindly consented to read a paper on Insanity: some points of mutual interest to the alienist and general practitioner. Members wishing to bring any other communications before the meeting are requested to give me early notice of the same. Tea will be provided after the meeting.—W. B. WINCKWORTH, Taunton, Honorary Secretary.

SHROPSHIRE AND MID-WALES BRANCH.—The spring meeting of this Branch will be held at the Salop Infirmary, on Friday, April 3rd, at 3.30 p.m. Members who wish to bring forward any business, to read papers, to show cases or specimens, are requested to communicate with the Honorary Secretary not later than Wednesday, March 25th.—HAROLD B. MACLEOD, College Hill, Shrewsbury, Honorary Secretary.

SOUTH-WESTERN BRANCH.—The next meeting of this Branch will be held at the Royal Devon and Exeter Hospital on Wednesday, April 1st, at 3 p.m., the President, Mr. J. Delpratt Harris in the chair. The following communications are already promised:—Mr. Russell Coombe: On two cases of early tubal gestation with operation; recovery. Dr F. Bushnell: On the antibodies in disease. Dr. W. Gordon: On the practical use of blood films. Dr. W. Gordon will also show: (1) Micrococci in the stomach wall beneath gastric ulcers; (2) photograph of an aortic stenosis which only produced a systolic murmur in the recumbent position.—G. Y. EALES, 1, Matlock Terrace, Torquay, Honorary Secretary.

DUNDEE AND DISTRICT BRANCH.—This Branch will meet in University College, Dundee, on Friday, March 27th, at 4.45 p.m., to consider further correspondence *in re* Dr. R. Miller, and to adopt new by laws.—R. COCHRANE BUIST, M.D., Dundee, Honorary Secretary.

LEINSTER BRANCH.—A general meeting of the members of this Branch will be held in Dublin on Tuesday, April 14th. Members will be notified by circular of the place and hour.

EAST ANGLIAN BRANCH.—The spring meeting of this Branch will be held at the Green Dragon Hotel, Wymondham, Norfolk, on Thursday, March 26th. 12 noon, Council meeting. Additional agenda: To consider the grouping of the Divisions for representation; to consider the rules regarding ethical procedure. 12.30 p.m., general meeting. Agenda: To consider draft model rules for the Branch. 1.30 p.m., lunch, 3s. Members are requested to intimate to Mr. H. A. Ballance, M.S., on or before Monday, March 23rd, if it is their intention to be present at lunch. 2.15 p.m., adjourned general meeting Adjourned consideration of draft model rules. Dr. Alan Reeve Manby, M.V.O., of East Rudham, Norfolk, will read a paper on Some Aboriginal Surgery, illustrated by lantern slides. Mr. W. K. Hatch, F.R.C.S., of Norwich, will read a paper on Vesical Calculus. Mr. William Wyllys, M.R.C.S., L.R.C.P., of Great Yarmouth, will read a paper on the Influence of the Gouty Diathesis on the Course of Pulmonary Tuberculosis. 4.30 p.m., afternoon tea, by kind invitation of Mr. David Hughes, of Wymondham, at the Green Dragon. 5 p.m., the Rev. the Hon. Archibald Parker, M.A., Vicar of Wymondham, has kindly consented to show the members over Wymondham Church, which is undergoing restoration at the present time. Messrs. Down Brothers will give an exhibition of surgical instruments and appliances.—B. H. NICHOLSON, (Colchester), H. A. BALLANCE (Norwich), FRANCIS WARD (Ipswich), Honorary Secretaries.

BEQUESTS TO HOSPITALS.—Under the will of the late Mr. Mortimer Harris of Brixton, the sum of £2,000 was bequeathed to King Edward's Hospital Fund, and £1,000 each to the Brompton Hospital for Consumption and to the Great Ormond Street Children's Hospital.

AN INTERNATIONAL CONGRESS ON TUBERCULOSIS AT ST. LOUIS.—A "World's Congress" on Tuberculosis is to be held in St. Louis on July 18th to 23rd, 1904. The work of organization is being carried on by committees appointed by the American Congress on Tuberculosis, which is now a permanent body, incorporated under the laws of Georgia. An Advisory Committee, composed of the heads of the medical corps of the army and navy and of many presidents of health Boards and other sanitarians in the United States and Canada, has been appointed. The Secretary of the organization is Dr. George Brown, of Atlanta, Georgia.

PUBLIC GARDENS IN LONDON.—The annual report of the Metropolitan Public Gardens Association for 1902 contains a good record of work accomplished during the twentieth year of its existence, including the laying-out and planting of many disused plots of ground, the establishment of recreation grounds of considerable extent, and the provision of seats in many open places, besides conjoint opposition to the alienation of beauty spots or open spaces around or in the metropolis. It also contains a long list of work now in progress. The report is useful, too, on more general grounds, for it gives information as to the steps to be taken for laying-out and throwing open to the public disused churchyards or burial grounds, and a list of trees and shrubs suitable for planting in smoky districts. It is interesting to know that the good example of the Association is likely to be followed in Birmingham, Belfast, and elsewhere.

SPECIAL CORRESPONDENCE.

PARIS.

Académie de Médecine: An additional Early Diagnostic Sign of Apical Phthisis: Closure of the Discussion on Dangerous Essences. —Proposed Memorial to the late Professor Panas at the Hôtel Dieu.—Opening of the Summer Session.

AT the meeting of the Académie de Médecine on March 10th M. Charles Fernet read a paper calling attention to the value of examining the condition of the axillary lymphatic glands in doubtful cases of early apical phthisis. M. Fernet, who has done this for several years, has been struck by the frequency of their alteration at the beginning of the disease. Although not so frequently as in the tracheo-bronchial group, he yet found an alteration in about one third of the cases examined. The glandular affection is latent; the affected ganglia are usually small, and may be felt at the bottom of the axilla or on its internal surface against the thoracic wall: their volume varies from the size of a lentil or a pea to the size of a bean or a nut, or even larger; the glands are movable, and roll under the finger; they are painless, and the patients do not know of their existence. Some perceptible glands may often be found at the same time on the side of the neck above the clavicle. M. Fernet has never seen these glands break down, at least in the first period of lung disease, and he presumes that the condition retrocedes or even disappears as the lung continues its evolution towards breaking down and ulceration, for the enlargement of the axillary glands is much less common then than at the beginning of the disease. Pathologically considered the infection may travel by either of two ways: (1) A direct propagation of the tuberculous affection of the lung to the adjacent pleura, and so to the chest wall and the axillary ganglia. (2) The infection would first reach the mediastinal ganglia, then those at the root of the neck, and finally the axillary glands. This, he thinks, is perhaps the more common route. Being often unilateral and coinciding with an alteration in the cervical glands on the same side as the pulmonary lesion, the enlargement of the axillary glands is of diagnostic value in suspicious cases, where there has been progressive loss of flesh, and yet careful examination of the chest only furnishes doubtful and uncertain signs of disease of the lung. Owing to the ill-health of the reporter, M. Laborde, M. Jouffroy, in the name of the Commission on Alcoholism, closed the discussion on "Dangerous Essences" before the Académie de Médecine by moving the following conclusions, which were unanimously adopted:—

1. The Académie declares that all essences, natural or artificial, without exception, as well as extractives incorporated with spirits or with wine, constitute dangerous and harmful drinks.

2. The Académie declares that the danger of these drinks resulting at once from the essences and from the alcohol which they contain, they deserve proscription whatever may be their basis, and at any rate there is need to increase the tax in such a way that the excess tax becomes in a measure prohibitive.

3. The Académie particularly calls attention to the danger of *apéritifs*, that is drinks containing essences and alcohol, which are taking fasting. The fact that these drinks are taken before meals renders their absorption more rapid and their toxicity more active.

Such is the reply of the Académie de Médecine to the letter of the Minister of the Interior asking the members to draw up two lists comprising (1) the most dangerous essences which should be prohibited, and (2) the less dangerous essences which should be under special regulations. To terminate the discussion the Commission on Alcoholism also brought forward a motion to the effect that efficient measures be taken to diminish the number of drink shops. It was carried unanimously.

The colleagues, friends, and pupils of the late Professor Panas have decided to open a subscription with a view to perpetuate his memory. The Committee proposes to have a medal engraved and also to place a monument in the hall of the ophthalmological clinique at the Hôtel Dieu, where during twenty-two years Professor Panas worked and taught.

The summer session in the Faculty of Medicine is now commencing, and many of the professors have already begun their courses of lectures. Professor Brouardel lectures on the medico-legal aspects of poisons, and Professor Proust on demography.

EDINBURGH.

Proposed Meeting of the Neurological Society in Edinburgh.—Vaccination in Scotland.—The Royal Infirmary and Dr. McBride. —The Outbreak of Scarlet Fever.

IT is proposed that the Neurological Society shall hold a meeting in Edinburgh at the end of June, and a Committee has been formed to make the necessary arrangements to ensure the success of the meeting.

A conference of representatives of various Scottish medical authorities regarding the conditions under which vaccination is practised in Scotland was held in the Royal College of Physicians on March 13th. Sir Thomas Fraser, Vice-President of the College, occupied the chair. The meeting was large, and included representatives from the Royal College of Physicians, the Royal College of Surgeons, the Faculty of Physicians and Surgeons of Glasgow, the Medical Faculties of the Scottish Universities, the School of Medicine of the Royal Colleges, the Incorporated Society of Medical Officers of Health for Scotland, and the recognized teachers of vaccination. After prolonged deliberation, the following motions were unanimously adopted:

1. That, in the opinion of this representative Conference, it is desirable that the medical profession in Scotland should enjoy the same facilities in regard to an authorized supply of vaccine as are enjoyed by the medical profession in England.

2. That the Conference is of opinion that an institution for the preparation of calf lymph should be established in Scotland.

3. That the following Committee (with power to add to their number) be appointed to prepare a memorial, embodying the views of the Conference, for submission to the Secretary of State for Scotland, and to arrange for an influential deputation in support of the memorial: Sir Thomas R. Fraser (Convener), Professor Glaister, Dr. Maxwell Ross (President of the Incorporated Society of Medical Officers of Health), Dr. J. Buist, and Dr. Francis Cadell.

At the weekly meeting of the managers of the Royal Infirmary on Monday, March 16th, it was reported that the minutes of the last meeting of the managers contained an expression of their thanks to Dr. McBride for his ungrudging devotion to the interests of the Infirmary during the past twenty years in the capacity of Medical Officer to the Ear and Throat Department. They recognized the position he held as one of the highest living authorities in his speciality, and they could not forget that he started the department to which he was attached. It does not, however, appear that they propose to retain his services till the new pavilion for diseases of the ear and throat is inaugurated.

The recent outbreak of scarlet fever, attributed largely to contaminated milk, seems to be dying down. The number of cases reported for the week ending mid-day Saturday, March 14th, was 33, as against 65 in the preceding week. The general mortality of Edinburgh for the week ending March 14th was 103, and the death-rate 16 per 1,000—a low rate for the month of March.

LIVERPOOL.

Presentation of Portraits of Dr. Caton.—Dinner to Sir William Banks and Dr. Caton.—The Samaritan Hospital for Women.

DR. CATON, Emeritus Professor of Physiology in University College, and, until lately Lecturer on Clinical Medicine, was recently presented with his portrait in oils by a number of old students, colleagues, and friends. The presentation took place in the Arts theatre of the College in the presence of a large gathering of the College staff, students, and others. The portrait, life-sized three-quarter in oils, representing Dr. Caton in his robes as Doctor of Medicine, is an admirable and pleasing likeness, painted by Mr. R. E. Morrison, which will be hung permanently in the College. At the same time a replica was presented which Dr. Caton will retain. The Chairman, Mr. E. K. Muspratt, in opening the proceedings, spoke of the high reputation which Dr. Caton had won during the last thirty-four years. He was originally connected with the old medical school of the Royal Infirmary, and when this was merged in the College he naturally became the first Professor of Physiology, and discharged the duties of that office until the chair was endowed by the munificence of the late Mr. George Holt. Professor Carter, Chairman of the Medical Faculty, who was called upon to unveil the portrait, said that there was in Dr. Caton the many-sidedness and the consequent broad and liberal culture of a mind which seemed equally in harmony with all that was attractive in the classic beauty of the past and all that was most intensely and vividly alive in the scientific movements of the present. The extent

and variety of his attainments were well known, but it was something of a different and superior order which had excited in his (Dr. Carter's) mind sentiments which were compounded quite as largely of affection as of admiration and respect. Although he had known Dr. Caton for many years, worked with him in many ways, and talked with him on many subjects, he did not believe he had ever once heard him speak evil of any living man. This was not due to any want of power to express disapprobation, and he used the term "living man" advisedly, for on one occasion, when the first Napoleon was the subject of discussion, Dr. Caton had condemned the character of the Emperor in no measured terms. Dr. Caton had devoted a great portion of his time and energies to training the minds of the young medical men of this generation, and it was no mean advantage to a student to have before him constantly the example of a pure and lofty-minded man, who, by the silent influence of his daily professional life did much more to mould character than by any number of didactic exercises. The portrait was then unveiled by Dr. Carter amid applause. Professor Sherrington said he had been entrusted to unveil and present the replica portrait by the old pupils, the present colleagues, and all the other friends who had subscribed for these portraits. They wished the gift to be accepted as a small sign of the esteem, the gratitude, and the affection with which they regarded Dr. Caton's long services to their Alma Mater. They knew the charming hospitality of Lea Hall, and there they hoped that this portrait might long hang to remind Dr. Caton and the members of his family of the strong ties which had bound him to them all. He hoped that Dr. Caton had a future of useful public work in the Liverpool City Council. With the replica was presented an address composed in Latin by Professor Strong, and illuminated by Mr. Sampson, the College Librarian. Dr. Caton, who was received with enthusiastic applause and musical honours, expressed sincere thanks for the extreme kindness which, he he said, had been so lavishly showered upon him. It was very pleasing to him to think that he would be represented by that portrait in the days to come in that college which he had loved so well, and to fancy that some of the old students as they stood before it might exclaim, "That is the old man who used to lecture on physiology in the dark prehistoric times when there was no university in Liverpool." In conclusion, Dr. Caton spoke of his recollection of the hundreds of students with whom it had been his privilege to be associated during the past thirty-four years. Every one who had left him had gone away a sincere friend.

In the evening a dinner of the University College Association was held at the Adelphi Hotel, the guests being Sir William Banks, Emeritus Professor of Anatomy, and Dr. Caton, Emeritus Professor of Physiology. Dr. Eastes, who was in the chair, in proposing the toast of the guests of the evening, spoke in sympathetic terms of the close friendship which had linked them together during the many years they had been associated with the medical school and the college. The guests, in their replies, entertained the company with several interesting and amusing recollections of the earlier days of the school.

At the annual meeting of the Samaritan Hospital for Women the report showed that the work done by this small and new institution continues to grow. In 1901 the new attendances of out-patients amounted to 519, and in 1902 they amounted to 623, while the number of in-patients had nearly doubled during the same time. The Committee expressed regret that the claims of the hospital had not yet been recognized by the Hospital Sunday and Saturday Fund, and they hoped that the coming year would see it placed on the list of that organization. The pressure on the beds had become very acute, and an urgent appeal was made for funds to enable more wards to be opened.

MANCHESTER.

Conference regarding Joint Action by the Proposed New Northern Universities.—Dalton Centenary.—Infirmary Site.—Death of the City Coroner, Mr. Smelt.—Earlier Opening of Medical Summer Session.

A very important conference of representatives of the three constituent colleges of Victoria University has been held at Owens College to consider the lines upon which joint action may be taken in the future, provided three independent universities are incorporated in place of the present Federal University as foreshadowed in the Order in Council of February 16th. The Committee of the Privy Council proposed that before the draft charters were finally settled the three colleges should be invited to consider "not only the points upon which joint action is desirable but also the methods by which it can best be secured without unduly restricting the liberty or circumscribing the responsibility that ought to attach to independent universities." The question of "joint action" is very important from the point of view of technology, and also as regards medical degrees. The Scottish universities have a certain amount of joint action by means of joint Boards for certain examinations. It remains to be seen how far such action is practicable in the present case. There is nothing in the Order in Council to indicate that Liverpool and Manchester must wait until Yorkshire has completed its arrangements. Indeed, provided substantial agreement is reached on the points raised by the Order in Council, there seems to be nothing to prevent the new charters being laid on the table of the Houses of Parliament during the present year.

It was about 1803 that John Dalton announced his atomic theory. It has therefore been arranged to celebrate the centenary of this event—"this capital and master idea, the grand atomic generalization"—in a fitting manner in Manchester. It was to the Literary and Philosophical Institution of this city that Dalton communicated his famous paper on this and allied subjects, and therefore it is fitting that some ceremonial should be held in connexion with this institution. It is arranged that on May 19th Professor Clark, of the Smithsonian Institution in Washington, shall deliver the Wilde Lecture, the subject being the Atomic Theory. On May 20th there will be an academic function of some kind in connexion with Owens College itself, probably an address in the Whitworth Hall and a *conversazione* in the evening. It is expected that a large number of distinguished chemists, both from this and other countries, will attend these meetings.

Some time ago a special Committee was appointed by the City Council to deal with the infirmary question and the acquisition of the site for the purposes of the city. This Committee has now reported, but its report awaits the approval of the City Council. The Committee unanimously approved the recommendation to offer the Board of Management of the infirmary the sum of £400,000 for the site and buildings. The total area is 19,552 square yards; that covered by the infirmary is 6,676, leaving 12,882 square yards of open space. The Committee also sketches a general plan for an art gallery to be erected on part of the site. Should this report be approved by the City Council, one-half of the infirmary problem will be solved. The other half the new site of the infirmary—will, we hope, soon be settled in a way acceptable to all parties and equitable to all the interests concerned.

By the death—quite unexpected and at a comparatively early age—of Mr. Sidney Smelt, Manchester has lost a public official who did no small amount of service to the community, and above all to the poor of the city. Mr. Smelt was coroner and deputy coroner for twenty-six years. During this time he held about six thousand inquests. He invested his office with no small degree of importance. He was ever mindful of the fact that coroner is derived from "corona," and that as such he is an officer of the Crown.

The Medical Faculty of Owens College last year tried the experiment of beginning the summer session at the end of April instead of May 1st as heretofore. It has been resolved to continue this plan, so that the summer session of 1903 will begin on April 22nd. The week thus gained permits of cessation of work during Whit-week.

SOUTH WALES.

North Wales University College.—Presentation to Dr. W. Williams, Medical Officer of Health, Glamorgan County Council.

The efforts of the authorities of this college to raise funds for new buildings are being pushed forward with considerable zeal. The cost is estimated at from £150,000 to £175,000. The fund was started nearly two years ago, and on March 11th an important meeting was held in the Town Hall, Pwllheli. The Lord-Lieutenant of Carnarvon (J. E. Greaves, Esq.) presided. The fund at present amounts to £11,600, including gifts of 100 guineas from the King and from the Prince of Wales. The difficulty of the site has been surmounted by the gift of the Corporation of Bangor of a valuable and suitable site worth £15,000. A letter was read at the meeting from the Prince of

Wales as Chancellor of the University of Wales, in which he expressed his sympathy with the movement and his hope that the appeal would be successful. A committee of sixty members was formed to aid in the collection of funds and all the area served by the college is to be vigorously canvassed for funds. Two of the three constituent colleges of the University of Wales are now, or will be shortly, appealing for funds for new buildings, the other being the University College of South Wales and Monmouthshire. The buildings of the latter are totally inadequate and unsightly wooden buildings, and separate houses near the college have had to be used for teaching purposes to a large extent. Abundant funds should be forthcoming to adequately equip both colleges if the matter is taken up thoroughly in Wales.

On March 7th, at the sixth annual meeting of the South Wales and Monmouthshire Sanitary Inspectors' Association, a presentation was made by the Association to Dr. Williams. The presentation took the form of a massive silver tea service and tray to Dr. and Mrs. Williams, and two silver cups for their children. Dr. Williams has been President of the Association ever since its inception six years ago, while in addition he has been greatly instrumental in improving the status of the sanitary inspector throughout Glamorganshire. In his reply Dr. Williams mentioned that during the last decade no less than three-quarters of a million pounds had been spent on sewerage works in Glamorgan, while ten years ago there were eight fever hospitals in the county compared with twenty-one at the present time.

CORRESPONDENCE.

THE INDIAN MEDICAL SERVICE.

SIR,—The thanks of the officers of the I.M.S. are due to you for the able and exhaustive statement of their position in the BRITISH MEDICAL JOURNAL of March 14th.

It will be observed from that article that an officer appointed to a second class civil surgeoncy receives Rs. 50 per mensem less salary than he would if in charge of a native regiment, and there are many additional disadvantages, such as isolation (the civil surgeon being often the only European in the station), expenses of travelling on transfer—the double first-class fare does not compare favourably with a free rail warrant for self, servants, and baggage, which is granted when in military employ. Leave is more difficult to obtain, and such leave as a few days or a week-end is practically impossible. Receipts from private practice are often meagre.

To my knowledge, some civil appointments reserved for the I.M.S. have been held for the past three or four years by uncovenanted medical officers, and I have seen in the *Bombay Government Gazette* that one of the civilian plague doctors has recently been appointed civil surgeon of Sholapur. These appointments may be excused on account of the strain on the I.M.S. caused by plague, etc.

Regarding the conveyance of a horse. It is not many years since I.M.S. officers were granted free conveyance by rail for their horse on transfer, as other officers of the Indian army are. If this concession (?) were reintroduced a great grievance and unfair distinction would be removed, and it would serve in lieu of horse allowance; the loss resulting from forced sale would be obviated.

Three moves a year are frequently exceeded. In my first year's service I was transferred long distances six times; in the second year six times, third year four times, fourth year four times, and in the two succeeding years three times (in each), not including short moves when on field service or famine duty.

Examination of recruits should certainly be remunerated, involving as it does much unpleasant and arduous work in filling in lengthy particulars and "personal marks."

Study is apparently not encouraged; but few officers are likely to avail themselves of the so-called concession of one year on furlough pay to study bacteriology, involving as it does great expense in passage and in living in London. A man does not object to furlough pay and expense when he is on real leave, and is able to please himself about his movements, and not tied down to London for a course of study but able to enjoy the country and its life and the society of his friends and relatives whom he so seldom sees.

Personally I should be sorry to see the regimental system abolished and I hope it never may be But some native hospitals certainly want improvement and all equipment requires modernizing. A more generous scale should be sanctioned.—I am, etc.,

March 16th. S. I. M.

THE ROYAL SEA-BATHING HOSPITAL, MARGATE.

SIR,—On a former occasion you were good enough to permit me to make some observations on the advantages this hospital offers for the treatment of early surgical tuberculosis. In your editorial comments, you called attention to the undesirability imposed by the rules of limiting the patient's stay, and limiting the admission of children to the age of 6 years and upwards. Incidentally I would remark that this latter rule is not now enforced.

In your last week's issue you again insist on the financial difficulties thrown in the way of patients who need to remain for a long period. I need hardly say that from a surgical point of view it is deplorable that we frequently have to relinquish the treatment of promising cases long before they are cured. In the last report of the visiting surgeons they urgently call the attention of the Governors to the waste of public money involved in treating inappropriate cases, which could be better dealt with in less highly organized institutions.

The building is unfortunately not adapted to the needs and requirements of patients "willing to pay a much larger sum than £6 a month." If so, your suggestion might help us out of the difficulties.

With ample funds, all our troubles would be over, and the rules would probably be altered forthwith. Whether the Court of Directors are adopting the best means of obtaining funds and dealing with the income at their disposal is doubtless a matter of opinion. I am convinced that they are now all actively doing their best to solve the problem of ways and means, and it was with the greatest reluctance that the patients' payments were raised. Among other causes, the King Edward's Hospital Fund has doubtless been detrimental to our hospital. Although this fund was established for the benefit of the population of London, the Committee have refused all our applications for a grant, on the ground that it is beyond the radius of inspection by their official visitors. Two-thirds of our patients come from London, and the King Edward's Committee "do not deny the value of the services which your hospital renders to the population of London." This red-tape attitude is more worthy of the palmiest days of the War Office than of a committee of experts who are presumed to realize the impossibility of properly treating tuberculosis within a mile or two of Charing Cross. Owing to the fact that the Royal Sea-Bathing Hospital is not under the immediate observation of the philanthropic public, it is under a disadvantage with other London hospitals.

In the BRITISH MEDICAL JOURNAL of February 21st you publish an interesting article by Mr. Tubby in which he points out the "wasteful and dangerous" practice of treating surgical tuberculosis in the crowded wards of London hospitals. I hope his views may find support from other London surgeons. He makes an excellent suggestion, which seems to me to be sound both from a surgical point of view and as a matter of finance. The suggestion is that the London hospitals should lessen the pressure on their accommodation by subsidizing hospitals situated in appropriate climatic surroundings, and send their cases of surgical tuberculosis to these hospitals in their early stages, when they are amenable to successful treatment. This is a practical suggestion, and worthy the attention of the medical and administrative authorities of London hospitals. I venture to believe that the directors of the Margate Hospital would meet any movement of this kind with cordiality.

In conclusion, I should like to add that the publicity which the JOURNAL has recently given to the advantages offered by the Royal Sea-Bathing Hospital has resulted in a distinct improvement in the class of cases applying for admission.—I am, etc.,

BERTRAM THORNTON,
Senior Surgeon, Royal Sea-Bathing Hospital, Margate.

Margate, March 16th.

ST. BARTHOLOMEW'S HOSPITAL.

SIR,—I am much interested in the discussion as to the retention of St. Bartholomew's Hospital upon its present site. That this site, under present conditions, affords insufficient space, will, I think, be admitted on all hands. If the hospital is to maintain as well as retain the position it has so long occupied, it appears to me most important that all

buildings which are not absolutely essential to the well working of such an institution should be rigidly excluded from the reconstructed hospital site. If this principle is accepted and logically carried out much ground will be gained, and, I opine, sufficient space will be obtained for the erection of an up-to-date hospital.

The area per patient may not be ideal, but quite sufficient to ensure good medical and surgical results. I therefore venture to think that the following structures which lie within the present enclosure should be done away with:

1. The college and warden's house.
2. The treasurer's house.
3. The chaplain's house.
4. The church.
5. The great hall.
6. There is no real reason or necessity for the erection of a nurses' home upon a site which is so valuable.

Sleeping accommodation for a few emergency nurses would meet all requirements, and the majority of the nurses should be provided with a house outside the hospital walls. I fully agree with you that it is unfortunate that the Lord Mayor's Committee sits with closed doors, and feel that good rather than harm would come from a brief discussion of important points in the BRITISH MEDICAL JOURNAL.—I am, etc.,

March 15th. AN OLD BART.'S STUDENT.

MIDWIVES FOR THE RURAL POOR.

SIR,—As a result of the Conference on March 3rd, reported in the BRITISH MEDICAL JOURNAL of March 7th, p. 559, an association has been formed to train and supply midwives for rural districts either to add to nursing associations already formed, or to help very poor parishes unable to support a nurse or midwife without assistance.

It is earnestly hoped that many who read this will gladly help in starting this good work, for there must be necessary expense at first in organizing, training suitable women, and assisting needy districts. At the same time every effort will be made to teach the people to help themselves, by small subscriptions and payments, as has been found to answer so well in Miss Broadwood's system.

The association will be on a broad basis including various schemes suitable to different districts, but the advice and help of the local doctor, will be sought in every instance, and his fee paid, when called in.

The midwives chosen are to be homely women willing to help the poor mother as much as they consistently can in the cottage.

I shall gladly hear from any willing to help or co-operate in the work of the association.—I am, etc.,

Pulborough, Sussex, March 11th. JOSEPHINE JOHNSTONE.

SIR,—As the position of the certificated midwife is being discussed, it may not be out of place to give briefly the experience of a medical practitioner in the country. Some years ago a large meeting was called in this district to establish a parish nurse, who should be a certificated midwife. There were many leading lights and ladies of title at the meeting, to which the medical men of the district were invited. I pointed out how a nurse might be a help or a hindrance. A Ladies' Committee was formed, a subscription solicited, and the nurse obtained. At first all went well, until the committee went touting about for midwifery cases, and the nurse became mixed up with some serious cases, and so lost her nerve. The first nurse left, and so did others, who could not face the responsibilities forced on them by the Ladies' Committee. At last a nurse was obtained sufficiently subservient, the parish nursing was soon put into a very second place, and the nurse—by the aid of the committee and her own touting—soon assumed the rôle of an independent practitioner in midwifery, quite dissociated from the medical men of the neighbourhood, and only accountable to the Ladies' Committee. The medical men were made assistants to the nurse without fee or reward. As the nurse's practice increased, I was being continually called at a moment's warning to undertake her bad cases. The committee and nurse were making money, inasmuch as they solicited patients on the understanding that "the doctor would always follow the nurse if anything was wrong." This induced many women who had hitherto been attended by a doctor to engage the nurse, as it was pointed out to them that it was such a saving. The poorest women were soon left to the parish doctor. After being called in to many very serious cases which could afford to pay the ordinary fees, I wrote to the committee pointing out that they were doing a great injustice to the resident practitioners, and thrusting the nurse into the position of an illegal practitioner. I was politely told to mind my own business, and if I refused to be called in in consultation they would make arrangements with another medical man, and would offer him a fee. I would not countenance such unqualified practice, and the nurse, fearing she might be left with a bad case on her hands, has resigned, after nearly a year's unpleasantness with the committee and herself on the one hand and myself on the other. The committee are seeking another nurse for the same object.

Is this the attitude that nurses under the Midwives Act are to take up under the auspices of Mrs. Heywood Johnstone and the Midwives Board?—I am, etc.,

Burnham, Bucks, March 10th. ALFRED E. WILMOT.

THE INTERNATIONAL MEDICAL MANIFESTO ON ALCOHOLISM.

SIR,—Your readers may possibly consider that Dr. Stavely Dick's excellent reply to Dr. Dutton's letter on the above was sufficient. He certainly vindicates us from the chief charge of confusing the use of alcohol as a beverage and as a medicine. It cannot be too widely known that, whatever some of us may think of the value of alcohol as a drug, the British Medical Temperance Association does not prevent its members from recommending alcoholic liquors to their patients at their own discretion.

Dr. Dutton attributes the crime and poverty which he admits result from "drink," to the "vile substitutes" for alcohol contained in it. It would be more to the point if he would prove this unwarranted assertion. There may be some ingredients in ordinary beer, wine, and spirits besides alcohol, but no one has ever shown that the amount of these ingredients present (omitting those in liqueurs) will, in the absence of ethylic alcohol, have any appreciable effect. That the multitudinous evils of drink could ever be due to anything but ethylic alcohol without the cognizance of public analysts and authorities generally is beyond belief. At all events, those who totally avoid alcoholic liquors, whatever there may be in them, avoid the cause of "a misery so great that it may be truly said that if alcohol were unknown, half the sin and a large part of the poverty and unhappiness of the world would disappear," to quote the words of a great authority, although a non-abstainer—the late Professor Parkes.

Dr. Dutton is talking wildly when he says that papers devoted to teetotalism place "all crime" on the shoulders of drink. It shows that he has not made the "careful study" he recommends. I would advise him and others to see what is said by the hundreds of clergy, governors of gaols and workhouses, judges, etc., in the report of the Convocation of Canterbury, evidence not of "fanatical teetotalers," but of men who know what they are talking about. Let him also read Dr. O'Gorman's *Scientific Valuation of Alcohol in Health* (1s. 6d.), published at 33, Paternoster Row. If he can still refuse to adopt the only practical plan for prevention of these evils he is more callous than I take him to be.

That some medical men follow the old custom of drinking intoxicants (various amounts) at dinners, is no doubt true, but how that can alter the facts of scientific experiment, which prove that alcohol interferes with the normal functions of the brain and does produce "progressive paralysis" of the nerve centres from above downwards (Sir Lauder Brunton) I fail to see. Certainly, if a patient, I should prefer to be treated, either medically or surgically, by such doctors before, rather than after, such a dinner. That such indulgence is "harmless" is simply an opinion which evidence contradicts. I am, etc.

Enfield, March 14th. J. J. RIDGE, Hon. Sec. B.M.T.A.

SIR,—In July, 1899, the Society for the Study and Cure of Inebriety appointed a Research Committee to "investigate the conditions under which the tendency to inebriety is capable of transmission to offspring." The committee, of which I had the honour to be a member, sat for the best part of two years, holding twenty-one meetings. Before issuing its report it appealed (in addition to its own efforts) for information to the readers of about thirty journals, among which were the BRITISH MEDICAL JOURNAL, the *Lancet*, and all other publications which could be thought of as likely to be interested in the subject. It requested from them evidence in support of the popular belief that parental drinking affects, injuriously or otherwise, offspring subsequently born. Not one tittle of evidence was furnished. The whole of the correspondents who replied confused *post hoc* with *propter hoc*, a logical error which

seems to have vitiated the labours of all previous investigators. Ultimately the Research Committee came to the following conclusion:

There is no evidence that acquired characters are heritable. In particular there is no evidence that characters acquired by the parent through indulgence in drink are inherited by the children subsequently born. The Committee are aware that it is possible that the mental and physical states produced in the parent by indulgence in alcohol do affect the child in some way through inheritance; again, they admit as possible, though strictly speaking this is no question of the inheritance of an acquirement, that indulgence may so damage the parental tissues that the germ is ill-nourished, and the child thus affected; yet again, they admit as possible that the alcohol circulating in the parent's blood may directly affect the germ, and in this manner affect the offspring, as by producing degeneracy. But these speculations have not been strongly supported by any evidence tendered to the Committee.

It should be added that more than one member of the Committee strongly protested against the last sentence I have quoted. They declared not only that no real evidence had been furnished in support of the hypothesis that parental drinking affects the offspring, but, on the contrary, that overwhelming evidence had been furnished in proof that it does not. On the other hand, "The International Medical Manifesto" agreed upon by the Council of the British Medical Temperance Association, etc., declares that

alcohol tends to produce in the offspring of drinkers an unstable nervous system, lowering them mentally, morally, and physically. Thus deterioration of the race threatens us.

It is evident that this manifesto and the report of the Research Committee are in direct antagonism. The President and Treasurer of the British Medical Temperance Association were distinguished members of the Research Committee, the latter gentleman acting as secretary. They have both affixed their signatures to the manifesto. Presumably, therefore, the Council of the Association cannot have been unaware of the report issued by the Research Committee. Doubtless, the discrepancy is due to the possession of fresh evidence which hitherto has not been available; the only alternative being the unpleasant supposition that the Council of the Temperance Association is regrettably reckless in its statements of fact. May I, then, beg the Council, and in particular the President and the Treasurer, to publish this new evidence? By doing so it would, in addition to justifying it own position, perform a high service to both science and philanthropy.—I am, etc.,

Southsea, March 16th. G. Archdall Reid.

Sir,—I am sure the British Medical Journal is not the proper place for a controversy on alcohol, but as a signatory to the manifesto, and as one of those attacked by Dr. Dutton, perhaps you will allow me to ask him a few questions.

Has he studied the subject of alcohol at all? Has he read any of the scientific investigations on the action of alcohol (unadulterated) published in the last thirty years? Is he aware of the existence of the British Medical Temperance Association? Has he ever read its journal? Is he thirty years behind the times? Is he willing to remain in the contented ignorance of the general public on a subject about which a medical man is expected to know?—I am, etc.,

Nenagh, March 15th. R. Morton, M.B.

COMMON LODGING-HOUSES.

Sir,—The small-pox epidemic in the north of England, and in one instance, at least, the placing a common lodging-house under quarantine, offers an opportunity of directing attention to these necessary places of accommodation.

Workmen of all kinds are compelled to be more migratory than in former days. The casual ward helps to keep the regular tramp in a state something approaching cleanliness, but a self-respecting workman would rather "rough it" under a hedge or hayrick than accept the hospitality accorded there. The writer has had more than enough experience of lodging-houses lately, and would like to offer a few suggestions which will come under the eyes of those most likely to set things right, and thus do something towards the common good. In large towns, thanks to competition, and particularly to municipal lodging-houses, there can be little fault found, but it is in small places under 5,000 inhabitants, and many miles away from anywhere, the greatest evils exist. Men are huddled together, and proper sanitation is the exception rather than the rule.

Here are a few hints which may help to mend matters: First, double beds ought to be completely abolished, except in the case of married couples; for human ingenuity could not devise a better plan for circulating dirt and disease than to make men sleep with different strangers perhaps seven nights a week. Single beds, with proper space between, should be enforced, and instead of a zinc bucket for the use of the whole room, chamber utensils should be supplied to each bed; for suppose a man suffers from some pulmonary complaint he is obliged to expectorate somewhere, and that is most frequently on the floor, where it will in time infect others. Secondly, no place should be licensed which has not a water-closet convenient, as it is not uncommon to have to go a considerable distance, which is rather awkward during night-time. Thirdly, the rules as to cubic space in kitchens and bedrooms is all but a dead letter in the smaller houses in out-of-the-way places. Fourthly, so-called public-house and private house lodgings are in many cases worse than registered houses, as all they have to do is to charge 6d. a night instead of 4d., and thus keep outside the category of common lodging-houses. To remedy this, wherever more than six lodgers are taken in either nightly or weekly, they should be open to inspection and a higher figure than 6d. be made the limit for exemption.

I will not further encroach on your space, but would finally suggest that medical officers of health should, in company with a sanitary inspector or other official, make occasional surprise visits at night, and they will discover without being told how disease is spread throughout the country.—I am, etc.,

February 10th. An Artizan.

POST-MORTEM EXAMINATIONS FOR CORONERS IN LONDON.

Sir,—The article by Dr. Major Greenwood, which appeared in the Supplement to the British Medical Journal of March 7th, puts the matter now at issue so well that I hope it may materially help towards ending this unhappy and much-to-be-regretted controversy. Dr. Greenwood notices several points not previously put forward, and I venture to commend his remarks to the notice of all parties concerned.—I am, etc.,

March 16th. D. B. Balding, F.R.C.S.,
Coroner for Herts.

Sir,—May I be allowed to accentuate the importance of general principles in connexion with this question?

The coroner holds office under the Crown. The local authority elects him and pays him a salary, which, after election, is a matter of agreement between him and the local authority, subject to the approval of the Crown. At the end of five years the salary can be readjusted after agreement between the local authority and the coroner, failing agreement by the Crown. The local authority pays the expenses of inquests, but has no jurisdiction over the actions of a coroner.

It has become the practice for local authorities to require candidates for the office of coroner to contract out of their statutory privileges and rights. This has so far not been forbidden by the Crown. The trouble complained of arises from this action of local authorities, and is apparently supported by the Council of the Coroners' Society. I say apparently, because they have certainly elected at least one gentleman to their Council who has contracted out of the privileges of the office. It appears obvious, if laws and Acts of Parliament are to be worth anything, that the authorities who are responsible for their working should obey statutory requirements. However, up to-date people say: "Not at all. Every one should be allowed to do as they please." Magistrates, for instance, claim the right of granting exemptions from vaccination, not in accordance with the law, but in accordance with their own pet fads.

Local authorities show their contempt for Acts of Parliament at every turn, and are rarely called to order unless the auditor happens to find out that they have paid a few halfpence in a manner not approved by auditors.

If anything is to be accomplished which is of any worth, the matter should be properly represented to the Lord Chancellor by the Council of the British Medical Association, and further waste of the space in the British Medical Journal would be avoided.—I am, etc.,

Hatfield, March 17th. Lovell Drage.

THE DIAGNOSIS OF PULMONARY TUBERCULOSIS.

Sir,—I have read Dr. C. Theodore Williams's able lecture on the diagnosis of pulmonary tuberculosis, in the British Medical Journal of March 14th, with much interest.

I cannot but regret, however, that Dr. Williams, in discussing the physical signs, made no mention of examining the chest with the *x* rays. This appears to me the more curious because Dr. Williams gives a very glaring instance of a case of pulmonary tuberculosis being overlooked because the two London physicians in charge of the patient refused to believe in the then new method of examining the chest with the stethoscope. From an experience of over five years I can testify to the value of an *x* ray examination in the diagnosis of early pulmonary tuberculosis. Many points have to be considered in such an examination, such as the transparency of the lungs, the movement and slope of the ribs, the position of the heart, and above all the movements of the diaphragm. I will only just refer to the latter. There can be no doubt that the limited movement of the diaphragm on the affected side is a most valuable sign of early pulmonary tuberculosis. My clinical assistant, Dr. Halls-Dally, has recently been working at the subject, and I hope his results will soon be published.—I am, etc.,

Harley Street, W., March 14th. HUGH WALSHAM.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE STRENGTH AND DISTRIBUTION OF THE ARMY MEDICAL SERVICE.

THIS is shown in the following table, compiled from the Active List of medical officers, in the *Army List* for March, 1903:

Distribution in March, 1903, Army List.

Ranks.	Home.	South Africa.	Other Foreign Stations.	Not Posted.	Total.	Seconded.	Remarks. Reserve of Officers.	On Probation.	Attending Medical Staff College.
Surgeon-Generals.	4	1	4	—	9	—	—	—	—
Colonels	15	1	12	—	28	1	—	—	—
Lieut.-Colonels ...	72	24	88	4	188	4	3	—	—
Majors	101	25	130	9	265	3	3	—	—
Captains	75	41	156	2	274	15	1	—	24
Lieutenants	83	22	90	6	201	6	—	32	1
Total...	350	114	480	21	965	29	7	32	25

This shows considerable alteration in the totals and distribution of army medical officers since our last analysis in January.

The gross total has increased 18; an increase at home of 51, a decrease in South Africa of 61, an increase at other foreign stations of 44, a decrease in the non-posted of 16, an increase in the seconded list of 3; the number of the reserve of officers employed is the same. The probationers are 2 more, but a new column is added showing 25 officers attending the Medical Staff College in London.

These figures show that the distribution of medical officers at home and abroad is now settling into normal groups, after having been so long upset during the war.

In the analysis of the Army Estimates given in last week's issue we found the number of medical officers to be voted for the ensuing financial year to be 954, a declared increase of 40 on the normal establishment; but at present there is an apparent excess of 11 in this estimated total, probably to be explained by the reserve of officers, still employed, not being reckoned on the active establishment. But although we are promised an increase of 40, that will probably only balance the probationers and those attending the Staff College; while those seconded, in increasing numbers, should really be shown in a separate list, as they are not available for general duties.

The number on the home list is, of course, much swollen by including the probationers and those attending the College; but it is a great deal to find that at last leave for purposes of study is no longer a myth but a reality.

NAVAL ESTIMATES FOR THE YEAR 1903-4.

Personnel.

THE estimates provide for, including Royal Marines, an increase of 4,600 over the previous year. Medical officers on the effective vote number 522, on half-pay 22, as compared with 501 and 20 respectively in the previous year, or an increase of 23 on the active list. The effective and half-pay voted number 544, as compared with 521 in the preceding year and 491 appearing in the March Navy List. This would indicate the necessity to recruit 53 surgeons to complete the 1903-4 establishment, irrespective of deaths, retirements, and resignations that may occur in the period, as also that the establishment is at present 30 under its number.

Medical Establishments

show an increased vote of £12,500 for all heads of expenditure; *inter alia*, three additional sisters at Haslar, one dispenser less; an additional surgeon and a sister at Plymouth; three sisters are now to be appointed to Hong Kong; by a new provision also a dispenser is granted an allowance at Plymouth for instructing the sick-berth staff there.

Principal Medical Officers as Store Officers and Cashiers.

It is notified that at Malta and the Cape of Good Hope "the stores and cash at present in this officer's—a retired assistant paymaster—charge to be transferred, on a vacancy, to the Principal Medical Officer, and a local writer entered for clerical duties." It appears that at Haslar and at Plymouth alone have "store officers and cashiers (retired paymasters-in-chief) permanency." It would thus appear probable that at all other naval hospitals it is the intention of the Admiralty that the P.M.O. should be the store officer and cashier. Recent correspondence in the BRITISH MEDICAL JOURNAL from time to time has laid stress on the absence of charge and additional pay for naval, as compared with that granted to military medical officers of hospitals, and there is no apparent evidence in these estimates that the pecuniary responsibility entailed by such duties secures special recognition by additional remuneration. Such duties are unknown in civil, if not, indeed, in military, hospitals, as pertaining to their medical officers.

It has been considered that the duties of a P.M.O. were purely professional and administrative, but it would occur to few acquainted with hospital administration that his duties were to include those of a store officer and cashier.

Works, Buildings, and Repairs at Home and Abroad.

The total vote for hospital and infirmaries, works, buildings, and repairs for the year is £70,500.

Haslar.—The new quarters for sick officers are to be completed, as also the adaptation and improvements of the older buildings. Drainage improvements, which would appear to have been found necessary in the past year, will be completed, at a cost of £3,400.

Plymouth.—Improvements and alterations in former ward blocks will be completed to a considerable extent, though £12,000 will be required subsequently to complete the work. Wards for lunatics and prisoners are now to be provided, at a cost of £6,000, a third of the money to be spent in the coming year.

Portland and Yarmouth.—The new General Hospital at Portland will be completed, as also the ward improvements at Yarmouth.

Queensferry.—Additional hospital accommodation, at a cost of £3,500, is now provided for, £2,000 to be spent this year.

Malta.—The new hospital blocks will be completed.

Jamaica.—The improvements in that hospital, costing £14,000, are to be completed.

Cape of Good Hope.—The aërial cable-way for the transference of patients to the new elevated hospital is to be completed, as also the infectious hospital accommodation. A general hospital and sanatorium, to cost £38,000, will have £5,000 spent on it for a start.

Hong Kong.—The additional accommodation will be completed.

Wei-Hai-Wei.—Hospital accommodation is at length to be provided there, at a cost of £45,000, of which but £1,000 is to be voted this year.

Chatham Naval Hospital.

This fine new hospital is approaching completion; the internal fittings of the pavilions are in progress; the administrative block is nearly completed; the constructional work in the infectious blocks, etc., is practically complete; the Principal Medical Officer's residences, as also those of the chaplain and sisters, are nearly completed; also the police lodge.

Britannia Royal Naval College.

The sick quarters are completed.

STATISTICAL REPORT OF THE HEALTH OF THE NAVY, 1901.

As the navy took no part in active operations in 1901, the statistics for that year compare favourably with those of 1900, which were markedly affected by the deaths, wounds, and climatic diseases occurring during the South African and China military operations.

The total force serving afloat was 98,410, an increase of 2,580 for the year; 60.89 per cent. were between 15 and 25; 29.69 per cent., 25 to 35; 7.82 per cent., 35 to 45; 1.58 per cent., over 45 years of age.

Of diseases and injuries there was a decrease in the ratio per 1,000 of 28 46, and when the average ratio of the last four years is considered, of 36 87. The invaliding ratio per 1,000 was 31.58, or a decrease of 4 25 as compared with 1900, the highest ratio being on the Mediterranean Station. The mortality ratio per 1,000 was 5 34, a decrease of 1.93 as compared with 1900, and of 0 36 when contrasted with the previous four years. The Cape of Good Hope and West Coast of Africa Station had the highest ratio—7.9 per 1,000.

Small-pox.—There were 9 cases on the Home, East Indies, and China Stations, 1 fatal; no information is, however, given as to whether this disease affected Europeans or natives, vaccinated, revaccinated, or unvaccinated subjects; the death was at Basrah, East Indies Station.

Plague.—There were 4 cases of plague; 3 occurred at Simon's Bay; 1 was a gunner, R M.A., a resident on shore at the time. Two kroomen were attacked, and 1 died. The other kroomen there were isolated and inoculated with antitoxin, and escaped infection. The fourth case was a native stoker at Bombay.

Cerebro-spinal Fever.—Sixteen cases of this disease, rare in the United Kingdom, are recorded. Nine are reported as occurring in training ships for boys in the South of England, and it is stated the "diagnosis was verified in several of the cases on *post-mortem* and bacteriological examination." Five cases occurred at Kiu-kiang in the Yang-tsze River, two of which were re-entered with subsequent debility; a death from heat apoplexy had happened at the time that these cases occurred, the end of July and early in August, temperature 90° in the shade; "no two cases were similar;" "A. becoming maniacal after being in extraordinary possession of his senses for several days; B. developed most severe convulsions; C. became rapidly comatose, with Cheyne-Stokes respiration; D. lost consciousness early, and literally burnt out like a candle; E., on the other hand, could always be roused. Retraction of the head was noticeable only in E.'s case, no paralysis or eye symptoms developed, but vomiting was an early symptom in most cases. Some of the cerebro-spinal fluid and a portion of the brain were sent for examination and report to a pathologist, but up to now I have not been able to learn whether the diplococcus of Weichselbaum was discovered." The weather is described at the time of the home cases as "strong north, north-east, and east winds.....Temperatures were generally low, with cold rain and fog." On the other hand, the China cases occurred at the time of intense inland tropical heat—a remarkable contrast.

Enteric Fever.—One very satisfactory report is furnished: "The prevalence of and mortality from enteric fever.....has greatly declined since 1900." Of this fever there were 208 cases, or rather entries, as convalescents for debility from this fever may be re-entered; 38 invalidings; 35 deaths; in 1900 the numbers respectively were 464, 98, and 124. In 1899, 193, 11, 41. In 1898, 153, 24, 34. The total naval strength was, however, only 82,830 in the latter year, or about 16,000 less than in 1901.

Mediterranean or Undulant Fever caused 287 cases, 183 invalidings, 3 deaths. In the previous year the respective numbers were 356, 188, 6. In 1899, 221, 68, 4. In 1898, 423, 149, 10.

Dysentery caused 131 entries; invalided 17, fatal 5. Of these, 57.2 per cent. occurred on the China station; as with enteric fever so with this disease, there has been a great reduction in cases and mortality since the termination of naval operations in China and South Africa in 1900.

Yellow Fever.—This fatal disease was introduced on board the ill-fated *Condor*, in the opinion of the medical officer, either at Tumaco or Buenventura, or at both; yellow fever "was present at both those places, and I was informed that, in fact, neither place was ever free from it." This is evidence confirmatory of Dr. Manson's warning of the danger to the commerce of the East by the probable introduction of this dire disease into Japan, China, and the neighbouring countries and islands, on the opening of the Panama Canal. The *Condor's* cases began on March 24th at Panama; she had left Tumaco on March 11th and Buenaventura on March 13th; there were 11 cases in all, one apparently a re-entry. They had all been severely bitten by mosquitos. Every effort was made to rid the ship of mosquitos as soon as the disease was recognized, and other careful sanitary measures were carried out; Sternberg's mixture was prescribed, and only 1 case proved fatal; 8 patients were landed for hospital. An officer, the first affected, appears to have been treated on board, and the last case occurred among the crew the day after proceeding to sea; this is evidence of the non-infectiousness of the fever, as she was a small ship, comparatively crowded, and in tropical waters. The twelfth case recorded was in a ship at Jamaica; it was fatal.

Malarial Fever.—The number of cases was 1,209; invalidings, 37; deaths, 5. South Africa and its West Coast contributed 478, China 341 cases. In 1900 the respective numbers were 1,165, 46, 11. In 1899, 1,132, 37, 9. In 1898, 1,652, 80, 10.

Tuberculous Diseases.—The number of cases was 401; invalided, 311; deaths, 54; an apparent increase, but more accurate classification of these diseases may account for it.

Venereal Diseases.—The cases number 11,193; invalidings, 219; deaths, 4. "A further decline in the ratio of cases of primary and constitutional syphilis and gonnorhea is shown."

Alcoholism.—The cases were 80, 12 less than in 1900 and 1899. Two were fatal.

Beri-beri.—Of this disease 56 cases with 4 deaths were recorded. The two foci of the disease were the Island of Ascension and the ports of the Persian Gulf. It is satisfactory to note that the cases at Ascension have decreased by more than 50 per cent.

Scurvy.—Four cases occurred in kroomen at Simons Town, who apparently dieted themselves on the "savings" principle.

Diseases of the Respiratory Sytem.—All the ratios show a slight decrease as compared with those of 1900. "The vessels of the training service in home waters return 1,747 cases as against 2,142 in 1900; the ratio being 195.74, compared with 252." The invaliding was 4.14; in 1900, 7.29. The deaths 9; in 1900, 11; in 1899, 10; in 1898, 13. The average complements of the ships in question, corrected for time, were 8,925 in 1901; 8,500 in 1900; 8,600 in 1899; 8,600 in 1898. In the invalidings are included pneumonia cases 10, phthisis 16; in 1900, 16 and 29 respectively.

Suicide.—The number was 4; in the previous four years, with smaller numbers borne, the numbers were: 1900, 17; 1899, 11; 1898, 8; 1897, 8.

CHANGES OF STATION.

THE following changes of station amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during the last month:

	From.	To:
Colonel H. J. W. Barrow	Kasauli	Umballa.
Lt.-Col. J. F. Williamson, M.B., C.M.G.	South Africa	Somaliland.
,, H. Grier	Dublin	Fermoy.
,, R. H. S. Sawyer, M.B.	South Africa	Dublin.
,, R. C. K. Laffan	Madras	,,
,, W. A. Morris	Bengal	Punjab.
Major N. Manders	Ceylon	Devonport.
,, J. R. Forrest	Bengal	York.
,, J. D. Moir, M.B.	South Africa	Canterbury.
,, H. D. James	Dublin	Egypt.
,, H. J. Fletcher, M.B.	South Africa	Chatham.
,, J. M. Nicolls, M.B.	,,	Buttevant.
,, G. J. A. Tuke	Woolwich	Gibraltar.
,, H. T. Baylor	Shorncliffe	Brighton.
,, H. W. Anstin	Dublin	Kinsale.
,, M. J. Whitty, M.D.	,,	Cahir.
,, J. S. Edge	Bermuda	Aldershot.
,, G. Scott, M.B.	Jamaica	Edinburgh.
,, T. Du B. Whaite, M.B.	Aldershot	Woking.
,, L. E. A. Salmon	Canterbury	South Africa.
,, M. P. C. Holt, D.S.O.	South Africa	Dublin.
,, A. Wright	Antigua	Barbadoes.
,, T. B. Beach	Madras	Bengal.
,, W. T. Mould	—	Portsmouth.
,, A. Pearse	Aldershot	West Africa.
Captain C. W. Duggan, M.B.	Gibraltar	Edinburgh.
,, C. B. Lawson, M.B.	Home District	Woolwich.
,, H. W. H. O'Reilly, M.B.	Cork	Limerick.
,, C. H. Hopkins	Bengal	Madras.
,, J. H. R. Bond	South Africa	Bombay.
Lieutenant T. B. Unwin, M.B.	Aldershot	Ceylon.
,, W. L. Steele	South Africa	Bulford.
,, T. White	,,	Malta.

The undermentioned recently-appointed Lieutenants are stationed as follows:—A. B. Smallman, M.B., Medical Staff College; P. Davidson, M.B., D.S.O., W. F. Tyndale, C.M.G., J. McKenzie, M.B., A. H. Hayes, and H. J. Crossley, Netley; N. D. Walker, M.B., and W. B. Taylor, Aldershot; R. Storrs, F. A. H. Clarke, and G. A. K. H. Reed, Woolwich; R. L. V. Foster and R. B. Ainsworth, Netley; C. A. J. A. Balck, M.B., G. W. Smith, M.B., J. M. H. Conway, S. M. W. Meadows, and J. W. S. Seccombe, Woolwich; H. V. Bagshawe, Aldershot; C. V. B. Stanley, M.B., Curragh; D. S. Skelton, H. G. S. Webb, and W. W. Browne, Aldershot; N. E. J. Harding, M.B., Netley; W. D. C. Kelly, M.B., R. Rutherford, M.B., and W. C. Rivers, Curragh; and R. J. Franklin, Aldershot.

Major F. J. Greig has been confirmed in his appointment as Second in Command and Instructor at the Aldershot Training School.

Lieutenant Colonel W. G. Clements, retired pay, has been transferred from Chatham to Christchurch.

Lieutenant-Colonel J. R. Greenhill, retired pay, has relinquished the medical charge of troops at Christchurch.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: JAMES C. F. WHICHER, Staff Surgeon, to the *Apollo*, March 17th; JAMES BRADLEY, Staff Surgeon, to the *Vivid*, for Plymouth Hospital, lent, March 12th; HERBERT H. GILL, M.B., Surgeon, to the *Sirius*, March 17th; ERNEST A. SHAW, M.A., M.B., Surgeon, to the *Vulcan*, April 10th; ERNEST C. LOMAS, M.B., D.S.O., Staff Surgeon, to Malta Hospital, April 10th; ALFRED CROPLEY, Staff Surgeon, to the Royal Naval Engineering College, Keyham, April 1st; ALEXANDER M'CLOY, M.B., EDWARD H. ROSS, ALEXANDER C. W. NEWPORT, HUGH C. ROSS, and DONALD P. CHAPMAN, Surgeons, to the *Duke of Wellington*, additional, for disposal, April 28th; HERBERT B. SIMPSON, EDWARD A. EVANS, THOMAS A. SMYTH, M.B., and GERALD C. CROSS, Surgeons, to the *Vivid*, additional, for disposal, April 28th; ARCHIBALD D. SPALDING, GEORGE M. LEVICK, WILLIAM N. BLATCHFORD, and GEORGE F. ALDERDICE, Surgeons, to the *Pembroke*, additional, for disposal, April 28th; ARTHUR DAVIDSON, M.B., ROBERT F. MACMAHON, and GEORGE D. BATEMAN, Surgeons, to the *Wildfire*, additional, for disposal, April 28th; CHARLES S. BENNETTS, B.A., M.B., Surgeon, to the *Hermes*, on commissioning.

Fleet Surgeon JOHN LINTON PALMER died at Rock Ferry, Cheshire, on March 5th, aged 78. He was appointed Surgeon, May 20th, 1848; Staff Surgeon, February 28th, 1860; and Fleet-Surgeon, September 11th, 1870. He retired from the service, February 3rd, 1874.

ROYAL ARMY MEDICAL CORPS: EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post-office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.

A MAJOR R.A.M.C., well placed home roster, will exchange South Africa, for one year or over.—Address No. 1341, BRITISH MEDICAL JOURNAL Office.

PAY WARRANT.

BY a recently-issued Army Order certain amendments are made in the Pay Warrant, among them being the following:

Pay of the Staff of the Medical Staff College.

The following shall be substituted for Article 155 as the rates of pay for the staff of the Medical Staff College: Commandant and Director of Studies, pay and allowances of a colonel; Professor of Clinical and Military Surgery, Professor of Clinical and Military Medicine, Professor of Military Hygiene, Professor of Pathology, £200, in addition to the pay and allowances of their substantive rank; Assistant Professor of Military Hygiene, Assistant Professor of Pathology, £30, in addition to the pay and allowances of their substantive rank."

INDIAN MEDICAL SERVICE.

CAPTAIN J. C. HOLDICH LEICESTER M.D., B.S., F.R.C.S., I.M.S., has been appointed to act as Resident Surgeon to the Eden Hospital for Women, Calcutta.

Lieutenant-Colonel J. W. CLARKSON, Bombay Establishment, Sanitary Commissioner, Bombay, is permitted to retire from the service from March 31st. He was appointed Assistant Surgeon, September 30th, 1875, and became Surgeon-Lieutenant-Colonel, September 30th, 1895. He served in Southern Afghanistan during the war there in 1880 (medal), and with the Burmese expedition in 1887-8 (medal with clasp).

Major F. C. CLARKSON, Bengal Establishment, is appointed Sanitary Commissioner, Bengal.

Lieutenant-Colonel J. MCCLOGHRY, Bombay Establishment, has been appointed to officiate as Principal Medical Officer, Sind District, *vice* Colonel J. P. Greany, M.D.

Lieutenant-Colonel T. S. WEIR, Bombay Establishment, Principal Medical Officer, Quetta District, has been directed to proceed to Obbia to take up the appointment of Principal Medical Officer with the Somaliland Force.

The appointment of Captain W. E. A. ARMSTRONG, Madras Establishment, to be Surgeon to the Governor-General of India, from February 19th, is gazetted.

The undermentioned medical officers are detailed for duty with the Somaliland Field Force: Major C. J. SARKIES, M.B., Bombay Establishment; Captain A. A. GIBBS, Bombay Establishment; Captain A. H. MORRIS, R.A.M.C., but at present borne on the Bombay Establishment.

IMPERIAL YEOMANRY.

SURGEON-MAJOR L. DRAGE, M.D., Herts, resigns his commission, March 14th.

VOLUNTEER GARRISON ARTILLERY.

SURGEON-LIEUTENANT COLONEL F. SMITH, M.D., 2nd Kent, resigns his commission, retaining his rank and uniform, March 14th.

Mr. ROBERT A. DRAPER, B.A., is appointed Surgeon-Lieutenant in the 1st East Riding of Yorkshire, March 14th.

VOLUNTEER RIFLES.

SURGEON-CAPTAIN C. A. K. RENSHAW, 3rd Volunteer Battalion the Cheshire Regiment, resigns his commission, March 14th.

Surgeon-Captain C. S. TICEHURST, 3rd (Duke of Connaught's Own) Volunteer Battalion the Hampshire Regiment, resigns his commission, and is granted the honorary rank of Surgeon-Major, retaining his uniform, March 14th.

Surgeon-Lieutenant W. HALDANE, M.B., 4th (Perthshire) Volunteer Battalion the Black Watch (Royal Highlanders), resigns his commission, March 14th; he retains his rank and uniform.

Supernumerary Surgeon Lieutenant D. MOWAT, M.D., 3rd Volunteer Battalion the Essex Regiment, to be Surgeon-Captain, and to remain supernumerary, March 14th.

Surgeon-Lieutenant J. W. T. WALKER, M.B., from the East London (Tower Hamlets) Royal Engineers (Volunteers), to be Surgeon-Lieutenant in the 7th Middlesex (London Scottish), March 3rd.

Supernumerary Surgeon-Lieutenant J. G. FRASER, M.B., 19th Middlesex (Bloomsbury), to be Surgeon-Captain, and to remain supernumerary, March 3rd.

EXAMINATION OF MAJORS FOR PROMOTION.

BY Army Order No. 40 it is announced that for the year 1903 the special subjects for the examination of majors, Royal Army Medical Corps, for promotion to the rank of lieutenant-colonel, referred to in Paragraph 5 (*a*), (*b*), and (*c*), Appendix VIII A of the King's Regulations, as amended by Army Order 127 of 1902, will be: (*a*) Medical history of the more important campaigns: (1) "Report on the Nile Expedition of 1898" contained in Appendix IV of Army Medical Department Reports for 1898; (2) "Operations on the North-West Frontier of India, 1897-98." Appendices VI and VII, Army Medical Department Reports for 1898; (*b*) a general knowledge of the Army Medical Services of other Powers—The Medical Organization of the French Army as described in the *Handbook of Medical Organization of Foreign Armies*, and in Appendix V of Army Medical Department Reports for 1899; or, The Medical Organization of a Foreign Army, selected by the candidate, described within similar limits.

India General Service Medal.—His Majesty the King has been graciously pleased to approve of a new medal being struck to commemorate military operations in or on the frontier of India. The medal will be designated the "India General Service Medal." It will be similar in design to the India Medal of 1895, but will bear on the obverse the effigy of His Majesty King Edward VII, and on the reverse the word "India" only. The ribbon will be the same as that of the India Medal of 1895. In each case in which the medal is issued, a clasp will be affixed denoting the operations for which it is granted. The clasp only will be issued to those already in possession of the India Medal of 1895.

Waziristan Expedition, 1901-2: Grant of Medal and Clasp.—His Majesty the King has been pleased to command that the "India General Service Medal," in silver, with clasp, "Waziristan 1901-2," shall be granted to all troops who were engaged in the later or active stage of the Mahsud Waziri blockade; that is, to all who served west of the administrative border between November 23rd, 1901, and February 15th, 1902, both dates inclusive. Officers, soldiers, and others who are already in possession of the India Medal of 1895 will receive the clasp only.

THE GRIEVANCES OF THE INDIAN MEDICAL SERVICE.

I.M.S., in the course of a letter on this subject, writes: I must emphatically endorse your remarks about "officiating" appointments. Here is an example of what actually happened in my own experience: A. was ordered on field service; he was on that duty rather more than a year. On return, he was instructed to relieve B. This latter man B. was junior to A., but B. had permanent charge of the regiment (both were over five years' service). B.'s pay was Rs 600 per month. A drew 400 + 100 = Rs 500 per month when doing B.'s work. A., somewhat indignant, wrote asking if there was anything against him, as he had been passed over for permanent charge of a regiment. In reply he was informed his services were not available at the time the vacancy occurred, that is, because he was on active service he was passed over or penalized in his pay. Not very reasonable, is it? That is how officiating appointments can be abused. Of course B., on transfer to the civil, received his civil pay, hence Government saved Rs. 100 per month. If, on the other hand, A. had been given the civil post (as senior) and B. had remained in charge of the regiment, Government would not have saved this amount, as the pay in the civil would have been the same for A as for B. I think it would be distinctly advisable if these "officiating" appointments pay was done away with, and that any officer should draw when he is officiating the same pay as he would do if he was in permanent charge of the post, always providing he has passed in Hindustani; he does the same work whether he is called in officiating or permanent charge. No, my advice to intending competitors is most emphatically don't; they will most certainly repent at a later date if they do.

THE SUPPLY OF PURE WATER TO TROOPS IN THE FIELD.

MAJOR F. J. W. PORTER, S.A.C. (R.A.M.C. seconded) writes from Pretoria to criticize the water-cart described in the BRITISH MEDICAL JOURNAL of January 31st, by Dr. J. F. Lees. He points out that in South Africa wood was with difficulty obtainable, or not at all, and that to provide sufficient transport for a carriage of wood would be a great difficulty. He also thinks that a water-cart weighing over one ton would be rather unmanageable in a country like South Africa, and he fears that while every one is satisfied that the drinking water ought to be boiled, this will never be possible in the field. Major Porter continues: I quite agree that there should be at least one water cart per company allowed, and that it should keep as close to the company as possible on the line of march, and that it should be in charge of a soldier who is responsible for its cleanliness, and filling with the best water procurable. In the earlier parts of the campaign at any rate the provision of water carts was absurdly small, and I am afraid that this was the cause of a good deal of the enteric and dysentery. I would like to call Dr. Lees's attention to Major Caldwell's article in the same issue. The water supply is not the only thing to be attended to in the prevention of enteric. My experience here in Pretoria is very similar to Major Caldwell's. We have got an undoubted water supply, and yet I get numbers of cases of enteric from camps and houses where it is impossible to trace the cause.

*** We should be very sorry to accept Major Porter's despairing counsels about the water supplies of moving columns. In modern times an army does not expect to live upon a country except with respect to water, and where wood is insufficient and water doubtful it would in the long run be an economy of transport to provide petroleum to be used in suitable heaters for boiling water.

CENTENARIANS IN THE UNITED STATES.—The *Medical Examiner and Practitioner* of New York states that, according to the statistics recently compiled by the Census Department in Washington, there are 33,762 persons in the United States who are over 90 years of age. There are 0 who are over 130, and 86 who are over 120. Of the latter number 28 are males and 58 females. All who are upward of 115 are negroes, with the exception of one Indian, who is 130. Next to the negroes, the Irish race holds the record in the United States for old age. Izai Rodofsty, a Russian, who is 136, is believed to be the oldest white man living.

MEDICO-LEGAL AND MEDICO-ETHICAL.

NEWSPAPER RECOMMENDATIONS.

A CORRESPONDENT draws attention to the answers to correspondents in a Manchester paper where the names of two medical gentlemen are given as those of specialists the correspondent is recommended to consult. We do not think it is fair to conclude that the gentlemen named are in any way responsible for these recommendations. The indications are sufficiently inaccurate to make it highly improbable that they had anything to do with it. As a rule, editors of newspapers decline to recommend particular doctors, and we are sorry to see that this rule has exceptions.

PARTNERSHIP AGREEMENTS.

A CORRESPONDENT asks (1) for the usual agreement in partnership. (2) Whether in cases where the partners take half shares, in event of disagreement, it is usual for each to practise independently, or whether it is specially settled in the partnership agreement. (3) Is it usually provided in the agreement whether the partnership is for life or a term of years?

*** (1) Our correspondent will find in Barnard and Stocker's *Medical Partnerships* draft forms, but it is always advisable to have the partnership deed drawn up by a solicitor. (2) There is always a clause in the deed to settle this point, but it does not usually allow the partners to practise independently in the same neighbourhood. (3) This also is always settled in the deed of partnership.

X. Y. Z. asks what a partner ought to pay for (*a*) half profits, (*b*) for one-third profits.

*** The average value of a half or third share of a practice is from one to three years' purchase, according to the character of the practice—that is, a purchaser would have to pay a sum of money equal to the income derived from the share during one to three years, as the case might be. The gross income, and not the profits, is the basis usually taken for estimating the value of a practice or a share of the same.

SCOTLAND writes that some time ago he purchased the quarter share of a practice for a sum of money the last instalment of which has just been paid. In the meanwhile the value of the practice has increased by one-fourth, and he desires to know what sum he could claim in event of a dissolution of partnership.

*** In every properly drawn-up deed of partnership there is a clause settling the terms of dissolution, and our correspondent can only be referred to the conditions laid down in his deed. Speaking generally, a retiring partner would be entitled to the market value of his share of the practice at the time of his withdrawal; but the conditions of partnership are very variable, and it is always necessary to lay down strictly in the deed of partnership the terms of dissolution.

MEDICAL ETIQUETTE.

DUMBARTONSHIRE.—Our correspondent complains that a Dr. C. was called in consultation to see a lady whose family had been for twenty-seven years under the care of Dr. A. At the consultation Dr. C. expressed to a member of the family in Dr. A.'s presence his agreement with Dr. A.'s diagnosis and treatment. On the following day Dr. A. received a letter from the same member of the family to say that Dr. C. would take charge of the lady as he (Dr. C.) could not agree with Dr. A.'s treatment.

*** It is a fundamental rule of medical ethics that a practitioner called in consultation must refuse to supersede the original medical attendant under any circumstances. Unless this rule is maintained consultations between general practitioners (which are frequently very useful in country districts) would become almost, if not altogether, impossible.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

THE NOTIFICATION OF INFECTIOUS DISEASES.

[BY A BARRISTER-AT-LAW.]

THE law relating to the notification of infectious diseases is to be found partly in the Public Health Acts, and partly in the Infectious Diseases (Notification) Act, 1889. It is practically uniform throughout the kingdom, but considerable doubt exists as to the interpretation of the various sections, and as to the duties and liabilities of medical practitioners who are called upon to administer the law.

The Public Health Act of 1875 contains the first statutory enactments relating to this matter to which we think it necessary to draw attention. Section CXXIV provides as follows:

Where any suitable hospital or place for the reception of the sick is provided within the district of a local authority, or within a convenient distance of such district, any person who is suffering from any dangerous infectious disorder, and is without proper lodging accommodation, or lodged in a room occupied by more than one family, or is on board any ship or vessel, may, on a certificate signed by a legally qualified medical practitioner, and with the consent of the superintending body of such hospital or place, be removed by order of any justice, to such hospital or place, at the cost of the local authority; and any person so suffering, who is lodged in any common lodging-house, may, with the like consent and on a like certificate, be so removed by order of the local authority.

An order under this section may be addressed to such constable or officer of the local authority as the justice or local authority making the same may think expedient; and any person who wilfully destroys or obstructs the execution of such order shall be liable to a penalty not exceeding £10.

The diseases which must be notified are small-pox, cholera, diphtheria, membranous croup, erysipelas, scarlet fever or scarlatina, and the fevers known by any of the following names: typhus, typhoid, enteric, relapsing, continued, or puerperal. There are also to be included, as respects any particular district, any infectious disease to which the principle of notification may be applied by the sanitary authority of the district.

This section was extended to canal boats by Section IV of the Canal Boats Act, 1877, and to ships by the Public Health (Ships, etc.) Act, 1885, Section II and schedule. The short effect of the section is that a person suffering from an infectious disease may be removed by a justice's order based upon a medical certificate if such person is (*a*) without proper lodging or accommodation, or (*b*) is lodged in a room occupied by more than one family, or (*c*) is on board a ship or canal boat, or (*d*) is in a common lodging-house. The section, does not say at whose instance the removal order may be made; but in actual practice this duty is generally performed by the medical officer of health at whose request the practitioner grants a certificate. For proof of all or any of the above facts it would seem that the justices must look to the medical practitioner's certificate. In determining what is proper lodging and accommodation the practitioner is entitled to consider the danger of infection to other persons.

In the case of Warwick *v.* Graham (15 *T.L.R.*, 410) a patient was suffering from scarlet fever at his father's house, where a family of eight, including the patient, resided. The house contained four rooms. The patient occupied one room and had proper lodging and accommodation, so far as he himself was concerned, but he could not be sufficiently isolated to prevent danger of infection to other inmates of the house, who had to pass the door of the sick room. It was proved that he was properly cared for. The medical officer of health granted a certificate for the removal of the patient, but the justices refused to make an order, on the ground that there was not sufficient evidence to show that the patient was without proper lodging and accommodation within the meaning of the section. It was decided by Day and Lawrance, JJ., that the section above set out was clearly directed to the protection of persons from infection, and not only to the protection of the sick person himself. They accordingly came to the conclusion that the justices were wrong, and sent the case back to them.

An application for an order may apparently be made *ex parte*, that is to say, without notice to the patient or his friends. In Reg. *v.* Davey (15 *T. L. R.*, 344) proceedings were instituted against a woman who refused to allow an order under the section to be carried into force. In explaining the effect of the section, Mr. Justice Darling said:

It has been urged that the order was arbitrary, but the question is, has a person the right to obstruct the execution of the order and at the hearing of a summons against her for so doing raise the whole question? The legislation meant to protect the public from infectious diseases, and the whole legislation would be useless if the operations in such cases were dilatory.

It is to be noticed that in the section above set out no duty was put upon the practitioner to issue a certificate. That duty was imposed upon him by the Infectious Diseases (Notification) Act, 1889, as affirmed by an Act passed in 1899. So far as London is concerned the duty of the practitioner is prescribed by the Public Health (London) Act, 1891.

Section III (1) of the Act of 1889 provides that:

Where an inmate of any building used for human habitation within a district to which this Act extends is suffering from an infectious disease to which this Act applies, then, unless such building is a hospital in which persons suffering from an infectious disease are received, the following provisions shall have effect, that is to say:

(*b*) Every medical practitioner attending on or called in to visit the patient shall forthwith, on becoming aware that the patient is suffering from an infectious disease to which this Act applies, send to the medical officer of health for the district a certificate stating the name of the patient, the situation of the building, and the infectious disease, from which, in the opinion of such medical practitioner, the patient is suffering.

(2) Every person required by this section to give a notice or certificate who fails to give the same, shall be liable on summary conviction in manner provided by the Summary Jurisdiction Acts to a fine not exceeding forty shillings;

Provided that if a person is not required to give notice in the first instance, but only in default of some other person, he shall not be liable to

any fine if he satisfies the court that he had reasonable cause to suppose that the notice had been duly given.

Section LV of the Public Health (London) Act, 1891, provides that:

Where an inmate of any house within the district of a sanitary authority is suffering from an infectious disease to which this section applies, the following provisions shall have effect, that is to say:

(1) Every medical practitioner attending on or called in to visit the patient shall forthwith on becoming aware that the patient is suffering from an infectious disease to which this section applies, send to the medical officer of health of the district a certificate stating the full name and the age and sex of the patient, the full postal address of the house, and the infectious disease from which, in the opinion of such medical practitioner, the patient is suffering, and stating also whether the case occurs in the private practice of such practitioner or in his practice as a medical officer of any public body or institution, and where the certificate refers to the inmate of a hospital it shall specify the place from which and the date at which the inmate was brought to the hospital, and shall be sent to the medical officer of health of the district in which the said place is situate.

(2) Every person required by this section to send a notice or certificate who fails forthwith to send the same, shall be liable to a fine not exceeding forty shillings; provided that if a person is not required to send notice in the first instance, but only in default of some other person, he shall not be liable to any fine if he satisfies the court that he had reasonable cause to suppose that the notice had been duly sent.

By Section LXVI (1) a person suffering from any dangerous infectious disease, who is without proper lodging and accommodation, or is lodged in a tent or van, or is on board a vessel, may, on a certificate signed by a legally qualified medical practitioner, and with the consent of the superintending body of the hospital to which he is to be removed, be removed by order of a justice, and at the cost of the sanitary authority of the district where such person is found, to any hospital in or within a convenient distance of London.

(2) The order may be addressed to such constable or officer of the sanitary authority as the justice making the same thinks expedient; and if any person wilfully disobeys or obstructs the execution of such order, he shall be liable to a fine not exceeding £10.

(3) Any sanitary authority may make by laws for removing to any hospital to which that authority are entitled to remove patients, and for keeping in that hospital so long as may be necessary any persons brought within their district by any vessel who are infected with a dangerous infectious disease.

Speaking generally, the effect of these Acts is that the practitioner is bound to notify every infectious case, and is liable to a penalty if he does not do so. He is not, however, bound to grant the certificate of want of accommodation, that is to say, he runs no risk of having to pay a penalty if he does not do so.

It next becomes important to consider whether a mistaken diagnosis, which leads to the removal of a patient, may involve a claim for damages against the practitioners who grant the certificate. In other words, how far is he protected (*a*) by the Public Health Acts; (*b*) by the Public Authorities Protection Act, 1893; (*c*) by the common law.

It is provided by Section CCLXV of the Public Health Act, 1875, and also by Section CXXIV of the Public Health (London) Act, 1891, that—

No matter or thing done.....by any local authority or joint board or port sanitary authority, and no matter or thing done by any.....officer of such authority or other person whomsoever acting under the direction of such authority, shall, if the matter or thing done.....bona-fide for the purpose of executing this Act, subject them.....personally to any action, liability, etc., and any expense incurred by any such authority, member, officer, or other person acting as last aforesaid, shall be borne or repaid out of the fund or rate applicable by such authority to the general purpose of the Act.

This section clearly protects or indemnifies a medical officer of health who grants a certificate notifying an infectious disease, or a certificate of want of proper lodging and accommodation upon which the justices make a removal order. A medical officer however is only protected if he comply with the strict letter of the law. Thus he cannot direct the removal of a patient without the order of justices (see Mitchell *v.* Mayor of Aberdeen, 20 Ct. of Sess. Cas. (4th ser.), p. 253). It would seem, however, that the private practitioner is not protected by the section. In granting a certificate he cannot be said to be a person "acting under the direction of a local authority" within the meaning of the section, as his duty is purely statutory. His position therefore seems to be more hazardous than that of the medical officer of health, and he must look for protection elsewhere. It is provided by Section 1 of the Public Authorities Protection Act, 1893, that

Where after the commencement of this Act any action, prosecution, or other proceeding is commenced in the United Kingdom against any person for any act done in pursuance, or execution or intended execution of any Act of Parliament, or of any public duty or authority, or in respect of any alleged neglect or default in the execution of any such act, duty, or authority, the following provisions shall have effect:

(*a*) The action.... etc., shall not lie or be instituted unless it is commenced within six months next after the act, neglect, or default complained of, or, in case of a continuance of injury or damage, within six months next after the ceasing thereof.

(*b*) Wherever in any such action a judgement is obtained by the defendant, it shall carry costs to be taxed as between solicitor and client.

It is submitted that the practitioner is clearly entitled to the protection of this section, but it is only a limited protection. It leaves the whole question whether he can be held liable for the bona-fide execution of his duty entirely at large

As to the liability at common law, it would be necessary to show (*a*) that the certificate was the *causa proxima* of the removal, for the actual order is made by the justices; and (*b*) that in granting the certificate the practitioner was actuated by malice or was guilty of gross negligence.

The degree of skill which a medical practitioner is called upon to display in the treatment of his patients was thus defined by Tindal, C.J., in the case of Lamphier *v.* Phipos (8 C. and P., 475):

Every person who enters into a learned profession undertakes to bring to the exercise of it a reasonable degree of care and skill. He does not undertake, if he is a surgeon, that he will perform a cure, nor does he undertake to use the highest possible degree of skill. There may be persons who have higher education and greater advantages than he has, but he undertakes to bring a fair, reasonable, and competent degree of skill, and the question is whether the injury must be referred to the want of a proper degree of skill and care in the defendant or not.

In the case of Russell *v.* Cree,[1] a county court decision of doubtful authority, the plaintiff, a clerk, sought to recover £24 damages for the alleged negligence of a medical practitioner in certifying that "he was suffering from scarlet fever and was therefore unable to follow his profession." It was alleged that he was really suffering from erythema, but that the case was extremely doubtful, and that the spots visible were very deceptive. Judge Meadows White said that he could not see that the defendant had been guilty of any negligence, and dismissed the action with costs.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 8,846 births and 4,977 deaths were registered during the week ending Saturday last, March 14th. The annual rate of mortality in these towns, which had been 16.7, 16.6, and 16.6 per 1,000 in the three preceding weeks, increased last week to 17.2 per 1,000. The rates in the several towns ranged from 6.8 in Ipswich, 7.3 in Hornsey, 8.0 in East Ham, 8.3 in Walthamstow, 9.3 in West Hartlepool, 9.5 in Grimsby, 9.7 in Leyton, 11.0 in Warrington, and 11.5 in Barrow-in-Furness to 21.2 in Stockport, 21.4 in Huddersfield, 22.3 in Hanley and in Blackburn, 22.6 in Manchester, 22.8 in Liverpool, 24.1 in Burnley, 24.6 in Swansea, and 27.7 in Wigan. In London the rate of mortality was 16.3 per 1,000, while it averaged 17.6 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.7 per 1,000 in the seventy six large towns; in London this death-rate was equal to 1.8 per 1,000, while it averaged 1.6 in the seventy-five other large towns, among which the highest death-rates from the principal infectious diseases were 3.1 in West Ham, 3.3 in Croydon and in Tottenham, 4.0 in South Shields, 5.8 in Hanley, 5.9 in Wigan, and 6.6 in Swansea. Measles caused a death-rate of 1.2 in Salford, 1.3 in Manchester, 1.5 in Croydon, in Walthamstow, and in Hull, 2.4 in Tottenham, 3.4 in Wigan, and 4.4 in Swansea; scarlet fever of 1.2 in Bolton, 1.3 in Oldham, and 1.6 in Hanley; diphtheria of 1.1 in Swansea, 1.6 in West Bromwich, 2.5 in Hanley, and 3.0 in Stockton-on-Tees; whooping-cough of 1.1 in West Ham and in Stockport, 1.3 in Hornsey, 1.4 in Reading and in Preston, 1.5 in Croydon, 1.6 in Hanley, and 1.8 in Wallasey; and diarrhoea of 1.1 in Oldham and 2.0 in South Shields. The mortality from "fever" showed no marked excess in any of the large towns. Of the 14 fatal cases of small-pox registered in these towns last week, 7 belonged to Liverpool, and 1 each to Birmingham, Leicester, Birkenhead, Manchester, Rochdale, Burnley, and Leeds. The Metropolitan Asylums Hospitals contained 7 small-pox patients at the end of last week, against 8, 5, and 6 at the end of the three preceding weeks; 2 new cases were admitted during the week, against 7, 1, and 2 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 2,528 to 1,791 on the eleven preceding Saturdays, had risen again to 1,708 on Saturday last, March 14th; 231 new cases were admitted during last week, against 205, 197, and 193 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, March 14th, 985 births and 645 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 18.1, 17.7, and 18.5 per 1,000 in the three preceding weeks, rose again last week to 19.7 per 1,000, and was 2.5 per 1,000 above the mean rate during the same period in the seventy-six large English towns. The rates in the eight Scotch towns ranged from 18.0 in Greenock and 18.3 in Leith, to 24.3 in Dundee and 27.9 in Perth. The death-rate from the principal infectious diseases averaged 2.0 per 1,000 in these towns, the highest rates being recorded in Aberdeen and Greenock. The 280 deaths registered in Glasgow included 4 from diphtheria, 16 from whooping-cough, 3 from "fever," and 4 from diarrhoea. Five fatal cases of measles and 8 of whooping-cough were recorded in Edinburgh. Two deaths from whooping-cough and 3 from diarrhoea occurred in Dundee; 7 from measles in Aberdeen; 2 from scarlet fever in Paisley; 2 from measles in Leith; and 2 from diarrhoea in Greenock.

THE POOR-LAW CONFERENCE.

THE NURSING OF WORKHOUSE SICK.

AT the thirty-first annual Poor-law Conference, on March 10th, the President, the Hon. Sydney Holland, opened the proceedings by an address on the Nursing of the Poor in Workhouses, which combined both close reasoning and considerable eloquence. He pointed out that the failure to provide efficient nursing was poor economy, since the return of many of the poor to a self-supporting life was thereby retarded or prevented, and numbers of children, for want of adequate care, grew up so weak and sickly as to be a constant charge upon the State. He welcomed the independence from lay control of other resident workhouse officials recently granted to superintendent nurses, but characterized the reduction of their number as a most retrograde step. A trained superintendent was required in every workhouse just as much as in every cottage hospital. The proposal to create a "qualified nurse" by a process of a year's

[1] BRITISH MEDICAL JOURNAL, March 17th, 1894, p. 608.

training in a workhouse ward he condemned as strongly as it has been condemned by nearly every one else except the Committee that is responsible for it.

THE TREATMENT OF THE FEEBLE-MINDED.

At a subsequent sitting Mr. W. H. Dickinson, L.C.C., read a paper on the treatment of the feeble-minded. He pointed out that in addition to 110,000 recognized lunatics there were some 100,000 other persons of "feeble mind" incapable of looking after themselves, but not qualified under present conditions to be taken charge of by the State. He desired that all asylums should be regarded as hospitals and duly differentiated according to the class of case received. In concluding, he advocated the removal of all public asylums for lunatics, idiots, and imbeciles from the scope of the Poor Law and their establishment as State hospitals under the County Councils. After some discussion of this paper a resolution was passed calling upon Government to carry out the recommendations of the House of Commons Committee in regard to the grants in aid of the epileptic and feeble-minded as in the case of lunatics.

SMALL-POX AND VACCINATION.

DURING 1902 there were 110 cases of small-pox at Govan, as against 97 cases in 1901, making 207 in all. The case mortality for 1902 was 13.6 and for 1901 was 12.3. Dr. Barras, the Medical Officer of Health, furnishes a number of particulars respecting the outbreak in his annual report which has just been received. It appears that of the 110 cases not less than 72 were traceable to an infant that had died of haemorrhagic small-pox in a densely populated locality; 98 out of the total cases occurred in March and April. Only 7 cases occurred in children under 10 years of age. The protective influence of vaccination against an attack of small-pox was again evidenced during the epidemic, as of the total cases only 9 were those of children under school age, and of these 5 were unvaccinated, aged respectively 11 weeks, 3 months, 3 months, $3\frac{1}{2}$ months, and $11\frac{1}{2}$ months. As regards deaths, the only cases which proved fatal under 15 years of age were both unvaccinated infants, aged respectively 11 weeks and $11\frac{1}{2}$ months, the attacks in the remaining instances being of a mild type, the result of successful primary vaccination. As regards the fatal cases over 15 years of age, 4 occurred amongst those who had never been vaccinated, aged respectively 21, 21, 33, and 45 years; whilst the remainder, numbering 7, had not been revaccinated. Of the total cases, 110, no less than 20 contracted the disease who had repeatedly declined vaccination, although especially visited by the medical officer of health. In 3 of these instances the attacks proved fatal.

THE METROPOLITAN WATER BOARD.

THE Local Government Board has issued an order, in pursuance of the powers conferred on it by the Metropolis Water Act of 1902, summoning the first meeting of the Water Board and regulating the proceedings at that meeting. It is to be held on April 2nd, at 3 p.m. in the Privy Council Chamber in Whitehall, and Mr. Almeric FitzRoy, the Clerk of the Privy Council, is to preside. After the election of a temporary chairman, the matters to be considered are (*a*) whether any, and if so what, salaries are to be assigned to the offices of Chairman and Vice-Chairman of the Board, (*b*) the appointment of persons to these offices, (*c*) the appointment of a temporary Clerk of the Water Board, and (*d*) arrangements for the next meeting. The Court of Arbitration (Sec. XXIII of the Act) has issued its procedure, a copy of which will be laid before the Water Board at its first meeting. The Court requires that on or before May 16th each of the metropolitan water companies and each of the urban district councils who have not agreed with the Water Board as to the amount of compensation to be paid them under the Act shall send in their claims, the first of which are to be answered by the Board on or before August 17th. All the members of the Water Board, numbering 66, have now been appointed by the several constituent authorities.

REGULATIONS UNDER THE DAIRIES ORDER.

AT the meeting of the Incorporated Society of Medical Officers of Health on March 13th a paper was read on this subject by Dr. Mitchell Wilson, the county medical officer for the East Riding of Yorkshire. After dealing in a brief historical review with the legislative enactments leading up to the Dairies, Cowsheds, and Milkshop Orders, Dr. Wilson discussed the situation of cowsheds, their proper inspection, the lighting, ventilation, etc. He considered that 30 feet from any building, whether inhabited or used as a workshop, was a suitable standard of distance for a cowshed. The largest amount of light should, wherever possible, be obtained from the roof, say, by glass tiles over every stall. Possibly some standard, such as 2 square feet of window or glass tile per cow might also be adopted in respect to this point. Speaking of ventilation, Dr. Wilson expressed the opinion that too much stress had been laid upon securing adequate air-space; 600 cubic feet was a reasonable minimum where definite means of ventilation were provided, and where the cows were turned out during a portion of each day. It appears that this amount has recently been sanctioned by the Local Government Board of Scotland. Dr. Wilson suggests that the 600 feet be obtained by the following measurements. The stall from front to rear is to measure not less than 15 feet, made up as follows: the feeding trough, 2 ft. 3 in.; the length of stall, 5 ft.; the manure and urine trench, 1 ft. 9 in.; the gangway, 6 ft. The width of a double stall is generally 7 ft., and a height of $11\frac{1}{2}$ ft. gives a reasonable space to obtain exits for foul air above the level of the cows. Lime washing is commonly undertaken in May and October, but Dr. Wilson thinks July and December would be more suitable. Emphasis was also laid upon the importance of a sufficient and wholesome water supply. In the discussion which followed the paper, particular attention was called by Drs. Newsholme, Richards, Shirley Murphy, and Kenwood, to the importance of clean cows and clean milking, and a reference dealing with these matters was made to the Council of the Society.

TEMPORARY SMALL-POX HOSPITALS.

COUNTRY PRACTITIONER wishes to know details as to the management of a temporary small-pox hospital; as to the fees he ought to charge for taking charge of such a hospital, which is three miles away from his home, and having regard to the possible damage to his private practice.

*** Our correspondent should apply to the medical superintendents of several large urban small-pox hospitals, and base his arrangements for management on the regulations which they enforce, having regard to the difference in number of patients, etc. Even for one case of small-pox, at least two nurses (one night and one day) are required, and one servant. Probably also a porter will be necessary. Disinfecting arrangements need careful consideration; but any textbook on public health may be consulted on this point. With regard to fees, we may refer our correspondent to the answer given in the BRITISH MEDICAL JOURNAL of February 28th, 1903, p. 528, but we are not acquainted with any precedents.

HOSPITAL AND DISPENSARY MANAGEMENT.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

THE annual general meeting of the Governors and Members of the National Hospital for the Paralysed and Epileptic was held at the Hospital, Queen Square, Bloomsbury, on March 12th. The chair was taken by the Rev. Prebendary Wace. The meeting was not largely attended.

The Chairman said that they would see from the report of the Board of Management that the year had been one of great interest. The Board met the Governors after a year of considerable expense with but a moderate deficit. The general condition of the hospital was very satisfactory, and its financial position was improved. No difficulty had been experienced in working the hospital, and the co-operation of the medical members on the Board had been found very satisfactory and useful to the lay members as well as to the members of the medical staff. No difficulty had arisen from the threefold division of administrative duties, which was a plan that had been imposed on them under the new rules.

Dr. T. Buzzard, in moving the adoption of the report, said that on behalf of the medical staff he welcomed the opinion expressed by the Chairman as to the harmony existing between the Board and the medical staff. They were grateful to the Board, and recognized in the harmony that prevailed a presage of prosperity and success to the hospital concerning which they could not too much congratulate themselves.

This was seconded by Mr. Melvill Green, who was followed by Mr. Burford Rawlings, who said that he could not agree that the financial position of the hospital was improved; he considered that it had obviously deteriorated. He then proceeded to contrast the work done by the old Board with that accomplished by the present Board.

Mr. J. D. Power said that it had been the object of the Board in the report to avoid as far as possible any comparison between what had been effected by the two Boards. In saying that the financial position was improved, it was not meant that the present Board were more successful than the old one owing to any merits of their own, and it was carefully stated that the hospital had been fortunate in the number and value of the bequests received.

The resolution was then put to the meeting and carried unanimously.

Sir Victor Horsley moved the re-election of the following five members of the Board of Management: the Hon. Mr. Justice Kennedy, the Rev. Prebendary Wace, D.D., Ernest De la Rue, Esq., Carl Meyer, Esq., Edgar Speyer, Esq. This was seconded by Dr. C. E. Beevor, and carried.

On the motion of Mr. Power, seconded by Dr. J. A. Ormerod, Earl Dudley was re-elected President.

Dr. H. Charlton Bastian moved and Mr. F. O. Macmillan seconded the re-election of the auditors, which was carried.

The meeting then constituted itself a special general meeting for the purpose of authorizing the Board of Management to petition for a Royal Charter incorporating the hospital and to approve draft of charter submitted. This was proposed by the Chairman and seconded by Sir Felix Semon who urged the adoption of the course proposed because of the very serious question of the personal liability that might be incurred by those who formed the Board. There were many able men willing to give their valuable time to the hospital who might be deterred from doing so because under certain circumstances pecuniary liabilities might be incurred. Another reason for procuring a charter was that it was not possible to acquire land as the hospital had not the requisite legal status. A further advantage to be derived from the plan proposed was the very desirable prestige ascribed in public opinion to a hospital incorporated under Royal Charter.

The resolution was passed unanimously and the meeting ended with a cordial vote of thanks to the Chairman.

MEDICAL NEWS.

THE American Association of Life Insurance Examining Surgeons will hold its next annual meeting in New Orleans on May 4th under the presidency of Dr. C. Lyman Greene of St. Paul, Professor of Physical Diagnosis in the University of Minnesota and author of *Medical Examination for Life Insurance*.

PRESENTATION.—Dr. William Odell of Torquay was recently presented with an umbrella bearing the following inscription engraved on a silver plate: "Presented to Dr. Odell by members of the Torquay Ambulance Class, March 3rd, 1903." The occasion of the presentation was the delivery of the last of the lectures for the session to the members of the class.

ARSENICAL POISONING.—It is announced that the Royal Commission on Arsenical Poisoning hopes to be able to finish its labours and present its final report before the end of the financial year 1903-4. Since issuing its interim report in July, 1901, it has, besides examining a considerable number of further witnesses, received reports from its Assistant Commissioner, and has instituted chemical inquiries as to the presence of arsenic in articles of food and drink other than beer, as to arsenic in malting fuel, and as to other matters.

The London County Council has issued an order, approved by the Local Government Board, to come into force on April 1st, applying to measles the provisions of certain sections of the Public Health (London) Act, 1891, having regard especially to disinfection, the letting of houses or lodgings, the exposure of infected persons, the use of public conveyances, and the carrying on of occupations in a manner likely to spread the disease.

The Matrons' Council.—The Matrons' Council, which is an association of superintendents of trained nurses, has recently issued its report of what seems to have been a busy year. The objects of the Association are to promote a uniform system of training and certification of all hospital nurses, and their registration by the State; and, further, to take counsel together upon all matters that interest or affect the nursing world.

Pension Fund for Nurses.—At the annual meeting of the Royal National Pension Fund for Nurses recently held under the chairmanship of Sir Henry Burdett, K.C.B., solid progress in all departments was reported. In the pension branch 869 policies had been issued as against 842 in 1901, an increase all the more satisfactory from the consideration that 1901 was the record year of the Fund. In the annuity branch there were, at the end of 1902, 415 annuitants holding 598 policies, while at the end of 1901 there were but 339 under 500 policies. During the last quarter of 1902 annuities were being paid out at the rate of over £8,000 a year. The amount distributed in sick pay during the year was £1,568, and the total funds increased from £648,725 to £734,182.

The Public-house Trust Association.—According to the second annual report of this Association recently issued, 37 local Trust Companies have now been formed, 27 in England and Wales, 9 in Scotland, and 1 in Ireland. In addition the People's Refreshment House Association manages 34 houses, so that altogether over 70 public-houses are now under Trust management. A very large number more, it is said, will be taken over when the present tenancies expire. Reference was made to the Colonial Secretary's recent statement to the Town Council of Johannesburg in favour of the municipalization of public-houses and to the fact that in the Transvaal the Trust principle had recently been adopted in an ordinance of the Legislature which provides for the placing of the exclusive control of the liquor traffic, in any locality, in an association formed to devote the profits to public purposes. The Committee reports that the points of difference between the extreme Temperance Party and the Trusts seemed to be diminished. Information concerning the Trust movement may be obtained from the Secretary at 116, Victoria Street, S.W.

Irish Medical Schools' and Graduates' Association. The annual festival dinner of the Irish Medical Schools' and Graduates' Association was held on March 17th (St. Patrick's Day) at the Café Monico, under the Chairmanship of the President of the Association, Dr. P. S. Abraham. Dr. Gilbart-Smith proposed the toast of "Our Defenders," and afforded great merriment to those sitting in his immediate neighbourhood, but unfortunately many of those present were unable to hear the speech. After this toast had been responded to by Deputy-Inspector-General Delmege, Surgeon-General A. Keogh, and Lieutenant-Colonel Milner, Dr. H. Macnaughton-Jones gave "Our Guests." Sir John Colomb, M.P., in reply, dwelt upon the position of the medical profession in the rural districts of Ireland. The health of the people was of such paramount importance that the introduction of the subject needed no excuse, and the matter was of vital interest in regard to the social welfare and progress of Ireland. He advocated the education of public opinion, which should be brought to bear upon those in authority with a view to break down local and rural prejudices, and to insure fair play. In his opinion too much family influence was traceable in the election of medical men to the various posts, especially in the southern and western portions of Ireland. The Solicitor-General for Ireland, Mr. J. H. Campbell, M.P., also responded to the toast, and congratulated those present on the feeling that had grown up in Ireland that the time had arrived for making a lasting peace and burying the differences which had divided the Irish people in the past. Professor Sir Robert Ball proposed the toast of "Ourselves," and emphasized the fact that the Association made no difference in regard to creeds or parties. His remark that the Association had peacefully existed for twenty-four years excited general hilarity. Sir Robert Ball concluded by drawing attention to the great influence exerted by the Association. The Chairman, who responded to this toast, referred with satisfaction to the good work done by the Association, not only in regard to social matters, but also in regard to scientific and professional studies. The proceedings were continued to a late hour, and a feature of the evening was the excellent music provided. Mr. Charles Ryall and Dr. J. H. Swanton fully deserved the praises they received for the success of the dinner. The guests numbered over 200, amongst whom were Surgeon-General Cuffe, Professor A. E. Barker, and Mr. Henniker Heaton, M.P.

Antiquackery Legislation in Pennsylvania.—A Bill has been introduced into the Pennsylvania Legislature which is said to be designed to check osteopathy and Christian Science. The Bill provides for the amendment of the existing law for the licensing and examining practitioners of medicine and surgery by providing for the penalization of any person for "entering or continuing in the profession or occupation of treating disease or injury by the use of medicine or any other means or agency," either for or without pay or valuable consideration, unless licensed under the Act. The penalty is any sum between 200 and 500 dollars (£40 and £100), and imprisonment for from thirty days to six months.

The Northern Spas of England.—Members of the Balneological and Climatological Society will in the latter part of April make an excursion to the northern spas, visiting Matlock Bath, Dovedale, Rowsley, Chatsworth, Haddon Hall, Buxton, Ilkley, Harrogate, Ripon, Scarborough, and Woodhall Spa. They will leave London on Saturday, April 25th. The cost of the entire tour will be £13 5s. each, or, with first-class travelling throughout, £14 14s. Either the first half or the second half of the tour may be taken separately. The cost of the first part of the tour from London to Matlock and Buxton and back to London—including the accommodation specified in the itinerary—from Saturday, April 25th, to breakfast on Thursday morning, April 30th, will be £7 7s. with third-class railway travelling, or £8 8s. with first-class railway travelling. The cost of the second part of the tour, from London to Harrogate and back to London—including the accommodation as specified in the itinerary, commencing with dinner at Harrogate on Friday, May 1st, and taking the remaining accommodation as given on the following days, up to and including breakfast at Woodhall Spa on May 5th—will be £7 7s. with third-class railway travelling, or £8 8s. with first-class railway travelling. The sums specified include accommodation at first-class hotels, consisting of table d'hôte breakfast, lunch, dinner, bedroom, lights, and service, commencing with dinner on Saturday, April 25th, and terminating with breakfast on Tuesday, May 5th—in the case of those who take the entire tour—carriage excursions (landaus) as specified, expenses of visiting various places of interest, fees to drivers, hotel and railway servants, conveyance of passengers and baggage between stations and hotels, and service of representatives to accompany the party and see that the arrangements are properly carried out. Applications should be addressed to Dr. H. S. Lunn, 5, Endsleigh Gardens, W.C. Any further information can be obtained from Dr. Leonard Williams, 8, York Street, Portman Square, W.

The Carnegie Institution at Washington.—The first *Year Book* of the Carnegie Institution at Washington announces the plans for scientific investigations, with the appropriations made for them. A sum of £40,000 is to be distributed for the use of original investigation in different fields of literature, science, and art; £8,000 will be allotted for publication; £20,000 for a reserve fund; and £10,000 for administrative expenses, including not only those pertaining to the offices in Washington, but the prosecution of certain inquiries concerning important objects to be considered in the future. It is the purpose of the Advisory Committee of the institution to substitute organized for unorganized effort wherever such organization of effort promises the best results, and prevents needless duplication of work. The grants at first are to be made to individuals working under proper guidance and supervision for specific purposes rather than to institutions for general purposes. The books, apparatus, and materials purchased for these investigations are to be the property of the institution and subject to its control. Money will also be granted for the publication of approved papers. Some of the foremost scientific workers of America have submitted recommendations to the Advisory Board in reference to certain subjects which they

believe should be more thoroughly investigated. Professor Langley, of the Smithsonian Institution, advises the establishment of two laboratories, preferably close to the equator, at the greatest possible difference of altitude, yet within sight of each other, where under like atmospheric and other conditions simultaneous observations with reference to the solar constant, the unit of heat exerted by the sun's rays on a given service at a given time, concerning which there is much discrepancy, could be accurately determined by records. Dr. David Jordan, of Leland Stanford University, recommends a special expedition to study ichthyology in the Pacific Ocean, especially in the vicinity of Peru, Chili, Patagonia, China, Okotsk Sea, and some of the East Indies and Polynesia. Professor Ladd, of the Yale University, makes recommendations in the realm of psychology. He advocates a bureau of information not only of definite results, but of partial results, and attempted investigations in the subject of psychology, with a view to keeping all scientists devoting themselves to this particular branch posted as to what others are doing and have done, thus preventing duplication. Dr. Whitman, Professor of Zoology in the University of Chicago, recommends a biologic farm as a means of studying heredity, variation, and evolution. Professor Johnson, of the University of Wisconsin, urges the establishment of a biologic experiment station for the study of evolution.

MEDICAL VACANCIES.

ALDERSHOT URBAN DISTRICT COUNCIL.—Medical Officer of Health. Salary, £30 per annum. Applications endorsed "M.O.H." to be sent to the Clerk, Council Offices, Aldershot, by March 23rd.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—(1) Resident Medical Officer. (2) Resident Surgical Officer. Salaries, £60 per annum, with board, washing, and attendance. Applications to the Secretary, Children's Hospital, Steelhouse Lane, Birmingham, by April 1st.

BRISTOL GENERAL HOSPITAL.—(1) Surgeon or Physician in the Throat and Nose Department. (2) Assistant Honorary Anæsthetist. Applications to the Secretary by March 23rd.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—Assistant House-Surgeon; appointment for six months, and if approved will then be elected Senior House-Surgeon. Salary at the rate of £30 per annum, with board, lodging, and washing. Applications to the Secretary by March 23rd.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Medical Radiographer. Honorarium, £25 per annum. Applications to the Committee of Management by March 31st.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians. Appointments for six months. Honorarium, £25. Applications to the Secretary by March 31st.

ISLE OF WIGHT COUNTY ASYLUM, near Newport.—Assistant Medical Officer. Salary, £160 per annum, rising to £200, with furnished apartments, board, attendance, and washing. Applications to the Committee of Visitors by March 25th.

LONDON THROAT HOSPITAL, 204, Great Portland Street, W.—House-Surgeon; non-resident. Honorarium, £50 per annum. Applications to the Honorary Secretary of the Medical Committee.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN.—House-Surgeon. Salary, £80 per annum, with apartments and board. Applications to Mr. H. Teague, Secretary, 38, Barton Arcade, Manchester by March 27th.

MANCHESTER: OWENS COLLEGE.—Junior Demonstrator in Physiology. Stipend, £100, rising to £150 per annum. Applications to the Registrar by March 24th.

MIDDLESBROUGH-ON-TEES: NORTH RIDING INFIRMARY.—Assistant House-Surgeon, unmarried. Salary, £75 per annum, with lodging, board, and washing. Applications to the Secretary by March 25th.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Junior House-Physician. Salary, £50 per annum, with board and apartments. Applications to the Secretary by March 23rd.

NEWCASTLE-UPON-TYNE: UNIVERSITY OF DURHAM COLLEGE OF MEDICINE.—Lectureship on Ophthalmology. Applications to the Secretary by March 31st.

NEW HOSPITAL FOR WOMEN, Euston Road, N.W.—Anæsthetist, must be fully-qualified medical woman. Applications to the Secretary by March 25th.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, N.E.—Resident Medical Officer. Salary, £120 per annum, with board, residence, and washing allowance. Applications to the Secretary by April 4th.

OXFORD: WARNEFORD ASYLUM.—Assistant Medical Officer. Salary, £100 per annum, with board, etc. Applications to the Medical Superintendent.

PADDINGTON INFIRMARY.—Clinical Assistant and Second Assistant to the Medical Superintendent; unmarried, and between 21 and 30 years of age. Appointment for six months. Honorarium, £36, with board, lodging, and washing. Applications to the Medical Superintendent, 285, Harrow Road, W., by March 28th.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Salary, £80 per annum. Applications to Mr. E. S. Baylis, J.P., 19, Moorgate Street, Rotherham, by March 24th.

ROYAL EYE HOSPITAL, Southwark, S.E.—House-Surgeon. Appointment for six months, but renewable. Salary, 50 guineas per annum, with board and residence. Applications to the Secretary.

ST. GEORGE'S HOSPITAL, S.W.—(1) Dental Surgeon; (2) Assistant Dental Surgeon. Applications to the Secretary by March 30th.

SAMARITAN HOSPITAL FOR WOMEN, Marylebone Road, N.W.—(1) Anæsthetist. Honorarium, £20 per annum. (2) Clinical assistants. Applications to the Secretary by April 4th.

TIVERTON: DEVONSHIRE INFIRMARY AND DISPENSARY.—House-Surgeon. Salary, £80 per annum and all found. Applications to the Honorary Secretary by April 6th.

VICTORIA HOSPITAL FOR CHILDREN, Tite Street, S.W.—House-Physician, appointment for six months. Honorarium, £25, with board and lodging. Applications to the Secretary by March 28th.

WEST HAM AND EAST LONDON HOSPITAL, Stratford, E.—Junior House Surgeon. Salary, £75 per annum, with board, residence, etc. Appointment for one year, but eligible for election as Senior; salary, £100. Applications, marked "Junior House-Surgeon," to be sent to the Secretary.

WOLVERHAMPTON EYE HOSPITAL.—House-Surgeon. Salary, £70 per annum, with rooms, board, and washing. Applications to the secretary by April 7th.

MEDICAL APPOINTMENTS.

ALEXANDER, Victor George, M.B., B.Ch., B.Sc.Edin., appointed to the District Surgeoncy of Standerton, Transvaal, South Africa.

BLAND, M.H., M.D.Glas., C.M., appointed Medical Officer and Vaccinator of the Guisborough Union Workhouse.

BURTON, W. C., M.B., B.C.Edin., appointed Assistant Medical Officer of the Aston Union Workhouse.

CAMPBELL, A. J., M.R.C.S., L.R.C.P.Lond., appointed District and Workhouse Medical Officer of the Ross Union.

COUTTS, P. J. H., M.D.Vict., Ch.B., reappointed Medical Officer of Health for Blackpool.

CURREY, E. F. N., M.R.C.S.Eng., L.R.C.P.Lond., appointed District Surgeon Vereeniging, Transvaal.

FACEY, R. A., M.R.C.S.Eng., L.R.C.P.Lond., appointed District Medical Officer of the Ross Union.

FORGE, G. B., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer of the Rochford Union.

FOX, Robert Algernon, M.B., M.S.Edin., appointed Visiting Medical Officer to the Rookwood and Newington Asylum for the Infirm, New South Wales.

FRASER, H., M.D.Aberd., Ch.B., appointed Medical Officer to the Aberdeen Dispensary *vice* J. J. Y. Dalgarno, M.B., C.M.Aberd.

HERBERT, B. H., M.R.C.S.Eng., L.S.A., reappointed Medical Officer of Health to the Uttoxeter Urban District Council.

HICKIN, H. J., M.B., C.M.Glasg., L.M., appointed Government Medical Officer, Wei-Hai-Wei, North China.

JELLY, G. Aubrey, F.R.C.S.Edin., M.R.C.S.Eng., appointed Honorary Consulting Ophthalmic Surgeon to the Bury Infirmary.

MORRISSEY, M. R., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Kill and Rathmore Dispensary District of the Naas Union.

MURRAY, John, M.B., C.M.Glas., appointed Medical Officer of Health for the Llandrindod Wells Urban District, *vice* S. G. Floyd, M.D.Lond.

PRICE, H. J., F.R.C.S.Eng., L.R.C.P.Lond., appointed District and Workhouse Medical Officer of the Maldon Union.

STAMFORD, R. B., F.R.C.S.Edin., L.R.C.P.Lond., M.R.C.S., appointed Honorary Medical Officer to the Loughborough and District Hospital and Dispensary.

SYMPSON, E. Mansel, M.A., M.D., B.C.Cantab., M.R.C.S., appointed Consulting Surgeon to the Lincoln General Dispensary, *vice* Dr. G. M. Lowe, resigned.

TEMPLETON, James, M.R.C.S., L.R.C.P.Lond., appointed Junior House Surgeon to the Bolton Infirmary, *vice* S. B. Brentnall, M.B., B.S.Vict.

WILLIS, J. G., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of Health to the Bishop Auckland Rural District Council, *vice* A. C. Farquharson, M.D.Glas., D.P.H.Camb., resigned.

YOUNG, W. A. B., M.B., B.Ch.Vict., appointed Senior House-Surgeon to the Bolton Infirmary, *vice* J. R. Munro, M.B., Ch.B.Edin.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Society of London, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Clinical cases: The President: Extensive Rodent Ulcer treated by X rays. Dr. W. Ewart: Symmetrical Fatty Swellings in an Adult Woman, perhaps a variety of Dercum's Disease (Adiposis Dolorosa). Dr. Parkes Weber: (1) Child with Multiple Congenital Deformities; (2) the Case of "Infantile Form of Articular Rheumatism" shown on April 11th, 1902. Dr. G. Cha. man: Multiple Cardiac Murmurs. Dr. F. J. Poynton: Chronic Rheumatic Arthritis in a Child: Recovery. Dr. S. E. Dore: Two Cases of Lupus treated by the Finsen Light. Dr. Grainger Stewart (for Dr. J. A. Ormerod): (1) Functional Tremor; (2) Syringomyelia. Dr. H. A. Caley: Arthropathy of Hip and Ankle.

TUESDAY.

Royal College of Physicians of London, 5 p.m.—Dr. A. S. F. Grünbaum On Theories of Immunity and their Clinical Application. Goulstonian Lecture III.

Royal Medical and Chirurgical Society, 20, Hanover Square, W., 8.30 p.m.—Mr. C. W. Ensor and Dr. J. O. W. Barratt: Paroxysmal Haemoglobinuria of Traumatic Origin. Drs. Arthur H. Robinson and Arthur Whitfield: A Further Report on the Remarkable Series of Cases of Molluscum Fibrosum in Children, communicated to the Society by Dr. John Murray in 1873.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Professor W. D. Halliburton: On the Chemistry of Muscle and Nerve.

WEDNESDAY.

Hunterian Society, London Institution, Finsbury Circus, E.C., 8.30 p.m.—Pathological evening.

Dermatological Society of Great Britain and Ireland, 20, Hanover Square, W., 5 p.m.

THURSDAY.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Dr. T. G. Brodie: On the Circulation.

FRIDAY.

Royal College of Physicians of London, 5 p.m.—Dr. T. R. Glynn: On Infective Endocarditis mainly in its Clinical Aspects. Lumleian Lecture I.

British Electro-Therapeutic Society, 11, Chandos Street, Cavendish Square, Cavendish Square, W., 8.30 p.m.—D. Donald Baynes: On Cataphoresis. Dr. G. B. Batten: A System of X Ray and Electrotherapeutics worked from the Alternating Mains. Dr. J. A. Codd: The Electric series Bath.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Dr. A. D. Waller: On Experimental Pharmacology: The Action of Anæsthetics and Narcotics.

Clinical Society of London, 20, Hanover Square, W., 8.30 p.m.—Dr. H. A. Lediard: A Case of Acromegaly. Mr. Howard Marsh: An Affection of the Knee-joint apparently depending on Malaria. Dr. Andrew Duncan: A Case of Bilharzia. Mr. G. H. Makins: Two Cases illustrating the employment of Invagination and Stitching over Gangrenous Patches of Intestine in Strangulated Hernia.

POST-GRADUATE COURSES AND LECTURES.

Hospital for Sick Children, Great Ormond Street, W.C., Thursday, 4 p.m.—Demonstration of Selected Cases.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C. Demonstrations will be given at 4 p.m. as follows:—Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, throat. Lectures will also be given at 5.15 p.m. as follows: Monday, Cancer of the Uterus; Tuesday, The Diagnosis of Malaria in England; Wednesday, The Pathology of Asthma; Thursday, Deformities due to Nervous Affections; Friday, Injuries of the Head and Neck.

Post-Graduate College, West London Hospital, Hammersmith Road, W.—Lectures will be delivered at 5 p.m. as follows: Monday, Diagnosis of Pain in the Teeth; Tuesday, The Medical Anatomy of the Stomach; Wednesday, The Medical Anatomy of the Leg; Thursday, Urinary Cases of Interest; Friday, Cases of Skin Disease.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning in order to ensure insertion in the current issue.

BIRTHS.

DUNLOP.—On March 13th, the wife of Thomas Dunlop, M.B., D.P.H., Medical Officer of Health, Aldershot, of a son.

HAMILTON.—On March 13th, at Chester Square, Ashton-under-Lyne, the wife of Graeme Hamilton, M.B., Ch.B.Edin., of a son.

MARJORIBANKS.—On March 6th, at Caversham Lodge, 592, Green Lanes, N., the wife of Robert Bruce Marjoribanks, of a son.

MARRIAGE.

PLUMMER—BEVERLEY-BIRD.—On March 16th, at Batheaston Church, Somerset, by the Rev. A. M. Downes, Vicar, Edgar Curnow Plummer, M.R.C.S.Eng., L.R.C.P.Lond., elder son of the late George Plummer, M.A.Lond., of Thame, to Constance Beverley, daughter of Captain and Mrs. Beverley-Bird, of Clifton, and formerly of Norton Hall, Somerset.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London*. The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London*.

☞ *Queries, answers, and communications relating to subjects to which the special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

TREATMENT OF DEAFNESS AND TINNITUS.

D. P. F. asks for suggestions in the treatment of a lady, aged 35 years, who for the past ten or twelve years suffered from deafness and tinnitus. Both drums are much thickened and one is perforated. There is no otorrhoea. Bromides, arsenic, blistering, and Toynbee's artificial drums have been tried without avail.

TREATMENT OF CHRONIC DIARRHOEA.

P. A. W. wishes suggestions as to treatment of a farm labourer with very frequent defaecation, but not diarrhoea. The patient appears healthy, tongue clean, and good appetite. He has suffered about four months. No improvement has followed the use of bismuth, iron, opium, acids, tannin, quinine, ipecacuanha, salol, creosote, etc. He formerly complained of slight pain in the duodenal region, but it has now gone.

ANSWERS.

AMICUS will find the information he desires in the Educational Number of the BRITISH MEDICAL JOURNAL, August 23rd, 1902.

H. E. R.—The cheapest handbook on first aid is that of the National Health Society—*Aids to the Injured and Sick*, by H. Willingham Gell, M.A., M.B. (London: Allman and Son, Limited. 2d.) The textbook of the St. John Ambulance Association, *First Aid to the Injured*, is published by the Association, St. John's Gate, Clerkenwell. Price, 1s.; post free, 1s. 2d. Both are reliable, but the latter is much fuller.

POST-GRADUATE INSTRUCTION IN ANAESTHETICS.

BETA.—So far as we are aware there are no special arrangements at the hospitals for instruction in anaesthetics, except in the case of the West London Hospital, Hammersmith. Some hospital anaesthetists make arrangements with qualified practitioners, whereby the latter can receive instruction in anaesthetics. The fees can be ascertained by writing to the anaesthetists.

DIAGNOSIS AND TREATMENT WANTED.

W. L. writes: The case described by your correspondent "Spinal Cord" suggests plethora as a cause—a pathological condition of the commonest, though little recognized. The remedy, of course, is simple. Reduce the food to 20 oz., 16 oz., or even fewer ounces per diem, in one or two meals. The weight should be estimated when the solid food is dry. "Boomerang's" case has probably a similar cause.

ANTIDIPHTHERIA SERUM IN SCARLET FEVER.

DR. MCLEAN (Doncaster) writes, in reply to W. B.'s inquiry as to the "beneficial effect of antidiphtheria serum in scarlatina throats," that there is probably no such effect unless the case is one of mixed infection—scarlatina plus diphtheria, such as one occasionally sees, and that in malignant cases of this kind the serum usually fails. In such cases along with diphtheria antitoxin it is wise to give antistreptococcus serum, though even then, unless the serum has been obtained from a similar strain or species as the infecting streptococcus, good results from its use are improbable.

LETTERS, NOTES, Etc.

ERRATUM.—In the description of the funis clamp in the BRITISH MEDICAL JOURNAL of March 14th, p. 615, line 1, for "Cross" read "Eröss."

MEDICAL OFFICERS IN THE HIGHLANDS AND ISLANDS OF SCOTLAND.

NON-SWEATER (Orkney) writes: Medical practitioners in the Highlands and islands are indebted to you and to Miss O'Connor for directing attention to the state of matters existing, more especially in the smaller practices, in these districts. The examination of Miss O'Connor's account of her stay in the island of Evay, in Orkney, yields interesting information, especially when supplemented with local knowledge. The island of Evay is nearly eight miles long, and from a-half to two and a-half wide. The small island of Pharay is separated by a mile of sea, often too rough to be crossed. The combined population is 643. The doctor's house is, I believe, situated about the middle of Evay, 3½ or 4 miles from each end. The doctor receives a salary of £60 and a house (of sorts) from the parish council, and £20 from a medical association which includes practically every one in the two islands. Considerable districts of Evay have practically no roads. The house is wanting either in a waiting-room or in a consulting room, and is, I believe, in bad repair. The ordinary visiting fee for any distance up to 3½ miles is 1s.; between 10 p.m. and 6 a.m. 3s. for the same distances. Tooth extraction at surgery 1s., at patient's house 3s. Vaccination 2s. 6d. (if successful) either, it would appear, at the surgery or at the patient's house, which may be 3½ or 4 miles distant. Midwifery 15s.

The doctor dispenses, and is out from morning to night, sometimes at night too—"never idle." The reward for this butterfly existence is £20 salary per year, and £20 a quarter from practice and sale of drugs—a total of £100 for attendance and medicine for a whole year. This medical association includes nearly 640 people—men, women and children—fishermen, crofters, merchants and farmers—who are scattered over an island eight miles long. This works out at about 3s. 2d. a head. The parish council appointment carries a salary of £60 (of which only part is paid by the island), which brings the total income up to £160, working from morning to night in an exposed island in a severe climate. But out of this £160 we have to pay all expenses. In the first year—and few doctors stay more than two years—these expenses are: furnishing house, taxes, cost of pony and harness, keep of pony, drugs (£20 to begin with), surgical appliances, wages of servant, etc. After deducting these, it is difficult to see what can be left for food and clothes. To complete the sum of blissful comfort, the parish council can dismiss the doctor without giving any reason!—a thing which has happened several times in Orkney. There is no society, and the postal service is defective. Will any one believe that there are other districts in Orkney and elsewhere in the Highlands and Islands even less desirable?

TRANSPLANTATION OF THE PANCREAS IN DIABETES.

DR. JAMES W. ALLAN (Glasgow) writes: I am much obliged to Dr. Williams, of Clifton, for the information conveyed in his letter, and shall refer to his case with great interest. I find that Dr. R. T. Williamson, one of our great British authorities on diabetes, has fully dealt with the questions which I raised in my letter. His paper, entitled, "Note on Pancreatic Preparations in the Treatment of Diabetes Mellitus," appeared in the *Practitioner* for April, 1901. On February 24th, this year, Dr. Barlow, my corresponding surgeon in the Glasgow Royal Infirmary, transplanted the pancreas of a cat into the patient whose case is referred to in my previous letter (BRITISH MEDICAL JOURNAL, Feb. 28th). I wished a sheep's pancreas, but this was deemed impracticable. When the cat succumbed to chloroform, it was promptly removed to the operating theatre, the gland excised, and transferred to the opening which had been made in the patient's side. Dr. Barlow performed the operation skilfully, and, from the surgical side, everything was satisfactorily accomplished. But the final result has been a failure. The pancreas has died, and sloughed out. The patient's condition was not satisfactory at the time of operation, and after it there were indications which gave rise to uneasiness. There were elevations of temperature, and a great diminution of the urine. (Gerhardt's reaction had been absent for about a fortnight before operation, but on the day before operation, and on till yesterday (March 6th), there has been more or less pronounced coloration—lately very marked.) Diabetic coma was feared. The diet was relaxed, and he got sodium bicarbonate. He is now (March 7th) in a more satisfactory state. He got up for a little yesterday. For the six days before operation he was passing daily from 108 to 146 ounces of urine, and from 3 to 12½ ounces of sugar. On the day of operation the urine dropped to 24 ounces, and the sugar to 1⅝. Next day the urine rose to 84 ounces, and since then till yesterday it has ranged from 118 to 204 ounces, and the sugar from 5⅛ to 8½. I have at command ample clinical records, but I do not think it desirable to occupy more space by going into details. Dr. Williams says: "I cannot help feeling that an attempt to graft a sheep's pancreas might be successful if resorted to while the patient is still in a fair condition of general health." I share these sentiments.

THE TREATMENT OF CORNS.

MR. R. A. REEVES (London) writes: I am glad Mr. Harding Freeland has called attention to this matter, and, had he chosen, he might have shown how often corn cutting, either by the sufferers or chiropodists, is productive of harm. His teaching as to excision of the painful or inflamed corn, and underlying and often inflamed bursa, is the only correct one if a radical cure be aimed at. This has been my practice at the Royal Orthopaedic Hospital as long as I can recollect, and old students at the London Hospital will remember what I used to say and do when dealing with these crippling callosities. In the sole of the foot I have twice observed that in leaving a small part of the thickened skin at the margin outside the elliptical incision the corn has reappeared and involved the cicatrix, necessitating a freer excision. Undoubtedly, surgeons and not chiropodists should supervise the feet of the infantry; and cavalry also are not without corns.

THE SPITTING NUISANCE.

DR. H. LAING GORDON (Florence) writes: To the medical man in the street there are three main causes of expectoration—namely, habit, disease, and—(euphemistically)—"Nature."

Habit.—Can a habit, however caused, rooted among a large class of the population, be exterminated otherwise than by patient education of the rising generation?

Disease.—Will the Association for the Prevention of Tuberculosis accompany preventive legislation by the provisions of bottles, etc., for the diseased, who are able to frequent public places, and yet must spit?

Nature.—Are the police to compel urban dwellers to swallow pulverized street refuse? or will the Association remove our impure urban atmospheres and streets—potent stimulants of preventive expectoration?

Here in Florence, where expectoration is a habit of respected antiquity, capacious sawdust boxes in public covered places have helped to concentrate the evil where printed instructions served as expectorants. Is there not too much symptomatic treatment, and too little scientific attack on the recognized causes of tuberculosis? Let us see the zealous Association wage war on every scheme which adds to the breeding grounds of the disease, and on every existing evil, and fight for all suggestions which would abolish these evils and improve man's environment.

Not a medical voice was raised in Parliament the other day when the housing of the working classes was discussed. Surely an enlightened scientific opinion would go far to assist legislation, and would point out how improvement in the dwellings of the poor should tend to decrease tuberculosis. Where was the hon. member for the University of London? Then, again, does the multiplication of underground railways tend to improve the health of the people? If tubercle bacilli breed in darkness, why not oppose such schemes, and try to

divert the millions of pounds to a widening of streets and a provision of rapid open-air traction?

If the broad principle is granted that tuberculosis is fostered by want of air, sunshine, exercise, and good food, surely there are a thousand ways in which a great Association can wield power without interfering with the subject's cherished liberty and laying it open to the charge of tyranny.

The foreigner who confessed that of all London institutions he admired most "the splendour of our urinals" encourages us to believe that in some sanitary matters we are ahead. I hope and believe that in the prevention of tuberculosis England may yet lead, on principle rather than on expediency, for the good of the race, as well as for the benefit of the individual.

POOR-LAW INFIRMARIES.

MR THOMAS PERRIN, M.B.Lond (City of London Infirmary, E.), writes: In the course of an editorial on "Hospital Sites and Population in London," in the BRITISH MEDICAL JOURNAL of March 7th, Sir H. Burdett is quoted as saying, "The Poor-law infirmaries, in the interests of the patients they contained, should be thrown open to medical instruction." I quite fail to see how this would affect the interests of the patients except adversely, for I think that most will agree that the frequent examination of patients (that takes place at a hospital possessing a medical school) is almost if not entirely designed for the benefit of the students. For more than two years I have been a medical officer at one or other of the London Poor-law infirmaries, and during that time have come across scores of patients, who having had experience of both hospital and infirmary treatment, have declared their preference for the latter on account of the absence of this continual examination. On the other hand during this time I never remember hearing a patient expressing a preference for a general hospital, although they are in no wise backwards in doing so for other infirmaries in which they may have been formerly treated. The next speaker did not think that the Poor-law infirmaries were of any use to the education of medical students. An ancient fable tells us that the fox thought the grapes sour when it found they were out of reach. But what had the admission or non-admission of students to Poor-law infirmaries to do with the subjects under discussion.

THE SILICO-FLUORIDES IN THE TREATMENT OF WOUNDS.

MR. F. FAULDER WHITE, F.R.C.S., Honorary Surgeon to the Coventry and Warwickshire Hospital, writes to draw the attention of the profession to the use of a solution of the silico fluorides in the moist treatment of wounds, and especially to the value of a preparation known to druggists as "salufer," which is a mixture of various silico-fluorides, as generally the more satisfactory in use. He writes: After ten years' trial I have a high opinion of their value, and the "salufer" bath has certainly saved a good many limbs, which might otherwise have had to be sacrificed. The following case shows its value as a treatment for extensive laceration of the soft parts, combined with severe injury to the elbow-joint and humerus. When the patient was admitted to the Coventry Hospital, his right elbow having been crushed between two railway buffers, the question to decide was whether to amputate or not. Being placed under chloroform it was found that all the soft parts on each side of the joint were bruised and lacerated, several square inches of skin being more or less destroyed; the ulnar nerve was exposed for four inches; the lower end of the humerus was smashed into twenty or thirty pieces. I determined, however, to give the man a chance of saving his arm, as he was young and healthy, and the main vessels appeared to have escaped injury. I accordingly removed the lower end of the humerus, which I was able to do with very little cutting, making use of large wounds on either side of the joint. I carefully cleansed the joint, removing over twenty fragments of bone. Only one or two stitches were used, the joint being left in a condition to favour free drainage. As soon as possible after the operation the arm was placed in a hot bath of salufer solution, in which it was kept most of the daytime, at night being wrapped up in moist salufer dressings. There was considerable pain for the first few days, especially when the arm was out of the bath; a good deal of skin sloughed, but there were no serious local or constitutional symptoms. Convalescence was naturally protracted, but the result in the end was satisfactory; the patient is now collecting tickets with his right hand at the Coventry Station. Movement of the elbow-joint is somewhat restricted, and the arm is not very strong, but there is perfect use of the right hand, a point of such importance as to repay the man for his six months' confinement. But for my experience of other grave cases of injury when treated in the salufer bath I should most certainly have amputated in the above case. One of the great advantages of salufer is that one can use it without fear of its absorption. One can hardly use corrosive sublimate or even carbolic acid with the same feeling of security. In the irrigation of suppurating joints I have used salufer with good results, and I think it is the best antiseptic for the purpose.

THE TREATMENT OF SCARLET FEVER AT HOME.

Mr. J. BRENDON CURGENVEN, M.R.C.S. (Hildenboro') writes: I am highly gratified to see by a letter in the BRITISH MEDICAL JOURNAL of March 7th, written by Dr. Killick Millard, the medical officer of health of Leicester, that he has by actual experiment, obligatory as it was at time, proved what I strongly contended was the case twelve years ago,—that the segregation of cases of scarlet fever in the isolation hospitals was a costly and useless method of treating those cases. I advocated the treatment of scarlet fever cases in their own homes by antiseptic inunction, as by that method the infection was prevented from spreading, the disease was checked and shortened in duration; there were no suppurative sequelae and few or no deaths. My statements were opposed by a paper from Dr. Sweeting on no experience of inunction, and without even reading my paper, but I was supported by the experience of Dr. Priestley of the Leicester Hospital, by Mr. Peake, Dr. Little, and others. The paper will be found in the BRITISH MEDICAL JOURNAL and the *Medical Magazine* in the years 1890-3. Since then I have been on my beam-ends, but still take an interest in old controversies, and regularly read my BRITISH MEDICAL JOURNAL.

A DEGREE FOR LONDON STUDENTS.

L.R.C.P.&S.Edin. writes: I took the College licence because it cost less. Many would be like me. All the classes for the Scotch diplomas could be taken in three winter and two summer sessions. This could not be done for a university degree. The five years' course has altered this, and I know no reason why all students should not go for a degree, nor do I know any reason for the continuation of the merely examining bodies. I hold the London student is entitled to obtain the M.B. and M.D. London University on similar terms to those of Edinburgh, Glasgow, Durham, or any other provincial university; why not? I suggest that the students demand this from their teachers. It is the teachers who should take action to secure this right, and their classes would increase in size.

TREATMENT OF PROLAPSUS UTERI.

DR. PERCY NEWELL (Crowborough) writes: In the BRITISH MEDICAL JOURNAL for February 14th a case of prolapsus uteri and its treatment (successful) by the hypodermic injection of quinine is recorded by Dr. G. C. Thomas. To the general practitioner who sees a number of these cases from time to time, any method of treatment which is successful must be of interest. That the usual treatment by pessaries is not a success is obvious from a glance at any surgical instrument maker's catalogue—a wonderful and useless array, with about two exceptions—and even these will not aid the majority of cases. Elytrorrhaphy, the "Alexander Adams" operation, and hysteropexy, so far as I can learn from the literature of the subject, give relief perhaps for two years. Would Dr. Thomas kindly refer to where more definite details of the technique of his treatment can be found?

LETTERS, COMMUNICATIONS, ETC., have been received from:

A Mr. S. E. Atkins, Hatherleigh. **B** Dr. H. A. Ballance, Norwich; Dr. E. Blake, London; Mr. E. H. Bannister, Barbadoes; Dr. C. W. Buckley, Buxton; Mr. J. Boyd, Simonstown C. C.; Dr. C. Buttar, London; Mr. L. A. Bidwell, London; Mr. A. H. Buck, Brighton; A. H. Burgess, M.B., Manchester; F. M. Blumer, M.B., Stafford; Mr. C. J. Barry, London. **C** Dr. J. E. G. Calverley, C.M.G., Folkestone; Dr. W. Cotton, Bristol; Dr. M. Craig, London; Mr. R. F. Chance, Manchester; Mr. L. Cooper, Rochester; Messrs. T. Christy and Co., London; A. Cox, M.B., Gateshead-on-Tyne; Dr. H. Crutchley, Stoke-on-Trent. **D** Dr. W. Donovan, Erdington; Dr. A. Duke, London; J. D. Davies, M.B., Swansea; Dr. J. Donald, Glasgow; Mr. F. Deas, Merton. **E** E. W. **F** Dr. D. P. Fitzgerald, Cork; Mr. J. A. Fraser, Romford; Mr. F. C. Forster, Lowestoft; J. Fotheringham, M.B., Motherwell; Dr. E. A. Fox, Warrington. **G** Dr. F. W. Grant, Blackpool; Mr. T. L. Gentles, Derby; Dr. A. L. Galabin, London; Dr. C. B. Gunn, Peebles; Dr. W. B. Geikie, Toronto. **H** Dr. W. Harris, London; Mr. H. Hilliard, London; Hon. Sydney Holland, London; Mr. A. G. Hebblethwaite, Keighley; Messrs. W. and D. Harvest, London. **I** I. M. S. **J** Mrs. Heywood Johnstone, Pulborough; Dr. G. P. Johnson, Stoke-on-Trent; Dr. W. M. Jones, Torquay. **K** Dr. J. Kerr, London; Dr. L. F. B. Knuthsen, Shifnal. **L** R. C. Lucas, M.B., London; Dr. W. D. Lawrie, Birmingham; Dr. T. G. Lyon, London; L.R.C.P.&S.Edin. **M** Mr. E. Morgan, Ventnor, Isle of Wight; J. McDonald, M.B., Motherwell; Mr. V. Matthews, London; Dr. W. A. McLachlan, Dumbarton; Mr. W. R. Miller, Dumfries; Dr. J. J. Macan, Cheam; Dr. J. C. Merry, Eastbourne; Mr. P. E. Millard, London; Dr. C. J. R. McLean, Doncaster; P. Morton, M.B., Nenagh; M.D.: Medical Superintendent; C. G. Maclagan, M.B., Berwick-on-Tweed; Mr. W. R. MacDermott, Newry. **N** Non-sweater. **O** Old Bart's Student. **P** Dr. E. F. Potter, London; Dr. T. F. Pedley, Rangoon; Philanthropist; Mr. A. T. Perkins, Wellington, New Zealand; Dr. H. C. Pattin, Norwich; F. Porter, M.B., Comrie; P. A. W. **R** Mr. H. A. Reeves, London; Dr. J. Reid, London; Dr. H. E. Rutherford, Larne; R. W. M.; Dr. W. B. Ransom, Nottingham; Mr. J. Rafter, Liverpool; Mr. E. J. Reid, London; Dr. R. Rudolf, Toronto; Dr. J. J. Ridge, Enfield; Dr. R. Row, Byculla; G. A. Reid, M.B., Southsea; Major R. Ross, Liverpool; Mr. A. Robinson, London; Dr. W. Reeve, London. **S** Dr. W. Sykes, Exeter; Dr. H. Snow, London; *Studio*, Editor of the, London; H. M. Speirs, M.B., London; Dr. A. Sheen, Cardiff; Mr. W. W. Stocker, London; Scientific Press, Manager of, London. **T** J. H. Teacher, M.B., Glasgow; Dr. H. Tilley, London; Mr. B. Thornton, Margate. **W** Messrs. Wainwright, Pollock, and Co., London; W. L. Wainwright, M.B., Henley-on-Thames; Dr. W. B. Warde, Tunbridge Wells; Messrs. Wills, Limited, London; Dr. A. Whitfield, London; Dr. G. A. Williamson, Larnaca; Mr. C. Williams, London; Dr. H. Walsham, London; Mr. F. W. Waters, Sheerness-on-Sea; Messrs. F. Williams and Co., London; Mr. L. Williams, London; W. L.; Mr. W. B. Winckworth, Taunton; Mr. E. S. Worrall, London; Messrs. J. Walker and Co., London; A. M. Watts M.B., Minster. **X** X. Y. Z., etc.

BOOKS, ETC., RECEIVED.

Disinfectants and Antiseptics: How to use them. By Edward T. Wilson, M.B. Oxon., F.R.C.P.Lond. London: H. K. Lewis. 1s. per dozen.

Atlas and Epitome of Human Histology and Microscopic Anatomy. By Dr. Johannes Sobotta. Edited by G. Carl Huber, M.D. Philadelphia and London: W. B. Saunders and Co. 1903. 18s. net.

Atlas and Epitome of Diseases of the Mouth, Pharynx, and Nose. By Dr. L. Grünwald. Second edition. Edited by James E. Newcomb, M.D. Philadelphia and London: W. B. Saunders and Co. 1903. 13s. net.

Congrès International de Médecine et de Chirurgie sous le Haut Patronage de S. A. le Khédive Abbas II. Ouvert le 1er Décembre, 1902. Communications faites par le Dr. Saleh Soubhy Bey. Le Caire: A. Costagliola. 1903.

The Transactions of the Society of Anæsthetists. Volume v. London: John Bale, Sons, and Danielsson, Limited. 1903.

Le Traitement Rationnel du Diabète. Par M. le Dr. A. Lorand. Paris: C. Naud. 1903. 2 frs.

Nouvelle Méthode pour la Diagnose du Sang Humain en Médecine Légale (Réaction Bordet-Uhlenhuth). Par Dr. A. Leblanc. Paris: Vigot Frères. 1903.

The Rationale of Telepathy and Mind Cure: A Lecture by C. W. Leadbeater. London: The Theosophical Publishing Society. 1903. 6d.

The Uniform System of Accounts for Hospitals and Public Institutions. Together with an Index of Classification. By Sir Henry Burdett, K.C.B. London: The Scientific Press, Limited. 1903. 4s.

A Brief History of the Hughli District. By Lieutenant-Colonel D. G. Crawford, M.B. Calcutta: Bengal Secretariat Press. 1903. Rs. 1.4. 1s. 10d.

Physical Chemistry for Physicians and Biologists By Dr. Ernst Cohen. Translated from the German by Martin H. Fischer, M.D. New York: Henry Holt and Co. 1903.

Therapeutics of Infancy and Childhood. By A. Jacobi, M.D., LL.D. Third Edition. Philadelphia and London: J. B. Lippincott Co. 1903. 18s. net.

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A Demonstration

OF

SOME EXPERIMENTS ON THE NATURE AND SPECIFIC TREATMENT OF HAY FEVER.

By Sir FELIX SEMON, C.V.O., M.D., F.R.C.P.,

Physician Extraordinary to His Majesty the King.

In November, 1902, Professor W. P. Dunbar, the Director of the State Institute for Hygiene of Hamburg, published a pamphlet on the Cause and Specific Treatment of Hay Fever,[1] in which he reported the results of his investigations concerning that troublesome affection. He had succeeded in isolating from the pollen of certain grasses a toxic substance which, when applied in very small quantities to the eyes or nostrils of people predisposed to hay fever, had within a few minutes produced in a more or less marked degree the local symptoms characteristic of hay fever, whilst the same quantity of the toxin when applied to the eyes or nostrils of persons not predisposed had remained without any effect.

Further, he had succeeded, by injecting the pollen of rye, maize, and several other grasses into the circulation of various animals (rabbits, goats, and horses) in producing an antitoxin which, when applied to the eyes or nostrils of hay-fever patients in whom the local symptoms of hay fever had been artificially produced by the previous injection of the toxin, immediately quelled the subjective symptoms, and after a few minutes caused retrogressive changes in the objective symptoms, produced by the toxin.

These are the principal results—speaking from the practical point of view only—so far obtained by Professor Dunbar, though his communication, which has been recently followed by a second,[2] teems with other interesting points. Thus I may mention that whilst the pollen of twenty-one different kinds of grasses have so far been found to contain the toxic substance producing hay fever, the pollen of roses, limes, wormwood, and other plants, which have been, and are still, frequently accused of causing hay fever in those specially predisposed, have been found by Professor Dunbar to be inactive. It is not the ethereal oils contained in the pollen which produce the typical symptoms. Professor Dunbar has obtained from the pollen three different products: (1) The true toxic substance, (2) a starchy matter, and (3) the ethereal oils, and only the first named (which he has isolated in the form of a white powder) produces the typical symptoms, whilst the ethereal oils, although they have a certain irritating smell, are deficient in toxic properties. His most recent researches lead him to believe that the toxic substance is a proteid, as it gives the characteristic proteid reactions. Finally, it appears from his investigations that it is not the spicula, as had also been surmised, of certain pollen which mechanically produce the irritation, inasmuch as the pollen of the grasses in question have absolutely smooth surfaces. For further details concerning these and similar points, I must refer to Professor Dunbar's original communication, which it may fairly be hoped will soon be published in an English translation.

At the present stage of the investigations it appeared desirable to Professor Dunbar that his researches should be controlled by other independent observers, and with this object in view he was good enough not only to send me small quantities of both the toxin and the antitoxin, but to depute his assistant, Dr. Carl Prausnitz, to help me in the experiments which I now report. I take this opportunity of expressing both to him and to Dr. Prausnitz, my sincere thanks for their kindness.

The toxin was, I understand, produced by extracting crushed maize-pollen with saline solutions at body temperature for about six hours, and by precipitating the toxin with alcohol. The antitoxin was obtained by injecting horses with this extract. Many horses were, however, found refractory, and the best results were obtained from young thoroughbreds.

The experiments in question were performed on March 19th in the presence of and with the kind co-operation of Dr. Prausnitz, Mr. Lanyon Owen, Mr. Armour, Dr. E. Law, Mr. Louis Taylor, Dr. Tilley, Mr. Waggett, and my eldest son.

On the six last-named gentlemen and myself control experiments were undertaken, whilst the two first-named, who are victims of hay fever, very kindly allowed a complete series of experiments to be performed on them. In addition to them, three patients of my own—Miss C., Miss K., and Mr. R. S.—were sufficiently animated by love of science, if not by the hope of being ultimately relieved of their troublesome affection, to submit to the by no means very agreeable experiments, and to all of them I hereby tender my sincerest thanks.

The experiments began by the instillation by means of a pipette of one drop of a solution of the toxin (1 in 1,000 of normal saline solution), to which was added ¼ per cent. of carbolic acid, into the left eye of the seven gentlemen on whom the control experiments were to be performed. The general effect in all of them was, with two exceptions, which will be presently referred to more fully, absolutely negative. A momentary sensation of irritation which occurred in a few instances immediately after the injection, was no doubt due to the addition of the carbolic acid, and invariably passed away in a few seconds.

It was different in the case of Dr. T.; he after a few minutes complained of a feeling of itching and burning in the injected eye, the caruncle began to swell, the lower lid became considerably congested, and the conjunctival vessels were markedly suffused. These sensations persisted for about half an hour, and then gradually disappeared.

It was at first thought that it was perhaps not quite fair to judge from this case, inasmuch as the gentleman in question not merely suffers, although only very occasionally, from asthma when residing in certain localities, but also that, as he stated, the mucous membranes of his eyes and nose are extremely sensitive to wind and dust, particularly when riding or cycling, a statement very frequently made by hay-fever patients. It seemed, therefore, by no means impossible that his case was one of greater susceptibility to the poison of hay fever than those of ordinary non-predisposed persons.

Another suggestion, however, was made to the effect that the carbolic acid contained in the toxin might have been the source of more lasting irritation. In order to test this further, a control experiment was made on March 20th, one drop of toxin being instilled into the right eye, and a drop of carbolized water into the other. The characteristic phenomena were produced in that eye only into which the toxin had been instilled. This fact certainly points in the direction of the conclusion that Dr. T., although not an actual sufferer from hay fever, is more susceptible to its poison than the general run of ordinary non-predisposed persons.

The second experiment, which points in the same direction, refers to my own case. I have never suffered from hay fever, although not infrequently I am liable to sudden violent paroxysms of sneezing, followed by considerable rhinorrhoea, particularly in the early morning at any time of the year. The instillation of the toxin into my left eye had no immediate effect whatever. About six hours after the experiment, however, I was suddenly taken with several very violent fits of sneezing, followed by profuse secretion of watery fluid from my left nostril only, which for a time became almost completely obstructed. At the same time I experienced sensations of heat, burning, and soreness in the left half of my nose, all of which were perfectly new to me, whilst in my left eye, although it was not congested, I had a feeling as if I had some particles of sand between the upper eyelid and the eyeball. These symptoms lasted until I went to bed at about 11.30 p.m., but had completely disappeared next morning. It was certainly remarkable that all the symptoms named were restricted to my left eye and nostril, the toxin having been instilled into the left eye.

In order to control this observation, on March 20th at 6 p.m. a drop of pure toxin was instilled into my right eye. In the course of the evening nothing further happened. Shortly after awakening on March 21st, however, I sneezed a few times, and this was followed by watery secretion from both nostrils, though undoubtedly more from the right, which for about ten minutes became quite obstructed and then very suddenly quite patent again. There was none of the feeling of heat, burning, and soreness which I had experienced in the left half of my nose on the evening of March 20th. Four or five minutes after the nasal symptoms had quite passed off I suddenly had a little wheezing in my chest, which was quite audible, but passed off within two or three minutes. The last-named phenomenon is one from which I hardly ever suffer.

Although neither of these experiments is in any way

conclusive, it would seem probable that I am—although this has been hitherto unknown to me—to some degree susceptible to the influence of the hay-fever toxin, and that the poison, without producing at first any local symptoms in the part into which it was instilled, travelled in minute quantities through the naso-lachrymal ducts into the nose, and there, after the lapse of a few hours, produced the characteristic nasal symptoms.

None of the other gentlemen, as I have ascertained by subsequent inquiry, have experienced any after-effects from the instillation of the toxin.

Experiments on Patients Liable to Hay Fever.

I now come to the experiments made with toxin and antitoxin in the five persons suffering at the typical time of the year from hay fever, who kindly submitted to be experimented upon. Owing to Dr. Prausnitz's presence, we had the privilege of not merely experimenting with the artificially produced toxin, but also with actual pollen of maize collected last year, and with some fresh pollen of grasses obtained quite recently at Genoa, and sent to Professor Dunbar by some hay-fever patients, who are now staying in that neighbourhood, and have just had their first attack this year.

In the following description the exact times at which the experiments were conducted and the sensations and objective symptoms which were recorded are stated, as they were taken down at the time. Several of the medical men present co-operated in controlling these times, and the results were written down immediately.

Case I.

Mr. L. O., aged about 32, has suffered from hay fever practically all his life. His father was similarly affected. He is the only one of several brothers and sisters to whom the tendency has been transmitted. The attack is quite typical, affecting the eyes and nose, and very occasionally causing asthma. He has been treated in one nostril with the galvano-cautery, with practically no effect.

At 2.43 p.m. one drop of a mixture of equal parts of a toxin solution (1 in 1,000) and normal horse serum was instilled into the left eye; into the right eye one drop of a mixture of equal parts of the toxin solution (1 in 1,000) and antitoxic serum.

3.5 p.m.—Sensation of heat in left eye, caruncle of left eye beginning to swell and to get reddened, itching begins.

3.10 p.m.—No increase in symptoms.

3.11 p.m.—Symptoms of heat, etc., increasing.

3.17½ p.m.—Complains much of heat and discomfort in the left eye. Antitoxin (one drop) instilled into the left eye and practically immediately afterwards the itching improved, but not the feeling of heat.

3.21 p.m.—Heat has disappeared.

3.27 p.m.—Pollen of maize rubbed into the right nostril.

3.29 p.m.—Itching begins in the tip of the nose.

3.31 p.m.—Irritation increases all round the nose.

3.33 p.m.—Sensation of heat in both eyes, and itching in eyes and nose.

3.39 p.m.—More pollen introduced into the right nostril.

3.42 p.m.—Antitoxin (2 drops) inserted in the right nostril.

3.44 p.m.—Great relief in both eyes and nose.

3.50 p.m.—One drop of mixture of toxin (1 in 500) with equal quantity of normal serum instilled into left eye, and a similar solution with antitoxic serum into right eye.

3.52 p.m.—Sensations of heat and itching in the left eye.

3.53 p.m.—In the left eye pricking and general irritation.

3.54 p.m.—Left caruncle again getting very red. Obstruction in the right nostril. Increased irritation and heat in the left eye.

4.0 p.m.—The throat feels uncomfortable; soreness and irritation. One drop of the antitoxin injected into the left eye, the itching stopped almost immediately.

About 5 p.m. the sensation of heat returned in the left orbit; then the usual headache began and some slight dyspnoea. At 5.45 p.m. a sneezing attack, but not a severe one, began. In the evening the usual feeling of lassitude was experienced, always present in a greater or less degree in the patient's case according to the severity and length of the attack.

[The information about these later effects was kindly communicated to me by letter next morning.]

Case II.

Dr. P., aged 26. Several members of the family have hay fever, and he has suffered for about fourteen years from genuine hay fever at the typical time with the characteristic symptoms in eyes and nose. He has once had asthma at the close of an unusually severe attack of hay fever. Treatment with the galvano-cautery undertaken seven years ago was successful for two years.

3.6 p.m.—One drop of a mixture of equal parts of a toxin solution (1 in 500) and normal serum was instilled into the left eye; into the right eye 1 drop of a mixture of equal parts of a toxin solution (1 in 500) and antitoxic serum. The right eye remained absolutely normal throughout.

3.9 p.m.—In the left eye sensation of burning and itching.

3.10 p.m.—Left caruncle red and swollen.

3.12 p.m.—Caruncle and edge of lower lid of left eye red and much swollen; conjunctival vessels injected.

3.29 p.m.—One drop of antitoxic serum injected into the left eye.

3.30 p.m.—Itching and burning nearly gone.

3.45 p.m.—Swelling and suffusion of left eye decidedly less.

3.37 p.m.—Into the left nostril some maize pollen was introduced.

3.38 p.m.—Tickling sensation in the nose; desire to sneeze.

3.44 p.m.—Patient sneezed once.

3.54 p.m.—Rhinoscopic examination: injection of the left inferior turbinated bone: watery fluid running down from the middle fossa; mucous membrane swollen; right nostril quite normal.

3.56 p.m.—Increase of nasal symptoms; a good deal of rhinorrhoea, two sneezing attacks, constant desire to sneeze.

After this the symptoms very gradually abated, and at about 4.30 p.m. matters had almost returned to normal conditions.

It ought to be stated here that Dr. P., who has often experimented on himself, informs me that his susceptibility has—at any rate transitorily—been considerably diminished since, a week ago, 1 c.cm. of antitoxin was injected subcutaneously into his left arm.

Case III.

Mr. S., aged 28, has for nearly twenty years suffered from genuine hay fever, nose and eyes alone being affected: no hay asthma. It always comes on in June. The nasal mucous membrane, when I saw the patient first (March, 1902), was considerably swollen. He submitted to prophylactic galvano-caustic treatment of the nasal mucous membrane in April last, but the result was absolutely negative, the hay fever being as bad as usual last season.

2.57 p.m.—Into the left eye one drop of a mixture of equal parts of a toxin solution (1 in 1,000) and normal serum was injected; into the right eye one drop of a mixture of equal parts of the toxin solution (1 in 1,000) and antitoxic serum. No irritation felt in either eye.

3.6 p.m.—Into the left eye one drop of a toxin (1 in 500) and normal serum mixture; into the right eye one drop of a toxin (1 in 500) and antitoxin mixture.

3.8 p.m.—In the left eye itching, burning, and desire to rub it.

3.11 p.m.—The sensation is passing off.

3.15 p.m.—Conjunctival vessels of left eye much congested. In the right eye a slight feeling of irritation, which passed off quickly.

3.20 p.m.—The patient feels sure that he is suffering from an attack of hay fever.

3.29 p.m.—He has all the ordinary dull feeling of recovery from an attack of hay fever.

3.36 p.m.—Symptoms practically disappeared,

Case IV.

Miss C., aged 21, has suffered for many years from genuine hay fever at the typical time with the characteristic symptoms in eyes, nose, and chest. She always suffers severely, and was once treated with the galvano-cautery with transitory effect.

3.14 p.m.—Into the left eye one drop of a mixture of equal parts of a toxin solution (1 in 1,000) and normal serum was injected; into the right eye one drop of a mixture of equal parts of the toxin solution (1 in 1,000) and antitoxic serum.

3.20 p.m.—Left caruncle red. Conjunctival vessels injected. Feeling of irritation in the right eye.

3.25 p.m.—No increase of symptoms. Into the left eye one drop of toxin (1 in 500) normal serum mixture; into the right eye one drop toxin (1 in 500) antitoxin mixture.

3.32 p.m.—In the left eye, feeling of irritation; in the right eye, none.

3.37 p.m.—Into the left eye one drop of antitoxin.

3.39 p.m.—Left nostril rubbed with maize pollen.

3.40 p.m.—Throat getting sore, just like in an ordinary attack.

3.44 p.m.—In the left eye feeling of irritation.

3.45 p.m.—Left nostril rubbed again with maize pollen.

3.46 p.m.—In the left eye increase of irritation.

3.49 p.m.—Left caruncle fiery red. One drop of antitoxin into left eye.

3.53 p.m.—One drop of antitoxin into the left nostril.

3.55 p.m.—Patient feels on the whole more comfortable.

4.2 p.m.—Left eye still irritated. One drop of antitoxin.

4.3 p.m.—Irritation in left eye has ceased.

4.8 p.m.—Rhinoscopic examination: Left nostril completely obstructed, mucous membrane over middle turbinated bone so much swollen as actually to touch the septum. Appearance as often seen in genuine hay fever. The right nostril wide open; normal.

4.11 p.m.—Two drops of antitoxin into the left nostril.

Towards the close of this experiment the patient was exceedingly depressed and presented the characteristic appearance of hay fever patients during a severe attack.

The patient informed me on March 20th that she had felt very ill, just as in a typical attack of hay fever during and a little while after the experiment, but that the symptoms had gradually passed off in the course of the evening, and that now she felt quite well again.

Case V.

Miss K., aged 45, was seen in June, 1902, a most typical case of hay fever, very characteristically described by the uncommonly intelligent patient. There is a history of hay fever in other members of the family She herself has suffered for over 20 years with the characteristic symptoms in eye, nose, throat, and chest.

3.22 p.m.—Sniffed up grass pollen recently obtained from Genoa. No result.

3.30 p.m.—Into the left nostril one drop of a toxin solution (1 in 500).

3.35 p.m.—Feels a little uncomfortable.

3.36 p.m.—Uncomfortable sensation has increased in both nostrils.

3.38 p.m.—Great desire to sneeze.

3.41 p.m.—Into the left eye a mixture of equal parts of toxin (1 in 500 and normal serum; into the right eye one drop of a mixture of equal parts of a toxin solution (1 in 500) and antitoxic serum.

4.20 p.m.—Left eye itching; left caruncle much suffused; right caruncle abnormally pale.

4.3 p.m.—Into the right nostril one drop of toxin solution (1 in 500).

4.6 p.m.—Itching in the left eye has ceased, the right nostril is beginning to tickle; typical sensation of irritation. Feeling of itching at the back of the soft palate, which increased during the next two minutes.

4.12 p.m.—The patient complained of the frontal headache from which she usually suffers during the hay-fever attack. In the nostril nothing is experienced but the ordinary irritation.

During the afternoon and evening the tickling continued, the patient sneezed twice at 4.45 p.m., again at midnight, and at 8 a.m. on the following morning. In the evening throat, nose, and ear on the right side felt sore and tired, as they do after a bad attack of hay fever. Next morning patient still felt as if she was suffering from a slight summer attack of hay fever.

[Information as to after-effects given by letter, March 20th.]

Conclusions.

From the above experiments the following conclusions, I think, may fairly be drawn:

1. There can be no doubt that Professor Dunbar has succeeded in extracting from the pollen of certain grasses (maize, wheat, rye, anthoxanthum odoratum, agropyrum repens, cynosurus cristatus, etc.), a toxin which when instilled into the eyes or nostrils of people predisposed to hay fever, produces in these parts the characteristic subjective and objective symptoms of the disease.

2. The toxin, when injected into the eyes or nostrils of people not predisposed, produced, in the great majority of cases, no symptoms whatsoever, but it certainly appears from Dr. T.'s and my own experiences as if there were instances of transition in which, although the persons experimented upon never suffer from typical hay fever, they are yet more susceptible to the influence of the toxin than the ordinary run of people.

3. The effects of the toxin in people suffering from hay fever are as variable in intensity as are the attacks of the affection itself, both with regard to the local and the constitutional symptoms.

4. Professor Dunbar's antitoxin certainly produced immediate disappearance of the subjective, and after a few minutes great amelioration of the objective symptoms.

5. The mixture in equal parts of a toxic solution (1 in 500) and the antitoxic serum suffices to neutralize the specific effects of the toxin.

6. The effects of the antitoxin appear in some instances to be sufficient to prevent a reappearance of the subjective symptoms, whilst, in other instances repeated instillations of the antitoxin were required to produce ultimately the return to normal conditions.

It is hardly necessary to add that this can only claim to be a preliminary report on a very interesting and important subject. We are, as it were, on the threshold of facts which, if our expectations should be realized, would in many respects open a new era for the better understanding and more efficient treatment of a most troublesome and common disease. At the same time, it cannot be too emphatically stated that all we know at the present is not sufficient to build excessive therapeutic hopes upon, and this for the following reasons:

1. We do not yet know what the nature of the special predisposition is which makes one person react violently to the influence of both the natural pollen and of the artificially-produced toxin, whilst it leaves another quite unaffected.

2. Whilst it may be justly hoped that it will be possible to produce an even more effective serum no guarantee can at present be given, nor do we know for certain whether it will be possible to produce such antitoxin in sufficient quantities to use it extensively. It may, however, confidently be hoped that such will be the case.

3. Whilst the antitoxic serum as at present produced quickly neutralizes the local effects of the toxin, it is impossible to foretell—and on this point I wish to insist very strongly—whether in cases of genuine attacks of hay fever, an even more powerful serum than that at present prepared, applied by way of instillation into the affected mucous membranes, or by subcutaneous injection or by internal administration, will arrest all the symptoms when once fully established, and even if it should do so, whether the effect will be lasting, or whether the symptoms may not return.

4. Finally, it is equally impossible to foretell whether by the prophylactic application of a very powerful serum we shall succeed in altogether preventing the actual outbreak of an attack in those specially predisposed.

I know I am in perfect accord with the original investigator in giving this strong warning against premature hopes which ultimately may not be fulfilled. At the same time, I think there cannot be any doubt that Professor Dunbar has made a very interesting and important discovery, which, it may be devoutly hoped, in the interests of many thousands of sufferers, will ultimately lead to the development of an effectual specific treatment of this very troublesome affection. He has most kindly promised to keep me *au courant* of his further experiments, and I, too, hope to continue my own researches. When anything new can be reported, I hope to return to the subject.

References.

[1] München and Berlin: R. Oldenbourg. 1903. [2] Weitere Beiträge zur Ursache und specifischen Heilung des Heufiebers, *Deut. med. Woch.*, 1903, No. ix.

The Goulstonian Lectures

ON

THEORIES OF IMMUNITY AND THEIR CLINICAL APPLICATION.

Delivered at the Royal College of Physicians, London.

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LECTURE II.

Theories of Immunity (*continued*).

It is well to recall the fundamental fact on which depends the production of all these bodies or substances which we are about to study. It seems to be a universal physiological reaction of the healthy organism to produce substances more or less specifically antagonistic to alien cells and some cell products. Although it is a familiar fact that tolerance can be established towards some crystallizable poisons, yet the "antidote" thus formed is not of the same nature as when an organized cell product is the poison. Yet it must not be thought that the distinction either lies between colloid and crystalloid, or that the poison or antidote is necessarily of proteid nature. Antidotes have been obtained for crystallized proteids, while attempts to produce them for starch or similar products, also gelatine, have failed. But in the case of gelatine, at any rate, a species of antidote in the form of a gelatine-dissolving enzyme is produced.

We have also seen that the antidote is the cast-off link by which the poison attaches itself to the cell. If this link does not exist the poison cannot act on the cell, and there is no need for an antidote.

[The lecturer at this point described a symbolic method devised by Professor H. C. Ernst, of Harvard University,[1] by which the conception of Ehrlich's theory had been found to be assisted.]

Antitoxins.

In the case of the toxins, the poison is a cell product and the antitoxin merely the antidote to this cell product. But as regards the mode of formation of this antidote there is a difference of opinion. Metchnikoff thought, and still thinks, that it may be modified toxin, in spite of the facts that one unit of toxin may lead to the production of about 100,000 units of antitoxin, that its production may be increased by pilocarpin injections, and that immunized animals may by repeated venesections have the whole of their blood withdrawn, and yet at the end supply a serum of nearly the same antitoxic power as at first. Moreover, antitoxin exists normally in demonstrable quantity in the blood of some men and animals—corroborative evidence of Ehrlich's views.

It must be clearly recognized that it is not necessarily one kind of cell which may form antitoxin, although the effects of the toxin may be most evident on one species of cell. Thus the tetanus toxin fixes on the cells most susceptible to it, namely, of the central nervous system. We know this to be so clinically: but it can also be shown in the manner of a chemical experiment. On mixing tetanus toxin with an emulsion of brain substance and then injecting it, it is found to have lost its toxic power. If the mixed toxin and emulsion be centrifugalized, the supernatant fluid has no more toxic power. It is no mere mechanical precipitation, since boiled brain substance has no neutralizing effect. In animals but slightly susceptible to tetanus the fixing and neutralizing power of the brain substance is correspondingly small. The proof value of these experiments is not affected by the fact that the same result can be obtained with lecithin, cholesterin, etc.

It is of interest to inquire whether the sensitiveness to tetanus toxin can be yet further localized. I have begun experiments to test whether there is any difference in the neutralizing power of "motor area" and other cells, but these experiments are still in the initial stage. It has been affirmed recently that the cerebral substance of an animal immunized against tetanus has but little, if any, more antitoxic power than that of normal animals, and that the blood always has more than the brain. If this be correct, it may perhaps be due to an inherent peculiarity of the cells of the central nervous system to set free the superfluous receptors more rapidly than other cells. Perhaps the most striking evidence to show the local cellular formation of antitoxin is obtained by rapidly immunizing one eye of a rabbit to abrin instillations. The cornea of that eye only will then be found capable of neutralizing abrin.

Some animals are very susceptible to tetanus toxin in whatever form introduced, whether subcutaneously or intracerebrally, whilst others are affected only when the poison is introduced intracerebrally. In the latter case it is found that the toxin is deposited and fixed in other tissues of the body. If the toxin is retained by only one kind, and that a vital kind, of cell, like the nerve cell of the central nervous system, as in mice and guinea-pigs, obviously immunization with toxins is impossible; and as a matter of fact it can only be done with toxoids. Yet on the whole it must be admitted that while no experiments inconsistent with the theory have been brought forward, the total evidence for the formation of antitoxin by the cell most sensitive to the toxin is not yet complete.

According to hypothesis the formation of antitoxin will depend only on there being suitable receptors for the haptophore molecule of the poison, since the saturation of the receptor will stimulate the cell to the production of others, whether a toxophore group be present or no, provided it does not when present irreparably damage the cell. It then merely stimulates to increased normal action.

If there are no suitable receptors, natural immunity exists. The poison cannot attack the cell, and consequently does not stimulate to the production of antitoxin. Of this nature is the immunity of the tortoise to tetanus, and of the pigeon to hydrophobia. The poison remains in the circulation for some time, but the animal does not become ill nor does it form any antitoxin. On the other hand the poison may disappear from the circulation, and be merely deposited without uniting with the cells in the tissues of the body. Thus scorpions may be injected with tetanus toxin. It disappears from the circulation and may be shown to be present in the liver cells months later. There is yet a third possibility. The receptors may be suitable, but the cells remain unaffected by the toxophore group. This is said to be the case with the alligator. Although unaffected by tetanus toxin, which rapidly disappears from the blood, it forms a considerable quantity of antitoxin. According to Metchnikoff, it is the large mononuclear leucocytes—the only form of leucocyte in the alligator—which produce the antitoxin, and he supports the view by experiments showing that the poison can be found fixed in the macrophages while the surrounding fluid is free. There can be no doubt in view of these observations, and of others concerning changes in the marrow during infection, that the leucocytes play a considerable but not exclusive part in the formation of antitoxin; but this is quite another matter to the destructive phagocytosis of bacteria.

Haemolysins.

The haemolysin in the ordinary sense is the antidote formed, namely, the receptor cast off, resulting from the introduction of alien blood into an organism whose serum then acquires the power of dissolving these alien xanthocytes. Many substances, of course, are capable of causing haemolysis. Distilled water does so; some glucosides, like saponin and solanin; some organized bodies, as snake venom; and also many bacterial products. It is a phenomenon which, less generally known than the action of toxin and antitoxin, has perhaps received more experimental study and investigation than any other portion of the theory of immunity. The reason for this lies no doubt in the comparative ease with which the experiments may be carried out, mostly in the test tube, with correspondingly unequivocal results, that throw a vivid light on the whole question. They raise the xanthocyte from its humble though important position of a mere oxygen carrier, and assign to it some duties for which vitality is a necessary function. They have given an insight into the multiplicity of factors concerned in the process of immunity and infection, and have revealed a complexity compared with which the scheme enunciated in the first lecture is merely a diagram.

The more simple cases of haemolysis have received a physical explanation.

Sapotoxin has a powerful haemolytic action; 0.001 c.cm. of a 2 per cent. solution will lake 1 c.cm. of a 5 per cent. solution of human or guinea-pig's blood in normal NaCl in a few minutes. I find that solanin has a similar effect, and with both substances the quantity required varies much with different kinds of blood. Apparently this is due to a combination of sapotoxin with the cholesterin and lecithin of the blood corpuscle. When added in the test tube to sapotoxin, cholesterin is able to neutralize its laking power (Stewart).

The part which may be played by lecithin is seen in the action of cobra venom. Certain xanthocytes—the difficulty in haemolysis apparently runs almost parallel with the difficulty of obtaining crystalline haemoglobin from them—are not haemolyzed by cobra venom alone, but they are on the addition of a small quantity of lecithin, which then apparently acts as a complement. The corpuscle thus contains within itself the necessary element for its own destruction, not only in the lecithin, but, as we shall see, in another thermolabile complement.

Since these experiments have brought to light several new facts they are worth considering more in detail. It had been known for some years that, while weak solutions of cobra venom would haemolyze xanthocytes, strong solutions might not. Ehrlich and Kyes attribute this result to the presence of an endocomplement whose existence they demonstrated in the following manner: Xanthocytes and a strong solution of cobra venom were mixed and then separated by centrifugalization. On adding normal NaCl solution to the xanthocytes, no haemolysis occurred until a suitable complement was subsequently added. The concentration of the amboceptors of cobra venom had withdrawn all the complement from the cells. The proof can be varied by making a solution of the complement from washed corpuscles in water and adding this to xanthocytes—for example, of the ox—not haemolyzable by cobra venom alone: they are then dissolved. Since the action can be destroyed by heating to 56° C., the substance is a complement in a genuine sense.

As the authors point out, these results are inimical to Bordet's theory, which supposes that the amboceptor enables the complement to enter (and to destroy) the cell, since we have the complement in this instance already in the cell, which it is unable to destroy unaided.

They found, further, in a systematic examination of Calmette's statement that fresh serum sometimes had antihaemolytic action, and that certain serums acted better when heated first to 62° C., that quite a number of serums had activating powers for assisting the haemolysis of certain xanthocytes by cobra venom when heated even to 100° C., which powers might be greater or less than they had been in the serum unheated or heated to 56° C. Moreover, they showed, by treating serum with 8 to 10 volumes of alcohol, that the activating substance remained in solution while the inhibitory substance went down with the precipitate. The solubility in alcohol and ether identified the substance as being probably either cholesterin, lecithin, fat, or fatty acids. Experiment showed that lecithin, even in very minute quantity, possesses activating power for cobra venom. It even enables haemolysis to take place at 0° C. In all probability, therefore, the venom amboceptor contains at least two complementophile groups, either of which is dominant—that is, can produce haemolysis by itself—but they are no doubt more powerful when acting together. The authors further point out that the cobra venom cannot act as a sensitizer towards lecithin in Bordet's sense. If this were so, the more cobra venom the less lecithin should be required, whereas the reverse is actually the case; the excess of cobra venom deviates the lecithin from its complementary action.

The chemical position of the various bodies which we have been considering is not without interest. By using Hofmeister's method of fractionally salting out the various proteids from immune serum, Pick showed that no antitoxins, lysins, or agglutinins were contained in the fibrins, globulin, or the albumin; they appeared in either the euglobulins or the pseudoglobulin. The distribution was rather remarkable. In the horse alone were any immune bodies in the pseudoglobulin; these were diphtheria antitoxin and typhoid agglutinin. In the goat they were all (namely, diphtheria and tetanus antitoxin, cholera and typhoid agglutinin and

cholera lysin) in the euglobulin. Cholera agglutinin was in euglobulin in the horse, and typhoid agglutinin in the euglobulin in the rabbit and guinea-pig also. The goat was the only animal tested for all bodies.

The difference between diphtheria antitoxin in the goat and horse was sufficiently marked to enable them to be separated, when mixed, by fractional precipitation. With such a marked difference in chemical constitution it is not remarkable that the physiological and therapeutical action of antitoxins obtained from various species of animals should exhibit marked differences.

Cytotoxins.

The experiments on xanthocytes naturally led to their extension to many forms of cells and to the study of various other cytolysins, principally by Metchnikoff and his school. Thus toxins for spermatozoa, ciliated epithelium, leucocytes, kidney tissue, etc., were made. Comparatively little is known about them as yet, but with more extended knowledge they are likely to play a considerable part in our conceptions of the etiology of non-infectious disease. Thus Delezenne produced acute yellow atrophy by an antihepatic serum. The results appear not to be strictly specific; in most cases haemolysins are produced at the same time.

The production of anticytotoxins is also of importance and may have a therapeutic future. Metchnikoff was able to produce an antispermatoxin in a rabbit from which the testes had been removed. A practical interest attaches to an experiment of this description. For example, in the treatment of myxoedema with thyroid gland we can hardly suppose that the few grains of gland taken per diem really replace the normal activity. At the same time we know that a large dose may produce toxic effects. Consequently a part of the beneficial therapeutic action seems to be due to the production of an antitoxin to the toxin contained in the thyroid. Normally the antitoxin would be elaborated by the gland itself, but it may be and is vicariously prepared in the absence of the thyroid by other cells.

By a converse reason the indifferent results obtained with pancreatic extract in diabetes, and as a rule also with suprarenal extract in Addison's disease, are explained. The function of pancreas (and suprarenal) is not to neutralize, but to elaborate. The symptoms in diabetes point rather to perverted metabolism than to production of toxin. The exhibition of pancreatic extract will neither replace this activity nor stimulate other cells to vicarious performance of such function. This object would rather be attained, if at all, by the injection of an antipancreatic serum. There is the more hope since we know that in man the injection of a haemolytic serum stimulates and leads subsequently to an increased formation of xanthocytes.

It behoves us now to pay some attention to Metchnikoff's theory as modified by him to the present state of knowledge. It is based on the phenomena following the injection of cells into the peritoneal cavity of the guinea-pig.

After a temporary destruction of the leucocytes already present, during which period the injected cells remain unaltered there follows an immigration of phagocytes (macrophages) which take up the alien cells. Having done this they wander back into various organs—for example, the liver—meanwhile dissolving the ingested cells by means of the hypothetical cytolytic ferment termed by Metchnikoff "cytase." From the spleen and lymphatic glands he obtained an extract possessing haemolytic properties destroyed by heating at 56° C.; he considers this due to the cytase liberated by maceration from the macrophages. If bacteria are used in the experiment instead of alien cells it is chiefly the polymorphonuclear leucocytes (microphages) which act as just described; for this reason the respective digestive ferments are termed by Metchnikoff "macrocytase" and "microcytase" respectively.

On repeating in the ordinary way of immunization the injection of xanthocytes, the digestive action takes place already in the peritoneal cavity instead of on the journey back to the spleen or elsewhere, and haemolysis occurs. This Metchnikoff attributes to the meantime formation of a special immune body (*fixateur*) which sensitizes the xanthocyte for the action of the cytase (complement). The cytase is not free in the blood, but is secreted by the leucocytes, since no haemolysis occurs on subcutaneous injection of xanthocytes.

The following experiments support this view in an even more striking fashion. By the injection of spermatozoa, an antispermatoxin is formed which dissolves the spermatozoa of the species of animal used *in vitro*, although the spermatozoa in the testes remain uninjured. But if these spermatozoa are put into the serum of a normal animal, loss of motility occurs at once. Consequently they were sensitized; so that if the cytase were free, we must make the unlikely supposition that it could not penetrate the vessel walls. But they are dissolved on intraperitoneal, although not on subcutaneous, injection; consequently the cytase was not circulating free in the blood.

In the case of bactericidal serums the microcytase is the efficient ferment. The difference was ingeniously demonstrated by Gengou, who obtained exudates consisting of macrophages and microphages respectively, and showed that their products behaved differently. The former had haemolytic but not bactericidal properties; the latter possessed bactericidal but no haemolytic power. The same observer also showed that unclotted immune blood had hardly any bactericidal action. I am myself attempting to help decide this question in the case of antitoxic serums by direct transfusion of blood from the immunized to the unimmunized animal, and comparing it with the injection of serum.

The bactericidal action being hypothetically due to two ferments, one special and one general, Metchnikoff supposes, in order to explain the production of immune serums, that the repeated injection of the bacteria leads to an over-production of the specific ferment, which is then secreted. There is no over-production of the general ferment. The special ferment sensitizes the bacteria for the action of the general ferment. Thus Metchnikoff, in opposition to Buchner, admits the existence of at least two alexins or complements. But in general he believes the leucocytes deal with the destruction of bacteria by themselves. In a similar manner, Metchnikoff explains the origin of the antitoxins. Neither theory explains all the phenomena without strain, yet on the whole there is a gratifying uniformity of idea underlying each.

No doubt in varying circumstances the conditions are different. At one time there will be more immune body or complement locked up in the leucocyte; at another moment the excess may be in the blood stream. Very likely there is a perpetual ebb and flow. Without an hypothesis of this kind, some of the phenomena are difficult to explain on any theory, and to my mind the weakest point in Ehrlich's theory is the strained explanation of the action of toxin in highly-immunized animals. When they succumb, it is supposed that the avidity of the toxin is greater for the animal cell than for the antitoxin; when they do not, the reverse must hold good. Since the absence of receptors also implies immunity, it seems a curious incompetence on the part of Nature that she could not shape the receptors in such fashion as to be suitable for food only, but unsuitable for toxins and bacteria.

"Everybody recognizes," says Professor W. H. Welch in his Huxley lecture, "abnormal metabolism as an essential condition in infections. The very point needing explanation is how the bacteria derange metabolism." He then puts forward an explanatory hypothesis, an extension of Ehrlich's theory to which we must here refer. We are early taught that action and reaction are equal and opposite. It would not, therefore, be surprising if, when the cell manufactures antidotes to the bacterium, the bacterium were also to elaborate antidotes to the cell, namely, its specific toxin. This theory is very seductive, and affords considerable assistance in the explanation of relapses and reinfections. It explains also the diminution in virulence resultant on growth on artificial media where there is less struggle for existence, and the increase in virulence on passage of the micro-organism through an animal. It may be urged that this is merely a survival of the fittest under artificial circumstances. There is some force in the argument, because a virulent toxin-producing bacillus will continue to produce toxin much longer after removal from adverse conditions than would seem to be the case with animal cells. It is a family characteristic much more deeply ingrained than in animal cells. We therefore look forward with interest to the experimental verification of Professor Welch's theory.

REFERENCE.

[1] *Trans. Amer. Acad. of Arts and Sciences.*

DONATIONS TO HOSPITALS.—Among other donations given by Mr. Henry Barnato in honour of the marriage of his daughter are £1,000 to the London Hospital and £500 each to St. Mary's Hospital, the Metropolitan Hospital, the City Orthopaedic Hospital, the Home and Hospital for Incurable Children, the Jewish Home for Incurables, and the Jews' Hospital and Orphan Asylum.

ON ANKYLOSTOMIASIS.*

By Surgeon-Lieutenant-Colonel OSWALD BAKER, I.M.S.(Retired).

Ankylostomiasis is a disease caused by a leech-like blood-sucking parasite which infests the small intestine. I firmly believe that ankylostomiasis is productive, both directly and indirectly, of far greater mortality than the vast majority of medical men have any conception of. The large number of deaths ascribed to unknown causes, the heavy mortality attributed to general dropsy and debility, and the great loss of life occurring among paupers found dying in the streets in tropical towns, I am convinced, were in the past and are to-day in no small measure due to ankylostomiasis.

There are few things more remarkable in the whole history of tropical medicine than the failure to realize and the reluctance to admit, on the part of many medical men, the injurious tendency of an invasion of the body by the parasite which gives rise to ankylostomiasis. In support of this statement, I would point to India, where the parasite in question—the ankylostoma duodenale—was discovered in 1879, when McConnell found it whilst making necropsies in Calcutta. He seems to have regarded this blood-sucking parasite in the light of a pathological curiosity, and, even as late as the year 1892, he wrote:

> I maintain it has yet to be shown that the presence of this parasite gives rise to a specific disorder to which the term ankylostomiasis can be applied.

McConnell's discovery attracted but little notice, and was soon lost sight of. Eight years later—in 1887—the parasite was again found at necropsies made in Madras. There is, however, nothing on record in the medical press of India to show that the ova of this parasite had been identified in the dejecta until the following year, when attention was called in the columns of the *Indian Medical Gazette* by a Bengal surgeon stationed in Burmah to the serious nature of ankylostomiasis. This officer pointed out that the parasite was extremely prevalent, and produced great mortality; also that it was the cause of much of the gaol debility seen in prisons, a disease which at that period was a veritable *bête noire* to gaol administrators; he, moreover, advised that the dejecta of all patients suffering from anaemia, debility, or dropsy of obscure origin should invariably be searched for ankylostoma ova. The communication in which these views and observations were embodied received very limited notice, and was, apparently, soon altogether forgotten. The next occasion in which life was infused into the subject was when Giles, who had been investigating the nature of kala-azar, made the astonishing announcement that this disease was, in his opinion, simply ankylostomiasis occurring in a malaria-stricken district. From this period ankylostomiasis has repeatedly engaged the attention of Indian medical officers, but it has not yet received in India more than a fraction of the consideration its importance demands. Only a little more than a year ago, in consequence of the prevalence of so-called gaol scurvy, a term applied to denote a condition of swollen gums associated with anaemia, amongst the convicts in a certain prison, an inquiry into the matter revealed that the disease in question was ankylostomiasis. Thymol was then obtained and used, when, according to the superintendent, Dr. Reilly, all the men recovered, some being saved, as it were, from the grave.

Nomenclature.

The parasite of ankylostomiasis, to which many synonyms have been given, is called by some observers ankylostomum duodenale, but the majority of writers use the term ankylostoma. Etymologically speaking the latter is correct, and, as the same word should if possible be employed to denote the same parasite, it is advisable, I think, to adhere to the term ankylostoma when speaking of a single parasite, and ankylostomata when referring to more than one. The use of the abbreviated words "ankylostome" and "ankylostomes" is convenient and seems unobjectionable.

History.

Although Sandwith of Cairo is of opinion that the ancient Egyptians suffered from ankylostomiasis, no reference to the parasite of the disease has been found in the writings of mediaeval times. Our knowledge of this entozoön dates only from 1838, when Dubini, of Milan, detected it in the intestines at a necropsy. The parasite was discovered in Egypt in 1847, by Bilharz, and Greisinger, who was working with Bilharz, came to the conclusion it was the sole cause of the anaemia which was, at that time, affecting one-fourth part of the entire population of Egypt, known as Egyptian chlorosis.

In 1879 a disastrous outbreak of anaemia, of a progressive and fatal type, took place among the thousands of labourers employed in the construction of the St. Gothard tunnel, which was pronounced to be ankylostomiasis. But then, as now, sceptics existed who attributed the anaemia to insanitary surroundings, want of light, and defective ventilation, causes which had, until then, been considered adequate to account for the anaemia very prevalent among miners and bricklayers, in different parts of Europe. From this period, however, ankylostomiasis has received notice in treatises on medicine, and to-day, although the disease has been subject to much neglect, and is still, in some quarters, discredited. I do not think any unbiassed man of ordinary intelligence, who studies the overwhelming mass of evidence which has been produced, can any longer doubt that ankylostomiasis is one of the most prevalent and fatal maladies which exist in the tropics.

Until quite recent times the anaemia of the tropics, owing to the prevailing ignorance of ankylostomiasis, was attributed to beri-beri, malaria, and general dropsy, or debility, of uncertain origin. But modern research has thrown a flood of light on this question and has solved the problem of tropical anaemia. Its revelations demand that this special anaemia of the tropics, due to the ankylostoma, shall no longer be ascribed to beri-beri with its well-known clinical signs, nor to malaria with its plasmodium malariae; nor to general dropsy, nor debility, but that it must, when the patient suffering harbours ankylostomes, and has no other demonstrable disease, be attributed to its rightful cause, ankylostomiasis.

Distribution.

Our knowledge of the geographical distribution of ankylostomiasis is far from complete. The disease is believed to exist interruptedly over about three-fifths of the habitable globe, between 50° latitude north, a chart line which passes through the north of France, and 30° south latitude. So general is supposed to be its prevalence throughout the tropics that an inquiry in a locality where its existence was undetermined, which yielded negative results, would be of great interest to students of geographical pathology.

Prevalence and Mortality.

Although ankylostomiasis exists over so large an area of the earth's surface it is far more common in some places than in others. The degree of prevalence naturally depends upon conditions favourable or otherwise to the existence of the parasite which produces it. Amongst agricultural races living in warm climates, who pay no regard to cleanliness and keep no sanitary observances, who carry food to their mouths with unwashed hands and leave their excreta on the ground around their dwellings, ankylostomiasis flourishes exceedingly. Under conditions such as these, which obtain in a pre-eminent degree in certain parts of Egypt and India, the ankylostoma duodenale reigns supreme. The parasite is found in 90 per cent. of all necropsies made at the Kasr-el-Aini Hospital, Cairo; Dobson has reported that he found the worm in the dejecta of 454 out of 547 immigrants brought from different parts of India for employment on the tea gardens of Assam; Daniels noted its presence in 52 per cent. of his large number of carefully-made necropsies in Demerara; and Dr. Giffard, of the Madras Hospital, informs me that in necropsies he, much more often than not, finds this ubiquitous tropical parasite.

Of the mortality caused by ankylostomiasis no reliable estimate can be given. As I have already pointed out, it is, I believe, the immediate and only cause of many of the deaths set down to general dropsy and debility, and also of those attributed to unknown agencies; but the mortality of which it is a contributory factor and indirect cause far outweighs, in my opinion, that due to its direct effects. Not only may it complicate all other maladies, but, by producing anaemia and disorders of the digestive functions, it lowers the natural vitality of the body, and thereby renders its subjects more receptive of and less able to cope with the many diseases of a fatal character to which mankind in the tropics is exposed. Looked at from this point of view, the enormous mortality it indirectly causes can hardly be exaggerated. In giving his opinion on this question, Dr. Thornhill, of Ceylon, states that the more he reflects on his own experience and the more he reads of the experience of others

* Being part of a lecture on Tropical Anaemia delivered at the London School of Tropical Medicine.

the firmer does his conviction become that the ankylostoma duodenale is the greatest enemy of the human race in the tropics.

The objection to the view that ankylostomiasis is a serious disease rests on two facts: First, that its parasite is widely prevalent in the body of man, and does not, in the majority of cases, do any appreciable harm; and, secondly, that very often in death from ankylostomiasis few or no ankylostomes are found on necropsy. But both these objections are fallacious and are easily overcome. The fact that ankylostomes, when present in only small numbers, are generally harmless is in no way opposed to the equally well-known circumstance that when a severe infection takes place it is often fatal, or it produces such extreme anaemia that recovery becomes impossible. An invasion of parasites cannot be compared to an attack of a specific contagious fever, wherein the germs conveying the disease undergo rapid multiplication in the body. An infection with ankylostomes is a purely local trouble, and, if the infection is slight, it may produce no symptoms and do no harm, for these parasites do not multiply within the human body.

With reference to the absence, in large numbers, of the parasite at the necropsies of persons dead of this anaemia, it must be borne in mind that ankylostomes, like other parasites, require food, and without it they must die. They obtain food from the blood of their hosts, but when the host has become so reduced by anaemia that his blood serum bears a resemblance to water, the parasites are no longer able to subsist on it, and deprived of the pabulum which is essential to their existence, they die, drop off the intestine and are carried away to be expelled with the dejecta. It is true that in some instances enormous numbers are found on necropsy, but in these severe cases it is possible that fatal anaemia has resulted before sufficient deterioration of the blood plasma to starve the parasites to death has occurred. In fatal haemorrhage as many as 3,000,000 red cells may be found in a cubic millimetre of blood, whereas in death from slow progressive anaemia the number becomes reduced to 1,000,000 or less.

There is another reason: Although some parasites are said to live as long as their hosts, such is not the case with ankylostomes, in which the limit of life is set down at five years. If this is the maximum duration of their lives, the presumption is that few reach that age. Man may live until he is 100, but he seldom does. Consequently in cases where reinfection is avoided the parasites will in due course disappear.

These considerations are, to my mind, amply sufficient to explain the fewness, or even entire absence, of parasites sometimes found on necropsy. In severe infections, where death is not long delayed, they are seen in hundreds and thousands.

Infection.

How does the parasite gain entrance to the human body? It was at one time widely held that infection was acquired through drinking water containing the embryos, and this view is not without supporters at the present time. On what this hypothesis is founded it is difficult to say; it is presumably based on inference and analogy, and not on carefully conducted observation or experiment. As far as can be judged from the data available, infection is seldom acquired in this way. Giles, a most capable observer, has shown that the embryos will not live in water, and Sandwith states that when embryos are placed in wells or stagnant water they soon sink to the bottom. Giles, moreover, whose writings have contributed largely to our knowledge of the parasite's life-history, when working in an ankylostomiasis-stricken district, examined 56 specimens of water drawn from local sources without finding more than one embryo in the whole of his specimens, and that was of a doubtful species of worm. In his paper on ankylostomiasis, read before the International Medical Congress a few years ago, Sandwith stated that of 402 cases of the disease of which he had notes no less than 310, that is, more than three-fourths, occurred in patients between the ages of 20 and 40; and Daniels, although he found the parasite in 52 per cent. of all necropsies, only detected it in 20 per cent. of children. If drinking water were the chief, or a frequent, source of infection, the disease would inevitably have a more uniform distribution in regard to age. In view of these considerations the waterborne theory of infection must I think be given up.

By glancing at the life-history of the parasite a more correct appreciation of the matter can be gained. The ova are discharged, in myriads, with the dejecta, and, under favourable circumstances, yield embryos in from one to two days. This phase of development takes place only outside the body, because exposure to the oxygen of the atmosphere is essential to its accomplishment. These embryos, when they gain entrance to man, quickly grow into mature parasites.

Now, the inhabitants of countries wherein ankylostomiasis is very prevalent are, for the most part, tillers of the soil, and generally live in overcrowded villages where sanitation is unknown. They have no latrines, and ease themselves anywhere, often close to their dwellings; they are dirty in their persons, and eat food with their hands, which are unwashed, and sometimes soiled with earth containing embryos. Furthermore, some races of men occasionally eat earth. The Egyptians are much given to geophagism, or earth-eating; they seem to believe that Nile mud, so valuable to their fields, may be beneficial to their bodies. Sandwith states that Nile mud, possibly taken from the banks of the river where pollution with excrement is common, is, on certain festive occasions, handed round the streets. Where such conditions prevail it cannot be surprising that nearly all the inhabitants become infected with ankylostomes. The majority of observers maintain that infection arises under the circumstances described.

In 1898, Dr. Looss, of Cairo, asserted that ankylostoma embryos entered the body through the hair follicles of the skin. He states he became accidently infected in this way, and that, in due course, ova appeared in his faeces. To prove his case, he placed some lively embryos on the leg of a boy, about an hour before the limb was amputated for disease. On the removal of the diseased limb he made sections of that portion of the skin selected for the experiment, and found many of the hair follicles packed with embryos. Giles, who saw Looss's specimens, has no doubt that infection can take place through the skin. Manson, on the other hand—who thinks it quite natural the larvae should, under such circumstances, seek shelter in the hair follicles—is not at present prepared to endorse Looss's views. The question must remain an open one until more convincing proof has been adduced.

Symptoms.

The earliest symptoms of ankylostomiasis are not often seen because patients seldom apply for treatment until they are anaemic and incapacitated for their daily work. At first, there is epigastric discomfort and pain, with a capricious appetite, and then anaemia; as the disease advances so do these symptoms become more severe, until the patient loses all desire for food, and presents the well-known signs of pronounced anaemia.

In addition to the chalk-white pallor of the nails and all visible mucous membranes, the empty pulse and cardiac distress, the mental and bodily apathy, all of which are marked features, oedema arises, first in the eyelids—not in the legs as in beri-beri—and subsequently extends to the entire body. Associated with this general oedema there is usually slight albuminuria, marked mental failure, and great drowsiness. When this stage is reached the case is generally hopeless, and death from asthenia soon ends the scene.

If other diseases complicate the disorder the symptoms noted will not be seen in this pure form. Excepting for eosinophilia—a common occurrence in helminthiasis—the blood presents no features special to the disease. In the early period it is of a protopathic type, with from 3,000,000 to 4,000,000 of red cells in the cubic millimetre, but towards the termination of a fatal case, setting aside the colour index, which is always reduced, and except for nucleated red cells, which are seldom found, it shows the character of pernicious anaemia, and gives a blood count of about 1,000,000. Rogers states that the relatively low colour index of the blood is sufficiently marked to furnish a means of diagnosing ankylostomiasis from malaria, wherein this reduction is slight. Possibly the presence of eosinophilia, by excluding a diagnosis of uncomplicated malaria, would furnish useful information. Daniels has sometimes found the eosinophile leucocytes constitute over 20 per cent. of all white cells present.

In the evacuations of the patient there will occasionally be found dead ankylostomes, confirming, in a measure, what has already been said regarding the disappearance of these parasites from the body; and if a minute fragment of faeces be stirred with a drop of water on a slide, and placed under the microscope, the characteristic ova of the ankylostome will be readily seen. Once recognized, they can never be mistaken by a careful observer.

Post-mortem Appearances.

On necropsy, all the organs are found extremely bloodless.

On the inner surface of the small intestine, between the second portion of the duodenum and the ileum, a situation, as Daniels has pointed out, which corresponds with alkalinity of the bowel contents, numerous, or a few, ankylostomes will be found adherent to the wall of the gut; or, if the parasites have already dropped off, ecchymoses, not larger than a flea-bite or split pea, having pale central points, will be visible. At the necropsies of eighteen patients dead of uncomplicated ankylostomiasis, to whom no vermifuge had been administered, the number of parasites found by Sandwith was as follows: In nine of the bodies, from 1 to 50; and in the remaining nine, from 170 to 863. Ernst, of Cologne, has reported a count of 2,768 at the necropsy of a brickmaker. The little nematodes, being sometimes half buried in the mucosa, and covered with tenacious mucus, require very carefully looking for, otherwise they may be missed. Occasionally small blood cysts are found in the submucosa, containing one or more parasites. Fatty degeneration of the heart, liver, and in a lesser degree the kidneys, always occurs; the liver, from fatty changes, sometimes floats when placed in water. In the peripheral cells of the liver lobules there is found, in a very finely-divided state, bright orange-yellow pigment, which, owing to the fatty condition of the organ, may easily be overlooked. Dr. Yates reports that in a case of ankylostomiasis, where thousands of parasites were present, which recently came to necropsy at the Johns Hopkins Hospital, Baltimore, there existed, in addition to yellow pigment, necrosis of the hepatic cells surrounding the intralobular vein, not the peripheral cells; he also noticed that the mucous membrane of the small intestine was more or less necrosed, and that its basal layer was infiltrated with eosinophiles in enormous numbers.

In view of the marked changes found in the liver, the question of the ankylostoma being capable of producing a toxin which has haemolytic and other destructive properties must be briefly considered. Some observers firmly maintain that such is the case, and to support their veiws appeal to the analogous action of the bothriocephalus latus, which, although not a blood-sucking parasite, generates a blood toxin which causes profound anaemia. They point out, moreover, that the presence of such a toxin would serve to explain the occurrence of death in those cases of ankylostomiasis wherein but few parasites are found in the body on necropsy. Furthermore, Calamida, a German observer, claims to have proved that certain other entozoa undoubtedly produce toxins which not only possess active haemolytic powers, but are positively chemiotactic as regards eosinophile leucocytes. But if the opinions I have advanced on the sequence of events in ankylostomiasis are sound, the pathology of the disease, apart from the necrosis of the liver cells, is already sufficiently clear. That true haemolysis takes place is not yet conclusively proved, for the presence of yellow pigment in the liver, on which this view is based is not, as Stockman has shown, a *sine qua non* of haemolysis in the strict sense of the word. To explain the necrotic changes in the liver, the presence of a toxin seems necessary, but it has yet to be established that this morbid condition is a constant, or even frequent, feature of ankylostomiasis.

Prevention and Treatment.

The means of prevention of ankylostomiasis are fully expressed by the word "sanitation." It has been shown that the ova of the parasite will not develop into embryos unless the dejecta containing them are exposed to the oxygen of the atmosphere; consequently all that is necessary to arrest the spread of and stamp out the disease is to prevent this exposure taking place by burying the excreta. But, simple as the remedy is, the difficulties of applying it, without an Act of the Legislature making burial compulsory, are, in my opinion, insurmountable. It is, I think, the duty of sanitary officers to do all in their power to secure the compulsory introduction of some simple system of village sanitation whereby ignorant villagers will no longer be suffered to pollute their dwellings and poison themselves with their own excrement. But to obtain the necessary legal authority a good deal of pressure must be brought to bear on the executive, and until medical men themselves fully realize the fatal nature of ankylostomiasis they are unlikely to convince others that village insanitation is productive of such heavy mortality from that disease. (Sandwith has pointed out that solar heat destroys the ova and kills the embryos, provided exposure is thorough and prolonged.)

For the treatment of ankylostomiasis there is no vermifuge comparable to thymol. Three doses of the drug are generally given on the same day, at intervals of either half an hour or some hours. If after four or five days ova are still found in the dejecta, the thymol should be repeated as at first. This plan of treatment should be continued until all the parasites are expelled. The dose of thymol as a parasiticide is from 10 to 60 gr., according to the views of different men. The maximum dose, if used at all, should be reserved for fairly robust patients, while not more than 10 gr. should be given for a dose to those who are very ill or much advanced in years.

It can be administered in rice paper or stirred up in water. A good plan is to keep a solution in spirit of a definite strength, and pour the prescribed dose, at the time of giving it, into 2 oz. of water, which will release the thymol in a finely-divided state.

In using thymol the same precautions in regard to food and purgatives should be taken as when using other anthelminthics. The physiological effects of thymol closely resemble those of carbolic acid, and in cases of ankylostomiasis admitted into hospital in a prostrate state it is sometimes advisable, before administering the drug, to improve the patient's condition by a short course of digitalis and judicious feeding.

CONCLUSION.

Time has not permitted me to enter more fully into the many and varied features of this disease, but I venture to hope sufficient has been said to secure for it your earnest and serious consideration. Treated early ankylostomiasis is easily cured, but neglected it tends to a fatal issue. Therefore the dejecta of all persons who are received into hospitals, gaols, and asylums in the tropics should be searched for the ova of the parasite; and the diagnosis of no tropical disease associsted with anaemia should be considered complete until this investigation has been made, in whatever country the person suffering may come under observation. If the precaution to examine the evacuations of the patient who became the subject of a necropsy at the Johns Hopkins Hospital had been taken, his life would doubtless have been saved, whereas he died of anaemia with his disease unrecognized.

No clinical examination of a patient living in a tropical country where parasiticism is such an important etiological factor in disease can be deemed adequate which does not include a microscopical study of his blood and dejecta.

TRYPANOSOMIASIS ON THE CONGO.

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THE publication of the case of trypanosomiasis alluded to in the columns of the BRITISH MEDICAL JOURNAL some months ago, and at present under my care in the wards attached to the Tropical School at the Albert Docks, has been delayed intentionally, pending developments. Meanwhile I have received information about a similar case, also a lady, and whose infection was also acquired on the Congo. As this second Congo case presents several features of a suggestive character, both as regards the manner in which the infection was acquired and also as regards the symptomatology, I have thought it well to bring it forward, although the information about it is very incomplete, in the hope that by calling attention to the points I refer to further information bearing upon them may be elicited.

History.—On July 17th, 1901, a lady, aged 40, consulted me about a fever from which she had been suffering from time to time, and which was invariably preceded and accompanied by an erythematous rash on the face and trunk. The fever, she informed me, recurred with regularity about once in ten days; each attack lasted three days, and was followed by seven days of complete apyrexia. Rigor was not a prominent symptom. The erythema occurred in spots and patches varying in size from an inch in diameter to a patch 1 ft. across. Usually they presented a ringed appearance. The erythema subsided with the temperature. The patient informed me that she had resided for two terms, of two years and one year respectively, on the Congo. It was during the last of these that the disease developed. Both she and her husband dated her illness from the middle of 1900, and attributed it to a bite on the foot. What inflicted the bite they did not know but believed that it was an insect. The foot swelled and must have given considerable trouble, for "boracic lotions were used to take down the swelling." Two or three days after being bitten she sickened with what her husband described as a "big fever" of two months' duration. The temperature did not reach the absolute normal for quite three months. Erythema was a feature of the fever from the commencement. Being pregnant at the time she left the Congo for England. Throughout the voyage she suffered from fever. She arrived in England in April, 1901. A week later she was confined prematurely of an eight months' child. Since the confinement, and until

the time I saw her in July, she had had these attacks of fever and erythema about once in ten days. There had been a good deal of rheumatic-like pain in wrists, knees, and ankles, partially relieved by salicylates, which she said caused profuse sweating. She complained of weakness of vision, which I attributed to asthenopia from general debility.

Condition when First Seen.—The patient was somewhat anaemic but I detected no visceral disease; the spleen and liver were not noticeably enlarged. Unfortunately, from want of leisure, I made no blood examination.

After-history.—I again saw the patient in April, 1902. Meanwhile she had consulted an eminent dermatologist, who suggested that the erythema from which she continued to suffer might be a toxic eruption due to the quinine she had been taking more or less systematically. The quinine was accordingly suspended. She informed me that her general health had improved since her previous visit, notwithstanding the fatigue and anxiety of nursing her baby, who had been very delicate and who had died some eight months after its birth. She certainly looked better. The fever had been in abeyance for a considerable period until about three weeks before this her final visit to me. During these three weeks, and apparently in consequence of a cold, she had had three slight attacks; these were, as usual, associated with erythema, though the eruption was distinctly less pronounced than formerly.

Diagnosis of Trypanosomiasis.—Some three months later this lady and her husband returned to the Congo. I heard no more about her till lately, when I received letters from her husband and from Dr. Sims, of Leopoldville, announcing that Dr. Broeden, of the Leopoldville Bacteriological Institute, had found a trypanosoma in her blood. I gather from Dr. Sims's letter that reading of the cases of trypanosomiasis recently described, he had been led to suspect the nature of this lady's illness and had got Dr. Broeden to examine the blood. Her husband writes: "Her general health is now really good and she is much stronger than when in England; the fevers do not pull her down. Her eyesight, which had been affected, is now restored. She has had fevers for nearly five months every ten days; as soon as the fevers are over she is perfectly well; they are very slight. The fevers do not seem to be as trying as ordinary malarial fevers, especially those she is having now."

Dr. Sims informs me that Dr. Broeden subsequently found another case of trypanosomiasis in an official whose blood swarmed with the parasites; and he mentions a third case in which the patient went mad, and in whom, judging from the clinical symptoms, presumably fever and erythema, he surmised that the trypanosoma was present.

Thus within a few months we hear of no fewer than four cases of trypanosomiasis in the very limited European community on the Congo. From this we are driven to infer that trypanosomiasis must be alarmingly common in that part of Africa.

Etiology.—In the case related above the patient and her husband associated her illness with the bite on the foot two and a half years ago, and which was followed within two or three days by a severe continued fever of several months' duration. We have exactly the same history in the case of the other poor lady at present in the Seamen's Hospital suffering from advanced trypanosomiasis, namely, a sore on the leg, attributed to insect bite, and followed by a three months' fever—the initial fever which issued in a more chronic recurring intermittent fever.

The same sequence of events in the two cases strongly suggests that the virus in both instances was introduced by a bite. It would therefore be of great practical importance to ascertain what the animal that inflicted the bite may be. The thought occurs to me that this may be the poisonous tick of bug-like habits (*Argas moubata*) that Livingstone and afterwards Sir John Kirk and others have described as occurring at Tete and other places in the Zambesi valley. The following notes on this animal and its effects will appear in the forthcoming edition of my *Manual of Tropical Diseases*. The information is somewhat hazy, but it may be of assistance to any one having the opportunity to clear up what seems to me to be a cardinal and very important point in the etiology of trypanosomiasis.

Ornithodorus Moubata (*Argas Moubata*, Murray).

Dr. Livingstone was the first to describe the tick disease of Portuguese South Africa. He met with it at Ambaca and Tete on the Zambesi. He says: "The effects of the bite are a tingling sensation of mingled pain and itching, which gradually ascends the limb until it reaches the abdomen, where it soon causes violent vomiting and purging. When these effects do not follow, as we found afterwards at Tete, fever sets in; and I was assured by intelligent Portuguese there that death has sometimes resulted from this fever."

Later, Sir John Kirk referred to the same disease, which he found in the Zambesi valley as high up as Sesheke, above Victoria Falls. "The symptoms," he says, "appear soon after the bite, and are sharp fever, vomiting, and often delirium; in about two days these pass off, but there is no marked profuse perspiration as in malarial fever. After recovery the patient has complete immunity from further attacks however he may be bitten, but it is doubtful whether this immunity lasts for any length of time in case of removal."

Dr. Dowson, R.N., in a letter accompanying specimens of the tick sent to the British Museum, says: "The Portuguese believe that the severity of the subsequent symptoms depends on the number of bites received. Severe fever and dysentery, with great swellings around the anus, are stated to have occurred.....A Dutch trader assured me that he was bitten by one of these acari on the toe, and that the bite was very painful. A few hours later he was seized with most violent abdominal pain, vomiting, and purging. The stools contained blood. He was ill for three days afterwards, but said there was no fever at all."

Dr. Daniels, writing to me from British Central Africa, says: "I have come across tick fever. Usually several ticks must bite; they produce a small lump, which remains for two or three days. In from five to ten days the subject of the bites gets an attack of abdominal pain with vomiting and purging. The stools are somewhat dysenteric. This lasts for nearly a week, and is accompanied by fever and rigors. After that, fever continues often for three or four weeks. Some people are not susceptible; others get only one attack; a few may have several, but in time they also become immune. The case I saw, an adult, was in the second week of the illness, and the purging had stopped. The temperature ranged from 100° F. to 102.3° F. Three blood examinations were negative. There were no physical signs."

In Tete the tick is called *kufu* or *bu* by the natives, *tampan* or *garrapato* by the Portuguese.

Mr. Pocock, the distinguished arachnologist of the British Museum, considers the Tete tick to be identical with *Ornithodorus moubata* found by Welwitsch in Angola. It has been confounded with *O. Savignyi* of Egypt, Somaliland, and British East Africa, but it differs from this allied but non-pathogenic species in several minute anatomical details.

O. moubata extends across Africa along the Zambesi valley and its tributaries. In habit it resembles the common bed bug; it inhabits old houses, hiding during the day in cracks and moving about actively during the night in search of the blood of man or beast. In some districts the natives protect themselves from the pest by plastering the walls and floors of their huts with mud and cow-dung; a practice adopted by the Boers, the Bechuanas, and nearly all the cow-keeping native tribes. They frequently smoke their huts to drive the ticks from their lodgement in the thatch. The Portuguese at Tete have a great dread of the *garrapato*, and always warn new arrivals not to place their beds on the ground, and to be careful to have the linside of their mosquito nets carefully searched for the tick before retiring for the night.

Amblyopia.

The patient in the case here reported complained at one time of defective vision. I made no detailed examination of the fundus, nor am I aware that she was seen by an expert ophthalmologist. Curiously enough, our patient at the Seamen's Hospital has a peculiar condition of the fundus oculi—a disseminated choroidal atrophy with pigmentary disturbance. It would be well, therefore, in suspected cases of trypanosomiasis to make an ophthalmoscopic examination. If choroidal disease be a usual feature in the infection, its discovery would be of value in diagnosis, especially in those cases in which the trypanosomes are very scanty in the peripheral circulation.

Prognosis.

The improving health in this last case encourages the hope that immunity may be acquired after a time in human trypanosomiasis, and that, therefore, the disease is not necessarily fatal.

TRYPANOSOMIASIS AND ITS CAUSE.

By ALEX. MAXWELL-ADAMS, Jun.,
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Before alluding to the causation of this disease I would make some remarks as to the question of priority of the discovery of the parasite. My grounds for doing so are that I observed the case on board the steamer before the researches of Dr. Dutton took place, and for four months afterwards had constant opportunities of following its progress. Finally at Bathurst I had the pleasure of a demonstration of the parasite in the blood by Dr. Dutton himself. I think that the priority of laying this discovery before the scientific public rests with Dr. Dutton, as announced first by telegraph from the Gambia, and afterwards published in his classical paper. There can be no doubt that Dr. Forde had previously observed a strange organism in the blood of his patient, and it is to be regretted he did not put this on record at the time.

The name "trypanosoma Gambiae" proposed by Mr. Dutton for this parasite is entirely inappropriate, as Dr. Manson has since shown it to have a greater geographical range, and I think it would only be a graceful thing to associate the name of Dr. Forde with it, and term it the "trypanosoma Fordii."

To the exact description of the clinical symptoms given by Dr. Dutton I would add a few remarks as to the pulliness of the eyelids observed in the case. This was entirely confined

to the under eyelids and the tissues below them, and varied greatly from day to day, presenting the striking peculiarity that at periods it was to be noticed only on one side of the face, a fact not noticed by previous observers. This I thought due to local conditions, possibly to a greater accumulation of the parasite in the capillaries of the part acting either chemically or mechanically for the time being.

The attack of pneumonia which the patient had on the steamer, and for which I attended him along with the ship's doctor, was, as Dr. Dutton remarks, atypical. It was rather a limited consolidation of the base of the left lung accompanied with a scant expectoration, which for two days inclined to be rather arterial in colour than rusty. When it ceased, no further expectoration of any kind whatever occurred. Might not this attack be due to a stasis of the parasite in the capillaries of the lung; has the time come to speak of a new form of pneumonia?

Now, as to the cause of the disease in man, I would venture to put forward a theory supported by a new fact not previously mentioned. The patient spent most of his time as master on board the Government river steamer, where, he informed me, he had been twice bitten by rats. Now, it is well known that trypanosomiasis is a common disease among such animals, and might it not be that a direct transference resulted in this instance? The rarity of it would support this, because it is seldom that one is so bitten. It it was conveyed by ties or mosquitos one would expect greater frequency. The original seat of the parasite, I would suggest, might be some insect (*pulex*) peculiar to, and living only on, the juices of the rat, which in its turn is capable of conveying it to man, acting as an intermediary. Mosquito curtains are decidedly a protection against ratbites, but as it is difficult to arrange them to satisfaction in a small steamer bunk, the patient probably was exposed when bitten.

At first sight one would expect the natives to be more exposed to the disease than Europeans from their surroundings, but the use of the curtain is fairly common among the natives of the Gambia, at least by the Mandingoes and Jollofs. The disease might perhaps be more frequent among the Pagan Jollas or Phoullas.

I would submit that the disease is conveyed by direct inoculation, and hence it is that the trypanosomiasis of horse and cattle has not yet been observed in man. Although I see no reason why it could not occur if direct inoculation took place. The rat harbouring such a parasite, with its propensity of biting sleepers, seems to me a probable cause. Points worthy of elucidation are as follows:

1. The nature of the rat trypanosoma of the Gambia, and its resemblance to or difference from that observed in man.
2. Is its origin to be found in any animal constantly parasitic on the rat; and, incidentally, is the ration board the local steamers an imported English rat or a native species?
3. Is the parasite to be found in the salivary secretion of the rat or man?
4. Has the trypanosome any relation to sleeping sickness?

It may be objected that sleeping sickness has not been observed in Europeans, but I submit that the case given in Henny's *Principles of Military Surgery*, third edition, 1829, case lxxvii, p. 469 (a white soldier returned from the West Coast) was in all probability a case of sleeping sickness. Though the symptoms of the two diseases are different might they not be different stages of the same process—in the first stage the parasite circulating freely in the blood, in the second stage accumulating in the brain tissue, and so causing somnolency through local anaemia?

Cases of sleeping sickness are not uncommon on the Gambia but are not often seen by European doctors, as the natives believe that the white surgeon, however well informed concerning other diseases, does not understand this complaint. They go to some native who undertakes the cure, which is entirely surgical. The method consists in the excision of the enlargements at the angle of the jaw, which are to be found almost universally in the earlier stages. It is said, when the operation is done in time, to be a certain cure.

It will be noticed that I have hinted that the rat is the intermediate host of the parasite. If the parasite has several metamorphoses, the origin is probably in some insect infecting the rat—the stages in man and the rat being identical.

If the above surmise be correct, the rat is necessary to the continuance of the life-history of the trypanosoma, its occurrence in man being accidental.

FILARIA PERSTANS.

By GEORGE C. LOW, M.A., M.B., C.M.,
Medical Superintendent and Tutor, London School of Tropical Medicine.

THE embryonic or larval forms of filaria perstans were first discovered by Manson in 1891 in the blood of a West African negro suffering from sleeping sickness, who was under the care of Dr. Stephen Mackenzie in the London Hospital. Later, in films of blood sent from Old Calabar and the Congo, he found the same parasite, and in 1897 described small sharp and blunt-tailed filarial embryos in specimens of blood sent by Dr. Ozzard from British Guiana, which he provisionally named filaria Ozzardi.

Daniels in 1897 confirmed the latter observations by finding that those embryos were very common in the blood of the aboriginal Indians of the interior of British Guiana, and in the following year he discovered the parental forms of the blunt variety.

Adult forms of the African blunt-tailed embryo were next found at the necropsy of one of the negroes who died from sleeping sickness in Charing Cross Hospital, and Manson, after a comparison of those with the British Guiana forms, came to the conclusion that they were identical, and so cleared up the life-history of his original embryos which he had named filaria perstans.

GEOGRAPHICAL DISTRIBUTION AND PREVALENCE.

South America.—Filaria perstans, as Daniels and Ozzard first pointed out, is very common amongst the aboriginal Indians in the interior of British Guiana, though not being found in Georgetown and the coast adjoining.

While studying filarial diseases in the West Indies in 1901 I did not once meet with it in the blood of large numbers of individuals examined in St. Kitts, Dominica, St. Lucia, Barbadoes, St. Vincent, Grenada, or Trinidad, but, as already mentioned, it was exceedingly common in British Guiana. Out of a total of 163 Indians seen in different parts of the dense tropical forests no fewer than 94, or 57.6 per cent., exhibited the parasite in their blood, 56 of those being pure infections, while in the other 38 it was associated with sharp-tailed embryos. Although it is not found in Georgetown and in New Amsterdam, nor the cultivated strip of the coast lying between those two towns, it is common on the coast to the north near the Venezuelan boundary where the forests come down to the sea, Warau Indians living at the mouth of the Waini river being found to be infected.

There is little doubt that the same parasite, if looked for, would be found in Dutch and French Guiana, Brazil, and in parts of Venezuela where the tropical forests are dense, and its distribution therefore is probably a much more extensive one in South America than we at present know of.

Africa.—Manson has shown that the parasite is common on the Congo, Old Calabar, and other parts of the West Coast of Africa, 30 out of 54 individuals showing it in blood slides sent to him by Professor Firket from the Congo, and 35 out of 61 in slides sent from Banza Mankeka. Further, Dr. Rice has lately informed me that he found filaria perstans in 50 per cent. of the people of Ibadan in the hinterland of Lagos, and the members of the Liverpool School of Tropical Medicine expeditions have also found it in other parts of the West Coast of Africa.

On the East Coast of Africa it is not found in the towns of Zanzibar or Mombasa; nor amongst the Masai, a large tribe inhabiting the highlands beyond Nairobi; nor amongst the Kavirondo, who dwell along the north-east shores of the Victoria Nyanza lake.

In Uganda, on the other hand, as Moffat, Hodges, and Cook have shown, it is extremely prevalent in many areas of that large province.

I found it in 86 out of 100 people from the Sese Islands to the south of Entebbe; in 62 out of 100 in Bulemezi and Mugema respectively, districts some distance north of the lake; and Moffat and myself got it in 76 per cent. of the people of Unyoro, the province lying to the east of the Albert Nyanza. In the Alur tribe, from near Wadelai on the Nile, Bagshawe and myself found that it was not so common, only 4 out of 48 having it. To the south Daniels found one case in a native of British Central Africa on Lake Nyassa.

PHYSICAL FEATURES OF THE COUNTRY WHERE FILARIA PERSTANS IS FOUND.

So far filaria perstans has only been found in or near the

equatorial belt, where the temperature is high and the atmosphere saturated with moisture, examples of those places being the tropical forests of South America, the steamy forests of the Congo, and Uganda, where tropical forests alternate with enormous swamps and open ground. In Kavirondo, as already mentioned, where the forest disappears and the land is covered with scrub and short grass, it is not found, nor on the grassy plains of the highlands of British East Africa. Towns, and areas where the forest has been cut down and cultivation taken its place, as on the coast line of British Guiana, are also exempt from it.

The Embryonic or Larval Form.

The anatomy and measurements (0.203 to 0.205 mm. by 0.0042 mm. broad) of the embryos of filaria perstans correspond closely to those of filaria Demarquaii, but it can readily be distinguished from those by its blunt or rounded tail.

Table I.

Date and Hour.	Case I. Number of F. Perstans in 5 c.mm. of Blood.	Case II. Number of F. Perstans in 5 c.mm. of Blood.	Case III. Number of F. Perstans in 5 c.mm. of Blood.	Case IV. Number of F. Perstans in 5 c.mm. of Blood.
Sept. 8th, 1902, 10 a.m. ...	16	12	10	15
,, 2 p.m. ...	8	17	10	17
,, 6 p.m. ...	19	8	13	19
,, 10 p.m. ...	10	6	10	10
Sept. 9th, 1902, 6 a.m. ...	10	4	18	10
,, 10 a.m. ...	14	15	8	14
,, 2 p.m. ...	10	10	10	10
,, 6 p.m. ...	7	8	11	7
,, 10 p.m. ...	5	10	11	9
Sept. 10th, 1902, 6 a.m. ...	11	10	9	15
,, 10 a.m. ...	10	10	10	10

Table II.

Case I.

Died 6 p.m., September 30th, 1902. Number of F. perstans in 5 c.mm. of blood on that day—8 a.m., 0; 4 p.m., 4. Necropsy, 6 a.m. Sept. 31st, 1902.

Enumeration of F. Perstans in 5 c.mm. of Blood from the Different Internal Organs and in Lymph.

Organ.	No. of Slides.	No. of F. Perstans in 5 c.mm. of Blood.
Heart, L. vent.	1	19
,, R. vent.	1	14
Lung, R.	1	14
,, L.	1	17
Liver	1	1
Spleen	1	0
Pancreas	1	2
Kidney, R.	1	0
,, L.	1	0
Aorta	1	30
Superior vena cava	1	16
R. common carotid	1	4
R. internal jugular vein ...	1	10
L. saphenous vein	1	7
Sup. longitudinal sinus ...	1	7
Subdural vein	1	8
Brain, capillary motor area...	1	1
R. middle cerebral	1	0
Smears not measured ...	—	—
Lateral ventricle fluid ...	1	0
Mesenteric gland, A. ...	2	0
,, ,, B. ...	2	0
,, ,, C. ...	2	0
Cervical gland	1	0
Femoral gland	1	0

Case II.

Died 3 p.m. September 16th, 1902. Number of F. perstans in 5 c.mm. of blood on that day—2 p.m., 7. Necropsy, 4 p.m., September 16th, 1902.

Enumeration of F. Perstans in 5 c.mm. of Blood from the Different Internal Organs and in Lymph.

Organ.	No. of Slides.	No. of F. Perstans in 5 c.mm. of Blood.
Heart, L. vent.	1	11
,, R. vent.	1	24
Lung, R.	1	10
,, L.	1	15
Liver	1	0
Spleen	1	0
Pancreas	1	1
Kidney, R.	1	8
,, L.	1	2
Aorta	1	10
Superior vena cava	1	10
R. common carotid	1	24
R. internal jugular	1	7
L. saphenous vein	1	10
Sup. longitudinal sinus ...	1	4
Subdural vein	1	8
Brain, capillary motor area...	1	8
Capillary at base of brain ...	1	1
Smears not measured ...	—	—
R. lateral ventricle fluid ...	1	0
Femoral gland	1	0
Neck gland	1	0
Mesenteric gland	1	0

The cephalic armature as seen in fresh specimens consists of a non-serrated prepuce, difficult to make out, and the little fang first described by Manson. A V-spot with the angle more obtuse than that seen in filaria nocturna is present, but it is difficult to say if a tail spot is or not. In stained specimens a break in the continuity of the central column of cells anterior to the position of the V-spot is seen. They have no sheath, and locomote freely over the slide on which one examines them. Their numbers in the peripheral blood vary, being equally numerous, however, by day as well as by night, that is, they observe no periodicity. The four cases in Table I demonstrate this.

In determining the number of filarial embryos in the blood at any given time, it is of the utmost importance that the same quantity of blood should be used each time, and it may not be out of place here to give the technique employed. A pipette graduated to 5 c.mm. may be used, and this quantity of blood, after being sucked up, is blown out on to a slide, spread out, and allowed to dry. The haemoglobin is washed out by placing the slide for a minute or so in water, and after this the film is fixed in alcohol and ether, stained with fuchsin or haematoxylin, and the number of filariae present accurately counted.

By this method an examination of the blood from the viscera and large vessels of the thorax in cases that have died reveals the fact that the special seat of selection of the parasites is apparently not in the peripheral blood but in that of the heart, lungs, aorta, and other large vessels. They are never found in the spleen, and only rarely in the liver and pancreas (see Table II).

The Parental or Adult Forms.

The parental forms of the embryonic filaria perstans, first discovered by Daniels in British Guiana, resemble fine coiled threads, the males being shorter and finer than the females. In both sexes the head is club shaped; the neck, narrower than the head, joins the body, which tapers somewhat as it approaches the tail, the latter organ having the cuticle thickened over it, forming two triangular appendages.

A well marked, musculo-cutaneous, non-striated layer encloses the body cavity, in which the viscera and generative organs are placed. The alimentary canal begins with a simple circular mouth, and extends almost throughout the entire length of the worm, ending on the concavity of the curve formed by the tail.

In the female the anus opens at the apex of a slight bulge or papilla on the cuticle; in the male it opens at the general level of the outside of the body, but has four pairs of papillae placed in front of it (preanal papillae) and one pair behind it (postanal papillae), and two unequal spicules may sometimes be seen protruding from the orifice. The two uterine tubes almost completely fill up the body cavity of the female, these being packed with eggs posteriorly and with embryos anteriorly, the latter escaping into the vagina, which unite and open externally some distance behind the head.

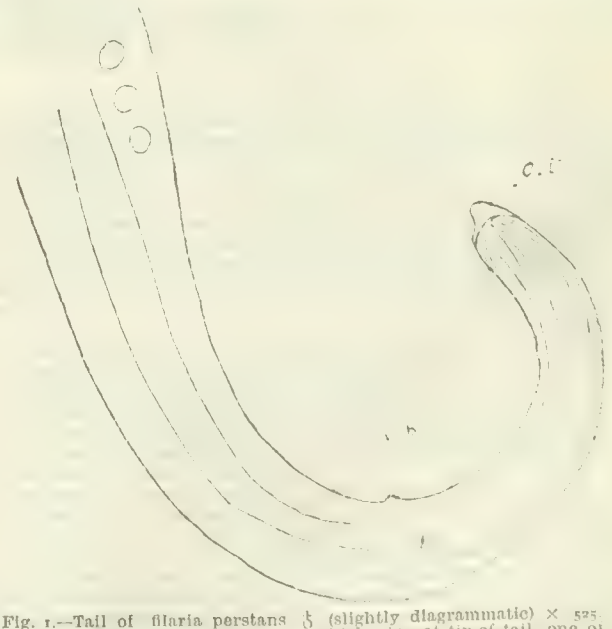


Fig. 1.—Tail of filaria perstans ♂ (slightly diagrammatic) × 525. *a*, *p*, anal papillæ; *c*, *t*, cuticular thickening at tip of tail, one of the triangular appendages only seen.

The adults inhabit the connective tissues at the base of the mesentery and may be found readily if some time is expended

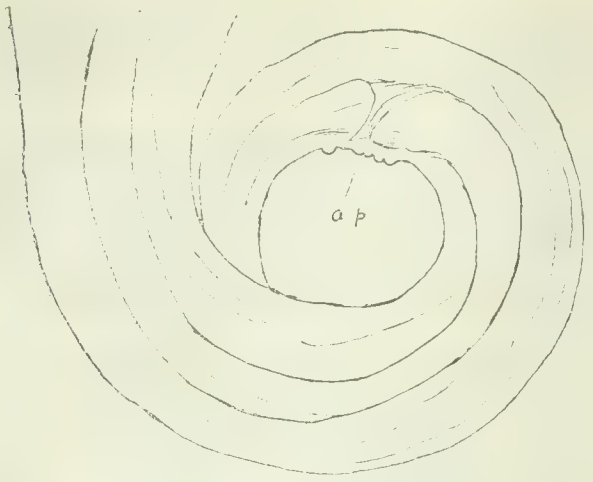


Fig. 2.—Tail of filaria perstans ♂ (slightly diagrammatic) × 525. *a*, *p*, anal papillae; tip of tail not seen.

on the research. The best method to adopt is to remove the whole of the mesentery from the intestines and the tissues at its base *en bloc*, and then to place them in 2 per cent. formalin. This is then dissected piecemeal at one's leisure, and with good eyes a lens is unnecessary. The worms when found may be placed in 2 per cent. formalin, and after measuring them, they should be mounted for permanent preparation with or without staining in glycerine jelly.

TABLE III.—*Measurements of an Adult Female and Male Filaria Perstans from Uganda.*

	♀	♂
Length...	50 mm.	34 mm.
Greatest thickness	0.160 mm.	0.104 mm.
Diameter of head	0.080 mm.	0.064 mm.
Diameter of neck	0.072 mm.	0.054 mm.
Distance from head of vaginal orifice	1.22 mm.	
Distance of commencement of uterus from head	1.60 mm.	
Distance of end of uterus from tail...	0.600 mm.	
Distance of anus from tail	0.160 mm.	0.120 mm.
Anal papillae	None	Four pairs of pre-anal papillae, one pair of posterior
Termination of tail	Cuticle thickened to form two triangular appendages	Cuticle thickened to form two triangular appendages

THE INTERMEDIATE HOST.

Analogy leads one to suppose that the embryo filariae must be sucked out of the blood by some insect in which they may undergo the metamorphosis necessary to enable them to become once more adult worms, and the peculiar distribution of the parasite and its association with dense tropical forests suggests some insect with a similar distribution. To determine the point a series of experiments were conducted with many different mosquitos and other insects, the procedure adopted being to catch the insects in infected huts or to rear them from larvae and then allow them to bite infected persons.

Subsequent dissections were then made, but with one exception all the results were entirely negative. In one isolated instance two forms, showing what has been described as a sausage shape, were seen in the thoracic muscle of *Taeniorhynchus fuscopennatus* (Theobald), and this is interesting, because Vincent and myself when working in Trinidad at the intermediate host of filaria Demarquaii found in several instances sausage-stage forms in the thoracic muscles of *Stegomyia fasciata* reared from larvae and fed on infected cases. Those, however, never developed further, and in dissections at later dates entirely disappeared.

The fact, however, of finding forms of perstans and Demarquaii in the thoracic muscles showing this stage of development suggests at once that if one could find the proper efficient host the embryos would migrate to that same region, and undergo a similar development to that of filaria nocturna in *Culex fatigans*.

Some of the other insects experimented on, all of which, however, gave negative results, were *Stethomyia nimbus*, of the subfamily of the *Anophelinae*, *Anopheles argyrotarsis*, *Culex fatigans*, *Culex atratus*, *Janthinonsoma musica*, *Culex viridus*, *Culex luteolateralis*, *Culex quasigelidus*, *Anopheles costalis*, *Anopheles funestus*, *Panoplites africanus vel uniformis*, *Uranotaemia caeruleocephala*, *Pulex irritans*, *Pulex penetrans* (chigger), *Pediculus capitis*, and *Pediculus vestimentorum*.

PATHOLOGY.

Filaria perstans, like filaria Demarquaii, gives rise to no pathological symptoms, the position of the worms in the connective tissues of the mesentery apparently causing no harm. A differential leucocyte count in a series of 8 cases showed that 5 had no eosinophilia, even though one of those had also bilharzial disease—a very common complaint in Uganda. The other 3—two children, one a young adult—showed an eosinophile percentage of 15, 16, and 19 respectively; but as their faeces exhibited the ova of ankylostomata, trichocephalus, and ascaris lumbricoides, it is difficult to decide to which of those the condition was due.

The idea that sleeping sickness was associated with filaria perstans is disproved by the fact that in British Guiana, where this parasite is common, there is no sleeping sickness, and vice versa in Kavirondo, where the latter disease is rife, there are no filariae.

SCREW-WORMS IN ST. LUCIA.

BY ST. GEORGE GRAY, B.A., M.B., B.CH.DUB.,
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THE screw-worm, which is the larval form of a small fly—*Chrysomyia* (*compsomyia*) *macellaria*, Fabr.—is one of the most important of all the insects that affect domestic animals in the New World. It does not confine its attentions, however, to the lower animals, for not infrequently it attacks man, and sometimes fatally. Its area of distribution is very wide, the species having been found in nearly all parts of America, from Patagonia to Canada, but it does the most damage within the tropical and subtropical belt.

I have seen numerous instances of its ravages in cattle, etc., chiefly in the navels of young calves and in barbed wire injuries. Not long ago I saw a goat with a cavity in its thigh caused by these worms into which I could have put my hand. Within the last few months I have seen several cases of screw-worm in man. These I shall briefly describe:

CASE I occurred in a young woman who was admitted to the Victoria Hospital, St. Lucia, with a sloughing ulcer on her upper lip. This spread rapidly, but was finally controlled by the application of pure formalin. Before the ulcer had healed, however, a large number of screw-worms were discovered in the nose. These were removed by injections of a dilute solution of izal, and the patient recovered with the loss of the greater part of the upper lip and of the septum nasi.

CASE II.—A man had his left hand and forearm amputated for malignant disease, which reappeared later in the axillary lymphatics. The affected glands broke down, leaving a large abscess cavity which was soon found to be swarming with screw-worms. As in the first case, these were removed by the dilute izal injections. But the patient succumbed to his original disease, dying of exhaustion several weeks later.

CASE III.—A young woman suffering from phthisis with diarrhoea. This patient used to throw off the bed clothes when sleeping, and one morning she found a worm in her bed. I examined her, and removed forty-six screw worms from her vagina and rectum. There was no wound and the patient seemed none the worse for her experience, but she is now more careful to keep herself covered while sleeping. This patient has since died of phthisis.

CASE IV was a woman with advanced phthisis. There was an offensive discharge from the nose, which afterwards became bloody, and then numerous screw-worms crawled out of the nostrils and mouth. I put five of these into a bottle with some earth, and twelve days later bred out five large flies similar to the flies which I had found attacking cattle, but many times larger. Dilute creolin injections soon removed the worms, and the patient improved somewhat, but her case was hopeless from the beginning, and she died just ten days after the last worm had been removed.

CASE V.—A man, about 50 years of age, received some slight injury to his left great toe. This was treated with *remède Créole*, which probably consisted of a mixture of various herbs, leaves, etc., boiled down with tallow, whale oil, and perhaps a little cow dung, and other ingredients. The result was a fetid ulcer, which soon became infested with screw-worms. On my first visit to him I removed twenty-two of the worms. I did not see him again for five days—he lived several miles in the country—and then found that my directions had not been carried out. The creolin lotion had simply been applied on a piece of rag without any attempt at cleaning the sore, which had now become a large suppurating cavity, in which I could still see a few worms moving. The end of the toe was gangrenous, and when I cut through a small bridge of skin in order to get at the worms at the bottom of the cavity, the ungual phalanx almost dropped

off, the last joint of the toe being attached by a strip of skin only. I cut through this, and removed the gangrenous part at once, and brought the patient to hospital, where I removed the other phalanx and scraped out the cavity with a sharp spoon. At the time of my second visit I took away all the worms that remained. In all sixty-seven worms were removed from this man's toe. The phalanges of the toe were completely destroyed, the bones being so rotten that they crumbled away when I attempted to seize them with forceps. This man is still under treatment and doing well, but, owing to the septic nature of the case and the great destruction of tissue his progress towards recovery is necessarily slow.

The fly which causes all this mischief is a small species, less than $\frac{1}{2}$ in. in length, although it varies considerably in size. The body is of a bluish-green (see below) colour, with metallic reflections, and covered with stiff black hairs. It is distinguished from other flies which are related to it by the presence of three longitudinal black stripes on the thorax. The head and eyes are of a brick-red or yellowish colour during life, but after death the eyes become darker.

In depositing its eggs it selects some wound or decaying matter, and lays a mass of eggs at once. I find them a great nuisance when I have to make a necropsy in the country, especially if the body is at all offensive, as it frequently is in the tropics. It is said[1] that at least three or four hundred eggs may be deposited by a single female within a very few moments, and that the same fly may oviposit at different times and in different places hundreds or even thousands of eggs. I think this an exaggeration. I have never seen as many as one hundred larvae in any one case.

The eggs are cylindrical like those of other flies, about one millimetre in length, and white. "Under the microscope the eggs show a prominent ridge on one side" (Weed). They hatch within from one to nine hours.

The larvae are whitish, footless, rather slender maggots, and quite active. They are composed of twelve segments, each with a ring of minute spines or bristles, giving the worm the appearance of a screw. They burrow into the tissues of the affected animal, or into the mass of putrid flesh or decaying matter that furnishes them food, devouring everything that comes in the way, even the bones (Case v), and, when they attack the head (nose, ear, or scalp), may penetrate to the cranial cavity and cause death. They grow rapidly, and mature in a week or less. When mature they escape from the wound or decaying mass in which they have developed, and bury themselves in the ground, or hide in crevices, bedding, etc., to transform.

The pupae are brown in colour, cylindrical, and rounded at the ends. The length of time passed in the pupa stage varies from nine to twelve days.

When freshly hatched the flies are brown, but after a very short exposure to the air they become blue or green. (See above.) All of those that I bred from larvae were blue, and all of those that I caught in the open were green. I killed and pinned all my flies without giving them a meal, so it is possible that the blue ones would have changed to green had they been fed.

I venture to suggest that the size of the adult fly depends upon the stage of growth that the larva has reached within the wound or sore before passing to the pupa stage. In Case IV the existence of screw-worms was not suspected until the full-grown larvae began to drop out of the patient's nose and mouth. These were quite large and fat, and the flies which were bred from them were nearly if not quite half an inch long. In Case V, on the contrary, the worms were discovered and removed when only half grown, and the flies bred from them were hardly, if at all, larger than ordinary house flies.

Owing to the immense area of its distribution (about half the New World) and to the nature of its ravages, it would be Utopian to expect that any remedial measures that could be devised would be successful in stamping out this pest; but much could be done to lessen the damage caused by it. Attention should be paid to the destruction of all kinds of filth, carcasses, etc., particularly in the country, and to the prevention of wounds, barbed wire scratches, and especially the punctures of tick, which, according to Weed and Francis, furnish the greatest number of cases in cattle.

The fatal cases in man are due to the deposition of eggs, mainly in the nostrils, sometimes in the mouth, and such deposition is most liable to occur to persons sleeping in the open air or to those suffering from catarrh. The evident precaution is to avoid these sources of danger by the use of mosquito netting or wire gauze for sleeping rooms, and of a protection for the nostrils when exposed in places where the flies are common.[2]

All wounds, ulcers, etc., should be covered with a suitable dressing, and care should be taken that flies do not have access to the sore while the dressing is being changed.

As a direct application for the sores infested with worms a wash of carbolic acid[3] or creolin is advised. After the worms have been killed and removed the sore may be dressed in whatever manner the medical attendant may think necessary. For cattle a final dressing of pine tar, or in deep sores a packing with oakum and coating with tar is recommended.

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1 *Bulletin*, No. 5, New Series, U.S. Department of Agriculture, Division of Entomology, p. 131. 2 Loc. cit., p. 132. 3 Loc. cit., p. 133.

THE DIAGNOSTIC VALUE OF BLOOD COUNTS IN MALARIAL AND OTHER FEVERS.

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IN the following notes I desire to publish the results of blood examinations I have made in the Medical College and Eden Hospitals, Calcutta, during the last nine months, with special reference to the diagnosis of malaria.

Technique Adopted.

I employ the usual method with the Thoma-Zeiss haemocytometer for enumerating the red blood corpuscles. In counting the white cells, however, I use the same pipette (namely, a 1 in 100 dilution) as for the red corpuscles, but I count whole "fields" of the microscope ($\frac{1}{6}$ lens), having previously ascertained the area of the field, and from this and the known depth of the space between the cover-glass and slide, ascertained the cubic contents of the space beneath the "field."

I usually count 100 squares on the marked slide supplied with the haemocytometer for the red corpuscles, and 100 "fields" for the white corpuscles. For the differential count of the white corpuscles I stain a large film on a slide with Ehrlich's haemotoxylin solution and eosin, and count 500 in all. I place them under the headings polynuclears, lymphocytes, large mononuclears, eosinophyles, and myelocytes. I always place "transitional" forms under the heading "polynuclears."

The differentiation of lymphocytes from large mononuclears is the most difficult part of the work, and for this I adopt the standard adopted by Captain Leonard Rogers, I.M.S.—namely, to place every single unlobed nucleated corpuscle which is as large or larger than a polynuclear under the heading "large mononuclears."

This portion of the blood diagnosis requires an amount of skill which will only be attained by a beginner when he has examined many normal bloods. Another difficulty to contend with is, that in severe malaria cachexia cases a number of nucleated red blood corpuscles are to be found in the blood. These will, if not recognized, cause one to give a too high total white blood corpuscle count, and a too high percentage count of lymphocytes in the differential count.

Again, in cachexia cases it may be quite impossible to find 500 white corpuscles on a slide, as they are sometimes very much diminished in number; but the fact that this difficulty occurs in any given case stamps it at once as a malaria cachexia case.

The method I refer to above for counting the white cells considerably shortens the time spent over each blood examination. Erhlich's haemotoxylin is a rapid stain for the nuclei of white cells, and the film can readily be stained while the white and red cells are being enumerated by the haemocytometer. The more the process of blood examination is shortened and facilitated the more likely it is to be universally adopted; but such as it is at present it is very tiring work, and three bloods at a sitting of three to four hours is the most any one can hope to do.

Skill acquired by frequent examinations alone will enable one to overcome the difficulties of blood examination. I find I have examined 197 bloods in nine months since I came to Calcutta.

Tabulation of Cases.

For the purposes of this paper I divide the 66 cases I am now publishing into three heads under Tables I, II, and III.

Table I shows cases recognized as malaria from the beginning and subsequently proved to be such by the clinical, quinine, and examination for parasites test. This table then is a sort of control and as such enhances, I consider, the diagnostic values of the blood counts exemplified in Tables II and III.

Table II includes cases not appearing at first by clinical methods to be malaria cases, in which the blood examination

TABLE I.—*Malaria Remittents recognized as such from the Beginning.*

Number of the Case in my Notebook.	Race or Religion and Sex.	Age.	Red Blood Corpuscles per Cubic Millimetre.	White Corpuscles per Cubic Millimetre.	Ratio of White to Red Corpuscles.	Percentage of Haemoglobin.	Colour Index.	Percentage of Polynuclear White Cells.	Percentage of Lymphocytes.	Percentage of Large Mononuclears.	Percentage of Eosinophiles.	Percentage of Myelocytes.	The Nature of the Case proved by the—
11	Mo., M.	32	2,360,000	4,032	1.5850	—	—	27.0	54.0	19.0	0.0	0.0	Clinical and quinine tests.
12	H., M.	24	1,248,000	8,364	1.1490	—	—	31.0	56.0	13.0	0.0	0.0	Ditto.
13	E., M.	25	4,016,000	3,808	1.1577	—	—	48.0	32.0	18.0	2.0	0.0	Ditto.
15	H., M.	40	2,306,000	1,836	1.1256	—	—	38.0	48.0	14.0	0.0	0.0	Ditto.
17	H., M.	20	3,280,000	4,590	1.7140	—	—	24.0	60.0	16.0	0.0	0.0	Ditto.
18	H., M.	22	2,624,090	5,814	1.4510	—	—	24.8	28.4	45.5	1.3	0.0	Ditto.
21	E., M.	21	3,880,000	1,190	1.3260	—	—	31.8	37.8	30.1	0.0	0.3	Ditto.
27	Mo., M.	28	2,000,000	6,824	1.2930	—	—	64.2	21.8	12.7	1.3	0.0	Tertian parasites in the blood.
33	N. Ch., F.	33	?	?	?	—	—	60.1	24.7	12.4	2.8	0.0	Clinical and quinine tests.
38	H., F.	29	2,216,000	7,140	1.3160	—	—	30.0	37.5	32.5	0.0	0.0	Ditto.
39	H, M.	40	2,832,000	14,790	1.1910	—	—	27.2	60.8	12.0	0.0	0.0	Ditto.
41	H., F.	30	3,952,000	5,820	1.5790	—	—	65.5	26.5	5.5	2.5	0.0	Clinical and quinine tests: attack short, only 6 days; never previous attack.
52	E., M.	26	3,240,000	4,600	1.7040	—	—	53.0	28.0	17.0	2.0	0.0	Crescents in blood.
53	E., M.	25	2,925,000	2,652	1.1464	—	—	25.0	55.0	20.0	0.0	0.0	Tertian parasites in the blood.
63	E., M.	28	3,333,000	700	1.4761	—	—	16.2	56.2	27.6	0.0	0.0	Clinical course and quinine test; death.
72	H., F.	36	2,562,000	1,500	1.1767	—	—	22.2	60.6	17.2	0.0	0.0	Clinical course and necropsy.
79	H., F.	29	1,928,000	30,600	1.6400	55	1.4	52.9	20.0	17.8	9.3	0.0	Clinical; cause of leucocytosis unknown, possibly pelvic.
112	E., F.	15	1,624,000	1,100	1.1467	48	1.4	29.8	47.3	22.9	0.0	0.0	Clinical; death two months later with large liver and spleen.
115	N. Ch., M.	10	3,712,000	2,700	1.1374	—	—	45.2	35.2	19.0	0.6	0.0	Tertian parasites in blood.
149	E., F.	32	2,752,000	1,316	1.2098	—	—	49.0	33.0	18.0	0.0	0.0	Clinical; death seven weeks later.
155	E., M.	20	2,000,000	1,500	1.1333	60	1.5	10.8	74.2	15.0	0.0	0.0	Clinical and quinine.
164	H., M.	45	3,600,000	5,100	1.7050	—	—	64.1	30.2	5.6	0.1	9.0	Tertian parasites found: 6 days fever only; no fever before.
173	E., F.	28	3,656,000	2,300	1.1586	—	—	55.8	37.8	0.64	0.0	0.0	Clinical and quinine tests; 8 days fever only.
181	E., F.	28	2,730,000	6,500	1.4200	58	1.06	41.0	50.1	9.8	0.0	0.0	History; clinical and quinine tests.

Mo., Mohammedan. E., European. H., Hindu. N. Ch., Native Christian.

TABLE II.—*Malaria Remittents the Nature of which was not at First Apparent.*

Number of the Case in my Notebook.	Race or Religion and Sex.	Age.	Red Blood Corpuscles per Cubic Millimetre.	White Corpuscles per Cubic Millimetre.	Ratio of White to Red Corpuscles.	Percentage of Haemoglobin.	Colour Index.	Percentage of Polynuclear White Cells.	Percentage of Lymphocytes.	Percentage of Large Mononuclears.	Percentage of Eosinophiles.	Percentage of Myelocytes.	Parasites Found.	Appeared at First to be—
22	H., M.,	32	3,560,000	3,060	1.1163	—	—	31.6	61.4	5.3	1.6	0.0	*Nil*	Hepatic liver abscess.
28	H., M.,	31	2,688,000	4,284	1.6290	—	—	56.7	28.6	14.7	0.0	0.0	,,	Liver abscess. Liver explored with negative results.
40	H., M.,	38	4,640,000	7,548	1.6140	—	—	34.0	54.3	11.7	0.0	0.0	,,	Typhoid fever.
44	Mo., M.,	24	2,180,000	10,000	1.2180	—	—	44.4	26.4	29.0	0.2	0.0	,,	Typhoid fever.
45	H., M.	30	2,480,000	8,432	1.2040	—	—	72.2	12.5	15.0	0.3	0.0	,,	Liver abscess.
48	H., M.	26	3,760,000	1,748	1.2151	—	—	27.8	36.1	36.1	0.0	0.0	,,	Typhoid fever.
58	H., M.	21	1,676,000	3,060	1.5580	—	—	28.8	51.2	20.0	0.0	0.0	,,	Typhoid fever.
60	H., M.	13	1,714,000	1,326	1.1292	—	—	16.9	67.2	15.0	0.9	0.0	,,	General tuberculosis; *post mortem* proved to be malaria.
73	H., M.	13	4,616,000	6,800	1.6790	—	—	50.5	31.2	17.9	0.1	0.3	,,	Enteric and pneumonia.
74	H., M.,	21	4,000,000	6,800	1.5890	—	—	40.0	46.0	14.0	0.0	0.0	,,	Typhoid.
88	E., M.	30	4,528,000	4,400	1.1132	—	—	40.0	23.8	30.2	2.7	3.3	,,	Pleurisy.
92	E., F.	24	5,648,000	6,038	1.9410	—	—	63.0	24.6	11.7	0.4	0.3	,,	Sepsis following miscarriage.
95	H., M.	27	1,696,000	1,800	1.9420	32	1.06	48.4	35.9	15.6	0.0	0.0	,,	Ankylostoma, anaemia, death.
96	H., M.	23	2,400,000	3,500	1.6850	—	—	40.4	18.8	40.5	0.0	0.3	Crescents numerous	Plague.
94	H., M.	27	2,640,000	3,200	1.8250	—	—	19.5	47.0	31.5	0.0	0.2	Quartan	Plague.
104	E., M.	25	4,600,000	5,400	1.8520	—	—	46.0	42.2	11.6	0.0	0.0	*Nil*	Enteric.
111	E., M.	18	5,064,000	3,000	1.1188	—	—	5.0	72.6	21.4	0.0	0.0	,,	Enteric.
112	E., F.	15	1,624,000	1,100	1.1467	48	1.4	29.8	47.3	22.0	0.0	0.0	,,	(?) Anaemia; death six weeks later.
120	H., M.	25	3,936,000	2,600	1.1513	—	—	40.0	43.0	17.0	0.0	0.0	,,	Enteric.
121	H., M.	28	2,012,000	3,760	1.5430	42	1.05	54.3	34.0	10.5	1.2	0.0	,,	Ankylostoma, anaemia.
125	H., F.	26	3,664,000	11,400	1.3210	—	—	57.3	23.2	18.5	0.5	0.0	,,	Sepsis after ovariotomy.
132	E., M.	43	3,208,000	2,000	1.1604	—	—	62.1	26.2	11.7	0.0	0.0	,,	Liver abscess; liver explored; negative results.
133	E., F.	15	2,464,000	2,400	1.1026	—	—	20.2	63.6	16.2	0.0	0.0	Crescents	Insanity.
134	E., M.	33	5,040,000	7,000	1.7200	—	—	74.3	15.0	10.7	0.0	0.0	*Nil*	Alcoholic coma.
137	H., M.	30	1,872,000	2,900	1.6450	—	—	16.5	66.0	17.2	0.3	0.0	Crescents	Cerebro-spinal fever or plague coma.
143	E., M.	26	5,136,000	3,000	1.1712	—	—	58.6	22.1	19.3	0.0	0.0	*Nil*	Plague (bubo present).
144	J., M.	16	4,032,000	1,900	1.2122	—	—	44.0	40.0	15.0	0.1	0.0	,,	Enteric.
146	E., F.	31	3,440,000	12,600	1.2730	—	—	66.8	14.8	18.4	0.0	0.0	,,	Puerperal fever.
150	N. Ch., F.	42	384,000	3,600	1.1060	15	1.9	57.8	23.4	17.6	1.2	0.0	,,	Ankylostoma, anaemia.
160	H., M.	30	1,144,000	38,000	1.3000	—	—	80.6	11.4	8.0	0.0	0.0	Crescents teeming	? Coma.
161	H., M.	14	4,400,000	10,000	1.4400	—	—	46.4	33.2	20.4	0.0	0.0	Tertian plentiful	Plague, delirious.
165	H., M.	29	3,656,000	14,300	1.2550	—	—	81.6	10.4	8.0	0.0	0.0	Crescents plentiful	Plague, delirious.
166½	H., M.	45	3,600,000	8,100	1.4440	—	—	84.1	10.6	5.2	0.0	0.1	Tertian teeming	Plague, comatose.

J., Jew. Mo., Mohammedan. E., European. H., Hindu. N. Ch., Native Christian.

proved the malarial nature of the cases before the clinical quinine or parasite tests, and which were subsequently undoubtedly proved to be malarial by the latter tests.

Table III shows cases the nature of which at first was not evident, which were suspected to be possible malaria cases, but which the blood examinations proved to be non-malarial,

TABLE III.—*Cases Clinically like Malaria at first; subsequently proved to be Non-malarial.*

Number in my Notebook.	Race and Sex.	Age.	Red Blood Corpuscles per Cubic Millimetre.	White Corpuscles per Cubic Millimetre.	Ratio of White to Red Corpuscles.	Percentage of Haemoglobin.	Colour Index.	Percentage of Polynuclear White Cells.	Percentage of Lymphocytes.	Percentage of Large Mononuclears.	Percentage of Eosinophiles.	Percentage of Myelocytes.	Cases were proved to be Non-malarial by Blood Count as well as by.
26	H., M.	32	3,640,000	15,484	1.235	—	—	86.1	12.5	1.4	0.0	0.0	Operation. Liver abscess.
32	H., M.	32	3,662,000	15,788	1.189	—	—	77.0	16.7	5.0	1.3	0.0	Ditto.
34	H., M.	21	4,200,000	12,546	1.350	—	—	75.0	15.0	6.4	3.6	0.0	Ditto.
70	E., M.	54	3,500,000	13,400	1.269	—	—	87.7	8.5	3.6	0.2	0.0	Patient left hospital with a suspected liver abscess.
128	E., F.	32	4,568,000	14,900	1.306	—	—	80.0	14.5	5.5	0.0	0.0	Subsequent course, namely, sepsis following confinement.
148	H., F.	29	3,872,000	15,000	1.251	—	—	82.0	12.4	5 2	0.4	0.0	A case of fever after Caesarean section. On discovery of a stitch abscess temperature fell to normal.
162	E., M.	28	4,800,000	11,200	1.428	—	—	80.0	15.6	4.4	0.0	0.0	Clinical course and failure of quinine. Patient left hospital refusing operation for a liver abscess.
177	E., F.	32	3,904,000	9,800	1.398	—	—	75.9	17.4	5.1	1.6	0.0	Failure of quinine and subsequent course, namely, pelvic abscess.
185	H., F.	25	4,696,000	60,000	1.70	—	—	89.4	8.6	2.0	0.0	0.0	Failure of quinine. Successfully treated by antistreptococcus serum.

H., Hindu. E., European.

and in many the blood examination gave the first hint as to the nature of the case.

Analysis of Results in Tables I and II.

As first indicated by Drs. Christophers and Stephens[1] and subsequently fully confirmed by Captain Leonard Rogers, I.M.S.[2], it will be seen that the cases in Tables I and II show an excessive percentage of large mononuclears. My experience leads me to follow Captain Rogers in fixing 12 as the limit, a large mononuclear percentage above which is diagnostic of malaria.

From the 57 cases in Tables I and II a percentage of cases giving the 12 per cent. large mononuclear count can be estimated.

Before doing so, however, I will exclude four cases—namely, numbers 160, 161, 165, and 166, Table II. as they are examples of a curious condition in malaria—namely, leucocytosis, which I will discuss later. Excluding these four cases, there are 53 cases of malaria remittents, 44 of which give the 12 per cent. large mononuclear count, and 9 fail to give it. This works out at 83 per cent. giving the count, and 17 per cent. failing to do so.

But I consider Cases 40, 83, 104, and 132, Table II, giving percentages of 11.7, 11.6, 11.6, and 11.7 respectively may fairly be considered to give the 12 per cent., as they are so near that figure, especially as they conform to some other characteristics of malarial blood, as will be shown afterwards. If these cases be included we get 48 cases giving the mononuclear count out of 53 cases, or over 90 per cent.

Now, if this result be compared with the diagnosis that was possible of the same number of cases by finding malarial parasites; out of the 53 cases parasites were found in 9 cases, that is about 17 per cent. I think I shall be supported by most observers in India that this about represents the percentage of success in finding malarial parasites in the malarial fevers of India at a single examination, and on this point both textbooks and writers on the subject are, I consider, very misleading. If, then, the diagnosis of malaria can be made in over 90 per cent. of cases by the blood count against 17 per cent. by the parasitic test, there can be no question as to which is the superior method.

I should perhaps have mentioned that in all the cases in the three tables I carefully searched in fresh specimens for malarial parasites: and that the house-physicians of the Medical College Hospital invariably did so too, and noted the results on the clinical notes of the cases. These notes I have always perused with the object of ascertaining if the house-physicians found parasites.

Other Features of the Blood Count in Malaria.

Besides (*a*) the increase of large mononuclears in malaria, the cases in Tables I and II illustrate other features of the blood count in malaria.

(*b*) The lymphocytes are usually largely increased (Cabot). Taking the normal percentage of lymphocytes at between 20 per cent. and 30 per cent., or say 25 per cent., they often run up to 60 per cent., or even over this in malaria.

(*c*) The total white blood corpuscle count is diminished (Cabot and Rogers, and others). Taking the normal as 7,500 white cells per c.cm., it will be seen that the majority of the cases in Tables I and II give a lower count than normal. They are so much diminished that the relation of white to red cells frequently rises to 1 in 1,000 or more, instead of the normal of about 1 in 600. Indeed the more severe the case the more marked those figures become.

(*d*) Myelocytes are frequently present to an appreciable extent. Myelocytes are, no doubt, "occasional visitors of the blood" from the bone marrow as Cabot writes, but they seem to be frequent enough visitors in malaria (Rogers).

(*e*) The red blood corpuscles are diminished, but the loss of white cells seems to be much greater than that of the red cells as a rule, as many of the cases in the tables illustrate.

(*f*) The haemoglobin is so much less diminished than the red cells in anaemic cases that the colour index is usually above 1.

Prognostic Value of the Blood Count in Malaria.

A reduction of the white blood corpuscles to 1,500 or less is of grave prognostic value. In such cases it is the experience in the Medical College Hospital that large doses of quinine hypodermically will alone save the patients, and frequently enough this will fail to avert a fatal issue. Thus in Cases 149 Table I, and 60, 85, and 112 Table II, death resulted in spite of large doses of quinine hypodermically and by the mouth. From this it will be seen that the blood count has a distinct prognostic value, a point which will probably be more fully worked out later.

Captain Rogers, I.M.S., has frequently pointed out to me in the *post-mortem* room and pathological laboratory the association of marked atrophy of the mucous membrane of the small intestine with the failure of immense doses of quinine by the mouth, and will, I hope, publish the results of his investigations in this direction at an early date.

Exceptions to the Malarial Blood Count.

In certain cases the 12 per cent. large mononuclear count and the other characteristics of the blood in malaria may not be present.

1. If the fever is very recent in one otherwise previously healthy, the blood changes may not have time to take place, and the first examination of the blood may give a count from which nothing can be inferred. This occurred in Cases 41, 164, and 173 (Table I) in which the fever had been present, only 6.6 and 8 days respectively, and the patients either stated that they had never previously had fever or had not had fever for some years. Case 41 represents about the normal blood count for a native woman. Case 164 shows a slight (probably beginning) blood change in the diminution of red cells, slight rise of lymphocyte percentage, and slight rise of large mononuclears. It will be seen that a few tertian parasites were found, and from this one can infer that the patient had not recently taken quinine; and from this again that he had not recently suffered from fever. Case 173 shows a still more advanced malarial blood change, for remembering that the patient was a European female, the diminution of red and white cells and high ratio of white to red cells, along with diminution of polynuclears and slight increase of lymphocytes, gives a blood picture of probably the early stages of malaria. The temperature rapidly fell to normal under quinine treatment. In cases such as these, should the fever continue the 12 per cent. large mononuclear count is likely to be obtained some days later, and should always be sought for. These three cases will, in part at least, account for some of the 10 per cent. failures to find the large mononuclear count in my cases.

2. If leucocytosis is present from any cause the characters

of the blood may not appear to be those of malaria. In this case the 12 per cent. mononuclear count may be apparently absent, though not really so. Thus a total white blood corpuscle count of 12,000 may give but 8 per cent. of large mononuclears. Still, this would represent a very high percentage for 12,000 white cells, and probably equals about 16 per cent. large mononuclears for a white corpuscle count of 6,000 per c.mm. A number of my cases gave the mononuclear count in spite of leucocytosis, such as Nos. 39 and 79, Table I; and 44, 125, 146, and 161, Table II. On the other hand, considering the high total white corpuscle count in Nos. 160 and 165, the 8 per cent. large mononuclear counts given in these cases is more than sufficient to justify one in calling the cases malarial.

3. If the temperature is up to 103° or more at the time the blood is taken the malaria count may be absent. As it is not always possible to be present at the period of remission in the fever, and should the temperature be above 103°, it is advisable not to take the blood until remission occurs.

Is a Leucocytosis ever found in Uncomplicated Malaria?

Cases 160, 161, 165, and 166, Table II, were examples of very severe malaria with leucocytosis. In all of them parasites were very numerous in the peripheral blood. In the diagnosis of liver abscess from malaria by the blood count, leucocytosis in the former is so constant as to be almost diagnostic. To this I would add that these four cases furnish the exception "that proves the rule." These cases would seem to indicate, however, that when this exceptional leucocytosis does occur parasites are so numerous in the blood that diagnosis from a fresh specimen is an easy process.

Leucocytosis in malaria seems to be comparatively rare, as it has not been much noted before. Dr. Manson, in his book on *Tropical Diseases*, pp. 98 and 99, edition 1900, mentions that an increase to as high as 30,000 may occur in the white cells in certain pernicious malarias, and Captain Rogers[3] mentions the possibility of it at certain stages of the malaria paroxysm.

These were all severe cerebral cases, and were either very delirious or comatose. They were admitted into the contagious ward at first as suspected cases of plague, and clinically there was nothing to distinguish them from septicaemic plague. They occurred during the month of September, when our most severe pernicious malarias occur in India. Immediately on admission I examined the bloods, and, finding parasites in the fresh specimens, at once transferred them to the general ward.

If I might be permitted to theorize on the point, I would say that leucocytosis in those severe malarias indicates a reaction of the blood to the intense poisoning, and that in these same severe cases the leucocytosis varies directly with the intensity of the poison. The converse to this latter rule no doubt holds good—namely, that the more chronic the malaria the more marked the leucopenia, as in Case 63, Table I, and Cases 85 and 112, Table II, which were markedly cachectic from malaria, and all died.

Case 143, Table II, deserves special mention, as it very well exemplifies the diagnosis from blood count alone of malaria. The patient, a European policeman of good physique, was admitted to the plague ward as a suspected case of mild plague. He had a well-marked right femoral bubo, temperature 105°, with severe constitutional symptoms, though not delirious. There was no wound on the leg or foot and no sign or history of venereal disease. Fresh specimens carefully examined showed no malaria parasites, but the blood count was so typical that I transformed him to the general ward. His temperature fell in two days under quinine, with occasional intermissions every third day afterwards. The bubo disappeared.

Value of Blood Counts in the Diagnosis of Post-operative and Post-puerperal Fevers in the Tropics.

Cases Nos. 83 and 146, Table II, were examples of what a blood count can effect in the diagnosis of post-puerperal fevers. The nature of those cases was in doubt, and with this of course the proper line of treatment uncertain, up to the time the blood counts were done. On subsequently giving quinine the temperatures came down almost at once. No. 83 had had fever for four days, and 146 for five days after miscarriage and confinement respectively.

Cases 128 and 185, Table III, were markedly in contrast with the foregoing. Case 128 was thought to be possibly malarial and quinine given, but she died of puerperal fever. Here, again, the blood count foretold the condition at an early date.

The patient, Case 185, Table III, was delivered ten days before the blood examinations, and had had fever since her confinement. She looked very ill, and might have been clinically either a severe malaria, typhoid, or puerperal case. It will be seen that the leucocytosis is exceeding high (the highest, in fact, of any of my blood counts). I gave the opinion from the blood count that she was suffering from septicaemia (there were no local signs whatever), and I recommended antistreptococcus serum. In two days after the injections of five phials of the serum the temperature fell to normal, and remained so for seven days more. On the next day (eighteenth day since confinement) the temperature ran up again to 103°, with rigor; and on examining the blood I got the following results: Red cells, 2,528,000: white, 18,000; ratio, 1—140. Polynuclears, 70 per cent.; lymphocytes, 19.3 per cent.; mononuclears, 10.7 per cent. In spite of some leucocytosis still present it will be seen that the large mononuclears are very high. Fresh specimens showed no parasites. I gave it as my opinion that the patient was now suffering from malaria. She got no quinine, but her temperature fell to normal. Two days later the fever was repeated, with rigor, hot stage, and sweating. Quinine was now given, and the patient got well. In my opinion this patient's life was probably saved by the blood count.

Case 148, Table III, also deserves mention. She was operated on by Caesarean section seven days before the blood examination, and had had fever for four days. I concluded that the blood condition was indicative of some local inflammatory process, and suggested "stitch abscess." This was carefully sought for and found, and on removing the offending stitch the temperature fell, and the patient completely recovered.

Diagnosis of Liver Abscess from Malaria.

It is no unusual occurrence in India to get cases of fever, with pain, tenderness, and enlargement of the liver, in which large doses of quinine is the proper line of treatment, though exploration of the liver seems clinically to be indicated. Cases 22, 28, 45, and 132, Table II, are examples. The livers were carefully explored without success in Nos. 28 and 132. No 28 recovered under quinine. No. 132 was taken out of hospital four weeks later than the blood count, in a dying condition. Nos. 22 and 45 recovered under quinine. Contrast the blood counts of those cases with Nos. 26, 32, and 34, Table III, which were clinically not unlike malaria remittents, without local signs, at the time of the blood counts. All were subsequently successfully operated on for liver abscess.

I cannot conclude this paper without owning my great indebtedness to Captain Leonard Rogers, I.M.S. Without the help he gave on all occasions when I sought it, I should probably never have had the patience to persevere until I possessed the skill necessary to examine the blood properly and interpret the results.

Finally, I would repeat, for the benefit of those who wish to test the value of blood counts, especially in malaria, that the skill to examine the blood and to interpret the results will only be obtained by repeated examinations of normal bloods, and that the greatest difficulty to surmount is in differentiating large mononuclears.

REFERENCES.
1 Royal Society's Malaria Committee *Report*. Fifth Series. 1901. 2 BRITISH MEDICAL JOURNAL, April 5th, 1902. 3 Loc. cit.

BERI-BERI AMONG LASCAR CREWS ON BOARD SHIP.

BY D. W. KEILLER MOODY, M.D., C.M.ABERD.,
Late Surgeon, P. and O. Steam Navigation Company.

BERI-BERI among Lascar crews is a common occurrence, and it may therefore be interesting, in view of the controversy as to its etiology, to look at what is likely to be the cause of the disease on board ship.

Passing over the predisposing causes, such as occupation, age, sex, climate, and overcrowding—and the latter does not occur on board ship (P. and O.), as the Lascars have the same superficial and cubic space as is allowed to European seamen—we come to the specific causes.

The anaemic theory is exploded, the cockroach theory has also little ground, as although they are numerous, yet they have practically no chance of getting infected from faeces, as the latrines are too well looked after. This also may be said of the metallic theory, since the only way of infection would be through cooking utensils. One is therefore drawn by a

process of exclusion to fall back on the rice and germ theories.

I am inclined to favour the view that rice is a prime factor in the disease, and that probably the germ, whatever it is, is intimately connected with the rice. I am certainly of the opinion that rice alone will not give rise to beri-beri, for beri-beri is unknown among the rice-eating millions of Bengal. Still we must remember that rice is the stable diet of the Lascars, and when this diet is changed and they are taken from the infected area, Dr. Manson admits himself they will recover (if not dead within a fortnight).[1]

The following is the scale of provisions for Lascars or other native seamen as per Board of Trade regulations:

	lb.	oz.	drms.
Rice	1	8	0
Dhal	0	4	0
Ghee	0	2	0
Salt	0	0		
Salt fish at sea	0	4	0
Curry stuffs	0	0	10
Fresh meat in harbour	0	4	0
Vegetables	0	8	0
Tea	0	0	4
Sugar	0	1	8
Lime juice after being ten days at sea ...	0	1	0

I think the burden of evidence is distinctly in favour of the rice theory, and many papers have been written to support this view. In the Japanese army and navy in 1884-1885 beri-beri was a serious complaint, but it was almost entirely eliminated by the improvement in diet, the conclusion being reached that it and rice were intimately connected, and that lack of nutritive substance was the cause, and consequently the introduction of barley into the diet along with rice caused a speedy diminution of the disease, and that no other hygienic condition had anything to do with the result.

Then, again, there are Captain Rost's investigations,[2] in which he examined rice liquors from different sources and of different kinds, and he found organisms in these liquors which proved identical.

Then, again,[3] example is given of outbreak of beri-beri on board a ship, where the disease resisted all treatment until the rice was thrown overboard and another fresh lot taken in, and then it stopped. As against this theory there is quoted the outbreak of beri beri in the Dublin Asylum,[4] but it is questionable whether this was beri-beri; also an instance of beri-beri breaking out among European officers.[5]

The two following cases are of interest. The first, as illustrative of the danger which young and inexperienced surgeons in tropical diseases are apt to fall into in giving a favourable prognosis in a case of beri-beri on board ship; the second, because it looked as if the patient had developed beri-beri by direct contagion, a view which is not upheld by any of the authorities on beri-beri.

Case I.

A Lascar reported sick on the morning of October 1st, 1900, on voyage home from Calcutta.

History.—He complained of pain in the calves of his legs, and said he felt tired and unable to work. Serang said he was a good worker, and was not lazy.

Present State.—Pulse 84, small, compressible, regular. Repirations 16; temperature 98°. Bodily conformation only fair; he was rather thin, medium height. Visible mucous membranes normal. There was slight oedema over the flat of both tibiae, but none anywhere else. There was a certain amount of anaesthesia over the front of the tibiae, but it was difficult to make out. The nucles of the calves were flabby, and on pressing against the bones the patient called out. No other tenderness could be elicited. The circulatory system was normal, except that the second pulmonary sound was accentuated. The respiratory system was normal. The tongue was clean and moist; the bowels slightly constipated; the liver dullness was normal. The knee-jerks were present and equal; ankle clonus was not obtained; the superficial reflexes were present. There was slight ataxia. I asked him to button his coat, and I noticed there was slight difficulty. His gait was not ataxic, but he walked as if tired. He passed his urine without any trouble, took his food, and slept well. The urine was of specific gravity 1020, acid, and straw coloured. No albumen.

Treatment.—I isolated him, putting him in an airy cabin in the other end of the ship, changed his diet and put him on the usual treatment.

Progress.—His symptoms remained much the same for the next six days, food being taken well. On the eighth day I visited him before breakfast and found him smoking a cigar. This and his general appearance put me off my guard, and I told him that I thought he would be ready for duty next morning. He complained, however, of some pain in his abdomen. That same night (9 p.m.) he commenced vomiting, and though at the time I did not recognize the significance of this symptom I saw, however, that there was something seriously wrong with him. He was pale and complained of post-sternal pain and dyspnoea. The pulse was quick and of low tension, intermittent, the extremities cold. There was epigastric pulsation; the cardiac impulse was diffuse. The deep cardiac dullness extended from 1 in. outside nipple line to the right of the sternum. The first sound at the apex was loud and followed by a loud "blowing" murmur conducted into the axilla and to the angle of the left scapula and could be heard there. The second pulmonary sound was both accentuated and reduplicated. The first sound at the base was followed by a murmur which was conducted into the carotids. He died in great distress in the early morning conscious up to the last.

Manson[6] in his book on *Tropical Diseases* gives a striking picture of such a case. "He was struggling for breath, his eyes were starting out of his head, and his whole attitude was expressive of the utmost distress." No necropsy was held, and he was buried at sea. A lesson which seems to be taught by this is that when beri-beri is diagnosed one must, at least on board ship, always be prepared for serious symptoms suddenly developing themselves. The case just described was one which I did not consider sufficiently ill to prevent his working and certainly his symptoms were such as to make one take such a view, yet he died within a few hours. The vomiting was probably due to the pneumogastric nerve becoming affected and death due to subsequent implication of the cardiac plexus.

One of the other officers told me he had seen a native suffering from beri-beri suddenly fall down dead, so that my experience is evidently not unique.

As Dr. Manson says: "In the matter of death and recovery beri-beri is a disease of surprises. It is an exceedingly risky thing to venture on a prognosis in a case of beri-beri."[7]

Case II.

A Lascar reported sick, October 11th, 1900, on voyage home from Calcutta.

History.—He complained of weakness, pain, and swelling in his legs.

Present State.—The pulse was 100, of low tension, irregular. Temperature, 99°. Respirations, 20. Bodily conformation very good; visible mucous membranes pale; oedema was present in a marked degree. It was present on the dorsal surfaces of the feet, on the legs and thighs, and in the small of the back. Anaesthesia was well marked over the whole of both legs, and hyperaesthesia of the calf muscles was also present. The apex beat could be seen and felt in the fifth interspace, half an inch outside the nipple line; the impulse was diffuse, and there was epigastric pulsation. The deep cardiac dullness extended from the right of the sternum to the apex beat. The first sound was followed by a loud blowing murmur conducted into the axilla, but I could not trace it further; second sound sharp and accentuated. Second pulmonic both accentuated and reduplicated. At the base the first sound was followed by a loud murmur conducted into the carotids; the second sound was accentuated. A certain amount of dyspnoea was present, and there were a few fine crackles heard at the base of the left lung. The tongue was clean and moist. Bowels regular. Digestion good. No difficulty in micturating. Fluid in abdomen could not be made out. The liver dullness extended from the fourth rib to a quarter of an inch below the costal margin in the nipple line. The legs and small of the back were oedematous, but not the scrotum. The muscles were tender all up the legs. The knee-jerks were absent; ankle clonus was not obtained; all the superficial reflexes were present except the plantar. Ataxia was well marked. He could walk with difficulty, but ankle-droop was not present. Romberg's symptom was present. When I laid him down and asked him to raise his legs he had difficulty in doing so. His arms were also affected, and he had difficulty in fastening his coat. Anaesthesia was well marked in both legs, and in the small of the back, but I could not make it out in the arms. The special senses and muscles connected with them were normal. There was no difficulty in making water, but he said he did not pass so much as usual. Urine, specific gravity 1025, and high coloured, and contains lithates; no albumen. Ordinary treatment was adopted.

Progress.—On October 12th there was very much more oedema, the arms and face commencing to swell. Crepitations occurred at the bases of both lungs. Slight shifting dullness made out in the abdomen; liver dullness increased to ½ in. below costal margin in the nipple line. He was transferred to another ship at Port Said, and sent to Bombay as an invalid.

Manson[8] says, "There is no conclusive evidence to show that beri-beri is communicable from one person to another," and I do not put forward this second case as evidence that direct communication does take place. Still the man showed no previous signs of beri-beri, and as he occupied the bunk of Case No. 1, who had died, the whole of the Lascar quarters, and his bunk in particular, having previously been thoroughly disinfected, it is a significant fact to notice that two days afterwards he developed a severe attack of beri-beri.

References.

[1] *Lancet*, November 23rd, 1901. [2] *Indian Medical Gazette*, December, 1900, and July, 1901. [3] Ibid, September, 1901. [4] British Medical Journal, September 24th, 1898, p. 876. [5] British Medical Journal, 1897, vol. ii, pp. 390-392. [6] *Tropical Diseases*, Article on Beri-beri. [7] Ibid. [8] Etiology of Beri-beri, *Lancet*, November 23rd, 1901.

There are at present 186 women physicians in Philadelphia. A number of these are said to make 10,000 dollars (£2,000) a year, while a large proportion average from 2,000 (£400) to 3,000 dollars (£600) a year.

NOTE ON THE CHANGES IN THE RED CELL PRODUCED BY THE MALIGNANT TERTIAN PARASITE.

BY

J. W. W. STEPHENS, M.D.Cantab., and S. R. CHRISTOPHERS, Lieut. I.M.S.,
Liverpool School of Tropical Medicine.

THE "stippling" of the red cell produced by the simple tertian parasite is well known. The appearance is that known as Schüffner's dots, and is seen most characteristically in specimens stained by the Romanowsky method.

In the case of the malignant tertian parasite a change in the red cell is also known, observable in the fresh specimen, and described by the Italians as "*globuli rossi attonati*," or "brassy corpuscles." We do not think, however, that it is at all generally recognized that characteristic changes in the red cell may be seen in stained films in the case of the malignant tertian parasite. As far as we are aware, we ourselves first pointed out this change when working in Central Africa in 1899. We wrote: "The corpuscles containing these developed parasites (malignant tertian) themselves show alteration in staining properties. They present minute clefts or spots, scattered over the cell, staining slightly with haematein." We from time to time observed the same change, more strikingly shown, however, when staining with Romanowsky, in West Africa and India; and lately in cases of malignant tertian in England we have met with marked examples of this change.

The appearance of the stippling in the case of malignant tertian is quite distinct from, though probably of similar character to, that seen in simple tertian.

Malignant tertian "stippling," if we may so call it, is characterized by the fact that—

1. The staining dots are few in number—2 to 6.

2. They are coarse in size and irregular in outline. The appearance, stained by Romanowsky, is so characteristic that it cannot be confused with the fine and abundant stippling of the simple tertian infected cell. In addition, the red cell as a whole may stain a peculiar deep yellowish-red colour, in striking contrast to non-infected cells.

The stippling is well shown by staining with Romanowsky (Leishman's method) for an hour, and washing well with water, or rapidly with equal parts of spirit and water to take the blue stain out of the red corpuscles. Most striking and characteristic specimens can also be obtained by fixing in chloroform, then staining with Romanowsky. The stippling shows beautifully in every cell containing a parasite, possibly from the fact that much of the haemoglobin has been dissolved out of the film by the watery stain.

We think Ruge, we regret we cannot recall where, has lately drawn attention to this malignant tertian form of stippling. The fact that it has been overlooked hitherto we think may depend to some extent upon its requiring a somewhat long staining for its best demonstration.

If the stippling of the red cell in a case of malaria is used as a diagnostic sign, errors may arise unless it is realized that a form of stippling is to be seen in cases of malignant tertian. It is important also to note that the malignant tertian coarse stippling is as characteristic of this parasite as the fine and abundant stippling is of the simple tertian parasite.

A CASE OF THE FORM OF CHRONIC JOINT DISEASE IN CHILDREN DESCRIBED BY STILL.

BY F. PARKES WEBER, M.D., F.R.C.P.LOND.,
Physician to the German Hospital.

THE patient, A. S., who was shown at the Medical Society in April, 1902,[1] was then a typical example of the articular affection in children, described by Dr. G. F. Still in 1896.[2] The disease seems to have commenced acutely at the end of the year 1900. In November, 1901, there was a definite attack of endocarditis, and the mitral valve was affected. In April, 1902, the knee-joints and elbow-joints were somewhat enlarged; but the most striking features of the case were the symmetrical swellings about the articulations of the hands and feet, and the stiffness in the cervical region of the spinal column. The spleen and liver extended considerably below the ribs, and the lymphatic glands in the neck, axillae, and groins were enlarged, but not greatly so. The cardiac apex beat was felt 1 in. outside the nipple line, and a systolic murmur was heard at the apex.

Since that time to the present the boy has been kept under observation. In May, 1902, there was a slight attack of catarrhal jaundice, and occasionally in May, June, July, and August the temperature was slightly raised. In September the general condition and the articular affection were improved, but there were crackling and signs of fluid in both knee-joints. There was no fever from the middle of August to the middle of December; the child continued to improve, and in December neither the liver nor spleen were felt. Unfortunately, the boy then got enteric fever, and from December 16th, 1902, to January 18th, 1903, there was more or less pyrexia, and later on again, between January 30th and February 19th, there were occasional elevations of temperature to about 100° F. During the attack of enteric fever the boy became emaciated, and his spleen was considerably swollen, but lately he has been putting on flesh and gaining rapidly in health and strength, and has had no fever since February 19th. Now (March 16th, 1903) he appears happy and active. His joints are almost normal, with the exception of crackling in the knees and slight spindle-shaped enlargement about the finger-joints. He can move his head freely, and the rigidity of the upper spinal column, which was such a marked feature of the case a year ago, has practically disappeared. The spleen is slightly enlarged, but the lymphatic glands cannot be felt, except the inguinal ones, which even in healthy persons are very often slightly enlarged. The heart is still somewhat enlarged (apex beat in fifth space, $\frac{3}{4}$ in. outside nipple line), and a very soft apical systolic murmur can still be detected. The urine shows nothing abnormal, and the blood (haemoglobin 90 per cent. of the normal) contains 4,060,000 red cells, and 14,064 white cells in the cubic millimetre (the white corpuscles in January, 1902, were 31,000). Lately the boy has been given cod-liver oil and malt and a little Easton's syrup, and he has had a tepid bath in the mornings with a cool douche over the back.

This case appears to show that the rheumatoid articular affection in children described by Still is sometimes practically recovered from. But the damage to the mitral valve of the heart has left its mark, and the crackling in the knees seems to show that in these joints a change has supervened, resembling that in chronic rheumatoid arthritis of adults. The original affection in the present case seems to me to have been, or at all events to have been complicated with, a form of true rheumatism, as far as such an expression may be used at all in the present state of our knowledge. Probably the most important part of the treatment has consisted in the child being kept away from the unsatisfactory conditions of its own home since May, 1901, care in regard to diet, etc.

NOTE AND REFERENCE.

[1] I termed the condition "an infantile form of articular rheumatism." The child was shown a second time at the Medical Society, March 23rd, 1903.
[2] A Form of Chronic Joint Disease in Children, *Med.-Chir. Trans.*, vol. lxxx, p. 47.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

VOLKMANN'S CONTRACTURE.

ACCORDING to your interesting report of the meeting of the Clinical Society of London,[1] under the presidency of Mr. Howard Marsh, several patients exhibiting Volkmann's contracture were shown by Dr. Dudgeon. In each there had been serious injury to the humerus, and splints had been used, in one case for four days, in another for only twenty-four hours, before the symptoms of contracture were manifest.

Is it necessary, I would ask, to incriminate the use of the splints in all such cases? Is not the limitation by the skin of the exudation following the injury sufficient to cause a pressure paralysis and contracture?

I saw last year a boy, aged 10, with what appeared to be a simple dislocation backwards of the elbow, which was easily reduced under chloroform. No splints were applied, the arm being simply flexed, enveloped in cotton wool and a soft bandage. In less than twenty-four hours there was complete

[1] BRITISH MEDICAL JOURNAL, March 7th, p. 547.

immobility of the fingers, with great oedema of the hand, and there gradually developed a trophic ulcer on the dorsal aspect of the ring finger, with extreme hyperaesthesia of the palm of the hand, and paralysis of muscles supplied both by the ulnar and median nerves that persisted for months. An *x*-ray examination two days after the injury showed a fracture of the tip of the internal condyle. These conditions obtained for nearly four months with little alteration.

Dr. Robert Jones of Liverpool, and Dr. Lynn Thomas, who happened to be in Paris, then saw the patient, and, by the advice of the former, I applied a splint strongly extending the wrist. Dr. Jones pointed out that the flexors could be trusted to maintain their power, and that the weaker extensors must be artificially aided by a daily increase of the amount of extension.

Thanks to the use of this splint for nearly a month, and patient, daily, thorough massage for several months, the lad made a complete recovery from what at one time threatened to be a permanent deformity. More than eight months were required, however, in all for the treatment.

Such cases—and the discussion at the Clinical Society—are, I think, evidences of the increasing recognition of the value of massage and movement as compared with fixation and rest in the treatment of injuries.

A. A. Warden, M.D.
Visiting Physician to the Hertford British Hospital, Paris.

PALMAR PSORIASIS.

I have met in lectures, and again the other day in an accepted textbook, the unqualified dogmatic assertion that palmar psoriasis is "invariably of syphilitic origin." Once only have I seen this etiology limited to cases in which the affection was "confined to" the palms or soles. The adoption of the former teaching, if it be incorrect, may lead to a presumption seriously unjust to the patient, as writing him down a liar, if he denies ever having had syphilis. In the interests of truth and fair play I would like to say that for years I had psoriasis, first of one and then of both palms with no single patch of it anywhere else, and yet I never in my life had syphilis of any form, hereditary or acquired. During the last year or two I have observed what feels like a small patch over the coccyx, but, prior to its appearance, either form of the categoric dogma given above would have led to a mistaken etiology and consequently mistaken treatment.

Goxhill. Thos. M. Watt.

RUPTURE OF THE SPLEEN DURING PARTURITION AS A CAUSE OF DEATH.

I was asked recently to make a necropsy, in conjunction with Dr. Wilson, of Belfast, upon an infant that had died a few hours after birth.

We found the child well nourished and apparently of full term. There were no external marks of violence whatever, but upon opening the abdominal cavity it was found to contain several large clots. We examined each organ *in situ* and found no haemorrhage or breach of surface in any except the lower end of the spleen, which was embedded in a large mass of clot; on gently removing the clot the capsule, about half an inch from the tip on the anterior surface, was found torn across and displaying the splenic pulp, which was somewhat diffluent. As the other organs were apparently healthy we could only conclude that haemorrhage from the spleen was the cause of death.

I may add that the manner in which parturition took place was somewhat unusual, as the mother was standing at the time and the child was expelled forcibly by a severe pain, and only saved from striking the floor by being caught in her petticoat. There was no doctor or nurse in attendance at the time.

Belfast. Hiram Monypeny, M.D.

CASE OF METATARSALGIA.

With reference to Dr. Cristalli's report on the connexion of Morton's disease with pregnancy, published in the January number of *Archivio di Ostetricia e Ginecologia*, a well-marked case of this disease originating during pregnancy has come under my observation.

The patient is an officer's wife, and became pregnant for the second time about two years ago. She had been resident in the East about two years at the time. Shortly after the commencement of gestation she proceeded to a Himalayan summer resort for the hot season. At first she did a good deal of riding, and believes that in mounting she strained one of the "leaders of the foot" to use her own words.

She had recently returned from a trip to England, and in consequence was not in good training for horseback exercise. Her husband was not with her, and, in consequence, she was obliged to mount a frequently fresh, and always restive, pony from a chair or mounting block. This makes the story of a strain of the flexor tendons a very probable one. After the second month of pregnancy she abandoned equestrian exercise, and under medical advice took fairly long walks. When fatigued she invariably suffered from severe pain between the heads of the third and fourth metatarsal bones of the left foot, which was occasionally paroxysmal in character, but more often of a dull boring character. Rest and mild anodyne applications always gave complete relief, and the patient completed her gestation, and gave birth to a healthy child without any untoward symptom.

During the period of lactation the pododynia seldom occurred, but since the patient has returned to her full round of social duties and pleasures she suffers from severe paroxysms of pain which often almost cripple her. The pain is strictly confined to the left foot and only comes on whilst walking or dancing. The pain is at once relieved by sitting down and removing the shoe and placing the foot flat on the ground. There is no tendency to flat foot, on the contrary the longitudinal arch of the foot is exceptionally well-marked. The foot is broad, but it can hardly be said to be more so than usual and is not broader than the right foot, which has presented no signs of metatarsalgia. The lady has only suffered from malarial fever on two occasions, but is a martyr to typical brow ague, which is intractable to treatment. She is anaemic and has lost flesh considerably since the onset of the disease. She wears boots and shoes of the usual fashionable type and no amount of persuasion will induce her to adopt foot gear constructed on hygienic principles for constant wear.

I have assured her that unless she does so there can be no hope of successful treatment. Obviously in such a case the heroic measures advocated by Morton are out of the question.

R. J. Blackham.
Captain Royal Army Medical Corps.

ADRENALIN IN HAEMATEMESIS.

This preparation seems a very useful addition to our pharmacopoeia. In two cases of haemorrhage from the stomach it has been singularly successful; in both the dose was 25 minims of Parke Davis solution of adrenalin chloride 1 in 1,000.

The first case was that of a woman of 68 with symptoms pointing to malignant ulceration. It was given in 90 minims of water; vomiting and haemorrhage stopped after the first dose—only two were given. There has been no more haemorrhage or vomiting for the last eight weeks.

The other case was one of simple ulceration in a woman aged 31. In this case it was given in ½ oz of water, but there was no more haematemesis or vomiting. It was continued for six doses, as the haemorrhage had been profuse and persistent. There has been none for six weeks.

Haverfordwest. Yarnold H. Mills,
M.B.Lond., F.R.C.S.Eng.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

WEST LONDON HOSPITAL.

CASE OF SPIRAL IMPACTED FRACTURE OF THE TIBIA.

(Under the care of Mr. Stephen Paget, Surgeon to the Hospital.)

[Reported by H. Meredith Speirs, M.B., House-Surgeon.]

R. M., aged 55, was admitted into the hospital under the care of Mr. Paget on the morning of February 24th, 1903. Patient, who was a feeble old man, gave the following account of his accident:

History.—He was employed by a dairy company to drive round in their vans and hold the horses. On the morning he was admitted the horse he was looking after bolted; to save himself patient jumped from the van, and landed with both feet firmly on the ground. His feet remained fixed, while his body swung round to the right. He felt a sharp pain in his

left ankle, and was unable to rise, so was brought to the hospital.

State on Examination.—When admitted he was found to be suffering from a fracture of his left leg. The left foot was everted to a right angle, so that the outer border of the foot and the little toe lay flat on the bed, while the patient lay on his back with the patella on that side looking directly upwards. There was no swelling of the tissues in the region of the fracture or the ankle. He could not flex or extend his ankle-joint. On grasping the foot one could not put it back in position or elicit the slightest amount of crepitus; but severe handling caused the patient some pain. The patient was taken to the *x*-ray department, and the fracture was looked at with the screen. The tibia was found to be fractured in a spiral manner, due to the forcible rotation inwards of the limb upon the adducted foot, the weight of the body being transmitted downward in a vertical direction. The strain was evidently insufficient to fracture the fibula, which was intact. The fracture commenced on the inner surface of the tibia, 1 in. above the malleolus, and ended on the anterior surface 3 in. above the same point, the line of fracture joining the points in an "S"-shaped curve. The displacement of the fragments was the usual one described, namely, the upper fragment passing downwards, forwards and inwards; the lower upwards, backwards and outwards.

Treatment and Progress.—The question was, what was to be done for an old man with a fracture which had set itself by becoming impacted? Unfortunately, the foot was in too bad a position to be left alone. So on February 26th the patient was given chloroform, and the fracture was disimpacted. It required some considerable force to break down the impaction, and when the ends separated they did so with a snap. The foot was then easily brought into good position, and the limb put up in a Neville's splint. Patient was left in the splints for five days, during which time he was very comfortable, and there was no swelling of the limb. On March 3rd the splints were taken off, and the limb rolled in plaster bandages. On March 5th the patient was discharged from hospital quite comfortable.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Alfred Willett, F.R.C.S., President, in the Chair.

Tuesday, March 24th, 1903.

Paroxysmal Haemoglobinuria of Traumatic Origin.

Mr. C. W. Ensor and Dr. J. O. Wakelin Barratt communicated this paper. The case was of special interest since the attacks of haemoglobinuria were associated with preceding violence. The subject of the paroxysms was a lunatic who for some years had contracted a habit of beating his forehead with the palm of his right hand. At irregular intervals this habit took the form of a bout of extreme violence lasting for half an hour to one hour or longer; such bouts were quickly followed by haemoglobinuria. Indications of local syncope and local asphyxia were absent, nor did the paroxysms depend upon exposure to cold. The interdependence of the paroxysms and the bouts of violence was shown by the fact that (1) every attack studied had been preceded by a bout of violence; (2) no undoubted instance of bout of violence not being followed by haemoglobinuria had been discovered; (3) restraining the patient from beating his forehead tended to reduce the number of paroxysms. The haemoglobin was present in the urine in the form of oxyhaemoglobin. A small amount of a compound giving an absorption band in the red of the solar spectrum was also present. The amount of haemoglobin lost during a paroxysm was equal to that contained in 1.5 gr. to 2.0 gr. of the patient's blood. The suggested explanation of the attacks of haemoglobinuria was as follows: The self-inflicted violence caused extravasation of blood into the subcutaneous tissue. Haemoglobin rapidly passed out of the red cells owing to the local development of an autolysin. The dissolved haemoglobin entered the blood stream and became rapidly filtered off through the glomerular epithelium of the kidneys.

Dr. Louis W. Sambon pointed out that the authors were obliged to surmise that the blows caused an effusion of blood, although there was no evident bruising of the skin. They were also obliged to assume a haemolysis. He was rather inclined to believe that the violence was an accompaniment of the cause producing haemoglobinuria. Horses and other animals did suffer from haemoglobinuria, but it was not due to muscular exertion as had been believed, but to a specific parasite. The cause of paroxysmal haemoglobinuria was very obscure, and he would be loth to add traumatism to the already long list of assigned causes.

Dr. J. W. W. Stephens drew attention to some of the points of resemblance between this case and cases of blackwater fever due to malaria. In blackwater fever the bands of methaemoglobin were commonly found with those of oxyhaemoglobin, and not infrequently those of urobilin. If the urine in a patient were examined before the appearance of the blackwater it might be found to contain urobilin and albumen, and also traces of a nucleoproteid as in this case. The only means of predicting an attack was the observation of the occurrence of these substances Was the doubtful band described by the authors reducible, and, if so, were the bands of reduced haemoglobin or of reduced haematin obtained? In blackwater fever the sediment consisted of yellow-stained matter, part of it being of the nature of granular casts as seen in kidney disease and part of so-called clotted haemoglobin. Haemoglobinaemia was often not to be detected in blackwater fever on examination of the serum, but it was often jaundiced. The explanation offered by the authors might be the correct one as to a deficiency in the total amount of colouring matter in the form of haemoglobin, but this would not apply to blackwater fever, in which the colour was intense. The isotonic point of the red corpuscles in blackwater fever was often changed; there was a relative increase of cells with lower isotonic point. The changes in the leucocytes were not strictly comparable in the two conditions.

Dr. Vaughan Harley thought that haemoglobin would occur in the urine in any case in which it occurred free in the blood. The case was almost an experimental demonstration of the power of blows to produce haemoglobinuria. He wondered if the authors were wrong in attributing the escape to haemolysins; he thought mechanical vibration might so shake the corpuscles as to liberate the haemoglobin. The presence of urobilin was not of much significance, as it was present before the attacks. He supposed malaria might in this case be absolutely excluded.

Dr. Archibald E. Garrod referred to the objection of adding another cause to the long list. But as cold was not the cause of paroxysmal haemoglobinuria and yet it was a common exciting cause of paroxysms of the condition, so traumatism might be an exciting cause. The cases occurring on exertion formed another group of cases in man, and it seemed as if the muscular exertion in the man's case described might have had a causal effect. The explanation, he thought, was not to be found in the friability of the red blood corpuscles but rather in the presence of some destructive substance in the blood of some patients.

Dr. W. Bulloch thought that haemolysis might occur in two ways either directly as by ether, or in a more complex way mostly by animal products, such as the cobra venom. In the latter usually two substances occurred, one linking on to the other—the immune body and the complement. Was the destroyer of red blood corpuscles in this case of the first or second class? The case seemed to show that trauma might be a definite cause, but the blood destruction was probably not due altogether to mechanical vibration, but rather to the local beating which might develop a destructive body, since in this case there was little or no extravasation of blood. In cases of paroxysmal haemoglobinuria it had been suggested that the poison might be produced locally, as by Ehrlich, for example, in the epithelial cells of the vessel wall.

Dr. Wakelin Barratt, in reply, said that scientific proof had practically been given that the attacks were due to traumatism. The resemblance to blackwater fever, in that urobilin was always present in the urine, suggested that it might be presumed that it had a destructive influence. There was a technical difficulty in reducing the band. When the urine was passed there was no deposit; after standing, a coloured deposit of phosphates and urates formed. By grinding up blood cells in a mortar with salt solution the haemoglobin could not be liberated; this was against the vibration theory. There was no bruising, but there must have been extravasation of blood because of the extreme violence continued for a long time. The production of haemolysins from the epithelial cells was of great interest, but a way of demonstrating it in this case was not clear.

Molluscum Fibrosum in Children.

Dr. Arthur H. Robinson and Dr. Arthur Whitfield contributed a further report on a remarkable series of cases of this disease occurring in children communicated to

the Society by Dr. John Murray in 1873. The patients were originally three in number, two females and a male, and constituted the second, third, and fourth children of a family of five, the eldest and youngest being healthy. When described by Dr. Murray the abnormality consisted in the presence of numerous tumours, varying in size from that of a pea to that of a walnut, and situated on the face, head, ears, back, and extremities. Similar growths were also found on the gums, and the terminal phalanges of the fingers were buried in purple tumours. This condition was most marked in the eldest child, a girl aged 7, but a similar state of things was to be observed in the boy, aged 3 years and 9 months, with the exception that his fingers were not affected, and also to a very slight degree in the girl aged 2 years. Of these three children, one, the youngest, had been dead some time, and nothing further could be found about her. The eldest lived in a home for incurable patients, and was visited and the size and position of the tumours in the present year carefully noted. The male died in Islington Infirmary, and photographs were taken after death, as well as material for histological examination. The chief change in the female patient appeared to be the enormous growth of the tumours in size rather than in number. Instead of reaching the size of a walnut as a maximum, they now formed in places, especially the buttocks, great lobed masses larger than an orange, those on the ears alone being as large as the fist. One or two new ones appeared to have developed, whilst one at least seemed to have disappeared. The male patient also showed enormous development of the original tumours in a similar manner, and the formation of a large number of small subcutaneous tumours about the fingers and toes. Histological examination was made of portions taken from the nose, ear, and fingers. The two former pieces presented identical appearances, namely, that of a tumour composed of a hyaline ground substance containing fine connective-tissue fibres and large cells, while the latter showed partly similar growth and partly ordinary fibroma. The tumours from the nose and ear seemed to blend with the corium, and might be called cutaneous, while that of the finger was distinctly subcutaneous. No nerve fibres or elastic tissue were found within the tumours, which were fibromata and not neurofibromata.

Sir Thomas Barlow had had these cases under his observation for many years after the death of Dr. Murray. In regard to the etiology, Dr. Murray had thought the tumours due to insanitary conditions, but years after the birth of the children the father came under observation with undoubted malignant disease. The eldest of the children was certainly the most severely affected, and the youngest was least, and in her the disease was not progressive, as it was in the two former cases. Each of these children was liable to intercurrent febrile attacks, in some cases with increase in the size of the tumours and to attacks of dermatitis. In one case, after removal of a tumour surgically, there was very alarming surgical fever. The mental condition of the eldest patient was defective, and there was deafness. The defect was less in the second, and least in the youngest.

Dr. A. H. Robinson, in reply, said the mental condition of the patient when he had seen him was similar to that of the eldest sister as described by Sir Thomas Barlow.

CHELSEA CLINICAL SOCIETY.

Annual Clinical Debate.

C. C. Gibbes, M.D., M.R.C.P., President, in the Chair.

Tuesday, March 17th, 1903.

Diabetic and Non-diabetic Glycosuria.

Dr. Robert Hutchison, in resuming the adjourned discussion on this subject, said that from the point of view of dietetic treatment the distinction between diabetic and non-diabetic glycosuria was of fundamental importance. The object of treatment in all persistent cases was to rid the blood of the excess of sugar. The justification of this was twofold: hyperglycaemia was in itself a danger, for not only was it responsible for the excessive thirst from which diabetics suffered, but it certainly tended to aggravate, if not actually to cause, many of the complications incidental to the disease. Every one must have seen cases in which a perforating ulcer or a sloughing cellulitus or a pruritus had obstinately resisted all ordinary treatment, but had immediately begun to do well so soon as the excess of sugar had been removed from the blood by dieting. An even stronger justification for diminishing the hyperglycaemia was that the power of assimilating carbohydrates tended to get less and less so long as their unrestricted ingestion was allowed, whereas after a period of suitable treatment the assimilative power tended to increase, and ultimately might almost, or even quite, reach the normal. There was no routine diet suitable to all cases of glycosuria alike. In some, such as the transient non-diabetic cases, it might not be advisable to make any alteration in diet at all; in others, such as the alimentary forms and mild cases of true diabetes, restriction of carbohydrates was all that was necessary, whilst in the severest cases the carbohydrates might require to be reduced to *nil* and the proteids limited as well. In order to ascertain to which class any given case belonged, the proportion of carbohydrate in the diet should be gradually reduced until sugar disappeared; if this did not happen until the proteids were lessened too, then they were dealing with a severe case. He thought it was better to reduce the carbohydrates gradually, for cases seemed to occur in which sudden change in the diet brought on coma. There was an impression that it was impossible to devise a carbohydrate-free diet which a patient would tolerate for any length of time. Thanks to the introduction of the casein preparations of breads manufactured largely from casein and of sugar-free milk it was now possible to construct quite a tolerable diet almost entirely free from carbohydrates. He could not speak too highly of the advantages of sugar-free milk as an aid in dieting diabetics, and could not at all agree with Dr. Hale White that a limited amount of ordinary milk usually did no harm. Dr. Saundby had spoken of alcohol as an exciting cause of glycosuria. He would be sorry if it should be inferred from this that alcohol was injurious in diabetes. It was of the greatest assistance in the dieting of these cases, and especially seemed to make it easier for the patient to take plenty of fat, which was the most important thing of all for every diabetic, fat being the one nutrient constituent of the food which seemed to be free from danger for those patients.

Dr. Hector Mackenzie said that to avoid errors from the possible sources of fallacy in the test for sugar commonly employed they must first see that the Fehling's solution was in good condition by boiling with an equal volume of water for two minutes, and noting that no change took place in it. They must next be careful that not more than half a volume of urine was added to the Fehling's solution and that the mixture was only brought to the boil. Almost any concentrated urine, if boiled with Fehling's solution for some time, would produce a change in colour. If the test was properly carried out, and produced only a greenish-yellow colouring, they could not say whether sugar was present or not without further tests. He had notes of four cases which had occurred during the last few years where medical examiners for insurance had reported slight traces of sugar. In three of those everything else was favourable, but the cases were not proceeded with. One eventually went to another office and was accepted at ordinary rates. The course advised by Dr. Mackenzie was that such applicants should supply one or two further specimens, and if those were normal the so-called trace of sugar might with safety be ignored. The assimilating power of all, even in health, was not unlimited. They all knew that even in health sugar would appear in the urine if undue amounts of various kinds of sugars were administered: 6 to 8 oz. of glucose, 4 oz. of lactose, and intermediate amounts of cane or fruit sugar, would cause the corresponding form of sugar to appear in the urine. It was impossible, however, in the normal subject to produce glycosuria by the administration of starchy food. He particularly drew attention to those cases of glycosuria of a temporary and transitory character which approached the borders of true diabetes. In insurance work, and more rarely in medical practice, cases of glycosuria were met with which appeared to be of an accidental character. He wished to emphasize the fact that it was possible for a person to have sugar in his urine on one or more occasions without having diabetes. If sugar was present more or less persistently, but only in small quantity, and there were no symptoms of diabetes, he thought from a clinical point of view it was preferable to call the case one of glycosuria. A considerable proportion of over-fat persons occasionally passed sugar in their urine. It was said that glycosuria occurred in about 33 per cent. of all cases of marked corpulency. The deposit of fat in the tissues was Nature's way of dealing with a greater supply of carbohydrate than was required to supply the needs of the tissues, but there was a limit to the powers of storing up fat, and then sugar was passed on into the urine. If those cases were taken in time and dieted, sugar would probably disappear, and the amount of fat be reduced to safer limits. In some

gouty subjects sugar was occasionally and intermittently present usually in small amounts. According to von Noorden, gout in middle life might be followed by glycosuria in later life, or attacks of gout might alternate with the presence of glycosuria, or an attack of gout and glycosuria might coexist.

Dr. EWART said that in his experience the most hopeful treatment of diabetes of the young was by hygienic measures rather than by drugs. He did not consider that the administration of opium was a satisfactory method of treatment.

The CHAIRMAN said that it was generally stated in textbooks that in chronic venous congestion sugar was found in the urine. He found that out of 200 consecutive cases sugar was found only in one instance. He had had that patient under observation for three and a-half years, and the presence of sugar appeared to be purely dependent on alcoholic excess.

Dr. HALE WHITE, in closing the debate, said that it could not be too strongly insisted that glycosuria was only a symptom, and probably not the most important symptom, of diabetes, for there was no reason for thinking that death was ever directly due to glycosuria, while it certainly was often due to another symptom, namely, coma. If he had understood Dr. Pavy correctly any one might be rendered glycosuric by taking enough carbohydrate, but if that was so, the amount in the food necessary to produce sugar in the urine must, in some people at least, be very large. He was glad that Dr. Pavy had referred to pertussal glycosuria, for although it had been fully described its presence was often forgotten. Dr. Saundby had referred to alcohol and had suggested that it was a cause of diabetes. In connexion with this it must be remembered that some of the instances of glycosuria after excessive consumption of alcohol were very likely examples of alimentary glycosuria rather than genuine diabetes, and were probable due to a premature wearing out of the tissues. All alcoholic drinks contained other substances than alcohol, and there was often too great a tendency to ascribe disease to alcohol when all that was known was that it followed the ingestion of alcholic drinks. As far as he knew there was no proof that absolute alcohol could produce genuine composite diabetes, and also there was no proof that unsweetened alcohol in moderate quantities was harmful to diabetics. Until this was shown to be the case it would be advisable to allow alcohol to diabetics, for their carbohydrate-free diet was short of energy, and an ounce of brandy yielded about 90 calories. The chief part of Dr. Bradford's remarks was directed to pointing out that probably different cases of diabetes owned a different morbid anatomy and a different pathology. With that they would all agree. But whether Dr. Bradford's suggested distinctions would be those ultimately adopted time only could show. Every one would agree with Dr. Hutchison that clinically one of the most important questions was the distinction between diabetic and non-diabetic glycosuria. The distinction was not of essential importance in considering treatment, for in all cases, whether examples of diabetes or only examples of alimentary glycosuria, the object of treatment was to diet the patient so that sugar would disappear from the urine, but if they could make it with certainty the distinction would be of essential importance from the point of view of prognosis. Unfortunately, they could rarely, if ever, be certain whether a patient who was passing sugar in his urine was only suffering from alimentary glycosuria, or whether he was suffering from the early stage of diabetes, if the urine contained no oxybutyric acid or its derivatives, and the sugar was quickly controlled by diet. He quite agreed with Dr. Hutchison as to the advantage of the casein breads, and also that if a patient was on a carbohydrate-free diet the addition of even milk to the list might lead to an increase of sugar in the urine, but if in any case it was felt that some carbohydrate should be allowed he thought milk was useful, and in actual practice it would be found that the cases in which a little milk might be given with advantage were not few, although no doubt in some the lactose in it was harmful. Each case must be judged on its own merits.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

CHARLES E. UNDERHILL, M.B., F.R.C.P.Edin., Vice-President, in the Chair.

Wednesday, March 4th, 1903.

GASTRIC HYPERACIDITY.

Dr. WILLIAM RUSSELL read a paper on gastric hyperacidity—hyperchlorhydria—its nature, and its relation to dyspepsia and dilatation, which will be published.

HAND DISINFECTION.

Mr. ROBERT PURVES read a paper in which he first considered the question of protecting the hands, especially at non-operating times, from all forms of infection. Short of the ideal means of wearing gloves constantly, except while operating, the infective potentiality of one's hands might be materially diminished by (1) the use of gloves when out-of-doors, (2) by always washing one's hands after examining cases, (3) by keeping the nails short, and (4) by wearing rubber gloves when operating on infective conditions, dressing septic wounds, and handling pathological specimens; also by using finger-stalls for rectal, vaginal, and oval examinations. He advocated a nightly toilet of the hands—namely, washing, drying thoroughly, and applying an emollient. He referred to Krönig and Reinike's observation that hands, if not reinfected, became in time germ-free. He himself had made sixty observations on the hands of washerwomen at different times of the day, and found that after five hours' washing cultures yielded no cocci. He urged the necessity for cutting the nails as short as possible, and considered that at least ten minutes should be devoted to preliminary cleansing. A sandglass, as a time recorder, was an advantage. Referring to subsequent purification, he stated it was only under most favourable circumstances that active disinfectants could safely be dispensed with. He then touched on Ahlfeld's and Mikulicz's methods. In order to avoid the cost of alcohol, a trial for a year had been given in the Deaconess Hospital to Mikulicz's spirit soap prepared with methylated spirit. Although results had improved slightly, the soap had to be abandoned on account of the skin irritation produced. He advocated the use of thread gloves in the ligating and suturing stage to prevent "implantation infection." He deprecated the use of the reel of catgut unless gloves were worn to prevent contact with the fingers. He showed a chart with a tabulated series of observations illustrating the facts that the right hand was less frequently sterile than the left, and the patients' skin was in only about half the cases entirely free from germs.

Mr. STILES, Dr. ALLAN JAMIESON, Dr. LUNDIE, Mr. CATHCART, Mr. ALEXIS THOMSON, and Dr. HAIG FERGUSON spoke to the paper.

Mr. PURVES replied.

CASES.

Patients were shown by Drs. CHALMERS WATSON, FRANCIS D. BOYD, GEORGE A. GIBSON, JOHN THOMSON, MELVILLE DUNLOP, R. A. LUNDIE and by Messrs. ALEXIS THOMSON and HAROLD J. STILES.

MEDICAL SOCIETY OF LONDON.

A. PEARCE GOULD, M.S., F.R.C.S., President, in the Chair.

Monday, March 23rd, 1903.

CLINICAL MEETING.

PHOTOTHERAPY OF SKIN DISEASE.

THE PRESIDENT showed a case of extensive rodent ulcer treated by *x* rays, in a man aged 73; the whole of his upper jaw and part of the lower jaw had been eroded in the course of forty years. The *x* rays relieved the pain, but no other improvement resulted until the strength of the current was increased to 3 ampères (three exposures being made daily with a spark of 4½ to 5 in.), when marked improvement was obtained.

Dr. S. E. DORE showed a case of lupus of eighteen years' standing in a woman of 34, who had received 580 applications of the Finsen light and 100 of Roentgen rays. The case illustrated, among other things, the excellence of the scar produced by the Finsen method. Dr. Dore also showed a case of rodent ulcer treated with *x* rays and Finsen light which, after improvement, showed a tendency to relapse.

The cases were discussed by Dr. SANSOM.

MULTIPLE LIPOMATA.

Dr. WILLIAM EWART showed a case of multiple symmetrical, painful and tender fatty tumours in an adult female subject which was believed to be a variety of Dercum's disease (adiposis dolorosa). The tumours made their appearance during a period of progressive emaciation, although the patient had previously been inclined to stoutness. Although the muscles were tender, the knee-jerks were exaggerated, negativing peripheral neuritis.

CASES OF JOINT DISEASE.

Dr. H. A. CALEY showed a case of arthropathy of the right hip and left ankle joints with osteo-arthritis of the right hand

in a man aged 73. There was a history of syphilis, the knee-jerks were brisk, there was Argyll Robertson pupil and the skin was in places atrophic.

Dr. F. Parkes Weber showed a patient whom he had brought before the Society in April, 1902, as a typical example of the group of cases first described by Dr. Still in 1896, characterized by swellings of the joints with enlargement of the spleen, liver, and lymph glands. There had been practical recovery, crackling in the knees, and evidence of mitral incompetence merely persisting. The case seemed to have been a form of true rheumatism or to have been complicated with it. Dr. Parkes Weber also showed a case of quiescent chronic hydrocephalus associated with complete syndactylia of both feet and hands, a cleft palate, internal strabismus, a slight umbilical hernia, and wide separation of the frontal and parietal bones in the sagittal line.

Dr. F. J. Poynton showed a case of chronic rheumatic arthritis in a girl, aged 6, who had suffered for eight months from rheumatic fever and had been bedridden. The salicylates had completely failed to relieve, but under liberal diet, including meat and tonics, complete recovery had occurred.

The cases were discussed by Dr. Sansom and Dr. George Shuttleworth.

Other Cases.

Dr. Grainger Stewart showed (for Dr. J. A. Ormerod) a case of syringomyelia, which was discussed by Mr. Kellock, and one of functional tremor; and Dr. C. W. Chapman showed a case of multiple cardiac murmurs in which the lesions were probably partly congenital in origin and partly the result of scarlet fever and chorea; it was discussed by Dr. W. Ewart.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

W. Lang, F.R.C.S., President, in the Chair.

Friday, March 13th, 1903.

Anophthalmos and Micropthalmos in a Chick.

Messrs. Treacher Collins and J. Herbert Parsons described the microscopic appearance of sections through the orbits of a chick in which the right eye appeared to be congenitally absent and the left eye abnormally small. In the right orbit a ring of hyaline cartilage, like that of the sclerotic, was found enclosing partly-pigmented tissue, similar to that of the choroid. There was no lens, retina, pigment epithelium, or optic nerve; there was thus a complete failure in development of all structures derived from neural epiblast. The essential element of an eye was a nervous mechanism which served to receive visual sensations for transmission to the brain. Where this mechanism was completely absent, the condition might be accurately described as one of anophthalmos, notwithstanding the presence of some of the subsidiary structures developed from mesoblast. As far as the writers had been able to ascertain, there was no case of congenital absence of the eye in which it had been satisfactorily shown by microscopical examination that the mesoblastic structures were entirely absent. On the left side the chick had a microphthalmic eye in which the lens had failed to become separated from the cornea. The capsule of the lens was adherent to the substantia propria of the cornea, Descemet's membrane having failed to develop. The adhesion had obstructed the growth of the iris forwards; above, it had turned back and crept round the posterior surface of the lens; below, its growth had become arrested.

The *X* Rays in Trachoma.

Mr. Mayou read a paper on the treatment of trachoma by the *x* rays. The idea first occurred to him when treating rodent ulcer and lupus of the eyelid, on finding that no serious damage was done to the globe. The first case cured in this way was shown by him last June: since then several others had been successfully treated. The histological changes in living tissues exposed to the action of the *x* rays were then described, the most important change being a superficial irritation capable of being increased and accelerated by the simultaneous application of other irritants, such as copper sulphate. Most of the resulting leucocytosis was found around the trachoma nodules and the cells of rodent ulcer after *x*-ray treatment of these diseases, the reason for this being that they similarly acted as irritants. It was next pointed out that with care the amount of reaction produced could be regulated and that the varying degrees of reaction might be compared with the first three degrees of burns described by Dupuytren. Cases of prolonged exposure of the globe to the *x* rays were then instanced, where the only bad effects produced, and those only temporarily, were falling out of the eyelashes and conjunctivitis; this latter trouble was also found amongst workers in the *x* rays, and in them it could be prevented by the use of lead glass spectacles. Mr. Mayou found, with Fuch and Kreidl (1896) that there was no bleaching of the visual purple by the *x* rays; his experiments were carried out on rabbits and frogs. The results of treatment by the *x* rays were then compared with those produced by copper sulphate, jequirity, and other irritants, and it was pointed out that there was less destruction of tissue and subsequent cicatrization, as well as less pain, with the former method. The technique of the treatment was then described. The eyelids were everted (the operator's hands being protected by bismuth ointment and cotton gloves); the cornea was only exposed in severe cases where pannus were present. Owing to the infiltration set up difficulty was found in deciding when treatment should cease. Out of 9 cases, five remained well, one cleared up but recurred two months later, two others improved and were still under treatment, and in one case of corneal opacities following trachoma the vision had improved from P. of L. to fingers at 3 ft. The advantages of this treatment were: (1) There was less resultant deformity of the lid; (2) it was painless; (3) pannus cleared more thoroughly. The disadvantages were: (1) All patients did not react well to *x* rays; (2) it was sometimes difficult to tell when treatment should cease.

Lantern slides of the histological changes produced by the *x* rays were shown, and also two patients who had been cured by this treatment.

Remarks were made by the President and by Messrs. Cargill and Stephenson, the latter having seen the best results from the use of high frequency currents.

Injuries to the Eye of the Child during Labour.

Drs. Ernest Thomson and Leslie Buchanan communicated some of the clinical and pathological observations which they had made upon this subject. After indicating the scope of the work done in this connexion, Dr. Ernest Thomson gave a summary of the lesions in the 12 cases observed. These comprised expulsion of the eyeball, proptosis, injuries to the cornea, haemorrhages into various parts of the eye, and retroversion of the lens and vitreous body without rupture of the globe. Dr. Leslie Buchanan described in detail 3 cases of lesion of the cornea, namely: (1) Rupture of the posterior elastic lamina with involvement of corneal tissue (healing); (2) rupture of the posterior elastic lamina and corneal tissue (unhealed); (3) rupture of the posterior elastic lamina with abrasion. The points of similarity and difference were briefly explained. The identity of those cases of rupture of the posterior elastic lamina and corneal tissue with the cases already described as traumatic keratitis with linear opacity[1] from a clinical standpoint was pointed out, and the etiology of other corneal opacities seen at birth discussed. Remark was made upon the very unusual injury, retroversion of the lens and vitreous body, and the nature and origin of the case somewhat fully explained. In conclusion, the subject of traumatic exophthalmos was dealt with, and allusion made to the connexion between them and the localized indentation of the cranial bones due to pressure against the sacral promontory. The subject was illustrated by macroscopic and microscopic specimens and diagrams.

Dislocation of Eyeball.

Mr. Lawford read notes of a case of complete dislocation of the eyeball forwards, occurring in a child, aged 7, as the result of a fall against an iron fender. Reduction was easily effected under chloroform, and recovery ensued, with no defect of sight and no limitation of movements of the eyeball. Slight proptosis was noticeable for one month after the accident, but no restriction of ocular movements could be detected even three days after the reduction of the dislocation.

Card Specimens.

The following were shown:—Dr. Leslie Buchanan: (1) Separation of the ciliary body; (2) congenital maldevelopment of the cornea and sclerotic.—Mr. Stephen Mayou: Two drawings of the normal fundi, illuminated by the mercury vapour lamp.—Mr. Arnold Lawson: (1) A case of paralysis of the ocular fibres of the cervical sympathetic with aortic disease; (2) a case of chronic irido-cyclitis (probably sympathetic) following a rupture of the globe twenty-one years previously.—Drs. W. E. Thomson and Leslie Buchanan: Preparations illustrating the effects of injuries to the eye of the child during labour.—Mr. W. H. H. Jessop: Tumour in the macular region.—Messrs. Sinclair and Parsons: Endothelioma of the cornea.—Mr. Doyne: (1) Melanotic carcinoma of the upper lid with pigmentation in the lower lid; (2) intraocular haemorrhage in a young man. Mr. Goldsmith: Hole in the macula.—Mr. N. Bishop Harman: Connective tissue veiling the optic disc.

[1] *Trans. Ophth. Soc.*, vol. xxii.

SOCIETY OF ANAESTHETISTS.

WALTER TYRRELL, L.R.C.P., M.R.C.S., President, in the Chair.

Thursday, March 5th, 1903.

A REGULATING CHLOROFORM INHALER.

MR. VERNON HARCOURT, F.R.S., read a paper describing a new regulating chloroform inhaler. During some observations upon the measurement of light he had employed pentane and happening to inhale some became aware of its anaesthetic properties. With Professor Gotch he investigated the physiological properties of this member of the paraffin series. The control experiments were conducted with chloroform, and as a result Mr. Harcourt became somewhat unwillingly convinced that the last-named body was the better anaesthetic of the two. He was then led to investigate how the amount of chloroform vapour in any given amount of air could be measured. The first attempt at constructing an inhaler which would deliver a known percentage of chloroform consisted in a tank so arranged that air was drawn through a mixture of 80 parts by weight of alcohol and 20 of chloroform through water which kept back the alcohol and delivered into a tubulure 2 per cent. choroform vapour and 98 of air. A stopcock was constructed which rendered it possible to cut down this 2 per cent. vapour to any desired lower percentage. This apparatus was tested at the Radcliffe Infirmary, and, proving satisfactory it was replaced by a more portable one in which the principle of diluting the chloroform by admixture with alcohol was replaced by an equally exact one—namely, permitting air to pass over a surface of known area of chloroform. This apparatus in its more portable form became somewhat modified from the first model. In effect it consisted of a Woolf's bottle attached by caoutchouc tubing to one arm of a metal stand. This was essentially three tubulures so arranged that chloroform vapour entered at one tubulure after traversing the surface of the chloroform in the bottle and then passed along a tubulure leading to the facepiece. The other tubulure admitted air. A stopcock, as in the original apparatus, by admitting more or less air diluted the chloroform vapour. The action of the stopcock was registered by an indicating needle traversing a dial. Thus, when the indicator was at "0" the tubulure from the Woolf's bottle was closed as the index travelled towards "2" the percentage of chloroform was increased until the maximum 2 per cent. was given, the free airway being closed. In the facepiece and at the inlet of each tube were placed accurately made valves to ensure ingress of air and chloroform vapour during inspiration and egress of respired air during expiration. The use of bulbs constructed so that one floated and the other sank when the required temperature of the chloroform in the bottle was reached ensured the desired rate of evaporation.

The PRESIDENT complimented Mr. Harcourt upon the success of his achievement. While earlier workers such as Snow, Clover, Junker, and members of the Society of Anaesthetists had designed apparatus with a view to giving safe proportions of chloroform and air, no exact method of estimating the percentage strength of the chloroform vapour had been provided before Mr. Harcourt's invention. He narrated some cases in which he had successfully used the apparatus, and only in one had he—using a 1.4 per cent. vapour—met with undesirable symptoms.

Dr. DUDLEY BUXTON had used the apparatus and considered it fulfilled its claims satisfactorily. Whether a 2 per cent. vapour was sufficiently strong for all the requirements of modern surgery he was at present uncertain. On many occasions the anaesthetist now had to push anaesthesia to a much more profound degree than was asked for or deemed desirable fifty years ago. In some abdominal cases he had found 2 per cent. with Mr. Harcourt's apparatus did not afford the degree of anaesthesia the surgeon required. It would be an advantage if the apparatus could on occasion provide a 3 per cent. or possibly 4 per cent. vapour.

Mr. HARVEY HILLIARD extolled the quietness of the induction afforded by Mr. Harcourt's apparatus. He had not succeeded in obtaining a sufficiently deep anaesthesia in all his cases, and vomiting and rigidity had caused inconvenience.

Mr. BELFRAGE, Mr. EASTES, Dr. MCCARDIE (Birmingham), and Mr. COPESTAKE (Derby) having spoken, Mr. VERNON HARCOURT replied.

Mr. COPESTAKE (Derby) described an apparatus for administering chloroform, ether, or the A.C.E. mixture.

ERRATUM.—In the report of the Obstetrical Society of London which was published in the BRITISH MEDICAL JOURNAL of March 21st, p. 670, column 1, line 15, for "case" read "instance."

GLASGOW NORTHERN MEDICAL SOCIETY.—At a meeting held on March 3rd a paper was read by Dr. J. K. KELLY entitled Can anything Special be done by the Medical Practitioner to Diminish the Frequency and Lessen the Mortality of Cancer of the Uterus? Dr. Kelly began by referring to the small amount of benefit which it was possible to afford to the patients sent in to hospital. In his experience nine cases out of ten could get only temporary relief if even that. There was something wrong if this was so, and the cause seemed to lie with the general practitioner in not diagnosing the cases early enough so as to be operable. The ignorance of the female public, too, was perhaps an important feature, as they often did not regard as serious a uterine discharge even after the menopause, compared with a condition of amenorrhoea. Dr. Kelly suggested that the cause of the frequency of cancer was due to long-continued irritation, especially from child-bearing and the laceration of the cervix occurring at such times. It was to be deprecated that any physician should glory in spending as little time over his confinements as possible, as it often ruptured the cervix and led to cancer. Dr. Kelly thought that the cervix should be examined after a confinement, and should there be any laceration it ought to be sutured at the time. Catarrh of the cervix and its modern treatment was also having much to do with the cause of malignant disease. In this situation, contrary to the treatment of inflammation in every other part of the body, the common usage was irritant applications. This added fuel to the fire. Gonorrhoea was mentioned as an important element not to be lost sight of. The only hope of diminishing the mortality lay in recognizing the disease in its early stages. The symptoms were reviewed individually, the chief being pain, haemorrhage, and fetid discharge. The physical appearance in the very earliest stage was referred to. When cachexia showed itself, the time for operation was much too late. The lecturer spoke of the importance of having a microscopic examination made from the ulcer. Reference was made to Dr. Lewers's suggestion that a leaflet might be published relating to the cause of cancer in the female, and put in the hands of doctors for distribution to nurses or those interested, so that those who suffered from the early symptoms might seek advice before it was too late. In this way the public would become educated about the matter. While approving of this, Dr. Kelly said that the thing of prime importance was to awaken the medical profession to a full sense of the importance of the matter; then this knowledge would be sure to find its way down to our patients. After considerable discussion, Dr. Kelly, in reply, said that the fear the practitioner had of examining the cervix was the fear that some septic material might be introduced. In many cases there was nothing which suggested a laceration of the cervix. There would then be no call for an examination; but when there was much haemorrhage or a severe labour, the cervix should be examined. It was quite easy to do this. It could be pulled down to the vulva after a labour without trouble with a volsella forceps and pressure externally, and could then be examined with the eye. If any laceration was seen it would be more easily stitched than th perineum, because the tissue was soft. In regard to light, the examination would often be unsatisfactory in working men's houses. With a candle and speculum, however, one might see fairly well. The practitioner should however rely more upon touch than sight in diagnosis of disease of the cervix. Laceration of the cervix had been suggested as a probable cause of cancer. The resulting ectropion exposed the lining membrane of the cervix to bacteria and acid secretion, the vagina being the receptacle of bacteria of all sorts. There were many cases of cancer of the cervix under 30 years of age, but it was commonest after 40. Cancer of the body of the uterus was mostly a disease of old age. Any haemorrhage from the interior of the uterus in an old person should at once be considered to be cancer. There was no other disease which would cause the haemorrhage. Curettage would be of no use then. The whole body must be removed at once. Dr. Kelly did not want it to be thought that specialists were blaming the general practitioner for not diagnosing the cases early enough. Specialists often made mistakes in diagnosis and should own to it. Douching the vagina might often be sufficient to heal a laceration in place of suturing, but the effect of the cicatrix would always remain. Filth in the vagina had very likely a great deal to do with the cause of cancer at the cervix. The vaginal douche should be in more common use. Women should lie on the back with a bedpan below, not sit over a pan as was usually done. This latter method would fail to flush the rugose walls of the vagina.

REVIEWS.

TROPICAL DISEASES.

A report on *Malaria in India*,[1] by Captain S. P. James, I.M.S., published in the *Scientific Memoirs by Officers of the Medical and Sanitary Department of the Government of India*, shows that the subject of malaria is not yet worked out, and that many important points still remain for future workers to elucidate. The report before us includes the greater part of the work done by Captain James while on service with the Royal Society's Commission on Malaria, and is divided into two parts, the first dealing with the methods of investigation, the second with observations on mosquitos, the malarial infection of native children in India, and other points. The usual technique for making dried and wet blood films, for staining methods and for dissecting mosquitos to show the malarial parasites is described in detail. The method of demonstrating the salivary glands of a mosquito by fixing the head of the insect with one needle, the thorax with another, and then pulling, is rightly condemned, and an ingenious substitute furnished. For keeping insects in a dry condition the author recommends fixing the usual little disc on which the mosquito is pinned on to the under aspect of a cork which then fits accurately into a glass tube, the large number of tubes required if the collection is considerable, however, form an objection to this plan. Investigation of malaria in gaols and hospitals, the number of infected *Anopheles* in districts, the identification of larvae by the frontal hairs, are all described, and help to complete this useful and practical part of the report. The observations on the characters and habits of mosquitos are exceedingly interesting, because, as the author points out, some species of Indian *Anopheles* appear to have little to do with spreading malaria while others have. In Calcutta the district of Hastings and that of the circular road were investigated by the Commission, and though *Anopheles* of the species *Anopheles Rossii* were found to be abundant, out of 140 children examined none had parasites in their blood, or enlarged spleens, and not one of 324 of this species of insect examined was found to be infected. This would be simple if this mosquito in question was not a carrier of malaria, but then the author goes on to say that at Nagpur, after feeding it on suitable cases of malaria, zygotes were found in the stomach and sporozoites in the salivary glands. One must remember that Major Ross and Dr. Daniels both failed to cultivate human malaria in this same species, and confirmation of the Nagpur experiments is therefore required. The suggestion that it may presumably feed only on the blood of cows, horses, and other animals is not very plausible if it so readily bites man experimentally. The report makes it clear that the malarial-spreading mosquitos in India are the group which contain *A. fluviatilis*, *A. Culicefacies*, and their allies. They always occur where malaria is very common, and sporozoites have been found in the salivary glands of free specimens. The classification of mosquitos is discussed at some length, with care and minute observation. The value of the differences in the larval characters for distinguishing adults is very great. Much confusion seems to exist as to many of the species of Indian *Anopheles*, and this has been aggravated by the different names given. The simplest way out of such a difficulty seems to be to have collections of mosquitos with their eggs and larvae where possible sent home to a competent entomologist, who, by comparison with other types, would decide as to the real differences, and name them once and for all. Two other very important points, which have already been observed in the West Indies, namely, that in some not markedly malarial places very little immunity, if any, occurs with advancing age, and that children with malarial parasites in their blood do have symptoms, are well brought out, and deserve every attention. A series of tables shows the first point admirably, and there is now no doubt that in many parts of Africa similar conditions are found. As regards symptoms in children Stephens and Christophers, the author clearly shows, may have been lead to erroneous conclusions by not observing their cases over periods of twenty-four or forty-eight hours. His careful and accurately worked out clinical charts show that high temperature, enlarged spleen, anaemia, and other symptoms are always to be found. The report is an excellent one, and shows much careful and accurate work. It should take a high place in the literature of malaria.

In a paper on malaria among the African negro population, with special reference to the question of immunity,[2] Dr. Albert Plehn gives a series of observations made by himself in the Cameroons. He found, as Koch and others found before, that many negro children, with apparently no symptoms, have numerous malarial parasites in their blood. Splenic enlargement, though usually present, may be absent. In addition, however, he states that about half of the grown-up negroes carry malarial parasites without showing the usual symptoms. According to the author some cases of undoubted malaria in negroes frequently show no parasites in the peripheral or splenic blood, and he considers that the presence or absence of parasites in West Coast negroes should not be turned to account for the diagnosis of health disturbances. Owing to the presence of parasites in the blood of so many individuals without symptoms the conclusion is reached that quinine, in order to prevent malaria, would have to be given to the entire native population, which is rightly considered impossible. For personal prophylaxis the use of the drug is, however, advised. The report closes by the statement that a severe separation of the malarial parasites found in the Cameroons into three or four constant groups will not hold good, and a coloured plate is given demonstrating forms difficult to classify.

After a year's study in Italy of the epidemiology and hygiene of malarial fever, Dr. Johann Krumpholz, of the Austrian Navy, publishes a very good account of this important subject.[3] As he rightly states, of all the infectious diseases with which mankind is afflicted, malaria comes first, no fewer than 2 000,000 cases occurring annually in Italy alone, while Austria-Hungary is by no means free, when the statistics which he gives for the Austrian army are considered. Although containing nothing original, the summary he gives shows careful study of Italian and other experiments for stamping out this deadly disease. The historical part of the subject, the life-history of the *Anopheles maculipennis*, and other points also are accurately dealt with. The suggestion that the fight against malaria should be conducted by the State, as has largely been done in Italy, is to be highly recommended. The Italian Government has recognized what it means to that country, and has spent and is spending large sums of money yearly to produce a healthier state of affairs in the Campagna and other malarial districts. The means used are to protect the houses of the peasants, to drain marshes, and to distribute quinine to the poor freely. The English Government, with its many tropical possessions, must not lag behind; it must act, and it cannot do better than follow the example of Italy, whose work in this direction is deserving of the highest praise.

Quartan fever[4] according to Dr. Legrain, editor of the *Revue Médicale de l'Afrique du Nord*, should be the standard type of malarial fever to study, because it cannot be confounded with any other disease, whereas the quotidian fevers either have no existence or can be confounded with other diseases. His statements as to the duration of this fever when untreated are correct, but the assertion that one can become infected during a stay of two hours in a fever district requires explanation. The same may be said regarding the lunar influence which he describes. The author's views as to the use of quinine are peculiar and do not agree with the results obtained by eminent authorities on this subject. He has come to the conclusion that the correct dose of quinine is 0.25 gram, smaller or larger doses having no effect in the febrile condition. As the majority of his charts show that the drug was only given once this is not to be wondered at. Purgatives, which he condemns, have in other hands proved most beneficial. The nomenclature of malaria is already extensive, and the application to quotidian fever of the designation attenuated quartans is not desirable. The paper as a whole is disappointing and very few people will probably be found to agree with the views expressed on it.

This translation of the leading Continental textbook on

[1] *Malaria in India.* By Captain S. P. James, I.M.S. *Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government in India.* Calcutta: Office of the Superintendent of Government Printing, India. 1902. (Royal 8vo, pp. 110. 2s. 3d.).

[2] *Die Malaria der Afrikanischen Negerbevölkerung besonders mit Bezug auf die Immunitätsfrage.* Von Dr. Albert Plehn. Jena: Gustav Fischer. 1902. (Demy 8vo, pp. 52. M. 2.50.)

[3] *Der Kampf gegen die Malaria.* Von Dr. Johann Krumpholz. Pola: Ig. v. Kleinmayer and F. Bamberg. 1902. (Demy 8vo, pp. 142. M. 1.)

[4] *La Fièvre Quarte.* Par le Docteur Emile Legrain, Rédacteur en Chef de la *Revue Médicale de l'Afrique du Nord*, etc. Etudes de Medecine Coloniale. Paris: A. Maloine. 1902. (Demy 8vo, pp. 74. Fr. 2.50.

tropical medicine[5] should be welcomed by the large class of British medical men in the tropics who are unable to read the work in the original. Dr. SCHEUBE's book is divided into six divisions. The first, on general infectious diseases, commences with an excellent account of plague. The article is concise, but includes all points of importance; its conclusions are based on the accurate work of the German and other commissions. The chapter on yellow fever was written before the publication of the American researches, which proved that this disease was conveyed by mosquitos, but is brought up to date by a summary of recent work on the subject by Mr. CANTLIE, the editor of the English edition. Dr. Scheube does not recognize typho-malaria as a separate disease. He considers the term useful, however, if restricted to the class of case in which both infections are present at the same time, and gives a clear account of the result of this combined infection. There is a full description of Japanese river or flood fever, but the author does not accept the view that it is caused by an acarus. Several more or less irregular or ill-defined forms of fever are briefly described in small print. Indian nasha fever, which has a short chapter to itself, might have been included in this list. The various views held as to the causation of blackwater fever are discussed in an impartial manner, and a good description of the clinical aspects of the disease is given, and there is a critical exposition of the views held by various authorities. Beriberi, a subject with which Dr. Scheube has made himself familiar, is very fully described. He holds that the nature of the virus is unknown, and relies in treatment on digitalis, rest, and diet. The article on leprosy is full and well repays careful study. The accounts of yaws and verruca peruviana are excellent summaries of our knowledge of these diseases. The second division of the book deals with diseases caused by intoxications, and includes pellagra, lathyrism, and snake poisoning. The third division treats of the diseases caused by animal parasites. The more important are fully considered, and the articles on the diseases caused by the distomum pulmonale and ankylostomiasis are of special value. Organic diseases form the fourth division. The more important articles in this section are those on sprue and dysentery. In the treatment of the latter the author contrasts the effects of calomel and ipecacuanha. He considers that both are of great value and have a specific effect. A personal preference is expressed for calomel, but the use and advantages of ipecacuanha are well described. In the fifth section cutaneous and local diseases are considered. The accounts of madura foot, ulcerating granuloma of the pudenda, and tinea imbricata are especially worthy of study. The last section is a summary of the cosmopolitan diseases met with in the tropics. The bibliography is a special feature of this book. The illustrations are numerous and well selected. We must, however, take exception to the charts showing the geographical distribution of diseases. They are misleading. The distribution of blackwater fever is represented in Africa as limited to a comparatively small area near the coast, instead of extending up to the great lakes and right across Africa. Ankylostomiasis is met with in the British as well as in German East Africa, and leprosy has a much more extensive distribution in Africa than is represented in the chart. It is important to mark in a different way countries from which no reports have been received instead of as in these charts, representing a disease as non-existent alike in countries where it is known not to exist, and in those concerning which there is no information. There are some misprints, but the translation is clear, and the articles are easily read. The work can be confidently recommended to the notice of those who are interested in tropical diseases.

A summary on the recent work done in plague,[6] by Mr. A. MITRA, Chief Medical Officer of Kashmir, will be found useful by medical men proceeding to India for the first time. The symptoms and pathology are briefly mentioned. Under the head of Mode of Infection fleas are mentioned, though the latest researches seem to show that they have little to do with spreading the infection. A detailed description of inoculation by Haffkine's method will be found useful. The diagram at the beginning of the pamphlet is crude, and had better have been left out.

The Nurse in Hot Climates[7] is the title of a very useful little book on tropical nursing by Dr. HENDERSON, late of Shanghai. The importance of the subject is very great, for many lives are annually lost abroad from the absence of good nursing. Protection by prophylactic inoculation, outfit, the voyage, and the question of climate are first dealt with. Hyperpyrexia is ably considered, and a good photograph of a bamboo couch for the treatment of heat apoplexy is given. Obstetrics, surgery, and infectious diseases are also discussed. No nurse proceeding to the tropics should be without this useful manual.

[5] *The Diseases of Warm Countries: A Handbook for Medical Men.* By Dr. B. Scheube. Translated from the German by Pauline Falcke. Edited by J. Cantlie, M.B., F.R.C.S. With all the original coloured maps, charts, illustrations etc., together with many additional plates from the *Journal of Tropical Medicine*. Translated from the second revised edition. London: John Bale, Sons, and Danielsson. 1903. (Demy 8vo, pp. 604. 30s.)

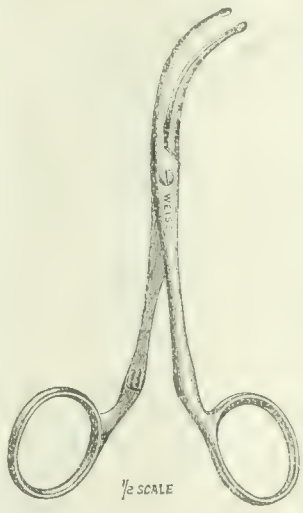
[6] *The Plague.* By A. Mitra, L.R.C.P., L.R.C.S.Edin. Srinagar: Central Jail Press. 1902. (Demy 8vo, pp. 21.

[7] *The Nurse in Hot Climates.* By Edward Henderson, M.D., F.R.C.S.Edin., late Shanghai, China. London: The Scientific Press, Limited. 1903. (Cr. 8vo, pp. 47. 1s.)

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

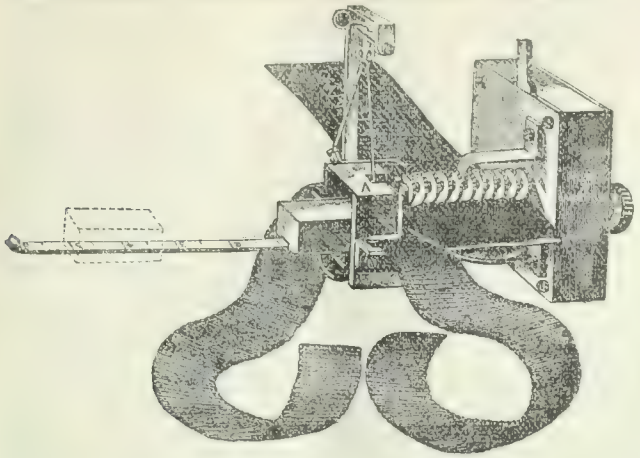
MEDICAL AND SURGICAL APPLIANCES.

Ligature Forceps.—Mr. CHARLES P. CHILDE, B.A., F.R.C.S., Assistant Surgeon, Royal Portsmouth Hospital, has designed the instrument figured here as a substitute for the aneurysm needle or pedicle needle. He writes: It obviates the necessity of threading and unthreading; it can be used with far greater facility than the above-named instrument in all cases in which their use is indicated, except, for instance, in tying an artery in its continuity (where the flat and fully-curved aneurysm needle is clearly best suited), or in radical cure of inguinal hernia (where specially curved needles are required). It is somewhat of the make of Lister's sinus forceps, with strong slender blades, curved as in the figure, serrated at the point, and with a Spencer Wells catch behind, thus, as will be seen, not laying claim to any novelty in design, but making a combination which is certainly very handy in operating. If a pedicle such as the broad ligament, or a piece of omentum, or the mesentery of the appendix, has to be tied in sections, the ligature is laid across the pedicle on the side furthest from the surgeon's hand, the blades of the forceps pushed through closed from the near side, opened, and the loop caught and pulled through, when it can be released at once by again opening the blades, or fixed by closing the catch, as required. If it is desired, on the other hand, to pass the forceps threaded, as, for instance, in nephropexy, all that is required is to place the thread in the end of the forceps, close the catch, push the blades through, then release the catch and withdraw the blades again, an easier and moreover neater manœuvre than threading and unthreading a needle. I have used this little instrument constantly in such cases as tying in sections pieces of omentum, the mesentery of the appendix, the pedicle of an ovarian tumour, the broad ligament in oöphorectomy, in nephropexy, fixing the stump in radical cure of hernia, underrunning vessels in various operations, etc., and I can recommend it as a far handier instrument than any aneurysm or pedicle needle. A trial of it, better than any description of mine, will convince any surgeon of the facility with which it can be used. It is made both sharp-pointed and blunt-pointed; the latter is the pattern figured here, and is obviously the one most commonly used. The makers are Messrs. Weiss and Sons, of 287, Oxford Street, W.



A Modification of Richardson's Sphygmograph. — Dr. J. FLETCHER LITTLE (London, W.) writes: Having found that

the Richardson's sphygmograph was so constructed that it was not possible to apply a pressure of more than 4 oz., and that a pressure of 1 oz. was not always to be depended upon, I have suggested that certain alterations shall be carried out



by Messrs. Allen and Hanburys, Limited, 48, Wigmore Street, London, W., which will remedy these defects. The steel bridge A has been raised to permit the weight being pushed home beneath it, where it does not interfere with the movement of the steelyard. The figures indicating the pressure are read off on the steelyard on the distal side of the weight, and not on the proximal as is customary. A pressure of from 1 to 6 oz. can be easily seen and registered. The pressure indicated by each figure has been separately tested by the makers and found accurate.

A Cold Water Bottle.—We have been shown an ingenious apparatus for providing ice-cold water, which may be of use in the sick room. Its principle is quite simple. The water, filtered or boiled, is placed in a reservoir holding half a gallon, which is enclosed in a larger vessel, the interval between the two being packed with ice and salt. A long tube provided with a tap screws into the lid, and the whole becomes airtight. The tube is in two parts. The upper is retained in place by a spring sliding over the lower; when the top is depressed and the tap turned, sufficient pressure is produced to expel the water; four or five movements will fill a tumbler. The apparatus has the further advantage of preserving the water from contamination by dust. The mechanism is simple, and can be easily taken to pieces. We are not sure that the maker is well advised in recommending it to be used for milk, as, without special means for cleaning and steaming, the tube would be apt to get out of order. The general construction is shown in the accompanying sectional drawing. Further particulars can be obtained from the patentee, Mr. Clapham, 4, West Parade, Springbank, Hull.



A Coverlet.—The Sanitary and Economic Association, Limited (Station Road, Gloucester), has sent us a specimen of what they call a euthermic coverlet. It looks like an eider coverlet, but instead of being filled with down is lined with pinool, a fibrous vegetable material composed of a graded combination of vegetable fibres, of which pine wool is the basis, designed by Dr. Francis Bond of Gloucester. Trial shows that the claims that it is light, elastic, porous, and yet warm, are justified. The coverlet also keeps its shape well after being rolled up. It is cheap, and may therefore be recommended where this consideration is of importance.

A Serviette Cylinder for Consumptive Patients.—In sanatoria especially the table napkin question has been a source of difficulty. Paper serviettes are not liked by all, and linen napkins being used for more than one meal are liable to come in contact with others in the drawer. To obviate this Dr. Charles Reinhardt has devised a cylinder made of celluloid with smooth surfaces which is easily cleaned and which entirely envelops the serviette. It is made by Messrs. Allen and Hanburys, and is inexpensive. These cylinders, beside being useful for consumptive patients, whether in a sanatoria or at home, would be a decided advantage to visitors in boarding houses.

Pocket Vaccination Lamp.

Dr. E. S. Worrall (Crouch End, N.), writes to say that for many years he has been in the habit of using for vaccination a darning needle; the point is sterilized by heat in the flame of a small spirit lamp, and is allowed to cool immediately before scratching the site previously cleaned for vaccination. He states that the Association for the Supply of Pure Vaccine Lymph, 11A, Great Marlborough Street, Regent Street, W., have made a small lamp for the purpose. The lamp is a small metal cylinder of little over $\frac{3}{4}$ in. long, and less than $\frac{1}{2}$ in. in diameter, and is filled with cotton wool soaked in spirit. Dr. Worrall states that it has proved sufficient for several vaccinations.

A Report
ON
THE MILK SUPPLY OF LARGE TOWNS:
ITS DEFECTS AND THEIR REMEDY.

II.
SOURCE AND DISTRIBUTION OF THE MILK OF TOWNS.

(Continued from page 680.)

Nearly all the milk consumed in London and in other large towns comes from country farms. It is landed by railway companies at special arrival platforms whence it is removed by the dealers.

The farmer generally sends only one consignment a day, and this is the mixed milk of the early morning and midday or early afternoon milking. The milking is usually, if not invariably, done in the byres where the cows are stalled, and with such absence of precautions against dirt and excrementitious contamination as will presently be indicated. In the better managed farms the milk is cooled by a water cooler immediately after milking, and run into large milk cans or "churns" holding from fifteen to seventeen imperial gallons, which have been scalded out. The temperature to which the milk is reduced depends on the temperature of the water supply of the farm. As a rule it will be higher in summer than in winter.

Once in the transport-churns circumstances as a rule combine to cause a steady rise of the temperature of the milk. The farmer sends it to the nearest railway station at such time as may be most convenient to him, and milk churns may be seen almost any afternoon on the platforms of roadside stations unprotected from the sun or dust. Some railway companies use special covered milk vans with open or louvred sides to allow ventilation. But even when this is the practice the supply of such vans appears often to be insufficient, and a great deal of milk is carried in ordinary closed box vans, attached in some cases to the slow passenger trains stopping at every station.

The churns are often inefficiently closed, so that dust easily enters, and are not as a rule locked or sealed. This system allows many opportunities for contamination and even for fraudulent tampering with the milk. The better system of sealing the cans at the farms is followed by some well-managed dairy companies.

Most of the milk is worked through by night, as the exigencies of passenger traffic permit, and begins to arrive at the town terminus about 11 p.m. or midnight. The arrivals go on until 4 or 5 a.m., by which time the greater part has arrived. Consignments, however, may arrive at all hours of the day, and in some instances a good deal may arrive about noon.

Country Dairy Farms and Factories.

The following account, for which we are indebted to a correspondent, of a visit to a dairy farm supplying milk directly to consumers in a large provincial town, illustrates some of the risks of contamination which exist at a farm carried on under conditions somewhat above the average so far as structural facilities go. Our correspondent writes:

"Having given some time to the study of the milk industry in Ireland and in Denmark, as well as in London, it occurred to me that it would be interesting to visit the country dairy farm from which I had been getting the milk for my child and household for a year or two. I had chosen it because I knew

it to be in a healthy situation, and because the milk was brought direct from the farm to my house.

"I interviewed the lad who delivered the milk, and ascertained that the cows were milked about midday, I therefore arranged to reach the farm at noon. I saw two houses and, a little way off, farm buildings, all situated on an open hillside; scattered clumps of pine trees gave a fragrant scent to the strong pure air blowing across the open country—an ideal spot for a dairy. The utter desolation of the scene surprised me; I looked for the bustle usual in a farm at the hour of milking, but not a soul was to be seen, and I thought I had mistaken the place, until I saw written up over a long building the words "Cow House." I walked up to the large double doors and tried to push them open, but they were immovable. After much battering with my umbrella I was about to walk away, when one of the doors was slid open a few inches, and a face appeared which I recognized as that of the lad who drove the cart which brought our milk from the farm every day. They were cleaning out the stalls he said, and milking would begin in an hour. I walked away, intending to come back a little before the hour, so as to be present at the washing or grooming of the cows before milking, and to while away the time I ate my sandwiches among the pines facing the cow-shed, a long building, well lighted with windows on each side and having at each end sliding doors. I kept the windows and doors under observation the whole of the fifty minutes I waited, first walking to one side and then to the other. During all that time I can certify that neither doors nor windows were opened. Against one wall of the shed was banked up a great heap of manure, while on the opposite side all the cinders, old bones, and general rubbish of the farm were accumulated, so that if the windows had been opened the air must have arrived into the shed polluted.

"One o'clock being the hour named for milking, at ten minutes to one I knocked over and over again at the door. As I received no answer I tried to get in, but could not open the door. I went to an adjoining cottage, and an old woman came back with me and succeeded in getting me in. The operation of milking was in full swing, three dirty-looking boys being hidden away behind their respective cows, I felt somehow as if I had been outwitted, for I was especially anxious to see the preliminary cleansing of the cows' udders and washing of the milkers' hands. I addressed myself to my friend the driver, who assured me that both had been thoroughly done before my arrival. I looked about for pails of water, soap, towels, or anything which might give the lie to the filthy state of the cows' udders and the milkers' hands, but in vain. The clothes which the boys wore were equally dirty, and the stalls which they were supposed to have been cleaning out while I had been waiting were several inches deep in manure and foul-smelling straw. I concluded that they had not been cleaned out for several days; the hind-quarters of the cows were coated with filth. Remarkable also were the cobwebs which hung in ropes several feet long from the ceiling and windows, clearly proving that the latter had not been opened for many a long day.

"Although I gathered that the driver had been longest on the farm, and was held responsible for the ordinary working of the place, one called Tom was referred to by him to answer every question put by me.

"'I see you haven't cleaned out the cows' stalls after all,' I began.

"'Oh! no, m'm; we always cleans 'em out nice and dry when the milking's over. Don't we, Tom?'

"'That's right,' said Tom.

"'What do you feed the cows on?' I asked the driver.

"'Hay, corn, turnips, oilcake, mangolds, and bran; don't we, Tom?'

"Tom, who had finished milking his cow, and was about to empty the contents into a doubtfully clean tin bucket, hung on a weighing machine suspended from the ceiling, said: 'No, we don't; they only gets hay, corn, and mangolds.'

"'That's it; hay, corn, and mangolds,' repeated the driver, as Tom tilted the contents of his pail into the weighing bucket.

"I was horrified to see the filthy state of the milk as it flowed out of his pail. It was discoloured with grit, hairs, and manure. 'Look at that,' I said, pointing to a specially large bit of manure. I regretted my zeal, for Tom dipped his whole hand into the pail, and, as he brought it out, said, 'Oh, that ain't nothing; that's only off the cow.'

"The driver having finished milking, his cow offered to take me into an adjoining room where the milk was cooled, saying that while he fetched the manager I could have a look round. He carried in the bucket which contained the weighed milk, and this he poured into a small cooler, out of which it passed into the churn through a muslin strainer placed on the neck. I had peeped into the churn and saw that it was wet, and when I tilted it up I noticed about a quarter of a pint of water inside it. I pointed this out to the driver, who merely remarked: 'That's only the drippings; it *was* quite dry.' And he proceeded to put it under the cooler to receive the milk.

"While he was gone I did look round. I had been very suspicious of a dirty duck-pond just outside the barn, and was relieved to find a tap inside the small room containing the cooler; beyond this and one other empty churn there was nothing in the room. I heard afterwards that the whole of their customers were supplied from these two churns, taken out twice daily on carts drawn by ponies. There were about thirty cows in the shed. All were not in milk, but they were in good condition and looked well fed. The shed was about 150 ft. long, broad in proportion, and well-lighted. The walls were whitewashed and the floors tiled, with a deep drain bordering the standing place of the cows. Everything seemed perfect for the production of good, pure milk; and yet, through such mismanagement as the absence of ventilation, neglected cows, lack of cleanliness in the stalls, and, as far as I could see, of sanitary precautions, what might, under good management, have been a model farm in an ideal situation in reality presented disgusting probabilities, or rather certainties, of contamination.

"The manager, who now came in, gave me the impression of being above his position; he flicked his check breeches uneasily with a hunting crop as I explained that I was a customer, and should be glad of any information he could afford me. In answer to my questions he assured me that the cows' udders and the milkers' hands were thoroughly washed before milking. He stated that the cows were brushed daily, and that the manure and hairs in the milk were unavoidable and perfectly harmless. He was sorry he could not tell me the temperature of the milk when it came out of the cooler, he had no idea, but he was quite positive that the stalls were always cleaned out before milking, and when I expressed doubts on the subject, he appealed to Tom, who turned round and was prepared to swear that they were. I next asked about veterinary inspection:—

"'Oh! we have no fixed inspections.'

"'I see,' I answered. 'They just pounce down on you every now and then?'

"'Yes, that's it.'

"'Who are the veterinary surgeons who inspect your cows?' I asked.

"'Oh, we keep our own vet,' he replied.

"'Are you doing well?' I next asked.

"'Not so well as we might; we have been established three years, and you'd think that people would do anything to get good pure country milk like this,' he said, waving his hunting crop towards the manure can, 'but if you'll believe me they'd sooner go the dairies in the town, knowing nothing about the conditions under which their milk is produced; milk probably coming from cows standing in byres knee-deep in manure.'

"'Yes,' I answered, bowing myself out; 'where ignorance is bliss, 'tis folly to be wise.'"

Dairy Factories and Creameries.

The same correspondent sends the following description of a well-constructed and well-designed dairy factory in England drawing its milk in part from a special herd and in part from ordinary farms, and of a small Irish creamery, the latter introduced mainly to show how much may be done to raise the status of the dairy industry by well-directed enterprise and careful supervision.

An English Dairy Factory.

"I have visited a country dairy factory chosen at random, and the results of my inspection may prove interesting. The dairy adjoins the property of a gentleman, who breeds Jersey cattle, and the milk used at the dairy is in part supplied by a fine herd of Jersey cows on the spot. These animals were housed in long old-fashioned sheds, spotlessly clean, with many windows. Moreover, the windows were open; and I learned that on every fine day in winter all the cows are turned out for two or three hours. The stalls are cleaned out several times a day, and always some little time before milking. They were as clean as a well-managed stable. The cows are brushed and groomed, but not clipped and not

washed before milking; neither are the milkers' hands washed. The cows are fed upon hay, mangolds, and brewers' grains. The cows seemed healthy, and though some looked in poor condition were stated to yield well. Some years ago the herd was tested with tuberculin, but no animals reacted.

"I could not attach much importance to the system employed in the management of these cows, excellent as many of its features undoubtedly were, as they were a special herd, a rich man's hobby, though I was given to understand that the farm paid. But the profit to be derived from the sale of the milk was, after all, a secondary consideration to the owners of the herd. I inquired where the rest of the milk treated and sold by the dairy came from, and was informed that it was supplied from different farms in the neighbourhood. I was told that there were no special veterinary inspections, nor were any special conditions made with the farmers. The milk arrived in churns from the farm. Part of it was cooled and sent away by rail to London and other towns. Part was separated, and the cream sold as such or made into butter on the premises. The buildings were very suitable, the machinery used up to date, and there was a large cold room for keeping the milk in in hot weather; but there seemed to me an air of untidiness. There were rows of cans filled or half filled with what I was told was separated milk. It was sent to milk dealers in the towns but what they did with it the deponent said not. Although I was assured that no preservatives were used; a stack of empty tins in a corner with tell-tale labels seemed to suggest the contrary only too clearly.

"Frankly, I was not impressed, and I am inclined to suppose that this unsatisfactory state of affairs in what might have been a model dairy is due to slackness in the management. Without active supervision it is impossible to carry on a dairy or milk factory in a satisfactory way. Scrupulous cleanliness, method, and the interest of the staff are not possible without the continual presence of some responsible person.

"Here again was an instance of what might be a perfect dairy gone wrong. There were good buildings, up-to-date machinery, a cold room, plenty of churns, steam appliances for cleansing the churns, and so on. But what is the good of elaborate appliances if they are not properly used, and if the milk, perhaps, comes from farms with foul water supplies or bad drainage or dirty or diseased cows? The managers of country distributing dairies should know well the farms from which their milk comes, and exercise over these the most rigorous surveillance, appointing their own veterinary surgeon to visit and report frequently upon the farms. The want of interest of the public has a good deal to say to this state of affairs. Surely, if the squire of a village, with a dairy perhaps 100 yards from his gates, chose to look in now and then and praise or make complaints, it would have a marked effect; it would make the manager more alert and the staff more ready to do their best."

An Irish Creamery.

There are now about five hundred co-operative creameries in Ireland, and the following description of a small plant in a country district will show that even among a population not generally accounted easily accessible to modern ideas they may yet be effectively applied. There is still room for a great increase in the number of creameries, and those who know the country believe that with due encouragement from the public, Ireland, whose population is double that of Denmark, and whose pasturage is the best in the world, may eventually outstrip the Danes in this branch of agricultural trade.

The creamery here described is situated about six miles from Tipperary, and is called the Grantstown Creamery, in compliment to General Dunham Massey, C.B., of Grantstown Hall, who presented the Limerick Creamery Branch Company with a plot of land on his estate, shaded with large trees and having a running stream passing through it. The shade of the trees keeps cool the creamery in the summer heats, and the stream carries away the waste water from the cleansing of the milk pans and vessels used in the dairy.

The description will illustrate what may be done on a comparatively small scale to make good butter from the milk of small farmers keeping each two or three cows or even only one. Under the special circumstances of this creamery, situated in a rather out of the way part of Ireland, without any large town within easy reach, there is little or no sale for the milk, and the chief product is butter, but it is clear that in a neighbourhood where there was a good demand for milk, it would be easy and probably more profitable for the creamery to supply it either by retail or in bulk to the retail milk sellers.

The building is, as will be seen (Fig. 1), very unpretentious. It is built of corrugated iron, and was put up by the company, which has furnished it with the following apparatus:

1 ten horse-power boiler.
1 nine ,, engine.
2 Surprise Alpha separators.
Pasteurizing plant and coolers for separating milk.
1 double action separating milk pump.
Cream pump for pumping cream into churn barrels.
2 Llewellyn churn barrels.
Mahogany butter worker.
Ripening vats (double bottomed).

As early as 5 a.m. in the summer the milk commences to arrive from the surrounding farms in churns drawn on donkey carts, as shown in the accompanying illustration (Fig. 2). The scene is a busy one both within and without the building until about 10 or 11, by which time all the butter is finished and the last cart has driven away with its share of separated milk.



Fig. 1.—Entrance to creamery.

The milk on arrival is poured from the cans into a zinc vat placed upon a weighing machine, situated in a small room at one side of the building and outside the central hall. The weight is entered and a sample put aside in a numbered bottle to be tested by the Gerber test on the composite system. Every facility is afforded to suppliers to see their milk weighed and tested, and at any time they can take duplicate samples to be tested elsewhere. Milk is accepted by the company from the farmers on the understanding that it is the whole new milk of the cow, and that no water or foreign matter has been added to it.

After it has been weighed the milk in the movable zinc vat is poured into a large stationary vat through a muslin strainer. From this tank it is piped into the regenerative heater in the central hall; it flows over the outside of the horizontal tubes of this apparatus and out over the top to feed the pasteurizer. The hot milk from the pasteurizer flows through the tubes of the regenerative heater to the separator. The milk being at a high temperature as it flows through these tubes warms the inflowing stream outside the tubes, while the latter cools the pasteurized milk to about 145° F. The cream separated in the centrifugal separator flows into zinc tanks (ripening vats), while the separated milk is conveyed through pipes to a small outer building on the left of the creamery (Fig. 3). Here the farmers in turn draw up their donkey carts with the empty churns, open, upon them. The skim milk is delivered into the churns by a vertical pipe, which is controlled by a tap to which a boy perched on a high ledge in the roof attends. The farmers who supply the milk receive back 80 per cent. separated milk and 5 per cent. butter-milk. They receive this amount free, but can purchase additional supplies if available. The separated milk is used for feeding pigs, its deficient nutritive value in respect

of fat being made up by the addition of cod-liver oil. The animals like it and fatten on it. The creamery retains nothing but the cream, and pays for the butter-fat which it extracts.



Fig. 2.—Farm cart after delivery.

The cream remains at an even temperature in the ripening vats for twenty-four hours, after which it is allowed to flow into a large barrel-churn revolved by machinery; a dairymaid stands by and watches the progress of the butter-making through a window at one end of the churn. The butter is then removed in small tubs and placed upon the mahogany revolving butter-worker, which is thrown into action by the pressure of the foot on a lever connected with the shafts overhead by a leather strap. As the table revolves, the butter, which comes in a granulated form from the churn, is squeezed between a



Fig. 3.—Receiving separated milk.

wooden projection and the table, to extract the water and to work it into a smooth mass. The dairymaid watches the process, and works the butter with wooden splashers under the projection until she considers the mass to be of the right consistency. It is then either cut up into pats, which are weighed, shaped, and packed in boxes or tubs, or packed without being divided into pats, and weighed by the firkin. The butter is dispatched to the Society's different branches in various parts of England, Manchester, Newcastle London, Bristol, and Cardiff.

The company's payments are made strictly according to the quality of the milk, which is judged by the amount of butter-fat contained in it. The average price during the fortnight ending May 17th, 1902, was 3.54d. per gallon. The quality and quantity of the milk vary at different seasons of the year, according to the feeding of the cows and their condition.

The economic importance of the enterprise is shown by the fact that although the Grantstown Creamery was only established in 1901, and is on quite a small scale, it paid out during its first year, ending May 17th, 1902, over £5,000 for milk; the amount paid out last autumn was about £600 a month.

The farmers at first were rather suspicious of the innovation; but now, not only do they bring their milk to the creameries belonging to the companies, but they are building creameries and setting up machinery on their own account. They subscribe in proportion to the number of cows in their possession, and are allotted shares in the creamery. Under this system farmers realize more money and have a certain market, provided their milk is pure; whereas under the old system their profits were precarious. Not having proper machinery or appliances, the butter made in turf-smoked cabins was often unpalatable and rancid. This is not surprising when it is remembered that it was made in small quantities, kept until enough had been collected to take to the nearest market, the stale mixed with the fresh, and sold or not sold, as the case might be, in brown firkins.

As has been mentioned, a sample is taken daily from each supplier's milk; this, consisting of 1½ oz., is placed in a numbered bottle, and allowed to accumulate for one week, being preserved by means of "creamery pellets" (mercury bichloride and potassium bichromate). At the end of the week the amount of butter fat is estimated. The farmer thus obtains exact information as to the quality of his milk, and will take measures to improve it if not satisfactory. He will weed out his bad cows, and probably pay more attention to the feeding.

An Irish dairy farmer receives 4d. per gallon on the average for his milk, whereas 7d. is a low rate in England. In many parts of England the demand for milk as such is large, whereas in Ireland the sale for milk is small, and the greater part is turned into butter, which is paid for by the creamery at the rate of 11d. per lb. instead of 6d., which is the very most the small farmer, making it at home, could ask, and even so without the certainty of a market. The Irish butter trade has been greatly improved by the creamery system, and with perseverance and encouragement Ireland may eventually entirely supplant Denmark in supplying England with butter. The quality is good, and the fact that the milk is pasteurized and the butter made without handling from start to finish should recommend it to the public if a sufficient quantity can be turned out.

There is no general sanitary supervision of the farms in ordinary times and no action is taken unless some special information is received, but if a case of typhoid fever occurs in the family of any supplier the sanitary officer inspects the premises, and examines the water supply, sanitation, etc. The creamery does not take milk from that farm until the family is free from infection, and sanitary defects have been attended to. Obviously there is room for improvement in these regulations.

Rigid inspection by veterinary surgeons should be enforced; they should visit the farms at fixed intervals, and as is done in Denmark, insist upon the isolation of cows suffering from contagious diseases. The farmers should be under contract to report to the companies cases of infectious illness in their families or in those of persons employed on the farm.

(To be continued.)

CHRISTIAN SCIENCE IN AMERICA.—A Bill was recently introduced in the Legislature of New Hampshire, U.S.A., for the purpose of prohibiting the treatment of physical ailments by Christian Scientists. The measure provided that "it shall be unlawful in New Hampshire to practise Christian Science, faith cure, mind healing, or other like agencies in curing disease;" and it imposed a penalty of 50 dollars for the first offence, 100 dollars for the second. If any one still further persevered in violating the law, he was to be sent to gaol. In case of death due to, or hastened by, failure to call a medical practitioner, the healer should be deemed guilty of manslaughter. This measure was defeated in the House of Representatives by a vote of 70 to 194.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1903.

MEMBERS of the British Medical Association are reminded that commencing with January 1st, 1903, the annual subscription is a uniform one of 25s., inclusive of the Branch, and that all subscriptions should be paid direct to the General Secretary, 429, Strand, London, W.C., and not to a Branch Secretary.

British Medical Journal.

SATURDAY, MARCH 28TH, 1903.

THE JUDICIAL BENCH AND THE MEDICAL PROFESSION.

JUDGES are not always judicious in their utterances, and on more than one occasion we have had to protest against an *obiter dictum* upon things medical which has either shown considerable ignorance of the relations of the profession or has expressed an unfair and harsh judgement upon an individual medical practitioner. Not long ago Mr. Justice Ridley took upon himself to censure a medical witness who had refused to give expert evidence without being paid a fee of twenty guineas before he entered the box. When the witness ventured to remark that he did not wish to come, the judge retorted, "We must have justice, you know;" and to the witness's further suggestion that there were many young men who would have been glad to come for a smaller fee, the judge said that he "would not argue the question, but that it was very hard that a man should have to pay in this way a sum which he could not possibly recover from the defendant." The judge chose to forget the heavy special fees paid to leading counsel which are greatly in excess of the amount recoverable in taxed costs, but we suppose he considered that prominent members of the profession of medicine have no business to charge proportionately for their services.

In the Southwark poisoning case one of the medical witnesses seems to have been somewhat severely handled by the judge. According to the newspaper reports Mr. Justice Grantham expressed surprise that the doctor had not informed the parents that the parties were not married. The Solicitor-General suggested that the position of a doctor in such circumstances was a difficult one. Mr. Justice Grantham: "Not at all; it is the duty of the doctor in such a case to inform the parents. I say that unhesitatingly."

We may be permitted to remark that in our opinion the Solicitor-General showed a much clearer appreciation of the duties of a medical practitioner than the judge. It was no business of the doctor's to consider whether the parties were married or not; it had no bearing whatever upon his duties in the case, and it is ridiculous to suggest that he ought to have informed the poor girl's mother.

Apparently the reason which weighed with the judge was that the prisoner had objected to the necropsy which the doctor desired. The judge held that, not being the girl's husband, he had no right to oppose the examination of the body, whereas the mother, if appealed to, and informed that the prisoner was not legally married to the girl, would have been the proper person to give permission. But the doctor had apparently no difficulty in getting consent; he told the prisoner that unless he permitted a necropsy the coroner must be informed. This argument had due weight, the necropsy was performed, the facts were laid before the coroner, the crime was detected, and the criminal has been convicted.

Surprise was expressed by the judge, and has been repeated by the press, at the failure of the practitioners concerned, and especially of the medical staff at Guy's Hospital, where the deceased girl seems to have been treated as an in-patient for four weeks, to detect the true cause of her sufferings, or as they put it, "to recognize the symptoms of poisoning." It has long been known that the symptoms of chronic poisoning by antimony are not characteristic, or, in other words, that the symptoms to which it gives rise are very likely to be mistaken for those of a chronic inflammatory affection of the bowel. This is such a common condition that where there is no reason to suspect crime it is certain that no practitioner would, in the first instance, look for antimony as the cause. As one of the medical witnesses very properly told the judge, "even doctors want time to think over such a serious matter as accusing off-hand some one of poisoning a person." It is easy to criticize the conduct of a medical practitioner in attendance, and to be, as every one can be, wise after the event, but no one has a right to say that if he had been in the same position he would have suspected the true cause of the girl's condition, or have taken the necessary steps to arrive at the truth.

We notice that the judge also improved the occasion to express his opinion on the question of cremation, and to point out that had these bodies been burned the important information of the prisoner's guilt would have been wanting. This is an obvious truth which cannot be disputed, but the advocates of cremation have always maintained that a much improved system of death certification and registration is a necessary corollary of the general introduction of this means of the disposal of the dead, and all the existing cremation societies require very special certificates. It is foolish to suggest, as the judge did, that the adoption of cremation would lead to a vast increase in the number of crimes by poison. There are plenty of poisons now which cannot be detected by the examination of an exhumed body, but so long as the Legislature is so chary of surrounding the sale of poisons with proper precautions, and permits the existence of a very loose system of death certification and registration, we can only express surprise that crimes are not more common. Or perhaps it is that they are more common than is supposed, but many remain undetected. Indeed, a well-known teacher of medical jurisprudence used to say in his lectures that a great deal of poisoning takes place which is never discovered, and is never likely to be discovered, except by accident. Where the symptoms caused by a poison have nothing characteristic to differentiate them from those of disease, evidence of another kind is required to put the doctor on the right track. And even with such evidence to guide him a doctor is no more infallible than a judge.

THE TREATMENT OF HAY FEVER.

HAY fever, though regarded as a trifling ailment by those who do not suffer from it, is the cause of much discomfort to those whom it claims as its victims. Till now the affection has remained among the *opprobria medicinae*. Nerve tonics, correctives of the gouty diathesis, cocaine and other local applications to deaden the sensibility of the

mucous membrane have mostly proved ineffective, and even cauterization has failed oftener than it has succeeded. Sufferers have therefore had to bear their trial with such fortitude as they could command, finding some comfort, perhaps, in the thought that their complaint is, like early baldness according to the Prince Consort, a mark of breeding. More distinctly even than gout it is an ailment of the well-to-do, for there is no "poor man's hay fever." At any rate the malady is scarcely ever seen in hospital practice. The Anglo-Saxon race has little need of the prayer—which, according to Lord Rosebery, is the only one that is always answered—for a good conceit of itself; it may therefore regard as an additional mark of its superiority the fact that it is an easy first among the peoples of the earth in liability to hay fever. This fact is doubtless taken by Americans as supplying an explanation of its widespread prevalence in the United States. More than twenty years ago a Hay Fever Association was founded there to afford sufferers a means of comparing symptoms, and telling each other of what Voltaire would have called their *bonnes fortunes* in the matter of remedies. In the hay-fever season the members take to the hills, where the baleful pollen cannot reach them. More recently a similar Association has been formed in Germany, a circumstance which may perhaps indicate a softening of manners in the Fatherland. The members take refuge from their enemy in Heligoland. The victims of hay fever may indeed say with Propertius:

> Ferte per extremas gentes ac ferte per undas
> Qua non ulla meum femina nôrit iter,

with the substitution of pollen for the more seductive danger which the Roman poet wished to avoid. The only alternative to flight is seclusion during the fairest time of the year in a darkened room jealously guarded against the intrusive pollen. Rousseau says that virtue which can be safeguarded only in a cloister is not worth preserving; it will probably seem to most people that, if one can keep free from catarrh only by sitting through the spring and early summer hermetically sealed up in a room where there is no light but only darkness visible, it would be better to defy the pollen in the open field. Those predisposed to hay fever may, however, retort that he jests at scars that never felt a wound.

A new hope seems to be opened for the victims of hay fever by recent researches of which an account is given by Sir Felix Semon in this number of the BRITISH MEDICAL JOURNAL. Professor Dunbar, Director of the Hygienic Institute at Hamburg, claims to have isolated from the pollen of certain grasses a toxin the application of which to the eyes and nostrils of persons predisposed to hay fever induces almost immediately the characteristic symptoms of the affection. It is noteworthy that while the toxic substance has been obtained from the pollen of twenty-one different kinds of grasses, none has so far been isolated from the pollen of roses and other flowering plants which many persons have been taught by experience to look upon as the source of their suffering.

With the bane Professor Dunbar claims to have discovered the antidote. By passing the pollen of rye, maize, and other grasses through the circulation of horses and other animals he has obtained an antitoxic serum which when applied to the eyes and nostrils of persons in whom the symptoms of hay fever have been produced by the toxic substance almost at once neutralizes its effect.

With the object of having his results experimentally tested in this country Professor Dunbar sent a supply of toxin and antitoxin to Sir Felix Semon. Last week Sir Felix, with the co-operation of Professor Dunbar's assistant, Dr. Carl Prausnitz, made a series of experiments which are fully described in his paper. The results were such as to establish a prima facie case in favour of Professor Dunbar's claims. A condition presenting the objective and subjective characteristics of hay fever was unquestionably produced in several persons predisposed to that affection by the injection of the toxin, and almost immediately relieved by injection of the antitoxin. The symptoms were indeed of a mild type, but the dose of toxin used was very small. It remains to be seen whether an attack of genuine hay fever can be controlled by the serum, and whether a more powerful antitoxin will be required. The question, in fact, is at present in the laboratory stage. The method has not yet been submitted to the test of a hay-fever season. But in view of the failure of other modes of treatment, it is certainly worth a trial.

In connexion with the discovery of a curative serum for hay fever the question of artificial immunization naturally presents itself. Professor Dunbar is working at this problem, and there seems to be ground for hope that he may be successful in producing a prophylactic serum by means of which it will be possible to make susceptible persons pollen-proof. In Sir Felix Semon's experiments the application of a mixture of the toxin and the antitoxin produced no effect in persons predisposed to hay fever, the antidote neutralizing the poison. The problem of prevention is, however, as yet unsolved, and it cannot be too strongly stated that, even in regard to treatment, Professor Dunbar's work has still to stand the *experimentum crucis*.

Another question for which an answer has still to be found is the nature of the factor or combination of factors that constitutes the predisposition to hay fever. Moreover, there is a considerable body of evidence than an affection identical with hay fever can be produced not only by the pollen of the grasses from which Professor Dunbar has extracted his poison, but by roses and other flowers, by dust and other things. There is also in some cases at least a subtler factor which must be taken into account, and that is the influence of autosuggestion. Most, perhaps all, sufferers from hay fever are of more or less pronounced neurotic temperament. A case is on record in which an attack of hay fever was brought on by the sight of a picture representing a meadow of flowering grass, and Dr. John Mackenzie, of Baltimore, has reported the case of a lady subject to "rose fever," in which he produced an attack by making her smell an artificial rose. Interesting and valuable, therefore, as Professor Dunbar's researches are, his work so far covers only a part of the territory to be annexed to scientific medicine before that extremely "slim" enemy which we call hay fever can be said to be wholly subdued.

THE ACCURATE DOSAGE OF CHLOROFORM.

THE invention of a new chloroform inhaler is perhaps not one of the rarest events in the annals of surgery. Those versed in the literature of the ten years following Sir James Young Simpson's epoch-making paper Notice of a New Anaesthetic Agent, will recall some score or so of mechanical contrivances which flashed for a moment across the path of medical science and were never seen again. Chloroform is a theme which might well provide the cynic or the philosopher with matter of thought. It has proved the greatest boon mankind has ever enjoyed, while it has led

to more discussion, scientific and acrimonious, than perhaps any other subject falling within the purview of the mere layman. It has not only enlisted the interest of the ordinary medical man, but has drawn eminent physiologists and, with Mr. Vernon Harcourt's recent pronouncement, we may add eminent chemists into its enchanted circle; it has even been the cause of the development of a speciality which, whatever may be urged against it, has proved a necessity for the due performance of hospital work. It would be tedious and unprofitable to plough once more the furrows wherein have been sown so many dragon teeth of dissension; we must content ourselves with the more limited task of detailing an attempt at last made to give a deadly drug to a patient by means of a method which enables the responsible person to limit the dose to the patient's requirements.

All thoughtful men who have had to devote anxious hours to administering anaesthetics have agreed that chloroform kills when given in concentration, whatever else it may or may not do when given in dilution. Snow taught this; the French school, whose work, perhaps, does not receive just appreciation nowadays, insisted that in dilution lies safety; Clover believed this, and he, like Snow, suggested means of giving dilute vapours. Unfortunately the authority of a great school scorned the belief that measurement is as much the scientific basis of chloroform administration as of the determination of the *mécanique céleste*. Thus divided counsels have retarded by some decades the progress of scientific anaesthesia. Although Snow was precise enough in his estimate of what percentage of chloroform was capable of providing certain physiological effects, yet neither he nor his followers have, as far as we know, been able to construct an apparatus more portable than a captive balloon, which enabled the average man to give chloroform in the full and certain assurance of what exact percentage he was employing. If, as we gather from the report of a recent meeting of the Society of Anaesthetists, Mr. Vernon Harcourt's chloroform regulator has proved a success, we now possess an exact instrument which may be relied upon to provide within certain limits, say 0.5 to 2 per cent. of chloroform vapour.

The essentials of an inhaler are accuracy, adaptability, and efficiency. It would seem from the comments made by the speakers at the meeting referred to that the two first desiderata may well be claimed for the chloroform regulator, and its reception at the Royal Society, when its first appearance in the scientific world was made, seems to indicate that competent judges are prepared to accept its principle as correct. On the other hand, as might be conjectured, a meeting of experts must concern itself more with practical efficiency. It has yet, we gather, to be established whether Mr. Harcourt's present apparatus, limited as it is by so narrow a margin as 2 per cent. of chloroform vapour, can be considered equal to all the requirements of the complex operations of present-day surgery.

As one speaker pointed out, these requirements are far more than those demanded in the days of Liston, Syme and Simpson, and if the triumphs of surgery of which the past century is so justly proud are to be extended, there must, we take it, not only be anaesthesia controlled by exact mechanism, but the mechanism must be sufficiently elastic to provide against all possible exigencies. Luckily, Mr. Harcourt's suggested regulator appears to be capable of modification allowing the inventor to provide a wider range of anaesthesia than one limited to a 2 per cent. maximum.

In conclusion, is it asking too much of a learned profession that we should be permitted to urge the importance of a warning which all anaesthetists from the time of Snow have uttered? This is that, important as is the apparatus from which chloroform is given, it is at best only a piece of mechanism, and must, if the safety of patients is to be successfully provided for, be presided over by an administrator. The administrator must employ the mechanism to enable him to apply his scientific knowledge of the drug he utilizes in the best and least harmful way to his patient, and not allow himself to be dominated by a mere piece of mechanical ingenuity.

COLLAPSE OF AN ACTION AGAINST A MEDICAL MAN.

Professor Byers will be warmly congratulated by all his friends and colleagues on the termination of the proceedings commenced against him by a person described as a professional nurse. She alleged that Professor Byers had on two occasions promised her marriage, had failed to fulfil his promises, and had, in fact, married his present wife last September. Professor Byers absolutely denied by an affidavit that he had made at any time any such promise, and that at any time his relations with the plaintiff had been other than those of doctor and nurse. The action was persisted in up to the point of trial, but as will be seen by the brief report at p. 768, when the case was called on the plaintiff did not appear, either personally or by counsel, and judgement was entered for the defendant. Owing to a rule of Irish law, in which respect it differs, we understand, from the practice in England, Professor Byers was not able to go into the witness-box to deny in open court the allegations made against him, which he has already in an affidavit stated to be utterly without foundation. The Solicitor-General for Ireland, who was counsel for Professor Byers, stated that his client altogether denied the allegations, and would have desired to do so on oath in court. The Solicitor-General further said that certain rumours which were in circulation to the effect that the plaintiff had failed to put in an appearance owing to inducements held out to her by Professor Byers, or on his behalf, had not the smallest foundation, and that his client had never contemplated offering or accepting any compromise. We would congratulate Professor Byers on the courage and resolution with which he faced a very disagreeable ordeal, not less than upon the complete vindication of his integrity. The legal proceedings before the case came on for trial were somewhat protracted, although Professor Byers appears to have made every effort to bring the case to an issue at the earliest possible moment, and great sympathy will be felt with him in the prolonged anxiety and worry which he must have suffered. Further, though judgement was entered for him at once when the case was called on, the legal expenses incurred must have been considerable.

ST. GEORGE'S HOSPITAL.

The meeting of the Governors of St. George's Hospital to "consider the advisability or otherwise" of removing the institution to some other site, was held on March 20th, and was well attended. In the unavoidable absence of the Duke of Richmond, the Treasurer, Mr. Timothy Holmes, presided, but reserved to himself the right to express his own views as an individual. The proceedings were animated, and the views of different sections of opinion well represented; among those who spoke were Sir William Bennett, senior surgeon, the Hon. Dudley Fortescue, Dr. W. H. Dickinson, Sir W. Kerslake, Sir Isambard Owen, Mr. Warrington Haward, Mr. Cathorne Hardy, and Sir Henry Burdett. Letters were also read from Lord Wemyss, Lord Clanwilliam, Lady Londonderry, and Mr. A. C. Drummond, and others, who opposed the idea of

removal, but were unable to attend in person. The upshot of the discussion was a confirmation by those present of the views we expressed in the British Medical Journal of March 14th in summing up the opinion we had formed from an examination of the "briefs" for and against removal, issued by the Weekly Board of Management. These were that on the facts and information hitherto collected with regard to the matter, the Governors did not seem to us to be in a position to come to any definite decision. The decision at which this meeting arrived was: "That if a suitable site can be found for St. George's Hospital within the area ordinarily served by it, and if the interest of the Governors in its present site and buildings can be disposed of to such advantage as to enable them to acquire such new site and to erect thereon a complete modern hospital establishment of not less than the present number of beds, and to meet all the contingencies connected with removal, the Governors are ready to consider the removal of the hospital." This resolution was moved by Sir William Bennett, seconded by the Hon. Dudley Fortescue, and passed by a majority of 50 votes to 8 after the word "consider" in the concluding line had been substituted on the suggestion of Sir Henry Burdett for "consent to," used in the motion as originally drafted. An amendment to this resolution, which was moved by Dr. W. H. Dickinson, seconded by Sir W. Karslake, and supported by the Chairman, was to the effect that an offer of the four houses adjoining the hospital for £50,000 should be accepted and the space used for the necessary additions to the existing building. This was lost by 51 votes to 32. It will be noted that the resolution passed simply binds the Governors to consider the matter when it has been properly threshed out and definite facts collected as to the actual sale value of the present site and buildings and the cost of a new site and buildings. In order that this investigation may be duly undertaken, a Committee of fifteen Governors, including the Treasurer and Deputy-treasurer, with power to add to its number, was selected before the proceedings terminated.

THE ROYAL NAVY MEDICAL SERVICE.

The second part of the statement of the First Lord, explanatory of Navy Estimates, 1903-4, will, we fear, be disappointing to naval medical officers, as there is no indication of the reforms our naval correspondents represent as requisite to render the naval medical service attractive to candidates, and to remove the general dissatisfaction among those in the service, at the delay in placing them on an equal footing with their brother officers in the R.A.M.C. as regards charge pay in hospitals, and additional pay for expert professional services. The various reforms of the year past fall short of what is urgently necessary. Seeing the shortage in the numbers already sanctioned, the assumed satisfaction with the increased numbers entered is hardly justified. At the conclusion of the war, more candidates were doubtless obtained than previously, but while the army attracted more candidates than were notified as requisite, it was not so with the navy. Seeing that the *personnel* of the fleet has so greatly increased of late, it is not surprising to be informed that the number of medical officers is greater than "at any time during the last quarter of the century." The Admiralty have secured the services of eminent medical men as "a Consultative Board." Great improvements have been made in the equipment of the naval hospitals, especially in all that concerns surgical operations, but as we believe that other improvements are necessary, it would be desirable that this Board should visit such establishments, and advise as to the reforms in their equipment that may be required. The revision of the ships' medicine chests, has, we are aware, long been necessary, and it is satisfactory to learn that the naval authorities have effected this, and that the new articles are being issued. In few respects were his Majesty's ships recently more behind the age than in *x*-ray installations, and their recent supply indicates that this has been realized; as dynamos are in use on board most ships of the navy for other purposes they can be used for charging the accumulators. The provision of "temporary surgeons in the case of war or emergency" is undoubtedly requisite, and the material increase of the previous pay offered, with "an equipment allowance," has, we understand, attracted "a satisfactory number of candidates." As instruction in bacteriology was established in 1899 at Haslar for surgeons on entry it is noteworthy that the authorities have now realized that the requisite "microscopes and bacteriological outfits should be supplied" to His Majesty's ships. Culture outfits are being issued for hospitals and hospital ships. The subject of ambulance stretchers for use on board ship is a difficult question, owing to the complicated passageways in modern warships, and we understand that the arrangements have been left to the officers in command. It is to be hoped that as the Admiralty have now taken this question into consideration it will be dealt with satisfactorily. Some excellent stretchers have already been described and illustrated in the British Medical Journal. The experience of the late imperfect preparation for war on land appears to have caused the Admiralty to organize an "auxiliary sick berth staff" from the British Ambulance Associations in time of peace, and a nursing reserve. The conditions of service of the sick berth staff, both as to pay and position, have in recent years been materially improved.

THE REVOLT IN THE IRISH POOR-LAW SERVICE.

The organization of the county branches of the Irish Medical Association goes on apace. Out of the thirty-two counties, twenty-six have now formed branches, all of which have adopted the Mayo resolutions in whole or in part; and the membership, notwithstanding the recent increase of the subscription from a half guinea to a guinea, has more than doubled, and now numbers over 700. As dispensary or workhouse appointments become vacant in the organized counties the members give notice that medical practitioners must not apply for them at less than the minimum terms fixed by the Association. There are now eleven derelict dispensary districts and many appointments, such as Drumconlath, Carrickbyrne, and Dundalk workhouses, have been vacant for months, while outsiders have taken others in defiance of the prohibition. We are glad to observe that the intimidatory clauses of the Mayo resolutions have been modified; but it is perfectly clear that individual members have made up their minds to hold no intercourse, professional or other, with medical men who disregard their obligations to their professional brethren. Guardians are grumbling and complaining, apparently forgetful of the fact that most of them are members of the National League. They appear quite unable to grasp the fact that what is sauce for the goose is also a nice condiment for her male partner. Some of them join issue with the doctors in such resolutions as the following passed recently by the Bawnboy Board on receipt of a copy of the Mayo resolutions adopted by the County Cavan Branch: "That we treat the resolutions with contempt, and are prepared to meet any obstacle which may be thrown in the way and working on this Board (*sic*) when the proper time arrives." As for the Irish Local Government Board, it is sitting tight and advising guardians who apply to it for instructions to advertise in the English and Scotch papers for English or Scotch doctors. We hardly think there are any English or Scotch doctors foolish enough to take the trouble to answer such advertisements. Possibly some of them might be elected, but we are assured by an Irish correspondent well acquainted with the idiosyncrasies of his countrymen that outside the extreme north of the island no English or Scotch doctor would have a chance of private practice. The hated Sassenach might starve on his salary of £150 and nothing found; even his masters would not employ him for their families. If the Irish Poor-law Medical Service is only true to itself it must succeed. Its members may and will have to face a period of conflict and possibly hardship, but their reward will come. In this connexion we observe that an Irish M.P. has blocked the Superannuation Bill. This gentleman is playing the game of the Poor-law reformers for them and helping to further embitter the doctors against

their employers, and thereby confirm the wavering and strengthen the spirit of revolt. Whether the doctors would now accept a Bill graciously permitting them to superannuate themselves out of their own miserable salaries is very questionable, and we hope they will hold out for superannuation without contribution when the time for compromise arrives.

THE LONDON COUNTY ASYLUMS LABORATORY.

In an article on the excellent work done in the Pathological Laboratory of the London County Asylums by Dr. Mott and his assistants, which appeared in the British Medical Journal of March 7th, attention was drawn to the great inconvenience of the situation of the laboratory at Claybury. To the scientific student it is like a city sitting alone in the wilderness, while to the Director, who has to take all the County asylums for his province, its remote position must be a cause of serious waste of time and of needless difficulty in the discharge of his duties. For the credit of the London County Council itself it is a pity that a laboratory so splendidly equipped and affording such unrivalled opportunities for research should be situated in the wilds of Essex where a foreign visitor has to waste the best part of a day in getting to and returning from it. The laboratory would be immensely more useful both to to the insane, for whose benefit primarily it exists, and to medical science, if it were in a central situation, and for this reason we urged its transference to London. We are informed that notice of motion to carry out this proposal was given at a recent meeting of the Asylums Committee of the London County Council. We understand, however, that a legal difficulty stands in the way. Under the present Act the Council has no power to erect a laboratory except in connexion with an asylum, and there is not at present in London an asylum that could be used for the purpose. The Council, we believe, intends to ask Parliament for the necessary power, and so reasonable a request can scarcely be refused. If Parliament proves unreasonable, however, we venture to suggest that there is a way by which the Council could transfer its laboratory to London without asking for any new power. The Council has under consideration the establishment in London of a hospital for the treatment of cases of acute insanity. Why cannot the laboratory be attached to the hospital? In this way the Gordian knot might be cut without the necessity of getting it untied by Parliament.

THE ROCKEFELLER INSTITUTE FOR MEDICAL RESEARCH.

A statement has been issued by the Board of Directors of the Rockefeller Institute for Medical Research, in which it is set forth that the institute was founded in 1901 by Mr. John D. Rockefeller, who gave for that purpose the sum of 200,000 dollars. The aims of the institute are the promotion of medical research, with special reference to the prevention and treatment of disease. It was thought wise not at first to concentrate the work in any one locality, but to enlist the interest and co-operation of such investigators throughout the country as might be engaged in promising researches, or who might enter upon new fields if suitable pecuniary assistance could be afforded them. Among the large number of applications for assistance in carrying on original studies relating to to the cause, prevention, and cure of disease, and to the problems upon which new knowledge on these subjects must be based, over twenty were selected. The directors took counsel in making these selections with the heads of departments or others in the Universities of Harvard, Yale, Johns Hopkins, Pennsylvania, Columbia, New York, Chicago, Michigan, McGill, Wesleyan, California, and Western Reserve; and in many of these institutions work has been prosecuted. Two of the Rockefeller Fellows have been working in Europe. Some of the workers under these Rockefeller Institute grants, which vary in amount from two hundred to fifteen hundred dollars, have completed and published their investigations; some are still engaged upon them. At the end of the first year of practical work, on careful study of the situation, it became clear that existing institutions in the United States, while in many instances carrying on most valuable researches in medicine, did not afford adequate facilities for many phases of investigation of the utmost importance. This is in part due to the lack of sufficient endowment, in part to the large demands made upon the time and energy of the workers by their duties as teachers. It was therefore thought that an institute for medical research of the largest promise would require a central institution, fully equipped and endowed, and with capacity for growth, in which the more comprehensive studies demanding the co-ordinated forces of various phases of science could be carried on from year to year; while at the same time, by means of such grants as had been offered during the first year, it should continue to make available the resources of special workers all over the United States, as well as in Europe. In view of these considerations Mr. Rockefeller, in June, 1902, gave to the institute the further sum of 1,000,000 dollars for the purchase of suitable land, the erection of buildings, and the organization of a working force along the broader lines which has been projected. It is the purpose of the directors to proceed at once to the erection of a laboratory building which will provide for present requirements and be capable of enlargement as the character and extent of the work of the institute may develop. A small hospital will also be built which will be maintained in close association with the experimental work of the institute. Provision will be made in the laboratory building for research in physiological chemistry, pharmacology and therapeutics, in normal and pathological physiology, and in various phased of morphology, and for the study of bacteria and other micro-organisms. It is hoped that the laboratory buildings may be completed and ready for the commencement of work in the autumn of 1904. It is proposed to organize the various sections and departments into which the work of the institute will naturally fall so that each of them, though in a measure autonomous, will still be so closely associated as to favour the conjoint investigation of comprehensive problems. Associated with the head of each of these departments will be a staff of trained assistants. Provision will also be made for research work by a group of trained men, to be designated Fellows, scholars, etc., of the institute, under pecuniary grants of varying amounts. Opportunities will be offered to suitable investigators, not members of the regular staff of the institute, to pursue special lines of research. The institute will also take over the publication of the *Journal of Experimental Medicine*, established some time ago by Dr. William H. Welch, of the Johns Hopkins University. The directors of the institute are: Dr. William H. Welch, of Baltimore; Dr. T. Mitchell Prudden, of New York; Dr. Theobald Smith, of Boston; Dr. Simon Flexner, of Philadelphia; Dr. Hermann M. Biggs, of New York; Dr. C. A. Herter, of New York; Dr. L. Emmett Holt, of New York. The officers are: Dr. William H. Welch, President; Dr. T. Mitchell Prudden, Vice-President; Dr. L. Emmett Holt, Secretary; Dr. C. A. Herter, Treasurer.

SAMARITAN FUNDS.

The work of hospitals in the relief of acute suffering is freely recognized, but two other titles to consideration are sometimes overlooked. The one is the venerable antiquity of the charitable trusts in which some of them originated, and the other, the large sums disbursed for patients who are no longer their direct charge. The administrators of the great hospitals in early days were regarded as suitable executors of almost every kind of charitable object. In this way there came into their hands considerable sums intended for objects which have since ceased to exist. These are now in many cases utilized as the nucleus of what are generally known as Samaritan Funds, and the annual report of one of them, that of St. Thomas's Hospital, has recently been published. This particular Samaritan Fund is not one of the oldest, having indeed

been constituted in its present form only fifty years ago by way of fitting celebration of the 300th anniversary of the granting of a royal charter to the parent institution. A fund, however, with a corresponding object, though far smaller powers, existed for well over a century before. It had for origin and principal asset a sum of £1,000 left to the executors of Theodore Rendue, Housekeeper of the Palace of Windsor, to devote to some charitable object at their discretion. Under the influence of Richard Mead, the well-known Physician of the first Hanoverian Court, they decided to give it to St. Thomas's Hospital; and did so (1725) with directions that "the produce thereof be for ever applied toward supplying with linen....such poor destitute patients as should have no friend or parish to provide for them and giving them some relief on their discharge from the hospital towards helping them to return to their own countries." The use of the latter word is worthy of note; it indicates that London was then, as now, the Mecca of the sick, though with far better reason. No records seem extant to show how the fund was used in the first century of its existence, butsome curious glimpses of hospital life in early Victorian days are given by an account-book commenced about that period. Thus, a common item is a payment "to the Sisters for washing the body linen, etc., of sundry poor and destitute patients." A little later we learn of a patient being sent to a convalescent home at Carshalton, in Surrey, the cost of the journey there and back being half a crown by an omnibus from the Black Bull in Holborn. A much less expensive journey this than was taken by the same patient the previous day from St. Thomas's to Sackville Street, then a fashionable medical quarter, to be passed for the convalescent home. The first record of a patient being sent to the seaside is in 1849, when 5s. was granted to "William Chavert, to help him to Margate." An idea of the price of common surgical appliances about the same period is given by an entry of 12s. paid "for a single truss." Since its formal constitution the modern fund has grown largely by the receipt of various legacies, etc. But more is still required. The opening of the children's ward has increased its work, and the cost of maintenance in homes is going up. Last year 721 patients were sent to various homes, fares costing £225 and "maintenance" about £700. Another £495 was spent on appliances for destitute cases. The cost of administration seems to have been under 5 per cent. The utility of Samaritan Funds is undoubtedly very great, and to the facilities afforded by them some part of the increase in work per bed done nowadays by hospitals must certainly be ascribed.

RITUAL CIRCUMCISION IN ITS OPERATIVE ASPECT.

CONSIDERABLE interest has recently been aroused both within the Jewish community and outside that body by the deaths of two infants shortly after the rite of circumcision, and under circumstances which left no doubt that in both cases death resulted directly from the operation. It appears, further, that in several other cases serious consequences have followed on circumcision, and it is stated that death after that operation has more than once come under the notice of the staff of the London Hospital. There can be little doubt that when the operation has been skilfully performed and the subsequent dressings carefully carried out, the mortality after infantile circumcision is extremely small. Indeed, until within the last few years deaths from this cause were so rare that many Jews were of opinion that it never occurred. Although this was at no time actually the fact, still such accidents were almost unknown. The increased frequency of misadventure during the last decade is chiefly, if not entirely, due to the Russian immigration, in consequence of which there is considerable overcrowding among the Jewish population of East London, so that the sanitary conditions are often far from satisfactory. Under these circumstances it is evident that evil results are likely to follow even the slightest operation unless this be performed with the greatest care and with the strictest aseptic precautions. The responsible heads of the Jewish community have always been alive to the necessity of taking means to secure that the rite of circumcision should be performed with due care, and for more than a century a charitable association with this object known as the Initiation Society has been in existence. In addition to receiving a money gift, every poor Jew applying to this society on the occasion of the circumcision of a child is provided, free of charge when necessary, with the services of a skilled circumcisor. Unfortunately the society has not found it possible to grant its licence to circumcise only to qualified surgeons, but the candidate has always been called upon to satisfy the society's medical officer as to his skill after having received special instruction. It appears on inquiry that since the deaths referred to above the Initiation Society has recast its rules and it is now proposed to establish a medical board consisting entirely of registered surgeons to examine candidates and to compile a register of circumcisors approved after examination. Such circumcisors will be called upon, under pain of removal, to conform strictly to the rules laid down by the medical board and these rules as drafted include every precaution which can be required to safeguard the child both during and after the operation. It is evident that there is no valid reason for the outcry which has been raised in some quarters regarding what is called the reckless sacrifice of infant life. The Jewish community is clearly quite alive to its responsibilities in this matter, and is prepared to remedy as far as possible the evil conditions which obtain in some cases. As far as the Initiation Society is concerned, the precautions proposed to be taken appear to be sufficient. The greatest difficulty will probably arise in dealing with those parents who from ignorance or obstinacy insist on having their children circumcised by operators other than those of the Society. However, when once the system is in full working order it will be less difficult to discourage unlicensed persons from operating. In cases where evil results follow the action of an unrecognized circumcisor the Society for the Prevention of Cruelty to Children might well be asked to take up the case, and it seems probable that the legal obligation on a parent to provide a proper operator for circumcision could be enforced in the same way as the obligation to call in a qualified practitioner when a child is ill. The dangers from circumcision should not be very serious, and considering the large number of Jewish children yearly submitted to the operation accidents are rare, but the matter calls for watchfulness on the part of the leaders of the Jewish community, and will no doubt receive from them the attention which it requires.

THE GRAPHIC REPRESENTATION OF VOICE.

THE lecture at the Royal Institution, on March 6th, was given by Professor M'Kendrick, of the University of Glasgow, who took as his subject "Experimental Studies in Phonetics." He introduced his lecture by describing the evolution of speaking machines from their first beginnings by Kratzenstein and Kempelen in 1780, through the work of Robert Willis in 1828, who imitated some of the vowel sounds by means of a vibrating reed and tubes of various lengths, the adaptation of resonators by Wheatstone, the demonstration of the resonating function of the mouth by Donders, the investigation of the pitch of the mouth cavities by Helmholtz, and the invention of various instruments culminating in 1877 in the phonograph of Edison. An instrument was shown by Dr. M'Kendrick, devised by himself, by which the sound wave marks on a phonographic cylinder could be projected on a flat surface in the form of a tracing. He also showed a method by means of which the loudness of phonographic tones could be increased. The sound waves from the phonograph fell on a microphone, and the electrical variations thus produced passed through the primary coil of an induction machine. These variations became intensified in the secondary coil, and were then made to act on a specially constructed telephone. By using the microphone and an electromagnet to which a drum and recording lever were attached, the phonographic vibrations were traced on a blackened cylinder. The wave forms corresponding to the different vowels and their combinations with consonants were

demonstrated, and their distinctive characters pointed out. For example, it was shown that the sound of the consonant "r" is made up of little groups of vibrations, thus: nine vibrations and then a break with no vibrations, and so on as long as "r" is sounded. It was then shown how the pitch of speech sounds could be determined. Thus in "i" (pronounced "ee") the tone from the larynx might have a pitch of from 400 to 500 vibrations per second, but it was associated with a harmonic tone whose vibrations were as high as 3,000 per second, and yet could be distinctly seen. The sensitiveness of the ear, infinitely greater than that of any telephone or phonograph, was shown to correspond with the infinite variations in the human voice, no two vowel sounds produced by different persons being absolutely alike in quality.

A MEDICAL PRESIDENT FOR THE UNITED STATES.

We hear much in this country of the political insignificance of the medical profession. This cannot be due to any incompatibility between a medical training and aptitude for political life, for in some other countries the highest political offices are held by medical men. France has a medical man as the head of the Government, while Switzerland has one as the head of the State. There is said to be a chance of a doctor being elected President of the United States. The recently-elected Governor of Rhode Island, Dr. Garvin, who is a member of the medical profession, will probably, according to the *Philadelphia Medical Journal*, be put forward by one of the great political parties as a candidate for the Presidency. It may be mentioned that Dr. Garvin is not the only member of the medical profession who is a Governor of a State at the present time. Dr. Pardee is the Governor of California. The brilliant success of General Leonard Wood as Governor of Cuba is known of all men. M. de Lanessan has been Minister of Marine, and Dr. Alfred Viger, Minister of Agriculture in more than one French Government. Of the political exploits of Dr. Jameson nothing need be said, but the British profession has good reason to be proud of the political career of Sir Charles Tupper in Canada and Sir Charles Nicholson in Australia; of the administrative success of Sir William McGregor as Governor of Lagos; and of the diplomatic services of Sir Rutherford Alcock, Sir Halliday Macartney, Sir George Robertson, and the many other men who have forsaken medicine for the work of the State.

HAEMOGLOBINURIA OF TRAUMATIC ORIGIN.

At the meeting of the Royal Medical and Chirurgical Society held on March 24th, a report of which appears at p. 732, an interesting paper on what is probably a unique case of haemoglobinuria of traumatic origin, which seems to have an important bearing on the etiology of so-called paroxysmal haemoglobinuria, and possibly on the inner pathology of blackwater fever, was communicated by Mr. C. W. Ensor, Assistant Medical Officer, and Dr. J. O. Wakelin Barratt, Pathologist to the West Riding Asylum, Wakefield. The subject was a patient in the asylum who was accustomed to beat his forehead with his right hand with such violence as to produce with each stroke, as the authors described, a "sickening thud." He would continue to do this for half an hour or longer at a time. Such bouts of extreme violence, which occurred at irregular intervals, were quickly followed by haemoglobinuria. There was no other exciting cause evident; each attack had been preceded by this violence, and after no undoubted bout of violence did haemoglobinuria fail to appear. The violence was so great that extravasation of blood must in the authors' opinion certainly have occurred, and yet there was never any visible bruising. It was therefore assumed that the local injury had set free a haemolysin which destroyed the red blood corpuscles, and that the liberated haemoglobin, becoming dissolved in the blood plasma, was quickly removed by the kidneys. A curious fact, if it were no more than curious, was the constant presence of urobilin in the urine, an association which was known to obtain, as stated by Dr. J. W. W. Stephens in the ensuing discussion, in the prehaemoglobinuric stage of blackwater fever; similarly in each condition traces of a nucleoproteid were to be found. It was suggested in the discussion that the liberation of haemoglobin was probably not the result of the action of a haemolysin, but the result of excessive mechanical vibration, just as haemoglobin might be set free on centrifugalizing blood, but apart from the fact that the vibrations cannot have occurred in rapid succession, the authors had failed to find any special fragility of the red blood corpuscles, at any rate none that could be demonstrated by the method of pounding the corpuscles mixed with saline solution in a mortar. The more general opinion seemed to be that the blood destruction depended on the action of a haemolysin locally produced which was assumed to be put in action by the mechanical injury—the injury acting as an exciting cause just as exposure to cold or violent muscular exertion might in predisposed subjects. Ehrlich's view that in paroxysmal haemoglobinuria a local haemolysin might be developed by the epithelial cells of the blood vessels was quoted as having a possible significance in relation to this particular case.

THE NEW YORK ACADEMY OF MEDICINE.

In a valedictory address to the New York Academy of Medicine, recently delivered by the retiring President, Dr. Robert F. Weir, an interesting account of that distinguished body was given. The Fellows of the Academy at present number 789 resident in New York. Since its foundation in 1847 there have been 27 Presidents, among them being such men as Valentine Mott, Willard Parker, Fordyce Barker, A. L. Loomis, and A. Jacobi. It is remarkable that of all the presidents only five have been surgeons. Dr. Weir is unable to say whether this is due to the modesty of character for which surgeons are so noted, or to their freedom from ambition, or their incapacity for intrigue. Dr. Weir gave sketches of the five surgical presidents. Of Valentine Mott Astley Cooper said: "He has performed more of the great operations than any man living or that ever did live." The tale of Mott's original operations include ligature of the innominate and the common iliac arteries, resection of the entire clavicle, resection of the lower jaw, resection and ligature of the deep jugular vein and the suture of wounded veins. Mott died in 1865, leaving an estate valued at £200,000. His largest fee was £200, and this was received only twice—a contrast to what Dr. Weir describes as the inflated charges of the present day. Of Willard Parker he says that he was the first to perform perineal cystotomy for the relief of intractable cystitis, and the first to operate for appendicitis. Of another surgical president, John Watson, he tells an amusing story. He was a strict Presbyterian, and on one occasion was assisted in a difficult operation for the removal of a tumour from the neck by a colleague, Dr. Markoe, also *vir pietate gravis* and a member of the same church. The procedure involved rather a large exposure of the parts, with troublesome bleeding from a deep vessel. When the vessel was at last caught with the tenaculum, and ready to be tied, Dr. Markoe said, "Stop a moment, Dr. Watson, that we may observe the handsome anatomical display you have made in your operation. See how finely," he continued, "is shown the carotid artery, the jugular vein, and —" "Devil take all that!" said Dr. Watson, with emphasis. "Will you tie that artery or not?" "Devil take it!" promptly replied the other church member, "I will, since you are in such a devilish hurry." The next surgeon who filled the presidential chair was Alfred G. Post, who was particularly fond of long Greek words. This led Dr. Weir, at a meeting of the Surgical Society, where Post had read reports of several cases interlarded with many words of learned length and thundering sound, to present an example of what he called the operation of "dysmorphosteodiaclasis"—a word which he had found in a German textbook, and the meaning of which he had carefully worked out with the help of a Greek lexicon for Post's special benefit. When Dr. Weir had uttered the fearsome word—which being

interpreted means a refracture of a badly-united bone—Post asked him to repeat it, and then set himself to dissect it philologically, with much satisfaction. On another occasion Post presented to the Medical and Surgical Society the thigh-bone of a chicken with a growth on it which he called an enchondroma. Some irreverent person present thereupon suggested that he had mispronounced the word, as the specimen was a *hen*chondroma. Dr. Weir concluded by saying that he exceedingly regretted that it had not occurred to the Academy to join in the jubilee celebration of the fiftieth anniversary of Lord Lister's admission to the medical profession "which was duly honoured in London, and particularly so in the pages of the British Medical Journal of December 13th, 1902." "It is hard to say," said Dr. Weir, "which is the greater boon to surgery, anaesthesia or antiseptic surgery. Owing to the rancorous contention of the friends of Morton and Wells the monument on Boston Common carries no name, but simply the words 'To the Discoverer of Anaethesia.' I had rather it had been adorned with Holmes's witty suggestion, 'To Either.' But no such confusion rests with the promulgator of the antiseptic treatment of wounds. This treatment has saved thousands and thousands of lives; it has rendered possible previous impossible surgical procedures; it has developed the art of surgery beyond the expected, and it has stimulated the science of medicine to an incalculable degree. But it could not have been done without anaesthesia. If the soldiers of France would not go into battle without Ambroïse Paré was with them, no more would they now willingly go forth without the help of anaesthesia, for the direst messages in the Civil War, in positions of the greatest straits, read often, 'We are without food and chloroform.'"

GATLING AND GUILLOTIN.

Richard Jordan Gatling, the inventor of the gun which bears his name, who died recently in his 85th year, was originally a member of the medical profession. He studied medicine at Ohio Medical College, and graduated in due course but never practised. He was destined to win fame as the inventor of means for the wholesale destruction of human life rather than for its preservation. He is said to have been inspired by the desire to make "artillery so deadly that deaths from disease would be averted owing to the universal horror for war." The reasoning is a little obscure, for even if the reign of peace, proclaimed somewhat prematurely by the Hague Conference, were to become an accomplished fact, there seems to be nothing to warrant the hope that people would cease to die of disease. But we are willing to believe that Dr. Gatling's intentions were better than his logic, and that his murderous weapon was designed for the protection of human life. The equally famous invention of Dr. Guillotin was in like manner the offspring of humanitarian sentiment.

A NURSING SCANDAL.

Dr. Joseph Smyth, Inspector under the Local Government Board of Ireland, has been holding an inquiry at Granard into certain serious allegations made by Dr. Kenny, the workhouse medical officer, regarding the nursing arrangements in the hospital. According to the story told by him, he was appointed in 1889, and the nursing was carried on by two nuns assisted by paupers. He called the attention of the guardians to the new order in 1897, and in the same year reported the filthy state of the infirmary. He mentioned cases in which the patients were clean while attended by skilled nurses, but were not so when this aid was removed. He requisitioned a nurse for a child who was being attended to by a wardmaid, but the nurse was sent away by the guardians in spite of his warning, and the child died. He refused to certify the cause of death. One of the sisters had refused to take directions from him as to treating a case in his absence. On January 9th he found that the putrid corpse of a burned woman had been allowed to remain in the children's ward uncoffined for nearly twelve hours. The children had to eat and live with such surroundings. He specified a number of instances in which the patients and the bedclothes were unclean. A nun refused to wash a man who was covered with vermin, and the medical officer had to do it himself. He asked for one nurse for ten beds. In cross-examination, he denied that there was want of harmony on his part, that he had called a priest a perjurer, or that the nurses told malicious lies. He persisted in saying that the want of the nurse killed the child. The inspector observed that the highest nurse in the land would have no objection to perform the most menial work. This was a high and holy office, and in no way humiliating. The witness continued, and said the slop buckets were left in the wards all night, with their contents. The closets were filthy. The deadhouse was shocking. The inquiry was adjourned.

IRISH WORKHOUSE ASSOCIATION.

The Lord Mayor of Dublin presided over the annual meeting of this Association in the Mansion House on March 20th. Lord Monteagle, who has been so conspicuous a worker in this cause, in moving the adoption of the report urged that all effective dealing with the most fundamental question of Poor-law reform—the treatment of pauper children—hinged on their removal from workhouses. A resolution was passed urging the importance of local Poor-law conferences at convenient centres.

FRAMBOESIA AND SYPHILIS IN GERMAN EAST AFRICA.

In a second paper on the diseases which occur among the natives of German East Africa, Dr. Steuber, late of Dar-es-Salâm[1], returns to the subject of framboesia tropica and syphilis. Among the Wadschagga of Kilima-Njaro, the former disease goes by the name of "shiwaki." Skrodzki describes the appearance as seen in Moschi. At first there is a general eruption about the body, including the scalp, consisting of small papules, which itch intensely. The papules next feel slightly raised, and light grey, pin-head-sized points appear about them. These points become sero-purulent, and break down with formation of a dirty-grey crust. When this falls off or is removed, a small ulcerated surface is seen, which has a proud-flesh appearance. This, becoming more developed and well raised above the level of the skin, gives rise to the framboesial lesion. According to Brückner, the disease in Tabora goes by the name of "buba." Both in this district and in Moschi the evolution of the disease is thought to render a subject immune. Steuber refers to a general vesicular eruption as part of the complaint; but whether by this he means the above-described pinhead points which form on the papules is not quite clear. In Tabora the vesicular eruption was observed to commence on the glans. Although Steuber admits that some of the appearances of framboesia are reminiscent of syphilis, yet the two diseases are distinct from each other, a view the author put forward in his first paper, and which further observation has confirmed. Both framboesia and syphilis are known to the natives, and are distinguished by them by different names. Moreover, both conditions have been observed on one and the same individual. Syphilis is very common among the negroes of East Africa, especially up country. The disease appears to be as a rule benign in its evolution. Mercurial stomatitis occurs frequently and rapidly when inunction is employed. It may be added that gonorrhoea is extraordinarily frequent in Tabora.

A LABORATORY OF CRIMINOLOGY.

A Bill is before the United States Congress providing for the establishment of a national laboratory for the study of the criminal and other abnormal classes, the work to include not only laboratory investigations, but the collection of sociological and pathological data, especially such as may be found in institutions for the criminal, pauper, and defective classes, and general hospitals and schools. The laboratory is to be in charge of a director appointed by the President, who is to make an annual report to the Attorney-

[1] *Arch. für Schiffs- und Tropen-Hygiene*, Bd. vii, 1903, p. 57.

General. The Bill has received the emphatic approval of the medical profession in America as represented by six national medical societies and twenty-two State medical societies. In addition to this, many scientific, legal, and religious associations have given their official sanction to the measure, among them the "International Congress of Criminology." The Bill has been unanimously reported by the House Judiciary Committee and the Committee on Judiciary of the Senate. It is estimated that crime alone costs the United States several hundred million dollars a year. In the Bill 8,000 dollars (£1,600) is to be appropriated for the study of the cause of crime. Yet we gather that this Bill is opposed on grounds of economy.

PROPOSED ABOLITION OF CORONERS IN THE UNITED STATES.

We learn from *American Medicine* that a Bill has been introduced into the New York Legislature abolishing the office of coroner. It is proposed to substitute for the coroners medical examiners, of which Manhattan will have 6, Brooklyn 4, Queens 2, the Bronx 2, and Richmond 1. These officers would be appointed by the Board of Health for a term of five years at a salary of £700 a year. It is provided that all matters now subject to investigation by the coroners shall be first submitted to the Board of Health. The police powers now vested in the coroners would be transferred to the district attorney, who would act in conjunction with the medical examiners in the investigation of all suspicious cases of death. The measure, which is said to be similar in all of its provisions to the present law of Massachusetts, is favoured by the various New York medical associations.

EDINBURGH UNIVERSITY UNION.

An appeal, signed by Mr. Arthur Balfour, Chancellor of the University, Sir R. B. Finlay, Rector, and Mr. Andrew A. Hall, President of the Union, has been issued for funds to defray the cost of necessary extension of the Edinburgh University Union buildings. Since the institution of the Union great change has been brought about in the social and academic life of the University, and with the development of a corporate and common life among the students increasing use has been made of the advantages afforded by the Union. The membership during the last five years has grown rapidly, and the buildings completed in 1889 are now found inadequate. It is proposed to erect on a piece of ground belonging to the University lying between the present Union buildings and the music class-room additional accommodation as follows: a new and much larger library and writing room, an additional reading room capable of being used as a small hall, extension of the dining room giving double the present accommodation, a large smoking and conversation room, to be secured by providing a new billiard room and setting free the present room; a new kitchen and service block, a tea-room, retiring-room and furniture store, and two fives courts. The estimated cost without the site is just over £16,000. The total estimated cost, including the site, will not, it is anticipated, exceed £20,000, of which sum £5,000 has been obtained. Subscriptions will be received by Mr. James Walker, C.A., Treasurer University Union, Edinburgh, from whom any graduate who has not yet received the papers relating to the extension can obtain them.

THE *DENTISTS' REGISTER.*

The *Dentists' Register*[1] for 1903 has just been issued by the General Medical Council. It contains the names of 4,617 recognized practitioners of dentistry, of whom 2,148 hold either a licence in dental surgery or a qualification in medicine and surgery, or both the one and the other. Very much the larger number, however (1,956), hold a qualification in dental surgery alone. The number of dentists whose names appear on the *Register* in virtue of their having been in dental practice prior to its institution in 1878, still remains very large, being 2,466, or 360 more than those who hold registrable qualifications. The Royal College of Surgeons of England still remains responsible for one-third more of the qualified dentists than all the other licensing bodies in the United Kingdom together.

[1] London: Spottiswoode and Co. (Demy 8vo, pp. 242. 3s. 4d.)

The Earl of Selborne, First Lord of the Admiralty, will visit the Royal Naval Hospital, Haslar, on Tuesday next, March 31st, to distribute the prizes gained by the surgeons under instruction at the examination recently held at the termination of the fourth-month instructional course.

Sir William Turner, Principal of the University of Edinburgh, and James Guthrie, Esq., President of the Royal Scottish Academy, are to be the guests of the Edinburgh Cap and Gown Club at dinner on Saturday, March 28th, when the Lord Justice Clerk (Lord Kingsburgh) will preside.

MEDICAL NOTES IN PARLIAMENT.

[From our Lobby Correspondent.]

The Public Health Bill.—Sir Francis Powell has put the second reading of this Bill down for this week, but with little hope of the Bill coming on. The Council of the City of Nottingham has issued a strong circular against the Bill, which is declared to be retrograde in its character and likely to injure the public health work of the City. As a large number of other municipalities take the same view, the prospects of the Bill passing are considered to be very slight.

The Naval Medical Service.—On Monday last Mr. Boland asked the Secretary to the Admiralty, whether it was proposed to improve the Naval Medical Department with respect to promotion and pay, so as to place it on a like footing with the Army Medical Service. Mr. Arnold-Forster answered that on March 24th, 1902, an order in Council was issued raising the pay of Naval Medical Officers and placing it practically on an equality with that of officers of the Royal Army Medical Corps. Promotion both in the medical branch of the navy and in the Royal Army Medical Corps was by seniority until the administrative grades were reached, when promotion by selection was practised. Special promotions for conspicuous professional merit or for war service were made in the Naval Medical Service. Owing to the great differences between the navy and army it was impossible to conduct the medical services on exactly similar lines.

Soldiers Discharged for Disease.—In the House of Lords last week, the Earl of Mayo asked (1) how many soldiers had, since the outbreak of war in South Africa, been discharged from the army without pensions for diseases not directly attributable to active service in the field; (2) whether, in view of the large number of men so discharged, the medical examination of recruits was carried out with sufficient care, as the discharge of so many destitute men must have a prejudicial effect on voluntary recruiting. The Earl of Hardwicke said that during the years 1899, 1900, 1901, and 1902 the total number of men discharged was 6,745. He did not think that they could look upon this number as being so large as to have the suggested effect on recruiting. During the last two years there had been better recruiting than ever before, and it was only during the last two years that so many men had been discharged. The number of recruits enlisted during those years was 126,149, the percentage of men discharged being only 5 per cent. of the total number. The Commander-in-Chief had laid down strict regulations that no recruit was to be sent before an officer unless there was a reasonable chance of his passing the medical examination; but, in spite of that strict order, the number of men rejected previous to enlistment was over 32 per cent. From the report of the Inspector-General of Recruiting it would be seen that during 1902 the number of men who came forward to join the colours and to be medically inspected was 87,609, and the number of men rejected on account of various ailments was 28,221. These figures showed that the medical examination was carried out with very great care. When the men were discharged, they always received a gratuity ranging from £2 to £12

Bad Teeth Among Recruits.—Last week Mr. Weir asked the Secretary of State for War, in view of a statement contained in the recently issued report of the Inspector-General of Recruiting to the effect that, in the reports from manufacturing districts, stress was laid upon the number of men rejected for bad teeth, to state the percentage of men who were rejected for this cause during the year under review. Mr. Brodrick replied that the number of men rejected for bad teeth in 1902 was 4,558, and the ratio per 1,000 inspected was 52.03. This number was nearly double the figures for 1901.

Fines and Costs under the Vaccination Acts.—Mr. Levy asked the Secretary of State for the Home Department last week whether he was aware that at Melton Mowbray, on January 10th, the police authorities, in executing three distress warrants for the recovery of fines and costs imposed under the Vaccination Acts, amounting respectively to 13s., 35s. 6d., and 40s. 6d., charged each defaulter, in addition to the usual fees, £4 7s. 6d. for the services of an auctioneer and £1 8s. 4d. for the use of a van which in two of these instances was not used for any excepting purely police purposes; and whether he would consider the desirability of issuing such instructions to the chief constables throughout the country as would insure due regard for moderation in the execution of distress warrants under the Vaccination Acts. Mr. Akers-Douglas stated, in reply, that he had no information as to the particular cases mentioned in the question, but he might say that the costs of enforcing such fines were properly charged to the defendants, and that the costs were necessarily increased when special police precautions were required. He did not think that he could properly issue to the police such instructions as those suggested.

The Supply of Glycerinated Calf Lymph in Scotland.—Mr. Weir asked the Lord Advocate, in view of the insufficient supply of animal lymph for vaccination purposes in Scotland, whether he would consider the advisability of establishing in Scotland an animal vaccine station and laboratory for the preparation of glycerinated calf lymph similar to the establishment under the control of the Local Government Board, London. Mr. Graham Murray replied that he could not assent to the view that the supply of animal lymph for vaccination purposes in Scotland had been found to be insufficient. But a proposal to establish in Scotland a station for the preparation of glycerinated calf lymph had been made to the Secretary for Scotland, and would be considered.

Vaccination in Scotland.—On Wednesday Mr. Weir asked the Lord Advocate from whom the public vaccinators in Scotland obtained their supply of animal lymph. Mr. Graham Murray, in reply, said that there were no public vaccinators in Scotland, as the term is understood in England. Parochial vaccinators, whose duties were confined to vaccinating defaulters and the children of paupers, received free on application supplies of glycerinated calf lymph from the Local Government Board for Scotland.

Vivisection at the Brown Institute.—Mr. Weir on Wednesday asked the Home Secretary whether, in view of the fact that the Brown Institute was founded in 1871 by means of a bequest of £20,000 for the establishment of a hospital for animals, he would ascertain under what authority a school of vivisection was now conducted at the Institute, and whether he would state how many attached to this school possess vivisection certificates, and the nature of such certificates. The Home Secretary replied that in 1877 the University of London, which is the governing body of the Brown Institute, applied to have the place registered under the Prevention of Cruelty to Animals Act, 1876, for the performance of experiments on living animals. The place was registered accordingly. Sixteen persons hold licences under that Act authorizing them to perform experiments at the Institute. Fifteen of those also hold certificates under the Act, namely, eleven authorizing practically painless experiments (such as inoculations) to be performed without anaesthetics, coupled in five cases with the extra certificate required for experiments on dogs and cats; and fifteen certificates authorizing the animal to be kept alive after an initial operation under anaesthetics, coupled in nine cases with the extra certificate for dogs, and in one case for horses.

The Prevention of Corruption Bill.—This Bill was considered in Committee in the House of Lords at the end of last week and passed the stage. In Subsection 1, Clause 1, Lord Alverstone moved to leave out the words "and without the knowledge of his principal" on the ground that the word "corruptly" covered all that was necessary. The amendment was agreed to. Lord James moved an amendment to cover the case of any person whose duty it was to order or receive goods on behalf of his principal who should in consequence of so doing receive any recompense or gift from the person supplying such goods without the knowledge of the principal. The Lord Chancellor opposed the amendment, and after a long conversation a division was called but not persisted in, and the amendment was negatived. Amendments by Lord Alverstone to increase the maximum penalty from one year to two years, and providing that imprisonment and fine might both be inflicted, were agreed to. The Lord Chancellor added subsections providing that servants of the Crown should be regarded as agents within the meaning of the Act, and that in any prosecution no evidence should be admissible to show that forbidden gifts or considerations were customary in any trade or calling. The following subsection was also added instead of the amendment of Lord James, namely, "For the purposes of this Act, when it is shown that any such gift or consideration as in this section mentioned has been taken, given, or offered without the assent of the principal, the burden of proving that such gift or consideration was not taken, given, or offered corruptly shall lie on the accused." This finished Clause 1, and the remaining clauses were afterwards passed.

The Addenbrooke's Hospital Bill.—This Bill has been issued this week, with the names of Sir R. C. Jebb, Mr. Brand, Sir Penrose Fitzgerald, Sir John Gorst, Mr. Raymond Green, Mr. Griffith Boscawen, and Mr. Rose as its promoters. It is introduced to confirm a scheme for the management of the charity made by the Charity Commissioners. The object of the scheme is to establish a responsible executive elected by the governors and charged with the administration of the hospital. The committee to be elected is to be representative of the governors resident in the borough of Cambridge, the University, and the surrounding counties. The mode of election and the powers and duties of the committee are defined in the scheme. Up till now the hospital has been administered under the Act of 1766, which gives the management to the governors at large, and there is no authority to appoint an executive committee. As there are at present about 650 governors, a scheme was considered necessary for creating a smaller executive authority.

Waltham Abbey and the Sanitary Inspector.—Colonel Lockwood asked the Secretary to the Treasury last week if he would explain why the sanitary inspector at Waltham Abbey was not allowed to visit the Government houses and cottages, as well as the houses of private owners. Mr. Hayes Fisher replied that under Clause 327 of the Public Health Act of 1875 War Department property was exempted from disturbance or interference on the part of the local authority. It did not appear, moreover, that the local sanitary inspector had ever made any attempt to visit Government houses at Waltham.

Shops (Early Closing) Bill.—The Lords were busy on Friday in last week discussing how shops should be managed and trade carried on by shop assistants. It was an interesting and suggestive study, but there ran through the comedy of it a tragic note. This was first voiced by Lord Wemyss, who, after giving notice of opposition at a later stage, raised the ghost of Lord Ribblesdale's Bill, which had been killed so unkindly a few days previously to give Lord Avebury his chance. After a general criticism of the Bill by Lord Cowper the House went into Committee on the measure, and then on the first clause Lord Ribblesdale intervened by moving an amendment in favour of letting local authorities initiate legislation as to early closing in preference to two-thirds of the shopkeepers as proposed by the Bill. A lively debate followed, and the Government supported the Avebury Bill, which, it was contended, reflected the opinions of both shopkeepers and shop assistants, and carried out the views of the Select Committee. In the end the amendment was rejected by a majority of 36 and the ghost of Lord Ribblesdale's Bill laid for a time. Lord Lytton afterwards tried to reject Clause 1, but it was finally agreed to with a slight amendment. Clause 4 was struck out after 2 and 3 had been passed. A new clause was substituted for Clause 5, Clauses 6 and 7 were passed, a subsection substituted for Clause 8, and then the remaining clauses were agreed to and the Bill reported to the House.

NOVA ET VETERA.

GILBERT MAMINOT AND THE DEATH OF THE CONQUEROR.

One of the most remarkable passages in the Anglo-Norman chronicles is the death-bed discourse attributed to the Conqueror by Vitalis, in his *Ecclesiastical History* (lib. vij, cap. 14, 15, 16). It has, of course, be depreciated as fictitious, and represented to be a flight of fancy on the part of that author, notwithstanding his very definite and express statement to the contrary, and his allegation that there was much more to the same effect. The more one knows of Vitalis, however, the more one is impressed by his general honesty and industry. Furthermore, artistic finish is the one quality above all others which he did emphatically lack, and that he should in this instance have given us something totally different from all his other writing is most improbable. Now this discourse contains several assertions on historical matters which are not elsewhere to be found, and it is therefore a matter of some importance to establish an opinion for or against its general trustworthiness.

When the King died Vitalis was but 12 years of age, therefore it is very unlikely that he heard any of this discourse himself. It must probably have been spread over at least two or three days, for it is a kind of autobiography of the Duke, and an abstract of the history of the duchy, from his very accession, some fifty-two years before. Vitalis, had he been present, could scarcely have understood it with any clearness at the time; and if he first heard it when he was old enough to comprehend and retain it, then it was already a matter no longer of the recent past. But those who have, on these or other grounds, questioned the authenticity of this discourse, have never observed that the medical details are well described, and afford evidence, of which we can judge for ourselves, that the narrative owes something to a man of keen intelligence, and good—that is to say cultivated—powers of observation.

In the last few days of July, 1087, William was besieging Mantes, and being already extremely "corpulent," and only just recovering from some abdominal trouble which had caused him for some notable time to keep his bed, was now carrying out his threats to pay his candles for his churching, his grim reply to Philip's delicate wit, that is to say, he was ravaging France, doubtless in execution of some deep policy in fact, but confessedly by way of revenge for a personal insult perhaps not actually apochryphal, which demonstrates that he could find no better reason for his invasion. The town was burnt, and the King received some hurt from the pommel of his saddle, a high affair reaching more or less to the level of the rider's umbilicus. Perhaps it is only by poetic justice that the horse is presented as treading in the hot ashes of the burning town, but that is immaterial. The King, says Vitalis, fell sick from the excessive heat and his great fatigues; and very possibly his exertions, independent of any injury, were too much for a convalescent. He is described as lingering for six weeks in severe suffering. There is not the least suggestion in the history of the case that the King's "corpulence" was caused by any form of hydropsis, and the condition is indicated to have exceeded the probable duration of any simple adiposity. Mitral incompetence, hepatic conditions, and chronic nephritis may all probably be excluded.

Therefore it is very possible that the King suffered from a hernia, for which rest had been advised. He was not the man to rest needlessly, therefore we may safely assume that his condition had been giving him much trouble before this accident at Mantes; certainly he was now in a very grave state, for we are told that his subjects very generally anticipated his demise. It is further stated that his intellect was clear, and his conversation lively, to the end; whence it appears that the trouble was entirely local, and that the King died of his abdominal disease, not of any intercurrent ailment; constitutionally a healthy, not a broken man, and his immense muscular strength had been notorious. The noise of Rouen worried him, and he was therefore removed to the priory of S. Gervase, close by the town. Though they ventured to move him, they feared, perhaps, to move him far. Gilbert Bishop of Lisieux, and Guntard Abbot of Jumièges, and others skilled in medicine, watched his spiritual and temporal interests, we are told. His disorder went from bad to worse, for it is said that he perceived death to be inevitable. Presumably his hernia had become quite unmanageable, and was much obstructed, for it is probable that any mere adiposity which may formerly have inconvenienced him was now wasted. It is said that his apprehensions of that which lay behind the veil gave him deep concern, and caused him frequently to sigh and groan; but physical suffering is an equally good reason for such symptoms. He put his affairs in order with great precision, and incidentally he delivered this "eloquent discourse, worthy to be kept in perpetual remembrance," a phrase distinctly suggestive of a mental comment made at the time of hearing by the witness to whom Vitalis was indebted for his narrative.

At the conclusion of the discourse comes Henry's plea for a heritage, and the prophecy of his ultimate succession, very probably made after the event, for Vitalis wrote during Henry's reign; but also very possibly only an intelligent anticipation, based on facts within the astute King's observation. We know he had the lowest opinion of Robert's capacity, though William and Henry were true sons of their father. William he dispatched to England with a letter to Lanfranc, and instructions to secure the crown—according to another sentence he refused to make any disposal of the English kingdom, by reason of the way he had come by it—and at his point of embarkation, which is not quite determined perhaps, the news of his father's death overtook Rufus, and this is fairly suggestive that the Conqueror died somewhat suddenly at last. We are told once again of the King's "excruciating" abdominal pains, and mental clearness. When pressed by the clergy to release from prison his turbulent half-brother Odo of Bayeux, being "exhausted" by their pertinacity, he gave an acute summary of Odo's character, and yielded the pardon, expressly against his own judgement; still able to think clearly, when too weak to argue or to command these petitioners to desist. Next comes the description of his death. On Tuesday, September 9th the King awoke at sunrise, and heard the great bell of Rouen Cathedral. An interval of ease and sleep preceded his decease, and we are indeed told of his peaceful sleep "all night." He must have been extremely weak if he needed to ask what the sound was. Being told that it was the bell of St. Mary's ringing for primes, he commended himself to Mary, uttered a brief prayer, and instantly expired.

Here is a clear picture of death by peritonitis, and the excruciating pains doubtless mark the time of the final catastrophe—the rupture of the intestine. His sudden decease after such a peaceful night greatly "astonished" the physicians, and many a practitioner can doubtless recall an equivalent surprise on his first meeting with this very deceptive symptom. Thus we have an account perfectly intelligible to us of details incomprehensible to its author, and it would be difficult to devise a better test of his veracity. We cannot expect to find mention of every symptom described in a textbook, but plainly we have a narrative of such a death as we have ourselves witnessed, whereof we can recognize the general accuracy. We even have some *post-mortem* evidence. In the effort to put the corpse into a stone coffin which was somewhat too small, the attenuated abdominal walls of the "corpulent" body gave way under the strain, and the officiating clergy were "alarmed" at the advanced state of decomposition thereby demonstrated. That is only explicable on the assumption that suppuration had reached to some considerable extent during life, and that the subsequent disorganization was rapid, or there would have been no cause for surprise; and again, the observer enables us to see that he was accurate in his statement of the facts.

As to the authorship of this narrative, the suggestion that it was Vitalis's own invention has already been noticed. This is a point which perhaps can never pass beyond the stage of critical opinion; but careful study of this account by this writer—for both factors must be considered—leads to a distinct opinion that Vitalis must have learned something very much to that general effect, from the minuteness of detail he had it by some means eminently dependable, and to recognize his authority requires of us no great subtlety. Vitalis does not indeed say that the two ecclesiastics, Gilbert and Guntard, were of those whom he next mentions as being skilled in physic, but there is no need to strain his words to cover that meaning, as they doubtless do so far as concerns Gilbert, for in another passage (lib. v, cap. iij) he tells us this same Gilbert was the King's physician, and he is also named among the clergy present at the interment. Moreover, Gilbert was well known to Vitalis, as appears by numerous scattered references to this bishop in his history, and especially in the last-quoted chapter, wherein, after some very candid remarks, he says that he is restrained from adding more by the consideration that from this bishop he

received his first orders. The whole incident is characteristic of this delightful gossip, for it is the peculiar merit of Vitalis that his dramatis personae are as familiar to us as Shakespeare's men and women, no tricked-out puppets, but living flesh and blood.

The portrait of this bishop is eminently recognizable, though drawn 800 years ago. Gilbert, surnamed Maminot, son of Robert de Courbépine, was the King's physician and chaplain, and was preferred to the bishopric of Lisieux, on the death of Hugh, the saintly bishop who peacefully expired in a meadow, pré-l'Evêque, while his clergy were striving to carry out his last wish, that he might draw his parting breath in the church of St. Peter at Lisieux, the scene of his ministrations for nearly forty years. These devoted men had borne him on a litter some ten miles, when they were compelled to turn off the road to offer their final prayers for their beloved diocesan. This happened on July 17th, in 1077, according to the generally-received account, but by a chronological argument here quite out of place it was much more probably 1079. Gilbert, succeeding, held the see for twenty-three years, till August, 1101, *recte vero* 1102, when he died at an advanced age, having been for some time past compelled to abandon his hunting, hawking, and other worldly diversions, by the burden of his years, not from devotional considerations. He ruled his bishopric with a strong hand, and for ten years wearied himself in a contest with S. Evroult, withstanding the abbots' claims to extra-diocesan privileges. In addition to unusual skill in medicine, he was eminent for his general learning and for his eloquence, but his wealth ensnared him to luxury, and consequent indolence in his ecclesiastical functions, till persuaded to these duties by the representations of his immediate subordinates. Under this stimulus, however, he performed those offices in a reverent and stately manner, and he was distinguished for his liberality, and also for his generous almsgiving. He was a liberal-minded man, treating tenderly confessed offences, giving wise and salutary counsel to those who sought it, keen to arrive at the truth in his judicial decisions. Possibly, therefore, his love of ease and leisure, even his dicing and indulgence in games of hazard, do not amount to evidence of actual depravity, for we are told that, having decided his judgements, he was a stern defender of the right, and dispensed justice to all freely, qualities then of extreme rarity, we may believe. Moreover, he was a man of scientific mind, and it is a high testimonial to his personal character that he retained about him and attached to himself numbers of eminent clergy who had been first drawn to the diocese by the illustrious piety of his predecessor Hugh, and to these already learned clerics he imparted instructive lessons in arithmetic, astronomy, natural philosophy, and other profound sciences. On Wednesday, April 4th, 1095, he observed a most remarkable display of meteors, quite equal, as described, to the much-discussed November Leonids; and it is incidentally remarked that the man of ease had long been in the habit of regularly observing the heavens at night. He calls up the watchman, to whom he discourses on the phenomenon, but he does not disturb those who sleep, so clearly he was no pedant; nor was he dismayed by the portent supposed by most to indicate that the ultimate fiery cataclysm was at hand, as indeed we might expect of the bishop who confessed and comforted the priest of Bonneval, one Walkelin, who in addition to having been face to face, as he he in his delirium believed, with Satan under the medlar tree, had witnessed the torments of many at the hands of the adversary, among them divers famous holy men, Manier of Evroult, and Gerbert of Fontenelles, and even the saintly Hugh of Lisieux himself; and moreover bore on his face a brand inflicted by the burning palm of one of the lost. Plainly this wealthy noble was a man of a mind and breeding fitted to adorn any profession at any epoch, and none the less that he had learnt the elementary lesson that a man owes something to himself. We should be dull indeed if we could not see in this portrait of Gilbert one of those churchmen who are also sound scholars and accomplished men of the world, one of a stamp no other church than the Roman seems able to produce with any frequency; a man of a type utterly different from that of which Vitalis himself was a notable instance, or we should not possess this vivid delineation of the many-sided Gilbert, who was indubitably the primary author of this deathbed narrative.

The abbot of Jumièges is also stated to have been present with Gilbert and others at the Conqueror's last illness, and this is suggestive; for William, a monk of that abbey, is the only serious Norman historian of that immediate time, so far as extant works show. He had written a chronicle dedicated to the King, and he was still improving his narrative till his own decease some two years later. That the abbot may have furnished Vitalis with all these particulars seems unlikely, since William of Jumièges has nothing anywise comparable, as he might presumably have had from his own abbot, if the latter had been in a position, or of a disposition, to supply it. We may, without transgressing the bounds of rational insight and ordinary probability, go a step further, again by the aid of Vitalis, who gives us a portrait of this ecclesiastic also (lib. iv, cap. xj). Guntard, abbot of Jumièges, was plainly another man of high ability. It appears that he was a strong man, pious and devout himself, but hard, a rigid disciplinarian, doing what he might to compel others to his own course. Nine years before this he had been elected to the abbacy on his merits, and in 1095 he died, on November 26th, in the performance of his ecclesiastical functions. That might be mere coincidence, but suggests devotion to duty, as he was then a matter of three hundred miles from his abbey, attending the council of Clermont in Auvergne. Doubtless a man who was quite as good a specimen of his type as Gilbert was of another type. Now Vitalis, having mentioned these two clerics by name, with or without others skilled in medicine, goes on to affirm the careful ministrations of all to the King's welfare, "spiritual and temporal." It is a plain inference, from these characters of the two men, that the abbot was chiefly concerned in spiritual matters, which may well have filled him with anxiety; for trust as he might the Divine mercy, he is represented as having clear ideas of justice, and he must have known for no ordinary sinner this man of blood, laid low in the very act of colossal wickedness. His own thoughts, then, may well have been on matters other than those immediately transpiring, to which he may have paid no great attention. He probably received the King's confession, and that may be another reason why he should not have been over-communicative to William of Jumièges, if it should be suggested that in this connexion he could have given to Gemeticus much more than the latter gives to us.

Returning for a moment to Vitalis, he was 26 years of age when Gilbert died, and as he clearly knew much about Gilbert, we need have little doubt as to who it was that furnished his information. His own indication on this point may be recognizable to some. Speaking on the functions of those attending the King, he named those functions in the order of their relative importance in his own mind, "spiritual and temporal," as might be expected. But if those functions have herein been fairly differentiated, he did not name the advisers in that order, setting the bishop who was furnishing material aid befor the abbot to whom has been attributed the spiritual office; by reason of their relative degrees, perhaps. But he was not dilating upon ecclesiastical rank, and his attention was presumably engrossed with a totally different set of ideas, by a subject to which we must in common fairness admit he has done full justice, and to which therefore he must have given his mind. His informant then was his leading idea at the moment of writing, and is accordingly the first named. There are of course those who will deem such an observation hypercritical, but for the mental student it is not devoid of meaning, based as it is on the demonstrable drift of this chronicler's thoughts. He was a garrulous man, ever absorbed in the present, enthusiastic in the accumulation of his material, without method, heedless of style, simple-minded, single-hearted, transparently honest, easily deceived by reason that he was unsuspicious of the falsity of others. It may have been shown that we have cause to trust the veracity of Gilbert, who was doubtless perfectly well able to impose upon Vitalis had he so desired, which is sufficiently improbable.

It seems then that Vitalis had excellent authority for his narrative, at first hand, and probably by direct word of mouth, but very improbably by unaided memory, however competent. Whatever the means, the authority came neither by much circumlocution, nor unpreserved from the dimming effects of time, for so the brightness of detail in matters of which we can judge it for ourselves would inevitably have been lost. This deathbed discourse, then, is doubtless to be candidly accepted, as expressing the mind, though not necessarily the words, or not always the precise words, of the King well aware of his approaching end. There are plain indications that the discourse was spread over some considerable period, and there is a separate and most convincing account of his parting moments. The idea that accuracy is a function

of shorthand, and inversely, and that the King delivered this long address *in extremis*, seems to have led to a shallow mistrust of Vitalis in this matter by some who are superior to the superstition that a monk and a liar are synonymous terms. It is very probable, on the other hand, that we have here the precise words of an accomplished practitioner, the ideas of a keenly observant and highly gifted and accurate-minded man; and that all the symptoms and facts were not fully comprehended simply enhances one's opinion of the observer's ability. It is reasonably likely that we have here whole sentences of the dying King's discourse *verbatim*. If he did not address the clerics in Latin, that language was to them interchangeable with the vernacular. Without quibbling as to the actual words, which nevertheless often merit close attention, the matter of this discourse is deserving of the fullest confidence, and is highly valuable.

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PLAGUE IN HONG KONG.

Its Causes and the Causes of its Continuance.

The following is a summary of Professor W. J. Simpson's report, just issued, on the causes and continuance of plague in Hong Kong:

In December, 1901, Professor Simpson was asked by the Colonial Office to visit the Colony of Hong Kong for the purpose of investigating and reporting on the causes and continuance of bubonic plague in that important colony. We are now in possession of the results of the inquiry, the report having just been issued. In an introductory letter to the Secretary of State for the Colonies, Professor Simpson states that he arrived in Hong Kong in January, 1902, and left in July; that every facility was afforded him in his inquiries by the Government of Hong Kong; that before he left a gradual organization of methods for combating plague was affected; and that with the exception of 1895 and 1897, which were non-epidemic years, and the statistics of which were not comparable with those of other years, the outbreak of 1902 was remarkable as the lightest since 1894; while the usual concomitants, such as panic and flight of the Chinese, with scarcity of workmen, disturbance of trade, and serious business losses were conspicuously absent.

2. The report submitted is divided into four parts:

Part I deals with plague in China.
(*a*) Before the outbreak in Canton in the spring of 1894.
(*b*) During and after the outbreak in Canton in 1894.
Part II treats of plague in Hong Kong.
Part III records the results of investigations into plague in animals.
Part IV suggests remedial measures.

Part I.—(*a*) Plague before the Outbreak in Canton in the Spring of 1894.

The report gives an account of the trade routes from Yunnan and of the epidemic in that province described by M. Emile Rocher in 1872, and of the epidemic in Pakhoi described by Dr. Lowry in 1882. It then traces the later prevalence of plague in the province of Yunnan, and at varying intervals in the neighbouring towns of Kweichow, Kwangsi, and Kwantung Provinces. In 1890 plague was at Lungchow-Pose, Nanningfu and Taipingfu. In 1891 it was at Kaochao, which is on the main trade route from Taiping to Canton, and nearly 200 miles east of Pakhoi and nearer Canton. In 1893 it was still further east, and in this year it was not only epidemic in some of the towns of Yunnan, but also in some of the south-western towns of Kwangsi, especially those situated on the west river, as well as being prevalent in the south-western districts of Kwantung. These are distinctly traced on a map accompanying the report. The existence of plague in these places, it is stated, excited no interest beyond the localities affected, and it was not until the disease reached the Delta of the West River, and attacked Canton, the capital of Kwantung, and an epidemic of exceptional proportions began to devastate the city in the spring of 1894, that the fact that plague in a dangerous form existed in China became generally known to Europeans living in that country.

Part I.—(*b*) After the Outbreak in Canton.

Canton is the chief port as well as the largest and most important city in Southern China. By a wonderful network of waterways it is connected with the chief inland towns of Kwangsi and Kwantung, its water communications extending westwards even to the borders of Yunnan and Kweichow. By an improvement in the system of Lekin duties in 1891 the west river had many of the obstacles to its use for the conveyance of produce and passengers to and from Canton removed, and as a consequence came into greater requisition, but whether this was the leading feature in Canton being affected it is impossible to say, for Canton stood as great a risk of being infected from the towns and villages of the south-western part of Kwantung, as it did directly from Yunnan and Kwangsi by the West River. Probably the infection arrived by both channels, but whichever was the first the original source was Yunnan.

The first recorded case of plague in Canton occurred on January 16th, 1894, when Dr. Mary Niles was called in to see General Wong's daughter-in-law, who was reported to be suffering from a "boil," and who, when seen, was found to have a very painful swelling in the inguinal region, a temperature of 104.8°, with a pulse of 150, and a petechial eruption. The patient recovered, but the bubo, owing to sinuses forming, took a very long time to heal. Out of seven cases seen by Dr. Mary Niles up to May 2nd, in no fewer than four purpuric spots appeared before death. In a number of cases met with the illness was of a light character, for instance, Dr. Niles records a case in which "a lady came in a chair but walked into the office. She looked perfectly well, temperature, pulse, and digestion normal. She said she had fever six days before, and the following day when taking a bath discovered a swelling in the inguinal region, of which she had not previously been aware, and which caused her no pain. I examined the bubo and saw for myself." This case is suggestive of other similarly mild cases and the likelihood of these occurring at an early stage of the outbreak without attracting any special attention. Dr. Niles further states, "It has been noticeable to the people that rats in infected houses have died. In the house where the child from the school was visiting when she took the disease thirteen dead rats were swept out one morning.....One of the officials, I am told, offered 10 cash for every dead rat brought to him. He had collected 35,000 in one month; 2,000 were brought to him in one day.

Dr. Alexander Rennie's report on the plague in Canton during the spring and summer of 1894, which appeared in the *Imperial Customs Maritime Report* for the year ended September 30th, 1894, is quoted from, and the remarkable immunity enjoyed by the foreign residents of the Shamien, separated only by a creek some 20 yards wide from houses where cases of plague occurred, is cited. Not only did foreigners living on the settlement enjoy excellent health, but no case of plague occurred among their servants living on the premises. The rats also remained healthy and lively. The plague prevailed epidemically in Canton from March to August, and caused from 60,000 to 100,000 deaths, according to different estimates. With an epidemic of these dimensions in Canton, and the inhabitants fleeing for safety in every direction, it was not long before Hong Kong became infected. Hong Kong is the largest and most important European possession near Canton. It lies at the mouth of the Pearl or Canton river, and is only some 70 miles from Canton, with which it is in daily river communication by junks and steamers. The extent of the intercourse between the two ports may be gathered from the fact that nearly half-a million of people pass each way to and fro annually, and some 4,000 river steamers and 8,000 junks annually enter the port of Hong Kong from the Canton and West River district. The deaths from plague in Hong Kong in 1894 did not however exceed 3,000.

Plague appeared in Macao in 1895, and gradually spread north of Hong Kong to Swatow and most of the coastal towns and villages as far north as Foochow, which lost some 30,000 persons from plague in 1902. These are marked on a map, which shows the spread of plague since 1894.

The condition of some of the villages of China is described, and it is stated that they are similar to those under which plague prevailed in Europe in the fourteenth century. One of these villages visited lost nearly half its inhabitants from plague. In connexion with plague in the villages and towns of China the opinions of more than thirty medical men is given as to the main cause of spread of the disease. These opinions are summarized in a tabular form, the detailed answers to questions concerning plague being printed in a valuable appendix. The consensus of opinion seems to favour the view that the infection is carried from place to place by individuals, and from house to house by rats.

Apart from the question of the main causes of the spread of the disease it is worthy of note that of 37 correspondents with experience of plague epidemics, 30, or over 80 per cent., had found the plague outbreak *preceded* by a mortality among rats; 4, or 10 per cent., were of opinion that the rat mortality was simultaneous with the plague outbreaks, 2 did not answer the question, and 1 stated it was unknown, though of opinion that rodents introduced the disease. The consensus of opinion that the rat mortality is a precursor of plague in man is practically unanimous, not only among medical men in China experienced in plague, but among the Chinese people whose villages or towns have been attacked with plague. Dr. A. Lyall refers to this common notion. He states: It is generally recognized by the Chinese that rats die first. During the year I have often been told that "*men are dying in such and such a street; rats have begun to die in*

another street, men not yet." Dr. Venderburg states that: *The natives who left their villages* in a body, and came to our market, say that the rats would be found in the morning *dead on the floor*, and that they knew it was *plague*, and hence ran away. Half of their village had died of it before they came.

Dr. H. W. Dobson states that dead rats are generally numerous just before an outbreak. *Chinese seem to look upon this as preceding plague.*

Professor Simpson remarks: That rat mortality precedes an outbreak of plague is a fact the significance of which is all-important. Were man and rats attacked concurrently at the commencement of an outbreak, the spread of an epidemic would have to be sought in some common media containing the infectious material, and which were likely to affect both simultaneously. But the antecedence of the rat plague points to a channel of infection which is capable of giving the disease to the rat, but which at first has no influence on man, and that dissemination of the infection by the rat is needed to bring it into those channels by which man can become infected.

PART II.—PLAGUE IN HONG KONG AND THE CONDITIONS WHICH FAVOUR ITS CONTINUANCE.

The topography of Hong Kong is described and the drainage and water supply are stated to be good. The latter, however, is deficient in quantity, and in 1902 there was a water famine. Hong Kong is a great *entrepôt* for the transit of Chinese commerce. Its warehouses are full of the produce of nearly every country waiting to be taken into the provinces of Kwantung, Kwangsi, Yunnan, and Fukien, and in exchange the produce of these provinces is stored in Hong Kong ready for export. The colony is one vast dépôt of cotton, flour, rice, sugar, oil, spices, teas, dried fish, and other merchandise. The population of Hong Kong is mainly Cantonese, consisting of traders and a large proportion of the labouring classes: it is floating in its character, non-residential, and largely made up of males whose wives and families remain at home in the villages of China. There are nearly 1,000 registered lodging houses in the city of Victoria, and the great majority of the other houses are tenement houses.

Under these conditions the epidemic diseases of Hong Kong synchronize to a very great extent with those prevailing in the chief centres and villages of Southern China. What the mortality is from plague in these towns and villages it is difficult even to approximately estimate. In Canton some information has been attempted to be gathered by having the coffins which passed through the gates counted. By this method it was estimated that in 1896 there were in Canton 40,000 deaths from plague; in 1898 another 40,000; and in 1901 a very large number, though not approaching these figures. Compared to these figures the recorded mortality in Hong Kong is evidently small, being 2,485 in 1894, 36 in 1595, 1,204 in 1896, 19 in 1897, 1,325 in 1898, 1,487 in 1899, 1,086 in 1900, 1,637 in 1901, and 540 in 1902.

It is pointed out, however, that these numbers are not to be taken as representing the actual mortality from plague contracted in Hong Kong, because immediately a Chinaman feels sick he will, if possible, go home to his native village. He sometimes dies on the way, even before he reaches Canton, which is only about eight hours voyage on the steamer from Hong Kong. In 1901, in the course of five weeks, the Custom House officers at Canton detected 160 cases of illness from plague, and also found 35 persons dead of plague among the passengers on steamers.

A very interesting diagram is given showing the seasonal prevalence of plague, 70 to 90 per cent. of the cases occurring before the end of June. Circumstances which favour prevalence in the early part of the year are the tombs festival, which attracts to China where plague exists large numbers of Chinese from Hong Kong to perform ceremonial rites at the tombs of their ancestors, and the extra activity of emigration at this time of the year which brings thousands of Chinese coolies to Hong Kong, sometimes from infected localities, to await their turn to be taken in emigrant ships to ports which require Chinese labour. As no sanitary control is exercised over the movements of these incomers from China, both of them contribute to a continuance and rise of plague during the season. Still the main source of plague in Hong Kong since 1898 is in the Colony itself, where it is endemic and where it would appear annually were it not materially assisted by reinfection from the mainland. Summarized, the main causes of plague and its continuance in Hong Kong are external and internal, and consist of:

1. Importation of plague from China, especially during the early months of the year.

2. The endemic maintenance and dissemination of the disease by infected rats, infected houses, and infected clothes. Hong Kong, owing to its being an emporium for grain and other goods, has an enormous number of rats.

3. The insanitary and overcrowded condition of most of the Chinese houses, with an exceptional amount of darkness and bad ventilation of the rooms.

4. The absence of a special staff to combat the disease, and to trace out the history, or to their homes, cases many of which are dumped in the streets when dead or dying.

5. The facility with which infected food may be imported into the Colony, combined with insufficient cooking of food by the lower-class Chinese. This, however, it should be added, is rather a suspected than attested cause, and needs more facts for confirmation than I had time or opportunity of collecting.

The infection is shown to adhere to old, dark, damp, and rat-infested houses, of which there are an exceptional number. The housing problem in Hong Kong seems to have been left to take care of itself, and as a result the Chinese inhabitants are living under unique conditions apparently worse that in other towns. Long rooms, having a window at each end, are divided into five or six compartments, each occupied by one or more persons, and often by a family. Neither light nor fresh air can gain access to these cabins. The cubicle system leads to overcrowding in its worst form and under the worst conditions, for every cubicle is for all practical purposes a windowless room, so dark as to render it impossible to be kept clean. It is remarked that, apart from the detrimental effect which the absence of fresh air and sunlight has on the general health of the occupants, the darkness, by favouring uncleanliness and other insanitary conditions, is an important factor in the spread of an infectious disease, the causal agent of which is not infrequently discharged in the excretions and sputum of the patient.

The relation of rat plague to human plague in the outbreak of 1902 is carefully worked out, and it is shown that the dissemination of plague in Hong Kong by rats is even a more influential factor in the spread of plague than its dissemination by man. The connexion is shown by a series of plans showing the situation of the occurrence of plague in man and in rats by squares and circles, and in each square and circle the week in which the case occurred.

Professor Simpson concludes this portion of his report by stating that "the dissemination of plague by the infected rat is, it appears, as marked in Hong Kong as it was in Cape Town in South Africa.

PART III.—PLAGUE IN ANIMALS OTHER THAN RATS.

This chapter is perhaps the most important in the report, as it deals with a series of experiments on animals as to their susceptibility to plague. The results of the experiments are carefully recorded, and the temperature charts of the animals are given. The experiments demonstrate that pigs, calves, buffaloes, sheep, hens, ducks, geese, turkeys, and pigeons are, in addition to rats, susceptible to plague, and particularly so when fed with plague material. The experiments also show that the infective material of a plague rat can cause plague in monkeys by feeding or by inoculation, or by contact or without contact, and the infective material of a monkey with plague can give rats plague. These are important as regards the channels of infection in man. A noticeable fact brought out by these experiments is that domestic animals suffer from chronic as well as acute plague. After feeding a considerable period some time elapses before the animals show any marked signs of illness. In the case of pigs it is sometimes over a month.

Any one not conversant with this might readily come to the conclusion that the pig was insusceptible to plague and get rid of it before the sickness had time to develop. This long period, not of incubation, because if the animal's temperature is carefully taken its system will be observed to be out of order, but of absence of visible signs of disease, is important in relation to the interval which elapses between cases of plague in endemic centres. It is probably one of the bridges out of many which connect the intervals common in these regions between the attacks in man. In this connexion it may be remarked that the descriptions of the mode of life of the inhabitants in the endemic centres of plague in Persia, India, and China, are alike in representing the very intimate association of the animals and poultry and the people in their houses, each and all being together generally in the same dark and unventilated hut. Now that the animals and poultry are known to be susceptible to plague, that the symptoms are ill-defined, and that the illness may be of more or less chronic type, and thus be unrecognizable except to those who are looking for it, the endemicity in these regions becomes more explainable.

That the animals of the farmyard and of the backyard of domestic dwellings are infected with plague is not only an important fact bearing on the continuance of plague in certain localities where these animals are numerous, but that they take plague by feeding is also an important fact to be borne in mind in any future consideration of the different modes by which the virus of plague gains an entrance into the

human body. The experimental facility of this mode of infection raises a much wider question, namely, whether plague is not more frequently acquired by swallowidg infected food, solid or liquid, than has hitherto been thought to be the case. The view that plague is mainly acquired by inoculation will probably have to be modified in the light of these experiments, and the swallowing of infected food or drink in whatever way that food or drink may become infected will have to take a more important place in the recognized modes by which the virus infects the body.

When it is found that such differently constituted animals as monkeys, pigs, calves, sheep, rats, hens, ducks, turkeys, geese, and pigeons contract plague by feeding on food which has previously been infected it is difficult to suppose, though it is possible that man is not likely to be infected in the same way. There are no recorded instances, so far as Dr. Simpson is aware, of plague in man being caused by infected food, if Dr. Graves's statement of his having known it be caused by diseased chickens be excepted; but this absence of evidence Dr. Simpson attributes rather to inquiry in this direction not having been pursued, owing to the preponderating influence of assigning most of the cases to inoculation. It is highly probable that the dissemination of the disease by plague rats is due, in a large measure at least, to their infecting food which has been lying about, or to which they have gained access. In this connexion the examination of the intestinal contents, urine, and mucus of the mouth of infected rats show plague bacilli in a certain proportion.

Part IV.—Remedial Measures.

The preventive measures are fully discussed with reference to local conditions. They are mostly concerned with the administration and with the legal powers necessary to combat the plague and improve the sanitary condition of the colony.

The remedial measures as regards external causes consist in controlling as far as possible the avenues by which infection is introduced into the colony. For this control it is necessary for the Government to be regularly informed as to where plague exists, but even with this information it has to be recognized that, with the southern coast of China in the condition described, Hong Kong is continually subjected to the risk of reinfection, and that no amount of precaution which is within the bounds of practicability can do more than lessen that risk so long as China takes no action.

In regard to internal causes the remedies lie in the creation of a special plague organization to combat plague, and the centralization of all sanitary matters into a public health department, with a trained medical man skilled in sanitary matters as its administrative chief, who shall be *ex-officio* President of the Sanitary Board and who shall be responsible to the Government for the efficient administration of the department.

By these measures an effectual control will be obtained over the outbreaks of plague, and it will be possible to deal gradually but effectively and on a commensurate scale with the numerous problems connected with the housing question and the general insanitary condition of Hong Kong which serve to perpetuate the continuance of plague in the colony.

The report acknowledges the assistance received from Dr. Clark, the Medical Officer of Health for the colony; Dr. Pearce, the Assistant Medical Officer of Health; Dr. Atkinson, the Principal Civil Medical Officer; Dr. Hunter, the Bacteriologist for the Colony; the medical missionaries in Southern China; and from the officials of the Government of Hong Kong and of the Chinese Imperial Customs Service.

TYPHOID PLASMA FOR THE PREVENTION AND TREATMENT OF TYPHOID FEVER.

We published last week under this title an account of the researches which Dr. Macfadyen, of the Jenner Institute of Preventive Medicine has been carrying out partly in conjunction with Mr. Sydney Rowland. At the conclusion of this article we referred to the general effects of a further communication made to the Royal Society by Dr. Macfadyen on March 12th. It will be interesting to give some details as to the nature of the experiments on which that paper was founded.

Preliminary experiments with the object of testing the typhoid cell juices for immunizing and other properties were made upon the monkey, which was selected as an animal most likely to furnish data of possible application to man. Subcutaneous injections of typhoid cell juice did not produce any general symptoms beyond a transient rise in temperature, whilst the material was quickly absorbed after each injection without any traceable local effect. In this manner doses of 0·5 to 1 c.cm. of the material were injected at intervals. An immediate result was the agglutination of the typhoid bacillus by the serum of the blood of the treated monkeys, whereas no such effect was produced by the serum of monkeys which had not been treated. This furnished useful evidence that the animals were under the influence of cell juices derived from the typhoid organism. The injections were repeated at intervals of three to four days, and after a lapse of four to six weeks the animals were bled.

Immunizing Properties.

The serum obtained was then tested for immunizing properties. The test objects were (1) a virulent culture of the typhoid bacillus, and (2) the intracellular toxic juice of the same organism. A varying amount of the virulent bacilli and of their toxic cell juice was mixed with a varying quantity of the serum. The respective mixtures were then injected into the peritoneal cavity of the guinea-pig. The broth cultures of the typhoid organism used in the experiments were *per se* lethal doses of 0.1 c.cm. in five to ten hours. The typhoid cell juice were fatal in doses of 0.2 and 0.1 c.cm. in three to five hours, and in doses of 0·05 c.cm. in about twelve hours. The serum was thus tested for (1) specific antibacterial, and (2) specific antitoxic properties.

The experiments showed that the serum of the monkey, after injections of the typhoid cell juices, possessed antibacterial and antitoxic properties, inasmuch as the serum protected the experimental animals against the bacilli, and also against an intracellular toxin obtained from them.

A simultaneous injection of (1) serum with the bacilli, and (2) serum with the toxic cell juice produced no lethal or toxic effects. The control animals, on the other hand, invariably succumbed.

Preventive and Curative Properties.

The serum from treated monkeys was injected into guinea-pigs, one injection being made in each instance, and the same animals received at an interval of twelve to twenty four hours lethal doses of the typhoid bacillus and of its toxic intracellular juice respectively. The treated animals survived the test, while the control animals succumbed. It was therefore concluded that the serum had protective properties.

A third series of guinea-pigs received lethal doses of the typhoid bacillus and of its toxic cell juice respectively. The serum was then injected at various intervals into individual animals. It was found that the lives of the animals could be saved by one injection of the serum from a fatal infection or intoxication, even when half of the lethal period had elapsed in each instance. The serum, therefore, possessed curative properties.

Conclusions.

From the experiments made upon the monkey Dr. Macfadyen concludes:

1. That by the injection of the intracellular juices of the typhoid organism into the monkey it is possible to obtain a serum with both antibacterial and antitoxic properties.

2. That such a serum possesses curative and preventive properties as regards the typhoid bacillus and an intracellular toxin present in the same organism.

It is believed that this research has afforded for the first time proof that, in the case of one species of pathogenic bacterium, the intracellular juices of the organism, when injected into a suitable animal, give rise to the production of a serum which is both bactericidal to the organism itself and antitoxic as regards a toxin contained in its substance. How far such properties of the cell juice are shared by other pathogenic microbes must be the subject of further inquiry.

Further experiments are in progress to test the effect of the typhoid cell juices upon animals larger than the monkey in order that a greater amount of serum may be obtained conveniently, and tested quantitatively as regards its antibacterial and antitoxic properties.

THE EPIDEMIC OF SMALL-POX.

England and Wales.

Upon the whole, it may be said that the reports to hand this week show a somewhat more favourable tendency than heretofore as regards localities in England where outbreaks or isolated cases have hitherto been reported. Nevertheless, several fresh centres are included in the reports, so the improvement, if there really is any, is not very material.

In Yorkshire, there have been fresh cases at Bagsworth, Middlesbrough, Normanton, Keighley, Leeds, Bradford, Middlemoor, Hebden Bridge, and Todmorden. The case at Middlesbrough appears to be the first that has occurred, and 10 contacts have been isolated, the disease apparently having been imported from West Hartlepool. Middlemoor, where cases have occurred among navvies, is also a new centre.

In Lancashire fresh cases are reported in Manchester, Wigan, Darwen, Bury, Burslem, Preston, Ashton, Haslingden, Stockport, and Middlewich

while at Northwich, a woman suffering from the disease has twice escaped from the hospital and visited public-houses.

In Liverpool during the week ending March 19th, 84 new cases were discovered, the total number then under treatment in hospital being 335.

In Accrington it has been decided to extend the hospital accommodation in good time, a case having been discovered of a married man in the third stage of the disease who had continued at work throughout his illness at a place where a popular food is prepared.

In Shropshire there have been new cases at Ludlow and Shifnal, but Oswestry and Wellington now appear to be free.

In Leicestershire a case occurred in Loughborough Infirmary, and in Leicester itself there are altogether about 20 cases under treatment.

In Derbyshire there are a few fresh cases, one of which appears to be directly connected with the case at Loughborough.

In Durham a somewhat unpleasant outbreak has occurred at the County Hospital, the first being a patient admitted for operation. The hospital was cleared as far as possible, and the staff and remaining patients vaccinated with two exceptions. Both these refused vaccination and have since developed the disease.

In South Shields 3 new cases are reported, and on March 20th there were altogether 9 cases in the isolation hospital. A case has also occurred at Teesdale.

In Cheshire there have been 2 more cases at Crewe, and a new first case in Bollington, near Macclesfield.

In Wales there have been a few new cases in Cardiff and Wrexham, while 5 cases of what appears to be small-pox are reported from Old Colwyn. At several places timely preparations are being made to deal efficiently with apy case that may occur.

SCOTLAND.

In Scotland only 1 case has been reported between March 1st and 15th. The influence of tramps in spreading the disease continues to appear in the reports, and there appears, among other people, to be many cases of so light a character that they do not come under timely medical observation. Hence the persistence of the epidemic is only to be expected.

IRELAND.

Very slowly, but surely, small-pox is making its way in Dublin. The cases under treatment number over thirty. The isolation hospital has been opened at the edge of the river, near the old Pigeon-house Fort. Only 32 beds are available, but the health authorities say they are making arrangements for extension. Revaccination should be at once enforced. The intercommunication between Liverpool and Dublin is frequent and on a large scale, and the disease has been introduced from the former port. These "contacts" scatter about the city and establish many different centres of infection. A little longer delay and small-pox will probably overwhelm the authorities in Dublin as it did before. Then there will be panic as usual and many lives will be lost. It is wiser to waste money than human life.

ANOTHER ASYLUM FOR LONDON.

AT their meeting last Tuesday the London County Council had before them a report from the Asylums Committee which is pleasant reading neither for the sociologist nor for the ratepayer. It showed that London lunacy exhibits as yet no sign of reduction, and it concluded by recommending the erection of yet another asylum, at a cost of £569,500. It seems difficult to predict with any certainty the annual increase of London lunacy, at any rate so far as certification serves to give us the real proportion of such mental alienation. The average annual increase of lunatics in the County of London since 1890 has been 527, but the average for the last five years has been 576, and last year's figures show an unusual increase on previous expectations. On this basis the ratepayers have the melancholy prospect of being called upon every four years to construct a fresh asylum for 2,000 inmates.

It appears that of the 16,961 lunatics for whose housing and care the London County Council is responsible, no fewer than 1,400 are accommodated in temporary buildings which, since the terrible experience at Colney Hatch, have come under public condemnation. Moreover, even with these temporary premises, there is still a shortage of beds, and many London lunatics are still provided for in provincial and other asylums at a rate of maintenance which is often unjustifiably heavy.

In the course of the discussion of the Committee's report it was evident that the Council was by no means satisfied with the proposals of the Asylums Committee, and after one or two critical divisions the final recommendation dealing with the allocation of the proposed expenditure was adjourned.

The Committee appears, perhaps under the stress of panic, to have too easily contented itself with a mere replica of the huge barrack building with which we are already too familiar. Some years ago an opinion in favour of a village community or, at any rate, of a villa system of treating lunatics, appeared to be gaining favour, based upon certain Continental and American models.

But the Asylums Committee propose to stereotype their old plan, and even employ the same architect "for a lump sum of £10,000," and it was on this point that the Council seemed to hesitate to accept its Committee's advice without further discussion.

THE MIDWIVES ACT, 1902.

ALTHOUGH this measure is to come into force on April 1st, 1903, it is only necessary at the present time to draw attention to a few of its provisions, as the full force of the Act will not be felt until 1910. The main object is to provide for the registration and certification of midwives, and to bring them under the control of the local authorities in the first instance, and under the general control of a new body called the Central Midwives Board.

It is provided that on April 1st, 1903, the Lord President of the Council is to take steps to secure the formation of the Board, which is to consist of nine members. Amongst these there must be four registered medical practitioners, of whom one is to be appointed by the Royal College of Physicians of London, one by the Royal College of Surgeons of England, one by the Society of Apothecaries, and one by the Incorporated Midwives' Institute. After two years the members so appointed as above are to retire, but they are eligible for reappointment annually. Vacancies may be filled up as they occur.

As already announced, Dr. F. H. Champneys has been selected by the Royal College of Physicians of London; Mr. J. Ward Cousins by the Royal College of Surgeons of England: Mr. E. P. Young, M.R.C.S., L.S.A., by the Society of Apothecaries of London: and Dr. Charles J. Cullingworth, by the Incorporated Midwives' Institute.

Two members (one of whom must be a woman) are to be appointed for terms of three years by the Lord President of the Council, and are eligible for reappointment at the end of three years. The Lord President of the Council has nominated Professor W. Japp Sinclair, M.D., and Miss Jane Wilson.

The remaining three members are to be appointed as follows: One by the Association of County Councils, which has already chosen Mr. J. Heywood Johnstone, M.P.; one by the Queen Victoria's Jubilee Institute for Nurses, which has chosen Miss Rosalind Paget: and one by the Royal British Nurses Association, which has chosen Miss Dorothea Oldham. The Board has already met informally, and Dr. Champneys has occupied the chair.

Amongst the more important duties and powers of the Board the following may be enumerated. It is to frame rules regulating its own proceedings; the issue of certificates and the conditions of admission to the roll of midwives; the course of training and the conduct of examinations: the admission to the roll of women now practising as midwives; the supervision and restriction within due limits of the practice of midwives; the conditions under which midwives may be suspended from practice; and the nature of the notice which every midwife must give to the "local supervising body" before she commences practice in any district. The Board also has power to appoint a secretary and examiners, and to fix the places where examinations are to be held. It can also publish annually a roll of midwives who hold certificates under the Act, and may decide upon the removal of the name of any midwife from the roll for disobedience of rules. The issue and cancellation of certificates is also part of its duty. Rules made by the Council are valid if and when approved by the Privy Council, and before approving the rules the Privy Council is to have regard to any representations which may be made to it by the General Medical Council. Any midwife whose name is struck off the roll may appeal within three months to the High Court, but there is no further right of appeal.

Those who at this moment are practising as midwives have certain rights under the Act. Thus the Board is bound to grant a certificate to every woman who, within two years from April 1st, 1903, claims to be certified, provided she holds a certificate in midwifery from the Royal College of Physicians of Ireland, or the Obstetrical Society of London, or the Coombe Lying-in Hospital and Guinness's Dispensary, or the Rotunda Hospital, or any other certificate which the Board

may consider satisfactory, or provided she shows that, on April 1st she has been for at least one year in bonâ-fide practice as a midwife, and that she bears a good character.

The Board has power to demand a fee not exceeding one guinea from each midwife applying for a certificate, and the fees are to be devoted to the expenses of examinations and of granting certificates, and to the general expenses of the Board. In case the fees do not provide sufficient funds for the purposes of the Board, the deficit is to be made up by contributions levied from the councils of counties and county boroughs.

The Board, as has been pointed out, is to exercise general supervision. Local supervision is to be exercised by each county or borough council. Every such council or a committee appointed by the council has power (1) to exercise general supervision over midwives; (2) to investigate charges of malpractice, etc., and report to the Board; (3) to suspend any midwife from practice in accordance with rules under the Act; (4) to report to the Board the name of any midwife convicted of an offence; (5) to forward to the Board the names of midwives who have notified their intention of practising; to keep a roll of midwives, and to give notice of the effect of the Act to any person now using the title of midwife. Any county council may delegate the duties imposed on it by the Act to any district council within the area of the county. Every certified midwife, before holding herself out for practice in any district, must notify the local supervising body of her intention. A like notice must be given every January, and if she move to a new district to practise there she must give notice to the local supervising body within forty-eight hours.

It may be pointed out that no woman certified under the Act is allowed to employ an uncertified person as her substitute, and that the certificate under the Act does not confer upon any woman any right or title to be registered under the Medical Acts, or to assume any name, title, or designation implying that she is a medical practitioner, or that she is authorized to grant any medical certificate, or any certificate of death, or of stillbirth, or undertake the charge of cases of abnormality or disease in connexion with parturition.

THE PREVENTION OF CONSUMPTION.

THE NATIONAL ASSOCIATION FOR THE PREVENTION OF CONSUMPTION AND OTHER FORMS OF TUBERCULOSIS.

THE report of the Council of this Association, presented to the fourth annual meeting of members which was held on Tuesday, March 17th, with the Earl of Derby in the chair, records continued progress in the work which the Association has set itself to do. Reference is made to the Conference held in Berlin last October for the purpose of forming an International Bureau for the Prevention of Consumption, which was attended by Dr. Nathan Raw and Dr. Hillier as representatives of the British National Association. A contribution of £100 has been made by the Council to the international fund for financing the Bureau. The work of prevention is being prosecuted with vigour. Compulsory notification is satisfactorily enforced in New York, Norway and Saxony, and a Bill asking for compulsory notification is shortly to be brought before the Prussian Diet. The British Association has used its best endeavours throughout the past year to further the institution of voluntary notification and such notification is in force in many large towns.

A deputation of the Council attended the sitting of the Committee of the National Conference of Friendly Societies in October, when the question of how the societies could best aid in the prevention of consumption was discussed, and it was agreed that they should use their organization for the distribution of simple literature on the subject. At the same meeting the Secretary of the National Association suggested the desirability of sending a deputation from the Friendly Societies to Germany to see the work done by the German State Sick Insurance Department. The deputation visited Germany later, accompanied by the Secretary of the Association.

The Council has forwarded to the President of the Local Government Board a resolution proposing that spitting on the floor in public buildings, carriages, etc., should be forbidden by law. A list at the end of the report shows that the Association has twenty branches in various parts of the kingdom. The Earl of Derby, in moving the adoption of the report, referred to the interest shown in other countries in the prevention of tuberculosis, and expressed the opinion that the interchange of views through the International Bureau could not fail to be of the greatest value. He also urged the necessity of dealing with the advanced cases of consumption to prevent the danger of infection, and endorsed the suggestion that the small-pox hospitals, now empty, might be used for consumptives.

CORK BRANCH OF THE NATIONAL ASSOCIATION FOR THE PREVENTION OF CONSUMPTION.

The first meeting of the Executive Committee of this Branch, which was formed last month, was held on March 13th, and Dr. P. J. Cremen was unanimously elected Chairman of the Committee. Messrs. D. J. O'Mahony, F.C.S., City Analyst, and J. F. McMullen, C.E., were elected Honorary Secretaries to assist the two Medical Honorary Secretaries who had been elected at the general meeting.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, CITY ROAD.

The eighty-ninth annual Court of Governors of this hospital was held on Thursday, March 19th, the Lord Mayor being in the chair. The report for the year shows that during 1902 779 patients were under treatment in the wards, being an increase of 70 over the number for the previous year. The daily average number of beds occupied was 57. The out-patient attendances amounted to 27,503. In October last the Council considered the present position of the hospital with regard to the open-air treatment of consumption, and referred the matter to the medical staff, on whose recommendation it is proposed to endeavour without delay to establish a sanatorium in the country. It is estimated that an expenditure of at least £50,000 will be required for this purpose and the much-needed home for the nursing staff. To obtain this sum a special appeal is now being issued. The income for the year amounted to £7,254, a decrease of £2,400 from the previous year's income. On the other hand, the expenses have been diminished by over £1,000 by economies in the administrative and domestic departments. The Ladies' Samaritan Society in connexion with the hospital is doing good work so far as the limited means at the disposal of the Committee allow.

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, VENTNOR.

The annual meeting of the Governors of this hospital was held on March 19th at the Hôtel Métropole, the chair being taken by Mr. P. B. Burgoyne, Chairman of the Board of Management, in the place of the Earl of Rosebery, who was unable to be present.

The thirty-fourth annual report showed that 760 patients had been admitted during the year. The income for the year amounted to £16,432, being £2,000 in excess of the expenditure. The hospital has beds for 94 men and 60 women.

NATIONAL HOSPITAL FOR CONSUMPTIVES FOR IRELAND.

His Excellency the Lord Lieutenant attended the eleventh annual meeting of this hospital on March 12th. The report showed that 289 patients had been treated during 1902 as against 164 in the previous year. The additional number of admissions was due to the opening, in January, 1902, of the James Weir House for 25 male patients. This larger number of patients necessarily increased the cost of maintenance, and additional subscriptions are asked for. The President of the hospital (Earl Fitzwilliam), who presided, welcomed the Lord Lieutenant, and made an appeal for funds towards providing additional beds for female patients. The Lord Lieutenant claimed support for the hospital on account of the excellent work which it had achieved, and said it was desirable that Ireland should not be behind other countries in provision for the treatment of consumption, which was exceptionally prevalent in the country. The Lord Chancellor, Sir Christopher Nixon, Mr. R. O'B. Furlong, C.B., and Dr. Magee Finny also spoke. At the conclusion of the meeting subscriptions towards the proposed extension of the hospital, amounting to £389 11s., were announced. This included £250 from the Lord Lieutenant and 100 guineas from Mr. Maurice Brooks, D.L. The President (Earl Fitzwilliam) had previously promised to give £500 on condition that the other £1,000 required was forthcoming by June next.

A SERUM FOR CHOLERA INFANTUM.—The Health Commissioner of New York City announces, says the *Medical Record*, that the bacteriologists of the department are preparing a serum for the treatment of cholera infantum at least for that form of it which is believed to be due to the presence of Shiga's bacillus.

LITERARY NOTES.

It has recently been announced by the advertising agent of the nine official organs of the Methodist Church of the United States that after January 1st, 1903, no medical advertisement whatever will be granted space in the journals under his management. May we suggest that some of our own religious papers might with advantage follow the example set them by the American Methodist journals? The advertisement columns of some of them are to a large extent happy hunting grounds for quacks.

The Scientific Memoirs of Thomas Henry Huxley, edited by Sir Michael Foster and Professor E. Ray Lankester, are to be completed by the publication of a supplementary volume of less than 100 pages, which Messrs. Macmillan and Co. have nearly ready. It contains the completion of Huxley's Survey Memoir on fossil fishes, and also three essays of considerable interests to zoologists.

It may interest some of our readers, who are looking forward to a trip to Spain, to know that Mr. F. E. Sydney, F.S.A., will shortly publish, through Messrs. Simpkins, Marshall, and Co., a work entitled *Anglican Innocents in Spain*. The book, he informs us, deals with his experience while travelling in that country, and particularly with the Holy Week ceremonies in Seville. The book will contain over 50 illustrations.

Dr. Weir Mitchell has won so conspicuous a place in the Temple of Literature that many readers of *Hugh Wynne* and his other brilliant novels may not know that he is recognized by the members of his own profession as one of the pioneers of modern neurology. We are proud of his distinction as a writer, but we are still more proud that we can claim him as one of the most prominent figures *in nostro docto corpore*. We are pleased to note that Dr. Weir Mitchell himself is prouder of his scientific achievements than of his literary laurels. The Board of Governors of the Pennsylvania University Club recently entertained him at dinner and held a reception in his honour. In a brief speech made during the evening by Dr. Weir Mitchell he said: "Perhaps I am better known to you by my literary work than by my works of science. I will say, however, that if I should be by necessity compelled to give up any branch of my work I would discard the literary work. I would rather be known for what I have done in my profession, medicine, than by my writings."

The *Journal of Nervous and Mental Disease* for March contains an abstract of a paper by Dr. M. L. Moharrem Bey on on the question, Was Mohammed an Epileptic? which appeared in the *Psychiatrisch-Neurologische Wochenschrift*. The author reviews from a purely medical standpoint the biographical literature and traditions concerning the family history of the Prophet of Islam. He considers his early life, and especially the first revelation, and following this experience the partially unconscious states into which Mohammed so often fell when receiving other revelations. Dr. Moharrem Bey's conclusion is that there is no solid ground for the assumption that Mohammed was an epileptic. Attention is called to the character of the so-called attacks, when the Prophet would lie down on the floor and would be covered with a garment, and have a pillow placed under his head by those near him, and distinguishes them from genuine epileptic attacks. These attacks were not followed by stupor, but Mohammed would quickly arouse himself, and at once begin to relate his divine revelation. Furthermore, the character of his intelligence, which was maintained until his death, which occurred at the age of 63, of an acute febrile disease, in Dr. Moharrem Bey's opinion, precludes the possibility of Mohammed having suffered in any degree from epileptic dementia.

Major F. Smith, R.A.M.C., has sent us the following interesting note which appears to show that typhoid infection derived from oysters is by no means a new thing in Dublin: "In a book entitled *Trifles from my Portfolio*, by Staff Surgeon Walter Henry, 66th Regiment, published in 1839, there occurs the following passage:

> About this time the surgeon of the regiment, having imprudently indulged at a supper in some doubtful oysters, was attacked with indigestion, which was followed by a bad fever that cost the poor fellow his life, notwithstanding the assistance of the physician-general and another physician. The writer succeeded to the surgency of the regiment.

This was in Richmond Barracks, Dublin, in 1825. Apart from its medical interest, this is amusing in its ironical reference to the physician-general and in the final sentence in the same paragraph as to the step in succession in spite of the illustrious medico."

It was stated some time ago in the British Medical Journal that Mr. Andrew Carnegie had given to the library of the Philadelphia College of Physicians the sum of £10,000 conditionally on the College being able to raise an equal amount on its own account. We are pleased to be able to state that the College has succeeded in complying with the condition, so that Mr. Carnegie's gift is assured. The College hopes to raise £10,000 more, but a final decision has not yet been arrived at as to whether the old building is to be enlarged or a new site purchased and a building erected thereon. Definite action has been postponed till April.

We have received a reprint of an article entitled The Book Worm, contributed to the *Medical Library and Historical Journal* for January by Dr. Frederick P. Henry, Honorary Librarian of the Philadelphia College of Physicians. His subject is not the *helluo librorum* of the Dominie Sampson type, but the little animal whose traces are frequently seen in old books, especially those of the fifteenth and sixteenth centuries, in the form of perforations as clearly cut as those of a ticket punch. Every one is familiar with these marks, and knows that they are made by the "book worm," but in the vast majority of cases Dr. Henry says this is an inference rather than a result of observation. He does not hesitate to assert that very few modern librarians have ever seen a book worm. At one time he was inclined to doubt its existence. There is no record of the presence of the book worm in the Philadelphia Library from the date of its foundation in 1787 till 1901. Dr. Henry quotes a few examples of the capture of single specimens from the records of the Bodleian, the British Museum, and other libraries, and gives an account of a veritable battue which occurred in the library of the Philadelphia College of Physicians in the spring of 1901. At that time the College purchased the valuable collection of the late Dr. J. Stockton Hough, which was largely composed of rare editions of the fifteenth, sixteenth, and seventeenth centuries. The books were packed in thirty-eight white pine boxes, and had remained in them for about eight months before their purchase by the College. They numbered about 3,500, and every one of them was examined and classified by the librarian, Dr. C. P. Fisher, and Dr. Henry. In the course of this examination, Mr. Fisher discovered the worms literally by the dozen. They were found in all stages of their growth except that of the egg. Beetles, cocoons, and larvae abounded; but, unfortunately, the powdery débris resulting from the pestilent activity of the latter was not examined microscopically with a view to the discovery of eggs. The first description of the animal is to be found in a work entitled *Micrographia: or Some Physiological Descriptions of Minute Bodies Made by Magnifying Glasses*, by R. Hooke, F.R.S. This book was published at the expense of the Royal Society in 1665. The chapter on the book worm is headed: "Of the small silver-coloured book worm," and contains an illustration which later investigators have declared to be largely a product of the imagination. A great authority on the subject, Mr. A. J. Bowden, has said that "accounts of the sea serpent have been various and wonderful, but they pale before some which have been given of the book worm." A detailed description of the book worm or "drugstore beetle" (*Sitodrepa panicea*, Linn.), by F. H. Chittenden, is quoted, and Dr. Henry finally is so carried away by his bibliophile emotions that, like Silas Wegg, he drops into poetry to the following tune:

> Sitodrepa panicea!
> Whether worm thou art, or flea,
> Matters not, for, culpa mea!
> Thy *existence* is my shame.
> Had I not my books neglected,
> They had never thee protected;
> Now, alas! too late ejected,
> I can only curse thy name.
>
> Easy said, but hard as German,
> Thou polysyllabic vermin,
> Is thy name, so long in learnin',
> So obnoxious to my verse.
> Shall I call thee Sito, Pani,
> Drepa, Cea, Pite or Sani,
> Or some word in Hindustani?
> Any name will do to curse.

In *Through the Heart of Patagonia*, lately issued by Mr. Heinemann, the author, Mr. Hesketh Prichard, gives an account of his travels in search of his prehistoric Mylodon which, it was rumoured some time ago, still survives in the depths of the forests of the Southern Andes. He did not find the Mylodon, but he had many exciting adventures, and made acquaintance with a very interesting tribe of Indians, the Tehuelches. That primitive people has a way of its own

of dealing with measles. An illustration of Mr. Prichard's book shows a mounted Tehuelche Indian furiously urging the horse with his naked daughter on its back through a snow-storm. The poor girl had the disease in an acute form, which in the Tehuelche pathology means that she was possessed of a particularly potent devil. The treatment is based on the belief that the devil has a special objection to noise and cold. Says Mr. Prichard:

All devils do. Hence the ride of the unlucky patient without a shred to protect her from the strong west wind, snow-fed with bitter cold, and the almost incredible uproar made by the old gentleman upon the dark-brown horse. If one concedes the premisses, it must be admitted there was method in his madness.

M. Fredel has recently given an amusing sketch of Boileau the satirist, one of the literary ornaments of the Court of the Roi Soleil, taking a course of waters at Bourbon-l'Archambault, a fashionable health resort of the seventeenth century. In 1687 the poet caught a very bad cold and lost his voice. Physicians, as the too frequent epitaph says, were in vain, and even ass's milk did little good. The only difference, the patient wrote to Racine, was that the ass's milk made him fat while the doctors' remedies dried him up. On the advice of Fagon, physician to Louis XIV, Boileau went to Bourbon, a medicinal shrine whither at that time flocked the paralysed, the rheumatic and the gouty. He arrived on July 18th, 1687, and on the 21st he wrote to Racine that he had been bled and purged and had undergone all the rites of initiation before taking the waters. The tutelary medical deity assured him that he was much better, but he himself felt so weak that he could scarcely stand. He was warned that the waters had what his friend Molière would have called a very marked *virtus dormitiva*, but that he must on no account give way to the drowsy feelings that would steal over him. Racine wrote to him that the King at dinner had been graciously pleased to inquire about him. His Majesty's condescension had such a stimulating effect on the poet that, although he was according to his own account reduced to the last extremity of weakness by the treatment, he was able to write in the following amazing strain:

Nothing more glorious could happen, I do not say to a wretch like me, but to the most considerable persons at Court; and I bet that more than a score of them at the present moment envy my good fortune and wish that they had lost their voice, and even their speech at such a price. I shall not fail, before long, even at the risk of offending my doctor, M. Bourdier, and my apothecary, M. Baudière, who are bold enough to maintain against him that the waters of Bourbon are good for restoring the voice; for my own part, I am convinced that it is wise to obey his orders, even in regard to medicine. I accept the augury which he has given me in saying to you that my voice would return when I least think of it. A prince who has done so many miraculous things is probably inspired by Heaven, and all his utterances are oracles. Moreover, I have still a further remedy to try in which I place great hope, and that is, immediately on my return to present myself at his passage, for I think the desire I shall feel to testify my joy and my gratitude to him will make me find my voice again, and perhaps even eloquent words.

This "human document" gives a painful idea of the servility to which the most vigorous minds were reduced by the influence of their environment in the time of Louis Quatorze. Fulsome flattery in a dedication directly addressed to the sovereign may be taken in "a Pickwickian sense." But such blasphemous adulation in a private letter (though doubtless intended to be shown) indicates that the writer—who, be it remembered, was one of the most biting satirists in the history of literature—must have had the soul of a flunkey. As to the courtiers envying him his loss of voice, Boileau was right enough. Is it not on record that after Louis was operated on for fistula there was a rush of courtiers to submit themselves to Felix's knife in order that they might have the joy of informing the Monarch that they had suffered from the *maladie du Roi* and had been cured by the same operation? Boileau went on with the treatment at Bourbon, but made little progress. In a letter to his sister he says that he does not think he can show his resignation to the will of God more clearly than in submitting to the yoke of medicine. After three weeks of the waters the King deigned to express the opinion that he would do well to resume his ordinary course of life, and, needless to say, all the court physicians agreed with His Majesty. Boileau left Bourbon on September 5th stronger but still voiceless. Six months later his voice came back, as the King had foretold, at a time when he was not thinking about it. Boileau died in 1711 at the age of 74.

Mr. Kruger, as all the world knows, operated successfully on his own wounded hand with knife and gunpowder on a hunting expedition. The following story of a Spanish soldier which is related by Brantôme is an example of mingled fortitude and readiness of resource beside which Oom Paul's performance sinks into insignificance. We wish we could reproduce the charming quaintness of the original, but our readers must be content with a bald translation:

The Spaniards have done great deeds in divers parts of the world since they have carried their arms and unfurled their flags almost over the whole earth, for which things they have earned among all nations the renown of an immortal glory. Leaving aside much of what is spoken of in the history books, one action alone of a soldier which has been undeservedly forgotten forces us to acknowledge the courage and valour of the Spaniards. At the time that the Marquis of Pescara was on his way to the obstinate wars of Lombardy, a fight took place between the French and the Spaniards. Louis de la Sena, a Spanish soldier, standing in the rank with his battalion was wounded by a bullet, and, his armour being insufficient, the bullet entered his body. The courageous soldier, feeling the bullet fall downwards into the hollow of the lower part of the belly, stepped a little way out of the rank, and with incomparable fortitude and courage took out a knife, made a small opening in the lower part of his belly, through which (a thing which will sound like a fable) he forced out the bullet, and pushing inwards his bowels with his fingers, with unexampled courage made on one side and the other of his wound divers small holes in the flesh, and, passing a needle through them, with great firmness, sewed up the opening which he had made. Returning then to his place, no one perceived from his look the martyrdom which he had inflicted on himself with his own hands. On the contrary, he kept up a bold appearance among the soundest, albeit he was in such evil case, until a short time afterwards he received a shot from an arquebuse on the eyebrow, which destroyed his eye. On this account he had to be removed from his battalion, and, having been dressed with no less diligence than admiration, he came to Valladolid, where was the Emperor Charles, and the monarch, having seen the proof of his valour, gave him by way of reward a perpetual pension of 100 ducats.

There have been other cases in which operations almost as bold as this have been performed by patients on themselves. One of the earliest instances in which the high operation for stone was performed was that of a Dutch blacksmith who cut into his bladder with an ordinary knife, and rid himself of a very large calculus. In other cases men have opened their stomachs and removed foreign bodies therefrom, and women in travail have helped delivery with the knife. We think, however, that the case of the Spanish soldier just related must be unique in the annals of laparotomy, as the patient went back and took his place in the fighting line immediately after the operation, and remained there doing his duty till he was disabled by a second wound.

In the *Field Naturalist's Quarterly* for February, Mr. William J. Long discourses on How the Animals Die in an article which is the last chapter of a book entitled *The School of the Woods* (Messrs. Grim and Co.). Mr. Long, who is a naturalist of the Waterton and Jefferies type, says that nine-tenths of animals die quite peacefully. We sometimes see what he calls the exceptional cases, as "the quail in the hawk's grip, the squirrel limp and quiet under the paw of cat or weasel;" but the unnumbered multitudes that choose their own place and close their eyes for the last time, as peacefully as ever they lay down to sleep, are hidden from our sight. Except in rare cases no animals or birds will tolerate any cripple or deformed or sickly member among them. They set upon him fiercely and drive him away. "So when an animal, grown old and feeble, feels the queerness of some new thing stealing over him, he slips away, in obedience to a law of protection that he has noted all his life, and, knowing no such thing as death, thinks he is but escaping discomfort when he lies down in hiding for the last time." As for the tragedies and catastrophes of animal life, Mr. Long, while admitting that there may be a few, says they are far rarer than human catastrophes. And as the vast majority of mankind die, not by earthquake or famine, but peacefully in their beds, so the vast majority of wild creatures die quietly in beds of their own choosing. There are violent deaths, to be sure; but these are usually the most painless and merciful. A deer goes down under the spring of a panther; we imagine that to be a fearful death, but as a matter of fact there is no pain whatever. Livingstone, who lay under the paw of a lion, with his shoulder crushed and his arm gashed with seams whose scars he carried to his grave, felt no pain and did not even know that he was hurt. He was the first to call attention to the fact that the rush and spring of a savage animal brings a kind of merciful numbness that kills pain perfectly, and seems also to take away all feeling and volition, so that one is glad simply to lie still—his only hope, by the way, if he is to escape. If this is true of men, it is still more true of animals, which have none of our nervousness or imagination. Sometimes animals die of cold; that is also a merciful and painless ending. Sometimes they die of hunger when an ice storm covers all their feeding grounds; that also, as any one knows who has gone days without food,

is far more merciful than any sickness. Sometimes they die by fire or flood, but in that case the creatures run away, with a confidence they always feel in their legs or wings, till the end comes swift and sure. "In short, unless the animals are to live always and become a nuisance or a danger by their increase, Nature is kind, even in her sterner moods, in taking care that death comes to all her creatures without pain or terror. And what is true of the animals was true of man till he sought out many inventions to make sickness intolerable and death an enemy."

ASSOCIATION NOTICES.

COUNCIL.

NOTICE OF MEETING.

A Meeting of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 22nd day of April next, at 2 o'clock in the afternoon.

March, 1903. Guy Elliston, *General Secretary.*

ELECTION OF MEMBERS.

Any candidate for election should forward his application upon a form, which will be furnished by the General Secretary of the Association, 429, Strand. Applications for membership should be sent to the General Secretary not less than thirty-five days prior to the date of a meeting of the Council.

Guy Elliston, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

West Somerset Branch.—The spring meeting of this Branch will be held at the Taunton and Somerset Hospital, on Friday, April 3rd, at 3.30 p.m., when the chair will be taken by the President, Mr. E. E. Frossard. Business: In addition to the minutes of the last meeting, etc., it will be necessary to adopt laws for the government of the newly-constituted Branch, and also laws to regulate ethical procedure. Draft model rules suitable for adoption will be found in the Supplement to the British Medical Journal of March 7th, 1903, pp. xxi and xxiii. It will save much time if members will make themselves conversant with these before the meeting. Clinical cases:—Dr. Rutherfoord will read notes on cases: (1) Caesarean section; (2) excision of elbow-joint (with skiagraph); (3) vaginal hysterectomy (with specimen). Mr. R. Morton will show two cases of lupus which have been treated with *x* rays. Address: Dr. L. A. Weatherly, of Bailbrook House, Bath, has kindly consented to read a paper on Insanity: some points of mutual interest to the alienist and general practitioner. Members wishing to bring any other communications before the meeting are requested to give me early notice of the same. Tea will be provided after the meeting.—W. B. Winckworth, Taunton, Honorary Secretary.

Shropshire and Mid-Wales Branch.—The spring meeting of this Branch will be held at the Salop Infirmary, on Friday, April 3rd, at 3.30 p.m.—Harold B. Macleod, College Hill, Shrewsbury, Honorary Secretary.

South-Western Branch.—The next meeting of this Branch will be held at the Royal Devon and Exeter Hospital on Wednesday, April 1st, at 3 p.m., the President, Mr. J. Delpratt Harris, in the chair. The following communications are already promised:—Mr. Russell Coombe: On two cases of early tubal gestation with operation; recovery. Dr. F. Bushnell: On the antibodies in disease. Dr. W. Gordon: On the practical use of blood films. Dr. W. Gordon will also show: (1) Micrococci in the stomach wall beneath gastric ulcers; (2) photograph of an aortic stenosis which only produced a systolic murmur in the recumbent position.—G. Y. Eales, 1, Matlock Terrace, Torquay, Honorary Secretary.

Leinster Branch.—A general meeting of the members of this Branch will be held in Dublin on Tuesday, April 14th. Members will be notified by circular of the place and hour.

Border Counties Branch.—The next meeting of this Branch will be held at Castle Douglas at the end of April. Gentlemen desirous of reading papers, etc., are requested to communicate at their earliest convenience with Francis R. Hill, 12, Bolton Place, Carlisle, Secretary.

SPECIAL CORRESPONDENCE.

MANCHESTER.

The Infirmary Site.—"Antifooting League."—Death of Sergeant Thorneycroft.

At a special meeting of the Board of Management held this week the offer of the Manchester Corporation to purchase the Infirmary site for £400,000 was formally accepted. Before, however, any steps can be taken in the matter, it is requisite to obtain the consent of the Trustees of the Infirmary. A general meeting of the Trustees will be summoned for April 3rd. At this meeting the following resolutions will be submitted on behalf of the Board:

1. That the offer of the Manchester Corporation to purchase the Infirmary site for £400,000 be accepted, and the Board of Management be authorized to carry out the sale.

2. That the new Infirmary be built on the Stanley Grove site, and that the Board of Management be authorized to acquire the same and any other adjoining property that may be expedient, including the site of the proposed Southern Hospital, on such terms and conditions as they may think desirable in the interests of the charity.

3. That the Board of Management be authorized to obtain plans for the erection of the new Infirmary, and to submit the same, together with an estimate of cost, to a future meeting of the Trustees.

4. That the Board of Management be authorized to take, and concur with other persons in taking, all such measures as may be necessary or requisite to give effect to the foregoing resolutions, including any application to Parliament, or any authorities which may be found necessary or desirable.

It appears that in connexion with factories in this district there is a practice called "footings." Whenever a new apprentice or worker begins work in a factory, it is usual—so it is said—for him or her to pay for what is called a "footing." Practically, this custom consists in a newcomer "paying for beer or other drink, which is drunk by the older hands. The cans emptied, and the bill paid, the stranger is considered properly 'shod,' or 'footed.'" Standing treat on all sorts of occasions is not an unusual custom. An organization called "The Antifooting League" has been started in Manchester to suppress these customs so far as they apply to women and girl workers. The organization was formed some three or four years ago with a view to counteract the alleged increase of drinking among girls and women. In many cases the officers of the League have secured courteous and efficient support from millowners. Let us hope that success will attend such praiseworthy efforts, for, after all, deterioration in the stamina of womanhood is a serious part of the problem of physical degeneration. If this is brought about by the abuse of alcohol, especially at an early age, it is sure to bring in its train unwholesome proclivities of the moral nature.

Old students of the Medical School of Owens College will regret to hear of the death of Sergeant Thorneycroft, who for years has been a well-known figure and genial personality in the Medical School.

BIRMINGHAM.

The General Hospital.—The Queen's Hospital.

At the annual meeting of the Governors of the Birmingham General Hospital, held under the chairmanship of the President, Earl Howe, an earnest appeal was made for further support, as the hospital is getting into debt. The lowest expenditure found possible is £25,000, and the total income only £19,850, of which about £7,750 are derived from subscriptions. An addition of no less than £5,000 a year is required in order to continue the work of the institution in a satisfactory manner. The number of in-patients during the year was 5,642, which is the largest number yet admitted in one twelve months. Dr. Edward Malins, who has resigned the office of Honorary Obstetric Officer, after holding the post during the past twenty-five years, was appointed Consulting Obstetric Officer to the hospital in consideration of the eminent services he has rendered during that long period. Sir John Holder has most generously promised to build and equip a laundry for the use of the hospital.

At the annual meeting of the Governors of the Queen's Hospital, the Lord Mayor of Birmingham in the chair, it was reported that the number of in-patients treated during 1902 was 2,065, and the number of out-patients 28,947; these figures are very similar to those of the year immediately preceding. An appeal for a larger subscription list was made, as it was found that an increase of about £800 a year was necessary in order to keep the hospital free from debt. Many

structural alterations which are greatly needed are in contemplation. It is intended to increase the number of beds in the detached wards and to extend the nurses' home. A new laundry has been already completed. Mr. Frank Marsh was appointed Honorary Consulting Surgeon to the hospital in recognition of his valuable services as honorary surgeon during the past fifteen years.

CORRESPONDENCE.

HOSPITAL AMENITIES.

Sir,—I feel sure many general practitioners would, like myself, be glad to know of a hospital in London where it is usual to write to the doctor who sends in a patient regarding (1) the diagnosis when one has not been previously made; (2) any exceptional development; (3) the time fixed for operation; (4) the date of discharge, with (if necessary) particulars of recent treatment, for many on leaving a hospital are not suitable people for out-patient relief.

A few weeks ago a case of mine was sent to a certain hospital where in course of time a rare hepatic disorder was diagnosed, an operation decided upon and performed, and now the patient is discharged without any sort of message coming to me from beginning to end. Another patient, a woman, was sent up as an out-patient for diagnosis, and a note came asking me to send her in for observation. She went, was observed, her abdomen opened, and they have sent her home. The friends knew I took great interest in the case, and would have liked me to be present at the operation. They think I must have heard exactly what was done, but as a matter of fact I am left to conjecture everything.

Such instances as these might easily be multiplied, and for my own sake and the sake of my patients I am anxious to discover an institution where my previous experience will not be repeated; and as all patients are not in poor circumstances the staff would not suffer by the manifestation of what may to some appear to be only courtesy.—I am, etc.,

March 20th. Suburb.

THE POWERS OF THE CORONER.

Sir,—In the British Medical Journal of February 14th you kindly allowed me to call attention to the action of our coroner in insisting upon the registrar of deaths reporting to him all cases of deaths following operation, that he might decide if an inquest should be held. I have now the pleasure to inform you that his honour, feeling that he would not be justified in withstanding the unanimous desire of our profession, has withdrawn the obnoxious regulation.

I should like to add that in this matter we have been much encouraged by the support of the British Medical Association. You, Sir, gave our grievance a publicity it was denied elsewhere, and after the appearance of my letter in the Journal, the Medico-Political Committee of the Association was preparing to take the matter in hand in business-like fashion, when the coroner's withdrawal spared them the necessity.

In strange contrast has been the action of the Registrar-General. Before addressing you I had appealed to the Registrar-General when the death of one of my patients was refused registration, although no mention of an operation was made in the death certificate. I ventured to point out that the services of the profession to the Registrar-General's department are not insignificant if gratuitous, and suggested that they ought not to expose certificates, given in good faith and relating to ordinary illnesses, to unreasonable refusals to registration.

But the local registrar was acting under the instructions of of his superior in refusing to register the death. In spite of remonstrance, the Registrar-General maintained his attitude, and allowed the coroner's regulation to rule his subregistrar's actions. Had the Registrar-General been desirous to protect those upon whose conscientious labours he has to rely for his statistics, he could have directed his subordinate to disregard our coroner's wishes. When one remembers that he allows the registration of "uncertified" deaths, one asks, and asks in vain, where are the consistency, the fairness, or the justice of refusing the registration of certificates given by qualified men, in cases of ordinary illness, without a single suspicious circumstance to warrant the raising of doubts in the minds of survivors, who would soon suspect that all had not been right, or "Why is the case to be referred to the coroner?"—I am, etc.,

Huddersfield, March 20th. Norman Porritt.

PLAGUE IN INDIA.

Sir,—The deaths from plague in India during the week ending February 28th numbered 28,860.

Without wishing in any way to be an alarmist, I do think that the continuance and increasing virulence of the plague in India is so serious that some well-considered "plan of campaign" against plague should be formulated. Ever since 1896 plague has prevailed in India, and now, in 1903, not only is the disease still present, but the number of cases and the mortality are evidently increasing with succeeding years. During the corresponding week of 1902 the figures, although the highest on record up to that year, were yet 7,000 less than the record for the corresponding week of this year. Moreover, there is every reason to expect that the maximum for 1903 has not yet been reached, as it was not until the week ending March 22nd, 1902, or about three weeks later than the record to hand for this year, that the greatest mortality for 1902 occurred.

The highest weekly record of mortality in 1902 reached during the third week of March the enormous total of 26,108, yet that number is 2,752 less than the returns for the week ending February 28th, 1903: and, should the epidemic follow the course it has done during previous years, we may expect to have a weekly return during the month of March, 1903, approaching or even exceeding 30,000.

There is an inclination amongst natives in India to accept the inevitable, and to let matters take their course. This is assuredly not the case with either the Government of India or the India Office at home, and it is certain that any help that may be asked for will be readily and willingly granted. Hitherto the chief step taken has been to send a commission of inquiry from this country to India. The Commission did excellent work so far as collecting information was concerned; but it is evident that some other, perhaps more practical, form of assistance should be sent.

We have evidence of the good accomplished in Cape Colony by the timely and vigorous measures recommended by Professor W. J. Simpson, and adopted by the Cape Government. We have evidence also of the benefits which resulted in Hong Kong by the methods recommended by the same expert authority. India of course is a larger and more difficult field to tackle, but it is evidently necessary to adopt some other plans of fighting plague than those at present in vogue in India. Were a Commission, consisting of practical sanitarians and with such a man as Professor Simpson at its head, sent to India, surely some scheme of prophylaxis could be devised whereby the continuance of these severe epidemics might be stayed.

I cannot believe that all the modern means of combating epidemics are exhausted, yet it is evident that for the time being, at any rate, sanitary science must own defeat. The present epidemic will no doubt subside in a few weeks as the hot weather advances, but experience proves that a recurrence during next winter is to be expected. It is not during the height of an epidemic that hygienic measures are likely to prove most beneficial, so that the approaching lull in the virulence of the disease seems the most favourable moment to organize a scheme of prophylaxis for the future.

Owing to extra plague work the officers of the Indian Medical Staff and of the officers of the R.A.M.C. in India have been overworked for some years past, and it is but fitting and right that the pressure of work upon them should be relieved by further help, which to be of real benefit must be that of trained experts.—I am, etc.,

Devonshire Street, W., March 24th. James Cantlie.

SOIL POLLUTION WITH REFERENCE TO ENTERIC FEVER DURING THE LATE CAMPAIGN.

Sir,—I think there can be no doubt that a large proportion of the enteric fever contracted by our troops was due to the great neglect of the most elementary sanitary precautions by the various columns engaged.

I was for the first eighteen months of the campaign attached to cavalry, part of the time with a field hospital, and part with a bearer company. My units invariably dug latrines for the use of the sick and attendants, even though we only remained on the ground for one night, but the same cannot be said for the combatant part of the columns.

It was quite exceptional for latrines to be dug unless we stayed more than twenty-four hours in the same place. Officers and men resorted to the shelter of friendly antheaps, or dongas, quite regardless of what must happen when the next heavy rain fell.

The idea seemed to be that as that particular column might not occupy the same ground again, it did not matter very much in what condition it was left. No thought was taken for any column which might come afterwards.

As water is only obtainable in certain places it is quite obvious that columns could only encamp near the water supply, and it must have frequently happened that numbers of columns have encamped quite close to previously occupied grounds, and at times, owing to military necessities, actually on an old ground itself.

I remember on one occasion having to drag putrid mules off our portion of the ground, and covering the fouled ground with fresh earth before we could encamp.

I do not consider that medical officers in charge of units in all cases carried out what was one of their most important duties—namely, the supervision of the conservancy arrangements. I would make the suggestion that, in future campaigns, one medical officer should be told off to each column for sanitary purposes only. He should be given a good N.C.O. of the rank of sergeant, and a staff in proportion to the size of the column. The duties of this medical officer and his staff would be:

1. To go on in advance, and with the staff officer of the column select a camping ground.
2. To choose the best water supply, and to police it.
3. To see that, immediately the column arrives in camp, latrines are at once dug by each unit, and also pits for kitchen refuse.
4. To patrol the camp, and see that no one defaecates or micturates in any other than the proper place.
5. To inspect the camp just before the column marches off, and see that the latrines and pits are filled in and all combustible rubbish burnt. A number of men from each unit would be told off for this purpose, and would not be permitted to leave the camp until a paper had been signed by the sanitary staff that the latrines, etc., of this unit were all correct.

Of course I am aware that it is the duty of every medical officer with a unit to see after every point above mentioned, but from practical experience I know that it is not always possible, owing to other pressing duties, to see after them. On this account I make the suggestion for the appointment of this sanitary staff. I am quite convinced that such an arrangement would pay.—I am, etc.,

F. J. W. PORTER, Major S. A. C.
(R.A.M.C. seconded).

Pretoria, February 22nd.

AN INTERNATIONAL MEDICAL MANIFESTO ON ALCOHOLISM.

SIR,—I do not at all accept the dilemma on the horns of which Dr. Archdall Reid proposes to pin me in his letter in the BRITISH MEDICAL JOURNAL of March 21st; having quite sufficiently guarded myself by the comments with which I qualified my signature of the report to which he refers.

But these personal matters are of trivial moment compared with the great question whether the offspring of drinkers are really exposed to the danger of degeneracy. That they are so is *a priori* extremely probable from the analogy of the havoc which other chronic poisons—lead and mercury—play with the developing ovum, and presumably with the germ plasm; and evidence of the fact has also been adduced from various quarters such as would satisfy most minds, though it may not amount to the absolute demonstration which Dr. Reid would postulate.

I may refer to an admirable paper by the late Dr. Demme of Berne, published at Stuttgart, 1891, carefully comparing the life-histories of ten sober and ten drunken families; a similar comparison of twelve families of each kind published in the American *Quarterly Journal of Inebriety*, 1897; a work by Dr. Legrain, on alcoholic heredity in France; a paper read by Dr. Sullivan, of the Pentonville Prison, on the children of the female drunkard, published in the *Proceedings of the Society for the Study of Inebriety* for 1900; and papers by Dr. Fletcher Beach and Dr. Walmsley, of the Darenth Asylum, the first of which deals with 430 imbeciles and idiots, of whom 136 had intemperate parents, and the latter with 27 inebriate families, comprising 212 children.

It should ever be borne in mind that the doctrine of the non-transmission of acquired characters, of which Dr. Reid is such a powerful exponent, does not cover the question, which is one of the poisoning of germinal and embryonic tissues.—I am, etc.,

T. MORTON, M.D.

Kilburn, N.W., March 24th.

THE VACCINATION QUESTION.

SIR,—I will assume for the purposes of argument that the country as a whole believes that vaccination is, if not an absolute preventive of that loathsome disease small-pox, at all events is such a moderator of its evil effects that it is desirable to obtain in some way or other a perfectly vaccinated community. It is not necessary nowadays to point out the disastrous effects of an epidemic of small-pox. The ratepayers of London, Liverpool, Sheffield, Swansea, and other large towns would, I feel convinced, be quite prepared to adopt any reasonable measures which would prevent the recurrence of the epidemics they have during the past few years experienced. The question of the day is: Can any measures be taken by the Legislature which will be likely to prevent such epidemics?

It must be apparent to all persons who have had any personal experience of the working of the Vaccination Act of 1898 that although that Act has undoubtedly made the operation less offensive to the people, yet it has at the same time done little or nothing beyond the Acts of 1867 and 1870 to ensure that every child (excluding of course those children whose parents have succeeded in satisfying the Justices of the Peace that they had a conscientious objection) should be efficiently vaccinated before it reached the age of six months—provided always that such children were in good health and were living in dwellings that were not insanitary.

The public vaccinators and the vaccination officers of this kingdom are perforce more aware than any other class of persons of the difficulties that have to be encountered, especially in large centres of population, in carrying into effect the provisions of the Vaccination Acts. In spite of all their efforts a large number of children remain unvaccinated. Disease, of course, accounts for a considerable number, but change of residence is, I venture to say, the cause of a still greater number of children escaping the provisions of the Act. I have not the figures by me at present, but I would venture to surmise that from 15 to 20 per cent. of the children are lost sight of through that cause.

Now, Sir, if the Legislature are in earnest about seeing that every child should be properly protected against the infection of small-pox, it occurs to me that the best way of carrying out such an intention is to say to the new educational authorities: Every child shall produce satisfactory evidence, before its name is entered on the register of a public elementary school, that it has been successfully vaccinated. By such a regulation one would then be successful in getting hold of those children whose parents had, from some cause or other, neglected to have them vaccinated during infancy. It is a curious fact, but true, that many parents, whilst objecting to the vaccination of their children during infancy, do not object to their being vaccinated when they reach the age of 4 or 5 years.—I am, etc.,

T. GARRETT HORDER,
Public Vaccinator.

Cardiff, Feb. 17th.

TRANSPLANTATION OF PANCREAS IN DIABETES.

SIR,—The patient referred to in my previous letters died on March 10th, the day fortnight after the operation. Death may be set down to diabetic coma. Gerhardt's reaction was present on the day before death, and on some days earlier it is marked "darker than claret." The breathing was heavy rather than hurried. The patient died unconscious.

The necropsy was made by Dr. Workman, Pathologist to the Glasgow Royal Infirmary. In his report he says: "The duodenum and jejunum are large, and the valvulae conniventes are considerably hypertrophied. ..... The pancreas is large and appears quite healthy to the naked eye." Dr. Workman says he finds this hypertrophy of the intestinal mucous membrane to be the characteristic feature in necropsies of diabetes cases.—I am, etc.,

JAMES W. ALLAN, M.B.

Glasgow, March 20th.

SIR,—I notice some correspondence on a suggestion to transplant the pancreas in cases of diabetes. Why transplantation? Dr. Allan will find in the literature of experimental medicine overwhelming evidence of the futility of attempting to transplant organs, or parts of organs, from one species to another. The invariable result is either sloughing or gradual absorption. Even were human pancreatic tissue available, again why transplantation? All the evidence is against the possibility of such transplanted tissue being competent to perform its normal function, even if it should

persist for a time. In face of these facts I think it is quite unjustifiable to perform on a diabetic such an operation as that proposed.—I am, etc.,

Liverpool, March 21st. KEITH MONSARRAT.

MIDWIVES FOR THE RURAL POOR.

SIR,—Will you allow me to point out, in answer to Mr. Alfred Wilmot's letter in the BRITISH MEDICAL JOURNAL of March 21st, 1903, giving an unfortunate experience of a village nursing association, that we must not judge of systems by isolated cases, or limited areas, otherwise I could give a very opposite experience of many years' standing in my own county. Rather let us look further afield, and note the numbers of deplorable instances, as shown in the coroner's statistics, following upon the fatal work of the untrained woman, where the doctor, alas! has been called in too late to find his skill of any avail, and compare these with the solitary ones of comparative failure, as described at Burnham.

There are hundreds of rural villages where it is impossible to count on the doctor for all the scattered cases, and some where his fee cannot be met, and some where the untrained Gamp still reigns supreme. For these our Association would provide the homely midwife, willing to act as a monthly nurse under the doctor, and trained to know, if acting as midwife, when to call him in, before anything has gone wrong. The people would not be encouraged to dispense with the doctor, and his fee would be guaranteed when his services were required.

There are, I am glad to say, many places where the doctors recognize and welcome the agency of our Association. In such as these we would begin our work, seeking his advice and direction, inasmuch as we depend upon his skill and help, and I hope that working in this spirit we shall find the borders of our usefulness enlarge, without deserving adverse criticism.—I am, etc.,

Pulborough, Sussex, March 22nd. JOSEPHINE JOHNSTONE.

CLINICAL INSTRUCTION IN UNION INFIRMARIES.

SIR,—Sir Henry Burdett has struck the right key when in his address he enunciated the doctrine that in the interests of the patients the above should be thrown open to students. Yes, the presence of students draws forth a man's powers in a way that nothing else will. It is not that he is better than if he were not engaged in teaching, but he is manifold better. Then, again, consider the immensity of detail which students alone can carry out. Then take the student himself; it is rank dishonesty to pretend that the limited resources of the fraction of patients treated at our clinical hospitals can afford or do afford anything like material enough for the practical training of medical students. Then, again, the very class of cases in the non-clinical hospitals are more akin to those met with in every-day private practice than the exceptional ones in the picked wards of clinical hospitals.

I was truly amazed to read Mr. Perrin's remarks; surely he should have recollected that the superior respectability of clinical hospitals, as well as the superior practice of most of their physicians are entirely due to the fact that students attend these hospitals. Finally, is it not the oligarchy who have so long ruled the professional masses with a rod of iron to whom we are indebted for this degrading monopoly and exclusiveness?—I am, etc.,

Cashel, March 23rd. THOMAS LAFFAN.

THE DIAGNOSIS OF PULMONARY TUBERCULOSIS.

SIR,—I was very glad to see Dr. Walsham's letter in the BRITISH MEDICAL JOURNAL of March 21st calling attention to the great value of *x*-ray examination in the early diagnosis of pulmonary tuberculosis, his experience coincides with mine, especially in (*a*) the movement of the diaphragm, which in many cases is most striking, and (*b*) the diminution of translucency on the affected side (especially marked in the apical region where this part is affected). I have found this method of examination of most value in (1) very early cases where there are no physical signs (I have a skiagraph showing tuberculous deposit in the left lung taken six weeks before a single physical sign could be detected, although most careful examination was made almost daily by competent physicians); (2) in early cases where the physical signs may indicate only a slight amount of disease the rays will very often reveal a more extensive area of mischief; (3) to show the improvement made during or after sanatorium treatment (I have some skiagraphs showing most striking alterations after six weeks' to two months' treatment); and (4) in cases where there is extensive disease in one lung periodical examinations should be made to detect as early as possible any deposit in the healthy lung.

I hope Dr. Walsham's letter will be the means of bringing this method of examination into more general use, as at present, unfortunately, many practitioners are extremely sceptical about its value.—I am, etc.,

Lincoln, March 23rd. STANLEY GREEN, M.B., B.S.

EXPERIENCE OF A WOMAN DOCTOR IN THE ORKNEY ISLANDS.

SIR,—I only notice the letter of your correspondent "Just before Generous" in the BRITISH MEDICAL JOURNAL of March 14th, p. 645, in order to correct an apparent misstatement of mine.

When I said that I had never heard of a case of dismissal of a parish doctor without reason given in Orkney, I meant to say Eday, and the word Orkney is either a misprint or was a slip of the pen on my own part, as I know nothing about cases of dismissal which may have taken place in other islands.

The only case I know of in which the Eday Parish Council dismissed their medical officer a reason was given, but the medical officer in question left the island about a year before I went to it.

As my own reasons for leaving Eday were of an entirely private and personal nature, I must decline to enter upon any discussion of them.—I am, etc.,

March 20th. C. E. O'CONNOR.

THE VIRCHOW MEMORIAL.

SIR,—Allow me to inform, through the medium of the BRITISH MEDICAL JOURNAL, all those who have kindly contributed to the Virchow Memorial, that the list of subscriptions was closed, as intended, on February 28th, and that the total, after deduction of the small expenses for stationery, amounts to £265 11s., contributed by 122 subscribers. A cheque for that amount has been sent, together with the list of the contributors by the Honorary Treasurer, the Right Honourable the Lord Avebury, F.R.S., to the Treasurer of the Berlin Committee, Herrn Geheimen Kommerzienrath A. von Mendelssohn-Bartholdy.

The Chairman of the Berlin Committee, Professor Dr. W. Waldeyer, has addressed to me a letter, in which he expresses, in the name of the Berlin Committee, his very sincere thanks to all those who in Great Britain and Ireland, have contributed to the memorial. He winds up by saying that England had once more shown that she knows how to honour genuine science and its representatives.—I am, etc.,

FELIX SEMON,
Cavendish Square, W., March 23rd. Honorary Secretary.

THE CORRECTION OF THE *MEDICAL REGISTER*.

SIR,—I should like to add a further suggestion to your note with regard to the notices sent out by the General Medical Council. As the question of the registration of every medical man's address is so important, not only should the notices sent out be registered, but the receipt of the inquiry form by the registrar should be acknowledged. At any rate, this should be done in every case where a change of address is notified; else how is a man to know that his change of address is duly registered?—I am, etc.,

Hounslow, W., March 22nd. GEO. A. S. GORDON.

TRANSMISSION OF MALARIA TO MAN.

SIR,—Professor Grassi has recently published a pamphlet entitled *Documenti Riguardanti la Storia della Scoperta del Modo di Trasmissione della Malaria Umana*, which I find he has dedicated to me. The work is of a polemical character. Lest, from the fact of the pamphlet being dedicated to me, it might be supposed that I endorse the views therein expressed, I beg to say that in many instances I do not; and, moreover, that I was not consulted about the dedication.—I am, etc.,

Queen Anne Street, W., March 20th. PATRICK MANSON.

FOOTBALL PROHIBITED IN ILLINOIS.—A Bill has been introduced in the Illinois Legislature prohibiting football in the State University and other institutions of learning supported wholly or in part by the State. The prohibition is made absolute, and any breach of it is to be characterized as a misdemeanour, the maximum penalty being a fine of 100 dollars. Not only are the students forbidden to play the college game, but presidents and faculties are forbidden to permit it.

OBITUARY.

THOMAS JOHN MACLAGAN, M.D.EDIN.,

Physician in-Ordinary to Prince and Princess Christian of Schleswig-Holstein.

WE regret to have to record the death on March 20th of Dr. T. J. Maclagan, whose writings on rheumatism in connexion especially with the introduction of salicin, has made his name very familiar to the profession. Dr. Maclagan had been ailing for some twelve months before his death, and by the middle of last December he had lost 2 st. in weight without apparent cause. He became easily tired, and his work was carried out with difficulty. In December he began to complain of abdominal pains and of various dyspeptic troubles. Towards the end of the month a somewhat indefinite swelling was discovered in the left hypochondrium. This became more defined, and the patient became feebler and more distressed. An exploratory laparotomy was performed on February 26th. The mass was found to be a part of an extensive cancerous growth of the stomach. The growth involved nearly one-half of the entire organ and had extended to the peritoneum. No attempt at excision could be entertained, but a gastro-enterostomy was carried out. The operation relieved him of his pain, but he gradually became weaker and weaker, and sank on the morning of March 20th. He was happily spared all suffering. Throughout the whole of his illness he never complained, and his last concern was for the welfare of others and not for himself. He was attended throughout the whole of his illness by Sir Thomas Barlow and Sir Frederick Treves.

Thomas John Maclagan, who was 65 years of age, was the son of another Thomas Maclagan, who after a very successful career as a medical man in Jamaica retired to Scone, in Perthshire. He received his early education at a school in Perth, studied the "humanities" at Glasgow University, and afterwards went to Edinburgh to take up medicine. There he obtained the M.D. degree in 1860, and then spent some time in further study at the schools of medicine of Paris, Munich, and Vienna.

On returning home, he first held a resident appointment at a hospital in Jersey, and afterwards became Medical Superintendent at the Dundee Infirmary, beginning his work during a bad epidemic of typhus fever. After spending three years in this post, he commenced what proved a very successful practice in the town of Dundee, being at the same time one of the examiners in medicine at the University of Aberdeen. He decided about the year 1879 to move to London, and established himself in Cadogan Place. He soon acquired the important semi-consulting practice which he continued to enjoy until his increasing illness compelled him to abandon it. His patients numbered many well-known people, amongst others the Duchess of Albany and his famous fellow-countryman, Thomas Carlyle; while he was also Physician-in-Ordinary to the Prince and Princess Christian of Schleswig-Holstein.

Among his professional brethren one of the first things that brought him into notice was his paper[1] on the Treatment of Rheumatic Fever by Salicin, published after two years' study of the properties and effects of the family of *Salicaceae* in this disease. The reasons that led him to study this drug and eventually introduce it to the profession are interesting, because in their inception purely empirical. His observation of rheumatic fever had impressed him with a belief that it is strongly allied to fevers of malarial or "miasmatic" origin, and believing also that in places which seem specially favourable to the development of "malarial" disease, Nature commonly also provides a cure, he was led to experiment with the bark of the salix alba, as well as with the common meadow sweet, or spiraea ulmaria, which also provides a salicyl compound. In 1881 he further developed his views in a monograph entitled *Rheumatism, its Nature, Pathology, and Successful Treatment*, of which a second edition was published in 1896. In this he gave with much detail his reasons for rejecting the neurotic and lactic acid theories of rheumatic fever, and urged that it must be due to the life processes of a parasite having its special nidus in muscles and the fibrous tissue of the joints and heart. According to him, rheumatic fever is in essence an intermittent fever, of which the intermittences are obscured by the cycles of existence of the parasites in various foci not being coincident. In the administration of salicin he insisted on the close repetition of large doses until pain subsided and temperature became normal.

[1] *Lancet*, March, 1876.

Other works published by him were *The Germ Theory of Disease* in 1876, and *Fever: A Clinical Study* in 1888. During the last year of his life he was engaged on another book of an allied character which, though not quite completed, will, it is understood, be eventually published. He was a Member of the Royal College of Physicians of London, and at one time on the Council of the Royal Institution, and whenever he could spare the time took a keen and active interest in fishing and shooting.

He leaves a widow, three sons, and a daughter. The interment took place on March 24th at Brookwood Cemetery after a funeral service at St. Paul's, Knightsbridge.

Sir Frederick Treves has sent us the following tribute to Dr. Maclagan's character and work: Dr. Maclagan was a man of rare gifts and of very admirable qualities. In spite of a large and exacting practice he always maintained the keenest interest in the progress of the science of medicine, and never lost the enthusiasm of his youth with regard to his professional work. He could claim to have been one of the most successful practitioners in London, and his success was based upon qualifications which could do no other than command success. He knew his work; he was one of the very kindest and most sympathetic of men, and certainly one of the most unselfish; he was rigidly upright and punctiliously honest, and he never lost sight of the dignity and responsibility of his calling. He was indeed a physician of the highest type, who was fully imbued with all those traditions which have made the profession of medicine honourable. He held the strictest views as to his duty, and carried out those views with a rigid and unflinching exactness. He had many friends, and they were devoted to him, and those of his profession who were associated with him in his work will always cherish his memory as that of a man who was honourable to the minutest particular, loyal, true, kindly, and generous. He possessed in a high degree all the fine qualities of that North Country from which he came, and to which he was ever attached, his firmness, his courage, his sense of duty, and, in the end, his uncomplaining submission to the inevitable.

WILLIAM SAUL, M.D., M.R.C.S.

THE somewhat sudden death of this well-known and esteemed practitioner took place at his residence at Boscombe, near Bournemouth, on March 11th, from cardiac failure supervening upon an attack of laryngitis. Dr. Saul had been in delicate health for several years, and for the last thirteen years had resided at Boscombe, having been advised to leave London, where he had conducted an extensive practice in Bedford Square and the neighbourhood for many years.

He was born at Banbury, Oxfordshire, and was a student at University College Hospital, London, where he won prizes in several subjects. He qualified in 1862, obtaining the degree of M.D.St.And., and the diplomas of M.R.C.S.Eng. and L.S.A.Lond. He was early in his professional career appointed Senior Medical Officer to the St. Pancras Infirmary, where he was known as an able surgeon and a skilful operator. On resigning this appointment he entered into private practice, and soon gained a wide reputation as a painstaking and reliable practitioner.

During his residence at Boscombe Dr. Saul took a deep interest in parochial affairs. He had been a churchwarden at St. John's Church for the last five years, and his genial face and kindly manner will be greatly missed by all who knew him.

The funeral service, which took place on March 14th, at St. John's Church, was very largely attended by his professional brethren in the locality and the residents of the neighbourhood, amid universal manifestations of grief at the loss of one who, by his unselfish life and innumerable acts of kindness, had endeared himself to the whole district. His remains were afterwards laid to rest in the East Cemetery, Boscombe. Dr. Saul married in 1884 Mary, daughter of the late Sir William Broun, ninth Baronet, of Colstoun, Haddingtonshire, who, with four children, survives him, and with whom much sympathy is felt in this great bereavement.

J. H. H.

DR. THOMAS LLEWELLYN PARRY died on February 4th at De Aar, Cape Colony, after a short illness, from acute dysentery, at the early age of 33. After receiving his medical education at the University of Edinburgh and taking the M.B. degree in 1891 and the M.D. in 1894, he commenced practice in 1896 at East London, and later practised at Springs,

near Johannesburg, Mount Fletcher, Swellendam and Uniondale, Cape Colony. On January 1st he took up his duties at Naaupoort, Cape Colony, as medical officer to the railway, and it was at this place that his fatal illness developed.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. M. Crisafulli, Professor of Clinical Medicine in the Univerity of Messina; Dr. Friedrich Cramer, of Wiesbaden, a well-known German surgeon, aged 55; Dr. J. Gine y Partagas, Professor of Surgical Pathology in the University of Barcelona; Dr. Josef Deutsch, editor of the *Aerztliche Zentralzeitung*, of Vienna; and Dr. W. E. B. Davis, Professor of Gynecology and Abdominal Surgery in the Birmingham Medical College, Alabama, and for some years editor of the *Alabama Medical and Surgical Journal*, the first medical journal published in that State, aged 40. It may be added that on February 1st Dr. Henry Helfrich, of Allentown, Pennsylvania, died at the patriarchal age of 99 years and 7 months.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVY MEDICAL SERVICE.

Compound Titles.

Naval Medical Officer writes: Allow me to protest in the strongest possible manner against your correspondent "Veritas's" suggestion in the British Medical Journal of January 17th, that a change should be made in the titles of naval medical officers. That the ancient and honourable title of Surgeon should be degraded by having a bogus executive prefix like Lieutenant or Captain tacked on to it would be a cause of disgust to us and ridicule to the rest of the navy. We are content to be doctors, and hanker after neither ornamental titles to our names nor curls to our stripes.

The following appointments have been made at the Admiralty: Norman L. Richards, Staff Surgeon, to the *Duke of Wellington* for the *Nelson*, March 27th; Shirley H. Birt, Surgeon, to Haslar Hospital for Portsmouth Dockyard, April 1st; James H. Fergusson, Surgeon, to the *Duke of Wellington*, for Portsmouth Dockyard, April 1st; William J. Stitt, Surgeon, to the *Bulwark*, March 19th; William M. Keith, M.B., Surgeon, to the *Diana*, March 19th; Frederick J. A. Dalton, Surgeon, to the *Vernon*, March 19th; John D. Hughes, Staff Surgeon, to the *Pioneer*, undated; Henry W. G. Green, Surgeon, to the *Hibernian*, for Malta Yard, March 21st; Pierce L. Crosbie, Surgeon, to the *Dryad*, March 21st.

Fleet Surgeon A. H. Miller, retired, has been appointed Examining Medical Officer for Recruiting Duties at Belfast, April 15th.

ROYAL ARMY MEDICAL CORPS.

Lieutenant P. S. Lelean is seconded for service under the Colonial Office, January 23rd.

The transfer to temporary half-pay on account of ill-health of Major J. I. P. Doyle will take effect from December 1st, 1902, inclusive, and not as stated in the *Gazette* of November 25th, 1902.

The confirmation of the undermentioned Lieutenants in that rank, which was notified in the *Gazette* of March 10th, is cancelled: W. F. Ellis, F. L. Henderson.

The initials of Lieutenant N. D. Walker, M.B., are as now described, and not as stated in the *Gazette* of March 10th.

Colonel F. W. Trevor has been appointed Principal Medical Officer, Scottish District, *vice* Colonel J. P. Rooney, retiring on account of age.

The New Uniform.

We have yet another protest against the new uniform of medical officers, on the ground that it is ugly, unsuitable, and so on. At the same time, we have had letters expressing approval and appreciation of it. It is a matter of taste, and cannot, we think, be discussed further with profit.

ROYAL ARMY MEDICAL CORPS: EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post-office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.

A Major R.A.M.C., well placed home roster, will exchange South Africa, for one year or over.—Address No. 1341, British Medical Journal Office.

ARMY MEDICAL RESERVE.

Surgeon-Lieutenant G. F. Whyte, M.B., 1st Volunteer Battalion the Black Watch (Royal Highlanders) to be Surgeon-Lieutenant, March 21st.

Surgeon-Lieutenant T. Thompson, to be Surgeon-Captain, March 21st.

INDIAN MEDICAL SERVICE.

Lieutenant-Colonel (Temporary Colonel) J. P. Greany, M.D., Bombay Establishment, is promoted to be Colonel from January 11th. His commission as Assistant Surgeon dates from March 31st, 1875, and he was made Brigade-Surgeon Lieutenant-Colonel, June 9th, 1898. He is appointed Principal Medical Officer Sind District, but will continue to act as Principal Medical Officer, Aden District.

Lieutenant-Colonel J. McCloghry, Bombay Establishment, is appointed to officiate as Principal Medical Officer, Sind District.

Lieutenant-Colonel W. Owen, M.D., Bengal Establishment, Superintendent of the Opium Factory, Behar, is permitted to retire from the service from March 24th. He entered the service as Surgeon, March 31st, 1877, and became Surgeon-Lieutenant-Colonel March 31st, 1897. He was engaged in the Afghan war in 1878-80, being present at the actions of Ahmed Khel and Urzoo (medal with clasp).

Indian Pay of the R.A.M.C.

When the new scale of Indian pay was announced, giving substantial increases to Captains and Lieutenants R.A.M.C., we expressed the opinion that it seemed fairly liberal; but were careful to remark that its sufficiency must be left to the practical judgement of the recipients. We now have a long letter from a correspondent adversely criticizing the new scale, compared with home pay and allowances, under the recent Royal Warrant. We give the following arguments and figures on his responsibility. He broadly maintains that the new scale in rupees does not work out at a sufficient amount compared with home and colonial pay and allowances in sterling gold, taking the interchangeable value, as recently fixed by the Government of India, of Rs.15 to the sovereign. He states that the calculation is somewhat complicated by two Indian allowances—"exchange" and "tentage"—the latter, as laid down in the Regulations, being included in the consolidated pay of each rank, according to the following nominal scale: Colonels, Rs 200; Lieutenant-Colonels, Rs.150; Majors, Rs.120; Captains, Rs.75; and Lieutenants Rs.50.

Tentage allowance means that each officer must keep up camp equipage and conveyance for the same, so that he may be able to move at the shortest notice.

The exchange compensation he gives at the rate Rs. 6.4.0 on the total items; we were under the impression this had recently been modified.

He constructs the following table, comparing the yearly value of home pay and allowances, with the monthly scale of rupees, at the equivalent value of Rs. 15 per sovereign, and including tentage and exchange compensation:

Ranks.	Yearly Home Pay and Allowances.	Monthly Equivalent in Rupees + Tentage and Exchange Compensation Allowance.	Monthly Proposed New Rates + Exchange Compensation.	£ Loss in Sterling per Year.	Gain in Sterling per Year.
	£ s. d.	Rs.	Rs.	£	£
Lieutenant ...	323 10 0	484	445	31	
Captain	379 15 2	585	504	65	
,, 7 years..	402 0 0	610	562	38	
,, 10 years...	477 15 4	712	689	18	
Major	587 12 0	906	838	54	
,, 15 years ..	632 12 0	964	876	70	
Lieut.-Colonel ...	713 15 0	1,105	1,121	—	13
Senior Lieut.-Colonel	804 15 0	1,278	1,224	43	

He reasons that the above comparisons show that the new scale in rupees is not calculated on the gold basis of the pay in the recent warrant; nor can it compare in solid advantage with the pay and allowances granted under Colonial service. Further, horse allowance should have been granted to all ranks, as absolutely necessary in the performance of all ordinary medical duties in India; at present it is given only to certain lieutenants and captains attached to field hospitals, in order that they may be in constant readiness for active service.

Such are our correspondent's contentions. His table shows that captains and majors over fifteen years' service are the greatest comparative losers in India. We do not venture to criticise the comparisons made between home and Indian rates further than to observe, that probably the value of the rupee is better estimated by its purchasing power in India itself, than by its European exchange, or equivalent legal value.

IMPERIAL YEOMANRY IN SOUTH AFRICA.

Temporary Captains R. Ahern and J. J. Scanlan, medical officers unattached, relinquish their commissions, February 3rd.

IMPERIAL YEOMANRY.

Mr. Henry A. Ahrens to be Surgeon-Lieutenant in the Hampshire (Carabiniers), March 21st.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

Mr. Alexander M. McIntosh, M.B., to be Surgeon-Lieutenant in the 1st Edinburgh (City), March 21st.

Surgeon-Lieutenant W. T. Blackledge, M.B., 6th Lancashire, to be Surgeon-Captain, March 21st.

VOLUNTEER RIFLES.

Mr. Alexander Mackenzie, M.A., to be Surgeon-Lieutenant in the 3rd Volunteer Battalion the Prince of Wales's Own (West Yorkshire Regiment), March 21st.

Surgeon-Captain G. W. H. French, 1st Volunteer Battalion the Duke of Cambridge's Own (Middlesex Regiment), resigns his commission, March 2nd.

Surgeon-Lieutenant H. B. T. Morgan, M.D., 1st London, to be Surgeon-Captain, March 10th.

MEDICO-LEGAL AND MEDICO-ETHICAL.

ALLEGED ARSENICAL POISONING.

An adjourned inquest by Mr. Troutbeck as to the cause of death of Ernest Fisher, aged 20, was concluded at Battersea on March 20th. The facts, as stated in evidence were, shortly, that on February 13th the deceased, who was a clerk at Guy's Hospital, returned home in the afternoon, saying that he thought he had influenza. Some medicine was obtained from a chemist, but as the patient was worse on the next day

Dr. McManus was sent for, and found him seriously ill. Dr. McManus had a consultation with Dr. Fawcett, Assistant Physician to Guy's Hospital, on February 14th. Dr. Fawcett stated in evidence that the patient was then sinking, he was suffering from abdominal pains, and the pulse and heart sounds were feeble. The deceased died on the following day, February 15th. On the next day the necropsy was made by Dr. Fawcett, Dr. McManus also being present. In Dr. Fawcett's opinion the appearances negatived the suggestion of arsenical poisoning, and he considered that ptomaine poisoning was the most probable cause of death. Dr. H. S. French, Medical Registrar, Guy's Hospital, stated that he had over a year ago prescribed a mixture containing arsenic for the patient, who was suffering from a skin affection; the dose was 1oz., containing 5 minims of liquor arsenicalis. The dose had not been subsequently increased, and the Pharmacist to Guy's Hospital stated that the prescription had often been dispensed for the deceased.

The mother of the deceased stated that the deceased had left off taking the medicine for about six weeks, but had resumed it for three days before his fatal illness.

Dr. Freyberger, who had made a second necropsy by direction of the coroner, said that he found traces of metallic arsenic and bismuth in the stomach and intestines. He had analysed the bottle of medicine, and estimated the amount of arsenic in it as 13⅜ minims to the fluid ounce; traces of arsenic were found also in the heart, blood, and the liver. He attributed death to arsenical poisoning.

The Coroner in his summing-up stated that it would seem that the deceased had taken arsenic in stronger doses than ordered on the prescription given at Guy's Hospital, and that there was nothing to show that the arsenic found in the bottle in the deceased's bedroom was supplied from Guy's Hospital, except that the bottle was such as was used at the hospital.

The jury returned a verdict that death was due to arsenical poisoning, taken by the deceased through error of judgement.

The result of this inquest appears to us to be highly unsatisfactory. According to the coroner's summing-up there was no evidence as to how the arsenic found in the deceased's bedroom had been obtained, and he appeared to set aside any error in dispensing at Guy's Hospital. The coroner appears to have accepted Dr. Freyberger's evidence that death was due to arsenical poisoning as unquestionable, but we think it would have been far more satisfactory had the matter been referred to a Home Office expert.

ALLEGED BREACH OF PROMISE.

The case of Clendenning *v.* Byers was called at the Belfast Assizes before Mr. Justice Holmes on March 23rd. The action had been commenced by Sarah Clendenning, described as a professional nurse residing at Belfast, to recover damages for alleged breach of promise of marriage. In her statement of claim the plaintiff alleged that the defendant in the year 1901 had promised to marry her, but had subsequently refused to carry out his promise, and in the month of September, 1902, had married another. The plaintiff claimed £2,000 damages.

The defendant in his statement of defence denied that there was any foundation for the allegation; that neither on the occasions alleged, nor on any other occasion at any time, had he promised to marry the plaintiff; that he had never been on terms of affection with her, had never given her a present, and had not at any time any communication with her in relation to matrimony. The relations between them had been purely and strictly that of doctor and nurse. When the case was called the plaintiff did not answer, and the Solicitor-General, counsel for the defendant, stated that the solicitor who appeared on the record for the plaintiff had intimated by letter to the solicitor for the defendant that the plaintiff did not intend to go any further with the case. The Solicitor-General asked for judgement on behalf of the defendant.

The Judge directed judgement to be entered for the defendant.

The Solicitor-General then obtained permission to make some observations. He said that he desired in the first place to say on the defendant's behalf that from the very first, both verbally and by letter and by affidavit, he had consistently and throughout denied that he ever gave any promise of any sort or kind. The course the lady had taken had deprived Professor Byers of the chance or power of going into the witness-box and repeating that denial on oath, but he had instructed his counsel to repeat it. Further, as a report was in circulation that the absence of the plaintiff was due to the fact that an arrangement or compromise of some character had been made, he wished to say that in no shape or form, directly or indirectly, either by the defendant or through him, or on his behalf, or by his friends, had the lady been approached. The report in circulation was probably due to the action of those to whom originally the institution of the action was due.

The Judge observed that he assumed that when the plaintiff did not appear she had no case of action.

THE CORONER AND CERTIFICATES OF THE CAUSE OF DEATH.

T. W. informs us that after seven days' attendance on a patient who was kicked by a horse in the abdomen, he gave to the widow a certificate of the cause of death as follows: "Primary: Subacute traumatic peritonitis; secondary: Alcoholic traumatic delirium, exhaustion." An inquest was held and the coroner censured our correspondent for having given the certificate, which had been notified to him by the registrar of deaths. In his summing-up the coroner observed that the necropsy made by another medical man confirmed in every particular the cause of death as stated in the medical certificate given, but that the mistake was in giving the certificate at all, as it was very improper for a medical certificate to be given in any case where an inquest was required by law. Our correspondent is desirous of ascertaining whether the dictum of the coroner is correct.

*** By Section XX of the Births and Deaths Registration Act 1874 it is enacted that the medical practitioner who is in attendance at the death "shall" certify to the best of his knowledge and belief the cause of the death, without reservation of any kind, and in so doing no breach of the law has been committed, even if the coroner elects afterwards to hold an inquest. There is no statutory obligation on the part of medical practitioners to inform coroners of deaths in which inquests are required by law, but it is generally recognized that a common law duty is imposed upon all persons about the deceased at the time of the death to inform the coroner or his officer in all cases arising from injury or violence. In such cases it is the usual, and perhaps the wisest, course for the medical man to withhold the certificate and refer the friends to the coroner, for by so doing delay in holding the inquest—and it may be the interment—is frequently avoided. A medical man who conscientiously and correctly gives a certificate of the cause of death is in no way censurable for so doing, neither should his conduct be called into question. In the present case the coroner was not justified in so doing, and, besides this, he was wrong as to the law on the subject.

SALARY OF ASSISTANT.

C. W. G.—Our correspondent's questions are not very precise, but we apprehend that £200 per annum would be a fair salary for an outdoor assistant, and that £40 per annum would be a fair allowance for rooms alone.

NECROPSIES FOR INQUESTS.

A. J. G. writes to ask: Can a coroner or the medical man making a necropsy in a case where the cause of death is unknown object to a medical man who is an adviser to an insurance company or an employer being present at the necropsy?

*** No objection should be raised by the coroner or the medical practitioner employed by him to the presence of a medical man representing an insurance company, or the employer of the deceased, or in the interest of relatives; it may be of some suspected or accused person. It would of course be understood that such representative would take no part in, or interfere in any way with, the necropsy. Such medical representative might desire to give evidence at the inquest, but he would not be entitled to the usual fee unless summoned by the coroner or requested by the jury to do so.

A QUESTION OF SENIORITY.

E. A. Fox.—In the case of a hospital officer seniority counts entirely from the date of appointment, and does not depend upon when the person was qualified, or upon the number of votes he received when elected. We should therefore say that the two officers in question, having been appointed upon the same day, are of equal standing, and that neither has seniority over the other.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Professorship of Physiology.—Sir Michael Foster, K.C.B., has given notice that he intends to resign the chair of Physiology at Michaelmas next. For some time back the duties of the chair have been performed by Dr. J. N. Langley, as deputy-professor.

D.P.H. Examination.—The examinations in sanitary science for the Diploma in Public Health will begin on April 7th (Part I), and April 14th (Part II). A change in the regulations has been made to bring them into conformity with the recent decision of the General Medical Council in regard to officers of the Royal Army Medical Corps.

Degrees.—At the congregation on March 12th, C. H. Gregory, Emmanuel, was admitted to the degrees of *M.B.* and *B.C.*; and E. E. Cornaby, non-collegiate, to the degree of *B.C.*

UNIVERSITY OF EDINBURGH.

University Court.

At the last meeting of the University Court, Principal Sir William Turner in the chair, Professor D. J. Cunningham was appointed Curator of the Anatomical Museum. Draft regulations relative to the performance of the duties of professors during their temporary absence or disability were submitted, adjusted, and approved. Dr. R. W. Philip, Edinburgh, was appointed an additional Examiner in Clinical Medicine. The Senatus intimated their resolution, subject to the approval of the University Court, to confer the title of Research Fellow on Mr. Swale Vincent, M.B., who had been admitted a Research Student in the Physiology Department under the provisions of Ordinance 61. Dr. R. Mackenzie Johnston was appointed University Lecturer on Diseases of the Larynx, Ear, and Nose, in room of Dr. P. McBride, resigned.

UNIVERSITY OF LONDON.

At the last meeting of the Senate a number of teachers in various subjects were recognized.

Exemptions from the Matriculation Examination.—It was determined that graduates of such British, Colonial, and foreign universities as are approved by the Senate for that purpose and those who have passed all the examinations required for a degree in those universities, also women who have obtained tripos certificates granted by the University of Cambridge, and women who have obtained certificates showing that, under the conditions prescribed by the delegacy for local examinations at Oxford, they have passed the second public examination of that University or have obtained honours in the Oxford University Examination for Women in Modern Languages, may, on application, be registered as matriculated students on payment of the registration fee of £2, without passing the matriculation examination. The standing of such students shall date for the purpose of external examinations from the matriculation examination immediately preceding the date of registration. Students who hold the Scotch school-leaving certificate, having passed on one and the same occasion in the higher or honours grade in all the subjects required by the regulations for the matriculation examination, and students who hold the *Zeugniss der Reife* from a gymnasium or real gymnasium within the German or Austrian Empire, will be registered on the same conditions as the graduates above referred to.

Dates of Degree Examinations for Internal Students, 1903.—It was resolved that the degree examinations for internal students should take place this year at the same time as those for external students.

Bostock Scholarship for Women.—The Reid trustees will offer a Bostock Scholarship this year on the result of an examination to commence at the University on September 15th. Candidates must have passed the Intermediate Examination in Science or the Preliminary Scientific

Examination to be held next July, and must read for the medical degree of the University of London at the London (Royal Free Hospital) School of Medicine for Women. The scholarship is of the annual value of £60, and is awarded in the first instance for two years, to which two more years are added upon the receipt of a satisfactory report from the authorities of the school. Further particulars can be obtained on application to the Academic Registrar, University of London, South Kensington, S.W.

University Exhibitions and Scholarships.—New regulations were approved for the University Exhibitions and Scholarships. Exhibitions of £40 tenable for two years are offered as follows: two for languages—Greek, Latin, French, or German (any two); two for science, physics, chemistry, botany or zoology (any two); and one for mathematics, pure and applied. Candidates must also take up one other subject from a long list. Twenty-two scholarships of £50 each tenable for one year will be offered annually without limit of age to candidates who have passed the Intermediate Examination and are of not more than two years' standing. There are six scholarships in classics; three in mathematics; seven in experimental physics, chemistry, geology, botany, zoology, physiology, elementary psychology or logic, two in economics, and political science; two for candidates for degrees in laws, and two for English history. All these examinations will commence on September 15th.

Mackinnon Studentship.—Two Mackinnon studentships of the Royal Society, each of the value of £150, will be awarded this year, one for research in the group of physical sciences including astronomy, chemistry, geology, mineralogy and physics and one for research in biological sciences including anatomy, botany, palaeontology, pathology, physiology and zoology. The studentships are renewable for a second year and under exceptional circumstances for a third year. Further particulars can be obtained from the Assistant Secretary of the Royal Society, Burlington House, London, W.

UNIVERSITY OF DUBLIN.

At the recent spring commencements the following degrees in Medicine, Surgery, and Midwifery were conferred by the University Caput in the presence of the Senate:

Baccalaurei in Medicinâ, in Chirurgiâ, et in Arte Obstetriciâ.—D. Jacovides, J. M'Cutcheon, T. E. H. Manning, S. Pringle (B.Ch., stip. cond.), W. P. Ringland, T. L. Sands, T. F. Wilson, J. Wallace.

Doctores in Medicinâ.—J. H. Douglas, J. R. Garratt, J. N. Laird, F. W. J. A. Lamb, R. G. H. Tate, A. Tuthill, S. H. Woods.

UNIVERSITY OF BRUSSELS.

The following practitioners obtained the M.D. degree with honours at the February examination: A. R. Henchley, L.R.C.P. and S.Edin., L.S.A. Lond.; N. Leonard, M.R.C.S., L.R.C.P.; H. Wolseley Lewis, F.R.C.S.Eng. There were six candidates.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The following have passed the Preliminary Science Examination for the Licence in Dental Surgery:

W. R. Bennette, Holt School of Science, Birkenhead; L. W. Biscombe, University College, Nottingham; D. Brewster and A. H. Craig, Charing Cross Hospital; G. Dawson, Birkbeck Institution; H. Hinson, Technical School, Manchester; F. M. Holborn, Polytechnic Institute; S. H. Hole and M. Kennedy, Charing Cross Hospital; P. B. Mardon, Birkbeck Institution; F. A. Husbands, P. E. Luce, J. W. Mawer, H. J. Russell, and H. J. Snowden, Guy's Hospital; N. Y. Tessier and F. Throp, Charing Cross Hospital; H. B. Trible, Middlesex Hospital.

An ordinary council was held on March 12th, Sir Henry R. Howse, President, in the chair.

Examining Board in Dental Surgery.

Mr. William A. Maggs, Dental Surgeon and Lecturer on Dental Anatomy and Physiology, Guy's Hospital, was elected a member of this Board.

Senate of the University of London.

Mr. Pearce Gould was re-elected to be the representative of the College upon the Senate of the University of London.

CONJOINT BOARD IN ENGLAND.

Diplomas in Public Health have been granted to the following:

B. L. T. Barnett, M.B., B.C.Camb., L.R.C.P.Lond., M.R.C.S.Eng., Cambridge University and St. George's Hospital; H. J. Barratt, L.R.C.P. Lond., M.R.C.S.Eng., St. Bartholomew's Hospital; J. Bell, L.R.C.P. Lond., M.R.C.S.Eng., University College, London; J. Bennett, L.R.C.P.Lond., M.R.C.S.Eng., Owens College and Royal Infirmary, Manchester; E. C. Bousfield, L.R.C.P.Lond., M.R.C.S.Eng., St. Bartholomew's Hospital; E. H. Brown, M.D.Brux., M.R.C.P.Lond., L.R.C.S.Edin., Grant Medical College, Bombay, and University College, London; R. F. Clark, L.R.C.P.Lond., M.R.C.S.Eng., Guy's Hospital; A. G. Davidson, M.B., C.M.Edin., Aberdeen University and University College, London; A. B. Dunne, M.B., B.C.Camb., L.R.C.P.Lond., M.R.C.S.Eng., L.S.A.Lond., Cambridge University and University College, Liverpool; E. G. Hill, L.R.C.P.Lond., M.R.C.S.Eng., St. Mary's Hospital; G. P. W. James, L.R.C.P.Lond., M.R.C.S.Eng., University College, London, and Cardiff; W. C. Lodwidge, L.R.C.P.Lond., M.R.C.S.Eng., St. Mary's Hospital; T. S. Logan, L.R.C.P. and S.Edin., F.F.P.S.Glasg., Queen's College, Belfast, and Yorkshire College, Leeds; L. Milburn, L.R.C.P.Lond., M.R.C.S.Eng., Middlesex Hospital; D. J. Morgan, M.B., B.C.Camb., L.S.A.Lond., Cambridge University and St. Mary's Hospital; W. Murray, M.B., Ch.B.Edin., Edinburgh University and University College Hospital; W. J. Shannon, M.B., B.Ch.R.U.Irel., London Hospital; J. M. Petrie, M.B., Ch.B.Aberd., Aberdeen University and King's College Hospital.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

At the ordinary meeting of the President and Fellows held on Friday, March 6th, the President admitted to the Licence in Midwifery Mr. Owen Gilmore, L.R.C.P. and S.Edin. and L.F.P.S.Glasg., who passed a special examination on March 5th.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

Dr. E. Wolfenden Collins (Sydenham) has been appointed to represent the Royal College of Surgeons in Ireland at the coming International Medical Congress at Madrid.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,501 births and 4,905 deaths were registered during the week ending Saturday last, March 21st. The annual rate of mortality in these towns, which had been 16.6, 16.6, and 17.2 per 1,000 in the three preceding weeks, declined again to 17.0 per 1,000 last week. The rates in the several towns ranged from 9.0 in King's Norton, 9.3 in Hornsey, 10.7 in Wallasey, 11.3 in Devonport, 11.4 in Tottenham, and 11.8 in Walthamstow, in Warrington, and in Rotherham, to 21.0 in Wolverhampton and in Preston, 21.4 in Salford, 21.5 in Bootle, 22.2 in Smethwick, 23.1 in Burnley, 24.7 in Merthyr Tydfil, 25.7 in St. Helens, and 28.5 in Wigan. In London the rate of mortality was 17.2 per 1,000, while it averaged 16.9 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.7 per 1,000 in the seventy six large towns, in London this death-rate was equal to 1.9 per 1,000, while it averaged 1.6 in the seventy-five other large towns, among which the highest death-rates from the principal infectious diseases were 3.1 in Rhondda, 3.2 in Grimsby, 3.3 in Tottenham, 3.7 in Willesden, 5.2 in East Ham, 5.5 in West Bromwich, 6.6 in Swansea, and 8.4 in Wigan. Measles caused a death-rate of 1.0 in Leyton and in Manchester, 1.4 in Salford, 1.5 in Walthamstow, 1.6 in Wolverhampton, 1.8 in Croydon, 2.4 in Tottenham and East Ham, 6.0 in Swansea, and 7.5 in Wigan; scarlet fever of 1.2 in Rochdale and 2.0 in Great Yarmouth; diphtheria of 1.1 in Middlesbrough, 1.3 in Hornsey, and 1.6 in West Bromwich; whooping-cough of 1.1 in Croydon and West Ham, 1.2 in St. Helens, 1.4 in Southampton, 1.6 in Grimsby and in Stockport, 1.9 in Leyton, and 3.3 in Willesden; "fever" of 1.1 in Huddersfield; and diarrhoea of 1.6 in West Bromwich and in Grimsby. Of the 12 fatal cases of small-pox registered in these towns last week, 6 belonged to Liverpool, 3 to Birmingham, and 1 each to Aston Manor, Wallasey and Hull. The Metropolitan Asylums Hospitals contained 7 small-pox patients at the end of last week, against 5, 6, and 7 at the end of the three preceding weeks; 2 new cases were admitted during the week, against 2 in each of the two preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 1,851, 1,790, and 1,798 on the three preceding Saturdays, had declined again to 1,789 on Saturday, March 21st; 133 new cases were admitted during the week, against 197, 193, and 231 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, March 21st, 982 births and 657 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 18.5 and 19.7 per 1,000 in the two preceding weeks, further rose last week to 20.1 per 1,000, and was 3.1 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scotch towns the death-rates ranged from 14.9 in Aberdeen and 18.3 in Paisley, to 21.6 in Leith, and 21.7 in Perth. The death-rate from the principal infectious diseases averaged 2.1 per 1,000 in these eight towns, the highest rates being recorded in Edinburgh and Paisley. The 318 deaths registered in Glasgow included 2 from measles, 10 from whooping-cough, 4 from "fever," and 7 from diarrhoea. Three fatal cases of measles, 4 of scarlet fever, 7 of whooping-cough, and 3 of diarrhoea were recorded in Edinburgh. Two deaths from measles occurred in Aberdeen; 2 from diarrhoea in Paisley; and 2 from whooping-cough in Leith.

NOTIFICATION OF MEASLES.

Dr. Cooper Pattin, the Medical Officer of Health of Norwich, informs us that the City Council has resolved, on his recommendation, to continue the voluntary notification of measles until December 31st, 1903, at the usual fees. The system applies to notification of the first cases of measles in separate dwellings.

The County Borough of Huddersfield, on the recommendation of its medical officer of health, Dr. S. G. Moore, has determined to continue the application of notification and isolation to measles, which was tentatively introduced at the end of 1899. So far as the prevalence of other epidemic disease may permit it is now intended to carry out in its entirety the principle of isolation, and to apply it to all suitable cases during intercpidemic periods, but on the occurrence of epidemics only to deal with such cases as special circumstances may seem to indicate. Families in which cases have occurred and other susceptible "contacts" in general will also be kept under observation.

SCARLET FEVER IN EDINBURGH.

During the week ending mid-day, March 21st, 44 cases of scarlet fever were notified and 4 deaths were registered, as against 33 notifications and 1 death in the preceding week. At the meeting of the Town Council on Tuesday, March 24th, the Convener of the Public Health Committee (Mr. Long Todd) stated that there were 350 cases in the Fever Hospital, as compared with 191 at the corresponding date last year, and that the increase was due to the scarlet fever epidemic. The hospital was quite full.

TREATMENT OF PAUPERS IN AN ISOLATION HOSPITAL.

C. G. M.—By the Consolidated Order issued 56 years ago (July 24th, 1847) a district medical officer is, on a proper order being issued, under an obligation to attend all the paupers who require medical aid within the district assigned to him. No exception appears to have been contemplated, but it would be most unreasonable for the guardians to decline to pay extra remuneration for the treatment of pauper patients brought into an isolation hospital, for this purpose only, from a district other than that of the medical officer in which the hospital is located. In all probability the remuneration of the medical officer of the district in which the isolation hospital happens to stand was fixed at a time when the establishment of such a hospital was not even contemplated.

POST-MORTEM EXAMINATIONS IN WORKHOUSES.

O. W.—We assume that the *post mortem* examination in question was made by order of the coroner, and when such is so made it rests with the medical man to complete the process either by sewing up the body himself or by arranging with some other person to do this for him. The medical man is responsible for its being properly done.

MEDICAL NEWS.

As we stated last week the order as to measles recently issued by the London County Council has reference to the application to that disease of certain sections of the Public Health (London) Act, 1891, but does not require notification of cases to be made.

DUBLIN HOSPITAL FUND.—At the twenty-ninth annual meeting of the Dublin Hospital Fund held last week it was stated that collections had been made in 280 places of worship. The collections in November amounted to £3,826 12s. 6d., being a decrease of £113 19s. 1d. as compared with 1901. The Committee determined to distribute £3,630 amongst fifteen institutions.

ITALIAN SOCIETY OF INTERNAL MEDICINE.—The annual meeting of the Italian Society of Internal Medicine will be held at Padua next autumn. The following are the questions proposed for discussion: (1) Individuality in relation to the pathogenesis and evolution of diseases; (2) modern views on immunity with reference to the prophylaxis and treatment of acute infective diseases; (3) the premature induction of labour in the course of internal diseases. Professor Zesi has been asked to draw up a report on the progress of diagnosis, and Professor U. Flora one on the progress of therapeutics, for presentation to the Congress.

SANATORIUM TREATMENT FOR INEBRIETY.—A Bill has, we learn from *American Medicine*, been introduced into the Pennsylvania Legislature which provides for the commitment of persons addicted to the use of alcoholic or other intoxicating drinks to a hospital or asylum for restriction, care, and treatment. According to the provisions of the Bill, any two relatives of the alleged drunkard may apply by petition to the Quarter Sessions court or magistrate, setting forth the facts upon oath, with an affidavit of at least two physicians based upon examination accompanying the petition, stating that in their opinion treatment in a hospital will be of benefit to him. If after a hearing the Court is satisfied that the petition should be granted, the person shall be committed to a hospital for treatment until the judge or magistrate shall be satisfied that further restriction is of no longer benefit, with the further provision that no commitment shall be for a longer period than one year, and all commitments shall be reviewable under a writ of habeas corpus.

THE YARROW CONVALESCENT HOME.—The Yarrow Convalescent Home for Children of the Better Class, founded at Broadstairs in 1895, has just issued its seventh annual report. It provides 50 beds for girls, and 50 for boys; the age limits for the former being from 4 to 16, and for the latter from 4 to 12. There were 942 admittances during the year, the average number of children present at one time being 80, and the average duration of stay 31 days. Of the cases admitted 789 were discharged entirely restored to health, 97 much benefitted, and 23 only sent home without apparent improvement. Thirty of the beds are now to be set apart for cases requiring further active medical or surgical treatment than they have received before admission, and the honorary medical staff has consequently been increased to 4. Besides a matron and assistant matron there are 10 nurses and a general staff of 21 persons. The average expense per child per week for the year was £1 18.¼d., but 5s. a week only is charged to the patient's friends, who are expected to be respectable people who are in reduced circumstances. The institution is one which helps to fill a distinct want. The secretary is Mr. T. F. Myers, Terminus Chambers, 6, Holborn Viaduct, London.

THE LONDON LICENTIATES' AND MEMBERS' SOCIETY.—We are informed that a meeting of the members of the above Society was held at the Royal Medical and Chirurgical Society's Rooms, 20, Hanover Square, W., on Tuesday, March 10th, at 3.30 p.m. In the unavoidable absence of the President, Dr. Frederick J. Smith, the chair was taken by Dr. William Bezly Thorne. Dr. A. Douglas Cowburn desired to know what definite answer had been received by the Secretary to the presentation of the petition to the Royal College of Surgeons. Mr. Frederick W. Collingwood replied that no answer had yet been received from the Royal College, although a reply had been expected as far back as November last. The Chairman then addressed the meeting, and pointed out that there were two courses before them: To approach the University of London with a petition that Conjoint men be permitted to present themselves for the Final Examination without matriculation, or, secondly, to approach one of the Provincial Universities to allow London diplomates to enter for the Pass Examination for the M.B. degree. Mr. Elliott Blake spoke upon the various injustices inflicted upon London Conjoint men. Dr. A. Douglas Cowburn did not think that any good would result from a petition to the London University. Mr. F. W. Collingwood, in reply to Mr. J. Ward Lawson, stated that the Durham University authorities declined to reduce both the length of time and the age at which registered medical men were eligible to obtain their M.D. degree, nor would it be likely that Birmingham University would consent to receive a petition from the Society. It was then proposed by Mr. F. W. Collingwood and seconded by Mr. Elliott Blake that a petition be prepared and drawn up for presentation to the London University. Mr. Percy Rose proposed that an executive committee be appointed to draw up a petition to the London University, such petition to be finally approved of by a general meeting of the Society. This was seconded by Mr. A. E. Griffiths. The following gentlemen were then elected to form that Executive Committee, namely, the President, Dr. Fred. J. Smith, Dr. Wm. Bezly Thorne, Dr. A. Douglas Cowburn, Messrs. F. W. Collingwood, Rumley Dawson, Percy Rose, Elliott Blake, E. Tipper, F. C. Langford, J. W. Lawson, T. Pearson, R. Wentworth Dillon, and J. P. Grieves. It was then proposed by Mr. S. A. E. Griffiths and seconded by Mr. Elliott Blake that the Society become a permanent one with an annual subscription of 5s. to be forwarded to the Secretaries. After some discussion it was agreed the Executive Committee should meet on April 7th next at 3.30 p.m. The following resolution was proposed by Mr. Elliott Blake: "That the Executive Committee be empowered to draw up constitutional rules for the government of this Licentiates' and Members' Society and to be submitted to a general committee for confirmation or adoption at an early date," which was seconded by Mr. Percy Rose. Other matters having been discussed, the meeting was brought to a close with a hearty vote of thanks to the Chairman and Secretaries.

MEDICAL VACANCIES.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—(1) Resident Medical Officer. (2) Resident Surgical Officer. Salary, £60 per annum, with board, washing, and attendance. Applications to the Secretary, Children's Hospital, Steelhouse Lane, Birmingham, by April 3rd.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—House-Physician; unmarried, and under 30 years of age. Salary, £80 per annum, with board, residence, and washing. Applications to the Secretary by April 1st.

DUNDEE ROYAL LUNATIC ASYLUM.—Junior Medical Assistant. Salary, £100 per annum, with board and lodging. Applications to the Secretary, Mr. R. C. Walker, 5, Whitehall Street, Dundee, by April 2nd.

ESSEX AND COLCHESTER HOSPITAL.—Honorary Physician. Applications to the Secretary by April 16th.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Medical Radiographer. Honorarium, £25 per annum. Applications to the Committee of Management by March 31st.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians. Appointments for six months. Honorarium, £25. Applications to the Secretary by March 31st.

HULL ROYAL INFIRMARY.—Honorary Assistant Surgeon for the Out-patient Department. Applications to the Chairman, Committee of Management, by April 6th.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—Anaesthetist. Honorarium, 25 guineas. Applications to the Secretary by March 30th.

NEWCASTLE-UPON-TYNE: ROYAL INFIRMARY.—Senior House-Physician. Salary, £100 annum, with board, lodging, and washing. Applications to the Senior House-Physician at the Infirmary.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, N.E.—(1) Resident Medical Officer. Salary, £120 per annum, with board, residence, and washing allowance. (2) Casualty Officer. Appointment for six months. Salary at the rate of £100 per annum, with luncheon. Applications to the Secretary by April 4th and 5th respectively.

NOTTINGHAM CHILDREN'S HOSPITAL.—House-Surgeon; unmarried. Appointment for six months. Salary at the rate of £110 per annum, with board and residence. Applications to the Secretary, Mr. A. F. Kirby, St. Peter's Church Walk, Nottingham, by April 13th.

OXFORD: RADCLIFFE INFIRMARY.—House-Surgeon, unmarried. Appointment for six months. Salary, £40, with board, lodging, and washing. Applications to Dr. Ritchie, 28, Beaumont Street, Oxford, by April 10th.

OXFORD: WARNEFORD ASYLUM.—Assistant Medical Officer. Salary, £100 per annum, with board, etc. Applications to the Medical Superintendent.

PORTSMOUTH BOROUGH.—Public Analyst. Salary, £250, rising to £300 per annum. Applications, endorsed "Public Analyst," to be sent to the Town Clerk, Town Hall, Portsmouth, by April 15th.

ST. MARK'S HOSPITAL FOR FISTULA, City Road, E.C.—House-Surgeon. Salary, £50 per annum, with board, lodging, and washing. Applications to the Secretary by March 28th.

SAMARITAN HOSPITAL FOR WOMEN, Marylebone Road, N.W.—Clinical Assistants. Applications to the Secretary by April 4th.

SUNDERLAND INFIRMARY.—House-Surgeon. Salary, £100 per annum, with board and residence, increasing £15 yearly for three years. Should present House-Physician be elected the appointment will be for House Physician. Applications, endorsed "Application for Resident Medical Appointment," to be sent to the Secretary by April 18th.

WEST HAM UNION.—(1) Assistant Medical Officer. Salary, £150 per annum, and residential allowances. (2) Dispenser, non resident. Salary, £80 per annum, with dinner and tea daily. Applications, on forms provided, to be sent to the Clerk, Union Workhouse, Leytonstone, N.E., by April 15th.

WEST NORFOLK AND LYNN HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board, residence, and washing. Applications to the Chairman of the Weekly Board by April 10th.

WOLVERHAMPTON EYE HOSPITAL.—House-Surgeon. Salary, £70 per annum, with rooms, board, and washing. Applications to the Secretary by April 7th.

YORK DISPENSARY.—Resident Medical Officer. Salary, £110 per annum, with board, lodging, and attendance. Applications to W. Draper, Esq., De Grey House York, by April 9th.

MEDICAL APPOINTMENTS.

BARCLAY, W. B., M.D., D.P.H.Vict., appointed Medical Officer of Health to the Farnborough Town Council.

BURGESS, Mildred M., M.B.Lond., appointed Junior House Surgeon to the Victoria Hospital for Sick Children, Hull.

CADWICK, C. M., M.D.Oxon., F.R.C.P.Lond., appointed Honorary Consulting Physician to the Leeds Public Dispensary.

DALLY, J. F. Hall, M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant Resident Medical Officer to the Royal National Hospital for Consumption and Diseases of the Chest, Ventnor.

DEWDNEY, E. L., L.S.A., appointed District Medical Officer of the Newton Abbot Union.

DOBSON, Margaret B., M.B.Lond., appointed Senior House-Surgeon to the Victoria Hospital for Sick Children, Hull.

FILTON, Herbert, L.R.C.P.Edin., M.R.C.S.Eng., appointed Surgeon to the Dewsbury and District General Infirmary, *vice* W. F. Watts, M.R.C.S.Eng., L.S.A.

FULLARD, John, M.R.C.S.Eng., L.S.A., appointed District Medical Officer of the Hexham Union.

LAPAGE, C. P., M.B., Ch.B.Vict., appointed Junior Resident Medical Officer to the Manchester Children's Hospital, Pendlebury.

LITTLETON, Philip Richard, M.R.C.S.Eng., reappointed Medical Officer of Health to the Ashbourne Urban District Council.

MALINS, Edward, M.D., F.R.C.P., appointed Honorary Consulting Obstetric Officer to the General Hospital, Birmingham, after twenty-five years' service.

MARTIN, Antony Alexander, M.D.Lond., B.S., M.R.C.S.Eng., L.R.C.P.Lond., D.P.H. Lond., appointed Medical Officer to the Eastbourne and Seaside District of the Eastbourne Union.

MOORE, E. J. F., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer of the Well Street Workhouse of the Poplar Union.

NEWSOME, Herbert, M.B., B.S.Durh., appointed District Medical Officer of the Long Ashton Union.

MORRIS, Frederick L., M.B., C.M.Glas., appointed Chief Government Medical Officer of Antigua, *vice* George Pierez.

SWETTENHAM, A. W., L.R.C.P., L.R.C.S.Edin., appointed District Medical Officer of the Leominster Union.

TELLING, Walter H. Maxwell, M.D., B.S.Lond., M.R.C.P., appointed Honorary Physician to the Leeds Public Dispensary, *vice* C. M. Chadwick, M.A., M.D., F.R.C.P., resigned.

TRAYLEN, C. L., L.R.C.P.Lond., M.R.C.S.Eng., appointed House-Physician to the Royal Hospital for Diseases of the Chest, City Road, E.C.

WATKINS, H. E., M.R.C.S., L.R.C.P.Lond., appointed Certifying Factory Surgeon for the Newton-le-Willows District of the county of Lancaster.

DIARY FOR NEXT WEEK.

MONDAY.

Odontological Society of Great Britain, 20, Hanover Square, W., 8 p.m.

TUESDAY.

Royal College of Physicians of London, 5 p.m.—Dr. T. R. Glynn: On Infective Endocarditis mainly in its Clinical Aspects. Lumleian Lecture II.

Therapeutical Society, Apothecaries' Hall, Water Lane, Blackfriars, E.C., 4 p.m.—Dr. Nestor Tirard: Some Dangers of Hypnotics. Mr. Peyton Beale: A New Film for Antiseptic Treatment.

University of London Physiological Laboratories, South Kensington, 5 p.m.—Professor W. D. Halliburton: On the Chemistry of Muscle and Nerve.

WEDNESDAY.

Obstetrical Society of London, 20, Hanover Square, W., 8 p.m.—Specimens will be shown by Drs. Herbert Williamson, Lea, Fairbairn, Groves, and Walter C. Swayne. Dr. Victor Bonney: Short communication on a Case of Primary Infection of the Puerperal Uterus and Vagina by the Pneumococcus. Lieutenant-Colonel A. J. Stormer: Four Cases of Ruptured Extrauterine Gestation occurring in Two Women: Removal by Abdominal Section: Recovery. Mr. W. Sampson Handley: A Case of Hydrosalpinx of an Accessory Fallopian Tube, due to Twisting of the Pedicle.

THURSDAY.

Royal College of Physicians of London, 5 p.m.—Dr. T. R. Glynn: On Infective Endocarditis mainly in its Clinical Aspects. Lumleian Lecture III.

Harveian Society of London, Stafford Rooms, Titchborne Street, Edgware Road, W., 8 3/4 p.m.—Dr. Leonard Guthrie: On Some Ancient Remedies. Mr. Raymond Johnson: On Some Mistakes in the Diagnosis of Malignant Disease.

Neurological Society of the United Kingdom, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Dr. E. Farquhar Buzzard: On the Pathology and Bacteriology of Landry's Paralysis.

FRIDAY.

West Kent Medico-Chirurgical Society, Royal Kent Dispensary, Greenwich Road, S.E., 8.45 p.m.—A discussion on The Principles of Dietetics, to be introduced by Dr. Robert Hutchison. The following will take part in the discussion: The President, Drs. Morgan Dockrell, F. S. Toogood, R. E. Schofield, Hugh Woods, and Leonard Williams, Messrs. Chisholm Williams and Charles Ryall.

Laryngological Society of London, 20, Hanover Square, W., 5 p.m.—Cases will be shown by Mr. L. A. Lawrence, Dr. W. H. Kelson, Dr. Donelan, and others.

POST-GRADUATE COURSES AND LECTURES.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C. Demonstrations will be given at 4 p.m. as follows:—Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, eye. Lectures will also be given at 5.15 p.m. as follows: Monday, Some Important Considerations in the Treatment of Heart Disease; Wednesday and Thursday, Diphtheria and its Antitoxin Treatment; Friday, The Use of Paraffin in Plastic Surgery.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning in order to ensure insertion in the current issue.

BIRTHS.

EDGE.—On March 18th, at 54, Darlington Street, Wolverhampton, the wife of Frederick Edge, M.D., F.R.C.S., M.R.C.P., of a son.

FULLER.—On March 17th, at 95, Tollington Park, the wife of J. R. Fuller, M.D., of a son.

LACKIE.—At 1, Randolph Crescent, Edinburgh, on March 23rd, the wife of J. Lamond Lackie, M.D., F.R.C.P.E., of a son.

WALTON.—On March 18th, at Milton, S.O., Stoke-on-Trent, the wife of Walter Rees Walton, L.R.C.P.Lond., M.R.C.S.Eng., L.M.Dub., of a son.

MARRIAGE.

WOOD—SMITH.—on March 8th, at St. John's Church, Rainmoor, Sheffield, James Miller Swanson Wood, M.B., Ch.B.Aberd., of Rotherham, to Edith, daughter of Frank and Mrs. Smith, of Hoyland, near Barnsley.

DEATHS.

ANDERSON.—On March 21st, at the Durham County Asylum, Winterton, Ferryhill, James Anderson, M.B., C.M.Edin., aged 31, Assistant Medical Officer.

BARRON.—On March 8th, at Buenos Ayres, Alexander Barron, M.B., formerly Professor of Pathology, University College, Liverpool.

FIELDEN.—On Sunday, March 22nd, Lillie Louise, the wife of Dr. W. E. Fielden, of Burgess Hill, Sussex. Will friends kindly accept this intimation?

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which the special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

TREATMENT OF OBSTINATE CONSTIPATION.

N. H. B. asks for suggestions in the treatment of a girl, aged 4 years, who for the last year has suffered from obstinate constipation, in spite of the most approved diet, stewed fruit, oatmeal, brown bread, green vegetables, water, etc. Aperients are being employed, but none seem curative; each has an effect for a few days, and then loses its power.

ANSWERS.

WE have received a paper giving statistics with regard to the dismissal of parochial medical officers in Highland crofting counties, together with a notice to graduates, but we are unable to take notice of anonymous communications.

TREATMENT OF CHRONIC DIARRHOEA.

DR. SYKES (Exeter), in reply to "P. A. W." (p. 711), would suggest a careful rectal examination, as the case, if the patient be 40 or upwards, is probably one of rectal cancer. Very frequent defaecation without diarrhoea is a common symptom of that disease. Anyway, the defaecation is only a symptom of some causative condition which requires diagnosis before treatment can be effective. The fact that the faeces are solid points to the rectum or large intestine as the *fons et origo mali*: were the trouble higher, the liquid contents of the small intestine would be hurried onwards, faster than their fluid portion could be absorbed, and fluid diarrhoea would certainly result. A rectum impacted with faeces might give some of the symptoms in question, but here the faecal discharge would probably be liquid. Anyhow a rectal examination will in all likelihood clear up the diagnosis.

DR. GORDON SHARP (Leeds) writes: "P. A. W." might try 5 to 10 gr. of compound kino powder in capsules before each meal. The best form in which to administer this preparation is to obtain the No. 0 empty gelatine capsules of Parke, Davis, and Co., and fill them with the powder. When jammed tight, each capsule just holds 5 gr. Men who work on the land seem to be liable to frequent evacuations, especially after a meal.

LETTERS, NOTES, Etc.

A WARNING.

MESSRS. J. AND A. CHURCHILL (7, Great Marlborough Street, London, W.) write: Information has reached us of a fraud practised upon a member of the profession residing at Clapham. A man on crutches purporting to be an agent for the sale of our publications induced the doctor in question to part with 6s. 3d. in payment of a book selected from our list. As we are totally unacquainted with the man, it is needless to add that the book was never received. By the insertion of this letter we hope to prevent a similar deception being perpetrated, or better, to give a clue which may lead to his arrest.

CORRECTION.

IN the BRITISH MEDICAL JOURNAL of March 21st, p. 665, a radiograph was published and described as showing a perforating bullet wound of bone described by a slip of the pen as the ulna. The radiograph clearly shows that the injured bone was the radius.

DOES SPITTING ON THE GROUND SPREAD TUBERCULOSIS?

DR. A. T. TODD WHITE (Leytonstone) writes: We see notices up and down which are an eyesore, requesting people not to spit about, and such notices should be unnecessary, as it is undoubtedly a dirty habit, but what I wish to point out is that such spitting decreases the danger of infection rather than increases it, for the following reason: Suppose a person suffering from phthisis spits in the road, what happens?—the sputum dries and the bacilli are scattered about and cannot possibly arrive in sufficient numbers anywhere so as to cause infection; on the other hand, he spits into a handkerchief, and at the end of the week he sends a dozen or so handkerchiefs to a laundry, surely these are a great source of danger? Some one says, Let him spit into a disinfectant in a bottle. Now, is it likely any one would care to take out a bottle in public and spit into it? Of course not. If he did so in a railway carriage everyone would get out at the next station. He might, of course, put his handkerchief in disinfectant when he got home (if he happened to know he had phthisis), but in the meantime his pockets get full of bacilli, and every time he pulls out his handkerchief a cloud of these are disseminated around into his, it may be, badly ventilated office, or wherever he happens to be.

THE BRACHIO-RADIALIS MUSCLE.

DR. JOHN J. HANLEY, M.R.C.S., L.R.C.P.Lond. (Boston, U.S.A.), writes: Having read with interest and profit the observations in the BRITISH MEDICAL JOURNAL of January 31st, I thought it may not come amiss to quote verbatim a note on the action of the supinator longus by Dr. Galton, the translator of an old acquaintance, Roser's *Surgical Anatomy*: "The sheath of this muscle is very liable to become ruptured. Professor Rolleston, in the course of a letter to me, remarks: 'As to the supinator longus, I have my own pulled out of all shape and made to swell up, so as to remind me pretty well of its origin, by pulling in, or rather by failing to pull in, a bolting horse. The muscle sometimes gives way in rowing men, being very much used in finishing up the feathering.' I was told by an old surgeon, Mr. Hester, formerly of Oxford, that it used to be a common thing for Irish reapers to come to St. Bartholomew's with this same muscle swollen up by reaping in the Essex marshes." This note, coupled with that of Mr. Lucas, explains, better than anything theoretical, the action of this muscle, which has been incorrectly (Morris) described as a supinator.

SYMMETRICAL GANGRENE AFTER FEVER.

DR. F. T. AUDEN (Tarkastad, Cape Colony), formerly district surgeon, Rustenburg, W. Transvaal, writes with reference to the case of symmetrical gangrene after enteric fever, published in the BRITISH MEDICAL JOURNAL of January 24th, p. 197, reported from the Mafeking Hospital, South Africa, by Mr. James A. Booth, M.R.C.S., Civil Surgeon, as follows: I practised in that part of the country for eight or nine years, and have had about six cases of gangrene of one or both of the lower extremities, following malarial fever; all the patients were natives, and made excellent recoveries after their respective amputations. In only one case was it symmetrical. As regards etiology, I am convinced myself that it is comparable to senile gangrene, the vitality having become so enfeebled through the fever that the circulation ceases in the part most distant from the heart. It has, I think, nothing to do with the native dietary of ground millet, nor yet with the "dagga" (cannabis indica?), which only a very few of them smoke.

THE INTERNATIONAL CONGRESS OF MEDICINE, MADRID.

DR. BOYD JOLL (Ealing, W.) writes: It was a great surprise to me to see your notice in the BRITISH MEDICAL JOURNAL stating that each passenger must be provided with a "letter of invitation," signed personally by the President of the Congress, especially as I have had sent me, as some of my friends have had, a "carte d'identité" with printed autographs of the President and General Secretary, expressly stating that the card is issued for the purpose of receiving the various concessions made by the railway and steamboat companies. However, to make sure that this apparent "friction" between the Congress and railway authorities is genuine, I have written again to Dr. Fernandez-Caro, sending my credentials as delegate from the London Polyclinic, and asking for the presumably necessary letter of invitation.

May I also inform members of the Association who have not already secured their passages through the various agencies that one of the most convenient ways of going to Madrid for those who appreciate a sea trip is by the General Steamship Navigation Company's boat from London to Bordeaux, and thence by rail to Madrid via Irun? The boats are good passenger ships and the fares are cheap (£4 return to Bordeaux), and having travelled before to Madrid by boat and train in this way, I can speak with some authority and experience of its convenience and comfort; and as I still have the refusal of one or two staterooms, I shall be pleased to give them to any members who will at once let me know their wishes to travel by this route.

BILHARZIA IN INDIA.

LIEUT.-COL. W. R. HATCH, I.M.S. (Norwich), writes: In connexion with Dr. Powell's letter in your issue of February 28th, p. 490, and his reference to Dr. Patrick Manson's work, I take this opportunity of mentioning that in the BRITISH MEDICAL JOURNAL of 1878, p. 874, I published a case of bilharzia in Bombay, that of a European gentleman who had lived with the Arabs in Arabia. I also stated that Vandyke Carter had told me of a case under his care in Bombay. Since then I have seen a number of cases at the Sir Jamsetji Jeejheebhoy Hospital, certainly from 20 to 30, and I believe that they were all Mahommedans. Most of them had been to Mecca on a religious pilgrimage and had undoubtedly contracted the disease there, and had been out of India for trade purposes. I should like to know if Dr. Powell's patient is a Mahommedan, and whether he has been out of India; as far as I can remember I was never able to establish the origin of the disease in India itself, and this is, I suppose, what Dr. Manson means, that no case has been published in which the disease was shown to be contracted in India. One patient, an Eurasian, went to Egypt for two weeks, and showed symptoms as early as six months after return to Bombay.

LARGE FEES.

DR. F. H. RODIER HEATH (Gravesend) writes: In the BRITISH MEDICAL JOURNAL of January 31st you refer under the above heading to a fee of £50,000 paid to Dr. Gale, the "Blind Physician." An account of the case from a layman's point of view, however, is, I think, given in *Story of a Blind Inventor*, a book published some years ago. Some of your might be interested to read this account for themselves.

REMOVAL OF FOREIGN BODIES FROM THE OESOPHAGUS BY AN IMPROVED USE OF THE ROENTGEN RAYS.

MR. WILLIAM MARTIN, M.B., B.Sc. (Honorary Assistant Surgeon and in charge of Electrical Department, Cardiff Infirmary) writes: With reference to the Memorandum under this heading in the BRITISH MEDICAL JOURNAL of February 7th, p. 311, Mr. Hamilton may be interested to know that I have a halfpenny removed under chloroform from a boy between 3 and 4 years of age under circumstances almost similar to those described by him. Our appliances were, however, somewhat primitive. Not having a proper couch, we projected the light from below up through an ordinary small wooden table, on which the child was placed horizontally. A nurse turned up the gas at intervals when required, as, owing to the great noise of the hammer the breathing could not be heard. This was almost a year ago, and would have been recorded but for the conviction that surely some one must have done this sort of thing before.

TREATMENT OF HARMLESS LUNATICS.

DR. W. R. MACDERMOTT (Poyntzpass, Newry) writes: In reference to the question addressed to the Chief Secretary for Ireland by Mr. Hammond aiming at giving Boards of Guardians power to board out lunatics as in Scotland (BRITISH MEDICAL JOURNAL, March 14th, p. 630) you may allow me to point out that association is an important cause of insanity. I have seen so many cases of the disease traceable to mere association that I look on boarding-out consumptives as judicious as boarding-out the insane. I would suggest that the Chief Secretary should have expert opinion before coming to a decision on the matter.

LETTERS, COMMUNICATIONS, ETC., have been received from:

A A. J. G.; J. W. Allan, M.B., Glasgow; Mr. H. R. Aldridge, London; A.; Dr. P. H. Abercrombie, London. **B** Mr. H. N. Barnett, Knock; Mr. W. F. Bradshaw, London Dr. T. E. B. Brown, C.I.E., London; Messrs. Bailliere, Tindall and Cox, London; Rev. I. M. Barr, London; Dr. W. H. Brazil, Bolton; T. A. Buck, M.B., Ryde, I. of W.; Dr. C. Buttar, London; Mr. C. Beesley, Exmouth. **C** Mr. F. W. Collingwood, London; County Member; Messrs. J. and A. Churchill, London; J. Cantlie, M.B., London. **D** Dr. L. Drage, Hatfield; Disgusted; Mr. C. W. De Grucby, Caerleon; Disappointed Junior; Mr. R. D. Dalal, Bombay; W. Duncan, M.B., Clay Cross; A. C. Dutt, M.B., Hull. **E** T. Eastham, M.B., Bournemouth; Mr. R. W. J. Evans, Wrexham; Enquirer. **F** Mr. T. H. Fry, London; Dr. N. R. Finsen, Copenhagen; F. R. H.; Dr. T. Fielding, Milton Abbas; Dr. W. E. Fothergill, Manchester. **G** Mr. G. A. S. Gibson, London; Dr. A. S. Grünbaum, Liverpool; A. S. Green, M.B., Lincoln; Mr. L. M. Griffiths, Clifton; Gotham; Mr. G. L. Gomme, London; Dr. L. Grant, Ballachulish. **H** Messrs. J. Haddon and Co., London; Dr. J. H. Hill, London; Dr. A. Hillier, London; Dr. J. W. Hamill, Manchester; Mr. R. W. Hill, Colombo; Dr. J. P. Henry, London; F. R. Hill, M.B., Carlisle; Mr. T. G. Horder, Cardiff; Mr. H. Horne, London. **I** I.M.S.; India. **J** Mr. R. D. Joyce, Dublin; B. B. Joll, M.B., London. **K** Mr. F. Kleemann, London. **L** Mr. H. K. Lewis, London; Dr. T. G. Lyon, London; Mr. N. Leonard, Nottingham; Liverpool Medica Institution, The Secretary of, Liverpool; Dr. T. Laffan, Cashel; Mr. F. C. Langford, London; Mr. E. M. Little, London. **M** A. M. Martin, M.B., Newcastle-on-Tyne; Mr. O. C. Maurice, Marlborough; M.D.; Mr. G. McGregor, Portsmouth; K. Monsarrat, M.B., Liverpool; Dr. J. G. McKendrick, Glasgow; M.D.Cantab.; Dr. E. Martin, Philadelphia; Dr. G. H. Masson, Port of Spain; M.R.C.S.Eng.; S. G. Moore, M.B., Huddersfield; M.R.C.S.; Dr. T. Morton, London. **N** N. H. B.; Naval Medical Officer. **P** Mr. H. E. B. Porter, Windsor; S. V. Pearson, M.B., London; Mr N. Porritt, Huddersfield Messrs. Parke, Davis and Co., London; Dr. W. D. Prendergast, Hanley; Dr. G. Peacocke, Dublin; Mr. J. F. Pink, London; Captain A. E. H. Pinch, London; Pachyderm. **R** Reform; Mr. A. R. Rendle, London; Dr. G. Rankin, London: Dr. R. Row, Byculla; Mr. F. C. Rogers, Belvedere. **S** Mr. W. Soper, London; Dr. L. E. Shaw, London; Mr. S. Spicer, London; Suburb; J. E. H. Sawyer, M.B., Birmingham; Dr. T. Stevenson, London; Messrs. Southall Brothers and Barclay, Birmingham; Mr. P. Schidrowitz, London; Dr. W. Sykes, Exeter; C. E. Salt, M.B., Shrewsbury; Dr. G. Scharp, Leeds. **T** Dr. W. Thyne, High Barnet; Mr. W. P. Thomas, London; Mr. A. T. Todd-White, Leytonstone. **W** Mr. F. W. Waters, Sheerness-on-Sea; Dr. G. B. White, Dublin; Mr. F. H. Westmacott, Manchester; Mr. A. E. Waters, Hull; Dr. A. J. Wallace, Liverpool; Dr. L. Williams, London; Dr. T. Wright, Aldershot; Mr. J. Wilson, West Hartlepool; Dr. T. J. Wood, Bradford; Mr. W. M. Willis, Nottingham, etc.

BOOKS, ETC., RECEIVED.

The Housing Handbook. By W. Thompson. London: The National Housing Reform Council. 1903. 2s. 6d.

Pathologisch-anatomische Arbeiten. Herrn Geh. Medicinalrath Dr. Johannes Orth zur Feier seines 25 jährigen Professoren-Jubiläums gewidmet von den Göttinger Assistenten, Schülern und Freunden. Berlin: August Hirschwald. 1903. M. 24.

Manuel de la Prostatectomie Périnéale pour Hypertrophie. Par le Dr. Robert Proust. Paris: C. Naud. 1903. Fr. 4.

"The Accountants' Library." Vol. xviii. Medical Practitioners' Accounts. By J. Henry May, A.S.A.A. London: Gee and Co. 1903. 3s. 6d.

The Scottish Medical and Surgical Journal. Edited by Norman Walker, M.D., F.R.C.P.Edin., and Harold J. Stiles, M.B., F.R.C.S.Edin. Volume xi (July to December). Edinburgh: The Scottish Medical and Surgical Journal, Limited. 1902.

Der Herzmuskel und seine Bedeutung für Physiologie, Pathologie und Klinik des Herzens. Von Dr. Ehrenfried Albrecht. Berlin: Julius Springer. 1903. M. 14.

Transactions of the American Gynecological Society. Volume 27. For the year 1902. Philadelphia: William J. Dorman. 1902.

Technical Mycology: the Utilization of Micro-organisms in the Arts and Manufactures. By Dr Franz Lafar. Translated by Caarles T. C. Salter. Vol. ii. Eumycetic Fermentation. Part I. London: Charles Griffin and Co., Limited. 1903. 7s. 6d.

Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition. By Professor Dr. Carl von Noorden. Part III. Membranous Catarrh of the Intestines. New York: E. B. Treat and Co. 1903. 50 cents.

The Transactions of the Hunterian Society. 1901-2. Eighty-third session. London: Headley Brothers. 1903.

Colonial and Camp Sanitation. By George Vivian Poore, M.D.Lond., F.R.C.P. London: Longmans, Green and Co. 1903. 2s. net.

Transactions of the Glasgow Obstetrical and Gynaecological Society. Vol. iii. Sessions 1900-1, 1901-2. Glasgow: Alex. Macdougall. 1903.

Manuel de Radiothérapie Clinique. Par M. Franck. Deuxième édition. Bruxelles: Henri Lamertin. 1903.

The Victualling of the Royal Navy: Past, Present and Future. By Alexander Turnbull, M.D. London: Elliot Stock. 1903. 1s.

Petit Manuel Pratique de la Vaccination. Par E. Feix and J. Flück. Lausanne: J. Couchoud. 1903.

Pathogénie du Tabes Dorsal. Par J. Nageotti. Paris: C. Naud. 1903.

Mental Diseases: A Manual for Students. By Walter Herbert Barker, M.R.C.S., B.A., M.A. London, Paris, New York, and Melbourne: Cassell and Co. 1902.

The Refraction of the Eye and the Anomalies of the Ocular Muscles. By Kenneth Campbell, M.B.Edin., F.R.C.S. Eng. London: Bailnère, Tindall and Cox. 1903. 5s.

The Sayings of Jesus. Collected and arranged by Harry Roberts. London: Gay and Bird. 1903. 1s. net.

Les Phénomènes de Suggestion et d'Auto-suggestion: précédés d'un essai sur la psychologie physiologique. Par le Dr. L. Lefèvre. Bruxelles: Henri Lamertin. 1903. Fr. 6

Diseases and Injuries of the Eye with their Medical and Surgical Treatment. By George Lawson, F.R.C.S.E. Sixth edition. Revised and in great measure rewritten by Arnold Lawson, F.R.C.S.E. London: Smith, Elder and Co. 1903.

Bibliothek von Coler. Herausgeben, O. Schjerning. Band xvii. Die Kriegs-epidemieen des 19 Jahrhunderts und ihre Bekämpfung. Von Dr. Otto Niedner. Berlin: August Hirschwald. 1903.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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Advertisements should be delivered, addressed to the Manager, at the Office, not later than first post on Wednesday morning preceding publication; and if not paid for at the time, should be accompanied by a reference.

Post-Office Orders should be made payable to the British Medical Association at the General Post-Office, London. Small amounts may be paid in postage-stamps.

N.B.—It is against the rules of the Post Office to receive letters at *Poste Restantes* addressed either in initials or numbers.

A Lecture
ON
THE PROGNOSIS AND TREATMENT OF SYPHILITIC DISEASE OF THE NERVOUS SYSTEM.

Delivered at the Medical Graduates' College and Polyclinic.

By Sir WILLIAM R. GOWERS, M.D., F.R.S.,
Consulting Physician, University College Hospital; Physician to the National Hospital for the Paralysed and Epileptic.

Gentlemen,—I have been asked to lecture to you at short notice, but fortunately a subject has been assigned to me—syphilitic disease of the nervous system. I have not, however, been told what to say. The subject far transcends the limit of a single lecture. All I can do is to present for your consideration some general principles concerning the most important practical branch of the subject, those which should guide us in the prognosis and treatment of these diseases.

I fear I can only give you that which is old. But the old is not, as such, to be despised. It has been well said by Ribot, as to senile failure of memory, that "the new perishes, the old endures." The saying is true in a much wider application, although it is only a partial truth. We may also remember another aspect of the relation. To present old knowledge to new minds involves a constant renewal of its youth. The seed that is old produces a new plant. It may be true that "there is nothing new under the sun," but there is a sense in which it is also true that there is nothing which is not new. The rising sun is old enough, but each sunrise is a new event.

Even in my restricted topic I must confine myself to the principles which seem to me of most importance. First, however, we must have a clear perception of what we are dealing with when we speak of "syphilitic disease" of the "nervous system." What do we understand by "nervous system"? If we only mean the actual nerve cells and fibres, the functional elements, I might paraphrase that chapter in a book on Iceland which Dr. Johnson said he could repeat from memory, the chapter on Icelandic snakes. Doubtless you know your Boswell, and remember that this feat of memory turned out to be the repetition of the sentence—"Throughout the whole of Iceland there are no snakes." So I might say, "there is no syphilitic disease of the nerve structures." But the term "nervous system" includes also the neuroglia, which supports and separates the nerve elements, the blood vessels, which penetrate and permeate the centres, and the membranes which enclose and protect them. These structures are among the most frequent seats of the morbid processes of constitutional syphilis. The nerve elements proper do indeed undergo degeneration after syphilis, but this is a different condition. I will refer to it presently, but it is not within our special subject.

I have not made this comparison with the snakes of Iceland merely to enunciate a paradox. Behind it lies an important fact. Syphilitic disease of the nerve centres, developing in what may be termed the "adventitial" elements, produces symptoms for the most part through the changes it causes in the nerve elements themselves. But these are simple, not specific. They are secondary to the syphilitic disease, but they are the same as would be caused by any other disease of the same character, whatever its nature. The significance of this fact is far reaching. Specific treatment acts only on the specific process. It has no direct influence on the secondary changes by which the symptoms are produced. This fact should be kept in view in all your practical conclusions, and to impress it upon you is one of my chief objects to day.

Let me give you some illustrations. You may not need them, but, believe me, the art of getting the knowledge you have not is to welcome that which you think you have.

To take first a salient example of the simple nature of the process by which syphilitic disease causes symptoms—consider syphilitic disease of a cerebral artery. The disease narrows the vessel, or narrows the orifice of a branch which arises at the affected spot, but causes hardly any symptom until a clot suddenly forms. The narrowing makes the flow so sluggish in the "backwater" just beyond the diseased spot, that clot forms on the altered wall and quickly closes the vessel. It extends on, up to a branch from which a collateral supply can maintain the circulation; if there is none it spreads to the distal twigs. The region of the brain from which the blood supply is thus suddenly cut off at once loses its function. Unless a collateral flow can be established in an hour or two, it perishes, undergoing necrosis, "necrotic softening," of necessity enduring, with persistent loss of function. But the thrombus which forms is simple not specific, and so is the resulting softening. The only syphilitic process is that in the wall of the artery.

Reduce the disease of the artery to a cicatricial state as quickly as you can by treatment you cannot change its effects. You can exert no more influence on the thrombosis or on the softening than in a case in which the softening is due to embolism. Nor can you influence the characteristic symptoms which are due to these simple effects of the disease. This must be clear to you, but it is not so many years since I heard a man of professional distinction say of such a case of sudden syphilitic hemiplegia, "Oh, he has a node within the skull; give him mercury and he will get all right."

Sometimes the course of the case seems to verify such a favourable prognosis. Under the treatment the symptoms lessen and may pass away. They do so in the same manner and degree in many cases of embolism from heart disease, and do so whether medicine is given or not. The initial effects of any vascular lesion are much wider than those that are permanent, because the area of brain disturbed is greater than the area destroyed, and the permanent symptoms depend on the functional importance of the latter.

Take, again, the case of a syphilitic gumma growing from the membranes of the spinal cord. It slowly compresses the cord and this causes paraplegia. The effects on the cord are precisely the same as would be produced by any other kind of tumour. If pressure is slowly exerted, the fibres lose all power of conduction long before they suffer total destruction. Secondary degeneration may follow with all its symptoms, and yet certain elements of the fibres may retain such continuity as permits their ready renewal when the pressure is removed. Conduction, if it has not been lost too long, may be restored when treatment causes the compressing growth to shrink, just as when a sarcoma of the membranes is removed by a surgical operation. But the treatment does good, not by its influence on the changes in the spinal cord, on which the symptoms depend, but by acting on the specific cause of those changes. These pass away if there has not been actual destruction.

Such syphilomata may form on the sheaths of the cranial nerves and produce the same effects—arrest of function, with palsy in the part supplied, recovering when the compressing agent is removed. It is so, also, with the similar processes in the membranes of the brain. But here, as in the nerves and the membranes of spinal cord, the processes of growth pass by degrees into another process—that of inflammation.

The subject of syphilitic inflammation brings before us some pathological conceptions which it is important to discern. The characteristic specific process is neoplastic, the formation of tissue which, when recent, is semigelatinous in aspect ("gummatous"), and resembles, histologically, granulation tissue. After a time it becomes firmer, and two changes occur. Its elements become transformed to fibres, which contract in a cicatricial change, or they undergo fatty degeneration and caseation. This caseation occurs in several discrete spots, perhaps because the vessels of the neoplasm become thickened and closed. These areas may coalesce, but do not constitute the general uniform caseation so characteristic of a tuberculous mass. This caseation in several foci, combined with the gummatous aspect of the recent parts, is the most characteristic feature of these specific growths.

Every process of tissue formation, whatever its nature, involves vascular disturbance proportioned to its acuteness. Syphilomatous tissue always forms rapidly, and the attendant vascular disturbance constitutes a state of active congestion, and even of inflammation.

Thus we can trace the two elements, the inflammatory and the neoplastic, in all syphilitic processes. In proportion as they are acute the inflammatory element preponderates. We meet with foci in the meninges, which we should call inflammation, but for the amount of gummy tissue produced, which may be such that in places the characteristic spots of caseation are seen. We may be then in doubt whether to call it a gumma with adjacent inflammation or inflammation of a gummatous character, and it is really a choice of terms. But it is doubtful how far the inflammation itself is specific or is simple. Inflammation is a curious process. You know how it spreads in some structures when once lighted up. We sometimes see this in the peritoneum in a terrible degree.

In the cerebral membranes an inflammation once excited, by whatever cause, tends to spread swiftly in proportion to its acuteness. In proportion to this the inflammatory element predominates in syphilitic meningitis, and in that proportion it has the features of simple inflammation. It speedily becomes extensive, general, and even may be bilateral. It seems as though some form of morbid agent had the power of exciting inflammation which at once attains a degree far in excess of its cause. It seems also to be less amenable to treatment in proportion to its acuteness, in proportion to the degree in which the simple inflammation runs away, as it were, from the specific cause. We meet with instances of this, happily not often, in the cerebral membranes. We meet with the same, more frequently, in the spinal cord.

Acute myelitis, focal or transverse, is met with so often in the early stage of constitutional syphilis that it is impossible to doubt a causal relation. Yet the inflammation presents similar features, and runs a course quite the same, as in patients in whom syphilis can be excluded. Remember that in all acute inflammations of organs the proper functional structures undergo rapid destructive changes which are regarded as a participation in the inflammation. But these are simple in aspect, similar in every form of inflammation equally acute. They are intense in proportion to the inflammation, and may speedily attain a degree from which recovery is slow, imperfect, or impossible. This is conspicuous in these cases of acute myelitis, and they justify the inference that in these cases also the symptoms depend on the simple effects of the specific process. It is alike true whether the inflammation is purely such or whether the damage to the nerve elements is brought about by disease of the arterial walls at the spot affected. In the more chronic forms of local inflammation in which the process passes into that which may be termed sclerosis the same fact is apparent. The morbid process is interstitial, and the nerve elements suffer secondarily.

Local chronic inflammation of the cerebral cortex has other effects which are also due to the simple damage to the nerve element in the cortical substance. Even if the effects of inflammation pass away, no structure is ever quite the same as before, and in the grey matter of the brain a slight residual alteration may entail a grave change in function. Instead of stimulated, proportioned liberation of nerve energy there is spontaneous discharge which gives rise to local convulsion. This may occur from the irritation of the active inflammation, but also as a residual effect, such as might be due to the inflammation caused by a blow. It also is a manifestation of simple changes on which specific treatment can have and does have no influence.

The points I have mentioned are not matters of theoretical pathology; they are of the utmost practical importance. On your perception of the mode in which the symptoms are produced depends the correctness of the forecast you can form, of the prognosis you can give. The essential point is that the specific process can be influenced by treatment, but this can produce no effect on the simple changes on which the symptoms directly depend. The forecast is favourable in proportion as the latter can pass away when their cause ceases to act. Hence it is important that you should cultivate the habit of picturing to yourselves what is the exact morbid state, and strive to discern the nature of the changes which give rise to the symptoms. Endeavour to acquire the habit of forming such a mental picture. Obtain all the data you can, and then strive to see with your mind's eye, and trust your vision. It may seem difficult at first, but will become easier with practice. It will often serve you in good stead in many forms of disease, in many parts.

Prognosis.

The application of these facts to prognosis should be self-evident. The prospect of improvement and recovery depends on the extent to which, after the removal of the specific disease, the simple processes on which the symptoms depend can pass away. In all tissues the tendency to recovery is great, if the change has not proceeded to actual destruction. Thus you will perceive that in arterial obstruction there is a speedy, permanent destruction of tissue, and function can only be regained in so far as it is capable of compensation by the other hemisphere, or in the degree in which initial damage exceeds actual destruction. But in the case of slow compression the possibility of recovery depends partly on its degree, but still more on its duration. Pressure always involves secondary inflammatory changes in the compressed tissues. These go on to cicatricial processes if the pressure has been long continued; in time they constitute a grave hindrance, sometimes an insuperable obstacle, to the restoration of continuous structure and conducting function. Paraplegia from such pressure may be complete for a month, and recovery will probably, in time, be perfect. If complete for three months, recovery may possibly be perfect, but is more likely to fall short of the normal state; but if complete paraplegia from compression has endured for six months only partial recovery can be expected after even the complete removal of the cause, and after a year the return of function may be very slight, and at best will not be great. Of course, these are but rough assertions; they are, I believe, approximately true, but they are given chiefly to fix on your minds the importance of considering duration in the attempt to forecast the future of a case. You have doubtless long since learned by experience, that may have been painful and certainly must have often been trying, the urgency with which a patient, and still more the friends, desire to know the future course of the malady. They expect from us a prescience more than human. It seems reasonable to them that we should be able to see into the future with the same certainty as into the past, and the same confidence as into the present. We are fortunate when the conditions are such that we can give them that which they ask for; but you will only discredit yourselves in the long run by holding out confident hope when it is unjustified. Strive, then, to perceive the morbid state, and if you cannot anticipate much improvement it is seldom that you cannot hold out hope of some, but take care that you are clearly understood, and that your "may" is not construed as "will."

It may seem strange to some of you that any cases of this character should lose their chance of complete recovery by reason of their long duration before appropriate treatment is employed. But it seems to be a law of Nature that everything that never should be, sometimes is. One cause is because some patients suffer long before they seek advice. It is not so with paralysing maladies, but it is sometimes with those that damage nerves, and even with arterial disease so placed as to cause only slight symptoms for a long time before arrest of the circulation is produced, and when the parts affected are those to which no motor functions are related. It is not often, now, that such disease is undetected in consequence of the ignorance of the doctor who is consulted, but it happens sometimes because he does not make a sufficiently careful search to discover slight but conclusive symptoms of organic disease. Among these optic neuritis is one of the most important and most frequently overlooked. Indeed, I may say in passing that no defect in medical education seems so persistent as ophthalmoscopic training. It will be so until the inspection of the normal disc is part of practical physiology, or at least is taught with the stethoscope at the beginning of practical medicine. Clinical work abounds with unused opportunities, because the eye is never looked into until the end of the student's course.

Another frequent reason for the prolonged unchecked development of the disease is a belief that it cannot be. One of the great lessons of life—sometimes only learned late—is hesitation in pronouncing anything impossible. Certainly, this disease is sometimes met with under conditions which suggest that it is impossible, especially to those who know the patient best. One fact, at any rate, you should always remember. It can be excluded only when there has never been exposure to possible infection in the common way. If there has been, if it has been escaped by "luck"—its denial should have very little influence on your opinion. You know also how constantly its occurrence in married women has no symptoms to make it suspected, and it is important to remember that the evidence afforded by children may be absent. Indeed, the subject is one in which it is important never to forget the rule—a rule of almost universal application—that the absence of evidence is of very little value compared with that of its presence. Nature is unveracious as well as man, or rather seems so because our ears are tuned only to its affirmations. Its "no" is often altogether untrustworthy, but this is because we interprets its silence as negative without the least justification for doing so. Almost every common symptom of a morbid state is sometimes absent; every indication of a common cause is sometimes absent. Hence assurance is possible only when the common cause can be absolutely excluded.

Thus the practical lesson which follows from the perception of these facts is that the cause of the *symptoms* of the various syphilitic diseases which damage the nervous system is a secondary result of the specific process. Remove the latter by treatment, remove it as completely as possible; the secondary

effects may pass away, or may only lessen, or may persist with only slight diminution. A cicatrix from a gumma in the liver may be unimportant; in the nerve centres it may cause enduring symptoms. In the cortex of the brain organic epilepsy may be its result. Even a gumma pressing on the cord may be removed by treatment too late to prevent a degree of mischief which cannot recover, and some palsy may be enduring.

Remember also that the actual result of treatment on the specific process depends on its duration. The new formation rapidly diminishes in size under treatment. Apparently the tissue elements that are of recent formation, chiefly cellular, undergo granular disintegration, the results of which are quickly removed; but the older cells undergo a change into fibres which may perhaps also be formed between them, and the diminution in size is partly due to the progressive cicatricial contraction of this fibrous tissue, which proceeds to such an extreme degree. Treatment seems to promote this cicatricial process in the tissue elements which have attained too mature a stage to undergo disintegration and total removal. But this process has its own consequences; that which it entirely surrounds suffers inevitable constriction, which may perpepuate or even augment the effects of the active disease. This is another reason why your prognosis in cases that have proceeded unchecked for some time should be very cautious.

A year ago I had occasion to point out that this change, going on all round the wall of an artery, seemed to have induced its occlusion, and that this effect had apparently been promoted by the influence of the treatment which arrested the disease and helped the cicatricial change. Happily such annular disease is rare, whether in a nerve or in an artery, and the conducting function of a nerve may be slowly restored in spite of considerable enduring constriction. Yet the impairment may continue long after cicatrization of function is established. This fact seems to be incomprehensible to many. As long as symptoms continue, as long as the normal state is not regained, it is believed that there must be specific disease unconquered; treatment must be made more energetic, must be repeated. Iodide is continued and increased; course after course of mercurial inunction is employed. Sometimes all is to no purpose; sometimes there is the slow natural recovery we know so well when causal disease has ceased, a recovery then inevitably assigned to the persistent treatment employed, although it may be, I believe, in spite of it. You may ask, Is not this reasonable? Are we not justified in our inference, since we cannot see what is going on?

Well, I would ask you to consider what you do in other conditions that are beyond the direct range of observation. You infer from that which you can directly discern the character of the process you cannot actually perceive. If a patient comes to you with a recent node on the tibia you know that under iodide or mercury it will have disappeared in six weeks. If the node has existed for six months, at the end of six weeks it will have become much less, but periosteal thickening will still be felt, and this will be very slow in disappearing. It will lessen in time, just the same whether or not you continue specific treatment. The residual thickening is due to cicatricial tissue, which must persist after all the specific element is removed. So with a syphilitic ulcer of the skin. At the end of six or eight weeks' treatment—if this is adequate—all the peculiar specific thickening is gone; the ulcer may not be healed, but all that remains is a simple ulcer undergoing simple cicatrization, which will go on just as well if you do not continue specific treatment as if you do.

When the ulcer is healed, what remains? A scar, first livid, afterwards brownish, in which the skin is thinner and smoother than elsewhere—a scar which remains to the end of life. In every tissue it is the same. Every morbid process leaves its changes in proportion to its degree and character. A destructive process leaves cicatricial tissue in place of normal structure, and this may even surround a cavity if there has been a massive destruction. Simple inflammation may leave a slighter change, but usually such as to be discerned, at least by the microscope, and this degree is colossal compared to the changes in finer nutrition which must always ensue. The effect on function even of the slightest residual change is enduring, and important in proportion to the delicacy and differentiation of function of the structures affected. Hence, whenever the nerve structures are damaged by specific processes, we should be prepared for imperfect recovery, however successful our treatment of the primary process may be. It is indeed remarkable how great is the restoration of function in many cases, in the course of time. But the fact I wish to impress upon you is that the "time" is not occupied by the removal of the specific disease, but by the recovery of the damaged structures when this has been removed.

You will perceive from what I have said that the pathology, prognosis, and treatment of these maladies are closely connected, or rather they are the same viewed from different sides. You can only frame a forecast by discerning whether the causal disease can be removed completely, and how far the nerve elements can recover. For this purpose it is essential to form a mental conception of the process as precisely as you can, and trust to your inference from it. When you cannot see with the eye you must strive instead to see with the mind. The great difference between various processes will then rise clearly into view, and all that the difference entails.

For the most part the symptoms of these processes are hardly ever really *slow* in their production. They are subchronic, subacute, acute, or sudden, reaching a considerable degree in less than three months, and often in much less. Of all it is true that the more rapid the development of the symptoms, the less is their course affected by specific treatment. Those which are most deliberate are chiefly the result of a gumma, compressing, or irritating, or of gummatous inflammation of the membranes. Over these treatment exerts its greatest influence, and in them the prognosis is the best, subject to the limitations I have mentioned—long duration and irritative influence. The acute symptoms, acute as distinguished from sudden, are for the most part the result of inflammation. This, although excited by a specific cause, varies in the relative amount of inflammation proper, which is greater the more acute the process. The nerve structures suffer chiefly from this, and the more rapidly the symptoms develop the greater is the destructive implication of the nerve elements, the less is the room for the influence of specific treatment. We see this strikingly in the cases of acute transverse myelitis, so frequent in syphilitic subjects, in whom, as I have said, it runs a course differing in no respect from that which it pursues in other patients. The cases of actually sudden onset present a course over which specific treatment can have and does have no influence. I need not repeat what I have said regarding this point.

Treatment.

It may seem strange that the therapeutic progress of the last half century has left us without any new remedy for syphilis. But we need not be ashamed of the nineteenth century since it has produced the second of our two certain remedies, iodide. Its value was discovered in the thirties, and in England. Like the majority of our most useful drugs, its service was found by empirical observation, indeed, it may be said, almost by accident. The real or supposed influence on goitre of burnt sponge led to the discovery that it contained iodine, and to the use of combinations of iodine for other swellings, among them for nodes. From this the step was small to the discernment of its power over other syphilitic processes, a power as certain as it is mysterious.

The older remedy, mercury, has come down to us from the dim distance of a thousand years. Its use by the Arabians is said to have been anticipated in India, but the Orient shrouds in impenetrable mist the beginnings of all things. Its service in syphilis is believed to have been one of the Eastern lessons the Crusaders brought back to Europe, unless it had been conveyed by the Moors to Spain with skill in other arts, such as the Alhambra retains for us.

The two agents stand on a different level. We have other facts regarding the power of mercury which make its influence on syphilis less strange. It is possible that it has a capacity of arresting many diseases that depend on an organismal virus, although it is only in a slow disease that we can avail ourselves of this effect. The fact was ascertained in the early days of the Brown Institution that an animal under the influence of mercury was unaffected by a dose of anthrax virus which would certainly be fatal to a similar animal not so protected. It is believed to have an influence on all processes of inflammation. Those of our profession who have occasion to watch the only internal inflammations which can be directly observed, those within the eye, are firm in their belief in the influence of mercury upon them, irrespective of their specific nature. I may add that it has been employed in most of the cases of cerebral meningitis, including some apparently tuberculous, in which recovery has been known. This is, at least, true of my own experience. Mercury is a poison, but a considerable quantity may be contained in the blood, if gradually introduced, and we can understand that this may be sufficien-

to be fatal to the organisms of disease long before it is fatal to the living elements of the body. But to permit this effect the disease must be one of slow development.

We can thus at least seem to understand the influence of mercury in syphilitic processes, and also the trust, placed in it in the early stage, when the organisms must be in their first flush of growth in a fresh soil. But iodide has no such toxic property. It is a salt not far removed in nature from common salt, yet its influence on the processes of syphilis is certain. This must be due to the iodine, and it is said to be possessed in equal degree by the combination of iodine with a vegetable oil, "iodipin," or "iodinol." Iodide, in itself, seems almost inert on the normal processes of the body, and yet it has a profound influence on this morbid process. But we must remember that all these elementary bodies seem able to enter into combination with albuminous substances, modifying their influence, sometimes profoundly. A slight change in constitution will transform a food into a poison. The mystery of the certain influence of iodide is made more salient by our uncertainty as to its effect in other morbid states. It has been, and is, thought to do good in many; but, if we search for stringent proof, we shall find ourselves in agreement with Nothnagel, who, in his great book on *Materia Medica*,[1] says: "The therapeutic influence of iodide is undoubted only in one condition, tertiary syphilis, and it is possible in hyperplastic affections of the lymphatic glands and thyroid. In all other conditions its influence is doubtful and uncertain. We have employed it much, very much, but in other maladies we have never obtained definite and incontestable certainty that the improvement and recovery occasionally observed were due to it."

Of course, its administration in many maladies must often coincide with spontaneous improvement, so very easily ascribed to coincident treatment. But when due allowance is made for this, and when the cases in which it has failed are given their weight, does the lesson of the residue differ much from the experience of Nothnagel? The contrast presented by its power over syphilitic new formations is most strange. Not less so is its innocuous character compared with the toxic power of mercury. It is difficult not to believe that the future has some revelation in store for us, which may not only explain what is now mysterious, but in doing so may augment our resources alike in means and method.

It is not through diseases of the nervous system that any new means of combating syphilis are likely to be discovered. Duty precludes us from the attempt. The effects of such disease are so grave, and are rendered graver by every day's delay, that we dare not pause to search for a new agent. We must employ at once the means we know and trust, and leave the task of discovery to those whose province is less profound. As a fact, moreover, nothing is such a hindrance to the discovery of new remedies, truly such, as the efficiency of those we have. If we know what will cure, we seldom dare search for another remedy.

The difference between the two agents is familiar and important. Iodide can be thrown into the system in any quantity; mercury can only be introduced gradually. For the chief lesions of constitutional syphilis they seem equally useful. But when the process is inflammation, we should expect mercury to have the more certain influence, and observation affords some confirmation of this. It is not for a physician to express an opinion on the treatment of the early stage of the disease, but in this there is a consensus of opinion of the need for mercury on the part of those who can speak with authority. Regarding the later processes, there seems to be a general feeling, rather than opinion, that mercury can do a little more, and can do it more thoroughly, than iodide, but that the latter does its work more speedily. The feeling deserves respect, even practical respect, but I do not think it rests on strong evidence—at least so far as the nervous system is concerned. The opinion is largely due to the use of mercury after iodide has lessened the symptoms, and probably after the syphilitic process has been entirely removed. The damaged nerve structures have slowly regained function during the subsequent mercurial treatment, to which the later improvement has been assigned. No delicate therapeutical inferences ought ever to be drawn from these diseases. We are right to apply to them all we can know or suspect, but the pitfalls of fallacy are, as we have already seen, many and treacherous. Real knowledge can only be increased from that which is within the range of vision, from the surface of the body. It rests with the dermatologists to augment our certainty, and increase our power. They can see and we cannot. The risks that delay involves are to them trifling. They should endeavour to eliminate every source of fallacy, to distinguish between the specific and the simple elements in the processes they treat, and to make their therapeutic observations precise, multiple, and widely known. Then we should feel sure of much we now only suspect, and perhaps we should doubt some things we now believe.

Of one thing I am quite sure, that the symptoms of a syphilitic growth may diminish and pass away as rapidly if iodide only is given, as we can conceive possible. I do not affirm that is always so, but I remember many cases in which 10 gr. three times a day produced in a week cessation of headache and distinct diminution of early optic neuritis, which had vanished at the end of a fortnight. In one such case slight hemiplegia had disappeared at the end of a month, and hemianopia which had been complete was reduced to part of one lower quadrant. But this remained permanent.

It is said that much larger doses of iodide are sometimes necessary, but I have not myself met with evidence of this, except in patients who have long been taking moderate doses. The use of large doses—30 gr. or 40 gr.—has been called the new American system. I have already referred to the saying that "there is nothing new under the sun." Many years ago I had occasion to go through some of the old casebooks of University College Hospital, and I found one case in which Dr. John Taylor gave 40 gr. three times a day for constitutional syphilis, somewhere about 1847. The same physician, by the way, at the same time, made constant use of the thermometer to ascertain the presence and degree of fever, long before it came into general use.

I think it is not wise to give iodide and mercury together in full doses, except for a short time in a very urgent case, when every means and measure are needed to stem life-threatening disease. There is reason to think that iodide promotes the elimination of mercury, as it does of most metallic substances, and thus hinders the retention in the system of enough to act upon the processes of the disease. We cannot be sure that an adequate quantity is present in the blood unless we have such evidence as is afforded by slight inflammation of the gums. The difference in the readiness with which this is produced is probably due to differences in individual power of elimination, which seem to be effected chiefly by the liver.

This explanation is, at any rate, plausible, and I think useful. It suggests that, if there is not the sign in the gums of enough mercury in the blood to act on the tissue processes, we should increase the dose—double it, treble it—until we obtain the evidence. But it is wiser not to give at the same time an agent which has the power of promoting its elimination, except there be the urgency I have referred to. All experience shows that the affection of the gums is evidence that enough is present in the system. It may then be stopped for a day or two, and continued in smaller quantity to maintain the effect for three or four weeks; then the iodide may wisely be resumed. It will have its own effect, and may also at first maintain the influence of the mercury by bringing into the blood that which has entered the tissues.

We cannot improve on the physicians of long ago in the method of administering mercury. The object is to get enough in the system, and this can only be slowly achieved, or inconvenient toxic symptoms result. One of these is gastro-intestinal irritation, which is always greatest when the administration is by the mouth. The old method was to rub it into the skin, and it is, I am sure, the wisest. One modern method is to inject it under the skin. Whether or not this is equally effectual, it is certainly much more uncomfortable than inunction. By the latter the gums can be affected in five or six days, which is as speedily as the result can safely be obtained by any system.

Inunction is much facilitated by the use of the oleate, which is not only cleaner in aspect, but, I think, surer in result. Order a drachm of the 10 per cent. oleate to be rubbed in twice a day for three or four days, and then continue once a day until the end of a week. If the gums then show no sign, resume the two daily rubbings until they do. But remember one small precaution, which I should be ashamed to mention to you did I not know how much depends upon the trifles of our work. See that the same small piece of flannel is always used, and let the first inunction be 2 drachms. Otherwise the nurse will think it so much cleaner and nicer to take a fresh piece of flannel each time, which will retain more than half the dose, and you will wonder why your patient's gums show no sign.

I do not think it matters into what part the mercury is rubbed. It is often convenient to have it rubbed in as near

as you can to the affected part—close to the scalp if it is the brain, down the back if it is the spinal cord. This has a certain reason, that the oleate makes the skin rather sore, and thus effects slight counter-irritation. It has another reason, of a kind not to be despised. There is nowadays too much knowledge, public and popular, regarding the use of drugs and their purpose. Many of the laity, not alone of the male sex, draw an immediate inference from the use of mercury, an inference which is undesired by the patient. It is prevented when the site of inunction is near the seat of the disease, and when the unmeaning oleate is employed, instead of the blue ointment with its suggestive colour. Such a device for the avoidance of distress does not merit any deprecation on the ground of high morality. If it is true that "things are not what they seem," it is equally true that they sometimes should not seem to be what they are, when the seeming can do no good and may do harm.

One element in treatment I have yet to mention. I have left it to the last because it runs counter to the cherished practice of many of those who have had experience in the treatment of this disease. It concerns the duration of treatment. Regarding the processes of the constitutional disease, definitely such, my conviction is that specific treatment should be energetic, brief, renewed, but not continuous. By "brief" I mean that it should stop at the end of eight weeks or so, and be renewed after two, four, or six months, and that the patient should have three or four weeks' treatment with iodide every four months during the first year after any true specific symptoms, and every six months for the next three or four years.

Let me tell you the reason for my conviction. I have said it before, but a teacher who hesitates to repeat, shrinks from his most important duty, and a learner who dislikes to hear the same thing twice over lacks his most essential acquisition. Many years ago a patient came under my care with symptoms of a cerebral syphiloma. Under 10 gr. of potassium iodide three times a day the symptoms rapidly passed away, and the patient seemed well. He continued, however, to attend this hospital and to take the medicine. At the end of three or four months he presented symptoms of disease of the upper dorsal region of the spinal cord. They progressed rapidly, and caused his death. It seemed impossible that the disease could be syphilitic, since he was still taking the medicine which had so speedily removed all indications of such disease in the brain. But the necropsy shook our confidence in the seemingly impossible. In the brain there was the shrunken relic of the gumma; in the spinal cord, invading it from the membranes on one side, was a similar growth, in the active stage, typical under the microscope, and typical also in the naked-eye feature of disseminated caseation, a character of conclusive significance.

The lesson this case taught me I have since seen confirmed by other cases, not my own, however. It is that treatment may lose its power if continuously maintained. It is not altogether unintelligible that this should be. We cannot doubt that syphilis is an organismal disease, that it depends on bacilli as yet unidentified. We have yet no definite objective acquaintance with these microbes, but the symptoms of the disease harmonize best with the theory that their life is continued by germs which persist in various parts of the body when the organisms die. The course of the malady suggests that these germs may long lie low and latent, but develop from time to time under influences we cannot discern. A consideration of the course of the disease and its relation to treatment compels the conclusion that this has no influence whatever on the latent germs. It seems to destroy the developed and developing organisms, and thus dissipates the morbid processes they excite. But the most thorough treatment may fail to prevent future development of the disease, at whatever stage it is adopted, however early. I do not say that it has no such preventive effect; but instances have been met with by every one who has had much experience, in which there was recurrence after recurrence, in spite of most thorough treatment. The only reasonable explanation of this seems to be that the germs are indestructible. They cause no symptoms until some influence induces and permits their development. After a given outbreak there may be none left, and treatment then seems to have cured the disease. In another case there may be many, and then recurrence occurs after the same treatment. Hence, whether syphilis is or is not incurable as a constitutional malady, it is certainly one of the cure of which we can never be sure.

Hence my belief that the essential principle of treatment is that it should be energetic but not continuous. Energetic mercurial treatment is, of course, such as to affect the gums, and this cannot well be continued for more than six or eight weeks, nor need it be. Iodide can be given persistently in large doses for many months with no grave constitutional inconvenience, and I know that such long continuance is thought by some to be an essential element of thorough treatment. But the organisms seem sometimes to become acclimatized to the presence of the iodide and to develop in spite of it. The fact is not unintelligible. Dallinger found that a temperature which surely killed certain organisms failed to hinder their vigorous development if successive broods were gradually inured to heat which was increased by slow degrees. So we can conceive that the syphilitic germs may gradually become accustomed to the presence of iodide. Even then, it is true, a great increase in the dose may arrest their development. But the increase cannot proceed indefinitely, and the question is, Is this long-continued treatment needed? My own conviction is that after eight weeks of adequate treatment the specific disease is at an end. All that remains is the non-specific element in the process, or, especially in the case of the nervous system, the secondary simple effects in the nerve elements, which can only slowly pass away, and sometimes cannot pass away completely.

These diseases present striking illustrations of the sources of error which beset our therapeutic reasoning. Let me repeat what I have already suggested. A gumma of the spinal cord, after six weeks' treatment, may have lost all its specific element, and be in process of rapid cicatrization, but it may be six months, of necessity, before the spinal cord can recover from its compression, and can regain its normal structure and its normal function. If iodide is given through this time, the inference is natural that this has caused the slow improvement, with which really it had nothing to do. Even more obvious, perhaps, is the frequent fallacy regarding the effect of treatment in the arterial disease. If a patient has an attack of incomplete hemiplegia from obstruction of an artery, whether due to this or embolism, great improvement is certain to occur, and can be confidently looked for—the imperfect degree shows that there is not total destruction of the motor path or centres. If iodide or mercury is given the improvement will assuredly be ascribed to it. Of course, such treatment should be adopted promptly and with energy, because other vessels may be near occlusion, which may be thus prevented. But we are not justified in ascribing to it any apparent effect on the symptoms. Here again we may see the value of the pathological imagination, in enabling us to discern clearly that which is, and hence to infer that which can be, and cannot be.

Thus the nerve elements suffer simple changes in consequence of the specific process adjacent to them, changes which are not directly influenced by the treatment of the latter. In the same way some of them may suffer simple degenerative processes, not as the direct effect of adjacent specific disease, but as a mysterious sequel to constitutional syphilis. These also are not influenced by specific treatment. They are the post-syphilitic or para-syphilitic degenerative diseases, of which locomotor ataxy and general paralysis of the insane are the most frequent forms. They are primary degenerations such as we know to be caused by chemical poisons, organic and inorganic, and they are probably due to a toxin, the result of the previous presence of the organisms of syphilis. Similar effects have been traced to a more acute organismal disease—diphtheria. We cannot doubt that the relation of these diseases to syphilis is similar, that the constitutional malady induces a perversion of some part of the chemistry of the body and a poison results, perhaps, with the help of other morbid influences—a poison that endures long afterwards. The evidence is purely that of sequence. It is neither pathological nor therapeutical. Most tabetic patients have iodide given, and hope is held out of benefit, but the cases are very few in which even slight improvement can be traced. A large majority are sure they derived no benefit, and not a few are certain that it did harm. The same is true of mercury, except that energetic treatment seems more often to be productive of distinct deterioration.

But you should know that these toxinic degenerations sometimes develop before the true constitutional disease is at an end, while gummata and gummatous inflammation still occur, for which specific treatment is needed. The important fact is the combination of symptoms produced and the difficulty of discerning their causes. In early distinct tabes, paralysis of ocular muscles may occur, which may be of the nature so common in tabes, or may be due to a syphiloma of the nerve or specific neuritis. Still

more perplexing are the cases to which Erb's attention has lately been specially directed, in which specific spinal pachymeningitis has coincided with true tabetic degeneration. If the nature of the disease is such as I have suggested—if germs are deposited in the system which develop from time to time under influences of which we know nothing—it is easy to understand that the organismal processes, truly syphilitic, due to later germs, should coincide with degenerations which are the effect of toxins, the result of earlier broods.

Let me remind you, however, of one useful criterion of the existence of post-syphilitic degeneration which is often of service when you are puzzled by symptoms which may be due to either process. This is the isolated light-inaction of the iris—"isolated" because it still acts readily on accommodation. You are familiar with this, which is known by the name, as just as it is cumbersome, of the "Argyll-Robertson symptom." You know its association with tabes and general paralysis as degenerative sequelae of syphilis, but you may not know that it is met with in association with other conditions, and also as an isolated symptom. Even then it is of great significance as an indication of old syphilis, and I have many times had reason to appreciate the guidance it has afforded.

But these degenerative conditions are not within my present subject and I have reached the limit of time at my disposal. I have endeavoured to put before you some general principles which should be kept in mind. If you strive to apply them to cases that seem clear, you will find it easier to use them in cases that are obscure. It is necessary to accustom yourselves to analysing the symptoms in simple cases, and discerning the grounds on which the prognosis is founded and the treatment based, in order to obtain the ability to do so in cases that are complex. Even those that seem most difficult will generally yield to a deliberate effort to apply to them the principles I have given you; they will yeild, if not altogether, at least in a degree sufficient for immediate need. Moreover you will, I believe, seldom fail to find that your conclusions are confirmed and your treatment justified by that to which we have all to look,

"The balance in the hand of time."

REFERENCE.

Nothnagel and Rossbach, *Arzneimittellehre*. 7te Aufl., 1894, p. 299.

CASE OF ACUTE ACROMEGALY.

BY W. MITCHELL STEVENS., M.D.LOND, M.R.C.P.LOND.,
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SINCE Pierre Marie in 1886 drew attention to the remarkable affection which he called acromegaly many cases of the disease have been recorded, until at the present time there exists an extensive literature on the subject. As acromegaly is a rare disease, the amount of writing on the subject of its pathology and clinical features may appear quite out of proportion to its real importance. Nevertheless, this disease is one of extreme interest, and its full investigation may tend to throw some light on the subject of "internal secretions," to which in late years the attention of many physicians has been directed.

The following case which was lately under my care is a typical one of what Sternberg calls "acute acromegaly," and in connexion with which he remarks: "In all cases with acute progress—and only in these cases—a true sarcoma of the hypophysis is present."

O. L. H., a married woman, aged 20—under the care of Dr. Roberts, of Pontypridd—came to my out-patient department at the Cardiff Infirmary on June 26th, 1902, complaining of severe headache, failure of sight, and alteration in personal appearance.

Family History.—Good.

Personal History.—Patient was a seven-months child, and her mother states that she was delicate until 12 months old, but after that time quite healthy until 14 years of age, when she commenced to suffer from occasional headaches of a mild character. Menstruation commenced when 14 years of age, and was quite regular till the onset of her illness. Patient was married two years ago, but has had no children.

History of Present Illness.—Three years ago (when 17 years of age) patient noticed that her eyesight commenced to fail and this was accompanied by very severe headaches. These symptoms becoming worse compelled her in two months time to give up her work in a post-office and they have gradually become more marked. The headaches though very severe, especially in the frontal region, have not been constant, and she has frequently been free from them for days at a time, but the failure of eyesight has shown no remissions. She has never suffered from vomiting. Menstruation has entirely ceased since the commencement of the illness. For nearly twelve months before admission her friends had noticed that her face was becoming broader, her lips thicker and the nose enlarged and that her hands and feet were somewhat larger. During her illness she has been in good spirits and her mental powers have remained unimpaired except for occasional transitory loss of memory and confusion of ideas. On July 3rd she was admitted to the Cardiff Infirmary as an in patient under my care.

State on Admission.—She is a woman of average height, and although only 20 years of age, looks considerably more. Her type of face approaches that of the "negress." The skin of the face is coarse and thick and the nose large, broad and bulbous. The lips are thick and everted but the gums and teeth are normal. The tongue is broad and large, and its movements free. The hair on the head is thick, black and luxuriant. The eyebrows are thick, black and well-defined. There is a marked development of hair on the arms and legs and an increase of the normal amount in the axillae and on the pubes. The bones of the skull are not enlarged. The nasal bones and cartilages, especially the latter, are thickened. The lower jaw is thick and prominent, but the lower teeth do not project beyond the upper ones. The hands and feet are broad especially the phalanges. No other bones are affected. The thyroid is not apparently enlarged.



Fig. 1.

Nervous System.—Memory is at times bad, and there is occasional confusion of ideas. When free from headache she is bright and cheerful and quite intelligent. Speech is unaffected. Sleep is good, and patient is frequently rather drowsy. Headache is very severe, and though diffused over the whole head is most marked over the frontal region, and particularly severe above the left eyebrow, where it is associated with marked local tenderness. The headache is not constant, there being intervals of freedom for some hours at a time. The reflexes are normal. Muscular power is good. The special senses are all normal except the eyesight, which is very defective, the acuity of vision being, with right eye $\frac{1}{5}$, and with the left eye, $\frac{1}{36}$. There is slight ptosis of the left lid, but the ocular movements are otherwise normal. There is well-marked bitemporal hemianopsia, and optic atrophy of both discs is present. The other organs are normal.

Progress.—The patient after admission rapidly became worse. The headaches increased in severity, and though at first slightly relieved by phenacetin and other drugs, and by the administration of thyroid extract these had no effect afterwards. The eyesight rapidly became worse until the patient was practically blind. She suffered also from occasional vomiting, which was always associated with the taking of food or medicine. Her features during the short time (four weeks) that she was under observation became much coarser, and the increased enlargement of the lips was especially noted.

On July 24th (three weeks after admission) she had a severe "convulsion,

with tonic spasm of both sides of the body lasting for two minutes and followed by a semicomatose state of several hours' duration. On account of the fearful severity of the headache, which resisted all medicinal remedies I asked my friend and colleague, Mr. Lynn Thomas, C.B., to trephine the skull with the object of relieving intracranial pressure.

On July 25th he removed a piece of bone over the upper part of the left Rolandic area, and on its removal the brain, covered by dura mater, bulged considerably. The piece of bone removed was quite normal. The patient recovered from the operation, but died in a comatose condition on July 30th.

Necropsy.—I obtained permission to examine the brain only. A large tumour was found in the middle fossa at the base of the skull, occupying almost the whole of the space between the pons behind the frontal lobes in front and the temporo-sphenoidal lobes laterally. It measured 2 in. in length and 1¾ in. in breadth. It was separated into right and left parts by a longitudinal depression. The left part, the larger and more pro-



Fig. 2.

jecting one, was oval in shape, and reached inferiorly to the level of the tip of the temporo-sphenoidal lobe, which was somewhat compressed; the right part was rounder, smaller, and less projecting. The left part of the tumour was grey in colour, resembling ordinary brain substance except that it was firmer, and from its anterior part projected a red cyst the size of a hazel nut, which had a thin membranous wall, and contained soft and partially decolorized blood clot and a little yellow serous fluid. The right part was pale red in colour and cystic in parts.

On section the tumour was seen for the most part to be formed of grey homogeneous material, fairly firm on the surface but softer in the deeper parts, and on the right side were found several "blood cysts." From beneath the posterior border of the tumour there were several small projecting soft flaccid cysts like "squeezed and empty grapes," and these were found to be connected with the main tumour on the right side.

The tumour occupied the sella turcica and extended considerably beyond it, and no trace of the pituitary body remained. The pituitary fossa was deeply eroded on both sides, and the posterior clinoid processes had disappeared.

The olfactory nerves were unaffected. The optic chiasma was displaced towards the right side, and was found to be squeezed and flattened out between the projecting anterior end of the right part of the tumour and the right frontal lobe of the brain and to be greatly atrophied. Both optic nerves were thin and flattened and markedly atrophied. The optic tracts were pressed on and more especially the left and were very small. Other cranial nerves were free from pressure though the left oculo-motor nerve was stretched,

Microscopical Examination.—The greater part of the tumour showed the appearance of a small round-celled sarcoma, the remaining parts being "haematomatous." The cranial bones, except for the effects of the pressure of the tumour, presented no abnormal appearances.

This case was a typical one of acute acromegaly. It presented two classes of symptoms:

1. Those due to a presence of an intracranial tumour in the position of the pituitary body, such as headache and visual defects.

2. Associated symptoms of acromegaly, namely, alterations in the face and enlargement of the hands and feet.

The progress of the disease during the last three weeks of life was very rapid, and it was interesting to observe that the facial appearances obviously altered within that space of time. Treatment had no effect, and my only hope was not to be able to arrest the disease, but, if possible, to relieve the symptoms

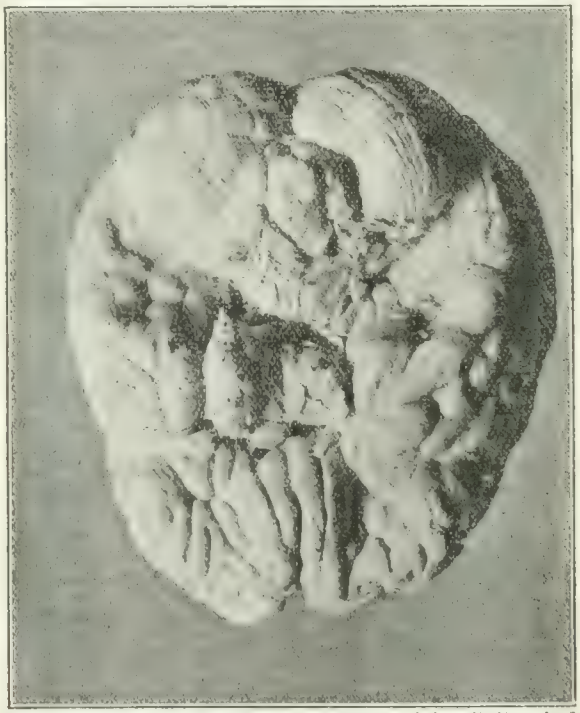


Fig. 3.—Photograph of brain showing tumour of the pituitary body.

of intracranial pressure. In this connexion I may state that in the British Medical Journal, 1896, vol. ii, p. 909, Mr. Lynn Thomas, C.B. reported a case of acromegaly, where the symptoms were greatly relieved by trephining.

In the acute cases of acromegaly, that is, those lasting from three to four years, in these only and in these always, there has been found a sarcoma of the pituitary body, and to this type belongs the case above described. Such acute cases must of necessity be fatal, as there is a malignant intracranial tumour, and the only hope is, if possible, to relieve the symptoms of intracranial pressure by "trephining."

Two classes of symptoms are present in cases of acromegaly as above mentioned—namely, those of an intracranial tumour and those properly termed "acromegalic." The first class are directly due to the enlargement of the pituitary body, and depend upon the amount of pressure exercised by the growth, and the second class of symptoms are peculiar and striking, are present to a greater or less extent, and are probably due to loss of function of the pituitary body.

The pathology of acromegaly has been much discussed, and has given rise to great divergence of opinion. The chief points are:

1. What is the cause of the acromegalic condition?
2. What are its relations to giantism?

These questions have been many times discussed, and I shall limit myself to pointing out some of the most salient points. Now in all cases of acromegaly there is disease of the pituitary body. This fact proves, of course, a direct relationship between the two conditions. The question then becomes: Is the acromegalic condition secondary to and dependent on disease of the pituitary body, or is the enlargement of this body (the diseased process always present) one of the phenomena of acromegaly? Some hold the latter view, and look upon the enlargement of the pituitary body as a partial phenomenon of acromegaly as, in fact, one of the symptoms of the disease analagous to the enlargement of the hands and feet. This view, however, seems to me an untenable one, for it certainly does not explain how a new growth like a sarcoma can give rise to acromegaly, and, moreover, in a large number of cases of acromegaly there is no "real" enlargement of the pituitary body, but rather an apparent one causing destruction of the gland itself, such as cystic tumours, colloid degenerations, etc. The balance of evidence certainly points to the conclusion that disease of the pituitary body with consequent loss of its function is the cause of acromegaly, and the development of the anterior lobe of this body from the oral diverticulum and its glandular structure suggest that it, like the thyroid gland, has some "secretory" function influencing the metabolism of the body. The main objections to this view are: (1) That tumours of the pituitary body may exist without symptoms of acromegaly; (2) that the medicinal use of pituitary extracts has little or no influence upon the course of the disease. It is quite true that tumours of the pituitary gland, and indeed tumours which may fairly be supposed to entirely destroy the functions of that body, may be present without causing symptoms of acromegaly. The very same objection has been raised against Addison's disease being dependent on an affection of the suprarenal capsules, for the latter may be so diseased as to be functionless, and this may occur without any symptoms pointing to Addison's disease. It is to be remembered, however, that acromegaly, like Addison's disease, is essentially "chronic" in its course, and death may occur before the development of definite symptoms apart from those of intracranial pressure. In the case above recorded it is certain that disease of the pituitary body had existed for three years and possibly longer, but definite symptoms of acromegaly (apart from those due to an intracranial tumour) were not observed until two years later, and had this patient died one year earlier the case would have been described as disease of the pituitary body without acromegaly.

In the treatment of acromegaly there are two objects: (1) The treatment of the local condition, the pituitary tumour, upon the presence of which depends the symptoms of intracranial pressure, and the object is to relieve such pressure by diminishing the size of the tumour, preventing its growth, or possibly removing it, and, lastly, the palliative one of "trephining"; (2) the treatment of the symptoms due to loss of function of the pituitary body—that is, acromegaly. In the treatment of this disease we cannot expect to obtain such good results as in the treatment of myxoedema, for in the latter there are no local symptoms due to the presence of a tumour. If we suppose that symptoms of acromegaly are due to loss of some secretion of the pituitary body, all that can be expected at the most from a pituitary extract is to influence those symptoms and to prevent further effects, and it can scarcely be expected to influence the pituitary tumour itself. Though good results have been described from the administration of pituitary extracts and from their combination with thyroid extracts, nevertheless their use has generally been most disappointing. In cases where the thyroid extract has proved beneficial it is probable that there has been some accompanying myxoedematous condition.

The want of success in the use of pituitary extracts in cases of acromegaly does not prove that this disease is not due to loss of some "secretion" of the pituitary gland necessary to the economy. Even in the case of the thyroid, we must remember that, though the thyroid extracts are so beneficial in myxoedema in man, they do not prevent symptoms of that disease in a monkey after thyroidectomy, though thyroid grafts are beneficial; moreover, it is to be borne in mind that the active principle of the pituitary gland may be destroyed in the manufacture of the pituitary extracts. Even if it were possible to cure, relieve, or prevent the further progress of symptoms due to the loss of function of the pituitary gland, the problem of dealing with the intracranial tumour would still remain.

If this tumour is malignant, prospects are hopeless; and if simple, some reduction in its size might occur; and, indeed, in some recorded cases it is stated that under treatment the eyesight has recovered and the headache lessened.

The second question is, What are the relations of acromegaly to giantism? It is an interesting fact that about 20 per cent. of acromegalians are giants, and also that about 14 per cent. of cases of acromegaly commence under 20 years of age. It is also important to observe that when there is congenital absence of the thyroid, cretinism with dwarfing is present. These facts suggest that loss of pituitary function leads to overgrowth with late union of the epiphyses, and that loss of thyroid function has the opposite effect.

Although only a certain proportion of giants are acromegalians, it seems probable that all cases of acromegaly commencing in youth lead to giantism. Nevertheless, there are cases of acromegaly which begin in youth, and which show no giant growth, and this at first sight seems difficult to harmonize with the above suggestion; nevertheless, when it is considered how frequently disease of the pituitary and thyroid glands coexist, it is quite possible that the absence of giant growth in some cases of acromegaly in early life may be explained by a coexisting loss of function of the thyroid gland which may inhibit excessive growth. In any case, it cannot be denied that giantism is a not infrequent symptom of acromegaly.

CASE OF CHRONIC ACROMEGALY.

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THE following notes, with the accompanying photographs, will serve to give a tolerably accurate description of the disease acromegaly, and although over 200 well-authenticated cases have already been placed on record, it must still be regarded as a rare disease.



Fig. 1.

History.—A. F., an unmarried woman, aged 30, was first seen at the Nottingham General Hospital on July 14th, 1902. She stated that her health began to fail four years before, and that three years previously she had been treated at this hospital. The out patient notes of that date state, among other things, "face somewhat acromegalic." There was nothing of importance etiologically in the patient's personal or family history. Since the present illness began the following have been the most

prominent symptoms: Violent paroxysmal attacks of headache, sometimes accompanied by vomiting; pains in the joints; gradually increasing debility. Although not anaemic-looking menstruation had been scanty for many months, and had entirely ceased for the last six months. As the patient has now been under observation for upwards of six months, it will be seen that the amenorrhoea has lasted over a year. She used to wear boots of No. 4 size, and now requires No. 6.

Appearance and Physical Examination, July 14th, 1902.—The attention is at once arrested by the patient's generally enlarged and massive-looking head, more especially the elongated and broadened nose and thickened lips. The hands are much enlarged, the fingers being much broadened and flattened. The patient is only of medium height for a woman, yet the hands, and also the feet, are larger than those of a man of more than average height and strength. The skin of the face looks muddy and pigmented. Patient complains of thirst and excessive sweating. The thyroid gland is uniformly enlarged, the pulse average, 120; eyeballs somewhat prominent, but von Gracfe's sign is absent. The teeth meet comfortably and easily, thus the marked prognathism or protrusion of the lower jaw, so often met with in this disease, is absent.

The head is thrown forward owing to a rounded cervico-dorsal curvature. The sternum is prominent and appears broadened, thickened, and more massive than normal. Over the surface of the trunk are numerous, soft, pigmented, and pedunculated little tumours about 0.5 cm. in diameter. These are mentioned by Sternberg and other authorities on this disease.

The fact of the case being still in a somewhat early stage may account for the absence of some of the features of the established disease. Thus there are no changes in the fundi oculi. There is no evidence, such as the presence of bi-temporal hemianopia, to suggest compression of the optic chiasma by an enlarged pituitary body. This, the classical symptom of compression of the chiasma, is by no means constant in even well-developed acromegaly, other pressure effects, for example, homonymous hemianopia, optic neuritis or atrophy, or oculo-motor palsies, being at least equally common. Another associated symptom is absent in this case, namely, glycosuria.

Enlargement of the thyroid gland is fairly commonly met



Fig. 2.

with in acromegaly. This symptom in the case under notice, together with the constantly quick pulse, prominent eyeballs, pigmentation and sweating, seems to suggest some relationship between this disease and Graves's disease. Such a combination has been described by Murray.[1] The functional relationships of the ductless glands to each other seem to be as yet but little understood. Thus the pituitary body contains iodothyrin, a substance also contained in the thyroid, and it has been found enlarged in myxoedema and cretinism. So also in acromegaly the thyroid is often enlarged, thus appearing to be an attempt at compensation; but the puzzling point about it is that this apparently benign effort of Nature, so far from alleviating the disease, only makes matters worse. The sexual glands also in acromegaly are often atrophied or functionless. The thymus is often, but not invariably, of large size.

Notwithstanding many anomalies and difficulties, Pierre Marie's hypothesis of the pathology of the disease—that it depends on loss of function of the pituitary body—still holds the field. The well-known cases in which this organ has been destroyed by tumour, yet without causing acromegaly, may be compared with cases in which the adrenals have been destroyed (especially by cancer) without producing Addison's disease. With the latter acromegaly also presents another singular resemblance—namely, in the comparative failure of treatment by extracts of the respective glands. So far as I am aware no cure either of pronounced Addison's disease or of acromegaly has been recorded. Thus the brilliant prospects of treatment by means of animal extracts, opened up by the signal success of thyroid treatment, have not as yet been realized.

The condition of the patient during the seven months I have known her has remained much the same, though the physiognomy of the disease appears to have become more marked, and the patient herself thinks her hands are getting larger. Her manner is generally bright and cheerful, not morose or peevish, as is said to be often the case. The drugs which have been given have been of an ordinary character, and directed to the relief of symptoms. Three varieties of the disease are described: (1) The benign, which may run a course of as long as 50 years; (2) the chronic, to which this case probably belongs; (3) the acute, lasting 3 to 4 years. In the latter class, sarcomatous tumours of the pituitary gland have been the cause of death.

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THE MEANING OF THE TERM "NEURASTHENIA" AND THE ETIOLOGY OF THE DISEASE.

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Professor Clifford Allbutt, in his clear and interesting paper read before the Section of Psychological Medicine of the British Medical Association,[1] pointed out that a common and mischievous error in the use of names is the etymological; that the literal meaning of a clinical name is simple, whereas the name itself is best used to connote the complex groups of factors that make up a disease; and that, in particular, the term "neurasthenia" is wasted if applied to simple nervous debility. This is true; yet it is the fact that there is a condition not far removed from the etymological meaning of neurasthenia which stands in need of a name; for it undoubtedly exists, it is pathological, it is an important factor in the etiology of the disease neurasthenia, and, it may be added, it is one of the most potent factors of unhappiness among men. On the analogy of the terms hysteria major and hysteria minor, we may perhaps describe this lesser (but more important) condition as neurasthenia minor, giving the name neurasthenia major to the recognized disease.

Neurasthenia minor is hereditary (though the heredity is often, if not usually, transmuted), and is also congenital. It consists apparently of an inborn feebleness of nervous impulses, both centripetal and centrifugal. Young children who suffer from it are often bright and lively, but they tire easily, and suffer very frequently from infantile complaints. As they grow older, one notices that their sensory acuteness and power of observation are below the normal. All will remember how, among their childish playmates, some were quick at finding a lost ball, and others very slow. Sufferers from neurasthenia minor are always slow. Co-ordination, too, is not good; appropriate action does not follow promptly on sensation, as in the case of healthy children; so that these subjects are not good at games. How far the memory is affected, apart from that feebleness which results necessarily from feeble primary impressions, it is difficult to say. Perseverance, attention, and application are deficient, and dawdling becomes a habit. The will is weak; all children are suggestible, but these more than others. Among them

arise those cases of "pathological piety," of which Dr. Wendell Holmes wrote; this is due to their lack of energy, to the timidity that accompanies this lack of energy, and also to the fact that, being more suggestible than most children, they are more open to emotional appeals. Often, too, they are "pathologically intellectual;" they pore over books, and are supposed to be studious, and do in fact learn book lessons better than the vigorous boy who neglects work for games, though not proportionately to the time they devote to them. These "studious," and sometimes really bright, children rarely redeem the supposed promise of their youth. Their poring over books is really due to the fact that reading is the easiest of all intellectual operations save one, requiring neither application, observation, nor thought; but unfortunately there is a popular belief that it is a sign of an intellectual disposition, and this encourages the young neurasthenics to indulge in the pernicious habit. The very easiest of all intellectual operations—day-dreaming—they learn early too, though it does not come to its full development till after the expansion of the self-centred emotions at puberty. Puberty often brings masturbation—a vice caused by the action of the newly-aroused sexual feelings on a listless, day-dreaming mind. At a more advanced age their instinctive turning away from effort may lead to the habit of drinking. I do not mean that most neurasthenics drink; I do not think they do; but I believe that in some cases neurasthenia minor helps to promote the habit. It is easier to loaf in the bar of a restaurant than to plod on at hard work, or to exert the constant self-control and consideration for others that are necessary in society. In adult life the languor continues, and is usually increased in spring; in the morning the sufferer wakes slowly and wakes tired, the tiredness lessening as the day advances; the weakness of will continues, and there is a want of power to roll away worries and unpleasant thoughts from the mind. It is this last feature that renders neurasthenia minor so potent a factor of unhappiness. Vasomotor instability and defective metabolism are common. So also is constipation; in those cases in which atonic dyspepsia has preceded an attack of neurasthenia major, it has probably been a symptom of neurasthenia minor.

It will be observed that some of the symptoms ascribed above to neurasthenia minor in childhood are often attributed to postnasal adenoids. The two conditions are very often associated, but to explain the nature of their association will require more knowledge of the etiology of adenoids than we possess at present.

It is unnecessary to enumerate the now well known symptoms of neurasthenia major, but a few words may be said about its etiology. From the pathogenetic point of view there appear to be two classes of cases.

1. Cases arising from shock. Among these I include not only traumatic neurasthenia, but also cases arising in a previously healthy individual from any sudden and severe mental shock. I have not myself seen an example of this last, but cases are described.

2. Cases due to the exacerbation of neurasthenia minor by depressing (or toxic) influences. The chief of these influences appear to be: (1) Worry and anxiety, (2) a relaxing climate, (3) certain illnesses, (4) prolonged drug intoxications, (5) prolonged autointoxication, (6) prolonged malnutrition, (7) prolonged exhaustion.

Of these, the first is far the commonest, and it is an influence to which the subjects of neurasthenia minor are especially liable. The second I have not seen described, but circumstances have led me to see a number of cases of it. The rest I have not seen, and have taken on the authority of others. I have known autointoxication to exacerbate both neurasthenia minor and neurasthenia major, but cannot satisfy myself that I have seen it actually convert the former into the latter. The seventh must be rare; cases ascribed to overwork are usually due to worry.

Though it does not come under the heading of this paper, a few words may be allowed on the upbringing of children subject to neurasthenia minor. Such children should receive a careful physical education, having a view not only to their vigour, but also to their power of co-ordination, and to a prompt and correct sequence of sensation and action. Their sensory acuteness, observation, and memory of observed facts should all be trained. Reading should be carefully supervised and limited, and all dawdling and day-dreaming rigorously repressed. Both in childhood and in adult life relaxing climates should be avoided.

REFERENCE.

[1] BRITISH MEDICAL JOURNAL, October 18th, 1902, p. 1208.

THE KNOCK-OUT BLOW ON THE POINT OF THE JAW.

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IN boxing contests a number of rounds are fought of two minutes' duration, there being one minute's interval between each. If a man cannot come up after that interval he is the loser, and if he be knocked down during a round he is given ten counted seconds to recover and resume his feet, or, if unable to do so, he is declared defeated. When large purses are at stake and reputations to be made or lost, the competitors endeavour as speedily as possible to effect a *coup de grâce*; and the blow which most effectually does this is one on the point of the jaw, the physiology of which is of interest.

The point of the jaw is situated on either side of the symphysis of the lower maxillary bone and corresponds nearly with the mental fossa; if a line, as in the photograph, be



drawn from this point to the centre of the odontoid process of the axis bone, which is the centre for rotation of the head, and is in close proximity to that for flexion and extension also, it will be seen what a powerful lever there is to turn the head in any direction. The attachments and feebleness of the muscles for rotation prevent much resistance being offered. The blow must be delivered hard and sharp, a stinging blow, weight is not necessary. The arm is usually bent at the elbow which is fixed, and the direction of the force is more or less at right angles to the line I have described, and slightly upwards, the hand falls upon the point shown by the asterisk; hence the head is jerked round suddenly to the full degree of rotation and backwards. The more unusual blow producing much the same result is an upper cut under the chin, the force is now upwards and slightly backwards.

Now a man, though in perfect condition, going strong, neither tired nor blown, receiving a blow such as I describe, instantly collapses and falls to the ground. He may be winning easily to all appearances, and in a future contest defeat the same opponent without trouble in a few rounds, still he falls, is counted out, and must accept his ill luck as the fortune of war. The man may fall in several ways, he may be lifted clean off his feet and land upon his back, or if he be coming in at the moment of impact he will drop on his face or side.

The attitude assumed in recovery, which may be instantaneous or delayed some minutes, rarely hours (unless some other element be introduced), is most characteristic. The fallen man begins to squirm about, raises his head and rolls his eyes around in an attempt to locate himself, and he tries to get on his side and elbow; he then makes a sustained but often futile effort to rise on his hands and knees; if successful in this he regains his feet, staggers around as if groping in the dark or like a drunken man; he may even if not counted out reopen hostilities, only, however, in most instances, to render himself an easy prey to his adversary, who floors him again. The sensations of the victim are not easily described, though any one who has experienced only a slight blow on the point of the jaw does not readily forget the feeling of helplessness which comes over him, and is well described by Mr. Allanson-Winn[1] in the following words:

The "point of the jaw hit" is a horrid head-jerking affair, compared with which a flush hit on the nose, with all its concomitant stars and stripes, is a mere fleabite. Even a moderate infliction of this terrible hit is sufficiently punishing to make one feel uncertain whether you are twisting round the surroundings, or the surroundings are twisting round you, or whether both are not waltzing away together; but a severe visitation, if it does not break the jaw, is likely to produce an absence of interest in subsequent proceedings, or a complete forgetfulness of all immediate and pressing engagements.

This blow is practically never fatal, an after-examination of the man shows the heart's action to be excited only in due ratio to the condition of the exertion, pulse regular and of good quality, respiration the same; there is neither contraction nor dilatation of the pupils, no squinting, no severe headache, no clammy sweat, no cold extremities, and no ashy colour of the face; in fact, none of the usual signs associated with ordinary shock or concussion.

The following degrees of severity may be noted according to the force and accuracy of the blow: (1) Giddiness and visual disturbance, with loss of equilibrium; the man falls to the ground, is able to recover almost instantly, and resume hostilities little the worse. (2) Unconsciousness, several seconds elapsing before he is able to rise; then he is shaky, uncertain in his movements; he has no recollection of the blow, and evinces surprise and indefiniteness about his position. (3) Complete loss of consciousness, prolonged for several minutes or hours, which is not followed by perfect recovery, the man being left dull and apathetic, never to gain his old nerve and courage.

Equilibrium and the semicircular canals of the ears. That these canals have to do with the maintenance of equilibrium is now an accepted fact, proved by the experiments of Lee upon dog fish, and the researches of many others in the realms of physiology and also pathology. These canals are so placed in their respective planes as to be specially adapted for this purpose. The statical explanation of their action is not proved; but the kinetic theory is to be accepted. They also have had ascribed to them the power of preserving proper muscular tone. A close relationship exists between these canals and the eyes.

The frequent occurrence of nystagmus in disease of these organs must be noted, and also the normal bilateral deviation which occurs when the head is turned in any direction.

When a moderate rotation is imparted to the body, the endolymph currents convey a stimulus to the hair cells in the canals and the ampullae (*crista acoustica*), which raises a definite and clear impression in the brain and consciousness, and we are aware of movement and change of position, independent of vision altogether, though more accurately determined when the eyes are called into play.

A slight exaggeration of this occurs when a moderate blow is received on the point of the jaw; the head is jerked suddenly round on its axis, and this rotatory movement sets up currents in the endolymph, which, if the force be applied in the horizontal plane, cause surrounding objects to appear to move around; but if the plane be altered towards the vertical in more or less degree these objects seem to dance up and down as well.

But let the blow be severe and then the rotatory movement is so intense that the nerve endings are stunned by the force of the sudden impact of the endolymph, the power of sustaining equilibrium is lost hopelessly, and the man falls to the ground in an unconscious condition. As soon as the fluid gains a condition of quiescence, he is able to grasp the situation, opens his eyes gradually, aided by touch and sight he regains his feet and soon feels himself again.

Captain Edgeworth Johnstone[2] states that the sudden twisting of the head, which he also recognizes as the primary movement, causes probably a jarring of the medulla oblongata, and a temporary constriction of the vertebral arteries, and anaemia of the brain; but this view I cannot accept.

We cannot constrict these vessels by merely normal rotation of the head, if they were constricted the symptoms produced would be entirely different from those I have described; we should experience them if our heads were twisted round beyond a certain point, which is not so; and again all these effects (concussion which in the severest type is added being eliminated) may be experienced if the body as a whole be rotated on a moving platform.

A centrifugal drying machine was, on one occasion, accidentally set in motion while a friend of mine was in it, and though quickly stopped, the inmate was already blind, helpless, unable to stand, and his memory was seriously affected; but all the symptoms speedily disappeared after a rest on the back.

A careful consideration of the signs I have endeavoured to describe will at once show that there is present something more definite than concussion and shock. The rotation of objects seen by the eyes in different planes is in direct relation to the direction in which the force of the blow falls, the several degrees of intensity in ratio to the amount of force of impact, and the speedy recovery in all but the most severe cases, when probably other elements come into play; and the fact that the blow must be such as to impart a rotatory movement to the head, or head and body as well; a flush hit straight on the nose, between the eyes on the side of the head, will knock a man down; but not with the signs of equilibrial disturbance; all point, in my opinion, to their origin in the endolymph in the semicircular canals.

References.
[1] *Boxing*, Sports Library, by Allanson-Winn, p. 55. [2] *Boxing*, by Captain Edgeworth Johnstone, p. 141.

The Goulstonian Lectures

ON

THEORIES OF IMMUNITY AND THEIR CLINICAL APPLICATION.

Delivered at the Royal College of Physicians, London.

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LECTURE III.

Actions of Curative Serums other than Antitoxic and Bactericidal.

We have seen that the introduction of the serum of one animal into the tissues of another, especially of a different species, leads to the formation of antidotes to that particular kind of serum. In some instances indeed the serum of one animal may be toxic for another. The introduction, therefore, of a quantity of horse serum into the human body may not be—indeed, is not—always a matter of indifference. We know that in the case of diphtheria antitoxin a certain percentage of cases have eruptions, joint pains, etc., which are probably to be assigned to the alien serum. Perhaps the juvenile serum is of a more primitive nature than the adult, since children are said to stand prophylactic injections of diphtheria antitoxin better than those already grown up.

But in the case of antitoxic serums these side-chains do not interfere with their efficiency. Nor will any harm arise from a dose beyond what is necessary for mere neutralization of the toxin: on the contrary, the excess may dissociate a union of toxin and cell already completed. There is not at present any evidence to show that the toxin formed by the B. diphtheriae in the human body is not efficiently neutralized by the antitoxin formed in the horse's tissues.

With bactericidal serums the case is rather different, because for their efficient action both amboceptors and complement are required. It is obvious that efficiency will be attained only if both components are present in sufficient quantity, but it is the number of amboceptors resulting from the process of immunization which will determine to a large extent the potency of the bactericidal serum, since they are present in normal blood only in small quantity.

The complement, as we know, is much more unstable, and may, on keeping of the bactericidal serum, either disappear or be converted into complementoid. On the other hand, complement is present in quantity and variety in normal serum, so that the introduction of amboceptors alone in the bactericidal serum will often suffice for its efficient action. But the quantitative relations of amboceptor and complement are of extreme importance. It has been known for some time that a medium dose of a bactericidal serum may save an animal from a lethal infection, whilst a larger or smaller quantity fails to do so. The explanation seems to be as follows: If the two components are present in corresponding quantities the amboceptor will unite with the bacterium by its haptophore group, the complement will then fit into the complementophile group of the amboceptor, and the bacterium will be destroyed.

But with an excess of amboceptors an alteration of equilibrium takes place, and the affinity of the complementophile group of the engaged amboceptor for the complement may be altered. If increased there is no harm done, because the complements will unite with the already engaged—that is, effective—amboceptors. If the affinity remains equal the complements will be equally distributed and only half will take part in the bactericidal action, and the efficiency of the serum will be correspondingly reduced. If the affinity is diminished the result will be even more unfavourable, for then the complements will become first

attached to all the unengaged amboceptors, and only the remainder available for effective bactericidal action.

Consequently, under certain circumstances too much bactericidal serum may do more harm than good.

Even if sufficient complement be introduced with the bactericidal serum, it may lead to the formation of anticomplement, and so, although a suitable complement as such will usually be present in the immune serum used for curative purposes, it may become engaged with the anti-complement and so be rendered useless.

On the other hand, in active immunization, although so far as we know there is no increased production of complement, that already existing in the organism will fit and activate the amboceptors formed during the immunizing process.

Since the complement contents and quality of the blood can be tested against a bactericidal serum *in vitro*, it is possible to ascertain in advance whether any bactericidal serum is likely to be of use or not for any individual case. It may even be possible to artificially induce the formation of deficient amboceptors in individuals in whom we recognize a diathetic deficiency—for example, in persons disposed to tubercle—and so make good the adage of prevention being better than cure.

What are the practical applications to be learnt from these experimental investigations regarding toxins and antitoxins? In the first place, it is obvious that any antitoxic serum which we possess should be applied as soon as possible after the recognition of the illness. Since most of the evidence goes to show that the mere injection of an antitoxic serum does not appreciably stimulate the formation of antitoxins in the body; since, moreover, any definite quantity of antitoxin will neutralize only a definite quantity of toxin, the object should be to inject before much toxin is formed.

We know that the toxins act directly on certain cells, and may have a greater avidity for them than for the corresponding receptors of the antitoxin. It may even be impossible to break the bond of toxin with cell, or possible only with a large excess of antitoxin: again another reason for its early administration.

The experimental investigations regarding tetanus and its antitoxin also give a clue as to the mode of application of antitoxin. In this instance we know that the toxin especially attacks the nerve cells of the brain, and more especially, it would appear, those of the motor area. Consequently it appears advisable to apply the antitoxin somewhere in proximity—namely, subdurally or intracerebrally, so that it may fix the toxin before it is bound or before it is indissociably bound or has destroyed the nerve cell. There is, to my mind, much more hope for cure in man in the particular case of tetanus, because the toxin is formed but slowly at the site of inoculation, and not introduced comparatively rapidly into the circulation as in experiments with animals.

Very little antidote is formed in certain cases in man, even when the attack is mild or successfully resisted, for example, in septicaemia. For this reason the administration of the serum should be continued for some time after apparent recovery until its action is quite complete. Since the antidotes are often not destroyed by digestion, it should be remembered that a curative serum may often be given with good result by the mouth.

Remembering also the ease with which the complement becomes inactive, it is obvious that all curative serums should be used as fresh as possible. Antivenomous serum undergoes a comparatively rapid and great deterioration in the climate of India.

INCUBATION.

By the incubation period of a disease we usually understand the period elapsing between the exposure to infection and the appearance of symptoms. We know that in different individuals this period will vary. The theory of immunity offers a rational explanation. We shall see how individuals differ both as regards the mediators and also the complements present in the blood. It is only to be anticipated that this variation, representing as it does a variable power of resistance to the bacterial invasion, will cause differences in the time taken until such reserve shall have been used up, that is, until infection is in full swing. Moreover, since the infective agents may also vary both in strength and in number, an additional factor for marginal differences is introduced. But the incubation period includes a number of processes and phenomena which are not expressed or explained in such a diagrammatic description. With the more slowly-acting poisons the incubation period cannot be reduced below certain limits, however great the dose administered.

According to Ehrlich's theory—but this explanation is not admitted by his opponents—the incubation period results from the separate action of the two groups in the toxin; the haptophore group becomes gradually attached, and not until this process is complete can the toxophore group act. The following experiments support this supposition: Frogs injected with tetanotoxin and kept at 8° C. do not develop tetanus; but they do if subsequently exposed to a temperature of 38° C. They can be saved by the injection of antitoxin before being raised to 38° C., but the longer the interval between the two injections the larger the dose of antitoxin necessary. On the other hand, if a "warm frog" be injected with tetanus toxin, and after twenty-four hours, but before there are any symptoms of tetanus, be cooled, no symptoms develop. But if now antitoxin be injected and the frog again made warm, tetanus nevertheless develops, and cannot be arrested by any dose, however large, of antitoxin. The union of toxin to nerve cell occurs so rapidly and completely in the warm frog that subsequent disruption by antitoxin is no longer possible.

There is experimental proof to show that such a union can be undone and it can be explained only on the supposition of mass action and greater avidity of the antitoxin.

It has been objected by some that no proof is afforded by these experiments of a separate toxophore group in the toxin molecule. This objection is valid, but there is also nothing in these observations inconsistent with such a supposition, far less anything to disprove it.

EFFECTS OF PROTECTIVE INOCULATION AND INFECTION ON IMMUNITY.

It might have been supposed that an attack of a disease would be the most effectual way of conferring immunity. Within limits this supposition is probably correct. In smallpox we know it to be so, and if the *causa morbi* be at all analogous in scarlet fever, measles, etc., it is very likely to be the same with these diseases.

But in those infections of which we know the micro-organism it happens that the individual may survive an infection and yet have no antitoxin in his blood. Both men and guinea-pigs recovering from tetanus have generally no antitoxin in their circulation. The attack on the cells is so severe that only a sufficient quantity of side-chains is formed and no excess. A mild attack will confer more immunity than a severe one.

Consequently for protection against such diseases a process of slow immunization is preferable. In the case of typhoid it would appear that various strains of the bacillus should be used; and since the immunity conferred does not last long, revaccination at comparatively short intervals is advisable.

This procedure is far more effective than any attempt to confer passive immunity by the injection of an immune serum, for it has been shown that the bactericidal antidotes are different and special for different animals.

Thus rabbits injected with goats' cholera immune serum form anti-antidotes for goats only, not for other animals. This affords further proof that the immune serum merely contains an excess of normal mediators and not new ones; also that amboceptors for any bacterial species exist separately.

The introduction of the hetero-immune serum thus leading to the formation of anti-antidotes explains the short duration of passive immunity, for the amboceptors are thus neutralized and rendered useless. On the other hand, the long duration of active immunity is accounted for by the stimulated production of mediators already naturally present, to which, of course, no antidote will be formed.

The fact that several tissues may take part in the process must be always kept in mind. Viewed in this way, the treatment of tuberculosis by injections of tuberculin is perfectly logical. One naturally feels inclined to argue that since the toxin is already being formed in the consumptive the introduction of more is likely to do harm rather than good. But it is formed at and largely limited to an area of cells obviously too weak to resist, whereas the other tissues may, and do, produce suitable antidotes. In my own opinion and experience the tuberculin cure has been unfairly discredited, and would form the most valuable part of sanatorium treatment. The latter by itself can at most induce a general resistance, possibly by securing the occupation of the nutrient receptors by nutrient molecules only. It cannot produce any specific improvement (as the subsequent tendency to relapse shows) of the diathetic deficiency in special mediators antagonistic to infection by the tubercle bacillus. This is effected by tuberculin.

RELAPSES AND REINFECTIONS.

Several reasons may be assigned in explanation of relapse. To begin with, the organism may have been so exhausted by the disease that no new adequate reproduction of amboceptors takes place. The tissue cells no longer respond to the stimulus, and the toxin or bacterium can attack the specific, most sensitive cell. Thus a horse highly immunized in the sense of having much antitoxin in its blood may yet succumb to a fresh injection of toxin by the exhaustion of its tissue cells, which now permit the toxin to proceed direct to and to poison the nerve cells. For in an actively immunized animal the toxin has greater affinity to the body cells than to the

antitoxin, whilst the reverse is the case with passively immunized animals.

On the other hand, a total loss of receptors should also lead theoretically to immunity, and experimental corroboration of this hypothesis is forthcoming in the fact that such immunized horses may stand large doses of toxin, but yield no antitoxin. In the absence of receptors there is no toxic action, and no necessity for the formation of antitoxin. The receptors for other toxins are not lost at the same time; such an animal can be and is used for the preparation of another antitoxin.

But relapses may also be explained in another way. The evidence regarding agglutinins showed that even in the same species there were individual differences in the various strains of B. typhi abd., α, β, γ, etc., so that while the antidote may be formed for one strain (α) it need not be for another (β), which then in its turn causes an exacerbation of the disease. In all probability some of the amboceptors thrown off to inhibit (α) will fit some of the receptors of (β), so that the relapse will be less severe than the original attack. We know as a matter of experience that relapses are not often fatal, at any rate in enterica.

The same line of argument will hold good for reinfections; it is then merely a question of time. The suitable amboceptors may have been already all excreted since the former attack, but it may also be that reinfection or a second attack may be produced by a bacillus of a slightly different strain.

Natural protection sometimes depends on the possession of an appreciable quantity of appropriate antidote.

We have already seen that bacteria are not digested in the alimentary canal, and it is a familiar fact that ascarides can survive the digestive juices. It has recently been shown that the body wall of ascaris contains an anti-enzyme to pepsin; and also what is more important and interesting, that the human stomach wall contains an anti-enzyme to its own ferment. It is an obvious deduction to infer that a diminution in quantity of this antipepsin may have an etiological relation to gastric ulcer. By the production of an anti-antipeptic serum, an experimental verification of this inference would be possible.

There may be an underlying current of rationalism in the practice of periodical venesection in times gone by. The abstraction of protective bodies ought in the healthy organism to stimulate their reproduction and their over-production. In some animals there seems to be a seasonal variation in the bactericidal power of the blood; who knows but this may be so in man too, and that by instinct our forefathers may have fallen on the most appropriate season? The question admits of experimental solution, and a simple investigation would give the answer.

This line of thought suggests another mode of treatment based on Ehrlich's theory. Since infection is not possible in the absence of suitable receptors, it might be feasible to devise some means for destroying these particular receptors. The method in our present state of knowledge would not be dangerless, for we might unwittingly destroy also nutritive receptors, and do more damage than good to the patient. Perhaps it will form a part of the therapy of the future.

Predisposition.

By this term we understand an increased liability beyond the average of any individual to be attacked by a given or any disease. The existence of this tendency has long been recognized by clinicians, but by them rather surrounded with an air of mystery—at any rate, no material explanation was forthcoming.

When we speak of the thick-necked, red-faced, pig-eyed individual as being an apoplectic subject, or as predisposed to cerebral haemorrhage, we recognize certain mechanical features of his anatomy which lead to producing certain physiological or pathological results, especially favourable to cerebral apoplexy. There is probably a similar but less definite line of thought in saying that "the strumous disposition.....is indicated by light or red hair, grey or blue eyes with large and sluggish pupils and long silky lashes, a fair transparent brilliancy of skin, and rosy cheeks." or "in persons of dark, muddy complexion and harsh skin; in whom the mental and body energies are more sluggish and dull."

But description is not explanation; diathesis is not a reason.

Does Ehrlich's theory afford any explanation? We have only to suppose that there is a paucity of production of those mediators especially capable of dealing with the tubercle bacillus and its products in individuals, to whom Sir Thomas Watson's graphic description applies.

Is there any experimental foundation for assuming that individual differences of such a nature exist in the same species? The experiments of Ehrlich and others show not only that such differences exist, but that peculiar properties of the blood may be inherited.

Thus it was found that if the serum of a goat A. were injected into goat B., B.'s serum would haemolyze A.'s xanthocytes, but not C.'s or D.'s, while it might act on E.'s. Here we have clear evidence of individual similarities and differences in the same race. Experiments with the blood of man by Shattock, myself, and others have revealed similar individual differences. Moreover Bulloch has shown that haemolysin may be transmitted from mother to offspring; and if an existing property may be so transmitted, the absence of it is even more likely to occur. Hence it seems only natural that predisposition is likely to be hereditary, and is to be met by improvement of environment and production of the deficient mediators.

Such predisposition can also be acquired, but it then shades off into the conditions to be considered under the heading of susceptibility.

Susceptibility.

This is very nearly allied to predisposition; it may perhaps be defined as acquired predisposition. It may be due theoretically to various causes. An absence or diminution in quantity of normal circulating mediators or the receptors for the nutritive groups may through malnutrition be left unoccupied and unguarded and consequently attacked by toxic groups, or there may be a diminution of complement.

Malnutrition is popularly and probably correctly considered to predispose towards infection, even when temporary—namely, at the time when the next meal is due. I am not aware of any direct experimental evidence in support of this hypothesis, but it can be tested experimentally.

We know that infants brought up at the breast are less susceptible to disease than infants reared on cow's milk or other artificial food, and it has been shown that the bactericidal power of the blood is deficient in the latter as compared with the former class. It is to variations in conditions of this kind that we must attribute infections by normal parasites, such as B. coli (appendicitis), and perhaps also by B. typhi abdominalis, which Koch considers a normal inhabitant of the human intestine.

As illustrating the varying susceptibility in spite of nearness of relationship I might instance the chimpanzee. We know that it spontaneously suffers from ankylostomiasis, filariasis, and trypanosomatosis. Of the first disease I have unfortunately practical experience, having lost at least one chimpanzee from it. The occurrence of the other two diseases has been recorded by Ziemann. I have been able without difficulty to infect the animal with typhoid fever as these two specimens will demonstrate. One single dose was given by the mouth. The animal was killed twelve days later.

The close relationship of its blood to man has been shown by Friedenthal and by myself. The former showed that the injection of large quantities of his own blood into a chimpanzee was not followed by any haemoglobinuria, while my own experiments demonstrated, by the injection of rabbits with human and chimpanzee blood respectively, the practical identity of the precipitins formed in each case.

In spite of this close relationship attempts to produce diseases like scarlet fever and measles in the chimpanzee have failed. It is true that on one occasion after swabbing out the throat with a swab from the throat of a case of scarlet fever an exudative tonsillitis resulted and from the chimpanzee throat the so-called S. scarlatinae was isolated, but I do not think the chimpanzee had scarlet fever. Apparently the chimpanzee's cells do not possess receptors for the poison of scarlet fever or measles.

Certain acquired habits are known to predispose towards disease, for example, alcoholism to phthisis. Have we any material evidence to show in what the predisposition consists? The experiments of Abbott and Bergey have shown that the administration to rabbits of alcohol diminishes the serum complement of the blood, while others have shown that it renders the rabbit more susceptible to infection by pathogenic organisms. In the case of man, diminution in the amount of serum complement in the last stages of disease has been shown on several occasions, and affords an explanation of terminal infections.

There remains a clinically very important form of acquired susceptibility. It is a matter of common knowledge that the period of immunity, if any, after an attack of pneumonia, influenza, or erysipelas is very short, and the patient often seems more susceptible than before to the disease. We have seen that the blood acquires but very feeble antitoxic or bactericidal power over the infecting organism; the stimulus to over-production seems to be very slight. Supposing this to be so, and the number of receptors reproduced not to exceed that which the cell can retain and to be less than before, the susceptibility will be increased.

Serum Diagnosis.

The existence of the agglutinins was one of the earlier results of modern investigations into immunity. They form a valuable means of identifying bacterial species and recognizing the degree of relationship between various species, whilst they have also been employed practically as a diagnostic sign in disease.* So much has been written and said about them in the past seven years, that it is hardly necessary to enter into a detailed description of their

* First performed on March 14th, 1896, and first mentioned by Gruber at the Wiesbaden Congress in April, 1896. The first publication, by Widal, was on June 26th, 1896, but he has not consented to give the date on which he first performed serum diagnosis, so that it was presumably after mine and after Gruber's utterance

characters and production. We may mention, in passing, that the most recent work shows their probable identity with the precipitations, but not with the amboceptors, since a serum can be produced, after suitable treatment, by B. pyocyaneus, which possesses immunizing but not agglutinating properties.

But in the practical application of serum diagnosis various phenomena may occur which must be known and understood in estimating the value of the results. In spite of early warnings, some at once pinned their faith on the supposed infallibility of the test, and then finding that it was unable to always determine an uncertain diagnosis, became unbelievers. The agglutinins, although not identical with the amboceptors, nevertheless go roughly together with them in their rate and conditions of production under ordinary circumstances. Consequently in very severe infections, when all the cells are hard hit, and many of them succumb, the agglutinin may either be used up or not formed, so that it is but natural for the reaction to be feeble or absent until the patient is already on the road to recovery. On the other hand, in mild attacks, which may be the result of either milder infections or of greater resistance, the reaction may naturally appear sooner and be stronger. Or, again, its absence may be due to an error in diagnosis. Finally, it may be the result of faulty technique.

The following points are worthy of consideration: Agglutinins may become converted into agglutinoids. These would in this form also unite with the bacilli like the complementoids with the amboceptor, but without producing any specific effect; no agglutination would take place. The bacilli may lose their agglutinability, although retaining the power of uniting with the agglutinin—namely, their agglutinable substance loses its functional atom group. This group is comparatively unstable, so that unsuitable culture media, etc., may make the bacilli nonagglutinable, although uniting with the agglutinin. If the serum contain both agglutinins and agglutinoids, and the latter have the greater affinity for the bacteria, even if present in less quantity, they may inhibit agglutination until the serum is so far diluted as to give the agglutinins a greater chance. This explains an early observation of my own for which I was then quite unable to account, that a higher dilution would sometimes agglutinate when a lower one would not.

The agglutinable substance is partly soluble in NaCl solution, so that an emulsion of bacilli should always be made fresh, or the reaction becomes less sensitive.

Partial Agglutinins.

This expression is used to indicate the fact that several agglutinins may exist in a serum and may have slightly different cytophile groups, so that they will react differently as regards intensity with different strains of the same bacillus. Some may even act on nearly allied bacilii. Consequently it is a matter of importance what culture is used for serum diagnosis. It is also important in using an agglutinative serum, both for the identification of a bacillus and for a serum diagnosis, that the serum should be diluted as much as possible consistent with obvious action, since in this way the misleading action of the less numerous agglutinins is eliminated.

The serum reaction is also likely to be absent in cases of erroneous diagnosis. If bacteria are otherwise nearly allied it is, at any rate, possible that they may produce symptoms having much clinical resemblance. This seems to be so in typho-coloid fever. On the other hand the relationship between the bacteria may be so close that the patient's serum may act on each in comparatively low dilutions, and the various strains may be separable only by degrees of dilution. Of course, discretion and reason must be exercised in all these cases, so that serum diagnosis requires not only considerable technical knowledge and skill, but also an acquaintance with the clinical features of the case under investigation. It is only a symptom, and its value as such in any particular case will vary like the value of any other symptom.

There is a strange gap in our knowledge of etiology regarding those diseases of which one attack produces a very lasting immunity: of small-pox, typhus, scarlet fever, measles, and others we do not know the morbific germ. It is a curious coincidence that these diseases happen to be the most infectious. I believe that the discovery of their causes would throw great light on the phenomena of immunity. Even with our present knowledge I think we can assert that they are cases of mixed infection in which streptococci play a part, but only the minor part, as often in tubercle and diphtheria. Streptococcus scarlatinae seems to occur pretty constantly in the throat and in the blood of scarlet fever patients. In two cases of measles I have found in the heart blood at the necropsy a streptococcus which is always present in the throats of measles patients. But to my mind it is pretty certain that these are only accessory causes. For we know that immunity to streptococcus infection is short, and second attacks are common. Many people exposed to scarlet fever infection get sore throats repeatedly, but no scarlet fever; and streptococcus scarlatinae has been isolated from such cases.

The infectious fevers form an attractive theme for theorizing, and a yet more attractive object for investigation. Their infectivity does not seem to be all of one kind. Thus yellow fever, an attack of which also confers a long immunity, has until quite recently been regarded as highly infectious. Yet the infection is certainly not by contagion; it is transmitted by the mosquito. The pathogenic micro-organism has not yet been found. Can it be that the infectious diseases of temperate climates are transmitted in a similar fashion? It seems possible, but unlikely.

Even so, we are not any nearer either the cause of the disease nor the reason for the long immunity. But I believe the discoverer of the cause will find with it the key to the innermost temple of the Theory of Immunity.

ON THE

BACTERIOLYTIC POWER OF THE BLOOD, AND ON ITS RELATION TO THE PROBLEMS OF ANTITYPHOID INOCULATION AND THE RECENT WORK OF DR. MACFADYEN.

By A. E. WRIGHT, M.D.,

Late Professor of Pathology, Army Medical School, Netley; Pathologist to St. Mary's Hospital, W.

The publication in the form of editorials in the last two numbers of the British Medical Journal of the results of Dr. A. Macfadyen's researches on immunization against typhoid fever and the serumtherapy of the disease affords a convenient opportunity for bringing forward certain observations on the bacteriolytic power of the blood, and certain criticisms of Dr. Macfadyen's work. I may deal seriatim with the more important of the issues raised.

Problem of the Proper Constitution of the Vaccine.

In undertaking researches in connexion with the production of immunity against typhoid fever, the following propositions only can legitimately be taken as axiomatic:

1. The vaccine material must derive from a culture of the bacillus typhosus.

2. Owing to the risk which would attach to the employment of living cultures the vaccine material must consist either of a sterilized typhoid culture or of a constituent isolated from such a culture.

3. The vaccine material, however constituted, must be free from contaminating micro-organisms.

Every other point in connexion with the constitution of the vaccine material is a debatable point, and deserves to be experimentally investigated. Among these points is, of course, the question as to whether the vaccine material I employ—which consists of agar or broth cultures sterilized at 60° C.—constitutes the ideal vaccine material. It seems to me that the path of progress may possibly lie in eliminating from these cultures any poisonous element which may be found inert with respect to the production of immunizing substances. Reserving this point, I may here address myself to the task of considering whether Dr. Macfadyen's vaccine material—constituted as it is by triturating typhoid bacteria at the temperature of liquid air—presents advantages over the ordinary sterilized culture which I employ.

In view of the results I have obtained in the course of an experimental inquiry into the fate of typhoid bacteria introduced into the blood and lymph, it appears to me that the question I have raised above may be answered in the negative. I find that when an ordinary twenty-four-hour-old typhoid culture—supposing it to contain not more than about 1,000,000,000 typhoid bacteria in the cubic centimetre—is mixed in a capillary tube with an equal quantity of normal human serum or lymph (blister fluid), and is digested with this serum or lymph for thirty minutes at blood heat, considerably over 99 per cent. of the typhoid bacteria are dissolved by the

serum. Where the experiment is carried out subsequent to inoculation with the typhoid vaccine I employ, a precisely similar effect may be obtained by the addition of one-fifth volume of serum or less to one volume of culture.

The technique employed is as follows:

Fitting a rubber teat on to a piece of glass tubing drawn out into a capillary stem, and placing a mark somewhere upon that stem, we draw up into the tube first one volume of a non-agglutinating human blood obtained from a prick in the finger, and then—keeping the successive volumes apart by bubbles of air—four volumes of an ordinary twenty-four-hour-old broth culture of the typhoid bacillus. Having intimately mixed the blood and the culture we place a drop of the mixture upon a carefully cleaned slide and draw it out into a thin film. The preparation is now stained with Leishman's stain or it is simply mounted in air under a coverglass. We then—employing an oil immersion lens and a high ocular—count the relative number of bacteria and red blood corpuscles on a succession of fields. Then taking the number of red blood corpuscles as corresponding to the normal of 5,000,000,000 in the cubic centimetre, we calculate out from the ratio of red blood corpuscles to bacteria the number of micro-organisms in the cubic centimetre, taking into consideration the fact that four volumes of the broth culture have been mixed with a single volume of blood.* At the same time we take up into another capillary tube one volume of the serum which we desire to test and one volume of the typhoid culture. After mixing the contents of the tube we maintain them at a temperature of 37° C. for half an hour. At the expiration of this period we take as before one volume of blood from the finger and mix this with four volumes of the digested serum and typhoid culture which have just been digested together. Preparing a film as before, we find on searching it with the oil immersion only a few isolated typhoid bacteria, instead of the many millions in the original film.

If we desire to arrive at the exact number of the bacteria which have survived, we employ the following procedure, which has been worked out by my friend Captain Stewart Douglas, I.M.S. We take an aliquot volume of the digested serum and culture, dilute it by mixing with it, by the technique referred to above, nine volumes of broth. Mixture having been effected, and a portion of the mixture having been reserved for further employment, we take a measured volume of our ten-fold dilution and spread it out over the surface of an agar tube of nutrient agar. To our reserved portion of tenfold dilution we now add nine further volumes of broth, and we again plant out upon agar a measured volume of the hundred-fold dilution thus obtained. We then place the agar tubes in the incubator, count the number of colonies which develop, and calculate from these data the number of surviving bacteria.†

The following figures, which represent the numbers of bacteria dealt with and the number of survivors found in the case of three successive experiments instituted by Captain Douglas with typhoid cultures and normal human serum, will give an idea of the magnitude of the forces of dissolution which come into play:

—	Number of Typhoid Bacteria contained per c.cm. in the Culture Employed.	Number of Survivors per c.cm. after Digesting 1 Vol. of Culture with 1 Vol. of Serum at 37° C. for half an hour.
Experiment 1 ...	1,100,000,000	140,000
Experiment 2 ...	1,005,000,000	144,000
Experiment 3 ...	1,050,000,000	156,000

It appears from the above that the trituration of the typhoid bacteria at the temperature of liquid air which constitutes Dr. Macfadyen's technical innovation effects only what is effected spontaneously in the organism when the typhoid bacillus is inoculated. It may be taken that the 1,000,000,000 typhoid bacteria which I administer as a first dose of typhoid vaccine would dissolve in little more than 1 c.cm. of the patient's lymph.

It may suggest itself that even if the process of triturating the bacteria be surplusage from the point of view of obtaining the constituents of the typhoid bacteria in the form of a solution, it may be incidentally of advantage if it avoids the need for the sterilization of the vaccine material by heat. I cannot, however, in view of the difficulty which has been experienced in effecting the sterilization of tubercle cultures by trituration, suppose that a process of after-sterilization would be dispensed with in the case where a typhoid vaccine was to be employed upon man; and I assume, in view of the risks of contamination which are presumably associated with the mechanical operations involved in Dr. Macfadyen's triturating operation, that exposure to a temperature of 60° C. for ten minutes would be quite insufficient for sterilization. The commentary will suggest itself.

* For further details of the enumeration procedure *vide Lancet*, July 5th, 1902.

† The automatic pipette and the procedure figured and described by me in the *Lancet*, July 5th and December 6th, 1902, will be found to furnish convenient means for calibrating the measuring pipette.

Standardization of the Vaccine.

Of dominating importance in connexion with every inoculation process is the standardization of the vaccine. That standardization involves, on the one hand, the determination of the amount of the immunizing element contained in a standard volume of the vaccine material; on the other hand, the adjustment of the dose administered to the resisting powers of the man or animal subjected to the inoculation.

Upon the assumption, which I make in common with Dr. Macfadyen, that a constituent of the bacterial protoplasm constitutes the essential immunizing element, it will be the amount of that protoplasm in the vaccine which will come into consideration in appraising the potency of the vaccine. The amount of that protoplasm can be estimated by two alternative methods. We may either, dealing with a definite volume of culture, enumerate the bacteria; or we may filter off these bacteria, wash on the filter, collect, dry, triturate, weigh, and then add—as is done in the preparation of anti-tubercle vaccine (tuberculin)—to a definite weight of the triturated bacteria a measured volume of fluid. I have adopted the former method, that is, the method of enumerating the bacteria which furnish the bacterial protoplasm. And I have reason to be satisfied with the results, now that I am in possession of the method of enumeration referred to above, which takes account of dead as well as living bacteria. Dr. Macfadyen has adopted—with the difference that he triturates his bacteria for some reason unrevealed at the temperature of liquid air—the method employed in the case of the preparation of tuberculin. I do not, in the light of experience gained in sending out typhoid vaccine in the mass, begrudge him his more complicated procedure.

Adjustment of the Dose of Typhoid Vaccine to the Resisting Power of the Organism subjected to the Inoculation.

The important issues that are involved in the correct regulation of the dose must in this connexion be clearly appreciated. It was first brought out perfectly clearly by Ehrlich in connexion with the inoculation of tetanus toxin, afterwards by Madsen in connexion with the inoculation with diphtheria toxin, that after the inoculation of bacterial toxins into the system there is developed a phase of diminished resistance, followed by a phase of increased resistance dependent upon an elaboration of antitoxins in the organism. The same succession of what I have called "negative" and "positive" phases has been shown to obtain, in connexion with all other inoculation processes which have been investigated. I myself have shown that this law of immunization has a wider application than had been previously discerned. I have demonstrated,[1] in connexion with the therapeutic inoculation of staphylococcus cultures into man that we have here to deal with a negative followed by a positive phase of a phagocytic power, and in the case of antityphoid inoculation[2] in man and animals that we have to deal with a negative followed by a positive phase of the bactericidal power. I have pointed out[3] also that the negative phase may be unduly prolonged, and the prophylactic effects of an inoculation imperilled where excessive doses of bacterial vaccines are inoculated.

Having recognized the general issues involved in the adjustment of the dose of a bacterial vaccine, it would seem that where the application of a typhoid vaccine to man is in contemplation, the experiments which are required ought to be undertaken not on animals but on man himself. I have endeavoured to point the way by devising and applying methods[4] which permit of the effects of a bacterial inoculation being investigated on man in an accurately quantitative manner.

If Dr. Macfayden has not followed this lead in testing the effect of his vaccine material I do not doubt that it is because he assumed that his mechanical operations placed in his hands a vaccine material which was entirely *sui generis*, and which caused the elaboration of an entirely novel series of immunizing substances in any organism that he might choose to subject to inoculation. It is claimed by or for Dr. Macfayden that he has discovered (induced) the elaboration of a novel element, to wit, of a typhoid antitoxin in the blood of his inoculated animals.

I have above expressed the opinion that there is nothing novel in the vaccine material devised by Dr. Macfadyen except that it was prepared with liquid air. I am further of opinion

that we have as yet no reason to conclude that any novel immunizing element has been developed by the inoculation of this vaccine material. When we have realized that an inoculation of a moderate quantity of a typhoid culture is by reason of the dissolution of the bacteria in the fluids of inoculated organism the equivalent of the introduction of a quantum of poisonous bacterial protoplasm in a dissolved form, and when we remember that it has been established in very numerous experiments that a normal animal treated with serum from an inoculated animal will survive the inoculation of an otherwise lethal dose of typhoid culture, we may, it seems to me, infer the presence of antitoxins in the serum which has exerted the therapeutic effect. Even if a difficulty of interpretation there arises in consequence of the complexity of the conditions, all doubt with regard to the elaboration of an antitoxin in the human system after ordinary typhoid inoculation is dispelled by the fact that in every case where a proper interval has been observed between first and second inoculation the symptoms are much slighter after a second inoculation undertaken with a larger dose, than after the first inoculation undertaken with a smaller dose.

SERUMTHERAPY OF TYPHOID.

Lastly, we may turn to the question of the serumtherapy of typhoid fever. It has been claimed by or for Dr. Macfadyen that an important step has been taken towards the solution of the problem of the serumtherapy of typhoid fever by the work which has just been passed in review. Even if it had been established—and I have contended that it has not been established—that Dr. Macfadyen has devised a novel vaccine material which induced the elaboration of a novel antitoxic element in the inoculated organism, the problem of serumtherapy would not necessarily have been brought any nearer to a practical solution. Those engaged in medical research must, under peril of keeping the word of promise to the ear only to break it to the hope, emphasize in season and out of season that there is absolutely no outlook for the successful practical exploitation of an antitoxic serum against any disease unless, as obtains in the case of antidiphtheria serum the quantity of antitoxin contained in the few cubic centimetres of foreign blood which can be inoculated into the patient is sufficiently considerable to neutralize at least a substantial fraction of the bacterial toxin generated in his system.

Unless Dr. Macfadyen's unpublished experiments show that the production of typhoid antitoxin in the system of his monkeys is of this order of magnitude—and the absence of all quantitative data from his publications gives occasion for an anxiety on this point—and unless further he has ascertained that an antitoxin formation on this scale can be induced in an animal capable of furnishing a sufficient supply of serum—and the unsuccessful experiments made up to the present on horses, asses, sheep, and goats here dash our hopes—the prospects of serumtherapy for typhoid seem to me to stand at present just where they stood before the announcement of the results of Dr. Macfadyen's work.

REFERENCES.

[1] On the Treatment of Furunculosis, Sycosis, and Acne by the Inoculation of a Staphylococcus Vaccine. *Lancet*, March 29th, 1902. [2] On the Changes Effected by Antityphoid Inoculation in the Bactericidal Power of Human Blood, *Lancet*, September 14th, 1901; On the Bactericidal Power of the Blood, *Jnl. of Hygiene*, October, 1902. [3] Loc cit. [4] *Lancet*, July 5th, 1902; *Proc. Roy. Soc.*, vol. lxxi.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

HEAD DROP FOLLOWING DIPHTHERIA.

IN reference to the interesting memorandum by Dr. Sharp in the BRITISH MEDICAL JOURNAL of February 7th on a case of paresis of the retro-cervical muscles following diphtheria, I would like to record a case which I have recently met with.

E. S., aged 6, was admitted into this hospital on November 28th, 1902, notified as diphtheria. I was also notified by telephone that the case required immediate attention, which I found to be the case, and I was obliged to open the trachea with very little preparation or cleansing, as the child's face was becoming black. After the tracheotomy the colour of the child soon became normal, and I injected beneath the skin of the flank 6,000 units of antitoxin. The child appeared to be doing well, and could do without the tube at the end of three days, although in the meantime she had coughed up sufficient membrane to almost half fill an ordinary test tube.

On the fifth night I was called up to see the child (whom I had seen on my night visit to the ward to be sleeping calmly), and was informed by the nurse that the child had jumped up in bed, and, after gasping for breath and tugging at her throat, had dropped back pulseless and breathless. I found the child with a very feeble, rapid pulse, and very shallow, slow respirations. I gave her a subcutaneous injection of 5 minims of liquor strychninae, and as she improved I went back to bed. In twenty minutes I was again called to see the child, and I found her twitching very badly about the face and arms, the effect apparently of the strychnine, although the dose was not large. The pulse and respiration had improved, but as the spasmodic twitching did not improve I gave her a few whiffs of chloroform, during which the spasm subsided, and the child went to sleep and passed a very good night.

She continued to improve steadily for three weeks, when we first noticed that she had a nasal intonation of her voice, and a little fluid returned through the nose when drinking, that she was less able to bear the weight of her body upon her legs, and that she had trouble in raising her head and keeping it raised. The dropping of the head got worse until she seemed to have no control over it, and when raised and let go it fell upon the chest and towards the left shoulder. The legs got a little stronger but she could not bear her weight upon them.

The nasal intonation of voice and return of fluid through the nose got better, and it was in this condition that she was sent home after forty-six days in hospital.

On the eighteenth day after discharge she was notified and came in with small-pox, pretty full but discrete, probably being infected at home from a case we received from the same house about five days after her return home. To my surprise the child could bear her weight on her legs and could walk, and could do practically any movement with the head, and showed no sign of head drop, nor would a casual observer have detected anything wrong; still there was slight weakness of the neck muscles. She is now quite convalescent, and has lost all trace of weakness of the part, can run about and is bright and intelligent, and is about to be discharged. It is probable that these cases are sometimes overlooked, more especially in infants, in whom the head is for some time after birth more or less uncontrolled. The paralysis, if slight, may also escape notice in older children. I can recall two instances of the kind which would have probably escaped my observation had not my attention been called to them by the sister of the ward.

JOSEPH BEARD, F.R.C.S Ed., L.R.C.P.Lond.,
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DISAPPEARANCE OF AN APPARENTLY MALIGNANT VAGINAL GROWTH.

LAST March I was asked to see a lady, aged 73, who had been suffering for some weeks from haemorrhage and discharge from the vagina, accompanied by a good deal of pain. She had lost flesh and become weak and anaemic, and the frequently recurring haemorrhage practically confined her to the house. She had suffered from piles for some years previously, and could never get an action of the bowels without an enema.

Upon examination I found a growth occupying the vagina and involving the cervix uteri and the posterior and anterior wall of the vagina to within an inch of the vulva. It was soft and friable and bled very readily, and there was a fetid discharge.

I had no doubt whatever that it was a cancerous growth, and that it was too extensive to be capable of removal. The friends desired another opinion, and Sir John Williams was called in consultation. He corroborated my view of the case, and also felt no doubt as to the nature of the growth.

The patient was ordered an injection of chinosol for vaginal irrigation, and to keep the recumbent position for the greater part of the day, and a laudanum and starch enema to be given every night to ease the pain.

In October I was told she was much better and that the haemorrhage and discharge had ceased, together with the pain. I saw her in November, and was astonished to find the growth gone. There was a slight cicatricial contraction of the vagina below the cervix, but the mucous membrane was smooth, the uterus was freely movable, and the patient declared herself quite well again. There is still a pile which

she says comes down when the bowels act, but it does not bleed or cause any pain.

Sir John Williams saw the lady in January, and was much surprised to find the growth had entirely disappeared. Unfortunately no microscopic examination was made, as neither of us felt any doubt as to the nature of the disease. The growth presented all the usual characters and symptoms of epithelial cancer, and, for my part, I am unaware of any disease that could so closely simulate it.

Are there any growths which may have misled us and given rise to a mistaken diagnosis: or do cancerous growths sometimes disappear?

Oxford Square, W. M. Prickett.

THE SURGICAL TREATMENT OF SCIATICA.

In the British Medical Journal of November 5th, 1898, I recorded eight cases of sciatica treated by exposure of the nerve below the gluteus maximus, the separation of inflammatory adhesions around the nerve and up to the sciatic notch. Other ten cases have been treated in exactly a similar way, and the results have been quite satisfactory, except in one case, where the patient did not benefit by the operation. The other nine are quite well after periods varying from a year to two years. The cases referred to had visited the various spas without benefit, and as they all illustrated the symptoms produced by adhesions round the nerve, I felt justified in recommending operation. No stretching of the nerve was employed as separation of the adhesions is quite sufficient to ensure relief to pain. The symptoms of perineuritis as distinguished from neuritis are distinctive, and should be borne in mind. In perineuritis there is no pain when resting, but whenever the patient walks for a few minutes the pain commences. Mild cases of adhesions improve with massage, movements, and electricity, both as the continuous current and also in the form of the high-frequency current. Where, however, the pain is persistent, the sooner an operation is done the better. In some of the cases six or eight weeks elapse before improvement takes place, because, the nerve being dragged on by adhesions, the pain takes a considerable time to disappear, and patients should be warned as to this.

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REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

STAFFORDSHIRE GENERAL INFIRMARY.

INTRAPERITONEAL RUPTURE OF THE BLADDER: OPERATION TWO DAYS AFTER: RECOVERY.

[By F. Milnes Blumer, A.B., M.B., C.M., Senior Honorary Surgeon.]

G. G., aged 35 years, was admitted into the infirmary on the night of March 18th, 1902, said to be suffering from rupture of the bladder.

History.—At 8 a.m. on March 17th, while working on the roof of a shed he slipped and fell to the ground across a low rail, a distance of some 10 feet. He picked himself up and walked home, a distance of half a mile, without making any complaint. The man said he had passed urine on rising in the morning, and again at his work shortly before he fell. He was seen during the morning by Dr. Cookson, who passed a soft catheter, and drew off a little blood-stained urine. He diagnosed rupture of the bladder, and advised removal to the infirmary. This, however, the man refused to agree to until late the next day, when his removal was effected.

State on Admission.—A short, spare man, complaining of vague abdominal pains at the level of the umbilicus, and that he had not been able to pass any urine since he fell the previous day. The house-surgeon passed a catheter with negative result. The abdomen was resonant, both in the hypogastrium and flanks, and there did not appear to be any appreciable amount of free fluid in the peritoneum. No fracture of the pelvis could be made out. Temperature, 99·6°; pulse quiet, and of fair quality; tongue moist. There was an entire absence of shock. Next morning it was evident there was free fluid in the peritoneum, and I decided to operate at once.

Operation.—The abdomen was opened by the usual incision above the pubes. The peritoneum was very thick, and on incising it the abdominal cavity was found to contain about three pints of clear urine. The intestines in parts were injected, but for the most part were healthy. The bladder was collapsed. Boric lotion was thrown into it through a soft catheter, when the rent was at once felt. It was on the posterior aspect, and of irregular shape, 2 in. long in the vertical direction with another ¾ in. long running into it laterally. This I closed with Lembert sutures, using fine sterilized silk. On again injecting the bladder there was seen to be another small leak in front where the viscus was not covered with peritoneum. A few stitches controlled this, and on injecting the bladder again no fluid escaped. The peritoneal cavity was sponged, and the parietal wound closed. A glass drainage tube was inserted. A catheter could not be retained, or even passed, for drawing off the urine, as it set up spasm.

Progress.—On the second day the drainage tube was removed. On the fifth day there was suppuration at the lower part of the wound, which necessitated the removal of two stitches, and there was an escape of urine. There was no peritonitis. The urine was evidently escaping through the small anterior leak, which had yielded again under the strain of coughing. A localized cellulitis was set up. Iodoform gauze was used as a drain, and a soft catheter was passed and retained in the bladder. The temperature, which had risen to 102·6°, fell next day to normal and remained so. The subsequent history was uneventful. The lower part of the wound healed up from the bottom, and the catheter was removed in three weeks. The man was discharged on May 23rd, and he resumed his usual work the following week.

Remarks.—Rupture of the undistended bladder without fracture of the pelvis must be of rare occurrence. In this case, although urine had been voided shortly before the accident, it is probable, as the man is said to have been drinking, that the viscus was at any rate partly distended. The small rupture on the anterior aspect was punctate and indirect, and I think must have been caused by the silver catheter which was passed on his admission. I cannot account for its presence on any other hypothesis. The absence of shock, and, I might almost say, of peritonitis also, was due, undoubtedly, to the healthy state of the urinary tract and the consequent bland condition of the urine.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

Howard Marsh, F.R.C.S., President, in the Chair.

Friday, March 27th, 1903.

Acromegaly and Goitre.

Dr. H. A. Lediard (Carlisle) related the following case:

The patient was a woman, aged 43, who was born and had always lived in Cumberland. She had had amenorrhœa and headache dating from the last confinement, ten years previously. The features were characteristic, especially the lips, nose, lower jaw, and tongue—speech and expression of face. The thorax was large, the ribs being massive and the hands broadened. Sugar had been at one time present in the urine. For some years a bilateral goitre had been evident, and in June, 1902, the patient was sent to the Cumberland Infirmary for operation on account of dyspnœa with stridor and dysphagia due to pressure. The left side of the goitre was removed in June, 1902, and all these symptoms were relieved. The patient was exhibited and her feeble muscular power demonstrated. Radiographs of the hands and parts were exhibited together with the goitre, which had been removed, and microscopic slides. The usual features of acromegaly not present in this case were kyphosis, bitemporal hemianopsia, sweating, and cyanosis. There was no trace of the general increase in size sometimes present, but the features of the face and the limbs were so greatly enlarged that the patient could not be recognized by her relations.

In reply to Dr. W. Pasteur, Dr. Lediard said there had been no change in the pulse or temperature since the operation, but the patient had gained several pounds in weight. The headaches had not been much benefited.

Bilharzia.

Dr. Andrew Duncan read the notes of a case.

The patient was a man, aged 32; lately in the 2nd Battalion East Kent Regiment. He had seen fighting in the Orange River and Cape Colony, and was in Lord Roberts's march to Pretoria. In May, 1902, he began to experience itching at the end of the penis, and a frequent desire to urinate, with great straining, but had no hæmaturia. He had also a lump in the left groin, and great pain in the lower part of the back. The lump after rest subsided. He returned to England in June, 1902, and on arrival

first noticed a small clot of blood in his urine. Soon after more blood passed mixed with the urine. In July, there being a decided increase in the haematuria, he went into a country hospital, and was there sounded for stone, and examined by the Roentgen rays. During this time also growths appeared around the anus, for which mercury was prescribed, on the supposition that they were specific. In January, 1903, the case was seen by Mr. James Cantlie, who recognized it as one of bilharzia, and sent him to the Branch Seamen's Hospital, where he was admitted under Dr. Duncan. On admission he was anaemic, and the urine contained blood, mucus, a small amount of albumen, and numerous ova of bilharzia. In the perineum there was a slight swelling over the raphé, which disappeared after being fomented. There were three growths round the anus—one conical, of about ½ in. in diameter, the other two flattened with broad bases of ½ in. These on removal were seen to be papillomatous, stuffed with the ova of the bilharzia. The faeces were found to contain ova. There were no growths in the rectum as far as the finger could reach. With regard to the ova passed by the rectum, according to Lancard's teaching, the spines of these, when occurring in the intestinal veins, were always lateral, in contradistinction to the terminal spines of the ova in the vesical veins. This, however, was not an invariable rule. Lieutenant Lelean, of the R.A.M.C., in his paper read last year at the Medical Society of London, stated that he had found rectal ova with terminal spines, and vesical ova with lateral spines.

As to treatment Dr. Lelean had drawn attention to the beneficial effect of methylene blue in four-grain doses three times daily. He had found that ova died in less than fifteen minutes when the stain was run under the cover-glass. Clinically also he found a marked lessening of the haematuria. Dr. Duncan's patient had been treated according to Dr. Lelean's directions, but up to the present time there had been no appreciable difference in the amount of the haematuria; the deposit in the urine glass seemed less, but the colour of the urine was the same. For the first few days after his admission, before methylene blue was commenced, the patient was given tabloids of suprarenal extract, but without any effect. Dr. Duncan now proposed to try liquid extract of maltene, as suggested by Mr. Herbert Milton of Cairo.

Dr. PATRICK MANSON said that the growths away from the anus and on the inner side of the thigh were uncommon, those just around the anus and in the groin were common. They probably contained the ova of bilharzia. The deposit of the ova in different parts of the body in this case, far from the usual habitat of the disease, was interesting. In the blood-spitting disease of Japan, due to bilharzia in the lungs, the disease occasionally wandered to the testicles and other organs. The ova with a terminal spine were alone found in cases of haematuria, whereas when the disease affected the rectum ova were found with terminal or lateral spines. He considered that the two kinds came from two different species of the parasite. Treatment was most unsatisfactory, so that new suggestions were very welcome.

Dr. HERRINGHAM asked why in bathing the worms always got into the portal system? Were they swallowed? And, where in South Africa was the disease liable to be caught? in certain places only, or all over the district?

Dr. PASTEUR asked what was the general prognosis in this disease. Years ago he had seen a patient from the Klerksdorp district who made a complete recovery without any special treatment, and had now being quite well for years.

Dr. BATTY SHAW had recently seen a case in which the disease had been contracted at Leydenberg. The Boers were aware that the drinking of the water of certain streams produced bilharzia. In his patient's case the haematuria resulted in a fortnight after he had drunk such water.

Dr. DUNCAN, in reply, said that ova with lateral spines had been passed from the bladder. He believed the disease was contracted by drinking contaminated water. He had never seen a case of the disease in which any improvement followed any treatment.

INVAGINATION AND STITCHING OVER GANGRENOUS PATCHES OF INTESTINE IN THE TREATMENT OF STRANGULATED HERNIA.

Mr. G. H. MAKINS, read notes of two cases illustrating the employment of this method of treatment.

The first case was a man, aged 87, who for sixteen years had been the subject of an irreducible right inguinal hernia, and was admitted to hospital twenty hours after the signs of strangulation had become marked. A herniotomy revealed a sac containing a quantity of red stinking fluid, 6 in. of small intestine with a small gangrenous patch perforated in the centre, and a single apple pip free. The small gangrenous patch was inverted by the passage of four Lembert sutures, the bowel was cleansed, the neck of the sac removed, and the bowel was returned within the abdomen. No attempt was made to close the wound, but this was plugged with gauze. The wound granulated up, and the patient left the hospital cured after an uneventful course on the forty-eighth day. The second case was a male infant, aged 9 weeks, an ill-nourished illegitimate child, the subject of congenital syphilis, in whom a small partial enterocele in a state of gangrene was found to exist. Two cases were also mentioned in which "doubtful" rings of gut had been stitched over, and a third in which a gangrenous patch had been inverted successfully.

The first case was admitted to belong rather to the category of an intestinal perforation than to that of gangrene, but the second was an example of an ordinary gangrenous partial enterocele, and it was claimed that the method of treatment adopted could not safely have been replaced by any other. The opinion of Messrs. Watson Cheyne and Burghard was quoted in favour of the adoption of the method of invagination in cases in which the condition of the gut was doubtful, as were also some cases published by Professor C. J. Breitmann in which inversion of gangrenous patches was successfully carried out. The opinion of Professor Fraser condemning the method as dangerous was also quoted; but the author urged the value of the method in all cases where there was reason to believe the gangrene to be local and unaccompanied by diffuse infective inflammation of the bowel beyond, and claimed that it was applicable to some cases in which resection could be performed with safety to the patient as in the two instances which formed the subject of his communication.

Mr. L. A. DUNN referred to three cases of strangulated hernia in males, which he had treated within a fortnight five years previously, in all of which there had been *reduction en masse*. In all there were gangrenous patches, which he had treated by cutting off a piece of the sac, laying it over the patch, with the raw surface to the bowel, and fixing it there with sutures. One patient recovered. In another case, as the event proved, the procedure had certainly done no harm.

Mr. BOWLBY said that surgeons who advocated the removal of intestine seemed to see a large number of cases requiring resection. He had seen very few such cases. He thought it would become the usual practice in the slighter cases of gangrene to draw the peritoneum together over that part. He had adopted this plan rather than that of resection for years, and thought the paper would tend to bring it still more into notice.

Mr. GOLDING-BIRD referred to the loss of resiliency of the bowel in the case of the old man described by Mr. Makins; this allowed involution of the peritoneum and the saving of the patient. On this the value of the paper turned.

The PRESIDENT hoped the paper might help to do away with the large resection of bowel advocated by some surgeons in cases where the intestine was supposed to be paralysed by inflammation.

Mr. MAKINS, in reply, said that Mr. Dunn's method was different from his own procedure. He did not fear stenosis much, as the bowel adapted itself remarkably to its new condition. As to the mortality after large resections, the latest statistics placed it at over 30 per cent.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

H. MALET, M.D., President, in the Chair.

Thursday, March 12th, 1903.

DEPRESSED FRACTURE OF THE VAULT OF THE SKULL, AND FRACTURE OF THE BASE.

Mr. MILWARD showed a lad, aged 14, who, while working in a granite quarry on February 4th, 1903, had been struck on the head by a broken piece of steel drill, flying at great velocity. He was picked up insensible, but in the course of a few hours became semi-conscious. He uttered no words, however, during the next three days. Dr. Beasley, of Rowley Regis, then saw him, and sent him to the General Hospital. At the time of the accident he had bled from the nose and left ear, indicating a fracture of the base of the skull. On admission he was drowsy and aphasic, and had right facial paralysis of the lower half of the face. The left temporal region was a boggy mass of pulped temporal muscle, which obscured any depressed bone. Mr. Milward turned down a large flap, and dissected the torn muscle from the bone. It was then seen that the whole of the squamous portion of the temporal bone, and lower half of the parietal bone, had been driven in. Three large fissures also ran upwards, backwards, and downwards to the base for an undefined distance. The loose fragments were removed, and the dura mater found to be much lacerated. The cerebral cortex over the motor speech area was a disintegrated mass. The dura mater was sutured, but the bone was not replaced, for the pulped muscle and brain substance rendered suppuration very probable. The wound, however, healed practically by first intention. The patient recovered his facial movements twelve days after admission, and had

regained full control of his speech in three weeks. He was at present perfectly well, and mentally very quick.

Spurious Hermaphroditism.

Mr. Morrison showed an infant nine weeks old who had been brought to him on account of an unnatural condition of the external genitals. The child had been registered as a female, but was, in fact, a male. The scrotum was completely cleft, each half resembling a labium majus and containing a well-formed testis. A short hypospadiac penis projected anteriorly; a groove on its under surface led backwards to the mouth of the urethra, which opened at the root of the penis under the pubic arch. Mr. Morrison proposed to prolong the urethral floor by a plastic operation.

Resection of Cancerous Rectum.

Mr. Morrison show a man, aged 42, the lowest five inches of whose rectum, including the anus, he had excised for cancer four months ago. The operation was performed by the vertebral route, sufficient access being obtained by the removal of the coccyx alone; and the truncated gut had been stitched to the skin. The case showed the satisfactory artificial anus obtainable by this procedure, and also the good degree of functional control acquired, the bowels acting voluntarily once a day unless the motions were loose. A small piece of the floor of the urethra had to be sacrificed, but the urinary fistula had closed, and a full-sized bougie could be easily passed. The patient had regained a good deal of his lost weight and strength.

Strangulated Ovarian Fibroma.

Mr. Christopher Martin showed a a fibroma of the ovary, removed on account of strangulation due to twisting of its pedicle.

The patient, aged 29, had been married seven years, and had had two children, the younger three years ago. Menstruation was profuse and painful. During the last eighteen months she had attacks of colicky pain, worse in the left side of the pelvis, each attack lasting two to seven days; the last one was very severe, and ended in a sharp attack of peritonitis. Operation was performed on March 8th, when a fibroma of the left ovary, as large as a five-months pregnancy, was removed. Its pedicle was twisted three complete turns, and the tumour was purplish black from strangulation. It was universally adherent to omentum and bowel, the result of recent peritonitis. The uterus and the other ovary were normal.

The patient made a straightforward recovery. On section the tumour was found to be infiltrated with black blood, so that it looked like a spleen.

Spontaneous Symmetrical Gangrene of the Feet.

Professor Jordan Lloyd showed the feet removed for spontaneous symmetrical gangrene from a man aged 36.

The man was healthy and of spare habit. He had been out of work for several months, and had complained of "rheumatic" pains in several parts of his body and extremities during the previous six or eight months. He was admitted to the workhouse infirmary with pyrexia and delirium, which had come on the day before, and to account for which nothing positive could be discovered by careful examination. Two days later the delirium and the fever had passed away, and it was then noticed that his toes were insensitive and dead-looking. A day or two later the area of the gangrene was well-defined. It was absolutely symmetrical, and its limits corresponded with slightly irregular edges, which ran parallel to, and almost three-quarters of an inch on the distal side of, the lines for Syme's amputation. The feet were cleaned and kept dry and aseptic until towards the end of the third week, when, no further extension of the process having occurred, both feet were removed at the same time by Syme's method. The man made an easy recovery after the operation.

The cause of the gangrene remained obscure. The urine was free from sugar and albumen; the blood vessels were apparently healthy; there was neither heart nor lung lesion; no exposure to cold, heat, or the influence of drugs; typhoid and all other fevers were excluded; he had no previous history of attacks of "dead" fingers or feet, such as occurred in Raynaud's disease. There were neither emboli or thrombi in the larger vessels of the limb.

Papers, Etc.

Dr. Ratcliffe showed an improved all-glass hypodermic syringe in which the end of the barrel was ground slightly conical, and the needle-cap fitted directly over this. The conical end was kept large enough to receive a hypodermic tabloid. The advantages claimed for the instrument were: (1) simplicity, as the syringe consisted only of three parts—plunger, barrel, and needle; (2) greatly increased strength, as the binding effect of the needle-cap strengthened the barrel, and prevented its breaking if the patient made any sudden movement; (3) easy sterilization.—Dr. Walter R. Jordan read a paper on neurotic conditions in childhood. The following is a synopsis:—Minor and general states: the more definite neuroses: causes: two cases, brother and sister, detailed to illustrate extreme condition. The paper was discussed by Dr. Perry, Mr. Oakes, Dr. Kauffmann, Dr. Morton, Dr. T. E. Underhill, and the President; and Dr. Jordan replied.—Dr. W. E. Bennett read a paper on the operative treatment of relapsed cases of club-foot, of which the following is a synopsis:—Historical: morbid anatomy: different operative procedures compared: reasons for preferring tarsectomy: results of 50 cases treated by this operation. The paper was illustrated by a number of excellent photographs showing the appearances before and after tarsectomy. Remarks were made by Mr. Higginson and Mr. Morrison.

CLINICAL SOCIETY OF MANCHESTER.

T. Arthur Helme, M.D., in the Chair.

Tuesday, March 17th, 1903.

Nasal Obstruction.

Mr. F. H. Westmacott read a paper on nasal obstruction and its causes. He urged the importance of a thorough examination both anteriorly and posteriorly in such cases, and indicated the main symptoms of this condition, namely, inability to breathe freely through the nose, a certain facial expression, adenoid facies present in nearly all cases, discharge from one or both nostrils forward or into the naso-pharynx, thickness of speech or voice, the so-called nasal speech, broadening of the bridge of the nose, a short upper lip, and open mouth. Of the various nervous and reflex symptoms consequent on nasal obstruction he mentioned headache, cough, asthma, deafness, convulsions (epileptiform in character), as well as a dull mental condition and inability to concentrate attention on any subject, sometimes called aprosexia. Loss of smell and defective vision might be present in some cases. Occasionally the child might become "pigeon breasted," the obstruction inducing a deficient or negative pressure in the chest, drawing in the lower ribs or cartilages. The "local" cause of obstruction in the nose might be due to disease in the septum, turbinates, or accessory cavities, or to adhesions between the turbinates and septum the result of inflammation, the "general" causes were due to general swelling of the mucous membrane, as in catarrh, or to such diseases as syphilis and tubercle. The "external" causes were congenital malformations of anterior or posterior nares, adenoids, polypi, or new growths. In a child the occurrence of a unilateral obstruction with a discharge more or less foul or blood-stained pointed very strongly to the presence of a foreign body, while in an adult a similar condition led one to suspect an empyema of the accessory cavities. Should the patient be able to detect an offensive odour in the discharge, then in all probability the antrum of Highmore was affected. If undetected by patient or there was loss of smell on that side, suppuration in one or more of the upper accessory cavities was indicated. Polypi when unilateral pointed to empyema of the accessory cavities; when they were bilateral and unaccompanied by much discharge there was often a myxomatous degeneration of the nasal mucous membrane, a condition seen generally in patients over 40 years of age. In cases of post-nasal adenoids where little relief was obtained by operation, the cause of the obstruction might be looked for in a swollen condition of the posterior ends of the inferior turbinate bones, a condition which should be attended to if an operation was undertaken.

Puerperal Eclampsia.

Dr. W. E. Fothergill gave some personal impressions of puerperal eclampsia and the history of some cases. He remarked that in attempting to forecast the end of a case it was not wise to attach too much importance to the number or the severity of the convulsions. The quantity of albumen in the urine was also a fallacious guide, for in many severe cases there was no albumen, or the amount was only trifling. A more valuable indication was an estimation of the quantity of urea, for if there was anuria things could not be much worse. If urine containing less than 1 per cent. of urea was passed, a serious disorganization of metabolism was indicated. He condemned the induction of labour as a routine practice in such cases, and stated that in many instances it probably produced a fatal issue.

MANCHESTER MEDICAL SOCIETY.

A. M. Edge, M.D., President, in the Chair.

Wednesday, March 4th, 1903.

Some Points in the Treatment of Laryngeal Diphtheria.

Mr. Knyvett Gordon read a paper on this subject in which he pointed out that whereas in America and on the Continent

the laryngeal obstruction of diphtheria was treated almost exclusively by intubation, in this country tracheotomy was still largely preferred. But tracheotomy as it was described in the later textbooks of surgery consisted in the performance of a dissecting operation, under chloroform, through a long incision. To this operation intubation was certainly preferable, and it was with this that it was usually compared. The points in favour of the rapid method through a short incision, the knife being guided entirely by the touch of the left forefinger, which was kept on the lower edge of the cricoid cartilage until the tracheal dilators were inserted, were (1) that it could be performed almost as quickly as intubation, (2) that no anaesthetic was required, (3) that the trachea was more likely to be opened in the middle line, (4) that the tracheal fascia was disturbed as little as possible, (5) that it was an easier operation in the hand of a tiro. Compared with intubation, it had the following advantages, (1) that the relief of the obstruction was more complete, (2) that the rest of the child was less disturbed, (3) that subsequent feeding was easier, especially in the hands of an imperfectly trained nurse; (3) that it was more easy to remove false membrane, especially when this was below the tracheal wound, and in large masses; (4) that complete rest was afforded to the larynx. Stress was also laid on the fact that it was possible to remove the tube as soon as an intubation cannula under the same circumstances, tracheotomy tubes being usually left in too long. In discussing the indications for operation, stress was laid on the importance of estimating, not the amount of obstruction so much as the effect that it was having on the patient; in this connexion restlessness, and the amount of epigastric recession being often misleading, the presence of cyanosis being the more important indication for operation. The after-treatment, which was most important, consisted chiefly in insuring absolute rest to the patient; it was particularly important to avoid the use of feathers, steam tents, and overfeeding; in the majority of cases, starvation for twenty-four hours was desirable. Under these circumstances the writer believed that tracheotomy was usually preferable to intubation, but there were a few cases in which intubation might be resorted to, when it was important not to leave even a small scar.

In reply to Dr. HARRIS, Mr. GORDON stated that the reason why intubation gave such good results in America and on the Continent was that antitoxin was given as a rule earlier in the course of the disease than in this country, where it was often left until the end of the first few days, or not given at all; the important point being to give a small dose at once, without waiting for absolute certainty in the diagnosis.

In reply to Dr. MARSDEN, he said that there were undoubtedly cases in which the rapid method was difficult; but it was precisely in these that the dissecting method was more difficult still. He strongly deprecated the giving of an anaesthetic, even when the obstruction was not urgent.

PYLEPHLEBITIS FOLLOWING PERITYPHLITIS.

Dr. GOODFELLOW read a paper on a case of pylephlebitis following perityphlitis, in which the occurrence of a period of delirium early in the course of the disease, followed by a series of severe and frequently-repeated rigors lasting throughout the whole illness, left the diagnosis for a long time in doubt. No definite abdominal tumour was felt, but laparotomy discovered the presence of a chronically-inflamed appendix with a broken-down lymphatic gland containing old pus. Their removal failed to relieve symptoms, although at a second operation the only abnormal condition found was the presence of ascites. Subsequently pus was found in the liver (that organ having become enlarged in the later stages of the disease), but its evacuation was not followed by any improvement and the patient died. The liver pus gave cultivations of the bacillus coli and of the streptococcus citreus. The case extended over fifty-nine days, during the last forty-six of which urobilinuria with a moderate amount of jaundice was present. A short summary of the present state of the knowledge of urobilinuria was given.

HARVEIAN SOCIETY OF LONDON.—At a meeting held on March 19th, Dr. WINSLOW W. HALL, President, in the chair, Mr. JAFFREY showed (for Mr. CRISP ENGLISH) a girl, aged 4, who since the age of 2 had exhibited a waddling gait, without pain. There was some atrophy of the muscles about the hip and 1 in. shortening of the limb. The case was thought at first to be one of coxa vara, but a skiagraph showed it to be a well-marked instance of congenital dislocation of the hip. Mr. JAFFREY asked for suggestions as to treatment. Mr. NOBLE SMITH considered the case a very favourable one for treatment by Lorenz's method.—Dr. SIDNEY PHILLIPS showed an extreme case of osteo-arthritis of the left knee in a man aged 48. He had rheumatic fever at the age of 15, and began to suffer from osteo-arthritis at the age of 33. Many joints were now affected, but the left knee was enormously enlarged, tense, and elastic. A small amount of fluid withdrawn by aspiration proved to be sterile. Mr. JAFFREY thought it much easier to treat monarticular disease of this nature. The treatment should be by massage and hot-air baths daily. Probably at least two or three different complaints were included under osteo-arthritis. Some cases were very likely of bacterial origin. He had found guaiacum and sulphur of use in many instances. After remarks by Mr. NOBLE SMITH and Dr. G. A. SUTHERLAND, Dr. E. CAUTLEY said that one definite type of osteo-arthritis was symmetrical in form, often occurred in acute attacks, simulating subacute rheumatism, and usually began in the metacarpo-phalangeal joints of the first and second fingers. This type was most common in young women between 15 and 25, sometimes occurred in young children, and was frequently seen in later life in a more chronic and less severe form. It was incurable. Another type of the disease was probably pyaemic in origin. A third form affected the larger joints, occurred in older people, and often followed an injury. The acute generalized form might be due to some affection of the trophic nerves or to some toxin. Some cases were preceded by neuralgic pains for months before any joint lesion was noticed. The PRESIDENT advocated the use of cod-liver oil, at all events in certain forms of osteo-arthritis.—Dr. W. J. HARRIS showed a woman who was probably suffering from acute poliomyelitis. The disease affected the muscles about the left shoulder, and was probably due to haemorrhage in the anterior horns of the fifth and sixth cervical segments. Dr. LEONARD GUTHRIE and Mr. DANIEL made remarks; and Dr. HARRIS replied.—Mr. JAFFREY showed a patient supposed to be suffering from actinomycosis of the upper jaw. The patient was improving under potassium iodide. Mr. DANIEL thought that the case suggested an abscess in connexion with the carious root of a canine tooth. He suggested that it should be slit up and scraped.—Mr. JAFFREY also showed two cases of monarticular osteo-arthritis of the elbow-joint.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.—At a meeting held on March 9th, Mr. A. E. MAYLARD, President, in the chair, Dr. A. MAITLAND RAMSAY demonstrated (1) a case of ophthalmoplegia; (2) a case of detachment of the retina, which had been treated by subconjunctival injection of saline solution; the fields of vision of eight other cases treated in the same way were also shown; in six there was marked improvement, in the other two cases none; (3) a case of tuberculous iritis.—Dr. J. CRAWFORD RENTON read notes of (1) the case of a girl aged 12, operated on for a burst appendix, and ten days after for obstruction of the bowel; (2) a case in which recurrent attacks of obstruction of the bowel were caused by a gall stone impacted in a contracting ulcer of the ascending colon.—Dr. J. WYLLIE NICOL showed a patient the subject of generalized favus, with microscopical preparations from the case.—Mr. A. E. MAYLARD showed specimens of bowel from two successful cases of enterectomy connected with strangulated femoral hernia.—Dr. JOHN M. COWAN and Dr. A. R. FERGUSON showed several specimens illustrating congenital cardiac anomalies.—Several fresh specimens were also exhibited, and a number of microscopic and macroscopic preparations were on view during the meeting.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—At a meeting held on March 25th, Dr. J. H. STOWERS, President, in the chair, Dr. GRAHAM LITTLE showed (1) a baby with a peculiar ulceration on the lower eyelid from which cultures of a bacillus, apparently identical with the diphtheria bacillus, had been obtained; (2) a case of lupus erythematosus in a woman associated with albuminuria and rhinitis; (3) the case of lichen urticatus, simulating lichen planus, shown by him at the last meeting. The plane lesions had rapidly disappeared, and had given place to lesions much more characteristic of urticaria in infancy; (4) a case of seborrhoeic eczema presenting a large patch on the upper sternal region, no other part being affected.—Dr. A. EDDOWES showed (1) a case of follicular dermatitis in a girl, the individual lesions resembling small warts; (2) a case labelled streptogenic necrogenic folliculo-adenitis. This case, as also

that subsequently shown by Mr. Hartigan, excited much interest. It was claimed, as an instance of the disease originally described by Tilbury Fox as disseminated follicular lupus, and the relationship of which with tuberculosis was now being investigated.—Dr. N. Meachen showed a case of alopecia areata.—Mr. A. Shillitoe showed (1) a case of rupia followed by hypertrophic scars, ascribed by the exhibitor to the use of iodides; (2) a case presenting multiple lipomata.—Dr. T. D. Savill showed (1) a case of severe persistent erythema pernio of the hands; (2) a case of dermatitis papillaris capillitii (Kaposi).—Mr. T. J. P. Hartigan showed the case of follicular lupus exhibited by him at the last meeting.—Dr. W. Warde (for Mr. Waren Tay) showed a young woman presenting symmetrical linear callosities on the palms. He also showed (1) a woman suffering from a long-standing ulcer of the leg, in the centre of which a sarcoma had recently developed; (2) a case of lichen planus confined to the scrotum and penis.—Dr. C. H. Thompson showed a microscopic preparation of the favus fungus.

Bradford Medico-Chirurgical Society.—At a meeting held on March 17th, Dr. H. J. Campbell, President, in the chair, Mr. J. H. Mason read notes of a case of gangrene of the foot.

The patient was an apparently healthy man of 50, without signs of organic disease. The disease started with severe intermittent pain in the calf and thigh muscles. There were attacks of blindness, lasting about an hour and then passing off, leaving dimness of vision. Nothing was seen on examination of the fundus oculi. The pain passed off temporarily and he returned to work. Two months after the onset the pain became very bad again. The foot was cold up to the ankle, and there was loss of sensation. The calf was very tender. Pulsation could not be felt in the femoral artery below the groin. The pulse had risen to 120 and the temperature to 102°. The pain was partly relieved by morphine. The patient got steadily worse, the pulse becoming very irregular and not responding to digitalis or other treatment. The gangrene became more pronounced, and he died some three weeks after the second onset of the pain. Shortly before death there was an attack of inspiratory dyspnoea followed by haemoptysis.

Drs. Goyder, Johnstone, Horrocks, Wood, Eurich, and Bronner discussed the case, and Mr. Mason replied.—Mr. Althorp read a paper on three cases of perforated gastric ulcer.

Case I.—A woman aged 23, with a seven-years history of stomach trouble. She was operated upon thirty-two hours after perforation. There was a condition of hour-glass stomach caused by a large ulcer, in the centre of which was a perforation. The stomach was fixed by adhesion posteriorly, and the perforation was situated near the cardiac end of the stomach. Much gastric contents had escaped, and had formed a localized perigastric collection. This material was mopped out, and the cavity was packed with gauze. The patient did well for ten days, the packing being changed daily. She then developed symptoms of left basal pneumonia, and died on the twelfth day. *Post mortem* there was found a small septic abscess in the lower lobe of the left lung with consolidation. No empyema. The subdiaphragmatic space was dry. There was hour-glass contraction of the stomach caused by an ulcer, in the centre of which was the perforation.

Case II.—A woman, aged 27, who had dyspeptic symptoms for five years. The abdomen was opened six hours after perforation, which had taken place soon after a hearty meal. There was much extravasation of stomach contents. The perforation was found in the middle of the posterior surface of the stomach and was reached by turning up the transverse colon and making an opening in the transverse mesocolon. The perforation was stitched up and the peritoneal cavity flushed out with hot saline fluid. Drainage of the pelvis and of the right kidney pouch was carried out. The patient made a slow recovery.

Case III.—A man, aged 23, who had a typical attack of perforation of the stomach and who was operated upon eight hours afterwards. A condition of hour-glass stomach—as in case No. 1—was found with a perforation near the cardiac end, The perforation was closed, the abdomen flushed out, and the abdominal wound closed without a drain. The patient made an excellent recovery.

The questions of flushing or of mopping out the peritoneal cavity, and of drainage—especially the pelvis and the kidney pouches and the neighbourhood of the perforation were discussed.

Cases and Specimens.

The following cases and specimens were shown:—Mr. C. F. M. Althorp: (1) A man after operation for perforation of the stomach; (2) a woman after radical cure of inguinal and femoral herniae on the same side; (3) a child after radical cure of a large scrotal hernia containing the vermiform appendix, caecum, and part of the ascending colon.—Dr. T. Jason Wood: (1) Facetted calculi removed from a cystocele by vaginal lithotomy; (2) a very large myeloid sarcoma of the trochanteric region of the femur removed by amputation at the hip-joint; (3) a cystic kidney removed by lumbar nephrectomy; (4) uterus showing cancer of the cervix and pyometra, removed by combined vaginal and abdominal hysterectomy.—Mr. W. H. Horrocks: (1) Ovario-salpingitis, the organs removed by operation; (2) early carcinoma of the corpus uteri; (3) ovarian cystoma.

Sheffield Medico-Chirurgical Society.—At a meeting held on March 19th, Dr. J. Robertson, President, in the chair, Dr. Arthur Hall showed a specimen of cerebellar tumour, and gave an account of the case.—Professor C. J. Patten showed a series of models in wax and plaster illustrating the topographical anatomy of the abdominal viscera, the originals from which the models were made were first thoroughly hardened by formalin injected through the femoral artery. Most of the specimens were from an adult male subject in which no sign of visceral disease was apparent.—Dr. J. Robertson read a paper on an outbreak of typhoid fever due to the consumption of oysters in Sheffield. Every year there had been from 20 to 30 more or less isolated cases of typhoid fever which possibly might have been due to the consumption of polluted oysters. On one or two occasions groups of as many as two or three cases appeared to have occurred from one oyster shop. As a general rule it was exceedingly difficult to be quite certain that the infection was derived from particular oysters. This arose from (1) the difficulty in tracing the source of the oysters, (2) the fact that everybody who consumed polluted oysters did not contract the disease, and (3) the fact that in towns where typhoid fever was endemic it was very difficult to trace the source of the disease. The occurrence, however, of these isolated cases every year, many of which derived their oysters from one particular district, gave rise to suspicion that the oysters from at least one source spread typhoid fever. During last summer, between August 14th and September 18th, 43 cases of typhoid fever were notified in Sheffield. That was a much smaller number than was usual at that time of the year. On examining these cases it was found that in no less than 20 of them patients had partaken of oysters from Cleethorpes within the previous twenty-five days. Oysters came direct from the Cleepthorpes layings to Sheffield, and in Dr. Robertson's opinion that was an important point. Oysters which were stored in clean water or even in shops lost their power of conveying the disease. In Sheffield there was every chance that the oysters from Cleethorpes were fresh. Most of the cases were persons of the working classes who had either been to Cleethorpes for a holiday, or had bought Cleethorpes oysters in Sheffield, or had had them sent from Cleethorpes. The period which elapsed between the consumption of oysters and the notification of the disease as typhoid fever varied up to twenty-five days; in the majority of cases the period varied between ten and fifteen days. Two of the cases were certified to be typhoid fever within seven days of the last occasion on which oysters were partaken of. In the well-marked outbreak at the Wesleyan University, Connecticut, the period varied from thirteen to thirty-three days. After describing the oyster layings at Cleethorpes, and quoting from the report of the Local Government Board, Dr. Robertson alluded to the difficulties which the oyster growers had in obtaining sites suitable for rearing oysters which were quite free from sewage pollution. He recommended that the profession should give warning against oysters until some guarantee were obtained of their freedom from all risk.

Bath and Bristol Branch of the British Medical Association.—At a meeting held on March 25th, Dr. H. Waldo, President, in the chair, Dr. W. Cotton read the account of a case of general paralysis of the insane.—Dr. J. O. Symes showed microscopical specimens of tubercle bacilli in fluid from a case of pericardial effusion, and read notes on the clinical history of the case. Drs. Michell Clarke, T. Fisher, and the President discussed the paper.—Dr. G. Parker read a paper on a case of generalised pneumococcus infection, in which the subject of pneumococcus infection was considered. Drs. Fisher, Alexander, and Elliott joined in the discussion which followed.—Mr. P. Bush, C.M.G., reported a case and showed the specimen of cancer of the stomach removed by operation, with a successful result. Dr. R. G. P. Lansdown and Messrs. Mole, Ewens, and Lace remarked on the case.

Ipswich Clinical Society.—At a meeting held on March 12th, Mr. W. W. Sinclair, President, who was in the chair, showed two eye cases: (1) A case of cataract complicated with extensive iritic adhesions operated on successfully; (2) a case of congenital ptosis with associated movements of the affected eyelid.—Dr. H. H. Brown showed a case of locomotor ataxy with a Charcot's knee. Dr. Brown also read notes (1) of a case of intestinal obstruction in a child where a preliminary colotomy was performed, and subsequently a large portion of gut successfully resected; (2) of a case of stricture of the

oesophagus due to the patient swallowing a mineral acid; gastrostomy was performed: the patient was now well.—Mr. T. F. C. Hossack read notes on some cases of influenza complicated with jaundice.—Mr. A. T. Pringle read notes of a case of removal of the sigmoid flexure for carcinoma. The patient was doing well.

British Guiana Branch of the British Medical Association.—At a meeting held on February 28th, the Hon. Sir David Palmer Ross, M.D., Surgeon-General of the Colony, in the chair, Dr. O. B. de Freitas showed a cystic sarcoma of the right kidney removed by Dr. W. S. Barnes from a girl aged 16. It weighed 24 oz., and its lower part merged into what seemed to be normal renal tissue, in which the pelvis and ureter could be seen to be of normal appearance.—The thanks of the meeting were given to Dr. Barnes.

Staffordshire Branch of the British Medical Association.—At a meeting held at Stafford on February 26th, Dr. W. Hind, President, in the chair, Mr. F. M. Blumer showed: (1) A woman, aged 55, who was undergoing treatment by the *x* rays for recurrent and inoperable cancer. Both breasts had been removed by him in May, 1901. Recurrence necessitated a second operation on the right side nine months later; but it was then found impossible to remove the whole of the growth. In November, 1902, the cicatrices were thickly studded with cancer nodules. On the right side the skin was firmly adherent and immovable over the thorax, the arm was swollen and oedematous, a large indurated gland the size of a plum was present above the clavicle, and the patient was suffering much pain. She had had two dozen "sittings" to the Roentgen rays. All pain had gone; only the remains of one nodule could be felt; the cervical gland had diminished to half its size; the oedema had considerably subsided; and the patient's general health had greatly improved, and she had put on weight. (2) A woman, aged 36, with dermatitis and thickening of both lips of eighteen months' duration for diagnosis. (3) A boy, aged 15, of stunted growth, the subject of multiple exostoses.—Dr. C. Reids howed a lad suffering from leukaemia.—Mr. W. D. Spanton read notes made at the Egyptian Medical Congress.—Mr. Geo. Heaton read notes on the preparation of catgut ligatures for surgical operations.

Northumberland and Durham Medical Society.—At a meeting held on March 12th, Dr. G. R. Murray in the chair, Dr. Victor Miller showed a girl, aged 19, the subject of congenital aniridia. The iris was almost entirely absent, there being only a narrow rim at the upper and outer side. There was a commencing posterior polar cataract, but the fundus was healthy. The margins of the lens could be distinctly seen; there was some hypermetropia.—Dr. H. E. Gamlen brought forward a woman who had suffered from rheumatoid arthritis affecting the knees, wrists, and elbows for three years. Previous to treatment she was unable to walk except with the aid of two sticks. Now, after six months' treatment with high-frequency currents, she was able to get about unaided.—Dr. Smurthwaite exhibited a man who contracted syphilis nine years ago. He had no laryngeal trouble until three months ago, when he began to have dyspnoea and hoarseness. On examining the interior of the mouth a perforation of the palate was seen, and on using the laryngoscope some stenosis of larynx with ankylosis of cords was observed.—Mr. G. G. Turner brought forward a man aged 23 years, whose eyelids, eyeballs, nose, and upper lip had been destroyed by congenital syphilitic ulceration. The deformity was extreme.—Mr. S. M. Martin showed a man, aged 45, who contracted syphilis twenty years ago. His tongue some years ago became affected with leucoplakia. Fifteen months ago an ulcer with raised and hard edges made its appearance about the middle of the tongue. As he objected to operation he was treated with *x* rays. After a few sittings the ulcer healed, but broke down again shortly after, and was again treated by *x* rays. Six or seven months ago it again appeared and rapidly spread. The lymphatic gland in the right submaxillary triangle became infected. At the operation ten days before the infected lymph glands, the right half of the body of the jaw, and the whole tongue were removed. For the first five days he was fed entirely by the nasal tube. Now he was able to swallow from an ordinary feeder. He was making a good recovery. Mr. S. M. Martin exhibited a man who had tuberculous disease of the right epididymis, with secondary infection of the vas and seminal vesicles. All these parts were removed in one piece by means of a combined perineal and inguinal incision. Mr. S. M. Martin also showed a man, aged 27, who contracted syphilis three and a-half years ago. Thirteen months previous his left testicle became swollen, followed six months ago by the right. Now he had bilateral hydrocele, and the epididymis on both sides was enlarged and hard. There was some slight thickening of the left vas, but no affection of the seminal vesicles. There was a doubt as to whether the condition was syphilitic or tuberculous.—Dr. Oliver brought forward a man who was a bleeder and the subject of a limited neuritis affecting the muscles of the left thigh. Dr. Oliver could not find a cause for the condition. Dr. Oliver also brought forward a miner who, as the result of drinking water, contracted wrist-drop. Other members of the same family had been affected with abdominal pain, vomiting, and constipation. The water contained free sulphuric acid, which would bring into solution the lead from the containing pipes. Dr. Smith, from whose district the patient came, had noticed that lately there had been quite an epidemic of lead poisoning. The water came from two springs, and had been examined chemically and found to contain free acid, probably sulphuric. He had examined the water direct from the spring, but discovered no trace of lead. After, however, allowing a piece of lead-piping to stand in the water for twelve hours a distinct trace of lead was discovered.—Mr. H. B. Angus showed a youth who, after having a cerebellar abscess, resulting from otitis media, opened developed lateral sinus thrombosis. For this condition Mr. Angus dissected out the internal jugular vein from clavicle to mastoid. The boy had made a satisfactory recovery.—Dr. Gamlen showed photographs of three severe cases of lupus treated by *x* rays and ultra-violet rays. He also showed a skiagraph of a chest with a piece of steel overlying the pericardium.—Dr. Lyle exhibited a myomatous uterus, ovarian cystic adenoma, and ectopic gestation.

Ulster Medical Society.—At a meeting held on March 19th, Dr. John Campbell, President, in the chair, Professor T. H. Milroy gave a histological demonstration of lesions of the motor tracts.—Professor Symington read a paper, with illustrations, on the surface relations of the deep parts of the brain.—Professor Sinclair described a case, and showed the specimens of a unilateral cystic tumour of the kidney.—Dr. Thomas Houston read a paper on the conditions simulating pernicious anaemia, and gave some clinical details of a case of Dr. Calwell's of secondary cancer in the bone marrow simulating closely this disease.

Nottingham Medico-Chirurgical Society.—At a meeting held on February 18th, Mr. J. Mackie, President, in the chair, Mr. A. R. Anderson read notes of three cases of operation for perforated gastric ulcer. Two of the patients were shown, and the third was in Ireland, well. When the position of the ulcer was such that the proceeding was feasible, Mr. Anderson recommended that the whole ulcer should be excised and the stomach sewn up by a double continuous suture. This gave better results in that on recovery from the operation all symptoms of indigestion entirely disappeared, whereas when the ulcer was simply turned into the stomach, and the perforation thus closed, symptoms of indigestion frequently persisted. Mr. Willis said that his experience bore out this contention.—Dr. W. B. Ransom delivered an address, entitled Public Measures for the Prevention of Tuberculosis. The lines on which the education of the public in the matter of hygiene as a means of prevention of the disease might be brought about were indicated. The question of the housing of the poor in relation to tuberculosis was alluded to; and the advisability of certain measures being adopted by the municipality as a means of checking the spread of the disease was suggested.—It was resolved, on the motion of Dr. P. Boobbyer, seconded by Dr. C. H. Cattle, that an adjourned meeting should be specially called, in order that this important question be adequately discussed. This was carried, and Dr. Ransom then gave notice that he would move, at the adjourned meeting, the following resolution:

That in the opinion of this Society voluntary notification of phthisis is desirable.

—The adjourned meeting was held on February 25th, Mr. J. Mackie, presiding. Dr. W. B. Ransom having briefly reintroduced the subject of his address, it was discussed by Dr. P. Boobbyer, Dr. Jacob, Mr. Wood, Dr. Mackenzie, Mr. W. Tresidder, Dr. Hunter, Mr. Dabell and Mr. Blurton. Dr. Ransom replied, and then moved the foregoing resolution. He defined "voluntary notification" as referring to both patient and the doctor. The object of such notification was,

he suggested, that steps might be taken by the municipality either by means of lady sanitary inspectors, or assistant medical officers of health, to carry out certain hygienic measures advisable in this disease and for the purpose of educating the public in the means for the prevention of infection. The resolution was seconded by Dr. Philip Boobbyer (M.O.H. Nottingham) and a spirited discussion ensued in which the following took part: Messrs. Wood, Anderson, Kingdon, Blurton, Geraty, Dabell, Thompson, Dr. Mackenzie, Dr. Hunter, and Miss Sarah Gray. On the motion being put to the meeting, the voting was as follows: 11 for notification, 6 against; 7 did not vote.

Midland Medical Society.—At a meeting held on March 18th, Dr. H. Langley Browne in the chair, Mr. Lucas showed a girl, aged 16, for whom he had excised the superior maxilla nine months previously. The cavity had closed with the exception of a small aperture ¼ in. in diameter. With the aid of an obturator, kept in place by a spring from the lower jaw, practically the whole of the resulting deformity was obliterated, and she was able to speak and masticate normally. The growth, for which the operation was performed, was an osteoma arising in the antrum of Highmore. It had been present for many years, and had lately increased rapidly. It was causing much disfigurement of the face and was encroaching on the orbital and nasal fossae.—Mr. Leedham-Green showed a case of xeroderma pigmentosum in a child aged 7.—Dr. Kauffmann showed a case of sarcoma, primary in the arches or spinous processes of the lumbar vertebrae. There were deposits in the spinal dura mater beneath the primary growth, but, to the naked eye, the cord itself appeared free from damage of any sort. There was secondary deposits in the retroperitoneal lumbar glands, and many in the liver. The patient was admitted with pronounced spastic paraplegia and symptoms locating the lesion in the upper lumbar segment.

The history was that he had gone to work in perfect health one day in July, 1902. While working he had the sensation of having caught cold in his back. He walked home with difficulty, went to bed, and next morning was unable to rise, and never again put his foot to the ground. He was admitted to hospital in December, 1902, and was then entirely paralysed in the legs, and soon developed overflow-dribbling from the bladder and cystitis. A month later, without any change of symptoms, excepting the development of a slight boss in the lumbar region, he died.

It was thought that the rapid onset of paralytic symptoms had been due to thrombosis of a nutrient artery produced by presence of the tumour.—Dr. Douglas Stanley showed a specimen of dilated heart with pyloric stenosis. The patient, a man aged 38, had suffered from pain in the epigastrium after food for a year. There was occasional vomiting. The appetite was voracious. Death was due to collapse. On necropsy the pyloric stenosis appeared to be caused by fibrosis round a simple ulcer situated immediately in the pylorus.—Mr. Nuthall showed a specimen of diffuse carcinomatosis of the intestine.—Mr. Christopher Martin read (for Mr. Edge) a note on the after-progress of a case of oöphorectomy for recurrent cancer of the breast.—Dr. Heath read a paper on scarlatiniform and erythematous eruptions.

REVIEWS.

GYNAECOLOGY.

A review of the first edition of Dr. Cullingworth's *Clinical Illustrations of Diseases of the Fallopian Tubes*[1] was published in January, 1896, and the fact that a third edition has appeared is a strong testimony to its popularity. This new issue shows a considerable amount of rearrangement. The "summary" of former editions is now placed at the beginning as an introduction. This alteration is to be commended from some points of view. It makes the work more suitable for the student, for a general sketch of any subject is indispensable to the learner, above all in a work mainly devoted to the same subject in detail. This introduction is followed by a description of the frontispiece—that is to say, by a demonstration of the normal relation of the tubes to the ovaries, enlarged from the simple note which actually faced the frontispiece in former editions. The author does well to impress on his readers the importance of a correct knowledge of these relations, which are nearly always inaccurately defined in textbooks. The fimbriae of the Fallopian tube run upwards, not downwards, as His demonstrated over twenty years ago. Dr. Cullingworth impresses this truth firmly on his reader's mind. The relations of the ostium of the tube to the ovary are very important in regard to the changes seen in chronic inflammation and in extrauterine pregnancy. Hence his demonstration of these relations is absolutely necessary as part of the text in a book of this kind. He says at the same time, almost apologetically, that it would be out of place in this work to give a detailed account of the anatomy of this region; but here we do not entirely agree with him, for if there be any fault in his demonstration, it is that it is a little too short. The main part of the text maintains its excellence, and the impressions of the plates are highly satisfactory in this edition. They deserve careful scrutiny at the hands of many to whom they are already familiar. By this we mean deliberately to criticize the readers, not the author, of past editions: for, just as many writers seem still under the impression that the fimbriae of the tube float about loose and far above the ovary, which is only touched by the ovarian fimbria, so do many writers speak of a tubo-ovarian cyst as though it were a common condition, and not a term often applied in error to a big dilated tube sharply bent on itself. Let us study Plate VIII in this work and then give things their right names.

Originality is not the strong point of the modern writer on diseases of women. Dr. Kossmann must therefore be congratulated, for his *Allgemeine Gynaecologie*[2] is quite original in its arrangement. It does not consist of long descriptions of operations, tables of cases in the author's practice, numerous drawings of new instruments, and a little information about the diseases themselves. Nor is it a work of the clinical lecture type, with its chapters headed "pain," "haemorrhage," and so forth, a class of publication highly valuable when prepared by competent writers of experience like Matthews Duncan and Herman. *Allgemeine Gynaecologie* is composed of heterogeneous elements, but in all Professor Kossmann has shown himself an expert. The kernel of the book, literally, as it lies in the middle of its pages, is a series of chapters on the normal and abnormal morphology and biology of the female organs, and on general gynaecological therapeutics—pessaries, massage, cure by suggestion, and "operative therapy." Like the rest of the book, these departments are original, the author is clearly a philosopher as his degree implies) and the passages on therapeutics are weighty. But the morphological portion is the most important, as Professor Kossmann has devoted much time to the subject. Many of his researches have been made public in the *Monatsschrift für Geburtshülfe* and incorporated with the text of Martin's *Krankheiten der Ovarien*, but here we find them collected together for the first time in chapters in which the author reviews and demonstrates the development and deformities of the entire genital tract. His observations on the fate of Müller's and Wolff's ducts are based on long and careful study. He has drawn conclusions as to the origin of certain morbid growths quite at variance with the theories of Coblenz accepted by Bland-Sutton and others in this country. He dwells on hyperaesthesia, dysmenorrhoea, and other subjects of clinical importance; but the bulk of the book is devoted to scholarship rather than science. The conclusion consists of an appendix on nomenclature which, owing to the great increase of literature on the diseases of women, requires a little marshalling. The author endeavours to put our bad Greek right. He suggests that modern Greek medical and scientific writers should be studied, the more so since educated Grecians have recently bestowed much care on reversion to classical forms in nomenclature. Unfortunately fresh terms too often lead to more confusion, and some modern Greek names seem decidedly clumsy when transported, rough hewn, to writings in the languages of Goethe, Voltaire, and Macaulay. Nevertheless, there is much that is suggestive in this appendix. Lastly, more than a quarter—indeed, all the first part of the book consists of a history of the science from its earliest ages, and appears to be one of the most complete, as it certainly is the newest and the most correct, ever written. It begins with papyrus literature, which shows that gynaecology was studied by the ancient Egyptians; what

[1] *Clinical Illustrations of Diseases of the Fallopian Tubes and of Early Tubal Gestation.* A series of Drawings with Descriptive Text and Histories of Cases. By Charles J. Cullingworth, M.D., Hon.D.C.L.Durh., F.R.C.P., Obstetric Physician to St. Thomas's Hospital, etc. Third edition. London: H. J. Glaisher, 1902. (Roy 8vo, pp. 90, 15 plates. 10s. 6d.)

[2] *Allgemeine Gynaecologie* [General Gynaecology.] Von R. Kossmann, Doctor der Medicin und der Philosophie, Grossherzogthum Baden, a. o. Professor, Berlin. Berlin: A. Hirschwald. 1903. (Roy 8vo, pp. 624. Fifty-one illustrations. M. 16.)

is more remarkable drugs were given to prevent conception, though in primitive nations women generally desired children. Crocodile's dung seems to have been the favourite. The gynaecology of the Greeks, and of the Moors and Christians of the Middle Ages is then reviewed. Much has to be said of the voluminous literature of the sixteenth and seventeenth centuries when so much advance was made in the anatomy of the internal organs. The review is brought down to contemporary writers. This remarkable work should be added to every medical library. It is an invaluable book of reference.

The chief feature of Dr. MACNAUGHTON-JONES'S *Points of Practical Interest in Gynaecology*[3] is the careful record of the labours of contemporary foreign operators, much new matter from alien sources being added in this edition. The paragraphs on hernia of the cicatrix after abdominal section are of importance; the diagram at p. 25, demonstrating a method of closing the abdominal wound after the removal of a large hernial sac of this type is not clear, contrasting unfavourably with the fine drawings after Noble on p. 21. The advisability of flexing the trunk during the application of sutures is rightly impressed on the reader. Surgeons have much more to learn, however, about the treatment of abdominal incisions. The clinical and operative records of cases of extrauterine pregnancy, and the arguments on the proper treatment of uterine fibroids, are instructive if only as signs of the advance made in what truly may be called gynaecological science. The physician believes in the innocence of a fibromyoma, the operator still tends to argue that it is semi-malignant.

Dr. EDMOND BRAYE'S essay on *Herpes of the Genito-urinary Organs*[4] is, like many issued by the Paris schools of medicine, clear, thorough, and not very deep. The matter compiled by authorities on gout and on the dietary suitable for herpetic subjects is well digested, thanks to the author and to his native tongue; indeed, a work of this kind might serve as a model to many an Anglo-Saxon or Teutonic writer far more widely known to fame than Dr. Braye. Herpetism is defined as a diathesis having its origin in a primary disorder of innervation; it is hereditary as a rule, and not contagious. Morbid elimination of excrementitial products causes urine and sweat to irritate certain parts, hence the characteristic skin affections. The study of herpes of the external organs is of some interest, it is always aggravated by coitus, and male patients have noticed that it is produced after connexion with certain women not necessarily herpetic. Coitus alone sets it up in some women. Yet transference of the local disease itself, as in venereal affections, is rare. Herpes of the prepuce and vulva are very distressing; as for the limits of herpes higher up the genital tract the alleged herpetic discharges, prostatorrhoea and endometritis, there is much difference of opinion. Dr. Braye dwells on this disputed subject, chiefly by quotation of authorities. The infectious element in herpes—an interesting subject—is also discussed. After all, the most important matter in relation to herpes is cure. The author is therefore quite right in dwelling at some length on diet and hygienic treatment, without which preparations of iodine and arsenic are of no avail. Some useful prescriptions are given.

THE MORALS OF SUICIDE.

THE Rev. J. GURNHILL has published a second volume in continuation of the treatise on *The Morals of Suicide*,[5] which was noticed in the BRITISH MEDICAL JOURNAL of September 8th, 1900. It was then stated that the purpose of the treatise, as indicated by the author, was to offer thoughts and suggestions which might "help to abate some of those evils from which society is suffering, and which so frequently lead the sufferers to the awful act of self-destruction as the only means of escaping them;" and that he summed up his suggestions by recommending the removal of these evils by raising our civilization out of the ruts of mere secularism "by the teaching of Christian Socialism." We felt that to discuss the merits of Christian Socialism was outside the province of a medical journal; but we read the volume carefully, in the hope of finding some definite suggestion which seemed likely to be of practical use. We failed, however, to discover any. He mentioned, it is true, that suicide is often due to "drink," and often to "betting and gambling, and so on," as any one writing about suicide could hardly avoid doing. We said "we should welcome any suggestions to abate the evil of suicide; but we do not think that Mr. Gurnhill's suggestions are of practical use." Mr. Gurnhill is not unnaturally displeased with this criticism, and in his new volume he replies, "Did my critic expect me to discover a specific remedy for suicide? He knows as well as I do that none such exists. But if my suggestions are worthless has he any others to offer? Apparently not." This reply, we think, is scarcely fair. We are not in the position of having written a book in which a hope was held out that helpful suggestions would be offered. But the question is too serious for bandying words. We recognized the kindly motive which prompted Mr. Gurnhill's efforts, and when we found that another volume on the same subject had come from his hand we opened it with a hope of finding real enlightenment or help. We regret to say we have been again disappointed. The object of the author is excellent as before. He wishes to show that Schopenhauer's assertion that a man has a right to destroy himself if he chooses is "immoral and untenable," and he endeavours to do this by a theologico-metaphysical essay on the nature of the divine and the human personalities. His argument, as far as it bears on the question of suicide, may be reduced to this, that man has received his life from a higher power, and that he is responsible to that power for the preservation of his life. In the course of the argument he traverses fields of speculation which we must not enter, and arrives at the conclusion that if we can teach men to live up to the Christian ideal of duty, "we shall perhaps be doing the best that can be done to render their lives at least endurable, if not useful and happy, and so removing some of the chief causes of suicide." Mr. Gurnhill must pardon us for saying that this does not shed any new light on the subject. The author devotes a chapter to statistics, in which he shows from official returns that the number of suicides, or as we should prefer to put it, the number of cases registered as suicide, have increased during the last ten years in England and the United States. The rest of the chapter can scarcely be called statistical, as it deals only with the cases—he does not give the number—that "have met his eye in the daily newspapers."

[3] *Points of Practical Interest in Gynaecology.* By H. Macnaughton-Jones, M.D., M.Ch., R.U.I., Master of Obstetrics (*Honoris Causâ*), Royal University of Ireland, etc. Third Edition. London: Bailliere, Tindall, and Cox. 1902. (Demy 8vo, pp. 200, 24 plates. 4s. 6d.)

[4] *Hygiène et Traitement de l'Herpétisme: Herpétisme des Organes Génito-urinaires* (Herpes of the Genito-urinary Organs). Par le Dr. Edmond Braye. Paris: J. Rousset. 1902. (Crown 8vo, pp. 124. Frs. 3.)

[5] *The Morals of Suicide.* By Rev. J. Gurnhill, B.A. Vol. ii. London: Longmans, Green, and Co. 1902. (Crown 8vo, pp. 236. 5s.)

NOTES ON BOOKS.

THE series of small treatises on nutritional diseases by Professor von Noorden and his pupils are being translated into English under the direction of Dr. BOARDMAN REED, of Philadelphia.[6] Two volumes are before us, one on obesity (price 50 cents.) reviewed in the BRITISH MEDICAL JOURNAL in 1901, vol. ii, p. 1603, and the other on nephritis (price, dol. 1.00) reviewed in the BRITISH MEDICAL JOURNAL last year vol. i, p. 721.

We have received an English translation of Dr. GRÜNWALD'S *Atlas and Epitome of Diseases of the Mouth, Pharynx, and Nose.*[7] The German edition issued by Lehmann was reviewed in the BRITISH MEDICAL JOURNAL of August 30th last, p. 619.

[6] New York: E. B. Treat and Co. 1903.

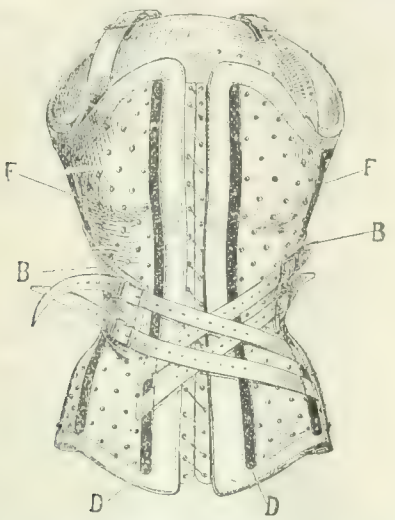
[7] Philadelphia and London: W. B. Saunders and Co. 1903. (Cr. 8vo. pp. 219. 13s.)

ANTISEPTIC BARBERING.—The Board of Health of Jersey City has adopted an ordinance for the sanitary regulation of barbers' shops. It provides that the floors and woodwork in all such shops shall be scrubbed at least once a week. The shop must be swept daily. No one shall sleep therein, and no skin disease shall be treated therein unless the barber be a licensed medical practitioner. Cleanliness on the part of the barber must be observed. He must not blow short hairs from a man's neck after cutting his hair, but must use a towel or fine hair brush instead. Brushes, razors, and combs, and other instruments must be sterilized in hot water or in a solution of formalin within five minutes after use. Every customer must be provided with a perfectly clean sterile towel. Razors and razor strops must not have the hands of the barber rubbed upon them nor his breath blown upon them during the process of sharpening. A penalty of 10 dollars (£2) is imposed for each and every offence.

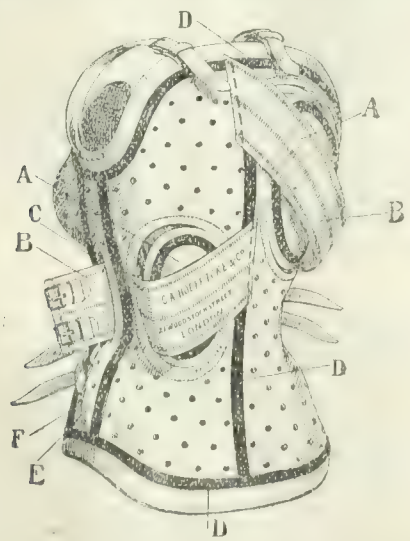
REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEDICAL AND SURGICAL APPLIANCES.

Leather Corset for Scoliosis.—Mr. E. Muirhead Little, F.R.C.S. (London, W.), writes:—The corset which is represented in the annexed figures was introduced to my notice by Mr. Hoefftcke, of 21, Woodstock Street, W., who states that it has been favourably reported upon by Dutch surgeons. The principle of its action is an old one, as old or older than Tavernier's lever belt, but it is, I think, applied in a new way. It consists of a perforated leathern jacket, which is carefully

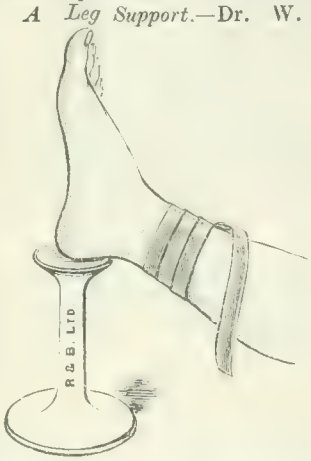


moulded on a plaster cast of the trunk taken in the usual way, and it is strengthened by light steel or iron bars. The peculiar features of the corset are the flaps A A, which are cut out of the leather for three-fourths of their circumference, the portion nearest to the mid-line of the back being left to act as a hinge. These flaps are placed over the prominent portions of the trunk, such as the ribs and loin, on which it is desired to make pressure, and they are strengthened by light steel rings. The corset shown in the figures is intended for a case of right-dorso convex scoliosis with rotation of right ribs and left loin. A A are the flaps, on which pressure



is made by the spiral belts B B. D D are the strengthening steels, and C is one of the slits in the jacket through which the belt which causes pressure on the left loin passes. The sides of the slit are supported by the two vertical steels E and F. It is obvious that on tightening the straps B B pressure will be caused on the flaps A A, and a certain amount of untwisting force will be exerted. It is essential that the jacket should fit well and closely over the ilia, and it must therefore come down as low as is compatible with the sitting posture. The maker has been good enough to supply one of these corsets gratis for trial at the National Orthopaedic Hospital, and, after four months' trial on a suitable case, a certain amount of improvement is discernible. The patient states, moreover, that the support is very comfortable. Like all other spinal apparatus, this corset will prove useless if not accurately fitted, and intelligently and persistently used. It cannot be expected that it will cure very marked or old standing deformity of the ribs and vertebrae. In such cases it can only be a comfortable support.

A Leg Support.—Dr. W. A. Carline writes: Messrs. Reynolds and Branson, Ltd., of Leeds, have made for me a leg support of enamelled iron, shaped somewhat like a huge, squat stethoscope. It is placed under the patient's heel when bandaging the leg, or for other purposes. It will be found useful in hospitals and consulting rooms. Its weight and broad base make it quite steady when used on a bed, and it can, of course, be kept perfectly aseptic. At the Lincoln Hospital it has earned the name of "Sister Jane," and frequently enables one nurse to do what otherwise would be the work of two. The price is 3s.; postage, 6d.



THE FOOD FACTOR IN EDUCATION.

The attention of the profession, as well as of the public, has latterly been much engaged with the evil effects which appear to result in many cases in young people from what is known as "overpressure."

In these cases symptoms distinctly referable to the nervous system are those most frequently encountered, but muscular weakness, accompanied by more or less anaemia, is scarcely less common; while a disturbance of the digestive organs is often met with which no care can prevent from constantly recurring, although it may be relieved at the moment by appropriate treatment.

These troubles are very generally supposed to be entirely due to overstrain of the mental faculties, but it seems desirable to consider whether other causes may not contribute; and whether some part of the evil may not be set down to a diet in which the food is often inadequate both in quantity and quality to supply the requirements of growth, as well as of mental and physical effort. Parents scarcely sufficiently understand that the body is a machine, and that the work done can only be in proportion to the fuel supplied, if the machine itself is to be kept in anything like working order. For it must be noted that the intellectual output of the child is as much energy produced from the fuel in form of food as the more obvious output of muscular exertion or bodily heat.

Dr. Collier, at a meeting of headmasters of preparatory schools in December, 1901, speaking on the question of the deficiency in growth and weight which had been noted in boys coming to public schools from preparatory schools, said, "It must be remembered that while growth depends upon the proper utilization of the food taken in from day to day, at the same time all muscular action and brain activity is brought about by the daily consumption of food."

All authorities write insisting on the absolute necessity for adequate nourishment for school children. Dr. Clement Dukes, the well-known physician to Rugby and a distinguished authority on school hygiene, states that the average public schoolboy requires meat twice a day, and suggests that the innumerable petty misdemeanours of boys may be due to insufficient nourishment.

Similarly Dr. Newsholme in his valuable book, of which a

new edition has just been published, points out that under 20 years of age the chief danger with regard to diet is underfeeding: "For that the younger an animal the more easily is it starved, and the more actively growing are its organs the more seriously are they injured by partial starvation." He is of opinion that a healthy child's appetite is the best guide to the amount of food required, so long as the food is wholesome.

These facts appear to be sufficiently recognized as far as they concern Board school children. Attempts are being very generally made in the case of these to supplement, by penny dinners or even by free dinners, the scanty home diet.

On the other hand, it is not by any means certain that the children of well-to-do, or even of wealthy, parents manage to obtain anything like the quantity of nutritious food necessary to keep them in robust health, though their appetite may be stayed by bread and butter, aided by cakes and sweets openly or surreptitiously obtained. With a view to judging whether such is the case, an attempt has been made to ascertain the number and nature of the meals in various English schools.

Girls' Boarding School Dietaries.

In considering the danger of underfeeding there is a general agreement that it is especially great in the case of girls. Dr. Newsholme points out that girls so underfed often get into the habit of relying on bread and butter and puddings to the almost complete exclusion of meat and other nitrogenous food. There is no doubt that he is correct in stating that much weakness and ill-health in after-life are ascribable to this cause.

England.

The following table (A) shows the food supplied at two first-class boarding schools for girls, one at the seaside and one in a suburb of London. It may be added that in both cases the fees paid were very high.

Table A.

	(1).	(2).
Breakfast ...	9 a.m.—Tea, bread and butter; a small slice of cold bacon.	8.30 a.m.—Tea, bread with a limited quantity of butter described as insufficient), boiled egg or slice of ham.
		11.30 a.m.—Milk.
Dinner ...	1 p.m.—Hot meat, vegetables, pudding. (The quantity of meat is described as being often very small; and although a second helping could be obtained, it was considered greedy to ask for it).	1.30 p.m.—Hot meat twice weekly; on other days cold; vegetables, pudding.
Tea	5 p.m.—Tea, bread and butter; cake on Sunday.	5.30 p.m.—Tea, bread and butter.
Supper ...	8 p.m.—Bread and butter or rock buns.	8.30 p.m. Bread and cheese.

It will be evident to our readers that these dietaries show more than one serious deficiency. The first, and perhaps the most important point, is that the quantity of meat supplied would seem to be far too little, especially when the fact is taken into consideration that not alone is meat given only once daily, but that the quantity appears mostly to be strictly limited. Then butter seems to be given sparingly, an important matter, as children usually refuse to eat fat. Further, the period between the dinner at about midday and breakfast the following morning is far too long a period to elapse without any substantial meal whatever. This last point will be more fully dealt with later when we come to consider boys' schools.

It is believed that these tables fairly represent the feeding in a high-class girls' boarding school. It may be noted that one of them was "a finishing school" at which the girls were from 14 to 18 years of age.

Table B (p. 799) shows the dietary at a well-known Convent School in the South of England. It must, we think, be admitted that it compares very favourably both in regard to quantity and variety with those given above.

France.

Table C shows the meals supplied at two French boarding schools for girls; one is in Paris and one in the neighbourhood of that city.

In addition to this, it is usual for the girls to be provided with a glass of wine and biscuits at 10 a.m.; this, however, being an extra. Wine is provided at luncheon and dinner.

Table C.

	(1).	(2).
Breakfast ...	8 a.m.—Coffee or chocolate, bread and butter.	8 a.m.—Coffee, roll and butter.
Luncheon ...	12 noon.—Soup, two courses of meat, one course of vegetable; sweet; dessert.	12.30 p.m.—Eggs, variously cooked; two courses of meat; one course of vegetable; sweet.
Goûter (tea)...	5 p.m.—Roll, to which the girl herself usually adds a supply of fruit or chocolate.	4 p.m.—Milk and roll.
Dinner	7 p.m.—Soup or fish; meat; vegetable; sweet.	7 p.m.—Soup, fish, meat or poultry; vegetable; sweet.

At first sight it may appear that the diet at these French schools errs rather on the side of excess; but it must be remembered that the work done at such schools in France is far harder than is usual in English schools. At one of those mentioned every girl was supposed on leaving to be prepared to pass her examination for the "brevet simple."

Germany.

An example of the dietary at a girls' boarding school in Germany is given in the following table:

Table D.

Breakfast ...	8 a.m.—Coffee or chocolate; roll.
	10 a.m.—Fruit and cake or milk and cake.
Luncheon ...	1.30 p.m.—Soup, two courses of meat, vegetables; stewed fruit.
Tea	4.30 p.m.—Tea or coffee, bread and butter.
Dinner	7.30 to 8 p.m.—Soup, eggs or fish, sausages or cold meat; jam.

Boys' School Dietaries.

The question of boys' schools has next to be considered, first premising that in no case need the boys suffer to the same extent as the girls, the introduction of extra articles of food being a recognized custom at most public schools, while at all the "tuck shop" is accepted as a semi-official institution.

Preparatory Schools.

The feeding of boys in preparatory schools is decidedly better than that of girls at the same age, or even of the same boys at a later period. The diet of a first-class preparatory school is described as follows:

Table E.

Breakfast ...	8 a.m.—Porridge; a little meat or fish.
	11 a.m.—Milk and biscuits.
Dinner	1 p.m.—Meat and two vegetables; pudding (unlimited in quantity).
Tea ...	6 p.m.—Bread and butter (unlimited); a little bread and jam or cake.
Supper	Milk and biscuits or bread and butter.

At a smaller school the meals given were:

Table F.

Breakfast ...	8 a.m.—Porridge, eggs, fish, sausage, or bacon alternately.
	11 a.m.—Bread and butter or cake.
Dinner	1 p.m.—Hot meat, two vegetables, pudding (unlimited).
Tea	4 p.m.—Bread.
Supper	7 p.m.—Milk, bread and butter, and a small quantity of jam or stewed fruit.

At the large school it seems that little fault can be found with the diet, excepting perhaps that something more like the breakfast meal might be given in the evening. At the smaller school the quantity of milk appears to be insufficient.

Table B.

—	Sunday.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
Breakfast, 7.45 a.m.	Cold ham.	Fried bread.	Porridge (plenty of milk). Golden syrup.	Hot bacon.	German sausage.	Porridge (plenty of milk). Golden syrup.	Fried bread.
Lunch, 10.45 a.m.	Bread and butter, with milk or tea (the same every day).	—	—	—	—	—	—
Dinner, 1 p.m.	*Meat.* Leg of mutton (onion or mint sauce), or roast beef (joint). Yorkshire pudding or roast veal (plenty of stuffing). *Vegetables.* Potatoes. Green vegetable. Salad. *Pudding.* Fruit tarts or jam tarts, or cake pudding and milk pudding.	*Soup.* (1) Stewed mutton with turnips, carrots, onions, potatoes. (2) Hot-pot, well seasoned (alternate Mondays). Boiled potatoes. *Pudding.* Apple dumpling or rhubarb, or suet pudding with sultanas and sugar. Milk pudding. Stewed fruit.	*Meat.* Boiled mutton (melted butter and turnips) or caper sauce, or rabbits, or hash with suet balls. Potatoes baked in jackets. Green vegetables. *Pudding.* Sago or tapioca. Stewed fruit.	*Soup.* Meat pies (beefsteak, rabbit, kidney, onions, well mixed and seasoned) or beefsteak puddings, or cold veal pies. Boiled potatoes. Green vegetables Salad (if veal pies) *Pudding.* Bread and butter pudding and stewed fruit, or suet pudding and golden syrup.	*Meat.* Roast of veal, beef or pork (but not the same two weeks running). Sauces to suit. Yorkshire pudding. Potatoes baked in dripping. Salad. *Pudding.* Sago and semolina pudding and stewed fruit.	*Pea-soup.* or potato pie (alternate Fridays). Fish, eggs, sometimes omelette. Seasoned potatoes (when no pie). *Pudding.* Marmalade or jam roly-poly, or jam turnovers. Cheese (if not at supper).	*Soup.* Liver and bacon and croquet balls. Baked potatoes. Haricot beans. *Pudding.* Apple Charlotte, or bread pudding and stewed fruit.
Tea, 5 p.m.	Bread and butter. The same every day. (Once a week a large bun, and on Sunday cake.)	—	—	—	—	—	—
Supper, 7.30 p.m.	Moulds of corn flour, or other farinaceous food, with jam and marmalade round.	Rissoles.	Hot vegetables, fried or boiled, melted butter, or meat gravy. Jam at each table.	Ragout (macaroni and gravy).	Soup. Potatoes. Syrup or stewed fruit.	Fish cakes and potatoes, or macaroni and cheese. Syrup.	Brawn or corned beef, or ragout. Stewed fruit.

Public Schools.

A very different state of things is disclosed in examining the feeding of the public school boy. Table G shows the diet in big houses at four of the large public schools of England.

It would of course be impossible for a boy to exist, far less to do hard mental and physical work, on the meagre diet described. The food supplied by the housemaster is necessarily in all cases supplemented by the boy himself, but as may be imagined not always most judiciously. In the diet tables of most public schools the defects are similar to those found in girls' schools, namely, a very insufficient quantity of meat and nitrogenous food, and altogether inadequate feeding after the dinner hour. The last point is of very great importance, as the boy often sleeps badly from going to bed hungry; in addition to which it must be remembered that at most large schools compulsory games are the rule for a part at least of the afternoon, and the boys naturally return to supper with a healthy appetite which is scarcely properly to be satisfied with milk and bread and butter. It must in justice be said that at public schools the food varies very much in different houses, and there are many where a more or less substantial supper is provided for the elder boys, but there is reason to believe that the diet tables below represent the usual meals given.

Another point, however, which has been already referred to is that more ample feeding can as a rule be procured by a parent who pays for what are known as "extras."

It will be of interest to compare the arrangement of meals at a boys' school in France. The diet table given in Table H is that of a "Collège du Gouvernement" in a small provincial town, at which the fees are low:

Table H.

Breakfast ...	8 a.m.—Coffee or chocolate, cheese.
Luncheon ...	Soup, two courses of meat, vegetable, dessert.
Goûter (or tea)..	4 p.m.—Chocolate and bread, or jam and bread.
Dinner	6.30 p.m.—One course of meat, one course of vegetables: dessert occasionally.

Wine is given at both luncheon and dinner.

So far the larger public schools have been under consideration. It need scarcely be said that remarks made on these do not apply with equal force to all schools.

A Schoolboy's Testimony.

The following authentic letter from an English schoolboy, who appears to be exceptionally favoured, will be found interesting:

"At a period not far distant the food as provided at schools was both scanty in quantity and inferior in quality. Many improvements have been forthcoming even within the space of the last ten years, for before that time dry bread, helped down by milk, constituted the bill of fare for breakfast and supper. But great as the advances have been, there is still scope for improvement. I have now been at school for eight years, two of which were spent at a preparatory establishment, whilst the remainder has been passed at a 'college.' A summary of the times of meals, fare, etc., with some remarks on the subject, might be of interest.

Table G.

Breakfast	8.30 a.m.—Tea or coffee, bread and butter and jam. Extras (paid for as meat breakfasts) sausages, eggs, etc.	9 a.m.—Porridge, fish, egg or sausage, bread and butter, marmalade, tea or coffee.	8-8.15 a.m.—Tea or coffee, porridge, bread and butter, jam. Extras (paid for), eggs, fish, etc.	8 a.m.—Tea or coffee, bread and butter. Extras (paid for) eggs, fish, etc.
Dinner ...	1.20 p.m.—Hot joint, potatoes and greens; milk pudding or tart.	1.15 p.m.—Hot joint and vegetables; pudding.	1.30 p.m.—Hot joint, vegetables, pudding or oranges, apples, etc	1 p.m.—Hot joint and vegetables; pudding.
Tea ...	6.30 p.m.—Tea, bread and butter.	4 p.m. in summer, 5 p.m. in winter.—Tea, bread and butter, jam or cake; eggs occasionally.	5-6 p.m.—Tea, bread and butter.	5 p.m.—Tea, bread and butter. Elder boys have cold meat.
Supper for monitors only	8 p.m.—Cold meat or bread and cheese.			
Notes	In summer and part of winter when there was early school boys had hot cocoa at 7 a.m.	Food varies in different houses.	Food varies in different houses.	

"At the preparatory school, we were given three regular meals a day, breakfast, dinner, and tea, whilst before going to bed, two slices of bread and butter and a glass of milk were served out to each boy. The food was good and there was no stinting. We had meat at breakfast and dinner each day; the monotony was sometimes relieved by such things as fried potatoes for breakfast and fish for dinner. Perhaps it may be urged that the bread and butter just before going to bed was anything but good for the digestion. In my experience I never either knew or heard of evil effects arising from it.

"Let us now make a survey of 'college' diet. After one hour and a-half spent in dressing, study, and prayers, breakfast is served at 8 o'clock. At this meal we are provided with porridge (*ad lib.*), bread and butter, and tea; those who take 'extras' (these number about 80 boys out of 110) are given bacon and eggs, varied by ham on one day each week. The boys are not limited as to time, and on the whole everything connected with this, the first meal of the day, is entirely satisfactory. Dinner is taken at 12.45 o'clock and lasts till 1 o'clock, the time being limited owing to compulsory games being played immediately after dinner. Despite the short time allotted to this meal, indigestion is a rare complaint among the boys. The fare consists of soup (three or four times a week), beef (sometimes mutton and occasionally roast pork), vegetables, pudding (milk or suet on alternate days, jam tart once a week), and cheese; beer, cider, or plain water are given to drink. Upon one day in the week fish figures as the principal dish. Few boys take more than one helping of meat and pudding. As a matter of fact, as far as I can see, a good proportion do not even take pudding, but confine their attention to cheese. It is noticeable also that after working indoors all the morning, the appetite for the midday rule is seldom very keen. Tea—a luxury enjoyed by members of the sixth form only—is at 5.45, followed by supper at 7.30, which consists of bread and butter and tea; those who take 'extras' for supper are given a chop or two poached eggs. It will be noticed that with the exception of the sixth form, the whole school fast from 1 o'clock till 7.30. It is true that there is a 'tuck-shop' opened twice a day, from 3 o'clock to 3.15 p.m. and again from 5.40 to 6 o'clock. From this biscuits, fruit, and chocolate may be obtained in return for cash payment. From 5.40 to 5.45, too, dry bread and a glass of milk are obtainable on application to the pantry. I do not think that this is right; unless a boy has money he has to exist for six and a-half hours—one hour of which is spent in playing football, and nearly all the rest in study—on a slice of bread and butter. Tea most certainly ought to be provided for the whole school and not reserved for the biggest boys. I notice that the appetites of the majority are usually very keen for supper, much more so than for dinner, and this is especially noticeable on Sundays when the shop is not opened. With this in view, I think that something more than mere bread and butter might be provided at this meal.

"From this summary it may be seen that the diet is plain but good. At breakfast and supper a pat of butter of uniform size is given to every one; one often wishes that the allowance were larger for supper. There is one circumstance to be regretted, that the joints, etc., are cooked on gas ranges. These stoves often char the outside of the meat whilst leaving the inside rather too underdone. If this were remedied perhaps two helps of meat would become the rule rather than the exception.

"It may be seen that school diet at the present day is very different from that provided at the establishment kept by Mr. Wackford Squeers. There is a much quoted proverb which says that 'the proof of the pudding is in the eating,' and this may be rendered into 'the proof of the pudding is in the effect, for good or for evil, that it has on the eater.' It is only fair to say that the diet that I have just detailed above has a decidedly good effect upon the boys. Judging from success at public examinations the studies of the school are well up to the standard of other schools: whilst there always exists a keenness for games and sports of all kinds. Illness is of rare occurrence and the general appearance of the school is robust and healthy; of course there are one or two delicate boys who look pale and thin, but this seems to be their natural state; by far the majority are 'the very pictures of health.' We must not look for the luxuries of home when at school and it is as well that we do not get them; from my experience, school diet answers its purpose very well, namely the maintenance of health and the giving of the power to exercise one's uttermost, both in the class-room and on the playing-field."

At this school, it will be seen that, with the exception of the long afternoon interval, there is little ground for complaint of the food supply, which, indeed, compares favourably with that usually given to children at home. It should be added that since the beginning of the present year, when the schoolboy gave his testimony, the interval has been filled up by a slight meal analogous to the French *goûter*, consisting of a bun and milk, while the time of supper has been advanced by an hour, and the meal itself has been made more substantial (soup or meat pudding, etc.). Moreover, "extras," as defined above, are now supplied at breakfast as a regular part of the school dietary.

HOME DIETARIES.

The following table (I) has been arrived at by comparing the food given to the children at a number of upper middle-class households, and may be considered to represent the normal fare:

TABLE I.

Breakfast	... 8.30 a.m.—Tea or coffee, porridge and milk, eggs or fish, bread and butter, jam.
Dinner ...	... 1.30 p.m.—Hot meat and vegetables, pudding.
Tea ...	... 5 p.m.—Tea or milk, egg, sardines or fish, bread and butter, jam.
Supper ...	... 8 to 9 p.m.—Milk and bread and butter.

In the case of girls this is often the fare up to 15 years of age or even older, although boys usually leave home for school at a much earlier period. For this reason it is desirable to call attention to the question of home feeding, which, although perhaps sufficient for children under 12, is inadequate for the needs of girls growing into womanhood.

One advantage enjoyed by children taking meals at home is that for the most part the food is of excellent quality and fairly well cooked. This can rarely be said to be the case at schools, and dissatisfaction is very frequently expressed on this head. Girls will usually be found to describe the meals as deficient in quantity; but boys, who for the reasons given above usually manage to obtain sufficient food of some sort, often complain bitterly of the quality and cooking of the meat, which is not infrequently said to be so tough as to be almost uneatable. It would appear desirable that some more central control should be exercised over the food supply in boarding houses than is usual in most of our public schools.

In the above description and list of dietaries an attempt has been made to present the case fairly; no one or more of our schools is specially aimed at, but the question presented for consideration is, whether we English as a nation are sufficiently alive to the importance of diet in education.

No doubt English children have for many generations been brought up on a fare not much differing from that of the present day, and most assuredly we have no reason to be ashamed of the race. It must, however, be remembered that there is now demanded of our children an intensity of effort and sustained intellectual labour unknown in former years.

Examinations which tend day by day to become more difficult bar the portal to every professional career, and a boy who cannot prove that he has thoroughly assimilated the subjects taught him at school is hopelessly left behind in the race. Further, the love for intellectual distinction which seems always to have lain dormant in the female sex, now exhibits itself in a strong desire on the part of girls to prepare themselves for difficult educational tests.

In addition to this, girls are now very properly induced to cultivate various forms of physical exercise, while among boys the competition in games has become keener. Alike, therefore, on the physical as on the mental side, the need for effort has become greater, but the quantity and quality of the food on which this effort is to be sustained remains the same.

The question for consideration is, whether if we try to drive the engine at a greatly increased speed with the same quantity of fuel serious injury must not inevitably result.

Warnings are not wanting that something is amiss when medical men meet with a constantly increasing number of adolescents of both sexes who are in delicate health even though not suffering from any definite organic malady. When the rising generation shows a deficiency in stamina it is certainly time to consider what part an insufficient dietary may play in its production.

A Report
ON
THE MILK SUPPLY OF LARGE TOWNS:
ITS DEFECTS AND THEIR REMEDY.

III.

A Model Dairy Farm on Commercial Lines.

The farm which Messrs. Welford maintain for the supply of nursery milk is situated at Harlesden, near Willesden, and the milk is sent up to the factory[1] in Maida Vale by road in carts. The farm, which is 128 acres in extent, affords excellent feeding for the herd, which consist of large shorthorns. On the occasion of a recent visit the animals were still housed, those in milk being in a large well-designed and well-constructed shed. The walls are faced with glazed white tiles, a small black slate being inserted opposite each cow's stall for the purpose of calling the attention of the veterinary surgeon to any animal which may be thought to require particular inspection. Against the walls are also two porcelain washing basins, with receptacles for soap and fitted with hot and cold water, while near them hang two roller towels. These are for the milkers, who wash their hands after milking each cow. This is excellent as a precaution against conveying infection from one cow to another and for ensuring general cleanliness. The milkers wear white linen jackets and oilskin caps, the latter as their heads are bound to touch the cows while they are milking, and oilskin is easily washed. The cows stand in a single row down the centre of the shed, the floor sloping slightly to an open drain, which flows through a gully into a disconnecting chamber and so to a drain which empties into a tank at a distance. The overflow from this tank is into the public drain. The litter used is straw, which is cleansed and made up twice a day. In front of the stalls is a long trough formed of glazed half drain pipe of large diameter, and in this the animals are fed and watered twice a day. The water supply is from the West Middlesex Water Company, and a constant supply is insured by a large tank. The shed is ventilated in the roof, and there are also doors and windows, so that it is airy and light. The importance of absolute quiet for the cows is insisted upon, and they are disturbed as little as possible. The udders are only washed in case of necessity, but the cows are brushed every morning, and this is found sufficient as a rule to keep them clean. It is found that to wash the udders habitually is apt to cause chapping, especially in frosty weather. The milk, which is drawn into ordinary milking pails, is poured through a wire gauze funnel strainer into bottle-shaped cans, holding about eight to ten gallons, in which it is dispatched to the factory. It is delivered in sealed bottles or cans within three or four hours of milking, a matter of great importance in the case of invalids and babies brought up by hand on cows' milk. The great object held in view is to supply the milk as fresh as possible and to diminish the chances of contamination. The average yield per cow is said to be from 12 to 16 quarts, but the quantity varies according to the season of the year. In the winter the cows are fed upon mangolds and finely chopped hay, with mashes made of mixtures of various corn meals, pea and locust meal, and bran. They are also given oilcake. Messrs. Welford do not keep a cow after its third calving, as they are of opinion that old cows are more subject to tuberculosis, which is seldom seen in younger animals, while the young cows run the risk of being infected when the older animals develop it.

Asses in foal, and recently foaled, are kept at this farm, but as soon as they are required for milking purposes they are removed to a special dairy in Edgware Road, Hyde Park. A few pigs are kept on the farm. Messrs. Welford's Harlesden Farm is a standing proof that, with proper organization and method, and, above all, personal care and supervision, something little short of ideal conditions for the supply of clean, fresh milk can be attained on a commercial basis. We have seen cowsheds, probably as good as that at Harlesden, with modern appliances, a good water supply, and healthily situated, which, with proper attention, might have turned out as pure milk. But, owing to careless or incompetent managers, the cows have been allowed to wallow in uncleaned stalls, knee deep in manure; the milkers have worn unclean clothes, and milk tainted with manure, hairs, and dust has been turned into doubtfully clean vessels. Messrs. Welford have no special costly fittings at their Nursery Farm, and possibly many large country farmers, or their landlords, have spent quite as much money on their cowsheds and their herd as Messrs. Welford; but we doubt if many have obtained the same results, and we would point to the Harlesden Farm as an example of the excellence which may be attained by good management.

[1] A description of the factory will be given in a subsequent issue.

Railway Transit.

The milk supplied from the farm just described is a special milk designed for the use of infants and invalids, and is sold at an enhanced price. The ordinary milk of towns is, as has been said, brought in nightly by train, and is, as a rule, delivered by the railway companies at special platforms in the early morning. It has been milked in the morning or afternoon of the previous day, and generally consists of a mixture of the two milkings. It has been carted by the farmer to the roadside station, where it has perhaps remained for several hours exposed to sun in summer and to dust on every dry day. It has then been put into a ventilated milk truck or a box-van as the case may be, and the truck may eventually have been attached to a through ordinary train, or may have formed part of a special milk train, which has been worked through as the exigencies of traffic permitted.

We would express the opinion that while the special milk cars probably meet all reasonable requirements, at any rate in this climate and in the present state of public opinion, the use of ordinary closed box-vans, especially in the warmer months of the year—say from April to October—ought to be abandoned. The railway companies will not collect or deliver milk. They receive it from the farmer at the country station, and hand it over to the town dealer, usually a wholesale merchant or a large dairy company with its own factory and distributing branches, at the town milk platform. The railway company's responsibilities therefore begin and end with the actual transit over its own lines, and in this there appears to be no unreasonable delay. The main precautions which they may fairly be asked to take in the interests of the public are three: (1) To supply covered sheds at the country stations where the milk churns may be kept under cover from the sun and dust when awaiting dispatch; (2) to supply well-ventilated vans in a systematic manner as a matter of routine, and to encourage the system of sending milk in sealed or locked churns.

In the course of inquiries in connexion with these articles we have often been met with the statement that one great difficulty in the way of preserving country milk from contamination was the practice of the railway companies to require that churns should not be sealed or locked. The object of this regulation was stated to be that the quantity of milk might be ascertained either by measuring the milk by pouring it from one churn to another, or by inspecting a scale marked on the inside of the churn. In consequence we addressed a letter to the secretaries of the principal railways in England, and owe to the courtesy of the officials replies from which we draw the following facts:

Mr. H. G. Drury informs us, on behalf of the Great Eastern Railway Company, that that company makes "no difference whatever with regard to the charges, whether the milk is sent in churns which are locked or sealed, or simply fastened in the usual manner." All the company requires is that "when the churns are locked or sealed the tare of the churn should be shown upon the outside." In this way the company is "able to check the quantity of milk, should it for any reason be inclined to do so." Mr. Drury adds that the company prefers to receive the churns locked, but it can very rarely induce the farmers to do so.

Mr. H. Partington, writing on behalf of the London and North Western Railway Company, informs us that that company makes "no difference in the charges for milk locked or sealed, and for milk not so secured, the condition of carriage being that the lids shall be properly fastened to the cans."

Mr. R. H. Haig Brown, writing on behalf of the Great Central Railway Company, informs us that that company charges the same rate for milk in locked or sealed churns as for milk in churns not so secured.

Mr. Chalk replies on behalf of the London, Tilbury, and Southend Railway that the rates are the same whether the churns are sealed, locked, or otherwise.

Mr. Allen, writing on behalf of the Great Western Railway Company, also informs us that the "charges for conveyance of milk, whether in churns, sealed or not so secured, are the same."

The London, Brighton, and South Coast Railway, and the London and South-Western Railway, have replied to our in-

quiries by forwarding copies of the printed conditions as to the conveyance of milk over their systems. Several of our other correspondents have also forwarded the conditions enforced by their companies. They appear to be identical in all cases. The "conditions of carriage" which affect the question at issue are as follows:

2. The lids of the milk cans must be properly fastened to the cans.

4. Each can (except hereinafter provided for) must have the number of imperial gallons it is capable of containing marked upon it, and the inside of each can must be marked to indicate the space occupied by four gallons, and by each additional gallon. In the case of "sealed cans," instead of the outside of the cans being marked, each can must have its "tare" conspicuously stamped thereon outside.

8. The officials of the company shall have the power to open any cans during transit, and if necessary to detain the same for a reasonable time, in order to ascertain if the quantity of milk therein agrees with the quantity declared.

9. Senders must, in each case, sign consignment notes showing the actual quantity of milk to be forwarded, the name of the consignee, and the station to which it is to be sent. The company reserve the right to refuse to accept milk, if and whenever the consignment note does not contain this information, or is not so signed.

10. Two rates are in operation for the carriage of milk: One the ordinary rate, when the company accept the ordinary liability of a railway company with respect to the carriage of perishable merchandise by passenger train; the other, a reduced rate adopted when the sender agrees to relieve the company and all other companies or persons over whose line the traffic may pass or in whose possession the same may be during any portion of the transit, from all liability for loss, damage, misdelivery, delay or detention, either with respect to the milk or the milk cans when full or empty, except upon proof that such loss, damage, misdelivery, delay or detention arose from wilful misconduct on the part of the company's servants.

The London, Brighton and South Coast Railway has an additional rule to the following effect:—

12. Milk for certain stations in the suburban district can only be forwarded by the regular milk trains, and the company do not guarantee the time of arrival.

We should like to have an explanation of (8). It seems on the face of it incompatible with the condition laid down with regard to "sealed" cans. Possibly it is not intended to apply to such cans, but if so, the wording is ambiguous. However this may be, we have here assurances from the principal railway companies in England (with the exception of the Great Northern which has not replied) that they are ready to carry milk in sealed churns at the same rate as in churns with loose lids, a system which closes a door to dirtiness and fraud. We could call particular attention to the statement made by Mr. Drury on behalf of the Great Eastern Railway Company, which in recent years has in several directions set an excellent example in the handling of perishable merchandise. He states that his company not only do not put any difficulties in the way of farmers who wish to send the milk in sealed churns, but prefers to receive the churns locked. Nevertheless farmers can rarely be induced to adopt that system. Why?

(To be continued.)

MANCHESTER MEDICO-ETHICAL ASSOCIATION.

THE ADMINISTRATION OF THE VACCINATION ACT.

AT the last meeting, Dr. Lloyd Roberts in the chair, Mr. F. H. Westmacott, F.R.C.S., acting as secretary, a discussion took place on "The Administration of the Vaccination Act." In opening it, Mr. DAVID OWEN pointed to the continued epidemics of small-pox as proof of the nominal fashion in which much vaccination is carried out. As a remedy he urged the adaptation to private vaccination of the rules applied to public vaccination as regards payment, standard and inspection, the cost of which would be nothing to that which small-pox now causes. He believed opposition to compulsory vaccination and revaccination would cease if free choice of vaccinator were permitted. He cited statistics he had collected in Manchester showing that most vaccinations performed did not come up to the Local Government Board standard, and regretted there was nothing in the Act to remedy this condition. He further referred to the general dissatisfaction that has been expressed with the Act during the past two years.

Dr. JOHN SCOTT considered it essential that vaccination should be made a department of public health and put under the sanitary authorities, and that at the age of 12 revaccination should be compulsory. In his experience, also, private vaccination never came up to the standard of four marks. He considered that public vaccinators should do no other work, and that the co-operation of medical men should be enlisted in removing the colossal ignorance of the poor with regard to the subject.

Dr. VIPONT BROWN believed that the only remedy for inefficient private vaccination was to make every general practitioner a public vaccinator, paid by the State, for, and only for, every efficient vaccination. Any question of pleasing parents would then be removed.

Dr. RAYNER thought no person need have small-pox, and that any person contracting it after refusing to be vaccinated should be made liable for the expense caused.

Dr. WOOD considered that making one mark only should be made a penal offence.

Dr. WILLIAMS referred to the majority of the newly-born in poor districts being under care of midwives, and to the rule that public vaccinators shall not visit a house officially before a child is 4 months old. In his own case the amount of vaccination he had to do seriously interfered with his practice.

THE EPIDEMIC OF SMALL-POX.

THE view which we expressed last week, that the slight decrease in the number of cases was probably an improvement more apparent than real, has unfortunately proved to be correct. The reports to hand this week show that the disease has spread to several new places, persists in others, and in several where it was considered to be extinct has broken out again.

ENGLAND AND WALES.

In Northumberland 2 cases have occurred at Walker and 5 at Wallsend, while with regard to Newcastle a statement that a case had been notified which we had occasion to correct three weeks ago appears to have been prophetic, since 3 or 4 cases have now occurred. The outbreak, however, is being actively dealt with by the medical officer of health, Dr. Armstrong.

In County Durham several fresh cases were notified from Darlington, South Shields, and West Hartlepool, while Rise Carr and Hebburn appear to be new centres. At Darlington the cases are to be moved from the isolation hospital to a special building.

In Yorkshire one or two fresh outbreaks are reported, as at Thorne, while at Middlesbrough, Leeds, Sheffield, Bradford, Dewsbury, Wakefield, Hebden Bridge, and Brighouse a good many new cases have occurred, and Rotherham has made its 42nd entry.

In Lancashire the disease exists in no less than 17 localities, Liverpool having had 86 fresh cases, Radcliffe its 16th, Burnley its 120th, while Rochdale and Blackburn, believed to be out of the fire, again show a fresh crop of cases. At Chorley a case has been discovered in the person of a woman who was a bedmaker at a much frequented model lodging-house.

From Derbyshire there is nothing much to report, but cases have occurred at Brigsworth and Carr Vale, and what threatens to be a sharp outbreak at Ripley.

In Nottinghamshire, the outbreak at Hucknall Torkard has not yet been got under, owing, perhaps, to the foolish curiosity of the people, who crowd round any ambulance.

In Leicester itself two cases are notified, while in Lincolnshire things, so far, appear promising, Grantham having nothing further to report.

In Shropshire, Broseley and Market Drayton seem to be fresh centres, while Oswestry, last week reported free, has had to register another case.

In Essex a case has been detected at Romford.

In Cheshire there is apparently nothing fresh.

In Wales there have been a good many fresh cases at Cardiff and in some other parts, while several cases are reported on board ships.

IRELAND.

Over 50 cases of small-pox have now been registered in Dublin, but the death-rate is so far small. A sensation has been caused by a sworn declaration of one of the "contacts," who has recorded his experience in the Corporation refuge in Nicholas Street. He declares that the inmates were insufficiently fed; that three rooms were allotted to eleven families of 40 persons; that men, women, and children were huddled there indiscriminately; and that decency was out of the question. This report was made to the guardians of the North Dublin Union, who have called for an investigation by the Local Government Board. Meanwhile, Sir Charles Cameron says that the case is grossly exaggerated; that the house is clean and airy; that the people are well fed; that the women have wine and the men stout; and that all are well looked after. It may be remarked, however, that if it is found necessary to remove persons suffering from the disease to an isolation hospital far removed from the city, the "contacts" who may be infected, and who are at all events presumably capable of spreading the disease, should not be kept in an inhabited locality. The Local Government Board has called upon the rural district councils to consider the question of hospital accommodation.

PATENT MEDICINE ADVERTISEMENTS.—The Pennsylvania Legislature has passed a Bill prohibiting the use of any person's picture or name as a testimonial for a patent medicine without securing the person's consent.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1903.

Members of the British Medical Association are reminded that commencing with January 1st, 1903, the annual subscription is a uniform one of 25s., inclusive of the Branch, and that all subscriptions should be paid direct to the General Secretary, 429, Strand, London, W.C., and not to a Branch Secretary.

British Medical Journal.

SATURDAY, APRIL 4TH, 1903.

SPRING WATER AS A CAUSE OF TYPHOID.

"Springs may be beautiful, but they are deceptive," says Professor Gaertner,[1] in a valuable study of the relation of spring water to ground water, and the dangers of the former as a source of typhoid infection. Streams and river beds run above ground, and so we can see whether they are contaminated, but with springs all but the point of exit is removed from view, and we have no opportunity of observing whether they are subject to any contamination along their course. If at any point polluting matter is introduced it is not easily eliminated, because spring water in its rapid course along wide or narrow channels cannot purify itself, like ground water, by a process of gradual filtration through the fine pores of a suitable soil.

Professor Gaertner has made a collection of statistics with the object of proving that the liability of spring water to contamination is a very real danger, and that many epidemics of typhoid fever must be attributed to this cause. There are many possible ways in which the infective material may be introduced. The heavy manuring of fields overlying a spring from which drinking water is obtained appears to have been the cause of several outbreaks, and the experience of Brouardel and Chantemesse is quoted, who found that at Lorient for a number of years in succession typhoid broke out in the barracks of the marine artillery about four weeks after the fields overlying the course of their water supply had been manured. As human excrement was used, and typhoid was endemic in the adjacent town, there are strong reasons for believing that the manure was responsible for these periodic outbreaks. There are several instances, too, both in this country and abroad, of an isolated case of typhoid being followed by a sudden outbreak amongst a large number of persons, all of whom drank water from the same spring; and investigation has shown that the excreta of the first case had been disposed of on the soil, whence they might have been washed down by heavy rains into the spring which supplied the sufferers in the subsequent outbreak. The epidemic at Worthing, described in the annual report of the Local Government Board for 1893-4, brings out another point of particular interest. In order to increase the water supply a shaft was bored which struck a copious volume of spring water at a depth of 72 ft. The outbreak of the typhoid epidemic dated from the opening of this source of supply. It was subsequently ascertained that the new supply communicated with a well, 18 ft. below the surface, to which impure flood water had access. This was an example of infection of a spring by local contamination.

But it is also possible for the infection to travel from a far distant locality when the soil through which it has passed into the spring has been deficient in the qualities of a good filter. Paris furnishes an illustration of this danger. Professor Gaertner describes in detail the various sources of that city's water supply, and brings forward very significant evidence to show that one of them in particular—the water collected from the Vanne—is, owing to imperfect filtration by the soil, particularly liable to receive contamination from a distance. From the evidence in the reports of the French authorities who investigated the matter, Professor Gaertner arrives at the following conclusion: "Owing to its spring water, and especially that derived from the Vanne, Paris has twice been visited with a severe epidemic of typhoid fever originating from germs of infection which penetrated the highly permeable upper stratum, and at some place or other found their way into the watercourse of the lower level." Chalk, which is too permeable to act as a filter, is mainly responsible for such instances of contamination from a distance. Two other routes of infection are worth noting. A sewage-polluted stream separated by a safe distance, so far as the eye can see, from a spring used for drinking purposes may travel for part of its course underground, and there come into dangerous proximity with the latter; or, again, river water of recognized impurity may find its way through fissures in the river bed, and make its appearance some distance away in the form of a spring which is thought to be of quite independent origin, and regarded as safe. Experience has proved that both these possibilities are to be regarded as real dangers, and that actual outbreaks of typhoid fever have been due to these sources of contamination.

Professor Gaertner's general conclusion is that spring water is to be distrusted. As his experience of this subject increases from year to year the stronger does his conviction become, and he finds himself in complete accord with Professor Heim, of Zürich, who, holding that "springs are variable; good one day, unsafe the next," roundly declares that he would drink the filtered water of Lake Zürich with a greater feeling of security than the water of the majority of springs with which he is acquainted. In France, too, where spring water is much used, opinion seems to be turning in the same direction. Brouardel, in 1901, pointed out that the notion, formerly predominant, that spring water was the best, was already on the decline. "We have passed," he declared, "through two periods. During the first, spring waters appeared to us excellent; during the second, certain of them excited our suspicion. We are now entering on a third period, in which observation is showing us that communications exist which enable us to recognize that what we formerly took to be the mainspring of our supply did not deserve the name," his meaning being that the spring water they thought so excellent was really contaminated by unfiltered surface water.

But of course it would, as Professor Gaertner points out, be foolish to condemn spring water, categorically and absolutely, as dangerous without considering the exigencies of the particular place under discussion. In many villages springs are the only source of supply available for public service, and the possible danger that some day or other the excreta of a typhoid patient may contaminate them is obviously much less and more remote than the constan

[1] *Die Quellen in ihren Beziehungen zum Grundwasser und zum Typhus.* Von Dr. A. Gaertner. *Klinisches Jahrbuch.* Bd. ix, Heft 2. Jena: Gustav Fischer. (Demy 8vo. pp. 124. M. 10.)

risks to which villagers are liable who have no organized water supply at all but are compelled to avail themselves of the nearest running water accessible with little or no security as to its freedom from pollution. In such cases, therefore, instead of condemning, on account of its possible dangers, a water supply which is the best procurable, it may be a wiser and more practicable course to preach the doctrine of rigid sanitary precautions in the event of a case of typhoid actually arising, with a special word of warning concerning the exceptionally great risks of infection being spread by those mild cases known as "ambulatory" typhoid.

ALEXANDER'S OPERATION.

Opinion on the proper treatment of uterine displacements remains much divided. Amongst operative measures shortening of the round ligaments holds a prominent place. On December 14th, 1881, it was first performed by Dr. Alexander, of Liverpool, and it has ever since been known by his name. The operation having reached its majority, Dr. Alexander speaks for himself in an article which he contributes to the *Medical, Surgical, and Pathological Reports of the Royal Southern Hospital, Liverpool.*

Alexander's operation seems to be more popular abroad than in the United Kingdom. Some writers of well-known textbooks dwell on the disadvantages of this method of treating retroflexion. Bland-Sutton and Giles note that the chief difficulty experienced in the course of this operation is anatomical, namely, the recognition of the round ligament as it comes from the inguinal canal; but they add that, like the operation of radical cure of inguinal hernia, it ought to be free from risk. Herman, on the other hand, teaches that the great objection to Alexander's operation is its risk—the danger to life and the danger of a long illness, with suppuration of the wounds.

Dr. Alexander insists that the unsatisfactory progress of his operation in this country is due to the number of wrong impressions which exist in regard to various points in the operation. He occasionally hears of shortening of the round ligaments being undertaken by surgeons who seem, in his opinion, to leave out the most essential points. As these points are necessary to success their omission must lead to failure and consequent dissatisfaction with the results of the operation. He dwells on what he holds to be the most essential of these points—the discovery of the ligament, the avoidance of snapping it when it is handled, and the necessity for a pessary in certain cases as part of the treatment. Dr. Alexander declares that the finding of the ligament seems to be one of the simplest operations in surgery. The aponeurosis of the external oblique *cannot* (the italics are the author's) be mistaken. All will agree with him that it should be well exposed; to aim at the external abdominal ring is a mistake. The round ligament is not always plain as it runs over the lower pillar, the canal may be much narrowed and the ligament cannot then be seen at once. In such a case the transverse fibres that cross the ring should be cut, and then the ligament, with some fatty tissue, bulges out and is quite visible. One of the most critical parts of the operation is the pulling out of the ligament. In about 4 per cent. of cases in Dr. Alexander's experience the round ligaments are so frail that it is impossible to pull them out without snapping them. He describes two cases in his own practice in which this accident occurred and caused failure: in one the patient had been the subject of fatty degeneration generally, and the change had affected the round ligaments; in the second the right round ligament snapped off internally just as it was drawn fully out and was about to be stitched. To avoid snapping, the ligament must be drawn upon very tenderly when it is already stretched out.

It is clear that the chances of snapping must be considerable when the operator is inexperienced, the tissues fat, and the uterus bulky. But when both ligaments are secured and fixed without damage, success is not assured in those bad cases where operative interference is most justifiable. Dr. Alexander informs us that in the majority of the patients on whom he performs his operation the retroflexion is of long standing and the bulky and tender fundus lies as low as the cervix. It is essential to a successful operation that the uterus be straightened before the round ligaments are shortened and be maintained in this straight position until healing has taken place. To this end Dr. Alexander always inserts a stem pessary and a Hodge pessary before operation. The stem, he declares, is essential and has been advocated by him from the very beginning. He recognizes the abuses of the uterine stem in the past, but when he employs it the uterus is fixed steadily by a Hodge pessary and the patient is lying quietly on her back all the time, so that the circumstances of its use differ entirely from those of days not long past where a stem was inserted and the patient allowed to move about. The stem is kept in for three weeks and then removed before the patient gets up, certain precautions being observed. The Hodge pessary is retained for two or three months, because if removed at the same time as the stem the cervix will tend to slip downwards, so that the fundus will fall backwards, the retro-uterine ligaments not having had time to contract to such an extent as to keep the uterus in the position of anteversion. Dr. Alexander further is very careful about certain minor technical points. He finds that his operation is suitable when adhesions exist. He first performs a vaginal coeliotomy, exploring the pelvis with the fingers, breaking down adhesions and straightening the uterus until it is brought forward in a state of anteversion.

According to the returns of the Royal Southern Hospital the results of shortening the round ligaments for the cure of retroflexion are highly satisfactory. Others claim good results from the use of pessaries without any surgical proceedings; others advocate vaginal fixation; and lastly there are many who fix the fundus to the abdominal walls after making an incision above the pubes. But both the defenders and the critics of Alexander's operation must thoroughly understand the technical points which its inventor declares to be essential to success, whilst he argues that failures are not the fault of the operation unless it be practised according to his directions.

DEGREES AND HOW NOT TO GIVE THEM.

There was an Irishman once who explained that how he fell out of a third floor window did not matter; the important thing was what he reached at the bottom. The views of Sir William Ramsay in an essay on degrees in a recent number of the *Contemporary Review* are precisely the reverse; the degree a man reaches is nothing, how he gets there everything. According to him, outside university circles in England a man with a degree is regarded as one to be avoided if he present

himself as a business recruit, whereas in Germany and America he is welcomed. This result he ascribes to the systems on which the degrees are awarded in the respective countries. The method of England he utterly condemns, because training for examinations results in men who have knowledge of the subjects on which they are examined, but no original ideas about them whatever. If the stories of some examiners are true, however, this is not always the case. Another statement is that the best men often fail to get through. This will meet with some assent, especially from those whose expressed views have been so original that they have failed to get examiners to accept them.

The fatal feature about English examinations appears to be the co-operation of outside examiners. They have an unpleasant way of asking questions to which candidates cannot supply answers, because they have not been taught them. This, of course, is dreadfully inconsiderate to the teachers, and in Germany and America such inconvenient persons are not invited to attend.

The method of which Sir William Ramsay approves, and which he wishes to see introduced into England, is what he describes as the mediaeval or German system. It is one which undoubtedly has its charms. Under it the aspirant to a degree, after the first year or so of his three or four years' course, is less the pupil than the assistant of his master. He is, indeed, "left very much to himself," and is not expected to have any further acquaintance with the work of earlier students of the same subjects than is necessary to enable him to, so to speak, "go one better". In short, the inference from this essay is that on the flag waved before the student from the beginning is inscribed, "Be original; or, if you cannot be original, be at any rate as original as you can." This at once explains why England has fallen so far behind in everything, and why all scientific advances have found their birthplace abroad. We had thought that some scientific discoveries were still made in this country from time to time, and that Sir William Ramsay was himself concerned in one of the most remarkable of recent years. Possibly he has forgotten the circumstance.

The next step is that the student and his master consult as to whether he is "ripe." If the opinion is affirmative he presents himself for the final ordeal, the essential basis of which is the defence of a thesis. The whole professorial body may be present, but it is not considered "good form" for any one to interfere beyond those who have have taken an active part in the manufacture of the now rapidly budding graduate. Even these are not necessarily bound by the conduct of the candidate on this occasion, when perchance he may exhibit what is apparently the most profound ignorance. This, however, is no matter. He has been the master and examiner's pupil for a long time; therefore he has been taught; therefore he knows. Under this system it is noted that failures to obtain a degree are extremely rare. This fact is not remarkable.

The foregoing is not necessarily a precise representation of the system of Germany and America; but, anyhow, it is a fair deduction from the paper before us. No doubt it is a "fair" system for pupils and teachers, and when a "degree" is a "gradus" pure and simple, there may be no objection. Otherwise, the interests of the public seem to be scarcely sufficiently guarded; in medicine, indeed, this has been admitted in Germany by the institution of the Staats Examen.

The different values, moreover, commercially attached to degrees are not necessarily due to systems. In Germany degrees are so readily obtained that any one with an aspiration beyond that of being a successful salesman may naturally be expected to have one. In America, again, where there are a great number of colleges, some of which we should call schools, a degree is almost a necessary proof of any particular education at all.

In England, however, very different conditions exist. Hitherto the majority of workers have not sought degrees. They have gone straight to places which train for the line of work by which they intend to make their living, but which grant no degrees. Except in medicine, the universities, especially the more famous ones, have been the resort of those who, if they ever intended to take up a business life at all, were not in a hurry to begin. Naturally, therefore, a university man came to be regarded less as a man with a practical training in science and art than as one who had pursued education chiefly for education's sake. Old beliefs die hard. An evolution in university life is now going on. How far it will go remains to be seen; how far it is desirable it should go is a matter of opinion.

THE FUTURE DISTRIBUTION OF HOSPITALS IN LONDON.

Miss Gregory, in a letter to the *Westminster Gazette*, has reverted to a midwifery scheme first broached by Lady George Hamilton and herself in a letter to the *Times*, part of which we referred to in the British Medical Journal of March 21st. Miss Gregory draws attention to the long training exacted from midwives in some other countries, and expresses the wish to see a corresponding system established in England. In order to carry out her views she urges the erection of "A National Training School for Midwives, which shall include a general as well as a maternity hospital, and a large midwifery district, all under the same organization. Here it is proposed that educated women shall receive a sufficient training in general nursing to enable them to become efficient midwives—prior to more specialized work—a two years' training in all. They shall also return to the training school every third year for re-examination and post-graduate courses." When this proposal has been sufficiently analysed to make its various factors clear, it is impossible to help wondering whether those responsible for it in any way realize what a vast one it is, and by what much simpler methods as good and probably much better a result could be attained. When the public is asked to help to bring about even an ideal result—and we do not think this could be so considered—the proposers should at least show that they are aware of the difficulties which lie in their way, and point out how they hope to overcome them. Apart from the fact that the official requirements for the training of the midwife have not yet been laid down, the scheme under consideration is likely to meet with much and well-justified opposition from many quarters. It entails for instance the building and endowment of a very large hospital of an especially expensive kind. All the money that can possibly be got together for several years to come is likely to be required to assist the various removals and reconstructions of existing institutions that are in the air; and the same removals when completed will, we hope, leave any site with a large unoccupied midwifery district in its neighbourhood very hard to find. Again, what about all the existing lying-in hospitals? Most of them have midwifery training schools attached, and as soon as standards are established will probably be only too pleased to work up to or above them. Why should they not be left to do so instead of new and expensive machinery *ad hoc* being called for? Then there are the fully trained nurses. Many of them, in increasing numbers year by year, are going to midwifery schools after taking a full three years' course in ordinary general nursing. What will they have to say to the introduction of a class of women who will

have gained practically the same position as themselves at so much less a cost of time and money? No; midwifery reformers, if still discontented, must work on lines which will create less opposition if they hope to attain practical results.

PROFESSOR BEHRING'S LATEST WORK ON TUBERCULOSIS.

THE *Wiener medizinische Presse* for March 15th, publishes an abstract of Professor E. von Behring's lecture lately delivered at Vienna on the Preventive Treatment of Tuberculosis. His recent experimental work on tuberculosis has resulted in highly interesting discoveries concerning the conditions under which cattle may be rendered immune from this disease. His results differed somewhat in different cases. He employed cultures of the human tubercle bacillus which had been kept up for eight years and had been dried *in vacuo*. Four milligrams of this material were injected into cattle intravenously. The reaction which ensued differed with the age of the animal; the older the animal, the more intense the reaction; whilst young animals proved insusceptible. As a rule there was a slight transitory fever for a few days, whilst in tuberculous animals the fever was more intense and lasted until the eighth day. In some animals dangerous complications, such as oedema of the lungs, supervened, and to this malady some of them succumbed. But when the animals survived this acute inflammatory reaction they made eventually a complete recovery. In such cases some pneumonic consolidation and pleural effusion developed gradually, but disappeared after three or four weeks and left no traces which could be found on subsequent necropsy, although if the animals were killed whilst the reaction was in progress definite evidence of pleuro-pneumonia could be found. The animals which thus survived inoculation were then found to be immunized in a marked degree against tuberculosis and their serum proved to be particularly potent in agglutinating tubercle bacilli. As far as cattle are concerned this method of inoculation has already been demonstrated to be of considerable practical value as a preventive, the inoculated animals, even when placed under the most unfavourable conditions, having been found to be proof against tuberculous infection. Professor von Behring is at present endeavouring to devise means of utilizing the experience he has gained in the immunization of cattle for the purpose of immunizing human beings; and, for this latter object, he hopes to take advantage of the presence in the milk of inoculated cows of "anti" bodies capable of being absorbed in the human intestinal tract. This work of Professor von Behring's is obviously most interesting and valuable, but we should prefer to have the opportunity of examining a detailed account of his experiments before expressing an opinion as to their ultimate significance. It is at all events fairly clear from the account before us that, by his method of producing immunity in cattle, he has demonstrated a very close relationship between the human and the bovine tubercle bacillus, and thereby has brought forward another argument which tends to invalidate Koch's famous dictum.

ISOLATION HOSPITALS.

A VERDICT which was entered last week against the Gillingham Urban District Council is well calculated to dismay those to whom the local administration of the public health is entrusted. In order to minimize the risk of infection to the inhabitants of their district, the Council, acting upon the advice of their medical officer, sent certain small-pox patients to an isolation hospital. The site of the hospital was selected with due regard to the health of the inhabitants, but it was unavoidably placed within a short distance of a dwelling house. Every precaution appears to have been taken by those employed by the Council to prevent the spread of infection from the hospital; but shortly after the small-pox patients were brought to the hospital the disease broke out in the dwelling-house. A man and his wife and child became infected and recovered, but their child died. Two other persons in the adjoining house also died. An action was then commenced against the District Council, it being alleged that the infection had been brought to the spot by their negligence. After a protracted hearing, in the course of which many medical men were called as witnesses to say how far small-pox may be carried by "aërial convection," a special jury awarded the plaintiffs £250 damages, expressing the view that the Council had displayed a want of caution in their selection of a site. Truly the position of the local authority in their endeavour to carry out this part of the law of public health is unenviable. Although they are under no legal obligation to establish isolation hospitals, it is clearly their moral duty to do so in the interest of the inhabitants at large. Indeed, the popular voice is soon raised in indignation if the necessary sanatorium is not provided when there is a small-pox scare; but while the public are ready to direct the local authority to provide the isolation hospital, every individual who happens to live in the neighbourhood of the chosen site cries out at once that his comfort is being interfered with, and that the health of his family is endangered. The case under notice appears to show that if a case of small-pox does occur in the neighbourhood of an isolation hospital the local authority may be held liable to pay damages. By erecting tents outside their district a local authority may obtain an absolutely isolated site, but in view of this verdict it is difficult to see how the isolation of small-pox patients inside the district can be adequately provided for unless the establishment of a suitable hospital is imposed upon every district council as a statutory duty. The terms of the present statute are not imperative but permissive, and it has been said by a great judge that the discretion thus vested in the local authority must be exercised in strict conformity with private rights. In taking steps for the preservation of the public health it is submitted that the local authority should be permitted to interfere with the comfort of the few. Possibly they ought to be empowered to make some compensation to those whose property may be depreciated in value by the advent of a small-pox hospital; even that would be preferable to the present condition of things in which the local authority may be muleted in heavy damages.

ST. GEORGE'S HOSPITAL.

THERE have been several communications to the press this week on the subject of St. George's Hospital, of which two only are of importance. The first is a circular letter signed by 18 out of the 22 members of which the staff of St. George's Hospital consists, addressed primarily to the governors. Its genesis is due to the fact that the staff has found reason to believe that its views which were quoted at the general meeting, and to which the governors very rightly attach much importance, have been interpreted as being entirely in favour of removal, which is not the case. On the contrary, the great majority of the staff, represented by the 18 signatories of this circular, are in favour of contriving to effect what alterations are necessary on the existing site and any adjoining land that can be acquired—*unless* such sum can be obtained by its sale as will suffice to provide a perfect modern 360-bed hospital on a suitable site, a thoroughly up-to-date medical school, a nursing home, and such an increase to endowment as will meet all additions to expenditure and loss of income as may be incurred by removal. It will be noted that in their underlying principle the views of the staff do not appear to differ essentially from those embodied in the resolution passed by the meeting. The postulates, however, as regards endowment, nursing home, and medical school, which in the resolution are only inferred, are in this circular distinctly emphasized, which is well. The other communication treats the question of removal in an entirely new manner, and makes proposals of a very radical nature. It is not a signed communication, or rather the identity of the writer is veiled under the pseudonym of "A Prophet;" nevertheless the suggestions it contains cannot be put aside without consideration. The points which the writer

endeavours to make are three in number: (1) That the hospital serves a most useful purpose where it now is, especially in view of the frequent accidents that occur in the neighbourhood, and that its removal, however, undertaken, is bound to be a very costly proceeding. (2) That it might, if it remains where it is, obtain a great addition to its current income by definitely catering for the care of sick servants, the latter being paid for by their employers. (3) That in order to retain the hospital where it is the school should be abolished, the ground it occupies used for the necessary extensions, and the medical staff, if necessary, paid for their services to the hospital. As regards the first point, there cannot be any doubt that in its present situation St. George's does serve a most useful and almost essential purpose, and its removal on the ground of superfluity has never been put forward with any confidence. Whether another site can be found on which it will serve the same purpose equally well remains to be seen. At present the only certain thing in the whole controversy is the one which we pointed out when reviewing the "briefs" issued by the Weekly Board; this point is that St. George's where it now stands is practically the only hospital between Charing Cross and the West London Hospital, five miles out. In most discussions, moreover, it has been admitted that a small accident hospital or, in any case, an adequate receiving station is necessary at Hyde Park Corner. As regards the second point put forward, there can be little doubt that there is a distinct want felt in the West of London, by a very large number of employers, of some hospital to which they can send their domestics and other employés in time of sickness, with the assurance that they will receive every desirable attention, and at which the charges will not be too high. Whether it would pay any hospital to cater for such cases is another question. If it did, such a source of revenue would be fairly constant, but one which would still be open to St. George's to obtain if its new site were strictly within the area of its present operations. It is the last proposal of "A Prophet" which is calculated to give rise to the greatest controversy, because, radical as it is, it is supported by some arguments which are undoubtedly true. There is no one in the profession, and no one even who has a reverence for the past, but would view with regret the disappearance of the Medical School in which John Hunter taught, fought, and died. It is, however, perfectly true that the number of medical students who come to London shows a tendency to decrease, and that there are under the circumstances perhaps more schools than there is any actual need for. That this is due to the disadvantages under which London medical students labour as regards facilities for getting a degree, and which the teaching staffs of London schools have made no particular effort to remove, is a view that may be held by some people. Others, however, will ascribe it to the excellence of the teaching accommodation which local patriotism, partly assisted by State funds and the extension of the University movement, has caused to be provided in several provincial centres. These, after all, are only side issues, and the chief important point in this connexion is that the Report of the London University Commission most clearly foreshadows the fact that unless some of the smaller medical schools, among which must now be included that of St. George's, are enabled very materially to improve their accommodation for laboratory instruction, the fiat will presently go forth that they are no longer considered capable of offering a full curriculum for the medical degrees of the London University. Certainly, if it were a mere question of eliminating one of the existing schools by way of diminishing the total number and so increasing the prosperity of the remainder, St. George's, which in its time has attained such prominence, would not be the one to be selected for sacrifice. If, however, by such sacrifice the hospital itself would be enabled to emerge from its existing difficulties—on which point we have no certain information—some of the staff and authorities might think it the right course to recommend. Even then, however, it would be proper and eminently desirable to retain St. George's as a centre of post-graduate instruction; since a point, of which the public and the lay authorities of hospitals should never lose sight is that the presence of students and pupils is a mental stimulus and encouragement of the strongest character to the members of a staff, and one to which the high efficiency of the hospitals which have medical schools or their equivalents is largely due.

SCURVY ON THE *DISCOVERY*.

It is very disappointing to learn that in the Antarctic expedition, fitted out with all the care that the Royal and Royal Geographical Societies could exercise, should have been crippled by scurvy, and that Lieutenant Shackleton was so seriously affected that he had to return in the *Morning*. When it is remembered that the *Fram*, under the careful supervision, in respect of provisioning, of Professor Torup, of Christiania, was engaged on two Arctic expeditions, each of about three years' duration, did not suffer at all from scurvy, the contrast is somewhat humiliating. All previous British National Arctic expeditions, save, we believe, Ross's Antarctic voyage in the "Forties," have been crippled by scurvy, while private British, United States, and Italian Polar expeditions have escaped. To Lord Lister and Sir Clements Markham this news about the *Discovery* must be particularly disappointing, as they were both fully impressed with the absolute necessity of pure food on such service, and did all in their power to see that it was supplied. "Some one has blundered," and we must await further particulars of the circumstances to discover where the blame is to be laid. Mr. Koettlitz, P.M.O. of the *Discovery*,[1] from his experiences in the 1894-97 Jackson-Harmsworth San Josef Land expedition furnished valuable evidence of the futility of the long trusted lime-juice antiscorbutic, if food is unsound, and the proved success of fresh and pure food in the prevention of scurvy, in that prolonged Arctic sojourn. As a British ship the *Discovery's* crew would, of necessity, have the established issue of lime-juice during their Polar service. Another important fact, in the case of the *Discovery's* outbreak of scurvy is that she was supplied with abundance of preserved vegetables and fruits, and it remains to be seen if these alleged antiscorbutics were among the bad food reported. It is known that from the leak developed in this specially constructed Polar surveying ship, much damage was occasioned to the provisions on board, but we believe that not only were these damaged stores destroyed before proceeding to the Antarctic, but it was possible to replace them in New Zealand. Yet it is stated that, with three years' supplies, there was a shortage when the *Morning* reached the *Discovery*, some thirteen months after she had left New Zealand. At the last annual meeting of the British Medical Association a discussion founded on the experience of the *Fram*, the Jackson-Harmsworth, Peary, Duke of Abruzzi and other private Polar expeditions, was opened in the Navy, Army, and Ambulance Section by Inspector-General Turnbull, R.N., who ended his remarks with the aphorism "Antiseptic surgery is purity; I submit the true antiscorbutic is purity of food." When we learn that "at least some of the food was so bad that not only did the men suffer, but the dogs died," we hope, with the *Times*, that a searching inquiry will be made to discover who is the culprit.

THE MEDICAL PROFESSION AND THE MERCANTILE MARINE.

Every member of the medical profession who takes an appointment for a short period on a passenger ship should be careful to study the articles before "signing on." It must be recollected that by merchant shipping law a surgeon is considered to be an ordinary seaman, and is subject to the laws which regulate the discipline of the ship. In these circumstances it is essential that the exact nature of the duties and liabilities undertaken should be clearly understood. A correspondent has brought to our notice a case which appears, upon his statement of the facts, to be one of great hardship. It appears that he obtained an appointment as surgeon to a vessel on a voyage out and

[1] British Medical Journal, February 8th, 1902, p. 342.

home. On joining the ship he was requested to sign the articles as prescribed by the Board of Trade. Pasted on to the articles was a printed strip which contained two of the company's by-laws, one of which ran as follows:

That the crew or any member thereof may be transferred if required at any port, at any time, to any other vessel of the company, wages, capacity and terms of service being the same.

Our correspondent took exception to this clause, and at first refused to sign the articles, but subsequently consented to do so on being told that the by-law could not be acted upon. Upon arriving at a port on the homeward voyage, however, he was ordered to join another ship which was not homeward bound, and, on refusing to comply with the order, was prosecuted at the Consular Police-court by the captain acting upon the instructions of the company's agent. The magistrate told him that he was charged with a criminal offence for which he was liable to a term of imprisonment without hard labour for a term not exceeding four weeks, or, in the discretion of the court, to a fine. Our correspondent who, owing to lack of ready cash, was unable to find legal assistance, argued his case as best he could, and pointed out that the by-laws in question were not in the articles, and that "the consent of the whole crew must be obtained to any alteration in the ship's articles." He also said that he had signed under protest. The magistrate decided that the by-laws could not over-ride the articles, and dismissed the charge. Shortly before the ship left the port our correspondent was informed that the company was about to appeal from the magistrate's decision. That appeal was dismissed by the judge who heard it. But even this did not end the matter. The company applied for leave to appeal to the Privy Council, but only on the terms of paying all the costs, including a sum to cover the defendant's costs in London. When the defendant arrived in London he instructed his solicitor to demand an apology and the costs already incurred. No notice was taken of this request, whereupon an action for malicious prosecution was commenced, and was eventually settled by the company paying a large sum by way of damages and all the costs. It is possible that in prosecuting this case with such vigour the company was merely endeavouring to obtain a high judicial opinion upon a point of law of great importance to them; but the facts as stated by our correspondent suggest persecution rather than prosecution. No doubt the surgeon acted imprudently in attaching his signature to articles which contained the obnoxious clause, but it would be idle to suggest that any medical man who undertakes the duties of a ship's doctor would knowingly enter into an agreement under which he might be compelled to stay away for an indefinite period and to go to any part of the world. Our correspondent obviously relied upon the verbal assurance that the article would not be put into force, and we are glad to find that the courts of justice before which the case was brought entirely adopted his view of the matter. The final result of the case, namely, the payment of a large sum by way of damages, would seem to show that the prosecution was instituted in the first instance by an irresponsible official, for whose ill-advised procedure the company has been mulcted in damages.

THE BEELITZ SANATORIUM.

The March number of the *World's Work* contains an illustrated article in which is described the sanatorium for tuberculosis recently opened at Beelitz, near Berlin. Reference has already been made to this establishment in the British Medical Journal, but a description of the arrangements may be interesting. The sanatorium consists of four huge divisions—two hospitals (one for men and one for women), and two sanatoria. These are built on about 250 acres of ground, the greater part of which is planted with resinous pine trees. Towards the end of 1897 the building was begun, and in less than five years the immense establishment has been completed, at a cost of £450,000. The cost of maintaining the establishment is reckoned at £60,000 annually, which works out at 5s. 6d. a day per patient. As the place is at present fitted out there is room for 600 beds, but the buildings are capable of indefinite expansion. Beelitz is only about an hour distant from Berlin, so that there are no difficulties about the transport of patients. The ground is dry and well drained, and the tall pine trees all around the establishment afford the necessary shelter from wind and dust. The demesne lands are large enough to allow the patients plenty of room for walks and exercise. The buildings are so arranged that their backs are against the prevailing wind, and their front verandahs in the sun. The railway is far enough away for the noise and rattle of trains to be diminished to the utmost. In addition to the four great divisions in which the sexes are rigorously kept apart, there is a church which is neutral territory, where both sexes may worship together, and where Catholic and Lutheran services alternate. The verandahs where the patients lie in the open air are beautifully fitted up with every convenience, and are architecturally works of art. Each division has four verandahs about 180 ft. long and 18 ft. wide—room, that is to say, for forty-eight reclining chairs. There are thus 192 chairs at the disposal of the men, and about an equal number for the women. The chairs are arranged in two rows, the inside being raised about a foot above the outer row. Between every two chairs there is a space of about a yard. Glass partitions divide up the verandahs and prevent draughts. Alongside the verandahs are pleasant promenading spaces about 260 ft. long. These are covered over with a handsome roof of iron and wood. For the flooring a fine kind of asphalt has been used as a cement for Dutch tiling, with the result that a perfect floor, durable, beautiful, and perfectly smooth without being slippery, has been obtained. This flooring is used in the dormitories, sitting-rooms, dining-rooms; the junctions of floors and walls are rounded, so that no crevices for the accumulation of dust or moisture of a poisonous nature are to be seen. In all corridors, kitchens, bathrooms, closets, Dutch tiles are used; and here, as elsewhere, the greatest care is taken to avoid all sharp corners or angles. Provision is made for the employment of the patients. In each of the male divisions there is a building set aside for workshops. Each building contains five different shops, where work in wood, leather, metal, etc., of a harmless nature may be carried on. There is an abundant supply of the best tools, and the patients, especially in the convalescent stages, are encouraged to occupy themselves with some industry. These workshops are superintended by watchful overseers, who take care that all the rules of the strictest sanitation are carefully observed. But the greatest stress is laid on occupation out-of-doors, and with this in view there are spacious gardens provided with greenhouses and forcing-frames. The sleeping apartments mostly face the south. Each room contains from one to four beds, seldom more, and then only when light and ventilation are more than usually favourable. It is only the first of several similar establishments which will rise in a short time over the consumption-afflicted provinces of the Fatherland. The insurance department has already set aside a further sum of 40 million marks (£2,000,000) for this purpose; and this sum, spent in the manner in which the £450,000 have been spent in Beelitz, will, it is estimated, annually provide for the reception of 20,000 patients.

ACROMEGALY AND ENLARGEMENT OF THE THYROID GLAND.

Two interesting and illustrative cases of the disease first described by Pierre Marie in 1886, and since known as acromegaly, are recorded on pp. 778 and 780 of the present issue of the British Medical Journal. One of these is of the acute variety, and may reasonably be said to have been due to the sarcoma of the pituitary body that was found at the necropsy. In the other, of the chronic variety, there was an associated enlargement of the thyroid gland and other symptoms of exophthalmic goître, which form evidence in addition to that already accumulated that there is a functional relationship between the pituitary body and the thyroid, and probably indeed ther oof the so-called ductless glands. It is a remarkable fact that in sporadic cretinism or congenital absence of the thyroid gland there is dwarfing of

the body of its subject, and that in defect of the pituitary body there is giantism or, if developing in later life after epiphyseal ossification has proceeded towards completion, an abnormal enlargement of the extremities and of the lower jaw. In the second case, that recorded by Dr. Cattle, the thyroid condition was presumably the antithesis of that obtaining in sporadic cretinism, and presumably, therefore, if the thyroid abnormality had had any influence on the giantism it would have been in the way of increasing it. On the other hand, as Dr. Mitchell Stevens has suggested, some of the cases in which disease of the pituitary body has been found without the occurrence of giantism or acromegaly may be explained by a contemporaneous defect of the thyroid gland inhibiting the general tendency to giantism. It may be pointed out that Magnus-Levy has found an increased oxidation in acromegaly like that which is characteristic of exophthalmic goître and cases supposed to be a combination of the two diseases, similar to that appearing in the JOURNAL of to-day, have been described by Lancereaux and Murray. Cases illustrative of the connexion between sporadic cretinism and acromegaly are fairly numerous. Boyce and Beadles[1] describe enlargement of the pituitary body in myxoedema, and refer to other cases recorded by Langhans, Nièpce, Dolega, Bourneville, and Brigon. At the last meeting of the Clinical Society of London, reported at p. 789, Dr. Lediard of Carlisle showed a patient exhibiting the typical characters of acromegaly (in whom glycosuria had been observed for a time) whose thyroid gland had so much increased in size as to require operation on account of the dysphagia and stridor it produced. At the meeting of the Société de Neurologie of Paris, held on January 15th last, P. E. Launois and Pierre Roy showed the pathological specimens from a case of acromegaly (in whom, also, there had been glycosuria) in which, with a primary epithelioma of the pituitary body, there was enormous enlargement of the thyroid body; the gland weighed 250 grams (or about ten times the weight of the normal adult thyroid), and was found to be in a condition of simple hypertrophy like that of fibrous goître. Such a condition, which is the converse of that described by Boyce, Beadles, and others, and differs from that described at p. 780 by Dr. Cattle, seems to be less uncommon than either; according to the statistics of Dr. G. Hensdale, of New York, it occurred 13 times in 36 cases of acromegaly. That the thyroid should be defective in association with enlargement of the pituitary body, and that the pituitary body should be defective with enlargement of the thyroid, seem perhaps less mysterious than the occurrence, with lesions of the pituitary body, of the signs of exophthalmic goître in some cases and of simple goître in others.

THE GRANARD NURSING SCANDAL.

THE inquiry into the charges made by Dr. Kenny, the medical officer, still proceeds. One of the trained nurses temporarily employed said she had to use turpentine to remove the dirt from a patient. The other patients had their feet and legs in a dirty condition. Mother Michael said she did not consider Dr. Kenny's report as to the dirt and overcrowding true. Dirt was not prevalent in the wards but sprang up from time to time when they were short of help. She did not consider that the boy Doherty was neglected. Dr. Kenny had used insulting language to her and the other nuns. She admitted that there were restrictions on the work she could do as a nurse, and if there were no secular nurses the orders of the Local Government Board could only be carried out by a wardsmaid. Sister Rose also gave evidence, denying the charges which had been made.

PROPOSED PSYCHOPATHIC HOSPITAL IN NEW YORK.

A BILL is now before the New York State Legislature appropriating 300,000 dollars (£60,000) for a new hospital for the insane. The Bill, which is promoted by the State Commission in Lunacy, provides for the erection of a suitable building in which patients may be cared for until proper examination establishes the fact of their mental soundness or unsoundness. The New York *Medical News* expresses surprise that, with 24,000 persons adjudged to be insane in the State of New York, a place has never yet been provided in which suspects may be kept under restraint until such time as they can be safely discharged or removal to an institution becomes necessary. The wards of the Bellevue Hospital in New York have to some extent served this purpose. But that institution is now quite inadequate to cope with the increasing number of cases. Our contemporary points out that a properly-equipped institution would furnish efficient means of isolating sufferers from diseases of the mind and nervous system, and would offer to young medical practitioners opportunity of studying these diseases which cannot be found elsewhere. An institution of the same kind is urgently needed in London; at present medical students and recently-qualified practitioners have very insufficient opportunities for the clinical study of mental diseases, and many persons suffering from acute insanity, who would have a good chance of recovery if they were suitably treated in a special hospital, drift to hopeless mental wreck in the necessarily deteriorating environment of an asylum where patients in all stages of madness are herded together.

THE STUDY OF TROPICAL DISEASES IN AMERICA.

A NUMBER of the leading physicians of Philadelphia have formed a Philadelphia Society of Tropical Medicine, the object of which is to prepare students of medicine and practitioners for their duties in the Philippine Islands and other tropical regions. No society of this kind has, according to *American Medicine*, previously been formed in the United States. The founders of the society include the following members of the medical profession: President, Dr. Fenton; Vice-Presidents, Professors James C. Wilson and James Anders; Secretary, Professor Joseph McFarland; Treasurer, Professor E. B. Gleason; Executive Committee, Dr. John V. Shoemaker (Chairman), and Dr. Fenton, Professor Judson Daland, Dr. R. G. Curtin, Professor Orville Horwitz, and Dr. Hobart Hare. It may be added that the trustees of the Michigan College of Medicine and Surgery have established two new chairs in tropical diseases, with the object of preparing medical practitioners to deal with those affections as met with in the Philippines and in Cuba.

THE TEETH AND JAWS IN PREHISTORIC SKULLS.

IN the *Journal of the British Dental Association* of February 16th, Dr. William Wright, Lecturer on Anatomy in the University of Birmingham, gives an interesting account of the teeth and jaws in a series of prehistoric skulls which were found in the East Riding of Yorkshire and are now in the Mortimer Museum at Driffield. The skulls, says Dr. Wright, naturally fall into two groups, the first consisting of 47 skulls of the Neolithic and Bronze Ages, 29 of which are male and 18 are female; the second group of 20 skulls, 13 male and 7 female, of the Early Iron Age. The skulls of the first group are mainly brachycephalic, and belong to the Celtic or mixed Iberian and Celtic races; those of the second are mainly dolicochephalic, and belong most probably to the Teutonic race. The most noticeable feature of the teeth was their excellent condition, as regards number, regularity, and freedom from disease. Among the skulls of the Stone and Bronze Ages especially, it was no unusual occurrence to find jaws with the teeth in the most perfect condition imaginable. It was possible to take the upper molar length (Flower) in 60 per cent. of the earlier skulls and in 50 per cent. of the later skulls, and this after they had undergone the double experience of burial and exhumation. In only one skull was there found a carious tooth—a first left lower molar. Alveolar abscesses, however, had been present in four cases among the earlier group, and in one in the latter group. The relative freedom of the molars from caries would seem to be due to their

[1] *Journ. Path. and Bact.*, vol. i, p. 233.

quickly worn down to a level surface, and the pulp speedily becoming calcified. Assuming that the abscesses were due to caries, there were thus 6 cases in 67 skulls. This proportion is slightly higher than that met with in skulls from long barrows only, where 46 cases have been noted in 562 skulls; it is lower than that found in the round barrows only, where 10 cases have been found in 47 skulls. The suggestion that caries was more common in the North of England than in the South in prehistoric times is not borne out. The flattening of the molars, and at times of the bicuspids, was no doubt due to the coarsely-milled grain mixed with more or less dirt or grit from the mill. No supernumerary or supplemental teeth were found in any of the skulls. The cuspidation of the molars was with difficulty, and only in a few cases, ascertainable. Special attention was directed to the second lower molars, which seemed to be invariably quadricuspid. Extremely deep canine fossae were noted in a number of cases. The upper incisors of one skull were vertically fissured. One lower canine was noticed to have two fangs; this is an abnormality not uncommonly found in prehistoric skulls, though according to the late Professor Rolleston, it is but rarely met with in the jaws of modern civilized races. Dr. Wright's investigations show that all measurements are greater in the jaws of the Stone and Bronze periods than in those of the Iron period, and that this is especially true of the bichondyloid width and of the width of the ramus. The indices show that the earlier race was more orthognathic, and that they had relatively wider palates and a smaller basio-nasal length.

MEDICAL SUPERVISION OF SCHOOL CHILDREN.

THE Corporation of Berlin has, it is announced, engaged the services of thirty-six medical men as inspectors of the elementary schools at a yearly salary of £100 each. Each child will be medically examined before it is allowed to go to school, that is to say, at the age of 6 years; special attention will be paid to the state of the lungs, heart, spine, eyes and teeth. Backward and sickly children will be kept under observation by the medical inspector, who will advise the parents as to the maintenance of their health and the promotion of their physical development. In America the medical inspection of schools has for some time been established in Boston and New York. Now it is stated that twelve medical inspectors are to be appointed in the District of Columbia. The provision made by [illegible] to the following effect: "For 12 medical inspectors of public schools, four of whom shall be of the coloured race at 500 dollars each, 6,000 dollars; provided that said inspectors shall be appointed by the Commissioners only after competitive examination, and shall have at least five years' experience in the practice of medicine in the District of Columbia, and shall perform their duties under the direction of the health officer and according to rules formulated from time to time by him, which shall be subject to the approval of the Board of Education and the Commissioners."

ANTITOBACCO LEGISLATION IN AMERICA.

IN the United States House of Representatives the Committee on Ways and Means has, we learn from *American Medicine*, reported favourably on a Bill which imposes a penalty upon any manufacturer of tobacco who affixes to any package of tobacco, snuff, cigars, cigarettes, a mark, label, wrapper, or any other device which promises or offers a premium to the holder. It is intended to stop the issue of gifts to purchasers of these articles in quantity, and especially as applying to the youthful buyers of cigarettes. Previous to 1857 this practice had been carried on to an enormous extent, but the Dingley Act, which came into effect at that time, abolished this nefarious traffic. It remained in force, however, only five years, just sufficiently long to establish its great value. The Nebraska State Board of Health recently passed resolutions in favour of a Bill, now before the Legislature of that State, which provides, "that no minor under the age of eighteen years shall smoke or in any way use any cigarettes, cigars, or tobacco in any form whatsoever, in any house, place, highway, street, square, or resort. Any minor violating the provisions of this Act shall, upon conviction be fined in any sum not less than 1 dollar or more than 10 dollars, or be imprisoned for two days for each offence, in the discretion of the court."

THE WAR COMMISSION.

AT a recent meeting of the War Commission Sir Arthur Conan Doyle gave some interesting evidence as to his experiences as head physician to a private hospital during the earlier part of the war, including the enteric outbreak at Bloemfontein. He considered that there must have been a disastrous breakdown but for the private hospitals, and that the services of the latter had been inadequately recognized; that the R.A.M.C. rose gallantly to the occasion but were shorthanded; that more pains should have been exercised in the selection of civil surgeons, and that a register of those willing to serve should be kept in time of peace. The nurses did splendid service, and the spirit of men in hospital was good. Men from the auxiliary forces seemed to him keener and more appreciative of what they were fighting for than the regulars. He favoured a small regular army composed of picked men, and a large extension of the Auxiliary Forces. It would not have occurred to us that the services of the private hospitals in the war had been "inadequately recognized" so far as public acclamation and free distribution of honours by the authorities may be held to constitute recognition. As regards registration in times of peace of civilian surgeons ready to serve in time of war, it does not seem probable that this would be a very useful measure. In the case of a thousand men quite ready and willing to-day to throw everything else aside and go anywhere on the chance of active service at a moderate rate of pay, such an undertaking a year or so later might, and probably would as regards the more valuable of them, be a matter of the greatest difficulty. As regards the civil surgeons who actually went out, Sir Conan Doyle, if his views are correctly reported, must have been singularly unfortunate in his experience. The records show that the percentage of men who failed under the strain of a new existence was singularly small, and, according to most observers, the utility of the rest was enormous. Indeed, considering the number of them who were mentioned in dispatches, wounded, died, or given posts of independent responsibility, the fact that practically none who were at the front were picked out for personal recognition can be accounted for only by the fact that the civil surgeons as a body were "no man's children."

THE SCIENTIFIC DETECTION OF CRIMINALS.

BY order of the Italian Minister of the Interior Professor Ottolenghi has lately given a practical course of scientific criminology to the superior officers of the service of public safety in Roma. He explained to them the application of the scientific methods for the recognition of criminals and the detection of the crimes committed by them. Practical demonstrations were given on convicts, on dead bodies, and on *corpora delicti* of various kinds. It is not stated whether the learned professor took the *Adventures of Sherlock Holmes* for his textbook, but doubtless he found the methods of that ingenious investigator useful in the preparation of his course. Perhaps a chair of detective science may be found in Scotland Yard for Sir A. Conan Doyle.

THE WAR AGAINST QUACKERY IN GERMANY.

A GERMAN Society for the Repression of Quackery has just been founded at Berlin. The first public meeting was held on March 8th, in the large Hall of the Rathhaus. Among the members of the Society are a large number of laymen as well as medical practitioners. The object of the Society is to enlighten the public mind as to the harm done by quackery to the public health, and as to the proper care of the sick. In furtherance of these objects, a regular propaganda is to be instituted. Public meetings will be held and addresses delivered; leaflets will be distributed and

other means of educating the man in the street will be adopted. The Society also proposes to take part in the meetings of quacks, in order to confute their arguments and expose their misstatements. A weekly journal is to be founded, in which all the misdeeds of quacks will be published and brought to the notice of the police authorities. The Society will do its utmost to influence legislation for the repression of quackery and to ensure the enforcement of existing laws. The subscription has been fixed at 1 mark, in order to make the membership of the Society accessible to all who are interested in the promotion of its objects. Among the members of the Prussian Chamber who have already joined the Society are Prince von Arenberg, Graf von Douglas, Herr Kopsch, manufacturer, and Privy Councillor Paasche. Full particulars may be obtained from Professor Sommerfeld, Wilsnackerstrasse 52, or Dr. Siefart, Tauenzienstrasse 3, Berlin.

VOLUNTEER MEDICAL ASSOCIATION.

The annual dinner of the Yeomanry and Volunteer Medical Officers will take place at the Hotel Cecil, London, on April 21st next at 7.30 p.m. Major-General Sir A. E. Turner, K.C.B., R.A., will take the chair and will be supported by Surgeon-General Sir William Taylor, K.C.B., Director-General, A.M.S., and other distinguished guests. Tickets (10s. 6d. each) may be obtained from Lieutenant E. C. Montgomery-Smith, 36, Abbey Road, N.W.

The German Society of Naturalists and Medical Practitioners will hold its seventy-fifth annual meeting this year at Cassel, September 20th to 26th.

On June 24th, when the Prince and Princess of Wales will receive the honorary degrees of Doctor of Laws and Doctor of Music respectively from the University of London, the honorary degree of Doctor of Science will be conferred on Lord Lister and Lord Kelvin.

A meeting of the Incorporated Society of Medical Officers of Health is to be held on Friday, April 3rd, at 8 p.m. Dr. Joseph Groves will open a discussion upon Public Health Administration, and will, we understand, deal with the Public Health Bill promoted by the British Medical Association.

Dr. Louis Heisler Hall, of Faulkland, Delaware, who was recently elected to the United States Senate from Delaware, is, we believe, the second member of the medical profession in active practice who has a seat in the United States Senate. The other Senator is Dr. Gallinger, of New Hampshire, who has taken a prominent part in the anti-vivisection crusade in America.

The subject of the Rogers Prize to be conferred by the University of London in 1904 will be the Relation of Tuberculosis and Streptotrichosis from a Pathological Point of View. Particulars may be had on application to the Secretary to the Senate.

We are requested to state that the excursion to the northern spas of England, to which reference was made in the British Medical Journal of March 21st, is not confined to members of the Balneological and Climatological Society. The object of the excursion is to make the merits of our native health resorts as widely known as possible among members of the medical profession of the country.

It is announced that Dr. Alfred Hill has resigned the office of Medical Officer of Health to the City of Birmingham, which he has held since 1872. Dr. Hill is in the 77th year of his age, and by his devoted labours has earned the gratitude of the city which he has served so well and the admiration of all interested in the progress of the science of State medicine, which he has done so much to promote.

Their Majesties the King and Queen have intimated their intention of attending the afternoon service at St. Paul's Cathedral on Sunday, June 7th, on which day the collections at the services in the Cathedral will be devoted to the hospitals and dispensaries of the metropolis through the Hospital Sunday Fund.

An International Health Resorts Exhibition is to be held at Vienna this year, from September 12th to October 20th. The exhibition will consist of pictures, panoramic views, and raised maps and plans of health resorts, with details as to the composition of waters, special treatment, climatic conditions, musical and other entertainments, promenades, etc., and last, but not least, as to the cost of living and treatment.

A discussion on the present methods of treating tuberculosis will be held at the Hunterian Society on the evenings of Wednesdays, April 8th and 22nd, commencing at 8.30 p.m. The discussion will be introduced by the President, Dr. Stephen H. Appleford. It will be continued in sections as follows:—Wednesday, April 8th: (1) Comparison between the Treatment in Sanatoria and in Private Practice, opened by Dr. Newton Pitt; (2) Influence of Location, opened by Dr. H. G. Felkin; (3) Selection and Classification of Patients in Sanatoria, opened by Dr. T. N. Kelynack. Wednesday, April 22nd: (4) Infection, Reinfection, and Multiple Infection, opened by Dr. Arnold Chaplin; (5) The Surgical Aspect, opened by Mr. W. Knight Treves; (6) Suggested Modifications, with respect to Comfort, Exercise, Rest, and Recreation, opened by Dr. Glover Lyon. There will be an exhibition of plans and models of sanatoria. The discussion will be held in the theatre of the London Institute, Finsbury Institute, Finsbury Circus, E.C., where a lantern and screen will be available for the exhibition of slides.

MEDICAL NOTES IN PARLIAMENT.

[From our Lobby Correspondent.]

The Standard of Recruits and Enlistment.—Both Houses were engaged last week in considering the character and physique of recruits, and on Wednesday, at midnight, a resolution was passed in the Commons in favour of requiring greater care to obtain adequate physique and to ensure that each recruit was 18 years of age. In the course of the debate Lord Stanley, who is now a very powerful-looking man, said that he was once himself a "special," being under weight, but drill and good food had removed the disqualification. On Thursday the subject cropped up in the Lords, on a question put by Lord Denman. Lord Hardwicke stated that the present standard of height for recruits entering the infantry of the line was 5 ft. 3 in. It was the same in January, 1899. He could not give the average chest measurement during the past year because a new system had been introduced. Under the old system no recruit was accepted, except as a special, whose minimum chest measurement was less than 33 in. But, in accordance with the report of a Committee of Military and Civilian Doctors, another system was introduced on April 1st last year. The chest was measured first when fully expanded; secondly, when relaxed; and if there was a difference of not less than 2 in. between the two measurements the recruit was accepted. If it were less than 2 in. he was not accepted. Since the introduction of this system no man had been accepted who did not comply with those conditions. In future it was intended to issue a return showing the average height, chest measurement, and the weight of every recruit on enlistment. Then, after he had completed six months' service and gone through gymnastic training, he would again be measured, and if he had not, according to the requirements laid down by the Committee, increased his physical development to the extent considered necessary he would not be allowed to remain in the Army. When this return was published it would show the exact extent to which every recruit developed after six months' training in the service. There was some amusement caused by the chest expansion being called the "blown-out" condition of the recruit by Lord Ribblesdale, who wanted to know the irreducible minimum. This depended, it was pointed out, on the physical development of each recruit.

The Pay of Captains R.A.M.C.—On Tuesday Dr. Thompson asked the Secretary of State for War if he was aware that the captains of the Royal Army Medical Corps now attending a professional course in London and residing at the temporary college in the Hotel Belgravia received an allowance at the rate of 5s. 6d., although lieutenants on probation received an allowance at the rate of 9s.; and if he would give directions to remove this difference. Mr. Secretary Brodrick replied that lieutenants on probation received allowances for servants, lodgings, and fuel and light, amounting to about 4s., and also drew mess allowance of 4s. Captains drew the former class of allowances, amounting to about 5s. The question of the grant of the 4s. mess allowance to them was under consideration.

The Volunteer Service and the Royal Commission.—Mr. Remnant asked the First Lord of the Treasury on Tuesday if he would consider the advisability of including a Volunteer medical officer among the members of the Royal Commission to be appointed to consider the Volunteer Service. Mr. Secretary Brodrick answered that he feared he could not promise to include officers of the various departmental corps on the Commission.

Royal Engineer Civil Staff and Vaccination.—Last week Mr. Charles Hobhouse asked the Secretary of State for War if he was aware that an officer of the Royal Army Medical Staff required civilian clerks in temporary employ on royal engineering works to be vaccinated as a condition of employment; and would he say whether this action had received his sanction. Mr. Secretary Brodrick referred in his reply to a previous answer which he had given, to the effect that the General Officer Commanding Home District had issued orders about a year ago, during the small-pox epidemic, that such clerks were not to be taken on if they refused vaccination.

Vaccination Officers and Legal Assistance.—Sir Charles M'Laren asked the President of the Local Government Board, on Friday in last week, if his attention had been called to representations of the Hinckley Guardians as to the state of the law as to the control of vaccination officers; and whether he would take steps to prevent these officials engaging legal advisers without consultation with, or the consent of, the guardians. Mr. Long replied that his attention had been called to representations made by the guardians on the subject. As regards the last part of the question, he pointed out that the duty of the vaccination officer to take proceedings in cases of default was quite independent of any directions from the guardians. In cases where the guardians were opposed to the enforcement of the Vaccination Acts, it would obviously be impossible for the vaccination officer to carry out the duty referred to if he had to obtain the consent of the guardians to the legal assistance which was requisite for the purpose; and he was advised that it was a necessary incident of the statutory duty of the vaccination officer that he should have authority to engage legal assistance where this was required.

The Vaccination Acts and the Conscientious Objector.—Mr. Levy asked the Secretary of State for the Home Department last week whether his attention had been directed to the refusal of the justices of the Altrincham Petty Sessions on the 16th instant to grant a certificate of exemption under the Vaccination Act to an applicant who stated he had a conscientious objection to vaccination, and whether he could take any steps in the matter. Mr. Secretary Akers-Douglas replied that he had no information as to the case referred to. Certificates of exemption were, by law, to be granted when the justices were satisfied that the applicant had a conscientious objection, and the Secretary of State had no authority to intervene in the matter.

The Irish Poor-law Medical Service.—On Monday last Dr. Thompson asked the Chief Secretary to the Lord Lieutenant of Ireland if he would consent to the appointment of a Royal Commission to inquire into the grievances of the Irish Poor-law Medical Service, and also into the question of the administration of the Poor Law, the condition of the workhouses, and the treatment and management of the poor in these institutions. Mr. Wyndham replied that the Government was about to appoint a Commission to consider the general question of the amalgamation of unions and the amelioration of the condition of all classes of destitute poor in workhouses. The grievance of the Irish Poor-law medical officers, which could only be remedied at the ratepayers' expense, was another matter, and any amendment of the law on this subject would be highly contentious. He should, therefore, be sorry to see it brought within the scope of a Commission through which it was hoped to ensure a more economical administration of the Poor Law.

The Adulterated Butter Bill.—This Bill came on for second reading on Tuesday afternoon and occupied most of the sitting. Mr. Kearley moved the rejection of the Bill in a long speech, in which he argued against any slackening of the law, and advocated the maintenance of the 16 per cent. standard for all butter. Mr. Lough also opposed the Bill, which was supported generally from the Irish benches. Sir Walter Foster, speaking from the front Opposition bench, said it was best to have a standard and stick to it, and he criticized the Bill for departing from the 16 per cent. standard for water in butter laid down by the order of the Agricultural Department, and substituting a more or less elastic limit of 20 per cent. In this way the general standard would be lowered. He suggested that the difficulty of Irish firkin butter should be met by a time limit for attaining the proper standard. In that way manufacture would be gradually improved. He strongly opposed the proposal in the second clause to call milk-blended butter "adulterated" butter. On the face of it the clause legalized the sale of an adulterated article, which was a new principle, and he objected to the term as inapplicable to a wholesome article of food, which was sold at a cheap price and was correctly described. Mr. Hanbury, in reply, defended the Bill, and especially argued for the retention of the word "adulterated" as applied to watered butters. He admitted the difficulty with regard to Irish firkin butter, and was willing to make terms for its continuance, and he would generally consider amendments on all the points raised in committee. After some further debate the Bill was read a second time without a division and referred to the Standing Committee on Trade.

Imbecile Children and the Darenth Asylum.—On Tuesday Mr. Remnant asked the President of the Local Government Board whether his attention had been called to the proposal of the Metropolitan Asylums Board to remove the improveable imbecile children back to the Darenth Asylum, where unimproveable imbecile children were retained; and, if so, what steps he proposed to take in the matter. Mr. Long replied that he had received from the Managers of the Metropolitan Asylums District a proposal with regard to imbecile accommodation and classification at Darenth. Their proposal seemed to be that the present schools should be used as a training school for improvable children; that the present adult asylum should be used as an industrial colony for improvable adults; and that the pavilions should be utilized for the quite unimprovable younger patients until such time as these buildings would be needed for the extension of the industrial colony. The managers proposed that the Brighton Road Schools at Sutton should be used for the accommodation of unimprovable imbeciles. It was necessary for him to obtain further information before he could form a definite opinion with regard to the proposal, and he was at present in communication with the managers on the subject.

The Sale of Poisons.—At the instance of the Pharmaceutical Society, Mr. Thomas Lough introduced on March 26th a Bill to amend the law with regard to the sale of poisons. The promoters represent, as one defect to be remedied, that the Companies Acts enable unqualified and incompetent persons to escape the incidence of the Pharmacy Act of 1868, under which the sale of poisons is regulated. The second defect in the law is that under the existing legal procedure it is only possible to prosecute the actual seller of a poison, who is frequently merely an assistant in the shop, while the real offender—the employer, who causes the offence to be committed—cannot be proceeded against. The Bill now introduced would alter this by making the master fully responsible for the acts of his servants. It also provides means, such as do not at present exist, of ascertaining readily—(1) in what shops poisons are retailed, and (2) whether the persons in charge of the business at such places are duly qualified or not.

Reception of Lunatics.—In the House of Lords, on the motion of Earl Carrington, a first reading was given to a Bill to authorize the London County Council to provide houses for the reception of lunatics or others mentally afflicted pending their removal to asylums.

NOVA ET VETERA.

CLINICAL THERMOMETRY IN THE CASE OF THE FIRST NAPOLEON.

[Communicated by Sir William H. Broadbent, Bart., M.D., F.R.C.P., F.R.S.]

An instance has come under my notice, which I think will interest the profession, of the temperature of the body being taken as an item of clinical observation as early as 1821. The patient was the First Napoleon, the medical man an army surgeon—Dr. Archibald Arnott.

When Lord Rosebery was writing his book on Napoleon at St. Helena, he sent me a pamphlet entitled *An Account of the Last Illness, Decease, and Post-Mortem Appearances of Napoleon Bonaparte*, by Archibald Arnott, M.D., Surgeon 20th Regiment, in order that he might be able to state with confidence the nature of the disease—cancer of the pylorus—which caused death. In this it is related how Dr. Arnott was consulted by Professor Antomarchi on the case of the Emperor on March 25th, and first saw him, or rather examined him, in the dark on the evening of April 1st, Napoleon not permitting a light to be brought into the room. He saw him thereafter daily or almost every day till his death on May 5th. His account of the symptoms is clear and concise, and would almost in itself have warranted a diagnosis of cancer of the stomach. There were pain, constipation, nausea, and vomiting, the vomited matters towards the end having the coffee-ground character. No tumour could be felt, but this was explained *post mortem* by the thickness of the abdominal parietes and by the fact that the pyloric end of the stomach was adherent to the under surface of the liver. At each visit the events of the previous twenty-four hours are recorded, the general condition of the patient is described, the pulse-rate is given, and the heat of the surface is noted. On April 3rd the notes run: "He passed a tolerably tranquil night and slept a good deal; his pulse was 76, heat 96; skin more moist than natural, etc."

This record of the temperature struck me as remarkable. It is set down as if it were a regular part of routine observation, and Dr. Arnott must have had a thermometer with him for the purpose, whereas clinical thermometry, while practised by a few advanced physicians for some years previously, did not come into general use till after the publication of Wunderlich's treatise in 1868, translated into English by Dr. Bathurst Woodman for the Sydenham Society in 1871. The temperature, it is true, was not again taken, but Napoleon was a difficult patient, usually refusing to take the medicines ordered, and considerable time must have been required for an observation with such a thermometer as was then available.

It is scarcely probable that Dr. Arnott, an army surgeon, superior as he evidently was in intelligence, could have practised taking the temperature on his own initiative, and it would be a matter of great interest to trace how he came to adopt it. He was a graduate of Edinburgh, and it is reasonable to suppose that he learnt it while a student. Now Dr. James Currie, Physician to the Liverpool Infirmary, who wrote the well known remarkable work on cold affusion in fever,[1] and who took the temperature before and after the cold brine was dashed over the patient, was an Edinburgh graduate, and was first led to employ the thermometer by a debate at a society of students there. Of course there was no self-registering thermometer in those days, and the temperature had to be noted while the instrument was *in situ*. Dr. Currie therefore modified the mercurial thermometer employed by Hunter in taking the temperature of animals when investigating the subject of animal heat, the most delicate then made, bending it so that the temperature could be read off behind the patient when the thermometer was in the axilla or mouth, so as to avoid the breath. Dr. Currie's book was published in 1797, and a fourth edition in 1805. Dr. Arnott graduated in 1815.

It is quite possible, and even probable, that in the interval one or other of the physicians of the Royal Edinburgh Infirmary—a contemporary and friend of Currie—was systematically teaching the use of the thermometer in the wards. Dr. Currie mentions in the fourth edition of his book that Dr. Gregory, of Edinburgh, practised ablution, and states that his friend, Dr. James Home, had employed cold and tepid affusion in sixty-four cases of fever in the Clinical Ward of the Edinburgh Infirmary during the winter of 1802-3. The thermometer was employed in these cases; a temperature of 106° F. was noted, and in another case a fall of 4.5°. It ought not to be difficult to ascertain whether Dr. Home continued to use the thermometer.

[1] *Medical Reports on the Effects of Water, Cold and Warm, as a Remedy in Fever and Febrile Diseases.*

Post-mortem Examination.

The following is the official report of the *post-mortem* examination:

Longwood, St. Helena, May 6th, 1821.

Report of Appearances on Dissection of the Body of Napoleon Bonaparte.

On a superficial view the body appeared very fat, which state was confirmed by the first incision down its centre, where the fat was upwards of an inch thick over the sternum, and one inch and a half over the abdomen.

On cutting through the cartilages of the ribs and exposing the cavity of the thorax, a trifling adhesion of the left pleura to the pleura costalis was found; about three ounces of reddish fluid were contained in the left cavity, and nearly eight ounces in the right.

The lungs were quite sound.

The pericardium was natural, and contained about an ounce of fluid.

The heart was of the natural size, but thickly covered with fat; the auricles and ventricles exhibited nothing extraordinary, except that the muscular parts appeared rather paler than natural.

Upon opening the abdomen the omentum was found remarkably fat; and on exposing the stomach that viscus was found the seat of extensive disease; strong adhesions connected the whole superior surface, particularly about the pyloric extremity, to the concave surface of the left lobe of the liver; and on separating these an ulcer, which penetrated the coats of the stomach, was discovered one inch from the pylorus, sufficient to allow the passage of the little finger. The internal surface of the stomach, to nearly its whole extent, was a mass of cancerous disease, or scirrhous portions, advancing to cancer; this was particularly noticed near the pylorus. The cardiac extremity for a small space near the termination of the oesophagus was the only part appearing in a healthy state. The stomach was found nearly filled with a large quantity of fluid, resembling coffee grounds.

The convex surface of the left lobe of the liver adhered to the diaphragm, but with the exception of the adhesions occasioned by the disease in the stomach, no unhealthy appearance presented itself in the liver.

The remainder of the abdominal viscera were in a healthy state.

A slight peculiarity in the formation of the left kidney was observed.

(Signed) Thomas Shortt, Physician and P.M.O.
Arch. Arnott, M.D., Surgeon 20th Regiment.
Charles Mitchell, M.D., Surgeon H.M.S. *Vigo*.
Francis Burton, M.D., Surgeon 66th Regiment.
Matthew Livingstone, Surgeon H. C. Service.

Biographical Sketch of Dr. Arnott.

This communication cannot be more fitly closed than by the obituary notice of Dr. Arnott, taken from the *London and Provincial Medical Directory* of 1856. Notices of greater length were published in the *Lancet* and *Medical Times and Gazette* of July 21st, 1855. In all Dr. Arnott is given the credit of having attended Napoleon for some time, but according to his own account it was during the last six weeks of his life only.

Arnott, Archibald, M.D. Edin. 1815, late of H.M. 20th Regiment, on July 6th, 1855, at Kirkconnell Hall, Ecclefechan, Dumfriesshire, aged 84. Dr. Arnott entered the army upwards of 60 years ago, and retired from active service in 1826. For a few years he was attached to the 11th Dragoons, but for a much longer period served with Her Majesty's 20th Foot, sharing the perils and exploits of that distinguished corps on the Nile, in Calabria, Portugal, Spain, and Holland, and earning a medal with clasps for Egypt, Maida, Vimiera, Corunna, Vittoria, the Pyrenees, Nivella, Nive, Orthes, and Toulouse. After the war Dr. Arnott accompanied his brave companions in arms to St. Helena and India, and at the former station became the medical attendant of Napoleon Bonaparte. His professional ability, ingenuous character, and dignified deportment as an officer and gentleman, at once secured for him the confidence of that extraordinary man, whose good opinion thus early formed was strengthened by daily interviews during the progress of the fatal disease, and at last ripened into warm personal attachment and sincere esteem. These sentiments were cordially reciprocated by the physician; and, on the part of the illustrious patient, were expressed on all occasions by delicate attentions and lively marks of affectionate regard.

Presentation. An interesting presentation was made to Dr. MacCarthy, at the St. John Moore Lodge of Oddfellows, M.U., Worcester, on the occasion of his leaving that city. Dr. MacCarthy has been the medical officer of the lodge for over twenty years. The lodge presented him with a handsome hand painted illuminated address, in which the gratitude of the brethren was expressed for his kind, skilful, and earnest attention to the members, and extending to him the best wishes of the lodge for his future happiness and welfare.—Dr. Black, on the occasion of his leaving Hunstpierpoint recently, received a cheque for £130 in recognition of his unselfish labours and unfailing courtesy. More that 190 persons contributed towards this sum.

THE EPIDEMIC GRANTS FOR PUBLIC ELEMENTARY DAY SCHOOLS.

THE Education Codes of past years contained an Article (101*) which was well known to medical officers of health, and which in well-administered districts was most efficient in preventing or minimizing friction between the educational and sanitary authorities. This Article enabled the school authorities to claim grant in respect of children who had been excluded from school because they were suffering from infectious disease, or had been in contact with cases of infectious disease. The Article in question has been worked to a very varying extent in different districts, but that its importance was rapidly becoming more fully realized is indicated by the fact that while in the school year 1897-8 the average attendances of children claimed under this head in the whole of England and Wales were 7,046, in the following years they had increased to 11,341, 25,267, and 35,242, becoming 46,446 in the school year 1901-2.

In the recently-issued Provisional Code of the Board of Educations Article 101* is abrogated, an intimation being inserted that "no grant will be made under this Article in respect of any diminution of attendance occurring after March 31st, 1903." In the prefatory remarks to the Code, signed by Mr. R. L. Morant, the new Secretary of the Board of Education, the following explanation of this unfortunate act of the Board is given :

After March 31st, 1903, the Board will discontinue the special epidemic grant which has hitherto been allowed to schools in compensation for loss of income in any particular year, owing to the grant being payable on a diminished attendance, while the expenditure on staff and maintenance remained unreduced. The amounts payable under this Article to individual schools have, as a rule, been inconsiderable as compared with the total income and expenditure of the year. Many difficulties, too, have been found incident to the administration of the Article, and it is believed that the money spent under its provisions might better be devoted to the improvement of the instruction given to pupil teachers. Arrangements are accordingly being made to effect this.

As has been indicated, the Article now rescinded has been instrumental in doing great good and was capable of doing much greater good. There lies before us the annual report of the School Board of an urban district in which this Article has been utilized probably more extensively than in any other town. In this town the average attendance at all the elementary schools has increased from 81.5 per cent. in 1895 to 87.0 per cent. in 1902. In the same town the average attendance in the infants' schools (in which Article 101* has been used more drastically than in the higher departments) was 85.6 per cent. in 1901 and 87.0 per cent. in 1902. These figures may be compared with an average attendance in infant schools throughout England and Wales rising slowly from 70.5 per cent. in 1897-8 to 72.5 per cent. in 1901-2. Were it possible to quote similar figures for other single districts than the above, there is little doubt that a close correspondence would be capable of being shown between the amount of infectious disease caused by school life and the judicious use of the powers for excluding children, which Article 101* ensured should not be accompanied by pecuniary loss to the local educational authorities.

School attendance is controlled, on the one hand, by the teachers of the schools and by attendance officers acting under the local educational authority ; and, on the other hand, by the sanitary authority acting on the advice of their medical officer of health. The local instance already adduced shows that the strict enforcement of exclusion of infected and of suspected children not only does not lower the average attendance, but is compatible with an average attendance so much higher than that of the entire country as to render it probable that the exclusion of such children and the extremely high average attendance stand to each other, in a large measure, in the relationship of cause and effect. This is in accordance with what we now know of the means by which such diseases as scarlet fever and diphtheria, especially the latter, are spread in schools. It is largely, if not chiefly, by means of children who have been in contact with infection, but themselves show little or possibly no clinical evidence of disease. Anything that will render it more difficult for the medical officer of health to exclude such suspected children temporarily from attendance at school will cause a serious increase of spread of infectious disease ; and it is obvious that when such exclusions are no longer to be reckoned in average attendance, education committees, except the most enlightened, will be persuaded with difficulty, if at all, to support the medical officer of health in such a line of action. His difficulties will be even greater should he propose to close a school on account of the serious prevalence of infectious disease among its scholars. It would be easy to argue this point in further detail, and to adduce instances in support of the above contentions ; but their general truth must be sufficiently obvious. A further word needs to be said, however, from the individual scholar's standpoint. Under the new conditions the scholar recently convalescent from acute disease will tend to be "rushed" back to school before his health is re-established, and much harm will result in many instances.

In view of the preceding considerations, we are driven to conclude that the Board of Education has been ill-advised in abolishing this epidemic grant. We do not wish to suggest that they have wittingly been withdrawing by means of the Code a portion of the increased parliamentary grant to educational authorities given by the recent Education Act. The reasons given in Mr. Morant's remarks quoted above have doubtless been the chief determining cause of the change, but the loss to local authorities will be greater than Mr. Morant appears to think. In London, where we believe Article 101* has been most imperfectly employed, it will mean a loss to the local rates probably of £12,000 annually. In some provincial towns it will, proportionately to population, mean a much larger loss. But the local money loss is not the chief consideration. The increased difficulty in securing the exclusion of children who ought to be excluded, the frequent failure to secure this exclusion, the consequent greater prevalence of infectious diseases, the damage to the national health, and the loss of life in very many instances, are much more important considerations. We hope that influential representations will be made to the Board of Education, and that the "provisional" Code when superseded by the regular Code will not continue this unfortunate alteration of policy, which if persevered in may have most serious consequences to the public health.

CONTRACT MEDICAL PRACTICE.

MOTHERWELL, LANARK.

THE difference between the medical profession at Motherwell and the local Friendly Societies does not seem to be settled. We are sorry to hear that a Dr. Graham of Carstairs, in spite of the remonstrances of the local medical profession, has accepted the position of medical officer to the societies. It is to be hoped that Dr. Graham will reconsider his position, which must be disagreeable to himself personally. If the Motherwell doctors and the local societies are left to arrange their differences, we have no doubt that a satisfactory solution will be eventually arrived at ; but if an outsider permits himself to be made the tool of one party to the the dispute we can foresee only prolonged discord and trouble. We strongly advise the local medical profession and the societies to seek the aid of an arbitrator who will inquire into the grievances of the medical profession, and see how far their complaints of inadequate payment are reasonable, and how far the societies can fairly be expected to allow the increased fees asked.

NEW ZEALAND.

A meeting of medical practitioners was held at Auckland in January in order to take a stand against the Friendly Societies endeavouring to reduce medical fees. The Friendly Societies are forming a dispensary there, and have notified club surgeons that unless they accept a fee of 14s. per member per annum without medicine they will advertise for new surgeons. At the meeting the following resolution was carried unanimously, and signed by all present, and up to February 3rd had been signed by most of the practitioners there, and now at the present time has in all probability been signed by all of them :

We, the undersigned medical practitioners of Auckland, agree to support in every way the action of the medical officers of Friendly Societies in resisting the determination of the Friendly Societies Conference to reduce the medical fees to 14s. per member without medicine ; and we pledge ourselves not to accept less than 16s. per member per annum for such services.

We are requested by the Honorary Secretary of the Auckland section of the New Zealand Branch of the British Medical Association to bring these facts to the notice of our readers, and to inform them that should the societies advertise and get practitioners to accept these appointments on the terms offered by the Friendly Societies, those practitioners will not be recognized by the medical profession in Auckland.

THE MEDICAL GRADUATES' COLLEGE AND POLYCLINIC.

The annual general meeting of the members and subscribers of the Medical Graduates' College and Polyclinic was held at 22, Chenies Street, W.C., on March 31st, under the chairmanship of Sir W. H. Broadbent, Bart., President of the College.

The fourth annual report of the Council and balance-sheet to the end of 1902 were presented. The report showed that there had been a continued increase in all departments of the work of the College during the past year. The number of members and subscribers had increased to 941 as compared with 825 in 1901.

The Chairman, in formally moving the adoption of the report and balance-sheet, referred to the multifarious departments of the work of the polyclinic, and said that although he had never ceased to hope that it might at length have its own fully equipped clinical hospital, the great value of the Polyclinic in its present stage of development was the evidence it afforded of the desire of medical men to keep abreast with medical advances, and by obtaining the latest knowledge to qualify themselves to render the best possible service to the public. The idea underlying their plan of work was extremely good, and by contributing to the efficiency of the medical profession was a great advantage to the community. He therefore thought that they had a claim on the public for support, and especially for the support of a post-graduate hospital and college which would result in service to humanity and science.

Sir William Kynsey seconded the motion, and alluded to the success of the work of the College in all its departments, to the increase of their numbers, and also to the only unsatisfactory point—the finances of the College, which were not as they should be. There was no medical institution, he thought, in Great Britain, if any in the world, where members received such good value for their subscriptions.

Dr. Seymour Taylor (Honorary Treasurer) explained the details of the balance sheet. Although it showed a debit, yet the financial position revealed was in some respects an improvement on the previous year. The College was very nearly paying its way by yearly subscriptions, but the publication of their journal meant the incurring of considerable debt each year.

Remarks on the internal economy of the College were made by several members, among which were suggestions for improving its financial position by making it available for use in the evenings as a sort of medical club, and by raising the annual subscription of members from one guinea to two guineas. The Chairman thought that if the members and subscribers agreed to the raising of the subscription the financial problem would at once be solved.

The report and balance-sheet were adopted. Votes of thanks were passed to the retiring members of Council, and the following were elected members of Council for the ensuing year: Mr. A. H. Tubby, Dr. S. Cathcart, Dr. E. N. Féré, Dr. Dundas Grant, Mr. Richard Lake, and Dr. Leonard Williams.

A vote of thanks to the Chairman closed the proceedings.

THE PREVENTION OF CONSUMPTION.

Great Britain.

Leeds.—At the conference of the Postal Telegraph Clerks' Association held in Leeds on March 7th a resolution was adopted appointing a committee to investigate the means of providing sanatorium accommodation for postal employés. In proposing the resolution, Mr. C. H. Garland (London) said that the post-office established staff in 1899 was 82,172, and there were 62 deaths and 83 retirements caused by consumption, a total loss of 145 persons. The total staff now numbered over 179,000, and it might be reckoned that of these 300 to 350 persons per year fell victims to this disease. Amongst the indoor staff the loss was probably 2 per 1,000 annually. The last report of the Postmaster-General showed that Class H (clerks, sorters, and telegraphists) numbered 30,330. Assuming that some 120 persons would require treatment in each year, and that each bed in the sanatorium would provide for the treatment of 3, or perhaps 4, persons during the year, 40 beds would meet the requirement. At a cost of £200 per bed £8,000 would be required for erection, and maintenance at £65 per annum for each bed would absorb a yearly income of £2,600. If the indoor staff would subscribe 1d. a week for about fifteen months the £8,000 for erecting the sanatorium would be provided, and if they would then continue to subscribe ½d. a week it would yield about £3,200 a year for maintenance. The collection of this sum would be greatly facilitated if the Postmaster-General would allow the money to be collected by the Department, as was done for some other purposes. Financial aid might also be obtained from certain benevolent societies, who would find it to their advantage to assist in reducing the death-rate amongst their members, about 50 per cent. of the mortality amongst these being due to consumption. The Association of British Postal Medical Officers, in a special report on the prevalence of tubercle amongst the employés of the Post Office, expressed a strong opinion that sanatoria for the treatment of the disease might be advantageous if established, and the Postal Telegraph Clerks Association could erect no more noble monument to its own memory than the record of having initiated such a work.

Nottingham.—The third annual report of the Nottingham and Nottinghamshire Association for the Prevention of Consumption for the year ending 1902 contains the reports of the first eleven months' working of the Sherwood Forest Sanatorium. Though the sanatorium was not formally opened till May 30th, 1902, patients had been received since February 3rd, and during the year the number of beds had been increased to 24, which had usually been all occupied. During the eleven months 61 patients had been admitted, of whom 41 had been discharged, and 20 remained under treatment at the end of the year. Of the 41 who had been discharged, after an average stay of about four months, 11 were early cases, 21 serious, and 9 advanced cases. There were no deaths during the year. Of the early cases the disease was arrested in 3, 4 left much improved, 3 were improved, and 1 stationary. Of the 21 serious cases 2 were "arrested," 7 "much improved," 9 "improved," 1 "stationary," and 2 "worse." Of the 9 advanced cases 1 was much improved, 6 improved, and 2 became worse. The Committee is anxious to see the practical adoption of the suggestion made by the Duke of Portland, that an "After-Care Committee" should be formed to assist convalescents to conditions of life and work suited to their strength, and it suggests the advisability of establishing a consumptive colony for this purpose. The building, which cost only £220 per bed, had proved quite satisfactory. The financial statement, though it shows a balance of £80 on the year's working, is not quite without cause for anxiety as to the future. The annual subscriptions at present only provide one-third of the amount required to carry on the sanatorium, and as the appointment of a resident medical officer will add to the expenditure, a substantial addition to the list of subscribers is essential. The working expenses show the annual cost per bed to be about £65.

Worcestershire.—A meeting of the General Committee of the Worcestershire Consumption Sanatorium was held at Worcester on February 26th, Dr. H. E. Dixey presiding. The cost of altering the house on the Ankerdine Hills, erecting shelters, lighting, heating and other expenses, amounted to £2,291, being £15 in excess of the total contributions received. The amount of annual subscriptions guaranteed for five years is £950. The sanatorium was opened in November last, and is now in full working order with 15 patients. Dr. Fosbroke mentioned that a further £400 per annum would be required to keep up the sixteen beds, the funds at the disposal of the Committee enabling them to provide only 12 beds, the other cases paying a weekly sum.

Gloucestershire, Somerset and Wilts.—This Branch of the National Association for the Prevention of Consumption is pressing forward the scheme for the erection of a sanatorium at Winsley, near Bath, where an ideal site has been selected. The total estimated cost of building a sanatorium equipped for 60 patients is £20,000, and £4,000 per annum will be required for maintenance. A commencement is to be made as speedily as possible with a building containing 20 beds, and an administrative block which will be sufficient for the 60 beds which the sanatorium will provide when completed. Twelve of the beds are already practically allotted, including 4 for Bristol, 2 each for Bath and Swindon, and 1 for Gloucester. It has been decided that the class of patients to be admitted should be the poorer classes above the rate-supported poor.

Liverpool.—On March 30th the annual meeting of the Liverpool Hospital for Consumption and Diseases of the Chest, Mount Pleasant and Kingswood, Delamere Forest, was held at Liverpool. The Lord Mayor, Mr. W. Watson Rutherford, M.P., was in the chair. The report stated that the number of patients treated at Mount Pleasant had been larger than in previous years, the figures being:—1900: indoor cases, 221;

outdoor, 2,071 new cases, 15,822 attendances. 1901: indoor, 218; outdoor, 1,984 new cases, 16,291 attendances. 1902: indoor, 217; outdoor, 2,115 new cases, and 18,039 attendances The Committee, acting under the advice of experts, had decided to demolish a large portion of the existing buildings, and to remodel what remained for administrative purposes. On the cleared area an entirely new hospital, in all respects suited to modern demands, would be erected. For the first time during the past year the total income at the disposal of the Committee had been inadequate to meet the expenses of maintenance at Mount Pleasant, and the new sanatorium in connexion with it at Delamere Forest now in full operation. The report of the sanatorium at Delamere Forest marked the first complete year of the working of that branch. The President, Mr. W. P. Hartley, in addition to previous benefactions, had stated to the Committee his preparedness to increase the patients' accommodation at Delamere to 60 beds, together with all appurtenances necessary thereto (the present capacity was 40 beds) at his sole expense, provided the Committee could reasonably assure him that the increased expense of maintenance was likely to be secured. The Committee issued a public appeal in December last, and the result, so far, was new and enlarged annual subscriptions amounting to about £450, and donations to an endowment and maintenance fund of slightly exceeding £2,000. The medical report showed that during the year 125 cases had been treated at the sanatorium, of which 74 were very greatly benefited—indeed, in many instances the disease was arrested. The Lord Mayor, in moving the adoption of the report and accounts, referred to the fact that the number of new cases continued to increase every year. Mr. H. L. Smyth, in seconding, drew attention to the fact that one-third of the mortality in Liverpool was attributable to consumption and chest diseases. The resolution was cordially adopted.

IRELAND.

Cork.—On a requisition to Lord Bandon from the members of the medical profession in the county and city, a public meeting was held in the County Court House on February 28th for the purpose of establishing a branch of the National Association for the Prevention of Consumption, and adopting other necessary precautions to check the spread of the disease, including the erection of a sanatorium for the treatment of poor consumptives. The Right Honourable the Earl of Bandon presided, and was supported by Sir R. Douglas Powell, Sir John Moore, the Most Rev. Dr. Browne, Bishop of Cloyne, and a large and representative assemblage of residents of the city and council. In opening the proceedings the Earl of Bandon said that the requisition he had received pointed out that though the death-rate from consumption was diminishing in other countries, it was steadily increasing in Ireland, and that in Cork it was double that of Glasgow and other large towns in Great Britain. Sir R. Douglas Powell sketched the causation of consumption and the means necessary for its prevention. He understood that Mr. Barter had most generously offered a site for a sanatorium, and he hoped the scheme would be attended with great success. Sir John Wm. Moore gave statistics showing the very great prevalence of consumption in Ireland, and the increasing mortality. He advocated voluntary notification and inspection, and mentioned cases where want of proper cleanliness in dwelling rooms had resulted in infection. He recommended the establishment of homes for advanced consumptives. The Most Rev. Dr. Browne, in an excellent speech, showing an unusual grasp of the subject, proposed a resolution to the effect that a branch of the National Association for the Prevention of Consumption should be formed for the County and City of Cork. Sir George Colthurst seconded the resolution, which was carried unanimously, as was also a resolution proposed by the Right Rev. Dr. W. E. Meade, Bishop of Cork, Cloyne, and Ross, and seconded by Mr. Maurice Healy, nominating the General Committee, with the Earl of Bandon as President of the Branch. In the evening Sir R. Douglas Powell and Sir John Wm. Moore were entertained at dinner by the medical profession of Cork.

THE MILK OF TUBERCULOUS COWS.

An investigation into the infectivity of the milk of tuberculous cows has been recently carried out by Mr. J. M'Lauchlan Young, F.R.C.V.S., F.R.S.E., Lecturer on Veterinary Hygiene in the University of Aberdeen. Cows in milk about to be slaughtered were tested with tuberculin and their milk bacteriologically examined. Sixty cows were examined, but owing to various reasons only 18 could be used for the purposes of the report. Of these, 4 were the subjects of tuberculous mammitis, and the milk from all these when inoculated into guinea-pigs produced typical tuberculous lesions, whilst the milk from the 14 remaining cases which had reacted to tuberculin produced no such effect, even though some of the cows showed extensive tuberculosis. The conclusions drawn are that milk drawn from cows suffering from tuberculosis of parts other than the mammary gland possesses no virulence, whilst that from cows suffering from tuberculosis of the mammary gland in all cases reproduces the disease when inoculated into guinea-pigs, and in some cases possesses a remarkable virulence.

POPULAR LECTURES.

The *Borough of Woolwich Labour Journal* for February, 1903, contains some lectures on Consumption, its Causes and Prevention, by Dr. Sidney Davies, the Medical Officer of Health. The first lecture deals with the causes of the disease. The second lecture on prevention discusses the main practical measures necessary, especially as they affect the working classes; whilst the third lecture deals with consumption and alcoholism. The lecturer concludes with an appeal to the working men: "Will they be led by the publicans and brewers, or will they fight for temperance, health, and morality." The lectures are clear and practical, and well-suited to the persons for whom they are primarily intended. Such lectures published in a labour journal cannot fail to have a beneficial effect if, as we may suppose, the journal is read by working men.

UNITED STATES.

Pennsylvania.—The Pennsylvania Society for the Prevention of Tuberculosis has a Bill in the Pennsylvania Legislature asking for 500,000 dollars for building sanatoria. The sites are to be selected by a commission of three to be appointed by the Governor, and are to be found in the State forestry preserves, one in the Pocono region, Lackawanna county; and the other Franklin county, near Palo Alto.

Washington.—Leading citizens of Washington, D.C., have organized a propaganda against tuberculosis. Every effort will be made to spread knowledge tending to prevent and combat the disease. The work has the approval and co-operation of the city health authorities, and among the organizers are many prominent physicians, charity workers, philanthropists, and clergymen. Public lectures will be given, and reprints and scientific documents are to be published by the Society in the dissemination of knowledge, with the hope that the progress of tuberculosis may be arrested.

New York.—The Arbeiter Ring, an organization of about 20,000 East Siders, composed principally of members of trades-unions and social clubs, has decided to try to raise a fund to establish a home for consumptives. It has called a conference for the second Friday in May, at which the feasibility of such a project will be discussed. In the meantime committees are to be sent to investigate how far the working of people in sweatshops is responsible for the spread of tuberculosis.—Plans for a sanatorium, which is estimated to cost 530,000 dollars, have been prepared by the Committee on the Prevention of Tuberculosis of the New York Charity Organisation Society, and have been submitted to the Commissioner of Health of the City of New York. The institution will provide accommodation for 480 patients, and it is proposed to build it in the Adirondacks. The general plan suggested is similar to that which has been adopted for the sanatorium which it is proposed to erect in this country under the auspices of the King. In addition to the permanent pavilions, however, it is proposed to have a number of tents, each provided with a wooden floor. A bill has been passed by the New York State Legislature empowering the Health Department to acquire land in any part of the State for the erection of the tuberculosis sanatorium. An effort will be made to secure an appropriation sufficient at least to allow the work to be begun.

CANADA.

Montreal.—A League for the Prevention and Treatment of Tuberculosis has recently been formed in Montreal, with Senator Drummond as President and Dr. A. J. Richer, Secretary. The aims of the association are to stimulate and increase the knowledge of what tuberculosis is, its dangers, and how they may be combated, and to afford assistance to those suffering from the disease. An active campaign has already been begun. Dr. Lachapelle, of the Provincial Board of Health, will assist in distributing literature, and lectures upon the subject will be given in French and English. The Health Department of Montreal has recommended an appropriation by the City Council.

THE ROYAL COMMISSION ON PHYSICAL TRAINING (SCOTLAND).

The Report of the Royal Commission appointed on March 31st, 1902, "to inquire into the opportunities for physical training now available in the State-aided schools and other educational institutions of Scotland, and to suggest means by which such training may be made to conduce to the welfare of the pupils, and, further, how such developments may be increased by continuation classes and otherwise, so as to develop, in their practical application to the requirements of life, the faculties of those who have left the day schools, and thus to contribute towards the sources of national strength," has now been presented to Parliament.

The recommendations of the Commissioners (Lord Mansfield (Chairman), Mr. Cochrane, M P., Sir Thomas Glen Coats, Sir Henry Craik, Sir M. Shaw-Stewart, M.P., Mr. J. C. Alston, Mr. J. B. Fergusson, Mr. McCrae, M.P., and Professor Ogston) are summarized as follows:

1. *Elementary Schools.*—The improvement in regard to physical training will be brought about chiefly by a more intelligent conception of the proper aim of education, by recognition of the fact that the education cannot be based on sound principles which neglects the training and development of the bodily powers, and by judging results as they are shown over the whole of school life, and not by short portions of that life. The school life should cover a larger part, not only of the working time, but also of the recreation of its pupils. Larger provision of playgrounds and of exercise halls is necessary, and might with advantage take the place of a certain amount of class-room accommodation. Variety should be substituted for formal methods; and in connexion with games, use should be made of all available voluntary help.

2. *High-class Schools.*—In the case of boarding schools, a certain amount of systematic physical exercise should be held to be necessary, and should be given independently of games; and in the case of day schools, while the opportunities are, as a rule, considerable, care should be taken to see that the pupils avail themselves of these opportunities, and that games and physical exercises should be treated as an essential part of the school course. Such a course should include instruction in the elements of hygiene and physiology.

3. *The Universities.*—The condition of physical training at the universities is unsatisfactory, and without suggesting that compulsion should be resorted to, we think that the subject demands the earnest attention of the university authorities, that they should afford adequate opportunities and facilities for such exercises, and that such rearrangement of courses as may be necessary should be adopted in order to avoid an overpressure which cannot but be injurious to the students and hurtful to the nation generally.

4. *Feeble-minded and Cripples.*—In any efforts for benefiting children of this class we are convinced that carefully-adjusted physical training must play a very large part. School Boards should co-operate as far as possible with voluntary efforts in this direction: and any further powers which are required to enable them to supplement such efforts should be given.

5. *Continuation Classes.*—For lads over school age these classes might be popularized by a larger introduction of physical exercises; and if attendance at these classes be not made compulsory for lads between 14 and 18 there should be at least power in the case of proved vagrants to issue compulsory attendance orders for a continuation school, with a penalty, for breach of such order, of committal to a reformatory.

6. *Medical Inspection.*—School Boards should have the command of medical advice and assistance in the supervision of schools; a systematic record of physical and health statistics should be kept; and a small number of medical and sanitary experts should be added to the inspecting staff under the Education Department.

7. *Feeding.*—It should be one of the duties of School Boards and school managers generally to inquire into cases of apparently insufficient feeding: that they should provide facilities for the provision of suitable food by voluntary agencies in the organization of this work. Should this prove inadequate, we think that powers should be given to provide a meal, and to demand from the parents a payment to meet the cost price.

8. *System.*—While we are unwilling to confine teachers unduly to a hard-and-fast system, we think that certain principles should be carefully observed, and fundamental uniformity of method, for convenience of organization, maintained. We have recommended the appointment of a skilled committee to prepare, under the auspices of the Education Department, a model course for a national system of physical training for Scotland. We hold that a daily amount of school time should, as far as possible, be devoted to physical exercises: short periods of exercise at frequent intervals being preferable to periods of longer duration at greater intervals.

9. *Teachers.*—Except in large schools, or schools where the services of a special instructor are employed, the physical instruction should be given by the ordinary teaching staff. But for this purpose a certain amount of systematic training is absolutely necessary. The qualifications for giving physical instruction should be attested by a certificate issued under the authority of the Education Department, and in future no teacher should be recognized for giving such instruction unless he or she possesses such a certificate. In due course the possession of such a certificate should be an indispensable condition of recognition as teacher in any State-aided school. No training college should be recognized for assistance from the Parliamentary grant unless such systematic training forms a necessary part of its curriculum, or unless other provision is made for its being given to the students of the college. We think that any institution for physical instruction which is supported by adequate local effort, which is approved as necessary to meet the requirements of public schools, and which is certified to be efficient, should be eligible for grants on the same conditions as the present training colleges.

10. *Inspections.*—There should always be on the inspecting staff persons who have given special attention to this subject, and competent expert and scientific aid should be available for advice and guidance.

11. *Auxiliary Agencies.*—We think that such organizations as cadet corps and the Boys' Brigade may be of great use in connexion with this work. Both agencies should be encouraged, and any assistance given them be given by the education authority out of the grant for education. We hold that as means of disciplining the disorderly elements in society, and also of strengthening the available resources of the country, the aims of both these organizations are of supreme importance. But we prefer to regard them chiefly as means of benefiting the individual pupil, and, as such, we think that they may best co-operate with educational authorities, and receive any assistance granted by the State, not as military, but as educational agencies.

LITERARY NOTES.

In the British Medical Journal of March 28th (p. 740, col. 1, third line from the bottom), the following remarkable incident is related:

> The driver having finished milking, his cow offered to take me into an adjoining room, etc.

We have been congratulated by more than one correspondent on the intelligence of the cow here referred to, and indeed at first sight she would seem to deserve a prominent place in the *Spectator's* stories of animal intelligence. But alas, she is but a creature of the "printer's devil," a mischievous sprite who delights in playing tricks with commas, letters, and figures. Freaks of punctuation such as that referred to often vex the souls of serious persons. A well-known Nonconformist divine is said to have scandalized Oxford by a public intimation that he would "wear no clothes, to distinguish him from his fellow Christians." Yet the worthy man only meant that he would not wear a black coat and a white choker. This was the result of a superfluous comma. The deplorable effects of a want of commas may be illustrated by the following advertisement of a new nursing bottle patented by a Canadian firm which we recently came across. In the directions for the use of the bottle, the following cold-blooded recommendations occur:

> When the baby is done drinking it must be unscrewed and laid in a cool place under a tap. If the baby does not thrive on fresh milk it should be boiled.

The prophetic soul of Sophocles, dreaming of things to come, would seem to have foreseen the advent of Christian Science. As pointed out by "K. W. M." in the *New York Medical Journal*, the Greek tragedian says (*Ajax* vv., 581, 582):

> οὐ πρὸς ἰατρόῦ σοφοῦ
> θρηνεῖν ἐπῳδὰς πρὸς τομωντι πήματι
> No practiser of healing who is wise
> Will treat with charms a hurt he should incise.

The *West African Mail*, the first number of which appears this day (April 3rd), is a new weekly illustrated paper, "designed to meet the growing public interest in West African affairs." According to the prospectus, it "represents the commercial, industrial, mining, and political interests of British West Africa," and is "the official organ for West Africa of the British Cotton-Growing Association, and the official organ for West African Sanitation of the Liverpool School of Tropical Medicine." The editor is Mr. Edmund D. Morel.

An instance of the ruling passion strong in death—or, as we prefer to believe, of devotion to duty—in a medical journalist is related in an Italian journal. A well-known contributor to an Italian medical journal who had long been confined to bed, feeling his end near, called for writing materials, and with much difficulty contrived to produce a last article. On completing and dispatching it, he calmly turned his face to the wall and died. It was his own obituary, and duly appeared in the next issue of the journal. It would save a good deal of trouble, and would perhaps be a wise precaution, if all members of the profession were thus to write their literary "*post mortem*" in anticipation.

A series of articles is now appearing in the *Cornhill Magazine* on "Prospects in the Professions." The medical profession has not yet been dealt with. In the April number the prospects of the schoolmaster are discussed. The writer says it is a strange feature of English public school life that masters should derive a large proportion of their salaries from the profits of boarding-houses. He thinks that it would be a good thing, if possible, to divorce the feeding from the teaching of the young. But he goes on to say that the boarding-house system, in spite of its faults, provides the only substitute for parental care, for domestic society, for the intimacies of home-life. "The schoolmaster stands *in loco parentis* to his pupils, and one element of a father's duty towards his children is to look after their food. Perhaps it is this unique yet complex relation of a master to his pupils in a public school which is his abiding recompense." Our readers, who this week have an opportunity of studying the dietaries of several public schools, will doubtless agree that the master gets a very fair "recompense" out of his pupils, though whether it is "abiding" or

not must depend on his economic character. Miss Hawtrey, who has had exceptional opportunities of knowing the facts, does not hesitate to say that in some public schools housemasters trust to parents making up by hampers for the deficiencies of the food which they supply to their pupils. As long as the schoolmaster has to eke out his salary by the profits of lodging and housekeeping, things cannot well be otherwise.

It may be remembered that a short time ago mention was made in the BRITISH MEDICAL JOURNAL of a conjecture thrown out by Mr. Cunninghame Graham that *modorra*, a disease which is said by historians to have caused great mortality among the Guanches in the Canary Islands at the time of the Spanish conquest, was the "sleeping sickness" which is now so prevalent in Uganda. We ventured to hint that the theory was not to be taken seriously; and indeed, it was tolerably plain that Mr. Cunninghame Graham only wished to use it as an excuse for the discharge of a few cheap jests at medical science. It may, however, be asked what *modorra* was. Thanks to the courtesy of Dr. George V. Perez, of Orotava, we are enabled to furnish what we believe to be a satisfactory answer to that question. Dr. Perez informs us that the late Dr. Chil, the well-known historian of the Canary Islands, who also was a distinguished anthropologist, had no doubt that *modorra* was simply typhus (*tifus de los campamentos*), the drowsiness of the typhoid state being called *modorra* by the old Spanish conquerors. He adds that the Guanches were a very remarkable, tall fair race, not negroes. On this ground alone the "sleeping sickness" is out of court. Besides, *modorra* was an acute epidemic disease. Dr. Perez has also given us the following interesting extracts from historians of the Canaries bearing on *modorra*. Fr. Espinosa, who wrote in 1594 (vol. iii, chapter ix, pages 70 and 72), says:

About 1494, it may be by divine permission or as a punishment for the slaughter of Spaniards carried out by the natives, or through the air having got poisoned by the putrefaction of corpses of the many killed in battle, such an epidemic developed from which nearly all attacked died. .....Hundreds of dead bodies were found eaten by dogs. These small dogs called *Cancha* which the natives bred were now starving through their masters not feeding them, and they got to relish so much the corpses of the slain that they ended by attacking the living, and the natives took to sleeping on trees. The mortality was so great that some 15,000 died, the island remaining almost deserted.

The poet Viana, who was also a medical man, mentions that the Guanches used to be bled for this disease. (Viana, Canto 2, p. 29.) Nuñez de la Peña (Book 1st, chapter xv, p. 146) mentions that January, 1495, was very rainy, and that a great pestilence broke out and numbers of dead bodies lay rotting in the open. The disease did not attack the conquerors but only the Guanches; this was ascribed to divine influence. This happened in the year of the conquest, and the Spanish camp being by the sea in an open site probably thus escaped contagion. Tomas Arias Marni y Cubas, writing in 1687, attributes the epidemic to the fact that at the battle of Acentigo, 2,000 dead bodies were left unburied; this occurred the year before the pestilence broke out. He mentions that the illness that the Spaniards called *modorra* lasted only three days and that during the summer some 4,000 died. This was in Teneriffe. He also refers to an outbreak of the disease in Grand Canary and he says that the patients died within three days without being able to eat. Viera y Clavijo (vol. ii, p. 212) devotes a chapter to *Modorra*. He says it broke out at the end of 1494 owing to the putrefaction of bodies left behind after the battle of Laguna. The cold weather and rains of January, 1495, made matters worse and the illness consisted in malignant fevers which ended in a mortal lethargy which was named *Modorra*. Millares (vol. iv, p. 224) writes much to the same effect. Dr. Chil y Naranjo (vol. iii, p. 361) writes as follows:

There is no doubt that the Guanches were greatly broken-hearted when they saw how typhus began to spread, called then *Modorra* of the Guanches; it took its origin in the battle of Acentigo, through the bodies having been left unburied, and then spread throughout the island.

In Grand Canary the same illness occurred in 1524 (*vide* Pedro A. del Castillo, p. 238). Dr. Perez says that his colleague, Dr. Bethencourt, who is devoted to historical research, has informed him that about 1664 *modorra* was prevalent in the island of Fuertaventura. In Gornar's *History of Mexico* the name occurs in the following passage:

One day Licentiate Pence went to hear mass at San Francisco, and returned to his inn with high fever, which was really *modorra*.

In a note by R. M. Dixon, of Bombay, on the senses of snakes, reprinted from the *Verhundlungen des v. internationalen Zoologen-Congresses zu Berlin*, it is stated that the *Typhlopidae* and *Glauconiidae*, popularly known as blind snakes, have minute eyes hidden by the shields of the skin. But though all snakes have eyes their sense of sight does not seem to be perfect. The eyes are not movable and are unprovided with lids, their place being taken apparently by a single thin transparent scale, probably a modification of the nictitating membrane, which covers the eye like a miniature watch-glass and peels off periodically with the rest of the epidermis. The transparent scale covering the eye becomes dim by degrees, and now and then interferes with the snake's sight. The peculiar structure of the eye in the snakes enables them to distinguish objects both in the dark and in the most brilliant sunshine. Snakes have no external ears; they have no tympanum and no traces of the Eustachian tubes. Nevertheless, there is reason to believe that they can hear as distinctly as other animals, though their auditory apparatus is obscure and imperfect. In Psalm lviii, 4, 5, Eccl. x, 11, and Jeremiah viii, 17, allusion is made to the charming of snakes by musical sounds. The Psalmist compares the wicked to "the deaf adder that stoppeth her ear; which hearkeneth not to the voice of charmers, charming never so wisely." According to Indian folklore there is a common belief among the natives that the nag or cobra, *Naja tripudians*, is always a male and that the nagin or female is the graceful snake, *Zamenis gracilis* or *Zamenis fasciolatus*. A similar belief probably prevailed throughout the East, and the Psalmist's "deaf adder" was perhaps some snake popularly believed to be the mate of the African cobra *Naja haje*, a frequent subject for snake-charming in Palestine. The snake-charmers of Egypt and India have been known from the earliest period. The mantras or incantations of these men have really no influence on other snakes except over the reptiles trained to obey their call. The cobra's fondness for music has been reported from time immemorial. The snakeman perhaps improves upon this natural instinct, and after a few weeks' training succeeds in teaching the reptile to keep time with the waving of his musical instrument.

With regard to an announcement of a forthcoming edition of Hakluyt's *Voyages* which appeared in the BRITISH MEDICAL JOURNAL of March 21st, Messrs. MacLehose and Sons inform us that the Hakluyt Society offered to relinquish their edition of the *Principall Navigations of the English Nation by Richard Hakluyt* if special consideration were given to members of the Society. It has now been arranged by Sir Clements R. Markham and Mr. Basil H. Soulsby, honorary secretary, on behalf of the Hakluyt Society, and Messrs. MacLehose, that members of the Society at present on the roll will have an opportunity of procuring a copy of their edition, in the Society's special binding, uniform with their other publications, provided early application is made. The Hakluyt Society will not now issue an edition of this work.

In the *World's Work* for April Dr. Chalmers Mitchell, discussing the teaching of science, says the greater part of the vast machinery for that purpose in this country avoids, almost as of set purpose, what should be its main object. Authority is the ruling power. The statements of books and of teachers, the appeals of diagrams, the alluring falsities of lecture experiments, are merely authorities in a new guise, and are arranged to impress the memory rather than to excite the critical faculty. The traffic in information reigns as supreme in science as in classics or in theology. The teacher has to impart information, the pupil has to receive information, and to belch it forth in examination papers. The system does nothing but make brains docile, and in the business of life a docile brain is much less valuable than a penny encyclopædia. The South Kensington Department of Science is probably the most costly, the most wasteful, and the most stupid of our educational shams. In the universities, the schedule system is still dominant and triumphant, and, with a few exceptions, the authoritative method still prevails, the only difference being that the information conveyed is generally more copious and more recent, and, for that very reason, more illusory. What is wanted in the modern world is not the satiated content of the well-informed brain, but the critical and discontented brain, the brain that is continually tumbling out the old to make room for the new. Enough money, says Dr. Chalmers Mitchell, is provided by this country to secure a continual crop of new discoveries, and to endow the laboratories of the new universities and of the old, if the latter will make themselves worthy to receive it by giving up the hotel-keeping business. For the vast majority of persons nothing more is wanted than the simplest possible selection of facts, capable of direct corroboration by measurement and by simple

observation. Such a discipline would suffice to give all who passed through it the power of distinguishing between knowledge and hearsay, and to select from among them those with the special aptitudes worth cultivating. The process would be infinitely less costly than the present grant-for-information system, and would free immense sums for the prosecution of research and the advancement of knowledge, besides training a number of persons in the methods necessary in all research.

In an article on Tracking Criminals by Means of Finger-prints, which appears in the current number of the *World's Work*, it is stated that at Scotland Yard there are at least forty identifications a week of criminals who are passing under new names in all parts of the United Kingdom. Bertillon's system of measurement was based upon the fact that certain bony portions of the human frame do not vary during the period between adolescence and extreme old age. He selected head length, head breadth, middle finger length, foot length and cubit, and distributed them as belonging to one or the other of three equally numerous classes—small, medium, and large. But very delicate instruments are required for this anthropometry, and the number of subdivisions for classification are very numerous and complicated. The most notorious case in which the finger-print system has been brought into play lately has been that of the so-called Leyton murderer, Edwards, who was hanged early in March. When the police were almost without a clue as to the murderer, and when Edwards was arrested merely as a suspect under one of his many aliases, the police had little to prove that he was not the law-abiding citizen he claimed to be. But, as is usual now throughout the country, immediately after his arrest impressions were taken of his finger-prints, and these were sent to Scotland Yard. Owing to the very simple and expeditious method of filing and classification which the new Chief Commissioner has perfected, it was the work of only a few minutes to find Edwards's former criminal record and to send a complete *dossier* to the police who had him in charge. In another recent case of murder the only clue to the criminal was greasy finger-prints left on the glass of a window by which escape was effected. One of the head men of the Finger-Print Department took careful photographs of the tell-tale impressions, and within a few hours the criminal, well known as an old offender, was arrested.

Dr. K. McAdam (Oamaru, New Zealand) writes: In your issue for January 3rd occurs a very interesting literary article entitled Doctors in British Fiction, describing many of the instances of medical characters, good and bad, in our literature. There is one rather unaccountable omission, however. I refer to the character of "Dr. William McLure" in *A Doctor of the Old School*, by Ian Maclaren. As this character is most lovingly portrayed by one of the best of our modern writers, exhibiting the profession in the best light not only to members but to the general public, I am sorry the writer has forgotten it. That "Dr. McLure" is not an overdrawn character the recent instance of heroism displayed by the late Dr. Smyth in Ireland bears witness. To all students desiring a pleasant exposition of one branch of medical ethics I would advise a perusal of this masterpiece of a master of letters.

Dr. J. W. Burdwood (M.O.H. Bourne, Lincs.) writes: In your notice in the British Medical Journal of March 28th of Mr. W. J. Long's article, in which he says it is very rare for birds, etc., to tolerate any cripple, I should like to draw your attention to the fact that in winter we make a practice of feeding birds on our lawn and also on the window sill. On this latter several blue-tits are in the habit of feeding: one of them is minus a leg, and this makes the third season he has visited us.

THE PLAGUE.

Prevalence of the Disease.

India.

During the weeks ending February 28th and March 7th the number of deaths from plague in India amount to 28,860 and 29,647 respectively. These numbers represent the highest figures recorded in India since the outbreak of plague in 1896. It was not until two weeks later that the highest mortality figures were returned in 1902, so that a still higher number of deaths from plague is possible. During February, 1903, 107,811 died of plague in India.

The principal centres of plague in India during the two weeks ending February 28th and March 7th, and the mortality they record from the disease, is as follows: Bombay City, 1,182 and 1,323; Bombay Districts, 10,444 and 9,878; Calcutta, 468 and 679; Bengal, 3,436 and 2,909; North West Provinces and Oudh, 3,204 and 3,437; Punjab, 5,642 and 6,814; Central Provinces, 1,852 and 1,704; Hyderabad State, 861 and 863; Madras Districts, 643 and 529. Central India reports 440 deaths during the four weeks ending March 7th.

A recent return showing the deaths from plague amongst the inoculated and uninoculated employés at the Empress Mills, Nagpur, is interesting. Of 2,312 uninoculated persons attending the mills up to March 7th, 42 died of plague; whilst of 2,476 inoculated persons, only 6 died of the disease.

South Africa.

Port Elizabeth.—During the weeks ending February 21st and 28th, and March 7th the fresh cases of plague met with in Port Elizabeth numbered 4, 18, and 11 respectively; the deaths from the disease are recorded as 2, 4, and 4 respectively. Twenty-three cases were under treatment in the plague hospital on March 7th. Plague-infected rats continue to be found throughout the town.

Port of Table Bay.—An Indian member of the crew of ss. *Nevasa*, from Bombay, died of plague on board that vessel on March 6th. The rats on board the ship were found to be infected with plague.

East London.—The rats on the wharves of East London have been found infected with plague, and a high mortality has occurred amongst them.

King Williamstown.—During the week ending March 7th, 2 Europeans and 2 natives developed plague. One of the latter died on March 6th; the remaining 3 cases are in the plague hospital.

Graaf-Reinet.—A European adult female died during the week ending March 7th of suspected plague. Plague-infected rats are being found in different parts of the town.

Mauritius.

During the week ending March 19th 1 death from plague only was reported in Mauritius.

Hong Kong.

During the week ending March 21st, 28 fresh cases of plague were reported in Hong Hong, and 8 deaths from the disease.

INDIAN HOSPITAL REPORTS.

Plague in Calcutta.

A report has been written and published by Major H. E. Deane, R.A.M.C., special health officer for plague in Calcutta, for the period June, 1901, to June, 1902. The report, with appendices contributed by Drs. Pettifer, Hossack, and Crake, runs to 68 folio pages. It is rather discursive, and is composed in a spirit of somewhat obtrusive agnosticism; it adds little to our knowledge of the epidemiology, pathology, or treatment of plague. The most conspicuous fact represented is the very marked seasonal variation of the epidemic. The period reported on includes the third outbreak which has occurred in Calcutta, and the experience of 1900 and 1901 is closely repeated. The number of deaths which took place in each period was 7,373, 7,398, and 6,925 respectively. Commencing with January, the disease rapidly advanced to a maximum in March and April, and rapidly declined in May and June to disappear in the rains. Major Deane holds by place infection rather than personal infection, and considers darkness, with its associated sanitary evils, to be the chief adjuvant of spread. He rather scouts the agency of rats, though Drs. Pettifer and Crake give strong grounds for belief in it. The preventive measures found most effective were demolition and disinfection, with removal of sick and suspect inhabitants.

Dispensaries in Central India.

The report for the year 1900 by Lieutenant-Colonel A. Dane, M.D., I.M.S., includes statistics of 102 hospitals and dispensaries, mostly established and supported by native States. The majority of these are under the supervision of the Agency Surgeon, but some states—for example, Indore—manage their own medical affairs. There were 1,009,744 patients treated, suffering mostly from fevers, bowel complaints, and ulcers. Famine prevailed during the year, and there were 29,366 cases of cholera, no plague. Cholera seems to have broken out at Ujjain and spread thence. "Being a great centre for pilgrimage, the city of Ujjain is always full of strangers, and crowds of dirty gossains and fakirs, while last year the poor classes of Malwa also crowded in in search of food. The water supply of Ujjain is most defective, and last year by the end of February the wells were all dried up, and nothing was left beyond the foul and stagnant river in which the enormous population of the city bathe and wash their clothes, and which they are obliged to drink." It is not surprising that cholera found a congenial nidus in the place, and Dr. Dane states that the outbreaks of 1885, 1892, and 1900 could all be traced to Ujjain. Dr. Dane refers to the prevalence of paralysis consequent on the consumption of the vetch called "teora" during the famine. A special inquiry is to be made under the orders of the Government of India regarding the prevalence and causation of lathyrism in India. The number of surgical operations performed was 40,331, most of them trivial, but a fair proportion serious, and apparently with good success. It is interesting to note with reference to the question of cancer in India that of 201 tumours removed, 51 were "malignant." There were 585 operations for extraction of cataractous lens, 28 cutting, and 71 crushing operations for stone. The forms relating to finances are very defective, and might well be omitted. Statistics relating to agency gaols, a leper asylum, containing 49 inmates, and vaccination are given.

Madras Hospitals and Dispensaries.

Surgeon-General D. Sinclair's report for the triennium 1899-1900-1 includes the medical institutions of the city and presidency of Madras. There were 579 hospitals and dispensaries at work at the close of the period; in them were treated

during the year 1901 4,937,482 patients—an increase on the two preceding years. The health of the province was bad during the triennium, fever and cholera prevailed severely, and plague caused 3,035 deaths in 1901. The death-rate among indoor patients—9.18—was high. Surgical operations numbered 151,995 with a mortality of 0.2 per cent. Some trivial operations have very properly been removed from the list. The number of cataract operations was 1,640 and of stone 20. The return of hernia and obstetric operations is large. Government contributes 27 per cent. and local and municipal funds 63 per cent. to the support of these institutions. The income amounts to over 15 lakhs of rupees and appears to be ample. The report is brief and mainly statistical; and the observations upon it by the Government are scrappy and uninstructive. Judged by arithmetical results these hospitals seem to be increasingly popular and useful, but it is impossible to discover how far they continue to adapt themselves progressively to the wants of the population and the advance of medical science and practice.

PUNJAB HOSPITALS AND DISPENSARIES.

Twenty-eight dispensaries were transferred in 1901 to the new North West Frontier Province; allowing for this decrease the charitable medical institutions of the Punjab underwent an increase of 6 during the triennium 1899-1901, leaving 245 open at the close of the period. The attendance of both indoor and outdoor patients was larger than in the preceding triennium, amounting in 1901 to 51,565 and 2,973,446 respectively. There was a falling off in numbers in the plague infected districts. Some parts of the Punjab are held to be insufficiently supplied with means of medical relief, but on the whole progress and popularity are manifest in this record. Fevers and diseases of the digestive system are the largest items in the list of diseases treated. Respiratory diseases and ulcers and skin diseases are also conspicuous. The number of surgical operations performed was 151,827 with a mortality of 0.17 per cent. They include 6,387 cases of extraction of lens with a percentage of success of 91.68, 212 removals of stone by cutting with a death-rate of 8.71, and 1,807 by crushing with a mortality of 2.63 per cent. These institutions are mainly supported by local and municipal funds, the Government contribution amounting to 25 per cent. The income, amounting to about 5¾ lakhs, is adequate. Female medical aid and training continue to receive attention. The report has been drawn up by Colonel A. Scott-Reid, Inspector-General of Civil Hospitals.

HOSPITALS AND DISPENSARIES OF THE UNITED PROVINCES OF AGRA AND OUDH.

The report for the years 1899, 1900, and 1901 compiled by Colonel G. Hutcheson, M.D., is a formidable work of 285 folio pages. It is painfully statistical, and, as the Government resolution on it remarks, devoid of any information regarding points of general interest relating to the administration of medical relief measures and institutions. It appears that as in Bengal the existence of plague interfered with the work of hospitals, but that the effect of the plague scare was wearing off. The number of institutions in operation at the close of the triennium was 485—115 were added to the list during the three years. The number of patients treated in these in 1901 was 3,717,285, an increase on 1900, but a decrease on 1899. Of these 55,328 were treated indoors, of whom about a half paid for their own dieting. The death-rates among this class were 4.80, 5.59, and 5.33. The record of surgical operations performed is satisfactory. Of these 5,904 were for cataract and 884 for stone. The financial condition of these institutions is sound. There are 56 special hospitals and dispensaries for females, and 4,202 *pardah nashins* were attended at their own houses by lady doctors and female hospitals assistants.

BENGAL HOSPITALS AND DISPENSARIES.

The report for the years 1899, 1900, and 1901 submitted by Colonel T. H. Hendley, C.I.E., includes both metropolitan and provincial institutions. The number of Calcutta medical institutions has been increased from 15 to 17. The attendance of out-patients has undergone progressive increase and the effects of the plague scare of 1898 have worn off. The year 1900 was very unhealthy, and both the number of in-patients and the proportion of deaths among them was very high. These important hospitals maintain their high standard of usefulness and popularity. The provincial hospitals and dispensaries increased during the same three years from 492 to 558. The proportion of institutions to population is less than in some provinces, but the Government is inclined to think that this is due to the large number of private practitioners settled in the towns and villages "who do a great deal of free work for the poor." Some 10½ millions of patients were treated during the three years, and in 1901 the number treated bore a percentage of 5.02 to population.

Various administrative reforms have been carried out, among them separate accommodation for paupers and moribunds, special arrangements for the treatment of women and children, improvements in the education and status of medical subordinates. The hospitals and dispensaries are generously supported. District Boards contribute freely, and private charitable subscriptions amount to 25 per cent. of income. Government contributes 74 per cent. of the cost of metropolitan and 10 per cent. of provincial institutions—a very curious contrast.

ASSOCIATION NOTICES.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 22nd day of April next, at 2 o'clock in the afternoon.

March, 1903. GUY ELLISTON, *General Secretary.*

ELECTION OF MEMBERS.

ANY candidate for election should forward his application upon a form, which will be furnished by the General Secretary of the Association, 429, Strand. Applications for membership should be sent to the General Secretary not less than thirty-five days prior to the date of a meeting of the Council.

GUY ELLISTON, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

SOUTHERN BRANCH: ISLE OF WIGHT DIVISION.—A meeting of this Division will be held at the Station Hotel, Sandown, on Friday, April 17th, at 3.45 p.m. All members of the British Medical Association living in the Isle of Wight are now members of this Division, and are invited to be present. Any member wishing to read papers or show cases, etc., are requested to communicate as early as possible with the Honorary Secretary, G. BENINGTON WOOD, M.B., Newlands, Sandown.

BORDER COUNTIES DIVISION OF EDINBURGH BRANCH.—The members of the British Medical Association resident in the counties of Roxburgh, Berwick, Selkirk, and Peebles are requested to meet in the King's Arms Hotel, Melrose, on Friday, April 10th, at 3.30 p.m., in order to form what will be known in future as the Border Counties Division of the Edinburgh Branch. The business will include the election of office-bearers (chairman, vice-chairman, secretary, and treasurer), and the consideration of the model rules for "a Division which is not in itself a Branch." Dr. Norman Walker, Honorary Secretary of the Edinburgh Branch, will attend in order to advise as to the organisation.

LEINSTER BRANCH.—A general meeting of the members of this Branch will be held in Dublin on Tuesday, April 14th. Members will be notified by circular of the place and hour.

MEDICAL PRACTITIONERS AND STRIKES.—The *New Orleans Medical and Surgical Journal* states that owing to a boycott instituted in Waterbury, Connecticut, as a result of a car strike, medical practitioners have been warned not to attend persons whose names have been placed on the black list. If they insist on doing so all who employ them are to be subject to the same treatment. This cowardly manœuvre is a peculiarly odious development of trade-unionism which will certainly be strenuously resisted by the medical profession. It is a cardinal principle of medical practice that the doctor must take no account of industrial, political, or even national differences. His beneficence, like the rain of heaven, falls on the just and the unjust. We are confident that the medical men of Waterbury have treated the impertinent "warning" of the boycotters with the contempt which it deserves.

SPECIAL CORRESPONDENCE.

NEWCASTLE-UPON-TYNE.

Northumberland and Durham Medical Society: Address by Professor Rose Bradford: Banquet.—Victoria Infirmary.—Hospital for Diseases of Women.—Local Edinburgh University Club.—Durham University Examinations.

On March 26th Professor Rose Bradford gave a lecture on the various forms of Bright's disease and their differential diagnosis, to members of the Northumberland and Durham Medical Society, in the College of Medicine. There was a large and appreciative audience. The chair was occupied by Professor George Murray. The lecture was in every way worthy of a physician and pathologist who has done such excellent work upon the kidney.

Later in the evening a banquet was held in Tilley's Rooms, Blackett Street, at which Dr. Rose Bradford was the guest of the evening. The company, which numbered about forty, included the President of the Society, Dr. George Murray, Sir George H. Philipson, Drs. Drummond, Oliver, Limont, Bolam, Adamson, Peart, Ruxton, Dale, Messrs. Page, Hume, Martin, Angus, Richardson, Leech, Ouston, Vickery, etc. In proposing the health of "Our Guest," the President made mention of the scientific work which Dr. Bradford had done both at the Brown Institution and at University College Hospital, and of the success of the meeting held a few hours previous to the banquet. Professor Bradford fittingly replied. The other toasts included "The Royal Infirmary," proposed by Dr. Adamson (Hetton-le-Hole), and responded to by Dr. Hume. Dr. Peart (North Shields) proposed "The College of Medicine," which was acknowledged by Sir G. H. Philipson.

Owing to the fine weather in the North and the large number of men employed on the grounds, the buildings of the New Victoria Infirmary have made rapid progress of late. The large building known as the Nurses' Home is almost ready for roofing.

At the annual meeting of the Newcastle-upon-Tyne Hospital for Diseases of Women, held on March 26th, Mr. W. A. Watson-Armstrong moved from the chair the adoption of the report of the committee for last year, and in doing so alluded to the increased amount of work done; 901 new patients attended during 1902. In seconding the adoption of the report, Professor Oliver spoke of the need for beds now that the hospital had removed to premises fitted for this purpose. During last year Drs. T. M. Allison and Hobbs were appointed Assistants to the Honorary Staff.

Last September there was founded the North of England Glasgow University Club. The inaugural meeting, which took the form of a banquet, was held in Newcastle-on-Tyne. The success which attended the formation of this club has apparently stimulated medical graduates of the University of Edinburgh in Newcastle and on Tyneside to establish a club on similar lines. The inaugural banquet of the club took place on April 2nd, when Sir Henry Littlejohn was the guest of the evening. Dr. James Smith of Ryton presided.

The examinations for degrees in Medicine and Surgery of the University of Durham commences on April 13th. All the examinations are held in Newcastle-upon-Tyne at the College of Medicine and Royal Infirmary. The First M.B. examinations commence on April 13th, and the third final examinations on April 17th. The extern examiners are Professors A. Robinson and McKendrick for Anatomy and Physiology respectively in the second examination; Dr. Newton Pitt of Medicine and Mr. John Langton for Surgery in the final. The number of candidates for the first and final examinations are fairly large, but small for the second.

HONG KONG.

Early Cases of Bubonic Plague: Deaths of Chinese Assistants.

From January 1st to date of writing (February 27th) 30 cases of bubonic plague have been reported, the majority of these having proved fatal. The "dumping" of dead bodies in the streets is still unchecked, and the work of cleansing and disinfecting the infected houses is greatly hindered. No remedy has yet been found for the detection of the culprits, and no doubt the Chinese help each other to evade the policemen on duty. Rats are examined regularly at the public mortuary, and an attempt made to trace the rats found infected by the plague bacillus to the houses where they have been found. The occurrence of so many fatal cases thus early in the year rather points to the incidence of another "plague year" in Hong Kong. Two assistant medical officers are expected soon from England specially to help the Medical Officer of Health in dealing with epidemics of bubonic plague. Already Hong Kong has been declared an infected port by Singapore.

During the last few months two native Chinese assistants have died, one Chung Lu Shing and the other Chan Fai Kwong. The late Chung Lu Shing was for many years resident house surgeon in the Alice Memorial Hospital and then in the Tung Wa Hospital. He was an exceedingly capable medical man, and did much to spread the knowledge of western medicine among his fellow countrymen in Hong Kong. His death was due to phthisis. Chan Fai Kwong had completed his five years' curriculum at the Hong Kong College of Medicine, and was engaged as assistant in the Government Bacteriological Department and gave promise of becoming a useful assistant. He died of acute yellow atrophy of the liver, at the early age of 28 years.

SYDNEY.

Serious Outbreak of Typhoid Fever at Coonamble.—Opening of a Sanatorium for Consumption on the Blue Mountains.—Faith-healing Case.—The Bubonic Plague.

One of the most serious outbreaks of typhoid fever that have ever occurred in New South Wales is reported from Coonamble, a country town about 365 miles distant from Sydney, with a population of about 1,700. The epidemic began about three weeks ago, and rapidly assumed serious proportions, the number of cases up to date being 185. So far, however, only one death has taken place. The Board of Health has taken the matter in hand, and several trained nurses have been sent from Sydney; several buildings on the Show Ground are being used temporarily as wards, the hospital being quite inadequate to provide the necessary accommodation. Dr. Sheldon, one of the local practitioners, was early attacked by the disease, but he is now progressing favourably towards convalescence. Dr. Millard, one of the officers of the Board of Health, was sent to investigate the cause of the outbreak, and he has now furnished a report on the subject. It appears that the disease originated in a shop doing a large business in summer drinks, of which "milk shakes" formed a considerable part. One of the employés contracted the disease, and continued to do his work, and it is supposed that the milk was thus infected. On ascertaining the facts, the proprietor was instructed to discontinue selling drinks in which milk formed any part. Although the original source of the mischief has been traced, and infection from it has ceased, yet under the conditions prevailing in the town infection has spread to other inmates in the houses in which cases have occurred, and it is probable that this will continue for a time at least. Dr. Ashburton Thompson, the President of the Board of Health, states that the worst previous outbreak of typhoid fever in a country town in this State was at Balranald in 1889, when, out of a total population of 670 persons, there were 120 cases, with 15 deaths. The infection in that case was traced to an underground well, which was used by the inhabitants owing to the coolness of the water.

A new sanatorium for the treatment of pulmonary consumption has been erected at Wentworth Falls on the Blue Mountains by the committee of the fund which was raised to commemorate the Diamond Jubilee of the late Queen Victoria. The sanatorium was opened on February 18th by His Excellency Sir Harry Rawson, the State Governor, in the presence of members of the committee, and a large gathering of ladies and gentlemen interested in the movement. The purchase of the site, together with the necessary buildings and full equipment, has cost about £5,000. The property consists of about 300 acres of land situated in the heart of the Blue Mountains, away from any main road. The buildings stand in the midst of young fruit trees and sheltered by well-grown pine plantations. The country immediately surrounding the institution affords excellent opportunities for walking. The buildings have been constructed closely on the lines to be followed at the King's Sanatorium in England (the buildings were all completed, however, before the plans of the King's Sanatorium were published). The original house purchased with the estate forms the central portion of the sanatorium, and is to be used for the accommodation of the matron and nursing staff. Immediately at the rear the wings representing the wards run out at right angles. A covered way, fully open to the north on each side, leads to the accommodation for patients, comprising in the one instance two wards containing 6 beds, and in the other one ward of 6 beds and two

with single beds. The cubic space per bed is estimated at 1,200 feet. All walls and ceilings have been painted and varnished, and everything is constructed on a scale of simplicity conducive to scrupulous cleanliness. At present provision has only been made for 20 male patients. The resident medical officer is Dr. McIntyre Sinclair, recently assistant medical officer at the Cotswold Sanatorium in Gloucestershire, England. This sanatorium is the first one to be built strictly on modern lines and entirely for the poor. At the luncheon Mr. J. H. Goodlet, one of the Vice-Presidents, presided, and several speakers emphasized the noble work which had been done by that gentleman in past days in supporting at his own expense the establishment for consumptives at Thirlmere. It was stated that a sum of at least £3,000 per annum will be required to maintain the new sanatorium and also the hospital at Thirlmere.

At the Central Criminal Court a few days ago a man was put on his trial for the murder of his wife under the following circumstances: The wife was confined by a nurse, but the placenta was adherent, and, finding this to be the case, as haemorrhage was alarming, the nurse wished a doctor to be called. The woman strongly objected to this course, and stated they should depend on prayer alone. Two doctors were subsequently called to the house, but the patient absolutely refused to see them. The woman died shortly afterwards, and a necropsy revealed a complete inversion of the uterus with adherent placenta. On a previous occasion the patient had nearly lost her life from serious *post-partum* haemorrhage with retained placenta. The coroner's jury returned a verdict of manslaughter against the husband on the ground that by neglecting to secure skilled medical assistance he was responsible for his wife's death. At the criminal court Mr. Justice G. B. Simpson spoke in very strong terms, stating to the prisoner, after he had been acquitted by the jury under His Honour's direction, that there was no justification legally or morally for charging him with murder.

Although several cases of bubonic plague have occurred in the other States, so far none has been reported in New South Wales for several months. But in view of the danger of the disease being imported afresh the Board of Health are taking every precaution to enforce all the regulations bearing on this disease which have been in force in the previous epidemics. Bacteriological examination of rats from different parts of the city has failed to reveal any trace of the disease in them. Several plague-infected rats have been found in seaport towns in Queensland and West Australia, and the regulations affecting the mooring of vessels arriving from these ports are strictly enforced.

CORRESPONDENCE.

HOSPITAL AMENITIES.

SIR,—The subject referred to in the letter under the above heading in the BRITISH MEDICAL JOURNAL of March 28th demands full ventilation. It may be hoped that an adequate discussion of its merits in your columns may determine a new attitude on the part of hospital authorities towards the matter which forms the complaint of your correspondent "Suburb."

I presume that every medical man whose practice lies among that section of the population which has recourse on occasion to hospital treatment, has at some time or other shared the grievance to which "Suburb" has drawn attention. Personally, it is no unusual occurrence in my own practice to furnish clinical material to the extent of three or four patients in the course of one week. To my certain knowledge, they are either admitted as in-patients or treated as out-patients; but during the whole period of their hospital life the only clinical information which their previous attendant can glean is supplied by the casual communications of the patient's friends. I will freely admit that when a consultation has been previously held at the patient's home, and the consultant assumes care of the case at his own hospital, he is always willing to reply to any questions the practitioner may address to him as to the progress of the case. Spontaneous information, in my experience, however, is rare. I have often preferred to visit the patient in the hospital, for the purpose of reading the notes, to the circuitous and prolonged method of endeavouring to extract information through the medium of the post. Again, a personal letter to the member of a hospital staff, sent with the patient, will generally elicit an opinion in reply. But one naturally limits these free consultations to those physicians and surgeons whom one is accustomed to consult when fees are forthcoming. And as the number of these gentlemen consulted in the practice of any one medical man is necessarily small, it comes to pass that any individual practitioner has very few consultants at his disposal in the hospital, and he is reluctant to trespass at all extensively on their kindness on behalf of his private patients. Consequently the average patient sent by the general practitioner is furnished with an open letter to the physician or surgeon in attendance. These cases, even if they possess features of the highest clinical interest, are entirely lost to the medical man who has sent them in, and I assert that there is absolutely no facility offered to him to learn anything of their fate. I have myself repeatedly written to hospitals to learn something of cases I have sent in, and to be afforded notes of necropsies when they have been performed, and I regret to say that replies have been exceptional. Some institutions are notoriously worse offenders than others. The hospitals of the Metropolitan Asylums Board are distinguished by the extreme courtesy of their medical superintendents, and in this respect rise much superior to the general hospitals.

When this matter is brought to the notice of members of hospital staffs they fully concur that medical men who send cases into hospital have a full right to be kept *au courant* with the progress of such cases. But they also consider that the proper mediums for the conveying of this information are their house-surgeons and house-physicians. These officials are, in my opinion, already sufficiently overworked in our large hospitals, and it would be unjust to add to their labours this work of correspondence. My suggestion is that all in-patients or out-patients at hospitals who have been under the care of private practitioners—and they form a goodly proportion of the whole—should have their notes marked with the name and address of such practitioner. A separate officer should be appointed to deal with the work of communicating with the practitioner, either for the purpose of eliciting from him obscure points of previous history or furnishing him with clinical information on the case. I believe that every large hospital would find ample employment for one officer in this direction.

This is an urgent reform, from the scientific point of view. The hospital is concerned with the maintenance of medical education, and it cannot legitimately limit its concern to its immediate pupils. The medical man outside has a claim on its teachings. From the point of view of social amenity and ordinary courtesy the matter need not be emphasized.—I am, etc.,

Brick Lane, E., March 28th. J. SNOWMAN, M.D.

SIR,—If "Suburb" lives anywhere in the Western or South-Western districts of London, I would strongly advise him to send his patients to the West London Hospital. From eight years' experience I can assure him that he will find himself treated by the staff with the greatest courtesy, and his opinions listened to with respect. He will be invited to be present at any operation in which he is interested, and often to give assistance at it. If in addition he will expend a very small sum and join the Post-graduate College there, he will have the run of the hospital and access to some of the best clinical classes to be found in London.—I am, etc.,

Kensington, April 1st. LEONARD C. DOBSON, M.D.Lond.

PAROXYSMAL HAEMOGLOBINURIA.

SIR,—In connection with the discussion on Paroxysmal Haemoglobinuria at the Royal Medical and Chirurgical Society, reported in your issue of to-day, it may be worth mentioning that I recently had the opportunity of making a few examinations of the urine of a case of this disease and found a well-marked urobilin band in specimens of the urine passed between the attacks. Saturation with sulphate of ammonia and extraction with alcohol gave a strong solution of urobilin.

The spectrum of the colouring matter during the attacks was that of methaemoglobin.

The case presented the usual clinical features of paroxysmal haemoglobinuria, the attacks apparently being usually excited by fatigue or exposure to cold, but sometimes coming on without obvious external cause.

I send this note as I have not met any reference to the presence of urobilin in the urine in this disease.—I am, etc.,

Nottingham, March 28th. W. B. RANSOM.

MIDWIVES AND PUERPERAL FEVER.

Sir,—The following series of cases may interest those of your readers who are divided in their opinions as to the desirability of registering midwives.

1. On February 15th, 1903, my partner was called in to see a woman who had been confined a week previously. She had been attended by a midwife, whom we will call A., and was evidently suffering from a severe attack of puerperal fever. She died two and a-half hours after he first saw her.

2. On the same day that No. 1 died, her sister was confined and was attended to by the same midwife A. My partner was not called to see her until February 25th, ten days after confinement, when she was also found to be suffering from puerperal fever, and though she still lives she is in a very critical condition with septic pneumonia.

3. On February 19th my partner saw another case of puerperal fever, being called in on the fifth day after the confinement. She had been attended by a different midwife, whom we will call B. This woman died thirty-six hours after he first saw her.

4. On February 25th we saw together another case of puerperal fever which had been attended in her confinement, six days previously, by midwife B. The patient was removed into hospital, and curetted, but died at the end of the operation.

5. On March 4th I was called to a woman by her husband at 9.30 p.m., who told me that she had been confined ten days previously and had been flooding ever since. There was an extremely offensive smell in the room and I removed immediately a piece of putrefying placenta the size of half an orange. The patient was, in my opinion, too ill to stand an anaesthetic. The bleeding ceased immediately, and the woman rallied slightly, but died about ten days afterwards, having had a high temperature throughout. She had been attended by another midwife, C.

6. On March 19th I was called to a woman who had been confined sixty hours, and who had been attended by midwife A. Her temperature was then 101°, and subsequently rose to 105°. We gave her an anaesthetic, and swabbed out the uterus, and also gave her an injection of Parke Davis's antistreptococcus serum, and I am happy to say she seems to be doing well.

What I should like to know is: Are we justified in giving certificates of death without notifying the fact that we were not responsible for their infection? I have seen it stated that cases of puerperal fever are as common in women who are attended to by medical men as in those who are attended to by midwives, and I can quite believe it if cases of the kind described go down under the former category. In case No. 5 I stated on the death certifieate the fact that I had not seen the patient until ten days after the confinement. This certificate was sent by the registrar to the coroner, who held an inquest. By law we are bound to state the fact, if a confinement has taken place within a month of death, and I see no way in which the mode of infection can be indicated to the Registrar-General except by some such means as the above. Practically, we are bound to attend these cases, or we might seriously damage our practice by refusing to go, in the event of the women dying without being seen by some one authorized by law to grant a death certificate, and it came out at the inquest that we had refused to attend. And yet we have to run the risk of infecting our own midwifery cases, and bear the "disgrace" of allowing women to die after confinements by those who do not know the full facts of the case.

What would have been said of us in case No. 1 or case No. 5, the former of which died 2½ hours after being summoned, and the latter, who would have died of haemorrhage that night if not attended to?

Truly the way of the general practitioner is beset by thorns, but if we could have some rule about these cases, which was universally followed by all practitioners, as regards the signing of the death certificates, so that we might not have to bear the blame of the death, if only in the eyes of the local registrars and the Registrar-General, it would be something gained.—I am, etc.,

March 24th. M.B.Cantab.

THE NOMENCLATURE OF MALARIA.

Sir,—The recent note of Lieutenant-Colonel Bruce[1] seems so far to have aroused no criticism, and brought forward no further suggestions. Doubtless, however, many medical men practising in malarious countries would welcome a final and accepted nomenclature for the different forms of malaria.

[1] British Medical Journal, January 3rd, 1903, p. 15.

With regard to Lieutenant-Colonel Bruce's nomenclature, might I suggest that the name "crescent tertian" is hardly comprehensive enough for the third form of malaria, in which the true quotidian fever is so commonly found, the term "tertian" occurring in two out of the three names might be found misleading?

If, as it appears, Bruce considers the third type of malaria to be that caused by the parasite with crescent-shaped gamete, and this gamete to be the sexual form of the pigmented and unpigmented quotidian fever parasites as well as of the so-called semitertian fever, a more general term would seem to be required than "crescent tertian." Although it is true that this variety of fever is found in places other than tropical yet its being the form most commonly met with in tropical regions makes the name "tropical malarial fever" an excellent one.

The name aestivo-autumnal is most suitable for Cyprus, as it it is said to be for Italy; but the objection that it is the summer-autumn fever only in countries bordering on the Mediterranean makes it unsuitable for general use.

While every student of malaria would be pleased to see the name of Laveran used in connexion with the disease—the cause of which he was the first to point out—yet it seems also a pity that the characteristic features of the parasite of the third variety, namely, its crescentic gamete, should not be given prominence to. Would the history of the classification forbid the use of the term (suggested by Sambon in the Malaria Number of the *Practitioner*) haemomenas Laverani? The name "haemomenas" (or blood moon) is descriptive. With regard to the nomenclature of the other two varieties there can be no exception taken. The name "haemamoeba" Golgii appears to be a distinct improvement on H. malariae.

The addition of malarial cachexia to the nomenclature of diseases would be a great advantage, and perhaps this term would be more acceptable than chronic malaria, the latter being somewhat misleading.

Possibly the question of nomenclature of malaria might be discussed at the Tropical Section at Swansea this summer. The need for something definite will be seen from the following:

A. Manson in his *Tropical Diseases* classifies thus:

Benign { quartan / tertian } do not form crescents.

Malignant { quotidian-pigmented / quotidian-unpigmented / tertian } form crescents.

B. Ross, again, thus:

Quartan fever—Haemamoeba malariae.

Tertian fever—Haemamoeba vivax.

Irregular, remittent, pernicious, or aestivo-autumnal fever—haemomenas praecox.

C. Rees (in the Malaria Number of the *Practitioner*, March, 1901) follows Ross, adding that others subdivide the third species of parasite into three subspecies, namely, the tertian, non-pigmented quotidian, and pigmented quotidian.

D. Sambon in the same number speaks of (*a*) tertian fever, (*b*) quartan fever, (*c*) semitertian fever, and (*d*) quotidian fever, caused by (*a*) haemamoeba vivax, (*b*) haemamoeba malaria, (*c*) haemomenas Laverani, and (*d*) haemamoeba praecox (pigmented quotidian) and haemamoeba immaculata (unpigmented quotidian), adding that we are not "entitled to consider the large pigmented crescents as the gametes of these minute unpigmented parasites."

E. In the British Medical Journal of February 14th, 1903, under the heading of "Reports on Tropical Diseases"—Malaya—the following occurs: "Dr. Hamilton Wright finds benign tertian and quartan fairly generally distributed, and subdivided the other parasites into malignant tertian, pigmented quotidian, and, doubtfully, unpigmented quotidian. This subdivision is to a large extent disused, and we do not find any new arguments advanced in its favour." Is one to understand from this that the last three mentioned parasites are now to be regarded as belonging to one species, namely, that with the crescent gamete?

F. At the last annual meeting at Manchester, after the reading of my paper on malaria in Cyprus, Dr. Sambon, speaking of nomenclature, suggested the term semitertian or subtertian in place of tropical malaria or aestivo-autumnal fever, and he thought the parasites of quartan, tertian, subtertian, and quotidian should be classed in one genus and called respectively haemamoeba Golgii, H. vivax, H. Laverani, and H. praecox.

The foregoing show how necessary it has become to have a generally accepted terminology for malarial fever, and that suggested by Bruce would be most advantageous.—I am, etc.,

George A. Williamson, M.A., M.D.

Larnaca, Cyprus, March 5th.

THE UNIVERSITY OF LONDON.

Sir, I notice in the British Medical Journal of March 21st under this heading that an opportunity will be shortly accorded to those interested in London University and its reconstitution to give expression to their views upon many of

the important changes recently made by the Senate, by voting for or against candidates to be elected to the Senate by the Faculties and by Convocation. I trust that the medical graduates will not fail to avail themselves of this opportunity. It is greatly to be desired that Sir Thomas Barlow and Dr. Payne, who have represented the medical graduates as Convocation representatives for the last three years, would enlighten their constituents as to their action and that of the Senate on many points of vital importance to medical graduates of the University of London, concerning which rumour is busy, but upon which the reports of the Senate vouchsafed in the columns of the *University Gazette* are silent. Take the case of the omission of classics and elementary science from the matriculation examination, on which you, Sir, probably voice the opinion of the majority of graduates when you say, "We are not sure whether in this direction relaxation has not been carried too far, at any rate for the medical faculty"; we should be glad to know how our representatives voted on that question. Then again with regard to abolishing a separate examination for the degree of Bachelor of Surgery, did Sir Thomas Barlow and Dr. Payne use their best endeavours to stop this retrograde step?

Again, we are told that the lower degrees of certain foreign universities such as those of Brussels, Chicago and Barcelona are to be accepted wholesale as enabling candidates to proceed to the higher degrees of the University of London. Does this mean that a B.A. of Barcelona may proceed M.A.Lond., and a M.D. of Brussels after attendance at a "recognised medical school" blossom out into a M.S. or M.D Lond.? Lastly, rumour is busy with the astonishing information that the Senate, in direct opposition to the whole spirit and tradition of the University of London, and we believe to its charter, are about to commence conferring honorary degrees. Are all these things true, Sir, or are visions about? Perhaps Sir Thomas Barlow, who I am informed is the retiring member who is eligible for re-election in May, will be so good as to inform us what his position is towards these important questions and what is really going on within the sacred walls of the Imperial Institute.—I am, etc.,

Wandsworth Common, March 27th. HAROLD BURROWS.

THE DOCTOR'S HOLIDAY.

SIR,—About six years ago there was some correspondence in your columns on the question of holidays, and details were given of various out-of-the-way places. As a consequence, I found at least one place where complete rest and quiet, plus moderately good fishing, afforded me an ideal holiday. *Table d'hôte* dinners were unheard-of, and there was no sight-seeing to be done.

To the doctor who lives more or less at high pressure for eleven months in the year a quiet holiday seems specially essential, and there must be many out-of-the-way villages where a little sailing or fishing may be had, and it is in the hope of hearing of such that I write this letter.

For any one in search of a holiday totally different to one's everyday life I would suggest a yachting trip on the lakes and canals of North Holland. Comfortable yachts can be hired over there; the country is most interesting, and the sailing splendid. Some coarse fishing can be had. It is an entire change of scene and mode of life, and the cost is by no means prohibitive. I should be happy to give further details.—I am, etc.,

Welbeck Street, W., March 30th. ERNEST SNAPE.

THE DIAGNOSIS OF PULMONARY TUBERCULOSIS.

SIR,—I heartily endorse what Drs. Walsham[1] and Green[2] say with regard to the value of *x*-ray examination in pulmonary tuberculosis. Here its greatest interest is perhaps in watching the changes in the condition of the thoracic viscera from month to month. The improvement in the diaphragmatic movements under exercise, especially in cases complicated by pleurisy, is very instructive.

One point not referred to by either Dr. Walsham or Dr. Green, however, is the difficulty in distinguishing between an obsolete lesion which may have fibrosed years before and the presence of active disease.

On more than one occasion an obscure diagnosis, where a complication such as aneurysm existed, has been made clear.

Peculiarities in the shape and position of the heart and the presence of enlarged glands at the roots of the lungs can be discovered with greater ease than by any other means. I have noticed in several cases, all of men of large chest measurement, but with tuberculous lesions of varying extent, a thickening, not aneurysmal, I think, which I do not remember having seen referred to in any literature on the subject. Perhaps Dr. Walsham or some other gentleman of wider experience than I can give some light on this point.—I am, etc.,

R. HILL CROMBIE,
Memb. Roent. Soc; Electro-therapeutist to Nordrach-on-Dee Sanatorium, Banchory, N.B.

March 30th.

[1] British Medical Journal, March 21st, p. 702.
[2] Ibid., March 28th, p. 765.

THE INDIAN MEDICAL SERVICE.

SIR,—I am sure all Indian medical service officers who have read the article in the British Medical Journal of January 31st, 1903, will be grateful for the fair and certainly not exaggerated way in which some of the pressing grievances of that service now existing have been represented, and one hopes that the eyes of the Indian Government may be opened before the time comes (which it almost certainly will, unless these matters are righted) when men of a lower standard will have to be admitted to a service which has had such a good reputation in the past—(though it is feared that even now it is dangerously near merely resting on its old reputation of years ago, as it is difficult to know and realize all about the service at "home").

With respect to the civil branch reform is still more difficult to compass, as the authorities are generally thought to know that a certain number of I.M.S. men, who are keen on increasing their professional knowledge and exercising their profession more widely, will always be ready for civil employ, apart from the possibility of increased emoluments (often not realized) for those very reasons; and they consequently take the somewhat unfair advantage of trading on such professional keenness and not remedying the causes for dissatisfaction in that branch. The remarks with regard to the present system of "officiating" pay could be supported by many who have been kept on such for several years, and it is a source often of complaint by the combatant officers of regiments that their regiments are kept so long without a permanent doctor being appointed.

It is said that when the matter of increasing the numbers of I.M.S. officers was under consideration, though it was known that a certain increase was necessary to enable leave (which is at present difficult or impossible to obtain, except at long intervals) to be taken with reasonable frequency, the numbers were not brought up to this increased amount merely for economical reasons and to gain credit from the Government for economy. Anyhow there is no doubt about the fact that leave is very difficult to obtain on account of undermanning, and that not from a deficiency of candidates for the I.M.S., but from not admitting more of those who show sufficient knowledge at the London examination. This want of leave in all probability increases the numbers of those medical officers who become sick and have to be sent to England on medical certificate; they often become lowered in health (and more susceptible to disease), from being kept several "hot weathers" without leave to enable them to recruit their health by a change of temperature and climate.

The chief "wants" of the service are: better pay in both military and civil branches—in the latter sufficient in addition to compensate for the diminished opportunities for private practice; and increase in the number of officers, by which means leave ought to be obtained as often as is usual in the case of the combatant officers of the Indian army, and less frequent moves necessitated from one station to another.—I am, etc.,

February 22nd. I.M.S.

THE INTERNATIONAL MEDICAL MANIFESTO ON ALCOHOLISM.

SIR,—I am wicked enough to hope I am thirty years behind the times if Dr. R. Morton's letter and opinion is being abreast of the times. To all his other questions my answer is definitely in the affirmative. I believe that all impartial readers of the British Medical Journal will agree with me that Dr. Morton's letter only endorses my opinion that it is a manifesto of faddists and should not be called a "medical manifesto."—I am, etc.,

Manchester Square, W., March 28th. THOMAS DUTTON.

P.S.—I cannot answer Dr. J. J. Ridge's letter because he says I have made an "unwarranted assertion."

ROYAL NAVY AND ARMY MEDICAL SERVICES.

DISTRIBUTION OF PRIZES BY LORD SELBORNE AT HASLAR HOSPITAL.

Lord Selborne (First Lord of the Admiralty) distributed the prizes to the successful candidates of the Instructional Course of the Royal Naval Medical Service at Haslar Hospital on March 31st. There was a full attendance of the medical officers of the ships in Portsmouth Harbour, of the various naval establishments and the marine dépôts.

Sir Henry Norbury (Director-General of the Medical Department of the Royal Navy) opened the proceedings by reading the report of the Inspector-General, which he considered very satisfactory. He announced that the gold medal and the microscope prize had been gained by Surgeon Laffan, and the silver medal and the books by Surgeon Spalding.

Lord Selborne, after presenting the prizes to the successful candidates, said that it had been the greatest pleasure to him to come there and present the prizes at the end of the course. Haslar Hospital was the head-quarters of the medical department of the Navy, and he always thought that one of the great glories of the naval service was that it took to itself members of the other great professions, the priest, the soldier, the engineer, and the surgeon, and gave to each of them a blend of the sea in addition their own particular qualifications, and in every case in his opinion the man was the better for that blend of the sea. Sometimes he had been told that although men might be the better for it, they were nevertheless handicapped in their professional career. In regard to the case of the medical officer, he quite agreed that in the Navy the medical officer would not have all those opportunities of constant observation, study, and varied practice which the civil practitioner had. He also admitted that in entering the Navy they abandoned the chance of those great professional prizes which the more fortunate medical man in civil practice might secure. It was to be remembered, however, that it was not always the man who deserved success who obtained it; there was many a clever medical man in civil practice who had never achieved that position of wealth which his ability should have enabled him to attain. There were many qualities that made for success, and success was achieved not by ability alone, but by a combination of qualities, and there was also the element of luck. Naval medical officers in thus deliberately foregoing this chance knew, at any rate, that they had achieved for themselves a perfect certainty in regard to income. They could look forward to what their life would be, and know exactly its course. If they chose they could serve their country with great honour to themselves and advantage to the Service. They put all care, in the strictest sense of the word, behind them; they knew what the future had in store for them, and recognized that if they had merit they could achieve honour for themselves and for their families. He admitted that perhaps the Admiralty had not done all that it could have done in the past towards enabling suageons in the Service to keep pace with the scientific advances of medicine. There had, however, been very great difficulty in the matter owing to the shortage of officers. It had to be remembered that 130,000 men would be voted for the navy next year, which was a great advance on the 60,000 voted fifteen years ago. It had been difficult for the medical department to keep pace with such expansion. It had followed that there had not been a sufficient number of officers to make it possible for the Admiralty to grant study leave, which he admitted was essential if officers were to keep abreast of the scientific advances in their profession. Nevertheless it was really very little that the Admiralty could do for them, for a man was really what he made himself, and not what the Admiralty made him. What they had to ask themselves during their professional life was, knowing the disadvantages they suffered from, were they using all the advantages they had? Lord Selborne went on to ask them to consider how many medical men would have the opportunities of studying that they would have. He advised them to use the time at their disposal in keeping themselves abreast of all the professional literature to be found in the medical publications and periodicals. Further, they would have very peculiar opportunities of observing cases which were denied to the civil surgeon at home. Their special service would give them special opportunities. He sometimes wished that the great triumphs of Manson and Ross had been naval triumphs. Why were they not, he asked, since it was exactly that class of case which was so often before the naval officer? They were only at the beginning of knowledge in those matters. Although they would not have those opportunities of the constant study of the mystery of cancer which the civil surgeon had, yet there was the almost equal mystery of the Mediterranean fever to be solved, which the civil surgeon would not have an opportunity of studying, and which was a world of science for medical men to conquer. They knew what work was being done at Haslar and at Malta, and more information had been acquired at those places in respect to the true knowledge of Mediterranean fever than in any other laboratories in the world. The opportunities they would have, therefore, were very great, and they would know that better than he did. He wanted each one of those officers entering the Naval Medical Service to remember that it was their duty, by every suggestion they could make, to contribute to the welfare of the Service and to the advance of medical science. He urged them to remember that the suggestions were welcomed. In his opinion, the man who shut his ears to suggestions was a fool. The man who was successful in his work, the man who got a reputation of always being able to overcome the difficulties of the moment, the man who gained a reputation for being resourceful, was in nine cases out of ten a man who opened his ears to suggestions from others. He (Lord Selbourne) could not possibly do his own work for one week trusting to his own brain alone: he was only too glad, and so were his colleagues, to welcome suggestions for the solution of problems. They never shut their eyes to any suggestions. Many, of course, were futile and many were foolish, but if they did not entertain suggestions they would find they would miss the advantage of the good ones. It was the duty of every one in authority to receive suggestions. It should therefore be the aim of young officers, after careful thought and due observation, to make suggestions. Of course, if he made random suggestions he would destroy, and deservedly destroy, his own reputation. The study of problems applied to every department of the work that lay before them. If they took, for instance, the battleship in which they would serve, there was a problem in connexion with that which was puzzling the brains of the most capable officers because of the difficulty of forecasting the conditions under which it would be possible in modern warfare to deal with the wounded in naval actions. He had been told only the other day that Sir Frederick Treves had said that if a tent could have been pitched over every wounded man in South Africa where he fell, and if he had been treated there, the loss in life would have been enormously decreased. The loss of life occurred because of the man being moved, not from the wound itself. In a battleship they had for all practical purposes a tent over the man where he fell wounded, and, though he could not be treated immediately, there was no necessity for him to be dragged into a cart or jolted in a wagon till he was nearly torn asunder by pain. All that did not occur on a ship, and that to his civilian mind was a rather comforting thing in connexion with the probable results of the treatment the wounded man would receive when the medical officers could get at him in time of war. He only put that forward as a kind of idea that occurred to him as one of the problems he would try to solve if he were a naval medical officer. The King desired, and the Admiralty and country meant to have, the best navy in the world. That did not mean the best ships or the greatest number of ships, but every part of the navy must be perfect in every department, and the Naval Medical Department must also be perfect. That depended in the first place on the officers, and secondly on the appliances which on their advice were supplied by the Admiralty. He considered that it was a duty of the Board of Admiralty to spare no money which the taxpayer would give to put every thing at their disposal, so as to make the Naval Medical Service of Great Britain a pattern and a type to all the medical services in the world. Lord Selborne, at the conclusion of his speech, congratulated Staff Surgeon Bassett-Smith on the success that had attended the course of instruction, for which he was chiefly responsible, and further congratulated him on his promotion which he then informed him that the Board had conferred upon him.

Sir Henry Norbury then read out the names of the surgeons who has passed through the course of instruction and

the number of marks each had gained in the examinations held at Haslar and in London. The following is the list:

	Marks.		Marks.
Surgeon Laffan	4,565	Surgeon Bateman	3,241
,, Spalding	4,347	,, H. C. Ross	3,217
,, McCloy	4,207	,, Chapman	3,121
,, S. H. Ross	3,881	,, MacMahon	2,988
,, Simpson	3,869	,, Blatchford	2,955
,, Smyth	3,759	,, Alderdyce	2,950
,, Anley	3,552	,, Levick	2,908
,, Evans	3,483	,, MacKay...	2,890
,, Newport	3,431	,, Cross	2,887
,, Davidson	3,301		

The proceedings terminated by Inspector-General Coppinger thanking Lord Selborne for giving away the prizes.

ROYAL NAVY MEDICAL SERVICE.

The undermentioned promotions, dated March 26th, are made for conspicuous professional merit: Staff Surgeons P. W. Bassett-Smith and G. Welch to be Fleet Surgeons: Surgeons E. A. Shaw, B.A., M.D., F. H. A. Clayton, M.D., F. J. A. Dalton, and E. Sutton to be Staff Surgeons. Fleet Surgeon Bassett-Smith was appointed Surgeon August 21st, 1883, and made Staff Surgeon August 21st, 1895. He was Surgeon of the *Rambler* during the operations at Suakin in 1884-5, receiving a medal and Khedive's bronze star. Fleet Surgeon Welch joined as Surgeon, February 11th, 1884, and became Staff Surgeon February 11th, 1896. The first commissions of the newly promoted Staff Surgeons are as follow: E. A. Shaw, November 11th, 1891; F. H. A. Clayton and F. J. A. Dalton, November 15th, 1892; E. Sutton, May 13th, 1896. Staff Surgeon Clayton served in the punitive expedition against King Koko, of Nimby, the chief town of Brass, on the River Niger, which was destroyed in February, 1895 (medal with clasp); was present on the occasion of the bombardment and capture of the Sultan of Zanzibar's palace, on August 27th, 1896; also in the punitive naval expedition against the King of Benin for the massacre of the political expedition, 1897, ending in the capture of Benin City (mentioned in dispatches, medal with clasp) Staff Surgeon Dalton was awarded the Stewart Prize of £50 by the British Medical Association for his investigations in the tropical disease termed "beri-beri," which is considered infectious. Staff Surgeon Sutton served in the expedition against the King of Benin in 1897 (medal with clasp).

The following appointments have been made at the Admiralty: Joseph H. Whelan, M.D., Staff Surgeon, and Robert W. C. Hall, Surgeon, to the *Edgar*, on commissioning, April 9th; Leonard H. Kellett, M.A., M.D., to Haulbowline Hospital, April 29th; Alfred M. Page, Staff Surgeon, and John Fullarton, Surgeon, to the *Renown*, April 2nd: Edmund Corcoran, Staff Surgeon, to the *President*, additional, for three months' course of hospital study, April 1st; Norman I. Smith, Surgeon, to the Royal Marine Artillery head quarters, Portsmouth, April 1st.

ROYAL ARMY MEDICAL CORPS.

Colonel J. P. Rooney, F.R.C.S.I., is placed on retired pay, March 22nd. He was appointed Assistant Surgeon, March 31st, 1866; Surgeon, March 1st, 1873; Surgeon-Major, March 31st, 1878; Brigade Surgeon, June 16th, 1892; and Surgeon Colonel, July 8th, 1896.

Lieutenant-Colonel S. J. Rennie retires on retired pay, March 28th. His commissions are thus dated: Surgeon, July 30th, 1881; Surgeon-Major, July 30th, 1893; and Lieutenant-Colonel, July 30th, 1901.

INDIAN MEDICAL SERVICE.

The grant to Lieutenant-Colonel J. P. Greany, M.D., Bombay Establishment, of the temporary rank of Colonel while officiating as Principal Medical Officer, Aden District, has effect from April 4th, 1902.

Lieutenant J. McCloghry, Bombay Establishment, is granted the temporary rank of Colonel from January 11th, while officiating as Principal Medical Officer, Sind District.

The undermentioned Captains, who entered the service as Surgeon-Captains January 31st, 1891, are promoted to be Majors from January 31st, 1903:—J. M. Crawford, M.B., C. H. James, F. O'Kineaily, and A. W. T. Buist, M.B., of the Bengal Establishment, and E. G. R. Whitcombe, of the Bombay Establishment.

The undermentioned officers, who joined the department as Lieutenants January 27th, 1900, are promoted to be Captains from January 27th, 1903:—A. C. MacGilchrist, M.B., J. W. D. Megaw, M.D., E. O. Thurston, M.B., G. Browse, C. M. Goodbody, R. Steen, M.B., F. F. Elwes, M.B., I. L. MacInnes, M.B., E. A. C. Matthews, M.B., L. P. Stephen, M.B., L. Gilbert, M.B., T. G. N. Stokes, M.B., H. M Mackenzie, M.B., M. H. Thornely, F. V. O. Brit, M.B., W. O'S. Murphy, M.B., M. Corry, M.B., C. C. Murison, H. A. Williams, M.B., D.S.O., W. C. Long, G. C. Beamish.

Lieutenant-Colonel T. J. H. Wilkins, Madras Establishment, is appointed to officiate as Principal Medical Officer, Burmah District.

Captain E. T. F. Birrell, M.B., is appointed Personal Assistant to the Principal Medical Officer, Punjab Command.

Major F. J. Crawford, M.D., Madras Establishment, is appointed to the Medical Charge of Head Quarters Staff and Establishments, Madras Command, from March 2nd.

Surgeon-Major-General William Roche Rice, M.D., C.S.I., late of the Bengal Establishment, died at Brighton on March 27th, in his 71st year. He joined the department as Assistant Surgeon, November 20th, 1856, and became Surgeon-Major-General, March 20th, 1890, in which year he retired from the service. He was at Indore during the Indian Mutiny campaign in 1857, and received the medal for the campaign. He was nominated a Companion of the Order of the Star of India in 1892, and appointed Honorary Physician to the late Queen Victoria in 1896.

ROYAL ARMY MEDICAL CORPS (MILITIA).

Lieutenant-Colonel Sir J. R. A. Clark, Bart., C.B., is granted the honorary rank of Colonel, March 5th.

IMPERIAL YEOMANRY IN SOUTH AFRICA.

Temporary Captain W. Pomeroy, Medical Officer at the dépôt at Stellenbosch, resigns his commission, is granted the honorary rank of Captain in the army, and retains his uniform, January 31st.

IMPERIAL YEOMANRY.

Mr. Reginald C. Gayer to be Surgeon-Lieutenant in the Surrey (the Princess of Wales's) Regiment, March 17th.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

Surgeon-Lieutenant C. O. Parsons, 2nd Glamorganshire, to be Surgeon-Captain, March 28th.

VOLUNTEER RIFLES.

Mr. Alfred Robinson, M.B., to be Surgeon-Lieutenant in the 2nd Volunteer Battalion the York and Lancaster Regiment, March 28th.

VOLUNTEER INFANTRY BRIGADE BEARER COMPANY.

Mr. Samuel H. House, M.B., to be Second Lieutenant in the Liverpool Company, March 28th.

PENSIONS.

Myopia thinks the pension rules defective, in that they fail to induce medical officers to serve beyond twenty years. The half-crown increase between twenty and twenty-five years' service is too small to induce officers to accept the risk, and thus experienced officers at their best are lost to the service. This would be obviated by making the increase 1s. a day for each year up to twenty-five.

*** Might not our correspondent reflect that it may not be desired, or desirable, to induce senior officers to prolong their service in the executive ranks?

EMPTY TITLES.

A correspondent states that the steps in rank lately conferred on certain retired medical officers who did duty at home during the war are empty titles, carrying no increase of pension, widow's, or compassionate allowances. The public naturally think that such steps, not having been declared honorary, do carry substantial advantages, the same as in the combatant branches of the army. He asks, What good are they?

*** We cannot assess their value, but we are aware these steps in rank have given rise to much comment, especially the questions—On what ground were they conferred? and on what principle were officers selected for them? Such questions have naturally arisen, because the few officers selected did, and were doing, precisely the same duties as the many who were accorded no recognition whatever for services freely given or continued during the war.

Lieutenant-Colonel H. J. Barnes, R.A.M.C., has been appointed Secretary to the St. Andrew Ambulance Association, Glasgow.

MEDICO-LEGAL AND MEDICO-ETHICAL.

WOLVERSON V. SMITH.

At the Wolverhampton County Court, on Friday, March 27th, before His Honour Judge Howland Roberts, an action was brought by Dr. Wolverson and his son, medical practitioners, against Mr. G. Smith, a local resident, for the recovery of fees for medical attendance.

Mr. Vacheil, instructed by Messrs. Hempson, Solicitors for the Medical Defence Union, appeared as Counsel for the plaintiffs, both of whom were members of the Union; and Mr. McCardie appeared as Counsel for the defendant.

Although the action was one for mere recovery of fees due, by the opening statement of counsel it appeared that a far graver question was raised, it being alleged by the defendant that the treatment his children had received was negligent, and that the plaintiffs were not entitled to recover their fees in consequence of such neglect.

From the report in the *Wolverhampton Express and Star* of the evidence given at the trial of the action, we gather that the plaintiffs were called in to attend one of the children of the defendant, and found the child to be suffering from scarlet fever of a severe type with grave throat complications. The parents were advised to have the child removed to the Isolation Hospital but refused to do so, and the disease was duly notified. On the following day another child was found to be suffering also from scarlet fever. Dr. Wolverson, senior, saw the cases in conjunction with his son, and neither had the slightest hesitation in pronouncing both cases to be scarlet fever, and again advised removal but without effect. The children were regularly attended by Dr. Wolverson, junior, throughout the illness. One of the children died, and a death certificate was given in the usual manner, there being no doubt as to the cause of death. The defendant's wife also became ill, and a few days afterwards Dr. Wolverson, junior, received a letter from Mr. Smith, the defendant, dismissing him from attendance, and stating that he had called another doctor in. Medical evidence was called in support of the plaintiffs' case, proving beyond question that the treatment and diagnosis of the cases by the plaintiffs were in strict accordance with medical skill.

The defendant went into the box and endeavoured to support his allegation of neglect and asserting that the disease from which the children were suffering at the time of the attendance was diphtheria and not scarlet fever, and also imputing that there was neglect on the part of the plaintiffs in not recognizing that it was their duty to have inspected the drains of the house.

Dr. Moreton was called by the defendant, but could only speak as to the advice he had given about removal from the house when he was called in, and stated that he had made no reference to diphtheria.

The local sanitary inspector was also called, and stated that the drains of the house were defective.

The evidence for the defendant being closed, the learned judge proceeded to sum up, without deeming it necessary to call upon the counsel to address him.

The judge stated that there was no dispute that the condition of the drains was very bad and serious. There was nothing to show that

Drs. Wolverson had made any error in the diagnosis. The question as to whether the children were or were not suffering from diphtheria or scarlet fever was done away with, and did not enter into the question at issue. The diagnosis made was beyond dispute, and had been amply supported. The suggestion against Dr. Wolverson was not that he had negligently omitted anything which he ought to have done, but that he had deliberately exposed his patients to a state of affairs which was directly antagonistic to their condition by not advising them to be removed from the house. He believed Dr. Wolverson when he stated that nothing was said to him about the drains until some time after it was alleged that he had been spoken to about their condition. It was clear that Dr. Wolverson told the defendant to make a complaint to the health authorities on the subject himself, and gave him the name of the chief sanitary inspector, in order to enable him to do so. In his opinion there was no ground for imputing to the doctor any bad faith. He found that the children were properly treated with professional skill and care, and there was no ground for stating otherwise. He therefore gave judgement for the plaintiffs for the amount claimed, and ordered payment of the same within fourteen days.

We congratulate the plaintiffs upon the result of the trial. It is quite evident that the defendant had no justification at all, either for the refusal to pay the fees or for the charges of negligence and bad faith by which he attempted to justify such refusal.

This case is an object lesson to members of the profession: first, to join a medical defence society, and secondly, not to sit silent when payment of fees is refused upon grounds which affect honour and reputation. It is the duty, unpleasant though it may be, of practitioners to raise these questions even in a county court, as by allowing fees due to them to remain unpaid they may give occasion for allegations to be made against them by their debtors, which allegations may be held to be justified if proceedings be not taken.

LOCAL AUTHORITIES AND THE ISOLATION OF SMALL-POX PATIENTS.

Chapman and Wife v. the Gillingham Urban District Council.

In this case, which was tried last week before Mr. Justice Grantham and a special jury, the plaintiffs sought to recover damages for injuries alleged to have been done to themselves by reason of the negligence of the defendants in erecting a small-pox hospital close to the plaintiff's house. The defendants denied that they had been guilty of any negligence, and alleged further that they had acted in pursuance of statutory powers.

Mr. Rufus Isaacs, K.C., and Mr. Kyffin appeared for the plaintiffs; Mr. Dickens, K.C., Mr. Eldon Bankes, K.C., and Mr. Lushington for the defendants.

It appeared that the plaintiff, Stephen Chapman, was a market gardener living at Hempstead, Gillingham, within the defendants' district. In December, 1901, a case of small-pox having occurred in the district, the Council brought the patient from a more populous part, and placed him in a stable which was close to the plaintiff's house. Objection was taken to the establishment of the hospital at this point, but the Council took no notice, and eventually two patients were brought to the stable, while another was accommodated in a caravan. There was no drainage of any description to the stable, and no water supply except a waterbutt. The stable was 36 ft. 9 in. from Chapman's field, and 200 yd. from his house. On December 18th Chapman's daughter, aged 7½ years, developed small-pox, of which she died on December 29th; while Chapman and his wife were both smitten with the disease in the early part of 1902. They both recovered, but Chapman's father and mother who lived in the house adjoining his both died of the complaint. The action was brought to recover damages in respect of the illness caused to the plaintiff and his wife, and for the loss of service of the child. The latter claim, however, was withdrawn during the hearing. It was alleged that the council had not only been negligent in selecting the site in question, but in not providing proper nurses.

A large number of witnesses were called to show that the hospital had not been properly managed, and that the refuse was not properly disposed of. Medical evidence was also called to prove that in all probability the occupants of the plaintiff's house had caught the infection from the hospital.

Mr. Dickens, K.C., in addressing the jury for the defence, pointed out that those who have imposed upon them the duty of establishing isolation hospitals are, unfortunately, not protected from the risk of an action for nuisance. In the present case the defendants had been called upon to act promptly, and however much the nurse who looked after the hospital had been maligned, all three patients recovered under his care. Further, before holding the defendants liable, the jury would have to be convinced that the plaintiffs had caught the infection from the isolation ospital by "aërial convection."

A number of medical witnesses, including Dr. E. C. Warren, medical officer of health at Gillingham, Dr. Thomas Savill, and Dr. S. I. Pritchett, medical officer of health at Rochester, and Dr. T. F. Ricketts were called to state their views as to the probability of small-pox being spread in the manner suggested.

After counsel had addressed the jury,

Mr. Justice Grantham, in summing up, said that the questions he proposed to deal with were: (1) Was this hospital a nuisance causing injury to the plaintiffs? (2) Was it carried on with proper and reasonable care? In the present case, no doubt, the defendants felt themselves in a difficult position, and, speaking on his own and, no doubt, on the jury's behalf, he had some sympathy with them. But, at the same time, this would not justify them in creating a nuisance. This was about as bad a place as they could possibly have chosen as a site for their hospital, and he hoped that this case would be a warning to public bodies everywhere to make preparations beforehand. It seemed clear that the child got the infection after the patient came to the hospital. The defendants had to get a nurse, and they might get either a good one or a bad one. After the evidence Hill had given that morning the jury would probably have little difficulty in deciding whose evidence they could rely on as to the disposal of the refuse. As to the manner in which the disease was spread that was still a matter of uncertainty, notwithstanding the discoveries of science. If the jury found that the injury arose through the hospital's being placed where it was, or from the manner in which it had been carried on, they ought to find for the plaintiffs. At the request of Mr. Dickens, the second question his Lordship left to the jury was, Was there a want of proper and reasonable care and skill in the defendants' conduct of the hospital whereby damage was caused to the plaintiffs?

The jury found for the plaintiffs, with £250 damages, for which the learned Judge gave judgment.

Mr. Dickens asked for a stay of execution, which was refused.

The jury said that they considered the urban council had acted incautiously.

PROFESSIONAL SECRECY.

W. D. P.—Our correspondent can conform to every professional obligation by submitting the letter from the Friendly Society to the representatives of the deceased person, and with their permission he may quite properly supply the required information, and accept the fee offered. Provided this condition is fulfilled, we can see no objection to such an inquiry being put to medical practitioners or answered by them. If the friends decline to give permission our correspondent should reply that his obligation to his patient precludes him from answering the question.

REMUNERATION FOR CERTIFICATES UNDER WORKMAN'S COMPENSATION ACT.

G. McG.—As the injured carter was not examined by our correspondent at the request of his employer, we fear that the latter is not liable, and that the only person to whom our correspondent can look for payment is the injured man himself. In giving certificates or reports for insurance companies it is necessary to ascertain beforehand that a satisfactory fee will be paid.

FEES FOR LIFE INSURANCE EXAMINATIONS.

Disgusted and F. M. B.—Our correspondents write to complain of the half-guinea fees tendered by some insurance companies for the examination of cases in which the sum assured is below a certain amount.

*** We do not think any question of principle is involved; every one is at liberty to decline to work for what he considers inadequate remuneration, but he must not seek to compel other persons to adopt his standard.

NOSTRUM VENDORS, THEIR PAMPHLETS AND SAMPLES.

E. W.—We share to a large extent our correspondent's feelings about this nuisance, and have referred to it repeatedly in this column (British Medical Journal, May 17th, 1902, p. 1245). It seems to us that the only effective remedy lies with the profession itself. If the majority of the profession would only throw these pamphlets into the waste-paper basket and take no notice of them the nuisance would die out.

HOSPITAL ADVERTISEMENTS.

T. A. Buck.—We would draw our correspondent's attention to our answer under this heading in the Journal for December 20th, 1902, p. 1936. We are of opinion that such advertisements are unnecessary and open to serious objection, and that the members of the staffs of the hospitals concerned should take steps to put a stop to the practice, which we fear is very widely spread.

PRIVATE SKIN DISPENSARIES.

J. M. W.—Great and well-founded objections are entertained by the profession to the establishment of private dispensaries by individual medical practitioners in which, under the mantle of charity, they advertise themselves in a way which would be admittedly improper if done in their own names. Should our correspondent desire to establish a skin dispensary, he should organize a responsible and respectable committee of laymen who will make the necessary arrangements and appoint a medical staff.

MIDWIFERY ENGAGEMENTS.

X.Y.Z.—D. might sue A. in the county court for his fee, and if he can prove the contract would be entitled to succeed. But few practitioners under such circumstances would adopt this course, and D. would act more wisely in allowing the engagement to be cancelled.

Pachyderm.—We cannot pretend to express an opinion as to what the General Medical Council might consider infamous conduct, as we do not know that a precisely similar case has been decided. We should advise our correspondent to apply to one of the Medical Defence Societies, or, if he is unable to do this, he can obtain information as to the necessary procedure by applying to the Secretary of the General Medical Council, 299, Oxford Street, London, W.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF LONDON.

Faculty of Medicine.

A meeting of the Faculty of Medicine was held on Friday, March 27th, at the University, South Kensington, Mr. Henry T. Butlin, the Dean of the Faculty, being in the chair. Dr. Rose Bradford and Dr. Kingston Fowler were unanimously re-elected as representatives of the Faculty upon the Senate. In thanking the Faculty for the renewed expression of its confidence in re-electing Dr. Bradford and himself, Dr Fowler referred to the fact that the work of the Senate in reorganizing the curriculum and scheme of examinations for degrees in medicine and surgery was almost completed, and stated that the new regulations shortly to be issued would be found to contain most of the modifications recommended by the Faculty. He felt sure that the Faculty would be gratified by the announcement made at the last meeting of the Senate, that their Royal Highnesses the Prince and Princess of Wales had signified their willingness to accept the honorary degrees of Doctor of Laws and Doctor of Music respectively. The Dean presented a report showing that satisfactory progress had been made in the negotiations between the Senate and the Faculty with regard to the establishment of a university institute to provide common courses of instruction for internal students and others in the Preliminary and Intermediate subjects of medical education.

UNIVERSITY OF EDINBURGH.

THE following candidates have passed the First Professional Examination in the Faculty of Medicine in the subjects undernoted:

Zoology.—J. Balfour, J. A. Belcham, B. H. Bradley, G. Britto, G. J. Cotter, W. Cramer, Ph.D., H. D. C. Cross, C. H. Derksen, C. A. A. Dighton, R. Dorset, M. Douglas, R. Edwards, C. J. Faill, S. L. Faulkner, E. M. Figaro, D. Geddis, G. H. R. Gibson, K. K. Grieve, J. Grimoldby, J. K. Hamilton, F. G. Harper, W. S. Heron, J. R. Hill, G. P. Hoyle, H. B. Hunter, M.A., R. L. Hutton, A. Jamieson, M. J. Johnston, S. W. Joubert, C. W. Kay, H. W. Kerrigan, J. G. de Kock, G. F. V. Leary, A. F. Lee, G. E. B. Lowe, G. H. Lowe, A. MacDonald, G. D. MacIvor, J. T. Mackenzie, D. R. C. Maclagan, R. E. M'Laren, E. P. Maitland, J. A. Manifold, R. P. Mathers, W. M. Menzies, C. J. van der Merwe, G. G. Middleton, J. E. Mitchell, A. Murchison, E. F. Nivin, A. J. P. Nowell, C. R. O'Brien, T. G. Park, A. A. W Petrie, B. B. Phillips, J. P. du Plessis, J. Reidy, J. M. Ross, M. Ross, P. Salmond, W. A. Scobie, F. L. Scott, W. J. Simpson, H. D. Stephen, C. H. Tewsley, V. F. Usher, and M. P. Winning.

Physics.—R. F. S. Abbott, G. P. Adshead, J. Aiken, J. C. Ashton, A. C. Barker, C. B. Baxter, C. S. Baxter, A. E. Bennee, J. P. Berry, Mary F. Bignold, A. Bremner, F. V. N. Bruce, G. P. Burns, T. Burrell, P. D. Cameron, R. A. Campbell, J. A. R. Cargill, H. G. Carter, R. J. Chapman, F. M. Chrystal, R. D. Clayton, W. G. Cobb, W. D Coghill, H. M. Cook, T. Craig, F. W. M. Cunningham, J. M. Dalzell, G. H. Dart, Margaret D. Davidson, T. Derrick, T. Dick, R. Dorset, A. E. Drynan, G. L. Duncan, L. T. Eden, P. A. Euvrard, W. G. Evans, Josephine L. D. Fairfield, J. P. Falvey, W. Fleming, W. S. Forbes, J. Fraser, C. F. C. Galloway, P. J. Garvey, D. Geddis, P. K. Ghosh, R. M. Glover, A. J. Goudie, I. M. Grant, R. D. L. Greene, A. R. Gunn, D. J. Guthrie, G. Henderson, A. F. Hewat, A. M. Hewat, J. A. A. Hofmeyr, St. G. M. L. Holman, J. H. Horne, L. Hughes, S. Jackson, R. H. Jamieson, D. Johnstone, G. G. Jolly, A. W. Kendall, G. F. V. Leary, J. H. Lechler, A. F. Lee, C. R. Lethem, E. Lewis, Anna S. Lindsay, H. B. Low, R. C. Lowther, C. W. L. Luthgen, R. M'Adoo, D. M'Carrol, W. S. M'Cune, J. Macdiarmid, J. L. Mackay, W. J. M'Keand, I. C. Mackenzie, J. T. Mackenzie, J. A. MacLeod, Ada J. Macmillan, J. B. M'Morland, Eleanor A. Maitland, J. A. Manifold, R. P. Mathers, A. F. W. Millar, Margaret M. Millar, A. R. Milroy, A. P. Mitchell, T. S. Mitchell, V. P. Mondon, J. Muckhart, Ara G. Murchison, J. J. H. Nelson, Katherine B. A. Nelson, F. H. Nixey, Hilda M. Northcroft, R. Nourse, C. R. O'Brien, A. T. Paterson, C. F. Pattie, A. A. W. Petrie, S. Piarroux, W. J. Porteous, D. H. Rai, J. Reidy, Barbara Richardson, A. N. Robertson, D. Robertson, G. Robertson, Marguerite Ross, P. Roytowski, F. L. Scott, R. L. Scott, H. C. Simpson, E. D. Smith, F. F. S. Smith, P. Stewart, C. H. Tewsley, L. H. F. Thatcher, C. A. Thellander, C. P. Theron, Alice M. Thompson, D. Thomson, W. Thomson, W. W. Thomson, A. L. Thornley, W. A. Todd, Lydia K. Towers, R. D. R. Troup, V. F. Usher, Helen M. Wakefield, Dora M. Walker, F. E. Wall, R. N. Wallis, D. J. Williamson, G. S. Williamson, J. Wilson, and J. L. M. Wood.

VICTORIA UNIVERSITY.

THE following candidates have passed the subjoined examinations in the Faculty of Medicine:

Final Examination.—Part I.: F. Bailey, Yorks.; J. B. Barnes, Owens; J. Battersby, Owens; F. P. H. Birtwhistle, Yorks.; J. A. M. Bligh, Univ.; A. Boyle, Yorks.; W. E. Brierley, Yorks.; H. Buck, Owens; R. Collier, Owens; W. E. Cooke, Univ.; W. J. Cox, Owens; F. W. M. Greaves, Yorks.; J. W. Hartley, Owens; S. L. Heald, Yorks.; F. C. Hudson, Owens; F. H. Lacey, Owens; J. T. Lloyd, Univ.; W. Y. Martin, Owens; S. Murray, Owens; G. G. Parkin, Owens; F. G. Pell-Ilderton, Owens; J. N. M. Sykes, Univ.; H. Tomlin, Yorks.; A. M. Walker, Owens; E. M. Wilkins, Owens; H. F. Woolfenden, Univ. Part II.: J. P. Bligh, Univ.; T. Brown, Yorks.; R. T. Dobson, Univ.; A. J. Edmonds, Owens; P. T. Hardings, Owens; A. S. Hopper, Univ.; C. O. Jones, Univ.; J. A. Jones, Owens; J. Longworth, Owens; J. S. W. Nuttall, Univ.; W. B. Ramsden, Owens; J. A. C. Roy, Owens; W. F. Shaw, Owens; J. N. Skinner, Owens; F. Sugden, Yorks.; J. C. Teasdale, Yorks.; A. F. Thompson, Owens; G. Unsworth, Owens; S. C. Wilkinson, Yorks.; T. B. Wolstenholme, Owens; M. S. Wood, Owens.

Second Examination.—Anatomy and Physiology: H. Ainscow, Owens; T. M. Bride, Owens; A. W. Byrne, Univ.; D. E. Core, Owens; C. M. Craig, Owens; J. Dixon, Yorks.; R. G. Dixon, Yorks.; W. R. Douglas, Owens; H. Fearnley, Yorks.; H. M. Fort, Owens; W. George, Owens; *B. T. J. Glover, Univ.; S. R. Gloyne, Yorks.; A. Gough, Yorks.; P. J. Harris-Jones, Owens; R. Haslam, Owens; R. A. Hendry, Univ.; W. P. Hill, Yorks.; J. J. Hummel, Yorks.; G. H. Hustler, Yorks.; T. E. Jones, Univ.; A. J. Landman, Yorks.; T. E. Lister, Yorks.; J. B. Macalpine, Owens; S. E. McClatchey, Owens; J. D. Marshall, Owens; R. Ollerenshaw, Owens; H. B. Pare, Owens; W. C. Parkes, Owens; E. M. Phillips, Owens; P. L. Pollard, Owens; J. Rickards, Owens; C. H. Smith, Univ.; F. H. Storey, Univ.; F. Whalley, Yorks.; S. R. Wilson, Owens; C. Yorke, Univ.; W. Yorke, Univ. Materia Medica and Pharmacy: J. S. Crawford, Yorks.; J. F. Edmiston, Univ.; D. Elder, Univ.; H. S. Harling, Yorks.; R. A. Hendry, Univ.; R. W. Higson, Owens; W. D. Higson, Univ.; F. E. Kendall, Yorks.; R. Nightingale, Owens; Ethel M. Phillips, Owens; J. Smalley, Owens; C. N. Smith, Yorks.; H. Spurway, Owens; A. C. Turner, Owens; Julia C. White, Owens; N. R. Williamson, Owens; S. R. Wilson, Owens.

* University Scholarship.

SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST, March, 1903.—The following candidates passed in:

Surgery.—V. E. M. Bennett (Section II), Royal Free Hospital; L. Courtland (Section II), Middlesex Hospital; T. G. Longstaff (Sections I and II), Oxford and St. Thomas's Hospital; S. Northwood (Sections I and II), Birmingham; W. A. G. Stevens (Sections I and II), Guy's Hospital.

Medicine.—J. Ewing, Leeds; B. C. Ghosh (Sections I and II), Cambridge; W. P. Jones (Section I), Sheffield; G. B. S. Soper (Section II), Guy's Hospital; W. A. G. Stevens (Sections I and II), Guy's Hospital.

Forensic Medicine.—S. Bentley, Sheffield; L. Courtauld, Middlesex Hospital; G. Dewick, St. Thomas's Hospital; J. Ewing, Leeds; R. Gauld, London Hospital; B. C. Ghosh, Cambridge; J. D. Keir, St. Mary's Hospital; G. B. S. Soper, Guy's Hospital; W. A. G. Stevens, Guy's Hosptital.

Midwifery.—C. E. Adams, Guy's Hospital; E. H. Drinkwater, Liverpool and St. Bartholomew's Hospitals; J. H. Harrison, Sheffield; W. A. G. Stevens, Guy's Hospital.

The diploma of the Society was granted to V. E. M. Bennett, L. Courtauld, R. Gould, T. G. Longstaff, G. B. S. Soper, and W. A. G. Stevens.

TRINITY COLLEGE, DUBLIN.

THE following candidates have passed the Examination for the Diploma in Public Health. Part I:

G. Raymond, T. G. Moorhead, K. W. Jones, A. L. Hoops, W. C. Oram, J. N. Laird, R. G. H. Tate, T. F. Telford.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

FELLOWSHIP EXAMINATION.—The following candidates have passed the Primary Part of this Examination:—W. W. Boyce, R. A. Brown, R. Bury, J. S. Dunne, G. H. Gallagher, and J. M. Hayes.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

SCHOOL BOARD CERTIFICATES IN THE HIGHLANDS OF SCOTLAND.

LETTERS have appeared in the *Northern Chronicle* with reference to the question of School Board certificates in the Highlands of Scotland, recently referred to in the BRITISH MEDICAL JOURNAL. The letter of a correspondent signing himself "Clach Ard" has been replied to by Dr. Murchison, Uig, Skye, who has shown how unsatisfactory the position of medical practitioners is in relation to this matter. Dr. Murchison has obtained from the Scottish Education Department the important statement that a medical certificate is quite valid, although it does not contain the words "soul and conscience." We consider that Dr. Murchison's contention that he is not bound to state in his certificate the nature of the disease the child is suffering from to be a sound one. If the disease is infectious the law compels the medical practitioner to inform the authorities, but if the disease is non-infectious we do not think that the School Board, the reporters present at the meeting, and the whole parish should become aware of the nature of the illness. This is a matter entirely between doctor and patient, and the doctor has no right to divulge professional secrets. Of the many grievances that medical men suffer from in the Highlands of Scotland, this question of the granting school certificates is not the least. Dr. Murchison writes us that the Board pay him nothing, and, at the same time, they decline to accept his certificates, and prosecute the parents who have obtained them for him. As there is shortly to be a new Educational Act for Scotland, it is important that this question be brought by the medical practitioners of Scotland under the notice of the Secretary of Scotland, so that it may be put on a proper footing. We do not consider it would be unreasonable if all medical certificates required by School Boards should be paid for by School Boards.

HEALTH OF ENGLISH TOWNS.

IN **seventy-six** of the largest English towns, **including London**, 8,820 births and 4,682 deaths were registered during the week ending Saturday last, March 28th. The annual rate of mortality in these towns, which had been 16.6, 17.2, and 17.0 per 1,000 in the three preceding weeks, further declined last week to 16.2 per 1,000. The rates in the several towns ranged from 6.3 in Handsworth, 6.7 in Hornsey, 8.7 in Grimsby, 8.8 in Walthamstow, 9.4 in Willesden, 9.8 in Wallasey, 10.6 in King's Norton, and 10.9 in West Hartlepool, to 20.6 in Hanley and in Bootle, 20.8 in South Shields, 21.5 in Bury, 21.9 in Manchester and in Rotherham, 22.4 in Swansea, and 26.1 in Stockton-on-Tees. In London the rate of mortality was 16.5 per 1,000, while it averaged 16.1 per 1,000 in the seventy-five large provincial towns. The death-rate from the principal infectious diseases averaged 1.7 per 1,000 in the seventy six large towns; in London this death-rate was equal to 2.1 per 1,000, while it averaged 1.5 per 1,000 in the seventy-five other large towns, among which the highest death-rates from the principal infectious diseases were 3.0 in Croydon and in Salford, 3.5 in Rhondda, 3.6 in Bury, 3.8 in Swansea, 3.9 in West Bromwich, 4.1 in King's Norton, 4.6 in Rotherham, 5.9 in Wigan, and 8.1 in Tottenham. Measles caused a death-rate of 1.1 in Croydon, 1.4 in Devonport, 1.5 in West Ham, 1.6 in West Bromwich and in Salford, 2.0 in Tynemouth, 2.2 in Swansea, 2.5 in King's Norton, 4.2 in Wigan, and 4.8 in Tottenham; scarlet fever of 1.2 in St. Helens; diphtheria of 1.1 in Swansea and 1.6 in Hanley: whooping-cough of 1.0 in Manchester, 1.1 in Oldham, 1.2 in Leicester, 1.5 in Croydon, 1.6 in West Bromwich and in Stockport, 1.7 in Wigan, and 2.4 in Tottenham; and "fever" of 1.7 in Rhondda. Of the 13 fatal cases of small-pox registered in these towns last week, 7 belonged to Liverpool, and 1 each to Walsall, Birkenhead, Bury, Manchester, Rochdale, and Blackburn. The Metropolitan Asylums Hospitals contained 11 small-pox patients at the end of last week, against 6, 7, and 7 at the end of the three preceding weeks; 5 new cases were admitted during the week, against 2 in each of the three preceding weeks. The number of scarlet fever cases under treatment in these hospitals and in the London Fever Hospital, which had been 1,700, 1,798 and 1,789 at the end of the three preceding weeks, had further declined to 1,736 at the end of last week: 213 new cases were admitted during the week, against 193, 231, and 220 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, March 28th, 1,063 births and 609 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 18.5, 19.7, and 20.1 per 1,000 in the three preceding weeks, declined again last week to 18.6 per 1,000, but was 2.4 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scotch towns the death-rates ranged from 15.0 in Leith, and 15.1 in Paisley, to 10.8 in Glasgow, and 21.7 in Dundee and in Perth. The death-rate from the principal in-

fectious diseases averaged 2.4 per 1,000 in these towns, the highest rates being recorded in Glasgow and Greenock. The 300 deaths registered in Glasgow included 2 which resulted from measles, 3 from scarlet fever, 3 from diphtheria, 22 from whooping-cough, 3 from "fever," and 9 from diarrhoea. Four fatal cases of measles, 6 of whooping-cough, and 2 of "fever," were recorded in Edinburgh. Two deaths from whooping-cough and 4 from diarrhoea occurred in Dundee; 5 from measles and 2 from diarrhoea in Aberdeen; and 5 from whooping-cough in Greenock.

INFECTIOUS DISEASES IN EDINBURGH.

There is a wide prevalence of whooping-cough and measles in Edinburgh. Neither disease is notified, so that exact figures are not available; but during the week ending midday, Saturday, March 28th, 3 deaths were registered as due to measles, and 6 as due to whooping-cough. During the same period 25 cases of scarlatina were notified as against 44 in the previous week, while no deaths were registered.

REGULATION OF CHILD LABOUR IN AMERICA.

A Bill has been introduced into the Pennsylvania Legislature regulating the employment of children throughout the State. It is made unlawful to employ any child under 14 at any labour during the hours when the public schools are in session, and the working hours are limited to ten hours a day and fifty-five hours a week. No child under 16 can be employed between the hours of 9 a.m. and 6 p.m.

THE CARDIFF PUBLIC HEALTH LABORATORY.

Dr. Savage, bacteriologist of the Cardiff and County Public Health Laboratory, who was recently appointed Medical Officer of Health for Colchester, was entertained at a farewell dinner at Cardiff by his medical and other friends, and presented with a barometer in a handsomely-carved oak frame as a memento of their esteem and affection. Dr. T. H. Morris, chairman of the Conjoint Committees, presided, and was supported by Principal Griffiths, Professors Haycraft and Parker, Drs. Williams and Walford (directors), Dr. W. T. Edwards, and the infirmary staff. Principal Griffiths, in making the presentation, spoke of the excellent work which had been done by Dr. Savage. Dr. Broad, in a humorous speech, recalling incidents of his student days, gave the toast of "The South Wales Medical School," which was responded to by Professors Haycraft and Parker. The former spoke highly of the original work of Dr. Savage, and hoped that his successor might be given more time for making investigations. Dr. Vachell, in wishing success to the laboratory, spoke of the splendid service it had been to the town and neighbourhood in enabling an early diagnosis to be made of plague and other diseases. Dr. W. Williams also, in reply, referred to some of its past successes and predicted much greater in the future. He deplored that the county medical men took so little advantage of the opportunities offered for accurate diagnosis in doubtful cases, as only about 30 out of some 340 sent specimens for examination.

HULL SANITARY REFORM.

We learn from the Hull local press that the Sanitary Clauses of the Hull Corporation Bill, to which reference has on several occasions been made in these columns, have been decisively rejected by the poll of ratepayers. It will be remembered that power was sought by these clauses to compel conversion of earth closets for houses without back entrances into water-closets. For the clauses there voted 12,126, and against 21,845, defeating the Corporation's scheme by a majority of 9,719. This result has been obtained, we understand, by the energetic action of the property owners, who, had the scheme received parliamentary sanction, would have had to pay half the cost of the conversion. They formed themselves into an association to fight the Corporation, and placarded the walls of the district with posters appealing to tenants and owners alike to avoid increased rents and rates by voting against the clauses. In total ignorance of the real issues involved tenants have given their votes against the sanitary reform on account of fear of increased rent. This is truly a victory for insanitation and small property owners, and cannot do otherwise than set back sanitary reform for many years. We think the Corporation is to be commended for its action, and we sympathize with its efforts to assist the people, even in spite of themselves.

DISCHARGE OF DIPHTHERIA CASES.

Medical Superintendent of an infectious diseases hospital asks for advice under the following circumstances: He has had "return cases" of diphtheria, although prior to the discharge of the infecting patients from hospital telegrams were received from a well-known association stating "specific organism absent"; and he asks whether it is customary to discharge patients on receipt of one certificate of this description.

*** There is no established procedure on this point. In certain cases of diphtheria, whether treated at home or in hospital, infection persists for protracted periods. Usually in these cases of persistent infection there is some rhinorrhoea. One negative result from a bacterioscopic examination does not suffice. There should preferably be three consecutive negative results. In some large fever hospitals the time for discharge is determined by clinical examination and a time limit, usually not before the end of the sixth week. Many cases may, however, be quite safely discharged earlier than this.

Our correspondent asks also whether it is desirable to remove diphtheria patients to convalescent wards before discharging them from hospital. When practicable this should be done for administrative reasons. It is doubtful whether it is necessary as aiding freedom from infection. Protracted infection means a "sport" in the natural history of the disease. On this point see page 231 of *Public Health* (February, 1903).

An American Psychiatrical Society.—The Psychiatrical Society of New York has recently been founded with the object of promoting interest in the study of mental disease. The active membership of the Society is limited to fifteen. The President is Dr. Allan McLane Hamilton, the Vice-President Dr. Frederick Peterson.

HOSPITAL AND DISPENSARY MANAGEMENT.

EDINBURGH ROYAL INFIRMARY.

At the weekly meeting of the managers on March 23rd, the following appointments were made for the six months from April 1st, 1903:

Resident Physicians.—Andrew J. Rowan, M.B., Ch.B., to Professor Sir T. R. Fraser; T. B. Hamilton, M.B., Ch.B., to Professor Greenfield; Ben. P. Watson, M.B., Ch.B., to Professor Simpson; Robert P. M'Neil, M.B., Ch.B.; to Professor Wyllie; Robert C. Low, M.B., Ch.B., to Dr. Andrew Smart; S. A. K. Wilson, M.A., M.B., Ch.B., to Dr. Byrom Bramwell; A. F. R. Conder, M.B., Ch.B., to Dr. Gibson; Henry J. Dunbar, M.B., Ch.B., to Dr. Bruce.

Resident Surgeons.—Sidney Gilford, M.B., Ch.B., to Professor Annandale; Frank Inglis Dawson, M.B., Ch.B., to Professor Chiene, C.B.; Paul Mathews, M.B., Ch.B., to Dr. MacGillivray; Robert B. Johnston, L.R.C.P. and S. Edin., to Dr. Berry Hart; A. E. Hunter, M.B., Ch.B., to Mr Cotterill.

Non-Resident House-Surgeons.—Charles Heron Watson, M.B., Ch.B., to Mr. Wallace; John M. Bowie, M.D., Ch.B., M.R.C.P.E., to Dr. R. M'Kenzie Johnston; Thomas Gowans, M.B., Ch.B., to Mr. Berry.

Clinical Assistants.—A. N. Fell, M.B., Ch.B., to Professor Sir T. R. Fraser; Herbert P. Thompson, M.B., Ch.B., to Professor Wyllie; W. G. Porter, B.Sc., M.B., Ch.B., to Dr. Byrom Bramwell; A. Dingwall Fordyce, M.B., Ch.B. (medical waiting-room), to Dr. R. W. Philip; John D. Comrie, M.B., Ch.B., M.R.C.P.E. (medical waiting-room), to Dr. Murdoch Brown; James A. Raeburn, M.B., Ch.B. (medical waiting-room), to Dr. J. J. Graham Brown; Wilfrid M'Farlane, M.B., Ch.B. (medical waiting-room) to Dr. F. D. Boyd; William Hume, M.B., Ch.B., to Dr. MacGillivray; T. W. E. Ross, M.B., Ch.B., to Mr. Cotterill; E. M. Lithgow, M.B., Ch.B., to Dr. George Mackay. The appointment was agreed to of Mr. James Burnet, M.B., Ch.B., as clinical tutor to the extra-mural medical wards for the ensuing summer and winter sessions. Mr. J. H. Gibbs, F.R.C.S., L.R.C.P., L.D.S., was elected to the post of junior dental surgeon to the institution.

MEDICAL NEWS.

The Queen has given £1,000 to the London Hospital Quinquennial Appeal Fund.

According to *Medical Missions in India*, there are 137 medical missionaries in India.

Dr. Frederick Mueller, Professor Lorenz's assistant, who accompanied him throughout his recent tour in the United States, has returned to America and will take up his residence in Chicago, where it is reported he is to have charge of a hospital devoted especially to orthopaedic surgery.

Imperial Service Order.—In the *London Gazette* of March 31st appears a list of appointments to the Imperial Service Order recently instituted for members of the Civil Service as a recognition of long and meritorious service. Among the names is that of J. McNaughton, M.D., Medical Officer, Scotch Prison Service.

A Health Day in Utah.—A Bill recently introduced into the United States Legislature sets apart the first Monday in October as a legal holiday in the State. On that day it is made compulsory for every person to clean and disinfect thoroughly dwelling-houses, stores, theatres, and buildings of every kind used by the people. A penalty of 50 dollars is imposed for failure on the part of any person to clean up and disinfect as provided.

International Congress of Otology.—The Seventh International Congress of Otology will be held this year from August 1st to 4th at Bordeaux, under the presidency of Dr. E. J. Moure. The questions proposed for discussion are: (1) The choice of a simple and practical acoumetric test, (2) the diagnosis and treatment of suppurative processes in the labyrinth, (3) the technique of the opening of encephalic abscess of aural origin, and the after-treatment of such cases. All communications should be addressed to the General Secretary, Dr. Lermoyez, 20 bis, Rue de la Boétie, Paris.

An American Congress on Venereal Diseases.—In pursuance of a resolution adopted at the Saratoga meeting of the American Medical Association a joint committee from various sections of the American Medical Association has been appointed by the President of the Association to consider the subject of the prophylaxis of venereal diseases and to present to the American Medical Association a plan for a national meeting, similar to the International Conference for the Prophylaxis of Venereal Diseases, which meets again this year in Brussels, under the auspices of the Government in Belgium.

The Prevention of Six-day Races in America.—A Bill has been introduced into the Pennsylvania Legislature which makes it unlawful for any person or persons to promote or manage or participate in any athletic contest or exhibition held within the State of Pennsylvania which shall continue for more than twelve hours in each calendar day. The

penalty imposed for violations of the Act is a fine of not less than 100 dollars (£20) or more than 1,000 dollars (£200), or imprisonment not exceeding two years, or both.

DONATION TO HOSPITAL.—The Committee of the Lord Russell of Killowen Memorial Fund have decided that a portion of the surplus money standing to the credit of the fund after providing for the statue of the late Lord Chief Justice shall be devoted towards the dedication of a male ward in the Hospital of St. John and St. Elizabeth in St. John's Wood, N.W. The sum apportioned for this purpose amounts to £1,000.

SPREAD OF PUBLIC-HOUSE TRUSTS IN SCOTLAND.—Lord Grey's Public-house Trust movement is to be introduced into Roxburghshire. A well-attended public meeting was held last week at Hawick, at which Mr. William Smith, K.C., Chairman of the East of Scotland Trust, described the principles of the movement, and a resolution was unanimously carried to form a committee for the purpose of organizing a local trust company.

ROYAL DENTAL HOSPITAL, LEICESTER SQUARE.—At the annual general meeting of governors, held at the hospital on March 31st, under the chairmanship of Lord Kinnaird, a very large increase in the number of patients treated during the year was reported; this increase amounts to over 15,000 more more than in 1901. Some time ago it was pointed out to the Committee that it was an unfortunate circumstance that the plans for the new hospital contained proposals for the retention of a public-house, which was on the site acquired some years before. The Committee, as trustees of the hospital property, felt it to be their duty to make the most of such a valuable asset as they believed the licence to be. As time went on the Committee became convinced that in the best interests of the hospital it was desirable to surrender the licence, and try to make up by subscriptions for the money loss entailed. The consent of the Charity Commissioners and of the Prudential Assurance Company, which holds a mortgage on the property, having been obtained, the "Duke's Head" had been closed as a public-house and the licence destroyed.

POST-GRADUATE MEDICAL EDUCATION IN GERMANY.—Reference has already been made in the BRITISH MEDICAL JOURNAL to the proposal to found an institution for post-graduate medical education in Berlin in commemoration of the late Empress Frederick, who was greatly interested in the scheme. It is now announced that Professor von Bergmann, Chairman of the Central Society for Medical Higher Education, who had an audience of the Emperor William a few days ago, has received the following letter from Herr von Valentini, of His Majesty's Prussian Civil Cabinet: "His Majesty the Emperor has verbally expressed, in reference to the audience of the 2nd instant, his most lively satisfaction at the project, and welcomes the idea of erecting a special building in Berlin, as a centre and support of the Medical Institution of Higher Education, and also of calling it 'The Empress Frederick House for Medical Higher Education,' in lasting memory of the efforts of Her Majesty the late lamented Empress and Queen Frederick in this province. His Majesty wishes the pious enterprise all success, and awaits with pleasure the reports on this meritorious work. By command of His Majesty, I have the honour to make this communication to your Excellency."

ROYAL INSTITUTION.—The following are the lecture arrangements at the Royal Institution after Easter:—Professor Allan Macfadyen: Three lectures on the Blood and some of its Problems; Professor G. H. Darwin: Two lectures on the Astronomical Influence of the Tides (the Tyndall lectures); Professor E. J. Garwood: Two lectures on the Work of Ice as a Geological Agent; Professor Dewar: Three lectures on Hydrogen: Gaseous, Liquid, and Solid; Professor S. H. Vines: Two lectures on Proteid-Digestion in Plants; Professor J. A. Fleming: Two lectures on Electric Resonance and Wireless Telegraphy; Professor Langton Douglas: Two lectures on the Early Art of Siena; Mr. Hamish MacCunn: Two lectures on Music (with musical illustrations); and Professor Silvanus P. Thompson: Two lectures on the *De Magnete* and its Author, (1) the Book; (2) the Man. The Friday evening meetings will be resumed on April 24th, when a discourse will be given by the Hon. R. J. Strutt on Some Recent Investigations on Electrical Conduction. Succeeding discourses will probably be given by Professor William J. Pope, Mr. Rider Haggard, Dr. D. H. Scott, Dr. J. A. H. Murray, His Serene Highness Albert Prince of Monaco, and other gentlemen.

PRESENTATION TO A MEDICAL HERO OF LADYSMITH.—The officers of the Natal Volunteer Corps held their commemoration dinner at the Victoria Club, under the presidency of Lieutenant-Colonel E. M. Greene. During the evening an interesting presentation was made to Dr. H. B. Currie, of Johannesburg. Lieutenant-Colonel Greene, in making the presentation, said the colony, and especially the Natal Carbineers, owed a deep debt of gratitude to Dr. Currie for assisting them as he had done. He came down a year before the outbreak of the late war, and threw his lot in with the Natal Carbineers, under Lieutenant-Colonel Hyslop, D.S.O. He remained with them as their regimental surgeon during the whole of the siege of Ladysmith. He was exceedingly popular among both officers and men. There was no time of the day or night when he was not available to alleviate the sick or wounded, and do good work generally. The inception of the presentation was a spontaneous act on the part of the non-commissioned officers and men of the regiment, and the officers were more than pleased to add to the subscription list. He felt assured that the parting hours of many of the men who had fallen had been soothed by the attentions of Dr. Currie, and he knew that those who remained appreciated to the full his services, and, indeed, had evidenced the same by this presentation. Dr. H. B. Currie, in reply, said that the best evidence he had of the thoughts of the regiment was the fact that he was held in the remembrance of those who had survived, and, through them, in the thoughts of those who had died. The presentation tea set to Dr. Currie consisted of a silver salver, tea and coffee set, milk jug, silver basin, and hot-water stand, the tray bearing the inscription: "Natal Carbineers. Presented by the Natal Carbineers to Lieut. H. B. Currie, N.V.M.C., in recognition of his services as medical officer to the regiment during the siege of Ladysmith, November 2nd, 1899, to February 28th, 1900." Dr. Hugh Brown Currie, after serving as resident physician under Sir William Gairdner at the Glasgow Western Infirmary, went out to Johannesburg. On the outbreak of the war he joined the Natal Carbineers, and was present at the fields of Elandslaagte and Dundee, and afterwards got shut up in Ladysmith, where he did much excellent work.

MEDICAL VACANCIES.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary £150 per annum, £30 allowance for cab-hire, furnished rooms, etc. Applications to the Secretary by April 20th.

BIRMINGHAM AND MIDLAND EAR AND THROAT HOSPITAL, Edmund Street.—House Surgeon. Appointment for six months. Salary at the rate of £70 per annum. Applications to the Secretary by April 18th.

BIRMINGHAM WORKHOUSE INFIRMARY.—Assistant Resident Medical Officer. Salary £100 per annum, with furnished apartments, rations, laundry, etc. Applications to the Clerk to the Guardians, Parish Offices, Edmund Street, Birmingham, by April 16th.

BRADFORD CHILDREN'S HOSPITAL.—House Surgeon. Salary £100 per annum, with board, residence, and washing. Applications to the Secretary by April 20th.

BRIGHTON: ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke Road.—House-Surgeon. Salary £80 per annum, with board, lodging, and washing. Applications to the Chairman of the Medical Committee by April 18th.

CARDIFF INFIRMARY.—Assistant House-Surgeon, Appointment for six months, but renewable. Salary at the rate of £75 per annum, with board, washing, and apartments. Applications to the Secretary by April 17th.

CAPE COLONY: COLONIAL BACTERIOLOGICAL INSTITUTE, Grahamstown.—Laboratory Assistant. Salary, £250 for first year, £300 for second, and £350 for third year, with free first class passage to Cape Town. Applications to Professor Macfadyean, Royal Veterinary College, Camden Town, N.W., by April 11th.

ESSEX AND COLCHESTER HOSPITAL.—Honorary Physician. Applications to the Secretary by April 16th.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—(1) House-Physician. (2) House-Surgeon. Salary, £80 per annum respectively. (3) Assistant House-Surgeon. Salary £70 per annum. Board, residence, and washing provided in each case. Applications to the Committee of Management by April 9th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Surgeon; unmarried. Appointment for six months. Salary £20, washing allowance £2 10s., with board and residence. Applications, on forms provided, to be sent to the Secretary by April 28th.

KING'S COLLEGE, London.—Sambrook Medical Registrarship. Applications to the Secretary by April 15th.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary, £100 per annum, increasing £10 on reappointment, with board and lodging. Applications to the Secretary of the Faculty, Public Dispensary, New Briggate, Leeds, by April 18th.

LEICESTER INFIRMARY.—Surgical Dresser. Honorarium, 10 guineas for six months, with board, apartments, and washing. Applications to the Secretary.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House-Surgeon. Appointment for six months. Salary, £25, with board and lodging. Applications to the Honorary Treasurer by April 20th.

MARGARET STREET HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, W.—Physician. Applications to the Secretary, 26, Margaret Street, Cavendish Square, W., by April 25th.

MIDDLESEX HOSPITAL MEDICAL SCHOOL.—Demonstrator in Physiology. Salary, £80 per annum. Applications to the Secretary by April 15th.

MIDDLESEX HOSPITAL.—Assistant Obstetric Physician, must be F. or M.R.C.P.Lond. Applications to the Secretary-Superintendent by April 14th.

NORTHAMPTON: ST. ANDREW'S HOSPITAL FOR MENTAL DISEASES.—Junior Assistant Medical Officer. Salary £200 per annum, with board, lodging, and washing. Applications to the Medical Superintendent by April 16th.

NOTTINGHAM CHILDREN'S HOSPITAL.—House-Surgeon; unmarried. Appointment for six months. Salary at the rate of £100 per annum, with board and residence. Applications to the Secretary, Mr. A. F. Kirby, St. Peter's Church Walk, Nottingham, by April 11th.

PADDINGTON GREEN CHILDREN'S HOSPITAL, W.—(1) House-Physician. (2) House-Surgeon. Appointments for six months. Salary at the rate of 50 guineas per annum, with board and residence. Applications to the Secretary by April 18th.

PLYMOUTH PUBLIC DISPENSARY.—Second Honorary Physician. Applications to the Secretary by April 11th.

PORTSMOUTH BOROUGH.—Public Analyst. Salary, £250, rising to £300 per annum. Applications, endorsed "Public Analyst," to be sent to the Town Clerk, Town Hall, Portsmouth, by April 15th.

ST. PETER'S HOSPITAL FOR STONE, Henrietta Street, W.C.—House-Surgeon. Appointment for six months, but eligible for re-election. Salary at the rate of £100 per annum, with board, lodging, and washing. Applications to the Secretary by April 15th.

SUNDERLAND INFIRMARY.—House-Surgeon. Salary, £100 per annum, with board and residence, increasing £15 yearly for three years. Should present House-Physician be elected the appointment will be for House Physician. Applications, endorsed "Application for Resident Medical Appointment," to be sent to the Secretary by April 18th.

TOWER HAMLETS DISPENSARY, White Horse Street, Stepney, E.—Resident Medical Officer. Salary £150 per annum, with furnished rooms, coals, gas, and attendance. Applications to Dr. J. Sequeira, 13, Welbeck Street, Cavendish Square, W.

WANDSWORTH AND CLAPHAM UNION.—Assistant Medical Officer at the Home for Aged and Infirm, Church Lane, Tooting; unmarried. Salary, £130 per annum, rising to £150, with apartments, board, lodging, and washing. Applications to the Clerk, Union Offices, St. John's Hill, Wandsworth, S.W., by April 8th.

WEST HAM UNION.—(1) Assistant Medical Officer. Salary, £150 per annum, and residential allowances. (2) Dispenser, non resident. Salary, £80 per annum, with dinner and tea daily. Applications, on forms provided, to be sent to the Clerk, Union Workhouse, Leytonstone, N.E., by April 15th.

WEST NORFOLK AND LYNN HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board, residence, and washing. Applications to the Chairman of the Weekly Board by April 10th.

WEST RIDING ASYLUM, Menston, near Leeds.—Lady as Resident Clinical Clerk. Board and residence provided. Applications to the Medical Superintendent.

WOLVERHAMPTON EYE HOSPITAL.—House-Surgeon. Salary, £70 per annum, with rooms, board, and washing. Applications to the Secretary by April 7th.

YORK DISPENSARY.—Resident Medical Officer. Salary, £110 per annum, with board, lodging, and attendance. Applications to W. Draper Esq., De Grey House York, by April 9th.

MEDICAL APPOINTMENTS.

BARON, Barclay J., M.B., C.M.Edin., appointed Honorary Consulting Physician to the Throat and Nose Department of the Bristol General Hospital.

BLUE, O., M.B., B.Ch.R.U.I., appointed Medical Officer for the Skelton District of the Guisborough Union.

CHAPMAN, Walter, M.B., Ch.B., F.R.C.S., L.R.C.P., appointed Surgeon to the Birmingham Corporation Waterworks and Hospital in Elan Valley.

DAWE, R., M.D.Lond., B.Sc., appointed Assistant Medical Officer to the London Fever Hospital.

FAIRBAIRN, John Shields, M.B., B.Ch.Oxon., F.R.C.S.Eng., M.R.C.P.Lond., appointed a Physician to Out Patients of the British Lying-in Hospital, Endell Street.

FIRTH, John Lacy, M.D., M.S.Lond., appointed Physician to the Throat and Nose Department of the Bristol General Hospital.

FOGGIN, George, B.A.Lond., L.R.C.P. & S.Edin., etc., appointed Principal Medical Officer to the Newcastle-upon-Tyne School Board.

HANNAH, Nathan, L.R.C.P.Edin., L.F.P.S.Glas., appointed Certifying Factory Surgeon for the Ashton-in-Makerfield District in the county of Lancaster.

HEARDER, F. P., M.D.Edin., appointed Senior Assistant Medical Officer to the North Riding Asylum, York.

HILL, Hedley, M.D.Brux., M.R.C.S., L.R.C.P.Lond., appointed Assistant Anaesthetist to the Bristol General Hospital.

LOW, Charles Wm., M.B.Durh., D.P.H., reappointed Medical Officer to the Stowmarket Urban District Council.

WHITMORE, F. C., M.R.C.S., appointed Deputy Medical Officer for the Workhouse, and the No. 1 District of Thornbury Union.

YEATES, Wm., L.R.C.P.Edin., L.R.C.S.Edin., L.F.P. & S.Glasg., appointed Medical Officer to the Heworth District of the Gateshead Union.

DIARY FOR NEXT WEEK.

TUESDAY.

Pathological Society of London, 20, Hanover Square, W., 8.30 p.m.—Mr. L. Cuenlle: The Relation of Carcinoma to Nerve Distribution or Trophic Areas (Lantern Demonstration). Dr. Beevor and Dr. E. F. Buzzard: Suppurative Meningitis due to Streptothrix Infection. Dr. J. H. Drysdale: Angioma of the Brain. Mr. Shattock: The Nature of the Vacuolation in Fat Cells. Dr. J. Broadbent: Rupture of Aortic Aneurysm into the Pulmonary Artery. Dr. R. T. Hewlett: Rupture of Aortic Aneurysm into the Superior Vena Cava. Card Specimens by Dr. Thursfield and Dr. J. Broadbent.

WEDNESDAY.

Dermatological Society of London, 11, Chandos Street, Cavendish Square, W., 5.15 p.m.—Demonstration of Cases of Interest.

Hunterian Society, London Institution, Finsbury Circus, E.C., 8.30 p.m.—Discussion on the Present Methods of Treating Tuberculosis.

POST-GRADUATE COURSES AND LECTURES.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C. Demonstrations will be given at 4 p.m. as follows:—Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical. Lectures will also be given at 5.15 p.m. as follows: Monday, On Therapeutic Inoculation: Tuesday, Cancer; Wednesday, On Cerebral Softening; Thursday, The Anatomy, Common Ailments of the Liver, and their Surgical Treatment.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning in order to ensure insertion in the current issue.

BIRTH.

GARFIT.—On Tuesday, March 31st, at Kirby-Muxloe, near Leicester, the wife of Charles Corringham Garfit, M.B., Ch.B.Vict., of a son.

MARRIAGES.

CORNER—HENDERSON.—At Dundee, on March 31st, Edred Moss Corner, F.R.C.S., youngest son of Francis Corner, Esq., M.D., London, to Henrietta, second daughter of James Henderson, Esq., The Gows, Invergowrie, Forfarshire.

KIDD—JOHNSON.—On March 28th, at Holy Trinity, Islington, by the Rev. F. J. Birkett, assisted by the Rev. T. Lancaster, Vicar, and the Rev. E. Lopresti, Harold Andrew Kidd, Medical Superintendent of the West Sussex County Asylum, Chichester, to Mildred Isabel Carlile, youngest daughter of Captain Johnson, Governor of H.M. Prison, Pentonville.

DEATHS.

FLEMING.—At 10, Chester Street, Edinburgh, on March 28th, suddenly, Henry Bowlby, infant son of Robert A. Fleming, M.D., aged 5 months.

TRINDER.—On January 5th, 1903, at Harley Street, London (after surgical operation), Mary Maud, the beloved wife of Alfred Probus Trinder, M.R.C.S., L.R.C.P., District Surgeon, Volksrust, Transvaal (late Civil Surgeon, R.A.M.C.).

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which the special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

WE would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only, and when sending more than one question to put them on separate slips.

QUERIES.

A COUNTRY MEMBER would be glad to know if *x*-ray treatment has been used for carcinoma of the rectum, and if any benefit resulted.

M.D.CANTAB. is about to take on a country town practice, and wishes to know the best form of couch and chair (combined if possible) for his consulting room. He has a leaning towards gynaecology, and prefers the Continental method of examining patients.

X. Y. Z. would be glad of suggestions as to the treatment of the following case: The patient, a thin wiry man, 69 years of age, suffers from enlarged prostate. Catheter life for the last three or four years. He complains of feeling when in bed at night, sometimes during the day, a pain, which starts on the left side, over the colon apparently. He feels a desire to go to stool, but passes nothing but a slight trace of mucus. Urine alkaline, albuminous, no stone, no malignant mischief apparently. The patient has gained a little in weight. No remedy appears to give any relief. Enemata have been tried without any permanent good. The bowels are quite regular.

ANSWERS.

C. B.—The odour of turpentine in a liniment may be to some extent covered by the addition of any volatile oil with an agreeable odour, such as oil of lavender or oil of rosemary.

ENQUIRER would probably find information of the kind he requires in the *Dictionary of Psychological Medicine*, edited by the late Dr. Hack Tuke (2 vols.) (London: J. and A. Churchill. 1892. 42s.).

DR. V. E. SORAPURE.—The following would probably meet our correspondent's requirements: Olshausen and Veit, *Lehrbuch der Geburtshülfe*, 1902 (Bonn: Cohen, 1 vol.); Küstner, *Kurzes Lehrbuch der Gynäkologie*, 1901 (Jena: Fischer; paper covers M.6, bound M.7.50, 1 vol.).

M.D. would probably find Caird and Cathcart's *Surgical Handbook*, eleventh edition (London: C. Griffin and Co. 1902, 8s. 6d.); and Fothergill's *Manual of Midwifery*, second edition (Edinburgh: W. F. Clay. 1900. 9s.) suitable for his purpose.

DR. CECIL E. SALT.—There is no reason for professional prejudice against the practice of radiography by laymen, so long as they confine themselves to the mere mechanical act of producing a picture and abstain from assuming a scientific knowledge of the bearings of their radiographs on diagnosis or prognosis. Of those engaged in *x*-ray work only qualified practitioners are entitled to undertake the treatment of disease.

MEDICAL ATTENDANCE ON SOLDIERS.

A. J. H.—The rates of payment laid down in Army Form O. 1667 are as follows: Each Visit.—Day—Under a mile, 1s. 6d.; over one mile but under two miles, 2s.; for greater distances, 1s. 6d. a mile. Night—10 p.m. to 7 a.m.; under a mile, 2s. 6d.; over a mile, double the day rates. When the practitioner charges full rates for medicines, charges for visits under the distance of a mile are inadmissible. Medicines.—According to nature and quantity from 1s. to 4s., the scale being laid down in the instructions on the form. The bill must be rendered on Army Form O. 1667, which must be sent to the regimental headquarters.

TREATMENT OF OBSTINATE CONSTIPATION IN A CHILD.

W. E. writes: In reply to "N. B. H.," who asks for suggestions on the treatment of obstinate constipation in a child of 4 years, I would advise him to give her magnesium carbonate, either the heavy or the light carbonate will do, though I think the light is better. Two or 3 gr. in water at night time is generally sufficient, but a little more may be needed at first. After a few weeks a dose may now and then be omitted, and after a time it may not be necessary to give the medicine more than once or twice a week. The prescription may be written thus: ℞ magnes. carbon. levis 3ij, aq ad 3vj, 3j omni nocte horâ somni.

W. S. S. (Powis Square) writes: Might I suggest, in answer to "N. H. B.," on page 771 of the March 28th number of the BRITISH MEDICAL JOURNAL, that he should examine for adenoid growths in the posterior nares, as I have recently operated on a boy of 8 years for adenoids, and cured not only his breathing but also his chronic constipation, which had been a great trouble to him for some time, so much so that he has twice had

convulsions due to derangement of his alimentary canal, the main treatment of the convulsions being large enemata.

DR. R. E. FOOTT (Wood Green, N.) writes: In answer to "N. H. B.," Treatment of Obstinate Constipation (BRITISH MEDICAL JOURNAL, March 28th), I suggest that a massage ball be made as follows: Get 3 lb. to 4 lb. of No. 10 gunshot and a child's playball; put a puncture in it and fill in shot until the ball is full and hard; then seal up the hole with a patch for mending puncture in bicycle tire. This is to be rolled over the abdomen for ten minutes night and morning when patient is in bed. In some cases it acts at once, others have to use it for two or three weeks before effect is obtained. This will cure ordinary cases of obstinate constipation in young or old. Drugs will never do so. It acts by toning up the bowel, pushing on its contents, and by increasing peristaltic action.

TREATMENT OF CHRONIC DIARRHŒA.

E. B. F. writes: Has "P. A. W." (BRITISH MEDICAL JOURNAL, March 21st, p. 711) tried small doses of arsenic before meals, to which might be added an occasional pil. plumbi cum opio and a weekly dose of castor oil?

THE TREATMENT OF PROLAPSUS UTERI.

DR. G. CREWDSON THOMAS (Sydenham) writes: In reply to Dr. Percy Newell's (Crowborough) question in the BRITISH MEDICAL JOURNAL of March 21st *re* the treatment of prolapsus uteri, I beg to inform him that the exact method of technique has been described by Dr. Inglis Parsons in the BRITISH MEDICAL JOURNAL. The first account was in the number for October 23rd, 1897. It was again referred to on October 5th, 1901, and last year at the Obstetrical Section of the British Medical Association meeting some further modifications of the treatment were put forward in a paper on the subject.

DRIGULSKI-CONRADI MEDIUM CULTURE.

R. N.—An account of the method of preparation will be found in a paper entitled *Ueber ein Verfahren zum Nachweis der Typhus Bacillen*, by Drigulski and Conradi (*Zeit. fur Hyg.*, 39, 1902, p. 283).—Prepare as follows: A. Agar solution; B. Litmus solution. A. Put 3 lb. finely-minced beef into 2 litres of water, and allow to stand till following day. Press out the "*Fleischwasser*," boil for one hour, filter, add 20 gr. dry Wittes peptone (pep. siccum), 20 gr. nutrose, and 10 gr. NaCl, boil for one hour, and add 60 gr. finest bar agar, boil for three hours (or for one hour in the autoclave), make faintly alkaline to litmus, filter, and boil for half-an-hour. B. Take 260 c.cm. of Kubel and Tiemann's litmus solution, boil for ten minutes, add 30 gr. chemically pure milk-sugar, and boil for fifteen minutes. Well mix A and B, and re-establish the faintly alkaline reaction, add 4 c.cm. of a hot sterile solution of 10 per cent. anhydrous soda and 20 c.cm. of freshly-prepared solution of 1 gr. crystal violet B. (Hochst) in 100 c.cm of warm distilled water. The authors give many details of manipulation and technique, for which the original memoir should be consulted.

LETTERS, NOTES, Etc.

OFFICER IN CHARGE OF BEARER COMPANY has omitted to enclose his card.

A WARNING.

DR. H. RADCLIFFE CROCKER (Harley Street, W.) writes: I am informed that a man of the name of "Dr. East" (or some similar sounding name) is calling on medical men in Brighton describing himself as "Dr. Crocker's assistant," and trying to sell copies of my *Atlas of Diseases of the Skin*. I write to say that I know nothing of this person who is making this unauthorized use of my name, and except at the hospital have no assistant. I may say that the *Atlas* is the property of the publisher, and my own interest is a small royalty on each copy sold.

ROYAL MASONIC SCHOOL.

THE executors of the late Lieutenant-Colonel S. J. Flood, R.A.M.C. (Dr. Richard Flood of Bundoran and Mr. Arthur Tuffield of 5, Brunswick Place, Cambridge), earnestly appeal to all medical Masons, and especially to those connected with the R.A.M.C., to give their votes to Samuel Basil Flood, youngest son of the above-mentioned Lieutenant-Colonel Flood, at the April election to the Royal Masonic School, for although he obtained 3,226 votes, he was unsuccessful in October last. The late Lieutenant-Colonel Flood had seen much active service on the West Coast of Africa; he was a most ardent Mason, having been connected with many lodges in this country and in India. He died at the early age of 42, leaving four young children very inadequately provided for. Votes will be gratefully received by Arthur Tuffield, 5, Brunswick Place Cambridge.

THE SERUM TREATMENT OF PNEUMONIA: A SUGGESTION.

DR. DAN MCKENZIE (Leytonstone) writes: The clinical history of an ordinary case of pneumonia seems to show that the sudden change from grave illness to convalescence, marked by the critical fall of the temperature, is due to the formation of a pneumococcus antitoxin in the blood of the patient. That being probable, the following suggestion may be deemed worthy of being submitted to experimental proof. Let some blood plasma taken from a patient who has just passed the crisis of the disease be injected hypodermically—as is done with diphtheria antitoxin—into a patient who is still in the pyrexial stage. It is just possible that thereby a successful result might be obtained. Since this idea first occurred to me I have not had two patients with pneumonia at the stages necessary for carrying out the experiment. Others, however, whose opportunities are more favourable, may consider the method worth trying.

A SUPPLEMENTARY TEST FOR INTOXICATION.

DR. FRANCIS W. GRANT (Blackpool) writes: I read with some degree of interest the letter published in the JOURNAL of March 7th, 1903, p. 588, on the above subject, and wish to express my concurrence in all my namesake (Dr. Grant, London) says on this important matter. I have invariably discarded the usual methods of testing whether a man is under the influence of liquor, and for 13 years as police surgeon have had recourse to what your correspondent says regarding the diagnostic value of inquiring the time of day of any suspected person. I have seldom found it fail.

MEDICAL OFFICERS IN THE HIGHLANDS AND ISLANDS OF SCOTLAND.

MISS C. E. O'CONNOR writes: I am sorry that the portion of my article which was reproduced in the BRITISH MEDICAL JOURNAL seems to convey exactly the opposite impression to that which was intended in the original article in the *Women Students' Medical Magazine*. I do not imagine that any one will ever make a fortune in the smaller islands of Orkney, and I should not recommend one of these posts to a man with a family to support, nor to any one who wished to enjoy a comfortable income and light work. But I do most strongly recommend them to newly-qualified medical women who desire experience in their profession, and to whom a couple of years of healthy open air life would act as a valuable antidote to five years of close study in a stuffy town. The courtesy, kindness, and hospitality of these islanders makes work amongst them a pleasure, and will always be a pleasant memory to any one who looks at the human, and not merely the commercial, side of their profession.

May I point out that in the letter of "Non-Sweater" *Evay* is throughout a misprint for *Eday*?

LETTERS, COMMUNICATIONS, ETC., have been received from:

A A.M.S.; Dr. P. E. Adams, Winchfield; Dr. J. J. Austin, Belfast; J. W. Allen, M.B., Glasgow; A. B. and C. **B** Dr. J. W. Byers, Belfast; Mr. B. Baldwin, Darley Abbey; Mr. H. Burrows, London; Mr. J. C. Bawden, London; Dr. H. A. Ballance, Norwich; Mr. F. B. J. Baldwin, Rotherham; Dr. W. F. V. Bonney, London; Mr. H. N. Barnett Knock; Messrs. Bovril, Ltd., London; Messrs. Burroughs, Wellcome and Co., London; Dr. F. Bushnell, Plymouth; Mr. J. W. Burdwood, Bourne. **C** Dr. H. R. Crocker, London; Dr. J. Clark, Lichfield; Dr. W. H. Calvert, Melrose; C. W. G.; Dr. W. A. Carline, Lincoln; G. Crerar, M.B., Silloth; Mr. H. J. Cundell, Huddersfield; Dr. R. H. Crombie, Banchory; S. W. Curl, M.B., Norwich. **D** Mr. Q. B. De Freitas, Georgetown; Dr. T. Dutton, London; Dr. G. H. Darwin, Manchester; Mr. G. J. Dudley, Stourbridge; Dr. L. C. Dobson, London. **E** E. B. F.; Mr. H. Elliot-Blake, Bognor. **F** Mr. E. L. Freer, Cork; C. Frier, M.B., Grantham; Dr. R. E. Foott, London; J. Fotheringham, M.B., Motherwell; N. S. Fraser, M.B., St. John's, Newfoundland; Fees; Dr. H. M. Fletcher, London. **G** Mr. W. A. Garrard, Rotherham; G. C.; Dr. J. Galloway, London; Dr. L. Grant, Ballachulish. **H** Mr. F. P. Hathaway, London; H. Halton, M.B., Liverpool; Mr. J. Humphrey, London; Mr. W. H. Hall, Tunbridge Wells; R. Harris, M.B., Southport; Mr. T. G. Horder, Cardiff; R. T. Halliday, M.B., Pollokshields; Mr. A. V. Harcourt, Ryde, I. of W.; Dr. R. C. Holt, Burnley; Dr. E. H. Houfton, Shirebrook, India; Mr. T. R. Inglis, Auckland, N.Z. **J** H. Jones, M.B., Dolgelly; Mr. H. Jones, London; Dr. E. Jepson, Durham. **L** J. L. Loudon, M.B., Hamilton; Dr. T. G. Lyon, London; Laryngological Society, Secretary of, London; Mr. G. Longbotham, Ilkley; Mr. F. G. Layton, Walsall; Dr. A. E. Larking, Folkestone; Dr. A. Latham, London; D. Lamb, M.B., Glasgow; Liverpool Medical Institution, Secretary of, Liverpool. **M** Dr. D. McKenzie, Leytonstone; Mr. A. Macdonald, Washington; Mr. E. Merck, London; Mr. W. J. Middleton, Bournemouth; Mr. T. H. Mitchell, Ambleside; J. T. J. Morrison, M.B., Birmingham; Mr. K. McAdam, Oamaru, N.Z.; B. G. A. Moynihan, M.B., Leeds; Messrs. J. Maclehose and Sons, Glasgow; Dr. W. J. O. Merry, Easthourne. **N** J. W. Noble, M.B., Nottingham; Mr. A. B. Norman, Oakham. **O** Mr. M. O'Connor, Chatteris. **P** D'A. Power, M.B., London; T. W. S. Paterson, M.B., London; Dr. W. Peart-Thomas, London; Mr. E. J. C. Palmer, Gloucester; Mr. J. R. Preston, Fleetwood; Dr. R. S. Peart, North Shields; Dr. D. R. Paterson, Cardiff; Dr. E. P. Pilpots, Bournemouth; Psychology. **R** Dr. H. S. Renshaw, Manchester; Dr. J. M. Rhodes, Didsbury; Messrs. Reynolds and Branson, Leeds; Dr. W. B. Ransom, Nottingham; Mr. F. C. Rogers, Belvedere; J. A. Rauhenheimer, M.B., Liverpool; R.N. Dr. M. K. Robinson, Dover; J. H. Rhodes, M.B., London; Mr. A. W. M. Robson, Leeds. **S** Mr. V. E. Sorapure, Port Maria, W.I.; Mr. C. Scott, Halifax; Scientific Press, Assistant Manager of, London; Dr. J. G. Shea, Chesterfield; Dr. J. Snowman, London; L. B. Scott, M.B., Roorhei; Dr. J. W. Summerhayes, Johannesburg; Mr. J. E. R. Stephens, London; Dr. E. A. Snape, London; Dr. R. H. Steen, Chichester; Dr. H. S. Stokes, New York; Dr. J. H. Sequeira, London. **T** Mr. W. A. Thompson, Winchcombe; Mr. A. Tuffield, Cambridge; Dr. E. F. Trevelyan, Leeds; Dr. G. C. Thomas, London. **U** Upnos. **W** A. G. Wilkins, M.B., Glenridding; Would-be F.R.C.S.Eng.; Dr. W. B. Warde, Tunbridge Wells; W. E.; Mr. A. E. Waters, Hull. W. S. S.; G. B. Wood, M.B., Sandown, I. of W. **X** X.Y.Z.

BOOKS, ETC., RECEIVED.

Die Chloroform und Aethernarkose in der Praxis. Von Dr. Koblanck. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1902. 1s. 6d.

Die Hamolysine und ihre Bedeutung für die Immunitätslehre. Von Dr. med. Hans Sachs. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1902. 1s. 6d.

Chirurgie der Notfalle. Darstellung der dringenden chirurgischen Eingriffe. Von Dr. Hermann Kaposi. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1903. 5s. 6d.

Die Technik der Lithotripsie. Vorlesungen von Professor Dr. Felix Guyon, mit Ermächtigung des Autors. Uebersetzt und bearbeitet von Dr. Georg Berg. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1903. 3s.

Die Reizungen des Nervus Sympathicus und Vagus beim Ulcus Ventriculi mit besonderer Berücksichtigung ihrer Bedeutung für Diagnose und Therapie. Von Dr. med. Willi. Plönies. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1902. 1s. 6d.

Statistischer Sanitäts-bericht der k.u.k. Kriegs-Marine für Jahre 1900 und 1901. Zusammengestellt von der IX. Abteilung des k.u.k. Reichs-Kriegsministeriums, Marine-Sektion. Wien: Wilhelm von Braumüller, k.u.k. Universitäts-Buchhändler. 1902.

Technique des Analyses Chimiques. Par J. Tarbouriech. Paris: A. Maloine. 1903. Frs. 6.

Le Malattie Veneree. Pericoli individuali e sociali: mezzi di prevenirli. Per il Dott. Giovanni Franceschini. Milano: Dottor Francesco Vallardi. Lire 2.

Disease of the Skin. By Malcolm Morris. New edition. London: Cassell and Co. 10s. 6d.

De la Glycérine. Par A. Catillon. Paris: C. Naud. 1903. Frs. 4.

Reports from the Laboratory of the Royal College of Physicians, Edinburgh. Edited by Sir John Batty Tuke, M.D., and D. Noel Paton, M.D. Vol. viii. Edinburgh: Oliver and Boyd. 1903.

Les Médicaments. Par le Dr. Alfred Martinet. Paris: C. Naud. 1903. Frs. 4.

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A Clinical Lecture
ON
THE DIAGNOSIS OF PREGNANCY.

Delivered at the Medical Graduates' College and Polyclinic.

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Gentlemen—When I was asked to give this lecture I proposed a very ordinary subject, and I hope that in choosing it you will not think I am taking one which is too elementary for discussion. What made me select it is the fact, which I suppose we all know and recognize, that medical men are constantly in difficulties in making a diagnosis, and hesitate to give a decided opinion, yes or no, as to whether a particular person is pregnant, and that mistakes from time to time occur which ought to be avoided. Therefore I thought it would be worth while to go over certain points in the diagnosis of pregnancy which appear to me to be more essential than others, as well as the points which, if we can recognize, we ought to make a certain diaguosis. When a patient comes we first of all inquire, or certainly ought to do so, as to her menstrual history, because the menstrual history of a patient gives one a very close clue as to the nature of her case. For instance, given she has got an abdominal tumour, an authentic menstrual history is of great value. Of course, all who try to obtain such histories know the difficulties. Most women, however highly educated, unless they have been educated in medical matters, are in the habit of speaking of all haemorrhages from the uterus as menstruation; and when we ask a woman who is some months pregnant when her last poorly time was she will sometimes tell you it was only last night, or a week ago, or a month ago, as the case may be, referring not to menstruation but to haemorrhage. That I need hardly say is not an authentic history, but it is a very common source of error. What we have to ask the patient is, when was her last regular monthly time? At what date was the last of the regular series? If we can obtain a date up to which the monthly times occurred regularly, followed by a sudden cessation, then, if she is of child-bearing age, single or married, we have the highest reason to presume she is pregnant. I am certain that this is a rule of the highest value. So you will observe that if a woman has amenorrhoea for a period of anything under nine months, and that woman is of an age to bear a child, we, as doctors, are wise in assuming that woman is pregnant until we have proved she is not. Naturally, such an assumption in the case of a single woman would be one in our own minds only, and we should take every care to verify it before expressing an opinion. If, then, we assume that the patient is pregnant and that our business is to prove she is not, we are far less likely to make mistakes, whatever difficulties we may have to meet with. Moreover, if we assume this, it will make us very careful how we examine our patient. Abortions caused by medical examination I should attribute to negligence, and they are not rare. Some are almost criminal when the negligence is gross and there has been an ignoring of the first principles of diagnosis. We do not suppose a doctor wants his patient to abort under ordinary circumstances; yet it is not a very uncommon thing. If a woman has not menstruated for three months and the medical man passes a sound into the uterus, there is either gross negligence on his part or his intentions are criminal; there is no burking the fact. I think in the majority of cases this happens because the doctor has not recognized the probability of his patient being pregnant; he has not sufficiently realized that that patient has not menstruated for three months, and that her menstruation was quite normal up to then. Now, what other conditions would give rise to such characteristic amenorrhoea? You all know the amenorrhoea of phthisis and anaemia, but that does not occur suddenly; it is a gradual diminution of the menstrual flow until at length it ceases. But in the case of pregnancy the woman menstruates one month, and does not menstruate the next or in the succeeding months. Again, the reverse is true. A woman who menstruates normally each month we may assume is not pregnant. None of us would say that menstruation during the early months of pregnancy is impossible. But to say that a woman who is pregnant menstruates, except under quite exceptional conditions, is absolutely contrary to fact. Women do not menstruate when they are pregnant. The losses of blood which occur in pregnancy are almost invariably pathological; they are haemorrhages, and not physiological menstrual losses. So I would lay great emphasis on this first point, that the history of regular menstruation up to a certain date and then its sudden cessation is one of the most important pieces of evidence which we can have, and it is therefore most important that the history with regard to menstruation should be obtained correctly. After that, the further information which we can obtain would cover such details as morning sickness and quickening; and I am sure it is unnecessary for me to make any further remarks on those two points. We know what quickening is, although we may use the term in a very loose way. Quickening is the first time a woman feels her baby move, and is often a very uncertain thing. Many a woman may think she feels her baby kicking about inside her who is not even pregnant; I am sure we have all seen instances of this.

Next we come to a point which is of the highest importance, namely, the examination of the breasts. I do not know how many of you gentlemen are in the habit of examining the breasts with the view of determining whether a given woman is pregnant. It is obvious that different values are placed upon the evidence to be obtained in this way, and different opinions are held, even among men of great experience, as to the value of an examination of the breasts with the view to determining pregnancy. I have heard it stated that it was of so little value that it was not necessary to waste one's time over it. My opinion is quite the reverse. I believe that in a very large number of cases you can tell by examining the breasts whether the woman is pregnant with almost absolute certainty. Of course, we meet with cases in which the activity of the breasts simulates that due to pregnancy without the woman actually being pregnant. It is important that we should always keep our minds open for exceptions. Under certain conditions the appearances of the breast are so demonstrative of the existence of pregnancy that in a young woman one need hardly make any further examination. What are those conditions of the breasts? I think they may be summed up in a way which is a little different to that adopted by the books. The breast, from the time of birth of the individual until the time of pregnancy, with certain exceptions, is an organ as passive as an empty stomach, with very little activity of circulation, and very little evidence of any activity at all. But as soon as the ovum is impregnated, that is to say within a few days, the changes begin to occur in the breasts, and changes which are just as well marked as are the changes in the uterus and the vagina, which, from the commencement of pregnancy, prepare for the labour which ought to follow nine months afterwards. These are changes in the direction of marked activity of function. An organ which was previously quite passive—not necessarily flaccid—without activity of circulation and the effects of active circulation, begins to grow and continues to grow in activity and size as pregnancy progresses. In the breast I am sure we may well speak of the signs of activity and contrast them with the passive condition previously existing. Now, what are the exceptional conditions which may give rise to a certain amount of activity in a woman's breasts when that woman is not pregnant? I have seen activity of the breasts so marked that I have said to my clinical clerks, "Here you see a typical and characteristic case of activity of breasts; this patient is almost certainly pregnant," but when I have examined her further I have found she was certainly not pregnant. Such occasional exceptional cases must be faced if we are going to place a proper value on these signs as evidence of pregnancy. If we do not recognize the exceptions—and I would not wish to persuade any one that these signs I have mentioned are infallible—the value of the signs would be lost. Of all the signs which are given there are only one or two which are infallible, and certainly the activity of the breasts is not an infallible sign, but it is of the highest value, and of such value that you can form an opinion of the highest importance when you recognize the condition. With regard to the conditions which sometimes give rise to activity of the breast, you may sometimes see it in girls at puberty; at such a time the breasts may be a little swollen and the vessels beginning to dilate, and they are visible on the surface, a very important sign. Moreover the breast is a little tender, and there might be a slight exudation from the nipple. These may occur at puberty, and I have seen them at the climacteric. I have also seen them in certain cases of tumours of the ovary. But it must be remembered that tumours of the ovary do not in the great majority of cases affect menstruation at all. There is a tendency to think that these tumours produce amenorrhoea, but it is not so. That is too big a question to go into in this lecture, but

as a statistical fact it is a very small proportion, not more than 5 to 10 per cent. of women with ovarian tumours whose menstruation is altered in the least by their growth. If there is continuance of normal menstruation with activity of the breasts, the activity of the breasts becomes of no value.

Now, what does activity of the breast in pregnancy consist of? The breast becomes larger from hypertrophy and increased vascularity, and this information you can obtain from the patient. The activity of the circulation means that all the vessels are dilated, and those on the surface become more and more easily visible. This is a piece of evidence which, taken in conjunction with the other breast signs, is of very great value. But bear in mind again that there is not a single sign or symptom of pregnancy which is not misleading unless we know the exceptions. What are the exceptions? They are such as that presented in a patient I saw at St. Bartholomew's recently, a girl of 17 who had not menstruated, but who had very clear and transparent skin without any pigment in it—so clear that any one could see the larger vessels underneath. If you have a girl wasted with phthisis or any other wasting disease, with a transparent skin, bear in mind the possibility of the vessels being visible simply because of this transparency of the skin. This does not represent the activity of function. The activity of breasts produced by the increase of the circulation is such that if you have once thoroughly recognized it you are not likely to mistake it for anything else. With the activity of circulation comes pigmentation of the areola, and the formation of what is spoken of as the "secondary" areola, which means nothing more than the extension of pigmentation in irregular patches beyond the limit of the normal areola.

Next we examine the substance of the breast itself. Of course, in different women the breasts give different sensations to the touch. In many women, through an excess of fat, the breast feels to be an elastic and homogeneous mass; while in another woman who is spare and has no great amount of fat you can feel the outline and lobules of the gland. In a woman whose breasts are active the whole surface of the gland presents a shotty, irregular surface. It requires only the lightest pressure with a finger to ascertain this. The man who grabs the breast in his hand in order to try and squeeze milk out of it will not appreciate this condition; but if he gently supports the breast, if it be pendulous, with one hand and then lightly presses through the subcutaneous fat until he feels the surface of the gland, he will easily recognize the shotty sensation due to the enlarged acini. If he does feel it he will know unmistakeably that the breast is in a state of activity. He will know that the lobules and acini of the breast are undergoing hypertrophy; and this fact, taken in conjunction with the activity of the circulation and the pigmentation, affords evidence of the highest value. But by itself it is not to be taken as evidence of more than moderate activity.

Lastly, we endeavour to ascertain the presence of secretion, bearing in mind that in a woman who has borne children the breasts may contain thin colourless fluid for months after weaning. So I would not take much notice of secretion in the breast unless it is associated with those other signs of activity which I have alluded to, that is to say visible vessels, increased pigmentation, and the rest of it. How often do men fail to find secretion in a breast in which it is present? In some cases there is only a very little present, and unless you begin your pressure at the base of the gland, taking hold of the breast in your hand, and with the gentlest pressure squeeze the breast from the base up to the nipple, very slowly, you will not find the secretion. Now, can we rely upon these signs in the case of a multigravida? Certainly, if the evidence is there, if you have got all those signs I have alluded to and the woman has not recently weaned a baby, or miscarried, if there has been a reasonable time for the breast to have recovered its passive condition, and these signs I have spoken of are marked, there is evidence of a most important kind. But I would also say that they are not always of the same unmistakable character as they are in the case of a primigravida. It is hardly necessary to remind you that if you have to tell a single woman that she is pregnant you must take care to have your evidence in all essentials complete.

Next we have to consider the examination of the abdomen, which presents points most easy to obtain, as well as some of great difficulty. The evidence which we want can only be obtained by having the patient sufficiently undressed and lying on a convenient couch or bed or sofa for the purpose. Unless this is done you cannot examine her properly, or overcome any of the difficulties which you may meet with. The examination must be done in an efficient way. When the patient is so placed we might almost at once get rid of the case in which directly you put your hand on the abdomen you feel the child give you a kick. Yet many a man will not be satisfied unless he can hear the fetal heart. In advanced pregnancy—and I would call any period over six months advanced pregnancy, or even after the fifth month—to feel the fetus and recognize its movements is the simplest as well as a final method of diagnosis. It is the easiest of all. If you feel a kick from the foot or some movement of the limbs of the child you must know at once what it is due to; there is nothing else in the abdomen which can kick you. In the presence of this kick or movement one would have thought it was impossible to make a mistake of diagnosis.

I think it is hardly necessary for me to occupy your time in going over the diagnosis of pregnancy when it is advanced; I think we may spend our time to better advantage over a far more difficult thing, namely, the diagnosis of pregnancy in the early months. The early months I regard as the first five. You will not be likely to feel the fetus before the fifth month, but if you do your diagnosis is easy enough. What we have to do is this: to ascertain if a woman is pregnant who has missed her periods for two, three, or four months. I do not say we can diagnose these without making some mistakes, but in the majority of cases we ought to diagnose them without much difficulty; and the way in which it can be done is the way in which I may be of some use to you on this occasion in explaining. We must remember that the uterus, lying as it does normally in the brim of the pelvis, begins to expand and ascend at the commencement of pregnancy. Normally the uterus lies just behind the pubes, and the cervix is towards the middle of the sacrum. When pregnancy commences the uterus begins to expand and ascend, and it creeps up the abdominal wall regularly, to a measurable extent month by month, until it reaches the great landmark—the navel—at the end of the fifth month, which, of course, is the beginning of the sixth month. The average distance between the lower border of the navel and the pubes in an ordinary English woman is about 6 in. In some it is $5\frac{1}{4}$ in., and in others as much as 8 in.; but $5\frac{3}{4}$ in. to 6 in. may be regarded as the usual distance. That point, as I have said, the uterus reaches at the end of the fifth month. The uterus rises towards that point at the rate of $1\frac{1}{4}$ in. per month above the pubes. Over and over again when one has to diagnose these cases I say to the clinical clerk who has ascertained the date of the last menstrual period, "At what height ought we find the fundus uteri above the pubes in accordance with this allowance of $1\frac{1}{4}$ in. per month?" Having decided this point, he proceeds to palpate the hypogastric region, finds a tumour, and with a tape measure ascertains that its height is very close to the point we expected. There is evidence easily obtained and of the highest value. You may say, but it is not easy to recognize that this is the pregnant uterus. I admit it and I can give you an instance of this in a case in which I operated only the day before yesterday. There was a patient whom I saw with her doctor who was supposed to be in the fourth month of pregnancy. For her last four periods her menstruation had come at the right time, but it had been scanty, and she had an enlargement of the abdomen, which her doctor believed to be due to pregnancy. I said, "Here is a menstruation uninterrupted, though scanty, which shows she almost certainly is not pregnant." He said, "But she is, she is certain she is pregnant." I took the measurement and found it right according to the period of the supposed pregnancy, that is to say, 5 in. above the pubes, and I began to think I had made a mistake. But when I examined bimanually I found her uterus lying below the tumour, which was ovarian. We removed the tumour and verified the diagnosis of a retroverted non-pregnant uterus with this tumour on the top of it. Well, how are we to measure the uterus? We must use ordinary precautions. We cannot do this examination without having ascertained that the patient's bladder is empty. There is nothing more likely to mislead us as a distended bladder or loaded rectum. Then by gentle palpation with the fingers you will very easily be able to recognize the outline of what you afterwards, by bimanual examination, prove to be the uterus. When you have found the fundus, the position where, on percussion, resonance and dullness meet, mark it with a pen or pencil, and then measure its height in inches. If you allow $1\frac{1}{4}$ in. of rise above the pubes per month you will have evidence of a very valuable kind, and evidence which it is not difficult to obtain unless there are certain complications, such as retroversion of

the uterus, excessive fat, or a complicating tumour in the abdomen. If the patient is exceedingly nervous and holds her abdomen stiffly, it must be done under an anaesthetic. If pregnancy is advanced, what other evidence can we obtain? You do not wish me to go into a discussion with regard to the fetal heart; but there is one point about the fetal heart which I would mention: that if a man goes to find a fetal heart without knowing where it ought to be found, he is only making himself great difficulties. One cannot hear the fetal heart in the child's breech, nor in its head, nor in the liquor amnii, nor in the mother's bowels. You must find out how the child is lying. And if you find that out you do not need to find the fetal heart in order to prove whether the woman is pregnant. So the evidence of the fetal heart is, in my opinion, of very secondary importance. But if you want to hear the fetal heart in the middle months of pregnancy, where should you listen? You must not expect to hear the fetal heart until the uterus reaches the navel, at the end of the fifth month, and even then one often fails to hear it. I think it is best to take the middle point of a line, joining the centre of the fundus of the uterus to the centre of the top of the pubes. If the fetal heart is not at that point it will be a very little to the right or to the left. But when the pregnancy is advanced we can feel the fetus. I refer to that because these methods of palpation of the abdomen are things which we were never taught as students, for it is only in the last few years that the methodical examination by palpation has gradually superseded a great deal of vaginal examination. It never will entirely supersede it, and never can; but it is infinitely easier to make out not only the presentation but the position of the whole fetus by abdominal examination rather than by the vaginal examination.

And if you have outlined the fetus you know where to find the fetal heart. And if you want to teach a nurse how to find the fetal heart do not teach her to use the stethoscope; teach her to apply her ear direct to the spot you mark out. Nurses very quickly in this way learn to find the fetal heart. There is another point with regard to the examination of the abdomen, and that is the recognition of contractions of the uterus. A great deal of stress is laid by some on what is called the rhythmic contraction of the uterus. I would not say there is no such thing, but I would say with great certainty that it is very rare to meet with anything like rhythmic contractions. Contractions of the uterus are one thing, but rhythmic contractions are totally different. Contractions of the uterus may be produced reflexly, such as by the application of the cold hand, and in some women far more easily than in others. If you could sit for days by a woman's side and note the contractions, you might be able to find some regularity about them, but of course that is not feasible. Now, are contractions of the uterus alone evidence of pregnancy? They would be strong evidence of pregnancy, but, like other signs of pregnancy, they are not altogether diagnostic, for in some cases of fibroids the uterus contracts, just as a gravid uterus does. With regard to the uterine *souffle*, this is more easily heard than the fetal heart, and yet we know it is not a reliable sign of pregnancy. It is frequently heard in cases of fibroids, and occasionally in cases of ovarian tumour.

To conclude: I would remind you that the diagnosis of pregnancy may be made easily and absolutely by feeling the fetus and its movements, and in the earlier months, from the history of amenorrhoea the recognition of the marked activity of the breasts, by finding the uterus enlarged and reaching to a definite height above the pubes, allowing 1½ in. for each completed month of pregnancy.

ON RECURRENT ABORTION,

WITH SPECIAL REFERENCE TO THAT FORM DUE TO DEFICIENT VITALITY OF THE MOTHER, OR BOTH PARENTS, AND OFTEN ASSOCIATED WITH SOME HISTORY OF TUBERCULOSIS.

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But little has been written on the subject of recurrent or habitual abortion—that is, abortion occurring repeatedly in the same individual. In Playfair's *Midwifery* there is only one short paragraph, in which, after mentioning syphilis and uterine flexion as exciting causes he suggests (p. 2[illegible]) that in many women a "habit" of abortion is induced, and hence, I suppose, the name "habitual." In Winckel the subject is only mentioned incidentally. In Lusk, Dührssen, and Galabin it is practically ignored.

In Norris's *Textbook of Obstetrics* there is a short section dealing with systemic, recurrent, or so called "habit" abortions, in which both syphilis and tuberculosis are mentioned as causes not only by transmission of these diseases to the placenta or ovum, but also by simply lowering the mother's vitality. Syphilis is naturally said to be responsible for most recurrent abortions.

An original and interesting paper, entitled Habitual Abortion, was written by Dr. Leith Napier about twelve years ago, and is published in the Obstetrical Society's *Transactions* for 1890. Under this heading, however, Dr. Napier includes, I think, quite a large number of cases that would be rejected by others. Of 31 cases of so-called "habitual aborters" reported by him every one had borne one or more children at term, and the majority (no less than 17) appear to have actually had more deliveries "at term" than abortions. Probably on account of this he deduces that syphilis is a comparatively rare and unimportant factor in causation.

My own classification is much more rigid and severe. I include under the title of recurrent abortion only those cases where from the beginning or from some definite epoch the patient has aborted with every (succeeding) pregnancy, and, with one exception only, I have restricted it to cases of initial or primary recurrent abortion; that is, to patients who from the beginning of their married life until the date of coming under observation have never been able to bear a living child at term.

The nomenclature of the subject is of some importance. All the references, such as they are, of the older writers appear to be under the heading or name of "habitual" abortion, and this is objectionable as involving a theory of causation which probably has no foundation in fact. The idea that the uterus can, without any exciting cause, form a habit of aborting at a certain period is only an idea, and now that the larger number of frequently-recurring abortions have been traced to syphilitic disease of the endometrium or placenta or fetus, there is no real justification for its continued use. Moreover, the so-called "habit" in cases of syphilis, especially if the patient be under treatment, tends to alter with each succeeding pregnancy. Recurrent abortion then is a better term than habitual abortion.

What are the causes of recurrent abortion?

Syphilis is undoubtedly one of the chief of these, and is responsible for a large number of cases. But any one who has the charge of a gynaecological clinic will soon become aware that there are several marked cases of recurrent abortion which either are not syphilitic, or, if syphilitic, are attended by no history or signs of syphilis, do not follow the usual course of syphilitic abortions, and are in no way benefited by antisyphilitic treatment. Indeed, it was the legacy of one or two of these cases which had been already vigorously but unsuccessfully treated by mercurials and iodides which first drew my attention to the subject.

Now if these cases of recurrent abortion be carefully investigated it will be found, I think, that most of them fall at once into one group having many features in common, and probably having a common causation, while a minority are distinctly separable, not only from these and from the syphilitic class, but also from one another, and belong rather to the exceptions or individual instances, which are too rarely met with to form any very well-marked class or group.

Let us take these first.

Of these rarer forms of recurrent abortion a few are due to intraperitoneal adhesions, and especially so far as my experience goes to those associated with chronic appendicitis. Most intraperitoneal adhesions involving the uterus (whether operative or otherwise) either stretch or give way or are put up with by the (growing) pregnant uterus, but some adhesions will not allow of this, and especially perhaps those graver adhesions which fix the caecum and appendix to the right appendages and uterus. There comes a time when the uterus cannot enlarge further without starting fresh and sometimes fatal mischief, and then the uterus either empties itself or some leakage with acute appendicitis may take place, or both abortion and peritonitis may occur almost simultaneously.

A case in point occurred in the practice of Dr. Taylor Haddow, of Hurst Street.

H. S., aged 22, had been married three years, and during this time had had four miscarriages of four or five months' duration, but no living child. There was no history of syphilis. On February 2th, 1898, she miscarried for the fifth time, the pregnancy having advanced six months. Four days before this she complained of some pain on the right side. On the evening of the 16th I saw him her with Dr. Haddow and found acute appendicitis

with the formation of an abscess. I opened and drained this in the usual way, and the patient made a good recovery.

On subsequent investigation there appeared to be little doubt that each of these abortions had been due to the remains of an original appendicitis occurring before her marriage, the fifth only resulting in acute and serious inflammation. Since the operation Dr. Haddow tells me she has had two living children and no further miscarriages.

Another occasional cause of recurrent abortion appears to be chronic kidney mischief with albuminuria. The following are rough outlines of illustrative cases:

J. D., aged 33, had been married nine years and had a history of five abortions, two at seven months and three between five and six months, all but one of the children being dead before birth. She was very well before marriage, and no history could be obtained of either struma or syphilis. She had considerable and persistent albuminuria. She was placed on a full milk diet (Oiv) and had steadily improved in health and weight. There is now barely a trace of albumen in the urine, but she has not again become pregnant.

E. R., aged 24, had been married four years on 'first' admission as a patient. She had one (living) child within a year of her marriage, but this had been followed by three miscarriages, the first at three months, the second at two months, and the third at seven weeks. She had no ascertainable history of syphilis or struma, but her urine contained a decided trace of albumen. This gradually disappeared under treatment, and after ten months she again became pregnant. The last note I have of this pregnancy is at six months, when she was quite well and without any trace of albuminura.

Another very occasional cause of recurrent abortion is a deep laceration of the cervix. This is very much more often a cause of abortion than of recurrent abortion, for, if untreated, cervicitis usually follows with eversion and hypertrophy. The uterine canal is then obstructed, and the patient usually remains sterile.

Still another rare cause of recurrent abortion (a criminal cause) may require some notice. An interesting example is recorded by my old friend Dr. Leslie Phillips in his little book on *Abortion*. Referring to the patient, he says: "I and another surgeon of my acquaintance had attended this woman in many abortions, and the uterus had invariably to be artificially evacuated. Quite recently she confessed to me that each and every one of her abortions was produced by a midwife whom she visited for the fell purpose" (pp. 66 and 67). Such a case does not perhaps strictly belong to my subject, but the possibility of its occurrence needs to be remembered, as the subject of such abortions will almost certainly represent herself as a martyr to her sufferings and disappointments.

But, as I have already stated, when all these rarer cases of recurrent abortion are accounted for, and when syphilis can be rigidly excluded—as I have been able to do in most of the cases I bring forward to-day (either by personal knowledge of both husband and wife, or by the help of the surgeon who has sent the patients to me)—still there remains a definite group of cases of very nearly equal importance to that belonging to syphilis, and the most distinguishing features which bind these cases together are:

1. Indications of a low vitality on the part of the mother or father, or both parents.

2. A "strumous" family history.

3. What I may call the remarkable result of an essentially "antistrumous" treatment when carried on for a long period of time or throughout the whole of the pregnancy.

Twelve cases of this class I have tabulated, and would draw your attention to a short analysis of the table so formed (p. 837).

The twelve patients are young—the ages of all being between 20 and 34, the average age being 26. They have usually come for advice after about three years of married life.

During this time each has suffered from repeated miscarriages or abortions, only two patients of the 12 having ever had living children. These died within a few days or weeks, and were probably premature, the one living longest (9 weeks) was a seven-months baby; so that we have practically in all the twelve an unbroken series of abortions.

If we consider the relative proportion of the number of miscarriages or abortions to the patients involved, we find that:

1	had 2	miscarriages	before	treatment.
2	,, 3	,,	,,	,,
2	,, 4	,,	,,	,,
4	,, 5	,,	,,	,,
2	,, 6	,,	,,	,,
1	,, 12	,,	,,	,,

all of these miscarriages being of course consecutive in each case.

In one of the twelve cases no history of any consumption or fistula or other strumous disease could be elicited; in two or three cases the history was doubtful; but in the majority of cases there was a fairly clear history, either direct or indirect, of strumous disease on one or both sides. In the one case having no strumous history—a patient of Dr. Joy's, of Tamworth—the mother was treated throughout the whole period of the next pregnancy by ext. viburnum prunifol. liq (mxv-xx bis die) and cod-liver oil ℥ss bis die); in another case (one of Dr. Melsom's) in which there was transient albuminuria the patient was treated with a liberal milk diet, and with the syrupus ferri phosphatis comp., according to Parrish's formula. The whole of the remaining ten cases were treated with both syrupus ferri phosphatis comp., ℥j, t.d.s., and with gradually increasing doses of cod-liver oil, ℥j to ℥ss t.d.s., during the whole of the time they were under my care.

Now as to results. For this I will take the twelve cases seriatim.

1. The first on the list has been under treatment for the whole of the present pregnancy, and is expecting in May next.

2. The second, after treatment during the whole of her last pregnancy, was confined at term in August, 1902, of a "fine, healthy, living child" (Dr. Pitt).

3. The third, after treatment during the whole of her fourth pregnancy, was confined at term. The child is described as healthy and strong (Dr. Clark).

4. The fourth was under treatment from November, 1899, to November, 1900. This was the date of her last visit, when the following note was made: "The patient is eight months pregnant, and is very well."

5. The fifth has been more or less under treatment and observation for fourteen years. Previous to this she had had four dead or dying children (one lived three days). The history since July, 1889 (when she began to take the syr. and ol.), is as follows: On the fifth pregnancy she had a healthy living child at term (Sept. 12, 1890), but her sixth pregnancy ended in an early miscarriage at about two months. Her seventh pregnancy resulted in a healthy boy (August, 1894), who died of diphtheria at 2½. Her eighth pregnancy resulted in another healthy child, still living, I believe. And, lastly, her ninth pregnancy ended in a miscarriage at 6½ months.

6. The sixth began treatment in June, 1901. In April, 1902, I find the following note: "The patient is seven months pregnant, and is very well."

7. The seventh began treatment in June, 1896, and was confined of a healthy child (boy) in June, 1897.

8. The eighth was only two months under treatment, and discontinued attendance.

9. The ninth was under treatment from January to December, 1899. In December I find the following note was made: "The patient is 7½ months pregnant, and is very well."

10. The tenth patient was sent to me just after her fifth pregnancy had begun, and was under treatment from January to August, 1902. On August 8th she was confined of a healthy boy (Dr. Joy).

11 and 12. The eleventh and twelfth (like the eighth) were very good examples of this class, but both discontinued attendance after one or two months of treatment, and were lost sight of.

Before writing this paper I kept several of these cases in my memory, and had a general idea that the treatment employed had been very successful, but I had no knowledge of the exact results until I began to tabulate my cases and found that in each of the patients whose notes were available, and who had been under regular treatment, the record of abortions appears to have been followed by a "promising" or successful pregnancy.

Nine of the twelve have either had or are expecting children, and the three who soon discontinued attendance, and from whom no report has been obtainable, may yet (possibly) have learnt how to treat themselves, and have qualified for a place beside the nine.

I will not give further particulars respecting most of these cases, but one of them (the second on my list) deserves a more than passing consideration.

Much may be learnt from the history of her married life, and the case incidentally affords an opportunity, I think, of showing that no undue haste or enthusiasm has characterized my practice.

This patient was brought to me in May, 1899, by Dr. Norbury for persistent metrorrhagia following a miscarriage. I found the uterus large, probably still retaining some products of conception, and advised exploration and curettage. The patient was to all appearance a fine, strong, healthy lady, with absolutely no trace of syphilitic or strumous history.

Table of Cases of Recurrent Abortion.

No.	Name.	Age.	Married.	Doctor.	Family History.	Miscarriages, etc.	Treatment.	Result.
1	Mrs. B.	30	4 years	Dr. Melson	Phthisis in M.P., M.M., M.F., & M.S.	3 at 4 months	Syr. Parrish and milk diet	Expecting parturition in May.
2	Mrs. D.	34	8 years	Dr. Norbury and Dr. Pitt.	Corneal ulceration No family history on patient's side Phthisis in husband's brother	1. Child, mort. 1898, 2-3 years 2. Miscarriage at 4½ months, 1891 curetting in May) 3. 7 months' baby, 1900, mort. 4. Miscarriage, 5 months, 1901 5. Pregnant again	Syr. and ol. all the time	August 2, 1901, part. puella, fine, living, healthy
3	Mrs. W.	?	8 years	Dr. A. Clark	Strumous ulceration about anus Distant history of phthisis	1. Miscarriage, 3 months, 1896 2. ,, ,, 3. ,, ,, 4. Pregnant again, 1897	Syr. and ol. all the time	Child born 1898, healthy and strong.
4	Mrs. B.	27	3 years	J. W. T. (O.P.)	Phthisis in M.P.	1. Miscarriage, 7 months 2. ,, 5 ,, Pregnant again	Syr. and ol. November, 1899, to November, 1900	Last note: 8 months pregnant, and very well, November, 1900
5	P. B.	33	13 years	J. W. T. (O.P.)	Phthisis and fistula in husband Patient weak, and very likely insufficiently fed No direct history	1. Child born dead 2. ,, ,, 3. ,, ,, 4. Child lived 3 days 5. Pregnant to full term 6. Miscarriage, 2 months 7. Full-term pregnancy 8. ,, ,, 9. Miscarriage at 6½ months	Syr. and ol, from July, 1899	Healthy child born September 12, 1899, living, healthy in 1897. Healthy child (boy), August, 1894 (died, diphtheria, at 2½) Healthy child, April 1st, 1897.
6	F. J. A.	27	6 years	J. W. T. (O.P.)	Father died of hip-joint disease, aged 35	1. Miscarriage, 3½ months 2. ,, 4½ ,, 3. ,, 5½ ,, 4. ,, 6½ ,, (lived 1 day) 5. ,, 5½ ,,	Syr. and ol. from June, 1901	7 months pregnant, and very well April, 1902
7	M. E.	24	2 years	Dr. Hawkins	Phthisis, M. F. died of "consumptive bowels"	1. Miscarriage, ? 2. ,, ? 3. ,, ? 4. ,, ? 5. ,, ? 6. ,, at 3 months (1–5: in 2 years)	Syr. and ol. Ol. from June, 1896 Syr. from November, 1896	Part., June 27th, 1897, boy, living, healthy
8	S. D.	27	6 years	J. W. T. (O.P.)	Enlarged glands of neck	1. Miscarriage at 8 months (dead) 2. ,, 7 ,, 3. ,, 3½ ,, 4. ,, 3½ ,, 5. ,, 2? ,,	Syr. and ol. 2 months only at hospital Discontinued attendance	
9	M. K.	25	5 years	J. W. T. (O.P.)	"Pneumonia" cause of death in F.	1. Miscarriage at 6 months 2. ,, 3½ ,, 3. ,, 2½ ,, 4. ,, 2½ ,, 5. ,, 2½ ,, 6. ,, 3½ ,, (2–6: in two years)	Syr. and ol. January to December, 1899	7½ months pregnant, and very well December, 1899
10	F. W.	24	5 years	Dr. Joy	No history	1. Miscarriage at 6½ months 2. ,, 5 ,, 3. ,, 7 ,, 4. ,, 6 ,,	Viburnum prunif. and ol. (January to August)	Part., August 8th. boy, healthy
11	A. B.	25	9 years	J. W. T. (O.P.)	Phthisis in M., M.P., and M.F.	1. Living child 2. Miscarriage 3. ,, 4. ,, 5. ,, 6. ,, 7. ,, 8. ,, 9. ,, 10. ,, 11. ,, 12. ,, (2–12: from 6 weeks to 3 months)	Syr. and ol. (ceased attendance)	
12	M. B.	27	5 years	J. W. T. (O.P.)	Phthisis in P.F. and S.	1. Miscarriage 2. ,, 3. ,, 4. ,, 5. ,, (1–5: all born dead)	Syr. and ol. (ceased attendance)	

M. = mother, P. = father, S. = sister, F. = brother.

She lived in the country, was fond of outdoor life, had the best hygienic surroundings and a liberal diet. On examining her, the only abnormality I could find (other than that afforded by the condition of the uterus) was a slight speck on the corner of one eye, and on being told that this had happened when she was quite a little child I rather hastily inferred that this had been the result of an accident. At the operation some placental remains were removed (which were not adherent), and the uterus was curetted. The patient made a good recovery and returned home. Finding no reason for any persistent treatment I did not recommend anything beyond some viburnum prunifolium (if I remember rightly) to be given during any subsequent pregnancy. The next year a seven-months baby was born, which lived nine weeks, and the following year (1901) a miscarriage occurred at five months.

Some time after this, in December, 1901, the patient consulted me again, but with sadly deteriorated health, broken down, disappointed and hopeless of ever becoming a happy mother. In addition to the troubles due to her past abortions she had now active corneal ulceration and conjunctivitis (for which she was consulting Mr. Lloyd Owen), and was, as she feared, just beginning with her fifth pregnancy. The corneal ulceration was, I found, a recurrence of what had happened in early childhood, and this—and no accident—had been responsible for the opacity which I had already noticed. The discovery of this, together with the fact that her husband's history was not free from suspicion—one of his brothers having died of phthisis—afforded me the clue which I was quite ready to have seized some years previously could I but then have found it. I wrote to Mr. Lloyd Owen (who kindly gave up the whole of the general treatment into my hands) and felt justified in assuring the patient that in spite of her ill-health if she persevered with the treatment I was prescribing I believed she would have a better chance than she had ever had before of bearing a living child. The result you know; she was confined last August of a healthy child—the first to live after eight years of married life and unsuccessful labour.

The history of this patient leads me to speak of the clinical history of the cases of recurrent abortion I am now considering as contrasted with those which are due to syphilis.

First the general characters of the recurrences are different: In the syphilitic class the natural tendency (even apart from treatment) is rather of an upward character. Each succeeding abortion, if the patient's general condition remain satisfactory, tends to occur at a later period until the pregnancy goes to term. At this stage dead children are usually born, but finally living children may be expected. The following list of abortions taken from the notes of a syphilitic patient who attended my out-patient room two weeks ago forms a good illustration. This patient was married four years ago and has had five consecutive miscarriages, the first at 10 weeks, the second at 3 months, the third at 3 months, the fourth at 4½ months, and the fifth at 6 months (fetus dead at birth). There can be no reasonable doubt, I think, that the miscarriages in this case are due to syphilis.

The patient is at the present pregnant again for the sixth time, and is taking the red iodide of mercury. She will now probably go longer—7 or 8 months—and have another dead child, or may, perhaps, have a living child at term. In the "strumous" class—if I may call it so—the natural tendency is rather of a "downward" character. Unless something is done to improve the general health, each abortion tends to further weaken the patient, each succeeding abortion tends to occur at an earlier period, and finally in some untreated cases I think the power of conception is lost. But although this is the "type" the cause of the pregnancies is by no means a constant one. Anything which improves the health and nutrition—prolonged residence at the seaside, a better dietary, less hard work, any and all of these may to a very large extent modify the "downward" tendency. So in the patient whose case I have just reported and whom I curetted, the rest and extra care following the operation was not without its effect for good, and the next pregnancy resulted in the birth of a seven-months child which lived nine weeks. The result, however, bears no comparison to that obtained by the treatment I adopted later.

Secondly, the clinical history of the miscarriages themselves are different. In syphilis, while abortion may occur spontaneously and without difficulty, as in some cases of general infection of the mother and fetus, in quite a large proportion of cases there is some definite difficulty connected with the abortion. The products are retained, occasionally become septic and need operative removal. In such cases the placenta is often found adherent to the uterine wall, is only fully detached after careful curetting, and the operation may have to be repeated over and over again with each succeeding abortion. In the "strumous" class such a history is unknown. With the solitary exception of the miscarriage in case No. 2, after which I removed some retained but non-adherent placenta, all the 60 abortions referred to in my table appear to have taken place easily, and, I believe, without any manual interference.

Finally, the general character of the aborted product is different in the two classes. In syphilitic cases whenever there is disease of the placenta, this is larger, thicker, more fleshy, patchy, and paler than normal. It often bears evidence, too, of adhesion and of tearing. In the class I have been chiefly describing it is difficult to say (so far as my experience goes) that there is anything very definitely characteristic in the earlier miscarriages, the ovum is often apoplectic, and there is a hæmorrhagic mole with little or no trace of a fetus, but these differ but little—at all events macroscopically—from other abortions which are the result of accidental bleeding. In later abortions the child is often dead, but I am not aware of any distinguishing feature characterizing either fetus or placenta. It is only right, however, to add that my observations are mainly clinical, that I have had but very occasional opportunities of examining the aborted products in these cases, and that medical literature at present appears to be wanting in any reliable and well-illustrated study of the placenta. Estimation, therefore, of disease in microscopical sections is especially difficult. Winckel describes a "tuberculous placentitis," but further observations are needed in order to establish the presence or not of pathological changes in the placenta accompanying these recurrent abortions not due to syphilis.

The cases which form the basis of this paper are not the only ones which I have met with, as I am conscious of a few others but cannot recall the names of the patients or obtain the notes of their cases. There has, however, been no selection of cases. I have collected all I could in the time at my disposal, and they must, I think, faithfully represent the result of my experience during the last sixteen years. Some critics may be disposed to question the value of any effort to bring living children into the world with such a parentage, arguing that untimely abortions were better than a weakly progeny. Apart from special reasons, I can only say that several doctors have assured me that the children born have been quite strong and healthy, and in one or two which I have seen myself I could discover no sign or trace of disease. This touches of course on another important question, that of the general treatment of the mother during pregnancy. As my title implies I am inclined to attach chief importance to the defective vitality of the mother in these cases of recurrent abortion and everything which tends to improve the general health of the mother and child, including the persistent administration of lime salts and easily-digested fat, is evidently of the utmost importance in successful treatment.

ECLAMPSIA OF PREGNANCY, WITH NOTES ON THE USE OF BOSSI'S DILATOR.*

By T. ARTHUR HELME, M.D., M.R.C.P.LOND., F.R.S.E.,

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ECLAMPSIA is still a fruitful source of anxiety to the practitioner and to the obstetrician. Treatment is empirical, because we know not the pathology or the cause. The whole subject is enwrapped in the clouds of ignorance and uncertainty, and we are fain to take a slippery hold on theory.

For a time the kidney was looked upon as the *fons et origo mali*. Eclampsia was found to be frequently associated with albuminuria, and it was hastily assumed that the eclamptic seizure was due to a state of uraemia or toxaemia dependent on disease of the kidney. Further observation, however, showed that (1) albuminuria occurs without eclampsia (only perhaps 25 per cent. of albuminurics develop eclampsia); (2) eclampsia occurs without albuminuria.

Further, experimental occlusion of the ureters in animals

* Read before the North of England Obstetrical and Gynaecological Society.

and accidental occlusion in gynaecological operations would show that failure to excrete on the part of the kidneys is not of itself sufficient to produce the eclamptic state.

Recently, however, the importance of interference with the ureters by pressure of the gravid uterus has again been urged as at any rate a not uncommon coincidence.

The kidney being abandoned as the primary cause, another explanation was looked for, and the liver was the organ next impressed to do the service of solution. The part played by this organ in the destruction and elimination of poisons and in transforming albuminoid bodies into urea suggested the possibility that eclampsia was the result of an auto-intoxication due to hepatic insufficiency. This was supported by the fact that, as a rule, in eclamptics there is a marked diminution in the output of urea; and experimental observations on the relative toxicity of the blood and urine of pregnant and non-pregnant and eclamptic women seemed to lend support, whilst necropsies have shown important lesions in the liver as well as other organs.

Others have turned to the thyroid gland to supply the missing link, and thyroid insufficiency is suggested as the cause, but evidence as yet is wanting.

There is a general tendency to accept the idea that in eclamptics there is a toxic state of the blood; but whether this is due to increased production of normal toxins or deficient or diminished destruction or excretion from inadequacy of one or all the emunctories does not appear. Another suggestion offered is that the toxaemia is of bacillary origin, due to a special toxin elaborated by microbes in the uterus itself—a fascinating and compact theory; but, though observations have been made, the suggestion is far from proved.

Schmorl has advanced a placental theory, namely, that the eclamptic state is brought about by the presence in the maternal blood of a toxin which has coagulating properties, and which is derived from the placenta. Schmorl examined a large number *post mortem*. He found lesions in the brain, liver, kidneys, and elsewhere, lesions due to a process of thrombosis, haemorrhage, and necrosis; and he found in the pulmonary thrombi giant cells, which he believes to be of placental origin, as he also found them free among the placental villi and in the uterine veins.

Another suggestion has been made that these noxious elements consist of fragments detached from villous buds. The theory is supported by observations that the urine of eclamptic women caused thrombosis in rabbits, and that the blood of eclamptics is especially rich in fibrino-plastic matter.

Another theory attributes the toxaemia to a fetal origin—to some poison generated in the fetus itself, for lesions have been found in the fetus identical with those in the mother, and in support of it, too, we may recall those cases where death of the fetus is followed by improvement in the maternal state. The functions of the placenta are not fully understood, but possibly it may have the power of destroying toxins formed by the fetus; and, if this power be deficient, the fetal toxins will gain access to the mother, whose organs are not capable of meeting the increased strain.

The etiology of eclampsia is evidently obscure, but, whatever may be the ultimate explanation of its cause, the fact remains that eclampsia is essentially associated with the pregnant state. Our present position seems to be simply this: That there are certain cases in which eclamptic seizures following certain premonitory signs are the result of some unknown conditions associated with the pregnant state.

When we come to the question of treatment we find a state of topsy-turvydom as striking as in the theories of causation. Whilst one condemns the administration of chloroform or obstetric interference of any sort, another eulogizes both; one says "empty the uterus," another cries out "don't." Whilst one pins his faith to morphine, another holds his hands in horror at the thought; one gives purgatives or croton oil, whilst another objects to their use; and still more extraordinary, whilst one administers thyroid juice, another gives adrenalin!

Before the advent of convulsions it is more or less generally agreed that, when the premonitory signs are advancing in importance and the state of the urine is becoming progressively worse, that is, the urea diminishing and the albumen (if present) increasing in spite of careful treatment, it is well to forestall the eclamptic state and put an end to the pregnancy. Perhaps this is the right course. I think it is, but I am inclined to think we sometimes give to our interference the credit of averting a catastrophe which might never have occurred. I have watched several patients, who are the subjects of chronic renal disease, go through successive pregnancies with no toxaemic signs; one of these I have watched for many years, and she has had some twelve or thirteen children. On the other hand, it is not long ago that I saw a young primpara, who, in spite of careful dieting and rest in bed, showed a steady worsening of the renal excretion with increasing headaches and other untoward signs. I advised the induction of labour, and with this object introduced two flexible bougies. I had scarcely reached the railway station before I was hurriedly recalled to find the patient in violent convulsions; we dilated and delivered under chloroform and the patient did well.

Much more difficult is our position, and much less unanimity of opinion exists as to the course of treatment which we should adopt when called to a pregnant woman in convulsions, whom perhaps we have never seen before. Of recent years the recognized treatment has been to control the convulsions (if possible) by drugs, to get the bowels to act, to promote the action of the skin and kidneys, and at once to end the pregnancy by *accouchement forcé*, even with incision of the cervix or vaginal section of the uterus. Some writers even urge the Caesarean section.

The pendulum of fashion has, however, been swinging back again to the opposite extreme, so that now again we find advocates for a less heroic treatment. Of recent years the teaching of the Edinburgh and other important schools has been: To control the convulsions by drugs, especially by large doses of morphine, to assist the action of kidneys and skin by saline treatment and the exhibition of thyroid extract, and to leave the pregnancy to take care of itself.

Personally I find myself opposed to the extreme of either school. Looking upon the association with the pregnant state as a vital factor in the production of the eclamptic fit, it seems to me necessary and best to terminate the pregnancy, but not by too heroic means regardless of injury to the maternal parts; to control the fits by chloroform or morphine; to use all measures to excite the action of the emunctories. For rapid dilatation of the cervix I have used Pelzer's glycerine method with success, but as a rule have found the use of Barnes's bags, and especially manual dilatation under chloroform, sufficiently rapid and effective.

If to empty the uterus is a necessary part of treatment, anything which tends to simplify that operation is welcome, and recently for this purpose I have employed the uterine dilator of Bossi, a powerful instrument, which must be used with care, but which may be used with confidence and safety. With this instrument I found it possible in a recent case to dilate the cervix in twenty minutes, after which the seven-months child was delivered by forceps in ten minutes more.

The notes of this case are as follows:

The patient, aged 28, now in the eighth month of pregnancy, consulted Dr. S. Infield, of Hyde. She felt perfectly well, but noticed that her feet and labia were swollen. She was advised by a midwife that she ought to see a doctor. She had had one miscarriage about the third month some eleven months previously.

December 15th, 1902, 4 p.m. Upon examination Dr. Infield found oedema of the feet, legs, thighs, buttocks, and slightly in the lower part of the abdomen. He ordered complete rest in bed and milk diet, and a sample of urine to be sent up to the surgery. The urine was high coloured and was being passed in small quantities. The tongue was clean, vision normal, and no headache. The patient thought "it was silly staying in bed."

6.30 p.m. Urine loaded with albumen, becoming nearly solid on boiling.

8.30 p.m. Patient uncomfortable; had some pain in left chest.

10.0 p.m. Patient has vomited; no headache. Pain in chest worse. Dr. Infield advised delivery, and telephoned about midnight for Dr. Helme to come out by first train in the morning.

December 16th, 6 a.m. Word was sent about this time that the patient had had a fit. From 5.30 up to 10 30 there were seven severe convulsions, in the intervals between which the patient remained unconscious.

At 10.30 chloroform was administered and the cervix gradually dilated by means of Bossi's dilator; this took twenty minutes. On withdrawing the dilator there was some smart haemorrhage, owing to a condition of marginal placenta praevia; axis-traction forceps were put on and the child delivered in ten minutes more. The patient's temperature was 102° F., and pulse varying about 120. In the afternoon the urine was drawn by catheter, and was almost pure blood. Next day the urine contained a little blood; the patient was very comfortable. Next day there was albumen in the urine, but no blood.

On December 19th there was no albuminuria, and the specific gravity of the urine was 1016. There were no convulsions after delivery, and the patient recovered well.

The child was born alive, but survived only thirty-six hours. It should be added that before the fits began Dr. Infield administered copious enemata of saline solution, and after delivery large quantities of water were given by the mouth.

In using Bossi's instrument for the first time I was im-

pressed by the ease and comfort with which it may be used without any laceration of the cervix; it afforded a marked and favourable contrast with the discomfort and cramp which often attend manual dilatation. Another advantage appeared to me to be the absence of friction between the skin of the hand and the vaginal walls; the substitution of an efficient instrument, which can be rendered absolutely aseptic by boiling, for the hand seems to me a very welcome one.

In addition to these points, there are two questions which I had especially wished to bring before this Society:

1. The advisability of ending pregnancy when once convulsions have occurred. Is the existence of pregnancy a vital factor in the production of the eclamptic state? And, if so, is not the termination of that pregnancy a vital factor in the treatment? It is urged that the shock of delivery may intensify the seriousness of the case, and turn into a fatal case one which might have ended otherwise. But I fail to see why there should be this fatal shock; under the influence of chloroform, with gentle manual dilatation, or careful dilatation by means of such an instrument as Bossi's dilator, delivery should not be accompanied by such shock.

2. Another question is the wisdom of administering large doses of morphine by the hypodermic method. Formerly it was taught that in renal disease morphine should be withheld. Present-day practice seems to be to administer morphine in acute and recent forms of nephritis, where there is not much destruction of the renal epithelium, but to withhold it in more chronic forms when degeneration has advanced. Does the same apply in eclampsia?

Until we know something of the etiology and pathology of the disease our treatment must of necessity be "in the dark." The elucidation of the subject in its scientific aspects must be largely left to the "schools," and this will probably take years of work. Meanwhile, is there no way of finding the safest lines on which the practitioner may direct his treatment?

The Clinical Society of Manchester, of which Society I have the honour to be President, is commencing a "collective investigation" with this object in view. If a sufficient number of cases are recorded, it may be possible to draw conclusions as to what lines of treatment in general practice would seem to hold out the greatest prospect of success, and this would serve until our extended knowledge leads to a more complete and rational system.

CASE OF DYSTOCIA DUE TO UTERINE MYOMA: CAESAREAN SECTION.

By GILBERT KEMPE, M.D.,
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With improved technique in abdominal operations the indications for Caesarean section are becoming more defined and the operation is attaining a larger scope. Formerly the results were so disastrous that it was only undertaken as a last resource when the mother was worn out from prolonged ineffectual efforts at expulsion and possibly other operative measures, and when the child was dead. With the present improved results Caesarean section becomes in many cases where the child is still living the operation of election. In the present case the pelvic canal was so blocked by the tumour that no alternative presented itself.

M. G., aged 34, was sent to the Salisbury Infirmary in December, 1901, on account of retention of urine, which was said to be due to a tumour of the pelvis. On examination it was found that the cavity of the pelvis was almost completely blocked by a large solid tumour springing from the posterior uterine wall. The external os lay apparently high up above the pubes, but could not be reached by the examining finger. The patient was also found to be about four months pregnant. The tumour, which was thought to be a uterine fibromyoma, could not be pushed out of the pelvis. The question of induction of premature labour was considered and dismissed partly at the wish of the patient and partly because it was thought that even a four-months fetus could not be delivered *per vias naturales*.

The patient's medical man was communicated with, and she went home to await results. Pregnancy proceeded normally until May 8th, 1902, when slight labour pains came on and the membranes seem to have ruptured, since a large quantity of "water" suddenly came away. The pains continued, and a constant flow of bloody fluid oozed from the vulva. The tumour presented an insurmountable obstruction to delivery, so the patient was brought to the Salisbury Infirmary on May 9th, at 11 p.m. When seen her general condition was good, but the pulse was rather quick (98). Examination of the abdomen showed a pregnant full-term uterus containing a living fetus whose heart sounds were heard in the right iliac region. The head of the fetus could be distinctly palpated lying above the pubes. No placental *bruit* could be made out. Per vaginam there was a constant oozing of blood. The vaginal walls were relaxed, and the external os could be felt slightly dilated, almost out of reach behind and above the pubes. Behind the cervix and almost entirely blocking the pelvic cavity a firm tumour of the size of a fetal head could be felt. It was impossible to displace this upwards.

After as thorough a preparation as time would admit of the patient and her abdomen, she was anaesthetised and a 6-in. incision was carried through the abdominal wall in the middle line. The uterus was partially withdrawn and surrounded by hot sterilized towels. The supra-vaginal cervix and broad ligaments were grasped by the hands of an assistant in order to control haemorrhage if necessary. A 5-in. incision was then commenced at the fundus uteri, and carried downwards and into its cavity. The child was extracted alive by a foot and given to an assistant after the cord had been tied and cut. The placenta, which was situated posteriorly, and the membranes came away entire. The uterus contracted well, and the incision into it was closed with silk sutures, involving the peritoneal and muscular coats only. Some small, hard tumours, apparently subperitoneal fibroids, were seen on the surface of the uterus. A large, hard fibromyoma was found on the posterior surface of the uterus and cervix, bulging into, and quite incarcerated in, the pelvic cavity. This had formed the obstruction to delivery. The uterus was cleansed with boracic lotion and returned to the abdomen. The abdominal wound was closed with silkworm-gut sutures and dressed with sterilized gauze. During the operation the patient became collapsed, but was rallied by strychnine $\frac{1}{12}$ gr. and submammary infusion of $\bar{z}$ xv normal saline. The child was a full-time female, and breathed from the time of extraction.

On the following morning (May 10th) the patient had quite recovered from the operation. She had been sick but once, and there was some abdominal pain. There was also some distension, but no tenderness. There was a free lochial discharge. The temperature was 99.4°, and pulse 120. During the day she was sick several times, and in the evening her pulse had fallen to 110, and her temperature was 99.6.

On May 12th she had improved considerably, and had a free evacuation of the bowels after a soap and turpentine enema. Her pulse varied between 90 and 98, and her temperature was not raised above 100° (98.4° to 99.8°). The infant was put to the breast several times, with the result that a large clot was expelled from the uterus. After this steady improvement was made. The stitches were removed on May 17th, and the abdominal wound was found to be soundly healed. On June 1st she was allowed up, and on the 14th left the hospital wearing an abdominal belt.

She refused any further operation.

I have seen her in the town several times since, and she and the baby are quite well. Up to the present she has not again become pregnant.

I am indebted for the notes on this case to Dr. David Ferrier, late House Surgeon at the Salisbury Infirmary.

The post-operative course of this case was but little different from that of any severe abdominal operation, and this, in my opinion, is largely due to the promptness with which Dr. Blackmore (the patient's medical attendant) recognized that natural delivery was impossible, since for this reason the patient was brought to operation in good condition and without having had her strength wasted by delay involving ineffectual uterine contractions, and perhaps by futile attempts to extract a mutilated fetus.

PREGNANCY COMPLICATED BY SUPPURATING HYDATID CYST OF THE LIVER.

By RICHARD JONES, L.R.C.S., L.R.C.P.I.,
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This case well illustrates the dangers of such a complication in parous women, more especially when suppuration and rupture of the cyst is delayed to the first few days after parturition.

A lady, aged 36, a primipara, residing at some distance in

the country, was delivered by me of a healthy child at term. The case was normal and easy. All was reported to be doing fairly well until the third day, when she was "chilly," and experienced some pain in her right side. On the early morning of the fourth day she had a violent "shivering," together with very acute pain in the same situation, which was accompanied by vomiting. I saw the patient within a few hours afterwards. There was cough more frequent than severe; the respirations were 40, the pulse 120, and the temperature 102°. Through the period of gestation she had periodical spasmodic seizures of pain in her side, together with vomiting and jaundice. The attacks appeared suddenly, and as quickly disappeared. At the time of the attacks jaundice was always general and deeply marked. Through the intervals it for the most part disappeared, but never completely. Previous to her pregnancy she had no symptoms whatever, and her general health was good.

Upon examination her body appeared well nourished; slight traces of jaundice were visible. The abdominal organs appeared healthy with the exception of the liver, which was plainly enlarged. There was no sensation of anything suggestive of hydatid disease save the situation. Tenderness was marked in front and to a less degree at the side. The right side of the chest was greatly distended from base to apex. Movements of respiration were markedly impeded and greatly increased in frequency. There was apparent flattening on the left side, upon which side the movements of respiration were well performed. The upper half of the right side was highly tympanitic, the lower half markedly dull, together with absence of all sounds. The intercostal spaces corresponding to the dullness were bulging. With the hand extended flat upon the chest, the fingers covering the bulging intercostal spaces, I could make out distinctly the sensation corresponding to the hydatid fremitus. The left side of the chest was quite normal.

My diagnosis was suppurating hydatid of the liver bursting into the chest cavity. I operated accordingly through the chest in the usual manner. The patient, notwithstanding the unusual circumstances of her case, stood the operation well. The cyst, however, communicated with a large bile duct, so that the flow of bile was very profuse and continuous, and the patient speedily sank from exhaustion, expiring on the fourth day after the operation.

Through her period of pregnancy she had been seen by other medical men. A nurse had been in charge, and gall stones searched for but none found. I conclude that the pressure of a cyst explained the symptoms, which are so unusual with hydatid diseases except in active suppuration.

Mikucki reports a case operated upon by Von Jordan of Cracow, the woman being in the fourth month of pregnancy. Abortion came on three hours afterwards, and the patient died on the third day. In her case the cyst had not burst.

It was unfortunate that a necropsy was not obtained in this case; an opportunity of going more fully into condition of liver was therefore not afforded.

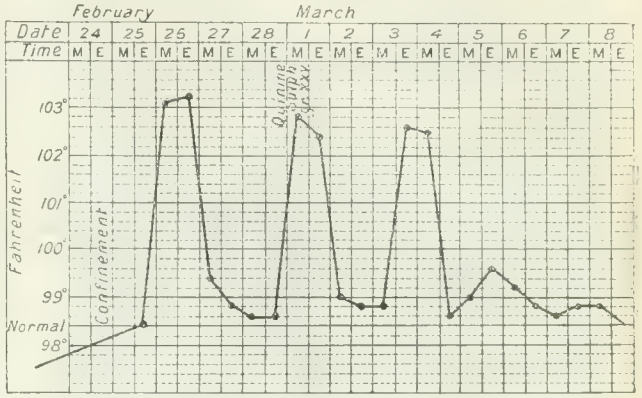
PUERPERAL HYPERPYREXIA OF MALARIAL ORIGIN.

By PERCY B. SPURGIN, M.R.C.S., L.R.C.P.,
Wimbledon.

In the British Medical Journal of January 31st the report of a case of puerperal hyperpyrexia of malarial origin by Dr. T. W. Clay recalls to my mind a similar complication in a case of the same kind which was under my care in 1899. The following are the notes of the case:

Mrs. K., aged 34, a primipara, after being in labour for eight hours, was finally delivered while under the influence of chloroform of a full-term child. The delivery was most difficult owing to contracted pelvis, and after trying to introduce forceps without success the child, which was dead, was turned and partially delivered. However, the head was too large to pass the pelvis, so craniotomy on the after-coming head was performed.

The patient was under the anaesthetic for 1½ hour. Antiseptic douches were given. The patient, on recovering from the effects of the anaesthetic, stated that she felt very well. There was no laceration of the perineum, and she was left in a satisfactory condition. The temperature then, and for thirty-six hours afterwards, was normal, and the patient was doing well. On the evening of the second day she complained of intense headache and of dull aching in every limb. She had been douched twice daily since the confinement; one was now given immediately. The temperature was 103°. Next day it was the same in the afternoon, but had risen to 103.2° in the evening. She complained of itching of the skin all over her body. No rash was visible. Next day the temperature had dropped to 99.4°, and a slight erythema was visible on the face, neck, and arms. The evening temperature was 98.6°. The rash had extended to the chest; there was now no itching.



After remaining at 98.6° the whole of the next day the temperature rose again to 102.8°. The skin was now covered with diffused well-raised squamous patches, the immediately surrounding portion being of a rose-red colour. It was not like an urticarial or scarlatinal rash. That evening the temperature was 102.4°, but the next day had dropped again to 99°. Remaining below that level for two days, it then rose to 102.6°, dropping next day to 98.6°. After two more days at 99°, a slight rise was noted; thereafter it dropped gradually, and in three days was normal, to remain so. The rash was less apparent daily, the skin desquamating freely. Some oedema remained below the eyelids for several days after all desquamation had ceased.

The case was treated medicinally at the initial hyperpyrexia by sodium salicylate; at the second rise the patient was put upon a mixture containing quinine sulphate gr.xxv every two hours for two days, then every four hours for the remainder of the illness.

Inquiry elicited the fact that the patient had been resident in India for some years prior to her marriage, but to her knowledge had never had any illness except a very slight and untreated attack of ague; on that occasion she "came out in a red rash all over."

The diagnosis made in the foregoing case was tertian ague, and I think the temperature chart bears this out. Owing to the very complicated labour, I was keenly alive to all points noted in the puerperium. It was only after three days that I was able to learn of her illness in India, which led me to form the conclusion as to the malarial origin of the present condition, which caused me much anxiety.

THE RADICAL CURE OF INGUINAL HERNIA IN EARLY INFANCY.

By B. H. NICHOLSON, M.B., C.M.Edin.,
Surgeon to the Essex and Colchester Hospital.

No doubt the bugbear in surgeons' minds after this operation is the difficulty of keeping the wound aseptic. I fancy the operation would be performed more frequently in large hernias, with large dilated abdominal rings in infants, if asepsis could be promised. If the following method is carried out with ordinary surgical care, there is not much chance of the wound going wrong:

Bassini's operation is performed; the two points of chief importance in this operation being that the scrotum is not opened, and that the aponeurosis of the external oblique is cut through, thus exposing the whole length of the inguinal canal, and making it easy to ligature the sac flush with the general peritoneal cavity.

In congenital hernia the best plan is to isolate the vas at the neck of the sac only for a short distance, sufficient for the sac to be divided and tied or transfixed, or a preliminary twist if desired. It is much better not to meddle with the distal end of the sac in the scrotum, if possible, as the testicle

is so easily damaged, and even a twist in the long tiny vas, feebly vascular, is sufficient to cause death of the organ. Special care is taken that there is absolutely no haemorrhage. The wound is closed in the usual way. Collodion dressing is applied, and over this a good pad of gauze, or sterilized swab. A plaster-of-paris spica is next applied, beginning below the knee.

The spica is of great advantage in preventing the child from wriggling about, and keeps the wound at rest. The spica is removed on the sixth day, when the wound will be quite healed. The important part of the operation is, however, the prevention of the wound and dressings getting soaked with urine.



The penis is inserted into a wide rubber tube. The tubing is attached round the skin of the base of the penis with four interrupted stitches, and the tube passes into a receptacle in the cot, or attached to a lead gas pipe, and allowed to drain into a receptacle on the floor. I am sure that the sooner the operation is performed the more chance there is of a perfect cure. The rubber tube acts splendidly, and apparently causes no discomfort to the infant, and the dressings and cot remain perfectly dry.

I have the greatest confidence in recommending this operation in early infancy in justifiable cases. In most hospital cases, at any rate, trusses are of little use.

Antiquack Legislation in the United States.—A Bill has recently been enacted by the Virginia Legislature under which osteopaths, Christian Scientists, and "healers" of all sorts will be required to pass an examination before the State Board of Medical Examiners. A Bill granting many privileges to the sect of osteopaths, which was under consideration in the present session of the Alabama Legislature, has been thrown out after a long and hard-fought battle. If the Bill had passed all the osteopaths who had practised in the State before January 1st, 1903, would have been legalized practitioners by the Act.

A NOTE ON SOME RADIOGRAPHS ILLUSTRATING CONGENITAL DISLOCATION OF THE HIP.

(With Two Pages of Illustrations).

By DAVID MORGAN, M.B.,C.M.
Liverpool.

Now that so much interest is taken in the reduction of congenital dislocations of hips by manipulation, it is most important that radiography should give the surgeon its best services. It should assist him in the selection of suitable cases, in confirming his clinical impressions as to reduction, and, in the necessarily prolonged after-treatment, give him a knowledge of the position of the head more accurate than can be noted by the hand. For the proper interpretation of any given radiograph, the surgeon must know the position of the limbs during exposure and the relative position of plate and tube. On examining a number of radiographs of congenital hips, the surgeon must be struck with the great proportion which show either an absence of the neck or the presence of a very twisted short one. Now, these appearances are generally fallacious, and are wholly due to the position in which the limbs are held as regards in or out rotation. Furthermore, one must remember that the picture is shown most clearly of the structures in juxtaposition to the sensitized plate. For instance, if we rest the outer side of the forearm upon the plate, it is the radius which shows most clearly, while the ulna is less sharply defined.

For the purpose of showing the different appearances exhibited in the femoral head and neck dependent upon rotation of the limbs, Mr. Robert Jones allowed me to radiograph several of his patients before, during, and after reduction by the method of Lorenz. The accompanying pictures will show some of the results, and will prove, I hope, useful to surgeons. I have chosen one case only for illustration, but all the other cases confirm the appearances in detail.

The case depicted is that of a child aged 5 years and 3 months, with congenital dislocation of the right hip. In each picture the girl is lying on her back. The position of the tube is of importance. My custom is to place the centre of the anode over the symphysis pubis at a distance of 16 in. from the plate, and so tilted that it looks towards the umbilicus. By this means an even illumination of the whole pelvis is obtained and the acetabula are shown in better relief. I used a 10 in. coil, a mercury break and a moderately soft tube. I like to give a minute's exposure where possible.

Description of Figures.

Fig. 1.—Case A depicts both femora rotated inwards until the sides of the feet almost rest on the couch. By this the neck is brought parallel with the plate, with the result that the shadow of the entire length of the neck is secured on the plate. The lesser trochanter disappears as a prominence upon the inner side of the shaft, and appears as a slight shadow on the femur.

Fig. 2 shows moderate eversion of the femora, the toes pointing directly upwards. It will be noted that the lesser trochanter begins to appear as a projection, the head points forwards, the necks appearing shortened, but still forming an angle with the shaft.

Fig. 3.—Here the femora are still further everted and the head looks forward, the necks are still further shortened, and on the dislocated side the head, neck, and shaft appear in line, while the greater and lesser trochanter are almost continuous.

Fig. 4.—The manipulations for the relaxation of all the structures around the joint having been completed, the limb is forcibly everted and abducted, the neck of the bone is brought into the same plane as the plate, and we thus obtain a shadow of its entire length. Here, however, the anterior aspect is necessarily nearest the plate.

Fig. 5.—The dislocation is here reduced, the limb still being maintained in complete abduction and eversion.

The remaining plates show other of Mr. Robert Jones's cases before and immediately after reduction.

Osiris Prize.—At the private quarterly meeting of the Institut de France, held on April 1st, the first award of the triennial prize of 100,000 francs, founded by M. Osiris to "recompense the most remarkable discovery or work in science, letters, art, industry, and generally in all that concerns the public interest," was made in favour of Dr. Emile Roux, the deputy chief of the Pasteur Institute.

CLINICAL LECTURE ON THE IMPORTANCE OF EARLY REMOVAL OF DOUBTFUL TUMOURS OF THE BREAST.

By J. CRAWFORD RENTON, M.D.,

Surgeon and Lecturer on Clinical Surgery, Western Infirmary, Glasgow; formerly Examiner in Surgery and Clinical Surgery in the Edinburgh University.

The following five cases come under the category of doubtful tumours of the breast:

Case I.—A. B., aged 35, was recommended to me by Dr. Haldane eighteen years ago. She was suffering from a small swelling in the left breast which was hard and in the neighbourhood of the nipple, and I advised removal of the breast. This was done, the axillary glands being left untouched, and the patient has remained quite well. The tumour was examined and found to be carcinoma.

Case II.—R. H., aged 40, was sent to me eight years ago by Dr. Wylie, of Kilmarnock, complaining of a small lump in the right breast. I advised operation, and this was done along with the glands in the axilla. The tumour was examined and found to be carcinoma. She is still quite well.

Case III.—M. C., aged 43, came under my care at the Western Infirmary twenty-five years ago complaining of a hard lump in the right breast. This was removed without the glands in the axilla. Fifteen years afterwards she returned complaining of a small lump in the other breast. This was removed along with the glands. In both cases the tumours were found to be malignant, but the glands were unaffected. Five years after she returned with an epithelioma of the vulva which was removed. She now remains well.

Case IV.—A. R., aged 38, consulted me with reference to a swelling in the left breast. The swelling was irregular in form, gave her no pain, and appeared to be a multiple cystic condition. I advised removal of the breast. This was done, along with the glands in the axilla, which were not enlarged, and on examination by Professor Muir the edges of one or two of the cysts contained precancerous cells. The patient has remained quite well for four years.

Case V.—L. Y., aged 43, consulted me regarding a swelling in her right breast. The swelling was multiple, and caused no retraction of the nipple, and gave no pain. I advised removal, and this I did along with the glands in the axilla, which were not enlarged. On examining the breast the tumour was found to be cystic, and on microscopic examination Professor Muir found the evidence of cancer at the edges of one of the cysts. This patient also continues to be quite well at the end of 3½ years.

These cases are mentioned in order to illustrate the importance of early operation in any patient over 30 years of age. A patient comes complaining of a small, hard lump, and the doctor may feel a hesitancy in advising an operation where there seems so little wrong, but if the patient is over 30 we may take it for a fact that the sooner that lump is removed, along with the breast and the glands, in the majority of cases the better it will be for the patient.

A simple cyst in the breast may occur, and can be dealt with by dissecting it out and having it microscopically examined, and, if it shows malignancy, the breast can be removed; but where multiple cystic disease exists I am satisfied that the whole breast ought to be removed, and in this relation Professor Muir's examination of the cases above detailed has impressed me very much. In the case operated on three times a very decided tendency to malignant disease is shown, but the tumours being removed before glandular or skin infection had taken place has prevented recurrence.

There is no doubt that patients themselves are often long in coming to their doctor with reference to a lump in the breast because they fear an operation; but I feel strongly that the public ought to be made aware of the great importance of early consultation with reference to any swelling either in the breast or elsewhere, in order to satisfy themselves as to what they are suffering from. A great deal is being done at present in endeavouring to discover the cause of malignant disease, but until that cause is discovered it is absolutely essential that a strenuous effort should be made to recognize the earliest beginnings of so serious a malady, and on the medical practitioner devolves the responsibility of guiding patients aright.

It is a very serious matter when a hard swelling in a breast has been discovered to recommend delay in interference while its progress is observed. In the great bulk of such cases it is better to advise operation rather than delay. Some may think that this is putting the matter rather strongly, but the cases that I have operated upon early are still alive and those where glandular infection had taken place previous to operation have not survived more than two and a-half years unless under very exceptional circumstances. I have read with the greatest interest in this connexion the paper by Mr. Butlin on affections of the tongue. It is to be earnestly desired that in all forms of cancer the ideal that he wishes may be reached, namely, to be able to diagnose the precancerous stage of the disease, until a remedy is obtained to cure it or secure immunity from the trouble itself.

CASE OF INFANTILE SCURVY.

By HUGH S. BEADLES, M.R.C.S., L.R.C.P.,

Forest Hill, S.E.

On January 21st, 1903, I was called in to see E. T., aged 1 year and 10 months. The mother informed me that the child cried out when touched, and that bathing her was extremely difficult.

I found the patient extremely anaemic and sallow, looking very ill, and with a quickened pulse and respiration, and a furred tongue. Directly I approached to touch her she cried out, and continued doing so during the whole of the examination. There was a history of constipation for some time, and her condition generally had been put down to teething, as some back teeth were being cut at the time.

On examining the mouth, the gums were found to be swollen, spongy, and purple in colour, especially round the upper incisors and the lately cut molars. There was some beading of the ribs, enlargement of the end of radius and ulnar, and of the ankles. The anterior fontanelle was open. The left thigh was more than twice the size of the right, extremely tender to the touch, and the skin tight and inclined to be brawny. The left shoulder was also swollen. The muscles were flabby, and the legs kept quite still, the child having apparently no power to move them. The abdomen was normal. There was no proptosis. No history of syphilis was obtained. I was unable to procure a specimen of the urine.

The child was the first, and was nursed for ten months. Since weaning she had been fed, first on a well-known predigested food, and latterly on an equally popular proprietary article, and owing to the weather and the mother's condition (she was expecting another baby daily), had not been out of doors for some considerable time, nor had she had the benefit of much open window ventilation. She had refused all such things as rusks, crusts of bread, etc.

I stopped the patent foods, and put her on plain unboiled cow's milk slightly diluted with barley water. I also ordered raw meat juice, beef-tea, and the yolk of an egg. In addition to this she was to have the juice of one orange daily, and some green vegetable boiled until soft, passed through a sieve and mixed with cream. The swollen leg was wrapped up in cotton wool. I insisted on the child going out daily (weather permitting) lying down in her perambulator. For medicine dialyzed iron with citric acid and glycerine was given.

On January 23rd there was already some improvement in the gums. The child had taken both the green vegetable and the orange juice greedily, the latter being increased to the juice of two daily.

On January 26th the improvement was most marked. The gums were almost normal, the swelling of the thigh and shoulder decreased, the legs being moved voluntarily.

On January 29th the improvement was still maintained. She had been out daily, was taking her food well, was bright, and quite took an interest in her surroundings. The tenderness of the leg had gone, and there was no difficulty in examining the left femur. The right shoulder was nearly well.

On February 5th the child was practically well except for the anaemia, which, however, had improved. The left thigh was still slightly larger than the right but there was no tenderness. The gums were quite well again.

This seems to me to be an undoubted case of infantile scurvy. The symptoms and progress all tally with the observations of Barlow and Cheadle; and, as the latter remarks, the immediate and rapid improvement under anti-scorbutic treatment practically settles the diagnosis, whereas purpura and haemophilia are not affected by similar diet. There was the predisposing rickets, injudicious management, bad feeding, no fresh air, and the sponginess of the gums most marked round the cutting teeth as suggested by Dr. Barlow. After a few days of treatment the enlarged shaft of the femur could be distinctly felt.

THE PHYSIOLOGICAL LABORATORY OF McGILL UNIVERSITY, MONTREAL.

By W. S. MORROW, M.D.,
Lecturer and Chief Demonstrator in Physiology.
With a Note by Wesley Mills, M.A., M.D.,
Professor of Physiology.

The present is a time of transition in the teaching of practical physiology. There is no settled standard of what should be expected of a medical student in this subject. It seems well, therefore, for those who have reached even a very temporary halting place to state their position, so that others may derive benefit from their experience, or assist them by friendly criticism. Even those who are not devoting their time especially to physiology, but who are daily using it in the practice, or perchance the teaching, of medicine, can help us in the solution of some of our problems if they will give expression to their views.

The opportunity of taking a forward step was afforded us at McGill two years ago by the erection of a large addition to our medical building through the munificence of Lord Strathcona and Mount Royal. At about the same time the Faculty of Medicine authorized the Professor of Physiology to spend between three and four thousand dollars on new apparatus. Advantage was taken of this combination of circumstances to reorganize the whole department. In the present account, however, it is intended to dwell especially on the provisions that have been made for students' practical work.

Laboratory Accommodation.

The main students' laboratory is a well-lighted room, 60 by 40 ft. in size. It is arranged for both experimental and chemical physiology, and can accommodate 80 students at a time. The smaller rooms, seven in number, consist of a library, workshop, preparation room, and research laboratories. In connexion with the department, there is also a lecture theatre with a seating capacity for 250.



Fig. 1.—Students' Laboratory.

Furniture of the Students' Laboratory.

The students' laboratory (Fig. 1) contains ten working tables, with ample space between. Each table is arranged for eight students in four working couples. The tables are 10 ft. long by 6 ft. wide; the centre of each is occupied by four glass cupboards with disappearing doors. The cupboards are supplied with locks, and are used to store the apparatus needed for experimental physiology. Extending from these cupboards to the ends of the tables are stout wooden shelves supported on an ornamental framework. These shelves may be lifted upon the tops of the cupboards if extra space is needed, or may be taken down and used to rest bottles on during the course in physiological chemistry. When the shelves are in place each pair of students has a working space on the table 5 ft. long by 2 ft. deep. Underneath the tables are cupboards for storing the glassware, tripods, etc., used in physiological chemistry. At each end there is a good-sized porcelain sink with water tap.

Around the walls of the laboratory there are numerous additional cupboards for reserve apparatus, three draft cupboards, a switchboard, and a galvanometer, of which the last two items require special description.

The Switchboard and Electric Wiring.

Such a variety of electric currents are required for physiological work that it was thought well to supply some of them from a central source. This idea has been carried out at Jefferson Hospital Medical School, Philadelphia, but our arrangements are entirely different in their details from those adopted there. We have each student's cupboard supplied with a pair of binding screws which are connected by wires with a switchboard near the demonstrator's table. The switchboard is contained in a cupboard, and a photograph of it is shown in Fig. 2. The wires marked with a white cross lead down under the floor, and are carried all around the laboratory. From them side wires are given off to the binding posts in each cupboard.

By closing the various keys shown in Fig. 2 a considerable variety of currents may be distributed to the students. If the keys A and B are closed, connexion is made through the two wires passing down from B, with a battery of six large-sized Edison-Lalande cells. These have a capacity of 300 ampère hours. We usually have them arranged to give a 2-volt current at low internal resistance. This current does very well for supplying the students' inductoriums for stimulating purposes. If the key A be opened and B be kept closed, the 2-volt current has to pass through a clock with an electric contact which makes and breaks the circuit every second. The clock is a large pendulum one, and adorns the wall of the laboratory. This current, interrupted once a second, may be used in connexion with an electromagnet for slow time marking, as in experiments on the frog's heart or unstriped muscle. It is, however, chiefly employed for supplying the students' inductoriums to furnish a periodical stimulus for fatigue experiments on frog's muscle. Sometimes we connect this same interrupted current with an electric bell, to mark the time for an ergograph experiment.

If the keys marked M and D are closed the students are supplied with a current for rapid time-marking, obtained as follows: The wires coming down from the ceiling to the key M are from the 110-volt alternating circuit, used to light the building. In this current the alternations number 66 per second, making 132 interruptions altogether. The rate has been frequently tested, and practically never varies. The key M connects this current with the transformer H, which is constructed on the principle of an inductorium with a secondary coil of very coarse wire. This transformer cuts down the voltage to any desired strength from 1 to 5 volts. The key D connects the transformer with the students' places, and supplies them with a current interrupted 132 times a second. By connecting this with an electro-magnet a student can get a beautiful time-marking in $\frac{1}{132}$ of a second. The transformer can supply enough current to keep ten or more electro-magnets going simultaneously. As rapid time-marking is seldom required by one experimenter for more than a few seconds at a time, we have never found the capacity of the transformer overtaxed. This current is used by the students

for timing the different phases of a simple muscular contraction.

If the key E be closed connexion is made with a battery of 50 Mesco dry cells, supplying a current of about 70 volts. This current is used by the students for working out the reaction of their own muscles to the constant current.

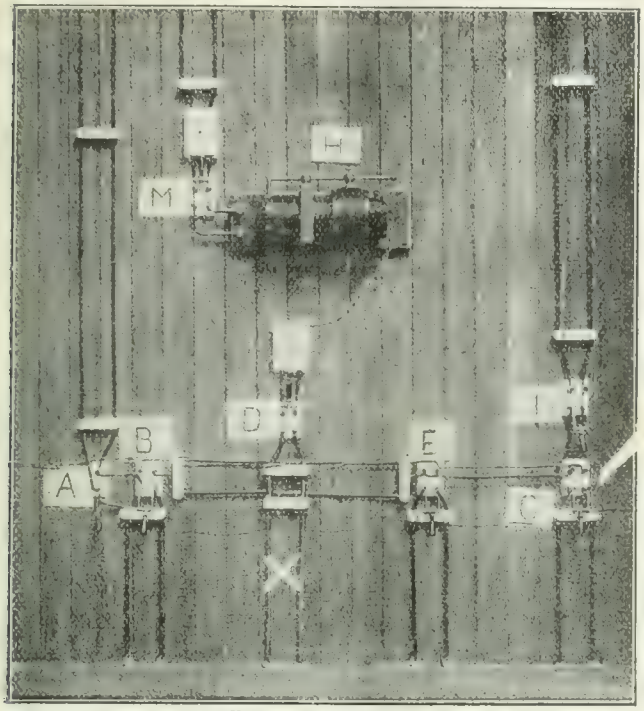


Fig. 2.—Switchboard.

In each cupboard there is a pair of sponge-electrodes, of which one has an interrupting handle, a commutator, and a

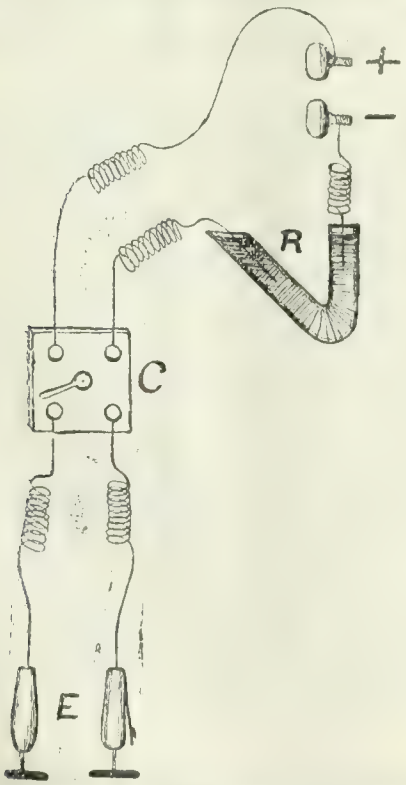


Fig. 3.

resistance tube. The resistance tube is made by bending a piece of ordinary glass tubing to an acute angle, filling it with a very dilute solution of sodium chloride and fixing it to a standard by a clamp (see Fig. 3).

The sponge electrodes E are connected with the commutator C, and the commutator is connected directly with one of the binding posts in the cupboard and indirectly with the other, a resistance tube R full of salt solution being interposed. The connexion with the resistance tube is made by the wire from the binding post being passed into one limb of the tube and the wire from the commutator into the other limb. If the wires in the resistance tube be only pushed a little way into the solution, very little current is obtained, and we only get a kathodal closing contraction. If they be pushed gradually farther in, more current passes, and the various stages of reaction are obtained, until, finally, before the wires meet, we get kathodal opening contraction. With this device we have perfect success, and thirty or more pairs of students can work out the law of contraction simultaneously with the current furnished by fifty dry cells.

If the key G be closed connexion is made with a battery of twelve Edison-Lalande cells of 100 ampère hour capacity, arranged in series. This gives a current of about ten volts for Pflüger's law and electrotonus. I may remark incidentally that the students have experienced greater difficulty in obtaining success with the electrotonus experiments than with any others in the course. Pflüger's law, on the other hand, usually comes out very well, although a few get atypical results with the weak ascending current.

If the key I be closed the 10-volt current is sent to the galvanometer which will now be described.

Tory's Galvanometer.

The galvanometer that we have in use was especially designed for us by Professor H. M. Tory, of the Faculty of Arts in McGill. It has proved very satisfactory indeed. It is

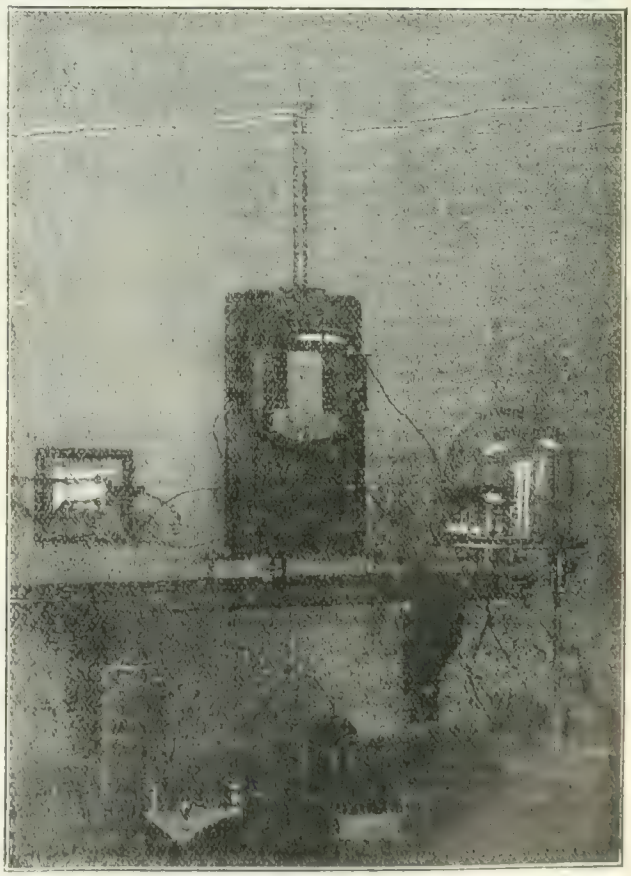


Fig. 4.—Tory's galvanometer.

sufficiently sensitive to show the currents of frog's muscle, heart and nerve by the movements of a pointer which can be seen without telescope, or screen, or darkened room. At the same time it is practically unaffected by the neighbourhood of iron, or by movements of students about the laboratory.

The following description is kindly furnished by Professor Tory.

The galvanometer (Fig. 4) is one of the D'Arsonval type, the magnet, however, being an electro-magnet instead of a steel magnet, as is usually the case. The magnet is made of a bar of soft iron and is wound with two coils, so as to give it magnetic saturation on the passage through it of about half an ampère. The poles are about half an inch apart. The resistance of the coils is such that the required current can be obtained from batteries, or from a direct current lighting circuit through an incandescent lamp. The suspended coil is made of very fine wire, and is about 2½ in. in length, weighing one ounce. The sensitiveness of the instrument depends on the current in the coils of the electro-magnet, on the number of turns of wire in the suspended coil, and the torsion of the suspension. To the lower end of the coil is attached an aluminium pointer enclosed in a small case, with its outer end bent vertically downwards over a small paper scale, the scale being so fixed that when the coil swings the pointer turns across the front of it (See Fig. 4). The front of the case is covered with mica. The weight of the coil can be taken from the suspension by turning a thumbscrew connected with a small lifter. The galvanometer is so sensitive that observations can be taken with a pointer, which usually require a telescope and scale, as the statements below show. Moreover, by cutting a small opening in the suspension tube a mirror is attached, so that by reflecting an incandescent light on a distant scale it may be used for class demonstrations. In this case the apparent movement of the coil is enormously increased.

This galvanometer of Professor Tory's is admirably simple and easy to use. The sensitiveness is quite sufficient for demonstrating the broad facts of electro-physiology and some of the nicer points. The experiments are first shown to the students, and they are then at liberty to repeat them for themselves. Things are so arranged that they can make their connexions without actually touching the galvanometer. The demarcation current of frog's muscle sometimes moves the pointer quite off the scale, and may always be well shown. The negative variation produced by tetanus causes a backward movement of the pointer through several spaces. A quite distinct to-and-fro movement is given by a beating frog's heart. The demarcation current of a frog's sciatic nerve may be seen pretty well, but the negative variation accompanying a nervous impulse is barely seen with a good preparation and is too slight to demonstrate to students. If the nerve be stimulated at regular intervals, however, the pointer will soon begin swinging to-and-fro in time with the stimuli. The currents from frog's eye, skin, and spinal cord all give good movements. A very distinct movement can be obtained by connecting the upper and lower surfaces of the tongue. Sufficient has been said to show that both as regards convenience and sensitiveness this galvanometer is eminently suited for students' work.

Apparatus Supplied to Students.

The contents of the glass cupboards on the students' tables are as follows:

Kymograph, supplied with automatic break key.
Dry battery (ammonium chloride).
Spring key.
Short circuiting friction key.
Inductorium.
Tetanus spring.
Platinum electrodes.
Non-polarizable brush electrodes.
Sponge electrodes.
Commutator.
Resistance tube.
Rheocord.
Time marker.
Two standards.
Clamps, assorted.
Muscle lever (also used for heart).
Brass rods, pulley, etc., used for heart work.
Moist chamber.
Muscle forceps.
Recording tambour.
Receiving funnel for pulse in carotid and for respiratory tracing (suprasternal notch).
Set of weights, scale pan, porcelain capsule.
Thermometer, seeker, beaker, thread, normal saline, saturated solution of zinc sulphate, frog board.

The kymograph was chosen after much consideration. It is a clockwork instrument made by the Chas. Willms Surgical Instrument Company, of Baltimore. Many advantages were recognized for the motor-driven instruments, but when it was found that a thoroughly strong clockwork kymograph could be obtained for 30 dols. we decided to have the men as independent of one another as possible, and free from the danger of having their work interrupted by any accident to a motor. We have found our kymograph thoroughly satisfactory except for an occasional jerk with the very slow speed. The dry battery is used very often for the inductoriums, leaving the switchboard free to supply a current for some other purpose, such as time-marking. It is also used for the weak and medium currents in working out Pflüger's law.

The inductoriums are based on the Harvard model, but are somewhat stronger and better finished. They were specially made to order. The rheocord is one designed for us by Professor Tory, and made in the McGill Physics Building; it is much like the one sold for the use of students by the Cambridge Scientific Instrument Company, except that instead of ebonite it is wound on slate, which has the advantage of being less affected by variations in temperature. A large part of the apparatus was made by the Chas. Willms Surgical Instrument Company, of Baltimore. The muscle lever and clamp are those designed by Professor Porter, and supplied by him under the name of the Harvard apparatus. We have numerous other articles of his invention about the laboratory, but they are not in the students' cupboards. Several of the instruments were designed by the physiological staff and made in Montreal.

The Laboratory Course.

There are 144 hours of practical physiology allowed by the time-table to each student. This is divided into 15 lessons of two hours each in the first year, and 38 lessons of three hours each in the second year. No attempt is made to cover the whole field of physiology in the laboratory. It is considered quite sufficient for medical students to perform a limited number of experiments under favourable conditions. The classes, which vary in size between 90 and 130, are divided into two divisions, so that there is plenty of room to spare in the laboratory. The number of instructors present to look after 50 or 60 men is usually three, which we find to be enough, as the men are supplied with full directions printed off from a copygraph, and it is not thought desirable to help them too much. They are expected to take careful notes, and are examined on them at the beginning of the following lesson. At this time, too, the best tracings taken are drawn on the board for the benefit of the whole class, and theory is briefly discussed. Any points of special difficulty that the written directions do not cover are also explained before they begin work. From half to three-quarters of an hour is taken up with this preliminary examination and explanation, leaving a little over two hours for actual experimenting. Many of the men, however, stay on beyond the allotted time when their first attempts have been unsuccessful. The ground covered by the experiments which the students perform for themselves is as follows:

First year: Simple lesson on blood, consisting of examination of clot serum, fibrin, and defibrinated blood, with a few simple tests; study of apparatus used for electrical stimulation with effects of different stimuli on themselves; preparation of muscle-nerve preparation, and study of the effects of various stimuli; elasticity of muscle; simple contraction; tetanic contraction; rheoscopic frog; exposure of frog's heart and study of cardiac cycle: Stannius's ligatures; isolated heart, last part to stop beating, etc.; simple lesson on food-stuffs; a similar one on digestion; reflex action in frog; examination of chick embryos at different dates, heart beat, brain, amnion, allantois, etc.

Embryology as far as this department is concerned is taught mainly by lectures, special demonstrations and lantern slides, but a practical course open to medical students is given by the Professor of Biology.

Second year: Blood, essentials for coagulation, salted plasma and oxalate plasma, proteids of serum, chemical tests for haemoglobin, spectra of haemoglobin and derivatives; muscle, minimal and maximal stimuli, make-and-break induction shocks, simple contraction, latent period, etc., fatigue and rest, electrotonus. Pflüger's law, law of contraction in body, unstriped muscle; frog's heart, inhibition reflexly and by stimulation of medulla, vagus and crescent, effect of cold and heat, pilocarpin and atropin; pulse; respiration, normal, forced, apnoea, cough; electro-physiology, heart and muscle currents demonstrated and repeated by those who choose; chemical physiology, eight lessons on food-stuffs, digestion and secretions; reaction time; three or four lessons on the special senses; examination of various types of placenta and other embryological specimens; repetition on white rat or rabbit of experiments on heart inhibition, with study of mammalian breathing, peristalsis, etc.

The lessons on physiological chemistry are supplemented by a course on clinical chemistry given by the Professor of Chemistry; and many demonstrations other than those referred to above are given before the class either in the laboratory or in the lecture room throughout the session. The lantern is also used freely.

Note by Professor WESLEY MILLS.

The Professor of the Department of Physiology holds the following views:

Neither the laboratory, nor the demonstration, nor the

lecture or didactic method is adequate in itself, but all these and others must be employed to secure the best results. As a matter of fact the number of methods of teaching is with us here increasing yearly. For a few years past, for example, the students of the second-year class have from time to time reported before their fellows, the professor acting as chairman, on a small number of original papers, and, this year especially, with surprisingly good results, both as regards the quality of the reports and the effect on the tone of the class. It is very easy to exalt technique unduly and very difficult to keep the field of physiology in good perspective in the student's mind, so that no small amount of the professor's energy is spent in not only utilizing, but correcting and supplementing, the results of the laboratory work—that is, its effects on the student's mind.

The above account of the laboratory, written at my suggestion by Dr. Morrow, who has been my chief assistant for some years, and to whose zeal and ability I gladly bear witness, will, I believe, meet the case. In designing, equipping, and arranging the work to be done in our laboratory we had the example of several of the leading American schools before us. Believing as I do that the physiology of the mammal is of great importance for medical students; that physiological principles are more than technique; that the law is higher than the demonstration; that all men should not be expected to do exactly the same work in the same way; that medical students are to apply physiology rather than advance it by discoveries, etc.. the course as at present constituted will probably be considerably modified in the near future. In spite of the time and energy expended in the work of reorganization, etc., in the past two years we have been able to do some research, both of the nature of verification and discovery, each of which we hold to be of importance, and the former too little considered at present.

The greatest need of physiology in McGill at the present time is the establishment of a Fellowship for research. This principle has been amply recognized among us in connexion with pathology, and I am hoping that ere long this want will be met in the allied subject of physiology.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

CONGENITAL GOÎTRE.

A very large number of readers must have been deeply interested by Dr. Hewetson's paper on Congenital Goître in the British Medical Journal of March 21st. If only as a curious coincidence it is perhaps worth while to mention that on March 11th I communicated to the Pathological Society of Manchester a Preliminary Note on Hyperplasia of the Fetal Thyroid. This was based upon a case in which, as in Dr. Hewetson's, the mother had been given potassium chlorate during pregnancy. The child was born alive, but death occurred within an hour. The thyroid gland was uniformly enlarged and weighed 25 grams. The normal weight of the thyroid at birth I find to be about 1·5 gram. On microscopic examination, my specimen is not so vascular as Dr. Hewetson's. The acini are smaller and more closely packed, and the connective tissue is more firm in type. There is no colloid matter. On cutting sections of fetal thyroids at different ages I find the "parenchyma" in my own specimen to resemble that of a fetus of about 6½ months' development. In normal fetal thyroids of 9 months' growth I find a considerable quantity of colloid material.

I note a further coincidence, for on March 11th, Dr. Angus Macdonald showed yet another example of congenital goitre after potassium chlorate to the Edinburgh Obstetrical Society Of this we shall see the details in due course. Three days before labour, the mother of the fetus from which my own specimen was obtained had an eclamptic attack, which was treated by thyroid substance as advised by Nicholson. I therefore propose to submit the whole case to the Edinburgh Obstetrical Society before publishing any detailed account of it.

Manchester. W. E. Fothergill.

PROTRACTED BONE SUPPURATION.

Mrs. H., aged 94, almost blind from cataract, and suffering from chronic bronchitis and emphysema, stated that when 4 years of age she met with an accident to her left shin bone, and that the medical man who saw her advised amputation, and told her that if she did not submit to operation she would die within six months. When I saw her the middle of the tibia gave indications of diseased bone from the discharge and the state of the skin near. The liver was not markedly enlarged, and the heart, apart from signs of fatty degeneration, had no other signs of disease. The lungs were markedly emphysematous. The case is of interest as it shows how long a bone may suppurate without seriously affecting health.

Southfields, S.W. J. Reid, M.D., M.A. and C.M.

SIMILAR CONGENITAL DEFORMITIES IN MEMBERS OF THE SAME FAMILY.

Dr. Esslemont's account in the British Medical Journal of February 7th induces me to put on record two cases, which interested me much at the time, of fetal malformations occurring in the same mother, the character of the malformation differing in each case only in degree.

The mother was a hard-working healthy woman, aged about 35 (I am writing from memory), who had three children. She had a normal confinement, at which a fine healthy boy was born, presenting nothing noticeable till it was found that no faeces were being passed. Examination of the rectum showed that it was occluded by a membrane. This was divided and stretched, and the bowels acted in a satisfactory manner. The child lived for a month or more, but sank into a marasmic condition, which had no connexion with its deformity, but rather with the parental idea that if it was not "all right," it had better not survive.

Two years or so after this, another apparently healthy child was born, whose muscular development and strength seemed to leave nothing to be desired, but its perineum was innocent of any orifices communicating with alimentary or renal systems. There was a tag of skin to represent a penis or scrotum. It lived for some days till the absence of drainage system in the body had time to assert itself, and then died.

The remarkable fact, to my mind, was the close similarity in each case of Nature's failure. In the first case, a comparatively minor fault—namely, neglecting to remove the membrane of the proctodoeal invagination; in the second, a serious error in neglecting to make any cloacal or proctodoeal invagination at all, pointing to the idea that what caused the failure in the first instance had gained in intensity in the second, and, further, that the failure was in the maternal organism, unless we regard the two cases as a remarkable coincidence.

We know a good deal of the cells and their divisions which result in the formation of the cellular layers by whose foldings and buddings the organs of the fetus are formed, in which we may trace phylogenetic reminiscences, but nothing of the forces which preside over the proper evolution of this architectural plan, and which fail in a remarkable and inexplicable way. These two cases suggest, as I have said, that it is in the maternal organism that we must look for the causes of these failures—in fact, to the vexed question of maternal influence and impressions.

Sevenoaks. James E. Blomfield, M.A., M.B.Oxon.

CASE OF FIBROUS STRICTURE OF THE RECTUM FOLLOWING DYSENTERY.

Simple fibrous stricture of the rectum due to dysenteric ulceration is so rarely met with among Europeans in the East, that the following case seems worthy of record.

A medical man who had resided five years continuously in India had his first attack of dysentery in 1898, which was followed by others in the two following years. None of the attacks were severe in character, and all appeared to yield readily to ordinary treatment. For several months prior to the diagnosis of stricture the patient suffered from great irregularity of the bowels, constipation being the primary condition but diarrhoea frequently occurring, being probably due to catarrhal enteritis from the irritation of retained faeces. Some "ribboning" of the stools had been noticed, but this was attributed to spasm of the sphincter due to some extero-internal piles which had developed as the result of residence in the tropics. When constipation became marked the patient suffered from frequent calls to stool, occasionally resulting in the passage of shrimp-like masses of faeces. This condition was, however, of rare occurrence, as the patient, like most Anglo-Indians, was careful to secure a free action of the bowels almost daily. The patient had been employed on plague work, and, as he had had no holiday for

nearly three years, and suffered from occasional attacks of malarial fever he became considerably debilitated. He came under treatment for a sharp attack of influenza, with tonsillar symptoms, during the last hot season. Treatment was commenced by a calomel purge, and the pyrexia and tonsillitis combated by appropriate remedies. About the fourth day of the disease the patient, being constipated since the action of the preliminary cathartic, was given a glycerine enema. This produced violent tenesmus but no action of the bowel. An ordinary soap and water enema was then administered but without result. Large enemata and big doses of castor-oil on subsequent days were equally ineffectual. On the seventh day of constipation the finger was passed into the rectum, and a narrowing of the gut discovered about 1½ in. from the anus. The stricture felt like a piece of thick parchment let into the bowel wall, with a central aperture which barely admitted the tip of the forefinger; scybalae could be felt beyond.

A large enema of water and oil was then given by the medical attendant, but it only washed away a little faecal matter and a good deal of it was retained, which increased the distension of the abdomen and the resultant discomfort. After consultation, it was decided to divide the edge of the stricture with a knife so as to allow the scybalae to pass. This was done without an anaesthetic at the patient's expressed wish. The "nicking" of the stricture was followed by a large enema of olive oil and hot water,, and the bowels at last acted freely. When the patient had somewhat recovered from the prostration caused by the influenza and obstruction of the bowels, gradual dilatation was attempted and persisted in for some time. This, however, failed completely, and as the patient was considerably debilitated, and operative treatment was hardly to be recommended in India, he was invalided to Europe. The patient's debility was attributed to malarial poisoning and the fact that he was obliged to maintain what was practically a state of artificial diarrhoea, as the slightest constipation induced troublesome tenesmus. On arrival in England he placed himself under surgical care. The stricture was forcibly dilated under an anaesthetic, the rectum plugged, and after four days' constipation the passage of bougies was commenced. The patient is now convalescent, but will be required to pass a bougie for several months. I think the case is of some special interest in that it shows that typical fibrous stricture may develop after comparatively mild attacks of dysentery, and that a piece of mucous membrane involving the complete lumen of the gut may slough without producing alarming symptoms.

R. J. BLACKHAM,
Captain Royal Army Medical Corps.

TRIGGER FINGER.

IN his interesting communication on this subject in the BRITISH MEDICAL JOURNAL of January 31st, p. 251, Mr. C. Hamilton Whiteford mentions small nodes as frequently occurring on the flexor tendon or sheath. No doubt these thickenings are, anyhow in many cases, the real cause of the disturbance. As to their nature, I beg to suggest that they are, at least in a great number of cases, of gouty origin rather than rheumatic, as stated in the statistics of Necker quoted in the article in question. At Bad Salzschlirf, which is chiefly resorted to for gout and rheumatism, such lesions are not unknown. During the last season I had occasion to treat two such cases—one a merchant from London, the other a German gentleman, a teacher of classics at a public school, aged respectively 38 and 34 years. Both had come to Salzschlirf on account of gout, and the presence of trigger-finger (Teutonice, *Schnappfinger*) was only incidentally noted. The symptoms were of the same kind as described by Mr. Whiteford in the second case, however, without marked stiffness on movement. The parts attacked were in the first case the index and middle finger of the right hand, and also to a slight degree the left index finger; in the second case the ring finger of the right hand alone was affected.

At first sight the impression was produced that subluxation of the first interphalangeal joint of the affected fingers had taken place. On the patient closing his fist a distinct click or snap was audible, and the finger was flexed and immobilized at this part, while the metacarpo-phalangeal joint was still movable to a certain degree. Further examination, however, revealed the presence of nodes on the flexor tendons, moving on contraction of the respective muscles but easily sticking fast at the articular protuberances. In the case of the teacher the defect had first become clearly evident during his term of service in the army, when he experienced some difficulty in musket exercise.

Both cases showed decided improvement in the course of the Salzschlirf treatment, which included massage and the use of gymnastic apparatus, besides bathing and drinking, but I am unable to state whether the improvement has remained permanent.

Bad Salzschlirf, near Fulda. F. A. PHILIPPI, M.D. (Leipzig).

EXCISION OF THE TONSILS DURING AN ATTACK OF ACUTE TONSILLITIS.

ALTHOUGH not the time any one would choose for tonsillectomy still there are certainly cases where one is not only justified in operating, but it seems to me almost bound to give the patient the relief which the removal of a baneful obstruction affords. Moreover, as Mr. Bleasdale[1] truly observes, it only too frequently happens that as soon as a patient with chronically enlarged tonsils recovers from an acute attack removal is declined, nor does the lesson of repeated attacks overcome the dread of "an operation" nor the dislike of being "laid up." Personally, I have operated during the acute stage in several cases, and the results have been in every way satisfactory. One patient—a neurotic female, with a temperature of 104° F.—was greatly relieved, and made a rapid convalescence. The slight haemorrhage resulting seemed to be a useful depletant. I fail to see why we should hesitate to operate "because the part is inflamed," any more than we should hesitate in a case of, say, appendicitis or periostitis, where the good effect of timely incision is generally recognized. It seems to me about as logical to say "always wait until the inflammation subsides," as it is in a case of alveolar abscess to await the bursting or dispersion of the abscess before extracting the offending tooth.

Bowdon. P. R. COOPER, M.D.Lond., F.R.C.S.Eng.

MALARIA AND THE HYPODERMIC INJECTION OF QUININE.

I HAVE of late seen several notes in the BRITISH MEDICAL JOURNAL on the hypodermic injection of quinine for malaria, in the majority of which fairly large doses were advocated, I think, therefore, that it may be of interest to place on record the successful results of the injection of small doses given under the skin.

My patients consisted of two series of cases—36 treated at Deoli in Rajputana and 64 at Loralai in Beluchistan, making a total of exactly 100 natives, children and adults. I use the hydrochlorate or the acid hydrobromate of quinine, both salts acting equally well. The dose I always give is from 1 gr. to 2 gr. on three or four successive mornings, injected into the subcutaneous tissue over the splenic area. After three injections in this site, if the treatment has to be continued, either the right flank or the upper arm is chosen. My rule is to give a dose for two successive mornings after the last rise of temperature, however slight.

I found that in 76 cases only three doses were necessary, the fever disappearing after the first dose; in 14 cases four doses were required, while in the remaining 10 cases more than four were given; these latter were of course the more severe cases, but in none were more than seven doses given.

Crystallization of the quinine salt was avoided by boiling the needle in a test tube before each injection, the syringe itself while not in use being kept constantly immersed in carbolic solution 1 in 40. No abscesses followed the injections, and in very few of these cases was there severe headache, as after the exhibition of large doses of quinine by the mouth.

Certain types of malaria may require larger doses, but for the routine treatment in hospitals small doses are quite sufficient and act with equal certainty.

DE VERE CONDON, B.A., M.B.,
Bombay. Captain, I.M.S.

PERI-URETHRAL ABSCESS CAUSED BY IMPACTION OF URIC ACID CRYSTALS IN THE URETHRAL LACUNAE.

As this cause of peri-urethral abscess has not to my knowledge been mentioned in the textbooks up to the present the following notes may be of interest: E. E., publican, aged 54, had never had any illness until July, 1900. He then noticed that his urine was very dark in colour, but he could not say that it looked like blood. This gradually passed off, and when the urine was first examined it contained no blood, but a trace of albumen. In November of the same year micturition increased in frequency, especially at night, and with this

[1] BRITISH MEDICAL JOURNAL, January 10th, 1903, p. 75.

there was occasional slight pain in the right groin, and also at the end of the penis. There was at no time any difficulty in passing water. The urine was at times acid, at others alkaline in reaction.

Early in January, 1901, he noticed pain near the anus on sitting down, which gradually became worse until on January 26th, while at stool the pain suddenly shifted into the penis, about half-way between the prostate and the meatus. The penis rapidly became swollen and oedematous; he had a well-marked rigor; but urine passed easily, and a soft catheter revealed no sign of impacted calculus or of stricture. Uric acid crystals were, however, found in the water he passed. The swelling of the penis gradually became less, but more localized, the rigors, however, continuing at intervals. Ultimately the local swelling suppurated, and the perineal abscess was opened and drained. No sign of calculus or crystals was found, but the history points very strongly to a small one being the cause of the suppuration.

He was carefully sounded before suppuration occurred, but no stone detected. Since the operation his urine has become normal, and he has had no subsequent trouble.

Manchester. ROBERT F. CHANCE, M.R.C.S., L.R.C.P.

THYROID EXTRACT IN PSORIASIS.

On reading the remarks of Dr. Radcliffe Crocker about the use of thyroid extract in the treatment of psoriasis in his interesting and instructive lectures on the conditions which modify the characters of inflammation of the skin, and their influence on treatment, I was reminded of a very severe case of long-standing psoriasis covering nearly the whole body, the skin of which frequently cracked and bled and caused great pain and suffering. It was so extensive that it nearly resembled a fish skin and might have been almost classed as an ichthyosis. I put him on large doses of thyroid extract and the rash cleared away very rapidly. During the treatment the digestive processes were on two or three occasions disturbed, associated with a rise of temperature, but soon righted again by a day or two's intermission of the treatment. The man was over 70 years of age.

Ilkley. GEO. LONGBOTHAM, M.R.C.S.Eng.

CASE OF FATAL DIARRHOEA.

Cases of rapidly acute and fatal dysenteric diarrhoea seem to be sufficiently rare to be worth recording. On March 18th a girl aged 9, strong and intelligent, walked two miles to school in the wet, and seemed perfectly well in every way. In the evening she was troubled with a vague feeling of *malaise*. Next morning she was found to be delirious, with a temperature of 105° F., with urine normal, no rash or sore throat, no sign of pain in any part of her body, either with or without pressure, but she vomited up constantly some greenish mucus, and was passing blood and mucus by the bowel. Per rectum nothing special could be felt. The abdomen was flaccid, but no increase or absence of resistance could be detected. There was no tympanites; the legs were not drawn up. She had a sunken "abdominal" expression. There had been no illness in the house, but an epidemic of influenza had occurred in the neighbourhood. Her food had apparently been exactly the same as the other children. In spite of stimulant treatment and tepid sponging she died within forty-eight hours of previously perfect health, with symptoms of cardiac failure. For social reasons a necropsy was not advisable. A rather similar case is recorded in Ashby Wright's *Diseases of Children*.

ARTHUR G. WILKINS, M.B., Ch.B.Vict.

Glenridding, near Penrith.

"ADRENALIN" AS A HAEMOSTATIC.

I have recently had under my care two cases of haemorrhage from the nose and gums, in which I have had remarkable results from "adrenalin chloride" (Parke, Davis, and Co.'s preparation compounded with chloretone) used as a haemostatic. Some time back I saw a note in the British Medical Journal on the value of this product in a case of epistaxis, and determined to try it on the first opportunity.

In the first case a patient sought advice for a frequently recurring bleeding from the nose, often so profuse as to produce syncope. When I saw her it had caused a distinctly anaemic condition generally. There were no adenoids or ulcerations visible on examination with the rhinoscope, and the mucous membrane though oozing at many points was not specially thickened or turgid. I injected, with a small glass syringe, a mixture of one part of adrenalin chloride in two of water into each nostril, and painted the mucous membrane as high up as I could reach with the full strength preparation. The bleeding ceased at once, and I told her to come in a day or two, and have the same treatment. She did not return until six weeks after the original application when she assured me that she had had no trouble with her nostrils since that time.

The second case was that of a boy, aged 14 years, from whom I had removed two molar stumps, the cavities of which continued bleeding for six hours, in spite of the iced water and cotton-wool plugging applied by his parent. I swathed the cavities thoroughly with the "adrenalin chloride" and left a plug soaked with it in each. There was no further haemorrhage.

It seems to me there is a large sphere of utility for this preparation in controlling mucous and small venous bleedings, which are often so reducing and so difficult to control.

London. L. WHEELER, M.B., B.Ch.

DIACHYLON POISONING.

In view of the paper by Dr. Jacob and Mr. Trotman in the British Medical Journal for January 31st, p. 242, I venture to think that the notes of the following case may be of interest:

Mrs. X., aged 29, sought relief, early in November, 1902, for severe vomiting. She looked ill, her face having an anxious expression, and being of a yellowish-white colour. She was very constipated, and complained of a good deal of headache. Although repeated inquiries on the subject were made, no history of the taking of any irritant could be obtained. She was put to bed, and in spite of varied treatment the general condition became worse, vomiting, constipation, and headache being more severe.

Early on the morning of November 24th the patient had an epileptiform fit, and in the course of the same day she vomited some blood; she also had five more fits during that day. In the course of the evening some weakness was noticed in the external rectus of the right eye, there being occasional internal squint on that side. The patient was given nutrient enemata, as all food by the mouth was at once returned.

It was thought that she was possibly suffering from some intracranial growth, but nothing abnormal was seen on ophthalmoscopic examination. Up to this time there was no sign of any blue line on the gums.

During the next week feeding by means of nutrient enemata was continued, the patient lying in a semi-conscious condition, and complaining of intense pain in the head. About this time it was discovered that she had taken something previously, and later, when she was able to talk about things, she admitted that she had taken in the course of a week 1½ oz. of diachylon.

Towards the end of November a blue line began to appear on the gums, and rapidly became more apparent. Paralysis of the right external rectus became complete, the patient complaining of diplopia. Knee-jerks were diminished, pressure over the vagi gave rise to pain. Left pupil was larger than right.

On December 9th lead was discovered in the urine, but could never be detected on any other occasion. Since then the patient has been getting well. The most persistent symptoms were headache and constipation. On December 15th she had another epileptiform attack, but none since. The patient is now about the house. The blue line has almost entirely disappeared, and the ocular paralysis has passed off. The most noticeable point about the case is, I think, the long period—almost a month—that elapsed between the taking of the lead, and the appearance of the characteristic signs of lead poisoning. I have come across several other cases of poisoning by diachylon, but never any so severe as this one.

Walsall. FRANK G. LAYTON, L.R.C.P., M.R.C.S.

THE TREATMENT OF OCCIPITO-POSTERIOR PRESENTATIONS.

I have found a very simple method of dealing with these cases, in my experience, to be as follows: Instead of using short, straight forceps, as suggested in most textbooks, the hand is used.

The patient is anaesthetised and the exact position noted; the head is then grasped in the right hand and rotated, so that the occiput is brought under the symphysis pubis, or even slightly further round, if there is any tendency to assume the old position on withdrawing the hand. Ordinary forceps are now used and the head delivered. This is a simple manœuvre

where the head is small. There are, however, occasionally cases where the pelvis is not large enough; in these the head, grasped in the right hand, is pushed up into the upper portion of the pelvis, or into the abdomen, and rotated at or above the brim of the pelvis, forceps being immediately applied.

I have used this method in all my occipito-posterior presentations during the last eight years (some thirty-five cases), and have never found any difficulty; in fact, I have been able nearly always to deliver the head within ten minutes of accomplishing anaesthesia.

The chief advantages of the hand over forceps are that it causes less damage to the soft parts of the mother; the hand is better able to appreciate the turning movement of the shoulders of the child, thus there is less danger to the neck of the child; the hand is able to push the head up into the abdomen, which we cannot do with short forceps; and, lastly, our hands are always with us.—I am, etc.,

South Hampstead, N.W. ERIC L. PRITCHARD, M.D.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

ST. BARTHOLOMEW'S HOSPITAL, ROCHESTER.

CASE OF ACUTE HAEMORRHAGIC PANCREATITIS.

(By J. Holroyde, F.R.C.S.E., Consulting Surgeon to the Hospital).

Cases of acute inflammation of the pancreas are sufficiently rare to make the record of each one a subject of more than passing interest, especially as the difficulties of diagnosis are great, the symptoms being so suggestive of other conditions.

J. L., aged 37, a railway porter, was sent into hospital on the morning of September 10th, 1902, with a note from his medical attendant stating that he was suffering from intestinal obstruction.

History.—He stated that he first felt sudden pain on the night of September 8th (about forty hours before admission), as if he had "strained himself inside." The pain lasted all night, and on the following morning he began to vomit. A doctor was called in, who gave him an aperient, but without effect, and as the general symptoms were getting worse he was sent into hospital.

Condition on Admission.—He was cold and collapsed, and complained of great pain in the abdomen. His temperature was 98° F., his pulse feeble and quick, and his abdomen tympanitic and moderately distended. I saw him shortly after admission, and on examination found considerable tenderness over the abdomen, more marked in the left umbilical and epigastric regions, and especially so at a spot 2 in. above and 1 in. to the left of the umbilicus. Faeces could be felt per rectum, and a simple enema was ordered, to be followed by a rectal injection of brandy, with ⅛ gr. strychnine hypodermically, and the application of hot bottles. I saw him again in the afternoon, and found him in the same collapsed condition. There had been a good result from the enema, but no flatus had passed, and the pain and retching still continued.

Operation.—The symptoms pointed to perforative peritonitis, and it was decided to do a laparotomy as soon as the patient could be got ready. A median incision was made below the umbilicus, and on opening the peritoneal cavity a large amount of turbid fluid was seen. The portion of small intestine which presented in the wound was deeply congested but not markedly distended. I made the usual search. The hernial rings were clear, the colon was flaccid, and the appendix healthy. At this stage of the operation the patient, who was in a very collapsed condition, succumbed.

Necropsy.—The small intestines were intensely congested, and the mesentery showed numerous haemorrhagic points. The colon was empty, and the ascending and transverse portions were of normal appearance. The descending colon was more congested, and its peritoneal covering was for the most part adherent to the parietal peritoneum on its posterior and lateral aspect. In the neighbourhood of the duodenum and the lower posterior wall of the stomach white thickened patches were visible, looking like areas of fatty degeneration, and at the root of the mesentery a hard mass was felt which on examination proved to be the pancreas and adjacent structures. It was greatly congested and haemorrhagic, and was adherent to the posterior wall of the stomach, to the duodeno-jejunal bend, to the posterior part of the lesser peritoneal sac, and to the spleen. A quantity of blood-stained serum was found in the peritoneal cavity, and numerous flakes of lymph were seen both on the parietal and visceral peritoneum. Beyond the evidences of peritonitis the other abdominal organs were quite healthy. The structures involved were separated with great difficulty.

Examination under the microscope showed disintegration of pancreatic substance, numerous haemorrhages, and crystals of haematoidin.

Remarks.—The literature on the subject is not very profuse, and the best description of the symptoms which occur in inflammatory affections of the pancreas is in an article by Fitz, of New York. The general symptoms are indicative of acute perforative peritonitis, or of intestinal obstruction, but there are one or two points which in the future would influence me in endeavouring to form an opinion. First of all, as to the seat of pain. My patient complained that his principal pain was on the left side above the level of the umbilicus, and there was absolutely no tenderness, or dullness or history of pain in the neighbourhood of the appendix. Then again there was well-marked tenderness over the region of the pancreas, and, what is very important, there was no history of any previous illness such as gastric ulcer. There was no history of previous constipation, nor was there any indication of mischief in the descending colon. The dominant signs were those of collapse and pain such as would accompany perforative peritonitis, and the distinctive points were that these symptoms occurred suddenly in a previously healthy subject, and that the chief seat of pain was in the region of the pancreas. It is said that catarrhal duodenitis may be the primary cause of pancreatic inflammation, and also that it occurs in alcoholic subjects. The latter cause was certainly not present in this case, and so far as I can ascertain the patient had not suffered from any digestive trouble.

CHILDREN'S HOSPITAL, NOTTINGHAM.

CASE OF CHRONIC INTUSSUSCEPTION: OPERATION: RECOVERY.

(By R. G. Hogarth, F.R.C.S.Eng., Surgeon to the Hospital; Assistant Surgeon General Hospital, Nottingham.)

A little girl, aged 6, was admitted to the hospital on May 22nd, 1902, for intussusception.

History.—She is one of a family of nine, four of whom are alive and five dead. The mother, who is a healthy woman, has had two miscarriages since the birth of her last child, who is the present patient. The father is said to be delicate. Six weeks ago the patient was attacked by diarrhoea which lasted a week. When this stopped abdominal pain came on, recurring every ten minutes or so night and day. The child when attacked at night got on to her knees in bed. This pain continued up to the time of admission. The mother was quite positive that there has never been any blood or slime passed. At no period of the illness was there what might be termed constipation. The child never went over a day without having an action of the bowels. Two weeks before admission vomiting began and was very persistent, occurring immediately after ingestion of any fluid. Thirst was very marked. The appetite had been almost lost for a month, the patient having existed on milk during that period. There had been great loss of flesh for a month. On May 12th, 1902, the child was brought up to the out-patient department and the note was made: Fourteen days' pain in belly, wasting and sick; B.O. + abdomen nil. She was given Angier's petrol. emulsion and salol.

State on Admission.—May 22nd, 1902. The child is extremely ill, with a very emaciated and drawn face, indicating abdominal disease. She lies on her back, with both knees drawn up. The tongue is very foul, and there are sordes on the lips. The temperature is subnormal; breathing slow. The pulse is rather faint. Nothing wrong is to be found in the chest. Abdomen: The umbilicus is normal. There is no dilatation of the veins. Tenderness on palpation is present, especially in the left flank. A tumour is felt in the line of the transverse colon, and passing down the left flank, ending in a rounded extremity, giving to the hand the impression of the lower end of the kidney. It could not be made out for certain that the horizontal and vertical tumours were continuous. Splenic dullness was present, and was separated from the tumour by a resonant area. Loin dullness was continuous, with the dull note over the tumour. There was no swelling detectable in the right flank. No fluid was found in the abdomen, and no glands felt.

Diagnosis.—This seemed to rest between tuberculous peritonitis of the plastic variety, causing matting of the omentum and intussusception. Mr. Hogarth was sent for, and allowed the patient, after examining her, to remain as she was for the night. An enema had been given after admission, and hard faecal masses had been got away.

Progress.—May 23rd. The child had a fairly good night. She was sick after most of her feeds. The tongue was more foul and pulse more rapid in the morning. Temperature 98°. The condition of the abdomen was as before. There was no motion of the bowels.

Operation.—In the afternoon, the parents' consent having been obtained, Mr. Hogarth opened the abdomen in the middle line, above the umbilicus.

The child was anaesthetised with A.C.E., and kept under with chloroform. A very large intussusception was found of the ileo-caecal variety, ending half way down the descending colon. It was very easily reducible until just at the very end, where the appendix was invaginated in the caecum. Liq. strych. mij was given hypodermically before operation and on completion. It was found extremely difficult to draw this out, adhesions evidently having formed. The appendix was removed. The abdominal wound was then stitched up and dressed with gauze.

Progress.—During the afternoon there were several actions of the bowels, the motions being very watery and small in amount. The first evacuation took place within a few minutes after returning the child to bed. There was no sickness. Mr. Hogarth ordered peptonized milk and Valentine's meat juice to be given. Up to 11 p.m. the child had taken feeds well. Pulse was 160 and good volume. Breathing easy. As the child was restless, she was given liq. morph. hydrochlor. mviij at 11 p.m., and ten minutes afterwards she was sleeping quietly.

May 24th. Temperature 99° this morning; fell a little in evening. There was no shock to speak of, no special measures being taken in that direction. There was diarrhoea, and tinct. opii miv was ordered four-hourly with bism. carb. gr.x, also brandy 5j a day. This kept the child drowsy.

May 26th. The mixture was continued eight-hourly, and was stopped the same evening. Bismuth salicylate was ordered, gr.vj four-hourly.

May 27th. Child has gone steadily on improving. Diet now advanced to Benger's food, beef-tea, plasmon, milk.

May 29th. Bread and butter, cocoa, milk pudding.

June 1st. Stitches removed, wound healed; collodion dressing applied. Child looks still pulled down, but bright and well. Pulse 90, respirations 29. Temperature subnormal morning and evening.

June 15th. Child up and running about; ordinary diet; quite well. Discharged to go to a convalescent home.

Remarks.—This case presents many features of great interest. Chronic or subacute intussusception is far from common, and in most cases the difficulty of reduction is very great owing to the formation of very firm adhesions. There is no doubt that an abnormal condition of the appendix was the starting-point in this case. At the operation the appendix itself was found invaginated into the caecum and formed the apex of the intussusception. It is difficult to understand how a healthy appendix could become invaginated, but more difficult still if it was inflamed, as the walls would then be thickened and indurated and lend themselves much less easily to such a proceeding. The intussusception extended well into the sigmoid flexure, and the reduction was found comparatively easy as far as the hepatic flexure of the colon, after this adhesions became very dense, but by squeezing carefully it gradually came out, till only the invaginated appendix was left. This was pushed out from the inside through the wall of the caecum without opening the wall of the latter, which was thought would be necessary. It was impossible to return it completely, as a small part at the base was so adherent. The appendix was then removed in the ordinary way. All that remained was a hard indurated disc in the wall of the caecum at the base of the appendix, about the size of a halfpenny. This it perhaps would have been better to excise, but as the patient was suffering somewhat from shock it was left and the abdomen closed. She made a rapid and uneventful recovery.

For the notes and careful after-treatment I am indebted to Mr. Dawson, the House-Surgeon at the Children's Hospital.

REPORTS OF SOCIETIES.

LIVERPOOL MEDICAL INSTITUTION.

Pathological and Microscopical Section.

R. J. M. Buchanan, M.D., M.R.C.P., in the Chair.

Thursday, March 26th, 1903.

The Pathology of Progressive Muscular Atrophy.

Dr. A. W. Campbell gave an account of the histology of two cases of progressive muscular atrophy, and made special reference to changes in the cortex cerebri. In both instances the muscles, the peripheral nerves, the spinal cord and bulb showed typical alterations, in both also a serial examination of the Rolandic area in the whole of its extent revealed the fact that in the part of the ascending frontal gyrus and paracentral lobule which an examination of healthy brains proved to be the normal residence of the giant cells of Betz, scarcely any of these elements were to be discovered, and their disappearance was associated with a general distortion of the cells which remained, atrophy of efferent fibres, and distension of cortical blood vessels. The ascending parietal and other neighbouring convolutions were relatively healthy. The view that the spinal changes in progressive muscular atrophy were primary was rendered untable by the findings in these two cases, because from an experience of the cortical alterations in instances of interference with the system of motor neurons at a lower level (cases of myelitis and amputation) it was idle to suppose that a complete retrograde destruction of the cells of Betz could occur during the progress of a disease which usually did not last more than three years. The alternative views mentioned were that either the cortical changes were primary, or else in progressive muscular atrophy one saw an expression of a general and more or less simultaneous affection of the whole system of motor neurons. The fact that the alterations were entirely confined to the area of distribution of the cells of Betz gave support to the view previously expressed by the author of the paper on histological grounds, that in man the topography of the motor area was analogous to that which Sherrington and Grünbaum had defined in the anthropoid ape; further, since sensation was unimpaired in cases of progressive muscular atrophy, the changes noted could be used as an argument against the theory of the mixed sensori-motor function of the central convolutions. The paper was illustrated by drawings and microscopic sections, and in one of the latter an abundance of muscle spindles were seen remaining in an extremely atrophied muscle; an appearance which strengthened the view that these bodies are concerned with muscle sense.

Dr. Warrington considered that Dr. Campbell had made an important addition to the pathology of this disease, since the complete disappearance of the Betz cells had not previously been described. It was recognized that the anatomical changes in the great cortico-spinal efferent tract were found most extensively marked in its peripheral distribution and were not seen in the higher cerebral regions. This, however, did not imply a peripheral origin, but indicated that the anatomical change first appeared in the position most remote from the trophic centre. Etiologically no toxic influence had been traced, and the view appeared probably correct that the disease was primarily due to some inherited lack of durability and unusual stress on the motor neuron. Such considerations also led to the acceptance of the view that the disease first began in the great pyramidal cells. Dr. Campbell's demonstration of the integrity of the muscle spindles was also important.

Dr. Grünbaum and Dr. J. Wiglesworth also spoke; and Dr. Campbell replied.

Acute Intussusception in an Infant.

Dr. Llewellyn Morgan read a note on a case of acute intussusception in an infant associated with ulceration of the intestine.

Mr. R. W. Murray said the case was exceptionally interesting on account of the remarkable combination of the lesions. It was the only case of intussusception he had met with in which the invagination originated above the ileo-caecal valve, and it was also the only case he had seen in which tuberculous ulceration of the gut had been the cause of the intussusception.

Specimens.

Dr. R. T. Bailey showed a specimen of acute plastic pericarditis; also a sequestrum consisting of the lower jaw of a child the subject of congenital syphilis.—Mr. Larkin showed sections of a carcinoma mammae densely infiltrated with small polynucleated round cells; also an adenomatous tumour which filled the lower half of the antrum and invaded the nose, the palate, and the alveolus; its structure was that of a simple mucous gland.—Dr. Warrington showed a specimen and sections from a case of collapse of the lung, bronchiectasis, and gangrene after pneumonia. Dr. E. T. Davies showed specimens of fibroid tumours of the uterus.—Mr. G. Hamilton showed microscopic sections from a sarcoma originating in the tendon sheath of the tibialis posticus.—Dr. Hay showed specimens from a case of actinomycosis; the patient was a girl, aged 15, the first noticed lesion being a submammary abscess; the disease at present affected the left lung, and there were secondary foci in the brain, scalp, and skin of the extremities and trunk.—Mr. Thelwall Thomas exhibited a carcinoma of the kidney removed from a woman aged 58, occupying the lower half of the organ; the cells of the new growth were large and showed some melanosis; he considered it adrenal in origin. Mr. Thomas also showed a necrotic clavicle removed from a man aged 24, following osteomyelitis; also a specimen of tuberculous disease of the mammary gland; the axillary glands were enlarged but not tuberculous.—Dr. Nevins showed an ovarian cystoma. The following members took part in the discussion of the specimens: The Chairman, Mr. Paul, Mr. Monsarrat, Dr. Barendt.

Ulster Medical Society.—At a meeting held on April 2nd, Dr. John Campbell, President, in the chair, Dr. Hogg, Union Infirmary, was elected a member.—Dr. Calwell showed a case of disease of the skin, which consisted of four patches of slightly-raised, reddish, dry plaques on the legs and thighs, in various stages of evolution; the diagnosis was

doubtful.—Dr. AGNEW (Lurgan) read a paper on Irish sanitary law with reference to certain anomalies and reforms which were urgently needed. Dr. GARDINER ROBB spoke.—Dr. DEMPSEY (Belfast) read notes on some cases of laparotomy in gynaecological cases. Dr. BOYD and the PRESIDENT spoke.—The PRESIDENT showed (1) the Fallopian tubes from a case of double pyosalpinx, and (2) the ovaries and uterus from a patient who had a rudimentary uterus, an incomplete vagina, and her ovaries in the internal inguinal rings, one of them being cystic.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

CLINICAL MEETING.

RICKARD W. LLOYD, L.R.C.P., M.R.C.S., President, in the Chair.

Friday, March 6th, 1903.

DISLOCATION OF PATELLA.

MR. J. R. LUNN showed a case of dislocation of the left patella in a woman aged 38. Ten days before admission to the infirmary she fell and injured her knee. The diagnosis of dislocation of the patella outwards was confirmed by the *x* rays. Attempted reduction under chloroform failed. The patient now had difficulty in getting up from a chair and in extending the knee, but once up she could walk fairly well.

Mr. JACKSON CLARKE considered that the internal lateral ligament had been ruptured and should be sutured.

Mr. KEETLEY advised operation.

Mr. J. E. FRAZER said that the internal vastus expansion was ruptured and the patella on the outer side of the outer condyle of the femur, so that the ligamentum patellae passed very obliquely to its insertion. He thought the external lateral attachment should be divided and the internal sutured. Then careful movements with fixation should be used. This failing, it might be necessary to resect.

SPINAL CARIES.

Mr. JACKSON CLARKE showed two cases of spinal caries in children. In one the products of disintegration were able to escape by means of a psoas abscess; in the other there was pressure on the cord resulting in paraplegia. To relieve this costo-transversectomy had been performed with good results. Laminectomy only removed sound parts and did not establish so efficient a drain. When rest had failed, and the tuberculous matter had liquefied, a transverse process with portions of the end of a rib should be resected. The disintegrated matter could then be evacuated, and the spine fixed by means of a posterior splint.

Mr. KEETLEY remarked that time cured nearly every case of paraplegia due to caries if the patient lived long enough. Recovery could not be ascribed to any particular treatment unless improvement commenced immediately. Such improvement might often be seen after applying a plaster jacket. Mr. Keetley had trephined through the transverse process some time before Vincent of Lyons had suggested a similar procedure. The patient recovered, but not probably as the result of the operation. Doubtless the operation had its uses, but the main thing was fixation of the spine, which was best done by means of a plaster jacket.

PYLORECTOMY FOR NEW GROWTH.

Mr. BIDWELL showed a patient who, up to September, 1902, had suffered from indigestion for two or three years, and vomiting for six months. His stomach was dilated below his umbilicus. He was much emaciated. Examination of the vomit showed free hydrochloric acid and no acid lactates. The case was regarded as one of cicatricial stenosis of the pylorus, and gastro-enterostomy was advised. On September 5th the abdomen was opened, and a new growth found at the pylorus. It was not adherent, and no enlarged glands were found in the hilum of the liver. The jejunum was attached to the posterior surface of the stomach by Halsted's method. Fluids were given on the second day after the operation, and solid food at the end of eight days. A month later pylorectomy was suggested to the patient, and this was done on October 4th. The greater and lesser omenta were divided above and below the growth. The ends of the stomach and duodenum were invaginated and closed by continuous suture suture through all the coats, and interrupted Halsted sutures through serous, muscular, and submucous layers. The patient left the hospital one month after operation, and returned to work; he had increased 2 st. in weight.

TUMOUR OF SHOULDER.

Mr. BIDWELL also showed a patient, aged 60, who had had a large tumour in connexion with the left shoulder for nearly fifty years. Photographs of the growth were taken in St. Mary's Hospital in 1857. From these it appeared that at that time the general condition suggested sarcoma. Excision of the head of the humerus was advised but refused. The tumour was now the size of a cocoanut. It gave no trouble except for the mechanical interference with movement. There was no sign of pressure or of wasting of the limb. There were enlarged veins over the tumour, and the skin was rather adherent. The diagnosis seemed to lie between simple exostosis and ossifying sarcoma. Probably it was a case of the latter, in which ossification had proceeded to such an extent as to completely destroy the sarcomatous elements.

Mr. PATON agreed with the diagnosis of ossified sarcoma, and mentioned a patient in whom several large bony bosses on the head had been increasing in size. An attempt was made to remove one, but the disease was found to be too extensive, so that only the outer table of the skull, and some of the softer interior, which proved to be spindle-celled sarcoma, were removed. After the operation further ossification took place, so that the growth is now smaller than after the removal.

Mr. ARTHUR EVANS had under his care a man with an equally large bony tumour of the upper end of the femur. Some two years ago an attempt was made to remove this, but bleeding stopped the operation. A portion removed proved to be osteo-sarcoma. The patient was then treated by injections of Coley's fluid. The tumour was now smaller and harder than it was.

ABDOMINAL SUPPURATION AFTER LITHOTOMY.

Mr. PARDOE showed a man, aged 37, who for three years had suffered with painful and frequent micturition, pyuria, and occasional hematuria. Eighteen months ago he had a stone removed by litholapaxy. In a few months the symptoms returned. In November, 1902, another stone was detected, crushed, and removed by Mr. Pardoe. The following day the urine was free from blood and clearer. Forty-eight hours after the operation there was pain in the left side of the lower abdomen and tenderness above Poupart's ligament. Three days after the operation the tenderness had extended to the umbilicus, the abdomen was motionless, and the pulse 130, although the temperature was only 99.5. The abdomen was opened to the left of the middle line, and an offensive accumulation of slough, urine, and pus was found. Drainage tubes were inserted. The peritoneum, apparently, was not opened. Recovery was tedious but uneventful. Probably there had been some pouch or sacculus in the bladder to account for the formation of stones, and this weak portion of the bladder was damaged in the litholapaxy, with consequent abscess. Mr. Pardoe wished for suggestions for the treatment of such sacculi.

MYXOEDEMA.

Dr. A. SAUNDERS showed a woman, aged 55, suffering from myxoedema. As regarded the possible causation of the disease she had a caseating glandular abscess in the neck incised in 1902. The fact that the thyroid gland in these cases was found to be small and fibrotic suggested an analogy with Addison's disease. Possibly the fibrotic process in the thyroid might be the expression of a chronic tuberculous inflammation leading to atrophy of the glandular elements.

X-RAY TREATMENT OF RINGWORM.

Dr. A. WHITFIELD showed a child, aged 4, who had been treated by *x*-rays for microsporon ringworm of the scalp. After thirteen or fourteen exposures the hairs on the patches had completely fallen out. In two or three months healthy hair grew again. Dr. Whitfield thought that *x* rays offered a clean and certain method of cure in circumscribed cases, but should only be used with great care. For the disseminated stumps, such as were seen in old cases, he thought croton oil needling would still hold its place.

SOUTH EASTERN BRANCH OF THE BRITISH MEDICAL ASSOCIATION: EAST KENT DIVISION.—At a meeting held at Deal on March 26th, Dr. LYDDON, who was in the chair, read a paper on a case of ununited fracture of the femur in a healthy man. He operated and fixed the ends of the bone together with a screw, but union still failed to occur, so he operated again, and obtained a good result from wiring the ends of the bone together. A discussion followed on the question of the best methods of dealing with these cases.—Dr. POWELL read a paper

on the treatment of inoperable malignant disease by the application of dilute solutions of formalin. He claimed that the dilute solution exerted excellent deodorizing and antiseptic actions without the escharotic results from the use of strong solutions, and at the same time the malignant tissue was destroyed and was separated by a natural process. Dr. Powell also showed several cases.

Therapeutical Society.—At a meeting held on March 31st, Mr. W. Parson, Master of the Apothecaries' Company in the chair, the appointments of Dr. J. Rose Bradford as Vice-President of the Society and of Mr. E Dennis Vinrace and Mr. W. Chattaway as members of Council were confirmed. It was resolved that an abstract of the papers read during the last winter should be published.—Dr. Nestor Tirard read a paper on some dangers of hypnotics. All hypnotics involved risks, as was the case with opium, chloral hydrate, and even potassium bromide among the older drugs, and sulphonal, trional, tetronal, paraldehyde, and urethane, in those more recently used. Their injurious action often depended on the total amount of the drug taken, or sometimes on idiosyncracies or disease, as well as an excessive dose at one time. Incompatibles in prescribing were more often considered than incompatible diseases. The public could purchase hypnotics with dangerous freedom, and injury might occur from accident, ignorance, or suicide. In a case of sulphonal poisoning little short of 250 gr. were taken on two consecutive nights. This caused a comatose condition lasting a week. Dr. Tirard also mentioned three cases of poisoning by opium, laudanum, and morphine where the obtaining of the drug was difficult to explain. The blame might extend to the prescriber or dispenser; for example, in one case the patient increased the dose prescribed, in another a sparingly soluble drug was dispensed without mucilage, or when the medicine was taken without measurement, or from a bottle improperly labelled. The hypodermic use also caused often a habit, and increased doses were often used; dangerous amounts of active drugs were obtained, and increased difficulties in treatment caused since a physiological antidote could only be employed. Sleeplessness was probably the least important factor to be considered in selecting a hypnotic. The cause must be ascertained and any idiosyncracy learned. Indications of any incompatible disease must be carefully noted, and wherever possible the drug should be administered by the doctor, or by a nurse under his instructions. Dr. F. de Havilland Hall said the difficulty respecting hypnotics was that patients would not bear pain without them but insisted on their being administered, and that sleep should be procured at any price otherwise they became quite impatient. Formerly atropine was considered a physiological antidote to opium, but it was rather a dangerous one. Once, when he had prescribed $\frac{1}{75}$ gr. of atropine to be used hypodermically in a case of poisoning by opium, and afterwards recommended that only half the quantity should be used, he found that the attendant had administered $\frac{1}{250}$ gr., as being the half of $\frac{1}{75}$ gr. The patient succumbed. Remarks were made by Dr. Paramore, Dr. Lee, Dr. Vinrace, and Dr. Kelynack; and Dr. Tirard replied.—Mr. Peyton Beale then read a paper on a new aseptic film. He said the proper healing of a wound required the aid of both asepsis and antisepsis—asepsis usually by heat to render innocuous instruments, dressings, etc., and antisepsis by chemicals to purify the skin of both the patient and operator, and to keep the dressing sterile; but all chemical antiseptics acted as poisons more or less, and diminished the power of the phagocyte to destroy extraneous organisms. It was, therefore, more advisable, when a wound had once been rendered sterile, to seal up the incision from all injurious conditions, and this could be done by "velvril," which was a mixture of nitro-cellulose with a nitrated oil only soluble in acetone. This formed a transparent film, which should be cut large enough to cover the wound for at least one inch in every direction. The skin should be carefully dried, and when sutured it should be washed with acetone and painted for one inch all round with velvril solution (made by dissolving velvril in acetone) freely applied, and the film firmly pressed on it with dry sterile wool and a bandage; and then it is impossible for any extraneous matter to gain access to the wound. If the film was left alone it would peel off in ten or twelve days, but it might be removed at any time by placing a damp cloth on it for a few minutes. The wound edges united perfectly, leaving a narrow scar. If draining was required it was best to make a separate incision as far as possible from the wound, applying absorbent sterile dressings. If pressure was insufficient, blood or serum might collect under the film, but this did not impede the cure. Velvril had the following characteristics in forming a film: It was transparent but slightly yellow, absolutely impermeable to all ordinary gases or liquids. It was tough and elastic, and never hardened. It could be easily sterilized by immersing in boiling water without undergoing change for a long time. It was dissolved only in acetone, its solution was perfectly sterile, and was not at all irritating. It might replace indiarubber in surgical practice, and be used for bougies or catheters. Specimens of the film and solutions were shown.—The Secretary showed a collection of medicinal roots from Lake Nyassa in Central Africa, sent by Dr. Old for investigation.

Epidemiological Society.—At a meeting on March 20th, Mr. F. Shirley Murphy in the chair, Dr. Louis Parkes, medical officer of health for Chelsea, read a paper on the prevention of diphtheria outbreaks in hospitals for children. In September, 1899, he was, he said, consulted as to the sanitary condition of the Chelsea Hospital for Children, which had at that time 56 beds and a staff of 30 nurses and servants. There had been in the three years 1897-9 no fewer than 65 cases among the patients and 9 among the staff, besides 16 cases of septic sore throat, which were probably diphtherial, among the latter. These cases might be roughly divided into eight outbreaks, separated by intervals of one to three months, during which the implicated wards were closed and disinfected. But this division was to a great extent arbitrary, for though in each group the majority of the cases followed one another in such close succession as to point to direct infection in continuous order, and there were a number—about 15 per cent. of the whole—in which the intervals, seven to twenty days, so far exceeded any possible incubation period, as to indicate an independent origin, whether the infection were introduced from without, or from some latent and dormant source within the hospital acquiring renewed activity. The building was not originally intended for a hospital, but though there was no proper air disconnection by lobbies of the closets, bathrooms, and sinks, the general sanitary arrangements, drainage, and ventilation were satisfactory. He advised the reduction of the beds to 42, thus giving 100 square feet of floor space to each; strict precautions against the introduction of any infective matter from the out-patient department into the wards; the disinfection of all excreta, and, so far as possible, of the nurses' hands, and the sterilization of all cups, spoons, spatulas, thermometers, feeding bottles, etc. A 1 per cent. solution of formalin was first used, but even much weaker solutions being found injurious to the hands, carbolic acid (1 in 40) was adopted instead and proved satisfactory, only a few isolated cases having occurred in the two following years, though in the three preceding months in which a solution of 1 in 80 was tried, four cases appeared close together. Every case was, as soon as it was diagnosed, sent to the hospitals of the Asylums Board. Other precautions were taken with regard to toys, visitors, etc.; the throats of all patients were examined before being admitted to the wards, suspicious cases being rejected, and for some time swabs from the throat were sent to the Jenner Institute for examination. Between October 26th, 1899, and the end of 1901 the admissions were 1,149, and the swabs taken 814; but of 88 admitted with Klebs-Loeffler bacilli, 95 per cent. of 162 with the pseudo-diphtheria bacilli, 98 per cent., and of 563 with neither, 97 per cent. showed no further symptoms. Three cases, two belonging to the last class, developed nasal discharge with diphtheria bacilli, but no further symptoms, and were treated in the wards. It seemed that a large proportion of the cases which appeared first in the hospital wards were caused by patients carrying bacilli potentially, though not actually virulent. It would be well, Dr. Parkes thought, if patients in fever hospitals could be more isolated, not merely from the outer world, but from one another. Dr. Seaton said that in 1888 he had held an inquiry into outbreaks of diphtheria at the same hospital, which were then always ascribed to insanitary conditions. Dr. Nash (of the Southern Fever Hospital) said that he took swabs from every case admitted, and often found diphtheria bacilli in cases of scarlatina, and then he isolated them. Dr. Goodall (Eastern Fever Hospital) recalled the attention attracted some years ago to post-scarlatinal diphtheria in hospitals, which was ascribed by the late Sir R. Thorne-Thorne to the treatment of both diseases in the same hospitals. From time to time, however, it broke out in those in which cases of diphtheria were not admitted, and even, as at Great Ormond Street, where all fever cases whatever were excluded.

Mr. GOADBY referred to his report on the outbreak at the Forest Gate schools, and stated that 30 per cent. of all children exposed to diphtheria subsequently presented bacilli in their throats. He could not accept the identity of the Klebs-Loeffler and Hofmann's bacilli. Mr. SHIRLEY MURPHY, Dr. COPLAND, Dr. MEREDITH RICHARDS, and Mr. FARRAR having taken part in the discussion; Dr. PARKES replied.

PATHOLOGICAL SOCIETY OF MANCHESTER.—At a meeting on Wednesday, March 11th, Dr. H. A. G. BROOKE, President, in the chair, Mr. SOUTHAM mentioned a case in which a tumour had been removed from the gluteal region of a male, aged 58 years, apparently originating in the bursa over the tuber ischii. It was of a solid nature, and had been present for about six months.—Dr. CHARLES MELLAND described the tumour as an angiosarcoma. A great part of the section simply showed a mass of round and oval cells, which were in places undergoing degeneration or were the seat of haemorrhagic infiltration. Other places, however, showed distinctly the way in which the tumour cells were originating from the connective tissue cells in the walls of the smaller arteries. Some of the arteries in which the proliferation was only just commencing had only two or three rows of easily recognizable tumour cells forming their wall, whilst others had been converted into circular masses of cells, roughly concentrically arranged around what could easily be recognized as the original lumen of the artery.—Mr. BURGESS exhibited the specimens from a case of angio-sarcoma originating in connexion with the ilium, with metastases in the ribs and right kidney.—Dr. DONALD and Dr. MELLAND demonstrated the specimens from a case of tuberculous peritonitis, including microscopical sections.—Dr. P. R. COOPER showed two specimens—(1) atrophy and hour-glass contraction of the stomach following chronic ulcer, occurring in a female, aged 74, who had died from exhausion, chiefly owing to her inability to swallow food. The symptoms of gastric ulcer had been entirely latent, although when young "indigestion" had been complained of. The stomach was constricted to a narrow passage near its pyloric end, and on each side of the constriction was the circular depressed cicatrix of an old ulcer; (2) chronic intestinal obstruction due to carcinoma of the rectum, which had been relieved by colotomy two years previously. The growth itself had made comparatively little headway, but unfortunately a loop of small intestine which dipped down into the pelvis had become adherent to and involved in the disease, causing a second and fatal obstruction.—Dr. W. E. FOTHERGILL made a preliminary communication on congenital hyperplasia of the thyroid gland and showed an example of the condition observed in connexion with maternal eclampsia. Chlorate of potash had been administered during pregnancy on account of habitual abortion. At the thirty-eighth week eclampsia supervened, but was tided over by medical treatment, which included the administration of thyroid substance. Three days later a living child was born, but succumbed an hour after birth, a hypertrophied thyroid gland, together with enormous congestion of the veins in the neck, interfering fatally with respiration. The thyroid after removal weighed over 25 gr. On section it consisted of a mass of irregular acini with very small lamina, and containing no colloid material. The normal thyroid gland in the fetus at term was found to weigh under 2 gr. and to contain a considerable amount of colloid material. The condition of the enlarged gland in question thus appeared to be one of hyperplasia interfering with normal functional development and probably toxic in origin.—Dr. HILL GRIFFITH mentioned some cases of ocular tuberculosis, and exhibited the specimens. Other preparations were shown as card specimens.

HUNTERIAN SOCIETY.—At a meeting held on March 18th, Dr. STEPHEN H. APPLEFORD, President, in the chair, Dr. FRED. J. SMITH showed (1) a case of multiple lipomata.

The patient was a man, aged 60, who first came under notice in September, 1901, for pain in the region of the heart, which had been present on and off for a year. He had lost 2 st. in weight, and complained that solid food produced great pain; the abdomen was rigid and the liver slightly enlarged and tender. He was diagnosed as a case of probable malignant disease of the stomach, but he improved very rapidly under treatment by bismuth and opium. He was again seen in February, 1902, still complaining of some pain in the lower chest on the left side, and there was then found to exist an obscure nodular swelling just below the ribs. Diagnosis was still obscure, and the case was still watched with some interest. By May, 1902, extensive subcutaneous growths had appeared above the clavicles, and on the ribs and arms, with signs of obstruction of the deep veins—enlargement of the subcutaneous veins of the chest—but he again improved very much under bismuth and opium, and the arms diminished in circumference by 4 in. About the same time he had an attack of profuse melaena, after which he was much better, and in July nothing was to be felt in the abdomen. He was not seen again till January or February, 1903. On his admission the only other point of interest ascertained was that he suffered from free epistaxis in association with the strain of vomiting.

Examination of organs gave no indications of disease. In the abdomen there was nothing to be felt that could be called abnormal unless it were a little tenderness to palpation in the upper abdomen generally. Dr. Smith stated that in his opinion there could be no doubt that the majority of the lumps were lipomata, but he was in doubt whether there were not also some glandular involvements; he hoped to be able to persuade the patient to allow one of the quasi-glandular lumps to be removed for microscopic examination. His suspicions were especially aroused by the history of gastric trouble, though he thought they might depend upon a chronic ulcer. He drew attention to the absence of any history of previous stoutness of the patient, a history which was commonly present in cases of multiple lipomata. He promised a further communication on any new facts in the case. Dr. Fred. J. Smith also showed (2) a case of leucocythaemia in a man aged 32.—Dr. KELSON showed a man suffering from ulceration of the epiglottis, interarytenoid fold, and both vocal cords. Tubercle bacilli were present in the sputa. There were evidences of slight changes in the lungs. The patient complained chiefly of pain on swallowing, which had been markedly relieved by orthoform insufflations. He had also been getting hoarse for about a month.—Dr. GLOVER LYON showed a case of "cured phthisis."

The patient was a girl, aged 11. She was said to have had a cough with slight expectoration for two months; occasional slight spitting blood, and had "wasted shocking." On admission to Victoria Park Hospital she was very thin, with shiny skin and pasty complexion, looking very ill. The physical signs were the same as described later, except that the heart's apex beat was normal in position. The patient rapidly improved in general condition, and in eight weeks her weight increased from 4 st. 4 lb. to 5 st. 1 lb., an increased of 16 per cent. After two months in hospital the physical signs were as follows: Chest well formed, moving slightly less on left than right side. In front, dullness over lung and above heart, whose apex beat in fourth space with much increased resistance. Tubular breathing with metallic (dry) crepitations. Increased vocal resonance and decreased vocal fremitus. Behind, slight dullness metallic crepitations and increased vocal resonance and vocal fremitus over upper half. Cough and expectoration had entirely ceased, and the child looked happy and well. The expectoration had ceased soon after admission, and no examination of it had been made, but there was no doubt about the tuberculous nature of the disease. The temperature had shown a tendency to rise from time to time up to 101°, but the child had been allowed to get up without any effect upon these rises of temperature.

Drs. F. J. SMITH, W. HARRIS BEST, W. KELSON, A. W. GALLOWAY, R. RAWES, JOHN ADAMS discussed the cases.

ROYAL ACADEMY OF MEDICINE IN IRELAND.—At a meeting of the Section of Obstetrics held on March 20th, Dr. W. G. SMYLY, President, in the chair, Dr. TWEEDY showed an ovarian cyst and also a parovarian cyst removed from the same patient.—Dr. PUREFOY showed a pyosalpinx (salpingitis isthmica nodosa).—Dr. ALFRED SMITH exhibited a Bossi dilator, and described its action and use.—Dr PUREFOY and Dr. CARTON gave details of cases in which they had used the instrument, and Drs. TWEEDY, DOYLE, and the PRESIDENT also spoke.—The SECRETARY read (for Dr. W. P. COCKLE) a paper on a case of eclampsia, with *post-mortem* delivery by forceps.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—At a meeting held on March 18th, Dr. E. SYMES THOMPSON, President, in the chair, Dr. MOUILLOT (Harrogate), introducing a discussion on Dietetic Factors in Health Resort Treatment, said he would state its purport in the form of seven conclusions:—(1) That a considerable portion of diseases treated at spas was due to faulty metabolism, and that gout, obesity, and glycosuria were the chief of these diseases, and were closely connected; (2) that gout in its widest sense was due to the development of certain poisons in the process of digestion, and that these poisons were best limited by a simple meat dietary; (3) that it was irrational to consider food or drugs solely from the point of view of their acidity or supposed solvent power on uric acid; (4) that if the patient was properly dieted at home no marked change ought to be made in the diet at the spa, more particularly should the quantity of food not be restricted whilst undergoing a treatment which made a great strain on the activity of the system; (5) that the education which the patient received as to the regular consumption of non-alcoholic fluid apart from

meals was a useful one; (6) that an attempt to treat obesity by withholding fluids was to be condemned as leading to the production of serious disease and ill-health, and that though it was right to diminish the quantity of fluid taken at meals, it was wrong not to make up for that limitation by giving water apart from meals; (7) that alcohol should be taken in very limited quantities, if at all, and that for gout, whisky, still Moselle, and still cider seemed least harmful.—Dr. Harry Campbell pointed out that for the long period which elapsed before man learnt to cook his food and till the soil his supplies of starch were limited and subjected to such thorough mastication and insalivation that very small quantities of crude starch passed into the stomach; whereas in this age of abundant starch and imperfect mastication the stomach and intestines were flooded with undigested starch, this giving rise to many evils.—Dr. Preston King (Bath) pointed out that, while the Continental system of a more strict diet was suited for certain cases, there were more for which it was not adapted, and he would be sorry to see it introduced here. Each case must, in dietary as in other things, be treated on its merits. In rheumatoid arthritis the too common starvation diet was to be condemned. In his experience, a liberal diet, including stout or wine, had done as much good as the use of the Bath waters.—Dr. Léon Blanc (Aix-les-Bains) said the diet was not very strict in France, because foods were lighter, and a moderate diet could be taken at home. Experiments made by Herman and Marie showed that excessive meat diet caused the uric acid to increase from 0.669 per cent. to 10.37 per cent., whereas vegetable food lowered to 0.458 per cent.; a full meal at once increased the quantity of uric acid, which rose to the maximum in the fifth hour after an abundant ingestion of food. Mixed diet was given, meat twice a day only (forbidding game, venison, pork, preserved meat, etc.), beef and mutton, which must be boiled, if possible. All vegetables were good, and fresh fruits taken between meals. The best were acid fruits, even strawberries, which contained a certain quantity of salicylic acid. It was now admitted that the acids had the extraordinary property of decreasing the production of uric acid and increasing the urinary alkalinity. Alcohol—the harmful action of which on the kidneys was well known—must be proscribed. Pure water (Massonat water) should be given, with a little white wine or lemon juice. All alkaline preparations must be prohibited.—Dr. Schott (Nauheim), speaking generally, advocated a mixed diet in heart cases, but uttered a warning as to all kinds of heavy foods and those calculated to produce distension of the stomach or bowel. He advocated small and frequent meals, generally at intervals of three hours, and of high nutritive value. Alcohol should be taken in a state of high dilution. He differentiated between the digestive powers of the English and Continental patients; it was unquestionably the case that certain wines well borne by Continental patients produced acidity in some of the English, and in such cases it was better to fall back on small and regulated quantities of whisky or brandy in a state of free dilution. Dr. Mahomed (Bournemouth) said that in chronic gout with increased vascular tension abstention from fluids was beneficial. In acute cases full doses of salicylates had failed in some cases which had improved at once on colchicum and quinine. Dr. Lorimer (Buxton) said simplicity and moderation effected more than elaborate diet sheets. The cases in spa treatment, as regarded dietetic requirements, might be divided into: (1) Those requiring only common-sense guidance; (2) those complicated with digestive troubles, where each case must be dieted on its own merits; (3) cases of old age, with senile heart and vascular decay—for these the English hotel system, with its excess of meat consumption, was inapplicable and injurious; (4) cases of polyphagia, neurotics with endless alleged idiosyncrasies, and faddists: for such a diet homes with moral discipline was more appropriate.

British Gynaecological Society.—At a meeting on March 12th, Dr. Heywood Smith, President, in the chair, Dr. William Duncan showed a bilateral haematosalpinx. The left tube was ruptured in removal; the right, distended to the size of a banana, with a blood cyst of the right ovary, formed a tumour which on section did not appear to be a gestation, and he considered the condition as more probably due to some bilateral inflammation of the tubes.—Mr. J. S. D. MacCormack exhibited a self-retaining retractor for keeping apart the sides of the abdominal wound in coeliotomy.—Dr. H. Macnaughton-Jones read a paper on the Importance of Attention to the Mouth and Teeth before and after Operations upon the Pelvic Viscera. He reviewed the bacteriology of the mouth in health, and noticed especially the products formed during the presence of pyorrhoea alveolaris with carious teeth, and illustrated the effects caused by such morbid conditions of the mouth by cases which had come under his notice in which gastric complications, associated with foul conditions of the mouth, and great fetor, parotitis, with angina Ludovici (post-operative), occurred. Summarizing the nervous, vascular, and lymphatic supply and distribution of the mouth, which explained such complications, he reviewed the arguments for the neural and septic origin of the parotitis, asserting that there were ample grounds for believing in both causes. In such patients the prolonged administration of ether was more apt to increase and prolong such gastric and digestive trouble than chloroform. He detailed the particulars of a case of parotitis which commenced on the fourteenth day after an operation for cystocele, with uterine prolapse and haemorrhoids. The case terminated fatally, notwithstanding free and deep incisions, on the fifteenth day of the attack. Here, unquestionably, the mischief began in the teeth and mouth. She had suffered for some time from the former, and had been under dental care immediately before the operation. As a factor in causing post-operative digestive disturbances, or such graver complications as that mentioned, or sepsis, attention to the teeth and buccal cavity before and subsequent to an operation was important. The best disinfectants were formalin, hydrogen peroxide, sulphurous acid, and boric acid, with a basis of glyco-thymoline. Benzo-naphthol had, in his experience, a most salutary effect in such cases. The President said that a reflex connexion with the pelvic organs might be suspected in the globus hystericus, and was advanced recently to account for the relief of dysmenorrhoea by cauterization of the nasal mucous membrane. He asked, What had been the immediate cause of death in the fatal cases of parotitis? Mr. Stephen Paget said that in the 101 cases he had collected he had been struck by the extreme variability of the interval between the operation or injury and the subsequent parotitis; by the absence of general septicaemia or pyaemia; and by the triviality of the trauma in very many cases, so that dryness of the mouth could not be invoked as a factor. The theory of infection from the mouth, though to some extent supported by the only necropsy he had made, in no way accounted for parotitis occurring more frequently after pelvic than other operations. A nervous influence of the pelvic organs upon the parotid gland seemed to be the most reasonable cause. Dr. Duncan said that the few cases he had had of parotitis following abdominal section he had always attributed to sepsis; in future he would always investigate the condition of the mouth. Dr. Bedford Fenwick, Dr. F. A. Purcell, Dr. C. H. Bennett, Dr. J. J. Macan, and Dr. Hugh Woods also spoke; and Dr. Macnaughton-Jones replied.

Metropolitan Counties Branch of the British Medical Association: West London District.—At a meeting of this District, held on March 25th, Mr. Brindley James, Vice-President, in the chair, a large collection of interesting and rare cases were shown, among them being an enormous ventral hernia (Sir William Bennett), splenic anaemia (Dr. Ewart), mollities ossium (Mr. Clinton Dent), scirrhus of breast, multiple secondary nodules (Dr. Rolleston). The Vice-President, Drs. Dutton, Clippingdale, O'Connor, Spicer, and Messrs. Kiallmark, Vinrace, Turner, and others discussed the cases shown.—Sir Isambard Owen showed two very instructive specimens, showing a pin in the aorta which had been swallowed during life without knowledge, the other an enormously enlarged right auricle. Sir Isambard Owen gave a brief description of each.

West Somerset Branch of the British Medical Association.—At a meeting held on April 3rd, Mr. E. E. Frossard in the chair, Dr. Rutherfoord brought forward the following cases: (1) Vaginal hysterectomy (with specimen); (2) excision of elbow joint (with skiagraph); (3) Caesarean section.—Mr. Morton showed three cases of lupus, which he had successfully treated by *x* rays.—Dr. Weatherly (Bath) gave an address on insanity—some points of mutual interest to the alienist and general practitioner. After the address the lecturer was asked a large number of questions by the members present, after which he was accorded a very hearty vote of thanks, on the motion of the President.

East Anglian Branch of the British Medical Association.—At a meeting of this Branch, held on March 26th, Mr. W. E. Wyllys, President, in the chair, Dr. Alan Reeve Manby, M.V.O., read a paper on Some Aboriginal Surgery, illustrated by lantern slides.—Mr. W. K. Hatch (Norwich) read a paper on Vesical Calculus: Causation and Treatment, with a large number specimens. Mr. Nance, Mr. Mayo, Dr. Beverley, Mr. Williams, and Dr. Long took part in the discussion.—Mr. W. Wyllys (Great Yarmouth) read a paper on the influence of the Gouty Diathesis on the Course of Pulmonary Tuberculosis.

Ceylon Branch of the British Medical Association.—At a meeting of this Branch held on January 24th, Dr. J. F. Garvin, the President, delivered an inaugural address entitled Some Professional Experiences at the Boer Camp. He said that no less than 757 of the Boers were laid low with enteric fever, and of these only 68, that is, about 9 per cent., found their last resting place among strangers in a strange land. The enteric fever was introduced into the camp by the Boers themselves from the theatre of war where it was very prevalent. They arrived in a dirty ragged condition, and carried the whole of their limited wardrobe on their backs or in bundles, which saw the light of day for the first time since their embarkation after their arrival at Diyatalawa. A very short experience justified him in asserting that the enteric bacillus found a hunting ground in the clothes of these prisoners, and, acting upon this assumption, steps were at once taken to minimize this danger, and the result was indubitably beneficial. His belief was based upon observations, but since then the experimental proof has been given of the danger of clothing by Horrocks and Firth. All clothing of enteric patients should therefore be viewed with suspicion as the carrier of infection, and only used again after careful disinfection by moist heat by a Thresh's disinfector. In private dwellings they could be boiled in antiseptic solutions. Linen soiled with faeces must not be sent to the wash unless previously disinfected. Such a procedure was very potent in transmitting enteric. To these methods he attributed in a large measure the success which attended his labours in stemming the tide of the epidemic of enteric in the camp. It was also noted that enteric was more prevalent in the residential huts in the vicinity of latrines, and this was due to the absence of ventilation which it took some time and persistence to persuade the prisoners to adopt. It was also noticed that atmospheric movements influenced the spread of the disease, and that when the wind blew from the latrines into the huts an appreciable increase in the number of cases occurred among them. In consequence the positions of the latrines were in some cases altered, and in others new latrines were erected to the leeward of the huts. This procedure had a beneficial effect. Another circumstance which attracted attention was the number of flies infecting the camp in the early days of the epidemic, and when these disappeared a great change for the better in the health of the camp began. It was difficult to say why they disappeared, but that they constituted an important factor in the propagation of the disease he was fully convinced. He believed that enteric was more prevalent in Colombo in the Seventies and early Eighties; that the sanitation of the town was much worse then than now; that cesspits with wells adjoining were then the rule; that if there was a recrudescence of enteric at Colombo at the present day it would not be as a result of the present system of conservancy; that it has been the fashion to attribute every case of enteric occurring in Colombo to the present method of conservancy and to ignore other more potent sources of infection—namely, overcrowding, insanitation of dairies, eating-houses, and the persistence of cesspits and wells among the houses of the poorer classes. Recently the subject of enteric bacilluria had received a good deal of attention, and the disposal of this urine should receive attention, for the bacilli continue in the urine after they had disappeared from the faeces. Urotropine was administered and enteric patients were prevented from returning to the camp till three months after convalescence. Compulsory notification of enteric should be looked upon as salutary, and if compulsory isolation were added it might help to diminish the enteric which was more than desirably prevalent in Colombo. The testimony in favour of airborne typhoid was supported by the experience of Diyatalawa. The entrance of the bacilli was by the alimentary canal, and in the camp the meat (biltong) might have been infected by the clothes hanging in the huts; and this taught that there should be a minimum of furniture, hangings, and clothes in the typhoid room, and that ventilation should be as free as possible. Could typhoid be conveyed by contact? This was difficult to prove, but it was not uncommon to find two brothers infecting each other, and therefore it was worth remembering. In the Spanish-American war the same thing was noted. Lastly, the Indian latrine coolie appeared to be immune to the disease.

Leeds and West Riding Medico-Chirurgical Society.—At a clinical meeting on March 20th, Mr. John Irving, President, in the chair, Dr. Churton showed (1) a woman, aged 39, who had been under antisyphilitic treatment since December, 1901. At first the subclavian arteries, especially the left, were thickened and greatly dilated, the pulsation being visible above the inner and below the outer part of the clavicle. The carotids were similarly, but less, affected, and pulsation was felt behind the manubrium. All these arteries now appeared perfectly normal. The other signs of syphilis were also gone. Diffuse arteritis in an early stage was apparently as curable as diffuse syphilitic hepatitis in the same stage. (2) A woman, aged 49, with aneurysm of the aorta pulsating in the second and third left intercostal spaces. In addition to ordinary signs a systolic *bruit* was audible at the margin of the sternum in the second space and also over the trachea. (3) A case of glycosuria of uncertain origin, in a man aged 56, in which "renal diabetes" had been excluded by finding excess sugar in the blood by Williamson's test (20 c.mm. of blood and 40 c.mm. of water + 1 c.cm. of 1 in 6,000 solution of methylene blue + four minutes in a boiling water bath.[1] Decolorisation occurred; in a control experiment with healthy blood the colour, slightly altered, remained.—Mr. W. H. Brown showed some results of plastic surgery.—Dr. Gordon Sharp showed (1) a man aged 40, with infiltration of the soft and hard palate, epiglottis, interarytenoid region, and ventricular bands, probably tuberculous in nature, although no bacilli had been found in the sputum. The condition had greatly improved under the local application of 75 per cent. lactic acid. The same patient also showed great hypertrophy of the lingual tonsil, causing no inconvenience and untreated. Six months ago he had pleurisy. (2) Three cases of vasomotor and trophic disease treated for some weeks with dried adrenal gland and cod-liver oil. During the past month 5 gr. had been given twice a day.

Case I.—A girl aged 13, a true Raynaud's disease showing remnants of necrosis of the soft parts of the fingers and toes. Last winter the girl had to be confined to bed on account of the sores. Under the present treatment she had this winter been able to move about and do household work, and all saving one sore on the toe had healed.

Case II.—A girl aged 11 was considered one of severe "broken" chilblain, with large areas showing local asphyxia. The sores had nearly all healed, and the nutrition of the skin and parts in general had improved.

Case III.—A girl aged 9 was one of doubtful Raynaud's, showing the results of malnutrition of the nails of fingers and toes, sores of the soft parts, areas of asphyxia, and glossy skin.

Although, on first consideration, a substance like adrenal gland, which contracted vessels, would appear to be contraindicated in local syncope, yet, as suggested by Dr. Mantle, the agent might act beneficially by raising the blood pressure.—Mr. Littlewood showed ten cases of perforated gastric ulcer which he had successfully operated on during the last seven years. In all the perforation was in the anterior wall of the stomach, and nearer the lesser than the greater curvature. The quantity of extravasated material varied from a general flooding of the peritoneal cavity to a small amount in the region of the ulcer and hypochondriac regions.

Case I.—Miss G., aged 18. Operation May 2nd, 1896, seven hours after perforation. Much extravasation. Ulcer excised and stomach closed with interrupted silk sutures. Abdomen drained.

Case II.—Miss A., aged 18. Operation July 21st, 1896, six hours after perforation. Ulcer excised and stomach closed with interrupted silk sutures. Much extravasation. Abdomen drained

Case III.—Miss N., aged 28. Operation April 11th, 1899, five hours after perforation. Ulcer excised and stomach closed with interrupted silk sutures. Not much extravasation. Abdomen closed without drainage.

Case IV.—Miss W., aged 28. Operation December 11th, 1900, five hours after perforation. Ulcer excised and stomach closed with interrupted catgut sutures. Abdomen closed without drainage.

Case V.—Miss A., aged 24. Operation September 11th, 1902, about twenty-four hours after perforation. Ulcer excised and stomach closed with continuous catgut sutures. Extravasation limited to upper part of abdomen. Abdomen closed without drainage.

Case VI.—Miss L., aged 24. Operation October 25th, 1902, about eighteen hours after perforation. Ulcer excised and stomach closed with continuous catgut suture. Much extravasation. Abdomen drained.

Case VII.—Miss H., aged 20. Operation May 15th, 1902, about fourteen

[1] British Medical Journal, September 19th, 1896, p. 731.

hours after perforation. Ulcer excised and stomach closed with continuous catgut suture. Much extravasation. Abdomen drained.

Case viii.—Miss A., aged 23. Operation February 26th, 1903, about ten hours after perforation. Ulcer excised and stomach closed with continuous catgut suture. Not much extravasation. Abdomen closed without drainage.

Case ix.—Miss G., aged 19. Operation March 1st, 1903, eight hours after perforation. Ulcer excised. Stomach closed with continuous catgut suture. Not much extravasation. Abdomen closed without drainage.

Case x.—Miss R, aged 18. Operation, March 16th, 1903. Ulcer perforated on March 12th. Very little extravasation, as the stomach around the perforation was adherent to the under surface of the liver. Ulcer excised and stomach closed with continuous catgut sutures. Abdomen closed without drainage.

—Mr. H. R. Beale showed a case of a pontine lesion. There was palsy of the left internal rectus for conjugate deviation to the right, not for convergence. The pupils were normal. Superior obliques were unaffected; sensation in the face normal. The muscles of mastication and both external recti were paralysed. There was also facial palsy, as well as right-sided deafness. The remaining cranial nerves were unaffected. There was paralysis, inco-ordination and numbness of the right arm and hand. The reflexes were increased on the right side. There was headache and vomiting.—Mr. Lawford Knaggs showed a patient in whom the great sciatic nerve had been severed six years ago by a crowbar that had transfixed the thigh. The nerve had been sutured the next day. The patient could walk without a noticeable limp, but sensation over the lower part of the leg and foot was still very imperfect. Considerable improvement had taken place in the last two years and was continuing.—Dr. Trevelyan showed (1) a series of cases of laryngeal affections in phthisis, among which were (*a*) a lad with a fixed left cord, enlarged glands in the neck, tubercle bacilli in the sputum, and no definite abnormal signs in the chest; (*b*) a man with persistent hoarseness and no obvious change in the larynx; and (*c*) a man with laryngeal obstruction due to infiltration of the ventricular bands. (2) A case of long-standing tabes dorsalis in a man who had worn a shade for many years on account of diplopia. Removal of the shade caused great increase in the ataxia although the diplopia had quite disappeared. (3) A case of marked silver nitrate pigmentation. This patient had taken during eleven months a solution of nitrate of silver prescribed by a herbalist as a remedy for venereal disease.

The following cases were also shown:—Dr. Wardrop Griffith: (1) Cases of Raynaud's disease; (2) cerebral diplegia; (3) an extensive rodent ulcer which had undergone complete cicatrization under the use of the *x* rays during five months.—Mr. Whitehead: (1) Traumatic ocular paralysis; (2) partial embolism of the central artery of the retina; (3) detachment of the retina.—Dr. Douglas Seaton: (1) Two cases of congenital syphilis; (2) a case of malignant disease of the floor of the mouth.—Dr. S. M. Hebblethwaite: A case of trichocephaliasis.

REVIEWS.

BIOLOGY.

The volume on *Mammalia* keeps up the high standard of excellence of the *Cambridge Natural History*.[1] Mr. Beddard's official position as Prosector of the Zoological Society of London has given him unique opportunities of studying the anatomy of the mammals, and, although the amount of space in which structure is dealt with is necessarily exceedingly limited, we find it to contain valuable material. There is a long exposition upon the structure and development of the milk glands, and the remarks upon the organs of circulation and on the brain are concise and to the point. In such limited space as some 600 pages there was naturally great difficulty in dealing adequately with so large a group as the mammalia, a group to which many new forms have been added in quite recent times. Mr. Beddard has therefore curtailed his remarks upon some of the more common forms, thereby getting more space for those new forms which have only recently come to light. It is unfortunate, however, that the information with regard to the okapia, the new ungulate, was incomplete at the time of publication. The first four chapters of the book deal with mammals generally, their structure, distribution, possible origin and the dawn of mammalian life. In dealing with the zoological regions Mr. Beddard apparently is not in harmony with the views of other authors. He retains the three primary divisions or realms, Notogoea, Neogoea and Arctogoea, and divides the last into the Nearctic, Palaearctic, Oriental, and Aethiopian regions, but does not recognize the claim of some that the southern part of North America should be separated as the Sonoran region, nor will he admit that Madagascar should rank as a separate region. In his classification Mr. Beddard separates mammalia into two main groups only, the Prototheria and Eutheria, instead of into three, this reduction being founded upon the discovery of a vestigial placentation in the marsupials, which shows their closer relationship with the true Placentalia. There are in the book a few errors and contradictions, the most startling being that on p. 160. We are first told that the extinct genera of marsupials as *Prothylacinnus* and *Amphiproviverra*, are not merely Polyprodonts but definitely Dasyures; and then in the next sentence we are informed that it is not certain that these forms are marsupials at all, but that they are possibly creodonts. On page 321 we find: "We may finally mention the wild ox of Europe, *B. primigenius*, the supposed progenitor of our domestic cattle, believed to be still surviving in the herds at Chillingham, Chartley, and elsewhere." The idea as to the close relationship between Chillingham and other park cattle and the wild ox has, we believe, been shown to be wrong. A large amount of space throughout the book is devoted to palaeontology, and this branch of the subject is of course of great importance in tracing the relationships of the various living forms. Some parts of the work appear to us less excellent than others, but on the whole Mr. Beddard has carried through his task exceedingly well, and the work cannot fail to be useful to students.

The second volume of the English version of *Zittel's Textbook of Palaeontology*[2] like the first, is not a mere translation but is edited and brought up to date by the translator, Dr. Charles R. Eastman, of Harvard, with whom Dr. Smith Woodward, of the British Museum, Dr. Case, of Milwaukee, Professor Osborn, Mr. Hay, and Mr. Thatcher, of Pittsburg, have co-operated, so that each section of the book may be relied upon as being brought completely up to date. The new volume treats of extinct fishes, amphibia, reptiles and birds. A third volume, as yet not ready, will be devoted to the mammals. The book constitutes a most valuable addition to knowledge and stands somewhat alone, as there is no other work in English which approaches it in completeness. The present volume contains an account of several creatures of peculiar interest, such as the toothed birds discovered in Kansas by the late Professor Marsh, the mammal-like anomodont reptiles, which are by most naturalists supposed to be the linking form between reptiles and the monotrematous mammals. There are not wanting also sundry fantastic looking reptiles and fish, in the evolution of which natural forces seem to have been at play. The numerous and excellent illustrations have been very judiciously chosen, so as to give the reader a good idea of each important group. In the case of fish and reptiles an account is given of each known family, but the geological record of the birds being so incomplete, less detail is furnished. A good figure is given of the beautifully complete specimen of archaeopteryx now in the Berlin museum.

On what does sex depend? This question has exercised many minds, and Dr. Van Lint's[3] answer that it depends on the relative strengths of the male and female elements which enter into a conjugation will not receive universal acceptation. Dr. Van Lint asserts that the weaker parent dominates the sex, a relatively weak female element producing a female embryo and vice versa. In support of this assertion he urges that an antagonism exists between male and female elements similar to that which exists between dissymetrical and complimentary chemical bodies, and that a like antagonism is present between the somatic and the germinal cells, the somatic cells of the female presenting spermatic characteristics, and the somatic cells of the male ovular characteristics. This being granted it follows, in Dr. Van Lint's opinion, that if a strong spermatozoon meets a weak ovum the somatic cells of the body of the embryo produced by the union will have the characteristics of male body cells, the germ cells therefore will be ova, and the embryo a female. The arguments and illustrations in support of the thesis are very interesting and readable, but not quite

[1] *The Cambridge Natural History*, Vol. x, *Mammalia*. By F. E. Beddard, M.A., F.R.S. London: Macmillan and Co., 1902. (Demy 8vo, pp. 618. 17s.)

[2] *Textbook of Palaeontology*. By Karl von Zittel, Professor of Palaeontology in the University of Munich. Translated and edited by Charles R. Eastman, Ph.D., Harvard College, Mass. London: Macmillan and Co. 1902. (Demy 8vo, pp. 201, 373 illustrations. 10s.)

[3] *Qu'est-ce qui détermine le Sexe?* By Dr. A. Van Lint. Paris: J. B. Bailliere et Fils. 1902. (Crown 8vo, pp. 76, Fr. 1.50.)

convincing, for they are in opposition with other biological evidence which tends to the conclusion that sex is determined before conjugation occurs. Nevertheless experiments based upon Dr. Van Lint's suppositions could only have a favourable influence on race, for if the suppositions are correct it is only necessary for the production of a healthy child of a desired sex that the vitality of the parent of the opposite sex shall be the greater.

The volume on *Agaricaceae*,[4] by Mr. GEORGE MASSEE, is a work upon systematic botany dealing with only one order of fungi—the *Agaricaceae*—and only with that order so far as its European representatives are concerned. These, however, number 2,750, and more than half are found in Britain. The author points out that the weakness of the classification of British fungi lies in the characters upon which that classification is based, and that when the *Agaricaceae* of Britain are considered in relation with those of the Continent many of the so-called species are connected by intermediate forms. He says:

> Primary specific characters should include only those features that are constant, and not materially modified by geographical or exceptional local conditions as to environment, etc., and such alone should constitute a specific diagnosis. Trivial or local characteristics should follow the essential diagnosis as a rider. With the introduction of characters due to local condition a description ceases to be a specific diagnosis in the proper sense, and is merely a description of a certain state of a species occurring under a given set of conditions. Such, however, is too frequently the nature of so-called specific characters given in local floras.

He has, therefore, taken the essential characters of each species as presented by pileus, gills, stem, and spores respectively, these being, in his opinion, constant features not materially modified by environment, etc. The numerous genera of the *Agaricaceae* have usually been separated upon characters such as the presence or absence of the two veils—the velum universale or volva and the velum partiale, the nature of the fructification, the form and branching of the lamellae or gills, and their position and relation with respect to the stem, the shape of the pileus, colour of the spores, etc. The chief value of the present work, however, appears to be that the characters of the four parts named above are used as a basis throughout, whereas in old classifications sometimes one character and sometimes another was relied upon. In the book under review the *Agaricaceae* are first divided into five groups according to the colour of the spores. Each group is then split up according to the characters of the gills, and then further subdivided on the character of the volva and pileus. When once the system of the book is grasped it is an easy one to work with, and the first division into five groups according to the colour of the spores is more convenient from a practical point of view than the old divisions into *Agaricinei*, *Marasmiei*, *Russulei*, etc., founded chiefly on the characters of the fruit body. The book is of a handy size and nicely got up, and will prove exceedingly useful to all mycologists.

The Elementary Textbook of Zoology,[5] by Dr. MASTERMAN, which has reached its second edition, is worthy of its success. The principle upon which the book is constructed is good. The first part is devoted to general facts and principles, and the second part to the study of the animal kingdom by means of types. The work has been revised, and many new figures have been added. Some loose expressions, such as on p. 76, "An animal 'has the power' of becoming the same colour as its immediate surroundings"—(which is not true in all cases of protective coloration)—and on p. 75, "All animals which adopt the endoparasitic habit 'acquire' certain features in common by adaptation to their peculiar surroundings," we should have liked to see modified, but, with the exception of small faults such as these, the whole work is thoroughly worthy of the name of an elementary textbook of zoology.

Mr. THORNTON'S *Elementary Biology*[6] has been written to meet the requirements of the Board of Education, and is intended for teachers preparing for these examinations. The first chapter, entitled The Living World, is not one to encourage a good opinion of the work. The wording is loose, and often tends to give a wrong impression. One first wonders how much the reader is expected to know and then how little. Chapter II, on the Biological Importance of Air, Water, Carbonic Acid, Starch and Sugar, is certainly an improvement on Chapter I. Chapters III to XIII deal with botany. Of these, the first two—a kind of general introduction to the subject—are far too scrappy and thin to be of any value. From Chapter V—The Life-History of the Bean—onwards the reading improves, but we do not consider this part of the book to be of much value. Chapters XIV to XIX deal with zoology, and the introduction to this subject is a description of the human body. Although "structure in relation to movement, as represented by some simple quadruped," is all that the syllabus of the Board of Education examination requires, the author has thought it well to found this knowledge upon an account of the human body, and the 35 pages occupied with this account give a very fair idea of the subject. A short chapter of 16 pages deals with the cat as a type of common quadruped, and the last three chapters of the book deal with physiology, chiefly human. The second part of the work appears to us much more likely to be of use than the first. Questions and exercises for each chapter are given at the end of the book.

[4] *European Fungus Flora: Agaricaceae* By George Massee, F.L.S. London: Duckworth and Co. 1902. (Cr. 8vo, pp. 274. 4s. net.)

[5] *Elementary Textbook of Zoology.* By A. T. Masterman, M.A. (Cantab.), D.Sc. (Lond and St. Andrews), F.R.S.E., etc. Second Edition. Edinburgh: E. and S. Livingstone. 1902. (Crown 8vo, pp. 652. 12s.)

[6] *Elementary Biology, Descriptive and Experimental.* By John Thornton, M.A. London: Longmans, Green and Co. 1902. (Crown 8vo, pp. 278; 180 illustrations. 3s. 6d.)

CLINICAL MANUALS.

WE have already reviewed the first part of the book on human faeces by SCHMIDT and STRASBURGER.[7] It dealt with the macroscopic and microscopic examination of the stools. The second part is entirely devoted to the chemical investigation of the faeces, and both authors have taken part in its production. The book consists of nineteen sections dealing with the detection of various organic and inorganic substances. Although we gave unqualified praise to the first part, the authors in their enthusiasm for their subject have, we think, erred considerably in the second part. More than ten pages are given to the study of the output of total acids, bases, and metallic salts in the faeces, and only six lines to a discussion on the clinical application of the observations recorded, and these merely say that the results obtained by different authors are so variable that the study of this particular branch of the subject cannot be put to any practical use. The same has to be admitted in the study of the nitrogen and fat output in the stools, though for different reasons. Both classes of substances, nitrogenous and fatty, are not solely derived from the food, but may be due to the activity or degeneration of the epithelial cells of the alimentary tract. On several occasions the authors have spared us much that would have been quite useless in a clinical manual by referring to such monuments of industry in the chemical examination of physiological and pathological material as the works of Hoppe-Seyler-Thierfelder, and Neubauer and Vogel, and we wish that they had done this more often. Investigators will find the volume valuable, because the greatest care has been taken to give references for the numerous facts recorded. To the pure clinician, despite the drawbacks, which belong more to the subject than to this particular volume, this publication will be of some service, for it is methodically arranged, and each substance investigated is discussed under three headings—detection, occurrence in disease, and value in diagnosis. We miss the assistance of an index, however. Throughout the work the reader will find many interesting facts useful at the bedside. We are again warned that bile pigment may be present in the stools as colourless leucohydrobilirubin, and that the stools may be clay-coloured, and yet the patient be free from jaundice. Marked disturbance of the pancreatic function may occur without any increase being noticed in the output of undigested starch, and we see an explanation of this in the relatively great activity of the human saliva. Macroscopical and microscopical examination for mucus is more reliable than chemical; in starvation stools, insoluble but not soluble proteids may be found; v. Jaksch found albumoses in the stools of patients suffering from cirrhosis and from cancer of the liver. In complete loss of bile through a cutaneous fistula the total output of nitrogen in the stools does not differ much from the normal, but with the loss of pancreatic juice the amount of nitrogen lost in the faeces is very great. Bacteria contribute a considerable amount of the nitrogen found in the stools. Starch is not formed in the alimentary tract, so that a qualitative estimation of the starch in the stools may give important evidence as to the metabolic

[7] *Die Faeces des Menschen in normalen und krankhaften Zustande, mit besonderer Berücksichtigung der klinischen Untersuchungsmethoden.* Von Professor Dr. Ad. Schmidt und Dr. J. Strasburger, Zweite Theil. Berlin: A. Hirschwald. 1902. (Demy 8vo, pp. 139, 1 plate and 2 figures. M. 6.)

activity of the alimentary canal, and the authors give special methods for estimating starch in the stools—one, an adaptation of the method of Volhard-Pflüger, by Dr. Strasburger, and another for estimating starch by fermentation, by Professor Schmidt.

Professor Posner's book on the diagnosis of urinary affections[8] contains the substance of ten introductory lectures given at the beginning of a course on the disorders of the urinary passages. The later chapters deal with diagnosis by means of instrumentation, and Professor Posner speaks highly of the advances made by the introduction of cystoscopy and the examination of the lower ends of the ureters by electrical illumination. It must not, however, be thought that he is an enthusiast in the new methods, for he constantly warns the reader that very much may be learnt by the older and simpler methods of examination, and with this object he devotes the first four lectures to ordinary clinical investigation and the chemical and physical examination of the urine and discharges. The introductory character of the lectures precludes a very close account of these examinations, and the reader is referred to other sources for further information. It would appear that some cases of "urinary fever" can be warded off if, before instruments are used, the patient undergoes a short course of treatment with quinine. Guyon's dictum is repeated that when an acute gonorrhoeal urethritis will not subside, attention should be paid to the apices of the lungs. Absence of Neisser's gonococcus from a discharge must not be taken as evidence of the simple nature of the affection, as at a certain stage the discharge resulting from gonorrhoeal infection shows no evidence of gonococci; the "provocative injection" of 0.025 per cent. silver nitrate solution is often useful in discovering the presence of the gonococcus. The frequency of micturition at night in cases of enlargement of the prostate is explained according to Guyon by the fact that rest and recumbency are more favourable to a congestive condition of the prostate. Tuberculous infection of the bladder is suggested when pus occurs in an acid urine, and the condition is of long duration. The book concludes with an account of the various affections of the urinary tract in which the etiology symptoms, course, and complications are stated in brief summary. That the publication has reached its third edition in Germany in eight years is proof of a considerable amount of appreciation, and although mainly intended for the use of specialists, the writer has endeavoured to give the book a certain stamp of general usefulness.

We are not surprised that a second edition of Dr. Engel's excellent little guide to the clinical examination of the blood[9] is already requisite. Considerable additions have been made and portions are largely rewritten, with the result that the book has been expanded to more than double its original size. Many new and improved methods are given, and much better and fuller accounts of the development of the blood and of the structure of the bone marrow are included. In its present form the book will prove of practical value in the clinical examination of the blood.

ASSOCIATION OF ANATOMISTS AT LIEGE.

[From a Correspondent.]

The fifth meeting of the Association des Anatomistes began at Liége on April 5th, when nearly sixty anatomists and histologists gathered together. On the last occasion the Association met at Montpellier, and next year it will meet at Toulouse. Amongst those present were Professors Waldeyer, Schwalbe, Edinger, Weigert, Nussbaum, von Spee, and Meves, representing Germany; Messrs. Suchard, Launois, Retterer, Nicholas, Loisel, Regaud, and Professors Renaut, Laguesse and Henneguy, from France; Professor Van der Stricht, Julin, Leboucq, Heger, Van Beneden, Van Bambeke, Brachet, and many others, from Belgium; Van Wighe and Van Pée from Holland; Apáthy from Hungary; Romiti from Rome, and Professors Thane and Stirling from England.

Few towns are so conveniently situated or so well provided with laboratories for scientific meetings as Liége. Many will recall the remarkable success of the International Physiological Congress held there a few years ago under Professor Fredericq. To-day it is the turn of Professor A. Swaen, Professor of Anatomy and Histology, to preside at the Anatomical Congress, the Vice-Presidents being Professors Julin, Van der Stricht, and Francotte.

The Anatomical Institute.

It would be difficult to find anywhere an anatomical institute at once so artistic and practical, so elegant and yet so adapted to its uses as that "created"—one can hardly use the word erected—under the direction of Professor Swaen. Replete with every requirement which practical experience and a refined artistic sense can produce, the dissecting-room and the histological laboratories are excelled—if equalled—by few institutes. The absolute cleanliness which pervades the whole establishment, the mode in which art is made subservient to utility and to beauty, and therefore to experiment, makes an enduring impression on those who have been accustomed to places where such arrangents do not or did not obtain.

The Anatomical Museum proper, though small, is one of the most perfect of its kind. Everything is in order, scrupulously clean, and all dissections prepared with skill and consummate art. No indifferent specimens are admitted; only the best that human artifice and perfect technique can produce find a place in the carefully-arranged cases. A very remarkable and beautiful series of sections of the body and its various parts—fully injected and beautifully coloured—after the method of Braune, form a striking feature. The muscles, tinged with carmine and "fixed" in solution of alum, give an almost natural colour to the preparations. It would be difficult to obtain anything more perfect than the dissections of the insertions of the muscles, and the full dissections of the human trunk as seen from behind. The sections of bone—of snowy whiteness—are superb, and show the osseous architecture in a manner only too rarely presented to the gaze of the student of medicine.

Inaugural Ceremonies.

Our Belgian friends seem to think that a physiological basis is the proper foundation for an Anatomical Congress, and also that "the better day the better deed." In any case, the ball was set rolling on the evening of April 5th by what the Administration Communale de la Ville de Liége was pleased in their invitation to call a *raoût*, a word that seemed to bring misgivings to the hearts of some of our French *confrères*, who are purists in language. Be this as it may, the *raout*—a word suspected to be of English origin—was a great success, and the Hôtel de Ville, where the reception took place, looked well, and is admirably adapted for such a function.

It is a far cry from Quentin Durward and the Boar of the Ardennes and the ghastly events of that period to the peaceful reunion of anatomists at the new Hotel de Ville in this the centre of the Walloon country. At the outset, Professor Swaen gave an address on the University of Liége, and dwelt on the work of Th. Schwann. The Burgomaster, in well-chosen words, described what the town of Liége had done and is doing for education in all its branches, not the least being the manner in which new institutes for the study of medicine in all its branches are springing up, and fitted with all the most recent improvements. Professor Renaut, of Lyons, acknowledged the welcome, noting that this is the first time that the Congress has met outside France, and dwelling felicitously on the history of Liége and its association with Charlemagne.

Demonstrations.

There were nearly sixty demonstrations and communications, many of them dealing with the structure and development of ova, spermatozoa, and genital glands, and many other cognate histological subjects.

M. Suchard gave a short but important communication on the lung of triton, showing that in this animal the relative position of artery and vein is already definite, and that this relation is preserved throughout the whole higher vertebrate series. It carries the work of Aeby backwards from chameleon to triton.

Professor Schwalbe dealt with the "relief" of the cerebral convolutions as it can be seen in the skull of many vertebrates, more especially in the *Mustelidae*. It appears that the primary frontal convolutions in this group are accurately outlined in "relief" on the outer surface of the skull. "Cranioscopy" in a scientific sense is still with us, but this, it appears, is less applicable to the higher apes than to many of the carnivora. In galeopithecus and lemur the cerebral and indeed the cerebellar markings are very evident. In the

[8] *Diagnostik der Harnkrankheiten.* [The Diagnosis of Urinary Affections.] Von Professor Dr. C. Posner. Dritte Auflage. Berlin: August Hirschwald. 1902. (Demy 8vo, pp. 182, 54 illustrations. M. 4.)

[9] *Leitfaden zur klinischen Untersuchung des Blutes* [Guide to the Clinical Examination of the Blood]. Von Dr. C. S. Engel. 2nd Edition. Berlin: August Hirschwald. 1902. (Demy 8vo, pp. 106. M. 3.)

former the position and size of the olfactory lobes are outlined with the utmost exactitude on the surface of the skull. In mustela and lutra amongst carnivora there is an almost complete "cerebral relief." The theory that best accounts for this arrangement is that the skull is primarily modelled on the developing brain, the brain itself with its various sensory capsules being the chief determining factor.

A most interesting communication combining histological with physiological considerations was that of M. RIGAUD of Lyons on the uriniferous tubules of ophidians, such as the ring-snake. This animal, besides having ciliated epithelium in the neck of the renal glomeruli, has similar cells lining part of the capsule of Bowman, and also in a narrow tube which succeeds the convoluted tube. The epithelium of the convoluted tube contains at least three kinds of granules. The most remarkable part of the uriniferous tube, however, is a wide part that occurs only in the male, and is therefore regarded as a "sexual" tube. It discharges its secretion not by osmosis, but by emptying the contents of vacuoles into the lumens.

INCOME-TAX ASSESSMENT.

BY A BARRISTER-AT-LAW.*

IT may appear at first sight to be a difficult matter for a professional man to draw up a proper return of his income for the purposes of income tax. An explanation of the principles upon which the computation is based may therefore prove useful to members of the medical profession.

Speaking generally, income tax is charged upon the profits of the practice, estimated upon a fair average of three years. The period of three years ends either (*a*) on that day of the year immediately preceding the year of assessment on which the accounts are usually made up; or (*b*) on the 5th day of April preceding the year of assessment.

Example.—For the purpose of estimating income tax payable on January 1st, 1903—that is, the tax for the year which runs from April 5th, 1902, to April 5th, 1903—regard should be had to the average profits of 1899, 1900, 1901. As yearly accounts are often made up to April 5th, the three years may run from April 6th, 1899, to April 5th, 1902.

Where the practice was started within the period of three years above referred to, the computation is made for one year on the average balance of profits from that date.

Example.—Suppose the practice was started in June, 1901. The profits made since that date are to be ascertained and taken as the basis for reckoning what would be made at that rate in one year.

If the practice was commenced within the year of assessment, the profits are to be estimated according to the best of the practitioner's knowledge and belief, and the grounds on which the estimate is based must be stated for the information of the Commissioners.

PROFIT: HOW ASCERTAINED.

The profit of a practice for the purpose of income tax is ascertained by making certain deductions from gross receipts. These must be made in strict accordance with certain rules. Taking the sum total of the receipts which are entered in the books as having been paid as the starting point, the following deductions are allowed:

1. For repairs of premises occupied by the practitioner in connexion with his practice; for the supply of drugs; and for the supply and repair of implements and utensils not exceeding the sum usually expended for such purposes according to the average of the three years preceding.

Examples.—Under the heading "repairs of premises" should be included all necessary repairs effected at the surgery or in the consulting room. The cost of improvements as distinguished from repairs is not, however, to be allowed (vide paragraph 4 post). The "supply or repair of implements, etc.," would include surgical instruments and all the apparatus used in a dispensary. It is to be observed that these figures are estimated on an average for three years. Thus, suppose during the year 1901 repairs were executed to the extent of £300, and no repairs were effected in the other two years, the proper deduction for repairs would be £100. The same rule applies to the supply and repair instruments.

2. Bad debts, or such part as shall be proved to the satisfaction of the Commissioners to be bad; also doubtful debts according to their estimated values.

3. The rent of premises used solely for the purposes of business, and not as a place of residence.

Example.—The actual rent paid for a surgery or dispensary may be deducted under this head.

5. Any other disbursements or expenses wholly and exclusively laid out for the purposes of the practice.

Under this head it is submitted that the practitioner may deduct:—

(*a*) The salary of any assistant, nurse, or secretary whom he may employ exclusively for the purposes of his practice.

(*b*) The wages of any servant employed exclusively for the practice such, for instance, as a coachman, groom, or *chauffeur*, and the board of any such servant if boarded by his employer.

(*c*) Travelling expenses incurred in the course of visits to patients.

(*d*) Cost of heating and lighting surgery or consulting room.

(*e*) Cost of keeping horse and carriage or motor, including cost of repairs, provided that the carriage or motor is used solely for professionally purposes. If the practitioner occasionally takes his wife and family out in the carriage he is not, in strictness, allowed to deduct anything in respect of upkeep, but in practice a fair proportion, say one half, is allowed.

(*f*) Cost of telephone, telegrams, and postal expenses.

(*g*) Cost of annual subscriptions to medical societies or defence union, also law costs incurred in recovering debts.

(*h*) Losses which may accrue from any accident happening in the course of the practice, for example, a carriage accident or injury while operating, unless such loss is covered by insurance.

(*i*) Cost of drugs, medicines, etc., used in the dispensary.

DEDUCTIONS NOT ALLOWED.

The following is a list of the chief matters in respect of which deductions are not allowed:

(i) For any interest on capital, or for any annual interest or any annuity or other annual payment, payable out of the profits or gains. The duty on such interest or annual payment should be deducted from the person to whom the payment is made.

Example.—Suppose a medical man purchases a practice or a share in a practice. He cannot deduct interest upon the capital so invested in arriving at "profits." Further, suppose he borrows £1,000 at 3 per cent. for the purpose of buying a practice. He cannot deduct the interest, namely, £30, from annual receipts for the purpose of estimating "profits," but he is entitled to deduct the income tax paid by him on the £30 from the £30 before he pays it to his creditor.

(ii) Any sums paid as salaries to partners.

(iii) Any sums invested or employed as capital, or on account of capital withdrawn therefrom.

Example.—Money expended in buying out a retiring partner cannot be deducted. The purchase of a motor car or of a carriage and pair would be regarded as expenditure on capital account.

(iv) Any sums expended in improvement of premises, or written off for depreciation of land, buildings, or leases.

(v) Any loss not connected with or arising out of the practice.

(vi) Any expenses of maintenance of the practitioner, his family, or establishment.

(vii) Any loss recoverable under an insurance or contract of indemnity.

(viii) Any sum paid as income tax on profit or gains, or on the annual value of trade premises.

(ix) Any premium for life insurance, but an allowance may be claimed as set out below.

WHAT INCOME IS NOT TO BE ENTERED.

Income which comes under any of the following heads is not to be entered upon the return:

(*a*) Income derived from ownership or occupation of land or unfurnished houses or buildings in the United Kingdom.

(*b*) Income from any office or employment in the public service or under any public body, or any annuity, etc., payable out of public revenue.

(*c*) Income from which tax has been deducted before it has reached the recipient. Instances: Dividends from public companies always have the tax deducted from them.

(*d*) Income of a person resident in the United Kingdom which is earned abroad, and which is not brought or remitted to or received in the United Kingdom.

Although incomes of the kinds specified in heads (*a*) to (*d*) is not to be entered on the return—that is on page 3 of the

* The author is greatly indebted to an official at Somerset House for many valuable suggestions of which he has been glad to avail himself in compiling this article.

yellow form—yet if the practitioner's income is small enough to entitle him to exemption or abatement, he must set forth on page 4 of the form the whole of his own and his wife's income from every source whatsoever, including that falling under heads (*a*) to (*d*).

Insurance Premiums.

When the amount of income to be returned for assessment has been arrived at, according to the foregoing rules, it should be entered on the yellow form. From this amount a deduction may be claimed for life insurance premiums paid, provided that the amount claimed to be deducted is entered in the spaces provided on pages 2 and 3 of the form, and verified by the production of premium receipts if required. The allowance claimed must not exceed one-sixth of the claimant's net personal income from all sources.

Example.—Suppose profits are £500, out of which life insurance premiums of £50 are paid, the £50 must not be treated as a business expense and the income returned as £450. The income must be returned as £500, and then, in the space provided, may be entered "Less life insurance premiums £50 = net £450.

Partnership.

The rules which govern the assessment of profits, to which reference has already been made, apply to every practice which is carried on by two or more medical men in partnership; but the following points may be specially noted in connexion with a partnership assessment:

(*a*) The computation of duty for the partnership is to be kept distinct from any other duty chargeable on the members separately;

(*b*) The return of the senior partner resident in Great Britain is to be sufficient;

(*c*) No separate return shall be allowed in the case of any partner unless he desires to claim exemption.

The effect of (*c*) is that income tax is chargeable upon the partnership income as a whole; but if any partner desires to claim exemption or partial exemption on the ground that his income does not exceed a certain amount, he must make a special return for this purpose. In making this special return, it will not as a rule be necessary for him to state the share or shares of the other partners, although the Commissioners have power to demand further information. A form of declaration to be made for this purpose is given on page 2 of the "yellow form."

Change in Partnership.

Sometimes there is a change in the partnership due either to the death or retirement of a partner, or to the admission of a new partner during the period within which profits are to be estimated. In these circumstances the annual profit must still be estimated upon the average of three years, or, if the partnership has not been so long established, upon the principles already explained for periods of less than three years, unless it is proved to the satisfaction of the Commissioners that the profits have fallen short or will fall short fall short from some specific cause to be alleged to them and proved, since such change or succession took place or by reason thereof.

Example.—Assume that a change took place in an old partnership practice by reason of the retirement of the senior partner in November, 1901. Under the rule above stated the "profits" of the partnership for the purpose of income tax in the year ending April 5th, 1903, would have to be calculated upon an average of the three years prior to April 5th, 1902, unless it was shown that the retirement of the senior partner had produced a considerable falling off in the receipts.

THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY.

The annual general meeting of the members of the London and Counties Medical Protection Society was held at 31, Craven Street, Strand, on April 2nd: Dr. G. A. Heron, Treasurer and Chairman of the Council, in the chair.

The tenth annual report and balance sheet to the end of the year 1902 were presented. The report stated that the number of applications to the Society for assistance during 1902 had not reached the proportion of 10 per cent. of the whole number of members; 10 per cent. was not an exceptional proportion of applicants in the light of past experience, but was nevertheless very high, and indicated the need that existed for combination among medical men for self-protection. By far the larger number of cases were attacks upon the professional reputation of the medical practitioner concerned. The attacks usually, as in previous years, seemed to emanate from a desire to find grounds for declining to pay for medical services rendered. The extraordinary frequency of claims for unskilful treatment made in reply to the doctor's request for payment of fees arose no doubt from the fact that medical men allowed such threats to deter them from enforcing their just claims. In regard to the various charges of wrong treatment made against members of the Society in the course of 1902 it was a gratifying fact that it was rare for any real negligence or want of skill to be discovered on the closest investigation. Many complaints had been received from members who had been the subject of "censures" by coroners or coroners' juries. Such censures were in most cases very unfair to the medical men concerned, but they were not regarded as part of the verdict, and no application could be made to have them quashed, while at the same time the plea of privilege protected the coroner and his jury from an action for slander, and also any paper reporting the matter in a bona-fide manner. The only remedy was publicly to contradict the assertions publicly made. If a coroner habitually conducted his investigations in such a way as to become a public scandal appeal could be made to the Lord Chancellor, but the procedure did not supply a ready remedy for the injustice which fell heavily on the medical profession. On January 1st, 1903, the reserve fund account stood at £1,769, the general account showed invested and in hand the sum of £392, whilst there were no outstanding liabilities. The surplus funds on the first day of 1903 amounted to £2,161, showing an increase during the year of £367. During the last year 325 new members had been elected and 17 members had died.

The Chairman, in moving the adoption of the report and balance sheet, said that it was with a certain amount of sorrow that the Council noticed that disputes arose not infrequently between medical men. When two medical men quarrelled, it was possible that the Council might advise litigation if that were inevitable and unavoidable, but the Council would do everything in its power to prevent litigation between two medical men, because it was a deplorable ending to a dispute of that kind. He doubted very much whether the man who won in such litigation was in a very much better position after it was over than the man who lost. If in disputes of that kind medical men would only refer the matter to the Council and ask them to arbitrate or to appoint arbitrators, a great deal of trouble and deplorable quarrelling would be avoided. The Council had saved money by rigid economy, and complaints had been received that they were saving too much. It was said that they ought to spend that money in the prosecution of quacks. He thought such a course would entail under the present state of the law the expenditure of great deal of money, and would moreover serve no good purpose.

Dr. W. A. Davidson, having seconded the motion,

Dr. Denning said that he hoped the Council would not spend money on the prosecution of quacks.

He was followed by Dr. J. P. Henry, who suggested that the Society should try to bring about an alteration in the law so as to render the suppression of quackery possible.

Dr. Greaves remarked that Dr. Henry probably had never tried to do what he suggested.

The adoption of the report and balance sheet was then carried.

After the Council and officers of the Society had been elected, the proceedings terminated with a vote of thanks to the Chairman.

THE MORISON LECTURES AT THE ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

THE NERVOUS AFFECTIONS OF THE HEART.

The first lecture of the second series of the Morison Lectures dealing with motor disturbances was given by Dr. G. A. Gibson on Monday, March 2nd, in the Hall of the Royal College of Physicians. In the absence of the President, Dr. Clouston, on account of indisposition, the chair was taken by the Vice-President, Sir Thomas Fraser. After pointing out how deeply ingrained upon every literature are references to the movements of the heart, the lecturer showed that nevertheless the thorough study of motor disturbances of the circulation is of comparatively recent origin. Although references to a scientific study of heart and pulse are to be found in the works of Aristotle

Herophilus, Rufus, and Galen, yet long after the time of Harvey there was no real investigation of such conditions. He referred to the observations of Senac, Morgagni, and Laënnec, and showed that it was not until the days of Walshe and Stokes that the consideration of the subject had an effective commencement.

Some consideration was given to the cause of the cardiac movements, and the various opinions from Haller and Senac down to Gaskell and Engelmann were mentioned. The modes in which the rate and rhythm of the heart might be modified were fully analysed, and the observations of Mackenzie, Wenckebach, and Cushny were described, showing that both the rate and the rhythm are dependent upon the initial movements of the great veins and auricles.

The lecturer showed that the disturbances of the rate might be in the direction of increase or decrease, and, as retardation of the rate is, on the whole, easier to analyse, a diminution of the frequency was taken up in the first place. Bradycardia, or diminution of the rate of pulsation, was shown to be sometimes due to idiosyncrasy—that is, personal peculiarity—as in the case of the great Napoleon, who, however, could not be regarded as a healthy being, since it has been well known that he was an epileptic. Direct stimulation of the inhibitory mechanism, as by organic diseases of the brain or skull, and pressure upon the vagus, or the influence of psychical processes, and indirect agencies, such as reflex causes from different viscera, were shown to diminish the pulse frequency. Toxic agents, such as tobacco, tea, and alcohol, as well as the poisons of diphtheria, influenza, and other acute diseases, are likewise powerful in the same way, partly by their action on the inhibitory mechanism and partly by weakening the action of the heart. Increased resistance in the last place was dealt with as an important factor in diminishing the rate of the heart.

The clinical features of bradycardia were afterwards discussed, and it was shown that there might be an entire latency of all phenomena except the essential feature of diminished rate, but that in most instances there were syncopal symptoms, epileptiform seizures, or mental disturbances, along with the objective features of cardiac disorder. The therapeutic indications were then shown to be removal of inhibitory influences, diminution of toxic substances, restoration of cardiac energy, and diminution of resistance to outflow.

The special variety of lessened frequency, known as paroxysmal bradycardia, was then historically traced from the times of Morgagni to the present day. It was shown to depend upon sclerosis of the arteries of the base of the brain, and to consist in seizures characterized by great retardations of the rate of pulsation with epileptiform attacks. Its management by rest, attention to the digestive processes, the iodides and hydriodic acid to restore the health of the blood vessels, nitroglycerine for any tendency to vascular spasm, and belladonna or the bromides to act as sedatives to the vagal system, was then discussed.

Tachycardia or increased frequency formed the concluding subject of the lecture. This was shown to be sometimes the result of personal peculiarities; of diminished inhibitory influence (as induced by heat, chemical poisons, microbic toxines, organic secretions, and mental emotions); increased accelerating influence (as in pyrexia, cardiac irritation—for example, endocarditis, cardiac strain); spinal lesions; and reflex influence. The clinical features were shown to consist essentially in the increased heart-rate, which might be otherwise latent or attended by many circulatory or nervous phenomena if therapeutic indications were seen to consist in the removal of the cause and the restoration of the circulation. The special variety of tachycardia generally known as paroxysmal occupied the end of the lecture, and the condition was said to be probably produced almost entirely by loss of vagus influence. Tracings taken from the condition demonstrated that the increased frequency depends upon the presence of premature systoles accompanied by cardiac enlargement and weakness. Its treatment was shown to be practically the same as that of tachycardia in general, with attention to posture, the use of bandaging, and the adoption of respiratory exercises.

THE QUEEN'S HOSPITAL, BIRMINGHAM.—The Queen's Hospital will receive 5 per cent. of the profits of the National Trades Exhibition, which was opened by the Lord Mayor of Birmingham in Bingley Hall on March 30th. The hospital has already been presented with £1,142 from the exhibition during former years; on the last occasion it received £210.

THE PREVENTION OF CONSUMPTION.

THE MOUNT VERNON HOSPITAL FOR CONSUMPTION.

THE medical report for 1902 of the Mount Vernon Hospital for Consumption and Diseases of the Chest, Hampstead and Northwood, formerly known as the North London Consumption Hospital, contains much that is of value. That the open-air treatment of consumption can be successfully conducted just outside the four-mile radius has already been proved by the results obtained at Hampstead and recorded in previous reports. A new wing is now in course of erection, and in this the entire south aspect is being constructed on the balcony system, allowing patients to sleep in the open air, as many do at present. The old open-air balconies having been removed to make way for this new wing, 16 male patients have been accommodated from March until December in a large marquee, 50 ft. by 25 ft., which was erected in the grounds. The sides of this tent were entirely open, except in very stormy weather, when the curtain was lowered on one side as a protection from driving rain. Thus, through cold, fog, and rain these patients slept with only a canvas roof above them, and progressed better than those who slept in the wards, although these are practically open to the air on one side. There is no artificial heating in these wards, but the patients are liberally supplied with blankets and hot-water bottles. Two or three wards are reserved for cases for whom such open-air living is unsuitable, such as bronchitic patients, but only twelve beds have been thus reserved during the winter, most of the patients having been under full open-air treatment. Experience has shown that absolute open air is the best antipyretic, and that under thorough open-air treatment night sweats invariably disappear within a week, without any anhydrotic drugs. Forced feeding is not adopted, but a liberal dietary is provided, and patients are encouraged to eat as much as they can, and every effort is made to make their meals as attractive as possible.

The educational work of the hospital is not neglected. The patients are taught how to dispose of their expectoration, and no opportunity is lost of impressing on them the fact that unless scrupulous care is taken in the disposal of their sputum they are a danger to the community.

In spite of the alterations in the hospital, the number of patients admitted during the year was 547, only 35 less than in the previous year; 503 were cases of pulmonary tuberculosis, and of these 38 did not remain so long as three weeks, and 5 died within ten days of admission. Of the remaining 460, 172 or 37.4 per cent. left much improved; 134 (29.13 per cent.) were improved; 68 (14.8 per cent.) slightly improved; 60 remained *in statu quo*; 23 were worse on discharge, and 3 died. The effect of indoor life is shown by the fact that 374, or 80.03 per cent., of the patients followed indoor occupations or trades, and only 91, or 19.97 per cent., outdoor occupations or trades. A table showing the extent and stage of the lesions in the lung brings out clearly the greater chance of improvement when only one lobe is affected. "The diminution in the percentage of improvement according to the increase in the number of lobes affected suggests that the limited extent rather than the stage of the disease should be an important determining factor in the selection of cases suitable for treatment." The preponderance of right side (67.35 per cent.) over left side cases affords evidence that the greatest care should be taken before assigning any slight abnormality of the physical signs at the right apex to the generally accepted physiological difference between the right and left apices.

A table showing the influence of family history in 460 cases strongly suggests that a definite family history of consumption considerably increases the gravity of the prognosis.

The report shows the excellent work which is being done by the Mount Vernon Hospital, and its arrangement and detail reflect great credit upon Dr. Sidney R. Williams, the Senior Resident Medical Officer.

MEDICAL MAGISTRATES.—Dr. William George Gray and Dr. Benjamin Jones have been appointed to the Commission of Peace for the Borough of Leigh.

THE following prizes have been won by students of the Royal Medical Benevolent College, Epsom, since the last report presented to the Governors in May, 1902: L. Sworn, Open Mathematical Scholarship, £80, New College, Oxford; A. C. C. Parkinson, Open Classical Demyship of £80 at Magdalen College, Oxford; T. B. S. F. de Chaumont, Scholarship £40 for Mathematics at Selwyn College, Cambridge.



Fig. 9.—Case C. Double congenital dislocation; age 3½ years.



Fig. 10.—Case C. The same, left reduced, right unreduced.



Fig. 11.—Case D. Left congenital dislocation of hip; age 3 years.



Fig. 12.—Case D. The same, reduced.



Fig. 13.—Case E. Left congenital dislocation of hip; age 4 years.



Fig. 14.—Case E. The same, reduced.



Fig. 15.—Case F. Left congenital dislocation of hip; age 4 years.



Fig. 16.—Case F. The same, after reduction.



Fig. 1.—Case A. Congenital dislocation of right hip; age, 5¼ years. Radiograph with foot inverted.



Fig. 2.—Case A. The same, foot with toes pointing upwards.



Fig. 3.—Case A. The same, foot everted.



Fig. 4.—Case A. The same, after manipulation, before reduction.



Fig. 5.—Case A. The same, after reduction.



Fig. 6.—Case B. Double congenital dislocation of the hip; age 6 years.



Fig. 7.—Case B. The same, after manipulation, before reduction.



Fig. 8.—The same, after reduction.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1903.

Members of the British Medical Association are reminded that commencing with January 1st, 1903, the annual subscription is a uniform one of 25s., inclusive of the Branch, and that all subscriptions should be paid direct to the General Secretary, 429, Strand, London, W.C., and not to a Branch Secretary.

British Medical Journal.

SATURDAY, APRIL 11TH, 1903.

THE HOUSING PROBLEM.

The discussion in the House of Commons on April 2nd on the unsatisfactory and defective administration of the Housing Acts by the departments concerned was interesting and suggestive, notwithstanding the fact that the Speaker ruled that the general question of the housing of the working classes was not admissible. The subject is so complex and presents so many branches that it is difficult to view it in true perspective. We are inclined to think that, notwithstanding Mr. Long's defence of the Local Government Board, there has been in the past a too rigid adherence to set rules, an unnecessary procrastination in sanctioning schemes, and an enforcement of conditions in the supposed interest of health or of safety from fire which were not indispensable. There is little doubt, however, that there is an increased inclination to treat each scheme on its merits and to facilitate in every direction the housing action of local authorities; and we hope to see shortly, in the promised Bill of the Government, some practical advance in these directions.

Much help would be given to local authorities if the powers as to housing were consolidated and the procedure amended, so as to be less expensive and tedious. The procedure under Part II of the Housing of the Working Classes Act, which requires that exactly the same notices shall be served when, in the opinion of the local authority, a given house cannot by alterations be made fit for human habitation as when this is possible, especially needs alteration.

The question of substitutory accommodation for persons displaced in connexion with schemes under Part I of the Housing of the Working Classes Act is most difficult. Mr. Austin Taylor, M.P. for the East Toxteth Division of Liverpool, advocated in the discussion that the Local Government Board when a slum was cleared should insist not only on substitutory accommodation, but should also require that the accommodation should be allocated to those who were dispossessed. There is much to be said for this proposal. Under present conditions, the Local Government Board allows the slum to be cleared before all the necessary accommodation for those displaced has been provided. It follows from this that while new sanitary houses are being built on the cleared area, the persons displaced have to a considerable extent crowded into neighbouring streets. Of course the substitutory accommodation could seldom, if ever, be found in the vicinity of the cleared slum, but if new accommodation equal to that required for the whole population of the slum were provided, even at a considerable distance, before the slum was cleared, the stress on neighbouring streets would be somewhat diminished. This phase of the problem indicates the change in public opinion. A few years ago we were chiefly concerned in clearing slum areas; now the greater importance of first providing new houses and of providing cheap means of communication is fully realized.

Construction before demolition is the watchword. It does not follow that demolition is not required. Mr. Hay, M.P. for Hoxton, who introduced the subject to the House, appears partially to misunderstand this point, and the misunderstanding is very widespread. "Overcrowding," he said, "produced high rents, created new slums faster than the old ones could be removed, and was a cause of insanitary dwellings and a low standard of home life.' If by "slums" is meant areas requiring demolition, we disagree with this statement of the problem. Overcrowding is no reason for demolition. It is a reason for the provision of a larger number of new and if possible cheaper dwellings, and for the strict enforcement of the law as to overcrowding, and of by-laws for "houses let in lodgings." Demolition on any considerable scale is required only when the evils connected with the houses "cannot be effectually remedied otherwise than by an improvement scheme" for reconstruction, etc. There is the same difference between the evils of overcrowding and those remediable only by the application of Parts I and II of the Housing of the Working Classes Act, as there is between a functional disorder and a disease caused by serious organic trouble of some important part of the body.

The experience of London and other large towns in clearing slums is not likely to favour further extensive experiments in this direction. During the last 27 years 34 slum areas have been cleared in London at a cost of £3,000,000, of which £2,200,000 is stated to be an absolute loss to the ratepayers of the metropolis. Unless Mr. Long can suggest improved methods, which will make schemes under Parts I and II less exorbitantly expensive, local authorities will in the next ten or fifteen years confine their activities to the provision of improved and more rapid means of transit, and to the building of houses under Part III of the Housing of the Working Classes Act, hoping thus to diminish the cost of ultimately clearing slum areas. In this connexion the interesting remarks of Mr. Balfour in the discussion on municipal trading on April 1st have special weight. He evidently welcomes the trespassing by local authorities (in the provision of electrical power, of means of communication, etc.,) on the areas of other local authorities, and is disposed to think that "there ought to be very great extension of these trespassing actions on the part of certain municipalities." During the next few years we shall almost certainly witness the operation of centrifugal forces on a large scale, which it may be hoped will do something to minimise the evils associated with the enormously increased urbanization of our population during the last half century.

Many aspects of this important problem are necessarily left untouched in this article, but we venture in conclusion to express our disagreement with the remarks of Mr. Middlemore, M.P. for Birmingham (North), who expressed the view that the whole explanation of the housing problem was that "population and rents were increasing quicker than wages." It would be interesting to know how this statement can be substantiated. To place population on the debit side of the account along with rent is in our opinion most fallacious. At the present time, when there is too much preaching of the doctrine of social salvation

by small families—in our opinion a thoroughly unsound doctrine—it is necessary that a protest should be entered against such unsupported statements. It is fair to add, however, that Mr. Middlemore was prevented from enlarging on this general aspect of the question by a ruling of the Speaker.

THE FRUIT OF THE FORBIDDEN TREE.

THE limits of parental responsibility would seem, as human ideals enlarge, to become more and more difficult to fix. While no one will wish to quarrel with the extension of these limits in any reasonable direction, many will agree at once that there do remain limits which it is as well, for the sake of society and the individual, to preserve. A book[1] written and lately republished by a member of the medical profession provides a text for a few remarks on the latter point. The book is written, so far as can be gathered from its introduction, for the instruction of members of the medical profession by one of their number, in the art of assisting parents and guardians in imparting information to their children in reference to various sexual matters and moral questions. The writer takes for granted the obligation of both medical men and parents and guardians and even persons described as the "younger generation of workers" to take an active part in this matter. The book would seem to be simply the logical result of a widely current view held by people of many different opinions that an elementary knowledge of what is known as "physiology" is a necessary equipment of each man and woman for the proper discharge of the duties of personal and family life. But physiology is no easy subject. It is also concerned only with the normal functions of the human body. So that, granted that an intelligent study of the subject by itself were possible, it is difficult to see what precise practical gain would accrue to the student. But this is not all. There are not wanting people who go farther still, and believe that without a smattering of facts not only physiological but actually pathological man is incapable of maintaining the just balance of his functions and faculties. Some people even think that they ought to know much of what is to be known on questions of diagnosis and treatment, and many flatter themselves that they do know a great deal. Some parents know, when their child is ill, what treatment they wish adopted, and are quite ready to argue with their medical man on the subject and to decline his treatment if it does not suit their views. Probably many causes contribute to the making of this class of parent, not the least of them being the circulation of inviting and plausible trade or quack literature, and the making of innumerable small popular books on very elementary physiology, hygiene, and so on. For the purpose of, or as a result of, the dissemination of this kind of information there exists a great army of philanthropists and reformers, whose benevolence is only equal to their ignorance, and who in their chronic kindly desire to improve human nature and make somebody's flesh creep, are always ready to shower books and advice on every topic concerning the education of his child upon the open-minded parent. The perils to the child from this class of person date from the time when they probably interfere to deprive him of his mother's milk—if not sooner. Indeed in the treatment of children of all ages and classes it is astonishing to reckon how much of the time of the medical man is spent in combating the mischief done by patent foods and remedies, and by various other experiments in treatment given at the instance of reformers whose theories have commended themselves to the child's parents and guardians. In addition, parents are deluged with advice upon their children's bringing up. They read books upon clothing, schemes of diet, manners, morals, conduct; on the question of educating, not educating; exercising, not exercising; on dangerous habits or on subtle temptations. Their children's life is a source of anxiety to these people, their school time is a period of torture, their period of puberty a nightmare. Whatever may be the results to the child, the parent too often ends as an example of the finished "crank," bewildered, blown about by every wind of doctrine, incapable of sticking to the advice of any one of his would-be guides, and equally sceptical of any advice from the medical man which may happen to clash with his own pet theories. Such people know about as much what to do with their popularized scientific knowledge as an African pigmy would know what to do with a telephone. As a finishing touch, the moral reformer once more appears upon the scene, desiring to fit the young adult for the responsibilities of married life and parenthood. His method is often peculiar, and when he proceeds to demonstrate it, as in the book to which we refer, the ordinary parent and medical man are, we think justly, surprised and shocked.

It will be a sufficient indication of our meaning if we quote the headings of the chapters "for the instruction of parents and guardians": Distinctive Characters of Human Sex. Equivalent Functions in Male and Female, On the Abuses of Sex, Development of the Idea of Chastity, Rescue Work, Trade in Women, etc. How it can be argued that a knowledge of some of the most sordid details of the street, the gaol, and the hospital can provide material capable of contributing to the making of good parents it is impossible to conceive. It is obvious that the happy and well disposed can profit nothing by such information, while to the unhappy or ill-disposed it may, and surely often does, come as a stepping-stone to more unhappiness, and as an introduction to an evil class of books. These results are not to be feared from weighty reserved writings upon questions of real scientific interest. But then such works are not numerous or vivid, nor of any particular popular interest. Simple graphic books full of anecdote, opinion, and quotation, without authority, and weighted only with an insidious power for mischief, are the harmful books, and their writers must continue to take the blame that always attaches to the reckless dissemination of specialized knowledge set out so that the onus of forming opinions on subjects which they cannot grasp is thrown on readers incapable of forming opinions at all.

Of course there are people always ready to gratify the would-be teacher by being eager to learn. There is a market for little books and pamphlets, and this is especially true when such books treat of matters which through their cloak of mystery, human interest, stimulus to curiosity, or any other not inherently depraved reasons are of interest to many young adults, whether parents or no.

The duty of the medical man in imparting knowledge in all matters of medicine and hygiene would seem to be fairly clear. If any man or woman in a public or private capacity as parent and guardian or as voter, ratepayer

[1] *Essays in Medical Sociology.* By Elizabeth Blackwell, M.D. In two volumes. London: Ernest Bell. 1902. (Crown 8vo, pp. 572. 7s.)

legislator, employer of labour, or private individual finds himself or herself in need of skilled advice regarding some question in which an opinion is demanded of him or her, there should be no difficulty in procuring it from some competent member of the medical profession. Such questions are as a rule, quite simple, and seldom cover much ground. The doctor's duty would seem to consist in giving the answers with all the skill and fairness at his command.

Of course any medical man may speak or write on social or medical matters of public importance; his right to be interested in these things is equal to that of any other citizen. But he must take care what he writes, and how, and consider to whom he addresses himself. In all topics on which his position in the medical profession presupposes special knowledge, he is especially bound to weigh his words and order his going. His science must not be too popular, nor his popular exposition too scientific.

In addressing the laity he should above all things make it clear that his function is not either primarily or secondarily that of an itinerant preacher of as much of the gospel of medicine and hygiene as he is able to put in popular form, and induce his hearers or readers to accept. Any such attitude is fatal to the respect owing him by the public, to whom he stands as a learned man. When he recognizes a morbid attitude on the part of humanity at large with regard to things hygienic his duty is to stem and correct it where he can, but certainly not to add to it on the pretext of giving it satisfaction.

There is still another side to this question. There is the point of view of the boy or girl who has undergone the enlightened bringing up, who enters adult life as many hundreds do, primed, theoretically at any rate, with the useful knowledge contained in such books as we are criticizing, and aware of most of the pitfalls life is likely to offer. And, curiously enough, many of these young people are not as grateful for their teaching as their parents and guardians might suppose. They sometimes confide their views to elders who are not their parents or guardians, or to each other.

It is not uncommon to hear young men express resentment against generalizations which class them either among helplessly foolish persons or among offenders with whom they have no part. It is not uncommon to hear young women denounce the cynicism which under the guise of kindness and worldly wisdom instils into their minds a deep distrust of the married state which they nevertheless believe to be their natural destiny.

If we may speak for parents in the medical profession it is impossible to suppose that wise fathers or mothers could desire to suggest to their sons or daughters either the problems raised or in many cases the explanations proffered in the book to which we refer. There are a multitude of the best parents who think that their way is not made easier by the so-called moral reformer but rather the reverse. And there are many of the most wholesome minded boys and sweetest girls who hate him with a perfect hatred. The rest would probably do very well without him.

For our own part we do not see that either parents or children can receive any real benefit from the amateur pathologist, the physiologist of doubtful accuracy, the moralist of vague opinions, the inventor of "sexual laws," or from any writer, medical or other, of indecent and unnecessary books.

BLOOD CONDITIONS AND SALINE INJECTIONS AFTER ACUTE HAEMORRHAGE.

Although from the work of Hühnerfanth, von Lesser, and others we possess some definite knowledge of the effect of haemorrhage upon haemoglobin and the corpuscles, up to the present we have known little of the chemical changes in the serum which follow severe haemorrhages. Upon this most important subject Baumann[1] has just published the results of a research suggested by Professor Vaughan Harley.

The animals employed were young, full-grown dogs. After a week of full dieting, blood amounting to 2.24 per cent. of their body-weight was withdrawn. A week later each animal was bled to death. During the interval the animals were kept on an ordinary diet of meat, biscuits, and water. On the day of operation the peripheral blood was examined; it was taken from the common femoral, and estimations were made of the water, solids, ashes, proteids, and total nitrogen of the blood and serum and of the albumin and globulin of the serum.

Comparing the figures given by the estimations of the blood constituents in the first and second depletions, the following conclusions were permissible; after marked haemorrhage there was a general deterioration of the blood and serum, the haemoglobin was more diminished than the red blood corpuscles, there was an increase of polymorphonuclear leucocytes, and the coagulation time was distinctly shortened. The corpuscular volume was decreased by about 17 per cent., and the solids showed a reduction of 11 per cent, and the nitrogen of 11.5 per cent. Although the present methods for the quantitative estimation of fibrin are not quite accurate, yet the figures obtained pointed to a marked increase in the fibrin-yielding elements. The ash was but slightly altered (— 2 per cent.). The serum solids were increased, but the serum proteids were diminished (13 per cent.), and the serum albumin was increased apparently at the expense of the serum globulin.

The extension of the experiments to include the effect of haemorrhage during the administration of iron and arsenic produced some exceedingly interesting results. Compared with haemorrhage alone, depletion during the administration of inorganic iron (Blaud's pills) led to the serum being less affected. Haemoglobin yielded an increased value, but the red corpuscles were more diminished. The corpuscular volume only showed a diminution of 10.5 per cent., and the serum solids were slightly increased.

When organic iron was given (liq. ferri. albuminati, *Pharm. Germ.*) the haemoglobin was diminished; but in respect of this and of the other constituents, the condition of the blood was better. The administration of arsenic caused a slight improvement upon the conditions exhibited after haemorrhage alone, but it was less beneficial than the iron preparations; in fact, there was leucopenia. When, however, inorganic iron and arsenic were given together the blood after haemorrhage was much less deteriorated than with either iron or arsenic; there was only slight leucopenia, the red corpuscles were nearly normal, the haemoglobin only slightly diminished, and the proteids and nitrogen gave the highest average values obtained.

Zachrisson has lately completed some lengthy experiments upon the effect of saline injections after severe

[1] *Journal of Physiology*, p. 18, February 23rd.

haemorrhages.[2] They were begun in Tigerstedt's laboratory in 1898, and completed under Professor Öhrvall in Upsala. He investigated circulatory conditions in acute anaemia, and the effect of saline infusions upon them as the earlier work of Maydls, Schramms, and Feis yielded results at variance with clinical experience. A preliminary survey of the literature of the subject showed that the results which had been obtained were very conflicting, owing probably to the varieties of animals used and the disregard of isotonic conditions when preparing the solutions. Zachrisson's work is divided into two parts, dealing with intravenous and with subcutaneous infusions respectively. Sixty-three experiments were performed upon rabbits. The solutions used were 0.9 per cent. NaCl, and Göthlin's solution.[3] He found that the animals recovered if the blood removed did not exceed 3 per cent. of their body weight. Immediately after this quantity was withdrawn, an intravenous saline injection was made, and it was then observed that the depletion could be continued for a longer time than in animals that did not receive such an injection. If the injection was delayed until death symptoms appeared, the saline infusion did not save the animal, although it delayed death for about ten minutes. When the animal was held head upwards until death appeared imminent, and when the resumption of the horizontal position with head downwards did not aid recovery, intravenous infusion frequently produced return of vitality. Subcutaneous saline infusions were less effective. Thus it appears that if the haemorrhage is so severe as to endanger life through deprivation of blood to the nervous centres, intravenous saline infusions will restore the circulation and save the animal's life.

Have these experiments any clinical import? In a later communication[4] Zachrisson relates some cases from the Upsala clinic. If after a severe haemorrhage all the usual remedies had been tried in vain and then an intravenous saline injection restored the vital activities, the question of its efficacy would be easily answered. But it is not easy in such cases to determine at once whether the anaemia is beyond ordinary natural compensation. However, in some of Zachrisson's cases the radial and in one the femoral pulse could not be felt. In two cases the light reflex was lost and the pupils were dilated to the maximum, and after intravenous saline infusion the pupillary reflex at once returned in one case, and in the other it returned three hours later.

The cases selected were examples of haemorrhage and acute heart failure after amputation, post-operative collapse after plastic operation for cranial fracture with hernia cerebri, post-operative abdominal bleeding, severance of the left common carotid and wound of the left internal jugular, and severe haemorrhage following nephrotomy. These patients all recovered from practically a moribund condition after intravenous saline injections. In a case of fractured pelvis, extraperitoneal and intraperitoneal haemorrhage and urethral rupture, the infusion was without any effect. The solutions employed were 0.6 per cent. to 0.9 per cent. sodium chloride at 38° to 40° C., and they were injected into the median basilic vein. Zachrisson considers these cases to be illustrative of a variety of acute anaemias in which the quantity of blood remaining is insufficient for the needs of the circulation, but in which the specific elements (or quality) are sufficient for the nutritional requirements of the organism. He evidently thinks that intravenous saline infusions are more beneficial than subcutaneous or rectal injections, although he reserves his opinion until he publishes further cases.

[2] *Upsala boktryckeriet.* 1902. (P. 156, 8 plates.)
[3] NaCl 6.5 grams + $NaHCO_3$ 3 grams + KCl 0.5 gram + $CaCl_2$ 0.25 gram + H_2O 0.1000 c.cm.
[4] *Upsala Läkar. forhandl.*, p. 106, 1903.

THE UNIVERSITY OF LONDON.

In accordance with the statutes made under the University of London Act, 1898, several of the members of the present Senate have recently retired, but are eligible for re-election. In addition to Dr. Kingston Fowler and Dr. Bradford, who, as stated last week, have been re-elected by the Medical Faculty, we understand that Mr. Pearce Gould has been re-elected for a further period of four years by the College of Surgeons. Dr. Hill and Dr. Ker have been similarly re-elected by the Faculty of Arts, Dr. Carey Foster by University College, Dr. Buzzard by King's College, and Mr. Geddon by the Incorporated Law Society. In addition to Sir John Wolfe Barry, who has been reappointed by the Crown, Sir Francis Mowatt, G.C.B., has been made a Senator for the first time, representing His Majesty in Council. Sir Francis Mowatt has been permanent Secretary to the Treasury since 1894 and has been concerned in the financial arrangements with the Government in connexion with the reconstitution of the University. Convocation will be called upon to elect representatives in the place of those retiring in the several faculties, at its meeting on May 13th. Election will be by ballot papers transmitted through the post. The retiring senators in the Arts faculty are: Sir Joseph Walton, Dr. Bourne Benson and Dr. Lambert Mears; in medicine, Sir Thomas Barlow; in science, Mrs. Bryant, D.Sc., Dr. Kimmins and Dr. Clowes. All of these are of course eligible for re-election. We learn that the decision of the Senate to confer honorary degrees was only arrived at after much discussion and several divisions. In addition to the degrees to be conferred on their Royal Highnesses the Prince and Princess of Wales, honorary degrees have been offered to Lord Lister, Lord Kelvin and Mr. Herbert Spencer. It is reported that the last-named has declined the proposed honour.

MEDICAL MEN AND CORONERS.

We publish in our medico-legal columns an account, reprinted from the *Kensington News*, of an inquest held on the body of a child by Mr. S. Ingleby Oddie, acting as deputy coroner for Mr. Luxmore Drew. From this account it would appear that at the inquest certain allegations were made against, and aspersions were cast upon, Dr. W. R. McKinnel. These allegations were made in that gentleman's absence, and no opportunity was given him of refuting them or of offering any explanation. We also publish a letter relating to the matter from Messrs. Hempsons, the solicitors to the Medical Defence Union, written on Dr. McKinnel's behalf, in refutation of such allegations and aspersions. From this letter it will be seen that the first intimation which reached Dr. McKinnel that an inquest had been held, or that his conduct had been impugned, was in the newspaper report of the inquest. To permit a medical man to be assailed in any court without giving him the opportunity of answering charges levelled against him is scarcely in accord with the recognized principles of right and justice. It is true that the coroner offered to adjourn the inquest for the presence of Dr. McKinnel should the jury desire it, and refused to allow the jury to censure him in his absence. The jury, however, after having "made some strong remarks as to the conduct" of Dr. McKinnel, stated that they did not wish to adjourn, but added that they would like "their opinion as to his action" to be represented to him by the coroner. Strange to say the coroner agreed to do this, and we are informed did so communicate with Dr. McKinnel. We cannot understand the line of action taken by the coroner, whose legal knowledge should have enabled him to realize the unjust manner in which Dr. McKinnel was being treated, and who should not have

allowed the opinions of the jury formed from mere *ex parte* statements to have prevented him from adjourning the inquest in order to give Dr. McKinnel an opportunity of attending and disproving the allegations made against him. Messrs. Hempsons' letter fully explains the facts of the case, and effectually disproves the statements made in evidence. It is to be hoped that the coroner will take the earliest opportunity of having Messrs. Hempsons' letter read in open court, in order that the stigma so unwarrantably attached to Dr. McKinnel may be removed. This would be simple justice to a professional man who has been most unfairly treated.

THE CORONERSHIP FOR MANCHESTER.

As was mentioned in the British Medical Journal a few weeks ago, the office of Coroner for the City of Manchester has become vacant owing to the death of Mr. Sidney Smelt, who held the office for many years, having previously filled the post of deputy-coroner to the late Mr. Hertford. The Town Hall Committee of the Corporation has already had the matter under its consideration, and without expressing any views of its own on the point as to the profession from which the new coroner shall be selected—whether from the ranks of barristers, solicitors, or medical men, the Committee recommends the Council to give definite directions thereon, and to say that the gentleman appointed shall in no case carry on his profession apart from his office, but shall give all his time to the duties connected therewith. The Committee also asks for general instructions as to advertising the vacancy. We hear there are already some candidates in the field. Dr. Geo. Henry Darwin, who has been police-surgeon for the county for over twenty years, is a candidate. He is a Doctor of Medicine and a F.R.C.P.Edin., and is well known and much respected in Manchester. Dr. Grieson Gledhill, a well-qualified medical man, and a barrister-at-law, is a candidate, and we hear that Dr. Cornelius O'Doherty, of Manchester, has also made application for the office.

THE PASTEUR INSTITUTE OF INDIA.

We were enabled to add to the paper by Major-General Creagh on the Pasteur Institute at Kasauli, India, published in the British Medical Journal of March 21st, a short account of the work of the Institute during the year 1902. We have now received the official report of the Director, Major Semple, R.A.M.C. We need not recapitulate the statistics which we were then able to give, but may call attention to a very interesting section describing the practical steps that should be taken with regard to wounds from animals. He considers that every bite from a dog or other animal should be cauterized, because the saliva of a dog is certainly capable of conveying the virus of hydrophobia for two or three days before it appears to be ill, and occasionally for as many as seven or eight, but never for so much as ten days. Any dog therefore, however apparently healthy, should be kept under observation for at least that period. A dog that has been bitten by another dog will certainly not develop hydrophobia for at least a fortnight, while the most probable interval to elapse is from three to four weeks, but it cannot be considered "safe" for several months. Cauterization of a dog bite, if performed immediately after its reception, may be depended on to reduce the risk to almost nil, but its efficacy decreases with every minute of delay, and after seven or eight hours have elapsed it is probably quite useless. Ineffective cauterization, or in default of a caustic simple washing and cleansing of the wound with water or an ordinary antiseptic lotion is better than no treatment at all, because the smaller the amount of virus left in the wound the longer the incubation period, and the more time for the patient to be brought under treatment at a Pasteur Institute. Since the virus spreads up the nerve tracts, it naturally follows that wounds about the head and face are more dangerous than those elsewhere, infection being more probable and the incubation period more brief. On this account Major Semple advises that any person so bitten should proceed at once to a place where he can be put under antirabic treatment without waiting to see whether the animal develops any symptoms of rabies. Owing to the course which the virus in all cases of infection takes, he considers ligatures above the wound, etc., perfectly useless, and the "first-aid treatment" that he advises is in all cases cauterization. This should be done by swabbing out the wound with pure carbolic acid, which penetrates the minutest crevices of a wound, and the action of which is not affected either by dirt or grease. The strong alkalies, silver nitrate, nitric acid, and the hot iron Major Semple considers much less effective and much more painful. Cauterization, however, should never be considered as more than a preliminary to a course of treatment at an institute, to be commenced at the earliest possible moment.

STATE AND VOLUNTARY HOSPITALS.

The inconsistencies for which many British institutions are celebrated are a proof of strength, in so far as they originate in slow conservative growth, and are the outcome of practice and not of theory. The same inconsistencies are, however, a source of danger when existing systems are thereby exposed to the energies of reformers who wish to bring them into line. Hitherto the inconsistencies which surround our modern treatment of the sick and infirm have not attracted much attention. They have been hinted at indirectly, but few have hitherto put the direct question, "If the State takes charge of these sick, why not those?" This, however, is the question which has been raised in three different ways, and from three different standpoints during the past ten days. The Lord Mayor of Liverpool made a remark at a public meeting in Liverpool to the effect that he thought the time had come when Poor-law authorities should be called upon to pay for the food supplied in voluntary hospitals to all those patients who cannot afford to pay for it themselves. The Liverpool Medical Club has in its turn raised the same issue in another form, passing a resolution to the effect that all public hospitals ought to be taken over by the State, that the expense should be borne entirely by the State, and that the medical staffs should be paid as State officials. The third way in which the subject has been broached is in an article by Mr. J. G. Craggs, M.V.O., in the *Times*. In this he calls upon the great commercial institutions, such as the banking houses, insurance companies and railways, to be more liberal in their support of the voluntary hospitals, threatening them if they do not listen with the financial terms of rate-supported substitutes. In the suggestion of the Lord Mayor of Liverpool there is nothing, it appears to us, essentially inconsistent with existing conditions. There are indeed many instances in which public bodies of the nature of Poor-law Boards pay for the support of persons for whom they are responsible in institutions over which they have no direct control. Poor-law guardians indeed themselves, we believe, not infrequently pay for cases from workhouses which are sent to convalescent homes, and of course they habitually pay for lunatics in county asylums. It often occurs, too, that sanitary authorities consign cases for which they are responsible to the isolation wards of other Boards, and pay very high rates for the accommodation. How far, however, the interpretation which the auditors of the Local Government Board put upon the rules laid down for their guidance would permit them habitually to pass sustenance payments for paupers in voluntary hospitals is quite another question. The principles which have influenced the Liverpool Medical Club in passing a resolution in favour of so radical change in existing conditions is not clear from the terms in which it is couched. So far, however, as the direct benefit of individual members of the profession may be considered to be one of them, it receives strong support from some of the arguments used by Mr. Craggs in his article. In this, among other things, he estimates that the financial saving to the public purse resulting from voluntary medical attendance is equal to a rate of 4d. in the £1. While it may be true that the conversion of the medical staffs of hospitals into State-paid or rate-paid officials

would be a benefit to individuals, it is not so clear that it would really be a benefit to the profession in general. Indeed, even individuals would probably benefit to a very much less extent than might be expected from the estimate put upon the total value of the services of the profession to the hospitals. The low rate at which existing appointments of a corresponding character held by medical men under the State is well known. Whether there would be a falling-off in the quality of the medical service rendered under a State-supported system of hospitals, as argued by Mr. Craggs, is a matter of opinion. The subject is a very large one, and may be considered from many different points of view By the abolition of the present system the profession would lose something, for the free service it renders to hospitals is one of its greatest honours. Nevertheless the profession will be quite justified if it put forward the business aspects of the relations between itself and the public much more prominently in the future than in the past.

THE ROYAL NAVY MEDICAL SERVICE.

Lord Selborne's address at the end of the Haslar course of instruction to surgeons on entry, published in the British Medical Journal last week, was a notable new departure, and one that will be highly appreciated by the distinguished Principal Medical Officer of Haslar, the instructors, and the naval medical service as a whole. The First Lord of the Admiralty fully recognized the sacrifice that an earnest student of his profession makes in entering the, as a rule, limited field of observation in ships' medical and surgical practice, and reminded the newly entered surgeons "that it was not always the men who deserved success who obtained it." As to the "very great difficulty....owing to the shortage of" (medical) "officers," our columns have shown how this could be overcome, and the navy made as attractive as the army, or even more attractive to newly-qualified medical men; such necessary reforms, with the social advantages of the senior service, could not fail to complete and maintain the requisite establishment desired, and render possible the study leave, so essential in the case of naval medical officers. Fleet Surgeon Gipps, in the *Times* of April 7th, when pointing out the advantages of the naval medical service, ignores the absence of charge and expert pay enjoyed by the officers of the R.A.M.C. The work done by Bruce and Ross affords a notable object lesson, and we may add the names of Bassett-Smith and Dalton, who are deservedly recognized, by the Admiralty as worthy of special promotion "for conspicuous professional merit." The invitation to "officers entering" to remember that it was their duty to offer every suggestion likely to contribute to the welfare of the service and the advancement of medical science" does not come too soon; we are aware that the Lords of the Admiralty have long desired such suggestions, and this authoritative pronouncement will, we feel assured, have far-reaching beneficial results, not only for the navy, but for the empire also.

THE PERILS OF THE CURETTE AND UTERINE CATHETER.

A recent article by Dr. Mauclaire[1] deserves the attention of every practitioner. "Minor gynaecology" has long ceased to be a reproach, but the simplest operations on the uterine cavity are never without peril, even when certain well-known precautions, seldom neglected, are observed. In Paris great advances have been made in the practice of obstetrics and uterine therapeutics, yet Dr. Mauclaire has had to intervene three times within a few months in cases of "gynaecological" perforation of the uterus. The first patient had aborted at the third month; three weeks later the curette was used in a great Parisian hospital be it remembered. The instrument suddenly went through the fundus; the scraping was at once discontinued and a plug of gauze passed into the uterine cavity. Six hours later the patient was in a state of collapse from acute septic peritonitis. Supravaginal amputation of the uterus was performed and the peritoneum drained through the vagina, but the patient died in twelve hours. The uterus had been perforated through a suppurating focus in its walls. The second patient was in another great hospital in Paris when the curette was used to remove some retained products of conception. It suddenly perforated the uterus, and the cavity of that organ was at once plugged with a strip of gauze. The case was watched, septic symptoms were very distinct at the end of twenty-four hours, therefore Mauclaire operated. The perforation was closed with two deep catgut sutures, and as the right appendages were inflamed they were removed. The pelvis was drained after Mikulicz's method; recovery was speedy. In the last case the patient had septic symptoms beginning twelve days after a normal labour. A doctor called in by the midwife employed intrauterine douches, making use of Doléris's metal dilating catheter, the tampon being inserted after each daily douche. At the end of a fortnight, during the douching, the patient fainted, then it was found that the catheter had passed far through the uterine walls, whilst the fluid, a solution of cresyl, did not return. The patient was sent into hospital, but the history of the case was not known until the next morning. Mauclaire operated twenty-four hours after the accident; he performed a supravaginal hysterectomy, drained the cervical canal, and packed the pelvis with gauze, the drain opened through an incision in each groin. The patient, however, died seventeen hours later. Dr. Mauclaire adds two cases in his experience last year (making 5 in all) where the puerperal uterus had been perforated, and most probably after or during an illegal operation. Both underwent supravaginal hysterectomy and packing of the pelvis with aseptic gauze. The first died, but she was sinking from acute anaemia as well as sepsis when admitted into hospital, the second was saved. These cases are instructive, as it shows that perforation may occur even when instruments are used by experts with all the advantages of appliances and nursing at a metropolitan hospital. The conscientious practitioner employing the intrauterine douche in a septic midwifery case may meet with the same accident. It is not only the abortionist, eager to scrape away at once all incriminating products of conception, who is likely to perforate the uterus. Further comment is needless, but the perils of intrauterine "minor" surgery must never be forgotten. Perforation by the sound in a non-gravid uterus is seldom followed by bad results, though some authorities suspect that in some cases so styled the sound has passed along the canal of one Fallopian tube so that no wound has been inflicted; still, the sound as an instrument used for diagnosis is not without grave disadvantages. About the treatment of sepsis after perforation there is much difference of opinion; many authorities distrust supravaginal hysterectomy, as the cervix left behind is probably septic.

[1] *Annales de Gynécologie et d'Obstétrique*, February.

ANTITOXIN TREATMENT OF DIPHTHERIA IN MASSACHUSETTS.

The work of producing diphtheria antitoxin was undertaken by the State Board of Health of Massachusetts in 1894 and the distribution for general use began in 1895. In a report recently presented to the State Board a number of most interesting particulars will be found respecting the advance which has been made from that date to March 31st, 1902. Before 1891 owing to non-notification and other circumstances the records of cases and deaths due to diphtheria are incomplete. It is, however, estimated that the fatality was as high as 30 per cent. From 1891 to 1894 inclusive the fatality was 28.3. In 1895, when the antitoxin treatment was introduced throughout the State, the fatality fell at once to 18.9 per cent. of all reported cases and during the next six years the percentage declined successively from 15.1, 14.1, 13.2, 11.6, 10.2 to 10.5. The actual number of registered deaths from diphtheria in Massachusetts in the seven years 1895-1901 was 9,281. But the estimated number obtained by applying the mean fatality rate of the four years 1891-4 to the actual fatality rate of each successive year of the later period 1895-1901 makes a total

of 19,978 deaths in the seven years. This means that there was a saving of life in these seven years represented by 10,697 lives. The report rightly points out that there are certain indeterminate errors in an estimation of this character, but after making the most liberal allowances for all these the saving of life still remains very marked. After discussing the financial economy of the gratuitous distribution of antitoxin, and its effect as compared with the supply which is furnished only by private purchase, the report refers to its increased use. In 1895-6, 1,724 bottles of antitoxin were called for. In 1901-2, 40,211 bottles were required, and many of those medical men who were most zealous in opposing its introduction are now most enthusiastic in its support. The most commonly used amount for each case of diphtheria varies from 2,000 to 4,000 units. The most interesting part of the report deals with the actual use and effect of the antitoxin. The strength of serum employed varies from 300 to 450 units per c.cm., and the serum has usually been issued in a 5 c.cm. phial, containing 1,500 units. For convenience, a vial containing 20 c.cm. has also been employed for use where several patients are to be treated at once, or where unusually large doses are to be used. The fatality by ages shows the well-recognized result of high fatality in infants and young children. From 0 to 2 years the fatality was 21.7 per cent.; 2 to 5 years, 12.8 per cent.; 5 to 10 years, 7.1 per cent., and over 10 years 3.5 per cent. The percentage fatality in relation to day on which antitoxin was administered is well shown in the following figures: First day administration (1,289 cases, 100 deaths), 7.8 per cent. died; second day (2,892 cases, 177 deaths), fatality percentage, 6.1; third day (2,290 cases, 219 deaths), 9.6; fourth day (1,505 cases, 195 deaths), 13.0; fifth day (784 cases, 122 deaths), 15.6; and when the antitoxin was administered on the sixth or subsequent days (1,080 cases, 192 deaths) the fatality percentage rose to 17.8. Nothing can be more conclusive than the cumulative testimony of these figures, supported as they are by similar experience elsewhere in the United States and in Europe, as to the importance of the earliest possible administration of antitoxin in the treatment of diphtheria. Referring to sequelae, the report states that, during the year ending March 31st, 1902, antitoxin eruptions occurred in 864 cases, or 29.5 per cent. of the whole number reported upon. Of this number 91 per cent. were mild in character, and the remainder severe or extensive. Albuminuria was reported in 338 cases, of which 91.7 per cent. were slight. Apparently only 100 cases were reported in which antitoxin had been used for prophylactic immunization, although considerable quantities were issued during the year for this purpose. The average dose employed for immunization was about 900 units.

AN OLD ITALIAN FOCUS OF LEPROSY.

It is well known to those occupied with the study of leprosy, that the disease still occurs at the present day on either side of the boundary line separating France from Italy, in the Alpes Maritimes Department and the province of Liguria. Attention was called to its occurrence in the former area by a communication made by Professor Chantemesse and Dr. Moriez to the Académie de Médecine in 1888. These observers insisted on the contagious nature of the disease. The distribution of leprosy in this region has recently been investigated by Professors Boinet of Marseilles and Ehlers of Copenhagen, and their results were published in *Lepra* (vol. iii, Fasc. 1 and 2), 1902. There are still a few cases of leprosy scattered about Provence, not only along the Mediterranean coast, but also some way inland. The authors point out in their historical introduction that leprosy was probably brought to these parts in remote times, perhaps as far back as the Phoenicians, who it will be remembered have been regarded as early disseminators of the disease; hence the "Phoenician evil" of the Greeks. It is of course well known now that leprosy existed in Europe long before the Crusades. The Lombards and Saracens must be mentioned in this connexion. Fabre, the historian of Provence, accuses the Jews especially as having spread the disease. Boinet and Ehlers have brought together other historical details culled from works relating to the hospital archives of Marseilles, which those specially interested in the matter will read for themselves. In Liguria there were in 1901 four lepers in the old leprosy hospital of San Remo, and four more at Col di Rodi. According to the report of Dr. Fornara to the Berlin Leprosy Conference, leprosy still existed at Taggia. Dr. Perrin, of Marseilles, has also met with cases originating in this Italian area; and Boinet and Ehlers came across a few similarly imported cases in their journey through the Alpes Maritimes. Where lepers exist the nature of their complaint is kept quiet. The people in affected localities refer to it in a vague way as the *malattia*, or *le mal de la lèbre* (*patois* for hare). The progressive disappearance of the malady is attributed chiefly to the following causes: The relative frequency of tuberculosis, which carries off a certain number of lepers, who are also very liable to succumb to acute infectious diseases, such as influenza, variola, and so forth; and the emigration of poor lepers, who leave their villages to find employment or live by charity in the towns. Those who are better off live a secluded life by day, venturing out only when it is dark; or they are kept by their family on some out-of-the-way country estate.

A PROVINCIAL CLINICAL LABORATORY.

A good illustration of the important place a well-managed clinical laboratory may take in the usefulness of a general hospital is to be found in the record of the work done in connexion with the South Devon and East Cornwall Hospital under the direction of Dr. Frank Bushnell, Honorary Pathologist to the institution, an account of which is published in its recently-issued sixty-third annual report. The work during 1902 has included 172 examinations of clinical or *post-mortem* specimens, especially diagnoses of malignancy in new growths, of tubercle bacilli in sputum and urine, of anaemia, leukaemia, and other forms of leucocytosis, and the serum diagnosis of enteric fever. A plan worthy of imitation is that the results of all such examinations are systematically recorded in a book of abstracts, and reports are issued to the physician or surgeon in charge of the case for binding with the clinical notes. A pathological cabinet is provided which now contains several hundreds of numbered slides, including specimens of rarity and interest for future reference. In order to promote accuracy in bacteriological examinations sterilized vessels are supplied from the laboratory for the collection of sputum, urine, blood, and other matter from the wards, operating theatre, and elsewhere. The resources of the laboratory are offered, it is understood, to the medical practitioners in the neighbourhood as affording opportunities for clinical research under favourable conditions. Moreover, the necropsies conducted in the hospital are always carried out at noon, and these examinations are also open to medical practitioners in accordance with the hospital regulations. The establishment of similar laboratories throughout the country would be an incalculable advantage, not only to the public, but also to medical science generally.

NORTH OF ENGLAND EDINBURGH UNIVERSITY CLUB.

The inaugural meeting of the North of England Edinburgh University Club, alluded to in the British Medical Journal of April 4th, which took place in Newcastle-upon-Tyne on April 2nd, was in all respects most successful. The banquet was attended by 54 gentlemen. In proposing "The Health of Our Guest," the President, Dr. James W. Smith, in well chosen and complimentary terms alluded to what Sir Henry Littlejohn had done to render Edinburgh one of the healthiest of cities. He had brought to bear upon intricate problems of public health rare scientific knowledge, unusual energy, and tact. His name, while a household word in Edinburgh, was equally well known and respected wherever hygiene was taught and practised. It was a real

pleasure and a privilege to students to have had the opportunity of attending Sir Henry's class for his illustrations, always extremely appropriate, had a thoroughly practical ring about them. The hope was expressed that as Sir Henry Littlejohn was still in the vigour of health he might long continue so. In responding to the toast Sir Henry Littlejohn very humorously said he had no idea until that evening that he was so great a man as had been represented. If there was one request he might be allowed to make before leaving Newcastle it was that Dr. Smith be invited to deliver his funeral oration. With wrapt attention, often broken by merriment, the audience listened to Sir Henry as he detailed how when a young country surgeon he had been "obliged, through the kindness of his patients, to leave the "Braes of Yarrow" fifty-five years ago to commence medical work in Edinburgh, of the importance he attached to the post of police surgeon to that city as affording the best opportunities of acquiring that particular kind of knowledge so essential to a lecturer on medical jurisprudence and of the value of illustrations of lecturers drawn from practical experience. From the remarks that followed it was apparent to the audience that Sir Henry Littlejohn's success had been attained, as is always the case, only after many difficulties had been surmounted. In graphic language he told the story of his efforts to introduce the compulsory notification of infectious diseases in Edinburgh, of the opposition to the proposal on the part of the two Royal Colleges and of private medical practitioners, and of how finally notification came to be compulsory. The strongest opponents of many medical reforms had often been medical men themselves. In confirmation of this Sir Henry Littlejohn, in speaking of his acquaintance with many of the distinguished physicians of Paris of 50 to 60 years ago, alluded to the circumstance of Laënnec and other equally distinguished men being almost hounded to death by their brother practitioners. The adage "that all things come to him who waits" has found a practical illustration in Sir Henry Littlejohn's career. For forty-four years, he reminded the audience, he lectured in Edinburgh in the Extramural School, waiting for the Chair of Medical Jurisprudence and Public Health in the University to become vacant. Sir Henry Littlejohn paid a compliment to the work done in the Edinburgh Extramural Schools. He indicated how the teaching carried on by the younger men therein reacted favourably by obliging University Professors to keep themselves abreast of the times. Sir Henry's reply contained much information of medical interest from a historical point of view, and was both humorous and racy. To Dr. Hume fell the honour of submitting the toast of "Alma Mater," which he gave in terms appropriate to the occasion. Comparison was made between student life at the old English universities and at Edinburgh; emphasis, too, was laid upon the large classes in the Medical Faculty of the University of Edinburgh and the hard work done by the students. The toast was coupled with the name of Sir Henry Littlejohn, who, in responding, said that his presence in Newcastle that evening was at the request of Sir William Turner, who was prevented being the guest of the evening owing to a family bereavement. He alluded to the connexion of Edinburgh University with the Town Council, and stated as an illustration of their successful choice by the Town Council of professors, that of Sir James Simpson, who would certainly not have been appointed to to the post had the voting rested entirely with a medical committee or a Board of University professors. Dr. D'Oyley Grange proposed "The University of Durham," and Professor Page responded to the toast. "The Health of the Chairman" was given by Dr. W. S. Campbell, and briefly acknowledged.

BIRMINGHAM MEDICAL INSTITUTE.

AT the annual meeting of the members of the Birmingham Medical Institute, Dr. Rickards being in the chair, there was a fairly long discussion concerning the future prospects of the institute. It was stated that the number of members had remained almost exactly the same during the past fifteen years, and in consequence it was urged that an attempt should be made to increase the membership, either by a personal canvass of the medical men in the city and suburbs or by adding to the attractions of the institute by the introduction of a club element. The Chairman promised that the committee should consider the matter, although he thought that the number of members was not small, and the suggestions which had been made were hardly practicable. At present there are 203 members, of whom 167 are ordinary and thirty-six life members. During the past year twelve new members have joined the institute, ten having resigned or removed from the district, and one member has died, so that the total number is one more than in the year immediately preceding. The library now consists of 13,327 volumes, and 217 volumes have been added during the last twelve months, while over a thousand books have been issued to the members. At the end of the meeting the officers for the ensuing year were elected.

SCHOOL BOARD HEALTH LECTURES.

THE School Board of London has sanctioned as an experiment during next session courses of lectures on hygiene in not more than twenty classes in evening schools. The lectures will be given by medical practitioners at fortnightly intervals, assisted by ordinary night school teachers, who will also teach the classes during the intervening weeks. The sort of subjects dealt with are to be practical matters, such as the virtues of ventilation, of correct choice of food for children, of adequate clothing, and of removal of refuse in health and sickness. In the letter in which Dr. Collie, medical superintendent of the first-aid and home-nursing classes, urged the institution of these new classes, the benefit that might be expected to accrue from dissemination of knowledge on the matters referred to was stated to be incalculable.

UNCERTIFIED DEATHS AND UNQUALIFIED PRACTICE.

THE need for alteration in the law with regard to the registration of deaths has so frequently been discussed in these columns of late that we do not now propose to make any remarks upon the general subject, but the annual report of Dr. R. S. Anderson, the Medical Officer of Health for the Spennymoor Urban District Council, Durham, supplies such a strong example of the evils that arise under existing conditions as to be worth quoting. Dr. Anderson shows that in 27 per cent. of all the deaths registered burials took place without either a medical certificate being given or an inquest being held by the coroner. The reason that no medical certificate was forthcoming in 22 per cent. of the deaths was that the patients had been attended by unqualified practitioners up to the time of their death. The worst feature, however, is that of the total number of deaths in children under 5 years 30 per cent., or one in every three, seem to have been under the care of one particular unqualified man. So striking a circumstance as this would alone seem to call for special action by the authorities.

CANCER IN IRELAND.

A SPECIAL report on cancer in Ireland, illustrated by statistical tables and observations on the prevalence of the disease and notes on the history of cancer cases, has been presented to Parliament by the Registrar-General for Ireland. With regard to family incidence it is stated that many cases of cancer recur frequently in the same family, that when a member of a family is afflicted with cancer other members of the family frequently suffer from tuberculosis, and that in a large number of instances where members of a family are afflicted with cancer other members suffer from lunacy, idiocy, or epilepsy. With regard to contagion, it is stated that the disease has occurred in persons who have been in direct contact with cancer patients, in individuals who have used the tobacco pipes of persons suffering from cancer of the lip, and in members of different families living in the same house, or occupying the same house in succession, while in a few

cases it has appeared in different houses in the same locality about the same time. Cancer has also appeared where there has been a history of syphilis, and after wounds and injuries, and irritation of the lip consequent on smoking clay pipes. Finally, it is observed that cancer frequently shows itself where unfavourable conditions as to residence, food, etc., exist. We propose to examine the report more at length in a future issue.

DECREASE OF LEPERS IN HAWAII.

We learn from *American Medicine* that in a recent report of Governor Dole to the Hawaiian Legislature it is stated that leprosy has decreased greatly in the Hawaiian Islands during the past twelve years. Mr. Jonathan Hutchinson will doubtless be interested to learn that this decrease is attributed to the rigid enforcement of the law requiring the segregation of lepers. Governor Dole says that since 1887 the law has been vigilantly carried out. The number of admissions in 1888 was 579; in 1889, 308; and in 1890, 202; and from that year to the present time the admissions have decreased in number, though not regularly from year to year; but, taking the twelve years beginning with 1890 and ending with 1901, in sections of three years each, we find the admissions to be as follows: 1890 to 1892 inclusive, 454; 1893 to 1895 inclusive, 445; 1896 to 1899 inclusive, 350; 1899 to 1901 inclusive, 254. Several Bills relating to leprosy have recently been introduced into the Hawaiian Legislature. One repeals all laws pertaining to leprosy; another permits all persons to treat leprosy; and a third prohibits persons afflicted with leprosy or tuberculosis from remaining in the territory.

THE TREATMENT OF EPILEPSY BY LABOUR AND EXERCISE.

Dr. Spratling, of Craig Colony, New York, is quoted by *American Medicine* as saying that about 50 per cent. of the patients admitted to the colony are able to do work of a remunerative kind; about 25 per cent. are able to do light housework only, and the remaining 25 per cent. can do nothing at all. According to the chief physician of the Bielefeld Colony, Westphalia, of 1,771 epileptics under his care, 33 per cent. have diseased minds, 62 per cent. weak minds, and only 5 per cent. sound minds. The problem, therefore, of supplying these patients with work is difficult; but it may be added, a most necessary one, for labour is the greatest therapeutic agent in curing epilepsy. Idleness is a powerful factor for evil. Dr. Spratling, in a private letter, says that this fact is made evident by the record of seizures. On rainy days, holidays, and Sundays, when patients do no work, the fits are doubled and even trebled in number. Dr. Weeks, medical superintendent of the New Jersey State Village for Epileptics, says that when winter comes on, and outdoor work ceases, there is a rapid increase in the number of convulsions and in the irritability and discontent of the patients. It is suggested that systems of gymnastics should be instituted under trained instructors, to replace and even to supplement other forms of labour.

This week the head quarters of the Medical Department of the Royal Navy have been moved from Craven House, Northumberland Avenue, to 18, Victoria Street, S.W., formerly the head quarters of the Army Medical Service.

The Executive Committee of the Carnegie Institution, Washington, has made a grant of 5,000 dollars and travelling expenses to Professor Arthur Gamgee to enable him to prepare a report on the Physiology of Nutrition. The object in view is to secure information which may lead to the organization in the laboratories of various countries of co-operative research in the important problems of human nutrition.

We regret to announce the death of Dr. Solomon Charles Smith, which took place at Walton-on-Thames on Sunday at the age of 61. Dr. Smith was for many years in general practice at Halifax, where he won for himself the highest reputation by his professional skill, his uprightness of character, and his active sympathy with suffering in every form. Some ten or twelve years ago Dr. Smith migrated to London, where he became a valued member of the staff of the British Medical Journal. Later he was associated with Sir Henry Burdett in the editorship of the *Hospital*. Dr. Smith was a man of wide knowledge and sound judgement not only in professional matters but in general affairs. His loss will be keenly felt by all who had the good fortune to penetrate through the crust of a somewhat formal manner to the genial man beneath.

We are requested to state that owing to the pressure of business the Chairman of Council has found it necessary to alter the time of meeting of the Council on Wednesday, April 22nd, to 10.30 a.m. The Council will adjourn for lunch at 1 p.m. In consequence of this alteration of the hour of meeting of the Council the Journal and Finance Committee will meet at 3 p.m. on Tuesday, April 21st.

MEDICAL NOTES IN PARLIAMENT.

[From our Lobby Correspondent.]

The Housing Problem.—On the motion to go into Committee on the Civil Service Estimates on Thursday in last week, a debate was raised by an amendment of Mr. Hay on the housing question. He contended that there should be more special attention given to the subject by the Local Government Board, with a view to stimulating local authorities to put existing Acts into force. He quoted figures to show the effect of slum life on the physique of the people, their habits, and the prevalence of lunacy. In one instance a local authority had spent five years to build twenty cottages, in consequence of the tardy procedure under the Acts. Dr. Macnamara also spoke in criticism of the methods of the Central Department, and the by-laws required to be observed by local authorities, and advocated an extension of the period for the repayment of loans. Lord Edmond Fitzmaurice, Mr. Keir Hardie, Sir Dickson Poynder, Mr. Austin Taylor, and others joined in the debate, and Mr. Long replied. In his answer the President of the Local Government Board pointed out that the regulations of his Board were almost entirely directed to sanitary efficiency and the comfort of the dwellings. The interference was in order to keep down expenditure to the limit compatible with health and safety. There was to be a Bill introduced in a short time as a consequence of the report of the Committee which dealt with the questions of areas and loans. The Department had done everything in the last few years to assist local authorities, and he did not think that any charge of negligence could be fairly made. Mr. Hay's amendment was negatived, and the subject dropped.

Cremation and Death from Poisoning.—Mr. J. Ellis last week asked the Secretary of State for the Home Department whether his attention had been drawn to the case of one Severin Klosowski, who was convicted on March 19th of murder by poisoning, in connexion with whose trial two bodies had been exhumed after burial of some years, in respect of which grave suspicion attached to the prisoner of similar poisoning; and whether, having regard to such cases, he would take steps to secure that any rules and regulations issued under Section VII of the Cremation Act, 1902, provided against cremation being used to destroy evidence of crime. Mr. Akers-Douglas replied that he had prepared regulations under Section VII of the Cremation Act, 1902, based on the recommendations of a Committee appointed to advise him on the subject. The report of that Committee, which had been presented to Parliament, showed that the chief point to which they directed their attention was the necessity of providing, so far as possible, against cremation being used to destroy evidence of crime. It was of course impossible to have an absolute safeguard under any system; but he was confident that if the bodies to which the question referred had been presented for cremation under the proposed regulations, the inquiries to be made would have been much more searching than any required under the present system of certification before burial, and they might have led to the immediate detection of crime. The regulations would lie on the table for forty days before coming into force.

Conscientious Objectors under the Vaccination Act.—Mr. Runciman asked the President of the Local Government Board if he could state how many certificates of exemption applied for by conscientious objectors under the Vaccination Act, 1899, had been refused by magistrates in each year respectively since the Act came into operation. Mr. Long said, in reply, that he had no information showing the number of cases in which certificates of conscientious objection to vaccination had been refused.

Tuberculosis in Pigs.—Last week Mr. Field asked the President of the Local Government Board whether he was aware that a number of pigs had been seized in London lately and confiscated because of alleged tuberculosis; and whether he would take steps to prevent unnecessary seizures pending the issue of the Report of the Commission on Tuberculosis. Mr. Long replied that his attention had been drawn to the seizure of carcasses of pigs in London which showed signs of tuberculosis. The Royal Commission which reported in 1898 recommended that "in view of the greater tendency to generalization of tuberculosis in the pig.....the presence of tuberculous deposit in any degree should involve seizure of the whole carcass and of the organs." Pending the report of the Royal Commission now sitting, he was not prepared to advise local authorities to act otherwise than in accordance with this recommendation.

The Treatment of Rabies.—Colonel Lockwood asked the Secretary of State for India last week whether the Indian Government had any reports affording a comparison between the results of the inoculations at the Pasteur Institute at Kasauli and those in the treatment of rabies by the vapour baths, appliances for which had already been supplied; and, if so, would he lay them upon the table. Lord George Hamilton answered that he had not received any reports on the subject from the Government of India, but he would ascertain from the Viceroy whether any information was available.

Accidents in Shipyards.—Mr. John Wilson (Durham) asked the President of the Board of Trade last week whether he could say how many fatal and non-fatal accidents occurred in the shipyards in the United Kingdom in 1902, and the number of persons employed in the same employment during that year. Mr. Akers-Douglas replied that the number of accidents reported as having occurred in shipbuilding during 1902 was 10,987, of which 118 were fatal accidents. Of the non-fatal accidents 1,070 were reportable to the certifying surgeon, and 9,792 reportable to the inspector only. These figures did not include accidents in a few incidental industries—principally in sawmills—which were carried on in shipyards. The returns of persons employed during 1902 were not yet ready; but, according to the last available returns, there were 150,727 persons employed in shipyards.

Medical Referees under the Workmen's Compensation Act.—Mr. Bell asked the Secretary of State for the Home Department on Friday last week whether he was aware that Mr. H. Langley Browne, the medical referee for the West Bromwich district, appointed by the Home Office under the Workmen's Compensation Act, 1897, was acting as medical adviser to the Great Western Railway Company in the case of a man named Ernest Steventon, who was making a claim under the Workmen's Compensation Act; and whether he would take steps to secure that in any application by this workman for arbitration with respect to the compensation payable to him this medical referee should not be appointed to report on the nature and extent of the injuries sustained by the claimant.—Mr. Akers-Douglas answered that he had communicated with Mr. H. Langley Browne, and he had informed him that the statement in the question was correct, but that, if occasion arose for a report upon the case, he quite understood that arrangements would have to be made for its being taken by another of the referees appointed for the district. He had further informed him that in point of fact he had never been called upon to act in his capacity as medical referee under the Workmen's Compensation Act since his appointment in 1898. Mr. Akers-Douglas added that he had felt it his duty to point out that the position of medical adviser to a railway company was not compatible with that of medical referee.

Trichinosis.—On Monday Mr. O'Mara asked the President of the Board of Agriculture whether he was aware that outbreaks of trichinosis among swine had lately taken place in Denmark and Holland; that bacon and pork from these countries had lately been condemned in Smithfield Market as unfit for human food; and if he would say whether he had any reports as to the danger of trichinae in bacon to the public health; and what steps, if any, he proposed to take to prevent the importation of bacon infected with trichinae into the United Kingdom. Mr. Hanbury said that the last case of trichinosis in swine in Holland as to which he had any in formation occurred in 1900. He had observed no reports of the existence of the disease in Denmark. Pork of Dutch and Danish origin had recently been condemned in the Smithfield Market as unfit for food, mainly on account of the presence of tuberculosis, but no case of trichinosis had been discovered in the City markets for the past twenty years, although a special microscopic examination was made for the detection of trichinae. It rested, however, with the Local Government Board, and not with the Board of Agriculture, to take any further steps which might be considered necessary for the protection of the public health from the danger referred to. He added that no case of trichinosis had been observed in this country for some sixteen years. In answer to a second question by Mr. O'Mara as to official reports on the inspection of Danish and Dutch bacon, Mr. Hanbury said that in the case of Denmark regulations were in force under a law of 1897, which prohibited the export of swine flesh and other meat which had not been previously examined by an official veterinary inspector, and certified to be sound and fit for human food. No specific reference was, however, made to trichinosis. In Holland trichinosis of swine was a scheduled disease under the Diseases of Animals Act, and provision was made for the inspection of swine and swine flesh, with a view to the detection of the disease. He would be happy to obtain copies of the Dutch and Danish laws and the regulations, and to supply them with translation to the hon. member.

Derby Volunteers and the War Medal.—Mr. Bell asked the Secretary of State for War on Monday whether he was aware that men belonging to the Derby Volunteers who volunteered in the Royal Army Medical Corps, and served in the South African War, had not yet received medals; and, if so, could he say when they would receive them. Mr. Secretary Brodrick replied that it was understood that ten men in question served in the war, but of these only six could at present be traced on the medal rolls. Steps were being taken to issue medals to these six, and inquiries would be made concerning the other four.

The Teeth of School Children.—On Monday Mr. Weir asked the Secretary to the Board of Education whether, having regard to the fact that the Admiralty estimated that 10 per cent. of the recruits for the navy were rejected on account of bad teeth, he would consider the expediency of arranging for dentists to visit State-aided schools, so that the children of ten years of age and upwards might have facilities for obtaining advice as to the best means to be taken to preserve their teeth. Sir William Anson, in reply, said that the Board would consider the propriety of communicating with the local authorities on the subject, as it appeared to be one which local authorities might most properly decide.

Volunteer Royal Commission and Medical Officers.—On Monday Sir John Tuke asked the First Lord of the Treasury whether he proposed to appoint a volunteer medical officer to serve on the Royal Commission to consider matters relative to the militia and volunteers. Mr. Secretary Brodrick answered that he was afraid that he could not promise to include officers of the various departmental corps on the Commission.

Annual Reports on the Health of the Army.—Mr. Charles Hobhouse asked the Secretary of State for War on Monday if he would state on what date the report of the health of the army for 1900 was presented to the House of Commons; and when the reports for 1901 and 1902 would be presented. Mr. Secretary Brodrick replied that the report for 1900 was presented on May 9th, 1902. That for 1901 was complete, and would shortly be presented. As regards the report for 1902, many of the returns would not reach this country from abroad until next October or November, owing to the enormous labour of compilation; moreover, a considerable period was required for the elaboration of the report from the various returns. This report could not therefore be produced before March or April, 1904.

DEATHS FROM TARTAR EMETIC.

I.—*POST-MORTEM* EXAMINATIONS AFTER DEATHS FROM TARTAR EMETIC.

By Thomas Stevenson, M.D., F.R.C.P.,

Lecturer on Medical Jurisprudence, Guy's Hospital; Scientific Analyst to the Home Office.

Death from antimonial poisoning is now so rare, and the data as to the distribution of antimony so sparse, that the following notes may prove valuable. The preservative effects of tartar emetic, though previously known, have been insufficiently recognized, though they were noted in the case of the wife of Palmer in 1856, and in the case also of Captain Cain, poisoned by his son-in-law Hall in New Zealand.

I.

Post-mortem examination made on October 30th, 1902—eight days after death—of the body of Maud Eliza Marsh, aged 19 years, in the presence of Dr. Ludwig Freyberger, Dr. Stoker, and Dr. Cotter:

The body was found lying unclothed on its back in the *post-mortem* room at St. George's, Southwark, mortuary. Since death the weather had been mild for the season. Putrefactive odour very slight. Body thin but not emaciated. The skin was of a pale yellow-green hue. There were dark rings around the sunken eyes; light livid green *post-mortem* discoloration of the clavicular fossae, inguinal region, and back, and to a less extent around the umbilicus and eyes. Lips parted and dry. Hair abundant; finger-nails and toe-nails normal. Eyeballs collapsed; nose pinched; gums pale. Rigor mortis had passed off, except that a little remained in the knees and jaw. Hypostases present on back and dependent parts. No marks of previous pregnancy in skin of abdomen. Virginal areolae on breasts. No ecchymoses of surface or of conjunctiva, nor on the scalp, which was pale and comparatively bloodless on section.

An antecedent partial *post-mortem* examination had been made by an incision from the top of the sternum to the pubes.

The skull bones were dry, but otherwise normal, and their was no localized thickening of them. All the tissues cut dry.

Brain: 42 oz. Well-marked hypostasis posteriorly. Membranes pale and thin; no opacities. Brain itself well formed. No haemorrhages into brain or meninges; no ecchymosis, and no abnormalities. Ventricles dry and empty, with the exception of a small quantity of clear serous fluid in the fourth ventricle. The substance of the brain throughout, and of the medulla, was normal in appearance.

Tongue thickly coated and yellow; the follicles at the back swollen. Tonsils normal. Air passages free from obstruction; no haemorrhages.

Lungs dry crepitant, free from cavities, deposits, or haemorrhages; pleurae free from petechiae.

Heart weighed 7½ oz., flabby, and its walls thin, but tough. Right and left ventricles covered with a considerable quantity of fat, which at the apex of the right ventricle invaded the muscle to the extent of one-third of its thickness. A little half-clotted blood in the right cavities; left empty. Valves thin with no deposits: the mitral, sharp edged, admitted the insertion of the tips of three fingers into its aperture. One small punctiform haemorrhage on the mitral valve. This was the only petechia found in the body. Aorta very slightly atheromatous in its ascending portion.

The *stomach*, 5½ oz., which had been removed at the previous necropsy (as also the rectum), contained about 1½ fluid oz. of yellow turbid fluid containing much bile and mucus. Its colour externally was bright pink; the blood vessels were injected; and its mucous coat was also injected. No ulceration or loss of substance.

Mesenteric glands somewhat swollen.

The small intestines throughout had the blood vessels at their mesenteric attachment rather red and prominent. Internally the mucous membrane was swollen, and the folds, especially at the tops were prominent and injected. The condition was that of acute catarrh and streaky congestion, and the membrane was covered with bile-stained, somewhat glairy mucus. The ileum and colon were dilated, and the solitary follicles swollen and hard. No ulceration of the mucous membrane in either the large or small intestine. Rectum hyperaemic. The contents of the bowels were entirely semi-liquid, with the exception of a little pulpy faeces above the sigmoid flexure of the colon. No faecal odour anywhere.

The *liver* was found detached, and a small portion had been previously removed. Total weight, 33 oz. It was of a pale yellowish hue, dry, soft, and slightly fatty in patches. The *gall bladder* contained one fluid ounce of dark bile.

Pancreas normal, and *spleen* (5 oz.) normal.

Kidneys (8½ oz.) normal, and the capsules stripped easily.

Bladder just bathed with turbid urine; slight catarrh of the mucous membrane.

Uterus, *ovaries*, and *vagina* normal.

Spinal cord very soft; no haemorrhages; normal to the naked eye.

There was a marked absence of putrefactive odour about the body considering the time—eight days—which had elapsed between death and the *post-mortem* examination.

The general result of the necropsy may be thus summarized: The body of an anaemic young woman with no serious organic disease; the tissues dry and drained of fluid; acute gastritis; subacute enteritis; appearances suggestive of an irritant poison, probably not arsenic.

Analysis.

Subsequent analysis showed the presence of antimony in all the organs analysed, some in the intestines still soluble—probably as tartarated antimony. Calculated as this salt, the stomach contents contained 0.64, the bowel contents (2½ oz.) 16 64, the liver 1.98, the kidneys 0.39, and the brain 0.47; total for these organs 20.12 gr. tartarated antimony.

II.

Exhumation of Bessie Taylor on November 22nd, 1902, who died February 13th, 1901, aged 36 years, and was buried at Lymm, February 15th, 1901.

The *post-mortem* examination was made by me in conjunction with Mr. R. Pugh Rowlands, M.B. and B.S. Lond.

The sound dry coffin was beneath those of two other relatives, buried on later dates.

The body was covered with mouldy growths. There was no putrefactive odour. Only a few dead larvae were found about the body. Fingers friable. Breasts shrunken. The hair of the head was abundant and of a fresh appearance. The abdominal walls were hard, dry, and cut like soft leather. The recti muscles were firm and fresh in colour. On opening the abdomen a distinct faecal odour was perceived.

The skull and meninges of the brain were normal. The brain was soft, shrunken, and putrid. No haemorrhages in or about the brain and its meninges. The *lungs* were shrunken, doughy and leathery; old pleuritic adhesions at the right base. No cavities or deposits. *Pericardial sac* empty. The heart weighed 3 oz., its walls were thin, paper-like, and tough: valves healthy. Aorta normal. A little tarry dark blood in right auricle: a little purple blood in left auricle; both ventricles empty. Coronary arteries normal and patent. Blood in superior vena cava.

Stomach, 3½ oz. thin leathery to touch and section, vesiculated. Blood vessels full of dark blood. To the left of the cardiac aperture the mucous membrane showed a peculiar cinnabar-red colour over a patch 4 in. in diameter. No ulcerations or perforation. No distension of intestines by gases.

Duodenum walls thin and parchmenty. The mucous membrane covered with cinnabar-red mucus which, when scraped off, showed beneath the same cinnabar-red colour as the stomach.

The *jejunum* showed similar appearances in patches but was paler than the duodenum. Ileum covered with orange-yellow slimy mucus in its lower portion. Twelve inches above the ileo caecal valve there was a patch of full orange colour, which was proved by analysis to contain antimonious sulphide. There were similar orange patches in the colon and in the upper portion of the rectum. A small quantity of yellow faecal matter in the rectum, merging into slimy slate-coloured faeces near the anus. The mucous membrane all through the intestines was of a dull cinnabar-red colour. No ulcerations.

Liver, 26½ oz., firm and greasy.

Spleen, 1¼ oz., normal.

Kidneys, 6 oz., lobulated, normal to the eye; the capsule stripped readily.

Uterus, *ovaries* and *bladder* normal in aspect.

Generally it may be stated that the body, buried twenty-one

months, was that of a woman showing no appearance of recent disease, but with the signs of acute non-ulcerative gastro-enteritis. The ordinary putrefactive changes were absent, and the body, with the exception of the integuments, was in a remarkably good state of preservation.

Analysis.

Subsequent analysis revealed the presence of antimony in all the organs examined, namely, stomach, intestines, liver, spleen, kidneys, heart, lungs, and brain. Calculated as tartarated antimony the quantities of this salt found were—in the stomach and its contents, 0.32: intestines and their contents, 23.43: liver, 4.55; and kidneys, 0.82. Total, 29.12 gr. emetic tartar in the organs examined quantitatively.

III.

Exhumation, in conjunction with Mr. R. P. Rowlands, of the body of Mary Isabella Spink, aged 41 years, who died December 25th, 1897, and was buried at Leytonstone, December 30th, 1897.

The body was the lowest in a public grave 18 ft. deep; seven other coffins having been deposited in the same grave during January, 1898. The stench from the other coffins was terrible, but that from Spinks's coffin was much less. On opening the sound dry elm coffin a female body was disclosed of an almost life-like aspect, except for the pallor of the countenance, which was covered with a fine mealy deposit of earthy phosphates, giving the appearance of the face having been dusted with face powder. Such deposits are not uncommonly met with in exhumed bodies. There was no putrefactive odour. The shroud was perfect. There were no larvae in or about the body. The short dark hair of the head was clean and unchanged. The fingers and hands were of a pink colour, with a few vesicles on them. No fungi were visible on the surface of the body. The right eye was shrunken; the left vesiculated but unruptured. I have never before made an exhumation so long—five years—after burial; or met with a so well-preserved exhumed body.

Abdomen firm, dry, with the usual lines indicative of a previous pregnancy.

Muscles firm, dry, and of a fresh colour. All the tissues cut like leather.

Scalp dry and firm. Cerebral meninges normal.

Brain, 19 oz., shrunken. No haemorrhages into it or its meninges.

Lungs and pleura normal (the death certificate stated the death to be due to phthisis).

Pericardium normal; its sac empty.

Heart, 5 oz., normal as to its tissue, valves, and arteries. A little atheroma of the ascending aorta.

Stomach, 2¾ oz., thin, of a pink colour when viewed externally, with a white phosphatic deposit on its outer surface. Internally at the cardiac end the mucous membrane was of a cinnabar-red hue, and also at the pyloric end, where there was also a large patch of tarry black blood overlying the surface of the cinnabar-red mucous membrane. Some old cicatrizations near the pylorus. No ulcers.

Small intestines distended with gas, but unruptured; pink externally. The mucous membrane had a cinnabar-red colour in its whole length, but not of uniform depth of tint. The lower end of the ileum was covered with orange-yellow mucus. Old adhesions about the appendix, but no signs of mischief internally. No ulcers.

Large Intestine.—The colon was lined in the ascending and transverse portions with orange-coloured mucus. No ulcers. Rectum normal, and containing a little soft-brown faecal matter.

Pancreas normal. *Spleen* ⅔ oz., shrunken, but normal.

Liver, 36 oz., pale, firm, and covered with phosphatic deposits.

Kidneys, 3 oz., shrunken, normal, with good proportion of cortex; capsule stripped well.

Generally, the body was that of a woman showing no signs of fatal disease, except acute gastro-enteritis, with an effusion of blood into the stomach, but whether *ante* or *post mortem* could not be determined.

Analysis.

Subsequent analysis revealed the presence of antimony in all the viscera examined—viz., in the stomach, large and small intestines, liver, spleen, kidneys, heart, brain, and muscle from the thigh. The quantities, estimated as tartarated antimony, found were: in the stomach 0.08, intestines 1.15, liver 2 42, and kidneys 0.18; total 3 83 grains.

II.—CLINICAL NOTES OF TWO OF THE CASES.

We are indebted to Dr. J. M. Stoker for the following notes of the cases numbered II and I in Dr. Stevenson's report:

Bessie Taylor, aged 35, stated to be married, residing at the "Monument," Union Street.

Family History.—Good.

Previous History.—About a month previous to her fatal attack she complained of indigestion with pain in the stomach and abdomen, vomiting, and constipation; she consulted me about this illness, and after a little time her symptoms got better and her constipation was relieved.

Fatal Illness.—She was taken ill on January 1st, 1901, with the following symptoms: Vomiting, pain in the stomach, thirst, loss of appetite, tenderness of the abdomen, tenesmus, and occasional diarrhoea. The vomited matter presented only the ordinary appearance. Her condition fluctuated, sometimes much better, often all her symptoms most pronounced, and so on, till her death.

During the course of her illness I had three doctors in consultation at different times, and at no time was it suggested or even hinted that she was suffering from any form of irritant poisoning. She died on February 13th, and though she was in a very serious condition, and had suffered a great deal from the vomiting and pain, I did not expect her death so soon. I gave a certificate in the case, ascribing the death to exhaustion following her symptoms. I did not observe any muscular spasms in her case.

Maud Marsh, aged 19 years, living at the "Crown," High Street, Borough.

Family History.—Good.

Previous History.—She was an in-patient at Guy's Hospital in July, 1902. (See below.)

Fatal Illness.—I was called to her on October 10th, 1902, and found her in bed suffering from vomiting, diarrhoea, thirst, pain, and tenderness over the whole abdomen, and particularly at the epigastrium; vomiting was a prominent symptom, and was immediately produced by the introduction of any food or liquid into the stomach, it was also induced by even slight pressure. She was distinctly better when she took no food. Her temperature ranged from 97° to 102° F., and was never above the latter; her pulse was small, weak, and accelerated up to 120. Her tongue was yellowish-brown and dry; the skin was dry except on one occasion; the countenance anxious; mind not affected. For the first few days her symptoms occasionally gave way to treatment, but at the fifth day she rejected all food and medicines, and I decided she was to be fed exclusively by the rectum. The principal drugs employed were bismuth, opium, morphine, sodium bicarbonate, and prussic acid. At this time I was only giving her powders of bismuth subnit. by the mouth, but I found it necessary also to discontinue their use as she continually rejected them. I gave full instructions to the nurse about the injections—how they were to be administered; the quantities, composition: the times for administration, etc. The patient was unable to retain the injections, and they caused her much pain; she had nutrient enules, which had a like effect. The vomited matter was green and bilious-looking; the motions watery, brown, and sometimes slimy. At no period of her illness was there any blood in her vomit or evacuations. About the sixth day I noticed spasms of the muscles and rigidity. The spasms were ushered in by pain in the rectum; then the muscles of the abdomen became rigid. From this the rigidity extended to the legs, and then to the upper extremities. The whole time occupied from the onset till the disappearance of the rigidity was not more than half a minute. The same order was observed in each attack, the abdominal muscles being first affected, and so on. They occurred independently of the vomiting. On one occasion the muscular spasms came on as I was palpating the abdomen, and I could distinctly feel the muscles contract under my hand. Morphine suppositories seemed to possess a strong controlling influence over them. On October 21st, the day before her death, Dr. Grapel was called in. We examined her together, and gave as our combined opinion that if the vomiting ceased she would recover; at the consultation there was no mention whatever of irritant poison. When I called the next day I found she was dead, and I must say I was unprepared for such an event. Remembering that the previous Mrs. Chapman also died unexpectedly, I decided to have a necropsy to determine for myself what very grave condition gave rise to this severe gastro-enteritis, and I made arrangements accordingly. I feel pretty certain now that had Maud Marsh lingered on, and if I had not remembered that Mrs. Chapman of

the "Monument" also died unexpectedly, I would have given a death certificate. She would have been buried in the ordinary way, and nothing more would have been heard of her case. I had a telegram from Dr. Grapel on the afternoon of the 23rd October (two whole days having elapsed since he saw Maud Marsh, and in the meantime he had been visited by the girl's parents and been informed of my course of action) suggesting to look for arsenic at the necropsy, but long before this I had caused the body to be removed to the mortuary and had made all arrangements for the necropsy, even to the extent of having provided clean bottles in case I wanted to retain any viscera for analysis or investigation. The *post-mortem* appearances were what one would expect to find in a perfectly healthy woman of her age, with nothing abnormal, and nothing to account for the symptoms during life. I therefore took away some of the viscera for analysis, with the result which is now well known. The subsequent long inquiry is too fresh in everybody's mind to require recapitulation, but, in view of the unfair and unjust remarks of the judge, calls for some comment. It would be a dreadful thing, both from a medical and social point of view, if doctors went about looking for irritant poison in every case presenting symptoms of gastro-enteritis, and no medical man in full possession of his senses would think of pursuing such an insane course. In the two cases under consideration there was nothing whatever to suggest poison; the symptoms and signs were identical with what we find every day, especially in the summer months, when gastro-intestinal troubles are prevalent; there was no hint of any accidental contamination of their food; there was nothing in the demeanour, history, or circumstances of either of them suggesting a desire on their part to take their own lives; and nobody could suspect the husband, who was at all times unremitting in his attentions to them, willing, even anxious, to carry out any suggestion of the doctor regardless of considerations of trouble or expense, full of sympathy and apparent concern of their sufferings and frequently in tears. I was at all times given to understand that the nurse administered the nutrient enemata. I never once heard during the illness that Chapman prepared the food.

It was not brought to my notice that the nurse and mother suffered after partaking of some of the patient's drinks, though I should imagine the doctor would be the first person to whom they should complain. The judge ignored logic, reason, and facts in his desire to give blame to those who assisted in the course of justice, and but for whose initiative justice would have been baffled, and the body of Maud Marsh would, with her sister victims, be now hiding a terrible crime deep in some lonely cemetery.

III.—CLINICAL NOTES OF ONE OF THE CASES WHILE IN GUY'S HOSPITAL.

We are indebted to Mr. J. H. Targett, M.S., F.R.C.S., Obstetric Surgeon to Guy's Hospital, for the following notes of the symptoms presented by Maud Chapman during the time she was an inmate of Guy's Hospital. She was admitted on July 28th, 1902, and made complaint of severe abdominal pain and fever. She stated that three weeks earlier she had been seized with pain in the lower part of the abdomen, coming on in attacks, generally worse at night. She attended Guy's Hospital as an out-patient on July 26th, when she stated that she had been in bed for the two previous days. She was given a saline aperient medicine and a lotion to use as a hot douche. She remained in bed on July 27th, and, being much worse on Monday, July 28th, she was admitted into Guy's Hospital.

On admission, the temperature was 99 4°, pulse 108, respirations 28. She stated that menstruation had ceased two days earlier. She complained of very severe pain across the lower parts of the abdomen with fullness there, and it was so extremely tender that she could not bear any examination. The swelling and tenderness were rather more marked above the right groin, and the pain extended up to the right loin, but no definite tumour could be felt either on abdominal or vaginal examination. There was no vaginal discharge or evidence of gonorrhoea. The os uteri was nulliparous. There was great tenderness on pressure through the vaginal fornices but no lump was to be felt. Bimanual examination could not be made because of the tenderness. Micturition was normal; the bowels were confined.

Treatment.—She was placed on milk diet, and ordered hot douches at 110° F., fomentations to the abdomen, and pulv. salium ʒiij. followed by white mixture if necessary.

Progress.—During the next fortnight the temperature varied from about 99° F. in the morning to 103° F, and 104° F. in the evening. The highest record was 104.6° F. (on August 9th). The pulse during this period ranged from 90 to 110, and the respirations from 22 to 28. The pain was often so severe that she required opiates. Tinct. opii ♏x or ♏xv was given some five or six times during this fortnight, and chloralamide gr.xx as a hypnotic at night. Aperients were given on the day of admission, and repeated on August 1st and 8th; after that mist. casc. sagr. was sufficient. There was occasional sickness, but it was never a prominent symptom. A little blood-stained mucus was noticed in the motions on one or two occasions. On August 11th, 1902, the evening temperature reached 104.2° F., and the bowels were moved several times in consequence of medicine (mist. casc. sagr.) The next day the temperature fell to 99° F., and from that time it continued below 100° F. (except once), and gradually reached the normal. On August 15th she was so much better that she was given light diet and wheeled out into the open air. On August 18th there was no tenderness on abdominal palpation, and no thickening could be felt on vaginal examination. On August 20th she left the hospital quite convalescent and free from pain.

Diagnosis.—The case was regarded as acute perimetritis, possibly of tuberculous origin. Looking back with a knowledge of all the circumstances it now appears that the more correct diagnosis would have been acute and rather anomalous enteritis or colitis.

THE RECENT LAWSUIT AGAINST PROFESSOR BYERS, M.D.

At a special meeting of the Ulster Branch of the British Medical Association, held in Belfast on April 2nd, Dr. Henry O'Neill, J.P., ex-President, in the chair, the following resolution was proposed by the Chairman:

We, the members of the Ulster Branch of the British Medical Association, heartily congratulate Professor J. W. Byers, M.D., one of its ex-Presidents, on the result of the recent legal action in which he was concerned. The courage and straightforwardness with which he defended an action, not merely of private, but also of public, interest, elicited our warmest admiration. We beg to assure him that he possessed throughout the full sympathy and confidence of his professional brethren, and that he retains that undiminished esteem and respect. That a lawsuit so likely to prejudice the harmonious relations that ought to exist between medical men and nurses should ever have been instituted has been to us a source of grave concern and regret. We rejoice that we can tender to Professor Byers our congratulations on the satisfactory termination.

The Chairman, in proposing the resolution, said he did so with something of a fellow feeling for Dr. Byers. Some years ago an action had been brought against him for malpractice, which ultimately collapsed, but not till it had put him to a great amount of expense and trouble. He was sure that there was not a medical man in Ulster that did not sympathize with Dr. Byers, and was not delighted at his escape from a danger by his own courage and determination, a danger to which they were all open.

Dr. H. S. McKisack seconded the resolution. He said that what one most admired was the way in which Dr. Byers never hesitated, but faced a most disagreeable duty and carried it straight through. He expressed warmly the feelings of confidence and sympathy. The resolution was passed with acclamation.

At a general meeting of the Ulster Medical Society, held in the Medical Institute, College Square North, Belfast, on April 2nd, 1903, the following recommendation of the Council of the Society was proposed by the President (Dr. John Campbell):

That we, the fellows and members of the Ulster Medical Society, desire to congratulate Professor J. W. Byers on the satisfactory result of the recent action brought against him in the law courts. During the time that this case was pending, the medical profession in Ulster, knowing Dr. Byers's high and honourable character, were unanimous in the opinion that there could be no foundation in fact for the allegations of the plaintiff. We are, therefore, extremely gratified that the proceedings in court have amply justified this opinion. We tender to Professor Byers our most sincere sympathy in the trying circumstances in which he has been placed in the eyes of the public by this most unjustifiable action. The resolution, which was seconded by Professor Redfern and supported by Sir William Whitla and Dr. Mackenzie, was passed unanimously.

A Report
ON
THE MILK SUPPLY OF LARGE TOWNS:
ITS DEFECTS AND THEIR REMEDY.

IV.
GOOD SYSTEMS OF SUPPLY AND DISTRIBUTION IN TOWNS.

We propose next to give some account of the system followed by dairy companies which conduct their business upon principles that appear to us to be in the main sound. We shall take first two such companies in London, and then give an account of the system of two companies in Copenhagen, where the handling of milk has been brought to a state of great perfection.

LONDON.

Welford and Sons' Dairy.

The chief dairy and offices of Messrs. Welford and Sons occupy an area of nearly two acres.

Source from which the Milk is Obtained.

When a farmer offers to supply the company with milk a form is sent to him to be filled up subject to the report of the medical officer of health of the district. This form contains questions as to the water used on the farm for domestic purposes, for cooling, for washing utensils, and for the cattle; whether the farm has been medically inspected, by whom, and at what date; as to contagious illness on the farm or in the neighbourhood, etc. In the event of the farmer being unable to answer these questions satisfactorily, he is requested to carry out the necessary alterations before a definite contract is concluded. If the answers are satisfactory, the farm is inspected for the company by Dr. E. F. Willoughby, who pays particular attention to the cows, or it is reported upon by the local medical officer of health, who receives a fee from the company. If the report be favourable, a form containing particulars to be entered in the company's reference book is sent to the farmer to be filled up before the milk is taken.

In the binding contract which is then entered into with the farmer the chief stipulations are that the milk be pure, whole, in good condition, and free from any offensive taste or odour. Milk yielding less than 12.25 per cent. of total solids, and of which the fat does not amount to at least 3.25 per cent. is to be regarded as not complying with the term "perfectly pure." As a matter of fact, the average percentage of fat is considerably higher.

Cards are supplied to the employés on the farm warning them to declare any cases of infectious illness in themselves or families to their employer. If infectious illness occur lodgings are provided for the workmen elsewhere at the company's expense, and their wages are paid as usual. Cards are also sent to the suppliers warning them to notify cases of infectious or contagious illness. Under these conditions the company undertakes to pay for the milk, although it is not again taken until fear of infection is over. The farmer is held responsible that the rules laid down for their employés are carried out, and it is in the interests of the farmers to be straightforward, for they lose nothing, and in case of concealment are liable to a penalty of £100. A letter of indemnification, clearly explaining and pointing out that it is in his interests to treat the company straightforwardly, is sent to each supplier.

Weekly Report.—In sending in their weekly bill, suppliers are required to fill up an attached report stating that during the interval since the last was submitted there had been no case of illness on the farm or among the workmen; that the cows used for milking purposes are in a healthy condition, and also that the milk-cooler has been that day examined and is in good and sound order. The company considers this a valuable check, as a man would be careful before committing himself in black and white.

In case of illness among the cows the farmer must at once report to a veterinary surgeon employed and paid by the company and must act upon his advice. The farmer is liable to a penalty if he conceal the fact that any cow is suffering from swollen udder. The experience of the company is that there is very little illness in young cows. If any sign of tuberculosis be detected the cow is ordered to be destroyed at once or got rid of. This method, though stringent, is best in the long run, as it checks the spread of infection.

Where the Farms are Situated.—The company get their supplies of milk from various parts of the country, in some instances as far off as Somersetshire; the farmers are required to deliver the milk at a fixed hour at the nearest railway station in cans belonging to the company and sealed with the company's seal.

Food.—The company lay down no special conditions about food, and they do not forbid turnips if the green tops be cut closely down.

Calving.—An interval of at least one week must elapse after calving before the milk is supplied to the company.

Cooling.—The milk must be cooled to a temperature not exceeding 60° F. immediately after milking.

Straining.—The milk is strained before cooling and again before being put into the churns as soon as possible after milking.

Churns, cans, etc., must be rinsed out with boiling water to remove dust before being filled at the farm, and must be kept upside down when not in use.

Precautions before Milking.—The cows' udders must be cleaned, and milkers must thoroughly clean their hands.

Analysis.—The purchasers, without notice, can take samples from any milk consigned to them for purposes of analysis.

Infants' Milk.

The milk for the use of infants is supplied solely from the company's farm at Harlesden, which has been already described. The cows on this farm are inspected by a veterinary surgeon once a week. The cows are milked twice; the milk from the first milking, between 3 and 4 a.m., arrives at the factory about 5 a.m. It is at once carefully strained, filled into bottles, and delivered between 6 and 8 a.m.—that is to say, within four, or at most five, hours of being milked. The second milking begins about 10.30 a.m., and the milk is delivered to customers between 12.30 and 1. The quantity at this second milking is less, and is therefore handled more quickly.

The Factory.

The factory is in Maida Vale, and occupies about two acres, being part of the farm upon which the business was originally established in 1845. The offices of the company are here, and one of the directors resides on the premises; dwellings are also provided for persons in the employment of the company. There is a large yard, with housing for horse and hand carts and stables for horses; two sides of the court are surrounded by a platform, on which the churns are landed when brought from the railway stations. Any churn arriving unsealed is set aside, the milk it contains separated, and the cream made into butter. The cans arriving in proper condition, sealed, are placed separately in a lift, the churn is hoisted, and its contents tilted automatically into a tank about 12ft. from the ground; in running out of this it is strained through, first, coarse honeycombed cloths, and then through fine muslin, into a receptacle in which it is weighed. The milk passes through a refrigerating apparatus, and is run directly into the churns for distribution; the churns are closed and sealed before being loaded on the distributing carts. The churns are cleansed in soda and water by machinery, rinsed, and finally sterilized by steam.

Cream.—Milk to be used for cream is first pasteurized, cooled in a capillary water cooler, and separated in the usual way. The cream is sent out to customers in sealed cans. The separated milk is sold, as such, partly to the poor at a cheap rate, and partly to bakers. The cream is sent out to customers in wide-mouthed bottles closed by a cardboard lid which fits into a groove in the neck. Butter is made in churns and mechanical workers.

Milk for Infants.—Nursery milk, as already stated, comes from a special farm owned by the company. It is strained into bottles closed by a simple mechanical stopper. Asses' milk is also supplied from animals kept in London and is treated in the same way as nursery milk. The object in both cases is to observe cleanliness in the milking and handling of the milk, and to deliver it as rapidly as possible to customers' houses. The company prepares sterilized milk, which is sent out in stoppered bottles, and also humanized milk, which is sterilized, and likewise sent out in bottles.

Laboratory.—Samples are not taken from every churn, but every day from some churns, and we are informed that a sample from each farm is examined once a week. The sulphuric acid (Gerber) test is used. If the results are not

satisfactory the farmer is communicated with, and any suspected cow is isolated for veterinary inspection. The farms are visited by veterinary surgeons in the employment of the company at uncertain intervals, as it is believed to be undesirable to give the farmers notice of the date of inspection.

Tampering during Delivery.—The delivery churns, as has been said, are sealed. The company employs inspectors, whose duty it is, at unexpected times, to take away the milk left at private houses, replacing it by the same quantity brought by the inspector direct from the dairy. The milk thus withdrawn is examined in the laboratory, and any attempted tampering would thus be discovered.

The Aylesbury Dairy Company.

The Aylesbury Dairy Company, which has carried on business in London for over thirty years, also relies, to ensure the purity of its supply, mainly upon the care exercised in the selection of the source of its milk supply, which is for the most part delivered fresh to customers.

Farms.

When a farmer offers his milk produce to the company, he is requested to fill in a form containing particulars as to the resources of his farm; the average number of cows kept; the water supply for cooling and washing purposes; the probable quantity of milk which he could supply, and whether he possesses or is willing to establish a refrigerator. If his supply is considered likely to suit the requirements of the company, a contract is entered into with him, subject to the report of the medical officer of health of the district certifying that his farm is satisfactory. The report of the medical officer of health (who receives a fee from the company) is concerned especially with the water supply and with the general sanitation of the farm. With regard to water, the details required to be given in the report are very full, and refer to water used for drinking purposes, for cleansing cans and for the refrigerator. Particulars are required with regard to the relation of the well, if that be the source of supply, to the farm-house and other buildings, as well as to arable and pasture land, and the way in which that land is manured. Samples are taken of the water used for any of the purposes above specified, which are submitted to chemical and bacteriological examination.

We are informed that the company finds it necessary to reject more than one-half of the farms otherwise suitable, owing to faulty water supplies. The report under the head of sanitation is required to contain general particulars as to the sanitation of the farmhouse, farm buildings, and the residences of persons employed about the dairy; as to the drainage and as to the general health of the inmates of the farmhouse, and of persons employed upon the farm and their families; in cases of illness, the nature of the illness is required to be specified. Finally, the medical officer of health is requested to indicate the nature of any alterations he would recommend to be made in order to render the sanitary condition of the farm and buildings satisfactory. The contract entered into with the farmer, subject to this report from the medical officer of health, requires that all cows, from which milk is received by the company should be supplied with good water; all improper substances to be excluded from their food, special attention being paid to the cleanliness of the cows' udders and the hands of the milkers; and all buildings in which the cows are kept must be sufficiently and efficiently ventilated. The following clauses are accepted by the farmer, subject to a penalty of £50 for each and every breach of any one of the clauses.

All milk to be of good quality, and to be delivered in a pure and good condition.

The whole of the produce of each cow to be sent at each meal—that is, the sender on no account to allow his cows to be partly milked, and to send the first portion only to the company, and keep back the "strippings" for feeding calves or for any other purpose.

No cream to be removed or in any way abstracted from the milk.

No water or any other ingredient or material to be added to or mixed with the milk.

Milk yielding less than 3.25 per cent. "fat" and 8.75 per cent. "solids not fat," to be regarded as not complying with the term "good quality," the reports of the company's analyst to be accepted without dispute.

No milk to be sent from any cow that is not in good health, or that is under physic.

No milk to be sent from a newly-calved cow or from a newly-purchased cow until she shall have been in the possession of the sender one clear day, or from any cow whose calf has been removed, for the space of one clear day after removal.

No mixed milk of two separate meals to be sent.

All milk to be sent away fresh, that is—the morning's milk to be sent the same morning, and the evening's milk the same evening—summer and winter.

All milk to be properly strained as soon after being taken from the cow as possible, and before it is put into the churns.

All milk to be thoroughly cooled, immediately after milking, over a refrigerator, which shall be of a description satisfactory to the company, and to which an ample supply of water from the source or sources only passed by the medical officer of health for the district and by the company's analyst, and described at the end of this contract, shall be provided, and the drainage from which shall not be connected with any covered drain. Milk to be considered as not having been thoroughly cooled, when the temperature, on arrival at the company's dairy, is found to be higher than the average temperature of milk of the same meal received from other farms.

N.B. The sender to daily examine his refrigerator and the in-flow and out-flow pipes, etc., in order to see that everything is in thorough repair, and that there is not any leakage.

All pails, strainers, railway churns, refrigerators, fittings, and other vessels and implements brought into contact with the milk, to be thoroughly inspected before being used, to be properly cleansed, scalded, and dried immediately after being used, and exposed to the air in a clean place, without lids or covers, and turned bottom up so as to admit free circulation of air inside.

No other than boiling water, or water that has been boiled in a boiler not used for household purposes, properly fixed in a suitable place, and provided with an ample supply of water from the source or sources only passed by the medical officer of health for the district, and by the company's analyst, and described at the end of this contract, to be brought into contact with any vessel or implement used for the reception, cooling, or storage of milk.

The sender to send no purchased milk, that is, no milk other than that produced on his own farm, unless by agreement with the company. In case it be agreed that a sender be allowed to purchase milk, it shall only be on condition that he is equally responsible for such purchased milk as he is for that from his own cows, under all heads of this contract.

Sender not to interfere in any way with the drains, or make any structural alteration from the condition in which they were when seen by the company's inspecting engineer without first notifying the same to the company, fully describing the intended alteration or repairs—and on the completion of such alterations, the sender to inform the company of the same, in order that they may send to inspect them, if necessary.

Should any disease of a contagious or infectious character, such as diphtheria, small-pox, typhoid, or scarlet fever occur in the house or family of the sender, or in that of any of his servants employed on the farm, or should any member of his family, or any member of the families of his servants, or any visitor or temporary resident in the house of the sender, or in the house of any person employed upon the farm, have suffered from any such disease within one month of the date of such person's arrival, the person so affected, or who may have been affected, and those persons living in the same house who have in any way personal communication with such person, to be prohibited and prevented from coming into or near the dairy or cowsheds, or from taking part in the dairy operations, and the sender to immediately give information to the company in order that the directors of the company may use their own judgement as regards the use of the milk, they guaranteeing that the sender shall not sustain any loss.

Should anything be found to exist at any time, either on the farm or in the family of the sender, or in that of any of his servants, deemed by the company to be, or likely to become, dangerous to the public health, the company reserves power instantly to cease taking the milk, and, if it please, to terminate the contract. The farmer contracts further to allow the representatives of the company to enter and inspect the farm at any time, and to take samples of milk, either at the farm or while the milk is in course of delivery. Before the farm is finally accepted it is inspected by the company's engineer. During the continuance of the contract a report is made monthly to the company by the medical officer of health of the district regarding the health of the inmates of the farm-house, and of all persons employed upon the farm and their families, as also upon the general health of the surrounding neighbourhood, especially with reference to zymotic diseases. He also reports on the general sanitary condition of the farm-house, farm buildings, dwellings, and premises; further, the medical officer of health has authority to visit a farm as often as he thinks necessary in the company's interests, and his fees are paid by the company. A monthly report is also made by a veterinary inspector upon the health of the cows and the condition of the cowhouses; each local veterinary surgeon reports direct to Professor MacFadyean as to any cow not in good health, and takes instructions from him direct. Professor MacFadyean, whose services are retained by the company for this purpose, advises as to the course which should be taken, and, pending the receipt of orders from Professor MacFadyean, the veterinary surgeon has power to direct that the cow shall be isolated and its milk withheld. As will be seen, the nature of the contract with the farmer makes it in his interest to report to the company cases of illness in his family, among the workers on his farm, or in the cows. The farmer is liable to a penalty for failing to report, whereas if he does so the milk, though not used, is paid for by the company so long as the contract lasts.

With regard to tuberculosis, the veterinary surgeon reports the occurrence of suspicious symptoms in any animal, and takes a sample of the milk, which is submitted at once to Professor MacFadyean, and if the bacillus tuberculosis be found the cow is condemned. If it is not found, the farmer is given the alternative of withdrawing the cow, or of

submitting it to the tuberculin test. An interval of three days must be allowed after calving before the milk is supplied. The farms which supply the company are situated in various parts of England, even as far distant as Cheshire.

Transit.

The farmer's contract requires him to deliver the milk, in the company's churns, at the nearest railway station, the churn first being sealed by the farmer with a seal provided by the company. When dispatching milk the farmer takes a sample; this is sent to the company, which on the arrival of the milk in London takes a corresponding sample: this is returned to the farmer. Thus there is a check upon fraud in transit, which is however otherwise provided against, and the farmer also has means in his power of ascertaining that the milk arrives in London in the same condition as it leaves the farm. Milk received by the company in churns not securely sealed is made into butter, and paid for according to the market price of butter.

Factory.

The general scheme upon which the business of the company is carried out is so excellent that it is regrettable that the factory should not enable it to display to greater advantage the machinery and general working of the dairy. The buildings are old and have been added to frequently, in order to meet the needs of the business as it grew more prosperous and more complicated.

The churns are brought from the railway terminuses in two-horse wagons and are landed on a platform. Any churn not sealed is set aside; the sealed ones are weighed, the seals broken and a sample taken from each churn, the specific gravity and temperature being noted. Any milk, the specific gravity of which falls below 1031 or above 1034, is set aside for further investigation, the results of which are communicated to the farmer, and such milk is not mixed with the day's supply. The temperature of the samples we had the opportunity of seeing on February 13th was 49° F. (9.5° C.), but we were informed that occasionally in summer it is as high as 60° F. (15.5° C.) or even 70° F. (21° C.). The samples from all the churns from the same farm are then mixed, and a sample of the mixed milk sent to the laboratory. Each churn is then placed in a pivoting cradle, and the contents tipped into a funnel-shaped receptacle (provided with openings covered with wire gauze) into a reservoir beneath. The company also has an arrangement under which the milk can be weighed in this funnel-shaped strainer, thus saving a double operation; this, we understand is the system usually followed by the company. From this small reservoir the milk is pumped up and flows over a cooler, and from the cooler passes through a muslin strainer, frequently renewed, into a large reservoir, the churns being filled in the story below, direct from the reservoirs. The churns when filled are closed and sealed with the company's seal, and on return from the round must bear this seal unbroken; those for retail sale direct are provided with a plunger for stirring the milk.

Milk for cream is conducted from the reservoir pasteurized, and separated by centrifugal separators, the cream being sent out in closed cans. The separated milk is mainly disposed of to bakers, while the greater part of the cream is sold as such, for the company itself does not make a large quantity of butter.

The Cleansing of Utensils.—The churns received from the farmers, as well as those returned from the retail rounds, are immersed in a soda bath and scrubbed by a revolving brush driven by machinery. They are then inverted and rinsed by an upward stream of boiling water, and finally sterilized by steam under pressure and left turned upside down to dry. The empty churns, when received at the farm, are required to be rinsed with boiling water, to remove any accidental dirt gathered on the return journey.

Nursery milk, supplied by the company, is obtained from a farm specially selected for the purpose, and is sent out in bottles. The company also makes infants' food under the name of "humanized milk," this being filled into bottles closed by a specially planned cover, and placed in a sterilizer designed by Dr. Fouterton. The neck of the bottle is provided with an indiarubber ring and a tin cover, which fits loosely on to the ring, is held in place by a temporary spring. When the temperature of the mixture rises in the sterilizer air is expelled, and when the source of heat is removed the condensation of steam in the bottle produces a negative pressure, which holds the tin lid firmly on. To open the bottle the lid is punctured and air admitted, when the cover becomes loose.

The milk returned by retail carts unsold is separated the same day and the cream churned after ripening for two or three days.

To prevent adulteration of the milk on the rounds, in addition to the system of sealing the churns, the company employs inspectors, who are authorized to take samples from a cart at any part of its round; these samples are examined by the company's analyst and also by a public analyst, whose services are employed by the company for this purpose. Samples are also taken from the milk remaining in each churn when it is brought back to the factory and compared with those taken before the milk is dispatched.

The Laboratory.—The company maintains a small laboratory, of which Mr. H. Droop Richmond is in charge. The mixed samples of the milk from each farm, taken, as already stated, when the churns are first opened on their arrival, are examined in this laboratory, and, as a routine measure, the specific gravity is taken, and the amount of butter fat estimated by the sulphuric-acid test. If this preliminary examination raises any suspicion as to the character of the milk, a fuller analysis is undertaken. In this laboratory the examination of the water supply of farms is also carried out.

Infection among the Workmen employed in London.—In the case of sickness among such employés, or in their families, the patient is visited by the company's medical officer, and if the sickness is found to be of an infectious character the employé is suspended from duty, but his wages are paid in full. As a further precaution, which is, we believe, taken only by this company, milk is supplied to the houses of customers in which infectious disease exists by special messengers, and not from the ordinary delivering carts Cans used in this service are specially cleansed and disinfected, apart from those used in the ordinary deliveries. In carrying out this precaution the company is, of course, largely dependent upon the goodwill of its customers; but the value of such a precaution is obvious, and should meet with the appreciation of the public.

(To be continued.)

LITERARY NOTES.

We learn from the *Westminster Gazette* that Dr. Greville Macdonald has nearly ready a book dealing with the relations between science and religion.

Several esteemed correspondents are much exercised as to the spelling of certain words adopted by the British Medical Journal. Their souls are vexed by the middle "e" in "judgement"; their finer etymological feelings are wrung by the "x" in "connexion"; they find a literary stone of stumbling in the "i" in "dispatch." Now be it known unto all men by these presents that if these be, as one correspondent assures us, "orthographical errors," the blame for them must lie, not on our shoulders, but on those of the Editors of the *New English Dictionary*, Dr. J. A. H. Murray and Mr. Henry Bradley. It is convenient to have a fixed standard for spelling, and for that purpose we chose the *Rules for Compositors and Readers Employed at the Clarendon Press*, Oxford, compiled by Mr. Horace Hart, printer to the University, and revised by the scholars above mentioned. As to "judgement" in particular—which seems for some inscrutable reason to arouse special ire in heavenly breasts—we may be allowed to quote the following note by Dr. Murray:

> I protest strongly against the vulgar and unscholarly habit of omitting it [the "e"] from "abridgement," "acknowledgement," "judgement," "lodgement," which is against all analogy, etymology, and orthoepy, since elsewhere *g* is hard in English when not followed by *e* or *i*. I think the University Press ought to set a scholarly example, instead of following the ignorant to do ill, for the sake of saving four *e*'s. The word "judgement" has been spelt in the Revised Version correctly.

In regard to "connexion," the *New English Dictionary* (*sub voce*) says:

> The etymological spelling *connexion* is the original in Eng.; in 17th C. it was supported by the verb *connex*.....The earlier Eng. lexicographers, including Batley, Johnson, Walker, Todd, Crabb, recognize *connexion* only.

Connection appears in Webster (1828), who adopted that spelling "for the sake of regular analogy." As to "dispatch," the *New English Dictionary* says:

> The uniform English spelling from the first introduction of the word to the early part of the 19th C. was with *dis-*; but in Johnson's *Dictionary* the word was somehow entered under *des-* (although Johnson himself always wrote *dispatch*, which is also the spelling of all the authors cited by him); though this has, since *C.* 1820, introduced diversity into current usage, *dispatch* is to be preferred as at once historical and in compliance with English analogy.

For our own part we plead guilty to a certain latitudinarianism in the matter of orthography, and recognize that every citizen of a free country has a right to spell as he pleases. But if we were to print all the communications with which we are favoured exactly as they are written, liberty would degenerate into licence or rather anarchy, and Chaos and old Night would reign in the composing room. Every printing office has its own code of rules, and ours is founded on that laid down by the highest authority on such matters in this country. Neither etymology nor analogy is to be taken blindly as a guide in English spelling; the only absolute rule is that *usus* which, according to Horace, is the *jus et norma loquendi*. We do not profess to regard Dr. Murray or Mr. Bradley as infallible, but they may safely be accepted as authorities on usage. Having given this explanation of the rules of spelling which we have adopted, we think it right to add that we cannot undertake to discuss whether they are the best of all possible rules. Those who are disposed to criticize them may, however, be reminded that *Peritis in arte credendum* is a sound principle which doctors can, as little as members of other professions, afford to call in question.

In defence of "tonsillitis," with which we are reproached more in sorrow than in anger by one correspondent, we need only plead that it has the sanction of Gould, Dunglison, Duane, Annandale, Lippincott, Funk and Wagnall, and the editors of the New Sydenham Society's *Lexicon* among lexicographers; and of Watson, Osler, Pye-Smith, and Roberts among writers of textbooks. As the word denotes the inflammation of the *tonsilla* we really do not understand why the spelling of which our correspondent complains should "make one's hair erect." We trust that this explanation will make it lie down comfortably.

The following extract from the parish register of a small village in Yorkshire may be of interest to some of our readers:

Burrialls 1693.

Sarah ye daughtor of Jane Micklefield Buried June ye 12th. Memoranda this was a young woman of very great stature and strength as any wth in a great way of hr being about thirty years of age but it pleas'd God on ye 11th day of June being Trinity Sunday yt she was struck down dead in hr own doorstead by a violent and terrable stroak of thundor and lightening *so dead yt she was not percieved to move ye least* nor hr voyce at all to be heard and yet wn she was struck down a child about 3 quarters old was in hr arms but recieve'd no damage nether by ye thunder nor by hr falling and hr mother and many children was about hr but all excepting herself escaped ye danger and yet hrself was not wounded in any part of her.

Dr. Launcelot Archer (Vincent Square, Westminster) has sent us the following extract from an old book entitled *Every Man his own Doctor*, written by John Archer, one of His Majesties Physicians-in-Ordinary, and published in 1673:

Since many great diseases have been and are daily cured by help of sweating, I do publish the beneficial use of this my invention, being a most profitable and delightful hot bath by steam, which far excels all that I have ever read or heard of, and used of no other as I know of yet, though I doubt not that many will imitate the device, for it is prevalent against most diseases, preventing the use of bleeding; the ingredients for the bath I order most agreeable for the person to bathe whether sick or in health, and causing them to sit in a closet much above the bath that the vapour or steam, being conveyed by pipes, may ascend, and he applyed to any part grieved, which doth operate so powerfully, that the virtue of the bath ingredients doth forcibly open the pores outwardly, as well as refreshing the noble parts inwardly, which cannot be effected so well otherways by common stoves or baths, and doth render the stubbornest disease more curable. Bathing and sweating doth especially prevail against all diseases, coming from cold, congealed humours, and hot feverish distempers. Because all these are rarified and evaporated by transpiration in sweating, as gouts of all sorts, lameness, pains, aches, etc.

Dr. Archer thinks that the application of steam or hot vapour, which, "being conveyed by pipes, may ascend and be applyed to any part grieved," is a fore-shadowing of what is considered a much more modern method of treatment.

To commemorate the twenty-five years' work of Professor Orth as teacher of pathological anatomy at Göttingen, his assistants, pupils, and friends have put together a very substantial "Festschrift,"* which is a fitting tribute to the wide range of Professor Orth's influence in the pathological world. The forty-three articles of which the book is composed deal with a large variety of subjects, some of them bearing on matters of immediate clinical interest to the surgeon, physician, or gynaecologist, whilst others are purely pathological or bacteriological. Each writer, apparently, has selected the subject in which he feels particularly interested, and there is no attempt at classification; articles on tuberculous lesions, renal growths, the pathology of the brain, the teaching of pathology in various countries, and cell inclusions in cancer follow one another in indiscriminate succession. Whilst a heterogeneous collection of this sort is very gratifying evidence of the many directions in which Professor Orth's influence has radiated, one cannot help feeling that the really valuable articles on particular subjects would have been more appreciated and more accessible if they had been published in association with others of their kind.

A new issue of Professor Osler's *Practice of Medicine* has recently been advertised in this country. The distinguished author writes to us to explain the premature appearance of a new edition of his textbook. To justify the confidence which the profession has shown in the book, he says he has tried to make each edition a faithful exponent of the medicine of the day. He had hoped to follow the plan of a triennial issue, but he omitted to copyright the fourth edition in Great Britain. This gave rise to a series of strategic manœuvres between two publishing firms, which seems to show that in the arts of commercial competition some members of "the trade" in this country are not so far behind their American brethren as we are said to be in other branches of industrial enterprise. Mr. Kimpton announced in an advertisement published on August 31st, 1901, that a new fourth edition of Osler's *Medicine* would be "ready this month," the price stated was 21s.; on October 12th Mr. Kimpton advertised that the new edition would be ready in the course of a few days, but no price was mentioned. At the same date Mr. Pentland advertised that he would "issue almost immediately the fourth enlarged and thoroughly revised edition, price 18s. net." On October 19th Mr. Pentland published an advertisement to the effect that the fourth edition was "nearly ready," and this advertisement was repeated on October 26th, when Mr. Kimpton advertised the edition as "just published, price 18s. net." Mr. Pentland's edition was announced as "ready" in an advertisement on November 2nd. We received a copy of Mr. Kimpton's edition on October 25th, and of Mr. Pentland's on October 31st. We were rather puzzled by the receipt of two copies of the same book bearing the imprint of different publishers, and called attention to the matter in a brief review of the book published in the British Medical Journal of October 12th, 1902. The whole affair may be called a comedy of copyright. Professor Osler explains that it is in order to obtain copyright in Great Britain that a new (fifth) edition has had to be issued. We are sure many of our readers will share his regret for the circumstances which have disturbed the normal process of triennial parturition. As he says, they seem to justify what Rabelais calls "the pretty perquisite of a superfetation."

Mr. Carl Lumholtz's last book on *Unknown Mexico* contains a number of interesting anthropological facts concerning certain little known tribes inhabiting Mexico. Among the Huichols, for instance, a good Shaman learns the nature of disease through dreams, and advises the patient what to do to get well again. Treatment consists in blowing on the patient and driving the disease out of the body by waving of the hands. This sort of thing, masked by an incoherent terminology and an incomprehensible patter, is carried on in the midst of an alleged civilized community, London to wit, and there is no need to travel in far-away Mexico to see this precious business in operation, so great and universal is the fundamental gullibility of *homo sapiens*! As far as our own country is concerned, the practisers of occult treatment find it a very profitable occupation, just as does the Shaman in Mexico, for he gets the best of everything. The people there think if they do not propitiate the wily Shaman with the best cuts of meat and the first pick of everything, trouble and misfortune will follow. The photographs of the Shamans reproduced in Mr. Lumholtz's book are instructive. These men are evidently shrewd and astute, and their existence and power a proof of sharps living on the flats. The author of the book adds that "without discussing the merits of the Shaman mode of treatment, the fact is that here, as everywhere else, the people finally die." The spiritualist quack goes one better than the ordinary medicine man, for the medium continues to thrive by conjuring up the ghost of the departed, including the ghost of his or her clothes. With him, the wicked and the good never are at rest.

* *Pathologisch-anatomische Arbeiten.* Dr. Johannes Orth gewidmet. Berlin: August Hirschwald. 1903. (Roy. 8vo; pp. 744. Portrait of Professor Orth, 9 Plates, M. 24.)

NOVA ET VETERA.

JAMES CURRIE, PHYSICIAN.

The interesting contribution on clinical thermometry in the case of the First Napoleon, in the British Medical Journal, vol. i, 1903, p. 313, calls attention to the valuable work of Dr. James Currie in connexion with the use of the clinical thermometer in England, at a time long antecedent to that of Wunderlich. Dr. Currie's life is sufficiently interesting to make it worth while to recall a few of its particulars.

He was born on May 31st, 1756, at Kirkpatrick Fleming, Dumfriesshire, where his father was minister. He set sail for Virginia in 1771, and settled in a merchant's office on the James River. He soon gave up commerce for medicine, and in 1776 he sailed for Greenock, intending to graduate at the University of Edinburgh. The ship, however, was seized on the way home and the passengers were turned adrift on the shore, their goods being confiscated. Currie was drafted into the colonial army, but, escaping, he again took ship, which was again seized, and he had to make a journey of 150 miles in an open boat to protest against his seizure. He reached Antigua after many misfortunes, and sailed thence for England, only reaching Deptford in 1777.

In the autumn of this year he went to Edinburgh, and in 1778, after walking thirty-two miles with a fellow student, during which they had bathed twice, he bathed a third time after sundown in the Tweed, and was presently laid up with an attack of typhoid fever. He graduated from Glasgow University in April, 1780, and after an abortive attempt to return to America he settled as a physician in Liverpool and obtained an appointment at the Dispensary. In 1783 he married, and in the following year he had pleurisy and blood spitting, for which he consulted Dr. Erasmus Darwin, who published his case in the *Zoonomia*. About the same time he became an active Abolitionist, and in 1792 he was elected a Fellow of the Royal Society. In 1797 he published "Medical Reports on the Effects of Water, Cold and Warm, as a Remedy in Fever and Febrile Diseases, whether applied to the Surface of the Body or used as a Drink, with Observations on the Nature of Fever and on the effects of Opium, Alcohol, and Inanition." "The object of the book," says Dr. Norman Moore in his biography of Currie in the *Dictionary of National Biography*, "is to establish three rules of practice: that the early stage of fever should be treated by pouring cold water over the body, that in the latter stages the temperature should be reduced by bathing with tepid water, and that in all stages of fever abundant potations of cold water are advantageous. These propositions are supported by a large number of carefully-observed cases and by passages from old medical books. Currie's is the first series of English medical observations in which clinical thermometrical observations are systematically recorded. Since the time of Galen cold bathing had been from time to time tried as a remedy, but Currie was the first exact observer of its effects, and he deserves the further credit of turning attention to the importance of repeated thermometrical observations in fever." Currie further wrote a life of Robert Burns, but in 1804, as his health began to fail, he moved to Bath, and died at Sidmouth August 31st, 1805.

The Museum of St. Bartholomew's Hospital contains a thermometer of the kind used by Currie and described by Sir William Broadbent (loc. cit.). It consists of a stout glass stem with a small bulb. There is no index, but the lower part of the stem is bent at an angle, so that the mercury may be read with the instrument *in situ*. The scale is engraved on an ivory plate wrapped round the stem.

Dr. James Currie must by no means be confused with Dr. James Curry who was appointed assistant physician to Guy's Hospital in 1802. Dr. Curry was a graduate of the University of Edinburgh, and was in practice for some time at Northampton. He was a most distinguished physician, with some remarkably fixed ideas. He believed that the liver was the root of all disorders, and that calomel was therefore of universal use. Sir Astley Cooper said: "With Curry there was only one organ discussed the liver; and only one medicine to be prescribed calomel." Sir Samuel Wilks tells us: "He could not be corrected, for if one of his patients died and was examined, and Dr. Curry was told that no disease of the liver was found, he replied that he had cured it." A report prevailed that Dr. Curry sprinkled calomel on the meat of the sandwiches which he ate at luncheon, for he always believed he was labouring under a disease of the liver, and it was in this way that he gained his nickname of "Calomel Curry." He published his views in a temperate work entitled *Examination of the Prejudice commonly entertained against Mercury as beneficially applicable to the greater number of Liver Complaints, and to various other Forms of Disease as well as to Syphilis*, 1809. Curry lived with Dr. Babington, and it is told of him that he had an almost monomaniacal propensity for attending auctions. There he bought books which he never unpacked, electrical apparatus, microscopes, globes, and prints, with which he crowded every corner of his rooms.

THE EPIDEMIC OF SMALL-POX.

The reports to hand this week are not as numerous as usual, but past experience shows that no very favourable opinion as to the future can be based on this fact. An instance, indeed, of the folly of early satisfaction is supplied by the report from Blackburn, in Lancashire. This town was entirely free for sixteen days—that is, several days over the normal incubation period—and now has had a sudden fresh outbreak of 6 cases among 6 women.

In other parts of this county new cases are reported at Bury, Hebden Bridge, and Heywood; while though Manchester has registered its 241st case, there appears to be some slacking off in that town. At Leavenshulme a very useful action under the Infectious Diseases Act has been brought, one of the defendants being summoned for exposing himself while suffering from small-pox, and his wife for failing to notify his illness. The former was fined 20s. and costs, and the wife costs only.

In Durham, there have been fresh cases at South Shields, Darlington, Durham and Stanley, Durham itself now having had 7 cases in all.

In Cheshire, 3 fresh cases have occurred at Bugsworth, and the number at Birkenhead risen to 15.

In Nottinghamshire new centres have been established at Sutton-in-Ashfield, and Beckingham Ship Yard, while Nottingham itself has had two more cases.

From Yorkshire the reports are few; one or two cases only being reported from Leeds, Bradford and Todmorden, Hunslet and Ancoats.

In Northumberland Newcastle registers another case and Morpeth two.

In Leicestershire several cases were reported, in Leicester itself up to March 31st, but none apparently since. There is a case, however, at Quorn isolated in a private house, while at Huckley a victim has been found in the person of the wife of an antivaccinator who had just purged his legal offence by detention in prison. Loughborough also has had another case.

In Staffordshire a fresh centre is reported at Leek.

In Lincolnshire, Grantham reports another case, which is apparently due to fresh infection from Nottingham, and not to the previous cases in the town.

The worst feature of the epidemic is that it seems to be steadily spreading south. We reported a case in Essex last week, and since then there have been serious outbreaks both at Croydon and Kingston-upon-Thames, 12 cases having occurred in the infirmary at the former place, and 4 having been removed from a common lodging-house at the latter.

In Wales, Cardiff has had some fresh cases, and others in the northern part of the Principality have occurred at Clynnog, Llysfaen, Penrhyn, and Bangor, while at Holyhead a case from H.M.S. *Renard* has been landed for isolation.

Scotland.

We are sorry to say several burghs are now infected—namely, those of Dundee, Leith, and Monifrith, while there has also been a case at Broughton in Peeblesshire. The outbreak at Monifrith is a little curious, as the 5 cases notified were all discovered together in one family.

Ireland.

There has been no special development reported during the week, but the cases noted show a tendency of the disease to slowly extend.

CONTRACT MEDICAL PRACTICE.

Southport.

We are informed that the Tontine Societies in Southport have secured the services of a medical man for their clubs in the person of James Morrison Orr, M.D. We regret that any member of the profession should be willing to accept an appointment upon terms which the local profession, knowing all the circumstances of the case, consider to be unsuitable and inadequate. We believe that such a course must tend to retard the raising of the standard of the profession.

Fleetwood.

We see an announcement in a local paper to the effect that Dr. Johnston, of Doncaster, has accepted the appointment of medical officer to the Fleetwood United Medical Societies Council. We are informed that as soon as it was stated that Dr. Johnston was willing to accept the appointment the local medical men made him acquainted with all the circumstances. Here again it appears to us lamentable, if the facts

are as stated, that any medical man should come into a neighbourhood under conditions which practically make him the servant of a body which has quarrelled with the local profession.

CONVALESCENT HOMES IN LONDON PARKS.

A fortnight ago we were able to announce that the Parks Committee of the London County Council had approved the principle of allowing certain mansions in some of the London parks to be used as convalescent homes. We are now in a position to lay before our readers a report of the Parks Committee, which was presented at the meeting of the Council last Tuesday. The Committee says:

The Council, on November 18th, 1902, on the motion of Mr. Crooks, M.P., directed us to consider and report what houses and mansions, situated in the parks and open spaces under the control of the Council, could be leased for the purpose of being used as convalescent homes for children of the poorer class in London, preference being given to those children who have been under treatment at the various non-infectious hospitals.

We have given careful consideration to the subject, and have arrived at the conclusion that any houses and mansions in the Council's parks which are suitable for the purpose should be allowed to be used as convalescent homes, provided there is no legal objection to such use.

Many of the houses and mansions situated in the parks and open spaces under the control of the Council have already been devoted to special purposes, and with regard to these we do not propose to suggest any alteration at present.

A part of the Horniman gift to London consists of houses, and we have consequently drawn the attention of the Historical Records Committee, who have charge of this property, to the Council's reference to us.

We think that the house at Marble Hill would be suitable for the purpose of a convalescent home, and we hope to be in a position to report upon this matter to the Council at an early date.

In the case of Clissold Park the Stoke Newington Borough Council has Parliamentary authority to purchase the mansion and a portion of the park for the purpose of a vestry hall, museum, library, baths, or other like purpose. We have for many years past endeavoured to induce the borough council to arrive at a determination with regard to this building, but without result.

We are reporting specially to the Council as to the uses to which we think the mansions at Avery Hill and Golder's Hill might suitably be put.

Having thus approved of the principle, the Committee leaving the case of the houses at Horniman's Park, at Marble Hill, and at Clissold Park for future consideration, proceed to say in reference to the mansion formerly occupied by the late Colonel North at Avery Hill:

As the result of a very careful consideration of the Council's instruction, we have come to the conclusion that the land (except a small portion referred to in a later part of this report) together with the winter garden, the conservatories, and some rooms on the ground floor of the mansion, should be devoted to the purposes of public recreation. The land and the gardens are already laid out, and the winter garden, fernery and fruit houses completely furnished, and could be opened for public use at once. We are of opinion that the ballroom, with the annexe adjoining, the sculpture gallery and the drawing-room, all of which communicate with the conservatories, should be retained as shelters and refreshment rooms. The rest of the mansion might, we think, be used as a convalescent home; and, should the Council adopt our view, we propose to communicate with hospital authorities and ascertain whether they would desire to occupy it temporarily for that purpose.

In the event of our proposal being adopted by the Council, we should enclose the part of the garden which is to the north of the mansion for exclusive use in connexion with the convalescent home. This could easily be done by means of hurdles and gates, still allowing the public access to the park by the two lodge entrances. The convalescents would, equally with the general public, have free use of the whole of the land.

The machinery house should be retained. It is fitted with electric light machinery to supply light to the mansion, and with boilers for supplying heat to the conservatories and the mansion.

We are not prepared at present to make any suggestion with regard to the stabling near the house or on the stud farm, but the outlying building we should propose to convert into a public shelter. We recommend:

(*a*) That the Avery Hill estate, with the exception of such part of the mansion and machinery house, and such out-buildings and part of the garden ground to the north of the mansion as the Council may temporarily set aside for the purposes of a convalescent home, be devoted to the purpose of a public open space.

(*b*) That, until otherwise ordered, a part of the mansion and gardens and of the machinery house at Avery Hill be used as a convalescent home, and that the Parks Committee be authorized to communicate with hospital authorities, and make arrangements to give effect to this resolution.

The Committee then proceed to report on the mansion at Golder's Hill, formerly occupied by the late Sir Spencer Wells, and on the future destiny of which an animated discussion has been going on in the public press. It will be remembered that representatives of Hampstead, led by Sir Henry Harben, have suggested that to put Golder's Hill house to the same use for sick children as it has for the last few years subserved so admirably for the soldiers would be an abuse of public trust and amount almost to a breach of faith with the subscribers who had acquired this estate for the use of the public. It will be interesting to learn whether the use to which the Committee now proposes to devote the upper portion of the Golder's Hill mansion will meet with the approval of these valiant defenders of public rights. We confess that we cherish the belief that the great bulk of Londoners would feel that a greater service was being rendered to the public weal by allowing little Londoners to recuperate their health in this delightful spot than by enabling an official of the County Council, however worthy an officer he may be, to occupy in solitary glory a magnificent suite of rooms to the exclusion of the little denizens of the slums. It needs the pencil of John Leech and the satire of Charles Dickens faithfully to represent Bumbledom driving out the sick children and establishing itself at the public expense in one of the finest residences in London or its neighbourhood. This is what the Parks Committee say:

The Council is aware that the mansion at Golder's Hill was allowed to be used temporarily as a convalescent home for men of the Brigade of Guards who were invalided home from the war in South Africa. The Guards having vacated the house early in the present year, we had plans prepared showing how it could best be utilized in connexion with the open space. A suggestion was made to us that the house should be placed at the service of hospital authorities of London for the accommodation of children, but in view of the strongly-expressed opinions of the various local authorities and individuals who contributed to the purchase of the estate we have found ourselves precluded from considering whether the mansion could be used for that purpose, and have sought to ascertain how it could best be utilized in connexion with the grounds of Golder's Hill and the adjoining Hampstead Heath. We have visited the house upon several occasions, and have arrived at the conclusion that it should be used mainly as a refreshment place and shelter. We think that the whole of the ground floor should be devoted to these purposes. The kitchen in the basement would be required for use in connexion with the supply of refreshments, and the rest of the basement would form a convenient storage place for park purposes. At the northern end of the mansion is a detached building which can readily be converted into conveniences for both sexes, the upper floor, which is approached through a conservatory, being reserved for women and children, and the lower part for men. We have found it convenient at all the Council's parks that the superintendent should reside within the park, and we propose therefore to allocate some rooms on the first and second floors at the northern end of the mansion as a residence for this official. This arrangement will be economical to the Council, inasmuch as the superintendent is at present receiving an allowance of £51 a year in lieu of a house. We do not make any suggestions at present with regard to the rest of the mansion, as we desire first to see the result of the present proposals. We have no present use for the stables, and we are considering whether we shall recommend the Council to offer to let them on lease. We recommend—

(*a*) That the annexe at the northern end of the mansion at Golder's Hill be utilized for the purposes of public conveniences, the upper part being reserved for women and children and the lower part for men, and that the architect do prepare the necessary plans accordingly.

(*b*) That the rooms on the first and second floors of the northern wing of the mansion at Golder's Hill be allocated as a residence for the park superintendent: that the architect do prepare plans showing the necessary alterations, including the provision of a separate entrance from the front of the house.

(*c*) That the whole of the ground floor and the kitchen, etc., of the mansion at Golder's Hill be devoted to the purpose of a public refreshment place.

(*d*) That tenders be invited from firms willing to take on lease the privilege of providing and selling refreshments in the part of the mansion at Golder's Hill to be devoted to that purpose.

(*e*) That the basement of the mansion at Golder's Hill be used as a store.

The recommendations were opposed by Mr. Stuart Sankey, who described them as illegal, and objected that they would be the beginning of the municipalization of hospitals.

The debate was adjourned.

ASSOCIATION NOTICES.

COUNCIL.

NOTICE OF MEETING.

A Meeting of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 22nd day of April next, at **10.30** o'clock in the forenoon, and not at the time previously announced.

April, 1903. Guy Elliston, *General Secretary.*

ELECTION OF MEMBERS.

Any candidate for election should forward his application upon a form, which will be furnished by the General Secretary of the Association, 429, Strand. Applications for membership should be sent to the General Secretary not less than thirty-five days prior to the date of a meeting of the Council.

Guy Elliston, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

THE Library will be closed on Good Friday, April 10th, and reopen on Tuesday morning, April 14th.

BRANCH MEETINGS TO BE HELD.

SOUTHERN BRANCH: ISLE OF WIGHT DIVISION.—A meeting of this Division will be held at the Station Hotel, Sandown, on Friday, April 17th, at 3.45 p.m. All members of the British Medical Association living in the Isle of Wight are now members of this Division, and are invited to be present. Any member wishing to read papers or show cases, etc., are requested to communicate as early as possible with the Honorary Secretary, G. BENINGTON WOOD, M.B., Newlands, Sandown.

LEINSTER BRANCH.—A general meeting of the members of this Branch will be held in Dublin on Tuesday, April 14th. Members will be notified by circular of the place and hour.

METROPOLITAN COUNTIES BRANCH.—The nomination of candidates for the office of Elective Members of Council (Branch Representatives) for the ensuing year must be made by three electors, and in writing, to the Senior Secretary of the Branch, H. BETHAM ROBINSON, 1, Upper Wimpole Street, W., on or before May 1st next

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The next meeting of this District will be held at Woodford Hospital, on Thursday, April 16th, at 4.30 p.m. The chair will be taken by Mr. H. E. Powell, Vice-President of the District. Dr. Goodhart will read a paper entitled Where Memory Sleeps. Visitors are invited.—C. J. MORTON, 56, Orford Road, Walthamstow, Honorary Secretary.

SPECIAL CORRESPONDENCE.

GLASGOW.

Medical Examinations.—Anderson's College.—Hospital Sunday Fund.

AT the medical schools the beginning of April is the time for professional examinations, the usual accompaniment of the close of a winter session, and the lists of results of examinations begin to make their appearance. At the University the graduation function follows on April 21st, after which the students are at once back at work for the summer session.

The activity and the popularity of the Anderson's College Medical School is again apparent at the close of the autumn session. The past session has been the most successful—at least as regards the number of students enrolled—since this medical school removed to its present quarters near the Western Infirmary, and the close of the session was marked by an enthusiastic meeting, at which Lord Provost Primrose presented the prizes and certificates to the successful students.

The ninth annual report of the Hospital Sunday Fund is published, and it is gratifying to learn that the amount of money raised in this way for the three principal infirmaries in the city is increasing; this year it is rather over £5,000. The sum set aside for the infirmaries was £4,790, and it was allocated in proportion to the number of fully occupied beds in each infirmary; these numbers being for the Royal Infirmary, 550 beds; for the Western Infirmary, 432 beds; and for the Victoria Infirmary, 162 beds. While grateful for the response that has been made to their appeal for this fund, the Committee of Management regret to observe that in all of the infirmaries the ordinary income has failed to keep pace with their increasing expenditure, and they appeal for even more liberal support. The following figures are given: Excess of ordinary expenditure over ordinary income: Royal, £11,000; Western, £9,500; Victoria, £4,800. These deficits have in each case to be paid either from extraordinary revenue or out of capital; and these sources are insufficient for the schemes of extension which are already before the public—the rebuilding of the Royal Infirmary, the new dispensary and new wards for the Western Infirmary, and a new pavilion for the Victoria Infirmary.

MANCHESTER.

Royal Infirmary Question.

VERILY, after many days—nay, long years—a problem of the first importance in the history of the Royal Infirmary of Manchester has been solved, and solved in a way and in a manner that redounds to the credit of those who a comparatively short time ago undertook a task which seemed almost incapable of immediate solution. The scheme of the recently-elected Board of Management of the Royal Infirmary for the sale of the present site to the Corporation for £400,000 has been agreed to so far as the Corporation is concerned. The second part of the scheme involves the transfer by the Council of Owens College of the Stanley Grove Estate to the Trustees of the Royal Infirmary for the erection thereon of a hospital worthy of Manchester, of its needs as a great centre of industry with its attendant diseases and accidents, and of the medical school, an asset perhaps more valuble to the community at large than appears on the face of it.

Be it observed, the Council of Owens College only holds the estate in trust for hospital purposes, and it has always shown itself willing and even keenly desirous of linking more effectively the theoretical and practical parts of the medical curriculum. The original deed of gift was executed many years ago by the Whitworth legatees. Now their foresight has borne good fruit, and it is to be hoped that the results will be commensurate with the good intentions that animated the donors.

The site is about 8½ acres in extent—the present infirmary site is 3½ acres—and is open towards Whitworth Park with a frontage of 200 yards. A relatively small sum will enable the area to be increased to over 12 acres. The trustees are recommended to spend about £40 000 in extending and developing the estate. Of this sum £18 500 will be required to compensate the Southern Hospital, which some time ago obtained a site on the Stanley Grove Estate.

Other details as between the Royal Infirmary and the Council of Owens College deal with the Cancer Hospital, Public Health Laboratory, facilities for teaching, etc. The Trustees unanimously resolved to adopt the report of the Board of Management.

CORRESPONDENCE.

ON THE BACTERIOLYTIC POWER OF THE BLOOD AND ON ITS RELATION TO THE PROBLEM OF ANTITYPHOID INOCULATION.

SIR,—May I offer a brief comment on the paper of Dr. A. E. Wright, which appeared in your last issue, inasmuch as my name and work are introduced in connexion with the particular question of the relative merit of Dr. Wright's antityphoid vaccine, a matter which was wholly foreign to my mind in attempting to approach objectively the study of the general question of immunity to typhoid fever, and of the factors upon which it might possibly rest.

Dr. Wright's "axiomatic" statements are entirely beside the point, as he speaks of a vaccine, whereas my experiments dealt with a serum possessing antitoxic and bactericidal properties.

The methods employed by Dr. Haffkine and subsequently by Dr. Wright in the preparation of certain vaccines were inapplicable to the accurate and direct study of the intracellular contents of pathogenic bacteria which it was desired to carry out. For this purpose *cold* grinding methods successfully furnished the desired conditions and results. The brittleness of the bacterial cells at very low temperatures (conveniently obtained with liquid air) rendered their rapid mechanical trituration possible without any admixture of sand and *Kieselguhr*, whilst the temperature of about −180° C. ensured the desired absence of chemical and heat changes in the cells during the grinding process. The method proved an ideal one for the purpose in view, namely, the more intimate study of the intracellular contents of the typhoid bacillus and other organisms. It placed at one's disposal a material to all intents and purposes identical with that of the living cell, which could be studied with an accuracy hitherto unobtainable. This proved particularly acceptable at a time when research has forced us to acknowledge that as regards a number of organisms the problems and their solutions lie within the cell.

I will pass over the references by Dr. Wright to what "has been claimed by or for Dr. Macfadyen." The title of my note expresses exactly the purport of the experiments in question: "Upon the immunizing effects of the intracellular contents of the typhoid bacillus as obtained by the disintegration of the organism at the temperature of liquid air." The fact was established not by "inference" but by proof that the intracellular juices of the typhoid organism when introduced into the most suitable animal available—the monkey—gave rise to the production of a serum which was both bactericidal to

the organism itself and antitoxic as regards a toxin contained in and extracted from its substance, and that the serum possessed curative as well as preventive properties. The fact thus accurately established is one of considerable significance, as has been generally recognized.

I cannot help regretting the general tone of Dr. Wright's paper, and more especially the criticism of an anticipatory character it contains, which goes entirely beyond the recorded results of the experiments and the deductions drawn from them in my note to the Royal Society. There are likewise certain gratuitous statements made by Dr. Wright with regard to the methods employed which are entirely of the nature of assumptions. The papers already published and about to be published by myself and my co-workers will, I think, be evidence that there is no desire to go further than sober inquiry and experimental fact will warrant.—I am, etc.,

Chelsea Gardens, S.W., April 6th. ALLAN MACFADYEN.

PUBLIC HOSPITALS AND THE STATE.

SIR,—I have been requested to send you a copy of a resolution which was passed, on February 25th, at a meeting of the Liverpool Medical Club. The meeting was called with notice that the subject for debate was: "Should any portion of the rates be used to assist the expenses of the general hospitals?" as it was considered that fresh interest in this question had been aroused by the remarks made by the Lord Mayor of Liverpool when he was presiding over two annual meetings of hospitals in the Town Hall, the remark being that he thought the time had arrived when our Poor-law authorities should be asked to pay for the food supplied in our hospitals to all those patients who could not afford to pay for it themselves. A representative number of medical men attended the meeting, and after full discussion a resolution in the terms of the notice was put to the meeting, when the following amendment was moved:

That all public hospitals ought to be taken over and managed by the State; that the expenses should be borne entirely by the State; and that the medical staff should be paid as State officers.

On being put to the vote, this amendment was carried with only one dissentient, and was then adopted as the resolution to be recorded, and a copy of which I was requested to forward, so that it may be placed before the profession through your columns.—I am, etc.,

PERCY EDWARDS,
Liverpool, March 31st. Honorary Secretary, Liverpool Medical Club.

HOSPITAL AMENITIES.

SIR,—I sympathize with your correspondents who justly complain that they receive no information about the progress of patients whom they send into hospitals. The grievance, however, is not entirely one-sided; frequently after a private consultation I have asked the medical attendant to let me know (if only on a postcard) the result of the illness, or the effect of any special treatment suggested. Very rarely indeed has my request been acceded to, even when a promise to do so has been made; in fact, it sometimes seems to be regarded as almost a breach of professional etiquette.

Of course, two blacks do not make a white, but in both cases the omission to give information is doubtless due to the same cause—pressure of work; and how to find a remedy without adding a serious additional burden to already hard-worked practitioners and hospital officers is a difficult problem to solve. So far as hospitals are concerned, Dr. Snowman would get over the difficulty by appointing a special officer, but the post would hardly be an attractive one unless paid; and I feel sure that an economical Board of Management of a general hospital would refuse to spend a penny for such a purpose.

Unquestionably it is most desirable that practitioners, if they so desire, should be informed about their patients when in hospital; but equally I think many consultants would like to know what happens to interesting cases which they may see in private; and all parties would be the gainers.—I am, etc.,

April 4th. F.R.C.P.

THE MEDICAL PROFESSION AND THE MERCANTILE MARINE.

SIR,—The thanks of the rising members of the profession are due to the ship's surgeon who so courageously fought a large and wealthy shipping company in a foreign port over the matter of being put on station duty. For years the P. and O. S. N. Company, through their agent abroad, turn men out of their outward bound ships and put them on station ships without any notice whatever. When a surgeon joins the P. and O. Company he is requested to buy a most expensive uniform, insure his life, and take an annuity policy in an insurance company, in which P. and O. directors are directors. Furthermore, he is compelled to spend about £20 on surgical instruments, and, at the same time has to sign an agreement with the company for two years. He is then appointed to join a ship at the docks on a certain day, and just before sailing he is told to go to the Board of Trade offices and sign the articles of the ship. Of course, one naturally assumes what is placed before you at the Board of Trade office is fair and genuine. Why are these by-laws of the shipping company attached to the ship's articles if they are illegal? Again, it is difficult after having been to such a heavy outlay to refuse to join the ship, especially when one is told that the by-law in question is illegal. Surely shipping companies can advertise for station surgeons and pay them better than subject surgeons on passenger ships to be put to the great inconvenience of being landed at a few hours' notice in a remote part of the globe.—I am, etc.

April 5th. SHIP'S SURGEON,
Late P. & O.S.N.Co.

THE DIAGNOSIS OF PULMONARY TUBERCULOSIS.

SIR,—I am glad to see that Dr. Green and Dr. Crombie agree with me in the value of an *x*-ray examination in the diagnosis of pulmonary tuberculosis. There are, however, one or two points in Dr. Crombie's letter to which I should like to refer. He says, "One point not referred to by Dr. Walsham or Dr. Green is the difficulty in distinguishing between an obsolete lesion which may have fibrosed years before and the presence of active disease." To this I would answer that the *x* rays cannot diagnose, in the absence of the past history of the case, and a careful stethoscopic examination of the chest, between an old and recent lesion. But I will say this much, that the darker and more uniform the shadow the more likely the lesion is to be an old one. Calcified tubercle throws a very black shadow on the screen. But it is not so much a definite shadow as a diminution in the lung transparency on deep inspiration that is important in the diagnosis of pulmonary tubercle. If we examine a perfectly normal chest with the *x*-ray screen we see that the pulmonary image becomes much brighter with deep inspiration. Now, if the apices in a case of early pulmonary tuberculosis be carefully examined with the *x*-ray screen this brightening up of the pulmonary image does not occur on the affected side. This may be noticed before a definite shadow can be detected. I quite agree with all Dr. Crombie says with regard to the diagnosis of aneurysm and enlarged bronchial glands, but I must admit I cannot quite follow his last sentence. Dr. Crombie says, "I have noticed in several cases, all in men of large chest measurement, but with tuberculous lesions of varying extent, a thickening not aneurysmal I think, which I do not remember having seen referred to in any literature on the subject. Perhaps Dr. Walsham, or some other gentleman of wider experience than I, can give some light on the point." I am not at all sure to what thickening Dr. Crombie refers. If he means a broadening and thickening of the mediastinal shadow seen in some cases of pulmonary tuberculosis, I think this is due to enlargement of the mediastinal glands.—I am, etc.,

Harley Street, W., April 5th. HUGH WALSHAM.

CIRCUMCISION IN ITS OPERATIVE ASPECT.

SIR,—Through illness I have been unable to thank you before for the cuttings sent me of the article in the JOURNAL on the above subject. I beg to point out that the writer on one or two points is quite in error. The interest which has been aroused was not caused only by the deaths of the two children, but these deaths point out that as matters now stand there is the certainty that many others are constantly occurring. Unless the present weak position of the Jewish authorities is altered so that they can prevent unqualified persons from operating, these deaths must frequently occur. When I speak of unqualified men I mean men who have never received any certificate and have had no proper instruction. He also speaks of the new rules of the Initiation Society. These rules are certainly an improvement on the old ones, but as the Society is only in a position to enforce them on those certified by it, those from whom all the trouble arises will still keep on operating and there is no one to prevent them. The writer also states that there is no valid reason for the outcry against this sacrifice of human life. I maintain

that numbers of children die during the year from improperly-performed circumcision due to the fault of the operator. This, I say, is a sacrifice of life and worthy of all efforts to prevent its continuance. Of course, as in every other operation, complications may arise which are due to no fault or want of skill and which are quite unavoidable. The number of medical men who endorse my opinions is very large, and they are most anxious for me not to let the matter drop. I am much afraid that unless you allow the article to be answered it will do more harm than good, so sincerely trust that you will insert this letter. Thanking you for your past courtesy, I am, etc.,

Maida Vale, W., April 3rd. F. S. COHEN.

*** We cannot undertake to find space for further communications on this subject.

THE KNOCK-OUT BLOW ON THE POINT OF THE JAW.

SIR,—At page 782 Dr. Duncanson gives a diagram which in no way supports the complicated theory which it is intended to explain. Moreover, the effect of this chin-blow is susceptible of a much simpler explanation.

I submit that the lower jaw is so rigid as to act as the engineer's chipping-chisel acts. Under the tap of the hammer this chisel chips away the cast-iron and trims up the casting. This may be seen any day in an engineer's shop. The chisel of the mason, under the tap of his mallet, also cuts away the hardest stone. In the same way the rigid lower jaw transfers the whole force of the chin-blow to the glenoid cavities and jars the base of the skull. No further explanation is needed. It is true that the articular ends of the lower jaw are cushioned with three layers of cartilage. Some spring also comes in at the angle of the jawbone. But, were the blow not thus far softened and diffused over the glenoid cavities, it is probable that the base of the skull would always be fractured.

Again, when the impact goes upon the line shown in the diagram at page 782, the effect of the blow is largely diffused into the muscles attached to the coronoid processes. It is only when the impact goes upon the line which joins the point struck with the centres of the glenoid cavities, and when the teeth are not clenched, that the whole force of the impact is transferred to the base of the skull.

The principle here involved is of importance in the explanation of other injuries. If a man be thrown over his horse's head, or jerked out forwards from a dogcart, and he fall on his head, the base of the skull will generally be fractured. This is because the body follows end-on in a spastic condition, and drives in the occipital condyles. If a man fell heavily upon his heels, or upon his buttocks—the body being so straight and rigid that flexure of the spine or limbs cannot let the concussion out through the extensor muscles—the oncoming head is suddenly stopped at the occipital condyles, and the same fracture of the base of the skull may occur. The jar caused by the body alighting upon the heels—the limbs being straight—may be realized by jumping down in this way from a bench. If an aged person slip down the height of a deep step on to the heel of a rigid limb, the head of the femur is knocked off in the same way. It is said that the patient fell down and broke the bone. But that is putting the cart before the horse. The patient fell down because he had broken the neck of his thighbone and could no longer stand up. Fracture of the lower end of the radius is always caused by putting out the arm in a rigid spastic condition in order that the hand may take the impact of a fall. If the arm be sufficiently bent to let the impact out into the spring of the triceps or other extensors the arm may be bruised or sprained, but the lower end of the radius is not fractured. The secret of alighting safely from a big jump is to alight with the joints so flexed that the impact may be absorbed by the gradual yield and spring of the extensor muscles.—I am, etc.,

Brighton, April 3rd. JAMES EDMUNDS.

CONTRACT SURGEONS AND DENTISTS IN THE U.S. ARMY.—The United States Secretary of War has decided that civilian medical practitioners and dentists may be employed as contract surgeons and contract dental surgeons by the Surgeon-General of the army. They will be entitled to the transport and fuel allowances of a first lieutenant, and, when on duty at a post or station where quarters are provided by the Government, they will be entitled to the quarters allowed by the regulations to an assistant surgeon with the rank of first lieutenant. They will not be entitled to commutation of quarters nor to the 10 per cent. increase of pay when serving beyond the territorial limits of the United States.

OBITUARY.

EDWIN CHESSHIRE, F.R.C.S.,

Consulting Surgeon, Birmingham and Midland Eye Hospital.

WE regret to announce the death of Edwin Chesshire, F.R.C.S., formerly of Birmingham, which occurred on March 31st, while he was staying at San Margherita, Liguria, in Italy. Mr. Chesshire was the son of the late Mr. John Chesshire, of The Oaks, Edgbaston, and was born in 1819, so that at the time of his death he was in his 84th year. He received his medical education at King's College and University College Hospital, London, and obtained the diplomas of L.S.A. in 1840, M.R.C.S. in 1841, and F.R.C.S. in 1857. He began practice in Birmingham as an ophthalmic surgeon over sixty years ago, and was held in the highest respect on account of his great professional skill, personal ability, and charm of character. He was Surgeon, and afterwards Consulting Surgeon, to the Birmingham and Midland Eye Hospital for a period of about fifty years. He took very little part in public life, but, mainly through his endeavours, the Eye Hospital was removed from Steelhouse Lane to Temple Row, where it existed for many years before the present hospital in Church Street was built. He retired from active practice a few years ago, and went to live at Pinner, in Middlesex. Mr. Chesshire had four sons and four daughters, all of whom were living at the time of his death; but it is a sad coincidence that one of the sons died at Folkestone on the same day as his father. Another son, Mr. A. E. Chesshire, is honorary surgeon to the Wolverhampton Eye Infirmary.

HENRY ORMEROD, M.R.C.S., L.S.A.,

Westbury-on-Trym.

BY the death of Mr. Henry Ormerod, on March 30th, the village of Westbury-on-Trym, near Bristol, loses an old and highly-respected inhabitant and an able practitioner of medicine. Qualifying in 1856 with the diploma of the Royal College of Surgeons, followed by the L.S.A. in the following year, Mr. Ormerod practised for over forty years in the village in which he died. In addition to being medical adviser to several friendly societies, he was Outdoor Medical Officer and Public Vaccinator to the Barton Regis Union. Mr. Ormerod's illness was of short duration, though he had shown signs of failing health for some time. An attack of pneumonia coupled with heart disease of some standing proved too much for him, in spite of the constant and skilled attention of his medical friends and his son, who for some years had worked with him. Few men have worked harder, year in and year out, than Mr. Ormerod in the profession of medicine. He spared himself in no way in the pursuit of his practice, and seldom allowed himself a holiday, and it is probable that had he taken more leisure his life might have been prolonged for many more years. His chief hobby was photography, in which he excelled. He was 68 years of age, and leaves a widow and three sons.

WE regret to announce the death of Dr. JEAN BAPTISTE VINCENT LABORDE, of Paris, whose name is well known to the profession in connexion with the method of restoring asphyxiated persons by rhythmical tractions of the tongue. This method has been the means of saving the lives of many persons who had been nearly drowned. Dr. Laborde was also prominent as an advocate of temperance. When the Académie de Médecine was invited not long ago to advise as to the dangers arising from the abuse of alcohol and spirituous liqueurs, it was Dr. Laborde who drew up the report. In that report he condemned alcohol *sans phrase* as a poison. Dr. Laborde was 73 years of age.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE APPENDIX TO THE STATISTICAL REPORT OF THE ROYAL NAVY FOR THE YEAR 1901.

IN the BRITISH MEDICAL JOURNAL of March 21st (p. 701) we dealt with the Statistical Report of the Health of the Royal Navy for the Year 1901, and we now have to consider the Appendix to that publication.

Though not shorter perhaps than in former years, this Appendix contains special communications on fewer diseases, but furnishes, nevertheless, excellent testimony to the scientific spirit in which the work of a branch of H.M. Navy,

which has not yet received due consideration from H.M. Government, is now being carried on.

Only three papers are published; one of which, from Staff Surgeon H. F. D. Stephens, is the history of a case of actinomycosis of the jaw, successfully diagnosed and successfully treated by operation. The other two communications both deal with the research work which the naval authorities are now carrying out on the subject of the so-called "Mediterranean fever," and in which all the medical officers of the navy to some extent take a share.

The first of these papers is by Staff Surgeon P. C. Bassett-Smith, who, assisted by Surgeon Shaw, has devoted his special attention at Haslar to finding out how the M. Melitensis passes from a patient's body, on what food media it will grow, what predisposing causes exist in the navy, and what prognostic value can be attached to blood-serum reactions.

As regards some of these points, the observer's conclusions may be best gathered from the prophylactic measures he recommends, but those on serum reactions are summarized. The number of cases he submitted to continuous observation was considerable; and while in one case agglutination in a dilution of as high as 1 in 600 was found as early as the fifth day of apparent illness, the following conclusions were deduced from others. That on sustained high and low agglutination powers of the serum of any patient, favourable and unfavourable prognosis may be respectively founded; that a rapid fall heralds a relapse, and that a continuous rise indicates approaching convalescence. In a disease which is not often fatal in itself, but which often causes profound cachexia, and incapacitates men for months, observations of this sort are of peculiar value. From notes of 214 cases of the disease compiled by different medical officers of the Navy, in nearly all of which the diagnosis had been confirmed by Widal's reaction, Staff Surgeon Bassett-Smith concludes that as regards seasonal incidence there are two wave summits, one from April to June, the other in October and November. In the greater number of cases the patients had not slept on shore, and many of them not left their ships in any way, for three weeks, which is considered to be the longest incubation period. The age at which men are most liable appeared to be between 15 and 25, and officers seem to get the disease more often than is easy to account for. The principal prophylactic measures recommended include disinfection of the urine and faeces of patients; protection of food from dust; prompt treatment of the sore throats which may open a path of infection; and avoidance as far as possible of detention of ships at Malta during the periods of seasonal prevalence.

The paper by Surgeon F. J. A. Dalton is of equal and perhaps greater interest, since, besides laboratory work, it deals largely with local conditions in Malta. In the laboratory, beside much other work, Surgeon Dalton confirmed the high susceptibility of the M. Melitensis to anything approaching acidity or marked alkalinity in the media, and experimented with seven different secretions or excretions of the human body in his endeavour to cultivate the organism from a living patient. He shows that whereas the combined ratio of cases per 1,000 of strength of the military and naval forces at Malta during the year 1900 was 18.1, that of the civil population during the same year was only 3.60. This he accounts for by a supposition of immunity acquired by long exposure to the organism, and commenced for the most part in childhood. He also shows that the disease is as common among the peasants in the interior, many of whom never leave their villages, as it is among the denizens of the faecal-tainted seaside towns. He regards it as almost exclusively an airborne disease with infected dust as the common materies morbi; and believes that, in the absence of special causes of vital depression, a larger "dose" than is usually present in the air is necessary for the disease to acquire any hold upon the system.

INDIAN PAY OF THE R.A.M.C.

In reference to a communication on this subject in the British Medical Journal of March 28th (p. 767), we have now received another letter from a correspondent, who writes: When lately questioned in the House of Commons as to whether the officers of the R.A.M.C. were drawing rates of pay equivalent to those granted at home, under the new Warrant, the Secretary of State for India merely replied that lieutenants and captains drew increased rates of pay from November 24th; but carefully avoided stating whether or not these rates were the equivalent of the new Home scale.

Our correspondent explains that Indian consolidated pay is expressed in the following items:

1. The equivalent of Home pay and allowances at the rate of 15 rupees to the pound (the legal value of the rupee has been permanently fixed at the above rate, and officers can draw their pay in gold at that rate (if they wish).
2. Tentage allowance, at a rate varying from Rs. 50 for a subaltern to Rs. 200 for a colonel (it is expressly laid down in Army Regulations, vol. i, that all officers in India shall draw their allowance, and must therefore keep up the tent equipage of their rank).
3. Exchange compensation allowance at the rate of Rs. 6.4 per cent. of the total items 1 and 2.

These being the facts, he suggests that some member of Parliament might further ask the Secretary of State for India whether the new rate of Indian consolidated pay for the R.A.M.C. has been calculated in reference and relation to, and as the equivalent of the new scale of Home pay and allowances, having regard to the fixed legal basis of fifteen rupees to the sterling pound? Until this matter is equitably adjusted, our correspondent remarks, the R.A.M.C. must remain losers by being handed over to the Government of India for service in that country.

ROYAL ARMY MEDICAL CORPS.

Increase of Pay in India.

In the Military Budget of the Government of India, recently presented to the Council, occurs the following: In consequence of the improvements made in the pay of Royal Army Medical Corps officers of the Home establishment, we have agreed to the grant, at an annual cost of Rs.4,04,547, of the following concessions to officers of that corps serving in India:

1. Increased pay to junior officers below the rank of Major	Rs.2,02,800
2. Charge allowances to senior officers in charge of station hospitals	80,640
3. Specialists' pay to certain officers below the rank of Lieutenant-Colonel	38,880
4. Increased pay to Lieutenant-Colonels	58,428
Add exchange compensation allowance	23,799
	Rs.4,04,547

The increased rates take effect from November 24th, 1902.

DISTRIBUTION OF PRIZES BY LORD SELBORNE AT HASLAR HOSPITAL.

A Correction.

Fleet Surgeon P. W. Bassett-Smith writes: In the report of Lord Selborne's speech at the distribution of prizes at Haslar on March 31st the impression is given that I was responsible for the course of instruction of the surgeons, which had passed off so successfully. The credit of this is not due to me, but to Fleet Surgeon Kirker, who was in charge of the course throughout, with whom I worked, and to whom the credit should be given.

THE INDIAN MEDICAL SERVICE.

A correspondent sends us a long communication on the present prospects and condition of the Indian Medical Service in connexion with the article published on January 31st last in the British Medical Journal. Many of the points he raises were dealt with in a second article published on March 14th, p. 635. He declares that candidates must be ignorant of the present condition of the service, and that the Government are trading upon its former reputation; for the following facts cannot be controverted:

First, there is discontent among the higher as well as the lower ranks, because the prospects of all are nothing like what they once were. In former days the older officers in many appointments could supplement pay by private practice; but this is no longer possible from various circumstances, including the competition of native practitioners; in civil employ private practice is non-existent outside some Presidency towns. The vast majority of civil surgeons do not probably add from private practice Rs.100 per mensem to their pay; and under recent rulings are prevented from making their own contracts with patients beyond a nominal sum. The only appointments now open are charge of gaols and lunatic asylums, which do not yield more than Rs.50 to Rs.100 per meusem.

During periodical fits of economy in the past twenty-five years the medical service has always been the first to suffer and to have the pruning knife rigorously applied. Moreover, extra allowances, such as they are, cease during leave and furlough, being attached to the appointments and not to individuals. As the average age of medical officers on entry is probably about 25, and the higher grades are now so reduced in numbers since 1880, the great majority can hardly look for a higher pension than £500 a year, on compulsory retirement at 55, and having a total of under thirty years' service. Such prospects naturally do not conduce to efficiency.

The contradictory rulings—of which there are no less than three—as to the exact time at which service begins are very anomalous, and really unjust to many seniors. It might naturally be supposed that service should count from the date of commissions; but here are the rulings:

1. For some officers service counts from date of arrival at Netley; but the period between leaving Netley and date of arrival in India does not count.
2. For others, both periods are apparently allowed to count.
3. For others, commissions appear to be dated from time of leaving Netley.

The first, which applies to many seniors, is peculiarly unjust, because they were called upon to do duty in troopships en route to India. Further, the pension rules of 1886 declare "that all leave, whether in or out of India, shall count as service for pension." Surely medical officers should count from date of arrival at Netley.

The following reform is urgently required: To remove the present block in promotion, and to compensate somewhat seniors for loss so caused medical officers should be granted a proportionate increase of pension after 25 years, so as to receive the maximum of £700 a year after 28 instead of 30 years' service; the latter many cannot attain on account of compulsory retirement through age. This would bring the medical more into line with other branches of the Indian Army, who retire after 32 years' service, but who enter at an age 5 to 7 years the junior of medical officers.

MEDICAL OFFICERS AUXILIARY FORCES.

A. M. S., in a long letter, complains that medical officers of the Army Medical Reserve do not, as regards temporary employment with troops, enjoy that prior claim to which they are entitled by para. 54 of the

Medical Regulations, but are set aside by officers R.A.M.C. (Militia) and even by civil practitioners. He ridicules the idea, set forth in a contemporary, that the officers R.A.M.C. (M.) have been promoted and preferred on account of "social and professional standing." If all favours are to go to these officers, why trouble to enter the R.A.M.C. itself, with its competitions, examinations, etc.? It has been suggested that these officers should do much of the line work of the army, thereby forming a suitable reserve for the R.A.M.C.; but how could a reserve, so employed, be a reserve at all?

SCOTTISH VOLUNTEER MEDICAL OFFICERS' ASSOCIATION.

THE Scottish Volunteer Medical Officers' Association gave a complimentary dinner in the Windsor Hotel, Glasgow, on Friday last to Lieutenant-Colonel Babtie, V.C., C.M.G. (Royal Army Medical Corps), Assistant Director-General of the Army Medical Services. There was a large attendance of the members and friends, covers being laid for 110. Surgeon-Lieutenant-Colonel Napier, V.D., the President of the Association, occupied the chair, and was supported by Colonel Babtie, the guest of the evening, Sir Hector C. Cameron, Sir David Richmond (a member of the recent Medical Commission), Professor Stockman, Major Moffat, R.A.M.C., Captain C. C. Fleming, D.S.O., R.A.M.C., Surgeon-Lieutenant-Colonel Frew, Brigade-Surgeon-Lieutenant-Colonel Johnstone Macfie, Brigade-Surgeon-Lieutenant-Colonel Cowie, Surgeon-Lieutenant-Colonel John Dunlop, Professor Murdoch Cameron, Professor Middleton, Professor R. S. Thomson, and others. The croupiers were Major Q. Chalmers, H.L.I. Brigade Bearer Company, Vice-President; Surgeon-Major A. K. Chalmers, 1st Lanark Royal Garrison Artillery, Treasurer; and Captain R. T. Halliday, R.A.M.C. (Volunteers), Secretary. "The Health and Prosperity of Colonel Babtie" was proposed from the chair, and received with enthusiasm. In replying, Colonel Babtie referred to the work of the R.A.M.C. in South Africa, and to the assistance which the Association might render in the work of organization, so that a reserve might be in readiness to draw upon in time of need. An excellent programme of music followed the toast list, a number of officers contributing to a most enjoyable evening's entertainment.

VOLUNTEER MEDICAL ASSOCIATION.

THE annual dinner of the Yeomanry and Volunteer medical officers will take place at the Hotel Cecil, London, on April 21st next, at 7.30 p.m. Major-General Sir A. E. Turner, K.C.B., R.A., who has consented to take the chair, will be supported by Surgeon-General Sir William Taylor, K.C.B., Director-General A.M.S., and other distinguished guests. Tickets (10s. 6d. each) may be had from Lieutenant E. C. Montgomery-Smith, 36, Abbey Road, London, N.W.

ITALIAN ARMY MEDICAL ORGANIZATION IN PEACE AND WAR.*

By Lieutenant-Colonel SWABEY, R.A.M.C.

PART I.—PEACE.

THE Minister of War is responsible for all matters connected with the army. As regards the medical organization, he is assisted by a military medical inspectorate which, in addition to carrying out such periodical inspections of hospitals, etc., as the Minister of War may direct, acts as a consultative board of experts in all medical service and sanitary matters connected with the army. The inspectorate is composed as follows:—1 surgeon-major-general chief inspector, 2 surgeon-major-general inspectors, 1 colonel inspector, 1 secretary, 1 major, 3 captains, 1 inspecting pharmaceutical chemist, 1 pharmaceutical chemist, 6 accountants (accountants corps) not medical officers. The peace strength of the medical service is 584 officers, 2,811 other ranks. The latter divided into 12 medical companies.

The Italian army consists of 12 army corps, in each of which there is a medical direction composed of—1 surgeon colonel director, 1 captain, 1 accountant officer which is responsible for all details connected with the army corps (medical service). One of the above-mentioned medical companies forms part of each army corps. The 12 army corps have at their disposal 20 principal military hospitals. The strength of the staff in these principal military hospitals varies. The largest is at Rome, 9th Army Corps. The staff is as follows: 1 surgeon-lieutenant-colonel-director, 4 majors, 5 captains, 6 lieutenants or sublieutenants (medical officers); 1 major, 1 captain, 2 lieutenants (accountant corps); 1 head dispenser, 5 dispensers; 6 clerks, 1 storekeeper (civilians); 11 under officers (non-commissioned officers not below sergeant), 200 orderlies, bearers, dressers, etc. In addition there are 16 nursing sisters (*religieuses*), and the cooking is superintended by them. From what I can make out, these sisters do little nursing and no dressing. The average number of sick in this hospital is about 500; when I visited the hospital on October 27th there were only 372, and 109 venereal. In addition to the above-named hospitals there are some 48 auxiliary hospital infirmaries, convalescent depôts, etc., in charge of captains or lieutenants of the medical service.

On the peace establishment from 2 to 3 medical officers are attached to each regiment of the line and *Bersaglieri*. Each regiment has 3 battalions, but their ranks are frequently much depleted, especially between the months of October and April, when the reservists have gone, and the general batch of recruits have not joined. There are 2 medical officers to each regiment of cavalry or artillery (6 batteries) and engineers. Alpine troops have a captain attached to regimental headquarters and a subaltern to each battalion. In the mounted artillery (15 batteries) there are 1 captain and 3 subalterns. Each regiment has its own infirmary established in barracks for the treatment of slight cases not requiring removal to hospital. These infirmaries are under the regimental medical authorities. The orderlies are selected from the ranks.

Recruiting.—The medical corps is recruited by an annual draft selected as far as possible from those connected with the medical profession, and also priests. Liability to serve is also universal between the ages of 20 and 39, but students can obtain permission to postpone joining till after their final examination. Service is for 3 years with the colours, 5 years' permanent furlough, 4 years in the mobile militia, and 7 in the territorial militia—total 19. Recruits who have passed their medical examinations can join as 1-year volunteers on payment of £48. Recruits, including 1-year volunteers, who are qualified medical men, are sent after joining to go through a course of instruction either in a military hospital or the Army Medical School at Florence. If they succeed in passing the examination at the end of the course they become complementary officers, and serve as officers on recall to the service. Officers of the Regular Medical Service are recruited by competition from among the complementary officers who have passed the final examination at the Florence School.

PART II.—WAR.

In war time the control of all medical arrangements is carried out by means of (*a*) the office of the Surgeon-General attached to the General Intendance of the Army and the Army Medical Direction of Army Corps and Divisions; also, the representatives of ambulance societies—that is, the Italian Red Cross and Knights of Malta. The executive duties are carried out by (*a*) the medical *personnel* and *matériel* attached to corps; (*b*) medical establishments of the 1st line—namely, ambulance sections, field hospitals, temporary improvised hospitals; (*c*) establishments of the second line, distributed along the lines of communication—namely, field hospitals, hospitals of the Italian Red Cross and Knights of Malta Societies. Civil and military hospitals existing within the zone of operations; locally improvized hospitals, depôts of medical stores, sick convoys, ambulance and hospital trains, assistance posts which are posts established at railway stations and along line of communications, to attend to sick and wounded unable to proceed on a journey. The Army Medical Direction forms part of and is immediately controlled by the Army Intendance, as are also the officers delegated by the Red Cross Society and the representatives of the Knights of Malta. These two societies have a free hand as regards their own internal economy, but in other matters are controlled by the Army Intendance and Army Medical Direction. The Army Corps Medical Direction forms part of the Army Corps Headquarters Staff, and is under the Chief of the Army Corps Staff. The Divisional Medical Office is under the Divisional Chief of the Staff.

Mobilization.—The total available strength on mobilization for war would be about 3,000 officers and 20,000 to 25,000 other ranks. On mobilization being ordered, the provisions for the war staffs and various units are carried out by the directors of the principal hospitals at the headquarters of the several army corps. The medical companies being strengthened by the men recalled to the colours, who report themselves at their own territorial principal hospitals, where they are clothed, equipped, and drafted to the medical units. The depôts of the principal hospitals contain ambulance wagons and the special material required for the equipment of field and mountain hospitals. Other carriages are supplied by the artillery train, together with the horses and mules. In war the establishments of medical officers attached to corps is increased to 7 per regiment of infantry or *Bersaglieri*—namely: 2 per battalion and 1 for regimental headquarters; 3 per cavalry regiment; 1 per brigade of artillery or engineers; 1 per battery of mountain artillery; in every infantry regiment 2 men per company are trained as stretcher-bearers.

Ambulance Sections.—Sectione di Sanità form a link between the medical staff of units and the field hospitals. There are three types of ambulance section—namely, infantry, mountain, and cavalry. An infantry ambulance section consists of: Medical *personnel*—7 officers (that is, 6 medical—2 captains and 4 lieutenants); 1 accountant; 1 chaplain taken from the ranks of medical corps; 229 other ranks, including 184 stretcher bearers, the others being orderlies, dressers, etc.; 2 officers' horses. Section of artillery train: 1 officer; 25 other ranks; 30 horses; 2 four-wheeled light wagons fitted as travelling dispensaries for carrying medical stores, or two similar light-wheeled carts; 3 light carts (battalion carts); 8 ambulance wagons, each wagon accommodating 6 wounded sitting, or 4 lying on stretchers. Each section carries 92 stretchers—that is, 64 on the ambulances, 24 on battalion carts, and 4 on the travelling dispensaries.

Field Hospitals.—There is no fixed allotment of field hospitals to an army corps or division. The number varies with the duties assigned to these bodies of troops, the principles being to furnish hospitals, to supply beds in proportion of 8 per cent. of the total number of troops in the first line. The following patterns of field hospitals are in use: 8 officers (7 medical and 1 accountant); 52 under-officers and bearers; 2 civilian chaplains and apothecary; detachment of civilian train; 11 civilian dressers (draught); 9 four wheeled carriages. The directors of a field hospital receive orders from the army medical direction, unless assigned to any body of troops, when they are under the senior medical officer of the corps to which they are attached. Advanced depôts and central depôts of medical stores are joined in each army. They draw their stores from the reserve depôts, and in turn issue them to medical units and corps.

Red Cross Society.—This society is supported by subscription and is closely affiliated with the military medical service. Its *personnel* is recruited from among persons exempt from military service or from the territorial militia. Members serving in war time are exempt from any other form of military service. In war time the society is under the control of the Army Intendance, and is represented by a Commissioner attached to that department. On technical matters the Commissioner corresponds direct with the Army Medical Direction. The objects of the society are: (1) To co-operate with the medical service by the supply of war hospitals; (2) to assist in the transport of the sick and wounded by means of hospital trains; (3) to establish assistance posts for troops travelling by rail; (4) to unite under its control any ambulance societies (foreign) except the Knights of Malta; (5) to collect and distribute all moneys and objects collected or subscribed and to regulate their disposal under the direction of the Intendance; (6) to organize means for informing the families of sick and wounded of their condition. The members of the society are formed into 12 groups corresponding to the 12 Army Corps. The society possesses following material: 8 war hospitals, 100 beds; 13 war hospitals, 50 beds; 27 war hospitals, 50 beds, carriage on pack animals; 32 mountain ambulances; 14 fittings for hospital trains with 200 stretcher beds; 1 fitting for hospital trains with 100 stretcher beds; 2 river ambulances; 2 hospital ships; 41 fittings with assistance posts. For service with the above, the following staff is at the disposal of the President of the Society. Mobile establishment: Directive staff, 7; medical staff, 532; dispensary staff, 93; administrative, 150; accountants, 107; chaplains, 71. directive staff, 14; medical staff, 125; dispensary, 17; administrative, 2; accountants, 27; chaplains, 14.

Association of Knights of Malta.—A semi-religious society. Its object is to provide medical and religious aid to sick and wounded by provision and equipment of hospitals, etc. The Association can equip 3 hospital trains—(1) 100 bed hospitals (huts); (2) 50 bed hospitals for transport on pack animals; for a hospital from 80 to 100 beds, 40; a hospital train, 49. The Association is in addition in possession of medical stores, valued at £1,740. A representative of the Association is attached to the Army Intendance on mobilization.

Lines of Communication.—In case of war, practically all the medical resources of the country are placed at the disposal of the Intendance. There are no fixed establishments, arrangements as required being carried out by the Army Medical Director. The transport of the sick

* Read at a meeting of the Malta and Mediterranean Branch.

and wounded from the front is carried out by means of river ambulances, ambulance trains, hospital trains, convoys. River ambulances are fitted out by the Red Cross Society. The following is the regulation detail for a river ambulance: One vessel for officers, pharmacy, and accountant's office; 1 vessel for hospital for officers; 7 vessels for rank and file; 1 vessel for kitchen. This will accommodate 214 invalids, including 18 officers. The ambulance trains consist of goods wagons fitted with apparatus for suspending stretchers. A train of regulation pattern is composed of: One mixed carriage for officers, 35 goods wagons for wounded, 1 baggage van, 1 guard van for medical stores, etc. The hospital trains are fitted out by the Red Cross Society and Knights of Malta, for transport of wounded from the zone of military operations to reserve hospitals at a distance from the front. The rolling stock is supplied by the railway companies. A regulation hospital train consists of: One baggage van, 1 corridor first-class carriage for officers, 1 corridor fitted as a pharmacy and store, 1 corridor as an office and for sick and wounded, 1 carriage fitted as kitchen, 1 carriage for orderlies not on duty, 1 guard's van fitted for linen, etc., 1 baggage van for baggage of wounded, 1 baggage van for mortuary or infectious cases; in addition, sufficient carriages to convey 200 wounded or sick.

By permission of the War Minister I was enabled to visit the principal military hospital of the 9th Army Corps at Rome. My visit was unfortunately a very hurried one, and I would have much liked to repeat it. The hospital stands in its own grounds, surrounded entirely by a very high wall. It is situated about half a mile behind the Coliseum and consists of a series of a double-storied pavilions, on gently rising ground. The pavilions being placed one behind the other at intervals of about twenty paces. There are no houses in the immediate vicinity. On the right rear of the main building are isolation blocks for scarlet fever, measles and typhoid, and small-pox. The separate buildings for the Army Hospital Corps and the Sisters of Charity attached to the hospital are on the left flank of the main building. The first pavilion which is situated at the base hospital is itself on rising ground and contains the offices of the Administration and Direction, and a very large dispensary on the ground floor on the right and a fine kitchen on the left. I may mention that the cooked food is taken by trollies running on light rails up the hill in very large hot cases direct to the wards. On the upper story of this pavilion is the officers' hospital. Each officer has a nice, well ventilated, and bright room to himself. Here also is the bacteriological laboratory and the Roentgen-ray apparatus is found in a separate room. The blocks behind are divided into (1) surgical, (2) medical, (3) venereal division. I was surprised to find from my Italian colleagues that there was no equivalent to our Contagious Diseases Act in Italy, and from the figures I mentioned in the first part of the paper it will be seen that venereal disease is somewhat prevalent, at all events in Rome. One thing that struck me particularly was the absence of wood about the hospital and the general tendency to have nothing that could catch dirt; no cocoa-nut or other mats. Everything portable was of iron. The patients' belongings were placed on a portable iron stand near his bed with three divisions. His hospital clothes were in an iron rack at the foot of the bed attached to the upper part of the legs. There was apparently no dressing of any importance done in the wards. The patients being taken into well lighted rooms, *salle di medication*, for the purpose of being dressed. I noticed all the surgeons wore gauntlets in dressing cases. Disinfection is carried out by moist heat in a special room.

The operating theatre was large and well ventilated with anaesthetic and recovery rooms. In this block of buildings was also a large distillator. I was shown the ambulance wagon, which is very light and handy, weighing 1,750 kilos. No sick or wounded are on the tailboard or beside the driver. It can hold three on either side, sitting on two comfortable curved back seats facing each other when it is desired to carry stretcher cases (four). These seats are reversed and stretchers run in over them on grooves, and two more are slung above these. I noticed also a steam wagon disinfector which accompanies the field hospital on service. It was not till after I left that I suddenly remembered that the sanitary arrangements had not been obtruded on my notice, but I gather that they are somewhat antiquated, the latrines being only flushed twice daily.

MEDICO-LEGAL AND MEDICO-ETHICAL.

MEDICAL MEN AND CORONERS.

At the Kensington Coroner's Court on Tuesday, March 24th, Mr. S. Ingleby Oddie held an inquest on the body of the newly-born female child of Harry Roe, a canvasser, of 6, Adair Road, North Kensington. According to a report of the case which appears in the *Kensington News* of March 27th, the father said that the child was prematurely born early on Monday morning. They had been worried by the three other children having whooping cough, and one died on Monday. On Sunday night his wife complained of pain, and went with a neighbour to Dr. McKinnel, who told her to go home and go to bed and rest. Witness was sitting up with the other children, and about one o'clock his wife told him the baby was born. He called in Mrs. Pretty, a neighbour, and went for the doctor but could not get one. In the meantime Mrs. Pretty had been looking after the sick children, and when a doctor came later in the day the baby was dead. There was no one to do anything for his wife. The child was not heard to cry.

Harriet Pretty, a neighbour, said she went to Dr. McKinnel with the mother. She was called up when the child was born. It was under the clothes and witness was too nervous to do anything.

The Coroner remarked that if the witness had had a little presence of mind to attend to the child it might have been living now.

Dr. E. T. Ensor, of Golborne Road, said he was called, but did not go, as the father could not pay his fee. His experience in many cases was that unless doctors had their fees in advance, they would not get them at all. If he had been told it was a dangerous case it might have been different, but the people were strangers, and not patients of his.

The jury asked the father a number of questions, and in reply he said that as his wife had seen Dr. McKinnel the night before, he went to him, and he said he would not come, as he expected to be called out. Witness went then to Dr. Coury, who was attending the children, and he was just off to another confinement. After going to Dr. Ensor, he went back to Dr. McKinnel, who opened the bedroom window and said he would not come. Witness begged him to come, but he only threw a pair of scissors at witness, and then closed the window quickly.

Dr. Ensor said the death was due to want of attention at birth. He attended later in the day on a parish order.

The jury made some strong remarks as to the conduct of Dr. McKinnel in not attending after he had seen the woman the night before.

The Coroner said he could not allow the jury to censure the doctor without allowing him him an opportunity of giving an explanation. If they wished for the attendance of Dr. McKinnel he would adjourn the inquiry.

Mrs. Pretty, recalled, in reply to the foreman, said that she went to Dr. McKinnel on Sunday night, a fee was not asked for, and one was not offered.

The Foreman, after consultation with the other jurors, said they did not wish to adjourn, but would like their opinion as to Dr. McKinnel's action to be represented to him.

The Coroner promised to do this, and the jury then returned a verdict of accidental death from want of attention at birth.

Dr. McKinnel's Explanation.

In the *Kensington News* of April 3rd there appeared the following letter relative to the inquest above reported:

Sir,—In your issue of Friday, the 27th March, is contained a report of an inquest held at the Kensington Coroner's Court upon the body of infant female child, the daughter of parents named Roe, the report in question being headed in large type, "Doctors and Confinements.—Medical Man's Conduct Questioned."

By the evidence of the father of the child, and the remarks and comments reported as proceeding from members of the jury, the conduct of Dr. McKinnel in not attending the case is called into question, and his professional reputation is sought to be impugned.

We write on Dr. McKinnel's behalf in our capacity as solicitors to the Medical Defence Union, of which association Dr. McKinnel is a member, with the view of correcting the mis statements of fact which were given in evidence, and for the purpose of placing before the public the true circumstances affecting the matter, which are as follows:

About 12.45 a.m. on Monday, the 23rd March, a call was made at Dr. McKinnel's house by three women, all of whom were unknown to him, but one of whom we gather to have been the mother of the child upon whom the inquest in question was held. Dr. McKinnel was at the time waiting up momentarily expecting to be called to a confinement case which he had been retained to attend.

One of the women informed him that she lived in Adair Road, North Kensington; that she had been ill for two days, and feared that she was about to miscarry. Dr McKinnel explained to her that he was unable to attend her owing to his engagements; that it was extremely unwise of her to be about in the condition which she represented herself to be, and that she had better go home to bed and arrange for another medical man to attend her. They then left without making any demur.

Within a short time Dr. McKinnel was called out to the confinement case, returning to his house about 2 a.m., and then retired to bed.

In consequence of a heavy wind blowing at the time one of his bedroom windows rattled, and to stop this he placed a small pair of nail scissors between the sashes. Shortly after Dr. McKinnel retired to bed the night bell rang. He went to the window, raised the sash, and the scissors thereby becoming released fell out into the street. A man was outside, and Dr. McKinnel inquired of him who he was and what he wanted. The man stated that he lived in Adair Road, that Dr McKinnel had been engaged to attend his wife, and that she had called upon him a short time previously. The correctness of this Dr. McKinnel denied, stating that he had informed the woman and those by whom she was accompanied that he could not attend her, and had advised her to go home and arrange for another medical man to attend her. The man pressed Dr. McKinnel to come, which he refused to do, and on his becoming insolent and abusive Dr. McKinnel closed the window and went back to bed.

No question in relation to a fee for attending occurred at any time in connexion with the matter.

Nothing further was heard by Dr. McKinnel in reference to the incident until he read the report of the inquest, which is contained in the issue of the *Kensington News*, to which we have referred.

From the above narrative of the facts it will be seen that the statement made by the husband that he called on two occasions at Dr. McKinnel's house and asked him to come, is absolutely without any foundation in fact, and that the incident connected with the scissors has been wilfully distorted, the true facts being that the scissors accidentally fell on becoming released from the pressure of the sashes between which they were placed, and the man was seen by Dr. McKinnel to pick them up and place them in his pocket.

We observe that under the direction of the coroner the jury refrained from passing any direct censure upon Dr. McKinnel in his absence, but that notwithstanding this the foreman, after consultation with the other jurors, prevailed upon the coroner to promise to convey to Dr. McKinnel a representation as to their opinion upon his action, from which it is to be inferred that the uncorroborated evidence of the father was accepted by them in its entirety.

It is only equitable in Dr. McKinnel's interest that the true facts as stated above should be given publicity to in order that any sinister impression which may have been conveyed to the public by the report in question may be thereby corrected. We will accordingly ask you to be good enough to publish this letter in this week's issue of your paper.

We refrain from commenting upon the fact of the conduct of a professional man being called into question in his absence, and without opportunity being afforded to him of justifying that which is imputed to him, and which appears to us to be directly in conflict with the most elementary principles of British justice.—Yours, etc.,

HEMPSONS,
Solicitors to the Medical Defence Union.

DEATH UNDER CHLOROFORM.

Action against a Medical Man.

Evidence was laid before the Lord Justice Clerk and a jury, on March 31st and April 1st, in an action by Mrs. Gillies, Stewarton, Ayrshire, against John Cunningham, M.B., C.M., High-street, Stewarton. The issue was whether in July last the pursuer's husband had lost his life while under the influence of chloroform administered by the defender, through the fault of the defender, to the loss, injury, and damage of the pursuer, and the damages claimed were £1000. The deceased had met with an

accident to his left arm in the end of April, 1902, in connection with which pain and stiffness of the arm resulted, and this it was proposed to remedy by breaking down the adhesions under chloroform. Dr. Cunningham, the usual medical adviser of the family, undertook to perform the operation, but unfortunately the patient died during the administration of the chloroform. Necropsy showed that the patient had died of syncope. The case for the pursuer was that the doctor had not taken proper precautions in the preparation of the patient for operation, and had not skilfully administered the anaesthetic or been supplied at the time with the usual restoratives. For the defence several prominent medical witnesses were called, who spoke to the occasional sudden and unexpected death of patients under chloroform by heart failure and the difficulty of explaining such deaths. The jury returned a unanimous verdict for the defender.

PROSECUTION UNDER THE INFECTIOUS DISEASES NOTIFICATION ACT.

ON April 7th, at the North London Police Court, Dr. T. Mowbray Henderson was prosecuted by the Hackney Borough Council for failing to notify a case of typhoid fever as required by the Infectious Diseases Notification Act. The defence was that the case had been notified as soon as the defendant decided that it was one of typhoid fever; the magistrate after hearing the evidence expressed the opinion that the delay had been unwarrantable, and fined the defendant the full penalty and 45s. cost. Dr. Henderson was defended by the Medical Defence Union. We are informed that Dr. Henderson is a homoeopath.

THE CORONER'S COURT.

THE Resident Medical Officer of a provincial infirmary writes to inform us that he was recently summoned to give evidence at an inquest, and that the coroner has refused to pay him the usual fee of a guinea, but offers him the common witness fee of two shillings.

*** The facts of the case are as follows, as reported by our correspondent: The deceased person was brought into the infirmary dead. The coroner's officer called and said he was directed by the coroner not to summon any medical witness, but only the person who laid out the body. These duties were, as it happened, performed by our correspondent, who received the summons and attended the inquest. The coroner refused to take him as a medical witness and refused to pay the usual fee as such, but afterwards tendered him the common witness fee, which was not accepted. Under the special circumstances of the case, we do not think that the medical witness fee is recoverable by law, as our correspondent was not summoned to give medical evidence, but he may, if he thinks, lay the facts before the Lord Chancellor or take counsel's opinion on the matter.

PARTNERSHIP ACCOUNTS.

D. E. F.—The doorplate and lamp, if a professional one, should be included in the expenses, if not excluded by agreement. With regard to the electric light in consulting room, if A.'s partner charges the firm with the expense of the lighting in his consulting room, then A.'s lighting would be included in the expenses of the firm, but not otherwise.

A. B. and C. are in partnership. A. sells part of his share to D. with the consent of the firm, and receives the whole of the purchase money. Should A. or the firm pay A.'s legal expenses?

*** As the whole of the price is received by A., he also ought to pay all the legal expenses.

FAMILY FEES.

FEES writes that his usual visiting fee at a certain house is 7s. 6d. He has recently been attending there three young adults with scarlet fever. We agree that a charge of 15s. a visit to include the three would be reasonable.

MEDICAL TESTIMONIALS IN TRADE ADVERTISEMENTS.

EDITORS.—We quite agree with our correspondent, and thank him for drawing our attention to these cases. They will be remitted to the Ethical Committee to deal with in accordance with its resolution on the subject which has been approved by the Council (see SUPPLEMENT, February 7th, 1903, p. xi).

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF EDINBURGH.

THE following candidates have passed the First Professional Examination in the subjects undernoted:

Chemistry.—G. P. Adshead, J. L. Annan, J. C. Ashton, A. C. Barker, C. B. Baxter, A. E. Bennee, J. P. Berry, F. H. Bradley, G. Britto, F. V. N. Bruce, P. D. Cameron, R. A. Campbell, H. G. Carter, J. M. Christie, R. D. Clayton, W. G. Cobb, W. D. Coghill, C. H. Corbett, H. C. D. Cross, G. H. Dart, Margaret D. Davidson, T. Derrick, T. Dick, T. H. Dickson, A. E. Drynan, J. C. Drysdale, G. L. Duncan, R. Edwards, P. A. Euvrard, W. G. Evans, C. J. Faill, Josephine L. D. Fairfield, S. B. Faulkner, E. M. Figaro, W. Fleming, J. Fraser, T. Fraser, J. Gilmour, R. M. Glover, I. M. Grant, G. R. Gray, A. R. Gunn, D. J. Guthrie, D. K. Henderson, G. Henderson, A. F. Hewat, A. M. Hewat, M. Heyns, S. W. Hogg, W. P. Holden, St. G. L. M. Homan, J. H. Horne, L. Hughes, H. B. Hunter, M.A.; S. Jackson, R. H. Jaimeson, Blanche M. Z. Johnston, T. A. Johnston, D. Johnstone, N. W. Kidston, J. H. Lechler, C. W. L. Luthgen, T. Lyon, L. G. M'Cune, W. S. McCune, A. E. M'Iver, J. L. Mackay, R. E. M'Laren, M. Maclean, J. A. MacLeod, Ada J. Macmillan, R. J. A. Macmillan, J. B. M'Morland, E. P. Maitland, Eleanor A. Maitland, S. E. Malherbe, Jamesina J. Marr, L. R. H. P. Marshall, R. E. Marwick, R. P. Mathers, A. H. M. Maxwell, C. J. Van der Merwe, Margaret M. Miller, V. P. Mondon, A. G. Murchison, J. E. Murray, J. H. Nelson, F. H. Nixey, Hilda M. Northcroft, A. T. Paterson, C. F. Pattie, A. A. W. Petrie, S. Parroux, W. J. Porteous, D. H. Rai, J. Reidy, Barbara Richardson, A. N. Robertson, D. Robertson, G. Robertson, J. M. Ross, P. Roytowski, F. L. Scott, H. C. Simpson, W. J. Simpson, J. T. Simson, A. F. H. Smart, F. F. S. Smith, Dorothy W. Stevenson, W. Stevenson, C. H. Tewsley, L. H. F. Thatcher, C. A. Thelander, C. P. Theron, Alice M. Thompson, D. Thomson, L. R. Thomson, W. Thomson, A. L. Thornley, W. A. Todd, Lydia K. Towers, R. D. R. Troup, V. F. Usher, A. M. Vlok, Helen M. Wakefield, A. S. Walker, R. N. Wallace, J. C. B. Williams, D. J. Williamson, J. Wilson, J. L. M. Wood, A. F. Wright, W. A. Wyllie.

The following candidates have passed the third professional examination for the degrees of M.B., Ch.B.:

Completed the Examination.—R. G. W. Adams, E. A. Aylward, J. W. H. Babington, F. Baillie, R. B. Barnetson, W. J. Basson, B. Baty, W. B. Beattie, D. Bell, L. H. J. Bell, A. R. Berrie, J. M. Beyers, A. L. Biggart, D. W. Boswell, F. T. Bowerbank, D. Brown, R. Buchanan, R. B. Calwell, T. E. Carlyle, Mildred Cathels, J. W. Cathels, D. M. C. Church, G. A. Clark, M.A.; H. S. Coghill, A. G. Cook, A. G. Coullie (with distinction), T. E. Coulson, A. B. Cox, J. G. Craig, G. Cunningham, M.A.; R. Donaldson, G. T. Drummond, T. H. Easton, C. G. Edmonston, E. D. Elliot, N. C. Fisher, G. H. L. Fitzwilliams, W. W. Forsyth, L. Fownie (with distinction), A. N. Fraser, W. J. Fraser, N. J. H. Gavin, A. C. Geddes, H. M. Gillespie, J. M. Graham, O. C. Greenidge, N. W. Greer, J. Grieve, E. J. Griffiths, P. A. Harry, E. Henderson, M.A.; Isobel Hill, T. J. H. Hofmeyer, A. M. Hogg, G. S. Husband, K. A. Inniss, A. Jackson, Annie Jackson, J. Jardine, J. Kirk, G. F. S. Landon, A. J. Lewis, S. M. Livesay, J. Lochhead, M.A. (with distinction), J. B. Lockerbie, A. H. C. MacArthur, A. D. M'Cullum (with distinction), W. M'Conachy, J. P. M'Gowan, M.A. (with distinction), H. R. MacIntyre, R. J. Mackessack, M.A.; E. M. Macmillan, A. MacRae, D. P. Marais, G. W. Mathewson, H. P. Milligan, E. A. Mills, M.A.; L. S. Milne, T. B. Mouat, W. M. Munby (with distinction), A. E. Nalborough, O. Archibald, C. D. O'Niel, R. G. S. Orbill, G. Ormrod, A. Pampeloune, W. J. Patterson, B. Pickering, Florence M. S. Price, D. S. R. C. Rae, M.A.; H. S. Reid, Margaret H. Robertson, Sheila M'Ross, C. S. Ryles, J. Sabbley, J. G. B. Shand, J. J. Shepherd, M.A.; W. H. Simpson, T. R. Sinton, G. M. C. Smith, W. A. W. Smith, P. Steele, T. H. Stewart, M.A.; H. A. Stewart, H. J. Stewart, A. C. Strain (with distinction), K. A. M. Stewart, G. H. S. Taylor, B.A.; Annie F. Theobalds, G. H. Usher, F. L. de Verteuil, R. W. L. Wallace, R. H. Watt, W. C. P. White, W. F. G. Whiteley, D. P. D. Wilkie, F. A. Wille, W. B. Wishart, A. C. T. Woodward, T. Wright, Margaret C. W. Young, M.A.

In Pathology.—W. S. Murdoch-Brown, C. A. Lawrence, C. S. McLintock, A. Malseed, R. S. Todd, M.A., D. C. Welsh.

UNIVERSITY OF GLASGOW.

THE following have passed the First Professional Examination for the degrees of Bachelor of Medicine (M.B.), and Bachelor of Surgery (Ch.B.), in the subjects indicated (B., Botany; Z., Zoology; P., Physics; C., Chemistry):

J. A. Aitken (C.), J. M. Anderson (P.), J. Anderson, M.A. (B., Z.), T. McC. Anderson (Z.), A. H. Arnott (C.), D. Arthur (B., Z.), J. Atkinson (Z.), E. Barnes (Z.), H. Bertram (Z., C.), J. H. Bisset (B., Z., P., C.), J. N. Brown, M.A. (Z., C.), M. Buchanan (P.), J. Cairncross (B., P.), J. Cairns (Z., C.), T. H. Campbell (Z., C.), M. I. T. Cassidy (Z., C.), J. S. Clark (B.), A. B. Cluckie (P.), A. J. Couper (B., P.), J. R. Craig (Z.), C. A. Crichlow (Z., C.), A. Dick (B.), J. A. Doctor (Z., P.), R. Donald (B.), J. R. Drever, M.A. (Z.), J. Dunbar (P.), D. Duncan (Z., C.), A. Dunsmuir (B., P.), L. J. Dunstone (Z., C.), W. M. Elliott (Z., C.), A. Fairley (Z.), S. N. Galbraith (Z., C.), B. Gale (Z.), A. T. A. Gourlay (Z.), H. M. Granger (P.), J. V. Grant (Z.), P. F. Grant (P.), T. P. Grant (Z., C.), W. C. Gunn (Z.), J. Hammond (C.), T. Harkin (B., P.), J. M. Henderson (Z., C.), A. J. Hutton (Z., C.), P. J. Kelly (P., C.), G. Ligertwood (B., Z.), D. C. M'Ardle (Z.), E. B. Macaulay (P.), A. M'Call (B., P.), T. M'Crirrick, M.A. (B., Z.), A. T. I. Macdonald (Z., C.), J. M'Donald (Z., P.), J. R. M'Gilvray (B., P.), R. M'Inroy (B.), J. B. Mackay (Z.), W. A. M'Kellar (C.), T. C. Mackenzie (C.), W. F. Mackenzie (B., P.), A. D. M'Lachlan (B., P.), A. N. R. M'Neill (Z., C.), D. Manson (Z., C.), Isa Carswell Marshall (Z., C.), R. Marshall (P., C.), J. H. Martin (Z., C.), D. R. Mathieson (C.), H. Matthews (B., P.), J. C. Middleton (Z., C.), J. W. Miller (Z., P.), R. S. Miller (B., C.), J. R. Mitchell (B., P.), H. W. Moir (P. C.), H. Morton (Z., P.), R. C. Muir (Z., C.), A. A. Murison (B.), P. O'Brien (Z., C.), J. Oswald (C.), I. Papiermeister (Z., C.), D. Renton (B., Z.), M. M. Rodger (C.), W. J. Rutherfurd (P.), A. Scott (Z., C.), R. E. Selby (Z.), A. C. Sharp (B., Z., P., C.), J. Sharp (P.), A. H. Sinclair (P.), J. Steedman (Z.), J. A. Stenhouse (Z., P.), C. K. Stevenson (Z., C.), W. Stevenson (B.), A. Stewart (C.), J. T. W. Stewart (C.), M. J. Stewart (Z., C.), J. A. Struthers (Z.), J. M. Taylor (Z., C.), H. J. Thomson (Z., C.), R. Todd (C.), M. Turnbull (B.), H. Watson (P., C.), W. B. Watson (B., Z., P., C.), T. C. D. Watt (B., P.), J. Weir (Z., C.), J. K. Welsh (C.), H. White (B., P.), D. J. Williams (B.), F. R. Wilson (Z., C.), H. M. Wilson (Z.), W. M. T. Wilson (B., P.), G. Y. Yardumian (Z., C.), M. Young (Z., C.), Annie M'Crorie (P., C.), Janet A. Macvea (C.), Jane I. Robertson (P., C.).

VICTORIA UNIVERSITY.

DEGREE CEREMONY.

THE following degrees were conferred by the Vice-Chancellor (Dr. A. Hopkinson) in the Council Chamber of the Owens College on Wednesday, April 1st:

Bachelor of Medicine and of Surgery.—J. P. Bligh, Univ.; T. Brown, Yorks.; R. T. Dobson, Univ.; A. J. Edmonds, Owens; P. T. Harding, Owens; A. S. Hopper, Univ.; C. O. Jones, Univ.; J. A. Jones, Owens; J. Longworth, Owens; J. S. W. Nuttall, Univ.; A. H. Radcliffe, Yorks.; W. B. Ramsden, Owens; J. A. C. Roy, Owens; W. F. Shaw, Owens; J. McG. Skinner, Owens; F. Sugden, Yorks.; J. C. Teasdale, Yorks.; A. F. Thompson, Owens; G. Unsworth, Owens; S. C. Wilkinson, Yorks.; T. B. Wolstenholme, Owens; M. S. Wood, Owens.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN extraordinary Comitia was held on Monday, April 6th, the President, Sir W. S. Church, Bart., U.C.B., in the chair.

President's Address.

The President, according to custom, delivered his annual Presidential address, making reference to the chief medical events of the year, and

giving short obituary accounts of the following eight Fellows deceased during the past year: Dr. Edward Long Fox, Dr. William Millar Ord, Dr. J. W. Washbourn, C.M.G., Dr. John Curnow, Dr. Henry Oldham, Dr. Thomas Shapter, Dr. R. C. A. Prior, Dr. Samuel Fenwick.

Upon the motion of Dr. Pavy (as Senior Fellow), seconded by the Registrar, the thanks of the College were accorded to the President for his address, together with a request that he would allow the same to be printed.

Election of President.

Sir William Church then vacated the chair, and the College proceeded to the election of President, the rules relating to the election having previously been read by the Registrar. The result of the ballot showed that Sir William Church had been for the fourth time re-elected President of the College by a very large vote, the numbers being: Sir William Church, 83; Sir R. Douglas Powell, 11; Dr. Pye-Smith, 7; Sir William Broadbent, 4; Dr. Pavy, 1; Dr. Dickinson, 1.

The insignia of office having then been delivered by the Senior Censor (Sir R. Douglas Powell), the President gave his faith to the College and expressed his thanks to the Fellows for the high honour conferred upon him.

Licenses.

The Licence to Practise Physic was granted to the following candidates: Victor Albert Chatelain, London Hospital; John Douglas Hope Freshwater, Cambridge and St. George's; Frederic William Forbes Ross, Edinburgh and University College, London.

Reports and Communications.

A report of the Laboratories Committee, dated March 6th, 1903, was received and adopted. The Committee report (1) that during the last three months 8,175 doses of diphtheria antitoxin, each containing 3,000 units, have been supplied to the hospitals of the Metropolitan Asylums Board, making a total of 24,525,000 units; (2) that during the quarter further batches of antitoxin supplied by Messrs. Parke, Davis, and Co. have been tested in the laboratory, and a certificate granted showing its strength, sterility, and freedom from excess of antiseptic.

Communications were received from (1) the Registrar of the General Medical Council; (2) the Secretary of the Royal College of Surgeons, reporting certain proceedings of the Council on February 12th and March 12th.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A quarterly Council was held on April 2nd, Sir Henry G. Howse in the chair.

The College Library.

The Council determined to sell certain sets of periodicals to which it no longer subscribed; the several sets are to be catalogued, and the catalogues circulated amongst all the libraries of the world known to take in periodicals of the kind in question.

Jacksonian Prize.

The prize for the year 1902, on Fracture of the Skull, its Consequences Immediate and Remote, including Pathology and Treatment, was awarded to Mr. T. Crisp English, M.R.C.S. An honorarium was awarded to Mr. Louis B. Rawling, F.R.C.S., for his essay on the same subject. The subject of the prize for 1904 is the Diagnosis and Treatment of such Affections of the Stomach as are Amenable to Surgical Interference.

John Tomes Prize.

This was awarded to Mr. Kenneth Weldon Goadby.

Hunterian Professors.

Dr. Arthur Paterson, of Liverpool, and Dr. Arthur Robinson, of King's College, London, were appointed Hunterian Professors.

Election of Fellow.

The following gentleman, a Member of twenty years' standing, was elected a Fellow of the College, namely, Sir Francis Henry Lovell, C.M.G., Dean of the London School of Tropical Medicine.

Examination in Biology.

The President suggested that owing to the number of students who now claim exemption from the first examination of the Conjoint Board on the ground of passing the Preliminary Scientific Examination of the University of London, it be referred to the Court of Examiners to consider whether any modification is desirable in the regulation requiring candidates to produce a certificate of attendance on a course of lectures on biology at a recognized medical school.

Pathologist to the London County Council.

A letter was read from the Clerk of the London County Council, stating that the Council considers it desirable that necropsies in inquest cases of a special nature should be entrusted to specially-skilled pathologists, and expressing the hope of the Council that the Council of the College will assist them by suggesting, with a view to a selection being made, the names of well qualified pathologists with experience of a medico-legal nature, and who would be prepared, if called upon by any of the London coroners, to make necropsies and to give evidence in special inquest cases at an inclusive fee of two guineas.

This was referred to a Committee.

TRINITY COLLEGE, DUBLIN.

The diploma in Public Health, Part II, has been awarded to A. L. Hoops, F. W. Lamb, K. W. Jones, and J. N. Laird.

SOCIETY OF APOTHECARIES OF LONDON.

The following candidates have passed the Primary Examination (Part I) in the undernoted subjects:

Biology.—C. J. Evans, St. Bartholomew's Hospital; M. L. Ford, Birkbeck Institute; C. A. Mortlock-Brown, University College; C. S. Spencer, Manchester.

Chemistry.—W. B. Neatby, London Hospital; F. B. O'Dowd, Birmingham; M. Rathbone, Royal Free Hospital.

The following candidates have passed the Primary Examination, Part II, in the subjects undernoted:

Anatomy.—W. H. S. Burney, Guy's Hospital; C. H. Colley, Royal Free Hospital; C. G. Grey, St. Bartholomew's Hospital; J. C. Johnson, Middlesex Hospital; R. Moore, Birmingham; H. T. Roberts, St. Mary's Hospital; R. Spears, University College Hospital; G. L. Walker, Leeds.

Physiology.—H. S. Burnell-Jones, Cardiff; W. H. S. Burney, Guy's Hospital; W. G. H. Cable, London Hospital; C. H. Colley, Royal Free Hospital; R. Moore, Birmingham; J. N. D. Paulson, St. Mary's Hospital; R. Spears, University College Hospital; G. L. Walker, Leeds.

HOSPITAL AND DISPENSARY MANAGEMENT.

EDINBURGH ROYAL INFIRMARY.

At the weekly meeting of the managers held on March 30th, the following gentlemen were appointed for a period of six months from April 1st, 1903: Resident physician—Mr. Henry H. Roberts, M.B., Ch.B, to Dr. Alexander James; resident surgeons—A. T. Gavin, M.B., C.M., to Mr. C. W. Cathcart; Mr. Duncan C. L. Fitzwilliams, M.B., Ch.B., to Mr. F. M. Caird; clinical assistants—Mr. A. M. M'Intosh, M.B., Ch.B., etc., to Dr. R. M'Kenzie Johnston; Mr. William M'Lachlan, M.B., Ch.B, to Dr. William Russell (in the medical waiting room). The following gentlemen were appointed clinical tutors for the ensuing summer session: Mr. Peter Murray, M.B., Ch.B., to Professor Annandale's wards; and Mr. F. M. Graham, M.B., F.R.C.S.Ed., to Mr. Cathcart's wards.

MIDDLESEX HOSPITAL.

The annual report of the Middlesex Hospital for 1902 contains an historical account of the hospital from its foundation up to the present date, which greatly adds to its interest. The hospital originated in a building in Windmill Street, Tottenham Court Road, in 1745, "for sick and lame patients," to which two years after was added a ward "for the reception of lying-in married women." Very shortly after it obtained the patronage of Hugh then Earl of Northumberland, and with his assistance a new building, which forms part of the existing structure, was erected in Marylebone in 1750. A special feature of the hospital is its cancer wards, of which that for women was endowed in 1792 by an anonymous benefactor, identified after his death as Samuel Whitbread, the fund being subsequently added to by others. The corresponding male ward was not opened until nearly 100 years later. In the women's ward—now in a separate building in Nassau Street—patients are, by the will of the benefactors, allowed to remain until "relieved by art or released by death." During revolution times at the end of the 18th century part of the hospital was given up for French refugees, its own finances being then very depressed. The growth of the hospital in every direction during the past fifty years has been steady, and the attention which it has been led to pay to cancer work, by the existence of the special endowment referred to, has naturally brought it of late into more prominence than before.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,476 births and 4,578 deaths were registered during the week ending Saturday last, April 4th. The annual rate of mortality in these towns, which had been 17.2, 17.0, and 16.2 per 1,000 in the three preceding weeks, further declined last week to 15.8 per 1,000. Among these towns the death-rates ranged from 2.7 in Hornsey, 3.6 in Handsworth, 7.1 in Barrow-in-Furness, 8.1 in Burton-on-Trent, 9.6 in Brighton, 9.7 in Leyton, and 9.9 in East Ham to 19.7 in Bootle, 20.6 in Bury, 20.9 in Rochdale, 21.1 in Liverpool, 21.5 in Halifax, 21.8 in Wigan, 24.6 in Rotherham, and 26.8 in Sunderland. The rate of mortality in London was 15.7 per 1,000, while it averaged 15.9 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.6 per 1,000 in the seventy-six large towns; in London this death-rate was equal to 2.0 per 1,000, while it averaged 1.4 in the seventy-five other large towns, among which the highest death rates from the principal infectious diseases were 2.4 in St. Helens and in Sunderland, 2.5 in Walthamstow and in Hanley, 2.6 in West Ham and in Burnley, 2.7 in Middlesbrough, 3.2 in Hull, and 4.2 in Wigan. Measles caused a death rate of 1.1 in Manchester, 1.2 in Salford, 1.3 in Hull, 1.6 in Burnley, 1.9 in Tottenham, 2.2 in Swansea, and 3.4 in Wigan; scarlet fever of 1.7 in Sunderland; diphtheria of 1.5 in Hull, 1.6 in Middlesbrough, 1.8 in Rochdale, and 2.5 in Hanley; whooping cough of 1.0 in Walthamstow, 1.2 in Walsall, 1.4 in Coventry and in Preston, 1.5 in Croydon, 1.6 in Stockport, and 2.1 in Willesden; "fever" of 1.0 in Halifax; and diarrhoea of 1.5 in South Shields. Of the 13 fatal cases of small-pox registered in these large towns last week, 6 belonged to Liverpool, 2 to Bristol, 2 to Bury, and 1 each to Birkenhead, Manchester, and Burnley. The Metropolitan Asylums Hospitals contained 13 small-pox patients at the end of last week, against 7, 7, and 11 at the end of the three preceding weeks; 3 new cases were admitted during the week, against 1, 2, and 5 in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had been 1,768, 1,789, and 1,756 on the three preceding Saturdays, had further declined to 1,735 on Saturday last, April 4th; 205 new cases were admitted during the week, against 231, 220, and 213 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, April 14th, 983 births and 589 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 19.7, 20.1, and 18.6 per 1,000 in the three preceding weeks, further declined last week to 18.0 per 1,000, but was 2.2 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scotch towns the death-rates ranged from 12.6 in Paisley and 13.6 in Aberdeen to 19.2 in Glasgow and 22.5 in Greenock. The death rate from the principal infectious diseases averaged 1.7 per 1,000 in those towns, the highest rates being recorded in Dundee and Greenock. The 290 deaths registered in Glasgow included three which resulted from

measles, 12 from whooping-cough, 5 from "fever," and 5 from diarrhoea. Three deaths from measles, 3 from whooping-cough, and 6 from diarrhoea occurred in Edinburgh; 5 from whooping cough and 3 from diarrhoea in Dundee: 6 from measles in Aberdeen; and 3 from whooping-cough in Greenock.

THE LEGAL ASPECTS OF NOTIFICATION.

A CORRESPONDENT, Dr. B., writes to us respecting the article on this subject published on March 4th, and asks our opinion of a case of which the following are the salient features:—

Dr. B. was asked by a Mr. S. to see his little girl, who was suffering from a sore throat. It appeared that during Mr. S.'s absence his wife had called in a practitioner who lived nearer the patient than Dr. B., the family doctor. This practitioner, Dr. X., said the girl was suffering from diphtheria, and he must notify her case. On Dr. B. visiting the patient he found the throat congested, partially covered with a yellow film, temp 101°. A swab was taken from the throat, and sent to the M.O.H. Meanwhile the sanitary inspector called on the strength of Dr. X.'s notification, and urged removal of the patient to an isolation hospital, as there were several children in the house. Mr. S. insisted on first knowing the result of the bacteriological examination. This arrived next morning: "No diphtheria bacilli found in the swab submitted." This day the child was apparently well, the exudate having disappeared, and the temperature became normal.

Dr. B having quoted Osler's *Medicine* to the effect that "the presence of the Klebs-Loeffler bacillus is regarded by bacteriologists as the sole criterion of the diphtheria," goes on to ask if it is right for medical practitioners to notify cases as diphtheria from clinical signs alone. "Surely," he adds, "even a serious case could be isolated for twenty-four hours, and an injection of antitoxin given pending the result of the bacteriological examination."

The writer of the article gives the following opinion on the case:

Assuming that there is an absolutely certain test for any disease which must be notified under the Infectious Diseases (Notification) Act, 1889, the practitioner would act imprudently in making a notification unless that test has been applied. The Act says that the practitioner must notify "on becoming aware that the patient is suffering from an infectious disease to which this Act applies." The Legislature obviously intends that the practitioner shall exercise his own judgement in deciding whether the case is one which should be notified, but in arriving at a conclusion every reasonable precaution ought to be taken. In the circumstances of the case above described it would certainly have been desirable to have applied the bacillus test before issuing the certificate; but as this test takes time, and is not always available, it may be doubted whether it is always the duty of the practitioner to have recourse to it.

A M.O.H. who has large experience of the question from an administrative point of view gives the following opinion:

Judging by the evidence given by Dr. B. the balance of probability is on the side of Dr. X.'s notification being correct. The fact that the exudate cleared up rapidly is not against this conclusion. This rapid disappearance of all clinical evidence of diphtheria not uncommonly occurs.

Dr. B. lays too much stress on one negative bacteriological result. It is common now in sending out bacteriological certificates to add a footnote, that three consecutive negative results should be secured before any importance is attached to them. A single negative bacteriological result leaves the practitioner where he was before he obtained it, namely, with the responsibility of diagnosing the case on clinical grounds. A careful distinction must be drawn between positive and negative bacteriological results. The former may be trusted, the latter unless repeated must be disregarded.

The question whether cases of diphtheria should be notified without bacteriological examination cannot be decided by a general answer applicable to all cases. If the ordinary clinical symptoms of diphtheria are present, in our opinion delay to notify until a bacteriological certificate has been obtained is unjustified (*a*) in the interest of the patient, as the parent in the majority of instances will not allow treatment by antitoxin until the certificate is obtained, and this delay may mean a fatal instead of a favourable result; and (*b*) in the interest of others, the objects of public health administration being thus partially defeated. If a single bacteriological negative result is trusted, there is the likelihood of the interests of the public health suffering to a further extent.

Delay in notification is justified only when the clinical symptoms are dubious. Even then a dose of antitoxin should be administered pending a bacteriological certificate.

THE SEWAGE POLLUTION OF OYSTER BEDS.

At the annual general meeting of the National Sea Fisheries Protection Association held on March 31st, under the presidency of Lord Heneage, a motion was adopted to the effect that the discharge of crude sewage into the rivers, estuaries, or on any part of the coast was injurious to public health and detrimental to the food supply of the people, and that representations should be made to such departments as might be invested with power advocating the stoppage of the same at the earliest opportunity; and that it was desirable that the supervision of the shell fisheries should be transferred to the new Fisheries Board.

TRADE EFFLUENTS.

IN the third report of the Commissioners appointed in 1898 to inquire into the treatment and disposal of sewage two recommendations are made. The first is that the law shall be so altered as to impose upon local authorities the duty of providing sewers for trade effluents, subject to the observance by manufacturers of certain regulations. What these regulations should be the Commissioners consider should be determined by each local authority, subject to information by some central Board, according to the nature of the manufactures carried on within its area. They consider, however, that in all cases they should provide standards of treatment up to which the manufacturers can work, and that power to vary or in some cases dispense with them altogether should be reserved. The central Board, to which they consider all differences likely to arise under this amendment to the law should be referred, is a new body, the creation of which forms their second recommendation. They consider that it should be a Board having adequate technical knowledge of the questions with which it will have to deal, such as the Supreme Rivers Authority, and that among these are likely to be some or all of the following: Refusals by local authorities either to allow the effluent of any given manufactory to enter existing sewers or to enlarge the latter, if necessary, for the purpose, or to build new ones; disputes as to what regulations with regard to preliminary treatment of the refuse of any particular manufactory may be called for; the disposal of the sludge arising, and the amount of the special charges to be imposed in each case. The Commissioners received much evidence, both from manufacturers and local authorities, and nearly all of it went to prove that the questions likely to arise could not be adequately dealt with by the ordinary courts.

DUTY OF DISTRICT MEDICAL OFFICERS.

C. W. G. writes that he has been requested by his Board of Guardians to arrange for one of his pauper patients to be taken to a distant town in order that he may be seen by an eye specialist, and his opinion on the case obtained at the expense of the guardians, though the medical officer himself considers it unnecessary. C. W. G. asks whether this is a duty which falls upon him as district medical officer.

*** We are not inclined to regard this as being by regulation one of the duties of a Poor-law medical officer, but as the request does not appear to be unreasonable we consider it would be best for our correspondent to comply with the wishes of his Board.

MEDICAL NEWS.

ISLE OF WIGHT ROYAL COUNTY HOSPITAL.—At a special meeting of the Governors of the Isle of Wight Royal County Hospital held at Ryde on April 4th, under the presidency of Princess Henry of Battenberg, it was decided to expend about £4,000 in remodelling the hospital.

THE Friday evening meetings of the Royal Institution of Great Britain will be resumed after Easter. On April 24th the Hon. R. J. Strutt will give a lecture on some recent investigations on electrical conduction; on May 1st Professor Pope will speak on stereochemistry; on May 8th Mr. Rider Haggard on rural England; on May 15th Dr. D. H. Scott on the origin of seed-bearing plants; and on May 22nd Dr. Murray on dictionaries. On May 29th Prince Albert of Monaco will deliver a discourse on oceanography.

SANITATION IN BARBERS' SHOPS.—A meeting called by the International League of Barbers for the purpose of arousing public interest in the adoption of a Bill by the Pennsylvania Legislature providing for better sanitary conditions in barbers' shops was recently held in Philadelphia. The proposed law regulates the practice of barbering, provides for the registration and licensing of barbers, and calls for the better education of those engaged in the work. It also provides for the appointment of a Board of Examiners composed of five members, who have had at least ten years' active practice in the business. The movement has the co-operation of the International Union of Journeymen Barbers, which comprises nearly 10,000 persons.

BEQUESTS TO HOSPITALS.—Under the will of the late Dr. James Stevenson, of Largs, maker of the Stevenson road from Lake Nyassa to Tanganyika, £1,000 has been bequeathed to the Glasgow Royal Infirmary, £500 to the Glasgow Victoria Infirmary; £400 each to the Glasgow Convalescent Home, the Kilmuir Seaside Home, the East Parade Home for Infirm Children, and the West of Scotland Convalescent Seaside Homes; £300 each to the Glasgow Opthalmic Institution, the Eye Infirmary, the Royal Hospital for Sick Children, the Scottish National Institution for Imbecile Children, and the Glasgow Association for Relief of Incurables; £200 to the Glasgow Lock Hospital and £100 to the Glasgow Medical Missionary Society.

AN AMBULANCE COMPETITION.—The London and North-Western Railway was constituted a centre of the St. John Ambulance Association in 1897, and since then the directors and superintendents have taken an active interest in promoting its objects. The company has given a challenge shield, for which eleven teams from eleven districts contended last week. The competition was very close, but in the end the Kendal team, trained by Dr. Sturridge, were declared the winners with 436 marks. "Runners-up" were Shrewsbury, 429; Oldham, 413; Bangor, 406; Leicester, 403. Since 1897 3,228 members of the staff of the railway have obtained the certificate of the St. John Ambulance Association, while 547 have also obtained the bronze medal.

Hospital Saturday Fund.—At the annual meeting of the Metropolitan Hospital Saturday Fund on April 4th, it was announced that 1902 had been a record year for the Fund in many respects. The total income had reached £22,964, being an increase of £1,417 on 1901, and £1,351 more than had been collected in any previous year. The total amount distributed had been £20,602, as against £19,244 in 1901, being the largest sum ever awarded to participating institutions in one year. During the past twelve months 32,241 letters of recommendation to the medical charities had been issued, an increase of 4,034 upon 1901, and 3,689 surgical appliances had been supplied, towards the cost of which the patients had contributed £1,981.

Medical Sickness and Accident Society.—The usual monthly meeting of the Committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 429, Strand, London, W.C., on March 27th, Dr. de Havilland Hall in the chair. A rough draft of the report upon the operations of the Society during the year 1902 was submitted. Although a larger amount was disbursed in sickness claims than in any previous twelve months of the Society's operations, over £10,000 has been saved and added to the reserves, which now amount to over £160,000. A considerable addition was also made to the number of members. The number of those members who are permanently disabled continues to grow, but at each valuation of the Society's business a special extra reserve is made for these chronic cases, and the amount to be earmarked for this purpose at the valuation to be made at the end of the current year will be considerable. Prospectuses and all information on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

Congress of the Sanitary Institute.—The Twenty-first Congress of the Sanitary Institute will be held at Bradford from July 6th to 11th under the presidency of the Earl of Stamford. In addition to addresses and lectures the main work will be done in the Sections, of which there are three:—(I) Sanitary Science and Preventive Medicine (President, Professor Clifford Allbutt, M.D.). (II) Engineering and Architecture (President, Mr. M. Fitzmaurice, C.M.G., M.Inst.C.E.). (III) Chemistry, Physics, and Biology (President, Professor C. Hunter Stewart, M.B., F.R.S.E.). There will also be conferences as follows: (1) of municipal representatives; (2) on industrial hygiene; (3) of medical officers of health; (4) of engineers and surveyors to county and sanitary authorities; (5) of veterinary inspectors; (6) of sanitary inspectors; (7) of ladies on hygiene; (8) on the hygiene of school life. An exhibition of apparatus and appliances relating to health and of domestic use will be held in connexion with the Congress.

MEDICAL VACANCIES.

BARNSTAPLE: NORTH DEVON INFIRMARY.—House Surgeon. Salary, £80 per annum, with board, residence, and washing. Applications to the Secretary.

BATH: ROYAL MINERAL WATER HOSPITAL.—Resident Medical Officer; unmarried. Salary, £100 per annum, with board and apartments. Applications to the Secretary by April 27th.

BRADFORD CHILDREN'S HOSPITAL.—House Surgeon. Salary £100 per annum, with board, residence, and washing. Applications to the Secretary by April 20th.

BRIGHTON: ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke Road.—House-Surgeon. Salary £80 per annum, with board, lodging, and washing. Applications to the Chairman of the Medical Committee by April 18th.

CANCER HOSPITAL (FREE), Fulham Road, S.W.—House Surgeon. Appointment for six months, but renewable. Salary at the rate of £70 per annum, with board and residence. Applications to the Secretary by April 20th.

COLCHESTER, ESSEX AND COLCHESTER HOSPITAL.—Honorary Physician. Applications to the Secretary by April 16th.

DERBY: DERBYSHIRE HOSPITAL FOR SICK CHILDREN.—House-Surgeon; unmarried. Salary £70 per annum, with board, washing, and apartments. Applications on forms provided to be sent to the Secretary by April 25th.

EAST SUSSEX COUNTY ANYLUM, Hellingly.—Senior Assistant Medical Officer; unmarried and not over 35 years of age. Salary, £90 per annum, with board, lodging, washing, and attendance. Applications, on forms provided, and endorsed "Assistant Medical Officer," to be sent to Mr. R. Blaker, Clerk to the Visiting Committee, 211, High Street, Lewes, by April 18th.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—(1) House-Physician, (2) House-Surgeon. Salary, £80 per annum respectively. (3) Assistant House-Surgeon. Salary £70 per annum. Board, residence, and washing provided in each case. Applications to the Committee of Management by April 16th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Surgeon: unmarried. Appointment for six months. Salary £20, washing allowance £2 10s., with board and residence. Applications, on forms provided, to be sent to the Secretary by April 28th.

KING'S COLLEGE, London.—Sambrook Medical Registrarship. Applications to the Secretary by April 15th.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary, £100 per annum increasing £10 on reappointment, with board and lodging. Applications to the Secretary of the Faculty, Public Dispensary, New Briggate, Leeds, by April 18th.

LEICESTER INFIRMARY.—House Physician. Salary, £100 per annum, with board, apartments, and washing. Applications to the Secretary, 24, Friar Lane, Leicester, by April 25th.

LEICESTER INFIRMARY.—Surgical Dresser. Honorarium, 10 guineas for six months, with board, apartments, and washing. Applications to the Secretary.

LONDON SCHOOL BOARD, Victoria Embankment.—Qualified Medical Men or Women with Ophthalmic experience to assist in examinations of vision. Salaries, one at £250 and five at £125 per annum. Applications on forms provided and marked outside "Application for Post of Oculist" to be sent to the Clerk of the Board by April 25th.

MARGATE: ROYAL SEA-BATHING HOSPITAL.—Resident-Surgeon, to act as Junior for six months and then as Senior for a like period. Salary at the rate of £80 and £120 per annum respectively, with board and residence. Applications to the Secretary, 30, Charing Cross, S.W., by April 23rd.

NEWCASTLE UPON-TYNE DISPENSARY.—Resident Medical Officer. Salary, £250 for first year and £275 subsequent years, with furnished residence. Applications, on forms provided, to be sent to the Honorary Secretary, Mr. Joseph Carr, 41, Mosley Street, Newcastle-upon-Tyne, by April 22nd.

NOTTINGHAM CHILDREN'S HOSPITAL.—House-Surgeon; unmarried. Appointment for six months. Salary at the rate of £100 per annum, with board and residence. Applications to the Secretary, Mr. A. F. Kirby, St. Peter's Church Walk, Nottingham, by April 13th.

PADDINGTON GREEN CHILDREN'S HOSPITAL, W.—(1) House-Physician. (2) House-Surgeon. Appointments for six months. Salary at the rate of 50 guineas per annum, with board and residence. (3) Physician to the Skin Department, must be F. or M.R.C.P. Lond. Applications to the Secretary by April 18th.

ROYAL EYE HOSPITAL, Southwark, S.E.—House-Surgeon. Appointment for six months, but renewable. Salary at the rate of 50 guineas per annum, with board and residence. Applications to the Secretary.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—(1) Resident House Physician; (2) Resident House-Surgeon; (3) House-Physician; (4) Casualty House-Surgeon. Candidates for (1) and (2) must be qualified medical women, and for (3) and (4) qualified medical men. Appointment for six months. No salary, but board, etc., provided in each case. Applications to the Secretary by April 18th.

ST. PETER'S HOSPITAL FOR STONE, Henrietta Street, W.C.—House-Surgeon. Appointment for six months, but eligible for re-election. Salary at the rate of £100 per annum, with board, lodging, and washing. Applications to the Secretary by April 15th.

SAMARITAN HOSPITAL FOR WOMEN, Marylebone Road, N.W.—Clinical Assistants. Applications to the Secretary.

SUNDERLAND INFIRMARY.—House-Surgeon. Salary, £100 per annum, with board and residence, increasing £15 yearly for three years. Should present House Physician be elected the appointment will be for House-Physician. Applications, endorsed "Application for Resident Medical Appointment," to be sent to the Secretary by April 18th.

MEDICAL APPOINTMENTS.

Beckett, T. G., L.R.C.P. & S.Edin., L.S.A., appointed Honorary Medical Electrician to the Alfred Hospital, Melbourne.

Blake, E. H., L.R.C.P.I., L.S.A.Lond., appointed Clinical Assistant to the Chelsea Hospital for Women.

Bourke, C. V., M.B., Ch.M.Syd., appointed Honorary Assistant Gynaecologist to the Sydney Hospital, New South Wales.

Briscoe, John Charlton, M.B.Lond., M.R.C.P.Lond., appointed Assistant Physician to the Evelina Hospital for Children.

Broad, William, M.B., B.Sc.Glas., appointed Visiting Medical Attendant to the Warangesda Aborigines Station, New South Wales.

Christmas, R. W. S., M.R.C.S., L.R.C.P.Lond., appointed District Medical Officer of the St. Neots Union.

Clarke, Philip S., M.B., appointed Resident Medical Officer to the Children's Hospital, Adelaide, *vice* Margaret White, resigned.

Fischer, G. A., M.B., B.S., appointed Honorary Surgeon to the Department of Diseases of the Ear and Throat of the Adelaide Hospital.

Glanville, E. M., M.B., appointed Medical Officer of the Casualty Department of the East London Hospital for Children, Shadwell.

Henderson, Eleanor R., M.B., Ch.B.Edin., appointed Surgeon to the Outdoor Department of Leith Hospital.

Jordan, W. E., M.D.Lond., appointed Visiting Physician to the Birmingham Workhouse Infirmary.

Joske, A. S., M.B., Ch.B.Melb., appointed Honorary Surgeon to the Children's Out-door Department of the Alfred Hospital, Melbourne.

Macleod, R. A., M.A., M.B., C.M.Edin., appointed Assistant Resident Medical Officer in Mill Road Infirmary, Liverpool.

Morris, B. H., M.B., B.S., appointed Medical Officer to the Yatala Labour Prison, South Australia, *vice* Dr. Brooks, deceased.

Parsons, W., M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant Medical Officer to the Islington Parish Infirmary.

Petrie, J. M., M.B.Aber., D.P.H.Lond., appointed Clinical Assistant to the Chelsea Hospital for Women.

Player, C. R., M.B., Ch.B.Melb., appointed Honorary Physician to the Children's Out-door Department of the Alfred Hospital, Melbourne.

Read, W. H., M.B., Ch.M.Syd., appointed Registrar and Anaesthetist to the Hospital for Sick Children, Sydney, New South Wales.

Richmond, J. D., M.B., B.S.Glasg., appointed Medical Officer of the Walton Workhouse of the West Derby Union.

Rosery, E. R., M.B., Ch.M.Syd., appointed Government Medical Officer and Vaccinator at Nyngan, New South Wales, *vice* E. L. Hickey, resigned.

Spear, G. A. W., M.R.C.S., L.R.C.P.Lond., appointed District Medical Officer of the Petworth Union.

Stuart, Esther M., M.B., C.M.Edin., D.P.H., B.Hy.Durh., appointed Female Medical Officer to the Newcastle-on-Tyne School Board.

Symonds, Charters J., M.S., F.R.C.S., appointed Examiner in Surgery to the London University.

Willis, H. A. L., L.R.C.P.Lond., M.R.C.S.Eng., appointed Government Medical Officer and Vaccinator at Gunning, New South Wales, *vice* Henry J. Leonard, resigned.

Woods, J. R., appointed House-Surgeon to the East London Hospital for Children, Shadwell.

DIARY FOR NEXT WEEK.

POST-GRADUATE COURSES AND LECTURES.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C. Demonstrations will be given at 4 p.m. as follows:—Tuesday, medical; Wednesday surgical; Thursday, surgical; Friday, ear. Lectures will also be given at 5.15 p.m. as follows: Wednesday, On Cerebral Softening; Thursday, The Anatomy, Common Ailments of the Liver, and their Surgical Treatment; Friday, The Histological Effects of the Finsen Light and X Rays.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

Barlow.—On April 5th, at Sa Maison Somersham, Hunts, the wife of H. Cecil Barlow, M.B.Lond., L.R.C.P., M.R.C.S., of a daughter.

Fookes.—At New Plymouth, New Zealand, on February 10th, the wife of E. Faber Fookes, M.B.Lond., M.R.C.S., L.R.C.P., of twins, a son and daughter, the son stillborn.

Harper.—On April 2nd, at 94, Weston Park, Crouch End, N., the wife of Peter Harper, M.B., C.M., M.A., of a son.

Storrs.—At Concordia, Namaqualand, Cape Colony, on March 4th, the wife of C. S. Storrs, M.D.Cantab., of a son.

Symes.—On March 24th, at Rudellion, Feltham, the wife of W. Legge Lymes of a daughter.

Waters.—On March 30th, at "Whitegates," Southend-on-Sea, the wife of A. Ormerth Waters, M.B., J.P., of a son.

DEATHS.

Fookes.—At New Plymouth, New Zealand, on February 9th, Evelyn McLeod Fookes (*née* Farrington), the beloved wife of E. Faber Fookes, M.D.Lond., M.R.C.S., L.R.C.P., of acute yellow atrophy of the liver.

Kellock.—On April 3rd, at 94, Stamford Hill, N., William Berry Kellock, M.D., F.R.C.S., aged 82.

Tait.—At 10, Elderdale Road, Hampstead, Edward Wilmshurst Tait, M.R.C.S., L.S.A., aged 79 years. (Formerly of Highbury.)

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which the special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

SANATORIUM writes: I should be obliged for information from gentlemen having extensive sanatorium experience whether in the cases of patients whose rectal temperature, though above 99°, maintains the same maximum daily for weeks, and who are improving in all other respects, it is advisable or not to relax the rule that pyrexia entails confinement to bed? In cases of mixed infection with streptococci in sputum, are serum injections of any benefit?

COTTAGE HOSPITAL PLANS.

A CORRESPONDENT submits sketch plans of a cottage hospital in which the matron's rooms are shown on the ground floor near the wards, and asks whether this can be regarded as a good arrangement.

*** We have consulted Mr. Thomas W. Cutler, F.R.I.B.A., who expresses the opinion that the balance of advantages is in favour of putting the matron's bedroom on the first floor, since it is further from her work, has fresher air, and gives better control of the staircase and bedrooms. He points out, on the other hand, that in many country hospitals the matron's bedroom adjoins her sitting room, and that many matrons prefer this arrangement.

ANSWERS.

A MIDDLE-AGED PRACTITIONER.—We sympathize with our correspondent's perplexities, but the terminology is new, and can hardly yet be expected to be found in dictionaries. It is fully explained in the series of articles on the Processes of Infection and Protection in the Organism by Mr. Armit, published in the BRITISH MEDICAL JOURNAL of March 29th, April 5th, April 12th, and April 19th, 1902.

R. A. B.—An English doctor cannot legally practise his profession in Germany unless he has passed the State Examination. He cannot practise in Austria unless he has passed the State Examination, or obtained a degree in medicine from an Austrian university, a necessary preliminary to which is naturalization as an Austrian subject. Recognition of foreign diplomas may, however, be obtained on passing certain examinations.

EFFECTS OF TOBACCO SMOKING.

NICOTINE would probably find the article on the action of tobacco in the *Practitioner*, 1896, vol. i, p. 150, suitable for his purpose. It contains references to the voluminous literature of the subject.

THE TREATMENT OF PROLAPSUS UTERI.

DR. F. B. HARGREAVES (Ardwick, Manchester) writes in reply to Dr. Percy Newell's (Crowborough) question in the BRITISH MEDICAL JOURNAL of March 21st: I can recommend any practitioner who has tried the many methods recommended—pessaries, etc.—the round ligament operation of Dr. Alexander of Liverpool. I have two patients in my practice who are now strong and healthy, and have each borne children and can follow their occupations, since their round ligaments were shortened. They were practically chronic invalids before, and had been under treatment—hospital and private—without any benefit whatever, and they had despaired of obtaining any relief. The uterus in each case, after a three or four years' trial, is now in a perfectly normal position.

LETTERS, NOTES, ETC.

DOCTORS' BILLS.

WE have received a cutting from a newspaper which—not being so ignorant of the common facts of this life as some of H.M. judges profess to be—we recognize to be one popularly known as the "Pink 'Un." The editor, in referring to the political grumbling over the cost of the war, compares the behaviour of the public to that of a patient who hysterically sends for his doctor morning, noon, and night, but when the bill is presented complains of the number of visits. He then proceeds as follows:

"We think that one of the meanest things on earth is to scrutinize too closely a doctor's bill. We see sometimes a doctor called up in the middle of the night, and having to wend his way, perhaps through driving rain and bitter cold, down dark country lanes, and he responds cheerfully, notwithstanding that he knows full well that in many cases he will receive only very doubtful payment for his labours. It is in this that the doctor shows so much the nobility of his profession."

We believe that some members of the profession depicted occasionally solace themselves by perusal of this paper in the quiet of their own studies. But after this admirable expression of a common truth, they may feel emboldened to give it a prominent position on their consulting-room table.

ECTOPIA CORDIS IN A CALF.

DR. C. CREBAR (Silloth, Cumberland) writes: On March 28th I saw an extraordinary case of the above condition in a calf. A farmer who was consulting me accidentally told me that a cow of his had given birth to a very strange calf that morning. The presentation was a breech one, and there was great difficulty in the delivery of the neck and head. The calf began to breathe naturally, and a swelling was seen pulsating in its neck. Death occurred a quarter of an hour after birth, and an opening was made in the skin over the swelling, which was shown to be caused by the heart. The calf was buried, and in the evening the farmer told me about it. The next day I went to the farm and we had the body of the calf exhumed. I enlarged the opening in the neck, and there certainly was the heart wholly outside the thorax. It was on the right side of the neck perfectly inverted, the apex being quite close to the angle of the jaw, the base immediately above the ribs. After making an incision from the chin to the abdomen and reflecting the skin, the ribs and sternum were seen to be entire but considerably arched on the right side. After dividing the sternum longitudinally in the middle line, and separating the two sides of the thoracic walls a partition dividing the chest into two unequal parts was seen extending from the diaphragm to the root of the neck on the right side and joining the pericardium. The left lung was crepitant and healthy. The right lung was normal in its upper half, but the lower half was collapsed, and the pleura over it rough and thickened. The right half of the thorax was greatly distended and contained about a gallon of blood-stained fluid. The liver, intestines, and the other abdominal viscera were quite normal, and in all other respects the calf was a very fine one. There was no appearance of any defects in the circulation before birth. It seems to have been a case of antenatal pleurisy with effusion.

LETTERS, COMMUNICATIONS, ETC., have been received from:

A Messrs. Arnold and Sons, London; Mr. L. Archer, London; Mr. F. Addiscott, London; Dr. J. J. Austin, Belfast; J. G. Andrew, M.B., Glasgow; Dr. R. S. Anderson, Spennymoor. **B** Bilious; Dr. J.W. Byers, Belfast; Dr. T. E. B. Brown, C.I.E., London; J. D. Brunton, M.B., Leatherhead; Mr. C. Basan, London; Mr. C. M. Burnside, Glasgow; F. Belben, M.B., Bournemouth; A. Brownlie, M.B., Lydney. **C** Country Member; Mr. F. S. Cohen, London; Mr. J. P. Croft, Birmingham; Mr. A. H. Cox, London. **D** D. E. F.; Dr. S. Davies, Woolwich; Mr. C. J. S. Digges, St. Louis; M. Dunning, M.B., Glasgow. **E** Mr. P. Edwards, Liverpool; Dr. W. A. Evans, Bradford; Dr. J. Edmunds, Brighton; Dr. F. Edge, Wolverhampton; Mr. W. N. Edwards, London; E. T. W.; Dr. R. E. Evans, Newcastleton. **F** Dr. H. R. Finsen, Copenhagen; F.R.C.P.; F. C. W. **G** Mr. R. P. Graham, Carstairs Junction; H. E. Gamlen, M.B., West Hartlepool; Dr. M. N. Gaudevia, Colombo. **H** Dr. R. C. Holt, Burnley; Mr. A. V. Harcourt, Ryde, I. of W.; Mr. F. B. Hargreaves, Manchester; Dr. J. P. Henry, London; Dr. M. C. Hime, Londonderry. **I** Mr. T. R. Inglis, Auckland, N.Z. **K** Mr. R. Kirkpatrick, London; Dr. T. N. Kelynack, London; J. F. Keenan, M.B., Edgeworthstown. **L** Mr. F. G. Layton, Walsall; Mr. R. M. Littler, Southport; Liverpool Medical Institution, Secretary of, Liverpool; Mr. J. B. Lamb, London; D. Lamb, M.B., Glasgow. **M** A. MacLennan, M.B., Glasgow; M.B.; Dr. J. A. Menzies, Rochdale; Dr. C. K. Millard, Leicester; Middle-aged Practitioner; Dr. A. Macfadyen, London; A. A. MacKeith, M.B., Southampton. **O** Obstetrical Society, Secretary of, London. **P** Mr. F. E. Potter, London; Dr. J. W. Paton, Bath; A. V. Pearson, M.B., London; Mr. W. Powell, Cheltenham; T. J. Pritchard, M.B., East Retford; Mr. H. J. Prangley, London. **R** Mr. O. F. Rowley, Barnsley; Mr. E. L. Robinson, Guernsey; Mr. H. M. Raven, Broadstairs; R.A.M.C.; R. A. B. **S** S. Stephenson, M.B., London; Dr. L. Smith, Monmouth; Ship's Surgeon; B. Strachan, M.B., Sunderland; Mr. J. M. Stoker, London. **T** J. McD. Troup, Pretoria; Dr. L. T. Thorne, London; Mr. E. D. Townroe, London; Messrs. Turnbull and Findlay, Glasgow; Mr. W. Thompson, Richmond, Surrey. **W** Mr. C. Williams, London; J.W.T. Walker, M.B., London; Dr. W. Whitelaw, London; H. A. Watson, M.B., Worcester; Mr. R. H. Wolstenholme, Salford; Dr. H. Walsham, London; Mr. W. B. Winckworth, Taunton; Mr. C. H. Whiteford, Plymouth; Mr. J. S. F. Weir, London. **X** X.

BOOKS, ETC., RECEIVED.

Open-Air Treatment. By Isabella Mears, L.R.C.P.I. Edinburgh and London: William Blackwood and Sons. 1903.

Applied Surgical Anatomy, Regionally Presented. By George Woolsey, A.B., M.D. London: Henry Kimpton. 1903. 21s. net.

A Textbook of Pathology and Pathological Anatomy. By Dr. Hans Schmaus. Translated from sixth German edition by A. E. Thayer, M.D. Edited, with additions by James Ewing, M.D. London: Henry Kimpton. 1903. 21s. net.

Nerves in Disorder; A Plea for Rational Treatment. By Alfred T. Schofield, M.D., etc. London: Hodder and Stoughton. 1903. 3s. 6d.

A Handbook of Physics and Chemistry. By Herbert E. Corbin, B.Sc.Lond., M.R.C.S., L.R.C.P., and Archibald M. Stewart, B.Sc.Lond. Second edition. London: J. and A. Churchill. 1903. 6s. 6d.

The Physiology of Mastication, and Kindred Studies. By J. Sim Wallace, M.D., D.Sc., L.D.S. London: J. and A. Churchill. 1903. 1s. 6d.

Atlas Manuel de Gymnastique Orthopédique. Traitement des Déviations de la Taille. Par Mme. Nageotte Wilbouchewitch. Paris: C. Naud. 1903. Frs. 8.

Obstetrics. By J. W. Williams. New York and London: D. Appleton and Co. 1903.

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An Address

ON

GASTRIC HYPERACIDITY (HYPERCHLORHYDRIA):

Its Nature, Diagnosis, and Treatment.

Delivered before the Edinburgh Medico-Chirurgical Society.

By WILLIAM RUSSELL, M.D., F.R.C.P.Ed.,

Assistant Physician, Edinburgh Royal Infirmary; Lecturer on Pathology, Medical College for Women, Edinburgh; Examiner in Pathology in the University of Edinburgh; and Examiner in Medicine in the University of St. Andrews.

Recent papers and discussions on dyspepsia and gastric dilatation which have appeared either in full or in abbreviated form in the British Medical Journal have led me to add my contribution to a subject of very wide interest. My excuse for doing so is the belief that my observations may clear up points in connexion with gastric disorders regarding which there is much uncertainty and confusion.

It is not many years since it was generally taught and universally believed that gastric hyperacidity was due to the presence of organic acids, the products of the fermentation of food in the stomach, the fermentation being caused by organisms. This widely-accepted view was probably appropriated from the knowledge of the condition of the stomach contents in pyloric obstruction. The inference that the gastric contents underwent fermentation whenever unduly retained came to be applied to all, or nearly all, gastric disturbances. It became a fundamental proposition, a practically unquestioned assumption. In more recent years, with greatly increased knowledge of digestive processes, it has, however, been recognized that there is a gastric hyperacidity which is due not to the fermentation of food stuffs in the stomach, but to a true excess in the amount of the special acid normally secreted by the organ. This excess of hydrochloric acid is suitably, if not elegantly, termed hyperchlorhydria or hyperchylia, and it is to this condition that I propose in this paper to confine myself.

This hydrochloric acid excess is, in my experience, a much more common cause of dyspepsia, and ultimately of gastric dilatation, than is at present recognized. It is the primary fault in many cases that are classed as nervous, neurotic, or irritation indigestion, and not infrequently it stands in the same relation to cases named gastric catarrh or gastric dilatation. I find that of the cases of dyspepsia I have seen at the Royal Infirmary I have placed about 25 per cent. in the category of hyperchlorhydria. The private cases I have seen show an even higher proportion of cases of hyperacidity.

Symptoms.

It requires patience and method to obtain an accurate record or a true picture of the symptoms in gastric disorder. The plan I have developed is simple, scientific, and practical, and gives satisfactory results. I begin by inquiring how my patient feels on getting up in the morning; then the hour at which he breakfasts, and of what that meal usually consists; how he feels after breakfast, and if any pain, discomfort, or other symptom is experienced during the forenoon, and the hour at which these come on, how long they last, and whether they continue up to the time of taking the mid-day meal. If symptoms continue up to the mid-day meal I ascertain the effect that meal has upon them—whether they are at once aggravated, or materially relieved, or entirely removed, at least for the time. I then inquire as to the composition of the mid-day meal. This is followed by inquiries as to the symptoms during the afternoon and so on until bedtime, and later if necessary. This method I have found to be the only way to obtain exact knowledge of symptoms, and the symptoms so obtained are of the greatest value in helping to determine the part of the digestive process which is at fault. Occasionally an observant patient gives all this without detailed questioning, but such patients are rare; the majority give a description which is usually irrelevant and confused, symptoms, times, and explanations being intimately interwoven and mixed.

The history thus obtained is often so characteristic as to warrant the diagnosis of hyperchlorhydria without the chemical examination of the gastric contents. The facts brought out in such a history are somewhat as follows: The patient feels quite well in the morning, and has no discomfort until during the forenoon some time. He can often state the hour at which discomfort begins—one to two, or two and a-half hours after breakfast—the time varying in different cases, and even in the same case. The pain after lasting an hour or two may pass off, to reappear an hour or longer after the midday meal. If the pain continue right up to the time of taking the midday meal, partaking of this meal removes it for a time, the period of relief varying from half an hour to an hour. The duration of the interval of comfort depends upon the severity of the condition and the composition of the midday meal. This sequence of events—meals, intervals of relief, recurrence of pain or discomfort—may be maintained throughout the rest of the day. If the last meal of the day be taken near bedtime, the patient may be wakened from sleep by pain and other symptoms which may keep him awake for an hour or two. The pain or discomfort varies within wide limits; it may be severe and acute, and described as grinding, gnawing, boreing, burning, or the sensation may be of dragging, oppression, or distension. The pain is usually referred to the epigastrium, but it may go through to the back near the spine; it may be present behind either shoulder blade, or be most marked in the normal position of the pylorus, or over the liver behind. The measure and the site of the pain depend upon the duration and severity of the condition more than on any neuropathic tendency in the individual. There is indeed no department where so much is attributed to disordered or disturbed innervation, as in gastric disorders, and the exaggeration of the factor tends to relegate to a subsidiary place the part taken by diet and altered secretion in the production of the symptoms. Symptoms due to one or other or both of these are referred to as nervous, as if a nerve condition were the primary and essential factor, when it is but the sensory index of disordered chemistry. In addition to pain, there may be epigastric tenderness, but this is only present in pronounced cases of considerable duration. The tenderness is quite superficial, and is readily overcome by gently rubbing or handling the skin, and then deep palpation can be practised without causing pain. Other symptoms referred directly to the stomach are flatulent distension, gaseous eructations, heartburn, and acid eructations. The eructation of gas or of a small quantity of acrid material gives relief, temporary usually, but often very marked and out of all proportion, one would think, to the amount eructated. The bowels are constipated, or, even if there be daily action, the removal of the intestinal contents is incomplete. In severe cases there is sometimes great physical and mental misery, coming on or attaining their worst when other symptoms are at their height. The most prominent of these is a sense of physical and mental exhaustion, langour, weariness, and weight in the lower limbs, and inability to apply mind or body to any work. Another symptom has been graphically described by Sir W. Roberts under the designation of "paroxysmal pyrosis," and he regarded it as an "abortive and incomplete act of vomiting." While agreeing with him that this special symptom only occurs during the presence of surplus acid in the stomach, I think, that, instead of its being an abortive act of vomiting, it is a pyloric phenomenon.

The Explanation of the Symptoms.

To understand the symptoms of gastric disorder it is necessary to postulate precise knowledge and a clear comprehension of digestive processes in the stomach. Our food consists of three great classes of nutriment—starch, proteid, fat. The main sources of starch are cereals, including rice and potatoes; of proteid are meat, milk, eggs; of fat are butter, milk, meat. The starches are prepared for food by baking and boiling, being unfit for human food in an uncooked state. The object of cooking is to break the starch capsules and to disintegrate the starch particles so as to expose them to the amylolytic enzymes of the saliva and of other secretions. The longer the cooking at a proper temperature is continued the greater are the changes in the starch and the better the prospect of its speedy conversion. The conversion is effected in the first instance by the ptyalin of the saliva, and this under favourable conditions acts with vigour and promptness, converting the disintegrated but insoluble starch into soluble starch, a long chain of dextrins, and finally into maltose. This amylolytic process continues in the stomach until by the pouring out of hydrochloric acid the gastric contents acquire an acidity of 0.003 per cent. according to Chittenden and Smith. At all events when the acidity reaches a certain degree the digestion of starch ceases, but the digestion of proteids, which has already begun, is accelerated by the increasing secretion of hydrochloric acid and pepsinogen. These three chemical phenomena—starch digestion, arrest of

starch digestion, proteid digestion—are those upon which the unconscious comfort or the conscious discomfort of digestion primarily and essentially depends. When the chemical equilibrium and balance during this period is maintained the stomach works without obtruding its existence on our notice. The full significance of this equilibrium has, however, to be realised; it means the existence of a "correct relation" between the amount of proteid food and the amount of gastric secretion. There ought to be no more gastric juice poured out than can satisfy the needs of—that is, can be taken up by—the proteid. When this is satisfied, the secretion of gastric juice ought to cease, and we cannot doubt that under normal conditions this must be the case. If this arrest of secretion does not occur, equilibrium is upset, and the resulting perturbation depends upon the measure of the excess. The element in the secretion which is the disturbing factor is the hydrochloric acid, and not the special enzyme. The effect of this hyperchlorhydria upon the gastric contents is noteworthy, and requires explanation. The proteid elements of the food are digested with promptness and even with exceptional alacrity; and it might be thought that the other food substances, especially the finely-divided starch food, as bread and oatmeal porridge, would readily pass out of the stomach with the dissolved proteids, but this is not what happens. What does occur is that a considerable portion of unaltered starch is kept back and retained in the stomach. This I have frequently found to be the case. The effect of this retained and unaltered starch is to keep up the gastric secretion while presenting no constituent with which it can combine. The physiological concept is that the undigested starch is readily passed into the duodenum, and its digestion completed in the intestine. Even in such conditions as I am now considering, the undigested starch is, as a rule, ultimately passed on, but this only after much local and often general discomfort, but it may be finally rejected by vomiting. Another interesting observation I have made in this connexion is that not only the unaltered starch may be thus retained, but a considerable amount of the fat of milk may also be retained. I have several times noted this when all the casein of the milk had disappeared. I have seen this both when plain milk and peptonized milk had been taken. When it occurs the fat of the milk is found diffused through the acid fluid removed from the stomach, but partly floating upon it, presenting an appearance as if it were a mass of mucus. When the fat of milk is thus retained, it seems to me that it also keeps up the gastric secretion, and, presenting no element with which the hydrochloric acid can combine, the discomforts of hyperchlorhydria emerge. A third important factor in determining the severity of the symptoms is the kind of proteid food taken. The general law is that the less stimulating and the more easily digested proteids cause less discomfort than do those of a contrary character.

In all three conditions there is the common factor of continued gastric secretion, continued beyond what is required, therefore beyond what can be utilized. This continued secretion when the stomach contents are examined, provides marked evidence of free hydrochloric acid, and a high percentage of acidity. At this stage the stomach contents may only measure from one to a few ounces of very acrid material, mainly fluid, containing starch, some milk fat, and shreds of undigested material according to the kind of food which had been taken. The main residue in ordinary cases is starch. At this period the gastric symptoms are very severe, and I have frequently obtained the contents of the organ when the symptoms were at their height, and have been amazed at the smallness of the amount in view of the intensity of the symptoms. Why a residuum of finely divided although undigested starch should remain in the stomach when other material has passed the pylorus is difficult to explain. The physiological position is roughly this, that the fate of starch in the stomach is of relatively little importance, as it is digested in the intestine; and this, from the nutritive standpoint alone, is true, and explains the fact that sufferers from hyperchylia do not lose flesh unless they adopt a starvation policy in regard to their food. But this physiological truth is one of those truths which has led to a total misapprehension of the phenomena of disordered function such as the physician has to deal with. The interpretation which seems to me to be in accord with my clinical observations is that we have to acknowledge that the unaltered starch is delayed in the stomach, and that it is so even when broken up and digested proteids have escaped. Being thus delayed it continues to stimulate the gastric secretion, and there being no more proteid with which to combine the secretion accumulates and leads to the hyperacidity in question. That this hyperacidity is due to a true hypersecretion is proved by the great peptonising power of the filtered contents when tested in the usual way. Once the residuum in the stomach becomes hyperacid its continued retention is explained by the fact that the hyperacidity keeps the pyloric sphincter closed, or even causes spasm of it.

ETIOLOGY.

Looking, in the next place, at the etiology of hyperchylia, we find ourselves face to face with terms and designations which only obscure the position. The favourite place in which to find it described is under gastric neuroses, nervous dyspepsia, gastric irritation, gastrodynia, or gastralgia. It is not always clear what writers on gastric disorders mean by some of these terms. Whether the idea which is sought to be conveyed is that the pain and discomfort are merely subjective nervous phenomena, or that an assumed neurotic diathesis determines an increased secretion of hydrochloric acid. The underlying idea seems to be that the nervous mechanism is the part of the system which is primarily deranged. This conception I hold to be erroneous and brimful of evil consequences. We all possess a nervous system, some more finely tuned and more responsive than others, and we all grant and recognise the important rôle played by it. All deviations of secretion from an average standard, all increases of secretion, all modifications of chemico-vital reaction, are not to-day accepted as explained or defined by the word "neurotic," and it is time that the word and the idea were relegated to a less prominent place when considering disturbances of stomach function. In opposition to this neurotic view I would submit as a result of my clinical experience and the examination of gastric contents that certain persons are prone to secrete over-much gastric juice, and that possibly the constituent which is primarily at fault is the hydrochloric acid. I have been impressed with the occurrence of severe hyperacidity in some gouty and rheumatic subjects, and by its occurrence in some persons as a consequence of a diet rich in nitrogenous substances. I think, indeed, there is little doubt that we might add to our list of constitutional conditions an acid dyscrasia. To regard the intense misery of severe hyperchylia as a mere neurosis is an impertinence to some of the victims of the condition. Apart, however, from that aspect of the case I hold the merely neurotic view to be disproved by the following phenomena which I have frequently observed: the instantaneous relief obtained by removing an ounce or two of acrid stomach residuum; a like relief obtained by neutralizing the acid by means of alkalies; and the measure of relief obtained by mere dilution. That the over-secretion is more a chemical and a diathetic error than a neurosis is further strongly supported by the experience that the mechanical removal of the hyperacid residuum in severe cases more promptly overcomes the attack than any dietetic or medicinal measure—as if the removal of the acid removed an overflow which otherwise is difficult to arrest, and which when not removed looks as if it were absorbed and again and again resecreted.

Further Local Effects.—The retention in the stomach of hyperacid residuum gives rise further to catarrh and to atonic dilatation. In fact, so-called "atonic dilatation" is very often not primarily an atonicity, but due to a hyperchlorhydria. The steps of this process are too apparent to need further words. In some severe cases relief is ultimately obtained by vomiting. Within the last six months I have twice had a man under my care suffering from intense hyperchylia, whose gastric contents when brought up by vomiting were green in colour from admixture with bile, but were never green when removed by the stomach tube. What evidently happened here was that with the onset of nausea there was a reflux of bile from the duodenum which seemed to determine active vomiting.

TREATMENT.

The treatment to be selected depends upon the severity of the condition and the history of the case, and only the general principles can be indicated here. In mild degrees, associated with constipation, the correction of this may be sufficient. In other instances an alkali taken some time before food neutralizes any acid residuum and facilitates the transformation of the starchy elements of the next meal. In other instances relief is obtained by the administration of even a small dose of an alkali as soon as discomfort begins. This has for some time been to me a clear practical fact, and it has now the support of Pawlow's work on the secretions of the digestive glands. I have had no success with the administration

of acids in this condition, although in some other gastric disorders I use them with good effect. As regards diet this also has to be determined by the severity of the symptoms. In some cases the prohibition of the more common forms of starch such as potato and untoasted bread is sufficient; in others still greater care must be exercised in the selection of the most readily digested carbohydrates. Another class may get past their immediate discomfort by the use for a day or two of readily digested pure proteid diet, and the gradual addition to this of the most soluble carbohydrates available.

A few weeks ago I promptly gave relief to a young woman who had been sent to me with pain coming on an hour or more after every meal, and so severe that she was almost afraid to touch food of any kind. A couple of days on raw eggs, and then the gradual addition of suitable carbohydrate gave complete relief. In the severest cases I find the removal of the gastric residum the speediest means of temporary cure. I say temporary, for as I hold the condition to be a chemical dyscrasia, and not a neurosis, permanent cure or anything approaching it can only be looked for from a dietary adapted to counteract or prevent the chemical dyscrasia manifesting itself.

The considerations determining the dietary are (1) the proteids ought to be reduced to a physiological minimum, and ought to be so selected and cooked as to be easy and ready of digestion; (2) the starches should be as much altered as possible;[1] (3) the quantity of food should not exceed the physiological requirements. Proceeding on these broad lines we may have every confidence in assuring our patients of recovery, and that continuance on the lines indicated will carry with them the reward of physical and mental well-being.

Note.

[1] Of these there are now several on the British market suitable for ordinary daily use.

An Address

on

THE OPERATIVE TREATMENT OF ENLARGED PROSTATE.

Delivered before the Section of Surgery of the Royal Academy of Medicine in Ireland.

By Sir WILLIAM THOMSON, C.B.,

Surgeon to the Richmond Hospital, Dublin; Hon. Surgeon to H.M. the King.

Removal of the prostate, or of portions of it, because of obstruction to urination, is a procedure which, in this country at all events, has the attractiveness of novelty. I think I may say that there are few here to-night who have seen the operation performed, and perhaps still fewer who have themselves done it. Prostatic obstruction, with all its attendant miseries and its tendency to cause the death of the patient, has until recently been viewed as a condition impossible to cure, and the surgeon's ingenuity has been directed to palliating the victim's distress by the use of the catheter and the administration of soothing drugs.

We have almost vainly hoped for a method comparatively safe and rapid of removing for good and all the body which produced the trouble. In the efforts to attain this McGill, of Leeds, and Belfield, of Chicago, stand prominent, and others have occasionally followed their example. But somehow to the majority of surgeons the radical operative methods have not commended themselves, and in the fourteen years which have elapsed since McGill's reports there certainly has been no general adoption of prostatectomy. If to-day British and Irish surgeons stand in the position that the principle of operative interference is accepted and practised on some approved line, I think I am right in claiming for Mr. P. J. Freyer, of London, that it is due to his strong advocacy and to the remarkably successful results which he has achieved.

I do not intend to discuss the cauterizing or cutting operations upon the prostate through the urethra by the methods of Bottini or Norton, in which the object is to remove only such portions of the gland as cause obstruction to the flow of urine. I wish to refer rather to those operations which aim at removal of the whole gland, or of adenomatous masses, which, for practical purposes, may be regarded as the gland. These may be divided into two great classes—the suprapubic and the perineal; and a subclass may be added in which the two procedures are combined.

Historical.

Suprapubic cystotomy for the removal of tumours of the wall, or of stone, appears to have suggested to the late Mr. McGill, of Leeds, that a like course might be successfully pursued in regard to the prostate. His first operation was done in March, 1887, and this, with three others, was reported to the Clinical Society of London in November of the same year. His example was followed by his colleagues, and two years later he reported the results at the annual meeting of the British Medical Association. Twenty-four operations had been done, and the number was made up as follows: McGill, 12; Atkinson, 5; Mayo Robson, 3; Jessop, 3; Pridgin Teale, 1. Of these, 4 died, and of the remaining 20, 7 no longer required the use of a catheter and were able to expel urine normally. You will notice, therefore, that only about one-third of the surviving patients were restored to freedom of urination.

But in comparing these results with what we expect to-day it is important to note particularly the nature of McGill's early operations. He says: "The growth has been removed partly by tearing with forceps and partly by a strong cutting instrument which I have devised for the purpose. This is a tedious and not very elegant proceeding; it will, if the operation prove a useful one, probably be improved. The piecemeal removal which I have practised has, however, been thus far satisfactory.[1]

Now when we look into the details of the reported cases[2] we find that in most instances only a partial removal was effected, and that the patient had still to run the risk of a continued growth of the parts left behind. Thus, we have these descriptions of the parts removed: (Case 2) Middle lobe size of a bean; (3) collar enlargement, size of a walnut; (8) middle lobe, size of a filbert; (12) piece, the size of a small pea; (16) middle lobe, size of a filbert. Atkinson snipped off a middle lobe with scissors, and enucleated the lateral lobes with the finger. In the eighteenth case McGill "enucleated a portion" of the prostate; and in the twentieth, having removed the middle lobe with the forceps, enucleated the lateral lobes. These cases, therefore, were in the main partial removals by means of scissors and forceps, and the enucleation was apparently an unexpected incident arising during the operation. The fact that adenomata of the prostate could be so removed was already known. Harrison had reported such a result in the course of a perineal operation for stone. In 1878 Bickersteth, of Liverpool, in performing lateral lithotomy had shelled out an adenoma the size of a hen's egg. In 1870 Sir William Fergusson "narrated a case where, in a patient 80 years of age, after removing the stone by lithotomy, he extracted the lower part of the prostate with the finger as readily as if it had been a stone."[3] Other like cases are on record.

Various Methods.

The possibility of enucleation, then, had been known for many years, and two years after his first case McGill, with larger experience, laid down the principle that "the prostate should be removed as far as possible by enucleation with the fingers, and not by cutting." Nevertheless, this fact, and the promising successes of McGill and his colleagues, appear to have made hardly any impression upon the surgical mind in these countries. Only here and there did their suggestions produce any effect; there was no general acceptance, and the position may be taken as accurately described by Buckston Browne, who so lately as last year[4] declared: "The fact is that prostatectomy has been abandoned by the majority of surgeons as too dangerous an operation to be undertaken save under very exceptional circumstances." It was only a year ago that Freyer's reported cases and the heated controversy which they excited, awoke the profession generally to the powers within our reach in this branch of surgery. The American surgeons—notably Belfield and Fuller—were not, however, unimpressed by English experiences, and in that country the operation has reached a stage of marked development.

The operation which I have carried out is that advocated by Freyer, and it is to him I owe it that I have had some success in dealing with enlargement of the prostate. The method is thorough, and it requires no instrument for the ultimate steps. The bladder is opened in the suprapubic

region, having first been thoroughly washed out and distended with boric lotion. A catheter is allowed to remain in as a guide to identify the urethra. The prostate having been reached, the mucous membrane is snipped or scraped through. Then two fingers of one hand are passed into the rectum to raise and fix the prostate, and the forefinger of the other is used to shell out the structure either in two or more well-defined pieces or in a single mass. This is sometimes a very laborious task, but with patience the whole obstruction can be satisfactorily removed. Bleeding is generally controlled by free douching with hot boric lotion. A large drainage tube is allowed to remain in for forty-eight hours, and the bladder is daily washed out. The wound is usually closed in about four or five weeks.

The operation by the perineal route consisted at first in making an incision into the urethra, and then dealing with such obstructing portions as could be removed by means of forceps or scissors. But it has now developed into an enucleation, and is much practised by American surgeons. Thus, A. B. Johnson, New York, makes a curved incision in front of the anus, and exposes the prostate by dissection. "After incision of the capsule upon either side in the direction of the fibres of the levator ani the two halves of the gland were enu leated with the forefinger."[5] The urethra is not opened. Samuel Alexander, of New York, says: "The true breadth of the prostate is broken into by the finger just beneath the mucous membrane of the prostatic urethra, and the incised prostate is shelled out from within its sheath by digital dissection."[6] Nicoll and others in this country prefer the perineal operation.

The combined perineal and suprapubic operation is represented by Belfield in America, who advocates the lower incision. He believes that the low-level drainage thus secured avoids dangers which may attend the high operation. I have no doubt that in certain cases this combined method is admirable. It will always be of special advantage when the urine is putrid, because it enables us to secure safe tube drainage until the wounds are secure against absorption. But I am not yet prepared to adopt it as a routine method, however excellent it may be in special cases:

For reasons which I shall state later on I have selected the suprapubic operation, and the cases in which I have practised it are as follow:

CASES.

CASE I.—The patient was a gentleman, aged 66, who for nearly fifteen years had suffered from frequent micturition. The details have already appeared in the BRITISH MEDICAL JOURNAL, May 31st, 1902. Last month this gentleman wrote to me: "A year ago to day I was in your hands for operation, which you performed so successfully, and I feel that I must send you something for the hospital (your ward, if possible) by way of a thank-offering for all you did for me. ..... I am thankful to say that I have no trouble at all with the waterworks part of my mechanism, and you can appreciate what a relief that is."

CASE II.—A gentleman, aged 75. He had been using a catheter for some years, but latterly it always produced bleeding, and sometimes he quite failed to pass the instrument. The residual urine varied from 4 oz. to 6 oz. There were a few granular tube casts and a small quantity of albumen present. Urea 7 gr. to the ounce. The prostate was easily outlined in the rectum. I put before the patient, who was a medical man, all the circumstances of his case, but he said his life was miserable. At times he had from twenty to twenty-eight calls to urinate during the night. I accordingly operated on September 28th, 1902. The lateral lobes were enucleated as before. There was no middle lobe. All went well until forty-eight hours later, when he had a slight cough, and *rdles* were found present. Dr. Coleman saw him with me at once, but in spite of all our efforts the bronchial condition became worse and he did on the fifth day. Throughout there was no trouble with the operation wound, and urine flowed freely from it. I have no doubt that the fatality was due to the irritation of the air passages set up originally by the ether, although the amount administered was small. In this case the weight of the tumour was 600 gr.

CASE III.—J. T., aged 62, was admitted to the Richmond Hospital on October 2nd. He had an enlarged prostate. He complained of great frequency of micturition day and night, sometimes as often as twice in an hour. His condition was such that he could not work. Residual urine 4 oz.; it was alkaline, and contained pus and blood cells, much epithelium, and some granular casts. He was suffering from some cystitis, and this having been allayed I operated on October 13th. The left lobe was removed, and an examination of the right showed it to be of normal size, and I determined not to interfere with it. The patient passed water per urethram on November 8th. There was a good deal of calculous deposit, which delayed the healing of the wound, and on the subsequent closure of the fistula he passed a quantity of small fragments. He is now quite free from all trouble. He sleeps for six hours undisturbed, and can pass water in a full stream.

CASE IV.—W. H., aged 63; admitted to Richmond Hospital October 9th, 1902. For three years he has had to pass water about fourteen times a day. He has been using a catheter for some time; and he was admitted for complete retention, which the medical men who saw him in the country could not relieve. Mr. Moore, the house-surgeon, succeeded in passing a catheter on his arrival. He had a bad attack of cystitis, which was treated. The residual urine was 6 oz.; it was alkaline, and contained some albumen and a very few granular casts. The arteries were very rigid. I operated on him on November 10th, 1902. The whole mass of the prostate came away in one piece, including the prostatic urethra, the enucleation lasting about ten minutes. There was not much haemorrhage at the time, but it was reported at 4 o'clock that there was smart bleeding. Mr. Harvey used the hot douche with some effect, but at 7 the bleeding recurred. Adrenalin was then injected without avail, and I saw the patient with Mr. Harvey a little after 8. We then decided to use a compress on the prostatic site. For this purpose the patient was anaesthetised. A large plug, tied in the centre with a long silk ligature, was introduced. The ligature was attached to a catheter which had been passed, and was then withdrawn, carrying with it the silk. By traction upon this I found that the bleeding was at once stopped, and an assistant remained with the patient for this purpose. After thirty-six hours the plug was removed. Although the patient never had a temperature above 100°, the healing of the wound was delayed by the disturbance and by the calculous deposits upon the edges. He has returned home, and has no pain and no difficulty in passing water. He complained at first of some frequency, but this soon abated. The tumour weighed 900 gr., or over 2 oz.

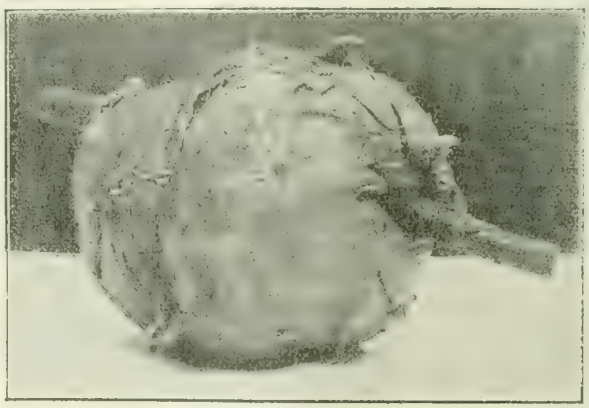


Fig. 1.—Prostate and urethra removed *en masse*. The roughness of the catheter is due to formalin. Weight, 900 gr.

CASE V.—A gentleman, aged 53. For some years he has had to rise two or three times at night to pass water. About two years ago he found he had to do this in the daytime about every hour. The residual urine was about 4 oz. It became necessary to use a rubber catheter; without it he could only pass a few drops after much straining. Sometimes he has had to rise every quarter of an hour at night. The straining often caused an evacuation of the bowel. Difficulty in passing the catheter followed; and at the time I saw him with Dr. M'William, in December, he was using a No. 5 coudé catheter. He had several attacks of cystitis, and was subject to frequent rigors. He accepted the recommendation of operation, and accordingly on January 13th last I removed the tumour, assisted by Sir Thornley Stoker, and in presence of Dr. M'William, Dr. Dobbin, and Dr. Keegan. Dr. Coleman gave the anaesthetic. Unlike the other cases the lobes were irregular in outline, this being produced by adenomatous masses of varying size. They were enucleated to the number of five, three of them being of the size of walnuts. The case was the most difficult I have had, and took a considerable time; but I am glad to report that the patient never had a bad symptom, and has returned home. The case is interesting in regard to the comparative youth of the patient.

COMPARISON OF METHODS.

Of course the advocate of each method has fault to find with all others. Thus it is objected that the suprapubic operation is dangerous, that drainage is unsatisfactory, that extravasation of urine and sepsis are likely to take place, and that the recovery is tedious. For myself I can say that in a large number of cystotomies which I have done I have seen sepsis only once, that I have had only one death resulting from operation, and that extravasation of urine has never taken place. The recovery is tedious, but rarely exceeds five weeks.

The objections to the perineal route seem to me to be more weighty. Those who have explored the bladder through the lower central incision have probably experienced how difficult it is to reach the upper limit of a moderately-enlarged prostate. Watson, of Boston, himself an advocate of this procedure, points out that an essential possession for the surgeon who adopts this method is a forefinger with a working length of three inches or more. Well, first you must have the finger; but, having it, what is the result?—that only two-thirds of the cases could be dealt with through the perineum. As M'Gill judiciously declared: "It is unwise to commence an operation with the probability of failing in 30 per cent. of the cases." Of course the answer will be that the surgeon in such a case could then do a suprapubic section; but on general grounds, it is undesirable to change a method midway, and certainly better to select a plan which we can follow out to a definite conclusion. Efforts to lessen the difficulty of reaching the distant parts of the prostate by the finger through the perineal urethra have naturally been made. One is to draw it down by fingers in the rectum; another to make a small suprapubic wound, and through it push the prostate towards the perineum; and Fry passes a hollow ball into the bladder through the perineal wound, distends it with water so as to make a bulk sufficient to "hitch" against the upper vesical portion of the prostate, and then pulls it down by means of the flexible tube through which the water is passed into the ball. It looks an attractive contrivance, but I know a case in which the tube broke off on traction, and the ball was left useless in the bladder. It further seems to me that there is danger in perforating the vesical mucous membrane during the removal of the prostate through the perineum. That structure is thin, and the finger-nail can easily penetrate it. The result would be an opening through which urine would infiltrate the structures at the outlet of the pelvis, in spite of the draining by catheter through the urethral incision.

But, outside all these possible difficulties with the prostate itself, there can be no doubt that we cannot through the perineum make a complete exploration of the bladder with the finger, and that it is quite possible, as I know, to miss an encysted, or even a loose, calculus. I have seen one case which was under treatment for enlarged prostate for some years, without there being a suspicion of stone, and yet the bladder really contained over 80 calculi—many as large as marbles. There the suprapubic route for the combined operations of prostatectomy and lithotomy offered immense advantages over the perineal.

But while I am of opinion that the method which I have followed is preferable to others, I think there are cases in which operation through the perineum may be more easy. For instance, in a man with a large pendulous abdomen, the suprapubic wound is many inches deep, and unless the fat is very freely divided so that the hand can get down into proximity to the bladder, the finger will carry out the work of enucleation with great difficulty; there is, perhaps, more danger of infection and the wound is slow to heal. Small prostates may be more easily removed through the perineum; but that route is certainly unfitted for the enucleation of some of the large masses with which we meet. The finger in such cases has to be supplemented by instruments, and the tumour, instead of coming away in a well-defined mass, is broken up into several pieces.

There are a few points to which I wish to call your attention as the result of my own observations:

1. So far as I have seen, the lateral lobes are most frequently the cause of obstruction. I have not myself seen a true pedunculated mass producing a block at the internal orifice, although we have been in the habit of laying stress upon this as the usual cause of the urinary distress.

2. The bulk of the prostate as felt in the rectum gives us no indication as to its intravesical contour. It may present two smooth lateral masses in the bladder, with the urethral opening forming a dimple between, or it may have a somewhat undulating surface, due to the projection of adenomatous tumours in the substance of the gland itself. No extravesical examination will determine the difference, although in cases where the prostate is very large its general outline may be determined by a bimanual examination—two fingers of the left hand being in the rectum, and the right fingers over the bladder.

3. The size of the prostate has no necessary relation to the severity of the urinary distress. In the case in which I removed only one lobe, which was small, the patient had had repeated attacks of retention and cystitis. His calls at night were often as many as twenty, and he was quite unfitted for work. Yet the tumour is of inconsiderable size comparep with the remainder of those I show you.

4. The smaller the tumour the more difficult relatively is its enucleation. Mr. Freyer has also observed this fact, and he accounts for it by the suggestion that the large tumour shakes itself free, as it were, from its natural attachments. The prostate which I exhibit, which was removed with its urethra, only took ten minutes to enucleate. The single lobe took twenty-five minutes of hard work. I think the removal of the larger tumours is more facile, because they are more bulky, looser in their attachments, and therefore more easily dealt with by the forefinger when they are pressed upwards from the rectum. The smaller ones are not so stable; they are apt to move much during the enucleating process. Added to all this there is no doubt that the attachments of the mucous membrane are more intimate and require a good deal of cautious force to free them.

The Treatment of Haemorrhage.

Although haemorrhage is usually easily controlled by flushing with hot boric solution, it may be severe, owing to opening of a vein in the prostatic plexus. Bleeding has sometimes caused death, and in one of my cases I found it necessary to introduce the compress which I have described. The objection to the plugging of the bladder is that we have afterwards to remove a bulky mass, and so disturb the union which has begun. There is then risk in opening channels for infection or extravasation. I have devised a method of dealing with the complication which, I think, will be found effective and simple (Fig. 2). A piece of smooth red rubber, ⅛ in. thick, is cut in oval shape, 2 in. by 1½ in. A long, strong silk ligature is passed through the rubber at a point midway in its smaller diameter, and ⅜ in. from the edge of the larger diameter. The needle should pass in obliquely from without. The other end of the silk is introduced in the same way ⅜ in. from the opposite edge, and the two portions are tied together in a knot, close to the under surface of the rubber. The ends are then secured to a catheter, which has been introduced through the urethra, and the instrument is withdrawn. Pulling on the ligatures which have so been carried out through the urethra, the flexible rubber oval fits easily over the site of the prostate, and moderate traction will control the bleeding. This can be effected by attaching the traction silk to a piece of strong elastic, which is in turn secured to a turn of bandage round the lower part of the patient's thigh. The tendency to haemorrhage, however, is not likely to continue long. In order to remove the rubber a silk ligature is passed through one end, about ¼ in. from the edge. Traction upon this pulls out the little plaque edgeways, and practically no disturbance of parts results. The objection to the cotton pad suggested by Keyes is that it is complicated and cumbrous, and that adhesions occur which make the removal most painful and demand an anaesthetic. The rubber is clean, small, non-adherent, and it can be removed without difficulty.

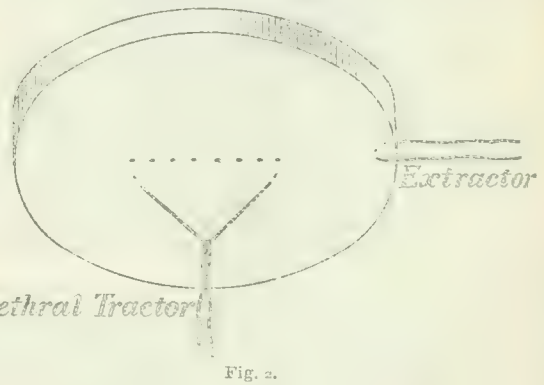


Fig. 2.

In a discussion upon this subject in this Section last year several members declared that enucleation of the prostate, as a whole, was an anatomical impossibility. I have, in another paper,[7] stated the views of many surgeons upon this point. I think there can no longer be any doubt that while we often remove only adenomata, leaving behind a thin layer of the original gland, expanded and squeezed into a thin layer, we can, and do, at other times take away the whole prostate. I show you to-night the enlarged prostate removed in one piece

and enclosing in its mass the prostatic urethra. Strange as it may seem, the patient has not suffered from the mutilation, and the same result has been observed by Freyer and other operators who have had a like experience.

The after-management of these cases needs the utmost care, but the surprisingly good results which follow are worth all the time and trouble which the surgeon devotes to them.

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[1] *Clin. Soc. Trans.*, 1888, p. 52. [2] BRITISH MEDICAL JOURNAL, October 19th, 1899, p. 864. [3] Harrison on *Surgical Diseases of the Urinary Organs*, 3rd Edition, p. 343. [4] BRITISH MEDICAL JOURNAL, March 29th, 1902, p. 763. [5] *Annals of Surgery*, vol. xxxiv, p. 421. [6] Ibid., vol. xxiii, p. 334. [7] BRITISH MEDICAL JOURNAL, May 31st, 1902.

A Clinical Lecture

ON A FIFTH SERIES OF CASES OF

TOTAL EXTIRPATION OF THE PROSTATE FOR RADICAL CURE OF ENLARGEMENT OF THAT ORGAN.

Delivered at the Medical Graduates' College and Polyclinic.

BY P. J. FREYER, M.A., M.D., M.CH.,

Surgeon to St. Peter's Hospital, London.

GENTLEMEN,—It will be within the recollection of some of you present here to day that in a lecture delivered at this College on July 20th, 1901, I placed before this class details of my new operation of total extirpation of the prostate for radical cure of enlargement of that organ. I also gave particulars of four cases in which I had performed this operation successfully, two of the patients being present to tell their own tales. Since then I have from time to time communicated to this class particulars of series of cases in which I had performed this operation, and exhibited many of the patients in good health, untroubled by any urinary symptoms. I have in these lectures brought to notice various developments incident to an increasing experience of the operation. The cases—21 in all—have been published in detail in the BRITISH MEDICAL JOURNAL,[1] as also a description of the anatomical and pathological conditions that render the operation practicable. A more elaborate description of these latter conditions will be found in my work on *Hypertrophy of the Prostate*.[2] To-day I have to invite your attention to a further series of 10 cases operated on by me in the period between my return from my autumnal holiday in September and the end of the past year.

CASE XXII.

Gentleman, aged 65, patient of Dr. F. Milburn, of London, seen first July 16th, 1902. Usual prostatic symptoms, gradually increasing for ten years. Whole of urine drawn off by catheter for six months. Much pain at times, haematuria, and difficulty in passing catheter. Chronic cystitis. Urine contained pus and mucus, but was faintly acid. Prostate much enlarged per rectum, bilobed, tense, smooth, movable. Cystoscopy on August 5th revealed irregular prominence of the prostate in the bladder, particularly of the left lobe, presenting a so-called "middle" lobe the size of a gooseberry.

On September 9th, Dr. Milburn being present, I opened the bladder suprapubically and enucleated the prostate as a whole, in the manner already described, with a thin band of the sheath formed by the recto-vesical fascia adherent to it from chronic inflammation. The prostatic urethra came away with the prostate. Nine minutes elapsed from commencing the suprapubic incision till the prostate was delivered from the bladder. Scarcely any bleeding, and no shock.

Recovery took place without any rise of temperature. Urine began to flow naturally September 22nd; wound closed September 29th; left the surgical home in good health October 5th, able to pass and retain his urine as well as he ever did. Came to see me November 6th in excellent health, untroubled by any urinary symptoms.

The prostate, which is pear-shaped, weighed 2⅔ oz.

CASE XXIII.

Captain J., aged 72, came from Wales to consult me October 24th, 1902, on the advice of Dr. A. Rees, of Cardiff, and Dr. Ironside, of Hampstead. Prostatic symptoms for nine years; retention of urine six years ago; much pain and haematuria for four years; catheter regularly employed for three years.

I drew off 6 oz. of turbid urine containing some pus and mucus. Sounded, but no stone found. Prostate enormously enlarged per rectum, bilobed, smooth, plump, soft, elastic, movable; suffering from chronic bronchial catarrh. Pulse irregular and bounding; high tension. Patient very stout.

On October 17th, Mr. C. Braine giving chloroform, Colonel Lucas, C.B., and Major Freyer, C.M.G., being present, I opened the bladder suprapubically. Prostate found much enlarged into bladder, particularly the left lobe, which projected like the handle of a pistol, forming a so-called "middle" lobe. The prostate was enucleated easily and rapidly, the lobes separating along both commissures, and coming away separately, leaving the urethra behind uninjured. There was very little bleeding, and the operation was completed in twenty-four minutes.

The recovery was uneventful. Some urine passed naturally on October 20th, and the whole of it in this way on and after November 8th. On November 27 he went home to Wales in excellent health, untroubled by any urinary symptoms. On December 1st he wrote: "I am feeling splendid. I now make water freely, and have thorough control of it."

Fig. 1 is the prostate, weighing 6½ oz. The left lobe (A) was continued into the bladder, forming a projection like the handle of a pistol—the so called "middle" lobe—and obstructed the entrance of the catheter.

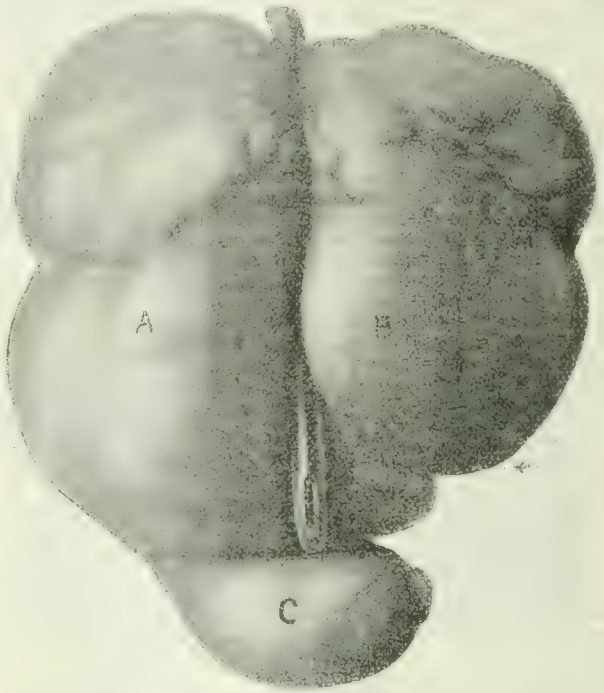


Fig. 1.—Prostate, weighing 6½ oz., removed from a patient aged 72. Actual size. C, pistol-shaped continuation of left lobe (A), forming so-called "middle" lobe, which obstructed entrance of catheter. B, right lobe.

CASE XXIV.

J. H., aged 66, sent me by Dr. Wm. Curtis, Alton, Hants, August 5th, 1902. Prostatic symptoms for thirty years. Retention twenty-four years ago; urine drawn off by Dr. Curtis. Since then no urine passed except by catheter. During last two years in great agony from usual symptoms of stone, superadded to those of enlarged prostate. Has had numerous attacks of cystitis with fever. Catheter now required every half to one hour. Inguinal hernia requiring a truss. Patient extremely feeble, anaemic, and much depressed. I drew off 3 oz. of stinking urine containing blood, pus, and mucus. Sounded and multiple calculi detected. Prostate enormously enlarged per rectum bilaterally, soft, elastic, movable, placed high up, so that the finger cannot reach beyond it. Operation postponed till my return from my autumnal holiday.

Litholapaxy in September, débris of calculi weighing 180 gr. Thirteen days under treatment, when he left for home to recruit his health preliminary to undergoing operation for removal of prostate.

Returned on November 4th; bladder washed out twice daily to improve its condition. On November 12th I removed the prostate as usual, both lobes of which were unusually prominent in the bladder. The lobes separated along both commissures, and came away separately, leaving the urethra behind. There was considerable haemorrhage and shock, and for several days patient suffered much from nausea. The wound was slow in healing, no urine passing naturally till December 15th. On December 28th the suprapubic wound had closed, and on January 6th he went home quite well, passing and retaining his urine naturally. On January 8th Dr. Curtis wrote: "I am perfectly delighted with the result. It is a triumph of surgery."

Fig. 2 is the prostate, weighing 6¾ oz., the lobes (A, B) being placed in apposition as before removal. On the prominent portions in the bladder, at C, C', are ulcers, no doubt caused by the calculi previously removed by litholapaxy.

CASE XXV.

Captain E., aged 68, came from Argyllshire to consult me on November 17th, 1902, on the advice of Dr. G. Henderson, of Kirn. Prostatic symptoms for nine years; urine entirely by catheter for six years. During the last three years frequent attacks of cystitis and haemorrhage, which blocked the catheter, which had to be passed every hour day and night; excruciating pain, requiring morphine to subdue it; urine thick with pus

and mucus. "Is now in such a state," wrote Dr. Henderson, "that he would submit to anything rather than go on suffering as at present." I drew off a couple of ounces of urine thick with pus, mucus, and blood, and of a fearful stench; and with the soft catheter detected calculi in the bladder. Sounded and found many calculi present. Prostate enormously enlarged per rectum, bilobed, rather hard, nodulated, but movable. Patient emaciated, but wiry.



Fig. 2.—Prostate weighing 6¾ oz. removed from patient, aged 66. A, B, lateral lobes. C, C', ulcers on prominent portions in bladder caused by calculi.

On November 19th, assisted by Mr. Wylie, Majors Freyer and Johnson being present, I opened the bladder suprapubically, and found it full of calculi—like a cup full of pebbles from the seashore—varying in size from a hazel nut downwards, each facetted, and all composed of phosphates. These I extracted by forceps and scoop, the process being a lengthy one, occupying 35 minutes. There were 96 whole calculi counted, besides the débris of many more, the whole weighing 5¾ oz. The prostate was then enucleated as a whole in its capsule, the lateral lobes separating along their superior commissure, the urethra being left behind. The prostate was so large that it had to be divided into its two lobes in the bladder by the finger to facilitate its removal. The enucleation and removal occupied five minutes. Though there was free bleeding during the removal of the calculi there was practically none during removal of the prostate. Convalescence was established without any rise of temperature or other bad symptom. Some urine passed naturally on December 6th, and entirely so on and after December 12th. On December 30th he travelled home to Argyllshire in perfect health, having put on much flesh, able to pass and retain his urine naturally.

Fig. 3 is the prostate, weighing 6¾ oz. The catheter shows the tortuous shape of the urethra. The end of the right lobe (B) projecting into the bladder is ulcerated, caused by the calculi. Fig. 4 (p. 900) are the calculi removed.

Case XXVI.

Gentleman, aged 65, sent me by Sir Thomas Barlow, November 18th, 1902. Usual prostatic symptoms for three years. Catheter employed once nightly without much relief, as he has to pass urine hourly day and night. Catheter causes bleeding. I drew off 8 oz. of residual urine, turbid with muco-pus. Prostate much enlarged per rectum, bilobed, smooth, soft, elastic, and movable. Cystoscopy on November 20th revealed prominence of both lobes in bladder, particularly of the left, with lip-shaped projection growing from it on left of trigone. Considered good case for removal of prostate, except that patient was very stout.

On November 25th, Mr. C. Braine, anaesthetist, and Major S. F. Freyer assisting, I removed the prostate as a whole in its capsule, the lobes separating along their superior commissure, leaving the urethra behind intact. Time occupied by operation twelve minutes; enucleation of prostate into bladder took four minutes. Scarcely any bleeding: no shock.

The patient made a rapid recovery, passing some urine naturally December 10th, and the suprapubic wound being completely closed December 16th. On December 19th he had a rise of temperature, apparently due to influenza, followed by slight jaundice, for which Sir Thomas Barlow saw him with me. This passed off in a few days, and on December 30th, Sir Thomas saw him in good health, untroubled by any urinary symptom. He left for home on December 31st. The prostate, which weighs 3¾ oz., is an excellent specimen, complete in its capsule.

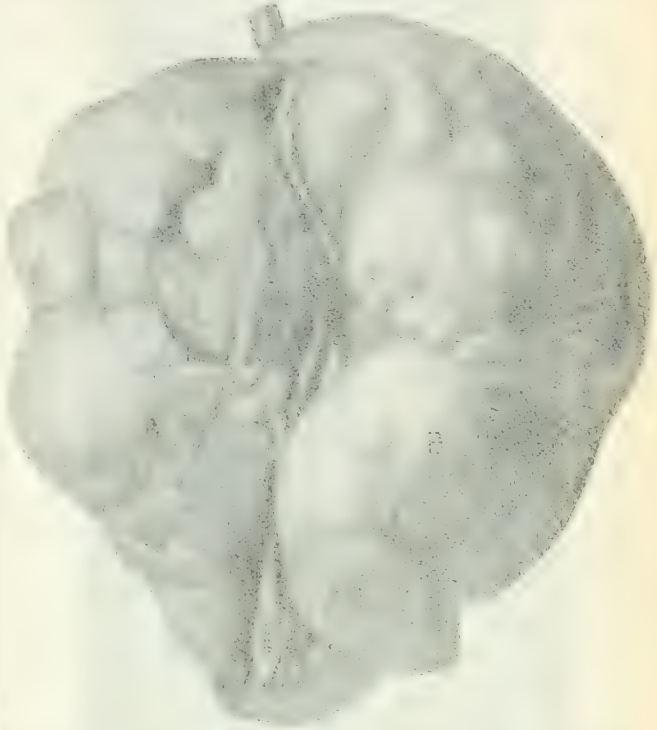


Fig. 3.—Prostate weighing 6¾ oz. removed from patient aged 68. Actual size. A, B, lateral lobes. Bladder end of B shows an ulcer caused by calculi. Catheter placed in course of urethra, showing its tortuous shape.

Case XXVII.

Gentleman, aged 72, seen in consultation with Dr. A. J. Fleming, of Hampstead, November 22nd, 1902. Usual prostatic symptoms gradually increasing for seven years. In March last had retention, for which the catheter was passed, followed by rigors and high fever; fourteen days in bed. Since then catheter regularly employed four or five times by night and once by day. No urine passed without catheter by night, some in the day. Several attacks of cystitis with fever since then; bladder washed out twice daily. Abscess of left kidney suspected in July; well-known surgeon called in in consultation. Urine then of specific gravity 1010. Two nurses in attendance since March. Went to Swanage in August, and had severe rigors with fever, from which he nearly died. Haemorrhage occasionally. I drew off 6 ounces of residual urine, faintly acid, with some pus and mucus. Prostate much enlarged per rectum, bilobed, broad, soft, smooth, movable. Patient, who had never been a strong man, extremely weak, emaciated, and anaemic. Cystoscopy revealed a well-marked outgrowth of right lobe in bladder.

On December 3rd Mr. Bakewell anaesthetist, Mr. Wylie and Dr. Fleming assisting, Major Freyer and Captain Erskine being present, I removed the prostate entire, leaving the urethra behind. Enucleation easily and rapidly accomplished, with scarcely any bleeding. The convalescence, though slow, has been uneventful, except for slight secondary haemorrhage on the eighth day. Urine began to pass naturally on December 26th; wound completely closed January 9th, 1903. He is now able to pass and retain urine normally, walking about his room daily and putting on flesh. He will leave the surgical home in a day or two.

The prostate weighs 2½ oz., and presents a well-marked outgrowth of the right lobe—a so-called "middle" lobe.

Case XXVIII.

On November 16th, 1902, I was summoned to Stockport to see a gentleman, aged 63, in consultation with Dr. Hyde Marriott of that place and Mr. Southam of Manchester. Prostatic symptoms for seven years; catheter from two to four times daily for five years, latterly attended with much difficulty of introduction and haemorrhage. Had retention in Brussels in the previous summer, when 26 oz. of urine were drawn off by a Belgian surgeon; subsequently profuse haemorrhage, necessitating the tying in of a catheter for four days, when patient's life was despaired of. Latterly the bleeding had increased in frequency, and when I saw him in consultation he was confined to bed from weakness caused thereby. I passed a coudé No. 8, and drew off 8 oz. of blood-stained urine containing some pus and mucus. Sounded; no stone present. Prostate greatly enlarged per rectum, bilobed, smooth, tense, soft, movable,

After consultation it was decided that the case was one suitable for removal of the prostate, the only drawback being that the patient was very stout. On December 4th he was sufficiently strong to travel to London.



Fig. 4.—Jar containing 96 entire calculi and débris of others, weighing 5¼ oz. removed from the bladder of Case XXV.

On December 8th I removed the prostate, Major Freyer and Dr. Marriott assisting. The prostate came away entire, together with a thin layer of the recto-vesical fascia, or sheath, outside it, which was adherent from old-standing inflammation. The prostatic urethra was also removed. Nine minutes elapsed from commencing the operation till the prostate was delivered from the bladder. Some urine passed naturally on December 20th, and entirely so on December 24th, after which the suprapubic wound did not reopen, and convalescence was established without a rise of temperature. The only interruption to his progress was an attack of biliary colic followed by jaundice, for which he was seen by Sir Thomas Barlow in consultation with me on December 30th; this gradually subsided. After January 3rd the patient went out for a walk daily, and on January 8th he left for Stockport, able to pass and retain his urine naturally.

Fig. 5 is the prostate, pear-shaped, and weighing 5½ oz. The lateral lobes (AA', BB') are seen covered by their true capsule, and outside of them is a thin band (C) of the recto-vesical fascia, or sheath. The prominences (A, B) projected into the bladder, forming a collar round its orifice.

CASE XXIX.

On December 10th, 1902, I was called in consultation with Mr. A. V. Evans, of Weybridge, to see a gentleman, aged 68, who had suffered from prostatic symptoms for many years. Great frequency of micturition—every hour for three months, and half-hourly for three weeks at night; less frequently in the day. Had retention ten days previously, when Mr. Evans drew off some 50 oz. of urine by the catheter, leaving a large quantity behind, so as to empty the bladder gradually. Haemorrhage three days after. London surgeon called in, and bladder then emptied by Mr. Evans for the first time. Much difficulty in introducing catheter at times; impossible to do so on the night of December 9th, when I was summoned, but on my arrival next morning the difficulty had been surmounted.

I drew off 15 oz. of bloody urine containing pus. Prostate enormously enlarged per rectum, bilobed, soft, movable. Patient extremely stout, suffering from emphysema, chronic bronchitis, and "gouty heart"; urine of low specific gravity. As suprapubic drainage of the bladder might be necessary at any time, and could not in any case be long delayed, owing to the difficulty in passing the catheter, I advised removal of the prostate, at the same time pointing out that owing to the extreme stoutness of the patient, and the conditions already referred to, the operation could not be regarded as devoid of danger.

The patient continuing to lose ground, and the catheter difficulty increasing, he was brought to London nine days after, and kept under observation for a few days to prepare him for operation. There was much difficulty in catheterism at times, and the patient was very drowsy, constantly falling asleep unless kept awake. This latter symptom was noticed for some days before he came to London.

On December 24th Mr. C. Braine anaesthetist, Mr. Evans and Mr. Wylie assisting, I removed the prostate. Owing to the extreme fatness of the patient, the suprapubic wound was necessarily much larger than usual. The enucleation of the prostrate from its sheath was easy, but some difficulty was experienced in getting the finger to reach the distant parts of the gland, to peel it off the triangular ligament. There was little bleeding, and the patient bore the operation well.

For the first few days patient progressed favourably, except for the constant drowsiness. He took nourishment well; urine was passed freely and clear, and the wound was healthy though extensive. The drowsiness, however, gradually increased, the pulse became intermittent and irregular, and he died on January 1st, 1903, in a comatose state, due apparently to retention in the blood of toxic elements of the urine. Whether or not death was immediately attributable to the operation it is difficult to say, though it has to be accepted in connexion therewith. A son of the patient, a medical man, who was with his father throughout his illness, considers that death was due to toxaemia from kidney disease which had set in before the operation, and probably was not hastened thereby.

The prostate, which in general contour resembles that of Case XXIII (Fig. 1) weighs 5½ oz.

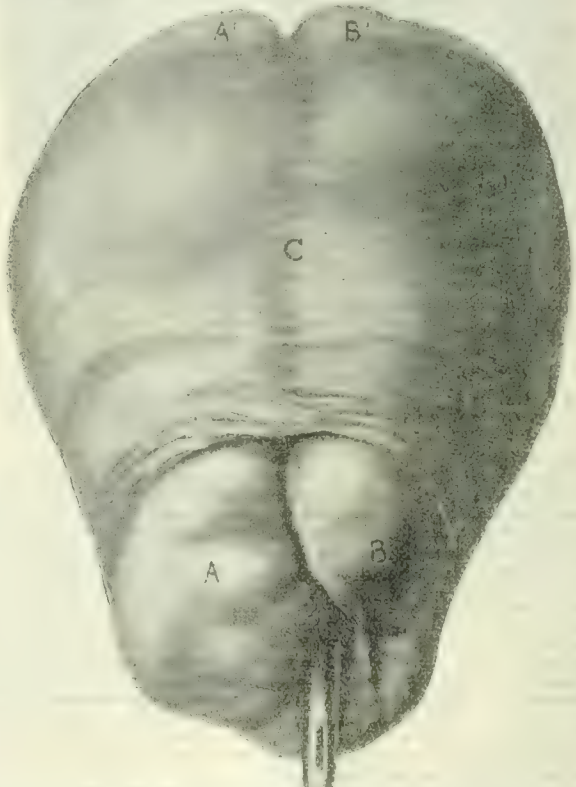


Fig. 5.—Prostate, weighing 5½ oz., removed from patient, aged 63; actual size. AA,' BB' lateral lobes covered by their true capsule, and encircled by thin band of recto-vesical fascia, c, removed with the prostate.

CASE XXX.

On December 17th, 1902, I was called to Bristol to see, in consultation with Dr. Edgeworth and Mr. Carwardine, a gentleman, aged 61, who had for ten years suffered from prostatic symptoms. Retention three years ago, when a catheter was passed and a large quantity of urine drawn off. Since then practically the whole of the urine passed by catheter; frequent attacks of cystitis; in dreadful pain; catheter every half-hour, day and night; narcotics for two years to relieve pain; latterly 70 or 80 gr. of chloral daily. Urine fearfully putrid, with much pus; haematuria occasionally. Unilateral castration 2½ years ago, which seems to have relieved him temporarily but did not stay the progress of the disease. I passed a catheter and drew off some urine of disgusting stench; impossible to sound him, owing to pain and contraction of prostatic urethra. Prostate moderately enlarged per rectum, bilobed, rather hard, and not very movable. Patient emaciated, anaemic, and very feeble; in terrible agony, from which his mind

seemed unhinged. Clamoured for immediate operation, which on consultation it was regarded advisable to postpone till after his arrival in London.

This patient, under the advice of Dr. Edgeworth and Mr. Carwardine, had arranged in May last to come to London to be operated on me, but getting temporary relief he postponed doing so till he was practically in extremis.

On December 18th he was moved to London. I had intended keeping him under observation for a few days, with a view to improve his health and prepare him for operation; but he was unable to sleep at night even under the influence of large doses of chloral, jumped out of bed, began to knock his head against the ground, and behaved generally like one out of his mind. I was therefore compelled to operate without delay, so telegraphed for Dr. Edgeworth and Mr. Carwardine.

I operated on the evening of December 20th, assisted by Mr. Carwardine and Mr. Wylie, Dr. Edgeworth being also present. On opening the bladder suprapubically, I found and removed three facetted calculi weighing 1½ drachm. The prostate, being prominent in the bladder, was easily enucleated, the lobes coming away separately. The enucleation and removal of prostate occupied four minutes. The prostate weighed 1⅓ oz.

The operation was borne well, and for the first two days no untoward symptom occurred. On December 23rd he became excited and violent, and was with difficulty restrained from jumping out of bed. Morphine was inadmissible, as it caused intense sickness, and large doses of chloral had no soporific effect; in fact, made him more excited. Seen in consultation with Dr. G. F. Blandford, who prescribed 2-drachm doses of paraldehyde, which produced sleep. Had to be removed from the surgical home and isolated as he disturbed the other patients. In spite of his excitement and constant attempts to remove the dressings, the wound rapidly healed, and urine began to pass naturally. He took nourishment freely, and on December 30th was physically stronger than before the operation, the temperature remaining normal throughout, and the pulse getting stronger daily. He now absolutely refused all nourishment, and, though artificially fed, his strength gradually gave way, and he died on January 2nd, on the fifteenth day after operation, from exhaustion, in spite of the most careful and tender nursing.

I approached the operation in this case with great diffidence, knowing that the patient was practically moribund, but in consultation we felt that we could not refrain from operating, to relieve the terrible agony and give the patient the only prospect of recovery. Only for the development of the mental symptoms, which had set in before operation, the patient would undoubtedly have made an excellent recovery.

CASE XXXI.

This patient, aged 68, came to the out-patient department of St. Peter's Hospital on November 29th, 1902, suffering great agony from complete retention of urine for two days. The bladder was enormously distended; the dullness reaching up to the ensiform cartilage. Prostatic symptoms had existed only eight months, but latterly there was great frequency of micturition, every hour and a-half by day and hourly at night. A coudé catheter was passed, and a large quantity of alkaline urine containing pus drawn off. He was at once admitted, and the bladder not completely emptied for forty-eight hours. On December 12th I made a cystoscopic examination, and saw both lobes of the prostate enlarged in the bladder; cystitis also existed. Per rectum the prostate was only moderately enlarged, bilobed, and rather hard, particularly the left lobe. On December 18th he was discharged, to attend as an out-patient for the purpose of preparing him for operation. A catheter was passed every four or five hours; not a drop of urine passed naturally after the retention.

His health being sufficiently restored he was readmitted December 29th, and on December 31st I opened his bladder suprapubically, and removed his prostate entire in its capsule, the lobes separating along their superior commissure, and the urethra being left behind. The patient scarcely felt the operation, and was reading a newspaper the next day. He began to pass urine naturally on January 10th, 1903, and the suprapubic wound was quite dry on January 12th. He has been sitting up for several days, and can now retain and pass his urine naturally. There has been no rise of temperature since the operation. The prostate weighs 1⅓ oz.

During the period covered by these operations there were four other cases in which operative interference was necessary in connexion with prostatic troubles. In two of these, aged respectively 76 and 62 years, partial prostatectomy was performed, the portions of prostate removed weighing about ½ oz. It was found impossible to remove the entire prostate, as the adenomatous outgrowth had not sufficiently advanced to define the limits between the prostate and the surrounding tissues. One of these made a good recovery, and, if not cured, is certainly relieved of most of his symptoms. The other died on the eighth day from pneumonia, believed to be due to the ether employed as the anaesthetic. The third case was that of a very feeble gentleman, aged 86, who was in terrible distress from prostatic symptoms which had existed twelve years. On opening the bladder suprapubically the patient became so collapsed that I was afraid to remove the prostate, so I had to rest content with establishing a permanent fistula. He made a good recovery, and is now free from pain, and walks out daily when fine. The fourth case was that of a medical man, aged 84, who, on the advice of Sir Henry Thompson, commenced catheter life in 1875, and for 26 years had passed practically the whole of his urine by catheter; for the last two years in terrible agony, great difficulty in passing the catheter, and haematuria. I could find no enlargement of the prostate per rectum, so concluded that the enlargement was wholly in the bladder. No sound could be introduced, but the presence of calculi was practically certain. I opened the bladder suprapubically in October, 1902, with a view to remove both calculi and prostate. I found two calculi, each 1 in. in diameter, but to my astonishment there was no enlargement of the prostate in the bladder, and with a finger in the rectum and one in the bladder I could find no enlargement of the prostate whatever. A 15 E solid steel sound was passed through the urethra. The patient made a good recovery, the suprapubic wound being allowed to close, and he is now in good health, able to pass his catheter without any trouble. This case suggests the following questions: (1) Is it possible that prostatic atrophy succeeded to enlargement; and, if so, why did the patient not regain the power of voluntary micturition? (2) Was the case an example of those one occasionally meets with, in which a patient enters on catheter life, sometimes long before the age of prostatic enlargement, and never regains the power of voluntary micturition, though neither enlargement of the prostate nor any other tangible cause can be found to account for this condition?

I have in this and previous lectures given full details of 31 instances of complete removal of the prostate performed by me, in a period extending over about two years, the patients varying in age from 58 to 79 years, the prostates weighing from 1⅓ to 10¼ oz. Those of you who have followed these lectures will have noticed that a very large proportion of the patients were almost moribund before the operation. Scarcely any of them were free from one or more grave complications, such as putrid cystitis, pyelitis, kidney disease, diabetes, heart disease, chronic bronchitis, etc. Of these, 27 were successful, both immediate and remote. And when I talk of success, I mean an absolute and complete success, the patients being able to retain and pass their urine as well as they ever did. I hear from most of these cases, and see many of them periodically. In no case has there been any relapse. Time only seems to consolidate their cures. There were four deaths in connexion with the operation—namely, two from mania, after the wounds had practically healed and urine was passed naturally; one died suddenly from heat-stroke on the tenth day, when he was convalescent; and one from coma due to retention of morbid products of the urine in the blood, which had set in before the operation. Though these deaths are accepted in connexion with the operation, in only one instance can death be possibly attributed thereto. Increased experience only confirms my early anticipations as to the blessing to poor old suffering male humanity of this operation.

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ON THE OPERATIVE TREATMENT OF PROSTATIC OBSTRUCTION.*

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It is only within the last fifteen years that attempts have been made to obtain a radical cure by operative interference in cases of prostatic obstruction. Before that time treatment was of a palliative nature, being mainly directed to the relief of the distressing symptoms which are so often met with in this condition—namely, the pain, increased frequency, and difficulty in micturition, culminating in many cases in more or less complete retention of urine.

Great advances have been made of recent years in the surgery of the bladder generally, not only in the methods of examination and means of diagnosis, but also in the operative treatment of many of the diseases to which it is liable. I need hardly remind you of the improvements in the performance of lithotrity, or of the reintroduction into practice of the old and discarded method of opening the bladder from above the pubes—the "high operation," as it was formerly termed, which may be said to date from about the year 1885. The

* Read before the Southport Medical Society.

revival of the latter operation marked an era and opened out a new field in bladder surgery, for it enabled us to deal with various conditions, such as vesical tumours and enlargement of the prostate, which previously were believed to be altogether beyond the scope of successful operative interference.

Prostatic surgery is, therefore, a comparatively modern development, and a few remarks upon its progress, as well as upon the position in which it stands at the present time, will, I hope, prove interesting to you.

At the outset, I may say that it is only in a small proportion of cases that any active surgical interference is required. It is a well-recognized fact that a considerable, and even a very marked, enlargement of the prostate may exist for years without causing any symptoms beyond perhaps an increased frequency in micturition, such as is generally regarded as one of the necessary accompaniments of advancing age. In other cases there may be so much obstruction to micturition that the use of the catheter is required, in some instances only occasionally, in other instances continually, the patients being unable to pass any urine without its assistance. Even under the latter conditions, except for the inconvenience of passing a catheter two or three times a day, patients may for years lead a life of comparative comfort; and, provided they pay proper attention and take ordinary precautions, cystitis—which is the complication to be dreaded under these circumstances—may be warded off almost indefinitely.

Some individuals appear to enjoy a peculiar immunity in this respect, and I have known persons carry a soft india-rubber catheter in their pocket, wrapped up in a handkerchief, using their saliva as a lubricant when they pass it, without incurring any harm.

These cases are of course the exception, for sooner or later it generally happens that the frequent passage of the catheter causes cystitis, even in spite of the most careful antiseptic precautions, usually from neglect of them. In other instances, quite independently of catheterism, cystitis is set up as the result of the irritation of residual urine lodging in a deep post-prostatic pouch, and of the frequent and ineffectual straining efforts of the bladder to completely empty itself of its contents.

In other cases, again, the patient is continually suffering from attacks of retention of urine, or there may be habitual retention, both these conditions necessitating catheterism, which under these circumstances is frequently attended by great pain and difficulty; or there may be frequent haemorrhages into the bladder, owing to congestion of the vesico-prostatic plexus of veins, these complications being often brought on by very slight causes, such as a sudden chill, constipation, some irregularity in diet, an unusual amount of alcohol, etc.

Now, when one or more of these complications are present, and when catheterism, after a proper trial—accompanied by the usual palliative treatment—fails, or is impracticable, then it becomes a question whether an attempt should not be made to afford relief by surgical interference.

The operative measures which may be adopted under these circumstances may be divided into three classes, viz:

1. Cystotomy and bladder drainage, either perineal or suprapubic.
2. Prostatectomy, or removal of the obstructing portion of the prostate gland.
3. Castration and vasectomy, these operations being performed with the object of removing the obstruction by causing a shrinking or diminution in size of the hypertrophied prostate.

Cystotomy and Bladder Drainage.

This is a valuable means of affording temporary relief in cases where cystitis is a prominent symptom, and where the introduction of a catheter, when it is frequently required, is painful and difficult. The bladder being left in a state of rest, the active congestion of the prostate, which under these circumstances is present, and greatly adds to the size of the gland, quickly subsides. At the same time the cystitis can be treated almost painlessly by bladder irrigation, the result being that the inflammation of the bladder wall is quickly relieved, and the septic condition of the urine is soon corrected. As a temporary measure it is also useful in cases of complete and sudden retention of urine, where catheterism is impossible, and is much to be preferred to simple aspiration of the bladder. When in addition the bladder is distended with blood clot it often affords the only means of completely evacuating its contents. As a permanent measure it may sometimes be adopted with benefit in cases where a patient is too old or too weak to bear the more radical operation of prostatectomy, or when the condition of the prostate itself—a point to which I will again refer—is such that its removal is not practicable.

Bladder drainage may be effected through either a perineal or a suprapubic opening, and personally I prefer and always adopt the latter route. For perineal drainage the tube introduced by my colleague, Mr. Walter Whitehead, is very useful. For temporary suprapubic drainage a piece of ordinary india-rubber tubing acts very well; while for permanent drainage Sir Henry Thompson's silver shield, or a vulcanite tube through which a soft rubber catheter passes into the bladder, answers every purpose, the other end of the catheter being connected with an indiarubber urinal attached to the patient's leg.

I have made use of the latter method of treatment, both as a temporary and a permanent measure, in many cases of prostatic obstruction, with satisfactory results. I will not trouble you with details of cases, but may just mention that in one instance where the prostate, though enlarged, was too firm and fixed to admit of removal, the patient wore a suprapubic tube for nearly six years, with complete relief to his previous symptoms, being able to mix in society and walk several miles without any discomfort or inconvenience.

Prostatectomy.

Considering next the operation of prostatectomy, or removal of the prostate gland, either partially or completely, this may be attempted by three different routes—urethral, perineal, or suprapubic.

1. Urethral prostatectomy includes Mercier's and Gouley's operations, where portions of the prostate are removed or punched out by an instrument with sliding blades, somewhat resembling a lithotrite, introduced per urethram; and Bottini's method—or galvano-caustic prostatectomy—where an electrode shaped like a sound is passed into the bladder, and, the current being turned on, the beak of the instrument burns its way through the obstructing portion of the gland from behind forwards. I have no experience of these plans of treatment, which have not been much adopted in this country, an obvious objection being the fact that the operation is performed without any definite knowledge of the exact nature of the obstruction, the surgeon, as it were, working "in the dark."

2. In perineal prostatectomy the prostate is exposed from beneath through an opening, median or transverse, in the perineum, and a portion or the whole of the gland is removed either by enucleation or by scissors. Considerable difficulty is often encountered owing to the depth from the surface at which the gland lies, especially in stout subjects; and, in order to overcome this, some recommend that a preliminary suprapubic cystotomy should be performed in order that a finger may be introduced into the bladder and the prostate pressed downwards from above into the perineal wound; or the finger may be passed into the bladder through an opening in the membranous urethra, and then hooked, as it were, round the prostate so as to drag it down, and in this way render it more accessible. Parker Syms, of New York, has devised a special instrument for this purpose, consisting of a hollow rubber retractor with a bulb at one end of the stem. The bulb is introduced in a collapsed condition into the bladder through an opening in the membraneous urethra, and then distended with water by means of a syringe. When traction is made upon the stem of the retractor the distended bulb catches against the prostate from behind and draws it downwards into the perineal wound, bringing it well into reach. At the recent meeting of the British Medical Association in Manchester he mentioned details of 21 cases of perineal prostatectomy, where this method of operation had been carried out with complete success.[1]

Of perineal prostatectomy I have again no experience, as it has always appeared to me that the gland is more accessible when exposed through a suprapubic opening by the method next described.

3. The operation of suprapubic prostatectomy was first prominently brought into notice in this country by McGill, of Leeds, in 1887, though it had previously been performed in America by Belfield, of Chicago. In that year McGill read a paper before the Clinical Society of London, in which he gave particulars of three successful cases.[2] In the description of the operation in his first cases the prostate was removed, in his own words, "piecemeal," namely, "partly by tearing with forceps and partly by cutting with scissors, or with a strong cutting instrument which I have devised for the purpose." Two years later, that is, in 1889, in introducing a discussion on the treatment of prostatic enlargement at the

annual meeting of the British Medical Association held at Leeds, McGill brought forward a series of 24 cases of suprapubic prostatectomy, operated upon by himself and his colleagues at the Leeds Infirmary, and a distinct advance had then been made in the technique of the operation, for he says in this paper: "The prostate should be removed as far as possible by enucleation with the finger, and not by cutting. The mucous membrane over the projecting portion having been snipped through, the rest of the operation is completed with finger and forceps.....A pedunculated middle lobe can, however, be removed by cutting through its base."[3]

A reference to his tabulated list of cases shows that while in his earlier operations McGill removed the prostate "piecemeal," in his later cases he enucleated it with the finger, for in one instance he "enucleated in one piece" a portion of prostate weighing over 2 oz. "which surrounded the urethra laterally and below," while in another "two enlarged lateral lobes were removed by enucleation."

The brilliant results of McGill and his colleagues did much to establish suprapubic prostatectomy as a recognized operation, and it began to be regarded as the proper procedure in cases where—as McGill tersely put it—the catheter treatment fails or is unavailable and more radical measures are necessary. From 1889 onwards the operation was frequently performed, and in suitable cases it was attended with very satisfactory results.

In 1894, however, another method of treatment in cases of prostatic obstruction was suggested by an American surgeon, White, of Philadelphia, which for a time tended to supplant prostatectomy, and therefore gave a distinct check to the further development of this operation. No doubt the much-regretted death of McGill in 1890, at the early age of 44, contributed to the same result, for the operation of suprapubic prostatectomy thus lost its most active and enthusiastic advocate. From the analogy supposed to exist between fibro-myomata of the uterus and hypertrophy of the prostate, White suggested that castration might have the same effect upon the enlarged prostate that removal of the ovaries has upon the uterus, namely, cause a shrinking or atrophy of the gland, which would result in the practical disappearance of the obstruction. This theory was based upon experiments on animals, which showed that removal of the testes was followed by marked atrophy of the prostate, and as double castration in man was a much less serious operation than prostatectomy, it became somewhat generally adopted in this country as well as in America, in spite of the obvious sentimental objection which attended the sacrifice of both testes and the loss of all sexual power. I myself performed the operation in a number of cases, in a few instances with satisfactory results, but in the majority it was followed by very slight or by no improvement whatever in the patient's condition.

It was also found that the patients occasionally developed evidences of serious mental disturbance after removal of both testes, consequently vasectomy, or excision of a portion of the vas deferens on each side, was proposed as a substitute for double castration as being less likely to be followed by mental trouble, in the hope that by causing atrophy of the testes similar changes might be produced secondarily in the prostate. I also tried this treatment but without any apparent benefit, and the results generally have been so unsatisfactory that it is, I believe, now almost entirely given up. In consequence, therefore, of the unfavourable results of the indirect operations (as we may term castration and vasectomy) for reducing the size of the enlarged prostate, surgeons after giving these methods a fair trial for about five or six years began to revert to the operation of prostatectomy, which during this period had fallen very considerably into disuse.

In 1901 Freyer brought it prominently into notice again in a paper published in the British Medical Journal,[1] in which he described 4 successful cases of "Total Extirpation of the Prostate Gland for Radical Cure of Enlargement of that Organ." Freyer worked on the same lines as McGill had in his later cases, removing the gland not "piecemeal," but performing a somewhat similar, though much more complete and radical operation, by enucleating it entirely within its capsule. In order to understand how this is practicable I may very briefly remind you of a few points in connexion with the anatomy and pathology of the prostate which have an important bearing on this method of removal.

The prostate is composed of two lateral lobes, nearly ovoid in form, lying side by side, their inner surfaces being adherent to each other in the median line, except where they are separated by the urethral canal. It is invested by a capsule of strong fibrous tissue, from which trabeculae pass into its interior supporting the gland structure, and outside this there is a second covering—"the sheath"—derived from the pelvic fascia; between the capsule and the sheath, which are connected by numerous fibrous bands, lie a number of veins, the prostatic plexus.

As regards its minute anatomy the prostate is composed of glandular structure supported by a stroma of unstriped muscle and fibrous tissue. When enlarged, the hypertrophy may be due mainly to an overgrowth of the muscular and fibrous structures, or it may chiefly affect the gland tissue. In the former case the "fibro-myomatous" prostate, the enlargement is, as a rule, not at all extreme, and the gland under these circumstances, is of dense consistence; on examination per rectum, it feels firm and fixed, and only slightly increased in size. In the latter case, the "adenomatous" prostate, the gland may attain very considerable dimensions; it may be enlarged uniformly, or one lobe may be affected more than the other; frequently there are polypoid outgrowths from the lateral lobes, which, when growing from their posterior surface, are often mistaken for and described as third or middle lobes. If a section is made through one of the hypertrophied lobes, it will often be found that the enlargement is due to the presence of numerous localized overgrowths of the gland tissue, each surrounded by a distinct capsule, and embedded in, but isolated from, the substance of the gland. These so-called "prostatic glandular tumours," which are sometimes no larger than peas, in other cases the size of a walnut, are very loosely connected with the surrounding stroma, so that they can be easily shelled out or enucleated with the finger. The adenomatous prostate is of softish consistence, and on examination per rectum feels elastic and somewhat movable; the enlargement of the gland is often very considerable, being much greater than that met with in the fibro-myomatous variety.

It is interesting to note that there is frequently no relation between the size of the gland and the severity of the symptoms, for a moderately-enlarged prostate may cause as much obstruction as one where the hypertrophy is extreme. It is, however, very important to distinguish clinically between the two varieties of hypertrophy; for, while complete removal is easy in the adenomatous, it is extremely difficult in the fibro-myomatous, prostate, as I found to be the case in the specimen here, which was recently removed from a patient aged 65 years. As you will see, the gland, though uniformly enlarged, is not very much increased in size, but still sufficiently so to produce well marked symptoms of obstruction and the continual presence of a considerable amount of residual urine. It was removed in its capsule, together with the prostatic urethra—as the specimen shows—but the process of separation, or enucleation, was difficult and tedious, for the capsule was intimately adherent to the surrounding sheath. The operation was followed by severe shock, accompanied by complete suppression of urine, and the patient died on the third day from uraemia. On examination after removal the prostate was found to be of dense, fibrous consistence, and to the naked eye free from any overgrowth of the glandular tissue; in fact, a typical example of the fibro-myomatous form of hypertrophy. In another similar case I should leave the prostate alone and drain the bladder through a suprapubic opening, a method of treatment which, as already stated, has proved beneficial when the same condition existed.

I have specimens from two other cases where the same form of hypertrophy was present; but, in addition, there was in one a small pedunculated third or middle lobe, and the removal of this with a pair of scissors was followed by a complete subsidence of the attacks of retention of urine from which the patient had previously suffered. No doubt in this instance the movable third lobe had acted like a ball-valve, being carried forward by the stream of urine, and in this way blocking the vesical orifice of the urethra on attempts at micturition.

In the second case there was a collar-like fringe of small polypoid outgrowths surrounding the orifice of the urethra, which probably acted in the same manner; these were snipped off with scissors, and their removal was followed by a similar improvement in the patient's power of micturition.

In the other variety of hypertrophy—the adenomatous prostate—as the gland increases in size, the capsule and sheath, as well as the fibrous bands which connect these structures, become stretched out and thinned, consequently it is not a difficult matter to separate the capsule from the sheath by breaking down the loose connexions with the finger, or, in other words, to enucleate the prostate in its capsule. This

procedure, which we may term "extracapsular" enucleation of the prostate, is the operation which Freyer has so prominently brought before our notice in the paper referred to, as well as in others subsequently published,[5] and in suitable cases is attended by very satisfactory results. The bladder having been opened from above the pubes, the mucous membrane and thinned-out sheath over the most prominent part of the swelling are divided with scalpel or scissors, or merely scratched through with the finger-nail. The enucleation is then effected entirely by the finger, which separates the sheath from the capsule above, externally, and below, as well as in front and behind, and by working close to the capsule the enucleation and removal of the gland is readily and quickly accomplished.

In cases of great hypertrophy the thinning of the sheath and capsule is so extreme that it is difficult to recognize these structures as such, and it is possible that under these circumstances the capsule becomes in places so stretched out and weakened that the lobulated glandular outgrowths actually burst through it. The gland may be enucleated *en masse*, but this necessitates tearing across, or removing with it, the prostatic portion of the urethra. This accident may be avoided by first dividing the tissue bridging over the urethra, the so-called "anterior commissure," and then working laterally round, and also below, the canal, which is pushed upwards and thus avoided. A safer method is to separate the lateral lobes from one another, and enucleate first one lobe and then the other, stripping them, as it were, from off the urethra which lies between them. If this is done, the urethra—in which a silver catheter should be retained to act as a guide—is less likely to be injured. If the surgeon stands on the left side of the patient and uses the right forefinger to enucleate the prostate, the presence of the left forefinger in the rectum will prove of great assistance, for by pressing the gland upwards it will steady it, and at the same time render it more accessible.

The haemorrhage, which may be free, is usually soon arrested by irrigating the bladder with hot lotion, and the subsequent treatment is identical with that after suprapubic cystotomy for bladder tumours or for other causes. A piece of large-sized drainage tube should be left in the suprapubic opening for a day or two, and until the wound closes, which usually takes place in from three to four weeks, the bladder should be washed out daily with some antiseptic lotion. As healing occurs the power of voluntary micturation gradually returns, the bladder regaining its expulsive power, even when this has been lost for a long period. The specimen, which I show you, is a good illustration of this method of treatment, the entire prostate being removed in its capsule in three portions, consisting of a large right lobe, a smaller left lobe, and a pedunculated third lobe, which was connected posteriorly with the right lobe. The patient, aged 59 years, who had suffered for eighteen months from retention of urine, requiring daily catheterism, made a good recovery from the operation, and completely regained the power of voluntary micturition in less than a month after its performance. Examination of the prostate after removal showed that the enlargement was due to the presence of numerous adenomatous growths embedded in the substance of each lobe.

Instead of removing the prostate in its capsule in the manner advised by Freyer we may enucleate separately the adenomatous growths embedded in its substance. In this method, which may be termed "intracapsular enucleation," the capsule is divided, as well as the mucous membrane and sheath, over the more prominent portion of each lobe. The finger is then passed through the opening in the capsule into the interior of each lobe, and the separate growths are easily detached from the surrounding gland tissue and enucleated one by one. This method, of course, does not so completely remove the obstruction as the "extracapsular enucleation," but it is probably attended by less haemorrhage, as the prostatic plexus of veins is very slightly interfered with. Moreover, there is less likelihood of injuring the prostatic urethra, as no doubt often happens in the more complete removal, and as yet our experience of the latter operation is not sufficient to say whether, if this complication occurs, troublesome contraction of the neck of the bladder may not possibly result in the future.

I adopted this procedure in the case of a gentleman, aged 61 years, in October, 1901, as he was not a good subject for any operation, and I thought it would be less severe than the method of complete enucleation which Freyer in his first paper, based on an experience of four cases, had published only a short time previously. A large number of adenomatous growths, varying in size from a pea to a filbert, were shelled out of both lateral lobes, and after the suprapubic wound closed he regained and still possesses the power of voluntary micturition, which had been lost for a considerable period.

My subsequent experience, however, of the complete or extracapsular method of enucleation would lead me to adopt this procedure in future, though we must remember that it is not applicable to all cases of prostatic obstruction which call for surgical interference; and when we have the condition present to which I have referred, namely, a moderate fibro-myomatous enlargement of the gland, it should not be attempted.

Under these circumstances, a partial prostatectomy will often give good results, and when this is not practicable, then cystotomy and bladder drainage will generally afford relief in the manner already described.

Though doubts were expressed by several surgeons as to the possibility of complete removal of the prostate—mainly on anatomical grounds—in the course of a somewhat prolonged correspondence on this subject, which appeared in the BRITISH MEDICAL JOURNAL[6] shortly after the publication of Freyer's early cases, it is my opinion that when the pathological changes to which I have alluded have taken place in the prostate, giving rise to the adenomatous form of hypertrophy, then its total enucleation is quite feasible.

This conclusion is based upon my own experience of the operation, and also upon an examination of many of Freyer's specimens, which were exhibited at the recent meeting of the British Medical Association held at Manchester.

I believe, therefore, that suprapubic prostatectomy on the lines laid down by Freyer is not only possible in properly-selected cases, but that it is an operation which will soon establish for itself a recognized place in surgery.

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NOTE UPON A POSSIBLE RELATIONSHIP BETWEEN CARCINOMA AND NERVE OR TROPHIC AREAS.*

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IN this communication I wish to point out certain features in the pathology of cancer when it is viewed stripped of the masking effects produced by the presence of secondary deposits.

The features to which I allude are mainly two: First, that there is a proportion of cases which show a marked relationship between the spread of the primary focus and the distribution of nerves and trophic areas. Arising out of this observation is the practical issue that the extent of these areas should be taken into consideration in marking out incisions when removal of cancer is contemplated. I do not wish to detract from the importance we now attach to the lymphatic pathways of distribution; I only desire to add another factor.

My second point is that there is reason for thinking that the incidence of cancer within a nerve area is not a fortuitous circumstance, but that it may be due to the direct or indirect nervous influence over that area.

I will take these two points separately, and will attempt to demonstrate my meaning by showing cases of rodent ulcer, Hutchinson's crateriform ulcer and squamous epithelioma, as they affect the head and face. Before doing so I will remind you of the close central connexion which exists between the fifth cranial, the glosso-pharyngeal, and pneumogastric nerves.

The mode of distribution in the cases remind one of the distribution of herpes, morphoea, moles, naevi, and of certain infective processes.

The particular nerves are sensory, but I am not prepared to say whether the following phenomena are due to the influence of peripheral nerves or whether they are due to a central

* Read before the Pathological Society of London. It may be mentioned that the illustrations published with this paper are only a few of the total number shown by the author at the meeting.

nervous influence exhibiting itself in its peripheral nerve areas. (Dr. Head advised me to be particularly careful to lay stress upon this point.)

In the absence of precise knowledge concerning trophic influences a definite statement cannot be made. But during the consideration of my paper I must press you to bear in mind the possibility of conditions indicating "central" nervous influence In any case I cannot believe that areas occupied by disease in the following cases are merely due to the promiscuous presence of lymphatic and blood vessels. Their share in the effect appears to me to be one presided over by a nervous influence, nor can the areas of occupation be entirely due to a relationship to developmental fissures and other anatomical conditions. One nerve area after the other is mapped out in too marked a manner to be overlooked, and this, too, in spite of the following factors which act against limitation, namely :

(*a*) Diminution of a normal skin area occurs when it lacks the support of the parts lost by ulceration, and its elasticity is rendered free to exert uncontrolled power of contraction. Unsupported skin flaps always atrophy.

(*b*) Imperfect operative procedures and infection will enlarge the area, and scar tissue modifies the direction of growth in cancer.

(*c*) Nerve areas overlap each other, and there are many variations to the usual manner of peripheral nerve distribution.

Rodent Ulcer.

I will show rodent ulcer first because it is the commonest form of cancer in which secondary deposits in lymphatic glands are rare. In the grossest and most extensive lesions of the head and face which I have seen the whole of the areas supplied by the two fifth cranial nerves have been destroyed.

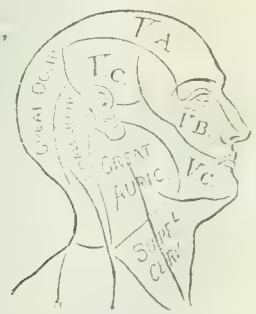


Fig. 1.—Mr. G. D. Thane's diagram of the distribution of the areas of the head and face supplied by the fifth cranial and the cervical spinal nerves. Taken from Dr. Head's article in *Brain*, vol. xvii, page 468, "On the Disturbances of Sensation and the Pain of Visceral Disease."

In these cases there seems to be an absence of spread to those areas supplied by the cervical spinal nerves, and this limitation to the fifth is more permanent on the head than



Fig. 2.—Mr. Malcolm Morris's case. The disease began near the right orbit. (Rodent ulcer.)

on the face (see Figs. 2 and 3.) The fifth nerve of one side can



Fig. 3.—Dr. Sequeira's case. The disease began on the side of the head above the attachment of the ear to the side of the head. The state of things since this photograph was taken eight months ago is that extension has occurred upwards and forwards, but not backwards. It is interesting to observe the ulcerated part of the pinna corresponds almost exactly with the peripheral distribution of the auriculo-temporal nerve. (Rodent ulcer.)

be sharply marked off from the advancing disease of the opposite fifth (see Figs. 4, 5, 8, and 11), and the nerve areas of



Fig. 4.—Mr. Watson Cheyne's case. The rounded swelling at the upper limit of the ulcer is the oedematous upper eyelid. (Rodent ulcer.)

one fifth can be sharply demarcated from the disease of contiguous nerve areas of the same fifth (see Figs. 2, 3, 5, 8 and 12).

Where the disease begins at the meeting place of two or more peripheral nerve areas they tend to be mapped out before the disease spreads to others (see Fig. 5). Should such areas be situated on one side at the middle line (Fig. 5) the corresponding and contiguous areas of the opposite side are frequently attacked and will then produce a bilateral lesion which appears central (See Fig. 6). This is an area mapped out in other diseases such as syphilis (see Fig. 7). In Fig. 8 the infraorbital nerve area is seen ulcerated and should this lesion become bilateral it will map out an area seen in Fig. 9. This is an area mapped out in other diseases, such as glanders (see Fig. 10).

In studying the sites of origin which correspond to a single nerve area one sees that the disease often begins at the point where the particular nerve becomes cutaneous. That point in relation to the infratrochlear nerve is probably the most frequent site of incidence in rodent ulcer. A mole is frequently observed about this region, but if one can believe patients' histories a rodent will begin here when no mole previously existed.

Fig. 13 shows rodent ulcer occurring in the cervical spinal nerve area and its progress of ulceration is spreading away from the areas of the fifth nerve. I have already pointed out



Fig. 5.—Dr. Sequeira's case, in which the disease began on the side of the nose behind the ala, where the nasal nerve area joins that of the infraorbital nerve. The disease was spreading downwards towards the lip, and represents a type of distribution. (Rodent ulcer.)



Fig. 6.—Dr. Sequeira's case. The disease began on the right side of the nose. (Rodent ulcer.)



Fig. 7.—Mr. Watson Cheyne's case. Congenital syphilis marking out same area as the rodent ulcer in Fig. 6.



Fig. 8.—A case from Mr. Hutchinson's collection at the Polyclinic.



Fig. 10.—A plaster cast of glanders affecting the same area as the rodent ulcer in Fig. 9. From the Museum of St. Mary's Hospital.



Fig. 11.—Dr. Whitfield's case, showing the area of first division of the fifth nerve on the right side in course of destruction. (Rodent ulcer.)

that the areas on the face supplied by the nerves of cervical spinal region are more liable to invasion than the areas on the head that are supplied from the same sources, and although the disappearance of the skin on the face may be more apparent than real there can be no doubt that the cervical nerve areas in the region do in some marked cases eventually succumb.

Squamous Epithelioma and the Crateriform Ulcer.

Hutchinson's crateriform ulcer, which may or may not be a squamous epithelioma, very frequently arises on the points at which nerves become cutaneous. The same may be said of typical squamous epithelioma.

Fig. 14 shows the naso-labial area as mapped out in herpes; and, in a patient who refused operation, I have seen the same area in the course of destruction by a cancer which began on the lower lip.

Fig. 15 shows an example of the same state of things arising from a cancer which began on the lower lip. It appears that it may be regarded as the eventual area of occupation when the cancer begins in either the lower lip and at or near the angle of the mouth. I have seen a cancer of the lower lip which began on and spread superficially along the whole mucous membrane of the lower lip. I have also seen two cases of so-called recurrent cancer of the lower lip beginning to map out this area in a more or less complete manner. It is a compound nerve area, the infraorbital, buccal, and mental nerves being involved.

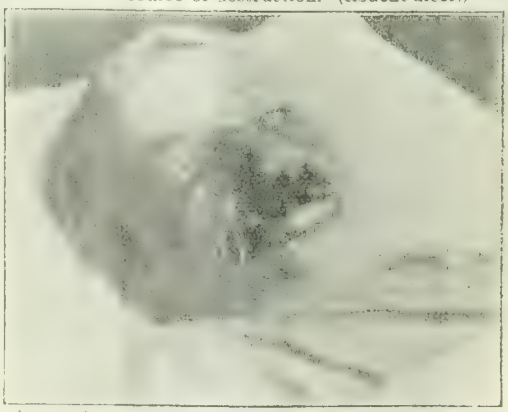


Fig. 9.—A case from the collection of the Cancer Hospital, London. (Rodent ulcer.)

I may here say that herpes occurred in this region in a case of pneumonia which died the Gasserian ganglion being the seat of a haemorrhage, supplying evidence of a central nerve connexion to this area. The recognition of this area as being the eventual site of occupation for the growth appears to me an indication for modifying the V-shaped incision now considered sufficient for removing cancer of this region. To

devise preliminary incisions for the removal of cancer according to the delimitation of similar areas elsewhere appears to me of first importance.



Fig. 12.—Mr. Watson Cheyne's case. The disease has begun in the area of the nasal division of the fifth and has not involved the infraorbital nerve supply to the ala nasi. (Rodent ulcer.)

In the tongue is seen remarkable limitation occurring at the middle line when cancer begins on the side of that organ (Fig. 16). The epithelium at the tip of the tongue on the side of the disease often remains free, and the overlapping of nerves at this point is of course considerable. I can see no mechanical or vascular reasons for the disease being arrested even temporarily in the epithel um of the middle line.



Fig. 13.—Dr. Sequeira's case. The rodent ulcer is occupying the cervical spinal nerve area.

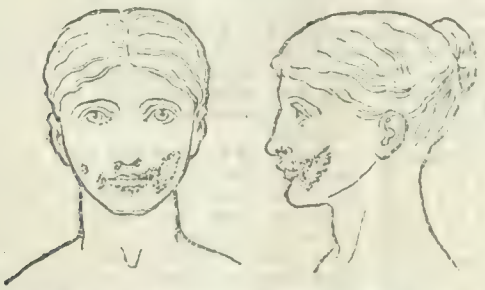


Fig. 14.—From Dr. Head's articles in *Brain*, vol. xvii, p. 384, showing the naso-labial region occupied by an eruption of herpes.

I would like to point out that an epithelial surface disappears during the cancer process in two ways. One in which the normal surface can be seen actually breaking down into cancer, and the other is atrophy of the epithelium due to the increasing pressure of the subjacent growth. Where disease begins at the mid-line of the tongue then both areas are simultaneously involved. (See Fig. 17.) Here no arrest of growth is visible at the middle line. One would have thought it would have shown if vascular arrangements or developmental clefts account wholly for limitation.



Fig. 15.—Approximately the same area as 14, occupied by squamous epithelioma which began in the lower lip. From the Royal College of Surgeons Museum.

My second main point is that there is some reason for inferring that carcinoma may originate in a nerve area as a result of the nervous influence over that area.



Fig. 16.—Mr. Watson Cheyne's case. A squamous epithelioma of left side of tongue, the epithelioma at the tip of the left side is still free. The disease began on the left side of the tongue.

The usual occurrence of a single rodent ulcer, 64 out of 66 cases (Bowlby), or a squamous epithelioma on the area supplied by the fifth nerve may not with justification convey any connexion between the two facts. But that connexion is made stronger, I think, when it is associated with cases in which the fifth areas either singly or combined are the seats of multiple discrete rodent ulcers. To make myself clear I will enumerate a few cases.

Case I.—A rodent on right ala nasi and one on left temple.
Case II.—Two rodents on right fifth area and one on left.
Case II.—Two rodents on left fifth area and one on right.
Case IV.—A squamous epithelioma on fifth of one side and a rodent on the fifth of the opposite side.
Case V.—Nine rodents over the areas of the two fifth nerves. (Mr. Bruce Clarke's case.)
Case VI.—Two rodent ulcers on fifth area of left side.
Case VII.—Five rodents on fifth area of right side. (Mr. Malcolm Morris's case.)
Case VIII.—A rodent ulcer on left upper lip and on front of tip of left ear

It will be seen that rodent ulcers may be multiple on the two areas of the fifth nerves at the same time; and that they may be multiple on the area of one fifth nerve; and no lesion elsewhere. Mr. McAdam Eccles had a case of two rodents on one fifth, and many others on the body and legs.

[I have omitted any reference to multiple epithelioma on the areas of the fifth, because the question of secondary deposits may be a factor in their appearance.]

I can quite appreciate the criticism that, singly or otherwise, infective processes can be shown occupying the same regions; but the incidence of cancer may not be due to the mere influence of infection as claimed by several observers.

Cancer, belonging essentially to the period of bodily degeneration, is a point which seems to me of some importance in considering the following facts. Lugaro has proved that peripheral irritation causes central changes of degeneration in the posterior root ganglia of the spinal nerves. In these the ganglia cells are seen swollen and rounded. The Nissl bodies break up; the nucleus is eccentric, and often quite at the periphery. Apart from senile degeneration there is, then, the fact that peripheral irritation can induce visible changes in the ganglion controlling the irritated area. At the same time I fully realize the importance of recognizing that central nerve impulses may be abnormal, although nothing abnormal can be seen in the central nerve ganglia.



FIG. 17.—A tongue from the museum of St. Bartholomew's Hospital. The squamous epithelioma began in a wart which was situated in the centre of the tongue and occurred at a point on which the end of a clay pipe habitually impinged.

Before I knew of Lugaro's experiments I examined the posterior ganglion of the fifth dorsal spinal nerve of the right side, which I took away from a woman for the relief of agonizing pain in an inoperable cancer in the right breast, and Dr. Purves Stewart, who kindly stained the ganglion for me, found the same changes as described by Lugaro occurring in some of the ganglion cells.

I do not wish to infer that a degeneration of the ganglion preceded the carcinoma in this case, because I know not if this really occurred.

At the same time I cannot help alluding to the clinical fact that irritation is a great precursor of cancer, and added to this it causes degeneration in the particular ganglia whose peripheral ramifications are irritated.

Carcinoma often appears in tissues which are associated with disorders of growth such as moles, and these moles are themselves associated with definite nerve areas and the incidence of cancer. (See Fig. 18.)

Dr. Whitfield has pointed out to me that Foldau has shown that nerve fibres can be traced into these moles.

I wish it to be understood that I do not claim to have enunciated a new theory of cancer, but to have shown that there is reason to justify us in taking into consideration the possibility that the genesis and spread of cancer, even when considered apart, may be connected directly or indirectly with the nerve influences which preside over the areas affected. In conclusion, I thank Dr. Sequeira for the unreserved manner in which he placed his large clinic and wide experience at my disposal. My thanks are also due to Dr. Scott, from whose thesis upon rodent ulcer I gleaned a few cases. Major Pinch kindly gave me permission in Mr. Hutchinson's absence to copy many of Mr. Hutchinson's pictures in the Polyclinic. Dr. Andrewes and Dr. Broadbent allowed me to reproduce some specimens from the respective museums over which they preside.



FIG. 18.—Dr. Sequeira's case, showing the distribution of moles and on the left side of the man's face was a squamous epithelioma.

ON THE ETIOLOGY OF SLEEPING SICKNESS.*

BY

ANNIBAL BETTENCOURT, AYRES KOPKE,

GOMES DE RESENDE AND CORREIA MENDES,

Members of the Portuguese Commission,

Lisbon.

THE bacteriological researches which we have prosecuted in investigating the etiology of sleeping sickness were principally on the organic tissues and liquids, for being guided by the knowledge of former pathological observations, and by the result obtained in the first necropsies made by us, we were aware that the principal lesions of this African disease were anatomically those of a meningo-encephalo-myelitis.

In our first report of June 9th, 1901, regarding the 6 cases observed in Principe, we said that the preliminary and restricted investigations up to that time accomplished seemed to "guide us in the sense of the infectious nature of the sleeping sickness."

Two months later, on August 10th, in Loanda, we first discovered the existence of a diplo-streptococcus in the cerebro-spinal fluid *intra vitam* (6 results positive in 9 cases) and in the subarachnoid exudate (in 13 necropsies), and we described the principal characters of the germ in an incomplete and summary way. These results were published in September, 1901.[1]

In Lisbon on August 7th, 1902, we finally brought forward the results of our researches in a public conference, illustrating our communication by projections and by the demonstration of pathological specimens, cultures, and microscopical preparations which were collected from a great number of examinations, both of the cerebro-spinal fluid obtained by lumbar puncture *intra vitam*, of the exudate in the ventricles obtained at the necropsy, of the blood, ganglia, and spleen, and demonstrating also in numerous microscopical sections, especially of the nervous tissues, the existence of the micro-organism both inside and outside the vessels.

We were particular in pointing out, in order to avoid error, that the micro-organism in question ought to be included in the streptococcus group, and we proposed therefore to call it the hypnococcus.[2]

We wrote as follows: "The general description of the principal characteristics of the hypnococcus being given, let us see if it is possible to determine its place in bacteriological classification."

In our first report we were rather disposed to consider it as a type transitional between the streptococcus and Fraenkel's diplococcus. We can, however, now affirm that it is easy to distinguish it from the latter.

It will be sufficient to say that it grows on gelatine and in other media at a temperature below 24° C. in order to clearly separate it from Fraenkel's diplococcus.

But in order to go further, we followed the method proposed by His to establish the differential diagnosis between the pneumococcus and the bacteria of the streptococcus group. To water and ox's serum in equal portions, conveniently alkalinized and sterilized, we added 1 per cent. of inuline. This sugar is fermented by the pneumococcus, giving a change in reaction from alkaline to acid, and producing the coagulation of the medium. Our diplococcus grew well in this fluid, the reaction was not modified, nor did the fluid coagulate even after a month's stay in the incubating oven.

We read recently in the BRITISH MEDICAL JOURNAL, March 14th, a preliminary report of the bacteriologist Castellani, a member of the English Commission sent to Uganda to study the sleeping sickness, in which he states that he had found, as we had already done, a streptococcus both in the cerebro-spinal fluid of living patients and *post mortem*, which he considers is different from ours.

This idea may probably be due to the fact that Dr. Castellani only knew of our first reports, which were erroneously translated before they came out in the *Journal of Tropical Medicine* in May and June, 1902, from which the description of our bacterium might reasonably give rise to some doubts in regard to its bacteriological classification.[3] However, after this work we described it more precisely, and considered it as belonging to the large streptococcus group (August, 7th, 1902). It is necessary to say that though some divergences exist between what we said in our first report

*This note belongs to the first part of the chapter, Recherches Bacteriologiques, of our report now in the press.

regarding the bacteria and the one Castellani found in Uganda, they are not vital, and we think are not sufficient to allow Dr. Castellani to establish such a radical distinction.

It might be considered that the difference might proceed from the diversity of the two bacteria or from the working conditions of the observer. Castellani only speaks of the first and completely forgets the second, which was in reality the principal. The proof of the small value of the facts advanced by Castellani to establish this difference is obvious from the way he ends his report, being apparently exactly of the opinion we were in August, 1901, as written in our report.

We then said: "As to the bacteriological classification of the diplo-streptococcus, only investigations of greater number and with more time can establish. Its analogies with Fraenkel's diplococcus on the one hand and with the streptococcus on the other are not yet sufficient to constitute it a distinct species, or merely a variety of the same species; they do not allow any one to classify it as belonging to either of these groups, though there is close relation between the two, as all bacteriologists know. What we have said so far of our diplococcus is that it seems to be a transition between Fraenkel's diplococcus and the streptococcus."

Castellani makes the following statement about the bacteria found:

From the description first given I think this germ must be considered a new variety of streptococcus. Every bacteriologist knows how difficult it is to differentiate sharply the varieties of streptococci on account of the numerous transition forms that occur, even a sharp separation between the streptococcus pyogenes and the streptococcus lanceolatus (Fraenkel's diplococcus) seeming to many authors to be impossible.

Further on he says:

I think this organism is a distinct variety of streptococcus, to be classed between the streptococcus pyogenes and the streptococcus lanceolatus (Fraenkel's diplococcus), and it might be called the streptococcus of the sleeping sickness.

This means that Castellani and ourselves in our first reports came to precisely the same conclusion, and expressed ourselves in practically identical terms. We cannot understand how this could happen if in reality distinct species were in question, the investigations being made quite independent one from the other. With the considerable difference of time and place, the same impression being made on the investigators, can only signify that the result of the researches was the same; or, in other words, that the two micro-organisms isolated by us in the West of Africa and by Castellani in the East are the same.

Let us see, however, what reasons Castellani has to offer for considering his bacteria different from ours. We are sorry he did not see the Portuguese journal in which we published our second work, which was of much earlier date than his, after reading which all doubts would cease as to priority.

Castellani says[3] as regards the diplo-streptococcus of the Portuguese: I do not think any confusion can arise. The Portuguese state that the culture of their germ generally failed every time on the usual media like agar, gelatine-agar,[4] etc., and with gelatine they never succeeded in obtaining cultures. The only differences then are merely—our cultures failing nearly always in the usual media and our not obtaining them on gelatine. We said conformably in our report (Portuguese): The diplo-streptococcus found by us is badly cultivated in nearly all the nutritive media usually employed. The bouillon, agar-agar, simple or glycerinized, fail nearly always. The liquid proposed by Martin for the cultivation of Loeffler's bacillus, and obtained by the maceration of the pig's stomach, gives a much better result, especially if we can make it solid by the agar addition.

What must follow from reading our text is that the bacteria grows badly, but this does not mean that it does not grow at all. We subsequently added that it grows much better in Martin's media, and even one of our photomicrographs represents some of the colonies grown on the surface of the agar of this author. These facts might have been expected to have made Castellani suppose that the absence of constant growths in these media proceeded rather from some defects of these than from the biological peculiarities of the bacteria. In fact in our first report we referred to the direct inoculation as well as to the bacteria isolated from the body.

We may say that for the manufacture of our media we always employed Witte's peptone, which, being very rich in albumoses, is not so favourable for the germination of the bacteria as are some others. Nicolle and Remlinger especially point out this fact in their excellent book *Traité de Technique Microbiologique* lately published, and we verified this recently on different bacterical species, including the hypnococcus. This last fact is not less important, and may have greatly influenced our results, especially in the inoculations made with the products gathered *post mortem*, because in these circumstances, as is known, the bacteria are more easily influenced by the unfavourable conditions of the media.

In Martin's media, which have for bases a good peptone prepared *ad hoc* in the laboratory, the same thing does not happen, and that explains the better development. Finally, Wassermann isolated in acute articular rheumatism a micro-organism belonging to the streptococcus group, which only grows in strongly alkaline media, fortified with Chapoteau's peptone, cultures not being obtained when Witte's peptone was used, as it is usually employed in Germany.

All this is set aside because it is long since we managed to obtain, as Castellani did, growth in all these media. Months before the publication of his work we published a description of our cultures on agar, bouillon, and potato, with which we made identically the same observations as Castellani.

We similarly point out the absence of milk coagulation and the absence of gas production in the media containing glucose, and both these the author speaks of, thus agreeing perfectly with us.

Finally, even the question of its growth on gelatine does not subsist, for the simple reason that we have already obtained in Lisbon cultures in this medium (both on the flesh-peptone-gelatine and on Martin's gelatine), any one could have seen these cultures at the time of our conference,[5] and the description of them may be found in the *Revista Portugueza de Medicina e Cirurgia Praticas*, where we state the reasons to which we attribute the negative result obtained in Loanda.

We never made direct cultures of morbid products in this medium, so we cannot say if they would be successful, nor does Castellani say in describing the streptococcus if he had recourse to all the media he speaks of for the original cultures, or if some of them were only employed in subculture. This makes a great difference in regard to the results, as is well known to obtain for various species, amongst which we may mention the diplococcus intracellularis meningitidis of Weichselbaum-Jaeger. In short, all the characters which Castellani says distinguish the two germs do not exist, and consequently the difference between them does not exist either; on the contrary, what is indeed remarkable is our agreement in so many points of the description. Some have already been cited; among others is, for example, the identical morphology, according to our various reports, as to form and size, and the existence of groups, from the isolated diplococcus to chains, which may be shorter or longer, either in the body or in cultures, and to these Castellani also refers.

The characters of the cultures on bouillon which he describes, and the form in which the hypnococcus grows are in complete agreement with our observations.

We accentuate, in conclusion, that our investigations were not limited to culture and microscopical examinations of the pathological fluids of the organisms. We also studied numerous microscopical sections, above all those of the nervous tissues, and were the first to find and describe the presence of the hypnococcus. Such sections were seen by Dr. Patrick Manson some time ago in London; by Marmorek, of the Institut Pasteur in Paris; and were presented by Mense to the last Colonial Congress assembled in Berlin.[6]

How is it to be understood that the bacterium so often isolated by us in pure culture may not be the same as the one seen in the sections and exudates, the identical morphology being given? And how can the germ isolated by Castellani from the same region of the body from which we obtained it during life, and *post mortem* fail to be the same we saw in our microscopical sections?

It is convenient to correct here a mistake of the English translation of our first report. It was said that we isolated constantly the diplococcus from the blood. This is absolutely false. What we clearly asserted was that in 4 cases examined from this point of view we found it only once. Now we can add that we have had 2 positive results in 7 cases. Castellani isolated it once only; we have here another point in which Castellani's researches agree with ours.

There cannot be the slightest doubt that Castellani's bacterium is the one we described, and that his investigations are in complete confirmation of ours. This is the essential and important fact. The priority in the matter is relatively a secondary one, as no one can honestly contest that it does not belong to us; but the researches of the member of the English Commission, made quite independently of ours, in quite different and distant regions, do not in the least lose their merit nor the important signification they bear in the clearing up of the etiology of sleeping sickness. It is, in fact, the first time that etiological researches on

African lethargy have had important verification and confirmation, coming, indeed, to identical results.

NOTES AND REFERENCES.

[1] Doença do Sompno. Relatorios enviados ao Ministerio do Marinha pela Missao Scientifica Nomeada por Portaria de 21 de Janeiro de 1901. Lisboa, 1901. [2] Doença do Somno. Trabalhos executados até 6 de Agosto de 1902, pela Missao enviada a Angola pelo Exmo Ministro da Marinha, composta de Annibal Bettencourt, Chefe da Missao, Ayres Kopke, José Gomes de Resende Junior, Annibal Correia Mendes. *Revista Portugueza de Medicina e Cirurgia*, Nos. 139 a 144, Agosto a Outubro, 1902. [3] Immediately after this translation was published we sent the editor a note pointing out the numerous mistakes in it. This unfortunately, however, was not published. [4] We never spoke of this medium because we never employed it. [5] August 7th, 1902. [6] *Archiv f. Schiffs- und Tropen Hygiene*, vii 2.

NOTE OF SOME FURTHER EXPERIMENTS REGARDING THE NATURE AND SPECIFIC TREATMENT OF HAY FEVER.

By Sir FELIX SEMON, C.V.O., M.D., F.R.C.P.,
Physician-Extraordinary to His Majesty the King.

THE results of some of the experiments reported recently in the BRITISH MEDICAL JOURNAL[1] made it desirable that the special influence of Professor Dunbar's toxin upon some persons not actually suffering from hay fever, but showing a greater liability than the ordinary run of people, should be further tested. With this object Dr. Tilley and I experimented upon ourselves on April 3rd, whilst my son and a lady who suffers from typical hay fever also were subjected to experiments similar to those described in my last communication.

1. In the case of my son two drops of a toxic solution (1 in 500) were instilled into the right nostril, but remained without any effect.

2. Miss R. has been suffering from hay fever for twenty-one years, the symptoms occurring at the typical time, and consisting of violent sneezing, obstruction of, and considerable running from, the nose, great irritation of the eyes, and, towards the end, slight asthma. The results obtained in her case were much more marked than in any of the cases I have hitherto experimented upon, and were as follows:

A drop of toxin (1 in 1,000) plus an equal quantity of serum was instilled into the right eye at 2.53 p.m.

No symptoms, either objective or subjective, having occurred at

2.58 p.m.—One drop of 1 in 500 toxin, plus serum, was placed into the right eye.

3.0 p.m.—Itching complained of.

3.1 p.m.—Caruncle obviously swollen, itching increases, and becomes a burning feeling.

3.3 p.m.—Objective symptoms still increasing.

3.4 p.m.—Distinct reddening of both upper and lower lid.

3.5 p.m.—One drop of toxin (1 in 500), plus serum, rubbed into right nostril.

3.7 p.m.—Itching and burning begin. No swelling as yet of turbinal bodies or septal mucous membrane.

3.10 p.m.—Mucous membrane of right nostril shows very obvious congestion at anterior end of inferior turbinal bone. Caruncle of right eye still markedly congested.

3.10 p.m.—Some degree of chemosis in right eye

3.20 p.m.—Irritation felt in right eye almost disappeared; objective symptoms still apparent.

3.21 p.m.—One drop of antitoxin instilled into right nostril.

3.24 p.m.—Feeling of itching and burning in nostril also allayed.

3.23 p.m.—Two drops of 1 in 500 toxin rubbed into left nostril.

3.24 p.m.—Itching sensation becomes apparent.

3.28 p.m.—Mucous membrane between middle turbinated bone and septum very much swollen. Itching, etc., constantly increases.

3.35 p.m.—Septum and lower turbinated bone completely touch one another, and are bathed in watery fluid, which constantly runs from that nostril. The patient is quite unable to breathe through the nostril on left side. Voice is nasal in tone.

3.37 p.m.—In the right eye the symptoms have completely disappeared. A drop of antitoxin was rubbed into the left nostril.

3.40 p.m.—Nostril very slightly less occluded, although running of watery fluid still continues.

5 p.m.—Left nostril quite free. In the course of the evening patient suffered from dull headache, such as she generally experiences whilst suffering from hay fever. Next morning quite free.

3. In my own case the mopping of the interior of my right nostril with a swab of absorbent cotton-wool soaked with one to two drops of the 1 in 500 toxin solution produced in a moment a feeling of slight itching and burning in the right nostril, followed by swelling and congestion of the right turbinated body which was repeatedly examined during the next hour by Dr. Tilley, when this swelling remained permanent. The sensation of itching persisted for some length of time, although at about one hour after the application it had become materially diminished. No sneezing fits as on previous occasion.

4. The following are the notes of Dr. Tilley's case:

2.59 p.m.—1 in 500 toxin mixture with serum.

3.3 p.m.—Itching first noticed.

From 3.2 p.m. to 3.20 p.m.—Itching constantly increasing. Swelling of mucous membrane of inferior turbinated bone, and septum becomes marked. The contrast between the mucous membrane of the left and right nostrils is very noticeable.

3.20 p.m.—A drop of antitoxin was applied.

3.29 p.m.—No change or amelioration of symptoms.

In the course of the afternoon the symptoms gradually wore off.

REMARKS.—Whilst the experiments in my son's and Miss R.'s cases fully accords with the results stated in my first paper, the phenomena appearing in Dr. Tilley's and my own cases tend to further justify the belief that there is a class of persons, who although not actually suffering from hay fever, yet are more susceptible to the influence of the pollen toxin than those of the great majority of persons experimented upon. It remains to be seen whether this fact establishes a connexion between genuine hay fever and paroxysmal sneezing or vasomotor coryza.

REFERENCE.

[1] March 28th, p. 713.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

BULLET WOUND OF BRAIN: RECOVERY.

THE following interesting case came before me on December 12th, 1902:

An Ashantee named Osey Cudjoe fought in the Ashanti rising of 1872 to 1874. At the battle of Fantiyan, Kumassi, fought about January, 1873, he received a bullet wound of the head. He and his friends gave the following account: He was unconscious for about a week. During this period the bullet was removed by native surgery and the wound dressed (most likely with leaf mould and leaves, as this is the native way of dressing all wounds). He was four months in recovering.

On examination there was found a hole on the left side of the head over the angle formed by the junction of the anterior inferior angle of the parietal bone with the frontal and temporal bones, the hole being a circular inverted cone, the base being external. It was ½ in. in diameter at the apex and ¾ in. in diameter at the base. Skin, devoid of hair, lined the cavity, except for the area of the apex where the dura mater was seen uncovered by anything, and through it the brain substance showed clearly. There were a few melanotic spots and veins to be seen. There was some thickening of the periosteum for about an inch round the opening. The man was quite healthy and did not suffer from the sun, though his head was clean shaved. He stated he had never suffered ill-health or from fits of any kind. All the movements were perfect, as were sight, speech, and hearing. There were no signs of induration of the exposed dura mater, which looked healthy and clean. He did not suffer from headache.

The wound was caused by a Snider bullet at long range. The man was about 20 years old at the time.

GEO. CHAS. WALKER, M.B., D.P.H.,
West African Medical Service, Medical Officer, Kumassi, Ashanti.

ACUTE DILATATION OF THE STOMACH WITHOUT APPARENT CAUSE.

SOME years ago I received an urgent call to a child 11 months old supposed to be dying. In a few minutes I was at the house and found the child dead; the heart had stopped, and all efforts at resuscitation were unavailing. The history was that the child had a short time before partaken of its bottle, and was laughing and playing on its mother's knee, when suddenly it seemed to stop breathing, "made a noise in its throat," and became insensible. There was no convulsion or struggle, and the child had apparently died immediately. There had been no previous illness or digestive troubles, and the child was well nourished and presented no evidence of rickets or congenital syphilis. The parents were both healthy.

I suspected "cardiac failure," but could find no clue to its causation. *Post mortem*, however, I found the stomach greatly dilated, containing 19 oz. of food—like fairly thick Mellin's

food—as well as a considerable but unmeasurable amount of gas. The heart muscle seemed pale and flabby, and the cavities somewhat dilated, but there were no other evidences of disease. When it is remembered that the normal capacity of the stomach in a child of this age is about 9 oz. it is obvious that a very marked gastric dilatation existed, and the opinion I gave at the inquest as to the cause of death was cardiac failure, the result of pressure of the distended stomach upon the feeble, flabby heart, both conditions—heart and stomach—being the result of excessive feeding. Although Mr. Belilios[1] does not mention the condition of the heart in his patient I am inclined to suspect that a similar state of things may have existed. As there were only 3 or 4 oz. of food in the stomach, however, the distension was evidently chiefly gaseous, although previous overfeeding may have helped to bring about the gastric dilatation.—I am, etc.

Bowdon. P. R. Cooper, M.D.Lond., F.R.C.S.Eng.

NASAL DIPHTHERIA AND INFECTION.

That the Klebs-Loeffler bacillus can excite and keep up a condition of nasal catarrh without producing any other disturbance of health whatever is a fact which, although well-known to rhinologists,[1] is not so keenly appreciated by practitioners in general as its importance from the point of view of public health merits.

The following cases from my notes serve to confirm the recent remarks of Dr. S. Davies[2] on the subject:

L. M., male, aged 9 years, was brought to me on July 26th, 1901, with the complaint that he had been suffering from "a bad cold in the head" for about a fortnight. On examining the nasal passages a copious discharge of muco-pus was observed, together with a tendency for the mucous membrane to bleed when touched. Suspicion of diphtheria did not arise in my mind until his second visit to me a week later, when I succeeded in removing an almost complete cast of the right nostril, like the finger of a wash-leather glove. The boy was otherwise quite well. There was no headache, anorexia, prostration, or fever. He was attending school and choir. A cultivation obtained from the nasal mucous membrane showed the Klebs-Loeffler bacillus and sarcinae. The patient was isolated, put to bed, and treated with diphtheria antitoxin, and obtained complete relief from the few symptoms he had.

His brother, a lad some years older, took the disease in a more virulent form fourteen days after L. M.'s first visit to me. In this case the pharynx and tonsils were attacked. There was considerable fever, drowsiness, and prostration. The exhibition of the antitoxin, however, soon cut short what was promising to be a very severe attack.

In an ordinary case of pharyngeal diphtheria the extension of the false membrane to the nasal passages is justly regarded as an event of grave significance, for its occurrence is always followed by an aggravation of the constitutional disturbance, presumably because of the rapid and complete absorption of toxins from the richly vascular mucous surfaces of the nose. Consequently the absence of constitutional symptoms in these cases of mild diphtherial catarrh of the rhinal mucous membrane can only be explained by assuming some natural immunity from diphtheria toxins on the part of those attacked. The other possibility, that in these cases the bacillus is of a non-virulent type is disposed of by experimental findings, for in a large proportion of such cases the membrane yields typical Klebs-Loeffler bacilli, highly virulent on inoculation in guinea-pigs,[3] and by instances like the above, where the rhinal diphtheria sets up a severe form of the disease in another patient.

It is notoriously difficult to trace many epidemics and isolated cases of diphtheria to their source, but it is extremely probable that many obtain their infection from a case of diphtherial rhinitis, of which the true nature has been unsuspected.

Leytonstone. Dan McKenzie, M.D.Glasg.

Notes and References.

[1] Lambert Lack found 2⅔ per cent. of all children attending his hospital practice affected with "fibrinous rhinitis." Quoted by P. Watson Williams, *Diseases of the Upper Respiratory Tract*, p. 139. Bristol. 1901. [2] British Medical Journal, February 14th, 1903. [3] Dawson Williams, loc. cit.

RHYTHMICAL COMPRESSION OF THE CHEST IN INFANTILE CAPILLARY BRONCHITIS.

The textbooks I have at my command do not mention this means of combating a fruitful source of mortality in the young, so that I thought the report of a case in which it proved successful might be worthy of publication.

On February 15th I was sent for to see a well-developed female infant, aged 6 weeks. On examination I found her suffering from a severe attack of capillary bronchitis. The lungs were sagged with exudative products, the lips were livid, the face pale and the alae nasi dilating. She was semi-unconscious, unable to take the breast, and no amount of rousing could produce more than a feeble sibilant whine. Having no hypodermic syringe with me, and failing to produce emesis, I placed the infant in a sitting position on my knee with the head well thrown back over one arm, and then commenced steady rhythmical compression of the chest with one hand. This properly applied not only squeezes out the inflammatory products from the acini and smaller bronchioles into the larger tubes, but also by causing peripheral irritation of the lung tissue, and consequent reflex vasomotor effects in it, promotes its circulation and the elimination of its morbid products. With the elastic resilience of the infant thorax this treatment is a combination of artificial respiration and "lung massage." While ordinary routine measures were not omitted in this case, the child's rapid uninterrupted recovery were in both the nurse's and my opinion due to mechanical rather than medicinal means.

Ambleside, Westmorland. T. Houghton Mitchell.

[1] British Medical Journal, January 10th, p. 74.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

Sir John Burdon Sanderson, Bart., M.D., D.C.L., F.R.S., President, in the Chair.

Tuesday, April 7th, 1903.

A Possible Relationship between Carcinoma and Nerve or Trophic Areas.

Mr. L. Cheatle read a communication on this subject, which will be found *in extenso* on pp. 904-8.

Suppurative Meningitis of Streptothricial Origin.

Dr. C. E. Beevor and Dr. E. F. Buzzard recounted this case, which concerned a woman suffering from headache and vomiting, commencing about three weeks before admission to the National Hospital, Queen Square. When admitted she complained of severe pain in the back of the head and back of the neck; no optic neuritis; ptosis of left eyelid and limitation of all movements of the left eye. There was no wasting, rigidity, or paralysis of the limbs; all the deep reflexes were well marked. The temperature was irregular, and varied from 98.4° to 103 4°, rising towards the end to 105°. Three days after admission the patient passed into a condition of stupor, and died twelve days later. The diagnosis was basal meningitis, spreading down the medulla, and involving the right spinal accessory nerve. At the necropsy, made four hours after death by Dr. Buzzard, there was found a suppurative meningitis affecting the meninges covering the left posterior half of the base of the brain. This appeared to be secondary to a carious condition of the body of the sphenoid and of the basilar portion of the occipital bone. As far as could be ascertained, the infection did not arise from the neighbourhood of the middle ear, but originated, in all probability, in the posterior nasal cavities. Examination of the pus revealed the presence of an abundant streptothricial growth in the form of mycelial tufts and scattered threads, some of which stained homogeneously by Gram, and some of which showed a condition of segmentation or sporulation. The same organism was found in sections made through small abscesses in the superficial parts of the cerebellum and temporal lobe. It stained well by Gram and by methylene blue, but was not acid-fast. All attempts to grow it on artificial media were unsuccessful, both by aërobic and anaërobic incubation. Histological examination of the bulb and spinal cord showed intense round-celled infiltration of the vessels of the former, and a condition of diffuse Marchi degeneration of the white matter of both, extending as far as the sacral region. The lack of cultural characteristics prohibited a definite opinion being formed as to what particular species of streptothrix the fungus in this case belonged.

Angeioma of the Brain.

Dr. J. H. Drysdale recorded the above. The patient was a man who was seized with abdominal pain and became drowsy; there was a foul discharge from the left ear. Death occurred from pneumonia. Four years previously he had sustained a fall on the head; this was followed by epileptic fits. At the necropsy, the surface of the brain was found congested; this was especially so on the right side; the veins were dilated and tortuous. On transverse section a wedge-shaped mass of angeiomatous tissue was brought into view,

extending towards the basal ganglia. The middle cerebral artery was greatly dilated as it lay in the Sylvian fissure; this vessel supplied the mass of channels on the vertex. The circle of Willis was of the ordinary size. Microscopic examination showed that the tumour consisted of a series of spaces filled with blood; it was an "angeioma arteriale racemosum," and was comparable to the cirsoid aneurysms of the scalp; the cause of such conditions was quite unknown, and it was not easy to explain their connexion with antecedent injury.

DR C. E. BEEVOR had made a series of observations by means of artificial injection, and confirmed the usually adopted view that the vessels of the cortex and basal ganglia did not anastomose; he was not, therefore, clear as to how the tumour in Dr. Drysdale's case extended from the vertex towards the basal ganglia.

THE NATURE OF THE NUCLEAR VACUOLATION IN FAT CELLS.

Mr. S. G. SHATTOCK remarked that this vacuolation of the nucleus was first drawn attention to by Sir Victor Horsley in 1885, and that it had been again referred to in this country by Professor Boyce and Mr. Beadles. It was in the fat from myxoedematous patients that the phenomenon was particularly common, but it was met with in normal fat and the fat of lipomata. The speaker's own observations had been made upon fat in the mid-line of the tongues of two negroes furnished by Major W. Cooke Daniels: and his object had been to see how far the lyssa might be represented in the lower races of man; but the source of the fat was immaterial. Seeing that the vacuolation was of such common occurrence in adipose tissue, the possibility that presented itself was that the nucleus contained fat, like the body of the cell. This surmise proved correct. The best staining method was Sudan III, preceded or followed by Ehrlich's haematoxylin. This stain was preferable to osmic acid, since the fat was stained of a positive red colour, and nothing except the fat. If the vacuolated nucleus was viewed on the flat it was hardly possible to decide whether the red coloration of the vacuole was intrinsic or was the colour of the fatty contents of the cell appearing through the intranuclear space. When viewed from the side the most noticeable feature was the deformity produced by the vacuole which projected solely from the outer aspect of the cell on which it formed a hemispherical boss. In optical section the droplet of fat in the nucleus, coloured red like that in the body of the cell, was bounded on the deep aspect by a thin line of compressed chromatin, whilst around it, the chromatin formed a ring or collar. These observations made it clear that in the process of fatty infiltration of the cells in the production of adipose tissue, oil was stored not only in the body of the cell, but not infrequently in the nucleus as well. There was no sign of any nuclear disintegration; the chromatic network was merely displaced, and the droplet was almost invariably single. How far mitosis would be affected under such circumstances could only be guessed at; should it be called for the oil would probably be first removed.

RUPTURE OF AN AORTIC ANEURYSM INTO THE PULMONARY ARTERY.

Dr. J. BROADBENT exhibited this specimen, of which a considerable number were on record, the first case having been described by Dr. Thurnam. The chief clinical sign was the continuous roaring murmur.

Dr. R. T. HEWLETT showed an example of aortic aneurysm opening into the superior vena cava, there being a history of urgent symptoms of sixteen days' duration.

Dr. J. H. DRYSDALE recorded a case of aortic aneurysm which opened into the wall of the oesophagus and eventually into the cavity of the stomach.

CARD SPECIMENS.

Dr. H. THURSFIELD: (1) Adenoma of the liver: (2) Congenital absence of gall-bladder.—Dr. J. BROADBENT: Sarcoma of sciatic nerve.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

E. J. MCWEENEY, M.D., President, in the Chair.

Friday, February 27th, 1903.

CANCER OF OVARY.

DR. JELLETT showed with Professor O'SULLIVAN a specimen of double adeno-carcinoma of the ovary.

The specimen had been removed from a patient aged about 40. She had been in comparatively good health until December, 1901, then her menstruation ceased and she believed herself to be pregnant. In the following June she noticed a swelling in the left iliac fossa, and at the same time suffered from severe attacks of pain. The tumours were removed in September. At the operation there was no apparent involvement of the pedicle nor noticeable enlarged glands.

The subsequent history of the case was difficult to obtain. He saw the patient two months after the operation, and there was then a small irregular mass in the bottom of Douglas's pouch. This might have been a malignant extension or a faecal collection, but as the patient refused further treatment it was impossible to determine definitely.

Professor O'SULLIVAN described the solid ovarian tumours as being to the naked eye very much alike and about the size of a clenched fist, and the surface uneven with large projections. The tumours were enclosed in what appeared to be a dense fibrous capsule, but proved to be condensed and flattened stroma of the ovary. On section the greater part of the growth was white, resembling ovarian tissue in its markings, but firmer. In one place there was a large blood extravasation. Through the white substance were minute cavities, pinhead and smaller, and occasionally much larger one—cysts. The largest of these was filled with a papillary growth and contained a glairy fluid. On examination under the microscope the tumour was found to consist of a stroma resembling the ovarian stroma, cells with spindle and rod shaped nuclei, and a very small quantity of intercellular substance. Embedded in this stroma were epithelial structures varying in appearance in different parts. In some places were cysts lined with a high columnar epithelium, ranging in size from a pea down. They contained a granular material with a few swollen cells; these structures were found down to a size when the single layer of epithelium filled up the whole lumen. The largest of these cysts contained papillary growths. Through the rest of the tumour were solid masses of pleomorphic epithelium lying in the stroma and communicating with each other, forming a network of epithelial strands about equal to the stroma in bulk, and traversing it in all directions. The only solid ovarian tumour which bore any resemblance to this of which he had seen an account was a tumour described by Von Kahlden in the *Centralbl. f. Path.* In this growth part was composed of small cysts, part of thick columns of cells. These two were separated by a fibrous partition. He distinguished them as the cancerous changed portions, and regarded the growth as derived from the follicular epithelium. In the case under discussion the two forms of growth appear to be intermixed. Both could be seen in the same microscopic field.

The PRESIDENT said that the case was undoubtedly one of true carcinoma of the ovary. He had himself observed three cases, in the last one of which the microscopic appearances were very similar to those seen in this case, save that the adenomatous element was less pronounced.

Dr. EARL had examined several cases of cancer of the ovary, probably some eight or more. Both ovaries were affected in each case. In two cases the cancer was in an early stage of mucoid degeneration, and in one case at least there were secondary growths in the peritoneum and liver.

Dr. JELLETT said that he did not consider ovarian cancer to be very rare. He had operated on one other case, and had seen at least four in the Rotunda Hospital. As to the question of malignancy, one at least of these ran a most malignant course. Metastases occurred in the retro peritoneal glands and ate through the spinal column, death resulting within three months of the operation.

ABNORMAL DEPOSIT IN JOINTS.

Professor E. H. BENNETT showed a series of joints marked by the deposit of a white material closely resembling the sodium urate seen in true gout. The deposit was present in the hips, shoulders, and sterno-clavicular joints, and was absent from the more distal joints of the limbs. The deposit was shown to be calcium carbonate. He also exhibited a water-colour drawing showing the recent appearance of the joints affected by this disease.

Professor BENNETT, in reply to the PRESIDENT, Drs. TRAVERS SMITH, and KNOTT, pointed out that in this case the calcium carbonate occurred in the form of small crystals.

SARCOMA OF DUODENUM.

Dr. PARSONS and Professor O'SULLIVAN exhibited a sarcoma of the duodenum with microscopical sections.

The PRESIDENT considered it to be in all probability a round-celled sarcoma, but could not explain the hybrid matter referred to by Professor O'Sullivan. He asked how it behaved to the Van Gieson triple stain? He thought the case ought to be submitted to the Committee of Reference.

Fracture of the Astragalus.

Professor E. H. Bennett showed a united fracture of the astragalus. The fracture had united without deformity by bone. There was no other fracture either in the bones of the foot or of the leg or thigh. The specimen was found in dissection, and was without history.

Primary Cancer of Liver in a Girl.

Dr. Thompson related a case of primary cancer of the liver in a girl aged 21.

The President said the liver was much enlarged; its surface was studded with secondary nodules, some of them umbilicated. The colour was dull-red with a greenish tinge. The nodules viewed from without were white. On section the primary mass was found occupying the centre of the right lobe. It was as large as the closed fist, and harder than the secondary knots. On cutting into the specimen a most remarkable change took place in its colour, most of the secondary knots assuming a brilliant grass-green hue on contact with the air. This green hue subsequently extended to the liver parenchyma after the specimen had been placed in formalin. Spectroscopic and other tests showed it to be due to oxidized bile pigment. The cancer was composed of very large epithelial cells closely resembling liver cells, but differently arranged. Many of them were crammed with globules of green pigment, and here and there presented an attempt at tubular arrangement, the lumen being filled with green matter. It was evident that the cancerous degeneration had not robbed the tumour cells of their function, and that they had continued to secrete bile, though several generations removed from normal liver cells. The bile pigment so secreted, finding no outlet, was stored up in the cells, and revealed its presence by the green hue at once assumed on section by the cancer tissue.

OBSTETRICAL SOCIETY OF LONDON.

Edward Malins, M.D., President, in the Chair.

Wednesday, April 1st, 1903.

Hydrosalpinx of an Accessory Fallopian Tube.

Mr. Sampson Handley read a paper on a case of Hydrosalpinx of an Accessory Fallopian Tube, due to Twisting of the Pedicle. He considered it doubtful if the existence of hydrosalpinx of an accessory tube had been proved. The specimen now shown was conclusive in that it possessed a communication with the main tube, and, like ordinary hydrosalpinx, was a retention cyst. Kossmann had described under the name "hydroparasalpinx" certain small cysts possessing a muscular wall, which he found in the broad ligament in association with tubal rudiments. These cysts had no communication with the main Fallopian tube. Kossmann did not bring forward any conclusive proof for his view that these cysts were distended rudimentary tubes. For purposes of comparison the author described, from personal observation, the appearances seen in a section taken in the long diameter of an ordinary hydrosalpinx starting at the uterine end. The diameter was greatest, the thickness of the wall least, and the tissues most degenerate at the ostial end. The epithelium, first losing its cilia, became cubical, then flattened, and finally, at quite an early stage, disappeared altogether, except from the plicae and in the subplical spaces. The plicae were very persistent structures, owing to their vascularity, and stained well, even when the wall from which they sprang was quite degenerate. After their disappearance the occurrence of subplical spaces, perhaps lined by flattened epithelium, might still show that the wall of the hydrosalpinx, although consisting of little but hyaline fibrous tissue, was a degenerate Fallopian tube. The hydrosalpinx of an accessory tube described was No. 4,582 in the Pathological Series of the R.C.S. Museum. It was described as "a thin-walled pyriform cyst, developed under the broad ligament at the point where it is reflected over the Fallopian tube." The cyst was attached to the upper border of the tube, like a growing pear, by a very short twisted stalk. Its diameters were 2.2 cm. by 1.4 cm. Its wall thinned progressively from the attached to the distal end, concurrently with an increase of diameter. Internally it was marked by branching fibrous-looking bands standing out in relief. When the Fallopian tube was distended with air, the air escaped into the interior of the cyst. A microscopical section showed that the wall of the cyst was similar in structure to that of an ordinary hydrosalpinx. There was a well-marked muscular coat; plicae and subplical lacunae were seen. The tissues were degenerate towards the thin distal end. The cyst had, therefore, all the peculiarities of a hydrosalpinx. The history of the specimen was lost, but it was not devoid of clinical interest. A pyosalpinx of an accessory tube might lead to a fatal result. Pregnancy in an accessory tube had quite recently been recorded. It was therefore advisable to ligature and remove an accessory tube, if one was found. The presence of plicae and of subplical lacunae in a cyst of the broad ligament had apparently not hitherto been described. The present communication was preliminary to one on the origin of broad ligament cysts, since the writer could bring forward evidence that many such cysts were derived from "rests" of the Fallopian tube.

Mr. Alban Doran said Kossmann's theory was of great importance. Perhaps he was not strictly accurate when he implied that parovarian cysts and papillary cysts of the broad ligament all arose from tubal or Mullerian elements, and not from relics of the mesonephron; but he was very possibly correct in ascribing the abundant free papillomata, which sometimes buried both broad ligaments, tubes, and ovaries, to tubal elements. If that view were correct it might account for the clinically innocent character of many cases of bulky free papillomata, notwithstanding formidable complications, which vanished when the growths were removed. The masses were hypertrophied tissue rather than neoplasms. Mr. Doran removed a very heavy pair of such outgrowths, which nearly filled the abdomen, nine years ago, and the patient remained well. He asked Mr. Handley if it were really justifiable to amputate a tube and mesosalpinx solely because accessory ostia and tubes were detected. Mr. Doran admitted, however, that these little growths were probably more than pathological curiosities, so that it seemed prudent to close an accessory ostium by suture of the adjacent serous membrane and to amputate accessory tubes.

Dr. Herbert Spencer did not think that it had been proved that the specimen shown was an accessory tube; he thought it was more probably an "antrum tubae"—a saccular dilatation of the tube in the situation of the specimen shown, described by Roederer in *Icones Uteri Humani Gravidi*, and figured in Montgomery's *Signs and Symptoms of Pregnancy*. The "antrum" was not mentioned in modern books; Roederer asked whether it was not produced by pregnancy: but Montgomery showed that this was not the case by finding it in unimpregnated uteri. He (Dr. Spencer) had found it in pregnant cases, but it was much more often absent. The "antrum" contained plicae, and of course was of the same histological structure as the tube, so that Mr. Handley's specimen could not be said to be a tube as a result of the histological evidence. It was pure hypothesis that the "accessory tube" had been closed by inflammation, and there was an absence of epithelium on the so-called fimbriae in the specimen. It was, however, well known that an accessory ostium with perfect fimbriae was not rarely met with in this situation, and he thought both the antrum and the accessory fimbriated ostium were due to some developmental peculiarity. But he thought they might ask Mr. Handley to produce a tube approximately the shape of the normal "tube" before they spoke of an accessory tube; the sketches showed structures bearing a very remote resemblance to "Fallopian tubes." He would suggest that further investigation should be made into the subject of the "antrum tubae"—a suggestion first made by Roederer himself.

Mr. Malcolm thought that Mr. Handley had proved that the cyst he described was a dilated accessory Fallopian tube. The fact that layers of peritoneum, muscle, fibrous tissue, and débris representing mucous membrane were found in the wall of a cyst, which communicated with the tube, seemed quite conclusive evidence. Mr. Handley would strengthen his argument if he could show that some of the closed cysts, which seemed similar to the one described, had also the various layers of tissue in their walls which were formed in the Fallopian tube. The speaker was much interested in the description of the microscopic appearances of the wall of an ordinary hydrosalpinx. The condition suggested to him that in the normal tube towards the fimbriated end the flow of its contents was probably towards the peritoneal cavity. The secretion of the tube (for it must have a secretion, or there could be no hydrosalpinx) and effete epithelial cells, cast off from the mucous surface, would, if near the free end, find an easier exit towards that end than towards the uterus. The readiness with which an extrauterine fetation near the fimbriated extremity might be expelled into the peritoneal cavity was further evidence to the same effect. It followed that if any slight inflammation closed the fimbriated extremity of the tube, the contents of the external portion,

which were accustomed to flow outwards into the peritoneal cavity, would be able to escape only through the uterus, and if the vascular power were insufficient to propel the contents forward, a hydrosalpinx would develop. The condition described by Mr. Handley, with the thinner-walled part near the fimbriated extremity of the tube, would follow.

Lieutenant-Colonel A. J. STURMER sent a short paper on four cases of ruptured extrauterine gestation occurring in two women. In each instance the case was treated by abdominal section, and a satisfactory recovery was obtained. The comparative rarity of extrauterine gestation occurring twice in the same subject was discussed, and the question of conservative treatment in dealing with tubal gestations was briefly reviewed.

The paper was discussed by Dr. CUTHBERT LOCKYER, Mr. ALBAN DORAN, Dr. SPENCER, Dr. RUMLEY DAWSON, and Dr. ARNOLD LEA.

INFECTION OF PUERPERAL UTERUS BY DIPLOCOCCUS PNEUMONIAE.

Mr. A. G. R. FOULERTON and Dr. VICTOR BONNEY read a short communication on a case of primary infection of the puerperal uterus by diplococcus pneumoniae. The authors pointed out that this case was undoubtedly one of primary infection of the genital passages by diplococcus pneumoniae, occurring during the puerperium, and they remarked on the extreme rarity of this form of puerperal infection. Similar cases had been recorded by Weichselbaum and by Bar and Tissier, but the latter author's statements were not supported by bacteriological proof. Infection secondary to lobar pneumonia was probably much commoner, and they cited a case investigated by one of them, in which diplococcus pneumoniae was found in the uterus of a patient who died in the Middlesex Hospital of lobar pneumonia, premature labour having occurred on the second day of the disease.

The PRESIDENT gave a brief description of two cases of a similar nature which had occurred in his practice.

SPECIMENS.

Dr. ARNOLD LEA showed two specimens of double tuberculous disease of the appendages removed by operation, and Mr. ALBAN DORAN recorded his experience of such cases.—Dr. GROVES showed: (1) A fibroid of the uterus which appeared two years subsequently to the removal of both appendages; (2) a uterus affected with early adeno-carcinoma; (3) a distended Fallopian tube, due possibly to extrauterine gestation. The cases were discussed by Dr. HORROCKS and Dr. SPENCER.—Dr. W. C. SWAYNE showed two specimens: (1) Fibroma of the vagina; (2) fibroid of the uterus removed by panhysterectomy, and Dr. HEYWOOD SMITH contributed some comments on the latter specimen.

MANCHESTER MEDICAL SOCIETY.

Wednesday, April 1st, 1903.

A. M. EDGE, M.D., President, in the Chair.

LIGHT AND *X*-RAYS IN LUPUS AND MALIGNANT DISEASE.

DR. R. B. WILD read a preliminary note upon the Use of the Finsen Light and the Roentgen Rays in the Treatment of Lupus and Malignant Disease, which was based upon an experience of 150 cases treated during the last two years. Taking the cases which had been discharged, 72 were lupus vulgaris and 32 malignant disease. Of the lupus vulgaris cases 20 had been treated by the Finsen lamp, and of these 11 were completely healed, and 4 very much improved, a total of 75 per cent. in which the result was satisfactory. Of 23 cases treated by the Lortet lamp 2 were healed and 4 much improved, a total of 26 per cent. Of 29 cases treated by Roentgen rays 9 were healed and 9 much improved, a total of 62 per cent. Many of these cases were, however, much more severe and extensive than those treated by the Finsen lamp. In the case of malignant disease no permanent benefit had been found in 8 inoperable carcinomata, chiefly breast scirrhus; in epitheliomatous ulceration benefit was obtained in 3 superficial cases, 2 of which recurred; in 3 deeper cases there was no improvement. In 4 cases of secondary epitheliomatous glands over which the skin was intact were treated, but without any good results. In rodent ulcer the results were very different; out of 17 cases discharged, 12—that is, 71 per cent.—were completely healed; in 5 there was either no benefit or a more rapid growth; in 4 of these 5 bone or cartilage was involved. Finally, the dangers of the Roentgen rays were considered, and it was emphatically stated that they ought only to be used under the supervision of a medical man.

PROSTATIC OBSTRUCTION.

Mr. SOUTHAM made some remarks on the operative treatment of prostatic obstruction, and gave details of cases where suprapubic prostatectomy had been followed by satisfactory results.

THE OPERATION OF CASTRATION.

Mr. THORBURN described a modification of the operation of castration recently practised by him. The object of the operation was to obtain high access to the spermatic cord without the risk of infection, which was greater than normal in the case of scrotal wounds, and especially in operations for disease connected with ulcers or sinuses. The patient being prepared, the compress was in the first instance removed from the pubic region only. An incision was made over the upper part of the spermatic cord; this was seized, brought well up, doubly ligatured, and cut across at the highest possible point. It was then dropped back and the wound entirely closed by suture of the internal oblique muscle to Poupart's ligament and of the external oblique aponeurosis and skin. A second incision was now made over the testicle, which could be rapidly isolated and dragged away with its cord. The two wounds were quite disconnected; the total incision was less than that usually employed; the operation was easy and rapid.

ATROPHY AND HOUR-GLASS CONTRACTION OF STOMACH.

Dr. P. R. COOPER mentioned a case of atrophy and hour-glass contraction of the stomach, and made some remarks on the occasional clinical association between oesophageal spasm and various gastric conditions.

Miss V., aged 68, complained of great difficulty in swallowing and dryness of the mouth, which had troubled her on and off for months. She was distinctly neurotic, and would not allow the passage of a stomach tube. She was extremely emaciated, and had a cachectic appearance. No evidence of organic disease could, however, be found, and under treatment she made a satisfactory recovery. Three years later the symptoms recurred, and the general condition was even worse, necessitating treatment in a nursing home on "Weir-Mitchell" lines. Again recovery ensued, the patient was able to take food, and gained surprisingly in flesh and strength. The improvement was maintained for three years, then again relapsed. This time the patient neglected to seek advice until emaciation and prostration were extreme, and although she was fed by stomach tube and bowel, and retained everything, she died from asthenia. At the necropsy the oesophagus was found to be normal, nor was there any growth external to it or involving the branches of the vagus. The stomach was small, shrunken, and "hour-glass" shaped, and on opening it the circular-depressed cicatrices of two chronic ulcers were seen, one on each side of the constriction, and rather on the anterior wall. The constriction was much nearer to the pyloric than the cardiac end, and the passage between the two cavities of stomach would barely admit a quill. The muscular coat of the stomach was somewhat hypertrophied, but there was no infiltration either of an inflammatory or a malignant character; this was confirmed microscopically.

In reference to the association of oesophageal spasm with gastric conditions, a paper by M. Maurice Soupault[1] was quoted, giving an account of four cases all presenting symptoms of oesophageal stricture which, *post mortem*, proved to be due to atrophic retraction of the stomach, three being the result of atrophic carcinoma, one following sclerosis after corrosive poisoning. These cases could hardly be mere coincidences, and it seemed not unlikely that others might have been overlooked either from want of necropsy or other reason, and that there existed a definite clinical association—either direct (that is, a nervous overflow) or reflex—between the gastric lesion (obstruction) and the oesophageal spasm. This was at least worth bearing in mind in cases of apparently functional oesophageal spasm.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.—At a meeting held on March 20th, Dr. HENRY ASHBY in the chair, Mr. HENRY J. CURTIS read a paper on a case of congenital parosteal sarcoma, arising from the acromion process of one scapula in a child aged 5¾ months. At the time of operation the tumour was the size of an orange. It extended from the point of the shoulder to the lobe of the ear, and could not be moved independently of the scapula. In horizontal circumference, it measured 11 in. It was removed, and microscopically proved to be a mixed spindle and round-celled sarcoma. The author drew attention to fibro-cellular tumours, of an allied kind, sometimes seen in young children.—Dr. HENRY ASHBY and Mr. SYDNEY STEPHENSON read a paper on acute amaurosis following infantile convulsions. They described a series of cases of the kind which they believed to be due directly to severe convulsions. Thus, the infants developed convulsions with coma, resembling the status epilepticus of adults, and upon recovery were found to be blind and

[1] *Bulletins de la Soc. Méd. des Hôpitaux*, June, 1902.

sometimes hemiplegic or aphasic. Ophthalmoscopic examination yielded negative results. There was no evidence of meningitis. The authors distinguished this form of amaurosis sharply from the amaurosis (also without ophthalmoscopic signs) which might accompany or follow posterior basal meningitis in infants. They concluded: (1) That there was a form of post-eclampsic amaurosis, due to anaesthesia of the visual centres, occurring in infants; (2) that the convulsions, which might be due to various causes, were apt to be severe and accompanied by coma; (3) that the amaurosis might be associated with aphasia and paresis of hemiplegic distribution; and (4) that the amaurosis was for the most part transient. Dr. A. E. Sansom suggested as a cause for the blindness either a vasomotor ischaemia or a poisoning of the nervous mechanism involved. Dr. Robert Hutchison alluded to amaurosis following superficial meningitis in infants. Dr. George Carpenter mentioned a case of a somewhat analogous nature occurring in an older child. Dr. Ashby replied to the discussion.—Mr. A. H. Tubby described a case of pneumococcus arthritis in a male infant 14 weeks of age. No history of accident or injury. On admission the child was evidently very ill. The right knee was bulbous, red, tender, and fluctuating. A quantity of pus was evacuated by means of two lateral incisions, and a drainage tube was passed through the joint. No signs of pneumonia could be discovered, notwithstanding repeated examination of the chest. The pus from the joint was examined by Dr. Lazarus-Barlow, who found that it contained the micrococcus pneumoniae in pure culture. Mr. Tubby briefly reviewed the literature of the subject, incidentally mentioning two similar cases that had been under his care at the Evelina Hospital. In one of the latter there had been an antecedent pneumonia, but in the second case no pulmonary symptoms were found. Mr. Tubby remarked that these cases of pneumococcus arthritis threw some light on the pathology of the "acute infective arthritis of infants." Mr. Lockhart Mummery suggested dividing the patella in such cases, and nursing the baby in such a way as to facilitate the escape of pus from the diseased joint.

Mr. Henry J. Curtis (on behalf of Mr. Stansfield Collier) showed a baby, born at the eighth month, two weeks after rupture of the membranes. There was extreme dimpling of the skin over the olecranon process and both sides of the knees, and there was also lateral compression of the limbs and of the skull. The grooving observed over the right inferior maxilla and the lower third of one leg was accounted for by compression of the parts by the funis. The skin dimpling, it was suggested, was due to amniotic adhesion. The skin presented other deformities.—Dr. G. A. Sutherland showed a case of infantilism in a boy aged 11 years. He weighed 28 lb., and his height was 39 in. The body and the limbs were well formed, and the only indication of disease was a clubbing and blueness of the fingers. The expression of the face was infantile, and the mental condition was backward. Dr. G. E. Shuttleworth suggested thyroid treatment, although he admitted that the child manifested no marked signs of cretinism. Dr. A. E. Sansom remarked that the absence of pronounced signs of congenital heart disease did not exclude that condition.—Dr. Robert Hutchison showed: (1) A girl, aged 5½ years, affected with great excitability, incoherence, and restlessness, and other evidences of chronic mania; and (2) a baby, aged 5 weeks, suffering from enlargement of the left side of the tongue, left arm, and left leg. The case was evidently one of hemiatrophy. The cases were discussed by the Chairman, Dr. Shuttleworth, Dr. Sutherland, and Mr. H. J. Curtis; Dr. R. Hutchison replied.

Harveian Society of London. At a meeting held on April 2nd, Dr. W. Winslow Hall, President, in the chair, Dr. Leonard Guthrie read a paper on some ancient remedies, and on Gideon Harvey, a seventeenth century physician, which is referred to elsewhere.—Mr. Raymond Johnson read a paper on some mistakes in the diagnosis of malignant disease. He pointed out how mistakes in diagnosis were often due to the primary tumour being overlooked, while a symptom caused by a secondary deposit was regarded as the essential disease. In illustration of this, reference was made to the case of a woman who came under treatment for almost symmetrical paralysis and muscular atrophy in the upper limbs. The nature of the case was altogether doubtful, until a small hard carcinomatous nodule was accidentally discovered in one breast. The necropsy revealed widely disseminated secondary growths, the muscular atrophy being caused by a deposit in the spine in which several nerve roots to the brachial plexus were involved. Special attention was directed to secondary deposit of cancer in the bones, for if the existence of the primary tumour was unrecognized a secondary cancer might easily be mistaken for a primary sarcoma, and possibly amputation of a limb might be performed before the mistake was detected. Mr. Johnson showed a tumour at the upper end of the humerus, from University College museum. It was diagnosed as a sarcoma, and amputation performed at the shoulder. By microscopical examination the tumour was proved to be a carcinoma. It was then discovered that the patient was suffering from extensive carcinoma of the uterus, of which she died six months later. It was useful, practically, in all cases of malignant tumour of bone occurring after middle age, to consider the possibility of secondary carcinoma. Spontaneous fracture due to these secondary bone deposits might be the cause of erroneous diagnosis if the primary growth was overlooked, for the secondary tumour might occasion fracture when, on account of its central position, it occasioned no obvious swelling of the bone; and the fracture might be followed by some degree of repair. As regarded abdominal tumours, various forms of inflammatory deposit might simulate hard malignant tumours of the large intestines. For example, a localized peritonitis probably due to mischief in the appendix was mistaken for carcinoma of the caecum. Inflammation about the gall bladder due to gall stones simulated a tumour of the hepatic flexure; and a small psoas abscess in a middle-aged man was mistaken for a tumour of the descending colon. The diagnosis of malignant disease of the large intestine was not infrequently complicated by the occurrence of a large abscess in connexion with the growth: the abscess might be diagnosed, while the tumour causing it was overlooked. Lastly Mr. Johnson referred to the many difficulties met with in the diagnosis of retroperitoneal sarcoma. A case was mentioned in which an exploratory abdominal section, performed on a young man, revealed the presence of a large retroperitoneal tumour having the characters of a soft haemorrhagic sarcoma. A history of epistaxis was however obtained, and the patient was said to have had an attack of "blood in the joints" in early life. This suggested the possibility of an extravasation of blood occurring in a bleeder. The outcome of the case supported this view. For many months altered blood oozed from an opening in the middle of the abdominal incision, and the tumour gradually completely disappeared. Four years later the patient was in perfect health. Dr. James Taylor said that such experiences as Mr. Johnson had related were almost the only silver lining to the heavy cloud of malignant disease. He himself knew of one instance similar to those mentioned by Mr. Johnson, in which the patient, at one time supposed certain to die, was now absolutely well. On the other hand cases unfortunately occurred in which the patient, supposed to be suffering from functional disorder only, ultimately died of malignant disease. Mr. Malcolm said that mistaken diagnoses which he could recall had more often shown malignant disease where it had not been suspected. He thought that ovarian tumours were more often malignant than was generally believed. This was shown by the development within three years of secondary malignant growths which were sometimes foreshadowed by the appearances found on microscopical examination of the parts removed. In one case he diagnosed a tumour of the kidney in a child aged 4. On operation a fibrous sarcoma, attached to the tail of the pancreas, was found. The patient did not survive the operation, and after death a secondary growth was found lying within the portal vein and distending it. In a patient operated on for a large ovarian tumour there was deep jaundice, thought to be due to a gall stone. Malignant disease of the head of the pancreas was, however, discovered. At the necropsy five weeks later the descending portion of the duodenum was found to be transformed into a tube of cancerous tissue. In another case in which ovarian tumour was diagnosed, the peritoneal cavity was found on operation to be completely obliterated, so that nothing could be done. Eighteen months later no tumour could be felt, and the patient was quite well. In another case, in which inflammatory disease of the ovaries and Fallopian tubes was diagnosed, the pelvis was found to be completely shut in by adherent intestines. An opening was made through the posterior vaginal fornix, but no pus could be found in the hard pelvic mass. The growth was then regarded as probably cancerous, but some months later it had disappeared, and the patient was quite well. Dr. Prickett mentioned the case of a lady, aged 73, who had been losing flesh and strength for some time, and suffered from a fetid sanious vaginal discharge. On examination a mass was found involving the anterior and posterior walls, and extending from the cervix, which was also involved, to within an inch of the vulva. There seemed to be no doubt as to the malignancy of the growth, and it was thought too advanced for operation. However, in less than a

year, the growth entirely disappeared, and had left no trace beyond a slight constriction of the vagina just below the cervix. Either the diagnosis was wrong, or malignant growths sometimes disappeared spontaneously.

Society of Medical Officers of Health.—At a meeting on April 3rd, Dr. Spottiswoode Cameron, President, in the chair, Dr. Joseph Groves, Medical Officer for the Combined Sanitary Districts of the Isle of Wight, on being elected President for the ensuing year, said that he looked on his election to that important office as a recognition, though a tardy one, of the good work done by the large army of "half-timers" as they were called, men engaged more or less in general practice. In introducing his subject of sanitary administration he need not insist on the wide differences in the character of different districts, urban and rural, rich and poor, but he must notice the paradox that while all recognized the health of the individual to be the greatest blessing, and admitted that of the public to be the basis and essence of national prosperity, legislators and administrators, instead of welcoming any measure that could conduce thereto, should, if not actually oppose, postpone such to every other consideration. Sir Michael Foster, in an able article in the *Nineteenth Century and After* for January, characterized the Local Government Board as a "phantom Board" consisting of president, secretary, and staff of officials. Reviewing the evolution of the Ministry he showed how, as the work of the several Secretaries of State had increased, new departments were constituted. The administration of the Poor Law and Public Health had been transferred to the Local Government Board, the work of which increased, while by delegation to subordinate Boards as those of Trade, Agriculture, etc., that of the Home Office was lightened, and the like course should be followed with Public Health, which demanded special knowledge, as much at least, as did Agriculture. But the estimation in which each was held might be gauged by the salaries of the heads, which were £5 000 in the case of each of the so-called Secretaries of State, and £2 000 only in that of the President of the Local Government Board, and as were the salaries of the chiefs, so were those of all their subordinates, and Mr. Austen Chamberlain maintained that this disparity was justified by the lower standard of intellectual attainments required for the administration of the Local Government. If this were so as regards the Poor Law, the sooner the Board were relieved of the control of the Public Health, the problems connected with which were often of the most complex scientific character, the better. With a higher salary the President would command greater respect in which his officials would share. The Board had, however, very little power of control, though it had done good work and collected a mass of valuable material. The political party now in power had, indeed, given the country nearly all its sanitary legislation, but they had not of late years fulfilled the aspirations of Lord Beaconsfield after a policy in which the public health should be the first consideration, and the Local Government Board might effect great improvement without additional legislation by simply removing such obstacles to progress as uncertain tenure of office. In most rural districts the practice had been at first to appoint the Poor-law surgeons as medical officers of health to their districts, with small additions to their salaries; then, with a view not to greater efficiency but to saving of a few pounds on each, a number of districts would combine to appoint a single officer, who might or might not be required to devote his whole time to the duties, but was always appointed for a limited number of years, from one to five. At the end of the period any district might withdraw, or the whole break up, leaving the officer, if he had been debarred from private practice, without the means of earning a livelihood. It was not an infrequent occurrence for an officer who had done his duty conscientiously to find himself at the end of the year not dismissed but superseded, another being appointed without his knowledge; and there were few that, as the time for re-election drew near, had not had threats or hints, perhaps of a friendly character, as to excess of zeal. Yet the Local Government Board defended the short-term system, apparently under the impression that fixity of tenure would lead to indolence, and that the fear of not being re-elected would urge the officer to the energetic performance of his duties. It had objected to giving security to conscientious men on the ground that it would be given at the same time to the inefficient and unconscientious, whereas the latter enjoyed for that very reason certainty of re-election, while the former were in constant fear of losing their appointments. The Local Government Board was in the position of the senior partner, and the local authority of the junior; and while the former issued orders and instructions the latter threatened the officer with dismissal if he obeyed them. When the Local Government Board admitted the injustice of such dismissal, it pleaded inability to protect the officer, but, if it had not the power, why did it not obtain it? The Poor-law surgeon whose duties did not bring him into conflict with his employers could not be removed without its consent; while the medical officer of health and the sanitary inspector were at the mercy of the local authority; and the temptations of the inspector—a poorer man—were the greater. The clerks and surveyor held office during good behaviour, but the sanitary officers were secure only while they postponed their duties to their interests. More power should be given to the Local Government Board and the county councils. Medical officers of health to counties and towns should be appointed for life, and those to small rural districts should not be allowed to suffer for doing their duty and carrying out the instructions of the Local Government Board which they were bound to obey.—Dr. Herbert Jones said that if even six months' notice of dismissal were required, a certain amount of sympathy would be aroused and of odium incurred by the authority which would go far to protect the medical officer; but they did not dismiss, they simply did not re-elect the medical officer. In large towns the medical officers, whose energy and good work were appreciated by the public, enjoyed a virtual security, since the members of the council would fear to face the indignation of their constituents at the poll, but the reports of the Inspectors of the Local Government Board teemed with instances of unjust dismissal of officers of smaller urban and rural districts for no other reason than that they had obeyed the instructions of the Board. The Local Government Board professed a reluctance to give fixity and permanence to the very small appointments, but these were not so numerous as was commonly supposed. Dr. Garstang, for instance, found in the *Medical Directory* no fewer than 90 in which the salaries were between £10 and £20; but most of these appointments were held along with others, so that, as a matter of fact, of about 1,350 medical officers of health, 36 only were in receipt of £20 or less, and 363 of £20 to £50. On the one occasion, in 1893, of the Parliamentary Secretary of the Local Government Board, Sir Walter Foster, having received a deputation from the Society, he assured them that the Board was strongly in favour of permanent appointments, and he would like to ask the Board now how many, if any, such appointments had received its approval, for there were occasions on which it had actually refused to sanction appointments to large towns for five years, and required them to be made annually. In rural districts the authorities were often ignorant of the provisions of the Acts they were supposed to administer, and reprimanded their inspectors for reporting nuisances or visiting houses where no complaint had been made. In rural districts road foremen and others equally incompetent were often employed by the highway authorities as sanitary inspectors from motives of economy.—Dr. Newsholme and others having spoken, the President remarked that the Local Government Board occasionally assumed an obstructive attitude in its dealings with progressive urban authorities, refusing, for instance, its sanction to a novel scheme for sewage disposal, or to the superannuation of an estimable but aged medical officer and the appointment at a smaller salary of an assistant with promise of succession to the office. It was in the rural districts only that its intervention was to be desired.

Laryngological Society of London.—At a meeting held on April 3rd, Dr. Dundas Grant, Vice-President, in the chair, the following cases and specimens were shown: Dr. W. H. Kelson: Case of infiltration of epiglottis, aryepiglottic folds, arytenoids, and right ventricular band of obscure nature.—Dr. Furniss Potter: Case of singer's nodule (left vocal cord) in a man, aged 41.—Dr. H. Tilley: Two cases, illustrating radical cure (by obliteration) of bilateral maxillary sinus empyema.—Dr. L. H. Pegler: (1) Case of clonic spasm of the muscles of the palate and pharynx, causing entotic tinnitus; (2) case of recurrent fibro-angeioma of septum nasi in a man, aged 30.—Dr. Donelan: A woman with lesions of pharynx and larynx with history of severe diphtheria.—Mr. L. A. Laurence: Case of ulceration of soft palate.—Dr. Westmacott: Specimen and section of acute tuberculosis of left tonsil from a man, aged 32.—Captain O'Kenealy: Microscopic specimen of localized psorospermosis of mucous membrane of

septum nasi.—Dr. Fitzgerald (for Dundas Grant): Ulcerating growth of left tonsil, side of tongue, and anterior faucial pillar in a man, aged 53.—Dr. Charsley: Case of polypus of maxillary antrum.—Mr. E. B. Waggett: (1) Case of sphenoidal sinus suppuration in course of treatment. The anterior wall had been removed with Lack's instrument. (2) Case and specimen of papilloma of larynx.—Dr. Dundas Grant: (1) Case of immobility of left vocal cord attributable to (?) bronchocele; (2) case of bilateral paralysis of both recurrent laryngeal and left sympathetic nerves in a middle-aged woman; (3) case of disease of larynx of twelve months' duration in a man, aged 50, probably epithelioma.—Dr. H. J. Davis: Case (for diagnosis) of swelling on right side of larynx, causing partial occlusion.—Dr. Wyatt Wingrave: Case of rapid (six months) destruction of nasal septum, probably lupus, in a man, aged 34.—Dr. Burt: Case of goître with early exophthalmos.

Glasgow Obstetrical and Gynaecological Society.—At a meeting held on March 25th, Dr. J. Nigel Stark in the chair, Dr. Edgar showed an extrauterine pregnancy, consisting of tube and peritubal haematocele.—Dr. Jardine showed an ovarian cyst removed from a girl aged 15.—Dr. Kelly showed an ovarian cyst into which there had been haemorrhage owing to twisting of the pedicle.—The President showed a parovarian cyst removed entire. The tube stretched across it for 9 in., the ovary was attached. The pedicle had been twisted twice. All the patients were doing or had done well.—The President (Dr. Stark) read a paper on ovariotomy in a patient suffering from exophthalmic goître. Symptoms of Graves's disease were very well marked, and the tachycardia was excessive. Operation had to be resorted to. The therapeutic exhibition of thyroid had been detrimental. At the operation the tumour, which extended to the stomach, was partly gangrenous from twisting of its pedicle. The acute onset of the abdominal symptoms had coincided with the twisting of the pedicle. The tumour was removed after breaking down many adhesions. It was a multilocular ovarian. The patient was much relieved by the operation, but succumbed on the second day. The heart-rate was then varying between 160 and 200 per minute. The speaker thought that the condition had really been aggravated by the administration of the thyroid, and he strongly advised that before operation on such cases the general condition should be improved. He recommended the administration of strychnine and perhaps digitalis some time before operation. The paper was remarked upon by Drs. Douglas, Edgar, and Adamson.—Dr. Edgar reported four cases in which labour had been obstructed by tumours in the pelvis.

Case I. There was a dermoid of both ovaries. The one which obstructed labour lay in Douglas's pouch. It was pushed above the brim, and the child delivered with forceps. Both tumours were subsequently removed by abdominal section. Case II. The tumour, which was cystic, was pushed out of the way, and the child delivered with forceps. At a subsequent date the tumour of the ovary was removed, and a part of the opposite ovary was resected on account of cystic disease. Case III. Forceps had been applied and the child dragged through the pelvis, with the result that the tumour ruptured. It was a dermoid. On the third day there had been a rise of temperature and vomiting. When seen by Dr. Edgar there was found a mass in the pouch of Douglas which fluctuated. The vaginal fornix was incised, the tumour with masses of hair was removed, and the cavity packed. Case IV. The obstruction was due to a myoma. There had been profuse antepartum haemorrhage. The child had passed the obstruction, but died later. The tumour was subsequently removed. In all these operations the pedicles had been grasped by the speaker's special forceps (which were exhibited), while the tumour was then cut away. The vessels appearing in the pedicle were ligated individually. The general treatment of those conditions was referred to.

Dr. Edgar thought that operation at the time was the best treatment if it could be carried out. The paper was discussed, and cases instanced by Drs. Jardine, Russell, Lindsay, and the President; Dr. Edgar replied.—In the absence of Dr. Munro Kerr, Dr. Russell gave a short outline of a case where labour had been obstructed by a myoma. Vaginal coeliotomy had been successfully performed. The papers will appear *in extenso* in the *Glasgow Medical Journal* for June.

North of England Obstetrical and Gynaecological Society.—At a meeting held at Sheffield on March 20th, Dr. J. E. Gemmell, President, in the chair, Dr. J. W. Martin (Sheffield) presented a married woman, aged 25, in whom there was complete congenital absence of the left mamma, associated with defective development of the entire left half of the body, and especially of the left hand and arm. Lactation was fully performed by the normal right breast.—Dr. Lloyd Roberts (Manchester) showed a walnut-sized fibroma removed from the interior of the right Fallopian tube through an incision made in its wall. The growth was discovered during the performance of ovariotomy on a woman aged 56, and microscopically showed the typical characteristics of a fibroma. Dr. Croft (Leeds) suggested that tubal moles might be removed through similar incisions made in the tube instead of sacrificing the whole viscus. Dr. Buckley (Manchester) also spoke, and Dr. Lloyd Roberts replied.—Dr. E. O. Croft (Leeds) showed a series of three polypi of the uterus which illustrated three different conditions and methods of treatment: (1) Small cervical fibroid polypus; (2) large necrosing fibroid polypus separated from its attachments by the écraseur, and delivered with forceps in obstetric fashion; (3) intrauterine submucous fibroid treated by vaginal hysterectomy, the ovaries being preserved. Enucleation in this case was impossible.—Dr. A. Donald (Manchester) showed a fibroid uterus removed from a girl aged 24 by abdominal hysterectomy with oöphorectomy. He preferred this method to the écraseur, which he regarded as a dangerous instrument. In the discussion on these specimens Dr. Lloyd Roberts considered that the écraseur would be necessary from time to time in cases where the vagina was narrow and the tumour difficult to reach. Dr. T. B. Grimsdale (Liverpool) always preserved the ovaries, as he thought their presence diminished the after-effects of the operation. Dr. J. W. Martin (Sheffield) considered that the actual state of the ovaries should be the guide. Dr. Buckley (Manchester) removed the ovaries if they were accessible. The President held that it was difficult to lay down the rule that the ovaries should be removed in all cases. Dr. Donald, in reply, maintained that the removal of the uterus minus ovaries rendered the latter liable to cystic changes, and that resection of the ovaries did not leave any unpleasant effects. Dr. Croft, in reply, said the écraseur was used because the pedicle was inaccessible to scissors. He had the strong conviction that the artificial menopause was more troublesome than the natural one.—Dr. Favell (Sheffield) showed (1) Fallopian tube and fetus from a case of ectopic gestation; (2) myomatous uterus removed from a patient aged 54.—Dr. A. Donald (Manchester) read a note on a case of idiopathic endometritis, illustrated by microscopic sections. From the age of 21 the patient had suffered from metrorrhagia, and when she came under observation at 32 haemorrhage had been continuous for seven months. The uterus was then anteflexed with a conical cervix, consistence was normal, and there was no question of gonorrhoea or sepsis. Curetting was twice performed within a few months, and for nearly four years there was no irregular or profuse bleeding. Marriage took place, followed by three months amenorrhoea, succeeded by continuous bleeding. Decidual débris was removed, but two months later curetting was again requisite. During the following six years the discharge never stopped for more than fourteen days at a time. Atmokausis was tried without avail, and finally hysterectomy was performed. The uterus was enlarged, very hard, and in a state of fibrosis. The case was exceptional in the symptom of excessive haemorrhage but in other respects was typical of a class of cases not infrequently met with. The President mentioned a case in which curetting had been performed sixteen times in five years. Improvement for twelve months followed removal of the appendages, but the bleeding again recurred, and finally the uterus was removed. It presented the same condition of fibrosis as that present in Dr. Donald's case. Was the metritis due to the original endometritis or to the operations? Dr. Buckley mentioned a similar case. Dr. A. W. W. Lea (Manchester) inquired whether the patient possessed the neuropathic temperament. He pointed out that there were two periods in the history of Dr. Donald's case—before and after marriage, and he asked whether endometritis was really present at first. Dr. Lloyd Roberts asked if it would not be better in many of such cases boldly to perform hysterectomy. Dr. T. B. Grimsdale thought the patients were fortunate if bleeding occurred, because the condition was then submitted to treatment. Dr. Martin spoke, and Dr. Donald, in reply, said the patient was of a quiet, uncomplaining disposition, and not neuropathic.—Dr. S. Buckley (Manchester) related a case of extrauterine pregnancy, with attempted abortion, and showed the specimen. From the date of the patient's admission the case was regarded as one of ectopic gestation, and the symptoms noted during the period of observation pointed to attempts at tubal abortion; but the friends were opposed to operation. Interference became imperative some three weeks after admission by reason of sudden collapse, with signs of severe internal haemorrhage.

Laparotomy disclosed a gestation sac in connexion with the left tube, which, as adhesions were absent, was easily lifted out and removed, together with about two pints of clot of varying ages. The tube itself was unruptured, and its fimbriated end was expanded and patent. The fetus was about three months old. The patient made a good recovery. Drs. LLOYD ROBERTS and E. O. CROFT discussed the case, and the question raised by it as to the course to pursue if a husband refused consent to operation when the wife was suffering from serious internal bleeding; Dr. BUCKLEY replied.—Dr. T. B. GRIMSDALE (Liverpool) read notes of a case of primary amenorrhoea with pyosalpinx in a single girl, aged 22. Three years previously she had had some chest trouble from which she had completely recovered. There had never been any approach to a menstrual crisis. The sound passed 1½ in. into the uterus, and to the right of the latter was a swelling the size of an apricot. Laparotomy revealed a uterus normal in shape, but of small size; left appendages normal, the surface of the ovary being smooth like that of an olive. The right ovary showed a similar condition, but the tube was enlarged and adherent to the pelvic brim near the caecum. The tube was removed, and found to contain pus. Both tube and pus were examined, but the investigation was entirely negative, no evidence of tubercle being discovered. The virginity of the patient excluded the more frequent cause, and although the tube lay in close proximity to the caecum and vermiform appendix there was no evidence of disease of the latter. In reply to Dr. A. W. W. LEA, Dr. GRIMSDALE said that the chest had been carefully examined by a physician and had been pronounced practically normal.

REVIEWS.

PHYSICAL THERAPEUTICS.

IN his book on the *Therapeutics of Dry Hot Air*,[1] Dr. SKINNER of New York has succeeded in putting before his readers a succinct account of the value of hot air as an addition to other therapeutical methods in the treatment of disease. It is natural that, as its exponent, Dr. Skinner should be enthusiastic as to its curative potentialities. This enthusiasm carries him sometimes further than seems altogether justifiable, but on the whole he guards himself against extravagance and endeavours to limit the virtues claimed for hot air to reasonable dimensions. "Its powers," he says, "are exerted in directions in which remedial agents hitherto known have been very deficient; its addition to the treatment results in benefit to many patients who would fail to improve under other measures alone, and its adoption into our armamentarium enables us to increase by a large percentage the sum total of our power over disease." Special stress is laid on the value of hot air in rheumatism, but surely the author's experience has been unusual. Rheumatism is not regarded generally as a disease about which there is much difficulty of recognition, yet he says, "at least three-quarters of the cases that have come under my observation with a diagnosis of rheumatism have not been rheumatism at all." He admits that the salicylates must always constitute the basis of treatment; but he insists that by the additional use of hot air "local metabolism is kept at its point of greatest activity and assimilation is rapid and more complete; less of the drug is therefore required to be introduced into the general circulation." This observation, if accurate, may prove important, especially in cases in which salicylates are badly tolerated. Two chapters are devoted to pneumonia, for the treatment of which hot air is claimed to be an efficacious though little known means of treatment. The argument on which the claims for a wider recognition of hot air is based possesses considerable attraction; but the difficulties of application to the chest wall must always be a hindrance to the adoption of this method, until at least more unequivocal evidence than theory is forthcoming to establish its superiority over the expectant plan of treatment most commonly followed at the present time. It is difficult to accept unreservedly the author's statement that "atheromatous arteries are softened and rendered more functionable by the use of this therapeutical agent;" indeed, the use of superheated air in such cases would seem on general principles to be contraindicated. The value of the hot-air method is widely recognized in the treatment of chronic disorders of joints and muscles, but little is yet known of its applicability for inflammatory and other organic affection. Dr. Skinner's book may be recommended to those who are interested in the subject as a temperate exposition of the results which have followed his own extensive experience of its practical application. The volume is printed in excellent type, has a complete index, and is helpfully illustrated.

[1] *Therapeutics of Dry Hot Air.* By Charles Edward Skinner, M.D., LL.D., Professor of Thermotherapy in the New York School of Physical Therapeutics. New York: A. L. Chatterton and Co. (Demy 8vo, pp. 200; 15 illustrations. 2 dols.)

The treatise on *Massage*, by M. MARFORT[2] is one of the best and most attractive which we have read. In his preface the author modestly states that the reader will find nothing new in the book, but long practical experience and careful observation have enabled him to deal with his subject in a concrete and readable style. Dr. Joseph Waltuch, of Odessa, is responsible for a commendatory introduction. In an interesting historical chapter it is pointed out that massage was mentioned in Chinese manuscripts 3,000 years before Christ; that it is referred to in the works of Homer; that mention is made of it by Hippocrates, Celsus, Galen, and other pioneers of scientific medicine; and that among the Romans special attention was devoted to baths and subsequent rubbings in establishments instituted for the carrying on of this form of treatment. Emphasis is laid on the fact that to be a good exponent of massage a careful education is necessary, and that more harm than good may be done by rough or unskilful manipulative movements. We agree with M. Marfort when he says: "Le vrai masseur doit travailler autant avec son intelligence qu'avec ses mains." If greater heed were given to this dictum the powerful therapeutic possibilities of a useful mechanical aid to treatment would be more widely appreciated, and much of the objectionable charlatanism which now surrounds its practice would be obviated. This is how the value of massage is summed up by the author:

> It exercises its influence on all the organs of the body; cutaneous secretion is augmented, the abdominal muscles, by their activity, exercise pressure on the intestines of such value that constipation disappears; the movements of the heart are regulated. The effects of massage and gymnastic exercises on the organs of respiration are no less favourable; more active combustion demands a greater quantity of oxygen, and this need of air compels the patient to breathe more deeply. Massage also produces an influence on character and temperament, for, in re-establishing the general health, it recalls the brightness of spirits so necessary to man. How often do we not hear it said that such and such an one has an evil disposition. If those who express such opinions will accept my advice and take the trouble to inquire more accurately into the state of health of the person on whom they pass judgement, they will almost invariably discover that his irritability of temper proceeds from some form of health disturbance. Let such an irritable person have recourse to massage and gymnastics: his *malaise* and nervous instability will soon disappear, and he will recover his good humour and tranquillity of mind.

Attention is given in sufficient but not in too elaborate detail to the various disorders in which massage may be expected to prove therapeutically useful, and instructions are set forth in terms that are practical and simple. The well-executed illustrations are pictorially descriptive of the text, and the book may be regarded as a reliable guide to those who are interested in massage as a curative measure.

The fact that Dr. DOUGLAS GRAHAM'S *Treatise on Massage*[3] has reached a third edition may be taken as prima-facie evidence that it has met with acceptance in America. It is pleasantly but floridly written, and contains a vast compilation of facts and theories in regard to massage, but it can hardly be contended that the subject is important enough to demand a volume of 450 pages for its exposition. What the author has to say from personal knowledge is of interest, as are also the directions he gives for the application of massage; but the book is elaborated by a needless accumulation of other opinions, and by a wearisome record of successful cases. It is universally admitted that movements of friction, percussion, pressure, and kneading are valuable mechanical aids in the treatment of disease, but they have their limits. Even their most ardent votaries will be startled at the variety and extent of organic and functional disorders for which they are here claimed to be either palliative or curative. The incipient stages of appendicitis, movable kidney, stricture of the urethra, enlargement of the prostate, Friedreich's disease,

[2] *Traité Théorique et Pratique du Massage et de la Gymnastique Médicale Suédoise.* (Leur Emploi Thérapeutique.) Par J. E. Marfort, Masseur-Gymnaste de l'Institut des Demoiselles Nobles. Deuxième edition. Paris: Vigot Frères. 1902. (Demy 8vo, pp. 192, 50 illustrations. Fr.4.)

[3] *A Treatise on Massage.* By Douglas Graham, M.D., Boston, Massachusetts. Third edition. Philadelphia and London: J. B. Lippincott Company. 1902. (Demy 8vo, pp. 452. 218.)

chorea, Raynaud's disease, myxœdema, cataract, and glaucoma may be quoted as a few of the instances in which records such as are given of the value of massage would require confirmation before they could commend themselves to general acceptance. The author says: "Massage is being applied to almost every accessible part of the human body, inside and out. Aspirants for fame are now as zealous in proclaiming its virtues as they were, not many years ago, in denouncing the same as vices." We entirely agree with him.

BACTERIOLOGY.

The soundest criticism of Professor Abbott's excellent manual, the *Principles of Bacteriology*,[4] is afforded by the fact that the present, the sixth, edition appears within twelve years of the date of the first. The book has been slightly enlarged and several new figures have been introduced, but its general character and scope have undergone no essential change. The additional pages are taken up by a description of the diplococcus intracellularis meningitidis, and, incidentally, of the method of performing lumbar puncture, an aid to diagnosis too seldom employed in this country; of the acid-fast bacilli with which the B. tuberculosis may be confused and the methods for their differentiation; the pathogenic streptothrices, and the B. dysenteriae. The distinctive feature of this manual, and the one most appreciated by the thoughtful student, is the inclusion of suggestions for experimental research work, necessarily of an elementary type. These suggested experiments are scattered throughout its pages, sometimes in the form of general directions for the carrying out of a specific piece of work, at others simply as a query, in seeking the answer to which the student is allowed to exercise his own ingenuity in the planning of his experiments. Whatever form they take these suggestions are always apt, inspired as they evidently are by a desire to lead the student to apply the results of his laboratory observations to his clinical work. Altogether Professor Abbott's book forms a model of what a student's manual should be.

The double-barrelled title of Mr. Bowhill's *Manual of Bacteriological Technique and Special Bacteriology*[5] indicates sufficiently the intention of the author in preparing it. An examination of its pages leaves the impression that he would have been well advised to have omitted the "Bacteriological Technique." The first hundred odd pages devoted to technique, comprise the classification and morphology of bacteria; methods of sterilization, and the principles of bacteriological technique, and contain rather less precise information than the corresponding chapters of any of the standard manuals of bacteriology with which we are acquainted. It is true the staining methods described are numerous, by the way in this section we note that the B. diphtheriae is included amongst those organisms which stain by Gram's method *under certain circumstances* (the italics are our own), but the student receives no indication of their respective values or special applications. Under the heading of culture methods undue prominence is given to obsolete processes, such as the original plate method of Koch and Esmarch's roll-tube cultures. Then, too, in the instructions for the preparation of his nutrient media, Mr. Bowhill is as ingenuously indefinite as were writers on the same subject some two or three decades ago, before the precise requirements of bacteria with regard to their food supplies had received the special study their importance demanded. The description of the methods of bacterioscopic analysis as applied to air, water, and soil is extremely sketchy; whilst that of the examination of milk is equally poor, and, moreover, can only be gathered from a careful study of odd scattered paragraphs. The second part of the book makes up in great measure for the shortcomings of the first. It deals with so many pathological conditions, which are entirely neglected by other writers, especially those occurring in the lower animals and in birds and primarily due to bacterial activity; upon these subjects Mr. Bowhill speaks with authority. The matter of this portion of the work is condensed, but accurate, and well illustrated by a series of photographs and photomicrographs of a high standard of excellence.

The lay reader who is not a scientist, but likes to be able to talk a little about scientific matters which are of general interest, will find excellent material in Mrs. Percy Frankland's *Bacteria in Daily Life*.[6] The book is written in a light magazine style, with an eye to keeping the popular interest well sustained, and at the same time is well stocked with useful and important bacteriological information. The average smoker will find much that is new to him concerning the duration of life of the tubercle bacilli found in the moist cigar and cigarette ends which have been discarded by phthisical subjects; and Mrs. Frankland teaches him how to take a scientific and unbiassed view of the situation when he is crowded out of a smoking carriage by an anxious mother and her progeny because she thinks the smoke will prevent them from "catching" something. A recollection of Mrs. Frankland's interesting account of the experiments which have been made upon the effect of tobacco smoke on the vitality of infective micro-organisms will no doubt aid considerably in soothing his ruffled feelings. And Mrs. Frankland's book ought also to fulfil the more serious purpose of enlisting the intelligent co-operation of the layman in the crusade against infectious disease.

NOTES ON BOOKS.

The Victualling of the Royal Navy, Past, Present, and Future,[7] is a pleasant little reminder of the keen interest retired medical officers of H.M. navy continue to take in their old service. The author of the pamphlet, Inspector-General Alexander Turnbull, M.D., R.N. (retired), was an important witness at the recent Commission on Naval Dietaries, and has taken much trouble to collect information from sources at which most people would find it difficult to get. The result is a fairly complete sketch of things culinary as they were between the years 1486 and 1903, and a summary of how they are likely to be from the latter date onwards until another reformer arises. The light thrown by these pages upon the life of a British sailor in the past reveals a very unattractive picture, and one cannot help wondering how he survived at all. He was expected in early days to consume a quart of beer at breakfast, a quart at midday, a quart in the afternoon, and a quart at supper, and meantime continue to serve His or Her Majesty soberly. Use might enable him to do his work soberly, but how in spite of so much hops, which at one time really did enter into the composition of beer, he also contrived to show so much activity as eventually to make England what it is, is more difficult to understand. At one time, too, in addition to other perils of the deep, he was doomed to live largely on dried fish. A precursor of Mr. Hutchinson, however, interfered to save him from the risk of leprosy from this cause, and a century or so later he was rescued from the dangers of excess in beer drinking by the introduction of cocoa and the tot of rum. The perils of the sailor, however, were not at an end, and he next went through an experimental course of ptomaine poisoning in order that the proper way of preserving meat might be discovered. In fact the experiments in dieting that seem to have been carried out are numerous, and the life of a man in the navy with "a delicate stomach" cannot have been a happy one. It is good, therefore, to learn that of late years things have vastly improved, and that in the author's opinion the new scales now to be enforced are excellent.

The method advocated by Dr. Bell in his book on *Cancer: its Causation and Curability without Operation*,[8] is to treat cancer by organic extracts, especially by extracts of the thyroid and mammary glands; he claims to have had a large amount of success by these means. The book appears to be addressed rather to the public than to the medical profession, and is not very complimentary to the latter, which is represented as being often ignorant, careless, and prejudiced. At the same time we cannot say that in our opinion the author

[4] *The Principles of Bacteriology*. A Practical Manual for Students and Physicians. By A. C. Abbott, M.D., Professor of Hygiene and Director of the Laboratory of Hygiene, University of Pennsylvania. Sixth Edition. London: H. K. Lewis. 1902. (Demy 8vo, pp. 640; 111 illustrations, 26 coloured. 12s. 6d.)

[5] *Manual of Bacteriological Technique and Special Bacteriology*. By Thomas Bowhill, F.R.C.V.S., F.R.P.S., Civil Veterinary Surgeon attached Army Veterinary Department; late Special Lecturer on Bacteriology, Medical Department and Professor of Bacteriology, Veterinary Department, University of California, etc. Second edition. Edinburgh: Oliver and Boyd, and London: Simpkin, Marshall and Co. 1902. (Roy. 8vo, pp. 324, 136 illustrations. 21s.).

[6] *Bacteria in Daily Life*. By Mrs. Percy Frankland. London: Longmans, Green, and Co. 1903. (Crown 8vo, pp. 210. 5s.)

[7] *The Victualling of the Royal Navy, Past, Present, and Future*. By Alexander Turnbull, M.D., Inspector-General of Hospitals and Fleets (retired). London: Elliot Stock. (Cr. 8vo, pp. 31. 1s.)

[8] *Cancer: its Causation and Curability without Operation*. By Robert Bell, M.D.Glas., F.F.P.S., etc., Consulting Physician to the Glasgow Hospital for Women. London: Baillière, Tindall, and Cox. 1903. (Crown 8vo, pp. 289. 5s.)

has brought forward the slightest evidence of value in favour of the propositions he seeks to establish. We notice a good many errors of spelling in English as well as in Latin, for which the printer may be responsible, while the following sentence illustrates the author's style (p. 212): "Though Sir William Banks states it is demonstrated that the popular idea prevails that operating prolongs life, even when imperfectly done, it is quite wrong, and he believes this to be a perfect delusion."

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF EDINBURGH.

SPRING GRADUATION CEREMONIAL.

THE spring graduation of the University of Edinburgh was held on Thursday, April 9th, in the McEwan Hall, which was crowded. This was the first ceremonial over which the new Principal and Vice-Chancellor has presided. Under ordinary circumstances the address to the new graduates would have been given by Professor Hume Brown, but it was considered an appropriate opportunity for the new Principal to give an introductory address in that capacity.

The honorary degrees were first conferred. In presenting Arthur Gamgee, M.D., F.R.C.P., F.R.S., Emeritus Professor of Physiology, Owens College, Manchester, for the honorary degree of LL.D., Professor Sir Ludovic Grant, Dean of the Faculty of Law, said: Occupied for many years in important academic work—for amongst other offices he was the first Brackenbury Professor of Physiology in Owens College, and, later, Fullerian Professor of Physiology in the Royal Institution of Great Britain—Dr. Gamgee has never ceased to devote himself with untiring enthusiasm to the prosecution of original inquiry. His well known treatise on the Physiological Chemistry of the Animal Body, which is based upon a study of original memoirs and personally verified experimental processes, is a trustworthy and exhaustive exposition of available knowledge regarding the composition of the elementary tissues and the chemistry of the digestive processes, and is especially calculated to stimulate and benefit those advanced students who are setting out upon the path of scientific discovery. No better proof of the reputation which Dr. Gamgee enjoys can be cited than the fact that on Saturday he is to sail for America, at the invitation of the Carnegie Institution of Washington, for the purpose of visiting laboratories and preparing a report upon the state of our knowledge of the physiology of nutrition. We wish our alumnus God speed.

The degree of D.Sc. in Public Health was conferred on Alfred Charles Coles, M.B., C.M., B.Sc.; and the degree of B.Sc. in Public Health on John Donald, M.B., C.M., and William M'Lachlan, M.B., Ch.B.

The Principal said it occurred to him that it might not be uninteresting if he were to sketch the influence exercised by legislation over the Universities of Scotland during the period of his connexion with the University of Edinburgh. In 1858 Parliament passed a Universities Act, and appointed an Executive Commission to carry out its provisions. Till then the administration of affairs was mainly in the hands of the Municipal Corporation. It was then empowered to appoint a Chancellor, Vice-Chancellor and Rector. The administration of affairs was vested in the Senatus, but the decisions of the Senatus were subjected to the control and review of a new governing body created by the Act,—the University Court. Prior to the Act of 1858, the Imperial Parliament had given little attention to the Scottish Universities, though small sums of money, in continuance mainly of ancient grants from the Crown, had occasionally been doled out by the Treasury for the promotion of education in them. The Act itself did not specify the amount of the grant to be alloted, but power was given to the Treasury to pay for certain purposes, on the recommendation of the Executive Commission, such additional moneys as Parliament might provide. The old and new Parliamentary grants together made a total of something less than £13 000 a year, of which the University of Edinburgh received £4,813 17s. 10d. The Universities as recipients of Treasury grants now became the subject of Parliamentary supervision. Though they derived important benefits from the Act they were required to surrender in great part their independence of action in regard to regulating the conditions under which degrees were to be conferred. The Act of 1889 provided £42,000 a year for the past and present purposes of the Universities, and by a later Act the amount was raised to £72,000. By this Act the State control over the Universities was made much more stringent. Reference was next made to the new English Universities, being organized on modern lines, and with their independence of State control secured; and a claim for freedom to the Universities of Scotland was strongly urged. The lack of funds was reviewed. In referring to the benefactions of Mr. Carnegie, the Principal said: In accordance with the conditions of Mr. Carnegie's gifts, the University of Edinburgh is now called upon to appeal to the public for funds in order to be in a position to claim and employ moneys which the Committee of the Carnegie Trust is ready to provide. The authorities of the University intend to purchase a site and to erect on it, in the first instance, laboratories and other accommodation for the departments of natural philosophy and engineering, and to equip them with the necessary apparatus—to extend the teaching of modern languages, and to provide for instruction in the subjects of a commercial education—to improve and expand the methods of tutorial instruction; to obtain the means for giving to the members of the University facilities for conducting research in various branches of knowledge; to found scholarships and fellowships, and to effect improvements in the University library. Nearly thirty years ago, when the advancing tide of knowledge compelled us to make a public appeal for funds to erect and equip a new school for the teaching of medicine and the auxiliary sciences, a most liberal response was made to our requests, and the important end we had in view was attained. A further stage in educational progress, on which the Universities are called upon to enter, has now been reached, and we again appeal to public sympathy and generosity. If we look into the history of the rise of the Universities in Great Britain, we shall find that, in addition to their immediate foundation, either by Papal Bull or Royal Charter, local effort and private enterprise and liberality have contributed largely to their progress. It would be a national misfortune if we regarded the State [illegible]der as source from which funds for instituting and carrying on developments in the branches of knowledge taught in the Universities, should be obtained. The strength of our national character hinges largely on the exercise of individual and local effort, and to be continually calling on the State for support discourages the habit of self-reliance, and leads to a system of centralization and control, which is not conducive to public prosperity. If a locality is satisfied that the University in its midst is employing the best endeavour to advance education, no further argument should be needed to elicit means which it may be necessary to provide in order to secure that end.

The Principal concluded with some advice to the graduates.

UNIVERSITY OF ABERDEEN.

GRADUATION CEREMONY.

AT the graduation ceremony on April 9th Sir Frederick Treves received an ovation from the students on his receiving the honorary degree of LL.D. Professor Dewar was also among the recipients of that honour.

The following received degrees and diplomas:

Degree of Doctor of Medicine (M.D.).—W. J. I. Bruce, M.B., Ch.B.: Thesis, Tropical Abscess of the Liver; *J. M'R. Cowie, M.B., Ch.B.: Thesis, The Occupational Incidence of Phthisis; W. S. M'Gowan, M.A., M.B., C.M.: Thesis, Disseminated Sclerosis; *J. H. Wilson, M.B., Ch.B.: Thesis, The Normal Changes in the Blood of the Newborn Child and in the Blood of the Mother during the Puerperium.

* Honours.

Degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.).—†G. G. Macdonald, M.A., †H. MacLean, W. Anderson, F. W. Begg, H. S. Brander, M.A., C. W. F. Gray, J. J. Harris, G. Hendry, J. F. Mackintosh, J. A. M'Kenzie, M.A., G. W. Maconachie, W. A. Mearns, M.A., K. S. Melvin, G. Mitchell, A. B. Morris, W. F. Munro, A. S. Niven, M.A., A. G. Peter, M.A., W. R. Pirie, J. H. Shepherd, M.A., F. K. Smith, M.A., W. Stewart, G. Stoddard, M.A., C. A. Suvoong, M.A., W. A. Watson, A. J. Watt.

† With Second Class Honours.

Degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.).—J. Fraser, J. E. Perera.

Diploma of Public Health.—W. J. I. Bruce, M.B., Ch.B.Aberd.; H. A. Davidson, M.B., Ch.B.Aberd., Lieut. R.A.M.C.; A. Hosie, M.D.Aberd., Major R.A.M.C.; D. A. Hutcheson, M.B., Ch.B.Aberd.; G. N. Wilson, M.B., C.M.Aberd.

Prizes.—The following prizes were awarded in the Faculty of Medicine: The Fife Jamieson Memorial Gold Medal in Anatomy and The Lizars Gold Medal in Anatomy to R. H. Spittal; the Keith Gold Medal for Systematic and Clinical Surgery to B. K. G. Russell; the Shepherd Memorial Gold Medal for Systematic and Practical Surgery to W. S. M'Gillivray; the Dr. James Anderson Gold Medal and Prize in Clinical Medicine to A. Callam and H. M'Lean (proxime accessit); the Matthews Duncan Gold Medal in Obstetrics to H. M'Lean and G. G. Macdonald (proxime accessit).

UNIVERSITY OF GLASGOW.

THE following have passed the Second Professional Examination for the degrees of Bachelor of Medicine (M.B.), and Bachelor of Surgery (Ch.B.), in the subjects indicated (A., Anatomy; P., Physiology; M., Materia Medica and Therapeutics):

S. C. Adam (M.), G. A. Allan (A., P.), W. S. Allan (A., M.), A. Allison (A., P., M.), A. W. Anderson (A.), J. H. Baird, B.A. (A., P.), H. Barr (A., P.), A. Baxter (A.), G. D. M. Beaton (M.), C. Burns (M.), T. M. Campbell, M.A. (A.), C. G. A. Chislett (A.), T. G. Copestake (P.), W. B. Cunningham (M.), R. W. Dale, M.A. (A., P., M.), R. S. Dewar, M.A. (A., P., M.), A. C. Douglas (A., P.), W. Duffy, M.A. (A., P., M.), J. S. Dunn, M.A. (A., P.), E. J. Dyke (A., P.), H. W. Dyke (A., P.), J. Fairley (A., P., M.), H. P. Fairlie (A., P., M.), A. B. Ferguson (A., P., M.), E. J. Fitzgerald (M.), W. Gilchrist (P., M.), J. Glaister (M.), A. Graham, B.Sc. (A., P.), W. Grier (A., P.), F. Hauxwell (A.), J. W. Hay (A. M.), R. McC. Hill (P. M.), R. V. Howell (A. M.), D. G. Hunter, M.A. (A., P.), A. Innes (M.), W. B. Jack (A., P.), J. R. Kerr (M.), G. N. Kirkwood (M.), W. L. Kirkwood (A., P.), G. H. Logan (P., M.), J. B. M'Cabe (A.), T. M'Cosh (A., P.), W. G. Macdonald, M.A. (P., P., M.), H. A. Macewen (A., P.), J. Macintyre (P., M.), R. Macleod (A., P.), W. Macleod (P.), J. M'Millan (A., P., M.), M. T. D. M'Murrich (A.), R. C. Macpherson (A.), P. Maguire (A., P., M.), J. Marshall (A.), W. B. M. Martin (M.), R. May (P.), H. J. Milligan (A., P., M.), D. R. Mitchell (A., P., M.), W. S. Moore (A., P., M.), G. D. Muir (A., M.), F. A. Murray (M.), P. J. O'Hare (P., M.), H. S. Ranken (A., P., M.), C. D. Rankin (A., P., M.), T. T. Rankin (A., P.), J. M. Renton (A., P. M.), A. Robertson (A., P., M.), W. Rolland (A., P.), J. M. Ross (M.), A. C. Russell (A., P.), J. C. Russell, M.A. (A., P.), J. Samson (A.), E. L. A. Sieger (A., P. M.), W. H. Sieger (A.), R. W. Simpson (A., P., M.), J. A. Somerville (A.), D. Stewart (A., P.), T. Strain (A., P.), W. A. Stuart, A., P.), J. Taylor (A., P., M.), W. R. Taylor (M.), T. Thom (A., P.), W. L. Walker, M.A., (A., P.), G. Wallace (M.), A. M. Watson (P.), A. C. West (M.), J. Wyper (A.), G. Young (A., P.). Women—B. S. Alexander (A.), J. T. Clark (A., P.), M. T. Gallagher (P.), E. M. M'Vail (A., P., M.), M. W. Millar (A.), J. D. Rankin, M.A. (A., P., M.), M. Spence (A., P., M.), A. M. Yates (A.).

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE following is the prize list for the winter session, 1902-1903: Stoney Memorial Gold Medal in Anatomy: R. Bury. Descriptive Anatomy: Junior: D. Adams, first prize (£2) and medal: W. H. Carden, second prize (£1) and certificate. Senior: W. St. Leger Moorhead, first prize (£2) and medal; L. Lucas, second prize (£1) and certificate. Practical Anatomy: First year: P. G. M. Elvery, first prize (£2) and medal; J. Murray, second prize (£1) and certificate. Second year: T. A. Burke, first prize (£2) and medal; J. B. Kelly, second prize (£1) and certificate. Practice of medicine: J. Parker, first prize (£2) and medal; A. N. Crawford, second prize (£1) and certificate. Surgery: C. A. Cusack, first prize (£2) and medal. Midwifery: R. Bury, first prize (£2) and medal; A. C. Adams, second prize (£1) and certificate. Physiology: J. Prendiville, first prize (£2) and medal: C. W. Greene, second prize (£1) and certificate. Chemistry: D. Adams, first prize (£2) and medal; W. H. Carden, second prize (£1) and certificate. Pathology: J. S. Sheill, first prize (£2) and medal; W. B. Loughnan, second prize (1) and certificate. Physics: D. Adams, first prize (2) and medal; W. H. Carden, second prize (£1) and certificate.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1903.

Members of the British Medical Association are reminded that commencing with January 1st, 1903, the annual subscription is a uniform one of 25s., inclusive of the Branch, and that all subscriptions should be paid direct to the General Secretary, 429, Strand, London, W.C., and not to a Branch Secretary.

British Medical Journal.

SATURDAY, APRIL 18TH, 1903.

THE SURGERY OF BRIGHT'S DISEASE.

Chronic nephritis is certainly a most dangerous complication when a surgical operation is contemplated. Dr. Edebohls of New York boldly made that disease the subject of direct and deliberate surgical interference with a view to its cure, in January, 1898. His patient was a single girl, aged 20, and the operation consisted of exposure of both kidneys, extensive decapsulation, and fixation. The patient has since married, and is now five months pregnant. Frequent examinations of the urine made during the past five years showed in every instance normal conditions, and her general health is excellent. Last month Dr. Edebohls reported 54 cases of "renal decapsulation for chronic Bright's disease."[1] In 47 both kidneys were operated upon; 7 died within seventeen days after operation, 7 at periods making an average of one year and eight months, whilst 2, who survive, do not show a thoroughly satisfactory improvement in health; 22 patients are improving, at periods ranging from two to fifteen months after the operation, but Dr. Edebohls considers that they cannot be registered as cured, since they have not passed the probationary period where the urine has remained normal for six months, according to the operator's standard in recording results. In 1 case, where only one kidney was operated upon, chronic Bright's disease has recurred after a cure extending over a period of four years. Three patients disappeared, and have not been traced. Lastly, Dr. Edebohls tabulates his 9 cases which were cured of chronic Bright's disease and remained free from it at periods after operation varying from one year and nine months to ten years, the average duration being over four years. The operation in 1898, we have explained, was the first which was undertaken deliberately to remedy Bright's disease. Dr. Edebohls, however, practised decapsulation of kidneys, the seat of chronic Bright's disease, as long ago as 1892, other renal affections such as suppuration, anuria, or pain coexisting. Since his experience in 1898 he has boldly operated for bilateral chronic Bright's disease, and is not deterred by advanced symptoms; indeed, very few of the 32 cases undertaken in 1902 were uncomplicated. The circulatory system, central and peripheral, was involved in nearly every case; one patient had cavities in both lungs, two had cirrhosis of the liver, and several pleurisy, hydrothorax, retinal lesions, and cerebral changes.

Seven Transatlantic surgeons (one, at least, a Canadian) have decapsulated kidneys with the object of curing chronic Bright's disease. We find no record of such an operation in this country, and on the continent of Europe Israel recently disclaimed any intention or desire on his part to inaugurate an era of Bright's disease surgery. Pousson not long ago averred in an article on Surgical Intervention in Medical Nephritis that he had never operated for the cure of chronic Bright's disease as such; yet it appears that he is now inclined to practise decapsulation.

Dr. Edebohls insists on his theory that the danger in operations of every kind upon patients subject to chronic Bright's disease is, broadly speaking, greater from the anaesthetic than from the operation itself. He adds the highly-important assertion that in renal decapsulation the moderate abstraction of blood direct from the kidneys, necessarily involved by the operation, counteracts to a great extent the congestive effects of the anaesthetic upon the kidneys. Nevertheless, the operation should not be prolonged, and Dr. Edebohls required in more than one-half of his operations no longer than half an hour, counting from the first incision, to complete closure of both wounds. He holds that it is clumsy to set two surgeons and two assistants at work so that the two kidneys may be decapsulated at the same time; they would probably be so much in each other's way that the operation would be longer than if undertaken by one surgeon. It is a mistake to decapsulate one kidney and then to operate later on upon its fellow. Decapsulation requires some practical experience in renal surgery, as it is somewhat difficult, especially when the twelfth rib is long and oblique, or when the kidney lies high up, and is not easily pushed down. For detaching the capsule proper from the kidney, especially when that organ lies chiefly out of sight, Edebohls finds that the very best instrument is the forefinger of the surgeon's hand, gloved in indiarubber. We are not surprised to learn that whilst in the parenchymatous and diffuse forms of chronic nephritis the capsule is generally separable with ease, it is otherwise in chronic interstitial nephritis. In that case the adhesion of capsule to kidney is frequently very firm, whilst the renal tissues are more or less friable, hence great caution and gentleness are needed during decapsulation, else pieces of renal tissue will be torn away, or the kidney may even be gravely lacerated. In one case an operator abandoned any attempt to decapsulate either kidney; in fact, they were both out of sight, probably through shrinkage due to chronic interstitial nephritis. Another surgeon admitted that all the four cases where he performed decapsulation died promptly after the operation, but added that they represented the half of his total experience in renal surgery. It is clear that decapsulation for chronic Bright's disease is an operation which seems to a certain extent justifiable according to Dr. Edebohls's experience, yet its justifiability is not completely established. To a certain extent chronic Bright's disease is a general disease, most manifest in the kidneys. That the state of those organs is improved by decapsulation there seems but little doubt, but more experience is demanded for us to feel sure that the general disorder is likewise cured by this remarkable operation.

[1] New York *Medical Record*, March 28th, 1903.

"THE PROPHYLAXIS OF MALARIA."

The work on the prophylaxis of malaria is gradually but steadily gaining ground in many British Colonies within the tropics; and the practical and common sense way in which Sir William McGregor, the Governor of Lagos, has dealt with the question should always remain as a standard to other Governors and people who are

entrusted with the preservation of the health of tropical towns.

Sir William McGregor paid a visit during a recent holiday in Europe to Amsterdam, believing that something useful might be gained by a study of the conditions prevailing there, especially in the light of future improvements for Lagos. He has now published a very interesting and useful report on this visit. A translation of a paper by Dr. J. H. M. Schoo, District Medical Officer of Krommonie, near Amsterdam, is appended to the report, and this clearly shows that, though malaria still prevails in many of the districts in Holland, it is decreasing very rapidly and tending to die out, just as has happened in England. Its disappearance from Amsterdam, Dr. Schoo thinks, is due to the increased percentage of salt water in the canals after the year 1872, and the introduction of water by pipes instead of the old tank system. This means the abolition of breeding grounds for the *Anopheles* mosquito, and shows how little may be required to render those sites healthy which lend themselves to improvement.

From the analogy of the salt water canals of Amsterdam, Sir William McGregor believes that a similar system would be of the greatest use for Lagos. It is now generally believed that the turning up or cutting through new soil cannot *per se* cause any harmful results as regards malaria, the only danger being the collection of pools of water, a result of the excavations, where the mosquito can breed. Many instances can now be brought to prove the correctness of this view, and the actual cutting of the soil should form no danger to the inhabitants of Lagos provided that the salinity of the water afterwards to be used is sufficient to completely prevent the development of *Anopheles* larvae in it. This is a point of the utmost importance, and would have to be accurately determined by a careful series of experiments before any such measures could be recommended. According to Dr. Tedaldi, larvae of *Culex pipiens* and *Culex annulatus* can live in water containing 1.407 per cent. of salt, and one analysis of the Lagos lagoon water gives only 1.3 per cent. of salt, a too small percentage for safety, if the above observations are correct, and if they apply equally to *Anopheles* larvae. Unless the amount of salt in the water would always, under different circumstances such as heavy rainfalls, etc., be sufficiently strong to kill larvae of the *Anopheles* mosquito, the scheme would be dangerous. As already stated, the point is one which only experimental research can decide.

The time has now come when the campaigns against mosquitos, so ably instituted by Major Ross in Sierra Leone, and by Sir William McGregor in Lagos, should be insisted on by the Government for all our other tropical possessions, a sum being set aside annually by the several colonies for this purpose alone. When the sanitary conditions of many towns in the tropics, often of large size, are considered, it is not to be wondered at that the death-rate is so high, and the really surprising point is that it is not higher. The time is, fortunately, now come when people who have intelligently followed the late researches on malaria are beginning to see that, after all, it is not only for the good of their health, but also a saving of money, to carry out such reforms. An instance is afforded by the recent action of the Suez Canal Company in requesting Major Ross to give them his advice on the subject of malarial fever at Ismailia. His report on the conditions found there shows again, if that is required, that the mosquito must be destroyed, and that Ismailia is favourably situated for such a procedure. It is not every place, however, that can be so easily dealt with, but even in those areas where swamps cannot be drained Italian men of science have shown to the world that a practically complete immunity can be obtained by rendering the houses absolutely mosquito-proof—a fact quickly seized upon by all the leading Italian railways for the protection of their employés. The saving of money and life by the adoption of this simple and comparatively inexpensive measure has already been enormous, and humanity at large has benefited. America is acting with an energy and activity equal to that of Italy, and it behoves the English Government not to lag behind in the struggle for the conquest of malaria, the cause of more death and suffering than any other disease known to mankind.

MARRIAGES OF CONSANGUINITY.

THE study of contemporary literature, both scientific and fictional, as well as the experience of the medical practitioner in his intimate relations with his patients as their family friend and adviser, go to show that there exists an ill-defined dread of the effects of marriages between first cousins. The physician is often at a loss to know what advice to give to those who, being already in the state of cousinship, wish to enter into the nearer relationship of matrimony; he reflects that to tender the famous and monosyllabic reply, "Don't," will probably send the cousins to a more acquiescent medical man; while to give his consent may bring to him in the future, when obstetric developments of a disturbing and perhaps weird nature have become manifest, the distressing reproach, "Why did you not warn us?" If he have given a ready ear to all the reported cases in which disaster has dogged the steps of the children of the unions of first cousins, he will probably refer to one or two notorious instances and warn accordingly; but if he himself have married his cousin he will doubtless become a special pleader of no little power. If he have read Mr. Alfred Henry Huth's somewhat remarkable book, *The Marriage of Near Kin*, he may possibly say that marriages within much closer degrees of relationship than cousinhood are physiologically right, although legally wrong: while if he have been a student of Darwin, Aubé, Devay, Reich and others he may possibly be ready to sign a petition to Parliament to make illegal the marriages of first cousins. There are admittedly wide differences of opinion on this as upon all matters of heredity and antenatal pathology; but the general view of the public as well as of the profession is perhaps fairly accurately represented by the following rhyming distich of the Germans:

Heirathen ins Blut
Thut selten gut:
Sterben, verderben,
Oder keine Erben.

Let us look, however, at some of the evidence bearing upon this matter.

Let us take, for example, the mortality among the newborn infants on the island of St. Kilda, far away to the west of the most westerly of the Hebrides of Scotland. In this island live less than 100 men and women; they are practically isolated from the rest of the empire; they show no tendency to emigrate, neither do they gain any addition to their ranks from immigrants from the mainland or neighbouring islands, and consequently marriages of consanguinity are common among them, and have been so for many years. Until recent years the mortality among the newborn infants in St. Kilda was enormous—so much

so that the island was threatened with depopulation; the inhabitants numbered 110 in 1851, 77 in 1881, and 71 in 1891. The infants were not weakly at birth, but commonly died of tetanus neonatorum a few days later. Here surely was a case of excessive infantile mortality due to consanguineous marriages, and could it be denied that lockjaw of the newborn was due to such unions? But happily the events of the past few years have served to demonstrate the fallacy of such reasoning, for with the antiseptic treatment of the stump of the umbilical cord the death-rate among the infants has fallen to the normal.

Again statistics have been collected by many writers dealing with such morbid states as idiocy, retinitis pigmentosa, albinism, chorea, haemophilia, deaf-mutism, goître, epilepsy, rickets, malformations, etc., and in several instances these seem to prove that consanguinity has not a little to do with the pathogenesis of these maladies. But, let it be noted that many of the diseases named are known to be markedly hereditary, and that therefore in estimating the effect of marriages of consanguinity it is necessary to allow for the exaggeration of the tendency to transmit the hereditary morbid state, for since both parents come from the same stock both will have a share in the common hereditary legacy of the family. Dr. Hack Tuke[1] wrote: "There is certainly only too conclusive evidence that disastrous effects result from the unions in question when there is already idiocy or insanity in the family, such morbid condition is intensified in the offspring; on the other hand it is by no means clear that consanguinity *per se* causes insanity in the offspring." Here, then, is really the crux of the whole matter: Does consanguinity *per se* —does the union of cousins by itself and apart from heredity—cause disastrous results to the offspring? The answer given by comparative physiology and pathology would appear in the negative, and with this the careful sifting of the evidence obtainable from the study of consanguine unions in the human subject seems to agree.

What advice, then, is the medical man to give on this matter? Dr. Ballantyne, in his lecture on *Antenatal Therapeutics*,[2] represents the unborn infants, in their "petition," as saying, "We do not particularly object to having first cousins as parents when they both have a clean bill of health, but we do not wish to be the public demonstration of the intensification of morbid processes which will result if they have not." Advice which takes into account this aspect of the matter may not always be palatable at the time to the then interested parties; but it would seem to have behind it a solid consensus of scientific opinion. Since few families have even an approximately clean bill of health, it will rarely be wise to run the risk of intensifying the pathological legacy which already exists by the intermarriage of blood relations. *Heirathen ins Blut thut selten gut.*

THE UNIVERSITY OF LONDON.

The election of Dr. Robertson, of King's College, to the Bishopric of Exeter will necessitate the choice by the Senate of a new Vice-Chancellor. Dr. Robertson has ably filled the office since the resignation of Sir Henry Roscoe, notwithstanding the fears expressed by some that the University which in its early years was accounted the Alma Mater of "godless education" would hesitate to submit to the rule of a cleric. We understand that Dr. Robertson's conduct in the chair has won the approbation of all parties, and that the industry he has displayed during the continuous absence of the Chancellor, Lord Rosebery, from the Senate has been highly creditable. Several names have been mentioned as the possible successor to Dr. Robertson, including that of a medical senator, but we understand that no decision has as yet been arrived at. We are informed that the University of London Graduates Association has decided to advise Convocation to re-elect Sir Joseph Walton, Dr. Bourne Benson, and Dr. Lambert Mears in the Faculty of Arts, and in the Faculty of Science, in which three of the Association's candidates of 1900 are also retiring, the names of Mrs. Bryant, D.Sc., Dr. Kimmins, and Dr. Russell Wells, M.D., B.Sc., will be recommended to the graduates. The London County Council at a recent meeting unanimously re-elected Sir W. J. Collins as one of their two representatives on the Senate, the other being Mr. Sidney Webb.

LORD BALFOUR AND VACCINATION.

The antivaccination party has never had much success in Scotland, and this week it has met with a very decided rebuff from Lord Balfour, Secretary of State for Scotland. The Antivaccination League had asked for an interview with him in the hopes of obtaining some support in its effort to obtain for Scotland the "benefits" of the English Act granting exemption from prosecution to "the conscientious objector." Their request was granted, but they gained nothing whatever by it. In reply to the deputation which represented the League, Lord Balfour said that the benefits of vaccination seemed to him to be proved up to the hilt, and that whatever damage, if any, it might cause in individual cases was far outweighed by its general public utility. Such risks as might be alleged to exist were a constantly diminishing quantity, owing to the improvements that were introduced into the processes of vaccination. The proved evils were so infinitesimal as compared with the great protection afforded by it, that he considered the State was not only entitled, but morally bound, to do everything in its power to ensure efficient performance of vaccination. The existing regulations in Scotland were so successfully administered that, of all children born, 95 per cent. were vaccinated; while of all those who lived over six months, only $2\frac{1}{2}$ per cent. were lost sight of. The Act of 1898 was not called for by any circumstances existing in Scotland when it was passed, and he disapproved of it. He considered the penalties enforced in Scotland to be quite the best and fairest test of the sincerity of the conscientious objector, and would hold out no hope whatever of legislation being introduced which would make the Scottish law similar to that in England. It is very satisfactory to hear of any of His Majesty's Ministers taking so frank and resolute a line in dealing with an application from the antivaccination party, to whose misguided efforts is mainly due the epidemic of small-pox which at the present time is creating so much trouble to individuals and loss to the community in the Midlands and North of England. Lord Balfour's attitude is not, of course, wholly due to his strong conviction of the efficacy of vaccination, but largely also to the fact that the state of public feeling on the matter in Scotland allows him to speak in an entirely uncompromising fashion. The Scotch are far more intelligent in all such matters than their English fellow subjects; and they have so much cool common sense that the crazes of the antivaccination party in England have never obtained any real footing among them.

HOSPITAL DISTRIBUTION IN LONDON.

The Council of the King's Hospital Fund has recently made an attempt to secure the amalgamation of the London Orthopaedic Hospitals, and establish them on one site and under one administration. For this purpose it made an offer of a sum of £10,000 towards the building fund of the proposed combined institution, and £2,000 per annum for three years towards the expenses of its maintenance. The hospitals referred to are "The Royal," "The National," and "The City" orthopaedic hospitals. Of these "The National" has recently enlarged and improved

[1] *Dictionary of Psychological Medicine*, vol. I, p. 248. 1892.
[2] British Medical Journal, April 15th, 1899.

its buildings near Great Portland Street Station, while "The Royal," as our readers are aware, finally determined quite recently to give up its old quarters in Oxford Street next to the offices of the General Medical Council. It is understood that as far as these two institutions are concerned no objection has been raised to the proposal of the Council of the King's Hospital Fund; and that they will amalgamate forthwith and receive in consequence an allotment of £7,500 towards building and £1,500 for three years towards maintenance. "The City Orthopaedic Hospital," however, is understood to have declined to assent to the scheme and remove from its present quarters in Hatton Garden, the reason given being that by moving to Portland Road it would deprive Clerkenwell and the East End of its services. How far these reasons can be considered sound, when locomotion is so easy as it is nowadays, we need not discuss here, but we must assume that, before deciding to stand out from the scheme, the Committee of the City Orthopaedic Hospital duly considered the matter in all its bearings. The effort of the Council of the King's Hospital Fund, therefore, promises to be only partially successful, but, nevertheless, we welcome it heartily. Its action shows a disposition to take a strong line upon the question of hospital distribution in London, and this is what every one must desire that it should do. The subject in its entirety is a vast one, involving innumerable issues of great difficulty, and one division of it certainly is the question of how far it is either necessary or desirable that there should be a large number of small hospitals devoting themselves to some more or less limited branch of general surgery.

DUBLIN HOSPITALS.

THE Corporation of Dublin has been considering its budget, and has come to the conclusion that it must retrench. The poor householder finds that he has to pay an additional 1s. 1d. in the pound, bringing his burden to over 10s. on the rateable value. Main drainage and electric lighting are said to be responsible; but the real reason is to be found in mismanagement. What particularly interests us, however, is that the Corporation has determined to prune the grants which it gives annually to certain hospitals to the extent of 10 per cent. The actual amount given is very small, so that the reduction will hardly be felt. We protest rather against the principle which is to be put into practice. It is sought to minimize the effect of past carelessness and extravagance by diminishing the small succour which has been given to the poor, while inflated expenditure in various other directions is allowed to go on untouched. The bowels of compassion of Dublin Corporators are evidently of a rudimentary kind.

THE LEINSTER BRANCH.

THE first annual meeting of the reconstituted Leinster Branch of the British Medical Association, and the twenty-fifth of the Dublin Branch which it replaces, was held on April 14th. The meeting took place in the Royal College of Physicians of Ireland, which had been lent for the occasion, as it was lent for the first meeting of the Dublin Branch a quarter of a century ago. After the adoption of the annual report, and the election of the Council of the Branch for 1903-4, Sir Charles Ball resigned the chair to Dr. Magee Finny, who delivered an address in which he gave a very lucid account of the provisions and working of the new constitution of the Association. In the evening the annual dinner took place in the hall of the Royal College of Physicians under the chairmanship of the President, Dr. Finny. After the usual loyal toasts, given by the President, had been duly honoured, Mr. L. H. Ormsby, President of the Royal College of Surgeons of Ireland, gave the toast of "The Irish Medical Association and the British Medical Association," and Dr. Cranny, President of the former Association, and Dr. Dawson Williams responded. The toast of "The Guests" was given by the President. It was acknowledged by Lord Justice Walker, the Solicitor-General for Ireland, and Sir George Morris, K.C.B. The Solicitor-General in the course of his speech expressed his sympathy with the Irish Poor-law Medical Service, and his determination in season and out of season to press upon the Government the justice of their claims to equitable remuneration and adequate superannuation. The health of the President was given by Mr. Justice Meredith, and acknowledged by Dr. Magee Finny in a brief and modest speech. Dr. Craig proposed the health of Professor White, the Honorary Secretary of the Branch, who responded in a humorous speech. The meeting was marked by much cordiality, and a hope was very generally expressed that the Irish Medical Association might work in the most friendly spirit with the British Medical Association, and that their co-operation might become more intimate in the future.

THE LIVERPOOL SCHOOL OF TROPICAL MEDICINE AND WEST AFRICA.

A CONFERENCE between the African Trade Section of the Liverpool Chamber of Commerce and Sir Ralph Moor, High Commissioner for Southern Nigeria, was held at Liverpool on April 6th under the presidency of Sir Alfred Jones, K.C.M.G. Professor Boyce, in welcoming the High Commissioner on behalf of the School, asked how he thought it could be of assistance in Southern Nigeria. Sir Ralph Moor, in reply, said the name of the School was a household word in West Africa, and throughout the Coast its recommendations were acted on wherever possible. He paid a specially high tribute to the work of the School's expedition under Dr. Annett. They had given advice which had been most valuable. Dr. Annett found the station of Akassa a hotbed of fever and disease, and entirely unfit for European habitation. In view of the public plant there Sir Ralph could not abandon that station. Dr. Annett had, therefore, pointed out what steps could and should be taken to make it healthy. Sir Ralph had faithfully carried these out. He removed the natives, brought the Europeans into a ring fence, and, by the aid of a very skilful engineer, drained dry what had been a hopeless bog. In addition, he had insisted on all the residents taking regular doses of quinine. The result was marvellously successful. Dr. Brown, whose experience on the coast of West Africa was unrivalled, recently reported that Akassa was now one of the healthiest stations in West Africa. Sir Ralph gave some interesting information as to the water supply of Old Calabar, where he was providing one supply for the natives, and another (a separate one) for the European population, and stated that he would spare no effort in other ways to improve the health of his colony. To Professor Boyce's question how the School could be of assistance, he would reply, "By making an authoritative pronouncement on the subject of the segregation of natives." At present, natives did not understand segregation, and objected thereto; they looked upon it as an attempt to put a slight upon them. If segregation is necessary, it must be advocated by a body competent to lay down the law on the matter, as the Liverpool School of Tropical Medicine, which would strengthen the hands of the authorities. Sir Alfred Jones undertook to bring the question of segregation before the School.

THE SHADY SIDE OF THE STREET.

IT must be well over a hundred and twenty-five years since Charles Morris sang, "Oh, give me the sweet shady side of Pall Mall;" and it is not certain whether he had any more solid reason for his preference than the fact that it was the cool side of a fashionable summer promenade. Small poetaster as he was, he was never likely to have the choice between a residence either on one side of the street or the other, but, if being given it, he maintained his preference for the southern side with its northern aspect, nine people out of ten would probably have said he was wrong. Dr. Thayer of New York, however, has collected a number of facts which prove that from a sanitary point of view the poet would have been right. He undertook an inquiry in which he set himself to answer what was practically the following question: "Is there any difference between what may be called the normal mortality-rates of the inhabitants

of opposite sides of the same street?" For the purpose of his investigation, Dr. Thayer selected a number of streets in New York for examination. They were all streets running practically due east and west, composed of houses of much the same character, inhabited by populations of much the same class, and with no disturbing elements in the way of specially insanitary conditions in the neighbourhood of any of them. The total population of the streets selected by him was over 170,000, a number which appears to be sufficiently large for safe induction. Having chosen his streets, he obtained complete mortality statistics for them for a whole year, and also returns with regard to the incidence of zymotic disease. The result showed that the rate of mortality per thousand among what we may call the northern population was decidedly higher than that among the southern population, the excess being chiefly due to a greater number of cases of phthisis, pneumonia and nephritis in the northern houses than in the southern. As regards the incidence of zymotic disease, there was in the year considered a slight preponderance of cases on the southern sides of the streets, and the deaths from these causes did something to reduce the difference between the total mortality ratios. Nevertheless when all causes of death had been taken into account, there still remained a difference of nearly two per thousand per annum in favour of the southern sides unaccounted for by any difference in age and sex constitution of the respective populations. Dr. Thayer, very reasonably, is inclined to ascribe the difference thus noted to the fact that in houses of the class he examined, the "best rooms" faced the street, having therefore a northern aspect in those on the south sides of the streets, and a southern aspect in those on north sides. The "best or front" rooms in middle-class houses, and it might be added in almost all houses, are usually used, some as sitting rooms, and others as the bedrooms of the more important members of the household. More people consequently have their sleeping chambers in back than in front rooms, especially in houses where there are drawing rooms on the upper floors and in tenement houses and flats. The greater number of the bedrooms therefore in houses which face the south are at the back and therefore face the north, while those on the southern side of the street facing north, have their bedrooms at the back facing south. When rooms face south in temperate climes they not only receive direct sunlight, but people are much more inclined to open, and keep open, their windows than they are when the windows face the north. Hence their superior healthiness and the lessened mortality of the inhabitants of southern sides of streets as a whole. We do not remember ever seeing an account of a similar inquiry having been made before in so elaborate a way, and the results certainly seem to justify the labour that Dr. Thayer has expended upon it. In this country, of course, sanitarians always recommend that houses, as far as possible, should be placed so as to face east and west in order that all rooms may receive a share of sunlight, but where streets have to be laid the point cannot be attended to. In any case, however, the preponderance of cases of phthisis and pneumonia is significant, and proves once more the great importance of ventilation and fresh air upon health; while incidentally the superior importance of those rooms in which the world spends so large a portion of its life, as it does in its bedroom, is brought into prominence. Many people in good health have an idea that any room is good enough to sleep in. To medical men and many others this is a self-evident fallacy, but for the rest statistics such as those referred to herein will be a useful demonstration of its inaccuracy.

JURYMEN'S OBITER DICTA.

Imitation being the sincerest form of flattery, we hope that Mr. Justice Grantham duly appreciates the compliment paid to him last week at Nottingham. Coming as it does from so skilled a craftsman in the manufacture of extempore opinions upon any subject as the common British juryman, it is a compliment of peculiar delicacy. The occasion of it was a coroner's inquiry at Nottingham into a double tragedy, in which a husband had first murdered his wife and then committed suicide. In the course of the evidence it came out that on a previous occasion the murderer had made what appeared to be an attempt to suffocate his wife, and also that, not many weeks before her end, she was found to be suffering from an overdose of laudanum, which she was supposed to have taken herself. No one was blamed for not reporting the alleged attempt of the husband to suffocate her by dragging her into a gas-filled room. Because, however, the medical man who attended the woman, when suffering from the overdose of laudanum, did not mention the matter to the police, some of the jury denounced him quite in the Grantham vein. Could anything be more absurd? There seems to have been nothing in the circumstances to suggest that the overdose of laudanum was anything more than one of those accidents which commonly occur when people treat themselves with strong drugs; nothing to show that the patient had taken it with any idea of ending her life, and still less anything to show that it had been given with that purpose by any one else. Yet according to these enlightened jurymen the medical man is to run round and discuss the matter with the nearest policeman! Even if the case had been known to be one of attempted suicide, what then? No one would be more angry than the British juryman if in his own case his doctor betrayed the confidence reposed in him, and in spite of Mr. Justice Grantham doctors know perfectly well that it is no part of their duty to play the part of private detectives and report every circumstance that comes within their knowledge which may or may not point to a breach of law. In fact, we have the high authority of Lord Brampton, as shown by his summing-up in the Kitson *v.* Playfair case, for believing that the circumstances of a legal nature which most of His Majesty's judges would hold to justify the betrayal of a professional confidence are exceedingly few, and that the disclosure of an unaccomplished even if intended crime is certainly not among them.

A BETHNAL GREEN NIGHT CALL.

An incident occurred at an inquest last week in Bethnal Green which further illustrates the curiously unfair attitude which the British juryman—especially of that class which commonly attends coroners' courts—is apt to take up towards medical men. The case was one in which a child 17 months old had died after what was alleged to be an illness of less than twenty-four hours' duration. A medical man was summoned, and duly took the case in hand, but it came out in the evidence that since he knew nothing beforehand either about the case itself or the person who sent for him, he refused to attend until his modest fee of 3s. 6d. had been paid. On this account some of the jury roundly accused him of cruelty, and wished to know whether people were to be allowed to die simply because they had not got 3s 6d. to pay for the doctor whom they wished to attend them. In some courts the medical man in question might have had a very unpleasant time, but the coroner presiding at this inquiry (Dr. G. E. Yarrow, Deputy Coroner) at once pointed out the absurdity of the charge. "Medical men," he said, "can no more be compelled to give their services for nothing, than a butcher or baker to give meat or bread to the first comer who asks for it. Young medical men are often ready to answer the first call on the chance of their services being really required, and of some payment eventually being made, but older ones have learned by experience that sudden calls made upon them at night are often needless and still more often unremunerated; and naturally they become shy of complying with such requests from unknown persons." This, of course, is in every way true. There are probably exceedingly few medical men in general practice who are not ready as a rule to go to any case in which they are certain their assistance is really essential, regardless of the prospect of payment, but they are so often deceived as to the real necessities of the case that they are quite right to be on their guard. It is, moreover, those very people who have the least intention of paying who are the least considerate of a medical man's

rest, and the most ready to make sudden calls upon his services at unexpected and inconvenient hours. Occurrences such as that at the inquest above referred to are extremely unpleasant, but the possibility of them should not lead medical men to abstain from doing what they consider right to guard their energies for the true needs of their position. Besides this, medical men have so many calls upon their philanthropy in the way of remittance of fees, etc., in the course of their ordinary work, that they should not hesitate to do every thing to discourage the idea that belonging to the medical profession *ipso facto* puts a man at the unpaid service of every one who at any moment chooses to call for it.

UP-TO-DATE JOURNALISM.

We are always glad to notice any evidence of the daily press being well informed and thoroughly up to date in regard to medical matters; we therefore think the *Daily Chronicle* may fairly be congratulated upon a piece of information of which it has just become possessed, and to which it devotes a "notice" and a leader. This information is that the Governors of St. Bartholomew's, as a result of recent investigation into the cost of the hospital's upkeep, have discovered that every year a very large number of persons have been receiving medical and surgical aid and advice in the out-patient department who could well afford to pay for treatment. This startling discovery is said to have resulted in a new regulation being made and a notice being affixed to the out-patients' entrance to the hospital to the effect that the hospital is intended for the necessitous poor, and that in order to prevent abuse of the charity, inquiry will be made into the means and circumstances of persons applying for relief. St. Bartholomew's Hospital is not a popular place, for some reason or other, with the daily press, so the *Daily Chronicle* expresses no approval of the careful administration of which the notice is evidence, but considers that it raises a very serious question as to hospital administration and finance. So it does; but unfortunately both the question and the notice by which it is supposed to be raised are at at least twenty years old. We venture to recommend our contemporary to betake itself to fresher fields and pastures somewhat newer in search of discoveries.

MEDICAL COLLEGES IN THE UNITED STATES.

According to the *Journal of the American Medical Association* there were in 1902 156 medical colleges in the United States. The number of teachers in those institutions was 6,776; the number of students 27,501, of whom 5,002 graduated in the academic year 1901-2. In 1900-1 there were 156 colleges, with 5,958 teachers and 26,417 students, of whom 5,444 graduated. Twenty years ago there were 89 medical schools, with 14,934 students and 4,115 graduates. The increase in the number of schools and students is far in advance of the increase in the number of graduates. The graduates twenty years ago were 4,115; in 1900, 5,314; in 1901, 5,444; and in 1902, 5,000. The attendance in twenty years has therefore increased nearly 200 per cent., while the graduates has increased less than 25 per cent. The decrease in the number of graduates last year is attributed to the increased length of course of study and more stringent requirements by State Boards. The decrease in graduates is classified thus: There were 4,879 graduates from the regular colleges in 1901; 387 from the homoeopathic, 148 from the eclectic, and 30 from the physio-medical and nondescript; total, 5,444. In 1902 4,498 graduated from regular schools; 336 from the homoeopathic; 138 from the eclectic; and 27 from the others; a decrease in every class. The increase in students is classified as follows: There were 23,846 students registered at the regular colleges during the year ending July 1st, 1901; 1,683 at the homoeopathic; 664 at the eclectic, and 224 at the physio-medical and nondescript; a total of 26,417. During the year ending July 1st, 1902, 24,878 students registered at the regular colleges: 1,617 at the homoeopathic, 765 at the eclectic, and 241 at the physio-medical and nondescript; total, 27,501. This is an increase among all but the homoeopathic schools. During the year the regular schools increased in the number of students enrolled by 1,032, and in the number of graduates by 381. The homoeopaths lost in enrolment 66, and in graduates 51; the eclectics gained in enrolment 99, and lost 10 in graduates: all other schools gained 17 in enrolment and lost 3 in graduates.

A *DAILY MAIL* MARE'S NEST.

Lord Melbourne complained of Macaulay that he was "so cocksure about everything." Cocksureness is a quality of youth, and usually disappears as the mind ripens to maturity. But it is a characteristic of the young journalism, of which the *Daily Mail* may be taken as the type, that age brings no abatement of its easy assurance. Like a famous statesman, it is always ready at a moment's notice to show how the Channel Fleet should be handled or how a man should be cut for stone. The young journalism, however, differs from Macaulay in one most important respect, for he was generally right, while the *Daily Mail* is generally wrong. A particularly edifying illustration of the way in which our contemporary will persist in talking of matters about which it knows nothing is afforded in a leader entitled, "The Cancer Scourge," which appeared in its issue of April 15th. We hear there of a "Royal Commission on Cancer," and we are given to understand that the report of this Royal Commission is practically ready for issue, and that it contains the great discovery for which the world is anxiously waiting. Our readers may be curious to know what this great discovery is. Their experience of previous "discoveries" will doubtless preserve them from any dangerous degree of excitement on the subject, and they will hear with tolerable composure that it is the modern panacea which has somehow got into the papers before now in association with the names—and addresses—of certain philanthropic practitioners who do good by stealth—as far as their professional brethren are concerned—and blush to find it fame in the press. Need we say that the marvellous remedy which the "Royal Commission on Cancer" is going to recommend is the "high frequency" current? So pleased is the *Daily Mail* with this piece of information, that in its issue of April 16th it assures its confiding readers that "the statement that the Cancer Commission in its forthcoming report will recommend the electric 'high frequency' treatment of the disease has created the greatest interest, not to say surprise, in that section of the medical profession which is chiefly concerned." We are somewhat doubtful about the "interest," but there can be no question about the "surprise," for certainly the statement, as Count Smorltork would say, "surprise by himself." It may interest and even surprise our imaginative contemporary to learn that there is no such thing in existence as a Royal Commission on Cancer, and therefore the "forthcoming" report of that mythical body is likely to remain where it is now—in the limbo of the uncreated. The *Daily Mail* is evidently labouring under a serious confusion of ideas. There is not, indeed, a Cancer Commission, but there is an organization known as the Cancer Research Fund. That body, however, has only just begun its work, and it is not at all likely to destroy the confidence reposed in it by the medical profession by issuing a premature "recommendation" of a method of treatment which has not yet been tested on anything like an adequate scale. Such sensational and misleading announcements in the public press must be strongly condemned. They are never free from the suspicion of inspiration from questionable sources, and they do incalculable mischief by exciting unfounded hopes in the breasts of sufferers whose lot is the most pitiful that can befall a human being.

TRANSPORT AND HOUSING.

Mr. Charles Booth's advocacy of improved means of locomotion as a help towards the solution of the housing question and the relief of overcrowding will shortly be

illustrated in a most interesting and concrete fashion. On May 15th the Prince of Wales will be the first to take a ticket on the London County Council's electric tramway to Tooting. His Royal Highness on alighting at his destination will have arrived at the entrance to the County Council's new village of workmen's cottages. The first section of this estate will be duly opened by the Prince before he re-enters the tramcar on his return journey to Westminster Bridge. The Tooting estate of the County Council is the first experiment in London of building cottages under Part III of the Housing of the Working Classes Act; it covers 39 acres, and will provide room for 8,532 persons at the rate of 218 to the acre. The first section of the estate, which is now completed, includes 276 cottages. These are of four different classes, varying from 6s. a week upwards in rental. Some of the cottages are "doubles"—that is to say, there is one tenement on the ground floor and another above; but in all cases there are separate entrances, and each tenement is self-contained, and is separated from the other by fireproof floors and walls. Small gardens are attached to the cottages, and care has been taken by Mr. Riley, the architect, to introduce variety in design and attractiveness in finish and decoration. We think that it would be worth the County Council's while to consider whether, following the example of Port Sunlight, some neighbouring land might not be acquired for allotments for such of the tenants as would care to cultivate them and provide their own vegetables, etc. When we reflect that in several parts of London there is overcrowding to the extent of 3,000 persons to the acre, and 5s. and 6s. are charged for a single room, we welcome the County Council's attempt, by cheap and improved tramways and cottage dwellings in the suburbs, to improve the lot of the Londoner.

THE UNIVERSITY OF TORONTO.

A deputation from the Medical Faculty of the University of Toronto recently waited on the Premier of Ontario to ask for a further grant of 50,000 dollars to finish and equip the new medical buildings now nearing completion in the Queen's Park, Toronto. The original sum of 125,000 dollars has been found inadequate. This building when completed will, it is said, be the finest type of modern college building on the North American continent. It has been constructed on the "unit system," the standard size of the class-rooms being 23 ft. by 30 ft. The lecture rooms are supplemented by a number of "research" rooms in which students can carry on independent investigations. It is, says the Canadian correspondent of *American Medicine*, the first university building to be constructed on this unit principle since it was laid down. Toronto University now has the largest number of medical students of any Canadian university, not excepting McGill, which for so many years took first place. There are at present 420 medical students on the rolls.

TRYPANOSOMA EXPEDITION TO THE GAMBIA.

A communication from the expedition sent by the Liverpool School of Tropical Medicine to the Gambia and Senegambia to make investigations on the trypanosoma has been received by Sir Alfred Jones, Chairman of the School. The report comes from McCarthy Island, 150 miles in the interior of the Gambia, and is dated March 18th, 1903. The report states that the expedition had just completed a trip to the French town of Maka, which is some sixteen miles away from the nearest large collection of water, their object being to examine natives living in the interior, remote from such collections. They failed to find the trypanosoma in any native examined, but they found it in two horses which had been in the district far up the river beyond the British Possessions, and it was believed had become infected while there. They intimate their intention of prosecuting the investigations thus suggested at St. Louis, in French territory, where many horses are said to die from a kind of "malaria," the symptoms of which seem to them to be the same as those developed in the two horses seen at Maka. They had recently infected a horse with the human trypanosome, and only two days before writing their report they had found numerous trypanosomes in its blood, while in the stomach of a prevalent species of fly which had fed on this horse forms of the parasite suggesting conjugation were discovered. The expedition gratefully acknowledges the valuable assistance rendered them by M. Porthes, the French Commandant at Maka.

PASTEURISM IN SOUTH AFRICA.

The Cape Health Office has, it is stated, in complete readiness all provision for Pasteur treatment should rabies enter the Colony. Some months ago Dr. G. W. Robertson, the bacteriologist to the department, visited Paris and brought away with him virus, and a knowledge of the necessary technique. Inoculations were at once proceeded with, and for the last two months a complete series of cords of all the requisite ages has been kept constantly in readiness. Notification has been made officially that any person supposed to be affected can be treated at Cape Town, and, in case of indigent persons, the Colonial Office will make requisite arrangements for their maintenance during treatment. An antirabic institute has been in existence in Rhodesia for some time. Dr. Loir, a nephew of Pasteur, went out to initiate it, and treated a fair number of cases. On his departure at the beginning of the present year, Dr. Dodgson, the Government bacteriologist, took charge, and had under him eight or nine cases. He has now gone home, says the *South African Medical Record*, for the purpose of procuring equipment for a complete bacteriological laboratory. During his absence Dr. Clarke takes charge of the work.

HUNTERIAN SOCIETY.

The meeting of this Society held on April 8th, which was devoted to the first three sections of the discussion on the Present Methods of Treating Tuberculosis, was largely attended by Fellows of the Society and visitors. The second part of the discussion will take place on Wednesday, April 22nd, at 8.30 p.m. It will comprise three sections: (1) Infection, reinfection, and multiple infection, opened by Dr. Arnold Chaplin; (2) the surgical aspect, opened by Mr. W. Knight Treves; (3) suggested modifications, with respect to comfort, exercise, rest, and recreation, opened by Dr. Glover Lyon. The discussion will be held in the Theatre of the London Institution, Finsbury Circus, E.C., where a lantern and screen will be available for the exhibition of slides.

AMERICAN MEDICAL ASSOCIATION.

The American Medical Association will hold its annual meeting this year at New Orleans on May 5th, 6th, 7th, and 8th. Among the subjects to be discussed a prominent place is assigned to dysentery and uncinariasis. Professor Flexner has promised a communication on the former subject, and Dr. Stiles one on the latter. Among the other subjects to be discussed are yellow fever and plague.

Dr. R. Deane Sweeting has been appointed the delegate of the Epidemiological Society of London to the International Medical Congress at Madrid.

We are asked to state that, as many of those who intend to take part in the Fourteenth International Medical Congress, which opens at Madrid on April 23rd, have already left home, copies of the final programme of proceedings will be delivered to members on their arrival in the Spanish capital.

Dr. Lorenz has been operating in Spain on his way to Gibraltar, where he took ship for a second visit to the United States. From America he will proceed to Japan to fulfil a round of professional engagements. His assistant,

Dr. Frederick Mueller, who accompanied him on his recent tour through the States, has, it is said, decided to take up his abode permanently in Chicago.

A MEETING of the British Balneological and Climatological Society will be held on Wednesday, April 22nd, at 8.30 p.m., when the adjourned discussion on The Dietetic Factor in Health Resort Treatment will be reopened by Dr. Arthur P. Luff. At 6.45 p.m. the Fellows will dine together at Pagani's Restaurant, Great Portland Street.

THE spring meeting of the South-Eastern Division of the Medico-Psychological Association will be held, by the courtesy of Dr. Harding, at the Northamptonshire County Asylum, Berrywood, Northampton, on Thursday, April 23rd, 1903. After the business proceedings Dr. George Greene will read a communication on an obscure case of intrathoracic tumour. The members will dine together after the meeting at the Grand Hotel, Northampton, at 6.30 p.m.

ON April 8th Sir Frederick Treves, Surgeon-in-Ordinary to the King, received from the University of Aberdeen the honorary degree of LL.D. When he was introduced the audience rose and sang "God Save the King." In the bestowal of the degree an allusion was made to Sir Frederick Treves's connexion with the University of Aberdeen as an examiner some nineteen years ago, to his valuable contributions to surgery, and to his services in South Africa during the war.

MEDICAL NOTES IN PARLIAMENT.

[FROM OUR LOBBY CORRESPONDENT.]

Business after the Easter Recess.—The House will meet again after Easter on Tuesday, April 21st, and the business on the first two days will be Supply. The votes in Class I, which come under the head of Public Works and Buildings, will be taken first, and there may be some discussion as to the ventilation and sanitary condition of the Houses of Parliament. The vote for the Board of Agriculture will be taken when the votes in Class I are passed. The Chancellor of the Exchequer will make his Budget statement on Thursday, April 23rd, and on the following day the Medical Acts Amendment Bill of Sir John Tuke is down for second reading, but is not likely to be reached, as it is third on the list, and Mr. Butcher's Licensing Law (Compensation for Non-Renewal) Bill, which stands first, is likely to occupy the whole sitting. Several Bills of medical interest, such as the Cruelty to Animals Bill, the Vaccination Prosecutions Bill, the Vaccination Bill, the Addenbrooke Hospital Bill, and General Laurie's two Bills for Amending the Medical Acts of 1858 and 1886, are down for April 21st and 22nd, but can only be reached by accident. They should however be watched, as small private Bills which would be opposed in a full House sometimes slip through at the end of the sittings after a holiday.

Imported Milk.—Sir Edward Strachey asked the Chancellor of the Exchequer whether he would give the names of the ports of embarkation and debarkation of fresh milk, and of preserved milk other than condensed, imported into the United Kingdom during the year 1902, together with the names and addresses of the persons to whom such milk was consigned; also whether he would give the amount of fat and non-fatty solids in the samples of such imported milk analysed in 1902, and the dates on which such samples were taken. Mr. Ritchie replied that he did not think it would be desirable to give the names and addresses of the persons referred to, but the names of the ports of debarkation and embarkation were as follows:—Fresh milk was imported in 1902 from Rotterdam to London, Rotterdam to Harwich, Amsterdam to Hull, and Cherbourg, Havre, and Honfleur to Southampton; preserved milk (other than condensed milk) was imported in 1902 from Riga, Drammen, Harlingen, Rotterdam, Amsterdam, Ostend, Boulogne, Genoa, Sydney, Brisbane, and New York to London, from New York and Boston to Liverpool, from Boulogne to Folkestone, from Hamburg and Antwerp to Grimsby, from Rotterdam and Antwerp to Harwich, from Christiania and Amsterdam to Hull, from Stavanger and Copenhagen to Newcastle, from Dieppe to Newhaven, from Amsterdam, New York, Havre, and Honfleur to Southampton, from Antwerp to Glasgow, from Amsterdam to Grangemouth, and from Rotterdam and Amsterdam to Leith. The results of analysis of samples of fresh milk and preserved milk (other than condensed milk) taken by the Customs during 1902 were as follows:

Date of Sampling.	Description of Milk.	Results of Analysis.	
		Percentage of fat.	Percentage of non-fatty solids.
February 10th	Separated	0.20	9.06
February 26th	Sterilized	2.91	8.47
March 7th	,,	1.89	9.07
March 10th	Separated	0.20	9.12
May 26th	Sterilized	3.00	8.85
June 24th	Fresh	2.85	8.80
June 25th	Sterilized	2.60	9.34
September 15th	Fresh	3.12	9.65
November 20th	,,	4.60	9.28
December 16th	,,	4.00	9.28

In addition a sample of frozen milk was taken on January 13th, but as it was found not to have been properly drawn, the analysis was not completed. The samples taken on February 26th and June 24th, although deficient in fat, were not so reported to the Customs Department, the condition of the samples when received being such as to raise a doubt whether they truly represented the bulk as imported. The samples taken on March 7th and June 25th were the subject of proceedings against the importers, as stated in answer to a previous question on March 10th last.

The Prevention of Corruption Bill has now passed through all its stages in the House of Lords, and is on the list of Government Bills in the House of Commons. It is down for second reading on April 21st, but is not likely to come on. It is a Bill which the Government evidently intend to press forward at an early date.

Licensing (Scotland) Acts Amendment Bill.—In the debate on the second reading of this Bill which took place in the House of Commons on April 6th, Sir John Batty Tuke expressed his regret that the important provision in the English Act as to the position of husband and wife was omitted from this Bill. It was a matter of great satisfaction to him that when the English Bill was passing through the House there was no opposition to it. England was ripe for such a measure, but Scotland was even more ripe and ready to accept a stronger measure. Knowing that fact, it surprised him extremely to find that there was no mention of the provision to which he referred. He wished he could say that there was no need for such a measure in Scotland. Hon. members, and especially members of the medical profession, knew of many miserable cases. He assured the House that never a week—certainly never a fortnight—passed without some unhappy man or woman coming to him and complaining of the wife or husband, and begging that he would give them some protection. He would take almost the last case that came before him. A man in a respectable position came to him and said, "My wife is a habitual drunkard; she gets liquor wherever she can; she goes out and gets it or sends the servants for it, and she is ruining our children physically and morally by her drinking and neglect. She is ruining my prospects, and soon I shall be a poor man. Are there no Acts which will give me protection?" His answer, of course, was that there were none; that the permissive Acts were absolutely futile; and that he must face his miserable position because the State gave him no relief. Much better would that man's position have been if he were able to tell him that there was a certain amount of protection for him, and that on proof before a court that his wife was a habitual drunkard he could have a separation from her. At present there was no protection at all. These cases were inexpressibly sad, and were worse than cases of lunacy, for which there was a remedy provided by the State. A two or three line clause in the Bill on the same lines as that indicated by the hon. member for Hawick Burghs would be beneficial and sufficient for his purpose. He should certainly move a clause to that effect, and make every effort to get the House to consent to it.

A COMPARATIVE STATISTICAL STUDY OF CANCER MORTALITY.

I.

In the present state of the cancer inquiry the following facts and figures, which have been collected by Dr. Alfred Wolff, of London, will be of interest:

A careful study of the statistics of the mortality from cancer in the various countries of the world with a view to ascertain as far as possible the districts in each of which the greatest number of sufferers from this malady are to be found would seem to promise much in the way of indicating the underlying causes upon which the greater or less prevalence of this disease may depend.

It must, however, be admitted that this promise is scarcely fulfilled, and although some few positive results which may perhaps be of value are arrived at, still, with regard to many of those conditions which have been supposed to influence the occurrence of cancer, statistical inquiry gives often doubtful and sometimes inconsistent results.

The value of comparing the death-rate from cancer in various countries as a whole is not so great as might be expected. The diseases collected under the generic name of cancer are not always the same, some States separate cancer from sarcoma, in some these two are grouped together, while there are yet others which include cancer and all tumours under one head. Another difficulty consists in the fact that, owing to the great delay in publishing vital statistics, the figures in all countries are not to be obtained for the same year, although a year as far back as 1900 is the one which has been selected for the inquiry. Again, it is evident that, accuracy of diagnosis would vary enormously according to whether more or less advanced countries are under consideration.

For these reasons the attempt has been made, not so much to compare the mortality from cancer in different States, althsugh that incidentally appears, but to compare in each country the mortality in different provinces in which, therefore, the same method of registration is likely to be enforced.

Some particulars as to most European States are given, but one or two have had to be altogether omitted, from the fact of deaths from cancer being included in the general heading of "Deaths from other Causes"; some were not dealt with, as the figures were too few and too doubtful to appear to be of any value; in two, France and Sweden, only particulars for towns were to be obtained. For the most part the rates and percentages have been calculated from official returns, but in one or two cases in which none such were available other sources of information have had to be relied on.

Of course it is evident that crude death-rates are of little value for purposes of comparison in dealing with a disease such as cancer, which occurs almost entirely in the latter half of life. Some correction for the age distribution of the population is absolutely indispensable. The ideal would be to offer for comparison death-rates for a standard population of 35 years and upwards, as is done by our own Registrar-General. Unfortunately the facts necessary for such a calculation are scarcely ever obtainable. In the few cases in which a recent census made it possible a cancer-rate has been calculated for a population of adult age, although not always of the same age, owing to the various methods of distribution adopted in different countries. These figures, therefore, serve for comparison with others of the same country, although not so well with those of other States. Where this could not be done the proportion of deaths from cancer to 100 deaths from all causes at and after a certain fixed age has been calculated. Only in a few cases was it unfortunately impossible to correct the crude figures in any way.

Large cities, such as London, containing the population of a small State, might, it may be thought, well have been divided into districts for comparison. The difficulties, however, were found insuperable, owing to the innumerable sources of error from the existence of more hospitals and public institutions in some quarters than in others, and even still more from the presence of nursing homes, etc., as no means exist for ascertaining the number and situation of these last.

The rates of mortality in various large towns are given, but no comments have been made on the differences between them, as an inquiry into this matter would involve considerations quite sufficient to form the basis of an entirely separate investigation. It may at once be pointed out, however, that a high death-rate from cancer in a city or in the principal town of a large district does not necessarily indicate that the disease is especially prevalent in that town, a large proportion of deaths being of persons from the surrounding districts; these come into the town hospitals, etc., for treatment, and, dying there, swell the mortality of the city, while diminishing that of the neighbouring country.

The different forms of cancer and the frequency with which different organs are attacked in males and females respectively has not come within the purview of this inquiry, in which it was desired to deal with malignant disease only as a whole. It may, however, be stated that in almost every country it was found that, after uterine cancer, cancer of the stomach was by far the most frequent in both sexes.

It was at once evident that there had been in recent years an apparently notable increase in the mortality from malignant disease, not alone in every country, but in almost every division which was separately considered. The vexed question how far this is a real increase, and to what extent due to improved diagnosis or increased longevity is one which it is not proposed to attempt to resolve in the present inquiry, which has been carried out with a view to show the comparative incidence of cancer in various regions at a given time.[1]

England and Wales.

The cancer-rate for England and Wales, which was[2] in 1900 82 8 per 100,000 living, shows very large differences when counties are separately considered, varying from a rate of 108.3 in Huntingdon to one of 60.6 in Monmouth. The eight highest and lowest rates are given below.

County.	Death-rate from Cancer per 100,000 Living at all Ages.	Proportion of Deaths from Cancer to Total Deaths.
Huntingdon	108 3	6.6
North Wales	106.3	5.7
Cambridgeshire...	103.3	6.4
Berkshire	100.2	6.8
Norfolk	99.1	5.5
Suffolk	99.1	5.8
London	96.4	5.1
Devonshire	96.4	5.5
Lancashire	73.9	3.4
Rutland	71.9	5.4
Middlesex	71.3	4.8
Essex	70.4	4.3
Staffordshire	68 5	3.3
South Wales	65.8	3.5
Durham	61.9	3.2
Monmouth	60.6	3.2

From the last, for purposes of comparison, Middlesex and Essex should be eliminated, as there can be no doubt that a considerable proportion of the cases occurring in these counties go ultimately to swell the mortality of the county of London.

In all of these, with the exception of Huntingdon and Rutland,[3] there has been a notable increase in the last ten years, the rates in 1890 being[4]:

Death-rate from Cancer per 100,000 Living.

England and Wales 67.6

Huntingdon ...	110.8	Lancashire... ...	55.5
North Wales ...	87.1	Rutland	103.8
Cambridgeshire ...	93 9	Middlesex	60.2
Berkshire	76.9	Essex	56.0
Norfolk	78.1	Staffordshire ...	53.8
Suffolk	77.9	South Wales ...	50.3
London	78 6	Durham	51.8
Devonshire ...	84.7	Monmouth ...	50.4

It is to be noted that the areas showing high death-rate were likewise above the average for all England in the preceding years, while with the sole exception of Rutland the same may be said for the low death-rate areas.

The general character of the counties showing the highest rates is that of agricultural districts with few large towns mostly (with the notable exception of North Wales and perhaps of part of Berkshire) low-lying and well-watered by slowly flowing rivers. On the other hand the counties showing

[1] Wherever no date is mentioned the figures given are for 1900.
[2] Sixty-third Report of the Registrar-General for England and Wales.
[3] The total deaths from cancer in this, the smallest of English counties are so few as seriously to impair their value as the basis of a calculation of rate.
[4] Fifty-third Report of the Registrar-General for England and Wales.

low death-rates (omitting Middlesex, Essex, and Rutland for reasons above explained) are in the main industrial and embrace some of the principal coal-mining centres. This last point will be found particularly interesting when considered in relation to the facts hereafter to be shown for other counties.

The figures given so far are the crude rates uncorrected for the varying age distribution of the local populations. The Registrar-General has, however, made a careful calculation of the average death-rate from cancer in the decade 1881-1890, reckoned for a standard population above 35 years of age.[5] It is important to note that this correction makes some considerable alteration in the position of the counties. Thus corrected for age distribution the counties now stand in the following order, the figures being given for those already referred to above:

Corrected Death-rate from Cancer per 100,000 Living aged 35 Years and Upwards.

ENGLAND AND WALES 184.4

London	225.0	Cheshire	
Huntingdon	215.7	Norfolk	177.5
Cambridgeshire ...	201.2	Hertfordshire	
Sussex	199.9	Yorkshire (W. Riding)	
Warwickshire	197.6	Suffolk	174.9
Cumberland	191.4	Westmorland	
N. Wales	191.4	Leicestershire	
Northumberland ...		Essex	173.2
Surrey		Somersetshire	
Yorkshire (N. Riding)		Herefordshire	
Northamptonshire ...		Lancashire	170.6
Middlesex	188.1	Durham	169.6
Devonshire	183.5	Staffordshire	166.3
Yorkshire (E. Riding)		Rutland	166.3
Gloucestershire ...		Worcestershire ...	165.3
Berkshire	181.8	S. Wales	164.7
Kent		Cornwall	163.0
Nottinghamshire ...		Wiltshire	160.4
Lincolnshire		Derbyshire	159.7
Shropshire		Buckinghamshire ...	157.8
Hampshire		Dorsetshire	157.8
Bedfordshire		Monmouthshire ...	157.4
Oxfordshire			

Huntingdon and Cambridge still have the highest rates with the exception of London, which now heads the list; but Sussex and Warwick come before North Wales, and the three remaining counties in which the crude death-rates were exceptionally high are, with this correction, found to show only about the average rate. Of the districts with low death-rates Monmouth retains its place at the bottom of the list, but between this and the five other counties mentioned there is a gap in which six districts are to be found. Even after correction the great coal-mining districts of Durham, Stafford, Derbyshire, South Wales, and Monmouth are still among those with the lowest mortality. It is also interesting to observe that the two best-wooded counties in England, Sussex and Warwick, hold the fourth and fifth places respectively.

Considering the geology, it will be seen that of the counties with the highest corrected rates the three first are mostly on a clay or chalk foundation; but, on the other hand, two others, Cumberland and North Wales, show a very different constitution, the strata here consisting largely of carboniferous limestone and igneous rock. South Wales, which is among the divisions having a very low rate, does not differ very greatly in geological formation from North Wales, excepting in the existence in many parts of old red sandstone; while Bucks and Dorset are largely composed of chalk, with a good deal of clay in the former county. Judging from these facts, little influence appears to be exerted on the cancer-rate in England by the geological formation, similar strata being found in the low mortality areas to those existing in the districts showing the highest rates.

It is hardly worth while to describe in detail facts which are so universally known as the geographical features and industrial characters of the various English counties. A few words must, however, be said with regard to the meteorological conditions which also appear to have little influence on the rates. Of the five counties with the highest cancer mortality, Huntingdon and Cambridge have rainfalls averaging 21·3 in. and 20.8 in. respectively, being the lowest in England, the two next, Sussex and Warwickshire, have about the average 28 in. to 30 in., while the last, Cumberland, with a cancer mortality not much below the other four, receives annually an amount of rain which exceeds by many inches the fall in any other county, being about 85 in.

It has so frequently been stated that cancer is endemic in the valleys of great rivers that it is well to point out that none of the counties bordering on the Severn appear to have an exceptionally great mortality, while several of those highest on the list are characterized by the absence of any great river.

It may be desirable here to make a passing remark with regard to the sometimes supposed relation between tuberculosis and cancer. The figures given by the Registrar-General corrected similarly to those for cancer give no support to this supposition. Of the districts showing high cancer-rates two, North Wales and Sussex, show a rate for tuberculosis in excess of the average for England, the remaining four being below that average. Similarly, of the six counties lowest on the list for cancer two only, South Wales and Durham, have a high rate for tuberculosis. It follows that, as far as can be indicated by statistics, there is no relation between the prevalence of tuberculosis and that of cancer.

The following table indicates the mortality in four important English cities, although for the reasons explained above it is not proposed to comment upon these rates at present:

	Death-rate from Cancer per 100,000 Living, all Ages.	Proportion of Deaths from Cancer to 100 Deaths from all Causes.
Liverpool, including Toxteth Park and W. Derby ...	77.0	3·3
Manchester, with Salford, Chorlton, and Prestwich ...	78.8	3.3
Birmingham, with Aston ...	85.7	4.0
Leeds	106.0	5.0
Sheffield	81.7	3.4

SCOTLAND.

Scotland shows a mortality from cancer for 1899 of 81 per 100,000 living, this disease being responsible for 4.4 per cent. of deaths from all causes.[6] For registration purposes Scotland is divided into five principal areas, a plan which is not followed elsewhere, and which gives much interesting information as to the distribution of disease in town and country. The population, according to the census, is not divided in this manner; in the following table, therefore, the proportion of deaths from cancer to total deaths has been estimated for persons 30 years of age and upwards, as it was impossible to adopt the more satisfactory course of calculating the death-rate in 100,000 living at that age.

	Death-rate from Cancer per 100,000 Living, all Ages.	Proportion of Cancer Deaths to 100 Deaths from all Causes, all Ages.	Proportion of Deaths from Cancer to 100 Deaths from all Causes of Persons of 30 Years and Upwards.
SCOTLAND	81.0	4.4	8.2
Principal Town Districts	85.0	4.2	8.6
Large Town Districts ...	71.7	3.8	7.0
Small Town Districts ...	73.0	4.3	10.4
Mainland Rural Districts.	89.5	5.6	8.5
Insular Rural Districts ...	66.0	4.1	5.5

The death-rate of the "principal town districts" is no doubt swollen in this, as in other cases, by the deaths of strangers in public institutions, while we are at once struck with the low mortality from malignant disease in what are known as the "large town districts," the rate being nearly 10 per 100,000 under that for the country generally, and forming only 7 as against 8.2 of the deaths over 30. The high rate found in the "mainland rural districts" is to some extent only apparent, as it will be observed that although the rate per 100,000 is far higher than the average, and even greater than that for principal towns, still the proportion of deaths over 30 in the last column is slightly below that for principal towns and not very greatly above that for the whole country. For the small towns on the contrary, although the rate is at first sight low, the proportion of deaths of persons over 30 is almost 2 per cent. greater than that for Scotland and for the principal towns.

These figures seem to indicate that in Scotland the mortality from cancer is considerably greater in rural and

[5] Supplementary Report for the decade 1881-90 by the Registrar-General for England and Wales.

[6] Registrar General for Scotland's Report of Births, Deaths, and Marriages in 1899. When this was written the figure for 1900 were not available.

semirural than in town districts. The low mortality in the islands is very marked, and may be possibly due to the fact that many of the inhabitants of these somewhat remote districts when attacked by cancer come for treatment to the larger towns of the mainland.

In a sparsely populated country such as Scotland, in which moreover the bulk of the population is congregated in large towns, it is difficult to make any trustworthy estimate as to the geographical distribution of cancer from the number of deaths in each county. The total number of deaths from cancer in some of the counties is so small that the addition or subtraction of a few cases such as naturally occurs from year to year makes an enormous difference in the proportionate results.

Dr. W. G. Aitchison Robertson has, however, investigated with great care the habitat of persons dying of cancer in Scotch public institutions, and after allocating them to their respective counties, gives a list showing the incidence of cancer in each of these in the years 1895-1897, which table is here inserted.[7]

Nairnshire ...	9.73	Elginshire ...	5.95
Forfarshire ...	7.74	Kinross-shire ...	5 93
Buteshire	7.60	Kirkcudbrightshire	5 84
Dumbartonshire	7.36	Caithness	5 84
Roxburgh	7.04	Perthshire ...	5.71
Dumfriesshire ...	6.70	Fifeshire	5.60
Wigtonshire ...	6.67	Haddingtonshire	5.58
Banffshire... ...	6 63	Argyllshire ..	5.52
Selkirkshire ...	6.60	Clackmannan ...	5.51
Berwickshire ...	6.40		

Dr. Robertson, judging from these figures, states that there is apparently no relation between geological structure, dampness of soil or rainfall, and the incidence of cancer. The chief coal-mining districts appear to have a very low rate, which is the most interesting definite inference to be drawn from the table. The mortality in the Highlands is also on the whole low, which may perhaps be due to the large Celtic element in the population.

The following figures show the deaths in four of the largest Scotch towns. The remarkably low rate in Glasgow will be noticed, and will form a good basis for an inquiry into the comparative mortality from cancer in cities.

	Death-rate from Cancer per 100,000 Living all Ages.	Proportion of Deaths from Cancer to 100 Deaths from all Causes at all Ages.	Proportion of Deaths from Cancer to 100 Deaths from all Causes after Correction by Dr. Robertson for Deaths in Public Institutions.	Proportion of Deaths from Cancer to 100 Deaths from all Causes of Persons of 30 Years of Age and Upwards.
Glasgow ..	82 0	3.8	2.08	7.9
Edinburgh .	107.0	5 6	4.03	9.9
Dundee ...	115.0	5.8	4.09	11.5
Aberdeen ..	95.0	5.2	4.55	10.0

Ireland.

The death-rate from cancer in Ireland in 1901 was 65 per 100,000 living, having increased from 61 in 1900. The year 1901 has been chosen for consideration, as a supplementary report dealing with the incidence of cancer in that year has just been published by the Irish Registrar-General.

Of the figures given below, those indicating the average death-rate are extracted from that publication, while those showing the proportion of deaths from cancer to those from all causes, at all ages and above 35, are calculated from the figures in the Registrar-General's Thirty-eighth Annual Report.

	Death-rate from Cancer per 100,000 Living.	Proportion of Deaths from Cancer to 100 Deaths from all Causes, all Ages.	Proportion of Deaths from Cancer to 100 Deaths from all Causes in Persons of 35 Years of Age and Upwards.
Ireland ...	65.0	3.6	5.9
Leinster ...	72.0	3.6	5.7
Munster ...	49.4	3.0	4.7
Ulster... ...	77.0	4.1	6.6
Connaught ..	48.0	3.4	4.9

[7] W. G. Aitchison Robertson. A contribution to the Study of the Local Distribution of Cancer in Scotland, *Edinburgh Medical Journal*, January, 1903.

The death-rate from cancer in Ireland compares favourably with that for England and Scotland. In Munster and Connaught the rates are exceptionally low, and it is noteworthy that these provinces are inhabited almost entirely by an agricultural population of Celtic race, mostly poor, and often living in somewhat insanitary conditions. The climate is moist and the country well watered but sparsely wooded. The highest rate is shown by the province of Ulster, which contains almost the whole industrial population of the country.

In the supplementary report to which reference has been made the average death-rate from cancer in the five years 1897-1901 is given for the different counties.

In Ireland, as in Scotland, it is difficult to form any judgement from a calculation based on the number of deaths in each county owing to the sparseness of population in many of them. A table, however, is given of all those counties in which there were at least 60 deaths from cancer in 1901; the rate per 100,000 is for an average of five years, while the proportion of deaths from cancer to those from all causes is for the year 1901 only.

	Death-rate from Cancer per 100,000 Living. Average 1897-1901.*	Proportion of Deaths from Cancer to 100 Deaths from all Causes, all Ages.	Proportion of Deaths from Cancer to 100 Deaths from all Causes in Persons 35 Years of Age and Upwards.
Dublin County and County Borough... ...	84 8	3.3	6.2
Wexford	62.2	4.0	6.0
Cork County and County Borough	55.6	3.5	5.7
Limerick County and County Borough... ...	49.2	2.7	4.3
Tipperary	59.8	3.0	4.3
Antrim...	69.6†	5.3	8.3
Down	68.7†	2.7	4.1
Belfast County Borough...	†	2.8	6 7
Armagh	104.7	5.6	8.3
Donegal	56.0	3.9	5.6
Londonderry County and County Borough... ...	82 4	4.7	7.3
Tyrone...	73.3	4.6	6.4
Galway...	41.9	3.5	5.0
Mayo	36 4	3.2	4.8

* Registrar-General's Special Report on Cancer in Ireland.

† The Registrar-General includes part of Belfast in each of the Counties Antrim and Down.

The high death-rate in the county of Dublin is no doubt largely due, as in the case of other capital cities, to the existence of hospitals and other facilities for treatment.

The percentage of deaths from cancer at all ages in Belfast is low. This is mainly due to the high rate of mortality among children under 5 years of age, the deaths of these in Belfast forming 35 per cent. of the total, as against 20 per cent. in the whole of Ireland. It will be seen that the proportion of deaths from cancer at ages above 35 is, as might be expected, above the average.

There is a well-marked area of high cancer mortality in the north-east of Ireland, comprising the counties of Armagh, Tyrone, Londonderry, and Antrim. The average rate in Antrim, as calculated by the Registrar-General, is evidently lowered by the inclusion therein of a large part of the borough of Belfast, as it will be seen that in the county taken above the proportion of deaths from cancer at ages above 35 is equal to that in Armagh.

The counties referred to, which are in parts very mountainous, surround Lough Neagh, the largest lake in the British Isles. The district is highly fertile, everywhere abounding in water, and contains many of the great orchard districts of Ireland. The conditions which obtain here are those which often characterize regions of high cancer mortality.

It may be observed that county Down, which has a low cancer mortality, has much less of its surface covered by water than the neighbouring counties.

The population of the district is on the whole more prosperous than that of other parts of the country, this being the seat of the great linen industries. It is largely of Scotch or English origin, and it is not improbable that racial difference has some influence in determining a greater liability to cancer here than in other parts of the country inhabited by a purely Celtic race.

In his recently issued report the Irish Registrar General

gives details of the incidence of cancer in the different districts of the county of Armagh; this deserves even closer investigation, with special attention to differences in age distribution, occupation, and conditions of life among the local populations. From statements collected from various medical men, and included in the same publication, it appears that in a large number of cases of cancer in Ireland there had been other sufferers from the disease in the same family, while in some considerable number the disease appeared to be related to a tuberculous taint. In order to estimate the value of these facts it would be absolutely necessary to ascertain the proportion which such cases bear to the total number of cancer cases observed.

On the question of the relation of tuberculosis it may be noticed that the district of high cancer mortality is one in which the mortality from tuberculosis is about equal to the average for all Ireland; this would indicate that there is no close connexion between the two diseases.

(To be continued.)

THE MORISON LECTURES AT THE ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

THE NERVOUS AFFECTIONS OF THE HEART.

THE second lecture of the present series, which was delivered by Dr. G. A. Gibson on March 4th, was devoted to disturbances of rhythm. The lecturer pointed out that many of these disturbances were independent of nervous influences, and that the term nervous affection could, therefore, scarcely be regarded as applicable to such cases. Seeing that they had to be compared, however, with disorders of rhythm, it was necessary that they should be referred to in any discussion of cardiac nervous affections. He showed that it was now clearly understood how, by means of the muscular connexions discovered by His, it was possible to explain the wave of automatic contraction travelling over the heart, and pointed out that, in addition, some of the nervous structures might assist in this propagation. That irregularity of the heart had been usually regarded from a point of view too pessimistic was strongly urged, and from examples amongst animals endowed with fleetness and endurance the lecturer proved that irregularity was often of little significance.

The origin of alterations in the rhythm of the heart was shown to depend either upon changes in the contents of the auricles—the normal stimulus to contraction—or to interference caused by the nervous system. Of the former, or intrinsic, causes, the infective toxins, the chemical poisons, debility of the heart wall, inflammatory affections of the pericardium, endocardium, and myocardium, and increased resistance to outflow, were the most important. Of the latter, or extrinsic, causes, reflex and direct nervous influence were to be considered. Reflex nervous influences might arise from disturbance of viscera in many different parts of the body; direct nervous influences might be either functional or structural in their origin. They might be produced by some irritation of the vago accessory; by interference with the cord or brain; or, lastly, by purely psychical influences, as in emotional disturbance. It was shown that but little was known of the accelerator mechanism of the heart as contrasted with the inhibitory.

Of simple irregularity it was shown that there were two main forms—one which was arrhythmic and one which was rhythmic. Many of the examples of irregularity produced by intrinsic or cardiac causes were of the rhythmic type, while, on the other hand, almost all of the examples produced extrinsically through the nervous system were arrhythmic. Several varieties of the rhythmic type of irregularity were described and illustrated. The special type of irregularity known as the pulsus paradoxus was specially analysed and illustrated by means of two excellent examples. It was shown that this particular symptom, in which with inspiration the pulse lost its force and at the same time became less frequent, was not always confined to mediastinal pericarditis, but occurred in ordinary adherent pericardium, in simple pericarditis, and even in debility of the heart. The last form of irregularity which was considered was cardiac hemisystole or contraction of one side of the heart, while the other did not pulsate or beat somewhat feebly. First suggested by Skoda, and afterwards revived by Leyden and Roy, the explanation had been difficult to accept on account of what we knew regarding the structure of the heart. Mackenzie, however, had published some tracings which showed that this condition was, to say the least of it, possible.

The last part of the lecture was devoted to the treatment of disturbances of rhythm. It was shown that the symptoms must in every case be traced to their source and treated according to their causes. When the morbid symptoms were the result of toxic agents, the first indication was to get rid of them. In the case of the microbic toxins time alone would serve to bring about their disappearance, but tonic remedies assisted in the process of recovery. As regards the chemical agents, the first point was to cease using them and to employ the nervous tonics. When the symptoms were due to weakness of the heart itself it was very interesting indeed to observe that by strengthening the heart by drugs of the purely cardiac type, such as digitalis and strophanthus, irregularity could be curbed and abolished. This was especially true as regards the irregularity of middle life. With regard to youthful irregularity, its causation was extremely variable. If it were due to some simple emotional or psychical disturbance the great point was to get rid of that disturbance. If it should be due to a weakness of the vagus system plus some irritation in any other viscus, what had to be done was to allay the irritability of the vagus nerve either by the bromides pure and simple, or by a combination of strychnine and hydrobromic acid, which was found to be extremely valuable, while the irritation elsewhere was allayed. If the proximate cause should lie solely in disturbance of such a neighbouring viscus as the stomach, a very simple line of medication to that disturbed organ, in addition to the hydrobromic acid, would bring the irregularity to an end. There were some other additional points in regard to irregularity, but they fitted in more thoroughly with palpitation, and would be discussed in the concluding lecture.

GRANTS FOR SCIENTIFIC RESEARCH.

THE Council of the British Medical Association desires to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences that it is prepared to receive applications for grants in aid of such research. Applications, which must reach this office not later than May 31st, for sums to be granted must include details of the precise character and objects of the research which is proposed, and must be made on forms to be had of the General Secretary, at the office of the Association, 429, Strand, London.

Every recipient is expected to furnish to the Committee on or before May 31st following upon the allotment of the grant, a report (or, if the object of the grant be not then attained, an interim report to be renewed at the same date in each subsequent year until a final report can be furnished) containing: (*a*) A brief statement for the Report of the Scientific Grants Committee, showing the results arrived at, or the stage which the inquiry has reached; (*b*) a general statement of the expenditure incurred, accompanied, so far as is possible, with vouchers; (*c*) and references to any transactions, journals or other publications in which the results of the research have been printed.

RESEARCH SCHOLARSHIPS.

The Council of the British Medical Association is prepared to receive applications for three Research Scholarships which become vacant (two holders are eligible for and seek re-election), of the value each of £150 per annum, tenable for one year, and subject to renewal by the Council for another year.

Applications for Scholarships must be made on forms to be had of the General Secretary, and returned on or before May 31st.

ERNEST HART RESEARCH SCHOLARSHIP.

The Council of the British Medical Association is also prepared to receive applications for the Ernest Hart Research Scholarship of the value of £200 per annum, tenable for one year, but subject to renewal by the Council for another year. The Scholarship is for the study of some subject in the department of State Medicine.

The present scholar is eligible and seeks re-election.

GUY ELLISTON, *General Secretary.*

429, Strand, April 1st.

A Report
ON
THE MILK SUPPLY OF LARGE TOWNS:
ITS DEFECTS AND THEIR REMEDY.

V.
THE MILK COMPANIES OF COPENHAGEN.

Dr. Henri de Rothschild has recently published[1] an abstract of the report of a mission with which he was charged by the French Minister of Agriculture last summer to study the conditions under which the milk trade is carried on in Denmark. The interest which M. de Rothschild has taken in the question of the supply of milk for infants is well known, and at the polyclinic which he established seven years ago and which is now carried on in a special building attached to the Hôpital Rothschild in Paris, not only is ordinary treatment given to infants, but sterilized milk is issued for their use free or at a low price and they are regularly weighed so that the effects may be registered. He therefore approached his investigations in Denmark with a full knowledge of the importance of the questions involved. He expresses the opinion that among all the cities in Europe, Copenhagen is best provided with milk, the trade being mainly in the hands of two companies which carry on their work in a scientific manner, and take the greatest pains to ensure not only that the quality of the milk be excellent, but that it shall be retailed under conditions which must prevent fraud, and at a reasonable price. The two chief companies are the Kjobenhavns Moelkeforsyning (The Dairy Supply Society of Copenhagen) and the Danske Moelke-Compagni (Danish Milk Company). Both Companies do a large business; the latter, though more recently established, handles a somewhat larger quantity of milk. The first named Company works upon the principle of furnishing milk preserved fresh by keeping it at a low temperature by means of ice, the second pasteurizes its milk.

The Kjobenhavns Moelkeforsyning.

The distinctive character of this Company is that it sends out fresh milk, that is to say, milk which has neither been pasteurized nor sterilized. In order that fresh milk may not produce effects due to the presence of pathogenic microorganisms, it must fulfil three essential conditions:

1. It must be obtained from cows ascertained to be healthy by veterinary examination and fed in a proper manner.

2. It must be manipulated from the time of milking until it is sold in a rigorously aseptic manner.

3. It must be kept during the same period, by some method which shall render the development of the bacteria which it may contain impossible.

[1] *Revue d' Hygiène et de Médécine Infantile*, Tome i, No. 6.

Contracts with Farmers.

The Company does not itself own any farms or dairies; all its milk comes from large or small farms within a radius of a few miles of Copenhagen. It accepts milk from any farmer or owner of cows subject to certain conditions laid down in a contract by which, on pain of fine or the cancelling of the contract, the farmer must rigorously abide.

As to the feeding and general hygiene, the contract provides that: (1) On no account must the cows live in the byres during the summer; (2) they must remain at grass as long as the weather permits; (3) if in summer it becomes necessary to use dry forage, it must be given in the open, and the Company must be notified; (4) before the cows are housed in the autumn their entire hindquarters shall be closely clipped. Their nourishment is to be wholesome and free from substances which might communicate to the milk any abnormal colours or flavour. Residues from distilleries of any kind, as well as turnips, turnip leaves, swedes, and vetches, are rigorously excluded. Carrots and beetroots are only permitted in the proportion of at most 1½ bushel to 5 lb. of corn, bran, and oil-cake. The only cake allowed is colza or sunflower, in the proportion of 1½ lb. at the most to 5 lb. of corn and bran. Cows kept to supply milk for infants must never receive cake, and carrots and beetroots are allowed only at the rate of ¼ bushel a head. The contract lays down the hygienic conditions which must be followed to safeguard the milk from contamination or infection.

Since the milk is not pasteurized, it must leave the farm chemically and bacteriologically pure. As it may be the channel through which typhoid fever, aphthous fever, diphtheria, and more particularly tuberculosis, be conveyed, it is essential that it should come from absolutely healthy animals. To ensure this, the contract provides that the farmer shall allow the inspection of his cows by the Veterinary Inspectors of the Company, and shall strictly obey their instructions. Thus a farmer must immediately remove and isolate any cow declared by the Veterinary Inspector to be suffering from tuberculosis, and get rid of it as soon as possible. He must report any case of illness occurring between the visits of the veterinary inspector, and keep back the milk of the sick beast until further orders. The health of the farmer's family, and that of his labourers and their families, is under special supervision, and the Company must immediately receive notice of the occurrence of an infectious disease. The Company employs seven Veterinary Surgeons. Each visits the farms in the districts allotted to him every fortnight, and makes a report of his inspection to the Company. They note their observations on a printed form (see Form No. 1). On no

Form No. 1 to be Filled in by Veterinary Inspector.

Name of Farm ..... *Number of Cows* ..... *Number of Young Cows* .....

Month.	Date.	Kept for the Company.		Cows Rejected for				Suspect Cows put in Reserve for Inspection.		Cows in Reserve who, since the last Report, are		What Quantity of Milk do the Cows in Reserve Give? What is Done with this Milk?	General Conditions of the Cows.	Is the Stable Kept Perfectly Clean?	Is the Same true of the Cows, and Especially their Udders?	Observations.
		Cows in Milk.	Cows not in Milk.	Tuberculosis of Udder.	Tuberculosis of Other Organs.	Other Illnesses.	Suspicion of Tuberculosis.	Number.	Cause.	Cured.	Left the Farm.					

Form No. 2, to be Filled in by the Farmer.

Name of the Farm .....

Month.	Date.	Dry Fodder.				Roots.			Are any other Foods given?	Hay.	Number of Cows.	Number of Cows in Milk.	Date of last Calving.	Observations.
		Barley and Oats.	Bran of Wheat.	Sunflower Oil-cake.	Colza Oil-cake.	Total.	Beetroot.	Carrots.						
		lb.	lb.	lb.	lb.	lb.	Bushels.	Bushels		lb.				

pretext must access to the farm be refused to the Veterinary Inspectors, who are required to report whether the rules specified in the contracts are carried out, and to give notice to the farmers of the defects they are reporting to the Company. A form showing the food given to the cows is filled in by the farmer (see Form No. 2). The regulations to which the farmer is required to subscribe are as follows:

Regulations Signed by a Farmer undertaking to Supply Milk to "The Kjobenhavns Moelkeforsyning."

A.—*Feeding and Management of the Cows.*

1. The food of the cows must be fresh, and in a good state of preservation. It must also be free from elements which might give to the milk an abnormal flavour or colour.

2. In summer the cows must be put out to grass, and be fed only with grass or clover. In case of necessity it is permissible to give them—but always out in the open—some dry forage and cut corn. It is forbidden to leave them in their sheds at this time of the year.

3. The farmer must arrange beforehand with the Company what food he proposes to give his cows during the winter.

4. He is under any circumstances bound to conform to the following rules:

(*a*) *Roots.*—Carrots and beetroots shall be given in the proportion of one bushel and a-half per cow, but conditionally on their being mixed with at least five pounds of corn, bran, and oil-cake. Cows supplying milk for infants to receive them only in the proportion of half a bushel. Turnips, rape, coleworts, swedes, turnip or beetroot leaves are excluded from the food.

(*b*) *Oil-cake.*—Colza oil-cake and sunflower oil-cake may only be employed in the proportion of at most 1 lb. mixed with at least 5 lb. of corn and bran. It is forbidden to give cake to cows supplying infants' milk.

(*c*) All distillery refuse, etc., is forbidden.

5. Before housing the cows in the autumn, the tails, hindquarters, and udders must be clipped.

6. The periods of calving must be so regulated that the quantity of milk sent to the Society during the months of September and October, shall not be less than the average quantity delivered during the first four months of the year. A farmer desirous of delivering a greater quantity than he is in the habit of supplying, must previously arrange with the Society to do so.

7. The milk of cows after calving must not be supplied during the first fifteen days of lactation; the Society also refuses to receive milk from sick cows, or from cows which yield a maximum of not more than 6 litres a day.

B.—*Milking.*

8. Milking must be done with the greatest care and cleanliness, and should normally take place under the following conditions:

(*a*) Milkers must wear, while milking, a special dress, and be supplied with a towel in case they require to wash their hands.

(*b*) During milking-time the shed should be well lighted, especially behind the cow, so that the operator may milk in an orderly and cleanly manner.

(*c*) Immediately after milking, the milk must be passed through a metal sieve covered with a fine clean cloth.

(*d*) The milk must then, in all seasons, be passed through a refrigerator, which should lower its temperature to 4° R. (5° C., or 37° F.). It must be kept at this temperature until the time of dispatch.

(*e*) Manure must be removed in the morning after milking, and the removal must cease in the afternoon, at least one hour before the evening milking.

(*f*) Milk coming from cows beginning lactation, that coming from cows declared sick, as also that of cows giving less than 6 litres a day, must be collected separately, to prevent its being mistaken for, and mixed with the normal milk destined for the Company.

10. The farmer is required to keep a stock of fresh ice of at least 30 lb. to 100 litres of milk.

11. To cool the milk he must use the Lawrence apparatus, which he can hire from the Society.

C.—*Delivery of the Milk.*

12. Milk is to be delivered once or twice a day, according to the requirements of the Company, at the nearest railway station, whether full, "half-skimmed" milk, or cream. It should only leave the farm in time to arrive at the station at the given time. In summer the milk wagons must have an awning to shade the milk from the sun.

13. The Society supplies the cans for the transport of the milk.

14. On arrival at the farm the cans must be carefully rinsed in cold water, to free them from the dust or dirt that they may have picked up on the way from the factory, then placed upside down in an airy place, where they must remain until required.

15. The use of the cans for any other purpose than milk transport is absolutely forbidden.

D. *Various Obligations.*

16. The suppliers are held, by their word of honour, to answer all inquiries made by the Society respecting the furnishing of milk.

17. They are bound to permit their cowsheds to be inspected by the Veterinary Surgeon of the Company whenever he thinks it necessary. They must fetch the Veterinary Surgeon from the station on arrival, and take him back there on departure, and they must carry out his instructions faithfully.

18. Cows declared tuberculous by the Veterinary Surgeon must be isolated immediately, and sold or destroyed as soon as possible.

19. All calves brought up with the object of yielding milk must have been, since 1896, submitted to the tuberculin test, and the injections must be repeated at least once a year in those which have not reacted to the test. [Since January 1st, 1898, the tuberculin test has been made obligatory for those cows or young cattle put in reserve on suspicion of sickness.]

20. If, in the interval between two of the veterinary surgeon's visits, signs of illness be noticed in the cattle, the farmer must at once inform the Company, and keep back the milk until the Veterinary Surgeon has investigated the case and sent in his report. Meanwhile, in the interval the milk is paid for by the Society, as though it had been delivered.

21 Suppliers are bound to watch with the keenest attention the sanitary state of all persons employed by or resident on the farms, as also that of their families. They are required if any case of infectious illness occur to notify the fact immediately to the Company, who at once take steps to check the evil. In this case the Society refuses to receive the milk, until such time as all traces of illness shall have disappeared, but it pays for it as if it were receiving it.

22. If the Company finds the milk of a quality inferior to the standard, and therefore unsuitable for sale, it reserves the right to reject it without paying any compensation to the farmer.

23. Either of the contracting parties can, on giving six months' notice terminate the contract from January 1st of each year.

24. If owing to an epidemic, or some cause impossible to foresee, the sale of milk at Copenhagen should be suspended, the supplier must keep his milk for a longer or shorter period, and shall not have in this case a claim to any compensation from the Company.

I accept the above-mentioned conditions.

(Signature of the Farmer.)

Production of Milk.

The farmer can engage to supply milk from some of his cows only, and reserve for himself the milk of the others. The cows certified to be healthy are milked morning and evening by milkers who wear special costumes, and are supplied with a towel, so that they may wash and dry their hands whenever necessary. The milking must be done with great care and cleanliness, and in a good light. The Company requires that cows which have recently calved, as well as those pronounced unfit in any way by the Veterinary Inspector, be isolated in a separate part of the byre, in order to avoid mixing the milk. The milk is drawn into pails, and immediately strained through a clean woollen cloth into a refrigerating apparatus, which lowers its temperature to + 4° R. (+ 5° C. or 41° F.). The farmer can buy this apparatus (Lawrence's) or hire it from the Company. In every case, at all seasons of the year, he must keep the milk in boxes, in which it is maintained at this temperature until it is dispatched, and he must keep a reserve of ice in the proportion of 30 lb. to 100 litres of milk. Women inspectors are employed to overlook the production of the milk in all its details, and they report to the Company at least twice a year as to the state of cleanliness and hygiene of each farm. They have to fill in the results of their inspection visits on Form No. 3.

Form No. 3, to be Filled in by the Woman Inspector.

Month.	Date.	Name of the Farm.	In what Conditions of Cleanliness is the Milking Done?	What Defects must be Remedied most Promptly?	How is the Ice for Refrigerating Used?	Where, and in what State, are the Refrigerating Apparatus? In what State is the Flooring or Paving?	General Observations.

Transport of the Milk.

After having been cooled to + 4° R. (41° F.) immediately after milking, the milk is put into cans supplied by the Company, and sent to the station in time to catch a particular train. During the short time they are at the station, the cans must not be exposed to the sun, and during the heat of summer must be covered by an awning. The journey is short, and the special wagons are well ventilated—the empty cans, having first been cleaned by the Company, are returned to the farmers, who rinse them with cold water to remove dust or other dirt which may have accumulated on the return journey; they are kept, upside down in a cool airy place and solely used for milk.

Price of the Milk.

The Society buys the milk at the rate of 14½ centimes the litre (about 6½d. a gallon), but the Company reserves the right to refuse any milk which appears to it to be of inferior quality; on the other hand, it undertakes to pay for, without receiving, the milk of any cows which the farmer has, of his own accord, declared to be ill, or suspected of illness.

The City Factory.

The visitor enters a large courtyard, having the sheds and stables at one end, the offices on one side, and the premises used in the manipulation of the milk on the other. The surface of the yard is macadam, frequently washed for cleanliness and coolness. There are 180 employés, divided into two shifts: one shift begins work at 3 a.m. and leaves off at 3 p.m., having, in the interval taken three hours' rest; the other set is on duty from 1 30 p.m. to 2 a.m., taking four hours rest (from 6 to 10 p.m.). They wear white linen suits, supplied and washed by the Company; the men wear a jacket, apron and cap; the women a blouse, an apron and a cap. All wear sabots, and smoking or spitting on the ground is absolutely forbidden.

A steam engine supplies the motor power; the steam is used for the pasteurization of infants' milk, and for the cleansing and sterilization of the utensils, and supplies also any apparatus for washing, sterilizing, and drying the sand used for filtering the milk. To preserve the milk at a low temperature during the different processes, no less than 2,000,000 kilos of ice are used yearly. There is also a special station for the receipt and dispatch of the milk.

Arrival and Reception of the Milk.—The night's milk is delivered in Copenhagen as it is yielded; the morning's, having been kept on ice all day, is skimmed at the farm and sent with the evening's milk, as cream, and as half-skimmed milk, containing still about 1 per cent. of fatty matter. Both sorts of milk, skimmed and unskimmed, are sold as such at different prices. The wagons and milk cans belong to the Society; both are sealed, and must arrive at the factory station with their seals unbroken. The 600 cans thus received daily contain on the average 30,000 litres, the contents of each can being 50 litres. They are taken on barrows into the reception hall, where an employé unseals them one by one, and takes the temperature, which should not exceed 11° R. (14° C. or 57° F.). An assistant weighs each can, and its weight and the number of the farm it comes from are recorded; while another takes, with a tube, a specimen of the milk, which is tasted in a spoon by a special woman taster. All details regarding the number, weight, temperature, and flavour of each can are entered by an inspector, who also takes specimens from odd cans for chemical and bacteriological examination.

Filtration of the Milk.

The milk cans are then carried into a large hall, where they are kept in vats, packed with ice, until the milk is filtered. The system of filtration is M. Busch's invention. The apparatus is made of enamelled sheet iron, and consists of a round vessel like a wash-hand basin and a small vat. The basin is at a higher level, and from its bottom a wide tub descends vertically, and is then bent at a right angle to enter the side of the small vat near the bottom. The small vat has two overflow pipes, through which the filtered milk flows into a reservoir placed immediately below. Formerly the milk was filtered through sponges. In 1890 a more practical and economical system was introduced. The milk descending from the upper basin rises in the small vat through three layers of gravel and sand, the lowest composed of gravel as big as peas, the middle of finer gravel, and the third of very fine sand; the layers are separated from each other by plates of perforated tin; on the upper plate are four layers of fine linen. The whole is kept in position by pressure exercised on the edges of the tin plates by a special arrangement. The filter is cleaned daily by forcing through it a boiling solution of sodium carbonate, and sterilized by passing steam through it at about 302° F. Cream, skimmed milk, non-skimmed milk, and infants' milk are filtered in different apparatus to avoid mixing; 4 000 litres of milk can be filtered in three hours. The reservoir, into which the milk runs from the filter, is of enamelled sheet iron; it is pierced at the bottom by a horizontal draw-off pipe, which is bent at right angles and rises vertically in the middle of the reservoir. The part of this pipe in the reservoir, is pierced by many small holes, and thus collects the milk from the different layers and conducts it—mixed so as to preserve a mean average—through the horizontal tube, whence it flows into the cans.

Filling the Cans with Full or Skimmed Milk.—The cans are filled with full or half-skimmed milk, weighed, and labels indicating the quality of milk contained in them affixed; the lid is fastened by a wire, the two extremities of which are sealed by a leaden disc, stamped with the date on one side, and the name of the Society on the other. The cans are kept packed in ice tanks until wanted for the town.

Bottling the Cream.—The cream is first weighed, tasted, and pronounced either No. 1 or No. 2 quality. Both qualities are then filtered separately, and placed in bottles containing 50 and 25 centilitres, labelled and marked. They are closed by by a patent cork, surrounded by a wire, ending in a leaden label, which is dated and marked. Whipped cream is also supplied in bottles.

Infants' Milk.—This milk is yielded by chosen cows, specially looked after, and fed in winter on hay, corn, bran, straw, oats, bartey, and at most a quarter of a bushel of carrots; cakes are absolutely forbidden. The price paid is higher. The milk is treated in exactly the same manner as the other milk: it is sold unprepared, or modified, or pasteurized. The milk is drawn from a reservoir under pressure, into bottles holding a litre. The corking is done mechanically; and the bottles are labelled with a guarantee and the date. The bottles are then placed in baskets and covered cases, and kept in ice, until they are sold in the street or delivered to customers. To the modified milk ⅓, ⅖, or ¼ of water is added, as also a certain quantity of sugar in proportion to the degree of dilution; the proteid contents are thus lowered, and the sugar increased in order to make it resemble human milk. The proportions can be altered to suit the digestion of the infant.

The preparation of pasteurized milk is controlled by a special committee, consisting of a municipal councillor and a professor of the school of medicine. After the filtration, a part of the special milk for infants is placed in four receptacles, and sugar and water added in different proportions. No. 1 contains 2 parts of water to 1 of milk; No. 2, 1 part water to 1 part milk; No. 3, 1 part water to 2 parts milk; No. 4, 1 part water to 3 parts milk. These four mixtures are drawn into bottles containing 135, 150, 175, and 180 grams respectively. The undiluted pasteurized milk is put up in bottles of 210 grams. When hermetically sealed, they are placed in a pasteurizing machine, at a temperature of 85° C., for half an hour. Breakages during the process are about 3 per cent. When ready for delivery the bottles are placed in iron wire circular baskets with a central handle, having seven, eight, nine, or ten compartments. The bottles are kept in place by a ring with a corresponding number of openings which fits over the necks of the bottles and is secured by a wire, the two ends of which are sealed with a lead seal, bearing the date of pasteurization and mark of the Society. Each basket has also a label, indicating the nature of the mixture. Each bottle contains enough for one meal, and each basket enough bottles for the number of daily meals of the infant. Mixture No. 1 is delivered in baskets containing ten bottles of 135 grams each; No. 2, nine bottles of 150 grams; No. 3, eight bottles of 175 grams; No. 4, eight bottles of 180 grams. The unmodified pasteurized milk is sold in baskets of seven bottles of 210 grams and in half-litre bottles. With the basket is a notice, to the effect that the pasteurized milk may be kept in the sealed bottles twenty-four hours in a cool place in the shade; that before being used it must be warmed for five minutes in water of a temperature of 50° C., that the neck of the bottle is to be wiped and the bottle opened, and that the infant must never be given any of the milk left over from a feeding. The baskets are sold as follows: Nos. 1 and 2 at 0.49 centimes, Nos. 3 and 4 at 0 56 centimes, and the non modified pasteurized milk at 0.63 centimes. A deposit is paid on the baskets or bottles as the case may be.

Sale of Milk.—Milk is retailed in special horsed vans and in hand carts; both kinds are closed and have three doors on each side. The milk cans are placed so that their taps project through an opening at the bottom of each door, while over each tap is inscribed the quality of the milk and price. A door at the back opens into a compartment reserved for milk and cream sold in bottles. The wagon is numbered, and bears the name of the Society. When the wagon is loaded the doors of the compartments containing the retail milk are sealed, and two men accompany the cart to given points in the street, where they stand or go into the neighbouring districts until the milk is all sold. The delivery employs 200 men,

50 wagons, and 68 horses. All sealed cans must be delivered with the seals intact, and the seals must be still affixed to the doors of the wagons employed in the sale of milk in the streets when they return to the manufactory. No tampering can thus take place. Fraud is further prevented by the quality of the milk being clearly described above the taps, and each buyer receives a different-coloured ticket for each measure of full or skimmed milk that he buys. On these tickets is described the quantity and price, and a number and a mark of the Society. The special milk for infants must be delivered with unbroken seals. In summer all bottles and cans in the wagon are packed in ice. The sale of full, and skimmed milk accounts for the major portion of the 30,000 litres received daily by the Company, while the infants' milk whether full and fresh, modified or pasteurized, averages 4,000 litres per diem.

Cleansing of the Cans and Bottles.—The cans used in conveying milk from the farms to the manufactory are washed in the morning, those brought back in the retail carts in the evening empty. A man turns them upside down on the spokes of a large wooden wheel, which is placed in a vat filled with carbonated water, in which it revolves, immersing in succession each can for a few moments. Another assistant then receives and washes them in hot water; while a third sterilizes them by jets of steam under pressure, and a fourth rinses them in filtered water. They are then removed to a drying room, where they remain upside down, until such time as they are sent to the farm, or are required for use in the town. The bottles are dealt with in another place in the same manner. On being removed from the carbonated water they are washed by a revolving bottle brush with a hollow stem pierced with small holes, through which boiling or cold water can be injected at will; they are then rinsed in filtered water and put to dry in a special drier.

Butter, Skim Milk, etc.—The whole milk and the cream returned unsold to the dairy are immediately made into butter, which is sold at a slightly lower price than butter of first quality. The residues and the half-skimmed milk not sold, are pasteurized and sold at very low prices to the farmers for feeding young pigs.

The Staff.—The staff, men and women, comprise clerks, coachmen, salesmen, errand boys, workmen for rough work and women for lighter work (tasting the milk, bottling the milk, washing the glass utensils, making butter, etc.) Each set has a fixed task at fixed hours and, thanks to the judicious distribution of work, the operations are carried out with remarkable rapidity and method. A white linen suit is given free to the workers, and the coachmen, and salesmen in addition to a fixed salary, receive a percentage on the sales. All employés are entitled to drink as much milk as they like in the factory. The discipline imposed by the Company on its staff is rigorous in the extreme, any infringement of rules being severely punished; on the other hand prizes are offered to those who distinguish themselves by their strict observance of orders and by their industry. The care the Company takes with regard to the animals on the farms, has already been mentioned; the constant watchfulness of their health and that of their owners, and the rigorous way in which all suspected animals are isolated. The same rules apply to the entire staff of the Company, its motto "Pure cows' milk" might well be read "Pure milk coming from healthy cows and manipulated by a healthy staff." The employé who of his own accord notifies to the Company and to his doctor a case of illness in his family or surroundings, is assisted until the danger is past, and during this enforced stoppage he receives his full salary. His interest is thus to act honestly, more especially as, if he omits to make this declaration, he runs the risk of immediate dismissal.

Danske Moelke-Compagni.

The company was founded about six years ago to work the Casse system in which the milk is partially congealed immediately after milking, so that it may be kept fresh for several days. When it started, the Company only sold wholesale the fresh milk, treated as above and sold in cans. But after the acquisition in 1900 of the site and the buildings of the "Pasteur" Dairy, it modified its system of sale so that it now sells, wholesale and retail, milk which is kept fresh during its transport to Copenhagen by partial congelation, and submitted to pasteurization on arrival at the manufactory. The Company now employs 250 workmen and trades in 50,000 to 60,000 litres of milk a day. The Company does not draw its supplies of milk from the immediate neighbourhood of Copenhagen. It owns co-operative dairies in various places, all more or less distant, the co-operators being bound by the same rules of hygiene, system of feeding, etc., as those laid down by the "Kjobenhavns Moelkeforsyning." The milk collected at the dairies is poured into large cans holding 500 kilos, and therein submitted to a very low temperature which partially congeals it. The cans are conveyed to Copenhagen in cold-storage wagons, and on arrival there, one-third of the total milk is congealed in a block which floats in the liquid. When unloaded the cans are weighed and wheeled to great reservoirs into which the contents are tilted, a specimen for analysis having first been taken. In these reservoirs the milk is liquified by a mechanical agitator, an operation which lasts forty-five minutes, but does not affect the flavour of the milk. It is filtered, pasteurized, and cooled, in apparatus capable of manipulating as much as 8,000 kilos of milk an hour. The three processes—filtering, pasturization, and cooling only take a quarter of an hour.

In the new pasteurizing apparatus, constructed recently from designs, prepared in the laboratory of experimental agriculture in Copenhagen, the milk or cream can be heated to 100° C., without affecting the flavour: as a rule 85° C. or 90° C. is thought sufficient. A man is told off to watch the whole process of pasteurization, and never allows the temperature to be lower than 85° C., while another assistant from time to time takes samples, which are examined by the Company's chemist to ascertain that it has actually been pasteurized. The apparatus pasteurizes, filters, and cools the milk automatically. It is easily taken to pieces, and is first cleansed in hot water, then sterilized by steam.

On leaving the pasteurizers the milk is at once cooled and bottled. The bottles, which are of two sizes—a litre and half a litre—are spindle-shaped for retail sale and cylindrical for wholesale. Once filled and corked, they are exposed and kept in ice rooms, at a temperature of 4° C. (39.2° F.) until they are sent out. The bottles reach the hands of customers without their contents having, after their entry into the pasteurizer, come into contact with the outer air. A red label bears the mark of the Company, the date of pasteurization, and a short notice about pasteurized milk. The milk is delivered wholesale in jars or in baskets of twenty bottles; it is retailed in litres or half-litres. Of the 50,000 to 60,000 litres of milk received by the Company daily, it sells as (*a*) pasteurized from 30,000 to 35,000 litres; as (*b*) cream about 3,000 litres; as (*c*) half-skimmed milk the milk from which the cream has been taken: and as (*d*) pasteurized milk for infants, some thousands of pints from selected cows.

Dispatch and delivery are carried out on the same lines as by the "Kjobenhavns Moelkeforsyning," that is to say, with the same precautions to ensure that the products reach its customers fresh and intact. The system of cleansing utensils, bottles, etc., is practically similar, but the sale of bottles being greater, the cleansing hall is much larger. In it are two immense wheels with compartments for the bottles; the wheels turn slowly in a vat filled with carbonated water, and the bottles, after passing through the water, are washed with bottle-brushes as already described, and finally rinsed and placed upside down on drainers.

The establishment also possesses a dairy for the manufacture of butter from the unsold milk and cream. The milk is skimmed mechanically by means of Laval's turbines. The butter-milk is sterilized afresh, and sold cheaply to the farmers for their pigs.

CERTIFIED MILK IN NEW YORK.

A brief account of the system under which certified milk is sold in New York was given in the course of a review of Dr. Henry Dwight Chapin's book on the *Theory and Practice of Infant Feeding*.[1] That reference gave rise to a correspondence in the British Medical Journal, which showed that a good deal of practical interest was taken in the subject. We now propose to give some details of the inquiries and negotiations which resulted in the establishment of this system, and of the manner in which it is worked.

Preliminary Measures.

Dr. Chapin had studied for several years the milk supply of New York in connexion with the subject of home modification of milk for infant feeding. To get an idea of how the milk business of the city was conducted, a business directory was taken and the financial rating of each milkman looked up. The bulk of the business was found to be in the hands of a few dealers—about fifty—some of whom were estimated by the commercial agencies as having over 1,000,000 dols.

[1] British Medical Journal, January 17th, 1903, p. 140.

invested. These dealers handled about 1,250,000 quarts of milk daily.

A list of questions was sent to each of them, asking, among other things, if they sold milk in bottles or not, and at what price; under what conditions their milk was produced, and what percentage of fat it contained. From these answers and talks with the milk dealers who called, the condition of the milk trade was easily discovered.

It appears that very few of the dealers have their own cows, the majority buy their milk from farmers. Milk-receiving stations, called creameries, are established at the railroad stations in dairy sections, and a number of farmers bring their milk to these stations, where it is mixed and prepared for shipment.

The milk business is divided sharply into two branches: (1) One selling milk in forty-quart cans to grocery stores, restaurants, etc.; and (2) the other in bottles to families direct.

(1) Price is the first consideration in "grocery milk," and the milk is bought of the farmers at prices that barely pay for the cow's feed. The milk is there standardized—that is, adjusted so that it will contain as nearly as possible 3 per cent. of fat and 12 per cent. of total solids (the minimum quantities allowed by law), any excess of fat being removed and sold as cream. Grocery milk in New York is retailed at from 3 to 4 cents. per quart.

(2) For the milk intended for family trade, the farmers receive better prices and more care is expended on it. Some dealers filter it; others allow the cream to rise and draw off some of the under milk, so that the remaining milk will show more cream when delivered to families in bottles. The milk is then bottled by machinery and packed in cases containing cracked ice. Much of the milk is good; some of it all that could be desired. The average retail price charged is 8 cents. per quart.

Dr. Chapin read a paper on How the Milk Supply of New York may be Improved, at a meeting of the Medical Society of the County of New York, to which the milkmen were invited. At this meeting each side presented its views on the subject. A Committee, with Dr. Chapin as chairman, was appointed, to look into the milk-supply question, and the present Milk Commission resulted. The milk dealers were invited to meet, and the Committee asked them how the problem could best be solved. The dealers finding that they were to be helped, did their best to assist the Committee, with the result that the standard determined on for milk certification was—not over 30,000 bacteria per c.cm., acidity not over 2 per cent., and at least 3.5 per cent. of butter fat. At first none of the dealers could produce milk up to this standard, but by visiting the farmers, showing them how to arrange their stables, clean their cows, hands, and dairy utensils, it was found that milk well within the standard could be produced in abundance, and at a small advance in price over that of the ordinary bottled milk. It was found necessary to cool the milk soon after milking, by running it over the surface of a cooler containing well or spring water; no milk was to be received from farmers at a temperature above 60° F. Those conditions imposed by the Milk Commission upon dealers, in any way differing from the system employed by the Copenhagen Milk Companies, are singled out in order that the two systems may be compared, and so as to avoid repetition. Dealers complying with the rules were authorized to use caps on their milk jars stamped: "Certified by the Commission of the Medical Society of the County of New York."

I.—*Certified Milk.*

1. *The Barnyard* must be free from manure and well drained; manure which collects each day must be taken several hundred feet away; thus not only will the barnyard be free from smell, but the number of flies in summer will be reduced. Flies are an element of danger, being fond of both filth and milk, and liable to get into the milk after having soiled their bodies in the manure. They also irritate the cows, making them nervous and reducing the amount of milk yielded.

2. *The Stable.*—The place in which cows are milked should have no storage loft above it, or the floor of the loft should be tight to prevent the filtering of dust into the stable beneath. The floors of the stables should have tight floors, preferably of cement, and be well drained. They should be whitewashed at least twice a year, and the air should always be fresh and without bad odour. A sufficient number of lanterns should be provided to enable the necessary work to be done during the dark hours. There should be an adequate water supply, with wash-basins, soap, and towels.

3. *Water Supply.*—The whole premises used for dairy purposes, as well as the barn, must have a supply of water absolutely free from any danger of pollution with animal matter, sufficiently abundant for all purposes and easy of access.

4. *The Cows.*—An animal must never be added to the herd until it has been tested with tuberculin and certified free from disease. No cow is to be excited by hard driving, abuse, loud talking, or any unnecessary disturbance. No strongly-flavoured food, like garlic, which will affect the flavour of the milk, is to be eaten by the cows. The entire body of the cow is to be groomed daily, and before each milking the udder is wiped with a clean damp cloth, or washed with soap and clean water and wiped dry with a clean towel. The udder must never be left wet, and the water and towel used must be clean. The cows must not be allowed to lie down after they are prepared for milking, and a chain or rope must be stretched under the neck to prevent this. All milk from cows sixty days before and ten days after calving must be rejected.

5. *The Milkers.*—Before milking, the milker must wash his hands in warm water with soap and a nail-brush, drying well on a clean towel; on no account should the hands be wet during the milking. Garments used for milking should be kept in a place protected from dust. Iron stools painted white are recommended.

6. *Helpers other than Milkers.*—All children under twelve must be excluded during milking, since from liability to contagious diseases they are more apt than older persons to transmit them through the milk.

7. *Small Animals.*—Cats and dogs must be excluded from the stables during milking.

8. *The Milk.*—The first few streams from each teat should be discarded, in order to free the milk ducts from milk that has remained in them for some time, and in which bacteria are sure to have multiplied greatly. If in any milking a part of the milk is bloody or stringy or unnatural in appearance, the whole quantity of milk yielded by that animal must be rejected. If any accident occurs by which the milk in a pail becomes dirty, no attempt must be made to remove the dirt by straining, but all the milk must be rejected and the pail cleansed. The milk-pails used should have an opening not exceeding 8 in. in diameter. The milk of each cow must be removed from the stable to a clean room directly after it is obtained, and strained through a sterilized strainer.

9. *The Dairy.*—The rooms where the bottles, milk pails and other utensils are cleaned and sterilized should be away from the house, or at least have a separate entrance and be used only for dairy purposes. Bottles after filling must be closed with sterilized discs, and capped so as to keep all dirt and dust from the inner surface of the neck and mouth of the bottle.

10. *Examination of the Milk and Dairy Inspection.*—In order that the dealers and the Commission shall be kept informed of the character of the milk, specimens taken at random from the day's supply must be sent weekly to the Research Laboratory of the Health Department, where examinations are made by experts for the Commission; the Health Department having given the use of its laboratories for this purpose. The Commission reserves to itself the right to change its standards in any reasonable manner upon due notice being given to the dealers.

II.—*Inspected Milk.*

A circular of information concerning the requirements of the Milk Commission of the Medical Society of New York for "inspected" milk, states that those dealers complying with the requirements of the Commission, will be authorized to use caps on their milk bottles stamped "Inspected. Milk Commission Medical Society, County of New York." The requirements are as follows:

1 *The Barnyard.*—(*a*) It must contain no manure in summer, and none in contact with the stable in winter; (*b*) it must be well drained, and kept reasonably clean.

2. *The Stables.*—(*a*) The ventilation and light must be sufficient for the number of cows stabled, so that the barn shall be light and the air never close; (*b*) the floor shall be of wood or cement; (*c*) the ceiling shall be tight if a loft above is used; (*d*) basins, handbrushes, clean water, soap, and clean towels shall be provided in the barn or adjacent dairy room; (*e*) the stable shall be whitewashed in the fall, and in the spring if necessary; (*f*) a sufficient number of lanterns shall be provided to allow the milking to be carried on properly; (*g*) clean the ceiling and sidings once a month; (*h*) the bedding shall be shavings, sawdust, dried leaves, cut straw, or other material that meets with the approval of the Commission; (*i*) the

soiled bedding must be removed daily; (*k*) the application of land-plaster or lime on the floor daily is recommended.

3. *Water Supply.*—Pure water must be used for all purposes. It must be accessible and abundant.

4. *The Cows.*—(*a*) Discard milk containing mucus or blood, and that from any diseased cow; (*b*) reject milk from any animal forty-five days before and six days after calving; (*c*) the cows must be kept from lying down between cleaning and milking. This can be done by means of throat latches.

5. *The Milkers.*—(*b*) Thoroughly wash the hands with soap, water, and brush before milking; (*c*) the hands, and also the cow's teats, must be kept dry during milking. If they become moistened with milk they must be wiped dry with a clean towel.

6. *Utensils.*—(*b*) All dairy utensils must be absolutely clean and free from dust.

7. *The Milk.*—(*b*) Must average 4 per cent. of butter fat; (*c*) cooling must be done within thirty minutes after milking. Temperature of milk must be reduced to 55° F. within two hours of milking, and to 50° F. within three hours, and kept below that temperature until delivered to the consumer. (*d*) When delivered to the consumer the milk must not average over 100,000 bacteria per cubic centimetre from May 1st to September 30th, and not over 60,000 bacteria per cubic centimetre from October 1st to April 30th. If the Commission's requirements are fulfilled the bacteria will not be in excess of the number permitted.

8. *Inspection.*—(*a*) The firms which furnish "inspected" milk must always be open to inspection by the Commission: (*b*) samples of milk must be submitted for bacteriological examination once a month.

For cooling milk to the best advantage, straining through a cheese cloth or Turkish towel into a can placed in ice water is better than the commercial coolers. All utensils should be simple, with tight seams, and steamed, if possible, before using. Dr. Chapin expresses the opinion that the necessity of rejecting a cow from a herd simply because she reacts to the tuberculin test is open to doubt. A distinction is now being drawn between tuberculin tuberculosis and clinical tuberculosis. If only a small gland is affected, the cow will respond to the tuberculin test; the disease may not spread in the body, and the cow's milk will not contain tubercle bacilli. When clinical symptoms of tuberculosis appear the cow's milk should not be used as food.

Bacterial Standard for Certified Milk.

In Dr. Chapin's opinion, 30,000 bacteria to the cubic centimetre is a small enough number to merit certification of milk. If enough care is taken to keep the number as low as this, most putrefactive bacteria will be kept out. The precautions necessary to keep below this number greatly increase the cost of milk and defeat the object in view—namely, to place within the reach of all wholesome milk at a moderate price; few milkmen can keep up to a higher standard no matter what price they obtain, and the high price will curtail consumption. The standard therefore required by the Medical Society of the State of New York, before they will certify the milk, is that there shall not be more than 30,000 bacteria per cubic centimetere: that, when it arrives in the nursery for use, the milk shall not contain less than 3·5 per cent. of milk fat, and shall not exceed 0·2 per cent. in acidity.

Pasteurization is considered in this system unnecessary if precautions before and after milking are taken for the absolute cleanliness of the milk; and if, after milking, it is immediately cooled and kept at temperatures below 45° F. If the milk was originally dirty, or contained as much as 2 per cent. acid produced by the growth of bacteria, it will not pasteurize satisfactorily, as many spore-bearing bacteria will be present. The heat destroys the active bacteria, most of which produce souring, but spores are not destroyed. Home pasteurization of milk is of great value, as the milk is usually consumed before the spores have time to germinate and affect the milk.

Filtration and Clarification of Milk.

Some milk dealers endeavour to improve their milk by filtration to remove the dirt. This has little or no effect in reducing the bacterial count, although the appearance of the milk is improved. The process of clearing or clarifying milk by passing it through a separator improves milk in cleanliness, but breaks up the natural emulsion of the fat, interferes with cream rising, and changes the physical character of the milk. Filtered and clarified milk must be kept cool, or it will spoil as well as uncleaned milk.

By free use of ice it is possible to keep clean milk for several weeks in good condition. Without the use of ice even pasteurized milk will soon change. Thus, as far as keeping qualities go, this natural milk is as good as the pasteurized milk, while it is much better, in that no changes have been produced by heating.

Milk containing large numbers of ordinary dairy bacteria will keep better and be better if ice is used than if pasteurized and no ice is used to keep it cool afterwards; but will spoil sooner than pasteurized milk if neither is iced.

For milk to be used in butter making, farmers who possess separators at home may deliver cream to creamery companies, which after being tested is bought just as other raw material is bought by mills. The separated cream is conveyed by rail and wagon to a central factory, where all the butter is made—a single churning place probably for a whole county.

In many places in America the milk trade is regulated and supervised by excellent municipal ordinances, which have done much to prevent adulteration and improve the average quality. But it is certain that much more real good is being done by private enterprise through large milk companies, well organized, who make a speciality of serving milk and cream which reaches a particular standard of purity and good quality. The effort to supply "certified" milk is doing more than all the legal measures. The basis of this system is care, cleanliness, and sanitary conditions.

Power and Duties of Sanitary Authorities.

Any person carrying on the trade of cowkeeper, dairyman, or purveyor of milk must be registered as such, and every local authority must keep a register of persons carrying on such trade. It would appear that the regulation is not held to apply to wholesale dealers in milk who do not retail milk direct to the public.

A great responsibility rests with the country sanitary authorities, for in our opinion until proper management of dairy farms and a high standard of cleanliness are insisted upon, the practical value of precautions taken in large cities will be small. Clean stables, clean healthy animals, clean milkers, and dairy utensils should be insited upon; the water supply and the drainage should be certified by the medical officer of health, as also the health of all those employed on the farm. If it were realized that from a single cow's hair hundreds of bacteria can be imparted to the milk, and that a gram of fresh cow's manue contains and many as 375,000,000 bacteria, the authorities would insist upon the cows' hindquarters being clipped, and their udders washed with clean water and dried with a clean towel before the operation of milking commenced. In fact, the Model Regulations for Dairies Cowsheds, and Milkshops issued by the Local Government Board for England contains the following:—

17. (5) He shall not cause or suffer any cow belonging to him, or under his care or control, to be milked for the purpose of obtaining milk for sale:

(*a*) Unless at the time of milking the udders and teats of such cow are thoroughly clean; and

(*b*) Unless the hands of the person milking such cow, also, are thoroughly clean and free from all infection and contamination.

If the farmer knew that should he refuse to take sanitary precautions his milk would not find a market, he would very quickly accustom himself to comply with the rules laid down by the medical officer of health, with the approval of the local sanitary authority.

The sanitary authorities in London and other large towns have power to take samples of milk arriving from the country at the railway termini within their respective districts. Such samples are taken, but under existing conditions they are necessarily few in number. The local sanitary authorities can also, by their inspectors, take samples from the wholesale and retail dealers, and may prosecute them when adulterated milk is discovered. On inquiry we have found that in most districts the medical officer of health is satisfied to prosecute the small retail dealers, on the grounds that they have adulterated milk on their premises, and without sifting the matter, in order to ascertain whether the milk was supplied adulterated by the wholesale dealers or by the farmers. While it is doubtless useful to prosecute small dealers this system does not go to the root of the mischief, and it is even known that in some cases the wholesale dealers pay the fines of those retail sellers who happen to be caught selling milk "faked" by *them*. The wholesale dealers are the people who should be dealt with if the mischief is to be really remedied instead of ameliorated. They should be prevented from manipulating the milk dishonestly, as by the addition of water, or, as is said to happen when a sudden demand arises for a larger quantity of milk than they can supply, the addition of diluted tinned unsweetened condensed milk, not to speak of foreign milk preserved by a process which consists in the injection of gases. They in their turn should insist upon a good quality of fresh milk being supplied to them by the farmers. One of the large milk factories in London which we

visited appeared to us to have an excellent system. The farmers who supply this factory take a sample from each churn before it leaves the farm. On arrival at the factory two samples are taken out of each churn; one of these is kept by the wholesale dealer, the other is sent back sealed with the empty churns to the farmer, who can thus prove whether the milk has been tampered with after leaving his farm. The samples are put in small tin cans sealed, these being packed in a box made to hold a dozen or two dozen samples, each small can bearing a number corresponding to the churn from which it is taken. This system not only protects the farmer but enables the wholesale dealer to see that his supply of milk is up to the required standard.

The dealers, as a rule, do not take samples at the railway termini on arrival of the milk; they depend upon the sanitary authorities to do so at their request (*a*) to save expense, (*b*) so that if a case goes into court representatives of the sanitary authority may be called as witnesses. On the other hand, it is said that some wholesale dealers make a practice of taking samples for the purpose of estimating the amount of butter fat. In this way they are able to keep a check upon the farmers, and to ensure that the contract to supply whole milk is fulfilled. But it is alleged that the taking of samples has another object. Should the wholesale dealer desire to dilute his milk, he would run serious risk of reducing the percentage of butter fat below the official standard of 3 per cent., did he not previously ascertain the percentage in the milk supplied to him by the farmers. If, however, he knows that he is dealing with a milk which contains, say 4 per cent. of butter fat, the calculation of the amount of water or separated milk which may be safely added, without producing a mixture having a proportion of fat below 3 per cent., is a simple matter of rule of three.

The sanitary department of a metropolitan borough can take samples of milk on arrival at a terminus within the borough. If milk arrived at that terminus destined for another borough, the officers of that borough have no power to take a sample at the terminus. The inspector would have to follow the cart until it reached his own borough, and then only could he stop the cart and take a sample. This rule has been established by a recent legal decision. Matters are thus seriously complicated, and the wholesale dealers are helped, while the hands of the sanitary authorities are tied.

To prevent dealers and farmers from manipulating the milk dishonestly and dirtily, it seems to us that for the milk to be up to a certain standard of butter fat is not sufficient. In order to bring pressure upon the farmers to be clean, it would be essential to have a bacterial standard of purity for the milk (to vary, perhaps, according to the season of the year), but which should be insisted upon by the dealers to whom the milk is supplied.

THE EPIDEMIC OF SMALL-POX.

The small-pox reports to hand this week tend, on the whole, to give a somewhat favourable impression, but one bad feature still remains. This is that outbreaks continue to occur among groups of workmen employed on railways, water and other similar works, and in workhouse receiving-wards and common lodging-houses.

England and Wales.

In Northumberland, there have been some fresh cases at Wallsend and Blyth, but none apparently at Newcastle. At this place the medical officer of health, Dr. Armstrong, has caused to be issued a little tract on the subject of small-pox, its early recognition and efficient treatment, which should prove very useful.

In County Durham there have been some fresh cases in Durham itself, and others at South Shields and Darlington. At the latter place the recrudescence is rather sharp, 5 cases having occurred in one household. At Felling no case has yet occurred. The medical officer, Dr. Peacock, has persuaded the Sanitary Council to make all preparation in advance, and is having a short pamphlet issued of the same character as the one referred to in Newcastle.

In Yorkshire, there have been several fresh cases at Sheffield and 3 at Fir Vale, which appears to be a new focus.

At Leeds it is considered that things are taking a favourable turn, but 51 cases still remain under treatment.

In Lancashire the Liverpool Sanitary Council is also inclined to take a cheerful view of things, since the decline in the number of cases has been fairly constant, though not very marked. At the last meeting it was stated that the number of fresh cases reported was only 62 against 68 at the previous meeting. There still however remain 303 cases under treatment in the various special hospitals.

In Nottingham things are not going very well. There are new foci at Long Eaton and Sutton-in-Ashfield, while at Hucknall Torkard the disease is as prevalent as before. In Nottingham the Council is complaining of the expense of vaccination, and the Clerk has assured it that the Government also considers the fees paid too high, and intends to reduce them. Does it? Of course, if towns persistently neglect vaccination for years, the amount that has eventually to be paid for it mounts up, but this is the fault of the towns themselves.

In Staffordshire there is little to note. At Burslem things seem to be improved, but the useful measure of making all cases of chicken-pox notifiable for six months has been adopted by way of precaution.

In Leicestershire there are new centres at Syston and Barrow-on-Soar; while in Shropshire Whitchurch is also a new focus.

In Warwickshire there have been one or two more cases at Warwick; while what appear to be new centres have arisen at Longford and Foleshill.

In Lincolnshire Grantham is not yet clear, and a case from it has been imported into Barrowby.

From Derbyshire only one report comes, of another case at Ripley.

In Buckinghamshire fresh centres exist at Haddenham and Slough.

In Surrey, at Croydon no fresh developments are reported, but it is far too early to anticipate what may occur.

In London itself cases have been removed from the boroughs of Southwark, Stepney, Whitechapel, Paddington, and Bermondsey.

In Wales things appear to be quiet; nearly all sanitary councils appear to be alive to the necessity of being prepared, and the only fresh places where cases have occurred appear to be Cricklewell and Mold.

Scotland.

In Scotland active prophylactic measures are being generally adopted, and, except one case at Brechin, no further developments are reported.

Ireland.

Nearly 80 cases of small-pox have occurred in Dublin, but there is no general spread of the disease, and most of the patients are now convalescent, while many have been discharged. At the South Dublin Union the other day Dr. Dunne reported that one of the men working at the new isolation hospital had been admitted suffering from scabies. The man had not been vaccinated, although working for the Corporation in close proximity to cases of virulent infectious disease, and he, in common with twenty-two other workmen, were permitted to go backward and forward to their houses in the city. Now the man was allowed to present himself at the workhouse, and perchance bring small-pox to the 4,000 inmates. Sir Charles Cameron, in reply, states that the contractor was told to have his men vaccinated, but he did not know whether any one inspected them to see whether the instructions had been complied with. We think that in such a case the inspection ought to have been carried out by a properly qualified person.

LITERARY NOTES.

Messrs. Blackie and Son, Limited, will shortly issue *Elementary Ophthalmic Optics*, by Dr. Freeland Fergus, Surgeon to the Glasgow Eye Infirmary, and Examiner in Physics to the Faculty of Physicians and Surgeons of Glasgow. The book deals mathematically with the fundamental principles of elementary physical and geometrical optics.

Messrs. Thacker, Spink and Co. have recently published a book on *Indian Anopheles*, by Captain S. P. James and Captain W. G. Liston, and one on *Infants and their Ailments*, by Major D. Simpson. All three officers belong to the Indian Medical Service.

The *Health Resort and Journal of Spas and Sanatoria* is the title of a new monthly periodical, the character and scope of which are indicated by its title. In the editorial remarks with which it is introduced it is stated that "its appeal is to the large and ever-growing public" which is in want of information about health resorts. This want is to be supplied by means of special articles from the pens of leading writers on climatology, aërotherapy, balneology, and all subjects connected with hygiene, and by regular monthly letters from specially-appointed correspondents. As far as can be judged from the first number, the *Health Resort* is likely to fulfil the object of its creation.

In a sermon on "Sin," the Rev. Dr. Parkhurst is quoted by *American Medicine* as having used the following language with reference to devotees of Mrs. Eddy:

> I should not want to stand sponsor for all the methods and teachings of Jonathan Edwards, but if there could sweep over this city that same tidal wave of heart searching and intense moral self conviction such as was started by his handling of the Bible and his address to the conscience, there would not be left a Christian Science edifice in the city. They would all be built over into apartment houses, or more likely into Christian churches, for the promulgation of God's truth, and the priest and priestesses of this unctuous fantasy would fall upon their knees alongside of the poor publican, and cry, "God be merciful to me, a sinner."

We are glad to note increasing evidence that the clergy are becoming awakened to the fact that it is not only the doctors who are attacked by Mrs. Eddy. They have grasped the significance of the statement that *proximus ardet Ucalegon*,

and that it is time to turn on the hose for the protection of their own dwellings.

At a meeting of the Harveian Society of London held on April 2nd, Dr. Leonard Guthrie read an interesting paper on Some Ancient Remedies and the Services Rendered to the Progress of Rational Medicine by Gideon Harvey, an English physician of the seventeenth century. He showed that in the latter half of the seventeenth century the progress of scientific treatment was impeded by ignorance of pathology, by neglect to make use of the great anatomical discoveries of the age for practical purposes, by superstition and reverence for tradition in the use of remedies employed, by multiplicity of medicaments and ignorance of their physiological action, and by abuse of venesection, vesication, issue-making, sweating, purging, emesis, and salivation. Valvular heart disease, cardiac and renal dropsy, and all forms of nephritis, except that dependent on calculus, were unknown. Biliary colic, or, at all events, the jaundice associated with it, was regarded by Sydenham as a manifestation of hysteria. The urine in diabetes mellitus was known to be sweet, but no importance was attached to the fact. Willis thought that all diseases were due to alterations in the crasis of the blood, which he held to be composed of spirits, sulphur, salts, earth, and water. In fevers he believed that the spirits literally boiled, and the sulphur took fire and smouldered. Treatment consisted in attempting to drive noxious substances out of the blood by the methods mentioned above. Historical instances were given in which death was hastened by excessive bleeding and purging, as in the case of Charles II; and by over-heating, as in the case of Evelyn's son. Scientific treatment was, moreover, hampered by the use of an enormous pharmacopoeia, containing 1,461 remedies, most of which were useless, and by the popularity of unwieldy compounds, such as Venice treacle, mithridate, and the like. Gideon Harvey, physician to Charles II, rendered considerable service to medicine by inveighing against over-treatment, and by counselling simplicity and the use of a few remedies whose action was understood. Harvey derided with much force and acumen Venice treacle and mithridate, showing that their sixty or seventy ingredients were mostly incompatible, and that they owed their virtue solely to the opium which they contained. He parodied Sydenham's famous "expectant attitude" towards diseases, with which he was unfamiliar, in a witty little book called *The Art of Curing Disease by Expectation*, showing how readily the attitude became dangerous and fraudulent in the hands of the ignorant and unscrupulous. Dr. Guthrie said that Gideon Harvey's services to medicine never met with the recognition which they deserved, partly on account of his bitter hostility towards all his contemporaries, and towards the College of Physicians in particular; partly on account of his inveterate habit of hinting in all his works that he possessed secret remedies and specifics against all diseases. But the pharmacopoeias published after his day show that his views were tacitly accepted, as most of the loathsome and absurd preparations which he condemned are left out.

There is an interesting painting on the shoulder-blade of a whale in the Town Hall of Middelburg, Island of Walcheren. It came from the anatomy rooms opened by Corn. v. d. Voorde in the year 1658, which were closed in 1679, and reopened in 1693 by P. M. Helvetius. Again closed in 1702, to be once more opened by A. Helvetius in 1716. The scene represented is a demonstration of anatomy, the teacher standing by the cadaver and students around him. The anatomist was probably A. Helvetius. The signature of the painter is O. J. Steenberg. In the museum of the same city there is a small picture representing the first Jennerian vaccination done in Middelburg by an old practitioner, Dr. Van Solingen, in 1790. It is a family scene and the patient a child.

THE PREVENTION OF CONSUMPTION.

SCOTLAND.

Ayrshire.—The Executive Committee of subscribers for the erection of a consumptive sanatorium for the working classes of Ayrshire has selected a site for the institution at Ashmark, in Glen Afton. It is on the north side of Cracow Glen, 800 feet above the sea level and well sheltered from the north and east. The soil is dry and porous; the water supply is good and abundant. The work is to be carried out by Mr. F. E. Jones, architect, London. About £5,000 is still required for the carrying out of the work.

ASSOCIATION NOTICES.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 22nd day of April next, at **10.30** o'clock in the forenoon, and not at the time previously announced. This necessitates the Journal and Finance Committee meeting on Tuesday afternoon at 3 o'clock.

The Committees Time Card is as follows:

Tuesday, April 21st.—2.0 p.m. Premises and Library Committee.—2.30 p.m. Council Portrait Subcommittee.—3.0 p.m. Journal and Finance Committee.—Trust Funds Committee (to follow Journal and Finance meeting).

April 14th, 1903. GUY ELLISTON, *General Secretary.*

ELECTION OF MEMBERS.

ANY candidate for election should forward his application upon a form, which will be furnished by the General Secretary of the Association, 429, Strand. Applications for membership should be sent to the General Secretary not less than thirty-five days prior to the date of a meeting of the Council.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m. Members can have their letters addressed to them at the office. GUY ELLISTON, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH.—The nomination of candidates for the office of Elective Members of Council (Branch Representatives) for the ensuing year must be made by three electors, and in writing, to the Senior Secretary of the Branch, H. BETHAM ROBINSON, 1, Upper Wimpole Street, W., on or before May 1st next.

STIRLING BRANCH.—The annual meeting will be held at the Crown Hotel, Falkirk, on Thursday, May 7th, at 4.15 p.m. The Council will submit new rules for adoption by the Branch. Dr. Balfour Marshall will give an address on Retroflexion of the Uterus. Members wishing to show cases or specimens or to bring forward any business will please communicate with the Secretary, J. E. MOORHOUSE, 1, Glebe Avenue, Stirling.

NORTH OF ENGLAND BRANCH.—The next meeting will be held at the Infirmary, Sunderland, at 4 p.m. on Wednesday, April 29th. Dinner at 6 p.m. at the Grand Hotel.—ALFRED COX, Hon. Secretary, Cotfield House, Gateshead.

MIDLAND BRANCH: LEICESTER DIVISION.—The first meeting of this Division will be held at the Wyvern Hotel, Leicester, on May 20th, at 4.30 p.m. All members of the British Medical Association living in the County of Leicester and Leicester itself are now members of this Division, and are requested to attend this meeting, when the rules for the Division will be adopted and officers elected.—F. M. POPE, 4, Prebend Street, Leicester, Hon. Secretary of Midland Branch.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.—The next meeting will be held at the Croydon General Hospital, London Road, Croydon (quite close to the West Croydon Railway Station), on Thursday, May 14th, at 4 p.m., Mr. T. A. Richardson, of Croydon, in the chair. The Chairman has kindly offered to provide tea and coffee at the hospital. Agenda: 1. Minutes of Upper Norwood meeting. 2. To decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. 3. Dr. Coles (Bournemouth): A demonstration on blood examination, giving the methods and means best adapted to the exigencies of general practice. 4. To visit the hospital wards, where cases of clinical interest will be shown and described by members of the hospital staff and also by other members, and discussion will be invited. Exhibition of surgical instruments, pharmaceutical products, etc., by Arnold and Sons and Burroughs, Wellcome, and Co. Members desirous of exhibiting specimens or reading notes of cases are invited to communicate as soon as convenient, and certainly by Monday, May 11th, with the Hon. Secretary. The dinner will be held at the Greyhound Hotel at 6.30 p.m., charge 7s., exclusive of wine. The Hon. Secretary would be much obliged if members would kindly inform him by postcard whether they intend, if possible, to be present at the meeting and if likely to remain to dinner. By so doing they will very materially facilitate arrangements and promote the success of the meeting. At the last Upper Norwood meeting it was decided that as the meeting at Croydon last year was such a great success the next one should be conducted on the same lines. It will therefore be a purely clinical meeting, and members are particularly requested to note the change in the arrangements. The idea is for members to show cases of general interest, to give a short history of each, and for a short discussion to follow. All members of the South-Eastern Branch are entitled to attend and to introduce professional friends.—HENRY J. PRANGLEY, Tudor House, Anerley, Hon. Secretary.

SPECIAL CORRESPONDENCE.

PARIS.

The Académie de Médecine: Discussion on the Protection of Infants and the Wet Nurse Industry: Vapour of Oxygenated Water in Tuberculous Laryngitis.—Death of Dr. Bouilly.—Appointment of Dr. Charrin to the Professorship of General Pathology in Collège de France.

The report of the Permanent Commission on Infantile Hygiene has given rise to much heated discussion in the Académie de Médecine. It would appear that by the casting vote of the chairman, Professor Lannelongue, the Commission *in camerâ* proposed to modify Article VIII of the Théophile Roussel Act of 1874, which article deals with the question of mothers placing themselves as wet nurses to the prejudice of their offspring. The article reads as follows:

Every person desiring to place herself in a family as a wet nurse is required to be provided with a certificate from the mayor of her commune, indicating whether her last infant is alive or deceased, and if alive that it is aged at least 7 months, or if it has not attained that age, that it is nourished by a nurse having no other nursling.

The Commission proposed to lower the age limit to three months, their reason being that the law was evaded, and that even the mayors gave false certificates to the women of their commune who sought them, the result being that large numbers of infants died of infantile diarrhoea, etc. Professor Pinard took very serious objection to this proposed mutilation of the Théophile Roussel Act. M. Porak, the Reporter of the Commission, recently explained before the Académie the reasons which led the Commission to bring forward the proposal. In France, during the year 1901, 827,000 births were registered. From statistics compiled in the clinique of Professor Pinard himself, it is found that 65 per cent. of mothers do not give the breast to their infant for economic, organic, or pathological reasons. Other statistics show that of the 35 per cent. of mothers able to to give the breast, but one out of two can do so for longer than six months. These statistics are taken in Paris, but they nevertheless show that 100,000 to 150,000 mothers at the most are capable of giving the breast for a longer period than six months. Of the infants who are deprived of the breast it is calculated that 200,000 are placed out at nurse and fed artificially, although some are supposed to be breastfed. Among the infants nursed at home 35 per cent. receive the mother's breast (17 per cent. during six months only), some are given to the care of wet nurses, but the majority are artificially fed. In Paris 5,000 wet nurses are inscribed on the official registers; if we double or treble this number for the whole of France, we find that there are 10,000 or 20,000 wet nurses as compared with the 100,000 and more children who are deprived of breast milk. Is it just, desirable, or possible to suppress wet nurses? Over 60 per cent. of the wet nurses are servants, widows, divorced women, or girl mothers who have been abandoned or driven from their family, and who are without resources. It is impossible for them to feed their infant for seven months, and more impossible to pay a wet nurse. If the proposal becomes law, when pregnant they will procure abortion, or after birth abandon their child to the Assistance Publique, or if they nourish it themselves will exhaust their meagre resources, and eventually the result will be a further increase in the infantile mortality. Professors Lannelongue and Budin and M. Guéniot took part in the discussion. On the motion of Professor Pinard, the Académie de Médecine passed the following resolutions, although many members abstained from voting:

1. Every person who desires to place herself in a family as a wet nurse is required to be provided with a certificate from the mayor of her commune indicating whether her last infant is alive or dead, and if alive that it is aged at least 7 months.

2. Considering that maternal nourishment, a law of Nature, favourable to the health of the mother and necessary for the life of the infant, is the latter's by right and the duty of the former; that it has been alleged that certain mothers, owing to lack of resources, are incapable of fulfilling this duty, that this argument is the only one which has been brought forward against obligatory maternal feeding of the infant, and that in fact the force of this argument cannot be contested.

But considering that it is in conformity with justice, not less than with social interest, that the community should come to the aid of those mothers who by destitution are prevented from fulfilling their maternal functions.

The Académie expresses its desire, and votes:

That relief be instituted and extended to help such mothers in whose case it shall have been proved that their lack of resources renders it impossible for them to nourish their infant at the breast.

M. Lucas-Championnière recently presented to the Académie de Médecine a paper by Drs. Maget and Planté (of Toulon) on the treatment of microbian affections of the respiratory passages, and especially of tuberculous laryngitis, by vapour of oxygenated water. The memoir describes experiments on animals showing the efficacy of such vapours and the benefit derived by patients who had been treated. Does the vapour contain sufficient oxygen to be of therapeutic value? Contrary to the opinion of many writers, heating, or even boiling, does not cause oxygenated water to lose all its oxygen; heat is even employed to concentrate oxygenated water by evaporation. Drs. Maget and Planté tried to estimate the quantity of oxygen which passes over during distillation. Their results varied with the different samples of oxygenated water experimented with, but they found that water containing 9 to 11 volumes gave in the distillate from 0.20 to 4 volumes of oxygen. Generally the quantity was between 1 and 2 volumes. The quantity of oxygen in the vapour will thus be somewhat small, but it may be of real therapeutic value, especially as raising the temperature increases the bactericidal value of oxygenated water. The vapours were well supported, as the patients took two inhalations daily of ten minutes' duration each, and, moreover, this is not a toxic drug.

French surgery has suffered a great loss by the death of Dr. Bouilly at the age of 55 years. Dr. Bouilly was Professeur Agrégé in the Faculty of Medicine, and Surgeon to the Cochin Hospital; he was well known for his gynaecological work, and it is to be regretted that he did not live to publish his book on this subject. The funeral was very largely attended, some 1,500 of his colleagues, patients, and friends being present.

Dr. Charrin, Director of the Laboratory of Experimental Medicine in the Collège de France, has been appointed Professor of General Pathology in that establishment.

SHEFFIELD.

New University College Building.—The University Question.—Overcrowding of Tramcars.

The foundation-stone of the New University College buildings is to be laid on June 30th next by the Lord Mayor of London. He has promised to attend in State accompanied by the Sheriffs. The site which has been acquired for the new buildings is an excellent one. It is situated a little out of the busier parts of the city, and yet is easy of access. It may be said to be placed in the centre of the medical institutions, it is situated half-a-mile from the Royal Infirmary (250 beds), and at the same distance from the Royal Hospital (150 beds). The Women's Hospital, the enlargement of which was mentioned in a previous letter, is only five minutes' walk away. The Children's Hospital, which has been in a measure rebuilt and a new out-patient room added (45 beds, which will when the hospital is completed be increased to 55) is only on the opposite side of the road. Moreover, one of the city hospitals for infectious diseases is situated sufficiently near, the larger one being three miles from the city.

The University question occupies a considerable part of public attention. The suggested assumption, by Leeds, of the title of University for Yorkshire is strongly resented, and opposition will be made to prevent its success. On the other hand, the community is fully alive to the advantages of the University College obtaining for itself University powers, and every effort is being directed to this end. The City Council at their last meeting adopted a resolution giving their hearty approval to the application for a charter, and pledged itself in the event of a such a charter being granted to seek Parliamentary powers to provide annually out of the city rates an amount which will be equal to a rate of 1d. in the pound in support of the Arts, Science, and Medical departments of the University.

Sheffield possesses a very complete system of electric tramways, but the fares charged are so low that they have become popular, and overcrowding of the cars is so frequent a feature that public attention has been drawn to the matter. The Editor of the *Sheffield Telegraph* collected, by means of circulars, the opinions of seventy-six medical men as to the overcrowding of the cars and the imperfect ventilation, and the information he has published seems likely to have some effect in bringing about an alteration in these matters, which could readily be effected by running a largely increased number of cars.

CORRESPONDENCE.

ON THE BACTERIOLYTIC POWER OF THE BLOOD AND ON ITS RELATION TO THE PROBLEM OF ANTITYPHOID INOCULATION.

Sir,—In rejoinder to Dr. Macfadyen's letter in the British Medical Journal of April 11th I would invite him to consider two points. I would invite him in view of the anticipatory publication of his work to consider whether his objection to criticism on the ground "of its anticipatory nature" is really well founded.

I would further invite him to consider whether he does not come into contradiction with himself in discountenancing my remarks on the constitution of antityphoid vaccine as remarks irrelevant to his subject matter, while he asserts in a subsequent paragraph of his letter that the title of his communication to the Royal Society "expresses exactly the purport of the experiments in question." Dr. Macfadyen can construe the title of his own paper. He does not require me to tell him that experiments "upon the immunizing effects of the intracellular contents of the typhoid bacillus" are experiments upon the immunizing effect of an antityphoid vaccine.

I need not repeat my criticisms with regard to that vaccine and the serum that was achieved by its means. May I, however, say that after the perusal of Dr. Macfadyen's letter, I am still at a loss to understand the *rationale* of employing mechanical means to crush bacteria which dissolve spontaneously in the serum, and of resorting to more than arctic cold to moderate the very temperate heat engendered by a simple crushing operation? Let it be noted—for it is ill to miss the vein of comedy running steadily through human affairs—that the typhoid bacteria have been grown at a temperature of blood heat, and that the vaccine which is derived from them will be subjected to this same temperature when it is inoculated into the body.—I am, etc.,

Lower Seymour Street, W., April 14th. A. E. Wright.

THE EDUCATION CODE AND INFECTIOUS DISEASE.

Sir,—It appears from the Provisional Code now before Parliament that the Epidemic Grant made pursuant to Article 101* is to be discontinued after March 31st, 1903.

It is well known that measles and whooping-cough cause far more deaths than all the other infectious diseases put together, and therefore any means that can be taken to prevent their spread must be of advantage.

Knowing that schoolmasters and schoolmistresses have much earlier information of the existence of infectious diseases than medical practitioners have as a rule, I have for many years maintained the closest possible intercourse with them, they giving me instant information of any infectious disease which came to their knowledge; and I, in return, giving, after inquiry, such certificates of exclusion as I deemed necessary, which certificates enabled them to claim the epidemic grant.

I am of opinion that this co-ordinate action is to a great extent responsible for the fact—see Registrar-General's Quarterly Reports—that the zymotic mortality of the county of Westmorland is, more frequently than any other, the lowest rate of any English county, even of the most purely agricultural counties.

Now it is proposed to change all this, and for the sole reason that it is too much trouble for the Lower Division clerks of the Board of Education to examine certificates and returns and thereby verify claims for epidemic grant.

A schoolmaster may notify infectious disease to a medical officer of health, and he may investigate the accuracy of the report and take such steps consequent thereupon as may be necessary to prevent the spread of disease, but now the school authority's incentive to notification is to be removed and the spread of disease is to be fostered.

I do sincerely hope that Parliament will not consent to put any stumbling-block between school managers and medical officers of health, for good health means both good attendance and valuable education.

I enclose copies of the three forms I use.—I am, etc.,

Musgrave Craven,
Medical Officer of Health, Westmorland Combined Districts.

Kendal, April 14th.

THE FOOD FACTOR IN EDUCATION.

Sir,—I was pleased to read your excellent article on the food factor in education in the British Medical Journal of April 4th, and would venture to point out that whilst it states that "parents scarcely sufficiently understand that the body is a machine and that the work done can only be in proportion to the fuel supplied," the whole tenour of the article is to show up the deficiencies of the dietary of the schools of the present day. For these deficiencies the governing bodies of the schools must be responsible and not the parents. It cannot be supposed that a medical parent could fail to understand the matter, and I doubt if parents in general fail to do so. Certain it is "that there is now demanded of our children an intensity of effort and sustained intellectual labour unknown in former years." But has school dietary been raised to meet this increased demand on the machine? It has been forcibly driven home to me as a parent that it has not. Quoting from your article again, "warnings are not wanting that something is amiss."

If there could be combined action on the part of parents school life would be much improved in all ways, but the parents of boys at a school are generally unknown to each other and cannot act unitedly. No one can read your article, however, without coming to the conclusion that the subject needs very serious discussion.—I am, etc.,

April 9th. A Father.

SMALL-POX AFTER VACCINATION: A CORRECTION.

Sir,—As the English translation of Jacobi's *Atlas of Skin Diseases* is obtaining a considerable circulation in this country (which the general excellence of the plates fully justifies) I feel it is my duty, in the true interests of vaccination, to correct an unfortunate and inexplicable misstatement which appears under the heading of small-pox. Such an error in so important a work is calculated, if uncorrected, to lead to serious misapprehension.

The representations of small-pox in the work consist chiefly of actual photographs, six in number, the first four being of severe unmodified cases. In the letterpress, after the description of the first four photographs, appears the following extraordinary statement (p. 62):

> Although variola may undoubtedly occur occasionally in persons who have been vaccinated with apparent success the disease is invariably modified and never assumes the more severe type illustrated in the preceding photographs..... The rash is always scanty and sparse in distribution....., and the lesions soon dry up to form small brownish scabs.

It is scarcely necessary to point out that such a statement is quite at variance with the real facts, and although a defective knowledge of small-pox is excusable in a German author, it is certainly surprising that an English translator should have passed the statement without comment. That it was allowed to pass, however, seems to indicate that amongst medical men who have not had much practical experience of small-pox there is a somewhat exaggerated idea as to the efficacy of vaccination. It is fully recognized nowadays that the protection conferred by vaccination lapses after a variable number of years, and that too often small pox, if then contracted, assumes an unmodified and possibly fatal form. I have myself seen confluent and entirely unmodified small-pox only ten years after vaccination, but such cases are fortunately very rare and quite exceptional. Twenty years after vaccination, however, unmodified small-pox is by no means uncommon.

As regards the photographs themselves they are reproductions taken by me in the Birmingham epidemic of 1892-5. It is to be regretted that the author did not communicate with me before making use of them. He could then, at least, have made sure that he had the facts relating to them correctly. As it is, he states concerning the unmodified cases: "None of the above four cases were protected by vaccination," which, taken literally, is obviously quite true. But if the author intends to imply (as from the context it is clear that he does) that none of them had ever been vaccinated, then he is certainly in error. I have looked up my original photograph of Case xxxv, B, 1, which he describes as "an extremely severe case of confluent small-pox in a man aged 23 on the tenth day of the disease," and I find the following note written on the back: "Ernest S., 23 years, vaccinated, 4 marks, fair size and foveation. Photograph taken tenth day." I remember the case quite well as the poor fellow remained in hospital an unusually long time owing to serious complications.

The value of vaccination in conferring protection against small-pox *for a time* has been so completely established as to be beyond the pale of scientific controversy, but reckless statements such as the one in question in a presumably scientific work can only bring the operation into the gravest disrepute and go far to explain the bitterness of those who are opposed to it.—I am, etc.,

Town Hall, Leicester, April 6th. C. Killick Millard.

HOSPITAL AMENITIES.

Sir,—Few of the profession fail to sympathize with those of your correspondents who complain that they receive no information about patients sent to hospitals, even if these patients have been furnished with special letters to members of the staff, sometimes personal friends of the writers. But we all realize the great tax laid on the staffs of the hospitals if such correspondence was punctiliously maintained.

The remedy lies, I think, in this direction: Every practitioner having a good class of practice knows how large and how important his correspondence on purely professional topics is—a correspondence with patients, their relations, their friends, consulting practitioners, and practitioners from whom patients are received or to whom they are transferred. In a solicitor's office or a business house articled pupils are trained to write letters, to write them legibly, grammatically, and with some display of sense and acumen; such letters are read, supervised, and signed by the principals.

No medical student at a hospital school learns this important part of his future business; but it would be very easy to teach him. Clerks and dressers could be trained to draft letters in answer to the correspondence received by the staff or the house-staff concerning patients, to submit them to the house-surgeon or house-physician, who would just look over them (to see that the spelling was correct), and submit them twice a week to the surgeon or physician, when they go round, for alterations or suppressions. The whole process of supervision would then take about twenty minutes a week, for perhaps a dozen letters.

It would be a most valuable training for the students, which they would remember gratefully all their days, would be little tax to the house-surgeon, and would be of great advantage to the visiting staff, who frequently do not realize how detrimental these unavoidable omissions of courtesy are.—I am, etc.,

Westerham, April 12th. Arthur Maude.

THE MEDICAL PROFESSION AND THE MERCANTILE MARINE.

Sir,—I think the letters on the above subject should be a warning to medical men applying for appointments as ship surgeons. In the Royal Mail Steam Packet Company the conditions of service are practically the same as in the Peninsular and Oriental Steam Navigation Company. The surgeon is compelled to insure himself in the same insurance office as the Peninsular and Oriental surgeon; he, however, is not bound for two years. He is liable, at great personal inconvenience, to be turned out of an outward bound ship and placed for an indefinite period on an intercolonial ship, should any surgeon senior to himself wish to come home. Life on an intercolonial boat is very pleasant for one who is fond of a tropical life, but surely justice demands that the unfortunate surgeon should be warned of his impending fate before he leaves this country and he can then prepare his outfit accordingly. He should also have an increase of pay as the necessary expenses, washing, etc., on these boats are much more than on the home boats.—I am, etc.,

Ship Surgeon,

April 14th. Late Royal Mail Steam Packet Company.

Sir,—The P. and O. Company is perfectly well able to look after itself, but I cannot let the letter in the British Medical Journal of April 11th signed "Ship Surgeon" pass unchallenged. "Ship Surgeon" states that surgeons are put on station abroad without any notice whatever, etc. May I point out that before a surgeon ever signs ships' articles at all he is shown at the P. and O. office the conditions of service, and also a list of necessary outfit and instruments. If he agrees to these conditions he signs an agreement to that effect, and so goes into the whole business with his eyes open. If afterwards he repent of his bargain, surely the company is not to blame. And it should be borne in mind that surgeons apply to the company for appointment; there is no necessity for the company to use any persuasion in the matter.

My five years' service in the P. and O. convinced me of two things—first, that if a man falls foul of the company he has only himself to blame; and, secondly, that if a medical man wishes to go to sea there is no service where he will be more fairly treated or more happily situated. I am, etc.,

H. J. Rutherford Jones,

Kensington, W., April 16th. Late Surgeon, P. and O. Service.

EXCISION OF THE TONSILS DURING AN ATTACK OF ACUTE TONSILLITIS.

Sir,—There are objections to the performance of tonsillotomy during an attack of acute tonsillitis which have possibly been overlooked by Dr. P. R. Cooper and others.

The primary cause of the attack is a lowered vitality, and the exciting cause the presence and growth of streptococci in the crypts or lacunae of the tonsil.

The mouth and pharynx will at the same time be found to be swarming with micro-organisms, staphylococci, pneumococci, and often the Klebs-Loeffler bacillus.

The toxins thrown off by the streptococci produce a mild toxaemia shown by high temperature and pains of a rheumatic nature in the muscles and joints.

The production of a raw surface at such a stage in what is practically an incubating chamber, is in my opinion courting the growth of the diphtheria bacillus, and with the lowered vitality of the individual the risk does not justify the operation.—I am, etc.,

G. A. Garry Simpson, M.R.C.S.Eng.,

Sen. Clinical Asst., Nose, Throat and Ear Dept., West London Hospital, Medical Officer of Health, Acton, W.

April 13th.

POST OFFICE MEDICAL APPOINTMENTS.

Sir,—I shall be glad if you will allow me to draw attention to the very singular methods which the Post Office apparently adopts in filling up the medical officerships to metropolitan postal districts. Last month the post of medical officer to the Brompton district became vacant through the death of Dr. J. A. de B. G. Gaven, and I, in common, doubtless, with other medical men, awaited the publication of an advertisement setting forth the terms, etc., of the appointment and inviting applications. To my surprise, however, the Department, without issuing any official intimation whatever, proceeded to subdivide the existing area of the appointment and to offer the medical officerships of the districts thus created to certain medical men. Local practitioners had thus no notification of the vacancy, and no material afforded them on which they could decide whether it was desirable to apply for the appointment. Is this a satisfactory way of ensuring the nomination of the most competent persons to responsible public positions?

I may add that, in the case of one of the subdivisions, all the candidates who applied were, for some mysterious reason, passed over without any opportunity being given them to substantiate their claims, in favour of a gentleman who had made no application at all.—I am, etc.,

Chelsea, S.W., April 7th. James Hamilton, M.D.

THE INTERNATIONAL MEDICAL MANIFESTO ON ALCOHOLISM.

Sir,—The authorities cited by Dr. Morton were precisely those which failed to convince the Research Committee though, I think I may say, that the majority of its members originally shared the prevailing belief that parental alcoholism is a cause of filial degeneration. It was shown that the sources of error were so numerous and weighty and apparently had been so little regarded by the compilers that the statistics quoted were practically worthless. I offered personally to produce counter statistics equally convincing—and just as worthless. Dr. Morton will find in medical literature quite as many statements "proving" the transmission of acquirements. The temperance cause is doubtless extremely holy, but that is no reason why a body of scientific men such as the British Medical Temperance Association should make statements which it is absolutely unable to substantiate.—I am, etc.,

Southsea, April 7th. G. Archdall Reid.

HOSPITALS AND THE STATE.

Sir,—The Liverpool Medical Club have passed a resolution "That all public hospitals should be taken over by the State." Why should the resolution stop here? Why not all medical attendance?

Free education may or may not have been a mistake. There is at least quite as much and probably a good deal more to be said in favour of free medical attendance than has ever been said in favour of free education.—I am, etc.,

Greenwich, April 13th. J. H. Keay.

OBITUARY.

SOLOMON CHARLES SMITH, M.D.DURH,, M.R.C.P.,

Consulting Surgeon to the Halifax Infirmary.

THE medical profession, and medical journalism in particular, has suffered a severe loss by the death of Dr. Solomon C. Smith, at an age when his mental energy and keenness were as yet unimpaired. The news came as a shock to all but the most intimate of his many friends, for the fact that he was seriously out of health was not generally known.

Dr. Smith was destined by heredity, as well as inclination, for the practice of medicine, for he was the son of a well-known surgeon—also Solomon Smith—in Halifax, where he was born 61 years ago. He received his medical education at Birmingham and at Guy's Hospital, but his inquiring mind was not satisfied with insular knowledge, and he spent some time studying in Paris. This desire to broaden his acquisitions never left him, and in later years he managed to visit a goodly number of the leading Continental schools of medicine. Always a conscientious worker, he neglected no effort to perfect his professional knowledge, and to the last he maintained an open mind, and gave careful attention to all that was new and promised to be helpful in medicine and the allied sciences. He took the diploma of M.R.C.S. in 1863, and that of L.S.A. in 1865. He at once settled down in his native town, with which his professional career remained intimately bound up, even after he had moved to London. He was soon appointed Surgeon to the Halifax Infirmary, and during the next twenty-five years gradually rose to be the leading medical man in the place. One of his patients has placed upon record Dr. Smith's mode of taking the sufferer into intellectual partnership, and of patiently explaining the scientific basis of his symptoms so as to secure his intelligent co-operation in the treatment.

Dr. Smith succeeded in acquiring the confidence of his professional colleagues as well as that of the laity, and received from them the high honour of being elected President of the Leeds and West Riding Medico-Chirurgical Society. Nor were his interests by any means confined to his profession, for he was a man of wide literary and scientific sympathies. He was Secretary and President of the Halifax Literary and Philosophical Society, President of the Halifax University Extension Association, and for some years President of the Scientific Society in the same town. All the while he was not only keeping himself abreast of advances in medical knowledge, but also subjecting himself to further examinational tests, taking the L.R.C.P.Edin. in 1872, and the M.D.Durh. ten years later. In 1889, when the rebuilding of the Halifax Infirmary came under discussion, Dr. Smith naturally took a leading part. He spoke out in the strongest manner at many public meetings, and gave an interesting address on the building of hospitals at the local Philosophical Society. He was entirely opposed to any attempt to tinker up the existing structure, and vigorously advocated the adoption of the pavilion system. He denounced all idea of spending on architectural decoration money which had been subscribed for the relief of the suffering poor. His views had, of course, great influence, and their frank and decided expression laid his native town under a further debt of gratitude. This was evinced in a notable manner when, some three years later, he announced his decision to leave Halifax and settle in London. A public subscription was raised to testify to the appreciation of his character; all classes vied in contributing, including—and this touched the recipient more than anything else—the nurses at the infirmary and many anonymous working men and women. A portrait of Dr. Smith was hung in the Public Library, and a replica, together with some silver plate, presented to his wife. The speeches at the public ceremony witnessed the keen sense of loss which was occasioned in the town by his departure.

Having retired from practice and being possessed of ample means, Dr. Smith came to London to "rest," and proceeded to do so in characteristic fashion. He took a flat in Baker Street, obtained the Membership of the Royal College of Physicians, and became Physician to the Westminster General Dispensary. At the same time he plunged with enthusiasm into medical journalism. He was appointed to a position on the editorial staff of the BRITISH MEDICAL JOURNAL, for which he did much good work until he became Sir Henry Burdett's colleague in the editorship of the *Hospital*. But even these duties did not fill the measure of Solomon Smith's energy. He joined the Executive Committee of the Workhouse Infirmary Nursing Association, in which he took the greatest interest up to the last; he associated himself with the National Health Society, and was a keen supporter of the London Polyclinic. Of an easy, placid disposition, all this work was got through by him without apparent strain. A few years ago he ceased to live in London and took a house at Walton-on-Thames, coming up to town every day.

Some three years back Dr. Smith had one or two severe attacks of bleeding from the bowel, the origin of which was never satisfactorily cleared up. He regained his normal health, and was apparently quite well until last October, when he had a severe attack of influenza. While recovering from this he took a chill and became jaundiced. The jaundice gradually abated, but a fresh chill in January brought it back again. From this date he steadily lost ground. Eventually Mr. Mayo Robson cut down and drained the distended gall bladder, but the patient sank under the shock of the operation, and died twenty-six hours later.

The funeral took place on Thursday, April 9th, in the family grave in Stoneyroyd Cemetery, Halifax, and was attended by a numerous gathering of those who wished to show that ten years' absence had not effaced the recollection of their old friend from the memories of their former fellow-townsmen.

Although he held a surgical appointment and was engaged till 1892 in general practice, Dr. Smith's sympathies were, in later years at any rate, chiefly medical. His professional success was the inevitable result of a thorough knowledge of his work, combined with excellent sound sense and a most kindly nature. Many of his old patients have spoken of the singular and intimate interest which he always brought to bear on their ailments. One of his own sayings was that "a doctor can give people a good many things he cannot put up in bottles." As a journalist he was also highly equipped, for he had a lucid and accurate mind, sound judgement, and a concise style. Of his signed articles, those on the Epidemiology of Cholera in Allbutt's *System of Medicine* and on Waterborne Diseases in the *Twentieth Century Practice of Medicine* are best known, but he also contributed much good editorial writing to the BRITISH MEDICAL JOURNAL and the *Hospital*. Personally he was a very kindly man, of a gentle and equable temperament, and with a fund of genial humour hidden beneath an extremely quiet manner. He had a singularly young mind, and, as has already been said, was keen to the last on everything pertaining to the progress of medicine and science.

Dr. Smith leaves a widow and four children. Both his sons are members of the medical profession.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE promotion of Staff Surgeons BASSETT-SMITH and G. WELCH to be Fleet Surgeons, and of Surgeons E. A. SHAW, B.A., M.B.; F. H. A. CLAYTON, M.D.; F. J. A. DALTON, and E. SUTTON to be Staff Surgeons, which has been already announced in the BRITISH MEDICAL JOURNAL, is gazetted. The promotions of Surgeons Clayton and Sutton to be Staff Surgeons is conditional on their passing the necessary qualifying examination.

The following appointments have been made at the Admiralty: ERNEST A. SHAW, B.A., M.B., Staff Surgeon, to the *Vulcan*, reappointed on promotion, March 28th; WALTER G. AXFORD, Staff Surgeon, to the *Duke of Wellington*, for Haslar Hospital, temporary, April 1st; GEORGE WELCH, Fleet Surgeon, to the Admiralty, reappointed on promotion, March 26th; ALEXANDER L. CHRISTIE, M.B., Fleet Surgeon, to the *President*, additional, for three months' course of hospital study, April 6th; JAMES M. FRANCE, Staff Surgeon, to the *Royal Sovereign*, April 6th; JAMES A. THOMPSON, B.A., M.B., Surgeon, to the *Triton*, lent, April 6th; A. F. MACKEY, M.B., Surgeon, to the *Research*, lent, April 6th; FREDERICK J. A. DALTON, Staff Surgeon, to the *President*, for three months' course of hospital study, April 9th; WILLIAM SPRY, Staff Surgeon, to the *President*, for three months' course of hospital study, April 15th; JOHN H. STENHOUSE, M.B., Staff Surgeon, to the *Hotspur*, April 8th; JOSEPH C. WOOD, Staff Surgeon, to the *Porpoise*, April 23rd; JAMES W. G. UNDERHILL, M.B., Staff Surgeon, and LLEWELLYN LINDOP, Surgeon, to the *Hawke*, May 6th; CHRISTIAN B. FAIRBANK, Surgeon, to the *Vernon*, April 23rd; HERBERT L. GEOGHEGAN, B.A., M.D., Surgeon, to the *Defiance*, April 23rd; BEAUCHAMP F. PARISH, Surgeon, to the *Pembroke*, April 2nd, and to the *Merlin*, on commissioning, May 1st.

Civil Practitioner J. A. ARKWRIGHT, M.B., has been appointed Surgeon and Agent at St. Margaret's and Cornhill, April 4th.

The *London Gazette* of April 10th announces that Surgeon G. T. S. SICHEL, F.R.C.S., has been allowed to withdraw from the service with a gratuity. He was appointed Surgeon November 14th, 1894.

ARMY MEDICAL SERVICE.

DEPUTY-SURGEON-GENERAL GEORGE BANKES FLOYER ARDEN has died suddenly at sea, on board the ship *Zweena*, on his return from Madeira. He joined the department as Assistant-Surgeon, June 9th, 1854; became Surgeon, March 9th, 1866; and retired from the service with the honorary rank of Deputy-Surgeon-General, July 8th, 1879. He was with the 12th Regiment in the New Zealand war from July, 1863, to June, 1866, and had received the medal granted for the campaign.

VOLUNTEER INFANTRY BRIGADE BEARER COMPANIES.

The following announcement is substituted for that which appeared in the *London Gazette* of March 27th: S. H. House, M.B., to be Lieutenant in the Liverpool Company, March 28th.

Mr. Arthur T. Sissons, M.B., to be Lieutenant in the Yorkshire Company, April 4th.

SOUTH AFRICAN CONSTABULARY.

A correspondent who wishes to get a medical appointment in the South African Constabulary is recommended to apply to the Agent-General of the Cape Government in London, who would doubtless inform him as to the steps to be taken in making application for such appointment.

CONDEMNATION OF A MILITARY HOSPITAL.

According to the *Pall Mall Gazette* the station hospital in Rochester Row, which has been used for very many years, came under survey during the present week, and was promptly condemned as being insanitary, dilapidated, and unfit for the reception and treatment of sick. It will be vacated at once, and pending the completion of the new hospital, which is being erected on a portion of the site of the former Millbank prison, in Westminster, all cases from the London garrison will be sent to the Herbert Hospital at Woolwich.

MEDICO-LEGAL AND MEDICO-ETHICAL.

THE LONDON COUNTY COUNCIL AND SPECIALLY-SKILLED PATHOLOGISTS.

Guy's Hospital, S.E.,
April 15th, 1903.

Sir,—I should be much obliged if you would publish the enclosed letter from the London County Council, which has been sent to all the important London hospitals, and the reply which has been forwarded from the Medical and Surgical Staff of the above hospital.

Yours truly,
J. H. Bryant,
Honorary Secretary, Medical Committee.

To the Editor of the British Medical Journal.

London County Council,
County Hall, Spring Gardens, S.W.,
March 16th, 1903.

Sir,—The Council considers it desirable that *post-mortem* examinations in inquest cases of a special nature should be entrusted to specially-skilled pathologists.

I have been directed to bring the matter to the notice of the authorities of Guy's Hospital, and to express the hope that they will kindly assist the Council in the matter by suggesting, with a view to a selection being made, the names of well-qualified pathologists, with experience of a medico-legal nature, who are attached to Guy's Hospital, and who would be prepared if called upon by any of the London coroners to make *post-mortem* examinations, and to give evidence in special inquest cases. The inclusive fee would be £2 2s.

May I ask you to kindly place this letter before the authorities of the hospital at the earliest opportunity?

I am, Sir,
Your obedient servant,
(Signed) G. L. Gomme,
Clerk of the Council.

To the Secretary,
Guy's Hospital.

Medical Committee,
Guy's Hospital,
April 3rd, 1903.

Sir,—With regard to your letter dated March 16th, 1903, which was referred by the Superintendent of Guy's Hospital to the Medical and Surgical Staff, I have been requested to make the following communications:

1. That the Medical and Surgical Staff of Guy's Hospital approve of the suggestion of the County Council to provide specially-skilled pathologists to undertake *post-mortem* examinations in inquest cases of a special nature.

2. That they are, however, strongly impressed by the fact that in many cases a safe conclusion as to the cause of death cannot be arrived at from the conditions found *post mortem* alone, and that medical evidence as to the preceding illness is then absolutely essential to a right judgement and should be obtained whenever possible.

3. That it is also obvious that in cases of sudden death or persons found dead the attendance at the *post-mortem* examination and the evidence at the inquest of the medical man who first sees the corpse may be desirable.

4. That while very willing to afford assistance in the furtherance of the objects of the Council they are of opinion that it is impossible to secure the services of pathologists of the required standard for the fee of two guineas.

I am, Sir,
Yours truly,
J. H. Bryant,
Honorary Secretary to the Medical Committee,
Guy's Hospital.

G. L. Gomme, Esq.,
The Clerk of the County Council.

ADVERTISING BY CARD.

M.B.—Our correspondent encloses the advertising card of a dispensary and surgery at 210, Derby Street, Bolton. It states that there is "a resident physician and surgeon," but Churchill's *Directory* for the present year does not give the name of any medical man as residing at that address. If a registered practitioner is seeing patients at this dispensary, we think the matter might properly be brought under the notice of the General Medical Council.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

GRIEVANCES OF POOR-LAW MEDICAL OFFICERS IN HIGHLANDS OF SCOTLAND.

We have received further communications with reference to the publication in the British Medical Journal of the anonymous circular with regard to the dismissal of parish medical officers in the Highland crofting counties which was referred to in the Journal of March 28th, and which we understand has been extensively circulated. We cannot depart from our rule not to take notice of anonymous contributions. We would suggest that the anonymous contribution referred to be submitted to the Society of Scottish Poor-law Medical Officers, and, if approved of by this society, that it be issued with their imprimatur. The return showing the number of medical officers dismissed by parish councils in each crofting county during the seven years 1895 to 1901 was published with some comment in the Journal of September 27th, 1902.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,388 births and 4,510 deaths were registered during the week ending Saturday last, April 11th. The annual rate of mortality in these towns, which had been 17.0, 16.2, and 15.8 per 1,000 in the three preceding weeks, further declined last week to 15.6 per 1,000. The rates in the several towns ranged from 8.0 in Hornsey, 8.2 in Handsworth, 8.7 in Grimsby, 8.9 in Smethwick, 9.4 in Willesden, 9.5 in Southampton, 10.1 in Burton-on-Trent, and 10.4 in East Ham, to 19.7 in Bootle, 19.8 in Middlesbrough, 20.3 in Rotherham, 20.7 in Blackburn, 20.8 in Tynemouth, 20.9 in Rhondda, 22.9 in Swansea, and 24.3 in Wigan. In London the rate of mortality was 15.2 per 1,000, while it averaged 15.8 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.6 per 1,000; in London this death-rate was equal to 1.5 per 1,000, while among the seventy-five other large towns it ranged upwards to 3.0 in Great Yarmouth and in Tynemouth, 3.9 in West Bromwich, 4.1 in Oldham, 4.2 in Wigan, 4.7 in Burnley, 4.9 in Swansea, 5.2 in Tottenham, 5.7 in Rhondda, and 6.4 in Northampton. Measles caused a death-rate of 1.1 in Manchester, 1.3 in Hornsey, 1.4 in Devonport, 1.5 in West Ham, 1.6 in Wolverhampton, 1.7 in Northampton, 1.9 in Leyton, 2.4 in West Bromwich, 2.5 in Wigan, and 3.3 in Tottenham and in Swansea: scarlet fever of 1.7 in Northampton and 2.6 in Burnley; diphtheria of 1.2 in Northampton, 1.2 in Rhondda, and 1.6 in Swansea; whooping cough of 1.1 in West Ham, 1.2 in Willesden and in Northampton, 1.3 in Derby and in Rhondda, 1.5 in Croydon, 1.8 in Rotherham, 1.9 in Tottenham and in Oldham, and 2.0 in Tynemouth; "fever" of 2.2 in Rhondda; and diarrhoea of 1.1 in Oldham. Two fatal cases of small-pox were registered last week in Liverpool, and 1 each in Croydon, Bristol, Manchester, Blackburn, Bradford, and Leeds, but not one in any other of the seventy-six large towns. The Metropolitan Asylums Hospitals contained 15 small-pox patients on Saturday last, April 11th, against numbers rising from 5 to 13 on the six preceding Saturdays; 5 new cases were admitted during the week, against 2, 5, and 3 in the three preceding weeks. The number of scarlet fever cases under treatment in these hospitals and in the London Fever Hospital, which had declined from 1,798 to 1,735 at the end of the four preceding weeks, had further fallen to 1,664 at the end of last week; 158 new cases were admitted during the week, against 220, 213, and 205 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, April 11th, 942 births and 578 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 20.1, 18.0, and 18.0 per 1,000 in the three preceding weeks, further declined last week to 17.6 per 1,000, but was 2.0 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scotch towns the death-rates ranged from 14.9 in Aberdeen and 15.0 in Leith to 20.5 in Edinburgh and 27.9 in Perth. The death-rate from the principal infectious diseases averaged 2.0 per 1,000 in these towns, the highest rates being recorded in Paisley and Greenock. The 256 deaths registered in Glasgow included 3 from measles, 2 from diphtheria, 12 from whooping-cough, 3 from "fever," and 5 from diarrhoea. Six fatal cases of measles and 7 of whooping-cough were recorded in Edinburgh; 2 of "fever" and 2 of diarrhoea in Dundee; 5 of measles in Aberdeen; 2 of whooping-cough in Paisley; and 3 of whooping-cough and 2 of "fever" in Greenock.

WANTED: ENGLISH OR SCOTCH DOCTORS FOR IRISH DISPENSARIES.

For the information of any English or Scotch doctors who might think of applying for one of the vacant Irish dispensaries, we publish the following report of the Castlerea guardians' proceedings which we take from the *Irish Times* of April 18th:

"At the weekly meeting of the Castlerea Board of Guardians, Mr. John Fitzgibbon presiding, Mr. Berne proposed, in accordance with notice of motion, that Dr. O'Donoghue's salary as medical officer of Castleplunket Dispensary District be increased by £10. Mr. Raftery: Withdraw that resolution. Mr. Berne: Why not give the man an increase when it is due to him? Mr. Raftery: Dr. O'Donoghue was the man who certified for Woulfe Flanagan (Lord De Freyne's agent) that a man was fit to be evicted who died a few days afterwards. Mr. P. Conry, County Councillor: As Nationalists we could have no sympathy with Dr. O'Donoghue. Mr. Raftery: It is the feeling of the Board he should get no increase. The increase was refused."

Comment would be superfluous!

MEDICAL NEWS.

The Natal Leper Institution is to be removed from the Durban Bluff to Zululand.

The Fourteenth Universal Cookery and Food Exhibition will be opened at the Albert Hall on Tuesday, April 21st, by Viscountess Wolseley.

An order against spitting on the pavements of streets has been issued by the health authorities of the District of Columbia. A law already in force prohibits spitting in street cars, public vehicles, and public places.

The City Council of Wilmington, Delaware, has passed an ordinance forbidding the sale of opium or cocaine except on the prescriptions of medical practitioners. The habit of using these drugs is said to be spreading, particularly among young men and boys.

Dr. E. Symes Thompson, Gresham Professor of Medicine, will deliver a course of four lectures on Digestion in continuation of his last course in Gresham College, E.C., on April 21st, 22nd, 23rd, and 24th, at 6 p.m. on each day.

Volunteer Medical Association.—The annual dinner of the Yeomanry and Volunteer medical officers will take place at the Hotel Cecil, London, on April 21st next, at 7.30 p.m. Major-General Sir A. E. Turner, K.C.B., R.A., who will take the chair, will be supported by Surgeon-General Sir William Taylor, K.C.B., Director-General A.M.S., and other distinguished guests. Tickets (10s. 6d. each) may be had from Lieutenant E. C. Montgomery-Smith, 36, Abbey Road, London, N.W.

Canadian Medical Association.—The Canadian Medical Association will hold its thirty-sixth annual meeting in the City of London, Ontario, on August 25th, 26th, and 27th, under the presidency of Dr. Walter H. Moorhouse, of Toronto. Dr. James Stewart, of Montreal, will deliver the address in medicine; Dr. Matthew D. Mann, of Buffalo, has been asked to deliver the address in gynaecology; and Dr. Alexander Hugh Ferguson, of Chicago, the address in surgery. The President has appointed Dr. R. W. Powell, Dr. T. G. Roddick, M.P., and Dr. E. P. Lachapelle, a special Committee in regard to the establishment of a proposed Dominion Health Bureau. This Committee recently waited on Sir Wilfred Laurier at Ottawa, with the result that the Premier has promised the proposal consideration.

Society for Relief of Widows and Orphans of Medical Men.—A Quarterly Court of the Directors of the Society was held on Wednesday, April 8th, Mr. Christopher Heath, President, being in the chair. Two new members were elected; the death of a member and the resignation of two were reported. The death of a widow, aged 87, who had been in receipt of grants of the annual value of £62 since April, 1887, was announced. There were no fresh applications for grants. It was resolved to distribute at the next Court £1,251 among the fifty-five widows, thirteen orphans, and the four recipients from the Copeland Fund, who had applied for the renewal of their grants. The expenses of the quarter were £56 19s. The following gentlemen were nominated for election at the annual general meeting to fill the vacancies among the officers of the Society: As Vice-Presidents—Mr. Couper, Dr. Rigden, and Mr. Laurence Read. As Directors—Dr. Brodie, Mr. Richards, Dr. Adams, Mr. Mahoney, Mr. H. Rogers, Mr. Smale, Dr. Champneys, Dr. Younger, and Dr. Chambers. The annual general meeting of the Society was fixed to be held on Wednesday, May 20th, at 5 p.m., at 11, Chandos Street, W.

Cardiff Infirmary.—On April 8th General H. H. Lee, Chairman of the Cardiff Infirmary, read a letter which had been received by Colonel Bruce Vaughan from a lady who did not wish that her name should be made public at present. She stated that after carefully considering the matter which had been placed before her by Colonel Bruce Vaughan she was prepared to send a cheque for £1,000 for the purpose of building the proposed pavilion for the treatment of lupus and other patients of the Cardiff Infirmary. She added that she was informed that many cases of lupus and rodent ulcers are radically cured by the treatment which will be afforded in these rooms, and, where this cannot be, much freedom from pain is given by the application of the *x* rays and Finsen light. She felt it a duty and a privilege to provide these buildings, and she trusted that others who could afford it would assist the Board of Management by making it possible to carry out the other much-needed improvements and additions to the hospital, which was doing such excellent work. The offer was gratefully accepted, and a hearty vote of thanks was accorded the donor.

Obstetrical Society of London.—A discussion will take place at the Obstetrical Society of London, 20, Hanover Square, W., on Wednesday, June 3rd, at 8 p.m., on Chorion-epithelioma (Deciduoma Malignum). The discussion will be opened by a paper and an epidiascope demonstration by Dr. J. Hammond Teacher, of Glasgow. Specimens of the growth, with microscopical sections, will be exhibited at 7.30 p.m. before the meeting. The honorary secretaries will be glad to hear from those who have specimens to show or who wish to take part in the discussion.

MEDICAL VACANCIES.

BANGOR: CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House-Surgeon. Salary, £80, increasing to £100 per annum, with board, washing, and lodging. Applications to the Secretary by May 5th.

BARNSTAPLE: NORTH DEVON INFIRMARY.—House Surgeon. Salary, £80 per annum, with board, residence, and washing. Applications to the Secretary.

BATH: ROYAL MINERAL WATER HOSPITAL.—Resident Medical Officer; unmarried. Salary, £100 per annum, with board and apartments. Applications to the Secretary by April 27th.

BRIGHTON, HOVE, AND PRESTON DISPENSARY.—House Surgeon. Salary £160 per annum (with £5 extra to provide locum tenens during holiday), with furnished rooms, washing, etc. Applications to the Hon. Secretary, Queen's Road, Brighton, by April 20th.

CHARING CROSS HOSPITAL.—Assistant Physician; must be F. or M.R.C.P.Lond. Applications to the Secretary by May 4th.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—(1) Ophthalmic Surgeon, must be F.R.C.S.Eng. (2) Dental Surgeon. Applications to the Secretary by May 9th.

FARNBOROUGH URBAN DISTRICT COUNCIL.—Medical Officer of Health. Salary, £60 per annum. Applications, endorsed "Medical Officer of Health," to be sent to the Clerk to the Council, Town Hall, Farnborough, by April 20th.

HEMEL HEMPSTEAD: WEST HERTS INFIRMARY.—House Surgeon. Salary £100 per annum, with furnished rooms, board, and washing. Applications to the Hon. Secretary by May 1st.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Surgeon; unmarried. Appointment for six months. Salary £30, washing allowance £2 10s., with board and residence. Applications, on forms provided, to be sent to the Secretary by April 28th.

LEEDS UNION.—Assistant Medical Officer for the Workhouse Schools and Infirmary; unmarried, and not above 35 years of age. Salary, £130 per annum, rising to £150, with board, washing, apartments, and attendance. Applications to the Clerk, Poor-law Offices, South Parade, Leeds, by May 1st.

LEICESTER INFIRMARY.—House-Physician. Salary, £100 per annum, with board, apartments, and washing. Applications to the Secretary, 24, Friar Lane, Leicester, by April 25th.

LIVERPOOL INFECTIOUS DISEASES HOSPITAL.—Assistant Resident Medical Officer. Salary, £120 per annum with board, washing, and lodging. Applications, endorsed "Assistant Resident Medical Officer," to be addressed to the Chairman of the Port Sanitary and Hospital Committee under cover to the Town Clerk, Municipal Offices Liverpool, by April 27th.

MACCLESFIELD: CHESHIRE COUNTY ASYLUM.—Junior Assistant Medical Officer; unmarried. Salary, £140, rising to £160, per annum, with board, furnished apartments, and attendance. Applications to the Medical Superintendent.

MANCHESTER: CHORLTON-UPON-MEDLOCK DISPENSARY.—Resident House-Surgeon; unmarried. Salary, £120 per annum, with furnished rooms and attendance. Applications to the Hon. Secretary by April 30th.

MANCHESTER SOUTHERN AND MATERNITY HOSPITAL.—Resident House-Surgeon. Honorarium at the rate of £50 per annum, with board. Applications to Mr. G. W. Fox, 53, Princess Street, Manchester, by April 23rd.

MARGARET STREET HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Physician. Applications to the Secretary, 26, Margaret Street, Cavendish Square, W., by April 25th.

MARGATE: ROYAL SEA-BATHING HOSPITAL.—Resident-Surgeon, to act as Junior for six months and then as Senior for a like period. Salary at the rate of £80 and £120 per annum respectively, with board and residence. Applications to the Secretary, 30, Charing Cross, S.W., by April 23rd.

MOUNT VERNON HOSPITAL FOR CONSUMPTION, Hampstead.—Junior Resident Medical Officer. Honorarium, £60. Applications to the Secretary at the offices, Fitzroy Square, W., by April 30th.

NEWCASTLE UPON-TYNE DISPENSARY.—Resident Medical Officer. Salary, £250 for first year and £275 subsequent years, with furnished residence. Applications, on forms provided, to be sent to the Honorary Secretary, Mr. Joseph Carr, 41, Mosley Street, Newcastle-upon-Tyne, by April 22nd.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum, with board, residence, and washing. Applications to the Secretary by April 28th.

SARAWAK: STATE OF SARAWAK MEDICAL DEPARTMENT.—Medical Officer; unmarried, and not more than 28 years of age. Salary, 300 dols. a month, and free unfurnished quarters. Applications to the Borneo Company, Ltd., Sarawak Government Agents, 28, Fenchurch Street, London, E.C., by July 31st.

SOUTHPORT INFIRMARY.—Resident Junior House and Visiting Surgeon. Appointmen for six months, but renewable, salary commencing at the rate of £70 per annum, with residence, board, and washing. Applications to the Secretary, 24, King Street, Southport, by April 23rd.

TAUNTON: TAUNTON AND SOMERSET HOSPITAL.—Resident Assistant House-Surgeon. Appointmen for six months. Salary at the rate of £50 per annum, with board, lodging, and laundry. Applications to the Hon. Secretary by April 20th.

WESTMINSTER GENERAL DISPENSARY.—Honorary Dental Surgeon. Applications to the Secretary, 9, Gerrard Street, Soho, W., by April 28th.

MEDICAL APPOINTMENTS.

Angus, Charles, M.B., C.M.Aberd., appointed Medical Superintendent of the Kingseat Lunatic Asylum, Aberdeenshire.

Ashton, George, M.B., Ch.B.Vict., M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant Surgical Officer to the Manchester Royal Infirmary.

Baker, F. R., M.R.C.S., L.R.C.P.Lond., appointed District Medical Officer of the Brighton Union.

Beaton, W. L., M.B., Ch.B.Aberd., appointed Senior House-Surgeon to the West Ham and East London Hospital, E.

Bonis, F. W., M.D., B.Ch.Dub., appointed Assistant Medical Officer of Health to the Bury Town Council.

Campbell, W. S., M.B., C.M.Edin., appointed District Medical Officer of the Tynemouth Union.

Cooper, K. D., L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg., appointed Resident Assistant Medical Officer of the Bradford Union Workhouse.

Cooper, William, M.D., appointed Medical Officer to Belhelvie Parish Council, *vice* James Crevie, M.B., C.M., deceased.

Corbyn, A. G., M.B.Syd., appointed Medical Superintendent to the Sydney Hospital, New South Wales, *vice* C. V. Bowker, M.B.Syd., resigned.

Dally, J. F., Halls, M.A., M.B., B.C.Cantab., L.R.C.P.Lond., M.R.C.S.Eng., appointed Assistant Resident Medical Officer to the Royal National Hospital for Consumption, Ventnor.

Darbyshire, D. E., M.B., Ch.B.Vict., appointed Health Officer at Peppermint Grove, West Australia.

Davies, Chas. Aur., M.D., B.S.Vict.Univ., L.S.A., appointed Admiralty Surgeon and Agent for Sick and Wounded Seamen and Marines at Ramsey, Isle of Man.

FORSTER, R. C. H., M.B.Syd., appointed Government Medical Officer and Vaccinator at Narrandine, New South Wales, *vice* G. H. Rowland, resigned.

FOSTER, E. C., M.R.C.S., L.R.C.P., appointed Junior House-Surgeon to the Radcliffe Infirmary, Oxford.

HACKNEY, G. H., M.R.C.S., L.R.C.P.Lond., appointed District and Workhouse Medical Officer of the Eltham Union.

HALL, C. H., M.D.Glasg., C.M., appointed Medical Officer of the Leavesden Schools of the Parish of St. Pancras.

HUTTON, J. A., M.D., B.S.Durh., appointed Medical Referee under the Workmen's Compensation Act for Scarborough, Whitby, and New Malton Courts of County Court Circuit No. 16.

JACKSON, Francis Willan, M.R.C.S., L.R.C.P., appointed House Physician to the West London Hospital.

KELLY, R. Vandaleur, L.R.C.P. & S.Edin., C.B., appointed Medical Officer to the Trial Bay Prison, New South Wales.

KNIGHT, Wilfred, M.B., L.R.C.P., appointed Junior House-Surgeon to the West Ham and East London Hospital.

MARTIN, A. A., M.D., B.S.Lond., appointed District Medical Officer of the Eastbourne Union.

MIDELTON, W. J., L.R.C.P.Lond., M.R.C.S.Eng., appointed District Medical Officer of the Christchurch Union.

PEEN, L., M.R.C.S., L.R.C.P.Lond., appointed Assistant Medical Officer of the Wandsworth and Clapham Union Infirmary.

SANKEY, R. H., M.R.C.S., L.R.C.P., appointed House-Surgeon to the Radcliffe Infirmary, Oxford.

SHARPE, Margaret, L.R.C.P., L.R.C.S.Edin., appointed Assistant House-Surgeon to the Middlesbrough Infirmary.

SIMPSON, C., M.B., C.M.Aberd., appointed District and Workhouse Medical Officer of the Towcester Union.

SPAIGHT, H. W., L.R.C.P., L.R.C.S.Irel., appointed District Medical Officer of the East Retford Union.

TAUNTON, E., M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant Medical Officer of the Whitechapel Union.

WALKER, Ernest T. Kent, M.B., C.M.Glasg., appointed Assistant Medical Officer to the Warneford Asylum, Oxford.

WALKER, J. D., M.B., C.M.Edin., appointed Medical Officer of Health to the Shaftesbury Town Council.

WILKINS, A. G., M.B., Ch.B.Vict., appointed District Medical Officer of the West Ward Union.

YEATES, W., L.R.C.P., L.R.C.S.Edin., appointed District Medical Officer of the Gateshead Union.

DIARY FOR NEXT WEEK.

TUESDAY.

Pathological Society of London, 20, Hanover Square, W., 8.30 p.m.—Mr. Alexander Foulerton and Dr. Kellas: The Action on Bacteria of Electrical Currents (or Discharges) of High Potential and Rapid Frequency. Dr. Bulloch: The Influence of Salts on the Action of Immune Haemolysins. Dr. Lazarus-Barlow: A Further Note on a Case of Multiple Granulomata Caused by a Higher Mould Fungus. Dr. D'Este Emery: A Case of Streptothrix Infection. Professor A. E. Wright: Note on Serum Reaction of Tubercle.

Society for the Study of Inebriety, 11, Chandos Street, Cavendish Square, W., 4 p.m. The President, Dr. Harry Campbell, will deliver an address on the Study of Inebriety: A Retrospect and a Forecast. Mr. Arthur Sherwell will read a paper on Inebriety in Scotland.

WEDNESDAY.

Hunterian Society, London Institution, Finsbury Circus, E.C., 8.30 p.m.—Discussion on the Present Methods of Treating Tuberculosis.

British Balneological and Climatological Society, 20, Hanover Square, W., 8.30 p.m.—The adjourned discussion on the Dietetic Factor in Health-Resort Treatment will be reopened by Dr. Arthur P. Luff.

Dermatological Society of Great Britain and Ireland, 20, Hanover square, W., 4.30 p.m.

THURSDAY.

British Gynaecological Society, 20, Hanover Square, W., 8.0 p.m.—Specimens will be exhibited by Drs. Inglis Parsons, Macnaughton-Jones, B. Fenwick. Postponed discussion on Mr. Bishop's paper. Paper by Mr. F. B. Jessett, on Some Rare Complications Accompanying Ectopic Gestation.

Harveian Society of London, Stafford Rooms, Titchborne Street, Edgware Road, W., 8.30 p.m.—Clinical Evening.

FRIDAY.

Clinical Society of London, 20, Hanover Square, W., 8 p.m.—Clinical evening. Exhibition of clinical cases, followed by discussion. Patients will be in attendance from 8 p.m. to 9 p.m.

POST-GRADUATE COURSES AND LECTURES.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C. Demonstrations will be given at 4 p.m. as follows:—Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, throat. Lectures will also be given at 5.15 p.m. as follows: Monday, On Blood Coagulability and its Relation to Haemorrhage and Thrombosis; Tuesday, Heart Disease in Children; Wednesday, On States of Unconsciousness; Thursday, The Anatomy of Common Ailments of the Liver, and their Surgical Treatment; Friday, Immunity.

North-East London Post-Graduate College, Tottenham Hospital, N., Thursday, 4 p.m.—Lecture on the Knee-Jerk and Plantar Reflex in Diagnosis.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

ALFORD.—On February 28th, at Stafford Lodge, Weston-super-Mare, the wife of H. T. Marmaduke Alford, L.R.C.P.Lond., M.R.C.S.Eng., of a daughter.

ALLFREY.—On April 5th, at 66, Lord Street, Southport, the wife of Frederic H. Allfrey, M.B., B.C.Cantab., of a son.

COVENTON.—On April 1st, at 111, Woodstock Road, Oxford, the wife of Chas. A. Coventon, L.R.C.P., M.R.C.S., of a son.

MARRIAGES.

COLMAN—MACKIE.—On April 15th, at St. Mary's, Broughty Ferry, N.B., by the Rev. George Mackness, D.D., Horace Crakanthorp Colman, M.D.Edin., Broughty Ferry, to Nora, second daughter of David Mackie, St. Katharine's, Broughty Ferry.

HASLIP—LEINKAUF.—On the 2nd April, 1903, at the Protestant Church, Vienna, by the Rev. Dr. Von Zimmerman, assisted by the Rev. Prof. Heckler, of the English Embassy, George Ernest Haslip, M.D., of 6, Northumberland Avenue, W.C., son of the late James Haslip, of Gravesend, to Anna, daughter of the late Moritz Leinkauf, of Vienna, General Secretary of the Exchange of Agriculture, Counsellor of the Government and Commerce.

DEATHS.

CHAPMAN.—On April 5th, Charles William Chapman, M.B., of Green Mount, 619, Leeds Road, Bradford, aged 35 years. Interred at Bodelwyddan Church, North Wales.

FORSYTH.—At Eyemouth on Saturday, April 11th, suddenly, after a few days' illness, John Glen Forsyth, M.B., C.M., Assistant Medical Officer, West Riding Asylum, Wakefield, the younger son of Dr. James Forsyth, Eyemouth.

PHILLIPS.—On April 14th, 1903, at Bank House, Cardigan, James Methlina Phillips, M.D., C.M., M.R.C.S., L.S.A., in the 65th year of his age.

PRIESTLEY.—On March 31st, at his residence, Lee-on-the-Solent, Hants, of blood poisoning, James Priestley, B.A., M.D., D.P.H. (Roy. Coll. of Phys. and Surg., London), youngest son of the late James Priestley, of Saintfield, co. Down.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which the special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

M.R.C.S. would be obliged for information as to the treatment of trichorrhexis nodosa, of which he can find no mention in the literature on the subject. The patient is a lady, aged 28.

CHOLESTERINE IN URINE.

DR. ERNEST F. NEVE (Mission Hospital, Kashmir) writes: Can any reader throw any light on the significance of cholesterine in urine? It appears to occur under varying conditions. Recently I met with a case in which a glittering film formed on the surface as soon as the urine cooled down. There was also glycosuria, and yet the mouth was unusually moist. There was no leucosin or tyrosin. In this case it seems probable that the pancreas may be at fault. I have, however, found cholesterine in the urine of patients in whom there was no evidence of organic disease; but it has been usually associated with some digestive disorder. I have been unable to find any reference to the condition in books.

ANSWERS.

DR. M. N. GANDEVIA (Ceylon).—So far as we are aware none of the medical licensing corporations possess the power of granting the title of "Doctor."

SOUTH AFRICA.—Full information as to the appointment of medical officers in the English prison service will be found in the Educational Number of the BRITISH MEDICAL JOURNAL, published August 23rd, 1902, page 563.

DR. F. W. FORBES ROSS (Gower Street, W.) writes: If "M.D.Cantab.", who asks in the BRITISH MEDICAL JOURNAL of April 4th for suggestions as to a couch and chair for his consulting room, will purchase a Harvard chair, which can be obtained from Messrs. Walsh, Great Portland Street, London, W., he will have found that which he is in search of. I have had one for twelve years, and have never regretted the outlay.

TREATMENT OF OBSTINATE CONSTIPATION.

DR. A. CORDES, M.R.C.P.Lond. (Geneva) writes: Owing to an absence from town I read to-day only (April 13th) the BRITISH MEDICAL JOURNAL of March 28th. At page 771 "N. H. B." asks for a suggestion in obstinate constipation. In a similar case I obtained regular and normal evacuations by giving the young patient hydrochloric acid (French *Codex*), 8 to 10 drops, twice a day, directly after meals.

SERUM INJECTIONS IN MIXED INFECTION.

S. J. R. writes: In reply to "Sanatorium's" question on the use of anti-streptococcus serum in cases of mixed infection, I may cite my experience of one case in which it was used. The patient was a male aged 24 years, in whose sputum tubercle bacilli were present in small numbers. The physical signs present were those of consolidation of the apex of the left lung. With change of air, cod-liver oil, and a generous diet, his condition improved. He gained weight, and the crepitations present at the left apex became less marked. Unfortunately he contracted follicular tonsillitis, from which I obtained a pure streptococcus culture. His pulmonary condition was aggravated, his temperature kept high, sputum increased in quantity, and the physical signs of a double pneumonia supervened. I examined his sputum, and discovered tubercle bacilli in about the same numerical strength as before, and streptococci in large numbers. I gave him four injections of 10 c.cm. of anti-streptococcus serum; his temperature fell, his expectoration became less copious, the physical signs of pneumonia gradually cleared up, and at the end of eight weeks he was in the same condition as he was previous to the attack. Since treating this case I have tried the effect of anti-streptococcus serum in cases of double infection in diphtheria where large numbers of streptococci were present, in which the exudate was very offensive, and fever very high. The results have been most satisfactory. The results I have found have been reduction of temperature, offensiveness of exudate lessened, general improvement of the patient's condition. I use the antidiphtheriall serum after two injections of anti-streptococcus serum. Finally, I have used anti-streptococcus serum in cases of streptococcus and staphylococcus infection with marked benefit. My conclusion is that in any case in which streptococci are present in appreciable number no harm can arise from tentative injections of anti-streptococcus serum, and in all probability marked benefit will result from such injections.

DISAPPEARANCE OF AN APPARENTLY MALIGNANT VAGINAL GROWTH.

MR. ROGER WILLIAMS, F.R.C.S. (Clifton) writes: In answer to Dr. Prickett's query in the BRITISH MEDICAL JOURNAL of April 4th, p. 788, as to whether there are morbid conditions in the vagina likely to be mistaken for cancer, I should like to point out that lesions of this kind certainly do

occur in this part of the body as elsewhere; and in my opinion the subject is worthy of far more attention than it has hitherto received, especially in view of the numerous reputed cures of cancer by various legitimate and quack remedies, of which we are now hearing so much. Owing mainly to this cause, no new specific for cancer has ever failed to find its justification in a plentiful supply of "cures." The truth is, until we have learnt to discriminate from cancer, far better than we now do, the various morbid conditions that closely simulate it, we shall always find great difficulty in estimating the true value of new therapeutic agents alleged to be curative. Now the chief morbid conditions which simulate cancer may be classed as follows: (1) Certain "chronic inflammatory" affections: (2) various tuberculous and syphilitic lesions; and (3) mycotic infections (actinomycosis, blastomycosis, etc.). All of these may be exemplified in the vagina: and those of them are of far commoner occurrence than vaginal cancer, which is a rare disease.

In this connexion the following case by Chamberlain is of interest: A woman, aged 55, who had for some time been subject to dysuria and leucorrhœa with occasional sanious discharge, was sent to him by a practitioner as being affected with utero-vaginal cancer. On examination the vaginal outlet was found blocked by a spongy mass of papillary vegetations. Most of these grew from a fairly circumscribed area of the anterior vaginal walls. The base of this mass was ligatured, and a lemon-sized conglomerate of vegetation was removed. The uterus was then found to be somewhat enlarged and fixed. Examination per speculum showed that the portio was covered with similar vegetations; but there were no signs of any within the cervical canal. She soon recovered from the effects of the operation and was free from any return of the disease when last seen, shortly afterwards. There was no obvious cause for the malady. Microscopical examination of the growths removed showed that each vegetation consisted of vascular loops, included in a fibrous stroma containing leucomyomatous elements, and lined externally by laminated epidermoidal cells.

THERMAL DEATH POINT OF MICRO-ORGANISMS.

INQUIRER.—The degree of heat necessary to ensure the destruction of the most resistant forms of bacterial life—for example, the spores of the anthrax bacillus or those of bacillus mesentericus—varies not only with the kind of heat employed—whether hot air, current steam, or superheated steam—but also with the length of time the exposure to that heat is maintained. For example, such spores exposed to hot air at a temperature of 150° C. for a period of one hour are certainly destroyed, a like result being produced by exposure to 175° C. for a few minutes. Superheated steam under a pressure of one atmosphere (120° C.) will destroy all bacterial life exposed to its action for half-an-hour; but, on the other hand, exposure to current steam at 100° C. for a period of three hours has proved inefficient in the case of spores formed by some strains of B. mesentericus. Any good mercurial thermometer reading to 200° C., and graduated on the stem or on an ivory scale, is sufficient for estimating the temperature of the hot air or current steam employed in practical sterilization. In the case of superheated steam the thermometer is usually dispensed with, and the temperature deduced from the pressure as recorded by the manometer.

LETTERS, NOTES, Etc.

IS DESQUAMATION AFTER SCARLET FEVER A SOURCE OF CONTAGION?

DR. WILLIAM SOPER (Clapham Road, S.W.) writes: Some time since some children were returned from the Asylum Board Hospital, with incomplete desquamation after scarlatina, and the result in one family was that four of the inmates contracted the disease. The new idea, I am told, is that there is no infection during the desquamation stage, but only where throat or ear complications have arisen, and the basis of argument against non-contagion is that cultivations have been taken and results nil. I have and shall always carry out my idea that scarlet fever is an infectious disease during the desquamative stage. The last case that came under my notice was verified by Dr. Priestley, medical officer of health for Lambeth. This case underwent complete isolation until the desquamation was finished, and with the result that no other child contracted the disease.

THE ROENTGEN RAYS IN PSORIASIS.

DR. CHARLES J. S. DIGGES, M.R.C.S.Eng., M.R.C.P.I. (St. Louis, U.S.A.) writes to say that in his own case the use of *x* rays has been exceedingly successful in the cure of psoriasis. He has suffered from the disorder for thirty years, and was recommended to try the *x* rays by Dr. Hardaway, of St. Louis. The patches treated were situated on the left frontal and right mastoid regions, and, after eight or ten short exposures, completely healed without staining, the skin being left quite smooth.

"MATERNAL IMPRESSION."

DR. G. AINSLIE JOHNSTON, F.R.C.S.I., etc. (Ambleside) writes: A record of the following case of alleged "maternal impression" may be of interest. On April 7th, 1903, I attended Mrs. D., a 5-para. Delivery was normal and the baby healthy and perfectly formed in every respect, with the exception of the left hand and wrist, which were entirely absent, the arm terminating in a stump immediately below the lower end of the radius and ulna. The other children are all perfectly formed, and there is no history of any deformity in the family. The mother says that a few weeks before Christmas she fell while carrying a crockery bowl full of flour, and in the fall cut her left wrist somewhat severely against the side of the broken bowl: this she says gave her a very great fright, and her neighbours say that she frequently referred to this fall and the shock it had given her. There is now a slight mark or scar across the front of her left wrist, but it is very faint.

PIGS AND POULTICES.

IN an account of a kind of inquest recently held in Cork the *Cork Constitution* has endeavoured to destroy one of the most cherished mental pictures of our childhood's days. In these, kindness towards dumb animals was instilled into us by the description of the Irishman's treatment of his pig—if a pig with its ear piercing squeal can really be called a dumb animal. The latter was represented as invariably taking his meals with the family, and, if not helped before his master, at least served before his master's eldest son. We now read, however, of the workhouse herd at Cork being cruelly deprived of their rightful place at the master or matron's table, and fed instead on poultices collected from the hospitals. The seven pigs concerned appear to have been so disgusted either at the fare provided or the treatment meted out to them, that they elected to die quite suddenly. After this warning we hope that no reforming master of either workhouse or pigs will venture to interfere with our early beliefs or the proper diet of pigs. Persistence in effort is good, but, after all, when an attempt has been made to get some good out of a poultice by applying it outside a human body, it seems more desirable to consign it to the flames than to apply it to the inside of a pig, however high the price of pepsina porci may be.

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BOOKS, ETC., RECEIVED.

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The Epidemiological Society of London. Founded 1850. The Commemoration Volume, containing an account of the Foundation of the Society and of the Commemoration Dinner, together with an Index of the Papers read at its Meetings between 1835 and 1900. London: Shaw and Sons. 1902.

Transactions of the Epidemiological Society of London. New series. Vol. xxi. Session 1901-2. London: Shaw and Sons. 1902.

Reports of the Cambridge Anthropological Expedition to Torres Straits. Volume II. Physiology and Psychology. Part II. Cambridge: At the University Press. 1903. 7s net.

Food and Fashion: Some Thoughts on What we Eat and What we Wear. London: Humanitarian League. 1903. 2d.

The Castration of Cryptorchid Horses and the Ovariotomy of Troublesome Mares. By Fred T. G. Hobday, F.R.C.V.S. Edinburgh and London: W. and A. K. Johnston, Limited. 1903.

Procentische, chemische Zusammensetzung der Nahrungsmittel des Menschen. Graphisch dargestellt von Dr. Chr. Jürgensen. Zweite Auflage. Berlin: August Hirschwald. 1903. M.1.20.

The Post Magazine Almanack, the Insurance Directory, Reference Year Book, containing statistics and facts of ordinary life, industrial life, fire, and accident insurance. London: T. J. W. Buckley. 1903. 6d.

Muco-Membranous Entero-colitis. By M. de Langenhaxen, M.D. London: J. and A. Churchill. 1903. 3s. 6d.

Where Shall I Send My Patient? A Guide for Medical Practitioners, and Book of Reference to the Health Resorts and Institutions for Patients in Great Britain. Bournemouth: Association of Medical Men Receiving Resident Patients. 1903. 2s. 6d.

The Story of Life Assurance. By A. Arthur Reade Wilmslow. Manchester: A. A. Reade. 1903. 5s

Vom ärztlich-n Intelligenzblatt zür Münchener medizinischen Wochenshrift. Festrede gehalten von Medizinalrath Dr. Gottlieb Merkel. München: J. F. Lehmann. 1903.

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Das Gewebe und die Ursache der Krebsgeschwülste. Unter Berucksichtigung des Baues der einzeligen thierischen Organismen. Von Dr. Ludwig Feinberg. Berlin: August Hirschwald. 1903. M.10.

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An Address

ON THE

IMPORTANCE OF AN EARLY DIAGNOSIS OF CANCER OF THE STOMACH,

WITH A VIEW TO RADICAL TREATMENT, WITH REMARKS ON OPERATIVE RESULTS, IMMEDIATE AND REMOTE.

Delivered before the Leicester Medical Society,

By A. W. MAYO ROBSON, F.R.C.S.,
Consulting Surgeon to the Leeds General Infirmary; Vice-President of the Royal College of Surgeons of England.

It is not so long a time since patients with cancer of the stomach were from the first condemned as hopeless, and I can trace in my own mind very clearly the changes of views that have occurred in the prognosis and treatment of these very serious cases. In the Seventies, any one with carcinoma of the stomach was at once given up as hopeless, and only in 1879 was the first attempt made by Péan to remove a malignant pylorus, the first successful operation being performed by Billroth in 1881, when the operation was looked on with as much disfavour as was the first-attempted complete gastrectomy a few years ago by Connor in America, when his patient died on the table; yet Schlatter's patient a little later lived 14 months after complete gastrectomy, and I can point to a patient in complete and perfect health on whom I performed almost complete gastrectomy over two years ago.

Nor was the palliative operation of gastro-enterostomy much better thought of at first, for although Wolfler successfully performed the operation in 1881, his patient surviving for four months, yet the mortality of 65 71 per cent. in the years 1881 to 1885, of 47 per cent. in the period from 1886 to 1890, of 33 91 per cent. from 1891 to 1896, though showing a steadily decreasing death-rate, yet presented so doleful a picture as to deter medical men from recommending their patients to submit to operation. Even so recently as 1900, when I gave the Hunterian Lectures on the Surgery of the Stomach, of the 1,878 cases of gastro-enterostomy that I was able to collect from all sources the mortality was 36.4 per cent. But since that time the surgery of the stomach has made such rapid progress that I can now point to a long series of posterior gastro-enterostomies up to December, 1902, in simple diseases of the stomach, with a mortality of only 3.9 per cent., and in cancer of only 5 per cent.

Moreover the operation of partial gastrectomy in cancer is one that is attended with much more encouraging success immediate and remote than is generally recognized, as the after-histories of cases which I will relate, will show.

I am firmly convinced that many deaths are ascribed to cancer when the disease is inflammatory and perfectly curable by the operation of gastro enterostomy without removal of the tumour, and this I think I can prove from my own experience. Of the causes of cancer of the stomach we know absolutely nothing; it occurs both in abstainers from alcohol as well as in inebriates, in temperate eaters as well as in gourmands, in the well-nourished as in the spare, in vegetarians as in meat eaters, in men and women, though more frequently in the former, in the young and in the old, though chiefly at or after middle age, and in the people of all nations so far as we know; in fact it is difficult to find any class or condition exempt from the disease. I will, therefore, not spend time over discussing the etiology but pass on to the more practical subjects of diagnosis and treatment.

No one has done more than that distinguished physician, Professor Osler, of Baltimore, in advocating the early diagnosis of cancer in order that a radical operation may be performed at a time when there is hope of cure; and if only this truth can be impressed on the minds of those engaged in general practice, who usually see these cases at a time when diagnosis is doubtful and when perhaps the only symptom complained of is indigestion, and if in such doubtful cases a consultation is insisted on in order that the matter may be taken seriously at the earliest possible moment, then we shall find that much can be done for these otherwise hopeless cases in the way of relief or even cure, but when so little was possible, the early diagnosis was of little moment from a practical point of view, as whether treated with or without an exact diagnosis at the outset, death was the issue and usually within a few months of the disease being recognized as cancer.

Diagnosis.

Although cancer of the stomach may occur in early life, yet it usually comes on at or after middle age, from 40 to 60 being the most frequent age. Men are more frequently affected than women. Osler observed 126 in men to 24 in women. In the Leeds Infirmary the proportion was for ten years 36 males to 23 females. The usual clinical manifestations are loss of appetite and wasting, with loss of strength coming on in a patient otherwise well and with nothing to account for the dyspepsia. Two features are prominent—acuteness of course and abruptness of onset. Perhaps the friends first notice the change in the patient, who, from being active and well, becomes tired, listless, and anaemic without any symptom pointing to the stomach. Or the first symptom may be pain after food or flatulent distension and great discomfort, leading to limitation of the intake so as to save the after-effects. Vomiting may be entirely absent, and is frequently not seen until the outlet of the stomach is becoming narrowed or the cavity encroached on. If early, the vomit consists of food with mucus, later of altered blood in the shape of coffee-ground material, and at times, though more rarely than in ulcer, of pure blood. Loss of flesh is well marked, and may be the only symptom beyond loss of appetite and discomfort after food. Even loss of appetite may be absent at the beginning when loss of weight is already showing itself.

Pain is usually felt at the epigastrium, but, unlike ulcer, there is generally an absence of tenderness on pressure until the peritoneal coat becomes involved, when local peritonitis may give rise to tenderness.

Professor Osler's analysis of symptoms at onset gives pain as present in 48, dyspepsia in 46, vomiting in 21, of which 2 were vomiting of blood; anorexia in 4, dysphagia in 3, tumour in 1, jaundice in 1, while in 13 there were no symptoms at the outset.

The three most constant symptoms are pain, vomiting, and tumour.

In 86.6 per cent. pain is present.
In 85.3 per cent. vomiting is present.
In 76 6 per cent. tumour is present.

The pain varies from slight attacks to constant, severe, and disabling distress. It may be made worse by food or it may be continuous and not much influenced by diet.

My experience is that the nearer the pylorus the more severe the pain, this being apparently due to obstructed outlet, and in some cases to painful peristalsis. On several occasions I have found tumour to be the first evidence of the disease.

An examination of the stomach contents obtained after a test meal should not be neglected. While free HCl in good quantity is against a diagnosis of cancer, the absence of free HCl is decidedly in favour of it, as in 80 to 90 per cent. of cases of cancer of the stomach free HCl is absent, or if present it is in very small quantity. An excess of free HCl is decidedly in favour of ulcer, just as the presence of lactic acid is decidedly in favour of cancer. A microscopic examination of the stomach contents may show blood cells and portions of growth which are of course of the greatest importance, as though blood may be present in case of gastric ulcer, portions of growth and cancer cells are absolutely pathognomonic of cancer.

I would not advise under any circumstances forcible lavage and curettage as recommended by some authorities, in order to obtain material for microscopic examination.

The presence of the Oppier-Boas bacillus has been given importance by some authors, who speak of its being present in 90 per cent. of all cases of gastric cancer.

In many cases—Fenwick says in one-third—a rise of temperature at some period will be found, but in the greater number of my cases there was a low or even a subnormal temperature. Anaemia, resembling in appearance the pernicious form, is a striking feature of gastric cancer; it is dependent on absorption from the diseased stomach and from the growth, leading to blood destruction, and on the loss of blood from repeated small haemorrhages into the stomach.

Laache states that there is a notable diminution in the number of red corpuscles present in the blood. Fenwick says that the corpuscular richness seldom increases under treatment; but, at the same time, the number of red cells rarely falls below 1,500,000 per cubic millimetre. The former peculiarity serves to distinguish the disease from many other

forms of secondary anaemia, and the latter from the pernicious form, where, according to Henry, the cells always number less than 1,000,000 per cubic millimetre before death occurs. Leucocytosis usually occurs, especially if there is perigastritis or pyrexia, but its diagnostic importance is not great.

As an element of prognosis, Fenwick lays stress on the total disappearance from the saliva of potassium sulphocyanide. He says that he has never known a patient to live more than a month after the observance of the phenomenon.

Rommelaere believes that the elimination of less than 180 gr. of urea per diem by a patient who suffers from chronic indigestion is pathognomonic of cancer, but this is probably, though suspicious, not absolutely true; though it may be permissible to assume that where 450 gr. of urea are excreted, carcinoma does not exist. The presence of ascites and of oedema of the feet are seen in cases too advanced to merit consideration from a purely surgical point of view.

Physical Examination of the Patient.

Where the cardiac end of the stomach is involved there may be difficulty in deglutition, and in such cases a bougie may be arrested at the entrance to the stomach. Such a case I saw lately, and when I opened the abdomen to perform gastrostomy the cause was at once manifest, as the growth had invaded the cardiac orifice and lower end of the oesophagus. In this case the bougie afforded valuable help in diagnosis, as no tumour could be felt through the abdominal wall.

The patient has obtained great relief from gastrostomy, through which opening the whole of his nutriment is now taken.

According to some authorities a palpable tumour is discoverable in from 70 to 80 per cent. of all cases of cancer of the stomach. Inspection of the abdomen may show a perceptible tumour in the epigastrium or in the left or right hypochondrium, and if the patient is thin it is often easy to manipulate the tumour, and to ascertain its relation to the rest of the stomach and to neighbouring organs, especially as the recti are usually free from rigidity, a condition which is quite different in chronic ulcer. It is usually hard, nodular, and irregular, and often free from tenderness, except when peristalsis occurs, or where there is perigastritis. Peristalsis from left to right can often be seen when the tumour is at or near the pylorus, and on palpation the organ is felt to harden under the hand.

The tumour may be very movable, and may be capable of displacement down into the pelvis and upward under cover of the ribs; this, from a surgical point of view, being, of course, very favourable. Tumour of the pylorus due to chronic ulcer is generally fixed under cover of the liver, and cannot, as a rule, be well defined, especially if, as is often the case, the right rectus is rigid and resists pressure. Retraction and fixation of the navel is an important sign of advanced disease, the growth having involved the round ligament or the subperitoneal tissue near the umbilicus. Ascites, as shown by a thrill on flicking the abdomen in the flanks with the fingernail, and as evidenced by other well-known signs, is a very unfavourable symptom, as showing the disease is very advanced and probably diffuse.

The position of the growth in the stomach may be shown, as also the shape of the stomach, either by inflating the stomach through a tube or by giving the patient a teaspoonful of sodium carbonate dissolved in water; if there is free acid in the stomach it will decompose the sodium carbonate, and CO_2 will be evolved, but if there be no free acid in the stomach about 30 gr. of tartaric acid dissolved in water can be given and this will immediately cause the stomach to be distended and its outline and relation to the tumour will be made manifest. In cases of ulcer, the sodium carbonate dose alone is often sufficient; but in cancer, the absence of free acid usually necessitates the tartaric acid dose also, thus affording some help in diagnosis. The presence of enlarged veins on the surface of the abdomen indicating obstruction to the venous return, of enlarged glands in the groin, of nodules on the skin, of enlarged glands over the left clavicle (indicating diaphragmatic extension), or of other secondary signs of growth in the liver, bowels, or peritoneum must all be taken into account in considering the case from a surgical standpoint.

For the surgeon to be able to perform his best work, the disease should be recognized before a tumour is perceptible, though as can be shown, very successful operations may exceptionally be undertaken even when the tumour is visible through the abdominal wall. Of the tumours of the stomach that can be palpated, some of which may be visible—according to Fenwick, 81 per cent. are situated in the body of the organ, 71 per cent. at the pylorus, and only 55 per cent. at the cardiac end or fundus.

Nearly all tumours of the stomach move downwards on deep inspiration. The size and shape of the tumour may vary considerably, and the position, though usually above the umbilicus, may in pyloric growth be in the hypogastrium, though I have seen and operated on a cancer of the pylorus that formed a tumour in the left hypochondrium, and which on expiration disappeared under the left costal margin.

A small tumour of the pylorus, barely perceptible to palpation, may lead to enormous dilatation of the stomach, and in nearly all cases of cancer of the pylorus a stomach splash may be elicited. When the disease involves the middle of the stomach an hour-glass shape results, and the proximal cavity as a rule becomes considerably dilated.

The Question of Treatment.

This may be considered under two heads, medical and surgical. Medical treatment cannot cure, and can do very little even to prolong life; it therefore applies only to cases too advanced for surgical treatment or where operation is declined. It aims at nourishing the patient as much as possible, and at relieving pain or other symptoms as they arise.

Surgical treatment offers the only chance of relief and the only possible chance of cure, and in order that the best results may be attained, the physician and surgeon must act in concert, so that by a timely diagnosis, an operation may be undertaken at the earliest possible date. There is ample evidence to show that for some length of time cancer is a purely local disease; and, just as in the breast, the tongue, and the uterus, we can point to patients living comfortable and happy lives years after the removal of the disease, so in gastric cancer it is reasonable to assume, and in fact can now be proved by positive evidence, that a like result may be hoped for. Here, however, we are faced with the difficulty of a sufficiently early diagnosis being made, and it is not only necessary for us to appeal for an early, exhaustive, and persistent investigation into suspicious stomach cases, but that when the suspicions are becoming confirmed an early surgical consultation may be held, and, if needful, an exploratory operation carried out to complete the diagnosis. Whenever a patient at or after middle age complains somewhat suddenly of indefinite gastric uneasiness, pain, and vomiting, followed by progressive loss of weight and energy, and associated with anaemia, the possibility of cancer of the stomach should be recognized, and, in a suspected case, if no improvement takes place in a few weeks at most, an exploratory operation is more than justified. As Professor Osler says, the important aid of an exploratory operation should be more frequently advised.

Let us remember, also, that to prolong the investigation uselessly, and to wait until a tumour develops into a recognizable quantity, is to lose the favourable time for a radical operation; and although a clinical examination of the stomach contents and a general examination of the patient may give us strong grounds for suspicion, our diagnosis can only be rendered certain by a digital examination, which may be effected through a small incision that can, if needful, be made under cocaine anaesthesia with little if any risk.

At the time of exploration it will be generally advisable to have everything ready to follow up the exploratory procedure by whatever further operation may be called for. It may be discovered that the disease is manifestly not malignant, and that some curative operation can be done, as in a case on which I operated a month ago in which a Mr. S., just over 50 years of age, who had suffered from indigestion for several years, began to have severe pain about an hour after food, and to lose flesh and look ill during the six months before I saw him. A doubtful tumour could be recognized, and during the attacks of pain the stomach could be felt to harden under the hand. Free HCl was present after a test meal. The serious nature of his ailment was brought home to the patient by his inability to continue his business, and on the advice of Dr. McGregor Young and of Dr. Barrs, who saw him in consultation, I saw him and supported the opinion as to exploration. On operating, I found the swelling to be a greatly thickened pylorus forming a distinct tumour, and that about 1½ in. from the pylorus along the lesser curvature was another tumour, which, from the enlargement of the glands,

we suspected might be growth; but on opening the stomach it was found that the pyloric swelling was an enormously hypertrophied sphincter, and that the stomach tumour was thickening around a chronic ulcer. The latter was freely excised, the edges being brought together by continuous sutures. The stomach opening was closed and a posterior gastro-enterostomy was then performed. As the gall bladder was full of thickened mucus and gall stones it was at the same time emptied and drained. A smooth recovery has followed, much to the relief of the patient and his friends, who all suspected the disease to be cancer.

Or it may be discovered that the disease resembles malignancy both in its history and physical signs and in the form of the tumour, and is yet, if we may judge from results, apparently not malignant, as in the following cases, all of which were at the time of operation supposed to be suffering from cancer of the stomach and were extremely ill, but who, as the result of surgical treatment, are now in good health.

Case I.—Mr. A. was sent to me in September, 1902, from New Zealand with a three years' history of dyspepsia, with pain after food. Two years ago he began to vomit after meals. This relieved the pain, but recently the vomit had been grumous, and there had been extreme loss of flesh. When he arrived in England he was so extremely ill that he was sent to a surgical home in order that he might be fed by nutrient enemata and be got into better condition. On September 22nd, 1902, the abdomen was opened and a large tumour involving the pyloric end of the stomach and extending all along the lesser curvature was found. The tumour was hard and nodular, and the glands in the lesser omentum were extensively involved, so that it had every appearance of malignancy. A posterior gastro-enterostomy was performed, and though recovery was retarded by thrombosis in the femoral veins, yet he ultimately regained his health, and three months later had gained 2½ st. in weight, the greater part of it having been gained within the last three weeks. When he left the surgical home the tumour had entirely disappeared, and his health has since further improved and enabled him to return home.

Case II.—Mr. B., aged 39, was admitted to the Leeds Infirmary in December, 1901, on account of pain about two hours after food, with the passage of melaena and great loss of flesh. An indefinite tumour could be felt. On opening the abdomen on December 10th, 1901, a tumour was discovered involving the pylorus and the first and second part of the duodenum, which were thickened and infiltrated, forming a sausage-shaped tumour, very hard and nodular and adherent to the neighbouring parts, so that it was impossible to remove it. A posterior gastro-enterostomy was therefore performed, the operation being concluded under the idea that the patient was suffering from cancer. As events proved, this was clearly an error, for in January of this year he wrote to say that, although he had had two attacks of pain due to over-indulgence, he was very well and able to do his work, and that the stomach swelling had entirely disappeared.

Case III.—The patient, a man aged 45, gave a history of pain for two years about an hour after food, with great loss of flesh. For nine months he had vomited every day or every second day a large quantity of yeasty material, but no blood, though he was very anaemic. There were well-marked signs of dilatation of the stomach, with tenderness over the pylorus, and the presence of a tumour. Posterior gastro-enterostomy was performed on June 12th, 1900. On opening the abdomen, the pylorus was found to be much thickened and adherent, forming a hard nodular tumour having the appearance and feel of cancer. Through the centre of the mass a No. 10 catheter only could be passed over a roughened ulcerated surface. An uninterrupted recovery followed. Food was begun on the second day, and solids could be taken in the second week without pain. He rapidly gained flesh and strength, and is now well.

Case IV.—The patient, a man aged 48, who was seen with Dr. R., was supposed to be suffering from cancer too advanced for treatment, the patient being extremely feeble, and having lost from 2 to 3 st. in weight in six months. The presence of a tumour in the pyloric region, with well-marked dilatation of the stomach and profuse coffee-ground vomiting, rendered Dr. R.'s diagnosis extremely probable, though the history of pain from one and a half to two hours after food for three years, with other symptoms of pyloric ulcer, led me to hope that the disease might be simple. Operation was performed on May 30th, 1902. An extensive tumour at the pylorus, associated with stenosis and dilatation of the stomach, with perigastritis and adhesions, together with numerous discrete though much enlarged glands, led me to perform gastro-enterostomy. The patient rapidly put on weight, gained strength, and lost all his distressing symptoms. When he returned to report himself in three months, he was robust and well, and no trace could be found of the tumour or of the dilatation of the stomach. He is to-day in perfect health.

Case V.—The patient was a man, aged 31, who was seen with Dr. B. and Dr. W. He had had dyspepsia for seventeen years; this had been more severe during the last twenty months. Sixteen months previously vomiting began, and from the outset large quantities were ejected, but never contained blood. There was recurrence occasionally of similar attacks, which were always relieved by treatment. In December, 1897, the stomach reached to the pubes and visible peristalsis was present. Relief followed dieting and lavage until March, 1898, since which time the pain had been almost constant. The pain was not materially worse after food or relieved by vomiting. A loss of weight occurred from 10 st. to 8 st. 6½ lb. There was great feebleness. Gastro-enterostomy was performed on May 6th, 1898. A large irregular tumour was found at the pylorus and along the lesser curvature with extensive adhesions, but the glands, though large, were discrete. A good recovery was made, followed by relief of all symptoms. When the patient left the home on June 7th his weight was 8 st.; on August 17th, 1898, it was 9 st. 3 lb. The following is an extract from a letter from the patient dated February 12th, 1900: "My health continues perfect. I have not lost a day's work through illness since I recovered." He is in good health in 1903, five years after operation.

Now I would lay particular stress on this class of cases, for I think it serves to explain some misconception about cancer generally. It would be easy for any one, looking at the subject from a one-sided point of view, to raise a claim to having cured a number of cases of cancer of the stomach by gastro-enterostomy; but I do not for a moment believe that any of these cases were more than inflammatory tumours formed around chronic gastric ulcers; nevertheless, I have no doubt that they would have proved fatal just as certainly as if they had been cancer had no operation been done. This brings me to another interesting point, and that is the alleged increase of cancer, for I feel sure that many cases like those related above would have been certified as deaths from cancer of the stomach had no operation been done or no necropsy and microscopic investigation made, and I think we must take such cases into account before hastily deciding that this disease is on the increase.

The cases also illustrate another point, and that is, even though a tumour be present, and even though it be probably too large for removal, it may be quite worth while advocating an exploration, to be followed up by gastro-enterostomy if that be practicable, in the hope that the disease may prove to be wholly or partially inflammatory, which the physiological rest secured by gastro-enterostomy will either cure or materially relieve.

Now, to pass to the genuine cancer cases, what can we do for them when diagnosed at an early stage? This will depend (1) on the position of the growth, (2) on its extent, (3) on the presence of adhesions, and (4) on glandular invasion or secondary growths.

First, as to position. In irremovable growth at the cardiac end, if it involve the cardiac orifice and adjacent portion of the stomach, gastrostomy should be performed in order that starvation may be staved off. The view that gastrostomy is both a dangerous and useless operation is, I know, held by some surgeons as well as physicians, but I feel convinced that such views are mistaken ones. When these cases, either of cancer of the cardiac end of the stomach or of the oesophagus, were handed over to the surgeon in a moribund condition, the mortality of gastrostomy was, of course, terrible, and the short survival, even if successful from an operative point of view, made "the game not worth the candle," but when I myself can point to a series of gastrostomies performed since 1897 not only without any mortality but with comfort to all and great prolongation of life to some, I feel that I have good grounds for saying that the operation is well worth doing. I have not time this evening, nor is it necessary that I should describe the operation in detail, but I may say that it is quite a simple one, and if necessary can be performed under cocaine anaesthesia in a very short time. In several cases the patients have lived a year or more and have gained considerably in weight, even up to 2½ st., and have lost their pain and the distressing sense of starvation.

The next class of cases is that in which the diseases involves a great part or the whole of the stomach, the disease being irremovable and gastro-enterostomy impracticable, and in which any attempt at taking food brings on pain and vomiting, so that the patient must rapidly die in great distress; here a jejunostomy can be performed by a very simple and similar procedure to that of gastrostomy, and through a Jaques catheter sufficient food can be given to ward off starvation and relieve the pain caused by attempts at taking food by the mouth. This operation can be done through the small exploratory incision, and need involve very little longer time. It may prolong life for two or three months or longer, and make the end much easier and certainly less painful. I reported a case of jejunostomy in 1891 in which the patient lived three months; but the fact of my case of almost complete gastrectomy being well two years after operation shows that the passage of food direct into the small intestine may be conformable with very much prolonged life. Although the operation is rarely called for, it is one nevertheless which should be borne in mind, as in an appropriate case it may confer a great boon upon the patient, and render tolerable an otherwise comfortless existence.

The third class of cases to be considered is where the disease involves the pylorus and is producing obstruction to the passage onwards of the gastric contents, but where, on

account of the extreme feebleness of the patient or because of extensive adhesions, secondary growths, or involvement of glands, it is considered unwise to attempt pylorectomy or partial gastrectomy, though there is sufficient free stomach wall left to enable a gastro-enterostomy to be performed. In such cases a gastro-enterostomy, if performed with proper expedition and adequate precautions, affords the greatest relief to the sufferer, who not only loses the distress due to painful peristalsis and to the irritation of retained secretion, but also becomes freed from the toxaemia due to absorption of the poisonous fermenting stomach contents, which are drained away into the intestine and there disposed of. Thus life is prolonged and made more comfortable, flesh and colour are regained, and even in cases of cancer the patient may have a new lease of life; moreover in some cases where the condition of the patient and not simply the extent of the growth has prevented a radical operation, the speedy restoration to health enables a radical operation to be subsequently undertaken. The following cases serve to illustrate what I mean:

CASE VI.—Mr. B., aged 62. Symptoms for a year. Epigastric tumour noticed a month. No free HCl in vomit. Exploratory operation, November 15th, 1900. Ring of cancer found, forming hour-glass shaped stomach. Patient too ill for gastrectomy. Posterior gastro-enterostomy performed. Good recovery. December 20th, a month later, partial gastrectomy performed, the ring of growth being removed and the proximal and distal ends of the stomach being fixed together over a large bone bobbin. Good recovery, returned home within the month. Quite well a year later. Letter from Dr. Gardner, Burnley, November, 1902, to say that Mr. B. had put on flesh, gained colour, and been able to take food well for over a year, but had succumbed to exhaustion from secondary growths in the omentum March 30th, 1902, about eighteen months after operation.

CASE VII.—Miss B., aged 24. Five years' history of stomach symptoms with great loss of flesh and recently coffee-ground vomit with tumour at epigastrium. Exploratory operation April 17th, 1902. Large tumour found involving the pylorus and anterior wall of stomach. Enlarged glands rendered gastrectomy inadvisable. Posterior gastro enterostomy performed. Good recovery and returned home on the 19th day. Seven months later Dr. A. B. Winder, of Blackpool, wrote to say that the patient, who weighed 4 st. 5 lb. at the time of operation, on September 1st, weighed 8 st. 1½ lb., thus nearly doubling her weight in five months, but that she had recently developed jaundice, possibly due to extension of the growth to the common bile duct.

CASE VIII.—Mr. B., aged 36, seen with manifest tumour of the stomach, October 26th, 1901, and with a history of stomach trouble extending over several years, with vomiting of blood and passage of melaena on two occasions within the preceding four months. At the operation a large tumour involving the duodenum and pyloric end of the stomach, too adherent for removal, was found and gastro-enterostomy performed. After the operation he went abroad, and for six months he rapidly gained weight and felt very well. He then began to get thinner and lose strength, and without any pain he gradually lost strength and succumbed in September, 1902, eleven months after operation.

CASE IX.—The patient was a married woman, aged 37, who was seen with Dr. D. Cancer of the body of the stomach and pylorus with dilatation was diagnosed. Gastro-enterostomy was performed on December 21st, 1899. She made a good recovery, and was so well that gastrectomy was advised, but cancer of the uterus supervened and prevented further operation. She lived for nine months in comfort and was able to take ordinary food.

CASE X.—The patient, a man aged 63 years, had symptoms for five years, at first those of chronic ulcer, later those of malignant ulcer with tumour associated with haematemesis. Gastro-enterostomy was performed on March 22nd, 1901. He made a good recovery. He returned home at the end of the month, and gained 4 lb. in weight during the fourth week. He ultimately gained about 2 st., and lived for a time in great comfort, but the growth progressed, and he succumbed to exhaustion about a year later, having been able to enjoy life for some months.

CASE XI.—Mr. W., aged 68, operated on July 18th, 1902, for pyloric tumour with dilatation of the stomach, the patient being extremely feeble and suffering great pain. The disease proved to be cancer, and the glands were extensively involved, so that gastro-enterostomy only could be performed. A recent letter from Dr. J. T. Spink, of Otley, says patient gained 10 lb. up to November, and is now 14 lb. heavier than before he fell ill last June. He is able to take regular exercise, and has never felt any pain after taking any meal whatever since the operation.

Other cases could be given, but these will suffice to show the beneficial effects of gastro-enterostomy even in advanced cases of cancer of the stomach, for, as will be seen immediately, it is only in the cases too advanced for removal that the short-circuiting operation should be performed.

As showing these advantages, a gentleman holding an important public position, sent to me by Dr. Gordon Black of Harrogate, told me that the benefits of the operation and the prolongation of life by a few months resulting from it had been a very great boon not only to him in the comfort it had brought, but to his family, in that it had enabled him to clear up all his business affairs in a satisfactory manner without hurry.

The operation can be done with little risk, as including all my cases of posterior gastro-enterostomy for cancer, the mortality is only 5 per cent., a great contrast to the death-rate of these cases a few years ago, when only the anterior operation was as a rule performed.

The remaining class of cases is of great interest, and includes those where the disease is limited to the stomach, and where the lymphatic glands and adjoining organs have not been seriously invaded, the patient being in a sufficiently good condition to permit of the radical operation being done. The following are examples:

CASE XII.—Mrs. J., aged 50. Symptoms five months, tumour noticed three weeks.

January 31st, 1901.—Tumour found, involving the whole circumference of the pyloric end of the stomach, a short distance from the pylorus. After the growth had been widely excised, the distal and proximal ends of the stomach were brought together over a large bone bobbin. Glands were excised from the lesser and also from the greater omentum. Smooth recovery.

On January 4th, 1903, two years later, Dr. Foster, of Dalton-in-Furness, was kind enough to write and tell me that the patient is remarkably well, and that there is no sign of recurrence.

CASE XIII.—Mrs. S., aged 54. Loss of flesh, and pain, with failing health for eight months; slight jaundice and tumour in epigastrium and right hypochondrium for a shorter period.

August 9th, 1900.—The gall bladder, containing gall stones and the site of tumour, was removed. As the adjoining portion of the liver was involved, a wedge-shaped partial hepatectomy was performed, and as the pylorus was also the site of growth a partial gastrectomy including the pylorus was done, the cut section of stomach being united to the duodenum by two continuous sutures over a bone bobbin. The removed tumour examined microscopically after operation, proved to be cancer. That part of the abdominal wall to which the tumour had been adherent was also excised.

A letter from Dr. Fry, dated January 23rd, 1903, says: "Patient continues to keep in remarkably good health. After leaving Leeds she slowly improved and for a few weeks had some swelling of the abdomen and of the feet after being out of bed for a few hours. The wound looked healthy, but was not quite healed till about the twelfth week after operation, but there was no discharge, merely a healthy granulating surface. After the third month from the operation there was a hardness all around the wound which persisted though gradually lessening for six months. In three months after operation she expressed herself as feeling well and gradually increased in weight. She has had no relapse since and does all her housework." She is in good health now, getting on for three years after operation.

CASE XIV.—Mr. A., middle-aged, who had been ailing for a year and had had stomach symptoms for three months and a noticeable tumour for six weeks, was supposed to be too ill and anaemic for operation, but as the tumour, which was situated in the left hypochondrium and epigastrium was freely movable, I decided to operate.

On May 23rd, 1902, I found a mass of cancer involving the centre of the stomach, which I removed along with some glands adjoining it. Recovery was uninterrupted.

A letter dated January 22nd, 1903, from Dr. Myers, of Shipley, states: "Patient very well, has gained 14 lb. in weight. No evidence of return of growth. Able to transact his business."

CASE XV.—In the BRITISH MEDICAL JOURNAL for November 8th, 1902, I reported a case *in extenso* where I had removed the whole of the stomach, except a small portion of the dome adjoining the oesophagus, for malignant disease, on March 18th, 1901. I am glad to say that this patient, over two years later, remains in absolutely good health; he has a good appetite, enjoys his food, and is able to attend to his business as usual.

These cases will be sufficient to show that removal of even a considerable portion of the stomach may be something more than a palliative operation, and I think it justifies me in saying that although it is better to have cases of cancer diagnosed and operated on early, yet we need not take the pessimistic view which has been given by some surgeons that if a tumour be manifest it is too late to perform a radical operation.

In conclusion, I hope I have advanced sufficient evidence to prove:

1. How desirable it is to make an early diagnosis of cancer of the stomach in order that a radical operation may be performed at the earliest possible moment.

2. That it may be needful to perform an exploratory operation in order to complete or confirm the diagnosis.

3. That such an exploration may be done with little or no risk in the early stages of the disease.

4. That even where the disease is more advanced and a tumour perceptible, an exploratory operation is as a rule still advisable in order to carry out radical or palliative treatment.

5. That where the disease is too extensive for any radical operation to be done the palliative operation of gastro-enterostomy, which can be done with very small risk, may considerably prolong life and make the remainder of it much more comfortable and happy.

6. That some cases, thought at the time to be cancer, too extensive for removal, may after gastro-enterostomy clear up completely and get quite well.

7. That in cases of disease of the cardiac end of the stomach too extensive for removal, the operation of gastrostomy may considerably prolong life and prove of great comfort to the patient by preventing death from starvation.

8. That even where the disease is too extensive either for removal or for a gastro-enterostomy being performed with a fair chance of success, the operation of jejunostomy may occasionally prove of service to the patient.

9. That where a radical operation can be performed the thorough removal of the disease may bring about as much relief to the patient as does the operation for the removal of cancer in the breast, uterus, and other organs of the body, and that in some cases a complete cure may follow.

THE SURGICAL TREATMENT OF GASTRIC ULCER.

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Cases of gastric ulcer have hitherto been regarded as entirely the property of the physicians. Only when perforation or some similar accident has occurred is it admitted that the matter has passed out of their hands, and that a surgeon is required. Quite exceptionally, in a chronic case, when the patient has been brought to death's door by ceaseless pain and vomiting, when the power of repair has been reduced to a minimum by years of starvation, and it is evident that life under such conditions is no longer possible, and is hardly desirable, exceptionally, then, surgery is thought of, and a surgeon is asked to do, as a forlorn hope, what might have been done years before with a splendid prospect of success. But even so much as this is a rare concession. Why this is so is, perhaps, not difficult to understand. One reason is the the want of acquaintance with, and as a result the want of trust in, the recent advances that have been made by surgery. Another, and the chief one I think, is the popular though certainly erroneous impression that the results of the present method of treatment are satisfactory. It seems to be the general opinion that the rate of mortality among those suffering from ulcer of the stomach is inconsiderable, and that relapses are unusual. The complications that follow, many of them of the gravest character, appear to be regarded as inevitable, to be met if they can be, but not to be prevented. In brief, what is called with, I am afraid, rather deceptive cynicism, the expectant method of treatment is apparently looked upon as doing all that can possibly be done.

Unhappily this optimistic view is very far from being correct. There is ample room for improvement, and I for my part look forward confidently to the time when chronic ulcer of the stomach will be regarded as an indication for operation, just as much as chronic inflammation of the appendix, and as early, if the object of the operation is to cure the patient; and when the complications that render acute ulceration so serious will be met at once in the same way, before it is too late, instead of allowing the patient to sink into an almost hopeless state, and then throwing the discredit of failure upon surgery.

I may at once disarm criticism by saying that I have not the slightest intention of advocating operation as a general mode of treatment for all cases of ulcer of the stomach, or of removing this disease from the care of the physician. Ulcer of the stomach is and always will be more medical than surgical. I am perfectly content to leave the general treatment in the hands of physicians, and therefore I am not concerned in the least with the slighter cases of gastric ulcer, those for example which are treated as out-patients at hospital, and the majority—the great majority I should say—of those which you meet in private practice. They do not enter into the question. No one suggests, or has ever suggested, that they could possibly require an operation. So far as my present subject is concerned, I leave them upon one side entirely. I am going to deal only with the graver cases—those which are sufficiently serious to be admitted into a hospital and treated as in-patients. This I suggest should be taken as the standard, and the question I wish to lay before you is simply whether, so far as these cases are concerned, the present method of treatment is really satisfactory, or whether the time has not come when an attempt should be made to obtain something better.

The results of the present methods of treatment can only be judged by collecting statistics. I know the fallacy of this. One distinguished surgeon, long since dead, once said to me that statistics could prove anything. His friends were kind enough to say that his remark was quite true of his own. So, instead of taking other people's, or working them out for myself, I asked Dr. Bulstrode, of the London Hospital, if he would collect them for me. This he very kindly did. He collected and analysed the statistics of all the cases admitted into the London Hospital for gastric ulcer from the beginning of 1897 down to August, 1902. They were just 500 in number, 98 men and 402 women. Out of this number, no less than 48 (nearly 10 per cent.) died from peritonitis; 13 (or 2·5 per cent.) from haematemesis; and 28 (5·5 per cent.) from other causes. The total number of deaths was 89, or approximately 18 per cent., taking all the cases together. Had all the slighter ones been left out, and only those reckoned in which the gravity of the symptoms suggested the possibility of operation being advisable, the rate of mortality, bad as it is, would have been far higher.

The question of the actual rate of mortality, however, is not the only one that requires to be considered; 82 per cent. of the cases of gastric ulcer admitted into the London Hospital were discharged as relieved or cured. It would be exceedingly interesting to ascertain what was the relative proportion of these two classes; how many were really cured; that is to say, left the hospital perfectly well, without suffering pain or inconvenience when taking ordinary diet, and, what is especially important, remained well. Such a thing, unfortunately, is not possible. Some idea can, however, be formed by ascertaining the number of patients admitted into hospital with gastric ulcer who had already been treated for and cured of similar attacks. Dr. Bulstrode has done this for me, and has calculated that out of the 500 cases no less than 211 (42 per cent.) had suffered in this way previously. In 116 there had been only one previous attack; in 41 there had been two; in 15, three; and in 39 four or more. In other words, gastric ulcer recurs or relapses in at least two-fifths of the cases which are apparently cured.

Bad, however, as this sounds, it is not yet the worst. These figures do not include any of the cases admitted suffering from what may be called the late sequelae and complications of gastric ulcer. They do not take into account the cases admitted for pyloric stenosis (which Gerhardt and Warren both estimate at 10 per cent.), hour-glass contraction, gastric dilatation, chronic dyspepsia, constant vomiting, perigastric adhesions, cardiac stenosis, and those numerous other disorders caused by the cicatrization of ulcers healed long since. Nor do they take into account those cases in which carcinoma has developed at the site of an old ulcer, which Hauser estimates at quite 6 per cent. When allowance has been made for all of these cases, which certainly cannot be described as cured, for the 18 per cent. of deaths, and the 42 per cent. of relapses, it must be admitted that the proportion of patients suffering from gastric ulcer of sufficient severity to require treatment in hospital, which is discharged as cured in the full sense of the term, in the sense in which a surgeon would use it after an operation, is not a very high one, not nearly so high as is generally imagined.

I do not think I shall be thought guilty of exaggeration, if I say that there is ample room for improvement here; and that if only the gravest of these cases had been selected from among the rest and treated by operation, not only would many more lives have been saved, but a vast amount of suffering would have been avoided.

My next point is to show that operation in these cases is not only feasible, but is attended by a sufficient measure of success to justify its recommendation. For this I shall rely entirely upon my own cases, and I shall confine myself to those in which I have operated directly because of the presence of an active gastric ulcer. Operations performed for perforation, pyloric stenosis, perigastric abscesses, and the other complications and sequelae of gastric ulcer do not enter into the question. From my point of view they are too late. The gastric ulcer should have been operated upon before they occurred.

I have operated upon 15 cases in all, with 2 deaths. In 12 of these cases the ulcer was excised or ligatured in various ways. In two gastro-jejunostomy was performed as the ulcer could not be dealt with locally; and in one the ulcer proved to be in the duodenum and not in the stomach. In four of these cases the immediate cause for operation was persistent

pain and vomiting. These all recovered. In the other eleven the immediate cause was haematemesis, and in six of these the loss of blood had been so severe that transfusion had to be performed on the table or immediately after. Two of these died. They were both *in extremis* at the time of the operation, and as the notes have already been published I will not trouble you with the details of them.

I may add that I have been consulted with a view to operation in three other cases of recent haematemesis; but the condition of the patients was so hopeless that I would not undertake the responsibility; and, as a matter of fact, they all died within twenty-four hours of my seeing them.

So much for the results of operation. Considering the desperate character of the majority of the cases in which it has been performed, I do not think that they compare badly with those that follow what is called expectant treatment. No case died that had not already been brought literally to death's door. As the ulcer was removed entirely in all but two (in which its long continuance had rendered it impracticable) there can be no question of relapse; and for the same reason none of those complications that are caused by the persistent contraction at the base of a chronic sore can possibly occur. The question now arises when and under what circumstances operation can be advised.

With regard to this, I regret to say that I find it impossible to adopt a logical classification. The pathology of gastric ulcer, which should furnish the foundation, requires revision. The appearance of a gastric ulcer during life is very different from what it is after death. I have several times found small bleeding fissures and abrasions with swollen overhanging edges, and I have stopped the bleeding by ligaturing or excising them, but I have never yet seen in any operation the often described funnel-shaped gastric ulcer. I do not say that such an ulcer is never present during life, but I have never seen anything approaching it in appearance, and I cannot help thinking that I should have if it had been at all common.

Again, I can find no satisfactory pathological explanation for the development of what I have termed, for want of a better phrase, recurrent ulceration of the stomach. These cases stand by themselves. They are characterized by attacks of haematemesis, recurring again and again, after intervals of many months apparently of perfect health. I have operated upon several such cases during one of the attacks, and have never found anything but one or more bleeding fissures such as I have already described, undoubtedly of recent origin. There was no sign of a chronic ulcer. The bleeding had come entirely from these fissures, which in these cases apparently form again and again, but I can find no explanation for their recurrence. So far, therefore, as the indications for operation are concerned, I must rely entirely upon the symptoms that happen to be present, and in speaking of these I think it will be more satisfactory to deal with acute and chronic ulceration separately.

In acute ulceration there are only two of these indications—threatened perforation and haemorrhage—and of these the former can rarely be diagnosed beforehand. The wall of the stomach itself is entirely devoid of sensation. It may be cut, or pinched, or even cauterized without the patient being aware of it; and accordingly perforation may occur suddenly from one moment to another, and has been known to do so without the patient having had the slightest warning. Such cases, of course, cannot be foreseen. They are quite beyond our power. But I do not think this is so with all. It is sometimes possible to say that an ulcer is spreading instead of healing; and though it is not possible to say whether it is spreading in breadth or depth, or both, the fact that it is spreading causes thought. The symptom to which I refer is the presence of persistent cutaneous hyperaesthesia in Head's epigastric triangle, especially when it is combined with a similar condition at the corresponding dorsal point. This means that there is something going on in the wall of the stomach, sufficiently grave to render the corresponding spinal nerve segment unduly sensitive. It has the same signification as cutaneous tenderness over the side of the abdomen in inflammation of the appendix. It is, in short, an indication that the corresponding splanchnic nerve—in this case the one distributed to the wall of the stomach—is exposed to some source of irritation; and though cutaneous tenderness by itself is not sufficient to diagnose the presence of an ulcer, I am disposed to think that when the existence of an ulcer is shown by other evidence, it is a sufficient indication that the ulcer is not healing; and I should not hesitate to recommend exploration when this cutaneous hyperaesthesia is definite and well marked, supported by other signs and persists in spite of a thorough course of ordinary treatment.

The other indication for operation is more obvious. No one, I think, will refuse to admit nowadays that if haemorrhage from the stomach is so profuse as to place life in danger, an attempt must be made to expose the bleeding point. No patient should be allowed to bleed to death if there is a chance of stopping the haemorrhage. But there is a reason which renders this question not quite so simple as it appears to be. There is a peculiarity about haemorrhages from what are called acute ulcers of the stomach. They often persist, in spite of all that is done to check them, until the patient is apparently on the point of bleeding to death, and then stop of themselves. Hence there is always a risk that a serious operation may be performed unnecessarily, especially as the actual rate of mortality from this cause in cases of acute ulceration is not more than 3 per cent. My own impression is that each case must be judged upon its merits. I have seldom had the opportunity of advising delay, simply because a surgeon is seldom called in until the physician has exhausted every means at his command; but, as I have mentioned already, in 3 cases in which I was called in I had to decline, it was too late; and in 6 in which I did operate transfusion was absolutely necessary. Four of these recovered.

The guide that I have always followed is the condition of the patient. A single haemorrhage is rarely fatal. Nearly always, if the stomach is given absolute rest, the bleeding will stop of itself. But if the pulse-rate continues to grow quicker and quicker, and particularly if the well-known restlessness and yawning of haemorrhage set in, I do not hesitate to recommend exploration. There is too great a probability that the haemorrhage is going on still, and that the blood is collecting in the bowel or the stomach. This was actually the case in one of my cases.

I believe the same plan should be followed if a second severe haemorrhage occurs within a few days of the first. This means that some vessel is bleeding. The chances are that it is an artery, and that there is a hole in one side of it. The bleeding has stopped once. The clot that plugged the opening has been removed by the action of the gastric juice, or the irritation which prevents the ulcer from healing has caused a further destruction of the wall, and the bleeding has returned. It is not wise to run the risk of allowing this to happen a third time.

And I believe the same plan should be followed in cases in which the haemorrhage, though comparatively slight, returns again and again. Frequently repeated haemorrhages, it is well known, are apt to induce a condition of anaemia, which renders patients much more susceptible to other disorders, especially to tuberculous disease. It has been estimated that upwards of 20 per cent. of those who suffer from this form of haematemesis, die subsequently from tubercle. If this is really true, and there appears to be very little doubt about it, this condition cannot be regarded as otherwise than very serious; and it is an open question whether an operation should not be performed at the first favourable opportunity, and the bleeding point secured, even though there may be only a 3 per cent. chance that the haemorrhage will prove directly fatal. Personally I think there is no doubt that this is the course that should be followed.

In chronic ulcer of the stomach indications for operation are much more simple. I hold that every case of chronic ulcer of the stomach, because it has become chronic, should be operated upon without further delay. The mere fact of its having become chronic is proof that the previous treatment has failed to cure it; and if one thorough trial of ordinary measures has been made, and has not succeeded, it is better that an operation should be performed without waiting further, than that the old measures, already discredited by failure, should be tried over and over again, each time in less favourable circumstances, until at last a condition is reached that is little short of hopeless.

Chronic ulcer of the stomach, an ulcer that has become chronic under, and in spite of, treatment, is practically beyond cure, in the full sense of the term, except by operation. The patient may get relief for a time, but nothing more. The longer such an ulcer lasts the worse it becomes, and the greater the liability to complications which, if not fatal of themselves, only too often succeed in rendering life a burden. Perforation and general septic peritonitis, subphrenic and perigastric abscesses, ulceration extending into the liver or pancreas, perigastric adhesions, hour-glass contraction of the stomach, pyloric stenosis (in a very large proportion of cases), haemorrhage from ulceration of the walls of the coronary or

splenic arteries, or even of the aorta, and cancer in many instances, are simply the result of leaving things alone, of what is called expectant treatment; of allowing, in other words, the ulcer steadily to grow larger and the patient grow weaker. What proportion of cases die from these complications is difficult to estimate, but it is not a small one. Haemorrhage alone, as Dr. Wall has shown at the London Hospital, is responsible for the deaths of 6 per cent. of the women, and 12½ per cent. of the men over 30 years of age admitted into the wards for haematemesis from ulcer of the stomach. The essential point is that hardly one escapes. It is no exaggeration to say that chronic ulcer of the stomach always leads to some complication or other, whether it continues to spread, or whether it heals and cicatrizes; and that even if these complications do not prove directly fatal, they only too often succeed in rendering life miserable.

On the other hand, excision of such an ulcer, so long as it is confined to the mucous membrane and does not greatly involve the sero-muscular coat, is comparatively simple. I have operated upon five such, three by excision and two by ligature of the whole thickness of the wall, and in each repair was rapid and complete. There is no reason why the operation should be followed by a higher rate of mortality than that which follows interval operations for inflammation of the appendix. Later, when the strength of the patient is broken down by years of chronic starvation, and all sorts of complications are present, the same operation may easily become one of the most difficult in surgery, so that not infrequently it has had to be abandoned. But this is not an argument against operation, but against delay.

The details of the operation and the mode of dealing with the ulcer I need not go into now as I have already fully described them elsewhere. The only thing I wish to say is that I am strongly in favour, wherever it is possible, of dealing with the ulcer itself, whether this is done by excision or by ligature.

Gastro-enterostomy should be reserved for cases in which this is impracticable, in which, for instance, the ulceration is multiple, or in which it obstinately recurs, or in which there is already some degree of stenosis at the pylorus or in the walls of the stomach. It places the stomach at rest, it is true, and so often enables the ulcer to heal; but it cannot stop bleeding (there are at least two cases on record in which the haemorrhage has continued and proved fatal, and I have been told of a third), and it is at best only a way of evading difficulties which are better met directly, before they have attained dimensions which render this impossible.

CASE OF PARTIAL GASTRECTOMY, WITH REMARKS UPON THE TREATMENT OF MALIGNANT DISEASE OF THE STOMACH.

By B. G. A. MOYNIHAN, M.S.Lond., F.R.C.S.,
Senior Assistant Surgeon, Leeds General Infirmary; Consulting Surgeon to the Skipton Hospital, and to the Mirfield Memorial Hospital.

In a paper read before the Clinical Society on November 8th, 1901, I described an operation that seemed to me to fulfil certain requirements in the radical treatment of cancer of the pyloric portion of the stomach. By means of this operation I hoped that it would be possible to remove—

(*a*) The primary growth, and all the area likely to be involved in its increase.

(*b*) The lymphatic vessels draining the area in which the primary growth occurred.

(*c*) The lymphatic glands into which these vessels drained.

The need for some more scientific method of dealing with cancer at or near the pylorus was obvious when the records of published cases were considered. In these the performance of "pylorectomy"—removal, that is, of the pylorus, and a margin of healthy stomach around the growth had resulted in the experience that in the great majority of cases the patients eventually died of a local recurrence—a recurrence, that is, in the walls of the stomach. In order to discover the lines which an operation should follow if local recurrence were to be avoided, it was necessary to inquire into, first, the mode of invasion of the stomach by the growth, the lines of spreading of the cancer from the original point affected, and the rapidity with which growth occurred along these lines; and secondly, the anatomy of the lymphatic system of the stomach, the direction in which the lymphatic vessels ran, and the position of the glands in which they terminated. The result of the investigations, so far as the first point was concerned, resulted in the following conclusions:

1. That malignant disease of the stomach begins in the majority of instances near the pylorus just below the lesser curvature.

2. That from this point it spreads most rapidly and most widely in the submucosa.

3. That the rate of growth towards the cardiac orifice is rapid, towards the duodenal side extremely slow. The duodenum is rarely affected extensively.

4. That the tendency of the growth is to drift towards the curvatures.

So far as the second point is concerned it was found that the lymphatic system of the stomach was comparatively simple. There are three chief lymphatic areas of the stomach (Fig. 1).

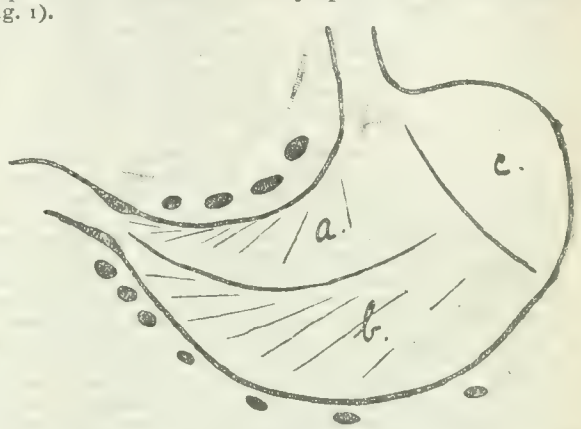


Fig. 1.—The lymphatic vessels and glands of the stomach. c is the "isolated area."

1. An area along the lesser curvature from which the lymphatic vessels pass upwards and to the left into the coronary glands. The coronary glands lie along the artery of the same name. At the coeliac axis they become continuous with the glands along the upper border of the pancreas.

2. An area along the greater curvature from which the lymphatic vessels pass downwards and to the right into the glands lying along the greater curvature. These glands are more numerous near the pylorus, and from here pass to the head of the pancreas and become continuous with the hepatic group of glands which lie along the hepatic artery, and in part along the pyloric artery.

3. In addition to these two areas is a third, for which I suggested the name "isolated area." This area comprises the greater tuberosity of the stomach, the lower end of the oesophagus, and an area along the greater curvature as far, approximately, as the limit of supply of the left gastro-epiploic artery. Its lymphatic vessels pass downwards to the hilum of the spleen. The term "isolated area" seems singularly appropriate for this region, for it is very rarely affected by growth spreading upwards from the pylorus. An examination of a large number of specimens of pyloric cancer will show that this area remains unaffected till the last, and that its lymphatic vessels and glands are very rarely involved in the spread of the disease. An operation therefore which aims at eradicating the primary growth, the lymphatic vessels draining the area in which the primary growth occurs, and the lymphatic glands into which these vessels drain will involve a removal of all the stomach except the "isolated area," and of the glands along the lesser and greater curvatures. On the duodenal side, the first portion of the duodenum will always have to be removed; beyond this it will very rarely, if ever, be necessary to go. The following are the notes of the first case upon which I was able to carry out this operation. As the clinical history of the case is now complete it is desirable to publish the record:

W. H. S., male, aged 31. Three years ago the patient began to have pain after food, belching, and occasional vomiting. These troubles gradually and progressively increased. During the last six or seven months he has been losing weight; during the last two months the loss has been rapid. In his present state he is quite unable to take any solid food, and can drink liquids only in small quantity. The pain is not acute at any time now, but there is a sense of constant heaviness and burning in the upper abdomen. When keeping erect, standing or sitting, he does not vomit, but within a few minutes of lying down a large quantity of brownish-coloured fluid is returned. The stomach contents were examined on

three occasions; a slight trace of free HCl was found on the first occasion only; lactic acid was always present. On examining the abdomen a large actively contracting stomach was seen; the greater curvature was 2 in. below the unbilicus. A small tumour was felt beneath the right rectus muscle. It was slightly movable, not tender, hard and rounded. The abdomen was opened on July 23rd, 1901. There was a very large stomach, which showed a slight though decided hypertrophy of its walls. There was a tumour at the pylorus about equal in size to a tangerine orange; extending from this along both curvatures, but more especially along the lesser, were hard cord-like masses of growth. There were enlarged glands along both curvatures. The growth was adherent behind to the pancreas, and in order to free it here a small portion of the head of the pancreas had to be removed.

The operation of removal of all the stomach except the "isolated area," and of the first portion of the duodenum, was carried out in the following way: A preliminary double ligature was applied to the chief vessels of supply. The coronary artery was exposed first, as it lay in the "ligament of Huschke"—the falx coronaria. The exposure was rendered easy by dragging the stomach downwards and to the left. The artery was then seen in a ridge of the peritoneum, which was thus upraised. The artery and vein were ligatured in two places and divided between (the vessel should be divided at a point beyond the origin of the oesophageal branches). The hepatic artery was then exposed a little above the pylorus by dragging the pylorus downwards; the pyloric and gastro-duodenal arteries, branches of the hepatic, were then ligatured and divided. The left gastro-epiploic vessels, along the greater curvature of the stomach, were similarly ligatured and divided at the junction of the "isolated area" with the body of the stomach, at a point which is near the hilum of the spleen. The lesser and greater omenta were then separated from the stomach at such a distance that the enlarged glands which they contained were left with the stomach. The middle colic artery, which is apt to be wounded in dividing the great omentum, was exposed and carefully protected. The stomach was then clamped by two pairs of Doyen's large clamps at the margin of the "isolated area" and divided between. Two smaller clamps were applied at the end of the first portion of the duodenum, and the gut was divided between. The stomach, with the involved glands and a part of the pancreas, were now removed (Fig. 2).



Fig. 2.—Showing the growth at the pylorus, the extensions along the curvatures, and the lines of incision in the stomach and duodenum.

The operation was completed by closing the cut ends of the stomach and duodenum, and by making an anastomosis between the posterior surface of the "isolated area" and a loop of jejunum pulled up through the transverse mesocolon. An end-to-end approximation was quite impossible. The operation lasted sixty-five minutes, and was attended by slight shock. No secondary nodules could be seen in the liver or elsewhere. After the operation the patient rallied well. His convalescence was uneventful, save for the fact that the abdominal wound did not heal by first intention; this was due to the fact that the Pagenstecher thread which I had used for the deep suture became septic, and caused a small abscess at the upper end of the wound. Within a fortnight the patient was taking ordinary diet, and was daily gaining health and strength. In March, 1902, the patient was shown at a meeting of the Leeds and West Riding Medico-Chirurgical Society. He was then 2 st. heavier than when the operation was done, and was able to take ordinary food in full quantity.

On May 22nd, 1902, he called to see his medical man, Dr. J. H. Waddington, who found there was a growth in the liver, and that there were signs of pleuritic effusion. The patient said he had "caught cold" a few days before, up to that time he had been quite well.

Dr. Waddington wrote:—

He walked to my house, a distance of 20 yards, and arrived suffering from great dyspnoea. On stripping him I found that the ares over the posterior parts of the lungs were quite dull, up to the scapula on the right side and a little lower on the left. The apex beat was not displaced, but was diffused. I suspected fluid. On puncture I removed a few ounces, where I expected pints. I felt the lung touch the cannula. The dullness pointed either to much fluid or to solid lung There was no bronchial breathing; no oegophony; vocal fremitus could be felt. The sputum, which was scanty, was not coloured, simply slightly frothy.

Dr. Waddington considered that there were secondary growths in the lungs, and I have no doubt that this opinion was correct.

The patient died on May 31st, 1902, 312 days after the operation. The cause of death was secondary deposit of growth in the liver and lungs.

This case, though the ultimate result of it was disappointing, is, notwithstanding, of great importance as showing that the operation which I adopted sufficed to relieve the patient of all the local growth, and was satisfactory in so far that it was not followed by any recurrence in the stomach or duodenum. The growths in the lungs and liver were doubtless present at the time of operation, but were of so small a size as to be unrecognizable. It is clear, therefore, that even in a most unfavourable case—for in this instance the involvement of the pancreas was a serious feature—the operation fulfilled all the requirements which were necessary to ensure complete local eradication. Further than this no operation for malignant disease can possibly go.

CASE OF CHRONIC PANCREATITIS, WITH AN ACCOUNT OF THE POST-MORTEM EXAMINATION.

By GILBERT BARLING, M.B., F.R.C.S.,
Surgeon to the Birmingham General Hospital.

In the BRITISH MEDICAL JOURNAL for December 22nd, 1900,[1] I published an account of a case the subsequent history of which is of such interest as to appear well worth recording.

History.—Briefly, the early history of the patient was one of epigastric and right hypochondriac pain, going through to the back, of shivering, vomiting, and jaundice; in fact, his appeared to be a typical case of gall-stone celic. Operation in 1897 failed to find gall stones, but discovered a firm, somewhat lobulated mass in the region of the head of the pancreas, which it was feared would prove to be a malignant growth. A good recovery followed the operation, and, on the whole, the patient thought he was better afterthan before. Subsequently his attacks of pain, etc., returned as badly as ever, but by lapse of time it was clear that they were not due to malignant growth in the head of the pancreas, and the condition felt there was regarded as one of chronic inflammation. In January, 1901, nearly four years after the operation, the patient again came under my care in hospital with the same train of symptoms as before, namely, pain in the epigastrium and right hypochondrium, shivering fits, vomiting, and jaundice. He was considerably wasted, and was unable to follow his occupation of clerk owing to his feebleness and the frequency of his attacks. On January 4th, 1901, his abdomen was opened for the second time, and the gall bladder emptied of stinking bile and pus, and of two gall stones the size of small peas. From this fluid a luxuriant growth of colon bacillus and a few cocci was obtained. The head of the pancreas was still enlarged, and was very tough and leather-like to the feel. The gall bladder was drained in the usual way, and in the hope that it and the pancreas might be restored to something like a healthy condition the drainage tube was retained for ten months, and so long as there was free escape for the bile the patient was comfortable and free from symptoms. Soon after the tube was removed the opening almost closed and the old train of symptoms began to return. When the fistula reopened and discharged bile freely the patient was much relieved, but as the orifice narrowed so the pain, shivering, and jaundice recurred. On May 30th, 1902, the patient was readmitted to hospital, my intention being to anastomose the gall bladder to some part of the intestinal tract to enable the biliary fistula to close, and at the same time the bile to get round the obstruction caused by the pressure of the enlarged pancreas on the common bile duct.

Operation, June 4th, 1902.—With considerable difficulty the abdominal cavity was opened below the gall bladder. The matting of parts to the parietes and to each other was the most dense I have seen in this region, and it was with great difficulty that the walls of the colon and of the shrunken gall bladder could be found. The smallest-sized Murphy button was used to approximate the cavities, as suturing was inapplicable.

The operation was well borne, and such good progress was made that I hoped the patient would soon be about again, but on June 23rd three motions containing a large quantity of blood were passed, and two days later another large escape of blood occurred by the bowel, the patient dying soon afterwards. Calcium chloride was administered freely before and after the operation, but it will be seen later that the bleeding was not such as this drug could reasonably be expected to control.

Necropsy.—The necropsy made by Mr. Billington showed the following conditions: The lower part of the liver, gall bladder, and right half of transverse colon were firmly adherent to the anterior abdominal wall around the wound. The liver, stomach, colon, spleen, and duodenum were involved in a dense mass of old adhesions which bound them to one another and to adjacent parts of the abdominal parietes. From caecum to rectum the bowel was distended with blood; the Murphy button lay free in the descending colon. The gall bladder opened by a wide orifice into the transverse colon just to the left of the hepatic flexure, the junction was firm and did not leak. There was extensive sloughing ulceration of the lower part of the gall bladder and this ulcer was the source of the bleeding, though no obvious bleeding point was visible, the ulcer was just above the opening into the colon. The gall bladder was a fair size but surrounded completely by adhesions, the cystic duct, the hepatic duct, and the common bile duct were all dilated. There was no stricture anywhere and there were no gall stones present; the opening of the common duct into the duodenum admitted a No. 4 catheter. The pancreas was generally very hard and dense, presenting evidence of old chronic interstitial pancreatitis. Microscopic sections showed numerous thick bands of organizing fibrous tissue forming a coarse irregular network in the meshes of which were the pancreatic alveoli, the appearance closely resembling that seen in multilobular cirrhosis of the liver; in places the pancreatic cells had undergone degenerative changes and had been replaced by fibrous tissue. The liver showed extensive changes; there was a considerable increase of fibrous tissue around the vessels and ducts in Glisson's capsule and the liver cells showed considerable fatty and granular change, very few normal ones being left.

The history and the necropsy show clearly, I think, that chronic inflammatory changes in the pancreas were responsible for the patient's troubles. There was in the first instance marked enlargement of the organ, and at the necropsy the main bile ducts were much dilated; they were free from calculi and stricture, and the opening of the common duct into the duodenum was quite patent. The only condition found which might have caused obstruction to the flow of bile, and with it of course pancreatic juice, into the bowel was the chronic inflammation in the pancreas met with at the first operation in 1897 and recognized by the pathologist at the necropsy, when it is probable that the process of contraction of the inflammatory tissue had considerably advanced and reduced the size of the enlargement originally felt.

In the paper containing the early notes of this case with others, I pointed out that the treatment required for chronic pancreatitis will not always be the same. Prolonged drainage of the gall bladder will in some cases suffice, but in others, of which Case 4 in my original paper and the one now under consideration are examples, further measures are required. If at the first operation in the case now completed the gall bladder had been united to the intestinal tract, there would have been none of the difficulties experienced later in effecting the union, and probably the patient would have been relieved of his suffering and rendered capable of pursuing his occupation.

REFERENCE.

[1] Remarks on Chronic Enlargement of the Pancreas in association with or producing Attacks simulating Biliary Colic.

AN ANALYSIS OF 110 OPERATIONS FOR STRANGULATED HERNIA.

By WILLIAM THORBURN, F.R.C.S.,
Surgeon to the Manchester Royal Infirmary.

During my tenure of the appointment of Assistant Surgeon to the Manchester Royal Infirmary from 1889 to 1900 it fell to my lot to operate upon a very large proportion of the cases of strangulated hernia admitted to the hospital, and, as the experience thus gained is probably fairly representative of the conditions commonly met with in Lancashire, it has appeared to me worthy of record. For the collection of the very scanty notes of these cases I am much indebted to my recent house-surgeons, Messrs. Wharton and Lapage.

Within the years named the total number of cases in which I had to perform the operation of herniotomy is 110, and their regional and sexual distribution is indicated in the following table:

	Males.	Females.	Total.
Inguinal	50	5	55
Femoral	3	34	37
Umbilical	4	13	17
Ventral	0	1	1
Total	57	53	110

The disproportion between the sexes in their susceptibility to strangulated inguinal and femoral hernia is here very marked, and is considerably greater than would be anticipated from the statistics of uncomplicated hernia. On the other hand the total number in each sex is almost equal, the male not showing the preponderant tendency to strangulation which might have been expected from the markedly greater frequency of hernia in this sex.

The case notes, which are often very defective, indicate the side which was affected in 53 cases of inguinal and femoral hernia. In 3 there was a double rupture, 2 being males with inguinal hernia on both sides, 1 (also a male) presenting a femoral on the right and an inguinal upon the left. In these 3 cases the right-sided rupture was alone strangulated. Of 48 remainining cases of single hernia with strangulation we have the following distribution: Right inguinal, 18; right femoral, 13; left inguinal, 12; left femoral, 7.

Strangulation thus appears to be more common on the right side in the proportion of 31 cases to 19 or about 3 to 2. Such a result was unexpected, and its explanation is not immediately obvious. To some extent it may perhaps be accounted for by the extra strain thrown upon the right side of the body, although it is difficult to appreciate how such strain could bear especially upon a right hernia. More probably the inequality is to be explained by the nature of the contents of the sac. Owing to its developmental position, and possibly to other causes, the omentum tends to enter a disproportionately large number of left herniae and the presence of omentum acts as a protection against strangulation by occupying the hernial canal with a yielding cushion, and thus allowing a greater amount of variation in the quantity of intestinal contents. Hence herniae of the left side may well be protected by their omentum from the danger of strangulation. The frequency of omental hernia upon the left side, and the tendency of strangulation to occur on the right are both well indicated in a table of Lockwood's: Of 79 strangulated inguinal and femoral herniae operated upon in St. Bartholomew's Hospital 49 were upon the right side, and of these 30 contained no omentum. On the other hand 30 were upon the left side and 3 only were devoid of omentum.[1]

The ages of the patients included in this analysis average 43·8 years, but considerable variations are naturally to be found in the case of different varieties of hernia. The 50 inguinal herniae of males include 8 children under 10 years of age, 6 cases only between the 10th and 30th year and 36 others extending up to the 84th year. The 5 females with inguinal hernia include 1 infant and 4 adults whose ages ranged from 37 to 54. The average age of all cases of strangulation in the inguinal region was 38·2 years. Femoral hernia, on the other hand, was found only in middle and late life, the extremes being 21 and 68 years while the average age was, for males 51.7 and for females 49.5. Among 17 strangulated umbilical herniae was 1 male infant of two days, the other cases ranging from 32 to 65 years of age and presenting an average of 50.3 years.

Strangulation being comparatively rare in infants and young children we may refer a little more fully to the exceptionally large number of examples here met with. One case of umbilical hernia was met with in a male infant aged 48 hours which was admitted with a very tense translucent sac about the size of a hen's egg: the sloughing stump of the unbilical cord was attached near the centre of the hernia: some meconium had been passed but there was constant vomiting. The infant was much exhausted and pressure would not replace the contents of the thin sac, which yielded no impulse on crying. The sac was entirely removed; its constricted neck divided, congested small intestine replaced in the abdomen and the operation wound closed by a single row of sutures: recovery was uninterrupted. Such a condition

appears to be sufficiently rare, as Macdonald collected only 31 cases of congenital umbilical herniae, of which 19 were treated by laparotomy with 2 deaths.[2] while Stern's analysis[3] yields only 14 cases in a total of 1,900 herniotomies.

Nine cases of inguinal hernia were met with in children, of whom 8 were boys, the ages being 6 months, 8 months (2 cases), 13 months, 3 years, 5 years, and 9 years (3 cases). All of these infants and children recovered from the operation, which, in the case of one infant, included removal of the vermiform appendix. The rarity of strangulation in infants has been frequently noted, while the comparatively favourable results of operation were referred to by Howard Marsh as far back as 1874.[4] About 150 such cases are collected by Stern.[5] The average proportion among 1,900 operations performed in various hospitals being 1 infant to every 108 adults, while strangulation is more common in the first three than in the succeeding nine months of the first year, and is again much more common in the first than in the succeeding years of early childhood. The proportion of cases met with in my experience has thus been considerably above the average, and is increased by another infant aged 9 weeks (not included in our analysis) which died within a few hours of reduction by taxis.

The relative frequency of various forms of inguinal hernia is not well indicated by the imperfect notes in my possession, and only in 16 out of 55 cases have we any definite information. In ten of these cases the hernia is distinctly stated to have been "congenital," while in five others the early age of the patient renders it probable that the rupture was due to some form of patent processus vaginalis. In one case only the hernia is described as "direct." Writing from mere general recollection, and judging from the fact that in no single case do the notes speak of "ordinary," "acquired," or "oblique" hernia, I should, however, be disposed to conclude that all or nearly all of the 39 undescribed cases belong to the acquired oblique category, and that of the total number only 15 were congenital or funicular, and only 1 "direct." The undoubtedly "congenital" cases included men of 17, 23, 31, 33, 35, 38, and 46 years of age.

The duration of the hernia before strangulation is noted in 46 patients of over 10 years of age. Of these 36 had been ruptured for one or more years, 3 for periods of less than a year, and in 7 the appearance of the hernia was said to be coincident with that of strangulation. These figures perhaps represent fairly enough that the danger of strangulation in a quite recent hernia is great: that it much diminishes after the rupture is well established: and that it is again by far most common in old herniae. The tendency of quite recent herniae to strangulation is illustrated by a case admitted with an uncomplicated left inguinal hernia of twenty years' duration and a strangulated rupture on the right side which had been noted for twenty-four hours only. The figures further indicate, as might be anticipated, that femoral herniae are the most liable to early strangulation, and the umbilical form the least so; thus among the cases of over one year's duration we find 18 inguinal, 12 femoral, and 4 umbilical, whereas among the "recent" cases we have 3 inguinal, 6 femoral, and 1 umbilical.

It is most difficult to ascertain the duration of strangulation, as there is no one symptom from which the existence of that condition can be dated, while the expressions used in the notes such as "one day" and "two days" are obviously not precise. The point is, however, noted with more or less accuracy in 53 cases, of which 6 were fatal. In the fatal cases it is stated to have been 10 hours, 48 hours, and 2, 4, 7, and 8 days.

Among the 47 cases which recovered, we find 38 which may be regarded as "recent," the duration of strangulation not exceeding 4 days and averaging 36 hours, while 9 may be classed as of "old standing," their average duration being over 7 days, and in 2 of them there appeared to have been definite obstruction for periods of 10 and 14 days. Two of the cured cases had been reduced *en masse* before admission, and were dealt with by median laparotomy. These figures show no relationship between the duration of the strangulation and the recovery or death of the patient, but they are obviously of little value, and they are vitiated especially by the scanty information obtained from those who were admitted *in extremis*.

In the vast majority of cases no cause of strangulation was assigned. Five cases only give a history of any form of injury, 1 attributing the complication to a slip, 3 to severe strain in lifting weights, and 1 to "heavy spade work"; all were adult males with old inguinal herniae, but in one—already referred to—it was not the old hernia, but a new rupture on the opposite side which became strangulated. Having regard to the strong inclination of patients to attribute all illness to injury, this absence of suggestion of any traumatic influence or even of exertion is striking, and has some medico-legal importance. In 1 case only cough appeared to have caused strangulation, this case being also an illustration of the dangers of very small herniae: a woman aged 50 developed a femoral rupture during violent coughing; reduction was effected and a truss was worn for a year without its reappearance; another vigorous attack of coughing then reproduced the hernia, which at once became strangulated.

The contents of the hernia included intestine in all cases, and no case of simple epiplocele was met with in those 110 operations; possibly, however, the less-marked urgency of such cases may have caused the resident staff to await the surgeons' visits in the morning rather than to send for an assistant surgeon, whose experience is, in Manchester, largely obtained in the evening and night. As to the relative frequency of pure enteroceles and entero-epiploceles the notes give no indication. In 2 or 3 cases only does there appear to have been a partial epiplocele, or Richter's hernia, all of these being small femoral herniae of women, while the method of operation did not allow of such investigation as would prove that the entire lumen of the gut was not included in the stricture.

In a very large proportion of all the cases the intestine involved was naturally the small gut. In one right inguinal hernia in a child aged 8 months the vermiform appendix and a portion of the caecum were included in the sac, and in one adult male the entire caecum was present, with some ileum, the whole being gangrenous. Both of these cases presented complete sacs.

Caecal and appendicular hernia were met with less frequently than in cases of non-strangulated hernia operated upon for radical cure, and the condition of the transverse colon, as met with in umbilical hernia, indicates that, as a rule, sacs containing large intestine are less prone to strangulation, the greater mass of the gut requiring a large neck, and providing a yielding surface, which allows of some swelling, as does the protecting omentum already referred to.

In umbilical hernia the transverse colon was commonly met with in the sac, and in 2 such cases that intestine presented no signs of congestion, while strangulation had resulted from the pushing beneath it of a knuckle of the small intestine. One of these cases presents some special points of interest.

A woman aged 50 was admitted with a large umbilical hernia of 14 years' duration. On opening the sac its contents appeared to consist solely of uncongested omentum and transverse colon with extensive adhesions: on raising this there was revealed at the lower part of the neck of the sac a small knuckle of intensely-congested small intestine. The general condition of the patient being very bad, this knuckle only was reduced after slight section of the neck of the sac. Three years later the same woman returned with fresh strangulation but in much better general condition. Herniotomy revealed the same state of affairs, and a radical operation was now performed. In none of the other cases is strangulation known to have recurred.

Organs other than intestine and omentum were not met with in any of the cases, but one contained a "foreign body." The latter was almost spherical, about half an inch in diameter, and both externally and on section closely resembled a very hard-boiled egg; it consisted mainly of dense white fibrin with a central yellow nucleus, which was probably derived from a fragment of the very granular omentum also met with, and not from an appendix epiploicus.

The condition of the intestine varied within the widest limits but actual gangrene or perforation had occurred in 10 instances only. In all of the remaining 100 cases the gut was replaced within the abdomen, and there is no reason to suppose that subsequent perforation occurred in any of them. In one of these cases free haemorrhage from the bowel followed on the day after the operation. Death ensued, but no necropsy was obtained.

The mortality of herniotomy is variously estimated by different writers, and is given by Treves as "over 30 per cent." and by Rose and Carless as "about 35 per cent.," but my own cases yield a considerably lower figure, as do the statistics of several London hospitals. The actual results in our cases regionally classified are as follows:

	Cases.	Deaths.	Mortality per cent.
Inguinal	55	15	27.27
Femoral	37	8	21.62
Umbilical	17	3	17.64
Ventral	1	1	100.00
Total	110	27	24.54

In this table there can, however, be little doubt that from accidental causes the danger of the inguinal form is exaggerated, while that of the umbilical is diminished. In order to compare these results with those met with elsewhere, I have collected the statistics of St. Bartholomew's and St. Thomas's Hospitals for the same years (1889 to 1900), and of the Middlesex Hospital from 1891 to 1900, and have found a most remarkable discrepancy between the three institutions, the gross mortality being at St. Bartholomew's 32.3 per cent., at St. Thomas's 19.9 per cent., and at the Middlesex 22 6 per cent. Such differences can only be due to local conditions preceding the admission of the patient, and as I am entirely ignorant of these conditions, I have endeavoured to eliminate them by adding all the figures together. We thus obtain the following table of the mortality in these three representative hospitals:

	Cases.	Deaths.	Mortality per cent.
Inguinal	496	99	19.95
Femoral	485	120	24.74
Umbilical	109	49	44.95
Total	1,090	268	24.58

The approximation of the total mortality to that met with in my own cases is so absolutely close that it may perhaps be regarded as correctly illustrative of English hospital practice.

A further point of interest appeared, in analysing my own cases, in the fact that the mortality had tended gradually to diminish, the first 55 cases showing 16 deaths (29 per cent.), while the second 55 yielded only 11 (20 per cent.). A progressive increase of recoveries was also found on dividing the 110 cases into three periods. The far larger figures obtained from the three London hospitals emphasize this improvement in results. In the years 1889 to 1894 (both inclusive) we find 427 cases with 130 deaths, or 30.44 per cent., while in the following six years we have 663 cases with 138 deaths, or 20.81 per cent., a reduction of one-third of the total mortality, and again a remarkable similarity to my own statistics.

This improvement in results can certainly not be attributed solely to improvements in the methods of operating, and is probably to be ascribed to the increasing intelligence of the patients, who more readily accept operation, as well as to an increase of confidence upon the part of the profession in general, with a more emphatic insistance upon the necessity for early interference. Possibly the hospital surgeon himself now operates more readily upon cases which would formerly have been treated by taxis, and would in some instances have been "cured" thereby.

A consideration of the causes of death in our fatal cases is also of interest. In 9 of the 27 cases the intestine was gangrenous or perforated by ulceration at the time of operation, and in 2 at least of these there was general peritonitis; of 10 cases with perforation or gangrene only 1 recovered, the remainder surviving for a few hours only. There remain 18 cases in which the intestine was reduced. Of these 14 died within 24 hours from shock or intoxication. One of these is especially interesting, as an umbilical hernia had been partially reduced, with marked improvement, two days before I saw her. Persistence of symptoms then led to operation *in articulo mortis*, which disclosed strangulation within the sac by a Meckel's diverticulum. Of the 4 still remaining cases one man, aged 84, died on the eighth day from pneumonia; a woman with very advanced mitral stenosis died on the fifth day from exhaustion, and 2 died from sepsis. One of the septic cases was an umbilical hernia with extensive ulceration, in which disinfection of the operation area was probably imperfect; the wound healed, but death occurred from exhaustion on the eighth day, and a localized intraperitoneal abscess was found beneath the wound. The other was a case of inguinal hernia which ran a normal course for 16 days, when suppuration began around the sac, and was followed by sloughing and exhaustion.

We may perhaps fairly summarize these conditions as follows: Of 27 deaths 9 were due to delay, leading to gangrene, and 14 to delay, which rendered the patient unable to bear the slight shock or to recover from the auto-intoxication of intestinal obstruction; 2 resulted from causes to which the operation was only subsidiary (advanced age and mitral stenosis); and 2 were direct results of the operation *per se*. The septic cases occurred in 1891 and 1894 respectively, since which years there have been great improvements in the equipment and technique of the operating theatres at the Manchester Royal Infirmary.

A further point which appears from these statistics is the importance of age in estimating the mortality of herniotomy: Of 27 fatal cases the average age was 50.2 years, while of 83 which recovered the average was only 41.7. Of the 10 infants and young children none died.

The methods of operation which were adopted varied from time to time. In almost all chemical antiseptics were somewhat freely used, a practice which I have now abandoned. Drainage by rubber tubes was adopted only in a few of the earliest cases; at a later stage gauze drains were employed only very exceptionally, the majority of the wounds being at once closed. The sac having been opened, its contents were always carefully washed with some antiseptic solution; herniated omentum was invariably removed, and the intestine was reduced in all "doubtful" cases. The gangrenous cases fall into two classes. In 8 the patient's condition was very bad, and the intestine was merely opened and left with or without a suture to attach it to the skin, the stricture being divided; of these 7 died. In 1 case several inches of small intestine were resected with end to end union by Maunsell's method; in another the caecum and a small portion of the ileum and colon were excised, union being again effected by Maunsell's method; both of these cases died within a few hours.

After reduction of its contents the sac was usually ligatured or sutured with silk and some method of "radical cure," which varied with the region and has varied also from time to time, was adopted in all but a few of the earlier cases, or in those which were at the time of operation obviously *in extremis*.

Two cases of inguinal hernia, which had been reduced *en masse* and which are fully recorded elsewhere, were treated by median laparotomy, both recovering.[6]

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TWO CASES OF INTERSTITIAL NEPHRITIS IN CONGENITAL SYPHILIS.

WITH REMARKS ON SYPHILIS AS AN ETIOLOGICAL FACTOR IN NEPHRITIS.

BY

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The following two cases are examples of a form of nephritis which has hitherto received but little attention:

Case I.

History.—A. C., female, aged 16 months, was admitted to Paddington Green Children's Hospital on September 20th, 1901. The parents were Italians and the father, who was said to have had syphilis, had died of heart disease. There had been one other child who was stillborn. The patient had appeared to be healthy up to the age of 6 months, when the right eye was noticed to be inflamed; the left soon became similarly affected and she began to lose flesh. During the two months before ad-

mission, she had wasted rapidly and had taken in the way of nourishment only a little beef tea.

State on Admission.—She was distinctly emaciated, weighing 12 lb., and presented evidence of congenital syphilis in the wizened face, the muddy complexion, and the sores around the anus and on other parts of the skin. She lay in a semi-comatose condition, taking no notice of anything, without voluntary movement, crying slightly only when disturbed, and never smiling. Owing to severe double ulcerative keratitis, with perforation of the cornea in the left eye, she was unable to see, and it was impossible to examine the discs. There were slight, but definite, evidences of rickets in the long bones. The right forearm was bent about the middle, the result evidently of an old greenstick fracture. The right arm lay motionless, apparently paralysed, and did not respond to any change of position. In marked contrast to this, were curious movements of superpronation in the left arm, suggesting athetosis. Sensation was dulled generally and the plantar reflexes were active. The spleen was enlarged and extended about an inch below the ribs. The cardiac action was weak but there was no evidence of organic disease. The lungs and liver and temperature were normal. Mercurial treated was adopted.

Progress.—During the seventeen days that she lived in the hospital, there were few changes to be noted. At times she passed a considerable amount of blood and mucus per anum without other evidence of intestinal disturbance. The right arm became rigid, and the same condition extended to the lower extremities, the toes and feet becoming fixed and pointed. There was also definite retraction of the head. On one occasion there was retention of urine, and urine drawn off by the catheter was pale in colour, and contained a small amount of albumen. On another occasion, she had an attack of hyperpyrexia, the temperature, rising to 106.4° F., with signs of extreme collapse. There was no improvement under the mercurial treatment, and she sank gradually with increasing coma and rigidity, the latter condition being very marked before death.

Necropsy.—Syphilitic arteritis of left, middle, and anterior cerebra arteries; softening of left frontal lobe; acute interstitial nephritis. The body was emaciated. On removing the dura mater, a quantity of clear, straw-coloured fluid was present in the subarachnoid space, being most abundant over the left frontal lobe. The left frontal lobe was small and shrunken, the convolutions in front of the fissure of Rolando being crowded together and greatly diminished in size, and the substance of the lobe soft and diffluent. The lateral ventricles contained a slight excess of clear fluid. The cut end of the left internal carotid artery projected rigidly from the upturned base of the brain, its lumen being open and the wall thick and white. There was also thickening and rigidity of the wall of the left middle and anterior cerebral arteries, and a small segment of the basilar artery showed a similar change. On microscopic examination of the left middle cerebral artery, the following changes were observed (Fig. 1): In the adventitia a wedge-shaped area,

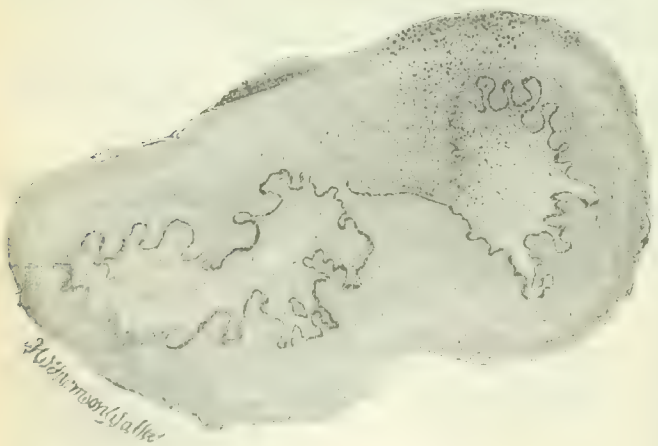


Fig. 1.—Section of left middle cerebral artery×60. The dark irregular line is the elastic lamina. Note the wedge-shaped area of infiltration of the outer and middle coats and the changes in the elastic layer and intima at the right upper segment. A fine line of new-formed elastic tissue is seen penetrating the thickened intima at the extreme left of the section.

base outwards, comprising about one-eighth of the circumference, was infiltrated with small round cells, and the vasa vasorum were here dilated and increased in number. This change was present in the corresponding part of the tunica media and completely obscured the muscle fibres. The fibres of the elastic lamina, corresponding to this infiltrated area in the outer and middle coats, were separated from each other by small round cells, the elastic layer being broader but less compact. At another part of the artery a well-marked strand of elastic tissue, apparently of new formation, penetrated into the thickened tunica intima. The changes in the intima were more marked than those in the other coats, and were not confined to a segment of the circumference. The endothelium showed abundant proliferation, but the greater part of the intima had the appearance of granulation tissue, the capillaries being derived from the infiltrated area of the outer coat. The right kidney was much enlarged and deeply fissured. The capsule stripped easily, and exposed a surface stippled with yellow dots and a few pea-sized yellow areas. On section (see Fig 2) only the upper pole of the kidney, about one-fifth

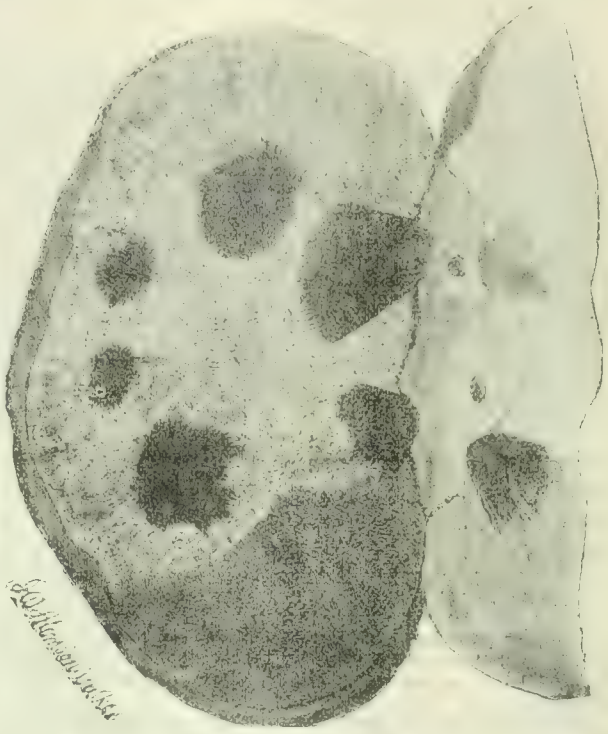


Fig. 2.—Naked-eye appearance of right kidney, Case 1, on section. The diseased portion (four-fifths) is pale in colour, and sharply defined from the dark normal (one-fifth) kidney substance.

of the cut surface, was normal in appearance. The rest of the cortex had a brilliant pinkish-yellow colour, with here and there small wedge-shaped or irregular areas of apparently normal kidney tissue. The limit of the change in the cortex was sharply defined from the normal kidney tissue. The pyramids were of a dark reddish-brown colour, contrasting strongly with the bright yellow cortex. The renal pelvis and arteries were normal. On microscopic examination (Fig. 3) the interstitial tissue of the cortex was densely infiltrated with round cells (Fig. 3.) Here and there the infiltration was so dense that the tubules and glomeruli were obscured, while in other areas, for the most part subcapsular, it was absent. Under the high power the cells in these infiltrated areas were found to be small mononuclear round cells and larger multinuclear cells, but there were also many large cells with a single nucleus. One would therefore infer that the process was in part an invasion of cells from the blood stream and in part a proliferation of the intertubular tissue. Fine capillary vessels were found in the infiltrated areas, and here and there their contents had escaped into the surrounding tissues. The adventitia of the larger vessels was infiltrated by closely-packed small round cells, but the media and intima were unchanged. The kidney tubules were widely separated by the infiltrated interstitial tissue. The lining epithelium was somewhat granular in appearance, and in many tubules the lumen was filled with casts of homogeneous material or masses of round cells. In the patches of dense infiltration the epithelium was shed, and blocked the lumen of the tubule. A few of the glomeruli showed a slight increase in their nuclei, but the majority of them showed no change. In the medulla round-cell infiltration was present, but only to a slight degree. In this part of the kidney there was engorgement of the blood vessels, and the straight tubules contained casts of round cells. The left kidney was slightly increased in size. The changes in its substance were similar in character to those in the right kidney, but much less marked in degree.

CASE II.

History.—The patient was a female infant, 8 months old. When first seen she had a small lump (? gumma) over the right frontal region, which had

been present for six weeks. She was ordered ½ gr. doses of grey powder twice daily. A week later she was found to be suffering from an acute septic sore throat, with general purpura and hyperpyrexia. She died within twenty-four hours of admission. There was nothing in her family or personal history pointing to syphilis, but her appearance at the first examination was considered diagnostic of that affection.

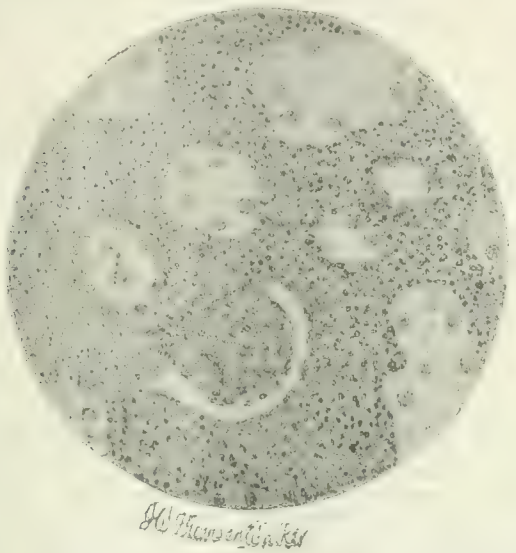


Fig. 3.—Section of renal cortex. Case I. × 450. The dense infiltration and the separation of tubules is well seen. One normal glomerulus is shown.

Necropsy.—The ossification of the cranial bones was remarkably incomplete, the various bones of the cranium being widely separated. A space the breadth of two fingers separated the squamous portion of the temporal bone from the left parietal, the gap being bridged by membrane. There was a large collection of clear straw-coloured fluid in the cisterna basalis and pontis, and the lateral ventricles were distended with similar fluid. A circumscribed patch of yellow lymph about the size of half-a-crown was present on the under surface of the right temporal lobe. The arteries of the circle of Willis and brain showed no abnormal changes to the naked eye. There was sloughing pharyngitis and tonsillitis. The left kidney was slightly enlarged, and the capsule stripped easily, exposing a healthy surface. On section the cortex was seen to be of normal breadth. The cut surface as a whole was pale in colour, with here and there pale yellowish patches in the cortex. These patches were most marked at an area midway between the upper and lower poles, and the convex border of the kidney was more prominent over this part. The patches gave the impression of an infiltration of the cortex, and were unlike the colour seen in fatty changes. At the bases of the pyramids there were well-marked dark haemorrhagic spots. The pyramids were normal. The right kidney was not enlarged and the capsule stripped readily. The cut surface was pale throughout, but showed none of the patches of infiltration seen in the left kidney. There were, however, several spots of ecchymosis similar in position to those in the left kidney. The remaining organs were normal. The microscopic examination of the kidneys demonstrated changes similar to those found in the previous case. There was the same diffuse infiltration of the cortex with round cells. The glomeruli and tubules were normal, but widely separated by the infiltration. The epithelium of the tubules was unchanged. The vessels of the cortex were engorged with blood. The infiltration was present also in the interstitial tissue of the pyramids but was much less marked, and towards the apex of the pyramid was entirely absent. There were none of the changes found in chronic nephritis.

In the first case there were, in addition to the interstitial nephritis, pathological changes in the cerebral arteries which are worthy of attention. It is convenient to consider these arterial changes first before turning to the nephritis common to both cases.

The condition is one of arteritis obliterans of the cerebral arteries alone, occurring in a syphilitic child, and is therefore an example of Heubner's syphilitic endarteritis. Microscopically, there is nothing to distinguish this condition from a similar obliterative process which takes place in chronic inflamed areas, in arteries after ligature and in the neighbourhood of tumours, and the diagnosis, therefore, rests upon the localization of the arteritis to the cerebral arteries, the history of syphilis and the absence of any of the other causes just mentioned.

The process was considered by Heubner[1] to be primarily a proliferation of the tunica intima, and he believed that changes found in the muscular tunica and the adventitia were secondary, and were by no means an integral part of the process. Friedlaender[2] and Baumgarten,[3] on the other hand, refer to the adventitia as the starting point of the process. We are inclined to agree with the latter authorities in laying greater stress on the changes in the vasa vasorum of the adventitia than the proliferation of the endothelium.

It is certainly possible to cut sections in which no change is apparent in the middle and outer coats, but it will be found that in other sections in the immediate neighbourhood there is well-marked infiltration around and increase in number of the vasa vasorum.

The process appears to consist in the production of granulation tissue in the vessel wall, which begins in the outer coat but only reaches its greatest development in the intima. The vessels of this granulation tissue are derived from the vasa vasorum, a very easily observed fact, and it is not unreasonable to suppose that the inflammatory phenomena commence in the vasa vasorum themselves. Changes in the elastic lamina are very constant, and it has been said that the development of a secondary layer of elastic tissue, such as our sections show, is characteristic of the syphilitic form of obliterative arteritis. We are not, however, convinced that this phenomenon has much diagnostic value.

Syphilitic arteritis is an uncommon complication of congenital syphilis. Heubner's original cases were all adults, and so were the cases on which the observations of nearly all the subsequent writers were based. Only a few isolated cases of arteritis syphilitica in congenital syphilis are found in the literature, such as those of Barlow[4] and Chiari.[5]

The occurrence of this process in the early months of congenital syphilis raises a point of some interest. Syphilitic arteritis is usually looked upon as a tertiary manifestation, and there is no doubt that the condition, with or without the presence of gummata in the immediate neighbourhood of the affected arteries, may coincide with tertiary lesions and chronologically come into this period. There is, however, undoubted proof that the condition may occur during the secondary period, accompanied by symptoms of secondary syphilis, and we have seen sufficient evidence, *post mortem* and clinical, to feel convinced that it has perhaps more claim to be considered a secondary than a tertiary syphilitic process. Such cases as the one under consideration certainly give support to this view.

When we turn to the renal changes we are on ground common to the two cases. In both cases the process consists of a diffuse infiltration of the interstitial tissue of the cortex, and in both there is evidence of congenital syphilis. Dr. Stoerk, of Vienna,[6] has recently described the effect of syphilis upon the kidney during fetal life. An arrest of development takes place, or at least the growth is retarded, so that at birth the outer layer of cortex contains imperfectly-developed tubules and glomeruli. Such, then, is the condition which may truly be called the congenital syphilitic kidney.

In the two cases we present the kidneys are fully developed, and the condition in no way corresponds to that described by Stoerk. They are cases of interstitial nephritis occurring in the subjects of congenital syphilis, and what we have to consider is how far the syphilitic poison is responsible for the production of the condition.

It is recognized that the etiology of nephritis in childhood is in many cases extremely uncertain. Dr. Leonard Guthrie,[7] in 1897, when discussing eight cases of chronic interstitial nephritis in childhood, insisted upon this uncertainty.

More recently Dr. Guthrie[8] reported a case of chronic interstitial nephritis, due to congenital syphilis, and he says: "On the whole, although the evidence is far from being conclusive, I am inclined to think that chronic interstitial nephritis in young children is due to hereditary syphilis."

Massalongo[9] has also fully described a case of chronic interstitial nephritis in a syphilitic child. On the other hand, cases of acute interstitial nephritis in congenital syphilis have been described by Coupland[10] and Ströbe.[11] If we look at the records of cases of congenital syphilis we get some idea of the frequency with which renal disease is found in this connexion. Thus we find that Speiss[12] has collected 34 cases, 10 of which had renal disease.

The association of renal disease and congenital syphilis is therefore not very uncommon, and a certain number of cases are on record in which interstitial nephritis, either acute or chronic, has occurred in these subjects without any very evident exciting cause.

The importance of syphilis as the causative factor in these cases cannot we think be disregarded. We would go further, and state our belief that the sole cause in many cases of interstitial nephritis in children is the syphilitic poison.

Nor does the importance of this question of etiology cease with these cases occurring in childhood.

The early changes in the granular kidney of adults are still speculative and the cause obscure. We are in accord with Dr. Guthrie when he suggests that hereditary and acquired syphilis may account for many of these cases also. It is possible, and we believe probable, that many cases such as those we have described have been passed over in the *post-mortem* room. For although in one of the kidneys of the first case the changes were very striking to the naked eye, yet in the other kidney they were but slight, while in the second case only at one part of the left kidney was there any change likely to arrest the attention, and this did not by any means lead one to expect the extensive infiltration revealed by the microscope. Moreover we read that in two of the cases described (those of Coupland and Ströbe) the kidneys showed no changes to the naked eye.

We would therefore submit that syphilis plays a more important and frequent rôle in the etiology of nephritis in childhood, and perhaps also of adult life, than has hitherto been recognized.

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KNOCK-OUT BLOWS.

By JAMES GRAY DUNCANSON, M.B., C.M.,
Shooter's Hill.

I THINK medical men are somewhat tardy in considering those accidents which are directly related to sport; by so doing they are causing themselves to be ignored by many in the athletic world to the benefit of the quack and the bonesetter. Of late twopenny monthly papers of mushroom growth have sprung up, professedly devoted to physical culture; they often contain wholesale condemnation of the medical profession and all its science and art; by their efforts they are leading many of the ignorant and unwary into the hands of the charlatan.

During the last few years boxing has in this country received a marked stimulus, and is recognized by civil, military, and other authorities as a sport requiring courage, strength, and self-control, with resource and endurance, therefore deserving all encouragement.

A general impression prevails that there is only one blow—that on the point of the jaw (dealt with in a paper by me published in the BRITISH MEDICAL JOURNAL of April 4th)—which constitutes the knock-out blow. This is an error. There are a number of places more or less easily defined in area, on the head and body, which are specially vulnerable, and although the danger is minimized to a great extent owing to the increased area covered by a boxing-glove, which may weigh from 2 oz. to 6 oz. or more, as compared with the naked fist, still a dangerous and even fatal blow may be delivered with the gloved hand. I will briefly enumerate the different dangerous points, and shortly describe the effects of a heavy blow on each.

The temple appears to be a particularly vulnerable part of the head, and in the days of bare knuckles a blow upon it was frequently attended by serious results. Fracture has occurred, but the lesion now produced is usually laceration of the brain substance, with haemorrhage, as was shown in a necropsy some time ago, on a boxer killed in the ring. The blow on the angle of the jaw is usually directed upwards and a little backwards; this forces the condyle of the lower jaw into the glenoid fossa of the temporal bone, causing severe concussion and even fracture of the base of the skull.

A swinging short-arm blow delivered on the ear may cause rupture of the membrana tympani, dizziness, and collapse, followed by sickness; on examination, air is found to pass through the rent with a hissing sound which may be heard at a distance from the man; recovery is slow, but may be perfect. One case I observed was in a bandsman of the 10th Hussars; he had received a blow such as I describe, paid no attention to it till next day; when he came to blow a cornet he was amazed by the hissing in his ear. The blow on the point of the jaw is the one most frequently attempted; the symptoms produced and their explanation I had the opportunity of bringing before the profession in a previous number of the BRITISH MEDICAL JOURNAL. A dangerous blow may be delivered on the neck if, when the head is thrown back, the side of the neck being exposed, the gloved hand be driven forcibly on a spot midway between the angle of the jaw and the sterno-clavicular articulation (the carotid hit); another point is just on the larynx or hyoid bone. The danger in these blows lies in the concussion conveyed through the large and important nerve trunks which run down the neck. The hit on the larynx if given with the ungloved fist may cause instant death, due no doubt to irritation of the laryngeals and their connexions.

Blows on the body must be above the belt, which is placed about the level of the umbilicus. A severe blow delivered on the chest wall about the region of the heart may cause syncope and death. The agony is great, and very easily disables the man from taking further part in the contest. To have the worst results manifested, the muscles of the chest walls must be relaxed at the moment of contact, and the lungs in the condition of partial or full expiration; this allows the force applied to be brought almost directly to the heart wall itself, without the intervention of the elastic framework which is formed when the lungs are full of air and the intercostal and chest muscles braced up. Diaphragmatic blows are not as a rule so dangerous to life, as the shock produced is of a more transient character. There is collapse, with difficulty in getting breath and sometimes unconsciousness. Brisk rubbing is the most satisfactory treatment, warmth externally and, if necessary, stimulants. Blows over the kidneys are still I think inadvisedly admitted as fair, they are delivered with a swing, when the opponent is half turned, his side undefended and exposed. Great shock results, due, no doubt, to the intimate relationship of the kidney nerve supply with that of the sympathetic and central nervous systems. The pain is severe, and there may be haemorrhage, with or without rupture of the capsule. In the old-time fighting with the bare knuckles the blow was most dangerous; great agony and even loss of life attended it.

The blow on the mark is a most dangerous one, and severe in its immediate and after-effects; in one memorable fight the man who lost the contest through being struck this blow was never the same again.

Captain Edgeworth Johnstone says in his book on *Boxing*, page 142: "The most dangerous and infinitely painful form of 'knock out' is that which is accomplished by a left hand hook on the mark." The popular idea is that it knocks the wind out of the body and thus produces painful gaspings for breath. The man struck falls to the ground, doubled up and gasping, he turns intensely pallid, face becomes drawn, he may vomit, strives perhaps to regain his feet, wriggles round and sinks back again, occasionally loses consciousness altogether, pulse weak and irregular, cold sweat breaks out on the face and body, shock is profound, nervous prostration pronounced and lasting, recovery slow and sometimes incomplete. The specially sensitive area on the abdominal wall termed the "mark," is the size of the palm of the hand, and corresponds with the centre of a triangle formed by the xiphi-sternal articulation above and a line joining the bony ends of the seventh ribs below; behind this lies the pyloric end of the stomach. We all know that injuries to, and operations on, the stomach are attended by more shock than is the case with almost any of the other abdominal organs. Edgeworth Johnstone says "the effects are due to irritation of the pneumogastric setting up cardiac failure." When we consider the nerve supply to the skin of this region and to the structures and organs beneath we readily come to a just explanation. The skin and muscles (recti) are connected by the lower dorsal nerves and splanchnics with the solar plexus which is related to the vagi in a ganglionic arrangement in the stomach walls (Auerbach); the intercostals and diaphragm likewise receive their nerve energy from a similar source. Thus we have a more complicated physiological condition of affairs than at first sight appears. The pugilist talks of a "knock-out blow on the solar plexus"; this is an impossibility, the stomach is

really the organ which receives the shock after the skin and muscles, and from it the nervous disturbance originates. The vagi are powerfully affected along with the sympathetic and the great solar plexus: a sudden fall of blood pressure ensues, probably due in part to a dilatation of all the abdominal blood vessels, with a direct disturbance of the cardiac, respiratory and even the higher centres.

Unfortunately, as happens in all forms of competitive sport, accidents occur, and in a few cases these have been attended with fatal results. The cause of death may be direct or indirect; fracture of the skull, laceration of the brain substance with haemorrhage, rupture of some of the large viscera, or shock without any definite external or internal lesion. This last is interesting, and has not been considered so far as I know. A man, perhaps of weak constitution, has trained and reduced his weight and brought himself to a state of extreme fineness, probably staleness. He has sapped his nervous energy. He enters on a prolonged contest of, say, twenty rounds; blow after blow is struck; he exerts himself to the utmost and fights vigorously: a round is at last reached when he begins to give way: he is now reduced to his last scrap of energy; a sharp punch lands on some vital spot, it may be jaw, heart, or stomach; Nature is done, the man collapses, becomes unconscious, the pulse weakens, and he dies some hours later. He is a victim to what Sir Lauder Brunton has termed the "summation of stimuli."

When a man is knocked out and does not speedily rally, the first treatment is to get him away as soon as possible from his surroundings, well wrapped up in warm blankets, and put to bed; stimulants should be administered, and strychnine hypodermically if necessary. As he comes round, the fact of his defeat should be carefully withheld from him. Of course, when some more serious lesion exists, such as fracture of the skull, the treatment must be conducted on the recognized surgical lines.

These are only blows which may occur in boxing under Queensberry rules, and no mention is made of foul blows, nor of those dangerous blows resorted to in *la Savate*, nor of those secret blows and holds with a scientific knowledge of which the Japanese are credited.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

A POSSIBLE USE OF THE ANTRA, FRONTAL SINUSES, ETC.

I do not remember having read anywhere that the large cavities situated in the front and lower part of the head not only by their presence lighten it, but actually help to support it, and take the strain off the ligamentum nuchae and the muscles of the neck, but I venture to suggest that this is so. These cavities, including the frontal, sphenoid, ethmoid, and nasal sinuses, together with the antra and the top of the pharynx, are filled with air which is considerably warmer than the outside atmosphere and therefore much lighter. When we consider the great extent of these cavities I think we must admit that being filled with lighter air they must at any rate reduce the weight of the head in some degree. I have seen a balloon inflated with heated air (not gas) rise from the ground with a heavy car attached, and I cannot help thinking that the warm air in the cavities above mentioned plays a part which, as far as I can ascertain, has been overlooked.

Leytonstone. Arthur Todd-White.

IS IT NECESSARY TO TIE IN THE CATHETER IN WHEELHOUSE'S OPERATION?

I have recently had occasion to perform this operation on three cases.

In the first two a No. 12 catheter was tied in for four days, as recommended in the textbooks, and the urine conducted away through an indiarubber tube.

As great discomfort was occasioned by the tied-in catheter I discontinued its use in the third case.

The operation was completed in the usual way, and the perineum plugged with a mass of cotton wool. For the first day urination took place into a bedpan. For the next five days the patient sat in a hot hip bath three times, and passed urine in it. On the sixth day, under nitrous oxide, a No. 12 bulbous-pointed sound was passed with the greatest ease. Subsequently to this ½ gr. of cocaine dissolved in a couple of drachms of water was injected into the urethra, and a sound passed daily without the slightest pain. I think the use of gas on the sixth day was unnecessary, and that cocaine would have sufficed. The hot baths were continued until the wound had practically healed.

The great diminution in the amount of discomfort occasioned to the third man, as compared with the other two, was most marked.

One cannot expect to get a growth of granulation tissue round the catheter in four days sufficient to form a continuous urethra, and one cannot therefore see the necessity for the continuous presence of the catheter. With a free perineal opening there can, of course, be no fear of extravasation of urine.

S.A.C. Hospital, Pretoria. F. J. W. Porter, Major S.A.C.

SYPHILITIC PARALYSIS.

À propos of the delightful lecture in the British Medical Journal of April 4th, p. 773, by Sir William Gowers, as also the recent discussion on the same subject before the British Medical Association, the following brief notes of a case may not be uninteresting:—

A. B., aged 27, had retention of urine with overflow for two or three days before medical assistance was obtained, his friends thinking it was incontinence. He then presented quite a typhoid aspect, with brown dry tongue, sordes on the teeth, pulse quickened, and temperature slightly raised. The abdomen was immensely distended and dull on percussion all over, while urine kept dribbling away. He lay on his back quite helpless, especially in his lower extremities. The presence of copper-coloured cicatrices over the shins led to a confession of syphilis the previous year, elsewhere treated. A large quantity of ammoniacal urine was withdrawn by the catheter, followed by a considerable muco-purulent residuum, and the bladder was washed out by siphonage with boracic acid. This had to be done twice a day for two or three weeks, while the biniodide with liquor strychninae was administered internally, a Gaiffe's battery also being used. He then gradually began to regain the use of the bladder and his other faculties, and in due course was able to be up and about. Now, after eight years, he still retains the distinctive traces of his acute seizure in his slouching ataxic gait. He otherwise seems quite well.

Sunderland. B. Strachan, M.B.

ACUTE RETROFLEXION AFTER CYCLING.

I have this year had three cases of acute retroflexion of the fundus of the uterus in strong women occurring after long bicycle rides. The point in these cases has been that the retroflexed portion was the fundus of the uterus or the upper half of the body of the uterus. Consequently the diagnosis was difficult, as the cervix was little, if any, out of position, and the finger felt a free posterior wall of the uterus. The sound passed a normal or approximately normal distance, and therefore the uterus was enlarged in each case. The pain and tenderness, metrorrhagia, discharge and weight, etc., in the pelvis were severe, and two of the cases were diagnosed as myoma of the uterus. The third was complicated by salpingo-oöphoritis on the left side, and a very doubtful diagnosis and prognosis were given.

Professor Taylor has pointed out that even a pyosalpinx or tubal sac may be undetected when it is in the upper back region of the pelvic cavity, and I cannot but think that these high retroflexions, with a normal length of cervix and body below the retroflexion and very little, if any, out of their normal station, may be within this obscure province.

These cases emphasize the necessity of examination under an anaesthetic as often as possible in pelvic diseases. They also show how often women overdo themselves in cycling long distances and climbing hills.

Wolverhampton. Frederick Edge.

MENSTRUATION DURING PREGNANCY.

On p. 154, vol. 1, 7th edition of Playfair's *Science and Practice of Midwifery* we read that "in certain cases menstruation may go on for one or more periods after conception, or even during the whole pregnancy. The latter occurrence is certainly of extreme rarity, but one or two instances are recorded by Perfect, Churchill, and other writers of authority, and therefore its possibility must be admitted." Again, on p. 155, "The occurrence, however, is so rare, that if a woman is menstruating regularly and normally who believes herself to be more than four months advanced in pregnancy, we are

justified *ipso facto* in negativing her supposition." One is warned against mistaking haemorrhage due to placenta praevia, abrasion of cervix or a polypus, for menstruation. Lewers[1] says: "Even as late as the fifth or sixth month there may be haemorrhages at intervals of a month, which the patient takes for ordinary menstruation. The explanation of haemorrhages so late as this must be that there is really a threatened abortion each month, and that the bleeding occurs at intervals of a month on account of the monthly congestion of the uterus, which probably goes on even during pregnancy. Playfair[2] says periodical bleeding after the third month can only occur from the canal of the cervix.

In view of these statements I think the following case worthy of record:

R. M., aged 33, wife of a farm labourer, was seen by me in February last. She had had four children, youngest 2 years 2 months of age. No miscarriage. The menses were regular till marriage, then became irregular mostly in the direction of infrequency. She never lost any blood whilst carrying the above children. She has not had metrorrhagia, dysmenorrhoea, or leucorrhoea. The usual length of her periods was from five to six days. She now believes herself about eight months gone, having had the usual symptoms. There is no local pain. The bowels have been regular. She missed two periods to begin with: the remainder have come quite regularly every twenty-eight days, and lasted the same time as usual. No loss whatever has taken place between times. Under these circumstances I strongly urged a local examination, but unfortunately she declined to have one, "as she felt quite comfortable."

On April 1st patient was confined shortly after 2 a.m. of a healthy female child. The labour was quite easy, with head presentation. The placenta, etc., were delivered entire spontaneously. No undue bleeding. The patient's last period commenced February 21st, and lasted five days as usual. The one that was due on March 21st did not appear. She has thus missed the first two and the last periods. April 12th. Patient has progressed without a bad symptom.

It would be interesting to know the source of the bleedings in this case. I think the theory that they were due to threatened abortion unlikely for the following reasons:

1. There had been no previous abortions.
2. The patient has throughout been in good health, living in the country.
3. If the tendency to abortion or miscarriage had been so marked as to appear at seven monthly periods, such would almost certainly have been completed at one time or other, especially as the patient did not lie up or otherwise attempt to stave off such an event.

Eastbourne. T. PETTEY, M.D., F.R.C.S.Eng.

SYMMETRICAL GANGRENE IN ENTERIC FEVER.

IN the BRITISH MEDICAL JOURNAL of January 24th Civil Surgeon Rooth reports three cases of symmetrical gangrene after enteric fever. It may be interesting to record another case which occurred in the Field Hospital, Mars Hill, Dordrecht District, Cape Colony, in April, 1902. In this case, which was that of a male native, aged about 28, the gangrene commenced about the end of the third week of the fever with the formation of bullae, and involved the toes, outer side of the feet, heels, and part of the soles of both feet. Lines of demarcation rapidly formed, and there was no extension of the gangrene beyond the areas over which it was originally noticed. These parts became hard, dry, and shrivelled, and there was extensive suppuration along the lines of demarcation. The case was sent as soon as possible to the C.C.F. Hospital at Dordrecht, where both feet were, I believe, amputated.

The camp where this case occurred was situated on a spur of the Drakensberg, over 6,000 feet above sea level. The nights were very cold, and I am much inclined to the opinion that the gangrene was due to frostbite. I have seen many cases of enteric among natives in the Eastern Province of the Cape Colony, but I had not before seen or heard of one in which this complication occurred. It exactly answered to the text-book description of frostbite, and had no resemblance to the rare cases of arterial gangrene after enteric fever.

Pretoria, Transvaal. T. McD. TROUP, M.B.Cantab.

A DRUG RASH.

ON February 11th I was consulted by a young domestic servant, who had noticed that morning an itching rash on her face and neck. Her temperature was 99.8°, tongue furred, the fauces injected, and there was some malaise. During the next twenty-four hours the rash spread over the whole body, being especially vivid and almost confluent in the groins. It closely resembled the rash of scarlet fever. On inquiry I found that for two days previously she had been taking a much advertised remedy known as Doan's Backache Kidney Pills. As an accurate diagnosis was of great importance I isolated the patient. The subsequent history was uneventful. There was no peeling. Some days later I obtained a copy of the pamphlet which is issued with the remedy, in which it is stated, "we have known of some cases where they have driven the poisons and impurities out of the body on to the skin, in the form of a red rash." "It is one of the best results that could happen." "Don't stop taking the pills." Comment on the last two extracts would be useless, but I have recorded the case in the hope that it may be useful to other general practitioners.

Hartley Wintney, Winchfield. PERCY E. ADAMS, M.D.Lond.

[1] *Dis. of Women*, 4th edition, p. 174.
[2] Loc. cit.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

ST. BARTHOLOMEW'S HOSPITAL.

CASE OF ILEO-ILIAC INTUSSUSCEPTION SPONTANEOUSLY CURED.

(Under the care of D'ARCY POWER, F.R.C.S.Eng.)

[Reported by W. H. ATTLEE, M.B., House-Surgeon.]

A MALE infant, aged 6 months, was admitted into St. Bartholomew's Hospital on February 23rd, with the following history:

History.—He was breast-fed and was in his usual health until about 7 p.m. on February 20th, when he suddenly began to scream and to draw up his legs. This continued throughout the night, during which he refused to take the breast and vomited four times. On the morning of February 21st he passed a very loose motion, he screamed and seemed in pain during the whole of the day and vomited frequently. In the evening he passed a quantity of blood and slime with a small amount of faecal matter. On February 22nd he seemed in much the same condition, the screaming and vomiting continuing. More blood and slime was passed during the afternoon, but no faecal matter. He had never been given anything but the breast, and had never been ill before.

State on Examination.—On admission he was found to be a healthy looking fat baby. He lay in his cot on his back with his knees drawn up towards his abdomen, continually screaming as if in pain and was very restless. His temperature was 99.2°, his pulse 120, and his respirations 36. The tongue was covered with a thin grey fur and was moist. The abdomen was not distended and moved well. Nothing abnormal could be found on palpation. No tumour could be felt and there was no obsence of resistance in the right iliac fossa. The rectum was empty and the examining finger was covered with blood and slime. Soon after admission a small quantity of blood and slime was passed.

Operation.—Immediate laparotomy was decided upon, and the operation was undertaken by Mr. D'Arcy Power at 1.15 a.m., an hour and a-quarter after admission. Chloroform was administered, and an incision 2½ in. long was made in the middle line midway between the umbilicus and the pubes. The interior of the abdomen was explored with the finger and a piece of the small intestine presented in the wound. A portion of this about 3 in. in length was intensely congested and covered with flakes of lymph. At one spot in this area the intestine was constricted, appearing as if it had been nipped there, and the peritoneum covering it was abraded. There was, however, no invagination. The intestine was then returned to the abdomen, and the interior of the abdomen again examined with the finger, but nothing further was discovered which was abnormal. The peritoneum was united with interrupted sutures of fine silk, and the skin and muscular layer brought together with interrupted sutures of fishing gut. The child was back in its cot twenty-five minutes after the commencement of the anaesthetic.

Progress.—There was very little collapse following the operation, and beyond troublesome vomiting which lasted for three days, convalescence was uninterrupted. The wound healed by first intention, and the child left the hospital on March 16th well in every way.

REMARKS BY MR. D'ARCY POWER.—I believe this to be one of the few recorded cases of a condition which, under any circumstances, must be a very rare phenomenon, though the spontaneous reduction of a true intussusception is not so rare clinically as it is pathologically. There has long been an

opinion that the sudden and painful attacks of colic which so often torment the very young and the very old may be caused by short and temporary intussusceptions, the result of irregular peristaltic action. The symptoms of intussusception have appeared in children and have afterwards disappeared, but to my knowledge there are very few cases in which the spontaneous cure of an intussusception has been verified by direct observation. The present case is further of interest because the intussusception was ileo-iliac, a form of invagination which is usually looked upon as the most serious, for the two pieces of intestine are of the same size and the strangulation is usually complete and acute. As we did not actually see the intussusception it might be said that the inflammation of the small intestine was due to a local enteritis or to the presence of a constricting band. The thickened and parchment-like feel of the intestine and the narrowing in the middle of the inflamed area were so exactly like the changes found after the ordinary surgical reduction of an intussusception that I had no hesitation in saying that the child had suffered from an intussusception, which had just reduced itself spontaneously.

The other recorded case of spontaneous intussusception is by Dr. G. Grey Turner, Surgical Registrar at the Royal Infirmary, Newcastle-on-Tyne.[1]

A child of 3½ years was admitted to the infirmary. Six days before it had been seized with acute abdominal pain, accompanied by vomiting, and followed by the passage of mucus and blood by the rectum. These symptoms continued up to the time of admission. When first seen at 11 a.m., a sausage-shaped swelling, which hardened and relaxed, was plainly felt in the right iliac fossa, making the diagnosis certain. The abdomen was opened at 12 30 the same morning. The peritoneum contained some free fluid, but no intussusception could be found. The lower three or four inches of the peritoneum were reddened, and the peritoneal coat was roughened. The involved bowel was thick and oedematous, and the glands in the corresponding part of the mesentery were enlarged. The whole appearances were such as to suggest that an intussusception had recently been reduced. The abdomen was closed, and the patient made a good recovery.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

Professor E. Klein, F.R.S., Vice-President, in the Chair.

Tuesday, April 21st, 1903.

The Action on Bacteria of Electrical Currents of High Potential and Rapid Frequency.

Mr. Alexander Foulerton and Dr. Kellas read a paper on this subject. In a former communication to the Society at a laboratory meeting last year the authors had given the results of their earlier experiments, which had shown that bacteria suspended in water could be destroyed by the discharge of currents of high potential and rapid frequency in an atmosphere of common air and close to the surface of the fluid. The bacterial emulsions were contained in ordinary glass test-tubes, through the bottom of which a length of platinum wire was sealed. The current used was one of from 2.5 to 5 ampères, the voltage varied from 35 down to 24, and the bacteria were destroyed after an exposure to the current of from 10 to 45 minutes. The duration of time before sterilization of the bacterial emulsion apparently varied with the intensity of the current employed. The bacteria thus tested were B. typhosus, B. coli communis, B. dysenteriae (Flexner), B. anthracis (sporing and non-sporing cultures), S. pyogenes aureus, streptococcus pyogenes, B. pyocyaneus, and B. prodigiosus. Further experiments had now been carried out in order to determine the precise cause of the sterilization, and it had been found that if the experiments were carried out in an atmosphere of pure hydrogen the bacteria would in some cases survive an exposure to the discharges of at least an hour and a-half's duration. It had also been found that the organisms were apparently unaffected when the discharge was sprayed over the surface of a growth on a sloped agar tube in an atmosphere of hydrogen. Further, it was found that when the discharge was sprayed over the surface of water, in an atmosphere of common air, under the conditions of the previous experiments there was a rapid development of acidity in the fluid, due to the formation of nitrous and nitric acids from nitrogen peroxide formed by the discharge of the current in air. Under the conditions of the experiments the nitrous acid was rapidly changed to nitric acid; and it appeared that the germicidal action manifested was chiefly due to the latter substance, and it seemed that the solution of the nitrogen peroxide by the fluid was assisted by the electric discharge on to the surface, the gas being carried down to the fluid, as it were, by the discharge. And it was not unlikely that with the discharge of such currents over the skin a somewhat similar penetration of the chemical products might occur. In any case, it seemed as though the discharged current had very little direct action on bacteria with exposures of moderate duration. The useful effect of the discharge of current in certain conditions when ulceration was present must be taken as being due, at any rate in part, to the germicidal action of chemical decomposition products formed in the air. It was possible that in morbid conditions, not apparently caused by parasitic infection, the favourable results sometimes observed might be in part due to the action of nascent and active nitrogen compounds penetrating the tissues in minute quantities. It was not improbable that the electrical discharge on the surface might favour the penetration of the skin by such bodies. Some experiments had also been carried out in which the discharge had been sprayed over the bacteria in an atmosphere of carbonic acid. But the results were at present contradictory, and further experiments were in progress.

The Chairman thought that there were difficulties in thinking that the action of the currents was solely chemical, or due to the production of chemical disinfectants, since the results upon particular micro-organisms did not quite correspond with those of the disinfectants best known; thus staphylococcus aureus was more readily killed than streptococcus pyogenes.

Mr. Foulerton observed, in reply, that the amount of nitric acid, which the authors considered the bactericide, possibly varied, and at present they had not estimated this quantitatively.

A Granuloma due to a Higher Mould.

Dr. Lazarus-Barlow corrected a statement made at a previous meeting of the Society in regard to what had appeared an example of the above. The same patient had since presented himself with two fresh abscesses. Cultures from the pus showed a typical streptothrix, and this corresponded with the masses of growth demonstrable in the tissues themselves, to which he had referred on the former occasion. The mould grown from the dried cover-glass films before he now held to be a contamination.

A Case of Streptothrix Infection.

Dr. D'Este Emery recounted the case of a young woman who presented an extensive actinomycotic lesion of the left side of the face extending to the chest, the jaw being also involved. The disease was successfully treated by incision and scraping, accompanied with the use of potassium iodide. One point of especial interest in the morphology of the the micro-organism was that if grown under aërobic conditions, only bacillary forms were produced; if under anaërobic conditions, a branching mycelium grew. He did not think the bacillary form due to the breaking up of filaments.

Mr. Foulerton thought this particular streptothrix identical with one he had met with in three cases. In a slow-growing organism of this class segmentation and subdivision would proceed with mycelial growth; the real test of the micro-organism passing through a bacillary phase would be that the bacilli should undergo fission, and this Dr. D'Este Emery did not appear to have observed.

The Influence of Salts on the Action of Immune Haemolysins.

Dr. W. Bulloch described a new method of preparing the stroma of the red blood corpuscles, and showed that the stroma was the part which gave rise to the formation of amboceptors. In the stroma this property was probably resident in the nucleo-proteid, as the haemolysin formation was lost if the extractives (lecithin, cholesterin) were removed by ether. He also showed that certain salts in isotonic solution were capable of arresting completely the haemolytic action of immune serums. The case of magnesium sulphate was specially investigated, and shown to be caused by the salt preventing the union of the complement with the amboceptor.

Dr. A. E. Wright suggested that the inhibitory effect of magnesium sulphate might be due to its action upon other salts present in the fluid.

Dr. D'Este Emery suggested that the presence of other salts might be necessary for the reaction, as held in agglutination.

Sedimentation Test in Tuberculosis.

Dr. A. E. Wright remarked that the technique here offered the chief difficulty. The method was that of Koch, and consisted in the use of powdered bacilli in place of the entire

[1] *Northumberland and Durham Medical Journal*, 1903.

micro organisms; the powder was used as in an agglutination or sedimentation test. The bacilli were killed with alcohol; ground with salt solution, centrifugalized to get rid of the coarser particles, and then used upon the serum to be tested. The sedimentation, so far, he had not found to occur constantly with the serum of tuberculous patients, but his observations were as yet only in an early stage of progress. Possibly the actual determinant of the sedimentation was electrical, as in the production of geological sedimentation.

In answer to Mr. S. G. SHATTOCK, who had unsuccessfully tried to dissociate flakes of human tubercle bacilli by floating them on sterilized salt solution (following Professor Klein's positive results with bacillus pestis), Dr. WRIGHT stated that the grinding adopted by him did not dissociate the bacilli, for microscopic examination showed no complete micro-organisms; they were broken up into a granular débris.

LIVERPOOL MEDICAL INSTITUTION.

RUSHTON PARKER, B.S., F.R.C.S., President, in the Chair.

Thursday, April 2nd, 1903.

IDIOPATHIC DILATATION OF COLON.

MR. R. W. MURRAY related a case of idiopathic dilatation of the colon occurring in a child aged 3 years. The child had suffered from constipation and abdominal distension from birth, and during the last twelve months the distension had become excessive, the abdominal girth measuring as much as 39½ in. After abdominal section it was found that the sigmoid flexure and descending colon were enormously dilated, the bowel measuring 6 in. in diameter. The distended gut was excised, the transverse colon and the rectum being united end to end by simple suture. The result had been most satisfactory. The child had improved in health, and now suffered from neither constipation nor distension.

The PRESIDENT had never met with a similar case, and congratulated Mr. Murray on his successful treatment.

AMPUTATION OF THE UPPER ARM AND SCAPULA.

Mr. ROBERT JONES described the case of a woman of 72, who complained of pain shooting down the arm and into the neck. There was limitation of movement and swelling, but no fluctuation, no enlarged veins, pulsation, or bony crackling. A series of *x*-ray photographs were taken which exhibited a blurred outline of the head and neck of the humerus, strongly suggestive of periosteal sarcoma. Three months after the onset of symptoms spontaneous fracture occurred. At the operation the growth was found to have originated within the upper end of the humerus, causing spontaneous fracture. The fractured ends were friable, the glenoid and surrounding muscular tissue having suffered invasion. Microscopically examined the growth proved to be an endothelioma. The patient made an uneventful recovery.

EXSECTION OF TWO-THIRDS OF THE FIBULA FOR CENTRAL SARCOMA.

Mr. ROBERT JONES related this case. The patient was a girl of 8 years. The swelling of the upper part of the fibula was firm and somewhat tender to pressure. There was no distension of superficial veins and no bony crackling. There was no history of accident and very little pain or limp in walking. The limp had only been noticed a few weeks. The exsection was free, and no functional disability followed. Mr. Jones emphasized the value of radiography in endosteal sarcoma, which rendered the diagnosis sufficiently accurate to enable the surgeon to plan his operation beforehand as to exsection or amputation.

Mr. G. P. NEWBOLT emphasized the value of radiography in the early diagnosis of central bone growths.

The PRESIDENT drew attention to the diagnostic significance of neuralgic pain.

Mr. MURRAY also spoke; and Mr. JONES replied.

ABDOMINAL SECTION.

Dr. ARTHUR WALLACE read a note on a method of dealing with the parietes in abdominal section. After a short review of the disadvantages entailed by the use of the median incision, even when combined with suturing in layers, and a brief mention of the procedures employed by Jonnesco, Juvara, Segond, and Abel, a method was described by which the onus of supporting fascial layers weakened by incision was thrown on to the uninjured rectus muscle. A vertical incision through skin and subcutaneous tissues was made 1 in. from the middle line, usually over the left rectus. The anterior layer of its sheath was opened along its centre, and the inner half of the divided sheath was separated from its muscle and drawn internally, the rectus itself being pulled outwards with retractors. The posterior layer of the sheath, together with peritoneum and intervening tissue, were then divided along a line corresponding to the middle line of the rectus. In closing the wound each layer was sutured separately. The method had been described in the literature of several countries, but it appeared to be less used than its merits deserved.

Dr. BRIGGS said the abdominal wall varied very considerably, and special methods of incision through the sheath of the rectus must be considered in connexion with such variations, notably in widely separated and in closely apposed or overlapping recti. The practical difficulty was a reliable absorbable suture material for buried stitches in the superimposed layers of the abdominal wound.

Mr. THELWALL THOMAS had used the method mentioned in many cases. It took a little longer time than the usual median incision, and there was occasionally some trouble from oozing of blood into the rectus sheath. He thought it a valuable incision, and preferable to any sectional suturing of the ordinary median incision. He would not advocate it in emergency operations or septic conditions.

Dr. GRIMSDALE and the PRESIDENT spoke; and Dr. WALLACE replied.

TUBERCULOUS DISEASE OF THE KNEE.

Mr. KEITH MONSARRAT read a paper upon some points in the operative treatment of tuberculous disease of the knee, based upon 11 cases in which he had considered it necessary to operate. He first referred to the importance of the early recognition of tuberculous foci about the lower femoral epiphysis, and of anticipating by early operation the usual invasion of the joint following these. He pointed out that it was difficult to estimate in any given case how near to the joint such foci had encroached, and that they were readily accessible to removal without invading the joint. Of the cases operated on for joint disease 1 had ultimately had amputation performed; in 1 the disease was still present; the rest were free from signs of local disease. In 1 case excision had been performed; in 9 erasion, and in 1 a focus in the external condyle had been evacuated. In 4 of the cases erasion had to be repeated owing to recurrence, the result being ultimately good. The subject of the functional value of the limb after operation was next considered. The opinion was expressed that any procedure which interfered with the integrity of the quadriceps extensor was likely to be followed by troublesome flexion; a method of exposing the joint was described by vertical bisection of the ligamentum patellae, the patella, and the lower part of the extensor, which gave satisfactory access to all parts of the joint, and left undamaged the functional integrity of the extensor apparatus.

Mr. R. W. MURRAY and Mr. NEWBOLT spoke; and Mr. MONTSARRAT replied.

CASE.

Dr. GORDON GULLAND showed a case of morbus coeruleus.

SOCIETY OF ANAESTHETISTS.

WALTER TYRRELL, M.R.C.S., President, in the Chair.

Friday, April 3rd, 1903.

SOMNOFORM.

MR. W. FOSTER CROSS read a paper on somnoform, which was a mechanical mixture of ethyl chloride 60 per cent., methyl chloride 35 per cent., and ethyl bromide 5 per cent. In his experience the claims made for it by Drs. Rolland and Field Robinson, who introduced it to the notice of the profession about a year ago, could not be entirely maintained, for if their method of administration were adopted patients strongly objected to its odour and the feeling of suffocation to which it gave rise, and this caused a good deal of struggling and rigidity, so much so that it often embarrassed the operator. Mr. Cross therefore substituted for the mask suggested by Dr. Rolland an ordinary celluloid Rendle's mask with the holes lightly plugged with lint. The signs of anaesthesia if the drug were given without too free a supply of air, were flushing of the face, never cyanosis, deep regular breathing, fixed position of the eyes, pupils at first widely dilated, but later contracting, with loss of conjunctival and corneal reflexes. The pulse was rapid at first, but soon became regular, although increased in frequency. Muscular relaxation he found uncertain, and therefore somnoform could not be relied upon where this relaxation was essential. Mr. Cross was never able to obtain an anaesthesia of more than about

eighty seconds' duration, but thought that somnoform had the following advantages over nitrous oxide gas, namely, that the anaesthesia was longer and there was complete absence of jactitation and cyanosis. The speaker was unable to support the claim that vomiting was uncommon after the administration of somnoform, having found it not at all infrequent; he had happily no experience of dangerous symptoms under the drug, but had seen a certain amount of collapse which might have ended disastrously if the anaesthetic had not been promptly discontinued. Mr. Cross differing from Dr. Rolland had not found recovery immediate in all cases. The speaker laid stress on the point that somnoform was liable to decomposition, giving off free bromine, with the risk of consequent respiratory trouble. The cost of the preparation was a point against it.

Dr. Swan said that he also had had to discard the apparatus advocated by Rolland and found a Rendle's mask with a rubber bag fitted over the end more satisfactory. He found the best guide to anaesthesia was to move the fingers backwards and forwards in front of the patient's face, and he had found that in from 90 to 100 seconds and in some cases 35 seconds the eyes became fixed, and the patient was ready for operation. He had found a good deal of muscular rigidity, but thought that this was less marked than when he was using Rolland's mask. Dr. Swan had found no difficulty from patients objecting to the smell and a sense of suffocation when he used his apparatus as the bag allowed room for breathing, and if patients were warned that the smell would not be pleasant they did not struggle or object to it. He thought that it deserved further trial but should be restricted to short operations.

Mr. Edgar Willett's experience of the drug was similar to that of Mr. Cross and had decided him not to give it a further trial, as he found the ordinary anaesthetics in use a good deal better.

Dr. Dudley Buxton said in his opinion the Society ought emphatically to record its censure upon the employment of such fancy and misleading names as "somnoform," "narcotile," "kelene," etc., and should encourage a careful physiological research on the action of any new anaesthetic agent before recommending its adoption. He pointed out that no serious attempt had been made to investigate the physiological action of somnoform and as far as he could see it was merely a proprietary and costly form of chloride of ethyl and inferior to it on account of its wicked smell.

Dr. MacCardie had carefully compared the actions of somnoform and ethyl chloride, and found them practically identical, except that the former had bromide of ethyl in it, which was objectionable on account of its unpleasant smell, and he could not see that it served any useful purpose, nor could he see the object of admixing methyl chloride, and he thought it far better to use ethyl chloride alone. He found it difficult to get relaxation of muscles unless the drug was pushed. He supported Dr. Dudley Buxton's objection to the name of the preparation.

Mr. Harvey Hilliard had found Dr. Rolland's method of administration unreliable and unsatisfactory owing to the unpleasant sensations of the patient, and the struggling and muscular rigidity, and had soon discarded it in favour of a Braine's modification of Ormsby's inhaler. With this apparatus he had been able to produce exact results in from twenty to thirty seconds—namely, complete muscular flaccidity, with loss of corneal reflex, the anaesthesia lasting from one to two minutes, and sometimes as long as four or five, this depending upon the degree of exclusion of air and the time taken during induction. In children he had found 2½ c.cm. quite sufficient to produce perfect anaesthesia for the removal of tonsils and adenoids, and he thought that somnoform was of value in operations of this character. He found that vomiting was common, and this and intense headache lasting several hours were the great objections to the use of somnoform in private practice. He thought it should not be used for long operations owing to the impossibility of maintaining an even depth of anaesthesia.

Dr. Boyle had seen collapse, muscular rigidity, and struggling while administering somnoform, and vomiting was not uncommon; he therefore thought that for general use somnoform had no advantages over other anaesthetics.

Drs. Noble, Barton, and the President also spoke.

Election of Officers.

The meeting then resolved itself into the annual general meeting, when the following gentlemen were elected for office during the ensuing session:—*President:* Mr. Carter Braine. *Vice-President:* Dr. F. W. Silk. *Honorary Treasurer:* Dr. Probyn Williams. *Elected Members of Council:* Mr. Walter Tyrrell, Dr. George Flux, Dr. Wollett. *Honorary Secretaries:* Mr. Harvey Hilliard, Dr. MacCardie. *Auditors:* Dr. Blumfeld, Dr. Ada Brown.

Metropolitan Counties Branch of the British Medical Association: East London and South Essex District.—At a meeting held on March 19th, Mr. H. E. Powell, Vice-President of the District, in the chair, Dr. C. F. Harford read a paper on physical qualifications for tropical residence or travel.—Dr. G. E. Herman opened a discussion on the treatment of placenta praevia. He advised separation of the placenta with the finger, to allow the bag of membranes to come down, and, if the pains were not strong enough to stop bleeding, to use a Champetier de Ribes's bag. When the bag was expelled, the membranes should be ruptured and a foot brought down. Rapid forcing open of the cervix, and delivery while the uterus was not acting, was dangerous. Every intrauterine or vaginal manipulation during labour was a possible source of septic infection, and in placenta praevia it was not enough to place trust in the power of maintaining asepsis, and therefore every antiseptic precaution should also be used.—Dr. C. J. Morton read a paper on a method of preventing puerperal sepsis. He recommended that the hand should be introduced after the placenta was expelled, and all adherent fragments be removed from the uterine wall. In more than half of the 105 cases examined appreciable portions of placenta were found, and very few were entirely free from small fragments. Of these, all but one, a case of placenta praevia, had a normal puerperium, and the results were better than those obtained by rigid antiseptics or no vaginal examination. Elaborate antiseptic precautions were unnecessary, and no douches were required. Washing and introducing the hand out of lysol solution without other lubricant was sufficient. The deductions were that external palpation or antiseptic methods alone were not certain preventives; that retention of pieces of placenta was much more common than was generally supposed, and was the overlooked factor in causing the disease as it ordinarily occurred, and that the immediate removal of the cause was harmless and effective.—Dr. J. W. Hunt showed skiagraphs of an obscure injury to the elbow-joint.—Messrs. Powell, Price, Corner, Sequeira and Wallace, and Drs. Herman, Hunt, and Morton took part in the discussions.

South-Eastern Branch of the British Medical Association: South-Eastern District.—At a meeting of the Branch, held on March 12th, Dr. B. N. Dalton in the chair, the following papers were read: Dr. F. Taylor, the Treatment of Chlorosis; Dr. Newton Pitt, on the Value of the Examination of the Blood for Diagnosis; Mr. R. Clement Lucas, Cases of Influenzal Orchitis; Mr. A. H. Tubby, Some Deceptive Abdominal Conditions, and when to Operate; Dr. A. P. Allan, some remarks on Enlarged Cervical Glands in Children. These papers were discussed by the Chairman, and Drs. Miller, Adams, Hugo, Rand, Wilkinson, Newton Pitt, Poole, Newby, Addison, Swayne, Bligh, P. J. Duncan, Lucas, Tubby, and Batten.—Down Bros. exhibited a large collection of instruments.

South-Eastern Branch of the British Medical Association: East and West Sussex Districts.—A conjoint meeting of these Districts was held on March 26th, Dr. Gordon Dill in the chair.—Dr. Gordon Dill and Mr. George Morgan showed microscopical specimens of tropical diseases.—Mr. R. Sanderson read a paper on a case of appendical abscess complicating a seven-months pregnancy.—Dr. E. Hounsome read a paper on the Significance of Wasting in Disease.—Mr. T. H. Ionides read notes on a case of albuminuria in pregnancy.—Dr. Walter Broadbent showed cases of heart disease and aneurysm.—Mr. Watson Griffin showed cases of corneal and pericorneal affections.

South-Western Branch of the British Medical Association.—At a meeting on April 1st, Mr. J. Delpratt Harris, President, in the chair, Dr. Russell Coombe read notes of two cases of early tubal gestation upon which he had operated with success, and he showed the specimens he had removed.—Dr. Bushnell read a paper entitled The Antibodies in Disease, which gave rise to an animated discussion, in which the following gentlemen took part—namely, Drs. Gordon, Sykes, Steele Cosens, Roper, and the President.—Dr. W. Gordon read a paper on the Practical Use of Blood Films,

which created great interest, and was discussed at length by Drs. Sykes, Fox, Bushnell, and the President.—Mr. C. Hamilton Whiteford's paper entitled The Buried Unabsorbable Ligature and its Sequelae was, in his absence, read by the Honorary Secretary.—Dr. W. Gordon showed microscopic specimens of micrococci in the stomach wall beneath gastric ulcers; and a photograph of an aortic stenosis which only produced a systolic murmur in the recumbent position.

Aberdeen Medico-Chirurgical Society.—At a meeting on April 2nd, Dr. J. Gordon, President, in the chair, Dr. J. Theodore Cash read a paper on the action of the aconitines, illustrated by numerous lantern slides.—Dr. J. S. Ross read a paper on premature separation of the normally situated placenta, founding his remarks on 34 cases which he had observed at St. Mary's Hospital, Manchester, by permission of the visiting staff. In the etiology he laid stress on nephritis; one of his cases occurred in an eclamptic patient. The mortality in recorded severe cases was heavy—50 per cent. (Goodall), 46 per cent. (Storer); 14 of the writer's cases were serious, and 2 of these died. In a short account of symptoms he emphasized the element of shock, which added gravity to the acute anaemia. In regard to treatment, if good pains were in progress, and the cervix nearly sufficiently dilated, all agreed as to the advisability of puncturing the membranes with operative extraction later if necessary; but in cases with no pains or dilatation there were various views as to treatment. Goodall advocated early puncture of membranes in order to promote uterine retraction and contraction. The writer doubted whether retraction was of much use so long as the fetus was still *in utero*, and contraction did not always come on promptly. He read notes of three cases which he had seen where this treatment greatly increased the severity of originally mild cases. He condemned accouchement forcé, because of the shock and *post-partum* haemorrhage induced. Gradual dilatation of the cervix was usually done in England and Scotland by Champetier de Ribes's bag, but the treatment which seemed to give the best results of all was the Rotunda method of vaginal plugging. He had himself used it in 14 cases, some of them very severe, without a death; after pains came on, he sometimes used a bag or operative extraction (5 cases). Jellett claimed that this treatment reduced the mortality from 6 in 56 cases to 1 in 57. Porro's operation, first suggested by Donald, of Manchester, he reserved for the most severe cases—he knew of only 1 case (Bagot's) where it had been successful.—Drs. Stephenson, McKerron, Westland, Edmond and the President took part in the discussion on the papers.

West London Medico-Chirurgical Society.—At a meeting held on April 3rd, Mr. Rickard W. Lloyd in the chair, Mr. J. R. Lunn showed a man, aged 35, who had been operated on for fracture of the patella by Barker's subcutaneous method a week after the accident. The bone had now joined well, and the *x*-rays showed the fragments to be in excellent position. He still, however, suffered from pain. Mr. Swinford Edwards said the joint was still swollen and tender. He advised removal of the wire, as it was probably maintaining some inflammatory symptoms. Mr. McAdam Eccles thought that the objections to Barker's operation were that the wire passed through the joint, and that the torn aponeurosis could not be removed from between the fragments. Consequently bony union in this operation was probably rarely obtained.—Mr. J. Pardoe read a paper on the indications and methods for the radical cure of so-called hypertrophy of the prostate. He said an increasing number of surgeons urged the removal of the obstructing prostate, or portion of prostate, as a measure of expediency. Early operation also much reduced the danger of septic infection of the bladder, ureters, and kidneys. An operation of urgency was rendered necessary by the following conditions: (1) Increasing frequency of attacks of cystitis, or chronic cystitis increasing in severity; (2) repeated attacks of epididymitis and orchitis due to catheterism; (3) increasing difficulty of self-catheterism due to the enlarging prostate; (4) haemorrhage from the passage of instruments; (5) the occurrence and recurrence of stone as a complication; (6) the probability that enlarged prostates, which in their early stages were adenomatous, might become malignant. He believed that in cases of urgency the mortality from the operation approached 20 per cent., while in cases of expediency it was from 2 to 4 per cent. He was not aware of any case in which restoration of function failed. After describing some methods of operation by the suprapubic and by the perineal routes, Mr. Pardoe concluded: (1) That the time had come when something better than catheter life could be offered to patients; (2) that early operation should be strongly advised, except, as a rule, in the case of very aged men; (3) that the operation should be carried out in the aged if the symptoms became urgent from haemorrhage, cystitis, or increasing difficulty in catheterism. Remarks were made by Mr. Swinford Edwards.—Dr. J. E. Squire read a paper on the modes of cure and arrest in pulmonary tuberculosis.

Association of Registered Medical Women.—A meeting was held on Tuesday, April 7th, Mrs. Boyd, M.B., President, in the chair.—Miss Ivens, M.B., read a paper on a case of inversion of the uterus.—Miss Murdoch, L.R.C.P. & S., spoke on consultation with irregular practitioners.—Miss Aldrich Blake, M.S., M.D., described a method of excision of the rectum in some respects new.—Miss Armitage, M.D., read notes of a case of acute lymphadenoma with rigors and hyperpyrexia. The points of interest in the case were: (1) The onset, which began with severe lumbar pain, and constitutional disturbance, anorexia, nausea, rigor, and profuse sour-smelling sweatings. (2) Temperature 102°, rising to 105.6° on two occasions, with rigors. The temperature was continuous throughout, never showing the characteristic intermittent type of Gowers. On three successive Mondays there were ague-like paroxysms with rigors and hot and sweating stages. (3) The late appearance of anaemia, cachexia, or emaciation. There were no blood changes in the sixth week of the illness. During the eighth week the blood examination showed 2,720,000 red blood discs per c.mm.: the number of white cells being 3,500 per c.mm. A week before death the blood count showed 1,300,000 red discs with poikilocytosis and crenated edges and no apparent increase in white corpuscles. Spleen enlargement was noticed during the eighth week, but the edge was only just felt below the ribs. The glands were enlarged in the following order: retroperitoneal, left submaxillary, axillary, both inguinal regions, left breast, right submaxillary, occipital. The liver and tonsils were not enlarged, but adenoids were marked and subcutaneous nodules of lymphoid tissue were felt down both thighs as strings of melon seeds; none were larger than a bantam's egg. Pressure symptoms were marked. The whole body became oedematous; there was severe dyspnoea, right-sided facial palsy and dysphagia. No retinal haemorrhages or purpura, but bleeding occurred twice from the post nares. Death occurred during the seventeenth week of the illness from gradual decay of the vital powers.

Pathological Society of Manchester.—At a meeting on Wednesday, April 8th, Dr. H. A. G. Brooke, President, in the chair, Dr. Lloyd Roberts showed the contracted pelvis of an adult female achondroplasic dwarf.—Dr. W. Japp Sinclair made a communication on certain nutritive changes in the uterus due to retroflexion. He demonstrated, by means of a series of drawings in water colours, a number of cases in which enlargement and erosion of the posterior lip of the cervix occurred in connexion with retroflexion, and disappeared after this had been corrected by the operation of ventrifixation. In casea of pathological anteflexion, enlargement and erosion of the anterior lip of the cervix was demonstrated.—Mr. C. Roberts exhibited a large malignant growth of the left testis from a case of spurious hermaphroditism, together with photographs of the patient and of another example of a similar condition.—Dr. C. H. Melland demonstrated by means of a series of microscopic preparations some of the less common varieties of sarcoma, special attention being given to the origin of endotheliomata.—Dr. W. H. Brazil showed (*a*) examples of the lepra bacillus, and (*b*) the liver of a child, aged 7 years, which died from scarlet fever. This contained a large cyst, which, though somewhat atypical, was probably hydatid in nature.

Nottingham Medico Chirurgical Society.—A meeting was held on April 1st, Mr. J. Mackie, President, in the chair.—Dr. Ashby Clarke, Honorary Secretary of the Leicester Medical Society, was present, and introduced the subject of the proposed incorporation of local medical societies with the British Medical Association, and urged that the Nottingham Society should consider it.—Mr. R. C. Chicken showed (1) a young man with partial dislocation of the spine in cervical region- skiagraph also shown; (2) a patient with synovial arthropathies.—Mr. Chicken also read a paper on

pseudo-hypertrophic synovitis. He described a condition often met with among miners and others following a laborious occupation in which the alar ligaments of the knee-joint, more especially the internal, increased in size and thickness. During movement they became trapped between the articular surfaces, giving rise to symptoms closely resembling a loose cartilage. The exquisitely sensitive edge of the thickened synovial membrane could plainly be felt just in front of the internal lateral ligament, quite distinctive from a loose cartilage except in the very earliest stages. Excision of the affected membrane was the only radical cure.—Dr. T. A. Clinch read a short note on bullae—their medico-legal aspect.

British Laryngological, Rhinological, and Otological Association.—At a meeting held on March 13th, Dr. Wyatt Wingrave, President, in the chair, the following cases were shown:—Mr. Mayo Collier: Suppuration of the frontal sinus.—Mr. Bark: Epithelioma of the oesophagus in a woman, aged about 30.—Dr. Lodge: Thrombosis of the cavernous sinus.—Dr. Dundas Grant: Deafness due to myxoedema, in a female, aged 59. The deafness, which was partly nerve and partly obstructive, had not improved under thyroid treatment.—The President: (1) Tuberculous granuloma of the larynx, in a woman, aged 26; (2) maxillary node (fibrous) in an infant; (3) bilateral adductor paralysis of the larynx following tonsillotomy in a girl aged 14; (4) lupus of the larynx in a boy, the disease being almost wholly confined to the epiglottis; (5) aphonia, due to (?) syphilis or (?) tuberculous disease.—Dr. Pegler: An aural case for diagnosis; (?) pseudo-membrane in the meatus. Dr. Dundas Grant regarded it as a case of attic disease and advised operation.—Dr. Pegler: Entotic tinnitus.—Dr. Jobson Horne: Injury to the nose in a child. Dr. J. Dundas Grant thought it a haematoma of the septum and advised operation. Dr. Fred. Spicer, Dr. Pegler, and Dr. Jobson Horne advised leaving it alone. Mr. Bark and the President were in favour of operation.—Dr. J. E. McDougall read a paper on a new method of dealing with adherent soft palate, and showed sketches and models. The paper was discussed by the President, Dr. Dundas Grant, Mr. Atwood Thorne, and Dr. P. H. Abercrombie.—Dr. Pegler read a paper on an unusual experience after partial turbinotomy, and Dr. Dundas Grant, Dr. Lodge, and the President discussed the case.

REVIEWS.

CLINICAL MEDICINE.

Dr. Rolleston has done well to republish an interesting clinical lecture on *Splenic Anaemia*,[1] which originally appeared in the *Clinical Journal*. It is a thoughtful contribution to a subject of great difficulty, based upon the record of two cases of enlarged spleen with grave anaemia. One was shown to be splenic anaemia, and after the disease had lasted some twelve years the spleen was excised, but the patient died shortly afterwards from gastro-intestinal haemorrhage. In the other there was also haematemesis, but the patient reacted to the tuberculin test; the lymphatic glands in the axilla and groin were also enlarged, and it was concluded that the whole condition was due to tuberculosis. Dr. Rolleston goes on to discuss the claims of splenic anaemia to be considered a clinical entity. He assigns to it the following six specific characters: Anaemia of the chlorotic type; absence of leucocytosis (sometimes even leucopenia); considerable splenic enlargement, which cannot be correlated with any other known cause; a prolonged course; a tendency to gastro-intestinal haemorrhage; and a termination, if sufficiently prolonged, in hepatic cirrhosis with ascites (Banti's disease). He is thus inclined to agree with Osler that the disease is definite and separate. Microscopically the normal splenic tissue is found to be largely replaced by fibrous tissue and numbers of large endothelial cells, with two or more nuclei. The fibrous tissue is composed of the thickened trabeculae and walls of the blood sinuses, while the large endothelial cells are the outcome of proliferation of the endothelium lining these spaces. These changes, it is plausibly suggested, may be due to a chronic toxic or infective process having its origin in the spleen, and being prevented by the intermediation of the liver from spreading through the system, which is, however, secondarily affected by the blood changes. The histological changes are strikingly similar to those recently described in lymphadenoma, and it may be that the underlying cause is the same in both.

[1] *Splenic Anaemia.* By H. D. Rolleston, M.D., F.R.C.P., Physician to St. George's Hospital. London. 1902. (Pp. 31. 1s.)

Dr. Bertram C. Stevens has printed in a pamphlet an essay on *Diseases of the Pancreas*,[2] for which was awarded a graduation gold medal by the University of Durham in 1900. Probably, owing to the limited space at his disposal, the writer has not made much reference to glycosuria produced by pancreatic disease, and has in the main limited himself to the more surgical aspects of the subject. Indeed, he might have perhaps done more wisely to have confined himself to a more complete study of one of the five or six sections into which he has divided his subject. On page 19 we read that many of the so-called cysts of the pancreas are due to accumulations of fluid in the "omental bursa," or are formed in the transverse mesocolon, especially where such cysts follow traumatism; many will feel that collections of fluid in the omental bursa confirmed by operation or necropsy are much rarer than pancreatic cysts. In the absence of necropsy or operation is it quite clear that Case I, reported on page 24, was one of acute pancreatitis? Our scepticism is further aroused by the account given of Case IV—gastric ulcer and gastro-enterostomy, for it does not appear from the evidence given that the pancreas was ulcerated.

Dr. Arons, in a footnote, disclaims all pretensions to the production of a monograph on pneumothorax[3]; his subject is the alteration of intrapleural pressure in this malady. He has something to offer us in the way of clinical experiments carried out in the Jewish Hospital in Berlin. He was able to persuade an adult male to allow puncture of the chest wall with trochar and cannula, and then took manometric tracings of the pressure in inspiration and expiration. In thirty-six observations the average pressure in the pleural cavity at the height of inspiration was − 4.64 mm. of mercury, and at the height of expiration − 3.02 mm. For the purposes of his observations Dr. Arons made use of a Bülau siphon drainage tube used for the treatment of empyema, and by the adaptation of a T tube to this has been enabled to make his manometric observations, glycerine being more convenient than either water or mercury. Some very elaborate tables are given showing the result of injection of air, 10 c.cm. at a time until 80 c cm. had been injected into one pleural cavity, rabbits being the animals used. In five out of the nine experiments there was a rise of intrapleural pressure during inspiration in the opposite pleural cavity, probably to be accounted for by the expansion of the sound side of the chest as compensation; in six cases out of the nine, however, by the time 50 c cm. to 80 c cm. had been injected the negative pressure of the sound side had fallen below what it was at the beginning, probably because of the bulk of the fluid injected into the opposite side of the chest. Dr. Arons recommends the clinical use of manometers in order to record the intrapleural pressures in cases of pneumothorax, but we hardly think the gain to practical medicine would be a real one.

Dr. Marique's essay upon the presence of foreign bodies in the heart and great vessels[4] is a very complete exposition of the subject. Having classified and analysed the 105 cases which he has been able to find recorded, he recounts a long and laborious series of experiments upon the rabbit; these show a remarkable tolerance of such bodies as sterilized needles in the myocardium and within the cardiac cavities. The chapter upon symptomatology reveals nothing that might not have been predicted; and that upon diagnosis indicates the Roentgen rays as the best means of detecting bullets or needles; other foreign bodies are hardly ever encountered. The chapter upon prognosis has been most carefully compiled from the clinical cases and the author's experiments. Upon it the author bases his conclusions as to treatment, which are in favour of active intervention. He discusses fully the various incisions proposed for pericardotomy and furnishes diagrams. There is a complete bibliography, a detailed description of each of the new

[2] *Diseases of the Pancreas*, Essay for M.D Durham, April, 1901. By Bertram C. Stevens, M.D., M.S., etc. London: John Bale, Sons, and Danielsson. 1901. (Demy 8vo, pp. 28.)

[3] *Die Mechanik und Therapie des Pneumothorax. Eine klinisch-experimentelle Studie.* [The Mechanics and Treatment of Pneumothorax. A Clinical Experimental Study.] Von Dr. E. Arons. Berlin: August Hirschwald. 1902. (Demy 8vo, pp. 66; 3 plates. M.2.40.)

[4] *Recherches sur les Corps Etrangers du Coeur et des Gros Vaisseaux.* Par le Dr. A. Marique. Brussels: H. Lamertin. 1902. (Demy 8vo, pp. 117. Fr.5.)

experiments, and an interesting cardiograph: but while we admire Dr. Marique's energy and conscientiousness, we cannot help doubting whether he has achieved any tangible result commensurate with the labour he has expended.

The little book by Dr. SCHILLING on the *Hygiene and Dietetics of Diseases of Nutrition*[5] is a compendium of a great deal of recent work in connexion with diseases of nutrition. As an epitome, it may be trusted to mention nearly every point of importance, but it deals with many subjects with such extreme brevity that it can hardly be regarded as a satisfactory work of reference upon these diseases. In some respects, as, for example, in the treatment of diabetes, it is excellent, at least for any one who is already acquainted with the subject. We are not quite sure for whom such a book can be intended. A student could not be expected to assimilate such very compressed material as he finds here, and a practitioner who went to it for guidance in a particular case would, as a rule, require more.

For the third volume of the English edition of Nothnagel's *Encyclopaedia of Practical Medicine*[6] an entirely new article on diphtheria has been written by Professor NORTHRUP, the editor. With this article we confess we are somewhat disappointed. In the first place the student who is reading it through from the beginning would have found it much more convenient and natural had the whole of the portions dealing with the bacteriology and pathology been placed after those which treat of the symptoms and course of the disease and its complications. Secondly, we entirely disagree with the author's classification of the disease, though we are aware that in this he follows other authorities. Diphtheria is here described as being faucial, nasal, laryngeal, and so on. So far so good. But each of these forms is subdivided according to whether it is (1) catarrhal, (2) fibrinous or pure, (3) phlegmonous or mixed, and (4) septic or gangrenous. This arrangement is highly theoretical; indeed, on reading the accounts of these various forms we fail to find any real clinical points by which they can be distinguished from one another. We notice that Professor Northrup still employs the word "croup" as equivalent to laryngeal diphtheria. We were beginning to assure ourselves that writers in the English language were at last reverting to the proper clinical signification of "laryngeal obstruction" for this word. But the present article demonstrates our error. We have noticed, however, that those who use "croup" for "diphtheria of the larynx" usually become involved sooner or later in some confusion of meaning, so that we have Professor Northrup on page 118 using "croup" or "croupal" as equivalent to (1) laryngeal diphtheria, (2) laryngeal obstruction, not necessarily diphtherial; (3) diphtheria, not necessarily laryngeal, unless he prefers to plead guilty to tautology. The portion on treatment is good, more especially that relating to laryngeal diphtheria. There is an excellent account of the evolution of intubation and of the operation itself. Professor Northrup advocates the upright position for the patient, and, we think, undervalues the dorsal position, which is just as convenient for the operator and certainly safer for the patient who is the subject of severe diphtheria. He does not seem very familiar with enucleation of the tube, of which a most inadequate account is given. We disagree with him when he says that "the short tubes of Baveux possess the single advantage that they may be enucleated"; they also allow the operator more room in which to work. We also demur to the statement that "the after-care of the intubated patient is far less troublesome than that of the tracheotomized." We have dealt at some length with the article on diphtheria, because it is quite new. Professor T. von Jürgensen's excellent articles on measles and scarlatina are well known, and have been brought up to date by the editor. We miss, however, any reference to Klein and Gordon's work on the streptococcus conglomeratus. To the article on rötheln the editor has added a few remarks on the so-called "fourth disease," the separate entity of which he regards as being "far from settled." In conclusion we may add that the volume is well got up and contains several useful illustrations.

HYGIENE AND PUBLIC HEALTH.

DR. NEWSHOLME, in the ninth edition of his well-known work on *School Hygiene*,[7] has had the valuable assistance of MR. WALTER PAKES, who is chiefly responsible for the second part of the book. This deals with the questions of site and construction of school buildings and their lighting and warming, and with the very important points of water supply and the disposal of waste matter: all of which are very completely treated. The necessity for efficient ventilation is especially insisted upon, although it may perhaps be considered that no sufficient solution is given for that most difficult problem, how to secure thorough ventilation without at the same time exposing teacher and scholars to draught. The importance of the question of ventilation will be realized from the fact stated by Mr. Pakes that "with the floor space insisted upon by the Education Code and with no ventilation the air of a schoolroom ceases to be fresh in two and a half minutes." Dr. Newsholme gives his attention chiefly to the children themselves, and every problem connected with the management of children at school is carefully considered and thoroughly dealt with. The value of the sub conscious memory and its importance as a medium of education is pointed out, while at the same time it is stated that a common deficiency in education is a failure to train children to reproduce what they have learnt in their own words. Dr. Newsholme altogether disapproves of commencing book work at too early an age. It is satisfactory to find that the authors condemn those forms of employment for young children used at the Kindergarten, such as needlework, which involve the attention being fixed on small objects. All authorities who have examined the question are of opinion that the eyes frequently suffer permanent injury from the accommodation being put to excessive strain during school life, and especially during the early years of such life. The impossibility of maintaining the sharpness of mental appreciation for a long time and the importance therefore of allowing, after lessons of not more than forty-five minutes' duration, a period of rest, is shown by quotations from the experiments of Burgerstein, who found that in a series of simple additions 3 per cent. of mistakes were made by the children in the first ten minutes, while in each succeeding ten minutes a larger percentage of errors occurred. A very interesting chapter deals with the management of school accidents, and might be entitled "First Aid for Schoolmasters." The question of infectious disease is also very completely considered, and a table is given showing the length of time which should elapse before a child should be allowed to return to school after suffering from such illness, or after being brought in contact with others so suffering. The table will be a valuable guide to practitioners who are continually being consulted on this point. As might be expected in a work by Dr. Newsholme, the book contains several statistical tables, one of the most interesting showing the average increment of height, weight, and chest girth in each year from birth to 18 years of age. A chapter of over thirty pages, written by Dr. James Kerr, medical officer to the London School Board, is devoted to the consideration of eyesight in school life. The psychology and physics of vision are carefully explained with the aid of numerous plates, and the arrangement of light and other precautions necessary to safeguard the eyesight are fully described. Altogether it will be seen that this book is a thorough compendium of school hygiene and should be carefully studied by those interested in education.

In editing a new Year Book of Social Hygiene and Demography,[8] DRS. GROTJAHN and KRIEGEL are endeavouring to fill the gap between the social and legislative aspects of public health on the one hand and the scientific and medical standpoint on the other. For this purpose they collect and epitomize such contributions to medicine and hygiene as concern the public welfare, and bring them into association with a survey of current legislative enactments, social reforms, and statistical records which involve points of medical interest. Their project is excellent, and they have succeeded

[5] *Hygiene und Diatetik der Stoffwechselkrankheiten.* [Hygiene and Dietetics of Diseases of Nutrition.] Von Kreis-Physikus a. Dr. med. F. Schilling zu Leipzig. Leipzig: H. Hartung and Sohn. 1903. (Crown 8vo, pp. 346. 8 illustrations. M. 5.40.)

[6] *Diphtheria.* By William P. Northrup, M.D. *Measles, Scarlatina* and *German Measles.* By Theodor von Jürgensen, M.D., Professor of Medicine in the University of Tübingen. Edited, with additions, by William P. Northrup, M.D., Professor of Pediatrics in the University and Bellevue Hospital Medical College, New York, etc. English edition of Nothnagel's *Encyclopaedia of Practical Medicine.* Philadelphia and London: W. B. Saunders and Co. 1902. (Roy. 8vo, pp. 672; 81 charts and illustrations, 24 plates. 21s.)

[7] *School Hygiene: The Laws of Health in Relation to School Life.* By Arthur Newsholme, M.D., F.R.C.P. New edition rewritten by the above and by Walter C. C. Pakes, D.P.H., with a chapter on Eyesight by James Kerr, M.D. London: Swan Sonnenschein and Co. 1903. (Crown 8vo. pp. 317. 3s.)

[8] *Jahresbericht über die Fortschritte und Leistungen auf dem Gebiete der sozialen Hygiene und Demographie. Band I: die Jahre 1900 und 1901.* Herausgegeben von A. Grotjahn und F. Kriegel. Jena: Gustav Fischer. 1902. (Roy. 8vo, pp. 370. M. 7.50.)

in producing a useful book for reference, supplemented by an extensive bibliography. In the future volumes, which are to appear yearly, perhaps the editors will see their way to give more space and do more justice to the English literature on the subject.

Under the title the *Prevention of Disease*[9] has been published a translation of a German work which, if we mistake not, appeared in small separate handbooks. It is an attempt to give a systematic statement of preventive measures against disease, not only of the infective type, but also of diseases usually known as local or constitutional. The appearance of such a book is an important indication of the increasing space occupied by and the increasing importance attached to considerations of hygiene in relation to disease. Its appearance is therefore welcome, and both the hygienist and the practitioner who study its contents will find much valuable practical information scattered through its pages. Dr. Bulstrode contributes a useful and suggestive introduction to the volume. Then follow chapters on the History of the Prevention of Disease, General Prophylaxis, the Prevention of Diseases of the Blood, of Metabolism, Infectious Diseases, Lung Diseases, Heart Diseases, Diseases of the Digestive System, Surgery, Diseases of Women, and Midwifery, Diseases of Children, Diseases of the Nervous System, Mental Diseases, Diseases of the Eye, of the Ear, of the Teeth and Mouth, of the Throat and Nose, of the Urinary and Generative Organs, and of the Skin. The different chapters are written by German authors, whose names are but little known in this country, and the quality of the chapters is very uneven. There is, however, not a single chapter from which useful prophylactic hints cannot be obtained. Owing to the multiplicity of authors there is also some overlapping of advice, and differences of opinion are not wanting. Dr. Rosen, in the chapter on the Prevention of Diseases of Metabolism, states that the present opinion is that the increased formation of uric acid in the body is not the primary and determining factor in gout, but rather the secondary. The chapter on Diseases of the Heart, by Professor Mendelsohn, has already been noticed (Epitome, 1899, vol. ii, No. 486). Under the heading of "Appendicitis" regulation of the bowels is recommended, but "the only means we possess of preventing appendicitis is to remove the appendix." Rickets is dealt with in the chapter on Surgery, by Professor A. Hoffa, of Würzburg, and in the chapter on Children's Diseases, by Dr. R. Fischl, of Prague. Professor Hoffa ascribes rickets to defective deposition of lime salts, the chief predisposing cause being the faulty diet of children. Dr. Fischl is of opinion that we are apt to operate too much for adenoids. He regards tonsillotomy for enlarged tonsils as frequently inadvisable, and holds the same opinion in regard to the slitting up of follicles in the tonsils. On the other hand, Dr. Rosen, in dealing with the prevention of infectious diseases, mentions with favour the slitting up of the deep pockets and channels frequently found in the tonsils. In the chapter on the Prevention of Mental Disease it is stated that "even the choice of the time of day for conception may be important, and in doubtful cases can best be determined by the physician who has physiological knowledge and is acquainted with the case"! In the chapter on the Prevention of Venereal Disease much advice is given which implies the continuance of promiscuous sexual intercourse. We suppose that, assuming a physician could not dissuade his patient from this practice, it would be his duty to give such advice as would possibly prevent the occurrence of gonorrhoea, but the position is one from which self-respecting physicians would prefer to escape. On the whole, the book is a distinctly valuable one. Certain chapters are wordy, and the advice given is not sufficiently exact; but the work is valuable for reference, and those consulting the different sections will seldom fail to discover matter of interest and practical utility.

The Sanitary Institute has recently published a pamphlet embodying specimen pages of *Books and Forms Used in a Public Health Department*.[10] This has been prepared for the use of students attending the lectures and demonstrations at the Parkes Museum and the Institute; and it will, we think, be found to be of practical utility to them. The ordinary candidate, whether he be a medical examinee for the diploma in public health, or a layman desiring to obtain a certificate of his competency for the duties of a sanitary inspector, is naturally deficient in his knowledge of the routine work of a public health office. He has in the true sense of the word in most instances never been engaged in it, for half-a-dozen demonstrations in routine sanitary work do not constitute a sufficient training. The pamphlet issued by the Sanitary Institute will materially help the student in his study of sanitary work, and will render his knowledge much more real than it would otherwise be. It is unnecessary to discuss the sample forms of bookkeeping and notices embodied in this publication. The selection has, as a whole, been judicially made, and the student making himself a master of what these forms imply will have gone far towards rendering himself practically efficient in his would-be future work.

[9] *The Prevention of Disease.* Translated from the German with an introduction, by H. F. Bulstrode, M.A., M.D., D.P.H. London: A. Constable & Co. 1902. (Demy 8vo, pp. 1082. 21s. 6d.)

[10] *Books and Forms Used in a Public Health Department.* Prepared for the Use of Students. (Sanitary Institute. 1902. Price 1s.)

NOTES ON BOOKS.

The fourth of the new volumes of the *Encyclopædia Britannica*, being Volume xxviii of the tenth edition, is a very weighty volume in every sense of the word, but with the help of a good strong bookstand becomes very readable, if not entirely comprehensible. The positive description is justified by the excellent print, and the justification of the qualification will be found hereinafter. It covers every subject that can be conceived to occur between the words Elections and Glamorgan. To the ordinary man the possibilities between the letters Ele- and Gla- would not seem very great, but not so to the editors, the departmental editors, the associate editors, and the sub editors. Between them they have managed to find eighty-seven subjects, which require, or at least receive, treatment at great length, while some hundreds of others are knocked off in a page or so. Last, but not least, they have enlisted into their service a striking array of well-known men who have a special knowledge of the subjects on which they write, and between them they have put together a volume of about 1,500 columns, or a good deal over a million words.

In a useful little French work, *Le Lait et son Industrie* (the Milk Industry),[11] the author, M. A. Touret, describes the different characteristics of the milk of the human female as well as that of animals. He touches upon the composition and manipulation of cow's milk, the methods of milking, and the control of milk in shops. The necessity of regular veterinary inspections of farms is insisted upon, as is also the cleanliness of the cows and their byres, especially during the process of milking. We quote M. Touret's description of a well-appointed cowshed.

> The building should be at least 20 cm. higher than the surrounding ground. It should be constructed with water-tight materials joined with cement. The shed should slope gently from the top to the bottom to facilitate drainage—the slope to be very gradual—1 cm. per yard is sufficient. A proper cowshed must be spacious and in considering its dimensions it will be well to remember that a cow renders unbreathable 100 c.m. of air in twenty-four hours. The shed should be at least 4 m. high, and each cow must be allowed 1.5 m. for the width of its stall. The length of the building will depend upon the number of cows to be kept in it. The width should be 4 m. for cowsheds containing one row, and 7 m. for a double row of cows. The urinary matters must flow out of drains (washed by water) into closed cisterns and never on manure. The cisterns must be outside the building and should be hermetically covered. The walls must be air-tight and free from damp, and supplied with windows to give ample light and air. The ceiling should be smooth and without openings and thick, especially if there is a living-room over it. An ideal temperature for a well regulated cow-house is from 12 to 15° C., confined air becoming damp and hot and acquiring a musty, stuffy ammoniacal smell. The stalls should be cleaned out several times a day and fresh litter put down. Cobwebs are highly dangerous and must be removed. The cows should be carefully washed and food should not be kept in the shed. It is essential to whitewash every cowshed and wash it over with an antiseptic every spring and only those people who are employed in the cowshed should be allowed access to it.

The fact that M. Touret is a veterinary surgeon and speaks from personal experience should recommend this little book to those wishing to get some practical hints on the milk question.

The Insurance Directory, Reference, and Year Book (London: T. J. W. Buckley. 6d.) for 1903, better known by its old title, *The Post Magazine Almanack*, has reached its sixty-third year of publication. It contains particulars of British, Colonial, and foreign insurance offices and their branches, lists of officials, directors, etc.

[11] *Le Lait et son Industrie.* Par A. Touret, Médecin-Vétérinaire. Paris: Vigot Frères.

REPORTS AND ANALYSES

AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEDICINAL AND DIETETIC PREPARATIONS.

Kresol.—We have received from Messrs. Hay, Steven and Co., Maryhill, Glasgow, a sample of a preparation named kresol, recommended by the makers as a disinfectant and antiseptic. It is a clear brown fluid, with a strong coal-tar odour, miscible in all proportions with water, and giving a clear solution. It is recommended as a 1 per cent. to 2 per cent. solution for general surgical use; in these proportions we find it non-irritating to the skin, and not destructive to fabrics. Its antiseptic properties are considerable; ½ per cent. in fluid media prevents the growth of the ordinary pyogenic organisms, and we find it efficient and convenient for disinfecting the skin in this proportion. It is also recommended in stronger solution for disinfecting sinks, linen, etc., and for veterinary purposes. The price is moderate.

Catgut Ligatures.—The Galen Manufacturing Company, Limited, Wilson Street, New Cross Road, S.E., have forwarded to us a sample of catgut ligature material. It is cut into convenient lengths and is of good quality and strong. The sample sent us proved sterile after a test of ten days' incubation in fluid media. As a ligature material for ordinary use catgut has some advantages over all others; in the past it has been discarded by many surgeons owing to difficulties in sterilization; there are now, of course, several methods available which carry this out satisfactorily without deterioration of the quality of the gut. We are not informed of the method of sterilization employed by the manufacturers of this sample, but it appears to answer the purpose successfully.

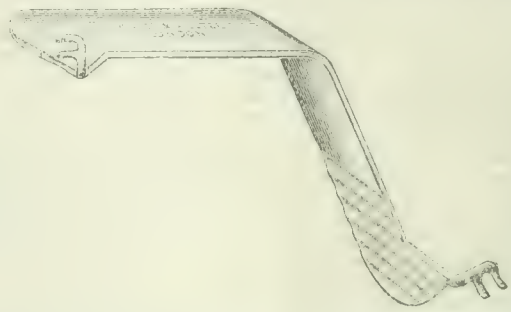
The Pharmaceutical Preparations of the Bilberry (Vaccinium Myrtillus).—Dr. M. BERNSTEIN (London) writes: In reply to the great number of inquiries as to a suitable preparation of the bilberry for use in typhoid and dysentery that have reached me from different parts of the United Kingdom and India, may I be permitted to state that I consider it essential that none of the constituents of the berries be eliminated and lost, but that the juice be used in its entirety if possible? For this reason, and in order to avoid the use of wines and tinctures, I have suggested to Messrs. Allen and Hanburys to prepare a liquid extract of vaccinium myrtillus which will be of a desirable strength, and able to withstand the influences of climate and transport whilst at the same time preserving the agreeable flavour and all the constituent principles of the berry. I am now informed that they can meet any orders for this preparation. The dose in enteric fever would be about 2 to 3 tablespoonfuls every three hours, in dysentery and chronic ulcers half as much more. It must be borne in mind, what I already mentioned in my paper in the BRITISH MEDICAL JOURNAL of February 7th, that it can be given either alone or mixed with milk, custards, lemon water, etc. The admixtures will in most cases suffice to moderate its astringent action when the latter is not desired, but will not interfere with its bactericidal and specific properties.

MEDICAL AND SURGICAL APPLIANCES.

An Empyema Tube.—Dr. RUFUS E. EVANS, Newcastleton, Roxburghshire, has designed an empyema tube on the model of a tracheotomy tube, with the object of allowing the inner tube to be removed and thoroughly cleaned each time the dressing is changed, while leaving the outer tube *in situ*. Its general form is shown in the accompanying illustration, which is two-thirds the size of the original. The instrument consists of an inner tube (*b*) and an outer (*a*); the former is provided with a solid point and two openings (*d* and *e*); while the latter has a shield (*c*) which can be moved towards the point and fixed with a screw, thereby shortening the length of the tube within the chest. It is used without removal of bone, and is flattened from above downwards to admit of easier insertion. The length of the outer tube is 2⅜ in., and that of inner tube is 2⅞ in.

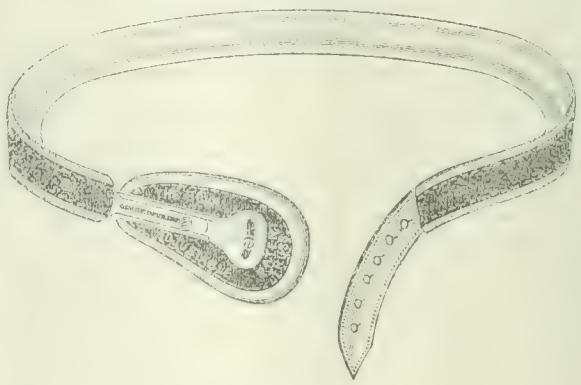


A Tongue Depressor for Exposing the Tonsil.—Mr. CRESSWELL BABER (Brighton) writes: This instrument is a modification of Jaenicke's tongue depressor. It consists of an angular tongue depressor having on one side a small double blunt hook fixed at right angles to the blade. The instrument is reversible, and by having a hook attached to either blade, as shown in the accompanying figure, it can be used for both



tonsils. By engaging the hook in the anterior faucial pillar or in the plica triangularis and drawing the same gently forwards and outwards, the surface of the tonsil and the opening of the supratonsillar fossa can be fully exposed. As this tongue depressor requires only one hand for its use, it leaves the other free for the application of a probe or any other instrument to the tonsil. It may be used with or without eucaine. I have found this instrument of especial use in cases of disease in non-projecting tonsils in adults. It has been made for me by Messrs. Mayer and Meltzer, Great Portland Street, W.

Adjustable Truss.—Messrs. James Woolley Sons and Co., Limited (Victoria Bridge, Manchester), make an adjustable truss which appears to possess certain useful features. It is after the pattern of the ordinary spring truss but, as seen in the block, the pad is capable of adjustment, both as



to length and angle. The truss is fitted after loosening the studs with an ordinary screw-driver; the correct position of the pad is ascertained, and it is then fixed by tightening the screws; the variation in length obtainable is about 1½ in. If the patient can be trusted not to experiment with the adjustment on his own account, the adjustability will be welcomed by the surgeon; unfortunately, screw-drivers are available to most people. The truss is advertised in various qualities, the cheapest one at 24s. a dozen for the single pattern, which appears to us a very reasonable price. We recommend the invention; it is likely to prove useful in the majority of cases.

LIGATURE FORCEPS.

DR. HEYWOOD SMITH (Welbeck Street, W.) writes: At page 738 of the BRITISH MEDICAL JOURNAL of March 28th there is described a pair of ligature forceps designed by Mr. Charles Childe of Portsmouth. The instrument—a most useful one—is identical with one introduced by the late Greig Smith some time ago, and has been used by many gynaecologists and others, with the advantage of lessening the time of passing ligatures, in coeliotomy and allied operations.

A Report

ON

THE MILK SUPPLY OF LARGE TOWNS:

ITS DEFECTS AND THEIR REMEDY.

VI.

STERILIZED AND "HUMANIZED" MILK FOR INFANTS IN ENGLAND.

Up to the present the only attempt made in England to combat infant mortality from diarrhoea, and to assist the poor in rearing their infants, has been the establishing of dépôts for humanized or sterilized milk.

The system of humanizing and sterilizing milk was first introduced into England at St. Helens by Dr. F. Drew Harris, M.O.H., who established a dépôt there. The idea was suggested to him by the working of the system at Fécamp in Normandy, where it had been established by Dr. Léon Dufour. An unpretentious building, consisting of six rooms, was taken at St. Helens, and the dépôt opened on August 8th, 1899. The Corporation supplied the installation, and agreed to pay the rent of the house, the wages for attendance, and the wear and tear of plant. A uniform rate of 2d. for a day's supply was charged, and it was found that this sum rather more than covered the cost of materials and of fuel. The cost of installation was £235 2s. 5d.

Since then, dépôts have been established at Ashton-under-Lyne, Bradford, and Liverpool, and at Battersea in 1902.

We have visited the dépôt at Battersea, where the system of supplying humanized milk for infants was introduced last year, at the instance of Dr. McCleary, M.O.H. The dépôt is a very unpretentious institution in York Road, in a densely populated neighbourhood; the building is a small shop, which has been converted to its present use by means of a few simple alterations. The front shop is used for the storage and sale of the milk; in a small room opening out of it the bottles are washed by means of a revolving brush, then rinsed on jets of cold water, and left to dry on a drainer. The sterilizer has been placed in the back yard, roofed in, in order to form a room. The system of sterilizing followed in Battersea is based on that adopted at St. Helens, and the manageress was formerly employed at the latter place. From 46 to 52 gallons a day are treated, and the number of children at present supplied is about 360. This milk is sterilized in five batches, and is country farm milk, supplied by a local dealer in ordinary churns.

The milk is first roughly tested to ascertain the percentage of cream. It is then diluted by one-third of its bulk, to reduce the proteids to the proportion usually found in human milk. Cream and sugar are then added, and a small amount of salt is also put in. This is done in a large drum, and the milk is then poured by hand into a funnel-shaped metal vessel, from which it is drawn into the bottles direct. The milk is modified according to two or three prescriptions, the quantities being based on the instructions on infant feeding issued by the Medical Committee of the Hospital for Sick Children, Great Ormond Street; by using three prescriptions, and by giving five different quantities of milk, eight varieties are obtained. The bottles are closed by an ordinary spring stopper (like German beer bottles). The sterilizer is a cylindrical vessel divided into five compartments, separated from each other by perforated zinc plates. Under the bottom compartment is a small boiler which holds eight gallons of water, and below that again is a fire at the base of the apparatus A door, hermetically sealed by rubber washers, closes each compartment, and there is a similar door in the top of the apparatus. When the water is heated, the steam rises through the perforated plates and fills the whole chamber. Thence it passes out through a pipe, governed by a stopcock, about 4 in. of this pipe being immersed in a bucket to which it is conducted. Thus a slight pressure is obtained, and the temperature of the steam raised about 2° C. At the top of the apparatus are a thermometer, a pressure gauge, and a small safety valve. As soon as the thermometer indicates 102° C., the time is noted, and that temperature is maintained for three-quarters of an hour. The time occupied in the whole operation is from three to three and a-half-hours. By this means very perfect sterilization results, and yet the milk does not taste boiled. Bottles of the mixture treated in this way may be kept a month.

The bottles are allowed to cool before being placed in baskets holding nine bottles, which are supposed to feed one child for twenty-four hours, six bottles being allowed for the day and three for the night. The bottles are prepared according to strength for three classes of infants of different ages:

Class I.—Milk	... ...	1 part.
Water	... ...	2 parts.
Milk sugar	... ...	6 oz.
Cream	... ...	6 oz.
Class II.—Milk	... ...	2 parts.
Water	... ...	2 parts.
Cream	... ...	4 oz.
Milk sugar	... ...	4 oz.
Class III.—Milk	... ...	2 parts.
Water	... ...	1 part.
Cream	... ...	2 oz.
Milk sugar	... ...	2 oz.

Strengths and Quantities.

No. 1 Strength.

At birth, and for first 10 days	...	9 bottles, each holding	1½ oz.
For next month	... ...	9 ,, ,,	2½ oz.
Up to 3 months old	... ...	9 ,, ,,	3 oz.

No. 2 Strength.

At 3 months old	... ...	8 ,, ,,	4 oz.
At 4 months old	... ...	7 ,, ,,	4½ oz.
At 5 months old	... ...	7 ,, ,,	5 oz.

No. 3 Strength.

At 6 months old	... ...	6 ,, ,,	6 oz.
At 8 months old	... ...	6 ,, ,,	7 oz.

The Battersea dépôt was only opened last summer; it has five branches, in order to make it easier for the milk to be fetched, and some 300 mothers deal there.

Before the child is fed the bottle is placed, without removing the stopper, in a basin of hot water, thus warming the milk to the requisite temperature. The stopper is then opened, and a teat is fitted to the bottle. By this means the danger of pouring the milk into a dirty feeding-bottle is avoided. One teat is given at first; afterwards the mothers have to buy them at 3d. each. When the institution was first started at St. Helens, mothers were requested to bring their babies once a week to be inspected and weighed. Records of their weight were to be entered in a book, and also on a card which was given to the mother. It was found impossible to insist upon this, and we are told that the records obtained were somewhat fragmentary. Why, when this is the system adopted in France with admirable results? In the report of the medical officer of health, dated March 30th, 1903, there is the following paragraph: "The lady sanitary inspector visits the homes of the children who are using the milk, and endeavours to get the instructions properly carried out." The instructions are contained in a leaflet handed to the mothers when they begin to deal there.

It seems to us that the merit in these institutions supplying humanized milk is the effort to do good. But to sell humanized milk without careful advice to each mother, medical inspection of the infant, and weekly weighing, involves some waste of energy. The results may be excellent or they may be nil, but surely there should be some means of knowing whether they are good or bad. It has been said that rickets and anaemia result from this method of feeding; this may be false, but if there is no medical supervision of the infants reared on humanized milk who is to know how true it is?

The shop visited at Battersea had black glass windows like a dispensary, with no name nor any indication that milk was sold there; the manageress was very kind in showing the writer over the premises and in explaining the process the milk went through. Beyond this there seemed nothing to tell. She said the mothers (or their representatives) called for the milk, received it, and went away until the next day. They never asked advice and were never given any, except that contained in the leaflet they were given on the first day. Some were old customers, while others sometimes only tried the milk once or twice, did not approve of it, or found it too much trouble to fetch it, and never came back again. In the report dated March 30th, 1903, the Medical Officer of Health says, "Turning to the statistical evidence, it should be said at once that it is doubtful whether the full value of the work of the dépôt can be expressed in figures." This is a matter for regret. It would be very useful to know precisely the results of this public effort to supply a special food, the value of which is not yet properly known. That it is possible to supply such information is clearly proved by the

following articles on the system in force in Paris, which may not only prove of interest to the medical reader, but may also point out to promoters of philanthropic institutions in this country the advantages of organizations worked in a methodical and business-like manner. Just as "humanized" milk is supposed to tend to anaemia and rickets in infants, so it has been contended that the sterilized milk used in Paris causes rickets and scurvy. Owing to the practical working of their system, by which the children fed on this milk are kept under medical supervision for two years, weighed, and examined, and a record of the results carefully made, it is possible for the medical officers of these institutions in France to contradict such statements and to advance evidence that they are unfounded.

In Liverpool the main municipal dépôt for the sale of humanized milk sends out that milk in vans to about forty dairies in the city; the price charged to the trade is 1s. 6d. for the week's supply, and it is retailed by the trade at 1s. 9d. for the week's supply. The amount of milk supplied to the dépôts at present averages about 166 gallons a day. There is not the slightest indication of the trade itself taking the matter up independently of the Corporation. The mixture, as made up in Liverpool, consists of two-thirds milk, one-third water, 2 oz. cream, 1½ oz. milk sugar, and 1½ oz. castor sugar per gallon of mixture.

So much for the working of the system and the results: what about the milk itself used by these humanized milk institutions? We are informed that at Battersea the milk is supplied to the dépôt by dealers, who themselves are supplied by country farms. What veterinary inspection of these farms is made, and what guarantee is there that the milk to be used in this life-saving work is healthy and free from contamination and dirt? Or is it the old story over again—the story of turning sewage into your drinking water and then trying to purify it by filtration?

Dr. Hope, M.O.H. for Liverpool, writes in a recent report:

> There can be no doubt that the operations of the Liverpool Corporation Act, 1900, is tending to improve the condition of cowsheds in various parts of the country from which milk is sent into Liverpool: the applications of the Act, however, in country districts are defective and expensive, and involve a considerable amount of the time of Liverpool officials. So far as Liverpool itself is concerned, the milk clauses of the Act unquestionably result in giving a measure of protection to the city, but there is nothing whatever to prevent a milk dealer who is prohibited from sending diseased milk to Liverpool, sending it to another part of the country which is less adequately protected.
>
> There are grounds for thinking that sanitary authorities in country districts are, owing to the action of the Liverpool Corporation, beginning to realize the necessity for putting into operation available powers to ensure the sanitation of country cowsheds, and there is no reason to doubt that cowkeepers themselves, when the matter has been pointed out to them by officers of the Corporation, are beginning to realize that advantages will accrue from keeping the cowsheds in a sanitary condition, and from keeping the animals clean.
>
> It is most discreditable to country sanitary authorities and cowkeepers, that cities, in self-defence, should be obliged to apply to Parliament for special powers to prevent dealers from sending milk of diseased cows into the city, when the obligation of removing the causes of disease rests with the country sanitary authority, and the remedy admits of an easy application.

If milk be sterilized, it should be supplied from inspected farms specially selected to supply the dépôts direct with pure fresh milk; a standard, not only of butter fat, but also of bacterial purity should be insisted upon. Milk already beginning to decompose and swarming with bacteria is not converted into good wholesome food by sterilizing. It has been contended that the sterilization of milk, carried too far, destroys the soluble ferment of the milk at the same time that it kills the microbes, and so converts this living fluid into a dead form of nourishment.

If there were great financial results from this system, or if the poor were supplied with milk gratis, one might be less surprised; but in spite of the price charged to the trade being 1s. 6d. for the week's supply, and retailed by the trade 1s. 9d. for the week's supply, the sale of sterilized humanized milk is carried on in Liverpool at a loss, estimated to amount this year to "something between £400 and £800." We hear of other towns agitating for the opening of humanized milk dépôts—for example, Leeds. Is this movement to become general? If so, surely the organizations should be maintained by those private individuals anxious to promote that particular form of good work. The money subscribed by the municipality might more wisely be expended on establishing dairies for the supply of clean pure fresh milk, which in this country is all that is necessary, except, perhaps, during the few weeks of a hot summer (when we get one). Would it not, then, be sufficient to advise mothers to scald at once, or to have the milk scalded at the dairies supplying the poor—sufficient, that is, if the sanitary authorities insist upon a reasonable standard of bacterial purity, cooling, and cleanliness?

CONSULTATIONS AND SUPERVISION OF INFANTS IN PARIS.

Owing to the decline of the birth-rate, the high rate of infant mortality in France has become a question of vital interest to the French nation. As long ago as 1784, indeed, Beaumarchais, who had set his heart upon creating a charitable organization to help deserving mothers and their children, issued a touching appeal, which led Mme. Fougeret to establish the still existing Société de Charité Maternelle. The movement, however, did not make much progress until 1869, when the matter, having been forced upon the attention of the public authorities, a Parliamentary Commission was appointed. The disasters of 1870, and the continuing diminution in the birth-rate, by the exertions of the great philanthropist, Théophile Roussel, led in 1874 to the passing of a law commonly known by his name. Public opinion was deeply moved; a league was formed to check infantile mortality, the Assistance Publique of Paris and the Conseil Général de la Seine established "consultations for infants": money was voted for similar purposes in the provinces, and private and medical organizations assisted mothers to rear their infants by giving them instruction, and by distributing milk and other necessaries or money. A milk commission was appointed, charged with the duty of improving the quality of milk and checking fraud.

Thanks, in large measure, to the exertions of M. Budin, the eminent Professor of Obstetrics in Paris, a serious attempt has been made during the last ten years to study the feeding and general hygiene of infancy, with a view to diminishing infantile mortality. M. Budin has many distinguished pupils, and his enthusiasm has fired the Obstetrical Society of France to take the matter up. The work thus done has been attended with gratifying results, and may be classified as follows:—

(1) Hospital Consultations for Infants.

These consultations are all conducted on the same principle, and the object in view is to supervise the bringing-up of the infant from birth. The first was established by Professor Budin, at the Charité in 1892. He established others at the Maternité Hospital in 1895, and in 1898 at the Clinique d'Accouchement Tarnier, this last being still under his direction. The consultations are continued at the two hospitals first mentioned by M. Budin's successors, and a similar consultation has been established by Dr. Boissard, at the Hôpital Tenon. Mothers who are delivered in these institutions are required subsequently to attend at the hospital until their children reach the age of two years. We may describe, as an example, the special department of the Clinique Tarnier, which by the courtesy of M. Budin we were recently allowed to visit. Women are admitted to this hospital for their confinements free of charge. Constant supervision is kept over the management of the infant after the discharge of the mother from hospital. Every effort is made to induce the mother to suckle the infant herself, but if her supply is insufficient, or if for any reason she is absolutely unable to give the breast to her infant, she can obtain sterilized milk daily at the hospital. The milk department is on the ground floor, and is very simply fitted up. In one room is a copper sterilizer. The milk, on its arrival from the country, in glass bottles with indiarubber stoppers, is sterilized, and is exposed to the temperature of boiling water for three-quarters of an hour. Each mother receives daily the number of bottles adapted to the child's age. The distribution is effected in a room adjoining the sterilizing room, the day's supply being handed through a window, which is approached by a special entrance at the side of the hospital. The quantity to be given is shown on a card handed to each mother before she leaves the hospital. The card bears the name and number, the date of birth, the weight at birth, the sex of the child, and the mode of feeding, whether by the breast in whole or part, or artificial. Each mother is required to bring her infant to the hospital at 9 o'clock every Wednesday morning; the child is seen and examined by one of the medical staff of the hospital, who enters upon a space in the card the date, the number of bottles of milk to be supplied, the weight of the child, and the alteration in weight which has taken place since the last consultation, the mean weight, and any observation which it may seem necessary to

record. The weight is also entered upon a chart, having space for fifty-two weeks, and bearing upon it the normal curve of the increase of weight of a healthy child. In this way any interruption in the steady progress which ought to take place can be seen at a glance, its cause investigated, and the mother advised as to the means which should be taken to remedy the defect. The following table shows the statistics of the department during a period of forty-nine months (March 1st, 1898, to April 1st, 1902):

Breast fed	448	or 85.09	per cent.
Mixed...	48	,, 9.10	,,
Artificial	31	,, 5.81	,,
	527		

Deaths from all causes 23, equal to an annual death-rate of 1.06 per cent. on the total number of infants.

No case of gastro-enteritis was notified.

The deaths, classified according to the manner of feeding, were as follows:

Breast	14	or 3.12	per cent.
Mixed	6	,, 12.50	,,
Artificial	3	,, 10.10	,,

We were informed by M. Planchon, who was good enough to explain the system, in which he evidently has the utmost confidence, that no case of scurvy, or even of rickets, had been observed among the infants treated at the hospital.

(2) Supervision of Infants.

This, the second class of institution, is conducted under the direction of the Conseil Général de la Seine, and administered by the Assistance Publique. The task is here more difficult, for while some of the infants are healthy, others are suffering from more or less serious digestive disturbances. The following table shows the statistics of the Surveillance de Nourissons, Rue Saint-Blaise, directed by Dr. Vildermann. They cover a period of sixteen months (September 1st, 1900, to January 1st, 1902):

Breast	153	or 45.4	per cent.
Mixed	66	,, 19.6	,,
Artificial	118	,, 35.0	,,
	337		

Deaths from all causes 25, an annual death-rate of 5.55 per cent. on the total number of infants.

Digestive disorders were the cause of 6 of the deaths.

The deaths, classified according to the manner of feeding, were as follows:

Breast	4	or 2.6	per cent.
Mixed	4	,, 0.6	,,
Artificial	17	,, 10.0	,,

(3) Crèches and Dispensaries.

These institutions, usually founded by private initiative, in some cases receive municipal assistance. Infants are received at ages varying from one to six or nine months and are taken care of during the day. Whenever possible, the mother is required to attend at stated hours to give the infant the breast; when this is not possible it is fed upon milk by the persons in charge of the *crèche*. The only rules imposed upon the mothers have relation to the prevention of infection. These institutions also supply milk for children who are not left there. In some cases the milk is given away, while in others a small charge is made. There are eighteen *crèches* in Paris, and as an illustration of the results obtained, we may take the statistics of the institution established by Dr. H. de Rothschild in the Rue Picpus. They comprise all the infants attending for at least one month during the year April, 1901, to April, 1902.

Breast	152	or 35	per cent.
Mixed	71	,, 16	,,
Artificial	211	,, 48	,,

Deaths from all causes 9 or 2.07 per cent.

As will be seen, the results obtained by means of the consultations, established in connexion with the maternity hospital are strikingly superior to those obtained elsewhere. This must be attributed to the fact that the infants are from the first brought up under medical supervision. Mothers are strongly urged to suckle their infants, with the result that 85 per cent. are induced to do so. At the other institutions mothers have often weaned their infants before they apply for assistance; they seek merely good milk at a cheap price. The low death-rate among the infants treated from the first at the hospital consultations is to be attributed not merely to the avoidance of digestive disorders, but also to the more robust constitution enabling them to resist infectious diseases, this greater robustness being due to the better feeding and general supervision of the hygiene of those infants.

Similar good results are observed in other parts of France, even in the largest manufacturing centres, where *crèches* have been established enabling the mothers to continue to suckle their infants.

The establishment of consultations in connexion with maternity hospitals, has the further great advantage of giving the students attending them an opportunity of studying the hygiene of infancy and the feeding of infants, and of becoming familiar not only with general principles, but with practical details.

Distribution of Milk for Infants in Paris.

As has already been indicated, there are in Paris, in addition to the hospitals, two main types of organization carried on with the object of assisting mothers to rear healthy children. These are the consultations for infants and the Gouttes de Lait. In the former the medical advice given is the primary consideration, and every effort is made to induce mothers to suckle their infants; in the latter, although also under medical supervision, the main work is the gratuitous or semi-gratuitous distribution of sterilized milk.

The following description is founded upon articles published by Dr. Henri de Rothschild in the *Revue d'Hygiène et de Médecine Infantiles*.

A Consultation for Infants.

The staff consists of: (1) A medical officer who sees and examines the babies, and is responsible to the administrative body; (2) a directress charged with the accounts and statistics, and with the distribution of the milk and of the layettes; she is also responsible for the sterilization of the milk, for giving help to women in their homes, and for making inquiries respecting them. For the actual work of sterilization she has an assistant.

At least four rooms are required—a waiting room for mothers and children, where also infants can be weighed; a consulting room; a room in which to prepare sterilized milk; a room for the distribution of the milk, which can also be used by the directress as an office. The furniture required is quite simple—a table and a weighing machine in the waiting room, and a table in the consulting room; a few chairs, a couple of basins, jugs for hot and cold water, a gas stove with a pot on it; four blouses for the directress and her assistant, a dozen glass-cloths and a few towels; stationery, two or three large registers, order cards to be handed with instructions thereon to the applicants, and charts on which the weight is entered.

The medical officer's task is to encourage breast feeding in every way—by the distribution of layettes, of medicines, of meat, and money to the mothers. Sterilized milk is only recommended as a last resource. Mixed and *a fortiori* artificial feeding is approved only when the mother has not enough milk to ensure the normal development of her infant. The gratuitous distribution of milk, clothes, etc., should be made only after careful inquiries by the directress so as to check fraud.

The books kept by the directress and the medical officer are very simple. There is a general register, one page of which is devoted to each child. Under an appropriate number, its name and age, and the name, occupation and address of its parents are entered, together with other particulars, such as the number of brothers and sisters living, or the cause of death if deceased, and the earnings of the parents. The weight of the infant at the time of its first attendance, and also if possible its weight at birth are recorded, together with particulars as to the mode of feeding (breast, mixed, or artificial), reasons for feeding artificially, state of health of the mother, and state of the infant's general health. In an alphabetically lettered page, the name of the child is entered with its number, to enable reference to it being quickly made to the general register. In a similar way a card is drawn out, and is either given to the mother or kept by the directress, according to circumstances. On it are entered the particulars contained in the register; more especially the name, age, weight, and the number in the register. The weight will be entered in its appropriate column at every consultation, with a note of the quantity of milk received, and to be received every day (number of bottles and quantity of milk to be contained in each). The medical director alone has authority to alter these. The cards will assist the directress in her book-keeping and in the distribution of the milk. According to the importance of the district in which the organization is situated, the consultation will take place once, twice, or thrice a week, the same or different medical officers attending on each of the days. In

case of different doctors the card will be of a different colour, so that each may have his own, although the same general register be employed. Facts noted at the consultations are entered in the register, for example, accidents or illnesses, date of weaning, vaccination or cutting of teeth; in short, any event which might explain diminution in the weight of the infant, or check in its progressive increase. The limit of age up to which a child is required to attend has been fixed at two years. One of the conditions most essential to the satisfactory working of a consultation is the rigorous discipline to which mothers must be subjected. They must attend with absolute regularity, submit unquestionably to the doctor's instructions, and follow his advice rigorously. The infants must be brought and weighed at least once a week, exception only being made in favour of breast-fed infants presenting no unhealthy symptoms, who are required to attend once a fortnight only.

The medical officer and directress should see that those rules are carried out; the first broken rule is held to merit a severe reprimand, at the second the mother is forbidden to attend the consultation. Severe as this rule appears, it is found to be quite indispensable to the good working of the consultation as well as to the health of the infant. Success depends absolutely on the firmness of the doctor and of the directress. On the other hand they cannot encourage or reward too much a mother who has faithfully executed the doctor's orders, and successfully carried out the rearing of her child, especially if it has been fed on sterilized milk, artificial feeding being far more difficult to manage than breast feeding.

Gouttes de Lait.

For several years past sterilized milk has been distributed in Paris, either free or at a reduced price, to the poor by an organization called Laiteries Philantropiques (philantropic dairies). These societies were formed with the object of supplying milk, guaranteed pure, whether fresh milk or sterilized, directly to the poor, or to charitable institutions (such as *crèches*, hospitals, dispensaries, consultations for infants, etc.). Sterilized milk is issued in bottles of various sizes, containing from 60 grams. to half a litre; 16 dépôts were at work in Paris in the autumn of 1902. The sterilized milk is sold at these dépôts at the following prices: 60 grams., 5 centimes; 100 grams., 10 centimes; half a pint, 20 centimes. Orders for the amount required daily are distributed to the mothers, who obtain the milk at the dépôt which happens to be nearest to their residence.

A charitable society, desiring to undertake work of this nature, would have to arrange to receive milk of good quality, which should be analysed at short intervals, and would have to provide a sterilizing apparatus of a size adapted to the probable requirements of the district. In addition to the sterilizer (which should be some form of water bath, in tin or enamel with a cover) frames for holding the bottles (like a cruet stand) would be required, a sufficient number of glass bottles with separate indiarubber stoppers, and some bottle-brushes and drainers. It will be found necessary to have four times as many bottles as the number distributed daily; one lot in circulation; another being sterilized; a third being washed, while the fourth is in reserve. Small baskets with compartments for the bottles, in which the milk may be carried away, will be required, each basket bearing the name of the recipient.

Arrangements should be made to receive the milk from the country as early as 6 a.m. at latest; it should be thoroughly mixed, and then filled into bottles of sizes and number likely to be required during the day, with an addition of 5 or 6 per cent., to allow for accidents or breakages. The sterilization will take an hour, and cooling of the milk being indispensable to the hermetical closing of the bottles, the distribution will commence not less than one hour after the sterilization is finished. The mother or her messenger attends each morning at a fixed hour, hands in the empty bottles and presents the order card, which entitles her to receive the number of bottles containing the quantity of milk noted upon it. The quantity is enough for one day only, as milk prepared under these conditions cannot be guaranteed to keep more than twenty-four hours. In the evening the directress prepares a tabular statement, showing the milk required for distribution the following morning. The milk is in part distributed gratuitously, in part at less than cost price, some at cost price, and some at a small profit. Such distribution requires careful supervision, but meets the case of women who are themselves able to pay something, or are assisted by rich persons. Profits thus made are devoted to extending the organization. In Paris the cost of a litre of sterilized milk is about 40 centimes. As the quantity required by an infant is on the average 80 to 85 centilitres a day, the cost for each infant is about 35 centimes a day, or 10 francs 50 centimes a month, which is about the sum usually paid in Paris to a dry nurse who takes charge of an infant.

In short, the Gouttes de Lait are philanthropic organizations, enabling mothers to rear their children in a rational manner, with a minimum risk and at a minimum cost.

THE POLYCLINIQUE H. DE ROTHSCHILD.

Baron Henry de Rothschild, a friend and pupil of Professor Budin, established a consultation for infants in 1896. The institution has grown rapidly, and its successor, the Polyclinique H. de Rothschild, was opened in the Rue Marcadet in December, 1902. The building is in two stories, and forms, what would be called in this country, a small hospital for children, with a very complete and carefully-designed out-patient department.

On the ground floor there is a waiting room for patients, a consulting room, dispensary, orthopaedic room for the application of splints, bandages, etc., and a room for dressings. Here, also, are the administrative offices. On the first floor are several small wards furnished with cots, beds, and several incubators. On the occasion of our visit, under the guidance of Dr. de Rothschild himself, several of these incubators were in use, and we understood that it was the practice to require the mothers to attend and suckle the premature infants treated in this way. Dr. de Rothschild is a philanthropist, fortunate enough to have himself the means of carrying out his benevolent schemes. His Polyclinique is fitted out in a very admirable and complete way, not only for the instruction of mothers upon the treatment of their infants, but also for the study of the diseases of infancy and childhood, and for giving instruction to students. There is a large lecture room and a well-designed library, in which Dr. de Rothschild has formed a very complete collection of books and periodicals bearing on the hygiene of infancy and the diseases of children. There is a Roentgen-ray room and a photographic studio, where photographs of patients are taken; these photographs are coloured by hand by a skilled artist, registered, and preserved with the notes of the case. A course of lectures to students has already been given in the lecture room, and similar courses will be given in the future. The presence of mothers and their infants will render it possible to illustrate the theoretical teaching by practical demonstrations. It is proposed also to give special lectures to mothers and young girls.

The Polyclinique possesses a milk-sterilizing department, and works in association with an organization called the Œuvre Philanthropique de Lait. This, which has been declared officially to be an "organization of public utility" seeks to help mothers to rear their infants into strong children, and to stamp out gastro-enteritis, a disease held to be due to ignorance in feeding, or to over-feeding, and to be the cause directly or indirectly of a great part of the large infantile mortality. The Polyclinique itself is situated in a poor and densely populated part of Paris on the outskirts of Montmartre, and the Œuvre now, less than five years after its foundation, has twenty dépôts in various other poor parts of Paris; it supplies milk both fresh and sterilized. In 1901, the third year of working, it issued 83,279 litres of sterilized and 357,868 litres of fresh milk. All the milk is obtained from a farm situated in the country at a distance of two hours by rail from Paris, maintained by and managed under the direct supervision of the Œuvre. Part of the milk obtained at the farm is sterilized there at 120° C., and sent in bottles, containing from 60 grams to half a litre, to the dépôts in Paris; a further quantity is sent unsterilized in churns to the same dépôts, and is sold to the poor for ordinary purposes—that is, for consumption by others than infants. Sterilized milk is sold at 5 centimes for 60 grams, 10 centimes for 100 grams, and 20 centimes the half litre. If a child taken to the Polyclinique Rothschild is considered by the physician there to need sterilized milk—and it is the rule to recommend the mother to give sterilized milk to all infants not suckled or partially suckled—the mother is given the address of the nearest milk dépôt to her home, and she sends there daily for the day's supply. In this way the milk has become very quickly known in many neighbourhoods, and the quantity sold is rapidly increasing.

The milk sterilized at the Polyclinique Rothschild is for the use of the patients in the hospital, and to be distributed gratuitously to out-patients as a gift from the Baron. It is

sterilized in copper boilers, in which the stoppered bottles of milk are placed and kept at the boiling point of water for three-quarters of an hour, after which they are put into little baskets made to contain six bottles, or enough for one day's consumption. There are three sizes of bottles, containing 60, 100, and 150 grams respectively. As the milk is sold at 2 sous for 150 grams, the cost is at most 6d. a day. After the age of 8 or 9 months a thriving infant is supplied with half a litre in a single bottle for the day, and this costs 4 sous. A visit to one of the small dépôts in the early morning was interesting. Two women stood behind a counter and received the order card of the applicants which they signed, after entering their names in a register, and filled their jugs or bottles with fresh milk from a churn by means of a dipper measuring a known quantity. In the room at the back of the shop were other churns, full or empty, and baskets containing sets of bottles of sterilized milk. The queue of women, which had begun to form at 6 a.m, spoke for the popularity of this great philanthropic work.

(To be continued.)

FOURTEENTH INTERNATIONAL MEDICAL CONGRESS.

[From a Special Correspondent.]

The Approaching Congress.

Madrid, April 18th.

Though the preparations for the congresses can hardly be said to be in an advanced stage, there are many signs of activity at any rate among the medical part of the Spanish capital. The journey to Madrid from England is a long one, and in its course one felt part of the wave of doctors advancing south. They are polyglot, but French is the usual medium for the exchange of ideas, and during the hours of the night in the corridor train might be heard a Canadian explaining to a Parisian, in the common tongue, the state of Medicine in Montreal, and the relation between the English races and the Lower Province of Canada.

The Spanish press is considerably interested in the congresses. The *Heraldo*, an evening paper, gives, under date of April 16th, two columns to the Press Congress, with portraits of the chief officials. It gives a short summary of the two previous congresses at Paris and Monaco, and defines their objects as being the promotion of fraternity and concord among medical journalists throughout the world, the defence of copyright, and the assurance to authors and to editors of their just rights.

The allusions to the officials are rather more laudatory than would be customary in our country, but no one here finds them unusual. Then follows a list of the Spanish editors and press representatives. The editor of the *Siglo Medico* (Dr. Corteza) is the President, those of the *Revista de Medicina y Cirugia Praticas* (Dr. Ulecia) and of *La Farmacia Española* (Dr. Marin y Sancho) Vice-Presidents. Among the foreign representatives are Cornil, Robin, Baudouin Blondel (France), Mr. Adolphe Smith and Dr. F. M. Pope (England), Drs. Posner and Ewald (Germany), Drs. Dejace and Dubois (Belgium), Dr. Hansen (Norway), Drs. Mariani and Ceccherelli (Italy), Dr. Montandan (Holland), Dr. Santos Fernandez (Cuba), Drs. Jenaro, Sixto (Argentina), and Wood (United States). Then follows an enumeration of the medical periodicals throughout the world. The United States is credited with 286, France 237, Germany 163, Italy 109, Austria 73, Spain 70, Russia 47, Belgium 28, Holland 13, Japan 7, and smaller numbers for other countries, making up the formidable total of 1,183. England is credited with 77, which fact seems to suggest that the compiler of statistics, whoever he may be, has thought all fish that his net would embrace, for the claims of some of the 77 English journals to be representatives of the medical press of the world must be of the slightest; and of the same want of discrimination has been shown in enumerating those of other countries surprise at this enormous total will be modified.

It is not yet certain if the King will inaugurate this Congress in person. Meanwhile, other functions of a medical character have been fixed for this period. The King on Tuesday will open a new municipal laboratory, said to be singularly perfect, of which more may be said later, and the professors of the Faculty of Medicine give public dissertations. *Conferencias* are announced to be delivered by Dr. Forns, being development of the following thesis: How Best to Study Medical Specialities. The Odontological Society of Madrid has an exhibition of apparatus, etc. As a proof of the interest taken in scientific and medical subjects just now, the *Heraldo* publishes a review of a work by Dr. José Carracido, Professor in the University of Madrid, on a Treatise on Biological Chemistry. It devotes nearly a column to the subject, and includes a portrait of the author. The review is mainly laudatory, especially welcoming the work as a proof that the Spanish nation is not so deplorably backward, while admitting that there is much to be done. Of the scope of the book not much is to be gathered except the expression of the author's belief that in the process of biological development chemical changes have always preceded morphological ones.

The Spanish public is, however, at present deeply interested in medical or rather surgical subjects from a far different reason. The *torero* Conejito, who was wounded in a bull fight a few days ago, lies dangerously ill at Barcelona, and all the papers contain full bulletins, sometimes issued almost hourly, with full clinical reports of pulse, temperature, and sleep. The last accounts are discouraging, and indicate general septic infection. Amputation of the injured limb is talked of as a last resource, and with but little hope of saving life. If a fatal termination should ensue, it will undoubtedly cast a gloom over Spain that the most brilliant successes of the Congress will do little to remove. Meanwhile the small band of *toreros* who stand in or promenade the Calle de San Geronimo are watched with the deepest interest and a respectful reverence that we can never hope to appreciate.

The military sanitary body or medical corps will show their apparatus and impedimenta, and also have prepared a "lunch" for the foreign military surgeons.

With regard to the Congress itself, the official programme is not yet issued, but may be *manaña*, a word the true inwardness of which we are rapidly getting to appreciate. The functions that appear to be finally decided on are the opening ceremony by the King in the Theatro Real on the 23rd, followed by a reception in the evening by the Ayuntiamento to the foreign guests. On the 24th, a reception will be held in the Royal Palace, which will be entirely thrown open to Congressists. No ladies will be admitted. There are many other meetings, some account of which will be given later.

The Medical Institutions of Madrid.

A short note on these may be of interest. First in importance is the great Faculty of Medicine founded by Charles III at the instigation of the renowned surgeon and anatomist, Gimbernat. It was first called the Royal College of Surgery of San Carlos, and was installed in the ground floor of the General (now the Provincial) Hospital. At its solemn inauguration in 1781 (October 1st) Gimbernat read a thesis on Sutures, their Use and Abuse. Chairs of Medicine were added, and in 1799 it was called the College of Medicine and Surgery of San Carlos. The greater part of the present building was built between 1827 and 1834.

A department of pharmacy was added in 1843, and in 1845 it ceased to be a separate college, and was merged into the University of Madrid as the Medical Faculty of the latter body, which had led a chequered existence for some years.

The University of Madrid first came into existence in 1822, when by Royal decree the Ancient University of Alcalà de Henares was suppressed or removed to Madrid. It went back to Alcalà when the French entered Madrid in 1823, returned to Madrid, at least in part, in 1836; but in 1850 was given the title of the Central University of Madrid, with Faculties of Law, Philosophy and Letters, Science, Medicine, and a School of Notaries. It has a magnificent library of 26,000 volumes founded by Cardinal Cisneros, better known to Englishmen as Ximenes.

The present course of studies for the Faculty of Medicine was approved in 1886, and appears very complete. The student must obtain his Baccalaureat in Science. He then has a course of eight years' duration, divided into three periods: (1) Preparatory; (2) for the Licentiate; (3) for the Doctorate. The first is taken in the Faculty of Science at the University. The second, Anatomy and Histology, Physiology, Therapeutics and Medicine, Surgery Operative and Theoretical, Obstetrics and Gynaecology, Elements of Hygiene and Public Medicine, etc., in fact, the ordinary subjects of a professional education.

In the third, History of Medicine, Advanced Hygiene, Epidemiology, Biological Chemistry, and that of Poisons.

There are also provisions in the Faculty for post-graduate courses. The separate departments and laboratories are all found under the same roof.

The magnificent amphitheatre with a fine painted ceiling is now being used as the reception-room for the Congress.

The public hospitals of Madrid are numerous, but it is difficult to separate those exclusively used as general hospitals from those which have rather the character of infant orphan asylums, asylums for the aged or blind, etc. The Provincial Hospital, in immediate connexion with the Faculty of Medicine, is the largest. It contains about 1,000 beds, and about 13,000 patients per annum pass through the wards. The clinical courses of the Faculty are given here. The Hospital de la Princesa (old) contains about 225 beds. El Niño Jesus, for children has 110 beds, and a large out-patient department. Nuestra Señora del Carmen has 250 beds, of which about 10 per cent. pay 1.50 pesetas a day.

All these are of very old construction. Of new ones are San Juan de Dios, 860, exclusively for venereal, syphilitic, and skin cases.

There remains only the fine new Military Hospital of Carabanchel, with 25 pavilions, exclusively military, and the Hospital de Buen Suceso, founded by the Catholic kings before the conquest of Granada, which claims to be the oldest hospital in the world. It is exclusively reserved for the servants of the King.

The Red Cross Society, founded under the auspices of the Order of St. John of Jerusalem about 1864, has a flourishing organization.

Officers of the Congress.

The President of the Congress, Dr. Julian Calleja y Sanchez, was formerly Professor of Anatomy in the University of Valladolid, and now occupies that of Descriptive Anatomy and Embryology in the University of Madrid. He is the author of a treatise on anatomy, and has several times held the office of President of the Medical Faculty of the University of Madrid. He is a member of the Spanish Royal Academies of Medicine and Science, of the Council of Public Education, a Vice-President of the Royal Council of Public Health, and President of the Madrid Colegio de Medicos. He has a seat in the Spanish Senate as representative of the University of Zaragoza. He was President of the ninth International Congress of Hygiene, and an official delegate of the Spanish Government at the International Medical Congress held in Paris. He is a Grand Cross of the Order of Isabel la Catolica, Great Officer of the Legion of Honour, etc.

The General Secretary, Dr. Angel Fernandez Caro y Nouvilas, is a Medical Inspector of the Spanish Navy, and has several decorations for his distinguished services in Cuba and elsewhere. He was for many years director of the *Boletin de Medicina Naval*. He is a member of the Spanish Academy of Medicine and President of the Spanish Society of Hygiene. He has sat in the Senate through the lifetime of several Ministries as representative of Alicante.

Some Statistics.

According to the Spanish newspapers the number of foreigners who had inscribed their names as members of the Congress up to April 18th was more than 3,000. This number added to that of Spanish members makes up a total of nearly 6,000. It must be remembered, however, that the Congress can scarcely be called a purely medical assembly inasmuch as pharmacists, veterinarians, dentists and generally all persons interested in medicine and sanitation are admitted to membership. It would therefore be interesting to know exactly what proportion of this motley gathering consists of members of the medical profession. It is anticipated that some 400 Germans and Austrians will attend; among those expected are Professors von Bergmann, Eulenburg, Leyden, Ewald, and von Schrotter. France and Belgium are expected to send between them 600 representatives; among them are Professors Brouardel, Cornil, MM. Robin, Hayem, Doyen, Tuffier, Chantemesse, and Lapersonne.

Of the representatives of Great Britain we are only told that they are *bastantes* (a fair number); among them are Sir Thomas Barlow, "Mrs. Smith, Semon, Dyce Dutwood" and others.

From Italy more than 400 are expected, among them being Professors Baccelli, Durante, Luciani, Grassi, Concetti of Rome, Golgi of Paris, De Giovanni of Padua, Maragliano and Bossi of Genoa, and Mantegazza of Florence.

From America, North and South, are expected *bastantes y notables* visitors.

(To be continued.)

THE PLAGUE.

Prevalence of the Disease.

India.

THE plague returns for the weeks ending March 14th and 21st show that the number of deaths from the disease in India amounted to 29,997 and 29,236 respectively. The abatement during the latter week indicates that the 1902-3 recrudescence of the disease reached its maximum during the second week of March, 1903, being a week or two earlier than the maximum weekly record of deaths from plague during 1901-2. These enormous totals exceed any records in previous years, and as the death-rate from plague has increased almost continuously year by year the future does not indicate any hopeful sign of an abatement of the epidemic in years to come. The maximum weekly death-rate has this year reached to within 3 of 30,000, whereas last year the maximum during the corresponding week amounted to a little over 26,000. The increase in numbers points not to any marked prevalence in any one centre, but to a more general infection of the whole country.

During the two weeks in question (ending March 7th and 14th) the deaths from plague in the principal centres of the disease were as follows: Bombay City, 1,107 and 1,110; Bombay Districts, 7,764 and 6,666; Calcutta, 895 and 751; Bengal, 3,839 and 4,447; North-West Provinces and Oudh, 4,177 and 4,419; Punjab, 8,177 and 8,514; Rajputana, 132 and 167; Central Provinces, 1,527 and 1,363; Hyderabad State, 845 and 451; Central India, 276 and 384; Berar, 501 and 458. In the South of India plague is rapidly diminishing as the hot weather increases, the deaths in Madras having fallen to insignificant proportions. Experiments with a new disinfection system have been tried in Bangalore. During February and March, with a view to ascertain the actual results of desiccation in various types of native houses, a series of fourteen experiments have been carried out by the Plague Department with Sawhney's desiccater. The temperature of each room is raised to 158° F. with dry heat, and with moist heat (steam) to 122° F., and the air freely circulated by exhaustion. Of the experiments only five were completely successful.

Cape of Good Hope.

Port Elizabeth.—Three cases of plague were discovered during the week ending March 14th, and one plague patient died, leaving 22 cases still under treatment in the Plague Hospital. During the week ending March 28th 7 fresh cases of plague were discovered; 3 deaths from plague occurred during the week; 23 patients remained under treatment in the Plague Hospital.

King Williamstown.—During the week ending March 14th, 1 case of plague was reported, leaving 3 cases in hospital.

Grahamstown.—On March 24th a native male was found suffering from plague; he died on the same day.

East London.—One fresh case of plague and 2 deaths from the disease occurred in East London during the week ending March 28th.

Saldanha Bay.—Two patients suffering from plague at the Quarantine Station.

Dead rats infected with plague continue to be found in Port Elizabeth, King Williamstown, East London, and Graaf Reinet.

Hong Kong.

During the weeks ending April 4th, 11th, and 18th the fresh cases of plague in Hong Kong numbered 66, 25, and 51; and the deaths from the disease were returned as 59 (including one European), 22, and 47 respectively.

SIERRA LEONE MEDICO-CHIRURGICAL SOCIETY.—On March 25th, the Hon. Dr. W. T. Prout, Principal Medical Officer of Sierra Leone, entertained at dinner all the medical men in Freetown, including the R.A.M.C. officers at Tower Hill, Wilberforce, and Kortright Hill, "to consider the possibility of forming a medical society." In proposing the health of the medical men in Sierra Leone and its Protectorate, Dr. Prout said he believed that was the first time in the history of West Africa, at any rate Sierra Leone, in which eleven medical men sat at dinner. That showed a new era, and was a sign proving the gradual development of the Colony. He went on to say that the medical society about to be formed would be a boon to all medical men; that all would meet and know each other, exchange thoughts, help one another, and work for one cause—to improve Sierra Leone, and make its sanitation all that could be desired. Afterwards Dr. Renner proposed that a medical society be formed; this was seconded by Dr. Davson and carried unanimously. The society is to be called "The Sierra Leone Medico-Chirurgical Society." Dr. Prout was elected President, Dr. Hood Honorary Secretary and Treasurer of the new Society. It was arranged that the Society meet on the third Wednesday in every month, and that the meeting of the Society should not confine itself only to scientific work, which was its first and chief aim, but should encourage social gatherings. A Committee was formed, composed of the President, Secretary and Treasurer, Surgeon-Major Pearce, and Dr. Renner. It was urged that the senior military surgeon at the barracks for the time being should be included in the Committee. All naval and ship's doctors in port are to be considered honorary members.

"THE Mary Wardell Convalescent Home for Scarlet Fever" has just issued its report for 1902, during which year 151 patients were received and kept until they could safely rejoin their friends. It is a useful institution, and requires support. The administrative officers are all honorary, and the Secretary is Miss Mary Wardell, Stanmore, Herts.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1903.

Members of the British Medical Association are reminded that commencing with January 1st, 1903, the annual subscription is a uniform one of 25s., inclusive of the Branch, and that all subscriptions should be paid direct to the General Secretary, 429, Strand, London, W.C., and not to a Branch Secretary.

British Medical Journal.

SATURDAY, APRIL 25TH, 1903.

THE LONDON COUNTY COUNCIL AND SPECIALLY-SKILLED PATHOLOGISTS.

The letter which has been addressed by the County Council to the London medical schools and to the Royal Colleges, together with the reply which has been returned to the Council by the medical and surgical staff of Guy's, were printed last week, page 945. We understand that the staff of St. Bartholomew's Hospital also do not intend to recommend the appointment of a skilled pathologist at the inadequate remuneration suggested. The matter is, we believe, still under the consideration of some of the other bodies addressed.

There is no question that the County Council will have the sympathy of every one, as it has of Guy's Hospital, in its wish that the best medical skill should be forthcoming for the assistance of the coroner's court in cases of doubt and difficulty. Instances must occasionally occur when such assistance is required. But there are many considerations involved, and it is open to grave doubt whether the provision of a list of expert pathologists guaranteed by the schools is the right way out of the difficulty.

In the first place, who are medical men "with medico-legal experience?" They are a small class, and in hospitals would be confined to the pathologists or demonstrators of morbid anatomy, and the members of the staff. Such men would certainly not be willing for the fee proposed to perform the *post-mortem* examination, and to spend possibly a whole day, perhaps more, waiting to give evidence; such a requirement, moreover, might seriously dislocate the working of the hospital. The law does not allow the coroner to offer a higher fee. But it should be clearly stated that since the duty required is of special difficulty—for that is conveyed in the County Council's letter—it is of the nature of expert evidence, and should be paid for accordingly. It is not right that medical men should be expected to perform public work for inadequate remuneration.

Secondly, even in these special cases it will be necessary, as the letter from Guy's Hospital very clearly states, to have the assistance of the medical man who has attended the patient in his last illness. The knowledge of the clinical symptoms which the medical attendant alone can supply is, as all who are in the habit of making *post-mortem* examinations well know, an important aid in the search for the cause of death. No provision appears to be made for this in the scheme suggested by the County Council, but it would be a great mistake for any authoritative body to fall in with any plan in which such an important omission existed.

Thirdly, we cannot but foresee great embarrassment in ordinary cases of no special difficulty. It has hitherto been the custom for the coroner to employ in such cases the ordinary medical attendant, and this ought to be the usual practice, since he can supply the clinical knowledge which is required and is fully competent to judge of the appearances after death. But if the coroner has in his hand a list of expert pathologists willing to perform the *post-mortem* examination for the fee mentioned he will be tempted, unless he be a man of some medical knowledge, to think this the only important point, and to ignore the great part which the clinical history plays in such investigations. As a result the expert will be employed to the exclusion of the general practitioner, to the disadvantage of the public and to the detriment of our profession.

Indeed, if the fees are equal the employment of these two persons will be a matter solely for the discretion of the coroner. We wish that we could say that our profession could safely rely upon this discretion. Unfortunately this is by no means the case. In our issue of April 11th, p. 887, a striking example was related. A coroner, Mr. Oddie, endorsed the censure of a jury on a medical man, Dr. McKinnel, who had not been summoned to the inquest and who had not had the opportunity of stating his case before them. The evidence on which the censure was based was incorrect; the coroner himself pointed out to the jury that they had no means of deciding whether it was true or not, since they had not heard both sides of the case; yet he made himself the mouthpiece of a grave and wholly undeserved reflection on Dr. McKinnel. It is impossible that when such instances occur we can willingly entrust to the discretion of coroners such powers as the County Council would confer, without at the same time safeguarding their employment. A state of affairs would rapidly be produced which would be greatly resented, and would be bad both for our profession and for the public.

THE RELATION OF HUMAN TO BOVINE TUBERCULOSIS.

At the instance of the Agricultural Committee of the University of Aberdeen and the Highland and Agricultural Society, Professor Hamilton and Mr. M'Lauchlan Young have been testing experimentally the assertion that human tuberculosis differs so much from bovine that it cannot be transmitted to cattle. Their experiments were made on calves, and were divided into four series:

1. Six young calves were selected for feeding with human tuberculous sputum; 2 of these died, one of them from diarrhoea, the other from septicaemia; the remaining 4 were killed after the lapse of from sixty-five to sixty-nine days after the commencement of the experiment; in these 4 the only lesions discoverable were in connexion with the tonsils and the lymph glands in communication with some part of the alimentary tract. The mesenteric glands were much involved and greatly enlarged. In 3 of the cases the glands showed "a tuberculous giant-cell structure," and portions of them inoculated into guinea-pigs caused tuberculosis to develop. In the remaining cases the authors' report is: "Enlargement of mesenteric lymph glands and of tonsils strongly suggestive of a tuberculous lymphadenitis; absence of giant-cell structures, absence of tubercle bacillus, failure to reproduce in the guinea-pig." In the whole of this series of experiments the complete absence of any intestinal tuberculous lesion is regarded as evidence of the power of the tubercle bacillus to pass

through the intestinal walls without infecting them and subsequently to develop tuberculosis in the mesenteric lymph glands.

2. Six calves were inoculated subcutaneously in the thigh or leg with human tuberculous material, 4 with caseous cervical glands, 1 with miliary tuberculous lung, and 1 with tuberculous urine. The first of the calves inoculated with cervical glands was killed in sixty-five days. A local tuberculous lesion was found with glandular enlargements in the groin of the same side. The pelvic, abdominal, mesenteric, post-mediastinal, tracheal, and oesophageal glands were markedly enlarged. There was no evidence of tuberculous implication of other organs. Most of the enlarged glands presented yellow tuberculous nodules. "Film preparations of scrapings from the cheesy nodule at the point of inoculation and from the mesenteric glands showed the presence of the tubercle bacillus. The bacilli seemed to be larger and broader than the ordinary human tubercle bacilli, and contained several deeply stained points in their interior." Another interesting observation in connexion with this animal is that "the glands over the stomach were all likewise enlarged and ran in chains, while some of them were so prominent as to resemble the 'pearly' or 'grape-like' variety of bovine abdominal tubercle." The results with the second animal were dubious and, on the whole, negative; the third animal died early. The fourth was killed in eighty-five days, and showed more or less general glandular enlargement with tuberculous caseation at the point of inoculation. In each lung there was a large tuberculous patch which had advanced to cavity formation. Corresponding to the tuberculous patches was a localized pleurisy. The animal inoculated with miliary lung was killed on the eighty-seventh day. Many of the glands were found to be enlarged, congested, and haemorrhagic. All the bronchial glands showed extensive caseous deposits, becoming in many cases calcareous; this material produced tuberculosis in guinea-pigs. The animal inoculated with tuberculous urine also exhibited extensive tuberculous infection with involvement of the right lung.

3. Of the six calves employed in this group of experiments, two were used for a repetition of the tuberculous gland inoculations, both with the result that extensive tuberculosis was produced. One was inoculated subcutaneously with human tuberculous sputum, with the result of producing widespread tuberculosis; two were caused to inhale a spray of phthisical sputum and developed tuberculosis of the lungs and pleurae in consequence; whilst the sixth animal was inoculated with tuberculous sputum intravenously in the neck, the result being a local tuberculous lesion, tuberculous glandular swellings at the root of the neck and in the thorax and tubercle of the spleen.

4. Two calves, a few days old, were inoculated subcutaneously with material obtained from previously inoculated calves, the object being to ascertain whether the human tubercle bacillus, after inoculation upon a calf, exhibited an increased virulence on being inoculated into a second calf. The result was that "each animal developed a widespread tuberculosis far more virulent than that of the primary host, clearly demonstrating that the human bacillus, once engrafted on the calf, becomes acclimatized to its new surroundings, and has its power of inducing lesions thereby enhanced."

The authors regard their results as a "direct contradication of those alleged to have been obtained by Koch and Schütz," and as supporting the view that "the human bacillus and that of bovines are identical, but modified somewhat by their environment." They consider that they have proved conclusively that human tubercle bacilli can induce tuberculosis in the calf, and are also of opinion that human bacilli gain enormously in virulence by being reinoculated upon a second calf, and that the morphological character of the bacillus may vary according to circumstances, and are no guide to the source of the organism under observation.

The experiments of Professor Hamilton and Mr. Young are highly interesting, and their results are in many respects in accord with those of several other recent investigators. But in dealing with a question of this kind, which is still unsettled and the subject of keen controversy and jealous criticism, we feel that an excess of circumspection is desirable in the preparation of experiments, the recording of results, and the drawing of inferences from them. Take, for example, the tuberculin test. Many of the experimental calves used were tested beforehand with tuberculin, but not all. Spontaneous tuberculosis in a young calf is not at all common, and therefore it is highly improbable that any of the untested animals used were, to begin with, tuberculous; still, the adverse critic would feel he had a right to say they might have been, and therefore it is regrettable that, for instance, the interesting resemblances to *Perlsucht* noted in the first calf of the second series of experiments should suffer somewhat in importance, owing to the fact that the animals in this series of experiments were not previously tested with tuberculin. Again, in a controversy, it is an error in judgement to bring forward in support of a point a case which is admittedly inconclusive. In one of their cases the authors say: "It seems probable, at least, that the glandular enlargement was tuberculous, but so sparsely distributed was the bacillus throughout the parts, that it failed to reveal itself either on microscopic examination or after inoculation." Their opinion may be right, but it is a personal surmise and a probability, not a proof; the dogmatic and sweeping assertions with which the article concludes can only be accepted in so far as they rest upon incontrovertible facts. The writers appear to have many strong points in favour of their views, but hardly to make enough of them. In many of their most interesting positive results, where they have obtained fairly generalized tuberculosis, their details are far too scanty. No details are likely to be accepted unless they are full, and what is wanted is a detailed account of the histology and bacteriology of each organ, gland, or group of glands described as tuberculous, which shall place the diagnosis of its tuberculous character upon an objective basis. In numerous instances the details provided are too meagre to be convincing.

Our general conclusion, then, is that, though the authors' views may prove to be right, they have been a little hasty in drawing general conclusions from a limited number of experiments. We may quote, as a final illustration, the assertion that a tuberculous virus of human origin "gains enormously in virulence by being inoculated upon a second calf." Now, whatever other evidence there may be in support of this view, the present writers only record two experiments to confirm it, one of them upon a calf two days old, the other upon a calf "a few" days old. It is well known that animals of the same species, months or even years old, vary considerably in their susceptibility to disease, tuberculous, or otherwise. How can we form an estimate of the capacity of these two newborn calves for

resisting infection? And if we cannot do that, it seems very rash indeed to infer from the fact that they died of generalized tuberculosis that the virus they had received had increased in virulence since its passage through the first animal. The twenty experiments of Professor Hamilton and Mr. Young are highly interesting, but the final verdict upon the subject with which they deal has not yet been pronounced.

SMALL-POX AND SOCIAL STATUS.

To the last issue of *Biometrika*, the journal for the statistical study of biological problems, Mr. W. R. Macdonell, LL.D., contributes a further study of the statistics of vaccination and small-pox. His first article was published in April, 1902, and was noticed in the British Medical Journal of May 31st. Near the end of that article Mr. Macdonell wrote: "It is to be hoped that information will soon be given regarding the social rank and occupation of the patients, as an investigation of the type and mortality of the disease in the different classes of the community seems to me a very important line of statistical inquiry, having regard to the state of the controversy at the present time." While he found that the statistics with which he then dealt "demonstrate that high correlation exists between the presence of the vaccination scar, and both the recovery from and the mildness of the attack," yet to complete a logical demonstration he held it to be further necessary to determine the correlation between the physique and nourishment of the attacked, to some extent indicated by their social class, and the presence or absence of the scar. It is mainly to the elucidation of this question of the influence of social status on small-pox that Mr. Macdonell sets himself in his new paper, so far as the material used renders conclusions possible. The material consists of the small-pox cases recorded by Drs. R. S. Thomson and Fullarton in their paper on Belvidere Hospital small-pox, read to the Royal Philosophical Society of Glasgow in April, 1902, supplemented by some additional statistics furnished by Dr. Brownlee, Physician-Superintendent at Belvidere.

Mr. Macdonell states his conclusions as follows: (1) The statistical constants for vaccination and small-pox differ sensibly for the same place with two different epidemics—that is, epidemics seem to be differentiated in character. (2) The statistics of Glasgow do not indicate that those of lower status—and therefore probably worse nourished and housed—provide the bulk of non-vaccinated cases. On the contrary, there seems to be a slight tendency for the non-vaccinated to be of higher status. (3) There is a slight, although scarcely sensible, correlation between status and power to resist a small-pox attack.

Classification of the cases into groups of higher and lower social status was difficult owing to the large number of "metal workers," and a doubt as to how they should be placed; and as the total cases available for this part of the inquiry numbered only 871, Mr. Macdonell is wisely cautious in stating his conclusions. In his own words, "The Glasgow statistics do not go very far, but as far as they go they do not justify the statement that the apparent protection of vaccination is due to the unvaccinated belonging to classes of lower status which have a far smaller power of resistance to the disease than the better nourished classes of a higher status in which the members are more generally vaccinated." This verdict, guarded as it is, is quite in accordance with the general teachings of experience. It is vaccination and not social status that makes the difference between individuals or groups of population as regards their liability to small-pox.

Nowadays members of the highest classes in the community are almost invariably vaccinated or revaccinated, and small-pox is seldom heard of among them, but in pre-vaccination times it was very different. Referring only to royal families, Sir John Simon in his classical Papers on Vaccination says regarding the ravages of small-pox, "In the circle of William the Third, for instance: his father and mother died of it, and, not least, his wife; and his uncle, the Duke of Gloucester; and his cousins, the eldest son and the youngest daughter of James the Second; and he himself (like his friend Bentinck) had suffered from it most severely, barely surviving, with a constitution damaged for life. Or again, in the Court of Austria: 'Joseph the First (says Vehse) was carried off, when not more than 33 years of age, by the small-pox; to which in the course of the eighteenth century, besides him, two empresses, six archdukes and archduchesses, an elector of Saxony, and the last elector of Bavaria, fell victims.' To this list might have been added, no doubt, many other names; among them, for instance, a dauphin (1711) and a king (1774) of France, a queen (1741) of Sweden, and an emperor (1727) of Russia."

History therefore supports Mr. Macdonell's general finding, and we have no doubt that an increasing body of reliable facts on which to base further mathematical calculations will only strengthen conclusions as to the value of vaccination and revaccination in the prevention and control of small-pox. If Mr. Macdonell has not seen Dr. A. K. Chalmers's Report on the late Glasgow epidemic, we would venture to call his attention to it, especially in its bearings on the question of the power of revaccination to prevent attack by small-pox. In the paper under notice Mr. Macdonell has confined himself to hospital statistics; but in Dr. Chalmers's report he will find a mass of facts of the greatest value and importance as indicating the influence of revaccination in preventing the individual from finding himself an occupant of a bed in a small-pox hospital.

THE UNIVERSITY OF LONDON.

We understand that at the meeting of Convocation to be held on May 12th, a communication will be received from the Senate in respect of certain changes which have been made or are in contemplation as to the holding of the medical examinations in the University. Thus it is proposed that the Intermediate Examination in Medicine, and the M.B., B.S., and the M.D. and M.S. Examinations shall this year be held jointly for internal and external students. A report will also be made by the Standing Committee to Convocation calling attention to the many important and far-reaching changes which the Senate has recently made in the medical curriculum. Thus the B.S. Examination is to disappear as a separate test, and the M.B., B.S., is to be conferred as the result of one examination. It will in future be possible for internal students to take the Preliminary Scientific Examination subject by subject. Moreover, what are called "Special" Preliminary Scientific Examinations and Intermediate M.B. Examinations will in future be open to internal students—that is to say, such examinations will be conducted jointly by the schools of the University and the University itself. Organic chemistry is to be transferred from the Intermediate Examination to the Preliminary Scientific, so that this much-criticized examination will be lightened in some respects and burdened in another. The subjects for the Intermediate Examination will be three—anatomy, physiology, and pharmacology—and a candidate who fails in one of the three may present himself for re-examination in that

subject alone. At the conjoint M.B., B.S. Examination there will be no separate examination for honours as formerly, and the University scholarships in medicine, surgery, obstetrics, and forensic medicine go by the board, but a couple of medals are to be given to the best internal and external student on the result of the whole examination. These changes will perhaps be sufficiently sweeping to satisfy the most ardent "reformer," but the M.D. Examination is revolutionized yet more drastically. It will in future be possible to take it in five different branches:—Medicine, Pathology, Mental Diseases and Psychology, Obstetrics, and State Medicine, and in every subject a thesis may be offered which, if accepted, may exempt the writer from the written examination, and in the case of Pathology, for some unexplained reason, may exempt from the practical as well as the written examination. Some may not unnaturally regard these changes as calculated to lower the standard of medical degrees which, in the case of the London University, have hitherto been justly prized. If the result of the new scheme be to cheapen the value of London degrees intellectually, that will certainly not be the result pecuniarily; for we observe that the fee for the M.D. is in future to be £20 instead of £5, that for the M.B. £10 instead of £5 as formerly, and in the case of the Intermediate Examination the fee is also doubled. There will doubtless be much discussion in Convocation, in the schools, and in the profession at large upon the changes with which the Senate has been in parturition during so many months of unbroken silence. One of the medical representatives of Convocation, Sir Thomas Barlow, vacates office next month, but will, we understand, offer himself for re-election. The University of London Graduates' Association, of which Mr. Fletcher Moulton, K.C., M.P., is President, and Sir William J. Collins, Vice-President, has nominated Mr. Harold Burrows, M.D., B.S., F.R.C.S., for the same office. In the absence of any other nominations it is now practically certain that the six candidates put forward by the same Association in Arts and Science will be elected—namely, Sir Joseph Walton, Mrs. Bryant, Dr. Benson, Dr. Mears, Dr. Kimmins, and Dr. Russell Wells. The last-named is new to the Senate.

THE IMMUNIZATION OF CATTLE AGAINST TUBERCULOSIS.

IN view of recent discussions as to the possibility of immunizing cattle against bovine tuberculosis by treating them with doses of tubercle bacilli derived from a human source, the work of Pearson and Gilliland[1] is of particular interest. They find, as a result of their experiments, that after repeated intravenous injections of cultures of tubercle bacilli from human sputum the resistance of young cattle to virulent tubercle bacilli of bovine origin may be enormously increased, with the consequence that they are not injured by inoculation with doses of a bovine culture which are capable of causing death or extensive infection in cattle not similarly protected. They also find that, without endangering the life of the animal experimented upon, much larger doses of tubercle bacilli obtained by culture from human sputum can be introduced intravenously than are necessary to confer upon the animal a high degree of resistance or immunity. The strain of human tubercle bacilli used was one which had remained in a collodion capsule in the abdominal cavity of a bull for seven months, and was then regained in pure culture and propagated on blood serum. In some of the experiments the bovine virus was inoculated by the intratracheal method; the animals previously immunized by intravenous injections of gradually increasing quantities of human bacilli proved practically free from infection, whilst the controls were very extensively tuberculous.

THE PHANTOM CANCER COMMISSION.

WE had occasion last week to expose a particularly reckless instance of journalistic sensationalism in regard to the anticipated recommendations of a mythical Royal Commission on Cancer. The thing was so stupid a fabrication that it might have been thought that, after our exposure, nothing more would have been heard of it. We are indeed gratified to see that the contradiction has had its effect in some quarters; in others, however, the phantom is still offered as a living reality to a confiding public. The *Pall Mall Gazette* has even thought the matter of such importance as to requisition a "Special Correspondent," who deserves the descriptive epithet at least in this—that his contribution bears on it the mark of a special ignorance of the subject on which he writes. We are told that there is "a good deal of speculation as to what will be the outcome of the labours of the present Commission." It is gravely added that "many people have come to the conclusion that high-frequency electric currents will be specially recommended, and that other forms of light (*sic*) cure will be practically disregarded." The sapient instructor of the public mind is careful to point out that "these are mere surmises," but rapt into future times he prophesies that "the use of the knife in cancer cases will be discontinued, for it is to the scientific application of light that all eyes are now turned." This is what Sir Toby Belch might well have called an "exquisite reason" in view of what the writer has just said about the favour with which the "Commission" is supposed to look on high-frequency currents. He at least does well to turn his eyes to the scientific application of light, for he is sadly in need of it. He concludes with the announcement that as "many members of the Cancer Commission are only recent converts to the high-frequency system the finding of the experts will no doubt be in favour of the combined use of the *x* rays and high-frequency currents whatever other recommendations they may make." That such a hotchpotch of nonsense and downright invention should be presented to the readers of a high-class newspaper is nothing less than a disgrace to British journalism. The cruelty of irresponsible statements which excite unfounded hopes in the breasts of sufferers from cancer and their friends, though the most serious, is not the sole objection to their publication. They make us ridiculous in the eyes of competent judges in foreign countries. A representative of the *New York Herald* has interviewed Professor von Bergmann, who declared that "it is folly to believe that a cancerous growth can be destroyed by 'high frequency' electric currents." Professor Leyden, Chairman of the German Cancer Commission, and other leading authorities in Berlin said much the same thing. So do we, and so does every one who has any practical knowledge of the matter. But there was really no need to go Berlin to learn this simple truth. We may, however, find some comfort in the announcement that comes from that city of light that still another specific has been found for consumption. At least, so says the *Daily Mail*, the herald of so many infallible remedies. All the consumptive patient has to do is to inhale eucalyptus vapour. 'Tis as easy as lying. The same oracle informs us, also, that the real cure for cancer—no mistake this time—has been discovered in India. It consists in a method of diet "enabling large quantities of common salt ..... to be absorbed." We take the statement itself with very large quantities of salt. It is, we fear, hopeless to induce newspapers not to rush in where the angels of science fear to tread, but we think they may fairly be asked to better the instruction of Principal Routh, and verify not only their references, but their facts. If, as Hippocrates tells us, experience is fallacious in medicine, how much more must inexperience expose to fallacy—and, may we add, to imposition? The true function of the press is to enlighten the public mind and foster truth, and the newspaper that, for the sake of a catchpenny sensation, misleads its readers, betrays a sacred trust.

THE DESIGNATION OF MUSICAL NOTES IN SCIENCE AND MEDICINE.

THE artistic temperament of musicians is not in general likely to submit itself, voluntarily at any rate, to the trammels of scientific nomenclature. It is true that certain of the moderns have conceived the necessity of ordering their compositions according to formal rules whereof

[1] *Proceedings of the Pathological Society of Philadelphia*, March, 1903.

the later works of Brahms afford lamentable evidence. But there is a growing tendency among them—and others—to write about their art and to this end it is surely desirable that an agreement should be arrived at with regard to a consistent terminology. This is obviously of interest also to the medical man who has to record defects in acoustic perception, and it is mainly from his point of view that Sir William Gowers has approached the subject—after a preliminary skirmish in the *Musical News*—in a paper in the current number of the *Review of Neurology and Psychiatry*. His intention is to establish a rational system of nomenclature by which the position of a given note on the keyboard may be at once understood. Thus the auditory range of the young normally extends through some ten octaves (Sir William would like them to be called "septaves") and a convenient method is sadly needed of indicating which particular C out of the ten possible is referred to in any particular case. Sir William Gowers points out the unscientific nature of the current system and gives eight examples of the varieties of nomenclature adopted by leading authorities, all differing among themselves and mostly inaccurate as well. His own suggestion strikes us as thoroughly simple and practical. Starting from the middle C, which has 264 vibrations and is situate midway between the bass and treble clefs, he would indicate the bass C by the sign C, and the treble by C′, altering the numeral as the note is octave by octave removed from the centre. We hope this innovation will commend itself to musicians and doctors alike and become adopted as the established nomenclature.

THE HUMOURS OF VACCINE.

In a letter published in the *Birmingham Post* of April 10th, General A. Phelps dilates upon the dangers of calf vaccine lymph as a predisposing cause of cancer. It appears he has been told that since a cow's growth is completed in four or five years, whereas that of a human being takes very much longer, the cells of which the former's flesh is constituted grow much more rapidly than those composing human tissue. Therefore, "in introducing into a human being's body the protoplasm of the calf (or cow), we are setting in motion conditions that almost necessarily predispose to cancerous growths," the exact and logical sequence of events apparently being that, on the introduction of bovine protoplasm, "the cells formed by it, in consequence of their growing at a greater rate than those formed of human protoplasm, rapidly outgrow, and, in a sense, kill the latter." General Phelps is thus led to formulate the momentous conclusion that the irritation produced by inoculation with calf lymph "may well be due to the grafting of quick-growing bovine cells upon the slower-growing human cells, and is calculated to start the growth of the 'giant cell,' which is, I understand, the first start of cancer. The use of calf lymph has certainly synchronized with the increase of cancer, and its general adoption has been followed by that increase." There seems to us to be more in this remarkable theory than at first meets the eye, and it may be doubted whether even its ingenious author fully realizes the extent of its possible applications; for it not only indicates a mode of shortening human life, but also suggests a means whereby we may prolong it. If the "protoplasm" of a quickly-growing animal curtails human existence by exciting our cells to malignant proliferation, we have equally cogent reasons to suppose that the protoplasm of a slowly-growing animal or an animal in a state of decadence might prolong human life by exercising upon our cells a soothing and retarding influence. Has the intuition of General Phelps here brought to light the great secret which has hitherto baffled all ages—the discovery of the elixir of life? As a follower of scientific methods, of course, General Phelps will not be rashly over-sanguine; but he may well feel a glow of pride and assure himself with a not immodest degree of self-confidence that the eyes of the world are upon him. What a fascinating field for research lies before those who disapprove of present methods of vaccination! Discarding the perilous protoplasm of the too proliferative calf, why do they not try the lymph of some slowly-dying cow, some truly ancient and effete animal, whose every cell is guiltless of the last vestige of youthful vigour? Surely, such material as this would be the reverse of an incentive to active cell growth, and, in addition to some slight incidental value as a preventive against small-pox, might prove of incalculable service in the prolongation of human life. Here is a noble opportunity which General Phelps and his followers will do well to seize before it is too late. For, as they no doubt know, there are ardent workers on the Continent too; followers of Ehrlich and others, who, in pursuit of the labyrinthine mysteries of serumtherapy, have already expressed the hope that some day they they may grasp the clue which will guide them to the manufacture of a life-conserving serum. How glorious is the thought that we may possess in this country one who has already achieved more than all of them, and, with a penetrating insight which leads straight to the root of the matter, grasped the clue to the great discovery of the new century. Why should General Phelps and his followers restrict themselves to cows? Futurity will decide whether it is not to be the antivaccinator's triumphant mission to endow suffering humanity with the serum of an entirely superior sort of animal. Here again we mark the prophetic insight of General Phelps's mode of reasoning. The calf passes through life's epoch quickly; hence its "protoplasm" is injurious to man. Obviously what the antivaccinator should do is to try the protoplasm of some animal whose life is long compared with man's, and see if its effects are not conservative and beneficial. Why not try elephants? They live a very long time; so do parrots it is said. Precisely what material ought to be introduced is not quite clear, because, with a masterly disregard of subsidiary detail, General Phelps appears, to the unaided medical mind, rather to confuse the grafting of cells with the inoculation of lymph. However, that is a minor difficulty, and we need not delay to inquire whether the hide of the beast or his humours would make the better material for inoculation. Provisionally, we may suggest a fine emulsion made from equal parts of each as likely to fulfil all the requirements of the most ardent antivaccinator. The epidermal ingredients might help to conserve him from the assaults of unbelievers, whilst the humoral elements would tend to perpetuate those traits in his nature which are a perennial source of amusement to his fellows.

AN ANTIVACCINATION COMPLAINT AT DERBY.

Dr. James W. King, one of the public vaccinators of Derby, has recently had experience of how carefully such an official must conduct his work to prevent the bringing of frivolous charges against himself. At a meeting of the guardians a complaint by an antivaccinating parent formed the subject of quite a lengthy discussion. It was alleged that a child had been vaccinated without due consent having been obtained, and the accusation appears to have been based partly on the supposition that the father's consent, as distinguished from the mother's, was essential, and partly on the allegation that even the mother had not given permission, in the absence of the father. Derby is well known as a hot bed of antivaccination, with a Board of Guardians by no means too favourable to the Jennerian prophylaxis. In these circumstances it is very satisfactory that after hearing the evidence, and holding a brief consultation in private, the following resolution was carried by thirty-one votes to one: "That in the opinion of this Board Dr. King did not exceed his duty, that he is entirely exonerated from blame, and we consider that the charge against him is not proved." Dr. King is to be congratulated on the result of what must have been a worrying and unpleasant ordeal. For our own part, however, we do not think the case was one for consideration by the guardians. If there had been anything in the charge, the proper place to hear it would have been a law court, but the fact that an elected body so favourably disposed to antivaccination as the Derby guardians are supposed to be have "entirely exonerated" Dr. King, indicates how very little the complainer would have had to say before a properly constituted tribunal.

EPIDEMIC GRANTS FOR SCHOOLS.

IN an article published in the BRITISH MEDICAL JOURNAL for April 4th, p. 814, attention was drawn to the evils likely to be wrought by the withdrawal of grants for the average attendance at school of children excluded under Article 101* of the Code of Education. Dr. Hartill in a recent report to the Willenhall Urban District Council emphasizes the same point. In his district this article has been most efficient in minimizing the incidence of infectious diseases. The decision of the Board of Education to abolish this grant will, as Dr. Hartill points out, make it more difficult to obtain early information, more difficult to exclude from school scholars coming from infected homes; will aid the rapid spread of infection, especially by bringing about the too early return to school of children after attacks of infectious disease, and will tend generally to bring about friction between sanitary and education authorities, owing to the apparent incompatibility of the objects aimed at. We say apparent because the objects are in fact identical. The more perfect the information of the sanitary authority the more complete the exclusion of infectious children and those who have been in contact with them, the higher will be the average attendance at school. This was shown to have been the case in the example quoted in the article referred to above. It has proved to be the same in Willenhall. Thus, during the last ten years, during which Article 101* has been vigorously worked, there has been an increase in average attendance of 8 per cent., and a decrease of 5.7 per cent. in the number of prosecutions for non-attendance.

THE REPORT OF THE ROYAL COMMISSION ON PHYSICAL TRAINING (SCOTLAND).

NEARLY all Blue Books are more or less interesting to those who know how to read them, but they are not esteemed by the general public as light literature, and it is true that in many of them there is not much to interest the general reader. To this rule, however, the report of the Royal Commission on Physical Training is a happy exception. It is very easy to read, is full of information of much interest to all classes, and the subject with which it deals is of such immense importance that it is to be hoped the report will obtain a very wide circle of readers. Though the observations made in it apply nominally to Scotland only, they are of almost equal force with regard to all parts of Great Britain; while in the appendix of the report are collected a great number of statistics and other collated facts with regard to the physical development of children which will be of great value for after-reference. The general conclusion at which the Commissioners arrived and on which they base their recommendations may be summed up quite shortly. It is that their inquiries into the subject have convinced them that the corpus sanum is entirely essential to the mens sana: that while this fact is recognized in theory, not less in Scotch educational institutions than it is anywhere else, it is in practice barely recognized at all, and that if it can be said to be less recognized by any one class of school in Scotland than another, it is the Scotch universities who recognize it least of all. In the opinion of the Commissioners, the net result is that the physique of the Scotch as a race is seriously deteriorating, and active steps to counteract it are called for. The Commission is not of opinion that the result mentioned is a necessary sequence of the Education Code of Scotland, but that it is the outcome of the way in which the Code is interpreted by teachers and others in authority. Far too much stress is laid upon pupils attaining a certain number of marks, etc., in a definite short space of time, instead of regard being paid to the general mental and physical progress of children during the whole period of their school life. They consider that all temptation should be removed from teachers to endeavour to extract from their pupils direct "mark" proof of mental progress from month to month or over short periods of time, and think that school inspectors should make it clear that the credit awarded to a teacher will in nowise depend upon the number of subjects he or she manages to cram into the school course. To ensure a proper amount of physical training and a due appreciation by the managers of schools of the great importance of the subject, they recommend that State aid should be refused to any school which cannot show that it includes at least two hours' work per week of regulated physical training, and suggest that in future every teacher appointed should be capable of conducting physical training classes, inspectors with expert knowledge of the work being appointed to look after the work of the schools in this direction, and classes on physical training forming part of the curriculum of every teachers' training college. Another useful suggestion is that in growing towns where further school accommodation is called for, no more money should be spent on the erection of fresh buildings, but that the money should be spent instead in acquiring exercising grounds to be used in common by all the children who are under the same general educational authority. Into such grounds part of the children should be drafted for physical training and regulated exercise, while the rest occupy the school buildings, and are engaged in mental work. As regards higher class schools, where playgrounds are provided and ordinary games indulged in, they consider that the authorities should not rest content with simple encouragement of voluntary games, but should insist, in addition, on every pupil taking part in regulated physical training as well. On this point they very truly point out that those who voluntarily engage in active school games are those who in comparison least require exercise, while those whose physique is deficent shun the games altogether. The final recommendation of the Commission is that a medical officer should be appointed to every school as a matter of course, and that his duties should not be confined to attention to matters of general hygiene, but that he should also make such observations as will lead to the compilation of facts with regard to the physical progress of children which will be of value for future guidance. The Commissioners are not of opinion that any of their recommendations will prove unfavourable to the cause of education, but that on the contrary they will promote it, and their views on this point are fairly represented by the following extract: "There is, we think, no doubt that even as regards mental conditions, better permanent results would ensue if all the pupils received adequate physical exercise. We are convinced that this is quite as necessary for proper intellectual equipment as for physical development." From this expression of opinion no medical man will dissent.

THE NOTIFICATION OF MEASLES IN DOVER.

AT a recent meeting of the Town Council of Dover an unsuccessful attempt was made to secure the cessation of the compulsory notification of measles in the town. The chief arguments urged in favour of this course were the large expense of notification and the fact that no other town in Kent had followed the example of Dover. It was also urged that in the absence of provision for the hospital isolation of cases of measles notification was without value. This last argument does not appear to us to carry much weight. Apart from aiding in preventing the spread of infection, notification brings home to parents the fact that measles is a serious disease, and there is little doubt that lives are saved by teaching this important lesson. A disease of which official cognizance is taken by the "Sanitary Department" is one in which precautions must be taken and care in every direction exercised. Isolation is not necessarily synonymous with hospital isolation, and much can be done, even in poor houses, to prevent spread of infection from household to household. Little can be done to prevent other members of the same household from becoming infected, but much to prevent other households from becoming implicated. From statistics furnished by Dr. Robinson, Medical Officer of Health of Dover, it appears that in the last six years (during which notification has been enforced) 64 deaths were caused by measles, as compared with 132 in the six years preceding notification. This certainly points to a favourable influence

exercised by notification and the measures adopted in connexion with it, although we are well aware that, irrespective of notification, measles may vary greatly in virulence in successive epidemics. It is, however, true that without modification of the machinery the notification of measles is apt to lead to a large expenditure, and to obviate this it has been suggested that the first case in every house might be made notifiable, subsequent cases within two months not being notified. It is also desirable that further attempts should be made to enforce the dual character of notification, as many cases of measles are never attended by a doctor. Now that the educational and sanitary authorities are more closely in touch, it ought to be practicable also to ensure greater perfection of the machinery for notification of cases occurring among scholars.

PHYSICAL EDUCATION.

A letter urging the financial claims of the Twentieth Century League, which has for its object the improvement of the physical state of the childhood and youth of London, has recently appeared in the daily papers. It was signed by the organizers of the League, who are representatives of widely different schools of thought—among others the Lord Mayor, the Chairman of the London County Council, the Bishop of London, Cardinal Vaughan, the Bishop of Rochester, Lord Alverstone, the Chief Rabbi, Dr. Clifford, and Dr. Edmund Warre. Its signatories desired to call the attention of the public to the effort which is being made by the League to provide wholesome and profitable recreation for the working boys and girls of London. The overcrowding of dwelling-houses, the general improvidence of our industrial system, the inadequate provision of clubs and institutions, and the scarcity and remoteness of playing fields and open spaces constitute, they maintain, the chief factors in the production of the physical deterioration of town populations. Many efforts had already been made and various agencies employed to remedy this evil, such as the promotion and organization of clubs and institutes for the young of both sexes, brigades, and cadet corps for boys, giving opportunities for games and sports, gymnastics and drill, with all forms of outdoor and indoor recreation, including camps and similar provision for summer holidays. In connexion with the Easter Conference of Manual Training Teachers held at at the head offices of the London School Board, Sir Philip Magnus gave an address on Handwork and Headwork in Elementary Schools: a Forecast, in which he made some pregnant observations bearing on the physical culture of the growing youth of the country. His text was the aphorism that education was, or should be, the preparation for complete living. Not long ago, he said, it would have been considered heresy to suppose that children went to school with any other object than to acquire knowledge, but it was now beginning to be realized that the acquisition of knowledge was not the aim or purpose of a child's school training. Learning in all its stages should be action, a search after knowledge, and the care of the teacher would be to prepare his pupils for this search. In future the main function of education would be to train the hands and sense organs and intellectual faculties. Before long the central feature in all the schools would be the workroom, in which children would work with their own hands and gain their knowledge by ordinary experimental methods. Manual training as a part of school education had been shown to mean much more than modelling in clay or the manipulation of wood or iron by appropriate tools, and every competent instructor now knew that physical training not only secured manual dexterity and skill, but might become a means of intellectual and moral discipline, and an educative force of the highest value. The sound body which was to be the begetter of the sound mind is now, it would appear, to have some culture inside the school house itself, as well as in its playgrounds. It is said that at a recent marriage service the bridegroom-elect repeated in revised version, "with all my goodly words I thee endow," and the bride-elect is said to have demurred, as she had had an abundance of "goodly words," and thought at that stage the reference should have been to "worldly goods," so it may be that matters educational will before long be divorced from their hitherto close relationship with mere "goodly words." The operations of the Twentieth Century League are apparently up to the present limited to London, but the need is only less great in the large towns throughout the country, and the small towns are not far behind in their claims.

THE HOLDING OF "WAKES" IN INFECTIOUS HOUSES.

The Public Health (Scotland) Act, 1897, contains a section providing that any person shall be liable to a penalty not exceeding £5 who wakes, or permits to be waked, in any house, room, or place over which he has control the body of any person who has died of any infectious disease. There is no such section in the English law, and except in parts of England in which the poorer Irish are closely aggregated, the enactment would be unnecessary as a means of preventing the spread of disease. That this is not so in Scotland is shown by a recent case in Hamilton. A patient died in a miner's house in this town of puerperal scarlet fever. The sanitary inspector, on the instructions of the medical officer of health, visited the house and gave instructions that nothing of the nature of a "wake" should take place. At this time a "wake" seemed to be in preparation, and a warning letter was therefore sent to the subsequent defendant. Notwithstanding this letter, when the house was visited between 11 and 12 at night (the house in this case consisted of a single apartment) twelve adults and two children were found in it. Candles were on the coffin, and in the room were also three whisky bottles besides snuff and pipes. The defendant was fined £3. The practice of "wakes" has, we believe, long been denounced by the clergy of the Roman Catholic Church, and as enlightenment grows among their flocks it will doubtless die out. A judicious application of the legal powers which exist may hasten this desirable consummation.

AMERICAN FOOTBALL.

Professor E. C. Dexter recently published in the American *Educational Review* some elaborate statistics on the subject of American football accidents. His returns ostensibly cover all the accidents that have occurred during a period of ten years among the players of sixty American colleges, or an aggregate of 1,374 different teams. During this period and out of this number of teams 654 men had received injuries sufficiently serious to oblige them to obtain leave of absence for a shorter or longer time from their studies. The percentage of these men to the total number who were during the period members of the different teams was 2.9, or nearly 3 per cent. A further estimate of Professor Dexter is that only 1 out of every 2,846 players amongst the college teams considered received injury of a permanent character. These figures some of the American papers consider satisfactory, and also regard them as a sufficient basis for making a favourable comparison between American football and other forms of sport involving a certain amount of rough exercise and risk, such for instance as hockey, polo, and riding to hounds. As regards these latter exercises, there are not sufficient accident statistics available to make a numerical comparison possible, but to those who know both it is obviously incorrect to compare hockey with football, whether of the American or any other type. It is true that a good many injuries are received at hockey, but it is rare for such injuries to be more serious than such things as bruises and "barked" knuckles. Polo of course is an admittedly dangerous amusement, and the number of serious injuries received in the hunting field is also great. Neither of these sports, however, is a "popular" amusement or comparable with the active games which are and ought to be encouraged among the students of every educational establishment. As regards football at English medical schools, we have no statistics as to the percentage of players who receive injuries serious enough to interfere with their work. Such accidents do undoubtedly occur, but

we should be very much surprised to learn that as many as one out of every thirty-three players is laid up through an accident during some portion of the time that he belongs to his hospital team. We have no reason to suppose that American young men are any more tender-skinned than are their cousins in England, yet it has never been suggested that the wearing of any protective dress is necessary. In America, however, the players wear a helmet which protects scalp, nose, ears and mouth. Their bodies and limbs are also padded; and we may be quite sure that so cumbersome a garb is not donned without good cause. To the spectator the American game certainly appears very much more of a fight than the most warmly contested game in England, and the chief accidents seem to arise from the "interference" system. In this, when a player of one side has got hold of the ball, several of his own side run in front of him endeavouring to charge down any of the other side who may attempt to "collar." The worst indictment against all football is what some of its advocates say in its defence, namely, that accidents occur chiefly among unseasoned or very young players who should not be attempting a game that requires the most perfect condition and training. It is a great pity that any outdoor game should become so "professional," that the players necessary become few and the mere spectators many.

A MEDICAL OFFICER FOR GLOUCESTERSHIRE.

At the last meeting of the Gloucestershire County Council it was decided to appoint Dr. Martin, D.P.H., at present Medical Officer of Health to the Stroud Urban and Rural Districts, to the post of Medical Officer of Health of the county. The salary attached to the new post is only 50 guineas per annum, with special fees for special attendances at committees or when local investigations are required. Hitherto the Gloucestershire County Council has retained the services of Dr. Fosbroke, the County Medical Officer of Worcester, for these purposes, and economical considerations have evidently led to the more permanent appointment being made. It may be congratulated on having secured a competent successor to one like Dr. Fosbroke, the excellence of whose work is universally recognized; and the appointment is a step in the right direction, inasmuch as it is a recognition of the necessity for a separate county medical officer, for whom there is, if he be permitted to do it, ample work. Notwithstanding the statement to the contrary by the Chairman of the County Council, we hope that Dr. Martin's work will steadily increase, and that it will ere long be found desirable, in the interests of the county, to retain his entire services. The Gloucestershire County Council, in following the example set by such counties as Yorkshire, Stafford, Worcester, Derby, and Surrey, among others, will be acting in the best interests of the public health, as could easily be demonstrated by the important advances in public health administration in these and other counties whose county councils have done their duty in this respect.

THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

It is pleasant to be able to note that the National Hospital for the Paralysed and Epileptic in Queen Square seems to have quite recovered after the grave crisis through which it passed the year before last. With a newly-constituted Board of Management and a new Secretary every thing is working very harmoniously, and, while the patronage of H.M. the King has now been obtained, an examination of the wards and building generally shows that many of the reforms suggested by Sir Edward Fry's *ad interim* Committee have already been carried out. The whole of the sanitary arrangements have been overhauled, electric light and communications installed throughout the building, the heating and ventilating arrangements considerably improved, a new boiler shaft erected, a fire staircase erected outside the male block, and some further accommodation, though only of a temporary character, provided for the night staff. The finances of the hospital are in a sufficiently prosperous condition as regards ordinary expenditure, and an examination of the published accounts shows that towards the end of the year a donation of £1,000 and an annual contribution of £750 was allotted to the hospital by the Council of the King's Hospital Fund, a fact which may be taken as fairly good proof of the satisfactory way in which things are now being done. The expenses of the alterations which have been effected so far have been paid chiefly out of capital, and amount to about £3,000. Before proceeding with the other alterations recommended by Sir Edward Fry's Committee, all of which are very necessary, it is the intention of the Board to raise a special fund. It is to be hoped that it will find no difficulty about this, since this hospital is one of the representative institutions of British medicine, and visited by a great many foreign medical men. In the general interest, therefore, it is desirable that it should not be open in any way to unfavourable criticism. When the structural alterations are undertaken, it would be well if a good deal of the stained glass about the building were removed. It is not beautiful, and makes the halls and passages dark and gloomy. The festival dinner will be held on April 30th, at the Whitehall Rooms, and the new building fund will then be started.

THE ANTI-ALCOHOL CONGRESS.

The ninth antialcohol congress was held at Bremen last week and was attended by a large number of delegates from foreign countries as well as many Germans interested in the campaign against alcoholism. The members of the Congress were welcomed by the Imperial Secretary of States for Home Affairs, who observed that the great increase in the number of persons engaged in indoor occupations in towns increased the dangers arising from the abuse of alcohol. While legislative measures were necessary private effort to reform and elevate popular customs might be expected to achieve more important results, and in this work the educated classes should take the lead. An interesting discussion was raised by an address given by Dr. Legrain, President of the Union Française Anti-alcoölique, who contended that alcoholism produced a tendency towards tuberculosis by diminishing the resisting power. He also maintained that alcoholism delayed if it did not prevent the cure of tuberculosis, and even ventured so far as to say that the eradication of alcoholism would be almost equivalent to the suppression of tuberculosis. Dr. Legrain's views found much support, and statistics were quoted showing the high mortality from tuberculosis among those concerned in the manufacture and distribution of alcoholic beverages. The figures given by Dr. Tatham for England in the last *Decennial Supplement* to the Registrar-General's report may be quoted in this connexion; taking the deaths from phthisis of occupied males as 100, those of inn servants were 257, of brewers 148, and of innkeepers 140. Professor Hueppe, of Prague, defended the moderate use of alcohol under certain conditions. He maintained that it was less dangerous in northern than in southern countries, but held that it was certainly injurious in the tropics, since it tended to inhibit perspiration. The President of the Congress, Dr. Delbrück, of Bremen, combated the idea that beer drinking was not injurious; of 149 persons treated in a North-German inebriates' home 30 were wine drinkers, 41 spirit drinkers, and 78—or more than half—beer drinkers. Professor Cramer, of Göttingen, contended that persons admitted to inebriate homes should be deprived of civil rights; that was to say, should be placed under restraint; to wait, as was now done in Prussia, until alcoholism had produced actual insanity was to wait until the stage when hope of cure had practically passed. The next Congress will meet at Buda-Pesth in 1905.

THE LONDON SCHOOL OF TROPICAL MEDICINE.

Dr. C. W. Daniels, Medical Superintendent of the London School of Tropical Medicine, left London some weeks ago to take up the position of Director of the Institute for Medical Research, Kuala Lumpur, Federated Malay States,

in succession to Dr. Hamilton Wright. The nomination to this important post, which is tenable for three years, is in the hands of the School, and Dr. Daniels has been appointed on the understanding that he will return on the expiration of the period for which it runs to resume his place as Medical Superintendent of the School. In the meantime the duties of that office will be discharged by Dr. G. C. Low. Dr. Daniels is a Government Medical Officer of British Guiana, but it was strongly represented some time ago to the Combined Court of that Colony that it was expedient in the interest of the School that his services should be retained. On this representation the Combined Court of British Guiana sanctioned the grant of a pension to Dr. Daniels in respect of his pensionable services as Government Medical Officer on the same scale as would have been payable had he been transferred to the service of another Colony, that is, to commence at the age of 55, or at any earlier date at which it may be shown to the satisfaction of the Governor-in-Executive Council, that he is incapacitated from discharging the duty of tutor at the School of Tropical Medicine or practising his profession. We may say that the interchange of posts in the manner above described has the approval of the Colonial Office. Dr. Daniels's work in British Guiana and in London justifies a confident hope that his investigations at Kuala Lumpur will be fruitful of results which will not only enlarge the boundaries of scientific knowledge but benefit mankind. His permanent attachment to the London School of Tropical Medicine cannot fail to be a source of strength to an institution which has already done excellent work, and which bears in it the potentiality of incalculable usefulness in the future development of the empire.

THE LIVERPOOL SCHOOL OF TROPICAL MEDICINE.

The fourth annual report (1902) of the Liverpool School of Tropical Medicine has lately been published. The most important change which it records as having taken place during the year is the foundation and endowment of the Sir Alfred Jones Chair of Tropical Medicine in Liverpool University College, and the appointment thereto of Major Ronald Ross, C.B., the winner of the Nobel prize. Four more expeditions were equipped and dispatched for the study of diseases in tropical countries, namely, to Freetown (Sierra Leone), to Ismailia (at the request of the President of the Suez Canal Company), to the Gambia and French Senegal, for the study of trypanosomiasis, and to the Gold Coast. Further expeditions are in contemplation. Important features of the work of the School are a proposal, to be shortly carried into effect, to deliver elementary lectures on tropical diseases and sanitation to employés of firms in Liverpool and the district, and the issue of a flysheet giving simple sanitary instructions for the preservation of health in the tropics. The students at the school include representatives from several foreign countries. Four nurses were specially trained in the Royal Southern Hospital for work in the tropics.

THE EPIDEMIOLOGICAL SOCIETY.

The Epidemiological Society of London has recently published the twenty-first volume of the new series of its *Transactions*, and with it a "Commemoration" Volume. The latter contains an interesting account of the history of the Society and of the proceedings at the celebration of its fiftieth anniversary in July, 1900, and also supplies, what is of still more use and importance, indices to the papers read at the meetings of the Society between the years 1855 and 1900. The first is an index of the papers and addresses published in the pages of the *Sanitary Review* between the years 1855 and 1858, both dates inclusive. Prior to the earlier date complete papers were not printed, but abstracts were published in the British Medical Journal, the *Lancet*, and the *Medical Times*. From the year 1858 the Society began to publish the papers read before it in its own *Transactions*, and a list of the volumes so published is given, together with a copy of the contents sheet of each. Any student therefore wishing to procure a certain paper can see at a glance what other subjects the volume containing it embraces. The third index is an alphabetical list of the subjects dealt with in the *Transactions*, and a reference is given both to the year in which the paper was published and the page of the volume in which it appears. This part of the indexing appears to be particularly well done, as we note that where the first word of the title of any paper does not bring its principal subject into direct prominence, a double reference to the paper is made. One of these will be found in the alphabetical position of the first word of the title of the paper, and the other in the alphabetical position of the name of its main subject. The fourth index is a list of the authors, which is also very useful since it sometimes occurs that in working up a subject a student remembers an author's name, but not the title or date of his paper. It will be seen, therefore, that the Society has managed to put its commemoration volume to most excellent use, since besides being interesting to members of the Society, it will prove most valuable to all students of epidemiology. It is mentioned that nearly all volumes of the *Transactions* published can be obtained from the publishers, Messrs. Shaw and Son, Fetter Lane.

GLASGOW VOLUNTEER MEDICAL CORPS.

The second *Annual*[1] of the Glasgow Companies, R.A.M.C.V., fully maintains the high standard set by the first number. The illustrations, whether from photographs or from pen-and-ink sketches, are excellent. The subjects of the various articles are, of course, chiefly interesting to the members of the Corps and their friends, who should be many, for the Corps evidently contains many good fellows. Lieutenant-Colonel Beatson, C.B., who commands, contributes an article on Aid to the Wounded in War. He points out that on the battlefield first aid should be rendered as soon as possible, so that deaths from haemorrhage and shock may be prevented, and the wounds protected at the earliest moment. The wounded must then be collected, and their wounds properly examined and dressed under shelter. Subsequently hospital accommodation must be provided. The article gives a very clear and concise account of the surgical arrangements in use in an army, with an explanatory diagram of the various lines of assistance to an infantry brigade in action, from the regimental aid to the base hospital. The Acting Chaplain (the Rev. T. Adamson, D.D.) writes on Responsibility in the Ranks. He quotes from the *Tactical Retrospect*, published after the Franco-Prussian War, that each individual in an army will weigh in the scale according to the whole value of his intellectual individuality. Thus personal responsibility is increased in the ranks where more is expected of the individual. Each man, also, who wears the King's uniform, whether an officer or a private, has entrusted to him the responsibility of maintaining the honour of the army, and all, whether regulars or volunteers, must consider the credit of the regiment or corps of which he is a member. The adjutant, Captain C. C. Flemming, D.S.O., gives details of the training which the R.A.M.C. recruit goes through at the dépôt of the corps at Aldershot. A humorous description of a wet field day, illustrated by pen-and-ink sketches; "Coronation Impressions," giving the experiences of the detachment which came to London to take part in that memorable function; and a description of events at "Our Camp at Netley," furnish a record of the principal events during the year. An illustrated article on ambulance dogs, and some notes on an Indian frontier expedition, by Lieutenant J. D. Graham, I.M.S., provide reading of more general interest; whilst notes on the band (which includes pipers), the transport section, and the swimming club will be of interest to the members of the corps. Staff-Sergeant Charles Thomson writes on the experiences of the Glasgow men on active service, and gives a most interesting sketch of the voyage out and of his eighteen months' campaigning in South Africa. Altogether the *Annual* is worthy of

[1] *The Royal Army Medical Corps (Volunteers) Glasgow Companies' Annual*. Glasgow and Edinburgh: W. Hodge and Co. 1903. (Demy 8vo, pp. 52. 1s.)

a high position amongst regimental magazines, and the editor is to be congratulated on the success of his task, whilst the corps may be proud of its *Annual*.

DR. DONALD MACALISTER, Chairman of the British Pharmacopoeia Committee of the General Medical Council, has been elected a Corresponding Member of the Société de Pharmacie de Paris.

M. LOUBET, President of the French Republic, has given £480 towards the erection of a dispensary for tuberculosis, which is to be erected in Paris on a site given by the Municipality. The dispensary will bear the name of the President.

AT a meeting of the Berlin Verein für innere Medicin, held on April 6th, Sir William Broadbent was elected an honorary member. The other honorary members elected on the same occasion were Professor Erb, of Heidelberg, and Professor Brouardel and Dr. Metchnikoff, of Paris.

IRELAND.

THE HOUSING OF A MEDICAL OFFICER.

THE Irish Queen's Bench has just had before it the case of O'Riordan *v.* the Guardians of the Celbridge Union, the plaintiff being the dispensary medical officer of the district. He sought to recover salary which had been deducted as the rent of a house which was unsuitable for habitation, and also for damages because of the insanitary state of this official residence. It appeared that the plaintiff had a salary of £125, from which £25 was deducted for rent. The walls were damp, and the guardians' engineer reported that "the house would give one the idea of a vault rather than a domestic dwelling." It adjoined a graveyard, the level of which was higher than the road in front of the house. The guardians proposed to dismiss the medical officer in 1898 because he would not live in the house, but the Local Government Board refused to sanction the proceeding. In 1900 he was so ill that Dr. Finny sent him to Matlock and in his absence the guardians again proceeded to dismiss him. After a good deal of evidence had been given on either side the jury found for the plaintiff on all counts. They held that the house was not fit for occupation, and they awarded Dr. O'Riordan £5 nominal damages. They awarded £56 5s. in respect of deductions made from his salary as rent of the house after he had given up possession.

HOLIDAYS FOR DISPENSARY DOCTORS.

A very important letter has just been addressed by the Local Government Board to the guardians of the Tuam Union on the question of holidays for dispensary doctors. The rule has been in existence for some time and is one of the good results of the efforts which we have made for so many years to support the claims of our brethren in Ireland. The new pronouncement will serve to enforce the law and to bring home to still-hesitating guardians the rights of their medical officers. The Commissioners say the guardians are aware that Article 28 of the Dispensary Regulations contemplates that each medical officer should be granted an annual vacation of four weeks, and the Local Government Board are prepared to sanction payment of remuneration to the substitutes at the rate usually allowed to temporary medical officers, but not exceeding in any case the sum of £4 4s. per week. The guardians will be entitled to receive recoupment in due course of one-half of the sums so paid by them. The Board trusts that the guardians of the union where only a fortnight's annual vacation has hitherto been granted to the medical officers will henceforth allow the term of four weeks. The cost of the full vacation to the medical officers will not in the altered state of the law necessitate a greater charge on the funds of the union than that heretofore entailed by the vacation of two weeks.

RESISTANCE TO THE DISPENSARY DOCTORS' DEMANDS.

The guardians of the Naas Union have determined to resist the claims of the dispensary doctors in relation to increased salaries. The medical officership of the Kile and Rathmore district being vacant, the local Branch claimed that the salary should be £200 a year, with £4 4s. for a *locum tenens*. The guardians retaliated by dividing the district in such a way as to enlarge the adjoining districts, agreeing, however, to increase the salaries of the medical officers for the extra work. This was done in spite of the opposition of the parish priest and the local guardians. It will be interesting to see whether the Local Government Board will approve of this arrangement. The districts generally are already very large, and if their area is extended it will be impossible to give due attention to the sick poor. It is the business of the dispensary doctors to resist this added labour, for no increase that the Board of Guardians would give could compensate for the new duty. The demand is now practically universal in Ireland, and guardians must submit if the doctors will only stand firm. Even in the present case, there being only one applicant for the office of *locum tenens*, his terms of £4 4s. a week were accepted.

A MAN IN THE GAP.

The Waterford Guardians have been for some time in difficulties regarding the appointment of a medical officer to the Kilmackenogue dispensary district. The salary has been deemed insufficient, and in accordance with the spirit of the general movement in Ireland regarding this question candidates have hitherto held aloof. It is stated that Dr. Hayes, the medical officer of Innisboffin, an island off the western coast, has signified his willingness to act for the old payment, and that the guardians have duly appointed him.

GUARDIANS AND MEDICAL OFFICER.

Dr. J. F. Newland has resigned his office as medical officer of No. 2 Dispensary District of Kingstown, near Dublin. At the meeting of the guardians a vote of thanks was passed to him for his long and faithful services during a period of over forty years, and it was resolved that a retiring allowance of the most generous kind should be awarded.

Dr. Michael S. Walsh has been elected medical officer of Dublin North City Dispensary in room of Dr. Speedy, resigned. He had held the position of Assistant Resident Medical Officer in the workhouse for the past two years.

MEATH HOSPITAL.

At the annual meeting of the Meath Hospital, Dublin, Mr. L. H. Ormsby, President of the Royal College of Surgeons in Ireland, presided. The report showed a deficiency on the year of £740 6s. 5d., leaving a balance against the hospital of £2,361 2s. 8d. The contribution from the Sunday Hospital Fund was £376 19s. 9d. One thousand three hundred and forty-seven patients were admitted, of whom eighty died, giving a mortality of 5·99. During the year 17,915 persons received treatment. On the motion of Dr. James Craig, seconded by Dr. Keys, the report was adopted. Mr. Taylor, F.R.C.S.I., Dr. Scott, Mr. Andrews, and Mr. Jacob were among the speakers, and the proceedings terminated with a vote of thanks to the chairman.

PROPOSED ISOLATION HOSPITAL.

The same Board had under consideration the report of a Committee on the site of an isolation hospital for the Union. It was recommended that a temporary building should be erected in the workhouse grounds, but at the furthest possible distance from the inmates' quarters. The proposal was opposed by Dr. Edgar Flinn, the Local Government Board Inspector, who considered the site unsuitable. A guardian said if the Local Government Board sanctioned the recommendation he should lose all confidence in that body; but the majority of the guardians adopted the report.

SMALL-POX IN DUBLIN.

There have now been nearly 100 cases of small-pox in Dublin. All the acute cases are treated in the isolation hospital, which has been enlarged by temporary structures to receive sixty patients. Sir C. Cameron states that the first outbreak he had to deal with some years ago involved 20,000 persons; 2,000 of these died. Subsequent outbreaks numbered 3,000 and 1,750 cases. In the present instance the disease was imported from Liverpool.

VACCINATION.

At a meeting of the Rathdown Guardians it was reported that there were 67 unvaccinated children in the Kingstown district, and steps were taken accordingly.

SIR WILLIAM TURNER, K.C.B., Principal of the University of Edinburgh, will take the chair at the May dinner of the Edinburgh University Club in London, which will be held at the Criterion Restaurant on May 20th.

A

COMPARATIVE STATISTICAL STUDY

OF

CANCER MORTALITY.

II.

France,

The inquirer into the incidence of cancer in the different departments of France is seriously handicapped by the fact that there exist no statistics whatever of the various causes of death in rural districts. An official publication, however, was obtained, giving the deaths in all towns in 1900.[8] These figures include even the small towns known as "chefs lieux d'arrondissement," and may be considered to some extent indicative of the mortality of the surrounding districts. A calculation has therefore been made, based on the aggregate mortality in all the towns of each department, and the figures so obtained are those given below for comparison:

Death-rate from Cancer and Tumour per 100,000 Living.

All Towns above 3,000 Inhabitants	104.0
All towns from 500,000 to 100,000	120.0
,, ,, ,, 100,000 to 30,000	110.0
,, ,, ,, 30,000 to 20,000	100.0
,, ,, ,, 20,000 to 10,000	94.0
,, ,, ,, 10,000 to 5,000	76.0
Chefs lieux d'arrondissement under 5,000 inhabitants ...	80.0

The departments of France are so numerous that a complete list would be too long for the present paper. In the following table the departments showing the highest and lowest death-rates for cancer are given, but it should be stated that all those are omitted in which the total number of deaths from cancer in a single year was too small for any estimate to be based upon it; some of these should no doubt be included among those having the lowest rate. The difficulty of obtaining the age distribution of the population was too great to be attempted, but the proportion of deaths from cancer to deaths from all causes at 40 and upwards will be found in the last column.

Departments in the Towns of which the Highest Mortality from Cancer was shown in 1900.

	Death-rate from Cancer and Tumour per 100,000 Living, at all Ages.	Proportion of Deaths from Cancer and Tumour to 100 Deaths, from all Causes, at all Ages.	Proportion of Deaths from Cancer and Tumour to 100 Deaths from all Causes of Persons 40 Years of Age and Upwards.
Eure et Loire	167.0	6.5	10.8
L'Aisne	161.0	6.6	11.5
Rhone	153.0	6.1	10.1
Seine et Oise	150.0	4.9	10.0
Seine (excluding Paris) ...	150.0	5.2	9.4
Seine Inférieure	149.0	5.0	10.9
Marne	143.0	6.4	11.7
Loiret	142.8	6.6	10.0
Somme	141.0	6.0	10.6
L'Indre	141.0	6.5	10.0
Seine et Marne	140.0	6.3	10.1
L'Oise	136.0	5.0	9.1
Nièvre	136.0	6.0	8.7
Côte d'Or	135.0	7.0	9.5
L'Isère	130.0	5.6	9.5
Nord	109.0	5.0	10.0

Noting the departments in which the highest rate is shown, and especially those giving the highest percentage of cancer in deaths of persons over 40, it will be observed that in France a very compact area of high cancer mortality exists. This area comprises all Normandy east of the Seine, Picardy, Ile de France, with the northern portion of Champagne. The district thus compounded is inhabited by a population having more affinity with the Germanic races than that in other parts of France. The chief occupation is agriculture, this being on the whole the largest cereal-producing portion of the country. At the same time, many towns are included which are the seats of large cotton and wool industries, and also some coal-mining districts. The staple drinks are beer and cider, which are here more largely consumed than in any other part of France.

[8] Statistique Sanitaire des Villes de France pendant l'Année 1900.

Departments in the Towns of which the Lowest Mortality for Cancer was shown in 1900.

	Death-rate from Cancer and Tumour per 100,000 Living, all Ages.	Proportion of Deaths from Cancer and Tumour to 100 Deaths from all Causes, all Ages.	Proportion of Deaths from Cancer and Tumour to 100 Deaths from all Causes of Persons 40 Years of Age and Upwards.
Côtes du Nord	68.0	3.0	5.2
Calvados	94.0	2.9	4.7
Hérault	85.0	2.9	5.1
Charente Inférieure ...	78.0	3.5	5.7
L'Aude	74.0	2.7	3.7
Cher	70.0	3.2	4.6
Morbihan	65.0	2.7	5.4
Bouches du Rhone ...	62.0	2.3	4.2
Vienne	59.0	3.0	4.8
Manche	58.0	2.1	3.9
Puy de Dôme	53.0	2.0	3.0
Maine et Loire	52.0	2.0	3.2
Vosges	51.0	2.3	4.3
Finisterre	38.0	1.5	3.2

The geological formations, in addition to the carboniferous strata, are slates, limestones, and chalks, often overlain by clays. The climate is generally somewhat cold, this part of France being, on the whole, the coldest and driest portion of the country. The chief characteristic of the whole region is that it is thickly wooded, this being a very striking feature of the country round Paris, and extending generally over all the departments to the north-east. All these departments are well watered by rivers, mostly taking their rise in the forests of the Vosges and the Ardennes.

A good example of the districts having the highest cancer-rates is the department of L'Aisne, which contains eleven forests, through one of which, the "Foret de Saint-Michel," runs the River Oise. In this department is situated the village of Oulchy, which is described as having the enormous cancer-rate of 400 per 100,000 living. The extraordinary mortality from cancer occurring in some communes in the north-east of France has been described by Arnaudet, who, in addition to Oulchy, mentions a village on the plateau of Rocroi, close to, although not in, L'Aisne, where the rate is 266. He also gives a full account of the cancer mortality in Cormeilles (Eure), where the rate per 100,000 living for the whole district is 203; but in the commune of St. Sylvestre rises to as much as 345.[9] Arnaudet himself believes that the disease is often transmitted by water, not infrequently, he thinks, in the form of cider.

There appear to be two other small areas of high cancer mortality in France, one in the immediate vicinity of Lyons, and another, less well marked, covering a portion of Burgundy.

The area of low cancer mortality comprises, in addition to a few isolated districts, two well-marked regions, one bordering on the Mediterranean and the other consisting of practically the whole of Brittany. Brittany has a geological formation of palaeozoic rock, and, as is well known, the people are of Celtic origin and poor, the chief industry being fishing.

Among the cities the one showing the highest mortality is Rouen, with a cancer-rate of 173, and the lowest is Marseilles, with a rate of 69 only, an extraordinary difference not at first sight easily explicable.

	'Death-rate' from Cancer and Tumour per 100,000 Living at all Ages.	Proportion of Deaths from Cancer and Tumour to 100 Deaths from all Causes at all Ages.	Proportion of Deaths from Cancer and Tumour to total Deaths of Persons over 40.
Paris	130.0	5.7	11.0
Lyons	133.0	5.1	11.7
Rouen	173.0	7.8	14.3
St. Etienne	100.0	4.6	11.4
Havre	140.0	4.1	10.1
Toulouse	130.0	5.6	8.3
Nantes	128.0	5.1	8.8
Lille	124.0	5.4	12.7
Bordeaux	97.6	4.6	7.2
Marseilles	69.0	2.5	5.8

[9] Arnaudet, *Normandie Médicale.*

Germany.

Although cancer is very prevalent in some parts of the German empire, nevertheless, the figure for the whole is not so high as in many other countries, the total number of deaths from "new growths" in 1899 being 38,918, and representing a rate of 72 7 per 100 000 living. The various States into which the German empire is divided exhibit very different rates of mortality from cancer, varying from one of 102 per 100,000 living, in the Kingdom of Bavaria and the Grand Duchy of Baden to one of 59 3 for Prussia, while two of the smaller States show even smaller figures. The age distribution in 1899 of the populations of many of the States cannot, unfortunately, be procured; in the following table, therefore, in addition to the death-rate and percentage, the proportion of deaths from "new growths" to 100 from all causes in persons over 15 years of age is given for all the German States, the free towns alone being omitted.

	Death-rate from Cancer per 100,000 Living, all Ages.	Proportion of Deaths from Cancer to 100 Deaths from all Causes, all Ages.	Proportion of Deaths from Cancer to 100 Deaths from all Causes of Persons 15 years of Age and Upwards.
German Empire	72.7	3.3	6.6
Prussia	59.3	2.7	5.6
Bavaria	102.0	4.2	8.2
Kingdom of Saxony	94.7	4.1	9 3
Wurtemburg	94.0	4.4	8.6
Grand Duchy of Baden ...	102.0	5.c	8 8
Hesse	95.4	5.2	8 6
Saxe Meiningen	63.0	3.3	5.9
Brunswick	04.3	4.6	8.9
Saxe Altenburg	78.0	3.2	7.0
Saxe Coburg Gotha	54.0	2.7	4.6
Anhalt	84.0	4.2	8.0
Schwartzburg Sondenheim	68.7	3.5	6.4
Waldeck	64.0	3.5	6.0
Reuss	79.4	3.5	8.0
Schaumburg Lippe	47.0	3.0	4.6
Lippe	65.2	3.7	6.4
Alsace-Lorraine	79.3	3.9	6.5

It will be seen that the highest rates prevail in the Southern States and in the Kingdom of Saxony, the last giving the greatest percentage when ages above 15 are alone considered. Of the others, Hesse and Brunswick are almost the only States where the cancer deaths are much above the average.

The great South German States, Bavaria and Baden, are not altogether dissimilar in physical features, being alike characterized by marked undulations, hills for the most part covered with forests alternating with fertile valleys well watered by rapid streams, thus contrasting greatly with the level plain of North Germany. Bavaria is also famous for its numerous lakes. The climate is on the whole warmer than in the north and the rainfall greater. Although both States contain large industrial populations the chief industry is agriculture, the soil being very fertile, and many of the valleys being among the warmest and most fruitful districts not only of Germany but of the whole of Europe. In both States vines are extensively cultivated; a special product also consists of hops, Bavaria being perhaps the most important hop-growing country in the world. Under these circumstances it will be understood that the consumption of beer is extraordinarily great.

It is worth while to note the marked difference between Bavaria right of the Rhine and the less mountainous and more sparsely wooded country to the left of that river, the figures for 1898 being:

Death-rate from Cancer per 100,000 Living.

Bavaria, right of the Rhine 102.3
Bavaria, left „ „ 73.3

In Baden also the ravages of the disease are not equally spread over the whole country. A cancer-rate of 136 for the division of Constance, and a rate of 119 for the division of Freiburg, which contains the well-known hills of the Black Forest, contrasting with rates under 100 for the more level region north of Baden-Baden.

The Kingdom of Saxony, surrounded on three sides by lofty mountains is on the whole an extremely hilly region, being diversified everywhere excepting in the north by wooded spurs of the bordering mountain ranges. Over a portion of the country these form a district of peaks and forests known as Saxon Switzerland. In many respects, therefore, the physical combination resembles that of the two other States, showing a high mortality from malignant growths. The dense Saxon population, however, is much more largely engaged in mining and manufacture than is the case with the inhabitants of Baden or Bavaria, while the climate of Saxony is distinctly colder. It may be noted that the kingdom is watered by the Elbe, flowing from Bohemia, a country in which the mortality from cancer is also high.

The Duchy of Brunswick, which almost alone of the North German States shows a high cancer-rate, is also mostly a mountainous country, although it has nevertheless level tracts of considerable extent. The climate on the whole is cold in winter, resembling that of North Prussia. Although mining is carried on to a considerable extent, the population is chiefly agricultural. It is especially to be remarked that the country is largely covered with woods, the preparation of timber forming an important industry.

The main fact indicated by the incidence of cancer and tumour in various parts of Germany is that the mortality from this disease is far less in the level wind-swept plains of Northern Germany than in the more broken districts of the south, and in those regions bordering on the Alps.

The vital statistics of Prussia have been so regularly and carefully kept for many years that it is possible to give a complete table for all the divisions of the kingdom for the year 1900, although those for the rest of Germany appear not to be at present available.

	Death-rate from Cancer per 100,000 Living, all Ages.	Proportion of Deaths from Cancer to 100 Deaths from all Causes, all Ages.	Proportion of Deaths from Cancer to 100 Deaths from all Causes of Persons 40 Years of Age and Upwards.
East Prussia	54.3	2.1	4.6
West Prussia	50.4	1.9	5.1
Berlin	109.1	5.8	13.8
Brandenburg ...	66.7	3.1	7.1
Pomerania	67.1	2 8	6.6
Posen	44.5	1.8	5.2
Silesia	54.2	2.1	5.1
Saxony	62.1	2.8	7.5
Schleswig-Holstein ..	76.3	4.3	8.4
Hanover	79.1	4.3	6.4
Westphalia	43.0	2.1	5.7
Hesse Nassau ...	57.1	3.2	6 0
Rhine Provinces ...	53.2	2.5	5.6
Hohenzollern ...	67.3	2.8	5.4

Omitting for many reasons any consideration of the apparently extraordinary mortality in Berlin, the highest percentage in persons over 40 years of age is shown in Schleswig-Holstein, this may possibly be accounted for by the fact that the population is largely of Danish origin. Notably low rates are exhibited by Posen, East and West Prussia, and Silesia, in all of which provinces there is a large Sclavonic element; the last, moreover, is a great coal-mining country, the Silesian coalfields, as is well known, being the largest in Europe.

The death-rate in towns of Prussia contrasts very unfavourably with that for the country generally. The following table gives the rate for 1900 in a few of the principal towns:—

	Death-rate from Cancer per 100,000 Living, all Ages.	Proportion of Deaths from Cancer to 100 Deaths from all Causes, all Ages.	Proportion of Deaths from Cancer to 100 Deaths from all Causes of Persons of 40 Years of Age and Upwards.
Berlin	109.1	5.8	13.8
Breslau	109.0	4.2	9.8
Cologne	91.8	4.0	11.3
Kiel	113.0	6.9	17.4
Düsseldorf	61.1	3.2	9.3

The tendency which everywhere exists for sufferers from malignant disease to quit the country for towns appears to be extraordinarily great in Germany, the death-rate in towns being very exceptionally high. This may be to some extent explained by the multiplicity of hospitals, and the great renown of many of the surgeons in the provincial towns of Germany, in which country the capital is not so much a medical centre as is often the case elsewhere.

Austria-Hungary.

Very complete statistics are available for Austria-Hungary. Unfortunately the last records of age distribution, being more than 10 years old, since which time the population has increased by something like 12 per cent., no satisfactory calculation could be made of cancer-rate among persons above 40 years of age. In the last column in the following table, therefore, the proportion of deaths from cancer to deaths from all causes of persons of 40 years and upwards is given:

	Death-rate from Cancer per 100,000 Living, all Ages.	Proportion of Deaths from Cancer to 100 Deaths from all Causes, all Ages.	Proportion of Deaths from Cancer to 100 Deaths from all Causes of Persons of 40 Years of Age and Upwards.
Empire of Austria ...	70.4	2.7	7.5
Lower Austria	108.0	4.9	11.9
Lower Austria (without Vienna	104.0	4.3	11.5
Vienna	112.0	5.5	12.1
Upper Austria	115.0	4.6	9.6
Salzburg	133.0	5.2	11.2
Styria	77.3	3.3	7.1
Carinthia	92.6	3.6	7.2
Carniola	41.8	1.6	4.0
Küstenland (Görz, Istria, and Trieste)	63.0	2.3	6.1
Tyrol and Vorarlberg ...	107.0	4.2	8.6
Bohemia	91.8	3.8	9.6
Moravia	83.7	3.3	8.6
Silesia	61.1	2.2	6.5
Galicia	28.3	1.0	3.5
Bukowina	37.6	1.4	4.7
Dalmatia	19.0	0.8	2.0

	Death-rate from Cancer per 100,000 Living, all Ages.	Proportion of Death from Cancer to 100 Deaths from all Causes, all Ages.	Proportion of Deaths from Cancer to 100 Deaths from all Causes of Persons of 40 Years of Age and Upwards.
Kingdom of Hungary ...	32.8	1.2	3.7
Hungary ...	39.3	1.4	4.4
Croatia, Sclavonia	16.5	0.6	1.9

Austria as a whole exhibits a moderate prevalence of cancer with a rate of 70.4 and a proportion of 7.5 per cent. of deaths over 40 years of age, but on examining the table one is at once struck by the very extraordinary range shown by the provincial rates. The great diversities of race and language in the Austrian Empire are paralleled by the differences in cancer mortality. At the same time, in noting the remarkably low figures in some cases, allowance must be made for the difficulties of accurate diagnosis and registration in the outlying provinces, and there can be little doubt but that many of these figures must be taken with some reserve.

The lowest rates are shown in the provinces inhabited mostly by people of Sclav origin; the Poles in Bukowina and in Galicia (where they are largely also Jews) appearing to suffer comparatively little. In addition, the district known as Küstenland as well as Dalmatia, into the population of both of which the Italian element largely enters, show low rates; that for Dalmatia however being somewhat doubtful. The province of Dalmatia, as well as Istria, is markedly deficient in timber.

The population of Hungary, a mixture of Magyar and Sclav elements, appears to have a mortality for cancer far below the average; the Czechs in Bohemia and Moravia give a distinctly higher mortality, but the highest rates of all are to be found in those provinces chiefly inhabited by the Teutonic races.

The province of Salzburg, which shows the highest mortality from cancer of any province in Austria-Hungary, is, as is well known, a mountainous region of lofty limestone peaks, well wooded in their lower parts, with rapid rivers and numerous lakes. The country is about equally divided between forests and pasture lands. Mining forms a considerable industry, of which the chief, of course, is the production of salt, a point which may be noted in favour of those who advance a salt theory of the causation of cancer.

The Tyrol, Upper Austria, Bohemia, and Moravia all show rates well above the average for the whole empire; of these, the Tyrol and Upper Austria are chiefly inhabited by Germans, although in the Southern Tyrol there is a considerable Italian admixture.

The extensive coalfields of Bohemia are worth noting, as in some other countries coal-mining districts appear to have a very low cancer mortality. For the rest, these countries, with the exception of the Tyrol, are largely mining and industrial, although a considerable proportion of the population is engaged in agriculture. It may also be stated that Salzburg is the province in which most beer is consumed, followed at some distance by Bohemia and Upper and Lower Austria. It is especially to be remarked that Styria, in which province the inhabitants are commonly said to be addicted to the use of arsenic, shows a rate of mortality from cancer only about equal to the average for the whole empire.

(To be continued.)

IRISH PUBLIC OPINION AND THE POOR-LAW MEDICAL SERVICE.

For about ten years the columns of the British Medical Journal have furnished evidence of the many attempts that have been made through the Journal, through the activity of Irish Branches of the Association and by other agencies, to improve the conditions of the Irish Poor-law Medical Service. The discussion and decision of the Leinster Branch, on April 14th, on this matter may prove to have materially helped forward the movement in two important respects. First, by adopting the resolutions for the consideration of the annual representative meeting, which are published in this issue of the Journal, the Branch has promptly seized the opportunity afforded by the new constitution for bringing the matter under the notice of the entire British Medical Association, and obtaining all the assistance which the Association can give to our Irish brethren in their struggle for justice. Secondly, we are glad to observe, in the Irish press, comments evoked by the discussion in the Branch meeting which show that something has been achieved towards the attainment of that object to which all the efforts of the profession must ultimately be directed, namely, the conversion of public opinion. Thus the *Irish Times* of April 16th, in a leading article devoted to the subject remarks:

The ordinary citizen scarcely realizes the seriousness of the grievances under which the medical officers labour. They are a body of men of the utmost importance to the entire community; they are accountable for the health of the people; they have charge of the sanitary arrangements of the country. The importance of their position in Ireland is immensely enhanced by the fact that Ireland is practically dependent on the Poor-law medical officers for medical attendance. In big towns there is, of course, a good supply, affording a choice in the selection of a medical attendant; but in hundreds of districts there is no medical man available except the Poor-law medical officer. In the past he has been scandalously treated, and yet to the eternal credit of the medical profession it must be said that it has sent to districts where there was no hope of improvement from a financial point of view Poor-law officers who were well equipped in professional and scientific knowledge, and who gave the most excellent service to the poorest of the poor, under the most exacting conditions, for incomes that would not be tolerated by a second-class clerk in the Civil Service. Not only have they been overworked and underpaid, but they have had to be beholden to Boards of Guardians, which are constantly changing, for the grant of an occasional holiday, while a superannuation allowance is really out of the question. To the Poor-law medical officers this state of affairs is undoubtedly very serious, but the matter has an interest far beyond their circle. If the Poor-law service achieves the reputation of a refuge for the destitute, it will be avoided by every medical student of any pretension or ability, and the result will necessarily be that Ireland will be handed over to the care of incompetent practitioners, that the Irish schools of medicine and surgery will decline, that every well-qualified man who cannot find a practice in the large centres of population in Ireland will try to find one elsewhere. It is impossible to estimate the consequences that would ensue. The rich can always command the highest medical skill, but the ills of the rich are very often the direct consequence of the sickness of the poor. An epidemic fostered in a poor and badly-controlled district reaches the districts where the well-do-to dwell, and Nemesis in a terrible form appears in the dwellings of those who, by exerting their influence, might have absolutely averted the evil. Indeed, the demands of these devoted public servants should not require advocacy at all. It is only proposed that they should enter into the public service at a minimum salary of £200 per annum for dispensary appointments, and £120 per annum for workhouse appointments, with a reasonable reduction where both appointments are held jointly; that they should be able

to claim a superannuation allowance; and that they should get one month's holiday every year. We cannot see how these demands can possibly be resisted. If the public authorities think that the poor should have competent medical service in the moments of their greatest need, that the young Irish medical man should have a fair chance of settling in some kind of comfort and security in his native land, and that the Poor-law medical service should not be handed over to the least capable of the profession, then their requests will be conceded immediately.

Similarly the (Dublin) *Daily Express* and the *Evening Mail* of April 15th devote leading articles to the subject, the tenour of which is sufficiently shown by the following extracts. The Dublin *Daily Express* writes as follows:

The question is one which clearly does not affect members of the medical profession alone. In fact, it affects the whole community in a very remarkable degree. That the dispensary doctors throughout the greater part of Ireland are, on the one hand, grossly underpaid, and, on the other, grievously overworked, is, of course, in the first instance, a matter of grave concern to the doctors themselves; but it is strange that in this enlightened age one should still have to insist on the extraordinary economic unwisdom, from the public point of view, of refusing fair remuneration to workers in whose efficiency the whole community is vitally interested.

The Dublin *Evening Mail* makes the following observation:

Surely there is nothing extravagant in the modest claims which are made on behalf of a most important body of public servants. A fair salary, superannuation, and an annual holiday are conditions which attach to the service of the meanest civil servant, and there is no reason which we can see why they should not be granted to Poor-law officers whose work is drudgery of a very exacting nature, and upon whose efficiency, individually and collectively, the public welfare so largely depends. Agitation and combination will, however, do something, if not everything, to secure an amelioration of the present state of things, but, as has been aptly pointed out, so long as medical men can be found who are willing to accept service under local authorities in the conditions which at present exist, and at the miserable salaries at present offered, it is impossible that the grievances can ever be wholly removed.

The case of the Poor-law officers is stated in these extracts with great force. We can but trust that other sections of the public, and, may we add, some members of the medical profession will lay to heart the lessons so clearly expounded, that economic law rules even in the domain of medical practice; and that getting something for nothing cannot be made a permanent basis for contract even when medical service is the commodity to be acquired. The salutary advice of the Dublin *Evening Mail* in the last sentence quoted may be commended to the notice of members of the profession. And perhaps in time Government and local authorities will realize, in the words of the *Daily Express*: "The extraordinary unwisdom, from the public point of view, of refusing fair remuneration to workers in whose efficiency the whole community is vitally interested."

CONTRACT MEDICAL PRACTICE.

COUNTY OF DURHAM.

FOR four years a struggle has been going on in the county of Durham to obtain increased remuneration for medical attendance on the miners. In some places the higher rate has been easily obtained, in other places there has been delay, whilst in a few places the struggle has been somewhat keen. At the present time in the suburbs of the cathedral city of Durham a very strong and bitter spirit is shown by the miners. Having stoutly rejected the demand made by the local practitioner who had served the miners well for some eight years they obtained the services of an outsider. We are informed that they canvass for him, and bring pressure to bear on their fellow workmen to become his patients, and sing his praises in every house. But after a time certain events happened which, we are told, led to the departure of this practitioner. The members of the County of Durham Medical Union have quietly and very certainly made up their minds not to associate in any way with a medical man who accepts an office on terms which they regard as inimical to the best interests of the profession, and the Union is well supported by the consultants of the North of England. When miners strike for more pay, men who are ready to work at the lower rates are dubbed blacklegs and ostracized by their fellows, but the miners in this particular instance would fain compel the Medical Union to recognize and associate with the medical man chosen by them. This the Medical Union will not consent to do.

In 1899 Dr. Jepson, President of the County of Durham Medical Union, sent a printed circular to the medical schools of Scotland and the North of England in the following terms:

County of Durham Medical Union.

A struggle is now going on in the County of Durham, by the above Union, to obtain an increased rate of remuneration for medical attendance on the miners and other workmen in the County of Durham.

At some collieries there is strong opposition to the increase, and the miners are advertising in the papers for medical men to come and accept appointments on the lower terms, and thus cause the present colliery doctors to lose their practices.

We trust to the dignity and uprightness of our brethren in the profession, that they will not take advantage of the offers made by the miners, but in every way support this effort to obtain what is just.

EDWARD JEPSON, M.D.,
President of the County of Durham Medical Union.

Durham, March 23rd, 1899.

We are informed that the situation was readily grasped by the medical students, who expressed a loyal feeling towards the local Medical Union. It appears, however, that there are still practitioners who desire information as to the principle involved, and appear disposed to conclude that if the miners should after a time give 9d. instead of 6d. a fortnight to the man introduced by them, no opposition need be raised, and that the dispute is at an end; but this is not so. The dispute is not ended until the old practitioner is reinstated and the proper remuneration is settled. Again, some ask how long this condition of strife must continue? The reply of the Union to this is the same as stated above, namely, so long as the old practitioner is opposed, and the proper remuneration is withheld.

Dr. Jepson, who sends us these particulars, does so in order to explain the position clearly, and in the expectation that the County of Durham Medical Union will have the help and sympathy of the whole of the profession.

CHESTERFIELD.

Last year the Chesterfield Friendly Societies formed a medical aid association and engaged a practitioner. It is stated that there are now over 3,000 members on the books of the association, and that one practitioner is supposed to do all the work. Prior to the formation of the Medical Aid Association the clubs were attended by some six or seven local medical practitioners. The following extracts from the registered rules of the Chesterfield District Medical Association (membership unlimited) are forwarded to us by a correspondent, and will, he thinks, be read with interest and advantage by medical men who are not acquainted with the conditions under which such associations expect their medical officer to work.

Duties of Medical Officers.

No. 19. The medical officers shall be in attendance at the dispensary on week days at such hours as the Committee of Management shall direct. They shall examine all candidates for admission into the various societies, and grant proper certificates required by members declaring on and off the sick funds. They shall prescribe for and give the proper medical treatment to all patients; they shall visit, when necessary, all patients unable to attend at the dispensary who reside within three miles of the registered office of the Association, subject to the provision of the rules. They shall also attend midwifery cases of members' wives, subject to the provision of the rules. No person can be attended by the medical officers during confinement unless she is a member or wife of a member of the Association. In case any member seeks the medical attendance of any other person, either for himself or his family, whilst under the treatment of one of the medical officers of this Association, without his consent, such medical officer shall immediately report such case to the Management Committee.

They shall also vaccinate members, their wives and families if required. They shall not engage in any private practice whatever, but devote the whole of their time to the cure of the sick of the Association, and perform such other duties as are contained in the agreement made with the Committee of Management. No person is entitled to medical treatment or medicine if suffering from venereal disease.

Confinements and Vaccinations.

No. 28. The wives of members or female members may be attended during their confinements on payment to the Association of 10s. 6d. in advance, due notice to be given to the medical officer previous to the confinement that his services will be required, the infants to be vaccinated free of charge if required. The wives of members or female members not requiring the services of the medical officers of the Association during confinement shall be ineligible for the benefits of the Association for one month before and one month after confinement; neither shall any benefit be granted the member in respect of the infant until it be 3 months of age, nor unless at that date it was in good health. Members and other persons entitled may be vaccinated or revaccinated at the dispensary on payment to the medical officers of 1s. for each case.

RULES FOR MEDICAL CLUBS.

G.P.—A correspondent asks for model rules for the formation of a medical club for attendance on poor people.

*** It is not advisable for medical practitioners to form medical clubs, unless in combination with the other practitioners of the neighbourhood.

Rules applicable to such institutions are in use by provident dispensaries, but they vary in different localities, especially in town and country practice. The rules of the Metropolitan Provident Dispensary Association, which might be obtained from the secretary, would probably be of use in the formation of a medical club in an urban district.

THE EPIDEMIC OF SMALL-POX.

The small-pox news this week is certainly not good, since, though the reports to hand are not very numerous, outbreaks which are described as alarming are reported at three different places which were either free altogether or at which the disease was supposed to have been got under.

In Co. Durham 7 new cases from one lodging-house are reported in Sunderland.

In Yorkshire, at Leeds there are some 70 cases under treatment, 12 new ones having been notified in the few days preceding April 17th.

In Lancashire, Burnley is one of the places at which a serious recrudescence of the disease has occurred, 35 cases having been removed to hospital in seven days after a period of fourteen days during which no fresh cases were reported at all. At Pemberton, a new centre, there have been 2 cases, and 1 at Heywood, which was also previously free. In Oldham Workhouse there is also a bad outbreak, 16 cases having occurred in three days. Stockport hopes that it is now free for the first time for four months; while Salford has just registered its hundredth case.

At Manchester things appear to be pretty quiet, but a case has been found in a lodging-house in a quarter of the town which had previously remained apparently unaffected.

In Derbyshire, the only fresh cases reported are at Long Eaton.

In Nottinghamshire fresh cases continue to occur at Hucknall Torkard, while there have been five at Mansfield, and one or two fresh ones in Nottingham itself.

In Lincolnshire, Grantham has again had to report a few cases, apparently directly connected with earlier ones.

In Leicestershire two more cases have occurred at Barrow-on-Soar, while in Leicester itself what is described as "an alarming outbreak" has occurred, 14 fresh cases from houses scattered all over the town having been reported in two days.

In Shropshire, a new case is reported at Whitchurch.

In Warwickshire, the Foleshill Union still continues to supply cases, and a case has occurred in Warwick itself. In this county, Coventry is a new centre, the tramp-master of the workhouse having developed the disease, as well as a mother and some children in the town. The town of Rugby is another place where an "alarming outbreak" is reported, but the cases at present do not seem to be numerous.

In Oxfordshire, Wheatley is a new centre, but has only had one case notified at present.

In Devonshire, where no cases have been reported for a long time, Barnstaple has received a case from a port in Wales.

In London itself there seems to be a tendency to an increase, as there are now under treatment between 30 and 40 cases, a larger number than there has been for some time past. One case is reported from the Remand Home at Camberwell.

In Wales there have been fresh cases at Cardiff and at one or two old centres, while Welshpool and Wrexham now appear in the list, as well as the village of Abercarn.

From Scotland there is very little news, but it is a well-vaccinated country and the outbreak reported in this column at several burghs is not likely to prove serious. Tramps figure in this week's report as largely as before, and in reference to many of the cases it is noted that the patient is an antivaccinator.

LITERARY NOTES.

Messrs. Smith, Elder, and Co. announce that they will publish in May a memoir of Sir Henry Acland, by Mr. J. B. Atlay, the author of *Lord Cochrane's Trial before Lord Ellenborough in 1814*. The work will contain portraits and other illustrations.

The German Society for the Prevention of Venereal Diseases is about to issue a journal entitled *Zeitschrift für die Bekampfung der Geschlechtskrankheiten*. The editors are Professors Lesser of Berlin and Neisser of Breslau, who will have the advantage of the co-operation of Dr. A. Blaschko of Berlin. The journal will be published by F. A. Barth of Leipzig.

We are informed that His Majesty the King has been graciously pleased to accept from Professor Corfield, M.D., of University College, London, Consulting Sanitary Adviser to His Majesty's Office of Works, a copy of the Milroy Lectures on The Etiology of Typhoid Fever, delivered by him before the Royal College of Physicians in 1902, by special request of the Council of the College. In one of these lectures Professor Corfield expresses the opinion that the attack of typhoid fever from which His Majesty suffered in 1871, when Prince of Wales, was not due to any sanitary defects in Londesborough Lodge, Scarborough, the house in which he was staying, and the sanitary condition of which was described by Professor Corfield in a letter published in the *Times* of January 23rd, 1872. Professor Corfield thinks there is no doubt it was due to contaminated food or drink partaken of by His Royal Highness, the gentlemen of the party and some of the men servants, away from the house, perhaps at a shooting luncheon, as Her Royal Highness the Princess of Wales, the ladies of the party, and all the female servants escaped infection. The disease, in fact, entirely spared those who were most in the house, and attacked only those who were most away from it, some of whom did not even sleep there.

Messrs. G. P. Putnam's Sons are, it is announced, about to issue a work entitled, *The Law of Mental Medicine*, by Dr. T. Jay Hudson. The author's aim is said to be neither to inculcate new doctrines nor to "explode" the fallacy of the medical profession. "He gathers a vast number of beliefs and quasi-medical practices from all times and all ages. By a correlation of these with existing medical theories, he clearly shows that there is a real repetition—'a law'—of the same ideas in various forms, and incidentally he demonstrates the great dangers arising from 'that fanatical imbecile' the extremist."

At a recent meeting the Institute of France considered how the proceeds of the Debrousse legacy, amounting to an annual sum of £1,200, were to be applied. The terms of the bequest state that the money is to be used "in the interest of literature, science, and the arts." The Institute decided: (1) To continue its subvention of £320 to the *Journal des Savants*, to enable that publication to continue its work; (2) to grant subventions for the publication of the works of Leibnitz (this is the Institute's contribution to the undertakings of the International Association) and of the manuscript correspondence of Richelieu and his agents; and (3) for experiments on certain electrical phenomena to be made by French and foreign investigators.

To those who can read Italian, and who may wish to know with a minimum expenditure of time and trouble what is being done in the domain of medical practice and research in Italy, we recommend a new periodical entitled *Auto Riassunti e Riviste dei Lavori Italiani di Medicina Interna ed Argomenti Prossimiori*, edited by Professor Alberto Riva, of Parma, and published by P. Grazioli, of the same city. The nature and scope of the publication are set forth in the following printed circular sent out by the editor:—

In the journal, which I have the honour to present you, I collect, with a selected number of scholars of mine, under the form of auto-epitomes or reviews, all that, month by month is pubblishing in Italy on internal medicine and affined arguments. This pubblication is made without any view *to lucre* but only and in order to spread, especially in the foreing countries, the knowledge of our progressive medical mouvement; and I think therefore it will answer to a true want of the internat onal scientific life and get into favour also in England whose profound and intense progress in medical sciences is highly appreciated in Italy.

The *South African Medical Record*, of which the first number, dated March 15th, is before us, is described on the title page as "a monthly journal devoted to the interests of the medical profession in South Africa." It is published at Capetown, and is edited by Dr. W. Darley Hartley. The history of medical journalism in South Africa is full of adventure. In the editorial "prologue," the fact is recalled that the need of a professional journal in South Africa was realized as far back as 1847, when "the very sparse band of medical men then dotting our country started a little quarterly magazine" under the editorship of Dr. Ebden. This publication appears to have lived only a year. No other medical journal appeared till 1884, when the first *South African Medical Journal* was started at East London under the editorship of Dr. Darley Hartley. "It was a monthly for a year, then blossomed into a weekly, changed its *locale* to the little village of Cathcart, and finally perished of asthenia after five years' existence." Another interval of suspended animation followed, which was terminated in 1894 by the launching of another *South African Medical Journal*, as the outcome of action taken by the first South African Medical Congress assembled at Kimberley. This new avatar of the journal was controlled by a committee of which Dr. Darley Hartley was a member. It was published at Capetown. Dr. Edington, of Grahamstown, was at first the editor, and was after a time succeeded by Dr. Eyre, of Claremont. The disorganization of the country led the executive of the South African Medical Association to suspend publication for six months from the end of that year. The interval was a good deal longer, for it is only a few weeks since the journal was revived in the form of the *South African Medical Record*. The *Record* "has no connexion with any society or association beyond the links which kindly

sympathy confers." We wish the new journal a prosperous career, which we venture to say that it deserves, for the original papers are of interest and value, and the editorial notes are brightly written.

ASSOCIATION NOTICES.

REPRESENTATIVE MEETING.

NOTICES OF MOTION.

THE following notices of motion have been given for discussion by the Annual Representative Meeting at the Annual Meeting of the Association, to be held at Swansea July 28th to 31st, 1903:

By the COUNCIL OF THE ASSOCIATION:

That the Council give notice to the Annual Representative Meeting. That By-law 2 be amended by the addition of a clause that any Branch may by special resolution require that each candidate for election to the Association shall furnish a certificate from two members of the Association to whom he is personally known.

That all officers of the Navy, Army, and Indian Medical Service be eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By the GATESHEAD DIVISION (North of England Branch):

(A.) That it be an instruction to the Medico-Political Committee to investigate the economic conditions of contract practice as carried on in various ways in this country, to report thereon to the next Annual Representative Meeting, and to present an interim report to the Council on any points which appear to call for action during the year.

(B.) That it be an instruction to the Ethical Committee to investigate the ethical position of medical men engaged in various kinds of contract practice with reference to (*a*) the amount of canvassing necessarily or commonly associated with the several varieties of contract practice; (*b*) the ethical position of medical men who accept or continue to hold appointments which the general body of medical men in the locality have agreed not to hold on the ground that the conditions of tenure are detrimental to the honour and interest of the profession.

(C.) That the Medico-Political Committee consider the advisability of placing the services of the Organizing Secretary at the disposal of any Division which may desire him to act on its behalf in negotiations with outside bodies, or in the adjustment of differences among medical men in connexion with contract practice.

(D.) That it be an instruction to the Medico-Political Committee to consider and report upon the advisability of running at the next election of Direct Representatives on the General Medical Council a candidate or candidates under the auspices of the British Medical Association.

By the CLEVELAND DIVISION (North of England Branch):

That, it being considered that the present system of death certification and registration renders unreliable the statistics of deaths from disease, tends to encourage and assist quack practitioners in their impositions upon the public and facilitates the concealment of crime, the Council be instructed to take forthwith such steps as may be deemed best calculated to bring about an early amendment of the law on the subject.

By the SOUTH-EASTERN COUNTIES DIVISION (Edinburgh Branch):

That a Standing Committee be appointed, consisting of the Scottish Members of Council, the Secretaries of the Scottish Branches, and such other members as may be selected, to consider matter relating especially to Scotland—the Committee to meet in Scotland.

By the DUNDEE BRANCH:

Resolved: To give notice for the Representative Meeting to amend By-law 39 by adding: (9) "A Scottish Committee, consisting of one Secretary from each Scottish Branch and the Scottish members of the Central Council and Standing Committees of the Association. It shall have a Secretary, resident in Scotland, and shall meet at least quarterly, at such place and time as the Committee may itself direct, and shall report to the Council on any matters specially concerning Scotland.

By the SOUTHERN BRANCH:

That the election of members by the Branches be subject to the same rule as election by the Council, namely, that the application for membership shall be accompanied by a statement signed by three members of the Association that from personal knowledge they consider the candidate a suitable person for electi

By the LEINSTER BRANCH:

(A.) That, in the opinion of this meeting the conditions of the Irish Poor-law Medical Service require amendment in the following respects:

1. That a minimum salary be fixed of £200 per annum for dispensary appointments, and £120 per annum for workhouse appointments, with a reasonable reduction where both appointments are held jointly.
2. Superannuation.
3. An annual holiday of at least a month.

(B.) That it be an instruction to the Council of the Association to take such steps as may be deemed best calculated to bring about the early adoption of these reforms.

GUY ELLISTON, *General Secretary.*

April 23rd.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1903.

MEETINGS of the Council will be held on July 8th and October 21st in the Council Room of the British Medical Association, 429, Strand, London, W.C.

ELECTION OF MEMBERS.

ANY candidate for election should forward his application upon a form, which will be furnished by the General Secretary of the Association, 429, Strand. Applications for membership should be sent to the General Secretary not less than thirty-five days prior to the date of a meeting of the Council.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m. Members can have their letters addressed to them at the office. GUY ELLISTON, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH.—The nomination of candidates for the office of Elective Members of Council (Branch Representatives) for the ensuing year must be made by three electors, and in writing, to the Senior Secretary of the Branch, H. BETHAM ROBINSON, 1, Upper Wimpole Street, W., on or before May 1st next.

LANCASHIRE AND CHESHIRE BRANCH.—A general meeting of this Branch will be held at the Medical Institution, Liverpool, on Wednesday, April 29th, at 3 p.m. Agenda—Dr. Grossmann: A Case of Paralysis of both Third Nerves and Left Fifth Nerve. Mr. F. T. Paul: Three Cases of Excision of the Caecum for Cancer. Mr. Thelwall Thomas: Three Cases of Acute Intussusception; Operation; Cure. Dr. Stopford Taylor will give the results of "Light" and "X-ray" treatment of skin affections, and will give a lantern demonstration and show appliances. Dr. Grimsdale: Remarks on Washing out the Stomach after Prolonged Anaesthesia. Dr. E. E. Glynn: A Demonstration of the Morbid Anatomy of Myelopathic Albumosuria. Dr. T. R. Bradshaw: Clinical Demonstration of a Group of Nervous Cases. Dr. T. Arthur Helme: Short notes of some cases of Extrauterine Pregnancy bearing upon the question of the Advisability of Operative Treatment. The President (Dr. A. C. E. Harris) is kindly providing afternoon tea between 4 and 5 p.m.—T. ARTHUR HELME, 3, St. Peter's Square, Manchester, Honorary Secretary.

MIDLAND BRANCH: LEICESTER DIVISION.—The first meeting of this Division will be held at the Wyvern Hotel, Leicester, on May 20th, at 4.30 p.m. All members of the British Medical Association living in the County of Leicester and Leicester itself are now members of this Division, and are requested to attend this meeting, when the rules for the Division will be adopted and officers elected.—F. M. POPE, 4, Prebend Street, Leicester, Hon. Secretary of Midland Branch.

MIDLAND BRANCH: BOSTON AND SPALDING DIVISION.—The first meeting of this Division will be held at the Peacock Hall, Boston, on May 27th, at 3.30 p.m. All members of the British Medical Association living in the Holland County Council area and the Horncastle Parliamentary Division are now members of this Division and are requested to attend this meeting, when the rules for the Division will be adopted and officers elected.—A. E. WILSON, 8, Grove Street, Boston.

MIDLAND BRANCH: DERBYSHIRE DIVISION.—All members of the British Medical Association living in Derby and Derbyshire are requested to attend the first meeting of this Division, which will be held at the Derbyshire Royal Infirmary on May 26th, at 4 p.m., to adopt rules for the Division and to elect officers.—J. ACTON SOUTHERN, 93, Friar Gate, Derby.

MIDLAND BRANCH: NOTTINGHAM DIVISION.—The first meeting of this Division will be held at the Victoria Station Hotel, Nottingham, on Wednesday, May 20th, at 4 p.m. All members of the British Medical Association living in the City and County of Nottingham are now members of this Division and are requested to attend this meeting, when the rules for the Division will be adopted and officers elected.—F. H. JACOB, 28, Regent Street, Nottingham, Honorary Secretary, Nottingham Division

South-Eastern Branch: East Surrey District.—The next meeting will be held at the Croydon General Hospital, London Road, Croydon (quite close to the West Croydon Railway Station), on Thursday, May 14th, at 4 p.m., Mr. T. A. Richardson, of Croydon, in the chair. The Chairman has kindly offered to provide tea and coffee at the hospital. Agenda: 1. Minutes of Upper Norwood meeting. 2. To decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. 3. Dr. Coles (Bournemouth): A demonstration on blood examination, giving the methods and means best adapted to the exigencies of general practice. 4. To visit the hospital wards, where cases of clinical interest will be shown and described by members of the hospital staff and also by other members, and discussion will be invited. Exhibition of surgical instruments, pharmaceutical products, etc., by Arnold and Sons and Burroughs, Wellcome, and Co. Members desirous of exhibiting specimens or reading notes of cases are invited to communicate as soon as convenient, and certainly by Monday, May 11th, with the Hon. Secretary. The dinner will be held at the Greyhound Hotel at 6.30 p.m., charge 7s., exclusive of wine. The Hon. Secretary would be much obliged if members would kindly inform him by postcard whether they intend, if possible, to be present at the meeting and if likely to remain to dinner. By so doing they will very materially facilitate arrangements and promote the success of the meeting. At the last Upper Norwood meeting it was decided that as the meeting at Croydon last year was such a great success the next one should be conducted on the same lines. It will therefore be a purely clinical meeting, and members are particularly requested to note the change in the arrangements. The idea is for members to show cases of general interest, to give a short history of each, and for a short discussion to follow. All members of the South-Eastern Branch are entitled to attend and to introduce professional friends.—Henry J. Prangley, Tudor House, Anerley, Hon. Secretary.

Edinburgh Branch: South-Eastern Counties Division.—The Executive Committee will meet in the Douglas Hotel, Galashiels, on Tuesday, April 28th, at 3.30 p.m., to arrange the business for the annual meeting to be held in May or June.—W. Hall Calvert, Honorary Secretary.

Glasgow and West of Scotland Branch.—The annual meeting of this Branch will be held in the Faculty Hall, 242, St. Vincent Street, Glasgow, on Thursday, May 7th, at 4 p.m. Business: Annual report; report of Medico-Ethical Committee; election of office-bearers; consideration of proposed Branch rules under new Constitution. By kind permission of the Faculty of Physicians and Surgeons tea will be served from 3 to 3.30 p.m.—James H. Nicoll and James Hamilton, Glasgow, Joint Honorary Secretaries.

Bath and Bristol Branch.—A meeting of this Branch will be held at the Royal United Hospital, Bath, on Wednesday, April 29th, Dr. H. Waldo, President. Specimens will be shown at 7.45. The meeting will begin at 8 p.m. punctually. The following communications are expected: Some Questions in Practical Dietetics, Dr. J. Pearse; Observations on Cerebro-Spinal Syphilis, Dr. J. Michell Clarke; A case of Biliary Intermittent Fever, Dr. E. J. Cave; A note on the Bacteriology of Rheumatoid Arthritis, Messrs. J. Crawford and J. W. Malim; Observations on Twelve Cases of Operation for Perforated Gastric Ulcer, Mr. F. Lace.—W. M. Beaumont, Bath, and J. Michell Clarke, Clifton, Honorary Secretaries.

Bath and Bristol Branch: Bristol Division.—The first meeting of this Division of the Branch, under the new Constitution of the Association, will be held at the Medical Library, University College, Bristol, on Wednesday, May 27th, at 8 p.m. Business: To elect the officers of the newly formed Division, the representatives of the Division on the Council of the Branch, and the ordinary members of the Executive Committee; to elect the representative of the Division in representative meetings of the Association; to make rules for the Division. This meeting of the Division will take the place of the ordinary Branch meeting, which will not be held. The date of the annual meeting of the Branch and of the annual dinner is altered to Wednesday, June 10th.

Stirling Branch.—The annual meeting will be held at the Crown Hotel, Falkirk, on Thursday, May 7th, at 4.15 p.m. The Council will submit new rules for adoption by the Branch. Dr. Balfour Marshall will give an address on Retroflexion of the Uterus. Members wishing to show cases or specimens or to bring forward any business will please communicate with the Secretary, J. E. Moorhouse, 1, Glebe Avenue, Stirling.

North of England Branch.—The next meeting will be held at the Infirmary, Sunderland, at 4 p.m. on Wednesday, April 29th. Dinner at 6 p.m. at the Grand Hotel.—Alfred Cox, Hon. Secretary, Cotfield House, Gateshead.

CHANGES OF BOUNDARIES OF DIVISIONS AND BRANCHES.

The following changes in boundaries of Divisions and Branches have been made, and are hereby published in accordance with By-law 4 of the Articles and By-laws of the Association:

(1) That Stourbridge should be included in the Bromsgrove Division of the Birmingham and Midland Counties Branch instead of as heretofore in the Worcester Division of the Worcester and Hereford Branch.

(2) That the Tyneside and Tynemouth Divisions be amalgamated to form one Division known as the Tyneside Division.

(3) That Walker-on-Tyne be included henceforth in the Newcastle Division instead of in the Tyneside Division.

(4) That the Elgin and Inverness Divisions be amalgamated, and that the Northern Counties of Scotland Branch henceforth consist of one Division.

(5) That Newburgh-on-Tay be included in the area of the Perth Branch.

The following changes of names desired by Branches and Divisions have been approved:

(1) That the Birmingham Division be named the Central Division of the Birmingham Branch, the Warwick Division, the Warwick and Leamington Division and the Tamworth Division, the Nuneaton and Tamworth Division.

(2) That the Divisions of the Staffordshire Branch be named Stoke, Stafford, and Wolverhampton, instead of North, Mid, and South Staffordshire respectively.

(3) That the Norwich City Division be called the Norwich Division.

(4) That the South East Hants Division be called the Salisbury Division.

(5) That the Berwick, Selkirk, Peebles and Roxburgh Division of the Edinburgh Branch be called the South-Eastern Counties Division.

By Order,
Guy Elliston,
General Secretary.

429, Strand, April 23rd.

SPECIAL CORRESPONDENCE.

CAPE TOWN.

Plague in Cape Colony and Natal.—The Sanitary Condition of Cape Town.—A Medical Candidate for Parliament.

There is now a distinct recrudescence of plague in Cape Colony and Natal. Thus far, owing possibly to a greater state of preparedness, the epidemic has been kept much more under control than at the time of the former invasion, but although it has attained no great magnitude at any one centre, it is much more diffused. Durban, Maritzburg, East London, Kingwilliamstown, Port Elizabeth, Graaf Reinet, and Cape Town are all now affected, and plague-stricken rats have been found at other places. A glance at the map will show how wide an area these foci cover. Port Elizabeth has suffered by far the most severely, as was to be expected, in view of the fact that it is in a worse sanitary condition than any other large town in the Colony. Graaf Reinet is a comparatively small place, with between five and six thousand inhabitants, and it is not a very dangerous diffusing centre, being at the termination of a line of railway wedged into a huge mountain corner, and of no commercial importance. But, from a sanitary point of view, it is an abomination, and epidemics of all kinds are rife there. It has, unfortunately, a proportion larger than perhaps any other town in the Colony of that very hopeless section of the population, the "arme blanken" or poor whites of Dutch descent. These are not usually working people, but occupy hovels with large gardens, and they live in a hand-to-mouth fashion on the produce of the latter. Unfortunately they mostly have votes, and they strenuously oppose all sanitary measures. To this day the only water supply of the town is derived from open furrows which run down the sides of the streets, and the water in which is used indiscriminately as a receptacle for the household slops and as a source of the household water supply. Dr. Gregory, the energetic Colonial M.O.H., has been making flying visits to the plague centres, and has indulged in some straight talking to apathetic municipal officials, with what result remains to be seen. The Cape Town outbreak was due to a ship from India, the *Nevasa*. In connexion with this vessel an unfortunate *contretemps* occurred, which has brought a volley of local indignation on the heads of the health authorities. The vessel, which had a lot of Indian immigrants on board, was given pratique, and the passengers were lost sight of. Three days later a Lascar on board died of plague after only twenty-four hours' illness. It was clearly proved that the dead man showed no symptoms of illness at the time pratique was given, and there had been no suspicious illness on board during the long voyage. There were very few rats on board, but numbers of them were found to be plague stricken, the source of infection being thus clear. The ship is now placed in quarantine in Saldanha bay, and two deaths have occurred on board since her detention. In all these fresh outbreaks the fact observable at the beginning of the previous epidemics, of many of the early cases being of the pneumonic form, is again noted. The Colonial Health

Department is now excellently organized, and quite in a position to do all for the suppression of epidemics that official action can accomplish. But the scattered nature of the population and the apathy of local bodies are sore thorns in the flesh of any M.O.H.

A very marked improvement has taken place in the sanitation of Cape Town since the advent of Dr. Jasper Anderson, and the disgraceful state of things evident when the fortunate (I use the word advisedly) invasion of plague showed up with a lurid light our shortcomings no longer exists. The very drastic action then taken by the Government in suspending the Town Council as a health authority and doing the work itself, brought the municipal mind to its senses, and it is now disposed to listen to its M.O.H. Moreover, Dr. Anderson has the enormous advantage of being a sanitarian pure and simple, whereas previously the capital city of the colony could only go as far in the way of sanitary supervision as paying a busy private practitioner for a portion of his time. The Health Department is quite ready for the certain invasion of rabies, having cords in constant preparation, with authority to bring patients to Cape Town for Pasteur treatment.

A medical man, Dr. A. G. Viljoen, is a candidate for Parliamentary honours, this time in the Upper House, where the profession has not at present a representative. He is almost certain to go in without opposition, and this will bring the number of medical legislators to nine. But of these only one is in practice. Dr. Viljoen abandoned medicine for farming some years ago, and Dr. Smartt is perhaps the most successful sheep breeder in the Western Province. But, as a body, the men with medical training have far outstripped any other class in the mark they have made in politics. Out of the eight, two are ex-Ministers, three others will almost to a certainty be Ministers whenever their respective sides come in, one being now the leader of his Party, and another is the Speaker. As a contrast, out of the many merchants who have been legislators only one has ever reached Ministerial rank since the Cape has had responsible Government, and he only held office for a short time.

CORRESPONDENCE.

THE MILK SUPPLY OF LARGE TOWNS.

Sir,—In the British Medical Journal of April 18th, the following statement is made:

> The sanitary department of a metropolitan borough can take samples of milk on arrival at a terminus within the borough. If milk arrived at that terminus destined for another borough, the officers of that borough have no power to take a sample at the terminus. The inspector would have to follow the case until it reaches his own borough, and then only could he stop the cart and take a sample. This rule has been established by a recent legal decision. Matters are thus seriously complicated, and the wholesale dealers are helped while the hands of the sanitary authorities are tied.

The articles upon this subject have been so excellent that I almost hesitate to ask to be allowed to point out that, quite apart from the fact that it is in the power of the officer of one borough to request the officer of another to sample milk at a terminus, or of a consignee to make this request, the suggestion underlying the above paragraph would crudely help the wholesale dealers still more, as I will endeavour to explain.

Some retailers of milk to the public obtain their milk direct from farmers; some are also themselves farmers, and some are retailers, middlemen, and farmers combined; but the course of distribution is usually as follows:

Milk supplied to the public or consumer passes through the hands of the retailer, the middleman, and the producer or farmer. For the protection of the public, instructions were given some time since in St. Pancras to adopt the following mode of procedure in sampling milk: first, to purchase a sample of the retailer, if this were found to be not genuine or very poor in quality, whether a prosecution followed or not, then, secondly, to take a sample upon delivery, at the retailer's door, of the milk supplied to him by the wholesale vendor or middleman, if this were found to be not genuine or poor, then, thirdly, to take samples at the door of the middleman upon the delivery of milk consigned to him direct by the producer when imported or conveyed by road, or if the middleman's premises are situated outside St. Pancras or the milk not consigned direct, to take samples of the farmer's or consignor's milk at the railway dépôt.

It was thought that in this manner it would be possible to protect the public all the way along the line of transit, but an interesting series of facts then came to light. When milk is sold by a retailer to a consumer or the public, the law assumes that it is pure whole milk; there is no necessity to prove this; when it thus changes hands from the retailer to the consumer the law reads in before the word "milk," in which form it is asked for, the words "pure whole." But, when milk changes hands at any other point in its transit there is no such implied warranty and it has to be proved that the contract or order was for pure whole milk otherwise a prosecution for adulteration will fail. It was soon found that retailers are not only refused warranties by middlemen but also that some middlemen refuse to supply invoices with delivered milk and others state upon their invoices that they are unable to warrant the milk, so that it is practically impossible for a local authority successfully to prosecute a middleman for supplying adulterated milk to a retailer, and the retailer is entirely at the mercy of the middleman who often pays his fines. On the other hand, the middleman takes great care to protect himself against the farmer by a warranty to supply pure, whole milk, and to make use of the local authority to protect his trade interests as consignee at public expense by demanding to have the consignors' milk sampled at the railway dépôt, often in the night or very early morning, and if the milk be found adulterated and a prosecution follow, he appears in court and produces his warranty in order to ensure conviction. A few years ago the middlemen demanded large numbers of samples to be taken, mostly involving night work at the railway dépôts in St. Pancras. It has now been ascertained that this is no protection to the public, as it does not guarantee or prevent the milk from being skimmed or watered by the middlemen. On the contrary, it enables this to be done to greater profit. A fee is therefore charged to those middlemen who make use of the officers of the local authority rather than their own analysts to protect their trading profits.

It has since been noticed that a middleman generally makes a demand for samples to be taken at a railway dépôt for one or two reasons—either (1) because a customer has just previously been successfully prosecuted and the middleman wishes to prove himself innocent, when he will sometimes have every churn consigned to him sampled in order to make sure of convicting the farmer; or (2) because he wishes to break his contract, either on account of the supply being too large for him to dispose of, or of the price being too high, and there is always a rush of demands to sample farmers' milk just towards the end of the six-monthly contracts.

From the foregoing it will be readily understood that to empower the officers of any local authority to sample at any railway dépôt the consignors' milks upon the demands of the consignees will not protect the public, but only the middlemen; and to carry out their behests—without charge, as proposed by some authorities—the officers of local authorities would be tumbling over each other amongst many hundreds of milk churns at the railway dépôts for the purpose of prosecuting milk farmers. This is quite unnecessary, since it is in the power of any middleman to demand samples to be taken by the officers of the local authority in whose district the railway dépôt is situated, provided he pay the moderate fees, and it is in the power of any local authority to refer the middleman to the authority in whose district the railway milk dépôt is situated. It would appear as if some local authorities desire to undertake this sampling at their own expense, but it is to be hoped that ratepayers will strongly protest against the middlemen having their trade interests protected at public expense without affording any protection to the ratepayers themselves.

The amendments required in the law for the protection of the public are: (1) A clause empowering farmers to securely enclose and lock the receptacles in which they consign milk to their customers, and if they neglect to do so, refusing any plea of adulteration in transit; (2) a clause compelling all retailers to obtain warranties with their milk from the middlemen or vendors, if they neglect to do so refusing any plea of selling the milk in the same state as delivered, and making it penal for a middleman or vendor to pay the fine of a retailer or customer; and (3) a clause empowering a local authority to take samples in transit at any place, whether within or without the district of the authority, between a consignor and consignee of any milk consigned to any person within the district of the local authority or to any person outside the district supplying a person within. With these amendments in the law it will then be possible to discover who is the culprit in the case of milk adulteration.—I am, etc.,

Camden Square, N.W., April 22nd. John F. J. Sykes.

SOME ANTIVIVISECTION MISSTATEMENTS.

Sir,—A year or two ago a book called *Scientific Research in England*, which is intended to show that "horrors openly and without shame" are practised in English physiological laboratories, was sent to several members of the medical profession in a large provincial town. Most of the recipients, after glancing through the book, no doubt came to the conclusion that the contents were unworthy of notice. It may seem late in the day to bring forward any facts to support the correctness of such a conclusion, but my excuse for doing so is that a gentleman who receives antivivisection literature has told me that experiments mentioned in this book are often quoted in such literature. The same experiments also formed the basis of the charges of cruelty brought forward in a well-attended antivivisection lecture recently delivered in a fashionable town and health resort. The chief experiments attacked in the book are those of an American professor, Dr. Crile, who made sixteen of a series of experiments upon dogs in an English laboratory, the remainder being performed in America. Abstracts of Dr. Crile's description of these sixteen operations are given by the author of *Scientific Research in England* after he has made the following statement as a preface:

Some of these experiments were done, we are told, with anaesthetics. *Others, how many we are not informed, were done without anaesthetics.* (*Scientific Research*, p. 38.)

On turning, however, to Dr. Crile's monograph on *Surgical Shock* one finds that he says:

In all cases the animals were anaesthetised, usually by the use of ether, occasionally by chloroform either alone or with ether. (*Surgical Shock*, p. 14.)

The statement of the antivivisectionist writer is, therefore, obviously absolutely untrue. The same writer also infers that when anaesthetics were given the anaesthesia was incomplete. That Dr. Crile, however, not only anaesthetized the animal, but was careful to operate on them only in the stage of surgical anaesthesia, is clear from the following remark:

If animals were allowed to partially recover from the anaesthesia, care was necessary in *reducing them again to surgical anaesthesia.* (*Surgical Shock*, p. 137.)

It is scarcely necessary to remark that the partial recovery from the anaesthesia spoken of is seen by the context to have been accidental not intentional. But even if we allow that the animals were sometimes the subject of experiment when under partial anaesthesia, we know that a condition of partial anaesthesia is by no means necessarily one in which pain can be felt. There is loss of sensation to pain even in the stage of increased reflex activity. To return, however, to the statement that in some cases anaesthetics were not administered, possibly the author of this statement soothed his own conscience by keeping before him the remark of Dr. Crile that "in a few cases morphine and curare" were used. But whatever the conditions of the conscience of the antivivisectionist writer may have been, he is considerate of the moral sensitiveness of others, and supposes that morphine was given "to anaesthetize the public conscience." I have been given to understand, however, that morphine is the best anaesthetic to use when curare is given to dogs. Yet, while such is the case, morphine is not always used alone, ether or A.C.E. mixture being often administered also; and Dr. Crile does not say that he omitted giving other anaesthetics in association with morphine. But even if he did omit giving anaesthetics by inhalation, such a passage as the following makes it clear to those who, like the writer, have no practical experience of the subject, that morphine can be used as an anaesthetic in dogs. Wynter Blyth says:

0·2 to 0·5 gram of morphine meconate or acetate injected directly into the circulation of a dog shows its effects almost immediately. In a minute or two the dog falls into a profound sleep, which is often so deep that *while it lasts—usually several hours—an operation may be performed.* (*Poisons, their Effects and Detection*, p. 297.)

In conclusion, it may be added that the accusation is not uncommonly brought against experimenters that they use morphine, not to allay pain, but to keep the dogs still. This base accusation was made in the recent public antivivisection meeting above referred to, and the following statement of Claude Bernard was quoted in support of the charge:

Narcotized with morphine, the animal still remains sensitive; he feels pain, but, so to speak, has lost the idea of self-defence. Placed on the ground, he can move, walk, try to hide; placed in the vivisection trough, he lies motionless.

It is scarcely necessary to remark, however, that a dog which has been given a dose of morphine which is not sufficiently large to prevent him being able to "walk" or "try to hide" is in a very different condition from one which has received enough to send him into "a profound sleep." But while this must be obvious it is interesting to note that Claude Bernard never properly appreciated the powers of morphine, as the following quotation from comments upon Bernard's experiments upon the alkaloids of opium shows. Phillips says:

Indeed there are other strange anomalies in this comparative table of Bernard. In particular *he actually reckons narceine as superior to morphine in hypnotic power.* This is so exceedingly incorrect as to shake our confidence in these experiments, great as is Bernard's reputation (*Materia Medica*, 1874, vol. ii, p. 121).

These "exceedingly incorrect" experiments, made fifty years ago, are the sole ground upon which experimenters are accused of cruelty for using morphine.

Few members of the medical profession have the leisure to enable them to examine into the truth of statements made by antivivisectionists, and the writer of this letter somewhat regrets the time spent in such a way, which might have been used more profitably. Yet he at least has had the satisfaction of finding that all the accusations of cruelty examined by him are either the products of disordered minds which are unable to see things as they really exist, or are ignorant and sometimes apparently wilful misrepresentations.—I am, etc.,

April 18th. MAGNA EST VERITAS.

THE LOCAL GOVERNMENT BOARD AND EMERGENCY VACCINATION.

Sir,—In view of the threatening aspect of small-pox in London in October, 1901, the Public Health Committee of the Chelsea Borough Council requested the public vaccinator for the borough to examine the arms of children in the voluntary and board schools in the borough, with a view to the detection of unvaccinated children, and the revaccination of children primarily vaccinated over 10 years of age. The instructions of the Committee to the public vaccinator were to offer revaccination to all children over 10 years attending schools in the borough, whether or not residing within the borough, and also to offer revaccination to all employés in shops, workshops, and factories in the borough, who had not been vaccinated within ten years previously, whose homes were outside the borough, in addition to those residing within the borough. The Committee, very rightly, I think, considered that, if distinctions were made in the Chelsea schools, shops, and workshops between those who resided in the borough and those who did not, very considerable numbers would fail to become protected, and the security of the public would be thereby endangered.

In accordance with his instructions the public vaccinator examined the arms of 3,561 children in the voluntary schools, and of 3,218 children in the board schools. About 500 persons, not strictly eligible for gratuitous vaccination or revaccination out of the Chelsea rates, were vaccinated by the public vaccinator in the course of the epidemic in accordance with his instructions, the large majority of these people being children or shop employés attending schools or shops in the borough, but residing outside the borough boundaries.

In the spring of 1902, to allay parliamentary anxiety with regard to small-pox in London, the President of the Local Government Board instructed a medical inspector of the Board to visit and report as to the precautions being taken by the various metropolitan boroughs. The medical inspector of the Board visited Chelsea, and was given every information as to the action taken to promote vaccination in the borough. I understood that all the measures so far taken by the Chelsea Borough Council were approved by the Local Government Board's medical inspector specially deputed to inquire into the matter.

The public vaccinator sends in his account of fees due for work done in accordance with instructions. A sum of £179 18s eventually agreed between the public vaccinator and the Council, and recommended for payment, subject to the approval of the Local Government Board. In respect of this claim a full statement of the facts is submitted by the Town Clerk to the Local Government Board. The Assistant Secretary of the Board replies that in order to prevent difficulty at the audit the Board sanctions the proposed payment to the public vaccinator in respect of services rendered under the circumstances described to the Board, but that the Board could not undertake to sanction any similar expenditure by the Borough Council in future.

It appears then that when there is public anxiety on the

subject of small-pox, the Local Government Board urges the sanitary authorities through its medical department to take every possible step, including the promotion of vaccination, to prevent the spread of the disease. When, however, public excitement is allayed, and the bills are presented for payment, it appears that the sanitary authority has exceeded its powers and must never do such a thing again. The situation would be comical, were it not for the menace involved to public health in the future: for what sanitary authority will undertake precautionary measures in any future threatening of small-pox, when it has been told by the Local Government Board that such action will involve a surcharge defrayable out of the pockets of the members of the sanitary authority concerned?

It may be said that the guardians and not the Borough Council were the proper authority to instruct the public vaccinator in these matters. But the answer to that is that the guardians are not concerned with the public health, and would not in any case have taken the action taken by the Borough Council. If the Borough Council had not moved, no one would, and the arms of the school children would not have been examined, and an enormous amount of revaccination actually performed would never have been done at all.—I am, etc.,

LOUIS C. PARKES, M.D., D.P.H., M.O.H. Chelsea.

Town Hall, Chelsea, April 21st.

THE EARLY HISTORY OF CLINICAL THERMOMETRY.

SIR,—In connexion with the instances recently given in the BRITISH MEDICAL JOURNAL of early clinical thermometry, it is of interest to note that it was frequently used in the early part of last century, and in so far off a place as Jamaica, by William Arnold, M.D., F.R.C.P.Edin. He settled in Jamaica in 1815, and in 1840 published in London a book entitled *A Practical Treatise on the Bilious Remittent Fever, its Causes and Effects: with Illustrative Tables and Cases of the Temperature of the System in the Febrile Diseases of Jamaica*, and from it I have gathered the following information. During the twenty-five years Arnold practised in the island he kept an exact register of the temperature of the atmosphere, and he devotes one chapter of his book to the "Temperature of the System." The exact date when he commenced his investigations on clinical temperature I cannot ascertain, but he gives records of temperature taken in cases attended as early as 1824. He states in his preface that "preliminary experiments on the temperature of the system were instituted for the purpose of ascertaining the exact temperature of every class of residents in the island in a state of health, and under the various circumstances which are mentioned." To ascertain the normal temperature "the experiments were made upon every denomination of subject, at different periods of the year, at different times of the day, and under a great variety of circumstances," and the author found that "the mean of the whole series, comprising 107 subjects of all denominations, ages, and sexes, is 98.19½ (*sic*), which may be considered a correct estimate of the temperature of the system in health, and as enjoyed in a climate like Jamaica." He took the temperature under the tongue and in the axilla, and notes "there are generally one or two degrees of heat between the experiments under the tongue and in the axilla, which was always found the lowest." As regards prognosis and the dangers of high temperatures in fevers Arnold writes: "Let the careful observer place the thermometer under the tongue or under the axilla, he will be astonished to find the mercury rise to 106°, 108°, or 110°. In such cases our fears are on the stretch for the patient's safety. If the external heat of the skin exceeds 108° or 110° we may infer some dire mischief is going on. If it lasts any time irreparable injury, with the extinction of life, will follow." He advises mitigating the external heat by cold affusions. He evidently sees the value of clinical thermometry, for he states: "I believe there is no study more calculated to improve the healing art, or to throw more light on the nature of febrile diseases than a minute attention to the state of the temperature of the system." Arnold gives many cases of fever in which the temperature is frequently noted. He, however, uses the term "bilious remittent fever" in a very loose way, for many of his cases were evidently yellow fever cases, and as such he often refers to them. I think it will be allowed that this Jamaica physician, who in 1824 was regularly taking febrile temperatures, making deductions therefrom, and pointing out the value of clinical thermometry, was a man with ideas somewhat in advance of his day.—I am, etc.,

IZETT ANDERSON, M.D.Edin.

Arundel Gardens, W., April 13th.

SIR,—Under the heading of Nova et Vetera, in the BRITISH MEDICAL JOURNAL of April 4th, there is an interesting statement by Sir William H. Broadbent, Bart., regarding the early employment of the thermometer in clinical observations. I am reminded that one of the earliest observations that I know of was made by Dr. David Livingstone, the great African explorer and medical missionary. In his *Missionary Travels in South Africa*, when describing his own experiences of African fever, he says: "The heat in the axilla, over the heart, and region of the stomach was in my case 100°, but along the spine and at the nape of the neck 103°." In speaking of treatment Livingstone says: "If we employ a wet sheet and a mild aperient in combination with quinine, they are an important aid in curing the fever."

These observations were made in 1853 and published in 1857, and are, I think, both interesting and valuable as showing that Livingstone was a pioneer in medicine as well as in other things.—I am, etc.,

Edinburgh, April 8th. A. G. MILLER.

THE LATER RECORDS OF GUNSHOT INJURIES IN THE WAR.

SIR,—The most disappointing element of medical and surgical work in the field, from a clinical standpoint, is that when one's cases are transferred down-country there is seldom an opportunity of tracing the ultimate results of their treatment. The immediate results of the surgery of Mauser gunshot wounds are well known to have been almost marvellous. Looking over my notes I find that my cases appear to embrace wounds of almost every region of the body, and my numbers are small compared with those that must have passed through the hands of medical officers in charge of larger units, especially in the earlier stages of the war. With regard to many of the cases the ultimate recovery of the patients is practically assured, but in gunshot wounds of the cranium the remote prognosis is not quite so certain.

On November 23rd, 1901, at about 9 a.m., in a heavy rear-guard action near Fauriesberg, O.R.C., a man of the 2nd Grenadier Guards was wounded by a Mauser bullet at about 1,000 yards range. The bullet entered the skull to the right of the median line of the forehead, just above the right orbit, and came out at the right temple. Both entrance and exit wound were perfectly "clean drills," as though made with a fine trephine. I happened to be fairly near at the time, and applied a temporary aseptic dressing at once. He was quite conscious, and not in much pain, and there was very little haemorrhage. I gave him one-sixth of a grain of morphine hypodermically, and had him removed to an ambulance.

The engagement over, we encamped about 4 p.m., a tremendous thunderstorm raging at the time. As soon as the ambulances were unloaded I dressed the wound more carefully, and found undoubted brain matter on the dressing.

Although he had been jolted about over rough ground all day his condition was not aggravated. He was quite conscious, though lethargic, with pulse 40, temperature normal, no acute pain. We moved next morning at 3.30, and wagons were loaded at 2.30, by candle-light, in drizzling rain, but only for a short distance, encamping at 7 a.m. He was no worse, but drowsy.

On the 25th I took all my wounded straight to 21st Field Hospital, Brindisi. This patient's condition was practically unaltered—pulse slightly improved, 45 per minute; temperature, 99.2: wound healthy; no symptoms beyond lethargy. The column remained at Brindisi till December 2nd, when we went "on trek" again. No urgent symptoms had developed; pulse nearly normal; temperature normal, and the patient getting quite cheerful. I did not touch Brindisi again until January 18th, 1902, when I found that this man had been sent down-country convalescent.

The question arises, What will be the ultimate result of a case like this? It would seem almost impossible that there should not be some splintering of the inner table, although both wounds were so clean drilled, and if such splintering is inevitable, would it not be calculated to set up cerebral irritation and probably ultimate softening? If it were possible to get some of the later records of gunshot injuries published, they would not only be extremely interesting, but also would clear up a doubt as to the advisability of trephining

in all cases at once, instead of adopting conservative methods until symptoms develop calling for operative measures.—I am, etc.,

E. Luke Freer, V.D.,
Surg.-Lieut.-Colonel, A.M.R. (late O.C. 22nd Bearer Company, R.A.M.C.).

Cork, March 24th.

"PUERPERAL HYPERPYREXIA OF MALARIAL ORIGIN."

Sir,—In the issues of the British Medical Journal, dated January 31st and April 11th, 1903, cases are recorded of puerperal hyperpyrexias attributed to malaria latent in the system. In the clinical note of the earlier issue an extremely high temperature, namely, 107.8°, was reached.

A case of puerperal hyperpyrexia in which, curiously enough, exactly the same temperature, namely, 107.8°, was reached, came under my observation in July last year. In this case the patient was quite well until the ninth day, when there was a slight attack of shivering with severe headache and subacute mastitis. The temperature next day was 103°, and, to exclude a possible septic source in the uterine cavity, an intrauterine antiseptic douche was administered. During the not ungentle manipulation of the tube the patient suddenly complained of severe pain in the abdomen and head, and became faint. A severe rigor, lasting twelve minutes, followed, after which the temperature was found to be 107.8°, and this in its turn was followed by profuse sweating. Cold sponging and stimulants soon brought about an amelioration of the symptoms, and by the evening the temperature had fallen again to 103°. For the next two days the temperature remained in the neighbourhood of 102°, and then subsided to normal, the patient making a good recovery.

In this case there could be no question of malaria, but the rise of temperature and other symptoms prior to the administration of the douche were almost certainly attributable to influenza, the patient being susceptible to this complaint in the relapsing form, and having had an attack a few weeks previous to her confinement. Moreover, during a previous lactation, influenza had produced similar mammary trouble.

The question arises, To what is the extreme hyperpyrexia to be attributed?

An analogous and commoner experience is met with in surgery—namely, the symptoms sometimes attendant on the passage of a catheter into the male urethra. Rigors, hyperpyrexia, collapse, and even sudden death are known sometimes to be associated with the process of catheterization.

The exact cause is admittedly obscure, but we know we have to deal with organs having a highly-specialized and sensitive nerve supply, and therefore we should not be surprised at constitutional symptoms appearing occasionally when this nerve supply undergoes artificial stimulation.

In the case of Mr. T. W. Clay, reported in the British Medical Journal of January 31st, 1903, the rigor and extreme hyperpyrexia appear to have followed a vaginal douche and a soap-and-water enema administered in close succession during a condition of moderate pyrexia, the sequence of events being very similar to that in the case I record.

It would be of real service to those whose practice includes midwifery could other readers of the British Medical Journal record similar cases in their experience or otherwise throw light on a group of symptoms, apparently dissociate from puerperal septicaemia, but calculated gravely to alarm the medical attendant at a time when cause for uneasiness is usually regarded as past.

J. S. Mackintosh, M.R.C.S., L.R.C.P.

Hampstead, N.W., April 14th.

Sir,—In the British Medical Journal of April 11th you have kindly published an article of mine "Puerperal Hyperpyrexia of Malarial Origin." In my case, as the temperature never rose above 103.2° F., I should like to correct the term hyperpyrexia. Pyrexia only is obviously the term to be applied. I also omitted to state that the initial rise of temperature was accompanied by rigors and profuse "sweating."—I am, etc.,

Merton Road, Wimbledon, April 12th. Percy B. Spurgin.

THE MEDICAL PROFESSION AND THE MERCANTILE MARINE.

Sir,—I am afraid Mr. Rutherford Jones has a little misunderstood my letter, when I made the statement that one is put on a station ship without any notice whatever. I meant that one was not appointed to the station ship direct by an official notice from London, but after being settled in a certain ship and on the articles of that ship, the agent abroad sends a chit to you to clear out of your present ship and join a station ship at a very great inconvenience to one. I am quite aware a surgeon knows these are the station ships on which a man may have to serve, and if appointed to such a ship he naturally does not object, because he is prepared to join that ship, and makes arrangements accordingly, also signs the articles of that ship. I am pleased it has been proved by law that a surgeon cannot be turned out of a ship on which he has signed the articles until he is released in London when "signing off." Respecting the conditions Mr. Rutherford Jones speaks of, I presume he means what he was told when he signed the two years' agreement, namely, that a surgeon had to sign this agreement in order that the company may have a hold on a man if appointed to a station ship, but the company will accept his resignation any time he should be in England. I did not refer to the insurances, having to buy expensive outfit, and instruments, as being unfair. I mentioned these items in order to show that one did not like to refuse to sign the articles of a ship after having been to so great an expense. Nor did I wish to convey in my letter that a man was badly treated in the Peninsular and Oriental service; that was far from my thoughts, and I am sure I should regret to hear that the Peninsular and Oriental Company were responsible for the persecution of the ship's surgeon in a foreign port, and the high price the shipping company in question paid for good manners.—I am, etc.,

Ship Surgeon,
Late P. and O. S. N. Company.

April 19th.

THE EARLY REMOVAL OF DOUBTFUL TUMOURS OF THE BREAST.

Sir,—I think there is a great deal to be said against the adoption of such a drastic method of dealing with mammary tumours not obviously malignant as that advocated by Dr. Renton in the British Medical Journal of April 11th, page 843. No doubt, as Dr. Renton says, it is desirable that every effort should be made to recognize the earliest beginnings of such a serious malady as mammary cancer; but it seems to me a curious way of attaining this end to extirpate the whole mamma, together with the axillary glands, of every woman over 30 who has a lump in the breast. I suspect Dr. Renton hardly realizes how exceedingly common innocent "lumps" in the breast really are. They are certainly of much more frequent occurrence than cancer. If his method of treatment were rigorously carried out, in my opinion, at least two out of every three of such operations would be altogether unnecessary. If the pathology, natural history, and clinical features of mammary tumours were more thoroughly studied by practitioners than they are at present, the differential diagnosis of these tumours would be made with more accuracy than is now customary.—I am, etc.,

Clifton, April 18th. W. Roger Williams.

DECAPSULATION OF THE KIDNEY.

Sir,—Bearing on your editorial in the British Medical Journal of April 18th I have to record that the operation of decapsulation of kidney was performed at the Diss Cottage Hospital by Mr. Bidwell, of Wimpole Street, the hospital's operating surgeon, on a female patient aged 49. The operation was performed on December 7th, 1902, for long-standing pyelitis (over seven years), and to-day the patient is so much improved that since the beginning of February no pus has been found in the urine, and since the operation no pain of any account has been experienced by the patient. For seven years before the operation the woman was never free from marked discomfort, which frequently amounted to attacks of severe pain. Now she is quite well. It would be interesting if our cottage hospital is justified in claiming the distinction of this operation being first performed in this country within its walls. I am, etc.,

Henry Dickman, M.B.,
Medical Officer, Diss Cottage Hospital.

Diss, Norfolk, Aug. 19th.

The Grande Chartreuse as a Sanatorium.—M. Marcel Sembat, one of the representatives of the Seine department in the French Chamber of Deputies, has presented a notice of motion that the buildings of the Grande Chartreuse should be used as a sanatorium for the children of weakly or anaemic workmen, for whom mountain air would be beneficial.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVY MEDICAL SERVICE.

The Director-General.

We are authorized to state that the tenure of office of Sir Henry Norbury, K.C.B., as Director General of the Medical Department of the Royal Navy, has been extended.

The following appointments have been made at the Admiralty: William A. Whitelegge, B.A., M.D., Staff Surgeon, to the *President*, for three months' course of hospital study, April 16th; W. B. Maurice, Surgeon, to Haslar Hospital, to assist in instruction of Surgeons on entry, April 16th; H. B. Simpson and T. A. Smith, M.D., Surgeons, lent to Plymouth Hospital, April 28th; Henry R. Gardiner, M.B., Surgeon, to the *Wildfire*, for Sheerness Dockyard, April 23rd; Alworth E. Merewether, M.B., and M. J. Laffan, M.B. (lent), to the *Britannia*, for the *Aurora*, April 22nd; A. D. Spalding, Surgeon, to Chatham Hospital, lent, April 28th; James Bradley, M.D., Staff Surgeon, to the *Porpoise* (the appointment of Staff Surgeon J. C. Wood being cancelled).

Civil Practitioner W. E. Munro, M.D., is appointed Surgeon and Agent at Burghead, April 20th.

The Gilbert Blane Medal.

A correspondent writes: In 1830 Sir Gilbert Blane, Bart., formerly a member of the Board for Sick and Wounded Seamen, established with Admiralty sanction, "for the encouragement of Naval medical science, a fund vested in the Corporation of the Royal College of Surgeons of London, in trust, for the purpose of conferring a gold medal, once in every two years, on each of the two medical officers..... who shall produce the most approved journals of their practice," in the form in which they have kept them day by day, "while in medical charge of a ship of war in the Royal Navy."

Would it not be possible to reconsider the terms of the award of this coveted distinction, in which the Royal Colleges of Physicians and of Surgeons are associated with the Medical Director-General of the Navy? Since 1830 the Naval Medical Service has been revolutionized. All who enter now are fully qualified in medicine and surgery, and it is open to a very junior surgeon to be in medical charge of a "ship of war," whereas some of the most senior may not be, but serving in ships with a fleet surgeon or staff surgeon in medical charge.

Then, again, no medical officer of a naval hospital or sick quarters under the present conditions of the award is eligible to compete for the Blane Medal.

We have recently received a complaint from a senior naval surgeon in a ship of war with medical officer in charge, that whereas he had, early in his service, medical charge of a "ship of war," and was eligible to compete for the Blane Medal, he is now ineligible, and has to furnish daily meteorological reports, copied as a rule from the ship's log, and, as he asserts, of little or no value.

Lord Selborne recently at Haslar invited suggestions for the benefit of the naval service from medical officers; possibly he may accept this suggestion, representing the views of a naval medical officer, and take steps to render all medical officers of hospitals, sick quarters, marine infirmaries, or in ships eligible, by contributions to "naval medical science," to obtain the Blane Medal in future.

ROYAL ARMY MEDICAL CORPS.

Temporary Lieutenant J. Clay, M.B., on relinquishing his temporary commission for service in South Africa, is granted the honorary rank of Lieutenant in the army, and permitted to retain his uniform, June 8th, 1902.

Lieut.-Colonel W. A. May, C.B., is promoted to be Colonel, vice J. P. Rooney, retired, March 22nd. Colonel May entered the service as Surgeon, September 30th, 1874; became Surgeon-Major, September 30th, 1896; was granted the rank of Lieut.-Colonel, September 30th, 1894; and made Brigade-Surgeon-Lieut.-Colonel, December 15th, 1897. During the recent war in South Africa he was Principal Medical Officer of a Division, was mentioned in dispatches, and made a Companion of the Order of the Bath. Colonel May, who is now Principal Medical Officer, Natal, has, we understand, been appointed Principal Medical Officer in Egypt.

Lieut.-Colonel R. H. Robinson, retired pay, has been appointed Senior Medical Officer, Guernsey and Alderney District.

Major Frederick J. W. Stoney died in London on March 6th. He was appointed Surgeon, August 1st, 1885; made Major, August 1st, 1897; and placed on half pay, May 19th, 1902.

ARMY MEDICAL SERVICE.

Major and Brig.-Surg.-Lieut.-Colonel M. W. Russell, Royal Army Medical Corps, is appointed Deputy-Assistant-Director-General, on augmentation, April 1st.

ARMY MEDICAL STAFF.

Errata.—Colonel F. W. B. Hodder, M.B., retired pay, and Major H. L. G. Chevers, retired list, were promoted "for service in South Africa," and not as stated in the *Gazette* of February 24th, 1902.

ARMY MEDICAL RESERVE.

Lieutenant James Bruce, M.B., Royal Army Medical Corps (Volunteers), to be Surgeon-Lieutenant, April 4th.

INDIAN MEDICAL SERVICE.

Lieutenant-Colonel O. H. Channer, M.B., Bombay Establishment, is appointed Sanitary Commissioner for the Government of Bombay.

Major W. G. Thorold, temporary Half Pay List, Bengal Establishment, has retired from the service, from April 15th. He was appointed Surgeon, April 1st, 1888; Surgeon-Major, April 1st, 1898; and placed on half pay, April 15th, 1901.

The undermentioned officers, who were appointed Lieutenants on probation for Indian Medical Service, having completed a course of instruction at the Medical Staff College, and being reported qualified, have been finally admitted to the service, their commissions being dated September 1st, 1902:—J. H. Murray, Punjab; F. P. Mackie, Bengal; A. T. Pridham, Bengal; J. O'Leary, Bengal; S. R. Christophers, Bengal; H. Emslie-Smith, Bengal; H. R. Dutton, Bengal; V. B. Nesfield; H. M. Brown, Bombay; F. P. Vieyra, Bombay; A. F. Pilkington, Punjab; P. G. Easton, Punjab; W. W. Jeudwine; T. C. McC. Young, Punjab; G. A. Jolly, Punjab; H. C. Brown, Punjab; W. J. Collinson, Punjab; C. L. Dunn, Punjab; H. M. H. Melhuish, Punjab; H. H. Kiddle, Bombay; R. F. C. Talbot, Madras; C. E. Bultfeel, Bombay; J. L. Lunham, Bombay; F. C. Rogers, Madras; G. F. Humphreys, Bombay; C. A. F. Hingston, Madras.

Brigade-Surgeon Richard Thomas Lyons, late Bengal Establishment, died at Cambridge recently, aged 67. He was appointed Assistant Surgeon October 1st, 1860, and became Brigade-Surgeon February 9th, 1886, in which year he retired from the service. He was in the campaign on the North-West Frontier of India in 1863, including the forcing of the Umbeyla Pass and the defence of the Eagle's Nest picquet (mentioned in dispatches, medal with clasp); he was also in the operations in the Khost Valley during the Afghan War in 1878-9 (medal).

Lieut.-Colonel William Henry Neilson, M.B., Madras Establishment, Agency Surgeon at Bhopawur, died at Indore Central India, on March 24th, aged 48. He was appointed Assistant Surgeon, September 30th, 1882, and made Lieut.-Colonel, September 30th, 1902.

Deputy Surgeon-General J. F. Shekleton, M.B., late of the Bombay Establishment, died at Clifton, Bristol, on April 15th. He joined the department in 1845, and was with the Bombay Horse Artillery in the Punjab campaign in 1848-9, being present at the siege of Mooltan, the battle of Goojerat, and the occupation of Peshawur.

IMPERIAL YEOMANRY.

Surgeon-Lieutenant M. R. Steuart, M.B., Royal 1st Devon, and Surgeon-Lieutenant J. G. D. Kerr, M.B., North Somerset, have resigned their commissions, April 22nd.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

Surgeon-Major (Honorary Captain in the Army) F. W. Grant, M.D., 1st Banff, resigns his commission, retaining his rank and uniform, April 4th.

Lieutenant L. H. D. Hale, 2nd Hampshire, is seconded while serving as a Civil Surgeon in South Africa, April 22nd.

ROYAL ENGINEERS (VOLUNTEERS).

Surgeon Lieutenant J. H. Teacher, M.B., 1st Lanarkshire, to be Surgeon-Captain, April 4th.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

Lieutenant R. Ramsey, the Glasgow Companies, resigns his commission, April 4th.

Lieutenant F. D. Woolley, the Manchester Companies, to be Captain, April 4th.

VOLUNTEER RIFLES.

Surgeon-Captain J. P. Elliot, 1st Volunteer Battalion the Northumberland Fusilers, to be Surgeon-Major, April 4th.

Surgeon-Lieutenant G. R. F. Stilwell, M.B., 2nd Volunteer Battalion the Queen's Own (Royal West Kent Regiment), to be Surgeon-Captain, April 22nd.

Mr. Alfred Robinson, M.D., is appointed Surgeon-Lieutenant in the 2nd Volunteer Battalion the York and Lancaster Regiment, March 28th.

Surgeon-Lieutenant H. P. Perkins, 15th Middlesex (the Customs and the Docks), resigns his commission, March 24th.

VOLUNTEER INFANTRY BRIGADE.

Surgeon-Lieutenant-Colonel G. Westby, 2nd Volunteer Battalion the King's (Liverpool Regiment), to be Senior Medical Officer of the Liverpool Brigade, April 4th.

VOLUNTEER MEDICAL ASSOCIATION.

The annual dinner of the Volunteer Medical Association took place on Tuesday, April 21st, at the Hotel Cecil, Strand, when the chair was taken by Brigade-Surgeon-Lieutenant-Colonel Andrew Clark, and about sixty members and guests sat down. The toast of 'The Imperial Forces" was given by Dr. Dawson Williams and acknowledged by Colonel Fludger, C.V.O., Scots Guards, who paid a warm tribute to the admirable services rendered to the brigade of guards by their medical officers during the recent war. The toast of "The Volunteer Medical Association" was given by Colonel Gubbins, M.V.O., R.A.M.C., P.M.O. of the Home District, who expressed his acknowledgements for the valuable assistance given during the public functions of last year by the volunteer medical organizations. The Chairman, in his reply, sketched the development of the association, and dwelt upon some of the difficulties which still strewed the path of the volunteer medical officer, referring in particular to those connected with the formation of bearer companies. He hinted that the sanguine anticipations that the reorganization of these companies would be sanctioned were likely to be falsified. Sir Henry Howse gave the toast of "The Medical Officers of the Yeomanry and Volunteers," which was acknowledged by Brigade-Surgeon-Lieutenant-Colonel W. R. Smith; that of "The Visitors," proposed by Lieutenant-Colonel Squire, R.A.M.C. Volunteers, was acknowledged by the Director-General of the Army Medical Department. "The Health of the Chairman," proposed by Brigade-Surgeon-Lieutenant-Colonel Thompson, and that of "The Honorary Secretary," Lieutenant E. C. Montgomery-Smith, by the Chairman, were duly acknowledged.

The annual meeting of the Association will be held at 20, Hanover Square, W., on Tuesday, April 28th, at 4.30 p.m.

THE VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

The annual dinner of the Staff and past and present members of the School will take place at the Trocadero, Piccadilly Circus, W., on Thursday, May 14th, at 7.30 p.m. The chair will be taken by the Senior Medical Officer, Brigade-Surgeon-Lieut.-Colonel P. B. Giles, V.D., F.R.C.S. Surgeon-General Sir William Taylor, K.C.B., Director-General of the Army Medical Department, will be the principal guest. Applications for tickets should be addressed to the Mess President, Surgeon-Captain E. M. Callender, M.D., 40, Connaught Square, W.

CHANGES OF STATION.

The following changes of station amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during the last month:

	From.	To.
Colonel W. L. Chester, M.B	Netley	Bengal.
Lt.-Col. W. J. R. Rainsford, C.I.E.	Bengal	Acton.
„ H. L. Batttersby	Dover	Bengal.
„ J. L. Hall	—	Maidstone.
„ M. W. Kerin	Colchester	Punjab.
„ T. P. Woodhouse	South Africa	Dover.
„ W. Rowney, M.D.	Aldershot	Bengal.
„ H. J. Barratt	Canterbury	„
„ F. H. M Burton, M.D.	Devonport	Pembroke Dk.
Major A. E. C. Spence, M.B.	Athlone	Holywood.
„ H. A. Haines, M.D.	Punjab	York.
„ R. L. R. Macleod, M.B.	Dublin	Dundalk.
„ R. H. Hall, M.D.	Bermuda	Dublin.
„ P. C. H. Gordon	York	N'castle-on-Ty.
„ H. D. Rowan, M.B.	Bengal	York.
„ J. G. Black, M.D.	Belfast	Wei hai-Wei.
„ A. Kennedy	Malta	Dublin.
„ T. G. Lavie	Dublin	Clonnel.
„ C. J. W. Tatham	Belfast	Athlone.
„ H. B. Mathias, D.S.O.	Devonport	Newport.
„ G. Bent	Barbadoes	Chester.
„ G. Scott, M.B.	Edinburgh	Fort George.
„ W. H. Horrocks, M.B.	M. S. College	Gibraltar.
„ B. H. Scott	Tower of Lndn.	Punjab.
„ D. Steill, M.D.	Fort George	Madras.
„ A. L. F. Bate	Dublin	Galway.
„ A. J. Luther	Egypt	Aldershot.
„ W. T. Mould	Portsmouth	Southampton
Captain H. W. Dunn, M.B.	Egypt. Army	WoolwichArnl.
„ E. W. Slayter, M.B.	Portsmouth	Bengal.
„ W. D. Erskine, M.B.	Edinburgh	Glencorse.
„ R. C. Lewis	Dover	Bengal.
„ R. F. G. Austin	Portsmouth	Portland.
„ G. Dansey-Browning	China	Aldershot.
„ S. J. C Perry	Dublin	Fermoy.
„ C. C. Cumming, M.B.	Aldershot	Punjab.
„ A. M. MacLaughlin, M.B.	„	Egypt.
Lieutenant J. G. Foster, M.B.	South Africa	Mauritius.
„ H. B. Fawcus, M.B.	„	Gibraltar.
„ G. J Houghton	„	Bulford.
„ R. L Popham	„	Halifax, N.S.
„ H. F. Shea, M.B.	Aldershot	Mauritius.
„ P. J. Bodington, M.B.	„	Ceylon.
„ J. F Whelan, M.B.	„	Punjab.
„ W. H. Odlum	„	Bombay.
„ F. A Stephens	„	Gibraltar.
„ M. G. Sterling	„	Egypt. Army.
„ J. T. Johnson, M.B.	„	Bulford.
„ R. F M Fawcett	South Africa	Halifax, N.S.
„ E. S. Worthington	Aldershot	Bengal.
„ R. McK. Skinner	„	Gibraltar.
„ R. N. Woodley	South Africa	Malta.
„ J. Conway	„	Dublin.
„ R. C. Wilson	Aldershot	Egypt.
„ E. G. Ffrench, M.B.	„	Jamaica.
„ A. McMunn	„	Punjab.
„ W. C Stevenson, M.D.	Dublin	Madras.
„ A. W. A. Irwin	Aldershot	Barbadoes.
„ S. M. Adye-Curran	„	„
„ L. Cotterill	Bulford Camp	Madras.

The undermentioned Officers of Reserve, who have been doing duty in the Royal Army Medical Corps, have relinquished their medical charge at the stations named: Lieutenant-Colonel F. G. Adye-Curran, M.B., Dublin; Lieutenant-Colonel J. McGann, Dublin; Lieutenant-Colonel J. J. Lamprey, Woolwich; Major H. V. Dillon, Woolwich.

The following officers, all on retired pay, have ceased to hold medical charge at the stations specified: Col P. J. McQuaid, Portsmouth; Colonel F. Howard, M.D., Home District; Colonel A. S. K. Prescott, Gravesend; Lieutenant-Colonel J. Barry, M.D, Queenstown; Lieutenant Colonel W. Alexander, M.D., Piershill; Lieutenant-Colonel M. M. Gallwey, Newcastle-on-Tyne; Lieutenant-Colonel J. F. Brodie, Fermoy; Lieutenant-Colonel T. O'Reilly, Guernsey.

THE MEDICAL BRANCH OF THE COLONIAL FORCES OF SOUTH AFRICA.

We learn from the *South African Medical Record* that a complete change of organization has taken place in the medical branch of the Colonial forces. Hitherto the permanent medical officers have been borne on the regimental strength of the C.M.R., and what assistance they needed has been rendered by "hospital sergeants" drawn from that regiment, some acting as orderlies in the regimental hospital, others—sometimes to the sore perturbation of the local medical practitioners—officiating as medical attendants in ordinary to the detachments. Now the organization has become entirely departmental, a new corps having been formed under the title of "Cape Medical Corps." The authorized establishment is 6 officers, 1 warrant officer, 3 staff sergeants, 6 sergeants, and 26 corporals and privates. As a natural consequence the compound titles of the officers have been superseded by the ordinary military designations. At present the volunteer companies remain as before, "Cape Medical Staff Corps," with a separate organization, but of course under the administrative control of the officer commanding the Cape Medical Corps as P.M.O. We understand, however, that it is in contemplation gradually to amalgamate the two, the relationship being presumably arranged much on the same lines as that between the R.A.M.C. and the R.A.M.C. (Vol.) in the Imperial service.

INDIAN PAY OF THE R.A.M.C.

Correspondence on this subject continues:

Vigilans writes: The increased pay granted by the Warrant of March, 1902, took effect in certain ranks in India in November. Meanwhile, and all during the war, the R.A.M.C. in India were so much under strength that the Government must have saved thousands upon thousands of rupees; many officers were doing double duty, and seniors that of juniors; leave was impossible. Such circumstances might reasonably be expected to have dictated greater liberality when the increase of pay was made. But these expectations have only been imperfectly realized. The attention of the independent civilian members of the Advisory Board might well be directed to the question of Indian pay.

Justice writes: The increase of pay under the Warrant of March, 1902, has only been partially recognized in India. Subalterns and captains have got an increase; majors are ignored; the charge pay of lieutenant-colonels is not commensurate with similar allowances in other branches of the service. For instance, a junior major only draws Rs.139 more than a senior captain; a selected lieutenant-colonel can only draw Rs 1,150+Rs 240 for charge of 300 beds, total Rs 1,390, against Rs.1,402 drawn by a lieutenant-colonel commanding an infantry battalion. The P.M.O. of H.M. forces in all India draws Rs.800 per mensem less than a G.O.C. of a first class district. Again, the so-called "staff allowances" are all against the medical service; those of a first class medical officer are only equal to third-class allowances of combatant officers in analogous appointments. There should be a levelling up, from majors to the P.M.O. of all India, who is surely worth Rs.4,000 per mensem.

EMPTY TITLES.

Quietem sub Libertate writes: Few will agree that the retired medical officers who got promoted for service at home during the war have a grievance, because such promotion will not carry increased pension, etc. Had such substantial rewards been given the public would probably have considered them out of all proportion to the services rendered. These officers have little to complain of compared with those who served on the active list at the front throughout the war, bearing the burden and heat of the day; and, although frequently mentioned in dispatches, yet received no reward of any kind.

R.A.M.C. also writes: With regard to the principles on which medical officers were promoted for services rendered during the war—at home, I have reason to believe such selections were left in the hands of officers commanding regimental districts, who submitted the names to the general officers commanding of such officers as they considered merited special recognition; and, as the recommendations did not take place until long subsequent to peace being declared, it seems not unlikely that many of those officers called up had by then relinquished their appointments, and so their claims became overlooked or forgotten. Inasmuch as such promotions would carry the increased pay of rank in the event of the officers being again recalled to duty, the titles could hardly be considered "empty" or merely honorary.....It is further to be hoped that your correspondent represents his own views only when he estimates honours conferred by the standard of their equivalent value in £ s. d.

*** Respecting these and previous communications on this matter we express no opinion as to the merits or deserts of the officers who received promotion, nor do we desire to institute a comparison between their claims and those of others, whether in the field or at home. The points that have been raised are, simply, on what principle were selections made, and do such promotions carry substantial rewards? On the first we do not think "R.A.M.C." throws much light; the selections could hardly have been made in the haphazard manner he indicates, but must, both in their initiatory and final stages, have been determined by other factors than the chance recommendations of officers commanding regimental districts; besides, all the officers so promoted did not belong to such districts. Nor were the promotions among reservists only, whether called up, or liable to recall, or not. Nor does the somewhat shadowy contingency of recall and enhanced pay meet the present financial question involved. Both correspondents assume that the promotions carry no substantial rewards, as regards pensions, etc.; and we are not aware that any of those promoted make a "grievance" of this; but the question cannot be begged, and we understand still exercises financial circles. The promotions being admittedly substantive, not honorary, do they therefore carry the substantial advantages of increased rank? If they do not, then we do not see how the titles bestowed may not be playfully designated as "empty."

THE SUPPLY OF PURE WATER TO TROOPS IN THE FIELD.

Dr. J. Ferguson Lees (London, W.) writes: My attention has just been drawn to Major Porter's criticism (in the British Medical Journal of March 21st) of the water cart which was described by me in the Journal of January 31st. I have carefully considered the various points mentioned in his letter, and I think the difficulties he sees are more apparent than real. The scarcity of wood in South Africa undoubtedly constituted one of the great difficulties to sterilizing water there in the way I suggested, but this objection does not apply to other countries. For example, in India, where fuel is plentiful and where polluted water is an important factor in the spread of such diseases as cholera and enteric fever, there should be no difficulty, on account of scarcity of fuel, in sterilizing water by boiling. Even in South Africa the scarcity of wood would not have been so much felt in many cases had some attempt been made to regulate the consumption of the supply which was available. I think, moreover, that Major Porter rather over-estimates the difficulties of transport in those cases in which it would be necessary to carry fuel. If wood or coal should not be considered sufficiently portable, petroleum might be used as suggested in the editorial note to Major Porter's letter. This would, however, require a modification of the furnace which would render the latter unsuitable for burning other fuel, thus preventing advantage being taken of any wood supply which might be available on the march and necessitating, in consequence, an entire dependence on the transport. This might be a disadvantage at times. In my article I took wood as the fuel, this being the form most easily obtainable as a rule, and I can see no reason, either on account of its weight or its bulk why a sufficient supply of it could not be carried when necessary. With an allowance of one water cart per company, taking 1 cwt. as the weight of wood required per diem for each cart—a liberal estimate, since this allows for a loss of 65 per cent. of heat by radiation, etc.—the quantity of wood required to sterilize the water

supply of a whole regiment for a fortnight would work out at 112 cwt., or roughly 5½ tons. For the carriage of this four mule wagons would be sufficient. This would not be a large addition to the present transport.

I do not think, therefore, that the carriage of fuel should present any very great difficulty in the hands of a properly organized water corps provided with its own transport. Major Porter's criticism of the cart on account of its weight is based, I think, on a misunderstanding. The weight given (22 cwt.) is that of the cart when filled with water. The cart itself with settling tank and furnace only weighs 11 cwt. This is not greatly in excess of the weight of some of the water carts used in South Africa during the late war. A loaded mule wagon weighs nearly three tons, and this weight was not found unmanageable in South Africa. I cannot, therefore, see why a water cart weighing 11 cwt. and containing 11 cwt. of water should be considered unmanageable. I read Major Caldwell's article in the BRITISH MEDICAL JOURNAL of January 31st with much interest, my own experiences corroborating his. His remarks apply, however, only to "camping grounds in prolonged occupation by troops" Under such circumstances impure water undoubtedly plays a relatively smaller part in the production of infection than in other cases, the difficulties of a pure water supply being less and the soil infection much greater. In the case of a moving column, however, I am of the opinion that an impure water supply is the principal factor in the causation of disease, and it is to the water supply of such a column that the remarks in my article principally refer. I am in perfect agreement with Major Porter in his opinion that soil infection plays a not inconsiderable part in causing disease, but I think that in his efforts to establish this fact he makes the mistake of attaching too little importance to a pure water supply.

MEDICO-LEGAL AND MEDICO-ETHICAL.

MEDICAL TESTIMONIALS IN TRADE ADVERTISEMENTS.

J. F. K. complains that a practitioner with British qualifications has sent the notes of a case under his care to a publication issued by an American firm of chemists, and ostensibly existing for the promotion of the sale of their specialities.

What should be the attitude of the profession towards these little medical journals owned by firms of druggists, distributed gratis, and the chief purpose of which is, no doubt, to advertise and push the sale of the preparations owned by the proprietors? So far as we know they are distributed to the profession only, and are not sent to the public. A broad distinction should be made between the use of notes of cases for advertising to the public and the publication of them to the medical profession.

We doubt if it is reasonable to lay down a rule that medical practitioners should refuse to contribute articles to these privately-owned journals. The firms of Bayer and Merck publish regular archives to which articles sometimes of scientific value are contributed by German physicians. No doubt a certain amount of doubt may legitimately be felt as to these publications; one naturally expects that only one side of the question receives attention, that papers in favour of the preparation are preferred and criticisms suppressed; but this doubt should dispose the readers of these publications to add the necessary grain of salt. We must trust the good sense of the profession to look for trustworthy guidance to the independent medical press, rather than to gratuitously distributed trade journals.

MEDICAL OFFICER OF HEALTH IN SCOTLAND AND PRIVATE PRACTICE.

ENQUIRER.—Section LII of the Local Government (Scotland) Act, 1889, is as follows: (1) "The Council of every county shall appoint and pay a medical officer or medical officers, and a sanitary inspector or sanitary inspectors, who shall not hold any other appointment or engage in private practice or employment without express written consent of the Council." When this Act came into operation many counties appointed medical officers who were confined to this work alone. Others were appointed with the right of consulting practice, and others were permitted to engage in general practice. A special grant is voted by Parliament to pay the salaries of these officials partially. We understand that the Local Government Board of Scotland, which has the power of allocating this grant, insists that any county now appointing a medical officer who is to participate in the grant must agree to the condition that he must not engage in private practice.

We should think that to assist in surgical operations by the administration of chloroform or to meet a medical practitioner in consultation upon a case of appendicitis would be engaging in private practice within the meaning of the Act, especially if such work was undertaken habitually and not under exceptional conditions. It might be argued that if the medical officer of health does such work without payment it does not amount to private practice, but we do not think such an excuse would be permitted, as there would be some direct or indirect consideration even if no actual fee were paid.

MEDICAL ANNOUNCEMENTS.

A CORRESPONDENT draws our attention to the notices which have appeared in the *Aldershot News* of Dr. W. Bowie Barclay, who seems to have been recently appointed medical officer to the Farnborough Urban District Council and subsequently temporary medical officer of health for Aldershot.

These notices are in very bad taste. One on March 14th informed the public that "Dr. Barclay has not so far sought to establish a private practice in Farnborough, but it is expressly provided in his agreement with the Council that he may do so if he wishes, and it is not unlikely that he may take advantage of this stipulation." Another notice on April 11th is illustrated by a portrait of Dr. Barclay, and we are told that "under the old regulations which were in force some years ago a medical student, if particularly brilliant, could pass all the examinations necessary for his L.R.C.S. and L.R.C.P. before he was twenty-one. Dr. W. Bowie Barclay was one of the clever students who accomplished this feat." There is more of the same sort of stuff.

Unquestionably the occasion of Dr. Barclay's appointment may excuse a newspaper notice, but the passages quoted are highly distasteful to the medical profession, and we hope he will do his utmost to prevent any recurrence of puffs which tend to make him look ridiculous in the eyes of his professional brethren whatever may be their effect in the little world of Aldershot.

INSURANCE OFFICE CERTIFICATES.

A COUNTRY MEMBER asks for advice under the following circumstances: He is in the habit of receiving applications from insurance offices for certificates as to the health of proposed insurers, with a warning that he must look to the latter for any fee for the report. As many of these are members of clubs to which he is the surgeon he is put in a difficult position, and would like to know what fee he ought to charge.

*** It is never the duty of a club surgeon in the absence of a special agreement to the contrary, to grant certificates to members for other purposes than those of the club of which he is an officer. He should therefore have a distinct understanding with the member beforehand as to what fee he is to receive for his insurance report. This may reasonably be modified according to the amount of the proposed insurance.

A QUESTION OF PROFESSIONAL DUTY.

P. A. N.—An English lady travelling abroad was taken ill suddenly one night with symptoms of peritonitis. No medical man could be got under six or eight hours. Under these circumstances a British doctor staying in the same hotel was implored by the patient's friends to attend her as it was a case of great urgency. He refused on the grounds that as he had given up all practice for ten years he would not undertake the responsibility in case he made an error in diagnosis or treatment.

*** A doctor who has been ten years out of practice may be excused for declining to undertake professional work, but we may regret that he had not sufficient confidence in himself to see the patient and do something to relieve the anxiety of the friends pending the arrival of other medical assistance.

TESTIMONIALS IN TRADE ADVERTISEMENTS.

M.O.H.—The advertisement referred to has already been before the Ethical Committee, and steps are being taken to bring the offender to book.

LETTERS TO THE NEWSPAPERS.

A. J.—Such a letter would be almost certain to provoke comment, although it might be defended on the ground that the question discussed is of interest and concerns the public health. We think such a letter should be signed only with initials or F.R.C.S.

MEDICAL ETIQUETTE.

X. Y. Z.—The wives of medical men should be careful not to expose their husbands to the charge of advertising by being too eager to call upon every new family. With the exercise of a little discretion a lady can always manage to fulfil her social obligations without giving any just cause of complaint.

MEDICAL ETHICS.

D. B.—We have carefully read our correspondent's communication. It was certainly unfortunate that the partnership negotiations came to nothing, but there is nothing of which Y. can be accused except want of fixity of purpose. In the other matter, where a medical man visits as a personal friend a case under the care of another practitioner misunderstandings constantly arise; we always advise that such visits should be avoided, but it would be going too far to say that they are ethically improper.

QUESTION OF SENIORITY.

H. C. S.—If the selection depends upon seniority that should be reckoned from the date of registration. If on the other hand it means seniority in practice in the town we think it should go to B. as he has been so much longer in independent practice there.

RED LAMPS.

X.—The use of the red lamp as a doctor's sign is purely conventional, and in districts where it is customary there can be no objection.

OBITUARY.

WE regret to announce the death of Dr. JAMES PRIESTLEY, of Lee-on-the-Solent, Hants, which took place recently, at the early age of 38, from septic poisoning, contracted in the discharge of his professional duties. He had attended his patients as usual up to Friday, March 27th, on the evening of which day he went to the bed from which he never rose again. On Sunday Dr. Ward Cousins and Dr. M'Ildowney, of Portsmouth, operated, and again on Monday; but on Tuesday sudden collapse occurred, and Dr. Priestley expired shortly before midnight. Dr. Priestley was the son of James Priestley, of Saintfield, County Down. He had a very distinguished career as a student. In his undergraduate course he was mathematical scholar for three years, and in his fourth year was the Senior Scholar and Demonstrator in Experimental Physics; while at the University he obtained first-class honours and exhibitions in the same subjects. After taking his B.A. degree in 1886 he studied medicine at Belfast. He took the usual medical degrees at the Royal University of Ireland in 1897, and the Diploma in Public Health at the Royal College of Surgeons, London, in 1893. He was for several years engaged in public health work in connexion

with the Paddington Vestry, and afterwards with the Metropolitan Asylums Board, at whose North-Eastern Hospital, Tottenham, he was for three years Senior Medical Officer. He was a frequent contributor to the medical press, and read a paper at the annual meeting of the British Medical Association held three years ago at Portsmouth. Dr. Priestley left the North-Eastern Hospital five years ago to take up private practice at Lee-on-the-Solent. Here his gentle, unostentatious manner and kindly disposition, together with his unremitting attention and skill as a medical man, endeared him to all the community, and he is sincerely mourned by his patients and friends in and around Lee. He was local lecturer to the St. John Ambulance Association, and on the Tuesday previous to his death delivered the last lecture of the session. A memorial service was held in Lee Church on Thursday, April 2nd, which was attended by practically every inhabitant of the place. The body was removed to Southampton, en route for Belfast, where the funeral took place in the family burial ground on April 6th.

Dr. J. V. Laborde, whose death at the age of 73 has already been announced in the British Medical Journal, succumbed, according to M. Lancereaux, the President of the Académie de Médecine, under the weight of the fatigue and the emotions he felt during the course of the recent discussion on the dangerous essences, on which subject he was reporter to the special commission on alcoholism. Dr. Laborde was born of poor parents at Buzet (Lot-et-Garonne), and came to Paris to study medicine. By sheer force of character and pluck he became *interne*, and in due course graduated Doctor in Medicine. He did not practise, but as *Chef de Travaux Pratiques* in Physiology he spent his time in the laboratory and in teaching. He was also Professor at the School of Anthropology; he was founder of the Société de Médecine Publique et d'Hygiène Professionelle, and one of the most active members of the Société de Biologie, of which he was Vice-President. In 1887 Dr. Laborde was elected a member of the Académie de Médecine. He will go down to posterity as a benefactor to humanity by his discovery of the method of rhythmical tractions of the tongue in the treatment of cases of apparent death. Latterly he threw all his energies into the campaigns against tuberculosis, and more especially against alcoholism. His convictions were firm, and he always acted up to them till the very end. As a freethinker he had a civil funeral, simple and without speeches; as a hygienist, he was cremated; as a member of the Société d'Autopsie Mutuelle, he willed his body to be dissected; and, as an anthropologist, his brain will be preserved in the Anthropological Museum.

We regret to see the announcement of the death at Pretoria of Mrs. Heckford, the wife of the late Dr. Heckford, the founder of the East London Hospital for Children. In the cholera epidemic of 1866 the late Mrs. Heckford and Dr. Heckford volunteered, the one as medical officer and the other as nurse in East London. After their marriage they established, in an empty warehouse at Radcliff Cross, a small hospital of ten beds, which attracted the attention of Charles Dickens, who described how Dr. and Mrs. Heckford devoted their life to the work, living in the hospital itself. Largely owing to the great novelist's advocacy funds were found for the erection of the building, subsequently extended, in which the hospital is now carried on. After Dr. Heckford's death Mrs. Heckford lived for a time in Italy; she travelled afterwards in India, and acted for a year or two as medical attendant to the Begum of Bhopal; afterwards she went to the Transvaal, and was for some twenty years more or less closely identified with educational and philanthropic works in that country.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. Julius Victor Carus, Professor of Comparative Anatomy in the University of Leipzig, translator of Darwin's works into German, and author of a large textbook of zoology, and a large number of smaller books, aged 80; Dr. von Kahlden, Professor of Pathological Anatomy in the University of Freiburg in Breisgau; Dr. Carlo Lopes, Professor of Physiology in the Medico-Chirurgical School of Oporto; Dr. Robert S. Newton, a well-known alienist and neurologist of New York, aged 45; Dr. James A. Stewart, for many years President of the Baltimore Board of Health, aged 75; Dr. John E. Sanborn, Professor of Chemistry and Materia Medica in the University of Iowa, aged 79; Dr. M. B. Borgono, Professor of Clinical Surgery in Santiago, Chile; and Dr. Crolas, Professor of Pharmacy in the Faculty of Medicine of the University of Lyons.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

Examinations for Medical and Surgical Degrees.—The First and Second Examinations for the Degree of Bachelor of Medicine will begin on Wednesday, June 10th. The names of candidates must be transmitted to the Regius Professor of Medicine not later than 10.30 a.m. on Wednesday, May 27th. The Examination for the Degree of Master of Surgery will commence on Thursday, June 18th. The names of candidates must be sent to the Regius Professor of Medicine not later than 10.30 a.m. on Monday, June 1st.

UNIVERSITY OF LONDON.

Advance Courses in Botany.

The Board of Studies in Botany, realizing that the reconstitution of the University offers an admirable opportunity for organizing a fairly comprehensive scheme of advanced and post-graduate instruction in botany, has drawn up a scheme of lectures and subjects which has been approved by the Senate. The general idea is that each course should deal with a definite branch of botanical knowledge or with more general aspects of the science, and should extend to about ten lectures. The panel of lecturers at present arranged include Sir W Thiselton-Dyer, K.C.M.G., F.R.S., Professor H. Scott, F.R.S., Professor J. Reynolds Green, F.R.S., Professor J. B. Farmer, F.R.S., and Professor F. W. Oliver. Courses will be given in each of the three terms in the three years 1903-4, 1904-5, and 1905-6.

Rogers Prize.

Under the will of the late Dr. Nathaniel Rogers, the Senate offers a prize of £100 open for competition to all members of the medical profession in the United Kingdom, for an essay on the relation of tuberculosis and streptotrichosis from a pathological point of view. Essays must be sent in not later than February 29th, 1904, addressed to the Secretary to the Senate. The prize has not been awarded this year.

King's College.

A course of twenty lectures on experimental psychology, accompanied by demonstrations and laboratory work, will be given by Dr. W. G. Smith, M.A., at King's College, during the summer session, on Wednesdays and Saturdays, at 11 a.m., commencing on Wednesday, May 6th.

UNIVERSITY OF GLASGOW.

The following have passed the Third Professional Examinationfor the degrees of Bachelor of Medicine (M.B) and Bachelor of Surgery (Ch.B.) in the subjects indicated (P., Pathology; M., Medical Jurisprudence and Public Health):

A. C. Amy (P., M.), H. G. Anderson (P.), J. R. S. Anderson (M.), J. W. Arthur (M.), D. Blackley (P., M.), F. Brechin (P., M.), C. Brown (P., M.), G. Y. Caldwell (P., M.), P. Carrick, M.A. (P., M.), R. B. Carslaw, M.A. (P.), R. P. Cartwright (P.), J. A. Cowie, B.A., B.Sc. (P., M.), D. W. Davidson (M.), T. T. M. Dishington (P.), H. M'M. Donaldson (M.), C. M. Drew, M.A. (P., M.), H. H. Fulton (P.), G. Garry (P.), J. Gemmell (M.), W. H. Gillatt (P., M.), W. M. Gilmour (P., M.), D. L. Graham (P., M.), J. Graham (P., M.), G. M. Gray (P.), L. L. Greig (P., M.), J. C. Henderson (P., M.), A. Jamieson (P.), R. D. Kennedy (P., M.), J. Kerr (M.), W. H. Kirk (P., M.), R. T. Leiper (P., M.), W. J. Logie (P., M.), T. S. Macaulay (P., M.), J. D. M'Callum, M.A. (P., M.), D. C. M'Cormick (P.), N. M'Dougall (M.), J. B. M'Ewan (P., M.), T. D. M'Ewan (P.), D. Macfadyen (P.), J. M Farlane (P.), R. M. Macfarlane (P., M.), R. C. M'Guire (P., M.), J. M'Houl (P., M.), M. M'Intyre (P.), R. Mackinnon (P.), D. J. M'Leish, M.A., B.Sc. (P., M.), N. A. Macleod (M.), A. B. M'Pherson (P., M.), A. Meek (P., M.), P. Millar (P., M.), J. Muir (P., M.), M. Munro (P., M.), G. Clement-Nelson (P., M.), T. Orr (P.), H. H. Patrick (P.), J. C. Pickup (P., M.), A. M'M. Pollock (M.), A. M. Pollock (P.), J. Porter (P.), W. M. Rae (M.), D. R. Reid (P., M.), D. S. Richmond (M.), B. H. Robertson, M.A., B.Sc. (P., M.), R. T. C. Robertson (P., M.), G. G. Smith, B.Sc. (P.), J. Stewart (P., M.), N. B. Stewart (P., M.), W. C. Stewart (P., M.), M. R. Taylor (P., M.), W. Templeton (P., M.), J. W. Thomson (P.), W. Y. Turner, M.A. (P., M.), H. F. Warwick (P.), R. Watson (P.), A. C. West (P., M.), A. S. Wilson (P., M.), D. W. Wilson (P.), G. Wilson (M.), R. M'N. Wilson (P., M.), W. Young (P.). Women—A. A. Baird, M.A. (P., M.), A. M'C. Black (P., M.), R. Campbell (P.), E. L. Chapman (P.), J. H. M'Ilroy, M.A., B.Sc. (P., M.), J. S. M'Lauchlan (P., M.), C. R. Park (P.), J. R. Shaw (M.), L. Smellie (P., M.), and E. T. Talbert (P., M.).

UNIVERSITY OF DURHAM.

The following candidates have passed the first examination for the Degree of Bachelor in Medicine in the subjects undernoted:

Elementary Anatomy and Biology, Chemistry and Physics.—Honours.—Second Class: C. G. Kemp, St. Bartholomew's Hospital; C. R. Wilkins, College of Medicine, Newcastle-upon-Tyne. Pass list: H. H. Blake, College of Medicine, Newcastle-upon-Tyne; G. L. Cumberlege, College of Medicine, Newcastle upon Tyne; S. G. V. Harris, M.R.C.S., L.R.C.P., D.P.H., Charing Cross Hospital; F. J. Willans, College of Medicine, Newcastle upon-Tyne.

Elementary Anatomy and Biology.—H. R. Crisp, College of Medicine, Newcastle-upon-Tyne; R. M. Davies, College of Medicine, Newcastle-upon-Tyne; W. H. Edgar, College of Medicine, Newcastle upon-Tyne; G. R. Ellis, College of Medicine, Newcastle-upon-Tyne; J. Everidge, King's College, London; A. L. Forster, College of Medicine, Newcastle-upon-Tyne; H. M. Levinson, College of Medicine, Newcastle-upon-Tyne; S. D. Metcalfe, College of Medicine, Newcastle-upon-Tyne; T. D. Miller, M.R.C.S., L.R.C.P., St. Thomas's Hospital; E. D. Smith, College of Medicine, Newcastle-upon-Tyne; H. B. Stephenson, College of Medicine, Newcastle-upon-Tyne; G. Walker, College of Medicine, Newcastle-upon-Tyne; F. W. White, College of Medicine, Newcastle upon-Tyne.

Chemistry and Physics.—H. E. Bloxsome, St. Bartholomew's Hospital; L. A. Clutterbuck, L.R.C.P. and S. Ed., L.R.C.P.I., College of Medicine, Newcastle-upon-Tyne; E. P. H. Joynt, Guy's Hospital; H. F. Joynt, Guy's Hospital; A. C. H. McCullagh, College of Medicine, Newcastle-upon-Tyne; Jessie Jean Martin Morton, Edinburgh Medical School; Bertha Mary Mules, London School of Medicine for Women; Elizabeth Patterson, London School of Medicine for Women; W. Rollin, College of Medicine, Newcastle-upon-Tyne; N. Spedding, College of Medicine, Newcastle-upon-Tyne; E. F. Waddington, Yorkshire College, Leeds.

Elementary Anatomy.—S. Havelock, B.Sc., College of Medicine, Newcastle-upon-Tyne.

The following candidates have passed the Second Examination for the Degree of Bachelor in Medicine in the subjects undernoted:

Anatomy, Physiology, and Materia Medica.—Honours.—Second Class: W. Fairclough, College of Medicine, Newcastle-upon-Tyne; J. C. Pearce, A.Sc., College of Medicine, Newcastle-upon-Tyne. Pass list: J. B. Cooke, College of Medicine, Newcastle-upon-Tyne; H. Drummond, College of Medicine, Newcastle-upon-Tyne; S. J. Fielding, St. Thomas's Hospital; A. Finlay, London Hospital; W. P. A. Hardwicke, L.S.A., College of Medicine, Newcastle-upon-Tyne; F. R. H. Laverick, College of Medicine, Newcastle-upon-Tyne; S. L. McBean, College of Medicine, Newcastle-upon-Tyne; J. C. Norman, College of Medicine, Newcastle-upon-Tyne; R. Rutherford, College of Medicine, Newcastle-upon-Tyne; A. J. Turner, London Hospital; R. J. Weidner, College of Medicine, Newcastle-upon-Tyne; H. H. Whaite, Birmingham University.

CONJOINT BOARD IN ENGLAND.

THE following gentlemen have passed the second examination of the Board in the subjects undernoted:

Anatomy and Physiology.—L. E. Acomb, Middlesex Hospital; A. L. Baly, B.A.Camb., Cambridge University and Middlesex Hospital; F. C. H. Bennett, St. Mary's Hospital; P. V. Bhatt, St. Bartholomew's Hospital; W. T. Briscoe, B.A.Camb., Cambridge University; C. G. Browne, Westminster Hospital; F. H. M. Chapman, St. George's Hospital; W. W. D. Chilcott, Charing Cross Hospital; E. Christofferson, University College, Bristol; J. Clarke, University College, Sheffield; G. Cockcroft, Guy's Hospital; H. A. de Pinna, Toronto University and Middlesex Hospital; G. Eager, King's College, London; K. E. Eckenstein, University College, Liverpool; T. L. Evans, University College, Cardiff; A. R. Fisher, Yorkshire College, Leeds, and King's College, London; C. F. Fothergill, B.A.Camb., Cambridge University and Guy's Hospital; H. G. Gibson, Guy's Hospital; R. G. Gillies, Middlesex Hospital; C. W. Gittens, University College, London; M. Grundy, Cambridge University and King's College, London; H. Gooch and E. H. R. Harries, London Hospital; T. R. Harvey, Guy's Hospital; R. F. Hebbert, St. Thomas's Hospital; M. L. Hine, Middlesex Hospital; G. M. W. Hodges, University College, London; F. W. Hobbs and W. L. Holyoak, St. Mary's Hospital; C. B. Hutchison, London Hospital; T. J. Jenkins, University College, Cardiff; V. G. Johnson, St. Mary's Hospital; H. E. Jones, London Hospital; H. J. S. Kimbell, St. Bartholomew's Hospital; H. A. Lash, St. Mary's Hospital; T. B. Layton, Guy's Hospital; R. Lecky, University College, Bristol; D. T. Lewis, University College, Cardiff, and Middlesex Hospital; H. B. Maxwell, London Hospital; P. F. McEvedy, J. H. Mayston, and G. H. Morris, Guy's Hospital; A. C. Morson, Middlesex Hospital; H. C. Mulkern, St. Mary's Hospital: C. M. Page, St. Thomas's Hospital: H. A. Pallant, Guy's Hospital: J. W. Parker and A. Randle, University College, London; F. E. L. Phillips and A. H. Pollard, London Hospital; E. E. Rendle, Guy's Hospital: C. F. Rumsey, Charing Cross Hospital; W. O. Sankey, St. Thomas's Hospital; F. Smith, University College, Sheffield; L. E. M. Smith, Charing Cross Hospital; R. T. Taylor, London Hospital; E. J. F. Thomas, University College, Bristol; C. H. B. Thompson, Middlesex Hospital; G. G. Timpson, and H. E. H. Tracey, Guy's Hospital; W. F. Todd, London Hospital: F. B. Treves, B.A.Camb., Cambridge University; G. L. Walker, Yorkshire College, Leeds: C. G. Welch, University College, London; J. C. Wootton, St. Thomas's Hospital; A. Zorab, Guy's Hospital.

CONJOINT BOARD IN SCOTLAND.

THE quarterly examinations of the above Board, held in Edinburgh, were concluded on April 8th, with the following results:

First Examination, 4 Years' Course.—W. Murray and H. L. O. Fleming.

First Examination, 5 Years' Course.—R. W. Duncan, N. Moxon, J. C. Scanlan, H. H. Babington, A. Rae, and R. K. Nisbet.

Two passed in Physics, 2 in Elementary Biology, and 3 in Chemistry.

Second Examination, 4 Years' Course.—J. H. Yearsley, R. B. Smith, N. Oliphant, and J. J. Bell.

One passed in Anatomy and 1 in Physiology.

Second Examination, 5 Years' Course.—H. T. Simpson, W. W. Dunlop, W. E. Davies, H. Bower, J. W. N. Roberts, G. A. S. Hamilton, J. Coffey, A. H. Bloxsome, J. E. Cox, R. W. Townley, L. H. Gill, and F. W. Cooper.

One passed in Anatomy and 1 in Physiology.

Third Examination, 5 Years' Course.—F. Hannah, Edith S. Warboys, Bessie Chapple, W. H. Woodger, E. Gaunt, K. G. Gharpurey, A. B. H. Pearce (with distinction), A. D. Fox, J. M. G. Ewing, M. A. Gibbs, T. F. Murphy, R. M. Fraser (with distinction), J. G. Cormack, E. P. Titterton, J. Watson, S. E. Mangénie, A. Oyejola, T. Archdeacon, J. R. Purcell, J. S. McLean, B. Ingram, H. A. Hagenauer, and D. D. Sathaye.

One passed in Materia Medica.

Final Examination.—W. Gerrard, Elizabeth S. Graham, F. R. Alles, G. J. W. Keigwin, A. B. Marsh (with honours), H. S. Christoffelsz, C. A. Whyte, J. F. Boyle, W. A. A. Joshua, C. M. Campbell, T. F. Owens, D. Bruce, G. A. Charter, Minnie Green, H. H. Warren, G. T. Alley, M.D.; M. J. McCarthy, J. S. Burton, J. Twohig, D. A. Whitton, M.D.; W. D. Lawton, R. J. Harley, V. D. Afiuwalla, E. Hull, R. B. Narain, A. H. Khan, J. J. Crowley, B.A.; C. G. Evers, L. E. Jarratt, G. A. MacFarland, T. Russell, C. H. Nash, W. Hall, H. A. Karim, R. Colombswala, W. Hughes, P. R. Sataravala, A. B. Timms, and N. McGowan.

Five passed in the division of Medicine and Therapeutics, 3 in Surgery and Surgical Anatomy, 5 in Midwifery, and 5 in Medical Jurisprudence.

At the April sittings of this Board, held in Glasgow, the following candidates passed the respective examinations:

First Examination, 5 Years' Course.—Laura Gertrude Powell (with distinction), W. E. Barrett, J. J. O'Callaghan, J. H. Patterson, G. L. Irwin, J. A. Smith, J. A. Scott, T. F. M. Leishman.

First Examination, 4 Years' Course.—J. R. Lawther.

Second Examination, 5 Years' Course.—W. N. Alexander, A. E. M'Dougal (with distinction), A. Brown, J. A. Ashurst (with distinction), J. Macnamara, P. Henderson, G. H. Waugh (with distinction), W. W. N. Knox, F. J. Breakell, E. F. Nyhan.

Second Examination, 4 Years' Course.—J. S. Farries.

Third Examination.—A. R. M. MacIlraith, Maud V. Everett, A. F. G. Spinks, J. Watson, J. H. Fyfe, L.D.S.

Final Examination.—Lizzie Denny, R. N. Macdonald, W. G. Macdonald, W. C. M. Burnside, D. D. Sathage, B. M. Dunstan, W. J. Baty, R. B. Hirsch, K. J. O'Brien.

SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST, April, 1903.—The following candidates passed in:

Surgery.—T. W. S. Hills (Section I), Cambridge and St. Mary's Hospital; D. J. Lewis (Sections I and II), London Hospital; W. S. Lewis (Section I), Birmingham; E. H. Noney (Section II), Calcutta and Westminster Hospital; J. A. Renshaw (Section I), Manchester; C. C. Rushton (Sections I and II), University College Hospital.

Medicine.—H. J. Aldous (Sections I and II), King's College Hospital; F. G. H. Cooke (Section II), University College Hospital; J. W. Elliott (Sections I and II), St. Mary's Hospital; A. F. Heald (Sections I and II), Cambridge and St. Mary's Hospital; T. W. S. Hills (Section I), Cambridge and St. Mary's Hospital; H. Jacques (Section II), London Hospital; L. H. Lewis, Middlesex Hospital; G. Lucas (Sections I and II), Cambridge and St. George's Hospital; M. L. Pethick (Sections I and II), Royal Free Hospital; J. A. Renshaw (Section I), Manchester; R. C. Rumbelow, Middlesex Hospital; H. G. Sewell (Sections I and II), London Hospital.

Forensic Medicine.—L. E. Ellis, St. George's Hospital; A. F. Heald, Cambridge and St. Mary's Hospital; H. Jacques, London Hospital; G. Lucas, Cambridge and St. George's Hospital; J. A. Renshaw, Manchester; H. G. Sewell, London Hospital.

Midwifery.—A. T. Barnard, Royal Free Hospital; J. C. O. Bradbury, Cambridge and Guy's Hospital; T. Campbell, Liverpool; C. F. W. Dunn, Middlesex Hospital; T. W. S. Hills, Cambridge and St. Mary's Hospital; G. H. Rains, Westminster Hospital; J. A. Renshaw, Manchester; J. P. B. Snell, Middlesex Hospital.

The diploma of the Society was granted to J. C. O. Bradbury, J. W. Elliott, A. F. Heald, H. Jacques, G. Lucas, E. H. Noney, M. L. Pethick, R. C. Rumbelow, C. C. Rushton, H. G. Sewell.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.

THE following prizes have been awarded for the winter session 1902-3: First Year's Students: H. J. Nightingale, the William Tite Scholarship, £27 10s.; A. C. F. Turner, College Prize, £20; S. F. Dudley, College Prize, £10. Second Year's Students: C. M. Page, the Musgrove Scholarship, £8 10s.; H. B. Whitehouse, College Prize, £20; R. F. Hebbert, College Prize, £10. Fifth Year's Students: A. E. Boycott (Medicine), Prize, £10; H. J. Pinches (Surgery, including Ophthalmology), Prize, £10; H. J. Pinches (Midwifery and Diseases of Women), Prize, £10; A. E. Boycott, (Pathology), the Hadden Prize, £10; A. H. Hudson (Pharmacology and Therapeutics), Prize, £10; G. R. Rickett and F. W. Smith (Forensic Medicine and Insanity), Prizes, £5 each; A. E. Boycott (Public Health), Prize, £10. The Wainwright Prize £10, and the Seymour Graves Foller Prize for proficiency in Medicine, Pathology, and Hygiene were awarded to A. E. Boycott, of Magdalen College, Oxford. The Mead Medal and the Treasurer's Gold Medal to G. C. Adeney. The Cheselden Medal for proficiency in Surgery and Surgical Anatomy was awarded to H. S. Bennett.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

STATE VACCINATION BY ALL REGISTERED PRACTITIONERS.

The Bradford and West-Riding Medico-Ethical Union, at a recent meeting, approved of the following memorial to the President of the Local Government Board:

That in the opinion of your memorialists it would lead to the extension of the practice of vaccination in this country if Parliament were to enact that every duly qualified medical practitioner shall be put on the same footing in regard to the practice of vaccination, as that on which public vaccinators now are.

It is well known to your memorialists that many adult persons who refuse to visit the public vaccinator would have their children vaccinated and would be themselves revaccinated if this could be done free of cost to themselves by their regular medical attendant.

VITAL STATISTICS OF LONDON DURING THE FIRST QUARTER OF 1903.

[SPECIALLY REPORTED FOR THE BRITISH MEDICAL JOURNAL.]

IN the accompanying table will be found summarized the vital statistics of the metropolitan boroughs and of the City of London, based upon the Registrar-General's returns for the first, or winter, quarter of the year. The mortality figures in the table relate to the deaths of persons actually belonging to the various boroughs, and are the result of a complete system of distribution of deaths among the several boroughs in which the deceased persons had previously resided.

The 33,422 births registered in London during the three months under notice were equal to an annual rate of 29.1 per 1,000 of the population, estimated at 4,613,812 persons in the middle of the year; in the corresponding quarters of the three preceding years the birth-rates had been 30.9, 30.1, and 30.8 per 1,000, while the average for the first quarters of the ten years 1893-1902 was 31.2 per 1,000. The birth-rates last quarter

Analysis of the Vital Statistics of the Metropolitan Boroughs and of the City of London after Distribution of Deaths occurring in Public Institutions during the First Quarter of 1903.

BOROUGHS.	Estimated Population middle of 1903	Births.	Deaths.	Annual Rate per 1,000 Living.			Deaths from Principal Infectious Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Typhus.	Enteric Fever.	Simple and Ill-defined Fever.	Diarrhoea.	Phthisis.	Deaths of Children under 1 year of age to 1,000 Births.
				Births.	Deaths.	Principal Infectious Diseases.												
COUNTY OF LONDON	4,613,812	33,422	19,328	29.1	16.8	1.83	2,110	5	665	99	238	759	1	82	2	258	1,909	127
Paddington	146,032	818	525	22.5	14.4	1.12	41	—	—	—	3	31	—	3	—	4	37	116
Kensington	178,409	549	724	21.3	16.3	1.91	85	—	—	1	6	63	—	3	—	12	74	153
Hammersmith	115,803	779	412	27.0	15.3	1.51	44	—	2	3	9	20	—	2	1	7	43	155
Fulham	147,780	1,200	501	32.6	13.6	1.38	51	—	2	3	7	29	—	2	—	8	44	121
Chelsea	74,169	388	345	21.0	18.7	1.35	25	—	3	—	3	14	—	—	—	5	42	152
City of Westminster ...	179,052	730	685	16.4	15.3	0.91	40	—	3	3	3	17	—	3	—	11	78	133
St. Marylebone ...	131,214	1,632	602	31.5	18.4	1.95	64	—	5	4	5	36	—	2	—	12	61	105
Hampstead	85,197	375	245	17.7	11.5	1.13	24	—	6	—	5	10	—	1	—	2	15	91
St. Pancras	235,716	1,637	1,032	27.9	17.6	2.07	122	—	49	6	10	48	—	3	—	6	125	123
Islington	339,137	2,164	1,385	26.8	16.4	2.18	185	—	39	9	19	89	—	7	1	21	106	145
Stoke Newington ...	52,089	283	199	21.8	15.3	1.70	22	—	16	—	1	5	—	—	—	—	15	127
Hackney	224,082	1,567	820	28.0	14.8	1.61	90	—	24	5	18	28	—	4	—	11	78	115
Holborn	57,845	439	312	30.4	21.6	1.25	18	—	3	1	1	9	—	1	—	3	55	89
Finsbury	99,717	962	574	38.7	23.1	2.17	54	—	11	—	5	28	—	4	—	6	68	136
City of London ...	24,537	90	112	14.7	18.1	0.83	5	—	1	—	1	1	—	—	—	2	12	100
Shoreditch	117,513	1,003	596	34.2	20.3	2.02	59	—	28	1	7	16	—	3	—	4	79	123
Bethnal Green	130,028	1,226	630	37.8	19.4	1.91	62	—	34	1	8	12	—	2	—	5	67	122
Stepney	302,153	2,894	1,455	38.4	19.3	2.08	156	3	66	5	15	39	—	6	—	21	178	119
Poplar	169,550	1,520	866	36.1	20.5	3.77	159	2	87	3	16	40	—	5	—	7	73	137
Southwark	207,369	1,715	1,054	33.2	20.4	2.09	108	—	38	10	12	28	—	3	—	17	147	144
Bermondsey	129,861	1,092	646	33.7	20.0	2.04	66	—	31	10	3	7	1	3	—	11	51	141
Lambeth	307,711	2,364	1,328	30.8	17.3	1.99	153	—	44	8	11	63	—	5	—	22	109	131
Battersea	173,422	1,246	641	28.8	14.8	1.67	72	—	23	2	8	27	—	4	—	8	57	142
Wandsworth	249,678	1,646	846	26.4	13.6	1.70	105	—	18	6	19	37	—	6	—	19	67	118
Camberwell	265,562	1,901	1,085	28.7	16.4	1.60	106	—	42	3	18	24	—	6	—	13	84	129
Deptford	112,537	901	493	32.1	17.6	3.13	88	—	45	6	10	18	—	2	—	7	43	133
Greenwich	99,824	692	352	27.8	14.1	1.44	36	—	16	3	5	6	—	1	—	5	24	101
Lewisham	136,405	826	390	24.3	11.7	1.13	38	—	9	5	6	4	—	1	—	3	23	96
Woolwich	121,478	877	428	29.0	14.1	1.05	32	—	11	1	4	10	—	—	—	6	54	104

ranged from 14.7 in the City of London, 16.4 in the City of Westminster, 17.7 in Hampstead, 21.0 in Chelsea, 21.3 in Kensington, and 21.8 in Stoke Newington to 33.7 in Bermondsey, 34.2 in Shoreditch, 36.1 in Poplar, 37.8 in Bethnal Green, 38.4 in Stepney, and 38.7 in Finsbury.

The 19,328 deaths of persons belonging to London registered during last quarter were equal to an annual rate of 16.8 per 1,000, against 23.1, 18.6, and 21.3 per 1,000 in the corresponding quarters of the three preceding years; the mean death-rate in the ten preceding first quarters was 21.0 per 1,000. The lowest death-rates last quarter in the various metropolitan boroughs were 11.5 in Hampstead, 11.7 in Lewisham, 13.6 in Fulham and in Wandsworth, and 14.1 in Greenwich and in Woolwich; the highest rates were 20.0 in Bermondsey, 20.3 in Shoreditch, 20.4 in Southwark, 20.5 in Poplar, 21.6 in Holborn, and 23.1 in Finsbury.

During last quarter 2,110 deaths were referred to the principal infectious diseases; of these, 5 resulted from small-pox, 666 from measles, 99 from scarlet fever, 238 from diphtheria, 759 from whooping-cough, 1 from typhus, 82 from enteric fever, 2 from simple continued fever, and 258 from diarrhoea. These 2,110 deaths were equal to an annual rate of 1.83 per 1,000, against an average rate of 2.15 per 1,000 in the corresponding periods of the ten preceding years. In the first quarters of the three preceding years the rates had been 1.83, 1.54, and 2.34 per 1,000 respectively. The lowest death-rates last quarter from these infectious diseases were 0.81 in the City of London, 0.91 in the City of Westminster, 1.05 in Woolwich, 1.12 in Paddington, and 1.13 in Hampstead and in Lewisham; the highest rates were 2.08 in Stepney, 2.09 in Southwark, 2.17 in Finsbury, 2.18 in Islington, 3.13 in Deptford, and 3.77 in Poplar. Measles showed the greatest proportional mortality in Stoke Newington, Shoreditch, Bethnal Green, Poplar, Bermondsey, and Deptford; scarlet fever in St. Marylebone, Southwark, Bermondsey, Deptford, Greenwich, and Lewisham; diphtheria in Hammersmith, Hackney, Poplar, Wandsworth, Camberwell, and Deptford; whooping-cough in Paddington, Kensington, St. Marylebone, Islington, Finsbury, and Poplar; "fever" in Hammersmith, Finsbury, Shoreditch, Poplar, Bermondsey, and Wandsworth; and diarrhoea in St. Marylebone, the City of London, Southwark, Bermondsey, Lambeth, and Wandsworth. Of the 5 fatal cases of small-pox, 3 belonged to Stepney and 2 to Poplar.

During the first quarter of the year 1,909 deaths from phthisis were registered, equal to an annual rate of 1.66 per 1,000, against 2.07, 1.82, and 1.84 per 1,000 in the corresponding quarters of the three preceding years. Among the various metropolitan boroughs the lowest death-rates from phthisis last quarter were recorded in Paddington, Hampstead, Stoke Newington, Wandsworth, Greenwich, and Lewisham; and the highest rates in Chelsea, Holborn, Finsbury, Shoreditch, Stepney, and Southwark.

Infant mortality, measured by the proportion of deaths under one year of age to registered births, was equal to 127 per 1,000 last quarter, against 138, 126, and 132 in the corresponding quarters of the three preceding years. The rates of infant mortality during the quarter under notice were lowest in Hampstead, Holborn, the City of London, Lewisham and Woolwich; while the highest rates were recorded in Kensington, Fulham, Chelsea, Islington, Southwark, and Battersea.

HEALTH OF ENGLISH TOWNS

In seventy-six of the largest English towns, including London, 8,34 births and 4,608 deaths were registered during the week ending Saturday last, April 18th. The annual rate of mortality in these towns, which had been 16.2, 15.8, and 15.6 per 1,000 in the three preceding weeks, rose again to 15.9 per 1,000 last week. The rates in the several towns ranged from 7.8 in Croydon, 10.0 in Hornsey, 10.3 in Willesden, 10.4 in Stockport, 10.5 in Aston Manor, 10.6 in Barrow-in-Furness, 10.7 in Wallasey, and 10.8 in Coventry, to 19.5 in Brighton, 19.7 in Bootle and in St. Helens, 19.9 in Blackburn, 20.0 in Rhondda, 22.4 in Swansea, 23.5 in Wigan, and 24.4 in Sunderland. In London the rate of mortality was 16.1 per 1,000, while it averaged 15.9 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.6 per 1,000 in the seventy-six large towns; in London this death-rate was equal to 1.7 per 1,000, while it averaged 1.5 in the seventy-five other large towns, among which the death-rates from the principal infectious diseases ranged upwards to 3.1 in Rochdale and in Burnley, 3.5 in Rhondda, 3.6 in St. Helens, 3.8 in Middlesbrough, 3.9 in West Bromwich, 6.6 in Swansea, 6.7 in Tottenham, and 8.4 in Wigan. Measles caused a death-rate of 1.0 in Manchester and in Burnley, 1.1 in Nottingham, 1.6 in Middlesbrough, 2.4 in West Bromwich, 3.8 in Tottenham, 5.5 in Swansea, and 6.7 in Wigan; scarlet fever of 1.2 in Rochdale; diphtheria of 1.1 in Middlesbrough, 1.2 in Walsall, 1.5 in Oldham, and 2.5 in Hanley; whooping-cough of 1.1 in Portsmouth and in Oldham, 1.2 in Rochdale, 1.4 in Reading, 1.6 in Burnley, 1.8 in St. Helens, and 1.9 in Tottenham; "fever" of 3.1 in Rhondda; and diarrhoea of 1.2 in St. Helens. Of the 18 fatal cases of small-pox registered in these towns last week, 7 belonged to Liverpool, 3 to Leeds, and 1 each to Croydon, Leicester, Manchester, Oldham, Rochdale, Bradford, Rotherham, and Cardiff. The Metropolitan Asylums Hospitals contained 33 small-pox patients on Saturday last, April 18th, against numbers increasing from 5 to 16 on the seven preceding Saturdays; 22 new cases were admitted during last week, against 5, 3, and 5 in the three preceding weeks. The number of scarlet fever cases under treatment in these hospitals and in the London Fever Hospital at the end of the week was 1,661, against 1,756, 1,735, and 1,664 at the end of the three preceding weeks; 188 new cases were admitted during the week, against 213, 205, and 155 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, April 18th, 1,117 births and 581 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 18.6, 18.0, and 17.6 per 1,000 in the three preceding weeks, rose again last week to 17.7 per 1,000, and was 1.8 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scotch towns the death-rates ranged from 7.7 in Perth, and 11.8 in Leith, to 19.5 in Greenock, and 20.3 in Edinburgh. The death-rate from the principal infectious diseases averaged 1.6 per 1,000 in these towns, the highest rates being recorded in Aberdeen and Greenock. The 581 deaths registered in Glasgow included 4 which resulted from diphtheria, 11 from whooping-cough, 2 from "fever" and 9 from diarrhoea. Two fatal cases of measles, 2 of diphtheria, 3 of whooping cough, and 2 of diarrhoea were recorded in Edinburgh. Two deaths from measles and 2 from whooping-cough occurred in Dundee; 3 from measles and 3 from diarrhoea in Aberdeen; and 2 from diarrhoea in Greenock.

NOTIFICATION OF INFECTIOUS DISEASES IN FRANCE

THE Prefecture of Police has induced the Municipal Council of Paris to sanction a special credit of 4,000 francs to substitute letter-cards for the present system of postal cards used in the notification of cases of infectious disease.

CANJA MEDICAL OFFICER OF HEALTH BE A COUNTY COUNCILLOR?

M.D. is medical officer of health for an urban district whose appointment is subject to confirmation by the Local Government Board. Half of his salary is refunded by the county council. Does this disqualify "M.D." from acting as (*a*) representative on the county council of the district for which he is medical officer of health, or (*b*) for any other district in the same county?

*** By the incorporation of certain parts of the Municipal Corporations Act, 1882, with the Local Government Act, 1888, it seems that no one is qualified for election as a county councillor if he has directly or indirectly, by himself or his partner, any share or interest in any contract or employment with, by or on behalf of the council. This clearly prevents a county medical officer of health appointed under Section XVII of the Local Government Act, 1888, from becoming a county councillor; but we do not think, in the absence of any express authority on the point, that this provision can extend to prevent a medical officer of health for an urban district becoming a candidate for the council, either as a representative of his own district or of any other district in the county. Although his salary is paid partly by the county council, he is not chosen or appointed by them, nor have they any right to order his dismissal. The case, however, is somewhat near the line, and we would not recommend our correspondent to become a candidate without a definite legal opinion upon the point.

MEDICAL NEWS.

THE annual dinner of the Pharmaceutical Society of Great Britain will take place at the Whitehall Rooms, Hôtel Métropole, on Tuesday, May 19th.

ACCORDING to the *Times*, Kunwar Sir Ranbir Singh, uncle to the youthful Maharajah of Patiala, has made a free gift of his residence at Kasauli to the Pasteur Institute there.

DR. L. H. BALL, who has recently been elected United States Senator for the State of Delaware, is a member of the medical profession. He took his degree at the University of Pennsylvania in 1885.

A BILL legalizing cremation, which was lately introduced for a second time into the Prussian Chamber of Deputies by Dr. Langerhans and Dr. Barth, has again been rejected, but by a diminished majority.

MOTOR CARS FOR CONVALESCENTS.—*Motoring Illustrated* is endeavouring to promote a league for taking convalescent women and children in London hospitals out for an airing. The active agent is Miss Annesley Kenealy, care of *Motoring Illustrated*, Arundel Street, Strand. It seems a good scheme.

THE opening meeting of the Twentieth Annual Congress of the French Ophthalmological Society will be held in Paris on May 1st. The subject proposed for discussion is the diagnosis and treatment of tumours of the orbit, on which a report will be presented by M. Lagrange, of Bordeaux.

A CENTENARIAN PRACTITIONER.—It is reported, says the *Boston Medical and Surgical Journal*, that Dr. John H. Woods, of Thomas, Aklahoma, died on March 28th, at the age of 101 years. He had been actively engaged in the practice of his profession for seventy-five years.

LONGEVITY IN PARIS.—According to the *Gazette Médicale de Paris* there are at the present time 5 men in Paris over 100 years of age; it is noteworthy that none of these Methusalehs is married. There are 531 nonagenarians, 85 of whom are within a few months of completing their century of life. Of octogenarians there are no fewer than 10,617.

AN Austrian Society for the Prevention of Venereal Diseases, on the lines of the German Society recently established with the same object, has just been founded in Vienna. A provisional committee, consisting of Professors Finger and Schiff and Dr. Zemann, has been formed.

A POST-GRADUATE course of lectures and demonstrations will be given during the summer session in the Central Hall of the Central Out-patients Department, 7, Fitzroy Square, W., of the Mount Vernon Hospital for Consumption and Diseases of the Chest. An introductory address on the Cause of Tuberculosis will be delivered by Professor T. Clifford Allbutt, F.R.S., on Thursday, May 14th, when the chair will be taken at 4 p.m. by Sir Hermann Weber.

BEQUESTS.—Under the will of the late Miss Ann Lonsdale Formby, of Formby, Lancashire, the sum of £1,000 has been bequeathed to the Royal Infirmary, Liverpool, in memory of her late father, who was for many years physician to that hospital.—Under the will of the late Mrs. Elizabeth Crate, of South Kensington, the sum of £1,000 each has been bequeathed to the Cancer Hospital, Fulham Road, and the Brompton Consumption Hospital for the endowment of a bed in each of these hospitals.—By the will of the late Mr. Samuel Palmer, of Northcourt, Hampstead, a former treasurer of the institution, a legacy of £500, free of duty, has been left to the St. John's Wood and Portland Town Dispensary.

SCHOOLS FOR CRIPPLED CHILDREN IN NEW YORK.—There are four special schools for crippled children unable to attend the public schools in New York, which are carried on under the direction of the Children's Aid Society of New York City. The schools were established in 1898, and have now among them 248 pupils. The cost of educating the children is a trifle over £6 a head, as against £40 in the average institution for the crippled.

ANTICIGARETTE LEGISLATION IN AMERICA.—A Bill making it a misdemeanour to sell cigarettes to any person under 21 years of age, and imposing a fine of 100 dollars (£20) to 300 dollars (£60) for violations of the enactment, has passed the Pennsylvania Legislature. A similar Bill has passed the Wisconsin Assembly. It forbids the manufacture or sale of cigarettes or cigarette paper in the State, and comes into force on July 1st.

GERMAN PUBLIC HEALTH SOCIETY.—The German Public Health Society will hold its twenty-eighth annual meeting at Dresden on September 16th, 17th, 18th, and 19th. The following questions are proposed for discussion:—(1) In what direction do our existing measures for the prevention of tuberculosis require to be supplemented? (to be introduced by Professor Karl Fraenkel of Halle); (2) the hygienic regulation of hotels and public-houses (to be introduced by Dr. Boerntrager of Dantzig); (3) the sanitary supervision of the milk supply) to be introduced by Professor Dunbar of Hamburg; (4) the purification of drinking water by ozone (to be introduced by Dr. Ohlmueller of Berlin); (5) architecture in relation to public health (to be introduced by Herr Stubben of Cologne and Dr. Rumpelt of Dresden).

OPENING OF THE MILITARY HOSPITAL AT ALTON.—It is announced that the Military Hospital at Alton, Hants, will be formally opened on May 1st by Princess Louise. It will be remembered that, as recorded in the BRITISH MEDICAL JOURNAL of July 7th, 1900, p. 42, this hospital, which was intended eventually to become a sort of supplement to Netley and Woolwich, was initiated as a hospital and convalescent camp for sick and wounded soldiers from South Africa, and was to be built, equipped, and maintained, at any rate in the first instance by the "Absent-minded Beggar Relief Corps" formed by the *Daily Mail*. It was to be in every respect a civilian hospital, except that a military medical officer was to be given charge over it, and to be responsible for the statistics and reports required by the War Office. A park-like piece of land of 155 acres was secured on the slope of a wooded hill, and a railway siding connected with the light railway to Basingstoke was constructed so as to be immediately to the rear or the wards.

THE MISSION TO LEPERS.—The objects of "The Mission to Lepers" is to convert them to Christianity, and also to relieve as far as may be their sufferings and provide for their simpler wants. It has been in existence for a good many years now, and its twenty-eighth annual meeting was held on April 20th at Exeter Hall. The seat of the operations of the Society is the Middle and Far East, and the report presented at the meeting shows that its work is now carried on at 54 different stations. The number of inmates in the society's institutions, or in those aided by it now number 6,420, of whom some 2,500 have been converted to Christianity. A very useful part of the work carried on is the care, in separate establishments, of such children of lepers as at present show no taint of the disease. The work receives a certain amount of recognition from the Central Government of India, and a good deal from various native princes. According to the Committee there is great need, in addition to its present work, of establishing a central home for European lepers in some healthy situation in India. The accounts published at the meeting showed that the financial position of the Society at the present time is very good, the receipts for last year having been £21,395, while the expenditure was only some £15,000. The meeting was presided over by Sir A. Wingate, and members of several ordinary missionary societies in London took part in the proceedings.

Presentations.—At the recent annual meeting of the Chorlton Board of Guardians, the Chairman, on behalf of the Board, made a presentation of a purse of gold to Dr. J. Milsom Rhodes, who has been for twenty-one years a member of the Board. Dr. Rhodes in his acknowledgement referred to the improvement in workhouse dietaries and in the condition of workhouse children as the two great reforms which had taken place during his tenure of office, and expressed the opinion that the Poor-law guardians were now rendering a great service to the State.—Mr. G. Gardner Oakley, M.R.C.S., L.R.C.P.Lond., has recently been the recipient of a handsome case of pipes from the members of a men's ambulance class whom he instructed in "first aid." Mr. Oakley, in thanking the members, congratulated them on the excellent results of the examination recently conducted by Professor T. Wardrop Griffith, of Leeds, under the auspices of the St. John Ambulance Association. Fifty men qualified for attendance at the examination, forty-five of whom presented themselves, and forty-two passed.

MEDICAL VACANCIES.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column advertisements must be received not later than the first post on Wednesday morning.

BANGOR: CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House-Surgeon. Salary, £80, increasing to £100 per annum, with board, etc.

BATH: ROYAL MINERAL WATER HOSPITAL.—Resident Medical Officer; unmarried. Salary, £100 per annum, with board and apartments.

BIRMINGHAM: GENERAL HOSPITAL.—House Surgeon for Special Departments. Appointment for six months. Salary at the rate of £50 per annum, etc.

BIRMINGHAM WORKHOUSE INFIRMARY.—Assistant Resident Medical Officer. Salary, £100 per annum, with furnished apartments, rations, etc.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—Third House Surgeon. Salary £60 per annum, with board, residence, and washing.

CANCER HOSPITAL, S.W.—House-Surgeon. Appointment for six months. Salary, £70 per annum, with board and residence.

CHARING CROSS HOSPITAL.—Assistant Physician; must be F. or M.R.C.P.Lond.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—(1) Ophthalmic Surgeon, must be F.R.C.S.Eng. (2) Pathologist and Registrar. Honorarium, £100.

HALIFAX ROYAL INFIRMARY.—Third House-Surgeon; unmarried. Salary, £80 per annum, with residence, board and washing.

HEMEL HEMPSTEAD: WEST HERTS INFIRMARY.—House-Surgeon. Salary £100 per annum, with furnished rooms, board, and washing.

HOSPITAL FOR DISEASES OF THE THROAT, Golden Square.—House Surgeon. Salary, £50 per annum, with board and residence.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Surgeon; unmarried. Appointment for six months. Salary, £20.

LEEDS UNION.—Assistant Medical Officer for the Workhouse Schools and Infirmary; Salary, £130 per annum, rising to £150, with board, washing, and apartments.

LEICESTER INFIRMARY.—Clinical Clerk. Honorarium, £10 10s. for six months, with board, apartments, and washing.

LIVERPOOL INFECTIOUS DISEASES HOSPITAL.—Assistant Resident Medical Officer. Salary, £120 per annum with board, washing, and lodging.

LIVERPOOL ROYAL INFIRMARY.—Vacancies on Resident Staff. Appointments for six months. Board, residence, and washing provided.

MANCHESTER SOUTHERN AND MATERNITY HOSPITAL.—Resident House-Surgeon.

MARGARET STREET HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, W. (for Out-patients).—Physician.

MOUNT VERNON HOSPITAL FOR CONSUMPTION, Hampstead.—Junior Resident Medical Officer. Honorarium, £60.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Assistant House Surgeon. Salary, £50 per annum, with board, residence, and washing.

NORTHAMPTON GENERAL INFIRMARY.—House-Surgeons: unmarried. Salary, £125 per annum, with furnished apartments, board, etc.

NORWICH: NORFOLK AND NORWICH HOSPITAL.—Second Assistant House-Surgeon. Appointment for six months. Honorarium, £20, with board, lodging, etc.

SARAWAK MEDICAL DEPARTMENT.—Medical Officer; unmarried, and not more than 28 years of age. Salary, 300 dols. a month, and unfurnished quarters.

SHEFFIELD ROYAL HOSPITAL.—Junior Assistant House-Surgeon. Salary, £50 per annum, with board, etc.

SOCIETY OF APOTHECARIES, London.—Examiner in Medicine.

VICTORIA HOSPITAL FOR CHILDREN, Chelsea.—House Surgeon. Appointment for six months. Honorarium, £25, with board and lodging.

WESTMINSTER GENERAL DISPENSARY.—Honorary Dental Surgeon.

YORK COUNTY HOSPITAL.—House-Physician. Salary, £100, with board, residence, and washing.

YORK DISPENSARY.—Resident Medical Officer; unmarried. Salary, £110 per annum, with board, lodging, and attendance.

MEDICAL APPOINTMENTS.

Armour, Donald John, B.A., M.B.Tor., M.R.C.P.Lond., F.R.C.S.Eng., appointed Assistant Surgeon to the West London Hospital.

Bannerman, James, M.B., C.M.Edin., appointed Medical Officer of Health for Stanhope Rural District, and Medical Officer and Public Vaccinator for Stanhope District of Weardale Union.

Brander, Wm., M.B., Ch.B.Aberd., appointed Resident Medical Officer to the Ecclesall Bierlow Union Infirmary, Sheffield.

Brightmore, H. S., M.B., Ch.B.Vict., appointed District Medical Officer of the Salford Union.

Brown, Josephine, M.B.Lond., appointed Assistant Medical Officer to the Lincoln County Asylum, Bracebridge.

Brown, W. Brodie, M.B., C.M.Aberd., appointed Medical Officer and Public Vaccinator for Aboyne and Glentanner, *vice* A. D. Kuth, M.B., C.M., resigned.

Evans, D. R. Powell, L.R.C.P.Lond., M.R.C.S.Eng., L.S.A.Lond., appointed Clinical Assistant to the Samaritan Hospital for Women.

Forde, G. R., M.R.C.S.Eng., L.R.C.P.Lond., appointed District and Workhouse Medical Officer of the Rochford Union.

Harrison, James, M.R.C.S.Eng., L.R.C.P.Edin., appointed Medical Officer for the Workhouse and First District of the East Grinstead Union.

Haynes, W. F., L.R.C.P.Lond., appointed District Medical Officer of the Bishop's Stortford Union.

Heggs, T. Barrett, M.B., Ch.B., appointed House Physician to the Sussex County Hospital, *vice* J. Henderson, M.B., resigned.

Hodgson, H. W., M.R.C.S.Eng., L.R.C.P.Lond., appointed Second Assistant Medical Officer of Whitechapel Union.

Jardine, Robert, M.D.Edin., M.R.C.S.Eng., L.F.P. and S.Glas., F.R.S.Edin., appointed Professor of Midwifery in St. Mungo's College, Glasgow, *vice* Dr. James Stirton, resigned.

Johnston, G. A., M.D.Brux., F.R.C.S., L.R.C.P.I., appointed District Medical Officer of the Kendal Union.

Kerr, Harold, M.B., Ch.B.Edin., appointed Assistant House-Surgeon to Rotherham Hospital and Dispensary.

Kitchin, E. H., M.B., B.C.Cantab., appointed Medical Officer of the Skipton Union Workhouse.

Knapton, George, L.R.C.P.Edin., etc., appointed Medical Examiner for the Scottish Imperial Insurance Company.

Mackay, James, M.B.Aberd., etc., appointed Medical Examiner for Hearts of Oak Benefit Society for Manchester, Moss Side, and Old Trafford.

MacLennan, Alex., M.B., C.M., L.M., appointed Visiting Surgeon to the Glasgow Training Home for Nurses, *vice* Dr. G. H. Edington.

Nyhan, Denis, L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg., appointed Medical Officer of Health to the Bromsgrove District Council, *vice* S. Shaps n, M.B., resigned.

Perry, F. W., L.R.C.P., L.R.C.S.I., appointed District Medical Officer to the Malling Union.

Toms, A. M., M.R.C.S.Eng., L.S.A., appointed District Medical Officer of the Tenterden Union.

Wasdale, J. D., M.B., appointed Lecturer on Ophthalmology in the University of Durham College of Medicine, Newcastle-upon-Tyne.

Whipham, T. R. C., M.B., B.Ch.Oxon., M.R.C.P.Lond., appointed Physician to Out-patients to the Evelina Hospital for Sick Children.

White, J. B., M.D., M.Ch., R.U.I., appointed Medical Officer to the Homerton Workhouse of the City of London Union.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Society of London, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Mr. H. P. Waterhouse will introduce a discussion on the Treatment of Rectal Cancer.

Odontological Society of Great Britain, 20, Hanover Square, W., 8 p.m.

TUESDAY.

Royal Medical and Chirurgical Society, 20, Hanover Square, W., 8.30 p.m.—Dr. Cecil Wall: On Acute Cerebro-spinal Meningitis caused by the Diplococcus Intracellularis of Weichselbaum: A Clinical Study.

FRIDAY.

Society of Anæsthetists, 20, Hanover Square, W., 8.30 p.m.—Mr. Crouch: On Three Cases of Vagus Inhibition from Chloroform.

West Kent Medico-Chirurgical Society, Royal Kent Dispensary, Greenwich Road, S.E., 8.45 p.m.—The President (Dr. George Herschell) will deliver an address on the Diagnosis of Cancer of the Stomach in its Earliest Stage.

West London Medico-Chirurgical Society, West London Hospital, Hammersmith, W., 8 p.m. Special General Meeting, 8.30 p.m.—Mr. Lunn: An Obscure Case of Intestinal Obstruction due to an Obturator Hernia.—Continuation of discussion on Dr. Squire's paper on the Modes of Cure in Tuberculosis of the Lung.

Laryngological Society of London, 20, Hanover Square, W., 5 p.m.—Cases, specimens, and instruments will be shown by Dr. W. H. Kelson, Dr. Herbert Tilley, Mr. Atwood Thorne, Dr. Bronner, and others.

POST-GRADUATE COURSES AND LECTURES

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C. Demonstrations will be given at 4 p.m. as follows:—Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, eye. Lectures will also be given at 5.15 p.m. as follows: Monday, On Blood Coagulability and its Relation to Oedema and Serous Effusions generally; Tuesday, Chorea; Wednesday, Mental Unsoundness amounting to Certifiable Insanity; Thursday, The Tongue in Disease; Friday, Insects of Medical Interest.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

Cook.—At Mengo, Uganda, February 21st., the wife of J. H. Cook, M.S., M.B., F.R.C.S., of a son (Norman Ethelbert).

Healey.—On April 16th, at Ravenswood, Preston, the wife of Edridge Healey, a son.

Parker.—On April 18th, at Clovelly, Kilmalcolm, Renfrewshire, the wife of James Parker, M.B., C.M., of a daughter.

Williams.—On April 9th, at Doveron House, Tunstall, the wife of George H. Williams, L.R.C.P., L.R.C.S.Edin., of a son.

MARRIAGES.

Davies—Lane.—April 15th, at St. Swithin's, Hempsted, Gloucester, by the Rev. John George, Vicar of Northmoor, Oxford, cousin of bridegroom, assisted by the Hon. and Rev. C. R. Sinclair, rector, Richard Davies, M.D.Edin., M.R.C.S., L.R.C.P., of Pulteney Villa, Cheltenham, to Dorothy Kathleen Lane, only daughter of Sidney Lane, of Hempsted.

Fairley—Stanley.—On April 15th, at St. Michael and All Angels, Bedford Park, W., by the Rev. A. Cooke, uncle of the bride, assisted by the Rev. J. Wilson, M.A., Samuel B. Fairley, M.D., of Gravelly Hill, Birmingham, to Helen Stanley, L.R.C.P.E. and S.E., younger daughter of the late Captain Francis Cooke Stanley, and granddaughter of the late Major Richard Ireland Stanley, London.

Morrow—McLaughlin.—On April 8th, at Whitebbey Presbyterian Church, by the Rev. R. K. Harris, B.A., assisted by the Rev. J. R. Prenter, M.A., John S. Morrow, B.A., M.D., Belfast, to May, eldest daughter of W. H. McLaughlin, Macedon, Belfast.

Mummery—Hope.—On April 21st, at All Saints, Knightsbridge, by the Rev. Canon Hensworth Shore, John Percy Lockart Mummery, B.A., F.R.C.S., eldest son of T. Howard Mummery, to Ethel, third daughter of Adrian Hope, of 55, Prince's Gate.

Smith—Bostock.—On April 16th, at the Parish Church, Horsham, by the Rev. Charles Bostock, of North Waltham, assisted by the Rev. Canon Daniel, Vicar of the parish, Edward Protheroe Smith, M.A., C.S., L.R.C.P., of Redditch, Worcestershire, eldest surviving son of Heywood Smith, M.D., of Woburn Street, to Eva Mary, eldest daughter of E. Ingram Bostock, M.R.C.S., of Horsham.

Steele—Brown.—On Wednesday, April 15th, at St. Paul's Church, Carlisle, by the Rev. W. D. Keit Steele, incumbent of Christ Church, Bromley, Kent, brother of the bridegroom, assisted by the Rev. W. E. Strickland, Vicar, and the Rev. J. B. Seaton, curate, Richard Irvine, solicitor, fourth son of the late Thomas Steele, of Friarsgarth, Cumberland, formerly Judge in the Ceylon Civil service, to Helen, eldest daughter of William Brown, F.R.C.S.E., Medical Officer of Health for the City of Carlisle. Mrs. R. I. Steele at home, Scotby, from May 15th to 30th.

Thomson—Style.—On April 21st, at St. Mary's Church, Shrivenham, by the Rev. J. C. Saunders, Rector of Folksworth, uncle of the bride, assisted by the Rev. A. T. Harvey, Vicar of the parish, Henry Torrance Thomson, M.D.Edin., to Margaret Helen Style, M.B., daughter of the Rev. George Style, Headmaster of Cheltenham College.

DEATH.

Halliday.—At Halifax, Nova Scotia, on March 10th, 1903, Andrew Halliday, M.B., C.M., D.P.H., aged 36 years, son of the late Andrew Halliday, Coxelram, Dumfriesshire, Scotland.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which the special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

MOUTH BREATHING AND SMOKING.

T. R. G. writes: I am curious to learn if pipe smoking has been made the subject of experiment in the treatment of mouth-breathing. Are smokers generally less addicted to this abnormal form of breathing than those who do not smoke? My impression is that the habitual contraction of the orbicularis oris and jaw muscle should exercise a beneficent effect.

ANSWERS.

WIGWAM.—(1) The tablets mentioned are said to contain thyroid substance, but we have no positive information. (2) Phloridzin is a glucoside obtained from the bark of some rosaceous plants, namely, apple, plum, cherry, etc.

T. G.—(1) Nutrose used in the preparation of Drigulski and Conradi's medium is a milk product, and can be obtained from Meister, Lucius, and Brüning, Hoechst O.M., Germany; London address, 51, St. Mary's Axe, E.C. (2) For particulars with regard to Class's diplococcus and its relation to scarlet fever, reference may be made to recent papers of Klein and Gordon published in recent reports of the Medical Officer to the Local Government Board of England.

NICHOLAS.—(1) We expressed our opinion as to the Manhu diabetic food in the BRITISH MEDICAL JOURNAL of September 28th, 1901, page 906. (2) Either of the following works would probably meet our correspondent's requirements: *The Principles and Practice of Medicine*, by William Osler, M.D. (London: Henry Kimpton. 18s.) A new edition is to be issued shortly. *A Manual of the Practice of Medicine*, by Frederick Taylor, M.D. Sixth Edition. (London: J. and A. Churchill. 1901. 16s.)

HETOL.

DR. GEORGE J. DUDLEY will find reports by various practitioners of their experience with hetol in the EPITOME of February 22nd, 1902, par. 110; September 20th, 1902, par. 178; August 17th, 1901, par. 115; May 5th, 1901, par. 350; April 27th, 1901, par. 283; and in the BRITISH MEDICAL JOURNAL of September 7th, 1901, p. 663.

CHOLESTERINE IN URINE.

S. J. R. writes: In three cases in which I have noted the presence of cholesterine in the urine the nervous system has been at fault: (1) A patient suffering from diabetes with neuritis; (2) a patient suffering from cystitis, the result of a myelitis: (3) a patient suffering from locomotor ataxia. In the first case cholesterine appeared three days before the onset of coma, lasted 24 hours, and then fatty casts appeared in the urine. In the second case cholesterine appeared in the urine two days after the onset of cystitis, and persisted for three days. In the third case cholesterine appeared in the urine after a gastric crisis. It persisted for four days. Therefore in all three cases we had an abnormal condition of the nervous system, and again the phenomenon was transitory only. If other correspondents will give their experience the clinical significance of cholestinuria might be solved.

DR. W. SYKES (Exeter) writes: Sir William Roberts described a case of his own in the fourth edition of his *Urinary and Renal Diseases*, 1885, where he also gives a few references to other notices of the condition, together with a woodcut of the microscopical appearance of cholesterine crystals in urine. He describes it as present in the fatty deposits of that secretion in cases of Bright's disease, in pyonephrosis, in one case of epilepsy, and, in his own patient, in a case of haematuria with fibrous casts of the ureter. Dr. William Hunter gives, in Allbutt's *System of Medicine*, vol. iv. p. 34, an interesting account of the genesis of cholesterine, from which it appears that it is a substance very widely distributed in the human body. It is found, among other situations, in pus and in the secretions of mucous membranes generally, whence possibly its presence in the urine. Von Jaksch (*Clinical Diagnosis*, 4th edition, p. 289) saw it but once in crystalline form in the urine in a case of tabes and cystitis. Rider and Delépine, in their *Atlas of Urinary Sediments*, p. 44, say that it is to be found as a urinary sediment in cases of lipuria, in lardaceous and fatty degenerations of the kidneys, in nephrolithiasis, in hydatid disease of the kidneys, and in cystitis.

TRICHORRHEXIS NODOSA.

DR. NORMAN MEACHEN (Loudon, W.) writes in reply to "M.R.C.S.": Acting upon the supposition that the disease is of a parasitic origin, one of the best applications is a weak corrosive sublimate lotion, which has been strongly recommended by Pabon and Suarez. The strength employed is 1 in 1,000, in equal parts of ether and alcohol. If the affected hairs be in a protected situation, frequent shaving may be practised, the area being meanwhile rubbed with an ointment containing sulphur 5j, carbolic acid mxx, and zinc oxide gr. x to vaseline 5j. Such measures should finally be successful, but the affection is very often most rebellious to treatment.

LETTERS, NOTES, Etc.

ETIOLOGY OF SLEEPING SICKNESS.

UNDER this head there was published in the BRITISH MEDICAL JOURNAL of March 14th at page 617 a report by Dr. Castellani, a member of the commission sent out to Uganda under the auspices of the Royal Society to investigate sleeping sickness. The report was furnished to us by the Secretary of the Royal Society at the request of Dr Castellani. We are informed that some readers have assumed that the Royal Society was responsible for the publication of the report in question; this was not stated, nor, so far, as we can see, implied in our article; but in order to remove any misapprehension we take this opportunity of stating that the report was published on Dr. Castellani's responsibility.

AN EXPLANATION.

MRS. MARIA THERESA EARLE (Sloane Gardens, S.W.) writes: Dr. Mitchell of 21, Park Lane, Little Horton, Bradford, Yorks, has called my attention to the fact that the reference in my book entitled *A Third Pot-Pourri* to him as recommending vegetarianism to his patients is not warranted by facts, and is calculated to injure his standing in his profession and affect his practice. I made the statement on the authority of another gentleman, and did not, as I suppose I ought to have done, check the correctness of the information. I have already offered Dr. Mitchell my sincere apologies. Would you, sir, help me by inserting this letter to repair the error which my publishers will correct in all future copies?

LETTERS, COMMUNICATIONS, ETC., have been received from:

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BOOKS, ETC., RECEIVED.

Report of the Proceedings of the Thirty-first Annual Poor-law Conference, held in the Guildhall, London, on March 10th and 11th, 1903. London: P. S. King and Son. 1903. 1s.

Essays on Clinical Medicine. By Beverley Robinson, A.M., M.D. (Paris). Philadelphia: William J. Dornan. 1903.

Indigestion: its Prevention and Cure. By F. Herbert Alderson, M.B. London and Newcastle-on-Tyne: The Walter Scott Publishing Co., Ltd. 1903.

The Manual Treatment of Diseases of Women. By Gustaf Norström, M.D. New York and London: G. E. Stechert. 1903. 10s.

Le Cloisonnement Vésical et la Division des Urines. Par le Dr Fernand Cathelin. Paris: J. B. Baillière et Fils. 1903. Fr. 1.50

Die physikalisch diätetische Therapie in der ärztlichen Praxis. Von Dr. med. Bernhard Presch. Lieferung VI. Würzburg: C. Kabitzch. 1903. M. 3.

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Remarks

ON THE

OPERATIVE TREATMENT OF CHRONIC FACIAL PALSY OF PERIPHERAL ORIGIN.

(With Special Plate.)

BY

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Assistant Surgeon to the Norfolk and Norwich Hospital, Norwich;

AND

PURVES STEWART, M.A., M.D., M.R.C.P.,

Assistant Physician to the Westminster Hospital.

THE prognosis in facial palsy of extracerebral origin is a very variable one. Whilst in the majority of so-called "rheumatic" cases the prospects of recovery are good, yet in other cases, and especially those due to traumatism or to involvement of the Fallopian aqueduct by a suppurative otitis media, recovery may not occur and the patient is doomed to lifelong disfigurement.

The following series of cases is an attempt to deal with the uncured residue by performing an anastomosis between another healthy nerve and the distal segment of the paralysed facial. The *rationale* of this procedure is based to a large extent upon the conclusions arrived at in a work published by two of us over a year ago,[1] according to which regeneration occurs in the distal segment of a divided nerve, even when separated from the central. Such regeneration, however, does not reach full maturity unless the distal segment is joined to the proximal, so as to permit of transmission of impulses between the nerve centres and the periphery.

According to the other view, hitherto the more popular one, regeneration occurs by a process of downgrowth from the central into the distal segment. The latter plays an entirely passive part, and unless reunited becomes reduced after a time to a mere fibrous cord along which the downgrowth of nerve fibres from the central segment towards the periphery with any hope of reaching the muscles is practically impossible.

If, on the other hand, as we have demonstrated, regeneration occurs (immature, it is true) in the distal segment itself, no interval of time ought to be too long for attempted reunion so long as any muscle fibres survive which can be innervated by the regenerated and reunited nerve. Thus, for example, in one of our cases the paralysis had existed for almost three years and yet recovery subsequently occurred. And we see no reason on *a priori* grounds why this limit should not be exceeded, providing always, as already stated, muscle fibres are still present to be innervated by the recovering nerve.

The method of procedure in the present series of cases was as follows:—Having first assured ourselves by galvanic stimulation that muscle fibres still survived on the paralysed side of the face, the facial nerve was exposed by operation at its point of exit from the stylo-mastoid foramen. The nerve trunk was cut across as high up as possible, and a minute portion of the distal segment was reserved for microscopic examination. The spinal accessory nerve was then exposed, its sheath incised at a level convenient for union with the divided facial, and into it the distal segment of the facial nerve was fixed by means of fine silk sutures. After healing of the wound, the muscles on the paralysed side were assiduously stimulated by daily galvanism for months, until faradic excitability reappeared, when faradism was substituted.

In every case where microscopic examination was carried out, new nerve fibres were demonstrated in the distal segment of the paralysed facial. (Compare Figs. 8, 9, and 10.)

HISTORICAL NOTE.

In 1895 the facial nerve was united to the spinal accessory by one of us at St. Thomas's Hospital for the relief of facial palsy due to ear disease. (Case 1.) In 1898 Faure[2] united the trunk of the facial to the trapezius branch of the spinal accessory, the branch being divided and end-to-end anastomosis being carried out on the posterior belly of the digastric muscle. The result was not satisfactory. In 1899 Kennedy[3] divided the facial nerve for facial spasm, and united it to the spinal accessory (end-to-side junction). The spasm was cured, and subsequently remarkably free movement of the face occurred on movement of the shoulder. In January, 1903, one of us united the facial to the hypoglossal (end-to-side junction), but the result of this operation cannot be determined for some months yet.

CLINICAL CASES.

CASE I.—G. G., a boy 11 years of age, was operated on in 1895 for left-sided otitis media. The left face became paralysed after operation, and facio-accessory anastomosis was performed six months later. The boy disappeared from observation for seven years, but reappeared again in 1902. His condition now is interesting. There is apparent left facial palsy, flaccid in type, with drooping of the angle of the mouth and widening of the palpebral aperture. (See Fig. 1.) There is also an old internal strabismus of the left eye, dating from infancy and quite unconnected with his facial palsy. All the muscles of the face react briskly and normally, both to faradism and to galvanism. Taste in the anterior part of the tongue is still absent on the affected side. No voluntary dissociated movement can be carried out in the left face, but on raising the left shoulder against resistance, marked contraction occurs on the left side of the face, and is maintained as long as the trapezius is innervated. (See Fig. 2.) Occasional fibrillary tremors occur in all the muscles of the left face.

CASE II.—Miss Q., 23 years of age, suffered from left-sided otorrhoea for twenty years. In addition, within the last seven years she had also had numerous attacks of left facial palsy. A fortnight after her seventh and last attack of palsy in April, 1901, the ear condition was operated upon, a cholesteatomatous mass being removed from the mastoid. The bony wall of the Fallopian aqueduct was found to be eroded, and the facial nerve lay exposed on an open shelf instead of within a closed canal. The facial muscles on examination were completely paralysed, had lost their excitability to faradic shocks, and the galvanic reactions though present were sluggish and with reversed polar phenomena. Taste was lost in the anterior two-thirds of the tongue on the affected side. In December, 1901, eight months after the onset of the last attack of facial palsy, electrical treatment having meanwhile proved unavailing, facio-accessory anastomosis was performed. Some transient weakness of the left sterno-mastoid and trapezius muscles followed, but these two muscles did not lose their faradic excitability, and rapidly recovered. It was not, however, until October, 1902, nine months after the operation, that any return of motor power was noticeable. At that date, when the left shoulder was elevated against resistance, there was a twitch of the orbicularis palpebrarum and an outward movement of the angle of the mouth. The previous flaccidity of the face was also much diminished, and the deformity of the face very slight when at rest. Taste was still absent in the anterior part of the tongue on the affected side.

CASE III.—The case was one of a married woman, aged 33, who had been under the care of Dr. Wright, of Eye. She was admitted into the Norfolk and Norwich Hospital on August 12th, 1901, suffering from right otitis media, for which, on August 16th, the mastoid operation was performed. Complete right facial paralysis followed the operation with wasting of muscles and loss of faradic contractility. Six months after operation although the constant current had been regularly applied, there was no sign of return of voluntary power. The difference in the two sides of the face when at rest, was, however, not so marked as immediately after the operation, a certain amount of contracture having ensued. At this period it was noted that all the muscles supplied by the facial nerve reacted well to the galvanic current—a very slight response to the faradic current was also noticed in the orbicularis palpebrarum, levator labii superioris, levator labii superioris alaeque nasi, orbicularis oris, and depressor anguli oris. On February 23rd, 1902, that is, a little more than six months from the date of the mastoid operation, the patient was placed under chloroform and a faradic current of a strength greater than she could bear on the skin of the face without an anaesthetic was applied and all the muscles responded well. The right spinal accessory and facial nerves were exposed. A faradic current was then applied directly to the trunk of the facial nerve, and all the facial muscles immediately contracted vigorously. The nerve was divided in the canal ½ in. above the stylo-mastoid foramen by chiselling away the overlying bone, and the distal portion, after a length of ½ in. had been removed for microscopical examination (see Fig. 10), was brought down and attached end-to-side by three sutures of 0000 French silk to the spinal accessory trunk. The sheath of the spinal accessory was vertically incised for ½ in. at the spot selected for the union, and it was thought that two of the sutures included a few fibres of the nerve in addition to the cut edge of the sheath. The wound was closed and the patient's head inclined to the right shoulder by means of bandages to relieve the nerve junction of all tension. Three weeks after the operation there was no response to faradism in any of the facial muscles, and the orbicularis oris and levator labii superioris were alone excitable to galvanism, and that to only a very slight degree. A week later, however, all the muscles responded to the constant current. There was considerable wasting of the sterno-mastoid as a result of the second operation, and it was not till a month had elapsed from that date that any voluntary power could be detected in it. The facial paralysis certainly appeared to be more pronounced after the operation than when examined immediately before it, and this was quite noticeable a month later when she left the hospital. Three months after operation a little voluntary power was first detected in the muscles of the right side of the face, more marked in those of the lower than in those of the upper half. This movement was

associated with contraction of the right sterno-mastoid and trapezius The facial muscles showed no reaction to the faradic current, but responded well to galvanism. Eight months after operation voluntary power had returned more completely, especially in the lower half of the face. She was able by a strong effort to close the eye entirely. The sterno-mastoid had regained a considerable amount of power (Figs. 3, 4, and 5 were taken at this period). Every voluntary movement in the right side of the face, however, was associated with contraction of the sterno-mastoid and trapezius, and conversely, contraction of these muscles was associated with movement of the face. When the patient was working her sewing machine with the right hand, each revolution of the wheel was accompanied by a contraction of the face, there being no power of dissociated movement. She had developed the habit, when wishing to move the right side of the face, of gripping the right hand with the left, thus partly fixing the shoulder and thereby making its movement less noticeable. During emotional excitement, for example, laughing, the left side of the face alone moved, the right being motionless All the facial muscles reacted to the faradic current, though less briskly than on the healthy side: they also all reacted well to the constant current. Ten months and a-half after operation the patient stated that she felt more power in the face, that food no longer lodged in the cheek, and that the movement of the shoulder associated with that of the face and that of the face with the shoulder was much less. The associated movement of the face when turning the handle of the sewing machine had almost disappeared. Upon examination, this diminution in the associated movements was quite evident and yet there was no absolute dissociation of the two. In laughing the left side of the face still moved alone. The facial muscles reacted well to galvanism, the frontalis better than the rest. To faradism the reaction had improved, but the frontalis was not so easily excitable as the other muscles, and voluntary power had not recovered in it to the extent that it had in the rest of the face.

CASE IV.—Miss Z., 36 years of age, suffered from left-sided chronic otitis media, for which an operation was performed in October, 1901. On the second day after operation total left-sided facial palsy appeared, with loss of taste in the anterior two-thirds of the tongue on that side. In spite of electrical treatment the paralysis remained permanent. After four months slight contracture of the paralysed muscles developed, and the electrical reactions were those of profound degeneration. In February, 1902, four and a-half months after the onset of the palsy, facio-accessory anastomosis was performed. Under the anaesthetic no reaction could be obtained in the paralysed muscles to strong faradic shocks applied through the skin, but direct stimulation of the exposed nerve trunk caused brisk contraction of all the paralysed muscles. After the operation the contracture disappeared, the paralysed side of the face again becoming flaccid, and there was superadded a paralysis of the left sterno-mastoid and upper part of the trapezius. These two latter muscles were found, three months after the operation, to have recovered. Four and a-half months after operation, on elevating the left shoulder against resistance; slight movement was observed in the zygomatic muscles of the paralysed side, and this movement gradually increased in strength, until after the lapse of seven months from the operation there was marked elevation of the angle of the mouth (Fig. 7) and of the ala nasi, with some contraction in the orbicularis palpebrarum. The flaccidity of the face also disappeared, so that at rest it was practically symmetrical (Fig. 6). In November, 1902, nine months after the operation, faradic excitability was found to have reappeared in the muscles of the left face, and the galvanic reactions, though sluggish, now showed normal polar differences. Fibrillary tremors were also visible at the angle of the mouth. No voluntary movement could yet be performed without simultaneous elevation of the shoulder—that is, the patient could not dissociate the movements of the face from those of the shoulder. Moreover, the facial movements were so easily elicited by slight shoulder movements that the patient had to carry her parasol or umbrella in the right hand instead of the left, otherwise involuntary facial movements so readily occurred that awkward misunderstandings with strangers resulted. The loss of taste was as before. In January, 1903, eleven months after operation, elevation of the inner end of the eyebrow reappeared.

CASE V.—At the age of 15 years Miss X. fell through the skylight of a conservatory, a distance of over 15 ft., sustaining a fracture of the base of the skull, with right facial palsy and deafness of the right ear. The deafness cleared up in about a year and a-half, but the facial palsy remained complete when she came under our observation nearly three years after the original injury. The right facial muscles were then totally paralysed, flaccid, and exhibited the electrical reactions of degeneration, loss of faradic excitability with sluggish response to galvanism, the anodal contraction at closure being greater than the kathodal. Taste was lost in the anterior two-thirds of the tongue on the affected side. The most assiduous treatment by massage and electrical stimulation ever since the original accident had been carried out but had failed to produce the slightest improvement. Accordingly an operation was recommended and in April, 1902, two years and eleven months after the accident, facio-accessory anastomosis was performed. Whilst the patient was under the anaesthetic, the strongest faradic shocks applied through the skin failed to produce any reaction in the paralysed muscles. But when applied direct to the trunk of the facial nerve after its exposure in the wound, it produced faint contraction in the orbicularis oris and in the lower-lid fibres of the orbicularis palpebrarum. For two months after operation, the sterno-mastoid and upper portion of the trapezius were paralysed, with loss of faradic excitability; they then recovered completely. Careful galvanic treatment was meanwhile applied to the paralysed facial muscles, and in September, 1902, five months after operation, slight movement first appeared in the face when the right shoulder was elevated against resistance. The earliest facial movement to return was a horizontal outward movement of the angle of the mouth. A few weeks later, on innervation of the trapezius as before, the eye could also be partially closed and the angle of the mouth was drawn outwards and upwards. The loss of taste remained as before. Microscopic examination demonstrated the presence of young nerve fibres in the distal segment. (See Figs. 8 and 9.)

CASE VI.—M. K., a girl, aged 18 years, had chronic middle-ear disease, for which she was operated on in February, 1902. Ever since, the right face had been totally paralysed, and in August, 1902, six months after the onset of the palsy, no improvement having occurred meanwhile, one of us was requested to admit her to St. Thomas's Hospital in order that facio-accessory anastomosis should be carried out. The electrical reactions were those of profound degeneration. When last seen in January, 1903, four months and a-half after the operation, no recovery had yet taken place, the face was still flaccid and paralysed, and the electrical reactions as before. Galvanic treatment is still being carried out.

CASE VII.—Facio-hypoglossal anastomosis:—Mrs. B., aged 44, had suffered from right facial palsy for twelve months. On admission to the National Hospital for the Paralysed, Queen Square, on December 19th, 1902, there was complete right peripheral palsy. No contraction to faradism was obtained in the face muscles. There was also anaesthesia in the distribution of the inferior dental nerve, and loss of taste in the anterior two-thirds of tongue. The condition was due to a tumour of the right ramus of the lower jaw. On January 9th, 1903, the right ramus of the lower jaw was removed, together with a cystic tumour. The hypoglossal nerve was defined, the occipital artery and descendens nerve being divided so as to free the hypoglossal. The facial nerve was divided at the stylo-mastoid foramen and sutured (end-to-side junction) to the hypoglossal. On February 2nd there was considerable atrophy of the right side of the tongue, which was protruded towards the paralysed side. The facial muscles are being treated by galvanism. As yet there is, of course, no recovery in them.

MODES OF OPERATION.

In Case I (1895) the spinal accessory was half cut through, and in the niche thus formed the trunk of the divided facial was fixed by fine silk sutures.

Faure's (1898) first method was the end-to-end suture of the divided trapezius branch of the spinal accessory with the end of the divided facial. The union was effected on the surface of the posterior belly of the digastric. Faure's second method consisted of the division of the trapezius branch of the spinal accessory. This was then brought upwards outside the belly of the digastric and fixed end-to-side to the uncut trunk of the facial.

Kennedy's method (1899) consisted in division of the spinal accessory, with the exception on one side of its perineurium, and the suturing, end-to-side, of the divided trunk of the facial into this gap.

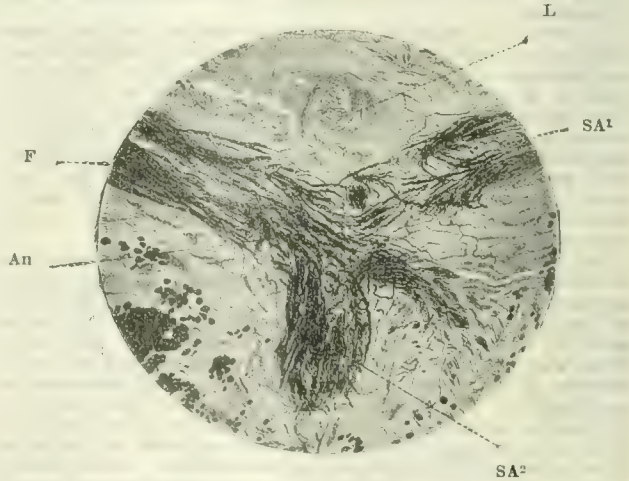


Fig. 11.—Facio-spinal anastomosis in the dog. Thirteen months after operation. F, facial nerve. SA¹, spinal accessory (central end). SA², spinal accessory (peripheral end). L, silk ligature. An, point of anastomosis. After Manasse. (*Langenbeck's Archiv*, 1900. Bd. lxii).

Manasse[4] (1900) recommended the division of the facial nerve at the stylo-mastoid foramen and the suturing of the cut trunk, end-to-side, to the spinal accessory (Fig. 11). This operation required, of course, the division of the posterior belly of the digastric, and it is practically the one which we now recommend with very slight modification (see Fig. 12).

Barrago-Ciarella[5] (1901) performed some interesting experiments on dogs. He found that recovery of movement in the face after facio-accessory anastomosis commenced in four and a-half months and was complete in six months, and that

recovery after facio-vagal anastomosis commenced in six months and was complete in eight. Our cases show that in man recovery after facio-accessory anastomosis takes about the same time as in the dog. (In Case III recovery commenced three months after operation.)



Fig. 12.—To illustrate the method of end-to-side anastomosis, recommended for facio-accessory or facio-hypoglossal anastomosis. The spinal accessory or hypoglossal nerve (SA) is shown with a longitudinal incision in its sheath which gapes, and thus exposes the nerve fibres. A short longitudinal incision in the sheath of the facial (F) is also made so as to expose freely the nerve fibres, which retract somewhat into the sheath when the trunk of this nerve is severed. The figure to the left shows the fine silk threads passing through the sheath only of each nerve, that to the right shows the sutures drawn tight and tied.

From the above series of facio-accessory cases it will be observed that in five patients out of six voluntary movement has already reappeared in the paralysed facial muscles, the nerve prior to operation having been paralysed for periods varying from five months to three years. In the sixth case, only four and a half months have elapsed since operation, and we therefore anticipate that recovery will yet occur. (In Case II the first sign of returning movement did not appear until nine months after operation.)

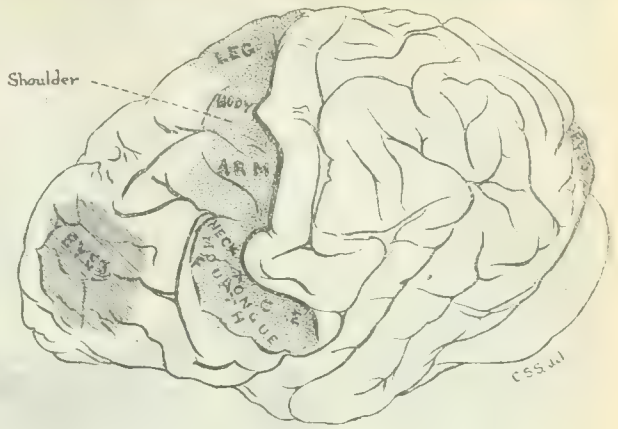
One of the immediate results of operation is invariably to produce a temporary palsy of the sterno-mastoid and upper part of the trapezius, due to affection of the spinal accessory. This clears up completely in all cases. Another point of interest is that if the paralysed muscles have already developed contracture, to however slight a degree, they at once become flaccid again; in fact, in several cases where clinically the muscles before operation appeared to be flaccid, this flaccidity seemed to become actually exaggerated, a condition for which we do not offer any explanation, except that possibly in such cases the nerves, though completely disconnected from the brain, do in some way, by virtue of the regeneration that has taken place in them, exert an influence on the muscles.

An observation to which it is desirable to draw attention is that the facial muscles during operation (see Cases V and VI), in which the patient was completely anaesthetized, though unresponsive to the strongest faradic shocks applied through the skin, nevertheless reacted when the peripheral end of the divided facial nerve was stimulated directly. This is possibly a clinical evidence of peripheral regeneration.

After operation, motor power returns in the affected muscles before faradic excitability; thus in Case IV, where motor power returned at four and a-half months, faradic excitability did not reappear until the ninth month.

Contemporaneously with the recovery of motor power, the muscle tonus in a certain number of cases also returns, so that at rest the face becomes again symmetrical, instead of distorted as before. This is well seen in Figs. 3 and 6. Such recovery from disfigurement is in itself no small benefit, especially in the case of lady patients. We must admit, however, that the flaccidity does not always disappear, even where motor power returns, as in Case I. (See Fig. 1.)

So far, in our series of facio-accessory cases we have not observed any independent movement of the face, unassociated with that of the trapezius and sterno-mastoid, although in several cases a minimal innervation of the trapezius is sufficient to cause facial contraction. The accomplishment of dissociated facial movement is, of course, a matter of education of the cortex, or of that part of it from which shoulder movements are initiated. Such a patient will require to educate afresh part of the shoulder centre at the junction of the upper and middle thirds of the ascending frontal gyrus, to do the work of the old facial centre some distance away, in the lower third of the same gyrus. (See Figs. 13 and 14.)



The left hemisphere of brain of Chimpanzee

Fig. 13.—Sherrington and Grünbaum's motor areas. (Note relative positions of face, tongue, and shoulder centres.)

Bearing this in mind, we considered whether it might not be practicable to select for anastomosis with the distal segment of the paralysed facial some other healthy nerve supplying muscles whose cortical centre is nearer to the face centre than in the case of the shoulder. The hypoglossal nerve and the cortical tongue centre fulfil these requirements.

As will be seen from the accompanying diagrams (Figs. 13 and 14) the face centre and the tongue-centre overlap one another, and we would therefore anticipate that the prospects of dissociated facial movement through the tongue-centre would be greater than when working through the shoulder-centre. Moreover it may be recalled that the movements of the tongue are closely associated with those of the lips, so much so that in health the orbicularis oris and the transverse fibres of the tongue always contract together. It is more than probable that the facial nerve derives its lip fibres from the hypoglossal nucleus. There is, therefore, a close relation, not only between the cortical face-centres and tongue-centres, but also between the facial and hypoglossal nuclei in the bulb.

Accordingly, in a case of facial palsy due to tumour in the parotid region, one of us, after removal of the tumour, united the distal segment of the facial to the healthy hypoglossal (Case VII). And this latter operation of facio-hypoglossal anastomosis is the one which we would recommend in future in preference to that of facio-accessory union.

In a letter to one of us in criticism of Case III. Professor E. A. Schäfer states that, in his opinion, although the cortical face centre had been cut off from its peripheral connexions for a period of six months, yet it would not have lost its power to start impulses, and since the movements of the two sides of the face are commonly associated, he would expect one facial centre to retain sufficient functional activity for both.

Professor Schäfer also suggests the glosso-pharyngeal as a suitable nerve to which to attach the divided facial, on the ground that its motor nucleus is much nearer to and is apparently serially homologous with the facial nucleus. With reference to this we think that the small size of the glosso-pharyngeal and its relative inaccessibility would make the operation one of extreme difficulty.

If the cortical facial centre still retained the power of generating impulses six months after division of the facial trunk, then the absence of the recovery of voluntary dissociated movement might be due to the inability of the "association fibres" running from the centre of the face to that of the shoulder to transmit such impulses.

Note.

CASES I, II, IV, V, VI, and VII were operated on by C. A. Ballance, who has also operated on another case of facial palsy, but the operation could not be completed, as the trunk of the facial nerve had been carried away by a bullet.

CASE VII is of special interest, as in this the trunk of the facial nerve was united to the hypoglossal. If in this case dissociated movement of the face occurs it will open the question as to whether the previous cases of facio-accessory anastomosis might not with advantage be re-operated on.

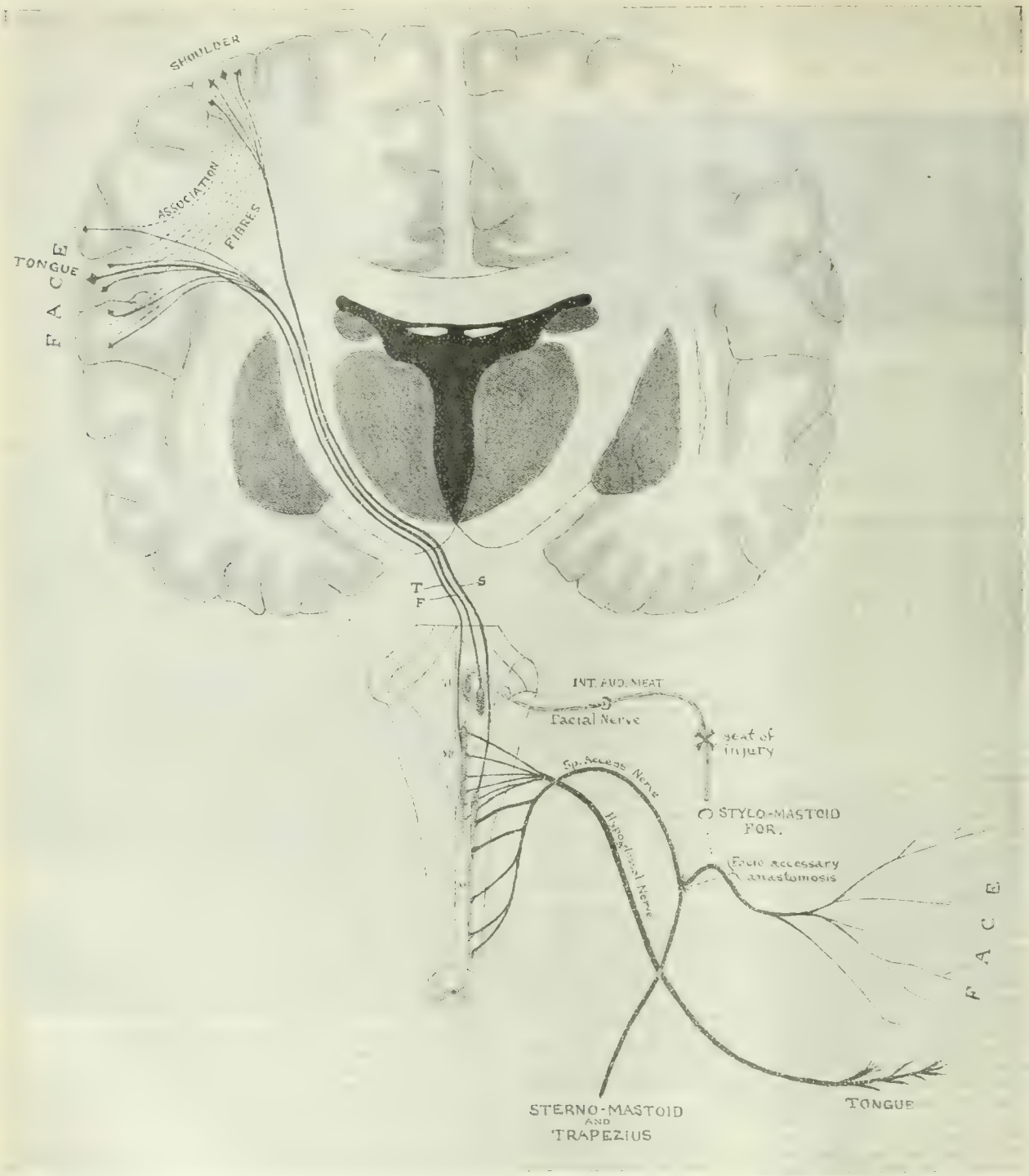


Fig. 14.—Schema to illustrate the cortical connexions between the movements of the face, tongue, and shoulder respectively, and the relations of the corresponding nerves in the medulla. It will be seen that the centres of the movements of the tongue and the face overlap in the cortex, whilst that for the shoulder is some distance away from the face. It will also be observed that the facial nerve in the medulla derives some of its fibres from the hypoglossal nucleus.

CASE III was operated on at Norwich by H. A. Ballance. Purves Stewart independently examined Cases I, II, IV, V, and VI, and directed their electrical treatment. He also prepared the microscopical preparations (see Figs. 8, 9, 10), the histological portion of the work being carried out at the neuro-pathological laboratories of King's College, by kind permission of Dr. Ferrier.

CONCLUSIONS.

1. Peripheral facial palsy is remediable by facio-accessory anastomosis, but the extent of recovery appears to be limited to associated movements in conjunction with the shoulder In most cases the previous deformity disappears when the face is at rest.

2. For reasons above stated we would in future recommend facio-hypoglossal anastomosis rather than facio-accessory.

3. The cases suitable for operation are those in which the paralysis has lasted so long that no recovery is to be expected, say, facial palsy lasting six months without any sign of

recovery. In our opinion the sooner the operation is done after this date the better.

4. A suppurative causal condition producing an infective neuritis renders the prognosis after operative treatment less favourable than in cases due to trauma.

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CASE OF BRAIN TUMOUR.

BY A. C. DUTT, B.A., M.B.CANTAB.,
With Remarks by D. LOWSON, M.D.,
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ON Sunday, October 19th, 1902, I was sent for in the evening to see S. P., aged 39, who, I was told, was in a "fit." On my arrival I found him lying on the sofa, unconscious, cyanosed, and breathing stertorously. His friends thought it was a "bilious attack," to which he was subject at intervals.

History.—Eleven years ago he had had a similar attack, with violent headache and delirium, when he kept to his bed for a fortnight. As a child he had had "rheumatism" very badly. Six years ago he had pleurisy on the right side. Every few days he had headaches; when an attack came on out-of-doors his wife said "he crawled along the road as if he could not see." He had been getting thinner. Last winter in Belgium he had a severe headache, when he walked about in his bedroom for three hours. His mother died when he was 10 years old; cause of death unknown. Father died of pneumonia. Of his two brothers, one died of phthisis. His two sisters are alive and well. The patient was a traveller for his brother, a fruit merchant in this city, and had been in America several years, where he had had a rough and arduous life. He had great business capabilities, and was the trusted adviser of his brother, who valued his services highly. He has several young children, quite healthy, and of normal development. His wife said he was very irritable at times, but this was attributed to a "sluggish liver."

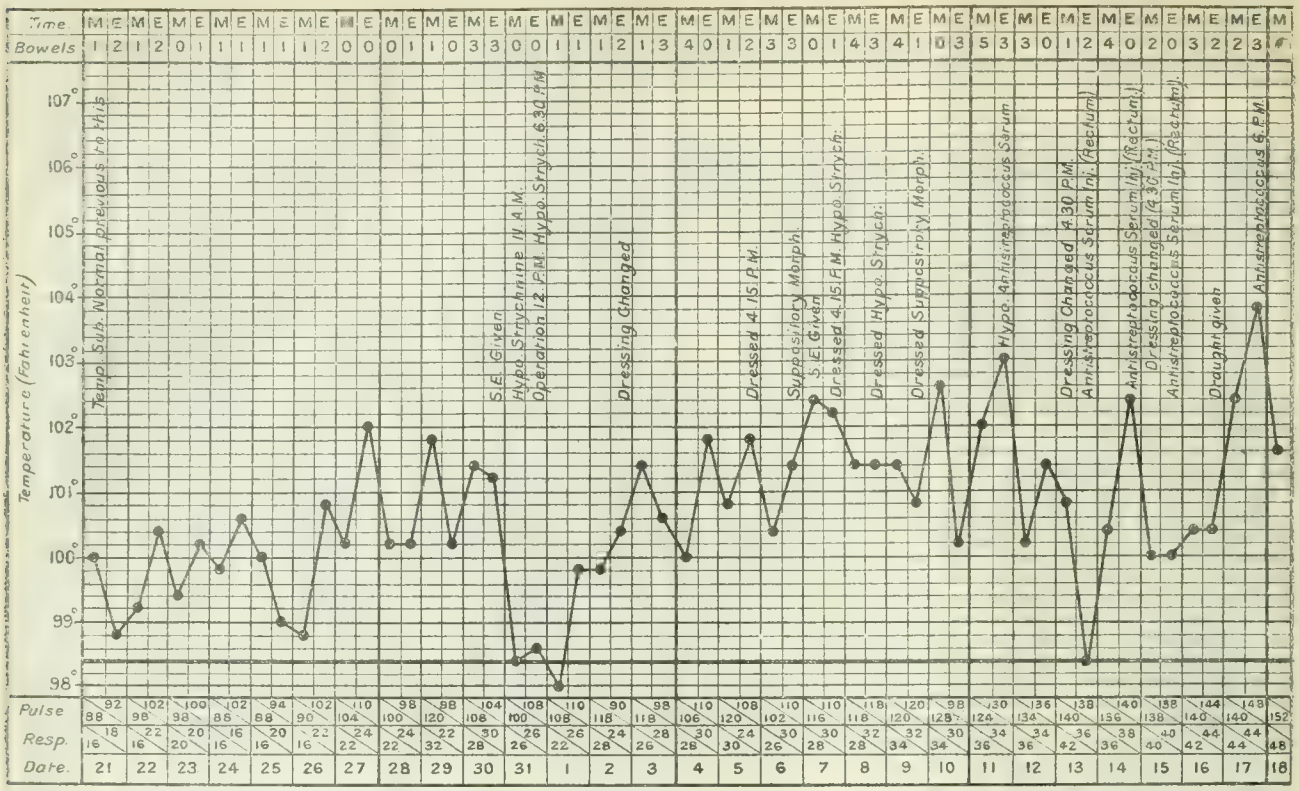
State on Examination.—The patient was of medium height, spare build, and very dark for an Englishman. The attack was undoubtedly epileptiform. He was ordered to be put to bed, and a mixture of bromides with belladonna was prescribed—with 3 gr. calomel at bedtime. In the morning he was considerably better, and conversed rationally and intelligently. Some years ago, he used to take alcohol freely, and at the age of 19 had contracted syphilis in America for which he had been treated for two months or so. There was no history of any other serious illness, except a slight attack of ague abroad, and several influenzal seizures at home. As he complained of indigestion and sickness a mixture of bismuth and salol with pepsin was ordered. The improvement being maintained, on October 22nd I gave nitromuriatic acid with strychnine before, and pepsin pills after meals. On the 23rd there was a good deal of flatulence necessitating the use of sodium bicarbonate and Bragg's charcoal which gave temporary relief. On the 24th violent headache was complained of, and the dyspeptic symptoms were worse. Phenacetin and caffeine relieved the headache; ½ ♏ creosote pills relieved the flatulence better than the charcoal powder. From this time the patient could not do without the phenactin powders. Mercurial ointment was ordered to be rubbed into the axilla for three or four nights and a 5 per cent. ointment of oleate of mercury was applied to the scalp. This quickly produced stomatitis and had to be abandoned. On October 31st ℥ ss. of pot. brom., 10 gr. chloral, and 10 ♏ tr. hyoscyamus was given for insomnia, but it did not produce the desired effect. The draught was repeated and 12 gr. of sulphonal given—producing two hours' restless sleep. On November 3rd quinine and phosphoric acid was tried, but this had no effect on the "neuralgia" (as the patient called it) and made him worse. All this time there was no tenderness of the scalp anywhere; mercurial inunction was begun again, but the next day the mouth was as bad as ever. On the 4th blisters were put behind the ears, which seemed to do a little good. The patient now remarked he could only see one of my eyes and half my face, and that the ornaments on the mantelshelf seemed double. Every remedy having so far failed to ameliorate the symptoms, and mercurial inunction being impracticable, I thought of the possibility of a syphilitic growth in the brain, and on November 5th prescribed potassium iodide beginning with 5 gr. t.i.d. The temperature so far had been subnormal, and the pulse 60 to 68; respirations 16 to 20. The iodide was increased by 2 gr. t.i.d. every second day till he took 20 gr. t.i.d. without apparent discomfort. There was now homonymous hemianopsia, defect of colour vision, and alexia or word blindness.

On November 8th Dr. Lowson saw the patient with me, took great interest in the case, and agreed with me in my diagnosis of an intracranial growth. On November 18th the teeth were tender and the mouth inflamed. Washing the mouth and brushing the teeth with "listerine" greatly improved this condition. Dr. Daly saw the case with me on November 27th and during my absence on the two following days; his opinion coincided with ours. In addition to alexia, the patient was apraxic—that is, forgot the use and significance of common objects, for example, knife and fork. Both alexia and apraxia pointing to a lesion in the angular gyrus extending back into the occipital convolution, we came to the conclusion it was probably a gumma. The patient could not call to mind objects named and point them out at request. He could recognize letters, but could not form them into words—for example, he could name the letters in *Yorkshire Post*, but could not say the name of the paper; he would call red and green blue. He could understand spoken words, but not words written or printed. He could not read, and could not recall objects when the names were shown to him. He could write voluntarily and at dictation fairly well, but could not copy, there being some paragraphia, "ryadd" being written for "Sunday"; there was no power to write the names of objects seen, heard, felt, tasted, or smelt; knife, spoon, fork, not being recognized. There was no power to read aloud or inaudibly, but he could write his name well and read it. He could also read my signature. He could not recognize a letter when traced with a pencil on the palm of his hand. The power to call up mentally the appearance of an object was absent, but he could read figures, calculate, and count both money and in numbers. There was papillitis more marked in the left optic disc. Occasional twitching of the left hand, and frequent retching were complained of, but never any sickness, the patient eating two or three good meals a day. Sometimes he was troubled with irritation in the left nostril and deafness in the left ear. There was some paraphasia, persistent insomnia, and occasional delirium. The headache was worse; he would knock his head on the wall to get relief.

On the December 20th the temperature was 100°, and stiffness of the neck was superadded to the other symptoms. Localized sweating of the scalp was noticed on December 26th. On December 27th the temperature was 102°, and Drs. Lowson and Daly saw the patient with me again. On the 28th he complained of difficulty and pain in passing water, a few drops being passed frequently.

A prolonged course of potassium iodide having failed to do any good, and the prognosis being desperate, I pointed out to the patient's friends that the case was hopeless, the only prospect—and that a very slender one—of alleviation being an operation. Their consent having been obtained, Dr. Lowson operated on December 31st, chloroform being the anaesthetic chosen. A cap of lint, soaked in 1 in 20 carbolic had been worn over the shaved scalp twelve hours before, and a quarter of a grain of morphine was injected hypodermically an hour before the operation. According to Treves the morphine has the effect of contracting the arterioles of the brain, and hence of lessening haemorrhage; it also allows less ChCl$_3$ to be given.[1]

Operation.—A single flap was raised at the region of the left angular gyrus perpendicular to Reid's base line. The outline of the flap formed a shallow curve, being free below. The pericranium being separated by the rugine over the area exposed, and all bleeding arrested by pressure forceps (there being some difficulty owing to the thickness of the scalp), the trephine was applied and a disc of bone removed. Immediately the dura bulged out, due to great intracranial pressure. But on incising the dura no growth was seen. Dr. Lowson put his little finger into the wound, and felt some adhesions about 1½ in. to 2 in. posterior to the opening made. The hole was enlarged by chipping off the bone all round, and the dura opened at this spot. On passing a grooved director, much pus-like material oozed out. This was subsequently kindly examined by Dr. Daly, who pronounced it to be most probably the débris from a breaking-down gummatous growth.



A gauze drain was put in. On account of the extent of the opening and the pressure within the brain, it was not found possible to stitch up the dura, so the opening was closed by replacing the scalp flap, which could not, however, be made to cover the whole area, brain tissue about the size of a sixpence forming a hernia.

After-History.—The patient was much collapsed, needing an intravenous saline injection. He rallied well, but about two hours after there was a rigor with profuse perspiration. Urine was passed without discomfort, temperature 98°, pulse 108, respirations 26. There was some dysphagia, but the headache had gone, and there was no stiff neck. About midnight he was delirious and restless, so a $\frac{1}{4}$ gr. of morphine suppository was inserted.

In spite of the relief of cerebral tension, the speech difficulties and the mental condition showed no improvement. The dressings were changed about every two days, the hernia cerebri being treated with gauze soaked in absolute alcohol (as recommended by Treves). The cavity in the brain was washed out with carbolic lotion or dilute hydrogen peroxide, drainage tubes were put in for a few days, and then gauze steeped in iodoform emulsion.

On January 2nd there was some pain in the right eye. From time to time $\frac{1}{30}$ gr. strychnine was given hypodermically.

On January 3rd there was some pain in the head, with abdominal distension and dysuria. For the latter symptom and the insomnia 5 gr. salol and 5 gr. Dover's powder were given, with the result that he slept all night on January 4th, but the dysuria continued. As medicinal treatment by the mouth had been discontinued since the operation, I dissolved 1 gr. of corrosive sublimate in ℥ij distilled water,[2] and injected ♏x hypodermically into the gluteal region for seven successive days, but with no apparent result. The temperature keeping above 101°, a 5-gr. quinine suppository was inserted two or three times a day. This brought the temperature down, but only temporarily. There was now a loud, dry cough, but the lungs were free and there were no physical signs of hypostatic congestion.

On January 11th, the temperature being 103°, Parke, Davis, and Co.'s antistreptococcus serum was injected into the skin of the abdomen. The patient felt much better after it, the speech was clearer, and the temperature came down to normal. ℥j to ℥ij brandy was given hourly to combat the toxaemia.

On January 12th there was incontinence of urine. Much objection was made to hypodermic medication, so on four occasions the serum was given per rectum. It was retained and had a stimulating effect, but no permanent result could be obtained.

On January 15th there were much delirium, floccitatio, and subsultus tendinum. The nurse reported: "Patient awoke, looking and acting quite mad, trying to tear bandage off, tried to bite, saying he would kill somebody, and made most dreadful noises." He often muttered, "Shall I do it? Yes, I think I shall." On his wife coming into the room he waved her away with an abusive remark.

On January 17th there was nystagmus, and the temperature was 103°; coma supervened on January 18th, and the patient passed away at 7.35 p.m. I much regret I could not persuade the friends to allow me to examine the brain.

The following are the chief points of interest in the case:

1. The cardinal symptoms of cerebral tumour are: Headache, optic neuritis, vomiting, giddiness, mental disturbance, convulsions, and slow pulse. In this case, beyond the headache and optic neuritis, there were no other marked symptoms. The occasional attacks of sickness often followed the ingestion of too much food, and the patient and his friends put it down to biliousness.

2. Digestion was perfect all through the case. The patient took meat, milk, vegetables, puddings, somatose, plasmon, Benger's food, panopepton, bovril, soups, etc., with evident relish, and whatever he took he retained up to the day of his death.

3. Mentally, he was exceptionally intelligent, polite, and well-behaved. Though a large area of the cortex must have been involved, he could talk on almost any subject brightly and reasonably. Though only 39 his hair was quite grey, and this he attributed to repeated neuralgic attacks.

4. One would have thought that the relief of tension after the operation would modify or improve the speech defects. On the contrary, however, the aphasia was worse after the operation.

5. The persistence of a high temperature after the operation can only be put down to sepsis or cerebro meningitis. The reason why the antistreptococcus serum failed to do good might be because there was a mixed infection. In the neighbourhood of the wound itself there were no signs of either sepsis or inflammation. Is it possible that either the thermogenic or thermotaxic cortical centres were thrown out of gear? Hale White, working on rabbits, produced hyperthermia

by injuring the corpus striatum and the posterior portion of the cerebral cortex.' The maximum temperature (about 2° above normal) is reached five hours after operation and lasts twenty-nine and a-half hours. As a fresh rise may be produced by a fresh puncture, Lazarus-Barlow thinks that sepsis cannot play any part in this thermal change.[1]

6. I cannot explain the dysuria, as there were no signs of cystitis and the urine was normal. No mention is made in the textbooks about this symptom.

7. Though there was paragraphia, and therefore damage to the cheiro kinaesthetic centre, the patient could write his own name perfectly late in his illness. The fact, that he could write numerals correctly shows the possibility—as suggested by Bastian[5]—that numerals may be registered in some region of the general visual centre apart from the visual word centre.

8. Both in visual aphasia and mind-blindness the lesion involves the cortex of the angular gyrus and supramarginal lobule.[6] Some hemiataxia and hemianaesthesia are very often associated with this condition, but were entirely absent in my case.

9. Recently Abbe and Schley, quoting Collins,[7] have declared that "scarcely more than one case in twenty of brain tumour is amenable to surgical interference." From the point of view of a cure this may be true. But in a hopeless case even palliation brings freedom from a certain amount of pain and discomfort, and on those grounds the operation was fully justified.

REMARKS BY DR. LOWSON.

In this case, so carefully recorded by Dr. Dutt, the principal difficulty the operator had to face was the question of localization. The optic path was evidently interrupted somewhere between the thalamus and the occipital lobe on the left side, while at the same time the presence of mind-blindness pointed to lesion of the angular gyrus. There was a doubt in my mind whether the tumour had grown forward from the occipital region, where it had first caused right homonymous hemianopia, and subsequently destroyed the angular convolution, or whether the growth had appeared at its onset in the optic radiation deep in the white substance of the parietal lobe, and, gradually approaching the surface, had at last affected the inferior parietal lobule and produced the mind-blindness. In the latter case the skull would have to be opened behind the upturned end of the fissure of Sylvius ¾ in. below the parietal eminence, while in the former the trephine would have to be applied farther back.

Ultimately I determined to start work over the site of the angular gyrus. On removing a disc of bone, however, and afterwards incising and reflecting the dura for some distance, no sign of tumour was found, though the brain bulged out to the size of a small orange. Finding no lesion at this part I introduced my finger as detailed by Dr. Dutt, and passing it in a backward direction, I came upon an adhesion which gave me hope that I should find what we were looking for in the occipital lobe. Cutting away the bone for 1½ in. or 2 in. backwards, and then opening the dura there, a yellowish protuberance was disclosed, and as it seemed to fluctuate I laid it well open. At first a thin, clear, straw-coloured liquid escaped, followed by what looked like pus, but subsequently proved broken-down gumma. It was unfortunate that no necropsy was permitted, as the case was one full of interest, more particularly with regard to the aphasia, the peculiar details of which Dr. Dutt has spent so much care in elaborating.

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GRAVES'S DISEASE IN ASSOCIATION WITH RHEUMATOID ARTHRITIS.

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As far back as 1888 Spender referred to points of affinity between rheumatoid arthritis and Graves's disease; and in Bath one has opportunities of verifying the accuracy of his observations.

Buzzard, in his article on tremor in the *Encyclopaedia Medica*, states: "The four diseases—neurasthenia, rheumatoid arthritis, paralysis agitans, and Graves's disease, are purposely placed together, because they appear in more ways than one to be related and to belong to a group of which the pathology is still obscure."

The result of my experience has not so much to suggest an affinity between the two diseases but rather to indicate that they frequently coexist. This statement seems justified by the fact that I have seen cases which, in addition to rheumatoid arthritis, showed the four cardinal symptoms constituting the so-called complete type of Graves's disease.

In the table of examples, the heading "vasomotor phenomena" is meant to indicate that some of the patients suffered from varying degrees of local syncope and asphyxia in their extremities.

As regards ocular symptoms—in addition to proptosis—the signs of Stellwag, von Graefe, and Moebius, together with slight ptosis and weakness of the external recti were very marked in some cases, in others less so. In the complete types there was a tendency to intermittency as regards Stellwag's sign. The thyroid swelling was usually of moderate grade, and certainly varied in size from time to time. Tremor in the complete types was as a rule general, and is often more marked in limbs affected with joint swellings; but, as Buzzard states, it may be hemiplegic or diplegic in distribution.

Rapid cardiac action is, as is well known, a feature of some early cases of rheumatoid arthritis; and this coexistence of Graves's disease raises the question whether the quickened pulse-rate is a feature peculiar to the former, or one due to a larval manifestation of the latter.

It is interesting and possibly significant that many of the so called secondary features of Graves's disease occur in the subjects of rheumatoid arthritis, and, moreover, in cases where none of the cardinal symptoms of Graves's syndrome are present. Increased pigmentation is fairly common. Leucoderma and scleroderma are occasionally met with—the former, in my experience, being more commonly on the arms, the latter on the outer side of the legs—and usually in long-standing cases. Urticaria is also met with in both diseases. Oedemas, fixed, transient, and of irregular distribution, are met with in both maladies. Lately I saw two cases, with two symptoms of Graves's disease, in whom solid oedema of the whole of both lower extremities was present; in one the arms also were affected, and their appearance suggested myxoedema. Rapid, widespread, and painful oedema of a limb sometimes marks the onset of acute forms of rheumatoid arthritis. It declines with the acuter phase, except in periarticular regions. Transient oedema of the face and eyelids is also met with. In the muscular system, sudden weakness of the legs—"letting them down," as patients phrase it—and painful "cramps," are points of similarity. Disturbances of the digestive system, of menstruation—amenorrhoea or menorrhagia are met with in both—likewise leucorrhoea. Unilateral flushing, subjective feelings of heat, excessive sweating, and extreme emaciation are also features common to both disorders.

In some of the cases in the table the Graves's syndrome preceded the joint affection—in one the thyroid swelling disappeared before spindle swellings appeared. In the majority the two diseases, as far as ascertainable, arose together. In a few Graves's syndrome was of more recent date than the rheumatoid arthritis.

Reviewing the etiology of the two diseases, one notes that quinsy and rheumatism are frequent antecedents of both maladies.

Clinical research distinctly suggests some obscure relationship between rheumatism and rheumatoid arthritis, and I venture to suggest that the following factors may determine this sequence in some cases:

1. A fundamental element in the form of a neuropathic diathesis, in evidence of which I would cite this coexistence with Graves's disease in some cases; not to mention the fact that in many other clinical features it resembles diseases of nervous origin.

2. An accidental element in the presence of a possible source of toxaemia for example, oral sepsis, chronic indigestion, gastric ulcer, sometimes dilatation of the stomach or chronic diarrhoea, sore throats, etc.

Chorea is another disease with which Graves's disease enters into relationship, and the same may be said of rheumatoid arthritis. The sequence is usually rheumatism, chorea, rheumatoid arthritis; but I have known chorea followed by rheumatoid arthritis without a previous history of rheumatism.

Passing on from etiological factors to a brief consideration of the clinical features of the two diseases, one notes that involuntary spasms or "cramps" are found both in rheumatoid arthritis and Graves's disease. Now, tetany has been

Some Examples of Larval Graves's Disease in Cases of Rheumatoid Arthritis.

Name.	Age.	Sex.	Pulse.	Thyroid.	Ocular Symptoms.	Tremor.	Vasomotor Phenomena.	Previous Duration.	Previous History.
C. N.	28	F.	124	Enlarged	Left eye, Stellwag's and von Graefe's sign	Present	Present	2 years	Anaemia, constipation, sore throats.
A. D.	47	F.	120	Enlarged	None	Present	Present	2 years	Influenza, sore throats.
L. S.	19	F.	112	Enlarged	None	Present	Present	2 years and 8 months	Sore throats, rheumatism.
A. B.	43	F.	100	Not enlarged	Proptosis	Present	Present	18 months	Sore throats.
N. T.	39	M.	120	Not enlarged	Proptosis	Present	Not present	Not ascertained	Gonorrhoea, followed by rheumatism (?)
W. L.	35	M.	76	Not enlarged	Proptosis	Present	—	14 months	Rheumatic fever 6 years ago, sore throat at onset of present illness.

Table of 14 Cases of Rheumatoid Arthritis, showing in Addition the Four Cardinal Symptoms of Graves's Disease.

Name.	Age.	Sex.	Pulse.	Thyroid.	Ocular Symptoms.	Tremor.	Vasomotor Phenomena.	Previous Duration of Joint Swellings.	Previous History.
F. P.	52	F.	96	Enlarged	Proptosis	Present	Present	2 years	Illness began after last labour (fourteenth pregnancy).
N. E.	21	F.	104	Enlarged	Proptosis	Present	Present	3 months	Anaemia, indigestion, sore throats.
A. G.	23	F.	120	Enlarged	Proptosis	Present	—	2 years	Influenza.
E. P.	43	F.	100	Enlarged	Proptosis	Present	—	2 years	Rheumatism, followed by Graves's disease, finally rheumatoid arthritis.
F. Y.	40	F.	120	Had been enlarged	Proptosis	Present	Present	7 months	Graves's disease for many years; the thyroid swelling, not noticeable now, had been much enlarged; previous to joint swellings.
L. A.	22	F.	120	Enlarged	Left eye proptosed	Present	Present	4 months	Sick headaches.
F. O.	21	F.	100	Enlarged	Proptosis	Present	Present	3 months	Tonsillitis, rheumatism.
F. C.	35	F.	112	Enlarged	Proptosis	Present	Present	12 months	Two attacks of rheumatism, influenza.
M. L.	29	F.	103	Enlarged	Proptosis	Present	Present	8 months	Influenza, bronchitis.
L. R.	29	F.	100	Enlarged	Proptosis	Present	Present	18 months	Scarlet fever, Graves's disease preceded rheumatoid arthritis by some years.
A. H.	18	F.	140	Enlarged	Proptosis	Present	—	18 months	Sore throats, anaemia, ozaena.
M. S.	30	F.	100	Enlarged	Proptosis	Present	Present	6 months	Anaemia, influenza.
F. C.	26	F.	116	Enlarged	Proptosis	Present	—	Not noted	Tonsillitis, rheumatism.
F. R.	21	F.	100	Enlarged	Proptosis	Present	Present	12 months	Gastric ulcer, haematemesis.

recorded by Maude in the latter, and I have, in a recent contribution, noted the similarity of these "cramps" in the former to those obtaining in tetany, and likewise stated that Chvostek's symptom is easily educible in some cases. The relationship of the thyroid gland to tetany is well established. This being so, one is tempted to speculate whether these involuntary muscular spasms, so closely simulating tetany, are devoid of significance. It seems to me that in this direction possibly we may find a clue to the obscure pathological relationship that appears to exist between rheumatoid arthritis and Graves's disease, and possibly also tetany.

These recurrent muscular cramps, with correlated vasomotor phenomena—that is, local syncopes and asphyxia—are often complained of by rheumatoid patients prior to the appearance of periarticular swellings. Furthermore, in addition, the deep reflexes are exaggerated, and in some cases the mechanical excitability of the nerves is increased—that is, Chvostek's sign.

In tetany there are vasomotor phenomena, as is evidenced by local cyanosis, local oedemas, etc., and, what is more interesting, in some cases periarticular swellings, which also are dependent on "vasomotor and trophic disturbances of innervation." I have elsewhere suggested a kindred origin for the spindle swellings of early rheumatoid arthritis. Against this comparison of the two diseases it may be urged that tetany is paroxysmal, and that the vasomotor phenomena cease with cessation of muscular spasms; but this is paralleled by the rise and wane of the periarticular swellings in the early days of rheumatoid arthritis; and, furthermore, the vasomotor phenomena and muscular spasms also rise and diminish in severity coincidently. It must be freely acknowledged that nothing comparable to the so-called malignant types of tetany occurs in rheumatoid arthritis; but, on the other hand, tetany is a disease showing infinite gradations in severity; and if Chvostek's symptom be of any value in the diagnosis of tetany, its presence in some cases of early rheumatoid arthritis gives food for thought, especially if we recognize the toxaemic origin of rheumatoid arthritis, and compare it with the toxic origin of tetany.

Again, we know that tetany is closely related to gastro-intestinal disorders, and I have lately seen several cases of rheumatoid arthritis following on gastric ulcer, in all of whom the prodromal symptoms above alluded to—that is, cramps, etc.—were present for weeks prior to periarticular swellings.

Bouchard claims that dilatation of the stomach is present in some cases of rheumatoid arthritis; and its occasional occurrence after acute rheumatism may possibly form a connecting link between it and rheumatoid arthritis.

Consideration of the foregoing facts seems to suggest the possibility of a cerebro-spinal toxaemia underlying rheumatoid arthritis, and one derived from many different disorders.

Posterior sclerosis was found by Triboulet and James in a case of rheumatoid arthritis, and the same lesion occurs in ergotism—a condition, according to some, closely allied to tetany.

Opinion as to the part played by the thyroid gland in Graves's disease is still divided, and when we reflect that this disease may precede, arise coincidently with, or possibly be engrafted upon, rheumatoid arthritis, one can hardly refrain from asking oneself whether these two diseases, when fused together, are not extensions of one and the same morbid process—that is, a toxaemia.

Ord and Mackenzie, in their article on Graves's disease, are inclined to the view "that the thyroid condition is at any rate not the primary cause of the disease." This intimate association with rheumatoid arthritis seems to suggest that the nervous system is primarily at fault, and that the enlargement of the thyroid may possibly be due to an effort on its part to counteract the circulating toxins. We have seen that in one of the cases in which the Graves's disease preceded the rheumatoid arthritis the thyroid gland had previously decreased in size, and it is at any rate worth noting that thyroid enlargement is but rarely met with in long-standing cases of rheumatoid arthritis.

Again, with regard to scleroderma, the occurrence of which in rheumatoid arthritis and Graves's disease has been noted by general observers, it is, in my experience, a condition more common in the later stages of the former disease; and in this connexion it is worthy of note that atrophy of the thyroid gland has been found by Hektoen in scleroderma.

The therapeutic value of the thyroid gland, according to Hutchison, is derived from that portion of the colloid matter which is richest in iodine, and experience has taught us that one of the most efficient drugs in the treatment of rheumatoid

arthritis is the syrup of the iodide of iron; but such means are, though valuable, but palliative, and if the disease be of toxaemic origin, the ideal line of treatment should be one directed to the source of the toxaemia; and in a good few cases there is some obvious possible source of absorption, that is, oral sepsis, chronic fluxes, diarrhoea, leucorrhoea, otorrhoea, etc.

Radical treatment, if possible, of such conditions when present, could not fail to be of benefit to the general health of the patient, and in early cases the joint condition. The rise and wane of the periarticular swellings in their early days seem to indicate a possibility of complete recovery; and the periodic variations in size of the thyroid gland may perhaps have some deeper significance, bearing upon the reactionary power of the individual.

In conclusion, I would express my gratitude to the honorary staff of the Mineral Water Hospital for their kindness in permitting me to observe these cases.

NEURASTHENIA: THE WEAR AND TEAR OF LIFE.

By GUTHRIE RANKIN, M.D., M.R.C.P.,

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THE term "neurasthenia" was first given in 1879 by Beard, of New York, to a group of symptoms which, though sometimes ill-defined and always capable of infinite variation, yet retain a general relationship which serves for the groundwork of a disease entity, little understood and never described before Beard's time, but through his investigations and those of many successors nowadays universally recognized as a formidable enemy of mankind. Speaking generally, neurasthenia may be regarded as a derangement of function resulting from exhaustion of nervous energy. The causes upon which it depends are varied and often obscure, but, despite the testimony of contrary opinion, it can scarcely be denied that the increasing wear and tear of life at the present day probably plays the most important part in its etiology. It is not suggested that the greater pace at which the world moves is the sole explanation. The disease has probably existed from the remote ages, but it seems unlikely that it can have been prevalent in the earlier periods of the world's history, else it could not have escaped description at the hands of the many eminent clinical observers of ancient days. And even coming down to recent times, it will be admitted by most physicians that in their individual experience the number of cases which they are compelled to classify as neurasthenics is infinitely greater than a few years ago; that it is one of the disorders which in its prevalence has become fashionable enough to be designated "the disease of the century"; and, most noteworthy of all, that its victims are to be found in far greater abundance among the restless inhabitants of busy communities and large centres of industry than in country districts where life is passed under conditions of uneventful monotony, and of prosaic, unexciting occupation and duty.

Cases occur in rural as well as in urban districts, but the former bear but a small proportion to the latter, and are usually found to have been determined by a definite cause, such as an accident, adversity, or mental shock. The dweller in town, on the other hand, frequently develops all the classical features of the disorder without any unusual occurrence in his life or circumstances to account for it. He has been living his ordinary everyday existence; but this is one of continuous high pressure, and ultimately his staying power becomes overtaxed, and terminates, without the development of organic disease, in a functional wreckage which is the expression of Nature's revenge for the lack of due attention to her imperative demand that rest as well as work is necessary for the maintenance of the *mens sana in corpore sano*. But the fault does not always or wholly lie at the door of a badly-regulated life. The original capital of nervous force with which humanity is endowed is not the same for every individual. One man is descended from ancestors who have been proverbially healthy, and have most of them attained long lives; another is the inheritor of a nerve instability which has manifested itself either in his immediate or remote progenitors in various forms of mental trouble or nerve disorder. Obviously, the latter individual has a serious handicap to begin with, and is more likely than the former to break down under the stress of work and worry.

To all who are exposed to excessive and prolonged attacks upon the citadel of their vitality, capitulation of their resistive power may follow at any moment, and unless such early warnings of waning energies as sleeplessness, incapacity for mental concentration, physical languor, and disturbed digestion are given heed to and counteracted by proper means, the sufferer will inevitably find himself ere long in the midst of neurasthenic tribulations, from which it will be tedious and difficult for him to emerge. A short period of rest and leisure may, if adopted in time, restore a life which would otherwise become miserable to its possessor and wholly unequal to its daily task of usefulness and healthy activity.

The disease is widely distributed, and, though specially prevalent in America, is met with in all the civilized countries of both hemispheres. "It is," says Proust, "equally spread amongst all civilized peoples in whom the struggle for existence keeps up an incessant and exaggerated exaltation of the functions of the nervous system. To-day every one endeavours to raise himself higher than his ancestors; competition has increased; conflicts of interests and persons h[ave] multiplied in all conditions of life; free course is g[iven] to ambitions that are often little justified; a[nd] re- of individuals impose on their brains a work beyon[d] is not strength; then come cares and reverses of fortune[,] cases nervous system, under the wear and tear of incessa[nt] is ulti- tion, at last becomes exhausted." ementia.

We are still in ignorance of the pathological [nature] ity over a underlying the disease. It is seldom a direct cau[se] fe, such as and therefore very few opportunities have ari[sen] y speedily *mortem* investigation. In a small number of tra[umatic] ng suffered, where death has ensued, punctiform haemorrhag[es] igorous and found scattered throughout the brain and cord, b[ut] ecovery has be looked upon as necessarily explanatory of t[he] hat the possi- Various theories have been advanced to satisf[y] d in terms of ings of our ignorance, but none of them is st favourable factory. mstances, and

Bouchard attributes the disorder to abnorma[l] ne, and other in a stomach which, in virtue of heredity or co[n]dant worry as ness of its muscular coat, contracts insufficient[ly] vals between different periods of digestion. U[nder] difficulty in cumstances he believes that soluble toxins [are] e possibility which, when reabsorbed, impair the anatomical [and] nia merges the different organs, and notably those of t[he] and it is centres. en it and

Another theory suggests that the disease is due t[o] ondriasis. vitiation of nutrition, the result of imperfect digesti[on] should dyspepsia need not, according to the advocates of thi[s] ooking thesis, be necessarily associated with gastric dilatation, [but] vs, in produces, sooner or later, anaemia, which in its turn g[ives] dis- rise to depression of the nutritive activity of all the tissues the body, and more particularly of the nerve elements.

Glénard has endeavoured to explain both the dyspepsia and the neurasthenic symptoms by a sinking of the viscera in the abdominal cavity; but, though enteroptosis exists in a certain number of cases, it is the exception rather than the rule.

The prominence of vasomotor phenomena in the symptomatology of the disease has led to a suggestion that low blood pressure, causing an overloading of the portal circulation and an imperfect filling of the heart, may be the responsible pathological factor in the etiology.

The frequent association of neurasthenia with Graves's disease, osteo-arthritis, and the menopause in women—in all of which vasomotor disturbance plays a prominent part—lends some apparent likelihood to such a theory; but, in the light of recent research, it may well be asked whether all of them are not due to one or more toxic influences which have yet to be discovered.

Whatever the ultimate nature of the pathogenic origin of neurasthenia may prove to be, the functional disturbances which the disease produces appear to depend upon some primordial alteration of the nerve cells which we do not yet understand.

In its incidence, neurasthenia is most frequently met with between 20 and 40, though it may set in at almost any age. It attacks men more frequently than women, and is specially apt to affect those of neurotic inheritance, or those who live under conditions of mental or physical tension. All forms of excess predispose to its occurrence; it is therefore not infrequently the Nemesis of a life spent in luxurious idleness and self-indulgence. It is probable that the present-day system of education, with all the anxiety produced by endless examination tests, may often be answerable for the earliest

beginnings of nerve instability. To the mental training there has also to be added the schoolmaster's craze for athletic development, often carried far beyond the physical strength of the growing boy or girl, and again leading to a depletion of the reserves of energy, which bodes ill for the future capital account of those who, in youth, are compelled to give such hostages to the fortune of their vitality.

In the great majority of cases neurasthenia is a disease of gradual development, but occasionally it sets in acutely and can generally be referred either to some form of serious mental shock or to an accident which subjects the nervous system to severe physical jarring. Its symptoms are so varied that it is well-nigh impossible to give a comprehensive description of it, but the leading feature of every case is a constant sense of weariedness which prevents the comfortable accomplishment of any act demanding sustained effort. The sense of weakness may declare itself mostly through cerebral or mostly through spinal centres, but there is, as a rule, such an amalgamation of manifestations that it is both superfluous and confusing to follow the descriptive plan of those writers who attempt to differentiate between the one and the other. It is true that in one instance the symptomatological grouping may be mostly cerebral and in another mostly spinal, but no case is ever entirely referable to either the brain or to the cord. Besides, cases are abundant in which the foreground of the picture is prominently devoted to local manifestations, which may belong to the cardio-vascular, gastro-intestinal, or sexual system almost exclusively.

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A. G.		
E. P.		
F. Y.	40	
L. A.	22	
F. O.	21	
F. C.	35	
M. L.	29	
L. R.	29	
A. H.	18	
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A frequent happens that the patient, who has been indefinitely out of health for some time, is at last driven to the consultation of this sense of langour, to which has lately been added sleeplessness and impaired digestion. He is disposed to attribute this discomfort to some passing disturbance of that or that organ—his liver—and feels confident that once he has taken this or that he will speedily be quite well again. But his friends know that within recent times his temperament has undergone a change; that, whereas he used to be cheerful, bright, and sociable, he has become moody, captious, irritable, and selfish. He may be emotional, especially in connection with the subject of his present state of health is referred to, or wearies of relating the manifold and complex symptoms which he believes himself to be suffering from to those he admits to his intimate friendship. From Charcot's point of view of physiognomy, two distinctive types of neurasthenic are met with—one, the patients belonging to the class described by Bouveret: "The patient is pale and depressed and sullen, and another in which they are animated and voluble in speech. The former type is thus graphically described by Bouveret: "The patient is pale and without strength or courage, and always sad and dejected. He sees everything from the worst side; he rarely smiles; he goes along with his head down, avoiding the looks of others, his eyes languid and dull; he hardly dares look people in the face when he speaks to them, and the vagueness of his look is, as it were, a sign of powerlessness, an avowal of the inferiority of his moral strength; he always has the gait of a tired man; he is usually very sensitive to cold, and is clothed in summer almost as in winter; his speech is slow, broken, and trailing. This neurasthenic is not talkative."

The latter type is represented by the patient whom Charcot has distinguished by the descriptive title of "the man with slips of paper." He is plump, fresh-complexioned, and capable of a certain amount of activity. His speech is ready, and he enters with avidity into an interminable recital of discomforts and unpleasant sensations which are not harmonious with his general appearance. He is possessed with fears that the full gravity of his condition will not be appreciated, and is so afraid of forgetting the innumerable details of his ailment that, at the outset of his consultation, he produces a formidable manuscript statement of his woes and miseries, about every one of which he has endless questions to ask. This neurasthenic is well known in every consulting room, and is the terror of the busy physician.

Between these extreme types there is a great variety of intermediate forms, but in every case of neurasthenia the following individual symptoms will be found grouped in every conceivable combination: The tongue is usually frothy, dry, and tremulous; it is often also abnormally red. There is no active appetite, but the patient is tempted to eat because of the uncomfortable sense of sinking at his epigastrium, which is temporarily relieved by the taking of food. His bowels are uncertain, being too loose one day and not acting at all the next. He is constantly troubled with flatulent distension of his abdomen, accompanied by frequent eructations which are often disagreeably sour and acrid. The motor power of his stomach may become so seriously impaired that dilatation ensues. He is liable to an uncomfortable form of spasm affecting his colon; and Clifford Allbutt has pointed out that, under such circumstances, it is not uncommon to find in the neighbourhood of one of the flexures a soft sausage-shaped tumour which slips away from under the hand on gentle pressure, and which varies in position from day to day but is always in the axis of the large intestine. As a rule the kidneys are overactive; the urine is of low specific gravity and often loaded with phosphates. It is worthy of passing note that in an appreciable number of cases, one or both kidneys are abnormally loose. There is no interference with the functions of the bladder, but micturition may be accompanied by urethral smarting and is occasionally followed by the discharge of a small quantity of prostatic mucus which always causes the patient grave concern and suggests to his alarmist mind sexual horrors of every description.

Headaches are invariably associated with neurasthenia, and the patient is seldom free from them on first waking in the morning. The head sometimes feels as though it were encased in an unyielding iron frame—the "casque neurasthénique" of the French. The pain is usually vertical or occipital in distribution, but it may involve the whole cranium. It is subject to acute exacerbations under the influence of the slightest fatigue or excitement, and it always leaves behind such hyperaesthesia of the scalp that for days it may be almost impossible to brush out the hair. A mild form of vertigo sometimes accompanies the headache, but it is not associated with aural symptoms. The muscles, especially those of expression, are tremulous when put into use, and one or other set of them may become the seat of unpleasant and uncontrollable clonic spasms. When the tremor affects the whole muscular system, it closely resembles that met with in cases of exophthalmic goître. Every muscular effort is quickly followed by a distressing sense of weakness, which varies in intensity from day to day, but never goes the length of a true paralysis.

The instability of the vasomotor system is manifested by flushings, sweatings, cold hands and feet, throbbing vessels, and palpitation. The knee-jerks are exaggerated, and possess this striking characteristic that when the patellar tendon is tapped in the ordinary way the resulting reflex movement is not confined to the leg, but often extends to the trunk of the body, so that the patient is jerked off his seat by the violence of the reflex act. In a patient under present observation the consequence of tapping the patellar tendon goes even further than this, and invariably brings about an epileptiform attack of a hysteroid character. In marked contrast to this hyper-excitability of the patellar tendon the plantar reflex is either feeble or entirely absent, and the toe-phenomenon is always flexor. This reflex antagonism was first called attention to by Buzzard, and is, in a doubtful case, valuable evidence in favour of a functional as opposed to an organic lesion. There may be a spurious ankle-clonus, but it is not maintained beyond two or three movements. The gait is not that of health, nor of any well-known disease of the nervous system; it is neither ataxic nor spastic, but walking is carried on with manifest difficulty, every step being executed at the expense of an enormous effort to clear the feet from the ground, to which they seem to be glued.

Sleep is always disturbed, and is often prevented by spasmodic jerking of the limbs, rushing sounds in the ears, extreme abdominal distension, or a sense of fullness and pulsation in the head. When at last, in the early hours of the morning, the patient drops off, the rest he gets is broken by dreams, often of a terrifying nature, and after a few hours he wakes unrefreshed, and with a sense of inertia, as though he had never closed his eyes.

The special senses are upset in various ways. The visual field may be contracted, there is frequently indistinctness of vision from asthenopia, and muscae volitantes are a source of constant worry. Buzzing noises in the ears are complained of, and are sometimes accompanied by impairment of hearing. A bitter taste in the mouth may entirely prevent the enjoyment of food, and subjective sensations of smell may haunt the nostrils continually.

Common sensation is impaired either in the direction of hyperaesthesia, paraesthesia, or anaesthesia. Muscular or neuralgic pains are seldom altogether absent. They are situated, for the most part, in the back, whence they radiate to the legs and arms. Not uncommonly one particular vertebral spine is tender to touch, and is referred to as the centre from which all the shooting pains emanate. In

women the coccyx is sometimes the seat of acute suffering, and the fifth or sixth intercostal nerve on the left side is, in some unaccountable way, often selected for neuralgic manifestations. The heart is irritable; its action may or may not be persistently rapid, but it is always subject to immediate acceleration on the least physical exertion or mental emotion. The patient is uncomfortably aware of its beatings, but, unless in the presence of anaemia, no murmurs are to be heard at its orifices. Pains in the precordial region and attacks of pseudo-angina are common, and are liable to produce a state of extreme dejection and depression. The pulse is full, compressible, and sometimes irregular. Arterial throbbing may be visible to almost as great an extent as in aortic regurgitation; the pulsations of the transverse aortic arch in the suprasternal notch or of the abdominal aorta in the epigastrium may even be so pronounced as to raise a suspicion of aneurysm. Morbid fears possess most neurasthenics. These may assume various phases, but the most constant are a dread of being in an enclosed space—claustrophobia, or its opposite, a dread of crossing an open space—agoraphobia. The former is the more common of the two, and often takes the form of an unreasoning fear of being taken ill in a crowded church or theatre from which escape will be impossible.

The general intellectual condition is variable, but its most prominent characteristics are loss of memory and difficulty of mental concentration. A more or less marked degree of amnesia is often the first indication of failing mentation. The patient forgets the names of indivinuals, and has a difficulty in finding the proper words to describe familiar objects. In writing, he misspells his words and expresses himself badly. The effort of conversation or writing soon becomes, like every other effort he makes, followed by profound exhaustion. With these defects there come to be associated vacillation of purpose, feebleness of volition, and failure of initiative. All interest is lost in the affairs of every-day life, and the patient possesses neither energy nor will force to shake himself free from the concentration of his feeble powers of attention on his own forlorn state, or from the exercise of his faulty and capricious judgement on the means which he deems necessary for the restoration of his health and energy. He often sees no way out of his miseries but in an appeal to suicide, but, except there be a hereditary tendency to insanity, he seldom puts his oft-proclaimed purpose into execution.

The duration of the disease depends largely upon the circumstances and surroundings of the patient. When the cause is overwork, a suitable holiday will probably speedily bring about recovery. But in many instances a relapse occurs soon after a return to the usual routine of every-day life, and in such, though old age may be attained, there is risk of more or less permanent invalidism. There is, moreover, always a danger that the failure of repeated attempts to effect a recovery may tempt the patient to find relief to his symptoms in an appeal to morphine or chloral for the cure of his insomnia, to cocaine or some other of the numerous analgesic drugs for the mitigation of his pain, or to alcohol for an escape from his overmastering depression and languor. If an illegitimate indulgence in any of these is permitted, either by the well meant but injudicious advice of friends, or by the weak-kneed indifference of the doctor, or by the yielding of the patient himself to the temptation they constantly set before him, the possibility of his becoming a hopeless slave to narcotics or stimulants, or both, is a serious contingency which must ever be kept steadfastly before the prognostic eye.

There is one variety of the disorder which, at least in its earlier developments, comes rather within the domain of surgery than medicine, to which short reference must be made in order to make the picture complete. It bears all the stigmata of ordinary neurasthenia, but it possesses this important characteristic that it is initiated by an injury or shock, and can therefore be referred to a definite cause. A railway or other accident which causes grave concussion of the cerebro-spinal system is the most frequent form of antecedent injury, and though in many instances the evidences of nervous breakdown ensue immediately after, it is remarkable that more commonly an interval, varying from a day to several weeks, in which the patient is apparently perfectly well, intervenes between the occurrence of the accident and the first manifestation of nervous symptoms. The patient may at first be dazed and stupid, but without complete oblivion as to what has taken place, or he may be restless and hysterical.

He then either immediately glides into neurasthenia or rapidly regains his normal composure for the time being, but subsequently develops the usual signs of nervous prostration and instability. These are in all respects similar to the symptoms of the idiopathic affection, but general paresis is often more marked, and localized monoplegias, mostly affecting the lower limbs, are not unusual. Hystero-epilepsy is said to be a frequent sequel in traumatic cases, but though not unknown elsewhere, it is comparatively rare outside of France.

The sequential dangers to be feared after neuarasthenia are mostly referable to the nervous system. Hysteria in women and hypochondriasis in men are the most frequent complications, and, when there is an inherited tendency to mental disease, the neurasthenic attack may prove to be the first step downwards in the direction of insanity. A concussion or jar severe enough to produce neurasthenia, but unaccompanied by apparent tissue lesion, has frequently proved the starting-point of various forms of cerebral and spinal sclerosis.

Exophthalmic goitre sometimes supervenes on neurasthenia, and interesting speculations as to the closeness of the relationship between these two disorders are, as has already been mentioned, suggested by the similarity of many of the symptoms common to both of them.

As regards prognosis, the majority of cases ultimately recover, and even when complete restoration of health is not achieved, life itself is rarely threatened. Inveterate cases may go on from bad to worse until the patient's career is ultimately terminated by an incurable melancholia or dementia, but even after the continuance of complete disability over a period of years, a striking event in the patient's life, such as a sudden and unexpected accession of fortune, may speedily dissipate the symptoms from which he has so long suffered, and he may recover the full usefulness of a vigorous and active existence. Unfortunately, even after recovery has taken place, relapses are so liable to follow that the possibility of permanent cure must always be stated in terms of guarded circumspection. The outlook is most favourable when the patient is in comfortable worldly circumstances, and is thus enabled to secure the rest, change of scene, and other appropriate addenda of treatment without attendant worry as to ways and means.

In well-marked cases there is seldom any difficulty in diagnosis, but it is important to bear in mind the possibility of the coexistence of organic disease. Neurasthenia merges almost imperceptibly into other morbid groups, and it is impossible to draw a definite boundary line between it and such closely allied conditions as hysteria or hypochondriasis. Examination of the urine and of the fundus oculi should never be omitted so as to minimize the danger of overlooking structural diseases of the nervous system or of the kidneys, in many of which the early stages present symptoms of a distinctly neurasthenic type.

The resemblance to Graves's disease is so great that certain diagnosis may, for a time, be impossible, but a persistent pulse of 120 or more, accompanied by vasomotor disturbances, is distinctly in favour of early exophthalmic goitre, whereas the existence of morbid fears, especially of claustrophobia or agoraphobia, is an equally strong argument in favour of neurasthenia. The neurasthenic is not emotional to the like degree as the hysteric, nor does he crave in the same way for sympathy. In traumatic cases it is always necessary to guard against the possibility of malingering or deliberate simulation, especially when questions of compensation are in the balance.

As regards treatment, rest is the first and obvious indication, and it must always be both mental and physical. Its power for good is intensified by the moral effect exercised on the patient by his physician and his surroundings. His enfeebled will-power is keenly susceptible to the influence of his environment, and in the seclusion of a nursing home the medical attendant has great opportunities for diverting his patient's mind from its usual gloomy and introspective imaginings by judicious management and by recourse to the various hygienic and therapeutic measures which are calculated to restore his energies and lost courage. In mild cases the requisite amount of variety and rest may be got from a sea voyage, a trip abroad, or a change of scene and surroundings at home; but no routine method is universally applicable, and it often happens that the breakdown has gone too far to leave sufficient energy for the enjoyment of either travel or recreation. Under such circumstances a course of Weir-Mitchell treatment will yield the best results. The essentials of this method are continuous rest, enforced feeding, and massage, and those require to be maintained over a

period of six or eight weeks if a permanent benefit is to be achieved. Electricity is often of signal service as an addition to the other details of a rest cure. Its success is perhaps mostly due to its suggestive influence on the patient's mind, but it also undoubtedly promotes metabolism, stimulates muscular activity, and exerts a soothing and pleasant influence on the nervous system. When the rest cure is finished, the improvement gained will be made more lasting if the patient pays a short visit to the country, seaside, or a suitable spa before re-entering the field of his daily labour. Though drugs play a secondary part, they ought not to be wholly neglected. When there is much restlessness, and particularly when the sleep at night is broken, the bromides in suitable doses will be found of advantage. It is often a successful plan to order one or other of them in combination with arsenic or strychnine during the day, and, should insomnia still persist, to provide for it separately by 20 gr. of sulphonal, trional, or chloralamide, or 5 gr. of chloralose at bedtime. As soon as the sleep habit has been re-established the hypnotic should be dropped, and on disappearance of the restlessness the bromides also may be withdrawn. When the simple hypnotics fail to induce refreshing sleep the question of the eligibility of narcotics arises. Much has been written against the use of morphine, on account of the risk of creating an unconquerable habit, but if care is taken not to extend its employment beyond the immediate necessities of the case, it will be found that a few small doses, given hypodermically on successive nights, will have the desired effect without the least subsequent risk of habitual dependence on its influence. If anaemia is present iron in one of its milder preparations should be administered; and when vasomotor instability is a prominent symptom, there is no drug which exerts a better steadying influence on the circulation than ichthyol. It may be given in doses of from 5 gr. to 10 gr., and is often usefully combined with cannabis indica and one or other of the nerve tonics. A combination of 5 gr. of ichthyol, 5 gr. of reduced iron, $\frac{1}{10}$ gr. of arsenious acid, and $\frac{1}{2}$ gr. of extract of cannabis indica will be found to meet successfully the requirements of a large proportion of cases. As soon as the digestion is strong enough to deal with it, cod-liver oil should be added to the daily regimen. It is best given in one dose of half an ounce at bedtime, and it may be advantageously combined with a like quantity of maltine.

The bowels must be carefully regulated by a simple aperient, if such be required, and the activity of the liver will be promoted by an occasional dose of calomel or blue pill. When there is much discomfort from flatulence valerian fulfils a useful rôle; its nauseous taste may best be obviated by choosing the zinc salt and giving it in the form of a pill or capsule. If headaches are severe and persistent they will be relieved by the exhibition of one of the numerous analgesics so much in vogue nowadays. The most dependable is probably antifebrin, which should be ordered in doses of not less than 5 gr. Alcohol must always be used sparingly, if at all. A tumblerful of well-matured stout taken with luncheon is often enjoyed, but in many cases a light Burgundy or claret is preferred, and agrees better. In traumatic cases, if there is much complaint of spinal tenderness, the use of a Paquelin cautery often affords marked relief to the pain.

Measures of prophylaxis ought not to be neglected. Children born of neuropathic parents should be safeguarded from the risks of their heredity by strengthening, as far as possible, the energy and resistance of their nervous centres. This can best be done by employing every hygienic means, during their developmental period, to ensure such a physical and moral education as shall substitute an acquired stable individual habit for an inborn unstable tendency without risk of over-pressure. An adult who has once suffered from neurasthenia may do much to lessen the risk of recurrent attacks by careful regulation of his daily habits of life.

He must arrange his work so as to avoid undue fatigue. He should have long nights in bed, observe regularity in regard to his meals and exercise, and make a point of seeking periodically a short respite from the daily routine of duty by a change of scene and surroundings. He ought to decline all responsibilities involving prolonged worry or anxiety, and every slight ailment should be treated with more than ordinary care, so as to lessen the risk of strain on his nervous system.

The Fifth International Congress of Applied Chemistry will be held at Berlin from June 2nd to 8th. Communications should be addressed to the office of the Congress, 21, Marchstrasse, Charlottenburg.

CASE OF MIGRAINE WITH OPHTHALMOPLEGIA.

By JAS. W. RUSSELL, M.A., M.D.Cantab., M.R.C.P.,
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S. J., aged 13, was admitted into the Birmingham General Hospital on August 11th, 1902. In the absence of Dr. Saundby, to whom I am indebted for permission to publish the case, he came under my own care. He complained of periodical attacks of headache and sickness, to which he had been subject since birth, and of a more recent paralysis of certain muscles of the left eye. For the latter affection he had been admitted into the Birmingham and Midland Eye Hospital, under the care of Mr. Jameson Evans, by whom he was transferred to the General Hospital.

History.—The family history presented little of interest. Both father and mother were alive and well, as were three younger brothers. The father, however, had suffered from rheumatism. The maternal grandfather died suddenly from heart disease. There was no history of headache, epilepsy, or other nervous disorder in the family, nor had the patient suffered from any nervous complaint other than that for which he was admitted. The attacks dated from birth, which lasted four days, and ended in delivery by forceps. A fortnight later he had an attack of sickness, and similar attacks have recurred from that time with great regularity, being accompanied by complaint of severe headache since he has been old enough to make himself understood. The interval between the attacks has generally been about a fortnight, and has never exceeded a month; and it has been noticed that the ensuing attack has always been worse after an unusually prolonged interval. On the other hand, a second headache occurring after a few days' interval has generally been mild, and of short duration. For the last six years the attacks have been accompanied by drooping of the left eyelid and strabismus, which at first passed off in the intervals, but has become persistent during the last two years.



Fig. 1.

State on Admission.—The patient was a healthy-looking lad, of good intelligence. Examination of the various organs showed nothing abnormal, and the urine was free from albumen and sugar. The right eye was normal in movement and reaction. On the left side there was a slight degree of ptosis, marked external strabismus, and extreme dilatation of the pupil, with complete loss of reaction to light and accommodation. The external rectus and superior oblique acted normally. The internal rectus contracted with considerable effort, but the eye failed to reach the inner angle of the lids, and quickly fell back to its position of external rotation. All upward movements were entirely abolished, and the inferior rectus appeared to be paralysed, the eye being drawn downwards and outwards on any attempt at downward movement. The optic discs were normal. There was no paresis of the face, tongue, or limbs, and Romberg's sign was absent. Both knee-jerks were somewhat exaggerated. Fig. 1 shows the condition at this stage of the disorder.

Progress.—On August 15th, at 7.45 a.m., he complained of sharp pain over the left half of the forehead, and of a feeling of fullness in the left eye, which was aggravated by light. The pain was temporarily relieved by vomiting, which, however, was scanty, and not very frequent. He also complained of pain in the epigastrium, and there was slight tenderness in this region. The action of the heart was quick and somewhat irregular, and the pulse feeble; there was no rise of temperature, and the urine remained free from albumen. Beyond a slight increase in the degree of ptosis and some congestion of the conjunctiva there was no change in the ocular condition at this time. During the course of the day the headache continued unabated, and paresis of the left eye muscles steadily increased. Next morning there was absolute ptosis, and the whole of the muscles supplied by the third nerve were completely paralysed, the eye being strongly everted and the pupil dilated to its utmost extent. The fourth and sixth nerves were unaffected. The exaggeration of the knee-jerks was more marked than before, and there was just a trace of to-and-fro movement on testing for ankle clonus. The plantar reflexes were of the flexor type. The urine was still free from albumen and the temperature remained normal. By the following evening the pain had nearly subsided, the eyelid could be partially opened, and there were signs of some return of power in the paralysed muscles. On August 17th the patient was free from pain and felt well; the eye had returned to its original condition, except for some remaining congestion of the conjunctiva. Figs. 2 and 3 show the con-



Fig. 2.

dition of complete paralysis. The next attack began with headache at 7.30 p.m. on August 25th, and was followed by vomiting at 9 p.m. The attack took exactly the same course, and on August 28th recovery had taken place. Since that time I have had the boy under observation in the out-patient room, but I have only seen him in one further attack, when I was inclined to think that there was some little paresis of the left superior oblique, in addition to the third nerve paralysis. During the three months following his discharge from the hospital attacks occurred on September 18th, October 1st, 14th, and 30th, and November 9th and 29th. Latterly there has seemed to be a slight increase in the length of the interval, but I should hesitate to attribute this result to the effects of treatment, which has seemed to be quite powerless to influence or relieve the condition. Diet, regulation of the bowels, stomach treatment, salicin, potassium iodide, mercury, bromide, and citrate of caffeine have all been tried, but the result has been equally disappointing in each case. The patient was at one time of opinion that doses of nitrite given on the first appearance of symptoms tended to shorten the attack, but he no longer holds that view, and I fear that we have both lost hope of improving the condition.

The association of persistent ocular paralysis with migraine is probably somewhat more common than would be gathered from the small number of cases on record. In English medical literature I have only succeeded in finding reports of the following six cases: Dr. Saundby[1] records the case of a girl, aged 19, whose attacks dated from her 12th year, and were accompanied by paralysis of the left third nerve. In the intervals there remained complete paralysis of the superior rectus, with some paresis of the other recti. The pupil was also persistently dilated. Dr. Saundby recorded another case[2] of migraine with ophthalmoplegia, but in this there was complete recovery in the intervals between the attacks. Mr. Simeon Snell brought two cases before the Ophthalmological Society.[3] In the first, a girl aged 8, had been liable to attacks of migraine with third nerve paralysis from the age of 18 months. There remained persistent external strabismus and slight ptosis, with marked enfeeblement of both upward and downward movement; but the power of convergence was only slightly impaired. In the second, a man aged 27, had suffered from attacks of migraine from his 12th year, complicated for the last seven years by third-nerve paralysis. Recovery was incomplete. In discussing the former of these two cases, Mr. Ernest Clarke mentioned a similar case under his own care. Dr. Suckling[4] reported a case in which the attacks dated from infancy, and Dr. Colman[5] showed a patient at the Neurological Society in whom the first attack occurred at the age of 11, and was followed by persistent paralysis. In the Index Catalogue of the Surgeon-General's Library of the United States army, I have found no reference to the condi-



Fig. 3.

tion in foreign medical literature, but Dr. Saundby quotes a case recorded by Horner,[6] and in the discussion of one of Mr. Snell's cases Dr. Ormerod also mentioned a case published by Thomsen of Berlin. I have not been able to refer to either of these reports.

REFERENCES.

[1] *Lancet*, September 2nd, 1882. [2] Ibid., January 10th, 1885. [3] *Ophthalmic Review*, 1885, p. 181; and 1893, p. 219. [4] *Brain*, vol. x, p. 241. [5] Ibid., vol. xxiii, p. 348. [6] *Monats. f. Augenheilk.*, 1869.

CASE OF CEREBELLAR ABSCESS FOLLOWING MIDDLE-EAR DISEASE.

FAILURE OF RESPIRATION DURING ADMINISTRATION OF ANAESTHETIC: TREPHINING: RESTORATION OF RESPIRATORY FUNCTION FOR NEARLY THIRTY HOURS: DEATH.

By J. GRANT ANDREW, M.B., F.F.P.S.G.,
Assistant Surgeon, Victoria Infirmary, Glasgow.

THE following case of cerebellar abscess presents some features of interest which appear to justify its publication:—

History and State on Examination.—The patient, a man, aged 26, had had for several years a purulent discharge from his left ear, but so small in amount as to cause little or no inconvenience. About the middle of June of last year he sickened, but with no definite symptoms. On June 30th

he was admitted to the Victoria Infirmary, Glasgow, under the care of Mr. Maylard. He looked ill, complained very much of his head, referring the pain chiefly to the occiput and nape of the neck, and of sickness and vomiting. His face was flushed, his eyes suffused, his pupils were equal and reacted to light. His temperature was high, 103.6° (afternoon, July 1st), his pulse was full, but numbered only 80 per minute. His tongue was dry and furred. There was no tenderness whatever over the mastoid, and none along the course of the internal jugular vein. The surface veins over the mastoid, temporal, and occipital regions were not prominent. The tympanic membrane on the left side was perforated; the discharge from the ear small in amount, and very foul-smelling. No gross lesion was noted elsewhere.

First Operation.—On July 3rd Mr. Maylard performed the usual mastoid operation. The whole postero-superior wall of the external auditory canal was removed, and the tympanic, attic and mastoid cells laid into the middle ear forming one large cavity. Granulation tissue and a small quantity of pus were found in the mastoid cells. As the bone was eroded over the sigmoid groove the sinus was exposed. The blood in the sinus was fluid. The resultant cavity was loosely stuffed with iodoform gauze, and everything left open. The operation considerably relieved him, the headache and sickness ceased. For some time, however, after the operation (ten days) the temperature remained remittent. There was very little discharge from the wound, and what there was was free from smell. The temperature gradually retured to normal and convalescence seemed established. The patient put on weight, the wound behind the ear was allowed to close. On July 15th Mr. Maylard left for his holiday, and the patient then came under my charge and more direct observation.

For nearly four weeks after the subsidence of the temperature, and for five weeks after the operation everything seemed satisfactory. The lowness of his temperature was noted, but as the pulse remained normal and no subjective symptoms manifested themselves, it was decided to await the development of events.

On August 11th, the fifty-seventh day of his illness, and the thirty-ninth since the operation, the headache recurred, at first slight, and again referred to the nape of the neck. On the evening of that day he vomited without any sickness, and apparently without relation to the food taken. On the following day, August 12th, the headache had increased in intensity, but unaccompanied by sickness or vomiting. The next day, the 13th, the headache persisted, and vomiting again occurred. Though a slight rise had taken place in his temperature, a degree in the evening, a decided lowering of his pulse-rate was observed. This at times numbered 50 per minute, and once not noted in the chart 40 per minute. It was this fall of the pulse-rate, with a corresponding diminution in the number of respirations per minute, and the feeling of depression and prostration not before manifest that caused me to come to the conclusion that some intracranial mischief was in progress.

The lowered pulse and respiration, the absence of a definite rise of temperature, pointed to intracranial pressure as a cause; the continued reference of his headache to the nape of the neck suggested the cerebellum as its seat. All other signs were negative. There was no tenderness along the course of the internal jugular vein, no emaciation, no yawning. His answers were intelligent. The condition of the surface granulation tissue along the track of the former incision behind the ear was suggestive of some further septic process. Its former red and healthy appearance disappeared at the onset of the headache, and a dirty-grey slough formed on its surface.

On the morning of August 13th he was taken to the theatre with the object of reopening the wound and tracing the sinus onwards towards the cerebellum.

Second Operation.—It is customary to have the patient anaesthetised in an adjoining room before being brought into the theatre. This was done in the present case by the anaesthetist of the institution, Dr. David Lamb.

After the patient was placed on the operating table, and before anything operative was done, he suddenly stopped breathing, the pulse-rate continuing satisfactory. Artificial respiration was at once resorted to, but no voluntary attempt at respiration followed. As long as artificial respiration was continued the pulse remained good.

The fact that a cerebellar abscess is a common cause of this phenomenon is well known, several cases having been recorded. When it was seen therefore that artificial respiration did not restore this function I lost no time in exploring the cerebellum. Some cerebro-spinal fluid escaped when the membranes were divided, but there was no bulging of cerebellar tissue, and pulsation of the exposed cerebellum was clearly visible. The absence of bulging and the presence of pulsation were remarked upon at the time and considered disappointing, as I felt sure that an abscess large enough to press on the respiratory centre would have caused some bulging at the trephine opening, and have been sufficient to render pulsation invisible. A hollow needle was inserted in a direction forwards and outwards, but failed to find pus. No reinsertion was made. Tracheotomy was performed at the anaesthetist's request.

It was thought that the patient was likely to die on the table, and failing to find pus in the cerebellum, I explored the temporo-sphenoidal lobe in the hope that I had mistaken the seat of the mischief, but with negative result. Voluntary respiration became re-established after a stoppage lasting for one hour and twenty minutes, during which time artificial respiration was continuously performed. On the restoration of respiration I reopened the mastoid wound and re-exposed the sinus. The blood in the sinus was thrombosed, but not in a state of disintegration, and as I had failed to find pus in the cerebellum, reluctantly resolved to desist from further attempt to find an explanation for the symptoms. The surface wounds over the cerebellum and temporo-sphenoidal lobe were closed, a drain being inserted in each case; the tracheotomy wound was also closed, and a small gauze drain passed down to the sinus at the mastoid opening.

Progress.—Though the patient had a somewhat restless night, he had snatches of sleep. On the following morning I dressed the wounds and left him fairly comfortable. His headache, he said, was relieved, and he was able to take some nourishment. His temperature, pulse, and respirations were increased.

At 7 o'clock that evening, thirty hours after leaving the theatre, he suddenly became livid, and it was noticed that he had again stopped breathing, though his pulse was quite perceptible at the wrist. The house-surgeon reopened the tracheotomy wound, inserted the tube, and again had recourse to artificial respiration. After this had been practised for a few minutes he voluntarily respired, but only for a short time. Failure of respiration recurred, but still with a fair pulse. He succumbed, however, two hours after the original respiratory failure, the pulse gradually giving out.

Necropsy.—Performed by Dr. Townley. The body was well nourished. The cavity formed at the first operation was examined and found to be lined with granulation tissue, the tegmen was intact, and no communication was detected with the middle fossa. The opening into the sigmoid was lined with apparently healthy granulation tissue. On removing the calvarium, some slight evidence of a commencing lepto-meningitis was noticed along the reflected portion of the occipital lobe and in the immediate neighbourhood of the superior occipital convolution. On separating the attachment of the tentorium cerebelli it was at once seen that that portion of the cerebellum which lies in contact with the lateral sinus just beyond the sigmoid groove was involved.

A greenish-yellow slough of cerebellar tissue was in contact with the sinus; this was extremely friable, and gave way on the most gentle handling. When detached, about a drachm to a drachm and a-half of pus escaped. The amount of pus could not be accurately measured, but it did not exceed the quantity stated.

Surrounding the cavity was an area about ½ in. in extent of degenerate and dead cerebellar tissue—encephalitis—of varied hue, that near the cavity being of a dirty green, and passing through various gradations of colour till that of normal cerebellum was reached. The whole of the involved portion of the cerebellum would not exceed in size that of a small walnut.

The track of the aspirating needle was then sought for, and traces of it could be found right up to the abscess wall. That it penetrated the abscess cavity there is little doubt, but in all probability it had become choked with soft brain tissue before reaching the pus. Direct pressure on the pons was improbable.

Sections were made of the entire brain, and no evidence of further lesion was detected. The whole brain was, however, oedematous, and there was marked distension of the third and both lateral ventricles, which contained an excess of cerebro-spinal fluid.

The lateral sinus was opened up and found to contain a thrombus, which extended from the jugular foramen to the torcular. It bore no evidence of disintegration, except at the part corresponding to the involved portion of the cerebellum. There was no further manifestation of lepto meningitis other than that already mentioned; the basal membranes were healthy.

Beyond a congestion of the base of both lungs there was no other lesion.

The interest of this case to a large extent centres round the sudden failure of respiration, and of respiration alone, during the administration of the anaesthetic, its subsequent restoration after a period of one hour and twenty minutes, its normal continuance for thirty hours, its recurrence with a slight intermission of three or four minutes, followed by the death of the patient. What would immediately occur to one as an explanation of these facts would be that pressure had been exerted on the respiratory centre, and on the respiratory centre alone. It is questionable whether the abscess alone was sufficient to account for this pressure. The amount of pus was small, the whole involved part did not include an eighth part of the cerebellum, and, moreover, the situation of the abscess was far removed from this centre, though in close proximity to the pons. That the anaesthetic increased the intracranial tension there can be no doubt. There was found *post mortem* an oedematous brain and an increased amount of cerebro-spinal fluid with distension of the ventricles. The oozing from the trephine opening during the time that artificial respiration was being performed temporarily relieved the pressure, and was, I believe, the cause of the return of normal respiration. The closure of the trephine wound, though a small drain was used, again allowed of reaccumulation, a renewal of pressure, a recurrence of respiratory embarrassment, and death. "In a case of otitis media purulenta, when evidence of abscess exists.....the internal hydrocephalus and oedema of the brain may actually be the cause of death in such cases. It is always serious, and when the patient is under the influence of an anaesthetic the respirations must be carefully looked to, as a little increase of oedema may cause a fatal result.[1]

The absence of bulging of cerebellar tissue at the trephine opening and the presence of visible pulsation are also worthy of remark. Both of these conditions are emphasized in the text-books as of almost constant occurrence in cases of abscess or tumour, and so they are in the majority of cases when the abscess or tumour is near the surface, but when the lesion is

more deeply placed and of small size the absence of the one and the presence of the other must not deter the operator from exploration in various directions.

The use of the hollow needle is, I am convinced, unsafe for exploration. It is liable to become choked with brain tissue before the abscess cavity is reached, and where there is no tension the pressure of the pus is not sufficient to free it. The sinus forceps is a much more reliable instrument and not likely to do more damage. Had sinus forceps been used in the present case the abscess cavity would have been evacuated.

Source and Time of Infection of the Cerebellum.

The source of infection of the cerebellum forms another subject of speculation. One would naturally at once conclude that extension had taken place along the lateral sinus. But if that were the case, why were there no symptoms during life of infective sinus thrombosis? True, the temperature remained remittent for some ten days after the operation, but if that were due to a septic thrombosis of the sinus, why were there no extension along the course of the internal jugular vein and lung complications? The thrombus discovered in the sinus after death was in a state of disintegration only at the site of the abscess in the cerebellum. One would have expected if infection had occurred along this route that the thrombus would have been in a state of disintegration from the sigmoid groove to the cerebellar collection of pus.

It is probable that infection occurred along another channel, possibly a vein, and in the form of a septic embolus. It is also a matter of surmise when the infection of the cerebellum took place. It is possible and probable that this occurred early in the course of the illness and before the date of the first operation. One feature of the case seems to add some support to this view, namely, the want of correspondence between the temperature and the pulse-rate during the time that the temperature was high and remittent. With a temperature of 105.2° F. on the day after his admission one would have expected a corresponding increase of the pulse-rate instead of 98 as recorded, and on the following day a temperature of 104° F. with a pulse-rate of 70. The gradual fall of the temperature to normal or subnormal with a normal pulse was misleading. A corresponding diminution of his pulse-rate did not occur until the recurrence of headache four days before his death. During the time that his temperature was normal or subnormal between July 14th and August 11th there was no symptom or sign to excite one's suspicion. The temperature, pulse, and respiration were noted daily and he was watched on account of the subnormal temperature for a possible recrudescence.

As already stated, on the recurrence of headache the pulse-rate dropped, as did also the respirations per minute. It was this combination of signs, the subnormal temperature, lowered pulse and respiration, accompanied by depression, severe headache, and vomiting, that led one to suspect increased intracranial pressure, possibly due to abscess, and that abscess cerebellar. If this assumption be correct, then it is more than likely that an attempt was made by Nature to encapsule the abscess, and that the incidence of headache, etc., revealed a reinfection and lighting up of the residual collection.

Reference.

1 Macewen, *Pyogenic Diseases of the Brain and Spinal Cord*, p. 196.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

SALINE TRANSFUSION IN ECLAMPSIA.

In the British Medical Journal of February 21st I see that the Clinical Society of Manchester proposes to make an investigation on eclampsia. The following case may have an interest bearing on the treatment of that disease:

On February 11th I attended a Mrs. U. in her fourth confinement, the last child having been born eight years previously. She had suffered much during the latter part of her pregnancy from great abdominal distension; otherwise her health had been good. There was no oedema of the legs or other signs of kidney mischief except occasional severe headaches. Her urine was tested in November, 1902, and found free from albumen or sugar.

Labour was slow, and no presentation could be detected at first owing to excess of liquor amnii, which on rupturing the membranes escaped in large quantities, and which I should estimate at 3 quarts. Chloroform was administered and forceps applied, the child being delivered with the greatest difficulty, both head and shoulders offering great resistance. The child weighed 11 lb. 2 oz. and was stillborn. The patient did very well for two days, but on the third day (February 13th) she had a severe headache, pulse and temperature being normal. At 9.30 p.m. I was hurriedly called and told the patient was dying. On arrival I found she had suddenly been seized with violent convulsions a short time previously, and was in a deeply comatose condition. Severe convulsions recurred every ten or fifteen minutes without any return to consciousness.

Dr. Purslow kindly saw her with me, and we gave morphine, ½ gr. hypodermically; and transfused a pint of saline solution into the subcutaneous tissue of her abdomen. The effects were striking, for in about ten minutes she passed into a quiet sleep lasting for three hours, and free from stertor. She awoke semi conscious, and in a few minutes had another severe convulsion followed by deep coma, the fit was repeated in half an hour, and coma even more pronounced, with a pulse of 120.

At this time her condition appeared quite hopeless, but as a last resource I again transfused, and with the same beneficial effects, for in a quarter of an hour she was quietly sleeping, and the stertorous breathing, which previously could be heard all over the house, had entirely disappeared.

She had one more slight convulsion some hours later. Her urine was drawn by catheter, and found to contain a light cloud of albumen.

During the next twenty-four hours she was very delirious, throwing the clothes off and attempting to get out of bed. This was followed by a good night's sleep, and next morning she awoke quite rational.

The points of interest in this case to my mind are the striking results of saline transfusion; and, secondly, the violent delirium next day, which I took to be partly due to the extremely diluted condition of her blood.

Birmingham. George St. Johnston, M.D.Lond.

THE TREATMENT OF CONGENITAL PHIMOSIS.

In the British Medical Journal of March 7th, p. 545, Dr. J. F. Woodyatt expresses his dissatisfaction with ordinary circumcision as performed for congenital phimosis, and describes "a much simpler operation." The latter is identical, if I am not mistaken, with one recommended forty years since by Mr. Furneaux Jordan, of Birmingham.

But even on Dr. Woodyatt's own showing, the simple operation he performed is hardly indicated. He says "the condition which prevents retraction of the prepuce is due to tightness of the mucous membrane and not to any contraction of the skin itself." If the word "adhesion" be substituted for "tightness," no description could be more accurate. Unless a mucous membrane has been structurally modified by disease or injury, it cannot well be associated with any idea of tightness or rigidity. All the preputial tissues are obviously soft and distensible.

The trouble in congenital phimosis depends on adhesion of two contiguous mucous surfaces with consequent retention of secretions. It ceases for good and all when one layer is gently peeled off the other and the smegma removed. Any one who attempts this under anaesthesia will be surprised to find how many seemingly tight prepuces, no matter what the age of the patient, can at once be retracted without any instrumental interference.

If, however, there be still difficulty, that can be readily overcome by the introduction of sufficiently long bladed dressing forceps, and subsequent expansion of the handle, usually in two directions. The mucous membrane and skin are thus well stretched to the point at which the former is adherent. It should be peeled off with the fingers till the gland is free all round, and after removal of the smegma duly anointed. No further treatment is necessary.

Circumcision is of course but a "lingering reminiscence of human sacrifice." How it can still find favour as a justifiable surgical weapon for congenital phimosis I am at a loss to imagine. No one who fairly tries dilatation would resort to even the mild treatment advocated by Dr. Woodyatt. But some profess to have done so with non-success. There are two reasons for this. The most common is carelessness in not securing complete exposure of the corona glandis. The next is laceration by too much roughness at the time, or by meddlesomeness afterwards, as by daily retraction of the prepuce with a screaming infant. In this way adhesions may

imagine, though I have not seen such a case) be again established. Gentle usage is everything. All bleeding is an abomination. The above procedure should be, as a rule, perfectly bloodless.

Gloucester Place, W. HERBERT SNOW.

DISLOCATION OF THE LOWER JAW BY MUSCULAR CRAMP IN CHOLERA.

[Reported by permission of the Director-General, Sanitary Department, Egypt.]

J. M. A., of Tabiet Saleh, a district of Alexandria, reported himself ill of cholera on December 8th, 1902.

He was admitted to a temporary cholera hospital at Om Kobeba, and when seen presented the typical signs of an acute attack of cholera. The cramps, usually most marked in the calf muscles, were, however, very severe and unusually extensive. The muscles of the neck, for instance, were much affected. As a result of these cramps, his jaw became completely dislocated.

Owing to the serious condition of the patient, it was only on December 18th that chloroform could be administered and the dislocation reduced. Previous attempts, without an anaesthetic, had failed.

The case is of interest, as dislocation of the jaw caused by muscular cramp during an attack of cholera is, I imagine, of very rare occurrence. The man had never had his jaw dislocated before, nor had he, he states, suffered from subluxation of the jaw, which is so often met with.

The clinical course of his attack of cholera was satisfactory, though the case was a severe one. The patient was seen again on February 5th, 1903, when he had quite recovered, and there had been no recurrence of the dislocation.

Alexandria. ALEX. GRANVILLE, M.R.C.S.

FOREIGN BODIES IN THE CORNEA.

THE recent discussion on foreign bodies in the cornea, in the BRITISH MEDICAL JOURNAL of October 18th, page 1247, January 10th, 1903, page 76, and January 24th, page 227, is of great practical interest.

It falls to my lot to remove an average of at least four daily. The mode of procedure adopted, and the experience of the use and effects of cocaine may therefore be of interest. A large number of these foreign bodies are, as the patients themselves say, "a piece off the emery wheel." As this wheel revolves with great velocity, many of the bodies are deeply embedded in the cornea.

Before any anaesthetic at all is applied to the eye it is examined by focal illumination, and the location, etc., of the foreign body is determined. One, or at most two, drops of an 8 per cent. solution of cocaine hydrochloride is then put in the eye, and whatever instrument is going to be used is got ready, in less than one minute the operation for removal is begun, using focal illumination.

The above procedure does not give the cocaine time to exert its mydriatic effect, but the cornea even in this short time is rendered quite anaesthetic. There can be little doubt that the use of focal illumination has the advantage of keeping the pupil considerably contracted. In some few cases of attempted but unsuccessful removal by an outside hand, where cocaine had been put in, and had had time to exert its mydriatic effect in addition to its anaesthetic one, the dilated pupil proved a very real drawback.

The use of such a strong solution of cocaine has never, so far as I have seen, injured the cornea. The application of cocaine in the crystal form I have never tried, for fear of its injuring the cornea, as it surely would be very liable to do; and as the crystal soon becomes a solution it has no advantage over a solution the strength of which is known.

The after-treatment consists of boric ointment (10 per cent.) applied at the time, bathings with warm boric lotion six-hourly, and pad and bandage for twenty-four hours more or less, depending on the severity of the injury.

London, S.E. ARTHUR GREENE, M.D.

THE AGGLUTINATION TEST IN ENTERIC FEVER.

THE case recorded by Dr. W. G. Dun, of Glasgow, in the BRITISH MEDICAL JOURNAL of March 7th, p. 546, is of great interest to clinical bacteriologists, and it is very desirable that all such observations should be put on record. Before, however, deciding that the agglutination reaction is absent in a case clinically diagnosed as enteric fever, it is necessary to carry out the test not only with B. typhosus, but also with one or two strains of B. enteritidis, as the infection caused by the latter (described as "paratyphoid" or "paracolon" fever) is clinically indistinguishable from enteric fever. It may be that Dr. Dun's case was a paratyphoid infection; this, however, will be negatived if he discovered any intestinal lesions *post mortem*, as they are not known to occur in paratyphoid.

Dublin. ROBERT J. ROWLETTE, M.D.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

EDINBURGH ROYAL INFIRMARY.

CASE OF TEMPORO-SPHENOIDAL ABSCESS AND LEPTO-MENINGITIS SHOWING REMARKABLE LATENCY OF SYMPTOMS.

(Under the care of Mr. ALEXIS THOMSON.)

[Reported by H. DOUGLAS WILSON, M.B.Edin., late House-Surgeon to the Infirmary.]

THE patient, a healthy-looking man aged 22, was admitted to the Edinburgh Royal Infirmary in August, 1900, suffering from discharge from his right ear.

History.—At the age of 17 he received a blow behind his right ear. He thought little of it at the time, but about a month later he began to suffer from occasional pain on the right side of his head. This pain continued intermittently for about six months, when it suddenly increased in severity, and he noticed that his right ear was beginning to discharge. In the autumn of 1897 patient had an attack of influenza, and for some weeks after the discharge became more profuse, and the pain returned in a much more severe form for some time, but gradually subsided, although the ear continued to run a little. As his ear continued to trouble him, patient sought advice at the Edinburgh Royal Infirmary, and was admitted on August 22nd, 1900.

State on Examination.—About 3 p.m. on that date there was no tenderness or pressure over the right mastoid, nor any redness or swelling. There was no facial paralysis. The right auditory canal, which appeared somewhat moist, was washed out, but nothing came away. Patient was quite deaf in his right ear, but he could hear well with his left. His eyes were not examined with the ophthalmoscope. Having assisted to bring in the ward tea at 4.30 p.m., he himself went to bed at 6 30, feeling in his usual health. He was seen at 7.15, and at that time was complaining of a slight ache in the occipital region, which had commenced a few minutes before. By 7.30 the pain had greatly increased in severity, and he was noticed to be lying on his right side and holding the back of his head with both hands. His head was retracted and the muscles of his neck firmly contracted. There were no tremors in any muscles, and no paralysis. The knee jerks were abolished. On examining his eyes there was found to be no strabismus and no photophobia. The pupils were rather contracted, both equal, and reacted very sluggishly to light. His pulse was then 90 per minute, and his temperature 99° F. At 7.45 he commenced to vomit, the pain in his head was more severe, and he was very restless. At 8 30 his temperature was 100°, and his pulse 97, and by 9.15 the former was 101° and the latter 99. At that hour Mr. Alexis Thomson saw him, and, regarding the case as an urgent one, he decided to operate at once.

Operation.—Chloroform was administered, and an opening was made into the right mastoid antrum, and a small amount of very offensive pus escaped. The opening into the antrum was enlarged, and a communication established between it and the tympanic cavity. At this stage of the operation there was a sudden rush of about 1½ oz of stinking pus which apparently escaped from the abscess in the temporo-sphenoidal lobe through an opening in the roof of the tympanic cavity. A drainage tube was inserted and the parts were washed out. The patient woke a quarter of an hour later, and seemed a little better than before the operation. His pulse was then quite satisfactory. About 11 p.m. he became very restless, and although quite conscious at that time he soon became delirious, and continued so till about 3 a.m., when the delirium ceased. From that hour he gradually became weaker, and died at 8 a.m.

Necropsy.—This was made on the following day by Dr. R. A. Fleming. On removing the calvaria and reflecting the dura, there was marked flattening of the convolutions. There was

extensive purulent meningitis at the base of the brain over the pons, medulla, and cerebellum, and extending up the Sylvian fissure on both sides of the cerebrum. The right temporo-sphenoidal lobe was occupied by an abscess lying to the outer side of the descending horn of the lateral ventricle, with which, however, it did not communicate. On the inferior aspect of the lobe there was a small opening through which there oozed a small quantity of pus. On examining the right middle fossa of the skull after removing the brain, a small elliptical opening was found in the dura mater and in the bone forming the roof of the tympanic cavity. It was through this opening that the pus escaped during the operation. The lateral sinus on the same side was normal.

Remarks.—While it is known that a patient may be able to go about, apparently in good health, although suffering from a chronic abscess of the brain, it is very remarkable that this should also be possible in a patient suffering from extensive purulent lepto-meningitis. In this case the patient on admission appeared to be in his usual state of health, as is shown by his volunteering to assist in the distribution of tea to the other patients in the ward, and yet within an hour his condition was attended with symptoms of the utmost gravity. The most natural explanation of the phenomena recorded is that the abscess of the temporo-sphenoidal lobe ruptured at the time of the first onset of acute symptoms, and that the pus diffused over the base of the brain and upwards on either side along the Sylvian fissure. The *post-mortem* appearances, however, did not bear out this hypothesis; the abscess had ruptured, but, as described in the operation, the pus escaped into the middle ear, and not at the opening into the mastoid antrum.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Alfred Willett, F.R.C.S., President, in the Chair.

Tuesday, April 28th, 1903.

Acute Cerebro-spinal Meningitis.

Dr. Cecil Wall communicated a paper on this subject. The object of the research was to establish the symptomatology of those cases of meningitis which had been proved by bacteriological methods to be associated with the presence of the diplococcus intracellularis of Weichselbaum. In 22 cases the infection was single. The analysis of these cases showed that the age incidence could vary from 2 months to 35 years, and that therefore, though occurring with greater frequency amongst the young, this form of meningitis was not confined by any narrow age limit. There was no evidence either of the actual mode of infection or of spread by contagion. The course of the disease was marked by two stages: (1) That of acute meningitis; and (2) that of internal hydrocephalus. These stages could be recognized by different series of symptoms, and corresponded with the condition found at the necropsies. The characteristics of the first stage were sudden or rapid onset in the majority of cases, the most common initial symptom being headache or convulsions followed by a rapidly-developing mental disturbance. The temperature was, as a rule, high, and fell as the meningitis subsided. The pulse was frequent and generally regular. Vomiting was fairly frequent at the onset, but did not as a rule recur until the second stage developed. There was no marked tendency towards constipation. Wasting was generally noticed early. Rigidity of the neck, with resistance to forward flexion of the head but not to rotation was practically constant. Spinal opisthotonos was not common. Kernig's sign elicited by the method described, was present in the majority of the cases. Irregular movements of the limbs and dissociated movements of the eyes were common in children. Convulsions, however, except at the onset, were less common than later. Blindness and deafness were, apparently, frequently present, though the profound mental disturbance usually present prevented any close examination of this point. Optic neuritis or other changes in the fundi were uncommon. The duration of this stage in the fatal cases varied from three to twelve days. Those that recovered either passed into the second stage of hydrocephalus, the symptoms of which developed towards the end of the third week, or passed into a condition of somewhat tedious convalescence. Lumbar puncture performed in this stage showed that there was not much rise of tension of the cerebro-spinal fluid, and that the fluid was turbid and contained cellular elements. The second stage was characterized by vomiting, occasional retraction of the upper lids so that a line of sclerotic showed above the cornea, irregular rises of temperature from a normal base line, mental disturbance apparently associated with the rise of intracerebral pressure, and periodic breathing in bad cases towards the end. If the synostosis of the cranial bones was not complete, evidence of the rise of intracerebral pressure could be found in the tenseness of the fontanelle, or even in the opening out of the sutures and a rapid increase in the girth of the cranium. Lumbar puncture performed at this stage showed the cerebro-spinal fluid to be under considerable tension, and the relief of the tension was often followed by an amelioration of the symptoms. The fluid, as a rule, was clearer than that obtained at an earlier stage of the disease, but less clear and slightly more albuminous than that obtained from cases of tuberculous meningitis. The necropsy in cases dying in the first stage showed purulent meningitis without distension of the cerebral ventricles; of those dying in the second distension of the ventricles with the main collection of lymph (if any was present) in the basal lymph cistern. Four cases of mixed infection by the meningococcus and pyogenic organisms were similarly analysed, 2 in which the pneumococcus was present with the meningococcus, and 3 in which the bacillus influenzae was isolated as the second infection. The clinical course of these cases resembled those in which the infection was single. In 7 cases in which the meningococcus was found in the cerebro-spinal fluid during life, miliary tuberculosis was found to be present after death. The symptoms, course, and morbid appearances presented a mixture of those usually found in simple meningitis and those commonly found to be associated with acute tuberculosis. In this form of meningitis the purulent exudate lay between the pia mater and the arachnoid membrane. In the earlier stages of the disease the distribution of this exudate was general; in the later stages the largest collection was found in the great basal arachnoid cistern, the boundaries of which were clearly marked out when the condition, frequently known as posterior basic meningitis was present. The rigidity of the neck which was so marked in these cases was probably to be explained as protective and preventing the mechanical disturbance of the inflamed arachnoid. In antero-posterior flexion of the head the cerebellum slid upon the medulla; rigidity of the neck prevented such movement. The intermittent strabismus and dissociated movements of the eyes frequently found in these cases probably found an explanation not in a neuritis, in which case the strabismus should be permanent, but either in some irritative disturbance of higher centres in consequence of the inflammation or in a reversion to an antecedent stage in the scale of evolution; in the latter case the movements were comparable to the movements frequently noticed in children during sleep or chloroform narcosis. The three conflicting theories as to the production of hydrocephalus were compared and discussed. The balance of evidence seemed to point against the truth of any mechanical theory such as the blocking of the foramen of Magendie or the obstruction of the veins of Galen. The theory that seemed most in accord with the facts at present known was that which, recognizing the arachnoid as a secreting membrane, supposed that there was some disturbance of the balance between secretion and absorption, and considered the excess of cerebro-spinal fluid to be brought about in a manner similar to pleural or peritoneal effusions.

Dr. Walter Carr welcomed any evidence tending to show, as he had previously maintained, that the posterior meningitis of infants was not an isolated condition but a part of acute cerebro-spinal meningitis. It was a fascinating view that several varieties of meningitis might have the same cause, a cause especially liable to attack children, and often limited to the base in them, but in severe cases and in older persons tending to spread over the convexity of the brain. The identity of these forms of meningitis might be held to be established from the bacteriological evidence, the clinical characters and the *post-mortem* appearances now described. It was clear that there was every possible intermediate condition between the slight and very chronic forms and the acutest forms. A similar research might well be prosecuted in regard to the pneumococcus meningitis. In regard to the causation of the hydrocephalus he had almost abandoned his previously-held view in favour of the mechanical theory of Sir Thomas Barlow and Dr. Lees, but it would appear that the last word had not been said on this point. There was much to be said in favour of the mechanical view in the

protracted and more advanced cases—it seemed almost certain that in them there was obstruction, but not necessarily at the foramen of Magendie, possibly higher up or lower down. The composition of the fluid in the cases of chronic hydrocephalus was also in favour of the obstruction theory by the absence of albumen and otherwise not suggesting inflammatory exudation. It was, however, a strong point against this theory that the intracranial pressure could be effected by lumbar puncture. Kernig's sign he also had found not altogether reliable; in several proved cases of meningitis he had seen of late it had been absent throughout, and he had found it present, moreover, without any nervous disease whatever being discovered at the necropsy.

Dr. H. S. FRENCH asked in regard to lumbar puncture as to its value in establishing a diagnosis, and whether it was of service from the point of view of prognosis, whether it should be repeated, and if so how often.

Dr. F. E. BATTEN alluded to the presence of blindness as one of the most characteristic features of this disease, and to the fact that in spite of the blindness the pupil reacted to light. He asked for an explanation and for an opinion as to the seat of the lesion.

Dr. R. L. BOWLES asked for an opinion as to the source of the diplococcus, and referred to cases which seemed to be associated with defective sanitation. Other cases which he had believed to be tuberculous had recovered. Cases were alluded to which recovered under the administration of mercury.

Dr. G. NEWTON PITT recalled a case of a boy, aged 10, suffering from chronic hydrocephalus, ascribed to basal meningitis, in whom the central canal was found dilated.

Dr. WALL, in reply, said he had not himself yet seen a case with dilatation of the central canal of the cord; such must certainly occur. The mechanical view, he thought, would ultimately have to be disposed of. He had seen several cases of chronic hydrocephalus, in which lumbar puncture had been followed by marked and immediate fall in the intracranial pressure. One case was referred to in which laminectomy was performed so as to establish permanent drainage of the cerebro-spinal fluid; the skull at once collapsed; the child was nursed with head downwards for several days, but the flow of fluid was so great that it died after a few days. After lumbar puncture had been performed complete bacteriological investigations were required; this was done in all the cases quoted. The usefulness of lumbar puncture from the point of view of treatment was, in the early stages, little or none, but in the later stages, with increased intracranial pressure, it relieved symptoms. In some cases it had been required to be repeated ten or fifteen times. The causation of the amaurosis, with retention of some of the lower forms of sensory perception, was possibly to be attributed to an encephalitis affecting the higher cortical centres. He could find no antecedent causal conditions, no evidence of contagion: the only thing was a possible lung affection as a source, but this was not by any means certain. Allusion was made to the after-effects, and one case of imbecility was described. By Netter alone was evidence of contagion obtained, and by him the meningitis was held to be pneumococcal.

CLINICAL SOCIETY OF LONDON.

HOWARD MARSH, F.R.C.S., President, in the Chair.

Friday, April 24th, 1903.

TRANSVERSE FRACTURE OF THE PATELLA IN A LIMB PREVIOUSLY AMPUTATED BELOW THE KNEE.

MR. CHARTERS SYMONDS exhibited a man whose leg was removed in the lower third for a crushed foot. Walking on crutches two months after, he fell, and was readmitted into Guy's Hospital with a simple transverse fracture of the patella. It was difficult to be clear whether he had struck the patella or not. The patella was sutured by wire in the open method. The joint was massaged in a few days, and at the end of a fortnight he could flex the knee to a right angle. The range of movement was at present complete.

EXCISION OF THE SPLEEN FOR RUPTURE.

Mr. BEAUMONT exhibited a man the early particulars of whose case were published in the *Lancet*. He was now exhibited to show his appearance eleven months after the operation.

A wagon passed over him on May 20th, 1902. The abdomen was opened immediately. The spleen was found completely ruptured, and was removed. On the sixth day after the operation fluid was found at the base of the left lung, and 6 oz. of bloody serum were removed. His temperature was 105°, and subdiaphragmatic abscess was suspected. An incision was made, and the eleventh rib resected. The stump of the spleen was easily examined, but no pus found. The examination of the blood showed large numbers of streptococci. He next developed pleural effusion on the left side, from which two pints of blood-stained fluid were removed. Antistreptococcus serum was injected, and on the fifth day of the injections the temperature fell to normal (but rose again next day), and the patient was conscious for the first time for nine days. All the wounds about this time became septic, and were swabbed with pure carbolic acid. On June 5th pus was found in the left pleura. Portions of the seventh and eighth ribs were resected, and the cavity evacuated. The temperature continued to rise to 104° and 105° daily. The cavity was washed out with weak lysol, but this gave rise to acute dyspnoea, and had to be discontinued. The continuous injection of a small quantity of oxygen gas into the cavity by a soft rubber tube was next tried. The temperature quickly fell, the discharge ceased, and general repair set in in all the wounds, and from this time he made an uninterrupted recovery. For a month the lymphatic glands were notably enlarged, and the pulse was never below 112. Now, eleven months after the accident the patient appeared to be in normal health.

The PRESIDENT alluded to other cases exhibited to the Society a few years ago in which, after removal of the spleen, the patient remained in good health.

Mr. SYMONDS drew attention to the treatment by the injection of oxygen gas, and asked how long it was continued.

Mr. BEAUMONT, in reply, stated that in less than forty-eight hours the stinking cavity became quite sweet, and after three or four days the patient's wounds were all healing.

SEPARATION OF THE UPPER EPIPHYSIS OF THE FEMUR.

Mr. GRAHAM SIMPSON showed a youth, aged 18, who gave no history of trauma, but had complained of pain in the hip ten months ago, still noticed with limping on walking far. The trochanter was prominent, with slight shortening. There was limitation of rotation and abduction and wasting of the thigh. Skiagraphy showed separation of the head of the femur. He raised the question of diagnosis, whether traumatic or due to a condition such as caries sicca.

DEFORMITY OF NECK OF FEMUR COMING ON WITHOUT SYMPTOMS.

Mr. CUTHBERT S. WALLACE showed a boy, aged 13, who, on the occasion of a medical examination, displayed a commencing lateral curve, the right leg being shorter than the left. There was no history to account for this discrepancy. A skiagraph show a general thickening of the femoral neck, the outlines of the head, neck, great trochanter, and acetabulum being fluffy and indistinct. The case was of interest in connexion with the subject of deformities of the femoral neck commonly classed as coxa vara.

Taking the two last cases together, the PRESIDENT mentioned the case of a boy, the son a doctor, who was noticed to limp slightly during the holidays, although there was no pain or indisposition to exercise. Examination revealed the fact that the neck of the femur was at a right angle with the shaft, the trochanter being raised considerably above Nélaton's line, with ¾-in. shortening. There was slight muscular wasting. Rotation was limited by the locking of the trochanter, but within the limits rotation was smooth. He thought it possible the lad was suffering from chronic tuberculous osteitis of the neck of the femur, with atrophy and consequent bending.

Mr. BRUCE CLARKE observed that in cases of coxa vara there were periods during which the deformity rapidly became worse, and he suggested that there might be some analogy with the cases under consideration.

Mr. CHARTERS SYMONDS remarked that cases of shortening with alteration of the neck of the femur constituted a considerable group, and he referred to the view that it might be due to arrest of growth consequent upon injury.

Mr. E. M. CORNER called attention to the cases in which suppuration of the upper epiphysis occurred without the attention of the patient being attracted to there being anything wrong. He had seen two such cases which had been operated upon, and there was no trace of tuberculous disease.

HERPES BRACHIALIS WITH DELTOID PARALYSIS.

Dr. S. VERE PEARSON showed a painter, aged 52, who was taken ill on February 16th, 1902, with a sharp burning pain about the left arm, and inability to move the upper part of the arm.

The following day an eruption appeared covering the left arm, the patient describing it as "clusters of watery blisters." On March 11th, as the loss of power persisted, he was admitted to St. George's Hospital The eruption extended from shoulder to wrist, and was present on every aspect of the limb, in distribution corresponding to the terminations

of the nerves from the posterior roots of the fifth cervical to the second dorsal segments. There was complete paralysis of the left deltoid with some atrophy, and almost complete paralysis of the latissimus dorsi. The other muscles of the left extremity were flabby and rather wasted. The herpes gradually healed. The paralysis remained stationary for about a fortnight, the other muscles of the left extremity becoming wasted more from disuse. Then the deltoid and latissimus dorsi began to regain their power, and had since continued to do so. These muscles had been galvanized; massage had also been employed. The other muscles of the left arm had become at the same time firmer and stronger. The electrical reactions were normal. Considerable neuralgic pain persisted up to about three weeks ago, but had now ceased. There had been no loss of sensation.

The case was of interest on account of: (1) The rarity of motor paralysis associated with herpes zoster; (2) the rarity of herpes zoster of the sixth, seventh, and eighth cervical roots.

Dr. Farquhar Buzzard referred to some cases of a similar nature which he had published in *Brain* of last year. His series included one practically identical with that shown by Dr. Pearson, and another which only differed from it in the absence of any herpetic eruption, although there was definite evidence of involvement of both motor and sensory fibres. From a consideration of these cases he had concluded that the lesion was situated at the junction of the anterior and posterior spinal roots of the fifth cervical nerve, and that in some cases the morbid process extended far enough along the latter to involve the root ganglion, and so to produce the herpes. From an antecedent history of some form of disease affecting the cardio-vascular system in several of these cases he was led to believe that the lesion was vascular in nature; in one case it occurred in the subject of acute rheumatism and mitral stenosis, in another two attacks of chorea had preceded the onset, and in a third the symptoms commenced suddenly during convalescence from Maltese fever. Many of these cases in their early stages presented an area of sensory loss of a dissociative character. The prognosis in Dr. Pearson's case was, he believed, a distinctly favourable one.

Other Cases.

The following cases were also exhibited: Mr. Cuthbert Wallace showed a man, aged 40, with fractured pelvis, caused by a fall, and absence of the prominence of the great trochanter due to a driving-in of the bone forming the acetabulum.—Dr. F. E. Batten showed a boy, aged 6, the subject of myositis fibrosa in many parts of the body and limbs; but no ossification of muscles could be discovered. Dr. Batten also showed a girl, aged 3 years and 9 months, who was a cretin and had marked cyanosis of the extremities, varying much from time to time.—Dr. R. Murray Leslie showed a girl, aged 22, suffering from chronic bulbar paralysis, which began ten months ago.—Dr. Clive Riviere showed a girl, aged 3½ months, and another aged 4½ months, both affected with congenital hypertrophy of a lower limb, the right limb in the former case, the left limb in the latter.—Mr. Bruce Clarke showed a man, aged 37, with multiple rodent ulcers on the cheeks near the eyes. They had all been excised and were undergoing treatment with *x* rays four times a week, with the result that the ulcers were healing.—Dr. S. Vere Pearson exhibited a farmer, aged 46, who had bradycardia, the pulse-rate ranging between 30 and 36 beats a minute. He had sunstroke in 1901, but his pulse-rate before the sunstroke was not known. He had had syncopal attacks, which now were rare.—Mr. T. Crisp English showed a plasterer, aged 62, who had a large spontaneous ventral hernia, springing by a broad base line from the right semilunar line, measuring 17 inches vertically and 13 inches transversely, hanging down on to the groins, and irreducible.

MEDICAL SOCIETY OF LONDON.

A. Pearce Gould, M.S., F.R.C.S., President, in the Chair.

Monday, April 27th, 1903.

Discussion on the Treatment of Rectal Cancer.

Mr. W. Watson Cheyne, C.B., opened a discussion on this subject, in which the following conclusions were advanced: Excision of the rectum was a valuable method of treatment in cases of cancer in that situation, and a considerable proportion of cases were much benefited by it, and might, indeed, remain free from disease for a long time. The first question to be determined, therefore, in approaching a case was the possibility or otherwise of excision. If the circumstances were suitable the operation should be strongly advised. The most important point in determining the suitability of cases for excision was to ascertain the mobility of the affected portion of the bowel, and also the presence of signs of disease elsewhere or a bad general condition of the patient. The situation of the disease was not so important. In cases unsuitable for excision colotomy should not necessarily be done at an early period. Some patients could go on to the end without colotomy, and in any case the operation should not be hurried unless there were reasons calling for immediate operation, such as a tight constriction, and possibly, therefore, impending obstruction, communication with the bladder, urethra, vagina, etc., much tenesmus, and irritability of the rectum. As regards the methods of removing the bowel, the sacral method was the one most universally applicable; the vaginal was good in some cases, but the perineal was rarely of value. Abdominal or combined abdominal and perineal operations were still on their trial. In excising the rectum preliminary colotomy was only rarely advisable. Measures to ensure asepsis were of great importance, such as prophylactic injections of antistreptococcus serum, disinfection of the perineum, occlusion of the anus, etc. Union of the ends of the bowel should be aimed at, but should only be carried out if the upper end could be drawn into the lower for at least half an inch. Failing the advisability of union of the ends, the bowel at its point of attachment to the skin should be firmly ligatured so as to prevent the exit of faeces for three or four days, or, as an alternative, a Paul's tube might be tied in. Further Gersuny's half or three-quarter turn of the bowel was of value as diminishing the subsequent incontinence.

Mr. Herbert F. Waterhouse, in continuing the discussion, communicated a paper, of which the following are the conclusions:—Excision of the neoplasm, together with removal of the glands which would first become infected with the disease, was the treatment to be adopted whenever practicable. For purposes of treatment rectal cancers might be classified as follows:—(1) Generalized cancer of the rectum; (2) anal or sphincteric cancer; (3) cancer involving any segment of the second part and lower part of the first portion of the rectum; (4) cancer of the upper part of the first portion of the rectum. In general terms it might be said that in Class 1 colotomy alone was indicated, for Class 2 perineal excision of the anal canal, for Class 3 parasacral excision of the neoplasm after removal of the coccyx, and for Class 4 excision of the growth by coeliotomy, suture of the upper end of the rectal segment, and inguinal colotomy. In fully half of the cases the patient first came under the notice of the surgeon when the time for radical treatment was past. Mobility of the rectal growth signified that the disease was limited to the rectum, and therefore indicated radical treatment. Immobility, on the other hand, denoted invasion of perirectal tissues and contraindicated excision. Extensive resections involving parts of neighbouring viscera were not worth doing. The mortality of excision for cancer was probably about 18 per cent. The majority of patients operated upon by excision had markedly benefited thereby. The combined abdomino-perineal operation was not to be undertaken except when no alternative presented, as the shock of the operation was likely to be extreme. The parasacral incision gave the best access. Excision of the coccyx almost always sufficed without removal of any portion of the sacrum, a procedure which, of necessity, increased the shock and haemorrhage, both of which might be serious. The facility with which the rectum could be drawn down towards the anus when the reflection of peritoneum was simply divided was astonishing to those who saw this method for the first time. The crux was the treatment of the divided ends of bowel. The ideal method, which would probably be more largely practised in the near future, consisted in shelling out the mucous membrane of the anal segment and stitching the lower end of the upper segment to the anal margins. This method preserved the sphincters intact. Union of the ends of the bowel should be attempted in all cases, and would almost always prove in part at least successful. No tension was permissible, for if it existed the sutures cut out to a certainty. Union by first intention occurred but rarely throughout the whole extent of the wound, but might be expected in the upper three-quarters of the incision. Every care must be taken by preliminary treatment at the time of operation to avoid fouling the wound by faecal matter, otherwise stercoral phlegmon was very prone to occur. A preliminary colotomy was never necessary. In cases unsuitable for radical treatment colotomy was invaluable when demanded by obstruction or intense pain on defaecation, but was not to be performed as a routine treatment, and was to be postponed as long as possible rather than done at the earliest moment.

Mr. D. H. Goodsall thought colotomy should be performed as soon as possible; in all cases it relieved the bearing-down pain and the constant action of the bowels. The increased irritation led to increased blood supply to the part, and probably to increased growth of the neoplasm. The patients were mostly 50 years of age, and the disease was far advanced as a rule when it was first seen. A fortnight or three weeks

after the colotomy the disease should be removed, or as much of it as was possible. Recurrence was usually in the skin.

Mr. F. C. WALLIS thought the early diagnosis of rectal cancer was of prime importance. In any obscure case of diarrhoea or tenesmus a rectal examination should be made. There was very little hope of complete removal of the growth in young persons, the activity of the growth of the tissues was so great. The best results were obtained where the growth was in a single plate, which did not encircle the bowel or interfere with the mobility of the rectum. No opinion as to the possibility of removal should be given until an examination had been made under an anaesthetic. After removal of an annular growth recurrence did not occur locally; it occurred some years later in the surrounding tissues. Removal of the coccyx was often quite sufficient to reach a high level of the bowel. To prevent septic absorption he had found a stream of hazeline and hot water playing over the wound throughout the operation of service. As to preliminary colotomy, it was indicated where there was the chance of uniting the two ends of the bowel, but not otherwise. If it were done it was a mistake to delay opening the bowel at the same time.

Mr. A. E. BARKER had a suspicion that many of the resections did not place the patient in a better position than a simple colotomy. The best results after excision showed a mortality of at least 5 per cent., and only about 25 per cent. had perfect control over their evacuations. Even after colotomy alone, patients had lived for years; one instance was quoted of life for 9 years; these were cases of slow growth and of a mild degree of malignancy. He doubted whether the good results following resection were wholly due to the resection. Some patients had no trouble whatever after a colotomy.

The PRESIDENT remarked on the diversity of opinion among surgeons as to the treatment of rectal cancer manifested in the discussion. He himself asked in every case, Was it suitable for excision; if so, this should be done? It did permanently rid patients of the disease in a considerable number of cases. Colotomy, too, was of great value. Haemorrhage was often relieved greatly by it, although relief of pain was less certainly obtained, and arrest of growth seemed to occur in some cases after colotomy.

Mr. WATSON CHEYNE, in reply, said he did not mean to condemn colotomy, but he thought it should not be at once proposed to the patient immediately the cancer appeared. As long as he was comfortable he was better without it than with it.

Mr. WATERHOUSE, in reply, had found that in very few cases had colotomy relieved the sacral pain. Where haemorrhage was a serious symptom colotomy was certainly urgently called for.

GLASGOW OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.—At a meeting held on April 22nd, Dr. J. M. MUNRO KERR, Vice-President, in the chair, Dr. RUSSELL showed part of an abdominal tumour removed from a girl aged 19. Adhesions were very intimate, and the tumour had grown very rapidly. It had not been ascertained exactly where the pedicle arose from, but the tumour was sarcomatous.—Dr. JARDINE related the history and showed the tumour removed from a woman who was at the time five months pregnant. It was a cyst of the left ovary, and was adherent to surrounding organs. Recovery was delayed till the uterus was emptied after inducing abortion. The symptoms following the ovariotomy had been toxaemic; the abdominal wound had given way under the stress of retching, but a secondary suture had resulted in union by first intention. There was no septic element about the case, though there had been high temperatures. The cessation of all dangerous symptoms after the induction of abortion had been most remarkable. The case had been very unfavourable, but the recovery after the induction of abortion was rapid. The case was discussed by Drs. KERR and MARSHALL. Dr. JARDINE replied.—Dr. BALFOUR MARSHALL then reported three cases: (1) Precocious pregnancy in a girl aged 13. Menstruation had not started. Dr. Marshall pointed out that this case showed that ovulation went on apart from menstruation. The case was discussed by Drs. JARDINE, DOUGLAS, and RUSSELL. (2) A ruptured extra-uterine pregnancy complicating a twin intrauterine gestation. Photographs taken by Dr. McIlroy were shown, but the original specimen had gone astray after being sent to the pathologist (Royal Infirmary) for report.

On admission to the infirmary an enema had been given by way of preparation for operation. Acute symptoms set in immediately, and the condition of the patient became very alarming before the operation—undertaken hastily—could be carried out. At the operation the abdomen was found filled with fluid blood, and bleeding was going on at the time. The sac was very adherent to the meso-sigmoid, and this fact was considered to have accounted for the accession of haemorrhage after the administration of the enema. A primary rupture had taken place earlier and had coincided with a previous attack of pain, faintness, etc. After removal of the tube and the sac the oozing from the uterus could not be controlled even by ligature of both ovarian and uterine arteries, so the uterus was rapidly removed, and the pelvis was packed with iodoform gauze. The patient succumbed the following day, and at the necropsy nothing to account for death but the profound anaemia was noted.

The case was discussed by Drs. ARMSTRONG, ADAMSON, and KERR; Dr. MARSHALL replied. (3) Inertia occurring during the first stage of labour:

The history of the former confinements was given; there was nothing remarkable about either except that the first child—a female—was still-born. The left ovary had been previously removed. The third delivery was the one under discussion. The membranes had ruptured early and this event was followed by complete inertia without other symptom. The patient was carefully watched till the fetal heart gave evidence that it was time to intervene on behalf of the child. The labour was concluded by dilating the cervix with Barnes's bags and the application of the forceps. When the head was born a hypodermic injection of aseptic ergot was given. The uterus contracted well and the placenta was expressed. There had been remarkably little blood lost. The patient was exhausted but not alarmingly so. Dr. Marshall was preparing to leave when she suddenly complained of a choking sensation, became very pallid and the pulse was very rapid; she had the sensation of impending death. Various remedies were administered but without effect; death taking place in about six and a-half hours after delivery.

The causes of sudden death after labour were enumerated and the one considered to be active in the case was embolism. The other causes could be eliminated. Unfortunately no necropsy was allowed. Dr. MACLENNAN thought the cause of death was more like that following thrombosis in the vena cava or auricle than embolism. Dr. DOUGLAS referred to the *post-mortem* cases where thrombosis had occurred, but in them he did think that death had followed from this cause. He also thought that in this instance death had probably resulted from thrombosis. Dr. ADAMSON asked about the difference of *ante-mortem* clot and *post-mortem* clotting. It was generally understood that *post-mortem* clotting took place always after death from pneumonia, and that the clots were often differentiated by having the blood cells covered by a layer of clear coagulum. The explanation adduced by Dr. Marshall was probable; if thrombosis had been the cause of death it must have begun before labour, and might have accounted for the inertia. Dr. KERR mentioned that one cause of sudden death after labour had not been referred to, and that was the entrance of air into the uterine sinuses. He did not think it likely in this case, even though a douche had been given, but he thought it should be borne in mind. He was of opinion that embolism had been the cause of death.—Dr. MARSHALL replied.—[Full reports will appear in the *Glasgow Medical Journal* for July or August.]

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.—At a meeting held on April 17th, Dr. LEWIS MARSHALL (Nottingham) in the chair, Dr. DAVID WALSH showed a case of ichthyosis hystrix in a girl aged 6½ years. The condition was noticed shortly after birth, and occurred on the neck and face. The part on the side of the neck was verrucose and deeply pigmented; that on the face was in a hypertrophied condition, somewhat like keloid but without warts or pigmentation, and terminated at the middle line. Mr. GEORGE PERNET said the greater part of the growth was of the nature of a white mole; it was certainly developmental, and that was as far as he would admit.—Dr. PORTER PARKINSON showed a case of dextrocardia in a child aged 6 years. It was admitted into hospital with rheumatic fever, and the condition of the heart was discovered in the course of a physical examination. The heart sounds were natural, and there was no displacement of viscera.—Dr. GEORGE CARPENTER showed a case of scurvy in a female infant aged 9 months, the prominent symptom of which was haematuria. The child's gums were spongy; there were no subperiosteal haemorrhages; it was also rickety. He drew attention to two features in the case, namely, well-marked "snuffles" and extensive craniotabes over the parietal bones. He had frequently called attention to this situation in the skull as being the usual site, and not the occipital bone as was taught. He said that craniotabes was most common during the second, third, and fourth months of life, and that by the ninth month it was infrequently met with; that during the prerickety period of life craniotabes was a marked feature, and when rickets was present craniotabes was found infrequently. He thought there was a difficulty also in giving a true value to chronic "snuffles." In some, congenital adenoids were present, in others they were not, and again in others the posterior nares could not be digitally examined. Some were

certainly syphilitic manifestations, but about others there was some doubt. This patient had congenital adenoids. When he found craniotabes in a patient he suspected syphilis, and it prompted him to make an exhaustive inquiry. Dr. EDMUND CAUTLEY thought that too much stress could not be laid upon "snuffles" in hospital practice, but in private practice he would look upon it with suspicion. He could not agree with Dr. Carpenter that craniotabes was very frequently associated with syphilis. He looked upon craniotabes in many instances as due to errors in diet, which later on might lead to rickets or other disorders of nutrition. He thought syphilis might predispose to it, inasmuch as it debilitated the child and impaired its nutrition. He called attention to venous dilatation on the scalp, which a French author sought to connect with syphilis, but which he regarded as due to malnutrition and thinning of the skin of the scalp. Remarks were also made by Mr. SYDNEY STEPHENSON, Dr. G. A. SUTHERLAND, Mr. J. S. MACINTOSH, Mr. HENRY SKELDING, Dr. LEWIS MARSHALL, and Mr. GEORGE PERNET; and Dr. GEORGE CARPENTER, in reply, said that his experience of craniotabes had been drawn from the observation of 238 typical cases of that state, and he did not think the condition an uncommon one. He did not consider subperiosteal haemorrhages and purpura essential to the diagnosis of scurvy; the case he had shown was in his opinion typical of that condition, although it lacked those manifestations on which Dr. Marshall had laid stress. Spongy gums did occasionally arise in edentulous infants, but it was unusual. In his experience infants taking mercury did not develop spongy gums and haematuria, and his case had not taken that drug.—Dr. LEWIS MARSHALL read a paper on cases of deformity of the hands and feet reproduced with singular faithfulness in five succeeding generations. Each hand and foot lacked the distal and middle phalanges, and the little and ring toes were ill-developed.

HUNTERIAN SOCIETY.—A pathological evening of this Society was held on Wednesday, March 25th; Dr. STEPHEN APPLEFORD, President, in the chair.—Dr. ETTLES showed a case of blepharospasm without ocular lesion.

The case was that of a man aged 64, who on closing his eyes could not open them again without pushing up the upper lids with his fingers. The ordinary unconscious blinking reflexes were normal; but if he was told to close the eyes voluntarily, and then was directed to open them, the lids remained tightly closed by spasmodic contraction of the orbicularis. On endeavouring to raise the upper lids with the fingers the muscular spasm could be felt, and offered considerable resistance; on continuing the pressure it gradually gave way, and the eyes opened. The only other evidences of nerve lesion were some indistinctness of speech and slight staggering towards the left side; this he attributed to an accident received thirty-seven years ago (fracture of leg).

—Mr. HORROCKS OPENSHAW showed a specimen of a section through the pelvis the subject of congenital hip-joint disease. The specimen showed clearly that it was impossible in some cases to place the head of the femur in the acetabulum by manipulation. The opening of the latter was seen to be much too small to admit the head of the femur.—Dr. KELSON showed a specimen and slide, exhibiting extensive ulceration of the larynx and oesophagus in a woman due to epithelioma. The symptoms had been very slight till a fortnight before death. Tracheotomy became necessary, owing to laryngeal obstruction.—Dr. L. A. SMITH showed a specimen of a large kidney which on section proved to be made up of a number of small cysts, scarcely any renal substance remaining. These cysts Dr. Smith considered to be analogous to ovarian cysts, and were quite independent of obstructions of ducts. The fluid found in them was identical with that found in ovarian cysts.

Dr. W. A. MILLIGAN showed: (1) A specimen from a case of carcinoma of the stomach, in which the clinical symptoms gave no indication of such misehief. The chief complaint was pain in the back low down, weakness, and headache. The pulse-rate was 120 to 140, and the temperature varied between 99° and 101°. Clinical symptoms indicated more a blood condition, but examination revealed only a leucocytosis. The pain in the back was accounted for by a great mass of enlarged lumbar glands. (2) A specimen of scraping of a uterus from a woman aged 63, the subject of rapidly-growing carcinoma. The history dated back only a few weeks. The first symptom was pain, followed by clear watery copious discharges, now and again very slightly brown-coloured. The uterus on examination was found enlarged regularly; there was slight fullness of the right broad ligament. At operation the entrance of the dilator was prevented owing to blockage at the internal os; on pressure the dilator was introduced, and on withdrawal a copious flow of pus ensued. A condition of pyometra had been set up by rapidly-growing carcinoma.—Dr. E. W. GOODALL showed the fauces, larynx, and oesophagus from a case of diphtheria. The patient was a boy, aged 4½ years, who was admitted to the Eastern Hospital on March 22nd, 1903, on the fifth day of an attack of diphtheria, which proved fatal twenty-four hours after admission. At the necropsy there were two or three subcutaneous haemorrhages on the legs, and many subcutaneous haemorrhages in the stomach. There was much membrane on the soft palate and tonsils, and some in the larynx. The lower 2 in. of the oesophagus was covered with membrane, but there was none in the stomach. The specimen was shown on account of the rarity of membrane in the oesophagus.—Sir HUGH BEEVOR sent a specimen shown by the SECRETARY of syphilitic liver in a child aged 16. The specimen was indistinguishable at first sight as a liver. The surface presented a number of round protuberances of varying sizes divided by deep fissures. On section one of the former displayed a well-marked gumma. The amount of liver tissue was very small. There had been signs of hereditary syphilis.—Mr. F. GORDON BROWN exhibited an aorta which had been transfixed by a stab from a sharp knife, which had penetrated the sternum. The point of interest was that the walls of the aorta had been pushed in front of the knife for a certain distance before the cut was made, so that the incision was not linear but of an obtuse angle, and, like most of these fatal stabbing cases, both walls of the vessel were perforated. Death was instantaneous.—Drs. F. J. SMITH, J. W. M. ETTLES, RUSSELL ANDREWS, DUNDAS GRANT, and T. H. OPENSHAW discussed the case and specimens.

PATHOLOGICAL AND CLINICAL SOCIETY OF GLASGOW.—At a meeting on April 20th, Mr. A. E. MAYLARD, President, in the chair, Dr. JOHN ANDERSON showed a brain in which an abscess in the Rolandic area had extended into the lateral ventricles. It was connected with a case of empyema.—Mr. GRANT ANDREW showed a boy operated on for foreign body in the left bronchus—attempted removal by posterior bronchotomy through the pleural cavity. A discussion on the treatment followed, an expectant line being strongly advocated by Sir HECTOR C. CAMERON.—Mr. HENRY E. CLARK exhibited (*a*) a bladder showing sacculation and abscess formation from a case of enlarged prostate, also the kidneys from the same case; (*b*) a uterus the subject of carcinoma of the body, removed by the paravaginal method.—Dr. JOHN H. TEACHER reported on the intestinal concretion shown at the last meeting by Dr. J. Crawford Renton, which proved to be an oat-seed concretion (avenolith), and exhibited for comparison a number of specimens of similar concretions from the Hunterian Museum, University of Glasgow.—Dr. J. KERR LOVE showed a series of stereoscopic photographs illustrative of the anatomy of the temporal bone, which were highly appreciated.

The following card specimens were shown by Mr. A. E. MAYLARD: Three sets of gall stones removed from the same case: (*a*) Facetted stones from the gall bladder; (*b*) one large corrugated stone impacted in the cystic duct; (*c*) a similarly corrugated but smaller stone impacted in the common duct.

ULSTER MEDICAL SOCIETY.—At a meeting held on April 23rd, Dr. JOHN CAMPBELL, President (and subsequently Dr. HENRY O'NEILL), in the chair, Dr. DRYDEN STEAD showed a case of complete paralysis of the brachial plexus following a fall on the back.—Mr. ROBERT CAMPBELL showed the abdominal viscera of a patient suffering from abdominal tuberculosis; the appearances closely resembled that of malignant disease. The patient died after operation from perforation of the bowel in several places.—Mr. FULLERTON showed a case of coxa vara.—Dr. ROBERT MCDOWELL read notes of a case of puerperal eclampsia.—Dr. J. J. AUSTIN read a paper on puerperal eclampsia, with note of illustrative cases, both albuminuric and non-albuminuric. Professor J. W. BYERS, in speaking to these papers, explained the action of Bossi's dilator.

FEMALE PRACTITIONERS IN GERMANY.—Two ladies, Fräulein Freida Busch and Hermine Edenhuizen, have recently for the first time passed the State examination in the University of Bonn. Both ladies pursued their professional studies in the Universities of Zurich, Halle, Bonn, and Berlin. They passed the preliminary examination at Halle in 1900 with the note "very good," which they also received at the final examination at Bonn. Fräulein Busch is a daughter of the late distinguished surgeon, Wilhelm Busch, who was Professor of of Surgery at Bonn, and died in 1881.

REVIEWS.

PATHOLOGY.

THE value of co-operation in bacteriological research is well illustrated by the volume which emanates from the Pathological Institute of Helsingfors on *The Action of Certain Bacteria and their Toxins upon Diverse Organs of the Body*.[1] The investigations here recorded are in continuation of the work, which has now been eight years in progress, upon the pathological effects produced by streptococci and other micro-organisms. The bacteria dealt with besides the staphylococcus pyogenes aureus are the diplococcus pneumoniae, bacterium coli, bacillus typhosus, and a variety of proteus. Professor HOMEN, using rabbits for the purpose of his experiments, describes the effects produced by these bacteria and their toxins upon the peripheral nerves, spinal ganglia, and spinal cord; the effect of trauma as predisposing to bacterial infection of the brain has been studied by Dr. Ehrnrooth; and the bacterial lesions produced experimentally in the liver, muscles, kidneys, and lungs are dealt with by other authors. The scheme of work is very comprehensive, and has necessitated the employment of over 1,000 rabbits in order to obtain specimens exhibiting the progress of the lesions step by step, and to minimize sources of error by repeating the experiments under a variety of conditions. When we consider how much of the vast bulk of recent bacteriological literature is occupied by disjointed individual efforts which seem to have been stimulated by the desire for originality rather than for the pursuit of a common end, we realize the importance of systematic work, such as the present undertaking, for the furtherance of bacteriological science. The authors are to be congratulated upon the thoroughness of their study, which is valuable not only as a piece of laboratory work, but for the light it throws on the channels by which infective organisms are disseminated in man.

The study of inflammation is one of the most important subjects with which the morbid histologist has to deal, and there is good reason to believe that as we gain a deeper insight into the nature of the cellular changes which are associated with inflammation, our knowledge of the general conditions which underlie all morbid tissue formation will be correspondingly widened and placed on a securer basis. Dr. MAXIMOW'S experimental investigations into the inflammatory new formations of connective tissue[2] are therefore of very considerable interest as bearing upon some of the fundamental problems about the solution of which pathologists are not yet agreed. He divides the types of cells essentially associated with inflammation into three main groups: Leucocytes of the ordinary polymorphonuclear kind, fibroblasts or ordinary connective-tissue cells, and "polyblasts." It is the bearing of his researches upon this last species of cells which is of particular interest, and will probably excite most controversy. Indicating by their name their capacity for assuming a variety of forms, Dr. Maximow includes under "polyblasts" the small round cells which all authors have recognized as a striking feature of inflammatory and granulation tissues. Originating as lymphocytes, some of them have emigrated from the blood channels under normal conditions, and then constitute the round migratory cells found in ordinary connective tissue. When inflammation ensues their numbers are enormously increased by the rapid escape from the vessels of additional lymphocytes, and these rounded mononuclear elements are now capable of undergoing many transformations. They may develop into large amoeboid migratory cells, and ultimately take part in a variety of processes. They may assist the fibroblasts in the formation of new connective tissue, or form the adventitia around the endothelial cells of newly-formed blood vessels, or play the part of phagocytes, or fuse with one another and so form giant cells. Dr. Maximow's views are very interesting, but can hardly be regarded as the final word on the matter, since the most important question they raise, the relation of the "polyblast" to the endothelial cell, is still very obscure and the subject of much controversy.

[1] *Arbeiten aus dem pathologischen Institute zu Helsingfors (Finnland).* Herausgegeben von Professor Dr. E. Homen. *Die Wirkung einiger Bakterien und ihrer Toxine auf verschiedene Organe des Körpers.* Jena: Gustav Fischer. 1903. (Demy 4to, pp. 520; 13 coloured plates. M. 30.)

[2] *Experimentelle Untersuchungen über die entzündliche Neubildung von Bindegewebe.* Von Dr. Alexander Maximow. Fünftes Supplementheft der *Beiträge zur pathologischen Anatomie und zur allgemeinen Pathologie.* Herausgegeben von Professor Dr. E. Ziegler. Jena: Gustav Fischer. 1902. (Royal 8vo, pp. 262, 13 plates. M. 20.)

By the antithesis indicated in the title of his book on the *Conflict of the Animal "Organism" with the Botanical "Cell,"*[3] Dr. SLEESWIJK endeavours to express the leading idea which he desires to enunciate. The animal body, although composed of cells, is, by virtue of its being an organism, essentially different in the conditions of its existence from the vegetable cells of the bacterial parasites which are liable to invade it. The bacterial cell multiplies into exact equivalents; there is no division of labour; each cell is dependent upon itself for the performance of its assimilatory and dissimilatory processes, and receives no co-operative assistance from its fellows. The cell of the animal body, on the other hand, is in essential unison with the other cells which make up the organism as an organic whole, and consequently a stimulus of bacteriological origin which may primarily act upon an individual animal cell or cell group, is necessarily distributed in its ultimate effects so as to call forth a reaction from the entire organism. Dr. Sleeswijk therefore disagrees with the dictum, deduced by Virchow from the principles of his cellular pathology, that "there is no diseased body which is modified in all its parts," and maintains on the contrary that no local affection ever arises in which the entire body does not participate. Dr. Sleeswijk's arguments are based upon chemico-physical considerations and, especially, upon an application to the phenomena of cell life of the laws of osmosis. Much of his reasoning gives the impression of being speculative rather than conclusive, but in view of the fact that physical conditions must necessarily play an important part in the determination of cellular activities and that the subject is one the importance of which is only excelled by its obscurity, any honest endeavour to elucidate it deserves to be appreciated. We may be doubtful as to whether the protoplasmic bridges from cell to cell, which are clearly demonstrated in some histological preparations, maintain a cellular continuity of the entire organism, as some physiologists hold; and we have strong reasons to hesitate before regarding the multicellular organism as equivalent to a plasmodium; but we must freely admit that the interrelationship between cell and cell, whether it be protoplasmic, chemical, or physical, is intimate, extremely important, and requires much further elucidation.

Part VI is the final instalment of the very elaborate *Treatise on General Pathology*[4] which Dr. BOUCHARD and his numerous collaborators have brought out. As was pointed out in the review of the earlier volumes in the BRITISH MEDICAL JOURNAL of February 9th, 1901, p. 346, the enormous bulk of this treatise is due to the incorporation of a large amount of matter which English readers would naturally look for in a textbook not of pathology, but of medicine. The present volume, for instance, begins with a discussion of the clinical types of mental disease, and then goes on to treat of the skin, the eye, and the ear; whilst the latter half of it is mainly occupied with the laboratory methods for the diagnosis of infectious and other diseases. If readers do not take exception to this distribution of the subject matter, they will find in the book a good exposition of much that is valuable in the French schools of medicine and pathology. Whilst admiring the loyalty of French writers in supporting one another's views, rather to the exclusion of any but their own countrymen, it seems to us that the higher scientific ideals of impartiality and cosmopolitanism, which have guided their great leaders of science whose names are immortalized and whose fame is worldwide, would form an incentive to research more likely to perpetuate the vigour and originality of thought to which French science has owed its greatest achievements.

Dr. LUDWIG KAMEN'S *Guide to Bacteriological Investigation*[5] is well put together and the subject-matter is excellent. It is intended as a laboratory handbook for beginners, and therefore devotes a good deal of space to the use of the microscope, preparation of specimens, sterilization, the making of culture media, and other matters of elementary technique. But it is more thorough than most students' textbooks of the kind, particularly in the second part which is devoted to the bacteriological methods of investigating the more important

[3] *Der Kampf des tierischen "Organismus" mit der pflanglichen "Zelle."* Von Dr. R. Sleeswijk. Amsterdam: J. A. Sleeswijk. 1902. (Demy 8vo, pp. 130, 10 illustrations.)

[4] *Traité de Pathologie Générale.* Publié par Ch. Bouchard. Tome vi. Paris: Masson et Cie. 1903. (Royal 8vo, pp. 994. Fr 18.)

[5] *Anleitung zur Durchführung bakteriologischer Untersuchungen für klinisch—diagnostische und hygienische Zwecke.* Von Stabsarzt Dr. Ludwig Kamen. Vienna: Josef Safar. 1903. (Royal 8vo, pp. 311. 118 illustrations, 12 Plates. M. 8.40.)

infectious diseases. The sections devoted to typhoid, tuberculosis, and malaria are most useful, and the last deserves especial praise for its thoroughness and the attention it devotes to the anatomical descriptions of the mosquitos which play the part of intermediate hosts in the life-history of the malarial parasites.

PHYSIOLOGY.

PROFESSOR MAX VERWORN'S works are widely known amongst physiologists, and therefore the new volume which he has devoted to the elaboration of his *Biogenhypothesis*[6] is sure to be read with great interest. The intimate physiology of the cell is a subject which is steadily gaining in importance and has made such rapid advances of recent years, owing to improved physical and chemical methods of research, that there is reason to hope that our knowledge of the vital processes which condition cell-life will soon be capable of more extensive application to the study of disease. On the ground that a molecule cannot be regarded as "living," Professor Verworn considers it a contradiction in terms to speak of "living albumen molecules" as the ultimate seat of metabolic processes; in place of this expression he substitutes the term "biogen" for the highly complicated, labile compound, constantly being built up and broken down, which is the basis of metabolic processes. "The continuous building up and breaking down of biogen," he holds, "constitute the middle point of all activities in living substance, and all other processes are subordinate aids employed in its service." Biogen is regarded as residing in the ground substance of the cell protoplasm and not in the nucleus, though the latter provides material which, directly or indirectly, is necessary for the metabolism of the former. In the present volume Professor Verworn seeks to show the value of "biogens" as providing a working hypothesis for the unification of our knowledge of cell life. They help to explain oxidation and reduction within the cell, the chemistry of muscular contraction, and the problems of intracellular enzymes. The advantage claimed for the "biogen" as compared with the "enzyme" hypothesis as explanatory of cellular activities is that whereas the latter involves the assumption that each cell possesses a large number of diverse enzymes, co-ordinate in rank and specialized in function, the biogen hypothesis deduces all vital manifestation from the metabolism of a single compound. The arguments brought forward in support of this theory are ingenious and well worthy of study.

"The object of Dr. NOEL PATON'S *Essentials of Human Physiology*[7] is," the author states, "to put before medical students as succinctly as possible the essential facts of human physiology, and to emphasise especially those parts of the science which are of cardinal importance in medicine and surgery." "Physiology," he continues, "has now become so wide in scope that the ordinary student must limit his attention to matters which have a direct bearing upon his professional work. Fortunately the study of this limited field affords ample opportunity for cultivating the scientific methods of observation and of thought which should be gained by the student before approaching his medical studies." These preparatory remarks led us to expect a reformation in the methods of teaching physiology, but the study of Dr. Paton's book resulted in disappointment. The contents are, indeed, well and properly chosen, and the facts are given with the accuracy that is to be expected from so accomplished a physiologist. On the other hand, the style and treatment of the subject matter is rather bald, and will, we fear, fail to stimulate "scientific methods of observation and thought," or to fire the enthusiasm of the student. The latter is given dry facts to learn in compressed paragraphs, each marked out by black-typed headlines. The book thus suggests the amplified notes of a lecturer, and becomes by the author's treatment a "cram," rather than a textbook. As an example of the author's method, we cite the following from the paragraph on the formation of lymph, to which subject not more than half a page is devoted:

> That lymph is also formed from the tissues is indicated by the fact that the injection of substances of high osmotic equivalent into the blood—such as sugar or sulphate of soda—leads to a flow of fluid into the blood, so that it becomes diluted, and also to an increased flow of lymph, and this increase of water in both can be explained only by its withdrawal from the tissues.

Dr. Paton here takes for granted that the student understands the term "osmotic equivalent," and he affords no information on a most difficult branch of modern physical chemistry. Similarly he assumes in his young readers an equally profound knowledge of organic chemistry. Thus the paragraph on the diurides runs as follows:

> The members of this series of bodies consist of two unmodified or modified urea molecules linked together by an acid nucleus. The most important of the series have as the linking molecule acrylic acid, and they constitute the purin bodies.

The whole book consists of such compressed paragraphs, expressing most difficult facts in a way intelligible to a professional physiologist, but not easily to be grasped by an ordinary medical student.

Mr. BLAND-SUTTON'S work on *Ligaments*,[8] which has reached a third edition, is an interesting contribution to the literature of human morphology. The degenerative nature of certain fibrous and fibro-cartilaginous structures is maintained, and in a succession of chapters dealing with these structures throughout the body, the author "sorts out," as he states, "from among the enormous heap of structures known as ligaments, those which can boast a noble descent, and traces the history of their downfall." The book should render the study of arthrology, which has long been regarded as a dry and somewhat repellent exercise, a really fascinating branch of anatomy.

The mechanics of the muscular movements of the body have been greatly advanced in the last ten years by the researches of Otto Fischer. Dr. DU BOIS-REYMOND seeks in a recent volume[9] to crystallize the new ideas on this subject into a simple and concise form. He first describes the methods of investigation, the geometric analysis, the photographic methods, etc., including the use of the Roentgen rays. He then considers in particular the structure of the bones and joints in relation to the mechanics of movement, the general and special mechanics of the muscles, the movement of individual parts of the body, and lastly the mechanics of standing and of walking. The book should prove of especial interest to surgeons interested in orthopaedics.

Messrs. Saunders and Co. are well advised in publishing English editions of the admirable series of German atlases and epitomes of which Dr. SOBATTA'S *Human Histology and Microscopic Anatomy*[10] forms one. The beautiful and accurate plates in Lehmann and Neumann's *Atlas of Bacteriology* have been generally admired, and in this atlas of histology we find the same accuracy and artistic execution. We can only marvel at the price of the atlases considering the workmanship and delicate colour of the plates. Any experienced histologist turning over the plates will at once recognize how they suggest not diagrams but actual microscopical sections. The haematoxylin-eosin staining is especially well represented, as may be seen, for example, in Plates 29, 40, 31. The text is concise and accurate. It contains no practical directions. For those who require an atlas the book is in every way to be recommended. The student should, however, have his atlas in his collection of microscopical slides, and no book must be allowed to usurp the place of this.

SURGERY.

THE somewhat bulky volume on deformities of the locomotive apparatus in infancy and adolescence, by Professor KIRMISSON, of Paris,[11] constitutes the second part of a work, the first part of which, treating of the surgical maladies of children of congenital origin, appeared in 1898. The writer has naturally found considerable difficulty in dividing his material into the two headings of congenital and acquired. The division he has made is sometimes arbitrary, and is open to criticism. He has further subdivided the volume into four sections—

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[6] *Die Biogenhypothese.* By Professor Max Verworn. Jena: Gustav Fischer. 1903. (Demy 8vo, pp. 114. M. 2.50.)

[7] *Essentials of Human Pathology.* By Noel Paton, M.D., B.Sc., F.R.C.P.E. Edinburgh: W. Green and Sons. 1903. (Demy 8vo, pp. 388; 110 illustrations. 12s.)

[8] *Ligaments, Their Nature and Morphology.* By J. Bland-Sutton. Third edition. London: H. K. Lewis. 1902. (Crown 8vo, pp. 112, 37 illustrations. 4s. 6d.)

[9] *Specielle Muskelphysiologie oder Bewegungslehre.* Von Dr. R. du Bois-Reymond. Berlin: A. Hirschwald. 1903. (Demy 8vo, pp. 323, 49 illustrations. M.8.)

[10] *Atlas and Epitome of Human Histology and Microscopic Anatomy.* By Dr. Johannes Sobatta. Edited by Professor Carl Huber. London: W. B. Saunders and Co. 1903. (Crown 8vo, pp. 248, 80 plates, 68 illustrations. 15s.)

[11] *Les Difformités Acquises de l'Appareil Locomoteur pendant l'Enfance et l'Adolescence.* By Dr. E. Kirmisson, Professor of Clinical Surgery of Children's Diseases in the Faculty of Medicine, and Surgeon to the Hôpital Trousseau. Paris: Masson et Cie. 1902. (Roy. 8vo, pp. 650, figs. 430. Fr. 15.)

tuberculosis, rickets and the deformities resulting therefrom, paralytic deformities, and those of traumatic and inflammatory origin. In the first section he insists on the importance of radiography in the study of Pott's disease of the spine, and gives some excellent illustrations. An interesting chapter is that which deals with the orthopaedic results of excision of the hip-joint. But the most useful is that which speaks of the more modern methods of treating the sequelae of paralysis by tendon grafting and arthrodesis. A fairly full account is given of the various methods, and the literature is up to date. The author is much in favour of tendon transplantation whenever possible. The chapter on the surgical treatment of infantile hemiplegia is not so satisfactory, and lacks detail. On the whole, we think that there is a good deal of matter in the book which has previously appeared in other writings of the same author, and the volume would be more useful had it been condensed. A writer who publishes a book of this size without an index may save himself a great deal of trouble, but diminishes materially the value of his work.

Professor Gumprecht has done much in the latest edition of his manual of the technique of special methods of treatment[12] to maintain its excellence and practical utility. The work has been revised throughout, and fresh chapters have been written on thoracotomy, local anaesthesia, and narcosis. The illustrations, most of which are quite original and very clear and helpful, have been increased in number from 182 to 205. The branch of work with which the book deals, though usually omitted in books on minor surgery, and inadequately dealt with in general treatises on medicine and surgery, is really, from a practical point of view and with regard to therapeutics, most important.

M. de Rouville's small volume on *Urinary Diseases*.[13] prepared on similar lines to those of two preceding books by the same author on general surgery and gynaecology, is a good example of a method that has lately been much improved, especially in France, of imparting practical instruction in a concise form. Like the well-known *Traité de Chirurgie d'Urgence* by Lejars, which may be regarded as a type of this kind of professional literature, it is, as is stated in M. Tuffier's preface, an essentially practical book to which the medical man may confidently refer when called upon to afford prompt relief in any case of sudden and alarming injury or disease of the organs with which it deals. In each of the sections, arranged in alphabetical order, on the traumatic and pathological lesions of the kidney, bladder, and urinary passages, the reader is presented with a brief but, in most instances, quite sufficient summary of the elements of diagnosis, prognosis, and treatment. The author has carried out his plan in a very efficient manner, as the information given under each heading is simple and practical, and at the same time in full accord with the latest development of both pathological and therapeutical teaching.

NOTES ON BOOKS.

While we approach with some distrust books which offer a short cut to knowledge, an exception must be made in favour of Mr. Arthur Underwood's *Aids to Dental Anatomy and Physiology*. (Second edition. Baillière, Tindall, and Cox. 1902. Fcap. 8vo, p. 119. 2s.6d.) Whilst briefly summarizing the important points, it has been well brought up to date, and is stamped with the personality of the author. If read after the perusal of larger works it will be what it professes to be—a real "aid" to the student.

The edition for 1903 of *The Annual Charities Register and Digest* (London: Longmans, Green, and Co. 1903. 5s.), published under the auspices of the Charity Organization Society, has just been issued. Mr. C. S. Loch, the Secretary of the Council of the Society, has revised the introduction, and the volume contains a review of the year, which is not confined to events in this country. As a work of reference it is invaluable, and its moderate price puts it within the reach of all who are interested in charitable work.

[12] *Die Technik der speziellen Therapie. Ein Handbuch für die Praxis.* [A Practical Manual on the Technique of Special Methods of Treatment.] Von Prof. F. Gumprecht, Med. Rat. in Weimar, Dozent an der Jena Universitat. Third Edition. Jena: Gustav Fischer. 1903. (Demy 8vo, pp. 402, 205 illustrations. M. 8.)

[13] *Consultations sur les Maladies des Voies Urinaires, a l'Usage des Praticiens.* Par G. de Rouville, Professeur Agrégé à la Faculté de Médecine de Montpellier. Preface par le Docteur Tuffier. Paris: J. B. Baillière et Fils. 1903. (Demy 8vo, pp. 268; 110 illustrations. Fr 5.)

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

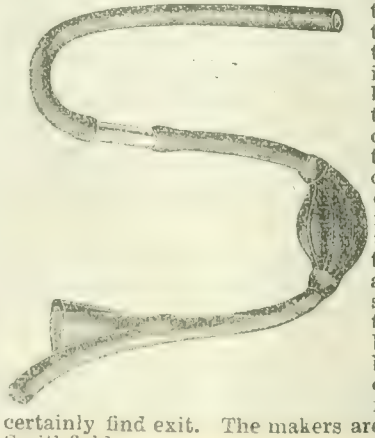
MEDICAL AND SURGICAL APPLIANCES.

A Leg Support.—Dr. F. Strong Heaney, M.A., M.D.Dubl., F.R.C.S.I. (Blackpool) writes with reference to Dr. Carline's description of a leg rest in the British Medical Journal of April 4th: Perhaps your readers may be interested in a somewhat similar article devised by the writer and now used in the out-patient department of Sir Patrick Dun's Hospital, Dublin. It consists simply of a light round iron bar bent in the manner shown. One end bears a rest for the heel the other being fixed to a firm wooden base. This foot rest has the advantage that in cleansing the limb or applying lotion, any superfluous fluid finds its way to the dependent point of the curve under which a receiver is placed. In practice it is found much more convenient than the older pattern,



where the heel is supported above a central pillar along which fluid can escape to the floor. The apparatus is only a few pounds in weight, is easily moved about, and every part of the supported limb is accessible for dressing, bandaging, etc.

Ovariotomy Trocar Tube.—Dr. Alexander Duke (London) writes: When tapping an ovarian cyst the difficulty is sometimes met with of getting the contents to flow through the ordinary exit tube. The one depicted in the illustration has been designed to meet this difficulty. When the cyst has been tapped and the contents will not flow or fail to flow freely, a jug of water poured into the funnel-shaped opening at the side of the rubber tube will create a vacuum, and fluid from the cyst should at once commence to run; if not, the rubber ball on the tube should be compressed, when the contents of the cyst—fluid or gelatinous—should certainly find exit. The makers are Messrs. Arnold and Son, Smithfield.



A Report

ON

THE MILK SUPPLY OF LARGE TOWNS:

ITS DEFECTS AND THEIR REMEDY.

VII.

HOSPITAL SUPPLIES.

We now propose to give a brief account of the system employed with regard to milk used in some of the principal hospitals in London and other large centres.

Westminster Hospital.—Milk is supplied twice daily direct from a farm in Hants—namely, at 7 a.m. and 12 noon. It is immediately sterilized in an Aymard's patent milk sterilizer, then cooled to 100°. It is distributed to the wards in tin cans, which are kept in the ward kitchens. The contract stipulates for "genuine new milk of such quality as will produce at least 10 parts of cream in every 100 parts when tested by a lactometer."

Hospital for Sick Children, Great Ormond Street, is supplied by the Aylesbury Dairy, a certain percentage of cream being insisted upon. Milk on arrival is at once sterilized. Glass quart bottles are filled with the milk and placed in a steam vessel and kept at a temperature of 160° for twenty minutes. After cooling they are sent to the wards. Sterilization in bulk is considered a great snare by Mr. Adrian Hope, the secretary, and quite useless for a hospital.

St. Thomas's Hospital.—The milk insisted upon is "genuine new," to contain not less than 3 per cent. butter fat, and without any added preservatives; specific gravity, 1032; total solids, 12 per cent.; solids not fat, not less than 8.5. The contractor undertakes not to deliver milk from any farm or dairy, the address of which has not been notified to the hospital, and the authorities of the hospital shall be empowered to inspect such farm or dairy, or call for evidence that it is in a sanitary condition, and that the cows thereon are free from tuberculous or other disease.

Charing Cross Hospital contracts with urban dairy companies. No stipulation is made that the milk should be delivered direct from a farm or sealed in any way. All milk is sterilized on receipt.

West London Hospital contracts with urban dairy companies. Milk not sterilized except in very hot weather.

St. Bartholomew's Hospital contracts with a wholesale dealer. Milk not sterilized.

Middlesex Hospital contracts with an urban dairy company. All milk sterilized on delivery.

St. Mary's Hospital.—The Secretary (Mr. Thomas Ryan) of this hospital writes: "The question of milk supply here is one which is receiving very careful attention, but its consideration has not reached a stage which enables me to give a definite reply to the very important questions contained in your letter."

North London or University College Hospital.—This hospital advertises for contracts for the supply of milk, the contracts being carefully gone into by the Committee, their selection having generally fallen upon large public contractors. All milk sterilized at the hospital.

Guy's Hospital obtains milk by contract. It is sterilized by boiling during hot weather only, unless a special request is received from the physician or surgeon in charge.

King's College Hospital.—The milk here is from one of the large dairy companies. Every churn of milk is analysed on receipt, and, in instances of milk falling below a given standard, the sample is sent on to the company for analysis and report by their analyst. The company is thus able to change any source of supply if necessary. The milk is sterilized only in the children's ward.

Royal Free Hospital.—The milk is obtained direct from farms in Wiltshire, through a wholesale dealer in London, and from time to time is analysed. Milk is boiled on receipt during the summer months only, when so advised by the medical staff.

London Hospital obtains its supply by contract with a wholesale contractor, who is required to supply milk containing 8 per cent. of cream "by glass." It is analysed about once a fortnight by the Medical College and by Professor Stokes. No sterilization is done. The milk is strained and sent up to the wards in large tin jugs, and kept in ice boxes until required. The milk is received twice a day, and is tasted by the storekeeper and the steward.

Queen's Hospital, Birmingham, is supplied from a farm direct. The milk is not sterilized.

General Hospital, Birmingham, is supplied from farmers direct usually, but occasionally by a milk dealer. The former has been found the most satisfactory. Milk is sterilized for the children's wards only.

Royal Infirmary, Manchester, is supplied direct by farmers in the country. The milk to be guaranteed from cows free from tuberculosis (tuberculin test), and cows to be periodically examined by a veterinary surgeon appointed by the Royal Infirmary. The churns are sealed, and the milk is tested by the staff of the infirmary. It is not sterilized.

Royal Infirmary, Sheffield, is supplied with pasteurized milk from the Sheffield Model Dairy, Limited. This is found to be satisfactory in quality. There is no sterilization.

Bristol Royal Infirmary for 20 years has been supplied by the Gloucestershire and North Hants Dairy Company with new milk, purified and pasteurized.

Bristol General Hospital is supplied by a farmer, and the milk sterilized on arrival.

Royal Infirmary, Newcastle-on-Tyne, get their supply sometimes from farms direct, sometimes from a wholesale dairy company. It is never sterilized.

Royal Infirmary, Liverpool.—The milk is got through a local agent who is responsible, but the cans go direct from the station to the hospital from the farmer; 10 per cent. cream test exacted, and a periodical veterinary surgeon's certificate that the cows supplying milk have recently passed the tuberculin test successfully. Each ward is supplied with an apparatus by which sterilization can take place.

Manchester Children's Hospital's supply is from a farm. The milk usually is found to range from 3.4 to 4 per cent. of fat. It is not sterilized.

It will be seen that none of these hospitals insist upon special conditions being carried out at the farms, such as the certification of the water supply, cleanliness of the cowsheds, milkers, or cows. In none is a bacterial standard insisted upon. Contractors supplying vast quantities—such as 94,000 gallons per annum to the London Hospital—would be willing to submit to any conditions insisted upon by the authorities of hospitals in order to get such important contracts. The hospital authorities are therefore very much to blame for not insisting upon milk from farms conducted on scientific principles, and therefore able to supply milk with a stated bacterial standard.

EXISTING SYSTEM OF RECEIPT AND DISTRIBUTION OF MILK IN TOWNS.

The milk consumed in large towns is for the most part received from farmers in the country, who send it by rail in churns, usually unsealed, to contractors. The large contractors meet the milk at the railway stations, take it to their factories, where it is cooled and manipulated (or in rarer cases taken straight from the station to the retailer) and there distributed by the contractors to the retailers, who sell it in small shops, or hawk it round the poorer districts, when the people buy it at their doors.

What is the state of the milk by the time it reaches the jugs of these poor people? First, at the farm there are the risks of foul water, bad drainage, dusty contaminated sheds, unhealthy or dirty cows, dirty hands of milkers, unclean machinery or churns. Follow the churns to the station, where in summer they may lie in the sun hours waiting for the train; to be, perhaps, put into ordinary box vans and closed in beside strong-smelling substances. Then there are the manifold risks of unsealed cans, the milk in which is at the mercy of any unscrupulous person. Things are known about the "accidents" to milk in unsealed churns impossible to write. We now arrive at the termini whence the churns are taken by the wholesale dealers to their factories, cooled and dealt with. It is not impossible that large doses of (let us hope clean) water are added, and, in not unknown cases, where the demand is greater than the supply, tinned unsweetened condensed milk diluted. The next stage is the retail dealer, who in many cases passes on part of the milk to still smaller shops, who dabble in it with dippers, take out their supply from the counter, where the milk lies in open vessels, while the remainder once more faces the dust and heat of the streets, and finally reaches the poor people's houses. Picture the state of the milk when it is

given to the babies, after perhaps passing through a long tube bottle. This is the manner in which milk is commonly handled in the large towns of England.

The following particulars with regard to the administration of those London boroughs in which the principal railway termini are situated illustrate the extent and limitations of the powers of urban sanitary authorities and the manner in which the law is understood and interpreted by the various authorities.

CITY OF LONDON.

We are indebted to Dr. Collingridge for the following information:

Inspecting Premises and Vessels.—The Corporation, as authorized under the Dairies and Milkshops Order, makes constant inspections of the premises where milk is sold under the Order, and has recently drafted fresh regulations, which at the present moment are before the Local Government Board for consideration. There are now 528 premises registered for the sale of milk. Special arrangements are made for taking samples in the streets from barrows and itinerant vendors at irregular times. When a case of milk sold by one dealer to another found adulterated is met with, the milk supply is traced through the whole chain.

Railway Transit and Delivery.—As a general rule milk is consigned to wholesale dealers, and fetched by them from the terminus, and then delivered to the smaller dealers. In very few cases do small dealers receive consignments of milk, and these are probably sent by small farmers in the country. The amount of milk reaching the City cannot be given. The consumption in City hotels, restaurants, tea shops, etc., is very large. There are, generally speaking, two deliveries daily, the larger one being in the early morning. The stations where milk is received in the City are Liverpool Street, Fenchurch Street, Broad Street, and Cannon Street (this is in order of amount of supply). Practically it does not remain at the termini for any length of time. It is removed at once by the vans waiting at the stations. The railway companies do not carry milk in refrigerating vans, and no cold storage is provided at the termini. There should be some proper definite arrangements arrived at with the railway companies with regard to the locking of churns: as a matter of fact the railway companies do not object to this, although they did formerly on account of the difficulty of checking the amount. This can easily be done by weight. Dr. Collingridge adds: "I have knowledge of pollution of milk supplied which I do not care to put into words."

Sampling.—Samples are taken from time to time at the railway stations within the City area, whether this be for consumption within the borough or without. The difficulty arises with regard to milk coming to a station without the City and intended for consumption within. A case occurred in March, 1902, in which a consignment of milk arriving at Euston was followed by the City Inspector until it came within the district, where a sample was taken which proved to be adulterated. The magistrate held that the sender's responsibility ceased on arrival at Euston, and as the inspector has no power to go outside his district to take samples, the law as it now stands affords no check to such cases. The Local Government Board has been urged by the Corporation to so amend the Act as to allow an inspector to take samples outside his district if he has reason to believe the milk is to be taken into it. Samples may be taken, but they are certainly not taken systematically at the terminus. So far as precautions to prevent contamination of milk are concerned, these are rather conspicuous by their absence.

PADDINGTON.

Railway Transit and Delivery.—Milk sent up from the country and arriving at the terminus of the Great Western Railway (in the borough of Paddington) is generally addressed to the wholesale dealers, who are in waiting with their carts. They usually drive straight to their factories, where the milk is first manipulated and then sent out to the retail merchants. In some cases only is the milk dropped by the wholesale dealers' carts at the retailers on their way to the factories. If a retail dealer receives milk direct from the farmer, which seldom happens, as they deal in such small quantities, he claims it himself at the railway terminus. As a general rule the retail milk seller gets his milk through a middleman. The milk arrives from the country twice a day, at hours of the night varying from 11 p.m. to 3 a.m., and again sometimes early in the afternoon. Refrigerating vans are not supplied by the railway company. Churns may lie for hours in the sun at wayside stations waiting to be picked up by the train, and in many cases are put into ordinary closed-up luggage vans. There are no cool rooms at the termini, for the carts are always waiting to remove the milk.

Sampling.—The wholesale dealers take samples of the milk at their factories on its arrival from the country. We learn from Dr. Reginald Dudfield, M.O.H., that the sanitary authority of Paddington usually prefers to take samples from the retail dealer, and to prosecute him if adulteration is found, without following the matter up to the wholesale dealer or farmer. The line he takes is that the retail dealer has no business to sell impure milk, and if it is impure or adulterated he must suffer the consequences. The sanitary authority, if requested by the dealer or by another authority to take samples of milk will do so free of charge.

Inspection of Premises.—The sanitary authority inspects the premises and vessels of small milk sellers, and the dealers are requested to keep the vessels containing milk covered and as far away as possible from strong-smelling substances.

LAMBETH.

Railway Transit and Delivery.—Milk arriving by the London and South-Western Railway, which has its terminus within the borough of Lambeth, is all carried at sender's risk. The greater part arrives between midnight and 3 a.m., having been kept back until the passenger traffic is over, but small consignments are arriving at all times of the day. The churns are, as a rule, carried in ventilated vans, but are not sealed. The milk is consigned to wholesale dealers, some of whom, however, have a retail trade. The wholesale dealer sells to smaller men, and they, again, to still smaller dealers and grocers, who may only dispose of a few gallons a day. In this way Dr. Priestley believes that much of the milk consumed in the poorer quarters is three or four days old; it has of course been treated with preservatives, probably by each dealer through whose hands it has passed.

Inspection of Premises.—All premises and the vessels used in them are inspected, and efforts are made to induce grocers and other small dealers to keep the milk away from paraffin and other strongly-smelling substances, but not with very much success, as the amount of milk sold is so small that it is not worth the shopkeeper's while to take much trouble about it.

Sampling.—Dr. Priestley directs samples to be taken at the milk platform, as the terminus is held to be a "place of delivery." In this way he claims that Lambeth protects all South London, but as only one sample a week can be taken the protection cannot be complete. Samples are also taken at other stages in the course of the milk from the railway to the consumer, and wholesale dealers have been prosecuted for selling adulterated milk. Samples would be taken free for a wholesale dealer. As a rule, however, the wholesale man knows how to protect himself; he has a warranty from the farmer to supply good pure milk with all the cream, 3.5 or even 4 per cent. being specified. Some wholesale dealers employ chemists and resort to systematic analysis in order to keep a check upon the farmers. The system, however, may have another result: a wholesale dealer who finds that the milk he receives is averaging nearly 4 per cent. of butter fat can easily calculate how much water may be added, while still keeping the percentage of fat above the official minimum of 3 per cent.

STEPNEY.

Railway Transit and Delivery.—Dr. D. L. Thomas (M.O.H. Stepney) informs us that where there is a contract for the supply of a large specified quantity of milk daily, the dealers—mostly those in a good way of business—fetch the milk themselves from the stations; but most small dealers buy from a middleman, who sends it in a van, the amount required, which varies from day to day, being measured at the shop door. If a dealer—not one of the smallest—runs short, he will send a cart to one of the large termini and buy as much as he wants from a wholesale dealer. Dr. Thomas regards the precautions against contamination and adulteration on the railway journey as very unsatisfactory, since in his experience churns are not sealed.

Sampling and Inspection.—About 550 samples of milk are taken annually, about 40 per cent. of these in the streets. Premises where milk is sold are registered and systematically inspected. Recently the borough sanitary authority prosecuted a milkman for having his vessels and measures in a dirty condition. He was convicted, and fined £5 with 23s. costs.

FINSBURY.

Dr. Newman, M.O.H., Finsbury, sends us a note on the

difficulties met with by a sanitary authority in London of a district which does not contain a large railway terminus where milk is delivered. The medical officer of health, he observes, has no control over the farms or transit; he can and does sample for chemical adulteration, but bacteriological examination is only done rarely. The London County Council is not much better off. The origin of milk sold in the several districts is not known, and only by accident who the contractor is. Registration is giving an increasing control of the retailer, but that is too late to be of much use. Section LXXI of the London Public Health Act, 1891, is supposed to help, but on examination its machinery is seen to be impracticable. In his annual report for 1902 he writes as follows:

MILK SUPPLY.

At the time of the formation of the borough in November, 1900, the registration of milk sellers and dairymen, including various powers and duties, was transferred from the London County Council to the Metropolitan Borough Councils under Section v, Subsection 1, of the London Government Act, 1899. The regulations thus to be enforced by the Borough Councils come under the Dairies, Cowsheds, and Milkshops Order of 1885, and the Amending Orders of 1886 and 1899, and comprise matters of registration, sanitary construction, ventilation, water supply, the health of the cattle in the cowsheds, the cleanliness of the utensils used in dairying, and the protection of milk from infection and other forms of contamination. In the borough there are registered 280 milkshops, and each of these was inspected periodically during 1902. A list of coffee-shops, restaurants, etc., where milk is consumed on the premises has also been made for purposes of reference, but such places are not, of course, registered. If milk is served on such premises to customers in their own receptacles, the occupier is called upon to register his premises.

A register book is kept containing the name of the occupier, situation of premises, and date of registration. In the same register is kept a record of all cases of infectious disease occurring at milkshops and dairies, with the dates of occurrence and disinfection.

It will be understood that with few exceptions these 280 milk sellers receive their supply from wholesale dealers and contractors. Contractors not infrequently receive their wholesale supply from places in the country at a considerable distance from London; such a supply, often thousands of gallons in quantity, reaches London by rail; the contractors' carts convey the milk in milk churns at an early hour of the morning from the railway station to the milkshop. Such a contractor would supply scores of milkshops. He does not, however, know at which shops the milk from certain farms is delivered. Moreover, in many cases a milkshop will deal with two or more contractors, thus still further complicating the business.

At present it may be said that whilst we have in operation registration of milkshops and some control over their management, there is little or no protection of the milk itself. A person buys some milk at his doorstep which comes from a small milkshop, which is supplied by a milk contractor, who is supplied by a large number of farmers in remote districts of the country, the purchaser, the purveyor, and the contractor all being entirely ignorant of the fact that this particular milk may be derived from a farm on which an infectious disease is prevalent. I am strongly of opinion such a contractor should, in the first place, keep a register of the farms from which he obtains his milk supply and every part of his supply; in the second place, he should keep an exact register of the destination, the milkshops, to which the milk from every farm with which he deals is delivered; and, in the third place, he should only deal with farmers willing to furnish him with a written guarantee that they will inform him immediately of any outbreak of infectious disease in man or animal upon their farms. By these three comparatively simple measures it would be possible to trace infection and stop infection at once instead of being compelled to wait until all the mischief has been done. The custom of some purveyors of milk obtaining their daily supply from several sources is not in my judgement a desirable one. It greatly complicates the difficulty of tracing the source of infection, as it also increases the liability of the purveyor to risk. Another circumstance which is apt to obscure the source in these cases is that the various supplies are delivered at different times and mixed together in the milkshop. Hence one delivery to purchasers may be a mixture of milk from various farms.

ST. PANCRAS.

We shall conclude this section by giving some account of the system followed in St. Pancras, where Dr. Sykes, the medical officer of health, is working on a well-considered plan which seems to offer many advantages.

Railway Transit and Delivery.

Milk coming up from the country arrives at the following stations in the St. Pancras Borough: King's Cross (Great Northern), St. Pancras (Midland), and Euston (London and North-Western), and is usually sent to the wholesale dealers direct, who meet it at the special milk arrival platform, and either drive it straight to their factories, where the retailer fetches it, or, as is more frequently the case, deliver it to retailers, usually after manipulation at the factory. Occasionally a retail dealer may receive milk direct from the farmer, in which case he fetches it from the station himself; but usually he deals in too small quantities to make this possible, and as a general rule the retail dealer gets his supply of milk through a middleman. The milk arrives at the London termini from the country from 4 to 5 a.m., and again about 12 noon. The dealers or retailers with their carts are waiting in readiness to take away the milk when it arrives, consequently it is found sufficient to refrigerate the vans in which the milk travels, and this is done by most companies on the railway lines running into this district. If it should happen that the milk is not immediately claimed, it remains in the cool van until such time as it is. There are special arrival platforms for the milk, quite independent of the ordinary goods service.

Samples.

The dealers do not care to take samples of the milk themselves—they prefer the sanitary authorities to do so, to save the expense of their own analysts and servants, and so that if a case goes into court the sanitary authority may be called to give evidence. Dr. Sykes considers that this is beginning at the wrong end of the chain, the duty of the sanitary authorities being to protect the public against vendors of impure milk, not to protect the wholesale milk-dealer against farmers, as this is no protection to the public under existing conditions:

Within the borough, the medical officer of health orders samples of milk arriving from the country to be taken at the railway termini, when samples taken at the retail dealers' shops have been found not genuine.

Without the borough, if requested officially by another sanitary authority, Dr. Sykes will make inquiries and take samples of milk to be delivered outside his borough, as presumably the milk is to be delivered to a retailer and not to a wholesale dealer, but he will not take samples for a wholesale dealer without a fee of 10s. 6d. for taking a batch of samples in the early morning and 10s. 6d. for examinations thereof. This is, as already stated, because the protection is afforded to trading profits and not to the public, as there is no control whatever over the wholesale dealer.

The sanitary authority inspects the premises and vessels of small dealers and takes samples, which are also taken in the streets. Although samples are taken at the shops of small dealers, yet, with a view to stopping adulteration on a large scale, he is not content with prosecuting the small dealer for having adulterated milk on his premises. He causes the matter to be sifted from the small shop to the wholesale dealer, and, if necessary, to the farm. His scheme of tracing infection through milk is the best in London. Registers are kept which enable the milk to be traced from the small shop to the original wholesale dealer. It may pass through three or four shops first, but this is known. A case, say of scarlet fever, occurs which may have been caused through the milk. It is ascertained where the milk of that family is obtained, where the shop gets its supply, and finally, wherever possible, the medical officer of health for the village or town where the farm is situated is communicated with and is asked to make inquiries. If it is found that any one employed on the farm is suffering from scarlet fever, the milk supply from that farm is immediately stopped, and with it the infection which may otherwise be sown broadcast. Unsweetened condensed milk is much used by wholesale dealers at certain times of the year to supplement the ordinary supply of fresh milk, and is either sold as pure milk, or else mixed with pure cow's milk, and then sold. It is quite up to the standard of butter fat required, but no mention is made in selling it of its being tinned and condensed. The unsweetened condensed milk is oftenest reserved by the dealers in case they are suddenly asked to supply a large quantity of milk—say for a banquet at a hotel, or some large order for which they might have difficulty in procuring sufficient fresh milk.

Large dealers often boldly water the fresh milk if their supply runs short. They do this on a large scale, and if the retailers are caught and summoned, the wholesale dealers will pay the fines. Even allowing for payment of fines for the retail dealers, if they should chance to get caught, the wholesale dealers still make a large profit on such a transaction.

Foreign Milk.—There are processes of freezing and also of injecting pure gases in order to preserve milk for a long period. These have been found to be the systems employed with regard to milk imported from foreign countries such as Holland, Norway, France, and even from Victoria, New South Wales. It only answers for a period of about a fortnight, after which the milk separates or deteriorates. But evidently the importation of milk from abroad has not been found to answer, for statistics show that the quantity, which was never really large, has gradually diminished, so that it may really be looked upon as an experiment.

Retail Distribution.

Humanized and Sterilized Milk.—In the first of three reports which we have before us upon the municipal supply of humanized milk, dated August 28th, 1901, Dr. Sykes points out that the humanizing of milk is the exact adjustment by measurement and manipulation of a detailed kind, carried out by competent judges, of cow's milk, in order to make it resemble human milk, which otherwise would often be done roughly by the mother or nurse. Sterilization consists in heating the milk in a careful manner so as to avoid alteration in the raw flavour. The above processes entail bottling. The effect of bottling and stoppering is that the milk is secured against subsequent contamination until opened and consumed. Cow's milk is purchased in three forms—(*a*) fresh, (*b*) bottled, and (*c*) condensed.

(*a*) *Fresh Cow's Milk.*—The mother or nurse who purchases this can be supplied by the sanitary authority with a notice containing detailed instructions which should enable her to feed her infant in a proper manner.

(*b*) *Bottled Milk.*—This is provided in three forms, preserved, sterilized, and humanized.

1. *Preserved Milk in Bottles* is milk in its natural condition treated with a preservative in such a way as to keep it sweet for a certain period. The process of injecting pure gases is perhaps the best type of preservative added to milk in bottles.

2. *Sterilized Milk.*—Dr. Sykes advocates all sterilized milk being sent out in bottles in a similar manner to aërated waters, and that all careful persons should boil their milk as soon as received; he also remarks that there is nothing to prevent milk, upon delivery at houses, being heated in bottles (standing in boiling water), stoppered while hot with one of the numerous patent stoppers available, and kept to be used at leisure.

3. *Humanized Milk*, being specially prepared, should be given only under medical advice, and not indiscriminately.

(*c*) *Condensed Milk.*—Condensed milk appears upon the market in two forms—skimmed and whole. The skimmed is absolutely to be condemned as infant food, unless the fat, of which it has been robbed, is restored to it. Dr. Sykes urges that, as a large number of infants are fed upon condensed milk, mothers should be guided by clear instructions upon printed labels. The affixed wrapper should guarantee that the milk is whole milk (not skimmed) sterilized and condensed, and unsweetened, and should not contain more sugar than is necessary to approximate it to the composition of human milk. The directions should be explicit and full—as to the intervals of feeding, the quantity to be used in every month of infant life, and details of the mode of preparation and all the precautions to be taken. Dr. Sykes suggests that there is a field of enterprise yet untouched, namely, the supply of condensed humanized milk ready for use.

In a report upon the Municipal Supply of Humanized Milk for Infants, March 26th, 1902, Dr. Sykes states that acting on the instructions of the Public Health Committee of the Borough Council of St. Pancras he obtained information from dairy companies, dairymen, and others as to the various kinds of milk supplied by them to the public. Over 550 letters were sent out, but the outbreak of small-pox postponed the digestion of the replies. The matter under consideration is the domestic distribution of milk, wholesale dealers and contractors not having been taken into consideration.

Tinned and Bottled Milks.—Dr. Sykes states that condensed humanized milk in tins does not appear to be on the market. Condensed whole milk in tins is sold by all grocers, most vendors of dairy produce, and many milkmen. He urges that milk, as also other tinned foods, should be date-stamped on tins from the inside, as the many brands on the market vary enormously in the length of time they remain good; some brands of tinned milk have been found blown in large quantities shortly after purchase, and some, stated to be newly made, do not last three months, whilst other brands will keep very long periods. All tinned milks should be labelled with full directions. The retail price of humanized milk in bottles is 3d. or 4d. per pint bottle and 5d. or 6d. per quart bottle. Preserved milk in bottles that has been treated with soluble preservatives possibly exists but is not recognized. Filtered milk in bottles, being bottled direct from the cow, will keep good for a much longer period, if rapidly cooled and immediately bottled, and some firms are adopting this means of supplying pure milk. It is the general want of country cleanliness that impels many of the dairy companies to filter the milk received from farms before they manipulate it for sale in special forms. There is an unfortunate impression that cow's milk should be of a deep yellow colour—this leads to artificial colouring, by the addition of annatto, which also favours the sale of dirty milk.

Fresh Milk in Open Vessels.—This is the common mode of selling milk and the numbers of opportunities of contamination at each stage are cumulative. The shed, the cow, the hands, the pail, each add their quota, the mixing vessels, the hands again, the churns, the carts, the station dépôt, the railway vans, the terminus platform, add something more, and the milk dealer's cart, the milkshop, the open counter vessels, the milk cans, the dippers, the hands again, and the dust of the street, complete the mixture. Dr. Sykes concludes: "There is only one defence against pure fresh milk of this kind, namely, to boil all cow's milk before consumption: the nutritive value is not diminished below that of human milk, the digestive condition is increased, and as the palatability is a matter of acquired taste it makes no difference to children. The foreigner would as soon think of drinking raw milk as of eating raw meat."

Conclusion.

Dr. Sykes, broadly speaking, considers that the teaching of personal health and domestic economy in the homes is the best solution, and that public money would be better spent upon health visitors teaching mothers the proper method of feeding and rearing infants than upon supplying humanized milk indiscriminately.

Dr. Sykes has further explained in a letter to the British Medical Journal of April 25th the utter want of legal control over the middleman milk dealer which paralyses the efforts of sanitary authorities to follow the chain of adulteration through the retailer, the middleman, and the farmer.

RICKETS AND SCURVY RICKETS.

Before concluding these articles it will be desirable to make some reference to the alleged statement that the use of sterilized milk, so-called, may produce rickets or scurvy, or the condition known as scurvy rickets or infantile scurvy, which Sir Thomas Barlow was one of the first to call attention to and to describe.[1] He pointed out that well-marked cases at least were very rare in this country, and occurred almost exclusively in rich families. Experience of the extensive use of sterilized milk in this country is limited, and we shall therefore rely on the exposition of the subject given recently by Dr. de Rothschild and Dr. Abramoff.

They point out the noteworthy fact that in spite of the large quantity of sterilized milk distributed by dispensaries in France, infantile scurvy is rare in that country. It appears to be most frequent in the United States, owing as is believed to the increasing tendency there to feed infants on prepared foods. The disease has also been observed in Holland, Denmark, Switzerland, Buenos Aires, and Australia.

Etiology and Pathology.—Scurvy in infants is seldom found before the age of 4 months, and is most frequent from 4 to 18 months.

Relation to the Feeding of the Child.—The following are the results of research in America:

1. The illness is attributable in many cases to the diet not being appropriate to each child considered individually. Change of diet may be followed by prompt recovery.

2. Proprietary foods specially conduce to the disease.

3. The more natural food is altered from its natural state, the more likely is it to produce scurvy. Rothschild and Abramoff add that, in considering sterilized milk, this theory can only be applied in 28 cases out of 100. Griffith found that in 100 cases starch or its derivatives, more or less soluble, entered into the composition of proprietary and table foods administered in 56 per cent. This, though not absolute proof of the hurtful influence of starch, must raise a suspicion. Condensed milk in 32 cases (9 per cent.) and malted milk in 44 cases (12 per cent.) were employed together with the dry prepared foods. In 68 cases (19 per cent.) sterilized milk constituted the only food; in a greater number of cases it was one of the elements of the food. In 16 cases pasteurized milk was the only food employed; in a few other cases scurvy developed in spite of feeding on fresh milk and breast feeding (cases recorded by Love, Southgate, Northrup, and mother). It was easy in those cases to find in the nurse a pathological state reacting on the mammary secretion. It must be admitted that the milk of mothers may undergo alterations as yet undetermined which are capable of causing scurvy. The greater number of authors who have studied the subject

[1] *Revue d'Hygiène et de Médecine Infantile.*

attribute this affection to the use of prepared foods, and to milk having been treated at a very high temperature. In America the greater number of cases have been observed where proprietary foods and "modified milk" are much used, especially in rich families. Modified and humanized milks have been prepared and offered to the public in France, and since then cases of scurvy have occurred, and have been attributed to their use. This may be merely a coincidence, but de Rothschild and Abramoff state that during the last ten years they have watched for months infants brought up on sterilized cow's milk, and have never seen a single case of "Barlow's disease." Without rejecting the hypothesis that sterilized milk is one of the factors of infantile scurvy, they maintain that to arrive at the truth it is necessary to make a particular study of the milk industry.

"Sterilization" of Milk.

Sterilization of milk may be divided into two groups: (1) milk sterilized by the trade, heated above 100° C., which can be kept, if not indefinitely, at any rate for some time; (2) milk sterilized in a steam bath (*bain-marie*) at home, which will not keep more than twenty-four hours. These two methods of preparation differ totally; milk sterilized by the trade may be considered as in a certain degree a preserved food, being often used a considerable time after its preparation, whereas milk sterilized at home is used within twenty-four hours. It is also indisputable that prolonged heating at a high temperature modifies the milk and destroys in it certain ferments the exact nature of which is not yet ascertained. Recently Dr. Netter drew attention to the fact that prolonged heating diminished the citric acid in milk, and maintained that as citric acid is essentially an antiscorbutic, its removal, or partial removal, caused or encouraged "Barlow's disease;" de Rothschild and Abramoff believe that there is a sort of auto-peptonization of the milk which is produced in the first stages of sterilization, before the temperature has become sufficiently high to destroy all the germs. This peptonization takes place very rapidly, and experiments on dogs have shown that the ingestion of peptones, to the exclusion of all other food (as well as the subcutaneous or intravenous injection of peptones in small quantities), is followed by haemorrhages and other symptoms similar to those of scurvy. If this can be admitted, we are not far from the hypothesis of Baginsky and Netter, that infantile scurvy has become more common since the milk industry has applied methods of pasteurization of milk largely, not only before it leaves the farm, but again on its arrival in a town, and without warning customers, who may again sterilize the same milk in a steam bath.

All these questions, appertaining much more to the milk industry than to biology, will only be satisfactory settled when milk production is scientifically regulated, as is the case in Germany and in Denmark. It will only be when the manipulations the milk goes through are known that the untoward results often attributed to it will be rightly accounted for. The occurrence of rickets and scurvy in infants in the same subject is, according to de Rothschild and Abramoff, a matter of chance. It is as if two lodgers inhabited a same house which happened to suit them. The frequency of rickets in Alsace-Lorraine has been remarked by many German authorities, in spite of scurvy being rare there. On the other hand, in North America rickets is rare and scurvy is becoming more and more general.

It has been observed that infantile scurvy is more frequently met with in the children of the rich and rickets in poor families. Scurvy may occur without any trace of rickets being discoverable, even on the most careful examination. Thiercelin, for example, published recently five cases of infantile scurvy in which there were no traces of rickets. What chiefly differentiates these two diseases is that scurvy mends rapidly if a diet of fresh milk, red meat juice, and fruit juice be given, whereas this treatment has no effect upon rickets.

Presentation.—On March 27th Dr. Harold Andrew Kidd, the Medical Superintendent of the West Sussex County Asylum (Graylingwell Hospital) Chichester, was the recipient of a handsome solid silver presentation bowl on a plinth, with suitable inscription, presented by the Committee of Visitors of the institution on the occasion of his marriage. The officers and staff of the hospital also contributed to a presentation, which took the form of a solid silver fluted soup tureen with ladle, and solid silver sauceboat and ladle.

THE SECOND INTERNATIONAL CONGRESS OF THE MEDICAL PRESS.

[From our Representative]

Opening Ceremony.

The solemn inauguration of the International Congress of the Medical Press took place on April 20th, in the magnificent Paraninfo, or Graduation Chamber of the University of Madrid. It is a splendid hall of an oval shape, and was well filled by the delegates, a good number of ladies, and a large number of undergraduates, who behaved remarkably well. A military band played the overture to *Tannhäuser* as the guests assembled.

The delegates were of all nations and languages, but French appeared to be pretty well understood. Uniforms were plentiful, and decorations and ribbons equally so. On inquiring the exact uniform worn by one of the Secretaries, I was informed by a Spaniard that there were 2,000 different uniforms in Spain, and no one could hope to know them all.

In the absence of H.M. King Alfonso the chair was taken by the Minister of Public Instruction, Don J. Allendezalazar, and supporting him on the platform were Dr. Cortezo, President of the Congress; Professor Cornil (Paris), President of the International Association of the Medical Press; Dr. Larra, General Secretary; Dr. Posner (Berlin), the Rector of the University; Dr. Pope (Leicester); Dr. Calleja; and Dr. Rodriguez Mendez, Rector of the University of Barcelona.

The Chairman called upon Dr. Larra, Secretary of the Congress, who read an address explaining the objects of the Congress. He recalled the circumstances under which the Association of the Medical Press first came into existence at the International Congress of Medicine at Paris, followed by its first congress at Paris and a conference at Monaco last year. He then devoted some time to a general consideration of the advantages of such an organization, and a eulogy of the medical press generally. He regretted that for long the spirit of professional confraternity, the fostering mother of all material proper and of the most elevated moral conceptions, had been lacking, and quoted Virchow, who at the first congress said: "Very slowly have medical men developed the true confraternal spirit which is indispensable for all general knowledge." As secretary he felt it his duty to follow the example of the modest histrion of former days, and merely announce what the play was meant to represent. He could not praise the Congress, for if eulogy were difficult after the conclusion, it was more than impossible at its commencement. He briefly reviewed some of the subjects to be touched upon, and gave a short account of the Spanish Medical Press Association, which, founded in 1881, was reorganized in 1902, and had done much to render the International Congress possible. He concluded, in imitation of his illustrious predecessor at the first Congress, with a peroration in praise of solidarity. "This solidarity, I repeat, is the source of progress, of love, and social equilibrium. There will always be conflict of interests, wars of peoples, professional commotions, economic catastrophes, suffering without end. Let us do what we can to promote real and permanent union, and to lay as the cornerstone of peace that intellectual confraternity so good for families, so vitally necessary for communities."

The President of the Congress (Dr. Cortezo) read his introductory address. He began in French, and welcomed the delegates in the name of the Spanish medical press. The medical press had no connexion with political machinations. The names of the distinguished visitors were well known in Spain. He continued in French, enumerating the French journalists who were present, and then commenced to speak in German, referring to the German press in flattering terms. In Italian he drew a parallel between the two countries of Spain and Italy, referring to their similar origin, their close connexion for ages, their similarity of race; he enumerated the great Spaniards, Seneca and others, who had been also great Romans. "Italy," he said, "was our mother, she is still our guide." Resuming in Spanish, he paid a graceful tribute to the English medical press and the state of medical knowledge in England, referring in warm terms to the work of Lister; and a few remarks to the Spanish Americans and the Spanish press concluded a striking address.

The Minister recognized the importance of the medical press, without which there could be no rapid diffusion of the results of scientific research. He was convinced that nothing but good could come of such a congress, and said it was a most agreeable task for him to welcome the members in the name of the King Alfonso.

Professor Cornil (Paris), who traced the origin of the

International Association, considered that the work of the press, as it tended to diffuse medical knowledge, made for the alleviation of suffering and the good of humanity, and urged the journalists present to keep their work up to the highest standard possible.

Professor Posner (Berlin) in returning thanks for the German delegates, referred to the interest always taken in the work by Professor Virchow, and urged this as a proof—if any were needed—that the work was a worthy one.

Dr. Dejace spoke for Belgium, Dr. Santos Fernandez for Cuba, Dr. Craigie (Chicago) for America, and Dr. Ascoli (Rome) for Italy.

Mr. Adolphe Smith, who spoke for the British delegates, recalled the fact that he had thrice previously visited Madrid on a journalistic mission, the last time being on the terrible visitation of cholera, but whatever the preoccupation of the day might be Spain always welcomed science and scientific men.

Dr. Blondel (Secretary of the International Association) made a good speech introductory to the work of the Congress, and the Minister of Public Instruction then declared the Congress open.

Dr. Cortezo and Madame Cortezo gave a dinner to the foreign delegates in the evening in the Restaurant L'Hardy. This was most interesting as an example of what can be done in Madrid from a gastronomic point of view and also of the world-renowned Spanish hospitality. The hour at which it commenced, 9 p m, is not unusually late for Madrid, where the population seems usually to find a difficulty in getting itself off to bed. The viands and wines were of the best and at the same time free from the British stodginess which is apt to make a large dinner party a thorn in the flesh for days to come. Ladies of several nationalities were present, and Madame Cortezo looked after her guests with the greatest cordiality, and the banquet will be remembered by all as a bright spot in a memorable meeting.

Tuesday.

Dr. Tolosa Latourn read a paper on intellectual property and the medical press. He was disposed to give the greatest protection to original scientific work, having regard to the very meagre pecuniary reward reaped by the medical and hygienic scientists for great inventions which in a more commercial field would have brought wealth to the discoverers.

Dr. Blondel regretted that medical journals gave so much prominence to the proceedings of learned societies, with the result that professors were led to write pretty articles *ad captandum* in place of setting out the subjects of which they had made a life study.

Dr. Martinez Vargas urged that the medical press should do more in the campaign against tuberculosis.

Dr. Larra read an interesting paper on the history of the medical press in Spain, which he said was the second country in point of time to publish medical periodicals.

Dr. Castelo, of the San Juan de Dios Hospital, spoke on medical reporting.

Dr. Barbera, of Valencia, contributed a chronological summary of the medical papers in his locality.

Wednesday.

Dr. Perez Nogueras, the Senior Officer of the Sanitary Department of the Army, spoke of the services rendered to military surgery by the medical press.

General Resolutions.

Definition of a Medical Journal.

Dr. Blondel proposed:

That a paper which published only the proceedings of one or more earned societies without news should not be considered a medical ournal proper.

After much discussion this was agreed to, though the President, on being questioned by the English delegates, admitted that its force was merely moral. He hoped it might have its effect, and Dr. Pope remarked that the discussion showed the absolute necessity of reserving to each national association the right of election or exclusion of journals of its own nationality.

Free Medical Journals.

A long discussion on this general question followed. Condemnation of the journal published merely as an advertisement by trading firms was unanimous, but the difficulty of meeting the evil was obvious and means for combating it wanting. The best advice was, perhaps, that of Mr. A. Smith, who urged the medical press to keep up a high standard, so that no free journal should be able to justify its existence by visible proof of its superiority to regular and independent journals.

Statutes of the International Association.

After a keen discussion, the principle of voting by nationality was adopted. Countries of more than 10 millions (population) were accorded 5 votes and the lesser 3.

It was resolved that only journals approved by their own national Committee should send voting representatives, an amendment by Dr. Mendez de Suarez that there should be an appeal to the International Committee being defeated.

The other statutes as drawn up by the Committee were carried, with the exception of the omission of the word *leçons* (lectures) from the list of matters which had a *droit privatif*, and which should not be used by any other paper than that first reporting them without acknowledgement of their source.

Thursday.

A meeting of the International Committee held on Thursday preceeded to the election of officers of the International Association with the following result:—*President:* Dr. Corteza (Madrid). *Vice-Presidents:* Professor Posner (Berlin), Dr. Ascoli (Rome), Dr. Dawson Williams (London). *Secretary and Treasurer:* Dr. Blondel.

The remaining papers, which were of no special interest, were then taken, and the Congress concluded.

Conclusions.

To sum up the results of the present Congress: It was evident from the first that great interest was taken in the proceedings by all the delegates, and that they were fully impressed with the desirability of achieving the objects set forth in the opening address. It is difficult to see that there can be any immediate results from the Press Association, but it undoubtedly will result in time in the formation of a healthy public opinion on the subject of what is and what is not reputable professional journalism; and if, at the outset, the decision not to make too rigid rules leads to the inclusion of a few journalists who sail rather near the line of commercialism and self-advertisement, the fact remains that we have a penalty for those inside the fold—namely, expulsion—while for those outside we have none. Amongst a good deal of verbiage some of the papers read were undoubtedly helpful to journalists who, living in remote places, are not in touch with current thoughts, and are likely to be led by capitalists and others into lines of conduct which they might afterwards find to be disastrous for themselves, and degrading to the status of the medical press.

A meeting of the Executive Committee of the International Association is to take place at Brussels some time in the next twelve months.

Entertainments.

The Association of the General Press gave a reception in its club-house on the Tuesday night. A large number of ladies and gentlemen were present, and the programme included Spanish classical music, recitations by Spanish poets of their own works, songs of the country, and terminated with supper.

The Basque game of pelota, resembling racquets on a large scale, was shown in the principal court *Fronton Central* of Madrid. The court is about 70 or 80 yards long, and has one side and two end walls (front and back). The players wear a kind of basket fastened on one hand, most like the piece of basketwork carried on a four-in-hand coach to protect ladies' dresses when mounting or alighting. In this small weapon they catch the ball with marvellous dexterity, and return it against the front wall with great force. A player sixty yards from the wall will, with a good stroke, strike at and make the ball rebound to the back one without touching the ground, and thence it will come back to the middle of the court. The players are professionals, and betting is very rife, the bookmakers standing on the floor of the court, while the spectators occupy the vacant side on raised seats.

The Congress held a banquet in the arena of the Theatro Moderno on Wednesday at 12.30. The auditorium had been hung with wonderful Gobelin tapestry, and the floor covered with old French carpets sent expressly from the Royal Palace by the King. No speeches were delivered. *O si sic omnes!*

At 6 30 the Mayor of Madrid received the congressists and a large number of representative Madrileños in the Town Hall, a new building of considerable pretensions, and hung with beautiful tapestries. After the reception by the Mayor (the Marquis of Portugado), what the papers describe as an elegant "lunch" was served, consisting of cold meats and wines. The Madrileños dine late—any time up to 8.30 or 9—but how they managed to dine at all after the celebrations of the day passes your correspondent's comprehension.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1903.

MEMBERS of the British Medical Association are reminded that commencing with January 1st, 1903, the annual subscription is a uniform one of 25s., inclusive of the Branch, and that all subscriptions should be paid direct to the General Secretary, 429, Strand, London, W.C., and not to a Branch Secretary.

British Medical Journal.

SATURDAY, MAY 2ND, 1903.

TOWN MILK.

THE series of articles upon the milk supply of large towns, published in the BRITISH MEDICAL JOURNAL during the last few weeks, have dealt with a subject with regard to which the medical profession has a duty to inform and guide public opinion. Its importance for the public health lies chiefly, but not wholly, in the fact that cow's milk is, under existing circumstances and under any circumstances which can be conceived as likely to arise in the future, an essential element in the artificial feeding of infants. It is, an important element also in the diet of young children and a not negligible part of that of adolescents and adults. We have in these articles purposely refrained from discussing the question of tuberculous infection of human beings by cow's milk, but have nevertheless been able to show the great need for more efficient control of the milk supply. We would say at once that we have no desire to hamper or harass an industry which has increased rapidly in importance with the growth of urban populations. Our contention is that the enforcement of reasonable precautions against contamination and infection need not add to the cost of the supply of milk in towns, and we can point to the fact that companies at work in London and in Continental cities are able to observe such precautions and yet to pay very excellent dividends.

The Legislature has already recognized that the milk trade is one which calls for special supervision in the interests of the public health. There can be no doubt that a large part of the heavy infantile mortality from gastro-intestinal disorders which occurs at all seasons of the year, and culminates in murderous epidemics in warm summers, is due to improper feeding, and that this very generally resolves itself into the simple fact that infants are given infected or contaminated and decomposing milk. The first year of a human being's life is of special importance; on it depends in no small degree its future health and strength. A rickety, puny infant constantly ailing from improper feeding will be little able to resist the stress of infection; and, if it survives, will never attain a good standard of physical development and health.

Sir Frederick Maurice has on several recent occasions drawn a disquieting picture of the low physical standard of a large proportion of those youths and young men from the towns who desire to enlist in the army. Bad housing and general insanitary conditions may have a good deal to say to this, but we believe that he is right in maintaining that sufficient importance is not generally attached to the matter of diet. The strength of a nation is in the brains and thews of her sons and daughters, and it is a national duty to take every means to ensure that the greatest care be used to give the child a good start and to set it up in the world with a vigorous and healthy constitution. Knowledge and care are both needed to provide wholesome nourishing food which shall be capable of building up sound tissues. Children born healthy can as a rule be brought up healthy by clean sensible feeding and reasonable attention to general hygiene. Everybody agrees that in nine hundred and ninety-nine cases out of a thousand the best thing that can happen to an infant is that it should be suckled by its mother, but where this natural rule cannot be followed, owing to the ill-health or incapacity of the mother, artificial feeding must be resorted to. Again, in districts where women are largely employed in industries, it is the custom to feed an infant artificially during the day, and this mixed feeding introduces all the risks of infection which attach to artificial feeding.

In France, where the stationary state of the population due to a decline in the birth-rate has caused deep searchings of heart, the diminution of infantile mortality has become a social question of the first importance. It has been studied there not only by philanthropists and by the medical profession but even by politicians. The politicians have talked about legislation, and have even passed laws, one of which at least—that which bears the name of proposer, Roussel—has been very useful. The philanthropists, under the guidance of the medical profession, have turned their attention to the improvement of the conditions under which infants are fed and cared for in the homes of the poor. We have, therefore, found it well to give somewhat full accounts of the systems in Paris and some other French towns. Special attention has been directed to the organizations directed by Professor Budin and Dr. Henri de Rothschild. The main characteristic of Professor Budin's system is the effectual way in which the mother is assisted to guard the health of her infant from its birth, and his results are strikingly good. Dr. de Rothschild has attempted a still more difficult task, for his organization deals with infants at any age up to 2 years; its characteristic features are the great care which is taken with regard to the source of milk and the systematic, minute, and untiring supervision of the management of the infant by its mother. We would venture to ask those who are responsible for the administration of children's hospitals and dispensaries in this country, whether something more might not be done to assist poor women who apply to them for assistance. Good advice, verbal or printed, is all very well, and should not be omitted, but when the mothers of children born in the crowded parts of large cities are told to get good fresh milk for their children, are they told where to get it? Or, when they are told to scald the milk as soon as it is received, is anything known about the condition of the milk which they purchase from a barrow in the street or from the little grocer at the corner? Dr. Sykes, M.O.H. for St. Pancras, in a recent report, has well said that the opportunities for the contamination of milk sold in open vessels are cumulative at each stage of its odyssey from the cow to the infant. The shed, the cow, the hands, the pail, each add their quota; the mixing vessels, the hands again, the churns, the carts, the station dépôt, the railway vans, the terminus platform, add something more; and the milk dealer's cart, the milkshop, the open counter vessels, the milk cans, the dippers, the hands again, and the dust of the street complete the mixture. If we add that to correct the too obvious results of this careless handling the farmer has probably added a little of his favourite preservative, the wholesale dealer a little more of his particular brand, and

each retailer a pinch of some other patent powder, we get some idea of the curious mixture, perhaps three or four days old, which mothers of the poorest class pinch themselves to buy for their infants under the delusion that they are getting fresh milk.

Dr. Hope, M.O.H. for Liverpool, reproaches rural sanitary authorities with their neglect to enforce the law, and Liverpool, like Battersea and some other boroughs (to which number Leith is now to be added), has followed the example of St. Helens in providing sterilized and so-called "humanized" milk for the use of infants as a part of the municipal defence against epidemic disease. We have no space to go into the social and medical questions raised by such schemes, and would merely remark in passing, first, that they do not excuse the sanitary administration of the country from the duty of safeguarding the purity and cleanliness of milk at its source, and during transit and distribution; and, secondly, that the mere distribution of milk rendered harmless by pasteurization or sterilization is not sufficient, and that unless the milk is used under proper medical supervision, assisted by health visitors, the full effect of the system, whatever it may be worth, cannot be ascertained.

It is, of course, easier to point out the evil than to find the remedy; but some points are clear: First, that in the interests not only of the public health but of the trade itself the management of dairy farms demands greater attention, and that rural sanitary authorities must be induced to adopt the model regulations of the Local Government Board, which if enforced would do away with a source of contamination which is probably one of the most dangerous. In the second place, urban sanitary authorities should make full use of the powers which they already possess. These are very considerable, and that very much good may be done when they are systematically exercised is evident from the system which Dr. Sykes has worked out in St. Pancras. Very great credit belongs to this energetic officer for what may be regarded as pioneer work; but he has to confess that his best efforts may be paralysed by the want of legal control over the middleman milk dealer, since it may become impossible to follow the chain of events from the retailer through the middleman to the farmer. In the third place, much good might be done by magistrates, and especially by stipendiary magistrates in large towns, if they took a more serious view of cases brought before them by sanitary authorities. Probably the importance of the matter has not been fully brought to their notice, and no doubt they may feel a natural hesitation in imposing a heavy fine upon a small dealer who is the class of culprit generally haled before them. There is reason, however, to believe that the small dealer is, in many cases at least, indemnified by the middleman, whose dealings are sufficiently large to render the fine imposed on the detected retailer a mere bagatelle. The dealers may perhaps be reminded of the fate which has overtaken the oyster trade; and we venture to believe that there are a sufficient number of upright men among them to ensure the co-operation of the trade in any well-considered measures for the amelioration of the condition of the milk supply of large towns.

PREGNANCY OR TUMOUR?

Now that obstetrical science has made such advances and abdominal surgery has achieved so many triumphs, it would be thought that errors of diagnosis in so simple a question as "Is it pregnancy or tumour?" would be impossible when the patient is not in a position to deceive others about her clinical history and the medical attendant is a man of experience. Yet the truth is otherwise. Error is by no means rare, even when the patient throws no obstacles in the way of diagnosis and the medical attendant possesses much practical knowledge of gestation and of ovarian and uterine tumours. Physiological amenorrhoea, one cardinal sign of pregnancy, is masked sometimes by uterine haemorrhages, so that a pregnant woman is supposed to be suffering from fibroid tumour without pregnancy, whilst these haemorrhages in a case of fibroid have been reckoned as the continuation of the catamenia during pregnancy. The fetal heart sounds are more essential for diagnosis than anything else; nevertheless many experienced practitioners seem puzzled over this apparently simple matter. It is not surprising, when we remember how very clearly these sounds are heard late in pregnancy, to learn that in many cases in which the error in question has occurred a uterus, soft from early pregnancy before the heart sounds are audible, has been taken for a rapidly-growing ovarian or uterine growth. Let there be uterine haemorrhages as well, then a false step is very natural, delay is considered dangerous, and an operation is performed. Waiting would bring absolute proof of the nature of the case, but as its effects are often dreaded lest there should be a malignant tumour, it follows that erroneous practices based on the overlooking of early pregnancy will probably continue to occur.

Dr. Howard Kelly has written an instructive article on the mimicry of pregnancy by fibroid and ovarian tumours, which appeared last autumn in *American Gynecology*. The example of so distinguished a teacher in dwelling on errors of diagnosis rather than on statistics of operative triumphs will, we hope, be followed by many other gynaecologists. Dr. Kelly's record of cases is very instructive. In one instance an emigrant, over 40, attributed amenorrhoea to the sea voyage from Europe, a general surgeon made preparations for a hysterectomy, but on the appointed day his house-surgeon informed him that the "tumour" had just been born. When relatively inexperienced, Dr. Kelly himself treated a woman several months for painful irregular menstruation and pelvic pain attributed to pelvic adhesions from subacute perimetritis. At length the pain became so severe that he opened the abdomen, only to find normal appendages and a healthy uterus in the third month of pregnancy. The woman recovered and bore a fine child at term. Dr. Kelly notes that the fact that the patient had been more or less constantly under his treatment for months had thrown him off his guard, so that he accepted the first diagnosis as permanent, and therefore neglected to review it and thoroughly reinvestigate the case before operating.

Another admission of this well-known gynaecologist deserves to be kept in memory. Both Dr. Kelly and Dr. Stone, of Washington, have opened the abdomen after diagnosing fibroid correctly and taken the tumour thus exposed for a pregnant uterus. In Dr. Kelly's case the event failed to justify his expectation and when the abdomen was subsequently reopened by another gynaecologist in order to remove the ovaries and check the growth of the mass, he failed for some reason to find them and insisted that Dr. Kelly must have removed them at the previous operation. This opinion was expressed without any intention of injuring Dr. Kelly, yet it almost involved him in a lawsuit. Thus there is another terror compassing the

gynaecologist who errs in this kind of diagnosis beyond the two grave dangers of damaging the patient's character and compromising his own professional reputation; it is, strictly speaking, a development from the second peril, but none the less unpleasant. In Dr. Stone's case the abdomen was closed, the patient sent to a lying-in department and two months later Dr. Fry examined her and decided that she was not pregnant. Then she was operated upon, by Dr. Stone we understand, and a fibroid uterus removed. Dr. Kelly reports in full a very curious case in which a fibroid uterus was taken for a normal pregnancy by an eminent colleague. Among the symptoms were gradual increase in the size of the abdomen, nausea in the early months when first under observation, well-defined sensations which the patient who had borne one child took for quickening, the presence of a tumour filling the lower abdomen the size of a uterus at term, a rounded body of the size of a fetal head entering the superior strait, easily displaced and returning at once to its primitive position, changes in the breasts, including distinct secretion, and, lastly, discoloration of the vagina; but no fetal heart sounds could be heard. Dr. Kelly operated and enucleated a large uterine fibroid.

The same authority turns our attention to a clinical point on which Paul Bar and Alban Doran have also dwelt. A gravid uterus is apt to develop irregularly when the ovum has become attached close up to the extremity of one cornu. In some instances the uterus in the neighbourhood of the opposite cornu remains firm to touch during the earlier months of pregnancy. In one case Dr. Kelly had to do with an irregular development, a softening of the right cornu during the fourth month of pregnancy. He took it for a soft pedunculated tumour attached to a pregnant uterus, just as in other cases where one cornu remains firm it is taken for a fibroid. On opening the abdomen the error was detected. The patient aborted.

THE INDIAN MILITARY BUDGET.

WE are glad to recognize that the annual memorandum of the military member of the Council of the Governor-General of India on the Indian Military Budget 1903-4 shows that a great deal of good work has been accomplished, and that more is projected, towards increasing the efficiency of the medical department of the Army in India.

In the first place the past year has seen the initiation of the new Army Bearer Corps designed to supply trained dhoolie bearers for the hospitals of the Field Army. The experience of the past has shown that mobilization of a force necessitated the emolument as bearers of men often of indifferent physique and belonging to undesirable classes to supplement the comparatively small establishment maintained in time of peace; moreover the raising of these men was carried out by the Supply and Transport Corps, to which they belonged. In future the Army Bearer Corps will be an integral part of the Medical Department, organized in time of peace in companies commanded by medical warrant officers and supervised by staff officers selected from the Royal Army Medical Corps and Indian Medical Service. This system is evidently far more satisfactory than the old; and as the men will be trained in first aid they will be very much more useful than their predecessors who were nothing but means of transport. The Corps will take some time to reach its full strength of 6,000 men, but it appears to have already made a good start. The Army Hospital Corps, which supplies the menial establishment of station hospitals of British troops, has also been made more attractive by increased pay.

In accordance with the recommendations of a Committee the re-equipment of field hospitals with modern patterns of surgical instruments, and the revision of the existing scales of drugs and stores, has been sanctioned at a cost of nearly 3 lakhs. This measure is, of course, a necessary part of the modernization of the equipment of station and regimental hospitals which has been going on slowly for some time past. Any general scheme of improvement of this sort, involving the whole of the military hospitals in India, is necessarily a costly matter, but the Government of India has not shown any undue haste; and, in fact, the programme of improvements now laid down ought to have been begun long ago, and will not, we trust, be suspended on any pretext.

Whereas field hospitals are kept ready for instant mobilization, it has hitherto been the custom to obtain furniture for general hospitals when required; as time is wasted in this process it has now been decided to maintain the furniture required in time of peace, and an outlay of over a lakh has been sanctioned accordingly.

Another most important but inevitable improvement is the abolition of leather "pakhals" in field hospitals. These are large skins slung in pairs on a pack mule for carrying drinking water. In common with the smaller variety carried by a man, the "mussuck," they are highly objectionable from the sanitary point of view. They have already been done away with in station hospitals, and their place taken by ordinary pails with lids. Metal pakhals are now to be supplied for field service.

The reserve of military hospital assistants—that is to say, the excess of establishment over actual requirements in peace, has again been raised. It used to be 15 per cent. of the total number, and was raised last year to 20 per cent.; this year it will be further raised to 25 per cent. Similarly in the case of military assistant surgeons the existing reserve of 15 per cent. has been found insufficient to cover the case of men temporarily ineffective from sickness or other causes without unduly interfering with the normal grant of leave; it will be raised accordingly to 20 per cent.

The establishment of the Indian Nursing Service has been recently increased by 16 nurses, and the benefits of trained nursing thereby made available in stations where it has heretofore been much wanted; 16 more will be added this year at the cost of a lakh.

Another most important measure is the establishment of a central school of cookery designed to afford instruction to soldier-cooks. The substitution of these for the native cook of ill-repute and dirty habits is gradually coming in. The measure of success which will result cannot yet be foreseen; in some corps the men approve of the change, in others apparently it is unpopular. To be a success, it is evident that the soldier-cook must be at least as good at the work as his predecessor, and he must have the proper appliances. The estimates include an item of over a lakh and a-half for the new school, for the provision of proper cooking ranges, and the appointment of sergeant-cooks to corps at hill stations. Here again progress will only be gradual. It may even ultimately be found that the climate of India in the plains will prevent the introduction of soldier-cooks throughout the country, but the Government of India is to be congratulated on having undertaken the experiment.

Finally, the estimates include the sum required for the

new rates of pay of the Royal Army Medical Corps and the provision of "specialist" pay. These items amount to over four lakhs. It is a matter for regret that no reference is made to any prospect of improvement of the pay of the military branch of the Indian Medical Service, which now alone, of all branches of the Indian army, is in the position of drawing materially less pay than the corresponding branch of the British service. How long this anomaly will continue it is impossible to say.

THE DEATH OF MR. HANBURY.

The unexpected death of Mr. Hanbury, in the flower of his prime, to use Sir Henry Campbell-Bannerman's expression, has come as a shock to the nation as well as to Parliament in the work of which he took so prominent a part. The attack which struck him down was as sudden as it was violent. A brief account of the illness may therefore be of interest to our readers. On Wednesday, April 22nd, Mr. Hanbury, after taking part in a debate in the House of Commons, went home to dinner apparently in his usual health. During dinner he was suddenly seized with extreme prostration, which compelled him to lie down; an hour or two later he went to bed, but had a very restless night. Early on Thursday morning he sent for Dr. Ridge Jones, to whom he said that he had never felt so ill in his life. He complained of slight aching pain in the right side; his temperature was 102°, the pulse feeble and irregular, the respirations 30. A remarkable feature in the case was that the expectoration contained much bright blood, and this continued to the end of his illness. It was found on examination that there was dullness, with crepitation and bronchial breathing extending as high as the spinous process of the scapula. In the evening the temperature fell and he seemed more comfortable. Mr. Hanbury progressed fairly well until Monday morning, when the temperature again rose, and the congestion extended along the back of the lung near the spine right to the upper lobe. Dr. Whipham saw the patient with Dr. Ridge Jones, who looked upon the case as one of erysipelatous pneumonia peculiar to influenza. When the congestion had extended to the upper lobe the physicians found that the lower lobe was closed up—a condition which Dr. Ridge Jones believes to be one of the distinctive characters of this erratic form of pneumonia. The temperature rapidly rose to 107° before death. Mr. Hanbury when in the country at Easter had had a bad cold for which he kept his bed nearly a week. On Monday, April 20th, he went to Preston to address a large political meeting, after which he travelled up to London arriving at 4 o'clock on Tuesday morning. Mr. Hanbury was a man of splendid physique, but he worked at high pressure, and his incessant application to his official duties and his constant attendance in the House, together with the fatigue of his journeys, led to a premature exhaustion of his physical power and to diminished resistance to the inroads of disease. It may be said with perfect truth that he has fallen a martyr to his work.

ST. MARY'S HOSPITAL.

We learn from the *St. Mary's Hospital Gazette* that it is proposed to present testimonials to Sir Anderson Critchett and Mr. Malcolm Morris in recognition of their long connexion with, and distinguished services to, St. Mary's Hospital. A Committee has been formed for this purpose consisting of the following gentlemen: Sir William Broadbent, Bart. (Chairman); Dr. Cheadle, Mr. George P. Field (Treasurer), Mr. Clayton Greene, Dr. Handfield Jones, Mr. Henry Juler, Dr. Luff, Mr. J. E. Lane and Mr. George Murray (Honorary Secretaries), Mr. Edmund Owen, Dr. Franklin Parsons, Mr. Leslie Paton, Dr. Bertram Thornton, Dr. J. P. Wills. The total sum collected will be divided, and the testimonials will be presented at a special dinner at which Sir William Broadbent has kindly consented to take the chair. Subscriptions limited to one guinea may be sent to the Honorary Secretaries or to Mr. George P. Field, Honorary Treasurer, 34, Wimpole Street, W.

THE SPITTING NUISANCE.

A new by-law framed by the Tramways Committee of the London County Council and sanctioned by the Board of Trade, which forbids spitting in or upon any of the Council tramway-cars, came into force on April 28th. The by-law runs as follows: "No person shall spit in or upon any carriage used on any tramway worked by the London County Council. Any person offending against or committing a breach of the foregoing by-law or regulation shall be liable to a penalty not exceeding 40s." We understand that the Public Health Committee of the Council was asked to consider the question of a general by-law. The Committee thought a general by-law would not be enforced, and it was considered doubtful whether the Council had power to make such a law. A question on the subject was submitted to the Home Office, which replied that it did not see its way to sanction a general by-law; and that such a law would not be enforced effectively. It expressed its willingness, however, to consider a by-law prohibiting spitting in public carriages, public halls, or places of entertainment. The Local Government Committee of the London County Council has accordingly, we believe, drawn up such a by-law, the terms of which have been sent to the Home Office informally for consideration. When the wording is agreed upon this by-law will be submitted to the Council, and if agreed to then formally sent to the Home Secretary for his approval. We are sure, that public opinion will strongly support any action the Council may take for the suppression of a disgusting and dangerous nuisance. In connexion with this subject we may mention that in America a society has been formed under the title of the Antispitting League, the object of which will be to begin an active crusade against expectoration on the sidewalks and other public places.

YELLOW FEVER, MOSQUITOS, AND OCEAN VESSELS.

Assistant Surgeon Grubbs, of the United States Navy, in charge of the Gulf quarantine station, has, we learn from the *Medical News*, just issued a report of an investigation which he has made with the object of deciding to what extent and under what circumstances mosquitos infected with yellow fever germs can be carried by vessels. From June to November, 1902, he inspected vessels arriving from ports where the presence of the *Stegomyia* render them liable to infection. Of the 82 vessels from possible yellow fever ports, 65 had no mosquitos on board at any time during the voyage, 5 had the insects on board at the port of departure, 9 reported the appearance *en route* of *Culex*, or harmless mosquitos, and three brought *Stegomyia* to the station. All three of the last group were from Vera Cruz, a yellow-fever port, and the voyages lasted on an average 17 days. Surgeon Grubbs formulates the conclusions to which his investigations have led him as follows: First, that mosquitos can come aboard a vessel under favourable conditions when the vessel is not over 15 miles from shore; secondly, that *Stegomyia* can be carried from Mexican or West Indian ports to those of the Gulf States; thirdly, that they can board a vessel lying at anchor half a mile or less from shore, being conveyed by the open lighters used or flying aboard; and, finally, that a vessel moored a short distance from land may become infected with yellow fever, old beliefs to the contrary notwithstanding.

THE PARIS MEDICAL FACULTY.

From the budget of 1903 it appears that the medical faculty of the University of Paris has thirty-one chairs, two of which are maintained by private foundations. There is one chair of chemistry, one of anatomy, one of morbid anatomy, one of medical physics, one of physiology, two of internal pathology (medicine), one of external pathology (surgery), one of general pathology and therapeutics, one of operative surgery, four of clinical medicine, four of clinical surgery, two of clinical obstetrics, one of

clinical urinary surgery, one of therapeutics, one of medical natural history, one of hygiene, one of medical jurisprudence, one of comparative and experimental pathology, one of histology, one of the history of medicine and surgery, one of clinical mental pathology and diseases of the brain, one of diseases of children, one of clinical ophthalmology, one of skin diseases and syphilis, and one of the nervous system. From the budget it may be gathered that the salaries of professors of the first chairs, of whom there are 26, is £600 a year; and of those of the second class, of whom there are 6, is £480; *agrégés*, of whom there are 36, receive £160; senior demonstrators, of whom there are 23, from £40 to £280; heads of laboratories, principal clinical assistants, etc., get from £40 to £88; prosectors, of whom there are 10, from £48 to £120; assistant demonstrators of anatomy, of whom there are 17, from £40 to £48; *préparateurs*, of whom there are 45, from £24 to £72. Of the six provincial faculties, Bordeaux has twenty-five chairs, Montpellier nineteen, Lille twenty-three, Nancy eighteen, Lyons twenty-six, and Toulouse eighteen. The professors are paid on the following scale: There are 10 professors of the first class who receive a salary of 11,000 francs (something under £444), 12 of the second class who get £400, 54 of the third who get £320, 34 of the fourth who get £240. There are 71 *agrégés* who get £120, 48 senior demonstrators who receive from £40 to £100, 45 heads of laboratories and principal clinical assistants who get from £40 to £80; 7 prosectors who get from £40 to £60, 12 junior demonstrators of anatomy who get from £20 to 32, and 101 *préparateurs* who receive from £16 to £72. The teaching staff of all the French faculties, therefore, comprises over 160 professors and more than 100 *agrégés*, and the budget for the year, including the wages of clerks and servants, amounts to about £115,000.

TRADE EFFLUENTS AND THE PUBLIC SEWERS.

THE third report of the Royal Commission on Sewage Disposal deals with the disposal of trade effluents. As the law now stands, a local authority, in constructing a system of sewerage, has the absolute right to elect that it will not construct the sewers of sufficient capacity to take trade effluents. The Royal Commissioners report that, in their opinion, unless the law is altered, differential treatment of manufacturers will continue, and trade will consequently continue to be hampered, if not actually injured. In considering what alterations in the law are practicable, the Commissioners have, after careful investigation, come to the conclusion that the purification of trade effluents by the local authority is, in the great majority of cases, practicable; while purification by the manufacturer would be generally more costly and often less practicable than by the local authority. They therefore recommend that it should be made the duty of the local authority to provide such sewers as are necessary to carry trade effluents as well as domestic sewage, and that the manufacturer should be given the right, subject to the observance of certain safeguards, to discharge trade effluents into the sewer of the local authority. The safeguards required will vary according to local circumstances; and it is recommended that they should be prescribed by regulations made by the local authority subject to confirmation by a central authority. For the carrying out of these and other duties connected with sewage disposal, the setting up of a new central authority in connexion with the Local Government Board is recommended, this authority to have attached to it a bacteriologist, a chemist, and an engineer in addition to other officers. It may be hoped that such a central body would be able to settle questions in dispute more expeditiously than the Local Government Board has usually succeeded in doing. At the end of this report the Royal Commission on Sewage Disposal gives an interesting summary of the present state of their inquiry. It first devoted much attention to general questions relating to the chemical and bacteriological analysis of sewage and sewage effluents. It has now completed a systematic investigation extending over a period of two years of the land treatment of sewage on farms of different kinds of artificial processes of various kinds at about thirty different places. This investigation, it is hoped, will be completed in about a year. While this inquiry is maturing, the Commissioners have been engaged in taking evidence as to the discharge of sewage and sewage effluents and manufacturing effluents into tidal waters, especially in relation to the contamination of shellfish. This is one of the most important parts of the work of the Commission, and in the interests of the public health it is very important that it should be in a position to advise the Government at an early date the best line of procedure for the legislation regulating the sale of sewage-contaminated shellfish, for which public opinion and the necessities of the case urgently call.

A HEALTH DEPARTMENT IN THE UNITED STATES.

DR. J. N. MCCORMACK, Secretary of the State Board of Health, has been appointed National Organizer of the American Medical Association. He is to proceed to Texas immediately in order to organize a State association and county associations in that State, and will follow up this work in other Western States. It is the purpose of the Association to form a strong organization of all the legally recognized medical practitioners of the United States, which it is hoped may have sufficient influence to secure the passing of whatever sanitary measures are required in the State Legislatures and in Congress. The ultimate purpose is said to be to induce Congress to establish a Department of Health, the secretary of which will be a Cabinet Officer, instead of the National Health Department being under the charge of a bureau of the Treasury Department, the Marine Hospital Service.

THE BEAUTY QUACK.

OF late years there has been an acute recrudescence of many forms of quackery and superstition, such as palmistry, theosophy, Christian Science, spiritualism, and so forth, which go back to very ancient times. At the present moment there is an epidemic of beauty doctoring, as it is called by an irresponsible section of the press, which panders to a still more irresponsible public, suffering apparently from mental St. Vitus's dance. Leading empty lives, many individuals fall an easy prey to the numerous advertisements of these quacks. Societies have the parasites they deserve. From the point of view of personal decoration and adornment, the veriest savage paints and tattoos himself, while his women folk wear rings through the nasal septum. The prototypes of the modern beauty-quack may or may not have existed in neolithic times, but at any rate in Eastern civilizations of the past and in ancient Greece and Rome they were well known. Ovid wrote a poem on *Medicamina facici femineae*: and many passages from the older writers might be adduced bearing on the point. Perhaps the clay tablets found in the ancient palace of Minos may reveal a high cosmetic development. Indeed a French archaeologist, on seeing the wall-painting representing female figures discovered by Mr. Evans in Crete, exclaimed "Mais ce sont des Parisiennes!" The desire for beautification is closely connected with sexual selection, and it is not to be wondered at that those exploiting such an instinct should find willing victims. Some of the methods employed are legitimate enough, such as electrolysis, which was introduced by medical men. Unfortunately, like a good many things electric, the word "electricity" is one to conjure with as far as a gullible public is concerned. The consequence is that the electric quack is rampant, and is likely to increase and multiply, for all kinds of male and female failures in other walks of life are taking up electro-therapeutics and beauty-doctoring, to say nothing of massage and balneotherapy. A short time ago a daily paper devoted a column to "The Beauty Doctor," who was referred to as the high priestess of beauty and worker of miracles, with other nonsense of the usual kind, apparently written by the lady journalist, for she

The *British and Colonial Druggist* also refers to the face artist, and states that a fee of twenty guineas has been paid to the quack by women for merely pretending to remove the outer skin. This sort of thing appeals to the rich and the "better vulgar," to use a phrase of Bishop Warburton. They are the predestined prey of quacks of every kind. Medical practitioners can only warn their patients against the wiles of these pretenders, but it must be remembered that, as Falstaff says, "Wisdom cries out in the street and no man regards it."

WATERBORNE TYPHOID.

In rapidly-growing industrial centres it is a common experience to find that sanitary provisions have failed to keep pace with the requirements of the population, and not infrequently serious epidemics of disease are the penalty which this negligence has to pay. Dr. Springfeld of Arnsberg has been investigating the recent outbreaks of typhoid fever which have arisen in the industrial districts with which he is concerned, and has compiled an exhaustive mass of statistics,[1] the main purport of which is to show that the epidemics have been due to pollution of the water supply. The causes of the spread of the disease in Bochum, the district of Gelsenkirchen, and Lüdenscheid are carefully analysed, with the result that the pollution of streams and the contamination of the water supply with infective material are held to be the factors mainly responsible. Attention is called to the suddenness with which the disease gained a foothold and the rapidity with which it spread. In a district previously free from typhoid, with a population of 400,000, from 1 to 2 per cent. of the inhabitants were affected within a month without distinction of age, sex, or social position. Dr. Springfeld's discussion of the remedial measures adopted for the suppression of epidemics is also suggestive. Those interested in the statistics of typhoid fever will find Dr. Springfeld's work of value for purposes of reference, but, although supplemented by several useful charts, the details would be much more readily digested if their main points had been summarized in a more perspicuous manner.

STATE CHILDREN IN NEW SOUTH WALES.

From the report for 1902 of the New South Wales State Children Relief Board we learn that 3,720 children were either boarded out, adopted without payment, apprenticed to useful trades or occupations, or placed for treatment in the Cottage Homes established by the Board. There had been an annual relative decrease during the last three years in the number of young children admitted to State care, a substantial reduction of 190 having occurred since 1901. This seems to indicate an improvement in the condition of the poorer classes of the community. In this (as in some other Australian Colonies) the children receiving State relief, whether living apart from their parents or residing with their own mothers (widows or deserted wives), are looked after by a special Government department, presided over the Honourable C. K. Mackellar, M.B., C.M., M.L.C. Much attention seems to be given to the inspection of children boarded out or otherwise relieved by State funds; and it is recorded that as many as 23,114 visits have been made during the year by official and voluntary visitors to the 7,045 children under State control, an average of 3.28 visits per child. Contributions towards maintenance are exacted from parents who are in a position to pay, and caution is exercised in admitting only necessitous cases to the benefit of State aid. Cottage homes have been established at Mittergong and Paramatta for invalid children, and amongst the 143 resident therein are several of feeble mind, who require special instruction, not being certifiable as imbecile. Incorrigible lads are sent to probationary farm homes where they are subject to corrective treatment and instructed in practical work, the prospect of return to ordinary situations where they will receive wages being an inducement to improved conduct. Legislative action is suggested by Dr. Mackellar in the direction of constituting one controlling authority over all the children of the State, as is the case in South Australia and Victoria, to include the registration of street sellers and the supervision of illegitimate children, the mortality amongst whom has averaged during the last seven years 27 per cent. as compared with 10 per cent. for legitimate children. In an Infant Protection Bill introduced in the Legislative Council by Dr. Mackellar some drastic proposals are made whereby the putative father of an illegitimate child is to be compelled to make adequate provision for the maintenance of the mother during a period of one month immediately preceding the birth of the infant, and for the maintenance of the infant and the mother during a period of six months immediately succeeding the birth. Proceedings under this section may be taken by the State Children's Relief Board on behalf of the mother, and be heard in private by a justice. It is proposed that children's courts, apart from the ordinary police courts, should be established for dealing with children, and hearing and determining all complaints and informations under the Act. Our progressive Colonies leave the mother country far behind in their arrangements for the protection of children; and the institution of children's courts, where cases affecting children, including the vexed problems of school attendance, could be investigated in a sympathetic manner, and apart from the debasing surroundings of the ordinary police-court, would seem to be a desideratum here as well as at the Antipodes. Antenatal jurisprudence is a distinct step in advance; its application would, however, need to be very discreetly administered.

[1] *Klinischer Jahrbuch.* Bd. x. Jena: Gustav Fischer. 1903. (Demy 8vo. pp. 138. M. 7.50.)

A FINNISH METHOD OF BURIAL.

The *Michigan Bulletin of Vital Statistics* for February, 1903, states that one of the latest difficulties in the way of registration brought to the attention of the department is found in a complaint by a local registrar, the gist of which is contained in the following passage: "Quite a colony of Finlanders have immigrated to our land, and they seldom have a physician. When there is a death, the corpse is put into a grave and left uncovered (save a few loose boards thrown over the top of the grave) for as long as two or three weeks, until some minister immigrates from the copper country." The registrar was uncertain whether the original deposition of the body in the ground or its final covering with earth attended with religious ceremonies was to be considered as the "interment." The department instructed him that the placing of the body in the ground, although the covering was not complete, was to be considered "interment" under the law, and that a permit must be obtained in advance. The department also called the attention of the State Board of Health to the possible evil consequences to the public health resulting from such imperfect burial. The method described certainly seems to have all the disadvantages that have been attributed to earth-to-earth burial without any compensating advantage whatever.

THE STREAMING OF PROTOPLASM.[1]

More than a century ago the attention of some of the early microscopists was attracted by the rotary movement of the protoplasm in certain vegetable cells, and from that time forward the phenomenon has been investigated over and over again from various points of view. Dr. Alfred Ewart has communicated to the Royal Society, and subsequently published in a separate form, the results of researches extending over several years, in which recent advances in knowledge in physics, in chemistry, and in electricity have been fully utilized and applied. Whilst it is not possible so to isolate the cells of higher organisms as to observe them without a prior destructive interference with their function, it would seem a fair inference that similar processes do go on in them, so that the investigation of these simpler plant forms has a bearing upon all physiological processes. The researches being numerous and complex,

[1] *On the Physics and Physiology of Protoplasmic Streaming in Plants.* By Alfred B. Ewart, D.Sc., Ph.D., F.L.S. Oxford: The Clarendon Press. 1903. (Pp. 170, figs. 17.)

it is only possible to notice some of the more significant conclusions arrived at. Dr. Ewart considers it fairly established that the energy consumed in this motion is wholly derived from metabolic changes within the moving protoplasm itself, and that the energy thus consumed is but an insignificant fraction of that afforded by respiratory and other metabolic changes in the plant. This energy may be derived from anaërobic metabolism as well as from aërobic, for in some cases movement goes on for many weeks under entire exclusion of oxygen. The velocity appears to be closely related to the viscosity of the protoplasm, and it is by change in the viscosity that temperature mainly influences it, though there are maximal and minimal, as well as optimal, temperatures for this phenomenon. After elimination of many causes to which the movement may be, or has been, attributed, he comes to the conclusion that the only mechanism of motion not excluded by objections is change of surface tension, and that this continuous disturbance of surface tension may perhaps be due to electrical currents generated by chemical changes in the protoplasm itself; it is certainly not controlled by anything approximating in nature to a nervous system. If these conclusions are to be accepted—and strong grounds exist for so doing—our ideas of the independence and physiological autonomy of the individual cell are extended, but it is, of course a question how far this would apply to the individual cells of more complex organisms. When the cell has become loaded with formed products, and its physiological activity is thus at an end, the streaming movements cease, but in some cases they can be revived by the removal by solution of these formed products, a fact which appears very significant. Whilst even this most elaborate research is not in all respects conclusive, Dr. Ewart may be congratulated upon having thrown great additional light upon an obscure subject.

IDIOSYNCRASIES.

THE truth of the homely saying that what is one man's meat is another man's poison is by no class of persons better appreciated than by medical practitioners. There are idiosyncrasies which no foresight can allow for; there are, on the other hand, tolerances which may be acquired or which belong to certain stages of existence or to certain races or classes of constitution which can be predicted, such as that for arsenic or opium, such as that for belladonna by children, such as that for malaria by negroes, the immunity against anthrax by Algerian sheep, and that against various toxins by white rabbits or white rats as compared with their brown-coloured fellows. Nothing happens, philosophers say, without a reason why it should happen thus rather than otherwise, and there is doubtless a good reason for each of these so-called peculiarities. The colour of white rabbits, for example, it has been suggested, goes along with a constitutional chemistry which accounts for their physiological peculiarities. But for practical purposes in present every-day life it is perhaps even more important to recognize that such differences do exist than to assign a rational explanation for them. Every practitioner is alive to the importance of being on his guard in prescribing active drugs to individual patients. Some exhibit toxic symptoms after ordinary doses of opium, some get tinnitus after small doses of quinine, some are invariably made wretched by minute doses of mercury. Similarly with regard to food, how often some articles of diet disagree with individuals or the same substance with the various members of a family; to not a few eggs have toxic qualities, shellfish and rhubarb cause an urticarial eruption with great constancy in certain subjects, while strawberries have been known to produce swelling of the face, repeated attacks of faintness and even death. What applies to food applies no less constantly to drink: tea for some people means acute dyspepsia, palpitation, and sleeplessness, and such can often drink coffee with satisfaction; others find that the post-prandial coffee, if unqualified, produces much depression; in some it produces constipation, and has been credited with aggravating haemorrhoids. The effect of alcoholic beverages varies enormously in different individuals, and instances of intolerance of some particular classes of wines are common. So with tobacco; in the young it is common knowledge that it almost invariably produces toxic effects, in some adults it readily causes cardiac disturbance, in some amblyopia; in later life, too, it again seems to be the rule that it is more toxic than in middle life. No doubt there are good reasons for all spontaneous variation, but the practical lesson in regard to such is that the public should be frankly instructed in the exceeding worth of the acquired knowledge of the peculiarities of individual patients by the family medical attendant—a knowledge which is indeed above price.

THE TYPHOID TYPE OF MALARIA.

IN an interesting paper on this subject, which obtained the Maillot Prize (1902) in the gift of the Medical Society, of Algiers,[1] Dr. Albert Billet, of the Military Hospital, Constantine, Algeria, gives the details of 40 cases of this form of malaria observed by him out of a total of over 400 cases of malaria. The typhoid type occurred, therefore, in about 10 per cent. of the cases coming under his observation. The importance of an accurate diagnosis of this anomalous form of paludism, especially from the point of view of treatment and the welfare of patients, need scarcely be insisted on. There is in Algeria a type of malaria which occurs frequently, and may be mistaken for one of the typhoid group of diseases. The chief points of diagnosis are: (1) The course of the temperature; (2) the constant presence of Laveran's haematozoon in the blood; (3) the haemoleucocytic formula, which alone of all known similar pyrexial formulae is invariably a mononuclear hyperleucocytosis, with predominance of the large mononuclear cells charged with melanic pigment. Among the negative points, the constant absence of rose spots and the negative reaction to Widal's test may be mentioned. Finally, the exhibition of quinine salts in the majority of cases not only rapidly cuts short the early infectious symptoms, but is the only effective mode of treatment. When quinine does not lead to an immediate apyrexia it brings out the characteristic intermittent type of the temperature, and thus confirms the diagnosis.

CLYSTERS.

La Presse Médicale for April 13th, 1903, contains an interesting and well-illustrated article on clysters. The article is written jointly by MM. P. Desfosses and A. Martinet, and shows that our profession in France is much interested in medical history. Clysters, like bleeding, appear to be as old as medicine. The Egyptians are said to have learnt the practice from the ibis, which sucks up water with its beak, and then introduces it into the rectum to open its bowel. The Koran gives currency to the same tradition, for we are told that "the first animal to use an enema was a bird. The bird had eaten freely of fish which it had caught in the water with its beak. The bird, feeling too full, took up some sea water with its beak, and introduced it into its anus. The bird evacuated what it had eaten." The administration of enemata was familiar both to the Greeks and Romans, who recognized a soothing enema, a strong enema, an astringent enema, and a stimulating enema. These enemata seem to have been given by an injector, for the syringe was not commonly employed, and such an apparatus is still used in Africa, where the negroes use a calabash from which the fluid is expelled by the administrator blowing into the opposite end. Malgaigne attributes the discovery of the syringe to Marco Gatinaria, a physician living at Padua in the fifteenth century; though Regnier de Graaf, who published his book *De Clysteribus* in 1668, is often called "the father of the syringe." An enema syringe, however, has been found at Herculaneum. The apogee of clysters occurred during the reign of Louis XIV, and the wit of Molière was often directed against their use, but it required not only his efforts but those of Madame de

[1] *Revue de Médecine*, No. 12, December 10th, 1902.

Maintenon and of Père Letellier to dethrone the clyster from its position of a sovereign remedy against every ill. The syringe did not disappear until the nineteenth century, and with it went the need for employing an apothecary whenever an enema was ordered. The public began to clyster themselves about 1830, using a syringe with a bulbous end to the clyster pipe, but this syringe was soon replaced by the clyster pump, india-rubber pear-shaped irrigators, and the well-known Éguisier irrigator, which is now replaced almost universally by Higginson's syringe.

THE UNITED STATES *PHARMACOPOEIA.*

The work of revision of the United States *Pharmacopoeia*, which has thus far occupied three years, will not, it is believed, be completed before next October. The Subcommittee of the Committee of Revision of the United States *Pharmacopoeia*, which has to do with biological products, recently held a meeting in Philadelphia to discuss the formulation of a definite standard for serums to be introduced into the new edition of the *Pharmacopoeia*. Among those who took part in the deliberations on the subject were Dr. Theobald Smith, of Harvard, who presided; Dr. William H. Park, of New York City; Dr. M. J. Rosenau, Director of the Hygienic Laboratory of the United States Public Health and Marine Hospital Service; Dr. Thomas C. Craig, U.S.N.; Dr. E. M. Houghton, of Detroit; Dr. Robert B. Pease, of the New York State Board of Health; and Dr. Joseph J. Kinyoun, of Philadelphia. It is understood that the Committee did not deem it practicable to adopt the suggestion that the National Government should establish a bureau for testing and certifying to the strength and purity of diphtheria antitoxin.

CANADA AND THE CIGARETTE QUESTION.

The Canadian House of Commons has passed a measure forbidding the importation, manufacture, and sale of cigarettes in the Dominion of Canada. The Bill met with violent opposition, but was finally passed. This is the most drastic measure on the subject that we have yet heard of. The Bill which the British Antitobacco and Antinarcotic League wishes to have introduced into our own House of Commons provides only for the suppression of the juvenile smoker, and the various States of the American Union which have legislated against cigarettes all leave the adult to use his discretion in the matter. But the Canadian measure appears to be aimed at cigarette smoking without limit of age. It will be interesting to see whether the Dominion will be more successful in putting down cigarettes than Sir Peter Laurie was in the determination which he expressed to put down suicide.

TYPHOID FEVER AT CORNELL UNIVERSITY.

Cornell University has recently been visited by a serious epidemic of typhoid fever. It is stated in the *New York Medical Journal* that Mr. Carnegie, who is a trustee of the University, in addition to the gift of a filtration plant to the University, has offered to defray the expenses of all students who suffered in the epidemic, whether they withdrew from the University or remained at Ithaca. As at least some two hundred students have been seriously ill, Mr. Carnegie's offer, if accepted, will entail an approximate expenditure of 60,000 dollars (£12,000).

THE CENTENARY OF THE ATOMIC THEORY.

Just about one hundred years ago John Dalton enunciated his atomic theory—in 1803. The Manchester Literary and Philosophical Society is going to celebrate next month the centenary of this event. On May 19th, Professor F. W. Clarke, of the Columbian University, Washington, will deliver a lecture on the evolution and philosophy of the theory. Arrangements are also being made for a conversazione at Owens College, and exhibition of Daltonian manuscripts, portraits, and other records. Dalton was appointed Secretary of the Manchester Society in 1800, and he held the office of President from 1817 until his death.

In the list of members of the King's suite on whom decorations have been bestowed by the King of Italy appears the name of Sir Francis Laking, G.C.V.O., who has received the Grand Cordon of the Order of the Crown of Italy.

A correspondent of the *Boston Medical and Surgical Journal*, writing on April 15th, states that the Committee of the Massachusetts Legislature, before which hearings were held recently on a Bill proposed by the antivisectionists, has given these petitioners leave to withdraw.

The third annual dinner of the South African Civil Surgeons will take place on Friday, June 5th, at the Hotel Cecil, Sir William Thomson, C.B., in the chair. Tickets (price 10s. 6d.) may be had on application to the Secretaries, F. E. Fremantle, M.A., M.B., Guy's Hospital, or C. G. Watson, F.R.C.S., 44, Welbeck Street.

Mr. A. G. R. Foulerton has resigned the position of Director of the Cancer Research Laboratories, a position which he has held for the last three years. The Weekly Board of the hospital has decided on the appointment of a Director who will be required to devote the whole of his time to the work of the Cancer Research Laboratories. Mr. Foulerton will continue his services to the hospital as Director of the Clinical and Bacteriological Laboratories.

The Prince and Princess of Wales, as Grand President and Lady Grand President of the League of Mercy, will receive the presidents, lady presidents, vice-presidents, and other workers for the League at a garden party at Marlborough House on May 22nd. The League has been instrumental in contributing £22,000 to the King Edward's Hospital Fund for London, and a Samaritan branch of its work is being organized.

The new Johnston Laboratory erected at University College, Liverpool, will be opened by the Right Hon. Walter Long, M.P., President of the Local Government Board, on May 9th. A large number of invitations have been issued to attend the ceremony, and among the distinguished foreigners who have expressed their intention to be present are Dr. Nocard, Professor Weigert, Dr. Uhlworm, Dr. Perroncito, Professor Blanchard, Dr. Tizzoni, Dr. Ravenel, and Professor Eulenburg. On Monday, May 11th, a conference on tropical sanitation will be held in the college.

We regret to learn that Professor Zakharoff of the Faculty of Medicine of the University of Warsaw, and Director of the Veterinary School of that city, is likely to fall a victim to his zeal for scientific research. In making a necropsy of the brain of a dog which had died of rabies, he inflicted a slight cut on one of his fingers, to which he paid no attention. About a fortnight later symptoms of hydrophobia appeared, and he was taken to the Pasteur Institute, which is under the direction of Professor Palmyski. There is said, however, to be no hope of Professor Zakharoff's recovery.

A meeting of the Committee of the Central International Bureau for the Prevention of Consumption will be held in Paris on Monday and Tuesday, May 4th and 5th, to make preliminary arrangements for the next International Congress, which is to take place at Paris in October, 1904, and to deal with other business. On Wednesday, May 6th, the members of the Committee will visit Lille. The representatives of the National Association for the Prevention of Consumption will be Sir William Broadbent, Bart., Sir James Blyth, Bart., Mr. Malcolm Morris, Mr. Rube, Dr. Nathan Raw, and Dr. Alfred Hillier, the Secretary of the Association.

MEDICAL NOTES IN PARLIAMENT.

[FROM OUR LOBBY CORRESPONDENT.]

The House of Lords met on Monday last, did some private business, and read the Army Annual Bill a first time. On Tuesday the Army Annual Bill was passed through its remaining stages, and then Lord Avebury's Shops (Early Closing) Bill was the subject of a sharp debate. The Earl of Wemyss moved an amendment to the third reading of the Bill to the effect: "That legislative interference with freedom of contract and the liberty of full-grown persons is contrary to the hereditary rights of a free people; that these rights are taken away by the Shops (Early Closing) Bill; and this House declines to proceed any further with a measure hurtful alike to trade and industry, which would press cruelly on small shopkeepers and their working-class customers, and for the first time in modern legislation limit the hours of free adult labour." This was beaten on a division by 43 to 19, and the Bill was read a third time and passed. The Bill will be forthwith introduced in the Commons with the approval of the Government, but is likely to meet with opposition. There are a good number who oppose the principle of the Bill, and a still larger number who regard it as a comparatively ineffective measure, requiring much strengthening before it can be passed into law.

The House of Commons met again after the Easter recess last week and devoted the first two days to the Estimates. The first subject discussed was the sanitary condition of Holyrood Palace. It appeared that there had arisen a great deal of indignation in Scotland at the idea of the Lord High Commissioner, who is the King's representative in Scotland, removing his residence during his official work from Holyrood to the New Station Hotel. It was regarded as a national slight, and an explanation was angrily demanded. It turned out to be a matter of drains. The Holyrood drains were found to be old-fashioned and in need of modernizing, and so while the work was on the Lord High Commissioner thought it wiser to reside away from the palace. The debate was lively throughout, and both the Leader of the Opposition and the Prime Minister took part. A division was finally taken to express dissatisfaction that the time chosen to make the repairs coincided with the time when the Lord High Commissioner performed his chief official duties, but in a thin house the Government won by 100 to 69. There was afterwards a debate on the large expenditure required for Osborne House in order to prepare it as a convalescent institution for officers of the army and navy. It was contended that the expenditure should have been brought up on the Army and Navy Estimates and not as part of the vote for Royal Palaces. The Government was, however, supported by a majority of 53 on a division. Later on there was an interesting discussion on the vote for the Board of Agriculture, and then the Stationery Vote and some minor votes occupied the remainder of the evening. On the second day the Board of Trade Estimates occupied the sitting.

The Budget.—Thursday in last week was occupied by the statement of the Chancellor of the Exchequer on the taxation for the year. These was a fairly full House and Mr. Ritchie's statement was listened to with great interest. The diminution of the income-tax by 4d. was generally popular and came as a surprise, as only 3d. had been anticipated. The repeal of the duty on corn was received on the Liberal benches with satisfaction and amusement, while some agricultural members condemned the remission.

Vaccination Registers at Poplar.—Mr. Guthrie asked the President of the Local Government Board on Monday whether his attention had been called to a report made by a committee of the Poplar guardians with respect to the entries made in the vaccination registers for the Lady Day, 1902, quarter; and whether he would direct an investigation into the matter, or what action he proposed to take on the report? Mr. Long replied that his attention had been called to the report referred to. The number of cases included in the registers for the quarter ended at Lady Day, 1902, amounted to upwards of 10,000, and he could not undertake to cause an investigation to be made into all these cases. One of the medical inspectors of the department would, however, shortly visit the union for the purpose of making the ordinary inspection of the work of vaccination. He would in the usual course inquire generally into the action of the public vaccinators in making the entries in their registers, and in the present case he would make a special report on the subject.

Boarded-out Children.—Last week Mr. Claude Hay asked the President of the Local Government Board if he could state the number of children now boarded out in England and Wales, distinguishing between those boarded out within and those without the union. Mr. Long, in reply, stated that on January 1st last there were 8,250 children boarded out in England and Wales. Of these 6,394 were boarded within the union and 1,856 beyond the union.

County Medical Officers of Health.—Dr. Farquharson on Monday last asked the President of the Local Government Board if he would state the county councils which had appointed medical officers in England and Wales, and specify the cases in which the medical officer gives his whole time to the duties of his office. Mr. Long said that twenty-six county councils had appointed medical officers of health, and of these eleven devoted their whole time to their duties. The following list was subsequently furnished by Mr. Long.

List of Counties in which the County Council has appointed a Medical Officer of Health.

Bedford	Nottingham
Cambridge	Salop
*Chester	*Stafford
*Derby	*Surrey
*Durham	Sussex, East
Essex	Warwick
Hertford	Wiltshire
Huntingdon	*Worcester
*Lancaster	York—East Riding
Leicester	York—North Riding
*London	*York—West Riding
Northampton	*Glamorgan
*Northumberland	Merioneth

* In these counties the medical officer of health appears to give his whole time to the duties of his office.

Metropolitan Poor-law Children.—On Monday Mr. Ernest Flower asked the President of the Local Government Board whether he could state the number of children in metropolitan Poor-law schools, workhouses, and infirmaries respectively at the date of the last return. Mr. Long answered that according to the returns for the second week in April, the figures were as follows: District and separate Poor-law schools, 9,277; infirmaries and sick asylums, 2,000; workhouses, 1,367; 732 of the children in workhouses were less than 3 years old, while of those in infirmaries more than 750 were under that age.

Medical Practice in Japan.—On Tuesday Mr. Weir asked the Under-Secretary of State for Foreign Affairs, whether he was aware that Mr. Samuel T. Knaggs, M.D., F.R.C.S.I., applied in December last to practise his profession at Kobé, Japan, but was informed by the British Consul at Kobé that the licence could not be granted until investigation regarding the diplomas had been made in this country; and whether, seeing that Dr. Knaggs was accredited to the British Consul at Kobé by the Premier and Chief Secretary of the State of New South Wales as having held Government appointments in that State, he would ascertain why the British Consul did not take steps to satisfy the Japanese authorities as to Dr. Knaggs's bona fides without awaiting the result of inquiries in this country. Lord Cranborne, in reply, said that he had no information on the subject, but His Majesty's Consul at Kobé would be requested to report the facts.

THE COCAINE HABIT IN CHICAGO.—A grand jury has recently been sitting in Chicago to inquire into the question of the sale of dangerous drugs. Representatives of the Illinois State Board of Pharmacy testified that the sale of dangerous drugs was carried on in Illinois, and especially in Chicago, to a large extent. The grand jury expressed its concurrence with this statement, and in its final report declared that there was an alarming growth in the sale and use of cocaine. Druggists in Chicago and in other parts of the State of Illinois were known to dispense the drug without a medical practitioner's prescription, and the grand jury urged that legislation on the subject was called for, and recommended that the police authorities should take active steps to suppress the evil.

Scotland.

UNIVERSITY OF GLASGOW: SPRING GRADUATION CEREMONY.

THE graduation ceremony that follows the close of the winter session took place in the Bute Hall at noon on April 21st. The building was crowded with undergraduates, graduates, and their friends, and the proceedings passed off in a very orderly and successful manner. Principal STORY presided, and was supported by the Lord Provost of Glasgow, and a large representation of the University Court and of the Senate.

The degree of Doctor of Laws was conferred, among others, on Sir William Tennant Gairdner, K.C.B., M.D., Emeritus Professor of Medicine in the University of Glasgow, and on Thomas Oliver, M.A., M.D., Professor of Physiology in the University of Durham.

Professor GLAISTER, who presented the recipients of this degree, in bringing forward the name of Sir William Gairdner, said: It is a matter of profound regret to all that, owing to conditions of weak health, Sir William is not able to be present in person to have the degree conferred upon him. But I desire in the name of the University that the degree be conferred upon him *in absentiâ*. It is not necessary to say a single word to commend this action to any assemblage of university men, but I may be permitted, for the benefit of those to whom the name of Gairdner must only remain a name, to recite some facts concerning the illustrious career of Sir William, not only as a physician, but as one of the most learned professors of this University. Beginning his professional career as a resident medical officer in the Royal Infirmary of Edinburgh, he became in turn its Pathologist and one of its Physicians. For several years he was an Extramural Lecturer in Edinburgh on clinical medicine and the practice of medicine. In 1862 he came to Glasgow, having been appointed by the Crown to fill the Chair of Practice of Medicine in this University. The following year he was also appointed by the Corporation of Glasgow to the position of Chief Medical Officer of Health, which he held with much acceptance for nine years. In this position he laid down the lines of work of public health which have been broadened and deepened by his distinguished successors in that office. His name will, however, probably be most closely associated with this University. As a teacher his expositions of disease were at once profound and luminous, and as a clinical physician in the hospital his diagnostic powers were unsurpassed. Generations of men, now located in all parts of the world, many of them filling positions of the highest eminence, came under the influence of the thoroughness of his teaching and the spell of his earnestness and enthusiasm in the search for the causes and origin of diseases. Some of those who were his colleagues in the professoriate, and one of the graduands of to-day who is filling in a distinguished manner one of the chairs in one of our northern English universities, were his students, and they, with multitudes of medical men in different spheres of life, look back with pride upon that fact. This University, in which the best part of his life-work was spent, remembers with gratitude to-day that he devoted his learning and splendid teaching abilities in her service, and that in so doing he contributed not a little to her fame as a medical school. While he is best known in the world of medicine as a physician of the first rank, and while honours of all kinds have therefore been showered upon him, it is not so well known that the first of his books was devoted to the advancement of the science of public health, and that in the position of medical officer of health to this city he was one of the pioneers in the study and practice of that subject. His work on clinical medicine is looked upon as a classic, and to very many it is a source of great regret that both of these works are now out of print. An abundant writer on the science and practice of medicine, everything he wrote bore the stamp of thoroughness and research, and even in his retirement from active work his pen is still untiring in various directions. In thus honouring him with the degree of Doctor of Laws this University hails him as one of its greatest teachers, and it prays God that He will spare him yet many days.

In presenting Professor Oliver, Professor Glaister said: Dr. Thomas Oliver, a graduate in Arts and in Medicine of this University, has honoured his University by his distinguished career. He is the present occupant of the Chair of Physiology in the University of Durham, and is one of the Physicians at the Newcastle Royal Infirmary. In 1891 he was appointed Gulstonian Lecturer to the Royal College of Physicians of London, and has upon two occasions been made a member of Governmental commissions charged to inquire into the causes and prevention of industrial poisoning in those trades in which lead and phosphorus are used, and, by reason of the valued assistance he was able to render in that capacity, he now holds the position of Medical Expert to the Dangerous Trades Committee of the Home Office. On the occasion of the International Congress on Hygiene which was held at Madrid in 1898, he was chosen to represent the British Government. Dr. Oliver has been a voluminous writer, while he has been a contributor on the subjects of industrial diseases to different cyclopaedic works of medicine; he has translated and edited Bouchard's work on *Auto-intoxication*, and is the editor of a recent authoritative work on *Trade Diseases*. His writings on industrial diseases are deemed by the medical profession as of the first importance and as authoritative. It is for his eminence in his professional work that the University deems him worthy of this degree.

The degree of M.D. was conferred on William Russell, M.B., C.M. Thesis: Summer Diarrhoea, its Causes and Prevention. Bellahouston Gold Medals for eminent merit in theses for M.D. were presented to Alexander R. Ferguson, M.D., Assistant Professor of Pathology, Glasgow University; George Lamb, M.D., Captain I.M.S.; William Glen Liston, M.D., Captain I.M.S.

At the close of the capping ceremony Principal STORY delivered an address. After referring to the losses by death that had been sustained during the year, and the benefactions the University had received, he referred to the discussions that had been taking place in connexion with the coming Education Bill for Scotland. In connexion with the Carnegie benefactions, he expressed regret that so many of the students—an increasing proportion—were accepting the payment of their fees. It was impossible not to wish that the method of distributing this money for the benefit of Scottish education had been different, and that a larger proportion of it had been devoted to the increase in the number of teachers, a matter in which they fell far behind the Continental universities.

Graduates' Conversazione.

The annual *conversazione*, attended by former graduates of the University and representatives of the learned societies and public bodies in the city, was held in the University buildings the same evening. The invitations had been issued specially to the graduates of the years 1884 to 1887 and 1901 to 1903. The Principal and Mrs. Story received the guests, the academic costumes of the graduates adding to the brilliance of the gathering. The Randolph Hall, the Bute Hall, the Hunterian Library, and part of the University Library were open for the occasion, and a very enjoyable and interesting evening was spent. The band and pipers of the Gordon Highlanders rendered an attractive programme of music during the evening.

GLASGOW WESTERN INFIRMARY.

The managers of the Western Infirmary of Glasgow are at present erecting splendid new dispensary buildings for the out-patient department, the work of which is much hampered by the inadequate character of the present accommodation. In connexion with these new buildings they have also decided to build a new wing to the infirmary, and have issued an urgent appeal for funds for this purpose. The first acknowledgement of subscriptions in response to this appeal has just been published, and announces subscriptions to the gratifying amount of about £21,000. Other £40,000 or £50,000 will be required to complete the contemplated extension. That this increase in accommodation is urgently needed is shown by the fact that during the past year the average number of patients waiting for admission to the wards was 300, while at the present time there are 400 waiting to get in.

HUMANIZED STERILIZED MILK.

On the recommendation of Dr. Robertson, Medical Officer of Health, the Leith Corporation has established a dépôt for the preparation and sale of humanized sterilized milk. Leith is the first of the Scottish towns to institute such a dépôt, which, though it has only been in operation for about three weeks, has established itself on a very firm footing. The price charged for a week's supply (63 bottles) is 1s. 6d. for infants aged six months and under; infants over six months old are charged for at the rate of 2s. a week. These prices pay expenses and a little more. The entire cost of apparatus and fitting up the dépôt was close upon £70, thus showing that it

is not at all necessary to be extravagant, especially where small towns are concerned. The rent of the dépôt is £20 annually, and the salaries paid to two females who attend to the dépôt do not when combined exceed £1 in the week.

Ireland.

District Nurses in Ireland.

Lady Dudley has made an appeal for subscriptions towards providing district nurses for the very poor districts in Ireland. Her Excellency points out that "the average annual cost of maintaining each nurse is about £100, and it is just in those places where the need for such nurses is greatest, on account of the extreme poverty of the people, that it is impossible to obtain the necessary funds locally." The central authority of the Queen Victoria Jubilee Institute for Nurses has voted a sum of £180 per annum to form a nucleus for a special fund for the purpose in view, and Lady Dudley will be happy to receive further contributions.

Slumming.

His Excellency the Earl of Dudley spent three hours on Tuesday in visiting the worst slums in Dublin. He was accompanied by Sir Charles Cameron, the medical officer of health, and Mr. L. H. Ormsby, President of the Royal College of Surgeons. The Lord Lieutenant made a close inspection of many wretched dwellings.

The Vaccination Acts.

In the King's Bench, Dublin, judgement was given on Tuesday last in the case of the King (Vint) *v.* the Justices of Donegal. The question involved was whether the relator (Vint) had been twice convicted in relation to the same offence—namely, the omission to vaccinate his child, or whether his refusal to so vaccinate or to obey the notice served upon him, were two different offences. The Chief Justice delivered the judgement of the Court. The relator had been fined in April, and again in September, 1902, in respect of the same child. The respondents argued that the matter for which the defendant was summoned disclosed two distinct offences. The Court held that the later Act of 42 and 43 Vict. c. 70 was an amending Act on the Act of 26 and 27 Vict., and did not create an independent offence. They were of opinion that there was only one offence, and the second summons must be quashed.

Small-pox.

Another death from small-pox has occurred in Dublin, the victim being a Corporation official in charge of a dépôt used for receiving and destroying refuse from infected houses. It is alleged that the man never was vaccinated, but that since he was attacked the other persons employed there have been vaccinated. The *Irish Times* says: "We can hardly give credence to a rumour which would convict the health officers of this city of most reprehensible neglect," and it awaits a statement from the health authorities. This is quite right. But we should like to know what the Corporation, as a sanitary authority, has done in relation to its many servants who are exposed to infection. They quite properly advise the general public to be revaccinated. Do they carry out these recommendations in their own household? The poorer class of their employés, such as the scavengers, mix with the very people from whom the cases at present come. We should be glad to hear how many of them have been protected by revaccination.

A case of small-pox is reported at Mullingar, forty miles from Dublin.

Six cases of small-pox were notified in Dublin last week, as compared with 17 in the previous week.

A very successful ball in aid of the funds of St. Michael's Hospital, Kingstown, took place last week. Over 700 persons attended, and it is hoped that there will be a substantial addition to the funds of the institution.

A Question of Residence.

Dr. W. P. Delahunt was elected Medical Officer of Carrigbyrne Dispensary, New Ross Union, in December, 1902, but, owing to ill-health, was unable to visit the village until March 18th. But then he found that no residence was available, and he left for Dublin next day. The guardians asked to have the office declared vacant, but the Local Government Board declined to do this without an inquiry, and this has just been held by their inspector, Dr. Edgar Flinn. Dr. Delahunt said he was ready to live in the dispensary, but he could not be accommodated even there. Meanwhile the guardians are paying a *locum tenens* 4 guineas a week. It looks as if it would be more economical to build a house.

The New Royal Victoria Hospital, Belfast.

Citizens' Meeting in its Support.

On the evening of April 20th a crowded and enthusiastic citizens' meeting was held in the Ulster Hall, Belfast, in support of the new hospital. At the end of 1896 the project of building such an institution was made public, and in the early months of 1897 inaugural meetings were held. Mrs. Pirrie, who was Lady Mayoress, gave a whole-hearted support to the scheme; £100,000 was promised within six months, and the whole of this sum, with the exception of a few thousands, has since been fully subscribed. The hospital is nearing completion, so that it will be very soon handed over to the present Board of Management by the Construction Committee, fully equipped and, it is hoped, free of debt. The meeting on April 20th was to gain public sympathy for the proper maintenance of the new building. The present hospital costs about £11,000 a year; it is estimated that the new one will cost from about £17,000 to £20,000. It is the earnest desire of the Committee appointed six years ago not only to hand the building over free of debt, but also a large sum—it is hoped another £100,000—to endow it. Mrs. Pirrie has since collected about £39,000 towards this object, and there is no doubt that the wave of genuine enthusiasm aroused by the meeting will quickly swell this figure.

Mrs. Pirrie, who took the chair, said that the citizens were under a deep debt of gratitude to all those who had subscribed to the erection of the hospital, and to those who had worked so hard on committees. The object of the meeting was to devise ways and means for providing additional working capital. She said the project to put the hospital on the rates was most unsympathetic and ungenerous.

The Right Hon. Thomas Sinclair proposed:

That this meeting desires to acknowledge with gratitude to Almighty God the splendid work of healing which has been accomplished in the Royal Victoria Hospital during the one hundred and ten years of its history, and rejoices at the prospect of the early transfer of its beneficent and many-sided ministries to the new buildings now on the eve of completion.

He referred to the medical school and to the advantages to both patients and community in having a large hospital, well equipped, to take its part in the education of medical men.

This resolution was seconded by Mr. R. H. S. Reade, D.L., and supported by several other speakers.

Lord Londonderry proposed:

That this meeting heartily congratulates the people of Belfast and the surrounding counties on the erection in the city of the new Royal Victoria Hospital—a building whose increased accommodation and up-to-date arrangements place it in the foremost rank of modern hospital structures; and, inasmuch as the administration of this larger and fully-equipped institution will be attended with greatly-increased expense, this meeting calls upon the public to unite in a determined effort, by donations large or small, by the endowment of wards and beds, and, above all, by much-increased annual subscriptions, and otherwise, to double the present income of the old hospital, and thus maintain the new hospital in a manner worthy of the city and surrounding districts.

He referred in terms of warm approval to the up-to-date arrangements of the institution, and to the high standard to which it was proposed to raise the nursing.

This resolution was seconded by Bishop Henry, and supported by Mr. G. W. Wolfe, M.P., Rev. J. Irwin, and Dr. J. Walton Browne (Chairman of the Medical Staff). Dr. Browne referred to the good work done in the old building, and said that the new building would bear comparison with the leading institutions of its size.

On the motion of Mr. Thomas Andrews, D.L., a large and representative committee was appointed to co-operate with the Board of Management and Working Men's Committee in the arrangement of the necessary machinery for carrying the foregoing resolution into effect.

Mr. W. M'Laughlin proposed:

That this meeting desires to express its gratitude to all those who have in any way facilitated the erection of the new hospital, and brought the work to its present state of accomplishment, and in particular to (*a*) the Corporation of Belfast for its enlightened liberality in granting a free site; (*b*) the late lamented Countess of Shaftesbury and the present Earl of Shaftesbury for their generosity in presenting the ground occupied by the present hospital to the trustees of the new hospital free of rent; (*c*) the Right Hon. W. J. and Mrs. Pirrie for their invaluable services in connexion with the initiation of the scheme for providing the new hospital.

and in obtaining subscriptions towards its building and endowment funds, and for their untiring efforts and generous liberality in the construction and equipment of the building.

This was seconded by Professor J. W. Byers, M.D., who spoke of the liberal gift of the City Corporation of twelve acres as a site; of the generosity of the late Countess of Shaftesbury and the present Lord Shaftesbury, who gave the site of the present building to the hospital, with power to sell or let it when they moved to the new building; and to the generosity, keen interest, and energy which both Mr. and Mrs. Pirrie manifested in the work. Mrs. Pirrie was able to announce further subscriptions from various donors amounting to about £5,000, and several annual subscriptions. Several complimentary references were made to the highly-valued and keen personal interest taken by both Mr. and Mrs. Pirrie in every detail, both in the construction and in the furnishing; and also to the generous manner in which Mr. Pirrie had defrayed any excess over the original estimate where a better but dearer article was under consideration.

Ulster Eye, Ear, and Throat Hospital: Annual Meeting.

The annual meeting of the subscribers and friends of this hospital was held in the hospital, Belfast, on April 23rd. The Lord Mayor (Sir Daniel Dixon) presided, and there was a large attendance. Dr. W. C. McKeown, honorary attending surgeon, in presenting his report, said that 1,995 patients had been treated in the hospital; of these 1,367 were eye cases, 400 ear cases, and 228 throat cases. As in previous years, the benefits of the institution were distributed all over Ulster. He referred to his practice of early operation in cases of cataract, and to the necessity of training in these special hospitals for medical students; he instanced the effect of general sanitary improvement on eye disease by the disappearance of a most obstinate disease of the eye formerly very prevalent in the slums, with the clearances made by the Corporation of the City about Smithfield. Owing to the increase of the work the Committee had found it necessary to appoint a second assistant, Dr. Allen; and he had much pleasure in testifying to the able work done by him and Dr. Killen, and to the manner in which Dr. Davidson had discharged his duties as administrator of anaesthetics.

A Case of Assault.

Last week, before the county court judge at Ballinrobe Sessions and a jury of six, a case was tried in which a Poor-law guardian, Mr. W. H. Dickin, sued Dr. R. B. Mahon, medical officer of the workhouse, for £50 damages for assault. It was stated that a committee of three was appointed to inspect the house from time to time, any one member being entitled to do so alone. Dr. Mahon was not present at the visit, and he claimed that as a matter of courtesy he should have been notified. The plaintiff wrote to the defendant saying his action in referring to him was unjust and ungentlemanly. Later on the disputants met near the workhouse, and the defendant referred to the letter as impertinent. The plaintiff said: "You must remember you are an official, and must not dictate to the guardians as to how they are to do their duty." After some altercation Dr. Mahon, it was alleged, struck the plaintiff on the mouth and on the side of the face; his mouth was cut. For the defence it was contended that the spirit of the resolution was that the three members should go through the house together, and that the assault was quite trivial. The jury gave £7 10s. damages.

THE MORISON LECTURES AT THE ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

ALTERATIONS IN THE FORCE OF THE HEART.

The third and concluding lecture of the second series of this course was delivered by Dr. Gibson on March 6th, 1903, and was devoted to alterations in the force of the heart. The lecturer showed that the force of the heart varies according to the nature of the stimuli and the capacity of the cardiac muscle, and he pointed out that changes in force due to nervous influences were for the most part produced by modifications in the anabolic action of the vagus system, and not by alterations in the katabolic action of the augmentor system. Under alterations in force were considered palpitation, tremor, syncope, and asystole. It was shown that palpitation consists in increase of rate as well as augmentation of force, and that it presents a sensory as well as a motor aspect. Its chief cause is to be sought in diminished vagus control. This may be brought about by emotional disturbance, by reflex influence, by weakness of the nervous mechanism, by toxic effects thereon, and, lastly, by physical stress. The symptom, which has often attracted the notice of literary men, such as Rousseau, is often attended by extreme discomfort, a sensation of fullness, tightness, or even pain, along with globus, tinnitus, and other phenomena. It may be removed by quieting down any emotional influences, by removing any source of reflex disturbance, and by bracing the whole nervous and circulatory mechanism.

Tremor, or fluttering, is quite a different affection from palpitation. It is essentially an affection of middle life, and has been frequently referred to by many literary men of great eminence. Sir Walter Scott, for example, describes his sufferings from it. It may be the result of degenerative conditions of the heart, but is also produced by interference with vagus control. It gives rise to a sensation, not of throbbing, but of fluttering, attended by the consciousness of stopping, but without much liability to faintness or giddiness. Objective examination reveals an irregular, flickering pulse, and feeble irregular heart sounds. The treatment of this condition is to get rid of any reflex influences and to strengthen the whole circulatory apparatus.

Syncope has frequently been described since the days of Seneca, and, at the hands of Montaigne and others, it has frequently been the subject of brilliant literary description. It may be the result of direct overstrain to the heart, but is mostly caused by excessive influence of the vago-accessory system, which may be brought into action directly or reflexly. With sensations of faintness, giddiness, mental confusion, and other analogous feelings, there are pallor, pinched features, dilatation of pupils, coldness of surface, and diminution of respiration. The pulsations are feeble and flickering, and the heart sounds are often imperceptible. The best methods of treatment are to invoke the aid of gravitation, and to employ every kind of stimuli with the galvanic current.

Asystole has been the subject of much work since the publication of Lancisi's work on *Sudden Death*, but it is only within recent times that we have got an inkling of the true nature of the condition. MacWilliam has shown cause to believe that, produced in a large variety of different ways, sometimes muscular, sometimes nervous, it consists in the development of a condition of fibrillation of the muscle. This may be present for a longer or shorter period, and sometimes it is the precursor of death. It is probably the mode of cessation of action in many cases of sudden death. The fact that in experimental physiology such a condition may be evanescent shows that it is possible for a patient to recover from this condition. The vagus nerve must be thrown out of action, and every method of stimulating the heart must be invoked.

THE PLAGUE.

Prevalence of the Disease.

India.

The plague mortality in India for the week ending March 28th was 32,078. This is a record in the matter of plague mortality. During the weeks ending March 14th and 21st the deaths from plague amounted to 29,097 and 29,236 respectively, and it was hoped that the drop during the week ending March 14th would be continued, and that the maximum mortality from plague for the year had been reached. This hope, unfortunately, has not been fulfilled, for the fourth week of March gives the enormous fatality noted above.

It was during the corresponding week of 1902 that the maximum mortality in India from plague was reached, and our anticipation that until the fourth week of March had come and gone it would be unwise to look for a real decline in the returns has proved correct. In 1902 during the corresponding week, however, the plague mortality reached only 23,834, or some 9,000 less than that for the present year. During the week in question, therefore, 4,571 persons were dying of plague daily in India.

During the week ending March 28th the deaths from plague in the principal centres of the disease were as follows: Bombay City, 1,583; Bombay Presidency, 7,486; Calcutta, 816; Bengal, 3,628; North West Provinces and Oudh, 3,791; Punjab, 10,837; Central Provinces, 1,134.

Cape Colony.

During the week ending April 4th the plague record is as follows:

Port Elizabeth.—Two fresh cases, 2 deaths; 15 cases remained at the end of the week under treatment at the Plague Hospital.

East London.—Two fresh cases, 2 deaths; 2 cases remain under treatment.

King Williamstown.—Three patients remain under treatment in plague hospital.

Graaff-Reinet.—No fresh cases.

Quarantine Station, Saldanha Bay.—Two patients under treatment in hospital.

Plague-infected rats have been found during the week at Port Elizabeth, King Williamstown, and East London.

A

COMPARATIVE STATISTICAL STUDY

OF

CANCER MORTALITY.

III.—UNITED STATES.

The twelfth census of the United States, containing the figures for 1900, supplies such an admirable account in every respect of the conditions of the population that it might well serve as a model for all countries. Cancer is said to have been the cause of 29,475 deaths, being equivalent to a rate of 38.6 per 100,000 living. The regions showing the highest and lowest death-rates from cancer and tumour were :[10]

Highest.		Lowest.	
Pacific Coast region	51.9	Gulf Coast region...	20.2
Heavily timbered region in the N.W.	46.8	South Central Appalachian region	20.0
North Eastern hills and plateaus	44.5	South Atlantic coast	18.7
Prairie region	43.0	South Interior plateaus ...	18.1
Atlantic Coast region	41.5	Mississippi river belt	11.3

The explanation of these differences is by no means simple, many reasons combining to complicate the consideration of comparative death-rates from cancer in the United States. The high rates found in the heavily timbered plateaus of the N.E. and N.W. hills and also in the coast region may probably depend on similar causes to those which produce a high cancer mortality under the same conditions in European countries. It is also notable and not altogether unexpected that the great coal-producing region of the Appalachians and the bare land of the interior plateau should show a lower rate than the average for the whole republic. But other and special reasons must be sought to explain the low mortality in the well-wooded and low-lying lands in the neighbourhood of the Gulf and along the river Mississipi. The explanation of this, and probably the most potent cause in influencing the cancer mortality throughout the United States is the question of the mixture of races which inhabit that country. This will be well seen from the following table showing the death-rate for different races in 1900:

Death-rate from Cancer and Tumour per 100,000 Living.

White	60 7
Chinese	49 4
Negro	48 0
Indian	28.6
Foreign born	124.6

It is at once evident that the Southern States, in which the negro population predominates, should suffer relatively less from the disease; but, in addition, the question of nationality will be found to furnish an explanation of the very high mortality in those States in which the greater number of immigrants from Europe make their home. The remarkable difference in the mortality in native-born whites and in many of those having even one foreign parent will be seen from the following table :[11]

Death-rate from Cancer per 10,000 Living.

—	All Ages.	45-64	65 and over.
Both parents native	48.3	145.0	349 0
Mothers born in France	92.8	212.0	428.0
,, ,, Scotland	81.8	151.0	533.0
,, ,, Germany	78.2	226.0	530.0
,, ,, Ireland	76.4	215.0	452.0
,, ,, England and Wales ...	72.0	171.0	415.0
,, ,, Hungary and Bohemia	31.5	258.0	530.0
,, ,, Scandinavia	31.1	148.0	271.0
,, ,, Russia and Poland ...	25.7	245.0	654.0
,, ,, Italy	22.8	115.0	372.0

From an examination of the above figures it is obvious that the Atlantic States, which receive every year a mass of immigrants from Great Britain and Germany, would be expected to show from this cause alone a distinctly higher cancer-rate than those inhabited chiefly by a native-born population. Another point of interest is the fact that the rate for persons of German origin is 10 per 100,000 living, and for those of Irish parentage nearly 20 greater than in Germany and Ireland respectively; while for the children of English and Scandinavians it is very considerably less than in their native country. This is extremely suggestive, as it indicates that mode of life and surrounding conditions have a great influence in the production of the disease. Attention may be drawn to the fact that children born of Russian and Polish mothers, although having a low cancer mortality at all ages, show an exceptionally high rate at ages above 45, and at 65 and over have the highest rate of any nationality. As the large majority of those coming under this heading in the United States are Jews, it proves that the Semitic race is very liable to cancer in the latter half of life.

It would be interesting were it possible to compare carefully the mortality from cancer throughout all the States of the Union. Unfortunately, until 1900, the conditions of registration in the United States had been so irregular that no such comparison could fairly or usefully be made. Registration not being compulsory over the whole country, the compilers of the admirable census had to rely upon the very uncertain method of enumeration in estimating the deaths from various causes throughout a large portion of the States. It appears, therefore, only useful to contrast the death-rates in the few Registration States, although these have the disadvantage of being all grouped in the north-east of the republic.

	Death-rate from Cancer per 100,000 Living, all Ages.		Proportion of Deaths from Cancer to 100 Deaths from all Causes, all Ages.	Death-rate from Cancer per 100,000 Living of 35 Years of Age and Upwards.
Total registration area	60.0		3.4	168
Maine	83.7	81.0 urban / 84 2 rural	4.9	201
Vermont	81.8	72.9 urban / 83.2 rural	5.3	200
New Hampshire	66.8	48.5 urban / 78.4 rural	4.0	157
Massachussetts	66.4	62.4 urban / 79.4 rural	4.0	181
Rhode Island	62.3	56.1 urban / 74.3 rural	3.2	168
Michigan...	61.4	61.4 urban / 56.6 rural	4.6	163
New York	61.2	60 0 urban / 63.6 rural	3.7	168
Connecticut	61.1	59.9 urban / 63.3 rural	3.9	164
New Jersey...	50.4	49.1 urban / 52.1 rural	3.2	145

There is a considerable similarity in the conditions of these States, but Maine and Vermont, which head the list, are both largely agricultural, the percentages for males engaged in agricultural pursuits being given as 33 and 43 respectively, as against 7.6 in Rhode Island. It will further be observed with interest that the Maine Liquor Law causes no diminution in the cancer mortality of that State. Vermont contains large forests, and is one of the great regions for the growth of the sugar maple tree. New Hampshire and New Jersey, which show the lowest corrected rates, are important manufacturing States, but the central region of the latter is chiefly given over to market gardening. Massachusetts is to a large extent a manufacturing State, but it may be observed that it is also the greatest centre of the fishing industry, which may have some connexion with its high cancer mortality. A point which calls for special notice is that the State of Michigan, which is the chief centre of copper mining, gives a low rate, while in England it has been found that copper miners suffer from cancer to a disproportionate degree. The climate shows but little variety in the States comprised in the registration area.

The high cancer-rate which obtains in rural as compared with urban districts is strikingly exemplified in the area under consideration, where in every case the death-rate in cities is considerably lower; in the case of New Hampshire as much as 30 per 100,000 lower, than in the surrounding country.

The following gives the cancer mortality for four of the most important cities :

	Death-rate from Cancer per 100,000 Living, all Ages.	Proportion of Deaths from Cancer to 100 Deaths from all Causes, all Ages.	Death-rate from Cancer per 100,000 Living, aged 35 Years and upwards.
Chicago	63.3	3.9	202.0
New York ..	64.7	3.1	203.0
Philadelphia ..	73.6	3.4	203.0
San Francisco ..	112.0		286.0

[10] Twelfth census of the United States, 1902.

[11] Ibid.

The exceptionally high rate in San Francisco may in part be due to the large numbers of Chinese inhabiting that city under somewhat insanitary conditions.

SWITZERLAND.

Switzerland has the unenviable reputation of having, as far as is known, the greatest mortality from cancer of any country in the world, the crude rate being 132 per 100,000 living, and cancer causing 7 per cent. of total deaths from all causes. This is the more remarkable, as the excess of females over males is considerably less in Switzerland than in most other European countries. The geographical features of the country are well known; it may, however, be stated that, apart from the unproductive area of the high mountains, the country is about equally divided between arable and forest land. The people are, on the whole, prosperous and of distinct ethnical elements, being composed of about two-thirds German and one-fifth French.

There are no official statistics available as regards causes of death, but the following figures given by Nencki[12] show the incidence of cancer in the year 1898. Unfortunately it is impossible to make any correction for age-distribution, the last census having been taken ten years previously:

	Death-rate from Cancer per 100,000 Living at all Ages.	Proportion of Deaths from Cancer to 100 Deaths from All Causes.
SWITZERLAND	132.0	7.0
Cantons of		
Lucerne	204.0	11.5
Appenzell-i-Rhine	193.0	7.8
Unterwalden nid dem Wald	189.0	10.0
Zug	184.0	10.2
Schwyz	171.0	8.7
Glarus	171.8	10.0
Unterwalden ob dem Wald...	170.0	10.0
Aargau	165.0	8.4
Schaffhausen	163.0	10.0
Thurgau	161.0	9.9
St. Gall	160.0	9.3
Zurich	151.0	8.3
Geneva	140.0	7.0
Appenzell-a-Rhine	139.0	7.9
Solothurn...	130.0	6.6
Uri	127.0	6.1
Basle (Town)	124.0	7.0
Vaud	122.0	6.5
Fribourg	120.0	5.5
Grisons	107.0	5.6
Berne	105.0	5.6
Basle (Country)...	107.0	6.0
Neuchatel...	103.0	6.2
Ticino	88.0	3.8
Valais	36.0	1.7

It will at once be noticed that all those cantons showing the highest rate of mortality belong to what is known as German Switzerland, those with a French-speaking population having, without exception, a much lower rate, while the half Italian canton of Ticino is almost at the bottom of the list. The last mentioned has been almost entirely deforested during the last ten years. The area of highest mortality is compact, and comprises those cantons in the north-east portion of the country, and, if German Switzerland be alone considered, represents the land of lakes and rivers as distinct from the high mountain districts. Geologically this plateau consists of tertiary deposits of sandstone and clay, and partly sea and lake deposits. The district in question includes a portion of the industrial population of the country, but is chiefly agricultural, containing more cultivated land than any other part of Switzerland.

The Canton of Lucerne, which shows by far the highest cancer-rate, is too well known to require much description, but the whole region round the lake, consisting of hills, thickly wooded in their lower portions and intersected by rapid streams, presents geographical features which in other countries are often accompanied by a high mortality from cancer.

The cantons bordering on the Rhine show rather a high mortality; while, curiously, neither the town nor the district of Basle has as high rates as might be expected. Perhaps the most remarkable fact in the whole table is the exceptionally low mortality for the valley of the Rhone.

Altogether the incidence of cancer in Switzerland varies in a way which is extremely interesting, and it is to be hoped that there may be before long opportunity for making the necessary corrections to enable a more trustworthy estimate to be formed of these differences.

[12] Nencki, *Journal de Statistique Suisse*, 1900.

ITALY.

The mortality from cancer in Italy has greatly increased during the last ten years, Ruata[13] calculates that the increase since 1887 is as much as 30 per cent. Nevertheless, even at the present time, Italy compares very favourably with most other European countries, the 16,680 deaths in 1899 representing a rate of but little more than 52 per 100,000 living. It must, however, be admitted that in some parts of the peninsula it is probable that many cases of malignant disease are not correctly diagnosed.

The population is on the whole poor, and the portion engaged in industry is almost entirely to be found in the northern provinces. There is a large production of wine, beer being but little drunk, while less meat is consumed per head than in any other European country.

The following table shows the cancer-rate in the different provinces, but unfortunately it is impossible to correct these figures for age-distribution, as there has been no census taken of the Italian population for a great number of years.

	Death-rate from Cancer per 100,000 Living, all Ages.	Proportion of Deaths from Cancer to 100 Deaths from all Causes, all Ages.
KINGDOM OF ITALY*	52.1	2.3
Tuscany	83.0	4.1
Emilia	78.5	3.6
Lombardy	70.8	3.0
Marches	63.1	2.9
Liguria	59.3	3.0
Umbria	54.3	2.6
Lazio (with Rome)	53.8	2.7
Venetia	51.9	2.6
Piedmont...	50.9	2.8
Campagna	38.0	1.6
Abruzzo and Molise	35.4	1.5
Sicily	34.3	1.4
Apulia	30.8	1.2
Basilicata	30.4	1.2
Calabria	30.6	1.3
Sardinia	19.0	0.7

* The proportion of deaths from cancer to 100 deaths from all causes of persons of 40 years of age and upwards in the whole of Italy was 5.1.

The southern provinces will be seen to give a noticeably lower rate than the northern, but that it is not altogether a question of a more genial climate is indicated by the fact that, in the north, Piedmont has a lower rate than the sheltered province of Liguria. The highest figure is that for Tuscany which is no doubt chiefly influenced by the great ravages of the disease in Florence, for which city the rate is 137. It will be noticed that the flat marshy plains of Lombardy and Emilia give a distinctly higher rate than the average for the kingdom. Ruata[14] notes that the town of Ravenna in this province shows the highest mortality from cancer of any town in Italy, 120.4 per 100,000 living. This town is situated in a flat malarious district not far from the Adriatic and in the immediate neighbourhood of the largest forest in the kingdom, the woods covering an area of about 25 square miles.

On the whole, however, especially in the absence of correction for age-distribution, few inferences can be drawn from these figures, which vary no doubt chiefly according to the greater or less accuracy of diagnosis in the different provinces.

The chief towns in Italy give the following rates:

	Death-rate from Cancer per 100,000 Living at all Ages.	Proportion of Deaths from Cancer to 100 Deaths from all Causes at all Ages.
Florence	137.0	6.1
Milan	101.0	4.6
Venice	103.0	3.7
Rome	77.7	3.9
Naples	56.7	2.3

[13] BRITISH MEDICAL JOURNAL, 1902.
[14] Ibid.

(To be continued.)

THE FOURTEENTH INTERNATIONAL MEDICAL CONGRESS.

[From Our Special Correspondents.]

The Past and Future of the Congress.

When Dr. Pantaleoni, of Nice, proposed at the French Medical Congress of 1867 that that meeting should be the first of a series of international congresses, he had probably little or no idea what his suggestion would lead to. The *Transactions* of that first International Congress are contained in one volume of 700 pages. The *Transactions* of the seventh, or London, Congress of 1881 were issued in four volumes, those of the Moscow Congress in eight, whereas it has needed no less than seventeen volumes to deal with the portentous mass of material that was presented three years ago at the thirteenth International Congress of Paris. There are many who ask if this astonishing rate of progress can be maintained, and who even predict that the international medical congresses must come to an end ere long, crushed by their own immensity and submerged beneath the avalanche of their own *Transactions*. Nevertheless, the Madrid authorities have now included in addition, dentists, veterinarians, and pharmacists. Doubtless there will hereafter be minor congresses for physicians and surgeons, oculists and aurists, laryngologists, dermatologists, hygienists, gynaecologists, neurologists and alienists, etc., but not huge gatherings for all together; where the mutual attractions are small and the total resultant centrifugal rather than centripetal. None the less, there may be many more international congresses yet, for in truth the attractions are manifold. Courts and peoples seem to vie with one another in welcoming their medical guests. All is thrown open. Excursions are organized in every direction. Railway fares are halved or remitted altogether. Receptions and *soirées* are alone restricted by the limited time available, and last, not least, many of the great personalities in medical science are sure to be there and we can see the faces and hear the voices of the intellectual giants who lead the world in medicine: and seeing and hearing we gain encouragement and impetus, for "as iron sharpeneth iron so doth man the face of his friend." The attendance at Madrid has been very large, six to seven thousand: and no wonder, for who that could, would not wish, under such favourable circumstances, to visit the classic land of Spain, with its romantic history, its priceless treasures of painting and architecture, its dignified and affable people, its reminscences of the Phoenician, the Carthaginian, the Roman, the Visigoth and the Moor?

The Arrangements.

So great are the goodness and kindness of the Spaniards that one scruples to find fault. Truth, however, compels one to remark that the arrangements of the reception room were made with a very imperfect conception of what was likely to be required. There were far too few clerks and tables, and the space was too restricted. The early scene was, in fact, pandemonium, though I cannot doubt that it was just as trying for employés as for visitors. One nice-looking lady clerk, who did her very best for all, had a very sad and suffering time in trying to get hither and thither. I know not how others fared, but this I can affirm, that it was only after the expenditure of many hours of time, pressure, and actual pain that I got inscribed at all, and received my invitation tickets. It was obvious that the clerks were not conversant with their duties, and I should doubt if they had had any previous rehearsal.

The Inauguration Ceremony.

Anyhow, the inauguration ceremony in the National Library was a great success. The hall is one of the finest in Europe, and was crammed to the ceiling with a distinguished audience. I would estimate the numbers at 5,000, with many señoras and señoritas, all in big hats. The ladies of the Court, in black—in mourning for a relative of the Queen Mother—attracted much attention and deserved it, being, as they were, every one of them most charming examples of Spanish beauty. The stage was occupied by the high officials of the Congress and by the delegates, and conspicuous among these in their scarlet robes—no other delegates wore any—was the British contingent, comprising, among others, Sir William Broadbent, Sir Thomas Barlow, Sir Dyce Duckworth, Sir John Moore, Sir John Tyler, and Drs. Radcliffe Crocker, Pye-Smith, Savage, Tyson, Shingleton Smith, Professor Murdoch Cameron, and Dr. Pavy. With them, also robed, was the Rev. Sir Borraidale Savory, and, not far off, Canon Duckworth. The Secretary of the Congress, Dr. Fernandez Caro, wore a naval uniform, with many stars and decorations and the President, Dr. Julian Calleja, was also in official uniform, though in point of tokens of honour there can be no doubt that the President was outdone by his Secretary. Almost equally *décoré* with the last was Señor Silvela, Prime Minister of Spain, who sat on the left of the President, and another very interesting figure was that of the Bishop of Madrid, who possesses a face strikingly handsome and intellectual. The most notable parts of his dress were his purple cloak and cap, the last surmounted by a large round green ball. The King with his mother and sister did not come on to the platform, but occupied the nearest box. They were received with much enthusiasm and seemed greatly pleased. The King was very simply dressed in a dark-blue uniform with a light blue scarf, and wore, as did his officers, black gloves in token of mourning. His decorations were not numerous, though conspicuous among them, of course, was the historic Golden Fleece. His mother is pleasant looking and the same may be written of his sister, but the King is quite good-looking. His complexion is almost fair, his hair brown, and he has in modified form and degree the heavy, protruding lower lip, inherited through his mother, of the Hapsburgs. He was pleased with his reception and his manner was dignified and natural. He looked happy and as one who had no fear for the future.

The Foreign Delegates.

The proceedings began with an address by the President which was read for him by the Secretary. The latter then read his report, after which representative delegates spoke for their respective countries. One of the first of these was Professor Leyden, of Berlin, who was very well received. He spoke in German, each delegate employing his own language.

Not all the delegates were audible, though audibility and eloquence must be freely allowed to Dr. Dubois, of Brussels. Next we heard delegates from Argentina, Austria, Hungary, Bosnia-Herzegovina, Bulgaria, Chili, Cuba, Denmark, Professor Brouardel—very well received—for France; then delegates from Greece, Italy, Japan, Mexico, Norway, Holland, Peru, Roumania, Russia, Servia, Switzerland, and Venezuela; and finally the representative of the International Press Association. Dr. Pavy, speaking for Great Britain and Ireland, came after Professor Brouardel. He spoke most audibly and forcibly, and his reception was one of great appreciation. He said, in brief, that congresses were good, for they increased and spread knowledge, and that being so there was no fear of them coming to an end. Apart from the Congress a visit to Spain was most interesting, socially and historically. They had been received with great kindness, and would carry away a most pleasing recollection; and addressing the King and Queen Mother, he assured them that the British delegates were most grateful for their presence, which had conferred a great honour on the inaugural ceremony.

The President then delivered an eloquent and animated address, the latter portion of it specially directed to the royal personages, and thus a most brilliant and interesting function came to an end.

As regards the speeches, a Hungarian doctor told me that he considered the best to have been the President's and Dr. Pavy's, and it is significant that no American representative was called on to speak; Americans were, in fact, conspicuous by their absence. This evening, April 23rd, the municipality is giving a fête, but the description of that and other functions must be deferred to another letter.

The New Municipal Laboratory of Madrid.

I have had the opportunity, thanks to the kindness of Dr. Alecia, Vice-President of the Pan-Congress, of being present at the solemn inauguration of this establishment by Their Majesties the King, Queen Mother, Infanta Isabel, and the Court.

A laboratory was first founded in 1878, before that of Paris, thanks to the energy of Don Luis Justo Villanueva, but, being in unsatisfactory quarters, the present building has been erected. It stands in a triangular piece of ground, which has been carefully utilized by the architect. It has an interior hall of the same shape, which gives two long halls on the ground floor, the entrance being in the centre of the third side and three halls on the sides of the first floor, the angle being utilized for professors', and other smaller rooms. The floors are covered with mosaics, and the walls enamelled. On the left on entering is the laboratory for chemical analysis, 90 ft. long, containing about fifteen stands for work, with lava

slabs, each provided with gas, water, vacuum, filtering and optical apparatus, etc.; and adjoining a good balance room, with provision against vibration, with glass shelves. Then a *post-mortem* room on the side opposite the entrance, containing a slate table, stove for disinfecting instruments and material. Adjoining this is the room where the animals used in pathological or toxicological research are kept, and on the other side the biological chemistry room, with disinfection stoves, incubators, tables with water, gas, and vacuum apparatus, and a fine centrifugal apparatus turned by an electro-motor.

The first floor, reached by a wide marble staircase, contains library and museum, well provided with periodicals; a room for optical and photographic work, with a dark chamber to render ingress and egress during operations possible, provided with polarimeters, spectroscopes, apparatus for photographic and photomicrographic work.

On another side is the bacteriological laboratory, 55 ft. long, with microscopes mostly of Zeiss's make. Sterilizers, microtomes, autoclaves, coagulation and cultivation apparatus, director's room, and also a committee room; and the necessary sanitary offices, porters' rooms, etc., complete what might be considered to be almost, if not quite, the most perfect establishment of the kind in the world. Dr. Chicote, the Director-in-Chief, must be congratulated on the building which he has been the means of obtaining for the people of Madrid. He is assisted in the sanitary inspection of the town by 2 subdirectors, 2 first-class professors, 2 second, 3 third, 4 auxiliaries, 5 chemical analysts, inspectors of foods and drugs, 5 veterinary inspectors, 10 subinspectors, and 16 veterinary subinspectors, 1 administrative officer, 2 clerks, a porter, 4 laboratory attendants, 2 *ordenanzas*, 3 disinfectors of the first and 10 of the second class, 2 engineers of disinfectors, and 2 coachmen, a staff altogether of 84. The laboratory is open from 8 in the morning till 8 at night, no fee whatever being charged for any work done therein. It cannot be doubted that the work of such a place must in the end react very favourably on the public health.

The inauguration ceremony was simple. Many municipal authorities and doctors were present, and the staff made a formidable show. Their Majesties arrived almost unaccompanied by any escort. M. Cornil of Paris, who was present, was presented together with Madame Cornil, and the royal party carefully inspected the building. No speeches were delivered.

Sanitary Condition of Madrid.

The water supply of Madrid is good, as it is obtained by surface collection from the granite slopes of the Guadarama Mountains, and is delivered in sufficient quantities. The only unsatisfactory thing about the supply is that after leaving the collecting reservoirs it runs in an open river bed for some miles before reaching the covered channels which convey it to the service reservoirs. These are three in number, the most recently constructed being of the capacity of about 100,000,000 gallons; but this has been found not to hold water, so now the city has to depend on an intermediate one of about 45,000,000 gallons.

Mr. T. Greenhill, sanitary engineer, gives the following details with regard to the sewage of Madrid: The sewers are huge, on the ancient Roman model, very leaky, and discharge into the Manzanares. They consequently get very foul, and it is only in the event of a flood that they are ever efficiently flushed. Mr. Greenhill has drained Bilbao with stoneware pipes of the most modern pattern and constructed septic tanks, but after this was done only a very small proportion of the inhabitants could be prevailed upon to connect their houses with the sewers. The same engineer has suggested to the municipality of Madrid that the outfalls of each large sewer, some 10 in number, should be provided with a septic tank, but hitherto this has not been done.

The death-rate is 33 per 1,000 per annum, while in Seville it is as much as 42. These data are for 1900 and are taken from a most interesting graphic record of the mortality of all the large Spanish towns prepared by Mr. Greenhill.

In the *Imparcial* of Monday, April 20th, there also appears the programme of a great series of sanitary reforms proposed by the Alcalde of Madrid, the Marquis of Portugado. He comments on the present unsatisfactory state of affairs as shown by the figures given elsewhere, and asks for about £1½ million sterling for drainage, paving, improvements of streets, markets, abattoirs, and an asylum. Some of this activity may with justice be credited to the Congress, and must be most gratifying to those connected with its management, who could not fail to be aware that they were inviting a most critical assemblage of scientists to visit a city whose sanitary arrangements fell far short of the minimum now expected of any decently-ordered municipality.

Nations Represented at the Congress.

The following are, according to the *Imparcial* of April 24th, the numbers of representatives of different countries who have registered their names at Madrid: Argentina, 45; Australia, 7; Austria, 258; Belgium, 98; Bosnia, 3; Brazil, 25; Bulgaria, 4; Colombia, 2; Cuba, 13; Denmark, 35; Egypt, 12; France, 826; Germany, 776; Great Britain, 238; Greece, 6; Hayti, 1; Italy, 235; Japan, 4; Luxemburg, 4; Mexico, 25; Netherlands, 16; Norway, 51; Peru, 4; Portugal, 33; Roumania, 21; Russia, 297; San Domingo, 2; Servia, 9; Sweden, 21; Switzerland, 35; Turkey, 11; United States, 195; Uruguay, 3; Venezuela, 18. The number of delegates from various Governments is 474. The total number of persons enrolled as members of the Congress is 6,961, of whom 3,530 are Spaniards and 3,431 representatives of other nationalities.

The number of communications on the programme is 1,681.

MEDICINE AND SANITATION IN EGYPT.

THE Earl of Cromer, in his report on Egypt in 1902, presented recently to Parliament, gives some interesting particulars with regard to medical and sanitary administration.

Medical Administration.

The number of patients admitted into the Government Hospital was 22,717, about the same number as in 1901. Among the native population there were 1,589 cases of measles and 644 deaths, the high rate of mortality being attributed to want of care by parents. The number of deaths from diphtheria decreased from 316 in 1901 to 228 in 1902; of these, only 160 were notified before death; and Sir Horace Pinching, K.C.M.G., Director-General of the Sanitary Department, does not expect that any considerable diminution in the number of deaths from diphtheria among the native population can take place so long as medical aid is not sought while the children are suffering from the disease, since the sanitary authorities are thus prevented from taking the necessary measures to segregate the sick and prevent the extension of infection.

The Foundling Hospital, established at Cairo by public subscription in 1901, received 85 children during 1902. The mortality was high, and was due chiefly to the condition in which many of the children were admitted.

The Lunatic Asylum at Cairo continues to be admirably administered under the direction of Dr. Warnock, but the accommodation is wholly inadequate to meet the requirements of the country. When money becomes available, it is hoped that this defect will be remedied.

Plague.

The number of cases of plague registered during 1902 was 481, with 291 deaths. The number amongst Europeans was 39, with 15 deaths, but the proportion of foreigners attacked showed a considerable diminution as compared with 1901. The disease was more severe and the mortality heavier amongst Soudanese and Berberenes than amongst the fellaheen population. Out of 98 cases in the Soudanese colony at Tantah, 78 ended in death. Lord Cromer adds that: "The germs of the disease are certainly not eradicated from the country, and it is to be feared that cases will occur throughout Egypt during the current year. It is hoped, however, that, by the early application of the measures hitherto adopted, no serious extension of the disease will take place."

Cholera.

Sir Horace Pinching writes: "I cannot too strongly urge on the Government the necessity of at once taking up the question of providing a pure water supply to the principal towns in Egypt."

Lord Cromer quotes the following extract from a report by Sir Horace Pinching, dated February 3rd, 1903:

If further evidence were needed to prove that cholera is chiefly a water-borne disease, the late epidemic in Egypt afforded ample.

During the period since the 1895-6 epidemic of cholera, a certain amount of work has been done in the larger provincial towns to protect as much as possible the water supply from pollution, and some have been supplied with water drawn from deep tube wells. In none of these towns did the disease assume an epidemic form; cases occurred in most of them, but the majority were imported from adjoining villages.

Several gangs of men were trained for the purpose of boring Abyssinian tube wells, and in villages where cholera broke out, which depended

entirely on well water for drinking purposes, one of these gangs was sent off and several pipes were driven, and a supply of pure water for the village obtained. The rapid way in which the disease ceased in such villages was most marked.

At the commencement of the epidemic, Birch Bey, of the Daira-Sanieh, very wisely had Abyssinian wells made in all the villages belonging to the Daira-Sanieh Administration between Rodah and Bibeh, in Upper Egypt. These villages contain some 22,000 inhabitants, and, though the towns and villages all around them were more or less seriously infected, only 196 deaths took place from cholera among the villagers on the Daira-Sanieh property. This immunity from the disease was no doubt due to the pure water supply and the excellent control over the villages exercised by Birch Bey himself.

The villagers as a rule accepted most readily the water from the Abyssinian wells, and only in some cases were the pumps destroyed and the tubes wilfully filled with rubbish by the inhabitants.

At Keneh, situated some two miles from the river, and which formerly drew its water from wells and a stagnant backwater of the Nile, an engine, with pump, etc., was erected about eighteen months ago on the Nile. The result of this was very remarkable, only one case of cholera occurring in this town of 27,478 inhabitants, whereas during the epidemic of 1896 no less than 422 cases were registered.

In Medinet-el-Fayoum, where much has been done to prevent the Bahr Yousef becoming polluted, a similar result was observed, though not so marked, 368 cases occurring in that town in 1896 and only 87 in 1902. As the Bahr Yousef is the main supply for the whole Fayoum province, the diminution in comparison with 1896 was marked throughout this province, 2,183 occurring in 1896 and 1,001 in 1902.

In other towns, such as Assouan, Beni-Suef, Mit-Gamr, Zifta, etc., the same results were remarked.

During the epidemic of 1896 Cairo experienced a sharp recrudescence of the disease when the old Khalig was opened and the people began to take water for drinking purposes from this highly-infected source. Since then then the Khalig has been completely filled in; another canal, however, remained—the Boulakia, similar to the Khalig, in that it was dry the greater part of the year, and, while dry, served as a public latrine to the inhabitants of Boulac, the quarter through which it passed, which is one of the most crowded and dirty parts of the city.

Had this canal been filled with water during 1902, Cairo would no doubt have experienced a similar recrudescence of the disease to that of 1896, but at my earnest suggestion the part of the canal which passes through the city was filled up, and a new head made on the river for the purpose of leading water to that part of the canal outside the city which serves for irrigation purposes.

Great thanks are due to Mr. Webb, Mr. Langley, and to the other public works officials who carried out this work so promptly, as the Nile was rising rapidly at the time, and had not the work been taken in hand at once it would have been impossible to prevent the water from filtrating into the canals.

Provision has been made for an annual expenditure of £E10,000 to provide Cairo with free taps, and an arrangement has been made with the Cairo Water Company to improve the quality and increase the supply by furnishing water from artesian wells. The Government will contribute £E20,000 towards the cost of installing the new system.

The question of the water supply of Alexandria was still undecided when the report was drawn up, but it is stated that the system of rapid sand filtration appears to be best suited to all the circumstances of the case. Much has been done during the last five years to improve the water supply of other towns, but much remains to be done, though Lord Cromer anticipates that next year he may be able to state that a plan has been adopted.

Lord Cromer quotes with entire approval Sir Horace Pinching's praise of the excellent work performed and the devotion to duty displayed by the whole staff, with very few exceptions, both native and European, during the epidemic. Lord Cromer adds that the steps taken by Mr. Graham, who during part of the summer was acting as Director-General of the Sanitary Department to prevent the spread of the disease, were specially successful, and gives the following description:

On July 22nd a woman, who had come from Mousha, the spot where the epidemic commenced, died in the Boulac quarter of Cairo. The disease spread rapidly. Measures were, however, at once taken to protect the water supply. All access to the river for the purpose of drawing water was forbidden, barricades being erected and police guards posted to prevent the people from approaching the Nile. Within forty-eight hours, free taps, to the number of sixty-two, were erected throughout the city. Every water carrier was obliged to bring his water skin and cart to the waterworks, where all were disinfected, the former with sulphuric acid and water, the latter with steam. Each skin and cart was stamped after disinfection, and no one was allowed to fill a skin or cart with water at the standpipes unless they bore the Government stamp. The earthern drinking vessels in all the infected quarters were destroyed, and replaced by new ones at the expense of the Government. The effect of these measures became evident at once, and the fear of any serious epidemic in Cairo was at an end by July 31st.

In all, 1,489 deaths from cholera occurred in Cairo. It cannot be doubted that, but for the energetic measures adopted by Mr. Graham and his staff, the mortality would have been far greater.

Quarantine.

Lord Cromer reiterates his opinion that a revision of the Venice Convention upon which the existing quarantine rules are based, is very necessary, and records that the Medical Congress which sat at Cairo last December passed a unanimous resolution in the same sense.

Ophthalmia.

While accepting the opinion expressed by Dr. Eloui Bey at the same congress that ophthalmia is diminishing in Egypt, Lord Cromer speaks of the very great pleasure with which he received Sir Ernest Cassel's offer to apply the interest on a capital sum of £40,000 to an endeavour to combat those diseases of the eye for which Egypt has, from time immemorial, been noted.

Small-pox and Vaccination.

There were 1,210 cases of small-pox, of which 228 were fatal, in the course of 1902. These figures show a notable diminution in the prevalence of the disease. In the Assouan district, where small-pox was formerly almost endemic, not a single case occurred. These results are unquestionably due to the more stringent application of the vaccination laws. About 400,000 persons were successfully vaccinated in the course of last year.

Rabies.

Twelve cases of rabies were reported among dogs during 1902, as compared with 31 among animals during 1901. Only 2 cases occurred amongst human beings, as against 3 reported during 1901; 115 persons bitten by dogs were treated during 1902 at the Antirabies Institution, as against 180 treated during 1901.

School of Medicine.

Lord Cromer states that under the able direction of Dr. Keatinge and his very competent staff, the efficiency of this school is steadily increasing. He says that the Council of the Royal College of Surgeons, in appointing Mr. Reginald Harrison as its representative at the Egyptian Medical Congress, held last December, delegated him, at the same time, to report on the curriculum of the School of Medicine, with a view to allowing attendance at that institution to qualify for the examinations of the Royal College. It was most gratifying to all interested in Egyptian progress to hear so eminent and highly qualified an authority as Mr. Harrison bear public testimony, in a speech delivered at the opening of the Congress, to the efficiency of the school. Mr. Harrison subsequently drew Lord Cromer's attention to the desirability of prolonging the course of studies, which now extends over four years. This is fully recognized by the authorities in Egypt. The difficulty which, for the time being, lies in the way is that, even with a four years' course of instruction, the school is unable at present to turn out students rapidly enough to meet the requirements of the public service. The attendance at the school is, however, increasing, and it is to be hoped that in time this difficulty will disappear. During the past year the pressure was exceptionally great owing to the cholera epidemic. The following significant remarks, which are quoted from a memorandum recently communicated to Lord Cromer by Mr. Dunlop, afford very satisfactory evidence of the improved spirit which, in comparison with former times, now animates the students:

The students of the fourth year, Mr. Dunlop writes, were employed on cholera duty from the beginning of the epidemic. In August, the Sanitary Service asked for the students of the third year, and the Director-General was, I believe, much pleased by the manner in which our students worked. The improved tone of the students was amply exemplified by this call for men to do cholera work. I remember the day when, had the students of this school thought they would be required for cholera duty, a large proportion would have been seized with sudden illness, or would have received urgent letters requiring their presence in their own homes. This year, on the contrary, the whole number of the students available not having been told off on the same day, I had to interview indignant applicants, who imagined that they were not to be allowed to do work in the cholera hospitals.

Some important additions were made, in the course of last year, to the Anatomical Museum. In this connexion Lord Cromer adds: It may be of some general interest to quote the following remarks from a memorandum prepared by Dr. Elliot Smith, who is in charge of the Museum:

The archaeological expedition, sent out by the University of California, Dr. Elliot Smith writes, under the direction of Dr. George Reisner, brought to light at Naga-el-Der (opposite Girgeh, Upper Egypt) a series of nearly 500 bodies of the earliest known prehistoric epoch (in Egypt), many of them in such a marvellous state of preservation that all the organs and "soft parts" are still retained in a perfectly recognizable form. The possibility was thus opened up of acquiring a very exact

knowledge of the physical structure of the aboriginal race which lived in Egypt at least 7,000 years ago. In addition, Dr. Reisner's party excavated hundreds of other graves, containing human remains ranging (in various epochs) from the time of the earliest dynasties up to about the fifth century A.D.

Practically all of this material (that is, so much of it as was deemed worth removing) is now in the School Museum. A considerable proportion of the specimens have been presented to the School of Medicine by Dr. Reisner, and the remainder (which will ultimately be deposited in the University of California) have been temporarily lent to the School Museum, in order that I may describe the whole collection.

Soudan.

Lord Cromer, in his report upon the Soudan, describes the state of affairs as on the whole very satisfactory. On his first visit to the country, soon after its reoccupation in 1898, it had been more than decimated by famine, disease, and external and civil war. The general impression left on his mind by his recent visit is that the country has not only begun to move, but is moving even more rapidly than could have been expected. He makes the following reference to medical and sanitary matters:

Some improvements have been made in the sanitation of the large towns. Lieutenant-Colonel Penton, the Principal Medical Officer of the Soudan, reports that the people are gaining confidence in the hospitals, and come to them in increasing numbers. But in this, as in other departments, want of funds stands in the way of any very rapid progress.

A satisfactory feature in the situation is that large numbers of the natives have been vaccinated, with the result that small-pox, which was heretofore very prevalent, is steadily diminishing.

Nine cases of cholera, all fatal, occurred at Wadi Halfa. It is supposed that it was imported from Egypt, but nothing certain is known as regards the method of its introduction. The spread of the disease was checked by the efforts of the medical officers, who were ably seconded by Captain Hayes-Sadler, the Administrator, and by Mr. Currie, who was temporarily in charge of this province.

THE EPIDEMIC OF SMALL-POX.

The number of reports of small-pox to hand this week is comparatively few, but the importance to be attached to this fact is probably not very great. Such reports as we have show that several new centres have become established in different counties, and that in some of the places where, as we noticed last week, recrudescence of the disease has occurred after what was believed to be complete extinction, the disease has again assumed what is apparently an epidemic type.

From Northumberland and Durham there are no reports, but Westmorland reports 1 case in the village of Pattendale.

In Lancashire the disease appears to maintain its hold more persistently than anywhere else. Burnley has had 51 cases in a fortnight, and since the hospital is full some of the cases have of necessity been left at their own homes. More accommodation, however, is being provided as rapidly as possible. At Rochdale, again, the outbreak is sharp, 19 cases having been found in seven days, while Heywood has had several new cases, and Shaw, a comparatively small place, has had altogether 34 cases in the space of three weeks.

In Lancashire an extract from a report by the county medical officer has been printed for circulation, owing to the prevalence of small-pox in the County Palatine. The extract briefly states the principal symptoms of the disease, the danger of their being overlooked, and of mild cases being mistaken for chicken-pox, the need for prompt notification, the need for vaccination and revaccination, the much greater fatality rate of small-pox in the unvaccinated than in the vaccinated, and the inability of isolation to take the place of vaccination, notwithstanding its value as an auxiliary measure. Dr. Sergeant's report is short and to the point, and ought to be useful under present circumstances in Lancashire.

In Staffordshire, Wolverhampton has had some new cases, but Walsall after some months appears to be shaking itself free.

In Warwickshire things on the whole are not going well, for though at Birmingham the cases under treatment are now reduced to 45, in Coventry, Rugby, Aston, and Foleshill Union the disease appears to be gaining ground.

In Leicestershire, Birstall is a new centre, while in Leicester itself 35 cases have occurred in five days, and the disease appears to have obtained a considerable hold of the town.

In Nottinghamshire, Nottingham and Mansfield both show fresh cases, but at Hucknall Torkard it is reported that the epidemic has ceased. In this place 1,000 persons have been vaccinated since the first outbreak, 200 of them for the first time. If this represents the average extent to which the population is protected, it is not remarkable that this small town has found it difficult to rid itself of the disease.

In Oxfordshire the disease is decidedly spreading with some rapidity, and new cases are reported from Wheatley, Headington, Oxford, Garsington, and New Marston.

In Yorkshire little is reported from Leeds, but there are fresh centres at Goole and Sowerby.

In Worcestershire, Bromsgrove is the only place that reports a fresh case.

Further south, Kingston-on-Thames has had more cases, one in the person of an omnibus driver who was actually on his driving seat when his condition was noticed.

In London itself there has been a certain increase in the number of cases removed from different boroughs, but it is not very marked.

In Wales the disease seems to be increasing at Wrexham, and Cardiff is not yet free, and Cathays and Pontypridd appear to be new centres. Abercarn denies having had any case near it, and says that the case reported to have occurred belongs to Argoed.

SCOTLAND.

In Scotland only 3 new cases occurred between April 1st and 15th, and there appears to be little chance of a serious outbreak.

LITERARY NOTES.

The *Russki Vratch* announces that Dr. Metchnikoff, of the Pasteur Institute in Paris, will shortly publish a book upon the philosophy of optimism, entitled *Essai d'une Philosophie Optimiste.*

To the *New Letters and Memories of Jane Welsh Carlyle*, published this week, Sir James Crichton-Browne contributes an introduction extending over 80 pages. He discusses Mrs. Carlyle from the medico-psychological point of view.

A series entitled *Pro and Con* is announced. It will consist of a number of books, each of which will be made up of two essays written from diametrically opposite points of view on some debated question of theology, ethics, politics, or sociology. Among the volumes is one on Vivisection by Mr. Stephen Paget and the Rev. J. Page Hopps.

The first number of the revived *Index Medicus* has appeared, and the happy event was celebrated at Baltimore by a dinner given by Professors Osler and Welch of the Johns Hopkins University on April 18th. The new *Index Medicus*, which is published under the editorship of Dr. Robert Fletcher and Dr. Fielding H. Garrison, is arranged on the same plan as its predecessor. It begins with January, 1903, though a few references from the literature of December, 1902, are incorporated.

Among the celebrities attending the Congress in Madrid of whom biographical notices appear in the Spanish newspapers is Sir William Broadbent. It is stated in the *Imparcial* that a Spanish translation of his classical work on the heart was published under the auspices of *El Siglo Medico*. The translation is dedicated to a leading Spanish clinician, Professor Mariani.

We are informed that the King of Sweden and Norway has graciously accepted from Professor Corfield, of University College, a copy of the Milroy Lectures on The Etiology of Typhoid Fever, delivered by him before the Royal College of Physicians last year by special request of the Council of the College, Dr. Corfield having been for the past eleven years a Fellow of the Medical Society of Sweden.

Messrs. Macmillan are about to publish an English translation of the first volume of a work on climatology by Dr. Julius Kann of Vienna; the third edition, in three volumes, appeared in 1897. The translator is Professor de Courcey, of Harvard University. The other two volumes of the German work are too local to be of use to English readers.

Perhaps it may have been intended as a delicate compliment to the members of the International Medical Congress that M. de Curel's play, *The New Idol*, was performed at the Comedia, Madrid, on April 23rd. The "new idol" is science, to which Dr. Donnat does not hesitate to sacrifice his own life and that of his neighbour. We are asked to accept him as a representative of the most advanced medical science; nevertheless, he makes a mistake in the diagnosis of a case of pulmonary tuberculosis in the last stage. The patient, a young Sister of Charity, being in the doctor's opinion doomed to inevitable death, he, by way of experiment, inoculates her with cancer. She recovers from her supposed tuberculosis only to fall a victim to cancer. Donnat thereupon offers himself as a further victim on the altar of science by inoculating himself with cancer. If the members of the Congress went to the play, they doubtless found a sufficient amount of "comic relief" to save their feelings from laceration by the fine sentiments which M. de Curel has placed in the mouth of his very unscientific hero.

The *Wiener medizinische Presse* is informed that a Sanitary Conference will be held in the course of the next few months. The place of meeting will probably be Paris or Constantinople. The Conference will occupy itself mainly with the discussion of the quarantine problem.

ASSOCIATION NOTICES.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1903.

MEETINGS of the Council will be held on July 8th and October 21st in the Council Room of the British Medical Association, 429, Strand, London, W.C.

ELECTION OF MEMBERS.

ANY candidate for election should forward his application upon a form, which will be furnished by the General Secretary of the Association, 429, Strand. Applications for membership should be sent to the General Secretary not less than thirty-five days prior to the date of a meeting of the Council.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m. Members can have their letters addressed to them at the office. GUY ELLISTON, *General Secretary.*

ERRATUM.—STAFFORDSHIRE BRANCH.—NAMES OF DIVISIONS.—Owing to a clerical error in the notice regarding the naming of the Divisions of the Staffordshire Branch, the names were wrongly described. The notice should read "that the Divisions of the Staffordshire Branch be named North, Mid, and South Staffordshire respectively."—By Order, GUY ELLISTON, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.—A meeting of this District will be held at the New Hospital for Women, Euston Road, N.W., on Wednesday, May 13th, at 4.30 p.m. Dr. Wynn Westcott will preside. Mrs. Scharlieb, M.D., M.S., Surgeon to the New Hospital for Women, will read a paper on the Importance of Early Operation for Malignant Disease of the Uterus and Methods of Diagnosis. —J. DILL RUSSELL, F.R.C.S., Osman House, Fortis Green, N., Honorary Secretary.

BATH AND BRISTOL BRANCH: BATH DIVISION—A meeting of this Division will be held at the Royal United Hospital, Bath, on May 27th, at 5 p.m., for the purpose of electing Divisional Officers, and for other business.—W. M. BEAUMONT, Bath, Honorary Secretary.

BATH AND BRISTOL BRANCH: TROWBRIDGE DIVISION.—A meeting of this Division will be held at the George Hotel, Trowbridge, on Thursday, May 28th, at 3 p.m., for the purpose of electing officers, and for other business.—W. M. BEAUMONT, Bath, Honorary Secretary.

BATH AND BRISTOL BRANCH: BRISTOL DIVISION.—The first meeting of this Division of the Branch, under the new Constitution of the Association, will be held at the Medical Library, University College, Bristol, on Wednesday, May 27th, at 8 p.m. Business: To elect the officers of the newly-formed Division, the representatives of the Division on the Council of the Branch, and the ordinary members of the Executive Committee; to elect the representative of the Division in representative meetings of the Association; to make rules for the Division. This meeting of the Division will take the place of the ordinary Branch meeting, which will not be held. The date of the annual meeting of the Branch and of the annual dinner is altered to Wednesday, June 10th.

DORSET AND WEST HANTS BRANCH.—The annual meeting of this Branch will be held at Weymouth, on Wednesday, May 6th. The business meeting will be held at the Royal Hotel at 3 p.m. Agenda: Secretaries' accounts for 1902. Dr. Lush will move that the balance in hand be divided between the British Medical Benevolent Fund and the Royal Medical Benevolent College. Report of Election of Branch Council. Place of Summer Meeting. Address by the President. Consideration of and, if deemed advisable, the adoption of Branch Rules. Communications:—Dr. Alderson: Case of Congenital Fracture of the Femur, with successful result. Dr. Morrice: Herpes Zoster of the Neck, followed in a week's time by Bell's Paralysis (patient to be shown). Dr. Comyns Leach: A Case of Prostatectomy (patient to be shown). Dr. Lawrie: (1) A Fibroid Tumour removed by Subperitoneal Hysterectomy from the fourth of four sisters who have suffered from the same condition; (2) other specimens. Mr. DuBoulay: Case of Sarcoma of Iris, with Microscopic Section. Dr. Batterbury: Two Cases of Acute Congestion. The members of the Branch resident in Weymouth invite all members and friends to lunch with them at the Hotel from 1.30 p.m. Members intending to be present are requested to signify their intention to Dr. Lush by Monday, May 4th. —WILLIAM VAWDREY LUSH, M.D., Weymouth, and C. H. WATTS PARKINSON, Wimborne, Honorary Secretaries.

GLASGOW AND WEST OF SCOTLAND BRANCH.—The annual meeting of this Branch will be held in the Faculty Hall, 242, St. Vincent Street, Glasgow, on Thursday, May 7th, at 4 p.m. Business: Annual report; report of Medico-Ethical Committee; election of office-bearers; consideration of proposed Branch rules under new Constitution. By kind permission of the Faculty of Physicians and Surgeons tea will be served from 3 to 3.30 p.m.—JAMES H. NICOLL and JAMES HAMILTON, Glasgow, Joint Honorary Secretaries.

EAST ANGLIAN BRANCH.—Preliminary Notice.—The annual meeting will be held at Chelmsford on Thursday, June 11th. Members wishing to read papers, or show cases or specimens, will kindly communicate with the General Secretary, B. H. NICHOLSON, M.B., East Lodge, Colchester.

EAST ANGLIAN BRANCH.—Election of Members of Council.—The nomination of candidates to represent the Branch on the Central Council of the Association for the ensuing year must be made by three electors on or before May 16th next, in writing, to the General Secretary of the Branch, B. H. NICHOLSON, M.B., East Lodge, Colchester.

MIDLAND BRANCH.—Preliminary Notice.—The annual meeting of the Midland Branch will be held on June 5th, at Derby. The annual dinner of the Branch will be held in the evening.—F. M. POPE, Leicester, Honorary Secretary.

MIDLAND BRANCH: LEICESTER DIVISION.—The first meeting of this Division will be held at the Wyvern Hotel, Leicester, on May 20th, at 4.30 p.m. All members of the British Medical Association living in the County of Leicester and Leicester itself are now members of this Division, and are requested to attend this meeting, when the rules for the Division will be adopted and officers elected.—F. M. POPE, 4, Prebend Street, Leicester, Hon. Secretary of Midland Branch.

MIDLAND BRANCH: BOSTON AND SPALDING DIVISION.—The first meeting of this Division will be held at the Peacock Hall, Boston, on May 27th, at 3.30 p.m. All members of the British Medical Association living in the Holland County Council area and the Horncastle Parliamentary Division are now members of this Division and are requested to attend this meeting, when the rules for the Division will be adopted and officers elected.—A. E. WILSON, 8, Grove Street, Boston.

MIDLAND BRANCH: DERBYSHIRE DIVISION.—All members of the British Medical Association living in Derby and Derbyshire are requested to attend the first meeting of this Division, which will be held at the Derbyshire Royal Infirmary on May 26th, at 4 p.m., to adopt rules for the Division and to elect officers.—J. ACTON SOUTHERN, 93, Friar Gate, Derby.

MIDLAND BRANCH: LINCOLN DIVISION.—The first meeting of this Division will be held at the Guildhall, Lincoln, on Thursday, May 28th, at 4 p.m. All members of the British Medical Association living in the Lincoln, Gainsborough, Louth, and Sleaford parliamentary divisions are now members of this Division, and are earnestly requested to attend this meeting, at which the officers and representatives will be elected, and rules for the Division adopted.—E. MANSEL SYMPSON, 2, James Street, Lincoln.

MIDLAND BRANCH: NOTTINGHAM DIVISION.—The first meeting of this Division will be held at the Victoria Station Hotel, Nottingham, on Wednesday, May 20th, at 4 p.m. All members of the British Medical Association living in the City and County of Nottingham are now members of this Division and are requested to attend this meeting, when the rules for the Division will be adopted and officers elected.—F. H. JACOB, 28, Regent Street, Nottingham, Honorary Secretary, Nottingham Division.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.—The next meeting will be held at the Croydon General Hospital, London Road, Croydon (quite close to the West Croydon Railway Station), on Thursday, May 14th, at 4 p.m., Mr. T. A. Richardson, of Croydon, in the chair. The Chairman has kindly offered to provide tea and coffee at the hospital. Agenda: 1. Minutes of Upper Norwood meeting. 2. To decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. 3. Dr. Coles (Bournemouth): A demonstration on blood examination, giving the methods and means best adapted to the exigencies of general practice. 4. To visit the hospital wards, where cases of clinical interest will be shown and described by members of the hospital staff and also by other members, and discussion will be invited. Exhibition of surgical instruments, pharmaceutical products, etc., by Arnold and Sons and Burroughs, Wellcome, and Co. Members desirous of exhibiting specimens or reading notes of cases are invited to communicate as soon as convenient, and certainly by Monday, May 11th, with the Hon. Secretary. The dinner will be held at the Greyhound Hotel at 6.30 p.m., charge 7s., exclusive of wine. The Hon. Secretary would be much obliged if members would kindly inform him by postcard whether they intend, if possible, to be present at the meeting and if likely to remain to dinner. By so doing they will very materially facilitate arrangements and promote the success of the meeting. At the last Upper Norwood meeting it was decided that as the meeting at Croydon last year was such a great success the next one should be conducted on the same lines. It will therefore be a purely clinical meeting, and members are particularly requested to note the change in the arrangements. The idea is for members to show cases of general interest, to give a short history of each, and for a short discussion to follow. All members of the South-Eastern Branch are entitled to attend and to introduce professional friends.—HENRY J. PRANGLEY, Tudor House, Anerley, Hon. Secretary.

STIRLING BRANCH.—The annual meeting will be held at the Crown Hotel, Falkirk, on Thursday, May 7th, at 4.15 p.m. The Council will submit new rules for adoption by the Branch. Dr. Balfour Marshall will give an address on Retroflexion of the Uterus. Members wishing to show cases or specimens or to bring forward any business will please communicate with the Secretary, J. E. MOORHOUSE, 1, Glebe Avenue, Stirling.

SOUTH-WESTERN BRANCH.—The sixty-fourth annual meeting of this Branch will be held on Wednesday, June 3rd, at the Guildhall, Launceston, at 3 p.m., when Mr. J. Delpratt Harris will resign the chair to Dr. W. T. Thompson, who will deliver an inaugural address. The report of the Branch Council will be presented to the meeting, and the officers of the Branch elected for the year 1903-4. Luncheon, by kind invitation of the President-elect, will take place from 1 to 2.30 p.m., at the Guildhall, and the annual dinner will be held at the White Hart Hotel at 7 p.m. Tickets (exclusive of wine), 6s., which can be obtained from the Honorary Secretary. The President elect has kindly arranged visits to the Priory

Ruins and Church, and the Castle. After the meeting a Garden Party will be held at the residence of the President-elect. The nomination of candidates for the office of Elective Members of Council (Branch Representatives on the Central Council) for the ensuing year, must be made by three electors, and in writing, to the Honorary Secretary of the Branch, G. Young Eales, 1, Matlock Terrace, Torquay, on or before May 20th.

SPECIAL CORRESPONDENCE.

MANCHESTER.

Medical Summer Session: Introductory Address.—Midwives Bill and the Disappearance of "Mrs. Gamp."—Burial of Stillborn Children.—Coronership—Royal Infirmary Question.—Towns and Child Life: Puny Salford Children.

The medical summer session began on Wednesday, April 22nd. This is in accordance with a new practice adopted last year. The earlier commencement allows work to be interrupted at Whitweek without any curtailment of the working time of the session.

Professor Sinclair, in opening his lecture on obstetrics, gave a special introductory address on the teaching of midwifery and the recent Midwives Act. From the point of view of the practitioner and the advanced student of medicine, the Midwives Act, he said, was perhaps the most relevant fact of the year, and it might be that the working of this Act and its subsequent developments might bring about a revolution in the practice of obstetrics in England which must influence the professional life of every practitioner in this country. The institution of a Central Midwives Board with powers somewhat analogous to those of the General Medical Council was now an accomplished fact, and its regulations when approved by the Privy Council would become law. When these rules were completed and sanctioned "no woman certified under the Act shall employ an uncertified person as her substitute," and no midwife "is authorized to grant any medical certificate or any certificate of death or of stillbirth, or to undertake the charge of cases of abnormality or disease in connexion with parturition." The "Gamp" as a social phenomenon must disappear. Besides "regulating the course of training and the conduct of examinations" another important portion of the duties of the Central Midwives Board would be that of "regulating, supervising, and restricting within due limits the practice of midwives." The Board had power to cancel as well as to issue certificates, and he was confident that under the Act the midwife would be sufficiently restricted and controlled in her practice to protect poor women from the sufferings and dangers with which the public were all too familiar.

It appears from evidence given before the Acting Coroner for Manchester that the burial of newborn infants on the mere certificate of a midwife has been carried to a degree that opens out serious possibilities. Midwives at present give certificates in cases of stillbirth which are used as burial certificates. The Acting Coroner, in the course of an inquiry regarding the prosecution of a midwife, read statistics which showed that 338 stillborn children had been buried in Philips Park Cemetery during the last twelve months. When the other Manchester cemeteries were taken into consideration, it might be taken that there were about 1,500 stillborn children buried in the course of a year, "and," he added, "we have not a single guarantee that every one has not lived if this is the way it is to be done." If this sort of thing were to continue it would be the easiest thing in the world to murder a child in Manchester. Taking the number of stillborn children as 1,500, they would bear a proportion to the registered births of 1 to 12.

The Committee of the City Council, out of a long list of applicants for the city coronership, reduced the list to six, and finally recommended Dr. Cornelius O'Doherty for the vacant office in succession to the late Mr. Sydney Smelt. The post is worth £800 a year. Dr. O'Doherty has been a member of the City Council for eight years, and for ten years he was a member of the Chorlton Union Board.

We have chronicled from time to time the history of the "battle of the sites" in connexion with the infirmary question. All's well that ends well, for after over twenty years of contention the question is finally settled. After the Infirmary Trustees had agreed to sell and the Corporation to buy the site for £400 000, this arrangement still required to be ratified by the ratepayers. They in public meeting assembled almost unanimously approved of the transaction. So far this ends a strange eventful history. The sanction of Parliament only is now required, and the City Council is arranging for the insertion of extra clauses in the Manchester Corporation Bill now before Parliament. The extra rate to be levied to cover the purchase will be a little more than one penny in the pound. The City Council is also fortunate in receiving an offer of £165,000 for the site of the reference library, a sum that works out at £110 per square yard. This site, namely, that of the present reference library, was originally the site of the house of Charles White, F.R.S., one of the founders of the Royal Infirmary. On Monday last the Infirmary Lay Board decided to appoint a special building committee to prepare for the erection of a new infirmary on the Stanley Grove site, in accordance with the arrangement with the City Council. The committee is to consist of twelve lay members of the Board and of all the members of the Medical Board, with power to co-opt outside persons whose assistance might be deemed advantageous. The objects of this special committee were defined as being to complete the arrangements with the authorities of Owens College, the Southern Hospital, and the Cancer Pavilion; the purchase and sale of land and houses at Stanley Grove; the issuing of instructions to architects, and the choice of architects to compete for the design of the new buildings; and other matters; and the committee was instructed to report its proceedings to the Board. In view of the new situation created by the decision to remove it was decided to make the best of the present building, the medical staff being instructed to take in urgent cases, even at inconvenience, and the House Committee being directed to consider arrangements for the use of the Board room itself as a temporary ward. A letter was read from Principal Hopkinson containing the proposals of the Owens College Council with regard to the negotiations on the Stanley Grove site. These included the estimate of £5,000 as a proper price for the removal of the laboratory, the suggestion that every consideration should be shown to the Cancer Pavilion, and the request that provision should be made for the instruction of students, and the representation of the College on the Committee. The letter was ordered to be printed and sent round for the study of the members.

Although School Boards are about to pass away, the Salford Board is exhibiting a commendable anxiety as well for the physical as the intellectual and moral training of the youth committed to their care. We recorded some time ago that a subcommittee was appointed to consider the weighing and measuring of children, and now anthropometric measurements are to be taken of boys of the ages of 8, 10, and 13 in all the boys' and mixed departments of the Board's schools. Dealing with Salford boys, and taking one school—the Grecian Street—the average boy of this school was the best boy from a physical point of view. He was a little less in height than the London schoolboy and also a little less in weight. But if the John Street boy was taken it would be found that at 13 he was actually 7 in. shorter than the average public schoolboy of his age and 25 lb. less in weight. These facts should make any one interested. At present in the Manchester press there is a lively interchange of views on physical training and the physical status of the population. It appears that, whereas the upper classes of the country are probable improving in physical condition—in height and weight—the so-called lower classes are steadily retrograding. The average professional man is from 4 to 5 in. taller than the artisan of the town and from 16 to 18 lb. heavier, the gap between the two typical men fast widening.

CORRESPONDENCE.

THE EARLY HISTORY OF CLINICAL THERMOMETRY.

Sir,—It is interesting to hear from Dr. Izett Anderson that Dr. Arnold, of Jamaica, made use of a clinical thermometer so many years ago. No doubt there were a few others like Dr. Currie, of Liverpool, who did the same, but, as far as I remember, the instrument did not come into general use until about the year 1860. I have at present no opportunity of verifying dates, but I believe that we are indebted to Wünderlich for the first account of its value and systematic use, and this is to be found in the *Medical Times and Gazette* for 1858. About the same time Dr. Aitken, of Netley, published a *Practice of Medicine*, and in it the value of the thermometer, both in diagnosis and prognosis as well as in treatment, is duly set forth in accordance with the researches of Wünderlich. I believe this chapter, the first that appeared in any treatise on medicine, caused the new method of taking

the temperature to be widely known. At all events, it was from the knowledge therein obtained that I requested the superintendent at Guy's to procure a clinical thermometer. This he did; it was at the service of any one who might wish to make use of it. I think it was nearly a foot long, and was so great a novelty that it was taken to a South-Eastern meeting of the British Medical Association for exhibition, where the members regarded it with much curiosity and interest, although, I am sorry to say, one or two with ridicule.

Of course, the temperature of the body has been long known as a scientific question, for we read of Benjamin Franklin one day saying that although the temperature of the air was 100° his own body was 96°, proving to him that warm-blooded animals had the power of maintaining a fixed temperature irrespective of the changes in climate and season. This must have been about the year 1750.

Sir Isaac Newton, of course, knew the temperature of the body, for he took this as the starting point on his scale in his new linseed-oil thermometer. If his numbers are multiplied to reach those of our present instrument, which is a development of Newton's, the body temperature would be equivalent to 96°, and upon this the author remarked that it was a little less than the heat of the inside of the body.—I am, etc.,

Prince Arthur Road, N.W., April 25th. SAMUEL WILKS.

HOSPITALS AND OPERATIONS.

SIR,—Every general practitioner knows the number of minor operations done at the general hospitals for patients who are too mean to pay for them privately, or who are allowed to believe that it can be done better at hospital.

I am certain we are all willing to facilitate our poorer patients, who can ill afford even half a guinea fee, getting hospital treatment, and personally I send very many adenoids, tonsils, naevi, circumcisions to hospital, but always with a letter to the house-surgeon stating exactly the circumstances. Why could this not be made a necessary qualification? It would be simple and effective, and save much heartburning among us G.P.'s, not to speak of the very considerable saving of the voluntary contributions which are given in the belief that only the poor are benefited.—I am, etc.,

Balham, S.W., April 23rd. FRANK COLLIE.

HOSPITAL AMENITIES.

SIR,—"F.R.C.P.," in discussing hospital amenities, refers to the complaint of a correspondent in the BRITISH MEDICAL JOURNAL of April 4th that hospital surgeons and physicians do not show proper courtesy in dealing with the ordinary medical attendants of their hospital patients. "F.R.C.P." puts this omission down to want of time. Now, Sir, I saw in the out-patient department of the Western Infirmary, Glasgow, some years ago a system which exactly met this difficulty of overpressure of work on the part of the surgeon. It was to set one of the students in attendance to take a note of the diagnosis and treatment, and in every case, whether the previous medical attendant had written or not, to communicate with him.

I wish to emphasize this proceeding, not only because it showed the right kind of feeling which ought to be entertained as between the two grades, so to speak, of the profession, but because of the object lesson which it afforded to the student of the true ethics of medical practice, and also because it showed how advantage might be much more frequently taken than is usually the case of the assistance of the young men in the work of the wards. How often does "walking the hospital" mean strolling around and nothing else? It may be impossible to give every student a clinical dressership or clerkship, but there are many ways in which every pupil may be made to share in ordinary clinical work.—I am, etc.,

April 13th. W.B.

THE LONDON COUNTY COUNCIL AND SKILLED PATHOLOGISTS.

SIR,—As one of those who hope that the recent circular of the London County Council will meet with a helpful response from the bodies addressed I venture to offer some criticisms on your leading article of last week entitled, "The London County Council and Specially-Skilled Pathologists." In that article you deprecate the suggestion that pathologists for the service of the coroners should be nominated by the hospitals and other medical authorities of London in accordance with the recent circular of the London County Council. In considering the reasons for or against acceptance of this offer a knowledge of the circumstances which gave rise to the circular in question may be of service to some of your readers, and I have therefore sketched them briefly in an appendix to this letter.*

It should be clearly understood that the Council in thus approaching the profession is not appealing for help but, in accordance with the pacific policy indicated in their resolutions (see appendix), is offering concessions which it has been given to understand will go far to remove the objectionable features of their present system. The rejection of these concessions will not leave the Council in any difficulty, but to the profession will mean the loss of an opportunity which may never return of exercising a legitimate influence on the direction of medico-legal questions in London.

In your leading article you formulate three objections to the proposed nomination of experts by the various medical authorities.

The first is to the effect that the class from which selection would have to be made is a small one and that (*a*) the other duties of its members would make it impossible for them to perform these, and (*b*) that they would refuse to do so for the fee of two guineas.

This is answered by the fact that a sufficient number of gentlemen of the requisite qualifications and standing have already expressed their willingness to act from public-spirited motives for the fee in question. They do so on the understanding that efforts are being made to secure an alteration in the law, and in the hope of furthering those efforts. It is, moreover, a matter of common knowledge that distinguished pathologists have accepted that fee for similar services in the past.

Your second objection is to the effect that the scheme of the Council makes no provision for the recognition of the general practitioner in medico-legal cases. On the part of the Council this is met by the terms of Resolution A (see Appendix). It is hardly necessary to state that the Council has no power to insist on the coroner calling for the general practitioner's evidence, but their resolution invites him to do so. Your second objection is, moreover, met by the fact that the gentlemen to whom I have referred as allowing their names to be put forward do so on the understanding that they act in co-operation with the general practitioner.

The third objection raised in your article is that the coroner, being provided with a list of experts whom he can employ at no greater expense than the general practitioner, will be tempted to ignore the latter with increasing frequency. But the coroner has already such an expert at his disposal who acts without reference to the practitioner. Further, if, in accordance with the resolution of the Council, the general practitioner is subpoenaed, the services of the expert will entail some additional expense.

I submit, therefore, that in making a favourable response to the County Council we shall be fighting the battle of the profession, and not sacrificing its interests. But is there not a wider view which also deserves consideration? The question at issue is of the greatest importance, and an honest attempt is being made by the London County Council (hampered as it is by the imperfect state of the law) to arrive at a satisfactory solution. In response to an appeal from more than one branch of the profession it now offers an influential share in the settlement to the various medical institutions of London. Is it policy to reject this offer because it fails to give us complete satisfaction, and in view of the fact that its rejection will simply perpetuate the system to which we unanimously object?—I am, etc.,

Portland Place, W., April 27th. H. G. TURNEY.

* APPENDIX.

In the early part of this year the friction between the practitioners of the S.W. district and the newly appointed coroner culminated in the appointment of a deputation to make representations to the L.C.C. The main grievances were two in number:

1. That the coroner ignored the practitioner who had been in charge of the subject of inquiry during life, except in so far as he seemed to regard him as *ipso facto* an object of suspicion; and

2. That he called in the services of a pathological expert in cases which presented no special difficulties.

An independent deputation representing the interests of St. Thomas's Hospital was received on the same day. This deputation, while sympathizing with the position taken up by the Battersea practitioners, had a grievance of their own. The hospital which they represented had on more than one occasion fallen under the censure of the coroner. They maintained that this censure was undeserved, and that it was due to the coroner being misled by the evidence given by the pathological expert whom he employed at the suggestion of the Council. They pointed out

to the Council that the private nomination by a lay body to so important and highly specialized a professional post was not calculated to secure the selection of an expert who would command the confidence of the medical profession or who would possess the necessary qualifications. It was then explained to the deputation that the hands of the Council were completely tied as to the remuneration of experts, and that they had no power to make a definite salaried appointment as was suggested. The deputation were then asked if, in their opinion, the various medical authorities of London would be willing to advise the Council in the selection of experts. To this the answer was returned that there was little doubt that the profession would gladly help, provided that it could be arranged that the experts suggested should perform their duties under suitable conditions.

As a result of this interview, the following recommendations were made by the Public Control Committee before which the deputations had appeared, and have been adopted by the Council. It will be seen that the first of these recommendations goes far to satisfy the grievances of the general practitioner; and the second, which is embodied in the circular, is intended, in accordance with the suggestions made by the second deputation, to place the appointment of experts in the hands of the medical profession.

"A. That an intimation be given to coroners that in those special cases where a pathologist is employed to make a *post-mortem* examination, and where a medical practitioner had been in attendance on the deceased, such practitioner may be summoned to give evidence and paid the statutory fee, whenever the coroner is satisfied that his evidence will be material."

"B. That the Public Control Committee be authorized to obtain the names of several competent pathologists who will be prepared to make *post-mortem* examinations and give evidence in special inquest cases at the fee of £2 2s. per case."

CARCINOMA AND TROPHIC AREAS.

SIR,—I was much interested in Mr. Cheatle's paper, in the BRITISH MEDICAL JOURNAL of April 18th, on A Possible Relationship between Carcinoma and Nerve or Trophic Areas. The point he draws attention to as to the areas attacked by rodent ulcer and carcinoma is in keeping with the experience of others. I am not, however, prepared to admit that his proposed explanation of nerve influence is the correct one. My belief for some time has been that a more likely one is that to which I made reference in a discussion on carcinoma at the British Gynaecological Society on March 11th, 1897. I refer to Goodsir's view of nutritive centres. As far back as 1843 this anatomist expressed his belief in the general existence of such centres of nutrition, for a certain period at least, in all textures and organs, and he regarded them as centres of germination. Subsequently, adopting the term from the embryologists, he named them germinal spots. Seeing that the whole essence of the cancer process is cell proliferation, and that this latter can only develop in cells that have a special proliferating power, either acquired in one of several ways, or natural, as in Cohnheim's "rests" and Goodsir's "centres of nutrition," I think that these last as a possible explanation of the phenomena alluded to by Mr. Cheatle should be borne in mind.—I am, etc.,

Glasgow, April 25th. GEORGE THOS. BEATSON.

THE SPREAD OF PLAGUE IN INDIA.

SIR,—Every one interested in India must share Mr. Cantlie's alarm at the continued spread of plague in that country, but it is to be feared that the pestilence is hardly likely to be stayed by the importation of "experts." Whence indeed are they to come, if we have not the article already home-made in India?

As a matter of fact, the difficulty we have to cope with is not that of devising measures, but in carrying them out. Were it a question of dealing with Europeans, most of us could formulate plans for "stamping out" plague with all desirable promptitude, but unfortunately we have to deal with a population sensitive, suspicious, and prejudiced to a degree that requires years of study and observation to understand. A single false step, due to want of understanding and sympathy, will render the special knowledge of a battalion of Kochs and Pasteurs worse than useless.

Mr. Cantlie is in so far right that the worst of our present difficulties are traceable to the mistaken policy of the Indian Government, in the early days of the invasion, in placing its operations against plague, not in the hands of experts, but in those of a combatant officer who, belonging as he did to the European, and not to the native army, was necessarily even more absolutely ignorant of native prejudices than he was of the principles of sanitary science. The members of the medical department were relegated to the position of therapeutic assistants to this military dictator, who was invested by the authorities with almost unlimited powers; and he proceeded to enforce his ideas of what was necessary, literally at the point of the bayonet. So odious were his measures to all native ideas of decency and propriety that more than one medical officer has confided to me that he would have lost all respect for the native had he not resented and resisted them.

To drag a sick man away from his house and relatives appears to the native mind a cruelty, beside which the infliction of mere physical suffering is of little moment, and it is no exaggeration to say that we earned greater odium by the forcible isolation of the sick than we should have, had we marched their entire families to instant execution, as they would not have lost caste under the latter circumstances; and it was impossible to induce the native to believe that this could or would be guarded against by the arrangements of the hospital. It is difficult for any one who has not served in India to understand the panic of terror and suspicion that spread over the land as the result of the Poonah plague campaign. The mildest and most carefully planned measures were regarded with sullen suspicion. Our previously popular general hospitals were deserted, and, in spite of the entire abandonment of compulsion, we are still reaping the evil effects of this initial folly and lack of sympathy, so that it is in the last degree difficult to carry out measures of any real value. Believe me compulsion is worse than useless, as it leads to concealment of cases, and hence their treatment under circumstances that treble the risk of spreading infection. India, however, can I think find a sufficient number of "experts." What is required is a liberal augumentation of the numbers of the medical rank and file, and tact on the part of its rulers; in which may be included the possession of sufficient humility to consent to be guided by the advice of those who have made a special study of sanitary matters.

Latterly I am glad to hear that the abandonment of ill-devised measures of compulsion is beginning to bear fruit, and that there are not wanting signs of commencing native co-operation. When by bitter experience the native has learned the lesson that pestilence has to teach him, we may expect its ravages to be stayed, but not before, unless as appears to have been the case in past centuries, the disease die down by a simple loss of virulence in its infective agent.—I am, etc.,

G. M. GILES, Lieutenant-Colonel, I.M.S. (ret.)
April 5th. (Late San. Comm. N.W.P. and Oudh).

INTERNATIONAL MEDICAL MANIFESTO ON ALCOHOLISM.

SIR,—The following facts and allegations came under my notice in the course of dispensary practice many years ago:

In one family resident at Bristol Hotwells there were at least three (I think four) children who were deaf and dumb, and one (the youngest) who stammered. The mother, a decent housewife, appeared to be healthy; and she told me that her eldest child was free from any defect. On my expressing interest she told me she thought she could account for the facts. "My husband," she said, "was a sober and healthy man when I married him, and till after the first child; then he took to drinking heavily, and all my dumb children were born during that period. Then, I am thankful to say, he completely reformed, and abandoned drink; and my last child was conceived after his reformation."

I can produce no record of this curious story; and if my friend Dr. Reid denies any value to it, "I daurna complain." I give it for what it may be considered worth. I did and do believe it.—I am, etc.,

JOHN BEDDOE, M.D., F.R.S., etc.
Bradford-on-Avon, April 18th.

TRACHEOTOMY AND INTUBATION.

SIR,—I should like to offer a few remarks upon Dr. Knyvett Gordon's interesting paper reported in the BRITISH MEDICAL JOURNAL of April 4th, p. 791.

Dr. Gordon is reported to have said: That in this country tracheotomy was still largely *preferred* (the italics are mine) to intubation. Now while it is quite possible that tracheotomy is still largely *practised*, an erroneous impression is conveyed by saying that it is *preferred*, because many expert tracheotomists have not given intubation a trial; some object to it on purely theoretical grounds, others have not the necessary equipment, while a few have discarded it after a very limited use. Again, Dr. Gordon states that it is with the dissecting method of tracheotomy that intubation is usually compared, and then it was certainly preferable. Now in the large majority of cases of laryngeal diphtheria requiring operative treatment, tracheotomy is entirely unnecessary, for they can

be and are successfully treated by intubation. Intubation is not intended to supplant the tracheal operation, it can never do so, for there are cases to which the latter method only is applicable. Tracheotomy should be the *dernier ressort* in the treatment, and the words ascribed to Malgaigne were never truer of the cutting operation then than they are to-day: "If I do real honour to the author of tracheotomy, what honour will he not deserve who shall come to deliver us from it?" Dr. Gordon goes on to compare the operations, and submits as the advantages of tracheotomy over intubation several contentions to which I venture to take exception:—

1. That the relief of the obstruction was more complete. Now this is by no means the case, indeed, there are extremely few cases in which the relief is not immediate and complete.

2. That the rest of the child was less disturbed. Intubated patients sleep like the proverbial top; so much so that it is always advisable, I think, to have them roused at intervals and to administer sips of water to excite coughing and clear the tube.

3. That subsequent feeding was easier. This contention I pass by because in my opinion it is desirable to feed both intubation and tracheotomy cases artificially, and no difficulty has ever arisen in my practice.

4. That it was more easy to remove false membrane, especially when this was below the tracheal wound and in large masses. Now, were it possible to diagnose obstruction as due to membrane in the trachea, tracheotomy would certainly possess that great advantage; but to say "that it was more easy to remove, etc.," is not within the limits of comparison, for membrane cannot be removed with forceps from the trachea via the larynx of an intubated patient.

5. That complete rest was afforded to the larynx. Assuming this to be indicated in diphtheria and that it does not obtain in intubation, case results entirely negative the importance of this contention.

The introduction of diphtheria antitoxin has given an impetus to the treatment of laryngeal cases by intubation, and the results are so successful that this method cannot lightly be put aside. Tracheotomy, alas! must always be with us, but every effort should be made to spare the patient the risks of a throat-cutting operation.—I am, etc.,

Eastern Hospital, Homerton, N.E., April 7th. CONRAD BASAN.

FRACTURE OF METATARSUS IN MARCHING.

SIR,—This accident is mentioned in the EPITOME of the BRITISH MEDICAL JOURNAL of April 25th as "more likely to occur if the foot be unduly arched," a fact which has an important bearing on foot physiology. An unduly-arched foot and claw-like toes go together, hollow-foot and claw-foot being convertible terms. The dual deformity, with callosities on the sole associated, is in minor degree very common. It is due, as I hold, to disuse of the toes, to failure of the muscles which should act on the under surface of the first phalanx of the great toe and the second of the others, in order to prevent the retracting influence of the extensors and the flexing influence of the long flexors on the final phalanges, and so to ensure the pressing influence of the latter on the ground surface. By this means the great toe is kept straight, and its short flexor and adductor muscles, acting from the great toe (as a fixed point) on the under surface of the arch, limit the formation of it. In doing this they also help to uplift the head of the metatarsal bone, relieving the skin upon it from undue pressure and friction. For all the metatarsal bones this function is effectively performed by the long flexors when they act on toes properly held in position. If, however, the two muscles mentioned fail to hold the great toe in position, they fail also to limit the formation of the arch. Then the powerful long flexors over-form it: they permanently bend the metatarsal bones, and these, being already bent, may be actually broken by specially violent action. The moral is: Let the "young soldier" be taught to habitually use his toes as pressing organs, and thus fulfil all of their physiological purposes.—I am, etc.,

Gloucester, April 25th. T. S. ELLIS.

THE NEW REGULATIONS OF THE UNIVERSITY OF LONDON.

SIR,—Alarmed by the new regulations recently introduced by the Senate of the University of London as reported by you in the BRITISH MEDICAL JOURNAL of April 25th, I wrote to Sir Thomas Barlow and Mr. Harold Burrows, the two candidates for the vacancy in the medical representation of Convocation on the Senate, asking their views on the following important questions:

1. Are you in favour of accepting examinations and degrees of other and foreign corporations in lieu of matriculation and in lieu of intermediate and pass examinations conducted by the University of London?

2. Are you in favour of abolishing classics and science as compulsory subjects for matriculation in the case of those who still enter the University by that portal?

3. Are you in favour of members of the Senate holding salaried positions under the Senate such as examinerships and professorships?

4. Are you in favour of the University of London making the new departure in conferring honorary degrees? If in favour, do you think they should be given on other than purely academic grounds?

5. Are you in favour of the Bachelor of Surgery degree being given up as a separate examination in scientific and practical surgery, and presented to every one who passes a slightly-modified M.B. examination?

6. Are you in favour of the University Library being dispersed among the Colleges, or would you prefer it to be made, along with a common room for the graduates, a centre of university life in London?

From Sir Thomas Barlow I have not as yet received an answer, only an intimation that he is away from home. I hope to send his answer in time for the next week's BRITISH MEDICAL JOURNAL. The enclosed letter is a copy of that which I received from Mr. Harold Burrows.—I am, etc.,

Barton, Westmorland, April 28th. HERBERT RHODES.

[Copy.]

April 27th, 1903.

Dear Sir,—In answer to the questions contained in your letter of the 24th inst., I may safely say I should answer the first five questions in the negative. In regard to the last, I feel that the gain would be great of having one Central University Library associated with a common room to be, as you put it, a centre of university life in London.—I am, dear Sir yours faithfully,

HAROLD BURROWS.

OBITUARY.

HENRY THOMAS RUDGE, M.R.C.S., L.R.C.P.EDIN., Bristol.

MR. HENRY RUDGE, of Bristol, died suddenly of angina pectoris on April 16th, while on a holiday at Fishguard. He was the son of Charles Thomas Rudge, a member of an old Gloucestershire family, and before entering the medical profession was for some years engaged in business. Entering the Bristol Medical School in 1879, he qualified in 1883, after a successful career as a student, and acted subsequently as physician's assistant at the Bristol General Hospital. Commencing practice in 1884 in the parish of Redcliffe, by his skill, resourcefulness, and conscientious attention, together with a cheerful and sympathetic nature, he soon gathered round him a large number of patients, by whom he was immensely beloved and trusted. His sudden death, at an age when it might be expected that he had many more years of useful work before him, came as a great blow to his numerous friends and patients, for in whatever capacity he was known he was universally respected and beloved.

Mr. Rudge was an ardent Churchman, and in the beautiful church of the parish in which he lived he had acted as sidesman, churchwarden, and as a vestryman. He was a member of the Masonic order, though not an active member of his lodge owing to the calls of his practice.

The funeral service was held at St. Mary Redcliffe Church on April 21st, the church being filled with relatives, friends, patients, and members of the medical profession, giving evidence of the widespread regard in which Mr. Rudge was held by all. Many will miss his merry laugh, his thoughtful care, his wise treatment, and his contant unaffected sympathy. Mr. Rudge was in his 51st year and unmarried.

WE much regret to announce the death of Dr. THOMAS O'MEARA, who for twenty-two years had been the medical superintendent of Carlow District Asylum. He graduated M.B. in the University of Dublin in 1872, and obtained the Licence of the Royal College of Surgeons in the same year. He had previously been House-Surgeon of the Birkenhead Borough Hospital and Honorary Physician of the Liverpool Free Dispensary. He was held in high respect by the people of his district, and all classes joined in testifying to their regard for him by attending his funeral.

THE *Times* announces the death of the Hon. MORGAN S. GRACE, C.M.G., which occurred on April 19th at Wellington, New Zealand. Mr. Grace went out to New Zealand in 1860, and served for many years in the Army Medical Department, becoming finally Surgeon-General in the Colonial forces. He had been a member of the Legislative Council since 1870 as a

Conservative and leader of the Roman Catholic party. Pope Pius IX conferred on him the title of Count of the Holy Roman Empire, and he became a C.M.G. in 1890. He was the author of a sketch of the New Zealand war.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. A. Bumm, Professor of Psychiatry in the University of Munich, aged 54; Dr. Kops, of Brussels, President of the Belgian Medical Federation; Dr. Gevaert, Director of the Marine Hospital at Middelkerke, aged 42; Dr. Eusebio Pehl, since 1862 Professor of Physiology in the University of Pavia, aged 76; Dr. Victor Jaclard, of Paris, who had a stormy career as a politician, and was for a long time associated with M. Clémenceau (himself a member of the medical profession) in the editorship of *La Justice*, aged 60; Dr. Bontemps, Member of the French Senate for the Haute-Saône Department; and Dr. Veit, for many years Director of the Gynaecological Clinic of the University of Bonn.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: MONTAGUE H. KNAPP, Surgeon, to the *Porpoise*, April 23rd (Staff Surgeon J. Bradley's appointment to the *Porpoise* is cancelled); PATRICK W. MACVEAN, M.B., Surgeon, to the *Porpoise*, April 24th; H. C. ROSS, Surgeon, to the *Bellona* (lent), April 24th; HENRY HUNT, Surgeon, to the *Bellona*, May 2nd; EDWARD D. J. O'MALLEY, Surgeon, to the *Porpoise*, April 27th.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL A. W. F. STREET, D.S.O., Bombay Establishment, has retired from the service, from April 2nd. He was appointed Assistant Surgeon, October 1st, 1877, and became Surgeon-Lieutenant-Colonel, October 1st, 1897. He was in the Afghan war in 1878-80, being present in the engagement with the Wali's mutinous troops in July, 1880, in the defence of Kandahar, and at the battle of Kandahar (medal with clasp); he was also in the Burmese expedition in 1886-7 (mentioned in dispatches, D.S.O., and medal with clasp).

Lieutenant F. W. SIME was among the slain in the disastrous action in Somaliland on April 17th, when the column under Colonel Plunkett was annihilated. He joined the department so recently as July of last year.

Colonel J. T. B. BOOKEY, C.B., Bengal Establishment, is appointed Principal Medical Officer of the new Kohat District.

Major G. G. GIFFARD, Madras Establishment, is appointed to act as Surgeon to the Governor of Madras, from February 22nd.

DISPATCHES FROM WEST AFRICA.

NUMEROUS dispatches respecting recent military operations in Northern Nigeria appear in the *London Gazette* of April 24th. They relate chiefly to matters undertaken during the spring and summer of last year, although one of them is dated as far back as September, 1899, and others February and December, 1900. Writing from Accra, September 25th 1899, Sir F. M. Hodgson brings to notice a gallant act performed by Assistant Colonial Surgeon P. J. Garland, who, at the risk of his own life, sucked the wound from a poisoned arrow sustained by Captain Pampton Green, thereby saving that officer's life. Major Morris, the officer in command, speaks highly of Dr. Garland's arrangements, and of the great assistance rendered.

Dr. Grant, Senior Medical Officer of the force, is spoken of with high commendation by Colonel Morland, Colonel Commandant West African Frontier Force, in a dispatch bearing date June 5th, 1902, as also is Assistant Colonial Surgeon P. M. Tobit, by Major Morris, under date April 26th, 1902.

THE NEW VOLUNTEER REGULATIONS.

SURGEON-LIEUTENANT writes: I should be glad to know the opinion of other medical officers on the above. It appears to me that we cannot promise to attend camp for a week commencing from a fixed date every year without running the risk of materially damaging our practices: for example, one might have an important patient seriously ill, and be quite unable to get away, or be expecting an important confinement. I sometimes wonder if it is worth while to pay a *locum tenens* four or five guineas a week in order to attend camp, where my duties appear to be principally to prescribe aperients and treat blistered feet, and, by way of a change, on field days ride myself in a sand hole with a stretcher squad until I am wanted. Personally, I get very little encouragement when I suggest stretcher drill; I am told the men are required for soldiers, not doctors.

MEDICO-LEGAL AND MEDICO-ETHICAL.

SMALL-POX DIAGNOSIS.

A FEW weeks ago we had to consider whether a medical man can be held responsible for erroneously certifying that a patient is suffering from small-pox; the converse question—namely, whether practitioners can be held responsible for the consequences which attend a failure on his part to detect the disease—may now arise in the near future. According to a report in the *Times* (April 23rd), a man made an application to the magistrate at Southwark for advice in the following circumstances. He had sent his son, who was feeling ill, to Guy's Hospital, where he was supplied with two bottles of medicine and told to come again. On a second visit to the hospital the patient was supplied with ointment for sores which had made their appearance on his body. His father then consulted his own medical adviser, who stated that the patient was suffering from small-pox, and ordered his immediate removal. The M.O.H. for Southwark subsequently called at the applicant's house, and, upon the facts being communicated to him, expressed some doubt as to the nature of the case, but the house was disinfected. Three of the applicant's other children, however, contracted small-pox and had to be removed. The applicant asked whether he could bring an action against the doctor at the hospital. Mr. Chapman, the magistrate, said that "if the applicant had evidence of gross and reckless conduct on the part of the doctor, and could call his own doctor or any one else to prove it, he might claim damages in the county court from the house-surgeon who was guilty of such gross negligence."

It is satisfactory to find that in giving this piece of gratuitous advice the magistrate made it clear that gross and reckless conduct would have to be proved. A study of the cases in which charges of negligence have been brought against medical men serves to show what the plaintiff must establish in order to succeed in such an action. A great judge has declared the legal principle which is to be applied to such a case in the following words:

"Every person who enters into a learned profession undertakes to bring to the exercise of it a reasonable degree of care and skill. He does not undertake, if he is a surgeon, that he will perform a cure, nor does he undertake to use the highest possible degree of skill. There may be persons who have higher education and greater advantages than he has, but he undertakes to bring a fair, reasonable, and competent degree of skill; and the question is whether the injury must be referred to the want of a proper degree of skill and care in the defendant or not."

He was dealing with a case in which a patient brought a charge against his own medical attendant: we anticipate that the difficulty of proving culpable negligence would be even greater when the defendant was a hospital officer seeing out-patients in the cause of charity.

We recall one case in which two surgeons at a London hospital were sued by a patient for negligence. It appeared that, acting upon the instructions of the defendants, a nurse at the hospital placed the patient in a bath which turned out to be so hot that he was scalded and injured. In summing up to the jury, the judge who tried the case said that it was not part of the defendants' duty to stand by and see that the bath was properly administered. He also said that although persons who went as patients to hospitals were not to be treated with negligence, medical gentlemen who gave their services gratuitously were not to be made liable for negligence for which they were not personally responsible.

In America the correct rule has been said to be that a physician and surgeon, when employed in his professional capacity, is required to exercise that degree of knowledge, skill, and care which physicians and surgeons practising in similar localities ordinarily possess.

THE MIDWIVES ACT.

THE Local Government Board has prepared a memorandum on the Midwives Act of 1902, and is causing it to be circulated among the various local bodies which under the Act become the local supervizing authorities over midwives practising within their respective areas.

The memorandum is divided into sixteen paragraphs, and deals with: (1) The object of the Act as shown by its text; (2) the general duties and constitution of the Central Midwives Board; (3) the definition of the term "midwife"; (4) the special duties of the local supervizing authorities, and their power to delegate the same; (5) the obligations as to giving notice to the local authorities imposed upon every person who, not being a qualified medical practitioner, acts as a midwife; (6) the prosecution of offences under the Act; and (7) the expenses and fees which will be entailed by or become payable under the Act.

The full text of the Act will be found in the BRITISH MEDICAL JOURNAL of August 16th, 1902, and copies of the memorandum referred to by this note may be obtained from Messrs. Eyre and Spottiswoode, East Harding Street, E.C., either directly or through any bookseller.

STAMP DUTY ON MEDICINES.

JUDGEMENT was delivered on April 24th in the case of Farmer *v.* Glyn-Jones, the arguments in which were heard by Lord Alverstone, L.C.J., Wills and Channell, JJ., on March 26th. The case came before the court on appeal from the decision of Mr. Dickinson at the Thames Police Court, he having refused to convict the defendant of selling a certain bottle of medicine which it was alleged should have been stamped.

The Solicitor-General and Mr. Rowlath appeared for the Crown; Mr. Asquith, K.C., Mr. Bonsey, and Mr Galbraith for the respondent.

It appeared that an information had been lodged against the respondent, a retail chemist, for uttering and exposing for sale a bottle of ammoniated tincture of quinine without the stamped wrapper required by the 52 Geo. III, c. 150, Sec. II. The label placed on the bottle by the respondent was in the following form: "Ammoniated tincture of quinine. *B P*, a well-known and highly recommended remedy for influenza and cold. One teaspoonful in water every four hours until relieved. Glyn and Co., Chemists, 159, East India Dock Road." The tincture had been purchased wholesale from another firm.

The learned magistrate found as a fact that the bottle was liable to duty unless it came within a special exemption to be found in the Schedule to the Act above referred to. That schedule, in effect, excepts from the operation of the Act all mixtures, drugs, etc., sold by any chemist or druggist, etc., (*a*) of which the composition is known; and (*b*) which are admitted in the cure of any malady; and (*c*) wherein the person mixing or compounding the same does not claim any exclusive right or title to so mix or compound; and (*d*) which are not advertised to the public by "the owners, proprietors, makers, compounders, original first vendors thereof" as specifics or beneficial for the cure of any particular disease or ailment.

It was contended, on behalf of the Crown, that the respondent, being the person who affixed the label, was the "owner, proprietor, etc." within the meaning of the schedule, and that inasmuch as he had recommended the tincture for influenza he was liable to pay stamp duty. It was argued, on behalf of the respondent, that the wholesale merchant was the "owner, proprietor, etc.," within the meaning of the schedule, and that he, if any one, was liable to pay stamp duty; but that inasmuch as he had not recommended it as a nostrum or proprietary medicine, even he was not liable. The object of the Act of Parliament was to tax proprietary medicines in regard to which the original inventor claimed some secret of his own.

Mr. Justice Wills, in delivering the written judgement of the Court, said that it was impossible to hold that the respondent, a mere retail chemist, was the "owner, proprietor, etc.," within the meaning of the

Act. Until the tincture in question came into his possession it was obviously within the exemption referred to in the Act. It was clear that whoever the owner, proprietor, etc., might be, if he once issued an advertisement or affixed a label containing a recommendation of the preparation as of curative efficacy, the subject matter of the advertisement would be affected with a perpetual liability to stamp duty. This consideration alone seemed sufficient to show that a retail chemist, buying in the ordinary course of business an article which, until it got into his hands was within the exemption could not be within the designation of the "owner, proprietor, etc." The whole scheme of the Acts appeared to be to strike with chargeability medicines imported from abroad, and medicines which particular persons could make to the exclusion of others. If they were to adopt the argument for the Crown that the respondent was "a first vendor" because he was the first person to sell the article, with a label recommending it, the result would be that the exemption could never take place at all. The appeal would be dismissed, as the Court were of opinion that the case came within the special exemption.

In another case, which was heard by the same judges, the defendant had been prosecuted for selling a box of pastilles without paying stamp duty. It appeared that the respondent's name was on the label on the box, together with the words, "Pure Gum Pastilles and Influenza. Delightfully soothing to singers and public speakers." It was urged that this was a distinct holding out of the pastilles as a remedy for influenza, and that there should be a conviction. This view was adopted by the Court, who sent the case back to the magistrate to convict.

MEDICAL TESTIMONIALS IN TRADE ADVERTISEMENTS.

PARASANG.—Our correspondent is one of many others who have called attention to the persistent advertisement of a letter given by Mr. E. Luke Freer to a Mr. Beasley, who appears to carry on a school for stammerers at Brampton Park, near Huntingdon. This matter has been before the Ethical Committee of the Birmingham and Midland Counties Branch of the Association, and it is fair to Mr. Freer to make it known that he has asked Mr. Beasley to withdraw his letter; but this the latter absolutely refuses to do, cynically remarking that, whatever the British Medical Association may do to Mr. Freer, it cannot touch him. The case has been referred to the Ethical Committee in London to consider what further can be done.

MEDICAL ETHICS.

D. B.—We have read our correspondent's further communication, but would remind him that he stated in his first letter that Z.'s family had previously been introduced by our correspondent's family to A., who as Y.'s intimate friend might easily afford the necessary link. Surely our correspondent would not try to maintain that Y. is debarred from entering into social relations with every one of the "70 or 80 best patients" who were on the list which Y. had. We have already expressed our opinion as to the undesirability of frequent friendly visits to a patient under the care of another practitioner, but we think our correspondent's claims go beyond what are warranted by the rules of medical ethics or etiquette.

CIRCULARS TO PATIENTS.

C. H. B.—In issuing a circular letter to patients to intimate the transfer of a practice, great care should be exercised to prevent their reaching any but bona fide patients; we think they might be safely sent with the statements of account or the receipts.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Appointments.—Dr. C. W. M. Moullin, Dr. D. MacAlister, and Dr. H. W. G. Mackenzie have been appointed additional Examiners for Medical and Surgical Degrees.

Sanitary Science.—The following have satisfied the Examiners in both parts of the Examination for the Diploma in Public Health: A. Armer, E. C. Bousfield, J. F. d'Abreu, A. B. Dalgetty, J. Donald, A. M. Fleming, C.M.G., F. Gröne, G. W. Jenney, H. M. Mackenzie, S. G. Mostyn, E. W. Reese-Jones, G. E. Richmond, H. B. Roderick, J. Sandison, D. Sommerville, A. C. Stevenson, G. C. Taylor, F. P. Vieyra, and A. E. Walker.

UNIVERSITY OF EDINBURGH.

THE following is the official list of passes at the recent professional examinations for degrees in Medicine and Surgery:

First Professional Examination.—G. P. Adshead, Margaret I. Balfour, J. P. Berry, G. Britto, R. A. Campbell, J. M. Christie, R. D. Clayton, W. G. Cobb, W. D. Coghill, W. Cramer, Ph.D., T. H. Dickson, J. C. Dingsdale, P. A. Everard, C. J. Faill, J. Fraser, T. Fraser, R. M. Glover, G. R. Gray, K. K. Grieve, J. Grimoldby, D. J. Guthrie, D. K. Henderson, G. Henderson, J. R. Hill, J. M. Hill, G. A. Hodges, S. W. Hogg, W. P. Holden, L. Hughes, H. B. Hunter, M.A., Blanche M. Z. Johnston, D. Johnstone, M.A., N. W. Kidston, G. F. V. Leary, J. H. Lechler, E. Lewis, Anna S. Lindsay, C. W. L. Lüthgen, G. D. M'Ivor, J. L. Mackay, A. T. Mackenzie, R. E. M'Laren (with distinction), M. Maclean, J. A. MacLeod, R. J. A. Macmillan, J. B. M'Morland, Jamesina J. Marr, L. R. H. P. Marshall, R. E. Marwick, R. P. Mathers, A. H. M. Maxwell, C. J. van der Merwe, Margaret M. Miller, Ada G. Murchison, J. E. Murray, E. F. Nivin, M.A., Hilda M. Northcroft, A. J. P. Nowell, C. R. O'Brien, A. T. Paterson, G. Robertson, J. M. Ross, F. L. Scott, H. C. Simpson, W. J. Simpson, A. G. H. Smart, L. D. Stephen, W. Stevenson, P. Stewart, L. H. F. Thatcher, C. A. Thelander (with distinction), C. P. Theron, Alice M. Thompson, L. R. Thomson, A. L. Thornley, W. A. Todd, Lydia K. Towers, R. D. R. Troup, A. S. Walker, F. E. Wall, R. N. Wallace, D. J. Williamson (with distinction), J. L. M. Wood, A. F. Wright.

Second Professional Examination.—T. Addis, M. Ahmed, F. Aitken, J. C. D. Allan, A. G. Anderson, D. J. Anderson, W. F. Archibald, *M. I. Balfour, G. G. Bartholomew, M. M. Sudjad Beg, N. Black, D. P. Blair, G. Blair, J. Brennan, H. Brown, W. S. M. Brown, H. C. Buckley, J. S. Caldwell, R. B. Calwell, J. Chisholm, *J. Clark, H. P. Cook, D. C. Cross, J. A. Cruickshank, D. R. J. Davidson, T. Davidson, F. H. Dickson, J. M. Dickson, P. Donald, E. A. Elder, M.A., B.Sc., C. E. Elliston, H. Ferguson, J. J. H. Ferguson, F. E. Field, R. S. Frew (with distinction), W. S. Fröhlich, F. H. S. Gardner, L. P. M. Gardner, J. H. Gellatly, W. Gemmill, O. M. Gericke, E. G. Girdwood, H. V. Goldstein, D. G. Gray, O. C. Greenidge, J. C. Grieve, G. Hadden, J. R. Hall, J. D. Harmer, A. J. Harpur, A. A. Hatchard, A. S. Hendrie, W. M. Hewetson, H. S. A. Hogg, J. R. Holgate, J. G. Hume, J. Ings, T. S. Jackson, J. F. James, J. P. S. Jamieson, S. Kark, J. R. Kerr, Ethel Landon, R. H. S. Langevelut, J. M. Lauder, J. Lindsay, J. Lindsay, W. L. Locke, W. Lumsden, S. A. M'Clintock, P. M'Dermid, P. M'Ewan, T. A. MacGibbon, J. D. M'Kelvie, J. Mackenzie, K. W. Mackenzie, S. M'Naughton, C. M'Neil, N. N. G. C. M'Vean, W. J. Maloney (with distinction), A. Malseed, S. E. Martin, E. S. Massiah, A. Mathieson, D. M. Mathieson, J. B. Mears, A. I. Miller, O. M. Mirylees, J. S. Mitchell, C. T. Möller, D. L. Morrison, H. L. Morrow, A. M. Mulholland, R. R. Murray, G. P. Norman, A. J. R. O'Brien, A. A. Ollivierre, W. Patton, A. E. Porter, H. E. Rawlence, A. E. C. Rees, B.A., D. G. Reid, W. E. Reynolds, W. G. Robertson, J. Z. H. Rousseau, B.A., A. Sandison, W. M. Scott (with distinction), W. J. B. Selkirk, A. C. Sharp, J. O. Shircore, D. W. Sibbald, E. M. Simmers, E. S. Simpson, O. Smith, R. C. S. Smith, T. R. Smith, A. der G. V. van Someren, A. B. Spence, S. H. S. Taylor, J. A. R. Thomson, N. B. Turnbull, E. Valenzia, P. Vickerman, F. M. Wakefield, R. C. Walker, A. P. Wall, H. E. A. Washbourn (with distinction), H. C. Weber, A. Wight, E. B. Wilkie, H. C. Wilson, J. Young, J. T. Young.

* Old Regulations.

Third Professional Examination.—R. G. W. Adams, E. A. Aylward, J. W. H. Babington, F. Baillie, R. B. Barnetson, W. Basson, B. Baty, W. P. Beattie, D. Bell, L. H. I. Bell, A. R. Berrie, J. M. Beyers, A. S. L. Biggart, D. W. Boswell, F. T. Bowerbank, D. Brown, R. Buchanan, R. B. Calwell, T. E. Carlyle, M. M. L. Cathels, J. W. Cathles, D. M. C. Church, G. S. Clark, H. S. Coghill, A. G. Cook, A. G. Coullie (with distinction); T. E. Coulson, A. B. Cox, J. G. Craig, G. Cunningham, R. Donaldson, G. T. Drummond, T. H. Easton, C. G. Edmonston, E. J. Elliot, N. C. Fischer, G. H. L. Fitzwilliams, W. H. Forsyth, L. Fourie (with distinction); A. N. Fraser, W. J. Fraser, N. J. H. Gavin, A. C. Geddes, H. M. Gillespie, J. M. Graham, O. C. Greenidge, W. W. Greer, J. Grieve, E. J. Griffiths, P. A. Harry, E. Henderson, M.A., Isabel Hill, T. J. H. Hofmeyr, A. W. Hogg, G. S. Husband, K. U. A. Inniss, Ada Jackson, Annie Jackson, J. Jardine, J. Kirk, G. F. S. Landon, A. J. Lewis, S. M. Livesey, J. Lochhead (with distinction), J. B. Lockerbie, D. H. C. MacArthur, A. D. M'Callum (with distinction), W. M'Conaghy, J. P. M'Gown (with distinction), H. R. Macintyre, R. J. Mackessack, E. M. Macmillan, A. MacRae, D. P. Marais, G. D. Mathewson, H. P. Milligan, Aimée E. Mills, L. S. Milne, T. B. Mouat, W. M. Munby (with distinction), A. E. Nalborough, A. Oliver, C. D. O'Neal, R. G. S. Orbell, G. Ormrod, A. Pampellonne, W. J. Patterson, B. Pickering, F. M. S. Price, D. S. Rama Chandra Rao, M.A., H. S. Reid, M. H. Robertson, S. M. Ross, C. S. Ryles, J. Saffley, J. G. B. Shand, J. I. Shepherd, W. H. Simpson, F. R. Sinton, G. M'C. Smith, W. A. Wilson Smith, P. Steele, F. H. Stewart, H. A. Stewart, H. J. Stewart, A. C. Strain (with distinction), K. A. Moody Stuart, S. H. S. Taylor, Annie F. Theobalds, G. H. Ussher, F. L. de Verteuil, R. W. L. Wallace, R. H. Watt, W. C. P. White, W. F. J. Whitley, D. P. D. Wilkie, F. A. Wille, W. B. Wishart, A. C. T. Woodward, T. Wright, Margaret C. W. Young.

UNIVERSITY OF LONDON.

Physiological Laboratory.

THE following lectures will be given during the summer term: Eight lectures on the Physical and Chemical Conditions of the Living State, by Dr. N. H. Alcock, on Tuesdays, beginning May 12th, at 5 p.m.; eight lectures on the Recent Advances in the Pathology of Vision, by Mr. W. MacDougall, M.A., M.B., on Fridays, beginning May 15th, at 5 p.m.

University College.

The first lecture of a course on the Chemistry of Respiration will be given by Dr. W. A. Osborne on Monday next, at 5 p.m.

London Hospital Medical College.

A course of eight lectures on Chemical Physiology and Pathology will be given in the Physiological Theatre by Mr. J. J. R. Macleod, M.B., Lecturer in Physiological Chemistry, on Thursdays at 2 p.m., beginning on Thursday, May 7th. These lectures are open to all internal students of the University, and to medical graduates.

UNIVERSITY OF DURHAM.

THE following candidates have passed the Third Examination for the degree of Bachelor in Medicine, 1903:

E. L. Jenkins,* M.R.C.S., L.R.C.P., St. Mary's Hospital; D. T. Birt, College of Medicine, Newcastle-upon-Tyne; A. Budd, College of Medicine, Newcastle-upon-Tyne; W. H. H. Croudace, College of Medicine, Newcastle-upon-Tyne; A. E. Clayton, L.R.C.P. & S., Edinburgh School of Medicine; H. E. Featherstone, College of Medicine, Newcastle-upon-Tyne; J. Galloway, College of Medicine, Newcastle-upon-Tyne; W. W. Jones, Birmingham University; Lillie Johnson, B.Sc., College of Medicine, Newcastle-upon-Tyne; P. W. James, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; F. W. Kemp, St. Bartholomew's Hospital; C. C. Lavington, College of Medicine, Newcastle-upon-Tyne; C. F. F. McDowall, College of Medicine, Newcastle-upon-Tyne; E. Martin, College of Medicine, Newcastle-upon-Tyne; C. Muthuswamy-Anthony, Guy's Hospital; E. J. Miller, L.S.A., King's College, London; S. Nix, St. Mary's Hospital; H. L. Noel Cox, St. Thomas's Hospital; A. B. Raille, College of Medicine, Newcastle-upon-Tyne; R. B. Reed, College of Medicine, Newcastle-upon-Tyne; W. E. Stevenson, College of Medicine, Newcastle-upon-Tyne; W. L. Tindle, College of Medicine, Newcastle-upon-Tyne.

* Second Class Honours.

VICTORIA UNIVERSITY.

MUCH progress has been made with the negotiations and arrangements for the separate constitution of the Universities of Manchester and Liverpool. The draft charters both for the Victoria University of Manchester and the new Liverpool University have been deposited with and are under the consideration of the Privy Council, so that the announcement of the approval of the Privy Council may be expected shortly. After approval however by the Privy Council, the draft charters must lie on the table of the House of Commons for thirty days. After the expiry of

this period they will be submitted to His Majesty for signature. There is every reason to believe that the Manchester and Liverpool charters will be granted simultaneously.

It is stated that "in accordance with the directions of the Privy Council, proposals have been submitted for securing joint action between the three Universities on certain points. Before long it is expected that a three years' course of study, after passing a preliminary, or matriculation, examination, will be required of all students who are going in for degrees, but whenever this change may be made it will not come into force immediately.

"There is a provision for all existing undergraduates to proceed to their degrees under existing regulations, whether at Liverpool or Manchester; and another to enable existing graduates of the University to proceed to the higher degrees under similar conditions to those already in force. In the interests of continuity and of the students some arrangement of this sort was absolutely essential.

"The Court of Governors of the Victoria University will include all existing governors except those representing the Liverpool College. The representatives of the Yorkshire College will continue to hold their seats until the charter constituting that institution a university is granted. The Victoria Court will, however, be much more representative than it has been in the past. The Lord Mayor of Manchester and the Chairman of the Lancashire County Council will hold office *ex officio*, and other representatives of these two important authorities will be appointed. Provision will also be made for the representation of Salford and other county boroughs."

UNIVERSITY OF BIRMINGHAM.

The following candidates have passed the first and second examinations for the degree of Bachelor of Medicine and Bachelor of Surgery:

First Examination.—E. J. Boome, E. T. Gaunt, J. K. Gaunt, P. J. Mason, N. C. Penrose, D. P. Smith, and N. V. Williams.

Second Examination.—J. S. Austin, H. N. Crowe, L. L. Hadley, L. C. Hayes, H. B. Jones, H. P. Thomason.

CONJOINT BOARD IN ENGLAND.

The following gentlemen have passed the first examination of the Board in the subjects indicated:

Chemistry.—E. M. Adam, Charing Cross Hospital; H. W. L. Allott, University College, Sheffield; R. E. Apperly, Middlesex Hospital; T. H. C. Benians and W. J. Berne, London Hospital; R. S. Capon, University College, Liverpool; B. A. Cheatle, St. Thomas's Hospital; W. T. Clarke and E. V. Connellan, University College, Bristol; G. Comyn, King's College Hospital; E. L. Councell and L. E. Davies, University College, Liverpool; H. Galloway, Westminster Hospital; F. J. Gillett, Guy's Hospital; W. E. Haig, Technical College, Bradford; C. A. Hallett, Westminster Hospital; A. Hanau, St. Bartholomew's Hospital; A. R. Hardy and S. Harlock, Owens College, Manchester, and Royal Technical Institute, Salford; C. A. Holburn, University College, Sheffield; E. P. L. Hughes, Guy's Hospital; J. E. Jackson, London Hospital; C. E. Krapp, St. Mary's Hospital; J. A. Laughton, Charing Cross Hospital; C. F. L. Leipoldt, Guy's Hospital; R. G. Maglione, Owens College, Manchester; A. C. Martin, London Hospital; P. W. Mathew, Middlesex Hospital; F. V. Milburn, Birkbeck Institute; R. Mugliston, London Hospital; D. North, Yorkshire College, Leeds; G. F. Page, St. Bartholomew's Hospital; R. M. Peake, Middlesex Hospital; C. J. M. Phillips, St. Thomas's Hospital; C. E. Price, Guy's Hospital; C. M. Rigby, London Hospital; A. B. Rooke, University College, London; F. C. Searle, St. Bartholomew's Hospital; R. W. Starkie, Owens College, Manchester, and Royal Technical Institute, Salford; G. F. Walker, University College, Liverpool; J. N. Watson, Guy's Hospital; J. A. von W. Wiehl, Edinburgh University and Guy's Hospital; D. E. Williams, University College, Cardiff.

Practical Pharmacy.—R. C. Allen, University of Birmingham; E. A. W. Alleyne, St. Mary's Hospital; H. L. Askham, Middlesex Hospital; H. W. Bethell, B.A. Camb., Cambridge University and Guy's Hospital; B. R. Billings, London Hospital; J. W. Bintcliffe, Owens College, Manchester; F. T. Boucher and E. V. Connellan, University College, Bristol; M. B. S. Button and G. M. Clowes, London Hospital; H. H. B. Cunningham, St. Mary's Hospital; C. S. Douglas, Owens College, Manchester; M. Eager, King's College Hospital; J. J. W. Evans, Westminster Hospital; H. W. Farebrother, Charing Cross Hospital; G. E. Ferguson and S. Field, St. Mary's Hospital; W. J. Fletcher, Owens College, Manchester; C. A. Flintoff, Charing Cross Hospital; E. G. Foote, Westminster Hospital; H. J. H. Graves, London Hospital; C. B. Hambling, St. Bartholomew's Hospital; F. G. D. Howell, St. Thomas's Hospital; T. W. Jeffrey and H. W. Latham, London Hospital; W. K. Legassick, University College, London; W. H. Leigh, Owens College, Manchester; M. Maher, Cairo and Guy's Hospital; W. B. Martin, Owens College, Manchester; H. E. Middlebrooke, London Hospital; B. B. Metcalfe, C. S. Morris, L.D.S.Eng., and E. H. Paterson, Guy's Hospital; R. E. Pitts and T. W. Sexton, Middlesex Hospital; R. Reynolds, University College, Bristol; A. Shelley, B.A.Oxon., Oxford University and London Hospital; T. J. B. Thomas, St. Mary's Hospital; R. J. C. Thompson, St. Thomas's Hospital; S. Tinsley, Yorkshire College, Leeds; C. Weller, Birkbeck Institute; H. Wheelwright and M. W. E. Widegren, St. Thomas's Hospital; P. B. Whittington, London Hospital; R. H. C. O. Wisdom, Cambridge University and London Hospital; R. W. L. Wood, Yorkshire College, Leeds; W. J. Wood, University College, London; F. Yates, St. Mungo's College, Glasgow.

Elementary Biology.—E. C. Banks and J. W. Bintcliffe, Owens College, Manchester; H. A. Biden, King's College Hospital; M. F. Bliss, London Hospital; O. H. Bowen, St. Bartholomew's Hospital; V. D. Bransbury, St. Thomas's Hospital; C. W. G. Bryan and J. H. Burdett, St. Mary's Hospital; R. S. Capon, University College, Liverpool; E. P. Carmody, St. Bartholomew's Hospital; A. H. H. Catt, Charing Cross Hospital; P. J. Chissell, Middlesex Hospital; H. R. Cotton, St. Bartholomew's Hospital; E. L. Councell, University College, Liverpool; W. Deane, St. Thomas's Hospital; W. J. Dearden, Owens College, Manchester; J. R. B. Dobson, University College, Cardiff; H. N. Eccles, Guy's Hospital; J. E. Ellcombe, St. Thomas's Hospital; E. R. Evans, St. Bartholomew's Hospital; R. Eyton-Jones, University College, Liverpool; H. B. Farrant, Owens College, Manchester; E. G. Foote, Westminster Hospital; A. A. Forty, Guy's Hospital; P. J. Franklin, King's College Hospital; H. Gall, St. Bartholomew's Hospital; A. De V. Gibson, St. Mary's Hospital; F. J. Gillett, Guy's Hospital; L. B. Glasspole, Charing Cross Hospital and Birkbeck Institute; S. G. Greene, St. Bartholomew's Hospital; S. H. Griffiths, Middlesex Hospital; R. H. Hadfield, Owens College, Manchester; W. E. Haigh, Bradford Municipal Technical College; S. Hallam, Charing Cross Hospital; A. Hanau and F. T. Hancock, St. Bartholomew's Hospital; J. C. Harris, University of Birmingham; S. R. Harrison, London Hospital; P. K. Hill, Yorkshire College, Leeds; N. S. Hoare, St. Thomas's Hopital; C. A. Holburn, University College, Sheffield; D. McK. Hunt and C. W. Jenner, London Hospital; D. W. Jones, Guy's Hospital; W. G. Jones, University College, Cardiff; E. B. Keen, Charing Cross Hospital; G. Ley, J. T. Lloyd, and T. P. Lloyd, London Hospital; A. R. Littlejohn, St. Mary's Hospital; G. B. Lucas, Charing Cross Hospital; W. F. McKenna, University College, Sheffield; A. C. Martin, London Hospital; J. H. Meers, St. Mary's Hospital; A. Miles and T. M. Miller, St. Bartholomew's Hospital; M. J. Naish-Gray, London Hospital; D. North, Yorkshire College, Leeds; M. Nurick, University College, Liverpool; B. C. N. O'Reilly, London Hospital; C. E. H. Paley and W. N. A. Paley, Westminster Hospital; E. N. Plummer, Guy's Hospital; G. H. Pridham, St. Thomas's Hospital; F. Rendall, London Hospital; J. A. Renshaw and R. G. Riches, St. Bartholomew's Hospital; Q. H. Richardson, Technical School, Plymouth; W. E. Roberts, University College, Cardiff; A. B. Rooke, University College, London; A. H. V. St. John, Guy's Hospital; R. Shacksnovis, B Sc.Vict., Yorkshire College, Leeds; S. Sharples, University College, Liverpool; P. Sinnock, University College, Bristol; R. G. Smith and S. F. St. J. Steadman, L.D.S.Eng., Charing Cross Hospital; C. F. Strange and H. S. Thomas, London Hospital; P. S. Tomlinson, University College, Bristol; F. J. Tuckett, Birkbeck Institute; G. D. H. Wallace, Charing Cross Hospital; B. Varvill, H. B. Waller, and G. H. Watson, London Hospital; W. H. Watson, Guy's Hospital; C. H. Welch, King's College Hospital; C. Weller, Birkbeck Institute; L. C. Wilkinson, University College, Cardiff; C. L. Williamson, University College, Liverpool; H. F. Woods, Middlesex Hospital.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

ENGLISH URBAN MORTALITY IN THE FIRST QUARTER OF 1903.

[Specially Reported for the British Medical Journal.]

The vital statistics of the seventy-six large towns dealt with in the Registrar-General's weekly returns are summarized in the accompanying table. During the three months ending March last, 113,120 births were registered in these towns, equal to an annual rate of 30.1 per 1,000 of the population, estimated at 15,075,011 persons in the middle of the year; in the corresponding quarter of the preceding year the birth-rate was 30.8 per 1,000. In London the birth-rate last quarter was 29.1 per 1,000, while it averaged 30.5 per 1,000 in the seventy-five other large towns, among which the birth-rates ranged from 17.7 in Bournemouth, 18.8 in Hastings, 20.4 in Hornsey, 22.2 in Bury, 22.4 in Halifax, 22 6 in Huddersfield, 23.2 in Northampton, and 23.7 in Bradford, to 35.7 in East Ham, 35.9 in Warrington, 36.8 in Sunderland, 37.4 in Hanley, 38.8 in St. Helens, 39.1 in Middlesbrough, 40.8 in Merthyr Tydfil, and 44.3 in Rhondda.

During the quarter under notice, 65,150 deaths were registered in these towns, corresponding to an annual rate of 17.3 per 1,000 persons living, against a rate of 19.9 per 1,000 in the first quarter of last year. The rates in the several towns ranged from 9.1 in Hornsey, 10.0 in Handsworth, 11.2 in King's Norton, 11.5 in East Ham, 11 8 in Walthamstow, 12.2 in Barrow-in-Furness, 12.3 in Leyton, and 12.7 in Willesden, to 20.1 in Bootle and Newcastle-on-Tyne, 20 3 in Oldham and West Bromwich, 21.4 in Manchester, 21.5 in Liverpool, 21.6 in Hanley, and 23.6 in Wigan. In London the rate of mortality was 17.3 per 1,000, and was equal to the average rate in the seventy-five other large towns.

The 65,150 deaths from all causes in the seventy-six large towns last quarter included 6,293 which were referred to the principal epidemic diseases; of these, 154 resulted from small-pox, 1,625 from measles, 640 from scarlet fever, 953 from diphtheria, 1,731 from whooping-cough, 414 from "fever" (principally enteric), and 776 from diarrhœa. The death-rate from these diseases was 1.67 per 1,000 last quarter, against 1.92 per 1,000 in the corresponding period of last year. In London the death-rate from these principal infectious diseases was 1.85 per 1,000, while it averaged 1.60 per 1,000 in the seventy-five other large towns, among which the rates ranged from 0.40 in York, 0.41 in Brighton, 0 42 in Handsworth, 0 44 in Bournemouth, 0 59 in Ipswich, 0.62 in Barrow-in-Furness, and 0.73 in Norwich and in Halifax, to 2 55 in Stockport, 2.56 in Oldham, 2.62 in Salford, 2.65 in Tottenham, 2.80 in Manchester, 3.00 in West Bromwich, 3.43 in Hanley, and 4 64 in Wigan. The 154 fatal cases of small-pox registered last quarter included 72 in Liverpool, 12 in Manchester, 9 in Birmingham, 6 in Leeds, and 5 each in London, Leicester, Bury, and Oldham. The 1,625 deaths from measles were equal to an annual rate of 0.43 per 1,000; in London the death-rate from this disease was 0.58 per 1,000, while it averaged 0.37 in the seventy-five other large towns, among which measles showed the highest proportional fatality in Tottenham, West Bromwich, Wigan, Manchester, Salford, Hull, Newport (Mon.), and Swansea. The 640 fatal cases of scarlet fever corresponded to an annual rate of 0.17 per 1,000; in London the scarlet fever death-rate was only 0 09 per 1,000, while it averaged 0 21 per 1,000 in the seventy-five other large towns, and was highest in Great Yarmouth, West Bromwich, Stockport, Wallasey, St. Helens, Bolton, Oldham, and Sunderland. The 953 deaths from diphtheria were equal to an annual rate of 0 25 per 1,000; in London the death-rate from this disease was 0.21 per 1,000 while it averaged 0.27 per 1,000 in the seventy-five other large towns, among which this disease was proportionately most fatal in West Ham, Bristol, Hanley, Smethwick, Coventry, Bury, Bradford, Hull, and Middlesbrough. The 1,731 fatal cases of whooping cough corresponded to an annual rate of 0.46 per 1,000; in London the rate of mortality from whooping-cough was 0.66 per 1,000, while it averaged 0 37 per 1,000 in the seventy-five other large towns, among which the highest death-rates from this disease were recorded in Croydon, Willesden, Tottenham, Grimsby, Stockport, Oldham, Preston, and Rotherham. The 414 deaths referred to different forms of "fever"

Analysis of the Vital Statistics of Seventy-Six of the Largest English Towns during the First Quarter of 1903.

Towns.	Estimated Population middle of 1903.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Infectious Diseases.	Deaths from Principal Infectious Diseases.	Small-pox.	Measles	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Fever.	Diarrhoea.	Deaths of Children under one year of age to 1,000 Births.	Rate per cent. of Uncertified Deaths.
76 Towns	15,075,011	113,120	65,150	30.1	17.3	1.67	6,293	154	1,625	640	953	1,731	414	776	135	1.2
75 Provincial Towns	10,461,199	79,698	45,205	30.5	17.3	1.60	4,160	149	954	541	712	971	323	510	138	1.6
London	4,613,812	33,422	19,945	29.1	17.3	1.85	2,133	5	671	99	241	760	91	266	129	0.2
Croydon	141,157	924	514	26.3	14.6	1.91	67	—	12	2	6	42	2	3	157	—
Willesden	127,077	986	401	31.1	12.7	1.31	42	—	2	1	2	34	—	3	125	2.0
Hornsey	78,386	399	177	20.4	9.1	1.23	24	—	3	—	5	15	—	1	100	—
Tottenham	109,749	907	416	33.1	15.2	2.65	72	—	30	1	4	30	3	4	122	—
West Ham	281,894	2,430	1,165	34.6	16.6	2.46	172	—	37	6	32	66	7	24	125	0.4
East Ham	110,451	984	318	35.7	11.5	1.57	43	—	11	6	6	14	6	—	104	0.3
Leyton	107,153	830	329	31.1	12.3	1.38	37	—	6	2	11	13	2	3	96	1.2
Walthamstow	106,290	877	313	33.1	11.8	1.32	35	—	12	4	6	6	4	3	111	—
Hastings	66,194	310	265	18.8	16.1	1.02	17	—	8	—	4	2	1	2	129	0.4
Brighton	125,405	771	477	24.7	15.3	0.41	13	—	—	—	9	1	1	2	99	0.2
Portsmouth	194,960	1,332	711	27.4	14.6	0.82	40	—	9	4	12	5	6	4	101	1.0
Bournemouth	63,132	278	221	17.7	14.0	0.44	7	—	—	—	3	2	1	1	101	—
Southampton	110,120	790	430	28.8	15.7	0.99	27	—	1	1	4	19	2	—	132	—
Reading	75,082	500	285	26.7	15.2	0.96	18	—	3	1	5	5	—	4	138	2.8
Northampton	89,863	519	333	23.2	14.9	1.46	33	—	3	4	7	15	3	1	145	2.4
Ipswich	68,818	506	267	29.5	15.6	0.59	10	—	—	—	1	7	1	1	121	0.7
Great Yarmouth	51,851	348	227	26.9	17.6	2.40	31	—	—	11	5	12	2	1	80	—
Norwich	114,351	825	491	28.9	17.2	0.73	20	—	1	7	5	3	1	3	150	2.0
Plymouth	112,022	703	510	25.2	18.3	0.83	23	—	1	2	3	8	6	3	141	0.4
Devonport	73,815	524	255	28.5	13.9	1.20	22	—	11	2	2	1	2	4	116	—
Bristol	338,895	2,335	1,390	27.6	16.5	1.31	111	2	8	17	41	34	4	5	130	0.6
Hanley	63,205	590	340	37.4	21.6	3.43	54	1	—	2	32	14	2	3	169	4.4
Burton-on-Trent	51,450	325	166	25.3	12.9	0.79	10	—	1	2	1	4	1	1	86	0.6
Wolverhampton	96,947	773	373	32.0	15.4	1.15	28	—	14	1	1	2	3	7	106	0.8
Walsall	89,878	746	365	33.3	16.3	1.64	37	2	3	7	—	7	9	9	146	0.5
Handsworth	57,557	380	143	26.5	10.0	0.42	6	—	—	4	1	1	—	—	95	2.8
West Bromwich	66,558	583	337	35.1	20.3	3.00	50	—	15	13	7	4	3	8	173	2.7
Birmingham	533,039	4,296	2,536	32.3	19.1	1.63	217	9	58	43	27	23	17	40	144	2.4
Kings Norton	63,717	431	178	27.1	11.2	1.26	20	—	4	6	1	4	2	3	102	1.1
Smethwick	58,787	492	210	33.6	14.3	1.24	18	—	—	2	7	8	—	1	154	2.9
Aston Manor	79,417	623	289	31.5	14.6	1.05	21	2	2	6	1	5	3	2	140	1.7
Coventry	72,684	530	300	29.2	16.6	1.78	32	—	—	3	17	5	1	6	100	2.0
Leicester	220,272	1,507	802	27.4	14.6	0.98	54	5	6	9	12	11	4	7	148	0.6
Grimsby	65,772	480	230	29.3	14.0	1.28	21	—	—	1	2	16	—	2	165	1.3
Nottingham	245,985	1,610	1,091	26.3	17.8	1.35	83	—	22	4	18	16	10	13	163	0.8
Derby	118,707	817	412	27.6	13.9	0.77	23	1	—	7	—	11	3	1	109	—
Stockport	95,709	691	463	29.0	19.4	2.55	61	1	1	11	5	35	2	6	181	0.4
Birkenhead	113,598	878	456	31.0	16.1	1.24	35	4	6	7	3	6	6	3	128	0.7
Wallasey	58,258	393	208	27.1	14.3	0.90	13	1	1	7	—	3	—	1	102	1.4
Liverpool	716,810	6,018	3,845	33.7	21.5	2.29	411	72	85	67	47	54	40	46	139	3.6
Bootle	60,761	498	304	32.9	20.1	1.06	16	4	1	5	1	1	2	2	153	2.3
St. Helens	87,259	844	380	38.8	17.5	1.56	34	—	—	14	6	7	2	5	128	7.6
Wigan	62,165	551	366	35.5	23.6	4.64	72	—	49	6	3	8	3	3	142	0.8
Warrington	66,370	594	251	35.9	15.2	0.96	16	—	2	2	6	2	—	4	125	6.4
Bolton	173,401	1,239	754	28.7	17.4	1.55	67	1	19	20	12	3	7	5	128	0.7
Bury	58,313	328	263	22.2	18.1	1.93	28	5	1	2	14	3	1	2	133	1.9
Manchester	553,486	4,491	2,955	32.5	21.4	2.80	386	12	159	35	33	74	22	49	163	0.7
Salford	226,480	1,784	1,115	31.6	19.7	2.62	147	—	67	11	22	24	6	17	169	0.3
Oldham	138,786	940	704	27.2	20.3	2.56	89	5	7	14	14	36	2	11	155	—
Rochdale	84,824	555	396	26.2	18.7	1.22	26	2	4	4	8	2	4	2	99	3.0
Burnley	99,469	700	474	28.2	19.1	1.60	40	4	5	9	8	3	4	7	181	1.1
Blackburn	131,218	790	554	24.2	16.9	1.53	50	1	11	3	10	5	4	10	181	2.5
Preston	114,404	860	537	30.2	18.8	1.82	52	2	—	4	6	30	4	6	137	2.6
Barrow-in-Furness	59,009	487	180	33.1	12.2	0.62	9	—	—	—	3	2	2	2	57	2.2
Huddersfield	94,963	536	443	22.6	18.7	0.98	23	1	—	4	3	7	4	4	132	1.4
Halifax	100,754	595	453	22.4	17.0	0.73	19	—	—	1	2	5	9	2	114	1.1
Bradford	283,412	1,673	1,242	23.7	17.6	1.30	92	—	2	5	33	33	6	13	136	0.7
Leeds	443,559	3,241	1,816	29.3	16.4	1.22	134	6	23	26	31	15	14	19	131	0.3
Sheffield	425,528	3,555	1,855	33.5	17.5	1.15	122	1	28	23	14	37	7	12	143	3.0
Rotherham	57,212	502	254	35.2	17.8	1.80	27	2	2	—	2	16	2	3	177	3.1
York	80,186	593	290	29.7	14.5	0.40	8	—	—	2	3	1	—	2	118	0.3
Hull	249,639	1,899	1,079	30.5	17.3	2.06	128	1	70	2	29	8	8	10	133	2.0
Middlesbrough	93,013	927	437	39.1	18.4	1.78	42	—	9	5	13	—	7	8	138	2.1
Stockton-on-Tees	51,965	419	209	32.3	16.1	0.94	12	—	—	5	4	1	1	1	110	1.9
West Hartlepool	67,201	593	216	35.4	12.9	1.02	17	—	4	4	5	—	1	3	80	0.9
Sunderland	149,572	1,374	743	36.8	19.9	1.42	53	1	2	15	5	10	8	3	125	4.2
South Shields	105,325	898	514	34.2	19.6	1.42	37	—	7	4	2	1	5	18	103	6.8
Gateshead	115,531	1,008	474	35.0	16.5	1.18	34	—	2	12	7	1	4	8	168	5.1
Newcastle-on-Tyne	222,241	1,784	1,114	32.2	20.1	1.05	58	—	6	11	13	11	4	11	160	0.0
Tynemouth	52,531	439	255	33.5	19.5	1.91	25	—	8	4	3	6	2	2	155	2.4
Newport (Mon.)	70,217	569	295	32.5	16.9	1.95	34	—	23	—	4	1	2	1	132	0.3
Cardiff	172,598	1,347	679	31.3	15.8	1.30	56	1	13	5	11	21	1	8	120	
Rhondda	119,652	1,322	552	44.3	18.5	1.91	57	—	3	0	10	17	1	14	104	0.9
Merthyr Tydfil	71,651	728	345	40.8	19.3	1.85	33	—	10	5	2	6	1	3	140	0.6
Swansea	95,489	799	468	33.6	19.7	2.47	59	—	41	—	6	2	1	7	155	0.9

in the seventy-six towns last quarter were equal to an annual rate of 0.11 per 1,000; in London this death-rate was 0.08 per 1,002, while it averaged 0.12 in the seventy-five other large towns, among which the greatest proportional mortality from "fever" occurred in East Ham, Walsall, Liverpool, Halifax, Middlesbrough, Sunderland, Newport (Mon.), and Rhondda. The 776 fatal cases of diarrhoea corresponded to an annual death-rate of 0.21 per 1,000; in London the rate was 0.23 per 1,000, while it averaged 0.20 per 1,000 in the seventy-five other large towns, the highest rates being recorded in West Ham, Walsall, West Bromwich, Manchester, Blackburn, Middlesbrough, South Shields, and Rhondda.

Infant mortality, measured by the proportion of deaths under 1 year of age to registered births, was equal to 135 per 1,000; in London the proportion was 129 per 1,000, while it averaged 138 per 1,000 in the seventy-five other large towns, and ranged from 57 in Barrow-in-Furness, 80 in Great Yarmouth, 86 in Burton-on Trent, 95 in Handsworth, 96 in Leyton, and 99 in Brighton, in Rochdale, and in West Hartlepool, to 168 in Gateshead, 169 in Hanley and in Salford, 173 in West Bromwich, 177 in Rotherham, and 181 in Stockport, in Burnley, and in Blackburn.

The causes of 775, or 1.2 per cent., of the deaths registered in the seventy-six large towns last quarter were not certified, either by a registered medical practitioner or by a coroner. The causes of all the deaths were duly certified in Croydon, Hornsey, Tottenham, Walthamstow, Southampton, Great Yarmouth, Devonport, Derby, Oldham, and Cardiff; while the highest proportions of uncertified deaths were registered in Hanley, Liverpool, St. Helens, Warrington, Sunderland, South Shields, and Gateshead.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 9,304 births and 5,031 deaths were registered during the week ending Saturday last, April 25th. The annual rate of mortality in these towns, which had been 15.8, 15.6 and 15.9 per 1,000 in the three preceding weeks, further rose last week to 17.4 per 1,000. The rates in the several towns ranged from 4.9 in King's Norton, 5.4 in Walthamstow, 7.1 in Hastings, 7.3 in Hornsey, 8.3 in Bournemouth, 10.1 in Burton-on-Trent, and 10.7 in Bury, to 22.6 in Wolverhampton, 23.8 in South Shields, 24.0 in Bootle, 24.9 in Walsall, 25.2 in Manchester, 25.3 in Salford, 26.5 in Sunderland, 27.8 in Swansea, and 30.7 in Middlesbrough. In London the rate of mortality was equal to 16.8 per 1,000, while it averaged 17.7 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.7 per 1,000 in the seventy-six large towns; in London this death-rate was equal to 1.9 per 1,000, while in the seventy-five other large towns it ranged upwards to 2.6 in Aston Manor, 2.7 in Hornsey, 2.8 in East Ham and in Salford, 3.1 in Burnley, 4.1 in Oldham, 4.7 in West Bromwich, 4.9 in Middlesbrough, and 6.6 in Swansea. Measles caused a death rate of 1.0 in Leyton, in Manchester, and in Sunderland, 1.1 in Wolverhampton and in Nottingham, 1.4 in Tottenham, 1.9 in East Ham, 2.2 in Middlesbrough, 2.5 in Wigan, 3.1 in West Bromwich, and 4.9 in Swansea; scarlet fever of 1.1 in Stockport, 1.2 in Rochdale, and 1.7 in Bootle; diphtheria of 1.2 in Northampton, 1.3 in Hornsey, 1.5 in Newport (Mon.), and 1.6 in Hanley and in Middlesbrough; and whooping-cough of 1.0 in Manchester, 1.1 in Croydon, in Oldham, and in Swansea, 1.2 in Salford, 1.5 in Bradford, and 1.6 in Willesden. The mortality from "fever" and from diarrhoea showed no marked excess in any of the large towns. Six fatal cases of small-pox were registered in Liverpool, 3 in Oldham, 3 in Burnley, and 1 each in Hanley, Leicester, Birkenhead, Bury, and West Hartlepool, but not one in any other of the seventy-six large towns. The Metropolitan Asylums Hospitals contained 38 small-pox patients at the end of last week, against numbers increasing from 7 to 33 at the end of the five preceding weeks; 9 new cases were admitted during the week, against 3, 5, and 22 in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had been 1,735, 1,664, and 1,662 on the three preceding Saturdays, had risen again to 1,608 on Saturday, April 25th; 243 new cases were admitted during the week, against 205, 158, and 188 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, April 25th, 1,097 births and 605 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 18.0, 17.6, and 17.7 per 1,000 in the three preceding weeks, further rose last week to 18.5 per 1,000, and was 1.1 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scotch towns the death-rates ranged from 13.9 in Perth and 14.5 in Paisley, to 17.9 in Edinburgh and 20.3 in Glasgow. The death-rate from the principal infectious diseases averaged 1.8 per 1,000 in these towns, the highest rates being recorded in Glasgow and Greenock. The 307 deaths registered in Glasgow included 22 which resulted from whooping-cough, 3 from "fever" and 8 from diarrhoea. Four fatal cases of whooping-cough, and 2 of diarrhoea were recorded in Edinburgh. Two deaths from diarrhoea occurred in Dundee; 2 from measles in Aberdeen, 3 from diarrhoea in Paisley, and 2 from whooping-cough in Greenock.

THE MEASLES ORDER IN LONDON.

MR. WYNTER BLYTH, M.O.H. St. Marylebone, in his report for March, makes some observations on the Order recently issued applying certain sections of the Public Health (London) Act to measles. Hitherto, he says, although it is well known to be a most infectious malady, a child suffering from measles could be conveyed in a public conveyance, or could be sent to school, or exposed in any thoroughfare, and those in charge of the sufferer would not be liable to any penalty under the Sanitary Acts. Besides this, disinfection would not be compulsory. From April 1st this is altered, and the law applicable to notifiable diseases will be applicable to measles. On the other hand, there is no notification as to measles, nor is there any provision for hospital accommodation. Information of the prevalence of the malady is only indirectly obtainable from the returns of school attendance and the registrar's returns of deaths.

The deaths from measles in the whole of London vary in different years from about 5 per 10,000 of all ages up to a little more than 8 per 10,000. Since, however, measles is essentially a disease of children, it is better studied in relation to the child population. The deaths in 1901 in all London were equal to 37 per 10,000 children (under 5 years of age). Measles varies much in virulence, and the relationship between the number of cases and the number of deaths is very different in different years. Probably for every 3 deaths at least 100 cases of sickness occur. In 1902 there were 86 deaths from measles in the borough, and this would represent about 2,800 cases; 1902 was not an exceptional year as regards measles, it may, therefore, be confidently stated that from 2,000 to 6,000 cases occur annually.

Hence, if even the cases brought to notice incidentally through the channels already mentioned have to be visited, recorded, and the usual disinfecting operations put in force, it is obvious the present staff will not be able to cope with the work. Mr. Blyth therefore considers that the best course would be to adopt the system in force in most of the boroughs, and to relieve the present staff from the duty of disinfection, and appoint a special staff of disinfectors.

If hospital accommodation for bad cases had been provided, and then notification of measles adopted, there is little doubt much good would have been effected. Under present conditions without facilities for isolation and without notification, the results as regards controlling spread will not be commensurate with the considerable pecuniary outlay involved. Hence the wisdom of making the order is open to criticism, on the ground of its small utility—a half-hearted measure, expensive in its incidence, partial in its application, and inefficacious to reduce the mortality or to control the spread of the disease.

INFANT FEEDING AND MILK SUPPLY.

AT the annual meeting of the Hospital Saturday Fund at the Mansion House on April 25th, under the presidency of the Lord Mayor, Dr. T. D. Lister delivered a lecture on Infant Feeding and Milk Supply. The importance of this subject, he said, was evidenced by the continued high infant mortality among civilized nations, and especially in large towns. A high mortality was coincident with a falling birth rate, and perhaps less natural modes of living. Over 140,000 children were born every year in this country to die before twelve months had passed. A great deal of the neglect and ignorance associated with the rearing of infants depended on a struggle for existence in certain sections of the people, and to an extent this could not be dealt with by merely medical precautions; but there was a large proportion of disease which was immediately prevented by simple measures. The lecturer dealt with various popular errors involved in the feeding of infants, and said that both theoretically and practically cow's milk should have the first place in the hand feeding of infants, but it should be of good quality. The cow's milk coming to London appeared to be, on the whole, excellent as regards its richness in food materials. Dr. Lister referred to the dangers resulting from the prevailing ignorance as to the proper handling of our milk supply at every stage, urging, among other things, the increased provision by the railway companies and other carriers of proper cold transport for milk. He remarked that by dealing with good milk firms, the dangers to which he alluded were almost eliminated. A large quantity of milk was sold under abominable conditions in small general and other shops, especially in the poorer districts of London and other large towns; but there were several great milk businesses in London that took every possible precaution. Where the poverty was such that skimmed milk, tinned or fresh, was all that could be bought, proper milk should be provided by public funds, either free or at the cost of the materials.

PAROCHIAL MEDICAL OFFICERS IN THE HIGHLANDS OF SCOTLAND.

WE observe in the lay press an advertisement which has not appeared in the BRITISH MEDICAL JOURNAL for a medical officer for the parish of Barra. From the return placed before the House of Commons on August 8th, 1902, showing the number of medical officers dismissed by parish councils in each crofting county during each of the seven years, 1895-1901, we find included the parish of Barra, whose medical officer was dismissed in 1898, and no cause for dismissal assigned. The parish of Barra is one of the most remote islands in the Hebrides, and includes several smaller islands, which are often very difficult of access, and the medical officer called to these islands in stormy weather may have to go at the risk of his life. The population consists mainly of poor crofters and cottars, so that the emoluments from private practice are small. We do not know the reason why the present medical officer is demitting office, whether voluntary or otherwise, but we would suggest to all intending applicants the urgent necessity of making full inquiry, and satisfying themselves before accepting office that the salary is adequate, that a suitable residence is provided, that all medicines and medical and surgical appliances for paupers be paid for by the parish council separately, and in addition to the salary that an annual free holiday be granted.

MEDICAL NEWS.

IT is announced that Miss K. Chamberlain, a niece of the Colonial Secretary, has been appointed Resident Physician at the Royal Free Hospital, Gray's Inn Road.

AT a meeting on April 22nd, Dr. Joseph Smith was unanimously elected Chairman of the Chiswick Urban District Council, and a J.P. for the County of Middlesex.

FOR the benefit of old students of the Middlesex Hospital a register has been opened for the names of members of the profession requiring *locum tenentes*, etc., and of companies requiring ships' surgeons. Particulars can be obtained on application to the Assistant Secretary.

AT the May dinner of the Edinburgh University Club of London, which, as already announced, will take place on May 20th at the Criterion Restaurant, Sir William Turner, K.C.B., who will take the chair, will be supported by Sir William Church, Sir H. G. Howse, Sir William Huggins, and Sir William Macewen. Members intending to be present are requested to send in their names to one of the Honorary Secretaries, Dr. James Taylor, 49, Welbeck Street, W., and Dr. G. A. Sutherland, 73, Wimpole Street, W.

DUNDEE CANCER HOSPITAL.—The contracts have now, according to the *Dundee Advertiser*, been signed for the construction of the additions to Dundee Royal Infirmary, the cost of which is to be defrayed by Mr. J. K. Caird. About a year ago Mr. Caird offered to erect a building in the infirmary grounds to provide accommodation for the increasing demands of the institution, and also to give facilities for the treatment of cancer. In his letter Mr. Caird stated that "so much attention has lately been directed to the subject of cancer, and so widespread is the disease, that it has suggested itself to me that a hospital to be used exclusively for cancer patients would be a great addition to the medical advantages of Dundee." The cost was estimated at £18,500, and Mr. Caird also offered an additional £1,000 a year for five years for the special purpose of investigation into the cause and cure of cancer. Though principally intended for the treatment of that disease the donor agreed that the accommodation not required for cancer patients might be used for the ordinary patients of the infirmary. The plans provided for a large brick building of three stories and attics on the pavilion system, containing six wards of from sixteen to twenty beds each. It is expected that the work will be completed in about two years.

MEDICAL VACANCIES.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column advertisements must be received not later than the first post on Wednesday morning.

ABERDEEN ROYAL INFIRMARY.—Medical Superintendent. Salary, £300 per annum, without residence.

BANGOR: CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House-Surgeon. Salary, £80, increasing to £100 per annum, with board, washing, and lodging.

BATH: ROYAL MINERAL WATER HOSPITAL.—Resident Medical Officer; unmarried. Salary, £100 per annum with board and apartments.

CANCER HOSPITAL, S.W.—House-Surgeon. Appointment for six months. Salary, £70 per annum, with board and residence.

CHESHIRE COUNTY ASYLUM, Parkside, Macclesfield.—Junior Assistant Medical Officer. Salary £140, rising to £160 per annum, with board, etc.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Pathologist. Salary, 100 guineas per annum.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—Ophthalmic Surgeon, must be F.R.C.S.Eng.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge Road, S.E.—Anæsthetist. Honorarium, £25 per annum.

HALIFAX ROYAL INFIRMARY.—Third House-Surgeon; unmarried. Salary, £80 per annum, with residence, board and washing.

HOSPITAL FOR DISEASES OF THE THROAT, Golden Square.—House Surgeon. Salary, £50 per annum, with board and residence.

LEICESTER INFIRMARY.—Clinical Clerk. Honorarium, £10 10s. for six months, with board, apartments, and washing.

LIVERPOOL DISPENSARIES.—Assistant Surgeon, unmarried. Salary, £100 per annum, with board and apartments.

MANCHESTER: HULME DISPENSARY, Dale Street.—House Surgeon. Salary, £150 per annum, with apartments attendance, etc.

MANCHESTER ROYAL INFIRMARY.—Resident Surgical Officer, unmarried. Salary, £150 per annum, with board and residence.

MANCHESTER SOUTHERN AND MATERNITY HOSPITAL.—Resident House-Surgeon.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—Dental Surgeon.

MOUNT VERNON HOSPITAL FOR CONSUMPTION, Hampstead.—Junior Resident Medical Officer. Honorarium, £60.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum with board, residence, and washing.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road.—Resident Casualty Officer. Appointment for six months. Salary, £80 per annum, with board, etc.

NORTHAMPTON GENERAL INFIRMARY.—House-Surgeons; unmarried. Salary, £125 per annum, with furnished apartments, board, etc.

NORWICH: NORFOLK AND NORWICH HOSPITAL.—Second Assistant House-Surgeon. Appointment for six months. Honorarium, £20, with board, lodging, etc.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon. Salary, £160 per annum, increasing £10 yearly, with furnished apartments, etc.

SALISBURY: FISHERTON ASYLUM.—Assistant Medical Officer, unmarried. Salary, £150 per annum, with board, lodging, and washing.

SARAWAK MEDICAL DEPARTMENT.—Medical Officer; unmarried, and not more than 28 years of age. Salary, 300 dols. a month, and unfurnished quarters.

SOCIETY OF APOTHECARIES, London.—Examiner in Medicine.

VICTORIA HOSPITAL FOR CHILDREN, Chelsea.—House Surgeon. Appointment for six months. Honorarium, £25, with board and lodging.

WESTMINSTER GENERAL DISPENSARY.—Honorary Dental Surgeon.

WEST RIDING ASYLUM, Wadsley.—Fifth Assistant Medical Officer. Salary £140, rising to £160 per annum, with board, etc.

YORK COUNTY HOSPITAL.—House-Physician. Salary, £100, with board, residence and washing.

MEDICAL APPOINTMENTS.

ALDERSON, Reginald, M.D., B.S.Durh., appointed Honorary Assistant Surgeon to the Hospital for Sick Children, Newcastle-upon-Tyne, *vice* Wilfred E. Alderson, M.D., M.S., resigned.

AUTY, C. H., M.R.C.S.Eng., L.R.C.P.Lond., appointed District Medical Officer of the Parish of Willesden.

BENNETT, F. G., L.S.A., appointed District Medical Officer to the Billesdon Union.

BYRES, George, M.B., M.S.Aberd., appointed Medical Officer for the Parish of Foveran and Surveon to H.M. Coastguards.

CHAMBERLAIN, Katherine, M.B., B.S.Lond., appointed Resident Physician to the Royal Free Hospital, Gray's Inn Road.

EASTON, Thomas, M.D.Edin., C.M., appointed District Medical Officer of the Southampton Union.

GREEN, T. A., M.D., C.M., appointed Clinical Assistant to the Chelsea Hospital for Women.

HEWETSON, John T., M.D., F.R.C.S., appointed Assistant Obstetric Officer to the General Hospital, Birmingham.

HILLIER, Sidney, M.D.Edin., C.M., appointed Medical Officer to the Children's Home of the Stow Union.

JOHSON, F. C., M.R.C.S., L.R.C.P.Lond., appointed Assistant Medical Officer of the Poplar and Stepney Sick Asylum District.

JOHNSON, James, L.R.C.P. and S.Edin., L.F.P.S.Glasg., appointed Medical Officer of Health for Bispham and Marbrick, Poulton-le-Fylde.

KNAPTON, George, L.R.C.P.Edin., appointed a Physician to the Edinburgh Life Assurance Company for Manchester, Bowdon, and District.

MACKAY, James, M.B.Aberd., appointed a Physician to the Edinburgh Life Assurance Company for Manchester and District.

MCKENZIE, John Alexander, M.B., Ch.B., appointed Resident Physician to the Aberdeen Royal Infirmary.

ORMEROD, H. L., M.D., R.U.I., B.Ch., appointed Medical Officer for the Westbury District of the Barton Regis Union, *vice* Henry Ormerod, M.R.C.S.Eng.

SMITH, Frederick K., M.B., Ch.B., appointed Resident Surgeon to the Aberdeen Royal Infirmary.

SYMES, W. Langford, M.D. Univ. Durh., F.R.C.P.I., appointed Pathologist to the Royal City of Dublin Hospital.

THOMSON, A. J., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer of the Stourbridge Union Workhouse.

THURSTAN, Edward Paget, M.D., B.A.Cantab., M.R.C.S.Eng., L.S.A.Lond., appointed Physician to the Perth Public Hospital.

TILLEY, Herbert, F.R.C.S., M.D., appointed Examiner in Laryngology, Royal Army Medical College.

TOOVEY, T. E. Frazer, F.R.C.S., L.R.C.P., appointed House Surgeon to the Royal Eye Hospital, Southwark.

WADE, Noel N., M.B., Ch.B.Edin., appointed Assistant House Surgeon to the Cardiff Infirmary, *vice* Evan Jones, M.R.C.S., L.R.C.P.Lond.

WARRACK, J. S., M.A., M.D.Aberd., D.P.H.Camb., Boarding Medical Officer to Port of London Sanitary Authority, Gravesend.

DIARY FOR NEXT WEEK.

TUESDAY.

Pathological Society of London.—St. Bartholomew's Hospital Medical School, 8.30 p.m.—Laboratory meeting. Drs. F. W. Andrewes and K. J. P. Orten: Hypochlorous Acid as a Disinfectant. Dr. Seligmann: On Cretinism. Dr. Horder: A Note on the Relative Readings given by the Haemoglobinometers of Fleischl and Haldane. Mr. Gask: Bacteriological Examination of a Case of so-called Rheumatoid Arthritis. Dr. Bainbridge: Some Suggestions Concerning Renal Dropsy. Messrs. K. J. P. Orten and W. H. Hurtley: St. Bendzynski and K. Panek's Alloxyproteic Acid—a Normal Constituent of Urine.

WEDNESDAY.

Obstetrical Society of London, 20, Hanover Square, W., 8 p.m.—Specimens will be shown by Drs. Tate, Fairbairn, Williamson, John Phillips, Galabin, Handfield-Jones, and Brook. Short Communication by Mr. Sydney Boyd (introduced by Dr. Amand Routh) on An Unusual Case of Inversio Uteri. Paper.—Dr. H. Russell Andrews: The Anatomy of the Pregnant Tube.

THURSDAY.

Ophthalmological Society of the United Kingdom, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Clinical Evening. Mr. R. H. Elliot: Pflaudi's Instrument for Detecting Feigned Amblyopia. Mr. G. Brookshank James: A New portable Perimeter. Mr. G. Hartridge: (1) Zonular Opacity of Cornea; (2) Central Choroiditis Shown Fourteen Years Ago as a Possible Growth. Mr. S. W. Roll: A Case of Microphthalmos. Mr. J. H. Parsons and Mr. P. Flemming: Persistent Hyaloid Artery. Mr. S. Stephenson: A Case of Papilloma of the Conjunctiva. Mr. J. B. Story: Two Specimens of Detachment of the Vitreous.

Roentgen Society, 20, Hanover Square, W., 8.30 p.m.—Exhibition of various new forms of apparatus.

North-East London Clinical Society, Tottenham Hospital, N., 4 p.m.—Clinical Cases.

Harveian Society of London. Stafford Rooms, Titchborne Street, Edgware Road, W., 8.30 p.m.—Mr. T. Crisp English: Some Points in the Diagnosis of Acute Abdominal Cases. Mr. P. L. Daniel: Gastro-enteritis of Obscure Origin simulating Peritonitis.

FRIDAY.

Ophthalmological Society of the United Kingdom, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Dr. E. W. Doyne: A Case Presenting several Deformities of the Eye, etc. Papers. Drs. Paine and Pounton: A Contribution to the Study of Rheumatoid Iritis. Mr. W. H. H. Jessop: Two Cases of Tuberculous Choroiditis. Dr. E. Donaldson: (1) Alveolar Sarcoma of the Cornea; (2) Proptosis and Deformity of the Head. Mr. A. F. MacCullen: Report of Five Cases of Glaucoma in which Adrenalin Caused an Increase of Tension.

Clinical Society of London, 20, Hanover Square, W., 8.30 p.m.—Mr. C. A. Morton: A Case of Hairball in the Stomach. Mr. F. S. Eve: Cases of Angioma of Synovial Membranes and of Muscle. Mr. H. Betham Robinson: A Case of Spinal Meningocele in which the Tumour made its exit through a Defect in the front of the Spinal Column and simulated an Intra-abdominal Cyst. Mr. E. M. Corner: Cellulitis of the Round Ligament and Spermatic Cord and their relation to Strangulated Hernia.

POST-GRADUATE COURSES AND LECTURES.

Charing Cross Hospital, Thursday, 4 p.m.—Lecture on Medical Cases.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C. Demonstrations will be given at 4 p.m. as follows: Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, ear. Lectures will also be given at 5.15 p.m. as follows: Tuesday, Raynaud's Disease; Wednesday, Injuries and Diseases of the Orbit; Thursday, Uterine Displacements; Friday, The Differential Diagnosis and Treatment of Chronic Diseases of the Joints.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C.—Tuesday, 3.30 p.m.—Lecture on Syringomyelia.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

DUBRANT.—On April 21th, at the Brook House, Billesdon, Leicestershire, Lucie Isabelle (nee Chard), the wife of Charles Durrant, L.R.C.P.Lond., M.R.C.S.Eng., of a son.

JACKSON.—On April 22nd, at Ashfield Road, Cheadle, the wife of T. Leonard Jackson, M.B., of a daughter.

POPE.—On April 19th, the wife of G. Stevens Pope, L.R.C.P. and S.Edin., Cleveland Asylum, Matton-in-Cleveland, Yorks, of a daughter (Dorothy Ethel Ughow).

SYDENHAM.—On March 16th, at Lichfield House, Walsall, the wife of Frederick Sydenham, M.D., of a daughter.

MARRIAGES.

MILROY—TARRENER.—On April 21st, at Pemberton Parish Church, by the Rev. G. F. Wills, M.A., Vicar of Upholland, William Cunningham Milroy, M.D., Lisoard, Cheshire, to Ethel, eldest daughter of Captain Tarrener, Orrell Hall, Wigan. (At home, 88, Seabank Road, Lisoard, May 20th and 21st.)

MUNRO—KAY.—On April 22nd, at St. Mary's Church, Hartlepool, by the Rev. Father Wickwar, Donald John Munro, M.B., B.S.Lond., of 50, Acre Lane, Brixton, S.W., to Louise Mary Edith, eldest daughter of the late J. T. Kay, Esq., Solicitor, and Mrs. Kay, of Rocksides, Hartlepool.

WEBSTER—HIRSCH.—On April 28th, at Christ Church, Chester, by the Rev. Baxter Harold Gordon Webster, M.R.C.S., L.R.C.P., of Longford, Coventry, son of G. Waumough Webster, of Chester and West Kirby, to Mabel, daughter of the late Hermann Hirsch, of Victoria Park, Manchester.

DEATH.

GRAY.—On April 17th, at Adelaide Place, Newcastle, co. Down, George Gray, M.D., J.P.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which the special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

A FRENCH medical student would be most grateful if any one could tell him of any work on the general anatomy of the guinea-pig.

ENQUIRENS asks: Is it usual when selling a practice to send out printed notices of the fact to all legitimate patients of the vendor?

COUNTRY PRACTITIONER asks for information as to the therapeutical properties of aluminium chloride and its use in medicine.

ELECTRIC CARRIAGES.

DR. G. A. H. BARTON (London) writes: It is evident to any observer that the electric carriages now seen in London are faster than horse-drawn carriages. As a doctor's time is money the speed of a doctor's carriage is a matter of great importance. Can any of your readers from actual experience tell us, through the BRITISH MEDICAL JOURNAL, what is the comparative cost of electric vehicles to that of horse-drawn carriages? As a faster vehicle would enable the doctor to travel a great distance in a day, it would be useful if the estimated cost of the two methods could be stated in cost per mile rather than cost per day.

ANATOMICAL METHODS.

WRIST-JOINT would like to know of any works treating on anatomical methods, dissection of small animals, injecting, preparation of dry bones and small skeletons, preparation of ligaments, etc. (for example, foot and pelvis).

*** We have referred this question to Professor Arthur Robinson, of King's College, who writes:—The following works contain instruction with regard to anatomical methods: *Human Morphology*, by H. A. Reeves (London: Smith, Elder and Co. 1882. 25s.); *Anatomical Instructor*, Poles (London. MDCCXC); *An Account of a New Method of Making Dried Preparations*, by Joseph Swan, 3rd edition (London: Longmans, Green and Co. 1833. 5s.); *Art de l'Anatomiste de la Desiccation et des autres Moyens de Conservation des Pièces Anatomiques*, by Gilbert Bruchet (Paris. 1819). The most recent methods can only be found by consulting the various anatomical journals published in the last few years or by consulting the curator of a good museum.

ANSWERS.

TREATMENT OF TRICHORRHEXIS NODOSA.

DR. W. SYKES (Exeter) writes: "M.R.C.S." will find the information he seeks in Malcolm Morris's *Diseases of the Skin*, 1894, chap. xx, p. 468, and in Professor Clifford Allbutt's *System of Medicine*, 1899, vol. viii, p. 785 (Section 18 of the article Affections of the Hair, by Dr. Radcliffe Crocker). Both authorities recommend persistent shaving of the part affected, which Crocker says is sometimes efficacious when long-continued, but generally not. Both also recommend sponging the hair with antiseptics, such as mercury perchloride or carbolic acid lotion (Morris says "subsequently to epilation"); this on the supposition, which Pye-Smith, in Fagge's *Medicine*, denies, that the disease is of bacterial origin. Crocker also suggests local faradization and change of air (change of hair would seem more appropriate), or a combination of all these remedies. He, however, declares that all treatment is very unsatisfactory. Morris recommends, in addition, all such measures as will improve the general health.

LETTERS, NOTES, Etc.

A TELEGRAM addressed to "Conjoint, London," from Calcutta, signed "Harris," has been received at the Examination Hall. The Secretary will be happy to give further information.

ROYAL MASONIC INSTITUTION FOR BOYS.

DR. HEATON C. HOWARD (London) writes: Will you allow me to thank most heartily all those who voted for the case of C. P. Hines at the recent election, by means of which his success was assured?

THE DESCENT OF THE TESTES.

AT a recent meeting of the Zoological Society of London Mr. Woodland read a paper on the phylogenetic cause of the transposition of the testes in mammals. He argued the transposition could not have been produced either directly from functional causes or indirectly by means of natural selection, and contended that the descent was the direct result of the mechanical forces arising from the superior activity of mammals under terrestrial conditions. It was contended that in the mammalia alone did such forces exist, and that in all cases the effect had been proportional to the cause. It was further maintained that the cause held to account for the descent of the testes was also responsible for the evolution of the diaphragm and the metanephric kidney.

FATAL CASE OF PEMPHIGUS ACUTUS MALIGNUS.

DR. R. H. PHILLIPS (Kalmunai, Batticaloa, Ceylon), writes: Reading Dr. W. J. Caie's notes on a case of pemphigus acutus malignus (BRITISH MEDICAL JOURNAL, February 7th, 1903, p. 308,) I am reminded of a case which occurred in my practice whilst house-surgeon, Civil Hospital, Kandy, in December, 1891, and of which I have a vivid recollection. The patient was a Malay adult male admitted with a high temperature and within forty-eight hours his whole body was covered with a bullous eruption resembling pemphigus and the next day the eruption had spread to the mucous lining of the mouth and probably the whole intestinal tract. Treatment was of no avail and he died. We (the late Dr. Gratiaen and I) could not diagnose the disease till Dr. Loos, the retired colonial surgeon, came to our rescue. He diagnosed it as pemphigus acutus malignus, a disease very rare in Ceylon. Notes of this case will be found in the Civil Hospital at Kandy. I merely mention this case as it is very rare out here and the severity of the symptoms and the acuteness of its course were more marked in this case than in that mentioned by Dr. Caie in the JOURNAL of February 7th. The eruption was, so to speak, all out at once without any predilection to any particular part. The temperature kept up till his death. As the body had been claimed we were not able to hold a necropsy.

LETTERS, COMMUNICATIONS, ETC., have been received from:

A Messrs. Arnold and Sons, London; Mr. P. Appa, Kyankpya, India; Anticruelty. **B** Dr. H. T Bulstrode, London; Miss M. Breay, London; Dr. H. E. J. Biss, London; Mr. D. Biddle, Kingston-on-Thames; Dr. F. Bushnell, Plymouth; Dr. H. Barnes, Edinburgh; Dr. G. A. H. Barton, London; Dr. G. T. Beatson, Glasgow; Dr. J. W. Byers, Belfast; Mr. W. M. Beaumont, Bath; E. H. Barrett, M.B., Iver; Dr. C. Buttar, London; Dr. C. E. Beevor, London; Dr. A. Brownlie, Sydney. **C** Cantab.; Dr. F. Collie, London; Mr. E. H. Currie, London; Dr. G. Carpenter, London; Mr. S. W. Cole, Cambridge; Mr. T. W. Clay, Holyhead; Cottage Hospital; W. W. Cheyne, C.B., M.B., London; Dr. W. H. Corfield, London. **D** Mr. F. Dawkins, London. **E** Mr. T. S. Ellis, Gloucester; Dr. M. G. Evans, Caerphilly; Enquirer. **F** Fibula; Fair Play; Dr. T. Fisher, Clifton. **G** Mr. A. E. Grant, Boscombe; Glasgow Obstetrical and Gynaecological Society, Secretary of, Glasgow; Mr. G. A. S. Gordon, London; Grasshopper; Dr. J. Galloway, London; Mr. G. E. Gask, London. **H** Mr. H. Hilliard, London; Mr. J. M. Haughton, Falmouth; Messrs. Hay, Steven and Co., Glasgow; Dr. W. B. Hunter, Londonderry; Messrs. Hilton and Co., Calcutta; Dr. C. Hodgetts, Toronto; Dr. J. W. Hamill, Manchester; Dr. J. Hamilton, London. **J** Dr. H. Jones, Dolgelly; Dr. G. P. Johnson, Stoke-on-Trent. **K** Mr. S. Kark, Edinburgh. **L** Laryngological Society, Secretary of, London; Dr. A. T. Livingston, Jamestown, N.Y.; Dr. R. C. Lucas, London; Dr. W. G. V. Lush, Weymouth; Dr. N. Leonard, Nottingham. **M** Mr. E. C. Montgomery-Smith, London; Dr. S. G. Moore, Huddersfield; Mr. J. Y. W. MacAlister, London; Dr. J. J. Macan, Cheam; Manchester Medical Ethical Association, Secretary of, Manchester; Liverpool Medical Institution, Secretary of, Liverpool; A. A. MacKeith, M.B., Southampton; Magna est Veritas; Dr. J. McNamara, London; Mr. A. Mercer, Wimbledon. **N** Not Quite Contented. **P** Perasang. Dr. A. Powell, Bombay; B. Pollard, M.B., London; Mr. S. Paget, London; Dr. E. P. Paton, London; G. M. Pittock, M.B., Margate; W. S. Page, M.B., London; Pauper; Dr. G. Parker, Bristol; Mr. J. R. Pollock, Tiverton. **R** Mr. H. A. Reeves, London; Dr. D. M. Ross, Bournemouth; Dr. P. Roethlisberger, Baden; Dr. C. Riviere, London; Dr. J. S. D. Russell, London; Dr. W. Robertson, Leith; H. Rhodes, M.B., London; Red Ticket. **S** Dr. J. F. J. Sykes, London; Dr. J. C. Simpson, Cambridge; Surgeon Lieutenant; Dr. C. R. A. Sutton, Sidcup; Dr. R. Soutar, Montrose; Dr. R. H. J. Swan, London; Mr. E. Seed, London; Sardam; Dr. G. Sanarelli, Bologna; Dr. W. Sykes, Exeter; S. Stephenson, M.B., London; Dr. G. A. Sutherland, London; Dr. E. M Sympson, Lincoln; Dr. W. C. Steen, Bournemouth; Mr. J. Smith, London. **T** Dr. H. H. Tooth, London; T. R. A.; T. J.; Dr. E. P. Thurston, Perth, W.A.; Mr. W. Taberner, Wigan; Dr. H. G. Turney, London. **V** Mr. E. W. Vignal, Paris. **W** Dr. J. Wishart, Bedlington; Mr. J. B. W. Wilson, Richmond; Dr. S. N. Whitaker, Liverpool; Dr. W. B. Warde, Tunbridge Wells; Sir S. Wilks, Bart., London; Mr. C. H. W. Whiteford, Plymouth; Mr. J. B. Wilson, Richmond; Mr. E. L. Walford, London; Dr. A. D. Waller, London; J. W. T. Walker, M.B., London; F. E. Wood, M.B., Windsor. **Y** Mr. W. P. Young, Keighley.

BOOKS, Etc., RECEIVED.

Diseases of the Skin. By Joseph Grindon, Ph.B., M.D. Kimpton's Series of Modern Textbooks. Edited by Bern B. Gallaudet, M.D. London: Henry Kimpton. 1903. 7s. 6d.

The Vaccination Problem in 1903 and the Impracticability of Compulsion. By A. Paul. London: P. S. King and Son. 1903. 2s. 6d.

Portfolio of Dermochromes. By Professor Jacobi. English adaptation of Text by J. J. Pringle, M.B., F.R.C.P. Parts I and II. London: Rebman Ltd. 1903. 6s. 6d.

An Atlas of Illustrations of Clinical Medicine, Surgery, and Pathology. Compiled for the New Sydenham Society. Fasciculus XVI: Coxa Vara. London: New Sydenham Society. 1903. 10s. 6d.

The Annual Charities Register and Digest. London: Longmans, Green, and Co. 1903. 5s.

Ocular Therapeutics according to the Most Recent Discoveries. By Dr. A. Darier. Translated by Sydney Stephenson, M.B., C.M. London: J. and A. Churchill. 1903. 10s. 6d.

Tropical Diseases. By P. Manson, C.M.G., M.D., LL.D. New Edition. London: Cassell and Co. 10s. 6d.

The Society for Psychical Research: its Rise and Progress, and a Sketch of its Work. By E. T. Bennett. London: R. B. Johnson. 1903. 1s.

Chronic Headache in its Treatment by Massage. By Gustaf Norstrom, M.D. New York and London: G. E. Stechert. 1903. 4s. 6d.

*** In forwarding books the publishers are requested to state the selling price.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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Post-Office Orders should be made payable to the British Medical Association at the General Post-Office, London. Small amounts may be paid in postage-stamps.

N.B.—It is against the rules of the Post Office to receive letters at *Poste Restante* addressed either in initials or numbers.

A Lecture
ON
THERAPEUTIC INOCULATIONS OF BACTERIAL VACCINES.

AND THEIR PRACTICAL EXPLOITATION IN THE TREATMENT OF DISEASE.

[Delivered at the Medical Graduates' College and Polyclinic.

By A. E. WRIGHT, M.D.Dubl.,
Late Professor of Pathology, Army Medical School, Netley; Pathologist to St Mary's Hospital, W.

THE therapeutic method which I propose to consider with you to-day is a method as yet almost unexploited. None the less it is a method which is, if I am not mistaken, destined to revolutionize our ordinary practice in dealing with localized bacterial invasions. In dealing with these our treatment has in the past consisted in making repeated applications of antiseptics or, in the case where this is impracticable, extirpating the seat of infection.

The time will come when, before embarking on either of these methods of treatment, and above all before acquiescing in a policy of leaving the bacterial invasion unchecked, an endeavour will be made in every case to arrest the invasion and to prevent its recurrence by calling into action the forces of resistance which lie latent in the organism. The physician of the future will, I foresee, take upon himself the rôle of an immunizator.

Before developing my ideas in a more concrete form, and pointing out where the opportunities already lie for the exploitation of methods of immunization, it will be essential for us to obtain a clear conception of the immunizing reaction which is initiated by the inoculation of a vaccine. And we may group together under the appellation of vaccines attenuated living cultures of micro-organisms, sterilized cultures, and derivatives of such cultures.

It will be convenient, at the outset, to discriminate from the more complicated processes associated with actual disease the simpler reactions evoked by such vaccines. Let us note that in actual disease we have to deal with a reaction of immunity hampered and often frustrated by processes of necrosis and cell degeneration induced by the action of the bacterial toxins. In the case of properly-conducted vaccination procedures, we have to deal with processes of immunization uncomplicated and unfrustrated. It is with these immunizing reactions—with these, if I may so denote them, physiological reactions—that we have here to concern ourselves. In dealing with them I shall not even attempt to call up before you a mental picture of the hidden machinery in the protoplasm which elaborates the products of immunization which are found in the blood. You will already have been much wearied with such attempts. I shall content myself with setting forth to you the sequence of events which supervenes when the machinery of immunization is set in motion by the inoculation of a vaccine.

Sequence of Events after the Inoculation of a Bacterial Vaccine.

The sequence of events after the inoculation of a bacterial poison was first clearly exhibited by Ehrlich[1] in connexion with a series of inoculations of tetanus toxin undertaken upon a milch goat already previously immunized. The curve of immunity (Fig. 1) here reproduced from

CURVE 1.

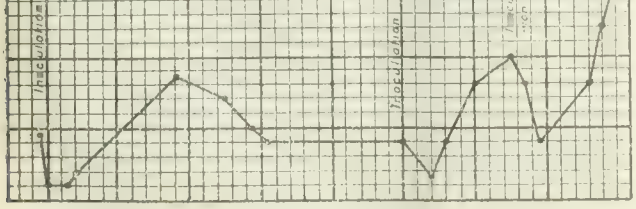


Fig. 1.—Curve of the immunization reaction as obtained by measuring the contents of tetanus antitoxin in the milk subsequent to three inoculations of tetanus toxin.

Ehrlich and Brieger's paper, discloses the content of the milk in tetanus antitoxin at different intervals after the inoculation. The following are the points to be noted:

1. Immediately subsequent to the inoculation of tetanus toxin we have what we may conveniently speak of as a "negative phase" of the curve of immunity.

2. This negative phase is succeeded after an interval by a "positive phase." In the case of the first inoculation here in question the climax of the positive phase was marked by a duplication of the previous anti toxic power of the milk.

3. After a further interval the curve comes back to the higher base line which represents the quasi-permanent achievement of the immunization process.

The same succession of a negative and a positive phase is reproduced after the second, and, so far as the curve was traced, after the third inoculation.

The reaction of immunity was next studied by Salomonsen and Madsen[2] in connexion with inoculations of diphtheria toxin undertaken upon a previously immunized milch mare. A reference to the curves in Fig. 2 (below) which represent the antitoxin-content in the milk and blood respectively, will show that we have here again to deal with a negative and positive phase.

CURVE 2.

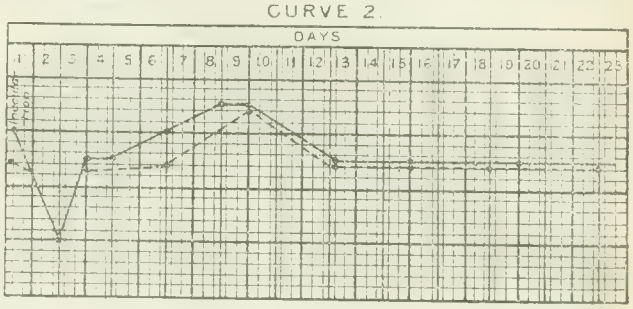


Fig. 2.—Curve of the immunization reaction obtained by measuring the content of the blood and milk of a mare in diphtheria antitoxin after the inoculation of diphtheria toxin. Unbroken line ——, antitoxin of milk; dotted line ....., antitoxin of blood.

Similar curves have been obtained in connexion with other immunization processes, in particular by Bulloch[3] in connexion with the inoculation of ox-blood into rabbits, and by Morgenroth in connexion with the inoculation of rennet.

I myself have, in a series of observations[4] made on men, obtained evidence[5] of a negative and a positive phase of the bactericidal power of the blood after typhoid inoculation. Two curves showing a negative and positive phase of bactericidal power after typhoid inoculation are presented in Fig. 3 (p. 1070). In later experiments undertaken by the same method I have obtained evidence of the maintenance of a higher base line two years after inoculation.

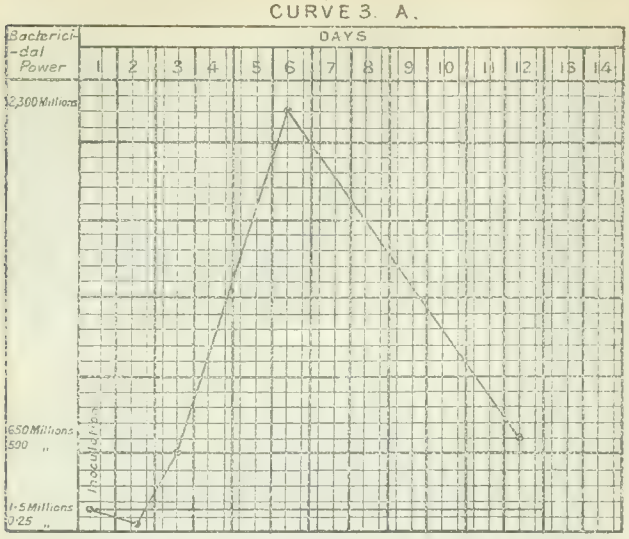
In a further research, dealing with the effects of antistaphylococcus inoculations[6] upon a series of men evidence was obtained by me of the supervention of a negative and a positive phase of phagocytic[7] power upon the inoculation of staphylococcus vaccines. I showed that in association with the decline and rise of the phagocytic power, an aggravation and improvement manifested itself in the clinical symptoms. A typical curve is set forth in Fig. 4 (p. 1070).

I think it may be taken as definitely established by the above that we have to deal in connexion with every immunization process with a succession of a negative and positive phase. So far we have concerned ourselves only with a typical form of curve. We should, however, lapse into fallacy if, carrying away in the mind's eye the features and general proportions of such typical curves as are shown in the figures above we were to assume that these features and proportions must be reproduced in the case of every inoculation process. And similarly we should fall into error if we were to assume that a series of successive inoculations would in every case, as in Fig. 1, lead to the achievement of a high base line of immunity.

We shall best guard ourselves against errors such as those first referred to if we consider the curves relating to the effect of antityphoid inoculation set forth in Figs. 5 and 6 (p. 1070). In curve 5 the negative phase is suppressed, or speaking more strictly, the positive phase is found fully developed twenty-four hours after inoculation. In Curve 6 the nadir of the negative phase is not reached till the ninth day after the inoculation the first evidence of a return in the direction of a positive phase being obtained on the fifteenth day.

Let it be noted here that the differences in the duration of the negative phase set forth in these traces are due either to comparatively small differences in the dose of vaccine administered or to idiosyncrasies on the part of the patients. If I may judge from experience of the results of the self-inoculation of a much larger dose of typhoid vaccine and from the results of blood examinations undertaken upon patients convalescent after very severe attacks of typhoid fever, it would seem to me that the incorporation or, as the case may be, generation in the system of excessive quantities of typhoid poisons may be followed by a negative phase of very many months' duration.

What applies in the case of single inoculations applies with even greater force to the case where a series of successive inoculations is undertaken. It is of fundamental importance to recognize that the effect of every such series of inoculations is a cumulative one. It is cumulative in the sense of the negative phase and the poisoning of the organism when the doses of vaccine are excessive and when they fall upon the negative phases of



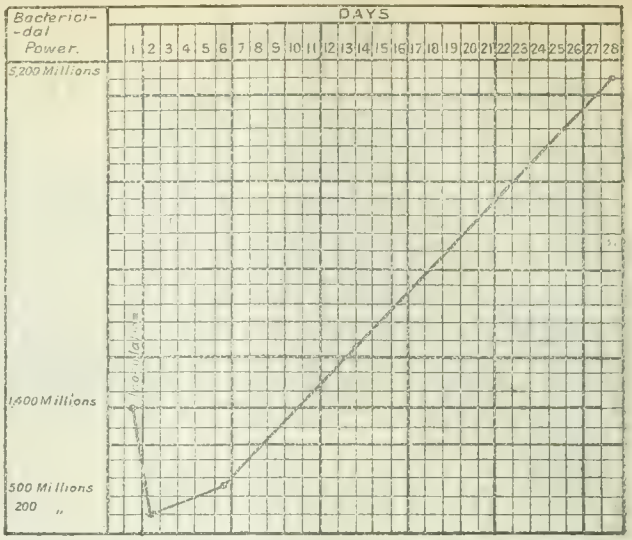


Fig. 3.—Curves (A and B) of the immunization reaction obtained by measuring the bactericidal power of blood obtained from the finger before and after the inoculation of antityphoid vaccine. In Curve A all the measurements on the upper (positive) side of the base line have for convenience of exhibition been represented on a hundred-fold reduced scale.

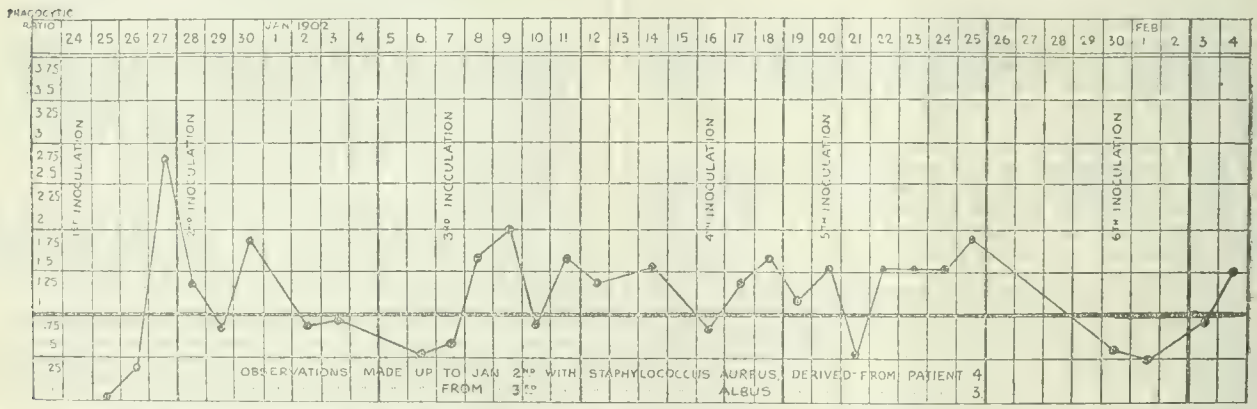


Fig. 4.—Curve of the immunization reaction produced by a series of successive inoculations of a staphylococcus vaccine; the curve represents the phagocytic ratio of the patient's blood, the phagocytic power of the control blood being everywhere taken as 1.

the foregoing inoculations. And only in the case where the doses are properly adjusted and where each succeeding inoculation starts from a higher level attained by the previous inoculation will the effect of a series of inoculations be cumulative in the direction of the positive phase and in the direction of raising the organism to a higher level of immunity.

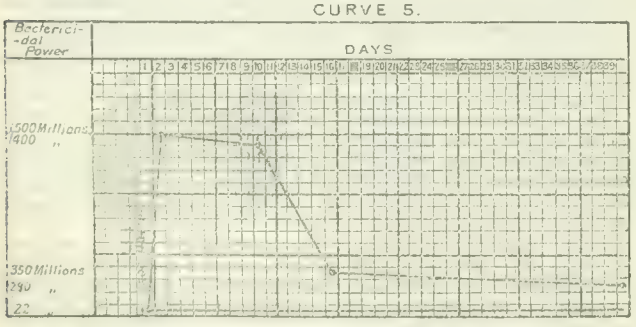


Fig. 5.—Curve of the immunization reaction obtained by the inoculation of antityphoid vaccine, suppression of the negative phase.

You have now before you in outline what is known with regard to the sequence of events following upon the introduction of a vaccine into the organism, and with regard to what I may call the *law of the negative and positive phase and of the attainment of the higher base line.* I desire to insist upon the fundamental practical importance of this law in connexion with every immunization procedure. Let me, with a view to illustrate its practical importance, deal, before I take up the subject matter proper of my discourse, very briefly with the negative and positive phase in connexion with prophylactic inoculations of bacterial cultures, and in connexion with serumtherapy.

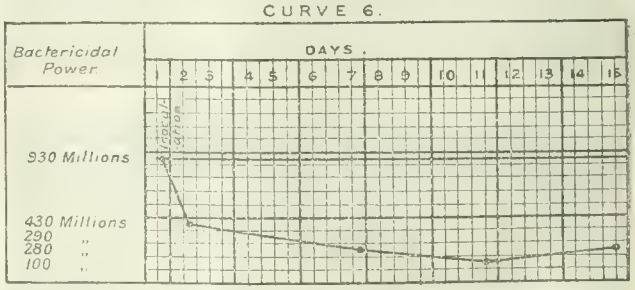


Fig. 6.—Curve of the immunization reaction obtained by the inoculation of antityphoid vaccine, postponement of positive phase.

Practical Importance of the Law of the Negative and Positive Phase in Connexion with Prophylactic Inoculations Undertaken with Living or Sterilized Vaccines.

In considering, in the light of individual results obtained in certain series of antityphoid inoculations undertaken in actually infected surroundings, the significance of the negative phase of bactericidal power after antityphoid inoculation, I have called attention to the fact that the success of these prophylactic inoculations is imperilled where excessive doses of vaccine are administered to patients in actually infected surroundings, or immediately before transference to such surroundings.

Basing myself upon information collected in India by the Indian Plague Commission,[8] in connexion with Mr. Haffkine's antiplague vaccination, I made a similar suggestion in connexion with this prophylactic inoculation. And I have recently learned that the idea of a risk attaching to the inoculation of large doses of vaccine in infected surroundings suggested itself also to several observers in South Africa who had occasion to watch the effect of the antiplague inoculations there undertaken. If the suggestions made by me in connexion with antityphoid and antiplague inoculation are justified, we may not unreasonably expect to find indications of an increased susceptibility to small-pox in the period supervening immediately upon the development of vaccinia pocks. It seems to me that such evidence can be found. In this connexion attention may be drawn to the fact that a vaccine lymph which has altogether failed to develop may, in the case where a more potent vaccine lymph is afterwards successfully inoculated, take on a typical development. We can hardly explain this fact otherwise than by assuming that the resisting power of the patient which sufficed to hold in check the earlier applied and weaker vaccine is diminished or abolished under the influence of the toxins elaborated in the course of the development of the subsequently inoculated and more active vaccine

Evidence of similar import, but from the nature of the case less conclusive evidence, is supplied by certain of the records of small-pox attacks, and in particular by records of fatal small-pox attacks affecting those who had been vaccinated immediately before. I would point out that it is traditional in these cases to ascribe the small-pox attacks in question to infection contracted previous to vaccination. It is also traditional to vindicate this ascription by reference to the longer incubation of small-pox,' overlooking the possibility that the incubation period may be shortened where the resistance of the organism is reduced.

A final word on this question will be appropriate. If the risks incidental to the production of a negative phase attach, as I believe they do, to prophylactic inoculations in the case of all septicaemic diseases alike, it is obviously incumbent upon us neither to ignore nor to magnify these dangers, and, above all, to recognize that these risks can be minimized. Let it be observed that the risk of a negative phase comes seriously into consideration only when excessive doses of vaccine are employed, and when the prophylactic inoculations are undertaken in the actual presence of infection. The remedy lies at hand. It lies in the case where a sterilized bacterial culture is employed in the reduction of the dose. It lies in the case of anti-small-pox vaccination in the reduction of the number of insertions; in other words, in limiting the elaboration of toxins by diminishing the area of skin surface employed for the culture of the organism of vaccinia.

Practical Importance of the Appreciation of the Law of the Negative and Positive Phase in Connexion with the Therapeutic Inoculation of Sera derived from Animals vicariously Inoculated with Bacterial Vaccines.

The principle of serumtherapy—that is, the idea of transferring to patients already the subjects of bacterial infection immunizing substances withdrawn from animals vicariously inoculated—appeals in a very forcible way to the medical mind by the fact that it promises a rational treatment of all bacterial diseases, and by the fact that it has fulfilled that promise in the case of diphtheria.

The prestige which it has derived from this signal success has led to the exploitation of the method of serumtherapy in connexion with almost every bacterial disease, and the time would appear to have arrived for a general survey of the results. We can hardly fail to recognize that the new method of treatment has almost everywhere (I except, of course, the case of diphtheria) failed to do appreciable good. I would also have you note that positive harm may upon occasion result from the resort to a serum. I may enforce this last statement by practical examples.

(1) There was submitted to the Indian Plague Commission a particular "antiplague serum" intended for therapeutic administration. This serum, which was tested by me as a member of the Commission, precipitated the death of every plague-infected animal to which it was administered, the acceleration of the fatal issue being in each case directly proportional to the dose of serum administered.[9] (2) In examining at Netley a number of "antityphoid" sera with a view to selecting for employment in South Africa any one that might seem calculated to be therapeutically useful, I found a particular "antityphoid serum" which completely abolished the bactericidal power which normal human serum exerts upon the bacillus typhosus. (3) I have myself administered with therapeutic intent to two Malta fever patients (personal friends) an "anti-Malta-fever serum," which produced unmistakeably toxic effects. The serum in question was a serum of my own preparation. (4) My friend Dr. Bulloch has had occasion to test on guinea-pigs the effect of an "antistaphylococcus serum." The serum in question was found to exert a lethal effect in doses of 1 c.cm and over. (5) The same has been observed by Marmorek in connexion with certain antistreptococcus sera, and instances are, I think, not infrequent—they have certainly occurred within my experience—in which the administration of "antistreptococcus serum" has seemed to produce toxic effects. (6) A number of different scientific workers have, in endeavouring to prepare an "antituberculous serum" by the inoculation of tuberculin into horses, obtained a serum which produced on inoculation into man and animals an unmistakeable tuberculin reaction. (7) Lastly, Dunbar[10] records the development of toxic effects in the case of a patient inoculated with an "anti-hay fever" serum.

These facts constitute, I think, striking confutation of the idea commonly entertained in our profession that all that is required for the production of an effective therapeutic serum is the incorporation into an animal of progressively increasing doses of a bacterial culture, and the withdrawal of the serum ten days after the last injection. In other words, the facts above enumerated enable us to realize that in default of an active production of immunizing substances on the part of the animal vicariously inoculated, the sera which are drawn off will inevitably possess the toxic properties of vaccines originally inoculated. Our awakening to this fact must be signalized by a re-examination of the whole question of serumtherapeutics. That examination must be undertaken in the light of the facts which have been adduced above with regard to the negative and positive phase.

Viewed from this point of view, the interpretation of the untoward results which followed the administration of the "antiplague serum" referred to above presents no difficulty. In point of fact, an inspection of the horses from which the serum in question had been derived showed that the horses were still suffering from the fever and local disturbance caused by the inoculation of the plague toxins. The serum had, in other words, been drawn off during the negative phase.[11]

Let it, however, be carefully noted that the passing off of the local and constitutional symptoms does not in itself afford any guarantee that the negative phase has given place to a positive phase. Personal experience in connexion with the inoculation of typhoid and Malta fever cultures into horses, the similar experience of others in connexion with the inoculation of other poisons into animals; and, lastly, experience of the effect exerted on human blood by antityphoid inoculation and by typhoid fever itself make it certain that the persistence of the negative phase does not always betray itself by physical symptoms.

There is warranty for going further; there is, in fact, warranty for asserting that the persistence of the negative phase would in many cases be undetected by our present methods of testing sera.

Thus, for instance, the verification of the presence of agglutinins in the serum which has been withdrawn does not in any way guarantee the neutralization of the toxic substances which have been inoculated into the animal. Let it be observed in this connexion that the toxic "antityphoid" and "anti-Malta fever" sera referred to above possessed high—in the former, indeed, exceptionally high—agglutinating powers.

Again experiments undertaken upon laboratory animals afford no security for the absence of toxins from the sera under examination, unless the animals are equally sensible with man to the particular toxins which are in question.

These points with regard to the difficulty of eliminating from use negative phase sera are, it will be seen, of altogether general application. If they have been overlooked, this has no doubt been owing to the fact that it has been possible, in the case of the serumtherapeutics of diphtheria, owing to the sensibility of the guinea-pig to diphtheria toxin, to eliminate all toxic (negative phase) sera from use, and thus every thing has in this respect here gone well.

The elimination of sera drawn off in the negative phase is, as consideration will show, only one of the preconditions of a successful serumtherapy. A further precondition of the successful exploitation of an antitoxic serum is that there shall be transferred to the patient in the few cubic centimetres of foreign blood which it is possible to administer a sufficiency of antitoxin to neutralize at least a sensible fraction of all the toxin which is being elaborated in the patient's system. In other words, it is essential that the animal which is selected for vicarious inoculation shall possess an altogether phenomenal power of reaction with respect to the particular bacterial poison employed. This condition, though it is satisfied in the case where horses are vicariously inoculated with diphtheria and tetanus toxins, is not, so far as is at present known, satisfied in the case where animals are inoculated with any other poison.

Superadded to the difficulties already adverted to are other and greater difficulties which have reference to the therapeutic exploitation of antibacterial sera. I refer to the difficulties created, on the one hand, by the circumstance that bactericidal elements disappear from the serum very soon after the blood has been withdrawn, and on the other hand by the circumstance that these bactericidal elements may be incapable of developing their effect when transferred from the vicariously inoculated animal to the human patient.

Let me finally, before taking up the subject matter proper of my discourse, try to sum up for you the situation. The path of the immunizator who desires to proceed by the method of serumtherapy is bestrewn with all manner of formidable difficulties. He must, in the first place, find methods which shall enable him to exclude from use sera drawn off during the negative phase. He must, in the second place, achieve the hyperimmunization of the animal vicariously inoculated. Lastly, in the case of antibacterial sera, he must find means of preserving the products of immunization unaltered after withdrawal, and of securing that they shall be operative within the system of his patient.

Therapeutic Inoculations of Bacterial Vaccines Undertaken upon Patients Already the Subjects of Bacterial Invasion.

If the situation as regards serumtherapy is as I have set it forth to you it manifestly behoves us to cast about and see whether there may not be a more excellent way. I venture to submit to your consideration—and here I arrive at last at the subject matter proper of this discourse—the suggestion that that more excellent way may, perhaps, in many cases be found in the therapeutic inoculation of the patient with a bacterial vaccine. Let me anticipate two *a priori* objections.

Let me make it plain, in the first place, that I am very far from suggesting the incorporation of additional bacterial toxins into a patient already the subject of a septicaemic disease or a serious bacterial intoxication. Such an inoculation could, I take it, serve no good purpose, inasmuch as the bacterial elements similar to those that constitute the vaccine would in such a case already be circulating in the blood stream. Furthermore, as you will immediately appreciate, the superaddition of additional bacterial toxins would inevitably prolong or reproduce the negative phase, if, indeed, it did not definitely turn the scale against the patient.

The suggestion I make is that bacterial vaccines should be employed in the case where we have to deal with localized bacterial invasions associated with inflammation at the site of inoculation. The situation is here entirely different from that which has to be confronted in septicaemic diseases. On the one hand, the conditions are here already unfavourable to the invasion of the blood stream by micro-organisms; and there is, on the other hand, a considerable uncalled-on reserve of resistance on the part of the organism. We have to deal, in fact, with a situation not altogether unlike that which obtains in the case of already partially immunized animals, such as those employed by Ehrlich and Salomonsen in the experiments which we considered at the outset of this lecture. Holding as we do in such a case a considerable balance in hand, we are in a position to confront without alarm the prospect of a possible temporary diminution of that balance. We are, in fact, in a position to adventure something for the sake of achieving afterwards a positive phase of increased resistance.

A further *a priori* objection which must be reckoned with is the following: I may throw it into the form of a question. If it was legitimately argued above that an inoculation of a bacterial vaccine would serve no good purpose in a case where the bacterial elements which call forth the immunizing reaction are already circulating in the blood, does not this argument apply also to the case where bacterial toxins are absorbed into the system from a localized seat of infection? In point of fact it seems not to apply. The explanation which suggests itself is that in such cases only the products of the metabolism of the bacteria, as distinguished from the substances in the bacterial protoplasm which evoke a production of antibacterial substances, are absorbed into the blood stream.

What I picture to myself as the situation will perhaps appear to you in a clearer light if I place before you the following series of facts:

The blood of the guinea-pig—and for our purposes we have to consider only the male cavy—contains no spermatoxin; in other words, it exerts no poisonous effect upon the cavian spermatozoa. This is in conformity with the circumstance that, while, conceivably, certain other metabolic products are absorbed into the blood from the testicle, the spermatozoa themselves and their constituent elements are normally not so absorbed. The conditions are here presumably analogous to those which obtain in the case where bacteria are cultivating themselves locally in the organism.

If we now, after extirpating one of the guinea-pig's testicles, inoculate him subcutaneously with a suspension of spermatozoa obtained by making an extract of the extirpated testicle, we find that his blood develops spermatoxic properties, and that when brought into contact with actively moving spermatozoa it immediately arrests their movements. Without pressing home the analogy, we might on a similar principle expect to induce an elaboration of antibacterial substances by inoculating a bacterial culture into a patient already the subject of a localized infection.

Having, so far as I can, disposed of the *a priori* objections which might suggest themselves in connexion with the proposed method of therapeutic inoculation of bacterial vaccines, and having given you, I hope, a certain insight into the principles of the proposed method, I will now ask you to consider where the opportunities lie for the application of the method. I may appropriately begin by discussing those therapeutic inoculations of which I have already had some experience.

Treatment of Furunculosis, Sycosis, Acne, and Localized Staphylococcus Infections Generally by the Inoculation of a Staphylococcus Vaccine.

There can, I think, be no doubt that in acne vulgaris, furunculosis, and most cases of sycosis we have nearly always to deal with an invasion of the skin follicles, or, as the case may be, of the subcutaneous tissue by the staphylococcus pyogenes. In almost every case the suppurating areas yield the staphylococcus in pure culture. This, however, is only one of the factors in the causation of these disorders.

Another factor is revealed by an investigation of the phagocytic power of the blood. This examination has, in all the cases I have as yet dealt with, revealed a defective power of phagocytosis with respect to the staphylococcus. We have, it seems to me in the above, taken in connexion with the extreme chronicity, tendency to relapse, and comparative non-infectivity which characterizes these disorders, clear indications of the line of treatment that ought to be adopted. We ought to aim primarily at the immunization of the patient against the staphylococcus.

I have elsewhere[12] given an account of six consecutive cases which were treated by the inoculation of a staphylococcus vaccine, and have set forth the details of the blood examinations, and in association with them the clinical result. In two of these cases—marked, but only temporary, improvement was achieved; in the four others—a complete and very rapid cure was effected. The cases in which the improvement was only partial and temporary were—a case of boils and irritable pimples occurring in an elderly lady as a sequel of a severe operation, and—a case of extensive sycosis and eczema barbae dating back eight years to almost the period of puberty. In both of these cases there appears to have been a deficient power of response to the inoculations.

Among the cases cured, the most conclusive from the point of the previous chronicity of the morbid process, the severity of the symptoms, and the subsequent following up of the case, was that of an officer who, subsequent to a septic infection which eventuated in peritonitis, had for a period of seven years been a victim to sycosis, eczema barbae and tarsistyes in the eye, and deep and superficial furuncles. All these troubles disappeared after three successive inoculations of staphylococcus vaccine. His face had remained absolutely free from eruption when the patient, eighteen months after the date of his original first inoculation, presented himself for reinoculation on account of the development of two incipient boils, these being the first which had developed since undergoing the treatment. The reinoculation was effectual in checking any further relapse.

It may be added that, owing to the relatively small toxicity of staphylococcus cultures, the therapeutic treatment by staphylococcus vaccine involves comparatively little discomfort. The discomfort is, at any rate, absolutely trivial in comparison with the mental suffering associated with disfigurement due to acne or sycosis, and the physical evils associated with the reiterated application of antiseptics, epilation, and the fomentation and lancing of furuncles.

If staphylococcus vaccine should continue to approve itself useful in the treatment of localized cutaneous invasions of the skin, this would manifestly pave the way for further therapeutical applications in connexion with staphylococcus invasions of wounds and open ulcers and granulating surfaces generally.

Treatment of Cholelithiasis, Appendicitis, Colitis (also of Cystitis, Pyelitis, and Endometritis where these are Produced by the Colon Bacillus) by the Therapeutic Inoculation of a Coli Vaccine.

The colon bacillus, even if we consider it quite apart from its near congeners, the dysentery bacillus, the Gaertner bacillus, and the typhoid bacillus, all of which, like the colon bacillus, affect by predilection the lower portion of the ileum and upper end of the large intestine, is responsible for an altogether astonishing amount of human ills. The rôle which the colon bacillus plays in connexion with internal surfaces is, in fact, not less predominant than that played by the staphylococcus in connexion with external surfaces and wounds. And the gravity of the local inflammatory processes which result from the inroads of the colon bacillus is infinitely greater. These derive their gravity, first, from the importance of the organs which are involved, secondly, from the anatomical relations of these organs with the peritoneum, thirdly, from the practical impossibility of effectively applying antiseptics, and, fourthly, from the very serious surgical procedures which are required in the case where the localized invasion culminates in the production of pus and shows a tendency to generalize itself. All these are considerations which plead in favour of dealing with colon infections by the method of immunization.

Time will not permit of my referring to more than one or two of the many problems which open out before us when we take into consideration the possibility of dealing with colon bacillus infections or by the method just suggested. And you will understand that even if time did permit, the limitations of my knowledge in this imperfectly explored field would very soon impose a restraint upon me. It may, however, not be altogether unprofitable to suggest to you in connexion with this question certain lines of thought.

Cholelithiasis.—Evidence amounting now almost to demonstrative proof has been accumulating showing that the formation of gall stones is dependent upon bacterial invasion of the gall bladder, just in the same way as the formation of the ordinary phosphatic calculus in the bladder is dependent upon a bacterial invasion. It has further been established that the colon bacillus is the particular micro-organism

which is responsible for the formation of gall stones. Not only is this micro-organism found in pure culture in the gall bladder in most cases of cholelithiasis, but it is found also in the interior of practically all recent biliary concretions. Furthermore, it has been shown that gall stones can be experimentally produced by a direct inoculation of the colon bacillus into the gall bladder. And, lastly, it is interesting and important to note that Professor Vaughan Harley has recently found that ordinary gall stones are spontaneously dissolved when they are introduced into the gall bladders of dogs, while no such solution occurs when they are introduced in association with pus derived from the inflamed gall bladder of man.

It would seem, in view of the above, that the treatment of cholelithiasis ought to be directed to the immunization of the patient against the colon bacillus. We can see that it is within the bounds of possibility that the colon bacillus infection might in this way be checked, and that the gall stones might be dissolved. Even if these ends were not achieved the immunization would at least prepare the way for surgical procedures by diminishing the attendant risks. Let us note with regard to the efficacy of these surgical procedures that the removal of the gall stones would not by itself make an end to the evil.

Appendicitis.—More important by far than the pathology of gall stones is the pathology of appendicitis. Without for a moment contending that the colon bacillus is the only micro-organism involved in the etiology of appendicitis, it appears to me to be beyond doubt the essentially important agent. I find, for instance, on looking up my records of bacteriological examinations undertaken in the surgical theatre or, as the case may be, the *post-mortem* room at St. Mary's, that the colon bacillus was in eight successive cases obtained in pure cultivation from the pus, and that it was obtained in pure culture from the contents of the caecum or appendix in 5 out of the 6 cases in which cultures were made from the contents of the intestinal canal.

Here again it would seem to me that treatment ought to be directed to the immunization of the patient against the colon bacillus. Immunization procedures might, it seems to me, appropriately be undertaken on the one hand with the design of preventing a recurrence and avoiding operation, and on the other hand with the design of preparing the patient for operation in those cases where surgical procedures are postponed until after the subsidence of the symptoms of inflammation. The risks of inducing peritonitis which are incident to the necessary breaking down of adhesions and opening up of old foci of infection might conceivably be appreciably diminished by these means. The results which have been obtained in man by anticholera and antityphoid inoculations, and animals by anticoli inoculations, would seem to show the possibility of effective immunization against bacterial infections proceeding from the intestinal canal.

Cystitis and Localized Bacterial Infections of the Genito-urinary Tract.

It is hardly necessary to do more than advert to the frequent association of cystitis and pyelitis with an invasion of the urinary tract by the colon bacillus. It is perhaps less well known that certain cases of endometritis are associated with an invasion of the uterus by the same micro-organism. It would seem possible that patients, the subjects of these infections, might be advantageously treated by inoculations of coli vaccine. In two cases in which I have already carried out such inoculations, the patients have claimed that they derived benefit from them. I was, however, unable to detect any objective evidence of improvement by bacteriological examination of the urine. It is obvious, however, that the number of coli bacilli in the urine is not necessarily a correct index of the condition of the local inflammation process in the wall of the urinary tract.

Treatment of Tuberculosis by Therapeutic Inoculations of Tubercle Vaccine.

A few words by way of introduction to the discussion of this question may perhaps serve to place matters clearly before you. The treatment of tuberculosis by tuberculin as originally introduced by Koch was in intention a method of toxitherapeutics. The tuberculous toxins which were inoculated were intended to compass the expulsion and destruction of the invading tubercle bacilli by effecting necrotic and degenerative changes in the foci of infection. It is now universally recognized that this therapeutic principle was fundamentally erroneous. It is unnecessary to say more, except that the results were untoward and that the necrotic, degenerative, and inflammatory changes which were effected in the foci of infection contributed, in some cases, to the dissemination of the tubercle bacilli in the infected system.

Of recent years modifications have been made by Koch in the preparation of the tuberculin which have as their result the elimination of the more soluble toxins and the incorporation into the menstruum of the less soluble elements of the bacterial protoplasm. In short, modifications have been made which bring tuberculin (the so-called new tuberculin or O and R tuberculins) more into line with our ordinary bacterial vaccines. Following upon these changes a complete change of policy has been tacitly inaugurated. The tuberculin inoculations have been definitely divested of the character of toxitherapeutic inoculations, and have been definitely invested with the character of therapeutic inoculations of a tubercle vaccine designed to call forth an antibacterial reaction in the organism.

As soon as we consider the antitubercle inoculations from this standpoint, everything that has occurred in connexion with them becomes immediately intelligible. We appreciate, in the first place, that the untoward results which so often supervened upon the inoculation of Koch's original tuberculin were, in so far as they were not the result of the degenerative and inflammatory changes above referred to, imputable to the inappropriate character of the vaccine, and often, no doubt, to the induction of a cumulative negative phase under the influence of successive inoculations uncontrolled by intermediate blood examinations. We appreciate further that the outlook for a useful exploitation of therapeutic inoculations for tubercle is more hopeful now that we have at disposal a vaccine which contains in it elements derived from the bacterial protoplasm; and now that we have at disposal in the tuberculous serum-sedimentation reaction a method by which we can obtain some information of the progress of the reaction of immunization in the patient's system. I would submit to you that since we now need no longer work entirely in the dark, we ought cautiously to exploit in the treatment of localized tuberculous affections the tubercle vaccine which we owe to the ever fertile labours of Koch.

Treatment of Bacterial Infections of the Meninges, of the Mucous Membranes of the Respiratory Tract, of the Middle Ear, of the Uterus, and of Joints by Therapeutic Inoculations of the Appropriate Vaccines.

Before proceeding to summarize the general results we have arrived at, I may perhaps take an opportunity of explaining that the therapeutic method which is here in question is capable of an even more extended application than that sketched out above. I foresee that if the principle of the therapeutic inoculation of bacterial vaccines establishes itself, as I do not doubt that it will in the future, as an approved method for the treatment of chronic and recurrent inflammation processes, it will be exploited also in connexion with chronic and recurrent meningeal disease (I have in view here in particular certain cases of infantile paralysis), middle-ear disease, and chronic bronchial uterine catarrh, and chronic joint affections. Every such case would, of course, be submitted to bacteriological examination with a view to the determination of the determining cause of the infection, and the employment of the appropriate bacterial vaccine. In considering such a treatment in connexion with a meningeal infection there may be borne in mind the fact that we have, in the case of the anti-rabies inoculations, a demonstration of the possibility of checking, by the means of subcutaneous therapeutic inoculation of a vaccine, the spread of infective micro-organisms in the cerebro-spinal system. Similarly, in considering a possible application of bacterial vaccine in connexion with inflammation processes affecting the mucous membranes of the respiratory system, we may derive encouragement from the results obtained by Professor Dunbar in connexion with inoculation against hay fever. For an elaboration of an antitoxin against the pollen toxin in the organism of animals has been achieved by him and he has obtained indications of a similar production of antitoxin in the organism of a susceptible human patient.

SUMMARY.

Let me, finally, recapitulate to you the conclusions we have arrived at in the course of our study:

1. We have seen that we have in connexion with every immunization process a sequence of *negative* and *positive phase*

followed in the case where the inoculation is successful by the maintenance of a *higher base line* of immunity.

2. We have seen that the inoculation of an excessive dose may involve a risk, in particular, the risk of an undue prolongation of the *negative phase*.

3. We have seen that the inoculation of a series of doses of a vaccine will, in the case where the inoculations are uncontrolled by intermediate blood examinations, involve the possibility of the production of a *cumulative negative phase*.

4. We have seen that the *cumulative positive phase* which is a desideratum either in itself or as leading to the maintenance of a high base line of resistance, is achieved only when the successive doses are properly adjusted and when the inoculations are appropriately interspaced.

5. We have seen that the success of a prophylactic inoculation process may be imperilled where sequence of negative and positive phase, and the cumulative effect of successive inoculations, is not taken into consideration.

6. We have seen that the success of serumtherapy in diphtheria and its comparative failure in the case of other diseases is explained by the fact that in the first case we are able to secure the elimination of all negative phase blood, and we are able to induce in the vicariously inoculated animals a cumulative positive phase of absolutely phenomenal dimensions. In the case of other diseases we have been unable to secure these prerequisites of a successful serumtherapy.

7. We have seen that in the case of patients who, though suffering from localized bacterial invasions, are possessed of a considerable balance of resisting power, it is possible without risk to undertake therapeutic inoculations of bacterial vaccines, provided always that the results of these inoculations are controlled by subsequent blood examinations.

Let us realize, in conclusion, that when all has been done that can be done in the way of guarding a patient against the risks attaching to the negative phase the success of a therapeutic inoculation cannot be guaranteed. The success must in each case depend upon the power of response which is possessed by the individual. In the case of a particular patient that power of response may fail us. It may fail us also in connexion with particular bacterial infections. But it may be predicted that success will in some cases be achieved. It seems to me, for instance, that it will certainly be achieved in the case of simple staphyloccccus infections occurring in the young and otherwise robust. It seems to me very probable that it will be achieved also in the case of certain coli infections.

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ON EXALTATION OF BACTERIAL VIRULENCE BY PASSAGE IN VITRO.

BY E. A. SHAW, M.B.CANTAB.,

THE appearance of Dr. E. W. Ainley Walker's paper on this subject in the BRITISH MEDICAL JOURNAL of October 18th, 1902, leads me to place on record the following series of observations made at Netley during the spring and summer of 1901, and not hitherto published because it was hoped that later more unimpeachable evidence of increased virulence by this method would be obtainable, and that the series might be extended by the inclusion of micrococcus Melitensis. Illness, the exigencies of the service, and other causes have conspired to prevent the realization of these desiderata, which, however, it is hoped may be attained ere long.

The medium selected for the "passages" was fresh human blood serum obtained from myself; the methods of dilution of cultures, enumeration of cultures, etc., those devised by Wright and described by him in various papers in the *Lancet* during the last four years.

The fact that quite fresh serum has a bactericidal action on some pathogenic bacteria having been established on a firm basis by the work of many observers, the idea suggested itself that here was a means of increasing the virulence of these whenever that should be desirable, by bringing into play the operation of the principle of "the survival of the fittest." For, a given volume of fresh serum having the power of killing off all the bacteria in a given volume of a bacterial emulsion of known strength, and failing to kill them all off in the same volume of an emulsion of greater strength, presumably the survivors would be the ones possessed of the greatest powers of resistance, the slain being those possessed of the least: and by allowing the survivors "the fittest" to propagate their species in serum, and so in each generation eliminating as before the weakly and unfit, one ought ultimately to arrive at a generation of increasedly healthy vigorous and resistant bacteria of the particular species subjected to this selective process, that is, a generation of increased virulence.

BACILLUS ANTHRACIS.

With this object in view the following series of experiments were undertaken.

On April 22nd, 1901, 4 sloped agar tubes (these throughout the series were all of the same length and diameter and contained identical quantities of agar sloped at the same angle) were inoculated as "mass" cultures of anthrax from an existing laboratory culture by making an emulsion of this with 1 per cent. peptone broth, allowing this emulsion to flow over the whole agar surface of each of the four sloped agar tubes, which were then inverted to allow as much emulsion to drain off as would, and these four tubes were then incubated at 37° C. for twenty-four hours, at the end of which, in order to get an index of its virulence, the resulting growths were all combined into one emulsion with 10 c.cm. of 1 per cent. peptone broth, which was injected into a guinea-pig of weight 320 grams, and at the same time another sloped agar tube was inoculated and placed in the incubator at 37° C., to be used as the basis of the succeeding experiments.

The guinea-pig just mentioned survived the administration of the four anthrax tubes and was alive some weeks after. Meanwhile the tube inoculated and incubated had its resulting plentiful growth of anthrax made into a thick emulsion with broth on April 25th, from which a series of broth dilutions were made as follows: $\frac{1}{5}$, $\frac{1}{10}$, $\frac{1}{100}$, $\frac{1}{1000}$, $\frac{1}{10000}$, $\frac{1}{20000}$, $\frac{1}{100000}$. A specimen from each dilution was put up in a capillary tube (calibre of about $\frac{1}{2}$ mm.) with an equal volume of freshly-drawn serum obtained from myself, the two fluids intimately mixed; the tube then sealed off in a Bunsen flame, indexed, and the whole series incubated at 37° C. for twenty-four hours. Next day the contents of these capillary tubes were expelled on divisions of an agar surface contained in a Petri dish, which was in its turn incubated at 37° C. for twenty-four hours, with the result that in each area growth had taken place.

Second Generation.—Taking the growth from the weakest dilution $\frac{1}{100000}$—as there being fewer bacilli in this they would have been most acted on by the blood serum—it was emulsified in broth, the same dilutions made and the series repeated exactly as before, with the result that again there was growth from each dilution.

Third Generation.—Taking, as before, the growth from the weakest dilution $\frac{1}{100000}$, a different series of dilutions was made, this time $\frac{1}{10}$, $\frac{1}{100}$, $\frac{1}{1000}$, $\frac{1}{10000}$, $\frac{1}{100000}$, $\frac{1}{1000000}$, the intention being to produce a dilution in which all the bacilli should be killed off by the bactericidal action of the serum, and then to make use of the growth from the next less weakest dilution for the production of the succeeding generation. This time it was found that though again there was growth from each dilution, that from the $\frac{1}{100000}$ dilution was much more limited than from the others.

Fourth Generation.—Repeated as for third generation, using growth from $\frac{1}{100000}$ dilution. This time it was found there was no growth from the $\frac{1}{10000}$ and $\frac{1}{100000}$ dilutions, but growth in all the others.

Fifth Generation.—Repeated as before, using the growth from $\frac{1}{10000}$ dilution of fourth generation, and each dilution from $\frac{1}{10}$ to $\frac{1}{100000}$ produced a growth. In order to test if any progress was being made, the growth from the $\frac{1}{10000}$ dilution was utilized to prepare a "mass" cultivation in one sloped agar tube, which, after twenty-four hours at 37° C., was suspended in 5 c.cm. of broth, and on May 10th injected into a healthy guinea-pig weighing 250 grams. This animal's temperature on the 11th had risen to 39.8° C., on the 12th 40° C., and on the 13th it was found dead in its cage. A necropsy was made with the customary precautions, and B. anthracis was recovered from the heart's blood and spleen pulp whence, as the first guinea-pig had survived the administration of four exactly similar tubes of the original culture it was deduced that some progress had been made in the direction of increasing virulence.

The growth from the $\frac{1}{100000}$ dilution of the same generation was used for continuing the series on the lines laid down until the fourteenth generation had been reached. Concurrently with these generations passaged through fresh blood serum a series of generations of anthrax commencing from the same original growth, but on agar alone, had been kept going; so that on May 30th one had for puposes of comparing (*a*) the fourteenth generation of a series which had been subjected to the bactericidal action of fresh blood stream, and was, on the hypothesis advanced, presumably increased in virulence; and (*b*) the fourteenth generation of a series which had grown on agar alone, and was presumably mild relative to the other; both (*a*) and (*b*) having originated from the same original growth; and all that remained to be done was to test them comparatively.

In the case of anthrax, owing to the adhesion of the bacilli to each other, no such enumeration of individuals in an emulsion as can be undertaken in the case of typhoid bacilli is possible, and the best way of obtaining equivalent doses for administration seemed to be that of preparing twenty-four hours' mass cultivation in exactly similar sloped agar

tubes in the manner already described, and to regard the product of each sloped agar tube thus obtained as one dose. By means of a sterilized platinum needle and sterile broth poured on the surface of agar in each such sloped tube it was easy enough to get the whole of its growth of anthrax in suspension in the broth, which could then be injected into the animal selected.

On May 31st four such tubes of the presumably mild, and two tubes of the presumably virulent, were so prepared and placed in the incubators. On June 1st a series of normal healthy guinea-pigs of selected weights, all approximating as closely as possible to 300 grams, were injected subcutaneously with the customary precautions; one with four tubes of the "mild" anthrax; the others with, of the "virulent" anthrax, respectively $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{10}$, $\frac{1}{20}$, and $\frac{1}{40}$ of tube. On June 5th all these guinea-pigs, including the one injected with four tubes mild, were alive, and apparently not one of them any the worse for its dose of anthrax, which in view of the results anticipated was somewhat disconcerting. So with a view to confirm or otherwise the result produced in the guinea-pig of May 11th, another guinea-pig (310 grams in weight), was on June 5th injected with one whole tube of the presumably virulent anthrax. On June 9th this last guinea-pig was found dead in its cage, and *post mortem* anthrax bacilli were recovered from its heart's blood and spleen pulp. On June 10th all the guinea-pigs of June 1st were still alive and well, as was the case on June 25th.

The minimum lethal dose of anthrax grown for fourteen generations on agar alone was more than four tubes; the minimum lethal dose of anthrax passed through fresh blood serum for fourteen generations was not more than one tube, an increase of virulence fourfold at least, a result attained in the fifth generation and not improved on in the succeeding nine generations.

CHOLERA.

On May 20th a precisely similar procedure was initiated with the spirillum of cholera.

Fresh blood serum obtained from Professor A. E. Wright was used for each generation in preference to that obtainable from others, his blood having been incidentally discovered to have a much greater bactericidal power on cholera spirilla than my own, and hence better results might be expected. In this series capillary tubes with mixing chambers of about $\frac{1}{2}$ c.cm. in volume were used for each passage, and after the intimately mixed equal volumes of each cholera dilution in broth and fresh serum in the capillary part of the tube had been in the incubator at 37° C. for twenty-four hours, the sealed end of the capillary portion of each tube was broken off under the surface of sterile broth, which was then drawn in until the mixing chamber was three-quarters filled, the capillary end then sealed up again in the flame, and the series then returned to the incubator at 37° C. for another twenty-four hours, at the end of which it was easy to ascertain at once in which mixing chamber there had been growth or the contrary.

A growth of cholera was taken, a sample of which had been found to be killed off in a $\frac{1}{2}$ broth dilution by an equal bulk of A. E. W.'s serum, dilutions made in series $\frac{1}{10}$, $\frac{1}{100}$, $\frac{1}{1000}$, $\frac{1}{10000}$, $\frac{1}{100000}$ specimens of each of these were intimately mixed with an equal bulk of serum as mentioned, then incubated, and next day (May 21st) broth was drawn up with the mixture into the mixing chamber of each tube, and these sealed off and returned to the incubator, till examined on May 22nd, when no growth was found in any of them, all presumably killed off. Another series of dilutions of the original cholera growth was therefore made as follows—$\frac{1}{1}$, $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$—and similarly treated, and on May 24th it was found there was growth in all save the $\frac{1}{5}$, hence the growth in the $\frac{1}{4}$ dilution was used as the basis of the second series of dilutions of $\frac{1}{1}$, $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, and $\frac{1}{5}$. On May 26th there was growth in all these, so on May 27th a different series of dilutions were made from the growth in the $\frac{1}{5}$ dilution of May 26th as follows—$\frac{1}{1}$, $\frac{1}{10}$, $\frac{1}{20}$, $\frac{1}{30}$, $\frac{1}{40}$, and $\frac{1}{50}$, and on May 29th it was found that all these had grown; so now the $\frac{1}{50}$ was used as basis of following series—$\frac{1}{100}$, $\frac{1}{200}$, $\frac{1}{300}$, $\frac{1}{400}$, and $\frac{1}{500}$, which were similarly treated, the intention throughout being as before, to use as the progenitor of each succeeding generation the weakest dilution (that is, that containing the fewest micro-organisms), which survived the bactericidal action of an equal volume of fresh blood serum.

On May 31st it was found that there had been growth from each of the last-mentioned dilutions; so now, taking the growth from the $\frac{1}{500}$ dilution as the basis for the next series, the following series of dilutions was prepared—$\frac{1}{10}$, $\frac{1}{20}$, $\frac{1}{30}$, $\frac{1}{100}$, $\frac{1}{200}$, $\frac{1}{300}$—and treated as before. All grew save the $\frac{1}{300}$, so the $\frac{1}{100}$ was used as the basis of the next similar series of dilutions. On June 6th it was found there had been growth in the $\frac{1}{10}$ and $\frac{1}{20}$ dilutions of last series, but in none of the others; so the growth from the $\frac{1}{20}$ dilution was taken as the basis of the next series, which, proceeding by multiples of 5, was $\frac{1}{100}$, $\frac{1}{200}$, $\frac{1}{300}$, $\frac{1}{1000}$, and $\frac{1}{2000}$. On the 8th there was growth in the $\frac{1}{100}$, $\frac{1}{200}$ and $\frac{1}{1000}$, but not in the others. Concurrently with these generations of serum-passaged cholera the same number of generations of the original growth had been inoculated from broth tube to broth tube. And now from the seventh generation of each, "mass" cultivations on sloped agar tubes were prepared. On June 10th a series of guinea-pigs of similar body-weights were intraperitoneally injected with these; one guinea-pig with one tube of solely agar-grown cholera (presumably mild relatively to the other); and the others with respectively $\frac{1}{4}$, $\frac{1}{2}$, and $\frac{3}{4}$ tubes of the serum-passaged cholera (presumably virulent relatively to the other).

Fourteen days later all of them were alive and well an inconclusive result; and my ship having to quit Netley at this juncture, I was unable to proceed further with this series.

BACILLUS TYPHOSUS.

On May 20th also, a similar series of generations was initiated with a growth of typhoid which had been originally derived from a patient dead of typhoid, and kept going for months as a fresh young growth by inoculation and incubation from day to day of a fresh 10 c.cm. peptone broth tube.

In this series also, fresh blood serum obtained by bleeding Professor A. E. Wright at time of use thereof was employed; because, having subjected himself to repeated injections of typhoid vaccine, his blood serum had a high bactericidal power, usually killing off all the bacilli in a $\frac{3}{4}$ dilution of a 24-hour broth culture of B. typhosus (equal volumes of serum and dilution). Whereas blood serum obtained from myself, who may fairly be regarded as a normal healthy individual, but absolutely free of any suspicion of undue intimacy with B. typhosus or its toxins, would only kill off the same growth in a $\frac{1}{1000}$ dilution.

A series of dilutions of the original growth of typhoid was made—$\frac{1}{10}$, $\frac{1}{100}$, $\frac{1}{1000}$, $\frac{1}{10000}$, and $\frac{1}{100000}$, equal bulks of each were intimately mixed with an equal bulk of fresh serum (A. E. W.) in capillary tubes, with large mixing chambers, one for each dilution, and were all placed in incubator at 37° C. for 24 hours; after which each mixture was combined with 25 to 40 times its bulk of sterile broth in each large mixing chamber, the series replaced in incubator at 37° C. for another 24 hours, and then examined for growth.

May 22nd.—It was found there had been growth in the $\frac{1}{10}$, $\frac{1}{100}$, and $\frac{1}{1000}$ dilutions but not in the remainder, so the growth from the $\frac{1}{1000}$ dilution was used as the basis of the next similar series of dilutions.

May 24th.—Growth found in every dilution, series repeated, using growth in $\frac{1}{100000}$ dilution as basis for next series of dilutions.

May 27th.—Again there was growth in every dilution, but it was not nearly so marked in the highest dilution, the $\frac{1}{1000000}$, as in the others, and this was used as basis of next similar series of dilutions.

May 29th.—Again growth in all, repeated as before.

May 31st.—Again growth in all, repeated as before.

June 3rd.—Again growth in all, repeated as before.

June 6th.—Again growth in every dilution, so now made dilutions of the growth from the $\frac{1}{100000}$ dilution of June 3rd as follows, $\frac{1}{10}$, $\frac{1}{100}$, $\frac{1}{1000}$, $\frac{1}{10000}$, $\frac{1}{100000}$, $\frac{1}{1000000}$, and $\frac{1}{10000000}$.

June 8th.—Again growth in every dilution. This was the eighth generation and should have been presumably increased in virulence. To test this the growth from the $\frac{1}{10000000}$ dilution was used to inoculate a 10 c.cm. broth tube which, after growing twenty-four hours in the incubator at 37°C., was used to prepare "mass" cultivations in sloped agar tubes. The original growth having been kept going through the same number of generations in broth was also similarly prepared.

A series of guinea-pigs were now injected subcutaneously.

Date of Injection.	Weight of Guinea-pig.	Dose.	Result.
June 10th ...	500 grams	1 tube, mild	Alive and well June 24th.
" " ...	470 "	1 " virulent	Dead on June 28th.
" " ...	320 "	$\frac{1}{2}$ " "	Dead on June 11th.
" " ...	500 "	$\frac{1}{2}$ " "	Temperature rose, but was living on June 24th.

B. typhosus recovered *post mortem*.

As this series of guinea-pigs, though affording some information as to the "virulent" typhoid, was inconclusive as regarded the "mild," four sloped agar tube "mass" cultivations of "mild" and two of virulent were prepared on the 13th, and another series of guinea-pigs injected on June 14th.

Date of Injection.	Weight of Guinea-pig.	Dose.	Result.
June 14th ...	310 grams	2 tubes, mild	Alive on June 24th.
" " ...	310 "	1 tube, virulent	Dead on June 16th.
" " ...	330 "	$\frac{1}{2}$ " "	Dead on June 16th.
" " ...	320 "	$\frac{1}{4}$ " "	Alive on June 24th.

B. typhosus recovered *post mortem*.

This series, it will be observed, was confirmatory as regards the "virulent" of that of June 10th, in that half a tube of "virulent" was sufficient to quickly kill (two days) a 320-gram guinea-pig, but yielded no information as to the lethal dose of the "mild" typhoid. In giving larger doses of the latter suspended in broth, it was thought well to have some information as to any possible hurtful effects of peptone broth on guinea-pigs, so 20 c.cm. of this was injected into a healthy guinea-pig weighing 300 grams, which was unaffected and quite well one week later. As it was not intended to give nearly this bulk of typhoid emulsion, it was thereupon considered that this possibility might be safely ignored. And now what remained to be done was to ascertain the minimum lethal dose of the "mild" typhoid for guinea-pigs.

On June 26th a normal guinea-pig of 260 grams weight was injected with the total broth emulsion obtained from six sloped agar tubes of "mild" typhoid and was alive and quite well on the 29th.

On June 28th another normal guinea-pig of 255 grams weight was injected with 11 tubes of the "mild" typhoid emulsified in 6 c.cm. of broth. This animal died the same night; and *post mortem* in this as in all the other cases of death from these injections the pathogenic micro-organism was recovered by cultures from the heart's blood and spleen pulp.

It was consequently obvious that the minimum lethal dose of this mild typhoid for 300 grams of guinea-pig was therefore somewhere between six and eleven tubes; and hence estimating by tubes, as only half a tube of "virulent" had the same effect, that the method adopted had resulted, on this basis, in at least a 12-fold increase of virulence.

As enumerations of the typhoid bacilli in a given volume of a broth culture, according to the method described by Wright in the *Lancet* of June 1st, 1901, were being daily carried out in the Netley laboratory, the opportunity was taken of thus enumerating the broth emulsions of typhoid bacilli administered to the guinea-pigs mentioned. Omitting the mass of figures involved in the calculation, which have been carefully verified, the results may be summed up as follows:

June 14th.—182,000 millions of "virulent" typhoid bacilli—the half of the product of one sloped agar tube—killed 330 grams of guinea-pig in forty-eight hours.

June 14th.—280,000 millions of "mild" typhoid bacilli—the product of two tubes—failed to kill 310 grams of guinea-pig.

June 26th.—330,000 millions of "mild"—the product of six tubes—failed to kill 260 grams of guinea-pig.

June 28th.—552,000 millions of "mild"—the product of eleven tubes—killed 255 grams of guinea-pig in fifteen hours.

This enumeration method only takes count of living bacilli.

These figures imply also a distinct difference in virulence—about 1 : 2—but not to so great an extent as is given by taking the number of tubes as the basis of comparison.

On inspecting the figures of the dilutions which grew from generation to generation, it may be noticed that in all these cases, and markedly in the case of the typhoid and cholera growths, as each series progressed, a greater and greater dilution was required to obtain the result of "no growth" after contact for twenty-four hours with an equal bulk of fresh blood serum in the incubator. In the case of cholera, the series commenced with a growth which had to be diluted only to the extent of 1 in 5 to ensure this result, and ended with one which had to be diluted 1 in 1,250 to obtain it. In the case of typhoid, the series commenced with a growth which required to be diluted 1 in 250, and ended in one which required a greater dilution that 1 in 10,000,000 for the same object to be attained; a result which may, I think, be taken to imply that from generation to generation there was a gradually-increasing power of resistance of these micro-organisms to the bactericidal action of the blood serum used.

Again, looking at the enumeration figures, it will be seen that (June 14th) a sloped agar tube grew on its surface 364,000 millions of "virulent" typhoid, while of the mild 140,000 millions was the most ever found to have grown on the same sized areas of agar contained in other tubes. This may be taken to imply more vigorous growth, a greater prolific power, on the part of the "virulent."

Thus, while the exactitude of mathematical demonstration has been impossible—and in some of the comparisons made between the differing generations of the bacteria dealt with—a similarity of strength numerically has been assumed though impossible to prove; still, the general trend of the results obtained goes to show, I consider, that an increase of virulence is obtainable by this procedure.

In conclusion, I beg to tender my warmest thanks to Major Leishman, R.A.M.C., Captain Windsor, I.M.S., and especially to Professor A. E. Wright (who personally made the inoculations on guinea-pigs described) for many valuable suggestions and frequent material assistance during the course of these observations.

FURTHER OBSERVATIONS ON THE REACTION OF BACILLUS PESTIS IN PLAGUE.

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In former papers ([1], [2]) I described the nature of the growth of B. pestis in the serums of various animals, and particularly pointed out the bacteriolytic property (to B. pestis) of the serums coming from the plague convalescents and plague patients at a certain stage of the disease. Since these observations were recorded a series of experiments have been made to study in detail the properties of such serums, and I now propose to set forth the results of this inquiry, as they appear to be of some theoretical interest, and also as they seem to throw a certain amount of light on the causes which probably underlie the failure to a suitable reaction on the part of the plague patient when subjected to serumtherapeutics.

Effects of Age and Temperature on Plague Convalescents' Serum.

These observations were made with the object of ascertaining if an old serum coming from a plague convalescent would behave in any way different from that in a fresh condition; in other words, to determine if the bacteriolytic property of a fresh plague convalescent's serum (to B. pestis) would alter by age. As these observations formed the starting point of the present research I give the details of the experiment. Thus an old blood serum of a plague convalescent exposed to the laboratory temperature and light in a sealed tube, and which in a fresh condition was found to be bacteriolytic to B. pestis, was infected with plague bacilli, and made into a hanging-drop culture according to the method described elsewhere,[1] and on examination after twenty-four hours was found to have lost all the old property. In fact, it behaved like an old serum from a control.

Subsequent experiments on various samples of plague convalescent's serum have confirmed these observations, and I come to the conclusion that age and exposure to light deprive the serum of "something" whose presence gave the serum in a fresh condition the bacteriolytic characters. Further, it has been experimentally determined by me that this loss of potency begins to manifest itself from the third day onwards, and by the end of a week the serum by itself behaves as any ordinary nutrient serum.

The same remarkable loss of the character of a plague convalescent's serum is brought about by a short exposure to 56° C., as the following experiment will show:

Fresh plague convalescent's serum + infecting plague drop.	Plague convalescent's serum heated to 56° C. + infecting plague drop.
24 Hours' Growth.	
No growth in hanging drop	Rich growth in hanging drop.

In another communication,[2] while describing the probable factors concerned in the bacteriolysis of B. pestis in certain serums from plague patients, I had thrown out a hint (partly from the study of a variety of blood serums in healthy as well as plague-infected men and animals, and partly from a review[3] of analogous phenomena in parallel processes—for example, haemolysis, cytolysis, and bacteriolysis of other bacilli—for example, bacillus, typhosus, and cholera in their respective serums), that probably a combined action of at least two distinct bodies was necessary to produce the lysogenic action of B. pestis used to infect such serums, one of these bodies being of the nature of "amboceptor" (not altered by heat up to 56° or 60° C.) and the other of the nature of "complement"; and seeing that the latter body is destroyed by heat, it appeared to me the loss of the bactericidal property of plague convalescent's serum when subjected to heat or age and exposure to light was caused by the destruction of the complement present in the fresh blood serum of the plague convalescent, and the following experiments were undertaken to see if the plague serum could be further utilized to demonstrate some other broad facts which have been recently brought to light in the study of parallel phenomena of cytolysis, haemolysis, etc.[3] I summarize the result of my observations in the following table. It may be noted that the observations were made twenty-four hours after infecting the blood serum with a plague bacillary saline emulsion, which is designated throughout this paper by "Pl."

1. Fresh plague convalescent's blood serum + Pl. = no growth.
2. Two weeks' old Pl. convalescent's blood serum + Pl. = good growth of B. pestis.
3. Pl. convalescent's blood serum heated to 56° C. for 5 min. + Pl. = good growth.
4. (Fresh) rabbit's serum + Pl. = rich growth.
5. Rabbit's serum heated to 56° C. for 5 min. + Pl. = very rich growth.
6. Heated Pl. convalescent's blood serum + fresh rabbit's blood serum + Pl. = no growth
7. Heated Pl. convalescent's blood serum + heated rabbit's blood serum + Pl. = good growth.

Thus it will be seen that the heated Pl. convalescent's serum and (fresh) rabbit's serum—each in itself a good culture medium for the plague bacilli—when infected in mixtures yield results as good as fresh Pl. convalescent's blood serum. It appears that what is lost by heating a plague convalescent's serum is restored by the addition of fresh rabbit's serum.

TABLE I.

No.	Description of Rabbit, etc.	Dates of Protection by Haffkinization or otherwise.	Dates of Infection with Live Plague and in what Doses.	Nature of Precipitins.	Nature of Bacteriolysis in Drop Cultures.
1	Black and white	By a special method, May 7th, 1902; May 12th, 1902; and and May 26th, 1902	$\frac{1}{10}$ loopful of Pl., June 14th, 1902; $\frac{1}{2}$ loopful agar culture of B. pestis, July 4th, 1902	Very rich, August 4th, 1902	Great inhibition in the growth of B. pestis used for infecting the drop. Poor growth in clumps (bacteriolysis), July 10th, 1902.
2	White, with blue mark on the eyes	By another method giving attenuated live Pl., May 19th, 1902; special method, July 25th, 1902	$\frac{1}{3}$ loopful, August 28th, 1902; $\frac{5}{6}$ loopful, September 8th, 1902	Very rich, August 4th, 1902	Inhibition of growth in drop culture on September 3rd, 1902; September 12th, 1902; September 23rd, 1902, and those also in small clumps of 4 or 8 (bacteriolysis).
3	White	*Nil*	June 14th, 1902	—	Died on June 19th, 1902, of plague. Diffuse rich growth (no precipitins, no bacteriolysis).
4	White, with blue collar	Haffkinization, July 7th, 1902	$\frac{1}{10}$ loopful, August 7th, 1902; $\frac{1}{2}$ loopful, August 20th, 1902; $\frac{1}{3}$ loopful, September 1, 1902	Very rich, August 15th, 1902	Good inhibition on September 12th, 1902. Hardly any growth; here and there a chainlet, seen September 21st, 1902 (bacteriolysis).
5	Albino, with red collar	By special method, August 16th, 1902	$\frac{1}{2}$ loopful	*Nil*; hardly any; Sept. 8th, 1902	Rich growth on September 8th, 1902; September 23rd, 1902 (hardly any bacteriolysis).
6	Albino, with two red dots on face	Haffkinization, July 7th, 1902; July 18th, 1902	$\frac{1}{10}$ loopful, August 8th, 1902; $\frac{1}{2}$ loopful, September 1st, 1902; $\frac{2}{3}$ loopful, September 8th, 1902	Hardly any, Sept. 5th, 1902	Rich growth in clumps, September 15th, 1902, and September 23rd, 1902 (no bacteriolysin, but precipitin demonstrable in drop culture though not in capillary tube).
7	Fawn, with a blue dot on face	Haffkinization, July 7th, 1902; July 18th, 1902	$\frac{1}{10}$ loopful, August 7th, 1902; $\frac{1}{2}$ loopful, September 1, 1902; $\frac{2}{3}$ loopful, September 8, 1902	No precipitin	Very rich and diffuse growth (no bacteriolysin).

PROPERTIES OF BLOOD SERUM OF IMMUNIZED RABBITS.

This leads me to the study of blood serums of animals immunized against plague, and I have been able to make my observations on a series of rabbits who were immunized by repeated injections of increasing doses of live Pl. bacilli, after receiving a preliminary protection by Haffkinization or otherwise. In this connexion it is of importance to note that the blood serums of such immunized rabbits show one or two points of fundamental difference from those of plague convalescents (human). These are in short (*a*) a protected rabbit surviving a lethal dose of live Pl. Bacilli may be quite immune to a hyperlethal dose of plague, and yet his blood serum may show no difference from that of a control; (*b*) when the blood serum is tested after frequent injections of increasing doses of Pl. bacilli it is found to be rich in "precipitins" and comparatively poor in "bacteriolysins," a character quite exceptional in the serums of human plague convalescents where the bacteriolysin or bactericidin is the most prominent and constant body, and where "precipitin" plays an exceptional and altogether a subordinate rôle; these and other facts have[1] been set forth by me in the *Journal* of the Bombay Medical and Physical Society, August, 1902.

The behaviour of the immunized rabbits' blood serum towards the plague bacilli infecting it is seen in Table I.

From this table it is evident that the rabbits protected by Haffkinization or otherwise, though capable of standing lethal doses of live plague bacilli, may not show in their blood any evidence of their immunity to plague. However, by repeated dosage of increasing quantities of live plague bacilli each time, they may show in time (1) the presence of powerful "precipitins," (2) the presence of bacteriolysins, though these are in comparatively small quantities. It now remains to see how such blood serums behave towards plague bacilli when studied in mixtures—that is, how they compare with plague convalescents' serums studied under similar conditions, to which a reference is made on page 1076. I tabulate the result in Table II.

From that table I learn that in Rabbits 1, 2, and 4 a small amount of amboceptor is demonstrable, though the amount of it is not sufficient to make a suitable saturated combination with all the "complement" of the fresh drop of the control rabbit's serum, while the quantity in the others is scarcely appreciable *in vitro*. It is of interest to observe that the quantity is in the order of the number of injections each rabbit has undergone, and therefore it is quite possible to work up the system of the rabbit to produce a very potent serum by repeated injections of increasing doses of B. pestis.

This leads me to give the reactions of such a serum (very rich in amboceptors), and I have availed myself for this purpose of Roux's serum from the Pasteur Institute. This serum when first studied by me by the drop culture method gave indifferent results, some samples giving a good growth of B. pestis in long chains of fine bacilli, while others at best gave an inhibition of the B. pestis growth with swollen pear-shaped involution forms.[2] Further, Roux's serum, when studied for the presence of precipitin, was found to be exceedingly rich in this property.

Considering Roux's serum is so rich in precipitin and also certainly inhibitory, though not quite bacteriolytic to the growth of B. pestis, the question suggested itself why such a serum was not potent enough for practical purpose. From the observations on the old Pl. convalescent's serum referred to, and also from the fact that fresh rabbit's serum, first distinctly bacteriolytic, lost its property towards B. pestis by exposure to heat, the idea naturally suggested that the potency of Roux's serum might have possibly lowered owing to age and exposure to the high temperature of the Red Sea, through which the serum had to pass before reaching Bombay. To put this idea to the experimental test the following experiments were undertaken, and here are the results:

Roux's serum taken direct from sample bottle + Pl. = growth of Pl. in isolated chains.
Fresh rabbit's serum + Pl. = diffuse rich growth of B. pestis.
Heated rabbit's serum + Pl. = very rich growth.
Heated Roux's serum + Pl. = very rich growth in long chains.
Heated Roux's serum + Pl. + fresh rabbit's serum = no growth.

From the above, the conclusion is inevitable that certain bodies from Roux's serum alter by age or exposure to heat,

TABLE II.

Date and Observation.	Number of Rabbits whose Blood Serum is tested.	Heated or Unheated.	Nature of Admixture before infecting with Plague.	Result and Remarks.
1902.				
Sept. 30 (*a*)	Control (new rabbit)	Not heated	*Nil* + Pl.	Profuse growth and diffuse (no bacteriolysis).
Sept. 30 (*b*)	,,	Heated	,,	,, ,,
Sept. 30 (*c*)	Rabbit (2)	Not heated	,,	Very scanty growth in small clumps in one or two places of the field (bacteriolysin and precipitin).
Sept. 30 (*d*)	,,	Heated	,,	Profuse growth (complement destroyed).
Sept. 30 (*e*)	,,	,,	+Control's fresh serum + Pl.	Growth more than in (*c*) but much less than in (*d*) (complement restored).
Sept. 30 (*f*)	Rabbit (6)	Not heated	*Nil* + Pl.	Very rich in growth.
Sept. 30 (*g*)	,,	Heated	,,	Profuse.
Sept. 30 (*h*)	,,	,,	+Control's fresh serum + Pl.	,,
Oct. 2 (*i*)	Rabbit (4)	Not heated	*Nil* + Pl.	Fair growth.
Oct. 2 (*k*)	,,	Heated	,,	Rich and profuse growth.
Oct. 2 (*l*)	,,	,,	+Control's fresh serum + Pl.	More than in (*i*) but less than in (*k*)
Oct. 2 (*m*)	Rabbit (7)	Not heated	*Nil* + Pl.	Very rich in control.
Oct. 2 (*n*)	,,	Heated	,,	,,
Oct. 2 (*o*)	,,	,,	+Control's fresh serum + Pl.	,,
Oct. 2 (*p*)	Rabbit (1)	Not heated	*Nil* + Pl.	Very sparing growth.
Oct 2 (*q*)	,,	Heated	,,	Profuse growth.
Oct. 2 (*r*)	,,	,,	+Control's fresh serum + Pl.	Less than in (*q*) but more than in (*p*).

Note.

Pl. = saline emulsion of plague culture on agar (one loopful to 30 c.cm. of normal saline) used as the infecting material in the "drop cultures."

and their place may be efficiently taken by admixture of fresh serum to make it perfectly bacteriolytic to B. pestis. In other words, the complements of Roux's serum are destroyed by heat, while the amboceptor remains unaltered, and for the formation of a potent antibody necessary to produce the bacteriolysis of B. pestis an introduction of fresh rabbit's serum rich in complement is essential. Further experiments have been made to show that the complement may be from the fresh blood of man, dog, rat, or monkey, and possibly from any other mammal. That Roux's serum is very rich in amboceptor is shown by the following experiment:

Heated Roux's serum was diluted with an indifferent serum; for example, heated rabbit's serum to the extent of 1 in 240, and a drop of this when mixed with a drop of fresh rabbit's serum has given results quite as good as a fresh plague convalescent's serum when infected with the plague culture.

On a perusal of the foregoing remarks the question naturally would suggest itself why a serum like Roux's serum, rich in precipitin and equally rich in amboceptor, does not yield such favourable result when applied to therapeutic use. One would at first sight expect that the complement or alexin naturally existing in a plague-infected individual would suffice to form a suitable antibody in combination with the amboceptor of Roux's serum, and a successful termination of the case would result. But the experience of all persons who have used this serum in India points no such hopeful issue. Could the complement of the plague patient at a certain stage of the disease be different from the normal complement? It is a well-known fact that after a certain stage of illness (in fatal cases) plague becomes septicaemic—that is, the blood of such patients shows *per se* bacilli, or at all events bacilli become demonstrable by culture. Here is an evidence of either a failure of amboceptor production or alteration of the complement or both, and this fact has been demonstrated by me *in vitro*[1]—namely, that though a patient's blood may show marked production of bacteriolysis in the earlier stages of the disease, the blood from the same patient becomes a very fertile soil to B. pestis towards the fatal termination of the case, even though the blood may be free from B. pestis. What is the actual observation gained by experiment on the subject?

For this purpose, two series of experiments were undertaken: first, to show the absence of amboceptor in dying cases of plague; and, secondly, the alteration of the complement in the blood of such a case; and I tabulate the results as follows:

A.

Heated Pl. convalescent's blood serum + rabbit's fresh serum + Pl. = no growth.

Heated blood serum of a dying plague case + rabbit's fresh serum + Pl. = rich growth.

B.

Fresh blood serum from a dying case + Pl. = very rich growth.

Heated blood serum from a dying case + Roux's serum + Pl. = good growth.

Roux's serum + fresh rabbit's serum + Pl. = no growth.

Fresh blood serum from dying case + Roux's serum + fresh rabbit's serum + Pl. = rich growth.

The same result was obtained in 12 dying cases I have examined, and from this I am led to believe that the complement in a dying case of plague is not only inefficient, but is altered in composition to the extent of neutralizing the complement effect of the fresh rabbit's serum. And, lastly, by a study of the plague bloods as indicated above, it appears to me that changes in a dying plague case occur in the following order:

1. Appearance of amboceptor.
2. Disappearance of the amboceptor and commencement of septicaemia.
3. Disappearance of complement.
4. Alteration of complement in the form of possibly an anticomplement.

Further proof that the blood serum of such cases does undergo fundamental biochemical changes, and the causes underlying these changes are, I believe, possible to demonstrate *in vitro*; but as the experiments are yet incomplete, I propose to defer this part of the subject for a future occasion.

Before concluding I cannot pass over the most vitally-important problem why a suitable complement should not be tried along with a serum rich in amboceptor for therapeutic purposes. It is true one has to bear in mind that an organism in its last stages and under the intoxication of a virulent infection may find it too much to react to a complement coming from another species—for example, the horse—and may break down in the effort to adjust itself on the entry of such a complement foreign to it. But as one has to face the problem *in extremis*, such an attempt seems to me justifiable, and should an opportunity arise I propose to put it to the clinical use at an early date.

I summarize the above considerations as follows:

1. The lysogenic action of Pl. convalescent's blood to B. pestis is brought about by the combined action of two distinct bodies—
   (*a*) One of the nature of amboceptor (not destroyed by heat up to 56° C.), and
   (*b*) The other of the nature of complement (destroyed at 56° C.).
2. A serum from a plague convalescent loses its lysogenic action on B. pestis by age and exposure to light in a few days, and in a few minutes by exposure to 56° C. (probably due to the destruction of complement).
3. This lost property is restored by a mixture of a fresh serum; for example, from the rabbit (addition of complement).
4. Rabbits when suitably immunized to plague produce a serum rich in precipitins, and containing a fair amount of bacteriolysin (to B. pestis).
5. By exposure to heat of 56° C. the bacteriolysis is rendered impotent (owing to destruction of complement); it is, however, to a certain extent restored by addition of fresh rabbit's blood serum (complement).
6. Roux's antipesteux serum is very rich in precipitin, but not particularly bacteriolytic to B. pestis as such.
7. This loss of bacteriolytic property is probably due to age, and is certainly produced by exposure to 56° C. (owing probably to loss of complement).
8. By addition of fresh rabbit's, man's, rat's, etc., fresh serum, however, the bacteriolytic property is restored (fresh complement).
9. Blood serum of dying cases of plague is deficient in amboceptor, and its complement is not only poor but of the nature of an anti-complement.

References.

British Medical Journal, December 20th, 1902. [2] *Bombay Medical and Physical Society's Journal*, April, 1902. [3] Ehrlich, Morgenroth, *Berl. klin. Woch.*, 1901. [3] Bordet, *Agglutination und Dissolution des Haematie.* Bordet, Serums Haemolytique et Antitoxine, *Ann. de l'Inst. Pasteur*, 1899; ibid., 1900. Metalnikoff, Spermatoxin et Antispermatoxin, ibid. Metchnikoff, Sur les Cytotoxins, ibid., 1889 and 1900. Metchnikoff and Besredka, Action de l'Haemotoxine sur l'Homme, ibid., 1900. Weichardt, Sur Antispermotoxin, ibid., 1901. Bulloch, *Practitioner*, 1901. Professor Welch's Huxley Lecture, British Medical Journal, 1902. [4] *Bombay Medical and Physical Society's Journal*, August, 1902.

THE USE OF ANTITOXIN IN THE TREATMENT AND PREVENTION OF DIPHTHERIA.

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The object of this short communication is to give the results of our experience with diphtheria antitoxin in the isolation wards of the Victoria Hospital for Sick Children of Toronto (*a*) in the treatment, (*b*) in the prevention of diphtheria.

1. During 1901 there were an unusually large number of cases of diphtheria in the hospital. In spite of every possible care being taken, every now and then a case would be admitted while in the incubation period, and although suspicious cases were immediately isolated, the disease would spread. We had during 1901, then, about 100 cases of the disease, all proved bacteriologically to be diphtheria. All of them, except a few very mild ones, were treated from the outset with antitoxin, and only 3 died, and 1 of these was complicated with scarlet fever. Unfortunately, no actual note was kept of the number of cases during that year; and although I believe that 100 very nearly represents the total, still the percentage of deaths loses most of its value, and I only give it as a general statement. The number of deaths is accurate.

Since January 1st, 1902, we have kept a book in which all cases have been entered, with details as to age, sex, number of days ill before being admitted to the infectious wards, treatment, etc., and from this book I take the following facts:

Between January 1st and July 7th there were 42 cases of diphtheria admitted to the infectious wards, all of which showed the Klebs-Loeffler bacillus. In nearly all cases the

bacillus has been of the short variety. All except a few of the mildest were given antitoxin at once on admission, frequently before the bacteriological report had been received, the initial dose varying from 1,500 to 4,000 units. The dose was repeated in a few hours if required. In addition, the throat cases had their fauces painted with Loefiler's solution of menthol and sesquichloride of iron, and where the nose was affected a spray of very dilute corrosive sublimate was used.

Of the 42 cases thus treated, 41 recovered completely. One died, a girl aged 13 years, and some details of her case are as follows:

It seems that she had been in the city isolation hospital several weeks before, suffering from diphtheria. She was discharged in May, and was admitted to the Children's Hospital on June 12th for genu valgum. Her history states that she had "kidney disease," and her urine on admission contained albumen and casts. On June 23rd she was sent into the diphtheria ward suffering from a mild attack of faucial diphtheria. So mild, indeed, was the case that she was not given antitoxin. A week later, when her throat was clear and her temperature normal, she developed uraemic symptoms, and died very quickly. She was given 3,000 units of antitoxin when the uraemia developed, in hopes of neutralizing the toxin that might be irritating the kidney, but no amelioration resulted. The necropsy showed the kidneys to be contracted, markedly cirrhotic and white on section. The left weighed 5 dr. 12 gr., and the right 5 dr. 36 gr.

It is thus scarcely fair to call this a case of death from diphtheria, although that disease undoubtedly precipitated the final result. If antitoxin had been early and freely used possibly that result might have been averted, as the cirrhosed kidneys might have been saved the toxic irritation; but one can only surmise on this point.

On the other hand, would the presence of renal disease have contraindicated the use of antitoxin? A large amount of literature exists upon the occurrence of albuminuria after the use of the serum. C. E. Michael, in a series of analyses from the returns of the Metropolitan Asylums Board of London in 1898, found that the use of antitoxin in diphtheria increased the percentage of cases of albuminuria, but, on the other hand, decreased markedly the occurrence of nephritis. McCullom at the Boston City Hospital found that cases of albuminuria of diphtherial origin more often showed a decrease than an increase in the albuminuria after the use of antitoxin.

There was only one case of post-diphtherial paralysis—a very severe one, involving the muscles of deglutition and of all four extremities. It occurred in a boy of 14 years of age, who had a slight attack of nasal diphtheria as a complication of scarlet fever. So slight was the affection that no antitoxin was used. He recovered completely. Thus the only two of our cases that went wrong were cases in which the disease seemed so slight that antitoxin was not used. Several of the 42 cases were of a very severe type.

One, a boy of 7 years, was not admitted to the diphtheria wards until the fifth day of his illness. His swab had persistently shown only a streptococcus infection until then. His pharynx was most extensively involved, and the disease had spread into both nostrils. He was unconscious and delirious. The case looked hopeless, but he was given 4,000 units of antitoxin, and 6,000 more within the next twenty-four hours. He also received 20 c.cm. of antistreptococcus serum, as the infection was a mixed one. Improvement set in at once, and he recovered completely.

I am fully aware that one cannot dogmatize from the results of the use of antitoxin in 42 cases, but the series helps to swell the enormous mass of evidence in favour of the value of the serum in the treatment of diphtheria.

The most extensive report upon the use of antitoxin has been published by Dr. Otto Jelinek, of the State Institute for the preparation of diphtheria antitoxin in Vienna.[1] He has collated the published reports of all observers in all parts of the world to the close of 1898. Altogether he has records of 127,359 case of diphtheria in which the serum was used, with 18,088 deaths—that is, 14.2 per cent. From an analysis of 52,521 cases, showing a death-rate of 15.28 per cent., he gives the following most convincing figures:

Those treated with antitoxin on the	1st	day had a mortality of			5.07 %
"	"	"	2nd	"	"	8.49 %
"	"	"	3rd	"	"	15.56 %
"	"	"	4th	"	"	23.36 %
"	"	"	5th	"	"	30.62 %
"	"	"	after the 5th	"	"	23.36 %

This table includes cases from all parts of the world, in all climates, in hospitals and private practice, amongst the poor and the well-to-do.

One might quote at any length from statistics published by different writers, but suffice it to say that they all tell the same tale of mortality reduced in proportion to the earliness of use and the quantity of antitoxin given.

2. The results of our employment of antitoxin in the prevention of diphtheria have, as far as they go, been equally striking.

In all institutions devoted to the care of children diphtheria is a frequent and dreaded scourge, and the Victoria Hospital for Children has been no exception to the rule. In spite of every precaution which could be thought of the institution has almost constantly had some diphtheria in it, and the Lady Superintendent informs me that during the five years that she has presided there there have never been two successive weeks in which the disease has been completely absent. Twice a year an exacerbation has regularly occurred, namely, when the children were moved over to the Summer Hospital on the Toronto Island in May, and when they returned to the city in October. The usual increase in cases occurred last June, and threatened to become more serious than the average.

In the first week in July every individual in the hospital was given an immunizing dose of from 300 to 500 units of antitoxin, and the dose has been repeated every three weeks since. There are, on an average, 165 souls in the institution. Every new patient has been given a similar dose on admission, and every three weeks thereafter. The result has been most gratifying. Not a single case of diphtheria has occurred in the hospital since the immunizing treatment was commenced, that is, for a period of over five months. During this time the usual number of cases have been occurring elsewhere in Toronto.

Dr. William Goldie, the bacteriologist to the hospital, has on several occasions during the last few years examined swabs taken from the throats of healthy inmates of the hospital, and has always found that a considerable percentage of them showed the Klebs-Loefiler bacillus. He has made similar examinations recently, and finds that, as before, a percentage of apparently healthy throats show the bacillus. Thus the germ is present, but its hosts are immune, and hence no diphtheria occurs.

A large amount of literature is rapidly accumulating, showing the good results that follow the use of immunizing doses of antitoxin. A good summary of this evidence up to date is given by Northrup in his excellent article on diphtheria in Nothnagel's *Encyclopaedia of Practical Medicine*.

As regards the safety of using these immunizing doses of the serum, our experience has also been in accord with that of most observers. Altogether upwards of 1,000 doses have been administered by Drs. Graham, Wright, and Waters, the resident physicians of the hospital. They have been given to patients suffering from all kinds of disease, and yet in no instance have any serious symptoms been produced. Not a single local abscess has occurred. A certain percentage of the cases have shown eruptions, and in three instances these have been petechial. It is interesting to note that the resident physicians have found that the eruptions occur almost exclusively after the first injections; a few have appeared after the second, and none later on. This point does not seem to have been remarked before.

Our experience with antitoxin, then, would lead us to the following conclusions:

1. Every case of diphtheria should be treated with antitoxin. As a rule, the diagnosis is easily made clinically, and it is better in such cases not to wait for the bacteriological report, but to inject the serum at once. Then, if the diagnosis is confirmed by the bacteriologist, one has "stolen a march" of several hours on the disease; if the case proves not to have been diphtherial, one has at least done no harm.

2. The serum should be administered not only early, but also freely, 3,000 units being an average first dose.

3. This use of antitoxin in no way interferes with the employment of any medicinal or other treatment which may be indicated, but all the latter are of secondary importance during the first few days of the illness.

4. All individuals who are exposed to infection should be given immunizing doses of antitoxin, just as all people who run the risk of small-pox infection should be vaccinated.

5. Five hundred units is the ordinary immunizing dose, but 300 seems to be sufficient for children under 2 years of age. The dose should be repeated at least every three weeks while any danger of infection lasts.

REFERENCE.

1 *Das Oesterreichsches Sanitatswesen*, No. 52, 1900, quoted by *American Medicine*, April 13th, 1901.

CLINICAL EVIDENCE FOR A TOXIC FACTOR IN CERTAIN DISEASES.

BY JAMES ADAM, M.A., M.D.,
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THAT certain diseases owe part of their etiology—their exciting cause—to endogenous toxins can be shown by a consideration of certain clinical facts which have not been sufficiently noticed, and which may be regarded as clinical experiments proving such a cause.

In a thesis on asthma written in May, 1900,[1] I drew attention to the fact that asthmatic attacks in working men occurred most frequently on Sundays or Mondays. Of 10 men, 8 showed this "week-end" periodicity; and, of the other 2, one was an architect whose condition of life did not vary greatly throughout the seven days of the week; and the second, a miner, consulted me before I knew of this weekly peculiarity. Further, a schoolboy, whose attacks were irregular during his schooldays, developed asthma regularly on Sundays and Mondays after he started work as a bricklayer. This periodicity was obviously connected with the altered life of the "week end," its rest and good feeding, and its frequent want of exercise.

This regularity is rarely manifest in asthmatic women, because their work is rarely periodic, but I have seen it in a young woman who worked a tailor's machine during the week. And I have known an ironworker escape his week-end attack of asthma when he had to work on Sunday. The want of exercise, especially of open-air exercise, without restriction, and indeed often with excess, of diet, resulted in imperfect metabolism, in a toxic condition of the blood setting up the asthmatic spasm; and the conclusion come to was, that asthma was caused by a spasm-producing toxin acting on a diseased respiratory tract—the nose being the most frequent starting point of such disease as it is the starting point of that tract. At the same time uric acid excess, though shown to be more or less constant in asthma, could be regarded as little more than a symptom, an indicator of other poisons present; for, amongst other reasons, the excess was not closely enough related to the spasm to be its cause.

That this "week-end" periodicity is more than an interesting fact, but one of some clinical—and especially of pathological—significance, is evidenced by its presence in other diseases. It occurred in the following striking case of the variety of urticaria called by Quincke "acute circumscribed cutaneous oedema."

CASE I.—A carter, aged 17, awoke on Sunday, July 29th, 1894, with pronounced brawny, painless swelling of one eyebrow; this disappeared towards evening. The following Sunday morning he found similar swelling of lower part of forehead and of both eyebrows, and towards evening of lower lip. During next day the swelling disappeared. Again the next Sunday, when I first saw him, he had similar swelling of upper lip, as if from a wasp sting, so that tip of lip was on a level with tip of nose. This disappeared during next day; yet the following Sunday a similar recurrence with a similar result. He was treated with purgatives and had no further trouble. Now on Saturday and Sunday this patient had more nitrogenous food and much less work than on other days, and it is to be noted that until seven weeks before his first attack he had been a shepherd always in the open air, and always on the same diet and work seven days a week.

CASE II.—A grocer, aged 24, came to me one Sunday about 1 p.m. to be examined for life insurance. Albumen in the urine was found; it was also found that he had been working late the night before and had lain in bed until he came to me. The insurance company asked for three more examinations of urine. I asked the patient to come any day but Sunday or Monday, found no albumen, and passed him as a first-class life. Complying with a further request he gave me samples of urine on two subsequent Sundays; albumen was found in one.

CASE III.—Again, my friend Dr. Alex. Morton, of Glasgow, kindly allows mention of a case of epilepsy under his care. A lad who worked as a builder during the week, and who loafed about and fed up on Sunday, usually had a fit during the Sunday night. Dr. Morton cut down his diet and increased his open-air exercise on Sundays, so that no more fits recurred for a month. Then Dr. Morton went on holiday; the patient got lax in his régime, and had fits as before. The lad was then taken by another doctor to a consultant, who ordered rest in bed on Sundays and abundant feeding, with the result that the fits were worse than ever on Sunday nights.

But this week-end periodicity occurs also in domestic animals under precisely similar conditions to those already mentioned. "Monday-morning disease"[2] is so called by American ostlers because horses take it on that day. It is also called "black strangury." "Broken-down haemoglobin or haematin" appears in the blood and urine. The change seems to originate in the cells of the voluntary muscles. Woods Hutchinson says:

"Its onset is marked by sudden stiffness and soreness, rapidly developing into complete loss of power in the muscles of the back and hind quarters, so violent and swift in its course as to have been at one time regarded as a form of paralysis. The disease is well known and greatly dreaded by horse owners, as it is not only frequently fatal—often barely 30 per cent. recovering—but seems specially prone to attack vigorous horses in the prime of life. In spite of the most careful examination of the affected muscles, no causal organism has yet been discovered, and we are completely in the dark as to the etiology of this strange degenerative myositis. *The only predisposing condition known is overfeeding and idleness after work*, as it seems to attack city work horses in high condition and stallions just after the breeding season. Indeed, in many of our large American carriage and express stables it is known as 'Monday morning disease,' as it is most apt to appear on that day of the week after thirty-six hours' rest and high feeding. It does not appear to be infectious, although it will often attack three or four horses in the same stable within a few days."

Now, the more obvious exciting cause of this remarkable disease of horses (which I have italicized) is just what during the last ten years has been forced on my attention as regards asthma in working men. Only, from a consideration of all the diseases mentioned this further explanation seems obvious. There is an error of metabolism, probably also of elimination.

Oxidation of nitrogenous food is most active in the muscles. When these are exerted much below their usual activity, and yet get their usual, or more than their usual, share of food, oxidation will be imperfect, and especially will this be so if the owners of those muscles, be they men or horses, keep indoors as in the cases adduced. Consequently the blood gets loaded with poisons. These toxins may be of various constitution and action according to the degree of oxidation, the nature of the food, and the chemical factor involved in the constitutional peculiarities of the individual. As a result, partly of this diversity of toxins and their affinity for special tissue cells, partly of other morbid conditions in the tissues, we get various disease manifestations. The tendency to such manifestations is probably increased by defective elimination accompanying the excess of food and the want of open-air exercise. The uric acid excess, which is more or less constant in asthma, and probably in some of the other conditions referred to, besides telling of imperfect oxidation, is less diuretic than urea. But except as thus hindering elimination, it is a symptom not a cause.

Now, it seems impossible to explain these diverse periodic manifestations in any other way than as the result of toxins. The Fourth Commandment was not made for microbes, and yet to credit them with the cause, as Hutchinson seems inclined to do, is to credit them with more than a human remembrance for Sunday. In any case, to look for microbes in the muscles of the horse in "black strangury," as he mentions having been done, is hopeless.

If they are to be found it will be in the alimentary canal, and in this regard it is to be noted (1) that digestive disorder is an extremely likely and very frequent concomitant of the diseases mentioned and of their predisposing conditions; and (2) that eosinophile leucocytosis occurs in asthma and urticaria, and accompanies the presence of interesting parasites. Gulland,[3] speaking of it in connexion with filariasis, says it protects the body from the toxin of parasites. But microbic agency is not needed to explain the production of toxins in the circumstances here referred to, any more than it is needed for the production of peptones or of snake venom, and until the connexion can be proved need only be kept in mind as a possibility.

Many writers have pointed out the toxic origin of urticaria, but in connexion with the "week-end" asthma and the "Monday morning disease" of horses, Bouchard's observations on the toxicity of urine are important. After pointing out that the urines of sleep are of a markedly convulsive character, he says:[4] "The toxicity of the urine of sleep being only half of the toxicity of the urine secreted during an equal period of the day, we might think that the urine of repose ought to be less toxic than the urine of muscular effort. But it is the contrary that is true. One day of great muscular activity spent in the open air in the country diminishes the toxicity of the twenty-four hours by one-third, and on that day the toxicity does not diminish only during the time devoted to muscular exercise. The toxicity which diminishes

during work remains less during the repose which follows this work and during the sleep which succeeds this day of muscular activity."

But if we admit the presence of toxins in the periodic cases of these diseases—asthma, urticaria, epilepsy, "black strangury"—we must go further, and say that such toxins are probably an essential factor in all cases of these diseases. Periodicity is less marked in other cases, because the variations in the predisposing conditions are less regular or more complex; hygienic errors may be less marked, yet active. If this be so, the endogenous formation of toxins is of interest in view of recent theories as to immunity against microbes. In autointoxication certain organs or tissues deal with certain foods imperfectly; in immunity the production of cytotoxins, haemolysins, etc., is regarded as resulting from an alteration of the normal food-assimilating powers of the tissues. Whether the toxins originate directly in the intestine or in the muscles future investigation must show. In favour of the latter view are two points:

1. The diseased condition of the muscles in "black strangury" of horses.

2. A markedly predisposing condition is defective muscular exercise.

It is to be noted that this deficient use of voluntary muscle is accompanied by perverted contraction of involuntary muscle in asthma, urticaria, and possibly epilepsy. In asthma there is spasm of the smaller bronchial tubes, and probably of the arterioles; in urticaria, spasm of the arterioles. (N.B.—Urticaria and asthma are often concurrent or intercurrent.)

In epilepsy there is, of course, spasm of the voluntary muscles; but the idea of sudden cerebral anaemia in epilepsy is one that dies hard, and will take a good deal of dislodging from the mind of any one who has observed, as I have several times, the initial groan and epileptiform movements which sometimes accompany simple syncope. For example, these symptoms occurred in an attack of syncope brought on in an asthmatic man, aged 54, by slight intranasal interference; and again in a cabdriver, aged 26, while having an abscess opened. In neither case has there been any question of epilepsy before or since. And I have to suggest that just as the poison causes spasm of the involuntary muscles of tubes or vessels in asthma and urticaria, so it may in those of the cerebral vessels in epilepsy. This would not preclude it acting on the cerebral cortex directly, or, indeed, on the nervous system generally, both in epilepsy and asthma. The cumulative effect of such toxin acting over a period of time might not only result in an epileptic fit, but might also do much toward inducing the excitable condition of the cortex which is supposed to exist in epilepsy, or the condition of the central nervous system which Dr. Sidney Martin[5] thinks exists in asthma, "a condition which cannot be defined categorically, but only expressed vaguely as that which is present in the individual predisposed to asthma."

In the "Monday-morning disease" of horses the poison, as might be expected in animals with such muscular power and exercise suddenly immured and overfed for thirty-six hours in dark stables, is much more powerful than those in the human being, and often is fatal. But it may well be of kindred nature; here also the blood vessels seem to be attacked. The difference between the stimulating effect of the poisons in the human diseases and the paralytic effect in that of horses suggests comparison with stimulating and paralysing doses of alcohol and other drugs. While haemolysis is pronounced in the horses, it is to be remembered that blood extravasations are frequent in the human diseases. I have records of several cases of petechiae and blood-stained sputum in asthma; haemorrhagic varieties of erythema are well known, and the last case of epilepsy I saw showed, twenty-four hours after the fit, a diffuse venous duskiness of the skin of the forehead as if from capillary extravasation. This, however, might be fairly regarded as asphyxial.

While such toxins are an efficient cause of the diseases mentioned, in no case can they be a sufficient cause; there must be other factors. These must also demand treatment, but the importance of preventing toxin formation by suitable hygiene and of procuring rapid elimination of such when formed is obvious. For example, in asthma, after intranasal treatment, a teacher took fortnightly doses of blue pill and salines, and has been able to work for the last four years, though previously off work seven years. I think I have also seen benefit in epilepsy from a weekly blue pill, but of this I cannot be sure.

As a final proof of the position here stated, I should like to mention one undoubted case of toxic disease (toxic amblyopia) which is remarkable because it was induced by the same conditions as in "week-end" asthma, because it was pronounced in its effect, and because it was cured by proper open-air exercise.

CASE IV.—A teacher, aged 24, who took little exercise, and spent most of his spare time in study, consulted me in July, 1899. Vision: left barely counts fingers; right, $\frac{5}{60}$; no marked fundal change. Dr. Maitland Ramsay, of Glasgow, to whom I sent the case, and to whom is due the credit of the cure, emphasizing the fact that the defect in the visual field was central, not peripheral, and that there was persistent oxaluria, gave a hopeful prognosis. The patient was at first made to rest in bed in a dark room, and got pilocarpin injections and other eliminants. Later he was allowed to go out with dark protection glasses, and medicinal treatment (hyd. perchlor., ammon. chlor., pot. iod.) was continued. During the winter vision became worse, so that he could not see the chairs in my consulting room, and stumbled against them. About a year after I firs saw him there was no improvement, and a well-known ophthalmologist in Edinburgh gave a very black prognosis, and said patient would never be able to read again. Shortly after this, strychnine having been added to the medicine, the patient thought he began to notice slight improvement; he could just see the largest test types. Dr. Ramsay had pressed for a sea voyage. To this patient was reluctant, but in July, 1900, he went for a trip to Shetland. By the time he reached Kirkwall he could see the town clock. On his return a few weeks later distant vision was $\frac{6}{9}$. A trip to Canada completed the cure, and he could read the smallest print.

Here the toxin hit the organ most strained, but while its effects were most manifest in the eyes they were doubtless widespread, as seems likely from the oxaluria. The importance of a sea voyage in quickening metabolism is obvious.

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CASE OF GENERAL PNEUMOCOCCAL INFECTION, WITH FEW SYMPTOMS.

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THIS case seems worth recording, not because generalized pneumococcal infection is at all rare, but because it shows how few of the recognized symptoms may be present in children, even in fatal cases. Here was a child whose blood and pericardial fluid gave a pure culture of the pneumococcus, who had peritoneal and pulmonary lesions, and whose mediastinum and pleurae were obstructed with effused lymph. His illness, too, had probably lasted six months, and yet for the last month, when under my care, there were hardly any symptoms of acute illness except a few *râles* and dullness at the base of one lung, and at times a slight rise of temperature, which was entirely normal for the last nine days of life.

History.—G. B., a male child of 17 months, was admitted into the Bristol General Hospital on January 21st, 1903, with a history of broncho-pneumonia, which had been recognized for a fortnight. He had been breast-fed, and was always healthy till August, 1902, when he suffered from measles, followed by an attack of diarrhoea. For the next two or three months he was feverish and ailing, but there was no cough. The mother remarked that during that time he was ravenous, and seemed to be always hungry.

State on Admission—His temperature was normal; the bowels were regular, and there was a faint trace of albumen in the urine. In both lungs there were a few scattered *râles*, most numerous at the right base, where there was some dullness on percussion and diminished respiratory murmurs. There was little or no cough. Two days later the temperature rose to 101°, but fell to normal in two days, and afterwards showed only smaller oscillations before it became permanently normal. The lungs cleared up, and frequent examinations failed to show anything except slight dullness and a few *râles* at the right base. The abdomen, the heart, and the other organs were normal, and the patient slept and took liquid food well. However, at times the breathing was very rapid—50 to 60 per minute—the skin was remarkably white and pallid, though the palpebral conjunctivae were not blanched, and there was also very slight oedema of the legs. As there seemed little or no evidence of kidney disease or heart failure to account for this, the blood was examined carefully. The red cells were nearly 5,000,000, while the white numbered 54,500. The differential count made by Mr. F. Leighton, the clerk, gave polynuclear cells 61 per cent., eosinophile 1.6 per cent., small lymphocytes 31.6 per cent., large hyaline 4.6 per cent., neutrophile myelocytes 0.6 per cent., eosin ditto 0.2 per cent., and basophiles 0.2. The haemoglobin was 50 per cent. and a few nucleated red cells were present. There was no enlargement of the liver, spleen, or other glands or evidence of any haemorrhage. The optic discs were normal. In order to avoid the possibility of overlooking any fluid in the pleura from the uncertainty of pulmonary signs in children, a needle was twice inserted into the right pleura, but with no result,

and the chest was examined by the *x* rays. Four weeks after admission the patient died rather suddenly with practically no symptoms except the occasional quick breathing, the pallor, and the abnormal blood count. Shortly before his death another differential count was made with the following result: Red cells 4,310,000, polynuclear 46 per cent., eosins 1.2 per cent., small lymphocytes 45 per cent., large hyaline 4.8 per cent., neutral myelocytes, 2.2 per cent., eosin ditto 0.8 per cent., total leucocytes 73,600.

Necropsy.—The necropsy was carried out by Dr. Newman Neild, to whom I am indebted for the following notes. The body was considerably wasted and anaemic. There was slight oedema of the hands and well-marked oedema of the legs and feet. A growth of fine hair appeared over the whole skin, most marked about the shoulders. The tonsils were normal, the larynx, trachea, and large bronchi were slightly injected. On opening the thorax the anterior mediastinum was found to be full of organizing lymph still somewhat gelatinous. Over the lower lobe of the right lung were thickly distributed masses of soft green lymph. In some places over the lower lobe there were adhesions to the chest wall. On section the whole of the middle and lower lobes showed signs of broncho-pneumonia apparently progressing towards recovery. The upper lobe showed a similar affection to a much less extent. In the left lung the lower lobe showed also broncho-pneumonia in the resolving stage, especially at the base. Thick flakes of green lymph were entangled among the large vessels at the base of the heart. The blood in the heart was fluid, but a large straw-coloured clot was lying in the right ventricle. The valves and the heart muscle were normal to the naked eye. The pericardium contained about half an ounce of greenish serum with flakes of lymph. The right auricle was somewhat dilated. The stomach, oesophagus, and intestines were normal. The lymphatic glands at the angle of the jaw were enlarged, those elsewhere were normal. There was very slight injection of the peritoneum, and a few flakes of lymph were found in the peritoneal cavity. The kidneys were congested, but otherwise normal. The urine showed a cloud of phosphates. The spleen was firm and not enlarged. The Malpighian bodies were translucent and enlarged. The marrow in the ribs was macroscopically normal, that in the femur was rather paler than usual. Cultures taken with due precautions from the pericardium and the heart blood gave a pure growth of the pneumococcus.

Pneumococcal septicaemia is, of course, a common occurrence. In pneumonia, especially if we examine the most severe cases and take the blood shortly before death, it is very frequent, and even in the course of ordinary attacks it can sometimes be found. Prochaska, the latest observer I have noted, found it in 38 out of 40 consecutive cases. It is found, too, in other diseases due to the pneumococcus, such as arthritis, tonsillitis, otitis, empyema, and peritonitis. Foulerton and Dieulafoy found it in their remarkable cases of phlegmonous gastritis, and G. Blumer notes that a general infection of the blood is often present, not only in pneumonia but also in simple oedema and congestion of the lungs. The difficulty raised by Durck's discovery of the pneumococcus in the lungs of some healthy individuals need not trouble us here, for there were ample evidences of its pathogenic virulence in the various organs and cavities. It does not seem certain where the primary entrance of the infection took place.

The lesions outside the lungs are at least as marked as those within them. The broncho-pneumonia may have been a late complication of the original trouble. Some 75 per cent. of the cases of empyema in children are pneumococcal, and Foulerton has shown reason for thinking that many of these are primary and without any lung affection. Indeed, Washbourn proved that the pneumococcus can pass through the healthy lung without injuring it and set up lesions elsewhere. In peritonitis, too, there may be no lung affection, and the disease may simulate typhoid or appendicitis, and commence with an attack of diarrhoea.

A recent case under my care was admitted as appendicitis, and was found to have a large amount of pus free in the peritoneum, which gave a pure culture of the pneumococcus. In this patient, as in G. B., I was struck with the very slight effect on the general activity of the patient which the infection produced, though marked pyrexia existed in the former case and a nearly normal temperature in the latter.

A high temperature is, of course, the rule in adults and older children. Nuthall and Billington,[1] in reporting 13 cases of pneumococcal infection, refer to its markedly remittent character and the "typhoid state," which marks the later stages of the disease. Newton Pitt, however, in a recent discussion, pointed out that with infantile empyema the temperature may be normal throughout the whole course of the disease in certain cases. It is not clear what is the cause of this apyrexia, but it is not likely that the degree of virulence of the special coccus has anything to do with it. If we suppose that in the present patient the acute attack was over before admission, still a month is a long while for the pneumococcus to remain in the blood and lymph with little or no pyrexia.

The blood counts do not seem on the whole to disagree with the *post-mortem* findings, though I was disposed at first to regard the marked lymphocytosis with apyrexia as due to some form of leukaemia. In the pneumonia of adults a marked leucocytosis occurs in all but the most severe or the very mildest cases, as is well known, and is due to an increase of the polynuclear cells, which amount to 80 or 90 per cent., while the lymphocytes are reduced to 4, or even 2 per cent. However, in children under 1 year all this is changed. A leucocytosis is made up chiefly by an increase of lymphocytes, except perhaps in severe intestinal disturbances, when the adult type is seen. Even in healthy children of this age, the statistics of Alf. Japha, of Berlin, show that the small lymphocytes are normally 54 per cent. and the large ones 4, while the polynuclear are only 42 per cent. Thus our count of 73,600 white cells made up of 49 per cent. lymphocytes and 46 polynuclear ones is not out of the way, and Cabot somewhere records a case of pneumonia in a child where the white cells amounted to 94,600 and lymphocytes to 66 per cent. Even the slight excess of large lymphocytes is a common feature in childhood, though it occurs also after the defervescence of pneumonia in adults, where Turck has found them numbering 16 per cent. The eosinophile myelocytes have been looked upon as peculiar to leukaemia, but of late have been found in pneumonia also. On the whole, the blood counts, remarkable as they were, did not aid us much, and unless a culture had been made from the blood during life it is hard to see how the condition could have been determined. Possibly the iodine reaction which has been recently used in pneumonia might have given some indication.

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NOTE ON THE ABSENCE OF B. COLI, ETC., FROM THE NORMAL OYSTER.

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UNLESS it can be shown that the bacillus coli and allied forms, and the bacillus enteritidis sporogenes are not present in shellfish living in uncontaminated waters, the bacterioscopic examination of shellfish for evidence of sewage pollution can be of little value, since it is based upon the search for, and detection of, these species of bacteria. The researches of Professor Boyce and of Dr. Klein, however, seem to have proved that, contrary to what obtains in the higher vertebrates, these microbes are normally absent both from the exterior and from the digestive tract of the principal edible molluscs, and make their appearance only as a result o sewage pollution.

I am able to confirm Dr. Klein's observations, and have no doubt that the presence of organisms of the colon or enteritidis (Gaertner) group is indicative of sewage pollution, and that the presence of the bacillus enteritidis sporogenes is further confirmatory evidence of this.[1]

I have recently examined some 32 oysters from various sources (the majority from the Roach River, a few "Mumbles," "Portuguese," and "Anglo-French"), and with the exception of two—a Portuguese and a Mumbles—not one contained any of the above-named organisms. The method of examination was to scrub the shells in clean water, dry them, and then to open with sterile instruments. The oyster was next cut up with sterile scissors, and two to four drops of the milky fluid were sown into (*a*) two Durham's fermentation tubes, containing litmus, glucose, bile-salt peptone water (McConkey); (*b*) one Parietti broth tube (0.2 c.cm. Parietti); (*c*) two milk tubes, which were heated and incubated anaërobically; (*d*) one surface carbol-gelatin plate. The tube cultures and plates were incubated and examined, and subcultures from suspicious tubes and colonies were made and examined. In a few instances carbol-gelatin plates and bile-salt tubes were inoculated from the contents of the digestive tract alone.

From my observations I have no hesitation, therefore, in concluding that oysters from waters uncontaminated with sewage do not normally contain the colon or allied bacilli or the bacillus enteritidis sporogenes.

[1] BRITISH MEDICAL JOURNAL, February 21st, 1903, p. 417.

ACUTE RHEUMATISM AND SEPSIS.

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THERE are many considerations which suggest that acute rheumatism, with its varied manifestations, such as arthritis, endocarditis and pericarditis, and pleurisy, is a microbic disease, and of late a micrococcus has been repeatedly isolated which some bacteriologists regard as a distinct and specific micro-organism. The question, however, appears to be still sufficiently unsettled to make it interesting to consider certain clinical reasons for thinking that the common septic bacteria are capable of setting up acute rheumatism in a predisposed subject.

An ordinary infectious follicular tonsillitis, which is said to be usually due to the streptococcus pyogenes, is apparently the commonest exciting cause of an attack of acute rheumatism, though no doubt a predisposition strong or weak must also exist, and symptoms very closely resembling or identical with rheumatic fever occur, with scarlet fever and the scarlatinal sore throat. That other local septic processes may precede and apparently cause attacks of acute rheumatism is not so generally recognized. In the following cases (I, II, and IV), an acute local septic process appears to have set up acute rheumatic symptoms. In Case III the arthritis caused was more like what is usually considered a septic arthritis, but the patient was a rheumatic subject. In Case IV there was no history of acute rheumatism in any blood relation, but the joint pains yielded to salicylates, and the patient had an appearance suggesting the rheumatic predisposition.

In acute rheumatism, as in other diseases, predisposing as well as exciting causes are recognized, and there is evidence pointing to the alimentary canal as the seat of the secondary or predisposing cause. This source is suggested by the great effects which constipation and changes in diet have on the symptoms of acute rheumatism, and by the therapeutic value of calomel and salicylates, which both have antiseptic action. The most obvious hypothesis, then, is that the septic products derived from the septic focus are much assisted in producing an attack of acute rheumatism by a poison which is absorbed from the intestinal canal. If the predisposition is strong, the exciting cause may only need to be slight, and, on the contrary, if the predisposing cause is slight or the exciting cause is very strong, similar symptoms may nevertheless be evoked; but under these circumstances they may more resemble septicaemic processes usually recognized as such and pyaemia. It appears to be the predisposing element in the cause which is affected by salicylates, as they, generally speaking, act best in classical cases of acute rheumatism, where there is often a strong personal and family predisposition. These remarks are largely speculative, but the cases seem to suggest a view of the connexion between septic and rheumatic arthritis which is not commonly taken.

CASE I.—R. M. was a little girl, aged 4, amongst whose near relatives one at least had had several attacks of acute rheumatism. Her illness began in August, 1897, with an acute axillary abscess on the right side, the result of a small septic wound on the hand. After the axillary abscess had been opened, it was noted on September 7th that both knees were swollen and painful, there being fluid in the joints, and the right elbow-joint was also painful. An abscess had developed on the back of the left hand; the temperature was 104°, and there were two rigors in the afternoon. The abscess on the left hand was opened and thick pus escaped. On September 8th the knees were much less swollen. On September 14th the temperature was lower; there was no swelling of or effusion into any joint, but there was resistance to full extension of the left knee, and on September 30th a small abscess was opened in the left popliteal space; at this date the temperature had been normal for some days. Recovery was rapid and complete. In this case obvious septic foci induced a simple synovitis, which quickly subsided, the patient having a decided family history of rheumatic fever.

CASE II.—C., a girl of 12, belongs to a family with a tendency to acute rheumatism, her father having had rheumatic fever twice, and an elder sister chorea twice. Her illness began with high temperature and an erysipelatous inflammation of the side of the nose, which spread on to the cheek. A small subcutaneous abscess formed in the cheek, and was incised. Within a few days pleurisy, with effusion on the left side, developed, and then an abscess in the anterior part of the right labium majus, which was incised. The pleurisy cleared up and the child recovered completely.

Here the rheumatic tendency seems to have been awakened by the septic inflammations to the extent of producing pleurisy and serous effusion.

CASE III.—S. S., aged 22, was the wife of a labourer, who had had rheumatic fever some years before, and had been delivered of her second child four weeks before I saw her. She had not got on well since her confinement, but had not been attended by a doctor. On December 28th, 1899, I first saw her, and found that she had a bad headache and severe pains in the legs, her pulse was 130, and her temperature was 104.5°; two days before she had had a shivering fit and general pains. On December 29th there was effusion into both knee-joints, and the right knee was the most affected. On December 30th she was still suckling her baby, although there was not much milk in the breasts. The apex beat of the heart was felt in the nipple line, and a soft systolic murmur was heard at the same spot and in the axilla. On January 1st a shivering fit occurred, and the temperature, which had been lower, again rose to 104°. On January 2nd she was perspiring very freely, and the hypogastrium was tender on pressure, but examination per vaginam revealed no induration around nor fixation of the uterus. There was a reddish offensive discharge. By January 26th the temperature had gradually fallen nearly to normal, but was still generally raised a little in the evening; there had been moist bronchitic sounds at the base of the left lung. On January 31st the temperature again rose to 103°, and the pulse to 120; while the swelling of the knees, which had subsided a little, became greater again. On February 12th the right knee was cool, and slight movement was possible, but the left was very tense and tender; an exploring needle drew off a few drops of blood-stained serum. After this the tenderness and swelling of the knees got less. On May 27th she could walk about the house, the right knee could be flexed to a right angle, but very little movement was possible in the left knee-joint.

This was a case of arthritis in a patient with a tendency to acute rheumatism, the exciting cause being probably puerperal sepsis.

CASE IV was that of a married woman, Mrs. P., aged about 25, who had never had rheumatism before, nor could any family history of rheumatic fever be obtained, but her complexion was bright, with injected venules on the cheeks and dark brown hair, a combination which seems to be often associated with a predisposition to acute rheumatism. It is worth remarking that her husband and several of his relations had had rheumatic fever severely, though he had not had an attack recently. She was delivered of twins in August, 1899, not being attended by a medical man. Since then she had been up and doing some house work. Five weeks after confinement on September 21st she had several rigors, and pains all over her. I saw her first on September 24th. She then had very severe general pains, and was unable to move her legs on account of pain in the joints, and her right shoulder also was very painful. The hypogastrium was very tender on pressure; the pule 120 and temperature 103°. She was given 20 gr. of sodium salicylate in solution every two hours, but this was vomited, and she had several more rigors. On September 26th she began to take salicin in 20-grain doses every two hours, and on September 30th the temperature was 99° 100°, and there was considerable improvement in the pain. On September 31st the temperature had again risen to 101°-103°, and there was delirium with hallucinations. Salicin was stopped. On October 2nd 15 gr. of sodium salicylate was again given every two hours in powders, and was retained. By October 5th the pains were much better and the temperature normal; there was no heart murmur. On October 16th there was only slight tenderness of the joints, the abdomen was not at all tender. Recovery was complete.

This was a case of acute rheumatism or multiple septic arthritis, differing from ordinary acute rheumatism in the rigors, and probably elicited by a local septic condition connected with parturition.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

IODIDE RASH.

ON April 14th, 1903, I was called in hurriedly to see a patient, E. W., aged 12, who was said to be dying. I found her reclining on a sofa and conscious. Her mother said the girl had just had a fit. What immediately called attention was the condition of the girl's face. The forehead, cheeks, lips, and chin were covered with a rash. Papules, hard and shotty, were felt; some of these were becoming vesicles, and some were fully-developed vesicles, loculated and umbilicated; some were becoming purulent, and were surrounded by a narrow zone of inflammatory redness. The pustules were most abundant under the eyelids, where they were confluent, and on the forehead. There was one vesicle as large as a split pea in the right wrist, and five or six papules on the back of the right wrist and hand. There were no other spots anywhere on the body or in the mouth. The rash had exactly the appearance of that of small-pox. The temperature was 101.4°. There had been no headache or backache, and the child had only been confined to the house for three or four days.

On inquiry, I was given the following history: The child suffers from leucocythaemia (there is also heart disease present), and on March 30th had visited a hospital in Liverpool and received a prescription which I found advised 3-gr. doses of potassium iodide three times daily. The next day some

hard spots came out on the forehead, and these continued coming out in crops since and were getting worse. Some scabs had fallen off, but had left no cicatrix.

The child had been revaccinated twelve months ago. There was an indirect chance of infection of small-pox. The medicine was stopped and arsenic substituted. Although I considered the case due to iodide, it seemed suspicious enough to ask the medical officer of health to see her also. This he was kind enough to do the next day. He considered the case doubtful, yet the signs were sufficient for the house to be put into quarantine. When we met again two days later, there could be no doubt that the rash was due to iodide. The whole was subsiding rapidly; the vesicles were drying up, not forming scabs, and some of the scabs had fallen off without leaving any scar. Since then the whole face has cleared up, and there is now no sign of what has occurred beyond a little scaliness and brownish discoloration.

The distribution of the rash is a point to be noted. In all the other cases of iodide rash I have seen it has been present on the body also. I believe that the rash of small-pox too sometimes comes out in crops, but not for such a time as fourteen days.

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FURTHER NOTES ON A CASE OF ABDOMINAL ACTINOMYCOSIS.

IN the BRITISH MEDICAL JOURNAL of November 15th, 1902, I published the report of a case of abdominal actinomycosis in a girl aged 15 years, in which there was an apparent cure. I have now to report the reappearance of the disease in the lungs, with fatal termination.

At the time of the last report all abdominal induration had disappeared, the sinuses in the iliac fossae were practically healed, and cachectic symptoms had cleared up, the girl being in good general health.

In January, 1903, she came to the out-patient department of the hospital looking very ill and wasted, with a troublesome cough, and was admitted as an in-patient under the care of Dr. E. L. Fox. The abdomen was found to be quite soft all over, except for a little induration at the site of the right iliac sinus. On removing a scab over this a little pus was found. At the base of the right lung dullness on percussion and weak breath sounds were found. A considerable amount of sputum of purulent character was expectorated, and in this Dr. Bushnell, the pathologist to the hospital, found "granules of streptothrix actinomycotica and motile bacilli." The patient became progressively more emaciated, with "hectic" temperature, and died at the end of March, 1903. Application for a necropsy was refused.

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EMBOLISM IN ACUTE RHEUMATISM.

ON March 16th I was called to see a boy, aged 8, whom I found suffering from well-marked symptoms of acute rheumatism with endocarditis. This was his first attack. There was also considerable broncho-pneumonia of both lungs. At the apex and in the axilla a well-marked systolic murmur was heard. Pericarditis did not develop during the course of the illness. He had always enjoyed good health previously.

On March 24th I found him in the following condition, which, his mother informed me, came on quite suddenly during the night: There was complete right hemiplegia, with aphasia, the right side of face, arm, and leg being involved. The upper branches of the facial nerve were not affected, as the orbicularis palpebrarum and frontalis muscles were intact, this fact clearly pointing to a supranuclear lesion. It was also noted that the voluntary movements of the face were more impaired than the emotional. Electrical tests were not applicable. The hypoglossal nerve was also involved, the patient being unable to put out the tongue straight, but it deviated toward the paralysed side. The arm was more completely paralysed than the leg. The thoracic and abdominal muscles were not involved. Hemianaesthesia was present, and was more marked in the arm. The deep reflexes were increased in the arm and leg, ankle clonus being well marked.

Evidently there had been embolism of the left middle cerebral artery, with softening of the parts supplied by it, including the posterior part of the internal capsule.

At the end of nearly five weeks there has been practically no improvement in the hemiplegia and aphasia, though the mother is inclined to think the patient moves his right leg slightly at times. I have been unable to verify this. Whether the condition will remain permanent or not remains to be seen. No secondary contractions have developed. The condition of the lungs has considerably improved, but there is still some trace left of congestion at the bases.

The case is interesting, as, according to an eminent authority, embolism in the acute endocarditis of rheumatism is rare.

Lydney, Glos. A BROWNLIE, M.B., Ch.B.

THE TREATMENT OF CHRONIC ECZEMA.

FOR the past few years I have had under my care several patients suffering from chronic eczema. From time to time I adopted the many forms of treatment laid down in text-books for the cure of this intractable disease; and the results I obtained from them have not been by any means satisfactory. I, therefore, carried out a form of treatment which has given very good results.

I had under my care some time ago a boy with two patches of chronic eczema situated on the back of the neck. One of those I treated with a local application of liq. plumbi and liq. carbonis detergens, together with a nightly application of ung. hydrarg. ox. flav. In the other I selected an area about the size of a crown piece, brushed it over with a 5 per cent. solution of cocaine, and then painted this area, thus anaesthetised, with equal parts of tincture and liniment of iodine. A fresh application was made every night, and a new area started every other day.

I extended this method of treatment over a period of three weeks; at the end of this time the part to which I applied the iodine was almost cured; the other was in much the same condition. With an occasional application of iodine the patch which I had already treated daily with it soon became completely cured. I therefore adopted the same line of treatment over the whole broken surface, which very soon showed signs of improvement, to the great delight of the patient.

The precaution was always taken to apply the solution of cocaine to a limited area, so that absorption might not cause any unpleasant results. No constitutional treatment was adopted in this case; the patient lived under precisely the same conditions as before.

I have since treated patients similarly affected, and always found this method of treatment effectual when others failed to do good.

Dorchester. PATRICK HEFFERNAN, L.R.C.S.E., etc.

REPORTS OF SOCIETIES.

STAFFORDSHIRE BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

W. HIND, M.D., President, in the Chair.

Thursday, April 23rd, 1903.

REMOVAL OF UPPER JAW FOR MYELOID SARCOMA.

MR. CHOLMELEY showed a girl, aged 15, whose left superior maxilla was removed for myeloid sarcoma. There was a history of four months' pain and swelling. The case was exhibited to show the small amount of deformity and the clearness of speech owing to the excellent toothplate made by Mr. Grove, of Wolverhampton and Walsall. The difficulties to be overcome were that no suction action was available. The plate was in touch with very tender structures, and though it had to be fixed in firmly enough not to fall out, yet the patient would have to be able to remove it and replace it easily for cleaning purposes. The plate was covered on the upper surface with vellum rubber to make it soft, and was fixed by gold wire to an incisor tooth in front and a molar at the back. Too firm fixing to the teeth would cause the teeth to be dragged out of position on account of the softness of the jawbones in a girl so young and the strong action of the muscles of the cheek on the left side. The patient's speech was very plain.

POST-MALARIAL LARYNGOPLEGIA.

Dr. CODD read notes of a case.

A missionary, aged 25, stationed at Colombo, was badly bitten by mosquitos. He was down with fever a fortnight after arrival, but the fever did not run its normal course; it lasted two days, and did not intermit. It recurred at irregular intervals. On April 2nd, 1902, he travelled from Colombo to Mysore City, three and a-half days' continuous travelling. The last twelve hours he was in a stuffy carriage with malodorous natives. On arrival he noticed that his voice was gruff. He began

to vomit at once, with severe straining. He had a rigor, and hot and sweating stages; the temperature kept above 104°. The vomiting lasted twenty-four hours, and at the end of that time he was completely hoarse. His doctor described it as "nervous sickness," and did not suggest malaria, but it seems evident that it was that disease. His voice had improved slightly, but was now quite stationary. He could now engage in conversation, and the hoarseness was not easily detected, but preaching or declamation was impossible. The left vocal cord lay motionless in the cadaveric position. On phonation the right cord crossed the middle line, and came into contact with the left, but the left had no tone. There was thus adductor, abductor, and tensor paralysis of the left cord. Phonation would be complete but for the tensor paralysis. The pupils were equal and reacted. The pulses were equal. No pressure signs or tracheal tugging. No abnormal signs in chest or abdomen. Knee-jerks very brisk: no ankle clonus. Internal faradization was not successful. On faradization of inferior laryngeal externally no movement of left cord noted. Blood no organisms. No leucocytosis or oligocythaemia.

Post-malarial neuritis was not uncommon, but malarial laryngoplegia was not common, but this, the author believed, was the pathology of this case.

Malignant Disease of Pharynx.

Dr. Codd also read notes of the following case:

A man, aged 60, was first seen on August 29th, 1902. History: The affection began with dysphagia seven months before admission. This got worse until two months before he could not swallow solids. For a fortnight before he was seen he had been unable to swallow liquids properly. On admission, he had not swallowed for twenty-four hours, and then only a teaspoonful. The bougie passed readily, but into the trachea: it would not engage in oesophagus; laryngoscopically it was seen to directly enter the larynx. Larynx: The epiglottis was tilted to right. The amount of tilting was shown by orienting lines. There was great infiltration into the posterior pharyngeal wall, forming with epiglottis a narrow oblique chink through which perfectly normal cords could be seen, and just the tips of the arytenoids, the left being much anterior to the left lung; palpation hard. A smooth swelling of posterior pharyngeal wall low down was discovered. Immediate gastrostomy was performed by Dr. Deanesly, and feeding by the stomach was carried out. A fortnight later he could take food by the mouth, and the swelling was less, the opening into larynx broader, the aryepiglottal folds more easily seen. He continued for some time to take food, but latterly by the natural passage. He was more and more dependent on tube. He was now confined to bed. He was cachectic, and only occasionally swallowed. He was fed by the tube exclusively. This case was peculiar in that the oesophagus was obstructed at its commencement, and bougies could not be induced to enter it, but slipped with the greatest ease into the larynx. The author had a case similar in many respects in which every one who attempted to pass a bougie got it into the larynx, but he was able by the use of the laryngoscopic mirror to pass a laryngeal probe into a small hole that represented the beginning of the oesophagus. He then passed Lister sounds, and eventually a No. 2 bougie, by aid of the mirror but not without, and he recovered his power of deglutition. It was, however, a case of syphilitic disease of the larynx.

Other Cases.

Dr. Codd also showed a case of cerebellar tumour; two cases of syphilitic leukoplakia of the tongue; a case of pseudohypertrophic myopathy of the right arm; and a specimen of gliosarcoma of the left frontal lobe of the brain.

Amputation at Hip joint for Sarcoma of Femur.

Dr. E. Deanesly showed this case.

A man, aged 27, was admitted on October 11th, 1902, with a firm ovoid swelling fixed to the middle of the right thigh. A brother had undergone amputation of the thigh for a growth and had died about twelve months later. A tourniquet was applied above two large steel pins transfixing the thigh close to the groin, and, after confirming the diagnosis by an exploratory incision, the limb was amputated at the hip-joint by antero-posterior flaps. Haemorrhage was completely controlled, and the operation carried out without difficulty or haste. The adoption of this simple method of controlling haemorrhage rendered amputation at the hip-joint as safe and almost as easy as amputation through the thigh. The operation was accompanied by no shock and the wound healed by primary union.

The growth (which was shown as a specimen beautifully mounted in glycerine, with its colour preserved by Mr. J. C. Clayton) was a small spindle-celled sarcoma originating in the periosteal layer of the middle of the femur.

Tarsectomy for Relapsed Talipes on Both Sides.

Dr. Deanesly also showed this case:

A boy, aged 5 years, had had talipes equino-varus from birth and had undergone several previous tenotomies; but had relapsed. On admission there was extreme talipes equino-varus the soles of both feet looking directly inwards, and the leg muscles on both sides being almost atrophied. On November 7th, 1902, the left foot was operated on, a wedge-shaped piece of the tarsus being removed by a curved dorsal incision. The tendo Achillis and plantar fascia were also divided, and the position of the foot completely rectified. The following day it was put up in plaster in a position of dorsiflexion and eversion. On November 22st a similar operation was performed on the right foot.

The boy was now able to walk without any support with the soles flat on the ground. The condition of the muscles was improving.

Excision of Rectum for Carcinoma of Middle Third by Sacral Route (Kraske).

Dr. Deanesly showed this case:

A man aged 64 had had frequent motions and rectal discharge for two years, tenesmus for twelve months, and occasional passage of blood for some months. A hard mass surrounding and constricting the bowel was felt about 3 in. from the anus. The anal portion was healthy. The stricture just admitted the finger. The growth was movable on the surrounding parts. On November 20th, 1902, ether was administered to the patient, lying prone with the pelvis raised on a block and knees resting on a stool. The sacrum was exposed by raising a large curved flap convex to the left side and the coccyx and lower two pieces of sacrum excised. The peritoneum was opened, the rectum drawn out and divided about 1 in. above the growth. The rectum and growth were then detached from the bladder, prostate, and urethra down to the anus, and there divided. About 5 in. of bowel were removed. The upper end could not be brought down to the anal portion and was stitched to the upper angle of the wound, a Paul's tube being tied in. The peritoneum of the bladder was stitched to that of the rectum, a gauze drain inserted, and the rest of the wound closed. Recovery was uneventful. Control of artificial anus was necessarily absent. The growth was shown as a mounted specimen. It was a columnar epithelioma.

Epithelioma of Tongue.

Dr. Deanesly showed this case. The patient was a man aged 67, and had noticed a painful sore on his tongue for eleven weeks. The growth affected the left half of the tongue in its posterior two-thirds, the posterior border of it being close to the anterior pillar of the fauces. The method of operation adopted was that introduced by Sedillot and Syme, and recently recommended by Kocher in the latest edition of his textbook. The advantages claimed for this method over Whitehead's removal through the mouth were the much better exposure of the growth, especially when this extended far back, and the readier access to the vessels. Compared with the method of opening the mouth through a curved incision in the neck, formerly introduced by Kocher, the present method offered the advantage of a minimal interference with the patient's swallowing powers, an advantage of the highest importance in reference to the danger of subsequent pneumonia, especially when the posterior part of the tongue had to be removed. Against this the glands had to be dealt with by a subsequent operation. As the latter procedure was, however, incumbent in every case, and should be of the most thorough and extensive character, it was decidedly better that this should be performed independently, either before or after the removal of the tongue. In view of the rarity of recurrence in the tongue itself, and the almost invariable recurrence in the glands of the neck, it was quite unnecessary, and indeed prejudicial, to remove the whole tongue in every case, but highly important to deal thoroughly with the neck in every case. Dr. Deanesly also showed a case of cancer of the tongue in a woman 27 years of age, four months pregnant. The right side of the tongue was removed, and dissection of the right upper anterior triangle of the neck carried out at one operation. The pregnancy was unaffected. Recurrence took place one year and eight months later in the lower part of the neck. The sterno-mastoid muscle and affected parts were removed, including the whole of the internal jugular vein down to its junction with the innominate, together with the inner half of the clavicle. This case illustrated some of the points referred to in the last. The youth of the patient was remarkable, and the cancer of the tongue in her sex very uncommon compared with its frequency in men. Although the structures of the anterior triangle were very thoroughly dealt with, including the submaxillary gland and the upper part of the sheath of the vessels, the subsequent result showed that the infection had already spread still more widely. At the second operation the jugular vein was found filled with growth, of which the lower end projected freely into the innominate. The sternomastoid muscle and the carotid sheath were infiltrated with growth, and in the course of the operation the phrenic, sympathetic, and vagus nerves were displayed. The vagus was cleared for 4 in., and was swollen to nearly twice its size where it passed through the growth. The extent of the disease was much greater than was anticipated, but the operation having been commenced, it was deemed better to complete it as far as possible, and remove all visible growth. The wound healed by primary union, and the loss of half the clavicle caused little inconvenience.

RECURRENT EPITHELIOMA OF ORBIT.

Mr. DEANESLY showed a case.

A man, aged 48, on January 7th, 1900, first noticed something wrong with his right eye, while taking aim with a gun. He consulted an oculist, who found a growth in the orbit. This was removed by a Birmingham surgeon in June, 1900. There were signs of recurrence three months after the operation, and further operation was not recommended by the surgeon. In August, 1902, the condition caused much pain. The eye was pushed forwards by a growth in the outer part of the orbit, but its sight was little impaired, and the ophthalmoscopic appearances of the fundus were normal. The outer canthus, which had been divided at the first operation, appeared to be involved in the growth. No enlarged glands could be felt in the neck. September 4th, 1902, the right external carotid and its facial branch were ligatured in the neck and two small lymph glands removed. The contents of the orbit were then exposed through a triradiated incision, with its posterior limb passing along the zygoma. The affected portions of skin, the whole malar bone and the frontal process of the frontal, the growth and orbital contents were then thoroughly excised. The maxillary antrum was opened and inspected but was quite healthy.

Recovery was uncomplicated, and so far there was no sign of recurrence. The absence of disfigurement was remarkable.

GASTRO-ENTEROSTOMY FOR CHRONIC ULCER OF STOMACH.

Dr. DEANESLY showed this case.

A man, aged 46, had suffered from indigestion and vomiting of food off and on for seven years. Two years before admission to hospital he vomited about half a pint of bright blood. Since then he had vomited food almost daily. Nothing could be felt by the abdomen, and the stomach when inflated did not appear dilated. Anterior gastro-enterostomy was performed on January 22nd, 1903. The stomach was carefully examined externally, but, beyond a circular scar in the stomach wall near the pylorus, nothing was detected. The interior of the stomach was not explored. There was no constriction of the pylorus to be made out externally. The operation was followed by more pain than usual. The second morning after the operation he began to expectorate thick yellow pus, and on the third morning there were signs of pneumothorax on the right side after an attack of very severe pain in the chest some hours previously. The pulse rose to 158, the temperature to 101°, and the respirations to 40. About 4 or 5 oz. of pus were expectorated during the next few days, the symptoms subsided, and the physical signs gradually cleared up. Apparently a previously existing subphrenic abscess had burst into a bronchus, together with some escape of air or gas into the pleural cavity. Regurgitation of bile into the stomach began soon after the operation, and continued daily for the first three weeks. Lavage twice daily then produced great improvement, and the patient returned home six weeks after the operation in good health, with improved appetite, and free from pain after food. Vomiting of bile, however, persisted, and became so troublesome that he was readmitted, and a second operation performed. The cause of the regurgitation appeared to be adhesion between the two limbs of the anastomosed coil by which they were kinked at an acute angle where joined to the stomach. In this way it was difficult for bile to pass from the afferent to the efferent loop without entering the stomach. The intestine was divided near the stomach, the distal end closed and the proximal (duodenal) end implanted laterally into the efferent loop of bowel about 6 in. from its attachment to the stomach.

This operation was completely successful, and no vomiting or discomfort had occurred since.

Dr. DEANESLY showed another case of anterior gastro-enterostomy in a man, aged 37. This case closely resembled the above in its clinical history, and the operation was performed about the same date. The after-course, however, was uncomplicated, there had been no regurgitation of bile, and the symptoms, pain and vomiting, had been immediately and completely relieved.

CHOLECYSTOTOMY.

Dr. DEANESLY showed this case. A very stout, heavy woman, aged 52, was admitted to hospital in June, 1902, moderately jaundiced and with a tender enlarged liver. She had suffered from similar attacks for many years. With the patient on her back, lying on sandbag passing transversely across the upper lumbar region, the liver and epigastric region were thrust forward while the bowels fell downwards away from the liver. A long vertical incision a little to the right of the middle line with its upper end reaching to the xiphisternum exposed the upper surface of the liver and its anterior edge. If the liver was now pulled strongly upwards and rotated under the diaphragm the whole biliary apparatus from the gall bladder to the duodenum was exposed to sight and touch. This method was adopted and found to be a great improvement on account of the ease with which the common duct could be examined and explored, and this in a very obese female. Two moderate-sized stones were removed from the gall bladder and a catheter passed down the duct into the duodenum. Recovery was uncomplicated, except by some trouble from bronchitis.

ENTERECTOMY IN UNREDUCED FEMORAL HERNIA.

Dr. DEANESLY showed this case.

A man, aged 51, had been ruptured for fourteen years, but had never worn a truss. It was generally completely reducible. The exact time of strangulation was uncertain, but the hernia was stated to have come down a fortnight before admission without pain. He declared that he had vomited incessantly for a fortnight and had passed no motion for nine days. A tightly distended femoral hernia the size of a tangerine orange was found on the right side. The sac contained dark offensive fluid and about 3 metres of small intestine very tightly constricted by the neck of the sac. The bowel had not lost its lustre and was not excessively dark, but there were several deeply indented ischaemic grooves at the site of stricture, and no sign of return of circulation in the central portion of the loop could be detected, except close to the mesenteric attachment. An attempt was first made to infold the grooves in which the vitality of the bowel was certainly lost, but the result was not very satisfactory, and about 6 or 7 in. of bowel, including the whole affected loop, were then excised, and the ends reunited by circular enterorrhaphy. Two continuous sutures were employed, the first through all coats, the second through sero-muscular only. The upper end of the bowel was nearly double the size of the lower. The reunited bowel was reduced through the enlarged hernial opening, which was then closed. Recovery was quite uncomplicated.

HYDATID CYSTS OF LIVER.

Dr. DEANESLY showed this case.

A miner, aged 31, was taken ill three weeks before admission to hospital on January 7th, 1903. He had pains in the bowels, and his skin became yellow. He had had a somewhat similar attack two years previously. On admission, he was slightly jaundiced, looked ill, and had a temperature varying between 100° and 103°. The lower part of the thorax on both sides, but especially on the right, was much expanded. Liver dullness extended from the third rib in mammary line to three fingerbreadths below the costal margin, at which point a rounded mass was plainly felt and thought to be the gall bladder. Liver dullness was continuous across the epigastrium with the splenic dullness. The diagnosis was gall stones with inflammatory complications. The gall-bladder region was exposed by an oblique incision, and the mass felt there on incision found to consist of a dense spurious capsule enclosing innumerable hydatid cysts. After evacuating these as completely as possible, a cavity remained passing and into the upper and posterior part of the liver as large as a man's double fist. A second smaller collection of cysts was also dealt with near the edge of the liver. The gall bladder was examined and found quite healthy. The cavity was drained with gauze and tube. Nineteen days after the operation the patient, who had been progressing well, was suddenly seized with intense pain in the right side of chest and collapse, followed by a rise of temperature to 104.8°. Twenty-four hours later his condition still forbade a general anaesthetic, and the pleura was opened in the right fifth interspace, and several pints of pus containing numerous cysts were evacuated. The patient gradually improved, and four weeks later the chest was drained more freely by removal of a portion of rib and making direct communication between the two cavities through the diaphragm. He was now attending as an out-patient.

RETROPERITONEAL HYDATIDS.

Dr. DEANESLY showed this case.

The patient, an ex-soldier, aged 58, who had never served abroad, was transferred from the medical wards on May 29th, 1902, on account of an abdominal swelling of obscure character. The lower half of the abdomen was occupied by an irregular lobulated mass, relatively dull on percussion. A little clear fluid had been obtained by puncture, but this was evidently not free in the peritoneal cavity. Patient was ill-nourished and weak, with an irregular heart and considerable pyrexia. Hydatids were not suspected. Owing to the state of the heart an exploratory incision was made in the median hypogastric line under eucaine anaesthesia. The swelling at this spot was covered with adherent coils of small intestines, and was not readily accessible. Under general anaesthesia a second incision was made in the right iliac region, when the intestines were found free from adhesions. On separating the coils a large retroperitoneal mass was exposed and punctured. The clear, watery character of the fluid which escaped showed the presence of hydatids. The main sac was incised and the opening enlarged until the whole hand could be introduced and passed into a retroperitoneal space extending from the level of the navel to the bottom of the pelvis. From this space literally hundreds of daughter-cysts, from the size of a cocoanut to that of a pea, were scooped out. Many were spherical and fully distended, and in shape and size resembled ping-pong balls. A large drainage tube was inserted, and patient made a gradual recovery. Subsequently the cavity was drained for a time through an opening made in the rectum, but a sinus still persisted in the iliac fossa.

COMPLETE MASTOID OPERATION FOLLOWED BY SKIN GRAFTING.

Dr. DEANESLY showed this case.

A boy aged 15 had suffered from chronic discharge from left ear with much impaired hearing ever since childhood. The mastoid operation was performed in November, 1902, and followed by grafting of the cavity through the enlarged meatus a week later. Healing was complete in six weeks and hearing much improved. Every part of the tympanum and mastoid cavity could now be seen covered with epithelium, and there was no trace of discharge.

A CASE OF CHRONIC GASTRIC ULCER TREATED BY GASTROTOMY AND EXCISION.

Dr. BLUMER read notes of a case.

E. S., aged 20 years, a well-nourished single woman, had suffered periodically during the past two and a-half years from pain in the stomach. The first attack was in July, 1900, when it lasted for a month; then at Christmas for six weeks. In July, 1901, she vomited, and had pain both before and after taking food. This persisted until September, when streaks of dark blood were noticed in the vomited matter on one day only. Treatment relieved her for a few weeks, but the symptoms soon recurred, and she was admitted into the Staffordshire General Infirmary, under Dr Charles Reid. On a diet of peptonized milk the pain and vomiting ceased, but on her return in due course to full diet and exercise the pain returned. She was then fed by nutrient enemata, when the pain again ceased. When she left the infirmary she was free from pain, but it recurred in a month, and persisted uninterruptedly until the middle of April, 1902. She had another attack of pain and vomiting in June, which lasted three weeks. On July 2nd she was seized with violent pain (lasting twenty-four hours) in the left side, which spread over the abdomen and through to the shoulder. It recurred in a few days so severely as to confine her to bed. In August she was again admitted into the infirmary, and left in October free from pain. The attack recurred, and one night the patient was seized with violent gastric pain, which radiated to the left clavicle in front and to the lumbar region behind. It lasted four days, and utterly prostrated the young woman. Since Christmas last she had had attacks of pain coming on about half an hour after meals, lasting one to two hours, and sometimes persisting until the next meal was taken. She had vomited only occasionally after food. It was thus apparent that the intervals between the attacks of pain had been getting less and less, until lately she had not known what it is to be free from it. Seeing that medicinal treatment had no permanent effect upon the condition, Mr. Blumer was asked by Dr. Reid to perform gastrotomy, and with that object the patient was again admitted into hospital on March 4th, 1903. Considering the distress she had suffered she was surprisingly well nourished. All her other organs were apparently healthy. During the week before the operation she was fed on milk, and on March 11th, the day of the operation, the bowels having been well cleared, she had a nutrient enema with brandy added. Her stomach was washed out with boiled water, and she was clothed in a suit made of Gamgee tissue.

Operation.—An incision, subsequently enlarged to 5 in., was made in the middle line, and the stomach felt for and brought into view. On its posterior aspect, close to the smaller curvature, and near the pylorus a puckering was found, and at this point the serous coat was dimpled, as by a pursestring suture, and it felt cartilaginous. There were some adhesions which appeared to be of recent formation. Evidently the ulcerative process had at some previous time extended through the serous coat, setting up a localized peritonitis which had sealed the perforation, and thus saved the patient's life. The stomach was now drawn up, and sponges packed between it and the abdominal opening. Mr. Blumer then made an incision into the stomach anterior to the scar and through healthy tissue. On inserting the index finger he felt, at a point corresponding to the scar, an almond-shaped ulcer about ¾ in. long with thick overhanging edges and dense cicatricial tissue for its base. With scissors he prolonged the incision in the stomach wall right through the ulcer with healthy tissue again. He next excised the whole of the cicatricial tissue, and also the thickened edges of the ulcer. There was no great amount of bleeding. With fine silk the two edges of mucous membrane were brought together partly by interrupted and partly by continuous sutures. This was the difficult step in the operation, as the end of the incision was deep down, and the stomach had to be dragged up a good deal before the needle could be passed. Dividing the right rectus would have given easier access, but this was not thought advisable, as it would of course have weakened the abdominal wall afterwards. The serous coat was secured by Lembert sutures. A small quantity of blood had escaped into the lesser peritoneal cavity. This was sponged out, and the abdominal wound closed with silkworm sutures.

Progress.—The patient stood the long operation well. There was but little shock. She vomited about 3 oz. of dark blood and mucus half an hour after being put back to bed. She slept three and a-half hours in the night, and vomited twice, about 3 oz. of bile altogether. She complained of pain in the abdomen. She continued to vomit bile at intervals during March 12th, 13th, and 14th. The vomited matter was streaked with blood on the 13th, and on the 14th it was coffee coloured. Hitherto only hot water had been allowed to be taken, and nutrient enemata had been given. On the 15th the enemata were stopped, and equal parts of peptonized milk and water were given in ounce doses every hour, and a nutrient suppository every four hours. No pain or vomiting followed, the patient felt better, and the quantity was doubled next day. On the 17th the temperature, which up till now had remained normal, rose to 101°, and she complained of pain in the right parotid, which was now swollen and made swallowing painful. This was treated at first with applications of belladonna and glycerine. Vomiting occurred on the 18th, 19th, and 20th. On this last date there was blood in the vomited matter. Twenty drops of adrenalin in water were given twice, after which there was only one slight attempt to vomit. The parotid eventually suppurated, and was incised and drained on the 22nd. The left parotid began three days later and took the same course. It was opened on the 25th, when a counter-opening had also to be made on the right side. This double suppurative parotitis was a severe strain on the patient. The abscesses took a fortnight to heal up, and they materially retarded convalescence. The dietary was gradually enlarged: Plain milk with lime-water was given on the 22nd, then plasmon, Benger's food, mutton broth, and eggs. The first solid food was taken on the 29th, fish and bread and butter, subsequently chicken; and flesh meat was added on the 19th. The abdominal wound healed straight away, and the stitches were removed on the tenth day. The patient was allowed out of bed on April 16th. Since the operation she had been practically free from pain except what was set up by vomiting, and she could now take a liberal diet, including fresh meat, with a comfort she has not known for more than two years. Gastrotomy for recent ulcer with haemorrhage was now frequently performed; but Mr. Blumer was not aware whether it was recognized as a justifiable operation or not in chronic cases when haemorrhage had been almost entirely absent. He did not think it ought to be undertaken until all the resources of medicine had failed, and then only at the request of the patient after the risks had been fully explained to her. In the case under review, in spite of prolonged treatment, the condition had become such that no kind of food could be taken without causing pain, and the young woman's life was a misery. At the operation it was clearly seen that no palliative measures could have had any beneficial effect, and in this case not only was operative interference indicated, but it was justified by its result. The double parotitis was an unfortunate, though not altogether unexpected, complication. In a series of gastrotomies performed by Mr. Mansell Moullin it occurred twice, one of them being a fatal case. The origin of post-operative parotitis was still a debatable subject, but it seemed to Mr. Blumer to be due to neural rather than to septic influence. Mr. Blumer acknowledged the valuable assistance he received from his colleague, Dr. F. H. Marson, during the operation, as also then and subsequently from the residents, Mr. G. C. Elliott and Mr. J. A. Atkinson.

PAPER.

Mr. CHARLES read a paper on Some Observations on Graves's Disease.

SPECIMENS.

Dr. DEANESLY showed the following specimen: A triangular fragment of a common dinner plate measuring 1¾ by ¾ in., removed from a man's larynx by means of the laryngoscope and forceps. The piece lay with its apex in the trachea and its base between the vocal cords edgewise. Removal was effected about eighteen hours after the entry of the fragment. A plate containing potatoes had fallen on the floor, and the fragment was accidentally transferred with the potatoes to another plate.—Mr. CHOLMELEY showed: (1) Dermoid cyst of ovary with twisted pedicle showing hair and two teeth, removed from woman, aged 46, who had had no trouble from it until the pedicle became twisted. She had had four children, the youngest 10 years old. No difficulty in any labour. Menstruation quite regular until this illness. History of three weeks' pain in abdomen and occasional vomiting. Cyst was the size of a cocoa-nut. The pedicle was twisted three complete turns, nearly severing the cyst. The cyst was incarcerated in the pelvis. (2) Fungating encephaloid carcinoma of breast removed from a woman, aged 49, five months ago. Tumour noticed five months before removal, and burst about a fortnight before. It formed a large fungating mass about 5 in. by 2½ in. at lower part of breast. The centre led to a cavity full of most foul stinking sloughs. Some glands in axilla. Breast, together with most of pectoralis major, whole of pectoralis minor, and contents of axilla removed with good result, though too recently to be certain of non-recurrence. (3) Congenital cystic kidney removed from a man aged 26. The kidney was large and was a mass of cysts, some of which contained pus. History dated from seven weeks back, when patient had acute attack of pain in right side, shivering. Patient was when first seen, three weeks after commencement of attack, pale, worn, and thin. Pain and some swelling over right kidney. Temperature 102.5° in the evening, below normal at night. Urine acid, some albumen and pus. Temperature became normal after a few days, and patient improved, so he refused operation. Returned in about three weeks worse than before. Temperature high and pus in urine. Kidney larger than before. [Since showing this specimen the patient had died. A small apology for a kidney, a mass of cysts, was found on the left side.]—Dr. W. HIND showed: (1) Gall stones; (2) stone from kidney; (3) piece of rib with bony growth, due to irritation of rubber drainage tube.—Dr. PHILLIPS showed: (1) A nasal polypus, the peculiarity of which was that it was removed from a boy, aged 11 years; that it grew from a fibroma about the size of a hazel nut, which was attached to the septum, and the large bifurcated polypus grew from the free surface on the upper side, and filled up the vault of the naso-pharynx, and then spread into the nares, one of the bifurcations going into each cavity; it was removed with a long pair of curved scissors, as it was impossible to get a snare round the whole mass; it was a rare condition; (2) a mass of chloride of silver wrapped up in greased rags removed from the rectum of a miner working in a silver mine; it was a common thing for these men to steal silver in this manner; they wrapped paper or rags tightly round the hard, rugged mass, then greased it well, leaving a tag of rag hanging out through the sphincter; this specimen weighed 1¼ lb., measured 6 in. in length, and 8¾ in. in its greatest circumference, and was said to be a comparatively small specimen of a *negro* (egg); the man who concealed it in his rectum was called a *maquinista* (a "machine man")—that is, the man who lays the egg.

CLINICAL SOCIETY OF MANCHESTER.

T. Arthur Helme, M.D., in the Chair.

Tuesday, April 21st, 1903.

Early Symptoms of Rickets.

Dr. Christopher Heywood read a short communication on this subject. He emphasized the fact that the bony changes were only one symptom of rickets, and often a late one, and that it was very necessary to be on the look-out for early symptoms before visible bony changes occurred, for then much suffering and death, not only in children, but also in adults, might be avoided. In his opinion, every case of rickets was preceded by a gastro-intestinal catarrh, often accompanied by constipation; this catarrh was usually due to faulty feeding, the result being that toxins were formed in and absorbed from the alimentary canal. These toxins acted especially on the nervous system, the first signs of the disease being often muscular twitchings, starting at slight noises, unusual fretfulness, etc, which early signs were often overlooked until convulsions, croup, tetany, or laryngismus occurred. He looked upon a combination of gastro-intestinal and respiratory catarrh as a danger signal which ought to put one on one's guard. He mentioned night restlessness, and added that in the early stages of rickets children often liked to lie on their face in bed. Thirst and appetite were often excessive. Muscular tone was lost early, and the unusual laxity of the ligaments was an early and often overlooked sign, as was also anaemia. Help in diagnosis might also be obtained from the presence or absence of any of the well-recognized predisposing causes of rickets, such as sterilized foods, insanitary surroundings, etc.

Abscess of Brain.

Dr. P. R. Cooper mentioned a case of chronic abscess of the occipital lobe of the brain, with somewhat unusual symptoms.

The patient, a man aged 21, had been ailing for two weeks with headache and lassitude. There was no history of previous injury or illness except a slight attack of influenza about eighteen months before. Syphilis was excluded. There was, however, a family history of tubercle. Nothing could be found to account for the headache; the eyes, nose, and ears were normal; the teeth in good condition; there was no tenderness of the scalp or at the nerve foramina. The patient looked ill, and had lost flesh. There were, however, no paralysis or loss of muscular tone; no anaesthesia; no altered reflexes; and no want of co-ordination. He had occasional attacks of vomiting, followed by collapse; constipation was extreme; the urine was normal. The mental condition was undisturbed except for the lethargy and depression. It was noticed that he occasionally had difficulty in grasping with the left hand, but as a rule this difficulty was absent. He died suddenly from syncope, and at the necropsy a chronic abscess was found in the right occipital lobe, with thickened capsule, and unruptured. There were evidences of old tuberculous mesenteritis in some calcareous lymph glands, and there was a tuberculous pyelitis in each kidney.

In commenting on this case, Dr. Cooper thought (1) the pyelitis was the probable source of the cerebral suppuration; (2) death was caused by pressure upon the medullary centres; (3) the indefinite character of the symptoms was due to the slow development and chronic nature of the abscess which had evidently existed for a long period. He emphasized the fact, shown by such a case, that organic mischief might exist for a long time in one of the most vital regions of the body without giving rise to definite localizing symptoms, and might so be diagnosed as merely "functional." Another similar case was instanced where the patient's symptoms were ascribed to "hysteria," but, death resulting, the necropsy also revealed an abscess of the occipital lobe.

Acid Dyspepsia.

Dr. F. Craven Moore read a communication on acid dyspepsia, and advocated a more systematic examination of the stomach contents in gastric disorders rendered possible by the use of the stomach tube and the introduction of simpler methods of quantitative analysis. These methods had resulted in the modification of many time-honoured conceptions. Formerly acid dyspepsia was regarded as the expression of abnormal fermentative changes, resulting in the production of various organic acids. Such conditions undoubtedly did exist, especially in connexion with cases of catarrhal gastritis, but it was probably the least common form of dyspepsia. As was first pointed out by Riegel, and since abundantly confirmed, acid dyspepsia might be entirely due to the formation in relatively large quantities of the normal acid of the stomach—namely, hydrochloric, a condition called hyperchlorhydria. Under normal conditions, the process of gastric digestion did not obtrude itself on the consciousness and the average quantity of free hydrochloric acid did not amount to 0.2 per cent. With an ordinary mixed diet, this acid as it was secreted was at once taken up by the proteid constituents of the food, and was held combined in the so-called acid albumen. When, however, all the proteid present had been satisfied then any further acid secreted remained in the free state in the gastric contents. Under certain conditions the relation became disturbed, and the hydrochloric acid was considerably beyond the physiological requirements. The time of appearance of gastric discomfort in such conditions showed considerable variability, but as a rule it appeared earlier with small than with large meals—earlier with a carbohydrate meal than with one containing a large proportion of proteid. The intensity of the symptoms showed the same variability, and there was apparently no definite ratio between the degree of acid and the severity of the manifestations. It was characteristic that the symptoms were absent when the stomach was empty. In this connexion it was interesting to note that some patients who might have suffered agonies on a starvation diet found that a large complex meal was digested with perfect comfort. Dr. Moore advocated a larger proportion of fats and proteids, and less starchy food in these cases of acid dyspepsia.

Bradford Medico-Chirurgical Society.—A meeting was held on April 21st, the President (Dr. H. J. Campbell) in the chair. A discussion on appendicitis was opened by papers read by Dr. Farrow and Mr. Horrocks. Dr. Farrow defined appendicitis as a peritonitis, local or diffuse, arising in the caecum or vermiform appendix, and septic in character. The most common organism was the B. coli communis, which, although an inhabitant of the normal intestine, acquired virulent properties in the presence of catarrh of the bowel. The chief causes were stated to be undigested food in the caecum or overloading of the bowel with masses of faeces. The irritating effects might be either mechanically produced, or chemically by putrefactive products. Mechanical injuries might precipitate an attack in a diseased appendix, but would rarely cause one in a healthy appendix. The opinion was expressed that many deaths certified as caused by peritonitis, volvulus, and intussusception would, if investigated, turn out to be due to appendicitis. Cases might be roughly divided into (1) mild, (2) severe, (3) surgical. Important diagnostic points were: (1) Severe pain about the umbilicus with pain on pressure in the right iliac region, (2) muscular rigidity on the right side of the abdomen, (3) fever moderate in degree, (4) vomiting usually, (5) constipation, (6) a swelling on palpation, (7) a history of previous attacks. The prognosis should always be guarded, as mild cases might rapidly develop a serious aspect. Treatment.—(1) Rest in bed. Rest to the bowel should be obtained by the administration of small quantities of easily-digested food. Rectal feeding might be desirable. (2) Local applications were not of much effect. Leeches to the affected region sometimes gave relief of pain. (3) In a mild case a purgative might be given at the outset of an attack, or an enema might be substituted in severe cases. Opium must be given in severe cases. The use of intestinal antiseptics appeared to be rational, especially if the colon was not overloaded with faeces. Operation was necessary in cases of perforation or where pus had distinctly formed, also in cases where attacks were of frequent recurrence. Mr. W. H. Horrocks pointed out that the situation and anatomical relations of the appendix predisposed to a septic inflammation. The peritonitis was at first adhesive and consequently protective in character, and a localized abscess the most usual result of a perforated appendix. Owing to the various positions in which the appendix might be lying, an appendicular abscess might be in the iliac fossa, the right side of the pelvis, the inner side of the ascending colon, or sometimes in the cellular tissue behind the colon. There were no certain means of ascertaining the conditions which had to be dealt with in cases of appendicitis, except by an exploratory incision, and this was attended by the risk of breaking down protective adhesions and converting a localized into a general peritonitis. Mr. Horrocks mentioned the following as indications for operation: (1) A high temperature (103° to 104°), with rapid pulse from the first and with no abatement of the symptoms within forty-eight hours, together with well-marked abdominal signs and symptoms; (2) when in the course of an attack the symptoms became exaggerated, the temperature either rising continuously or falling suddenly, and the pulse increasing in rapidity; (3) when there were definite signs of pus formation; (4) cases in which there was general peritonitis. If the condition of the patient permitted, removal

of the appendix, with drainage of the peritoneal cavity, would increase his chances of recovery. After the patient had been anaesthetised and before making the incision it was well to ascertain if there was induration at any spot, if so the incision should be made over that. If there was no indurated spot the incision should be made rather below McBurney's point. If pus was found an attempt might be made to remove the appendix, but the latter should be left if not easily removable, owing to the danger of breaking down adhesions. If pus was not found at once gauze should be packed into the wound and the intestines separated till the inflammatory induration surrounding the appendix was found. The cavity should be wiped out and gauze packed into it as a drain. The further from the middle line the abscess was the greater the chance of recovery. In the rare cases of fulminating appendicitis early removal of the appendix, with flushing and drainage of the peritoneal cavity, offered the only chance. Alluding to recurrent cases, Mr. Horrocks advocated removal of the appendix after recovery from a severe attack. Mr. Horrocks considered that there was an increasing tendency in practice to operate early and to remove the appendix more frequently than was the custom a few years ago. The discussion was continued by Mr. C. F. M. Althorp, Dr. S. Johnston, Mr. J. Phillips, Mr. Basil Hall, and Dr. Beatton. Dr. Farrow and Mr. Horrocks replied.

British Balneological and Climatological Society.—At a meeting held on April 22nd, Dr. E. Symes Thompson, President, in the chair, Dr. Arthur P. Luff reopened the discussion, previously introduced by Dr. Mouillot (Harrogate), on the dietetic factor in health-resort treatment.—Mr. Wm. Armstrong said definite distinction should be made in dieting the gouty between those who suffered from a *plus* formation of uric acid and those who showed a *minus* excretion, and also between those who were too stout and those who were too thin. In rheumatism the tendency should be towards a vegetarian dietary. In rheumatoid arthritis, on the other hand, much red meat should be given, and the dietary generally should be as generous as the patient's digestion permitted.—Dr. Neville Williams (Harrogate) said a more varied diet could be taken with the sulphur than with the chalybeate waters. Vegetables of the cabbage tribe, rhubarb, and most fruits were to be avoided.—After remarks from Dr. Lee and Dr. Fortescue Fox, Dr. Blaker said that from personal experience he considered red meats increase the quantity of uric acid. All vegetables (potatoes excepted) grown in the sun and air were preferable to those grown under ground. Fruit often disagreed with patients taking iron tonics. Dry cider, lemon drinks, Moselle, and some ports suited the gouty and rheumatic subjects.—The discussion was continued by Dr. Buckley, Dr. Bowen Davies, Dr. Braithwaite, Dr. Snow, and the President; Dr. Mouillot replied.

Liverpool Medical Institution.—At a meeting of the Pathological and Microscopical Section on April 23rd, Mr. Rushton Parker, President, in the chair, Dr. Grossmann read a paper on coloboma cyst, the condition in the case related being associated with microphthalmos.

The patient, a girl aged 16 years, had had a cyst the size of a pigeon's egg bulging into the left lower lid. The orbital cavity was small, and was almost completely filled by the cyst; the right eye was smaller than normal, and exhibited a large choroidal coloboma. After removing the cyst a small body, about ½ in. in diameter, was found behind it in the deeper part of the orbit. The cyst was lined in part by columnar epithelium containing pigment in places; among the cells were peculiar bodies resembling Pacini bodies. No connexion was traceable between this cyst and the small body, which proved to be a microphthalmic rudiment, lined by folded retinal tissue of the ciliary region type.

The pathological anatomy of coloboma was discussed, the speaker stating that in the cases which had come under his personal observation, five in number, no hereditary history of the malformation was traceable. This experience was at variance with the recent account of the condition given by v. Heppel. The paper was illustrated by photomicrographic slides.—Dr. W. Blair Bell showed an appendix with perforation, removed by operation within a few hours of the onset of symptoms, a stercolith being present.—Sir William Banks showed a melanotic sarcoma removed from the vesico-vaginal septum; also a large mammary growth, fibro-adenomatous in nature.—Dr. W. B. Warrington described specimens illustrating cerebral vascular disease.

(*a*) A large aneurysm of the middle cerebral artery, causing death by rupture; no history of either syphilis or embolism. (*b*) Miliary aneurysms. (*c*) Thrombosis of the basilar artery, occurring during alcoholic coma and associated with rigidity of all four limbs. (*d*) Syphilitic meningo-encephalitis with extreme endarteritis. (*e*) Extreme atheroma of the basal arteries.

—Dr. E. Nevins and Dr. F. Griffith showed specimens from a case of carcinoma of the pleura with widespread secondary growths.—Mr. C. G. Lee and Mr. Stockdale showed a specimen of melano-sarcoma of the choroid.—Mr. Edgar Stevenson and Mr. Stockdale showed a tumour of the retina which was considered an endothelioma.—Mr. Robert Jones showed a vascular endothelioma of the head of the fibula.—Dr. Holland and Dr. Macalister showed radiographs of two cases of aortic aneurysm.

(1) The case of a man who when first seen had a large pulsating aneurysm, when seen two years later the aneurysm was no longer pulsatile. (2) A man who when first seen had a large rounded tumour in the chest, with every appearance of aneurysm but not pulsatile; nine months later he died suddenly and the necropsy disclosed a cured aortic aneurysm with a secondary dissecting aneurysm in its wall which had caused death by rupture.

Dr. Holland pointed out that the pulsatile character of a thoracic shadow as seen by the screen was the real point of importance in the diagnosis of aneurysm by the *x* rays.—Sir William Banks showed a series of cases illustrating lymph-angiectasis, also a patient with cervical rib causing occlusion of the left subclavian and gangrene of the hand, and other cases of pathological interest.

Pathological Society of London.—At the laboratory meeting held at St. Bartholomew's Hospital Medical School on Tuesday, May 5th, Sir John Burdon Sanderson, Bart., M.D., D.C.L., F.R.S., President, in the chair, the following communications were made:—Dr. F. W. Andrewes and Dr. K. J. P. Orten: Hypochlorous acid as a disinfectant. Mr. C. G. Seligmann: Cretinism in the calf. Dr. Horder: Comparison between the haemoglobinometers of Fleischl and Haldane. Mr. Gask: Bacteriology of a case of acute rheumatoid arthritis. Dr. Bainbridge: Some suggestions concerning renal dropsy.

Bath and Bristol Branch of the British Medical Association.—At the sixth ordinary meeting of the session held at Bath on April 29th, H. Waldo, M.D., President, in the chair, Dr. J. Pearse propounded some questions in practical dietetics, and Dr. Symes, Dr. Cave, Dr. Michell Clarke, Dr. Markham Skerritt, and Dr. Waldo contributed to the discussion.—Dr. Michell Clarke read some observations on cerebro-spinal syphilis. In the discussion which ensued Dr. Melsome, Dr. Cave, and Dr. Waldo joined.—Dr. Cave read notes of a case of biliary intermittent fever, and remarks were made upon it by Dr. Markham Skerritt.—Dr. Crawford and Dr. Malim contributed a note on the bacteriology of rheumatoid arthritis, and Dr. Bannatyne, Dr. Melsome, Dr. Cave, Mr. Fraser, Dr. King, and Dr. Waldo commented upon it.

Medico-Psychological Association.—At a meeting of the Northern and Midland Division of the Medico-Psychological Association, held at Cheddleton Asylum, Leek, on April 30th, Dr. Menzies in the chair, Dr. Trevelyan, of Leeds, exhibited a number of "dry brain" preparations, and read a paper on the method of preparing them. He expressed preference for Laskowsky's method. Although there was general shrinkage, the convolutions of the brain were not distorted by this method, and the colour was well maintained. For demonstration purposes, brains prepared in this way were of great value; they could be freely handled, they were elastic and tough, but did not become hard.—Dr. Rice showed a remarkably large specimen of an aneurysm of the middle cerebral artery, and gave an interesting description of the clinical features of the case.

Society for the Study of Inebriety.—At the last quarterly meeting, held on April 21st, the President, Dr. Harry Campbell, gave the annual address on the Study of Inebriety: A Retrospect and a Forecast. The object of the Society, he said, was the study of inebriety in all its forms—not only the inebriety produced by alcohol, but also the various forms of drug inebriety, such as those produced by opium, cocaine, chloral, sulphonal, as well as by tobacco, tea, and coffee. He pointed out that caffeine, the active ingredient of tea and coffee, was a vegetable waste product, an excrementitious substance allied to the waste products of animal organism (urea and uric acid). It was excreted as such by the kidneys, and might

thus in course of time predispose them to disease. Caffeine had, moreover, a powerful action on the heart and blood vessels as well as on the nervous system, and he raised the question whether it was wise to administer this drug as a matter of routine to children. He attributed much of the nervousness, not only among adults but among children, especially the children of the poor, to the practice of excessive tea drinking. Tobacco inebriety was a subject which just now especially claimed attention. He had over and over again seen the nervous system shattered by excessive smoking. The practice of cigarette smoking among boys had reached dangerous proportions, and needed legislative interference. He pointed out that the ill-effects of alcoholic drinks were largely due, not to the alcohol they contained, but to foreign substances, such as arsenic and lead, as well as to deliberate adulterations. If people would drink alcohol steps should be taken to see that the community was provided with an unadulterated article, especially when that community spent something like 150 millions annually on its drink bill. Much inebriety of all sorts was induced by advertised nostrums. All owners of nostrums should be compelled to publish with each sample an analysis of their contents. To allow this trading in secret remedies was unworthy of an enlightened people.—The Honorary Secretary read for Mr. Arthur Sherwell a paper on inebriety in Scotland in which as the result of an extensive statistical investigation regarding the returns as to consumption of alcohol, prison records, reports of mental cases, and official figures of the mortality from intemperance, it was shown that inebriety was on the increase, and particularly in female subjects. A large number of members and associates took part in the discussion.

REVIEWS.

HAEMATOLOGY.

Dr. P. Schmidt has brought together in a small volume[1] his observations made upon red corpuscles. Plehn has shown that basophile granules occur in red corpuscles soon after the first attack of malarial fever, and Schmidt's early observations were carried out upon people journeying to South Africa, with the idea of comparing the appearances of the red corpuscles before and after arrival in malaria-infected districts, and to estimate whether such basophile granules depended upon the infection with the malarial parasite or whether they were due to the physico-chemical effect of tropical sunlight. His experiments upon animals consist partly of an attempt to study the effect of heat upon small quadrupeds, but other experiments were also carried out, and the net result is an investigation into the nature and origin of the basophile granules of red corpuscles. These basophile granules have been described in a variety of diseases—for example, in pernicious anaemia and other blood diseases, in typhoid fever, in broncho-pneumonia, in acute rheumatism, in lead poisoning, in bothriocephalus anaemia, in haemoglobinuria, and, as already stated, in malaria. Other changes occur in association with this granulation of red corpuscles, more especially the changes known as polychromatophilia. Various views have been held as to the origin of basophile granules. Moritz produced the changes experimentally in rabbits by the injection of pyridin or by the use of lead acetate given with the food. Cohn bled animals and found similar changes, and concluded that they were due to degeneration in the haemoglobin brought about by hydraemia. Grawitz produced similar changes by the exposure of animals to overheating in incubation chambers. Similar changes were, however, produced when the animals were made to live in dark cellars. The granules may be derived from the haemoglobin; they may, however, be derived from the nuclei of the red corpuscles, and to this latter view Schmidt subscribes, deriving support from the fact that such changes are met with in the blood of newborn animals and in the marrow of many animals; as a corollary, it follows that these changes are probably regenerative, and imply excessive activity on the part of the marrow, which Schmidt concedes is a blood-forming organ. A short account is given of the relationship between physiological and pathological blood formation, and important observations are recorded on certain networks found in the marrow, in the interstices of which are small mononuclear cells free from granules which he considers the parent cells of red corpuscles of all characters, whether nucleated or not, large or small, monochromatophilic or polychromatophilic. Schmidt found as a very constant result of the introduction of phenylhydrazin into guinea-pigs and rabbits that polychromatophilic cells were increased in number, and at the same time there was a reduction of the alkalinity of the blood, and also of the number of red corpuscles containing basophile granules. Space prevents further quotation from this interesting account of the peculiar granules met with in red corpuscles both in health and disease; the subject, however, requires the careful consideration of all who are interested in the development of haematological investigations, and to them we commend a closer consideration of the views and observations given by Dr. Schmidt.

It is with considerable satisfaction that we call attention to the second edition of *The Blood*[2]: by Dr. Alfred Coles. Other and more ambitious treatises have been of late years written in English on the same subject, but hardly any more useful to the busy practitioner than the present volume. The first edition was published in 1898, and Dr. Coles, in his second edition, while adding considerably by the description of Oliver's haemoglobinometer which, however, he considers much more troublesome than von Fleischl's instrument, and also by a more extended account of such diseases as malaria and filariasis, has yet managed to retain the simplicity of the former edition by putting before the practitioner a convenient and compact guide to the examination of the blood. The writer is quite in accord with other observers who also find that Major Leishman's stain is a most useful one, not only for the examination of malarial blood, but also for the more routine cytological examinations of the blood. It is satisfactory to find free reference to the observations of British as well as to those of Continental and American writers, and we are glad to see that Dr. Coles calls attention to Professor Sherrington's observation that the nucleus of the polymorphonuclear cells (a better term than "multinucleated") when allowed to quiet down before the cells are killed, becomes spherical, for ignorance of this fact readily leads to the mistaken recognition of neutrophilic granules in lymphocytes (?) The reader is further warned against relying upon one examination of the blood as a means of excluding such disorders as pernicious anaemia and leucocythaemia. A brief account of the alterations in the character of the blood in many diseases is given, and though in some the changes are small in degree and in many diseases no change is observable, yet, by a careful examination of the blood, diseases may be excluded which do show marked changes. We congratulate Dr. Coles on his industry and warmly recommend the book to all who wish to apply the methods of blood examination to the investigation of disease.

Dr. Da Costa has written a very complete treatise on *Clinical Haematology*,[3] dealing with the examination of the blood and the application of such examination to the differentiation of disease. Although it is not yet possible to feel that Hayem's forecast has been realized, "*c'est elle (l'hématologie) qui nous apportera la solution des grands problèmes nosologiques*," yet no physician can, with justice to his patient, neglect this new addition to clinical investigation. The volume has assumed considerable proportions, for the author has not been content to give a bare account of the results of blood examination in various diseases, but—as, for example, in the study of the anaemias of infancy—he discusses, in addition, other clinical aspects, such as would be met with in a treatise on general medicine. This method is obvious, too, in the study of other diseases of the blood, though to a less extent; and it is this feature which to us appears one of the greatest recommendations to the perusal of this volume. Dr. Da Costa does not spare his subject, and, when it falls short of the ideal claimed for it by Hayem, he makes a full admission. A very complete description of the various ways of estimating the numbers of the cells and blood platelets by the various methods known to haemotologists is given, and considerable space is devoted to the study of the parasites of

[1] *Experimentelle Beitrage zur Pathologie des Blutes* [Experimental Observations on the Pathology of the Blood]. Von Dr. P. Schmidt. Jena: Gustav Fischer. 1902. (Medium 8vo, pp. 42, 4 plates. M.3.)

[2] *The Blood: How to Examine and Diagnose its Diseases.* By Alfred C. Coles, M.D. 2nd edition. London: J. and A. Churchill. 1902. (Demy 8vo, pp. 286, 6 coloured plates. 10s. 6d.)

[3] *Clinical Haematology.* A Practical Guide to the Examination of the Blood, with reference to Diagnosis. By John C. Da Costa, jun., M.D. London: Rebman, Limited. 1902. (Demy 8vo, pp. 474, 8 coloured plates, 3 charts, 48 illustrations. 22s. 6d.)

the blood, though no reference can be expected to the recent discoveries of trypanosomata occurring in human beings. The author strongly recommends Zappert's modification of the ruling advocated in the use of the Thoma-Zeiss apparatus, as by the employment of this modification nine times as many leucocytes may be counted in one preparation; the author further recommends the counting of red and white corpuscles in one preparation, and does not hesitate to recommend the holding of cover slips in the fingers instead of by means of forceps. On pages 71 and 72 Determann's method of estimating the number of platelets is recommended. On page 164, we are glad to see a notice of Professor Sherrington's observation, mentioned on p. 1090. We should like to recommend to Dr. Da Costa's consideration the facts observed by Haldane and Lorrain Smith in various pathological conditions of the blood. Most of the more recent theories and observations on the blood are noticed, and full discussion and references are given to the possible parasitology of leukaemia, and to the specific agglutinative and haemolytic action of the blood serum of one animal upon another of different species as described by Bordet, Uhlenhuth, and others. The contents of the book are well arranged, and the illustrations are adequate and of great help to the student. Dr. Da Costa has spared no pains in providing the reader with a profuse list of references, and this, with the solid contribution he himself makes from a study of four thousand cases, is sure to make this volume of the greatest utility. A full index of subjects and another of authors closes a volume which we recommend to the notice of all workers in haematology.

The method of recognizing human blood, of which Dr. LEBLANC gives a complete and up-to-date account in a small volume[4] just issued, was described in the BRITISH MEDICAL JOURNAL for March 30th, 1901, p. 788, while the proceeding upon which it is based has been the subject of several contributions in the JOURNAL by Nuttall and by Ruffer. We may briefly remind our readers of the facts upon which the method is based. If a small quantity (10 c.cm.) of defibrinated blood of any animal—for example, an ox—is injected into the peritoneal cavity of a rabbit at intervals of six or eight days until five injections have been given, the serum of the blood of the rabbit so treated gives a precipitate if dropped into a 1 per cent. dilution of the blood of an ox, while no precipitate follows its addition to the similarly diluted blood of any other animal. So that if a rabbit is prepared in this way by the injection of human blood the serum may be used to detect the presence of human blood in very small quantities upon clothing, woodwork, etc., in medico-legal investigations. The precipitation of diluted blood by this specific serum is called the Bordet-Uhlenhuth reaction. The subject has been worked at by several observers, notably by Wassermann, Schütze, and Nuttall, and the distinctive value of the reaction has been placed beyond doubt, with the single exception in the case of human blood of certain species of monkeys, especially the *Simiidae*, less so with the *Cercopithecae*, and still less with the *Hapalidae* and the *Cebidae*.

In the present work Dr. Leblanc gives the details of several medico-legal investigations in which he has utilized this method, and he summarizes his experience in the following conclusions :

1. The Bordet-Uhlenhuth reaction deserves a place in the medico-legal determination of the nature of blood stains.

2. Its results should not be considered as positive unless the reaction follows in the course of an hour at most at a temperature of from 32° C. to 37° C.

3. The precipitated serum must always be recently prepared, and extracts of serum must never be employed in medico-legal work.

4. Until it has been shown that antiseptics have no action upon the serum no chemical substances should be added to it.

5. It is desirable that the method should be employed and tested in many laboratories in order to study it thoroughly.

In accordance with Professor Barthe's opinion it may be said that

The presence of blood being demonstrated by the precipitation of haemine crystals and perhaps by spectroscopic examination, the Bordet-Uhlenhuth reaction is the chief means by which an expert can give an opinion upon the probable source of the blood, but by itself it does not suffice to prove even the presence of blood, and still less to indicate its source. It is of greater value than the microscopical examination of blood corpuscles, undoubtedly of greater value than their measurement. In the hands of a prudent and skilful expert it is capable of facilitating the recognition of human blood.

[4] *Nouvelle Méthode pour la Diagnose du Sang Humain en Médécine Légale. Reaction Bordet-Uhlenhuth* [A New Method for Recognizing Human Blood in Legal Medicine. Bordet-Uhlenhuth Reaction]. Par le Docteur A. Leblanc. Paris: Vigot Freres. 1903. (Demy 8vo, pp. 86.)

MEDICAL MANUALS FOR INDIA.

MOORE'S *Family Medicine*[5] is a book known to most Anglo-Indians. It first appeared in 1873, and during the subsequent twenty years six editions were produced. The present (seventh) edition has been revised by Major J. H. T. WALSH, and, like its predecessors, has been published under the authority of the Government of India. No doubt the book met a distinct want at a time when, in many out-of-the-way stations, it was difficult to obtain professional advice at short notice. Medical education has advanced in India since those days, and there are now few places (in which Europeans reside) without a resident native practitioner who has studied and graduated at one of the Indian universities, and whose opinion may be considered quite trustworthy. We do not wish it to be inferred that the want of such a work has disappeared; but the question arises as to the desirability of entering into such minute details of medical description, for the edification, and possible confusion, of the lay reader. Major Walsh shows in his preface that he was fully cognizant of the difficulty before him, when he says; "popular language may carry a writer too far." With this reservation, we are of opinion that he has done his work carefully and conscientiously. The following is a brief summary of the contents of the volume: In Chapter I there is a description of a small "family" medicine chest for use in India, with the doses and mode of administration of the drugs recommended. The bulk of the book is taken up by Chapter II, which is devoted to the symptoms and treatment of the diseases in alphabetical order. The articles upon the following maladies may be mentioned as being comprehensive and practical—cholera, convulsions of children, diarrhoea, dysentery, liver diseases, malaria, skin diseases, and sunstroke. There is also a good article, with mouth diagrams, on teething, which should prove useful, especially to primiparae. Accidents and injuries are dealt with in Chapter III, and appropriate "first-aid" is indicated. There are useful illustrations depicting the position of the principal arteries, and how to arrest haemorrhage. The sections on poisons and their antidotes is well arranged, special allusions being made to the vegetable poisons indigenous to the country. Chapters IV and V deal with pregnancy, labour, and the management and feeding of the infant. There are some practical suggestions that cannot be otherwise than valuable to mothers in rearing delicate children by hand when wet nursing is not possible, or the native *dhai* is objected to. Chapter VI is on the preservation of health, and, without being hypercritical, we are inclined to think that more space might have been devoted to hygiene at the expense of Chapter II. It is all, however, excellent as far as it goes. We cordially agree with the editor in registering a "hope that the time will come when all passenger ships will be better provided for the comfort and care of sick passengers," when change to Europe is essential, as it too frequently is. The last chapter is upon the management of the sick room with dietetic preparations for invalids. There is an appendix of the prescriptions referred to in the text, and the index appears to be complete.

In a short review of the third edition of Dr. E. A. BIRCH'S *Management and Medical Treatment of Children in India*[6] (BRITISH MEDICAL JOURNAL, December 14th, 1895, p. 1503), a sketch was given of the history, purpose, and utility of the work, which has established for itself a firm hold on the Indian profession and public. The fact that a fresh edition has been called for in seven years indicates its sustained popularity and usefulness. Originally intended for a mother's book, successive editions have become more technical and detailed, and fitted to be a practitioner's book as well. It is no easy task to prepare a manual sufficiently simple to be serviceable to the laity and sufficiently scientific to satisfy the requirements of a medical man. The double object has been admirably attained by this book, which ought to be in the possession of every mother, nurse, and doctor in India, or for that matter in any and every tropical country. This fourth edition has undergone careful overhauling—a labour in which the author was materially assisted by Dr. E. H. Young of Okehampton and his library. Alterations and additions have been made in accordance with the progress of pathology

[5] *A Manual of Family Medicine and Hygiene for India.* By Sir William Moore, K.C.I.E. Seventh edition, revised by Major J. H. Tull Walsh, I.M.S., F.I.S. London: J. and A. Churchill. 1903. (Demy 8vo, pp. 680. 12s.)

[6] *The Management and Medical Treatment of Children in India.* By Edward A. Birch, M.D. Fourth edition. Calcutta: Thacker, Spink, and Co.; and London: W. Thacker and Co. 1902. (Demy 8vo. Pp. 498. 10s. 6d.)

and therapeutics. The mosquito theory of malaria, for example, has been explained, and its applications in preventive and medicinal treatment indicated. The work includes the management and dieting as well as the ailments of children, their prevention and treatment, and is throughout eminently sound, rational, and practical.

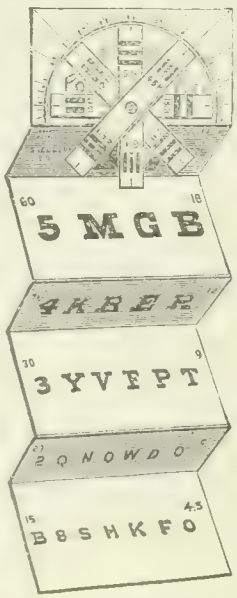
REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

Improved Window for Hansom Cab.—One of the most characteristic objects in London is the hansom cab. Its chief advantage is that it probably takes less out of a horse than other covered vehicles. Whatever the reason, its popularity in London is so well established that not even the wounding of a Cabinet Minister can shake it, and imitations of it (*longo intervallo*) are to be seen in some provincial cities. But it has certain obvious disadvantages, most of which centre round the window. On a wet day the passenger is either damped or asphyxiated, and, if the horse falls, risk of injury, even if the window be raised, is considerable. Mr. S. Whitehouse, cab proprietor and driver (18, Randolph Mews, Portsdown Road, W.), has invented a window which obviates many of these drawbacks. It is in two parts, and opens vertically in the middle; each half is in three parts and folds back to the side after the manner of a three-fold screen. It can be opened and shut by driver or passenger, and one side can be opened in whole or part while the other remains closed. The most valuable part of the invention, however, is that if an accident happens and the passenger is thrown forward, the four centre leaves of the windows swing outwards, and the danger of broken glass, at least, is avoided. The number of accidents due to the breaking or falling of the window justify us in calling attention to the invention of a practical man which appears to minimize risks while adding to the comfort of the "fare."

MEDICAL AND SURGICAL APPLIANCES.

Test Type for the Pocket.—Mr. PERCY DUNN, F.R.C.S., Ophthalmic Surgeon to the West London Hospital, has designed the appliance illustrated in the accompanying drawing, for the purpose of meeting the difficulty which from time to time arises of not having a convenient and ready form of types for testing the vision in patients' houses. It consists of seven cards, united by strips of linen, measuring 6½ in. by 4 in., upon one side of which is printed Snellen's distance types, and, on the other, types for reading; in addition the topmost card is perforated in its centre with a revolving pin, which secures four strips of stout cardboard. At each extremity of these strips is a set of horizontal and vertical lines. These lines vary in thickness, from those visible at 18 metres to 12, 6, and 4.50 metres respectively; while behind the lines is printed on the card a graduated arc, indicating the axes which they can be made to assume. This arrangement provides for the testing of cases of astigmatism, and thus the appliance forms a handy, complete, and compact visual test, especially adapted for use in patients' homes. The whole folds into a small space occupying about 6½ in. by 4½ in. by ½ in., and can be readily carried in the pocket. The publisher is Mr. F. Davidson, optician, 140, Great Portland Street, W.





A Simple Refractometer.—Mr. SIMEON SNELL, F.R.C.S. Edin. (Sheffield), writes: For some years past I have been using a very simple refractometer. I described it in my little work on the *Examination of the Eye* (Pentland). It has been in constant use in my hospital and private practice, and experience has shown its convenience and the aid it affords to rapid and satisfactory retinoscopy. The refractometer is here depicted (Fig. 1), and will be seen to consist of a vulcanite plate, with handle, in which are set a series of lenses. Two of these plates are provided, one for convex glasses and the other for concave. Each plate holds 16 lenses—at one side of the plate are dioptres 1, 2, and so on, in succession, to 8 D.; on the other side are half dioptres, commencing 0.5, 1.5, and so on, up to 7.5 D. The number of each glass is plainly marked on both surfaces of the frame.



Fig. 1.

On the one with the + lenses the marks are red, whilst those on the frame with — glasses are white. Each lens is ⅞ in. in diameter, and each frame only weighs 3½ to 4 oz. The refractometer is shown in use in Fig. 2. If + glasses are required with the shadow test the patient is given the frame with those lenses. He is directed to look through the glass it is desired to commence testing with, and then he can, at request, readily raise or lower the frame so as to bring other lenses before his eyes until the correction is completed. If it be found that, whilst one number undercorrects, the next dioptre over-neutralizes, recourse may be had to the 0.5 D. between these two numbers. The other frame containing the — lenses is employed similarly in cases in which concave glasses are needed. The saving of time effected by using such a simple apparatus as this with retinoscopy is considerable, and, as all cases of astigmatism can be estimated, as well as hypermetropia and myopia, with sphericals only, its employment will be found a great convenience. Two reversible spectacle frames, one containing + 1 D. and + 2 D., and the other + 3 D. and + 4 D., to be placed in front of the eye in instances of high degrees of hypermetropia before using the frame of glasses, may be employed, if thought desirable. The refractometer may be put to a further use, for it can be employed to work out the sphericals required in any given case, with the test letters, instead of resorting to the trial frame and substituting one glass after another. It is in this way in regular use in my out-patient room. The refractometer here mentioned is modified from one described by Dr. Wurdemann, of Milwaukee. The makers of it are Messrs. Priest and Ashmore, opticians, Sheffield.



Fig. 2.

A PRIZE FOR A RESPIRATOR.—The Council of the Society of Arts has decided to award under the terms of the Benjamin Shaw Trust a gold medal or a prize of £20 for the best respirator designed to arrest dust for use in dusty processes and dangerous trades. The respirator must be light and simple in construction. It should be inexpensive so as to permit of frequent renewal of the filtering medium or of the respirator itself, or alternatively it should be of such construction that it can be readily cleaned. It should allow no air to enter by the nostrils or mouth except through the filtering medium. It should not permit expired air to be rebreathed. The filtering medium, though it should be effective in arresting dust particles, should not offer such resistance as to impede respiration when worn for some hours under the actual conditions of work. And, lastly, the respirator should be as little unsightly as possible.

THE FOURTEENTH INTERNATIONAL MEDICAL CONGRESS.

[From Our Correspondents.]

Reception in the Town Hall.

The reception given on the evening of the opening day of the Congress (Thursday, April 23rd) by the Marques de Portugago, Alcalde of Madrid, took place in the Town Hall, a spacious and convenient building. The function was distinctly brilliant. The guests were ushered through long rows of civic guards, followed by a large number of black-coated beefeaters, if I may be allowed the term, any one of whom might have stepped out of a canvas of Velasquez. All the congressists, I think, were there, which is equivalent to saying that the crowd was great. The salons upstairs and down constituted two separate parties, at both of which very excellent music was given. A large number of members and guests were in uniform, and stars and crosses were borne by almost every other among the guests. Spanish beauty was conspicuous on every side, dark complexions predominating, though many were fair; nearly all the ladies had strongly-marked eyebrows and wondrous great dark eyes, charming in their pleased animation, though one could not help surmising how they would look in wrath. I should add, however, that I have seen no Spanish women in wrath, and my own impression is—and I have known several—that they are very good-tempered indeed, and as charming as they are attractive. Their charms are, however, too often slightly opulent; but all the congressists with whom I conversed expressed their gratitude to the Alcalde for inviting so many charming ladies to meet us. There was plenty of beauty at the Casa Consistorial that evening, but I am compelled to add that I have seen very little of it in the streets, despite the tasteful hair-dressing and the hatless heads, with or without their becoming covering of black lace. The civic function was, no doubt, another great success; but the air there was almost deoxygenated and very superfluously carbonated, and, to tell the truth, a good many did not feel quite well. Nevertheless, we spent a delightful evening and paid the penalty for it. We were very hot and thirsty, and the buffet was on the ground floor, and hence was undiscovered by many. But the worst remained. There were hundred of policemen downstairs, but none above to form "queues" around the two cloak rooms, and so it came that a prolonged struggle was requisite before one could regain one's overcoat, a struggle in which "Those behind cried forward and those in front cried back," which was otherwise and actually expressed by *Ne poussez pas; laissez sortir.* If the barriers had given way some must have been crushed. Teutonic bulk and weight told wonderfully for its possessors as against the rest. Even such a scene has it comic aspects, as when a well-known Scottish professor of a fighting clan yelled his slogan and, charging a serried rank of Teutonic heavy weights, successfully brought through his coat. Many abandoned the attempt in despair and only retrieved their overcoats next day. I fear that the impression is growing on me that modern international congresses are most suitable for young and powerful men. I have made a personal Mem. not to take an overcoat again to any similar future function.

Reception at the Royal Palace.

The reception at the Royal Palace next day at 3 was a very different affair, and was admirably arranged. Different nationalities were put into different rooms, which the King, accompanied by the Prime Minister, Señor Silvela, visited in succession, bowing to all his invited guests, and engaging in a few words of conversation with those who, being specially representative, were selected for presentation to His Majesty. The British delegates were under the particular care of the British Ambassador and of Sir Henry Norbury, who represented the British Admiralty, and who after his own presentation presented the rest. The King, who speaks English perfectly, had longer or shorter conversations with Dr. Pavy, Sir William Broadbent, Sir Thomas Barlow, Sir Dyce Duckworth, Sir John Moore, Dr. Radcliffe Crocker, Dr. Pye-Smith, Dr. Pope, Dr. Shingleton Smith, and many others. To Dr. G. B. Ferguson, he said: "The Association which you represent is, I believe, one of the largest in the world?" Dr. Ferguson replied that it was the very largest, comprising more than 18,000 doctors. At this the King expressed surprise, and then asked if the British delegates were pleased with their reception. What answer could be given but one? The King, who is barely 17, looks older than his age, and is of a figure admirably erect and certainly not under 5 ft. 9 in. in height. His simple and gracious demeanour took all hearts by storm, and loud were the British cheers as he left the room.

Alfonso XIII seems to have known just what to say to each one. For instance, with Sir William Broadbent and Sir Thomas Barlow he concerned himself mainly with the health of King Edward, whilst with Dr. Pye-Smith his inquiries were about the College of Physicians. He was interested in Sir William Broadbent's uniform of the royal household, and inquired if Dr. Pye-Smith's court dress was the dress of the College of Physicians. He proved himself, in fact, a most acute and observant monarch. His question to Dr. Pavy had reference to the scarlet robes worn by many of the British representatives. These robes and college caps—togas and flat birettas as the Spanish papers described them—excited much attention at the inaugural ceremony, and gained for their wearers the best places and an easy passage through the crowds, who took them for no less than a deputation of the College of Cardinals. Dr. Pavy and Mr. D'Arcy Power were responsible for the British presentations, and their selections gave, I believe, very general satisfaction.

The Spanish officials have been very strict in respect to tickets, and one distinguished American representative who forgot his was firmly denied admission to the King's audience. There is a story current which we will hope is not true. It is of an American delegate who wore the Santiago medal. "What medal is that?" said the inquiring King. "Sire," replied the ready American, "that is merely the badge of our medical service."

After the King had left the room the Queen Mother and the Infanta followed with the British Ambassador, and the former graciously accorded long conversations to several, among whom may be specified Canon Duckworth, who was with his brother, Sir Dyce, and Mrs. Berry. The Queen was specially interested in the latter, as being a qualified medical lady.

One Indian doctor in native dress, S. V. R. Tyenga, M.D., the Government oculist of Bangalore, most worthily represented our great dependency, and was specially asked for by the Queen, though, like some others, he had left before Her Majesty's arrival. I owe his name and description to Sir John W. Tyler, C.I.E., himself formerly a distinguished Indian medical officer, who was also present. With the departure of the Queen and her attendants ended, so far as the British section is concerned, a very interesting and gracious function.

The Palace is one of the very finest of comparatively modern palaces, and elicited from Napoleon the remark, when he installed his brother Joseph there, that the latter would be better housed than he himself was. The superb gallery of tapestries, not ordinarily shown to the public, was thrown open to the Congressists, who much appreciated the privilege.

Dinner at the British Embassy.

On April 25th Sir Mortimer Durand, the British Ambassador, entertained a distinguished company at dinner, the guests including Sir William, Lady, and Miss Broadbent, Sir Thomas and Lady Barlow, Sir Henry Norbury, Sir Dyce and Lady Duckworth and Canon Duckworth, Sir John and Lady Moore, the Rev. Sir Borradaile Savory, with many others.

Reception by the Prime Minister.

In the evening a very brilliant reception by Señor Silvela—the Prime Minister as we should call him—took place at the Ministry of State. The flowers in beds and basins were extremely choice, the music was admirable, and there was an excellent buffet. Every one was there *en grande tenue*, and uniforms and orders made the scene a brilliant one.

Entertainments.

There now only remains for me to describe some further lighter functions, the Municipal Garden Party of Tuesday in the Park of the Buen Retiro, and the Royal Garden Party in the Palace Gardens on Wednesday. The first was not favoured by weather, though it cleared at last, but the party was, nevertheless, much enjoyed. There is a kind of circus affording some shelter in the park and there sat the beauty of Madrid, suffering itself to be admired. One point, however, has been wanting at all the functions; the weather being cold there were no fans, and in a Spanish lady without her fan there is something wanting.

The municipal party must, I think, give place to the more exclusive party of the King. The Royal gardens are attractive; the hawthorns, pink acacias, and beds of periwinkles

were in flower, but they could easily be improved by removing many of the firs. There is a fine fountain, broad walk, and shady paths, whilst over all towers high the immense mass of the palace. At the party we had all the court officials, the high naval and military authorities. German helmets and French képis, Russian caps, and light blue cloaks, and none more observed or more distinguished-looking than the British naval uniform, worthily borne by Sir Henry Norbury, K.C.B. Here, again, was the same wonderful royal *bonhomie*—the King, his sister, and his mother walking about everywhere, approachable and accessible, apparently, to all; and the centre, as it seemed to me, of true affection and devotion. He wore his usual uniform, and the cap of a captain-general, with its three broad stripes of gold. Most that was best was there of the Congress and of Madrid, and the royal cakes and ices were handed round, and the sweet royal Perrier Jouet seemed to be inexhaustible. I am quite sure that no other royalties have ever taken greater interest in such a congress, and I shall be surprised if the precedent is sustained to the same degree in the future.

Excursions.

The Escorial.

The excursion to the Escorial was well managed, and was undoubtedly a great success. It was attended by about 250 congressists. They assembled in the Puerta del Sol, the great business and tramway centre of the capital, at 8.15 a.m. on Saturday, April 25th, and were driven in breaks and well shaken up over the great cobble stones with which most of the streets of Madrid are still paved, to the Northern Station. The Escorial was reached in an hour and a half, and the monastery, church, and library were at once visited. The latter is of great value, and the illustrated missals are extremely fine. This library shows an unusual peculiarity: the backs of the books are turned from the spectator in order to preserve them better, and the titles are consequently displayed on the gilded pages of the fronts.

The church is a noble one, and is practically St. Peter's at Rome on a smaller scale. The main interest of it lies in the Pantheon, or place of sepulture of Spanish royalty, planned by Philip II, the builder of the Escorial. There, under the high altar, just where each day the host is elevated, rest in marble sarcophagi in a chamber and on a floor of marble, the bones of the Kings of Spain: and close by in other chambers, the remains of other members of the Royal House. There was good light in the royal vaults and the air was pure, the explanation being that these royal remains are not placed in their final receptacles before twelve years after death. Prior to that they remain in an open grotto (not publicly shown) exposed to air and light, till nothing is left but an inodorous, dry mass of skin and bone. It could not be other than a solemn moment to stand there in that chaste and beautiful chamber, surrounded by the dead majesty of Spain, by all that remains of Charles V, the opponent of Luther: of Philip II, the builder, the husband of our Queen Mary, and the organizer of the Armada; of Alphonso XII, its last occupant; and where, too, the cenotaph was visible, destined for, though not, all hope, to be occupied for very many years to come, by the gracious Boy-King of Spain.

Lunch was served at 1.15 in the two chief hotels of the town. The cloisters and the cell of Philip II were visited after lunch, as also the cottage of Prince Charles, which is close to the railway station; and so, after a long wait for a belated train, back to the Puerta del Sol by 9 p.m.

The position of the Escorial is desolate but grand. It is situated in a sterile and rocky valley, almost surrounded by serrated hills, like those of Skye, though light, not dark in colour like the last. In the crevices of the rocks unmelted snow still lay, and though the sun was warm and the day perfect, the wind was icy from the hills close by and from the more distant snowclad Guadaramas. The Escorial, with its light grey granite, was built for a thousand years, and though severely simple, is distinctly grand, little justifying the sarcasm of Mark Twain that you should certainly see the Escorial, if only for the thankfulness that you will ever after feel, that you do *not* live there. My own judgement is that those who visit Madrid without visiting the Escorial also will miss one of the greatest sights, not only in Spain, but in the world at large.

Toledo.

On Monday followed a similar excursion, which also took an entire day, to Toledo. It also comprised 250, and no more tickets were issued. Personally, I was more anxious to visit Salamanca, the site of the oldest Spanish university, junior, in fact, by a few years only to Oxford; but being assured that nothing save a few walls now remains of its ancient glories, I renounced that intention in favour of the trip to Toledo. Roman Toledo, named in Livy, was later the capital of the Visigoths, who there from Arians became orthodox in 587. Later still it was for 400 years under the Moors, who were at last driven out by Alphonso VI of Castille. No wonder, therefore, that the cathedral, once a mosque, should still show so many traces of Moorish work. "Toledo epitomizes," as Mr. Street puts it, "the whole strange history of Spain." The main attraction of Toledo centres in its cathedral, which has served successively for the worship of the Arian, the Moslem, and the orthodox. It is certainly one of the wonders, as it is also the seat of the Primate of Spain. Splendid without, it is still more splendid within, with its Gothic nave, its richly carved choir, and its Moorish apse. Thus it is that its special character shows itself of Christian emblems here and Moorish tracery there. The Sala Capitular is almost wholly Moorish.

So is it throughout Toledo, which would need a volume to describe it, where a very agreeable day in perfect weather was spent, and where the swallows were disporting themselves in the sunshine.

We passed from church to Moorish court, and then around the town, perched on its hill, with its crumbling walls still protecting it, and its river Tagus in a gorge that half surrounds it, on to the sword manufactory, still famed as of old, and then through mediaeval gates, past ancient towers, through narrow streets to the extraordinary Zocodover Place, with its columns of pillars, its four-storied green-shuttered houses, its shops and *cafés*, its sandy arena and dwarf acacias, and thence to the disillusionizing railway station, whence in two hours and ten minutes back to Madrid.

A Bull Fight.

I suppose I must unwillingly say a few words about the bull fight, and the first will be that it is a brutal anachronism and ought to be abolished. Of course there was no bull fight specially for the Congress, but nevertheless there was a bull fight, which was very largely attended by the congressists. The original and mistaken intention of public bull fighting was to make the people brave and to habituate them to the dreadful sights of the battlefield. The best that can be said for it is that it is very dangerous, and I doubt if those who indulge in the cruel but perfectly safe pastimes of coursing, hunting, fishing, and battue shooting, which invariably means maiming many birds and devoting them to lingering death, have very much reason to plume themselves on their greatly superior sense of mercy. A Spanish bull fight is a very serious affair, and each bull ring has its hospital and its chapel where a service is previously held and the sacrament administered to the fighters! To be caught by the bull is death and how the unfortunate spearmen ever escape is a mystery to me, for they and their miserable superannuated steeds are almost invariably overthrown by the charge of the bull. The explanation seems to be that the picador is usually thrown off on the far side.

I am glad to be able to add that a mortally wounded horse is usually at once dispatched by a dagger thrust through the medulla oblongata. After about half-an-hour the bull is completely tired out with vain chasing of the chulos, into whose proffered cloaks, ignoring them, again and again he plunges his horns. The trumpet then sounds and the matador enters in his splendid dress of chocolate and gold with his long sword and scarlet scarf. Distracting the bull's attention with the scarf in his left hand he aims to transfix the heart of the devoted animal, and if the thrust is mortal—as too often it is not—then the act of the dagger through spinal cord follows at once and all is over.

Bomba Chico, the younger matador, was a very handsome specimen of Spanish grace and beauty, and seemed to enjoy a vast popularity among the spectators, which was shown by their throwing bouquets and hats at him. All these he received with the bows and smiles of a prima donna, immediately returning his less interesting trophies to the quarter whence they came.

The Sections.

Whatever may have been the faults of management—one pigeon hole only for stamping 7,000 return tickets, and one only for the department of lodgings—there can be no doubt that the Sections were never better or more spaciously housed than in the splendid Gallery of Modern Spanish Art, which is situated in the same building with the National Library and the Reception Room. It is true that most of the

immense canvases there displayed are of a very distracting kind, breathing deeds of violence and death; and it is no exaggeration to say that corpses and trunkless heads were far commoner there than scenes of joy and beauty, more especially in the room assigned to medicine. There, too, was the wonderful picture by A. Gisbert—which I remember in one of the Paris exhibitions—General Torrijos and a group of Spanish constitutional patriots awaiting execution, all resigned, and some contemptuous or indifferent, though their slaughtered comrades are lying before them; undoubtedly one of the greatest modern pictures in the world.

I do not feel at all equal to attempting any adequate description of the over-numerous Sections, though I may mention that Mr. W. H. H. Jessop of St. Bartholomew's who presided in the Section of Ophthalmology during part of the day on the 29th, brought forward a very interesting communication, founded on 83 cases, showing that ocular glioma is non-malignant so long as it has not invaded the nerve. On a previous occasion Mr. Jessop also officiated for Professor Landolt of Paris, reading for him a paper on a subject connected with refraction.

Dr. J. F. Sutherland, who read a paper on the distribution of lunacy in Great Britain and Ireland, was made an Honorary President in the Section of Mental Diseases.

In the Section of Surgery, Dr. W. A. McAdam exhibited Reginald Harrison's instruments and methods of dealing with urinary calculi; with many specimens.

In Medicine, Dr. Ian Macdonald, Huelva, read an excellent paper on malaria.

In the Section of Surgery the Spaniards held the field whenever I was there, though not dealing all the time with subjects of great importance or novelty. Some German casts of operations there interested me much, representing an admirable method of teaching. One greatly missed a medical and surgical museum, such as we always have at our British Medical Association meetings, for which there was no substitute of any kind at Madrid.

Dr. Schächter, of Buda-Pesth, made in the Medico-legal Section an important communication on the Medico-Legal Senate in Hungary. Whether all or even the majority of the papers proferred at the Congress were of value is an open point, but there can be no doubt that a vast number of communications were made, and the greatest animation and even excitement prevailed. There were orators innumerable, and their oratory was often impassioned.

As is usual in the case of these congresses we shall have to wait a year or two before we know just what has been said and done and gained, and we can only hope that the result will repay the great labour expended alike by organizers and readers, and even by mere attendants and listeners.

General Addresses.

In addition to the Sections there were also general addresses on no less than seventeen different subjects, delivered by as many acknowledged masters of those subjects. To mention only a few: Professor Brouardel dealt with alimentary errors, Professor Thomson with the attitude of the medical profession towards anthropology, Professor Waldeyer with Darwinism, Professor Politzer with the need of official teaching of otology, Doyen with the teaching of operative surgery by living photographs. Addresses on other subjects were delivered by Ramon y Cajal, Holländer, and Robin of Paris.

It would be impossible without occupying an inordinate amount of space to name even one-tenth of the authors and their subjects, and time alone will show whether it would not have been much wiser to have very greatly compressed the mass of proferred material. In any case, the writers and readers enjoyed themselves hugely and the Spaniards in particular did not lose their opportunity of showing the rest of the world that they were abreast of modern medicine and surgery. I think this Congress, practically ending to-day, April 29th, must, altogether, be reckoned as second only to the last one of Paris and this is true, notwithstanding serious errors in arrangement and management.

The Closing Meeting.

The final meeting took place in the Paraninfo of the University, under the Presidency of Dr. CALLEJA, who delivered an address declaring that the splendour and originality of the modern spirit had reigned in all the sections, which endeavoured in a spirit of fraternity to establish the great commonwealth of science and universal peace. From the Sovereigns who had given them so many proofs of affection and sympathy down to the lowest social classes, all had shown their respect and their regard for the Congress. Professor BROUARDEL, in the name of the foreign members, expressed the general gratitude for the welcome which they had received and the hospitality with which they had been treated. He said: "I desire to be the faithful interpreter of all in conveying to Their Majesties the gratitude and respect of all for their august patronage." He invited the congressists to attend the next Congress of Tuberculosis, which is to be held in Paris. Dr. SFORZA responded on behalf of Italy, Dr. BRETTMANN spoke for Russia, Dr. POSNER for Germany. Dr. RODRIGUEZ (Chile) read a poem to science which was much applauded. Dr. KELLY (Baltimore), delegate of the United States, speaking in English, saluted the President, the Congress, the ladies, and members present. Dr. QUEVEDO spoke for Mexico, saying that the Congress was a proof of the civilizing influence of Spain. Dr. PEREZ ARANIBAL (Peru) said that Peruvians loved Spain as they did their own country. Dr. MELLO REIS spoke for Brazil, Dr. GUISY (Athens) for Greece, Dr. HONDA for Japan.

The Award of Prizes.

The award of the prizes given by the Municipal Councils of Moscow and Paris was then announced. That of Moscow, of the value of £200, was awarded by a unanimous vote to Professor Metchnikoff, of the Pasteur Institute, Paris, for his researches on phagocytosis. With regard to the Paris prize, which is of the value of £120, there was some discussion, Professor Roentgen, Professor Grassi, Dr. Sanarelli, and others having their supporters. On a vote being taken, 42 were given for Grassi, 39 for Roentgen, 5 for Laveran, the remainder being distributed among other investigators. Finally it was awarded to Professor Grassi, of Rome for his researches on malaria.

Next Meeting.

It was announced that the next meeting of the Congress will be held at Lisbon in the spring of 1906 under the presidency of Dr. Costa, Professor of Surgery in the University of Coimbra, member of various scientific societies and author of important works. Professor Miguel Bombarda was appointed Secretary-General. He is President of the Royal Academy of Medical Sciences of Lisbon, author of various works and editor of *A Medicina Contemporanea*, published at Lisbon. The Portuguese hymn was played on this announcement, all present standing. Dr. Costa then in a few graceful words congratulated Spain on the success of the Congress, and bade adieu to the King and Queen whose august patronage had contributed so much to its success. Dr. Calleja then declared the proceedings of the Fourteenth International Congress at an end.

Resolutions.

The following are the principal resolutions passed in various Sections and adopted by the Congress:

In the Section of Dermatology there was an animated discussion on the contagiousness of leprosy, and on the proposition of Dr. AZUA a resolution was passed urging the adoption in all countries of measures for the isolation of lepers similar to those which have been in existence for many years in Norway with such good effect.

In the Section of Pediatrics the following resolutions were passed: (1) The food during early infancy should be mother's milk. Natural milk is always preferable to artificial, there being at present no effective substitute to take its place. The employment of wet nurses should be regulated, legislation for the protection of infants in this direction being urgently needed; the formation of an international league for the study of infant mortality and the means of preventing it is also necessary. (2) Serumtherapy has brought about a great improvement in the treatment of various diseases such as diphtheria, scarlatina, and typhoid fever in children. Further and more detailed studies in regard to this treatment are however desirable. (3) In view of the obscurity in the nomenclature, classification, and nosology of diplegias, a revision of the whole chapter of infantile diplegias is recommended. (4) The Section is unanimous in the wish to see multiplied on the sea coasts marine sanatoria in view of the prophylactic and curative effects of seaside treatment. It also recommends the foundation of school colonies, climatological stations, inland sanatoriums, convalescent homes, etc., for the benefit of infants.

The Section of Pathology passed two resolutions: (1) That a permanent International Committee should be formed for the revision and classification of known bacteria and the study of those recently discovered. (2) That a circular should be sent by the health authorities to all medical practitioners asking for data for the purpose of drawing up statistics as to

rhinoscleroma, in order to know its geographical distribution and the frequency of its occurrence in Spain.

In the Section of Neuropathology, Dr. RODRIGUEZ MORIENI, Director of the Asylum of San Baudilio de Llobregat, proposed a resolution calling on the press not to report crimes in order to avoid the contagion of crime.

In the Section of Military Medicine a resolution was passed urging the creation of a league for the prevention of tuberculosis in navies and armies. The proposer was Dr. DEL VALLE, Secretary of the Section. Sir HENRY NORBURY, K.C.B., was among those who spoke in favour of it.

The Section of Ophthalmology passed two resolutions: (1) On the proposal of Drs. LANDOLT, CUEVAS, and PRESAS, that the unification of optometric scales is necessary, and that the question should be definitively resolved at the next Congress. (2) That a Committee should be appointed, consisting of Drs. Menacho of Barcelona, and Reina y Marquez of Madrid, to study the causes and distribution of blindness in Spain, so as to co-ordinate its results with those of the International Commission appointed for a similar purpose in other countries.

The Medico-legal Section, on the proposal of Dr. MARISCAL, passed a resolution declaring it urgent and necessary that a supreme tribunal of legal medicine should be constituted. This tribunal should be composed of experts of acknowledged standing and repute, and its duty should be to be a final court of appeal in cases of difference of opinion between medical witnesses.

A further resolution bearing on the same subject was one calling on the Minister of Grace and Justice to grant permission to medical experts giving evidence in a court of law to sit on the bench and to wear cap and gown or other professional insignia.

A SPANISH LADY DOCTOR.

An interesting feature of the Congress was the presence of Doña Aleixandre y Ballester, who, in the Section of Obstetrics and Gynaecology, read an interesting paper on diseases of the heart in women in labour. The lady is a doctor of medicine, and the Spanish papers point to her presence as a proof that they are not so backward as they have been represented in regard to the emancipation of women. Female professors have before now adorned chairs of literature and philology in Spain, especially in the reign of Ferdinand and Isabella. At the present time several young ladies are studying pharmacy in Madrid, and several others have obtained degrees in the Faculty of Philosophy and Letters.

THE CONGRESS FROM THE OUTSIDE.

The arrangements made for persons to reach the Madrid Congress were somewhat complicated, and, in certain instances, they did not work satisfactorily. First of all, the would-be visitor intimated his desire to attend. Then he was supplied with a form which he filled in and returned with a subscription—somewhere about a guinea I think it was. After this he was instructed that if he desired accommodation to be reserved for him he must forward 50 pesetas (as a deposit) to the Treasurer, who would then see to this being done. But by no entreaty—neither by urgent letter or telegram in Spanish, French, or English—could the visitor ascertain beforehand the address of his location in Madrid, and for a medical man in particular, this absence of knowledge of an exact address was a matter of considerable importance. The utmost that could be obtained was a printed engagement on the part of the Secretary-General that when the member arrived at Madrid he would have the address given to him, and that all would be in order.

I left Paris at midday on Wednesday, April 22nd, and arrived at Madrid on the following afternoon, and there in a room adjacent to the platform, I found two gentlemen seated at a small table on which was a large indexed book containing the names of those visitors who were to arrive by that particular railway. But the book had not been carefully made up, for an important matter in connexion with arrangements on my behalf had not been notified in it, though on two separate occasions I had written to the Secretary-General concerning it.

As a good many members of the Congress had come by the same train and as we were all crowding round the little table, it took, of course, some time before we could be dispatched to our respective quarters. When it came to my turn, the gentleman behind the book asked me for a certain sum in pesetas as payment for ten days' board and lodging. "But," said I, "the Congress is to last only for seven days; why, therefore, should I pay for ten days?" On this, he referred me to a printed notice upon the wall, which stated that every visitor would be expected to pay for ten days, and that if he stayed less than that time a *remboursement* would be made to him for each day up to ten for which he had paid in excess. When I had paid the pesetas (*minus* the 50 pesetas which I had already sent in deposit) I received a series of green coupons from which I was to pay, *jour par jour*, the person whose guest I was. An agent of the Congress then took me in a conveyance to a so-called hotel, the name of which "for obvious reasons," as the papers say, I refrain from giving. On the way there I consulted my *Baedeker* in the hope that I might find this hotel amongst those recommended, even if it were not marked with an approving star; but I searched in vain. After a while we pulled-up in front of some shops, and, taking me in through a doorway, my conductor led me up two flights of stairs and introduced me to the "hotel keeper," who led me down a long passage, and showed me a bedroom with pigeon-hole windows and a dark airless alcove in which was the bed. I told him at once that I could not accept such accommodation, that I could not breathe there. Then he took me to a higher story and showed me something a little less objectionable, but there was the stifling alcove with its bed. Tired and disheartened as I was, I thought of Desdemona, and then I looked at my host to see if he were at all like the noble Moor. A man less like Sir Henry Irving, however, there could scarcely be, so I took courage and said that I was "content." The host then asked to see my coupons, and having got them into his hand at once deposited them in his pocket. To this I urged a vigorous protest, telling him that, as instructed, I would give him coupons *día por día*. At this he was evidently much annoyed. He wanted them all and at once, for were they not as good as little bank notes? He asserted and he argued. But he did not convince. Still he kept the coupons in his pocket, just as Iago would have done. He had got the best of me, and visions of a future *remboursement* were quickly passing out of my mind, as I thought of an adage about getting butter out of a dog's throat. "It's dogged as does it," however, and at last I secured my precious coupons. But when I got out into the street, I felt a miserable, hopeless wanderer. For I was in a town of a population something less than that of Birmingham, into which had been poured a crowd of about 6,000 visitors. But at any rate I was free! Then I begged my Virgil to help me to another limbo. As we were discussing plans with the cabman, a passer-by said that we could find just what we wanted in the Calle Montera, at a number which, once more "for obvious reasons," I must withhold. It was a small room on the third story, with no fireplace or bell, with a brick floor, but with a large window looking on to a dingy courtyard. The demand was ten pesetas a day—about four times the amount, I should think, which the lady usually obtained for it—and in engaging it it was agreed that I should vacate it at any time I chose. So I was no longer homeless.

On the next day but one, Saturday, I went to the Bureau des Logements and, showing my green coupons, explained to the manager that I could not avail myself of the quarters which had been officially secured for me; that I had found an independent lodging, and that I would be glad to receive the *remboursement*. He asked me where I had been located by the Secretary, and when I told him the name and address of the house and assured him that I found it *impossible*, he replied, *ca ne m'etonne pas!* These few words convinced me, first, that he knew the "hotel" in which I had been billeted and, second, that the Bureau de Remboursements had no direct association with the Bureau de Logements. He then asked me how much I had paid to the latter Bureau, and when I told him the amount he asked me to call for it next day, Sunday, or on Monday, when his Bureau would be open from 10 a.m. I begged him to save me that trouble if it were possible and to return me the money straight-away. This he explained could not be done as he had to send to the railway station to consult the ledger and obtain the money. He desired me to come tomorrow—*mañana*. *Mañana* has a very wide signification in Spain.

Accordingly on Sunday morning at 10 o'clock I went up to the office, but only to see a notice posted up: "*Dimanche; caisse fermée; ouverte demain à dix heures!*" (*Mañana!*) There was quite a large number of persons there seeking *remboursement*, one of whom was an excitable French gentleman, who, having arranged to leave Madrid that evening, was wroth and excited. He said in his wrath: "*Dimanche! Pendant le*

Congrès il n'y a pas de Dimanche!" A similar thought had struck me as I had been walking up to the office—a good mile and a quarter: "*Dimanche! A Madrid il n'y a pas de Dimanche!*"—except for bull fights!

But it is no good being wroth in Spain simply because appointments are broken or time is disregarded. In Spain no one is in a hurry. It was a Spaniard who said that hurry was invented by the devil.

So I went to the office on Monday to make a third (and a successful) attempt to get back the pesetas. I arrived there at 10 o'clock, but there were a dozen applicants in front of me, one of whom, a Frenchman, had been there since 9 a.m. He evidently wanted to secure a good place. Some one calculated that it took each applicant fifteen minutes to get back his money. When I had got within four of the *guichet*, greatly to the consternation of those waiting in the cue—which now was of immense length—the Chef du Bureau disappeared. He was absent for over an hour; probably he had gone to breakfast, although the cue was steadily increasing in length and in impatience. At last he returned, smoking a cigarette, and totally unconcerned at the annoyance which his absence had entailed upon us. Hurry was invented by the devil. ..... It was exactly a quarter to twelve when my pesetas were handed to me! But the Chef was imperturbable and polite, and when I expressed to him my gratitude (which was quite sincere) at getting back my money, he said that thanks were really due from him to me. He was as polite as he was unpunctual; higher praise than this would, I think, be impossible.

Having thus spent the chief part of the morning over the *remboursement* business, it was time for lunch, and as on the previous day I had told my landlady that I should be leaving on this (Monday) afternoon, I afterwards went home to finish packing. Had she wanted the room I could have taken my things to the station after breakfast, but she had other empty rooms at her disposal, so it made no difference to her arrangements, my portmanteau and hat-box lying there until I took them away just after 5 o'clock.

Then came the question of paying. I had arrived there on Thursday afternoon, and I left on Monday afternoon, and this, at ten pesetas a day, made, according to my calculation, forty pesetas. I therefore laid eight new silver cart-wheel pieces of five pesetas on the table. These she counted over, and then claimed ten pesetas more, insisting that from Thursday to Monday was *five* days. She affirmed that I should not leave her house until I paid what she demanded, and rushing off to the main door of her flat she shut and bolted it, and stood with her back against it. It was necessary for me, therefore, to carry her away from the door before I could open it and escape with my portmanteau. With the help of a messenger the portmanteau was then put on the box of an open cab. The lady having disappeared I thought that I was all right, and I told the *cochero* to drive to the Estación del Norte. But before we were under way the lady reappeared with a policeman, and practically gave me in charge for attempting to defraud her!

The Calle Montera leads down into the Puerta del Sol, a splendid open space about four times the size of Piccadilly Circus, and as the lady kept on accusing me and gesticulating, a crowd was collecting. Then two more policemen arrived and stood over me as I sat in the victoria. They asked me for my version of the affair, and I told them I had agreed to pay the lady ten pesetas a day for a small room, and I ended by saying, "*Aun he pagado demasiado, y no pagaré mas!*" (I do not quote this as classical Spanish; I merely repeat what I kept saying to the police—I had already paid her too much and I did not intend to pay her any more.) By this time the lower end of the Calle Montera was chokefull of people who were interesting themselves in the altercation, and a crowd was beginning to surge up from the Puerta del Sol. The electric tram-line was blocked, and all traffic rendered absolutely impossible. I never saw a crowd collect so quickly, and I certainly never occupied so central a position in one.

In the height of all this excitement a gentleman wearing the Congress badge came up to me and asked me if I were an Englishman. He assured me that he was immensely amused at the scene, and, having heard my story, told me that *his* landlady had done him out of 100 pesetas. I then asked him to beg the cabman to try his best to hurry away; but he replied he could not do this as he did not know the Spanish word for *hurry*. However, it did not matter, for so anxious had I been to leave my miserable lodging that I had ordered the cab two hours before it was wanted and "I had all the time," as the French say. Eventually, perhaps because it was the simplest and the easiest way of clearing the street for traffic, the police allowed me to go, and as I left I saw the lady still holding out that handful of new silver, and violently gesticulating against what she pretended to think was deliberate fraud. As the crowd made way for me I waved them a triumphant and, I hope, graceful *à Dios*, thankful to have got away.

THE JOHNSTON LABORATORIES OF LIVERPOOL UNIVERSITY COLLEGE.

DESCRIPTION OF THE BUILDING.

ON Saturday, May 9th, the Johnston Laboratories—the latest completed addition to the splendid group of buildings belonging to the Liverpool University College—will be formally opened by the Right Hon. Walter Long, President of the Local Government Board.

The new buildings, which have been erected and furnished entirely at the cost of Mr. William Johnston, a Liverpool shipowner, are situated on the east side of the Thomson-Yates Laboratories, which they immediately adjoin. They are 90 ft. long, and 47 ft. wide at their broadest part and 34 ft. wide at their narrowest. They contain four floors (connected by staircases and by a lift) which are each devoted to separate departments of study and research, and are under the control of various professors and lecturers. The basement is devoted to comparative pathology, and is under the control of Dr. Annett; the ground floor is devoted to tropical medicine, and is presided over by Professor Ross, F.R.S.; the first floor is set apart for the study of experimental medicine, including experimental investigation in medicine, pathology, physiology, bacteriology, and allied subjects, under the superintendence of the Professor of Physiology and the Professor of Pathology; while one suite of rooms will be devoted exclusively to cancer research, under the direction of Dr. Grünbaum; the second floor is assigned to bio-chemistry, and is presided over by Professor Moore.

The arrangement and equipment on the various floors have been carried out so as to meet the wants and desires of their directors, so that the laboratories differ considerably in detail; but in size and general structure they are practically identical. The following description, though strictly applying to the second floor—the Bio-chemical Department—will give a fair idea of the whole group of laboratories.

The Bio-chemical Laboratory occupies the entire top floor, and consists of four rooms fitted up solely for research work upon chemical problems connected with the various departments of biological science.

The principal room is 60 ft. long and 30 ft. wide, and is well lighted by ten large windows, 12 ft. by 9 ft., the small remaining wall space being faced with white glazed tiles, a wall cupboard being fixed to each pier to hold stock reagents and standard solutions. A complete belt of benches runs round the walls, and the middle of the room is practically divided into four working compartments by two large H-shaped benches, having an outside measurement of 22 ft. by 16 ft. By this arrangement the laboratory is divided into bays in which investigators can work surrounded on all sides by working benches. The floor of the rooms and the tops of the benches are constructed of polished lito silo, a material which lends itself well to such purposes on account of its resiliency, warmth, and non-absorbent properties. Drawers and presses are fitted underneath the benches for the storage of materials and apparatus, a free space being, however, left in the middle of each working space for convenience in sitting. Two large fume chambers, 9 ft. by 3 ft., are built into the central benches, one at each end of the room, and contain six gas jets, regulated from outside, so that the fittings cannot be attacked by the fumes. Sinks are arranged in the wall benches opposite each pier, and each of the large central benches is provided with eight sinks. In addition there are two large sinks placed one at either end of the room for washing glass apparatus. Steam is provided by a main pipe carried up the track of the lift and conducted along the wall on one side of the room for a distance of 18 ft., distribution taps with screw-down valves being provided at intervals of 3 ft. for the attachment of steam baths and other heating appliances. The steam supply is also made use of for the production of distilled water by means of a suitable apparatus.

Opening from the south end of the large room is the Professor's Research Room, measuring 20 ft. by 16 ft., provided with working bench, fume chamber, and cupboards.

To the east of this room, and communicating both with it and with the large room, is the Balance Room, provided with

slate slabs for the support of the balances, let into the wall to ensure greater steadiness. The walls of this room are lined with bookcases, and there are writing tables under the windows.

The fourth room, situated on the west side of the Professor's room, is designed as a working library for the use of workers in the laboratory, and is fitted up with bookcases and a writing table.

The whole laboratory is admirably lighted by large windows and is fitted with the electric light. It is warmed by hot water, and ventilated by the upper parts of the windows and by extraction shafts arranged down the centre.

This is the first laboratory that has been constructed in Great Britain solely for carrying out of research work in bio-chemistry, and will be under the immediate personal supervision of Professor Benjamin Moore, the newly-appointed Johnston Professor of Bio-chemistry. The supreme importance of the chemical aspect of medicine and physiology is becoming daily more thoroughly recognized both in this country and abroad, and it is hoped that many important contributions to physiological and pathological chemistry will emanate from this new laboratory. Four workers, not without previous experience in this kind of research, have already started investigations in the laboratory, and more are expected to join.

It is hoped that the noble example set by Mr. William Johnston, the munificent donor of the whole block of laboratories which bears his name, will inspire others to spend their wealth in providing similar means of research in other centres of education throughout the United Kingdom, so that this country may take a foremost place in the advancement of all those sciences which concern the processes of life, whether in health or disease, and which will no doubt in the near future throw a brilliant light on many of the obscure problems of medicine.

THE INDIAN PASTEUR INSTITUTE AT KASAULI.

A correspondent of Indian experience, at present in Paris, sends us the following notes on the recent report of the Indian Pasteur Institute:

In the report of the Director of the Pasteur Institute at Kasauli for the second year, the classification of cases according to severity is exactly the same as that followed by the Pasteur Institute in Paris. The Paris Institute has had the same experience as to the greater virulence of bites by jackals. They have had several cases from Algeria, and the virulence of such bites is most marked. As regards the views of the Kasauli Institute in relation to "first aid," and particularly touching the necessity for cauterizing every dog-bite, using the word "cauterize" in a general sense to include all caustic application, the officers of the Paris Institute do not believe in cauterizing dogbites in the general protective sense meant by the Kasauli Institute. Dr. Roux is of opinion that the only useful form of cautery is the slight application of the red-hot iron to a bite, and this only when the wound is of a superficial nature. He also declares that no form of cautery is of any avail in the case of deep-seated wounds, and cites the case of a man from Algeria, treated at the Institute, whose wounds had been so terribly cauterized with a red-hot iron that the limb (a leg) was destroyed, and yet the patient died eventually from rabies. Dr. Roux contends that, from the very nature of wounds inflicted by the large fangs of a dog, the deeper portions close up almost immediately of their own accord. This prevents their being thoroughly reached in useful time by any cauterizing agency, more especially such agents as carbolic acid, crude phenyl, caustic potash, caustic soda, etc., most of which also cause rapid decomposition of the tissues, and are therefore not only unreliable but objectionable. He thoroughly appreciates, however, the value of the moral effect of certain applications on the patient as tending to give confidence and thus alleviate certain nervous symptoms, but this and the actual cautery of very superficial bites is all he will concede, and the iron must be used almost immediately after the bite is received.

The officers of the Paris Institute also regard, as does the Kasauli Institute, the sucking and excising of wounds as very dangerous.

As regards the reasons of the Kasauli Institute for their method of procedure when persons are bitten by an apparently healthy dog, and the precautions suggested in such cases, there is a considerable discrepancy in the observation periods laid down by the two institutions. In the French establishment, such exceptional cases as saliva being infective for as long as seven, eight, or nine days without any apparent symptoms of rabies are unknown. Four days at most is said by Dr. Roux to be the time, and the animal is only kept under observation for five days. Of course the immediate destruction of an apparently healthy dog is held to be a mistake in Paris, for the same reason as set forth in the Kasauli report. But it is an interesting fact that the brain of a dog suspected of rabies is now no longer examined microscopically for experimental purposes. It is by examination of the "ganglion plexiforme" of the neck (ganglion of the trunk of the vagus, which in the dog lies quite close to the superior cervical ganglion of the sympathetic) that rabies in the dog is now most rapidly detected by the Van Gehuchten method. By this means the existence or otherwise of rabies may be ascertained in about twelve hours. Dr. Roux regards this discovery by the Belgian, Van Gehuchten, as most important, since it reduces a period of dreadful anxiety and suspense from twelve or fifteen days to twelve hours.

As regards the remaining portions of the Kasauli report, the directors of the Paris Pasteur Institute appear to be generally in accord with it except as to the necessity for keeping the animal under observation for ten days as noted above. But in this regard it is interesting to note that the experience of Dr. Roux tends to show that the incubation period of the virus, when inoculated in the rabbits whose spinal cords are used for preparing the vaccine, is longer in a warm temperature than in a cool one. Indeed, when it is found that death is unduly or inconveniently delayed, the fatal effect of the virus is considerably hastened by placing the animal in a cold atmosphere.

It is probable that the effect on the nervous system of the discomforts and shiverings produced by cold is to disorganize it, and thus facilitate the rapid growth of the virus. But whether this may be the cause of the great discrepancy which exists apparently between the duration of the observation period as practised in the Paris Institute and at Kasauli remains to be investigated. It would be interesting, for instance, to have information from Kasauli as to whether their experience regarding the incubation period goes to show that there is a very marked difference between the cases occurring in the hot season and those in the cold. Should this be the case, we might reasonably infer that in a warm eastern country the period of incubation is longer than in a more moderate climate.

THE PREVENTION OF CONSUMPTION.

United States.

California.—It is announced that the committee appointed to investigate the influx of tuberculous persons into California from other States will recommend to the Legislature measures preventing such persons from coming to the coast. It was also decided not to advise the establishment of a State Sanatorium for the treatment of tuberculosis as it is believed that such a project would encourage the tuberculous to come to the State.

New Jersey.—The New Jersey Legislature has appropriated the sum of 300,000 dols. (£60,000) for a sanatorium for the reception of poor persons suffering from tuberculosis. This is in pursuance of the plan adopted more than a year ago, when the Legislature appropriated a sum sufficient for the acquisition of a suitable site for the necessary buildings. The second appropriation will supply the means for the construction of buildings and the sinews of war for the commencement of a systematic campaign against tuberculosis.

New York.—Dr. Lederle, of the New York Health Department, has written to Mayor Low, urging the appropriation of 35,000 dols. (£7,000) for the establishment of a sanatorium for the treatment of tuberculosis on the tent plan. It is proposed to erect a camp on a tract of 20 acres in Orange County, which has been offered to the city for two years rent free. Dr. Lederle states that with the sum mentioned he could provide a camp for 60 patients from May 1st to December 31st next. A Bill has been introduced into the States Legislature providing that no hospital camp for the treatment of consumption shall be established in any town without the consent of the supervisors of the county and the Town Board of the town concerned. This Bill is apparently intended to give the local authorities power to prevent the proposed establishment of a consumption camp by the City of New York in Orange County.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1903.

MEMBERS of the British Medical Association are reminded that commencing with January 1st, 1903, the annual subscription is a uniform one of 25s., inclusive of the Branch, and that all subscriptions should be paid direct to the General Secretary, 429, Strand, London, W.C., and not to a Branch Secretary.

British Medical Journal.

SATURDAY, MAY 9TH, 1903.

THE ANTIVIVISECTIONIST SCHOOL FOR SCANDAL.

THE drama has, we learn from the *Zoophilist*, been added to the agencies enlisted in the campaign against experimental medicine. Dr. Ernst Arthur Lutze, President of the Berlin Section of the International Union against Vivisection, has produced a drama entitled *Der Vivisector*, which is said to have been played recently before the German Emperor in a darkened auditorium. We are tempted to think that the Hon. Stephen Coleridge had this example before him in organizing the annual meeting of the National Antivivisection Society, of which a report appears elsewhere. At any rate it produces on our mind the impression of a dramatic performance, showing evidence of skilful stage management, with judicious arrangement of cast and careful preparation of effects, the provision of a *claque* not being forgotten. It may, we think, not unfitly be described as an antivivisectionist adaptation of the *School for Scandal* with the venom intensified and the wit left out. Lord Llangattock played the part of the "heavy father," testifying "against what he believed to be displeasing to God." May we ask this noble sportsman whether he thinks it pleasing to God to bear false witness against his neighbour? He invited the public to consider whether it was right to torture helpless dumb animals. This, he said, was the simple issue to be decided. If this be indeed the issue, we are surprised that Lord Llangattock has the impudence to submit the case to the public. He has probably caused more torture to "helpless dumb animals" in the battues given by him than all the physiologists in Great Britain; who is he, then, to cast stones at them? Lord Llangattock has probably to speak his part as it is set down for him; otherwise we should be compelled to charge him with deliberate misstatement of the issue. He boasted of the great progress made during the year by the Society over which he presides, and expressed the belief that it had at its back the vast majority of the working classes. If this be true it is only a further proof that the Society finds its supporters among the most ignorant members of the community. We have the highest respect for the industrious working man, for, as Browning says, "All service is the same to God." But to erect the working man into a judge of the methods and results of scientific research is as absurd as it would be to make Mr. Stephen Coleridge the *arbiter elegantiarum* in the conduct of controversy. A correspondent, who elsewhere relates what he saw at the meeting, gives his impression of the working-class recruits who have been drawn to the standard of antivivisection. They doubtless find the blood and thunder of the antivivisection drama a stimulating addition to the drink, betting, and other "wanton indulgences" which, as we have it on the testimony of Mr. John Burns, are their natural amusements. The same unimpeachable authority charges the working classes with snobbery; this may explain how some of them may think it worth while to keep sober for an hour or two one evening in order to have the privilege of appearing before lords and ladies as "delegates," and have their feelings harrowed by an "Honourable."

Lord Llangattock further boasted that his Society had scattered tens of thousands of pamphlets and newspaper articles broadcast over the land, and he challenged vivisectionists to name a single inaccurate statement in any of these countless publications. Surely the noble organizer of battues was here carried by his enthusiasm a little beyond the limit of his "lines." To mention only a single instance, does he need to be reminded of a certain catalogue purporting to be translated from the German in regard to which the methods of his Society had so fierce a light shed on them in the *Times*? We should recommend Lord Llangattock to stick to the killing and mangling of pheasants and partridges; he is evidently more at home in that ennobling art than in discussing the ethics of research.

The Hon. Stephen Coleridge has greater histrionic gifts, but his manner is too stagy, and he is too prone to tear his passion to tatters. He, too, misrepresents the issue when he calls on Parliament "totally to abolish the legal torture of animals." He, doubtless, knows more about "legal torture" than we do, for we have never heard of such a process being applied to animals. If, after the numerous testimonies to the contrary which he has received from men just as much entitled to credence as himself, he still, with no personal knowledge of facts to rebut their testimony, professes to believe that animals are tortured in laboratories in this country, we can only suggest a surgical operation such as our forefathers were wont to practise, "for the ventilation of the brain." Mr. Coleridge is good enough to say that his opponents no longer defend the torture of animals. This admission is evidently modelled on the famous question of one of that class of his professional brethren who may justly be called legal torturers, "How long is it since you left off beating your wife?" When have his opponents defended torture? We say that it does not exist, and the gruesome story which somebody has told him about University College will not convince any one who knows the facts that torture is practised there. The howling of dogs in confinement may, as Londoners troubled with insomnia can testify, be heard in many a back garden and yard. The evidence of the witness called by Mr. Coleridge to make the blood of the British public run cold, is given in full at p. 1110. It will be seen that he states that "the dog struggled forcibly during the whole experiment and seemed to suffer extremely during the stimulation." If the witness knows anything of medical practice he must be aware that exactly the same might be said of many human patients under the operator's knife; yet on awakening they will say that they felt absolutely nothing of what was being done to them. The witness states that no anaesthetic was administered in his presence; but that does not prove that none was used. Did the witness take the trouble to inquire whether an anaesthetic was given beforehand, and did he satisfy himself that in point of fact the anaesthesia was not "kept up by repeated administration"? He displays so manifest a bias that we say frankly, without

implying that he is consciously saying the thing that is not, that his statement cannot be accepted unless it stands the ordeal of a severe cross-examination. Should it be shown that anything like torture had been practised we should be the first to denounce it. We hate cruelty to animals as heartily as Mr. Coleridge does. We hold that a dog is superior in character to many men, and in intelligence to most antivivisectionists. But though we admit him to be our friend and almost our brother, we do not, as Artemus Ward said of the negro, look upon him as our grandfather and our great grandfather and our aunt in the country. We have still some sympathy to spare for our own kind, and therefore we think that Mr. Coleridge, who persistently denounces, as monsters of iniquity, men who have to an incalculable degree lessened the sufferings of humanity, either prefers animals to human beings, or is deliberately playing a part to gain the applause of groundlings. Of his appeal to sentimental Hooligans to leave every laboratory in the kingdom a heap of ruins, we will only say that, coming from one who is, in his degree, a law officer, it is a remarkable utterance. But we do not suppose that he means what he says—it is merely a trick of the actor strutting on the stage; and if he does mean it, no one minds him, for, like Gratiano, he speaks an infinite deal of nothing.

Of the minor characters in the drama little need be said, but that they played up to the "star" according to their ability. The Rev. Neville Dundas repeated Mr. Coleridge's stale and often refuted calumny that hospital funds are used to assist in the maintenance of laboratories where vivisection is carried out; and Dr. Bagshawe, who is, we believe, a bishop *in partibus*, showed himself very much at sea in his notions both as to hospitals and as to experimental research. That ecclesiastical dignitary was perhaps put forward in the place of Archdeacon Wilberforce, who seems to have retired from the boards since our exposure of his controversial methods in the BRITISH MEDICAL JOURNAL of June 29th, 1901. There was a gleam of reason in a speech of Lord Ernest Hamilton, in which he said that antivivisectionists could attain their end only by gaining popular sympathy, and "they could only win that sympathy by intelligent argument on lines of moderation, proving that they were not the cranks and vapid sentimentalists depicted by their opponents." This is a side-thrust at Miss Frances Power Cobbe, who clamours for total abolition of vivisection, and anathematizes those who ask only for its regulation, as traffickers with iniquity. Lord Ernest further warned his hearers that they must distinguish between painless experiments and those which could not be so described. We doubt, however, whether they will pay any heed to his warnings; it is so much more natural to fallen mankind to believe with Mr. Coleridge that vivisectors torture animals in laboratories and that "physiologists" use "clinical material" in hospitals for experiments.

Sir F. Banbury, who has introduced a Vivisection Bill into Parliament, gave us a glimpse behind the scenes when he reminded the audience that however uncompromising they might be in St. James's Hall they must go slow in the House of Commons. We have no fear that, however they may mask their batteries, the House of Commons will walk into the trap set by them by the Bill. Parliament will never, we are sure, allow itself to be misled into mischievous legislation by fanatics who strive to incite mobs to violence and destruction of property.

THE DETERMINATION OF SEX.

As is very well known, the human family has no stereotyped composition; now we meet with the father of seven daughters and no sons who bewails his hard case; again, we hear the mother of many sons lamenting bitterly that a daughter has not been given to her to be a companion and a help; and again, we make the acquaintance of parents who are more or less contented with families in which the sexes are fairly or somewhat unevenly distributed. There is apparently no rule in this matter of the composition of the family; there is, in fact, an almost infinite variety, so that a pleasing uncertainty, if it be not an agonizing suspense, precedes the birth of every infant into this world. Is it to be a boy or a girl? If it is to be again a girl, is there no way in which on some future occasion it may not be a boy? Both these questions or variants upon them will meet the medical man, not once, but many times in his professional experience. With his answer to the first of them we are not now concerned, although it will tax his knowledge, his clinical skill, and his *savoir faire* to the uttermost; but the second question goes deeper into the mysteries of reproduction and calls even more clamantly for some sort of answer, or for some explanation of why there can be no sort of answer. It is well for us to know the limits of our knowledge and the extent of our ignorance in this matter of the determination of sex; and among several works upon this subject, that by Professor M. von Lenhossék[1] gives us at least a means of finding out what little is known upon the question and how much is still unknown.

No one, not even he who only crosses the threshold of the inquiry into this subject, can fail to be struck by the fact that while in the individual family the proportion of the sexes varies within very wide limits, in the case of the general population of any country the ratio which the male births bear to the female is very constant. More boys are everywhere born into the world than girls. The excess varies slightly in amount in different countries (it is as 108.3 is to 100 in Spain and as 103.6 is to 100 in England), but the variations are inconsiderable. Further, statistics would seem to show that the excess of male over female births is no new phenomenon, but was noted in the seventeenth century. It is true that before long the excess in boys over girls gives place to an excess in women over men; but the change is due to many factors, and, while interesting enough in itself, does not enter within the scope of our present inquiry.

There is then a constant excess of male births as compared with female, which may be represented roughly as 105 to 100. If, however, we take into account the sexes of the fetuses in abortion sacs and of premature and dead-born infants, we find that in these cases the males still further outnumber the females, so that the proportion of the sexes from the time of conception onwards has to be represented as 111 to 100. The question now arises whether under certain circumstances this disproportion between the sexes at and before birth varies; whether, in fact, it is possible by altering environmental or other conditions to alter the relation of the male to the female births. Professor von Lenhossék goes very completely into both the statistical and the biological aspects of this problem, and lays before his readers much information from the works of Rauber, Bodio, Hofacker, Wilckins, Düsing,

[1] *Das Problem der geschlechtsbestimmenden Ursachen.* Von Dr. M. von Lenhossék, o. Professor der Anatomie an der Universität Budapest. Gustav Fischer, Jena. 1903.

Stieda, Sadler, Berner, Korschelt, Born, Pflüger, Ploss, Bartels, Heape, Treat, Maupas, Schenk, Weismann, and many others. The greater part of the information deals with very special subjects, requiring a fuller knowledge of biological problems than is possessed by most medical men, but the chief conclusion which is come to is clear enough, and can be easily and shortly stated. It is that the sex of the offspring is determined early in antenatal life, before intrauterine life in the strict sense of the word has begun, and before impregnation has taken place. It follows then that the sex of the offspring is decided not by both, but by one only of the parents, and Professor von Lenhossék is of opinion that biological experiments show that it is the mother, and not the father, that possesses this power. The sex of the ovum is fixed before the spermatozoon fertilizes it. In this respect von Lenhossék takes up a very different position from that assumed by Dr. Van Lint, whose work was recently reviewed in the BRITISH MEDICAL JOURNAL,[2] who holds that the sex of the embryo is determined by the relative strength of the spermatozoon and the ovum, a female embryo being produced by the union of a strong spermatozoon with a weak ovum. In order to maintain von Lenhossék's position it has to be proved that after impregnation the ovum, and later on the embryo, has a sex although it shows apparently no signs of it. The young embryo is neither to be regarded as neuter nor as hermaphroditic, but is to be looked upon as already male or female, while as yet it shows no indications of sex. As early as the fifth week it is believed by Nagel that the cells of the future testicle can be distinguished from those of the future ovary, and it is maintained that it is not improbable that still earlier signs of sex may exist if only we were able to recognize them. This, of course, is for the human subject; in some of the lower animals—as in Dinophilus apatris, one of the worms—there are ova which are quite recognizably different, the female eggs being large, oval, and granular, the males being small, round, and clear. The ova in the human subject, and in many of the animals, do not indeed show any sexual dissimilarity either in their histological or in their chemical characters; but similarity in these details may be only apparent, not real. Nature is constantly teaching us that dissimilarity may exist when we cannot perceive it; she also occasionally astonishes us into recognizing similarity between apparently very dissimilar states. He is a bold histologist who will nowadays maintain that no difference exists between two masses of protoplasm simply because his microscope reveals to his eye no difference between them.

Another problem arises if we admit that sex is determined in the ovum before impregnation—namely, how long before impregnation is it fixed? Nothing very definite can be asserted upon this matter; but it may be asked whether, having carried the determination of sex so far back, there is any need to stop at, say, the maturation of the ovum? Is it not likely that the female infant comes into the world with the ova in her ovaries already male and female? This is undoubtedly a very important question, for if we admit the latter supposition, all our hopes of modifying the sex of offspring vanish into thin air. If, on the other hand, the sex of ova is not settled till maturation then there may be some chance of altering their destiny. So it will be seen that the practical side of the problem has been gradually narrowed down. No treatment of the mother after her pregnancy has begun can be efficacious, for the sex of the ovum is fixed before there is yet an embryo. It is possible that treatment just before pregnancy may be of some effect, but only if the sex of the ovum is determined at or about the time of maturation. But, if we admit this possibility of a therapeutic determination of sex, what is the treatment to be? Professor von Lenhossék shows fallacies in the well-known methods of Schenk, of which so much has been heard in recent years, and it must be admitted that the reasoning upon which they are founded is not in accord with biological discoveries. The tendency of recent research has been to show that the better nourished the ova are the more likely will they prove to be female, while the poorly-nourished ones will give origin to male embryos. This conclusion has not, however, been established, and, even if it be proved for the human subject as well as for the lower animals, it does not follow that it can be put to practical use. How can we, so to say, starve the ova in a woman's ovaries before the beginning of a pregnancy? To starve the woman may or may not be effectual, for it would seem that under such circumstances the reproductive function may, as it were, take precedence over the others; the ovary with its ova may become, from the standpoint of nutrition, the preferred part.

The conclusion of the whole matter, then, may very well be that the medical practitioner will be a wise man if he refuse to raise hopes in the breasts of parents that by any means in his power he can hope to alter the sexual future of their offspring. This may not always have to be his answer; there may be a time when he may step in as arbiter of the sex of the infants yet unborn. Whether that will be for the happiness or unhappiness of the parents and children of the future it is hard to say. Our wishes many times give us not our wish.

[2] April 11th, 1903, p. 857.

RECRUDESCENCE OF PLAGUE.

THE reports on the prevalence of plague which we notify week by week in our columns have during the past few weeks indicated a rather serious state of affairs in several quarters. India has during the past winter suffered from the most serious epidemic experienced since the disease appeared in Bombay in 1896. As reported in our columns, over 32,000 deaths from plague occurred in India during the week ending March 28th, and during the succeeding week the deaths from the disease reached the enormous total of 34,000, or about 5,000 deaths daily. At the present moment it is not so much that any one city or district in India is seriously affected, as that the disease is very widely spread. Central India and Hyderabad remained for a long time free from the disease, whilst the provinces around them were being severely scourged; but these two previously immune areas have lately been added to the list of districts affected. It is satisfactory to note that although several parts of the Madras Presidency have been visited by plague, the city of Madras itself has remained free, and the medical and sanitary authorities of the city are to be congratulated upon the fact. We would warn them, however, that continued vigilance is necessary if they are to maintain their immunity; but we are willing, from what we know of the inroads of plague, to free them of blame should plague unfortunately invade the densely populated city. It has occurred over and over again that in districts in which plague seemed to be staved off by the

vigilance of the authorities, the epidemic has appeared while yet all known channels of entrance have been carefully guarded; and it would appear that our knowledge of how this disease gains access is as yet quite imperfect.

We have been rendered familiar by events in many quarters with the fact that rats contract plague, but Professor W. J. Simpson has recently shown that many of our domestic animals are subject to the disease, and are in all probability capable of transmitting it to man. If this is the case an outbreak of plague is a calamity which may well terrify any community, for a disease which becomes endemic by virtue of a general infection of animals, of which the rat is only one, and it may be an insignificant factor in the spread of plague, is an infection which is likely to remain indefinitely in any place in which it attains a hold. In Hong Kong plague is again recrudescent, and after some six weeks of immunity the disease is once more in evidence in Mauritius. In Cape Colony the plague report is far from reassuring, and in such widely-separated towns as Port Elizabeth, King Williamstown, and Graaff-Reinet the rats are found to be infected, and cases of plague in human beings are reported from time to time. Recent telegrams also seem to point to a possible infection of Johannesburg. The Cape would appear to be becoming saturated with plague, and we should not be surprised to hear that the disease has become widely prevalent, as there can be no doubt that it has become endemic.

The arrival of a ship at Plymouth from Sydney, from which a case of plague was landed at Suez last week, shows that plague continues in Australia, and although apparently neither very widely spread nor virulent, yet the infection remains, and is capable of being carried by ships to distant ports. It is satisfactory to note that at the present moment Egypt is free from plague, and that both North and South America have got rid of the disease.

Strict vigilance at our ports is the only safeguard against the importation of plague into this country, visited as it is by ships from several infected areas. A vigilant watch is, we know, being maintained, and rightly so, for so long as plague remains in India, so long does it behove the authorities in all European ports to be watchful of ships arriving from the East.

What is to be done in India to check the ravages of plague is a difficult question, but it is one to which both the India Office and the Government of India must give early attention. The authorities and the natives of India seem to have accepted the inevitable. The difficulty of setting aside the prejudices and religious observances of the natives of India is an ever-present obstacle when any new sanitary measures are undertaken. We sympathize with the authorities in their struggle. At the same time it is possible to make too much of native prejudices, and to give way to them to an extent not quite justifiable. One of the most glaring instances of this kind occurred lately, when the authorities, to humour the natives, refrained from killing rats, although they were known to be infected. Certain sects in India forbid the taking of animal life, but when the animal in question is a danger to the community, to India, and to the world generally, we question the wisdom of giving way to such prejudices.

It is asserted that, were the authorities to insist upon the destruction of the rats, there would in all probability be a riot, perhaps bloodshed. Blood has been shed for less commendable reasons than the protection of humanity from one of the most terrible diseases known, and even at the risk of creating a local riot it is doubtful whether the continued giving way on almost all points of sanitation to antiquated prejudices is wise in the long run. There is no doubt that the state of India owing to plague at the present moment is pregnant with extreme danger to the whole world, and it is possible, in fact not improbable, that the European Powers may request Great Britain to take stringent measures that this focus of danger be summarily dealt with. So accustomed have we become to the presence of plague in India, that even whilst people are dying at the rate of almost 5,000 daily, no single British paper thinks it worth while to give telegraphic accounts of the course of the epidemic. There are no grounds for panic, but to save our fellow-subjects from a loathsome disease, and to maintain the sanitary pre-eminence which belong to us by our exertions in the cause of hygiene, it is time the condition to which India has been brought by plague should receive the serious attention of the imperial authorities.

MR. COLERIDGE'S STAGE ARMY.

MR. STEPHEN COLERIDGE is a clever stage manager, and makes the most of the handful among his followers who have the most shadowy claim to distinction of any kind. It is always interesting to learn how masters of any craft achieve their results, and we have therefore read with much edification a correspondence in the *Daily Chronicle* which is one of the sequels of the meeting of the National Antivivisection Society, a report of which appears elsewhere. In a letter published in the issue of that newspaper of May 6th, Mr. Eden Phillpotts, whose name had been given in a list of those who had written letters of regret at their inability to be present, denies that he wrote such a letter. We cannot forbear quoting the rest of the letter. After saying that the error conveys a false idea of his opinions and a contradiction of his published utterances, Mr. Phillpotts proceeds: "The National Antivivisection Society should be careful to avoid mistakes of this character. As a matter of fact, I have always been strongly in favour of vivisection in the proper hands, and have deeply resented the cowardly epithets of "cruel" and "immoral" hurled against noble and distinguished students of science and toilers for truth by a sentimental, ignorant, and inaccurate section of the community. This hysterical wave of sentimentality is among the most regrettable features of modern thought. However, my opinion does not matter a button. I am only anxious to set myself in the right. The list of those who wrote letters regretting their powerlessness to be present is interesting reading—and rather astonishing reading, too." In the *Daily Chronicle* of the following day, Mr. Maurice Hewlett complains that he has been treated even worse than Mr. Eden Phillpotts, inasmuch as it was said that he had been present on the platform. "Not only," says he, "was I not present, but I wrote to Mr. Coleridge to say that I should not be able to assist him." He adds: "I did not consider it necessary to tell him my reasons, feeling (as Mr. Phillpotts says he feels) that they were not material. Now, however, I will ask you to record that they are precisely those of Mr. Phillpotts." In regard to Mr. Eden Phillpotts, Mr. Coleridge characteristically defends himself by quoting what, if authentic, is merely a note of refusal couched in terms of ordinary courtesy which Mr. Coleridge as a professor of the "amenities" should be able to appraise at their true value. Part of the secret of his stage management would therefore seem to consist in a skill in handling "men in buckram" which Falstaff might envy. He may comfort himself for his repudiation by Mr. Eden Phillpotts and Mr. Maurice Hewlett with the devotion of that savoury writer Madame Sarah Grand, and Mr. Richard Le Gallienne, the *vates sacer* of female underclothing. We confess, however, to a certain curiosity as to the absence from the platform and from the list of those who sent letters of apology, of the Duke and Duchess of

Portland, whose names used to figure prominently among the supporters of the National Antivivisection Society.

HOSPITAL SCHEMES FOR SOUTH LONDON.

IN our issue of February 28th, 1903, p. 512, we gave some account of the work of the Bolingbroke Hospital on Wandsworth Common, with special reference to the scheme then recently published of converting it into a large general hospital. The report of the hospital for the year 1902, which has just been issued, makes no direct reference to this scheme, but contains some points of interest in connexion with it. The institution contains 30 beds, and during the year 378 persons were treated as in-patients; 270 were admitted direct from the "accident room." Of the total number admitted about half came from Battersea, 38 from Wandsworth, only 14 from Clapham, 56 from Balham and Tooting, and the rest from other parts of London. In the "accident room" some 274 cases were treated as "out-patients," in addition to those admitted to the wards. As pointed out in our previous account of the hospital, ordinary out-patient work is not undertaken, but a feature is made of the ear and throat department, in which 544 cases of this class were treated during the year. One of the claims that have been made for the institution is that it is worked on a provident basis, but the accounts show that not much weight can be attached to this factor. Only about one-third of the patients paid anything, and less than 14 per cent. of the income for the year was derived from other than ordinary charitable sources of revenue. We note that the Council of King Edward's Fund, when forwarding their grant in aid, make an implied suggestion that the beds should be made altogether free. Why this suggestion should have been made is not obvious, since so long as the admission of an accident case is not made contingent upon payment, there seems to be no reason why payment should not be asked for if it is subsequently found that the patient is in a position to make it. Considerable prominence is given in the report to the fact that only first-aid emergency treatment is given except upon the recommendation of a medical practitioner, and that "179 local practitioners availed themselves" of this rule during the year. Reviewing matters in the light of this report, we find nothing to change the view we before expressed upon the ambitions with which the managing body are credited. These were that while we believe the existing institution in its present form to be very useful, and that if modernized and perhaps slightly enlarged it would form an excellent annexe and feeder to a large general hospital, we believe that its situation and the basis upon which it works under its articles of asssociation as an incorporated institution make it undesirable that any call should be made upon the general public for its material enlargement, until it is quite obvious that the needs of South-West London will not be met by the transfer of one of the large existing hospitals from north of the Thames.

THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

THE festival dinner of the National Hospital for the Paralysed and Epileptic was held under the Chairmanship of the Lord Mayor at the Whitehall Rooms of the Hôtel Métropole on April 30th. Amongst those present were Sir John Cockburn, Sir John Paget, Sir Thomas Brooke-Hitching, Sir A. Rücker, Sir Felix Semon, Sir H. Howorth, Sir William Gowers, Rev. Dr. Wace, Mr. Justice Kennedy, Mr. Justice Bigham, and Dr. Buzzard. In proposing "Success to the National Hospital for the Paralysed and Epileptic," the Lord Mayor explained how it was justifiable to look on the hospital as a school for the whole world, and remarked that the institution was the largest hospital in the kingdom for the treatment of nervous diseases. It had been calculated from the number of medical men who attended the hospital clinics that in the last five years 75,000 patients had been indirectly benefited. Last year the number of in-patients treated was 1,004 and the number of out-patients was 6,366. There were also 90 pensions for incurable cases. The expenditure was £18,000 a year, while the income was only £10,000, and £25,000 was required for additional buildings. The Rev. Dr. Wace, who responded to this toast, was greeted with loud cheers when he expressed his opinion that the hospital administration in all its branches was now working in a perfectly harmonious manner. When the applause which followed this statement had died away, Dr. Wace said he was extremely glad to hear the cheers, for he noticed they were joined in by the members of the medical staff. He assured those present that the greatest benefit had been derived from the association of members of the medical staff in the management of the hospital. Sir John Cockburn gave the toast of "The Medical and Surgical Staff," and dwelt on the far-reaching influence of the hospital staff not only throughout the whole of the British dominions but also in other countries. The hospital was an effective agent in the advancement of scientific medicine and surgery. Sir William Gowers, in replying, said that if both the charitable and the uncharitable public knew of the cases treated at the hospital, if they could witness how suffering which made life unendurable was absolutely abolished, and if they could see palsies which would soon end life completely removed by the surgeon, then he was sure their pockets would be opened without the aid of Sir Victor Horsley's ambidexterity, and their purses would be emptied of their contents without the use of the trephine. He congratulated the hospital on the fact that the persevering labours of their pathologist, Dr. F. Buzzard, had resulted in his discovering that acute ascending paralysis was dependent on a special organism. In the course of the evening Dr. Wace made the announcement that the subscription list amounted to £1,882.

THE AMERICAN MEDICAL ASSOCIATION AND THE CODE OF ETHICS.

IN an address recently delivered[1] before the Cincinnati Academy of Medicine, Dr. Charles A. L. Reed, the President of the American Medical Association, has related the history of the attempt to enforce a uniform code of ethics upon the medical profession in the United States. The code was drawn up in 1847, and formally adopted by the Association as the basis of membership in 1855, its object being to determine who should be regarded as orthodox and properly-qualified medical practitioners, and to proscribe professional relations with all practitioners whose antecedents and practice did not satisfy its requirements. It was especially aimed at sectarian medicine, but in spite of it, and Dr. Reed thinks because of it, in the years following its adoption by the Association the sectaries increased enormously in numbers and influence, and in many parts of the country acquired the best share of private practice. At the same time the medical profession as a whole was far from accepting the code. The American Medical Association never exceeded 8,000 members, while many of the most influential societies, notably the New York State Medical Society, refused to affiliate with it, from dislike to the code. Now within the last two years the American Medical Association has been reorganized; its house of delegates has been greatly reduced in number, and a revised constitution and by-laws have been adopted from which all reference to the code has been eliminated. As a consequence of this change, which Dr. Reed claims as a great and liberal reform, new societies are being formed and old ones recast on new lines at an unprecedented rate, and "sectarianism, the acknowledged evil of medicine of the last century, has already begun to disintegrate." It is evidently the opinion of the President of the American Medical Association that the code of ethics has been a hindrance to the influence and authority of that Association and to the organization of the medical profession within the United States, and he welcomes the liberation of the Association from its trammels as the first step on the road towards attaining these important objects.

[1] *New York Medical Journal*, February 28th, 1903.

LACERATION OF PREGNANT UTERUS: RETAINED FETUS.

INJURIES during pregnancy are of importance for medico-legal as well as obstetric reasons. The great tolerance of the gravid uterus to injuries which, even when severe, do not always cause abortion is set forth in all manuals of forensic medicine. Recovery after eventration by an ox has been recorded more than once; indeed, the mortality after Caesarean section effected by that accident was said to be less than when the same operation was performed in lying-in hospitals by skilled authorities before the days of antiseptics. Góth,[1] of Kolosvár, Hungary, reports an extraordinary case of injury during pregnancy. In this instance the injury was caused by a calf, which did not rip up the patient's abdomen, but struck it so as to cause laceration of the uterus; the patient was in the seventh month of her sixth pregnancy. She kept her bed for three days, more from fear of abortion than from any specially severe symptoms. No abortion followed although the uterus happened to be lacerated. After the three days' rest her husband made her get up, and she attended to her domestic duties until term, when dull pains in the hypogastrium set in, but left off within a few days. Nothing, fluid or solid, passed out of the vagina. A week later haemorrhages set in, and were mistaken by the patient for returning menstruation. At length, over ten months after conception, great pain and high temperature were noted. The right arm of a fetus was detected in the os, flooding followed, so that a tampon was applied to the vagina, and the patient sent by rail to a hospital. The uterus reached to the umbilicus; its walls were curiously flaccid, but its lower and right part held a mass, and in passing the finger into the cavity fetal bones could be felt. The uterus was carefully emptied; the fetus was completely macerated so that its bones were removed piecemeal. During this proceeding a large rent was found in the anterior wall of the cervix; it gaped widely, and led into a cavity which lay anteriorly and to the right, and held a great part of the fetus. The placenta could not be distinguished. The uterus was tamponed. Four days later the tampon was removed; there had been no further haemorrhage. Involution had become almost complete by the end of six weeks. A mass of parametritic deposit had developed around the part of the fetus extruded from the uterine cavity; it was slowly absorbed during convalescence. One noteworthy feature in this remarkable case was the absence of any true labour pains at term, for the trouble at that period was evidently due to pelvic inflammation, so that this was not precisely an instance of "missed labour."

MEDICAL MEN AND CORONERS.

WE have received a letter from Mr. S. Ingleby Oddie, Deputy Coroner for West London, protesting against the allusion to himself in an article published in the BRITISH MEDICAL JOURNAL of April 25th, p. 979, and contrasting the observations there made with those contained in an annotation published in our issue of April 11th. The report of the inquest published in our issue of April 11th, p. 887, was founded on that published in the *Kensington News*, and in that report, as also in the annotation published in the same issue, it was stated that when the jury made some remarks as to the conduct of Dr. McKinnel in not attending after he had seen the woman the night before, Mr. Oddie informed the jury that he could not allow any censure to be passed upon a medical man in his absence. Mr. Oddie's contention is that we have erred in using the term "censure" in the article published on April 25th in connexion with his subsequent action. If the word "censure" is to be read as conveying any technical meaning we can understand Mr. Oddie's contention, but it is admitted by him, and it appears from the report published in the JOURNAL of April 11th, that at the request of the jury he did agree to write to Dr. McKinnel informing him that the jury in his absence did not feel justified in expressing any opinion other than one of general regret that Dr. McKinnel should have refused to attend the woman and child under the circumstances detailed in the evidence. Mr. Oddie, as was stated in our previous issue, informed the jury that if they wished for the attendance of Dr. McKinnel the inquest must be adjourned. It is, we think, obvious that this was the course which Mr. Oddie should have adopted if he considered that Dr. McKinnel's conduct was in any way called in question or merited any condemnation at the hands of the jury or of himself. The facts have been, we think, fully placed before the readers of the BRITISH MEDICAL JOURNAL in the brief report of the proceedings at the inquest published in our columns of April 11th, page 887, so that we cannot feel that Mr. Oddie has any serious ground of complaint. Having in the first place expressed the strong opinion that the jury could not be permitted to censure Dr. McKinnel without hearing his evidence, it seems to us unfortunate that he should subsequently have consented to address a letter to Dr. McKinnel in terms which, if they are not to be called a censure, at least express disapproval of the course which he was alleged to have followed.

[1] *Zentralblatt für Gynäkologie*, April 4th.

THE CORONERSHIP FOR MANCHESTER.

AFFAIRS in connexion with vacant office of City Coroner have taken a remarkable and quite unexpected turn. Some time ago a committee of the City Council out of a long list of applicants recommended for the vacant office a well-known medical man in Manchester, who prior to his application and nomination was a member of the City Council, which office, however, he resigned. On Wednesday last when the report of the committee came before the City Council for adoption an amendment was moved that the proceedings relating to the appointment should be sent back to the Town Hall Committee. After a long debate the amendment was carried. Eventually the appointment was referred to a special committee consisting of the senior councillor of each ward.

ST. BARTHOLOMEW'S HOSPITAL.

THE subcommittee of the Lord Mayor's Committee of Inquiry into the affairs of St. Bartholomew's Hospital has reported: (1) That the hospital is properly and economically administered, and that an increase rather than a reduction of expenditure must be looked for; (2) that any prospective increase of rental will be more than absorbed by the deficit caused by the purchase of land from Christ's Hospital; and consequently (3) that no part of the outlay that will have to be incurred for new buildings can be provided out of the hospital's funds except by additional borrowing that would entail a further loss of income. The Lord Mayor's Committee has thus far come to two decisions, first, that St. Bartholomew's should be retained on its present site, and secondly, that the character of its administration justifies it in appealing to the public for funds to utilize the additional land already acquired. The concluding words of the resolution of the committee are a little ambiguous and it would appear that the final outcome must depend upon the report of the building subcommittee which will have to consider whether the plan prepared can provide, on the site, the new buildings necessary to bring the hospital up to modern requirements in all respects.

THE WORK OF SANITARY REFORM ON THE GOLD COAST.

WE learn that Dr. Logan Taylor, who has been in charge of the Expedition of the Liverpool School of Tropical Medicine to the Gold Coast and Sierra Leone, has just returned to this country. He was sent to the Gold Coast a year ago, in consequence of certain disquieting rumours as to the health of Europeans in that Colony. After an inquiry into the state of affairs, Dr. Taylor made some recommendations for the improvement of the sanitation in the town of Cape Coast, which were at once acted upon by the Governor, Sir Matthew Nathan. Dr. Taylor returned to Cape Coast in November, 1902, with instructions to investigate the causes of the ill-health on the Gold Coast, and also to

assist the Governor in carrying out the recommendations which he had made. Dr. Taylor's engagement with the Liverpool School terminated early in February, but he was retained some time longer by the Gold Coast Government until Dr. Barker, Assistant Colonial Surgeon, should arrive in Cape Coast. Dr. Barker worked with Dr. Taylor on his previous visit to Cape Coast, and on Dr. Taylor's recommendation the Governor sent him back to Cape Coast on his return from leave in March, to carry on the work there. Dr. Taylor reports that very effective steps are being taken by Sir Matthew Nathan to improve the sanitation of the principal towns on the Gold Coast—namely, Accra, Cape Coast, and Sekondi, and that sanitary departments have been instituted in each of these towns with the special purpose of carrying out much-needed reforms. The conditions of health on the Gold Coast and other West African Colonies are always fluctuating, and while they may be comparatively good in one district, they may be very bad in others. Cases of blackwater fever, remittent fever, and dysentery are constantly occurring, especially in the rainy season. Dr. Taylor is very hopeful that in the towns, at any rate, the new steps now being taken will have the effect of minimizing as far as possible the chances of illness. Whilst on this expedition Dr. Taylor took the opportunity of visiting Freetown, Sierra Leone, and winding up the fifth expedition of the Liverpool School of Tropical Medicine, which has been in operation there for a year and nine months. The majority of the men connected with that expedition ceased work in August, 1902, but a gang of twelve men was kept on for experimental purposes in the Grassfield district until the end of March, 1903. Freetown was chosen as a suitable place for testing the value of Major Ross's discoveries, and Dr. Taylor has expressed himself satisfied with the results of the experiments carried on there. It may be pointed out that the object of the expedition was to clear up the town at once in the best possible way with the money at its disposal, and the Liverpool School of Tropical Medicine has never felt that it is its duty to make the work permanent, or even to keep it in an efficient state from year to year. This is a duty devolving upon either the Colonial Government of Sierra Leone or the Freetown Muncipality. Dr. Taylor, however, stated that Sir Charles King-Harman is showing great interest in the question, and he expressed a confident hope that although the Liverpool School is no longer going to continue the work of this expedition, the money spent by it will not be wasted, as the Government is fully alive to the advantages arising from practical action on the lines advocated by the School. Two thousand pounds have been set aside this year for drainage work in Freetown, the worst streets being dealt with first. The new water supply for Freetown is now nearly completed, and by this time next year it is expected that the mountain railway will be finished, and the bungalows for the European officials completed.

SCHOOL HYGIENE.

A DISCUSSION on the Report of the Royal Commission on Physical Education in the *Scotsman* has led to a letter from Dr. James Carmichael, in which he regrets that the Commissioners did not make it more obvious that they consider physical education merely a part of the general subject of school hygiene, and also that they did not differentiate more particularly between the physical requirements of boys and girls. As regards the first criticism, the Commissioners' views would appear to be made sufficiently evident by their recommendation that a medical officer should, as a matter of course, form one of the regular staff of officials of every school. If this recommendation is accepted, as it probably will be, it will certainly be the duty of the officer so appointed to give advice and make suggestions on all medical aspects of school life, and not merely to take note of the effect of whatever form of physical training may be henceforth introduced into the regular routine of State-aided schools. The importance of the character and amount of the bodily exercise taken by girls is certainly very great, for as Dr. Carmichael points out, the healthiness of the children of the future depends much, if not entirely, upon the healthy development and physical well-being of the possible mothers of the present. Regulated and non-voluntary exercise is also perhaps more called for in the case of girls than of boys, for of the latter a majority will always make exercise for themselves, while a large proportion of girls are inclined to be sedentary. The question really becomes of most importance in secondary schools, and especially in those for the middle classes. In these a girl is commonly expected to complete her education soon after the age of 16, and it is in the three or four years preceding this age that the greatest educational pressure is put upon her. It is unfortunately just in these same few years that the pubescent girl becomes a woman. It is a critical period in her existence, and one at which much caution is necessary. The ill effects of over-exertion, whether mental or physical, at this time are often not obvious at the moment, but they become well marked later on. It is often wise on the very first appearance of approaching puberty to slacken a girl's mental education until her normal functions are well established. The precise age, however, at which the girl becomes a woman varies so much in individuals that it would be impossible to lay down any general rule, and, though schoolmistresses should be instructed to direct more attention to the point than many of them apparently do, the precise age at which special caution should be observed must be determined in the case of each individual girl by consultation between the schoolmistress and her medical adviser.

INTERNATIONAL EFFORTS FOR THE PREVENTION OF CONSUMPTION.

THE second and final sitting of the meeting of the Inner Council of the International Bureau for the Prevention of Tuberculosis was held in Paris on May 5th. Dr. Alfred Hillier read a report of the British National Association for the Prevention of Consumption. A subcommittee, consisting of Dr. Kohler, head of the Public Health Department of Berlin; Dr. Duvez, Belgium; Professor Landouzy and Dr. Bécot, of Paris; Professor von Schrötter, of Vienna; and Dr. Hillier, was appointed to consider the best way in which to approach the different Governments and local authorities, with a view to inducing them to take measures for the suppression of indiscriminate expectoration. A second resolution was passed in favour of strongly urging upon all countries represented in the International Bureau to take steps for the provision of instruction in universities and schools as to the laws governing the spread of infectious diseases, with special reference to tuberculosis. In the afternoon there was a public meeting of the International Bureau, presided over by the M. Casimir-Périer. He said the object of the Bureau was to ascertain and make known the general rules to be followed in the struggle against tuberculosis, according to the habits, laws, and resources of all nations. The weapons to be employed were hygiene and its indispensable concomitant State aid. Hygienic laws would be gently imposed upon the outcast portion of society, and the medical aid at present given would be largely extended. All human forces, both public and voluntary, would co-operate in the work. The Congress terminated with a reception at the Hotel de Ville.

WALKING.

IF the Stock Exchange walking contest could be taken as a sign of the times, it would be one at which we should greatly rejoice. Originally, however, it was merely suggested as a joke, and though afterwards it was taken up and carried through with admirable pluck and seriousness, it does not, we fear, indicate any strong tendency on the part of the public towards a form of physical exercise and athleticism the popularity of which would be of enormous benefit to the country. By popularity, however, we are far from meaning the popularity which attaches to football. This game, admirable in itself, was formerly a true pastime of the people, but of late years it has degenerated into a mere spectacle, a business rather than a game for the active few, and an excuse to the many to take no more

exercise than is involved in keeping a place in a smoking, pushing crowd. Walking, however, is less easy to reduce to a spectacle. Eventually, as in former generations, it would probably be killed by professionalism, but it would take some years at least to reduce it to this pitch, and meantime an enormous number of the rising generation would have tried their hands at it. This expression is not so "Irish" as it sounds, or rather, like the true Irish bull, it is pregnant with meaning. Walking is an exercise that does far more than merely develop the legs. There is, of course, walking and walking, but to move, not merely slouch, along at a fair pace and with head erect, shoulders back and arms swinging, requires a muscular poise and balance which is only not more recognised because, until fatigue sets in, it is automatic and instinctive. It calls into play practically every muscle in the body and the tissue metabolism which ensues is general and not merely local. Any one who doubts this has simply to take, when not in good condition, what is for him an unusually long walk, and then after a rest, carefully note in what parts of the body any sensation of stiffness is felt. It is these that have been called into unusual activity, and in these that healthful tissue change is going on most rapidly. We are not desirous of seeing walking reintroduced into the routine of school life, from which it has happily to a great extent disappeared, but as a voluntary amusement it should certainly be encouraged among all classes and at all ages. Pedestrianism has the great advantages over all other forms of sport that it costs nothing in itself, and that, while in its highest developments, it must be a sport for the active few, it is open to all persons in the enjoyment of ordinary health to engage in it to a greater or less extent with great benefit and no chance of harm to themselves. In most other forms of muscular exercise either a strain is thrown upon some particular set of muscles, or they require such quick movements that an undesirable amount of work is thrown upon the heart. The element of competition, moreover, necessarily enters into nearly all of them, and those who engage in them are liable to be led into unintentionally over-exerting themselves.

THE SEGREGATION OF LEPERS IN HAWAII.

ACCORDING to *American Medicine*, Governor Fole reports that leprosy is decidedly decreasing because of the stricter enforcement of segregation in Molokai. The settlement on that island was established in 1866, during which year 141 patients were admitted. During the first seven years the patients admitted averaged 114 per annum, the largest number admitted in any one year being 183. In 1873 the law was more strictly carried out, the result being that 487 patients were sent to the settlement. Until 1887 the average each year was 141, the largest number admitted in any one year after 1873 having been 301. Since 1887 the law has been rigorously carried out, the number of admissions in 1888 being 579; in 1889, 308; and in 1890, 202, since which time the number of admissions has constantly decreased. Thus, from 1871 to 1880, an average of 648 patients was admitted, the death-rate 20 per per cent.; from 1881 to 1890, 823 patients, 17 per cent. death-rate; 1891 to 1900, 1,098 patients, 12 per cent. death-rate. This shows the great decrease in the death-rate in the past ten years. The large number of patients from 1891 to 1900 was, in the Governor's opinion, due to more vigorous execution of the law of segregation. It is deplorable, therefore, to learn that a plan proposed by the Subcommittee of the Senate on the Pacific Islands which visited Hawaii last year for the establishment of a national leprosarium on the island of Molokai is meeting with determined opposition from the inhabitants. The Legislature has even passed a remonstrance, which is expected to influence the President against the measure. Some even urge the complete abandonment of the colony planned, on the ground that leprosy is gradually subsiding with the progress of civilization and better hygiene. On the other hand, those in favour of the leprosarium maintain that within certain limits leprosy is a curable disease; for this reason they advocate the establishment of a leprosarium where the disease can be promptly and scientifically treated.

THE ROYAL SOCIETY.

AMONG the fifteen candidates recommended by the Council of the Royal Society for election to the Fellowship are Dr. William Maddock Bayliss, Assistant Professor of Physiology in University College, London, distinguished for his researches in that branch of science; Dr. Sydney Monckton Copeman, Medical Inspector of the Local Government Board, well known for his researches in connexion with vaccine lymph; and Dr. Johnson Symington, Professor of Anatomy in Queen's College, Belfast, distinguished for his investigations into the anatomy of the mammalia. Among other representatives of biological science are Dr. Thomas William Bridge, Professor of Biology in the University of Birmingham, and author of many papers on vertebrate anatomy; and Dr. William Philip Hiern, late Fellow of St. John's College, Cambridge, and a distinguished botanist.

THE CROONIAN AND FITZPATRICK LECTURES.

THE Croonian lectures before the Royal College of Physicians of London will be delivered by Dr. C. E. Beevor on June 9th, 11th, 16th and 18th. The subject will be muscular movements and their representation in the central nervous system. The first course of FitzPatrick lectures founded by Mrs. FitzPatrick in memory of her late husband, Dr. Thomas FitzPatrick, will be delivered by Dr. J. F. Payne on June 23rd and 25th. He has chosen for his subject English Medicine in the Anglo-Saxon and Anglo-Norman Periods.

THE first *conversazione* of the Royal Society will be held on the evening of Friday, May 15th, at Burlington House.

IN the list of honours conferred by M. Loubet, President of the French Republic, on members of the King's suite on the occasion of His Majesty's recent visit to Paris, we note that the decoration of the Commander of the Legion of Honour was given to Sir Francis Laking, Bart., K.C.V.O.

LORD GEORGE HAMILTON, the Secretary of State for India, will take the chair at a meeting to be held at the Polyclinic, 22, Chenies Street, Gower Street, W.C., on Friday next, at 2.30 p.m., when Mr. Jonathan Hutchinson will report the results of his recent tour in India for the investigation of leprosy. Mr. Hutchinson's main object will, we are informed, be to show that there are no facts in India inconsistent with the theory that fish food is the cause of leprosy, whilst there are some which very strongly support it. Discussion and criticism will be invited. Tickets can be obtained on application to Captain Pinch at the Polyclinic.

MEDICAL NOTES IN PARLIAMENT.

[FROM OUR LOBBY CORRESPONDENT.]

The Midwives Board.—Sir Walter Foster, on Wednesday last, asked the Secretary to the Board of Education whether the Midwives Board, appointed under the provisions of the Midwives Act which came into force on April 1st, had held any meetings since that date; and, if so, when the minutes of such meetings would be issued for information. Sir William Anson stated, in reply, that the Midwives Board had met several times since April 1st for the purpose, among other things, of framing rules under the third section of the Act. These rules, when approved by the Privy Council, would be published, but the minutes of the Board's meetings were for the exclusive information of the Board.

Health Questions and the Post Office.—Last week, late on Thursday night, the Post Office vote was discussed and questions of sanitation and meal reliefs were dealt with. The Post Office employés complain from time to time of the insanitary condition of the post offices, and urge that it would be more satisfactory and produce less friction if all sanitary

inspections were done either by the Home Office inspector as under the Factory Acts, or by the local medical officer of health. A provisional promise to call in the Home Office inspector when necessary had not so far given satisfaction. These points were pressed in the debate by Mr. T. P. O'Connor, Sir Walter Foster, and others, but no satisfactory concession was made by the Postmaster-General. The question of meal reliefs was also raised in order to secure to telegraph operators more especially an arrangement whereby they should not be subjected to fasts of six hours or more without time for refreshment. The plan of work in many places compels the men to dine at 2 or 2.30, to resume work at 4, and to have no chance of refreshment of any kind till 8, or in some cases later. Medical testimony was quoted in the debate to show that work under such conditions was likely to be less efficient, and that it was therefore unwise economy on the part of the postal authorities. The vote was under discussion when the House rose.

The Sale of Glycerinated Calf Lymph.—Last week Mr. Weir asked the President of the Local Government Board if he would state on what terms glycerinated calf lymph was supplied or sold by the Local Government Board to medical practitioners in private practice other than public vaccinators. Mr. Grant Lawson replied that the glycerinated calf lymph issued by the Local Government Board was not sold. It was only supplied to public vaccinators for use in public vaccinations performed by them in that capacity, and no charge was made for it.

Expenses of National Vaccine Establishment.—On the same day Mr. Weir asked the President of the Local Government Board, seeing that under the Medical Department of the Local Government Board Vote there were two separate items for contingencies of £800 and £2,000, the former item under Subhead R, National Vaccine Establishment, and the latter under Subhead S, whether he could state in more detail the nature of this expenditure. Mr. Grant Lawson in reply said that the two amounts referred to were intended to meet any temporary extension of staff at the Vaccine Establishment of the Local Government Board, and the cost of purchasing and keeping additional calves, and any other incidental expenses which might be rendered necessary if small-pox continued to prevail, and there was in consequence an excessive demand for lymph. It was impracticable to state in detail what sums might be required on these accounts.

Ophthalmia and Ringworm in Poor-law Schools.—On Friday in last week Sir Walter Foster asked the President of the Local Government Board if he could state the number of Metropolitan Poor-law children at present suffering from ophthalmia and ringworm respectively. Mr. Long answered that it appeared from returns for the week ending April 4th that there were 149 cases of ophthalmia in the district and separate Poor-law schools in the metropolis, and 203 in the special school provided by the Metropolitan Asylums Board for the reception of ophthalmic children. The same returns showed that there were 131 cases of ringworm in the district and separate schools, and 419 in the special school provided by the Asylums Board for ringworm cases. He could not state the number of children in metropolitan workhouses and infirmaries at present suffering from these diseases, but he was about to obtain a return on the subject.

The Royal Commission on Sewage.—Dr. Farquharson asked on Monday, for Sir John Tuke, whether the President of the Local Government Board proposed to take any steps towards putting into effect the recommendations contained in the Third Report of the Royal Commission on the Disposal of Sewage recently laid before Parliament. Mr. Grant Lawson, replying for his official chief, said that the report referred to had only recently been issued, and the evidence on which it was based had not yet been published. The recommendations contained in the report involved questions of very considerable importance, and he was not at present in a position to state what course should be adopted in the matter. The subject, however, was receiving consideration.

Prison Diet.—On Monday last Mr. Guthrie asked the Secretary of State for the Home Department whether he was aware that convicts called as witnesses received the ordinary prison diet whilst in attendance at the courts of justice; and, whether, considering the strain to which they were subjected by prolonged cross-examination, he could take steps to revise the prison regulations in this respect. Mr. Secretary Akers-Douglas answered that the case could be met without altering the existing rules. He had authorized the governors of prisons to arrange that convicts giving evidence in a court of law should be allowed some special addition to their diet if in the particular circumstances the ordinary diet was insufficient.

Private Small-pox Hospitals.—Mr. Weir asked the President of the Local Government Board if he would state the number of private establishments for the reception of small-pox patients within the County of London area; and whether they were subject to inspection, and if so by whom. Mr. Long answered that he was not aware that there were any private establishments in London for the reception of small-pox patients.

The Supply of Glycerinated Calf Lymph.—On Monday last Mr. Weir asked the President of the Local Government Board if he would state the number of tubes of glycerinated calf lymph produced during the last financial year at the Local Government Board's vaccine station. Mr. Long replied that 799,092 tubes of glycerinated calf lymph were issued by the Local Government Board during the financial year 1902-1903.

The New Irish Poor-law Commission.—On Tuesday Mr. O'Doherty asked the Chief Secretary to the Lord Lieutenant of Ireland if he had as yet appointed the Commission to inquire into the question of the amalgamation of workhouses in Ireland and union boundaries; and, if so, would he state the names of the Commissioners appointed, and when they purposed holding their sittings? Mr. Wyndham, in reply, said the Commission had not yet been formally appointed, but the warrant of appointment would, it was expected, be shortly issued. Until that had been done, it would be unusual to announce the names of the members.

The State of the Sligo Lunatic Asylum.—Mr. Tully asked the Chief Secretary to the Lord Lieutenant of Ireland on Tuesday whether he would state what action had been taken on the reports of the inspectors of lunatics as to the state of Sligo Asylum; and what steps had been taken to carry out the resolutions of the Leitrim County Council and the Mohill Rural District Council to have the Leitrim Poor-law Unions amalgamated, and one of the workhouses thus dispensed with converted into an auxiliary asylum for the patients in excess of the authorized number at present detained in Sligo. Mr. Wyndham replied that the Asylum Committee had called for plans and specifications with a view to the reconstruction of the sanitary system of the asylum where defective. The question of union amalgamation would be referred to the Commission about to be appointed for the purpose of inquiring generally into the subject.

The Plague at Suva.—Mr. Cathcart Wason asked the Secretary of State for the Colonies, on Tuesday, if a petition had been received from Suva protesting against the establishment of a bubonic plague hospital in the centre of the town; and, if so, would he explain why no reply had been returned? Mr. Chamberlain replied that a letter was received in October, 1900, from the Warden of Suva protesting on behalf of the town and vicinity against the establishment within the precints of the town of an isolation camp in anticipation of an outbreak of plague for cases which could not be removed to the quarantine station. No case of plague ever occurred, and after some correspondence with the Governors (in course of which it appeared that the matter had been amicably settled with the Town Board) a reply was returned in a dispatch dated February 1st, 1901.

THE CARE OF THE AGED IN NEW YORK.—Mr. Homer Folks, the New York City Commissioner of Charities, has recommended the appropriation of 100,000 dollars (£20,000) for the establishment of a cottage colony for the aged and infirm on the city farm on Staten Island.

THE UNIVERSITY OF PENNSYLVANIA.—An appropriation of 175,000 dollars has been made by the Pennsylvania Legislature for the purpose of making various additions to the hospital of the University of Pennsylvania. An *x*-ray apparatus will be provided and a sterilization building will be constructed.

Ireland.

THE HOUSING OF THE VERY POOR.

THE Earl of Dudley, Lord Lieutenant of Ireland, presided last week at a meeting held in the Royal College of Surgeons of Ireland to consider the question of the better housing of the very poor. His Excellency stated that 21,000 out of 54,000 families resident in Dublin lived in one-room tenements. He was convinced that it was not the fault of the people themselves that they lived under these conditions. It was due to the fact that in comparison to their weekly wages they could not afford to pay for better accommodation. Great improvement had been effected by the municipal authorities and by the munificent private generosity of Lord Iveagh. But these homes did not meet the wants of the poorest class, but of the artizans who were able to pay 4s. or 5s. a week. They needed accommodation at 2s. or 3s. a week. To secure this a company had been formed with a capital of £20,000 of which £5,000 had been paid up, and the result of the experiment had been fairly satisfactory. The rooms in the converted houses were let at 2s. and 2s. 6d. a week, and it had been made possible for the people who inhabited them to live healthy and decent lives. More than that, the company had been able to pay 3 per cent. But conversion was not satisfactory, and the company had determined to build new houses, beginning with blocks which would house 338 families. But they required £10,000, and the public was asked for its support to that extent. Civilization, education, self-improvement become a farce if people were allowed to exist in squalor, misery, and the degradation which existed in many of these rookeries. He had seen the misery of Irish peasants in the West, but nothing comparable with what existed at their own doors in Dublin. He therefore appealed for help for this company in the efforts which it was making. The Lord Mayor, Sir C. Cameron, the Registrar-General, Sir F. Cruise, M.D., Mr. Justice Barton, Sir J. Nutting, Mr. Lambert Ormsby (President R.C.S.), Mr. C. Eason, Mr. J. Gordon, Q.C., M.P., also spoke. A considerable number of shares were taken up.

SMALL-POX IN DUBLIN.

There have been three more deaths from small-pox in the Dublin Corporation Isolation Hospital, making eight in all. Twenty-three new cases have been reported, 9 of these having been discovered in a house-to-house inspection by the health officials. In one house 3 cases were found. We are glad to see it reported that Sir Charles Cameron advocates a general revaccination. The wonder is that it has not already been enforced. Small-pox cannot be fought without the most energetic action, and although wholesale revaccination costs money, it is cheaper in the long run than a true epidemic. The Lord Mayor has appealed to the public to aid the efforts of the public health department. Some prosecutions for concealment, in which heavy fines have been inflicted, will no doubt bring home to the public in general the need of immediate notification.

IRISH MEDICAL ASSOCIATION.

The annual meeting of the Irish Medical Association will take place in Enniskillen on June 17th. Dr. Leonard Kidd, the active local Secretary, has arranged that return railway tickets shall only cost one and a-quarter fares. There will be a special conference of delegates from the Branches, and in the evening there will be a banquet in the Town Hall. An excursion to Bundoran on June 18th has also been arranged.

A meeting to form a North Down Branch of the Irish Medical Association was held in the Medical Institute, Belfast, on April 30th. Dr. MacLaughlin, J.P., presided and Dr. Olpherts acted as Secretary. The following resolutions were unanimously passed:

That the annual holiday leave to infirmary, dispensary, workhouse, prison, and asylum medical officers be one month free of cost to them.

That the salaries paid to medical officers of health are inadequate.

That it be urged on the profession, that no doctor should accept a dispensary appointment under £200 per annum, or workhouse under £120.

That no medical man should interfere with, or take any position rendered vacant by any medical officer, on his resigning office with a view to obtaining a salary approved of the Irish Medical Association.

That no medical man should under any circumstances apply for, or accept any medical appointment when the outgoing medical officer, if entitled to same, has without just cause, been refused superannuation.

That we object to the scale of fees under the Factory Acts, and to the Acts making these compulsory on dispensary doctors.

That a fee should be paid for the examination of harmless pauper lunatics.

That the following should be the minimum fees for temporary duty: Dispensaries, four guineas, and workhouses three or three and a-half guineas per week, or one guinea each per day.

That Sir Wm. Whitla be elected first President of the North Down Branch of the Association, with Dr. Olpherts as Honorary Secretary.

A strong resolution was also passed congratulating Dr. O'Riordan, of Rathcoole, on his recent victory in the courts over both the Celbridge Guardians and the Local Government Board.

POOR LAW CONSUMPTIVE SANATORIUM FOR BELFAST.

The Infirmary Committee of the Belfast Board of Guardians has made a recommendation that a tentative consumptive sanatorium be instituted. The proposal was discussed fully at the meeting of the Board on April 28th, and the principle was on the whole favourably entertained. Some weeks ago the City Council moved in the matter, and it was agreed that, as far as dispensaries were concerned, consumptive patients would be notified to the Corporation; and that an officer would be sent to teach people how to care for the patients; if the home happened to be in an insanitary or dirty state, the public health authorities would cleanse it. The question of a sanatorium for those who could pay something was also entertained. The Board of Guardians is now discussing the question of an institution for its own poor; there are nearly 250 consumptive patients in the union infirmary. At present they are nursed in special wards, and have a special dietary; but it is felt that this is but a poor substitute for a properly-equipped sanatorium in a suitable site. The proposal of twenty beds is, of course, simply experimental. The recommendation was finally referred back to the Infirmary Committee for the purpose of ascertaining what action might be contemplated by the City Corporation, and to make further recommendations.

PUBLIC HEALTH OF BELFAS .

At the meeting of the City Corporation on May 1st the Medical Superintendent Officer of Health reported that 236 cases of zymotic disease had been notified during the last month, including 88 cases of typhoid, 46 of erysipelas, 45 of simple continued fever, 33 of diphtheria, and 16 of scarlet fever. The births numbered 1,106, and the deaths 712; the deaths from phthisis were 131. The annual death-rate from all causes was 20 7. The epidemic of measles is dying out; only 8 deaths are reported from it. The Health Committee recommended the Council to make a by-law constituting it an offence punishable by fine to expectorate in the streets or other public places in the city.

SEASIDE TRIPS FOR PAUPER CHILDREN.

The report of the Special Committee appointed to make arrangements for sending the school children down to the seaside in parties of fifty for a week was also considered. The report recommends that a large empty house be taken, that it be furnished from the Union buildings, and that the children, in parties of fifty, in charge of suitable and competent officers, be sent down during the summer, and that the Local Government Board be asked to support the scheme. The difference between the cost per child in the Union and at the seashore will be paid by voluntary subscriptions from the Board of Guardians and the Trade and Labour Council of Belfast. After some discussion it was agreed to refer the report back to the Committee to make further arrangements as to details.

A WIN FOR GUARDIANS.

The medical officership of the Dispensary of Drumconrath, Ardee Union, became vacant last year by the resignation of Dr. Jones. The salary was £120 with £30 for duties under the Health Act. The Committee declined to adopt the new terms now generally demanded in connexion with these appointments, and as a result, when it came to fill the vacancy in October, there were no candidates. The place remained vacant until Tuesday last, when another attempt was made to fill it. There were three candidates, and 16 members voted for Dr. Crean of Dungarvan Union, and 10 for making no appointment. We are sorry to say that this is a distinct win for the guardians. In a struggle of this kind such incidents are apt to occur, but they will not in any degree shake the general position of the profession in Ireland.

THE St. Petersburg Society for the Prevention of Tuberculosis has established a sanatorium for consumptives at Balaklava in the Crimea. It is intended to accommodate 17 patients.

THE NATIONAL ANTIVIVISECTION SOCIETY.

The annual meeting of the National Antivivisection Society was held in St. James's Hall, on Friday, May 1st, Lord Llangattock, the President, being in the chair. The audience is estimated in the *Morning Post* (from which the following report of the proceedings is mainly taken) as between two and three thousand, of whom, we gather, a considerable majority were women. Among those present were Georgiana Countess of Seafield, the Earl of Buchan, Lady Llangattock, Lady William Lennox, Admiral the Hon. G. Douglas, Mr. John Davidson, and Mr. Jerome K. Jerome.

The President said he came there because he thought it his duty to testify against what he believed to be displeasing to God. During the past year the the Society had made great progress. He believed that the Society had at its back the vast majority of the working classes. Tens of thousands of pamphlets and newspaper articles against vivisection had been sent broadcast over the land, and he challenged vivisectionists to name a single inaccurate statement in any of these countless publications. In the last four months the Society had founded six new branches, one being in Scotland, and the others at Bristol, Birmingham, Bath, Hastings, and Leamington. They asked the public to consider whether it was right to torture helpless dumb animals. This was the simple issue to be decided, and the Society had no fear as to the verdict.

The Hon. Stephen Coleridge moved:

That this meeting declares the practice of vivisection as by law allowed in this country to be cowardly, immoral, and detestable, and calls on Parliament totally to abolish the legal torture of animals.

Their opponents, he said, no longer defended the torture of animals. They declared that the torture of animals was not legal, nor did it exist. As to their declaration that it was not legal, the Act that governed vivisection in this country provided that any one armed with a certificate for the purpose should be at liberty to vivisect an animal without anaesthetics. As to the question whether the torture of animals took place or not, the fact that terrible suffering was inflicted on animals had recently been brought home to him personally in a manner that ought to convince the most callous and the most indifferent. Within the walls of University College there was a laboratory licensed for vivisection, and into its dark portals there passed a never-ending procession of helpless dumb creatures. Dogs, lost or stolen from their homes, where they had known nothing but love and affection, followed one another down that Via Dolorosa into a scene of nameless horror, where man degraded his race and his manhood, and brought on that university a smirch that time itself would never erase. Within the precincts of the college and close to this Pit of Tophet was a school dedicated to one of the purest and loftiest of human studies—that of the fine arts. Between this place of peace and the place of torment the dividing wall was slight, and into the serene and silent school of the beautiful rose distinctly from the vivisectors' den the shrieks and piteous cries of the dogs in their agony. Surely in this world Heaven and Hell were never brought so near together! But the love of beauty never yet failed to keep the soul alive, and, through the Slade School students had the inarticulate sobs and moans of these wretched creatures reached the ears of those less pitiless than their tormentors. Thus, through him, had the piteous cries reached the thousands in this hall, and he trusted they would reach a million ears through the press. There might be some few persons so hard to convince that even the shrieks heard in the Slade School might not be sufficient, and they might say that until he could produce the testimony of an eye-witness they would not believe. He had come prepared even for them. His audience would do him the justice to say that never yet from that platform had he distressed their ears with rehearsals of the horrors of vivisection; but in the face of the outrageous denials perpetually iterated by the vivisectors, he felt it was his duty to make public the written statement of an eye-witness of what went on in the University College of London, every syllable of which had been endorsed by another eye-witness present at the same time and place. He had ascertained from both these persons that they were ready, if necessary, to substantiate every syllable on oath in the witness-box. The statement was as follows:

I have attended many lectures at the Physiological Laboratory of University College. I have constantly heard, while there, the long-drawn howling and whining, like that of dogs in terror and agony. When the door of the lecture-room was opened the sound of this grew louder, when the door was again shut, the cries seemed to be fainter. On February 2nd this year I saw an experiment on a dog at this laboratory. A big brown dog of the terrier type was brought into the lecture-room stretched on its back on the operation board. Its legs were fixed to the board, the head held firmly in a head-holder, and it was muzzled so tightly that it was now deprived of every power to give audible expression to its pain. In the skin of the abdomen there were several scarcely-healed scars and wounds; in one of them that seemed to be rather fresh there was left a pair of clamping forceps. ["Shame."] It was evidently not the first time that this dog had had to serve science. The internal organs of the abdomen had surely had their turns of operations in previous experiments. The neck was opened widely for the stimulation of electricity of a certain gland. The dog struggled forcibly during the whole experiment, and seemed to suffer extremely during the stimulation. No anaesthetic had been administered in my presence, and the lecturer said nothing about any attempts to anaesthetise the animal having previously been made. When an anaesthetic has been given, good care is generally taken to tell the audience about it, and as a rule the anaesthesia must be kept up by repeated administration of the anaesthetic used. Nothing of the kind was done here, and the violent and purposeful struggles of the animal indicated complete consciousness. The dog was carried out still fixed on the board after half an hour.

Was not this enough to make the blood run cold? If this was not torture, let Dr. Bayliss and his friends Lord Lister and Sir Victor Horsley tell in heaven's name what torture was. He desired to observe the amenities of gentleman-like debate, but so certain was he of the deep and abiding humanity of the British race that he felt sure that did they know what he knew went on in these dens of infamy they would not wait for supine legislation, they would not wait for the second readings or third readings of Bills in Parliament; but they would go in their irresistible thousands; they would set free the victims from their cages; they would smash to atoms the horrible instruments of torture; and they would leave every laboratory in the kingdom a heap of ruins.

The Rev. Neville Dundas, in seconding the motion, said that in some London hospitals portions of the hospital funds were used in the maintenance of laboratories where vivisection was carried on.

Lord Ernest Hamilton said that antivivisectionists must distinguish between absolutely painless experiments and those which could not be so described. If they agitated against the first-named class their countrymen would never support them, for really painless experiments had no more connexion with the atrocities which this meeting protested against than a general election had with the French Revolution. Warning his hearers—especially the ladies—against taking the opinion of doctors on vivisection, he said that in the Middle Ages the priests exercised a despotism founded on ignorance and superstition. In the present day the doctors exercised a despotism based on cruelty and superstition.

Bishop Bagshawe, supporting the motion, disagreed with Lord Ernest Hamilton's statement that there were painless experiments made by vivisectionists. Vivisection in all its forms was immoral, as well as cowardly and detestable. The readiness of some medical men to make experiments rendered poor people reluctant to go into hospitals. In the East-end many working men would do anything rather than enter such institutions, and he feared they were right. He was firmly convinced that poor patients were experimented on in hospitals to gratify scientific curiosity. The motion was unanimously adopted.

The Hon. Dudley Leigh proposed a vote of thanks to the President.

Sir F. Banbury, M.P., in seconding the motion, said that the Bill he had introduced into Parliament was extremely moderate, because, however uncompromising they might be in St. James's Hall, they must go slow in the House of Commons. The measure provided that there should be no vivisection for purposes of mere illustration. It permitted painless experiments and those for genuine scientific investigation, but it required that anaesthetics should always be administered; that the animal experimented on should be killed before recovering consciousness; and that an inspector should be present at every experiment. The motion was carried by acclamation.

Ophthalmia in Pauper Schools.—At the last meeting of the Central London School District Managers it was reported that the number of cases of ophthalmia in the school at Hanwell had recently risen to eighty, and was increasing at an alarming rate. The cases have been isolated, but complaint was made that after six years the Metropolitan Asylums Board was still unprepared to deal with the emergency, and a strong protest was addressed to the Local Government Board.

A

COMPARATIVE STATISTICAL STUDY

OF

CANCER MORTALITY.

IV.

Holland.

The excellent vital statistics published by the Government of the Netherlands enable a fairly complete calculation to be made of the mortality from cancer in the various provinces of Holland. This appears to be extremely high in almost every part, the rate for the whole country being 91.3 per 100,000 living. As is well known, Holland consists entirely of alluvial plains intersected everywhere by canals; the country is most carefully farmed, agriculture being the chief industry of the population, which is notorious for its prosperity. A wealthy agricultural population inhabiting a fertile and well-watered country presents conditions which seem to be everywhere accompanied by a high mortality from cancer.

The following table gives the rates for all ages and for persons above 23 years of age, together with the proportion of deaths from cancer, to 100 deaths from all causes.

	Death-rate from Cancer per 100,000 Living, all Ages.	Proportion of Cancer Deaths to 100 Deaths from all Causes, all Ages.	Death-rate from Cancer per 100,000 Living of Persons 23 Years of Age and Upwards.
Kingdom of Holland ...	91.3	5.1	171
North Holland	94.9	5.7	184
South Holland	84.2	4.9	173
Zeeland	102.0	5.5	204
North Brabant	93.0	4.3	171
Guelderland	88.8	4.9	178
Utrecht	90.2	5.0	182
Overyssel	87.5	4.7	176
Drenthe	77.3	4.3	152
Groningen	97.3	6.0	194
Friesland	110.0	6.7	211
Limberg	87.4	4.8	175

The chief point noticeable is the comparatively low rate in the province of Drenthe; this may perhaps be connected with the fact that there are several pauper colonies established here. It is said to be the least populous province, and has a poor soil, being largely covered with heath and morass.

Considering the provinces showing high mortality, it is remarkable that North and South Holland, which contain the principal cities, do not give the highest figures, which are exhibited by the provinces of Friesland and Zeeland. The figures further indicate that the Frisian portion of the population suffers disproportionately. In connexion with this fact, it may be pointed out that these are the parts of Holland most cut up by water, Zeeland consisting chiefly of islands, while Friesland abounds in marshes and inland waters.

The following shows the mortality from cancer in the principal towns.

Communes of	Death-rate from Cancer per 100,000 Living at all Ages.	Proportion of Deaths from Cancer to 100 Deaths from all Causes in Persons of 20 Years of Age and Upwards.
Amsterdam ...	97.5	10.0
Utrecht	90.3	8.5
Hague	89.6	9.7
Rotterdam ...	87.3	10.0

Scandinavia.

Norway has a distinctly high mortality from cancer, this disease accounting for 5 per cent. of total deaths, and giving a rate of 84.5 per 100,000 living.

The country consists almost exclusively of igneous rock, and is very largely covered with mountains, woods, and lakes, in addition to which the numerous sea inlets or fjords must not be forgotten. Five-sixths of the population is rural, although agriculture is carried on only over a very small portion of the country, the chief wealth being derived from timber, fishing, and cattle rearing.

	Death-rate from Cancer per 100,000 Living, all Ages.	Proportion of Cancer Deaths to 100 Deaths from all Causes, all Ages.	Proportion of Deaths from Cancer to 100 Deaths from all Causes of Persons of 30 Years and Upwards.
Norway	84.5	5.0	9.1
Jarlsberg	120.0	6.1	10.0
Hedemarken	112.0	6.6	11.4
North Trondjem	111.0	7.0	10.8
Akerhus	103.0	5.4	9.2
Nedemaes	92.2	5.4	8.5
Bergen*	92.0	5.8	11.4
South Trondjem	90.1	4.9	8.6
Smaalenes	89.0	5.1	9.0
Bratsberg	88.0	5.3	8.6
Buskerud	83.6	4.6	9.0
Romsdal	83.7	5.3	9.0
Christians	82.6	5.2	8.4
North Bergenhus	76.4	5.2	8.3
Lister or Mandel	75.6	4.2	7.0
Stavanger	72.2	4.2	7.0
Nordland	70.4	5.0	9.5
Tromso	70.0	4.5	9.0
Christiania	66.3	3.5	8.0
South Bergenhus*	63.9	4.3	6.9

* The low rate of South Bergenhus and the high rate of the town district of Bergen are probably correlative.

The most interesting point about these figures is the low rate shown in the district of Christiania, including the only large town, where are concentrated almost all the industrial establishments of the country. Low rates are also shown in most of the divisions in the south-west, almost the only part of the country where agriculture is successfully carried on, while the mountainous regions around the fjords, the home of the fishing and timber industries, show a much higher mortality. It must, however, be admitted that the small population of Norway is so much subdivided as to make the inferences from the mortality in the various divisions somewhat uncertain.

For Sweden no statistics exist which are of any use for the purpose of this inquiry except with regard to the towns, particulars as to a few of which are here given.

	Death-rate from Cancer per 100,000 Living, all Ages.	Proportion of Cancer Deaths to 100 Deaths from all Causes, all Ages.	Proportion of Deaths from Cancer to 100 Deaths from all Causes of Persons of 40 Years of Age and Upwards.
Sweden (all towns) ...	102.0	6.4	—
Norrkoping	117.0	8.0	16.0
Stockholm	110.0	7.0	14.1
Göteborg	100.0	6.0	13.6
Malmö	80.3	5.4	11.4

These rates are remarkably high, and would seem to indicate a high mortality throughout the country, as it is estimated that about one-fifth of the population inhabits the towns. It is not very surprising to find that Sweden suffers severely from cancer, as both in its physical features and in its population it so far resembles Norway that it would be anticipated that the population of the two countries would suffer in somewhat the same degree. It is noteworthy that what is known as the Göteborg system for the management of licensed houses is in force in all these towns.

Other Countries.

In recent years facts have come forward tending to show that the diffusion of cancer is wider than had been previously supposed. There is reason to believe that in both China and Japan a considerable number of deaths occur annually from this cause, although, of course, no figures are obtainable.

A recent report from the Government of India to the Secretary of State shows that cancer is prevalent in that country, the highest percentage being found in Punjab and the Central Provinces. The percentage of cancer to the total number of cases treated in the dispensaries and medical institutions in the several provinces is here given, although the figures are not considered to be of much statistical value.

Proportion of Cases of Cancer to 100 of other Diseases Treated in Dispensaries and Medical Institutions in Indian Provinces.

Madras	0.024	Burmah	0.610
Bombay	0.050	Central Division...	0.700
Bengal	0.025	Assam	0.005
Agra and Oudh ...	0.050	Berar...	0.700
Punjab	0.700		

The Punjab is level, and nearly two-thirds of the population are Mahommedans. On the other hand, the Central Provinces are hilly and thickly wooded, and are almost entirely inhabited by Hindus and forest tribes, among whom meat forms scarcely any appreciable portion of the diet. Burmah, which has the next highest percentage, is also a hilly country with much forest land. Statements have frequently been published by hospital surgeons and others, showing that cancer is about equally common in India among Mohammedans and Hindus.

In the Australian Commonwealth the number of deaths registered from cancer has increased considerably during the last ten years, the death-rates at all ages being as follows.[15]

	Death-rate from Cancer per 100,000 living, all Ages.	Proportion of Cancer Deaths to 100 Deaths from all Causes, all Ages.	Death-rate from Cancer per 100,000 living, 1890.
New South Wales	57.4	4.5	45.1
Victoria	72.0	5.0	61.6
Queensland	46.4	3.5	30.5
South Australia	57.6	5.1	49.5
West Australia	30.2	2.2	35.8
Tasmania	56.8	4.7	51.5
New Zealand...	60.6	5.9	48.4

Occupations in Relation to Cancer.

Few things would be more interesting or more likely to help in the elucidation of the cause of cancer than to ascertain, were it possible, the proportion in which the disease affects those engaged in various occupations in different countries. Unfortunately there are but few figures available, and of those which exist, scarcely any are serviceable for comparison. The chief exceptions are those prepared for 1890-1-2 by the Registrar-General for England and Wales.[16] From these it appears, as is of course well known, that chimney sweeps suffer from cancer at a rate far above all other occupied males. It is also to be noted that in that occupation the figure for deaths from alcoholism is greater than the average in the same proportion as that from cancer. Persons engaged in the liquor trade also show a high mortality, both from cancer and alcoholism.

Considering other occupied males we find the death-rate from malignant disease exceptionally high among seamen and copper miners; curiously enough workers in copper do not suffer at all above the average. With regard to coal-miners, the figures are very remarkable, the rate for the whole class being low, but for miners in Derby and Nottingham nearly twice as great as for those in Monmouth and South Wales. This fact suggests that the death-rate may depend not so much on the occupation followed as on the surrounding conditions.

The United States[17] is almost the only other country where we can gather any idea as to the influence of occupations on cancer mortality. Comparison is, however, extremely difficult, owing to the various periods of life during which different occupations are followed, and although the percentage above 45 years of age is given, nevertheless it is impossible from the figures to construct any table which would show the cancer-rate in each occupation duly corrected for the age-distribution of those engaged. In addition to this, in some instances the number of individuals from whom the rate was calculated seems to be altogether too small for a trustworthy estimate.

The general impression to be gathered from the United States figures with regard to occupied males is that seamen, blacksmiths, and masons show an exceptionally high rate of death from cancer, the first of these coinciding with facts observed in England. No rate is given for coal miners.

With regard to the United States, however, the main interest centres on the cancer-rate for occupied females, among whom nurses and domestic servants show deaths far above the normal. In the case of nurses no very decided inference can be drawn, they being well above the average age for all employed females. The figure for domestic servants is, however, very striking, the deaths from cancer in this class between 45 and 64 years of age being double, and above 65 three times the average. It may be added that 400,000 individuals were comprised in this calculation, while the age-distribution of the class was of course extremely favourable. It would be desirable to investigate this matter further in other countries; the facts must be available and can only require collection.

[15] Allen, *Statistics concerning Cancer in Australia.*
[16] Supplementary Report, Part II, 1897.
[17] *Twelfth Census of the United States*, vol. iii.

Influence of Food and Alcoholic Drinks on the Prevalence of Cancer.

This question has attracted so much attention that any general survey would be incomplete without some reference to the subject.

The following table as to the quantities of meat and grain consumed per head of population was compiled some years ago, but is probably not very inaccurate now.

	Pounds of Meat Consumed per Head of Population.	Pounds of Grain Consumed per Head of Population.
United Kingdom	109	378
France	77	540
Germany	64	550
Holland	57	560
Switzerland	62	440
United States	150	370

It will be noticed that in Germany, Holland, and Switzerland very nearly the same amount of meat is consumed per head, while the cancer rates vary very considerably. As regards grain also, the amount of bread consumed per head in Germany and Holland is about the same. It cannot be said, therefore, that these figures show that the prevalence of cancer is in any way proportionate to the quantity consumed of the staple articles of food.

It is somewhat different, however, when the consumption of alcoholic beverages in different countries is considered, and special interest, therefore, attaches to a statement on this head issued as a Parliamentary paper in 1900, from which we extract the following particulars:[18]

	Gallons of Wine Consumed per Head of Population.	Gallons of Beer Consumed per Head of Population.	Gallons of Spirits Consumed per Head of Population.
United Kingdom	0.39	31.70	1.12
France	23.50	7.00	2.30
Italy	22.00	0.15	2.90
German Empire	1.60	31.20	2.20
(*a*) Alsace Lorraine* ...	—	21.50	—
(*b*) Bavaria	—	62.00	—
(*c*) Baden	—	42.50	2.80
(*d*) Wurtemburg	—	48.00	—
Austria	3.75	18.00	2.50
Hungary	3.50	2.25	2.75
Holland	4.50	—	2.00
Switzerland	10.75	17.50	1.30
Norway	—	5.00	0.82
United States	0.40	16.00	1.27

* The blanks indicate that there were no returns.

The above table certainly suggests that there may be some connexion between a large consumption of alcohol and predisposition to cancer, and this seems to be especially so in the case of beer. In attempting to form a judgement on these tables, however, the whole question is greatly complicated by the difficulty of comparing the cancer-rates of different countries, and it would be desirable to ascertain the consumption per head of food, beer, and other alcoholic liquors in various divisions of the same country, a statement which is at present only to be found for some few States of the German Empire.

(To be continued.)

[18] Statement showing the production and consumption of alcoholic beverages in various countries of Europe.

BEQUEST.—Under the will of the late Mr. John Pickop, of Wenston, Blackburn, the sum of £3,000 has been bequeathed to the Blackburn and East Lancashire Infirmary.

THE ROYAL ACADEMY EXHIBITION.

We should deserve and receive the censure of the art world if we were to go beyond our last, and criticize pictures which have no bearing, direct or indirect, on the life-work of the medical man; all we have ventured to do in previous years has been to direct the attention of our readers to the contents of the Royal Academy in their relation to the class of questions which come within the four corners of our editorial responsibility, and year by year our task becomes more difficult because of the want of active help given us by the painters themselves. Urged, no doubt, by commercial necessity and the demands of dealers, they turn out of their studios, with unfailing regularity and almost mechanical skill, the same subjects treated in the same way, when the cold winds of winter mellow into spring. Suns rise and set, gently heaving tides dash on mussel-clad rocks amid the approving screams of attendant gulls, rivers flow, flowers bloom, trees bear and shed their leaves, domestic scenes are enacted whilst war and chivalry clash by, and imperfectly-clad maidens sprawl about in varied attitudes, but hardly any one does anything for us. They manage these things differently in France. It was only the other day that eager competition at Christie's raised the price of a representation of vaccination by one of the leading members of the younger Parisian school up to £1,500. Nothing could be more realistic than the scene. The operator is just beginning his work, whilst sympathizing friends look on, and a long row of victims who have passed the chair sit with their scratched arms in full view drying themselves in the sun. Visitors to the French Salon will remember other pictures of the same class. A surgeon removing an ovarian tumour and a physiologist at work in his laboratory are some of the topics treated with the unflinching realism of the foreign school. This may perhaps encourage our budding R.A.'s, or even those within the circle of the elect, to cast aside tradition and burst forth into fresh fields and pastures new. What an infinitely wide range of subject opens up before them! The first tooth would inevitably "fetch" the mothers of England, whilst the painful uncertainty attending a rosy blush on the forehead and the various premonitory symptoms of the exanthemata leading up to their full development might be treated with dramatic significance. Then operative surgery might claim the attentions of the brush and appendicitis might obtain an even enhanced measure of social distinction by being brought within the limits of the painter's art.

But leaving these imperfect hints to fructify in the minds of those who are ambitious of such recognition as originality can confer, let us with all due thankfulness for small mercies stroll through the rooms of the Royal Academy, and see if there is anything of special interest in our own line of business. The only truly pathological picture, if we may use such a phrase, comes from the easel of Mr. Ernest Normand, who, in his "On the Threshold," furnishes a painfully realistic portrait of a young man, evidently far gone in consumption, wistfully gazing, under the superintendence of a sympathetic dog, on a world which he must so soon leave. Excellent although the intentions of the painter are, there is no special charm of execution to relieve the mournful character of such a subject, and we should be surprised to learn that any one can be found amid the anxieties and worries of ordinary existence to depress life's mercury still further by placing it on his walls. Last year we took occasion to describe Orchardson's masterly supper scene, where the Borgia is sombrely contemplating his victim under the reposeful splendour of an Italian evening sky, and we now find another kindred scene in No. 289, the surrender of Capua and the passing round the poisoned cup. The figures are too small to enable us in their somewhat exalted position to trace with any accuracy the effect of the particular drug employed, but all seem somewhat perturbed, some from its effects and some from anticipation; the dramatic effect, however, is somewhat impaired by the small scale of the work and the academic dryness of the execution.

Turning from these lugubrious topics, it is refreshing to meet amid the weary and somewhat dreary waste of portraiture the familiar forms of two old friends, placed on the canvas with complete success from very different artistic standpoints. Sir R. Douglas Powell is sitting on his consulting chair and looking at us with the calm reflecting expression which seems so completely in harmony with his pale refined features; the general colour scheme is pitched in a low reposeful key, and everything is carefully finished after the method of what has sometimes been called the "tight school." On the other hand Sir Hermann Weber has evidently stimulated the fullest powers of his compatriot. Herkomer is here seen at his best, and has given us a singularly bright and animated version of the characteristic personality of his sitter, and delighted us with the robust handling and harmonious vigour of what is undoubtedly one of the best portraits of the year.

Mrs. Jopling gives us a palpably realistic version of Lieutenant-Colonel Manders, M.D., but we hardly think that Dr. Donkin has received full justice at the hands of Mr. Cyrus Johnston. We well remember the look of alert, and on occasions almost aggressive, intellectuality which used to hang about our friend's features; and we wonder whether this has been softened by time, or whether contact with the subtler and sadder medico-sociological problems which now engage his attention has subdued the vivacity which was so much appreciated by his friends.

In the Sculpture Room we find two very successful busts of past and present worthies. Mr. Drury has very cleverly reproduced the look—half mournful and half resigned—which partially hid the genial humour and unfailing friendliness of one of the finest-natured men that ever lived—the late Sir William Mac Cormac; and Sir John Williams's strong and sagacious face has fared well under Mr. Gascombe John's chisel.

And here we must take our leave of the Academy of 1903, which seems to be in no way inferior to its predecessors, with the final comment that, so far as we can discover, nothing has been contributed to its walls by any member of the medical profession.

THE EPIDEMIC OF SMALL-POX.

The number of small-pox reports received this week shows clearly that the disease in most parts of the Midlands and some of the northern counties is in no way decreasing in prevalence.

No reports have been received from Durham, Northumberland, Cumberland, and Westmorland, but we are afraid that this does not mean that no new cases have occurred.

From Yorkshire, the only report concerns Bradford, where there have been a number of new cases from different parts of the town.

In Nottinghamshire there is perhaps some improvement; Mansfield has apparently managed to check the spread, Hucknall Torkard reporting nothing fresh, and Nottingham having only a few fresh cases.

In Derbyshire the disease is certainly spreading steadily. Long Eaton has had more cases, and there are new centres at Greenhill Lane and Shirebrook, while Little Eaton, close to Derby itself, has had 2 or 3 cases.

In Staffordshire, Burton reports the importation of a case from Derby, while at Wolverhampton there is a fresh crop of cases. The course of the disease in this town has been irregular, cases having recurred from time to time since Christmas, but the sanitary authorities have been able to prevent any serious outbreak. A useful object lesson was given by one incident. There were forty-four inhabitants in one house where a case occurred, and forty-three of them submitted to vaccination, the forty-fourth, a youth, refused to be vaccinated, and subsequently developed small-pox, his being the only case that occurred among the contacts in the house.

In Warwickshire there is also marked progress in the spread of the disease, and further cases have been reported from Longford, Aston, Gravelly Hill, Nuneaton, Walsgrove-on-Sowe, and New Inn Bridge Longford has now had 12 cases, and at Coventry the outbreak is decidedly increasing.

From Leicestershire the news is also bad, but decidedly instructive. Loughboro' has had some more cases, and Billesdon and Market Harboro are fresh centres. In Leicester itself, after a scare of a week, the Town Council congratulated itself on having got things under on the strength of no fresh reports for a couple of days, but they were disillusioned by a rapid spread which brought the total up to 97 in less than three weeks. Twelve deaths have already occurred, 10 of the deceased never having been vaccinated at all, while the other 2, who were middle-aged, had not been vaccinated since early childhood.

In Northamptonshire, there may be some ground for believing that the disease is not going to be severe; but Kettering is a fresh centre and the hamlet of Raunds another, while Northampton itself is still infected.

From Cheshire there is only one report, that of 3 cases at Northwich.

From Oxford, Worcestershire, Gloucester, and Shropshire there are no reports to hand, nor yet from Lincolnshire, and Cambridge, and Bedford.

From Lancashire the reports vary. Some newspapers speak as if there were a decided decline in the extent of the epidemic and number of cases. Our own correspondent, however, states that the disease keeps "forging ahead," both in the towns and in rural localities, and that in Salford the 213th case has been reached.

In Liverpool, at the date of the last weekly statement to the Municipal Council, there was some decline in the number reported during the week. Orrell and Scholes, however, are new centres, and Wigan, Crewe, Heywood, and Whittlefield reported a considerable number of new cases. At Whittlefield and Heywood incidents that have occurred show the

difficulties with which the sanitary authorities have to contend and how little likely the disease is to stop under the circumstances.

At Heywood, the last 6 cases were all young children some of whom had been vaccinated, and at Whittlefield, two antivaccinating families had cases for a month without calling in medical assistance or in any way reporting them, while the members of the families continued to go about freely outside.

Further south, and near and in London, fresh cases have occurred, but there is no evidence that a considerable spread is to be feared.

In Wales the disease seems to have begun to spread again after a period of quiescence. Several fresh cases have occurred at Cardiff, and fresh centres are to be noted at Darwen, Mold, and Welshpool. At the latter place the patient was a "contact" who had refused vaccination. Bagillt has also imported a case from Liverpool, and Conway, though it has no cases itself, has had to deal with 2 cases from Abergele.

In Scotland things are still going well, only 1 case having been notified during the fortnight ending April 30th.

THE MIDWIVES BOARD.

We have received from Mr. G. W. Duncan, Secretary of the Central Midwives Board, the following summary of the proceedings at the meeting of the Board, held on Thursday, April 30th, when the chair was taken by Dr. Champneys.

1. Letters were read: (1) From the Local Government Board, enclosing copies of a circular letter and memorandum on the subject of the Midwives Act, 1902, which it had sent to the councils of counties and county boroughs in England and Wales. (2) From the Derbyshire County Council, urging the desirability of forming a rule requiring every midwife to report all cases of puerperal fever within her practice to the medical officer of health of the district in which the case occurs, and also to the local supervising authority. The letter was referred to the committee dealing with the subject. (3) From the Secretary of Queen Charlotte's Hospital, enclosing a petition praying for the recognition of the hospital's certificate as a sufficient qualification under Section II of the Act. The Secretary was instructed to reply that the question of admissions under Section II in respect of "such other certificate as may be approved by the Central Midwives Board" could not be decided immediately, and that the memorial from Queen Charlotte's Hospital should have careful consideration.

2. The Chairman and Secretary reported as to offices which they had inspected, and the matter was left in their hands.

3. The question of the general standard of education to be required from candidates for examination was considered, and it was resolved that the examiners should have the power to reject any candidate not sufficiently instructed in elementary education.

4. It was resolved that the meetings of the Board should not be open to the public or to reporters except on special vote of the Board, but that the Secretary should furnish a summary of the proceedings to the press.

5. Considerable progress was made in the drafting of rules under Section III (1) of the Act.

CONTRACT MEDICAL PRACTICE.

The Coventry Dispensary.

We learn from the *Coventry Herald and Free Press* that the annual meeting of the Coventry Dispensary was held on April 28th. The annual report stated that the number of new members was 1,756, and that the income was £3,828 19s. 6d.; there was a balance in hand of £202 11s. 6d.; the medical staff received £2,184 8s. 3d.; and drugs, salaries, and establishment expenses amounted to £1,407 7s. 10d. The report was adopted.

The following rules were submitted by the Committee:

1. The object of the institution is to ensure for its members by the payment of one penny per week for each member (adult or child) efficient medical advice, attendance, and medicine during illness.

P.S.—Children to pay one penny per week instead of halfpenny as heretofore.

2. The benefits of the institution shall be limited to the families of working men and others of small means; when the head of a family does not earn more than a weekly average of £2 during a twelvemonth, or an annual income of £104. This rule, however, at the time of its adoption shall not apply to members already in the institution.

3. The regular management and supervision of the work of the institution shall be in the hands of twenty-four members, together with the whole of the medical staff and honorary secretary, who shall be *ex-officio* members of the committee.

P.S.—There are only two of the medical staff on the committee at the present time.

4. Benefit, Friendly, and other societies may be received as subscribers to the dispensary, and their members entitled to all the benefits of the institution. The rate of subscription shall be 3s. 6d. a year for each existing member, all clubs admitted after that date to pay 4s. per member per annum, the payments to be made quarterly and in advance.

P.S.—This rule shall not be brought into operation unless the outside doctors unanimously agree to raise their clubs to the same amount, namely, 4s. per annum. As they have demanded the rise we await their example.

An amendment to the effect that rule 1 should not be retrospective was carried by 42 votes to 35. Rules 2 and 3 were adopted, as was also rule 4 after considerable discussion, during the course of which a member pointed out that medical men in Coventry not connected with the dispensary had signed an agreement that they would not take club members under 4s. a year, and that the proposal to take existing members at 3s. 6d. upset the scheme.

From information which reaches us we fear that these decisions must be taken as putting an end to the hope entertained some time ago that this chronic difficulty in Coventry might be adjusted. It will be observed that neither the wage limit nor the annual rate applies to those who are already members. Rule 3, which admits all the medical officers of the dispensary, instead of two only, to the Managing Committee, is a move in the right direction, but this only gives the medical staff six votes in a committee of 30. The rule which continues all existing members for the annual rate of 3s. 6d. is unsatisfactory. We are informed that the Dispensary Committee, having resolved to charge clubs at the rate of 4s. a year, approached the outside members of the profession in Coventry, and asked for their support. Every member of the profession signed a document undertaking to hold no club at less than 4s. a year, and a resolution to this effect was unanimously passed, with a rider to the effect that notice of the change was to be given by midsummer. The new rules, it will be seen, make the adoption of the rate of 4s. for the future members dependent upon the unanimous agreement of the medical men not connected with the dispensary to charge the same amount, but as the new rules of the dispensary are retrospective those medical men who have given notice that they will in future charge 4s. a year, are placed in a difficult position.

LITERARY NOTES.

The representatives of this country at the Madrid Congress have fared somewhat badly at the hands of the Spanish printers in respect of spelling of their names. Sir Dyce Duckworth has been particularly evil-entreated. In one newspaper his honoured name appeared as "Dyec Dutwood," in another as "Duckwosth." Drs. Poynton and Paine are combined into one personality after the Spanish fashion, which allows a man the luxury of two surnames connected by an *y* (and). The name of the distinguished Director-General of the Medical Department of the Royal Navy is disfigured into "Norburig." These, however, are with a little ingenuity recognizable. But among the illustrious visitors there appears a mysterious "Uhigyworth." We decline to accept such a fortuitous concourse of typographical atoms as a human name; but we confess ourselves unable even to conjecture the identity of this weird creation of the printer's devil.

In the May number of the *Scottish Medical and Surgical Journal* there is an interesting account of the history and statutes of the Royal Infirmary of Edinburgh, as set forth in a book published in 1778, and picked up at an old bookstall. Lunacy reformers will learn with interest that at that time there were "in the ground floor twelve cells for mad people"; it was afterwards found that so many cells were unnecessary for that purpose, and some of them were accordingly converted to other uses. "On the attic story in a remote part of the house was a salivating room for female patients. This ward being under the management of a prudent nurse is never open but when she herself is present; so that these patients cannot have any intercourse with the other wards of the hospital." The hospital was provided with baths, but they were few in number, and only one of them apparently was intended for the use of the patients. Of the death-rate in the infirmary in the eighteenth century an idea may be formed from the fact recorded that "from 1770-75 the numbers admitted in one year amounted to 1,567½, and the number of deaths by the same proportion to 63½; that is, neglecting the fractional parts, deaths are to the numbers admitted as 1 to 25." Among the duties of the surgeon's clerk, in addition to opening and inspecting dead bodies when required, it is specified that he has "to electrify those patients for whom electricity is ordered." Among the general regulations

respecting the clerks and the apothecary is one that "the clerks shall not give any list of the patients with their diseases, to be published in the periodical magazines or other papers, as hath sometimes been done, without an application made to the managers and their leave obtained."

Amongst the books recently presented to the library of the Royal College of Physicians of London is a very interesting MS. folio volume, presented by Dr. Lee Dickinson, which had belonged to his grandfather, Dr. J. A. Wilson (Physician to St. George's Hospital), and which had come from his great grandfather, Mr. James Wilson, an eminent Surgeon and Lecturer on Anatomy at the Hunterian School of Medicine in Great Windmill Street, and the colleague and successor of Matthew Baillie. As might be expected, therefore, Mr. Wilson took great interest in morbid anatomy, and recorded a large number of necropsies in this volume, to which additions were made by Dr. J. A. Wilson. The most remarkable of these records is an account of the necropsy of Dr. Samuel Johnson, which was made by Mr. Wilson for Mr. Cruikshank on December 15th, 1784, in the presence of Dr. Heberden, Dr. Brocklesby, and others.

In the new number of the *Journal of Anatomy and Physiology* Professor Alexander Macalister, under the heading of "Archaelogia Anatomica," discusses the word "hilum." He says it is given by Pompeius Festus (*De Significatione Verborum*, ed. Gothofried, p. 296), with the definition *Putat esse quod grano fabae adhaeret, ex quo nihil et nihilum.* As this work is for the most part an abbreviation of the oldest Latin vocabulary, that of Verrius Flaccus, who lived in the Golden Age, about the beginning of the Christian era, this gives the word a respectable antiquity. From the meaning of the bean seed-stalk it came to signify metaphorically anything very small. Professor Macalister quotes Lucilius, Lucretius, Varro, and other ancient Roman writers, who used the word in various senses. He adds that "throughout the whole whole range of ancient and mediaeval literature there is no such word as *hilus*." The first use of the word as a scientific term known to him is in Linnaeus's *Philosophia Botanica* (1751), where it is employed as the name for the spot of attachment of the seed. It is easy, says Professor Macalister, to trace the stages by which the word became applied to the area of attachment of the kidney. Eustachius (*Opusc. Anat.*, Venet., 1564, p. 31) compares this organ in regard to its shape with the *Faseolos* or kidney-bean; and when describing its margins he says, *interius vero, qua vena et arteria in eos inscritur, simi a natura facti sunt et in eam retusae lineae speciem curvati, quae treicijs arcubus non inepte comparari potest.* Galen had, before this, called the hilum of the kidney τά σιμά; other authors called it in later times *concavité* (Winslow), *sinuosité* (Portal), *porta renis* (Fallopius), etc. The Eustachian description is adopted and somewhat paraphrased by Haller (1765, xxvi. S 1. 4), who says, *Homini renis figura est, quae phaseoli, ut nempe facies anterior et posterior compressa sit, et utroque hinc per aciem convexam semielipticam uniatur, inde per hilum quo interior longitudo renis exsculpitur.* Here Haller, as far as Professor Macalister knows, is the first to apply the Linnaean name to this bean spot on the bean-like kidney. In the sentence just quoted the word is accusative, but in continuing the Eustachian description he makes its nominative "hilus"; *Hilus recte cum arcus Turcici.* Later describers have used the same comparison; thus Cruveilhier says, "*La figure du rein ne saurait être mieux comparée qu'à celle d'un haricot dont le hile serait en dedans.*" That the use of the Linnaean name was suggested by the bean simile is confirmed by the fact of this word being used by Haller of the kidney only, not of the spleen or liver. The transverse fissure of the latter is with him the portae. He uses Galen's plural, that author having described the portae as two (*De Formatione Foetus*, iii), and Haller speaks accordingly of the vena portarum. Once started, the error was propagated by Meckel, and it is to be found also in the works of Lauth, Krause, Henle, and Sömmering. Hyrtl, in his *Onomatographia*, recognises that *hilum* is the proper word, but he has not the courage of his conviction, and uses *hilus* in his *Topographical Anatomy*. The French authors, as they appropriate and gallicize the word *hile*, are saved from the necessity of choice between the two. English writers for the most part use the Linnaean *hilum*. It is so in Knox, Wilson, Heath, Morris, Gray, and in Todd's *Cyclopaedia*, as well as in Ellis (*pace* Murray's *Dictionary*, s v.). Quain is impartial, using *hilus* in the 1882 edition, and *hilum* in that of 1896. Reviewing the history of the word, Professor Macalister holds that there cannot be the shadow of a doubt that Linnaeus was correct in the form, if not in the usage of the word, and that the mistake in gender was a slip of Haller's; *quandoque bonus dormitat Homerus.* Had he meant to make a new word he would have said so, and explained his intentional departure from the acknowledged form. "Whether, as the *hilum* of the kidney is not exactly the same as the *hilum* of the bean, there is need for a new word is a debateable point; but until this is definitely agreed to, and *hilus* put on the same footing etymologically as Paracelsus's word *gas*, frankly, as a barbarism, those who are interested in the maintenance of some degree of classical purity in the nomenclature will do well to adhere to the form of the word that is sanctioned by the usage of twenty-three countries." May we venture to point out that the aphorism that Homer sometimes nods is also illustrated in the above interesting quotation? The word *gas* was invented, not by Paracelsus, but by Van Helmont; at any rate he claims it and describes the process of its formation.

We are asked to state that the whole of a forthcoming issue of the *American Journal of Dermatology and Genito-Urinary Diseases* (published at St. Louis, Missouri) will be devoted to a "symposium" on modern prostatic investigation in which the leading surgeons of the world will take part. To prevent painful misconception in sensitive souls we hasten to explain that the word "symposium" is merely a piece of journalistic slang and does not imply that the "leading surgeons" are to carouse together. They will merely discuss such questions as the following: (1) To what extent occupation tends to prostatic hypertrophy, with especial reference to active indoor, active outdoor, and sedentary pursuits. (2) Which suffer oftenest, the phlegmatic or nervous, the lean or obese? (3) Etiology of prostatic hypertrophy. (4) To what extent the cystoscope has been of service in diagnosis. (5) To what extent habit is responsible for prostatic hypertrophy with especial reference to the use of alcohol and constipation. (6) In what cases palliation is advised, and of what it consists. (7) Ligation of the vasa deferentia and results. (8) Castration for prostatic hypertrophy and results. (9) Bottini's operation or some modification of this treatment and its success, with especial reference to complications, permanency of relief, etc. (10) Suprapubic drainage with an estimate of results. (11) Suprapubic prostatectomy and results obtained. (12) Perineal prostatectomy and with what success. (13) Operation of choice for prostatic hypertrophy. (14) What unexpected complications have arisen during the operation for prostatic hypertrophy, and what during the post-operative conduct of cases. (15) Summary of prostatic work.

The *World's Work* for May contains a description of a cremation ceremony at the new crematorium opened recently among the country fields at Golder's Green, a few miles out of London. The coffin, covered in purple cloth, and bearing a mass of beautiful flowers, lay on a narrow catafalque extending at right angles to the wall, in which just at the coffin's foot were a small pair of metal folding doors. When the solemn words of committal were reached, a lever was drawn, the metal doors opened, and the coffin by the aid of an invisible mechanism was drawn silently and smoothly along the railed floor of the catafalque to the other side. Then the doors swung back and the service proceeded to its close. Meanwhile, within the precincts of the crematorium proper the coffin rested on a table on a level with the catafalque from which it had just come, and immediately in front of one of the two furnaces at present in use at Golder's Green. When the service in the chapel was ended, the superintendent of the crematorium standing beside the coffin made a sign, and the sliding iron door of the incinerating chamber was raised, disclosing the narrow, low interior, glowing orange-red with a heat of 1,800 degrees from the fire in the basement below. Then lightly, easily, by means of an iron rod, which the superintendent grasped in one hand, the coffin was swiftly pushed forward. As it entered the chamber, flame sprang instantly around it; no sooner was it entirely within, than it was wrapped in a shroud of fire. The iron door immediately descended, and the process of incineration was begun. This takes, as a rule, about an hour and a-half; if the coffin be of fragile construction, and be made of suitable material, the time required is even less. The entire operation was visible through a small talc window in the door at the back of the crematory chamber. The sight is not one that relatives and friends might be expected to watch, though at Hull they are permitted to do so, and sometimes avail themselves of the permission, but there is nothing connected with it that should render them reluctant to have it witnessed by a stranger's eyes.

CONVALESCENT HOMES IN LONDON PARKS.

THIS question, which we have on several occasions brought before the public, was the subject of a prolonged discussion at the first ordinary meeting of the London County Council after the recess, held last Tuesday. During the last few months a discussion has been carried on in the columns of the *Times*, chiefly in reference to the proposal to utilize the mansion at Golder's Hill for the purpose of a convalescent home for children, in which Mr. Frank Debenham defended the proposal against the severe criticisms of Sir Henry Harben and others. We understand that members of the County Council had been duly circularized by those interested on both sides, and the result was a lively debate. In the end the principle of devoting mansion-houses in the parks under the London County Council, provided they are suitable to the purpose and there be no legal objection in the way, has been endorsed by the whole Council: and, in the case of Avery Hill House, the recommendation of the Parks Committee was adopted—namely, a part of the house and gardens shall be set aside for use as a convalescent home, and the Parks Committee be authorized to communicate with the hospital authorities accordingly.

This decision, however, was not finally arrived at without considerable discussion and after the defeat of hostile amendments. Mr. Sankey at a previous meeting had opposed the suggestion on the ground that it really amounted to an insidious attempt to municipalize the hospitals, and that although such homes might be at first restricted to non-infectious cases of disease, infectious cases might later on be introduced so as to prejudice the use of the parks by the public.

On Tuesday Mr. PIGGOTT (late Chairman of the Parks Committee) moved that the consideration of the recommendation be postponed, and that it be referred to the Establishments Committee to report if the premises at Avery Hill could be used by the staff for clerical work, drawing, depository for papers, etc. This was seconded by Mr. SYDNEY WEBB, who, however, disclaimed hostility to the principle of using certain of the park mansions for the purpose of convalescent homes.

Mr. R. A. ROBINSON (Deputy Chairman) saw difficulty in the way of putting any of the central staff at Eltham, but favoured the view that the Technical Education Board might advantageously occupy the premises.

Sir WILLIAM COLLINS said the Council had virtually approved the principle that if any of the unused houses in the parks were suitable, and there were no legal obligation, they might be used as convalescent homes. He repudiated the idea that this was a step in the direction of municipalizing the hospitals, but if it were they were sinning in good company, for the President of the Local Government Board had last session introduced the Hospitals Contribution Bill, the object of which was to enable county and borough councils to contribute to hospitals available for the use of the inhabitants in their districts. The Metropolitan Asylums Board dealt efficiently, though perhaps not economically, with the infectious cases, and there was no intention to bring them into the parks. The "lungs of London" existed both for health and recreation; they had perhaps overdone the recreation and underdone the opportunities for promoting health. There were hundreds of cases occupying beds in London hospitals which might with greater advantage be treated in the purer air of the suburbs, and thereby relieve hospital beds for acute cases.

Dr. FORMAN confirmed the views of Sir W. J. Collins.

Colonel ROTTON disputed the eligibility of Avery Hill for the use of convalescents.

Mr. JOHN BURNS, M.P., was not sure that a portion of the building might not be devoted to the purpose of a cottage hospital for accidents, and the remainder for a free library or as a residence for technical students engaged in horticulture.

Mr. CLELAND (Chairman of the Parks Committee) quoted figures, which have appeared in these columns, to show how serviceable such houses would be for children suffering from chronic bone and joint diseases.

The amendment was defeated on a show of hands.

Mr. LEON then moved that the recommendation be referred back to the Committee, and favoured the use of the house as a municipal music-hall.

This was seconded by Mr. HENRY CLARKE, but was also defeated, and the Committee's recommendation, with a slight alteration, was adopted.

The Council then turned its attention to Golder's Hill mansion. In this case they stated:

A suggestion was made to us that the house should be placed at the service of hospital authorities in London for the accommodation of children, but in view of the strongly-expressed opinions of the various local authorities and individuals who contributed to the purchase of the estate, we have found ourselves precluded from considering whether the mansion could be used for that purpose.

They accordingly recommended:

(*a*) That the annexe at the northern end of the mansion at Golder's Hill should be utilized for the purposes of public conveniences; the upper part being reserved for women and children, and the lower part for men; and that the architect do prepare the necessary plans accordingly.

(*b*) That the rooms on the first and second floors of the northern wing of the mansion at Golder's Hill be allocated as a residence for the park superintendent; that the architect do prepare plans showing the necessary alterations, including the provision of a separate entrance from the front of the house.

(*c*) That the whole of the ground floor and the kitchen, etc., of the mansion at Golder's Hill be devoted to the purposes of a public refreshment place.

Mr. CROOKS, M.P., in a vigorous speech, ridiculed the use of this house, which had served so well for the Guards who were invalided home from South Africa, for the purposes indicated, and the Rev. FLEMING WILLIAMS, in seconding, warmly protested against the local opposition of wealthy Hampstead residents to the use of the mansion by the children. He despised such selfishness; did they merely desire to enlarge their own back gardens? He hoped the Council would show its sympathy with the childhood of London.

Sir W. J. COLLINS said Golder's Hill was far more suitable for the purpose than Avery Hill, and the solicitor had advised that there was no legal objection; it was preposterous to devote the upper rooms to the residence of a parks constable; there would be no public advantage in that. The local subscribers were as divided on the question of a refreshment room as they were on a convalescent home.

The amendment of Mr. Crooks on Recommendation (*a*) was defeated on a discussion by 54 to 45.

Mr. SPOKES claimed the closeness of the vote as a ground for not proceeding with Recommendation (*b*), and Dr. FLETCHER LITTLE moved that this be referred back. On a show of hands, the reference back was carried by 34 to 20, but on a division being demanded, this was lost by 56 to 39, and this and the other recommendations of the Parks Committee were carried.

ASSOCIATION NOTICES.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1903.

MEETINGS of the Council will be held on July 8th and October 21st in the Council Room of the British Medical Association, 429, Strand, London, W.C.

ELECTION OF MEMBERS.

ANY candidate for election should forward his application upon a form, which will be furnished by the General Secretary of the Association, 429, Strand. Applications for membership should be sent to the General Secretary not less than thirty-five days prior to the date of a meeting of the Council.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m. Members can have their letters addressed to them at the office. GUY ELLISTON, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

BATH AND BRISTOL BRANCH: BRISTOL DIVISION.—The first meeting of this Division of the Branch, under the new Constitution of the Association, will be held at the Medical Library, University College, Bristol, on Wednesday, May 27th, at 8 p.m. Business: To elect the officers of the newly-formed Division, the representatives of the Division on the Council of the Branch, and the ordinary members of the Executive Committee; to elect the representative of the Division in representative meetings of the Association; to make rules for the Division. This meeting of the Division will take the place of the ordinary Branch meeting, which will not be held. The date of the annual meeting of the Branch and of the annual dinner is altered to Wednesday, June 10th.

BATH AND BRISTOL BRANCH: BATH DIVISION.—A meeting of this Division will be held at the Royal United Hospital, Bath, on May 27th, at 5 p.m., for the purpose of electing Divisional Officers, and for other business.—W. M. BEAUMONT, Bath, Honorary Secretary.

BATH AND BRISTOL BRANCH: TROWBRIDGE DIVISION.—A meeting of this Division will be held at the George Hotel, Trowbridge, on Thursday, May 28th, at 3 p.m., for the purpose of electing officers, and for other business.—W. M. BEAUMONT, Bath, Honorary Secretary.

EAST ANGLIAN BRANCH.—Preliminary Notice.—The annual meeting will be held at Chelmsford on Thursday, June 11th. Members wishing to read papers, or show cases or specimens, will kindly communicate with the General Secretary, B. H. NICHOLSON, M.B., East Lodge, Colchester.

EAST ANGLIAN BRANCH.—Election of Members of Council.—The nomination of candidates to represent the Branch on the Central Council of the Association for the ensuing year must be made by three electors on or before May 16th next, in writing, to the General Secretary of the Branch, B. H. NICHOLSON, M.B., East Lodge, Colchester.

MALTA AND MEDITERRANEAN BRANCH.—A meeting of this Branch will be held at 38, Sda. S. Giovanni, Valletta, on Monday, May 11th, at 4 p.m. Agenda: (1) Approval of the By-laws of the Branch; (2) Election of Delegates to attend the Seventy-first Meeting of the British Medical Association at Swansea on July 28th.—THEM. ZAMMIT, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH.—A special general meeting of this Branch will be held at the rooms of the Medical Society of London, Chandos Street, Cavendish Square, W., on Thursday, May 21st, at 4 p.m. The business will be to consider draft model rules, and also ethical rules proposed for adoption by the Branch, as published in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of March 7th, 1903.—HENRY BETHAM ROBINSON and GEORGE ROWELL, Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.—A meeting of this District will be held at the New Hospital for Women, Euston Road, N.W., on Wednesday, May 13th, at 4.30 p.m. Dr. Wynn Westcott will preside. Mrs. Scharlieb, M.D., M.S., Surgeon to the New Hospital for Women, will read a paper on the Importance of Early Operation for Malignant Disease of the Uterus and Methods of Diagnosis.—J. DILL RUSSELL, F.R.C.S., Osman House, Fortis Green, N., Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.—The annual meeting will be held at Bethlem Royal Hospital, at 4 p.m., on Thursday, May 14th. Dr. Milne Bramwell will read a paper on Hypnotism. The business of the meeting will be: (1) To elect officers for the Division; (2) to consider model rules suggested for adoption by a Division which is not itself a Branch, as published on p. xxii of the SUPPLEMENT to the JOURNAL of March 7th, 1903.—MAURICE CRAIG, Honorary Secretary, Bethlem Royal Hospital, S.E.

MIDLAND BRANCH.—Preliminary Notice.—The annual meeting of the Midland Branch will be held on June 5th, at Derby. The annual dinner of the Branch will be held in the evening.—F. M. POPE, Leicester, Honorary Secretary.

MIDLAND BRANCH: STAMFORD DIVISION.—The first meeting of this Division will be held at the Board Room, Stamford Infirmary, at 4 p.m., on May 21st, when the rules for the Division will be adopted and officers elected.—H. D. MACKENZIE, Stamford.

MIDLAND BRANCH: LEICESTER DIVISION.—The first meeting of this Division will be held at the Wyvern Hotel, Leicester, on May 20th, at 4.30 p.m. All members of the British Medical Association living in the County of Leicester and Leicester itself are now members of this Division, and are requested to attend this meeting, when the rules for the Division will be adopted and officers elected.—F. M. POPE, 4, Prebend Street, Leicester, Hon. Secretary of Midland Branch.

MIDLAND BRANCH: BOSTON AND SPALDING DIVISION.—The first meeting of this Division will be held at the Peacock Hall, Boston, on May 27th, at 3.30 p.m. All members of the British Medical Association living in the Holland County Council area and the Horncastle parliamentary division are now members of this Division and are requested to attend this meeting, when the rules for the Division will be adopted and officers elected.—A. E. WILSON, 8, Grove Street, Boston.

MIDLAND BRANCH: DERBYSHIRE DIVISION.—All members of the British Medical Association living in Derby and Derbyshire are requested to attend the first meeting of this Division, which will be held at the Derbyshire Royal Infirmary on May 26th, at 4 p.m., to adopt rules for the Division and to elect officers.—J. ACTON SOUTHERN, 93, Friar Gate, Derby.

MIDLAND BRANCH: LINCOLN DIVISION.—The first meeting of this Division will be held at the Guildhall, Lincoln, on Thursday, May 28th, at 4 p.m. All members of the British Medical Association living in the Lincoln, Gainsborough, Louth, and Sleaford parliamentary divisions are now members of this Division, and are earnestly requested to attend this meeting, at which the officers and representatives will be elected, and rules for the Division adopted.—E. MANSEL SYMPSON, 2, James Street, Lincoln.

MIDLAND BRANCH: NOTTINGHAM DIVISION.—The first meeting of this Division will be held at the Victoria Station Hotel, Nottingham, on Wednesday, May 20th, at 4 p.m. All members of the British Medical Association living in the City and County of Nottingham are now members of this Division and are requested to attend this meeting, when the rules for the Division will be adopted and officers elected.—F. H. JACOB, 28, Regent Street, Nottingham, Honorary Secretary, Nottingham Division.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.—The next meeting will be held at the Croydon General Hospital, London Road, Croydon (quite close to the West Croydon Railway Station), on Thursday, May 14th, at 4 p.m., Mr. T. A. Richardson, of Croydon, in the chair. The Chairman has kindly offered to provide tea and coffee at the hospital. Agenda: 1. Minutes of Upper Norwood meeting. 2. To decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. 3. Dr. Coles (Bournemouth): A demonstration on blood examination, giving the methods and means best adapted to the exigencies of general practice. 4. To visit the hospital wards, where cases of clinical interest will be shown and described by members of the hospital staff and also by other members, and discussion will be invited. Exhibition of surgical instruments, pharmaceutical products, etc., by Arnold and Sons and Burroughs, Wellcome, and Co. Members desirous of exhibiting specimens or reading notes of cases are invited to communicate as soon as convenient, and certainly by Monday, May 11th, with the Hon. Secretary. The dinner will be held at the Greyhound Hotel at 6.30 p.m., charge 7s., exclusive of wine. The Hon. Secretary would be much obliged if members would kindly inform him by postcard whether they intend, if possible, to be present at the meeting and if likely to remain to dinner. By so doing they will very materially facilitate arrangements and promote the success of the meeting. At the last Upper Norwood meeting it was decided that as the meeting at Croydon last year was such a great success the next one should be conducted on the same lines. It will therefore be a purely clinical meeting, and members are particularly requested to note the change in the arrangements. The idea is for members to show cases of general interest, to give a short history of each, and for a short discussion to follow. All members of the South-Eastern Branch are entitled to attend and to introduce professional friends.—HENRY J. PRANGLEY, Tudor House, Anerley, Hon. Secretary.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting of this District will be held at Lewes, at the White Hart Hotel, on Thursday, May 21st, at 4.45 p.m. Mr. G. Vere Benson will take the chair. Papers are promised from Mr. L. Lovell-Keays and Dr. Lawsett. Members willing to read papers or show cases are requested to communicate with the Honorary Secretary at their earliest convenience. Dinner after the meeting at 6.45; charge 6s., exclusive of wine. All members of South-Eastern Branch are entitled to be present.—W. J. C. MERRY, Honorary Secretary, 2, Chiswick Place, Eastbourne.

SOUTH-WESTERN BRANCH.—The sixty-fourth annual meeting of this Branch will be held on Wednesday, June 3rd, at the Guildhall, Launceston, at 3 p.m., when Mr. J. Delpratt Harris will resign the chair to Dr. W. T. Thompson, who will deliver an inaugural address. The report of the Branch Council will be presented to the meeting, and the officers of the Branch elected for the year 1903-4. Luncheon, by kind invitation of the President-elect, will take place from 1 to 2.30 p.m., at the Guildhall, and the annual dinner will be held at the White Hart Hotel at 7 p.m. Tickets (exclusive of wine), 6s., which can be obtained from the Honorary Secretary. The President-elect has kindly arranged visits to the Priory Ruins and Church, and the Castle. After the meeting a Garden Party will be held at the residence of the President-elect. The nomination of candidates for the office of Elective Members of Council (Branch Representatives on the Central Council) for the ensuing year, must be made by three electors, and in writing, to the Honorary Secretary of the Branch, G. YOUNG EALES, 1, Matlock Terrace, Torquay, on or before May 20th.

NORTH LANCASHIRE AND SOUTH WESTMORLAND BRANCH.

THE first meeting of this newly-formed Branch was held at Ulverston on March 11th, Dr. A. W. COLLINS in the chair. There were present 27 members and 10 promised members. The notice convening the meeting and the resolution of the Council constituting the Branch were read.

History of the Formation of the Branch.—Dr. HALL (Lancaster) gave a short history of the steps leading up to the formation of the Branch. He stated that there were at present 95 members, and that 33 had promised to join at the end of the half year. That would earn an allowance of £22 6s. from the funds of the Association. It was decided that the Branch be called the North Lancashire and South Westmorland.

Election of Officers.—The following were then elected the officers of the Branch:—*President:* Dr. W. W. Wingate-Saul (Lancaster). *President-elect:* Dr. A. W. Collins (Ulverston). *Vice-President:* Dr. J. Mason (Windermere). *Treasurer:* Dr. W. Dodgson Barrow (Lancaster). *Secretary:* Mr. A. S. Barling (Lancaster). These, together with the members of the Council to be elected by the Divisions, are to hold office until the annual meeting in 1904.

Boundaries of Divisions.—The boundaries of Divisions were then fixed:—Furness: The whole of Lancashire north of Morecambe Bay and the piece of Cumberland. Kendal: The whole of Westmorland and Yorkshire in the Branch lying north of a line drawn from south of Ainside to north of Hawes. Lancaster: The portion of the Branch south of their line.

Election of Members of Branch Council.—It was resolved that each of these Divisions should elect two members to the Branch Council.

Suggested Rules.—The suggested rules were considered and adopted, with additions approved by the Council of the Association. The suggested ethical rules were referred to the Council.

Honorary Associate Members.—It was finally resolved that

the President and Secretary of the Border Counties Branch should, *ex officio*, be honorary associate members of this Branch.

GRANTS FOR SCIENTIFIC RESEARCH.

THE Council of the British Medical Association desires to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences that it is prepared to receive applications for grants in aid of such research. Applications, which must reach this office not later than May 31st, for sums to be granted must include details of the precise character and objects of the research which is proposed, and must be made on forms to be had of the General Secretary, at the office of the Association, 429, Strand, London.

Every recipient is expected to furnish to the Committee on or before May 31st following upon the allotment of the grant, a report (or, if the object of the grant be not then attained, an interim report to be renewed at the same date in each subsequent year until a final report can be furnished) containing: (*a*) A brief statement for the Report of the Scientific Grants Committee, showing the results arrived at, or the stage which the inquiry has reached; (*b*) a general statement of the expenditure incurred, accompanied, so far as is possible, with vouchers; (*c*) and references to any transactions, journals or other publications in which the results of the research have been printed.

RESEARCH SCHOLARSHIPS.

The Council of the British Medical Association is prepared to receive applications for three Research Scholarships which become vacant (two holders are eligible for and seek re-election), of the value each of £150 per annum, tenable for one year, and subject to renewal by the Council for another year.

Applications for Scholarships must be made on forms to be had of the General Secretary, and returned on or before May 31st.

ERNEST HART RESEARCH SCHOLARSHIP.

The Council of the British Medical Association is also prepared to receive applications for the Ernest Hart Research Scholarship of the value of £200 per annum, tenable for one year, but subject to renewal by the Council for another year. The Scholarship is for the study of some subject in the department of State Medicine.

The present scholar is eligible and seeks re-election.

GUY ELLISTON, *General Secretary.*

SPECIAL CORRESPONDENCE.

MANCHESTER.

Arrangements for Dalton Centenary.—Underground Bakehouses.—Ministry of Health.—Burial of Stillborn Children.

THE annual report of the Manchester Literary and Philosophical Society states that the Wilde Medal for 1903 has been awarded to Professor F. W. Clarke, of Columbia University, Washington, for his distinguished services to chemical science, and especially for the masterly judgement he has shown in his critical discussion of the atomic weight determinations of all the elements. A Dalton medal (struck in 1864) has been awarded to Professor Osborne Reynolds for his writings and researches on hydrodynamics, on the dimensional properties of matter, on the theory of lubrication, and on the mechanical equivalent of heat. The medals will be presented on May 19th, and on the same day Professor Clarke has been appointed to deliver the Wilde Lecture on The Atomic Theory. In the evening the members and the Society's guests will dine together at the Queen's Hotel. On the following day there will be a meeting of the Victoria University in the Whitworth Hall of Owens College, and the University Court will be asked to confer honorary degrees on distinguished foreign guests who are expected to be present. In the evening there will be a *soirée* at the Owens College, given by the Council of the College, and an exhibition of apparatus which belonged to Dalton, portraits, and other relics.

Steadily but surely the effects of recent sanitary legislation is making itself felt in every direction. It seemed in days gone by the proper thing in order that the matutinal "roll" or crumpet should appear at morning breakfast, that the bread should be prepared during the night, and a corollary of which paterfamilias either did not think, or was unaware, was that the pulpy, warm morsel was more frequently than not prepared in an underground cellar called a bakehouse. The Sanitary Committee of the City Council have prepared a report on underground bakehouses, going back to the year 1894, when the Corporation first gave attention to this matter. The Manchester and District Master Bakers' Association then met, and passed a resolution expressing willingness to co-operate with the Committee in the improvement of the sanitary condition of the bakehouses, and agreeing favourably to consider any proposed Act of Parliament that would gradually close all cellar bakehouses throughout the country. The Factory Act of 1895 is referred to in the report, and it is pointed out that the goal arrived at alike by master bakers, Parliament, and the Corporation has been the final extinction of underground bakehouses. The question is then considered in detail of the grant of a certificate of suitability to any cellar bakehouse under the Act of 1901. It is reported that, as the Act states that a bakehouse must be suitable in respect of construction, light, ventilation, and in all other respects, "it is evident that in strictness a sanitary authority can scarcely give a certificate at all, since a cellar bakehouse cannot be made suitable in the above sense, or so rarely as to render the exceptions extremely few." The conditions which would fulfil the requirements of the section are stated. Besides these, particulars are given of the arrangements of a number of underground bakehouses, and the medical officer of health "desires to substitute for the requirements, which have already been before the Chairman and Deputy Chairman of the Sanitary Committee, and the Chairman of the Shop Hours Subcommittee, model requirements drawn up by the Council of the Incorporated Society of Medical Officers of Health, after very full discussion. These are contained in the report. The question of how best to ventilate these underground bakehouses is also dealt with.

The Manchester and Salford Sanitary Association has always been in the van in connexion with the advancement of sanitary reform. At a meeting of the committee, Professor Dixon Mann, M.D., in the chair, the question of the creation of a Ministry of Health was revived, and the following resolution was passed:

> That Sir John Gorst be invited to act as leader in a movement for the creation of a Ministry of Health, and that Sir William H. Houldsworth, Bart., M.P., and other Manchester members, be asked to give the movement their support.

The fatal lamp accident which occurred in Ancoats early this month was mentioned, and it was resolved that Mr. Ure, M.P., be requested to seek an early opportunity of reintroducing his Bill for raising the flash point of illuminating oils.

It would seem that we have not yet heard the last of statistics of cemeteries. Recently the acting coroner is reported to have stated that in one cemetery there were 300 funerals of stillborn children annually; and, taking this as a basis, he estimated that there would be about 1,500 in the five cemeteries of the city. The Committee of the Parks and Cemeteries has instituted inquiries on the subject, and it finds that at Philip's Park Cemetery the number of stillborn burials last year was 328. This, however, was out of a total of 5,000 funerals, or nearly half the total funerals of the city. From the Southern Cemetery the burials of 63 stillborn children was reported, while there were no figures from the Ardwick and Harpurhey Cemeteries. As the two mentioned, however, account for the majority of the funerals, it is estimated that the annual number of stillborn burials will not be more than 500, instead of the 1,500 suggested by the Acting Coroner.

CORRESPONDENCE.

MR. COLERIDGE'S GENTLEMAN-LIKE AMENITIES.

SIR,—A friend gave me a ticket for the antivivisectionists' meeting at St. James's Hall on May 1st, and I went, perhaps from that morbid curiosity which I learned subsequently is not merely the sole incentive of all scientific investigation, but the peculiar vice of doctors, in whom it is of so virulent a type, that, leading them as a body through many gradations of infamy, it ultimately brings the worst of them to the bottomless pit of the physiological laboratory itself. As we are all tarred with the same unholy brush, and long past praying for, it can do no harm to offer a short account of the proceedings to any of your readers who take an interest in them. On entering St. James's Hall I was surprised to find myself in a crowd of roughs of a type not often met with in that neighbourhood. They were brought in large brakes and euphemistically described as delegates,

though what particular slums they represented I have no idea. They formed a considerable proportion of the audience, and called "Shime," and "Shoot him," etc., when there was an opportunity; and when Mr. Coleridge proceeded to incite them "not to wait for supine legislation," but "to go in their irresistible thousands, smash to atoms the instruments of torture, and leave every laboratory in the kingdom a heap of ruins," I realized what appropriate instruments he had provided for his schemes.

The Chairman, Lord Llangattock, began by saying that he was suffering from a recent bereavement, but that he had put aside private feelings to help what he believed to be morally right and put down what he believed to be displeasing to God. Fine sentiments, but why do they never occur to him when he gives a shooting party? He well knows that every time he has a big shoot scores of crippled birds and rabbits (especially the latter) crawl away to linger in pain far greater than is ever inflicted in any laboratory in this country. Most of the birds may be picked up the following day, but the rabbits go to ground and are never seen again, but perish from their wounds or from hunger and thirst. The pain inflicted on animals in all the laboratories in the kingdom in a year cannot compare with what they suffer every day in the shooting season for sport. I think it will be time enough to condemn sport when we know how this world can go on without inflicting suffering on animals.

But while like Mr. Coleridge, I wish "to observe the amenities of gentleman-like debate," would it be too much to say of a man who inveighs against the immorality of vivisection and says it is displeasing to God, and inflicts ten times more suffering for mere amusement, that he is a canting hypocrite? An authority Lord Llangattock will scarcely venture to impugn exclaimed, "Thou hypocrite! Cast out first the beam out of thine own eye, and then shalt thou see clearly to pull out the mote that is in thy brother's eye."

After Lord Llangattock came Mr. Coleridge, who is like the Chairman, only more so—very much more so; he has considerable histrionic talents, and his part was well rehearsed, but, like many amateurs, he has a tendency to overact. He has cultivated the vocal expression of mental anguish to a degree which is quite harrowing, and has at command the whole scale, in the lachrymose key, from the suppressed whimper to the prolonged wail, which he employs with considerable effect. The result, however, is marred by continual repetition; there is no pause, no rest; sentence after sentence he works up to a paroxysm which apparently must find relief in a flood of tears but nothing happens and he begins again, and the repeated di-appointment produces the same sort of effect as a sneeze which threatens and never arrives. Moreover when he was working up to a climax he lost the thread of his idea and required a rather long search through his notes to find it again. He said by way of excuse, "I am very sorry, I am so tired," as well he might be with the burden of all suffering creation on him all these years—then he resumed at exactly the same pitch of mental anguish he had reached when he left off. This was an oversight and inartistic, after a pause one should begin in a lower key and work up again. He is very skilful in the use of the handkerchief. At the correct moment he brings it out neatly folded, holding it by one corner it falls in the form of a large triangle and a gentle undulation from the suspended corner unfurls it till it floats like a white banner of mercy before him, then he gathers it up in his hand and mops the clammy dew which gathers like pear drops on his brow, while the ladies applaud and hoarse cries of "Shime" break from his truculent lambs. Beyond the manner there was nothing very new in the matter—cowardly, immoral, detestable, legal torture, dens of infamy, Via Dolorosa, nameless horror, pit of Tophet, place of torment, shrieks of dogs in their agony, blood run cold, horrible instruments of torture. The old story, the old familiar flowers of rhetoric. He opened with an attack on Mr. Paget whom he condemned because his book, giving an account of experiments which have been directly beneficial to man, does not devote any special chapter to a moral justification of them. Does Lord Llangattock commence his shooting parties with a discourse on the moral justification of his proceedings, and if not, why not? Mr. Coleridge said that Mr. Paget after a few comments by "our Society"—that is, the National Antivivisection Society—had rewritten every word of his book from beginning to end. I have never heard of this new rewritten book, though I know of the second edition, and should have thought Mr. Coleridge's statement was a mistake, but, knowing his fastidious regard for accuracy, I suppose it must be perfectly true; but it is very extraordinary.

In his incitement to physical violence and his attack on Dr. Bayliss, Mr. Coleridge's unerring judgement and refined taste appear to have betrayed him. If any of his rough audience adopted his suggestions, he might find his responsibility onerous, and whilst his methods of exciting ignorant prejudice were well chosen and doubtless effective, it was astonishing to note the entire absence of any effort to verify the statement that Dr. Bayliss had operated on a dog which was not kept under an anaesthetic. It is amazing, and unfortunately characteristic of antivivisection methods of controversy, that such a charge should be made, and if need be substantiated on oath, without the slightest attempt to ascertain whether it is true that the dog was anaesthetised imperfectly or not at all, and whether it was or was not conscious of pain. Mr. Coleridge's informant has attended many lectures at the Physiological Laboratory at University College; does he wish us to believe that Dr. Bayliss's method of anaesthetising dogs is habitually ineffective, or that it failed on one occasion? If only the latter, surely it would be reasonable to conclude that if the witness were correct as to the consciousness of the animal, it must be through some accident or inadvertence which the lecturer would remedy immediately if his attention were called to it. Did the witness take that obvious step? What was the result? And why are we not informed of it? But if the witness intends us to believe that in the case cited the anaesthesia was a sham, and this case was only a sample of the rest, that Dr. Bayliss and Professor Starling (in whose laboratory the alleged occurrence took place) habitually evade the Act of Parliament—that they administer sham anaesthetics, or give them in such a way that they fail to keep the animal unconscious of pain; this is a very grave matter indeed. What steps did the witness take; and, again, why are they are not stated? The Inspector (Professor Thane) is Professor of Anatomy at University College; he was probably in his rooms at the time of the occurrence. Did the witness go to him? It was only a step. What did the Inspector say or do? Behind him there is the Home Secretary, was the matter brought before him? The antivivisectionists have accused every Government Inspector of incompetence and dishonesty without an atom of proof, and they would say the same of an angel from heaven if the Government could appoint one. But it is trespassing too far on popular credulity to make such allegations, and not give him a chance of acting when they get a case like this. To any fair-minded person the verification of the facts before a grave charge is made in public is of vital importance, but to hear Mr. Coleridge's charge one might suppose that as long as he could find some one to swear to a statement of facts, the accuracy of the observations and the verification of the facts were no concern of his, and it would be time enough to go into that when some one made a fuss.

I watched with interest the expressions of some of Mr. Coleridge's lambs as he dilated in tearful tones on the contrast between the Slade School, that place of peace, the serene and silent school of the beautiful, and that pit of Tophet, the vivisector's den, with the shrieks and piteous cries of dogs in their agony, next door. I could not swear to any tears, but I suspected in some cases at any rate a sensation of dryness of the throat, a recognized symptom of mental emotion with which I fancy some of these gentlemen are not wholly unfamiliar. The most startling of all Mr. Coleridge's remarkable statements was his description of the procession of dogs. He asserts that there is a never-ending procession of dogs lost or stolen following one another down the Via Dolorosa, which is the Latin for Gower Street. It is never-ending, it goes on day and night, it is there now, it has always been there, it is like a nightmare, an everlasting Noah's ark—we know where it goes to—the pit of Tophet, but where does it begin? Does it come across Oxford Street from the Seven Dials or along the Euston Road? What are the police about? Why don't they stop it? Can't they see it? Are they dog-blind? Who sees it? Are there witnesses ready to swear to it? I thought at first Mr. Coleridge must be allowing himself for this once to tinge the sober hues of fact with the colours of romance, but has any one else seen a procession of ten dogs in the Via Dolorosa, of five, of three; and what corroboration would ten dogs be of a procession which never ends? And you can't treat a statement by Mr. Coleridge like the fisherman's yarn—"Well, Colonel, if you will take something off your tiger I will see if I can't take something off my fish." Mr. Coleridge never exaggerates; he is the embodiment of truth; he prosecuted (unsuccessfully)

a poor parson the other day for saying that a remark of Mr. Coleridge's involved a *suppressio veri*. He suppress the truth! Why he would not add to that procession by the thickness of the epidermis on a dog's nose or the last hair of the end of its tail. So there is no escape by any loopholes or byways, the issue is a plain one. As we are forbidden by the amenities of polite debate to describe Mr. Coleridge's statement in the only language which is applicable, we must accept the other alternative and believe it is true, and that the procession is really there, though we cannot see it, which, as Euclid says, is absurd.

There were no more speeches worth commenting on, with perhaps the exception of a single remark by Lord Ernest Hamilton. He said doctors were no better judges of the utility of vivisection than any of his hearers, and added, I don't ask my bootmaker how many pairs of boots I require, why should I ask my doctor about the utility of vivisection? As he was talking of cobblers it was a pity he did not recall the advice of Horace and stick to his last if he has one. Any schoolboy could see that the analogy is false and the argument misleading. The utility of vivisection or experiments on living animals involves the relation of medicine to physiology, and a fair comprehension of the question requires an acquaintance with both sciences which may need more application than Lord Ernest has ever bestowed on any subject in his life. If he cannot see the difference between a cobbler giving his opinion on his own work and his customer's business, what of his intelligence? If he can see it and merely uses the argument like a penny in the slot to extract a grin from the great unwashed, what of his honesty?—I am, etc.,

London, W., May 3rd. R. H. CLARKE.

SOME ANTIVIVISECTION MISSTATEMENTS.

SIR,—Your anonymous correspondent, "Magna est Veritas," criticizing my book, *Scientific Research*, points out that I accused Crile of experimenting without anaesthetics in the face of Crile's assertion that "in all cases the animals were anaesthetised." My reason for the assertion is as follows:—Crile admits that in some cases he used morphine and curare only. Now my experience has been that, even with ether, to give just enough to produce anaesthesia without killing the dog (dogs were the animals used) is much more difficult than in human administration. Without curare the struggles and cries of the animal furnish a guide; with curare this guide is absent. Proper anaesthesia with ether and without curare is possible, for the drug can be regulated from moment to moment as indications require; but with a slower agent, morphine, how can the quantity be adjusted? And, when curare is combined, what evidence is there that the animal is unconscious?

These considerations I indicated in the context of the passage criticized and on other pages. It was pointed out to me that they might be overlooked by a careless reader, and in the third edition I suppressed the assertion that Crile had experimented without anaesthetics, substituting the statement that some were done with anaesthetics and others under morphine and curare.

Your correspondent has "been given to understand that morphine is the best anaesthetic to use when curare is given to dogs." Possibly—from the experimenter's point of view. But what about the point of view of the dog? If "Magna est Veritas" wishes to set the matter for ever at rest and thoroughly expose my fallacy I suggest that he should undergo one of Crile's experiments under morphine and curare and publish his experience. I shall be pleased to look on and to select the experiment from Crile's book.

His letter is headed "Some Antivivisection Misstatements." "Magna est Veritas" cannot write without making some himself. He says "the chief experiments attacked in the book are those of Dr. Crile." I think any one else would say that the chief experiments attacked are those I have myself witnessed and described. To heighten the effect he quotes me as saying that "horrors openly and without shame" are practised in English laboratories. Like the Irish orator who electrified his audience by stating that the British Government had murdered a priest in his vestments, and artistically omitting the fact that it was a pagan priest in Burmah, so "Magna est Veritas" artistically omits that the said horrors referred to experiments I had seen on the Continent on struggling and howling dogs. What I did say is—after a passage stating the impossibility of being sure of anaesthesia under curare—that similar experiments are conducted in England under curare.

Lastly—and this is so unimportant that I should apologize for dwelling on it—"Magna est Veritas" thinks most medical readers of the book thought it unworthy of notice. Is the writer a lady or Sir Fretful Plagiary redivivus?

While Mr. Stephen Paget has "gone for" other publications which must be equally unworthy of notice, he has given a most severe letting alone to *Scientific Research*, which was heavily advertised and "boomed," not, however, by myself. I think the real reason for his silent contempt was that the gist of the volume is a plain narrative, almost without comment, of what the author had seen.—I am, etc.,

April 29th. THE AUTHOR OF THE BOOK.

THE LONDON COUNTY COUNCIL AND SPECIALLY-SKILLED PATHOLOGISTS.

SIR,—With reference to the article in the BRITISH MEDICAL JOURNAL for April 25th last, on the subject of the Council and specially-skilled pathologists, stating that while special pathologists were desirable £2 2s. was too small a fee, and that the Council had made no arrangement for calling in the practitioner who had been in attendance during life, I desire to point out to you: (1) That the only object of the Council is to secure the services of skilled pathologists in cases of special difficulty; (2) that the fee for making *post-mortem* examinations and giving evidence thereon is determined by statute, and that the Council has sought an amendment of the law in the direction of the appointment of medical investigators in inquest cases on more than one occasion, but hitherto unsuccessfully; and (3) that the recommendation of the Public Control Committee, which was adopted by the Council on March 3rd, 1903, was as follows:

That an intimation be given to coroners that in those special cases where a pathologist is employed to make a *post-mortem* examination, and where a medical practitioner had been in attendance on the deceased, such practitioner may be summoned to give evidence, and paid the statutory fee whenever the coroner is satisfied that his evidence will be material.

—I am, etc.,

GODDARD CLARKE,
Chairman of the Public Control Committee of the Council.

Spring Gardens, S.W., May 5th.

SIR,—I fully appreciate the good intentions of the London County Council on the one hand, and the inconvenience to which St. Thomas's Hospital has been recently put on the other. But it appears to me that neither the one nor the other should lead the hospitals to the action which Dr. Turney wishes them to take.

In matters of business, and especially of public business, it is not wise to rely on the good intentions expressed by others, nor on the pious opinions to which we ourselves may give utterance, when we at the same time take the very steps which will render both abortive.

It is acknowledged that the work which is proposed requires special skill and training. To say that such work ought to be properly paid for by the public body which needs it, and then to add that, although we are of that opinion, we are ready to recommend certain specially-skilled persons to do it at the fee which we have already said is inadequate, is a course of action not only undignified, but impolitic. It will effectually prevent any proper recognition of such services ever being made.

That this or that individual has done, or may in the future do, the work for this or that fee is no concern of any one beside the individual. It is an entirely different thing for large public bodies to sanction, and thereby to perpetuate, inadequate remuneration for medical men.

But the matter has another side still. It is allowed by all that such important work as this ought to be performed by an officer or officers specially appointed. Such an appointment the present state of the law renders impossible. But that is no reason for us to make the necessary change of the law impossible by providing, in order to remove a temporary inconvenience, a makeshift which, while itself unsatisfactory, will certainly prevent all chance of improvement.—I am, etc.,

Wimpole Street, W., May 5th. W. P. HERRINGHAM.

PROPOSED DEPARTMENTAL COMMITTEE ON VACCINATION.

SIR,—I am requested by the Council of this Association to send you the following resolution, which was unanimously passed by them at their meeting on Friday, May 1st, and

which has been forwarded to the President of the Local Government Board:

That this Association would welcome the appointment of a Departmental Committee of the Local Government Board to inquire into the details of the working of the Vaccination Acts, 1867 to 1898, and would be prepared to give every possible assitance in any such inquiry.

I am, etc.,

CHAS. GREENWOOD,
Secretary, Association of Public Vaccinators of England and Wales.

Temple, E.C., May 5th.

OPERATIONS ON THE BILIARY PASSAGES: A CORRECTION.

SIR,—I feel that a note of explanation is necessary from me in connexion with an address that was given before the London Polyclinic, and published in the BRITISH MEDICAL JOURNAL for January 24th.

I had not noticed, until it was pointed out to me a few days ago, that one case is referred to both under the headings of "Choledochotomy" and "Intravisceral Fistula." The case does actually illustrate both conditions, as a gall stone was removed from the common duct and at the same operation a gall-bladder colic fistula was closed by suture; yet it might have been better to give separate cases as examples, which could easily have been done, seeing that I have performed nearly 100 choledochotomies (60 of which have been published) as well as a number of operations for intervisceral fistula.

As a matter of fact, the cases illustrating my lecture were got out for me by my secretary from abstracted notes furnished by my colleague who assists me in my work, and when I read over the type-written copy of my address I did not notice the two references to one case.

The choledochotomy was an interesting one in the fact that an incision was continued down the shrunken cystic duct until it reached the dilated common duct, and through the opening the crushed fragments of calculus were extracted by a scoop, and a drainage tube was inserted directly into the common duct through the part where the cystic duct joins it; in the brief abstract of the case these details have been omitted.

Trusting that this note will suffice to explain an oversight for which I must hold myself responsible, I am, etc.,

Park Crescent, W., May 4th. A. W. MAYO ROBSON.

POST-OFFICE MEDICAL APPOINTMENTS.

SIR,—I am obliged for your courteous insertion of my letter on this subject. May I ask you to allow me to make a few further remarks on the matter? I understand that the Postmaster-General has now decided to divide the Brompton postal district, for medical purposes, into four parts. I am therefore anxious to point out that there is thus some risk of a very undesirable precedent being created. In the case of the district in question, the total receipts for the undivided area did not amount, on an average, to more than £250 per annum, from which the cost of medicine, etc., must be deducted. As this appointment involved the care of over 500 persons, it must, I think, be admitted that this remuneration was in no way excessive. It is consequently obvious that the division of the district into four parts means that the annual remuneration of each of the medical officers will amount to a very small sum. I do not suggest for a moment that the Post Office has not, in this particular instance, found gentlemen willing to accept the positions who are thoroughly qualified to perform the work; but I do feel compelled to point out that, if it becomes the practice to so cut up medical postal appointments that they cease to be attractive, the public service is likely to be a severe sufferer by the change.

I should also like to draw attention to the very singular manner in which the new medical officers have been selected. The vacancy was not advertised in either the local or medical press; and in one of the subdivisions, a gentleman who has acted as deputy medical officer for the past six years, apparently to the satisfaction of the Department, and who has done the work since the death of the late holder of the position, has been passed over, together with all the other applicants, in favour of a gentleman who was not a candidate, and who has had no experience of postal duties. It would seem that proximity of residence to the various postal centres has been the only qualification considered.—I am, etc.,

Sydney Street, S.W., April 28th. JAMES HAMILTON, M.D.

SIR,—Dr. James Hamilton of Chelsea has raised, in the BRITISH MEDICAL JOURNAL of April 18th, the important question whether, in filling up Post-office medical appointments, the Department should advertise vacancies or fill them up at once by the exercise of patronage in favour of practitioners known or recommended privately to one or more of the leading officials. I imagine the profession would as a whole prefer an open competition. At all events this would give all aspirants an equal chance, and prevent discontent.—I am, etc.,

South Kensington, April 23rd. T. R. A.

UNIVERSITY OF LONDON SENATORIAL ELECTION.

SIR,—It has not hitherto been the custom that candidates for election to the Senate of the University of London should issue an address to the members of Convocation, and we do not apprehend that Sir Thomas Barlow will in the present instance depart from so laudable a practice.

We therefore ask you to allow us to make known through the BRITISH MEDICAL JOURNAL that Sir Thomas Barlow, by his long and well-sustained service to the University, continues, in our opinion, to merit the strong support of all those graduates who have at heart the development of the University in the interests of true education.—We are, etc.,

CHARLES A. BALLANCE.	F. G. PENROSE.
J. MITCHELL BRUCE.	SIDNEY PHILLIPS.
JUDSON BURY.	FRED. T. ROBERTS.
ALFRED HY. CARTER.	A. ERNEST SANSOM.
NORMAN DALTON.	MARY SCHARLIEB.
A. PEARCE GOULD.	E. MARKHAM SKERRITT.
F. DE HAVILLAND HALL.	FREDERICK TAYLOR.
J. A. NUNNELEY.	H. J. WARING.
RUSHTON PARKER.	

May 6th.

SIR,—I have received a note from Dr. Colman telling me that Sir Thomas Barlow is in Spain and his present address is not known. For this reason I am unable to give to your readers Sir Thomas Barlow's answer to the important questions relating to the University of London mentioned in my letter last week.—I am, etc.,

Burton, Westmorland, May 6th. HERBERT RHODES.

THE IRISH POOR-LAW MEDICAL SERVICE.

SIR,—With reference to your article in the BRITISH MEDICAL JOURNAL of April 25th on the Irish Poor-law Medical Service and the efforts made by the Association to help us, I think that the Medico-Legal Committee might now give substantial aid by endeavouring to impress on the Chief Secretary for Ireland the necessity which exists for the appointment of a Royal Commission to inquire into the grievances of the dispensary doctors and the general dissatisfaction which is growing in the service. This inquiry might be included in the Commission which is about to take evidence with regard to the amalgamation of the Irish Unions, or might be an independent one if desired. At all events, it is time that all our organizations should be up and stirring if the present deplorable condition of the Irish Dispensary Service is ever to be remedied.—I am, etc.,

April 27th. RED TICKET.

MEDICO-LEGAL APPLICATION OF STEREOSCOPIC PHOTOGRAPHY.

SIR,—May I call attention to a fact which should be of some medico-legal interest?

I have for some years been in the habit of taking stereoscopic photographs of naked-eye appearances in fractures and dislocations, skin diseases, abnormalities, etc., and it occurs to me that as records in certain cases for the purposes of legal evidence these are reliable. The ordinary photograph (single) is not so, for the obvious reason that it can be "retouched" or "faked" by a skilful manipulator in such a manner as to produce very false appearances. The stereoscopic photographs cannot be tampered with in any way without the fact becoming obvious at a glance. The reason for this will become at once apparent to any one who will make the attempt, say, by "manipulating" a view such as one buys at the photographers. He may ever so carefully touch up or alter one of the pair of views, but he cannot make the other match it in this respect, and all adventitious work will stand out of the combined picture and be easily recognized as such when seen through the stereoscope.—I am, etc.,

C. H. SOUTER, M.B., C.M.Aberd.

Balaklava, South Australia, March 30th.

OBITUARY.

THOMAS BLANEY, C.I.E.,

Bombay.

THIS remarkable man passed away quietly in the 80th year of his age, on April 1st, in the city of Bombay he loved so dearly, and in the interests of which he exerted himself with so much enthusiasm and devotion, as well as singular unselfishness for many years. In testimony of this a statue was raised to him in his lifetime, which does not often happen in the case of ordinary individuals.

Thomas Blaney was born in Ireland on May 24th, 1823, but was not altogether of Celtic extraction, which possibly may account for the degree of popularity he enjoyed, as it can be safely asserted, without any racial reflections, that no pure-blooded European could have gained the hearts of the natives of Bombay and have been worshipped as was Blaney at one time. He is still remembered with much gratitude in the Western Presidency. His sympathy with the sick poor was always deep, and the extent of his charitable deeds will never be truly known or estimated; in fact he gave away his all and was himself supported by generous friends during the last few years of his life, whilst with ordinary prudence he might have ended his days in comfort on his own fortune. Universal applause is the empty reward of men and women who spend their lives and substance in promoting the welfare of their fellow creatures, though generally few are found disposed to follow the examples of such philanthropists. Charity did not begin at home with poor Blaney, whose case clearly points the moral that this virtue is sometimes carried beyond reasonable limits by the giver and has perhaps a demoralizing effect on the receiver.

In early boyhood he arrived in India, and was apprenticed in the Subordinate Medical Department of the East India Company in 1836, with the customary formalities and solemnities of the time. His quaint indenture was written with his own hand and duly signed and sealed with three seals, over which it was made obligatory on the apprentice to "avoid bad company, not haunt or frequent inns, ale, or punch houses, not play at cards, dice, billiards, or any other unlawful game, but regularly attend the public worship of God," all of which sound precepts, it may be added, might with advantage be engrossed on the parchments issued by the India Office at the present day.

He went through a four years' course in the Grant Medical College after the completion of his apprenticeship in the European General Hospital. After serving for some time in the Indian navy Blaney retired in 1860, engaging shortly afterwards in private practice, which was considered the largest in Bombay at the time. He had been medical adviser in many families during three generations, and frequently found himself unexpectedly a legatee in a will. He was an effective and fluent speaker in public, and often distinguished himself as a writer in the press. It appears that on one occasion he spoke through a whole afternoon, no common feat in a tropical climate, when he saved Bombay City from falling into the clutches of a syndicate who proposed to buy up the waterworks. This was one of the greatest of the numerous benefits he helped to confer on his fellow citizens.

For more than thirty years as a justice of the peace, town councillor, and member of the municipal corporation, and twice president, he was actively and intimately connected with the civic administration of Bombay, fighting many battles about the still imperfect drainage. It should be mentioned that, along with Dr. Viegas, he was one of the first medical men in Bombay to diagnose the outbreak of plague which has proved so disastrous to the Presidency, and, which it is to be deplored, still lingers in some of the overcrowded centres.

Blaney had the unique honour of being twice Sheriff of Bombay, which distinction is rarely conferred by Government on any citizen. He also filled the office of coroner for a period of seventeen years, and received the thanks of his Excellency the Governor in Council in a special resolution to the following effect:

In accepting Dr. Blaney's resignation of the post of coroner of Bombay, his Excellency the Governor in Council is pleased to express his appreciation of the services which that gentleman has rendered during a long series of years to Government and the people of Bombay, and his regret that Dr. Blaney's tenure of office as coroner of Bombay is now come to an end.

He was chairman of the Joint Schools Committee, member of the Jubilee Technical Institute and the City Improvement Trust, and Fellow of the Bombay University, though not possessed of any academic degree, and lastly, was honoured by being created a Companion of the Indian Empire.

To perpetuate the memory of his services to the city a handsome statue, subscribed for by the public, was unveiled on June 4th, 1894, on a conspicuous site in the vicinity of the Victoria Terminus of the G.I.P. Railway, and not far from the municipal office, the scene of much of his labours.

On hearing the news of his death the Corporation paid a touching and suitable tribute to his memory, and adjourned thereafter without proceeding to the transaction of any further business.

THOMAS WILLIAM BULLOCK, M.R.C.S., L.S.A.,

Warwick.

WE regret to announce the death of Mr. Thomas William Bullock, of Warwick, which occurred at his residence, Eastgate, on April 30th, from heart disease. He was 65 years of age, and was the senior member of the medical profession in Warwick. He was born at Stow-on-the-Wold, Gloucestershire, and was educated at Gloucester College. After being apprenticed to his uncle, Dr. Edwin Smith, of Sherston, Wilts, Mr. Bullock entered Queen's College, Birmingham, and subsequently went to St. Bartholomew's Hospital. He became M.R.C.S. Eng. in 1859, and L.S.A. in 1860. Mr. Bullock began his work in Warwick in 1859, when he took the practice of Dr. Willcox, who had recently died. He afterwards married Dr. Willcox's niece, by whom he had five sons and three daughters. The post of Medical Officer and Public Vaccinator of the Warwick district was held by him until quite recently, and on his resignation of this position through illness his son—Mr. Roger Bullock—was appointed to the office. For many years he was Medical Officer to the Workhouse, and held at the time of his death the following appointments: Senior Medical Officer of the Warwick Dispensary and Cottage Hospital, Honorary Medical Officer of the Warwick Lying-in Charity, and Surgeon to the Heathcote Hospital Sanatorium. Mr. Bullock was for thirty-six years Medical Officer to the Warwickshire Yeomanry, and was a very popular officer; he retired with the rank of Surgeon-Colonel about five years ago.

The death of Mr. Bullock is a great blow, not only to his family but also to a very large number of friends and acquaintances, who held him in great respect and regard. He was of a very cheerful temperament, of kindly disposition, and courteous to all. Two of Mr. Bullock's sons are medical men; Mr. Roger Bullock being in practice in Warwick, and Dr. Arthur Bullock in Leamington.

The funeral took place on May 4th, and the first part of the service, which was attended by a detachment of the 3rd Warwickshire Troop of Yeomanry, was held in St. Mary's Church, Warwick.

GEORGE GRAY, M.D., J.P.,

Newcastle, co. Down.

THE announcement of the death of Dr. Gray, of Newcastle, co. Down, has been received with much regret. Dr. Gray, who had been ailing only a short time, succumbed on April 28th. Dr. Gray was educated at Queen's College, Belfast, and in 1866 took the degree of M.D. with honours in the old Queen's University in Ireland; he gained both the Charter's and the Malcolm Exhibition as a student, and was a Scholar of his College. At first he practised in Castlewellan, co. Down, but about ten years ago removed to Newcastle. He was Treasurer of the North of Ireland Branch of the British Medical Association for many years, and was President in 1896. He held numerous appointments, such as medical attendant to the Constabulary and to the Coastguards. He was the author of several contributions to the BRITISH MEDICAL JOURNAL: The Pulse in Cerebral Disease, in 1871; Croton Chloral Hydrate in Neuralgia, in 1874; and Hydrate of Chloral in Poisoning by Strychnine, in 1881; but latterly his time was fully occupied by a large private practice. He attended most of the county families in his neighbourhood, but to both rich and poor he was ever a valued friend. The funeral, which took place on May 1st, was very largely attended.

WE regret to record the death of Dr. EDWARD MONRO SPOONER after a short illness at Blandford, Dorset, on April 17th. Dr. Spooner was born in 1840, educated at Epsom College, the London Hospital, and University College. He took the L.S.A. in 1864, became M.R.C.S. in 1865, and in 1881 to k

the M.D. degree at St. Andrews University. He succeeded his father Dr. Edward Oke Spooner in an extensive practice at Blandford. He was Surgeon to the Blandford Cottage Hospital, Medical Officer and Public Vaccinator to one of the districts of the Union, Certifying Factory Surgeon, and Honorary Assistant Surgeon 1st Volunteer Battalion Dorset Regiment. Dr. Spooner took a keen interest in his professional duties, and was untiring in his devotion to his patients. He was a ready and witty speaker, and was deservedly popular with his professional brethren and his fellow townsmen. His kindness of heart and genial manner endeared him to his patients, and especially amongst the poor will his loss be deeply felt. He leaves a widow, one daughter, and two sons, the elder of whom was associated with him in his practice.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVAL MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: ALEXANDER K. SMITH-SHAND, M.B., Surgeon, to the *Bellona*, May 1st (the appointment of Surgeon H. Hunt is cancelled); A. C. W. NEWPORT, Surgeon, to the *Excellent* (lent), May 4th.

Civil Practitioner E. W SKINNER, M.D., has been appointed Surgeon and Agent at Rye Harbour and Camber, May 4th.

ROYAL ARMY MEDICAL CORPS.

THE retirement of Lieutenant-Colonel R. C. GUNNING, which was announced in the *Gazette* of October 14th, 1902, is cancelled.

Lieutenant (on probation) R. M. RANKING is seconded under Article 349, Royal Warrant, April 1st.

Captain R. S. RODGER, M.B., is transferred to the Reserve of Officers under the provisions of Article 370 of the Pay Warrant, February 24th.

The services of Lieutenant-Colonel A. E. J. CROLY, Surgeon to the Governor of Bombay, are placed at the disposal of the Commander-in-Chief in India from April 8th.

Lieutenant-Colonel G. D. BOURKE, who is serving in the Punjab Command, is granted the temporary rank of Colonel from April 1st, while officiating as Principal Medical Officer, Peshawar District.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL A. W. F. STREET, D.S.O., Bombay Establishment, Deputy Sanitary Commissioner, Central Registration District, Bombay, is permitted to retire from the service from April 2nd. He was appointed Assistant Surgeon, October 1st, 1877, and became Surgeon-Lieutenant-Colonel, October 1st, 1897. He served in the Afghan war in 1878-80, being present in the engagement with the Wali's mutinous troops in July, 1880, in the defence of Kandahar, and at the battle of Kandahar (medal with clasp); he was also in the Burmese expedition in 1886-7 (mentioned in dispatches, D.S.O., and medal with clasp).

Lieutenant-Colonel T. J. H. WILKINS, Madras Establishment, is granted the temporary rank of Colonel while officiating as Principal Medical Officer of a district.

Surgeon-Major JOHN REID, late of the Bengal Establishment, died in London very suddenly on March 6th, at the age of 66.

ROYAL ARMY MEDICAL CORPS (MILITIA).

LIEUTENANTS H. E. DALBY and J. H. P. GRAHAM to be Captains, May 6th.

IMPERIAL YEOMANRY.

SURGEON-LIEUTENANT H. KELLY, M.D., Lanarkshire (Queen's Own Royal Glasgow) to be Surgeon-Captain, May 6th.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

SURGEON-CAPTAIN F. W. SINCLAIR, M.B., 3rd Durham, to be Surgeon-Major, May 6th.

Surgeon-Major A. T. WEAR, M.D., 1st Newcastle-on-Tyne, to be Surgeon Lieutenant-Colonel, May 6th.

VOLUNTEER RIFLES.

SURGEON-CAPTAIN F. LACE, 1st Volunteer Battalion the Prince Albert's (Somersetshire Light Infantry) resigns his commission, and is appointed Captain, May 6th.

The undermentioned officers have resigned their commissions, dated May 6th: Surgeon-Lieutenant R. McL. STOKES, 4th Volunteer Battalion (the South Wales Borderers); Surgeon-Lieutenant H. L. LOWIS, M.B., 1st (Pembrokeshire) Volunteer Battalion the Welsh Regiment; Surgeon-Captain R. S. SMITH, M.B., 1st (City of Dundee) Volunteer Battalion the Black Watch (Royal Highlanders); Surgeon-Lieutenant G. R. FORTUNE, 1st Volunteer Battalion the Highland Light Infantry.

Mr. NORMAN MACNAIR, M.D., to be Surgeon-Lieutenant in the 4th Volunteer Battalion the Cameronians (Scottish Rifles), May 6th.

Supernumerary Brigade Surgeon-Lieutenant-Colonel H. R. SMITH, 3rd (Duke of Connaught's Own) Volunteer Battalion the Hampshire Regiment, resigns his commission, is granted the honorary rank of Surgeon-Colonel, and retains his uniform, vacating at the same time the appointment of Senior Medical Officer to the Hampshire Volunteer Infantry Brigade, May 6th.

Surgeon-Lieutenant J. ANDERSON, M.B., 5th (Perthshire Highland) Volunteer Battalion the Black Watch (Royal Highlanders), to be Surgeon-Captain, March 21st.

The following announcement is substituted for that which appeared in the *London Gazette* of March 23rd: Mr. ALFRED ROBINSON, M.D., to be Surgeon-Lieutenant in the 2nd Volunteer Battalion the York and Lancaster Regiment, March 28th.

Surgeon-Lieutenant J. A. KENDALL, M.D., 5th Volunteer Battalion the Durham Light Infantry, to be Surgeon-Captain, May 6th.

VOLUNTEER INFANTRY BRIGADE BEARER COMPANIES.

LIEUTENANT J. MCK. HARRISON, M.B., the Welsh Border Company, to be Captain, May 6th.

The *London Gazette* of May 5th contains the following Memorandum: His Majesty has been graciously pleased to approve of the following volunteer infantry brigade bearer companies being formed into independent units—namely: Argyle and Sutherland, Black Watch, Cheshire, Devon, East Surrey, Gloucester and Somerset, Gordon, Harwich, Home Counties, Leicester and Lincoln, Liverpool, 2nd London, 4th or City of London, 5th London, 1st Lothian, North-East Lancashire, Seaforth and Cameron, Sherwood Foresters, South Wales Border, South Yorkshire, Staffordshire, Sussex and Kent, Welsh, Welsh Border, West Yorkshire, Worcester and Warwick.

UNIFORM OF R.A.M.C. (VOLUNTEERS).

ACCORDING to a War Office circular recently issued, the shoulder-strap and arm-patch designations on the clothing of the Royal Army Medical Corps (Volunteers) and bearer companies of volunteer infantry brigades are in future to bear the name of the district or brigade to which the unit belongs. The shoulder-strap for companies R.A.M.C.V. will thus bear the words HOME; NORTH-WESTERN, etc.; and for the bearer companies, ARGYLE AND SUTHERLAND; HOME COUNTIES; SOUTH WALES BORDERERS, etc., in dull cherry letters, whilst the arm-patches of the service uniform will consist of these words, with the letters R.A.M.C. above and V. below them both for the R.A.M.C.V. companies and for the bearer companies. Unless the designation on the clothing is distinct from the ordinary designation, the bearer companies of volunteer infantry brigades are in future to be known as companies of the Royal Army Medical Corps (Volunteers).

VOLUNTEER MEDICAL ASSOCIATION: AMBULANCE CHALLENGE SHIELD COMPETITION.

THIS competition will take place at the Guildhall, London, on June 6th, at 3 p.m. It is open to squads of the Hon. Artillery Company, Yeomanry, and Volunteers (not R.A.M.C.V. or V.B.B.C.). Squads intending to compete should give notice to the Hon. Secretary, Lieutenant Mongomery-Smith, 36, Abbey Road, N.W., by May 31st, who will furnish further particulars if required.

MEDICO-LEGAL AND MEDICO-ETHICAL.

THE WORKMEN'S COMPENSATION ACT.

AMONGST the recent batch of compensation cases which have come before the Court of Appeal there is one of some interest to medical practitioners who have anything to do with the administration of the Act. It is a matter of common knowledge that if a workman is disabled he is entitled to compensation not exceeding half his weekly earnings. The amount awarded is subject to revision if it be shown that for some reason the recipient is able to return to work. In the case under notice a workman had sustained an injury to his finger. Although the wound healed the man was unable to earn the same wages as before the accident. An award having been made of compensation at the rate of 17s. a week, the employer asked him to see a medical man, who expressed the view that a slight operation would enable the man to return to work. Another practitioner, however, said that the operation might be attended with danger, and the workman declined to have it performed unless his master insured him for such an amount as, in the event of the operation ending fatally, would provide for his family. The master applied to the Court for a revision of the award, on the ground that a workman ought not to receive full compensation when undergoing a slight operation: he might reasonably hope to regain the use of his hand.

We are not surprised that the Court of Appeal refused to adopt this reasoning. As one of the Lords Justices remarked, the assurance company (who were really behind the employer) had so little regard for the man that they would not even insure him against the risks of the operation for the benefit of his family. The Master of the Rolls said: "What would be the feelings of the judge who had forced a man to undergo against his will an operation which proved fatal?"

THE SOCIETY OF APOTHECARIES V. PURDUE.

THIS was an appeal heard on May 6th before a Divisional Court consisting of the Lord Chief Justice, Mr. Justice Wills, and Mr. Justice Channell by the defendant from the decision of his Honour Judge Smyly at the Bow County Court. Proceedings had been instituted in the Bow County Court by the Society against the defendant to recover from him a penalty of £20 for practising as an apothecary or medical practitioner without holding the necessary qualification, and judgement was given by the learned county court judge for the Society. It appeared from the judge's notes of the evidence that the defendant, who is a "herbalist" carrying on business in Limehouse, had in the month of July, 1902, on several occasions attended a Mrs. Sarah White, who was suffering from pneumonia, in the capacity of a medical man, and had prescribed and supplied her with medicine, making a charge of 6d. per visit.

The grounds of the defendant's appeal were that the decision was wrong, first because he had not acted as an apothecary within the meaning of Section V of the Apothecaries Act, 1815, which section recites that it is the duty of an apothecary to make up the prescriptions of physicians; secondly, because he contended that the facts of the case as appearing upon the judge's notes did not constitute acting as an apothecary, and thirdly, because the learned county court judge had declined to hold that the defendant was protected by the Statute 34 and 35 Henry VIII, c. 8, sometimes known as the Herbalists Act.

Mr. Schultess Young appeared for the appellant, while Mr. T. E. Scrutton, K.C., and Mr. R. O. B. Lane, junior (instructed by Messrs. Upton, Atkey, and Co.), represented the Society of Apothecaries.

After hearing counsel for the appellant, the Lord Chief Justice, without calling on the respondent's counsel, gave judgement dismissing the appeal, in which the other judges concurred. Leave to appeal further was asked for by Mr. Schultess Young, but refused.

THE NOSTRUM NUISANCE.

DR. MAURICE EVANS.—We have frequently sympathized with our correspondents respecting the nuisance of transatlantic puffing pamphlets

with which we are all pestered. We know of no means of stopping the nuisance: we can only recommend as a remedy a waste-paper basket of adequate size, and an occasional "tip" to the dustmen who may be asked to remove an unusual quantity of rubbish.

NEWSPAPER PUFFS.

WE have received a cutting from the *Aberdeen Evening Express*, which gives a portrait and a ridiculously laudatory notice of Dr. George Byres, recently appointed medical officer for the parish of Foveran, and surgeon to H.M Coastguard. Our correspondent naturally complains of it, and we regret to note the increasing frequency with which such puffs appear. We hope that the subject of this is not responsible, but when a portrait and a number of intimate details of personal history are included, it must be admitted that appearances are against him, and charity is strained to allow him the benefit of the doubt. Local medical societies might do much to check this practice by expressing disapproval of it.

A DISCLAIMER.

MR. R. LAKE (Harley Street, London, W.) writes: I have been informed that a slip was distributed last week at a London theatre, which, with other matter, contained a certificate of mine and my qualification. This was done without my knowledge.

*** We have received a letter from the manager of the theatre stating, in justice to Mr. Lake, that it was not with his knowledge or consent that a copy of his certificate was published.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF LONDON.

THE MEDICAL CURRICULUM.

AT the general meeting of Convocation to be held on May 12th, a medical graduate will be elected a member of the Senate; and the contest lies between Sir Thomas Barlow, Bart., M.D., B.S., B.Sc., and Harold Burrows, M.D., B.S., both of whom have been nominated.

A resolution of the Senate will be considered, which defines more exactly than the section of the Statutes for which it is proposed as a substitute, the exact status of the graduates of other universities who may be admitted as candidates for any of the higher degrees (except in medicine and surgery) without their having previously taken any lower degree of the University of London.

The report by the Standing Committee describes the changes in the curricula for degrees in medicine and surgery which have been introduced by the Senate. Formerly every student of the University was compelled to pass the Matriculation Examination; now a large number of other examinations of very varied character are accepted in lieu of it; and in the Matriculation Examination itself it is now possible for a student to omit either Latin or Science. The Preliminary Scientific Examination can be passed subject by subject. Organic chemistry is transferred from the Intermediate Medicine to the Preliminary Scientific Examination, which means a lowering of the standard of examination, as the year of study was barely sufficient for the study of the other three subjects of the examination, namely, chemistry, physics and biology, and now to these organic chemistry is added.

Further, students who have studied elsewhere may now entirely dispense with this examination and matriculation. At the Intermediate Examination a student who fails in any one subject may be re-examined in that subject alone. A candidate who has passed the intermediate in medicine may, under certain conditions, enter in the following year for the degree B.Sc. Honours in Physiology or Human Anatomy and Morphology; consequently if he be one of those who may have dispensed with the Matriculation and the Preliminary Scientific, he may obtain the B.Sc. degree by being examined only in physiology and its subsidiary subjects. The final M.B., B.S. examinations can be taken in two groups: (1) Medicine, pathology, forensic medicine, hygiene; (2) surgery, midwifery, diseases of women. Formerly a candidate had to pass all the subjects at the same time. In clinical medicine candidates examine and report on one patient only, instead of two as heretofore; and in forensic medicine the practical examination is abolished. There are no separate papers for honours at either Preliminary Scientific, Intermediate, or final M.B., B.S. examinations, but candidates successful in the whole Pass examinations will be divided into two classes—namely, honours and pass; and candidates in the honours list will have the subjects in which they distinguish themselves appended to their names. The titles of university scholar in medicine, forensic medicine, obstetric medicine, and surgery respectively are abolished; the scholarships of £50 for two years in both medicine and in surgery, and of £30 for two years in both obstetric and forensic medicine, and gold medals to the first and second candidates in each of the four subjects are abolished, and one medal alone is given for the whole examination to internal students, and one to external students; in each case to the candidate who distinguishes himself most in the whole examination.

The B.S. as a separate degree is abolished. It is given with the M.B., to which a paper on surgical anatomy and pathology is added. But the examination and report of cases of surgical patients, operations on the dead body, with certificates of attendance on corresponding courses of instruction, are not now required.

In the two years intervening between the M.B., B.S. Examination and the M.D. each candidate must hold for at least six months a resident or non-resident hospital appointment, or a pathological appointment, or an appointment in a recognized asylum.

The M.D. Examination can be taken in five different branches, namely, medicine, pathology, mental diseases and psychology, midwifery and diseases of women, and State medicine. The paper on mental physiology disappears from the examination. A commentary on a case in medicine or obstetric medicine is no longer necessarily a part of the examination. "A Clinical Examination" is substituted for the "examination and report on cases of medical patients." Vivâ voce interrogation and demonstration from specimens and preparations disappears, and the report remarks that "the new regulations, which substitute tests fostering early specialism for the former thorough all round examinations in medicine, are open to many objections"

A candidate may submit a thesis or published work, which, if judged of sufficient excellence, may exempt him from the written examination, or, in the case of pathology, from the practical as well as the written examination. The fee is raised from £5 to £20.

At the M.S. Examination there are certain alterations in the papers; the paper in mental physiology is omitted, whilst a candidate may submit a thesis, which if judged of sufficient excellence may exempt him from the whole or part of the written examination. The fee is raised from £5 to £20.

The report notices great changes in the curricula for arts and science degrees, and remarks that "a general tendency appears throughout the new regulations to accept theses or published work in lieu of examination, either wholly or partly," and "that some of the changes are fraught with peril to the standard and reputation of London University degrees." The Annual Committee "sees in the new syllabuses and regulations for graduation opportunities for such variations in and exemption from the University's examinations as may imperil the reputation for high standard and impartiality which the degrees of London University have hitherto enjoyed;" and it recommends Convocation to pass the following resolution:

That in the opinion of Convocation some of the changes in the curricula and schemes of examination approved by the Senate are calculated to impair the value and lower the reputation of the degrees conferred by the University of London.

The University Library has engaged the attention of a Subcommittee, which protests against a threatened dispersal of the books of the University, and recommends that in the first appeal for funds made by the University the needs of the library should not be placed second to those of any Faculty; that graduates should be encouraged to meet at the headquarters of the University for purposes of study, research, and intercourse; that a well-equipped library is the first essential of such a scheme; that the library should be immediately housed in convenient rooms; and that it should be provided with all recent important scientific and literary publications and periodicals. Lastly, it is proposed that the Senate be asked to receive a deputation upon the subject.

UNIVERSITY OF CAMBRIDGE.

Examinations for Medical and Surgical Degrees.—The First, Second, and Third Examinations for the degree of M.B. will commence on Monday, June 15th. The names of candidates for these examinations must be sent to the Registrary on or before Monday, June 1st.

Chair of Surgery.—The General Board of Studies propose that the Senate should revive the Professorship of Surgery first held by the late Sir G. M. Humphry. The stipend suggested is £600 a year, with the right of private practice, and of holding a surgeoncy at Addenbrooke's Hospital. One of the chief duties of the office will be to superintend the surgical examinations of the University, the number of candidates for which continues to increase.

Degrees.—At the Congregation on April 30th the following medical and surgical degrees were conferred: *M.D.*: J. G. Taylor, King's; A. C. Hill, W. M. Strong, and J. E. Sandilands, Trinity; F. C. Shrubsall, Clare; W. T. Mullings, Christ's. *M.B. and B.C.*: E. D. Macnamara, St. Peter's; G. D. Barton, Pembroke; M. C. Hayward, Caius. *M.B.*: C. de L. Carey, Emmanuel. *B.C.*: E. D. Telford, Caius.

THE VICTORIA UNIVERSITY.

IT is confidently expected that the Charters for the Universities in Manchester and Liverpool will be placed on the table of the House of Commons in time to admit of arrangements being made for the new charters to come into operation in October. Appended to the proposed charter of the Victoria University in Manchester is a statement setting out the composition of the Court of Victoria University as it will be constituted until the Yorkshire College obtains its charter. This body will be composed of all the old members of the University Court except the representatives of Liverpool. When Leeds ceases to be a member of the University, which will not be later than within a year from October next, or when she gets her charter, she will cease to be represented on the University Court. The other members of the Court will continue to act, and they will include all the governors of Owens College. The charter also provides for the inclusion of the Lord Mayor of Manchester and the Chairman of the Lancashire County Council, and persons appointed by the Lord President, the Chancellor, the Corporation of Manchester, the County Council, the Corporation of Salford, and other county boroughs, the Senate, and Convocation. There will be, however—so far as Manchester is concerned—two distinct corporate bodies, one the University and the other Owens College, just as there was from 1880 to 1884 when Owens College was the sole college of Victoria University. Probably, however, the two bodies will be incorporated by an Act of Parliament, which will in all likelihood be applied for next year. The internal arrangements of the new Universities will not undergo any great change, at any rate at once, but it may be definitely stated that they will not be entirely dissociated in their work, as it is intended to form a joint Board to conduct the preliminary matriculation examinations of all, and that will be a permanent body.

UNIVERSITY OF DUBLIN.

AT the First Summer Commencements in Trinity Term, held on Wednesday, April 22nd, the following Degrees in Medicine were conferred by the University Caput in the presence of the Senate:

Doctores in Medicinâ.—C. P. Ball, A. M. Carolin, F. G. Hopkins, K. W. Jones, *A. H. S. Roberts.

* *In absentiâ.*

ROYAL UNIVERSITY OF IRELAND.

THE following candidates have passed examinations as under:

M.D. Degree Examination.—R. L. Boyd, M.B., B.Ch., B.A.O., Queen's College, Belfast, and private study; R. K. Brown, B.A., M.B., B.Ch., B.A.O., private study; B. A. O'Flynn, M.B., B.Ch., B.A.O., Catholic University School of Medicine; J. E. Whitaker, M.B., B.Ch., B.A.O., private study.

M.B., B.Ch., B.A.O. Degrees Examination.—Upper Pass: *T. Carnwath, B.A., Queen's College, Belfast; *P. Dwyer, Catholic University School of Medicine; H. Hanna, M.A., B.Sc., Queen's College, Belfast; *N. d'E. Harvey, Queen's College, Cork; T. D. Liddle, Queen's College, Belfast; *J. McClatchey, B.A., Queen's College, Belfast. Pass: R. J. Bethune, Queen's College, Belfast; Catharine L. Boyd, Queen's College, Belfast; J. P. Brady, Catholic University School of Medicine; C. Byrne, Catholic University School of Medicine; A. A. Chancellor, Queen's College, Belfast; W. Cummings, Queen's College, Belfast; Adeline English, Catholic University School of Medicine; S. B. W. Moore, Queen's College, Belfast; P. J. Murray, Catholic University School of Medicine; D. J. Roantree, Catholic University School of Medicine; J. E. Simpson, Queen's College, Belfast; J. K. Small, Queen's College, Belfast; F. C. Smyth, Queen's College, Belfast; C. E. Suffern, Queen's College, Belfast; T. H. Suffern, Queen's College, Belfast; A. T. Swan, Catholic University School of Medicine; C. B. I. Tivy, Queen's College, Cork; J. J. Walsh, Catholic University School of Medicine; J. W. A. Wilson, Queen's College, Belfast.

Second Examination in Medicine.—Upper Pass: *J. W. Beirne, Catholic University School of Medicine; G. F. Campbell, Queen's College, Belfast; *J. R. Hackett, Queen's College, Cork; R. Hill, Queen's College, Belfast; W. J. Hill, Queen's College, Belfast; S. W. Kyle, Queen's College, Belfast; *R. J. Ledlie, Queen's College, Belfast; *P. T. McArdle, Catholic University School of Medicine; *D. T. McCarthy, Catholic University School of Medicine; *W. A. McKee, Queen's College, Cork; J. W. Murphy, Queen's College, Cork; J. Shaw, Queen's College, Belfast; E. F. Watson, Queen's College, Belfast. Pass: Madeleine S. Baker, Catholic University School of Medicine; J. A. Beamish, Queen's College, Belfast; H. J. Burke, Catholic University School of Medicine; A. G. Cummins, Queen's College, Cork; J. Dowling, Queen's College, Galway; P. J. Dwyer, Catholic University School of Medicine; I. Flack, Queen's College, Galway; J. Gaston, Queen's College, Belfast; R. F. Kennedy, Queen's College, Belfast; S. McCormac, Queen's College, Belfast; Charlotte E. Mitchell, Queen's College, Belfast; J. Nunan, Queen's College, Cork; T. O'Driscoll, Catholic University School of Medicine; W. B. Purdon, Queen's College, Belfast; M. P. Scanlon, Catholic University School of Medicine; P. Walsh, Queen's College, Galway; W. M. Woods, Queen's College, Cork.

Third Examination in Medicine.—Upper Pass: J. Byrne, Queen's College, Galway; R. G. G. Croly, Queen's College, Cork; *J. Lilley, Queen's College, Belfast; *S. Porterfield, B.A., Queen's College, Galway; *C. G. Robb, Queen's College, Belfast; *O'C. Sullivan, Catholic University School of Medicine; H. C. Watson, Queen's College, Belfast; *W. J. Wilson, Queen's College, Belfast. Pass: C. D. Bell, Queen's College, Belfast; S. Bradbury, Queen's College, Belfast; H. W. Carson, Queen's College, Belfast; R. Chambers, B.A., LL.B., Queen's College, Belfast; W. J. Deighan, Catholic University School of Medicine; J. Devane, Catholic University School of Medicine; J. Flack, Queen's College, Galway; W. Godfrey, Queen's College, Cork, and Catholic University School of Medicine; J. Houlihan, Catholic University School of Medicine; G. J. Jones, B.A., Queen's College, Belfast; E. J. Kavanagh, Catholic University School of Medicine; R. L. Keown, Queen's College, Belfast; G. W. Knipe, Queen's College, Belfast; T. Laverty, Catholic University School of Medicine; A. Leitch, Queen's College, Belfast; F. A. McCammon, Queen's College, Belfast; J. McCloskey, Catholic University School of Medicine; S. McMurray, Queen's College, Belfast; E. H. M. Milligan, Queen's College, Belfast; J. J. O'Keeffe, Queen's College, Cork, and Surgeons' Hall, Edinburgh; T. Rouse, Catholic University School of Medicine; M. V. Shanahan, Queen's College, Cork; J. K. Thompson, Queen's College, Belfast; S. M. Walsh, Catholic University School of Medicine; J. M. Warnock, Queen's College, Belfast; J. Wright, Queen's College, Belfast.

The candidates whose names are marked with an asterisk (*) may present themselves for the further examination for Honours.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

AT the Stated Examination for the Membership of the College, held on Monday and Tuesday, April 20th and 21st, the following candidates were successful: T. P. C. Kirkpatrick, M.D., L.R.C.P.I.; J. A. Matson, M.D., L.R.C.P.I.; F. C. Purser, M.D., L.R.C.P.I.

CONJOINT BOARD IN IRELAND.

CANDIDATES have passed the First Professional Examination as undernoted:

Honours.—M. R. H. J. Hayes.

In All Subjects.—P. Blake, R. M. Brontë, T. A. O. Buchanan, B. Foley, J. J. Murphy, T. T. O'Farrell, H. J. J. Raverty, T. Sheedy.

Completed Examination.—C. M. Donovan, C. J. Kean, G. M. Loughnan, H. S. Moorhead, D. O'Dwyer, W. H. Soady, J. R. Talbot.

UNIVERSITY OF DURHAM.

GRADUATION CEREMONY.

AT the Convocation held on April 25th the following degrees in Medicine and Surgery were conferred:

Doctor in Medicine.—R. Alderson, M.B., B.S.Durh.; R. H. Cole, M.B.Durh. (*in absentiâ*); C. E. Fenn, M.B.Durh.; Selina Fitzherbert Fox, M.B., B.S.Durh.; L. G. Fraser, M.B., B.S.Durh.; J. T. Johnson, M.B., B.S.Durh.; S. Raw, M.B., B.S.Durh.; H. C. Sturdy, M.B., B.S.Durh.; E. N. Threlfall, M.B., B.S.Durh.; A. M. Watts, M.B., B.S.Durh.

Doctor in Medicine for Practitioners of Fifteen Years' Standing.—C. T. Blackwell, L.R.C.P. and S., E.; E. H. Brown, M.D.Brux., M.R.C.P., L.R.C.S., D.P.H.; T. F. Forster, M.R.C.S., L.R.C.P., L.S.A.; B. B. Grayfoot, L.R.C.P. and S., E., L.F.P.S., G., M.R.C.S.; J. D. Harris, M.R.C.S., L.S.A.; G. W. K. Hector, L.R.C.P. and S., E., L.F.P.S., G.; W. B. C. Treasure, M.R.C.S., L.S.A.; H. L. Williams, M.R.C.S., L.R.C.P.

Bachelor in Medicine (M.B.) and Bachelor in Surgery (B.S.).—F. G. Armstrong, College of Medicine, Newcastle-upon-Tyne; J. W. Caton, College of Medicine, Newcastle-upon-Tyne; S. T. Cochrane, College of Medicine, Newcastle-upon-Tyne; J. F. Dover, College of Medicine, Newcastle-upon-Tyne; G. B. Gill, M.R.C.S., L.R.C.P., Westminster Hospital; B. Glendining, Guy's Hospital; C. W. M. Hope, College of Medicine, Newcastle-upon-Tyne; H. W. Horan, College of Medicine, Newcastle-upon-Tyne; C. R. Lease, College of Medicine, Newcastle-upon-Tyne; J. H. McDowall, College of Medicine, Newcastle-upon-Tyne; A. A. Miller, M.R.C.S., L.R.C.P., Guy's Hospital; Flora Murray, London School of Medicine for Women; T. E. Pemberton, Birmingham University; R. R. Pirrie, College of Medicine, Newcastle-upon-Tyne; Thomasina Georgina Prosser, College of Medicine, Newcastle-upon-Tyne; P. M. Rivaz, St. Bartholomew's Hospital; B. S. Robson, College of Medicine, Newcastle-upon-Tyne; T. Rowell, College of Medicine, Newcastle-upon-Tyne; N. B. Walker, College of Medicine, Newcastle-upon-Tyne.

Bachelor in Medicine (M.B.).—G. R. East, College of Medicine, Newcastle-upon-Tyne; Chella Mary Hankin, London School of Medicine for Women; H. R. Kendal, College of Medicine, Newcastle-upon-Tyne; O. Shields, M.R.C.S., L.R.C.P., St. Mary's Hospital.

Bachelor in Hygiene (B.Hy.).—J. J. French, M.B., B.S.Durh.; J. McConnell, M.B., B.S.Durh., M.R.C.S., L.R.C.P.

The following candidates received the diploma in Public Health: R. Bigg, M.B., B.S.Durh., M.R.C.S., L.R.C.P.; J. J. French, M.B., B.S.Durh.; J. McConnell, M.B., B.S.Durh., M.R.C.S., L.R.C.P.; L. McNabb, M.B., B.S.Durh.; S. G. Vinter, M.R.C.S., L.R.C.P., L.S.A.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AT the ordinary Comitia held on April 30th the President, Sir W. S. Church, Bart., K.C.B., was in the chair.

New Fellows.

The following members nominated by the Council were elected to the Fellowship of the College: St.C. Thomson, M.D.Lond.; E. Goodall, M.D.Lond., Carmarthen; G. A. Sutherland, M.D.Edin.; E. Cautley, M.D.Camb.; J. A. Lindsay, M.D.R.U.I., Belfast; W. Gordon, M.D.Camb., Exeter; W. W. H. Tate, M.D.Lond.; A. Morison, M.D.Edin.; B. E. Dawson, M.D.Lond.; G. F. A. Harris, M.D.Durh., Calcutta; A. M. Gossage, M.B.Oxon.; L. Humphry, M.D.Camb., Cambridge; J. S. Collier, M.D.Lond.; A. P. Beddard, M.D.Camb.; R. Hutchison, M.D.Edin.; F. J. Poynton, M.D.Lond.

New Members.

The following gentlemen having passed the required examination were admitted as Members: E. P. Baumann, M.D.Edin., L.R.C.P.; R. A. Bolam, M.D.Durh.; E. A. Gates, M.D.Lond., L.R.C.P.; J. Hay, M.D.Vict., L.R.C.P.; G. L. Pardington, M.D.Durh., L.R.C.P.; Lt. C. P. Phillips, M.A., M.D. Camb., L.R.C.P.; J. H. Swanton, M.A., M.D.R.U.I.

Licences.

The licence to practise physic was granted to 109 gentlemen. Of these, one was under regulations dated October 1st, 1884.

University of London.

Upon the nomination of the Council Dr. Allchin was reappointed a representative of the College on the Senate of the University of London.

Communications.

The following communications were received: (1) The Secretary of the College of Surgeons reporting certain proceedings of the Council on April 2nd. (2) The Sanitary Institute, inviting the College to send delegates to the annual Congress to be held at Bradford, July 7th to 11th.

Reports.

A report, dated March 23rd, from the Committee of Management was received and adopted. The Committee recommend the addition of the University of Cincinnati, U.S.A., to the list of universities whose members may be admitted to the final examination of the Examining Board in England, and of Rossal School to the list of institutions recognized by that Board for instruction in chemistry, physics, and practical chemistry.

The Committee also made recommendations to carry out the alterations in the regulations for the Diploma of Public Health for sanitary officers of the Royal Army Medical Corps (see BRITISH MEDICAL JOURNAL 1902, vol. ii, p. 1779).

The quarterly reports of the Finance Committee, and of the Examiners for the Licence, and a report from the Censors Board on the communication from the London County Council of March 17th, referred to them at the last Comitia, were also received and adopted.

First Conjoint Examination.

Upon the motion of Dr. Starling, seconded by Dr. Kingston Fowler, it was resolved: "That a Committee be appointed to consider and report upon any alterations that may be desirable in the regulations for the First Conjoint Examination; that this Committee be empowered to confer with representatives of the College of Surgeons; and that the College of Surgeons be invited to appoint representatives for this purpose." The President nominated Dr. Frederick Roberts, Dr. West, Dr. Pasteur, and Dr. Rolleston to serve on such Committee, and to these the names of Dr. Norman Moore and Dr. L. E. Shaw were subsequently added.

Library.

A list of books and other publications presented to the Library during the past quarter was presented by the Librarian, and the thanks of the College accorded to the donors.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

EPIDEMIC MORTALITY IN LONDON.

[SPECIALLY REPORTED FOR THE BRITISH MEDICAL JOURNAL.]

THE accompanying diagram shows the prevalence of the principal epidemic diseases in London during the first, or winter, quarter of the year. The fluctuations of each disease, and its relative fatality as compared with that recorded in the corresponding periods of recent years, can thus be readily seen.

Small-pox.—Five fatal case of small-pox were registered in London last quarter, against 734, 507, and 73, and 1 respectively in the four quarters of last year. Of these 5 fatal cases, 3 belonged to Stepney and 2 to Poplar. The number of small-pox patients admitted into the Metropolitan Asylums Hospitals during the quarter was 39, against 3,215, 325, and 42 in the three preceding quarters; 3 cases remaining under treatment at the end of last quarter, against 837, 42, and 14 at the end of the three preceding quarters.

Measles.—The deaths from measles, which had been 714, 346, and 571 in the three preceding quarters, further rose last quarter to 671, but were slightly below the average number in the corresponding periods of the ten preceding years. Among the various metropolitan boroughs measles showed the highest proportional fatality in Stoke Newington, Shoreditch, Bethnal Green, Poplar, Bermondsey, and Deptford.

Scarlet Fever.—The fatal cases of this disease, which had been 136, 139, and 134, in the three preceding quarters, further declined last quarter to 109, and were 76 below the corrected average number. Among the various metropolitan boroughs this disease was proportionally most fatal in St. Marylebone, Southwark, Bermondsey, Deptford, Greenwich, and Lewisham. The number of scarlet fever patients in the Metropolitan Asylums Hospitals, which had been 2,439, 2,656, and 2,327 at the end of the three preceding quarters, had further declined to 1,704 at the end of last quarter; 2,705 new cases were admitted during the quarter, against 3,571, 4,084, and 4,179 in the three preceding quarters.

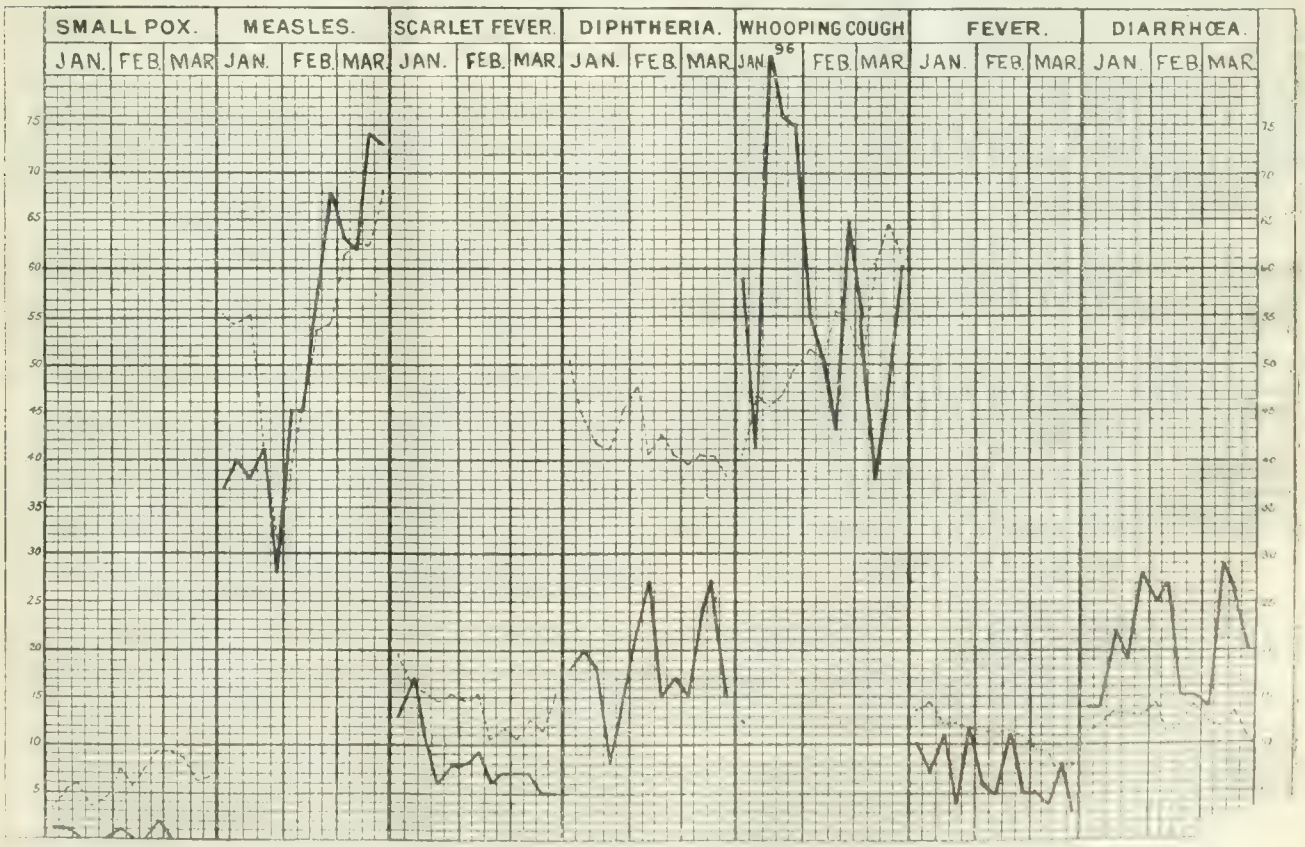
Diphtheria.—The deaths referred to diphtheria in London, which had been 256, 244, and 317 in the three preceding quarters, declined again last quarter to 241, and were 311 below the corrected average number. The greatest proportional mortality from diphtheria last quarter was recorded in Hammersmith, Hackney, Poplar, Wandsworth, Camberwell, and Deptford. The number of diphtheria patients under treatment in the Metropolitan Asylums Hospitals at the end of March was 903, against 975, 981, and 927 at the end of the three preceding quarters; 1,761 new cases were admitted during the quarter, against 1,888, 1,972, and 2,053 in the three preceding quarters.

Whooping-cough.—The fatal cases of this disease, which had been 532, 469, and 414 in the three preceding quarters, rose again last quarter to 760, and were 79 in excess of the corrected average number. Among the various metropolitan boroughs, this disease was proportionally most fatal in Paddington, Kensington, St. Marylebone, Islington, Finsbury, and Poplar.

"*Fever.*"—Under this heading are included deaths from typhus, from enteric fever, and from simple and ill-defined forms of continued fever. The deaths referred to these different forms of "fever," which had been 69, 197, and 214 in the three preceding quarters, declined again last quarter to 91, and were 51 below the average number in the corresponding quarters of the ten preceding years. One death from typhus and three from simple continued fever occurred during the quarter under notice. The "fever" mortality was highest in Hammersmith, Finsbury, Shoreditch, Poplar, Bermondsey, and Wandsworth. The Metropolitan Asylums Hospitals contained 92 enteric fever patients at the end of last quarter, against 195, 359, and 210 at the end of the three preceding quarters: 213 new cases were admitted during the quarter, against 314, 650, and 593 in the three preceding quarters.

Diarrhoea.—The 266 deaths from diarrhoea in London last quarter showed an excess of 102 over the average number in the corresponding periods of the ten preceding years. Among the various metropolitan boroughs this disease was proportionally most fatal in St. Marylebone,

DEATHS FROM EPIDEMIC DISEASES IN LONDON DURING THE FIRST QUARTER OF 1903.



NOTE. The black lines show the *recorded* number of deaths from each disease during each week of the quarter. The dotted lines show the *average* number of deaths in the corresponding weeks of the ten preceding years, 1893-1902.

the City of London, Southwark, Bermondsey, Lambeth, and Wandsworth.

In conclusion it may be stated that the 2,143 deaths referred to these principal infectious diseases in London during the quarter ending March last were more than 14 per cent. below the corrected average number in the corresponding quarters of the ten preceding years. The lowest death-rates from these diseases last quarter in the various metropolitan boroughs were recorded in Paddington, City of Westminster, Hampstead, the City of London, Lewisham, and Woolwich; and the highest rates in Islington, Finsbury, Stepney, Poplar, Southwark, and Deptford.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,777 births and 5,040 deaths were registered during the week ending Saturday last, May 2nd. The annual rate of mortality in these towns, which had been 15.6, 15.9, and 17.4 per 1,000 in the three preceding weeks, further rose last week to 17.5 per 1,000. The rates in the several towns ranged from 9.0 in King's Norton, 9.9 in Tynemouth, 10.0 in Croydon and in Hornsey, 10.5 in Norwich, 10.6 in Ipswich, 10.8 in Walthamstow, 11.1 in Grimsby, and 11.2 in Bootle, to 21.5 in Liverpool, in St. Helen's, and in Burnley, 21.8 in Swansea, 22.2 in Smethwick, 22.5 in Halifax, 22.7 in Manchester, 24.4 in Warrington, 29.1 in Middlesbrough, and 34.4 in Wigan. In London the rate of mortality was 17.3 per 1,000, while it averaged 17.5 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.8 per 1,000 in the seventy-six large towns; in London this death-rate was 2.0 per 1,000, while it averaged 1.7 in the seventy-five other large towns, among which the highest death-rates from the principal infectious diseases were 3.1 in West Bromwich and in Sheffield, 3.3 in Swansea, 3.5 in Barrow-in-Furness, 3.9 in Rhondda, 4.4 in Merthyr Tydfil, 5.2 in Tottenham, and 15.9 in Wigan. Measles caused a death-rate of 1.5 in Walthamstow, in Sheffield, and in Merthyr Tydfil, 1.6 in West Bromwich, 1.9 in East Ham, 2.2 in Swansea, 4.3 in Tottenham, and 9.2 in Wigan; scarlet fever of 1.1 in Oldham and in Swansea, 1.3 in Rhondda, 1.7 in Wigan, and 1.8 in Handsworth and in St. Helen's; diphtheria of 1.3 in Rhondda, and 1.6 in Hanley; whooping-cough of 1.2 in Manchester, 1.5 in Merthyr Tydfil, 1.6 in Grimsby, and 1.7 in Wigan; and "fever" of 1.3 in Rhondda, and 2.5 in Wigan. Five fatal cases of small-pox were registered in Leicester, 4 in Liverpool, and 1 each in Aston Manor, Wigan, Oldham, Sheffield, Hull, and Gateshead, but not one in any other of the seventy-six large towns. The Metropolitan Asylums Hospitals contained 47 small-pox patients on Saturday last, May 2nd, against 13, 15, 33, and 38 on the four preceding Saturdays; 12 new cases were admitted during the week, against 5, 22, and 9 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 1,664, 1,662, and 1,700 at the end of the three preceding weeks, had further risen to 1,716 at the end of last week; 235 new cases were admitted during the week, against 158, 188, and 243 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, May 2nd, 1,068 births and 628 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 17.6, 17.7, and 18.5 per 1,000 in the three preceding weeks, further rose to 19.2 per 1,000 last week, and was 1.7 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scotch towns the death-rates ranged from 15.2 in Edinburgh and 15.7 in Paisley to 21.7 in Perth and 23.3 in Greenock. The death-rate from the principal infectious diseases averaged 1.7 per 1,000 in these towns, the highest rates being recorded in Paisley and Greenock. The 311 deaths registered in Glasgow included 2 which were referred to measles, 15 to whooping-cough, and 6 to diarrhoea. Five fatal cases of measles, and 4 of whooping-cough were recorded in Edinburgh, 3 of whooping-cough in Dundee, 2 of diarrhoea in Aberdeen, 3 of scarlet fever in Paisley, and 7 of whooping-cough in Greenock.

EXAMINATIONS FOR INSPECTORS OF NUISANCES.

Inquirer asks for information (1) as to the necessary qualifications for an inspector of nuisances; (2) under whose auspices is the examination for the certificate held? (3) Is there more than one Examining Board in the United Kingdom? (4) Where can copies of examination papers be obtained?

*** The answers to our correspondent's questions are as follows: (1) The necessary qualification is a certificate, approved by the Local Government Board. (2) Under the Sanitary Institute for qualification for posts in the provinces only; under the Sanitary Inspectors' Examination Board for qualification for posts in London or provinces. (3) The above two Examining Boards cover the United Kingdom. The Sanitary Institute holds its examinations in different centres. (4) Examination questions previously asked may be obtained from the Sanitary Institute, Margaret Street, W.

MEDICAL NEWS.

The annual general meeting of the Medical Defence Union will be held on Thursday, May 21st, at the registered offices, 4, Trafalgar Square, W.C., at 5 p.m.

The annual meeting of the Asylum Workers' Association will be held under the chairmanship of Sir James Crichton-Browne, President, at 4 p.m. on Thursday next at the house of the Medical Society of London.

The next general meeting of the Medico-Psychological Association will be held at the Langham Hotel, London, W., on Friday next at 4 p.m., when the adjourned discussion on Dr. Ernest W. White's paper on the Care and Treatment of Persons of Unsound Mind in Private Houses and Nursing Homes, and on Dr. Outterson Wood's paper on Lunacy and the Law, will be resumed.

Princess Louise (Duchess of Argyll) has been obliged, owing to other engagements, to postpone her visit to the new military hospital at Alton until some time in June, when it is anticipated that everything will be in full working order.

Mr. George A. S. Gordon, M.A., L.R.C.P., L.R.C.S.Edin., has been unanimously elected Chairman of the Heston and Isleworth Urban District Council for the ensuing year, and *ex officio* is on the Commission of the Peace (J.P.) for the county of Middlesex.

The Licensing Question in Virginia.—The Virginian Legislature has passed a drastic liquor law which in its practical workings will bring about prohibition in parts of the State. It makes it necessary for any applicant for liquor licence to get on his petition the signatures of a majority of the registered voters of his district—a form of local option which is likely to work disastrously to the saloons.

Mr. George Wyndham, M.P., Lord Rector of the University of Glasgow, will take the chair at the dinner of the Glasgow University Club, London, to be held at the Trocadero Restaurant, W., on Friday, May 29th. Further particulars can be obtained from the honorary secretaries, Mr. James M. Dodds, Dover House, Whitehall, S.W., or Dr. C. O. Hawthorne, 28, Weymouth Street, Portland Place, W.

We are requested to state that the complimentary dinner arranged by the London and Counties Medical Protection Society in honour of its President, Mr. Jonathan Hutchinson, has, at Mr. Hutchinson's request, been deferred from the beginning of May until July 23rd, Mr. Hutchinson's birthday. Medical men wishing to be present should communicate with the Secretary, London and Counties Medical Protection Society, 31, Craven Street, Strand, London, W.C.

Presentation.—Our Hong Kong correspondent writes: On March 17th the members of the Sanitary Board staff entertained Dr. F. W. Clark, M.O.H., to a complimentary dinner in the Hong Kong Hotel. Dr. Pearse, Assistant M.O.H., presided, and in the name of the staff presented Dr. Clark with a silver inkstand for himself, a silver tea service for Mrs. Clark, and a gold bangle for Miss Clark. After seven and a-half years of continuous and arduous service Dr. Clark is leaving the Colony on a year's furlough.

Medical Practitioners in Finland.—According to official statistics which have recently been published, there are in Finland 414 legally qualified medical practitioners. This does not include 52 medical officers of the Russian garrison. There are 31 dentists. The number of unqualified practitioners is given as 14, so that Finland would seem to be in the happy position of being almost free from quacks.

Bequests to Hospitals.—Under the will of the late Miss Alice Savage, of Highgate, £500 each has been bequeathed to the Cancer Hospital at Brompton and to the Cheyne Hospital for Sick Children, £300 to the National Orthopaedic Hospital, £200 each to the Evelina Hospital for Sick Children and to the National Hospital for the Paralysed and Epileptic; and in addition one-fourth of the residual estate has been left to the Cancer Hospital.

International Botanical Congress.—The International Association of Botanists, founded a year ago on the initiative of some Dutch botanists, has just held its first congress at Leyden under the presidency of Professor Goebel, of Munich. The foreign botanists were welcomed by M. van der Vlugt, member of the Second Legislative Chamber, and sometime Rector of the University. Professor Chodat, of Geneva, replied. Both addresses were delivered in French, and the discussions were carried on in the same language.

A Dispensary for Tuberculosis in Madrid.—The first dispensary for tuberculosis in Spain was opened in Madrid on March 30th. The founder is Dr. José Verdes Montenegro. The Queen of Spain, who was attended by the Duchess de San Carlos and the Duke de Sotomayor, was present on the occasion. The Alcalde and the Governor of Madrid were also present. The maintenance of the dispensary is provided for by grants from the municipality and other public bodies. The dispensary consists of four departments—one for the disinfection of clothes, one for the examination of patients, which includes the appliances requisite for the inspection of the throat and nose, as well as every kind of instrument for the examination of the lungs and heart; one for the employment of the *x* rays, and one equipped as a clinical laboratory.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.—The usual monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 429, Strand, London, W.C., on April 24th. There were present Dr. de Havilland Hall in the chair, Dr. G. E. Herman (Treasurer), Dr. J. Pickett of Tunbridge Wells, Mr. H. P. Symonds of Oxford, Dr. J. B. Ball, Dr. M. Greenwood, Mr. J. Brindley James, Dr. A. J. Rice-Oxley, Dr. J. W. Hunt, Dr. Walter Smith, Dr. Frederick S. Palmer, Mr. Edward Bartlett, Dr. Alfred S. Gubb, and Dr. W. Knowsley Sibley. The list of current claims still remains rather long, but has considerably diminished since the beginning of the year. As compared with the amount paid in the first three months of 1902, the amount disbursed this year was moderate. The draft report for 1902 was considered and passed.

PRESENTATIONS.—On April 29th Dr. and Mrs. Dysart McCaw were entertained at dinner in East Finchley, North London, and at a subsequent reception Dr. McCaw, on the occasion of his leaving the district for reasons of health after fourteen years' residence, was presented by his patients and friends, including his former medical neighbours, with a most complimentary address, a purse of gold, and a complete solid silver tea and coffee service, with a massive tray, on which the following inscription was engraved:—"Presented to John Dysart McCaw, Esq., M.D., F.R.C.S., with a Silver Tea and Coffee Service, Illuminated Address, and Purse of Gold by his Patients and Friends when leaving East Finchley, London, N., after fourteen years' residence, as a token of their high esteem and appreciation of his professional services and personal character, 29 April, 1903."—On May 4th, the Committee of the Tower Hamlets Dispensary, on behalf of the patients of the institution, presented Mr. Oscar E. Lemin, L.S.A.Lond., the retiring Resident Medical Officer, with a framed illuminated testimonial subscribed for by the patients of the institution.

MEDICAL VACANCIES.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column advertisements must be received not later than the first post on Wednesday morning.

ABERDEEN ROYAL INFIRMARY.—Medical Superintendent. Salary, £300 per annum, without residence.

BIRMINGHAM CITY.—Medical Officer of Health. Salary, £1,000 per annum.

BRECON AND RADNOR ASYLUM, Talgarth.—Assistant Medical Officer, resident; unmarried. Salary, £140 per annum.

CANCER HOSPITAL, S.W.—House-Surgeon, resident. Appointment for six months. Salary, £70 per annum.

CHESHIRE COUNTY ASYLUM, Parkside.—Junior Assistant Medical Officer, resident; unmarried. Salary, £140, rising to £160 per annum.

DUBLIN: TRINITY COLLEGE.—Professorship of Chemistry.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge Road, S.E.—Anaesthetist. Honorarium, £25 per annum.

GLASGOW UNIVERSITY.—Additional Examiner for Degrees in Arts, Science, and Medicine. Salary, £50 per annum.

HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL.—House-Surgeon, resident; unmarried. Salary, £75 per annum.

IPSWICH: EAST SUFFOLK AND IPSWICH HOSPITAL.—Second House-Surgeon, resident; unmarried. Salary, £80 per annum.

JENNER INSTITUTE OF PREVENTIVE MEDICINE, Chelsea, S.W.—Director. Salary, £1,000 per annum.

LIVERPOOL DISPENSARIES.—Assistant Surgeon, resident; unmarried. Salary, £100 per annum.

LIVERPOOL: ROYAL SOUTHERN HOSPITAL.—Junior House-Surgeon. Salary, 60 guineas per annum.

MANCHESTER: HULME DISPENSARY, Dale Street.—House-Surgeon, resident. Salary, £150 per annum.

MANCHESTER ROYAL INFIRMARY.—Resident Surgical Officer; unmarried. Salary, £150 per annum.

MANCHESTER SOUTHERN AND MATERNITY HOSPITAL.—Resident House-Surgeon. Salary, £100 per annum.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—Dental Surgeon.

MIDDLESEX HOSPITAL, W.—Director of Cancer Research Laboratories. Salary, £500 per annum, rising to £800.

NATIONAL DENTAL HOSPITAL AND COLLEGE.—Anaesthetist.

NEWPORT AND MONMOUTHSHIRE INFIRMARY.—Assistant House-Surgeon, resident. Salary, £50 per annum.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, N.E.—(1) House-Surgeon. (2) House-Physician. (3) Resident Casualty Officer. Appointments for six months. Salary at the rate of £80 per annum each.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Professors and Lecturers.

SARAWAK MEDICAL DEPARTMENT.—Medical Officer; unmarried, and not more than 28 years of age. Salary, 300 dols. a month, and unfurnished quarters.

SOCIETY OF APOTHECARIES, London.—Examiner in Medicine.

TEIGNMOUTH HOSPITAL.—House-Surgeon, resident. Salary, £70 per annum.

WESTMINSTER DISPENSARY, Gerrard Street, W.—Resident Medical Officer. Salary, £120 per annum.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Junior House-Surgeon. Salary, £50 per annum.

WEST RIDING ASYLUM, Wadsley.—Fifth Assistant Medical Officer, resident. Salary, £140, rising to £160 per annum.

MEDICAL APPOINTMENTS.

AHERN, Richard, M.B., Ch.B.R.U.I., appointed Resident Medical Officer to the Tootin Home Infirmary of the Wandsworth and Clapham Union.

ALLEN, W. T. D., M.B., B.Ch., B.A.O.R.U.I., appointed Honorary Assistant Surgeon to St. George's Hospital for Diseases of the Skin, Liverpool.

BARRIE, William Turnbull, M.B., C.M.Edin., appointed Certifying Factory Surgeon for the Hawick District of the county of Roxburgh.

BOWIE, John M., M.D., M.R.C.P.Edin., appointed District Medical Officer of the Edinburgh Parish Council, *vice* T. Lowne, M.D.Edin.

CASE, H., L.R.C.P., L.R.C.S.Edin., appointed District Medical Officer of the Chorley Union.

CLARKE, A. H., M.R.C.S.Eng., appointed Honorary Pathologist to the General Hospital, Hobart, Tasmania.

CONLON, William A., M.B.Syd., appointed Public Vaccinator for the District of Reefton, New Zealand.

ERHARDT, Conrad C. J., M.R.C.S., L.R.C.P.Lond., appointed Certifying Factory Surgeon for the Crosshills District of the county of Yorks.

FISCHER, G. A., M.B., B.S.Adel., appointed Physician in Charge of the Nose and Throat Department of the Adelaide Hospital.

GORDON, A. Knyvett, M.B., B.C., B.A.Cantab., appointed Lecturer on Infectious Diseases at Owens College (Victoria University), Manchester.

GOULD, F. Clayton, L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg., appointed Medical Examiner to the Pioneer Life Assurance Company, Liverpool.

GRATTAN, M. H., L.R.C.P., L.R.C.S.Irel., appointed Certifying Factory Surgeon for the Ongar District of the county of Essex.

HILLS, William Ernest, M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer to the Hampstead Division of the London Postal Service, *vice* Charles Newberry Cobbett, M.D.P[illegible]., resigned.

JUPE, [illegible] M., B.A.Camb., L.S.A., appointed Certifying Factory Surgeon for the Histon District of the county of Cambridge.

LOWER, N. Y., M.R.C.S., L.R.C.P.Lond., appointed Certifying Factory Surgeon for the Presteign District of the county of Radnor.

MCCLELAND, Hugh A., M.R.C.S.Eng., appointed Port Health Officer for the Port of New Plymouth, New Zealand.

MURRAY, W., M.D.Edin., appointed Certifying Factory Surgeon for the Hessle District of the county of Yorks.

PHILPOTT, A. J. W., M.B., Ch.B.Melb., appointed Senior Medical Officer of the Yarra Bend Asylum, *vice* Stuart Macbirnie, M.B., Ch.B.Glas., resigned.

SUTTER, R. R., M.D., M.S.Aberd., appointed Certifying Factory Surgeon for the Warboys District of the county of Hunts.

WHITEHOUSE, A. Landon, M.R.C.S., L.R.C.P., L.D.S.Eng., appointed Dental Surgeon to the Westminster General Dispensary.

WILLIS, C. S., M.B., M.Ch.Syd., appointed Health Officer for Lennonville, West Australia, *vice* Dr. Ramsay, resigned.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Society of London, 11, Chandos Street, Cavendish Square, W., 8 p.m. General Meeting. Election of Officers and Council. 8.30 p.m.—Ordinary Meeting. Mr. Bruce Clarke: Some Points in the Pathology and Treatment of Enlarged Prostate. Dr. H. R. Andrews and Dr. R. C. B. Wall: Chorea in Pregnancy.

TUESDAY.

Royal Medical and Chirurgical Society, 30, Hanover Square, W., 8.30 p.m.—Captain Leonard Rogers, I.M.S.: The Differentiation of the Continued and Remittent Fevers of the Tropics by the Blood Changes. Illustrated by the Epidiascope.

WEDNESDAY.

Dermatological Society of London, 11, Chandos Street, Cavendish Square, W., 5.15 p.m.—Demonstration of Cases of Interest.

South-West London Medical Society, Bolingbroke Hospital, Wandsworth Common, 8.45 p.m.—Dr. G. F. McCleary: The Feeding of Infants.

THURSDAY.

British Gynaecological Society, 20, Hanover Square, W., 8.0 p.m.—Specimens will be shown by Dr. Macnaughton-Jones and others. Adjourned discussion on Mr. Bowreman Jessett's paper—Some Rare Complications accompanying Ectopic Gestation. Dr. C. H. F. Routh: On Some Directions and Avenues through which probably a more successful Treatment of Cancer may Result and perhaps Cure.

Guy's Hospital Medical School, 4 p.m.—Dr. E. W. Ainley Walker: On Internal Secretions in Relation to Disease (Gordon Lectures in Experimental Pathology).

FRIDAY.

Epidemiological Society, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Mr. Jonathan Hutchinson: The Etiology of Leprosy.

Society for the Study of Disease in Children, 11, Chandos Street, Cavendish Square, W., 5 p.m.—Clinical Cases by Mr. F. F. Burghard, Dr. Frederick Taylor, Dr. J. P. Parkinson, Dr. A. A. H. Partridge, and Dr. Edmund Cautley. 5.30 p.m.—Papers: Mr. R. H. Perry: Operation for Removal of Tuberculous Glands from the Anterior and Posterior Triangles of the Neck through an Incision in the Hairy Scalp. Dr. E. C. Williams: A Note upon a Case of Infantilism. Dr. J. McCaw: A Case of Splenic Leukaemia in a Young Child. Dr. J. P. Parkinson: A Case of Colloid Cancer of the Peritoneum in a Child.

POST-GRADUATE COURSES AND LECTURES.

Charing Cross Hospital, Thursday, 4 p.m.—Lecture on Surgical Cases.

Hospital for Sick Children, Great Ormond Street, W.C., Thursday, 4 p.m.—Pathological Demonstration.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C. Demonstrations will be given at 4 p.m. as follows:—Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical. Lectures will also be given at 5.15 p.m. as follows: Monday, Retroversion of the Gravid Uterus; Tuesday, The Differential Diagnosis and Treatment of Chronic Disease of the Joints; Wednesday, Some Practical Points in Climatology; Thursday, Uterine Displacements; Friday, Acute Septic Inflammation of the Throat and Neck. On Friday at 2.30 p.m. there will be a Discussion on Leprosy.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C.—Tuesday, 3.30 p.m.—Lecture on Epilepsy and its Treatment.

Post-Graduate College, West London Hospital, Hammersmith Road, W.—Lectures will be delivered at 5 p.m. as follows: Monday, Pelvic Haemorrhage; Tuesday, The Physiology and Pathology of the Ductless Glands; Wednesday, Melancholia; Thursday, Treatment of Some Injuries and Emergencies; Friday, Public Health Regulations as regards Shipping.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

CROFT.—On April 30th, at Sunnyside, Fenton, Staffs., the wife of J. T. H. Croft, M.R.C.S.Eng., L.R.C.P.Lond., of a daughter.

ELLERTON.—On the 24th April, at 9, Priory Terrace, Leamington, the wife of J. F. Hesse Ellerton, M.D., of a son.

HOCKEN.—On March 9th, at West Wallsend, Newcastle, N.S.W., the wife of J. Preston Hocken, M.D., M.R.C.S., L.R.C.P., L.S.A., of a son.

PORTEOUS.—On the 30th April, at Chalford, Gloucestershire, the wife of Herbert Llewellyn Porteous, M.R.C.S., L.R.C.P., of a daughter.

WILLIAMS.—On May 6th, at 4, Clifton Park, Clifton, Bristol, to Dr. and Mrs. Watson Williams, a daughter.

MARRIAGE.

BANNERMAN—ISMAY.—At St. Michael's Church, Stanwix, on the 2nd inst., by the Rev. C. D. Rutherglll, James Bannerman, M.B., C.M.Edin., of Stanhope, co. Durham, to Annie, elder daughter of the late Robert Ismay, Wigton. No cards.

DEATHS.

BULLOCK.—On April 30th, at Eastgate Warwic Thomas William Bullock, M.R.C.S., L.S.A., aged 0 years.

NOBLE.—On May 4th, at 29, Wellington Square, Oxford, Eric Raymond Noble, Balliol College, Oxford, [illegible] of Samuel Cooper Noble, [illegible] L.S.A., [illegible], aged 25.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which the special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

THROMBOSIS AFTER ENTERIC FEVER.

W. D. E. has a patient who had thrombosis of the veins of the lower extremities after enteric fever contracted in South Africa eighteen months ago; considerable enlargement of both limbs still exists. The superficial abdominal veins are enlarged, and both there and in the limbs feeling of pain occurs after extra exertion. W. D. E. asks, What is the best line of treatment to adopt in the case; is there any hope of a cure being effected?

ANSWERS.

GRASSHOPPER might try St. Luke's Hospital for Insane, Old Street, London, E.C.

LETTERS, NOTES, Etc.

HAEMORRHAGIC TYPHOID FEVER AND HAEMOPHILIA.

DR. J. R. CLEMENS (St. Louis) writes: In view of the recent statement of Professor Wright, that the coagulability of the blood in the acute stage of typhoid fever is lessened, the case of haemorrhagic typhoid fever reported by Dr. E. W. Goodall to the Clinical Society (BRITISH MEDICAL JOURNAL, January 17th, 1903, p. 138), in which calcium chloride and adrenalin chloride were given without avail is significant. Is it possible to have a double infection of typhus and typhoid fever? In view of Wright's investigations, the haemorrhagic form of typhoid can easily be explained without having recourse to the theory of a typho-typhus infection to account for the various haemorrhages in the case reported. A much more interesting question to solve is, Why, in view of the lowered power of coagulation of the blood in the acute stages of typhoid fever, should haemorrhagic typhoid fever be such a rare phenomenon? If it be due to alcoholism, then it should be far more common than it is; or is it due to typhoid fever developing in a haemophiliac? Perhaps the latter suggestion comes nearer answering the question. Haemophilia is rare, and so is haemorrhagic typhoid fever. In both the tendency is towards a persistent haemorrhage of a low grade and a great vulnerability of tissues. True, in the case reported, the patient was a female and therefore less likely to be a haemophiliac than if the sex were masculine, yet a case of typhoid ending fatally towards the close of the second week where there was no great toxaemia and no perforation (as ascertained at the necropsy) and signalized by profuse haemorrhages from all the mucous membranes is suggestive at least of a dyscrasia characterized by a blood index of low coagulability (haemophilia) which had undergone a further deterioration due to the presence of the toxins elaborated from the B. typhosus. Further, the prodromal symptom of epistaxis in ordinary typhoid can now be explained, thanks to Wright's investigations, and is due to the passive filtration of the altered blood from the mucous membranes of the nasal cavities which are the most dependent of all mucous membrane surfaces of the body.

THE HOUSING PROBLEM.

MR. W. A. DAVIDSON, L.S.A. (Shepherd's Bush, W.) writes: Mr. Middlemore was not far from the truth when he said that "population and rents were increasing quicker than wages." We have this exemplified in Shepherd's Bush. The "Tube" and the electric cars have brought a crowd of people to this and other districts further afield. The advent of these people has led to greatly increased rents, in some cases as much as 80 to 90 per cent. Alas! as we medicos know, wages keep stationary. I know you regard the word "population" in another sense to the above, but the words attributed to Mr. Middlemore are, I think, quite justified.

TWIN PREGNANCY WITH UNRUPTURED HYMEN.

DR. C. K. BOWES (Herne Bay) writes: I was called at 4.15 a.m. to a primipara. She was 38 years of age, and had been married five years. When I arrived at the house I found the pains strong, prolonged, and frequent. On attempting to make a vaginal examination, I could find no orifice, but with the aid of a light I found that the hymen was unruptured; it had a hole in it about three-tenths of an inch in size. I could not get my little finger through the hole, as it was so small and the hymen so sensitive. I gave the patient chloroform, ruptured the hymen, and found a head presenting with the membranes ruptured and the os fully dilated. As the patient had had a most troublesome cough for some weeks, and did not take the chloroform too well, I delivered her with forceps, and as the uterus seemed very large I examined again, and felt another bag of membranes, which I ruptured, and found a breech presentation, and had no difficulty in delivering the twin. There was one large placenta. The husband when questioned afterwards said he did not think he had ever penetrated. I should think a virgo intacta (in the eyes of the law) giving birth to twins is nearly a record.

LETTERS, COMMUNICATIONS, ETC., have been received from:

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REPORT LXXV.

ON THE PHYSIOLOGICAL ACTION OF THE KENYAH DART POISON AND ITS ACTIVE PRINCIPLE ANTIARIN.

By C. G. SELIGMANN, M.B., M.R.C.P.,
Late Salters Research Fellow, and Superintendent of the Clinical Laboratory, St. Thomas's Hospital.

[ABSTRACT.]

WHILE in Sarawak in 1899 I obtained from the Kenyahs of the Baram district a quantity of the poison made from the crude sap of *Antiaris toxicaria*, which when inspissated is used to poison their blowpipe darts. Passing over a larger amount of the earlier work done on this, the poison of the much fabled upas tree, two recent papers must be briefly considered. One of these, by Hedbom, which deals only with the physiological action of the poison, will be immediately referred to. The other, by Kiliani, contains that author's account of the chemical composition of the juice of several large upas trees sent home from the Malay Peninsula in tins preserved by admixture with methylated spirit. From this, besides other bodies, he isolated antiarin as a crystalline nitrogen-free glucoside, having the formula $C_{27}H_{42}O_{10}$. The physiological effect of this preparation has been carefully studied by Hedbom, who states that in cats spasms, and even opisthotonos, occurred shortly before death; in rabbits and frogs convulsions also occurred.

Separation of Antiarin, the Poisonous Principle in the Juice of Antiaris Toxicaria.

By treating ipoh with boiling benzine for two days, and extracting the dried residue in water, I was enabled to obtain a dark-brown fluid almost free from resins which was physiologically extremely active. The pigment was then precipitated with basic lead acetate, and excess of lead removed from the clear filtrate by sulphuretted hydrogen, after which the resultant slightly-acid liquid neutralized with chalk was evaporated to dryness. The residue was extracted with alcohol from which crystals of antiarin, subsequently purified by recrystallization from water and alcohol, were obtained in the form of needle-shaped crystals or sometimes flat plates with a not quite sharp melting point between 208° and 215° C. The substance so obtained was found to be a nitrogen-free glucoside which on hydrolysis split into a reducing sugar and a yellowish body, which, unlike the products of the hydrolysis of other poisons of the digitalis group, was quite inert.

Upon analysis, the preparation gave results which agree best with the formula $C_{21}H_{30}O_8$, the average carbon and hydrogen percentages of three analyses being C 61.26 H 7.24.

The above analytical results are at variance with those of Kiliani, who found C 61.46, H 8.05.

My figures for carbon show no divergence from these, but for H (7.24) I find a lower percentage. That this divergence from Kiliani's analytical results is not to be attributed to accident seems to be borne out by physiological differences between the two preparations immediately to be described.

Physiological Action of Ipoh.

1. Fish and small fresh water crustacea were left in a watery solution of ipoh for some hours without any effect being produced.

2. Frogs into which ipoh had been injected subcutaneously showed well-marked symptoms. Inco-ordination, with inability to maintain their position on an inclined plane, was first noticed, often accompanied by passing clonic spasms, especially of the hind legs, and occasional gaping movements of the lower jaw. Respiration became slower, usually with apnoeic intervals, but the latter was not a constant effect. Meanwhile, paresis passing into paralysis appeared; before the latter was complete a limb when stimulated was not always withdrawn, though it generally was. Complete paralysis of the limbs and trunk preceded the cessation of the reflex movement of the third eyelid obtained by stimulating the cornea. Not infrequently a short period of excitation was noted immediately after ipoh was injected.

A cardiograph taken after ipoh has been applied to an exposed frog's heart shows that the beats become slower and more forcible, then the ventricular beats became smaller, the auricles usually beating slowly and firmly till the ventricle stops in systole; the auricular beats then become slower, slighter, and more irregular until the auricles stop in diastole.

The action of ipoh on frogs, therefore, is to produce (1) clonic spasms of the muscles, (2) paralysis, (3) systolic arrest of the ventricle.

When in place of the crude poison a solution of antiarin was injected, the same results were obtained, with the exception that the clonic spasms were not elicited. Death resulted from systolic arrest of the ventricle, and was preceded by paralytic symptoms. As to the part of the neuro-muscular system, the affection of which caused the paralysis, a large number of experiments showed this to be the nerve centres. Whether these are affected directly by the poison, or secondarily owing to circulatory failure, does not seem quite clear. In mammals the former is undoubtedly the case, in frogs the heart is, as a rule, arrested before paralysis is complete. I was quite unable with the Kenyah ipoh or with antiarin prepared from it to obtain any evidence that nerve or muscle was directly affected by the poison. It was necessary to determine this point precisely, and a large number of experiments were performed with this end in view, since other observers, notably Hedbom, who worked with Kiliani's antiarin, have come to the conclusion that the poison acts on the muscles themselves. As has been already pointed out, the analyses of my preparations and of Kiliani's show that the substances we respectively obtained were not identical; the results of physiological tests also point to their being different.

As regards dosage, it was found that for pithed frogs the minimum dose required to produce the full physiological effect on the heart lies between 0.01 and 0.005 mg. of ipoh, while as little as 0.001 mg. of antiarin produced a typical effect.

3. In mammals the short convulsive movements seen after administering ipoh to frogs become one of the chief features of the action of the poison, and, in addition to the other effects seen in frogs, gastro-intestinal symptoms are conspicuous. Repeated acts of defaecation are common; often the stools are loose and watery; this character was never present in guinea-pigs, but appeared to be fairly constant in carnivora, in whom salivation and vomiting are usually well marked. Convulsions do not, however, invariably occur, and are usually absent when large and rapidly fatal doses are given.

Post mortem the heart is found arrested in diastole (very rarely the ventricles are in systole) and distended with blood. Often by a single stimulus applied to the distended ventricle, or even without this, a very slow contraction of the ventricular wall takes place, so that without any definite beats the ventricles may be found extremely contracted a quarter of an hour after the chest is opened; the lungs may show a few small subpleural (probably agony) haemorrhages and are generally congested. The liver and large veins of the chest and abdomen contain much blood. The lethal dose of ipoh for guinea-pigs was found to be about 0.2 mg. per 100 grams, while the lethal dose of antiarin was about 0.05 mg. per 100 grams.

If blood-pressure curves be taken in a mammal (cats and rabbits were investigated, under anaesthetics), the first effect observed is a steady rise of blood pressure, with usually a slowing of the pulse. This occurs even with quite small doses. If the dose is larger, the steady rise of pressure is succeeded by a period in which, with the pressure still high, the inhibitory mechanisms are excited, dropped beats occur or longer pauses causing irregularities of various degrees (Fig. 1, p. 1131). Death is usually caused by sudden extreme inhibition in this stage.

It is much less usual for the inhibitory apparatus to become suddenly paralysed after the preliminary stage of excitation, and without any inhibition occurring in which recovery does not take place. In these instances the curve is commonly maintained for some time at a high pressure with a very rapidly-beating heart, and death results from a gradual failure of the heart, the blood-pressure curve slowly falling.

More rarely still, this result is brought about without any preliminary rise of blood pressure, the curves simply showing increased frequency of heart rhythm coming on almost immediately after injection of the drug (Fig. 2, p. 1131).

4. Birds with the exceptions to be immediately noted are susceptible to ipoh, death being as a rule very sudden, a comparatively slight paresis rapidly becoming complete paralysis, when the animal falls down and after a few convulsive (? asphyxial) struggles and expires. In fact, the suddenness with which the poison acts on pigeons, for

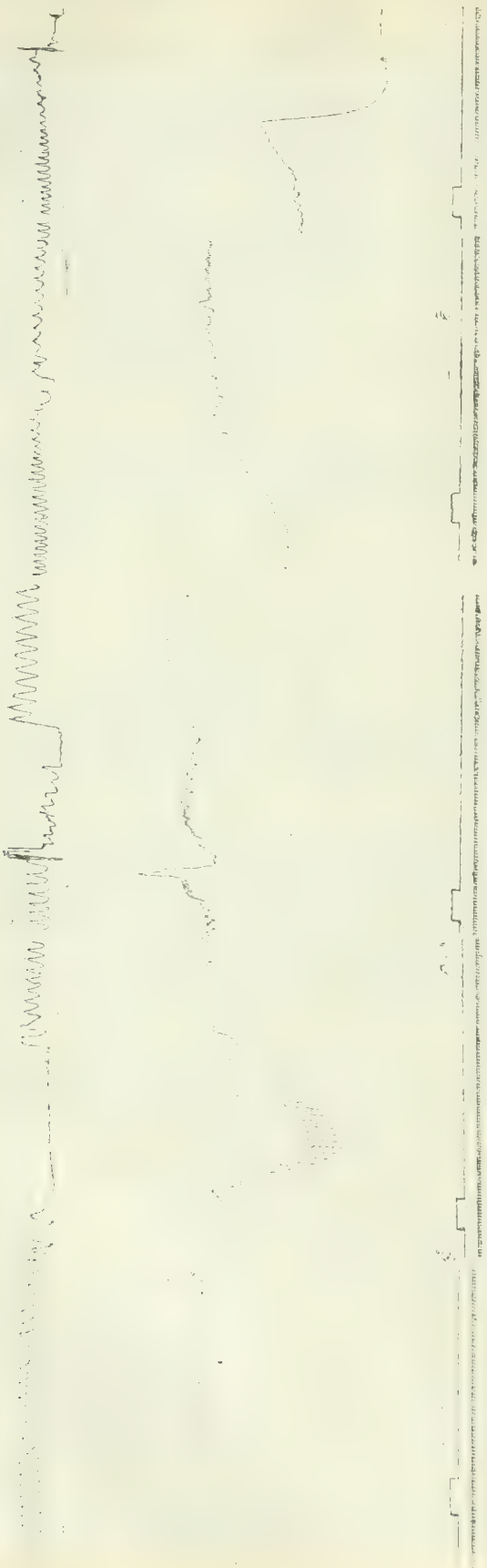


Fig. 3.—Result of repeated injections of antiarin into femoral vein of fowl; first dose, 0.5 mg.; subsequent doses, 0.03 mg. (× about ½).

instance, probably accounts for the stories of the upas tree told by early travellers in Malaysia. Fowls, and to a less extent pheasants, possess a high degree of immunity to the poison when this is injected subcutaneously; but, although usually very large doses produced little effect in the former, smaller doses occasionally produce transient paresis and repeated watery evacuations, and it was evident that individual fowls varied in their susceptibility to ipoh.

Blood-pressure tracings taken from fowls show that, though these birds resist enormously large doses given subcutaneously, the action of the drug on the circulatory system when it is injected intravenously is essentially the same as in mammals, although weight for weight the fowl will survive a larger amount of the poison given intravenously in successive doses, and recover from a degree of inhibition which, judged by the fall in blood pressure, would have been fatal in mammals. Fig. 3 illustrates these points.

Immunity.

An attempt was made to determine the proximate cause of the difference in the effects produced by the subcutaneous injection of ipoh into mammals and fowls. The frequent occurrence of diarrhoea soon after injection, even when paresis was absent, seems to point to their immunity not being due to slow or incomplete absorption. It was not possible to obtain *in vitro* evidence of a difference in the action of the poison on the heart muscle of immune and susceptible animals. A number of experiments, in which minimum lethal doses of ipoh were treated with heart extract of fowls and susceptible animals and then injected into guinea-pigs, uniformly failed to show that these extracts had in any way altered or weakened the action of the poison. On the other hand, it was not difficult to demonstrate by the physiological test the presence of ipoh in the heart muscle of frogs and guinea-pigs which had been killed by ipoh when the test animal was sensitive enough. The only animals which fulfilled this condition were very small frogs, not more than 5 to 6 cm. long. These, when left in a moist chamber for an hour after their brain had been destroyed, became extremely efficient reflex machines. The following experiment illustrates the method employed:

A guinea-pig weighing 512 grams was given 1.4 mg. of ipoh subcutaneously at 5.30. Paresis soon came on, and the animal died at 6.15, after a few convulsions. Its head was cut off, and as much blood as possible allowed to drain away, the heart removed, opened, and quickly washed in normal saline, then minced and ground in a cooled mortar, with a further small quantity of normal saline, and placed in an ice chest. At 9.30 a few drops of turbid pink solution which resulted were injected at room temperature under the skin of a small frog prepared as described, whose heart was beating 45 per minute. At 10.15 the heart beat 30, at 10.45 the ventricular beats were few and intermittent, auricular beats were also irregular, but about twice as frequent as those of the ventricle. A small frog similarly prepared, into which a few drops of normal saline were injected, was used as a control, and showed no such alteration in rhythm.

Similarly conducted experiments with the freshly-prepared heart extract of healthy unpoisoned guinea-pigs killed by decapitation showed that such a result was not given by the extract of the normal tissue. When a few drops of the heart extract of two large frogs killed by ipoh were employed, typical results were obtained in each of two small frogs injected.

These experiments seem to show that in frogs and susceptible mammals into which the poison is injected subcutaneously the latter acts on the heart by entering into combination with its muscle substance, and preventing the execution of its normal rhythmic function. Probably this effect is always absent in fowls, and has not time to occur to a full extent in susceptible mammals when these are submitted to the effects of large suddenly-acting doses as the result of intravenous injection, stimulation of inhibitory mechanisms here causing death. As has been already seen, under these circumstances fowls and mammals are similarly affected, so that the immunity of the former to subcutaneous injections is probably an expression of a power of resistance of their heart muscle. Their respiratory and spinal centres, too, are probably less readily affected than those of mammals or pigeons. That their immunity is not due to slowness of absorption seems proved by the constancy of diarrhoea after subcutaneous injections.

CONCLUSIONS.

The action of Kenyah ipoh when frogs were used for the experiments is as follows:

1. It acts on the ventricle of the heart as a poison of the digitalin group; this has been noted by all observers working with the juice of *Antiaris toxicaria*.
2. It causes paralysis of the central nervous system.

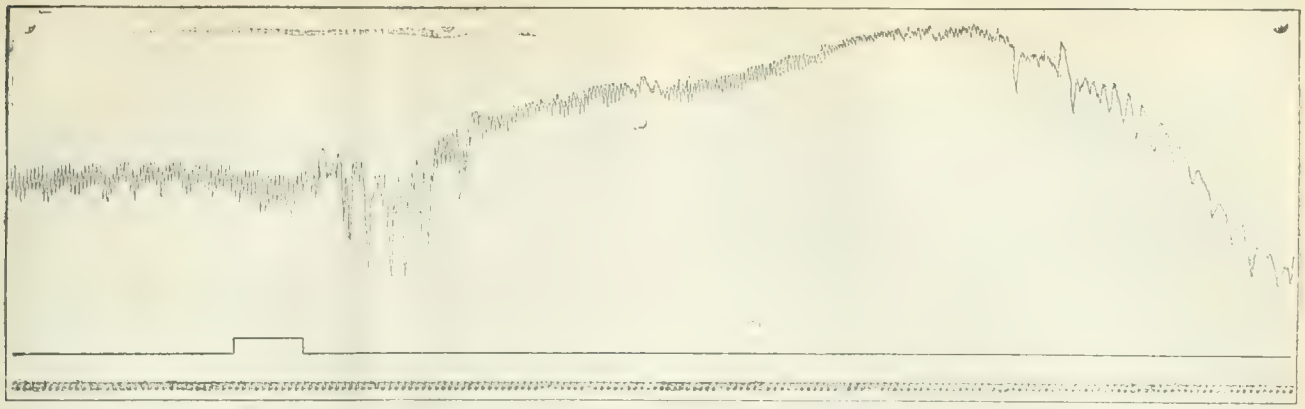


Fig. 1.—Cat; ipoh, about 2 mg., injected into jugular vein.

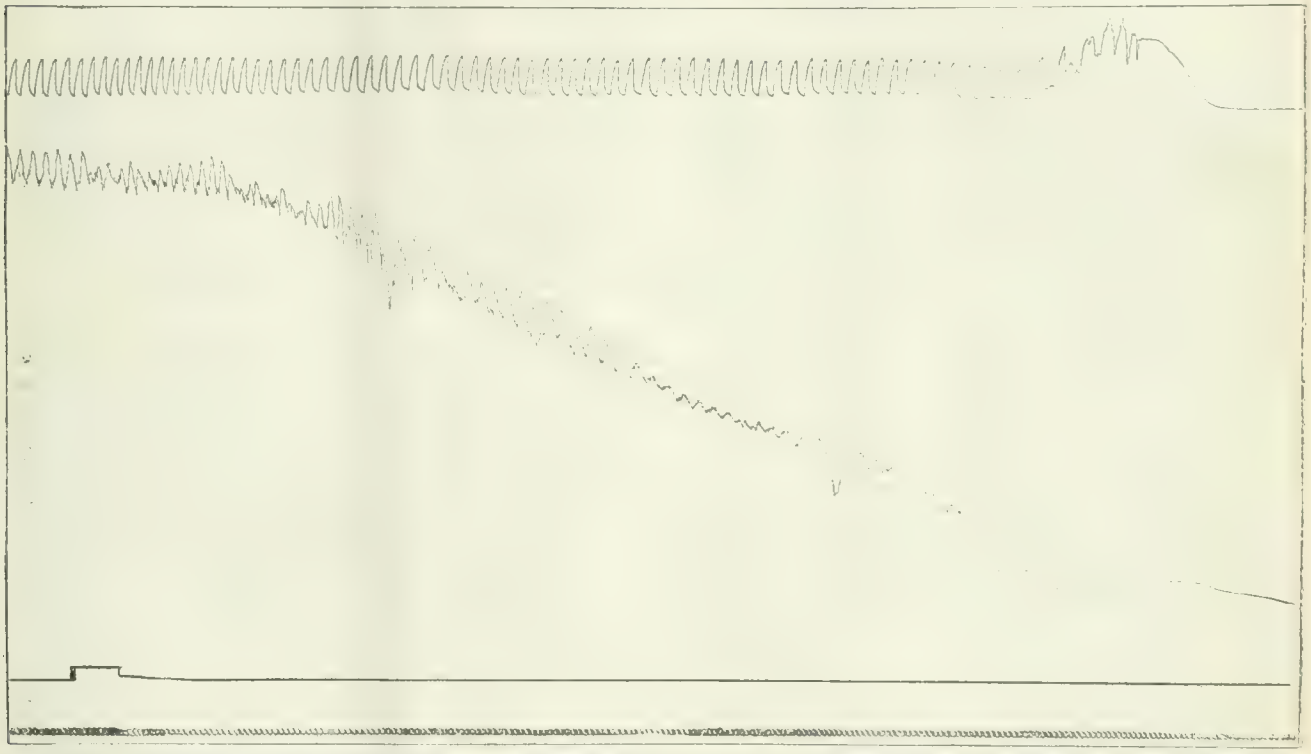


Fig. 2.—Gradual fall in blood pressure and late arrest of respiration brought about by the second of two injections of ipoh, each of 1 mg.

3. It causes passing clonic spasms of the voluntary muscles.

When mammals or birds are subjected to its action marked gastro-intestinal symptoms are usually added to the above effects. Certain birds are, however, comparatively immune. My preparations of antiarin, a crystalline glucoside, the active principle of ipoh, lacked the convulsive effect of the crude substance, thus differing physiologically as well as chemically from Kiliani's antiarin, investigated by Hedbom, although in its purely cardiac toxicity it was at least as active as Kiliani's.

In conclusion, I wish to express my thanks to Dr. J. B. Leathes for much kind help and advice throughout this investigation.

Centenarians in the United States. According to the United States census for 1900 there are 3,536 persons in the United States who are 100 or more years of age. The value of these figures is, however, somewhat discounted by the fact that 72.8 per cent. of the whole number are negroes; many are very hazy as to the date of their birth. It is improbable, as pointed out by the *Journal of the American Medical Association*, that the United States should have over 3,500 centenarians, when Germany, with a population of nearly 55,000,000, has only 778; and England, with 32,000,000, only 146; and France, with 40,000,000, has only 213.

DRUG ERUPTIONS.

By GEORGE PERNET, M.R.C.S.Eng., L.R.C.P.Lond.,

Assistant to the Skin Department, University College Hospital; late Pathologist, Hospital for Diseases of the Skin, Blackfriars.

The number of medical remedies which may give rise to rashes is a large and increasing one. Scarcely a week passes but some new synthetic product is placed upon the market, usually accompanied by an assurance that it has no drawback in the way of causing ill-effects. As a rule one has not to wait long before cases crop up which show that the new remedy is not so innocent as was at first supposed. Now many of these products are useful, but what I desire to emphasize is that they should be employed with care. Rather than give you a long list of drugs, with details of the cutaneous manifestations they may occasion, I propose to take the various eruptions as they come before you clinically. This arrangement will be more practically useful, although it will necessitate some repetitions and cross-references owing to the overlapping of the morbid phenomena. It is the eruption we see, but the drug which caused it we have to find out. I shall adopt the following rough classification of the rashes:

(1) Erythematous, urticarial, papular, and desquamating. (2) Vesicular and bullous. (3) Pustular. (4) Furuncular. (5) Purpuric. (6) Gangrenous. (7) Pigmentary and discolouring. (8) Hypertrophic. (9) Tumour-like.

1. *Erythematous, Urticarial, Papular, and Desquamating Rashes.*—These cutaneous conditions are those most commonly met with, as they are produced by the great majority of the drugs which give rise to eruptions. *Belladonna.*—Applications containing it, such as glycerine of belladonna, have produced generalized symmetrical erythematous rashes of the limbs, with swelling and redness of the face, mixed up sometimes with erythema multiforme and wheal-like patches. Atropine ointment is in the same case. The itching is very great, and it may be said at once that this is a common symptom in eruptions of this kind. Belladonna by the mouth may lead to a scarlatiniform rash, but it is rarely seen, although the drug is freely prescribed. Other solanaceous plants act in the same way. A purplish rash all over the body, with much swelling of the face, followed the ingestion of an ounce and a half of tinct. hyoscyami taken in mistake for a black draught.[1] *Chrysarobin* is another drug which leads at times to a marked diffuse erythema, especially when applied near the face. In this situation it is frequently accompanied by a smart conjunctivitis. *Mercury*, locally applied in the shape of ointment, is well known to give rise to an eruption, which may be anything from a slight erythema to a severe eczematous-like, irritant dermatitis, according to the strength of the preparation and the susceptibility of the patient; such a rash may become generalized, and cases have been recorded of pityriasis rubra, that is, a universal dermatitis, supervening with a fatal result. In the old days when mercury was used in a wholesale manner, the cutaneous complications were very severe and frequent, and went by the name of hydrargyria, morbus mercurialis, etc. Alley saw forty-three cases in ten years, and eight of these terminated fatally.[2] In this condition there was diffuse redness of the skin, with tumefaction, tenderness, and itching, accompanied by the formation of pinhead-sized vesicles, with weeping. The whole body became involved. It usually terminated by desquamation, the epidermis coming off in large flakes. In some instances the nails and hair fell off. Such severe cases are very seldom seen now. It is an interesting point that these mercurial rashes when they occurred in the course of syphilis were attributed to the lues venerea itself, with the unfortunate result that the mercury was pushed with greater energy in proportion to the severity of the symptoms. It was in this way that a fatal termination sometimes ensued. But the fact that eruptions were occasionally met with in patients who were not suffering from syphilis, and were taking mercury for other complaints, led observers to the discovery that the eruption was entirely due to the drug. This fact was published by Alley in 1804, but Pearson claimed he had known the disease hydrargyria ever since 1781.[3] Mercury by the mouth may also give rise to various rashes, and they have been observed to follow also intramuscular injections and intrauterine and vaginal douches. A localized dermatitis is occasionally seen to result from the use of unguentum hydrargyri for pediculi pubis. At one time, when blue ointment was used in a routine manner for this complaint, such a complication was common.

Arsenic during the Manchester beer poisoning epidemic produced a variety of rashes. Brooke and Roberts have described erythematous eruptions on the trunk, which were either diffuse (scarlatiniform, morbilliform, erythrodermial) or circumscribed (papular, circinate, etc.). Urticarial wheals were also seen, and the cutaneous lesions sometimes simulated seborrhoeic dermatitis, psoriaris, lichen planus, and papular syphilides. The hands and feet were hot, swollen, and painful, with redness of the palms and soles, accompanied by marked hyperidrosis of the latter. Of course, in the development of these rashes, the association of two poisons must be borne in mind in the estimation of the results of the Manchester chronic intoxications.

Iodoform, when used locally, is well known to act as an irritant in some patients. When it has been absorbed, urticarial and erythematous condition have occurred. The substitutes for iodoform (europhen, loretin) may also act as irritants. Orthoform applied locally has led to erythematous and erythemato-papular eruptions; and also to more severe conditions. I have seen insufflation into the nares followed by marked swelling and redness of the face.

Copaiba may cause an eruption which at times leads to errors of diagnosis. It may be papular, scarlatiniform, or morbilliform. Usually it is made up of rosy red, slightly-elevated patches, chiefly about the backs of the hands, the fronts of the knees, the limbs, and abdomen. A well-defined scarlatiniform rash may develop over the front of the trunk. Turpentine by the mouth has also given rise to erythematous and morbiliform rashes.

Quinine and *salicin* are two drugs with similar effects. Quinine erythema may supervene in patients with a generalized skin disease, such as psoriasis. This is rarely met with, and, indeed, in widespread inflammatory skin affections, such as pityriasis rubra, generalized eczema, etc., the effects of quinine are distinctly beneficial. With salicin a rash is an extremely rare complication.

Borax, once much used in epilepsy, has been said to have caused psoriasis. I have never seen this, and the question arises whether the rash was true psoriasis, or only psoriasiform. And further, if true psoriasis, was the borax the essential cause of it or merely a factor in its development, or was the eruption quite independent? Boric acid has given rise to erythema and other rashes after washing out purulent cavities, but the possibility of absorption of toxic products must not be forgotten in such cases. Rashes have also followed its use in washing out the stomach, after rectal injections, etc.

Erythematous eruptions may be caused by a number of drugs—opium, morphine, potassium chlorate, digitalis, etc. The numerous synthetic remedies also act in this way: antipyrin, phenacetin, sulphonal, etc. Chloral hydrate deserves special notice. The eruptions from the use of this drug vary, but are usually erythematous in type. They occur, too, as dusky-red papules, or as a purplish mottling in the neighbourhood of the joints of the extremities. The scarlatiniform rashes may be generalized, with flushing of the face, itching and burning, and followed by desquamation. I may remind you, too, of the erythema which occurs in ether and chloroform anaesthesia, and also of the well-known antitoxin rashes.

DIAGNOSIS.

Diagnosis in the foregoing cases may be easy, at other times difficult. In scarlatiniform rashes the first thing is to exclude scarlatina. Here duration, mode of onset and development, and absence of corroborative symptoms are the points to lean on. Non-scarlatinal rashes do not usually come out in the order observed by scarlatina. There may be some rise of temperature and some congestion of the fauces in the former, but this is not the rule. I need scarcely insist on the importance of examining the urine in suspected scarlatina. Desquamation is not the appanage of scarlatina; it occurs also to a greater or less extent as a result of scarlatiniform rashes in general. In times of small-pox epidemics the premonitory scarlatiniform rash of that disease, which sometimes occurs about the abdomen, must be thought of. Scarlatiniform eruptions due to food poisoning, resulting from prolonged constipation, or following the absorption of toxic bodies liberated by enemata, or occurring in the course of gonorrhoea at times, may be mentioned here, as also the idiopathic erythema scarlatiniforme, so called when the cause cannot be made out. Multiformity is in favour of non-scarlatinal rashes—that is, the coexistence of urticaria, erythema multiforme-like patches, and so forth. Morbilliform eruptions must be dealt with in the same way. In urticarial cases animal parasites would have to be excluded, as also hepatic and renal defects.

Erythema multiforme has been closely imitated by drug rashes. In the arsenical beer-poisoning epidemic the grouped papules observed in some cases about the limbs bore a great resemblance to those of erythema multiforme, which was increased at times by the depression and bluish discoloration of their centres. When psoriasis, lichen planus, syphilides are simulated, the duration, distribution, character of the lesions, and corroborative symptoms, as adenitis in the case of syphilis, must be carefully gone into and these diseases excluded. Pityriasis rosea would be put out of court by the fact that it usually commences as a single primary patch, followed after some days by a rash about the body and upper segments of the limbs, consisting of fingernail-sized, rosy red patches, oval or circinate, with very fine desquamation. Having got rid of the above possibilities, the offending drug must be traced. I may at once say that cross-examination as to previous treatment, or as to whether the patient has been taking drugs on his own account, will not always elicit the cause. In the latter case patients do not always admit having taken quack remedies. Headaches would make one think of antipyrin or other headache "cure;" insomnia, of chloral hydrate, etc. Some people, again, are fond of trying their friends'

prescriptions. When copaiba is suspected, a gonorrhoeal discharge will be of assistance. In a dermatitis localized to the pubic regions and groins, the pediculus pubis should be looked for, about which the patient has, perhaps, not said a word, nor of having used mercurial ointment. In atropine rashes, dryness of the mouth and dilatation of the pupils would perhaps be present. I have noted the former symptom in one case, but there was some doubt about the latter, as a certain amount of dilatation is habitual in some individuals. In cases of accidental or suicidal poisoning corroborative evidence, such as bottles, etc., would help.

2. *Vesicular and Bullous Eruptions.*—Vesicular and bullous lesions are at times mixed up with erythematous and papular manifestations, and indicate a more severe action of the drug or a greater susceptibility of the skin. This may be compared with what is observed in the erythema multiforme group in which we get a variety of eruptive elements—papules, vesicles, and bullae. In the rashes under review there is often a preponderance of one or other of these primary lesions; in some cases the eruption may be practically made up of one kind. Vesicles and bullae have been observed in rashes originated by most of the drugs I have already alluded to, such as antipyrin, arsenic, copaiba, chloral hydrate, morphine, mercury, quinine, salicylates, etc. In this place several deserve special mention. Thus iodoform applied locally to varicose ulcers for instance, occasionally leads to a vesicular eruption characterized by closely aggregated vesicles on an erythematous base, with at times formation of bullae by coalescence. In some instances, the eruption is eczematous, but in several I have observed the vesicles were hemp-seed and larger in size. The rash is not limited to the neighbourhood of the immediate source of irritation. Mr. Hancocke Wathen has recorded his personal experiences of iodoform dermatitis, which in his case led to the formation of blebs about the hands after merely handling iodoform gauze. The eruption suggested pompholyx. It was only after several attacks that the condition was traced to the gauze.[4] Other surgeons have had a similar experience, and have had to give up the use of the drug in their work.

Salipyrin (a compound of salicylic acid and antipyrin) has led to a herpes-like eruption about the glans penis and mucous membranes of the mouth. There were also erythematous areas about the hands and upper limbs in the case of a medical man, who had taken 15 grains in a little diluted cognac. He found subsequently that a very small dose of antipyrin had the same effect. There is an interesting case of a German student, who for about nine months had recurrent attacks of a bullous exanthem involving various parts of the body, but chiefly the face. This was accompanied by headache, rigors, and pyrexia. The diagnosis of pemphigus chronicus was made, but it turned out subsequently that this rash occurred after drinking bouts, the patient treating the usual *Katzenjammer* in the morning by taking 30 grains of antipyrin in place of the customary red herring. Here again the combination of beer and drug may account for the severity of the symptoms.

It is important to mention that bullous eruptions are greatly aggravated by the exhibition of potassium iodide. The drug should never be given in such cases. I have also seen what appeared to have been originally an erythema multiforme made markedly bullous by small doses of potassium iodide combined with mercury under the impression that the patient was suffering from syphilis. This mistake is also very likely to occur in cases of non-syphilitic vesicular eruptions about the mucous membranes of the mouth, in which case both mercury and iodide would make matters worse, especially if pushed. Just as in the old days mercury was persevered with in mercurial exanthems mistaken for manifestations of syphilis, so at the present time the cause of the aggravation by iodides is apt to be overlooked, and the drug given in increasing doses, thus adding fuel to the fire and establishing a vicious circle.

That *arsenic* may give rise to zoster was first pointed out by Mr. Jonathan Hutchinson, and it has since been confirmed by a number of other observers. This fact has proved of great practical importance, for it was zoster which first suggested to Dr. Ernest Reynolds the possibility of arsenic in the beer being at the bottom of the Manchester poisoning epidemic.[5] Apart from zoster, vesicular and bullous eruptions were rare in the Manchester epidemic, but they have occurred more frequently in other arsenical poisoning epidemics. Zoster has also been seen in chorea treated by arsenic. I have known of an attack of zoster in an elderly gentleman, who had been taking a course of arsenical waters; there was marked neuritis, and it is probable that arsenic was the *fons et origo mali*.

The eruption caused by *potassium iodide* is more commonly pustular, but vesicles and bullae are sometimes seen. In this connexion it is important to distinguish between the lesions that are truly bullous and those which are only apparently so. In a case of Dr. Radcliffe Crocker's, the eruption was bullous to the eye, but when the lesions were punctured they were found to be solid.[6] On the other hand, true bullous lesions may occur. This may perhaps be accounted for by the continued use of the iodide, notwithstanding the presence of an iodide rash. In several cases on record there was renal and cardiac disease, and therefore faulty elimination. Papules and pustules may be present at the same time as the bullae. Similar lesions may follow the exhibition of bromides.

As to diagnosis, I need not repeat what I have already said. Iodide eruptions, consisting of papules, pustules, and bullae, have been sent in to hospital as cases of small-pox. It is of course of great practical importance to avoid erroneously diagnosing syphilis in these cases, a mistake which has been made, especially when the mucous membranes of the mouth have been affected. Pemphigus neonatorum and congenital bullous syphilides are not likely to be taken for drug eruptions.

Antipyrin may give rise to an erythema multiforme bullosum-like rash. A point about antipyrin is the pigmentation which may be left behind after the subsidence of the bullae. This pigmentation must not, in the absence of corroborative symptoms, lead to the erroneous diagnosis of syphilis. The recurrent vesiculo-bullous lesions due to iodoform must be specially borne in mind, and direct inquiry be made, especially in the case of medical men, for the cause of these rashes may be easily overlooked and ascribed to constitutional conditions. In fact surgeons, who have suffered in this way themselves, have failed for a long time to realize the cause of their trouble.

3. *Pustular Eruptions.*—Before considering the important bromide and iodide rashes belonging to this class, I will clear the ground by saying at once that arsenic, chloral hydrate, salicylic acid, etc., have led to lesions of this kind, but it is rare for this to occur.

Bromides, and especially potassium bromide, for it is the salt most frequently used and the one most potent for evil, give rise to pustular lesions, which may be either discrete or confluent. The discrete or acneiform condition is observed on the face, back, chest, scalp, and about the limbs, especially the legs. The rash consists of yellow pustules, from a hemp-seed to a pea in size, situated on a reddened base. Perseverance with the drug will increase the severity of the eruption, giving rise to the enlargement of the individual elements and to their confluence. In some cases ulceration has occurred, with subsequent formation of disfiguring scars. In infants and children confluence is the rule. In these cases, the markedly raised, more or less convex elevations of a reddish or violaceous hue, generally round or oval in outline, but sometimes with a gyrate border, and topped by small, closely aggregated pustules, are characteristic. Moreover these lesions are soft and rather fluctuating to the touch, but they may have a more solid feel. An eruption of this kind may look very formidable, but when the offending drug is left off the elevations gradually subside, leaving no scar but merely a stain, which is at first purplish, then brownish, and remaining for some time as a record. Such lesions may occur quite independently. On the other hand, they are sometimes grafted on an existing dermatitis—no doubt a favouring circumstance, a case of *locus minoris resistentiae*. In some instances marked papillary hypertrophy has developed in connexion with the elevated lesions just described; and there may also be a certain amount of scabbing in the central part. Radcliffe Crocker insists on their tendency to appear in scar tissue, such as vaccination scars, for instance. In addition to the confluent lesions, it is not unusual to find a few discrete acneiform pustules here and there.

The *diagnosis* of bromide rashes is one of great importance. A not uncommon error is to mistake them for syphilis, a great point being made of a negative history as to the administration of bromides. Histories, however, are fallacious, and it is well not to lean too hard on them. The confluent rash in children is characteristic, and it is important in such a case not to be misled by the negative replies of the mother, for cross-examination will often bring out the fact that the infant has had a soothing draught, or has been suffering from whooping-cough. Although there may be suspicions of

syphilis about the mother, the objective appearances of the eruption must not be lost sight of for a moment. Moreover, there is nothing *a priori* against a syphilitic child having a bromide rash. In a case which had been diagnosed as a generalized vaccinia, and in which the history of bromide administration to the infant was negative, I was able to show, first, that the mother was suckling her infant; and, secondly, that she was herself regularly taking medicine for "fits"—a fact which she admitted very reluctantly. I mention this merely to emphasize the importance of bearing in mind the possibility of drugs being conveyed to sucklings through the mother's milk. Of course it is in epileptics that such eruptions are likely to occur. The addition of liq. arsenicalis to the bromide usually prevents the eruptions due to the latter drug, but not always, for they may occur even then, especially in a susceptible individual. In this connexion it should also be mentioned that in trying to avoid Scylla we must not fall into Charybdis—in other words, produce arsenical rashes. Another point about bromides is that the rash may continue to appear though the drug be stopped. This can be explained by the fact that bromides, and iodides also, have a diuretic action, the diuresis ceasing with their suppression. It must be borne in mind also that bromides are also frequently given for menopause and other neuroses, menstrual troubles, and so forth; and that the various quack "I cure fits" remedies contain bromides. In a remarkable case of Szadek a medical man was treated for three years for a supposed recurrent syphilitic rash, which turned out to be really of bromide origin.[7] In the case of a child who came under my observation, on my calling the attention of the medical attendant to the nature of the rash, he found that, quite unknown to himself, the single gr.v dose of bromide he had ordered originally had been continued nightly for several weeks.[8]

The *iodide* pustular rashes are the most common. The individual lesions generally are smaller than in the case of bromides; they are usually discrete, rarely confluent. Both these drug eruptions have points of resemblance, and affect much the same parts of the body. Like the bromide rashes, those due to iodides may become very formidable-looking when they are pushed, as in the case of supposed syphilis, when the vicious circle I have already referred to may be established. Severe ulcerations may result, nodules may form, and also tumour-like masses. Individuals are, however, occasionally met with in whom iodides lead to an aggravation of syphilitic lesions, and it is in such that the noxious effects of the drug must be borne in mind. A common iodide rash is a pustular folliculitis, chiefly affecting the face, which the French call iodide acne. The lesions are more acute in development and more inflammatory, as a rule, than those of ordinary acne vulgaris, when severe scarring may ensue. Acne rosacea and acne vulgaris may be aggravated by its use.

As to the *diagnosis* of pustular iodide rashes, syphilis, when suspected, can be excluded by a careful examination and the absence of corroborative symptoms. The pustules due to the drug are usually more superficially seated than in syphilis, and do not, as a rule, leave a scar. Another point is that the iodides have a tendency to produce bullous lesions; and papules, pustules, and bullae may all be present at one and the same time. This multiformity of iodide lesions must not be mistaken for syphilis. The various advertised blood mixtures are frequently at the bottom of the mischief, for they contain potassium iodide. Patients do not always tell us what they have been taking on their own account, and, further, when examined on the point, they may be a long time admitting the fact. They may perhaps deny it altogether. The examination of the urine for iodine would in some cases be of assistance.

4. *Furuncular* complications sometimes result from the use of arsenic, bromides, and quinine. In this connexion I would call your attention in passing to the abscesses which may occur as an indirect result of self-administered morphine injections, due to unclean needles and the absence of aseptic precautions. Recurrent lesions of this kind localized to those parts where such injections are usually made should make you think of this possibility. Recent punctures may be present. In such cases there may also be diffuse infiltration of the skin, with multiple scars and some pigmentation.

5. *Purpuric eruptions* indicate a greater severity in the toxic effects, which may be due either to larger doses of the drug or to the greater susceptibility of the patient or of his tissues. As to the last-named point, the question of haemophilia as a factor would have to be gone into. Purpuric drug rashes are fortunately uncommon, but they have been observed after the exhibition of many of the remedies I have already referred to, such as antipyrin, arsenic, iodoform internally, quinine, sulphonal, etc.

In the *diagnosis* of these, purpuric lesions due to other causes must be excluded. They are numerous, and I may remind you in passing of the haemorrhagic skin manifestations which occur in typhus, in the premonitory rashes of variola, and also in other specific fevers and septic diseases. As a result of snake poison they are well known. To enumerate all the conditions in which they may occasionally occur would take us over a great part of the field of medicine. In the differential diagnosis the general condition of the patient must therefore be carefully gone into. The examination of the urine is especially important here. The duration, distribution, and the general symptoms would help in arriving at a conclusion. It must not be forgotten, however, that, given a cachectic condition, the exhibition of a drug may give rise to a rash. I have known potassium iodide produce a purpuric eruption in an advanced case of leprosy, in which the skin lesions were attributed to syphilis. In the case of haemorrhagic cutaneous lesions due to drugs, the distribution would be the same as that already described for the other kinds of rashes, but the lower limbs are more prone to purpuric conditions. Erythema multiforme sometimes assumes the haemorrhagic form (erythema purpuricum or haemorrhagicum), but with distinct elevation of the lesions, as opposed to the purely purpuric which are level with the skin. In both cases the lesions do not disappear on pressure. In both cases, too, the cause is no doubt toxic. The condition known as peliosis or purpura rheumatica comes into the category of the exudation erythemata.

Sir J. Crichton-Browne has seen the long-continued use of chloral hydrate lead to purpura, which in one instance terminated fatally.[10] Haemorrhage into bullae may also occur, as was the case in a lady under Wiglesworth, who had been taking bromides for a long period.[11] Purpuric rashes have also been seen after quinine.

6. *Gangrene.*—The onslaught on the skin may be so violent as to destroy its vitality. A complication of this kind has been seen after arsenic, iodide, quinine; and also after orthoform locally applied. Here again various factors are at work: large doses, long-continued use of the drug, vulnerability of the patient. In the case of arsenic the gangrene is more prone to attack the genitalia, but is not confined to them; it is an unusual condition. Arsenical zoster may go on to localized gangrene.

Potassium iodide has led to sloughing about the sites of bullae caused by it, with destruction of the penis. Such an experience emphasizes the importance of discontinuing the use of the drug when bullae occur, and of strictly avoiding its use in bullous eruptions. The local application of orthoform has been observed to give rise to gangrene. Dubreuilh has collected several cases in his paper on orthoform eruptions.[12] Vincent has recently recorded a case of gangrene of both nipples in the puerperium, which I consider was due to the orthoform dressing.[13] The anaesthetic effects of orthoform are interesting in this connexion, and the lowered vitality ending in gangrene may perhaps find an explanation from this property of the drug. Gangrene following a purpuric eruption apparently caused by salicylate of soda has been published by Shepherd of Montreal,[14] and a similar complication has been seen after quinine.

In the *diagnosis* of circumscribed areas of gangrene, feigned eruptions must be considered. I will merely allude in passing to diabetic gangrene, a condition well known to you. In the case of gangrene due to a drug locally applied, such as orthoform, the diagnosis should not offer much difficulty. As to drugs taken by the mouth, there would probably be other cutaneous manifestations, such as purpura, bullae, and so forth, to point in the right direction. The distribution and duration of the rash, and the general condition of the patient requiring the use of quinine, sodium salicylate, etc., would help in coming to a conclusion. The multiple gangrene of infants and children would be excluded by attention to the appearances of the lesions and the development of the eruption.

7. *Pigmentation.*—This is a condition of particular interest and importance. That pigmentation may be caused by the prolonged use of arsenic in small doses has been long known. Hunt in 1847 stated that in persons of fair complexion and delicate skin arsenic commonly produced a dirty brown, dingy, unwashed appearance of all those parts of the body protected from light and air.[15] I may say at once that fair people with delicate skins are not the only ones to be affected in this way. Indeed, Reynolds says it is not generally present

in light-complexioned patients, but is practically always found in dark people.[16] The Manchester epidemic has lately brought the subject prominently before the medical profession. Arsenical pigmentation usually affects the covered parts of the body, especially the abdomen and other parts of the trunk, with accentuation about the axillae and inguinal regions. It is frequently observed about the neck, where it attracts the attention of the dermatologist and leads to further investigation. The limbs are sometimes more or less involved, and more rarely parts of the face also. In colour it varies from some shade of sepia to a blackish hue. In the early stage the follicles are spared, giving rise to a characteristic appearance of white dots on a dark ground. This can be well seen on the abdomen. In time the discoloration becomes uniformly diffuse.

According to Reynolds, in most cases the pigmentation follows the erythematous blush, which gradually turns from red to copper colour, then to bronze, and, in severe cases, almost to black. I would point out that another factor, namely, beer, in the Manchester cases must not be overlooked. It is possible, too, that where there is no diseased condition in which arsenic is known to act beneficially, the drug having no morbid change to expend itself upon, the normal tissues have to bear the whole brunt of its energies. The pigmentary changes due to arsenic may also occur in spots and patches varying in size. As to the diagnosis, all the facts must be taken into account. As far as objective symptoms go, chorea is an important one, as it is a condition which is treated in a routine way by arsenic. In this connexion I may allude to the "intensive" treatment recommended by Dr. W. Murray, of Newcastle, namely, large doses (m xv) of liq. arsenicalis three times a day for a week only, the drug being then stopped.[17] The latter point may be overlooked, and these large doses continued for longer periods with toxic effects. The association of the pigmentation with peripheral neuritis, or with rashes such as I have dealt with; also with oedema of the face and limbs, which was frequently met with in the beer-poisoning epidemic; and with other results of arsenical intoxication, hyperidrosis of the palms, and especially keratosis, with alterations in the texture of the nails, which I will deal with presently, would be valuable in the way of corroboration, but the pigmentation may exist apart from other skin changes. The urine would perhaps contain a trace of albumen, and perhaps the test for arsenic would give positive results; this reaction was present in several of the Manchester cases. The history of epilepsy is very valuable. Sir William Gowers states that few patients who take the combination of potassium bromide and Fowler's solution for more than two years escape pigmentation.[18] It must be remembered, too, that arsenic is also exhibited over long periods in other chronic nerve complaints; that it is used as a tonic in malaria; and last, but not least, that arsenic is erroneously looked upon as a kind of panacea in a variety of diseases of the skin. Patients again may go on using an arsenical prescription for considerable periods on their own account without troubling to report themselves in any way. Or they may pass a prescription on to a friend supposed to be suffering from the same complaint as themselves. But as I have already said, what we can see for ourselves is the chief thing to depend on. The minute white dots on a dark background are characteristic. As to the differential diagnosis, the discoloration of the skin in Addison's disease is more uniformly diffused about the entire body, whereas arsenical pigmentation is irregular in its development. In the former disease the mucous membranes are affected, the face involved, and the patient is weak, emaciated, and cachetic-looking, with almost next to no pulse from time to time, to say nothing of the vomiting often present. A common cause of very marked pigmentation is chronic pediculosis corporis, such as is frequently seen in Poor-law infirmaries; I mean the so-called vagabond's disease. Melano-leucoderma is another disease which must be excluded. It is more or less symmetrical and often well marked about the backs of the hands. It consists of abnormally white pigmentless areas which gradually encroach on the surrounding dark background. Leucoderma syphiliticum of the neck met with in syphilis occasionally is more common in women than men. In such cases corroborative symptoms of syphilis would no doubt be forthcoming if carefully looked for. As to patchy arsenical pigmentation, which is more uncommon, it must be remembered that psoriasis treated with arsenic may leave pigmentation of the psoriasis areas behind after their involution. A point to be borne in mind again is that syphilis is not the only disease leading to pigmentation. *Antipyrin* is another drug which gives rise to permanent pigmented areas. This condition has been named by Brocq *eruption érythémato-pigmentaire fixe*.[19] It is described as occurring in roundish or oval patches up to a crown in size, at first pale red, but soon becoming deeper in tint, of a brownish-red or even blackish, reminding one of impending gangrene. Pigmented macules remain behind, and if antipyrin be again taken, the same macules brighten up, and on subsiding become more pigmented than before. Antipyrin is not the only drug to do this, for phenacetin, acetanilid, and allied bodies have been found to act similarly.[20]

At one time *nitrate of silver* was much used for epilepsy. When continued in small doses for long periods a bluishness of the skin sometimes ensued. The discoloration is of a slate colour and is the result of the deposition of the metal in the tissues. The face and hands are most affected, that is, the parts most exposed to light. It has been said to follow long-continued topical application of the salt to the throat. The condition is practically incurable, although improvement has been claimed by some observers. It is very rarely seen now. I have seen one case.

8. *Keratosis or Hyperkeratosis.*—This complication is observed in arsenical intoxication. It consists of a thickening of the horny layer of the epidermis chiefly about the palms and soles. Hyperidrosis of these parts has already been referred to in connexion with arsenic. The keratosis takes place about the sweat orifices. In the earlier stage a distinct thickening in this situation can be made out by careful examination with a lens. The changes must be looked for on the top of the epidermal ridges where the sweat ducts open. The appear as minute warty-looking lesions, which by increasing in size and coalescence form flat or nodule-like growths. They may also occur about the knuckles. They are characteristic and point to arsenic as the cause, although a history may not be forthcoming. In the Manchester epidemic there was also redness, with tenderness, and other nerve symptoms reminiscent of the condition known as erythromelalgia.

The *diagnosis* depends on the points I have mentioned. Arsenical pigmentation may coexist, and be a valuable confirmatory point. It is sometimes necessary to distinguish arsenical keratosis from other plantar and palmar horny thickenings, such as the condition known as symmetrical keratodermia, in which there is marked general thickening of the afore-mentioned parts, whereas in that due to arsenic the central triangles of the palm are spared as a rule, the brunt of the change falling on the thenar and the hypothenar eminences. Of course, coalescence in the latter condition may give rise to uniform thickening more or less irregular in shape, the characteristic feature of the sweat orifice localization being lost. Moreover, symmetrical keratodermia (or keratoma palmae et plantae hereditarium) is a family complaint. It has been pointed out by Mr. Hutchinson that arsenical keratosis may lead to epithelioma. I am able to show you sections from a case under Dr. Radcliffe Crocker, in which the epithelioma supervened forty years after the arsenic had been discontinued. The drug had been originally taken for psoriasis.[21] It may be that the thickened horny layers force the proliferating epithelial cells to grow downwards, and invade the corium, especially if the latter became lowered in vitality, as with advancing age, or as a result of cachectic diseases.

9. *Tumour-like lesions* may result in some cases. This is especially likely to occur in the bromide eruptions if the drug be persevered with. Köbner has recorded an instance of such a lesion being taken for a malignant growth and an amputation of the leg nearly proceeded with. Fortunately for the patient the true nature of the case was recognized at the eleventh hour.[22] Similarly this eruption may be mistaken for mycosis fungoides; the latter disease has also been simulated by the lesions produced by potassium iodide. This drug may occasionally give rise to subcutaneous nodular masses, which may or may not break down, and look something like sarcomata. In another case large red tumours formed about the body, limbs, and face with a fatal result. It is important, therefore, to bear in mind the possibility of such complications as a result of drug-taking.

Nails and Hair.—It is a well-known fact that arsenic is eliminated through these structures. Cases are on record in which arsenical poisoning has led to the loss of both the hair and the nails.

With regard to the *nails*,[23] waviness and roughness of their surface, longitudinal striations, discoloration, increased brittleness, etc., may occur. In some cases hyperkeratosis of the nail bed takes place, with raising of the nail plate. There is,

however, nothing characteristic about such changes. Various conditions may lead to them, so that in arriving at a diagnosis all the facts must be taken into consideration. The association of pigmentation or of hyperkeratosis of the palms, neuritis, and so forth, would be in favour of an arsenical origin. The nails have also been shed as a result of a generalised erythematous quinine rash followed by desquamation.

As to the *hair*, it does not appear to have been much affected in the beer-poisoning epidemic. Arsenic is supposed to improve its gloss, just as it is said to improve the coat of horses. On the other hand, loss of hair has been noted in several instances. In this place I must mention a drug which is seldom if ever used now, namely, thallium acetate, but which at one time had some vogue in the treatment of the sweats of phthisis. Its use has led to the falling of the hair, not only of the scalp but also of other parts of the body. A generalized alopecia may rapidly ensue without any objective cutaneous morbid manifestations, but the hair grows again when the cause is removed.

I have arrived at the end of my rapid—and in the circumstances necessarily incomplete—survey. I will now conclude with some general remarks. The rashes may present great variety in their characters: the majority of them in their elementary form are common to other conditions. In only a few instances practically are they characteristic, as in the case of bromides and of arsenic. In the first-named the elevated lesions I have described are so characteristic as to make a diagnosis possible on them alone. The pigmentation of arsenic is also very typical, especially in the earlier stages, when the minute white areas about the follicles on a dark background are seen. The same may be said of arsenical keratosis.

ETIOLOGY.

The special susceptibility of some individuals goes by the name of idiosyncrasy, a term which, like idiopathic, merely burkes the question of causation. It is always well, therefore, in such cases to pass the various functions and habits of the individual in review in the hope of obtaining a clue, which will sometimes be forthcoming, such as disturbances of the gastro-intestinal tract, constipation (especially in women), catarrhal conditions involving changes in the mucous membranes, dyspepsia in its protean forms. The state of the liver should be inquired into. Disease of that viscus, such as that following in the train of chronic alcoholic poisoning, for instance, may be a factor in the development of skin eruptions. Cardiac disease and renal inadequacy, leading to faulty elimination, are also factors. When albuminuria is present the effects of some drugs may be disastrous. The nervous system, although its share in the production of rashes of all kinds has no doubt been overrated, cannot be neglected. And in this connexion it is well that we should bear in mind the embryological fact that the epidermis with its appendages, including the hair and nails, and the nervous system, central, peripheral and sympathetic, are all developed from the epiblast. This relationship is exemplified in the case of arsenic, which leads to skin, nail, and hair changes, and also to neuritis. In the matter of arsenical pigmentation, again, Leslie Roberts came to the conclusion that the pigment was formed *in situ* in the epithelial cells, and was not derived from the cutis; and further, that the pigmentation of the palms and soles, though rarely visible clinically, might be present in abundance microscopically.[24] Speaking of arsenic leads me to point out that this drug is very likely to give rise to morbid alteration of the skin, such as pigmentation, when taken over long periods, whatever the class of patient. This is in contrast with what obtains in the case of other drugs which require favouring conditions. Thus infants and children are especially prone to bromide rashes. Again, some patients are able to take very large doses of iodides for months together without any ill-effects. On the other hand, a very small dose in another patient will give rise to a rash. Moreover, a susceptible patient will react again and again in this way to the same drug, and in some instances, whether it be applied locally or given by the mouth. I have observed, too, that such patients may be susceptible to more than one drug. The intolerance may be extreme, as when a rash follows the mere handling of iodoform gauze. Heard has seen a generalized erythematous rash from ½ gr. doses of quinine.[25] Again, an individual previously immune to a drug may ultimately become susceptible. This, I take it, is what has been called acquired idiosyncrasy; but it means no doubt that some change has occurred in the organism, a change we cannot grasp, and which we pretend to explain by a word which itself requires explaining. Congenital and hereditary conditions may also play a part. Here, as in the case of idiosyncrasy, it is important to gather patiently all the facts we can which may serve as material for future generalization. In dealing with habits, the associated actions of other toxic products, either introduced into or brewed within the organism, must not be overlooked. Perhaps the internal secretory glands may some day be shown to play a part. An important point is the fact that a drug may occasion an eruption some time after it has been left off.

DIAGNOSIS.

With regard to this, I have already dealt with diagnosis in particular when describing the eruptions themselves. In a general way, whenever an unusual-looking rash comes before you, the possibility of a drug rash should be borne in mind. If the patient has been under your own care, the medication you have prescribed will occur to you. On the other hand, the patient may have taken remedies on his own responsibility, unknown to you, or may consult you for the first time on account of the rash. In all cases it is important to see as much of the eruption as possible. The duration, distribution, and mode of development, together with a general examination of the patient as to the condition of the various functions, are the points which will help you to arrive at a right conclusion. The duration alone will in some cases exclude the acute exanthemata, and variation from the mode of invasion of the latter will also be of great assistance. The urine should always be examined. Inquiry as to a pre-existing skin disease should be made.

TREATMENT.

In the treatment of drug eruptions, the first thing to do is to stop the offending remedy. But even then it must not be forgotten that the eruption caused by bromides and iodides may persist for a time. The next step is to eliminate the drug by the way of the kidneys or bowels. Diuretics are therefore useful, and milk in this respect may be found valuable, both as a diuretic and as a food which gives little work to the organism. Aperients are indicated for intestinal elimination. It is an interesting point to remember that poisons not only act on the skin, but also on the mucous membranes lining the alimentary tract. Külz has shown that when alkaline bromides and iodides are substituted for chlorides, the gastric juice becomes acidified by hydrobromic and hydriodic acid respectively, instead of hydrochloric acid.[26] A certain amount of diarrhoea in drug rashes should not be interfered with any more than you would suddenly stop a similar condition in albuminuria; it may be a natural effort of the body to get rid of the poison. The exhibition of diuretics and aperients will be governed by the general condition of the patient. It is well-known that potassium iodide helps to get rid of arsenic and mercury by releasing them into the circulation.[27] But it is well to bear in mind that more harm than good may result from the employment of this method, as is well exemplified in the case of mercury; and that the sudden charging of the blood with the *fons et origo mali* may lead to an aggravation of the symptoms. It is also important not to push a drug, which instead of ameliorating a morbid skin condition is doing the distinct contrary. In bromide eruptions, liq. arsenicalis is of assistance. The latter given in association with the bromide will usually in cases of epilepsy prevent the rash of the latter, but not always. The possibility of inducing arsenical keratosis and pigmentation must not be lost sight of. In epilepsy, Féré insists on the part played by intestinal catarrh in the development of bromide rashes; these were avoided, he found, by the use of intestinal antiseptics. When the drug is conveyed through the mother's milk, she must either stop the drug, or the infant must be weaned and artificially reared. Locally, drug eruptions must be treated on the same lines as other skin affections.

PROGNOSIS.

This is favourable as a rule, but in the case of argyria nothing can be done. In slight and recent cases of arsenical pigmentation, the latter may fade, but little change is to be expected, at any rate for a very long time, in marked ones. Arsenical keratosis is also an obstinate condition. Prognosis would of course be guided by the general condition of the patient. Some cases have terminated fatally, but this is a rare issue.

PATHOGENESIS.

I may say at once that the way in which drugs lead to

morbid cutaneous manifestations is probably more complex than appears on the surface. As in the production of all disease, various factors are at work, some of which are at present unknown. Recent study of the blood and of immunity points the way, I think, in the direction of a solution.[28] Behrend's view that drug eruptions may be the result of the production of toxins in the body is probably correct in some cases. It receives support from the fact that eruptions may occur some time after the exhibition of the drug. The rashes due to antitoxins may be mentioned in this connexion. The sweat-excretory view was put forward long ago by Trousseau.[29] Other hypotheses are that drug eruptions depend on changes in the tissues themselves or in their vessels. Others rely on the peripheral nerves, on the vasomotor centres, on trophic nerve influence. As to the last named physiologists state there is no proof of the existence of such. Howbeit, it can be safely said at the present juncture that the intimate mechanism of drug eruptions is not known. Normally, the tissues are bathed in sodium chloride, but may not the use of bromides and iodides lead to rashes by substituting bromine and iodine for the chlorine?

I will conclude with the practical application of a knowledge of drug eruptions. I have already insisted on the part played by zoster in the Manchester epidemic. Sir William Gowers relates an interesting instance bearing on this point.[30] In a case of peripheral neuritis in a young Indian civil servant, arsenical pigmentation gave the clue to his disorder. It was ultimately found that there had been a prolonged attempt to poison the patient in India. A curious fact, too, was that about the commencement of his illness, which had been diagnosed as intermittent fever, he had had an attack of shingles. I need hardly tell you that in India arsenic is largely used as a poison, and the same custom apparently prevails in other Eastern and semi-Eastern countries.[31]

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DATURA POISONING IN THE FEDERATED MALAY STATES.

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It has long been known that datura fastuosa, datura stramonium, and some other plants of the nightshade family, such as atropa belladonna and hyoscyamus niger, possess poisonous properties.

Botany of the Daturas.

The species D. fastuosa and D. alba are members of the genus datura which are commonly found in the Federated Malay States. They are wild or semi-wild plants, which grow on the refuse land of our native villages or thrive on the borders of cultivated land, in the kitchen gardens, near stables, and elsewhere. These two plants of the Peninsula are identical with the datura fastuosa (Linn.) and the datura alba (Nees) of India, where they are also found more or less commonly with other members of the same genus.

Datura fastuosa (Linn.), the black datura, is generally taken as a type of the tropical varieties of the daturas. It is a quickly growing herbaceous plant belonging to the natural order *Solanaceae*, about 4 to 6 ft. high, with widely-spreading branches and conspicuous trumpet-shaped flowers.

Habitat.—Common almost everywhere, especially when protected. Malay name—"*kechubong itam*" or "*kechubong ulong*": "*trong pungah*" in Kedah.

Distribution.—South-Eastern Asia and Malay Archipelago. Leaves: broadly ovate, often about 5 to 10 in. long (12.5 to 25 cm.), and 4 in. broad (10 cm.) at the widest part, margin repandly toothed, petiole 4½ in. (11 cm.) long, apex acute, base unequal, glabrous or sparsely tomentose upper surface dark greyish-green, under surface paler. The fresh leaves exhale a fetid smell when bruised, and have a slightly bitter taste Flowers: axillary, on short peduncles about ½ in. (1 cm.) in length, single erect. Calyx tubular, five-angled, five-toothed, teeth reaching about half the length of the corolla tube. Corolla funnel-shaped (infundibuliform), purple or white without, and white within: five-lobed, twisted in bud Lobes oblong-ovate, cuspidate, length of funnel about 6 in. (15 cm.). Stamens inserted near the base of the tube, included, anthers linear with parallel cells, opening by introrse slits. Ovary two-celled, falsely four-celled by false septa, ovules attached to both the true and the false septa. Style filiform, stigma bilamellate. Fruit an oblong globular capsule, 1½ in. (4 cm.) in diameter, spinous, dehiscing by halves, seeds indefinite embryo with characteristic curvation. Fruit stalk recurring with maturity until the ripe fruit becomes pendent.

Datura alba (Nees), the white datura, *kechubong puteh*, is a taller plant than the preceding, with trumpet-shaped flowers, either pure white in colour, or yellowish-white tipped with violet. The flower is smaller and more tubular in shape than that of the datura fastuosa, the teeth of the calyx being less than half the size, and lanceolate acuminate in shape. The differences between the two plants, however, are so slight that they can scarcely be classed as being specifically distinct from each other.

Datura alba is the common datura of the Federated Malay States, but in certain districts datura fastuosa is said to be the more common of the two. Both plants are found in the Straits Settlements.

Datura stramonium (Linné), owing to its wide distribution in Europe and America, as well as in Asia, the best of all the ten or twelve species which have been recognized, is probably D. stramonium, or the dwarf thorn apple, which, however, so far as I know, does not occur in the Federated Malay States. It is necessary to refer to it, as it has been taken as the type of the temperate or tropical-alpine series, and because of the almost identical toxological significance which is attached to the datura fastuosa, datura alba, and datura stramonium at the present time.

Popular descriptions of the tropical daturas as the black and white kinds has led to a great deal of confusion, it having been often taken for granted, on the authority of natives of India, that the black datura possesses more powerfully poisonous properties than the white, but of the same nature. No proof of this, however, has yet been given. By reference to the colour of the flowers alone no botanical distinction can be made, and it may be remarked that soil and circumstances may modify the colour of the flower or even double or treble the corolla.

Description of the Datura Seeds.—The seeds, in which the poisonous property chiefly exists, bear some slight resemblance to those of the common chillies (capsicum), and at times have been mistaken for them.

In many instances the light colour and the pungent taste of the latter would be sufficient to make a distinction, but when either is cooked and mixed with food, such as boiled rice, recognition by means of the taste alone cannot be relied upon. The resemblance is most marked in the unripe seeds, but a careful comparison of the two kinds shows many morphological points of difference; the datura alba seed is almost reniform in shape, having one end smaller than the other. It has been not altogether fancifully compared to the human ear, but the margin is angular; size about ¼ in. (5 millimetres) in length, rather less in width; no marked odour; taste slightly bitter; surface somewhat shrivelled except on the two compressed sides; testa tough and rough, being made up of a convoluted series of thick-walled cells, so arranged as to give a pitted appearance when seen with a lens. Datura seeds in powder may be distinguished by means of the cavernous appearance of their exosperm when seen under the microscope.

The embryo is embedded in a white oily albumen, and curved in a manner peculiar to the genus. By cutting parallel to the flattened side the embryo may be seen by the naked eye to be curved, twisted, and recurved, so as to resemble the head of a shepherd's crook.

A watery decoction of the datura seeds, when placed in the eye, will cause dilatation of the pupil

The seed of the capsicum is kidney-shaped, a little shorter and wider than that of the datura, pale yellow in colour, uniformly rough, and when

seen in section as described above, the embryo is found in a flesh albumen and curved like the figure 6. Capsicum seeds in powder may be recognized by means of the application of heat, the acrid vapours of capsaicin being at once detected by heating even a small portion.

A watery decoction, when placed in the eye, causes irritation without dilatation of the pupil. The seeds of the datura fastuosa resemble those of datura alba. They are about ¼ in. (4 millimetres) long, of an oblong kidney shape, flatter, and darker in colour. About eight of them weigh 1 gr. in the dried state.

DATURA POISONING: CLINICAL CASES.

Death from datura poisoning seems to be comparatively rare; but, although the drug has been known medicinally in the East from time immemorial, and is often used by Asiatics for purposes of revenge or for drugging victims with criminal intent; lethal doses are seldom given intentionally. Three instances of drugging by datura have recently occurred in Pahang and one in Selangor. It is to be observed that these four cases merely furnish examples of the datura poisoning which is of every day occurrence in India.

CASE I. *Datura Seeds Mixed with Food by Pahang Malays.*—In the month of April, 1896, a Malay named Saiyed, was charged at Kuala Lipis, Pahang, with causing hurt by means of poison. He pleaded not guilty, but, although the motive of his crime was never actually discovered, he was eventually convicted of having mixed datura seeds in a curry, thereby stupefying a Malay constable, his wife, and their niece, and a girl friend, as well as two men, all of whom happened to eat of the same dish. The symptoms in each case were similar, namely, attacks of giddiness, passing into unconsciousness for a few hours, followed by complete recovery. This group of cases is of some interest, owing to the fact that one of my colleagues, who appeared for the prosecution, was able to give evidence of a very practical kind. A sample of seeds and powder which had been found in the prisoner's handkerchief was sent to Dr. D. H. McClosky for identification. I am indebted to him for the following notes of his personal experiment. He says: "I took pinch doses of the sample, which consisted of the bruised seeds, and had the following experience: I felt flushed, dry about the mouth and throat, and became hoarse. When I tried to walk I staggered about like a drunken man and got very excited. I then took an emetic of zinc, vomited, and slept for about five or six hours." Dr. McClosky is further said by an eye-witness to have been in a delirious state, rolling on the floor, and uttering inarticulate cries.

CASE II. *Datura Seeds Mixed in Food by Pathans.*—In February, 1900, a Pathan was found by the roadside in Kuala Lipis, and brought to the hospital about midnight. He was half conscious, very restless, had dilated pupils, and was supposed to be intoxicated with alcohol. Mr. Henry Philips, the chief dresser, who saw him the next morning, fortunately suspected datura poisoning. He applied the stomach pump, and found datura seeds, together with partially-digested rice and green peas, in the gastric contents. The patient made a complete recovery, and two of his fellow countrymen were subsequently sentenced to rigorous imprisonment for having administered the poison with intent to facilitate robbery.

CASE III. *Datura Seeds Mixed in Tea by Kedah Malays.*—At Kuala Kuantan, in July, 1901, two natives of Kedah were tried at the assizes and found guilty of administering datura seeds to a party of Chinese. Five different preparations of datura were found in their possession, some of which had been successfully used to produce unconsciousness in three Chinese, whose goods had then been stolen from their shop. They had been administered in tea and the stupor produced lasted apparently for several hours. The Chinese recovered without treatment. They stated that they had suffered from dryness of throat, uncertainty of vision, and "drunkenness."

CASE IV. *Datura Seeds Mixed in Tea by Chinese.*—In January, 1902, a family of Japanese in Kuala Lumpor, consisting of a man and his wife and son of about 10 years of age, were poisoned by datura seeds, which had been administered, as far as could be ascertained, in tea by a Chinese cook. I am indebted to Dr. Travers for the following brief and excellent notes: The man and the woman had flushed faces, bright eyes, dilated pupils, and suffered from giddiness. The man felt hot, dry, and parched in the throat, and had uncertainty of vision. The woman was semi-unconscious for a time, and kept picking at imaginary objects. Both recovered by the aid of emetics. The effect of the poison on the boy was more severe. About one hour and a-half after taking it he was seen rolling about the floor; he crawled, but could not walk without falling. He kept uttering inarticulate cries not unlike the mewing of a kitten, and appeared to be in a state of delirium, with flushed face and dilated pupils. He could not be induced to swallow anything, and gradually became very excited. He then fell into violent fits of temper, struck at imaginary objects, and was delirious all day, from 7 a.m., but slept soundly at night, and had completely recovered by the next morning. Dilatation of the pupils was very marked and persistent. It is noteworthy that in this case the drug was given on an empty stomach. The tea in which it was administered was the ordinary weak infusion of Chinese tea which is used every day by natives in the Federated Malay States.

MODES OF ADMINISTRATION.

The favourite mode of administering the drug for criminal purposes is by the mouth, the raw seeds being commonly used. In the Federated Malay States they are generally crushed and put into ordinary tea or into the common food, which is some form of rice curry. Cases have been known, however, of the seeds being mixed with other poisons, such as *chandu* (opium prepared for the pipe) and *ganja* (Indian hemp), with the addition of a little sugar.

It is also, perhaps, worthy of note that they are sometimes mixed with other substances which are commonly supposed to be poisonous. For example, one of the exhibits in the Kuatan trial (Case III) was a carefully-prepared powder of datura seeds mixed with the fine hair of the young bamboo shoot (*miyang rebong*); *kulat taun*, a kind of toadstool; *gadong utan*, a wild yam (dioscorea daemona); and the fruit of the *rengut*, a climbing plant (epipremnum giganteum, Schott). These were all in dry powder, and being inodorous were in a form calculated to escape observation when mixed with food. In Pahang the seeds have been burnt with *gaharu* (aquilaria malaccensis), an incense wood well known as lign-aloes, also with *dama mata kuching*, a common local resin, for the purpose of producing lethargy by means of the fumes, and in the Temerloh district I have known of two cases in which this state was successfully produced in the victim with the object of profligacy or plunder.

POISONOUS EFFECTS.

The three most characteristic symptoms of poisoning by datura are the same as those of poisoning by atropine, namely:

1. Paralysis of the salivary nerves, leading to dryness of the mouth.
2. Paralysis of the third nerve, causing dilatation of the pupils, with imperfections of vision.
3. Paralysis of the inhibitory fibres of the vagus in the heart, causing sometimes very rapid action of the heart.

Other effects which should be noted are—that when the seeds are given internally (and the professional thief appears to know the exact dose necessary) symptoms of insensibility may commence early—within a quarter of an hour)[1]. The effect of the drug may last for two days, and is more severe, as a rule, if it is administered during childhood and old age. Many fatal cases of poisoning by the fruit and young seeds of datura are reported by Chevers,[2] as well as five fatal cases of poisoning by the leaves. They are mostly in children and aged persons.

Excessive dilatation of the pupil may be regarded as a dangerous symptom in datura poisoning. The loss of power of accommodation which is thereby produced, and the hallucinations caused, may explain the disorders of vision which are so common. There is also a certain degree of impairment of memory before complete recovery.

In India this after-effect has been regarded as one of the causes of insanity, and it seems not at all improbable that slow or chronic poisoning by datura would tend to weaken the intellect. In absence of any suspicious circumstances the differential diagnosis of datura poisoning may be difficult. As with atropine, the symptoms of daturin poisoning have occasionally been confounded with those of rabies, delirium tremens, and mania.

NATIVE THERAPEUTICS.

The datura plants are generally recognized as being poisonous. The leaves are almost universally used in the treatment of asthma, but it is significant to note that datura is not often given internally as a remedy by natives. The Malays mix leaves with urine or powdered rice and saffron, and apply them externally for various pains and swellings. They will heat them over a torch until smoked, and then apply them as a poultice over the spleen in intermittent fever. The root is powdered and applied to the gums in order to relieve the pain of toothache. The flowers are dried and roughly powdered with or without the leaves and rolled into cigarettes for the relief of asthma.

An instance of alarming narcotism from the application of D. stramonium leaves to an extensive burn is recorded by Christison; but although datura is frequently used as a therapeutic agent for local application, I have never heard of a similar accident in Malaya. It may be of interest to remark that datura is highly prized by Malays, all parts of the plant being used and valued; an infusion is often employed by agriculturists as a dressing to prevent the destruction of the young padi (rice) plant by insects. The datura, or "devil's trumpet," is regarded as a good medicine by Tamils, and is often used by them in the Federated Malay States, but generally as an external remedy. They are fond of applying the leaves with cowdung in the form of a poultice to relieve the pain of boils, carbuncles, and piles, and also use them in

powder, mixed with "ghee" (clarified butter) in their treatment of facial neuralgia and dogbite, or steeped in spirits as a lotion to promote the growth of the hair. They are said to administer the powdered root in cases of epilepsy and insanity.

The dried flowers of datura alba (called *Nau yeung fa*) can be bought in most Cantonese drug stores, where they are frequently dispensed for the relief of asthma and chronic dry cough, but the use of the seeds seems to be eschewed by the Chinese druggist.

Toxicology.

So far as is known at the present time the active principle of the datura plants is a mixture of a kind of atropine and hyoscyamine. The term "daturin" has been applied to this mixture, but the true nature of the component alkaloids has yet to be finally determined. Schmidt properly insists on speaking of stramonium atropine as contrasted with belladonna atropine: because, although chemically identical, some difference may be recognized both in their physiological and therapeutical actions.[3]

The medicinal dose of daturin has been given as $\frac{1}{2}$ mg. to 1 mg., or $\frac{1}{120}$ gr. to $\frac{1}{60}$ gr.,[4] but it is difficult to say from the reports of fatal cases by datura poisoning how much daturin will constitute a fatal dose in any given case.

With regard to clinical experience of poisoning by the closely-related datura stramonium seeds, a child has died in twenty-four hours after swallowing a dose of 16 gr. (128 seeds), although 20 seeds had previously been dislodged by vomiting, and 80 by purging.[5]

Luff states that about 100 seeds form a fatal dose, death occurring in seven hours.[6] Taking the mean of the proportions of the total alkaloid stated to be contained in the seeds by Squire[7] and by Gunther[8]—namely, 0.5 per cent. and 0.318 per cent. respectively—this is equal to about $\frac{1}{25}$ grain of the alkaloid daturin. The whole plant is said to contain the active principle in the proportion of only $\frac{1}{50}$ per cent.[10]

Seventeen or eighteen gr. of the officinal extract of stramonium seeds (dose, $\frac{1}{4}$ to 1 gr.) have caused death.[6] Recovery, on the other hand, has occurred after the vomiting of more than 100 seeds.[9]

Recent Chemical Experiments.

Important points to discover are:

(*a*) The amount of poison which is present in the common daturas of the Federated Malay States.

(*b*) The relative degrees of strength of the poisonous principle in each.

(*c*) The difference, if any, between the daturin contained in D. stramonium and that contained in D. fastuosa and D. alba. I have attempted to elucidate this by examining both the fresh plants and the dried seeds. The experiments were made at the Institute for Medical Research at Kuala Lumpor. I am greatly indebted to Dr. H. E. Durham for the results that have so far been obtained by them, and have much pleasure in expressing my appreciation of the valuable experience which his kindly instruction has afforded me. It was found that the mixed alkaloids could be easily removed from an ammoniated extract by shaking out with benzol. In the case of a full-grown datura alba plant which was treated in this way, the refuse remaining after extraction by benzol was found to have no further mydriatic effect on a cat's eye, and had no poisonous effect when given in large doses to a puppy. It was therefore concluded that the whole of the active principle had been removed by means of the benzol. Want of time and opportunity prevent me from making further experiments in this direction, but I hope to resume my investigations on account of the great importance of this branch of the subject.

Datura Poisoning; Treatment.

Cases of poisoning by datura are generally treated by more or less time-honoured methods. It has been proved, however, that implicit reliance cannot be placed on emetics, and the early administration of a purgative is often advisable. Daturin is precipitated by tannic acid; and the use of any decoction containing tannin, such as tea or coffee, which is strong enough to destroy the active principle, may be of value. Like atropine, it is excreted from the system by means of the kidneys.

Opium administered by the mouth or through the rectum, the various salts of morphine, pilocarpin, and chloroform inhalations have been given successfully in cases of stramonium poisoning, but no chemical antidote by which daturin has been decomposed in the animal economy appears to have been either used or suggested up to the present time.

Nevertheless, there is reason to believe that we possess an efficient antidote in potassium permanganate. Potassium permanganate has the important chemical property of oxidizing the vegetable alkaloids, and has been used with success in many cases of opium poisoning. This salt may be introduced into the stomach without danger in solutions not stronger than 1 gr. to the oz. Washing out, therefore, by means of a tube with a dilute solution of this strength appears to be indicated so long as any datura remains in the stomach.

Experience alone can settle the question as to whether the potassium permanganate will be of any therapeutic use after daturin has been absorbed into the system, but as the action of the poison is doubtless prolonged, especially when taken with large quantities of food, we should expect that repeated small doses would be of great value in many cases.

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EXPERIMENTAL HAEMOGLOBINURIA IN A CASE OF BLACKWATER FEVER.

UNDER THE CARE OF

PATRICK MANSON, M.D., C.M.G.,

At the Branch Seamen's Hospital, Albert Dock, E.,

REPORTED BY

W. G. ROSS, M.D., M.R.C.S., and GEORGE C. LOW, M.B.,

Inability to take quinine is a bar to residence in highly malarious countries. Therefore, idiosyncrasy in the direction of quinine haemoglobinuria is a definite indication against return to West Africa. When the patient (who is the subject of the following notes) declared that quinine always gave him black water, and we were requested to advise his employer as to his future for further service in West Africa, and as he expressed willingness to give a demonstration of the fact, his offer was accepted partly in his own and his employer's interests, and as an object lesson for the students at the London School of Tropical Medicine.

T. R., aged 25, English, last from the Gold Coast Colony, was admitted on March 19th, 1903.

Previous History.—He went to the Gold Coast in June, 1901, and had his first attack of fever in January, 1902; it was not severe, and he was not laid up. He had three similar attacks up to September, 1902, and was always treated with quinine, 10 gr. at a time, and also took this dose irregularly at considerable intervals as a prophylactic. In October, 1902, he had an attack of blackwater fever; the first symptoms led him to believe that he was about to have an attack of malaria. He took 10 gr. of quinine at 5 p.m. one evening (he cannot remember the date), and about midnight he had vomiting, diarrhoea, and frequent micturition. He noticed that his urine was black. He was attended by a doctor, who stated that his temperature at one time was 107°. He was in bed three days and was deeply jaundiced. The black water passed off in twenty-four hours, and he had no further attack in Africa, and arrived home early in March. On March 11th, feeling chilly and feverish, he took 10 gr. of quinine at 7 p.m., and at midnight diarrhoea and vomiting set in, and he began to pass black water. All symptoms had disappeared in the morning. He consulted Dr. Manson, who sent him for observation and experiment to the Branch Seamen's Hospital in connexion with the London School of Tropical Medicine.

State on Admission.—On March 19th, 1903, temperature 99.6°; is anaemic spleen enlarged, not tender.

Blood Examination.—No malarial parasites; no pigmented leucocytes. Red corpuscles, 3,425,000; leucocytes, 10,000; haemoglobin (von Fleischl), 65 per cent.

Differential Leucocyte Count.—Polymorphonuclear, 59 per cent.; large mononuclear, 18 per cent.; lymphocytes, 21 per cent.; eosinophiles, 1 per cent.; mast cells, 1 per cent.

On the following day the temperature was normal and he felt quite well—he remained so until March 23rd, when Dr. Manson decided to test his statement that quinine gave him haemoglobinuria. His blood was examined during the day and gave red corpuscles, 3,635,000; leucocytes,

7,000; haemoglobin, 65 per cent. At 9 p.m. he was given the 10 gr. quinine by the mouth. He slept until 1 a.m., when he had a moderate rigor, nausea, and diarrhoea, and passed a large quantity of black water. His temperature was 99° at 2 a.m. In the morning his urine began to clear, and by 7 p.m. was pale yellow, his temperature then being 98.8°. The examination of the black sample of urine showed one-third albumen, methaemoglobin crystals, and a few haemoglobin casts; the spectroscope also showed methaemoglobin.

Blood Examination, 11 a.m.—Red corpuscles, 3,000,000; leucocytes, 10,000; haemoglobin, 59 per cent.

Differential Leucocyte Count.—Polymorphonuclear, 77 per cent.; large mononuclear, 8 per cent.; lymphocytes, 13 per cent.; eosinophiles, 1 per cent.; mast cells, 1 per cent.

This examination showed a loss of over half a million of red corpuscles in a few hours.

On March 25th his anaemia was marked and he was slightly jaundiced.

Blood Count.—Red corpuscles, 3,000,000; leucocytes, 11,800; haemoglobin, 57 per cent.

Differential Count of Leucocytes.—Polymorphonuclear, 56 per cent.; large mononuclear, 21 per cent.; lymphocytes, 20 per cent.; eosinophiles, 2 per cent.; transitional, 1 per cent.

On March 26th daily hypodermics of 15 minims of Squire's arsenate of iron were ordered, and on the 27th euquinine gr. 2 three times daily. His progress was favourable, but his blood regeneration was slow.

Blood Count (March 30th) was: Red corpuscles, 3,320,000; leucocytes, 6,200; haemoglobin, 58 per cent.

He left on March 31st with instructions to continue iron and arsenic and euquinine for one month.

This experiment, deliberately planned and carried out, is one more proof that in some individuals under certain unknown conditions quinine produces haemoglobinuria. The antecedents of the case seem to indicate that the conditions which led to the formation (so to speak) of the haemoglobinuria idiosyncrasy were brought about by neglect of the use of quinine in the earlier stages of what may have been a special form of malarial infection and the consequent development of an intense and peculiar cachexia.

HODGKIN'S DISEASE AND ARSENICAL POISONING.

By WALTER BROADBENT, M.A., M.D., M.R.C.P.,
Assistant Physician to the Sussex County Hospital, Brighton.

THE following case of Hodgkin's disease is of particular interest from the effect of arsenic given medicinally.

A lady, aged 58, noticed in June, 1901, some slight swellings in the neck; she also for a few months before had been getting short of breath on slight exertion. In July she consulted a physician in London, who found "enlarged glands, occipital, cervical, subclavicular, inguinal, abdominal and pelvic, varying in size from a pea to a chestnut, all quite distinct, rather firm and hard." She also had slight oedema of the feet. In the lungs there were some scattered rhonchi, and the air entry in the lower half of the left lung was deficient, presumably from pressure of mediastinal glands. He diagnosed Hodgkin's disease, and ordered liq. arsenicalis mv ter die. At the end of a fortnight she went to him again feeling very much better, less short of breath, with no oedema of the feet, and a distinct diminution in the size of the glands, but she complained of a burning pain in the soles of her feet and had a slight purpuric rash on her shins. In consequence the arsenic was stopped, but there came on keratosis of the soles and slightly of the hands, followed by desquamation, increased pigmentation of the skin, and four weeks after the stopping of the arsenic a severe attack of herpes of the right side of the neck; this was succeeded by most intense and persistent neuralgia, which resisted all treatment. During this time the glands all rapidly decreased in size and in two and a-half months had almost disappeared, but then began to enlarge again.

When she came to Brighton at the beginning of October, 1901, she still had intense neuralgia and hyperaesthesia of the right side of the neck, but otherwise was in fair health. A few glands could be felt in both sides of the neck and in the groins, but none were larger than small beans. There was no evidence of mediastinal pressure, the heart and lungs were normal, and neither liver nor spleen were enlarged. The blood showed no leucocytosis. Under phosphorus there seemed no increase of the glands for three weeks, but they then began to enlarge rapidly. I then tried liq. arsenicalis in 2-minim doses, but in ten days there was some tingling in the feet and pain in the calves of the legs, so a return was made to phosphorus in large doses, and also as disinfectants of the alimentary tract sodium sulphocarbolate and perchloride of mercury; I regret that a trial was not given to lavage of the stomach, which has proved so beneficial in a few cases, but there was no evidence of dilatation. The glands steadily increased in size, the liver could be felt below the costal margin and the spleen was also enlarged. She had an irritating cough and was short of breath, the air entry in the left lower lobe was diminished. Since nothing delayed the disease except arsenic, I determined to try sodium cacodylate, and, beginning with ½ gr. hypodermically, I increased up to ¾ gr. at the end of the week; after a week's interval without injections there was a slight diminution in the size of the glands and no symptoms of arsenical poisoning; ¾ gr. was then injected every day for another week and the improvement continued. After another interval of a week ¾ gr. was injected every day for a third week. At the end of this there was a trace of albumen in the urine, so I deemed it safer not to give any more cacodylate.

The glands slowly decreased and all went well till the fifteenth day, when an acute attack of pleurisy started on the left side; she also complained of pain in the legs, which were slightly swollen. Two days later there was a friction rub on the right side and evidence of a moderate amount of fluid in the left chest; the legs were very oedematous and painful with several deep red erythematous patches upon them. Her pulse was 120, temperature not higher than 99° at night; the urine contained no albumen. Fluid rapidly accumulated in the right chest but did not increase in the left, there was also some fluid in the abdomen. A fortnight after the onset of the pleurisy I drew off 28 oz. of grey milky fluid from the right chest, a week later 32 oz. of the same fluid not quite so milky, and by Southey's tubes 15 oz. of serum from the feet. A fortnight later a final aspiration drew off 36 oz. of quite clear fluid from the right chest. The milky fluid did not look like pus, though microscopically it contained large numbers of leucocytes. The glands all rapidly diminished in size meanwhile, and the oedema of the legs quite disappeared and she seemed to be making progress for a time, but the swelling of the glands began to return, and she finally developed great irritability of the stomach, which resulted in her death from exhaustion in April.

This is a case of Hodgkin's disease in a person peculiarly susceptible to arsenic; it is interesting to note that the glands diminished under arsenic with quite unusual rapidity. The pleural effusion, ascites, and oedema I cannot help attributing to the sodium cacodylate, since the glands were steadily becoming smaller before and during this part of the illness, and these symptoms were present in some of the victims of the recent arsenical beer epidemic.

In going through the literature of Hodgkin's disease, a case reported by Dr. J. H. Bryant in the BRITISH MEDICAL JOURNAL of September 14th, 1901, p. 706, struck me as of peculiar interest.

A man, who had noticed the presence of enlarged glands for four years and had been unable to work for the past six weeks, and presumably had been under treatment outside, was admitted to hospital with the gland trouble well marked, but in addition he had a cough and occasionally spat up bright red blood. No tubercle bacilli could be found and there was no evidence of phthisis; he had a right pleural effusion. He used to "vomit after meals, and also complained of an acid taste in his mouth"; another troublesome symptom had been "itching of the skin, which was rather dusky." There was some albumen in his urine; the pulse was 108. He was ordered 6 minims of liq. arsenicalis three times a day. A fortnight later "there was marked oedema of both legs, the penis and scrotum, and over the sacrum and abdomen up to the manubrium." A fortnight later still the skin appeared to be more dusky, the dullness had increased on the right side of the chest to the level of the second rib The arsenic was increased to 7 minims. A week later paracentesis abdominis drew off "5½ pints of turbid and rather milky fluid. The turbidity was not cleared up by ether; a good many leucocytes were found, but no fat globules." A week later "9 pints of chylous fluid were withdrawn"; a week later still 68 oz. of clear fluid were drawn from the right chest, and the abdomen was again tapped. Then the man died.

Turning to Dr. E. S. Reynolds's description of arsenical poisoning in the BRITISH MEDICAL JOURNAL of December, 1900, one finds: "The face is dusky red.....In many cases there is persistent vomiting.....In some cases much itching of the skin.....A few patients have spat blood, there being no symptoms nor physical signs of phthisis.....There is sometimes very marked general oedema like that seen in beri-beri."

One can hardly doubt that the case I have just quoted suffered from arsenical poisoning. Then, as to the fluid drawn off from the abdomen, it is called chylous, evidently because the cause was supposed to be blocking of the lacteals by large glands; but the description "turbidity, not cleared up by ether, a good many leucocytes but no fat globules," shows that it is not chylous, but of the same nature as the fluid drawn from the pleural cavity in my case.

At the necropsy "three pints of yellow fluid were found in the right pleural cavity. The right lower lobe was covered with recent yellow lymph which readily peeled off, beneath it were many subpleural ecchymoses. Several hard nodules could be felt in the lower lobe of both lungs. There was a good deal of fibrous tissue infiltrating the lungs. Microscopically the nodules were made up chiefly of fibrous tissue, and in places there were collections of lymphoid cells." After the description of the other organs there came the following remarks: The macroscopic appearances of the organs were most peculiar and by no means characteristic of lymphadenoma. The most marked feature presented by the sections examined microscopically was the large amount of fibrous tissue present. This was peculiarly noticeable in the glands, spleen, and liver. In the liver the fibrous tissue was unequally grouped between the nodules, but was by no means confined to this area, for in many places it was infiltrating the lobules themselves, here and there replacing and here and there surrounding the liver cells; in fact, the change had the appearance of a mixed interlobular and intracellular cirrhosis. There was only one part of the body in which a lesion quite typical of lymphadenoma could

be found, and that was in the pericardium. After saying that no history of syphilis or alcoholism had been obtained, and that the changes superadded to the lymphadenoma did not correspond with either accurately, he concludes that "without doubt some other change, such as that which may result from syphilis and alcoholism, must be added to lymphadenoma to explain these pathological changes satisfactorily."

The man had been troubled with large glands for four years, probably in that time many doctors had diagnosed the case as one of Hodgkin's disease, and all of them would have prescribed arsenic. It seems likely, therefore, that this is a description of the changes wrought by constant doses of arsenic, an arsenical cirrhosis of the liver, spleen, and lungs.

Professor Osler, in his *Textbook of Medicine*, describing Hodgkin's disease, says:

In connexion with the affection of the abdominal glands there may be bronzing of the skin....Bronzing may occur, and occasionally a most intense and troublesome prurigo.....Palpitation is common.....Pleural effusions are not uncommon.....Often there are dropsical symptoms.

Dr. Murray, in Clifford Allbutt's *System of Medicine*, says:

The solar plexus may be implicated with bronzing of the skin as in Sir W. Jenner's case, in which Sir W. Gowers found the solar plexus was involved, though the suprarenal capsules were unaffected.....Effusion into the pleural cavity often takes place, either as a part of a general anasarca or as a result of pressure on the azygos or bronchial veins..... Diarrhoea may take part in bringing about the fatal termination.

Is it not probable that most of these are symptoms of arsenical poisoning? Dr. Reynolds in his papers on the effects of arsenic says:

Many of the cases are just like Addison's disease....Much itching of the skin....Sometimes there is very marked general oedema....Diarrhoea has been noted in the acute cases.

In other diseases usually treated with arsenic one may also meet with possible signs of poisoning. A few months ago I was told of a case of pernicious anaemia where sudden general oedema supervened, though the blood count had markedly improved under arsenic: and may not the "pigmentation of the skin," "oedema," "ascites," "sensory disturbances" mentioned in accounts of pernicious anaemia and leucocythaemia, and the cirrhosis of the liver in Banti's disease, be due to arsenic, and even the vomiting and diarrhoea, which often are the cause of death?

CASE OF SEVERE BELLADONNA POISONING.

By GEORGE R. LIVINGSTONE, M.B.,
Dumfries.

THE notes of the following case of severe poisoning through the application of a belladonna plaster are of some interest as an illustration of the tendency at the present day to self medication, very largely due to the knowledge derived from "newspaper medicine" as described in the BRITISH MEDICAL JOURNAL of January 24th, 1903, p. 211. There seems to be a twofold danger in this growing tendency on the part of the public to play the amateur physician. There is the danger from the wrong use of a drug, and there is danger through symptoms being masked and the correct diagnosis rendered more difficult.

On December 24th, 1902, I had occasion to see a patient who was suffering from influenza. His attack lasted a few days, and he appeared to be making a fairly good recovery. On January 1st, 1903, he showed symptoms of cardiac trouble. In addition to medicinal treatment complete rest was enjoined. In a few days the action of the heart appeared to be normal, at all events while the patient remained recumbent. As it seemed impossible for him to abstain from business, and as his business books were being brought over to his house, he went, on my recommendation, to the country on January 5th. It seems that after five days he felt so well, and business matters seemed so urgent, that he returned home, feeling quite "fit," on Saturday, January 10th.

By Monday, the 12th, he was beginning to feel out of sorts, and was suffering from pain in the back, a "fluttering" sensation over the region of his heart, etc., and altogether at this time he felt very seedy, but, having disobeyed orders, he was afraid to consult his medical attendant. Upon the following evening I got an urgent message to go over to his house at once, as he had fainted. I saw him between 6 and 7 p.m. I found he was suffering from severe pain in the back and head; the pain in his back, however, was his chief complaint, and his wife told me that she had applied a belladonna plaster to it shortly before. He also complained of shortness of breath and of a sense of oppression over his chest. His pulse was very irregular in strength, and there were occasional intermissions. He complained of some thirst, and on taking his temperature I found it was 101°. I prescribed for him, and, as his condition was undoubtedly critical, I said I would see him later in the evening. I had barely reached my house when a messenger came over asking me to return at once, as the patient had had a fit. I saw him shortly afterwards. From his wife's description of the fit, he had evidently had a severe rigor, and I found on taking his temperature that it was 102.6°. His chief complaint was still, however, of severe pain in the back. He showed a slight tendency to become delirious.

The possibility of belladonna poisoning did suggest itself to my mind at this stage, but I at once dismissed it, as the plaster had only been applied shortly before my first visit, which had been made about an hour previously, and I could not recall having seen even slight symptoms of poisoning after so short an application. Besides his most prominent symptoms had commenced before the belladonna plaster was applied. I did not therefore remove the plaster.

I saw the patient again about 11 p.m. His heart's action was exceeding feeble and irregular. His wife said he had been rambling a little, but he seemed sensible enough during my visit, and answered all my questions quite intelligently. His temperature was 102°. His respiration was very rapid, but I could detect nothing abnormal in the lungs. He had had several of what his wife called "fits," but these seemed to me, from her description, to have been rigors. I had obtained a specimen of his urine, and found it was normal. There was no dilatation of his pupils. I was sent for about midnight, when the patient was supposed to have had another "fit." I did not see him in this, but saw him shortly afterwards, when he was apparently completely paralysed in his right arm and leg, and his speech seemed to be affected. I gave some additional directions, and left feeling very anxious about the case, and resolved that if the patient survived till morning I would recommend another opinion.

About 2 a.m. I was asked to go over to see the patient, who was said to be much worse, and they thought dying. I went over, and found he was heavy and drowsy, and only roused with difficulty. On examining his eyes I found his pupils widely dilated. He had had some vomiting shortly before I was sent for, and his wife told me that he had been very delirious since my last visit.

There was now no doubt that whatever else he was suffering from, his acuter symptoms were due to severe belladonna poisoning, and arising from a belladonna plaster applied to his back only a few hours previously. To have rapid and severe poisoning by absorption through the skin after a comparatively short application seemed so unique that I could hardly believe it possible. I at once proceeded to remove the plaster. Upon its removal I found the skin reddened over the whole area covered by the plaster (an area of about 10 in. by 7 in.), and at one or two points actually blistered.

Here, then, was the explanation of the rapid absorption. But how had such a condition of the skin been brought about? On inquiry I found the plaster had been obtained from one of the best chemists, and we could not therefore blame the plaster. A little cross-examination brought out the whole story of the domestic practice of medicine by the wife. The pain had been "excruciating," and she applied a mustard poultice. After half an hour's application there was no relief. A turpentine fomentation suggested itself, and was applied; several were applied in quick succession; but the hoped-for relief to the patient did not come, and having heard from a servant that a liniment she had procured from a chemist for some obscure pain had "lifted" the pain at once, what remained in this bottle was freely applied and vigorously rubbed into the back of the unfortunate husband by this would-be healer of the sick. Still no relief. Dry mustard was then rubbed into the part. The pain remained practically the same, and the wife consulted a chemist, and was advised to apply a belladonna plaster. This was done. Later my services were called in because the pain continued very severe in spite of this energetic treatment. Whether this was the original pain or a new pain is a matter of doubt. The patient is now inclined to think that the original pain had really been removed, and that it had been replaced by a new pain. He did not appreciate the difference at the time; he only knew that his back was very painful.

After the removal of the plaster the patient rapidly lost the delirium, and the threatening coma passed off; and in an hour's time his condition had greatly improved. The irregular action of his heart, although no doubt aggravated by the

poisoning, was independent, and continued after all symptoms of belladonna poisoning had disappeared, but subsequently greatly improved under treatment.

CASE OF CHLORODYNE POISONING, WITH RECOVERY.

BY K. R. DALAL, L.M.&S.,
Mazagon, Bombay.

C. H., a Parsee lad, aged 18, was found one morning by his parents lying unconscious in his bed. They stated that he was perfectly well about 8 o'clock that morning, and when, about 10 o'clock, they happened to enter his room they found him breathing laboriously. They tried to awake him; failing in their effort they immediately sent for me.

On my arrival, I found the lad lying unconscious in his bed, drenched with profuse perspiration. The whole body was quite cold to the touch, the pulse imperceptible at the wrist, and the breathing embarrassed, the respirations being shallow and quick.

On auscultation, the heart sounds were found to be very feeble and fluttering, without any rhythm, and the heart's impulse was quite visible about an inch outside the left nipple line.

I immediately injected over the cardiac region a syringeful of ether, followed soon by another injection of ether and tincture of digitalis ♏x. After this the pulse could be felt at the wrist, and though at first very frequent and soft, in about twenty minutes it became full and slow. After the injections I had applied mustard plasters to the nape of the neck and over the cardiac region, and also fomentations of hot carum ajowan seeds were applied all over the body.

On auscultation over the lungs, air was heard to enter quite freely, no adventitious sounds being heard excepting the stertor. Respirations were shallow and about 45 per minute. Breathing in the beginning was of the snoring character, but after the injections it became quiet and regular. The pupils were equal, regular, in a state of moderate contraction, and they responded well to light. The tongue was dry, and appeared white and shrivelled as if some acid had been taken.

On inquiry being made of his parents, and on searching the room for an empty bottle or a drug, not the slightest clue could be obtained about the cause of this sudden unconscious condition, and, when the possibility of his having taken some poison was hinted, they persisted in stating that the boy was so sensible and of such good behaviour that he was incapable of doing any such act. Under these circumstances I provisionally diagnosed this case as one of syncope form of insolation, wherein I was strengthened by the statement that he had roamed about a good deal the day previously without any head protection.

About half an hour after the second injection, the pulse at the wrist became frequent and soon was scarcely perceptible. The heart sounds also became weak and irregular and fluttered so much that I feared it was about to come to a standstill. So I again injected ether and digitalis; soon after which, the pulse was felt at the wrist and it gradually became full and less frequent till it reached 110 per minute and was of good tension. On percussion the heart was found to be in a state of acute dilatation and the impulse was still visible outside the nipple line. The heart sounds were heard to be regular and stronger than before, but occasionally the contractions failed to produce the sounds in the intervals, though the pulse beat was regular.

Stertor also disappeared, the respirations became full and deep, the whole body was now warm to touch and the sweating also became less. The patient's general condition by this time was much improved, but I had kept on feeling the pulse, which soon began to increase in frequency till it reached 160 per minute. I had already ordered hot coffee to be prepared and when ready I injected about 8 oz. per rectum. The pulse soon resumed its former condition, becoming full, of fair tension and 100 per minute.

About twenty minutes later I again felt the pulse rising in frequency, and it soon began to flutter under my fingers. The heart sounds were like those in a case of tachycardia. I gave another rectal injection of coffee with 2 oz. of brandy, after which the pulse and the heart again became quiet. Soon after the patient became a little conscious; he would draw up his legs when hot fomentations were applied to his feet, and on trying to open his eyelids he would now resist the act, whereas in the very beginning touching the cornea did not elicit any reflex. His name being shouted to his ears he would utter a little grunt, then turn on his side and would snore away as in deep sleep.

Now the patient, instead of gradually coming round, appeared to become more and more drowsy, as if he had taken some narcotic drug. I continued rectal injections of coffee, and tried to awake him by flapping him on his face with wet towels. About 2 p.m., four hours after my arrival, the patient threw his eyes wide open, and was able to recognize his parents. As he became quite conscious, I gave him a drachm of spt. ammon. arom. with little water to drink, a few minutes after which he vomited, the vomited matter consisting of bile, mucus, and little phlegm, but no odour of any drug could be detected in it. Now he was practically out of danger, talking rationally, and when asked denied having taken any drug or poison.

As I had to see another patient of mine, I sent for my friend Dr. J. R. Vakil, and, having explained to him all the particulars of the case, entrusted the patient to his care. Within an hour after my departure Dr. Vakil noticed the same fluttering condition of the pulse as described before. So he gave a hypodermic injection of brandy, and, as the patient was now conscious, gave him hot coffee by the mouth. Soon the pulse resumed its normal condition.

Meanwhile the patient's brother came home, and, opening his cupboard, found a bottle of chlorodyne unpacked. He brought it to Dr. Vakil, stating that he had left that bottle in his cupboard in a packed condition, and consequently his brother must have opened it, which the patient afterwards admitted to be true.

During his stay there Dr. Vakil had noticed that the heart's impulse was gradually receding, and when I arrived there—at about 5 o'clock—it had nearly resumed its normal position. He was now quite conscious but still drowsy, and his heart sounds being very feeble he was enjoined strictly to keep the recumbent position.

I directed them to keep him awake through that night, and a mixture containing digitalis, strychnine, caffeine, citrate, and spt. aetheris was prescribed. Since then no further trouble ensued excepting severe constipation. The chlorodyne bottle was a half-ounce phial, in which a drachm and a-half was still left, and so the patient must have taken two drachms and a-half of the fluid undiluted. On the label attached to the phial, besides the directions for use, the only statement given about its constituent parts was that it contained one-eighth of a grain of morphine in 30 minims. No proportion of hydrocyanic acid was given.

CASE OF ACUTE ALCOHOLIC POISONING IN A CHILD AGED 4 YEARS: TREATMENT BY SALINE INJECTION: RECOVERY.

BY FREDERICK C. FORSTER,
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I WAS sent for hurriedly a few weeks ago to see a young child who "had been poisoned." On my arrival I was told that the child—a boy aged 4 years—had, three-quarters of an hour previously, swallowed 2 oz. of neat whisky. His father, who was a potman, had left the whisky—a measured quantity—in a small corked flask, and the child had removed the cork and drank the contents, telling his father, who came in a few minutes later, that he had "drank it all."

This was taken about 8 a.m. on an empty stomach. As the child soon "began to lose himself" I was sent for, and when I saw him at 8.45 a.m. he was lying insensible on a sofa; his temperature was 97°, his skin cold and clammy, the respirations shallow and sighing, and the pulse irregular and uncountable, his general condition being one of profound collapse. The corneal reflex was absent, the pupils being dilated and slightly reacting to light—a sign which is regarded by Luff as favourable. There was a strong odour of alcohol in his breath. There had been no vomiting.

After giving a hypodermic injection of strychnine sulphate (1/30 gr.), I proceeded to siphon out the stomach. The siphonage smelt strongly of alcohol, and the father volunteered the statement that the whisky was of "extra special strength." The child, though wrapped in blankets, with hot bottles round him, and cloths constantly rung out in hot water placed on the chest, was as deeply comatose as before, and

seemingly dying from shock. A further hypodermic injection was given of strychnine (1/30 gr.) and digitalin (1/50 gr.), and the child placed in a tub of hot water and vigorously rubbed. The improvement, if any, was very slight.

At this stage I thought of trying the effect of a warm saline solution per rectum, having no apparatus at hand for employing the intravenous method. Most of the injection (about 1 pint) was retained, and I had the satisfaction of seeing my patient slowly rally from his collapse, so that about half an hour later he was able to take some hot beef-tea by the mouth. From this stage his recovery was rapid, and next day he was playing about as usual.

Since alcohol, owing to its high diffusive power, is so readily absorbed into the blood vessels, it would seem reasonable to try and dilute the poison in those channels, in addition to helping the kidneys to eliminate the toxic products. It has been stated that saline solutions given per rectum are useless if the patient is much collapsed, as the fluid is not absorbed; but practical experience would point to the contrary, and I would strongly urge the beneficial effects of the rectal administrations of saline solutions, as witnessed in cases of shock following prolonged labour, operations attended with considerable haemorrhage, and after severe injuries. I do not attribute the happy result in this case entirely to the saline injection, since other remedial measures were adopted, but I am convinced of its great efficacy.

In summing up, the interesting features of the case are: (1) The amount of concentrated alcohol (℥ij of strong neat whisky) in proportion to the age of the child; Luff states that a child died after taking ℥ij of gin. (2) The rapidity of the onset of insensibility, no doubt due to the stomach being previously empty. (3) The beneficial result consequent on the saline injection.

CASES OF ANGIOMA OF SYNOVIAL MEMBRANES AND OF MUSCLE.

BY FREDERIC EVE, F.R.C.S.,

Surgeon to the London Hospital; and Member of the Court of Examiners, Royal College of Surgeons.

THE following cases of angioma or naevus affecting the synovial membrane of some of the larger joints and, in some instances, the adjacent muscles may be of interest both from a diagnostic point of view as well as from the fact that they have hitherto attracted, little attention.

CASE I.—Florence S., aged 15, was sent up to me in June, 1892, by Dr. Fraser, of Romford.

History.—Three or four years previously she noticed a swelling, a little bigger than a pea, just above and to the outer side of her knee. The swelling gradually increased and at first was only occasionally painful, but had been much more so during the last month. In addition to the gradual increase occasional variations in size were noted.

Present Condition.—There was a swelling about the size of a hen's egg on the outer side of the thigh just above the knee. The skin over it was natural and it was evidently deeply placed, apparently involving the upper and outer part of the *cul de sac* of the synovial membrane. Its outline was indistinct and consistence elastic. It was noted that on passing the hand down the thigh towards the swelling the latter seemed to become harder and to increase in size.

Operation.—I first punctured the swelling with a trocar, and blood only came away. An exploratory incision was then made and the tissue opened up contained a large number of dilated vessels. On still further enlarging the incision the tumour was found to be an angioma involving the upper part of the synovial membrane and the vastus externus and crureus. It extended upwards 4 in. above the knee joint and across the anterior surface of the femur to the inner side. It was removed with some difficulty owing to haemorrhage, the knee-joint being freely opened and the affected portion of the synovial membrane excised. Bleeding was arrested by ligatures, capillary oozing by the actual cautery, and the wound was plugged with iodoform gauze. Next day the plug was removed, the wound closed with sutures, a drain being left in the upper part. There was some suppuration at the upper part of the wound, but the knee joint was unaffected, and the patient left the hospital with the wound soundly healed and a freely movable knee.

Microscopical Examination.—Sections of the affected muscle showed bands of connective tissue and fat lying between and around the muscle bundles. Within these were very large and some smaller irregular cavernous spaces. The walls of the larger spaces were, as a rule, very thin, but in places a thin band of unstriped muscle could be traced. The walls of the smaller spaces were thicker. There were also blood vessels, showing irregular dilatations of their lumina, whose walls possessed a distinct layer of unstriped muscle.

I have since met with a precisely similar case, also in a young woman, in whom an angioma involved the upper part of the synovial membrane of the knee-joint and the adjacent muscles. In this case the diagnosis was made owing to the resemblance to the case first related. I am unable to give details owing to the notes having been mislaid.

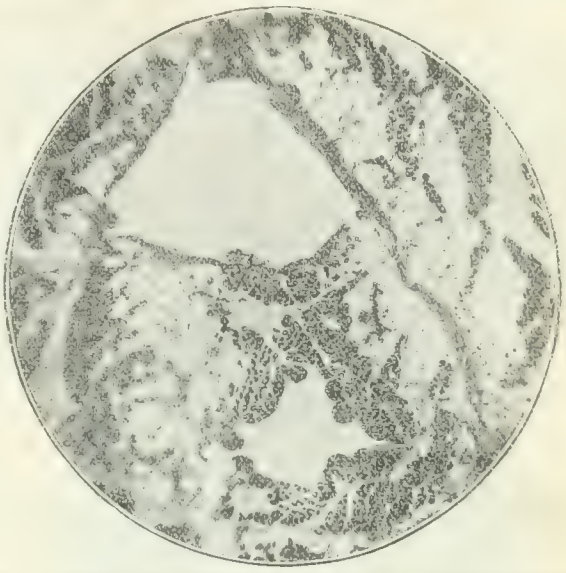


Fig. 1.—From Case I; section of muscle with large vascular channels.

CASE II.—I saw Master D., aged 10, with Dr. J. Burton, in March, 1898. The left knee had been painful, without evident cause, for four or five years. The pain was increasing, and he had begun to experience difficulty in moving the joint. Latterly a swelling had appeared on the inner side. He stated that the knee started in his sleep. A maternal uncle and one of his cousins had died of consumption.

Present Condition.—On the inner side of the left ligamentum patellae was a prominent swelling which was elastic over the inner two-thirds and fairly well defined over the outer third. The swelling, after use of the limb, became hot, tender, and red. The skin over it was normal. Measurements showed a diminution of circumference of the left thigh of 1 in. and of the left calf ½ in. The circumference of the knee-joint over the patella was unaltered, but above it the left thigh was diminished owing to the wasting of muscle. It was thought to be a case of localized tuberculosis of the synovial membrane such as I have occasionally met with; and as the function of the joint was becoming impaired I advised operation.

Operation.—A transverse incision was made, extending from the inner side of the ligamentum patellae, over the inner aspect of the joint and following the line of the articulation. The capsule was opened and a roundish swelling of a yellow colour exposed, presenting at first sight the appearance of caseous tubercle; it was, however, spongy in consistence. Its real nature was recognized by an incision, and it was completely removed. The capsule of the joint was united with silk and the skin sutured. Primary union took place, and movement of the joint was completely restored.

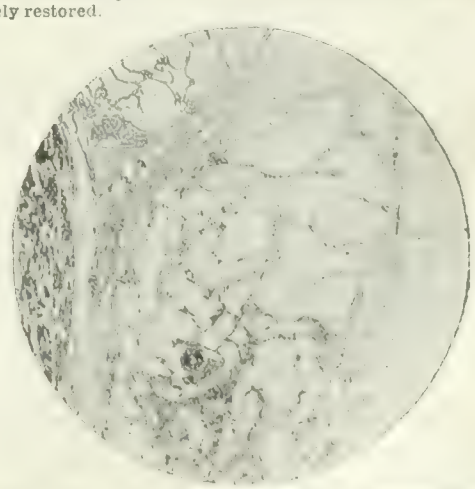


Fig. 2.—From Case II; large cavernous angioma of synovial membrane of knee.

Microscopic Examination.—The sections presented the typical appearance of a cavernous naevus. The blood spaces were very large, freely communicating, and with very thin walls. In parts of the section there was a good deal of dense, fibrous tissue.

In the two following cases a small circumscribed angioma was situated near the elbow joint.

Case III.—Mary B., aged 23, was admitted to the London Hospital in October, 1898.

History.—Twelve months previously her elbow became stiff and painful, the pain being worse at night, and there was often starting of the limb at night. She could not use the arm on account of pain. Her left knee was swollen three years ago, and was treated by strapping for three months.

Present Condition.—There was a swelling on the inner side of the elbow between the olecranon and the internal condyle, which also extended somewhat to the front; it was elastic, and the synovial membrane near it felt thickened. Flexion of the joint was limited, the muscles of the arm flabby, and the tumour acutely tender.

Operation.—An incision about 2½ in. long was made between the olecranon process and the internal condyle. The ulnar nerve was drawn aside and the capsule opened, when a mass of thickened synovial membrane was exposed. An incision into the affected membrane revealed a few soft yellowish bodies, which proved to be phleboliths. Primary union, with restoration of movement, took place.

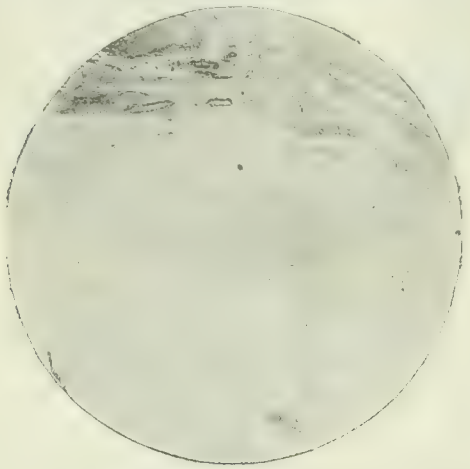


Fig. 3.—Angioma of synovial membrane of elbow showing part of a very large vascular channel, from Case III.

Microscopic Examination.—In this case the angioma was entirely confined to the synovial membrane. The cavernous spaces were very large with thin walls, and were widely separated by connective tissue. Many of them were filled with organizing fibrin, and a section thus appeared to the naked eye to be studded with caseous patches.

Case IV.—Alfred A., aged 24, was admitted to the London Hospital about the same time.

History.—He complained of a lump on the outer side of the right elbow which had existed for three months. It was slowly increasing, but caused neither pain nor limitation of movement.

Present Condition.—On the outer side of the right elbow, between the olecranon and external condyle, was an oval elastic swelling the size of a pigeon's egg. It was smooth, well-defined, movable laterally, and not tender.

Operation.—An incision was made over the swelling in the axis of the limb, and a fatty-looking growth which bled rather freely was removed from the substance of the triceps and anconeus, and the adjoining portion of the synovial membrane. Primary union.

Microscopical Examination.—The chief part of the mass was composed of fat, but there were also bands of connective tissue containing numerous small and some larger venous channels; in other parts were much larger vascular channels with ill-developed walls. At one point there were bundles of degenerate muscle fibre separated by bands of connective tissue containing numerous capillary blood vessels.

Remarks.

The feature of chief interest arising in connexion with these cases is the question of diagnosis. All occurred between the ages of 10 and 25 when tuberculosis of the joints is common; some of the patients complained of symptoms highly suggestive of tuberculosis, such as pain increased by movement, and two complained of starting of the limb at night. Tenderness and limitation of movement were marked in three cases, and in two wasting of muscle was noticed. In some instances the swelling was described as being soft and elastic. It is not surprising therefore that in some instances a diagnosis of localized tuberculosis of the synovial membrane was made; while in the last case lipoma was suggested, and, in fact, the tumour consisted chiefly of fat.

Pulsation was not observed, but in the first case it was noted that the swelling increased when pressure was made above it. Pressure upon the venous trunks above the tumour might perhaps have proved a diagnostic sign in some of the other cases had it been tried. Emptying of the tumour by pressure was not apparent. Possibly in Case III the symptoms were exaggerated by a neurotic tendency just as they may be in fibro-adenomata of the breast in young women.

The histories pointed to a somewhat rapid increase of the tumour in Cases I and II; and in the former the microscopic appearances suggested a progressive infiltration of muscle by fibro-vascular tissue.

I mentioned Case I in a discussion on a case of naevus of the peritoneum recorded by Mr. Arbuthnot Lane.[1]

In Cases II and III the tumour was entirely intra-articular and solely connected with the synovial membrane. A careful search through literature has failed to find any additional cases of angioma of the synovial membrane of joints. They cannot be very rare as I have met with the four cases recorded and seen two others. Probably they would have remained unrecognized but for the advances in surgery which have enabled us to open joints with impunity.

In an admirable monograph entitled Remarks on Some Cases of Vascular Tumour Seated in the Muscle,[2] Mr. Campbell de Morgan describes two cases of vascular tumour, definitely circumscribed and encapsuled, situated respectively in the gastrocnemius below the popliteal space, and on the front of the thigh, about the middle, and within the substance of the rectus. He gives a complete collection of similar cases published up to date, quoting examples of vascular tumour involving respectively the posterior muscles of the neck, supinator longus, deltoid, rectus femoris, inferior and external part of the thigh, and also one on the side of the chest, which involved the latissimus dorsi, serratus magnus, and intercostal muscles. But in none of these cases was any relation with a joint or synovial membrane noticed. Some of them were well-defined and encapsuled, others diffuse. In one case recorded by Liston there was distinct pulsation, in some the blood could be expressed from the tumour, while others were mistaken for lipomata until they were incised.

References.

[1] *Clin. Soc. Trans.*, vol. xxv, p. 5, 1893. [2] *British and Foreign Medico-Chirurgical Review*, vol. xxxiii, 1864, p. 187.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

LOCAL TREATMENT OF SNAKE-BITE.

A few weeks ago one of my coolies when walking along the high road about dusk was bitten by an *Echis carinata* on the top of the middle toe of the right foot. He reached me in about ten minutes. I put a ligature of a piece of string, which was in my pocket, around the base of the toe and a tourniquet, made with a duster and a walking-stick, just above the knee.

The ligature round the toe gave him no pain and there was some swelling of the affected toe, which had the marks of the bite clearly visible on it, but otherwise, at this time there was no change in the part.

By the time he got to hospital, in a carriage, within thirty minutes of the bite, the top of the foot was swollen and the skin was insensitive up to the ankle. About six incisions were made through the skin and connective tissue on the top of the foot. He was unable to feel these incisions and no blood oozed from them.

An elastic bandage was then put on, as in the bloodless method of operating, beginning at the knee and extending down to the ankle. The blood in the foot was then emptied out as far as possible by vigorous kneading. It was black, thickened, and ran with difficulty—being quite different in appearance to the venous blood which normally exudes from a part below a tourniquet. The elastic bandage was then removed and the upper tourniquet slightly loosened to allow the leg to fill up. The elastic bandage was then again applied and more blood got out from the foot.

This was repeated and on kneading the foot this time the blood ran naturally and the patient sat up saying he was all right, as the wounds had begun to smart. All bandages were then removed, but two assistants kept vigorously massaging the leg from the knee downwards for fifteen minutes. The wounds were cleansed with perchloride solution and dressed antiseptically—they healed without suppuration or slough, but very slowly—a fact I noted in a case somewhat similar to this about three years ago. There were no constitutional symptoms. The case is of interest as it shows that amputation

is not necessary even when the snake poison has got well into a part. The snake was killed by the man's companion and shown to me.

Vivian B. Bennett, M.B., B.S.Lond. Univ.
Capt. I.M.S., Civil Surg., Broach, Bombay Presidency.

A SPECIES OF BLOOD FILARIA, PROBABLY HITHERTO UNDESCRIBED.

I write this preliminary note so that if the worm has been already observed or described my readers may kindly let me know.

The worm possesses a sheath, has a blunt tail; in fact, is of practically the same diameter throughout. Dr. Surveyor has measured the first specimen found, and gives 5·3 μ as its greatest diameter, 131 μ as its length.

The worms in the circulation are very few. I have as yet only found two complete, and a third unfortunately broken in two by a scratch in the glass, though I have searched thirty thick slides. All three were found in night blood. The second complete specimen is distinctly smaller than the first. The host is a Mohammedan police-constable, admitted to hospital for scabies. He seems in all other respects healthy.

Arthur Powell, B.A., M.B.,
Professor of Biology, Grant Medical College;
Surgeon to Police Hospital, Bombay.

PYREXIA AND RIGOR FOLLOWING DOUCHING IN THE PUERPERAL WOMAN, WITH THEORY OF THEIR CAUSATION.

Dr. Mackintosh calls attention to cases of pyrexia, etc., following douches in puerperal women, and asks for instances of a like kind. I am able to supply a record of such an event from notes taken at the time by myself.

On July 19th, 1897, I attended the confinement of a lady, a multipara, the wife of an officer. The birth was quick and natural, and for three days the patient's recovery was uneventful—temperature normal, lochia odourless. Vaginal douches of liquor iodi (mxx to the pint of warm water) were ordered as a routine measure.

On July 22nd I called at 1 p.m. and found the patient quite well—temperature normal, pulse 72, lochia natural, uterus diminishing in size but rather large and flabby.

At 8 p.m. the same day I was summoned to see the patient again, as she had had a rigor. When I arrived half an hour later her temperature was 101.6°, and she had a quick pulse. The uterus was not tender, and was decidedly smaller and more firmly contracted than on my previous visit. It appeared that while undergoing the evening douche, about 7, she had felt faint, and that directly after its conclusion she had a rigor lasting fifteen minutes, and her temperature at once rose to 99°. The nurse reported that the douche pipe appeared to slip in more easily and further than usual. It had probably passed into the uterine cavity through a patulous os. When I saw the patient next morning she had passed a good night, pulse quiet, temperature normal. Her after-progress was uneventful.

I have had one other case of rise of temperature with rigor after douche but have unfortunately preserved no notes of it. Personally, I should associate these cases with those of "catheter fever" and those of tetanus in dilated stomachs after lavage as having one causation. The usual explanation offered and accepted is that of reflex nerve stimulation or irritation, an explanation to my mind only satisfying us by cloaking our ignorance. What nerve, or series of nerves, irritated experimentally by whatever means, reacts in a rigor and pyrexia? Sometimes, as in "catheter fever" of a prolonged and fatal nature? I venture to answer my own question by the monosyllable, "none."

What, then, is there in common in these three complications? There is (1) a mucous surface, generally inflamed, or ulcerated, or pyogenetic; in all cases bacteria producing. (2) The introduction of an instrument which is likely to abrade the mucous surface, or to open up existing abrasions; which either itself stretches the mucous membrane over which it passes (catheter and intrauterine douche tube), or dilates a cavity into which it is introduced with a fluid injected through its own lumen (intrauterine douche, gastric lavage). (3) The absorption through these abrasions or cracks not of bacteria themselves (though these may and do find entrance thereby), but of the bacterial toxins which, while present only on the surface of the mucous membranes concerned, rendered non-absorbent by inflammatory changes, are practically harmlessly extracorporeal. The moment, however, that a tear or abrasion is made, either by puncture or stretching, the toxin is absorbed into the circulation rapidly and in bulk, and the pyrexial and other symptoms are produced.

The symptoms of the morbid occurrences are in unison with this theory. In my own case both rigor and pyrexia followed and were not simultaneous with the douching, the temperature beginning to rise after its completion, and gradually increasing to a maximum during the next few hours. Were the causation a mere reflex nerve irritation, the reaction in response to such irritation would be contemporary, immediately maximal, and disappearing with the removal of the causative instrument.

In summary, I would venture to suggest then (*a*) that the causation of catheter fever, of post-douche pyrexia, and of gastric tetanus is similar, and that (*b*) they are none of them either pyaemic, septicaemic, or nervously reflex, but in all cases sapraemic, the toxin being absorbed suddenly and in bulk through mechanical and coarse lesions, and being consequently immediately operative, being in the uterus and urethra thermogenic, in the stomach tetanogenic.

Exeter. William Sykes, M.D., F.S.A.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

LIVERPOOL ROYAL INFIRMARY.

CASE OF CARBOLIC ACID POISONING DUE TO EXTERNAL APPLICATION.

(Reported by J. A. Raubenheimer, M.B., Ch.B.Edin., House-Surgeon to the Infirmary.)

E. J. L., aged 6, was admitted to Ward VI., Royal Infirmary, Liverpool, on March 4th, 1903. She was suffering from genu valgum on both sides. Her general health was good except that she had adenoids.

On March 20th, at 11 a.m., she was prepared for operation by one of the nurses. The process of preparation was briefly as follows: (1) The parts were well scrubbed with warm water and soap; (2) all traces of soap and grease were removed by a thorough cleansing with methylated ether; (3) the legs were wrapped up from ankles to the groins with towels impregnated with 1 in 40 carbolic acid. (None of the acid in any shape or form had been applied to the patient before.) The little girl, being of a nervous disposition, cried vigorously while these proceedings took place.

At 12 o'clock it was noticed that the child became quiet and drowsy. This condition was thought at the time to be due either to exhaustion from crying or possibly to the presence of adenoids.

At 12.55 p.m. she was conveyed to the theatre for operation. At 1.5 p.m. the anaesthetist arrived, and was requested to commence the administration of chloroform. On examining he found patient apparently fast asleep. She could not be aroused, however, and took no notice of smart blows on the face and chest. She was evidently unconscious, the pupils were dilated, the pulse feeble and rapid, and respiration was quiet. She was ordered back to bed at once. Mr. Paul saw her immediately afterwards, and found her cyanosed and practically pulseless. On consultation with Dr. Abram and Mr. Parker, it was decided that the case was one of carbolic acid poisoning due to external application. The carbolized towels were at once removed, when the parts were found to be very pale. Stimulants were administered without delay (that is, brandy ℥j by the mouth half-hourly until consciousness was regained; drinks of hot tea frequently; a subcutaneous injection of ether mv, hot bottles to the extremities, and a mustard plaster over the precordia). Some urine was drawn off, but no carboluria was present. At 3.30 p.m. she began to recover, and regained control over the bladder and rectum, which before this had moved involuntarily. About 4 o'clock vomiting commenced; nothing peculiar could be detected in the vomit. Patient now began to improve rapidly. At 5 o'clock another specimen of urine was obtained which was found to be of a pale green colour, gradually becoming darker on exposure to air and light. On chemical examination

it responded to the usual tests for carboluria. All subsequent specimens during the next twenty-four hours gave the same results, thus verifying the diagnosis.

The patient has now recovered completely.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

ALFRED WILLETT, F.R.C.S., President, in the Chair.

Tuesday, May 12th, 1903.

SIR DYCE DUCKWORTH, who represented the Society at the recent International Medical Congress at Madrid, gave a short account of its proceedings.

DIFFERENTIATION OF THE CONTINUED AND REMITTENT FEVERS OF THE TROPICS BY THE BLOOD CHANGES.

Dr. LEONARD ROGERS read this paper, in which he dealt with a series of 200 cases of continued and remittent fevers worked out during the last two years in the European and native hospitals in Calcutta, with both the serum tests and differential leucocyte count, together with clinical notes, and four-hour temperature charts, in order to allow of their being classified. In the paper the question was discussed whether there were any hitherto undifferentiated fevers to be met with, such as were described by Crombie in his address before the Indian Medical Congress in 1894, that had not previously been put to the test of modern methods of diagnosis. In all the cases the differential leucocyte count was carried out, for as he had shown a year ago by its means very valuable aid could be obtained in differentiating typhoid from malarial remittent fevers. This was of the greatest value in the research on account of the impossibility of finding parasites in most cases of malarial fevers, which had been dosed with quinine before they came under observation, as was nearly always the case with European patients. Fifty consecutive cases of typhoid fever were first dealt with, a short clinical account based on the analysis of the notes were given, and tables of the results obtained by the serum test and the leucocyte counts were included. The latter bore out his earlier results in a different and smaller series of cases with regard to the very frequent presence of an increase in the percentage of the lymphocytes without any increase of the large mononuclear white corpuscles, except during the stages of convalescence, or in cases complicated by malaria. The positive frequency of typhoid fever in natives, as shown by the serum test, was emphasized, his further experience since writing on this subject a little over a year ago being given—a point of some importance in view of Crombie's statements that the disease was very rare in natives of India. In a similar way a series of malarial remittent fevers was dealt with, and the great value of the large mononuclear leucocyte increase in the diagnosis of this class of fevers was illustrated. Further certain clinical features of considerable diagnostic importance, based on the records of both series of cases, were pointed out, which enabled many cases to be accurately diagnosed without the use of the blood tests. The question of the existence of new fevers in addition to the typhoid and malarial was discussed in relation to Crombie's classification based on clinical experience, and a chart of the cases treated in the European General Hospital during the last three years, showing the seasonal distribution of the different forms of fever, was exhibited, which supported his own conclusion that there were no new fevers of common occurrence, and that the so-called "simple continued fevers" were malarial in nature, while that described by Crombie under the term "non-malarial remittent," and seen by him nearly exclusively in natives, was nothing but typhoid fever. Lastly, some recent observations on the so-called "low fever" were recorded, and the nature of this affection discussed.

Dr. MANSON, C.M.G., dissented from some of the conclusions drawn in the paper, particularly those diagnosing typhoid from an excess of lymphocytes and malaria from an excess of large mononuclear leucocytes. Other fevers besides malaria showed the latter excess, as trypanosomiasis fever. When the excess was found it might be concluded that malaria might be present, if not found, that it was not present. The deductions drawn in the paper were based on Calcutta experience, but this could not be extended to the tropics generally. In regard to double continued fever, which he had described many years ago, he said that while in Formosa he had had great belief in the specific value of quinine, but in Amoy this was broken down, and yet this was not the fault of quinine, but of his diagnosis, because the fever was not, he was certain, either malaria or typhoid. If quinine were given by the mouth and absorbed it was quite as effective as if given subcutaneously and absorbed. The facts advanced in the paper were not, he thought, adequate to justify the sweeping conclusions drawn.

Dr. A. E. WRIGHT did not approve of the conclusions, neither did he approve of the methods described in the paper. The increase of large mononuclears in the blood was fallacious, no arbitrary test of size would distinguish such, for a varying amount of pressure on the films gave differences in apparent size. The percentage of lymphocytes and of large mononuclears did not give accurate information, as the polynuclear cells were probably destroyed. It was a point that should be investigated whether quinine could change the relative numbers of leucocytes in normal persons. It would have been desirable to have had references to the number of parasites in the cases quoted to compare with the number of large mononuclear leucocytes. Malaria was probably very rare in Calcutta, and the two remaining fevers classified in the paper, typhoid, with small mononuclears, and the inflammatory conditions with polynuclears seemed to imply a hasty generalization.

Dr. G. C. LOW thought that because one particular form of leucocyte was present any disease could be diagnosed was hardly supported by facts. Lymphocytes did actually occur in other diseases than typhoid. But it seemed to be certain that an excess of large mononuclear leucocytes did occur with the presence of malarial parasites. The large mononuclears could also, he thought, be recognized by the microscope. The case described, in which there was no response to quinine, but was diagnosed as malaria from the presence of large mononuclears, might have been allied to a form of the new fever of trypanosomiasis peculiar to Calcutta.

After Dr. GOODALL had made some general remarks Dr. ROGERS replied.

CLINICAL SOCIETY OF LONDON.

HOWARD MARSH, F.R.C.S., President, in the Chair.

Friday, May 8th, 1903.

HAIRBALL IN THE STOMACH.

MR. CHARLES A. MORTON (Bristol) related the following case:

A young woman, aged 18, had a large and very hard, and very freely movable and resonant abdominal swelling which had been noticed for some months. The symptoms were pain and vomiting. The latter occurred most after food, but often in the night. No exact diagnosis was possible, but the free mobility and resonance suggested an omental mass of tubercle or new growth. The hairball weighed 1 lb. 12 oz., and measured 6 in. by 2½ in. thick. It was removed through a 4-in. incision in the stomach, and the patient made a good recovery. After operation a history of eating hair and cotton was obtained.

References were made to other published cases in which hairballs had simulated omental growth or faecal masses in the colon, or cystic diseases of the spleen, and attention was called to the free mobility of abdominal swellings due to hairballs in the stomach.

Mr. E. P. PATON described a similar case under his observation in a child, aged 9. The patient was in perfect health, the tumour having been accidentally discovered. It was removed, and the patient did well.[1]

ANGIOMA OF SYNOVIAL MEMBRANES AND OF MUSCLE.

Mr. FREDERIC EVE read notes of several cases. The paper is published at p. 1143.

The PRESIDENT said he had never seen a case of the kind, and that the author had clearly worked out the pathology of the disease. He suggested that if the tumours became inflamed they might closely resemble active tuberculous disease. He referred to a case in St. Bartholomew's Hospital in which there was a pulsating tumour at the inner part of the thigh, thought to be an aneurysm, and sent in for ligature. But, under an anaesthetic the tumour and pulsation quite disappeared. Probably that was an instance of angioma; it was not an aneurysm.

Mr. R. C. LUCAS thought most surgeons were acquainted with this condition. He referred to the case of a girl who had a tumour extending from the thigh a long way down the leg, which he removed in three operations. It passed down by the side of the knee, and a portion of the synovial membrane of the joint and of the vastus internus muscle was removed with the tumour. He urged that surgeons in the present day

[1] See the last number of the Society's *Transactions*.

should treat these vascular tumours by excision rather than by ligature and other similar measures. Even if a tumour which had been soft and painless should become hard and tender, he would operate upon it without waiting for the clotting to cure the case.

Mr. E. P. PATON showed a specimen from a lady, aged 20, who had an elongated soft swelling on the inner side of the thigh, without pulsation or thrill, which disappeared on pressure. It was found to involve the gracilis muscle, which was excised from end to end. Many of the vascular spaces in the muscle measured more than 1 in. across.

Mr. H. BETHAM ROBINSON had not seen a case affecting a synovial membrane; but recalled a case in which the flexor muscles of the forearm were involved.

Mr. H. W. PAGE related the case of a man, aged 28, who was admitted to St. Mary's Hospital with a markedly pulsating swelling in front of the right knee, of three or four weeks' standing, associated with much pain, and rendering him unable to work. The diagnosis was very obscure. It proved to involve the whole of the bursa beneath the patellar ligament and much of the synovial membrane, as well as muscles. He ligatured several large vessels, and the wound healed by the first intention; but there was no subsequent difference in the size of the angioma. The magnitude of the operation which the complete removal would have entailed led him to think that the amputation of the limb was the only course, though he did not amputate. He was surprised to find that these cases were not as rare as he had believed.

Mr. EVE, in reply, agreed that symptoms might sometimes be due to temporary congestion after over-use, as in Case II, but he had never seen any trace of active inflammation. He said that angioma of muscles alone was not rare, and what he wished to point out was that the formation might involve synovial membranes as well as muscles. In one of his cases the tumour had undergone almost entire metamorphosis into fat, and most of the blood spaces had become cysts.

SPINA BIFIDA WITH FORMATION OF INTRA-ABDOMINAL CYST.

Mr. H. BETHAM ROBINSON read notes of a case, and showed the specimen removed from a female child, aged 11 months, who displayed sundry malformations, and whose abdomen was fuller than natural on the right side, having markedly increased in size during the previous two months.

She was a healthy-looking child. There was no prominence of the umbilicus. There was some impulse on straining. The cutaneous veins were enlarged over the right side, which was dull on percussion. There was evidently an encysted collection of fluid, which, however, did not become tense unless the child strained. No hydrocephalus and no obvious deformity of the spinal column existed. Abdominal section was performed, and a bluish cyst presented, which was tapped, giving issue to about a pint of clear fluid. The sac was firmly adherent to the right side of the spine, just below the transverse mesocolon. The finger passed through it into a hole in the side of the spinal column. It was ligatured and cut away. There was no appearance of nerve structures in the cyst wall. The fluid had a specific gravity of 1002 and was alkaline, obviously of cerebro-spinal origin. The child died ten days later. *Post mortem*, extensive abnormalities of the spinal column were found, the defect involving the bony walls on the right side of the last two dorsal vertebrae and all the lumbar region. The whole of the lateral mass behind the position of the neuro-central suture was absent. The development of the bodies was also very irregular. There was marked dilatation of the central canal of the cord.

Along with this specimen he showed one from the Royal College of Surgeons museum (No. 322), exhibiting a somewhat similar defect of the vertebrae.

Mr. R. C. LUCAS said that there appeared to be a slight absence of the laminae of the vertebrae, and he thought that possibly there was a projection backwards, and some fluctuation thence to the tumour in the abdomen. Was any such fluctuation observed? In regard to the dilated central cavity in the cord, he asked if at the necropsy any obstruction was found at the floor of the fourth ventricle, or at the *iter a tertio*.

Mr. ROBINSON, in reply, said there was no projection behind the spine. He himself had not an opportunity of examining the brain.

CELLULITIS OF THE ROUND LIGAMENT AND THE SPERMATIC CORD AND THEIR RELATION TO STRANGULATED HERNIA.

Mr. EDWARD M. CORNER read a paper on this subject. The first case was that of a young married woman, who had been confined a year previously. From four to five days before admission her attention had been drawn to a lump in the left groin by pain. The lump increased in size; she vomited regularly, and her bowels were open. The case was diagnosed as one of strangulated inguinal epiplocele, with perhaps also a partial enterocele. At the operation the distal end of the round ligament with a lymphatic gland on it was found inflamed. The ligament was ligatured above this, and the diseased part removed. Leichenstein and Hermann had recorded a similar case. From consideration of these two cases it had been suggested that the mischief arose in an unhealthy condition of the endometrium following delivery, with consequent lymphadenitis of the gland alongside the distal end of the round ligament, which was secondarily affected with cellulitis. This gland was known to be occasionally enlarged in cases of carcinoma of the fundus uteri. A case of cellulitis of the spermatic cord was also related, which occurred in a man, aged 25, as the result of a kick. The tumour was accompanied by vomiting, the bowels were constipated. Under treatment with hot lead lotion the swelling subsided. Three years later the testicle on that side was softer and much smaller. These two processes illustrated in woman and man the fact that cellulitis of the spermatic cord and the round ligament might complicate the diagnosis of strangulated hernia.

OBSTETRICAL SOCIETY OF LONDON.

EDWARD MALINS, M.D., President, in the Chair.

Wednesday, May 6th, 1903.

THE ANATOMY OF THE PREGNANT TUBE.

DR. RUSSELL ANDREWS read a paper in which, from a study of the literature on the subject—chiefly that of the last seven years—and from sections made by himself, he gave a short description of the histological appearances of the tube and ovum in early tubal pregnancy. The question of tubal decidua was first discussed. In intrauterine pregnancy decidual changes were not confined to the corporeal endometrium, similar changes being found in the connective-tissue cells of the cervical endometrium and ovaries, and also in the peritoneal cells. In tubal pregnancy decidual changes were found in the endometrium and in the connective-tissue cells of all parts of the tube. A compact decidua, comparable to that formed in the uterus, was not formed in the tube, the difference in the amount of decidua in the two organs depending on differences in their anatomical structure. He drew attention to the difference in the structure of the mucous membrane of the tubal folds and that of the mucous membrane between the folds. The latest researches on the embedding of the ovum in the uterus were briefly mentioned, and attention was drawn to the fact that the method of embedding of the ovum in the tube was at first similar to this normal process, but that later the ovum bored its way into the tubal muscle on account of the comparative thinness of the tubal mucous membrane. The fetal part of the placenta formed in the tube was in every way identical with that formed in the uterus. The maternal part, however, was markedly different in the two organs. A short account was given of the trophoblast as seen in the tube, and it was shown that it was exactly like the trophoblast as described by Peters in uterine pregnancy. The danger to life associated with tubal pregnancy was due to the deep situation of the tubal placenta and the comparatively small amount of decidual formation. Abortion and rupture were explained as being results of the penetrating action of the trophoblast. These two accidents were very similar in etiology, the former being an "internal rupture," caused, as was the latter, by the destructive action of the trophoblast. The breach of surface on either the peritoneal or mucous aspect of the tube was brought about either directly by destruction of tissue by the trophoblasts, or indirectly by increase of pressure due to bleeding from vessels whose walls had been destroyed by these fetal cells. The author came to the following conclusions: (1) Decidual formation did not occur in the tube in the early months of pregnancy to an extent comparable to that seen in the uterus. In many tubes the formation of a compact layer of decidua was anatomically impossible. (2) The site of the ovum was outside the lumen, in the tubal muscle. It seemed impossible to explain this deep site except as due to the eroding action of the trophoblast. (3) The vessels were opened by the trophoblast. (4) Rupture and abortion were mainly brought about by the destructive action of the trophoblast.

Dr. EDEN said that he had been struck by the fact that there was remarkably little direct evidence in support of the contention that the ovum was implanted in the muscular layer of the tubal wall. With the exception of the case described by Füth there was practically no evidence at all

in support of it. Possibly the specimen shown to the Society that evening by Dr. Cuthbert Lockyer would confirm Füth's conclusions, but at present it was impossible to speak definitely upon the point. On the other hand, it was to be borne in mind that the French school, as represented by Couvelaire and Cornil, entirely contravened Füth's position; it seemed to him that Dr. Andrews had not done justice to the important work of Couvelaire. His monograph, *Etudes Anatomiques sur les Grossesses Tubaires*, was the most important work on the subject which had appeared since Clarence Webster's *Ectopic Pregnancy*, yet Dr. Russell Andrews had made no mention of it. Couvelaire's view was that the tubal ovum was never completely embedded in the tubal wall as the uterine ovum was in the uterine wall, but remained with its outer pole uncovered except by an adventitious layer of fibrin; this he called the "free pole" of the ovum, and described its relations with great minuteness. This decided difference of opinion upon a question of fact between Füth and Couvelaire appeared at first sight to be very perplexing, but it was possible that the explanation was to be found in the fact that Füth's ovum was much younger than any examined by Couvelaire. Experience in regard to the uterine ovum had taught that developmental questions could be solved only by the examination of very early specimens; deductions drawn from appearances found at later stages were very apt to be erroneous. He therefore welcomed the appearance of Dr. Cuthbert Lockyer's specimen, which ought to yield important evidence upon this point. Another point he wished to refer to was Dr. Russell Andrews's use of the expression that the tubal ovum developed "outside the lumen of the tube." This appeared to him to be a clumsy and bizarre expression, and it did not in any way add to the accuracy of the conception of tubal pregnancy. Since Peters had shown that the uterine ovum buried itself in the decidua and developed there, it would be equally accurate to speak of the uterine ovum as developing outside the cavity of the uterus; but no one proposed to do so. He thought the point Dr. Andrews should try to emphasize was that he regarded tubal implantation as intramuscular, and uterine implantation as intradecidual.

Dr. CUTHBERT LOCKYER showed a case of incomplete tubal abortion which demonstrated the mode of implantation of the ovum in the wall of the tube. The specimen illustrated very clearly one of the most important points of Dr. Russell Andrews's paper, namely, that the manner in which the impregnated ovum burrowed by means of its trophoblast through the mucosa and into the muscle of the tube wall and there developed outside the lumen, was strictly analogous to what normally took place in the uterus, as proved by Peters's specimen of early uterine pregnancy. Peters showed the fallacy of the older ideas regarding the mode of formation of decidua reflexa, in which the ovum was regarded as a passive cell, which acquired a covering of decidua by the latter growing up on all sides to enclose it. Peters proved that the ovum by means of its trophoblast penetrated the endometrium, and Dr. Lockyer's specimen proved that the same process took place in the tube when the impregnated ovum lodged in that structure. The value of this specimen lay in the fact that the capsularis of the placenta was complete, and this, Dr. Lockyer believed, afforded a hitherto unique observation. It negatived the view of Couvelaire that one pole of the ovum remained uncovered by a capsule derived from the wall of the tube. Couvelaire's researches were carried out on material derived from older specimens of tubal pregnancy than the one exhibited by Dr. Lockyer. In the latter the placenta had a diameter of half a centimetre only, and although haemorrhage had taken place in the placental tissues no blood had escaped into the lumen of the tube, consequently the placental capsule, which projected into the lumen, was uninjured by mechanical pressure, and, as a consequence, its microscopical structures were easily demonstrated. The sections were illustrated by coloured drawings.

Mr. TARGETT had examined four cases of very early rupture of a gestation sac in the isthmus or narrowest part of the tube. In one of these cases rupture occurred on the seventeenth day after a single coitus (rape). They all showed extensive destruction of the muscular coat by the phagocytic action of the fetal epithelium and ultimate rupture of the serous membrane. He had also examined a considerable number of ampullary gestations, most of which were tubal moles, and in none of them was there anything at all comparable to a uterine decidua, either beneath or around the ovum. He doubted whether the muscular coat would be penetrated so early in the ampullary gestation as in that of the isthmus, because in the former situation the ovum had much more room to expand.

Dr. RUSSELL ANDREWS, in reply, thanked the Fellows for the way in which they had received the paper. He had not had access to Couvelaire's monograph while writing his paper, but had read it since. He did not consider that what might be called the German theory of the formation of the "capsularis" was disproved by Couvelaire's description of the membrane covering the "free pole" of the ovum. He had seen serial sections which proved the presence of muscle in the "capsularis." He quite admitted that in the majority of specimens it was impossible to demonstrate a perfect "capsularis," because the majority of specimens were spoilt by bleeding. He considered Dr. Cuthbert Lockyer's specimen an exceedingly interesting one, as showing a thin layer of muscle between the ovum and the lumen of the tube.

SPECIMENS.

Dr. W. H. B. BROOK (Lincoln) showed a uterus which he had removed by vaginal hysterectomy for primary tuberculosis of the cervix. A microscopical section from the same specimen, showing typical tuberculous structure with giant cells, was also exhibited. The specimen was removed from a married woman, aged 50, whose mother and one brother had died of phthisis. Since December last she had suffered from backache and leucorrhoea. On examination in February, a circular ulcer, with sharply-cut edges and a ragged depressed surface, which did not readily bleed, was found. A portion of this being excised showed the presence of multinucleated tuberculous giant cells. The whole uterus was removed on April 4th, the tubes and ovaries, which appeared healthy, being left. The body of the uterus was not affected, nor was there any evidence of tubercle elsewhere. The patient's husband was a strong healthy man. The case was discussed by Dr. CULLINGWORTH and Mr. TARGETT.—Dr. TATE showed two specimens of fibromyoma of the cervix treated by abdominal hysterectomy.—Dr. FAIRBAIRN exhibited a specimen of a cervical fibroid which had given rise to severe haemorrhage, and Dr. GALABIN brought forward three fibroids of the cervix removed by hysterectomy. In the discussion which followed Dr. SPENCER, Dr. CULLINGWORTH, Dr. BLACKER, Mrs. STANLEY BOYD, and Dr. AMAND ROUTH took part.—Dr. WILLIAMSON showed a specimen of embolism of the pulmonary artery occurring twenty-four days after delivery. Eight days after delivery the uterus was explored, on account of symptoms of septic infection, and a small piece of retained placenta removed. The patient made a good recovery, and was discharged from hospital sixteen days later. On her way home, however, she suddenly became unconscious, and died in a few minutes. At the necropsy a large embolus, completely plugging the pulmonary artery, was found. The right uterine and internal iliac veins were also thrombosed.

PAPER.

Mr. STANLEY BOYD read a short communication on an unusual case of inversion of the uterus. Dr. AMAND ROUTH and Dr. GALABIN took part in the discussion which followed.

MEDICAL SOCIETY OF LONDON.

A. PEARCE GOULD, M.S., F.R.C.S., President, in the Chair.

Monday, May 11th, 1903.

PATHOLOGY AND TREATMENT OF ENLARGED PROSTATE.

MR. BRUCE CLARKE in reading a paper on this subject said he preferred the term prostatic obstruction to that of prostatic enlargement. He contended that prostatic obstruction was the result of several pathological conditions and not of one. Some of them were accompanied by enlargement and some were not. After quoting various authorities on this point he described three principal varieties of obstruction from (1) adenoma, (2) fibrous prostate due to sclerosis of gland tissue, (3) varicosity of the veins of the prostatic urethra and trigone. Each of these demanded special treatment. The adenoma must be shelled out. In the fibrous form, the tissue of which was very difficult to remove, it was quite sufficient to remove one half of the gland. This plan of treatment had been very successful in his hands. In the vascular prostate the cause of the obstruction was blocking of the urethral orifice by the prolapse of the mucous membrane of the trigone which was loosened by the subjacent varicose vessels. A method of cauterization similar to that which was practised in prolapse of the rectum produced a satisfactory result. Thirty-three cases were related, of which 3 died, giving a mortality of 9 per cent. He argued for the selective treatment of the different forms of prostatic obstruction.

Mr. REGINALD HARRISON was brought up in the belief that carcinoma of the prostate was a very rare condition, but his experience had shown him that this was not the case. He had operated on two in the last year, which were described; in one the growth recurred within three weeks of its removal, and death shortly followed; in the second case the tumour shelled out like an adenoma, the patient was immediately and

completely relieved, but recurrence occurred three months after the operation. Two other cases he had recently seen, but he had refused to operate on them, and had recommended the high-frequency currents and the Roentgen rays.

Mr. SWINFORD EDWARDS had found that during a whole year all his cases admitted into hospital for prostatic obstruction proved to be malignant. He also referred to obstruction from prostatic obstruction. For vascularly enlarged prostate he had found double vasectomy of much value. The results of enucleation of the prostate were excellent when the patient survived, and the enucleation *en masse* was much less dangerous than its removal piecemeal, as there was much less haemorrhage. After enucleation a layer of the muscular wall of the bladder was sometimes removed with the gland, indicating, in his opinion, that the whole gland was really removed. Cases which lent themselves to complete enucleation should be submitted to that procedure if the patients were not content to endure catheter life.

Mr. CUTHBERT WALLACE said that in a strict sense the prostate had no capsule like the kidney, but it had a fibrous sheath intimately blending with the gland itself. But large tumours could be shelled out from the prostate. His investigations had shown that after a prostatectomy a thick capsule was left, and in this prostatic tissue could be found. The operation was, he submitted, the shelling out of adenomata from expanded prostatic tissue. The larger the tumour the easier it was to shell out. Vasectomy had no effect on the testis, and according to his recent observations it also left the size of the prostate unaltered.

Mr. BRUCE CLARKE, in reply, said that when the adenoma got very large it burst its prostatic limits and burrowed under the wall of the bladder. The growth of the adenoma led to atrophy of the remaining portion of the prostate.

CHOREA IN PREGNANCY.

Dr. CECIL WALL and Dr. RUSSELL ANDREWS communicated a paper on this subject, which was based on 40 cases that, all but one, had been under treatment in the London Hospital. Out of 37 patients there was a definite history of antecedent rheumatism in 16, and 12 more had had chorea in childhood without any other rheumatic manifestations. In all 23 out of 37 patients had previously suffered from chorea. In the chorea of childhood the majority of cases occurred in association with a high grade of mental development, yet some were found in children showing signs of mental deficiency and frequently also stigmata of physical maldevelopment; in the first group a history of rheumatism was common, in the second group it was frequently absent. In pregnant women suffering from chorea similar groups were found. A case was quoted in which the predisposing cause seemed to have been a defective cerebral development associated with microcephaly. The determining cause of chorea in pregnancy was usually mental worry often determined by the fact of pregnancy. The onset of movements at or about the time of quickening in a large proportion of the cases suggested the nature of the determining cause. Sudden shocks might also be the immediate cause of chorea; instances of this were quoted. The loss of the power of control in chorea might find expression not only in the physical irregular overaction, but sometimes also in emotional outbreaks, in some instances reaching to a degree of mania or melancholia. It was suggested that chorea in pregnancy was determined by mental worry, overstrain, or shock, acting upon a brain of which the controlling power was lowered by pregnancy, and the original stability was abnormal owing to antecedent rheumatism or chorea, or because it had never reached the normal standard of development. Of 40 cases of chorea in pregnancy in 37 patients, it occurred in the first pregnancy 18 times. In 10 cases the first pregnancy was not attended with chorea, but chorea occurred in later pregnancies. In 6 cases it recurred in subsequent pregnancies. There was a previous history of chorea in 23 patients. There was a history of rheumatism without chorea in 5 patients. There was no such history in 9 patients. The apparent cause in these 9 cases was shock in 2, husband out of work in 1, secondary syphilis in 1, and unexplained 5. The month of pregnancy in which the movements began was 4 in first, 3 in second, 4 in third, 9 in fourth, 7 in fifth, 6 in sixth, 2 in seventh, and 3 in last. There were 5 fatal cases, and 5 patients out of 37 were single women. The proportion of cases in which spontaneous abortion occurred was very little, if at all, higher than in ordinary pregnancy. In subsequent pregnancies there was not necessarily chorea. Treatment consisted of quiet, full feeding, freedom from anxiety and worry, and sleep, if necessary assisted by drugs, of which chloral and chloralamide were the best. Light massage was very useful in some cases. Induction of abortion was seldom indicated, and could not be looked on as a certain or safe method of treatment.

Dr. ROBERT JONES alluded to cases of chorea which came to asylums. There was much yet to be done in elucidating the relation of muscular movement to intellectual disturbance. When there was marked muscular movement in chorea there was much mental disturbance of the type of certain stages of dementia. In cases of Huntingdon's chorea he had seen distinct changes in the large pyramidal cells of the motor cortex. If the choreic movements were a reversal it was curious that in cases of chorea with insanity the sphincters were affected as these were elemental in their function.

Dr. F. J. MCCANN alluded to the fact that the movements of a fetus were for a time essentially choreic, thus eliminating, as he thought, the so-called congenital chorea. Cases of hysterical chorea should be excluded. The period of quickening had an important time relation with the onset of chorea. The relation of heart disease with chorea in pregnancy was of serious import. Chloral was, no doubt, the best drug to use. The mortality of chorea in pregnancy was probably not so high as had been supposed.

Dr. G. E. HERMAN alluded to the mistaken idea that chorea in pregnancy was the cause of abortion. Quickening, he thought, was not of much importance in its etiology. Were there any cases of chorea in which labour should be induced? He thought experience showed that it was never indicated.

Dr. AMAND ROUTH alluded to the great difficulty in preventing sepsis after abortion, suggesting that there might be some predisposing substance in the blood. He described two types of chorea in pregnancy—a slight and a very severe case. One very severe case was mentioned in which persistent treatment was ineffectual until the uterus was emptied, when the movements ceased, he thus thought it a too strong statement that abortion should never be induced in chorea.

Dr. ANDREWS and Dr. WALL replied.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

JOHN IRVING, M.B., President, in the Chair.

Fridays, April 24th and May 1st, 1903.

SPLENOPLEXY.

MR. BASIL HALL (Bradford) read a paper on a successful case of splenoplexy.

Mr. E. WARD and Dr. P. LEECH discussed it, and Mr. HALL replied.

RETROPERITONEAL HERNIA.

Dr. PRIESTLEY LEECH (Halifax) related the following case:

A muscular young fellow, aged 25, was seized in the early morning with violent abdominal pain; two days later abdominal section was done on account of intestinal obstruction, when a left duodenal (retroperitoneal hernia) was found, the sac containing about a yard of small intestine. The patient made a satisfactory recovery.

Mr. E. WARD, Mr. B. G. A. MOYNIHAN, Dr. T. CHURTON, and Dr. J. B. HELLIER discussed the paper, and Dr. LEECH replied.

THE ACTION OF DRUGS.

Dr. GORDON SHARP read a paper on the action of morphine, kino, and calomel, illustrated by experimental and clinical evidence. In ordinary doses he believed morphine was non-toxic to the patient after it had gone the round of the circulation. The loss of toxicity was not due to the rapid elimination by the urine, for if the ureters were tied and the drug allowed to remain in the tissues, there was no increase in toxicity. The loss of toxicity was probably due to the formation of a firm proteid compound of morphine which was not easily broken up. The fact that morphine could not be easily removed from the urine by the acetic and ethylic ether process in the presence of sodium bicarbonate supported this view of a combination of a proteid and the alkaloid. In future experiments Dr. Sharp intended to digest the morphine-laden urine with pancreatine and sodium bicarbonate, and then try to remove the morphine by the ethers. Going on to speak of kino, rhatany, and catechu, the writer detailed some experiments he had made with compound kino powder extending over long periods. The drug was given in 5-gr. doses in capsules before meals four times a day. The evacuations, which previously had been dark, thin, watery, and

frequent, now became pale, gluey, and less frequent. The motions were treated with absolute alcohol and examined after two days' maceration. The alcoholic extract was found to give no tannin or gallic acid reaction. The alcohol only appeared to dissolve the colouring matter of the kino (kino-red). This body had lost its astringency. After some weeks' maceration the alcohol had precipitated the proteids, and the tannin (kinöin) of the kino was taken up by the alcohol. This tannin was only feebly astringent. It gave a reaction with ferric and ferrous salts. The urine gave no reaction with the combined iron salts, so that it would appear the drug in small doses only acts locally—by forming a coagulum with the proteids, etc., and as it does so it gradually loses its astringency. This coagulum can only be broken up after prolonged maceration in alcohol. Calomel was next dealt with. The drug was found free from the perchloride when first obtained, but in from six weeks to two months it gave the reaction for the persalt. By experiment it was found this change could be produced rapidly by digesting the calomel with cat's stomach in several hours. This action might explain why calomel acted so energetically and in small doses in flesh-eating animals. In human beings the salt might act energetically or not at all and much depended on the condition of the stomach at the time as to pepsinogen and acid. The purgative action might be a reflex one as where the stomach contained much ferment and acid, vomiting was set up, peristalsis followed, and the canal contents were evacuated. Calomel, however, did not always act as a persalt. It might be transformed into a soluble mercurous proteid salt. The experimental evidence pointed this way, for when calomel was digested with active saliva or with fresh extract of calves' pancreas a solution was obtained which could be dialysed through parchment and passed through filter paper, and when so treated and examined it gave a black precipitate with caustic potash, a green with dilute solution of potassium iodide, and reacted to the electrolysis test. These tests proved the presence of a mercurous salt and of a soluble mercury salt.

Dr. T. CHURTON, Mr. T. G. FOX and Mr. C. RICHARDSON took part in the discussion, and Dr. SHARP replied.

ATONIC DILATATION OF THE STOMACH.

Dr. BEDFORD PIERCE (York) read a paper on Hendall's treatment of this affection, and related a successful case. The principal features of the treatment were continuous application of heat and the persistent administration of food without restriction of solids or liquids. The patient must remain in the recumbent position, and at first must not even read or write. No drugs were given. Stimulants, tea and coffee, were prohibited. The heat was applied night and day by relays of hot-water bottles. The diet must be liberal, consisting largely of milk, yolks of eggs, meat of all kinds, including pork; fresh and stewed fruit, macaroni and farinaceous foods. The food must be persisted with regardless of discomfort. In the case related dyspepsia and constipation had lasted for twenty years, and all modes of treatment had been tried. In the course of three months the patient gained 3 st., the constipation disappeared, and the stomach, which had previously extended nearly to the level of the crests of the ilium, retracted to its normal position. Dr. Pierce suggested that the heat promoted peristalsis. Concentrated foods should be avoided. Ordinary food with abundant indigestible residue, as above indicated, was the proper diet for atonic dilatation, provided there was no sign of ulcer or gastritis.

Dr. J. E. EDDISON, Dr. T. CHURTON, Mr. SECKER WALKER, Dr. A. MANTLE, Mr. H. LITTLEWOOD, Dr. CHRISTY WILSON, Dr. EURICH, Mr. L. KNAGGS, and Mr. C. RICHARDSON joined in the discussion; and Dr. PIERCE replied.

ANNUAL MEETING.

At the close of the last ordinary meeting, the annual meeting was held. The average attendance at the meetings held during the year was sixty-three. The following officers were elected for the session 1903-4: *President:* Mr. C. Richardson. *Vice-Presidents:* Dr. A. Bronner (Bradford) and Mr. E. Ward. *Treasurer:* Dr. J. E. Eddison. *Librarian:* Dr. A. G. Barrs. *Auditor:* Dr. C. M. Chadwick. *Committee:* Dr. Gordon Black (Harrogate), Dr. Evans (Bradford), Dr. E. Roberts, Dr. Bampton (Ilkley), Mr. W. Thompson, Dr. J. W. H. Brown, Dr. J. G. E. Colby (Malton), Dr. S. M. Hebblethwaite (Harewood), Dr. J. H. Woods (Batley), Dr. John Irving (Huddersfield), Dr. Swanson (York), Dr. J. Pickles, Dr. Edward Ellis (Halifax), Dr. de C. Woodcock, Mr. Michael Teale. *Honorary Secretaries:* Dr. E. F. Trevelyan and Mr. Lawford Knaggs.

BRITISH GUIANA BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

J. H. CONYERS, M.B., C.M., President, in the Chair.

Tuesday, April 7th, 1903.

PRESIDENT'S ADDRESS.

THE PRESIDENT delivered an address which alluded to certain problems of importance at this date in the Colony. (1) He urged the necessity of the identification of the special species of *Anopheles* that acted as the host to the malarial parasite, its breeding places, etc., in order to see if a practicable method of exterminating the insect might be possible in a Colony the low-lying nature of which added considerably to the difficulty. (2) Referring to the enormous prevalence of tuberculosis and the costliness of sanatoria, he advocated prevention by a wholesale education of the public in the doctrine of infection. (3) He pointed out the frequency of suppurating hydroceles and alluded to a writer in the BRITISH MEDICAL JOURNAL who had regarded them as filarial, and asked that evidence might be accumulated on this point. (4) He uttered a word of warning as to the apparent increase in diphtheria—a disease at present rare in this Colony. (5) With regard to the prevailing epidemic of eruptive fever he dwelt at length on the first case reported to the Government and alluded shortly to five others, and summed up by pointing out that it differed from (*a*) chicken-pox in chiefly affecting adults, in the severity of the prodromal fever, the late appearance of the eruption (the fourth day), its slow maturation and the greater tendency to affect the face, and alluded to the rarity of endemic chicken-pox and the tendency for the epidemic disease to assume a severe type; that it differed from (*b*) small-pox in that the prodromal fever, though severe, lacked the great prostration and muscular flaccidity characteristic of small-pox, that the incidence of the rash though most marked on the face, showed a relatively lighter incidence on forearms and hands, and still less on legs and feet, and thirdly in the superficial nature of the eruption, its appearance in crops, and the variation in the size and shape of the vesicles. He finally pointed out that the one direct proof as to whether the disease was small-pox was its relation to vaccination, and urged the members to accumulate evidence on this point. So far, there had been no cases in the recently vaccinated, and two of those who had recovered from the disease had been successfully vaccinated, though he admitted that the vaccine vesicles, though fairly typical, had been delayed in appearing.

Sir DAVID PALMER ROSS congratulated the President on his excellent address, and moved a hearty vote of thanks to him, which was seconded by Dr. EDMONDS and carried unanimously.

A discussion followed, and the PRESIDENT replied to the different points raised.

SOUTH WALES AND MONMOUTHSHIRE BRANCH OF THE BRITISH MEDICAL ASSOCIATION.—At the spring meeting held at Pontypridd on Friday, April 24th, Dr. R. G. PRICE, President, in the chair, Mr. W. F. BROOK showed (1) myoma of uterus impacted in pelvis, and causing intestinal and urethral obstruction, relieved by laparatomy and hysteropexy; (2) some unusual specimens of myoma removed by abdominal hysterectomy.—Dr. P. RHYS GRIFFITHS showed (1) etiology and symptoms of perforating ulcer of the stomach, based upon four successful cases after operation: (2) appendicitis, (*a*) pseudo-appendix, (*b*) appendicitis complicated by a parovarian cyst and fibroid of uterus; (3) extraperitoneal method of dealing with an artificial anus.—Mr. WILLIAM SHEEN, read a communication entitled Remarks on Septic Thrombosis of the Lateral Sinus.

DORSET AND WEST HANTS BRANCH OF THE BRITISH MEDICAL ASSOCIATION.—At the annual meeting of this Branch held on May 6th, under the presidency of Dr. JOHN MOORHEAD, an address was delivered by the PRESIDENT on some unusual gouty affections.—Dr. COMYNS LEACH related a case of prostatectomy. The patient and the removed prostate were shown.—Dr. ALDERSON reported a case of congenital fracture of the femur, with successful result.—Dr. LAWRIE showed (1) a fibroid tumour removed by subperitoneal hysterectomy from the fourth of four sisters who had suffered from the same condition. (2) Other specimens.

REVIEWS.

OBSTETRICS.

The *Textbook of Obstetrics*,[1] by American authors, is a work of high merit—one of the best treatises on midwifery that has appeared in recent years. The illustrations are better than those in any preceding work on the subject. The section on the pathology of pregnancy is full and complete. We note with some surprise mention of incarceration of the anteverted pregnant uterus. Who has ever met with such a thing? We cannot imagine any mechanism by which it can be produced, and we believe its only existence was in the mind of the ingenious constructor of "the mechanical theory of uterine pathology." The chapter on the mechanism of labour, by Dr. Edward Reynolds, of Boston, is good. The author lays proper stress on the desirability of examining the abdomen by palpation some time before labour has begun in order that the position of the child may be found out and, if wrong, corrected. He omits to give directions for estimating the size of the child. When the child is lying dorso-posteriorly, Dr. Reynolds finds that this can usually be rectified by postural treatment. If the patient is instructed to assume the "knee-chest" position several times daily during the last few weeks of pregnancy, gravity will cause the head to retreat from the brim, and then, as the spinal column makes the dorsal side of the fetal ovoid the heavier, this will sink down towards the front. We are grateful to Dr. Reynolds for using English instead of long Latin words, but they should be "knee chin" or "knee-elbow"; the "knee-chest" position is impossible except to an acrobat, and this Dr. Reynolds, as appears from another passage, has found out. He gives directions for rotating the head manually when it is above the brim, by passing the hand into the uterus; but he seems not to have tried rotating it by external manipulation. He says nothing about manual rotation when the head is in the pelvic cavity, but mentions to condemn, and rightly we think, forced rotation with the forceps. In face presentations at the brim, the author's practice depends upon whether the chin is behind or in front. If behind, he tries to effect flexion, so as to make the case one of a favourable vertex position. If in front, as flexion will only make the case an occipito-posterior one, he prefers podalic version. The author approves of applying forceps to the breech. He recommends assisting delivery of the after-coming head with the fingers on the canine fossae of the child, a position in which the power they can exert is limited by the amount of friction between the lubricated fingers and the slippery skin of the child's face. Any one who tries it will find himself compelled to put his finger in the child's mouth. In the chapters on instrumental delivery there are figured no less than seventeen different kinds of forceps, six perforators, and eleven instruments for delivery after perforation. Surely it would be more helpful to the learner if he were told the best instrument, and the best only. If historical completeness is aimed at, seventeen forceps is but a small fraction of the trivial modifications with which ambitious obstetricians have linked their names in instrument makers' catalogues. The last article in the volume, on "coeliotomy for sepsis in the child-bearing period," is by Dr. Hirst, and is a very wise one. He says of "exploratory abdominal section in those cases in which there are no physical signs of pelvic inflammation, but in which there is evident septic infection of a nature difficult to determine," that he has formerly resorted to this practice, and has seen others do so, but never with benefit to the patients. The chapter concludes with a brief description of pelvic cellulitis, as to which the author says, "Cases like this of true extra-peritoneal pelvic abscess, due to puerperal infection and without intraperitoneal inflammation, are rare. There are some gynaecologists who deny their existence; but the writer has had two cases under his charge in which the diagnosis was established by abdominal section." Here at least we benighted Englishmen are, and for years have been, ahead of advanced American gynaecology. We know of no London school in which the ordinary student is not taught the symptoms, signs, and course of pelvic cellulitis; nor of any hospital in which abdominal section is thought necessary for its diagnosis.

[1] *A Textbook of Obstetrics for Practitioners and Students* (by American authors). Edited by Richard C. Norris, M.D.; Robert L. Dickinson, M.D., Art Editor. Two volumes. Second edition. London and Philadelphia: 1902. W. B. Saunders and Co. (Roy 8vo, pp. 554 and 547; 77 plates, 605 illustrations. 35s.)

Dr. Garrigues's *Textbook*[2] is a contribution to the art rather than to the science of obstetrics. It is a description of the art of midwifery as understood and practised by Dr. Garrigues, a physician of considerable learning, large experience, originality, and resource. It cannot be quite as highly commended to those who wish to learn the physiological processes which the physician has to watch, and with which a skilful accoucheur only interferes when necessity compels him to do so, and the mechanical conditions which render easy or difficult the task of the uterus in the delivery of a child. The description of the mechanism of labour is poor. The mechanical action of the uterine action in the different stages of labour, the general intrauterine pressure, the fetal axis pressure, and the form-restitution force are not described at all. The account of the involution of the uterus is imperfect; the old assertion, copied from one book to another for so long, that the involution is accomplished by fatty degeneration, is handed on again here, although it rests on no solid foundation and has been disputed by recent observers. The changes in the veins which form the most trustworthy evidence of past pregnancy are not mentioned. The author describes the different kinds of deformed pelvis that have been observed; but, as a rule, he makes no attempt to explain the mechanical production of each deformity. Without some guiding explanation to show how the deformity has come about, the retention in the memory of the characteristics of each kind of deformed pelvis is one of the most painful and profitless tasks that can be inflicted on the student. We gladly pass from theory to practice, although the defects of the kind we have indicated make the book hardly one to be recommended to students. The practitioner will find in this book abundance of little pieces of practical advice such as are commonly called "tips." Indeed he will find an *embarras de richesses*. Thus when Dr. Garrigues advises him how to dilate the cervix, he tells him of three kinds of dilators to begin with; one a machine for stretching the cervix, two modifications of Hegar's dilators; then when these have done their work he is told not only of Champetier de Ribes's bag and the forceps with which it is introduced, but of two other obsolete dilating bags; and the suggestion is made that the reader may introduce Champetier de Ribes's bag with an instrument constructed for the insertion of one of the obsolete forms. Dr. Garrigues takes with him in his "satchel" an axis-traction forceps, and also an old-fashioned pair. We should have thought either the one or the other unnecessary. He has evidently never used Ramsbotham's decapitating hook, for he recommends Braune's comparatively inefficient instrument, with scissors or the écraseur as alternatives in case of failure. No one who has used the decapitator as recommended by Ramsbotham would advise any other instrument for the purpose. We are aware that Ramsbotham's instrument has been modified by others, and not for the better; and therefore we advise those who would use it to follow Ramsbotham's directions. Dr. Garrigues does not describe or mention subcutaneous symphysiotomy. He gives directions for the performance of ischio-pubiotomy, but does not tell us how often this has been done either by himself or by other American operators. He has thought it necessary to insert a chapter on copulation, which we should have preferred omitted; and he directs advice to be given as to sexual intercourse during pregnancy, which to us seems neither necessary nor advantageous—either to patient or doctor. We have said enough to illustrate the character of the book. It is one with a good many merits and a good many faults. It will stimulate, instruct, and suggest much to the specialist, but it cannot be recommended as a textbook to the student. It might be much improved by a free use of the pruning knife; by striking out the alternative courses which the author so abundantly offers, and the obsolete methods which he often mentions only to say that a better course should be chosen in their place.

Like many volumes which are the composite production of many writers, *The Practice of Obstetrics*,[3] edited by Dr. Jewett, is made up of contributions of unequal value. It is designed for the practitioner; and the letterpress is therefore

[2] *A Textbook of the Science and Art of Obstetrics*. By Henry J. Garrigues, A.M., M.D., Professor of Obstetrics (retired) in the Postgraduate Medical School, New York, etc. Philadelphia and London: J. B. Lippincott Company. 1902. (Demy 8vo, pp. 844, 504 illustrations. 25s.)

[3] *The Practice of Obstetrics* (by American authors). Edited by Charles Jewett, M.D., Professor of Obstetrics and Gynecology in the Long Island College Hospital, New York. Second Edition. London: Henry Kimpton. 1902. (Demy 8vo, pp. 786, 445 illustrations. 25s.)

not encumbered by any bibliography and contains few references. The opening chapters on anatomy and physiology are excellent. So on the whole are those relating to pregnancy; except that we are rather startled at being told that a greatly distended bladder presents intermittent contractions like those of a pregnant uterus. (p. 134.) Our experience has hitherto been that a distended bladder fluctuates and does not intermittently contract. The description of the mechanism of labour contains some errors. The writer states that "the suboccipito-bregmatic is the plane which engages in complete flexion of the head;" and that the suboccipito-frontal is "of little practical importance." (p. 179.) Now the diameter obstetrically important is that which is the largest that has to pass through the genital canal; and this, when the vertex presents, is according to Dr. Jewett's own measurements, the suboccipito-frontal, for he gives the suboccipito-frontal as $4\frac{3}{8}$ in., the suboccipito-bregmatic as $3\frac{1}{2}$ in. It is then the suboccipito-bregmatic and not the suboccipito-frontal that is "of little practical importance." Dr. Buckmaster, who continues the subject, adopts Schroeder's diagrams of the retraction ring, but commits himself to no statements as to its situation, and does not mention that many think it identical with the os internum. The obliquity of Naegele is described, but not explained; and there is no mention of the demonstration by Pinard that posterior obliquity is often present in the beginning of labour. Dr. Jewett inculcates well the importance, and clearly describes the methods, of abdominal palpation in pregnancy, and of antiseptics. He mentions no method of directly measuring the true conjugate, but figures a pelvimeter for measuring the thickness of the symphysis, a proceeding that some people think impracticable upon the living woman owing to there being unfortunately a bladder and urethra in the way. The article on the puerperal state by Dr. Hunter Robb is excellent, but it gives a longer lease of life to an error which has been copied from book to book for years, but was shown to be erroneous in the *Transactions of the Obstetrical Society of London* ten years ago; we refer to Gassner's estimate of the amount of the lochia—an estimate based only on two cases, both of them pathological, and corrected by Giles in 1893. The chapter on embryotomy is one of the least satisfactory in the book. The beginner is not helped by being given his choice between three or four different instruments for each purpose; and the fact that the writer does not clearly tell the reader which is the best suggests that he has not had experience enough to enable him to decide. If the learner wishes to perforate, he is given his choice between the trephine and the scissors perforator. Oldham's, the best of all perforators, is not mentioned. Braun's decollator is said to be the "most efficient instrument" for its purpose. This is a statement no one could make who had used Ramsbotham's sharp hook. Cephalotripsy is said to be only efficient in the minor degrees of pelvic contraction—a statement which is explained by the drawing of the very inferior American cephalotribe which is given. If the author were to try Braxton Hicks's instrument, we think he would alter his judgment as to cephalotripsy.

HYGIENE AND PUBLIC HEALTH.

Professor Corfield has printed in a handy volume his Milroy lectures on the *Etiology of Typhoid Fever and its Prevention*[4] delivered before the Royal College of Physicians of London last year. The table of contents gives perhaps the best conception of the scope of the work. In the first lecture the history of the recognition of the disease is given and a general view of its pathology presented. In the second lecture the part played by general insanitary conditions by polluted water and by milk is described. Under each of these headings a graphic summary of well-known epidemics is given, and it cannot be too often emphasized that the reading of lucid accounts of epidemics is more instructive from a practical standpoint than textbook instruction can possibly be. In the third lecture are described various miscellaneous causes of typhoid fever, as oysters and other shellfish, ice-cream, fried fish (?), ginger beer, raw vegetables, while the relationship of typhoid fever to sewer air, to subsoil water, and to direct contagion are all discussed in the same lecture. The book presents an admirable conspectus of epidemics of typhoid fever, and will therefore be found invaluable to those wishing for convenient reference to the literature of this subject. Our only complaint is that the descriptions of epidemics are somewhat too much curtailed, and that descriptions are given and author's views are summarized with a too infrequent application of the criticism for which Professor Corfield's very exceptional experience makes him specially fitted. The very full table of contents makes reference to any particular epidemic or cause of disease an easy task.

[4] *The Etiology of Typhoid Fever and its Prevention.* By W. H. Corfield, M.A., M.D., etc. London: H. K. Lewis. 1902. (Demy 8vo, pp. 159. 2s. 6d.)

THE OVERCROWDING OF THE MEDICAL PROFESSION.

By William Gordon, M.D.,
Physician, Devon and Exeter Hospital.

The number of medical men in England and Wales is now considerably in excess of the needs of the population. In 1887 Mr. Rivington drew attention to the overcrowded state of the profession, and showed its seriousness;[1] but the overcrowding is much worse now than it was in 1887. Whilst in 1880 there were 0.59 medical men to every 1,000 of the population, in 1900 there were 0.70 per 1,000. (Table I.)

Table I.—*Ratio of Numbers of Medical Men to Population in England and Wales.* (*The Numbers of Medical Men are from the "Medical Directory."*)

Year.	Number of Medical Men.	Estimated Population.	Number of Medical Men per 1,000 of Population.
1871	14,684	22,782,892	0.64
1872	—	23,067,835	—
1873	—	23,356,414	—
1874	—	23,648,609	—
1875	—	23,944,459	—
1876	—	24,244,010	—
1877	—	24,547,309	—
1878	—	24,854,397	—
1879	—	25,165,336	—
1880	15,211	25,708,666	0.59
1881	15,116	26,055,406	—
1882	15,304	26,413,861	—
1883	15,460	26,770,744	—
1884	16,192	27,132,499	—
1885	16,624	27,499,041	—
1886	16,978	27,870,586	—
1887	17,395	28,150,169	—
1888	17,893	28,628,804	—
1889	18,236	29,015,613	—
1890	18,792	29,001,018	0.64
1891	19,021	29,081,047	—
1892	19,319	29,405,054	—
1893	19,870	29,731,100	—
1894	20,487	30,060,763	—
1895	21,055	30,383,047	—
1896	21,505	30,717,355	—
1897	22,135	31,055,355	—
1898	22,507	31,397,078	—
1899	22,714	31,742,588	—
1900	23,023	32,526,075	0.70
1901	23,471	Not yet published	—
1902	23,707	,,	—
1903	23,917	,,	—

But in those twenty years the public health had greatly improved, owing to causes quite unconnected with the number of medical men; and consequently, in 1900, a given number of persons afforded less work for medical men than in 1880. The annual death-returns furnish the only available statistics of the general decrease of illness. The method will be imperfect, but we shall, I think, certainly gain a truer estimate of the progress of the overcrowding from a comparison of the numbers of medical men with the total number of deaths than is afforded by the above comparison of the numbers of medical men with the numbers of the population. Taking five years' averages of the total annual deaths at each date, there were, in 1880, 29 medical men in England and Wales to every 1,000 deaths, whereas, in 1900, there were 41 medical men per 1,000 deaths. (Table II.) In other words, *taking total annual deaths as roughly proportional to total annual medical work, if the average income of a medical man was £410 a year in 1880, in 1900 it would have fallen to £290 a year!*

The effect of this growing poverty, together with the growing strain of more elaborate clinical methods, on the medical profession, is evident from the Registrar-General's returns. The mortality amongst medical men is much higher than that amongst members of other professions. *The death-rate from nervous diseases is excessive and increasing*, although alcoholism is insufficient to account for this, and is decreasing. *The death-rate from suicide is enormous, and is notably increasing.* In 1892 suicide amongst medical men was to suicide amongst occupied males generally as 41 to 14! (Table III.) Indirect effects of such overcrowding are obvious.

The effect on the public is very bad also. *Too many medical men are no gain to the public, and the loss of the services of many men of higher calibre, who would enter the profession if its overcrowding did not deter them, is a most serious loss. The admission of boys of 16 is a grave evil.*

It will be obvious that "possible depletion of the profession" cannot, in face of these facts, be made a ground for delaying the adoption of the only too moderate suggestions of the British Medical Association for remedying the present grave defects in the age limit, standard, and scope requirements in preliminary general education examinations for medical students.[5]

I append the tables of figures and the references on which the foregoing is based; also a chart which makes clear at a glance the continuous progress of the overcrowding. My best thanks are due to Mr. Elliston for the statistics of population, annual deaths, and numbers of medical men, which he has so kindly placed at my disposal, and to Dr. Deas for his official permission to use them in this paper.

TABLE II.—*Ratio of Numbers of Medical Men to Total Deaths in England and Wales.*

Year.	Number of Medical Men.	Total Deaths in Whole Population.	Number of Medical Men per 1,000 Deaths. (Averages of Five Years Deaths.)
1871	14,684	514,879	29
		Average of five preceding years = 499,348	Death-rate per 1,000 in 1871 = 22.6
1872	—	492,265	—
1873	—	492,520	—
1874	—	526,932	—
1875	—	546,453	—
1876	—	510,315	—
1877	—	500,496	—
1878	—	539,872	—
1879	—	520,255	—
1880	15,211	528,624	29
		Average of five preceding years = 521,112	Death-rate per 1,000 in 1880 = 20.5
1881	15,116	491,935	—
1882	15,304	516,654	—
1883	15,460	522,907	—
1884	16,192	530,828	—
1885	16,624	522,750	—
1886	16,978	537,276	—
1887	17,395	530,758	—
1888	17,893	510,971	—
1889	18,236	518,355	—
1890	18,792	562,284	35
		Average of five preceding years = 531,921	Death-rate per 1,000 in 1890 = 19.5
1891	19,021	587,925	—
1892	19,319	559,684	—
1893	19,870	569,958	—
1894	20,487	498,827	—
1895	21,055	568,997	—
1896	21,565	526,727	—
1897	22,135	541,487	—
1898	22,567	554,141	—
1899	22,714	581,799	—
1900	23,025	587,830	41
		Average of five preceding years = 557,997*	Death-rate per 1,000 in 1900 = 18.2

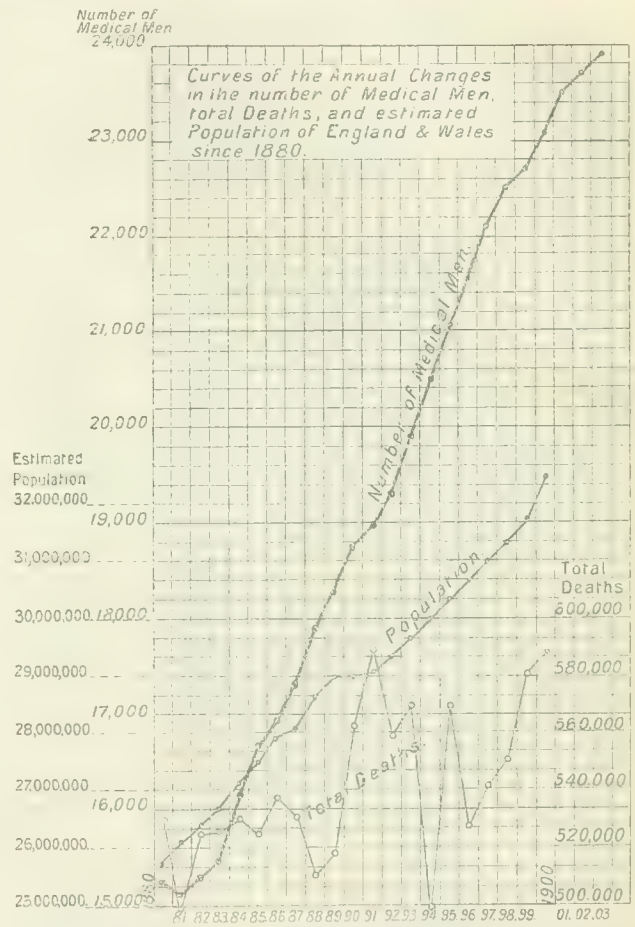
* No later figures yet published.

TABLE III.—*Showing Effects of Overstrain on Medical Men. Comparative Mortality Figures, 1890-92. (Supplement to Registrar-General's Report, 1897).*

Occupation.	All Causes.	Alcohol.	Nervous Diseases.	Suicide.
Occupied males	953	13	82	14
Clergymen	533	2	69	7
Lawyers	821	12	104	22
Schoolmasters	604	5	71	22
Medical men	966	14	122	41

REFERENCES.

[1] W. Rivington, Carmichael Prize Essay, 1887, p. 912. [2] Supplement to the 55th Annual Report of the Registrar-General, 1897, Part II, pp. xxiii, xxiv, cxiv, clxv. [3] Op. cit., pp. xxiv, clix. [4] Op. cit., pp. xxiii, clxv. [5] (1) That it is undesirable that any one should be registered as a medical student until he or she has attained the age of 17. (2) That the standard of the examination in preliminary general education required by the General Medical Council should be suitable for candidates of 17 years of age, and not lower than that required at present for the Oxford or Cambridge senior local examinations. 3. That the examination should include a pass and an honours division as in the University local examinations, the subjects for the pass to comprise at least Latin, mathematics (comprising arithmetic, algebra, and geometry), English grammar, literature and essay writing, history, geography, and either French or German; the honours division to include Greek and physical science as compulsory subjects. (4) That the present system of multiple examining Boards is most undesirable, and that it is essential, in order to secure uniformity of standard, that the Medical Acts should be amended so that the General Medical Council should be empowered to appoint a single examining Board, which should hold its examinations, as often as necessary, at multiple centres simultaneously.



This chart illustrates the progressive overcrowding of the medical profession since 1880. The ratio between medical men and population has been taken as 0·6 to 1,000, and that between medical men and total deaths as 30 to 1,000, that is, approximately the ratios existing in 1880; but as both of these ratios are slightly in excess of what they were in 1880, the increase of overcrowding since 1880 is represented as rather *less* than it really is.

A STATE BOARD OF BARBERS IN PENNSYLVANIA.—The sanitary reform of the art and mystery of barbers proceeds apace in the United States. A Bill creating a State Board of Barbers in Pennsylvania has, we learn from *American Medicine*, passed the Pennsylvania Legislature, and is now ready for the signature of the Governor. It creates a State Board of two master and three journeymen barbers, who shall formulate sanitary rules and regulations for the government of barbers. Every barber at present engaged in his occupation in first, second, and third-class cities, and in boroughs of 10,000 population, must pay a licence fee of 1 dollar to the Secretary of the Board. Barbers throughout the State are almost unanimous in approval of the Bill, as they think that it will tend to drive the cheap barber and his usually inexperienced workmen out of the field. Every shop must be provided with up-to-date sanitary appliances.

PHYSICAL EDUCATION IN ITALY.—A Board has just been appointed by the Italian Minister of Public Instruction to see that the new law relative to physical training in schools and universities is efficiently carried out. The President of the Board is Commendatore Angelo Mosso, Professor of Physiology in the University of Turin.

A

COMPARATIVE STATISTICAL STUDY

OF

CANCER MORTALITY.

(Concluded from p. 1011.)

V.

GENERAL SUMMARY.

IN examining the general conclusions to be arrived at from the consideration of the regional distribution of cancer it may, at first, be pointed out that only in a few instances can these be of a positive or decided character, and if this be thought unsatisfactory, the excuse may be made that the calculation was not commenced with the view of proving any preconceived theory, but to discover what inference might naturally be drawn from the study of the figures by an impartial mind.

The facts before us give little support to the view that the distribution of cancer is entirely dependent upon the geological conformation of various districts. It is true that a high cancer-rate is noticeable on the clays of Cambridge and Sussex, and on the alluvial soil of Holland, but similar high rates are found among populations living on the igneous rock of Cumberland and North Wales, on the carboniferous strata of Bohemia, and on the palaeozoic rocks of Norway. In fact, the strata of every geological period show alike areas of high and others of low mortality, although the former are perhaps more often found on recent deposits.

It will have been noticed that the areas of high mortality are not uncommonly situated in the colder portion of the country, but this fact is scarcely sufficiently well marked to justify the conclusion that climate is a very potent influence in this respect. With regard to rainfall, the facts which were given in detail for England could only lead to a negative conclusion, and the same may be said of other countries, though it has not been thought necessary to give details as to the average rainfall.

Elevation is another point which seems to be of comparatively little importance, for although the high mortality area in Holland, like that of Cambridgeshire, is of course extremely low-lying; on the other hand, the majority of such areas appear to be situated in hilly districts of which North Wales, Bavaria, and Baden may be instanced with the mountain region of Norway and most of the country about the Alps. A difference of opinion has long existed on this question, for while some have looked upon low-lying lands as the natural home of cancer, there have always been others who have pointed out that the disease is more prevalent on the tops of hills.[19]

The figures give more support to the view so largely held that the valleys of great rivers are favourable to the production of cancer. It has long been known in this country that the Thames Valley is an especially favourable locality for the occurrence of malignant growths, and it will be now noticed that a high death-rate obtains along the whole valley of the Danube to the Hungarian frontier, and along a great part of the valleys of the Rhine and Elbe. Also in France the same fact is observable with regard to the Seine, Marne, and Oise.

On this point, however, there is also a certain amount of contradictory evidence. The counties bordering on the Severn Valley have never shown a great mortality from cancer, while we find in France few areas of high mortality in the valley of its principal river, the Loire, and the Department of the Bouches du Rhone is one of those coming lowest on the list.

Altogether, therefore it seems very doubtful whether there is any persistent prevalance of cancer among populations living in river valleys and whether, where this occurs, it may not be due to some superadded condition. In fact, cancer appears to be common wherever water abounds be it in the form of river, lake, or marsh, a fact which is exemplified in Switzerland, Bavaria, and Holland. No doubt this is due to the intimate relation which exists between abundance of water and vegetation. Along the Rhone, however, we find low cancer mortality everywhere except in the immediate neighbourhood of the city of Lyons and the middle portion of the Rhine valley shows no excess of deaths from malignant disease, though the rate is very high about its upper portion, as well as in the Dutch provinces near its mouth.

A careful study of the tables given for each country leads to the conclusion that one geographical feature has a very important influence. In almost every case it will be found that districts of high cancer mortality are also forest, or at least well-wooded, districts. This is especially noticeable in France and Germany; but in Austria, Switzerland, and Italy alike the highest rate is found in parts of the country largely covered by woods. It is even more striking that areas which have been deforested are almost invariably areas of low mortality, such as the canton of Ticino in Switzerland, and Istria and Dalmatia in Austria.

The idea that trees may play a part in the production of cancer is not a new one, Noel[20] having pointed out as long ago as 1897 that the inhabitants of isolated houses surrounded by trees are specially liable to suffer from this malady, and that the disease is particularly prevalent among forest guards. Lloyd Jones in reviewing the incidence of cancer in Cambridgeshire also noted the fact that it was more common in the neighbourhood of trees. Noel suggests that cancer may be directly derived from a somewhat similar disease which occurs in trees, and which is known as "canker."[21] Without, however, assenting to this statement, for which proof seems to be altogether wanting, it cannot be doubted that trees have a very serious and potent influence on those who live in their neighbourhood, and which seems beyond question to make them more prone to suffer from cancer.

There remains for consideration the question whether any inferences can be drawn as to those conditions of life which most predispose to malignant growths.

Both wealth and poverty have been accused by different authors of having an evil influence in this respect.

The conclusions to be drawn from the figures before us are not very definite. In considering countries as a whole it appears that the disease is more common in rich countries such as England, France, Holland, and Bavaria, while the lowest rates are among the poorer nations, Italy and Ireland. It is, however, difficult to judge whether this cause has any influence as regards the rates in different districts of the same country, as in many of them the poorer parts would be the regions in which diagnosis and registration would be most faulty.

It was frequently found that the rural portions of the population suffered more than the urban, a fact now sufficiently well understood, although in former years the contrary was supposed to be the case. That an excessive mortality occurs in the large towns of Prussia and France is probably due to the facility of communication and the multiplicity of public institutions, owing to which sufferers from cancer usually come into towns for treatment. This is well explained by De Bovis.[22] Agricultural districts appear, on the whole, to suffer more than industrial; this is by no means invariable, but is so general as to suggest that where it is not evident there is some special cause to account for the fact.

With regard to special articles of diet, there appears to be absolutely no evidence that the consumption of a large quantity of meat is a cause of cancer. This is not only established by the table as to the quantity of meat consumed in different countries, but also by the fact just alluded to that cancer is more prevalent among among the agricultural population, who eat but little meat, than among the well nourished inhabitants of towns and of the seats of wealthy industries. Moreover, cancer is not scarce among races who eat little or no meat, such as the Hindus and Chinese, and among the very small meat eaters of Italy and Norway.

Fish eaters, on the other hand, may perhaps, have a somewhat increased tendency to malignant disease. Both in England and in America sailors and fishermen among occupied males show a high rate; but, on the other hand, it must be pointed out that the Bretons, who are largely a fishing population, suffer but little, and that the greatest mortality often occurs in inland districts where fish can form but a very small element of the diet.

Braithwaite's suggestion that salt influences the production of cancer seems to be founded on a fallacy, as he supposes that cancer does not occur among Jews, which is certainly not correct. The high rate in the Salzkammergut might be noted as a point in favour of the suggestion; but, on the other hand, the kingdom of Saxony, which shows the highest rate for the whole of Germany, is almost the only country in that empire in which salt is not found.

[19] Butlin, Collective Committee of British Medical Association.

[20] Noel, *Revue des Maladies Cancereuses*, 1897.

[21] Marshall, *Diseases of Trees.*

[22] L'Augmentation de Fréquence du Cancer. *Semaine Médicale*, September 10th, 1902.

In dealing with the table on the consumption of alcoholic liquors in various countries, it has already been pointed out that the statistics seem to give very strong ground for the belief that the consumption of beer is a predisposing cause of cancer. On referring to the figures for cancer distribution generally we find this impression strongly confirmed. In almost every country in which the staple drink varies in different parts, it is found that the highest rate is in those districts in which beer and cider are most used. It is specially noteworthy that the Bavarians, who consume a larger amount of beer per head than in any country in the world, show an extremely high cancer-rate; and Lille, where far more beer is drunk than in any other French city, gives the largest percentage of cancer among persons over 40 years of age.

As to the question of the effect of alcohol generally in the production of the disease the evidence is more doubtful, and the indications given by the table just referred to are not very clear. The fact that persons engaged in the liquor trade suffer unduly gives some support to the idea that the consumption of alcohol may have some influence in predisposing to cancer. Chimney sweeps also have a high mortality from alcoholism, and seamen, another class with a high cancer mortality, are not usually considered to be very temperate. On the other hand, the study of the Registrar-General's table for deaths amongst those engaged in various occupations shows that the rate of death from cancer is not at all in proportion to the rate from alcoholism. It is also noticeable that districts in which special temperance legislation exists, such as the State of Maine, do not from this cause show a low cancer mortality. Altogether the evidence on this point is not very convincing, but, on balance, tends to establish some slight relation, although not nearly so definite and certain as in the case of beer.

One of the most striking features in the local distribution of cancer is the effect of race in varying the rate of mortality, the Scandinavian and Teutonic races suffering apparently always to a greater and the Latin, Sclav, and Celtic to a less degree. This is not only evident when countries are considered as a whole, but is clearly exemplified in the different provinces of Austria and almost as distinctly in France and Prussia. At first sight this would appear to furnish a strong argument for those who urge that cancer is usually hereditary. The point, however, has aroused considerable attention in the United States, where the statistics for each race have been carefully calculated, and it is remarkable to find that the change of environment has in many cases materially altered the comparative liability to suffer from malignant growth. This fact suggests the probability that it is not race alone but the diet and habits of different peoples which constitute the important element of the difference.

The existence everywhere of areas of high and of low mortality from cancer is difficult of explanation by any theory of the etiology of the disease which excludes the existence of a specific cause. It is not altogether easy to understand that the habits and diet of the people in different parts of the same country can differ so greatly as to account for the difference in the rates.

This is the case when such areas as North and South Wales or Northern France, east and west of the Seine, are considered, and the fact is emphasized by investigations which have been made in more limited districts by various observers both here and abroad. Some account has already been given of the remarkable prevalence of cancer found by Arnaudet in certain villages in Normandy. Similar facts have been noticed by Guelliot[23] and others, and in this country by Lloyd Jones[24] and Nason.[25] The existence also of "cancer houses" is vouched for by all the observers above mentioned, Guelliot giving an instance which came under his personal notice in which four persons died of cancer in the same house within the space of five years. Several doctors among those who replied to the German Statistical Committee on Cancer[26] gave instances of the same character, and others are furnished in the replies to the Registrar-General for Ireland.[27]

The experiments of Moreau[28] and Langenbeck, who successfully inoculated malignant growths from one animal on another of the same species, and similar experiments which had been made from time to time by other pathologists, had long suggested the possibility that cancer was contagious, or at least inoculable. Evidence is now accumulating that the disease may be contagious in human beings. Numerous individual instances suggesting the probability of contagion as a cause have been published for many years past in the medical journals both here and elsewhere. Special interest therefore attaches to the statistics as to the incidence of cancer among nurses and servants in the United States, America.

This exceptionally high mortality among women who are more likely than any others to be brought into intimate contact with sufferers from the disease would, if confirmed by the experience of other countries, afford the strongest evidence of the contagious character of cancer. The clinical features also, especially the tendency to metastasis, indicate an infective quality. In fact both in the character of the malady and in its distribution we find a very close analogy to many disorders which are known to owe their origin to a micro-organism.

On the other hand, there is overwhelming evidence to show that a part of the body attacked by malignant growth has often been previously exposed to continual irritation. This has given rise to the view so widely held that persistent irritation is the true and effective cause. It is possible that the two theories may be harmonized, if cancer be caused by a bacillus somewhat similar to the leprosy bacillus of which Impey[29] says that, in order to develop, "it must in the first place come into contact with a person specially prepared to receive it by external conditions or constitutional debility; it then remains quiescent until stirred into activity by an exciting cause, until which time it circulates harmlessly in the lymphatics." If a bacillus of cancer should be ultimately discovered, it may well be that, like the bacillus leprae, it remains dormant even in a favourable soil until urged into activity by an exciting cause in the form of some chronic local irritation.

The disputed question as to the bacterial origin of cancer must necessarily remain sub judice until the bacteria can be isolated and successfully cultivated, but it is difficult to account for the mode of distribution of the disease without admitting the existence of some definite external cause. This cause, micro-organism or other, is to be sought for in thickly-wooded localities whence it may readily be distributed by Nature's agents, wind and water, especially by the latter. Direct contagion would do the rest. It seems not unlikely that the puzzling contradictions as to the geological and geographical characters of areas of high cancer mortality are due to the fact that certain of such characters are favourable to the production of cancer only in so far as they may be favourable to the growth of certain forms of vegetation. It is also probable that certain species of trees have more influence on the cancer mortality than others.

The suggestion that arsenic predisposes to the development of malignant disease has been prominently brought before the notice of the profession recently especially by Mr. Jonathan Hutchinson. The extraordinary tendency of chimney sweeps to suffer from cancer is the main foundation for the statement, soot usually containing arsenic. Some support is lent to the theory by the high mortality among copper miners, and if it be found that beer usually contains arsenic the argument would be greatly strengthened. On the other hand the absence of any excessive cancer mortality among the arsenic eaters of Styria is striking, and the low mortality in many coal-mining districts is certainly not favourable to the contention. To decide this question by statistics it would be necessary to examine into the cancer-rate among those occupied in the many industries in which arsenic is largely employed; this would naturally form part of any investigation as to the incidence of cancer among the populations of large towns.

The definite conclusions of a positive character which appear to result from the present inquiry are:

1. That certain races are especially prone to cancer, more particularly the Scandinavian and the different branches of the Germanic family.

2. That cancer is more prevalent in districts in which beer is the staple drink and the excess is in some degree proportionate to the amount consumed per head.

3. That cancer tends to cause excessive mortality in regions abounding in water, but to a much more marked extent when these are covered with woods or forests. The mortality is

[23] Guelliot, *Gazette des Hopitaux*, November 12th, 1892.
[24] Lloyd Jones, BRITISH MEDICAL JOURNAL, 1889, p. 813.
[25] Nason, BRITISH MEDICAL JOURNAL, March 12th, 1898.
[26] *Bericht über die vom Komittee für Krebsforschung.*
[27] Special Report on Cancer in Ireland.
[28] Moreau, *Archives de Médecine Expérimentale*, September, 1894.
[29] Impey, *On Leprosy.*

also usually high along the valleys of rivers flowing from such districts.

4. That the regional distribution of cancer indicates the probability that the disease is due to a specific cause.

To confirm or correct these conclusions it would be desirable to divide some district of high cancer mortality such as the Department of the Aisne in France, the Canton of Lucerne in Switzerland or Swabia in Bavaria, into small areas and to gradually narrow the circle of the inquiries until the exact localities can be found and compared in which cancer is most distinctly endemic. The difficulty of the task will chiefly consist in the absence of published figures to enable a judgement to be formed as to the prevalence of cancer in villages after all sources or error have been avoided.

It is also necessary to find some explanation of the varying rates of mortality in different towns and with that view to examine carefully into the sources of the water supply, while at the same time noting the food, habits, and occupations of the inhabitants.

The writer feels that this is a very imperfect contribution to the statistics of cancer, but he hopes that it may pave the way for further inquiries.

LIVERPOOL UNIVERSITY COLLEGE.

Opening of the Johnston Laboratories by Mr. Walter Long, President of the Local Government Board.

The new Johnston Laboratories, which were fully described in the last number of the British Medical Journal, were on Saturday, May 9th, formally opened by Mr. Walter Long, President of the Local Government Board. The laboratories, built and equipped at a total cost of £25 000 including the foundation of a chair and scholarships, by Mr. William Johnston, of Liverpool, include Departments of Bio-chemistry, Tropical Medicine, Experimental Medicine and Comparative Pathology, together with Cancer Research.

The ceremony took place in the Arts Theatre of the College where there was assembled a distinguished company which included the Right Hon. Walter Long, M.P., the Lord Mayor, Sir Alfred Jones, Mr. William Johnston, Sir William Banks, Sir Michael Foster, M.P., Professor Sims Woodhead, Professor Gotch, Professor Clifford Allbutt, Professor Stirling, and a number of distinguished foreigners, among them being Eulenburg, Uhlworm, Von Hansemann, Weigert, Blanchard, Nocard, Ravenel, Perroncito, Bottani, and others. The chair was taken by Mr. E. K. Muspratt.

A letter was received from the Earl of Derby regretting his inability to be present and stating that he absented himself most unwillingly, as the occasion was one of no little importance, both to the University College itself and also to all who sympathized with the progress of medical research and the extinction or cure of disease. He wished to offer a cordial welcome to the many distinguished visitors from abroad.

The Chairman said he had received a number of telegrams from distinguished men in Germany who took an interest in the great work to be done in the new laboratory, and who expressed a hope for its success. That gathering had assembled to open the laboratories in which a large amount of original research would be done, and which they owed to the munificent generosity of Mr. Johnston, who had for a number of years taken a deep interest in the progress of medical science, and had seen the need of devoting a large amount of his energy and money to the promotion of original research in medicine. It was with that view that Mr. Johnston, acting on the advice of Professor Boyce, had resolved to make the gift. He hoped Mr. Long's presence there was an indication of the increased interest the Government took in the progress of science. Nearly all the Government departments for the last fifty years had been obliged to have the assistance of scientific men, and though the Government had availed itself of the services of these men, it had thought little of the necessity of training up to meet the needs of an increasingly complicated civilization a large number of men of high scientific attainments. He hoped Mr. Long would carry away a feeling that if they were to have scientific men in the future to work in the Government departments, it was necessary that the Government should do its best to promote original scientific research.

Mr. William Johnston said it gave him great pleasure to tender for the acceptance of the Council the laboratories which Mr. Long had so kindly consented to open. He trusted that the laboratories would be successful, as he was sure they would be, considering the very eminent medical men in whose charge they would be, and he further hoped that they would contribute to place the medical school of their new University in the foremost rank.

Mr. Walter Long said there could not be any doubt that there was a great need and a widespread demand for laboratories such as these. He did not believe there was any need to impress upon his colleagues of the Government the importance of such work as would be performed in these laboratories. It was appreciated by them as it was appreciated all over the world. So long as he had the honour to occupy the position he did he would do his best to secure on the part of the Government the utmost assistance which could be given to the advancement of science in all parts of the country. In the city of Liverpool there was a striking evidence of the connexion between the development of science—especially of preventive medicine—and commerce, for which this great country was so justly famous. The School of Tropical Medicine in Liverpool had already been productive of conferences of the greatest value, which had drawn to them distinguished men from our colonies and from foreign countries. The Chairman had reminded them that one of the objects of the laboratories would be to increase knowledge in regard to those valuable preventives of disease such as vaccines and various kinds of sera now happily in use. From the point of view of commerce and of the Government regulation of disease, work such as would be done in these laboratories must be of inestimable benefit to the country as a whole. There was another feature to which they could not be blind, namely, the munificence of the citizens of a great city like Liverpool. The permanent record of their work was in the splendid buildings which existed for the purpose of research, and the schools and scholarships which had been founded for this beneficent work. Not only had the citizens acted magnificently towards science, not only had £200,000 been contributed to the University Fund, but they had an epoch-making instance in the fact that the city was willing to be rated for the purpose of maintaining a university. Let them try to realize what were the sufferings of the men in the great wars of Wellington, and to realize what it was possible to do for the men who fell in the great war just concluded. The almost immeasurable reduction of human suffering and the prolongation of human life had been due to discoveries by men of science, and the provision, as the result of these discoveries, of antiseptics, which had done so much to lessen human suffering, and make the prolongation of human life possible by the performance of operations which a quarter of a century ago would have been regarded as almost humanly impossible. This was the kind of work to be done in the future in the laboratories. He had a very simple duty to perform, and it was to declare these laboratories open; he would try to voice the gratitude they all felt not only in Liverpool, but in the country at large, to the large-hearted and patriotic men who had come forward to endow these great works, and enable them to be carried on, as they believed they would be carried on, successfully, and to the advantage of the community. They all felt profoundly grateful, and hoped that these splendid examples would be followed as time went on. They realized that it was useless for the trader to go into foreign countries or into new possessions of the Empire to try to found a trade or industry if he was to be met with the fever of the swamp or the pestilence of the forest. The investigation of cancer was one of the great works which the munificence of Mr. Johnston and others would enable them to carry on—work which would add much to the sum total of human happiness and to the comfort of life.

Principal Dale moved:

That this meeting of members and friends of University College expresses its sincere gratitude to Mr. Johnston for the munificence which has enriched University College for the work of medical research, and to Mr. Walter Long for his kindness in taking part in the inaugural ceremony.

The laboratories were but a part of Mr. Johnston's gift; he had founded and endowed the Chair of Bio-chemistry, which had brought amongst them Professor Moore, a most distinguished man of science, and one of the best of colleagues. He had also founded and endowed three Fellowships for the purposes of medical research. One of these Fellowships recalled a sorrow and a loss in which many of them shared. It bore the name of one whose memory was not forgotten by those who felt the friendliness and brightness that made life fuller and richer while she was with them. In that Fellowship she had a nobler and lovelier memorial than in any

marble monument, however stately, for it embodied and perpetuated that pity, that compassion, and that sympathy for human suffering which were characteristic elements of her life. As to cancer research, the prospects of success were brightened and strengthened by the fact that in that great work the University would be united with their colleagues and neighbours in the Royal Infirmary. Mr. Long's presence had a special fitness. In Liverpool the links between the local authorities and the University had been close and strong for many years. He trusted they would be closer and stronger as years went by, and that the work that would be done in the University and in the city—work not done for science only, but for humanity—by joint effort, by common sympathy, and by common purpose, would succour, relieve, and redeem thousands of the sons and daughters of misery.

The motion was seconded by Professor GOTCH, and supported by the LORD MAYOR and Sir ALFRED JONES, who stated that the King of the Belgians had promised to come to Liverpool to see the Tropical School, to which His Majesty had already given £500.

The resolution was carried with acclamation, and Mr. JOHNSTON and Mr. LONG briefly returned thanks.

DINNER AT THE ADELPHI HOTEL.

In the evening Mr. William Johnston entertained a distinguished company at dinner at the Adelphi Hotel. Amongst those present were the Right Hon. Walter Long, M.P., the foreign and other guests and representatives of commerce and of the University. Covers were laid for 150.

After the loyal toasts had been submitted by Mr. JOHNSTON, the LORD MAYOR proposed "The President of the Local Government Board." He said a very magnificent gift had been made, not merely to University College but to the city of Liverpool at large. It was most gratifying to be able to say that Liverpool had for many years been enabled to take to itself the credit of having amongst its citizens men who had shown munificence and great public spirit.

The Right. Hon. WALTER LONG said that Mr. Johnston looked for his reward in the direction where he would surely find it—namely, in the countless advantages which, by his munificence, would be conferred, not only on the city, but on the country generally. He hoped that University College would shortly be the University of Liverpool. There were gathered there that evening men of great eminence in various fields of science who were devoting their knowledge and energies to the benefit of their fellows. Science was the best friend any worker could call to his aid. Mr. Johnston's gift was one from which the country would reap inestimable benefits. Scientists could take common ground; they could put behind them any political difference and join together in the common interest. He expressed his conviction that the work would bear noble fruit in the days to come.

Sir ALFRED JONES in proposing "Commerce and Scientific Research," said that the work carried on in the laboratories of University College was largely directed to securing health in the tropics. They desired to bring scientific men up to date in regard to commercial requirements.

Sir MICHAEL FOSTER acknowledged the toast in a very happy speech. He spoke of commerce as the husband who went forth into the world, and of science as the gentle wife who sat at home, and by her thought, and care, and wise advice armed her husband for the triumphs he won abroad.

Professor HENRY ARMSTRONG, F.R.S. (City and Guilds of London Central Institute), who also responded, dwelt upon the fact that this country, owing to its failure to appreciate the importance of scientific research, had lost in whole or in part industries in which a generation ago it had been pre-eminent.

Sir JOHN BRUNNER, M.P., then gave the toast of "The Foreign Guests." He thanked them for their presence in Liverpool, and their encouragement of the efforts which were being put forth to place scientific research in this country in a more satisfactory position. He referred in particular to the splendid example set by American citizens in this respect.

Professor RAVENEL, of the Veterinary Department of the Board of Health of the State of Pennsylvania, in responding, gave an account of the organization of that department, which employed a number of experts as well as a large staff of inspectors.

Professor NOCARD, in responding for France, expressed his appreciation of the wisdom and liberality of Mr. Johnston in making so splendid a gift to science.

Professor WEIGERT, who spoke for Germany, and Professor PERRONCITO, who spoke for Italy, followed in the same sense.

SCHOOL OF TROPICAL MEDICINE.

On Monday Sir Alfred Jones, K.C.M.G., Chairman of the Liverpool School of Tropical Medicine, invited a number of leading men of business in Liverpool to meet foreign and British representatives of medical science who had visited Liverpool to attend the opening of the Johnston Laboratories. The company were entertained to lunch.

Afterwards Sir ALFRED JONES said that although Liverpool had done much there still remained much to be done in regard to research in the diseases of tropical Africa. He acknowledged the assistance received from the Colonial Secretary, and read a telegram which he proposed to send to Mr. Chamberlain expressing the meeting's appreciation of the services which he had rendered to the encouragement of research in tropical medicine. He thought that merchants and others engaged in trade in tropical climates should not only support the School of Tropical Medicine, but also take advantage of the courses of study which it afforded; in this way not only would trading prospects be improved but a boon would be conferred upon the natives.

Professor RAVENEL observed that a striking illustration of the good which flowed from the application of scientific research to practical affairs was afforded by the results obtained in Havana, from which yellow fever had been banished for two years; the same principles were now being applied throughout Cuba and in all parts of Central America. Formerly certain ports had to be closed for several months in the year on account of the risk of yellow fever, but it had now been found quite safe to abolish these restrictions, and thus commerce was relieved from a serious obstruction.

Professor NOCARD congratulated Liverpool on the excellent understanding that existed between commerce and science. He thought that the benefits of the Tropical School ought to be extended to the veterinary profession, and, as an example of the loss to commerce which infectious disease among animals might cause, he instanced the recent experience of Mauritius. In ordinary times Mauritius obtained cattle in large numbers from Madagascar, but owing to the great demand for draught cattle made by the South African war Mauritius had been forced to obtain its beasts from India. With these animals was imported the surra disease, which had spread rapidly throughout the island. Had the animals imported from India been inspected by a veterinarian skilled in microscopical research he could have ascertained the existence of the infection. It was necessary not only to employ skilled veterinary officers, but also to give them opportunities of refreshing their knowledge by visiting such schools as the Tropical School in Liverpool. It was true that to give these officers leave would cost something, but such expenditure would be but a drop in the ocean to the enormous loss incurred by the importation of disease.

Professor BOYCE agreed that it was essential that veterinary medicine should be kept in touch with modern science, and he expressed the opinion that the Government and administrative bodies throughout the country should encourage and subsidize scientific research. Sagacious countries like Germany and France had been learning a great deal, while this country had been asleep, but in the union between commerce and scientific men he saw the prospect of rapid advance in the future.

Sir JOHN BRUNNER said that he owed every penny he had to the application of science to commerce, and added that he would take that opportunity of declaring in public an opinion which he had recently expressed in private to Sir Norman Lockyer. This was, "That if we as a nation were to borrow ten millions in order to help science by buildings and by endowing professorships, we should get that money back in the course of a generation a hundred-fold." Being of that opinion, he could only repeat that there was no better investment for their money than the encouragement of science.

After some remarks by Professor PERRONCITO on the importance of the study of tropical diseases,

Professor RONALD ROSS referred to the need for the further study of Malta fever and tropical dysentery. He urged also that the study of diseases of animals in the tropics should be undertaken systematically, and expressed regret that no efforts had yet been made to institute such investigations in African colonies, such as Sierra Leone.

Mr. GEORGE MILLER (Glasgow) while praising the admirable work done in Liverpool expressed the opinion that we were as yet only on the threshold of the study of tropical diseases.

Sir WILLIAM BANKS said that it was a happy thing for men who, like himself, had begun a generation ago to work for the establishment of a college in Liverpool to have lived to see the growth of interest and knowledge among commercial men which had realized results beyond their fondest hopes.

Dr. CARTER (Physician to the Royal Southern Hospital, Liverpool) dwelt on the importance of the application of the improved knowledge of malaria to medical treatment. He insisted that money spent on research was an investment which yielded an enormous return.

Professor ZIMMERMANN, who spoke in English, said that when Germany first began to undertake tropical colonization, German medical men were disappointed to find how little had been accomplished by Great Britain, the pioneer colonizing nation, for the study of disease; this reproach was now being removed. Germany, like Liverpool, was now sending out investigators to West Africa to study disease, and had undertaken in the Cameroons the investigation of sleeping sickness, upon which Dr. Christy, who had recently returned from Uganda, was preparing a report, which promised to be of the highest value.

Mr. JOHN HOLT, as one who had lived for many years on the West Coast, spoke from personal experience of the terrible mortality among white men due to malarial diseases, and said that increased knowledge of the means of prevention would benefit commerce, not only by saving the lives of Europeans, but by improving the health of natives.

Dr. CATON, in a short speech, insisted upon the necessity, if full advantage was to be taken of the recent increase of knowledge, of giving practical instruction to young men who were sent out to the West Coast of Africa or other malarial regions to act as agents. If they were acquainted with the means which should be taken to prevent malarial diseases, he felt no doubt that the terrible mortality which had prevailed in the past would be still further diminished.

Sir ALFRED JONES then moved a formal vote of thanks to Mr. William Johnston, whose gift included a laboratory of tropical medicine.

Mr. JOHNSTON, in reply, said that he had never spent money which had given him greater pleasure than that which he had devoted to the laboratory.

A vote of thanks to Sir Alfred Jones brought the proceedings to a close.

SYMPOSIUM AT THE LIVERPOOL MEDICAL INSTITUTION.

On the evening of Monday, May 11th, Mr. Rushton Parker, President of the Liverpool Medical Institution, entertained the members at a symposium in the institution, to meet the distinguished foreign and other guests visiting Liverpool on the occasion of the opening of the Johnston Laboratories. Dr. F. W. Mott and Dr. O'Hagan sang some excellent songs, and Dr. Grossmann gave a charming performance on the violoncello. The foreign guests received a very hearty welcome.

THE EPIDEMIC OF SMALL-POX.

THE reports received this week with regard to small-pox are of rather an indeterminate character, but leave room for belief that in the more northerly parts of England there is considerable remission in the number of cases and the extent of country over which they are spread. More towards the centre of England, however, this is certainly not the case, and in some counties, those the more recently invaded, the disease shows a strong and decided tendency to increase. One of the difficulties of dealing with this particular epidemic has been that it has been in most places of a decidedly "humanitarian" type. In the long run, perhaps, this form is the more to be dreaded by sanitary authorities than those types of infectious disease which render the people more ready to assist in its suppression. This mildness, however, is by no means universal, and in some places the case mortality is quite "normal." In several of the reports this week, as before, there are complaints of concealment of cases, neglect and rejection of precautions, and a general tendency to obstruct.

In Yorkshire, the disease is perhaps rather more widespread than before. Mexborough, Wakefield, Sowerby Bridge, Dewsbury, Bradford, and Sheffield all have cases, and there are one or two in the Rotherham district. At Sheffield the occurrence of one case in the person of a two day's bride has led to 200 "contacts" having to be dealt with.

In Nottinghamshire, little fresh is recorded. Notts itself has had no fresh cases, but at Hucknall Torkard, which it was hoped was free, 2 new cases have been discovered.

In Derbyshire, the disease appears to be decidedly spreading, and new cases are reported from Greenhill Lane, Little Eaton, and Sandiacre.

In Staffordshire, Tunstall has another case.

In Leicestershire, there is a strong tendency for the disease to spread all over the county. It is increasing largely in Leicester itself, and there are several cases at Kettering, and some at Syston, Bilston, Billesdon, and Humberstone.

In Warwickshire, Birmingham now has 46 cases under treatment, and there are others at Aston.

In Lancashire, Dr. Niven at the beginning of the month drew the attention of the Manchester Corporation to the great extension of the disease during the past few weeks. Heywood has further cases, as well as Bolton. Salford, too, complains of an increase, and in Burnley the number of verified notifications is now 84. At Whitefield the authorities have had to announce a 3d. addition to the rates. Blackburn has had 11 new cases after a fortnight's pause, and Bury 8 in five days after a somewhat similar remission. Pemberton is a new centre, while at Liverpool itself the number for the week ending May 7th was 69, a total which does not materially differ from the records of several past weeks.

In Essex there has been a case at Colchester, and there have been other cases in the county.

Near London, Kingston and Croydon have reported nothing recently, but more than one case has been reported in several corresponding country-London areas. In London itself cases crop up, but the number under treatment is still only 60.

In Wales, Montgomery is the only fresh centre, but there has been a recrudescence in Cardiff, while Wrexham is reporting a considerable number of cases.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

DURING the weeks ending April 4th, 11th, and 18th, the deaths from plague in India numbered 34,000, 27,787, and 32,159 respectively. Including the week ending March 28th, when the deaths numbered 32,078, the average daily deaths from plague during the four weeks in question amounted to 4,500. The rise in the deaths from plague during the week ending April 18th to 32,159, after a satisfactory drop during the previous week is disappointing. The increase is accounted for by the Punjab returns, where the plague mortality is now greater than in all the rest of India put together, the totals in the Punjab having gone up from 13,225 during the week ending April 11th to 18,488 during the week ending April 18th.

In the city of Bombay the excessive mortality due to plague has continued to a later date in the spring than has been the case during the past six years. The cause of this may be partially due to the unusually cold spring weather, but it would seem also to be accounted for by the overcrowded condition of parts of the native town. The demolition of a large number of dwellings for the sanitary improvement of parts of the city has forced the dispossessed population to crowd into any shelter they can find. This has increased the rents, and thereby the overcrowding, and it is stated that houses condemned as unfit for human habitation have been occupied. The result is an increase of plague and of small-pox in the city. The advance of the warm weather will no doubt bring about an amelioration this year as in former years, but to continue to allow climate and temperature to determine the abeyance of plague is not altogether creditable to sanitary science. There are indications of an abatement (seasonable) of the disease in the city and presidency of Bombay, in Calcutta, Bengal, Mysore, Hyderabad, Berar, Central India, and Rajputana; but in the Central Provinces, the Punjab, and the City of Karachi there has been a marked increase. In the North-West Provinces and Oudh, the cities of Allahabad, Agra, Benares, Cawnpore, Lucknow, Meerut, and Bareilly are all infected by plague at the present time.

CAPE COLONY.

During the two weeks ending April 11th and 18th the fresh cases of plague in Cape Colony numbered 15 and 9 respectively, and the deaths from the disease were returned as 8 and 8 respectively. These were distributed as follows:

Port Elizabeth.—During the weeks ending April 11th and 18th the fresh cases of plague amounted to 12 and 6 respectively, and the deaths from the disease to 6 and 5.

East London.—During the two weeks fresh cases 0 and 1; deaths 0 and 1.

King Williamstown.—Fresh cases 3 and 2; deaths 2 and 3.

At *Graaf-Reinet* and *Burgherdorp* plague-infected rats were found.

MAURITIUS.

Plague has reappeared in Mauritius after a cessation of several weeks. During the weeks ending April 23rd, 30th, and May 7th the fresh cases of plague numbered 2, 1, and 1; the deaths from the disease 1, 1, and 1.

HONG KONG.

During the weeks ending April 18th and 25th and May 2nd and 9th the fresh cases of plague in Hong Kong numbered 51, 79, 95, and 98 respectively, and the deaths from the disease were returned as 47, 72, 83, and 85.

Plague on Board Ship.—The ss. *Orizaba* from Sydney called at Plymouth on April 27th, and reported that one of the native crew was landed at Suez believed to be suffering from plague. Bacteriological information has confirmed the suspicion. The vessel was admitted to pratique at Naples, Marseilles, and Gibraltar, but at Plymouth the Local Government Board ordered that it should be treated as an infected ship.

ORDER OF ST. JOHN OF JERUSALEM.—The King has been pleased to appoint the following gentlemen Knights of Grace of the Order of the Hospital of St. John of Jerusalem in England: Sir Arthur Conan Doyle, D.L., M.D., Lieutenant-Colonel Edmond Munkhouse Wilson, C.B., C.M.G., D.S.O., R.A.M.C., John Gardiner Hamilton, Esq., M.V.O., Surgeon-General Alfred Keogh, C.B., Lieutenant-Colonel William Babtie, V.C., C.M.G., R.A.M.C.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1903.

SUBSCRIPTIONS to the British Medical Association fall due on January 1st each year. All members who have not yet paid should forward, without delay, postal order or cheque for 25s., to the General Secretary, 429, Strand, London, W.C., or, in the case of Colonial members, to their Branch Treasurer.

British Medical Journal.

SATURDAY, MAY 16TH, 1903.

COMMERCE AND MEDICAL RESEARCH.

THE block of new laboratories for bio-chemistry, experimental medicine, tropical medicine, and comparative pathology opened by the President of the Local Government Board on May 9th, are a gift to University College, Liverpool, by Mr. William Johnston, a shipowner long identified with the great port on the Mersey. Mr. Johnston has also endowed the Chair of Bio-chemistry, and Fellowships for workers in the laboratories. The gift is very significant. It is a proof of the interest which leading men engaged in commercial pursuits in Liverpool are ready to take in the University College, an interest which must go a long way to ensure the success of the University of the near future, and it is a proof that such men have realized the immense services which science, in this instance medical science, may render to mankind and to the great industries on which our welfare and very existence depend. The nature and terms of the gift show that the conditions to be fulfilled in order that the best results shall be attained have been thoroughly studied by the donor under the guidance of experts. That the significance of the occasion was fully grasped by the people of Liverpool, and especially by its leading men, the great captains of its commerce, was proved by the remarkable gatherings which assembled to hear Mr. Walter Long in the afternoon, and later in the day to congratulate Mr. Johnston. They welcomed their guests, some of whom had come from abroad, and others from various centres in England and Scotand, with warm-hearted courtesy, and again and again gave expression to their sense of the honour done to their city and its college; but to the onlooker by far the most remarkable thing about the gathering was not that some distinguished foreign men of science should have made long journeys to congratulate Liverpool on the event, but that men engaged in business in that city should display so deep an interest in Mr. Johnston's gift and so keen an appreciation of its significance.

The new laboratories complete, for the time being, the equipment of University College, Liverpool, for physiological and pathological research. Architecturally they form part of a fine pile of buildings, which, standing as it does on a conspicuous site, is an ornament to the city. When certain old buildings which have served their turn are cleared away the College will possess a noble quadrangle, which will only need the mellowing touch of time to make it rival in beauty some of the oldest collegiate foundations in the country. The disuse of these old buildings and the erection of the new mark the end of the first stage of the life of the College. It must always be a matter of pride to the medical profession to remember that this College, which has now taken its place among the foremost centres for higher education in this country, owes its inception to the efforts of a small body of medical men who, some thirty or more years ago, raised a comparitively small sum for the establishment in suitable buildings of a medical school in Liverpool. Sir William Banks and Dr. Caton, to whose forethought and devotion to a high ideal amid many discouragements the existence of University College is in no small measure due, received many congratulations on the vigorous adolescent into which the infant they had nursed with so much assiduity has grown.

And the adolescent is about to attain to man's estate, for it is now certain that a charter for the incorporation of the University of Liverpool will shortly issue, probably early in the autumn, so that the new University will be able to commence work in October. The Privy Council, in advising the Crown that such a charter should be granted, recommended that, in respect to certain points, having regard to the great importance of the matter and the effects of any changes upon the future of higher education in the North of England, co-operation was expedient between universities of a common type and with cognate aims. We understand that the representatives of Liverpool, Manchester, and Leeds have worked cordially together in carrying out the intentions of the Privy Council, and that in particular it has been arranged that the charter shall provide that the three Universities shall have an identical standard for matriculation, and that it will probably be provided that an undergraduate who has matriculated at one University shall have the right to proceed to his degree at either of the others. Further, special clauses will be inserted to ensure that the standard of knowledge for the degrees shall be high and uniform, and providing with this object that the examinations shall be visited and inspected by the Crown. In this way it is hoped to obviate any tendency towards downward competition.

The promoters of the University scheme, and doubtless those also who are opposed to the multiplication of universities, will have watched with some anxiety for indications of the kind and quality of the studies which are likely to be fostered within the walls of the new institution. If there were any lingering fears lest the new University would be a mere school for utilitarian instruction rather than a seat of higher learning and original research, such fears must now be dispelled. The new laboratories, erected, equipped, and endowed at the cost of £25,000, are for the furtherance of medical and the allied sciences, but will have no direct share in the preparation of candidates for the ordinary medical degrees. The Chair of Bio-chemistry, the first of its kind established in this country, has been endowed by Mr. William Johnston entirely for the pursuit and encouragement of research, and the splendid laboratories, described in the BRITISH MEDICAL JOURNAL of May 9th, have been equipped especially to meet the wants of the advanced student and original investigator.

Professor Nocard of Paris expressed in graceful terms a feeling which must have been present to the mind of every one who looked upon Mr. Johnston's gift, and upon the Thompson-Yates Laboratories which it completes, that such gifts are a striking proof of the appreciation by public-spirited men of commerce of the importance of higher education and of scientific research. In France or in Germany such laboratories would be provided and supported by the State; in this country they must be erected

and for the most part supported by the private benefactor. The City of Liverpool, however, has set a noble example by voluntarily undertaking to make a large contribution towards the expenses of the University. Power was taken in an omnibus Act passed last year to impose a special rate not exceeding a penny in the pound for University purposes. The full amount would yield, we believe, about £15,000 a year, but even half this sum would be a handsome contribution. The President of the Local Government Board was so impressed by all he learnt—and not least, perhaps, by this example of civic munificence—that he spontaneously offered to meet representatives of the University, with the view of discussing some practical scheme for enlisting the effective co-operation of the Government. Sir John Brunner boldly asserted that if the country were to borrow £10,000,000 for the purpose of advancing scientific education and original research it would at no distant period receive a hundredfold in return. His faith is well grounded, and we hope that the day may not be far distant when it will be shared by an enlightened Chancellor of the Exchequer.

THE ROYAL MEDICAL BENEVOLENT COLLEGE.

Regularly as the revolving year brings back the "season" the bitter cry of the hospital secretary and the charity treasurer makes itself heard through the sound of social revelry. The newspapers are filled with appeals for all sorts of deserving institutions. To ladies are offered the attractions of bazaars and concerts, while men are lured to banquets, where the undoing of the lower waistcoat button is expected to be followed by a corresponding loosening of pursestrings. During the past two or three years, when the income-tax has been as a millstone round the neck of of the average citizen, and charity has been almost exhausted by the demands made upon it by the war, the institutions which exist to supply the every-day needs of ordinary humanity have suffered to a much greater extent than usual from the eternal lack of funds. Now, the taxpayer has found relief, and the wounded have been healed or provided for; the lean years should, therefore, be over for the charities which succour the poor who are always with us.

Among these none should appeal with greater force to the heart, and through that vital organ to the purse, of every member of the medical profession than the Royal Medical Benevolent College, Epsom. This year the College celebrates the jubilee of its foundation. It is just half a century ago since the foundation stone was laid by Lord Manvers, representing the Prince Consort, who was prevented by illness from performing the ceremony in person. Later the College was opened by the Prince Consort, who, it is interesting to recall, was accompanied on the occasion by his eldest son, now our Gracious Sovereign. When it is remembered how jealously the royal patronage is guarded against cheapening by indiscriminate bestowal, the fact that Epsom College has throughout the whole period of its existence enjoyed without interruption the patronage of the Sovereign is in itself a high testimony to the value and success of its work. King Edward has continued the patronage graciously extended to the College by his "beloved, revered" mother.

Keeping up the tradition of royal patronage thus established, the Prince of Wales has graciously consented to take the chair at the festival dinner of the College which is to be held at the Hotel Cecil on June 10th. As this is the only function of the kind at which His Royal Highness will preside this year, his consent must be regarded as a mark of special favour to the College.

The heartiest thanks, not only of those who benefit by the institution but of the whole profession are due to the Prince of Wales for coming forward to make an appeal on behalf of the College. It is felt by those charged with the administration of its affairs that a strenuous effort is called for to place it in a permanently sound financial position. For this purpose the sum of £10,000 is needed. The profession has shown itself fairly liberal in the past, but there is no doubt that it could do much more to secure the stability and efficiency of an institution of which it has good reason to be proud. It is earnestly to be hoped, therefore, that the Prince's appeal may meet with a generous—we had almost said, a loyal—response. It is impossible to believe that the heir to the Crown will be allowed to plead in vain for what, after all, is, in these days of millionaire donations, a small sum. If every member of the medical profession were to give only a mite, the want of which he would not feel, the governing body of the College would have no further ground for anxiety as to its future.

The work of the Royal Medical Benevolent College is too well known to our readers to need setting forth in detail here. It is only necessary to recall the fact that it relieves members of the profession whom age or disabling illness or misfortune has placed *hors de combat* in the battle of life, or destitute widows of practitioners who have fallen in the fight, as so many do, too early to allow them to make provision for those whom they leave behind. The College also provides an education fully equal to that which can be obtained at the best public schools of the country, with maintenance and clothing, for orphan sons of medical men in need of such aid. Of the efficiency of the teaching the best proof is the number of scholarships and distinctions won by Epsom boys at the universities and medical schools. It should be clearly understood that Epsom College as a successful public school stands in need of no assistance; it is for the support of the charitable side of the institution that funds are required.

That this support will be forthcoming there seems to be good reason to believe. The preliminary list of stewards, which may be seen in our advertising columns, includes not only most of the foremost men in every branch of the medical profession, but leaders in the Church, in the State, in law, in the army, and in every department of public life. A cause which, in addition to the patronage of royalty, has the support of the Archbishop of Canterbury, the Commander-in-Chief of the Army, the Lord Chief Justice of England, Prince Louis of Battenberg, Mr. Balfour, and Lord Rosebery, to mention only some of the most distinguished names in the list, must obviously be one that appeals to all that is best and worthiest in the British people.

Doctors are in the truest sense *servi servorum Dei*, and it is right that the public whom they serve so faithfully, and often for a very inadequate reward, should contribute to a charity intended for the relief of those among them who fall upon evil days. But Heaven helps those who help themselves, and the members of the medical profession may fairly be called upon to take the lead in ensuring the prosperity of an institution in which they are all directly interested.

CANCER INVESTIGATION.

At hardly any time does it happen that some particular medical subject does not loom large before the public mind. Sometimes the popular interest is intelligent, as, for instance, in the present crusade against spitting; more often it is intemperate, so that a season in which the *dernier cri* is the offering up of appendices for removal is followed by one devoted to the overcrowding of "rest cure" establishments; not infrequently "the people is a fool" seeking to achieve perennial youth by means of indiscriminate massage or "treatment." At the present moment the lay mind is following the medical in its efforts to find a basis for a rational campaign against the ravages of cancer. The unscrupulous charlatans who write or advertise in a credulous press have prepared for the popular palate a new stock of "cures"; others, cursed with a little knowledge, delude the wretched sufferers by extravagant forecasts of the remedial powers of each new therapeutic agent whereof they hear. Of this latter class we had something to say in a recent issue, but it cannot be too widely known that the present is not the time to expect sudden and startling disclosures as to the treatment of cancer. Modern scientific methods, with their infinite patience and scrupulous exactitude, are being brought to bear upon its cause; if this once comes within our ken it may be that we shall learn to apply other remedies than that which is now our only hope, the knife.

Inquiry into the causation of cancer can be conducted along two main lines. The first of these is pathological, and is at this moment receiving a very large amount of attention. Both in Germany and in England the work of trained men of science is being directed upon the morbid histology of the disease and of the tissues which it attacks; parasites are suspected, hunted awhile, and then exculpated; experiments in feeding, in environment, in inoculation are projected and carried out; but still the cause eludes the pursuing microscope. The work that is being done is no doubt good work, for if we have not an Ehrlich in England, yet the question is occupying many patient seekers after truth in this country. A little more concentration would perhaps be an advantage, and this is one of the main objects for which the Cancer Research Fund was instituted; greater profit might ensue if there were a freer and more confidential communion between our somewhat numerous investigators in their scattered laboratories. The gain to the race should far outweigh any idea of personal fame, and should be the sole motive impelling the search.

The other avenue of inquiry is the hygienic, based upon the application of the broad principles of public health. We venture to think that not enough systematic attention has as yet been paid to this aspect of the question. Certain writers have, it is true, conceived this, that, or the other external condition to be the cause of cancer, but their ideas have often been fanciful and their investigations usually *ex parte*. And yet the discovery of "cancer areas," and especially of "cancer houses," should encourage further careful work in this direction. The first impetus in this country to the statistical study of cancer resulted from the well-known researches of Mr. Haviland. The increasing prevalence of the disease has recently turned the attention of many other observers to the subject, and Branches of the British Medical Association have made valuable collective contributions to the subject. A systematic summary of the present state of our knowledge in this respect has hitherto, however, been much needed. Of such a nature is that undertaken by Dr. Alfred Wolff, of which we publish the last instalment this week. Starting without bias or predisposition of any sort, Dr. Wolff has sought the deductions which may legitimately be drawn from a comparative statistical study of cancer mortality. To this end the figures published by all civilized nations have been ransacked and analysed; where they have been calculated upon different bases an attempt has been made to educe comparable results. A critical investigation of these results enables Dr. Wolff to point to two conditions which appear definitely to conduce to high mortality from cancer, namely, a well-wooded environment and the undue consumption of beer. When these two factors co-operate, as in Bavaria right of the Rhine, the death-rate from the disease is notably serious. Race and occupation may also be predisponents, but seem to be overridden in this respect by the other influences just mentioned. It is interesting to note that ten years ago a French country doctor named Fiessinger published two careful papers showing the prevalence of cancer in certain well-wooded river valleys. Here, then, is a definite basis for further research. Dr. Wolff's facts are incontrovertible and his inferences legitimate, though it is to be hoped that he will extend his labours so as to embrace the annual records of the various countries as they continue to appear. But a definite field is opened for inquiry as to how the conditions which he has pilloried influence the spread of cancer. The consumption of excessive quantities of beer no doubt lowers the general vitality so as to render the consumer an easier prey to whatever may be the true agent of the disease. But how about habitation in woods? Does this also lower vitality, or does a germ haunt by choice the forest-clad slopes of river valleys? It would not be a difficult matter to arrive at some conclusion in this respect if a philanthropic man of wealt hcould be found to equip an expedition to investigate some particular area of high cancer mortality. Anthropometrical examination of the inhabitants, including an investigation of their blood, bacteriological analysis of the water, research into the botanical and entomological conditions, should all be provided for. And the results could not fail to clear up at any rate one portion of the difficult subject. The fact that a district is infected with cancer should, as Verneuil long ago pointed out, lead to a most careful search for the cause. This has been successful in the cases of tetanus and anthrax, and it is not impossible that in this way light may also be thrown upon the etiology of malignant disease.

Put briefly, the problem which confronts all who are concerned with the question of the nature, and by consequence the cure, of cancer is this: What influence is it that stimulates an apparently normal cell of the organism to start a new career in which it has assumed the character, so to speak, of a noxious parasite, devouring all the tissues within reach, and eventually destroying its host by its pernicious multiplication? The nature of this influence must be sought with unremitting patience both within and without the body, and we think that Dr. Wolff's papers indicate one direction which has hitherto been imperfectly followed, and along which fruitful work may be accomplished.

UNIVERSITY DEGREES IN DENTISTRY.

The proposal for the establishment in the University of London of a degree in dentistry, which will shortly come up for discussion by the Faculty of Medicine, is one of

interest and importance. The precedent has already been set by the University of Birmingham, and we believe that it is the intention of the Universities of Manchester, Liverpool, and Leeds, now in process of creation, to follow suit.

The evils which arise from a deficient masticatory apparatus and a septic condition of the oral cavity are daily becoming more manifest and gaining a wider recognition by medical men, and it is no exaggeration to say that the great and increasing prevalence of dental caries in children and young adults of all classes of society has assumed the proportion of a grave national danger.

The onus of combating this evil by curative or preventive measures falls almost wholly upon the dental profession, and gives to dental surgery a proportionate importance.

Since the efforts of a few far-sighted and broad-minded men secured the passing of the Dentists Act, and the establishment by the Royal College of Surgeons of a special licence in this subject, dentistry has emerged from the limbo of ignorance and quackery into the usefulness and dignity of a learned profession. A generation of men has arisen, well-educated, well-equipped, and animated by that spirit of devotion to duty which permeates all branches of the art of healing.

Dental science, in common with all spheres of knowledge, is ever widening and increasing its relations to other departments of science and art, and a want has been expressed for some years past for a wider curriculum and a higher qualification, not in competition with, but in addition to, that now provided by the Royal College of Surgeons.

It is the opinion of some that the granting of a degree in dentistry by the University of London would best meet this want. Whether this be so or not the proposal deserves the most careful consideration.

LEXICOGRAPHIC AMENITIES OF DEBATE.

We referred last week to Mr. Stephen Coleridge's dainty device for swelling the ranks of his supporters by interpreting in a literal sense the conventional expressions of regret for inability to be present received from two well-known authors to whom invitations had been sent. In how many other instances the letters of apology were of the same type we have no means of knowing. No one who knows the ways of Mr. Coleridge will be surprised at the piece of sharp practice here exposed, and fair-minded people will simply come to the conclusion that in dealing with the Honorary Secretary of the National Antivivisection Society we must speak by the card or equivocation will undo us. It may, however, be pointed out that Mr. Coleridge's system of exegesis will yield some curious results if applied to his own correspondence. We have before us some letters with which we have at various times been favoured by him. In these we observe that he addresses us as "Dear Sir" and subscribes himself "Very faithfully yours." On following the advice given by Mr. Coleridge to Mr. Eden Phillpotts and Mr. Maurice Hewlett and consulting the dictionary, we find the meaning of the word "Dear" given as "beloved, loved," or "highly valued, precious," or "important, weighty." "Faithfully," again, we find defined as "loyally," "earnestly," "honestly, truly," "with a strict adherence to truth and duty." We give Mr. Coleridge a choice of any of these meanings, and we invite him to say whether he intended us to accept them as expressions of his tender affection and undying fidelity towards us. We may say frankly that we should not take it as a compliment if he does wish them to be so interpreted; but as he has appealed to the dictionary we cannot allow him to escape from its decision.

THE KING'S SANATORIUM.

We are officially informed that a site for King Edward VII's Sanatorium has been acquired from Lord Egmont at Lord's Common, Easebourne, six miles south of Haslemere, and about three from Midhurst. The site is 150 acres in extent, and contains in its northern and eastern portions a magnificent fir wood. Towards the south and sheltered by the wood is a natural open plateau over 450 ft. above sea level, and commanding in the distance a beautiful view of the South Downs. Upon this the sanatorium will be erected. Behind, the ground gradually rises, until at the northern extremity of the property a height of 620 ft. is attained. Complete shelter from north and east winds is thus secured. To the west and immediately adjoining the site is an open common of considerable extent, which will add materially to the usefulness of the institution. The lower greensand is the geological formation. A delay in acquiring the site was occasioned by the difficulty experienced in obtaining a due supply of water, but by impounding springs to the north of the site and about a mile away this difficulty has been overcome, and an abundant supply of water of great organic purity, as tested both bacteriologically and chemically, has now been obtained. Mr. H. Percy Adams, F.R.I.B.A., the architect appointed by the Advisory Committee, who has recently, by their direction, made a very careful study of sanatoria, both in Germany and Switzerland, is now preparing his plans.

LONDON HOSPITALS AND THE LONDON PRESS.

The *Daily News* having, it would seem, heard rather late in the day the story of the munificent unknown who is ready to present £300,000 to St. Bartholomew's Hospital to defray the cost of reconstruction, came out at the end of last week with a very positive statement. The Treasurer of the hospital at once wrote to the *Daily News* to say that so far as he was aware there was no foundation for the announcement, but our contemporary, instead of accepting the denial, appended a statement to Sir Trevor Lawrence's letter pointing out that the Treasurer only said that there was no foundation for the story "so far as he knew," and added that if the Treasurer "made inquiry in the right quarter he will perhaps still find the statement to be true." Let us hope that the mystery will soon be solved, and that the unknown will quickly confide his intentions to the hospital authorities. The injury which such a statement, if not corrected, may do is shown by the manner in which the *Daily Mail* immediately rushed to the conclusion that the requirements of St. Bartholomew's had been fully met, and expressed the hope "that others will be moved by this great example to do likewise for the London Hospital, which is in dire need of funds for the prosecution of its admirable work." The way in which by a portion of the press the needs of the London Hospital are dragged into any discussion with reference to metropolitan hospitals appears to call for some little protest. While it is sincerely to be hoped that the London Hospital will get all the money it requires, its chances of doing so seem to be lessened by the manner in which the campaign in its favour is being conducted with or without the consent of its immediate supporters. It is constantly referred to as if it were the only one of the better known hospitals that is doing its duty, the only one that needs support, and the only one that devotes its energies to the needs of the really poor or is itself situated in a really poor neighbourhood. This is very far from being the case, and, but for the very good feeling which usually prevents the larger hospitals from contending with one another in anything but good works, the tone of some of the papers might well lead to a protest from some of them and the institution of a very dangerous counter-campaign. Great as are the claims of the London Hospital to support, it is probably, in point of buildings, fittings, general outfit, and every particular except capital, better off than most large general hospitals in London. That it needs money to enable it to keep its position and carry on its good work is true; but its claims to public

support ought not to be pressed by drawing comparisons unfavourable to the conduct and usefulness of other hospitals.

THE UNIVERSITY OF LONDON.

At the unusually large meeting of Convocation held last Tuesday, the only contested vacancy on the Senate to be filled by Convocation—that in Medicine—was filled up by the re-election of Sir Thomas Barlow. The result of the voting was 272 votes for Sir Thomas Barlow and 234 for Mr. H. Burrows. In the election which took place in 1900 Sir Thomas Barlow received 381 votes, against Dr. Ringer's 243, the latter being put forward, as was the case with Mr. Burrows, on behalf of the Graduates' Association. Mr. Burrows is quite a young man, and, indeed, we do not find his name in the register of Convocation, and the close fight he made was doubtless largely attributable to a certain amount of dissatisfaction within the Medical Faculty at the new curriculum and examinations, which rightly or wrongly are thought to imperil the standard of the medical and surgical degrees. A discussion was raised at the last meeting of the London County Council on the question of the grant of £10,000 a year from the Technical Education Board to the University of London. Dissatisfaction was expressed as to the allocation of the grant for economics exclusively to the London School of Economics, and an assurance was obtained from the Chairman that in future a free hand would be given to the Senate in the apportionment of the grant to various schools. Should the Education Bill for London become law it is in the highest degree probable that the University will in some way be represented upon the Education Committee, and a larger subsidy than £10,000 a year for University work may be anticipated. It is therefore of the utmost importance that the distribution of this grant should be fairly and judiciously made.

MEDICAL OFFICERS OF HEALTH AND SANITARY INSPECTORS IN SCOTLAND.

Owing to its not having been specifically stated in the Public Health (Scotland) Act, 1897, that the medical officer of health is head of the sanitary department, in not a few instances considerable difficulty has been experienced owing to the strenuous endeavours of sanitary inspectors to be recognized as independent officials. The local authorities whose duty it is to define the duties of these officers have in the great majority of instances recognized the absolute necessity of having one head official whom they hold responsible in all sanitary matters, and have invariably determined that the medical officer of health should be in that position. Apparently, however, there are local authorities who have avoided the subject and have not framed any regulations, with the result that recently the Local Government Board of Scotland has requested these authorities to issue regulations. In some instances this has led to sharp differences of opinion. We observe from the local press that in Ross-shire the sanitary inspector of that county lodged a formal protest against the recommendation by a special committee appointed to go into the matter, that Dr. Bruce, the medical officer of health of that county, should be appointed head of the department. To this Dr. Bruce, of Dingwall, wrote a most effective reply, with the result that the Committee, on the motion of the Chairman, unanimously agreed that Dr. Bruce should be head of the department. The 1897 Act has made it compulsory that all medical officers of health now appointed should hold the diploma in Public Health, and thus a very special training is necessary. With sanitary inspectors it is very different. Any person is eligible for the post of sanitary inspector. It appears to us to be unfortunate that medical officers of health in Scotland should have to fight for rights which should have been laid down by Act of Parliament. It would be advantageous to the future good management of public health matters in Scotland if medical officers of health, before accepting their appointments, should make the reasonable stipulation that they be recognized head of their department.

OYSTERS AND OYSTER LAYINGS.

At the present time, when so much attention is being given to the bacteriological examination of shellfish, there is apparently grave danger of overlooking the fact that an oyster laying may be liable to occasional pollution, and that oysters therefrom, whilst usually exhibiting no signs of sewage contamination, may from time to time be polluted. It is now fully recognized that chemical and bacteriological examination of a sample of water, however satisfactory the results, does not justify an opinion being expressed with reference to the safety of the source from which it was derived; and the same applies to oysters and the layings from which they are derived. Several factors should be taken into consideration before expressing an opinion. Dr. Thresh, who has been inspecting the oyster layings around the Essex coast, has found that such intermittent pollution may arise from the unloading of London manure and house refuse in immediate proximity to the beds, and from the occasional discharge of large volumes of highly-polluted water by the opening of mill gates which may have held back the whole of the sewage of a large village for many weeks. He suggests that most importance should be attached to an actual survey of the layings, a careful examination of the surroundings, and full inquiries as to the possibility of occasional pollution. This should be supplemented by an examination of the water over the layings and by a bacteriological examination of the oysters. If all the results are entirely satisfactory then the oysters from the layings may be pronounced "safe," but not otherwise. Dr. Thresh's experience proves that sources of pollution may very easily be overlooked unless the greatest care is taken, and the inquiry is conducted by some one well acquainted with all the possible sources of pollution. Unsuspected danger may lie behind the sea wall, and incriminating information is not usually volunteered. Too great a reliance upon bacteriological examinations may engender a false feeling of security, and it is highly desirable in the interests of the owners of the fisheries, as well as of the general public, that reports upon particular layings should contain an account of the investigations made to ascertain the possibility of occasional contamination; moreover, these reports to be of any value should be made by competent observers for some public authority, and not merely at the instigation of the owners of the particular layings. The Fishery Boards, county councils, or the Local Government Board are the authorities chiefly concerned, and it is probable that the public would have greatest confidence in the last named. The Fishery Boards and county councils would be reluctant publicly to advertise the defects in the districts under their jurisdiction, whilst the Local Government Board would, presumably, not be affected by any such considerations. In any case it is tolerably certain that the shellfish industry must remain under a cloud until steps are taken to have such official examinations made, and until power is obtained to to prevent shellfish from uncertificated layings being offered for sale to consumers.

THE EDUCATION OF SANITARY AUTHORITIES.

In large towns the lay members of sanitary councils on the one hand are usually fairly well informed with regard to the general bearings of public health questions, and on the other are more or less constantly stimulated into activity by the existence of conditions which obviously call for reform. In small communities, however, this is often not the case. The necessity for activity in scattered rural districts is frequently not very obvious, and it not seldom occurs that a large proportion of the persons who form the sanitary authority have hardly even a bowing acquaintance with the general principles underlying the Acts dealing with questions of public health. It is therefore, perhaps, natural that it should in some places be difficult to get them to avail themselves of powers given them by the law. It is possibly with some such considerations as these in his mind that Dr. Lloyd-Roberts has added to his annual report on the health of the districts for which he is medical officer of health,

several little essays on subjects such as hospital accommodation, tuberculosis, and the housing of the working classes. They are brief, but sufficiently explicit, and seem calculated to be of considerable utility. The one which is perhaps the most opportune is that which deals with isolation hospitals. The individual suffering and loss caused by even a very brief epidemic is touched on, and attention is drawn to the economic balance in favour of every district being prepared in advance to grapple with any outbreak of dangerous infectious disease that may occur. Point is given to his remarks by the narration of the steps to which in his own and neighbouring districts the small-pox scare has given rise. It has been found necessary to take in hand the erection of eight small isolation hospitals within the space of a few months, whereas two at most, if constructed and organized betimes, would have sufficed for the needs of the whole county. This is by no means a very exceptional circumstance. Many sanitary authorities during the past few months have had occasion to lament the expense due to their previous supineness in the matter of provision against epidemic disease, both in the way of the necessary isolation hospitals and general prophylactic measures. *Si vis pacem, para bellum* is as true of disease as it is of human foes, and the earlier preparations are made the less costly and more efficient they are likely to prove. When put off until disease is at the door, the expense of adequately meeting it is enormously increased; for there is no time for the negotiations necessary to form "combined hospital areas," or to choose and bargain for the most suitable sites, or to decide at leisure on the most economical form of building. Under such circumstances, either extravagant fees have to be paid to some more provident neighbour willing to lend the accommodation required, or in default of this each district has to fend for itself, sign building contracts in haste, and accept sites which may not be the best in point either of economy or suitability. The moral is that every sanitary authority, however limited the population of its district, should not rest satisfied until either alone or in combination with its neighbours, it has provided in advance for all its probable needs in epidemic times.

IRVING'S DANTE.

IT is a curious circumstance that the play of *Dante* produced by Sir Henry Irving the other day at Drury Lane, has a double connexion, through the eponymous hero and through one of the authors, with the medical profession. The play is by MM. Sardou and Moreau. M. Sardou began his career in Paris as a medical student, and the result of his first effort to write for the stage was not calculated to wean him from medicine. He wrote a tragedy in blank verse which had one point of originality at least, since in the speeches of the characters the length of the line varied with the dignity of the speakers. Kings and queens, for example, spoke in Alexandrians. He was laughed at for his pains, and burnt his manuscript in disgust. It is to be feared that M. Sardou was never a very diligent student of medicine, for he does not seem to have passed any examinations, though it was long before he got a piece accepted, and still longer before a play of his was given with success. Dante's connexion with medicine was perhaps even more nominal. He was a member of the Florentine Guild of the Physicians and Apothecaries, but in Florence every aspirant to public office was required to be a member of one of the Guilds. The motives which induced the great poet to select this particular art or Guild do not appear to have been ascertained. Possibly it was a mere matter of private convenience or personal connexions. At any rate, Dante never seems to have exercised the art or craft, and the play begins long after his exile from Florence. It is somewhat loosely constructed, rather a string of incidents than a drama, and M. Sardou has declared that he and his collaborator have sought to portray, not the historical, but the moral Dante, "the lover of liberty, the fierce hater of persecution, of oppression." There was plenty of oppression to fight against in the Italy of his day, and the struggle of Dante, who is never long absent from the stage, against the forces of injustice is the keynote of the play. The scenery is beautiful, or striking, and the costumes have been studied from contemporary pictures. This striving after realism emboldens us to ask why, when in everything else the manager and actor seek after accuracy, death scenes should be so unreal? In the last scene of the last act Dante, who has visited hell under the guidance of Virgil, as in the poem, and so gained supernatural knowledge terrifies the Cardinal legate at Avignon by foretelling not only the retribution which is to fall upon him hereafter, but the exact hour of his death—in fact, gives him only a quarter of an hour to live. The Cardinal staggers, or rather rushes about the stage, until the appointed moment, and then, as the clock strikes, topples over on his face—dead. There is no hint that the death is supernatural; in fact the Cardinal, on his first entrance, is made up and walks as a man in the last stage of exhaustion. It is presumptuous, perhaps, to question the judgement of two such masters of stagecraft as M. Sardou and Sir Henry Irving, and we may be reminded of the proverb "*Ne sutor ultra crepidam*"—but in a sense this is our last, and we find it difficult to believe that the incident is good art. It did not impress the audience; everybody felt that the Cardinal was to have a "dramatic" death; he was going to fall somewhere somehow, yet not a creature on the stage showed a trace of the natural instinct to catch him. Frankly, we think that the incident is played wrongly, and that it jarred on the nerves even of the enthusiastic first-night audience. In an earlier scene Sir Henry Irving, who throughout acts with remarkable dignity and reserve, is wounded, and sinks slowly, before he faints, into an attitude which recalls that of the dying gladiator. This is, we believe, not only very much more true to Nature, but also vastly more effective with the audience.

THE HEALTH OF THE FRENCH ARMY.

THE high rate of mortality in the French army, which was recently the subject of an important debate in the Senate, has been carefully analysed by Dr. Villaret in a recent number (No. 17) of the *Semaine Médicale*. Although there was a certain amount of exaggeration in the statements made during that debate, a careful examination of the statistics for the period 1874-1901 show that the mortality in the French army was two and a-half times greater than that of the German army. A more careful examination of the statistics from 1888-9 to 1899-1900 of the number of deaths in the French army after deducting the deaths of officers, which did not form a part of the German statistics, and eliminating from the German army the Bavarian figures, shows an average mortality in the French army of 5.9 per cent., as against 2.7 per cent. in the German. Moreover, there has been a gradual fall in the mortality in the German army throughout this period, while in the French the figures have undergone considerable oscillation, the highest point having been reached in 1890-1 and 1894-5. Dr. Villaret has pursued his investigations into comparisons of the mortality from different diseases. Influenza has been very much more fatal to the French army than to the German; the maximum mortality in the latter during this period was 0.06 per cent. in 1889-90; whereas the minimum mortality in the French army was 0.04 per cent. in 1888-9, when the epidemic had scarcely made its appearance, the lowest after that date being 0.11 per cent. and the highest 1.15 per cent. The mortality from typhoid fever is also greatly in excess in the French army. The highest mortality among the Germans being 0.31 per cent. and the lowest 0.16 per cent., while the lowest mortality in the French army is 0.96 per cent. and the highest 1.88 per cent. Tuberculosis also, especially pulmonary tuberculosis, is more than twice as fatal in the French army and the same may be said of dysentery, pneumonia, and pleurisy. The only causes of death in which the German army shows a higher rate than the French are: meningitis, due no doubt to epidemic cerebro-spinal meningitis which prevails in Germany, peritonitis, suicide and accidents. Dr. Villaret attributes the superior health

of the German army to the existence of a much better sanitary service. For the prevention of typhoid fever the greatest care is exercised over the water supply; every barrack well has fixed near it a card on which the doctor enters four times a year the results of the examination of the water; if there is anything doubtful about it the water is analysed in the chemical laboratory of the army corps which is under the orders of the director of the sanitary service of the army corps and who can, if he thinks fit, send a bacteriologist to make all necessary investigations. As the result of these measures typhoid fever has become very rare in the army, and such cases as are observed are due to infection during the manœuvres. Thus for example in 1899-1900 in the 13th Army Corps out of 21,583 effectives there were only 4 cases of typhoid fever; in the 11th Corps out of 19,594 there were 6 cases; in the 3rd Corps out of 23,132 there were 9 cases; in the 9th Corps out of 24,689 there were 9 cases; in the 18th Corps out of 25,905 there were 10 cases. In the same year, 1899-1900, there was only one epidemic of typhoid fever which occurred in the 8th Army Corps and was traced to a camp of exercise. Dr. Villaret adds that the German sanitary corps has elbow room in respect to the administration which enormously assists the execution of hygienic measures, not only in respect to the quality of drinking water, but in the regular supervision and disinfection of the barrack drainage. He attributes the diminution of mortality from tuberculosis to the more careful examination of conscripts. For some years past it has been forbidden to present in a single day more than 150 men for examination. Moreover the recruit on incorporation is carefully examined, and if his parents or one of them have died of some suspicious disease the fact is verified by reference to the local authority, and the recruit is submitted to prolonged observation until it is possible to speak definitely as to his physical aptitude. Moreover the German military surgeon has greater power in the matter of temporary discharge than his French confrère, as in Germany since the two years' service system has been adopted a certain number of supplementary men are always taken, so that it is possible to discharge every conscript of weak constitution without infringing the total of effectives. He also thinks that the German industrial legislation, providing assurance against disease, accidents, and old age, is beginning to produce a beneficial effect upon the civil population and indirectly upon the military element also.

COMPULSORY INSURANCE IN GERMANY.

IT is interesting to note that, after a discussion lasting more than two months, the German Parliament has voted a prospective law completing the law of obligatory insurance against sickness. It will be remembered that the law of insurance against old age was passed in 1889. Under it all persons receiving wages of not more than £2 a week are obliged to insure. The premium, which varies according to the amount of wages received, is paid half by the person insuring and half by the employer. The pension commences at the age of 70, and is regulated by complicated rules, the State paying the pension and also £2 10s. annually. It has been found that the advantages from this system are the excellent effect which the co-operation in the administration of the societies has upon the relations between employers and employed, and the checking of undue increase of bureaucratic power. At the same time the existence of so many separate funds causes much waste of money and labour, and it is now sought to abolish separate administration of the various trade benefit societies, and to establish a common administration of the sick funds and old-age pensions. This, in fact, was the basis of the law—insurance to be compulsory, but existing friendly and other societies to continue their corporate existence and separate administration under State control. For this purpose an imperial assurance department was created in the office of the Secretary of State for the Interior. By the old law, which applied chiefly to those employed in factories where machinery was used—but since extended to other trades—the whole burden of compensation in cases of accident was thrown upon the masters, but on the other hand, for the first thirteen weeks after an accident the injured workman received compensation from the sick fund, so that the cost only fell upon masters in serious cases. The new law, just passed, modifies the existing one (1) by prolonging assistance in case of sickness to twenty-six weeks instead of thirteen; (2) by extending assistance to lying-in women to six weeks instead of four; (3) pregnant women whose names are entered on the official list for at least six months will be assisted during six weeks, provided it is ascertained that they are incapable of working; (4) those suffering from venereal affections will be entitled to assistance. The new law unfortunately does nothing to better the position of German medical practitioners in regard to the sickness funds. The question, however, was raised during the debates, and the Legislature has invited the Imperial Government to present, at the next session, or as soon as possible after, a proposal on the subject.

THE TOOTHBRUSH AND APPENDICITIS.

THE use of the toothbrush is almost universal, although other methods of cleaning the teeth have been suggested by dentists. The bristles have certain disadvantages. Men ignorant of the principles of dentistry are apt, chemists inform us, to prefer "hard" brushes to "soft," partly because the hardest brush seems to imply the best money's-worth, partly because there is an idea that firm bristles must clean better than soft bristles, but chiefly because there is a common notion that it is more healthy and manly to use hard toothbrushes, just as it is best for a man to bathe in cold water and to eat underdone red meat. These ideas, however common in the days of Todd and Kingsley, are not entirely confirmed by experience, and hard bristles seem to be actually detrimental to the enamel. But any bristle detached from the brush may do harm; it may get into the larynx or even into the vermiform appendix. Dr. Weisswange[1] recently exhibited before the Gynaecological Society of Dresden an appendix containing a stout bristle from a toothbrush surrounded by faecal concretions which had set up ulceration. This condition was accidentally detected at an ovariotomy. Dr. Wiesswange has had similar experiences of diseased appendix in relation to other abdominal operations. One patient felt ill after a successful ovariotomy; he opened the abdominal wound and found the appendix inflamed, being full of ascarides. Hence he considers that the appendix should always be inspected when the abdominal cavity is opened for any purpose.

MILK DEPOTS AND CHILDREN'S HOSPITALS.

THE medical staff of the Royal Hospital for Children and Women, Waterloo Bridge Road, have adopted resolutions approving the principle of an infant's milk dépôt, and pledging themselves, if the Lambeth Borough Council establish a dépôt in the near neighbourhood of the hospital, to do what they can to induce patients to use it. The resolutions of the medical staff have been approved by the Committee of Management, and the Secretary of the hospital was instructed to prepare a petition to be laid before the Borough Council of Lambeth. As has been pointed out in the series of articles which have appeared recently in our columns, it is essential, if the best results are to be obtained from the systematic use of sterilized milk for infants, that the administration should be under medical supervision. We are therefore glad to know that one of the children's hospitals in London is giving serious attention to the matter, and is prepared to take some trouble to induce mothers unable to suckle their babies to obtain wholesome milk. Experience in Paris has shown that it is important to take care that women should be instructed in the first place that they ought only to resort to artificial feeding when the natural nutriment fails, and secondly, that infants taking the artificial food should be kept constantly under observation in order to ensure that the food is being given under proper conditions. The attendance of women,

[1] *Zentralbl. f. Gynäk.*, May 9th, 1903.

whether weekly or fortnightly, should be insisted upon and the quantity and strength of the milk mixture given should be prescribed by the medical adviser.

THE HEALTH OF PRETORIA.

We have received a copy of the report of the Medical Officer of Health for Pretoria, Transvaal, for the year 1902, which shows that the administration of the town from a public health point of view is rapidly being conformed to the British model. The population during the year was 22,971, of whom 13,000 were Europeans, while the rest belonged to the coloured races. The distribution of the European population appears to have been closer in proportion of sexes than we should have expected, and was as 7 males to 5 females. The sex distribution of the coloured population is not calculable from the figures supplied. Some clue to it, however, may be gathered from the birth-rate, which also throws some light upon age distribution among the female Europeans. The birth-rate among Europeans was 36.16 per 1,000 of population, and among the coloured population was 22.60. The death-rate for both classes was about the same, and for the two averaged 21.15 per 1,000 of population. The town still appears to depend to some extent upon wells for its water supply, though it does not seem to be necessary to do so, since the possible supply from the surrounding hills is estimated to be as high as 5,000,000 gallons per diem. The system of notification is in force, and notice was received of 477 cases of notifiable disease; of these, 50 ended in death, being about 10 per cent. of the total deaths from all causes. Leprosy, malaria, and chicken-pox are among the notifiable diseases, and at some distance from the town there is a leper asylum containing at present about 250 persons. Enteric fever was responsible for more than half the deaths from notifiable disease.

ALCOHOLIC EXCESS AND INSANITY.

The Special Committee on Mental Cases of the parish of Glasgow recently has had reports of the medical superintendents of the Glasgow district asylums at Woodilee and Gartloch with reference to the number of patients admitted to both asylums during the year ending May 15th, 1902, as the direct result of alcoholic excess. Particulars of these cases and of similar cases in the observation wards of Barnhill Poorhouse were obtained; and the Committee publishes an analysis compiled from them all. "The Committee views with concern the fact that, of 565 admissions to the two asylums as insane, and 213 to the poorhouse as cases of incipient insanity during the twelve months, no fewer than 259, or 33 per cent., have become chargeable to the parish through alcoholic indulgence..... In the large majority of cases the conditions and surroundings were good, and the earnings, in 19 typical cases, were from 19s. to 60s. per week. It is beyond question, further, that a large number of the insane sent to the asylums in previous years, and still inmates thereof, are cases of the same nature." Of the cases in the asylums, 1 was under 20 years of age, 38 under 30, 53 under 40, 42 under 50, 17 under 60, and 5 under 70; total, 156. Among the poorhouse total of 103 such patients, the proportions at different ages were somewhat roughly similar. In the asylum cases the surroundings are stated to have been "respectable" in 59; "fair" in 45; and "poor" in 52. In the poorhouse cases the surroundings of 1 were "respectable," of 31 "fair," and of 71 "poor." Of the total of both sets of patients—namely, 259—90 had been "found by police." Eight of the 103 poorhouse cases are stated to have been removed to the asylum; it is possible these may be counted twice over—that is, in both asylum and poorhouse statistics; but in any case the figures are sufficiently striking; and we publish, in the above, those of the numbers which are medically interesting and of value with regard to the important subject of alcoholic excess in relation to insanity.

MIDWIFERY IN FIJI.

We have received two pamphlets in the Fijian language written by Dr. E. Glanville Corney, the President of the Board of Health of Fiji, to instruct Fijian women in the better management of childbirth. It has been the custom there to cut the cord, leaving a piece as long as from the umbilicus to the knee or forehead, and then leave it to take care of itself till it drops off. Many deaths of children a few days old have been attributed to unskilful dealing with the cord. The native midwives, it seems, think that the blood in the cord is "bad blood," and that it is a good thing to let some of it escape. Dr. Corney has written a little catechism to teach the native midwives the proper way to secure the cord, and protect the umbilicus from flies, smoke, and dirt until it has healed. In the other pamphlet instructions are given as to the conduct of natural labour. The hindrances to the safe conduct of childbirth seem to be much the same among the Fijians as among the lower classes of our own country. The children of the sunny Pacific need to be taught to wash and be clean; not to crowd the lying-in chamber; and to avoid unnecessary meddling. These pamphlets are the outcome of some recommendations made in a report by a Commission appointed in 1893 to inquire and report upon the circumstances affecting the decrease in the native population, especially the infantile death-rate. It is the policy of the Government to instruct, encourage, and assist the native population in every possible way. Dr. Corney has lived twenty-six years in Fiji; and an English-trained nurse, Miss Anderson, has spent the greater part of her life there. She has helped Dr. Corney in the compilation of these instructive pamphlets. Mindful that "a little knowledge is a dangerous thing," they conclude their teaching by telling the native not to try and combine two things: to either follow strictly European methods, or to let them alone and stick to native custom.

THE CREMATION SOCIETY OF ENGLAND.

The sixteenth annual volume of the *Transactions* of the Cremation Society of England, recently published, is of special interest in connexion with the Cremation Act, which came into force at the beginning of last month. The successful passage of this Act may be considered the crowning of the Society's endeavours, but the success which has greeted its efforts is also shown by other facts. The specific object of the Society is set forth in the declaration which every candidate for membership has to subscribe: "We disapprove of the present custom of burying the dead, and desire to substitute some mode which shall rapidly dissolve the body into its component elements by a process which cannot offend the living and shall render the remains absolutely innocuous. Until some better method is devised, we desire to adopt that usually known as cremation." This is the same declaration as that agreed upon by the twelve persons who met in January, 1875, at the house of Sir Henry Thompson, and forthwith formed themselves into a Society. Among them was Ernest Hart, and, except Sir Henry Thompson himself and the Rev. C. Voysey, none now survive. It was ten years, however, before the Society found itself in a position to put its principles into practice, and it is to be noted that the first person to be cremated was a woman. In the seventeen years that have elapsed since then the number of cremations has steadily increased, until now altogether 2,372 bodies have been disposed of at Woking in this way. Besides this, however, there are now eight other crematoria established in England, all due to the influence of the Society, but established, some by municipal authorities and others as commercial speculations. The Society, of course, has always been well supported by members of the medical profession, and in a list of persons of note who have been cremated at Woking we find the names of forty-five medical men of greater or less repute. The table of fees charged at Woking shows that cremation is no more expensive than interment in a London cemetery, and since heavy coffins, etc., are prohibited, the connected expenses should be very much less. This is itself an advantage, and if cremation became popular the expense of all funerals would probably be brought down. How great they are at present is not generally realized, and any one who can obtain access to an undertaker's books will be

astonished at the enormous amounts frequently charged. Besides the promotion of cremation, one of the Society's expressed objects is the introduction of the Continental system of death certification, whatever the form of "burial."

SOUTH AMERICAN MEDICAL CONGRESS.

The second Congress of Latin America will be held at Buenos Aires in the spring of 1904. In connexion with the Congress there will be an exhibition of medical, surgical, and hygienic appliances. The exhibition will be open on April 2nd and close on May 31st.

The next session of the General Medical Council will begin on Thursday, May 21st, when the President, Sir William Turner, will take the chair at 2 p.m.

In view of numerous inquiries received relative to the experiments on the serum treatment of hay fever, described in the British Medical Journal of March 28th, we are requested to state that the method is still in the laboratory stage.

The Ingleby Lectures of the University of Birmingham will be given this year on June 9th and 16th, at 4 p.m., by Mr. W. F. Haslam, F.R.C.S., Surgeon to the General Hospital, Birmingham. The subject selected is the surgery of the pancreas.

When the Jenner Institute of Preventive Medicine was reorganized in consequence of Lord Iveagh's large endowment in 1898, no director was appointed. The work of the institute has since much increased, and the governing body has now resolved to fill up the appointment. The salary is £1,000 a year.

A *conversazione* will be given by the Medical Society of London at their Rooms, 11, Chandos Street, W., on Monday next. The reception by the President will take place at 8.30 p.m., and at 8.45 Sir William H. Bennett, K.C.V.O., will deliver an oration entitled Some Reflections, mainly Ethical, upon the Present Position of Operations in the Practice of Surgery.

Mr. Henry Morris, Honorary Treasurer of the Cancer Research Fund, under the direction of the two Royal Colleges of Physicians and Surgeons, has received the sum of £1,000 from Mr. Henry Louis Florence, to be applied for the advancement of the investigation of cancer. The research is now being actively carried on along several lines of inquiry, but we understand that the amount of money in the hands of the trustees must be considerably increased before the investigation can be pursued in all the contemplated branches.

We understand that Dr. W. M. Bayliss, Assistant Professor of Physiology at University College, London, is bringing an action for libel and slander against the Hon. Stephen Coleridge, on the ground of certain statements made in the speech delivered by that gentleman on Friday, May 1st, at the annual meeting of the National Anti-vivisection Society, relative to an experiment said to have been performed by Dr. Bayliss at University College on February 2nd last. The writ has, we believe, already been served on Mr. Coleridge.

MEDICAL NOTES IN PARLIAMENT.

[From our Lobby Correspondent.]

Bills of Medical Interest.—There is little chance for private Bills which have not yet passed the second reading stage. Sir Francis Powell has put the Public Health Bill down for June 1st (Whit Monday), an indication that there is little or no chance for the Bill this year. The Medical Acts Amendment Bill has been put down for Monday, but it is blocked in the interest of the Medical Aid Associations, who are opposed to any increase in the powers of the General Medical Council. The Poor-law Superannuation (Ireland) Bill is put down from day to day, but is steadily blocked, and the same may be said of the Scotch Bill.

Physical Training in Scotland and Medical Inspection.—Mr. Shaw-Stewart asked the Lord Advocate last week whether he could state what steps were being taken to obtain the assistance of medical officers to carry out the recommendations of the Royal Commission on Physical Training (Scotland) for establishing a system of medical inspection of the children in all schools; and whether, in aid of the remuneration of their services, provision would be made out of the Parliamentary vote; also, if any arrangements were being made for the appointment, to serve under the Education Department, of sub-inspectors, male and female, for the purpose of assisting in sanitary matters the existing staffs of schools. Mr. Graham Murray answered that the Scotch Education Department was now in communication with representatives of those interested, in order to obtain their views as to the recommendation referred to and the means by which it could be carried out. When their lordships were in possession of these views they would consider what, if any, proposals might be submitted to the Treasury as to the financial arrangements.

Infectious Diseases at the Guards' Hospital.—Captain Jessel asked the Secretary of State for War on Friday in last week if he would state how many cases of infectious disease were being treated in A Block of the Guards' Hospital, Rochester Row, Westminster; and whether, as the hospital was in close proximity to the sleeeping rooms of the boys of the Newport Market Army Training School, Coburg Row, Rochester Row, he would take measures to remove the patients elsewhere. Mr. Secretary Brodrick replied that the mild varieties only of infectious diseases which did not require notification under the Infectious Diseases Act were treated at Rochester Row Hospital, such as measles and mumps. There was considered to be no danger of infection being spread to the boys of the school mentioned.

The Production of Glycerinated Calf Lymph.—Mr. Weir asked the President of the Local Government Board if he would state the number of tubes of glycerinated calf lymph which were produced, not issued, during the year 1901-2 at the Local Government Board vaccine station. Mr. Long answered that he was unable to state the number of tubes produced. The lymph was only placed in tubes with a view to immediate issue.

Vivisection at University College, London.—Sir Frederick Banbury asked the Secretary of State for the Home Department last week if he would state under what certificate the operation on a brown dog was performed at University College, London, on February 2nd last; and whether, seeing that a second operation was performed upon this animal before the wounds caused by the first operation had healed, he proposed to take any action in the matter. Mr. Secretary Akers-Douglas answered that the operation to which he understood the honourable member referred was performed under Certificate C. It was true that at the time there was an unhealed wound in the body of the dog. This was an incision made very shortly before by another licensee for the purpose of examining the condition of an organ upon which he had previously carried out an operation, from which the animal suffered no ill effects. Previously to the making of the incision the animal was placed under anaesthetics, and while still in that condition was brought into the theatre for the purpose of the experiment under Certificate C. During the whole of the latter the animal continued under anaesthetics, and was eventually taken away and killed before it recovered consciousness. In these circumstances there appeared to be no action which he was called upon to take.

Vivisection Certificates at University College, London. Mr. Weir asked the Secretary of State for the Home Department last week if he would state the number of persons holding certificates to practise vivisection at London University College, the qualifications of the operators, the nature of the certificates which they respectively held, and the source from which they obtained the dogs on which they experimented. Mr. Secretary Akers-Douglas answered that the information asked for, with the exception of the last item, was contained in the Annual Return of Experiments on Living Animals, of which the volume for the year 1902 would be issued very shortly. He had no information as to the source from

which the animals were obtained. Mr. Weir returned to the vivisection question on Monday, and put two queries to the Home Secretary. First, he asked the number of dogs which had been subjected to experiments at London University College during the year ending December 31st last: and the number of such experiments which were conducted without the use of anaesthetics; and afterwards whether the Home Secretary's attention had been called to an experiment made on a dog on February 2nd last at the London University College: and whether he would take steps to secure that such experiments should be discontinued, or conducted only in the presence of a Home Office inspector, and while the animal was under the influence of anaesthetics. Mr. Secretary Akers-Douglas replied that the total number of dogs subjected to experiments was 232. Of these, 155 dogs were operated upon in the Department of Physiology, all under anaesthetics. Of the remaining 77 cases the experiments (which took place in the department of Pathological Chemistry) were of the nature of inoculations or feeding experiments, not involving any serious operation, and were conducted without the use of anaesthetics. It was a condition of such experiments that if pain ensued the animal should be killed under anaesthetics as soon as the main result of the experiment was attained. Inquiry into the case mentioned in the second query showed that during the whole of the experiment, and until it was killed, the dog was under anaesthetics. The Home Secretary was afraid he could not adopt the suggestion as to the presence of a Home Office inspector. On Tuesday Sir Frederick Banbury asked the Home Secretary whether the dog operated upon in the theatre of University College on February 2nd was killed immediately after its removal from the theatre. Mr. Akers-Douglas, in reply, stated that the answer was in the affirmative.

Colonel Lockwood has given notice that he will on Monday, May 18th, ask the Secretary of State for the Home Department whether, with regard to the operation carried out on a brown dog on February 2nd at the University College, he is aware that three operations were carried out on the same animal; and, if so, has he any official report showing that the animal was placed under anaesthetics and had suffered no ill-effects from the operation.

The Plague at Hong Kong.—On Monday Mr. Weir asked the Secretary of State for the Colonies if he would state to what cause the recurrence of plague at Hong Kong was attributed; and how many deaths had resulted from this fresh outbreak. Mr. Chamberlain, in reply, said that the number of deaths from plague in Hong Kong since January 16th had been 402. There was usually a recrudescence of plague in that Colony at this period of the year, and he was not aware of the existence of any special cause for this year's outbreak. In answer to a further question, the Colonial Secretary said he believed the local authorities shared the opinion that rats were a cause of plague.

The Treatment of Prisoners under the Vaccination Acts.—Mr. Channing asked the Secretary of State for the Home Department on Monday whether he was aware that Henry Elderkin, who was recently sentenced to imprisonment under the Vaccination Act at Wellingborough, did not receive at Northampton Gaol the treatment of a first class misdemeanant as required by the Vaccination Act, 1898, but was obliged to wear prison clothes, stripped with ordinary prisoners and his measurements taken, put on prison diet, and refused books or permission to write letters, and otherwise subjected to all the treatment of an ordinary criminal; and what steps he proposed to take to prevent such treatment of prisoners under the Vaccination Acts. The Home Secretary said that he almost thought there must be some mistake. The inquiries which he had made showed that the prisoner in question was treated strictly in accordance with the rules for prisoners of the first division. He was not stripped with ordinary prisoners nor measured; by his own choice he wore the prison clothes and received prison diet. He was allowed library books. As his sentence was only one week he did not become entitled to any privileges under the rule allowing fortnightly visits and letters, but he was allowed to receive a letter from his wife.

The Royal Edinburgh Asylum.—On Monday Mr. Weir asked the Lord Advocate whether his attention had been called to the fact that in the West House of the Royal Edinburgh Asylum there were 142 patients in excess of the number which the building could accommodate, and that this overcrowding had resulted in an outbreak of dysentery; and would he state what steps it was proposed to take to obviate this overcrowding pending the erection of Bangour Asylum. The Lord Advocate replied that he was informed by the Lunacy Board for Scotland that the dysentery had ceased for the last three months, and that the overcrowding had diminished. Full particulars of the action taken by the Board in pressing forward the construction of new buildings in West Bangour would be found in their annual report just published. It was expected that these buildings would be ready in the autumn.

Private Establishments for the Reception of Small-Pox and the Production of Animal Vaccine Lymph.—Mr. Weir asked questions on these subjects last Monday, and was informed by the Parliamentary Secretary of the Local Government Board that there was, as far as the Local Government Board was aware, only one private establishment in England and Wales for the reception and treatment of small-pox. Mr. Grant Lawson was unable to state the number of establishments for the production of animal vaccine lymph, but referred the honourable member to the *Lancet* of June 7th, 1902, for some information on the subject.

The Commission on Arsenical Poisoning.—In answer to Sir Cuthbert Quilter, Mr. Long stated on Monday that the Commission had almost completed the inquiry and was about to prepare its final report. He was unable at present to say when it was likely to be issued.

Scotland.

THE VISIT OF THE KING AND QUEEN TO EDINBURGH.

Address from the University.

ON May 12th a deputation from the University of Edinburgh attended at Holyrood and presented the following address:

To the King's Most Excellent Majesty, may it please your Majesty, we, your Majesty's loyal subjects, the Chancellor, Vice-Chancellor, Rector, University Court, *Senatus Academicus*, and General Council of the University of Edinburgh, offer our most respectful homage to your Majesty, and to your illustrious Consort, on this the first visit to the capital of your ancient kingdom since your accession to the Throne. The University owes its origin to a charter granted in 1582 by your Royal ancestor King James VI., who designated the college as "the college of King James." We recall that a Princess of Denmark was the Queen of our Royal founder, and we regard it as a signal felicity and happy omen that after the lapse of many generations we hail on this occasion as our Sovereign Lady a Princess of the same renowned and ancient House. We also recall that your Majesty, as Prince of Wales, was an *alumnus* of the University in 1859-60, and pursued your studies under the direction of one of our late colleagues. We rejoice that your Majesty has recovered from the severe illness from which you suffered some months ago, and we earnestly hope and pray that for many years to come your Majesties may reign over a prosperous and contented empire.

The King replied as follows:

It gives myself and the Queen great satisfaction to receive your loyal and dutiful homage on this my first visit to the ancient capital of Scotland since my accession to the Throne. The fact to which you refer that my ancestor to whom the foundation of your honoured University was due, chose, like myself, a Consort from the Royal House of Denmark, recalls an historical parallel interesting alike to myself and to the Queen. I reflect with pleasure on the time that I spent as an *alumnus* of the University, and on the friendships there formed with illustrious members of its staff. I thank you for your congratulations on my recovery from serious illness, and I am grateful for the prayers which you offer for the prosperity of my reign.

Opening of the Infectious Disease Hospital.

The new infectious disease hospital erected by the city of Edinburgh on a site of 130 acres at Colinton Mains, four miles from the heart of the city, was opened by the King and Queen on May 13th. The hospital, which has cost £350 000, will provide accommodation for 600 patients and 150 nurses. The King was received by Lord Rosebery, the Lord Provosts of Edinburgh, Dundee, and Aberdeen, and Mr. Lang Todd, Convenor of the Public Health Committee. Mr. Todd gave a brief history of the institution, and the King, in reply, said: I congratulate the Corporation of the city of Edinburgh upon the completion of this great building. I am confident that it will mark an important step in the improvement of sanitary administration in the city, and I trust it will realize all the anticipations of benefit which have led you to undertake

so large a work. It has been a great pleasure to me and to the Queen to come to the city of Edinburgh, and we are gratified that the visit should have taken place at a time which has enabled us to open this hospital.

Sir Henry Littlejohn the City Architect (Mr. Morham), Dr. J. O. Affleck (Consulting Physician), Dr. C. Buchanan Ker (Resident Physician), and Miss E. C. Sandford (Lady Superintendent of the hospital), were presented to their Majesties. Before leaving, the King and Queen each planted a commemorative tree. The hospital is expected to be ready for occupation in the autumn.

The Prevalence of Consumption.

The second annual meeting of the Glasgow Branch of the National Association for the Prevention of Consumption was held in Glasgow on the afternoon of May 6th. In the unavoidable absence of Lord Provost Ure Primrose, Lord Inverclyde, who takes a deep interest in the Association, presided. The annual report showed that considerable progress was being made. There was an increased membership of 166 over the previous year, and a number of district public meetings had been held in the city for the purpose of spreading a better knowledge of the objects of the Association. The Branch has, moreover, acquired a site for a sanatorium in the neighbourhood of Lanark which it is hoped will provide accommodation for the treatment of sixty patients, and for this they appeal for further generous subscriptions. In connexion with the endeavour to secure the abatement of spitting, the Branch Council report the means they have been taking to awaken public feeling to the danger of this pernicious practice. The railway companies had been communicated with, and had undertaken to exhibit the placards of the Association upon the platforms and in the waiting-rooms of the principal stations prohibiting spitting, though not meantime in the railway carriages. In connexion with the tramway cars, the by-laws of the Glasgow Corporation cars render spitting in or upon the cars a police offence, and it is reported that the general manager had been communicated with regarding the frequent breach of these by-laws, and had forthwith renewed his instructions to inspectors and conductors to warn offenders, and, if necessary, give them in charge. Some prosecutions have recently followed, which should have some deterrent effect. Lord Inverclyde, in moving the adoption of the annual report, referred to the good work that had been done during the two years of the existence of the Society. He spoke of the different departments of the work, but dwelt specially on the subject of expectoration, and the need of efforts being made for its abatement. Dr. Dougan seconded the resolution, and in doing so emphasized the Chairman's remarks. The work of the Association was important, and had many gratifying results, but it had hitherto been so unostentatious that the public did not know much about it. He referred to the proposed sanatorium, and hoped that the necessary funds would soon be forthcoming, so that the erection of the necessary pavilions might be proceeded with. Mr. Quarrier's consumption sanatoria at Bridge of Weir were exclusively for female patients, so it was intended that the sanatorium of this Association should provide accommodation for males. The reports were unanimously passed, new office-bearers were elected, and the meeting terminated with a vote of thanks to Lord Inverclyde.

General Council of the University of Edinburgh.

The statutory half-yearly meeting of the General Council of the University of Edinburgh was held in the Examination Hall on May 6th, at 3 p.m. Sir William Turner, the Principal, on taking the chair for the first time, was warmly received.

Election of Assessor in the University Court.

On the motion of Mr. Thomas M'Kie, advocate, Mr. J. Hope Finlay, W.S., took the chair while an Assessor in the University Court was being elected to fill the vacancy caused by the appointment of Dr. F. Grant Ogilvie as an Under-Secretary to the Board of Education, London. Dr. D. F. Lowe, head master, Heriot Hospital School, and Dr. John A. Traill, W.S., Chairman of the Business Committee of the Council, were nominated, and, on a division, Dr. Lowe was declared elected.

Congratulations to the New Principal.

Dr. Traill, in submitting the report of the Business Committee, remarked that that was the first meeting of the General Council since the retirement of Sir William Muir and the appointment of Sir William Turner to the Principalship of the University. He had therefore the honour to tender to Sir William, on behalf of the Council, their most hearty congratulations on his appointment as Principal of a University to which he had rendered conspicuous service, both as a member of the teaching staff and as an administrator.

Sir William Turner expressed to the members of the General Council his feeling of gratitude for the good words which had been said of him. He hoped that as long as health and strength were spared to him he might give to the service of the University the experience which he had gained within its walls during so many years.

The Medical Curriculum.

In dealing with the report, Dr. Traill said that a small Committee of the University Court and of the General Council had had various meetings in regard to the proposed alterations in the medical curriculum. A memorandum of the conferences had been prepared and transmitted to the University Court for their consideration, and by the Court sent down to the Senatus for their observations.

Modern Languages.

A report had been received from the General Council of the University of St. Andrews in regard to the position of modern languages in the bursary competition, making certain suggestions and asking that a committee of four members of the General Council of Edinburgh University should be appointed to confer with similar committees from the Councils of the other Universities in Scotland and to report. At a recent meeting of the Business Committee, a Subcommittee was appointed to watch the present position of education in modern languages in the secondary schools and Universities of Scotland, and to report to the Business Committee.

Report of the Finance Committee.

The Committee regretted that the system of University finance remained of such extreme intricacy. Much might be simplified if, as claimed by Sir William Turner in his first graduation address as Principal, the University could recover a reasonable measure of autonomy. The General University Fund, which more than ever was the backbone of the University's finance, and out of which were paid the administration, the general working expenses, and the upkeep of the University, struggled on with a capital of about £70,000, fluctuating slightly according to the immediate needs of the University year by year. The bulk of this capital was the result of slowly accumulated balances of revenue and portions of the Government grant coming from the Treasury unexpended during the earlier years of the recent Commission. Into this general fund passed annually the Government grant of £25,870, the fixed and parsimonious contribution of the State towards the upkeep and development of the University. Through the general fund also passed the matriculation and examination fees, and sundry balances which were available from the income of other funds when their primary purposes were satisfied, likewise any apparent surplus from the fee fund. Under the modern conditions, if due provision were made for laboratories and the junior teaching staff, the class fees of even the most successful department met only a part of its cost. From this point of view, any accession of students to the University brought with it greater charges to the general fund, hence the wisdom of Mr. Carnegie's provision that one-half of the income from his munificent endowment should be devoted directly towards the improvement of the teaching staff and equipment. As formerly announced, the Carnegie trustees had resolved to appropriate the portion of that endowment available for Edinburgh University mainly towards the erection and fitting-up of new buildings for the department of physics and engineering, towards the development of the department of modern languages, and towards the improvement of the library. But they had indicated that they expect, as a condition of such assistance, that the University will be able to raise otherwise a considerable portion of the sum required to carry out these objects. A sum of £80,000 was thus urgently needed in order that the University might have the advantage of Mr. Carnegie's endowment. There was in preparation an appeal to the public in that behalf, which the Committee hoped would meet with a hearty response, and which they specially recommended to the members of General Council as a worthy means of recognizing the benefits which alumni have received from Alma Mater. The report contained the following observations on pensions:

The Universities Commission of 1858, in view of the very small emoluments of professors at that time, approached the Treasury, and obtained

for them the highest scale of pension paid by the State. By the Act of 1880 the burden of pensions hitherto borne by Parliament was, in respect of the increased Parliamentary grant, transferred to the universities. The Commission of 1889, while not disturbing the scale of pensions, made, in consequence of the much-improved incomes of the professors, an important limitation that for the future no pension should exceed £600 a year. But it was needful to exempt already-appointed professors from this limitation, and accordingly 20 professors whose incomes reached £23,371 a year were, along with 6 retired professors whose pensions amounted to £2,852 18s. 6d. declared to be so exempted. As their pensions might fall heavily on the general finances for a time, the University was directed to set aside for an indefinite period £5,000 annually, out of which the pensions current should be met, any balance being accumulated in a separate fund to equalize the burden of heavier years in which possibly more than £5,000 would be required for the pensions. Upwards of £21,000 had been accumulated in this reserve fund, yielding by itself a revenue of about £600. Of the original 20 professors 5 are dead whose salaries amounted to £5,336, and of the 6 retired professors 3 are dead whose pensions amounted to £1,415 12s. 4d. The actual charge for pensions has varied from £2,070 in 1890-1 to £3,410 in 1898-9, since which year it has steadily fallen, being last year £2,555. The calculations made for the Commissioners of 1889 were stated to be on too narrow a basis to permit of an accurate result, but it was reckoned that for the whole four Scottish Universities the pension claims might vary from £10,000 to £15,000, and that they might not fall below £10,000 till 1916. With the experience which has now been got of the incidence of the pensions, and with the considerable reserve accumulating, the time is approaching when it will be the duty of the University Court to obtain a new actuarial report as provided by the Ordinance to ascertain whether some part of the annual charge of £5,000 may not be set free for the general purposes of the University.

Mr. D. D. Buchan, in moving the adoption of the Report of the Finance Committee, said that one result of the operations of the Carnegie Trust was that students were taking more classes, and were able to give more attention to their studies than formerly, because of the relief which came from the payment of fees.

General Statistics.

The report stated that the improvement of recent years was fully maintained, and the number of matriculated students last year was the largest since 1894-5. There was no apparent rush to the University owing to the Carnegie endowment, but as compared with 1900-1 there was an increase of over £2,600 in class fees, suggesting that the Carnegie students were being enabled to take more classes than formerly. It was also believed that the addition to their resources, through the payment of their class fees, was leaving them more free for study. A legacy of £5,000, doubly valuable as devoted to the general purposes of the University, had been received from the estate of the late Miss Ormerod, LL.D.

The number of matriculated students of medicine during the last thirteen academic years had been:

	1889-90	1890-1	1891-2	1892-3	1893-4	1894-5	1895-6
Medicine	2,003	1,951	1,852	1,736	1,560	1,512	1,455

	1896-7	1897-8	1898-9	1899-1900	1900-1	1901-2
Medicine	1,419	1,405	1,412	1,368	1,364	1,396

The Directors of the Royal Edinburgh Hospital for Sick Children have appointed Dr. W. B. Drummond to be an extra physician to the Hospital *vice* Dr. A. S. Cumming, resigned.

Ireland.

ROYAL VICTORIA HOSPITAL, BELFAST.

In view of entering the new hospital, the Board of Management, on the recommendation of the Medical and Surgical Visiting Staff, has enlarged that body by the creation of three new posts, a second assistant-physician, an assistant-gynaecologist, and an assistant-ophthalmologist. The work has been done lately by "Assistants" who held office for two years only; but owing to the responsibility of many of the major operations, it was finally decided to place the appointment on an equality with other members of the visiting staff. An election was held on May 6th. Dr. J. C. Morrow was appointed assistant-physician, Mr. James Craig, F.R.C.S.Eng., was appointed assistant-ophthalmologist, and Mr. R. J. Johnstone, F.R.C.S.Eng., was appointed assistant-gynaecologist. Both the Hospital and the Medical School are to be congratulated on their staffs being strengthened by the addition of these gentlemen. At the same meeting Dr. S. Blakely, Fivemiletown, co. Tyrone, was appointed house-surgeon.

IRISH MEDICAL ASSOCIATION: FORMATION OF A BELFAST BRANCH.

A meeting of the members of the Irish Medical Association resident in Belfast and surrounding district met in the Medical Institute on May 5th. Professor Byers occupied the chair and explained the object of the meeting. On the motion of Dr. Davison (Ballymena), seconded by Dr. Mussen (Glenavy), it was resolved that a Branch of the Irish Medical Association to be called the Belfast and District Branch be formed. The following were elected office-bearers: President, Professor Byers; Vice-President, Dr. S. B. Coates; Honorary Secretary and Treasurer, Dr. A. G. Robb; Council, Drs. Manley, St. Clair Boyd, McLiesh, Osborne, Munn, Davison, Mussen, Killen (Larne), Gaussen, and Adams (Antrim). The President, Vice-President, and Secretary, with Drs. Adams, Gaussen, Davison, and Currie were appointed delegates from the Branch to the annual meeting of the Association to be held at Inniskillen in June. It was decided to hold the next meeting on June 30th, when the report of the delegates to the annual meeting will have been received, and rules and by-laws will be then submitted.

SMALL POX.

Sir Charles Cameron's report shows that for the week ending April 25th the admissions to hospital were 8, but in the succeeding week they were 23. The number of cases under treatment was 32, and 16 were convalescent. A whole family of 9 was found in an infected house, six suffering from the disease. All the tenement houses are being searched for concealed cases. Since the epidemic began about 900 "contacts" have been lodged in the refuge. In the case of the Rathmines and Pembroke Joint Hospital Board, an action for an injunction will be heard on June 3rd. It is brought to restrain it from erecting a small-pox isolation hospital at Vergemont, Clonskea.

NATIONAL CHILDREN'S HOSPITAL.

At the annual meeting of the National Children's Hospital in Dublin last week, the Secretary reported that 273 intern and 3,792 extern patients had been treated during the year. The average number of beds occupied was 34. Among the speakers were Mr. G bney, Surgeon-Lieutenant-Colonel Backhouse, Dr. J. H. Kelly, and Mr. Ormsby, President of the Royal College of Surgeons.

NUNS IN WORKHOUSE INFIRMARIES.

From a Parliamentary return just issued, it appears that 335 nuns are employed as nurses in 162 workhouse infirmaries in Ireland; there are, in addition, 32 who act as matrons. The salaries amount to about £13,500 per annum.

OVERCROWDING OF BELFAST DISTRICT LUNATIC ASYLUM.

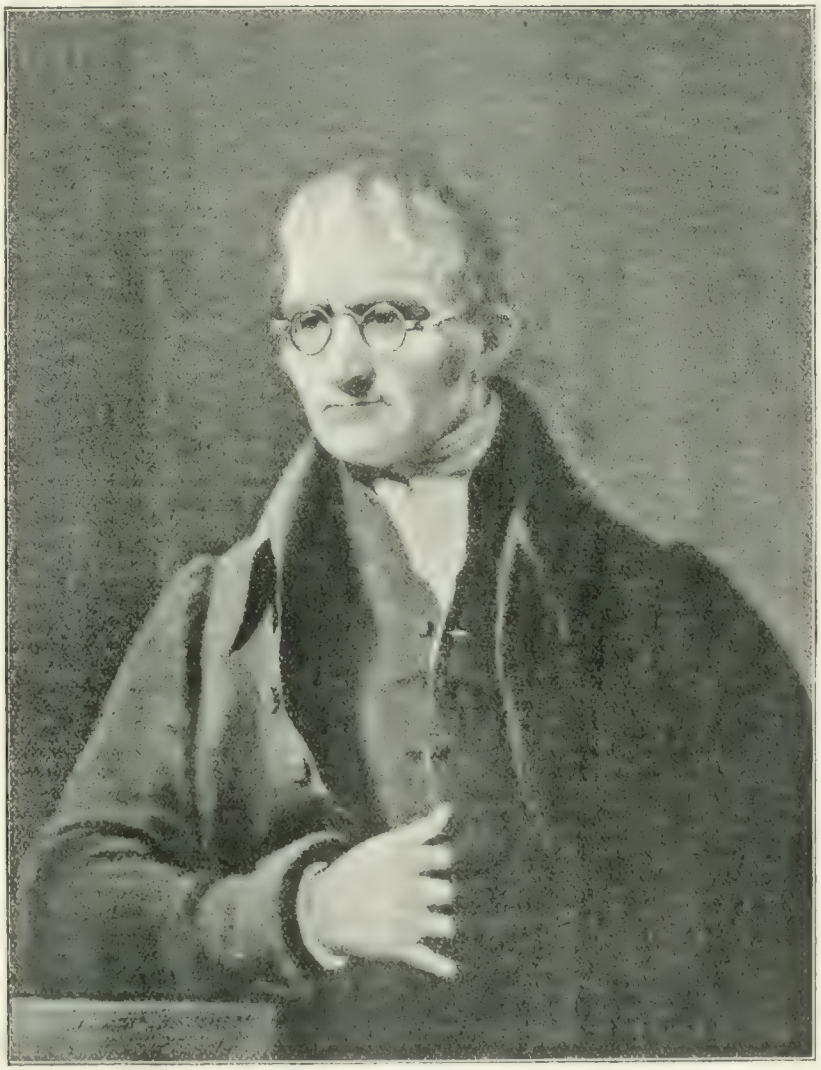
At the last monthly meeting of the Committee of Management of the Belfast District Lunatic Asylum, the Medical Superintendent reported 351 males and 412 females in the old asylum buildings on the Grosvenor Road, and 11 males and 70 females at Purdysburn; these numbers, with 62 at Ballymena, make a total of 1,014. The chairman, Alderman Lowther, said that the old buildings were overcrowded to the extent of 320 patients. A few years ago they had discarded at considerable expense plans for a new asylum on the block system, and had unanimously adopted the principle of the villa colony; two villas were approaching completion, and would accommodate 50 patients each. But it was a very doubtful policy to go on scattering villas over the estate without a well thought-out plan and careful consideration of the water supply and the sewerage scheme. He recommended that expert opinion should be obtained. Sir George O'Farrell, Inspector of Lunacy, said that it was absolutely necessary to do something; it would be a great pity if the central Government were to step in and threaten pains and penalties if the necessary accommodation were not provided for the lunatic poor. He urged that the Purdysburn estate should be developed on systematic lines, and that the highest skilled architectural advice should be obtained. Dr. Courtenay, Inspector of Lunacy, said that additional accommodation should not be created until plans for the whole scheme had been obtained. All the new German asylums built on the villa plan were divided into two sections—one for the sick and acute cases, called the enclosed asylum, while the rest of the accommodation was provided in small villas. Alderman Dr. Graham thought that the two extra villas should be built at once, and that provision should be made for consumptive lunatics. After further discussion it was finally agreed to go on with the two extra villas at once, and to ask the architects to prepare a sketch plan for a complete asylum.

The Centenary of the Atomic Theory

GLEANINGS FROM THE LIFE AND WORK OF JOHN DALTON.

The eye sees what it brings the power to see.—Thomas Carlyle.

It is rare that the lives of scientific men who devote their time seriously and exclusively to the pursuit of science afford much to awaken general interest. At most one can chronicle what has been called the "successive births of the children of their intellect" and the influence of their work on human progress and the advance of natural knowledge. In this regard two names in the history of chemistry in England at once occur to one—namely, Cavendish and Dalton. Dalton's life was devoted exclusively and laboriously to the pursuit of science. More especially was the life of Dalton a singularly unvaried and uneventful one. Moreover, it was one devoted to the pursuit of certain apparently limited, yet general, problems, which, however, in his hand led to the establishment and promulgation of those laws upon which the science of chemistry is founded, and also to the formulation of the "atomic theory." Indeed, Dalton has been called "the law-giver of chemical science." In May of this year the memory of Dalton and his great achievements will be duly honoured in Manchester, the city of his adoption. Manchester and Salford lie on opposite banks of the now inky Irwell. The latter gave to science James Prescott Joule, while Manchester claims Dalton as her most distinguished scientific heritage. The year 1903 marks the centenary of what is now called the "atomic theory." We have thought it therefore not inappropriate that we should give a short sketch of the life and work of Dalton and of the influence of the latter on the development of scientific thought and progress.



JOHN DALTON, 1766-1844.
(Portrait painted by J. Lonsdale and engraved by C. Turner in 1834).

Early Life.

Dalton was born at Eaglesfield, near Cockermouth in Cumberland, in 1766, and throughout his early life was noted for his untiring application and vigilance. As an independent teacher in his native place at the age of 12 or 13, he at least showed himself bold and self-reliant. From an early period mathematics, pure and mixed, and meteorology were his favourite studies. Throughout life the problems of the abstract relation of space and numbers were ever before his mind, and, indeed, the problems in chemistry which he studied were those most closely related to mathematics. His mental tendencies were essentially contemplative, and his thoughts dealt largely with abstract reasoning. It is perhaps for this reason that his methods of study dealt more with the synthetic than the analytical. It is written of him by his pupil, friend, and biographer, Wm. Charles Henry, M.D., F.R.S., "The God of Nature laid his hand upon his head and ordained him for the ministry of High Philosophy."

At the age of 15 (1781) Dalton removed to Kendal, where he remained until 1792 actively engaged in learning and teaching mathematics and natural philosophy. There he made the acquaintance and became the friend of Mr. Gough, a blind gentleman, who cultivated philosophy and meteorology with ardour and success. It was through the good offices of Mr. Gough that Dalton became a "tutor" in the New College in Manchester, of which Dr. Barnes was the head. His salary was £80 a year, with £27 10s. deducted by the College for commons and rooms, "passing rich" on £50 a year.

It is interesting to recall the fact that Dalton seriously weighed the question of studying medicine or practising at the Bar. Circumstances were not favourable, and he kept on his way as a teacher in a school. When thinking of a profession, he made some physiological experiments on the loss to the body by insensible perspiration, a question that had been attacked by Sanctorius of Padua in the first quarter of the seventeenth century. Dalton's idea was to compare the amount of food taken in and the ejecta thrown out by the body. It was a problem in metabolism. He published the numerical results forty years later.

Goes to Manchester.

When he was 27 years of age he went, as already stated, to Manchester to act as tutor in the New College, which was situated in Moseley Street. At the end of six years, however, the college was removed to York, and Dalton resigned. He remained in Manchester and pursued the even tenor of his uneventful life as a teacher of mathematics, natural philosophy, and chemistry; as a lecturer, and as an experimenter, and occasionally acting as a professional chemist. All his spare time—and he was a most methodical man—was given up to his own work in his laboratory.

Leaving out of account for the present a notice of the publication of his first printed book—namely, that on *Meteorology* (1793) and his lifelong labours and observations

on this subject, his first contribution of importance and of "ever-during" interest—to use a Miltonic phrase—to medical men is his paper, Extraordinary Facts relative to the Vision of Colours, read before the Literary and Philosophical Society of Manchester (founded in 1781) in 1794, the year in which he became a member of this Society. In 1805 he gave a course of twenty lectures on Experimental Philosophy in the rooms of this Society. He became secretary of the Society in 1800, Vice-President in 1808; from 1817 until his death he was its President. His laboratory was situated in the lower rooms of the Society in George Street. He gave lessons for very small fees—eighteenpence to half a crown a lesson. He also made analyses for the manufacturers in the district, and was thus perhaps one of the earliest of pioneers of "professional chemists."

LECTURER ON CHEMISTRY IN THE MEDICAL SCHOOL.

There is one chapter in the life of Dalton which must not be forgotten — namely, that he was the first lecturer on Pharmaceutical Chemistry in the first fully-equipped medical school in the provinces—namely, that founded by Mr. Thomas Turner, F.R.C.S., in 1824, in Pine Street. It was long known as the Pine Street School of Medicine. It was then called the Royal School of Medicine, and ultimately became amalgamated with Owens College. It was in this school that Dalton taught, let it be noted, "pharmaceutical chemistry." The *Guardian* of December 24th, 1824, contains an announcement of a course of fifteen lectures on pharmaceutical chemistry. An address on chemistry was delivered in the Manchester Mechanics Institution, 1829, by John Davies, "Lecturer on Chemistry at the Manchester Medical and Mechanics' Institutions." It is certain that Mr. Davies succeeded Mr. Dalton as the Lecturer on Chemistry in the Pine Street Medical School. The apothecaries were a power in those days and for many years thereafter. It was the custom in those days to hold an annual reunion of those connected with the Manchester Medical School. At one of the later gatherings when Dalton was an honoured guest he, in response to the toast of his health, uttered the following sentiments. Years before he attributed his success to his unwearying assiduity.

> With regard to myself, I shall only say, seeing so many gentlemen present who are pursuing their studies, that if I have succeeded better than many who surround me in the different walks of life, it has been chiefly—nay I may say almost solely—from unwearied assiduity. It is not so much from any superior genius that one man possesses over another, but more from attention to study and perseverance in the objects before them, that some men rise to greater eminence than others. This it is, in my opinion, that makes one man succeed better than another. That is all I shall say concerning myself (1833).

Of course more is required, and was present in Dalton; still the reply was very appropriate to the occasion, when he was addressing a youthful audience.

COLOUR BLINDNESS.

His paper on Colour Blindness, although it relates primarily to his own case, and although at first sight it appears to be merely an observation on himself, is in reality an important discovery, for he soon found that others were similarly afflicted. Dugald Stewart, the celebrated metaphysician, was also colour blind. He also states that his own brother Jonathan was colour blind. His sister, however, was not. He collected cases and gave a general classification of this affection now called colour blindness, a name suggested by Sir David Brewster. It was published in vol. v of the Society's *Transactions* in 1798. This communication is of such practical medical importance that we may be pardoned if we give an excerpt from the original in Dalton's own words:

> "I found that persons in general distinguish six kinds of colour in the solar image, namely, red, orange, yellow, green, blue, and purple. To me it is quite otherwise. I see only two, or at most three, distinctions; these I should call yellow and blue or yellow, blue, and purple. My yellow comprehends the red, orange, yellow, and green of others, and my blue and purple coincide with theirs."
>
> He sums up the peculiarities of the vision of himself and others who have been found similarly affected thus:
>
> "1. In the solar spectrum three colours appear—yellow, blue, and purple. The two former make a contrast, the two latter seem to differ more in degree than in kind.
>
> "2. Pink appears by daylight to be sky blue a little faded; by candle light it assumes an orange or yellowish appearance, which forms a strong contrast to blue.
>
> "3. Crimson appears a muddy blue by day, and crimson woollen yarn is much the same as dark blue.
>
> "4. Red and scarlet have a more vivid and flaming appearance by candlelight than by daylight.
>
> "5. There is not much difference in colour between a stick of red sealing wax and grass by day.
>
> "6. Dark green woollen cloth seems a muddy red, much darker than grass, and of a different colour.
>
> "7. The colour of a florid complexion is dusky blue.
>
> "8. Coats, gowns, etc., appear to us frequently to be badly matched with linings when others say they are not. On the other hand we should match crimsons with claret or mud, pink with light blues, browns with reds, and drabs with greens.
>
> "9. In all points where we differ from other persons the difference is much less by candlelight than by daylight."

Dalton hunted up the now well-known historical cases, including the Harris family of Maryport. His "observations on the probable cause of our anomalous vision" were, of course, not verified after death. He thought that perhaps some medium of the eye—probably the vitreous—was probably coloured, some modification of blue.

Had this been so, what would have happened to those who wore blue-coloured glasses?

"It appears, therefore, almost beyond a doubt that one of the humours of my eye, and of the eyes of my fellows, is a coloured medium, probably some modification of blue." He was short-sighted, "concave glasses of about five inches focus" suited him best. He could see distinctly at a proper distance, and was seldom hurt by too much or too little light, nor yet with long application.

"In lecturing on optics I got six ribbands, blue, pink, lilac, and red, green, and brown, which matched very well, and told the curious audience so. I do not know whether they generally believed me to be serious, but one gentleman came up immediately after, and told me he perfectly agreed with me; he had not remarked the difference by candle light." (Quotation from a letter, dated London, 1804, having reference to his lectures on Optics at the Royal Institution.)

It might be well to give in Dalton's own words how he came to discover the condition of his vision as regards colour. Here they are:

Since the year 1790 the occasional study of botany obliged me to attend more to colours than before. With respect to colours that were white, yellow, or green, I readily assented to the appropriate terms. Blue, purple, pink, and crimson appeared rather less distinguishable, being, according to my idea, all referable to blue. I have often seriously asked a person whether a flower was blue or pink, but was generally considered to be in jest. Notwithstanding this, I was never convinced of a peculiarity in my vision till I accidentally observed the colour of the flower of the *Geranium zonale* by a candle light in the autumn of 1792. The flower was pink, but it appeared to be almost sky-blue by day; in candle light, however, it was astonishingly changed, not having then any blue in it, but being what I called red, a colour which forms a striking contrast to blue.

Dalton was a Quaker, and "dressed in their peculiar manner, taking care that every article of dress should be of the finest texture, but avoiding the extreme of formality. In his general conversation he did not adopt their style, and never gave an opinion on religious subjects."

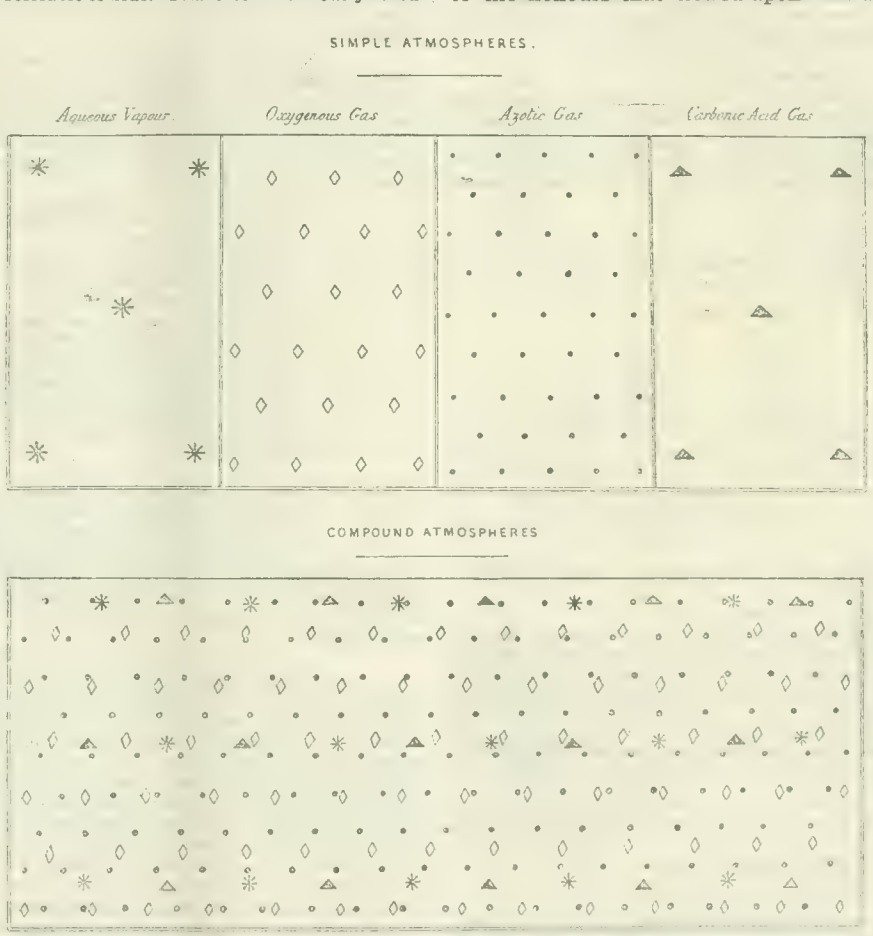
Why Dalton Remained a Bachelor.

Dalton led a frugal, simple, temperate, singularly uneventful life. He was never married; he said he had no time. His head, he said, "was too full of triangles, chymical processes, and electrical experiments, etc., to think much of marriage." It is stated that he had little taste for art or poetry, but occasionally in his earlier years lapsed into verse. He lacked that poetic fire and admirable diction which made Davy and Faraday so charming as lecturers. He was, however, not insensible to the charms of the opposite sex. Sir Henry E. Roscoe has recorded an incident about Nancy and the Cyprepedium. Dalton himself records his adventures in his interview with a widow—a Friend—"universally allowed to be the handsomest woman in Manchester." His "*captivity* lasted about a week, he lost appetite, and had other symptoms of *bondage*, as incoherent discourse, etc.," but he regained his freedom. There is also the story of Hannah. All, however, came to nought; Dalton lived and died a bachelor.

Visits London and Paris.

He first visited London in 1792, to attend an annual meeting of the "Friends," and again in 1804, having been invited to lecture at the Royal Institution. In 1807 he gave lectures in Edinburgh; he also lectured at Glasgow.[1] He gave a second course of lectures in London in 1809 and lectured in Birmingham in 1825, and visited London again in the same year. We need not refer to the well-known incident of his presentation at Court to William IV in his D.C.L. robes, or to his inability to distinguish between the colour of his Doctor's gown and the green of the gardens of Oxford. He did not adhere strictly to the practices of the "Friends," for he even attended the opera in Paris.

For many years few honours came to Dalton. In 1822 he visited Paris, where his great talents and discoveries were most generously appreciated. This made a strong impression upon Dalton, more especially as at that time his rewards at home were few. We need not speak of the honours that flowed upon him after 1826.



Dalton's original diagram showing how he represented to himself the atomic constitution of what he called elastic fluids or gases. These show the atomic constitution of the gases of the atmosphere and how the "particles" are arranged in the atmosphere itself. The atoms do not interpenetrate but remain distinct.

From his London letters to his brother and also to the Rev. Mr. Johns, with whom he lived in Manchester for nearly thirty years, we have culled some observations cast in a lighter vein.

Tobacco.

Like others of a contemplative turn of mind, Dalton liked tobacco. On his second visit to London in 1804, when he was invited to lecture at the Royal Institution, he was introduced to Mr. Davy—the future Sir Humphry—who had rooms adjoining his in the Royal Institute. Mr. Davy—

Is a very agreeable and intelligent young man, and we have interesting conversations in an evening; the principal failing in his character is that he does not smoke.

Davy gave him the best possible advice and assistance as to his lectures at the Royal Institution, so that at the end of the course Dalton writes to his brother—

I can now enter the lecture room with as little emotion nearly as I can smoke a pipe with you on Sunday or Wednesday evenings.

He also spent an hour in conversation with Dr. Rees, "Encyclopaedia" Rees as he was called.

The doctor seems a worthy philosopher of the old school; his evening lucubrations are duly scented with genuine Virginia.

Dinners in 1809.

In 1809 he again visited London to give another course of lectures. He was invited by Mr. Davy to dine with him at the club of the Royal Society at the Crown and Anchor at 5 o'clock.

I was detained until nearly six and arrived late. I got there, called Davy out; all was over, the cheese was come out. I went, therefore, to the nearest eating house I could find to seek a dinner. Looking in at a window I saw a great heap of pewter plates and some small oblong tables covered with cloths. I went in and asked for a beefsteak. "No." "What

[1] He dedicated Part I of his *New System of Chemical Philosophy* (1808) to "The Professors of the Universities and other residents of Edinburgh and Glasgow who gave their attention and encouragement to the lectures on heat and chemical elements delivered in those cities in 1807," etc.

can I have?" "Boiled beef." "Bring some immediately." There was nothing eatable visible in the room, but in three minutes I had placed before me a large pewter plate covered completely with a slice of excellent boiled beef swimming in gravy, two or three potatoes, bread, mustard, and a pint of porter. Never got a better dinner. It cost me 11½d. I should have paid 7s. at the Crown and Anchor.

The incident speaks for itself and illustrates one phase of Dalton's character. "*O quae mutatio rerum.*"

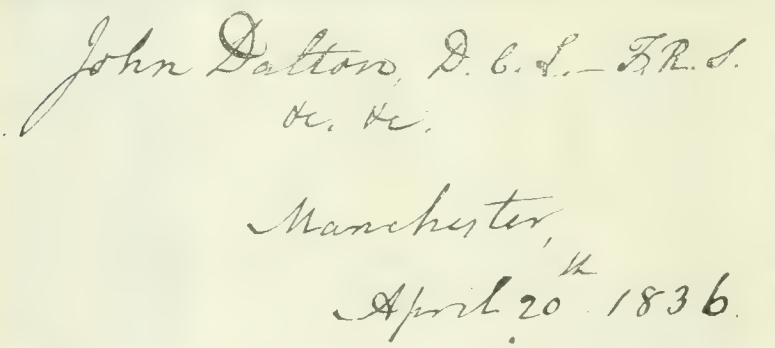
At the Royal Institution he held a "long conversation with a lady on the subject of rain gauges." Then comes the following:

I see the belles of New Bond Street every day, but I am more taken up with their faces than their dresses. I think blue and red are the favourite colours. Some of the ladies seem to have their dresses as tight round them as a drum, others throw them round them like a blanket. I do not know how it happens, but I fancy pretty women look well anyhow.

In 1810 (from London), January 29th, he writes that he had been nearly poisoned after a stay of about three weeks. He discovered that it was the porter which produced the effects. It was not the porter, however, but the lead which was in it added accidentally from the lead pipes used.

Portraits.

There are several portraits of Dalton. The one we have reproduced is we are told the best. One of the frescoes by Madox Brown in the Town Hall, Manchester, represents Dalton collecting marsh gas from a stagnant pool. We are able to give a sample of his handwriting. It will be noticed



that he appended D.C.L. after his name, a custom he rarely omitted.

Death.

In his 71st year (1837) he suffered from an attack of hemiplegia affecting the right side of the body and also impairing his speech. A final "stroke" carried him off on July 27th, 1844, full of years and honours in his 78th year. As was to be expected *post mortem*—

In the anterior portion of the middle lobe on the left side, above the fissure of Silvius, there was discovered a sac, firm and rather thick, containing the *débris* of an old coagulum, and softening of the brain around it.

Constant ever to his first love—meteorology—the night before his death he made the last of his 200,000 meteorological records.

Die Arbeit war vollbracht.

Scientific Work.

Returning now to Dalton's scientific work, it does not appear that he devoted his attention to chemistry before 1796. In 1803 he speaks of "having got into a track that has not been much trod in before." The years between 1793 and 1803 mark, to use the words of his biographer, Dr. Angus Smith, his "epoch of greatest fertility." In his Meteorological Essays (1793) he states that he had not a "superabundance of assistance from books," in fact all through life he was not a great reader, relying on his own observations and methods. His observations on evaporation led him to state that "aqueous vapour always exists as a fluid *sui generis*, diffused amongst the rest of the aërial fluids." This ultimately led to what is known as "Dalton's law of vapours." We now know that all gases can be liquefied and some even solidified. Faraday published his researches on the condensation of gases in 1821. Long before this Dalton with keen foresight predicted:

There can scarcely be a doubt entertained respecting the reducibility of all elastic fluids of whatever kind into liquids; and we ought not to despair of effecting it in low temperatures, and by strong pressure exerted upon the unmixed gases.

Constitution of Mixed Gases.

Among his papers on physical subjects is that on the Constitution of Mixed Gases (1801). He laid down, as the result of his experiments, three important laws, and one arrived at from theoretical considerations, which form the basis of our present knowlege of this subject. To the same group of papers belong his investigations on Elastic Fluids—that is, gases and vapours, and their expansion by heat. The law known on the Continent as "Gay-Lussac's" or "Charles's law"—the equal expansion of all gases for equal increments of temperature—should really be called "Dalton's law of expansion," for he arrived at it by direct experiment (1801). It is in his celebrated memoir on the Constitution of Mixed Gases that we find the at first incredible proposition that—

When two elastic fluids denoted by A and B are mixed together, there is no mutual repulsion amongst their particles—that is, the particles A do not repel those of B, as they do one another; consequently, the pressure or whole weight upon any one particle arises solely from those of its kind.

This led him naturally to study how the gases of the atmosphere behaved in spite of their different densities. Here we see how his physical researches, again, are linked with meteorology.

Absorption of Gases by Water.

Passing over his papers on the Composition of the Atmosphere (1801) and on Diffusion, we come to that on the Absorption of Gases by Water and other Liquids (1803). It is perhaps in this paper that we have the first published germ of his atomic theory. He compares the gases dissolved in water to a pile of shot.

A particle of gas pressing on the surface of water is analogous to a single shot pressing upon the summit of a square pile of them.

William Henry in 1803[2] showed that a gas will diffuse into water directly as the pressure to which it is subjected.

Water will take up under equal circumstances of temperature the same volume of condensed gas as of gas under ordinary pressure. But as the spaces occupied by every gas are inversely as the compressing force, it follows that water takes up of gas condensed by one, two, or more additional atmospheres a quantity which, ordinarily compressed, would be equal to twice, thrice, and so on, the volume absorbed under the common pressure of the atmosphere.

This is Henry's law. Stated shortly, the amount of gas absorbed by water varies directly as the pressure. Dalton's researches led him to what is now known as the law of "partial pressures," that is, a fluid absorbs from a mixture of gases each gas just as if the other gases were not present; that is, the gas is absorbed in direct proportion to the amount or percentage or "partial" pressure it exerts in the mixed gases.

First Table of Atomic Weights.

In the same paper we find that he leads up to "an inquiry into the relative weights of the ultimate particles of bodies, a subject, as far as I know, entirely new." He gives a "table of the relative weights of the ultimate particles of gaseous and other bodies." This was the first table of atomic weights. Hydrogen was assumed as unity. The other numbers representing the atomic weights of the substances mentioned in the table do not correspond with those determined since then. That, however, does not modify the conception of the atomic theory in the wide sense as laid down by Dalton. In this case, as so often happens, a frontal attack failed, and, as in the history of many other discoveries, Dalton, while attempting to verify an untenable hypothesis—the theory of solubility of gases in a fluid—discovered something of far greater importance. Bernard, whilst studying the fate of sugar in the organism, came upon the glycogen problem. Dalton has been compared by the genial author of the *Religio Chemici* to Columbus, who "missed an El Dorado but found an America."

Dalton represented his results by symbols (1802); he never could be induced to use the present nomenclature introduced by Berzelius (1779-1848) the Swedish chemist. At the present day each symbol or formula in chemistry has both a qualitative and quantitative value.

As showing how experiment and theory went hand in hand, and indicating the progress of his mind towards his atomic theory, we find in this paper a diagram to illustrate his conception of the constitution of the atmosphere which we have reproduced. Each gas present in the air has a different symbol or mark, and these are so arranged that each has an equal space, while the marks indicate the real density of the gases themselves. Thus it would seem as Dr. Henry says:

There is, therefore, not any doubt that it was in contemplating the essential condition of elastic fluidity that he first pictured to himself the existence of atoms.

[2] *Phil. Trans.*, xxix, 274.

LAWS OF COMBINATION BY WEIGHT.

Dalton also used the method which is now so extensively employed under the title of volumetric analysis. When we look at Dalton's work apart from his theory we see that it forms a consistent whole. His chief researches group themselves around his atomic theory. The laws of proportional combination of elements in a chemical sense, and having reference solely to weight and not to volume, are:

1. The law of definite or constant proportions, that is, elements forming chemical compounds always unite in the same proportions by weight.

2. The law of multiple proportions. In the higher compounds the higher one is a multiple of the first or lowest. This was one of Dalton's most brilliant generalizations from the simple case of the compounds of carbon and hydrogen—olefiant gas and carburetted hydrogen or marsh gas—and the compounds of nitrogen. In his paper on the proportion of the several gases in the atmosphere (1802) he had discovered, in the combinations of oxygen with nitrous gas, an undoubted example of multiple proportions. In his own words:

> These facts clearly point out the theory of the process; the elements of oxygen may combine with a certain portion of nitrous gas, or with twice that portion, but with no intermediate quantity.

The third is that of reciprocal proportions, that is, "if two bodies combine with a third in certain proportions, they combine in the very same proportions with each other," a law obviously of the greatest practical importance both to the chemist in the laboratory and in the factory. It used to be spoken of as the law of equivalents.

Dalton invented his atomic theory or hypothesis to account for these laws. He, like others, assumes the existence of atoms—what he called ultimate particles possessed of a definite shape, size, and unchangeable weight. Newton, as we have seen, also spoke of primitive particles, but he says nothing of their weight.

> It is here that Dalton leaves Newton behind, and takes not a step, but a stride, in advance of all previous speculations on atomics.

As soon as he got a glimpse of the laws of combining proportions he boldly generalized—from a very few analyses—and concluded that

> the ultimate atoms of the elements possessed different weights, and that the differences between their weights is identical with that which subsists between the combining properties of the elements themselves.

The researches of Joseph-Louis Gay-Lussac, *élève ingénieur*, in 1808 "on the volumetric proportions in which gases combine together, have led to the double result of furnishing a new and decisive argument in favour of the law of definite proportions, and of giving to the atomic theory a firm support and a new expression" (Wurtz).

ATOMIC CONSTITUTION OF MATTER.

One of the most romantic chapters in the whole history of physical science is that dealing with the conception of the atomic constitution of matter. Any one wishing to read the history of this subject will find it in the treatise of Professor C. Daubeny of Oxford in his Introduction to the Atomic Theory,[3] a work dedicated (posthumously) to Dalton. The dedication sets forth in graceful language, at once a tribute and an homage, and briefly describes both his claims and his merits:

> TO
> THE MEMORY OF
> JOHN DALTON, F.R.S.,
> LATE PRESIDENT OF THE LITERARY AND PHILOSOPHICAL SOCIETY
> OF MANCHESTER,
> CORRESPONDING MEMBER OF THE ACADEMY OF SCIENCES OF THE ROYAL
> INSTITUTE OF FRANCE, AND HONORARY D.C.L. OF THE
> UNIVERSITY OF OXFORD.
> THE FRAMER OF A THEORY
> WITH RESPECT TO THE MODE OF COMBINATION BETWEEN
> BODIES,
> WHICH STANDS FOREMOST AMONG THE DISCOVERIES
> OF THE PRESENT AGE,
> FOR THE UNIVERSALITY OF ITS PRACTICAL RESULTS;
> HOLDING THE SAME KIND OF RELATION TO THE
> SCIENCE OF CHEMISTRY,
> WHICH THE NEWTONIAN SYSTEM DOES TO THAT OF
> MECHANICS;
> AND THROWING LIGHT,
> NOT ONLY UPON ALL THE ORDINARY SUBJECTS OF
> CHEMICAL INVESTIGATION,
> BUT EVEN UPON THOSE MORE SPECULATIVE QUESTIONS WITH RESPECT TO
> THE CONSTITUTION OF MATTER, WHICH SEEMED TO LIE
> BEYOND THE REACH OF EXPERIMENTAL
> INQUIRY.

[3] Second edition, 1850.

The balance was introduced into the study of physiology long before it played its legitimate part in chemistry. In the seventeenth century, under the influence of Stahl, there crept in the idea of phlogiston, a myth that dominated chemical philosophy until the end of the eighteenth century. It was the pivot round and on which the whole of chemical philosophy revolved. Later, the researches of Black, Scheele, Cavendish, Priestley, Lavoisier, and many others led to much positive knowledge as to elements entering into the composition of a compound. The quantitative aspect of the question was still unsolved, although it was foreshadowed; indeed it could not be otherwise.

Modern chemical ideas are based on the "atomic theory," or, as Dr. Angus Smith prefers to call it, the "quantitative atomic theory. The final establishment of the principle of the "conservation of energy" is the outcome of the researches of James Prescott Joule; the author of the one was Dalton, of Manchester; the other was Joule, of Salford. Faraday's Laws of Electrolysis (1834) embody the quantitative connexion between chemical action and electricity.

The history of the speculations regarding atoms goes far back in the world's history. It appears that "Leucippus first distinctly gave a meaning to the notion of small particles, which he calls atoms." Everything is composed of indivisible atoms. The views of Leucippus were championed by Democritus and adopted by Epicurus. Lucretius,[4] who lived in the first century B.C., in his poem explained in his own inimitable picturesque and poetic high-sounding strains to his beloved Memmius, the Roman soldier, the whole realm of Nature, starting from the atomic standpoint of Democritus and dealing with the learning and philosophy of the ancient Greeks. To him atoms are the "first beginning of things."

PUBLISHES HIS CHEMICAL PHILOSOPHY.

Dalton published his *New System of Chemical Philosophy*, Part I, 1808; II, 1810; Vol. II, 1827, in which he sets forth his views regarding the doctrine of atoms and their complex relations. It is obvious that they must occupy relative positions in space, consequently this gives us notions as to their symmetrical and unsymmetrical groupings, constituting what is now known as stereo-chemistry. He had, however, presumably arrived at his doctrine of atoms. It is interesting to record the views of Newton on atoms. Dalton quotes them:

> It seems probable to me that God in the beginning formed matter in solid, massy, hard, impenetrable, movable particles, of such sizes and figures, and with such other properties, and in such proportion to space, as most conduced to the end for which He formed them; and that these primitive particles being solid are incomparably harder than any porous bodies compounded of them, even so very hard as never to wear or break in pieces, no ordinary power being able to divide what God Himself made one in the first creation. While these particles continue entire, they may compose bodies of one end and the same nature and texture in all ages; but should they wear away or break in pieces, the nature of things depending on them would be changed. Water and earth, composed of old worn particles and fragments of particles, would not be of the same nature and texture now with water and earth composed of entire particles in the beginning. And therefore, that nature may be lasting, the changes of corporeal things are to be placed only in the various separations and new associations and motions of these permanent particles; compound bodies being apt to break, not in the midst of solid particles, but where those particles are laid together, and only touch in a few points.

Here are Dalton's own views:

> A pure elastic fluid is one, the constituent particles of which are all alike, or in no way distinguishable. These fluids are constituted of particles possessing very diffuse atmospheres of heat, the capacity or bulk of the atmosphere being often one or two thousand times that of the particle in a liquid or solid form. Whatever, therefore, may be the shape or figure of the solid atom abstractedly, when surrounded by such an atom it must be globular; but as all the globules in any small given volume are subject to the same pressure, they must be equal in bulk, and will, therefore, be arranged in horizontal strata like a pile of shot.

In the chapter On Chemical Synthesis in the *New System* he says:

> When any body exists in the elastic state its ultimate particles are separated from each other to a much greater distance than in any other state; each particle occupies the centre of a comparatively large sphere, and supports its dignity by keeping all the rest, which, by their gravity or otherwise, are disposed to encroach on it at a respectful distance. When we attempt to conceive the number of particles in an atmosphere it is somewhat like attempting to conceive the number of stars in the universe; we are confounded with the thought. But if we limit the subject by taking a given volume of any gas, we seem persuaded that, let the divisions be ever so minute, the number of particles must be finite; just as

[4] *De Rerum Natura*; libri sex. See an admirable translation by H. A. J. Munro, of Trinity College, Cambridge. 1898.

in a given space of the universe the number of stars and planets cannot be infinite.

Chemical analysis and synthesis go no farther than to the separation of particles one from another, and to their reunion. No new creation or destruction of matter is within the reach of chemical agency. We might as well attempt to introduce a new planet into the solar system, or to annihilate one already in existence, as to create or destroy a particle of hydrogen. All the changes we can produce consist in separating particles that are in a state of cohesion or combination, and joining those that were previously at a distance.

In all chemical investigations it has justly been considered an important object to ascertain the relative weights of the simples which constitute a compound. But unfortunately the inquiry has terminated here; whereas from the relative weights in the mass, the relative weights of the ultimate particles or atoms of the bodies might have been inferred, from which their number and weight in various other compounds would appear, in order to assist and to guide future investigations and to collect their results. Now it is one great object of this work to show the importance and advantage of ascertaining the relative weights of the ultimate particles, both of simple elementary particles which constitute one compound part cle, and the number of less compound particles which enter into the formation of one more compound particle.

Eulogies on Dalton's Work.

This is not the place to record the enormous progress made by atomic chemistry since the days of Dalton. Perforce we leave aside the subject of isomorphism and the support it gave to the Daltonian atomic theory, the newer developments of the relation of crystalography to polarized light, the researches of Pasteur on tartaric acid, and the brilliant discoveries of Van't Hoff and Le Bel. Suffice it for us to quote the words of one happily still with us, who has written of *John Dalton and the Rise of Modern Chemistry*, Sir Henry Roscoe:

No one before Dalton used the theory of atoms to explain chemical phenomena. To him is due the glory of placing the science on a firm basis, by showing that the weights of the atoms of the different elements are not identical, but different, and that combination amongst these elements takes place if more than one compound be formed of the same elements in simple arithmetical proportion.

Thus also wrote the genial, gentle, cultured, and withal learned and pious chemist, George Wilson, Professor of Technological Chemistry in the University of Edinburgh:

Dalton will never be forgotten. He is the second Newton of English physics, and will go down to posterity along with the first (to whom it may be remarked he had a certain resemblance of features). Men will think of them together, and compare them to the double stars which a later astronomy has unfolded to our view—each a sun shedding light on the other; both stars of the first magnitude, revolving round, and pointing towards a great centre, which they equally make manifest and obey. Even Him who is the first and the last, the Alpha and the Omega, the beginning and the end of all things.

A hypothesis is always justified when it not only explains all known facts, but is doubly so when it leads to further discovery. Equally true is the statement which introduces Dalton's famous paper on Mixed Gases (1801), and with that he shall conclude.

The progress of philosophical knowledge is advanced by the discovery of new and important facts; but much more when those facts lead to the establishment of general laws.

Such was the result of the work of him who is described by the Professor Ad. Wurtz, the learned author of the *History of Chemical Theory*, in the following terse and eloquent tribute: "At the beginning of this century chemistry was taught at Manchester by a man who joined to an ardent love of science that noble pride of the philosopher who knows how to prefer independence to honours, and the glory of solid labour to a vain popularity. This professor was Dalton; his name is one of the greatest in chemistry."

Dalton was singularly self-reliant and independent; he strove to avoid error and discover the truth, and possessed a clearness of intellectual perception, directness in achieving a result, combined with a singular tenacity of purpose. His contemplative habits of thought often led him to broad, sweeping, and fearless generalizations, even when the data he had to work on were comparatively limited. His mental vision was singularly clear, comprehensive, and far-sighted.

THE PREVENTION OF CONSUMPTION.

Poor-law Sanatorium for Consumptives.

Two wards for the treatment of tuberculous patients by the open-air method in the Mansfield Union Workhouse were opened on May 6th by the Duchess of Portland. It is claimed for the Mansfield Board of Guardians that they were among the pioneers in treating consumptive patients according to sanatorial methods. The results obtained have been so satisfactory that they have felt justified in erecting permanent buildings in which to give the open-air treatment.

THE FOURTEENTH INTERNATIONAL MEDICAL CONGRESS.

[From Our Correspondents.]

(*Concluded from p.* 1097.)

The Congress from Outside.

Although my remarks on the Congress are only from the outside, I did not go to Madrid as an "Outsider," but as a Deputy. Moreover, the august body which I had the honour of representing had thoughtfully armed me with a very fine parchment document, engrossed and duly signed. Immediately on my arrival at Madrid, therefore, I made my way to the central office of the Congress, and having inscribed my name and my temporary address in the City, I formally handed in the parchment at the special office of the Chief Secretary. Up to the time of my leaving Madrid, however, on the fourth, or, as my landlady would have said, the fifth day of the Congress, the testamur had not apparently attracted attention. Considering the enormous number of Deputies and other visitors who had presented themselves to the General Secretary, this was not a cause for surprise. I certainly do not complain on that score. I merely state that the document did not attract more attention than might a certificate of membership of the Antient Order of Foresters. The simple fact is that Madrid, and the arrangements made for the reception of the Congress, were not equal to the great rush upon them. I very much doubt if it be in the nature of Spaniards to begin to make adequate preparations on an extensive scale long before they are wanted, or to keep on expanding arrangements as from time to time evidence arrives that they might not be sufficient.

Spaniards are noted all the world over for their courtesy and their gentle manners, and their hospitality is historic. But it would be entirely foreign to their nature to take off their coats, as it were, to bustle along, and to multiply offices and departments as arrangements seemed to be inefficient. Thus, the small department set aside for the work of the post-office was absurdly inadequate. Each time I passed by it men were standing around the counter much as Londoners might have stood outside the pit entrance of the Savoy Theatre on the first night of Gilbert and Sullivan opera. I often wondered as I passed the throng if there was, by chance, a letter waiting for me there; but I had not sufficient resolution to take my turn in the crowd and so to ascertain.

Possibly the question may enter the mind of some one reader of the Journal, "Did this outsider go to see the Bull-fight in Madrid on that Sunday afternoon?" To this the answer is a polite but decided negative. If the fight had been between nimble matadors and blustering bulls I might, perhaps, have gone; but to see innocent, blinded horses ripped up, and maintaining a plucky gallop across the arena while stumbling over their bowels as they dragged them along in the sand, was more than I could have stood. The poor horses get no fun out of the show, and the only way in which I could evince my sympathy for them was by keeping away from the miserable entertainment. Every body who is any body goes every Sunday afternoon to see the six bulls killed, and this happens in somewhere about twenty cities of the peninsula every fine Sunday—a hundred and twenty splendid bulls sacrificed to gratify a base thirst for blood. Better by far to slay them on an altar to Baal!

The bull-fight is evidently the remnant of the old gladiatorial combat, and it enters very largely into the life of the Spaniard. The depiction of incidents of the ring are the common form of ornament, and the favourite matadors are the darlings of the people. A visit to the public picture galleries shows that the bloody spectacle exerts a terribly powerful influence upon their art, realistic and ghastly pictures being much in evidence. Such pictures are the execution of criminals, the point-blank shooting of prisoners of war, and matter-of-fact representations of duels.

In my experience, one of the most unsatisfactory elements of the general arrangements of the Congress was in connexion with the purchase of railway tickets. The concession promised was practically, "there and back for a single fare." But when the proposing congresser wrote to Messrs. Cook for the ticket, or made application to any other agent, the answer came that the booking through to Madrid could not possibly be done.

It seemed to be such a simple thing to grant a first-class return ticket at a single fare; but it was impossible to obtain a ticket further than to the Spanish frontier—to Irun—and we were told that at Irun we should have to present our *lettre d'invitation* and buy a ticket through to Madrid. The Sud-

Express train reached Irun between 11 and 12 o'clock at night, and the time allowed for changing trains, having the luggage examined by the Customs officers, and booking on to Madrid was none too long—indeed it was very short.

Coming home, on the way up from the French frontier, the ticket collector boarded the train, and, having examined our tickets, told me that my papers were not in order, inasmuch as I had not had the return ticket stamped at the Paris office on the way down. I explained to him that I had come down with tickets which I had obtained from Cook and Sons, and that those tickets had been duly stamped and collected on the down journey. "Yes," said he, "that was right enough, but you ought also to have had your Congress invitation stamped as well." It was in vain that I explained to him that I had come up from the Congress, having originally come down by that same line, and that I translated to him a letter from Messrs. Cook, in which they said that I should not be required to get a ticket for the return journey. It was of no avail; I ought to have had that wretched leaf also stamped. "But," said he cheeringly, "all that you have to do is to pay me now for a fresh ticket, and if the railway company finds that your statements are correct you will be *remboursé* in due course." But I had had enough of *remboursements* in Madrid! So I said that I could not possibly pay for a new and unnecessary ticket, as I had not enough money—the cash that I had on me being wanted for Paris. It was very unpleasant. And all because I had not asked to have a date stamped on a sheet of paper.

When I reached the barrier at the Quai d'Orsay terminus I had to go through the whole business again before the station-master, and it appeared to me to be unnecessary and vexatious. But I again said that I had no funds available for the purpose which he suggested. The stationmaster said that if I declined to pay he must take me to the *Commissaire de Police*. So, for the second time in two days, I found myself in the hands of the police!

When I was in the police-office, with the door shut, the *Commissaire* took down my name, my country, occupation, and various other particulars which might have to be set forth in my indictment. Then, with solemn voice, I said to him, "*Monsieur, est-ce que je suis prisonnier?*".....His manner was kind and reassuring, and I did not feel at all unhappy, as I knew that I was in Paris and amongst friends. He carefully went over my Congress-papers and tickets, and, being satisfied, he set me free.

As I took my discharge I felt that I was parting from a real friend, and I said to myself that I would much rather be a prisoner in the hands of the charming *Commissaire de Police* of the Quai d'Orsay, than a "paying guest" in certain "hotels" and lodging-houses that I knew of. I felt exceeding glad to be back in Paris, and although perhaps it may look presumptuous on my part to say it, I felt also that I left the police office without the slightest stain upon my character.

It was now nearly midnight, and as I drove along the rue Royale to my hotel, I saw the decorators making trophies of the Union Jack and the French tricolour for the reception of our "Great Ambassador." Happy and free, I was once more full of rejoicing; and, having no one else with whom to share it, I called out to the cabman, "*Vive la République!*" On which he turned half-round to me on his box, and, flourishing his noisy whip, rejoined, "*Et Vive le Roi d'Angleterre!*"

LITERARY NOTES.

WE have received the following letter from Dr. E. Berdoe:

In your article entitled The Antivivisectionist School for Scandal you say: "We have the highest respect for the industrious working man, for, as Browning says, 'All service is the same to God.'" Will you permit me to remind you that what Browning does say is, "All service ranks the same with God"?

We accept this correction meekly, all the more since, as Mr. Toots would say, "it's of no consequence." We congratulate Dr. Berdoe on his zeal for accuracy in quotation, and we are glad to be able to say to him, in the thrilling words of the Latin Grammar, *Macte virtute puer!* Dr. Berdoe really deserves encouragement, for his sensitiveness in regard to misquotation has not always been so delicate as it now seems to have become. Doubtless his experience as literary assistant to the veracious author of the *Nine Circles* had an educative influence on him. But does not the proverbial zeal of the convert make him a little too critical? After all, though we "translated" Browning a little, we did not misrepresent his meaning. Possibly, however, Dr. Berdoe thinks a verbal slip a graver matter than the suppression, in the record of a series of experiments, of the fact that the animals were all the time under chloroform.

Reference was made last week to the mutilation and disfigurement of the names of some British visitors to the Madrid Congress in the Spanish newspapers. We were puzzled by a mysterious "Uhigyworth." Dr. Shaw, of Liverpool, writes to point out that this remarkable form was probably evolved thus: "Wiglesworth—Whiggyworth—Uhigyworth."

Dr. Burnside Foster, of St. Paul, Minnesota, has sent us a reprint of an account of Dr. Thaddeus Maccarty, a New England doctor of pre-revolutionary days, which recently appeared in the *Boston Medical and Surgical Journal*. The memoir was written in 1836, by Dr. Maccarty's son-in-law, J. W. Stiles. Dr. Foster himself is Dr. Maccarty's great-great-grandson. The son of a poor parson, this worthy man was born at Worcester, Massachusetts, in 1747. He received part of his early education under no less a person than John Adams, who kept a school in Worcester while reading law. Adams appears to have been an indifferent schoolmaster, and spent most of his time in writing what his pupils believed to be sermons. When not writing he was deep in the meditation of lofty themes far from the humble task before him. His method was to set one pupil to teach another. In 1762 Maccarty entered at Newhaven, where in due course he took his B.A. degree, and left College with a good reputation as a classical scholar and a mathematician. In 1767 he began the study of medicine under Dr. John Fimke, of Rutland, who on the completion of three years of study gave him a certificate setting forth that he was fully qualified to practise physic and surgery. For some years he practised his profession in Fitchburg. His field of practice included not only that place, but five adjacent towns. In the spring of 1775 small-pox was causing frightful ravages in all parts of the country. Maccarty had himself inoculated and entered into partnership with James Latham, who had been a surgeon in the British Army, and who was a kind of American agent for William Sutton, the famous inoculator. Maccarty's agreement with Latham allowed him to practise the Suttonian method at Fitchburg, but nowhere else without a licence from Latham. Dr. Latham was to have one-half of all moneys received in the work of the business until his portion should amount to £300, after which he was to receive one-third. Latham was to furnish the medicines from time to time, ready prepared, but was not to be obliged to disclose or discover to Dr. Maccarty the method, art or mystery of preparing and making up the said medicines or the contents or composition thereof; and Dr. Maccarty on his part solemnly promised and engaged "to render an account every three months of all persons inoculated by him, not to dispose of or sell any of the medicines, or use any other than such as he would receive of said Latham, except in case of necessity; and especially not to analyse or otherwise try to discover the composition of the said medicines or permit it to be done by others." Maccarty carried on the inoculation business long enough to operate on 800 persons with only 5 deaths. Maccarty later became an agent for Elisha Perkins, whose name is known in the history of quackery as the inventor of metallic "tractors." He had no difficulty in disposing of his thaumaturgic wares, among the purchasers being "all the doctors in the vicinity." "Great cures were wrought; the very chiefest apostle of animal magnetism could not do more. All the good women, old and young, whose nerves were a little disturbed, came and were healed—or fancied themselves so, which was just as well." In a year or two the "tractors" began to lose their marvellous virtues and soon they passed into oblivion. The curious may learn about them in *Terrible Tractoration: A Poetical Petition against Galvanizing Trumpery and the Perkinistic Institution*, by Christopher Caustic, M.D., LL.D., Ass., London, 1803. Notwithstanding his dabbling in quackery, Maccarty became a Justice of the Peace, and seems to have spent the evening of his days in theological controversy with all the clergy in his district. His knowledge of Greek gave him an advantage over his adversaries. He died in 1802.

The *Medical Library and Historical Journal* proposes to publish a series of the early contributions to medical literature published in America. The first will be *The Abuses and Scandals of Some Late Pamphlets in Favour of Inoculation of the Small-pox, Modestly obviated, and Inoculation further consider'd in a Letter to A—— S——, M.D. and F.R.S., in London*, a monograph by William Douglass, printed by Franklin at Boston in 1722. Photographic plates of the book will be made in exact facsimile, and an illustrated prefatory sketch—historical, biographical, and bibliographical—will be contributed by Dr. Lewis Stephen Pilcher, the editor of the *Annals of Surgery*. The issue will be strictly an *edition de luxe*,

limited to 150 signed and numbered copies, printed in the best style of the typographical art on large paper and bound in grey boards. After the limited edition has been printed the plates will be destroyed and the book will not be reissued.

MEDICAL EVIDENCE AT INQUESTS.

DEPUTATION TO THE LORD CHANCELLOR.

On May 12th a deputation waited on the Lord Chancellor for the purpose of making representations relative to the practices and procedure recently adopted in the conduct of inquests by Mr. John Troutbeck, Coroner for Westminster and the South-Western District. The British Medical Association was represented by Mr. Andrew Clark and Sir Victor Horsley; the South-West London Medical Society by Surgeon-Major Mark Robinson and Dr. McIntosh; the Medical Defence Union by Dr. Bateman and Mr. Hempson; the London and Counties Medical Protection Society by Dr. Heron and Dr. H. Woods.

The deputation was introduced by Mr. Andrew Clark, Chairman of Council of the British Medical Association, who said that the Council had, after considering the report of a Special Committee, felt that the facts disclosed were of such gravity that it became its duty, not only to the medical profession, but also to the public, to take steps to put the facts before the Lord Chancellor. As it was found that other bodies were moving in the same direction, the British Medical Association determined to associate itself with those bodies.

Surgeon-Major Mark Robinson, as the representative of the South-West London Medical Society, stated that the matter had engaged the attention of that Society for six or seven months past. Mr. Troutbeck, since his appointment as Coroner for South-West London, had introduced the somewhat novel plan of calling in outside medical testimony. The London County Council now required applicants for appointment as coroner to agree to a set of conditions; among these was the following:

9. Are you prepared to entrust the *post-mortem* examinations to a skilled pathologist, as desired by the Council, in all cases except where you are satisfied that the medical man connected with the case is competent to make a trustworthy *post-mortem* examination?

It was found that Mr. Troutbeck constantly employed Dr. Freyberger, who had sometimes been described as pathologist to the London County Council. The Society ascertained on application to the County Council that Dr. Freyberger did not hold the office of pathologist, but that he had been selected as a gentleman willing for an ordinary fee to make *post-mortem* examinations and give evidence at inquests, particularly in those cases in which special pathological knowledge was required. Dr. Freyberger was not known to the Society as a pathologist, and he did not hold the office of pathologist to any large London hospital, nor had he been appointed in any public way. A deputation had waited on the London County Council, and had pointed out that Dr. Freyberger was employed in cases which could not be described as special cases. Cases involving special knowledge did not occur frequently; they constituted, perhaps, 1 per cent. of all inquests, whereas during a certain period Dr. Freyberger had been employed in some 60 or 65 per cent. of the total number of inquests. As to what Mr. Troutbeck regarded as special cases, but which were not such, it appeared that Dr. Freyberger had been called on to make a *post-mortem* examination in a case of judicial hanging in Wandsworth Gaol, and again in the case of a man who had been killed by a train cutting off his head. Dr. Robinson mentioned as examples of special cases certain toxicological cases. During the course of certain inquiries Mr. Troutbeck had drawn a parallel between Dr. Freyberger and local medical men, not to the advantage of the latter; the coroner had no right to express an opinion upon the qualifications of medical men. The coroner had also reflected injuriously upon the united action of the local medical men in this matter, and on some occasions had made observations as to the treatment or advice given to their patients by medical men who were not present. He thought that such a course of conduct on the part of the coroner was not likely to be to the advantage of the public. Medical men had been in the habit, in doubtful cases, of writing to the coroner and explaining the circumstances to him; naturally they would not continue to do this if the coroner treated them with the want of consideration he had shown. Dr. Robinson insisted that it was in many cases important that the medical man first called to the patient, before or after death, should give evidence as to the surrounding circumstances. It was of importance that Mr. Troutbeck should conduct inquests according to the Coroners Act, and more especially in accordance with Section xxi of that Act, which directed that the coroner should call in the medical man who had attended the person before death, or who was called in at the time of death.

Sir Victor Horsley, speaking on behalf of the British Medical Association, said that the Association felt that the evidence brought forward was sufficient to establish the charge against Mr. Troutbeck that he had contravened the Coroners Act, in that he had in a large number of cases deliberately set aside the clinical evidence. The Association, composed as it was of general practitioners throughout the country, had received the impression from Mr. Troutbeck's action that he considered that general practitioners were not competent to perform pathological investigations in an ordinary case; he had indeed gone so far as to suggest that they were not trained in pathology. That was erroneous, for medical men were thoroughly trained in pathology, and in the vast majority of inquests the medical man who had attended the patient was perfectly competent to perform the *post-mortem* examination. The Association fully recognized that there were special cases, but contended that Mr. Troutbeck should not depart from the ordinary procedure under the Act. Mr. Troutbeck had not altogether preserved the judicial dignity of his office. On several occasions he had allowed himself to comment severely on the conduct of a medical man who was not present and thus had not the opportunity of refuting misstatements. In this way Mr. Troutbeck had so far forgotten the dignity and the duty of his office that they desired to lay the facts before his lordship. The main point, however, was that, while fully recognizing that the services of expert pathologists were necessary in special cases, the Association maintained that the Coroners Act intended that the clinical evidence should be laid before the jury, and were convinced that unless this were done the interests of the public would suffer materially.

The Lord Chancellor, in reply, said he had listened, as was his duty, to their representations, but could express no opinion adverse to Mr. Troutbeck until he had heard what he had to say himself. He should certainly make some communication to him of what the deputation had been telling him. He thought they had put it a little too high when they spoke of the "contravention" of Section xxi of the Coroners Act. He could not quite agree that it was an absolute statutable obligation on the coroner to call in local medical practitioners. It was obvious that the Legislature could not have intended to force upon the coroner a particular person, whether he liked it or not or whether in his judgement and discretion he thought another person should be called in. The word in the statute was "may," and he thought both the gentlemen who had spoken had given reasons why the Legislature must have left it to the discretion of the coroner to some extent. Let them take the ordinary case they had advanced—the execution of a criminal. To say that the person who last attended him should be called in would be absurd. Or let them take the other example they had given of a person killed in a railway accident. How would the medical man who last attended the deceased know anything about the cause of death? Whilst he went with the deputation to a certain extent, while he thought the natural meaning of Section xxi of the Coroners Act was that the coroner would probably summon the person by whom the deceased was attended, yet he was afraid he could not go so far as to say that it was an actually statutory obligation. It must be left, as so many things must be left, to the person conducting the inquiry. At the same time he did not at all deny that any general rule laid down by the coroner that he would not do so would be contrary to the statute—as to that he agreed—but it must be applicable to a particular case before they could say that it was an absolute contravention of the statute for him not to do it, and that, he thought, was going too far with the materials before him. They had put one or two matters which he was afraid it would hardly be appropriate for him to inquire into about the coroner—he meant questions of what the coroner had said about this or that particular medical man. He (the Lord Chancellor) could know nothing about that, nor could he express any opinion about it without knowing the facts of the case. It might be that a medical man might have incurred

the coroner's animadversions properly, and until he knew the facts he could express no opinion. All he could say was that he would make a communication to the coroner, and he hoped he would be able to give a satisfactory explanation. He did not understand how any communication could be properly made to the coroner by any body electing him, whether the County Council or any other body. He ought as a judge to exercise his functions quite independently of any bargain made with anyone. He did not say Mr. Troutbeck had made a bargain, nor did he quite understand that they were able to establish that it was a condition of his election that he should do so. In conclusion, his Lordship said he quite agreed as to the importance of the matter, and he also quite agreed with them that no rule ought to be laid down contrary to what appeared to be the policy of the statute. With reference to the other questions, it was a question in each case of good manners and of a sense of justice not to speak of people in their absence without proper respect. Upon that he could say nothing without knowing the facts of each particular case which had arisen. With reference to the general question, as he said, he would make a communication to the coroner, and if the coroner gave him an explanation it should be sent on to them.

The deputation thanked his Lordship and retired.

ASSOCIATION NOTICES.

Those Members who have not yet paid their Subscriptions for the current year are reminded that these fell due on January 1st. It is particularly requested that all Subscriptions should now be paid. Members resident in the United Kingdom should send Postal Orders or Cheques payable to the General Secretary.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1903.

MEETINGS of the Council will be held on July 8th and October 21st in the Council Room of the British Medical Association, 429, Strand, London, W.C.

ELECTION OF MEMBERS.

ANY candidate for election should forward his application upon a form, which will be furnished by the General Secretary of the Association, 429, Strand. Applications for membership should be sent to the General Secretary not less than thirty-five days prior to the date of a meeting of the Council.

GUY ELLISTON, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

BATH AND BRISTOL BRANCH: BRISTOL DIVISION.—The first meeting of this Division of the Branch, under the new Constitution of the Association, will be held at the Medical Library, University College, Bristol, on Wednesday, May 27th, at 8 p.m. Business: To elect the officers of the newly-formed Division, the representatives of the Division on the Council of the Branch, and the ordinary members of the Executive Committee; to elect the representative of the Division in representative meetings of the Association; to make rules for the Division. This meeting of the Division will take the place of the ordinary Branch meeting, which will not be held. The date of the annual meeting of the Branch and of the annual dinner is altered to Wednesday, June 10th.

BATH AND BRISTOL BRANCH: BATH DIVISION—A meeting of this Division will be held at the Royal United Hospital, Bath, on May 27th, at 5 p.m., for the purpose of electing Divisional Officers, and for other business.—W. M. BEAUMONT, Bath, Honorary Secretary.

BATH AND BRISTOL BRANCH: TROWBRIDGE DIVISION.—A meeting of this Division will be held at the George Hotel, Trowbridge, on Thursday, May 28th, at 3 p.m., for the purpose of electing officers, and for other business.—W. M. BEAUMONT, Bath, Honorary Secretary.

DORSET AND WEST HANTS BRANCH: WEST DORSET DIVISION.—The first meeting of this Division will be held at the County Hospital, Dorchester, on Wednesday, May 20th, at 3 p.m. Agenda: To elect officers—namely, Chairman, Vice-Chairman, and Secretary; to elect the Representative of the Division on representative meetings of the Association; to make rules for the Division. Model rules are to be found in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of March 7th, 1903, pp. xxii-xxiii.—WILLIAM VAWREY LUSH, Joint Honorary Branch Secretary.

EAST ANGLIAN BRANCH.—Preliminary Notice.—The annual meeting will be held at Chelmsford on Thursday, June 11th. Members wishing to read papers, or show cases or specimens, will kindly communicate with the General Secretary, B. H. NICHOLSON, M.B., East Lodge, Colchester.

EAST ANGLIAN BRANCH.—Election of Members of Council.—The nomination of candidates to represent the Branch on the Central Council of the Association for the ensuing year must be made by three electors on or before May 16th next, in writing, to the General Secretary of the Branch, B. H. NICHOLSON, M.B., East Lodge, Colchester.

METROPOLITAN COUNTIES BRANCH.—A special general meeting of this Branch will be held at the rooms of the Medical Society of London, Chandos Street, Cavendish Square, W., on Thursday, May 21st, at 4 p.m. The business will be to consider draft model rules, and also ethical rules proposed for adoption by the Branch, as published in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of March 7th, 1903.—HENRY BETHAM ROBINSON and GEORGE ROWELL, Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—A meeting of this District will be held at Brooke House, Upper Clapton, on Thursday, May 21st, at 8.30 p.m., Mr. H. E. Powell in the chair. Dr. J. H. Sequeira will give a Demonstration of Cases of Skin Disease. Visitors are invited to attend.—C. J. MORTON, 56, Orford Road, Walthamstow, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: WANDSWORTH DIVISION.—The annual meeting will be held at the Drill Hall, Clapham Junction, on Thursday, May 28th, at 4 p.m. prompt, for the purpose of electing officers and representatives and other business.—E. ROWLAND FOTHERGILL, M.B., B.S., Torquay House, Southfields, Honorary Secretary.

MIDLAND BRANCH.—Preliminary Notice.—The annual meeting of the Midland Branch will be held on June 5th, at Derby. The annual dinner of the Branch will be held in the evening. The last day for sending in nominations for elective members of Council for this Branch is Saturday, May 30th.—F. M. POPE, Leicester, Honorary Secretary.

MIDLAND BRANCH: LEICESTER DIVISION.—The first meeting of this Division will be held at the Wyvern Hotel, Leicester, on May 20th, at 4.30 p.m. All members of the British Medical Association living in the County of Leicester and Leicester itself are now members of this Division, and are requested to attend this meeting, when the rules for the Division will be adopted and officers elected.—F. M. POPE, 4, Prebend Street, Leicester, Hon. Secretary of Midland Branch.

MIDLAND BRANCH: STAMFORD DIVISION.—The first meeting of this Division will be held at the Board Room, Stamford Infirmary, at 4 p.m., on May 21st, when the rules for the Division will be adopted and officers elected.—H. D. MACKENZIE, Stamford.

MIDLAND BRANCH: BOSTON AND SPALDING DIVISION.—The first meeting of this Division will be held at the Peacock Hall, Boston, on May 27th, at 3.30 p.m. All members of the British Medical Association living in the Holland County Council area and the Horncastle parliamentary division are now members of this Division and are requested to attend this meeting, when the rules for the Division will be adopted and officers elected.—A. E. WILSON, 8, Grove Street, Boston.

MIDLAND BRANCH: DERBYSHIRE DIVISION.—All members of the British Medical Association living in Derby and Derbyshire are requested to attend the first meeting of this Division, which will be held at the Derbyshire Royal Infirmary on May 26th, at 4 p.m., to adopt rules for the Division and to elect officers.—J. ACTON SOUTHERN, 93, Friar Gate, Derby.

MIDLAND BRANCH: LINCOLN DIVISION.—The first meeting of this Division will be held at the Guildhall, Lincoln, on Thursday, May 28th, at 4 p.m. All members of the British Medical Association living in the Lincoln, Gainsborough, Louth, and Sleaford parliamentary divisions are now members of this Division, and are earnestly requested to attend this meeting, at which the officers and representatives will be elected, and rules for the Division adopted.—E. MANSEL SYMPSON, 2, James Street, Lincoln.

MIDLAND BRANCH: NOTTINGHAM DIVISION.—The first meeting of this Division will be held at the Victoria Station Hotel, Nottingham, on Wednesday, May 20th, at 4 p.m. All members of the British Medical Association living in the City and County of Nottingham are now members of this Division and are requested to attend this meeting, when the rules for the Division will be adopted and officers elected.—F. H. JACOB, 28, Regent Street, Nottingham, Honorary Secretary, Nottingham Division.

SOUTH MIDLAND BRANCH: BEDFORD AND HERTS DIVISION.—The annual meeting of this Division will be held at the County Hospital, Bedford, on Tuesday, May 26th, at 3.45 p.m. All members of the Association living in this Division are requested to attend this meeting, when the rules for the Division will be confirmed and officers and representatives elected.—W. GIFFORD NASH, Bedford, Honorary Secretary.

SOUTH MIDLAND BRANCH.—The annual meeting will be held at Wellingborough on Thursday, June 18th, under the presidency of Dr. W. E. Audland. Members wishing to read papers or show specimens must inform the Secretary not later than June 7th. E. HARRIES JONES, Northampton, Branch Secretary.

STAFFORDSHIRE BRANCH. Nominations of candidates as representatives on the Central Council of the Association must be sent to the Secretary of the Branch, G. Pelgrave Johnson, Brook Street, Stoke-on-Trent, before Saturday, May 30th. G. PELGRAVE JOHNSON, Honorary General Secretary.

SOUTH-WESTERN BRANCH.—The sixty-fourth annual meeting of this Branch will be held on Wednesday, June 3rd, at the Guildhall, Launceston, at 3 p.m., when Mr. J. Delpratt Harris will resign the chair to Dr. W. T. Thompson, who will deliver an inaugural address. The report of the Branch Council will be presented to the meeting, and the officers of the Branch elected for the year 1903-4. Luncheon, by kind invitation of the President-elect, will take place from 1 to 2.30 p.m., at the Guildhall,

and the annual dinner will be held at the White Hart Hotel at 7 p.m. Tickets (exclusive of wine), 6s., which can be obtained from the Honorary Secretary. The President-elect has kindly arranged visits to the Priory Ruins and Church, and the Castle. After the meeting a Garden Party will be held at the residence of the President-elect. The nomination of candidates for the office of Elective Members of Council (Branch Representatives on the Central Council) for the ensuing year, must be made by three electors, and in writing, to the Honorary Secretary of the Branch, G. Young Eales, 1, Matlock Terrace, Torquay, on or before May 20th.

South-Eastern Branch: East Sussex District.—The next meeting of this District will be held at Lewes, at the White Hart Hotel, on Thursday, May 21st, at 4.45 p.m. Mr. G. Vere Benson will take the chair. Papers are promised from Mr. L. Lovell-Keays and Dr. Lawsett. Dr. Gabbett will read a paper on the Diagnostic Value of Blood Examination. Dinner after the meeting at 6.45; charge 6s., exclusive of wine. All members of South-Eastern Branch are entitled to be present.—W. J. C. Merry, Honorary Secretary, 2, Chiswick Place, Eastbourne.

Worcestershire and Herefordshire Branch: Worcester Division.—The first meeting of this Division will be held at the Worcester Infirmary on Friday, May 22nd, at 5 15 p m. Business: To elect officers of the Division: to elect a Delegate to attend Representative Meetings of the Association; to make rules for the Division, and any other business.—Geo. W. Crowe, M.D., 43, Foregate Street, Worcester, Honorary Secretary.

Worcestershire and Herefordshire and Gloucester Branches.—Election of a Member of Council to represent these Branches on the Central Council of Association. It has been arranged that the Worcestershire and Herefordshire Branch should have the nomination for the first three years, Gloucestershire for the next three years, and so on alternately. Nominations made by three electors must be sent in writing to the undersigned on or before June 10th.—Geo. W. Crowe, M.D., 43, Foregate Street, Worcester, Honorary Secretary.

SPECIAL CORRESPONDENCE.

MANCHESTER.

New Skin Hospital.—City Coronership.—Small-pox Epidemic.

Just at the present moment in Manchester there is much scope for the activity of the talents of architects. There has been a keen competition amongst local architects in the preparation of plans for the new Manchester and Salford Hospital for Skin Diseases, Quay Street; and premiums have been awarded to certain firms of architects for the excellence of their designs. The cost of the hospital building is limited to £14,000, and the hospital must be so arranged as to provide accommodation for 30 in-patients, and a large waiting room with accommodation for 200 out-patients. In the matter of plans for the New Infirmary on the Stanley Grove Estate, the assessor is busy making a selection from the architects—nearly fifty in number—who have sent in their names as competitors.

As has already been stated, the City Council refused to accept the nomination for the office of coroner made by a Committee, and referred the matter to a Special Committee consisting of the senior councillor of each ward. This Committee met on May 8th, and selected from the original list of twenty-six candidates six names; this short list differed from the list sent up by the original Committee in that two names were omitted and two names added; one of the names omitted was that of the gentleman who had been recommended for election to the office. After interviewing all the candidates, the new Committee unanimously recommended Mr. Ernest Gibson, M.B., barrister-at-law. Mr. Gibson, who has practised as a barrister on the northern circuit, has acted as deputy coroner for Liverpool since 1892.

The small-pox epidemic is costing the authorities much money. Already in Salford there have been about 130 cases. A Local Government Board inquiry was held in Salford on May 8th to hear the request of the Salford Corporation to be allowed to borrow £2,200 to repay the cost of temporary pavilions at their small-pox hospital at Drinkwater Park, and £2,000 for a special disinfecting station. The question at issue was whether the Local Government Board would grant the Corporation permission to raise a loan, having regard to the temporary character of the buildings. The expense of the epidemic has been considerable, and it is hoped that the expenditure may be spread over a few years to relieve the ratepayers of an additional burden.

The University of Vienna.—The prospectus of lectures for the summer term of this year in the University of Vienna comprises 316 courses to be delivered by 29 ordinary and 54 extraordinary professors and 112 *privatdocenten* and assistants. The total number of students enrolled in the medical faculty at present is 1,913, of whom 51 are women.

CORRESPONDENCE.

THE SPITTING NUISANCE.—SPITTING IN PUBLIC-HOUSES.

Sir,—As a means for the prevention of tuberculosis it is chiefly important that spitting should be stopped in places where it is most likely to do harm.

Of all places of resort probably the public-house is the most fruitful source of phthisis. It has been found that in France the amount of phthisis varies with the amount of alcohol drunk, and the English Registrar-General has shown that public-house servants suffer from this disease to a far greater extent than any other class of the community. It is these servants who sweep out the bars. In poor districts it may be safely said that every public-house bar is visited by at least one consumptive every day, and he probably spits on the floor while there.

I have formed the opinion, on evidence as conclusive as it seems possible to get, that the majority of adult male consumptives in my own district have derived the infection from the public-house. It is obvious, then, that of all places where it is desirable to stop spitting the public-house is far the most important. Yet I am informed that the terms "public hall, public waiting-room, or place of public entertainment," as used in the Glamorganshire by-law against spitting, do not include "public-houses." If so, it is most important that these should be specifically included in any by-laws made for the County of London.

Besides being pre-eminently desirable, it is, I believe, perfectly practicable to stop spitting in public-houses. They are under continual police supervision, and it is to the interest of the landlord and his servants to keep their bar clean. The publicans are becoming aware of the danger they run from the infection of phthisis, and many of them would be glad to join in an effort to reduce this danger.

In the borough of Woolwich, with very few exceptions, the licensed victuallers have posted up in the bars notices requesting customers not to spit on the floor, but they say that at present they are powerless to enforce such notices. A by-law would effectually strengthen their hands.

I venture to say that any by-law against spitting which does not apply to public-houses will produce but an insensible effect in the diminution of tuberculosis.—I am, etc.,

Woolwich, May 12th. Sidney Davies, M.O.H.

THE RELATION OF HUMAN TO BOVINE TUBERCULOSIS.

Sir,—The results of the experiments of Professor Hamilton and Mr. M'Lauchlan Young referred to in the British Medical Journal of April 25th, p. 979, though interesting as confirmatory results of experiments performed in the past, do not supply us with the evidence now wanting. Young calves have been already successfully inoculated with tubercle from human sources by other experimenters, as for example by Ravenel of Pennsylvania, who took the tuberculous sputum of human adults as the source of his experiments. The point that now needs settling is whether *adult* cattle also can be inoculated with human tubercle direct, since the subjects of Dr. Koch's negative experiments he describes as "young cattle," which presumably means adult cattle, not calves. That calves may be susceptible to direct inoculation of human diseases where adult cattle are not is shown by the result of the transference of variola from man to bovines. Though this "age distinction" is theoretically negligible in the question of the transmissibility of tubercle from man to cattle, in practice it is of great importance, as is demonstrated by the curious conclusions drawn from some of the experimental results already obtained.

Thus, Dr. Nathan Raw in a paper read before the Liverpool Medical Institution on February 26th, 1903, points to the successful inoculation of calves from abdominal tuberculosis cases in infants as evidence of the bovine source of the disease, a conclusion which is quite untenable in view of the successful inoculation of calves from human phthisis of adults. If these experiments referred to by Dr. Nathan Raw had been successfully conducted with adult cattle, they would have possessed some value so long as Koch's negative results in adult cattle inoculated with undoubted human tubercle bacilli remain undisproved.

The susceptibility of calves should be accepted for the present as proved. The question of the susceptibility of adult cattle still remains doubtful, and when this doubt can be

finally removed there may be some chance of determining by experiment the important question whether abdominal tuberculosis of children is of human or bovine origin. At present the results allow of no sensible conclusion being drawn either way.—I am, etc.,

Devonshire Street, W., April 26th. CLIVE RIVIERE.

THE EARLY HISTORY OF CLINICAL THERMOMETRY.

SIR,—In connexion with this subject the following narrative may possibly not be without interest. In 1857, when resident physician in Dr. Warburton Begbie's wards, in the Royal Infirmary, Edinburgh, I made a prolonged series of observations with the clinical thermometer, under his direction, upon certain patients under treatment. During the time I was resident he had charge of the fever wards, which, strange as it may appear to modern sanitarians, were located promiscuously among the general wards, without any idea of segregation. At that time, typhus and typhoid fevers had only very recently been differentiated; and, even yet, there were some obscure points, which seemed to call for further investigation; and for this purpose Dr. Begbie acquired his first clinical thermometer. I have a vivid recollection of Dr. Murchison making a visit to the fever wards one day, of the keen interest he took not only in the cases of fever, but also in our thermometer and the tables of temperature we had been compiling. The instrument used was apparently almost identical with that described by Sir Samuel Wilks. It was, at least, a foot in length, and having no arrangement for self-registration, the bulb was placed in the axilla, and the tube was anxiously watched to see how high the mercury would go. Dr. Begbie never, as far as I am aware, published an account of these observations, although he fully recognized their great importance; but, nevertheless, there is little doubt that they were among the first, if not the first, studies of clinical thermometry made in Scotland.—I am, etc.,

Hawick, N.B., May 3rd. JAMES BRYDON, M.D.

SIR,—In a volume in my possession entitled *Report of the Society for Bettering the Condition of the Poor*, dated 1808, there are some interesting records of thermometry in connexion with typhus. I quote from an article entitled Cases of Typhus Fever, in which the Affusion of Cold Water has been Applied, in the London House of Recovery, by W. P. Dimsdale, M.D.

Jas. Johnson, aged eight, caught the infection from his parents, who died of fever. On the 23rd of May, 1802 (the twelfth day of the disease), the symptoms were as follow: Pulse extremely frequent; tongue covered with dark fur, and very dry; skin dry. A thermometer placed under the tongue arose to 104°; constant and violent delirium. The usual medical treatment not being attended with success, recourse was had to the affusion of cold water. He was taken out of bed, stripped, and a pitcher of cold water poured suddenly over him; after being wiped he was replaced in bed. He slept an hour; the skin felt more relaxed; no perspiration, however, followed. May 24th the affusion was repeated with a pail of cold water. He again slept quietly, and soon afterwards a profuse perspiration came on which continued throughout the night.

The House of Recovery alluded to was, I believe, the forerunner of the present Fever Hospital in the Liverpool Road. The cases reported, which all improved and recovered after cold affusion, seem to have been mostly typhus, and though little mention is made of diarrhoea, yet some are classed as "contagious fever," thus anticipating the differential diagnosis between typhus and enteric made by the late Sir William Jenner.

In 1864 I attended a number of cases of typhus, all originating in two dilapidated houses in "Off Alley," a court near the Strand. My principal, Mr. Leonard, possessed a clinical thermometer, small and neat, non-registering, the index on an ivory plate, below which the bulb protruded about 1 in. for placing in the mouth or axilla. I used this instrument upon several occasions.—I am, etc.,

Weybridge, May 4th. HENRY WILLSON, M.D.

SIR,—A propos of the article by Sir Wm. Broadbent on clinical thermometry in the case of the first Napoleon, may I add to the subsequent discussion a quotation from *Notes on a Diary Kept Chiefly in Southern India, 1881-6*, by the Right Hon. Sir Mountstuart E. Grant Duff, G.C.S.I., vol. ii, p. 208?

"..... Dr. Birdie sent me a note in which the following passage occurs: 'I also send a copy of the report of the Committee on the Epidemic Fever in the Southern Provinces, which prevailed in 1809-11. Sir Whitelow Ainslie was, you will see, President. Your Excellency will be pleased to notice, at the top of page 52, that the Committee used the thermometer as a clinical instrument long before its use as such was revived in Europe.

"'The first man who used the thermometer to investigate the temperature of the body in health and disease was Sanctorius (1561-1636), but its value for such purposes was only recognized a few years ago, and it was never seen or heard of in a hospital ward in my student days.

"'Curious to say, that lunatic Tippu Sultan had some inkling of the use of the thermometer in disease, as, according to Wilks, he wrote and asked Cossigny, the Governor of Pondichéry, for an instrument of this kind, which, when the sick man places his hand on it, "the ascent of the quicksilver will mark the height of the disease."'"—I am, etc.,

Cambridge, May 10th. E. LLOYD JONES.

IS IT NECESSARY TO TIE IN THE CATHETER IN WHEELHOUSE'S OPERATION?

SIR,—In the BRITISH MEDICAL JOURNAL of April 25th, p. 963, Major F. J. W. Porter raises the question, "Is it necessary to tie in a catheter after external urethrotomy?"

The old method of retaining a metal catheter until the patient can stand it no longer, which event nearly always takes place within four or five days of the operation, and of intermittent dilatation of the healing and contracting urethra under general or local anaesthesia is gradually giving way to a less barbarous but equally efficacious procedure. This consists in the retention of a full-sized red rubber Jaques catheter until the perineal wound has nearly healed; this takes on an average three to four weeks, during which time the urethra and perineal tissues have been uniting around the rubber catheter, so that, when the catheter is dispensed with, a full-sized Clutton's steel bougie can be passed daily along the new urethra with great ease and without pain. In a communication to the *Lancet* of November 3rd, 1894, p. 1033, I reported a case of external urethrotomy in which I had retained a rubber catheter by what I termed a "perineal stop," which was inserted into the catheter through the perineal wound, from which the handle of the stop projected, a clip on the catheter beyond the meatus completing the fixation.

The catheter is removed every few days, washed, and immediately reinserted. During the last nine years I have employed this method and find it very satisfactory. I well remember one case which I treated by continuous retention of a rubber catheter followed by a full-sized Clutton's bougie, which the patient passed daily for himself. He had neither pain nor rigor from start to finish. During his convalescence my patient was visited by a friend who, after external urethrotomy had experienced the not uncommon sequence of a tied-in silver catheter, pain, removal of catheter, rigors, anaesthetic, reintroduction of metal catheter with repetition of pain, etc. The gratitude of this patient, when he knew what he had escaped, was almost comical in its extravagance. It is a great advantage to be able to keep the wound free, during the first few weeks, from urine, which is rarely aseptic, and cannot be conducive to sound repair. The end of the rubber catheter, lying just beyond the prostate, does not appear to irritate the bladder. A small amount of secretion, formed by the glands which open into the urethra, appears around the catheter, but causes no inconvenience, and is of no importance. The metal "perineal stop" is supplied by Messrs. Reynolds and Branson of Leeds.—I am, etc.,

Plymouth, April 26th. C. HAMILTON WHITEFORD.

PUERPERAL HYPERPYREXIA OF MALARIAL ORIGIN.

SIR,—In the case of hyperpyrexia recorded in the BRITISH MEDICAL JOURNAL of April 25th, p. 999, mention is made of a case of mine published in the JOURNAL of January 31st, 1903. The rigor and hyperpyrexia following a douche and soap and water enema "during a condition of moderate pyrexia," as Mr. J. S. Mackintosh states in referring to my case, hardly conveys a correct impression. My patient, as stated in my account of the case, "had been suddenly taken with a very severe rigor, felt icy cold, and soon afterwards became very hot." The temperature, on my arrival two hours after the onset, was 102.4° F., although the patient stated that she felt much better. This and the husband's statements at the time afforded strong reasons for suspecting that the temperature had been very high, if not even hyperpyrexial, before my arrival. I simply wish to point this out as it has a bearing on the suggested causation.

The hyperpyrexia in Mr. Mackintosh's case occurred during the course of febrile disturbance due to mastitis.

setting in on the ninth day after labour. A very considerable rise of temperature of short duration, and immediately after intrauterine douching, is perhaps not unfamiliar to most practitioners of experience in midwifery. Washing out the uterus on the ninth day after labour, in the absence of any intrauterine condition to retard the normal process of involution, would not be accomplished without some difficulty and without causing distress to the patient. As is stated, whilst manipulating the tube the patient complained of "severe pain in the abdomen and head." Such an impression on the nervous system might, as suggested, be sufficient to determine such a rise, but the disturbance of giving an enema and simply washing out the vagina would be nothing in comparison with the above-mentioned procedure.

The following are the points which clearly distinguish my case from that of Mr. Mackintosh:

In mine there was (1) a history of malaria.

2. Complete absence of any discoverable local cause of the initial pyrexia such as mastitis.

3. No intrauterine douching.

4. A severe rigor, profuse sweating, and also probably hyperpyrexia before any treatment was commenced.

In conclusion, whilst pleased at the interest taken in and the comments made on the case, I however fail to discover any similarity in "the sequence of events" beyond the fact that the same temperature (107.8° F.) was reached in both—a pure and simple coincidence.—I am, etc.,

Holyhead, April 25th. T. W. CLAY.

THE OPERATIVE TREATMENT OF CHRONIC FACIAL PALSY OF PERIPHERAL ORIGIN.

SIR,—In a most interesting paper on this subject by Messrs. C. A. Ballance, H. A. Ballance, and Purves Stewart, which appeared in the BRITISH MEDICAL JOURNAL of May 2nd, a number of cases of spino-facial anastomosis are recorded. The authors state on p. 1011:

So far, in our series of facio-accessory cases we have not observed any independent movement of the face, unassociated with that of the trapezius and sterno-mastoid, although in several cases a minimal innervation of the trapezius is sufficient to cause facial contraction.

The possibility of obtaining such dissociated movement of the face is a most important consideration in judging of the ultimate value of spino-facial anastomosis; for, if the face cannot be moved except in association with the shoulder, this will considerably detract from the value of the operation. My case of spino-facial anastomosis, an account of which was communicated to the Royal Society in 1900, showed that dissociated voluntary movement of the face can be recovered, for in that case the patient was able voluntarily to close the affected eyelids completely, winking was perfectly efficient, and other movements of the face were to a less extent also exhibited, and these movements were quite unassociated with movements of the sterno-mastoid or of the trapezius.

Referring to the amount of recovery in my case the authors merely state:

The spasm was cured, and subsequently remarkably free movement of the face occurred on movement of the shoulder.

It is perfectly true that on sudden elevation of the shoulder a marked spasm of the face was produced, but I think the statement quoted, without being qualified, gives the impression that this was the full extent of the recovery in the case. I, however, emphasized in my paper that it required sudden raising of the shoulder in order to produce this associated movement of the face, and that the spasm of the face gradually passed off, although the elevation of the shoulder was maintained. Except under these circumstances, the voluntary movements of the face were apparently perfectly dissociated, that is to say, movements of the face could be made without movements of the shoulder.

As a matter of historical accuracy, then, my case is the only one published in which recovery of voluntary dissociated movements has occurred, and I am glad to read an account of further cases which, although, so far, not showing recovery of dissociated movement, I am inclined to think have not yet reached the end of their possible degree of recovery.—I am, etc.,

Glasgow, May 4th. ROBERT KENNEDY.

THE LATER RECORDS OF GUNSHOT INJURIES IN THE WAR.

SIR,—Surgeon Lieutenant-Colonel Freer's letter in the BRITISH MEDICAL JOURNAL of April 25th is an interesting one, but there ought to be no doubt as to the advisability of trephining in all cases of perforating or "clean drills" of the cranium from high velocity bullets or anything else.

The entrance wound may be a "clean drill" in some cases, but the "drillings" are driven into the substance of the brain and at a later date cause chronic headaches and giddiness, epileptiform seizures, or cerebral softening and abscess.

I can remember a case of a native boy who had a hole drilled in his skull with a sharp-pointed pickaxe. A good deal of discussion took place at the time as to whether trephining was necessary. The wound in the skull was a clean cut round opening, and the patient's condition was excellent.

Trephining was, however, performed, and practically no spicules of bones were found on the surface of the brain. The boy was discharged after a short time well. Three and a-half months later he died rather suddenly, and, although there were no external manifestations, a small localized cerebral abscess with a spicule of bone was found close to the seat of the injury in the brain substance. I have found in the track of gunshot wounds of the skull and brain small spicules of bone, and I would unhesitatingly say in such cases as he mentions, "Trephine as soon as the condition of the patient and the nature of the surroundings in the field will allow you."—I am, etc.,

Rusholme, Manchester, May 1st. ROBERT BOYD, M.D.

THE FOOD FACTOR IN EDUCATION.

SIR,—Your article on the Food Factor in Education, as "A Father" says, "needs very serious discussion," and it is to be hoped that you will encourage such discussion. I desire to call attention to one or two points. The writer of the article says: "No doubt English children have for many generations been brought up on a fare not much differing from that of the present day, and most assuredly we have no reason to be ashamed of the race." According to my observation, the diet of to-day, both in England and Scotland, is very different from what it was in the past, and the physique, health, and longevity of the people have deteriorated since the change was made. Dr. Clement Dukes thinks the average public school boy requires meat twice a day; but the deterioration we notice in Scotland in the people cannot be due to the want of such meat—namely, flesh meat—because now it is used in almost every house daily where formerly it was seldom seen. I have spoken to a man, who was reared in a town in Scotland, who in his youth never tasted butcher's meat except on Sundays, and even then he only got a bit about the size of his thumb. I have spoken to a woman who never got butcher's meat till she was married, and that was forty-nine years ago. In those days there were strong, healthy men and women both in town and country, with good teeth. Now, even in our rural districts they are comparatively poor specimens, and teeth are conspicuous by their absence. Struck with such a change as I had observed, I have frequently asked old people how they accounted for such a change, and it was attributed to the importation of American flour. Formerly, in Scotland more especially, oatmeal, barley-meal, and peasmeal were made into porridge or bread, and used as food, but when American flour came in it supplanted such cereals, and being deprived of the bran is a poor food compared with our home-ground oat, barley, or peasmeal. I remember when a slice of white bread was a treat rarely got, now our poorest are fed on the whitest baker's bread, and plenty of it may be picked off our streets. It is thus evident that if the people are deteriorating in physique—as both in town and country they are doing—it is not because they have less food than they had, but because its nutritive quality is not what it was. This seems a point worthy of attention in discussing "the food factor" in the young, as well as in the aged.

I believe that the people are beginning to learn the value of what are called the coarser foods, but now some of them are actually dearer than the fine American flour which has caused such havoc.

Another point worthy of discussion is as to the number of meals. The Romans ate once a day; in Scotland, sixty years ago, many ate only twice, now the farm hands eat five times daily. Whether it is better or worse to eat once or five times daily is a question deserving of discussion. There can be no doubt that habit has much to do with the number of our meals, and that those who eat most butcher's meat feel inclined to eat oftenest. The whole subject of diet is one of such national importance that your article is most opportune, and perhaps, if it were freely discussed, it might encourage our authorities to insist on a chair of dietetics being established in every university.—I am, etc,

Denholm, May 1st. JOHN HADDON, M.D.

SIR ANDERSON CRITCHETT ON THE TREATMENT OF CONICAL CORNEA.

Sir,—The recently circulated pamphlet by Sir A. Critchett on the above subject contains some statements which I think ought not to be allowed to pass without some modification. The author's skill in the management of cases of this disease is evidently not equalled by his knowledge of the literature of the subject, and with a little trouble he might have ascertained what others had done in the same field with the cautery long before the date (1895) of his communication to the medical press. If he will only turn to the British Medical Journal of February 23rd, 1889, he will find a short paper read before the Section of Ophthalmology at the Glasgow meeting in the previous year, in which I refer to the works of the late Dr. Andrew and Mr. W. J. Cant on the use of the cautery, and in which it is stated that:

The plan adopted by these operators differs in at least one important point from the method employed in the cases which I am about to relate. The essential difference consists in the fact that the two surgeons named make a point of opening the anterior chamber so as to allow a continuous drainage of the aqueous for a prolonged period, and so purposely use a needle capable of penetrating the corneal tissue; whereas I hold that complete penetration of the cornea with the discharge of the aqueous is a result to be avoided, as unnecessary and dangerous, and believe the same object as regards the reduction of conicity can be attained without the escape of the fluid.

Yet Sir Anderson Critchett says in his pamphlet:

Till about three years ago the universally accepted plan of applying the cautery in cases of conical cornea was to use it almost at red heat, and to persevere until a spurt of aqueous showed that the anterior chamber had been penetrated.

My first case was operated on in 1886, fourteen years before the time mentioned by Sir Anderson! I do not think, therefore, that he can claim either priority in or "initiation" of this method of treating conical cornea, and I am sure he would be the last willingly to deprive benighted provincial surgeons of the few laurels that they may be able to cull as against their more fortunate metropolitan *confrères*.—I am, etc.,

Liverpool, May 11th. Richard Williams.

POST OFFICE MEDICAL APPOINTMENTS.

Sir,—Having great admiration for the name of Chamberlain, believing, as I do, that it is synonymous with efficiency, I believe the Postmaster-General would be obliged to the British Medical Association if that Association was to bring under his notice the correspondence that has appeared in the British Medical Journal on Post Office Medical Appointments; more particularly because in one of the subdivisions the gentleman who had acted as deputy medical officer for the past six years, and since the death of the late holder has had charge of the whole of the present four subdivisions, and to the satisfaction of the Post Office authorities; in spite of this, when the department looked round for a suitable officer to appoint to the subdivision in which this gentleman dwells, it does not offer the appointment to the gentleman who "knows the ropes" of the appointment, and of whose efficiency it has practical knowledge, but offers it in the first place to one gentleman who refuses it, and then to another who accepts.—I am, etc.,

F. Herbert Alderson, M.B.

Queen's Gate Terrace, S.W., May 9th.

SOMNOFORM.

Sir,—In your report in the British Medical Journal of April 25th of Mr. Cross's paper on the above subject before the Society of Anaesthetists, some remarks are accredited to me which I write to correct. The report states that "in from 90 to 100 seconds, and in some cases 35 seconds, the eyes became fixed, and the patient was ready for operation." My remarks at the meeting were that the average period of *induction* of anaesthesia was from 20 to 25 seconds, in some cases 35 seconds, and that the *period of anaesthesia* resulting from a single application of the mask was from 90 to 100 seconds. These figures represent the average duration in some five hundred administrations in the Dental Department of Guy's Hospital, but in some instances an anaesthesia of 2½ to 3 minutes has been obtained with a single administration of somnoform.

The report goes on to say that I have "found a good deal of muscular rigidity" with somnoform. This again is inaccurate, for my remarks were that I seldom saw rigidity since I have been in the habit of administering somnoform with a cone and rubber bag apparatus, pointing out at the time that the absence of muscular rigidity was one of the great advantages of somnoform over nitrous oxide anaesthesia.

Trusting that I am not encroaching too much on your valuable space in asking you to insert this letter, I am, etc.,

R. H. Jocelyn Swan, M.S.Lond., F.R.C.S.
Anaesthetist, Guy's Hospital.

St. Thomas's Street, S.E., April 25th.

OBITUARY.

ARTHUR TRETHEWY, M.B., B.C.Camb.

It is with great regret that we record the death of Dr. Arthur Trethewy, Resident Medical Officer of Haileybury College, which occurred very suddenly on May 4th at Haileybury, Hertford, from heart disease. He was the youngest son of Henry Trethewy, of Silsoe, Bedfordshire, and was only 34 years of age at the time of his death. Dr. Trethewy was a B.A. of Cambridge, and obtained his scientific and medical training at Cambridge University and at St. George's Hospital. He became M.R.C.S., L.R.C.P.Lond. in 1894, and took the degrees of M.B., B.C.Camb. in 1898. While at Cambridge he held the post of Assistant Demonstrator in the Biological Laboratories of the University. On entering St. George's Hospital, in 1892, he obtained an Entrance Scholarship in Science, open to students from the Universities of Oxford and Cambridge. He held at this hospital the posts of Assistant in the Dental, Obstetric, and Throat Departments; Assistant House-Surgeon, Assistant House-Physician, House-Surgeon, and House-Physician. Afterwards he became House-Surgeon at the Warneford Hospital, Leamington. Dr. Trethewy served as a civil surgeon in South Africa in 1900-1, being attached to the 1st Herts Volunteers. The funeral took place at Great Amwell, Ware, on May 6th.

Dr. J. W. Noble (Nottingham) writes: As one who was at school, college, and hospital with the late Arthur Trethewy, Medical Officer to Haileybury College, I should like to bear some slight testimony to the sterling worth of his character. Kind, generous, and of a most cheerful disposition, he was the life and soul of any social gathering. His friends, once made, were made for life, and however seldom seen in later life were still old friends in the best and truest sense of the word. Upright and conscientious in the highest degree he was always to be depended on to fulfil his duty. Fearless of ridicule, he was possessed of a dogged perseverance which enabled him to carry through any scheme on which he had set his heart. Gifted with great physical strength, I have never known him use it in oppression, but always to aid those less strong. Broadminded to an unusual degree, he was always tolerant of other people's views, even when in direct opposition to his own. A conservative in most things, he was still never tired of trying to better the lot of his less fortunate fellow-men. Truly he was a gentleman in the highest and best sense of the word and his short life has left its mark in the hearts of those who had the privilege of knowing him and calling him friend.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVAL MEDICAL SERVICE.

The following appointments have been made at the Admiralty: Walter G. Axford, Staff Surgeon, to the *Æolus*, for Haulbowline Dockyard, May 28th; Eric C. Ward, M.D., Staff Surgeon, to the *Black Prince*, June 2nd; John Moore, B.A., M.D., Staff Surgeon, and Montague H. Knapp, Surgeon, to the *Exmouth*, June 2nd; Henry N. Stephens, Surgeon, to Haslar Hospital, May 8th; Thomas E. Honey, M.D., Surgeon, to Haslar Hospital, for zymotic wards, May 28th; Charles S. Woodwright, Staff Surgeon, to the *Victory*, and tenders for instruction of Probationary Sick Berth Staff, May 18th.

ARMY MEDICAL STAFF.

Colonel W. J. Fawcett, from the Royal Army Medical Corps, to be Surgeon-General, on temporary augmentation, April 1st. His commissions are thus dated: Assistant Surgeon, April 1st, 1871; Surgeon, March 1st, 1873; Surgeon Major, April 1st, 1883; Surgeon-Lieutenant-Colonel, April 1st, 1891; Brigade-Surgeon-Lieutenant-Colonel, April 24th, 1895; and Colonel, May 10th, 1899. He was in the Soudan campaign in 1885 (medal with clasp, and Khedive's bronze star), and with the Hazara expedition in 1888 (mentioned in dispatches, medal with clasp).

ROYAL ARMY MEDICAL CORPS.

Colonel Frederick Beaufort Scott, M.D., C.M.G., died at Tivoli, near Rome, on April 27th, aged 64. He was appointed Assistant Surgeon, October 1st 1862; Surgeon, March 1st, 1873; Surgeon-Major, April 28th, 1876; Brigade Surgeon, January 23rd, 1888; and Surgeon-Colonel, December 27th, 1892. He retired from the service December 9th, 1898. *Hart's Army List* informs us that he received the special approbation of the

towns the death-rates ranged from 11.5 in Dundee and 14.9 in Aberdeen, to 20.1 in Perth and 24 8 in Greenock. The death-rate from the principal infectious diseases averaged 1.7 per 1,000 in these towns, the highest rates being recorded in Edinburgh and Greenock. The 296 deaths registered in Glasgow included 2 which resulted from measles, 2 from scarlet fever, 2 from diphtheria, 14 from whooping-cough, 2 from "fever," and 3 from diarrhoea. Five fatal cases of measles, 2 of diphtheria, and 4 of whooping-cough were recorded in Edinburgh, 3 of diarrhoea in Dundee and in Aberdeen, 2 of scarlet fever in Paisley, and 2 of whooping-cough in Leith.

WATER SUPPLIES OF GLAMORGANSHIRE.

Glamorganshire must be added to the small number of counties for which a complete and comprehensive report on water supplies has been issued. The report of Dr. Williams, the County Medical Officer, recently published, extends to 81 quarto pages, and is accompanied by four excellent maps. The subject is first considered in general, and then the individual supplies of the urban and rural districts are separately described. Dr. Williams holds that a report on water supplies should deal with (1) the available supplies obtainable from various sources; (2) general information concerning existing waterworks; and (3) information concerning districts inadequately supplied with water. The population of the county for 1901 was 631,092, an increase of 29 4 per cent. since the census of 1891. This very rapid rate of increase has taken place mainly in the mineral area. The river system of South Wales is, as Dr. Williams points out, very simple, the chief rivers running in more or less parallel courses in a southerly direction. All the Glamorganshire rivers have their origin within the county, or in the uninhabited and mountainous regions immediately beyond the northern boundary of the county at an elevation varying from 1,000 to 2,000 feet. They are, consequently, comparatively short and swift-running, the longest no more than forty miles. Pollution takes place almost entirely within the county, and consequently should not be difficult to abate.

The water of no Glamorganshire rivers is used for drinking purposes after sewage has been discharged into it—a highly satisfactory condition of things. A number of tables giving the rainfall in different parts of the county are given.

A population of about 50,000 is supplied by water from underground sources, and in part by rain water as such. This area includes the urban districts of Barry, Bridgend, Porthcawl, Cowbridge Borough, parts of Cowbridge Rural, parts of Penybont, Gower, and Oystermouth. All these districts are south of the coal measures. The remainder of the inhabitants of the mineral area are all supplied with surface-collected water, and it is over this area that the increase of population has taken place.

Dr. Williams considers that the most useful supply is the rain water collected on the northern area or to the north of it. Cardiff and Merthyr obtain their water from this area, and Swansea is about to be supplied from the Cray works now in course of construction. The proposed Ystradfellti works will supply four other districts. All these collecting areas are to the north of the coal basins.

The results of the chemical analyses of the different supplies are given in detail, but the bacteriological examinations are omitted because "there is a difference of opinion among experts in this branch of public health as to the significance of the presence and number of certain classes of organisms in water supplies." This seems a matter for regret, since the figures obtained, apart from any opinion as to their significance, would have possessed some interest.

MEDICAL NEWS.

We are asked to state that the Seventh Annual Medical, Surgical, and Hygienic Exhibition will be held at the Queen's Hall on June 2nd, 3rd, 4th, and 5th, and will be open on each day from 1 to 10 p.m.

The date on which Mr. Jonathan Hutchinson will deliver his address on the etiology of leprosy before the Epidemiological Society of London has been altered to Tuesday, May 26th.

The proprietors of Benger's food have converted their business into a limited company. The public showed great eagerness to obtain shares, the applications being largely in excess of the amount asked for.

Mr. George Herring has again offered to contribute £10,000 to the Metropolitan Hospital Sunday Fund, or to add one quarter to the amount collected in the churches, limiting the latter offer to £25,000. Mr. William Herring has offered to contribute £1,000 to the fund.

Medical Magistrate.—Dr. R. Balfour Graham, F.R.C.S.E., Leven, Fife, Honorary Secretary of the Fife Branch, B.M.A., has, on the recommendation of the Right Hon. the Earl of Elgin, K.G., Lord Lieutenant of the County, been added to the list of His Majesty's Justices of the Peace for the county of Fife.

Princess Christian will present the diplomas, medals, and certificates granted by the National Health Society at a meeting at Grosvenor House on Saturday next, May 23rd, at 3.30 p.m. The chair will be taken by the Earl of Derby, K.G., President of the Council, and among those who will take part in the proceedings are Archdeacon Sinclair and Sir James Crichton-Browne.

Antirabic Inoculations in Vienna.—The report of the Vienna Antirabic Inoculation Institute states that in the year 1901 the number of persons who applied for treatment was 280 (112 men, 51 women and 117 children). Of this number 242 underwent the inoculations. Among these there were 3 deaths from hydrophobia, a mortality of 2.24 per cent. Of 1,522 patients treated in the Institute since its foundation, 20 have died, a mortality of 1.31 per cent. In 1901 there were 25 cases of hydrophobia in the whole of Austria which were not treated, and all died.

Childhood Society.—A meeting of the Society for the Scientific Study of the Mental and Physical Conditions of Children was held on May 11th, the Earl Egerton of Tatton being in the chair. Among those present were the Duchess of Buckingham and Chandos, the Countess of Albemarle, Julia Marchioness of Tweeddale, Lady Adelaide Taylor, Lady Galton, Lady Trench-Gascoigne, Sir James Crichton-Browne, M.D., F.R.S., Mr. E. W. Brabrook, C.B., Chairman of the Council; Dr. G. E. Shuttleworth, and others. Professor J. Edgar, M.A., Professor of Education in the University of St. Andrews, delivered an address on the Universities and Scientific Study of Children, with special reference to the teaching profession. The following resolution was proposed by Mr. E. W. Brabrook, C.B., and seconded by Sir James Crichton-Browne: "That it is desirable that the Elementary Education of (Defective and Epileptic) Children Act, 1880, should be compulsory on educational authorities, and that special training should be given at one or more training colleges for teachers who wish to qualify for the care of defective children. That the Government be requested to institute an inquiry into the best means of dealing with defective classes in after-life, and for determining the authority to be entrusted with that duty." The resolution was carried unanimously.

MEDICAL VACANCIES.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column advertisements must be received not later than the first post on Wednesday morning.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES.—Clinical Assistant. Honorarium at the rate of 52 guineas per annum.
BIRMINGHAM CITY.—Medical Officer of Health. Salary, £1,000 per annum.
BIRMINGHAM: GENERAL HOSPITAL.—Three House-Surgeons, resident. Appointment for six months. Salary at the rate of £50 per annum.
BUXTON: DEVONSHIRE HOSPITAL.—(1) House Surgeon. Salary, £100 per annum. (2) Assistant House-Surgeon. Salary, £70 per annum. Both resident.
BRIGHTON: THROAT AND EAR HOSPITAL, Church Street.—Non-resident House-Surgeon. Salary at the rate of £75 per annum.
CHICHESTER INFIRMARY.—Honorary Medical Officer.
DENBIGH: DENBIGHSHIRE INFIRMARY.—House-Surgeon, resident. Salary to commence, £100 per annum.
EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge Road, S.E.—Anæsthetist. Honorarium, £25 per annum.
GLASGOW SAMARITAN HOSPITAL FOR WOMEN.—House-Surgeon (female).
GLASGOW UNIVERSITY.—Additional Examiner for Degrees in Arts, Science, and Medicine. Salary, £50 per annum.
GOSFORTH: CITY ASYLUM.—Assistant Medical Officer, resident. Salary £140, rising to £160 per annum.
GREENWICH UNION INFIRMARY.—Junior Assistant Medical Officer of the Infirmary and Workhouse, resident. Salary, £100 per annum.
HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL.—House-Surgeon, resident; unmarried. Salary, £75 per annum.
HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Physician, resident. Appointment for six months. Salary, £20.
HOSPITAL FOR WOMEN, Soho Square, W.—Assistant Physician.
INVERNESS: NORTHERN INFIRMARY.—House-Surgeon, resident. Salary, £100 per annum.
LIVERPOOL EYE AND EAR INFIRMARY.—House-Surgeon, resident. Salary, £80 per annum.
LIVERPOOL: MILL ROAD INFIRMARY.—Assistant Medical Officer, resident. Salary £120 per annum.
LONDON HOSPITAL, E.—Assistant Obstetric Physician.
LONDON COUNTY COUNCIL.—Assistant Medical Officer at Epileptic Colony, Ewell, resident. Salary, £200 per annum.
MIDDLESEX HOSPITAL, W.—Director of Cancer Research Laboratories. Salary, £500 per annum, rising to £800.
MIDDLESEX HOSPITAL.—Research Scholarship of £105 at the Cancer Research Laboratories.
NEWCASTLE ON TYNE DISPENSARY.—Visiting Medical Assistant. Salary, £160 for first year and £180 afterwards.
NORTH WEST LONDON HOSPITAL, Kentish Town Road.—(1) Resident Medical Officer; (2) Assistant Resident Medical Officer. Salary at the rate of £50 per annum each.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Professors and Lecturers.
SALISBURY INFIRMARY.—(1) House-Surgeon. Salary, £100 per annum. (2) Assistant House-Surgeon. Salary, £75 per annum. Both resident.
SEAMEN'S HOSPITAL SOCIETY, GREENWICH.—Senior House-Surgeon at the Branch Hospital, resident. Salary, £75 per annum, and £25 for officiating as Registrar.
SHEFFIELD ROYAL HOSPITAL.—Junior Assistant House-Surgeon, resident. Salary, £50 per annum.
SOCIETY OF APOTHECARIES, London.—Examiner in Medicine.
SOUTHPORT INFIRMARY.—Resident Junior House and Visiting Surgeon, unmarried. Salary commencing £70 per annum.
WAKEFIELD: CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY. Junior House surgeon, resident. Salary, £80 per annum.
WESTMINSTER DISPENSARY, Gerrard Street, W.—Resident Medical Officer. Salary, £120 per annum.
WEST BROMWICH DISTRICT HOSPITAL.—Resident Junior House-Surgeon. Salary, £50 per annum.
WEST RIDING ASYLUM, Wadsley.—Fifth Assistant Medical Officer, resident. Salary, £140, rising to £160 per annum.

MEDICAL APPOINTMENTS.

BERKELEY, Comyns, M.B., B.C.Cantab., M.R.C.P.Lond., appointed Assistant Obstetric Physician to the Middlesex Hospital.

BLAKELY, Samuel, M.D.King's Coll.Aberd., M.R.C.S.Eng., appointed House-Surgeon to the Royal Victoria Hospital, Belfast.

BUTLER, T. Harrison, M.A., M.D., B.Ch.Oxon., M.R.C.S., L.R.C.P., appointed Assistant Surgeon at the British Ophthalmic Hospital, Jerusalem.

COGSWELL, Philip D., M.R.C.S.Eng., L.R.C.P.Lond., appointed Certifying Factory Surgeon for the Broughton Astley District, Leicester.

COSGRAVE, Frederick Robert, M.D.Dub., B.Ch., appointed Certifying Factory Surgeon for the Burton-in-Kendal District, Westmorland.

GRIFFITHS, John, M.R.C.S.Eng., L.S.A., appointed Certifying Factory Surgeon for the Llandrindod Wells District, Radnor.

HORNE, Maynard, M.A., M.B., appointed Honorary Physician to the Margaret Street Hospital for Consumption and Diseases of the Chest (for Out-patients).

HUBBARD, Walter L., M.D.Brux., M.R.C.S., L.R.C.P.Lond., appointed Certifying Factory Surgeon for the Edenbridge District, Kent.

JEAFFRESON, G. Cordy, M.R.C.S., L.R.C.P.Lond., appointed Certifying Factory Surgeon for the Framlingham District, Suffolk.

MOWATT, George, M.B., Ch.B.Aberd., appointed Police Surgeon of the Borough of Bolton.

RAMSBOTTOM, Chas. H. Godfrey, M.D.Vict., Ch.B., appointed Certifying Factory Surgeon for the Bungay District, Suffolk, and the Ditchingham District, Norfolk.

RICHARDS, J. B. O., L.R.C.P.&S.Edin., L.F.P.S.Glasg., appointed Certifying Factory Surgeon for the Wadebridge District, Cornwall.

RICHARDS, Thomas Edward, M.B., Ch.B.Edin., appointed Certifying Factory Surgeon for the Abercrave District, Brecon.

RITCHIE, James, M.D., C.M., D.P.H.Aberd., appointed Certifying Factory Surgeon for the Old Deer District, Aberdeen.

RUNDLE, F. C., L.R.C.P., L.R.C.S.Edin., appointed District Medical Officer of the Tenterden Union.

SCARLETT-SYNGE, Mrs., M.D.Brux., L.S.A., L.M., appointed Medical Officer to the Government Normal College, Bloemfontein, and to the High School, Bloemfontein.

WACHER, Sidney F.R.C.S.Eng., L.R.C.P.Lond., appointed Certifying Factory Surgeon for the Canterbury District, Kent.

WHITAKER, L. E., M.R.C.S.Eng., L.R.C.P.Lond., appointed Certifying Factory Surgeon for the Diss District, Norfolk.

WORBOYS, Thos. Sanders, M.R.C.S., L.R.C.P.Lond., appointed Medical Officer and Public Vaccinator for the Winterton District of the Glanford Brigg Union, *vice* R. P. Goodworth, L.R.C.P.Edin., M.R.C.S.Eng.

WRIGHT, W. S., M.R.C.S., L.R.C.P.Lond., appointed Certifying Factory Surgeon for the Wool District, Dorset.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Society of London, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Annual Conversazione; reception by the President. 8.45 p.m.—Oration: Sir William H. Bennett, K.C.V.O.: Some Reflections, mainly Ethical, upon the Present Position of Operations in the Practice of Surgery.

TUESDAY.

Pathological Society of London, 20, Hanover Square, W., 8.30 p.m.—General Meeting: Election of Officers. Dr. R. S. Trevor: Multiple Aneurysms of the Splenic Artery Associated with Calcification of the Portal Vein. Dr. Drysdale: Primary Sarcoma of the Heart. Mr. Barnard and Mr. Rigby: Case of Pulsating Exophthalmos. Dr. F. P. Weber: Malignant Endocarditis associated with Large White Kidneys. Dr. Seligmann and Dr. Strong: A New Method of Blood Counting. Mr. J. H. Parsons and Mr. Rockliffe: Plexiform Neuroma of the Orbit. Card Specimens will be shown by Dr. C. P. White, Dr. Dudgeon, Dr. H. M. Fletcher, and Dr. Drysdale.

WEDNESDAY.

Dermatological Society of Great Britain and Ireland, 20, Hanover Square, W., 4.30 p.m.—Annual General Meeting and Conference. Dr. Corlett, of Ohio, U.S.A., will give an address on Small-pox, illustrated with lantern slides.

THURSDAY.

Harveian Society of London, Stafford Rooms, Titchborne Street, Edgware Road, W., 8.30 p.m.—Clinical Evening.

Guy's Hospital Medical School, 4 p.m.—Dr. E. W. Ainley Walker: On the General Pathology of Acute Rheumatism (Gordon Lectures in Experimental Pathology).

FRIDAY.

Clinical Society of London, 20, Hanover Square, W., 8.30 p.m.—Annual General Meeting; Election of Officers for Session 1904-5. Papers—Dr. J. P. Zum Busch: Ileo-cæcal Invagination by a Meckel's Diverticulum. Dr. Percy Kidd: Sequel to a Case shown at the Society in 1901 as Congenital Morbus Cordis. Dr. J. Porter Parkinson: Sequel to a Case of Great Dilatation of the Heart.

POST-GRADUATE COURSES AND LECTURES.

Charing Cross Hospital. Thursday, 4 p.m.—Lecture on Gynæcological Cases.

Hospital for Sick Children, Great Ormond Street, W.C., Thursday, 4 p.m.—Demonstration of Selected Cases.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C. Demonstrations will be given at 4 p.m. as follows: Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, eye. Lectures will also be given at 5.15 p.m. as follows: Monday, Hæmaturia in Children: Tuesday, Ozæna; Wednesday, Some Practical Points in Climatology: Thursday, Uterine Displacements; Friday, Parasites of the Gastro-intestinal Canal.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C.—Tuesday, 3.30 p.m.—Lecture on Visual Fields in Medical Diagnosis.

North-East London Post-Graduate College, Tottenham Hospital, N., Thursday, 4 p.m.—Lecture on Itching as a Symptom and its Treatment.

Post-Graduate College, West London Hospital, Hammersmith Road, W.—Lectures will be delivered at 5 p.m. as follows: Monday, Treatment of Some Injuries and Emergencies; Tuesday, X Rays; Wednesday, Extraction, When and How; Thursday, Diseases of the Kidney, Nephritis; Friday, Pelvic Inflammation.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

BROWN.—On May 9th, 1903, at Mount Lodge, Silver Valley, Callington, Cornwall, the wife of George Brown, M.R.C.S.Eng. (late of 6, Gibson Square, Islington, N.), of a daughter.

GOUGH.—On May 2nd, at Greenallon, Old Torwood Road, Torquay, the wife of John Harley Gough, M.D., F.R.C.S.Edin., of a son.

MACDONALD.—At "The Haven," Inverness, on the 10th inst., the wife of Thomas Rankin Macdonald, M.B., F.R.C.S.Edin., Lieutenant-Colonel, Indian Medical Service (ret.), of a son.

MARRIAGE.

FISH—SOUTHON.—On Tuesday, May 12th, Oscar Edgar Fish, M.B., M.R.C.S., B.A.Cantab., of Llanbedr Hall, Ruthin, to Susie Constance, daughter of the late Richard Southon, of Port Elizabeth, South Africa, and niece of Thos. E. Fuller, of 39, Hyde Park Gate, S.W.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London*. The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London*.

☞ *Queries, answers, and communications relating to subjects to which the special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

M.D.BRUX. asks whether any open-air sanatorium would take a female cook aged 29 in return for her work; she has tuberculous disease at the apex of the right lung, and is without money, relatives, or friends.

RUBBER-SOLED BOOTS AND DEFECTIVE SIGHT.

SEAFARING SURGEON asks for an explanation of the curious belief which prevails in seafaring circles, that the wearing of rubber-soled sea boots has a prejudicial effect upon the eyesight. Personally, he had always smiled at the "yarn," until he was told by a commander, R.N., that an oculist of European fame (whose name he gave) told him a few years ago in consultation that this was the only explanation he could think of for the large number of cases of defective eyesight among seafaring people he had come across in the course of practice.

R. W. M. writes May I ask (1) if there are any works dealing with manual training or the education of the hands—for example, that could answer the question, What trade or handicraft would render a man most deft and facile with his hands for surgical manipulations? (2) Any works treating of the finding of arguments, their arrangement, and the marshalling of facts in writing any literary composition, as essays, speeches, theses, articles for publication, etc. Whately's *Rhetoric* is the only one I know.

ANSWERS.

MUNGO.—We have made inquiries, and are informed that there is not in Berlin any Poliklinik where the lectures are delivered in English.

KEW.—One of the following books might probably meet our correspondent's requirements: *Forensic Medicine and Toxicology.* By J. Dixon Mann, M.D., F.R.C.P. Third edition. London: Charles Griffin and Co. 1902. 21s. *A Textbook of Medical Jurisprudence, Toxicology, and Public Health.* By J. Glaister, M.D., D.P.H., F.R.S.E. Edinburgh: E. and S. Livingstone. 1902. 15s. *Textbook of Forensic Medicine and Toxicology.* By A. P. Luff, M.D. London: Longmans, Green, and Co. 1895. 24s. *Manual of Medical Jurisprudence.* By A. S. Taylor. Twelfth edition, edited by Thomas Stevenson, M.D. London: J. and A. Churchill. 1891. 14s.

THE ASSESSMENT OF INCOME-TAX.

DR. E. GOFTON (North Shields) writes: Can you find out for me what should be done under the following circumstances? A. and B. are in partnership. A. is M.O.H. and also public vaccinator. During an epidemic of small-pox A. is requested to devote the whole of his time to the M.O.H.'s work, and B., who is deputy public vaccinator, is requested to undertake the vaccinations, which soon become too much for him, and C., another practitioner, is appointed to assist. The fees due in respect of vaccinations are paid to A. as public vaccinator, who pays C. for his work, the remainder going into the partnership takings. A.'s salary as M.O.H. for the period of the epidemic is also put into the partnership funds, as B. is carrying on the whole of the private practice. How are the several items to be returned for assessment?

*** We have referred the question to an authority on the subject. The following is his reply:—For the sake of clearness let us suppose that the salary of the M.O.H. is £150 per annum; that the fees of the public vaccinator amount to £200 per annum (including the deputy's fees) that the salary paid by A. to C. for his assistance is £100; that the profits (after paying expenses) of the private practice alone amount to £400 per annum. The income-tax returns should then be made as follows:—(1) On the blue form, No. 12 or 12A: By A. as M.O.H., £150; by A. as vaccinator, £200, less expenses £100 = £100 net. (2) On the yellow form No. 11 or 11A: By A. and B. (as a firm) as medical practitioners, £400. The total profit (or income) of A. and B. is thus £400 + £150 + £100 = £650, or £325 each, and they should, as between themselves, divide the amount of tax to be paid accordingly. C. will, of course, include the £100 received by him in his own income-tax return; but if the surveyor of taxes refuses to allow the £100 expenses to be deducted (as he might legally do on the ground that the emoluments from the appointment as vaccinator are taxable in full), A. must then pay tax on £200 as vaccinator, and when C. is paid his sala

(£100) the tax thereon may be deducted by A. from C. Thus A. will get back from C. the tax which he has paid on C.'s behalf, and if this is done C. will not again include the £100 received by him from A. in his own income-tax return. If A. and B. wish to claim exemption or abatement they must each fill up one of the claims printed on page 4 of the yellow form (or the back of the blue form) stating their income from professional sources as £325 each, and specifying how the £325 is arrived at, Thus:

Half income of the firm of A. and B., namely:

As M.O.H.	£150
As vaccinator £200, less salary £100 paid to Mr. C. ...	100
From private practice	400
Total ...	£650
My one half share ...	£325

Any other income would then be shown as required by the form.

OVERTAX writes: In regard to the article on Income Tax Assessment in the BRITISH MEDICAL JOURNAL of April 11th, under the heading, What Income is Not to be Entered, am I to understand that the income derived from any public appointment, such as medical officer of health, is not in any way taxed, as I have for thirty years always entered my income from such an appointment in my income tax returns?

*** This is not the meaning of the statement in the article. Income derived from a public appointment "is not to be entered" upon the yellow form of return, because a special (blue) form is provided for the return of this class of income, which is taxed under a separate head of the income tax code.

LETTERS, NOTES, Etc.

SPANISH BULL FIGHTS.

DR. H. W. SEAGER (London, W.C.) writes: I see that your Special Correspondent has been present at a bull fight in Madrid, but at a bull fight which was clearly specially arranged for foreign spectators. I was present at a bull fight in Madrid last summer, and the horses which had received a mortal wound were not put out of their misery at once by a stab in the spinal cord, for I saw a horse driven round the ring twice treading on its own intestines, and this horse was left for many minutes after its fall to struggle in its agony. I saw other horses with their intestines trailing on the ground which were not killed but dragged out alive, as was the first horse mentioned. I saw another horse spurred on to the bull's horns no less than five times, because the four first wounds did not incapacitate the poor brute, and the bandage over the unhappy beast's eyes slipped after the first wound, so that it saw that it was being spurred to its death. I do not know what happened after this, for I left the place amidst the hisses and laughter and scoffs of the audience; but this much I do know, that the bull fighters—the men I mean—do not run half so much risk as an ordinary football player. They are so padded that they cannot be hurt, and the bulls are so stupid and dazed by confinement that a sheep in a field is more dangerous. I met in the train a renowned bullfighter who stood 5 ft. 6 in. and weighed 17 stone. I would rather be a matador or a torero than cross from Trafalgar Square to Whitehall between 11 a.m. and 6 p.m.

EPILEPSY AND TOXAEMIA.

DR. JOHN MILSON RHODES, M.D., Chairman of the Chorlton and Manchester Asylums Board, etc, Didsbury, writes: Dr. Adam in his excellent paper on toxins is, I am glad to see, of the opinion I have held for some years, namely, that the cause of epilepsy is a toxin. Dr. Adam refers to the "Monday morning disease" that occurs amongst horses in America as probably caused "by overfeeding and idleness after work." The same might be said of a considerable number of epileptic cases. When I was in the United States I made careful inquiries as to the periodicity of the attacks and found, as I had thought probable, that Mondays, July 5th, Boxing Day, are the days upon which the largest number of seizures take place, but that Dr. Spratling, the Superintendent of Craig Colony, United States, the largest State institution for epileptics in the world, informed me that ever since the opening of the institution there had been fewer seizures at 7 o'clock in the evening than at any other time. Out of 73,785 seizures during the year only 2,203 took place at 7 p.m. The maximum number attained was 4,405 at 9 p.m., but the hour of greatest frequency had varied. The minimum has always been the same.

URINARY COLORATION PRODUCED BY SANTONIN.

DR. A. OGIER WARD (Cheapside, E.C.) writes: R. D. presented himself for examination for insurance; result entirely satisfactory except that the urine was of a peculiar greenish-yellow tint, and on adding a few drops to heated Fehling's solution a rose-purple colour appeared. Inquiry showed that he had taken 2 gr. of santonin in a capsule that morning, as he had threadworms. Two days later there was no trace of this colour or reaction. Tested again on April 29th the urine was found perfectly normal. On April 30th he took 2 gr. of santonin at 1.30 p.m. The urine passed at 4.30 p.m. turned Fehling purple and liq. potassa a brilliant salmon-red. He complained of slight xanthopsy as on previous occasions. On May 1st urine passed at 8.30 a.m. showed some reaction still.

LETTERS, COMMUNICATIONS, ETC., have been received from:

A W. A. Anderson, M.B., London; Mr. H. E. Allen, London; Anti-Rot; Dr. H. Alston, Gosforth; Mr. S. Andrews, Basingstoke; F. H. Alderson, M.B., London. **B** A. G. Bateman, M.B., London; Dr C. Buttar, London; Dr. W. G. Bacot Bournemouth; Dr. H. T. Bulstrode, London; Mr. E. Berlou, London; Dr. F. Bushnell, Plymouth; B. B.; Mr. J. F. E. Bridger, Brdgetown, W.I.; Miss M. Beadon, Bushey Heath; Mr. F. B. J. Baldwin, Rotherham; Dr. J. B. Ball, London; Mr. L. A. Bidwell, London. **C** J. H. Clayton, M.B., Birmingham; Mr. E. H. Currie, London; Mr. J. T. Cunningham, London; Mr. C. P. Childe, Southsea; Dr. J. Cameron, Edinburgh; Captain R.A.M.C. Dr. O. W. Chapman, London; F. Chown, M.B., Hayle; Chilthcol Society, secretary of London. **D** Sir D. Duckworth, London; Mr. F. I. De Lisle, Napier, N.Z.; A. Duncan, M.B., London; Dr. S. Davies, Woolwich; Messrs. Down Brothers, London. **E** Mr. F. Eve, London; Enquirer. **F** Mr. Q. B. de Freitas, Georgetown, W.I.; Mr. E. Freund, London; Dr. W. T. Freeman, Reading; E. R. Fothergill, M.B., London; Dr. P. J. Freyer, London; Dr. H. M. Fletcher, London. **G** Dr. L. Grant, Ballachulish; Mr. A. P. Giles, London; Sir J. A. Grant, K.C.M.G., Ottawa; Mr. R. B. Graham, Leven; Mr. G. H. F. Graves, Edinburgh. **H** Mr. J. Hutchinson, jun., London; Mr J. Houston, London; Mr. H. R. Haggard, London; Dr. R. G. Hebb, London; Mr. W. Habgood, Marple; Mr. E. Horder, Limpsfield. **I** I.M.S.: Indignans. **J** Dr. E. L. Jones, Felixstowe; J. P. B.: E. H. Jones, M.B., Northampton Dr. G. P. Johnson, Stoke on Trent. **K** Dr. E. D. Kirby, Birmingham; Dr. W. Knott, Middlesbrough; Kidderminste Medical Society, Secretary of, Kidderminster; Mr. C. King, Knebworth; Kew. **L** Dr H. Lankester, London; Liverpool Medical Institution, Secretary of, Liverpool; Mr. N. Leonard, Nottingham; A. R. Laing, M.B., Aberdeen; Dr. W. V. Lush, Weymouth; Dr. C. W. Laver, Laverton, W. Australia; J. Lloyd-Roberts, M.B., Colwyn Bay; Dr. R. M. Littler, Southport. **M** M.B.Lond.; Mr. E. C. Montgomery-Smith, London; D. M. Mackay, M.B., Liverpool; M.D.; Mr. J. R. Motion, Glasgow; Mr. W. B. Mayne Swindon; M.D.Brux., M.R.C.S., L.R.C.P.; Dr. J. A. Menzies, Rochdale; Dr. C. J. Morton, Walthamstow; Magna est Veritas; Mr. V. Matthews, London; M.B.; Mr. A. S. Millard, Edinburgh; Mr. J. C. Martin, Letterkenny; Dr. P. Manson, C.M.G. London. **N** J. W. Noble, M.B., Nottingham; Mr. W. G. Nash, Bedford. **O** Overtax; Mr. E. Owen, London; One of the Branch; Obstetrical Society, Secretary of, London. **P** Mr. E. J. C. Palmer, Gloucester; Dr. E. F. Potter, London; Mr. T. Percival, Knottingley; Peritonitis. **R** Dr. W. R. Rice, Coventry; J. H. Rhodes, M.B., London; Dr. P. Roethlisberger, Baden; Mr. J. Ridout, London; Mr. J. J. T. Ramsay, Blackburn Dr. P. Randall, Bromley, Kent; R. W. M.; Dr. B. Robinson, Chicago; Dr. J. M. Rhodes Didsbury. **S** Dr. W. Sheen, Cardiff; Seafaring Surgeon; Dr. L. E. Shaw, London; Mr. J. H. Sutcliffe, London; Dr. J. H. Simmons, Chicago; Dr. S. Sunderland, London Scientific Press, Assistant Manager of, London; Dr. J. E. Sandilands, London Strophanthus Hispidus; Mr. R. Stewart, London; Mr. R. F. Symons, Pretoria; Dr. J. Shaw, Liverpool; Mr. W. Schroder, London; H. W. Seager, M.B., London; Mr. L. M. Snow, Horsham. **T** T. C.; Dr. J. C. Thomson, Hong Kong; Mr. W. Thorburn, Manchester; Messrs. E. B. Treat and Co., New York; Dr. E. F. Trevelyan, Leeds; R. S. Trotter, M.B., Bedlington; J. H. Teacher, M.B., Glasgow; Dr. J. C. Thresh, Chelmsford. **U** Dr. C. L. Urriola, Panama. **V** Mr E. D. Vinrace, London. **W** Mr. S. W. Wilson, Bath; Mr. E. W. Wallis, London; Dr. J. M. Wilson, Beverley; Dr. W. E. Wynter, London; Dr. F. Willcocks, London; Dr. W. B. Warde, Tunbridge Wells; Mr. H. E. Wilkinson, London; Mr. R. Williams, Liverpool; Dr. C. P. White, London; Dr. G. T. B. Watters, Stonehouse.

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Remarks
ON
THE INFLUENCE OF WIND ON PHTHISIS.

BY W. GORDON, M.D., F.R.C.P.,
Physician to the Royal Devon and Exeter Hospital; Physician to the West of England Eye Infirmary.

THE EXISTING CHAOS OF OPINION.

THERE is a wonderful want of agreement amongst medical authorities as to the influence of wind on phthisis, and the most widely divergent views have been expressed on the subject, some maintaining that wind is injurious, others that it is non-injurious or even beneficial, others again that it may be injurious or beneficial according to circumstances. This divergence of opinion is especially unfortunate at the present time, when the curability of many cases of phthisis by open-air treatment is fully recognized, and when sites are being chosen in many parts of the country for the erection of sanatoria. A few quotations will illustrate how widely opinions differ.

Wind Injurious.

Dr. Haviland, who has made such a careful study of the distribution of phthisis mortality in the registration districts of England and Wales, goes so far as to say that "with the facts before him.....no medical man would send a consumptive case to live where he would be subject to the *full force* of prevailing winds."[1] Sir Hermann Weber says "My own experience has been that strong wind from any quarter.....is injurious to consumptive people, and seems to increase the mortality.[2]

Wind Harmless.

Dr. Theodore Williams says, "Some authorities object strongly to wind in a health station for consumptives, but I am in favour of its ventilating and purifying influence in the case of all diseases of germ origin, and protection by shelters can be successfully secured when wind is excessive."[3] Dr. Symes Thompson says:

> It has been asserted that wind is deleterious to phthisical patients..... A careful observation of the influence of wind on patients subjected to the full effect in windowless rooms, on balconies, and in the open air sets aside this fear. Wind is annoying, chilling, and, if accompanied by dust, is uncomfortable, and in all these respects is, of course, objectionable, but, on the other hand, it sweeps away noxious emanations and supplies fresh air as nothing else can. ..... Some are so impressed with the evil effects of wind that they cannot face a gentle breeze without complaining of shortness of breath, who can yet climb considerable hills with ease, the difficulty being, to a large extent, imaginary. When it is realized that such is the case, and that wind is salutary, these same persons become as pleased with themselves and as manifestly benefited by exposure to a quickly-moving large body of air as they are to life in all weathers without windows.[4]

Sir J. W. Moore agrees with this: "I was delighted personally to hear Dr. Symes Thompson speak as to the innocuousness and harmlessness of wind."[5]

Wind Injurious or Harmless according to Circumstances.

Dr. Solly puts this view thus:

> It is extremely difficult to generalize upon the influence of this meteorological factor [wind] on the development and progress of phthisis. ..... Consumption is neither more or less prevalent in a place simply because it is windy, nor are consumptives as a class made better or worse by this element alone. It is beneficial or detrimental according to its temperature and humidity and the patient's condition.[6]

With such divergent views before the profession from authorities of such weight the conclusion has naturally been drawn that we have no real knowledge on the subject. Sir R. Douglas Powell has written that "the only positive climatic influence made out in relation to phthisis is that dependent upon insufficient surface drainage."[7] Professor Osler, in his *Principles and Practice of Medicine*,[8] does not even mention wind in connexion with the causation or with the climatic treatment of phthisis, and Dr. Kidd, in his article on phthisis in Professor Allbutt's *System of Medicine*, makes no allusion to wind in describing the sort of climate suitable to a consumptive patient.[9]

MARKED INFLUENCE OF WIND IN DEVONSHIRE.

Yet there are facts which suggest that wind is not unimportant, and the following is a brief abstract of observations which have been recently made in Devonshire.

Suggested by the Death-rates of the Rural Districts.

When the establishment of a sanatorium near Exeter was first discussed in the autumn of 1899, I examined the phthisis death-rates of the rural sanitary districts of the county with a view to getting facts which might help in the selection of a site. I chose the "rural sanitary districts" rather than the "registration districts" because the latter included the "urban districts" which last seemed less likely to present fairly uniform conditions of life, and in Devonshire are specially apt to introduce fallacy, since many of them have long been phthisis health resorts, where imported cases are included in the death returns.

My ideas at that time were those generally held, being in accordance with the views expressed by Dr. Theodore Williams that "*the house should be protected from northerly and easterly winds and well open to the south and west.*"[10] My astonishment therefore was great to *find that the ideally-situated localities, well open to south and west, suffered most from phthisis.* I tried to explain this distribution of the phthisis mortality by reference to general sanitation (as indicated by general mortality), to geology, and to rainfall, and failed. Nothing except exposure to west and south-west winds seemed to offer a reasonable explanation. But this explanation was so contrary to my expectation that only a searching test could have convinced me of its validity.

Proved by the Death-rates of the Parishes.

This test was as follows. I took four rural sanitary districts, two on the south coast of Devon, one on the north coast, one in mid-Devon, and examined the phthisis death-rates in the parishes of each separately. I chose parishes rather than larger units of area, because they allowed of more exact classification into "sheltered" and "exposed" as regards wind, into "pervious" and "impervious" as regards soil, and they enabled me to show more clearly, on maps of moderate size, the precise position of the dwellings. Soil and rainfall were shown to be incapable of explaining the results.

The following table gives the phthisis death-rates per 1,000 per annum in exposed, partly-sheltered, and sheltered parishes respectively, with the period of observation and the approximate ratio between the mortalities in exposed and sheltered parishes in each.

Name of District.	Years of Observation.	Parishes. Exposed.	Partly Sheltered.	Sheltered.	Approximate Ratio of Death-rates in Exposed and Sheltered Parishes.
St. Thomas ...	2½	1.34	0.57	0.24	5.5 to 1
Newton Abbot ...	15	1.38	1.08	0.83	3.0 to 2
Okehampton ...	10	1.72	1.28	0.61	3.0 to 1
Barnstaple ...	10	1.10	0.75	0.44	3.0 to 1

Whilst laying little stress on the figures from St. Thomas, because the period of observation was so short, I felt justified, from a consideration of the figures from the other districts, in concluding that the degree of exposure to, or shelter from, west and south-west winds exercised a marked influence in determining a higher or lower rate of phthisis mortality in these districts. This conclusion, with the arguments supporting it, formed the subject of a paper which I had the honour of reading before the Royal Medical and Chirurgical Society in October, 1900.[11] In the discussion which then took place the following objections were raised.

Objections.

1. That the populations quoted were too small to found conclusions on.
2. That the periods of observation were too short.
3. That I had not sufficiently carefully excluded the influence of racial differences.
4. Or of occupations.
5. Or of differences in closeness of intermarriage.
6. Or of differences in parish sanitation.
7. That I should have confined my inquiry to female death-rates.
8. That the wind had only excited an indirect effect through the closure of windows and doors against it.

And to these another objection has since been added, namely:

9. That the wind had only exerted an indirect effect through the damp it drove into the walls.[12]

Replies to Objections.

To these objections I have replied thus:

1. If it can be shown, in a *considerable number* of small villages, in spite of the natural tendency of the small numbers of the populations to produce large exceptions to any law of incidence, that the law holds with no, or almost no, exceptions, then the conclusion to be drawn is, not that this absence of exception is itself a matter of chance, but that the law is so cogent that it overrides chance and compels conformity.

2. Ten years was the period chosen by Sir George Buchanan in his well-known report on phthisis and dampness of subsoil, as well as by Dr. Haviland in preparing his fine map of phthisis mortality in the registration districts of England and Wales. It seems to me a reasonable period.

3, 4, 5, 6. The medical officers of health for the four rural districts, to whose kindness I owe very much, have assured me that in their districts these objections cannot be maintained.

7. The female death-rates bring out, even more markedly than the death-rates of both sexes together, the influence of these winds. To make my inquiry into the female death-rates as conclusive as possible within the time at my disposal, I proceeded as follows:

Female Death-rates, Okehampton District.[13]

I chose a district which seemed specially suited to the purpose—namely, the rural district of Okehampton. This district is the most generally exposed in Devonshire, being open to all winds except the south, and presenting to each wind marked contrasts of shelter and exposure. Its geological formation is very simple, and its rainfall probably fairly uniform. (Rainfall, *per se*, seems to have exceedingly little effect.) Dr. Young, the Medical Officer of Health, kindly supplied me with the parish deaths from phthisis during the preceding ten years, examined and agreed with my classification of the parishes into exposed and sheltered in respect of each separate wind (namely, south-east, east, north-east, north, north-west, west, south-west), and satisfied me that neither occupations, racial differences or differences in closeness of intermarriage or in parish sanitation could account for the distribution of the phthisis mortality.

Tables were drawn up in which the parishes were classified into fully exposed, partly sheltered, and fully sheltered with respect to each separate wind, and maps were constructed to illustrate these exposures and shelters. A geological map, and a map of the distribution of the female phthisis death-rates in the parishes were also made. From these tables and maps it became obvious that geological formation could not explain the phthisis distribution, nor could shelter from and exposure to south-east, east, north-east, or north winds. The influence of north-west wind was doubtful. But the influence of west and south-west winds was unmistakable, and even startling. The following table shows the influence of west and south-west winds considered together.

Okehampton Rural District.

Name of Parish.	Female Population 1891.	Female Deaths from Phthisis in 10 Years.	Female Phthisis Death-rate per 1,000 per Annum.
I. Sheltered Parishes from both			
Inwardleigh ..	258	1	0.4
Monkokehampton	83	0	0.0
Chagford	728	7	0.9
Gidleigh	57	0	0.0
Throwleigh ..	140	2	1.4
Drewsteignton ...	378	3	0.8
Ashbury	37	0	0.0
	1,690	13	0.7
II. Exposed to both.			
Highampton ...	135	5	3.7
Beaworthy... ...	122	3	2.4
Bratton Clovelly...	255	8	3.1
Sourton	217	8	3.6
	729	24	3.3 nearly

This table shows:

(*a*) That the mortality in the parishes fully exposed to both west and south-west winds is relatively high- usually very high, whilst the mortality in the parishes fully sheltered from both is relatively low—usually very low.

(*b*) That the average mortality in the exposed parishes is *nearly five times as great* as that in the sheltered parishes.

(*c*) *That there are no exceptions.*

These figures are very remarkable, and it is difficult to imagine that mere chance can explain them. I considered that they afforded definite proof of the marked influence of these two winds.

Female Death-rates—Barnstaple District.

However, to make assurance surer, I investigated another very exposed area, namely, the Exmoor portion of Barnstaple district. This area is perhaps the second most exposed in Devonshire, being open in some part or other to all winds except the east. Its intricate hollows and winding valleys afford very complete shelter to dwellings within them, and the heights of Exmoor cut off all south-west gales from the northern towns, which are, however, fully exposed to northerly sea winds. The soil is generally fairly pervious. The rainfall, as usual, seems to have little influence *per se*, 50 in. falling in one parish (Arlington) where no deaths, male or female, have occurred within the ten years of observation. The late Dr. Harper, Medical Officer of Health for the Rural District, assured me that neither occupations, or differences in race, intermarriage, or parish sanitation could explain the phthisis distribution. This table shows the influence of west and south-west winds considered together:

Barnstaple Rural District (Exmoor Portion).

Name of Parish.	Female Population, 1891.	Female Deaths from Phthisis in 10 Years.	Female Phthisis Death-rate per 1,000 per Annum.
Sheltered Parishes.			
Westdown	268	1	0.3
Bittadon	23	0	0.0
Eastdown	175	0	0.0
Kentisbury ...	195	1	0.5
Arlington	127	0	0.0
Parracombe ..	151	1	0.6
Brendon	139	0	0.0
Challacombe	113	0	0.0
Highbray	109	0	0.0
Berrynarbor ...	340	0	0.0
Combemartin ...	731	2	0.2
Trentishoe ...	45	0	0.0
Martinhoe	84	0	0.0
Countisbury ...	125	0	0.0
Sherwell	179	0	0.0
	2,804	5	0.17
Exposed Parishes.			
Morthoe	346	3	0.8
Georgeham ...	390	3	0.7
Braunton	1,125	15	1.3
Heanton Punchardon	224	4	1.8
Ashford	87	0	0.0
Goodleigh	119	1	0.8
Stoke Rivers ...	96	1	1.0
Loxhore	100	2	2.0
Bratton Fleming...	247	4	1.6
	2,734	33	1.2

It shows:

(*a*) That the mortality in the parishes fully exposed to both west and south-west winds is relatively high—usually considerable—whilst the mortality in the parishes fully sheltered from both is relatively low—in the majority *nil*.

(*b*) That the average mortality in the parishes exposed to these winds is *seven times as great as in the parishes sheltered from them.*

(*c*) *That amongst twenty-four parishes there is only one exception, and that in a very small parish—the smallest parish exposed.*

Taking into account the suggestive result of the comparison of the phthisis death-rates of the rural districts of Devon, the striking results of the comparisons of the death-rates in the parishes of four separate rural districts in different parts of the county, and these startling results of the comparisons of the female phthisis death-rates in two specially-exposed areas, I can conceive of no other reasonable conclusion except that in these districts the west and south-west winds exercise a very marked influence on the phthisis death-rate amongst the populations exposed to them.

I naturally do not contend that these winds are the only influences at work. Indeed, another influence, that of soil, which is evident although subordinate, serves to explain some

peculiarities in the foregoing tables. The relatively lower death-rates, amongst females in Barnstaple district, as compared with those in Okehampton district, probably depend on the more pervious soil of the former. Again, the less marked contrasts in Newton Abbot district, between the mortalities in exposed and sheltered parishes, is probably due to the fact that many exposed parishes are on pervious soil, whilst many sheltered parishes are on impervious soil under a very heavy rainfall. Heavy rainfall on an impervious soil, where surface drainage is not rapid, must, of course, increase its dampness.

8, 9. Coming now to the last two objections, it is contended that this influence of these winds is only an indirect one, and that the direct cause of the increased mortality in exposed areas is either defective house ventilation (8) or house dampness (9). If these were correct explanations the wind *per se* would be a matter of little importance. But, though plausible, I would submit that both explanations are unsound.

8. *It is merely a matter of conjecture that doors and windows are specially closed against these winds.* There is no evidence to prove it. Cottage windows in the country districts of Devon are generally shut in all weathers and many are not capable of being opened. Doors and windows, moreover, are not all on the west or south-west side of the houses.

9. It is doubtful if a house exposed to rainy winds, on a hill-slope where wet drains easily away, is as damp as one in a valley, on a clay soil which receives the drainage of surrounding hills.

Moreover if the houses are the source of the evil—whether through defective ventilation or dampness—one would expect the male mortalities from phthisis to present as marked contrasts as the female, which they do not.

Finally, these explanations wholly fail to account for the effects of these winds on phthisis patients in dry well-ventilated dwellings.

Confirmed by the Observed Effects on Phthisis Patients.

I have watched the effects of these winds on phthisis patients in hospital and in their own houses and they seem to be uniformly injurious. A friend who has a number of phthisis patients under his care on a hill-top, in a well-built, well-ventilated house, finds that they do well in all winds except west and south-west, in which they do badly. Another friend, who practises on both sides of a long hill running north and south, tells me his phthisis patients die faster on its western slope.

Taking the observed effects of these winds on cases of phthisis, and the results of investigating the phthisis death-rates of exposed and sheltered localities into account together, it appears to me certain that, in Devonshire, west and south-west winds exercise a very marked and injurious influence on the disease.

Influence of Wind Elsewhere.

But, if wind exerts so marked an influence in Devonshire, is it probable that it is of little influence elsewhere? At present there are no sufficient data for a sound conclusion, but the following considerations seem at least to point to the importance of the question.

It is not every wind in Devonshire which exercises so notable an effect. What are the characters of the winds which are so injurious?

First, they are the *prevalent winds* of the county just as they are the prevalent winds of the whole of the British archipelago. But this prevalence may be easily overstated. From the tables published by Dr. Symes Thompson in the *Climates and Baths of Great Britain*,[14] it may fairly be concluded that west and south-west winds in Devon together do not account for more than one-third of the total windy days. Prevalence, however, has no doubt something to do with their influence.

Secondly, *sea winds* have been said by Dr. Haviland and others to be specially harmful. But in Okehampton district all winds except the north east may be equally well described as "sea winds," yet only the west and south-west can be shown to exercise a pronounced effect. Again, seaside places like Beer and Paignton, sheltered from west and south-west, and fully exposed to east and south east winds over the sea, have very low phthisis death-rates amongst their female populations; so too Ilfracombe on the north coast of Devon, completely sheltered from south-west, and fairly sheltered from west, but fully exposed to north-west, north, and north-east across the wide estuary of the Severn, has a female phthisis death-rate of only 0.6 per 1,000.

Thirdly, they are *strong winds*, and some of the greatest authorities say any strong winds are injurious. Yet experience abroad does not altogether bear this out. The strong, dry winds of Upper Egypt, of Colorado, and of the inland plains of Australia and South Africa, although very dusty and disagreeable, seem to do little harm to phthisis patients, and are associated with populations almost free from the disease.

Lastly, they are *strong wet winds*. Can such be shown to be deleterious elsewhere? Probably the most established reputations for the cure of phthisis belong to Davos, Janja, Görbersdorf, Nordrach, Colorado, and the inland plains of Australia and South Africa. Of these, not one is exposed to prevalent strong wet wind. The high altitudes which have never attained a reputation for the cure of phthisis are those of the Himalayas, and they are specially visited by strong wet winds, at least at certain seasons. Lately Dr. Allen, of Natal, has drawn attention to the bad effect on phthisical patients of the wet winds of that colony,[15] and Dr. Auffret has emphasized the unexpectedly high death-rate from phthisis at Brest, which he attributes to the sudden changes from the wet winds from west and south-west to the drier and colder north and north-east.[16]

Taking these facts into consideration, it may be reasonably believed—

1. That west and south-west winds in Devon owe their bad influence on phthisis to their being the prevalent strong wet winds of the county.

2. That strong wet winds anywhere are not unlikely to produce somewhat similar effects.

Possible Explanations.

Professor Beneke has shown, by his experiments on the cooling of flasks of water exposed to wind, that moist winds have a specially chilling effect.[17] It is possible, therefore, that strong wet winds are deleterious because they are very *chilling* winds.

Sir Hermann Weber has emphasized the tendency of strong wind to induce respiratory catarrh.[18] It is possible these winds *excite bronchial catarrh.*

There can, I think, be no doubt that, in Devon at least, these rainy winds, when strong, have a peculiarly *depressing* effect, inducing langour and making fatigue easily produced. Such depression may conceivably lower the resistance of the body to tuberculous invasion. Sir Patrick Manson's observations on wind and malaria are particularly interesting in this connexion.[19] He writes:

> Stanley says that so long as he and his companions were ascending the Congo, the wind being with them, and therefore not much felt, they did not have fever; but that on descending the stream, a strong breeze blowing in their faces and chilling them, they constantly had attacks. The physiological depression and disturbances caused by the cold wind paralysed the self-protecting power of the body, and permitted the hitherto latent plasmodia to get the upper hand. And so it is found in the highly malarial districts of tropical Africa, that houses perched on elevated and windy situations are not so healthy as those on the lower, and therefore less exposed and more sheltered ground. This latter fact must not be interpreted as showing that wind causes or carries malaria. The wind merely acts as a cause of physiological strain, of chills; it acts just in the same way as fatigue, hunger, a wetting, disease, fear, excesses or depressing emotions, are found to do.

Conclusions.

To sum up briefly the foregoing conclusions:

1. West and south-west winds in Devonshire have a marked influence on phthisis, raising the phthisis death-rate amongst populations exposed to them, and injuring those who have already developed the disease.

2. This bad influence is probably due to the fact that west and south-west winds are the prevalent strong wet winds of the county.

3. It is reasonable to believe that strong, wet winds anywhere may produce similar effects.

4. The bad effects may be possibly explained by the chilling and depressing nature of the winds, and by their tendency to excite bronchial catarrh in those exposed to them.

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1895), vol. i, pp. 77, 82, 88, 91. [15] *Transactions of the British Congress on Tuberculosis*, vol. iii, p. 39, et seq. [16] Ibid, p. 81, et seq. [17] Quoted by Dr. Burney Yeo, *Climate and Health Resorts*, p. 26, et seq. [18] *Med. Chir. Trans.*, vol. lxxxiv, p. 29. [19] *Tropical Diseases* (1900), p. 120.

CASE OF

PYOPERICARDITIS: PYOPNEUMO-PERICARDIUM: PNEUMOCOCCUS PYAEMIA.

BY

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WITH NOTES ON THE OPERATIONS BY

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IN the year 1883 Samuel West, in describing a case of purulent pericarditis which had been successfully operated on, speaks of this condition as "one of the rarest of clinical rarities."[4]

Batten, in the BRITISH MEDICAL JOURNAL (1901), in giving an analysis of necropsies, writes of pyopericarditis, that "it is a disease seldom suspected, still more rarely diagnosed, and hardly ever treated, and yet it is one that is present in nearly 3 per cent. of the deaths in the records of the Children's Hospital."

In the *Annals of Surgery*, Philadelphia, for the year 1900, C. B. Porter published an article entitled Suppurative Pericarditis and its Surgical Treatment, with an Analysis of Fifty-one Cases reported in Literature.[1–51] But among these 51 cases are included 2 (Nos. 40 and 51) which were simple serous effusions, and both of these recovered. In this paper he makes the following observations:

"Of the total 51 cases of incision for pericarditis, 20 recovered and 31 died—a mortality for all cases of 60.5 per cent.

"Of the 14 cases in which acute pneumonia, either lobar, bronchial, or septic, was the cause of the pericarditis, only 4 recovered (Bohm,[33] Lilienthal,[41] Porter,[50] and Bjorkmann[33]). In 2 of these the pneumococcus was cultivated from the pus. The other two report no bacteriological examination."

Of the above 51 cases, 5 have been recorded in the BRITISH MEDICAL JOURNAL: West, 1883;[4] Davidson (2 cases), 1891;[17 18] Bronner, 1891;[19] Robinson, 1898.[43]

The case recorded below differs in many respects from any of those previously published. That described in this JOURNAL in 1891 by Bronner presented the nearest resemblance clinically, though unfortunately in his case no necropsy was permitted, and so the exact state of the organs was never determined.

The case here published I saw several times in consultation, first with Dr. D. Wilson of Bushey Heath, and then with Dr. Levick of Pinner. I have to thank those gentlemen for their kind assistance with these notes.

History and State on Examination.

The patient was a healthy public school boy, aged 16, whose father had died at 33 from phthisis. His mother was living and well, but she had lost a sister at 21 after amputation of the leg for disease of the knee-joint. A brother older and a sister younger were both living and well. The patient had no previous history of serious illness. The attack commenced at school on December 7th, 1902, when he complained of a stiff neck and sore throat. He was seen by Dr. Wilson the next day, and found to have some general injection of the fauces, suggestive of a commencing tonsillitis. There was some elevation of temperature and he was kept in bed. On December 10th he was more feverish, and there was a slight dry cough, but the throat was better. During the next day or two there were some apparently superficial *râles* to be heard, at one time over the region of the right nipple, and at another in the left axillary region. The temperature on one occasion was 105° F.

On December 12th the boy presented many of the signs of a case of pneumonia of an infectious type. The pulse was 150 or more; respirations 50 to 60, very short, shallow, and catchy; slight dry cough, great restlessness; temperature about 103°. The patient appeared very ill for the physical signs, which consisted only of some large pleuritic *râles* heard just outside the left nipple region, with some impairment of percussion note over the base of the left lung. The heart sounds were indistinct, but no *bruit* was heard.

On December 13th he was obviously worse—the pleuritic *râles* over the left side were less distinct, and the dullness slightly more marked; with a very small area of tubular breathing, and some slightly suspicious signs at the right base; cough very slight; no expectoration. He also complained of pain in the epigastric region, and there was some fullness, tenseness and great tenderness there. The heart's action was greatly excited and the sounds more indistinct—no *bruit*. There was considerable blueness over the malar regions.

He kept about the same till December 15th, when the temperature fell to normal but unaccompanied by sweating; the pulse improved, slowing to 104, but the respirations continued about 48, and there was an absence of any marked general improvement. The temperature remained normal for about twelve hours and then rose to 99.8°, falling to normal again shortly after, and again rising slightly the following evening. This condition continued for the next few days. All the pulmonary signs rapidly cleared up, but there appeared to be an increasing area of cardiac dullness, and the heart sounds became less distinct; the apex beat could not be felt.

On December 23rd, there being no great change in his condition, he was put into a fly and driven to his home, about an hour's drive, being kept all the time in the recumbent position. He then came under the care of Dr. Levick. During the next few days he appeared to improve a little in himself, but the heart's action kept rapid and feeble all the time, and he presently became gradually worse.

On December 30th he appeared very ill; the pulse was running, irregular, and very feeble. The respirations were greatly embarrassed, with marked expiratory distress. All the symptoms were greatly aggravated on placing the patient on his back for the purpose of examination, which could therefore only be done rapidly and not very satisfactorily. There was great restlessness; he was perpetually asking to be moved from side to side, being too weak to move even his hands or arms himself; the extremities were cold, and the cheeks and ears very cyanosed.

The cardiac dullness had greatly increased both upwards and outwards, the heart sounds were hardly audible, but obviously much more (probably twice) rapid than the pulse at the wrist (pulsus paradoxus). There was no dullness over the bases of the lungs or adventitious sounds heard. The spleen was felt below the ribs, and appeared to be displaced downwards, and slightly enlarged. There was no oedema of the legs or elsewhere.

On December 31st, during the morning, the patient had an alarming attack of heart failure, and for a time he was practically pulseless. The temperature for some hours had been subnormal, and the boy appeared to be collapsed, with the extremities blue and cold. Strychnine hypodermically was administered and he rallied a little.

First Operation.

In the afternoon an anaesthetic was administered by Mr. Rowell, and Mr. Lane inserted an exploring needle into the area of precordial dullness and found pus, a piece of rib was eventually resected, and a local empyema was evacuated. This pus was afterwards examined, and found to contain the pneumococcus in considerable numbers, and was apparently unmixed with other organisms. No tubercle bacilli were found.

Although somewhat relieved by the opening of the left pleura and free discharge of pus, still the pulse continued rapid and unsatisfactory, the respirations were just as rapid but somewhat deeper, the temperature remained elevated, and only fell to the normal for a very short time on two occasions during the next ten days, after which all the symptoms became more alarming, and the temperature rose to 103.6°. A second operation was decided upon, as the symptoms pointed to a further collection of pus.

Second Operation.

An anaesthetic was again administered by Mr. Rowell, and Mr. Lane inserted his finger into the opening in the chest wall, and now felt the pericardium bulging against it, and evidently distended with fluid. By the exercise of firm pressure the finger was forced through the wall of the pericardium and a large quantity (about 10 ounces) of pus escaped into the pleural cavity and externally. The heart was felt to occupy the back part of the dilated pericardial space, being forced away from the sternum by the fluid which distended the pericardium. The pus was identical in character with that in the empyema, no flakes were present, and the surface of the heart was smooth and not covered by lymph.

After-History.

The next day, January 11th, the temperature fell at one time to normal, and the pulse was fuller and slower than it had been for many days. After the second operation he was given a mixture containing opium and digitalis.

January 14th. Temperature each day since the last operation had dropped at some time to the normal, and the subsequent rise had each day been less marked. The appetite was bad, but otherwise the condition was satisfactory.

The opening in the thorax had enlarged, owing partly to a general bulging of this side of the chest wall, which presented a large air cavity extending from beyond the right edge of the sternum; and partly to the emaciation and consequent retraction of the intercostal spaces, with the result that there was now some ½ in. of rib exposed anteriorly. The lung was expanding satisfactorily, and as the boy lay on his back one could look into the opening in the chest wall and through the foramen, about ¾ in. in diameter, into the pericardium, at the posterior part of which the heart was seen beating vigorously; the surface of the heart and pericardium was dry and of a pale mahogany colour, and there did not appear to be any fluid in the pericardium. There was a small slough attached to the edges of the pericardial opening, but beyond this the parts appeared perfectly healthy. The action of the heart was at once considerably agitated on removing the dressings and allowing more air

to enter the pericardial sac. It was therefore decided only to change the dressings once a day, and then as rapidly as possible. The tube was also left out.

January 17th. The temperature during the last three or four days had been very irregular. In the morning it would be not more than 96°, and in the evening over 101°. The respirations and pulse had kept about the same.

January 18th. There was some recovery of strength in the legs and arms, the appetite was slightly better, so also the general colour. The respirations were deeper. Lying on the left side, little or no air entered through the opening in the thorax—the curious hollow, metallic heart sounds could be distinctly heard some 4 or 5 ft. away from the bed—"resonance sounds." By slightly raising his shoulders, and turning him more on to his back, air entered the opening freely, and the metallic cardiac sounds completely disappeared.

January 20th. Urine, specific gravity 1025, acid, very high-coloured, with large deposits of dark-brownish lithates. No albumen or sugar was present. Patient for first time during his illness was perspiring freely, and was obviously weaker. The temperature the last four days had varied between 99.4° and 102°.

January 21st. Condition this morning was very critical. Upper region of abdomen was distended. A finger was inserted into the opening. An hour or two afterwards a large quantity of pus escaped from the wound, and the fullness in the epigastric region diminished. The lung had expanded very completely, and now came up to the external opening in the chest wall, and covered over the foramen in the pericardium. The pleural cavity had filled with blood-stained serum, a large quantity of which escaped with each movement of respiration. During the afternoon the diaphragm did not appear to be acting, and the liver dullness was increased downwards, the boy was perspiring profusely, and the pulse was very weak.

The blood-stained serum continued to escape freely, and the patient became more blanched. He became suddenly worse, and died at 6 o'clock the next morning, January 22nd. His mind kept perfectly clear to the very last. The temperature a few minutes before death was over 100° F., and a small quantity of recent blood clot escaped from the wound. That at the time of death the temperature was raised was somewhat remarkable, as there was internal haemorrhage of a considerable degree going on; in fact the necropsy showed that the loss of blood appeared to have been the immediate cause of death.

NOTE ON THE OPERATION BY MR. LANE.

On December 31st I proceeded to remove a portion of the sixth left rib about an inch outside the nipple line, sufficiently long to allow of the free introduction of the finger into the suppurating cavity. About two pints or more of creamy pus escaped, containing no flakes or masses, and presenting all the characters of that produced by the pneumococcus. The diaphragm could be felt at its attachment to the ribs, while above and behind the shrunken lung could be touched at the extreme limit of the space.

As the rapidity of the pulse and the general condition of the patient had suggested the presence of pus in the pericardium, this region was carefully examined with the object of detecting fluctuation in it. Though the finger could reach the middle line, the pericardium could not be felt, nor could the pulsations of the heart be detected. This led to the hope that the pericardium had not been affected, and that the conditions suggesting the presence of pus in it were due to the great displacement of the organ. A large short tube was fixed in position, and the wound was dressed with cyanide gauze and some antiseptic wool. The dressings were changed twice daily, and the part was rendered as clean as circumstances permitted. The patient was kept as much as possible on his left side to permit of free drainage.

It would seem from the sequel of the case that though there was probably pus in the pericardium at this period it existed only in a small quantity, since the heart was displaced considerably to the right of the middle line; and that the bulk of the amount evacuated later formed subsequent to this operation.

In a paper in the *Guy's Hospital Reports for 1882* entitled Cases of Empyema in Children treated by Removal of a Portion of a Rib, in which I described, for the first time, the operative treatment of empyema by the resection of a length of a rib, which I had devised and practised successfully, is related the history of a case of purulent pericarditis associated with empyema on the left side, the details of which were very similar to those presented by the patient forming the subject of this paper. In it I called attention to the facility with which this operation, now performed as a routine practice, afforded for careful digital examination of the pericardium and the detection of pus in it, and the drainage of the cavity.

NOTES ON THE ANAESTHETIC BY MR. ROWELL.

December 31st. The patient was in great distress. The respirations were short and rapid, with constant expiratory straining due to muscular contraction at and above the glottis causing obstruction. There was also much terror of the anaesthetic, though he did his best to breathe as instructed. Pulse uncountable, pupils dilated, marked cyanosis. He was placed on the right (sound) side, as breathing was less difficult in that position than when on his back. A.C.E. mixture on a Skinner's mask was used for the first two or three minutes, as he could only keep the breathing efficient with a very mild vapour. There was constant moaning until, at the end of this time, a Rendle's mask was employed with a drachm of the mixture on the sponge. He was then rapidly relaxed, moaning ceased, the colour slightly improved, expiratory straining much diminished, but there was slight inspiratory stertor. From this time until the end ether was given upon the sponge of the Rendle's mask in frequent small quantities, and the symptoms scarcely varied. He had ɱv of liq. strych. hypodermically while the exploration with the syringe was proceeding. The corneal reflex was strong throughout, pupils rather large, globes not quite stationary. A slight movement of the limbs occurred while the resection of the rib was proceeding. He recovered consciousness in a few minutes, although the duration of the administration had been about twenty minutes. There were no after-effects.

On January 10th his condition as regards colour, pulse, and apparent strength was rather better than on the former occasion, but there was a still greater terror of the anaesthetic, and the patient said that he knew he should not live through the operation. He nevertheless made every effort to take it as directed. The position and method employed were the same as before, and the same symptoms were encountered. There was no change when the pericardium was opened. Duration shorter than before, and recovery equally rapid, with no after-sickness.

NECROPSY.

The body was extremely emaciated and the surface blanched. On opening the thorax, the pericardium and left pleural cavity were found to contain a large quantity of recent blood clot. About two ounces were in the pericardium, and this extended through the foramen into the pleural cavity, which contained about ten ounces. The clot was most abundant about the base of the heart, especially in relation to the right auricle. With the naked eye it was impossible to be certain of the source of the haemorrhage.

The right lung appeared to be normal, with some slight recent pleuritic adhesions towards the median line posteriorly. The left lung was firmly adherent over the whole of the posterior part and also to the pericardium; the whole of the free anterior and lateral surface was covered by a thick deposit of firmly-adherent lymph, which extended over both surfaces of the pericardium and produced considerable irregular thickening of this membrane. The edges of the connecting foramen between the pleural and pericardial cavity were healthy. With the exception of the extreme apex and the median area adherent to the pericardium, the lung was well expanded, vesicular and healthy, only a little frothy fluid escaped when it was cut into. The apex and median adherent parts were solid. No tubercle or other deposits were seen with the naked eye, nor was any further collection of pus found.

The whole surface of the heart was also covered by a thick deposit of firmly adherent lymph. The size of the heart was about normal, there were a few very vascular adhesions posteriorly, connecting the right ventricle with the pericardium. The muscular walls of the heart were rather soft, especially parts of the right auricle, which appeared much degenerated in places, and these walls readily tore when handled. There was some slight deposit of pale fibrin between some of the pectinate processes, but no obvious deposit on the free surface of any of the valves, nor did these show any morbid changes, to the naked eye.

The large intestine, especially the transverse colon, was distended by flatus, otherwise the abdominal organs revealed no gross lesion, nor was there any fluid in the peritoneal cavity.

MICROSCOPICAL AND BACTERIOLOGICAL REPORT.

Sections through the wall of the right auricle stained by Gram's method, and also with haemotoxylin and eosin, showed the pericardium to be covered by bosses and tags of adherent lymph, and the latter was crowded with micrococci, which existed in dense patches and rows throughout the connective tissue layer of the pericardium. In places the cocci were arranged in oval masses, appearing as emboli. The areolar tissue superficial to the myocardium was infiltrated by leucocytes. The myocardium showed hyaline degeneration of the muscle fibres. In places there was a good deal of round-celled infiltration amongst the muscle fibres, and in other places the fibres had undergone necrosis, and fibroblasts had begun to take their place. The fibres were in some areas separated by swollen oedematous connective tissue containing leucocytes and distended vessels. In the musculi pectinati the hyaline degeneration was less marked, but the fibres cut across were very granular. The endocardium was swollen, and its connective tissue reduced in places by oedema to a delicate reticulum. In the meshes of this network numerous cocci were present, but no dense masses existed in the endocardium, such as were seen in the areolar tissue of the pericardium. In the interstices between the pectinate bundles there were strands of fibrin containing cocci. No fully-formed abscesses existed in the section examined, but the masses of cocci surrounded by areas of necrosis found in the subpericardial tissue were evidence of abscess formation.

In many places the diplococci arrangement was very well shown, and in many the capsule was very distinct, together with a clear unstained area around the cocci. There was also a marked tendency for them to occur in small chains. No other organisms were present.

Sections through the collapsed lung with Ziel-Nielsen stain showed the pleura to be considerably thickened; the thickening consisted of fibroblasts and round-celled infiltration. There was proliferation of the endothelial cells covering the pleura. The lung showed some thickening of alveolar septa in places and a good deal of desquamation of alveolar epithelium. The whole section was crowded with cocci, which were both intracelular and extracellular. There were large numbers in the endothelial cells lining the pleura and many in the cells of the alveolar epithelium. In the greater part they appeared as diplococci and in many cases showed a distinct capsule, in some places they had taken on the methylene blue and in others the fuchsine staining. They were undoubtedly the pneumococcus of Fraenkel, and there was no evidence of any other organism present. With Gram and eosin the cocci took the stain, but the capsules were not so distinctly shown.

SUMMARY OF CASE AND REMARKS.

The case may be briefly summarized thus: A healthy lad of 16 developed a sore throat which in a day or two was followed by most of the symptoms, but without very distinct physical signs, of pneumonia of the left base. On the eighth day after the onset of the attack an apparent crisis occurred. In a few hours the temperature again rose slightly, falling to the normal the following morning, to rise again in the evening for the next three days. Then came a period of five days with the temperature generally raised and with some slight increase of all the symptoms. For the next eight days the temperature was usually markedly subnormal, and during this time there existed the pulsus paradoxus. At no time was either an endocardial or exocardial murmur heard. A left empyema was then opened, but without the relief to the general symptoms which had been expected. The pulse, however, became much more regular and of better volume, and, as far as could be determined, of the same rate as the heart's beat. Ten days afterwards the pericardium was opened, but with only a slight temporary general improvement, soon followed by a more irregular temperature. The patient died thirteen days after the pericardium had been opened, and twenty-three days after the operation on the pleura. The immediate cause of death appeared to be the result of internal haemorrhage from the heart, due to rupture of one or more small abscesses in its walls. The bacteriological examination proved the presence of pneumococci in great numbers in the blood, death being the result of a general pyaemia, due to the pneumococcus.

Judging from the immediate result of the opening of the pericardium and the subsequent course of events, had there not been a general pyaemic infection, there was no reason why the case should not have recovered.

Many authorities have described the very unusual and peculiar heart sounds heard in cases of pneumo-pericardium with and without the presence of fluid. In the case here described, commencing immediately after the second operation as pneumothorax and pyopneumo-pericardium; after the first few hours of opening the pericardium it became a condition of pneumothorax accompanied by pneumo-pericardium. The following are the classical descriptions of the sounds heard under these conditions: Brichetean, "*l'eau agitée par la roue d'un moulin*," or "a water wheel sound"; Laënnec "*bruit de fluctuation*," or fluctuation sound, audible with the action of the heart: Begbie, "a churning splash"; Stokes, "a mixture of various attrition murmurs with a large crepitating and gurgling sound, while to all these phenomena are added a distinct metallic character, the region of the heart giving a '*bruit de pot fêlé*' on percussion."

From the heart sounds heard in this case, after the pericardium had been opened, I should describe them as accompanied by a peculiar loud metallic resonance, such as reminded one of the resonance accompanying sounds in a small cave. In this condition (due no doubt to the very large air cavity filling the pericardium and left pleura, and extending from well over the right edge of the sternum) the heart sounds were so increased by resonance that when the patient lay on the left side, so as to press the dressings firmly over the opening in the thorax and prevent the entrance and exit of external air, the heart beats could be heard very distinctly some 4 or 5 ft. away from the bed. Upon slightly turning the patient more on to his back, or by raising the shoulders, in either case allowing the entrance and exit of air through the wound, the heart sounds could no longer be heard away from the patient, and also lost their metallic resonance character.

Date.	Temperature.	Pulse.	Respiration.	Notes.
1902.				
Dec. 11	M., 103.0°	—	—	
	E., 102.2°	—	—	
,, 12	M., 101.6°	158	64	
	E., 103 2°	128	64	
,, 13	M., 101.4°	128	64	
	E., 102.6°	120	54	
,, 14	M., 101 4°	122	52	
	E., 101.2°	122	52	
,, 15	M., 98.6°	112	48	Crisis.
	E., 99 8°	104	48	
,, 16	M., 97.8°	112	44	
	E., 99.8°	100	48	
,, 17	M., 98.6°	104	40	
	E., 99.2°	104	44	
,, 18	M., 98.0°	144	36	
	E., 99 4°	106	36	
,, 19	M., 100.0°	108	48	
	E., 101.6°	110	48	
,, 20	M., 100.0°	68	30	
	E., 101.2°	112	48	
,, 21	M., 99.4°	108	40	
	E., 100.0°	84	40	
,, 22	M., 99.8°	100	44	
	E., 100.2°	80	48	
,, 23	M., 98.8°	112	48	Removed home.
	E., 99.4°	—	—	
,, 24	M., 97.4°	68	40	
	E., 96.6°	—	—	
,, 25	M., 97.0°	88	44	
	E., 97.4°	78	36	
,, 26	M., 97.8°	60	42	
	E., 99.2°	68	42	
,, 27	M., 97.6°	68	42	
	E., 98.0°	78	40	
,, 28	M., 97.4°	76	40	
	E., 98.8°	60	44	
,, 29	M., 97.2°	84	46	
	E., 98.2°	68	40	
,, 30	M., 97.4°	80	44	
	E., 98.2°	73	44	
,, 31	M., 97.0°	78	44	
	E., 99.6°	100	48	Pleura opened.
1903.				
Jan. 1	M., 99.2°	116	52	
	E., 99.8°	124	54	
,, 2	M., 99.2°	120	48	
	E., 101.0°	120	52	
,, 3	M., 99.6°	122	48	
	E., 99.6°	120	48	
,, 4	M., 98.2°	116	48	
	E., 101 6°	128	52	
,, 5	M., 99.4°	120	32	
	E., 99.8°	120	48	
,, 6	M., 101.2°	118	48	
	E., 101.2°	112	48	
,, 7	M., 97 6°	120	48	
	E., 101.2°	120	52	
,, 8	M., 100.4°	116	60	
	E., 102 0°	120	52	
,, 9	M., 100.8°	128	31	
	E., 103.2°	126	58	
,, 10	M., 102.8°	130	52	
	E., 103 0°	120	52	Pericardium opened.
,, 11	M., 99.8°	114	38	
	E., 101.4°	106	39	
,, 12	M., 100.4°	116	44	
	E., 100.8°	120	44	
,, 13	M., 99.2°	116	24	
	E., 100 6°	122	46	
,, 14	M., 96.2°	116	29	
	E., 99.2°	116	44	
,, 15	M., 96.4°	110	35	
	E., 100.2°	106	48	
,, 16	M., 96.2°	108	30	
	E., 100.8°	120	42	
,, 17	M., 99.8°	122	32	
	E., 101.2°	122	48	
,, 18	M., 98.4°	110	38	
	E., 100.4°	110	38	
,, 19	M., 100 2°	112	37	
	E., 102.6°	112	42	
,, 20	M., 100.0°	116	38	
	E., 102.8°	120	48	
,, 21	M., 103 0°	124	42	
	E., 100.4°	120	52	
,, 22	M., 100.2°	—	—	Death.

Since the publication of C. B. Porter's paper in 1900 I have found the following cases recorded:

Reichard (2 cases operated on by Lindner) *Centralbl. f. Chir.*, 1900, No. 44. In the first case, which resulted from a knife stab, the third left rib was resected and two tubes were inserted—the operation took ten minutes—patient was well in six weeks.

In the second case, which followed an attack of influenza and arthritic rheumatism, the fourth rib was resected; recovery was prolonged as the drainage was never satisfactory, and some time after a note was made to the effect that the heart's action was still somewhat quick.

R. Sievers, Fall af pneumopyo-pericardium. [*Finska läkällsk. handl.* Helsingfors: 1901, xliii.

Villemin, Un cas de péricardite purulente traité par l'incision du péricarde. *Ann. de Méd. et Chir. Infant.* Paris: 1901.

Devaux, Pleurésie putride, péricardite putride, pleurotomie, mort. *J. o. Sc. Méd. de Lille*, 1901, xxiv.

On going through all the recorded cases of purulent pericarditis operated on, there does not appear to have been one in which tubercle was the cause of the condition, a fact certainly worth noting.

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CASE OF INFECTIVE ENDOCARDITIS SUCCESSFULLY TREATED BY RECTAL INJECTIONS OF ANTISTREPTOCOCCUS SERUM.*

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A. R., aged 15, printer's boy, admitted into Matthew Ward, St. Bartholomew's Hospital, April 9th, 1902.

History.—He felt ill two days previously, and had a rigor on each day. He had pains all over the body, and a rash appeared on the trunk and limbs. There was no history of growing pains, rheumatism, or chorea. The family history was unimportant, but the father was believed to have suffered from rheumatism.

State on Examination.—The boy was anaemic, very feeble, and ill, movements were painful, and caused dyspnoea. He was sparely nourished, fair-haired, with grey eyes. Pupils large, reacting well, conjunctivae suffused, tongue thickly furred. Teeth fairly good. Fauces red and congested, tonsils large and engorged. The pulse was full and soft. The temperature was 98.8° F. on admission, but rose in six hours to 103.8°, when he had a rigor. There was a septic scab on the right elbow, the result of a recent injury. On the limbs and abdomen were several raised red spots of various sizes which closely resembled patches of erythema multiforme or erythema nodosum. The lungs were free from disease, and the thorax moved well. The liver was of normal dimensions, and the spleen impalpable. The heart's apex beat was inside the nipple line, with increased impulse. A systolic murmur was audible at the apex, heard all over the precordia, and the second sound was muffled. The urine was of specific gravity 1016 and free from albumen and sugar. Knee-jerks natural. Rigors occurred on April 11th and 12th, and on the latter date a fresh eruption of erythema. On the 14th an eruption of herpes appeared on the left cheek. On the 15th there was another rigor, with temperature of 104.8°. On the 17th Widal reaction was negative. For some days afterwards there were rigors daily and occasional fresh eruptions, some with petechial haemorrhages, and some on the hands, vesicular, and there was vomiting at intervals. Between the febrile attacks the boy felt well and took his food with relish. During the attacks there was headache, with more rapid respirations and some huskiness of the voice.

Serum Treatment and Progress.—April 30th. Treatment with fresh yeast was begun, two or three tablespoonfuls being given in water twice or thrice daily. Hitherto, salicylate of sodium, quinine, and calomel had been given with no benefit, and a light diet with fish. Ten c.cm. of antistreptococcus serum, prepared from mixed cultures, were injected into the left flank. This was repeated on May 4th. Pains in the limbs were again felt. No improvement appeared to follow these injections, and the temperature rose daily in flights to 102°, 103°, and 105°. May 11th. Slight rigor. Temperature, 104.2°. May 12th. Conjunctivitis of left eye with ecchymosis, and swelling in the left ankle-joint. Occasional fresh outbreaks of eruption. Patient still feeling well in the intervals of fever, and eating well. Oil of gaultheria in ♏xx doses relieved the pain in the ankle. A blood count showed 4,000,000 red globules, and 55 per cent. of haemoglobin, colour index 0.68, and a culture of it proved negative of any organisms. May 22nd. The pyrexia continued, with falls to 97° and normal daily. The yeast was taken daily. Effusion was now found in the left knee. A cultivation of the fluid in it proved negative. A presystolic murmur was now observed, and a systolic murmur followed it. A soft souffle was also heard in the aortic area, and in the pulmonary arterial area, the second sound being clear. May 27th. Some pains in the left shoulder-joint. June 1st. No more rigors, but daily flights of temperature, 103° or 104° with remissions to normal or below this, The patient was gradually losing strength and appetite and was very ill. Fresh spots came out at intervals, and pains occurred in various joints and other situations. It was now decided to employ mixed antistreptococcus serum by means of rectal injections, 10 c.cm. to be given daily. In two days there was improvement, and this was more decided in the course of a week. The temperatnre had not exceeded 101.2° since this treatment was begun, there was less pain and no further outbursts of spots. The appetite improved markedly, and the boy said he felt quite well. The yeast treatment was continued together with the serum injections. From this time the improvement steadily continued. The cardiac murmur altered somewhat, the systolic murmur remaining, but not being heard at the scapular angle. The blood count on July 17th, was 6,260,000 reds, 8,000 white, 57 per cent. haemoglobin, and the colour index 0.45. There was no further rash, and there was improvement in the general nutrition. The pyrexia was subdued within two weeks after the rectal injections. By the end of June the temperature had become fairly normal. The serum treatment was maintained well into July, long after the febrile condition had abated. The boy was sent to the country for three weeks, and returned in excellent health. He was taken away from London and set to work in a farm in the country. The heart sounds were found to be normal in September, and the boy was in the best of health. The first diagnosis in this case was that of a severe form of erythema multiforme associated with rheumatic infection, and the cardiac condition tended to confirm this opinion. In spite of appropriate treatment, the boy grew worse, and the pyrexia became very severe, accompanied with rigors at irregular intervals. The changes in the cardiac sounds indicated an active endocarditis, and led to the belief that this was of an infective nature. It was doubtful if the small septic wound on the arm was the true source of the illness. Yeast was employed in view of the septicaemia, and I am not disposed to regard its influence as unworthy of serious consideration. But certainly no good effects were apparent before the use of regular doses of antistreptococcus serum by the rectum. The boy was manifestly losing ground steadily before this treatment was begun, and the daily improvement afterwards was very certain and remarkable. It was satisfactory to note the perfect recovery which was maintained for some months, and to find that the cardiac condition had completely passed away and left no signs of mischief. This case may be taken to illustrate the effects of a specially virulent quality or variety of the specific infecting microbe which commonly induces ordinary rheumatic symptoms, and may add support to the view of Drs. Poynton and Paine that infective endocarditis may sometimes be a primary affection due to a virulent form of the peccant matter of rheumatism.

*Read in French in the Section of Medicine at the Fourteenth International Medical Congress at Madrid, April, 1903.

A BED in St. George's Hospital has been endowed by the members of the Bachelors' Club in memory of twenty-eight members who were killed or died of wounds or disease in the South African war, 1900-1902.

TRAUMATISM AS A FACTOR IN THE ETIOLOGY OF PULMONARY TUBERCULOSIS.

By JAMES WEIR, M.B., C.M.Glasg.,
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Injury as a causative agent in the production of tuberculous disease in bones and in joints is generally admitted. In most cases in which such conditions exist it is very frequently spontaneously obtruded to the notice of the surgeon by the patient or his friends during the recital of the morbid history; if not so voluntarily referred to, it is often readily elicited on inquiry. Seldom, if ever, does one hear of the physician inquiring for such a history in a case of tubercle of the lungs; rather, indeed, is it the injury that is complained of in cases of pulmonary phthisis following traumatism, and the symptoms of the pulmonary trouble that are to be inquired after. It is true that some deny the possibility of any close connexion existing between injury to the thoracic parietes and the genesis of tuberculosis in the subjacent organs, but this connexion is admitted in most quarters, and it seems to me that a full recognition of this factor in the etiology of pulmonary lesions has very important bearings on the treatment of such conditions.

It is principally for therapeutic reasons that I give the history of the following case, in which the factor of injury is very well marked in the causation of the condition.

P. R., aged 44, hammerman, consulted me on August 4th, 1902, at the Victoria Infirmary. He complained of progressive general weakness and lassitude, which prevented his being able to work. He gave a history of having been injured a month previously by receiving a blow with a heavy pair of tongs in the course of his occupation. The tongs had struck him on the right side over the base of the lung in the mid-axillary line. He was treated at the time for a bruised side. During the fortnight following the injury he suffered from what would appear to be symptoms of pleurisy, the acuteness of which, gradually fading, left him after a time with what he terms a "catch in the breath." He had pneumonia in the left lung more than twenty years ago, otherwise he had always enjoyed good health. The patient's family history strikes a very tuberculous note. One sister is said to have died of phthisis following an injury inflicted on the chest by a pebble projected from a catapult. Among the patient's own children, too, the tuberculous tendency was undoubtedly strong.

August 4th.—Patient seen for first time; no cough; nocturnal sweatings absent; complaints of weakness and loss of flesh; anorexia. Chest: dull area at base of right lung between posterior and mid-axillary line; respiratory murmur deficient in same area, and obscured by numerous fine superficial crepitations (chronic pleurisy with stretching of pleuritic adhesions). Vocal fremitus and vocal resonance diminished (pleura thickened).

August 29th.—Coarser and distinctly pulmonary moist crepitations heard at the right base in the area specified at last note; at right apex some comparative dullness with auscultatory signs of commencing consolidation. Cough absent. Chest measurements, 33½ in. on complete expiration, 35 on forced inspiration. Weight, 10 st. 4 lb. Patient is taking cod-liver oil and creosote.

October.—At the beginning of this month he developed a cough; a fortnight later this was accompanied by expectoration, and at the end of the month by a trifling haemoptysis. Sputum: Thin, slightly frothy, and almost entirely mucoid; exhibited tubercle bacilli in fair numbers. Weight, 10 st. 2 lb.

November 19th.—Condition of right lung little changed, apical condition more pronounced; left lung pure. Chest measurements, 32½ in. on expiration, and 34 in. on inspiration. Note (1) Both measurements less than on August 29th, probably due to general emaciation. (2) Amount of chest expansion diminished, due to the fact that the more a lung is diseased the more grossly is its function impaired. (3) Increase of disease; diminution in chest expansion. Breathing exercises advised for the purpose of increasing the amount of chest expansion, and so allowing of fuller inflation of the lungs.

December 10th.—Weight, 9 st. 12 lb. Cod-liver oil and creosote increased.

December 31st.—Weight, 9 st. 12½ lb. Measurement of chest: Expiration, 32½ in.; inspiration, 35½ in. Right apical condition clearing up; condition at base improving.

January 14th, 1903.—Right apex practically clear; base exhibits no signs of interstitial pulmonary disease, but is still dull to percussion, and vocal fremitus and vocal resonance are still markedly diminished. Weight, 9 st. 13½ lb. Cough and expectoration still troublesome. Sputum: Many squamous and epithelial cells, myriads of micrococci, no tubercle bacilli.

The patient was about this time examined on behalf of an insurance company by a leading physician, and was, I understand, declared to have nothing the matter with his chest except some bronchial catarrh.

This is a fairly distinct case of pulmonary tuberculosis, which would seem to have been definitely consequent upon a by no means severe injury to the thoracic parietes; and, inasmuch as it would seem that this man is on the fair way to recovery, it behoves us to look more closely at the case as illustrating traumatic tuberculosis particularly, and as raising important points in the consideration of pulmonary tuberculosis generally.

In the matter of etiology, notwithstanding the strong tuberculous element in the family history of the patient, there are several points against the theory of coincidence—an idea which might very readily strike one.

The age of the patient is 44 years; not that the prime of life is exempt from tuberculous infection, but it is a fact that we look for the disease at a somewhat earlier age—during adolescence or in early adult life. Now, in this man's history there is recorded an attack of pneumonia at the age of 22; and it is more probable, had he been fated, as some people seem to be, to have been laid hold of by the bacillus tuberculosis, that the germ would have found him out on this occasion, when his left lung was in an extensively impaired condition, and he himself in low general health.

Then it is important to note that when tubercle does lay hold of him, it attacks the right lung, which had never been previously diseased, and that too in a region which is not the usual one for tuberculosis to affect: but more striking still is the fact that the part affected is exactly the region which was injured by the tongs.

It is hardly possible to get away from the idea that there must be a very close connexion indeed between the traumatism and the tuberculous deposit when we consider the foregoing facts, and even more so when we reflect on his own statement that his health up till the time of the accident had been excellent, nay more, he is emphatic on the point, that always active in his habits and of spare physique, for twelve months prior to the onset of his present illness he was actually getting stouter.

The sequence of the symptoms in the patient's illness exhibits very fully the progress of the pathological phenomena which followed his injury; the initial symptoms of pain and inability to respire deeply or move his trunk freely in the course of his labour, were, no doubt, due to the bruising of the chest muscles from the blow of the tongs; this morbid process would seem to have gradually involved the deeper tissues until it extended to the serous covering of the lung, when we find symptoms of low pleurisy. No doubt the injury thus inflicted on the pleura left an appreciable effect on the subjacent lung tissue, or this tissue may have been only functionally impaired as a secondary effect of the pleurisy. Here arises a point of the utmost importance—if not the crux of the whole question, certainly a point upon which, in my opinion, hangs the true part traumatism plays as an etiological factor in the production of pulmonary tuberculosis.

Physicians generally are agreed that oft-recurring pleurisies in a case are symptomatic, or at the least suspicious, of the presence of tubercle in the lung tissue itself, which, however, at the time may be undiscoverable to physical examination.

Inflammatory diseases of the lung substance, whether acute as in pneumonia, or chronic as in phthisis, do frequently bring about some serous inflammation in the superjacent pleura; but is it possible directly to connect inflammation of one portion of the deeper lung tissue with a pleurisy existing simultaneously at any distance from the site of the purely pulmonary lesion as cause and effect respectively? Truly I think not, and yet I believe the converse proposition to be a verity, as will appear in the sequel.

Is it probable that undiscoverable inflammatory mischief in the lung, which we must assume to be fairly beneath the surface of the organ, is able to produce a pleurisy? Central pneumonias are seldom accompanied by pleurisy until the physical signs reveal the fact that the zone of inflammation is nearing the serous coating of the organ.

Is it not possible that physicians have been putting the cart before the horse with regard to the connexion between pleurisy and pulmonary tuberculosis? Quite as tenable, and in my opinion much more acceptable, a theory is that the pleurisy is the primary lesion, and that the effect of the serous inflammation is so to impair the great function of the lung as to afford a suitable nidus upon which the tubercle bacilli may implant themselves. Let me elaborate this idea. It is recognized that the apices of the lungs are the happy hunting grounds of the tubercle bacillus. Why? The late Professor Coats of Glasgow, writing of phthisis in his *Manual of Pathology*, says, "The localization at the apex of the lungs of the earliest lesions is probably related to the fact that the apices of the lungs are the least expansile portions," and later he writes, "Remembering that the tubercle bacillus

is of slow growth, we may presume that it is more likely to obtain a footing when it is left undisturbed in parts where the air is more or less stagnant."

Wherefore we may take it that in the apical portions we have the parts of the lungs which are the most inaccessible to the purifying influences of the tidal air, for which reason, the germs of tubercle being once implanted thereon, there is nothing to disturb the progress of their growth, or to prevent the elaboration of their baneful influences.

When pleurisy affects the chest it leaves traces in the form either of thickened serous membrane or of inflammatory adhesions, or almost universally of both, which must have an influence on the expansile power of at least one part of the lung; grant this diminution in the power of expansion of a so affected area, and you admit the existence of a patch of lung tissue, analogous in functional characteristics to the apices, and therefore predisposed to invasion and attack by the germs of consumption.

This is most probably the manner in which the case under review has been attacked by the disease. It is possible, of course, that tubercle may have developed as a sequel to a traumatic haemorrhage from contusion of the lung at the seat of injury, which would thus furnish a suitable soil for the growth of the invading bacilli, but the fact that there was no cough and no haemoptysis for some considerable time after the infliction of the injury leads me to the idea that the tuberculous infection was in reality superimposed upon a deflated area of lung tissue consequent upon traumatic pleurisy.

In the treatment of the case there are several points of interest; the patient during the entire course of treatment was in a state of semi-starvation; in receipt of only 6s. 11d. per week as benefit from his friendly society, he contrived by means of cod-liver oil and pulmonary antiseptics reinforced by breathing exercises, not only to place something to the credit of his body weight, but to free himself, as far as physical and microscopical examinations could ascertain, from an attack of pulmonary tuberculosis.

It seems to me, as the outcome of observation, that if there is one thing in the treatment of this scourge above another to which due attention has not been given, it is the question of pulmonary physical culture. This seems to me to be the one method whereby this anchoring and consequent devitalizing of the pulmonary tissues by pleuritic adhesions may be rendered comparatively impotent.

I have for some time past taken the opportunities which have been afforded me of measuring the range of chest expansion in cases of pulmonary phthisis, and I find that it practically never approaches the normal or average of the healthy chest, which may be put at from 2½ in. to 3 in. Anything between 1 in. and 2 in. is a very common range in cases of chest disease—which being the case, the question arises, of what use is all the fresh air in the universe to a man who, suffering from phthisis, is unable so to expand his chest as to permit the purifying influence of the air to reach the most ultimate alveoli of the lungs? In pulmonary physical culture, I believe, we have the means whereby this is to be effected.

I have had several cases in which treatment by this method combined with the exhibition of pulmonary antiseptics has proved remarkably beneficial. The case under consideration is one of these, but I should like to read short notes of a case which was treated by pulmonary gymnastics alone, and that too in a tainted atmosphere, with excellent results, inasmuch as it serves, more distinctly than those in which the treatment has been combined with drugs, to demonstrate the value of the purely physical treatment.

The patient, an overgrown lad of 18 years, had been troubled with a cough for only a few weeks; the expectoration accompanying the cough was scanty, but contained tubercle bacilli in abundance. It is unnecessary to detail the physical signs found on examination; suffice it to say that they were not exactly typical of a fully inflated apex solidified by tuberculous deposit, and led me to suspect that the left apex was in a condition most probably of apneumatosis, with a tuberculous infection superimplanted upon the collapsed area. The range of chest expansion taken at the nipples was ¼ in. Pulmonary antiseptics were prescribed, with cod-liver oil, but all were rejected from the beginning. Treated entirely by physical culture, in about three months' time his range of expansion had increased to 3 in., his cough gradually disappeared, and all trace of abnormality in the lung vanished. It is only fair to state that this treatment was carried out to the end in the very heart of our city. The lad is now—four years later—still in perfect health.

Breathing as a curative agent—that is, forced or dynamic breathing, by which is intended that mode of respiring in which inflation and deflation of the lungs, instead of being an unconscious and involuntary act, is subjected to the dictates of the will and as far as possible brought under voluntary control—is no new method of treatment, for as a writer in one of our leading journals, writing on Full Breathing as a Therapeutic Agent, Restorative and Curative, says: "Frequently has attention being called in these pages to the great value of cultivating the habit and practice of filling the lungs to the utmost capacity as a curative measure in all scrofulous and other constitutional conditions.....In constitutional disease depending on malnutrition, and associated with impaired assimilation of the kind that is belonging to the deeper tissue renovation and repair, this practice of breathing in oxygen to the fullest extent is of remarkable curative powers."

There can be no doubt that deep and forcible rhythmic breathing, by means of which the lungs, which ordinarily only take in 20 or 30 cubic inches of air at each inspiration, may be made by practice to accommodate as much as six times the quantity, generates a large quantity of vital energy, and indeed forms of itself a superb physical culture; and quite apart from the physiologically vitalizing influence, its power as a scavenger of the uttermost interstices of the respiratory apparatus must alone commend it as a therapeutic agent in pulmonary tuberculosis.

Numerous as are the various points in the systems of dynamic breathing at present in vogue, all the exercises are perfectly simple and most of them have strong points in favour of their acceptance by exponents of the healing art.

Taken generally, respiratory gymnastics as recommended by professional physical culturists, are valuable exercises, and all have very much in common as regards the ultimate result.

With a general knowledge of these systems, any one who is familiar with the muscular mechanism of ordinary and extraordinary respiration may, with little trouble, evolve an excellent system of breathing exercises, or, in the presence of disease of the lungs, invent a scientific system of respiratory movements suitable to the special condition of the patient and the site of the disease.

As a side issue in connexion with the question of chest expansion, its bearing upon life insurance is of considerable importance. It has been a matter of surprise to me that all life offices do not make specific reference to this point in the catechism of their medical forms. Some ask definitely for a note of the chest measurements on expiration and on inspiration, but these offices would seem to be in a minority.

I would commend to the notice of "life" companies the advisability of demanding a fairly good chest expansion as an additional safeguard against pulmonary disease, especially in considering the lives of young adults, and would suggest as a passable minimum range of expansion a difference of 2½ in. from forced expiration to forced inspiration.

On the side of the applicant for life insurance there is also something to be said. It is well known how great the stress is that is laid upon a tuberculous family history. It seems to me that this may in very great measure be discounted when the applicant himself is of good physique, of healthy appearance, and where the chest expansion is fully up to the normal.

THE SO-CALLED ANTHRACOSIS AND PHTHISIS IN COAL MINERS.

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In former years these conditions were stated to be prevalent in miners of coal; in fact, they were said to be so prevalent that they were classified by many statisticians in "occupation diseases" of this class of workmen.

Probably largely owing to the great improvements in mine ventilation in this country, these conditions are very uncommon now; it is probable also that, as regards anthracosis at at any rate, a considerable amount of misapprehension has led to the symptom "black spit" being taken as diagnostic of anthracosis when the diseased condition of the lung may have been due to something altogether different from coal dust.

Though all coal miners would show a blackening of the lungs due to the inhalation of coal dust, smoke from powder and other explosives, and soot from their lamps and candles, in the *post-mortem* room, this blackening or anthracosis is by no means necessarily due to a diseased condition of the lungs,

nor does it seem to be a factor in the causation of a diseased condition of the lungs. Phthisis, either fibrous or tuberculous, as a disease among coal miners due to their occupation is very uncommon indeed; in fact, as a disease phthisis is probably more uncommon in coal miners than in any other class of workmen in the country.

I very much question whether the presence of coal dust and soot in the lungs of miners has any influence whatever in the production of phthisis, and I venture to express the opinion that anthracosis as a disease *per se* does not exist, but is really an epiphenomenon in diseases of the lungs in which this blackening is found.

In a tuberculous phthisis the diseased condition is due to the presence and work of the tubercle bacillus on a fertile ground; in a fibrous phthisis the fibrosis is due, not to the presence of coal dust and soot and their irritating peculiarities, but to the presence of and irritation produced by the dust particles from the post or sandstone strata and by the dust from the shale and seggar clay.

I wish particularly to draw the attention of pathological observers to this point, and to the fact that these other dust particles are probably not as a rule observed, on account of the only too evident presence of the coal dust and soot particles which obscure them macroscopically and microscopically. I would suggest to these observers the application of simple chemical tests, the use of the polariscope, and also a comparison with the lung tissues of dead ganister workers.

I am inclined to believe that the comparative rarity of phthisis among coal miners is probably largely due to the protective influence of coal dust and soot. I am aware that this is disputed, but I am not aware that it has been disputed in regard to the relative protecting and irritating influence of coal dust and soot, etc., and the post, shale, and seggar clay dusts.

I do not think that this point has been touched upon, far less argued out, by other observers. This protective influence of coal dust and soot appears to be due partly to a filtering action, partly to a mechanical action, in clinging to and covering the sharper angles of the post, shale, and seggar clay dusts, which latter are thus screened as a rule from observation, and to a lesser degree to an antiseptic and deodorant action.

That there must be some protective influence in the coal dust and other carbon particles inhaled by the coal miner seems evident, for many of the other factors which favour the development of phthisis are present and actively at work in his daily life, such as (in this district at least) living in damp houses under conditions of overcrowding and bad ventilation, working in an atmosphere often impure from the presence of noxious and irritating gases, and where the percentage of oxygen is often below the normal, and possibly also sometimes contaminated with dried tuberculous sputum, and spending the greater part of his time indoors and in the mine. In fact, one may say that the average coal miner often works in the mine under more healthy conditions than those in which he lives at home.

A point which corroborates this is the fact, which is well known to all men familiar with mine work, that the horses and ponies down the mine improve in condition there, and though they do not get very much nor very efficient grooming their coats are generally sleek and glossy. The average life of a horse or pony in a pit, notwithstanding the hard nature of its work, is quite up to the outside standard. I know of several ponies down the pit upwards of 20 years of age still working well. These have been in the mine all their working lives. The statements as to the prevalence of coal miners' phthisis in former years do not correspond with the actual facts observed now. Phthisis among colliers is the same as phthisis among other people, and arises from the same causes with the exception above mentioned. Facts worth noting, too, in this connexion are:

1. Coal dust may remain embedded under the skin for years without producing any irritation whatever.

2. The death returns from phthisis in a colliery district show a greater proportion of deaths among females than among males.

3. Colliery surgeons almost invariably state that phthisis is not so common in mining as in other districts where they have been in practice.

4. In the majority of phthisis cases which do occur there is a strong family history of phthisis on one or both sides.

5. Phthisis often seems to attack successive families in particular houses.

THE "PHYSIOLOGICAL" DIFFERENCE BETWEEN THE TWO SIDES OF THE CHEST

IN THE PHYSICAL SIGNS OBTAINED OVER THE UPPER PART OF THE LUNG.

By J. EDWARD SQUIRE, M.D.,

Physician to the Mount Vernon Hospital for Consumption and Diseases of the Chest, Hampstead and Northwood.

It has long been recognized and taught that the physical signs obtained in examination of the chest by palpation, percussion, and auscultation are not identical on the two sides. That there are such differences may be generally recognized by teachers, though the fact is certainly not universally emphasized in their textbooks and writings. The extent of these differences is, however, certainly not always fully appreciated by practitioners, and an exaggerated idea of what may be considered as physiological differences in the signs elicited over the two lungs leads sometimes to failure in recognizing a very important pathological condition when such recognition is of vital consequence to the patient.

That tuberculosis of the lungs is curable if treatment is commenced whilst the disease is in its earlier stages is now abundantly proved; the small expectation of cure when the disease has become more advanced is unfortunately common experience.

In the detection of the disease physical examination of the chest is an important factor, and in the earlier stages the deviations from the normal are often but slight. There is practically no standard which we can apply to all cases; the physical signs which are normal in one individual would be abnormal in another person of different build or age. We are therefore obliged to supplement our sense of whether or not the signs elicited over a portion of a lung in any given case approximate to our views of the supposed normal, by comparison with the corresponding part of the opposite side of the chest. The exact amount of difference between the two sides which may be considered "physiological," as opposed to "pathological," becomes then a matter of supreme importance.

In the Medical Report for 1902 of the Mount Vernon Hospital for Consumption and Diseases of the Chest, out of 68 early cases of tuberculosis of the lung in which signs of disease were found in one upper lobe only, 46 had the right lung affected, or 67 35 per cent. In commenting upon this the report says that the preponderance of the right side over left-side cases affords evidence "that the greatest care should be taken before assigning any slight abnormality of the physical signs at the right apex to the generally-accepted physiological difference between the right and left apices." It is on these grounds, and in view of cases in which the physical signs of early tuberculosis of the lung have been passed over as representing the physiological difference between the two sides of the chest, that I have noted carefully when examining healthy chests what differences can be detected over the upper part of the chest between the two sides. The cases include healthy persons presenting themselves for life assurance, healthy young women joining the staff of the hospital as nurses, probationers, or servants, and a few patients suffering from slight complaints unconnected with the lungs.

The Physical Signs over the Pulmonary Apices on Examination of the Chest in Health.

It cannot be too much insisted upon that by physical examination we can only learn the physical condition of the parts, so that physical examination alone will not lead us to a diagnosis. But, on the other hand, the general condition of the patient and his various symptoms, though these may give reason to suspect tuberculosis, are by themselves insufficient foundation for an opinion on the nature of his complaint. Examination of the sputa cannot be relied upon for the very obvious reason that there may be no expectoration to examine. Many cases of pulmonary tuberculosis run their course to arrest or cure without any expectoration and even without any marked cough. Of those cases where cough with expectoration is present from the commencement, in comparatively few will tubercle bacilli be found in the sputa until the disease has advanced so far that the physical signs in the chest give clear indications of the presence of disease; examination of the sputa may then be useful to demonstrate its nature.

The right lung is primarily affected in pulmonary tuberculosis more frequently than the left, and it is in the

upper part of the right lung that the physical signs in health differ slightly from what may be considered the normal. Thus it may easily happen (and in my experience does sometimes occur) that a person with healthy lungs might be suspected to be phthisical. More frequently, and more disastrously, the physical signs indicating early tuberculosis may be passed over as being merely the physiological difference between the right and left sides of the chest.

The plaint from the various sanatoria for consumptives is that cases are not sent for treatment sufficiently early, the reason being in many cases that the disease was not recognized in time; and although this is often the patient's fault for not seeking advice, it is sometimes due to want of recognition, or faulty interpretation of the physical evidences of disease on examination of the chest. The first essential towards the recognition of a diseased condition of the lung is a clear appreciation of what signs to expect in examining a healthy lung, and it was to satisfy myself on this point that the investigation which forms the subject of this communication was undertaken.

The cases referred to in this communication are almost all young adults. I have been able to include a good proportion of females in the number, as I am responsible for the resident staff at the Mount Vernon Consumption Hospital, where every nurse and servant is carefully examined before being accepted for duty. Of the remainder of the cases, many are persons examined for life assurance, and passed as first-class lives. A few of the persons examined could not be included amongst the "healthy chests," although they expressed themselves as being in perfect health, and had every appearance of being so. In one of the nurses, for example, there were very obvious signs of consolidation in the apex of one lung, due probably to an old tuberculosis which had run its course to complete arrest without having been suspected, although inquiry showed a period of lowered health some years previously.

The cases dealt with in this report number 58—28 males and 30 females. The physical signs which are noted are as follows: The percussion note, the breath sounds, the vocal resonance, and the vocal fremitus.

In all cases the examination has been made with the person stripped to the waist, and the remarks refer to the upper part of the chest only, above the third rib in front, and to the spine of the scapula at the back.

Percussion.

No difference was detected between the right and left sides of the chest in 29 (11 males and 18 females). In 6 others the only difference noted was that on direct percussion on the right clavicle the note was slightly different from that on the other side and from the rest of the upper part of the chest on the right side, the sound being equal on the two sides except on the right clavicle. In 5 of these (2 males and 3 females) the note on the right clavicle was slightly less resonant, and in the other (male) slightly more resonant than that elicited elsewhere.

Another case (male) gave greater resistance on percussion over the right apex, though the note produced appeared to be the same as on the other side. In one case (male) the percussion note was more resonant on the right side above the clavicle than on the left. On the clavicle and below it the resonance was the same as on the left side. The man was a strong powerful man, 30 years of age; he was not left-handed and had no transposition of viscera.

In the remaining 21 cases (12 males and 9 females) the note was slightly less resonant over the right apex than over the corresponding area on the opposite side.

It may be noted that it is chiefly in the male subject (12 out of 28 males against 9 out of of 30 females) that a difference in the percussion note is found. This might be taken to favour the view expressed by some writers that the note is altered by the thicker coverings to the chest on the right side, since men use their muscles more than women, and the right arm is always more used than the left. The percussion note would thus seem to be slightly higher pitched and less resonant in about half the cases. The difference in the note is, however, not very marked and might easily escape detection unless special attention was directed to the comparison.

I do not think there should be any danger of mistakes arising from this source, as a well-marked difference in the percussion note between the two sides cannot be considered "normal" in any case. It is, however, just this difference in the percussion note which often misleads the examiner.

Breath Sounds.

No difference in the character or intensity of the breath sounds on quiet breathing could be detected in 41 cases (22 males, 19 females).

In 7 cases (3 males, 4 females) the breath sounds were louder over the right apex, in only 3 (2 males and 1 female) were the sounds less distinct (softer) on the right than on the left side. In 3 cases (1 male, 2 females) the sounds were bronchophonic, that is, more directly conducted to the ear on the right side. The expiratory sound was distinctly more marked (louder) on the right side than on the left in 9 cases (3 males and 6 females). In only 5 cases (3 males and 2 females) was the character of the breath sounds different on the two sides. In 2 cases (males) the breathing was harsh at the right apex. In 3 others (1 male and 2 females) the breath sounds were higher pitched on the right than on the left; in one of these cases (a female) it was the expiratory portion of the sound which alone was modified, this being almost tubular in character.

It would appear, therefore, that though the breath sounds may be somewhat louder, and thus more clearly heard over the right apex, there is in health no difference in character between the breathing on the right and left sides. The expiratory sound may be more distinct on the right side, but there is no difference in the proportion between the length of the inspiratory and expiratory portions of the breath sound. If the expiratory sound is prolonged (as well as louder) the condition is abnormal, and cannot be taken to indicate a healthy lung, and any obvious alteration in the character of the breath sound must be taken to indicate a divergence from the healthy condition.

Added ("adventitious") sounds—for example, crepitations—are never heard under "normal" conditions of health.

Vocal Resonance.

In 21 cases (9 males and 12 females) no difference was detected between the two sides of the chest. In 30 cases (16 males and 14 females) vocal resonance was more marked over the right apex than on the corresponding region of the opposite side. In only one of these cases (a female) was the resonance noted as much louder on the right; in the remainder the difference was slight, and in 4 it is noted as very slight. Bronchophony was distinct on the right side in 7 cases (4 males and 3 females).

The voice resonance, like the breath sounds, is increased in intensity in a large proportion of the cases—rather more than half. It is to be noted that this increase in intensity is more often to be noted in the case of males, in whom the resonance is always more than in females.

It would appear that any marked difference in the vocal resonance on comparing the two sides of the chest, must raise suspicion of some abnormal condition in one lung.

Vocal Fremitus.

The vocal fremitus seemed to be equal on the two sides in 11 cases (5 males and 6 females). In 45 cases (22 males and 23 females) the fremitus was distinctly more marked on the right side; and in 2 cases only (1 male and 1 female) it was more marked on the left side.

The great majority of the cases showed an excess in the vocal resonance over the right apex as compared with that on the left side of the chest. This is, in fact, the most constant, as it is also the most marked difference in the physical signs over one apex as compared with the other.

We must infer that an increased vocal fremitus over the right apex as compared with the left is a normal condition, and is no indication of disease.

As to the explanation of the differences which may exist between the physical signs over the opposite sides of the chest at its upper part, I will, at present, merely say that the arrangement of the main bronchus in the right and left lung respectively seems to offer an explanation which will cover almost all the differences noted.

CONCLUSIONS.

1. In the majority of healthy persons, but not in all, the physical signs elicited over the upper part of the right lung differ somewhat from those on the corresponding part of the left side.

2. These differences consist in the following: (*a*) The percussion note is slightly less resonant and higher-pitched on the right side; (*b*) the breath sounds are louder on the right side, and the expiratory portion of the sound more marked; the character of the sound and the proportion between the

length of the inspiratory and expiratory sounds is not modified in health; (*c*) the vocal resonance, especially in men, is more marked on the right side; (*d*) vocal fremitus is more marked on the right side.

3. Of these differences the increase in the vocal fremitus is by far the most constant. Differences in the percussion note are only noted in half the cases examined.

4. The differences, except in percussion, are not so much alterations in the character of the signs as modifications in transmission of the sounds.

5. The modifications in the signs are apparently due to the direction and form of the main bronchus, which are not the same in the two lungs. The percussion note modification may possibly be influenced by the thicker covering of the right side of the chest, but is most probably also dependent upon the position and size of the bronchus.

CONSUMPTION IN THE NAVY.

By W. E. HOME, M.D., M.R.C.P.E.,
Staff Surgeon.

MR. SICHEL'S important paper on Consumption in the Navy, read at the annual meeting of the Association at Manchester, published in the BRITISH MEDICAL JOURNAL of October 4th is full of interest, and his demonstration of the waste of money and loss of efficiency produced by the disease is most valuable.

Personally, I think that he has underestimated the damage, as he has only considered cases returned as tuberculous. The Blue Book for 1900 gives in addition, at page 9, materials from which we may calculate the total deaths ascribed to phthisis, and these must be added to the "tuberculous," that we may have complete statistics of deaths from tuberculous infection. Diseases of the respiratory system are reported on page 9, and at the end of the very valuable annual discussion of the prevalence of these diseases in the training service, it is said that in that service about half (really two-thirds) the invaliding from respiratory diseases and about a quarter of the deaths are due to phthisis, probably tuberculous. If this proportion obtains in the service generally, we must add to the 49 deaths which occurred in 1900 from tuberculous disease one-fourth of the 106 deaths reported to have resulted from respiratory disease, that is, 26, and thus we get 75 as the total number of deaths in the service from tubercle in 1900, a rate of 0.79 per 1,000. This increased proportion gives even more weight to Mr. Sichel's contention that there is still room for improvement in the navy.

The loss of the training service from tuberculous diseases is nowhere shown in the Blue Book, but in the last ten years there has been on an average a yearly death-rate of 0.4 per 1,000 from phthisis and pleurisy, which may be pretty safely grouped together. The rate has been falling of recent years, such cases being increasingly returned as tuberculous. There is some reason for believing that in 1900 deaths from phthisis were proportionately more numerous in the training ships than in the general service, but there were only 3 in the training ships. In the three years 1896-7-8 the ratio per 1,000 of invaliding and deaths for phthisis pure and simple was higher in the training service (5 per 1,000 invaliding and $\frac{3}{4}$ per 1,000 deaths) than in the general service (3 per 1,000 invaliding and $\frac{1}{2}$ per 1,000 deaths). This is a serious consideration when it is remembered how lately those boys were passed into the service as free from physical defect.

Owing to alterations made in the form of the health statistics of the navy it is no longer possible to compare the death-rate of this disease in the army and navy, but from their respective reports for 1896, 1897, 1898 the deaths in each service on the large home station (in each case involving about half the men of the service) may be extracted. To get a complete account of the deaths from tubercle I add to those specified as "tuberculous" those also ascribed to phthisis, haemoptysis, haemorrhage of the lung, pleurisy, empyema, and broncho-pneumonia. We then find an average:—Army, force at home, 97,666; deaths, 67; rate per 1,000, 0.68; 1896 8; navy, force at home, 34,481; deaths, 31; rate per 1,000, 0.9; and as our men are better clothed and fed, I suppose the excess must be due to their closer aggregation in small cubic space, as Mr. Sichel believes; in fact, to the greater chance our life offers for the spread of infection. To reduce this risk we must diminish overcrowding by improving ventilation, and as in the management of other infectious diseases we must strive for early recognition and isolation or removal of the patient. Mr. Sichel has done a most useful work in bringing this matter before the Association, and has greatly lessened the difficulties of securing increased prophylaxis by his skilful investigation and telling announcement of the loss to the navy caused by tubercle, furnishing us with a financial argument for improved sanitation which cannot but arrest the attention of those who concern themselves with the defence of the empire.

OBSERVATIONS ON EMPYEMATA IN CHILDREN.

By P. STANLEY BLAKER, M.R.C.S.ENG., L.R.C.P.LOND.,
Late Resident Medical Officer, East London Hospital for Children, Shadwell, E.

IN this paper I have put together the facts and impressions gathered from a personal experience of 81 cases of empyemata in children.

I think it is on the whole admitted that the disease during childhood is a less serious complaint than during adult life, but this statement does not hold good for all ages of childhood. It will not be denied, for instance, that the disease is a very serious complaint during infant life—that is, when it attacks a child under 2 years of age; under a year old, as the figures below will show, the recoveries are few and far between. Hence a record of a personal experience of the above number of cases may be deemed of value, and more especially the points relating to treatment.

I range myself with those who believe that an empyema is an empyema from the beginning—that it starts as such, and very seldom as a simple effusion, which later on becomes purulent. Only in one case did a secondary puncture (after an interval of a fortnight) of the chest reveal pus when the first exploration withdrew a syringeful of clear pleural fluid. In this case, moreover, I am rather inclined to the belief that pyogenic organisms were introduced into the chest at the first operation. In every other case pus was found from the beginning.

Classification.

If I were to arrange all the 81 cases in some order of classification, I should, from a clinical standpoint, be disposed to divide them up into two main groups—those that I would associate with the name of "acute" or "primary," and the "late" or "secondary," which latter would include about 80 or 85 per cent. of all cases. To explain this classification, I would begin by saying that nearly all empyemata seen at a childen's hospital are associated with an attack of pneumonia, either of the croupous or of the catarrhal form. An empyema due to initial disease of the pleura alone must be a very rare condition indeed, and then it would probably be associated with a similar condition of the other serous membranes or with some form of pyaemia. In the 81 cases to which reference is made, it was not found possible to attribute any one of them to an absolute primary morbid condition of the pleura. Further, many cases that were examined *post mortem* showed some trace of associated pneumonia. Of course, it is difficult to imagine how the lung tissue could escape implication when the contiguous pleura was diseased and vice versa, and hence it would be practically impossible to say which was the seat of the primary mischief. Now, the affection of the pleura is manifested either concomitantly with the attack of pneumonia or else subsequently to it, this period varying from ten days to three or four weeks, and even much longer; and hence those in the former group would be classed as acute or primary, and those in the latter as chronic or secondary.

In the acute cases the signs of fluid in the chest develop simultaneously with those of pneumonia, and the patient is very ill indeed from the first onset of the disease. The illness starts quite suddenly with vomiting and marked dyspnoea, the respirations are hurried and grunting, the alae nasi work vigorously, there is a good deal of recession of the lower part of the chest, the face is dusky and the lips markedly cyanotic; the temperature is found to be raised to 104° or 105°. On making a physical examination of the chest, there is marked dullness with increased resistance on one or both sides, and loud tubular breathing over a very extensive area. A puncture with an exploring needle withdraws a thin watery purulent fluid, very often blood-stained. Such cases practically always die when the patients are under 2 years old. They may live for a few days or as long as a fortnight after the onset, but they eventually die, not from the empyema, but mostly from extensive consolidation of the lungs, if they escape such complications as pericarditis, meningitis, and peritonitis.

As a rule the fluid withdrawn from the chest in these cases is teeming with the pneumococcus, and there may be at times an admixture of the streptococcus or the staphylococcus. At a necropsy the lungs are found to be very extensively consolidated with broncho-pneumonia, in the third stage, if the patient has lived long enough; the surface of the pleura is seen to be injected, sometimes looking quite red and inflamed (in the early stages), and covered over with large flakes of yellow lymph. So intense is the inflammation and infiltration of the pleura in such cases that I think if any are to be classed as primary pleural affections these acute cases should. There were altogether 9 such cases in the series of 81.

In the second group, that is in the chronic or secondary empyemata, are included all those cases where the signs of fluid developed after the attack of pneumonia, and it may be pointed out that in some of the cases the signs of pus were observed to follow immediately upon the attack of pneumonia, whilst in others some weeks had elapsed before they were evident, in other words the pus formed very gradually in these latter cases. In the first class the patient gets an attack of pneumonia with all the characteristic signs and symptoms, but he fails to have a crisis as far as the temperature is concerned, though the general symptoms may have improved; signs of fluid become evident, and when the chest is explored pus is found. In the later cases very often there is a history of pneumonia four or five weeks ago, or even longer; there is also a definite history of the child having had a crisis, in that the child seemed very well, and "seemed to be getting on," but two or three weeks later "he seemed to fall back again," and wasted. When the child is seen and the chest examined, the physical signs of fluid are obvious, and the exploring needle withdraws a syringeful of pus.

It may seem rather complicating to differentiate between the early and late secondary cases, but my object in doing so is to emphasize this important difference, that in the early cases the consolidated lung has not undergone complete resolution, but there is still probably a good portion of lung tissue quite solid, whereas in the late cases, from the fact that a much longer interval has elapsed, the patient has an empyema pure and simple without any lung consolidation. The secondary cases as a whole do very well when operated upon, but I think the late cases do best of all, provided the patient is treated within a reasonable time, because such cases, as a rule, are quite free from complications.

	Under 6 Months.	6 Months to 1 Year.	1 Year to 2 Years.	2 Years to 3 Years.	3 Years to 4 Years.	4 Years to 5 Years.	5 Years to 6 Years.	6 Years to 7 Years.	7 Years to 8 Years.	8 Years to 9 Years.	9 Years to 10 Years.	10 Years to 11 Years.	11 Years to 12 Years.	12 Years to 13 Years.	Total.	
Number	2	9	28	8	11	5	6	3	3	1	1	1	0	1	81	
Males	—	6	16	4	3	2	4	3	1	—	1	1	—	1	43	81
Females	2	3	12	4	8	3	2	—	4	1	—	—	—	1	38	
Recoveries	1	1	17	5	7	5	6	2	4	—	1	1	—	1	50	81
Deaths	2	8	11	3	4	—	—	1	1	1	—	—	—	—	31	
Right side	1	1	9	6	3	2	3	1	2	—	1	—	—	1	30	
Left side	1	5	16	2	6	3	3	1	3	1	—	1	—	—	42	81
Double	—	3	3	—	2	—	—	1	—	—	—	—	—	—	9	

SUMMARY OF THE FACT OF 81 CASES OF EMPYEMA.

From the table it will be seen that the 81 cases were made up by 43 males and 38 females; that in 30 the empyema was right-sided and in 42 left-sided; 9 cases turned out to be double. Not a single case of apical empyema occurred, and in 2 cases only were there two cavities on the same side necessitating double operation to let out the pus. That empyemata are more common on the left side cannot be wondered at, since the croupous pneumonia of the lower lobe is more often met with on the left than on the right side; and the only reason by which one can account for the rarity of an apical empyema is that the pus gravitates to the base, for apical pneumonia of the croupous type is quite a common occurrence in young children. In 58 patients the onset of the illness was quite sudden, like that of pneumonia, and in 10 it began very gradually without being able to fix a definite date as to when the complaint commenced. A recent attack of measles from which the illness dated was noted in 5 cases, and 1 had a history of injury to the side the day before he was taken suddenly ill with symptoms pointing to pneumonia. In the remaining cases no reliable history could be got from the parents.

BACTERIOLOGICAL EXAMINATION.

Examination of the pus was made in 69 cases, with the following result:

Diplococcus in 61 cases.
Diplococcus and streptococcus in 3 cases.
Diplococcus and staphylococcus in 1 case.
Streptococcus alone in 3 cases.
Staphylococcus alone in 1 case.

In all but 4 cases, then, out of 69 was the diplococcus found. In most cases this organism was encapsuled, and of the lanceolate shape.

Tubercle is a very rare cause of empyema in children. At the necropsy made on 23 of the patients that died, tubercle was found in 3, and they showed signs of general disease. The question that may be asked with regard to these cases is, Does the illness begin as tubercle, or is tubercle grafted upon the original complaint of empyema? Two of these showed evidence of chronically enlarged tuberculous bronchial glands, which in all probability served as the focus from which general dissemination took place when the patients were taken ill. In the other case there were a few old tubercles in the spleen.

PROGNOSIS.

This depends very much indeed upon the age of the patient, the younger the patient the less are the chances of recovery. It will be seen from the series that 11 of the patients were under a year old, and out of this number only 1 recovered, a baby 10 months old. Between 1 and 2 years of age there were no less than 28 cases, the largest number in the series, and of these 11 died, and 17 (nearly 64 per cent.) recovered. And so with regard to the other periods of life, the same fact is evident that the older children have a better chance of recovery. Of the 9 acute cases included in the series 4 died and 5 recovered; the ages of those that died was 2 and under 2 years, and the youngest of those that recovered was 5 years. It would seem, therefore, that the acute affection is particularly fatal in infants. The older children recovered from the acute attack; but, nevertheless, their illness was very severe, and caused considerable anxiety.

From the cases it is also evident that the bacteriology must be taken into account in forming a prognosis. I have already mentioned that 4 cases had a mixed infection of pneumococcus and streptococcus or staphylococcus. All these died. Three cases showed the streptococcus only; one of these recovered after being in hospital 131 days; and lastly, one case was due to the staphylococcus alone, and that also proved fatal. Only 2 of the acute cases in the series had a mixed infection—the remaining 7 were due to the pneumococcus only.

THE CAUSE OF DEATH.

Of the 31 deaths that took place a necropsy was made in 23 cases, and the following is briefly what was found:

1. Pericarditis (blood-stained fluid in pericardium), mediastinitis, extensive broncho-pneumonia; acute case.
2. Pericarditis, non-purulent.
3. Early fibrosis of lung: scrotal abscess; had a good deal of diarrhoea and vomiting.
4. Double empyema; right lung collapsed.
5. Pyo-pericarditis and suppurative peritonitis.
6. Pyo-pericarditis and extensive broncho-pneumonia.
7. Pyo-pericarditis and extensive broncho-pneumonia.
8. Double empyema, extensive broncho-pneumonia, abscess of lung.
9. Double empyema; purulent meningitis.
10. Suppurative mediastinitis; extensive broncho-pneumonia.
11. Died under anaesthetic (chloroform); heart soft and flabby.
12. Extensive broncho-pneumonia.
13. Purulent meningitis; extensive broncho-pneumonia.
14. Early meningitis.
15. Pyo-pericarditis, oedema of pia mater; collapse of left lung.
16. Double empyema; gluteal abscess; tubercle of spleen.
17. Double empyema; purulent meningitis.
18. Broncho-pneumonia; collapse of right lower lobe of lung.
19. General tuberculosis.
20. Extensive broncho-pneumonia; purulent peritonitis and considerable oedema of the pia mater.
21. Purulent peritonitis.
22. Double empyema and pyo-pericarditis.
23. General tuberculosis.

Thus it will be seen that pericarditis occurred in 7 patients: 2 were in cases of right-sided empyema, 2 left, and 3 in double. Suppurative pericarditis is not always diagnosed during life, and it is evident from the fact that it occurred at least seven times in 31 patients that died that it should always be very carefully examined for in cases of empyemata. A pericardial friction is not always heard, and its absence is by no means indicative of the absence of pericarditis. One very striking feature that impressed me most in these cases of pericarditis was the intense pallor which was always present, and a diagnosis of this complication has mainly to be

made from this symptom, along with increase of the area of cardiac dullness and a diminution of the heart sounds. Purulent meningitis accounted for 4 deaths. In one of these cases it was astonishing to find at the necropsy the whole of the brain covered over with a thick layer of yellow pus, and during life the patient did not exhibit a single indication of any kind of brain trouble. On the other hand, another patient had a great many symptoms of meningitis, without any naked-eye evidence of the disease at the necropsy—a cultivation made from the base of the brain, however, showed encapsuled diplococci. Purulent peritonitis was noted in 3 cases; these were attended with signs and symptoms of peritoneal trouble. Suppurative mediastinitis was also present in 2 cases. A bacteriological examination of the pus was made in each of the above cases, and in every instance a diplococcus resembling the pneumococcus was found to be present.

But what I feared most, especially in infants under 2 years of age, was the occurrence of broncho-pneumonia. Eight of the cases that were subjected to a necropsy and 4 that were not had evidence of very extensive broncho-pneumonia. Of course, some of the cases were of the acute type where the pneumonia was present from the commencement of the illness; on the other hand, the pneumonia developed in other cases subsequently to the operation, and in all the cases death was due to this cause and not to the empyema. Once the infants showed any signs of pneumonic consolidation, they went from bad to worse and died. Some of these cases were of the late secondary type, where there was nothing but an empyema pure and simple to treat; in some instances a portion of a rib was resected, while in others a simple incision was made. The patients did very well for a few days, the cavities drained well, and when everything seemed to be most satisfactory these patients suddenly developed signs and symptoms of pneumonia, and after a week to a fortnight died. At the necropsy, extensive broncho-pneumonia in the third stage, probably involving a whole lobe of one lung and a part of the other, was seen. The pleural cavity was in each instance quite empty, having been well drained. But for this subsequent development of pneumonia, I am quite sure that the percentages of recovery from empyema in infants would be much higher. It is difficult to know what could be done to avoid its occurrence.

Treatment.

All the cases were treated by opening the pleural cavity and draining it. Aspiration was tried in 4 cases in the very young—that is, in babies under a year old—but although the operation was repeated three or four times the pus re-accumulated, and the chest had to be eventually opened and the pleural cavity drained. Although, however, the aspirator cannot be depended upon to cure an empyema, yet its (aspirator's) use has certain advantages in that complaint. For instance, as a preliminary to evacuation of the pus by drainage in those cases where the signs and symptoms are indicative of a very large quantity of pus in the chest. In such cases it is a wise plan to remove a part of the fluid a day a two before the operation. By this means a certain amount of risk from shock may be avoided. Especially would I urge this proceeding in the case of babies, who are particularly liable to collapse soon after the chest has been opened. Again, aspiration finds its use in cases of double empyema. In such cases the chest should be opened on one side first, whilst the other side is treated by means of aspiration, the pus being withdrawn either once or twice before the second pleural cavity is opened. Double empyema is a very serious condition, even in the older children; the percentage of recoveries in infants under 2 years of age is very small indeed; therefore the proceeding to be adopted in the operative treatment should be one that will produce the minimum amount of shock. At any rate, I am quite certain that to open both sides of the chest on the same day, or even within two or three days, is a mistake, and that the chances of recovery will be better if a longer interval is allowed to elapse between the two operations. The interval must be determined upon the merits of each case. Of the nine double empyemata included in the series, only one recovered, and that was the case of a baby, 1½ year old, where one empyema developed some days after the other, and the interval between the two operations was, in consequence, considerable. Apart from one other use, to which reference will be made later, I have no further recommendations to make in favour of the aspirator, and I should never attempt to treat a case of empyema by this means alone, hoping to cure it.

The treatment by drainage was adopted in all the cases, either by previously removing a portion of rib, or else by merely making an incision into the pleural cavity through one of the intercostal spaces.

With regard to the presence of pus in any situation, the right principle to follow is to remove it as soon as its existence has been made evident. To this sound principle I am inclined to make one exception in connexion with empyemata. In the acute or primary cases it is a mistake to open the chest at once because some thin purulent fluid is withdrawn with an exploring needle. It would be wise to wait until the acute stage of the illness has passed off before the operation is undertaken. If this is done the patient will stand a greater chance of recovering. Of course, if the quantity of the fluid is excessive (more often it is small), then it would be better to aspirate rather than open the chest. This line of treatment is particularly applicable to infants under 2 years of age suffering from acute empyema, and in them no undue haste should be made to let out the pus. These patients do not die from the effects of the empyema, but from the concomitant pneumonia, and an open pleural cavity would seem rather to bring about an attack of pneumonia than help in its resolution—witness the cases that develop a pneumonia after a secondary or late empyema has been evacuated.

Out of the 81 cases under consideration 52 had rib resection done and 26 had merely a simple incision made; the remaining three cases were not operated upon since they were admitted into hospital in a moribund condition and died within a very short time after admission. There is nothing to say upon the question of rib resection—the ordinary operation was done in each case, removing about an inch of rib.

Incision.—With reference to the method of treatment by simple incision, in all but one case the patients were 2 and under 2 years of age. The one case alluded to was that of a girl 7½ years old who was admitted into hospital in a very critical condition with one side of the chest entirely filled with pus. The chest was immediately aspirated and then incised, but she died the next day quite suddenly from pericarditis. Of the 26 patients thus treated 12 recovered and 14 died, and the cause of death in each of these 14 cases is as follows:

Purulent pericarditis	1
Purulent pericarditis and double empyema	1
Double empyema (2 were under a year old)	3
Purulent peritonitis	1
Purulent meningitis	1
Purulent mediastinitis	1
General tuberculosis	2
Acute empyema with pneumonia	1
Pneumonia (extensive) following upon operation	1
Pyaemic abscesses	2
Total	14

That these 14 patients should have died cannot be wondered at; not one of them was free from complications, and the complications were of a serious nature, and in themselves sufficient to cause death. Four out of the 14 patients had a double empyema, and one of these was associated with purulent pericarditis, and 2 of them were under a year old.

Of the cases that recovered the youngest was only 10 months old, and another case was that of a double empyema. All the cases were, however, of the secondary or late variety, and were quite free from complications, and had consequently the best chances of recovery. In babies under 18 months old I feel sure that a simple incision into the pleural cavity is the best mode of treatment, and in every case treated in this manner the drainage provided has been very efficient. This fact was repeatedly proved in the *post-mortem* room beyond any question of doubt. In 9 cases (treated by simple incision) that were examined after death, the pleural cavity was found to be quite empty, and in such cases that lived for many days after the operation and died from some complication, the pleural cavity was found to be practically obliterated, indeed in 2 cases it had become quite obliterated. If an exploring needle (of large size) withdrew pus quite easily from the chest of a baby under 18 months old, the practice was to invariably make a simple incision, deeming that this procedure would provide quite efficient drainage. Latterly the incision was made as far forwards as possible—about the mid-axillary line or even a little further forwards. Here there is undoubtedly more space, and it is surprising how large sized a tube can be got between the ribs. In most cases two tubes were inserted side by side, in this way providing freer drainage, and it was found to act most satisfactorily. It has been said

that the ribs bounding the space are liable to become eroded and to give rise to trouble. This happily did not occur in any of the above cases.

A second point in favour of incision over rib resection is that the operation is a simple one, takes very little time, and can well be done without a general anaesthetic. In many of the cases operated upon the parts were simply first frozen with ethyl chloride. And lastly, the shock from the operation of simple incision is very slight as compared with the larger operation of rib resection. This is a most important point which must be taken into consideration with babies, who are not able to sustain as severe a shock as the older children.

After-Treatment.

I next turn to the question of the after-treatment of cases of empyema, whether treated by rib resection or by incision. To think that, once the operation has been done, there the treatment practically ends is a very grave error. It cannot be too strongly emphasized that very great care and attention is most essential during the whole period from the time that the operation is done to complete recovery and the ultimate success is dependent in a far greater measure upon the after-treatment than upon the immediate line of treatment adopted. A great many of the ill-effects of an empyema can be avoided if the after-treatment of a case is carefully attended to.

For one thing the duration of the illness in a great many cases can be reduced to as little as three weeks, or even a fortnight from the day of the operation. In many of the cases included in the series the wound had healed in three weeks, and in some cases before that period. The one great mistake that is repeatedly made is that the services of the drainage tube are not dispensed with early enough. The longer the tube is retained the longer will the wound go on discharging, and the more tedious will the healing process be. In a very large number of cases the lung soon expands, and the pleural cavity soon becomes obliterated, and the discharge for which the tube has been kept in comes not from the pleural cavity but from a sinus which has been produced and kept open by a tube which was not necessary.

The first point, then, to remember, is to get rid of the tube as soon as possible. In the earlier cases the tube was kept in for a very much longer period than in the later cases, and latterly it was frequently disposed with altogether within the first week after the operation. It is quite certain that this can be done in a great many cases, but every now and then a case will be met with where the utmost difficulty will be experienced in dispensing with the tube; still, if the case is very carefully watched, then there is no harm done by leaving the tube out, even though it may have to be reinserted. In one or two of the cases the tube had to be reintroduced several times before it was ultimately dispensed with altogether. How often one meets with cases of old empyema with a discharging sinus for months and even years after the operation, and when such a condition of things obtains it is only too well known what very great difficulty is experienced in trying to get the sinus to heal; repeated scrapings of the sinus or even fresh resection of a rib or ribs is done in the hope that the wound may heal. Necrosis of the rib would probably not occur so often if the prolonged source of irritation was early removed.

The following was the plan adopted with regard to the after-treatment of a case. The tube was not removed from the wound for two days after the operation, though it was invariably shortened by ½ in. or more on the next day. This was done by withdrawing the tube and cutting off the protruding end. After this the tube was daily removed, cleaned, boiled, and shortened before being reinserted. Whenever the discharge became thin and watery it was very often found to be a good indication for leaving out the tube altogether, and was always considered a good sign. After removal of the tube, as a rule, a thin gauze drain was put into the wound for a couple of days, and each morning when the dressings were done a sinus forceps was introduced to let out any retained discharges. This had to be done only two or three times in most cases. In such cases where a double tube was inserted, one of them was removed on the first or second day, and then the remaining one treated in the usual manner. It was found to be a good plan to apply boracic acid fomentations to the wound when the tube had been omitted; it prevented any scabbing over, and so permitted egress to any discharges. On the whole, aseptic dressings were found to be preferable to antiseptic, since they were not irritating to the skin. Previous to applying the dressings the wound was dusted with iodoform and a very liberal sprinkling of boracic acid powder all over the side of the chest. Another little detail which was invariably carried out each day, and which was found to be very useful, was to clean the surrounding skin thoroughly with methylated ether. By observing all these little details connected with the dressings there was seldom if ever any trouble with the skin.

Washing out of the pleural cavity was done in several of the cases in the series, not on account of any foul discharges from the wound, but as a means of clearing away any thick pus or flakes of lymph. During this operation (irrigation) patients frequently coughed out through the wounds large pieces of lymph, and there can be no doubt that the duration of their illness was materially shortened. The solution used was one of iodine (one drachm of the tincture to the pint), and great care was also taken to let it run in slowly. The coughing that very often accompanied the irrigation was beneficial in that it helped to expel any pus or lymph. With great care and attention, there is very little danger of any harm coming from washing out an empyema cavity.

With regard to the general treatment, there is nothing much to say. The patients were put on a very liberal diet, and when the weather was fine they were well wrapped up, and their cots wheeled out into the open.

In concluding this paper, I must express my indebtedness to Dr. Eustace Smith, Dr. A. J. Coutts, and Dr. Dawson Williams for giving me permission to make use of these cases which were under their care in the Shadwell Children's Hospital during the time that I held the posts of House-Physician and later of Resident Medical Officer to the hospital—a period extending over nearly three years.

SIX CASES OF EMPYEMA.

By OSWALD F. ROWLEY, M.R.C.S.Eng., L.R.C.P.Lond.,
Honorary Surgeon to the Beckett Hospital and Dispensary, Barnsley.

The following cases show that pus may be present in the pleural cavity with but few symptoms and a moderate degree of pyrexia; that suspected serous effusions may unexpectedly be found to be purulent, and that in cases following pneumonia, especially in children, the effusion may be purulent early in the case.

Case I.—A. B., a youth, aged 17, came to me on November 14th, 1891, and showed a small fluctuating tumour of one of the intercostal spaces in the right axillary line, giving a history of a past injury to the rib. The cold abscess was incised with a fine-pointed bistoury, when to my surprise a quantity of laudable pus flowed out soon accompanied by coughing and obvious signs that the abscess was continuous with the pleural cavity, being in fact an empyema apparently caused by caries of the rib with abscess of the chest wall pointing internally into the pleural cavity. The abscess showed no signs of pointing on the surface. Suitable dressing being applied, the patient returned home, where the opening was afterwards enlarged and a tube inserted, and the empyema drained. In six weeks he was quite well and had not much diminution in size of the affected side. Probably the healthy condition of the visceral pleura enabled the lung to more readily expand.

Case II.—B. C., a girl aged 3, about June 4th, 1894, had an attack of broncho-pneumonia. On June 20th there was left pleural effusion with well-marked displacement of the cardiac apex beat. In this case there were no signs of the effusion being anything but serous. On July 16th aspiration was performed in the mid-axillary line in the sixth interspace, and pus was evacuated which was quite sweet; this was followed by incision and drainage. This child made a very good recovery. There resulted curvature of the spine with contraction of side, which, however, gradually but perfectly expanded.

Case III.—C. D., aged 10, was found on April 8th, 1899, to have pleurisy with effusion on the right side. On May 20th he was admitted to the Beckett Hospital, aspirated, and the fluid found to be pus. In this case the fluid afterwards was found to be causing bulging in the pectoral region (fifth space), at which spot it was opened and drained. Recovery was protracted and followed by contraction of the lung and falling in of the thoracic wall.

Case IV.—D. E., a farmer's boy, aged 18, about April 27th, 1899, had an attack of pneumonia on the right side. In this case the temperature fell by lysis on the eleventh day of the disease to 99°, then rose the following day to 102.5°, and then remained at 100° for two days; for the next eight days it varied between 103° and 104°, during which period signs of effusion were present (although exploration with the syringe was negative). On the morning of May 27th he expectorated about 5 oz. of healthy pus almost wholly in one coughing attack, and very easily; this was repeated in the evening, making 10 oz. expectorated that day. On June 1st I found him sitting up in a chair, his cough being very persistent. His daily temperature since voiding the pus had been 101.5° F. On the following day he was able to be removed to his own home two miles away. On June 5th I was shown 1½ pint of healthy pus and was informed that

the patient had voided it all at once while coughing. The temperature at once fell and remained normal, and beyond occasional small quantities of purulent and sometimes bloody expectoration there was an end to the case. He was walking out on June 15th, rapidly gaining flesh, and his recovery was progressive and perfect.

CASE V.—E. F., a girl, aged 10, about June 7th, 1900, had an attack of acute pneumonia. The temperature fell on the seventh day of the disease to 100° F., remained the same on the following day, then gradually rose during the next four days to 104° F.; it then varied between 103° and 104° for seven days, signs of effusion being well marked. With a view to opening the empyema I arranged for her admission to the Beckett Hospital on June 26th. During her short journey in a cab she expectorated a quantity of pus. The following day while in bed she spat up 5 oz. more of healthy pus. Her improvement was at once marked. She returned home in six days, and was downstairs quite well three days afterwards.

CASE VI.—F. G., a man aged about 32. January 29th, 1901, had an attack of acute pleurisy on the left side, followed nine days after by definite signs of effusion. The temperature was 100° to 101°. On February 8th he was admitted to Beckett Hospital. Aspiration was done on February 20th, and 1½ pint of pus evacuated. On March 5th incision and drainage was done, and fetid pus let out. This case was very tedious, the pus discharging for some months, the patient losing ground for a few weeks. At one time the discharge ceased and, hectic symptoms appearing, the sinus was probed deeply with a soft metal probe when it was found that the abscess cavity had become loculated. He improved, and was able to attend the out-patient room for many weeks with some inches of tubing in the pleural cavity. Gradually, however, the tube was shortened, he recovered, and returned to his occupation of shoemaker, but has now practically only one lung functionating.

In Case I the young man's pleura must have been half full, yet he had merely a cough and was only concerned about the swelling near the injured rib. The lung and pleural covering being healthy (that is to say, not primarily affected by inflammatory changes) favoured expansion. In none of the cases was any rib excised. Of the 4 cases operated on 2 (Nos. 1 and 2) recovered very well, and 2 (Nos. 3 and 6—pleuritic) were protracted cases; whilst the 2 other cases ending most favourably were Nos. 4 and 5 (pneumonic) both of which were quickly cured by rupture internally and expectoration of the empyema. Case IV practically emptied his pleura of two pints of pus in three attacks of coughing, and Case V emptied hers practically at twice. These two cases from their very favourable termination illustrate the fact that when the empyema ruptures through the lung into a bronchus the prognosis is by no means necessarily unfavourable.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

CASE OF PLEURISY, WITH EFFUSION AND ASPIRATION OF A LARGE QUANTITY OF FLUID.

I WAS called to see a man, aged 28, three weeks after the onset of an attack of pleurisy, which, so far as could be ascertained, had not been accompanied by much pain, but was very soon followed by difficulty in breathing and debility. When first seen his respirations numbered between 35 and 40 per minute and his temperature varied between 101° and and 102.5°. On physical examination extreme dullness, almost wooden in pitch, was found over every part of the right lung. There was very little respiratory movement on that side, no vocal resonance or fremitus, and the respiratory murmur could only be heard, and that very indistinctly, over the apex, and in the axilla at its highest point. There was great pressure on the trachea, and he was troubled with a throaty cough, and a sense of weight and pressure in that region. Two days later (on July 13th) I aspirated below the angle of the scapula, and drew off 85 oz. of clear, straw-coloured fluid. This gave considerable relief, the circumference of that half of chest being reduced 1 in. The frequency of the respiration was reduced from 38 to 24 per minute, and the pulse-rate from 130 to 116. The respiratory murmur was heard now somewhat more distinctly over the back but not in front; his temperature ranged between 100° and 101.5°. Within seven days the dullness seemed to increase along with other symptoms, and I accordingly aspirated again but only drew off 6 oz., as the operation had to be stopped on account of severe coughing, which came on with each aspiration. The patient was very little better after the second aspiration and the dullness seemed gradually to increase, so that I had again to aspirate on August 3rd, with the result that 90 oz. of fluid were removed at a point selected at the edge of the pectoralis major muscle. The temperature ranged at this time from 100° to 101.5°, the respirations from 28 to 32, and the pulse-rate from 112 to 140.

For five days following this there was considerable improvement but he later began to show signs of increased secretion of fluid, and on August 15th 80 oz. of fluid were drawn off, it being still straw coloured with no sign of suppuration. The respirations were reduced to 20, the temperature to 99.2°, and the pulse-rate to 98. But yet again signs of re-collection began to appear, and he was aspirated for the fifth time on August 25th, when 75 oz. were removed, and as a result the respirations were gradually reduced to 16, the pulse-rate to 90, and the temperature fell to normal. From this point he gradually but surely improved, all symptoms disappearing, and the chest measurement being the same on each side.

This case seems worthy of record, particularly in view of the large quantity of fluid removed, 336 oz., or fully 16¾ pints in all, and also on account of the rapidity with which the fluid reaccumulated on four occasions.

Johnstone, N.B. W. WESTWOOD FYFE, M.B., C.M.

NYSTAGMUS AS A FAMILY PECULIARITY.

I read Dr. C. O. Hawthorne's article in the BRITISH MEDICAL JOURNAL of February 21st, 1903, on nystagmus in three generations, with much interest; and in connexion with his and Dr. Theodore Fisher's observations the following case, which I came across some years ago, may prove interesting:

Child A., aged 21 months, has had marked horizontal nystagmus from birth; a brother B., aged 19, had the defect well marked in infancy, and it still reappears occasionally if he gets excited. The mother's sister C. has had nystagmus all her life, and, of her seven children, three present a like peculiarity; a daughter D., aged 23, in whom it is very marked; a son E., aged 25; and another son F., aged 12. I verified the condition myself in cases A., B., and E. The peculiarity could not be traced on the father's side.

While on the subject of physical peculiarities I may mention the following instance I came across of extra digits, a peculiarity which admittedly often runs in families:

Child A. has six fingers on each hand, the supernumerary digit in each case springing from the outer end of the fifth metacarpal bone. The child's right foot has a sixth or supernumerary toe springing from a corresponding position; the left foot is normal. The peculiarity runs on the father's side. The father B. was born with six fingers on the left hand; the supernumerary digit was removed by Professor George Buchanan, when B was 18 months old, but this did not prevent the peculiarity from reasserting itself thirty years later in his progeny A. B.'s brother C. has six fingers on the left hand; so, also, had B.'s father's (A.'s grandfather's) brother D.

M. MCINTYRE SINCLAIR.

The Sanatorium, Wentworth Falls, N.S.W.

SKIAGRAPHY IN FORENSIC CASES.

IN a recent case in which I was a witness, and where the fetal age at birth of a live child was in dispute as relevant to the probable date of conception and other questions arising from this last, I found the use of the *x* rays of considerable value as an adjunct to the ordinary signs of fetal age, such as weight, length, nails, ear, etc. The child, which was premature, while warmly swathed in wadding, etc., was placed over a plate, and a skiagraph obtained, thereby localizing absence of the lower femoral and presence of the ossifications of the os calcis and astragalus respectively. The sternal ossifications were obscured by the heart, and were thus unavailable. Unfortunately, there does not seem to be any very definite means of deciding by this or other means development corresponding to the eighth month in a live child. In a dead infant the skiagraphy would be simpler, but I venture to draw attention to its use in cases of dispute as to fetal age of live premature infants, provided danger from unnecessary exposure be avoided.

Edinburgh. JAMES CAMERON.

TONSILLOTOMY SHORTLY AFTER ACUTE TONSILLITIS.

I REMOVED a very large tonsil from a little girl in the Louise Margaret Hospital, Aldershot, recently, a week after she had suffered from an attack of acute tonsillitis. The tonsil was very soft, and the fork of the guillotine almost tore it during

removal. Next day a dirty grey slough formed, with rise of temperature, enlargement of cervical glands, etc.; these all became normal in four days, but I certainly think that all operation is contraindicated either during or shortly after tonsillitis.

This is the only case in several hundred that has given any trouble. There was no possibility of diphtheria.

W. WATSON PIKE, F.R.C.S.I., etc.
Aldershot. Lieutenant-Colonel R.A.M.C.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

COLONIAL HOSPITAL, TRINIDAD.

PUNCTURED WOUND OF THE HEART: RECOVERY.

(Reported by E. A. GAYNER DOYLE, M.R.C.S., L.R.C.P., Resident Surgeon to the Hospital.)

E. P., a well-nourished black woman, aged about 35, was admitted to the hospital about 7 p.m. on February 26th, 1900, with the history of having been struck on the chest by a man with his closed fist in a carnival *mêlée* at 4 p.m. I was notified that a case of fractured rib, presenting peculiar symptoms, had been sent to one of the wards. When I saw the patient shortly after she was sitting up in bed in apparently much distress, with urgent dyspnoea and restlessness. She was sober, but had been drinking.

State on Examination.—I found a small pulsating tumour about 2½ in. in circumference between the second and third intercostal space, and ¾ in. from the right margin of the sternum. There was no discernible puncture. Something hard and sharp-pointed could be felt beneath the skin. Pressure from left to right flattened the tumour, but gave much pain, and increased the dyspnoea. The radial pulses were equal, full, and good. There was no sign of internal haemorrhage. A firm pad was applied, and ½ gr. of opium given; the body was well supported on a bedrest, as she could not lie down. The next day, on removing the pad, it was found that the pointed part of the swelling had moved about ½ in. outwards. No crepitus was to be made out. The heart sounds were intensified over the swelling. After consultation with Surgeon-General Sir Francis Lovell and Dr. De Wolf it was decided to cut down and relieve the pressure on the heart.

Operation.—February 27th. I made an incision, under chloroform, about 2 in. long, immediately over the swelling. On cutting through the skin, the end of what proved to be part of a hatpin protruded for about a quarter of an inch. The pin was felt to be firmly embedded in the heart, as the end of the pin moved with every beat. On gently pulling the pin it suddenly loosened, and came away easily. It measured 5½ in., was part of a lady's hatpin, and was curved slightly, the concavity *in situ* being downward, backwards, and to the left. No oozing or heart failure followed removal of the pin. The wound was closed with silk, and the patient kept absolutely quiet. She rallied well three hours after, but complained of a weight over the heart. Pulse, 102, regular, good volume; no dyspnoea.

Progress.—February 28th. Passed a very fair night; slight cough with muco-purulent offensive sputa spat up. Temperature 98°. 9 p.m. Progressing favourably; sputa same, 1/6 gr. apomorph. in a little syr. tolu and peppermint water given for the cough, and a mercurial purge followed by castor oil.

March 1st. Temperature 98°. Doing well: sputa less offensive, but the breath very unpleasant; a mouth wash was given.

March 3rd. A little restless during the first part of night. Wound nearly healed.

March 4th. Began to complain at 3.30 p.m. of a stitch in her right side. Some dullness at the extreme base; breathing harsh; dry friction front and back. Tr. camph. co., syr. codeine, and sp. ether nit. every four hours soon relieved these symptoms.

March 5th. Improving; lungs clearing up.

March 7th. Sutures removed and patient allowed to sit up for the first time.

March 12th. Discharged well, and returned to her work as a cook.

REMARKS.—The temperature never rose above 102°. It would appear that the pin only penetrated the muscular substance of the heart. The lung trouble which followed six days after could hardly have been due to a clot caused by the needle entering the cavity of the heart. The external wound was difficult of recognition on the black skin. The woman was at her work and well last month.

REPORTS OF SOCIETIES.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Sir THOMAS R. FRASER, President, in the Chair.

Wednesday, May 6th, 1903

LIPAEMIA IN DIABETES MELLITUS.

Sir THOMAS R. FRASER read a communication on this subject. He was led to bring it before the Society, not only because of the interest, which much exceeded the mere rarity, of cases of diabetic lipaemia, but also because in a recent case the existence of a large quantity of fat in the blood was unambiguously determined during the life of the patient, as well as fully demonstrated at the necropsy.

The patient was a young man, aged 17, admitted to the Edinburgh Royal Infirmary in May, 1902, suffering from the cardinal symptoms of diabetes mellitus. His family and previous personal history was good. His health had been good till twelve months before admission, when he began to complain of great thirst, polyuria, and loss of weight. Dr. J. Macdonald, of Carlisle, who then saw him, put him on a strict diet and gave morphine, under which treatment his condition somewhat improved. On admission, he showed a fair amount of muscularity; his temperature was subnormal, and remained so throughout the whole course of his illness. His breath had the acetone odour; the appetite was not voracious: the action of the bowels was regular, though they were occasionally moved twice a day, and the motions were of a good colour and formation. There was no tenderness over the pancreas or abdomen generally. The liver and spleen were normal in size. The circulatory and respiratory systems were healthy, the pulse was slow and of low tension, there was no evidence of neuritis, the fundus oculi was normal. Glucose, acetone, and diacetic acid were present in the urine. From the day of his admission, on May 19th, till June 3rd, he was put on ordinary diet. On June 4th diabetic diet was begun, and on June 20th 20 gr. of sodium phosphate were given twice daily. This was the whole treatment. His body-weight continued fairly constant throughout, and there was only a loss of a few pounds. Under dietetic treatment there was a reduction in the amount of urine and sugar excreted, and a further reduction followed the exhibition of sodium phosphate. The patient began to feel much better, and spoke of going home about the end of June. Nevertheless, the acetone odour in the breath continued. Later a faint albuminous cloud appeared in the urine. On July 5th this became more pronounced, but only to the extent of 0.33 gr. per oz., and hyaline and granular casts were present. Shortly after admission, when on ordinary diet, the patient drank 10 pints of liquid per diem, and excreted 351 oz. of urine, 10,000 gr. of glucose, and 975 gr. of urea. When under dietetic treatment he drank about 12 pints of liquid per diem, and he excreted 245 oz. of urine, 6,847 gr. of glucose, and about the same quantity of urea as under ordinary diet. These quantities were further reduced during the following week. From June 18th to 24th, during the exhibition of sodium phosphate, he drank 8½ pints of liquid per diem, excreted 181 oz. of urine, 5,020 gr. of glucose, and 840 gr. of urea. These quantities were further reduced in the following weeks until July 5th, on the afternoon of which day he felt drowsy and unwell and did not get out of bed. The condition improved at 7.30 in the evening. Next day, at 8.30 a.m., he was again drowsy, the lips were cyanosed, the pulse was small, feeble, and extremely rapid (166, while formerly it had been 76), the respiration was sighing. He gradually became semicomatose. At 9 p.m. sodium phosphate solution was injected. On July 7th, at 10.30 a.m., the face and surface of the body showed a purplish-blue mottling, respiration was very difficult; there was pain on pressure over the stomach, the head was being moved from side to side. On examination of the fundus oculi the retinal vessels were seen as pale streaks, leading to the inquiry, Was this due to a change in the wall or in the contents of the vessels? At 4 p.m. the pulse was much weaker, irregular, and 160 in rate. Temporary improvement followed the injection of a cardiac stimulant. Examination of the blood at this stage showed that the red corpuscles were slightly cloudy in appearance and ran irregularly together without forming rouleaux. In the blood plasma an immense number of fine granules were present, as well as clear, highly-refractile droplets about half the diameter of the red cells. The specific gravity was 1036, the haemocytes were 4,500,000, and the leucocytes 23,800 per cubic millimetre. Estimation of the haemoglobin could not be made, because on mixing the blood with water a semiopaque liquid was produced. On staining with osmic acid an immense number of fat droplets were demonstrated. At 9.30 p.m. a solution of sodium carbonate along with strophanthin was injected, and this was repeated every two hours. On July 8th the patient was absolutely comatose. On examination of the fundus oculi at this stage, Mr. George A. Berry found a peculiar and striking condition; the retinal vessels were white in colour, apparently an exaggeration of the condition noted above as having been seen on July 7th—that is, the day before. The patient continued comatose, the head thrown back, the

mouth open, the tongue protruded. Death took place soon after. At the necropsy all the serous cavities were found to contain a large quantity of milky fluid. The blood which had escaped from the blood vessels had a dirty pink colour, and the exposed blood vessels, as on the surface of the brain, were white or reddish-white along considerable stretches of their course, and appeared as if they had been injected with wax. This was best seen in the vessels of the retina. When pressure was put on them this white part moved under the finger from place to place. The internal organs were for the most part healthy. There was a moderate amount of fatty degeneration of the liver, most marked in the peripheral lobules; and the hepatic capillaries on microscopical examination were seen to be filled with the fatty material. There was slight congestion of the lungs and kidneys. There was great hyperaemia of the cardiac end of the stomach, which contained some tarry-looking matter. At first the blood had a homogeneous, dirty-pink colour, but after standing in a vessel it separated into two layers, a dark part below and a paler cream-coloured layer above, both nearly equal in amount. The liquid in the pleural cavities (an effusion apparently) gave when coagulated an even larger proportion of the white material than the blood.

Lantern slides of the blood withdrawn *ante mortem* were shown to demonstrate that the granular matter was really due to the existence of particles of fat. Sections of the lung showed that the blood vessels were filled with fatty particles. Fatty particles were also found in the capillaries of the liver and kidneys. There was congestion of most of the internal organs. It was, however, in the blood that the most profound change was seen. Everywhere there was an immense quantity of fat in the form of minute granules. There was in the blood 16.5 per cent. of fat as against 0.2 to 0.5 in the blood of a healthy individual. In Sir Thomas Fraser's former case of lipaemia in diabetes mellitus, described in 1882, the fat present amounted to 12.6 per cent. In that case, also, the presence of the fat was ascertained *ante mortem*. The proportion of fat in the blood of ordinary diabetic cases was not materially increased. In the case now being described the amount of fat found in the pleural effusion was greater in amount than that found in the blood. It amounted to about 19 per cent., as against 16.5 per cent. in the blood. In certain other recorded cases the amount of fat in the blood was reported as having varied from 1.3 per cent. to 11.7 per cent. Sir Thomas Fraser next shortly referred to the literature of the subject. Mariet of Edinburgh had, as early as 1799, noted excess of fat present in the blood of diabetics. In 1879 Sanders and Hamilton had reported a case of the kind, and expressed the opinion that the dyspnoea and coma of so-called acetonaemia were due to fat embolism in the pulmonary vessels. Such a theory could not now be accepted, inasmuch as there were very many cases of diabetes mellitus and diabetic coma where there was no lipaemia. Moreover, it did not appear that the presence of fat in the blood greatly modified the usual symptoms of diabetic coma. The particles of fat were so small that they could find their way into any of the serous cavities, and as they were perfectly liquid at the normal temperature of the body they could not be concerned in the production of embolism. Lipaemia must, therefore, in the absence of further evidence, be looked upon as an accidental occurrence in the course of diabetic coma. Most probably diabetic coma was an acid intoxication of such nature that β-oxybutyric acid was the most potent factor. When this acid was injected into animals there was produced a coma which could not be differentiated from diabetic coma. The same end could be attained by reducing the alkalinity of their blood. It had been estimated that from 100 to 200 grams of this acid were present in the body of a person who had died of diabetic coma. In the case described by the author the alkalinity of the blood was reduced before the onset of the signs of coma, etc. The fat present in such cases was not a mere event in or manifestation of a general fatty degeneration. There was some moderate fatty change in the liver, kidneys, and myocardium only. Throughout the whole vascular system, however, fat was abundantly present. It could scarcely, therefore, have been derived from the blood or the tissues. Simultaneously with the onset of coma, there was a reduction of the amount of sugar excreted. Urine obtained *post mortem* contained 2.5 gr. per oz. This abrupt fall in the sugar could not have resulted from any alteration in the kidney, as more than 120 oz. of urine were excreted on July 6th. On that day, and the day before, the sugar had begun to undergo extreme chemical changes leading to a greatly increased production of butyric acid as well as an enormous production of fat. The blood obtained after death contained no sugar. Nor did the blood of the case reported in 1882 show sugar *post mortem*. There was strong evidence that in diabetes mellitus the sugar in the blood might suddenly undergo chemical changes leading to the production of toxic acids, and occasionally also of fat. With reference to treatment, acetonaemia and lipaemia might both be recovered from. If the formation of fat and the production of acetonaemia were due to an acidosis, it appeared that the exhibition of alkaline treatment was indicated. In the case narrated it might be that an insufficient amount was injected, or that so much fat and acid had been formed that no treatment was of any avail. Alkaline treatment should be employed in large amounts, and on the earliest sign of β oxybutyric acid in the urine or fat in the blood. The urine and blood ought to be very frequently examined in all cases of diabetes mellitus for β oxybutyric acid and any increase in the amount of fat. A young diabetic patient might truly be said to be living on the edge of a precipice, and might at any moment unexpectedly pass into a state of the most grave danger.

General Paralysis.

Dr. Lewis C. Bruce read a paper entitled Clinical and Experimental Observations upon General Paralysis. In a previous communication he had stated that his conclusions were (1) that general paralysis was a disease due to poisoning by the toxins of bacteria, their point of attack being through the the gastric and intestinal mucous membrane; (2) that the poisoning was probably a mixed one, but the bacillus coli communis was apparently one of the noxious organisms; (3) that the result of treatment by means of serum taken from cases of general paralysis in a condition of remission and injected subcutaneously into early progressive cases, pointed to the fact that some form of serum treatment was the proper treatment for this as yet incurable disease. Further observations had led him to modify conclusion No. 2 that bacillus coli communis was a cause of the disease. He now believed that the bacillus coli infection was a secondary infection. Since the commencement of these observations he had treated 8 cases of general paralysis by serum derived from cases of general paralysis in a state of remission. Three of these patients had apparently made complete recoveries, and were earning their livelihood in the outside world. Of the remaining 5 patients 1 was relieved and 4 were not improved. During the subcutaneous injection of the serum in 6 of these cases it was noted that there was a continuous hyperleucocytosis, with a high polymorphonuclear percentage. In 2 of the cases which recovered the leucocytosis upon recovery fell below 10,000 per c.cm. of blood, and the polymorphonuclear element fell to 50 per cent. or below 50 per cent. Two patients were treated with antibacillus coli treatment without any beneficial results. Two patients were also treated by means of antistreptococcus serum; both improved temporarily, but relapsed when treatment was discontinued. One of these cases, however, made a good recovery when general paralytic serum was employed in treatment. The leucocyte changes which occurred in the disease were next investigated. The earlier observations that in general paralysis there was a recurrent hyperleucocytosis was confirmed. The second series of observations made on six cases gave the following result. During the first stage of the disease the polymorphonuclear cells were present in a percentage of 70 or 80. As the disease advanced the polymorphonuclear cells decreased in number, until in the third stage of the disease they might fall as low as 40 per cent. As the polymorphonuclear cells decreased the lymphocytes increased. An eosinophilia was invariably present at some time of the disease, and varied from 15 to 5 per cent. An eosinophilia was never found in patients who had recovered or in patients in a state of remission. Three patients were treated with small doses of streptococcus pyogenes toxin. Case VII showed no reaction in temperature, pulse, or leucocytosis, and there was no mental benefit. Cases I and II both reacted vigorously, and both showed marked temporary improvement. The same patients were treated with the toxins of staphylococcus aureus, but the result was nil. Two cases were treated by means of inducing terebine abscess. One patient reacted well, and great mental and physical improvement followed. The other case reacted very sluggishly, and the benefit was nil. These observations Dr. Bruce thought pointed to the fact that the inducing of a state of hyperleucocytosis alone would in some cases arrest the disease temporarily. The injection of toxins apparently acted in the same way, that was, by inducing a hyperleucocytosis, but probably the stimulation to the formation of antitoxins in the body of the patient also temporarily raised the resistive power against bacterial invasion. He further thought that these observations were evidence against the theory that general paralysis was a disease primarily due to the breaking down of

the brain neurons as the result of syphilitic or other poisons, and they supported the more recent view that the disease was due to direct action of bacterial toxins, which when temporarily overpowered allowed Nature to put into force the constant attempts at recovery which were so marked a feature of the disease. Syphilis, plumbism, and great mental and physical strain were undoubtedly the predisposing factors, but without the direct bacterial attack there would be no such thing as general paralysis.

The PRESIDENT, Dr. T. H. CLOUSTON, and Dr. W. FORD ROBERTSON spoke on the paper; and Dr. BRUCE replied.

MISCELLANEOUS.

Sir William Turner, K.C.B., LL.D., Principal of the University of Edinburgh, was elected an honorary member of the Society, and Professor Fritz Strassman, Professor of Medical Jurisprudence, etc., Berlin, a corresponding member. Patients were shown by Drs. CHALMERS WATSON, NORMAN WALKER, W. H. MILLER, and by Messrs. DAVID WALLACE, ALEXIS THOMSON, and CHARLES W. CATHCART.—A three-way stop-cock for use in washing out the stomach and bladder was shown by Dr. C. W. CATHCART.—Card specimens were shown by Dr. CHALMERS WATSON and Messrs. DAVID WALLACE and ALEXANDER MILES.—Dr. FRANCIS DARBY BOYD demonstrated Bancroft and Haldane's apparatus for estimating oxygen and carbonic acid in small quantities.

PATHOLOGICAL SOCIETY OF LONDON.

RICKMAN J. GODLEE, M.S., Vice-President, in the Chair.

Tuesday, May 19th, 1903.

MULTIPLE ANEURYSM OF THE SPLENIC ARTERY.

DR. R. S. TREVOR exhibited this specimen, which was obtained from a man the subject of syphilis. The artery was dilated into aneurysms, and was itself extensively calcified; associated with this lesion was a notable dilatation of the splenic vein, but no intercommunication was discovered. The splenic, gastric, and mesenteric veins exhibited the changes due to endophlebitis, the portal vein being partially calcified. Although the blood was not examined, the author thought the case was one of Banti's disease, as the enlargement of the spleen, the cirrhosis of the liver, and the tendency to haemorrhage found in that disease were all present. The histological changes in the spleen also corresponded with those seen in Banti's disease; there was a diffuse thickening of the trabeculae and a diminution in the Malpighian corpuscles.

PRIMARY DIFFUSE SARCOMA OF HEART.

Dr. J. H. DRYSDALE recounted this case, which was that of a woman who died in a state of collapse three days after admission to St. Bartholomew's Hospital. The whole of the heart was invested with a layer of sarcomatous growth, the pericardium being adherent. There was a main tumour in the muscular substance which the author considered the starting point of the disease. The layers of the pericardium were not so infiltrated as to be inseparable, whence it seemed probable that the infection of the parietal layer had taken place by contact. Clinically the irregularity of the pulse was a noticeable feature.

A CASE OF ACUTE LEUKAEMIA.

Dr. F. PARKES WEBER read a paper on this condition, commenting on the classification of leukaemias and pseudo-leukaemias. A very anaemic man, aged 49 years, with a purpuric eruption, swollen gums, tonsils and uvula, and enlargement of the spleen, liver and all the lymphatic glands was admitted into the German Hospital in a semi-delirious condition with slight fever. He died on the following day, about two months from the commencement of his illness. The blood in the heart after death had a peculiar brownish-pink appearance, as if mixed with milk, and showed an enormous proportion of white cells, of which 92.7 per cent were large or small lymphocytes. The bone marrow in the shafts of the long bones had a creamy brownish-red colour. Microscopic examination of the bone marrow, spleen, lymphatic glands, liver, and of a whitish patch in one kidney, showed that all these tissues were permeated with colourless cells, most of them of the lymphocyte class, but many of them containing granules (more or less eosinophile) and apparently belonging to the myelocyte class. Dr. Weber regarded "acute leukaemia" as a more "primitive" or "less differentiated" type of disease than the more chronic forms of lymphatic leukaemia and still less differentiated than typical "spleno-medullary leukaemia." Microbic infection often complicated the cases.

NOTE ON A NEW METHOD OF COUNTING THE CORPUSCLES OF THE BLOOD.

Dr. W. M. STRONG and Dr. C. G. SELIGMANN gave a demonstration on the above. They had been able to obtain permanent preparations from which the number of red and white cells could be counted at any period after the blood was taken, while the use of any form of counting chamber was done away with. Five c.mm. of blood were diluted a hundred-fold with a fixing solution containing methyl violet. For the white cell count 5 c.mm. of this mixture were blown on to a slide from a pipette graduated to deliver this quantity. The drop was allowed to dry and mounted in Canada balsam in the usual way. When such slides were examined with $\frac{1}{6}$ in. objective the white cells were seen stained a conspicuous blue among the unstained red corpuscles. The former were counted by going over the whole of the dried drop with the aid of a mechanical stage. Then knowing the dilution of the blood the number of white cells per c.mm. could be readily calculated. For the red cell count a further dilution of the first hundred-fold dilution was made into a solution containing eosin. Five c.mm. of this were placed on a slide, dried, and mounted in Canada balsam. From the total number of red cells present in the film formed by the dried drop the total number of red cells per c.mm. was calculated. The authors stated that as a result of considerable experience in the clinical laboratory of St. Thomas's Hospital where the method had for some time been in daily use, the results obtained by this method did not differ appreciably from, nor take longer in obtaining than, those given by counting with a Thoma-Zeiss slide. Dr. Seligmann added that for the use of expeditions the method would prove particularly serviceable.

CIRRHOSIS OF THE LIVER IN AN INFANT.

Dr. L. S. DUDGEON showed microscopic sections of an unusual specimen of a form corresponding with biliary cirrhosis in that the fibrous tissue exhibited a notable number of bile ducts. The lesion had been regarded by Dr. Rolleston as "congenital cystic disease" of the liver, although no actual cysts had yet formed. Syphilis and alcoholism were excluded.

Dr. H. BATTY SHAW and Dr. LAZARUS-BARLOW referred each to a closely similar case, and Dr. F. PARKES WEBER remarked that whilst one form of such cystic disease was of the nature of an adenoma, as stated by Dr. Lazarus-Barlow, there was another due to an intrauterine cirrhosis, the possibility of which had to be borne in mind.

PLEXIFORM NEUROMA OF ORBIT.

Messrs. J. HERBERT PARSONS and W. C. ROCKLIFFE reported a case of this disease. The child, aged 2 years, was shown at the Ophthalmological Society in 1899, as the subject of pulsating exophthalmos. The proptosis increased gradually without much affecting the child's general health; but, finally, interference became necessary, and Mr. Rockliffe exenterated the orbit in January, 1903, after tying the carotid artery. The child died very shortly after the operation. At the necropsy it was found that the roof of the orbit had been absorbed, and the growth had become intracranial, leading to great distortion of the bony and soft parts. On microscopical examination the mass was found to consist of convoluted thickened nerves, embedded in dense fibrous tissue. These filled the orbit, extending backwards into the skull and forwards into the posterior part of the upper lid, leading to ectropion. Cases of elephantiasis neuromatodes involving the upper lid and temporal region formed a large proportion of cases of the disease, but affection of the orbit was rare, and this was the most extensive case yet on record.

GONOCOCCUS ENDOCARDITIS.

A paper by Miss JULIA COCK on gonococcus endocarditis was taken as read in consequence of the shortness of time due to the general business of the annual general meeting.

NEXT MEETING.

The PRESIDENT announced that the next meeting of the Society would take place at Oxford on Saturday, July 4th.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

W. LANG, F.R.C.S., President, in the Chair.

Friday, May 8th, 1903.

RHEUMATIC IRITIS.

DRS. A. PAINE and F. J. POYNTON read a paper illustrated by lantern slides in which they endeavoured to establish the

identity of the pathological changes in rheumatic iritis with those occurring in other accepted rheumatic affections. The diplococcus of rheumatism developing in the tissues and cells rather than in the fluid exudate rendered the identification of micro-organisms in fluids obtained by paracentesis of the anterior chamber unsatisfactory, while the opportunities of examining the iris itself in the acute phase of inflammation in the human subject did not often occur. The specimens, therefore, of iris exhibited, which showed the diplococci *in situ*, had been produced experimentally in rabbits. The distribution of the organisms was similar to that occurring in the synovial membranes showing dense clumps.

Observations were made by the PRESIDENT, Mr. G. HARTRIDGE, and Mr. HOLMES SPICER in regard to the extreme rarity of iritis as a complication of true acute rheumatism, and the probability that most cases of so-called rheumatic iritis had really their origin in gonorrhœa.

Dr. POYNTON, in reply, said the demonstration of the special micro-organisms, when present, required nothing beyond the ordinary methods of preparation and staining. He was not sanguine about finding them in portions of iris removed in the quiescent period, as the subsidence of active inflammation was dependent on their destruction or reduction to a state of latency.

TUBERCULOUS CHOROIDITIS.

Mr. W. H. H. JESSOP described two cases of tuberculous choroiditis associated with conjunctival tubercle.

The first case, a girl, aged 9, was seen on October 29th, 1901, complaining of a burning sensation in the right eye, associated with periodical attacks inflammation and prominence of the lower lid. Later on there developed a smooth, round, non-fluctuating swelling in the outer part of the conjunctiva which nearly reached the limbus of the cornea, with enlargement of glands in the neck. In the right eye tension was —1, and vision $\frac{6}{36}$. There were two areas of detachment of the retina, corresponding with two masses obscuring the disc. The external growth was incised and proved to be tubercle by inoculation experiments, characteristic bacilli being obtained. When seen again on January 30th, 1902, vision was $\frac{6}{12}$, the masses in the fundus having practically disappeared, leaving patches resembling albuminuric retinitis, without either pigment, new vessels, or vitreous opacities. The second case was a woman, aged 23, who complained of misty vision and of a black spot in the field; the vision was $\frac{6}{12}$. A cyst in the breast was found to contain tubercle bacilli, and there was a strong family history of tubercle. While under observation masses in the choroid similar to those described in the former case were seen to spread from the centre towards the periphery of the fundus, leaving but little trace behind them, and now, after three years and four months, the patient had recovered with good vision.

Reference was made to forty-two cases collected and described by Dr. George Carpenter and Mr. Sydney Stephenson.

Mr. SYDNEY STEPHENSON said that tubercle of the choroid, like some other conditions regarded as rare, ceased to be so when systematically looked for. Among 119 cases of tuberculosis he had examined in surgical wards he had found 11 instances of affection of the choroid; further investigation had disclosed others, but had not disturbed the proportion of about 10 per cent. in which the choroid was involved. He endorsed Mr. Jessop's observations as to the absence of residual pigment and vitreous opacities.

Mr. JULER inquired whether these cases had been treated by subconjunctival injection, as one case was on record which had recovered under local treatment alone.

Mr. JOHNSON TAYLOR asked if the open-air treatment was of use in such cases, and suggested that the appearances described suggested to him congenital syphilis.

Mr. HOLMES SPICER said he had regarded tubercle of the choroid as very rare, whereas syphilitic changes in the choroid were comparatively common, and asked how they could with certainty be distinguished.

Mr. SYDNEY STEPHENSON said that, of the cases he had collected, 50 per cent. had been confirmed as tubercle, both pathologically and bacteriologically. The history was an important factor in the diagnosis, but in tubercle the lesion was solitary and centrally situated, while in syphilis it was multiple and peripheral in distribution.

Mr. JESSOP insisted on the importance of there being no residual pigmentation; he thought the combination of tubercle with congenital syphilis was very common. In regard to treatment, he had adopted little besides "the air at Margate."

ADRENALIN AND INCREASE OF TENSION.

Mr. A. F. MACCALLAN reported 5 cases of glaucoma in which adrenalin caused an increase of tension. The subject was of interest in connexion with the extended use of this drug in ophthalmic operations.

The first case was that of a woman who had been treated by free instillation of eserine in both eyes. Tension in the right was normal; in the left + 1. After the use of adrenalin and eserine together, there was headache and vomiting, and tension in the left eye was + 3. The second case was that of a man with acute glaucoma, who had tension + 2 L. and + 1 R. Adrenalin and cocaine were applied before operation, and the right eye tension rose to + 2. The third case was that of a woman with acute glaucoma in the right eye which after the use of eserine presented a tension of + 1. The addition of two drops of adrenalin solution raised it to + 2. The fourth case was that of a man with increased tension which after the use of adrenalin presented symptoms of glaucoma, tension being raised to + 2. After operation vision was $\frac{6}{9}$ in each eye. The fifth case was that of a woman with acute glaucoma; improved under eserine, tension being + 2. Adrenalin was applied before operation, with the result that tension was raised to + 3, and haemorrhage occurred.

An increase of tension was not the invariable consequence of the use of adrenalin, but it was common in cases of acute and subacute glaucoma, and in two such retinal haemorrhage had occurred in the writer's experience. Other cases in which adrenalin had been used showed no change in tension or in the fundus, but the vascular constriction produced by adrenalin appeared to prevent the absorption of other drugs, such as those employed to contract the pupil.

Mr. BISHOP HARMAN mentioned the use of adrenalin solution in a case of episcleritis. Vision was reduced to $\frac{6}{18}$ and J 8, with diminution of the colour fields. Improvement occurred after a week, the patient having discontinued the drug himself on account of the stinging pain it caused.

Mr. JESSOP spoke of the pain and increased tension produced by the use of adrenalin in scleritis and episcleritis; he found that engorgement followed constriction of the vessels.

Mr. J. H. PARSONS thought the effects of adrenalin in diseases of the eye were by no means uniform. Complications following its use were probably due to dilatation of collateral or deep-seated vessels and reactionary dilatation of the superficial ones after the initial contraction had subsided.

Mr. HOLMES SPICER thought that when the arteries were rigid the drug probably caused contraction of the veins.

Mr. JOHNSON TAYLOR (Norwich) considered adrenalin useful in limiting haemorrhage, if not otherwise dangerous; since using it he had observed no haemorrhage in cataract extractions.

PROPTOSIS.

Dr. E. DONALDSON (Londonderry), communicatad a case of proptosis and deformity of the head in a male child, aged two and a-half years, the youngest of three.

There was nothing in the family history; labour had been tedious but at full time and no instruments were used. The proptosis was present at birth to much the same extent as now. Half-a-dozen times the right eye had become dislocated forwards outside the lids. The child was in fair health except for slight rickets, the mother having continued suckling up to the present time, and could walk well. He was 2 ft. 8 in. high and there was no defect in other special senses or intelligence. The forehead was prominent in the mid-line and depressed on either side. The margin of the lids only just reached the limbus of the cornea in the primary position, in all movements of the eye the sclerotic was exposed above and below. There was slight horizontal nystagmus, the eyes could be closed and the corneae were covered during sleep. Movements were free with a tendency to diverge, particularly in the right; there was no pulsation and the globes could not be pressed back. So far as could be made out with the finger there was no deformity of the orbital plate. The anterior fontanelle was closed. Vision was defective, the optic discs being pale, but there were no corneal opacities.

The case appeared similar to one shown by Mr. H. Power and recorded in the *Transactions*, vol. xiv, p. 212. The shallowness of the orbits being due to premature synostosis, as pointed out by Mr. Swanzy in vol. xviii, p. 15.

CASE.

The following case was shown: Mr. R. W. DOYNE: Multiple deformities of the eye and eyelids.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

PATHOLOGICAL AND CLINICAL SECTION.

Friday, April 24th, 1903.

Professor BARLING in the Chair.

ELECTION OF OFFICERS.

THE following officers were elected for the ensuing session:—*President:* Mr. Frank Marsh, F.R.C.S. *Honorary Secretaries:* Dr. Hazelwood Clayton and Mr. George Heaton.

CASES AND SPECIMENS.

Dr. LAMB showed a living case of frontal suppuration and a living case of ethmoidal suppuration.—Dr. POTTS showed a girl, aged 18, suffering from myositis:

The illness began three years ago with severe pain at the back of the right shoulder. Two years ago slight swelling was noticed in this region. There was great tenderness and pain over the upper part of the right scapula, the pain being worse and persisting after movement. A radiograph showed no abnormality. Two months ago the swelling had increased at the back of the shoulder, and there was also some swelling and tenderness in front of the shoulder, the deltoid, trapezius, and pectoralis major being chiefly affected. There was slight loss of power in right arm due mainly to the pain on movement. The patient was anaemic, constipated, and the urine loaded with urates. A year before the illness she fell over a fence on to the right side and was "stunned." The disease had steadily progressed though salicylates relieved the pain to some extent.

Mr. MILWARD showed specimens of a perforated appendical and a perforated gastric ulcer from a girl, aged 7.

The patient was admitted to the General Hospital with a history of fourteen days' illness, an abscess was opened in the right iliac fossa, and eight days afterwards a tympanitic swelling appeared over the transverse colon. Subsequently the swelling appeared to depend on the condition of the bowels. The temperature in the meantime remained subnormal, the tongue was clean, and the leucocytes determined on several occasions were not increased. The epigastric swelling was finally opened seventeen days after it was first noticed and a perforation of the stomach discovered. A large cavity in front of the stomach contained much gas but very little true pus. The child died five days afterwards.

The patient had never shown any recuperative power, and was markedly asthenic from the first.

Dr. CHARLES showed an intra-abdominal cyst.

Dr. JAMES SAWYER showed a microscopical specimen taken from the kidney of a child who died of chronic interstitial nephritis at the age of 4 years. Attention was drawn to the rarity of the disease in children and the difficulty of ascertaining the causation of the condition. The kidneys showed diffuse interstitial nephritis, and there were cardiac hypertrophy and arterio-sclerosis. No evidence of syphilis in the child, but a marked syphilitic history in the father.

Dr. LAMB showed showed a specimen of abscess of the cerebellum.

Professor BARLING showed a calculus removed from the ureter 1 in. from the bladder.

Mr. HEWETSON showed the following specimens: (1) A congenital coccygeal tumour about the size of a fetal head, attached by a broad pedicle to an 8 months fetus. The tumour presented and was mistaken for a large uterine fibroid. The tumour was situated between the coccyx and the rectum, and subjacent to the levator ani muscles. The spinal canal was continuous with the interior of the tumour's capsule by an opening that admitted a No. 8 urethral bougie. The tumour was solid and arranged in large lobules, which were held together by a loose framework of fibrous tissue. On microscopical examination it was found to consist of a fine round-celled groundwork, with masses of cartilage irregularly scattered about and numerous tubules lined by a single layer of cubical epithelium. The tubules varied considerably in size, showed well-marked convolutions, and occasionally intracystic growths. The tumour possessed a well-marked capsule, which was loosely attached to all its surroundings, except the tip of the coccyx. It might safely be called a congenital adenoma, which in all probability arose from the embryonic neurenteric canal rather than from the coccygeal gland. (2) A general hyperplasia of the thyroid gland in a 7-months fetus. There was no history of thyroid enlargement in the family. The mother, who had been the subject of six previous miscarriages, was given 12 gr. of potassium chlorate and 10 gr. of potassium iodide during her last pregnancy. The child was born naturally, and lived only five minutes. The thyroid enlargement was about the size of a hen's egg, and was accompanied by considerable enlargement of the thymus gland. It completely encircled the trachea, and between its two lobes nipped the oesophagus, causing considerable obstruction to the passage of a No. 6 urethral bougie. On microscopic examination the acini were found to present the character of fetal acini of about the seventh month, no colloid matter being present. Interspersed amongst the acini were numerous large blood sinuses, and the enlargement of the thyroid was without doubt due largely to this intense vascularity. The nature of this fetal bronchocele was thus of a congestive or vascular type. How far the potassium chlorate was a coincidence and how far a causal factor it was impossible to say. (3) Fetal adenoma of the thyroid gland. A fetus of seven and a half months showed a large swelling occupying the entire left half and part of the right half of the neck. The tumour caused obstruction to labour, the head becoming arrested in the pelvis, from which it had to be extracted by forceps. The child lived two hours, and died of asphyxia. There was no history of goitre in the family. The tumour was fluctuating in part with hard nodules irregularly spread over it. It was subjacent to the sterno-mastoid, sterno-hyoid, and sterno-thyroid muscles, and encircled the trachea. It was perfectly encapsuled and occupied the entire left half of the thyroid gland, the isthmus, and part of the right lobe. The tip of the right lobe was quite normal to the naked eye, and also microscopically. The tumour consisted of cysts of varying sizes, which were full of clear mucin. The more solid parts showed acini of various sizes lined by a single layer of cubical epithelium. Some of the cysts contained beautiful intracystic growths, which were lined by clear columnar epithelium identical with the chalice cells of the large intestine. Masses of cartilage were scattered throughout the sections in considerable numbers. No colloid matter was visible anywhere. Casts of all the three fetuses were shown to illustrate the appearance of the tumour before dissection. Lantern slides of the tumours and photomicrographs of their microscopical sections were thrown upon the screen to more clearly demonstrate the character of the individual tumour.

CARDIFF MEDICAL SOCIETY.—At a meeting held on May 7th, Dr. R. PRICHARD, President, in the chair, Mr. WILLIAM SHEEN showed a patient with a sacral anus after excision of the lower part of the rectum for malignant disease. The patient was a man aged 59, and the operation was done four months previously through a posterior vertical incision with removal of the coccyx. The patient had almost perfect control over the artificial anus, and had discarded an appliance with which he had been provided.—Dr. H. G. COOK showed a man, aged 64, with a large intramuscular tumour in the right thigh of one year's duration; the tumour resembled a sarcoma, but had distinctly diminished under iodide; there was no evidence of syphilis in the patient.—Dr. J. J. BUIST read notes on the medical aspect of the late Pentre tragedy. After a midnight struggle a young woman was found drowned in a few inches of water. Dr. Buist gave briefly the story of the case, which was recently tried at the Glamorgan assizes, when the prisoner—a young man—was found guilty of manslaughter, and sentenced to fifteen years' penal servitude. While considering that death was due to drowning, he commented on the absence of froth at the mouth and of water in the stomach, and remarked on the bearing of these facts on the conclusion arrived at. He then discussed the question as to whether the drowning was (*a*) suicidal, (*b*) homicidal, or (*c*) due to misadventure, and gave his reasons for believing in the last explanation. He suggested that after a struggle the deceased went into the river, and that there she either had an epileptic fit or fell down in an exhausted state and was unable to recover herself before being asphyxiated. Dr. Buist pointed out that the theory of misadventure was not inconsistent with the finding of the jury, and explained the interpretation of the legal aspect of the case as given by the judge in charging the jury. The PRESIDENT, Drs. W. E. THOMAS, NAUNTON, MORGAN, and others commented on the case, agreeing generally with Dr. Buist's conclusions.—Mr. J. LYNN THOMAS read a paper on prostatectomy, partial and complete. He gave details of 3 cases recently under his care, in each of which he had performed prostatic enucleation by Freyer's method with a successful result. He showed the specimens from 2 of the cases. The operations of suprapubic and perineal prostatectomy were contrasted, and the anatomical considerations affecting complete removal and the identity of the "capsule" of the prostate discussed. Professor DIXON, in commenting on the paper, gave details of the anatomical associations of the prostate. Mr. E. J. EVATT pointed out that the development of the prostatic ducts as outgrowths from the prostatic urethra rendered it impossible to completely remove the prostate without injury to the urethra. The PRESIDENT, Dr. SHIACH, and Mr. WILLIAM SHEEN also joined in the discussion, and Mr. LYNN THOMAS replied.

ABERDEEN MEDICO-CHIRURGICAL SOCIETY.—At a meeting held on May 7th, Dr. J. GORDON, President, in the chair, the following clinical cases were exhibited: Dr. J. F. CHRISTIE: (1) Two cases—brother and sister—of ichthyosis; (2) a case of urticaria papulosa going on to prurigo; (3) photograph of a peculiar syphilide. Dr. MARNOCH: A patient with arrested development of mandible; (2) radical cure of inguinal hernia in a man aged 73; (3) a patient operated on eighteen months ago for chronic ulcer of stomach; (4) a case of posterior gastro-enterostomy for cicatrized ulcer of stomach; (5) a case

of intraperitoneal and extraperitoneal rupture of the bladder, successfully operated on.—Dr. J. SCOTT RIDDELL: (1) A case of abdominal tumour, probably lipoma of omentum; (2) a patient after removal of tuberculous glands from mesentery; (3) a patient in whom Burrell's operation for recurrent dislocation of shoulder had been performed a year before; (4) a case of coxa vara with skiagraph; (5) a case of congenital dislocation of hip treated by the method of Lorenz.—Dr. ROSE: (1) a case of resection of knee-joint; (2) a case of acute diaphysitis of femur.

METROPOLITAN COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION, NORTH LONDON DISTRICT.—At a meeting held on May 13th, Dr. WYNN WESTCOTT, Vice-President in the chair, Mrs. SCHARLIEB read a paper on the importance of early operation for malignant disease of the uterus and methods of diagnosis. Dividing the disease into the two heads of malignant disease (1) of the cervix and (2) of the body, under the first, she discussed the positions it might begin in (*a*) vaginal surface, (*b*) surface of the cervical canal, (*c*) deep on the substance of the cervix. She emphasized the importance of early examination under an anaesthetic with removal of a wedge or curetting the growth for microscopical examination.—Dr. WYNN WESTCOTT proposed, and Dr. HUMPHREYS seconded, hearty votes of thanks to Mrs. Scharlieb and to the hospital authorities.

STIRLING BRANCH OF THE BRITISH MEDICAL ASSOCIATION.—At the annual meeting of this Branch, held on May 7th, Dr. BALFOUR MARSHALL (Glasgow) delivered an address on retroflexion of the uterus. Dr. Marshall spoke of the various methods of replacing a mobile retroflexed uterus and of its retention in position by various kinds of pessaries. He advocated a more particular adjustment of pessaries to individual cases, and demonstrated the method of shaping Albert Smith and Schultze pessaries from celluloid rings. He also briefly discussed the treatment of retroflexions fixed by adhesions by the method of massage and by operation.

ULSTER BRANCH OF THE BRITISH MEDICAL ASSOCIATION.—At the spring meeting held on May 13th, Professor SINCLAIR, F.R.C.S.E., President, in the chair, Dr. DARTNELL, Bangor, read short notes of a case of penetrating wound of the abdomen by the shaft of a car, and showed the patient, which was spoken to by Mr. FULLERTON and the PRESIDENT.—Dr. JOHN CAMPBELL read a paper on subperitoneal lipomata, which was spoken to by Mr. MITCHELL and the PRESIDENT.—Professor BYERS read a short paper on the early treatment of acute puerperal infection, which was spoken to by Drs. DARLING, CAMPBELL, FRASER, MARTIN (Portrush), RITCHIE, CREERY (Coleraine), MCKEOWN, CALWELL, and WADSWORTH.

REVIEWS.

TUBERCULOSIS.

THE keynote of Dr. ZEUNER's book on *Purity of Air, Aseptic and Atoxic Management of the Lungs in Combating Tuberculosis*,[1] is to be found in the words of the author, "*Je reiner die Luft, desto weniger Schwindsucht*" (the purer the air, the less consumption). The object of the author is to show that tuberculosis of the lung is a "filth disease," in that it depends upon impure air, and that for its prevention as well as its cure purity of air is essential. The dangers to be met are threefold: dust in the air, gaseous impurities, and bacteria. The influence of dust is well known, and is shown in the great mortality from consumption amongst those who live and work in dusty atmospheres. Gaseous impurities include the carbonic acid given out in respiration and from the combustion of illuminants, as well as the impurities given to the air in certain trades, such as straw-hat bleaching. Both the above predispose to consumption by the injury they cause to the mucous membrane of the air passages and to the bronchial glands. The small lung, neck, and bronchial glands, we are told, produce a secretion which, like chloroform, narcotizes the bacilli, and, though these may not be killed, their activity—and therefore their power to produce toxins—is kept in abeyance. The bacilli are incapable of inducing tuberculosis so long as the mucous membrane and these glands are intact and active. These must therefore be kept healthy if tuberculosis is to be avoided; and, whilst dust damages the epithelium, gaseous impurities, and especially carbonic acid, tend to diminish the protective power of the lymphatic glands. Not only the poor but also the better-class people, are often not sufficiently careful to keep the air in the sleeping room pure, and the author quotes with approval the saying of Biermer, that "most lung complaints are bedroom diseases." The argument is clearly and fully worked out, and the pamphlet is a useful contribution to the subject of which it treats.

[1] *Luftreinheit, aseptische und atoxische Behandlung der Lungen zur Bekämpfung der Tuberkulose.* Von Dr. Med. W. Zeuner. Berlin: A. Hirschwald. 1903. (Demy 8vo, pp. 83. M. 1.60.)

The first volume of a new German periodical dealing with tuberculosis, *Beiträge zur Klinik der Tuberculose*,[2] contains articles on the incidence of tuberculosis amongst the workers in the cigar factories of Baden and Bavaria, the dissemination of tuberculosis in Baden, and a description of lupus follicularis disseminatus. The first article gives statistical evidence that consumption is more prevalent amongst the workers in the cigar factories than amongst the other dwellers in the same district. Much of the work seems to be done at home, and poverty often obliges all the members of the family, even children, to assist. Under such conditions the hygienic conditions are likely to be unsatisfactory. Every care, however, is taken to render the factories themselves satisfactory in sanitary details. The records of the Heidelberg Medical Clinic showed that amongst the cigar workers who applied for treatment for various diseases during the ten years 1889-1898, 25.5 per cent. suffered from tuberculosis, as against 13.1 per cent. amongst applicants following other occupations. Cornet has placed the proportion of tuberculous individuals in an adult population at 1 in 85 to 109, but amongst those engaged in the cigar factories and their families the proportion is found to be three or four times as great. It is, of course, difficult to determine whether the work in the manufacture of cigars is in itself a predisposing cause, or whether family predisposition and unhygienic surroundings in the home may not be the chief factor in causation. The author gives numerous statistical tables, which he critically analyses in order to arrive at some definite conclusion, and is led to the opinion that the disease is contracted in the factories, where the phthisical workers expectorate freely on the floor. He accordingly places as the first requisite for bringing about a diminution in the relatively high mortality from tuberculosis amongst the cigar makers the elimination of phthisical workers from the factories. The second article is a careful analytical study of the statistics of tuberculosis mortality in Baden, with a view of determining the cause of the prevalence and distribution of the disease. Geographical and climatic influences are examined, as also are the influence of density of population, of occupation, of age, and of mode of life or social position. The effect of the consumption of alcohol is also discussed. The main conclusions arrived at are that as the height above the sea level increases the prevalence of consumption diminishes, not necessarily merely because of the increased altitude, for the conditions of life differ in the plain and on the hills. Occupation has a decided influence on the prevalence of tuberculosis, and there may also be some race predisposition to be taken into account.

Drs. GOODBODY, BARDSWELL, and CHAPMAN have reprinted their very interesting and important communication on *Metabolism in Phthisis*,[3] read before the Royal Medical and Chirurgical Society of London on June 11th, 1901. It embodies the results of investigations into the results of "overfeeding" on the metabolism of phthisical patients. Though patients often take insufficient food if left without supervision, the ingestion of large quantities of food—more particularly of proteids—does not necessarily result in increase in body weight nor in improvement in the general condition of the patient. A medium diet appears to give the best results, and it seems to be advisable to diminish the amount of food as the disease becomes quiescent, but even then the patient will require a more substantial diet than in health. These investigations deserve the careful study of all who have to regulate the dietary of consumptives.

[2] *Beiträge zur Klinik der Tuberculose.* Herausgegeben von Dr. Ludolph Brauer. Heft 1. Wurzburg: C. Kabitzsch. 1903. (Demy 8vo, pp. 118. M. 2.)

[3] *On Metabolism in Phthisis.* By Francis W. Goodbody, M.D., M.R.C.P., Noel D. Bardswell, M.D., M.R.C.P., and J. E. Chapman, L.R.C.P. London: H. K. Lewis. 1902. (Demy 8vo, pp. 130, 1s.)

THE "BRITISH GUIANA MEDICAL ANNUAL."[4]

ALTHOUGH no *Medical Annual* had been published for two years in British Guiana, the excellence of the articles in the

[4] Edited by A. T. Ozzard, M.R.C.S.Eng., and C. P. Kennard, M.D.Edin. Demerara: Baldwin and Co., Georgetown, Demerara. 1902. 5s.

present issue testifies to the valuable work being done in the Colony. The contents are arranged under eighteen headings, the seventeenth and eighteenth being devoted to the *Transactions* of the British Guiana Branch of the British Medical Association during 1900-1. Dr. G. C. Low, Craggs Scholar of the London School of Tropical Medicine, contributes the first article on Filarial Lymphangitis. He describes the clinical features of the disease and the diagnosis, pathology, and treatment of the affection. He states that "a certain class of cases in Barbadoes is known" as "fever and ague of the abdomen," and considers that the conditions induced might have been caused by lymphangitis of the large vessels of the abdomen, complicated possibly by the formation of abscesses. The part the adult filarial worms play in attacks of lymphangitis is still uncertain. Dr. C. P. Kennard describes under the title Fever Cases a number of ailments such as "febricula, low fever, pernicious or malignant malarial fever," etc. The same writer has also two excellent articles in the *Annual*, entitled Ankylostomiasis and Notes on Filaria in Birds. Dr. Kennard is of opinion that the great trouble in ankylostomiasis is the catarrhal condition and wasting of the intestinal tract, and considers that the resulting indigestion is the chief cause of the anaemia in chronic cases. Dr. A. T. Ozzard, in a contribution entitled The Mosquito and Malaria, gives a useful outline of a lecture delivered before the Governor of British Guiana and the Royal Agricultural and Commercial Society of the Colony. Dr. Ozzard's lucid description is a model for other medical men to adopt when teaching the intricacies of the malaria-mosquito theory to the public. The same able observer contributes two articles on ankylostomiasis, one being the Life-history of the Ankylostoma Duodenale, and, in addition, a Description of a Female Parental Form of the Filaria Demarquayi. Dr. C. W. Daniels, until recently Medical Superintendent, London School of Tropical Medicine, gathered, during the tour of the Royal Commission on Malaria, valuable information concerning malaria and other tropical diseases. Dr. Daniels states "that in Africa one was at once struck by the large number of *Anopheles* present, and the rough general correspondence between the numbers of these mosquitos and the liability to early infection with malaria." The great majority of cases of malaria amongst the natives in Central Africa occurred in children. In most malarial districts he found no less than 68 per cent. of children under 2 years of age with markedly enlarged spleens. In blackwater fever Dr. Daniels states that the great danger is suppression of urine. No drugs appeared to have any specific action: quinine did not affect, either favourably or otherwise, the course of the disease. Concerning the "ground itch" of British Guiana, Dr. Daniels affirms that the eruption met with in this complaint is due to the ankylostome embryos. Dr. Robert Carter contributes three cases of Beri-beri. The patients in whom beri-beri occurred were men dwelling in the midst of a dense forest. The sunlight scarcely penetrates through the bush even at midday, and the heat and dampness of the locality were most marked. The food of the patients in the forest consisted principally of flour, rice, and salt fish. Dr. P. H. Delamare contributes an article on Ankylostomiasis, in which he discusses the question, Is pigmentation of the tongue an early sign? He maintains that a mark all down one side, "just as if he had wiped a penful of Stephens's blue-black ink on it," is a characteristic early sign of ankylostomiasis. Dr. J. H. Conyers discusses the Diagnosis and Treatment of Liver Abscess; and Dr. Q. B. de Freitas communicates Notes on a Case of Extrauterine Gestation, with Passage of Fetal Remains per Rectum. Dr. W. de W. Wishart writes on the Influence of Rainfall on Death-rate in the Tropics; and Mr. J. A. Raleigh, M.R.C.V.S., contributes notes on Anthrax (Charbon) in British Guiana. The variety and scientific interest of the several articles in this *Annual*, contributed by men of high standing in their profession, several of whom have made a world-wide reputation in tropical medicine, stamps the *British Guiana Medical Annual* for 1902 as a periodical of importance. We congratulate the editors upon their work, and the appreciation with which the *Annual* has been received will, we hope, stimulate the medical men in British Guiana to continue to issue periodical reports of their investigations and observations.

FORENSIC MEDICINE.

DR. LESSER, in his stereoscopic *Atlas*[5] of plates, representing those conditions in medico-legal practice that are capable of graphic representation, has produced a work of considerable interest and of some novelty. The subjects have been carefully selected, the photographs are good, and the descriptive letterpress accompanying them is clear and concise. As to whether much is to be gained by this method of representation is, however, open to question. The help of the stereoscope, as of the magic lantern, undoubtedly renders the pictures more realistic, but it in no way compensates for the lack of practical experience in *post-mortem* work in these special cases. If, indeed, the student be tempted, by their very excellence, to rely upon such pictures and to neglect opportunities of enlarging his knowledge by inspection at first hand, then he would be better without such aids altogether. Again, no pictorial representations can ever be as instructive as mounted specimens. To those, however, who have not the opportunity of being present at necropsies, or who, having seen the actual conditions, want to refresh their memories, this atlas will be of considerable service, especially if it be used in the way that every such work should be employed, in conjunction with a good textbook on the subject. In many cases it must be admitted, also, that photographs, however well taken, are not as valuable as good diagrams, which make no attempt to reproduce Nature, but only to convey an impression of the conditions. The subjects illustrated in the present series are all of the head and neck, and are naturally of unequal merit, according to their adaptability for reproduction by photographic processes. Those representing cut throats, bullet wounds, lacerations, contusions, and external injuries generally, are not especially effective, whilst some of the pictures of haemorrhage into and abscess of the brain and cord are, when viewed through the stereoscope, almost startlingly vivid, owing to the apparent increased depth of view obtained.

The fact that a second edition of Dr. BRUNDAGE'S *Manual of Toxicology*[6] has become necessary within a year of the first issue of the work in itself shows that the book more or less satisfies an undoubted want. The author has written for three classes, namely, physicians, pharmacists, and students, and has taken considerable pains to include only what he considers will be of practical service, and to make this as easy of reference as possible by the free use of tables wherever possible. The first and second parts dealing with classification of poisons and the symptoms and treatment thereof are on the whole very good, the facts being concisely and tersely expressed, and the treatment advised being such as would probably be feasible under the conditions usually met with in cases of acute poisoning. The third part, which treats of the diagnostic value of individual symptoms, is not so good. For example, it is not much help to the student to have a list of seventeen drugs which may be suspected if convulsions occur, and it is decidedly misleading to him to be told that when illusions and visions are present he should expect the poison to be absinthe, opium, morphine, cocaine, etc. The fourth and fifth portions are also far from satisfactory, the methods for the detection of poisons described being only applicable, in many cases, where considerable quantities of the substance are available. At the same time, some of the most important poisons are omitted altogether or only imperfectly dealt with. The final sections dealing with signs and modes of death, *post-mortem* procedure, chronic poisoning, drug habits, and maximum daily and single doses of the drugs of the *Pharmacopoeia*, contain much valuable and at times curious information which is not to be found in ordinary textbooks. The volume will be of use, but not of as much use as it might easily have been made if more care had been taken in its compilation.

This is not the place to discuss whether books of the class of Dr. MURRELL'S *Aids to Forensic Medicine and Toxicology*[7] are useful or the reverse, but in the little manual before us the usual complaint that such short synopses contain nothing but lists of more or less ill-sorted facts hardly holds. The subject is treated superficially and inadequately, and the student would from a perusal of its pages only glean a scrappy and imperfect idea of even the main features of the subject; but, on the other hand, so far as it goes the matters are clearly dealt with, the sins being rather of omission than

[5] *Stereoskopischer gerichtsärztlicher Atlas.* Von Dr. Adolf Lesser. Erste Abtheilung. Tafel 1-50. Breslau: S. Schottlaender. 1903.

[6] *A Manual of Toxicology.* By A. H. Brundage, A.M., M.D., Ph.D. Second Edition (revised and enlarged). London: Bailliere, Tindall, and Cox; and New York: The Henry Harrison Co. (Crown 8vo, pp. 383. 6s.).

[7] *Aids to Forensic Medicine and Toxicology.* By W. Murrell, M.D., F.R.C.P. Sixth Edition. London: Bailliere, Tindall, and Cox. 1903. (Fcap 8vo, pp. 122. 2s. 6d.)

of commission. The best part of the book is that dealing with toxicology, but here, too, the descriptions are too brief to be of service unless the student has already mastered the subject by the perusal of a larger book on the subject. To remind him of the cardinal points, however, this part may be studied with advantage, as most of the poisons are well and clearly described.

MEDICAL PRACTITIONERS' ACCOUNTS.

MR. MAY'S little manual entitled *Medical Practitioners' Accounts*,[8] forming vol. xviii of the *Accountants' Library*, will be found very useful by the medical practitioner. Members of the profession have gained rather a notoriety for their lack of business habits, and this ought not to be. Every practitioner should be able to show by clearly-kept books what his practice is and what its pecuniary value. Then much of the difficulty that arises in the transference of practices would be eliminated, and he or his representatives would reap the benefit by increase in the sum paid. It too often happens that a purchaser is debarred from buying, or will only offer much less than he would otherwise give if the vendor could show him properly-kept books as a voucher of the bona fides of the practice. Mr. May describes and gives examples of four systems of medical bookkeeping:

(A) Where the visiting list is utilized as a complete day-book and accounts are posted straight from it to the ledger.

(B) Where a partial day-book is used and the ledger receives items from the visiting list and the day book.

(C) Where all chargeable items are entered in a separate day-book and are summarized and posted periodically into the ledger.

(D) Where all chargeable items in proper sequence and priority are entered separately in a day-book and posted separately into the ledger.

Some useful information is also given as to the assessment of medical receipts for income-tax purposes and the deductions that may be lawfully made.

NOTES ON BOOKS.

TRANSACTIONS OF SOCIETIES.

THE *Transactions of the Hunterian Society of London*[9] for its eighty-third session, recently published, contain, in addition to a record of the clinical cases and pathological specimens brought before the Society, two lectures, one of which—that by Dr. Mitchell Bruce—was reported in the BRITISH MEDICAL JOURNAL of November 23rd, 1901, and the text of six original papers, four of which are on small-pox.

The eighth volume of the *Laboratory Reports of the Royal College of Physicians, Edinburgh*,[10] deals with work done in the laboratory chiefly in 1900 and 1901. It consists of a collection of articles, already published elsewhere, the greater portion of which treat of physiological subjects, the remainder, with the exception of one article on hygiene, being devoted to pathological research. The two most important articles in the physiological section are upon the diet of the labouring classes in Edinburgh, by Drs. E. Noël Paton, J. Craufurd Dunlop, and E. Inglis, and the placenta of the rabbit. The latter, by Dr. Chipman, is a valuable contribution to the study of the placenta as regards its histological development and the formation in placenta and fetus of fat, glycogen, and iron. The pathological discussion of the action of diphtheria toxin on the motor cells of the spinal cord, immunization against typhoid fever, and the leucolytic powers of various bacteria are also interesting.

The third volume of the *Transactions of the Glasgow Obstetrical and Gynaecological Society*[11] contains reports of the meetings held during the two sessions 1900-01 and 1901-02. A list of the principal communications classified under the head of obstetrics and gynaecology respectively, with a third division headed miscellaneous, is a useful feature of the volume since it will facilitate reference. We hope that this Society, like some others, will eventually publish a classified index to its volumes. The work, if done on slips year by year, is comparatively light, and the accumulation of slips at the end of five or ten years is easily arranged for the printer. The volume contains many valuable papers, which without some such system will be apt to escape the notice of future writers.

We have also received the twenty-seventh volume of the *Transactions of the American Gynaecological Society*,[12] which contains a record of its proceedings for the year 1902. One of the most interesting papers in the volume discusses a case of splenectomy for wandering spleen. The patient was an unmarried woman, aged 22. The operation was undertaken under the impression that a mass occupying the left pelvic region and extending above the symphysis was either a large pus tumour, an ovarian cyst, or a soft myomatous tumour. When the abdomen was opened it was found to be the spleen, which was removed. It turned out that the patient at the time was in the early stage of typhoid fever. She passed through a severe illness, but finally recovered and has since married.

In the fifth edition of Dr. HOBART AMORY HARE'S *Practical Diagnosis*[13] (a previous edition of which was reviewed in the BRITISH MEDICAL JOURNAL of May 27th, 1899, p. 1286) much new material has been incorporated and the text has been carefully revised, so that it may be considered fairly abreast of advances in clinical medicine and its methods of diagnosis. The earlier part of the book is on a rigidly anatomical plan, dealing with the face and head, hands and arms, and so on, while in the later portion grouped symptoms, such as fever, headache, vertigo, and so forth are considered. Covering so large a field, the book is of course fragmentary, but it leaves few of the more important facts—important in the sense of being practically useful—absolutely unnoticed, so that at the same time it may be claimed for it that it is approximately complete. The only adverse criticism that appears to be really necessary is that the statements regarding the symptomatology of the diseases of the nervous system are often indefinite—for example, it is said that in progressive muscular atrophy the reflexes of the legs are preserved; in tuberculous meningitis the reflexes are apt to be more marked on one side than the other; ankle clonus is found most marked in lateral sclerosis, in disseminated sclerosis, and in amyotrophic lateral sclerosis. This seems to come perilously near covering the unknown with the still more unknown; these and similar statements certainly cannot be considered to represent knowledge. One good feature of the book is a copious, not to say stupendous, index of nearly 60 pages in a volume of not quite 700 pages. The book is simple, clear, and practical, but if the reader can bring to its perusal an instructed eye it will be all the better.

A Pocket Cyclopedia of Practical Medicine and Surgery,[14] by Dr. GEORGE GOULD and Dr. WALTER PYLE, is a reproduction in miniature of their large cyclopaedia which was noticed in the BRITISH MEDICAL JOURNAL of January 10th, p. 87. It of course does not tell everything about anything, but it is well worth pointing out that for students the possession and use of this little book may ensure against absolute ignorance of all, or nearly all, the more important subjects in medicine and surgery, for it tells something about most things connected with the healing art.

We have received the eleventh volume of the *Scottish Medical and Surgical Journal*,[15] edited by Dr. NORMAN WALKER and Mr. HAROLD STILES. It comprises the numbers from July to December, 1902. By its original articles and reviews of current literature it ranks high among the really living medical magazines. Besides this, on account of local editorial notes and news, it appeals especially to medical men educated in the Scottish schools.

The *Medical Annual*[16] is too well known to need any further praise in this the twenty-first year of its publication. The volume for 1903, like its fellows, is the faithful mirror of contemporary medical progress. A new feature in this volume is a short critical survey of the various departments of medicine and surgery intended to guide the reader

[8] *The Accountants' Library* (Vol. XVII) *Medical Practitioners' Accounts*. By J. Henry May, A.S.A.A. London: Gee and Co. 1903. (Cr. 8vo, pp. 92.

[9] London: Headley Brothers. 1903. (Demy 8vo, pp. 148. 3s.)

[10] Edinburgh: Oliver and Boyd. 1903. (Demy 8vo, pp. 622. 10s. 6d.)

[11] Glasgow: Alex MacDougall. 1903. 8vo, pp. 259.

[12] Philadelphia: W. J. Dornan. 1902. 8vo, pp. 446.

[13] *Practical Diagnosis*: The Use of Symptoms and Physical Signs in the Diagnosis of Disease. By Hobart Amory Hare, M.D., B.Sc. Fifth Edition. London: H. Kimpton. 1902. (Demy 8vo, pp. 698; 25 plates, 236 illustrations. 21s.)

[14] London: Rebman, Limited. 1902. (Fcap. 8vo. 5s.)

[15] Edinburgh: The Scottish Medical and Surgical Journal, Limited. 1902. (Demy 8vo, pp. 586.)

[16] Bristol: John Wright and Co. 1903. (Crown 8vo, pp. 896. 7s. 6d.)

directly to the points in the growing edge of medical science of most importance for his purpose; by reference to the articles themselves his knowledge may be subsequently made more ample and more precise.

REPORTS AND ANALYSES

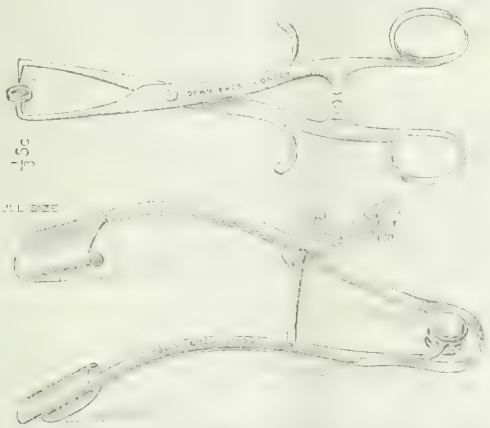
AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEDICAL AND SURGICAL APPLIANCES.

Tongue Forceps and Eye Speculum.—Mr. W. ATKIN THOMPSON, M.R.C.S., L.R.C.P. (Spilsby), writes to describe two instruments that he has devised: (1) Tongue forceps with finger rests, which are intended for pulling out the tongue in any unconscious condition of the patient, or in operations on the tongue. In the first place they were devised to avoid the discomfort caused (for example, after pulling out the tongue during the administration of an anaesthetic) by the ordinary tongue forceps, owing to the pressure caused by the latter; for whereas the old style of forceps crushes ¾ to 1 sq. in. of lingual tissue, with subsequent bruising, extravasation of blood, and oedema of the crushed area, which, by exerting pressure upon the branches of the lingual nerve, causes great discomfort to the patient, this being often the first thing complained of, on regaining consciousness after the ordinary forceps have been used, the forceps depicted do not crush the tongue, and hence are less painful, merely making one minute



puncture, which is practically painless, and of which the patient never complains. In one unusually severe case of alcoholic coma, the tongue was held forwards by means of these forceps for over six hours, and on regaining consciousness the patent did not complain of his tongue feeling at all sore, and on examining the organ eight hours after the forceps had been taken off the puncture was only just visible, being almost completely sealed up. The finger rests are intended for use during the administration of an anaesthetic. By their means the anaesthetist is enabled to pull the tongue forward with the first and second fingers of the right hand only, the thumb and the remaining fingers being free to hold the mask on and to pull the lower jaw forwards, while the left hand is free to feel the pulse or to add more of the anaesthetic. (2) A "Merrythought" eye speculum: This simply combines the spring speculum of Nettleship with the flattened, gently-curved retractor blades of Desmarre. The combined instrument gives the advantages of both, with the disadvantages of neither. It is especially useful in dealing with diseases or injuries of the eye in children. It is made in two sizes, one for children and one for adults. Both instruments have been made by Messrs. Down Brothers.

SUCCESSFUL VACCINATION.—Dr. George Fisher, public vaccinator for the No. 6 Albury District of the Guildford Union, has, for the fourteenth consecutive time, received the Government grant for efficient vaccination.

THE King of Italy has presented a gold watch with the royal monogram set in brilliants to Professor Leoni, Director of the Vaccine Institute of Rome, in recognition of his services to the royal family.

LUNACY AND LAW.

THE CARE AND TREATMENT OF PERSONS OF UNSOUND MIND IN PRIVATE HOUSES AND NURSING HOMES.

THE discussion on the above subject which followed the reading of two important papers at the Medico-Psychological Association dealing with lunacy law and practice in regard to the treatment of persons of unsound mind in private houses and nursing homes was resumed at the general meeting of the Medico-Psychological Association of Great Britain and Ireland held in London on May 15th, under the presidency of Dr. WIGLESWORTH.

The two papers referred to above were read at a previous meeting of the Medico-Psychological Association held at Derby on February 14th, by Dr. Ernest White, Medical Superintendent of the City of London Hospital for the Insane, and Dr. T. Outterson Wood, Senior Physician to the West-end Hospital for Nervous Diseases, and a report appeared in the BRITISH MEDICAL JOURNAL of February 21st. At the conclusion of the papers the discussion of the subject was commenced by Dr. Seymour Tuke, who touched upon the importance and the necessity of legislation in the matters referred to—namely, the question of single care and its abuse, and the question of notification without certification of incipient cases of insanity. At the adjourned meeting held in London on May 15th the discussion was resumed by Dr. Henry Rayner.

Dr. RAYNER said that two points required special attention in regard to the private care and treatment of persons of unsound mind. First, it was desirable that the patient should receive medical care and treatment early in the course of the disease; and, secondly, it was important that such care and treatment should be efficient. To ensure this, proper legal control of the patient was necessary, and the Lord Chancellor had stated to a joint deputation of the Medico-Psychological and British Medical Associations that proper legal control would be provided for in the provisions of a forthcoming Lunacy Bill dealing with the care and treatment of incipient and unconfirmed cases of insanity. In regard to efficient care and treatment, Dr. Rayner drew attention to the fact that this was often wanting, because patients of unsound mind were sometimes placed in the charge of persons who were ignorant or incompetent, while the system of clandestine treatment, still largely prevalent in the United Kingdom, lent itself to grave abuses which could only be abolished when it became necessary to notify every such case to the Commissioners in Lunacy. Persons who had had asylum experience in the treatment of the insane, such as former assistant medical officers of asylums were those best fitted to take charge of insane patients in private and single care, while ladies who had had experience in nursing were also suitable to have the immediate care of the patient. Persons without experience in mental disorders should never have charge of such cases, because the qualifications demanded were tact, skill, absence of prejudice, and sympathy; and the absence of such qualities in the nurse or attendant led to risk of the patient's prospect of recovery. Dr. Rayner had seen several cases of patients kept in the back rooms of houses, neglected, wet and dirty, and permitted to remain in bed while their delusions were growing fixed and stereotyped, or while they were steadily deteriorating in health physically and mentally. He hoped that the Commissioners in Lunacy and the Medico-Psychological Association, which had devoted so much time and energy to the training and preparation of a reliable corps of nurses qualified to attend on mental cases, would be enabled to continue to furnish such qualified persons in the future.

Dr. LIONEL WEATHERLY stated that during 30 years' experience in lunacy practice, of which the first 14 years were devoted to the care of private patients, he had found that much was yet needed in the way of legislation and reform of the single care of private patients. In the year 1880 he read a paper on the subject, and published a pamphlet dedicated to the late Earl of Shaftesbury. He then suggested that the "treatment of the insane in single care should be definitely legalized," and that licences should be granted to qualified persons for this purpose at the petty sessional divisions. Lord Shaftesbury himself, in a letter addressed to Dr. Weatherly, favoured this view. A recent proposal by Sir William Gowers to place insane persons in the private and single care of laymen or nurses, but without legal protection was, in Dr. Weatherly's opinion, unwise. Such detention of a patient should be legalized. As regards the private care of insane patients, it

depended more upon the person taking charge than upon the patient's particular insanity as to whether treatment and prospect of recovery would be efficient and hopeful, for if the custodian was incompetent or bad it would be better for the patient to be removed from such "private" care and placed in an asylum. The statement that any one could take charge of insane patients for private and single care was a popular fallacy. Dr. Weatherly also urged that the "voluntary boarder" system should be extended by legislation so as to include public asylums, which, under existing law, are not permitted to receive such cases of threatened or oncoming insanity. He advised that encouragement should be given to this system, which had been hampered by the Lunacy Act of 1890.

Dr. Briscoe, of Alton, Hants, regarded the care of the insane as a question almost of national importance. He dwelt upon the shortcomings of the existing Act, and proposed that a resolution should be passed by the Association to the effect that it disapproved of the present system of single care, and that it desired that a better system, efficiently controlled by law, should be in operation, and, moreover, that all nursing homes and custodians taking charge of the care of persons of unsound mind should be duly registered and licensed or otherwise qualified in psychological medicine before patients could be given in to their care.

Dr. David Bower, of Bedford, said that the Medico-Psychological Association had tried to get a provision similar to the existing one in Scottish lunacy law into the forthcoming Lunacy Bill. He did not believe that the care and treatment of lunatics should be left to any one, whether competent or not; there could be no free trade in the matter, since abuses which already existed would increase and multiply unless the whole system was regulated and controlled by law. He also believed that all "homes" receiving insane persons in single care should be duly registered and brought within the cognizance of the Commissioners in Lunacy. He cited cases from his experience showing that the proprietors of many such homes desired the patient's money rather than the patient's recovery.

Dr. William Douglas found it almost impossible to generalize in a discussion of this nature, but he would go so far as to state that while some patients benefited most in private care, others would have better prospects of recovery in an asylum. The friends and relatives of patients solicited the doctor's advice, but did not always follow it, and hence troubles arose when the patient, kept at home and treated inefficiently, developed dangerous or violent symptoms. He hoped the forthcoming Lunacy Bill would incorporate into its text provisions taken from Scottish lunacy law and found to work effectively in Scotland. He thought that private patients with incipient or slight mental disorders should have a legal guardian appointed in case such a patient became a voluntary boarder in an institution, so that the patient could not be permitted to leave the institution to his danger whenever he liked—a contingency which would be obviated if the legal guardian sanctioned his temporary detention till the necessary certificates were made out.

Dr. Savage felt that, as he had spoken at some length on the subject on the occasion of the reading of a paper on Lunacy and the Law by Sir William Gowers last year, he would not have much to say at present. He emphasized the fact that many persons would not have their relatives certified though they might be obviously insane. A notification of such cases, as of "homes" receiving them, should be sent to the proper authorities—the Commissioners in Lunacy, and such notification should be made compulsory by law. In his experience not all medical men who desired to take charge of insane persons were suitable persons to receive them. A semi-detached house standing in the heart of a great city and without a garden attached to it would not be a suitable residence for such a patient though the custodian was a medical man. The insane required quiet, absence of noise and worry, and open-air exercise in a garden, and such accommodation and accessories should be available in the house of the medical man taking charge of a case. Every such case should be notified to the Commissioners in Lunacy. The tendency in the modern care and treatment of lunatics was towards greater breadth of therapeutic treatment and greater freedom from abuses. He thought that the staff of Commissioners in Lunacy should be increased numerically, especially if notification, registration, and the further development of legislation in regard to the care and treatment of incipient and unconfirmed cases of insanity were to be expected in the near future. He protested against a habit, not uncommon even among medical proprietors of institutions, of indiscriminately saying that if patients were brought under their care earlier the chances of recovery would not have passed away, as he had known cases of general paralysis and of dementia praecox concerning which such comments had been uttered. He deprecated this as an unprofessional tendency which should be strongly discouraged by every medical man.

Dr. Edridge-Green was of opinion that occasionally the notoriety attached by friends and neighbours to the fact of an insane patient being treated at home, and the scandal arising therefrom were sufficient in some cases to provoke a second attack of insanity in a patient who had happily recovered from the first.

Dr. Elliott, of Sevenoaks, stated that in a long experience, extending over several years of general practice, he had met with but few cases of clandestine treatment and its abuse. He, however, was of opinion that a proper system of legal provisions should be enacted to deal with this branch of medical practice and to safeguard both patients and bona fide practitioners alike.

Dr. Lloyd Andriezen stated that he agreed in the main with the statements and propositions made by Dr. White, but he was of opinion that no hard-and-fast lines could be laid down concerning the care and treatment of private patients. He believed that proper legal measures would be incorporated in the next Lunacy Bill, so as to render more effective the future treatment of mild and incipient cases of mental disease and to prevent the abuses still prevalent in regard to single care. The friends and relatives of patients, although they consulted the alienist and solicited his advice, did not or were not always able to follow it, and occasionally a tragic ending in suicide of the patient was the result of their neglect to carry out medical advice. He thought it incumbent on medical men, both as a social and medical obligation, to notify to the Commissioners in Lunacy every case of lunacy treated by them, whether certified or not, and hoped legal provision would be made to compel such notification. He cited instances of incipient general paralysis and of dementia praecox in his recent experience as illustrating the breach of medical ethics which was sometimes committed when the relatives of such patients were informed by the proprietor of the institution receiving the patients that they (the patients) would have recovered if they had been sent in earlier. He strongly supported Dr. Savage's opinion that such a habit was to be deprecated. He was not in favour of patients with melancholia and delusions being sent on long journeys, as they developed unforeseen suicidal impulses, and yet this was a point little attended to by the general practitioner, who often advised change and travel in such cases. He thought the general practitioner required much education yet regarding lunacy before he could conscientiously take charge of the burden of treating or giving advice in such cases.

Dr. Henry Winslow stated that, for the sake of the patient and of the public, the law should enact that the custodian or caretaker of the patient was responsible for suicidal or other accidents. Chronic and harmless lunatics were especially suited for private single care or even for boarding out, but "recent" cases should have every security, legal and medical. Cases of suicide of patients placed in the charge of unskilled and ignorant custodians were both frequent and deplorable. At present the custodian incurred only a moral blame, but he believed it necessary that some legal punishment should be meted out to such persons.

Dr. Hayes Newington was of opinion that Sir William Gowers was too ardent to relax the restrictions of lunacy law and to allow excessive latitude as regards the custody and treatment of patients in single care, a tendency which Dr. White's paper had checked. The law regarding such cases should be so fashioned that a better state of things for both patient and the public might prevail. At present the law was broken day by day, and wrongdoers flourished because their actions did not come under the knowledge and cognizance of the Commissioners in Lunacy.

Dr. White, in replying, stated that the general trend of medical opinion was that better and more efficient legislation was needed in regard to early care and efficient custody of patients. The letters of Lord Shaftesbury indicated that abuses existed twenty-five years ago, and other abuses might occur in the near future if legislation was not provided to guard against them. He believed in the advantages of extending the voluntary boarder system to existing licensed houses, and he concurred in the view expressed by many speakers that the custodian of the patient in single care

should be held responsible for incapacity. He also urged that all homes receiving patients should be licensed, and that the staff of the Commissioners in Lunacy should be increased.

Dr. OUTTERSON WOOD spoke in similar terms, and the discussion then terminated.

THE PRACTICAL WORKING OF A CRECHE AND ITS HYGIENE.

THE following description of a French *crèche* and its working is founded upon an article published recently by Dr. Beluze in the *Revue d'Hygiène et de Médecine Infantiles* (No. 6).

The object of a *crèche* is to assist mothers unable to devote themselves to their babies, and to mind these infants during the daytime, between the ages of a fortnight and 3 years. The physician in charge of the *crèche* is thus working for the protection of infancy.

I. THE CRÈCHE FROM A HYGIENIC POINT OF VIEW.

Socially the *crèche* has for its fundamental principles: To separate the child from its mother as little as possible, and to hand it back to her when her work is done; to allow the mother to go out to work in cases of necessity and to obtain good general results.

Its drawbacks are (1) that as the infant must be brought in the morning and taken away at night, it is exposed to cold; (2) a tendency to premature weaning; and (3) the risk of contagious diseases being brought in by one child and spread among the others.

Its advantages are that it affords a healthier abode for infants than the homes of their parents, that they are fed under medical supervision, that they are supplied with good milk, and that often ailments are checked before they have become illnesses. Finally, the mothers are taught hygiene and the feeding of their infants.

II. THE INSTALLATION.

Dimensions of the Crèche.—Crèches should be small and numerous; the distances for the mothers to come and the risk of cold for the infants are thus reduced, and mothers are enabled to attend more frequently to suckle their babies. The spread of contagious diseases is lessened, and physicians and matrons can look after forty infants and four nurses more conscientiously than if there were double that number.

Locality.—Air, light, and space (large windows, sun, roomy wards) are essential, for without these healthy growth is checked.

The Arrangement of the Premises.—All appliances saving trouble to the staff should be employed. Every attention should be given to arranging the premises so that the spread of contagion may be avoided.

Preliminary Crèche.—A hall where the children shall be cursorily examined; a cloak room to undress them in and in which a further examination takes place; a lavatory and bathroom, where they are bathed, examined from head to foot, and dressed, are necessary. These rooms should have plenty of light and be situated at the entrance of the building, so that suspicious cases may be sent straight away. On this neutral ground also the physician's consulting room and the dairy will be arranged.

The crèche proper should contain everything conducive to the health and development of its inmates. In a *crèche* of thirty-six beds there will be three dormitories—the smallest for infants, the medium for babies from 6 to 15 months, to be twice the size of the first, and one twice as large again for bigger children who can run about; for these there will be also a playroom.

III. THE WORKING OF THE CRÈCHE.

Hygiene and the management of their babies will be first taught to mothers.

On the arrival of the children in the morning, at the least sign of illness the temperature must be taken, the mother questioned, and a suspicious case must be at once sent home. As about 4 per cent. of the children who are received annually in the *crèches* have measles in their homes, and as an epidemic of measles in the *crèche* means a mortality of 1 out of 5, no precautions can be too strict. If cases occur, the children being kept in groups, the infection need not spread through the entire community. There should be an isolation sanatorium.

Disinfectants.—Aseptic precautions should be employed with regard to utensils used for the children—beds, toys, clothes, and the hands of the nurses.

Feeding.—Suckling should be encouraged, as artificial feeding is most difficult with those babies brought, as is often the case, in a weak and dyspeptic state.

Breast Feeding.—Unless the physician is firm, women will only attend once a day to suckle their infants, and this leads to premature weaning. The physician should act upon the knowledge that it is possible for the mother to continue suckling regularly, as has been done in many cases.

Artificial Feeding.—Sterilized milk has been generally recognized as the best substitute for the breast. It has been found advisable in all cases to give the milk diluted with water. Dr. Beluze invariably orders the milk to be diluted one quarter with sweetened water up to the age of 6 months. This simplifies matters, and the happiest results have been obtained, always provided that the milk is found on analysis to be up to the required standard.

Sterilized Milk.—Milk may be supplied sterilized by the trade; but to this there are three drawbacks. First, in industrial sterilization, milk is heated, in view of the time it may have to be kept, to a temperature of 115° to 120° C. Many children display repugnance for this overcooked liquid, which has a flavour of caramel. Milk sterilized in the "Soxhlet" and other apparatuses of the same kind, need not be heated over 99° C., which is sufficient for milk to be used within twenty-four hours, while the overcooked flavour is avoided. The second drawback is that milk, sterilized by the trade, is delivered only in litres and half litres. This means that it must be poured into other vessels, warmed in saucepans, mixed with boiled water, and again bottled. These delicate and important operations take place at a time when the infants are being suckled; the matron is engaged in looking after that process, and the preparation of the sterilized milk is entrusted to less reliable persons. The milk being only prepared at the moment of feeding, the physician is unable to check the number of bottles given daily to each infant, and the perfect uniformity of the contents of each bottle is uncertain. Nowadays every *crèche* can procure fresh new milk, or, failing this, milk pasteurized immediately after milking. By sterilizing at the *crèche* the overcooked flavour will be avoided, the manipulation can be superintended, and the exact quality and quantity of milk given to each infant checked. The operation of preparing the whole day's food need only take an hour, therefore the matron herself can be present. The bottles are carefully numbered for each child, and the physician is enabled at any time to see that his orders are carefully carried out.

IV. MEDICAL STAFF.

Organizing the Working of the Crèche.—The chief thing the physician has to fight against in organizing a *crèche* is the financial question. He may have to be satisfied with much less pretentious premises than he would choose were he not limited to a certain sum. Happily, according to French law, the healthiness of the situation and the dimensions of the rooms must be up to a certain standard. The physician's duties consist in the daily examination of the children on arrival, their grouping, and, finally, the normal working of the organization. He will prescribe the individual feeding of each child, including those affected with rickets, or suffering from debility and dyspepsia, whose name is Legion; finally, he will guide and encourage the matron, who in her turn controls the nurses under her charge.

Teaching the Staff.—The matron is responsible for the healthy state, as regards contagious diseases, of children newly admitted. She is also responsible for the nurses' carrying out the aseptic cleansing of all the utensils in the *crèche*, and, finally, she superintends the artificial feeding of the infants. A special course of instruction being necessary in these matters, the physician must teach them to the matron and nurses. This elementary and practical teaching will include hygiene of the house: method of airing, temperature, cleanliness; individual hygiene of the child: its ablutions, bed, clothing, and necessary exercise; the prophylaxis of direct and mediate contagion, with the precautions to be taken for its prevention; notably aseptic and antiseptic treatment of the clothes and of the nurses' hands; individual isolation; isolation of groups; and the management of the sanatorium for infectious cases; nature and method of preparing foods, mixing and sterilization of milk, rules for infants' feeding, dyspepsia, and its prevention; relative and hydric dieting and weighing of infants. Elementary instruction should be given also as to the use of the thermometer; the recognition of ordinary contagious diseases, such as measles, conjunctivitis, impetigo, chicken-pox, and whooping-cough. Three or four simple lectures will suffice, to be followed by practical experience,

patient and intelligent observation, and daily commentaries.

Teaching the Mothers.—Each mother should be persuaded that (1) every child's face must be covered out of doors in very cold weather; (2) the person in charge must not stand about the streets with it on a cold day; (3) milk must be the only food for infants: (4) if an infant cries loud and often it is protesting, not from hunger, but from overfeeding; (5) because a child is short-coated it is no reason that it should be fed on food other than milk.

Simple as these rules appear they are not easy to enforce, and it often happens that the good done in the *crèche* is undone at home. The physician, having in view these difficulties, must be patient and firm in the direction of his staff and with the mothers of the infants. He alone must be responsible for the hygiene and general management of the organization. In a word, medical supervision, well understood and strictly exercised, is an indispensable condition to the successful working of a *crèche*.

THE WORSHIPFUL COMPANY OF SPECTACLE MAKERS AND EYESIGHT TESTING.

Under the heading "May Opticians Test Eyesight?" our contemporary, *The Optician and Photographic Trades Review*, has published a correspondence between the Editor of the British Medical Journal and the Master and Clerk of the Spectacle Makers' Company, and comments thereon in a leading article, which says:

We think we may fairly summarize the position by saying that an indirect attack has been made on the traditional right of opticians to exercise their business of sight testing for the purpose of adapting spectacles to correct mechanical defects of sight.

This was evidently written under a misapprehension, as any one would infer from it that we have gone out of our way to read a lecture to opticians on the way in which they should conduct their business, which we need hardly say we have not done. On March 7th of last year Sir William Hart Dyke, at that time the Master of the Spectacle Makers' Company, addressed a letter to this Journal which commences in the following way:

It has been brought to my notice, as Master of the Spectacle Makers' Company, that reports are circulated to the effect that candidates for the diploma of this Company are examined in sight testing, and that the diploma certifies that the holder is competent, by virtue of such examination, specially to undertake cases of refraction. I therefore wish to state most emphatically that the examination does not include sight testing.....

He goes on to say:

Any holder of the diploma of the Spectacle Makers' Company may carry on the general business of an optician in the ordinary way, but in reference to spectacle fitting particularly he is bound by certain restrictions, as may be seen by the enclosed copy of the declaration which he signs.

The declaration was printed below the letter, the most important of those conditions being those numbered 7 and 8, which read as follows:

7. That he will not publish any advertisement unfair to fellow craftsmen or misleading to the public, and especially will not use or advertise this diploma in any way which would lead the public to infer that it conveys medical qualification.

8. That he will not use any drug for the purpose of paralysing the accommodation of the eye.

Having had our attention drawn to the restrictions placed upon its diplomates by the Spectacle Makers' Company, we forwarded to Sir W. Hart Dyke a copy of a complaint received from a correspondent respecting an optician who appended to his name the letters F.S.M.C. (Fellow Spectacle Makers' Company), and who advertised himself in a journal as an "expert refractionist," who "has a system of his own whereby he can not only discover the exact defects of each eye, but is able to determine the exact lens to give in each individual case." We pointed out that it seemed to us that this optician had disregarded the conditions under which he held his diploma by publishing an advertisement which was misleading to the public, as it is impossible for him to "determine the exact lens to give in each individual case," unless he is prepared in many instances to violate the eighth condition by using a drug for the purpose of paralysing the accommodation of the eye, and we hoped that the Company would exercise its undoubted power to restrain such advertisements.

When our letter reached the Company Sir William Hart Dyke had ceased to be Master, and the present authorities seem indisposed to take action in the direction indicated by their late Master's letter, which clearly implied that the Company would exercise its disciplinary authority over those diplomates who violate the conditions under which their diplomas are granted. The answer we received from the Clerk to the Company was a request to state definitely in what respect the advertiser had violated the conditions of the agreement, and when we had again pointed this out we were asked if we had actual proof of the use by the advertiser of drugs for paralysing accommodation; we replied that the point of our accusation was that either the advertiser's claim to be able to determine the exact lens for each individual case was false, and therefore misleading to the public and a violation of the seventh condition, or he must in many cases use a drug to paralyse accommodation in violation of the eighth condition. This dilemma is carefully avoided by the Clerk to the Company, who ends his correspondence by affirming the willingness of the Company to take action if assured of the fact that the advertiser uses paralysing drugs, which is simply a feeble evasion of the question.

According to the *Optician*, a committee has been appointed by the Spectacle Makers' Company, consisting of the Lord Mayor of London, with several other "gentlemen of position" to discuss and make recommendations with respect to the official recognition of sight testing under the Spectacle Makers' scheme of certification.

If we may accept this statement as correct, it is positive evidence of a disposition to reconsider the policy upon which Sir W. Hart Dyke's letter was based, and explains the inconsistency of the Company's present attitude.

It is not an unreasonable conclusion that the Company now hesitates to exercise disciplinary authority over its diplomates, and in connexion with this it is interesting to note the action of a body styled the British Optical Association, and founded in 1895. In a circular, of which a copy has been sent to us from the registered offices of the Association, we are informed that "It was the first society in the world to institute optical examinations, and at the present day it is the only body in the United Kingdom holding optical examinations which have for their chief subject that of the sight testing." It asks for "legislative powers" which by some strange topsy-turvy way of looking at things are represented as capable of converting the at present unorganized opticians into a strong, honoured, educated, and well-trained body. The circular alleges "that medical men in the old days were 'quacks' until they acquired legislation;" in other words, that previous to 1858 all medical practitioners were "quacks;" Cullen and Gregory, Bright and Addison, Astley Cooper and Brodie, and, indeed, many men still living who were qualified and practising long before 1858 were "quacks," and only acquired a legal status on the passage of the Medical Act! One feels obliged to ask whether mere ignorance can account for such a stupendous misrepresentation. An Act of Parliament may do much to consolidate and strengthen a profession by trimming away from it the fringe of irregular practitioners, but it cannot give it those qualities which it does not already possess.

The British Optical Association, we are informed, gives certificates of efficiency in sight testing and desires to obtain legislative sanction for its claims to do so, and thereby takes up the position of an active and militant rival to the Spectacle Makers Company. This dangerous competitor has not escaped the notice of certain members of the Company, as is testified by a circular issued by a Mr. Lionel Laurance, wherein he asks for opinions upon the advisability of the Spectacle Makers' Company certifying opticians in respect to sight testing.

These two circulars throw a flood of light upon the altered attitude of the Spectacle Makers' Company. Sir William Hart Dyke went out of his way to publish the assurance that the examination of the Company does not include sight testing; he emphasized the conditions upon which the diplomas are granted, and his letter might not unfairly be considered to be intended to secure the approval and support of the medical profession; but the present authorities of the Company are evidently prepared to reverse that policy. Before they proceed further we would commend to their attention the dilemma already propounded; if they evade it now they will not be able to do so always; they will have either to show that it is to the public interest to allow opticians to use drugs to paralyse accommodation, or be prepared to give up the present claims of many of their diplomates and to restrain their pretensions.

The editor of the *Optician* admits in his article that the "newspaper announcements of some worthy members of the craft" lend themselves to "adverse interpretation" in the sense of "semi-medical advertising," but he contends that it is difficult to find a remedy for this; and even if the Trade Guild

should be able to exercise some sort of censorship it must not be on the lines "prescribed" by us. We confess we do not see any difficulty in the Company insisting upon a strict adherence to the conditions under which its diplomas are granted, which is all that we have ventured to "prescribe"; if it can not do so much as this, we fear it will be regarded as of little value as a disciplinary authority.

In conclusion, we desire to disclaim any pretension to dictate to the Spectacle Makers' Company or to the trade. We were appealed to in the first instance and officially informed of the conditions upon which the diplomas of the Company are granted. As frequent complaints reach us of the proceedings of opticians, some of whom hold the Company's diplomas, we did right to test the good faith of the assurances made to us by drawing attention to the inconsistency of the terms in which certain diplomates advertise with the declaration they have signed. In our opinion the Company would show its wisdom by ceasing to issue its certificates, unless it is prepared to insist upon those conditions being observed.

LEPROSY.

Mr. Jonathan Hutchinson addressed a crowded meeting held at the Polyclinic on May 15th, on the results of his recent tour in India for the investigation of leprosy. The chair was taken by Lord George Hamilton (Secretary of State for India) who expressed his interest in the subject.

Mr. Hutchinson said that he went to India with a conviction that the "fish theory" was the only one which would explain the prevalence and the disappearance of leprosy in various places. The Commission on Leprosy formed in 1890 did not neglect the investigation of the question of fish eating and returned a somewhat adverse verdict to it, based upon the fact that in the leper asylums there were a certain number of lepers who denied ever having eaten fish. The object of Mr. Hutchinson's journey to India was to visit these asylums and see whether that objection could be got over. The fish hypothesis had assumed a somewhat modified aspect since what was called commensal communication of leprosy was fully recognized. It was fully admitted that leprosy was communicable by food from the leper's hands conveying the bacillus direct into the leper's stomach. A commensal communication was probably restricted to very careless communities of which there were plenty in India. That was a modification of the whole position in regard to the fish theory which had arisen since the Commission on Leprosy sat.

Mr. Hutchinson thought that the Commission, in visiting leper asylums, might not have been sufficiently explicit in explaining its questions to those whom it interrogated in regard to eating fish. Very possibly the question had been put blankly, "Have you eaten fish?" The conception of the meaning of the question in the mind of the patient probably was, "Have you eaten fish taken out of the stream?" They might have forgotten the peculiar appearance fish in dried conditions assumed, and any person might be excused for eating such fish without knowing that he was eating fish at all. The number of different names and words applied to dried and salt fish was very great, and confusion might thus have arisen. Mr. Hutchinson found that at many places not only the patients but also their superintendents thought fish meant salt fish taken out of the sea. What Mr. Hutchinson meant was any kind of fish preserved with salt. It was also asserted that fish was not obtainable in a certain number of districts in India, and it was therefore absurd to say that residents in those districts contracted leprosy from fish eating. One of the objects of Mr. Hutchinson's visit was to make inquiries concerning that point. On all sides they heard that leprosy was a disease which disappeared before advancing civilization and increased attention to general hygiene. Surely, Mr. Hutchinson said, it was unworthy of the science of the twentieth century to conceal ignorance under such a general expression. Leprosy did recede under many conditions of advancing civilization but it was by no means invariably the case. There was plenty of leprosy in the West Indian Islands, and in Spain and Portugal and in Cape Colony, where it was steadily advancing.

The advocates of the fish theory alleged that the one factor of importance in the decline of leprosy was the disuse of badly-preserved fish. The supporters of the fish hypothesis were not at present prepared to suggest the precise mode by which fish became a cause of leprosy or to specify any particular fish other than that in a state of partial decomposition, whether salted or dried. The fish theory assumed that really fresh fish and really well-preserved fish were both alike innocuous, and that cured or uncured fish in commencing decomposition might occasionally contain ingredients effective in the causation of leprosy. It might be a little doubted whether that ingredient was the bacillus: probably it was. The fish theory assumed that it was probable that even in a state of decomposition the presence of that ingredient in fish which excited leprosy was quite exceptional. It was not the excessive use of fish, but the accidental reception of a specific ingredient in connexion with that fish, which determined the occurrence of the disease. It had to be freely admitted that as yet the bacillus of leprosy had never been found in fish. Mr. Hutchinson believed, however, that it would be found. Leprosy was universally prevalent in India, and there were no places there in which the fish hypothesis was impossible on account of there being no fish used. There was no part of India in which fish could not be obtained and in which it was not an article of food which could be got easily. Mr. Hutchinson challenged any one to name a place where fish could not be got in India. He had been told over and over again in Calcutta that if he would go to a place called Chota Nagpur he would find a district in which leprosy prevailed but no fish was obtainable. Mr. Hutchinson went to the asylum there and he asked the medical superintendent to let him question those of the lepers in the asylum who had never eaten fish. The medical officer replied, "I have not one in the asylum who has not eaten fish. They have all eaten fish habitually." Mr. Hutchinson had been assured that in the sub-Himalayan districts leprosy was to be found without any fish being obtainable, but in the districts referred to fish was abundant.

Mr. Hutchinson, continuing, said that if any one thought there was any one district in India in which fish could not be obtained, let him name it, and with precision, saying exactly where it was, and giving his reasons why he thought no fish was obtainable. Mr. Hutchinson then proceeded to discuss the question whether there was any religious creed in India to which the suspicion of eating fish would not apply. The Mohammedan would eat fish freely, and had no reluctance about it. The Hindus were eager to eat fish if they could get it, and according to the abundance of the supply all Hindus did eat it. Certain sects of Brahmins fully allowed fish eating. He had been often assured by high-class Brahmins that they did not eat fish, but, on the other hand, others admitted that there were many exceptions to the rule.

There was another very interesting sect called the Jains, who were rigidly against the taking of life in any form. Some of them even wished to protect vegetable life. To ask a Brahmin if he ate fish was like asking a clergyman if he took spirits. If you asked a Hindu, you might expect various replies, according to the moral courage of the man and according to what he thought you wanted him to say. To ask a Jain if he ate fish was an insult, and in Mr. Hutchinson's opinion the fact was undoubted that Jains did not eat fish and did not furnish any leper patients.

When Mr. Hutchinson was in Calcutta he received a postcard saying that if he would go to a certain asylum in the north of the Punjab district he would find 100 lepers not one of whom had ever tasted fish. Mr. Hutchinson went there, and the resident medical officer handed him a schedule in which 40 men were put down as never having eaten fish. Mr. Hutchinson then asked to see each of these patients separately, and the resident medical officer produced one patient who firmly and persistently avowed that he had never eaten fish. He admitted his father and mother ate fish habitually, and so did his brothers and sisters. There was plenty of fish in his village, and he stated that he had never tasted fish because he did not like it. Mr. Hutchinson then asked for the remaining 39 male lepers who had never tasted fish, but the resident medical officer was unable to produce them, because they had changed their mind and admitted that they did eat fish. In the cases of a few women, however, Mr. Hutchinson said that he was unable to shake the conscience of a single one, and could only explain it by remarking that women were apparently much more consistent than men, and once having said a thing would stick to it. Reverting, again, to the question of religion, Mr. Hutchinson said that he was much struck in the report of an asylum near Bombay concerning a column in the report headed Salsette Christians. The number of lepers under that heading was more than under the heading of Hindus or Mohammedans. Salsette Christians simply meant

Roman Catholic Christians living in the island of Salsette. The patients from the Salsette Christians in the asylum were very much out of proportion to their ratio to the population. If it were supposed that Jain and Hindu, and Mussulman and native Christian were all equally exposed to the risk of leprosy, the Hindus ought to have furnished 1,419 patients to that asylum, but they really furnished 365; the Mussulmans ought to have furnished 372, they really did furnish 45; the Christians ought to have furnished 9, they furnished 60. Similar tables from other asylums showed the same sort of thing. The Salsette Christians were fishermen, and Mr. Hutchinson considered that there was no other conclusion than that the change to Christian food by the poorer classes of India, and most especially to that enjoined by Roman Catholicism, was most powerfully productive of leprosy. Amongst the facts as to leprosy which were generally acknowledged might be noted: Its world-wide distribution; its great antiquity; its marked preference for certain localities; its sameness in all regions and in all races; its very scattered and scanty occurrence in many large districts which yet never became free from it; the absence of any evidence of contagion in connexion with leper asylums; the assertion by a large majority of the patients that they had never knowingly been exposed to any risk of contagion; it was remarkably persistent in certain localities; the proof of it being transmitted hereditarily was for the most part negative; in no region where it had been long established did it ever in any locality assume epidemic prevalence; it was prone to die out and leave large communities amongst whom it had been prevalent, entirely free; in all declared cases it had a bacillus which resembled closely that of tuberculosis; experiments in inoculation had always failed; no primary sore or patch was ever identified on the surface; it might have almost indefinite periods of latency or incubation; in almost all countries and in all ages in which leprosy had prevailed there had been more or less a popular belief that it had been caused by fish eating; when two communities living in close proximity, the one addicted to hunting, the other to fishing, it was the latter that might suffer severely and the former that might wholly escape; and it had been wholly or almost wholly absent from Cape Colony, from Natal, from the Sandwich Islands, and from some other places until factories for the salting of fish were instituted.

Mr. Hutchinson concluded by stating his belief that the reduction of the salt tax in India would tend to prevent the prevalence of leprosy.

Lord George Hamilton, in replying to a vote of thanks moved by Sir William Broadbent, and seconded by Dr. Theodore Williams, admitted that the salt tax in India was heavy, but was afraid it must remain until some other source of revenue could be found. He had thought the salt tax restricted fish curing and other industries, but he had not before connected the prevalence of leprosy in India with a heavy salt tax.

The further discussion of the subject was then postponed to May 21st.

TRYPANOSOMA IN SLEEPING SICKNESS.

At the meeting of the Royal Society on May 14th a paper by Dr. Aldo Castellani was communicated by the Malaria Committee of the Society. The paper, which was dated Entebbe, Uganda, April 5th, 1903, was entitled On the Discovery of a Species of Trypanosoma in the Cerebro-spinal Fluid of Cases of Sleeping Sickness.

Record of Observations.

Dr. Castellani reported as follows:

"On November 12th, 1902, when examining a specimen of cerebro-spinal fluid taken by lumbar puncture during life from a well-marked case of *sleeping sickness*, I was surprised to observe a living trypanosoma. Since that date I have made as many obversations in this direction as possible, and the results are to my mind sufficiently surprising to excuse me for presenting this preliminary note.

"These trypanosomes are not in large numbers, so that to find them it is necessary to draw off at least 15 c.cm. of the cerebro-spinal fluid. It is better to reject the first few c.cm. as they are apt to contain blood. When the fluid comes away clear, 10 c.cm. are collected and centrifuged for 15 minutes. At the end of this time there is found at the bottom of the tube a slight deposit of whitish sediment, and in some cases also a minute trace of blood.

"The liquid above the sediment is poured off and the sediment examined under a moderately low power of the microscope. As the trypanosomes are at first fairly active they are easily detected."

He then gave two tables, the one showing particulars with regard to 34 cases of sleeping sickness and the other of 12 cases which were examined as controls. Trypanosomes were found in the cerebro-spinal fluid taken by lumbar puncture during life in 20 out of 34 cases of sleeping sickness or 70 per cent. Commenting upon this table Dr. Castellani observes:

"On two occasions I also examined in the same way fluid from the lateral ventricles and in both cases found the same parasite. In blood I found the trypanosoma once with certainty, but only a few cases were tested.

"It may be thought that the trypanosomes are found in the cerebro-spinal fluid on account of the trace of blood which sometimes forms part of the sediment." But in several cases there was no trace of blood.

"In 12 cases of ordinary disease the cerebro-spinal fluid taken during life by lumbar puncture, in no case contained trypanosoma, and it is important to note that 3 of these controls were cases of the usual trypanosoma fever, as described by Forde, Dutton, Manson, Daniels, etc.

"Here it may be remarked that trypanosoma fever is by no means uncommon among the natives in Uganda, 3 cases having been met with by Dr. Baker, one of the Colonial surgeons here (Entebbe) within the last three weeks. I understand that Dr. Baker is publishing this most interesting observation. It must be clearly understood that these cases of trypanosoma fever bear no resemblance in their clinical features to sleeping sickness.

"The trypanosoma found in the cerebro-spinal fluid of sleeping sickness does not, as far as I have been able to make out, differ materially in size and shape from the species one finds in the blood of trypanosoma fever, trypanosoma Gambiense (Dutton), but possibly it is to be differentiated from this one, because as a rule the micro-nucleus lies nearer the extremity and the vacuole is apparently larger. Besides, its movements are not apparently so active, but this fact might be due to the effects of the centrifugation. In case it should prove to be a new species, the trypanosome I have described might be called from the country where I have found it first—trypanosoma Ugandense.

Relation of the Trypanosoma to Sleeping Sickness.

"At the *post-mortem* examination of 80 per cent. of the cases where I found during life the trypanosoma, I grew from the blood of the heart and from the liquid of the lateral ventricles the variety of streptococcus I described many months ago in my first note. Up to that time I had never found the trypanosoma, but this is easily explained by the fact that I did not use the technique I have described in this note—namely, examination of a *large* quantity of liquid after a long centrifugation.

"Influenced by my last investigations I would suggest as a working hypothesis on which to base further investigation that sleeping sickness is due to the species of trypanosoma I have found in the cerebro-spinal fluid of the patients in this disease, and that at least in the last stages there is a concomitant streptococcus infection which plays a certain part in the course of the disease."

Note by the Secretary R.S.

The following note is appended to the paper by Sir Michael Foster, Secretary of the Royal Society:

"As so far supporting the observations by Dr. Castellani recorded in the above communication, it may be desirable to state that Colonel Bruce, to whom in Uganda Dr. Castellani made known his discovery of the trypanosoma, and who is now continuing the investigation begun by Dr. Castellani, has sent to the Royal Society a telegram, received May 4th, stating that since Dr. Castellani left, in 38 cases of sleeping sickness he had found trypanosoma in every case in fluid obtained by lumbar puncture, and that he had found trypanosoma in the blood in 12 out of 13 cases of sleeping sickness."

Medical Students in Austria.—The total number of students of medicine matriculated in the current semester in the Universities of Austria-Hungary is 3,299. Of these, Vienna has 1,913, Prague (German) 248, Prague (Czech) 350, Graz 333, Innsbruck 198, Cracow 150, and Lemburg 107.

During his recent visit to Rome the German Emperor conferred on Dr. Giuseppe Lapponi, Physician in Ordinary to the Pope, the order of the Red Eagle (second class).

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1903.

SUBSCRIPTIONS to the British Medical Association fall due on January 1st each year. All members who have not yet paid should forward, without delay, postal order or cheque for 25s., to the General Secretary, 429, Strand, London, W.C., or, in the case of Colonial members, to their Branch Treasurer.

British Medical Journal.

SATURDAY, MAY 23RD, 1903.

THE MEDICAL SERVICE OF THE ARMY.

THE BRITISH MEDICAL JOURNAL has for many years past been recognized by the medical officers of the army as in an especial manner the mouthpiece of their legitimate grievances and the champion of their interests. We may fairly claim to have taken a leading part in the long struggle for the recognition of their just rights and the removal of the numerous causes of discontent which made the Service a galling yoke to those who had to bear it, and a snare in vain set in sight of others. We may claim, too, some share of honour for the final victory, for, if Mr. Brodrick's crude and incondite scheme of reform was at last moulded into a practicable shape, this result was largely due to the adoption of the amendments proposed and advocated by this JOURNAL. That the scheme is now working satisfactorily is to our mind shown by the fact that, whereas the complaints of the officers in the service filled our Dionysian "ear" as with the clamour of a multitude, now only a stray whisper of a grievance makes itself heard from time to time. A Saturnian reign of peace has indeed come upon the Service.

We learn from various sources that the possession of military titles was found of the greatest practical advantage by the officers of the Royal Army Medical Corps in the discharge of their duties in South Africa. We have reason to believe that under the firm and judicious administration of the Director-General, ably and loyally assisted by the Advisory Board, the corps is steadily becoming more efficient, while the general improvement in the conditions of service is admitted and appreciated by the majority of the officers. Nevertheless the Service still fails to attract a sufficient number of suitable candidates. We cannot pretend to wonder at this, for, to speak plainly, the Service has to live down a deservedly bad reputation, and that will take some time. Years, indeed, must elapse before the effects of the perverse and narrow-minded policy so long pursued by the War Office will have wholly worn away. The profession and the Service, indeed, like the former friends in Coleridge's poem, "stand apart, the scars remaining." The disappearance of the scars and the reunion of the sundered parts may, however, be hastened by the application of a form of the light treatment which, though unrecognized in therapeutics, has a marvellously healing power in cases like the present.

Why do the men most likely to make efficient medical officers stand aloof from the Service? We think there can be no doubt that it is simply because they judge it in the light of its past and they do not know what it is and what it offers now. The War Office is therefore about to take a wise step by circulating among the medical schools information as to the present condition of the Service, and the prospects which it offers to a young medical man entering on the practice of his profession. The document containing that information is published in full at p. 1238 Therein is set forth without official verbiage exactly how a man can enter the Service; what pay he will receive in the various stages of his medico-military evolution; through what examinational portals he enters on these stages. His way of professional life is clearly traced out for him and he can see the goal, different according to circumstances, to which it leads.

The document speaks for itself, and needs very little comment from us. It may, however, be pointed out that the important matter of pay is perhaps dealt with somewhat too optimistically, especially in regard to India. Some communications from officers now serving there which have recently appeared in the JOURNAL show that, in spite of the levelling-up to the combatant standard which is officially stated to have taken place, there is still some discontent, particularly in the junior ranks.

A point on which stress is justly laid is the introduction of the principle of promotion for professional merits as distinct from military services. One of the greatest drawbacks to the army as a career for medical men devoted to their profession was that scientific work was ignored by the military authorities, and often positively discouraged by fossilized superiors. We should be glad to see promotion by seniority abolished altogether, except in cases in which the merits of the officers are otherwise equal. Napoleon made his army the formidable machine it was by acting steadfastly in his choice of officers on the principle *la carrière ouverte aux talents.*

The gratuity of £1,000 on retirement after nine years' service should be an attraction to many men who would otherwise be condemned to spend the early years of their professional life as assistants or *locum tenentes*, with little or no chance of emerging into a state of independence. The beginning of the medical life is becoming more and more difficult owing to the increasing overcrowding of the profession. The army offers to such as care to take advantage of the opportunity a start in life on comparatively easy terms. For those who are willing to serve for twenty years there is the prospect of a pension representing a capital which few general practitioners can hope to accumulate by their professional earnings in so short a time.

One most serious objection to the scheme as first propounded by Mr. Brodrick was the endless vista of examinations which the officer had to face from the time of his entering the Service as a young man fresh from the examination tables of his student days till he was a grey-haired veteran. We pointed out that the aim of the Secretary of State for War seemed to be to create a corps of medical mandarins. On this point, as on others, Mr. Brodrick showed himself amenable to advice. Not only was the number of examinations diminished, but their character was altered. They are no longer academic tests necessitating special "coaching," but practical tests of knowledge and experience such as no man who knows his work can have any difficulty in passing. There, again, the principle of advancement by merit is acted upon, for by giving proof of special proficiency in the examinations for promotion from the rank of captain to that of major acceleration to an extent varying from three to eighteen months may be gained.

We have no space to call attention to all the points touched

upon in the official document. We need only say that in our opinion the advantages of the Medical Service of the army are fairly set forth. There is, of course, another side to the picture, illustrations of which have appeared in our own pages. Wherever men work together there must occasionally be friction. There will always be superior officers who, like Carlyle, are "gey ill to deal wi'"; there will always, too, be subordinates who chafe at authority, and are prompt to take offence at slights or injuries, real or imaginary. Moreover, there must necessarily be occasional conflicts with the combatant branches and other departments. Any of these things may lead to the ruin of a career, and of a life. But if a doctor is a gentleman, has been trained to give and take, knows his work and is not ashamed of it, he need have little fear either of official ill-usage or of social snubs in the army. The Service is, after all, very much what the individual officer chooses to make it for himself.

INTERNATIONAL MEDICAL CONGRESSES.

The Congress held in Madrid last month was the fourteenth International Medical Congress. The original conception of these congresses was grandiose. They were to bring together all the workers of all nationalities in all departments of practical and scientific medicine. They were to afford opportunities for workers in the same field to compare experiences; to become acquainted, and to announce *urbi et orbi* their latest and most important discoveries, and at the same time they were to enable workers in adjacent fields to communicate the one with the other across the boundary line. To a certain limited degree, and at some of the earlier congresses—London (1881), Copenhagen (1884), and Berlin (1890) at once come to mind—these objects were attained to a remarkable and even unexpected degree. It would seem, however, that the day for these great gatherings is passed. For various reasons they are no longer taken seriously. Medicine has become more specialized, and the specialists prefer to have international congresses of their own. Thus in recent years physiologists, ophthalmologists, dermatologists, otologists, and gynaecologists have held congresses in various great cities to which workers in these special departments have gathered from all parts of the world, where much useful work has been done, mainly by demonstrations rather than by the wearisome reading of written papers, and where friendships have been formed between men known to each other only by name, thus producing a feeling of good fellowship which has tended to soften the asperities sometimes to be observed in scientific controversy.

Again, the last twenty years have witnessed a great development of national medical congresses. In this respect the British Medical Association may justly claim to have set an example which has been very generally followed, though in some countries the tendency to concentration has gone still further. Thus, in Germany there are three annual congresses—the two spring Congresses of Medicine and Surgery respectively and the autumn Scientific Congress, at which biology and various departments of medical science form important parts.

In Madrid we saw once more the attempt to bring together all departments of medical work in one vast assemblage. Not satisfied with this huge task, the executive committee sanctioned the admission as members of the Congress of dentists and veterinarians, of persons engaged in trades connected with medicine—chemists and druggists, instrument makers and electricians—and in the Section of Hygiene even any member of the public who professed an interest in public health. The result was a gathering so heterogeneous that the title "medical" could hardly be held properly to apply to it, and so numerous that the executive was overstrained, and the accommodation for visitors proved to be inadequate. It is possible suddenly to bring some two to three thousand congressists into large capitals like Paris, London, or Berlin, or into a city like Rome, accustomed to receive droves of tourists, without greatly overtaxing the ordinary provision for visitors; but when the executive of a Congress, going out into the byways and hedges, compels some seven thousand persons into a city so little prepared as Madrid for such an influx, the consequences involve a paralysis of the organization necessarily causing much discomfort to individuals, and seriously diminishing the scientific and social success of the gathering. The troubles of a delegate who trusted to the arrangements made by the local executive have been humorously described in our columns by a correspondent who was fortunate in not seeking to take the Congress too seriously, and fortunate also in the temperament which allowed him to look on the bright side but even so things probably seemed brighter when looked back upon from gaily decorated Paris than they did at the moment. The arrangements made for lodging the seven thousand would seem to have been inadequate in extent, and badly administered. The magnitude of the task was not appreciated in time, and, when it was understood, it was given into hands which proved unequal to accomplishing it in a worthy manner. Even the most ardent votary of science likes to have a roof over his head at night, does not care to have to pay twice over for wretched accommodation, and resents the discovery that in some way or other some 25 per cent. of what he has paid disappears on the way from the coupon office to the lodging-house or hotel-keeper.

Our Spanish *confrères* proved that they were desirous that the Congress should be worthy of their country and of the great profession which is adorned by the names of so many illustrious Spaniards. The nation is renowned for its courtesy, and no more charming hosts exist in any country. But Madrid was overwhelmed by the incursion of a huge mob, in which the real workers in medicine were lost. If it was a mistake to include dentists and veterinarians—and we think it was—it was a still more serious error to open the Congress to all kinds of miscellaneous tourists. Many of the Sections attempted to carry on their deliberations in rooms so open to the public that serious discussions were almost out of the question, even if the difficulty created by the general use of the Spanish language, a tongue with which not many dwellers beyond the confines of the Peninsula are acquainted, could have been overcome.

Spain was glad to welcome many eloquent sons of the great Western countries which were once her colonies; would not a congress limited to those on either side of the Atlantic whose native language is Spanish have been more profitable and pleasanter, and therefore really more successful? Is it worth while to go on with this particular series of congresses? At the Conference of the International Medical Press held in Monaco last year a very strong opinion to the contrary was informally expressed. At Madrid an invitation to hold another International Medical Congress in Lisbon was received and, we believe, accepted. We are not aware whether the decision is irrevocable. If it be, we venture to express the hope that Lisbon will no

seek to beat the record in numbers. To gather, by promises of special facilities which it is not always physically possible to fulfil, a great crowd of people, the majority of whom are mere tourists, is no service to science. If there is to be another International Medical Congress we would strongly urge that membership should be strictly limited to members of the medical profession recognized as such by the law of the several countries, that the number of sections should be restricted, and that the arrangements for travelling and for lodgings should be most carefully worked out with the advice of experts in such matters.

THE GENERAL MEDICAL COUNCIL.

THE spring session of the General Medical commenced on Thurday, May 21st, too late for us to be able to publish in this issue any report of its proceedings on that day. The session under ordinary circumstances would have commenced on May 26th, but the date was altered in view of the Whitsuntide holidays. We may therefore conclude that the President and the Executive Committee expect that the session will come to an end in the course of next week.

Several matters of considerable importance must, however, be dealt with. One of these will doubtless be the curious position in which the Royal Colleges in England stand towards the Council with regard to the recent report of the visitor and inspector on the examinations in chemistry, physics, and biology. The Council of the Royal College of Surgeons of England at its meeting on February 12th adopted a report from the Committee of Management of the two Colleges formulating a reply to the report. The published reports of the proceedings of the Royal College of Physicians, however, do not show that this reply has been adopted by that College. As in their relations with the General Medical Council the two Colleges act independently, it is to be presumed that the Royal College of Surgeons has transmitted the report of the Committee of Management, which it adopted last February. This reply, we are informed, is practically a defence of the examinations as at present conducted, and is, we gather, an admission that the circumstances of the examinations are such that it appears to the College advisable that the standard should be adapted to the needs of school-boys. It will be interesting to observe what course the Council will take in the circumstances, and much will no doubt depend upon the information which the representative of the Royal College of Physicians is able to give the Council with regard to the attitude of his College. Should the Colleges prove obdurate the Council apparently has a choice of the proverbial three courses. It may let the matter drop—a hardly conceivable policy; it may report the Colleges to the Privy Council, on the ground that certain of their examinations are insufficient, or it may postpone its decision.

The Medical Act of 1858 (Section XX) authorizes the General Medical Council if it considers that "the course of study and examinations to be gone through to obtain any such qualification from any such college or body are not such as to secure the possession by persons obtaining such qualification of the requisite knowledge and skill for the efficient practice of their profession.....to represent the same to" the Privy Council which may then (Section XXI) "if it see fit .....order that any qualification granted by such college or body, after such time as may be mentioned in the Order, shall not confer any right to be registered." The only occasion on which the General Medical Council exercised this power was in regard to the Apothecaries' Hall, Dublin, with the result that the Council was compelled to undertake peculiar responsibilities for the examinations of that body. The clumsiness of the machinery provided by these sections illustrates one of the defects of the Medical Acts which call for amendment, and will no doubt be considered in drafting the amending Bill which must soon be brought forward.

The third course open to the Council is to postpone any decision, until, at any rate, a reply has been received from the Royal College of Physicians, and it will not be surprising if this course is adopted, more especially as the Council will have before it reports criticizing the examinations of two of the chief English universities. The recent report of the visitor and inspector on the examination for the degree of M.B. of the University of London condemned the surgical part as inadequate; but that University is at present undergoing changes which are little short of revolutionary, and although Convocation of the University was naturally exercised by the fear that the changes might impair the value and lower the reputation of the degrees, and although there has been a regrettable delay in making the new regulations public, Dr. Payne, speaking on behalf of the Medical Faculty, was able to assure Convocation that the new scheme was the best and most comprehensive which had been devised. It therefore appears safe to presume that the Council will refrain from acting upon the report until it has an opportunity of studying the new regulations. There will also, we understand, be a report from the visitor and inspector on the examinations for the medical degrees of the University of Oxford, which is understood not to be altogether favourable.

We publish elsewhere a communication received from the Secretary of the Central Midwives Board stating that the Board has completed the task of drafting rules under Sections 31 of the Midwives Act. These rules are to regulate (*a*) the proceedings of the Board; (*b*) the issue of certificates and the conditions of admission to the roll of midwives; (*c*) the course of training, the conduct of examinations, and the remuneration of examiners; (*d*) the admission to the roll of women already in practice as midwives at the passing of the Act; (*e*) to supervise and restrict within due limits the practice of midwives; (*f*) to decide the conditions under which midwives may be suspended from practice; and (*g*) to define the particulars required to be given by a woman certified under the Act and holding herself out as a practising midwife, or commencing to practise as a midwife, in any area. The Secretary further states that he was instructed to forward a copy of the draft regulations to the Privy Council for approval. He does not inform us whether this has been done, nor whether the regulations represent the unanimous opinion of the Board. The Act requires the Privy Council before approving the rules to take into consideration any representations which the General Medical Council may make with respect thereto. It is, therefore, to be assumed that the Privy Council will transmit the draft regulations of the Board to the General Medical Council at the earliest possible date, and there can be no doubt that they will call for the most serious and detailed consideration by the Council.

Another matter of great importance to which the Council

is sure to be required to consider is its financial position. it is now, we believe, admitted on all hands that the income is insufficient, and that the deficit must be met either by the practice of economies or by increasing the sources of income; the economies hitherto suggested have not been of a character to encourage the hope that their enforcement would enable the Council to balance its books, and unless some great surprise awaits us—and of this we can see no signs—it seems certain that the question of increasing the sources of income, either by raising the registration fee or by imposing an annual tax, must be seriously considered without delay.

At this meeting, also, penal cases will be heard; some of them, we understand, are of an extremely important character, since they raise points of principle upon which the Council has not yet expressed an opinion.

THE ETHICS OF OPERATING.

THE annual *Conversazione* of the Medical Society of London was held on the evening of May 18th at the rooms of the Society. The Fellows and guests were welcomed by the President, Mr. Pearce Gould, and at once passed into the Society's hall to listen to the oration for the year by Sir William Henry Bennett, K.C.V.O., who took as his subject Some Reflections, mainly Ethical, upon the Present Posision of Operations in the Practice of Surgery. The principal burden of the oration was a warning against a too great readiness on the part of present-day surgeons to undertake operations without fully considering the ultimate advantage of their patient. No operation could be considered absolutely safe, and the risk to life should be carefully weighed before deciding on the advisability of any operation. That a patient would certainly die if left alone was not in itself a sufficient justification of operation. The question that should guide the surgeon as to the amount of risk that could rightly be run was whether the lesion was due to curable disease or not. Of two operative procedures, by either of which the desired end might eventually be reached, the milder should be preferred, even though less brilliant, or giving less obvious immediate results. Routine in operating was to be vehemently protested against—as applied to any particular disease it magnified its danger. Even operations involving no risk to life should not be undertaken without serious consideration. The interests of the patient, and not the mere attainment of a mechanical achievement, should be the first concern. Exploratory operations should not lightly be undertaken as a routine procedure on the plea that they would do no harm, even if no good resulted, for this was not always so, and in any case it was harmful in encouraging the neglect of extra-operative methods of diagnosis. Judgement was the enemy of routine, and routine was the bane of surgery. The lack of opportunity of studying in hospital, at the present day, those surgical affections that were curable by non-operative measures was to be deplored, and it would be a profitable arrangement if beds were permanently allotted for such cases. The dread of necessary operations by patients was in marked contrast to their craving for inexpedient and unnecessary operations. But no amount of anxiety on the part of a patient to undergo an operation could absolve a surgeon from responsibility as to its result. A too great regard for the good achieved by operations discounted the value of the preventive measures of surgical disease. Surgery was said to be a handicraft, but the knowledge of when to apply its craftsmanship was of the first importance: judgement as to the need for operations was much more important than skill in carrying them out. A vote of thanks to the orator was proposed by Mr. C. A. Ballance and seconded by Sir Thomas Smith; it was carried unanimously and suitably acknowledged. After the oration, opportunities were provided for social intercourse between the Fellows and guests, music being provided by the Bijou Orchestra. The attendance at the *conversazione* was very large.

A SCHOOL FOR CONSUMPTIVES.

THERE are many towns in England, small and great, which are fortunate enough to have some at least of the pavilions of their isolation hospitals frequently unoccupied for long periods. This is the case at Brighton, and there Dr. Newsholme, the medical officer of health, has during the past nine months been employing such unoccupied pavilions as a kind of school for phthisical patients, and he expects to be able to pass through it about 120 patients per annum. As there are 10 beds at his disposal, this estimate is based on the supposition that each patient will stay about one month. No rule, however, has been made as to the length of stay, and in exceptional instances patients will be allowed to remain much longer. A month, of course, is an admittedly non-curative period in the majority of cases, but it is as long as most patients who belong to the poorer classes can afford to remain away from their work, and is quite long enough to effect what is to some extent the primary object in view. This is to teach patients in what way they can best contribute to their own treatment and cure, and how they can manage their expectoration, etc., in such fashion as to minimize the risk of conveying infection to their healthy relatives and comrades. A further advantage is that while the patient himself will in most cases be considerably benefited by living under desirable conditions of life, even for so short a period as a month, his family will have a "holiday" from infection for the period of his absence, and the house in which he has been dwelling can be thoroughly cleansed and purified. This "holiday" for the relations and companions of the patient is in itself no small gain, for it cannot be doubted that the poison, so to speak, of tubercle is cumulative rather than immediate. The lead thus given by Dr. Newsholme seems worthy of being followed both as regards the use of temporarily unoccupied pavilions of isolation hospitals and the definite and careful instruction of patients as to what they owe both to themselves and their friends. So long as phthisis remains as widespread as it is at present, it will be impossible for any municipal or other authority, however energetic or wealthy, to make full provision for treatment in sanatoria of all cases of phthisis, new, chronic, and incurable, and the next best thing is to see that those who remain among their friends do as little harm as possible. It would be lamentable if the public learned to have any exaggerated fear of personal intercourse with the unfortunate sufferers from this disease, as is the case in some parts of the South of Europe, but it cannot be doubted that if the possibility of infection, and the conditions under which it is most likely to occur, were thoroughly understood both by patients and their friends, the chances of eventually abolishing this scourge would be greatly increased. It is to be noted that Brighton is a town in which the voluntary notification of phthisis has been in practice for four years, and that Dr. Newsholme has been much impressed by the number of cases with which he has met, in which healthy persons had apparently been infected by house, office, and workshop companions.

THE PROBLEM OF INFANT REARING IN TOWNS.

A RECENT issue of the *Revue Française de Médecine et de Chirurgie* contained an interesting description of the manner in which a philanthropist who wishes to engage in this work may well feel puzzled in deciding what practical steps he should take. The writer in the *Revue* states that the *crèches* which have been founded in Paris and provincial towns, either by the municipalities or private charity, though excellent in principle, have often been disappointing in results. Their relative failure is attributed to bad management, insufficient staff, and in some cases to ignorance of the simple rules of infant feeding. The principle formulated by Roussel, and upon which the law which bears his name was founded, is that "everything which separates a child from its mother exposes it to danger and death." That principle is unquestionably sound, but our contemporary questions whether the Roussel law has lessened infantile mortality in a substantial way. Our contemporary then sketches the consultations founded by

M. Budin in Paris and M. Dufour of Fécamp, as well as the system of *gouttes de lait*, which have already been described in the BRITISH MEDICAL JOURNAL of April 25th, and expresses the opinion that such consultations, when well managed, must help mothers who are careful of and attached to their children. Unfortunately, we are told such mothers are in the minority, for in Paris most women confined in institutions belonging to the Assistance Publique send their infants to the country, where a considerable proportion of them die from the effects of bottle feeding. The object of the *gouttes de lait* is to supply mothers working in large commercial centres, and unable or unwilling to suckle their infants, with milk carefully sterilized and mixed. This is done gratuitously or semigratuitously, according to the degree of poverty of these women. Such institutions have been founded in many French provincial towns, notably Elboeuf, Le Havre, and Rouen. In Normandy, where milk of the best quality can be procured, it is argued that the results have not been at all as satisfactory as is supposed, and that in the above-mentioned towns, since the establishment of *gouttes de lait*, not only has infantile mortality not been checked, but has slightly increased. M. Peyroux, who is responsible for the above statement, attributes this state of affairs not to bad management, but to the fact that the milk is tampered with by the messengers sent to fetch it, and also through the unnecessary transfer of the milk into unclean feeding bottles with unclean teats. M. Peyroux is also of opinion that many women have been deterred from suckling owing to these facilities for getting fresh cow's milk for their infants. Recently, under the patronage of Roussel and under the direction of Senator Straus and of Professor Budin, a league was founded in Paris to combat infantile mortality. M. Marfan, in his report of this league,[1] stated that experience showed that "manuals on infantile hygiene are quite useless to persons who are strangers to biological sciences. For many years *Instructions for Feeding Infants* have been distributed to those women bringing their babies for advice to the Hopital des Enfants Malades, but we only consider them as a means of reminding them of the verbal counsels given as clearly as possible. The physician alone can, by advice given in each particular case, disseminate necessary knowledge, redress errors and combat prejudices, and in this he has a real social duty to perform. Is he prepared for this task by his studies? It is unfortunately a fact that the young physician when he begins to practise has everything to learn about the scientific side of infant feeding." M. Marfan considers that the League should teach this special branch of medicine and shows how the consultations may be utilized for giving such instruction. M. Marfan next points out that the ignorance of mothers is almost less difficult to combat than their indifference and their poverty. He refers to M. Lagneau's proposal, that every poor mother should be the paid to act as the wet-nurse of her child, but objects that no amount of payment will ensure a mother being conscientious and bringing up her child carefully. A woman in one of the densely populated manufacturing towns, where infant mortality is at its highest is attached to her child by a natural instinct, but this sentiment, he argues, is crushed in her by the heavy responsibility incurred in minding the being she has brought into the world, so long as it is helpless. She feels vaguely that she has no interest in its living. Here we touch the knot of the question; to unravel it political and social changes all over the globe would be necessary. Sociologists of the most opposed schools admit this, and the solutions proposed by each are similar; the economist Laplay suggests a return to the patriarchal system, the socialist Van der Velde a return to the fields. But these remedies are unpractical, since it is impossible to check the progress of commerce, the real cause of the ever-increasing exodus from the country towards large cities, and that most opposed to the phenomena so much wished for. These considerations may appear sceptical to some, but the word scepticism comes from a Greek verb which means "to examine." This question, so much discussed, has been examined, and we are obliged to recognize that it is not possible at present to solve it completely. Partial solutions must, therefore, be gratefully accepted, provided it is proved with any degree of certainty that they can diminish, in even the slightest degree, infantile mortality.

[1] *Revue Philanthropique*, February, 1903.

THE ROYAL SOCIETY CONVERSAZIONE.

THE *Conversazione* of the Royal Society was held on May 15th, and as usual had for one of its attractions an exhibition of some of the latest scientific novelties. Among them were only two or three exhibits of strictly medical interest, but there were several in which medical men were likely to take more interest than most of those present. Among the latter was a collection of photographs and objects relating to Dr. William Gilbert, of Colchester, the author of the treatise *De Magnete*, who died in 1603. Another was an exhibition of the apparatus recommended by the Board of Trade for the detection of arsenic in beer and brewing materials. There is nothing very novel about it except that the arseniuretted hydrogen, if arsenic be present, is generated by electrolysis, and that thereby certain sources of possible error are avoided. It was shown by Professor Thorpe. A rather ingenious adaptation of a Dine's dew-point hygrometer was shown by Professor Trouton. The tube is surrounded by parallel coils of platinum wire. These remain insulated as long as the tube is dry, but the moment moisture is deposited the current is completed and a reading either taken from a distance or recorded automatically. It is likely to be of considerable use for hygrometric experiments in places which cannot be entered by the observer. Another apparatus shown by Professor Trouton was a gravimetric recording hygrometer. It is based upon the empirical observation of the amount of moisture condensed by flannel and allied substances. This, within meteorological temperatures, depends on the hygrometric state alone. That is to say, when the moisture in the air alters or the temperature changes, the weight of water absorbed by flannel varies in proportion to the true hygrometric state and not to the absolute amount present. Another instrument belonging to the same general class was Callendar's compensated air barometer, oil being used both as an index and as an eliminator of appreciable variations of temperature: 1 cm. of its index corresponds to 0.1 cm. of a mercury barometer. Mr. Alfred Williams showed an apparatus for regulating, by means of a shunt, electrical spark discharges with the idea of placing them thereby more under control for therapeutic and other purposes. Mr. S. G. Shattock, in conjunction with Mr. C. G. Seligmann, showed a preparation from a specimen of a true hermaphrodite fowl. The external characteristics of the bird were certainly of a mixed type, and the dissection of the organs was stated to show a left oviduct and two reproductive glands, one being testicular and containing spermatozoa, and the other consisting of inactive testicular tubuli and an ovum. An exhibit of more purely medical interest was a specimen of the trypanosoma, which Dr. Castellani found in the cerebro-spinal fluid of a patient suffering from sleeping sickness in Uganda, and believes to be the cause of the disease. Dr. Castellani had arrived in England from his expedition just in time to demonstrate the specimen himself. Perhaps the most interesting exhibit of all was a series of cultures from vaccine lymph shown by Dr. Alan Green of the Government Laboratory. Half the series had been treated with glycerine and the other half with chloroform. The differences were very marked. Those treated with glycerine exhibited colonies of extraneous organisms up to three and four weeks, while none were perceptible in the chloroform preparations after the lapse of six hours. The efficacy of the lymph is said not to be altered in any way, and, if further experiments confirm these results, this chloroform lymph seems destined to replace the glycerine lymph to which the Local Government Board has hitherto pinned its faith. It will not be an undesirable result, since there have not been wanting complaints lately as to the quality of the lymph supplied. The last exhibit to be noticed is that of Dr. Macfadyen and

Mr. S. Rowland, who showed their freezing method of extracting intracellular toxins. It was accompanied by a descriptive sheet, which did not err upon the side of claiming too little, and ended with these remarkable words: "In short, the process may be described as producing a devitalized toxin, while the bacillus is in a condition of chemical anaesthesia." It is to be supposed that what is meant is that at the low temperatures used there is no risk of any chemical change in the organism taking place during the process, but it rather sounds as if Dr. Macfadyen were afraid that, unless explained, his brutal pounding of bacilli might expose him to the wrath of Mr. Stephen Coleridge. Readers of this JOURNAL are already aware of the chain of reasoning by which this method was evolved by its authors, and it is certain that whatever else may be claimed for it, it offers a means of obtaining the intracellular toxins of micro-organisms in a pure and unaltered condition.

DORSET AND WEST HANTS BRANCH.

AN interesting feature of the annual meeting of this Branch of the British Medical Association, which was held at Weymouth on May 8th under the presidency of Dr. John Moorhead, was a presentation made to Dr. William Vawdrey Lush in recognition of his long and valuable services as Honorary Secretary of the Branch. The presentation consisted of a handsome clock with cathedral chimes, with a service of silver plate comprising a tea and coffee pot, hot-water jug, sugar basin, cream jug, cake basket, and a dozen spoons. Dr. Roberts Thomson, ex-President of the Association, said they had now entered upon a new era in its history, and the Branch would never be exactly as it had been before. It was therefore thought that this was a fitting time to express in some tangible form the gratitude which they desired to express to their senior secretary. It was largely through him that the Branch was founded, and by his energy and earnestness it had attained the success it had. The presentation was an expression not only of their recognition of his work as Branch Secretary, but also of much personal regard and esteem for himself. Dr. MacDonald remarked that he had been asked to undertake the work in connexion with this testimonial, and it had been a real pleasure for him to have such an opportunity of showing the esteem, regard, and respect which he had felt for Dr. Lush for many years, and his appreciation of the kindness received from him on many occasions. After some remarks from Dr. Macpherson Lawrie, who spoke of Dr. Lush as a man who occupied a high position in his profession, and who enjoyed the respect and esteem of his professional brethren, Dr. Moorhead said that he rejoiced to have the opportunity of paying a well-deserved tribute of respect, esteem, and gratitude to their old and valued friend, Dr. Lush, who had been senior honorary secretary for the Branch for nearly thirty years, and who, though he had had the co-operation of his colleague, Mr. Parkinson, had chiefly borne the burden and heat of the day. In conclusion, Dr. Moorhead read the inscription on the coffee pot, which is as follows: "Presented to William Vawdrey Lush, M.D., F.R.C.P., by the members of the Dorset and West Hants Branch of the British Medical Association, in recognition of his long and valuable services rendered to the Branch as its first Honorary Secretary." Dr. Lush, in replying, said that for whatever pains he had taken in promoting the welfare of this Branch he had been already repaid a hundredfold by the valued friendships he had made. He then gave a sketch of the history of the Branch. It was to Dr. Ward Cousins, he said, that the Southern Branch owed its origin. Under his guidance that part of it in 1874 consisted of three districts: Bournemouth, having Mr. Nunn as Honorary Secretary; East Dorset with Mr. Parkinson; and West Dorset with himself. In the second year of its existence they mustered 3 members in Bournemouth, 2 in Christchurch, and 21 in Dorset. Of the 21 Dorset members, 8, with himself, were still members of the Branch: Dr. Bacot, Mr. Graham, Dr. Leach, Mr. Parkinson, Dr. E. P. Philpots, Mr. William Rendall, and Mr. Turner. The three districts soon considered it advantageous to combine; they therefore formed the Dorset District of the Southern Branch, the East and West Dorset secretaries acting as joint secretaries for the new District. So they continued till 1882, having as their successive presidents Dr. Aldridge, Mr. Parsons, Dr. Bacot, Dr. E. P. Philpots, Mr. Williamson Daniell, Dr. Simpson, and Dr. Roberts Thomson. During that time Mr. Husband, formerly Surgeon to the York Infirmary, came to reside at Bournemouth, and took a great interest in the district, which had at that time about 50 members. He it was who suggested to Dr. Lush the advisability of forming the district into a Branch. After some difficulty this was accomplished, and they were recognized in 1883 under their present name, and having as their first President the late Dr. Williams, of Sherborne. If, therefore, Mr. Husband and himself might be considered the fathers of the Branch, their friend Dr. Ward Cousins must be considered the grandfather; for had there been no Southern Branch there would have been no Dorset and West Hants Branch. The good policy of their action was shown by the Branch rapidly rising to 100 members, a number below which it it had never fallen. At one time they had 136; at the end of last year they were 124. Now, under the new regulations, they comprised the formerly unattached members residing in their area, and with those elected by the Branch Council that day they mustered 187. It was in 1891 that, at their invitation, the Association held its annual meeting at Bournemouth. Dr. Lush concluded by again thanking the members for their kindness and consideration shown him during his many years of office, and for their handsome recognition of his services. We are glad to take advantage of this opportunity to add our congratulations to Dr. Lush on the well-deserved tribute of respect and personal regard which he has received from the members of the Branch which owes so much to his organizing capacity and self-sacrificing labours.

WITNESSES AND THEIR FEES.

PRACTITIONERS who are summoned as witnesses in criminal cases frequently have cause to complain of the inadequacy of the fees which are tendered for their services in this capacity. In civil cases, although the scale of remuneration is often larger, the fact that the party who issues a subpoena does not always pay up renders the attendance of a medical man even more irksome. This reluctance to pay is particularly noticeable in actions for personal injuries, this kind of litigation being frequently conducted, so far as the plaintiff is concerned, on the "no cure, no pay" system, and an adverse verdict often brings to light the fact that the plaintiff has empty pockets. The practitioner, however, has a remedy if he thinks it worth while to pursue it. He may bring an action against those who have subpoenaed him, and this although there is no express contract to the effect that he is to be paid for his services. It seems that mere attendance at the court is sufficient evidence of an agreement. A recent case in the City of London Court shows that a professional man may reasonably expect remuneration even if there is no express agreement. It seems that a solicitor brought an action against the registrar of the Peterborough district to recover the sum of £12 1s. 6d., the balance of £12 12s. which he alleged to be due to him for attending court on a subpoena. He had allowed for four days, and claimed £3 3s. a day. It was contended on the part of the defendant that the plaintiff's proper remedy was to have stayed away from court, and that there was no right of action. Judge Rentoul, however, after reviewing decisions on the subject dating back one hundred years, and although he felt some doubt as to the law governing subpoenas, said that common sense required him to find for the plaintiff for £8 8s., that is, remuneration at the rate of £2 2s. a day.

PHYSICAL AND INTELLECTUAL EDUCATION.

THE President of the Royal Society of Canada, Sir James Grant, M.D., K.C.M.G., has favoured us with an advance copy of an address which he was to deliver on May 19th

before the Society. The subject selected was Brain Power and How to Preserve It. The great problem of the present day with which educationalists had to deal was how to build the best brains out of the material at their disposal, and not for men only but for women as well. The occasional advice of school teachers that the sooner children were sent to school the better was injudicious, as premature school attendance was most decidedly injurious. The first seven years of life were for growth. In Canada, fortunately, children rarely attended school before their fifth or seventh year, and every degree of care and prudence was exercised to guard the development of intellectual activity. The chief test of education was the outcome of life at maturity. This constituted the practical examination of life, and the verdict was the outcome at the period of manhood. Gorging the brain in ordinary schools from six to nine hours daily, with only one to three hours each day in the open air, was not likely to bring about desirable results. The intellectual development and physical growth of the young generation would be greatly promoted by four hours of exercise in the open air, with four hours of study, and the final results would be better in every particular than by the system now in operation. The leaders in brain work in England and on the Continent gave three to five hours daily to the desk or laboratory. Such data pointed to the necessity of an equal exercise of mental and physical capacity in order to build up successfully mental and physical power.

THE USE OF CHLOROFORM IN THE PREPARATION OF VACCINE.

In a communication recently read before the Royal Society, Dr. Alan B. Green described his observations on the use of chloroform as an agent for the elimination of the extraneous organisms of vaccine lymph. He finds that by the use of a solution of chloroform in distilled water, extraneous organisms can be eliminated in from one to six hours, whilst the specific element remains fully potent for vaccination. This method is as follows: Sterile air is passed through pure liquid chloroform in order to become saturated with chloroform vapour. This mixture of air and chloroform vapour is then passed through the vaccine emulsion, which has been prepared by triturating one part by weight of vaccine pulp with three parts by weight of distilled water. It is essential that no liquid chloroform be allowed to pass over into the vaccine, since its presence is strongly inimical to the potency of the vaccine. Passage of the mixed vapour quickly saturates the vaccine emulsion with chloroform, the excess of chloroform after saturation has been reached escaping automatically. The vaccine is thus never brought into contact with a stronger solution of chloroform than 1 in 200, which is the limit of solubility of chloroform in water. The germicidal action, as demonstrated by aërobic and anaërobic plate cultures, is very rapid; emulsions which have contained as many as 100,000 extraneous micro-organisms per platinum loopful become free from their presence in from one to six hours. After elimination of extraneous bacteria the chloroform in the emulsion is evaporated by passing through it a stream of sterile air. Only the non-spore-bearing bacteria are killed by this process; but Dr. Green points out that in some thousands of vaccines examined in the Government lymph laboratories the only spore-bearing organisms found were non-pathogenic varieties. Dr. Green considers that this method will be found valuable when there is urgent demand for a rapid supply of vaccine lymph, such as may arise during small-pox epidemics. Vaccinations performed with lymph prepared by this method have produced excellent results.

THE SANITARY INSTITUTE DINNER.

The annual dinner of the Sanitary Institute was held on May 15th at the Hotel Cecil, when the chair was occupied by the Duke of Cambridge, President of the Institute. The Chairman, in replying to the toast of "The Queen and other Members of the Royal Family," referred to the great interest he always took in the proceedings of the Sanitary Institute. Sir Henry Norbury, K.C.B. (Director-General Navy Medical Department), in responding to the toast of "The Navy, Army, and Auxiliary Forces," proposed by Sir Francis Powell, said that the naval forces now numbered close upon 130,000. Lieutenant-Colonel A. S. Jones, V.C., also replied to this toast. Sir Henry Howse, in proposing "The Houses of Parliament," said that the connexion between the Sanitary Institute and the legislative assembly was close, for the Institute could bring influence to bear on Parliament towards passing various sanitary Bills, and, he added, towards opposing certain Bills of a decidedly pernicious tendency. Lord Monkswell (Chairman of the London County Council) made a witty reply on behalf of the House of Lords. He pointed out that the House of Lords had been for the last seven centuries absolutely unreformed, whereas the House of Commons went into dock for repairs two or three times every generation, and there were even some people who asserted that the House of Commons was not perfect yet. Mr. J. G. Talbot, M.P., answered for the House of Commons, and suggested as a subject for discussion by the Institute the question of compulsory vaccination. Sir William Church, in proposing the toast of "The Sanitary Institute," observed that the last three or four decades of the past century had seen greater advances in the science of medicine than almost all the preceding ages that had gone before. It might also be said that during that time the very science of preventive medicine had arisen. The Sanitary Institute had stuck its roots deep into the fertile soil of science and knowledge, and thus nourished its boughs had spread so that it now included not only their own country but the whole of the British empire. Sir William Church concluded by referring to the vast improvement that had taken place in the manner in which various industries were conducted, a condition of things due to the Factory and other Acts, which had done more to alleviate suffering and injury than almost any of the other Acts connected with sanitation. He urged the Sanitary Institute not to ask for greater parliamentary powers, but to continue to spread education in sanitary matters more widely among the people. Mr. W. Whitaker (Chairman of the Council of the Sanitary Institute) having replied to this toast, the company separated.

THE "HENDON DISEASE."

Lincoln has recently, for a second time, suffered from an outbreak apparently on all-fours with the scarlet fever outbreak in Marylebone in 1885, which has passed into literature under the title of "the Hendon disease." That outbreak was investigated by Mr. Power and Professor Klein, and led to the conclusion that a cow, and subsequently several cows, were the source of the infection. Since then several similar outbreaks have been reported, and traced, as in the classical instance, to the milk of cows suffering from a peculiar vesicular eruption on the teats and about the body, but not otherwise noticeably unwell. In the recent Lincoln outbreak Dr. Harrison, the medical officer of health, appears to have traced all the cases to one particular dairy in the south part of the town. All the persons affected were found to have partaken of milk from this one dairy, and the cows at this dairy were found to be suffering from a vesicular eruption on the teats and other parts corresponding to that observed at Hendon. Professor Klein visited Lincoln to assist the medical officer of health in his investigation, but no official report either of his investigation or of a similar one into a similar outbreak traced to another dairy in the same town about a year ago, has yet been made public. The clinical features of the disease as described in a communication, for which we are indebted to Dr. W. A. Carline, are briefly as follows: On the first day sore throat, vomiting, and sometimes diarrhoea, followed, in many cases, by a scarlatiniform rash two days later, with peeling of the skin many cases about a week later. Most of the patients fell ill on the same day—namely, the second of this month—but none of the cases appear to have been of a particularly serious nature, and no deaths have at present

occurred. It is to be noted, however, that of the forty cases that have been notified so far, no fewer than fourteen occurred in one household. In the corresponding outbreak about a year ago over a hundred persons were affected with the same disorder, which, on that occasion, appears to have been of a more severe type, since four deaths were ascribed to it. One of them occurred before the rash appeared, and the other during the peeling stage. All the patients were found to have drunk milk from one dairy, but not from the dairy implicated upon the present occasion. They are, indeed, some two miles apart. So far as is known, the cows upon the first occasion were not found to be in anything but an apparently healthy condition. In the Marylebone outbreak a streptococcus was obtained from the vesicles on the teats of the affected cows. It was cultivated, and on reinoculation produced in healthy calves a disease having many points of analogy with scarlet fever, especially as regards kidney affection. Professor Klein's report on the Lincoln cases will, therefore, be awaited with interest.

COMMERCIALISM AND SCIENCE.

ALTHOUGH, as we pointed out last week, commerce if animated by an enlightened spirit may do much for the promotion of medical research, there is another spirit which must be kept rigorously aloof if science is not to degenerate into a commercial speculation, and medicine in particular into the vilest of trades. It is unfortunately true that in recent years the taint of commercialism has invaded the laboratory, which should be the holy of holies of pure science, The manufacture of therapeutic serums of one kind or another has in fact become a recognized industry, and if stringent measures are not taken for the supervision of the manufacture of these remedies it is likely to become not merely a commercial scandal but a public danger. We need only refer to the deplorable accidents recorded not long ago in Italy. America, and India as illustrations of the terrible results that may follow the distribution of carelessly made or imperfected tested serums. Another serious danger lies in the placing on the market of remedies before the investigation of their properties is complete. Elsewhere in this issue we publish a strong protest by Sir Felix Semon against a new instance of this scientific commercialism. It may be remembered that in the BRITISH MEDICAL JOURNAL of March 28th he gave a preliminary account of some clinical experiments with a serum prepared by Professor Dunbar, Director of the Hygienic Institute of Hamburg. Sir Felix Semon, after recording his observations, uttered an emphatic warning that they must not be accepted as in any way conclusive, and that the whole question was still in the laboratory stage. From letters received by him within the last few days from Professor Dunbar's assistant, Dr. Carl Prausnitz, it is evident that the matter is so regarded by the discoverers of the serum themselves. This makes it all the more remarkable that a firm of manufacturing chemists in Hamburg should be offering the serum for sale at a high price, and "pushing" it vigorously by ordinary commercial methods. We cannot believe that Professor Dunbar is in any way connected with such a proceeding, and we think that Sir Felix Semon has the strongest possible reason for complaint at the way in which the traders in the serum have sought to associate his name with their enterprise. The use of such tricks of trade in connexion with preparations offered as cures for disease cannot be too strongly condemned from the point of view of the public welfare as well as from that of professional rectitude. We may add that it appears to us that even from a commercial standpoint they are to the last degree impolitic, as the issue of an imperfect product must tend to damage the reputation of the vendors.

THE UNIVERSITY OF LONDON.

AT the meeting of the Senate on Wednesday Dr. Pye-Smith was by a large majority elected Vice-Chancellor until the first meeting of the Senate in June. The vacancy has arisen by the resignation of Dr. Robertson on being appointed Bishop of Exeter. The only other nomination was that of Sir E. H. Busk, the Chairman of Convocation. Dr. Pye-Smith is the second medical Vice-Chancellor since the foundation of the University, the only other having been Sir James Paget, who held office from 1883 to 1895. Dr. Pye-Smith is M.D.Lond. and F.R.S. He was educated at Mill Hill School and on the Continent, and received his medical education at Guy's, at which school he has been Physician and Lecturer on Physiology and Medicine. The Faculty of Science has elected Dr. Waller and Mr. Hatton in place of Sir Michael Foster and Dr. Halliburton as their representatives on the Senate. King's College has appointed the Rev. A. C. Headlam in the place of Dr. Robertson as one of their representatives on the Senate. These appointments, together with those already announced, complete the reconstitution of the Senate as required by the statutes.

THE "CURE" OF CANCER.

WE were shown recently a leaflet setting out that a free hospital for the medical treatment of cancer by electricity had been opened at 110, Palace Gardens Terrace, Notting Hill Gate, at which cases considered incurable and inoperable would be received. The surgeon was stated to be Mr. Cloete-Smith, M.R.C.S.E., L.R.C.P.Lond. As it was stated that out-patients only could be treated the institution might perhaps more correctly have been described as a free dispensary. We have received a communication from Professor Watson Cheyne, of King's College, informing us that his attention has recently been called by a medical practitioner residing in the country to two cases formerly under his care, and subsequently treated at this so-called hospital. The country practitioner stated that he had under his treatment a lady suffering from malignant tumour of the uterus whose friends had sent him particulars of certain cases treated at the "hospital" in question. The particulars set out with regard to one case were that the patient, a woman, had been admitted to King's College Hospital in February of this year, where she was seen by Mr. Watson Cheyne and Dr. Dalton, who diagnosed malignant tumour of the stomach, which they regarded as inoperable. The report stated that when the patient was admitted to the "hospital" at Palace Gardens Terrace there was a tumour of the size of a man's fist presenting below the ribs, there was extreme emaciation, all digestive functions were in abeyance, and rapid loss of weight by starvation was taking place. X-ray treatment was begun on March 6th, and, it was stated, had resulted at the time of the note (May 1st) in the total disappearance of the tumour, improvement in all the digestive functions, considerable gain in weight and strength, and convalescence generally. Mr. Watson Cheyne communicated with the patient, and received a letter in reply from her husband, who stated that in April haemorrhage occurred from the bowels, accompanied by a large piece of tissue; the haemorrhage stopped for a time and then recurred in considerable quantities; the vomiting had ceased, general health had improved; the patient was not conscious of any lump, and had practically no pain at the seat of the tumour. Mr. Cheyne visited the patient and found her in bed, very much emaciated, and with an *x*-ray burn the size of the palm of the hand over the epigastric region. The tumour he had previously felt was quite evident, and not in his opinion smaller than previously. Since the haemorrhage referred to, the pain, which Mr. Cheyne concludes was due to involvement of the transverse colon and partial obstruction, had almost disappeared, probably, as he believed, on account of the sloughing of some obstructing portion of the tumour. The patient he found however was hardly able to take any food, and although buoyed up by hope, Mr. Cheyne regarded her position as very serious, and did not consider the treatment had done her the slightest good. In the other case the patient was a man who in August last had been seen by Mr. Watson Cheyne, who had performed an operation for malignant growth in the left sterno-mastoid region. A report, dated

May 1st, and purporting to be signed by Mr. Cloete-Smith, stated that when this patient came under his treatment there was recurrence of malignant growth in the scar and supraclavicular glands, but that after treatment by *x* rays, commenced on March 11th, the superficial part of the tumour had become level with the surface, the undergrowth had softened, the glands had disappeared, and the patient was relieved of pressure symptoms from which he had previously suffered. The general condition was much improved, all pain except that caused by the reaction of the skin having ceased. Mr. Watson Cheyne has recently seen this patient also, but found that he had lost 3 st. since he last saw him in February. There was an extensive burn on the neck and another on the shoulder. He considers that the tumour is as hard and evident as it was, and that it has made considerable progress. The patient's health has deteriorated, but he has lost a good deal of the pain about the shoulder from which he had previously suffered. We think it right to publish these particulars, which come to us from a surgeon of wide experience, since we have reason to believe that the alleged advantages of the *x* rays in the treatment of cancer are being set before the public with a degree of confidence which the facts, as yet known, certainly do not justify. Members of the Association who may be consulted with regard to the application of this method to cases of malignant disease would, we think, be well advised to make it quite clear that at the present time there is no evidence that cancer can be cured, although in some cases considerable relief of pain and some improvement of the general condition may take place.

A VACCINATION COMPLIMENT.

THE wife of Major-General Chambers, of 11, Trinity Gardens, Folkestone, recently paid the public vaccinator of Folkestone one of those delicate compliments of which only well-to-do women are capable. She apparently regards vaccination as too important an operation to be entrusted to an ordinary medical man, so, when she felt that she and her two daughters were in need of it, she selected one who may be regarded as a vaccination specialist. Many quite ordinary people, with whom we would not for a moment class the wife of a major-general, think and do the same, and the supreme delicacy of Mrs. Chambers's conduct lies in the fact that, instead of being content to pay the public vaccinator a compliment in the surgery where he sees his official patients, she made it a direct and personal one by seeking him out with her two daughters in his private consulting room. Unfortunately, however, after this she rather spoiled the thing by refusing to pay his fees, and the intervention of another of H.M. officers, in the shape of the county court judge, had to be invoked before she rounded off her compliment by the noble fee of half a crown a head. Half a guinea was the fee that had been suggested, and it really seems more appropriate. Medical men are too modest a race really to enjoy the compliments so frequently paid by the public to their philanthropic instincts, and have too much artistic taste not to see that "lily" compliments like this should, if painted at all, be gilt with the finest gold.

DR. JEAN CHARCOT'S ARCTIC EXPEDITION.

THE exploring expedition fitted up by Dr. Jean Charcot, which was to have sailed for the North Pole from St. Malo on May 15th, has changed its destination. It is now intended that it shall attempt to reach the South Pole, to which it hopes to find a passage by way of Alexander the First Land. The object of the expedition is to make scientific explorations, geographical, oceanographic, zoological, etc., on the Antarctic Continent. The French Minister of Marine being unable to grant a subvention directly has promised to supply gratuitously the coal required for the expedition, besides furnishing it with a number of scientific instruments.

REFORMED SPA.

THERE can be little doubt that the roulette tables at Spa have constituted a serious drawback to that place as a health resort; it is well, therefore, that it should be known that this objection no longer exists. In Belgium all public gambling is now prohibited by law. Situated in a picturesque position at a height of 1,000 ft. above the sea level, provided with innumerable shady walks at easy gradients, possessing agreeable chalybeate waters renowned since the visit of Peter the Great, and having a thoroughly efficient bathing establishment, Spa continues to deserve its ancient fame, and may now again be regarded as the worthy mother of the many other "Spas" named after it.

TRYPANOSOMIASIS IN GAMBIA.

A REPORT has, according to the *Times*, been received by the Liverpool School of Tropical Medicine from the Senegambia expedition. Dr. Dutton and Dr. Todd, writing from McCarthy Island in the Gambia, state definitely that trypanosomiasis is prevalent over the whole of the British colony of the Gambia. They have now completed the examination of over 1,000 natives. They have also discovered that trypanosomiasis is extremely common among all the horses there, and is chiefly responsible for the great mortality in those animals. Dr. Dutton and Dr. Todd have now left the Gambia to continue their researches into the disease in the French Senegal settlement, which adjoins the British.

THE Council of the British National Association for the Prevention of Consumption has appointed Dr. Leonard Robinson Honorary Corresponding Secretary in Paris for the purpose of facilitating arrangements with regard to the International Congress of Tuberculosis which is to be held in Paris from October 3rd till October 8th, 1904.

MEDICAL NOTES IN PARLIAMENT.

[FROM OUR LOBBY CORRESPONDENT.]

The Employment of Children Bill.—This Bill, after a somewhat stormy passage through the Standing Committee on Trade, is now reported, with amendments, to the House, and may come on for consideration next week. Some important changes were made in Committee, and the Bill generally strengthened. As several of the changes were carried against the Government view there is sure to be some division of opinion in the House when the Bill as amended is considered. The most important amendments carried were those forbidding street trading by girls under 16, that preventing children still under obligation to attend school from working more than twenty-five hours a week, and that making it obligatory on local authorities to make by-laws to regulate street trading by young persons. There was much discussion on an amendment proposed on behalf of the Government to incorporate Section 111 of the Prevention of Cruelty Act, 1894, which regulates the employment of children in public entertainments. This was opposed by Mr. Tennant, and after considerable debate was rejected by a majority of nine. There are more than two pages of amendments down for the report stage, so that the Bill will necessarily come in for a good deal more criticism before it becomes law.

The Coal Mines Regulations Bill occupied the whole of Friday's sitting last week, and was mainly supported on the second reading as a measure for increasing safety for life and limb. Sir Charles Dilke pointed out that fatal accidents had not decreased during the last three years, and that it was calculated that about 100,000 accidents occurred every year to working miners. He quoted from Dr. Oliver's *Dangerous Trades* Dr. Tatham's reference to the excessive mortality of colliers under 20 years of age as due to accidents. Mr. Abraham (Rhondda) seconded the motion for the second reading, which was opposed by Colonel Pilkington and Sir Thomas Wrightson. Mr. Bayley, as a colliery proprietor, supported the Bill; and after speeches from Colonel Blundell, Mr. John Wilson, and Mr. Keir Hardie, Sir Walter Foster argued strongly in favour of the Bill as a measure likely to save young life. He pointed out that the Bill affected some 800,000 workers, and that among them the death-rate had gone up from 1.27 per 1,000 in 1898 to 1.38 in 1901. He quoted cases of boys of 17 who had been killed when working for

excessively long hours, in one instance sixteen hours out of twenty-one, and he appealed to the House to support a measure which would prevent excessive hours of labour and the sacrifice of life among boys of 13 to 18 years of age. After a speech against the second reading by the Under Secretary for the Home Department the Bill was rejected by 183 to 144.

The Wandsworth Infirmary.—Mr. Ellis asked the President of the Local Government Board last week whether his attention had been called to the inquest on Michael Sadler, who died in the Wandsworth Infirmary on April 20th, at which evidence was given of violence on the part of the male attendants, and it was found by the jury that Sadler's death was hastened by undue violence; and whether further inquiry into the matter would be made. Mr. Long replied that his attention had been called to the inquest referred to, and he had applied to the coroner for a copy of the depositions. He was now in communication with the guardians on the subject, and on the receipt of their reply and the depositions he would consider what further action he should take in the matter.

The Pay of Militia and Volunteer Medical Officers.—On Thursday last week Major Rasch asked the Secretary of State for War if he would explain why those medical officers of the militia and volunteers whom the War Office had employed continuously for the last three years or more in lieu of R.A.M.C. officers, and whose services it still found necessary, through the dearth of regular medical officers, to retain for the same duties, no longer received the pay and allowances of their corresponding army rank, but had been reduced to a salary of £270 per annum, a reduction in the case of a lieutenant of more than £50, and in that of a captain of nearly £100 per annum. Mr. Brodrick stated, in reply, that these officers had been demobilized and were now employed as civil medical practitioners. They acted as such entirely at their option, and it was impossible to treat them differently from other civil medical practitioners.

The Prevention of Cruelty to Wild Animals Bill which came on for second reading a few minutes before midnight last week, was stated by the mover, Mr. Corrie Grant, to have for its object the prohibition of the coursing of rabbits in enclosed spaces and the hunting of stags originally wild but kept in confinement. Curiously enough the Bill was talked out by Sir Frederick Banbury, who is the sponsor of the Cruelty to Animals Bill, which deals with vivisection, the second reading of which has been postponed to Tuesday, June 9th. Colonel Lockwood has withdrawn the question, which, as mentioned in the British Medical Journal last week, he had intended to ask on Monday last; the question will not now be put.

The Insanitary State of the Telegraph Office in House of Commons.—Mr. William Redmond last week asked a question as to the condition of the instrument room of the Telegraph Office, House of Commons, and whether owing to its proximity to the boiler house the temperature was rarely below 70°, and the ventilation was defective. Mr. Ailwyn Fellowes answered that the First Commissioner admitted there was a foundation for this complaint, and he would take steps to effect an improvement.

Addenbrooke's Hospital Bill.—This Bill was accorded a second reading after midnight before the close of Monday's sitting, and there is now a prospect of the new scheme formulated by the Charity Commissioners becoming law. After the second reading Mr. Caldwell handed in two amendments, neither of them hostile to the scheme. The first is to provide that Governors shall be able to vote for the Committee either in person or by sending in their polling papers to an authorized person, and the second seeks to limit the number of paying patients received into the hospital to one-fourth of the total number of patients being treated in the hospital. The Committee stage was taken after midnight on Tuesday, and Mr. Caldwell's two amendments with verbal alterations in the first were added to the schedule of the Bill, which was ordered to be reported for consideration on June 26th.

Insanitary Oyster Beds.—On Monday Mr. Seymour Ormsby-Gore asked the President of the Board of Trade if, in view of the cases of typhoid fever caused by oysters reared in insanitary beds, he would consider the advisability of appointing an inspector of oyster beds. Mr. Gerald Balfour replied that the question of preventing the spread of typhoid was primarily one for the sanitary authorities, and he did not think that the appointment of a special inspector of oyster beds by the Board of Trade was necessary. The Board of Trade was considering with the Local Government Board whether in particular cases joint action might not be taken by the local sanitary and fishery authorities with a view of preventing the discharge of sewage in the neighbourhood of oyster beds, or, where that was impossible, of inducing the owners to move the oysters to another site.

The Cost of Public Vaccination.—Sir Thomas Roe asked the President of the Local Government Board if he would cause a return to be issued showing the total cost of public vaccination charged on the Poor-rate for England and Wales for the two periods of four years, namely, 1895 to 1898, and 1899 to 1902. Mr. Long replied that the particulars referred to were shown in Part I of the Local Taxation Returns published annually. The returns for the year ended Lady Day, 1902, were in preparation, and Part I he hoped would shortly be ready for issue. It did not seem necessary that a special return should be granted.

The Duke of York's School and Scarlet Fever.—Mr. Thomson asked the Secretary of State for War on Monday whether, in view of the fact that the epidemic of scarlet fever at the Duke of York's School still continued, and that the sanitary authority of the borough of Chelsea, although it had been called upon to remove and disinfect bedding and clothes, had been refused information on the extent of the epidemic and not allowed to enter the school, he would instruct the officials of the school to give entrance to the representatives of the sanitary authority of the borough. Mr. Brodrick answered that nothing was known of any such refusal to give information to the sanitary authorities of the borough. On the contrary, the medical officer of the school had been working in co-operation with the borough medical officer of health. It had been decided to remove all the boys who were free from infection and encamp them for a time.

The Royal Edinburgh Asylum and Overcrowding.—On Tuesday Mr. Weir asked the Lord Advocate whether, seeing that in the West House of the Royal Edinburgh Asylum there were 142 patients in excess of the number which the building was designed to accommodate, and in view of the outbreak of dysentery, arrangements would be made to secure temporary premises for the accommodation of the surplus patients pending the erection of Bangour Asylum. Mr. Graham Murray answered that he was informed that as many patients as accommodation could be provided for had been removed as boarders to other asylums, and that the new asylum buildings would be ready within as short a time as would be required for the acquisition and adaptation of temporary premises.

Expenditure on Vaccine Lymph for Scotland.—Mr. Weir asked the Lord Advocate, on Tuesday, whether in view of the fact that the Local Government Board for Scotland expended £120 14s. 3d. in respect of glycerinated calf lymph and vaccine lymph during the year ending March 31st last, he would state the quantity of each of the two classes of lymph thus obtained, the source from which each class was procured, and to whom the cost in each case was paid. Mr. Graham Murray replied that 419 tubes of vaccine lymph were obtained from Dr. Cadell, of Edinburgh, and 2,220 tubes of glycerinated calf lymph from Dr. Blaxall, of the Government Bacteriological Laboratory in London. The amounts paid to these gentlemen respectively were £15 14s. 3d. and £105.

Leprosy.—On Wednesday, in answer to a question put by Mr. Schwann, the Colonial Secretary said that there were two leper hospitals in Ceylon, and 312 leper patients could be accommodated in them. The leper ordinances did not require that lepers who could be otherwise properly isolated should be removed to a hospital. He was not aware that hospital accommodation was insufficient, but he would consult the Governor on the subject. Earl Percy, in reply to another question by Mr. Schwann, said that according to the census there were 4 190 lepers in Burmah in 1901. Provision for the compulsory segregation of lepers publicly soliciting alms, or appearing at large without any ostensible means of subsistence, was made by the Indian Lepers Act, which was in force in Burmah. There were three leper asylums in the province.

Ireland.

Small-pox in Dublin.

Dr. Flinn, Medical Inspector L.G.B., at the last meeting of the North Dublin Guardians, urged the importance of a systematic house inspection in the infected areas of Church Street and Anne Street and the surrounding district. It was mentioned that Dr. Meyler and Dr. Molloy had been appointed temporary assistants to the dispensary medical officers for the purpose of vaccinations, at £4 4s. a week, with half vaccination fees.

Royal Medical Benevolent Fund: Belfast and County Antrim Branch.

The annual meeting of this Branch was held at the Medical Institute on May 15th; Sir William Whitla, M.D., presided. Dr. Richard Purdon, the Honorary Secretary and Treasurer, read the annual report. The gross contributions from all sources were £172 7s., expenses £11 6s. 9d., leaving a net sum of £161 0s. 3d. remitted to the central treasurer; this is £4 18s. 7d. less than last year, and £19 7s. 4d. less than 1901. Medical students subscribed £7, and £15 were contributed at the inauguration dinner of the Ulster Medical Institute. Of the medical men in Belfast, 153 contributed £106, but 45 gave nothing: of the 213 county members, 43 gave £32 2s., but 170 gave nothing. Eleven applications for grants were recommended, and one refused. The Chairman said this was the only charity of the profession in Ireland; he hoped every member of the profession, town and country, would join; it was the privilege of the Society to help the orphans and widows of their brethren and those members who had failed and fallen in the battle of life. He moved the adoption of the report. Dr. Leslie seconded the motion. The report was adopted, and the following were elected office-bearers:

President: Sir William Whitla. *Honorary Secretary and Treasurer:* Dr. Richard Purdon. *Committee:* Drs. Lindsay, Brice Smyth, O'Neill, Dempsey, R. C. M'Cullagh, McKisack, Taylor, Macarthur (Greyabbey), St. George (Lisburn), Darnell (Bangor), Donnan (Holywood), Dobbin (Banbridge), and Whitaker (Belfast).

Training of Nurses in Fever Work.

An amendment to the report of the Infirmary Committee was proposed at the meeting of the Belfast Board of Guardians on May 12th. The amendment was to the effect that a scheme should be drawn up for the training of outside nurses in the Fever Hospital. An application had been made from the Mater Infirmorum Hospital to allow their nurses to complete their training by a course of nursing in the Fever Hospital. After a long discussion, in which sectarianism was introduced, the amendment was defeated by 14 votes to 3. This is at present a very important question in Belfast, and deserves more serious consideration than it has received.

Dr. E. Thompson, M.P., and the Guardians.

Dr. Thompson, M.P. for Tyrone, has written to the Board of Guardians of Omagh Union, complaining that at their last meeting they "perpetrated upon me a most unmerited insult, and one which I bitterly resent." It appears from his letter that Dr. Fleming had met with a serious accident, and had nominated Dr. Thompson to do his duty, but the guardians appointed some one else. Dr. Thompson points out that he had already acted in this capacity on several occasions, and that within the previous fortnight he had so acted without charging the guardians a farthing. "The only excuse I can find for your action towards me," he says, "is excusable ignorance," and he concludes with a demand for £12 12s. for three days' work, which the guardians will not pay. Dr. Thompson has been treated shabbily, and we hope he will enlighten the Board as to their duties in such cases by a lesson at law.

Dispensary Doctors' Substitutes.

The Edenderry Board of Guardians at present pay the *locum tenens* for a medical officer £3 3s. for one week only, and at their last meeting a proposal was made with the view of arriving at an amicable arrangement as to the payment of substitutes for doctors on vacation. Mr. More O'Ferrall said he did not believe the medical men would attend, and this view was generally held in view of the fact that they had now what was called "a ring of their own." There was no seconder, and the motion therefore dropped. The incident is, however, of much importance, as showing how the union of the profession has at last forced the guardians to recognize its strength, and even to suggest a discussion of grievances.

Proposed Consumption Sanatorium for Kildare.

Dr. O'Connor, medical officer of Celbridge Workhouse, has written to the Board of Guardians urging the establishment of a sanatorium for the treatment of tuberculosis. His opinion is that the effects of the disease are more serious to the country than emigration. He suggests that a sanatorium should be erected to serve two or three counties. The Board ordered a copy of the letter to be sent to the guardians of the neighbouring unions.

The Granard Nursing Scandal.

After a very long and full inquiry conducted by Dr. Smythe, the Medical Inspector, into the allegations made by Dr. Kenny as to the nursing arrangements in the Granard Union Hospital, the Local Government Board have conveyed their decision in a letter to the Guardians. They say:

The Local Government Board feel that the evidence given at the inquiry justifies them in arriving at the conclusion that, for the deplorable condition of affairs at the inquiry, the guardians themselves are primarily responsible, and that, in spite of continuous caution and advice, they neglected to discharge their responsible trust with ordinary care or consideration. It has been shown in evidence that, time after time, Major Ruttledge-Fair, the Local Government Board Inspector, urged on the guardians the necessity for making certain reforms, but his recommendations in the main were ignored.

The default of the guardians is such as makes them, as a Board, liable to dissolution, but the admissions of the chairman and other guardians would appear to show that they are at last alive to the necessity for making improvements that have been shown to be necessary, and the Local Government Board are, therefore, glad to be able, for the present, to give the guardians an opportunity of remedying their default.

One of the gravest errors committed by the guardians was that when the medical officer requisitioned a nurse, he was called on by them to resign because he would not permit the wardsmaid to do nursing duties. This action of the guardians must be described as a most improper attempt to intimidate an officer in the conscientious discharge of his professional duty. It was open to the guardians to run the risk of not retaining the nurse, but there can be no justification for their threatening their medical officer by calling on him for his resignation if he were to exercise his legal right to require for an emergency such nursing or attendance as he might consider necessary.

The Local Government Board proceed to say that

The list of nursing duties that the nuns of the Granard Workhouse gave as being outside their province as nurses in charge of sick wards had come upon the Local Government Board as a surprise; and the matter, from a general point of view, was one that would require further very careful consideration. The next reform necessary was the removal from the infirmary of a number of persons who admittedly ought not to be there. No nurse could be expected to maintain a proper standard of nursing under such conditions. Married and unmarried mothers, with their infant children, who are not sick should be at once removed from the infirmary to district wards elsewhere. The removal of certain lunatics to the lunatic asylum was recommended, and there were recommendations for the rearrangement of the infirmary. Filth should not be allowed to remain in the wards during either night or day. Other recommendations included the provision of a proper mortuary, a better kitchen for the sick, a better surgery, a revision of the dietary scale, the provision of a disinfecting apparatus.

The decision is a complete justification of the complaints of Dr. Kenny, who has endured much in consequence of his attitude. The hostility of his Board has not been allowed to remain in doubt, and every one who knows the pettiness of spirit which often animates a body of this character in a small country town will be able to understand what that means. Arising from this dispute notice has been given to take into consideration "what relations should in future exist between our Board and that officer" (Dr. Kenny). It will be interesting to learn what the guardians will do; but they are so clearly wrong that one can only hope they will realize the obligations of their position as protectors of the poor.

The Local Government Board can hardly be serious when they declare their surprise at the limits which control nursing by nuns. They are known to every medical officer. The subject is a very delicate one to handle in Ireland; but it ought to be recognized that when ladies undertake the duties of nursing they must be prepared to do everything that is necessary for a patient, no matter how unpleasant it may be to fine sensibilities.

Trained Nurses in Schools.—We learn from the *New York Medical Journal* that there are at present 31 trained nurses engaged in visiting 120 public schools in New York City. Each of the schools is visited every day. The services rendered by the nurses have been so valuable that the Department of Education proposes to employ them on a larger scale.

Scotland.

Annual Report of the Registrar-General.

The forty-eighth annual report (for 1902) of the Registrar-General for Scotland estimates the population of Scotland at the middle of the year 1902 at 4,531,299, the males numbering 2,204,503, and the females 2,326,796.

Births, Deaths, and Marriages.

The births recorded during the year amounted to 132,250, the deaths to 77,946, and the marriages to 31,878. Hence for every 100 of the estimated population there were 2.92 births, 1.72 deaths, and 0.70 marriages. Comparing these rates with those for last year, a decrease is found in the case of the births and deaths, while the marriage-rate is almost the same. The birth-rate was the lowest recorded in these reports. The births exceeded the deaths by 54,304, 6.2 per cent. of the total births were illegitimate. This rate is the lowest recorded in these reports. The highest rate, 8.3 per cent., occurred in the Mainland Rural districts, and the lowest 5.3 per cent., in the Large Town districts. The death-rate was the lowest which had occurred since 1896. The average number of deaths was greatest in February, when 267 were registered daily, and least in August with 166. In eight of the principal towns of Scotland there was a birth-rate of 297 for every 10,000 of population. The highest rate occurred in Glasgow (319 for each 10,000), and the lowest in Edinburgh (251). In these eight towns there was a death-rate of 190 for every 10,000 of the population as estimated. The highest rate of mortality occurred in Glasgow, where 200 in every 10,000 of the computed inhabitants died during the year, and lowest in Edinburgh (178), and Leith (153). The death-rate for 1902 was below the mean for the decennium 1892-1901 in all these towns except Greenock, the rate for which was slightly above. The total number of deaths of children under 5 in these towns was 10,416, a death-rate of 54 per 1,000.

Infectious Diseases.

The principal infective diseases—namely, small-pox, measles, scarlet fever, influenza, whooping-cough, diphtheria, and fevers—caused a mortality at the rate of 0.153 per cent. of the population of these towns, and accounted for 8.06 per cent. of the total deaths. The percentage of deaths from these diseases to the total mortality was 11.83 in Perth, 11.57 in Paisley, 11.32 in Greenock, 8.16 in Aberdeen, 7.89 in Edinburgh, 7.81 in Glasgow, 6.55 in Dundee, and 5.65 in Leith. The mortality from diarrhoea and enteritis was at the rate of 0.029 in every 100 of the population, and constituted 1.52 per cent. of the total deaths. In Glasgow, in every 100 deaths 3.07 were due to whooping-cough, 1.83 in Edinburgh, 1.86 in Dundee, 4.60 in Aberdeen, 2.71 in Paisley, 2.91 in Leith, 0.59 in Greenock, and 3.00 in Perth. In Glasgow, 1.72 in every 100 deaths were due to measles, 2.15 in Edinburgh, 2.64 in Dundee, 0.65 in Aberdeen, 3.56 in Paisley, 0.50 in Leith, 2.59 in Greenock, and 3.83 in Perth. In Glasgow, in every 100 deaths 0.72 were due to scarlet fever, 0.56 in Edinburgh, 0.33 in Dundee, 0.32 in Aberdeen, 1.75 in Paisley, 0.08 in Leith, 4.29 in Greenock, and 0.67 in Perth. In Glasgow, 1.36 were due to diarrhoea and epidemic enteritis, 1.08 in Edinburgh, 3.19 in Dundee, 1.69 in Aberdeen, 1.49 in Paisley, 1.41 in Leith, 1.33 in Greenock, and 1.00 in Perth. In Glasgow, in every 100 deaths 0.58 were due to influenza, 2.02 in Edinburgh, 0.75 in Dundee, 1.69 in Aberdeen, 2.07 in Paisley, 1.58 in Leith, 0.67 in Greenock, and 1.50 in Perth. In these eight towns taken together there were registered 861 deaths from whooping-cough, constituting 2.73 per cent. of the total mortality, and giving a proportion of 5.2 in every 10,000 of the computed inhabitants. Measles gave a rate of 1.91 per cent. of all the deaths, and 3.6 for each 10,000 of the estimated population. To influenza 344 deaths were attributed, being at the rate of 1.09 per cent. of the whole mortality, and giving a death-rate of 2.1 per 10,000 persons; of these deaths 116 took place in Edinburgh. Tuberculous diseases gave 13.08 per cent. of the total deaths, equal to 24.8 in every 10,000.

Deaths from Other Causes.

Rheumatic affections caused 208 deaths, of which 94 were returned as due to rheumatic fever. Malignant tumours caused 1,523 deaths, equivalent to 4.83 per cent. of the total; 113 deaths were ascribed to syphilis, 109 to puerperal septicæmia, 121 to erysipelas, 118 to chronic alcoholism and delirium tremens. Diseases of the nervous system caused 1,971 deaths, being 6.25 per cent. of the total mortality. Diseases of the organs of circulation accounted for 4,563, equal to 14.46 per cent. Respiratory diseases caused 6,808 deaths, equivalent to a rate of 41.0 per 10,000; digestive diseases caused 1,985 deaths, urinary diseases 916, atrophy or debility 897, violent deaths 1,320, and suicides 68 in all; 113 persons died over the age of 90 years. The oldest was a woman aged 102. Three other women were over 100, and 2 over 99.

Glasgow.

The Visit of the King and Queen to the University.

The King and Queen travelled from Dalkeith to Glasgow on May 14th, and honoured the city with a State visit. Amongst the functions arranged for the day, which included the laying of the foundation stone of the splendid new Technical College, not the least interesting was the visit of Their Majesties to the University. It is some thirty-five years since the King (then the Prince of Wales) laid the foundation stone of the University, and a great gathering of the Court, the Senate, graduates, and undergraduates was assembled within the grounds of the College to receive Their Majesties on this return visit. Lord Balfour of Burleigh having introduced the Principal of the University, the following address was read.

May it please your Majesty,

We, your loyal and faithful subjects, the members of the University of Glasgow, desire to express our sense of the high honour conferred on us by the visit of your Majesty and our gracious Queen, and to offer you our most dutiful and grateful welcome.

We hold in reverent and affectionate remembrance the privilege which the late Queen granted us of receiving her when in Glasgow in 1849, and again in 1888, but except on those occasions no Sovereign of Great Britain has seen this University since King James VI. visited it on his return to his ancient kingdom after succeeding to the throne of England.

It is, therefore, with peculiar pride and pleasure we thank your Majesty for this mark of your Royal favour and interest in our welfare. The University, as seen by King James, was poorly housed and impoverished in resources; the great building in which we now meet, and of which your Majesties laid the foundation stone on October 8th, 1868, is a visible emblem of the immense progress this venerable institution has made within the last three hundred years, and shows that the city's expansion into one of the world's greatest marts of trade, commerce, and manufactures has been accompanied by an equal development of the University as a school of science, arts, philosophy, and letters.

That it may continue so to grow and flourish is, we doubt not, your Majesty's earnest hope, as it is ours that your Majesty and your Royal Consort may, by the blessing of God, be spared for many prosperous and peaceful years to reign over a devoted people and to encourage with your august sympathy the labours of all whose work it is, here and elsewhere, to foster the sacred cause of knowledge, science, and learning.

In name and by the authority of the University,

R. Herbert Story,
Principal and Vice-Chancellor.

In reply the King said: It is with great gratification that I take this opportunity, accompanied by the Queen, of renewing my acquaintance with your ancient University. I am deeply interested in your allusions to the visits of my predecessor King James VI, and those of my august and beloved mother the late Queen Victoria. I recall with satisfaction my own share in laying the foundation stone of this noble building, and I recognize that it is a true symbol of the greatness of the University which has adapted itself to the commercial expansion of the city, has developed its powers and resources, and is continually opening up new avenues of knowledge and thought. It is my earnest desire that this and other universities as schools of higher learning may grow and prosper, and so advance the material progress of my people.

Thereafter the President of the Students' Representative Council presented the Queen with a beautiful bouquet, and the Deans of the various Faculties in the University were presented to His Majesty.

The University and the General Medical Council.

Sir William Gairdner, who has acted as the representative of the Glasgow University at the General Medical Council for about ten years, has just resigned owing to the state of his health. The University Court at a meeting held last week passed a resolution thanking Sir William for his services, and agreed to appoint Professor McCall Anderson as the representative of the Court for the next five years.

A law for the registration of nurses was passed by the Legislature of the State of Illinois on April 16th.

Mr. Cyril Goodman, M.B., has received the King's permission to accept the 3rd class of the order of the Medjidieh, conferred upon him by the Khedive of Egypt, in recognition of his valuable services to the Egyptian Government.

THE EPIDEMIC IN THE WEST INDIES.

An acute controversy has been going on for some time past in the West Indies with reference to an epidemic disease which prevails in Trinidad and probably some other parts. Various circumstances have hitherto determined us to defer making any reference to it, but the time has come when it may be usefully discussed on this side of the water. Many side issues are involved in the question, but the main point is whether the disease which prevails should be declared to be small-pox, or whether some other term should be applied to it.

An enormous amount of correspondence, descriptive communications, and other literary matter connected with the question has reached us, and it seems preferable to give simply the result of our study of the various documents received. Later, if a suitable opportunity arises, we can publish *in extenso* one or more of the papers dealing with the clinical aspects of the disease. The course thus adopted is the less open to objection because, in essential features other than conclusions, the communications on both sides of the controversy are of much the same tenor. The disease in Trinidad is an acute, eruptive, and infectious disorder, and except for one or two abnormalities the descriptions given of the cases by all parties resemble small-pox in the closest possible way.

These abnormalities, to which the one side point as proof of their contention that the disease is not small-pox, and the other side explain in a different fashion, are that the mortality is low, and that after the first few days the constitutional disturbance is not great—that is, that secondary fever is usually only slightly marked. As regards the mortality, how low it is is a matter of dispute, but in any case it has been very much lower hitherto than is the case in an ordinary outbreak of small-pox. The absence or slightness of the secondary fever is also a remarkable point, for from the description of cases and photographs sent to us, it is obvious that the eruption is commonly very profuse and almost of a character to which the term "confluent" is often applied. The small-pox party admit that secondary fever is usually slight, but quote some cases to show that occasionally the secondary constitutional disturbance is of typical severity.

As regards the influence of vaccination, the evidence is conflicting. The one side claim that it does not influence either the incidence or course of the disease, and points to this as proof that the disease cannot be small-pox. The other side, however, adduce somewhat convincing evidence that the term "vaccination" is applied by the other side in a very loose way—that is, "no protection" is claimed in cases which are said to have been vaccinated but which show no marks, as also in cases not vaccinated until the subjects were already sickening. On the other hand, cases are quoted in which the disease was peculiarly light in persons having stigmata, and the results are given of cases where convalescent patients and healthy persons were vaccinated side by side. The latter "took," the others did not. Imported coolies, who have to be revaccinated on arrival, are also said to have escaped the disease altogether.

The weight of evidence on the whole is certainly in favour of the view that vaccination does affect the disease, and in this connexion it is to be noted that in Trinidad vaccination in childhood is compulsory, and that the chief incidence of the disease—that is, on the 20 to 35 age period—is that which might be expected from small-pox among a population partially protected by early vaccination.

To sum up our general conclusions, we cannot find anything in the description of the outbreak, as given by either party, to justify the term "varicella" being applied to the disorder, or to necessitate the supposition that Trinidad has been the birthplace of a new disease. Similar exhibitions of small-pox were recognized under various terms in pre-vaccination times, and were discussed under the heading of "A Sport of Small-pox" in the British Medical Journal of September 21st, 1901, p. 821. Besides this, the disease as described in Trinidad precisely resembles the epidemic that was prevalent, and still to some extent exists, in many of the United States and also in Canada in 1900-1-2. There, again, some medical men were averse to the term "small-pox" being used, on corresponding grounds to those relied on in Trinidad, but in the face of the diagnosis arrived at by the sanitary authorities wherever the disease appeared, little weight can be attached to their views.

The controversy, it is to be noted, is by no means merely a medical one. It is complicated, if it was not mainly caused, by questions of quarantine, trade and inter-island jealousy. In its present form it was brought about by the action of Barbadoes. This island about a year ago imported some cases from Halifax, which were diagnosed as small-pox. They were followed by an epidemic of a mild type of the disease which was very actively taken in hand, but, in spite of this, the island was subjected for nearly a year to the severest form of quarantine by all its neighbours. Smarting from its consequent trade losses, the island about the beginning of this year accused Trinidad of having cases of the same disease, and of concealing the fact. Thereon it was invited to send over its small-pox expert, and the latter, after long investigation, reported that there was small-pox in Trinidad of the same character as that in Barbadoes. The Trinidad Government, however, refused to admit that the disease was anything more than chicken-pox, and obtained the support of most of the local medical men. These were not, however, unanimous, and an incident that occurred before any inter-island controversy arose, and while yet there were but a few cases, must be referred to. A private practitioner early in November notified two or three cases of small-pox, and, being contradicted in his diagnosis by the medical officer of health, reported the matter with some heat direct to Government. The latter referred the matter to its chief medical officer, who was then apparently absent on leave. On his return he made some inquiry, and then supported his subordinate. *Hinc fortasse illae lacrimae.*

Trinidad now, in spite of its objections, has been put in quarantine by the other islands, so perhaps the matter will now be allowed to be taken in hand from a purely medical standpoint. This is most seriously called for; for, although the mortality is at present low, it will not necessarily remain so, and in any case the disease gives rise to a great deal of individual suffering and loss, whatever name the local authorities may choose to apply to it.

It may be added that there is a strong reason for believing that an epidemic of allied, if not identical, character is commencing in one of the British settlements on the mainland.

The only comment that, in conclusion, it seems right for us to make is to express our wonder that the Home Government should permit the West Indian Islands to depend in any way for the suppression of small-pox upon such a useless remedy, under the circumstances, as quarantine, or that they should have it in their power to destroy one another's commerce by imposing it *à volonté*.

LITERARY NOTES.

It is stated that a life of the late Dean of Canterbury is to be written by his eldest son, Dr. Reginald A. Farrar. Dr. Farrar, who is a Doctor of Medicine of the University of Oxford, is a medical inspector under the Local Government Board.

Mr. George Cowell, F.R.C.S., Consulting Surgeon to Westminster Hospital, has, we learn from the *Westminster Gazette*, undertaken to write and edit the *Life and Letters of the late Professor E. B. Cowell*, and the book is to be published by Messrs. Macmillan and Co. He will be grateful to friends of Professor Cowell for the loan of any letters in their possession which can add to the interest of the book and throw light on a notable personality. All papers, which should be sent to Mr. George Cowell, at 24, Harrington Gardens, S.W., will be carefully tabulated, and returned to the senders in due course.

Dr. Green's well known *Introduction to Pathology and Morbid Anatomy* is now in its ninth edition. The following particulars as to the previous issues of the work are given in the *Charing Cross Hospital Gazette*. The first edition, consisting of 1,200 copies, was published in 1871. Subsequent editions appeared in 1873, 1875, 1878, 1880, 1884, 1889, 1895 and 1900, each successive edition containing a larger number of copies than its predecessor.

We regret to learn that the *Index Medicus*, the first number of which in its new incarnation has already appeared, is not receiving the support that was expected from the medical profession of the United States. The Carnegie Institution at Washington promised, as was stated in the British Medical Journal some time ago, an annual subvention of £2,000 for three years. This grant was made on the understanding that its continuance would depend on the amount of active support which the undertaking should receive from the profession. It is stated in the American journals that so far the subscription list scarcely exceeds 250. The cost of production is estimated at £2,400, so that unless further subscriptions are forthcoming there will be a shortage of about £150. The *Index Medicus*

is a publication that should be of interest to the medical profession throughout the world. No medical library can be considered as discharging its function adequately to those who use it unless it has the *Index Medicus* on its shelves. No one engaged in original research, no one who contributes in any way to the literature of medicine, can do without it unless he is content to waste his time in rediscovering facts already known, and resuscitating theories already dead and decently buried. The *Index Medicus* supplies the only literary machinery we have in the English language for the co-ordination of research and the correlation of facts and observations published by workers of all nations. It will be a disgrace not to the United States alone, but to the whole medical profession, if it is allowed to die a third time.

President Roosevelt as might be expected from a man of his character is a lover of plain English. The following exemplification of his taste in that direction is given in a recent issue of *American Medicine*. In a statement recently published by Commissioner Lederle, of the Board of Health, it is set forth that letters have been received objecting to the use of the word "spit" in the Board of Health ordinances, and asking that the word "expectorate" be substituted. In this connexion Commissioner Lederle makes public a letter received by the Health Department from Mr. Theodore Roosevelt, when the latter was Police Commissioner, asking that the word "spit" be used instead of "expectorate." The letter is as follows:

Police Headquarters, New York, March 21, 1896.

The Hon. Charles E. Wilson, President Health Board.

Dear President Wilson:—Can't you have our form of notice changed so as to read "spit." instead of "expectorate?" Expectorate is a vile word and the Health Board ought to use good English.

THEODORE ROOSEVELT.

We know of no advantage in the word "expectorate" except that it made possible one of the few puns which may be allowed to rank as really witty. Some one speaking to a lady of a friend of whom it might have been said that he had no manners and his customs were beastly, gave an example that he would not hesitate to expectorate in her presence. She at once replied, "Then he cannot *expect to rate* as a gentleman."

Professor Nicholas Senn, of Chicago, who recently made the grand tour, modern style, has recorded his adventures and experience in a book entitled, *Around the World via Siberia*. Special attention is given to Russia, its charity organizations, its hospitals, national religion, its priests, and its prisons. The distinguished author has also a good deal to say about China and Japan, its religion, its medical schools and hospitals, its leper colonies, &c. The book is well illustrated.

The eighth of May was the hundredth anniversary of the birth of Justus von Liebig. As a writer in the *Cornhill Magazine* for May points out, Liebig is known to some of the public only as the inventor of a method of preparing "extract of meat." He has infinitely stronger claims on our remembrance as one of the fathers of modern chemistry, and as a man who took a leading part in laying the foundations on which his fellow-countrymen have constructed their splendid system of higher education in chemistry and physics, and built up the great industrial system which we all admire, and which not a few of us regard with some degree of anxiety. Liebig not only opened the first public laboratory for students, but also originated the best system of advanced scientific training yet known to us. In his laboratory, except for the beginners, there was little or none of the merely formal instruction in the methods of qualitative and quantitative analysis which has been so overdone in this country. Every student under Liebig had a task to perform, a research to carry out. He followed his own method, and was only helped by consultations with, and suggestions from, his chief. Every worker in the Giessen laboratory followed every other worker's researches. Everyone helped everyone else. All were teachers, all were learners.

CONTRACT MEDICAL PRACTICE.

A WARNING FROM THE MIDLANDS.

THE *Heanor Observer* contains a long notice in its issue of May 15th of a meeting of the Council of the "Heanor and District Friendly Societies" to consider a proposal to form an amalgamated medical association, and so render the societies independent of all local medical men. If anything were required to bring home to the profession the necessity of organization, union, and absolute loyalty on the part of its members, it would be supplied by some of the speeches at this meeting. There were many references to the successful measures that had been adopted elsewhere to resist the endeavours of medical men to put their relations with clubs on a proper footing, and a resolution was passed to form a Medical Association, with an imported medical man to serve it in order that the members of the societies "should not be fleeced to any extent the medical men chose."

All this is the outcome of a very modest endeavour of the local medical men to raise the inclusive fee for medicine and attendance per annum from 3s. and 4s.! One argument addressed to the members in support of the proposal is worthy of note by all. It was that if the proposal were adopted the Friendly Societies would receive their attendance from a medical man "who will be your servant," and not an independent man.

The resolution having been passed, it is to be supposed that this council will shortly be issuing advertisements for a medical officer to act as its "servant."

We would therefore strongly urge any medical man who may feel tempted by its terms to refrain from either applying for or accepting the position.

THE MIDWIVES BOARD.

WE have received the following statement from Mr. G. W. Duncan, Secretary of the Central Midwives Board:

"I am directed to inform you that meetings of the Central Midwives Board have been held on May 7th, 12th, and 14th.

"The drafting of the rules under Section 3 I of the Midwives Act, 1902, was completed, and the Secretary was instructed to forward a copy to the Privy Council for their approval, together with some draft 'suggestions to county councils.'"

The temporary address of the Board is Privy Council Office, Whitehall, London S.W.

ASSOCIATION NOTICES.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1903.

MEETINGS of the Council will be held on July 8th and October 21st in the Council Room of the British Medical Association, 429, Strand, London, W.C.

ELECTION OF MEMBERS.

ANY candidate for election should forward his application upon a form, which will be furnished by the General Secretary of the Association, 429, Strand. Applications for membership should be sent to the General Secretary not less than thirty-five days prior to the date of a meeting of the Council.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m. Members can have their letters addressed to them at the office.

GUY ELLISTON, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

BATH AND BRISTOL BRANCH: BATH DIVISION—A meeting of this Division will be held at the Royal United Hospital, Bath, on May 27th, at 5 p.m., for the purpose of electing Divisional Officers, and for other business.—W. M. BEAUMONT, Bath, Honorary Secretary.

BATH AND BRISTOL BRANCH: BRISTOL DIVISION.—The first meeting of this Division of the Branch, under the new Constitution of the Association, will be held at the Medical Library, University College, Bristol, on Wednesday, May 27th, at 8 p.m. Business: To elect the officers of the newly-formed Division, the representatives of the Division on the Council of the Branch, and the ordinary members of the Executive Committee: to elect the representative of the Division in representative meetings of the Association; to make rules for the Division. This meeting of the Division will take the place of the ordinary Branch meeting, which will not be held. The date of the annual meeting of the Branch and of the annual dinner is altered to Wednesday, June 10th.

BATH AND BRISTOL BRANCH: TROWBRIDGE DIVISION.—A meeting of this Division will be held at the George Hotel, Trowbridge, on Thursday, May 28th, at 3 p.m., for the purpose of electing officers, and for other business.—W. M. BEAUMONT, Bath, Honorary Secretary.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.—Notices: (1) Nominations for the offices of President-elect, Treasurer, two Honorary Secretaries, and two Representatives of the Branch in the Council of the Association, may be made by any three members of the Branch, in writing, to Mr. J. T. J. Morrison, 3, Great Charles Street, Birmingham, on or before June 6th. (2) A special meeting of the Branch will be held in the Medical Institute, Birmingham, on Thursday, June 11th, at 4.30 p.m. Business: Adoption of Rules for the Branch. (Members are requested to bring the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of March 7th, 1903, containing Draft Model Rules.) (3) The forty-ninth annual meeting of the Branch will be held in the Medical Institute, Birmingham, on Friday, June 26th, at 4 p.m. The retiring President, Dr. Henry Malet, will introduce his successor, Mr. Jordan Lloyd, who will deliver an address. The business to be transacted will be duly notified to each member by circular. (4) The annual dinner will be held on the same date as the annual meeting, June 26th, at 7 p.m., in the Grand Hotel, Birmingham. Tickets 5s. each. Members may introduce guests.—J. T. J. MORRISON, F.R.C.S., T. S. SHORT, M.D., Honorary Secretaries.

DORSET AND WEST HANTS BRANCH: BOURNEMOUTH DIVISION.—The first meeting will be held at the Medical Society's Room, Shaftesbury Hall, Bournemouth, on Wednesday, May 27th, at 3.30 p.m. All members of the British Medical Association residing in the Boroughs of Bournemouth and Poole, and the Wimborne and Cranbourne, Ringwood and Poole Unions are earnestly requested to attend this important meeting, when the officers and representative will be elected and the rules for the Division adopted.—C. H. W. PARKINSON, Wimborne.

EAST ANGLIAN BRANCH.—Preliminary Notice.—The annual meeting will be held at Chelmsford on Thursday, June 11th. Members wishing to read papers, or show cases or specimens, will kindly communicate with the General Secretary, B. H. NICHOLSON, M.B., East Lodge, Colchester.

EDINBURGH BRANCH: SOUTH-EASTERN COUNTIES DIVISION.—The annual meeting of this Division will be held in the Railway Hotel, Newtown St. Boswells, on Friday, June 5th, at 3.30 p.m. Business: (*a*) To elect office-bearers, the Representative of the Division on the Branch Council, and the ordinary members of the Executive Committee; (*b*) To elect the Representatives of the Division in representative meetings of the Association; (*c*) To receive the Annual Report of the Executive Committee; (*d*) To consider the business of the Annual Representative Meeting; (*e*) To make new rules, or alter or repeal existing rules; (*f*) To transact any business that may be transacted at an ordinary meeting. The members will dine together at 5.30 p.m., and it is hoped as many as possible will be present. All intending to dine must notify the Secretary one week before the date fixed.—W. HALL CALVERT, Melrose, Honorary Secretary.

GLASGOW AND WEST OF SCOTLAND BRANCH.—I hereby give notice that the names of candidates for election as members of Council to represent this Branch must be sent to me on or before June 15th. Each candidate must be nominated in writing by three members of the Branch, which is entitled to elect two representatives.—JAMES H. NICOLL, Senior Honorary Secretary, 4, Woodside Place, Charing Cross, Glasgow.

METROPOLITAN COUNTIES BRANCH: HAMPSTEAD DIVISION.—The first annual meeting of the above Division will be held in the Concert Hall of the School for the Blind, Swiss Cottage, N.W., on Wednesday, June 3rd, at 4.45 p.m., for the purpose of electing officers and representatives, and for other business.—J. DILL RUSSELL, Osman House, Fortis Green, N., Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: WANDSWORTH DIVISION.—The annual meeting will be held at the Drill Hall, Clapham Junction, on Thursday, May 28th, at 4 p.m. prompt, for the purpose of electing officers and representatives and other business.—E. ROWLAND FOTHERGILL, M.B., B.S., Torquay House, Southfields, Honorary Secretary.

MIDLAND BRANCH.—Preliminary Notice.—The annual meeting of the Midland Branch will be held on June 5th, at Derby. The annual dinner of the Branch will be held in the evening. The last day for sending in nominations for elective members of Council for this Branch is Saturday, May 30th.—F. M. POPE, Leicester, Honorary Secretary.

MIDLAND BRANCH: BOSTON AND SPALDING DIVISION.—The first meeting of this Division will be held at the Peacock Hall, Boston, on May 27th, at 3.30 p.m. All members of the British Medical Association living in the Holland County Council area and the Horncastle parliamentary division are now members of this Division and are requested to attend this meeting, when the rules for the Division will be adopted and officers elected.—A. E. WILSON, 8, Grove Street, Boston.

MIDLAND BRANCH: DERBYSHIRE DIVISION.—All members of the British Medical Association living in Derby and Derbyshire are requested to attend the first meeting of this Division, which will be held at the Derbyshire Royal Infirmary on May 26th, at 4 p.m., to adopt rules for the Division and to elect officers.—J. ACTON SOUTHERN, 93, Friar Gate, Derby.

MIDLAND BRANCH: LINCOLN DIVISION.—The first meeting of this Division will be held at the Guildhall, Lincoln, on Thursday, May 28th, at 4 p.m. All members of the British Medical Association living in the Lincoln, Gainsborough, Louth, and Sleaford parliamentary divisions are now members of this Division, and are earnestly requested to attend this meeting, at which the officers and representatives will be elected, and rules for the Division adopted.—E. MANSEL SYMPSON, 2, James Street, Lincoln.

NORTH LANCASHIRE AND SOUTH WESTMORLAND BRANCH.—The annual meeting will be held at Lancaster on June 24th. Members wishing to show cases or specimens or to bring any business before the meeting are requested to communicate with the Honorary Secretary, A. S. BARLING, High Street, Lancaster.

NORTH OF ENGLAND BRANCH.—The nomination of candidates for the office of Elective Members of Council (Branch Representatives) for the ensuing year must be made by three electors, and in writing, to the Honorary Secretary of the Branch, Dr. ALFRED COX, Cotfield House, Gateshead, on or before June 6th next.

SOUTH MIDLAND BRANCH.—The annual meeting will be held at the Council Chamber, Wellingborough, on Thursday, June 18th, under the presidency of Dr. W. E. Audland. The President invites members to lunch at the Central Hall, High Street, at 1 p.m. sharp. Members who intend to be present at lunch must communicate with the President, Dr. W. E. Audland, Oxford Street, Wellingborough, not later than June 14th; Branch Council meet at Council Chamber 12.15 p.m. same day. Members wishing to read papers or show specimens must inform the Secretary not later than June 7th.—E. HARRIES JONES, Northampton, Branch Secretary.

SOUTH MIDLAND BRANCH: BEDFORD AND HERTS DIVISION.—The annual meeting of this Division will be held at the County Hospital, Bedford, on Tuesday, May 26th, at 3.45 p.m. All members of the Association living in this Division are requested to attend this meeting, when the rules for the Division will be confirmed and officers and representatives elected.—W. GIFFORD NASH, Bedford, Honorary Secretary.

SHROPSHIRE AND MID-WALES BRANCH.—The next meeting of the Clinical and Pathological Section of this Branch will be held on Tuesday, June 2nd, at 5 p.m., at the Salop Infirmary. Members who wish to read communications, or show cases, or specimens, are requested to communicate with the Honorary Secretaries before Tuesday, May 26th.—HAROLD H. B. MACLEOD, LEONARD J. GODSON, Shrewsbury, Honorary Secretaries.

SOUTH-EASTERN BRANCH.—In accordance with By-law 22, I give notice that the names of candidates for election as members of Council to represent this Branch must be sent to me on or before Saturday, June 6th. Each candidate must be nominated in writing by three members of the Branch. The Branch is entitled to elect three representatives on the Council.—T. JENNER VERRALL, 97, Montpellier Road, Brighton, Honorary Secretary.

SOUTH-WESTERN BRANCH.—The sixty-fourth annual meeting of this Branch will be held on Wednesday, June 3rd, at the Guildhall, Launceston, at 3 p.m., when Mr. J. Delpratt Harris will resign the chair to Dr. W. T. Thompson, who will deliver an inaugural address. The report of the Branch Council will be presented to the meeting, and the officers of the Branch elected for the year 1903-4. Luncheon, by kind invitation of the President-elect, will take place from 1 to 2.30 p.m., at the Guildhall, and the annual dinner will be held at the White Hart Hotel at 7 p.m. Tickets (exclusive of wine), 6s., which can be obtained from the Honorary Secretary. The President-elect has kindly arranged visits to the Priory Ruins and Church, and the Castle. After the meeting a Garden Party will be held at the residence of the President-elect. The nomination of candidates for the office of Elective Members of Council (Branch Representatives on the Central Council) for the ensuing year, must be made by three electors, and in writing, to the Honorary Secretary of the Branch, G. YOUNG EALES, 1, Matlock Terrace, Torquay, on or before May 20th.

STAFFORDSHIRE BRANCH.—Nominations of candidates as representatives on the Central Council of the Association must be sent to the Secretary of the Branch, G. Petgrave Johnson, Brook Street, Stoke-on-Trent, before Saturday, May 30th.—G. PETGRAVE JOHNSON, Honorary General Secretary.

STAFFORDSHIRE BRANCH.—The annual meeting of this Branch will be held at Stafford, on Thursday, June 11th.—G. PETGRAVE JOHNSON, Stoke-on-Trent, Honorary General Secretary.

WEST SOMERSET BRANCH.—The sixtieth annual meeting of this Branch will be held at the London Hotel, Taunton, on Tuesday, June 16th, at 12.30 p.m., under the presidency of Dr. David Brown. Agenda: Minutes of last meeting; report of Council; Treasurer's report; election of President-elect; election of other officers. President's address on Some Medical uses of Chloroform. Lunch will be served at the London Hotel at 1.45 p.m. It is proposed to pay for this out of the funds of the Branch in the case of all members who signify their intention to be present to the President, Dr. D. Brown, Hamdon, Taunton, on or before Saturday, June 13th. In the case of others, and of tickets for guests, a charge of 2s. will be made; in all cases exclusive of wine. After lunch, arrangements have been made to enable members to play tennis (4 courts) and croquet (2 grounds) on the Somerset County Cricket Ground, where they will also be entertained to tea by the President. The Curator of the Museum of the Somersetshire Archaeological and Natural History Society (Mr. H. St. George Gray) will be very pleased personally to conduct any members over the Castle and Museum, which has been recently rearranged, during the afternoon. In the event of the afternoon being wet, an alternative programme will be arranged.—W. B. WINCKWORTH, Taunton, Honorary Secretary.

WORCESTERSHIRE AND HEREFORDSHIRE AND GLOUCESTER BRANCHES.—Election of a Member of Council to represent these Branches on the Central Council of Association. It has been arranged that the Worcestershire and Herefordshire Branch should have the nomination for the first three years, Gloucestershire for the next three years, and so on alternately. Nominations made by three electors must be sent in writing to the undersigned on or before June 10th.—GEO. W. CROWE, M.D., 43, Foregate Street, Worcester, Honorary Secretary.

SPECIAL CORRESPONDENCE.

PARIS.

Académie de Médecine: Dr. Calmette on Practical Chemical and Bacteriological Tests of the Efficiency of Sulphurous Acid and Formaldehyde as Disinfectants.—Amelioration in Position of Hospital Nurses in Paris.

AT a recent meeting of the Académie de Médecine, M. Roux, in the unavoidable absence of the author, M. Calmette, read a most important communication on the practical tests to be employed to show how far the usual methods of disinfection by sulphurous acid and formaldehyde are efficacious. For each of these disinfecting agents it is necessary to determine (1) if the penetration of the antiseptic has been sufficient to assure the destruction of the pathogenic germs contained in the thickness of contaminated objects submitted to disinfection; and (2) if the pathogenic microbes which it is proposed to destroy in each particular case have been reached.

A. *Tests Based on the Use of Sulphurous Acid.*

1. From experiments carried out in the Pasteur Institute at Lille M. Calmette finds it is easy to measure the penetrating power of sulphurous acid by means of a simple chemical test. He takes glass tubes 5 to 10 millimetres in diameter and 1 metre in length, closed at one extremity and filled with dry fine sand which has been coloured blue with litmus; these tubes are graduated and the open end is closed with a pledget of cotton wool. He places these tubes horizontally at different heights in the room to be disinfected. The gas penetrates more deeply the greater is its concentration or the longer the tube is exposed. All the sand traversed is coloured red, and it is only necessary to measure the red zone to calculate the approximate percentage of sulphurous acid gas efficiently produced. A table can thus be drawn up indicating to what point the gas must penetrate for the disinfection to be efficacious against the different species of pathogenic microbes, for example, the sand should be coloured red to a depth of 25 centimetres to kill the typhoid bacillus, and for a depth of 40 centimetres to be sure of killing the bacillus of diphtheria.

2. The bacterial tests are made in little glass cylinders 10 millimetres in diameter and 10 centimetres in length, open at both ends and fitted with cotton-wool tampons. In each of these cylinders, which have been previously sterilized, are placed one or several little bands of filter paper or cloth impregnated with pure cultures of the different microbes to be experimented with. These are then placed in the dry room at 30° C. for twenty-four hours. Some are kept to check the results, and the others are placed at different heights in the room to be disinfected. After disinfection has been carried out they are taken to the laboratory and examined. Each band is immersed in a tube of nutrient bouillon, and after forty-eight hours' incubation these tubes can be compared with the tubes which were not exposed to the disinfectant and the results exactly determined. If, for example, we wish to disinfect a room for a case of diphtheria, tubes containing dried cultures of the bacillus of Loeffler will be placed in the the room. To be more precise, it is better to mix the cultures with serum so that the albumen dried on the surface of the strips of filtered paper or stuff will protect the microbes, and represent more exactly the normal conditions existing on the soiled linen in an infected room.

B. *Tests Based on the Use of Formaldehyde.*

1. M. Calmette mixes a certain quantity of a hydro-alcoholic solution of fuchsin rubine with liquid serum of the horse, and dries this at a temperature of 40° C. This dried serum, in bright red scales, dissolves very readily in water, to which it immediately gives its colouring matter. If we submit the scales to formol vapour, the colour is immediately fixed, and becomes insoluble in water. Nothing is simpler then than to prepare tubes containing either dry sand or cotton wool, placing at intervals in each, say every 5 centimetres, some of the red scales, or else little discs of filter paper impregnated with the fuchsin serum and dried. These tubes will be placed at different heights in the room to be disinfected. After the operation, each index will be placed in water, and those which have been reached by the formol will not dissolve their colouring matter. It will then be easy to measure exactly the distance to which the gas has penetrated.

2. The bacteriological control of disinfection by formol can be done in exactly the same manner as that described for sulphurous acid. The penetrating power, however, of formol, is much less than that of sulphurous acid gas, therefore it is necessary to use very loose and light tampons of cotton wool to close the ends of the test cylinders, which should be shortened to a length of about 6 centimetres.

M. Calmette has constructed a small room of 5 cubic metres in the Lille Pasteur Institute, where he is carrying out a series of experiments on this question, and he hopes shortly to publish precise details as to what quantities and what concentrations of sulphurous acid or of formol or of formol-acetone must be employed to be sure of obtaining the destruction of each of the principal pathogenic microbes in a room of given dimensions.

M. Mesureur, the Director of the Assistance Publique, has just made important modifications in the material situation of the hospital *personnel*. All the salaries have been increased, the smallest being raised from 550 francs to 800 francs per annum. Moreover, in future all nurses, male and female, will be lodged and fed, clothed, and get their washing free. In future all nurses will wear a new pattern of cap, with a red and blue cocarde, the colours of the city of Paris, the superintendents wearing a gold star, and the staff nurses a silver star.

MANCHESTER.

City Council and Infirmary Site: Bill in Parliament.—Visit of French Scientists.—Formation of New Scholarships at Owens College.

THE City Council are now reaching the final stage in the matter of the infirmary question. They are preparing a Manchester Corporation Bill 1903, and it is proposed to insert in the Bill the following clause, which however has still to receive the final imprimatur of the Council:

> The Corporation may, as and when they obtain possession of the said land (the Piccadilly site), buildings, and hereditaments, appropriate the same or any portions thereof for public streets and open spaces as they may determine, and may also remove the existing buildings and erect and provide upon the said land such new buildings as they may determine, with all necessary fixtures, fittings, furniture, and equipment.

This Bill has now come before the Examiners of Standing Orders in the House of Lords. The new clauses introduced into the Bill relate to the vesting in the corporation of the Manchester Royal Infirmary and the transfer of the institution to another site. It is proposed to raise £400,000 for the purchase of the infirmary buildings and site, and £30,000 to cover the expenses connected with their acquisition. The purchase money is to be paid in four equal instalments—on the passing of the Act, on the delivery of the buildings to the Corporation, at the expiration of a year from that date, and the final payment at the end of two years after the handing over of the buildings. As soon as the first instalment has been paid the Corporation is to widen streets adjacent to the infirmary site, and the Infirmary Board, which will be created, will be authorized to acquire land on which to erect the new infirmary from Owens College and the Manchester Southern Hospital for Women and Children, at Chorlton-on-Medlock. The Board will have power to sell surplus land, but without the consent of Owens College they may not sell any part of the Stanley Grove Estate. As a result of the additions to the Manchester Corporation Bill the examiners reported that it did not comply with the forms of the House, and a dispensation of the standing orders will have to be obtained before the Bill can proceed.

Professor Calmette, of Lille, and others—scientists and engineers—representing the corporation of that city and the surrounding districts, last week visited and inspected the Manchester Corporation sewage works at Davyhulme.

The Owens College and the Medical Board of the Royal Infirmary, jointly, have founded two entrance scholarships in medicine, each of the value of £100 a year. One will be given in connexion with science subjects, and the other with art subjects. They will be offered for competition this year, and are open to all, whether students of the College or not. The Council of Owens College has also founded a Platt Scholarship in Zoology and Botany of the annual value of £50.

A MUZZLING ORDER FOR NEW YORK.—At the annual meeting of the New York Academy of Medicine, held on April 20th, a resolution was adopted urging the passage of an ordinance that all dogs should be muzzled while at large in the city.

CORRESPONDENCE.

PROFESSOR DUNBAR'S ANTITOXIN TREATMENT OF HAY FEVER: A DISCLAIMER.

Sir,—A circular has just been brought under my notice, which has probably been sent out broadcast, and which refers to my paper on the subject of the antitoxin treatment of hay fever, published in the British Medical Journal of March 28th, in a manner which easily may lead readers to conclude that it had been issued with my knowledge and consent. I need hardly say that such is not the case. As a matter of fact, this circular, of which I have never received a copy myself, is dated May 16th, the very day when the London agent of the company in question wrote to me asking my permission to have reprints made of my paper "for professional purposes only," a request to which, needless to say, I promptly and absolutely declined to accede.

Apart from this personal question, however, there are some broader considerations of general importance. I most strongly disapprove of a remedy which is still entirely in the laboratory stage, and of the dosage, mode of application, and possible dangers of which, when administered for some length of time, etc., we as yet know little, if anything, being placed prematurely on the market. When I took an active part in the investigation of the subject I assumed as a matter of course that all these most essential conditions would have been complied with before the remedy was recommended for practical use.

But what makes the matter most serious is that, to conclude from a very recent communication from Dr. Prausnitz, Professor Dunbar's assistant, the antitoxic properties of the serum are constantly on the increase, which simply means that the article now introduced is by no means a remedy of definite strength.

I therefore consider it my plain duty, as my name has in some sense become associated with the subject, to utter a serious word of warning against the premature use of the article now offered, and to express my deep regret that a promising scientific innovation should have at its very inception been mixed up with commercial methods such as I have described.—I am, etc.,

Wimpole Street, W., May 21st. Felix Semon.

THE ANTIVIVISECTOR'S METHOD.

Sir,—My attention has been drawn to the following paragraph in the *Zoophilist* (May 1st, 1903). "The same number (*Journal of Physiology*, March, 1903, vol. xxix, No. 2) contains an article on 'Respiratory Exchange' from the Physiological Laboratory, Guy's Hospital,' by Dr. M. S. Pembrey. Experiments were performed upon dormice, hedgehogs, and the marmot. It is absurd to suppose that experiments upon hibernating animals are needed to advance human medicine, or that Guy's Hospital is legitimately employing its resources in such researches as these."

Such is another example of the methods of misrepresentation used by the antivivisectors. None of the observations in question were vivisection experiments; it was clearly indicated in the papers that the observations were upon animals under normal conditions; in fact in the former paper on the respiratory exchange of the marmot, to which reference is made, it is stated that "the marmot was subjected neither to operation nor forced feeding" (*Journal of Physiology*, vol. xxvii, 1901, p. 407).

It may appear to the antivivisectors that "it is absurd to suppose that experiments upon hibernating animals are needed to advance human medicine." A certain amount of intelligence and respect for truth are necessary for the appreciation of the value of physiology in relation to medicine. Did not the antivivisectors show their gross ignorance on a former occasion by complaining of the cruelty of exposing hibernating animals to a temperature of 10°, a temperature which they vainly thought represented twenty-two degrees below the freezing point? In that case was it not obvious to the intelligent reader that the temperature was recorded in the Centigrade scale and was that of the room in which the observer himself worked?

It is of course more than "absurd to suppose that Guy's Hospital is legitimately employing its resources in such researches as these" in the face of the statement upon the first page of my paper that "the expenses of this research were defrayed by a grant from the Royal Society," and of the fact that the Physiological Laboratory of Guy's Hospital was built and is maintained at the expense of the Medical School.—I am, etc.,

Guy's Hospital, S.E., May 17th. M. S. Pembrey.

SOME ANTIVIVISECTION MISSTATEMENTS.

Sir,—The author of *Scientific Research in England* attempts to controvert my remarks mainly on three grounds: first, that in the third edition of his book he has withdrawn the statement that Dr. Crile "had experimented without anaesthetics"; secondly, that the "horrors" committed "openly and without shame" were operations seen by him on the Continent, and that I made a "misstatement" in saying that he had thus described experiments performed in England, and, thirdly, that he will "be pleased to look on" and see me operated upon under morphine and curare.

As to the first point, the admission of withdrawal of one of his remarks in the third edition is a confession that the first and second editions of his book have circulated what is not true, but it must be added that if the present edition states that Dr. Crile says he operated under "morphine and curare *only*," that also is not true. As to the second point, I will quote the words of "the author" and leave it to your readers to judge whether a "misstatement" was made and that the truth was "artistically omitted" to "heighten the effect" of my remarks. "It is obvious," says the author of *Scientific Research in England*, "that the horrors practised on the Continent, openly and without shame, are going on in England." If the writer does not mean to imply that "horrors" are practised in England then he cannot write so as to be understood, and if he does not mean that they are also done "openly and without shame" then he should not immediately after these words describe an operation witnessed by himself in England in an endeavour to prove that they appply to this country.

With regard to the third point, his expressed willingness to see me operated upon under morphine and curare. If I were under sentence of death I might offer to oblige him, but since I am not in the hands of the law, and the dose of morphine necessary to produce the "profound sleep" in which dogs are operated upon would endanger my life, I feel compelled to decline his proposal. Such a suggestion, it may be remarked, cannot be described as original. It is a weak subterfuge apparently not uncommonly adopted by antivivisectionists when at a loss for argument, and has been made use of in this instance because it cannot be denied that morphine in appropriate doses acts as an efficient anaesthetic in dogs.[1] One ought not to leave this question of the use of morphine as an anaesthetic without remarking that in the description of the English experiment above referred to, which was similar, in "the author's" opinion, to a Continental "horror," because only enough ether was given to make anaesthesia "a pretence," all reference to the fact that morphine was also given is omitted. The book *Scientific Research in England* may be, as its author asserts, "a plain narrative," but surely such an omission, whether "artistic" or unintentional, is calculated to "heighten the effect" of the narrative. Narratives may be "plain" yet be untrue in essential details, and if this writer has not endeavoured to colour untruths, there are others who have done so for him, as an illustration of which it may be remarked that at a recent lecture in which experiments mentioned in this book formed the basis of accusations of cruelty, Dr. Crile and other experimenters were described as "human devils."

I take this opportunity of making a correction. Through temporary lapse of memory I omitted in my former letter reference to one case in which Dr. Crile mentions "incomplete anaesthesia." As previously stated, however, it is well known that all loss of power to feel pain disappears some time before "surgical" anaesthesia is reached, and there is no reason to suppose that the animal felt the momentary shock or would have felt a more prolonged operation.—I am, etc.,

May 11th. Magna est Veritas.

THE PAUCITY OF DEGREES.

Sir,—In the British Medical Journal of May 16th one may read a short and non-committal leading article entitled University Degrees in Dentistry. There occurs in the same number a paragraph headed A State Board of Barbers in

[1] It may be added that although morphine is not used as an anaesthetic in human beings, largely on account of the risks that attend its use in large doses, a considerable number of major operations have been performed on the human subject under a combination of small doses of morphine and hyoscine.

Pennsylvania. An order of midwives has recently been created, and the War Office has appointed chiropodists to His Majesty's troops.

It seems hardly fair that this last class should be branded merely by a bureau which every reader of newspapers is permitted to call muddling. The honours given by the youngest university cover considerable ground; surely, now is an opportunity for the sluggards of Cam and of Isis to emerge from their ancestral calm and achieve modernity by bedecorating the corn-curer. Failing these, it might perhaps be possible to revive archiepiscopal powers, and establish a baccalaureate in pedicure (Lambeth).—I am, etc.,

Mossley, near Manchester, May 17th. SIDNEY VINES.

DEGREES FOR LONDON MEDICAL STUDENTS.

SIR,—It is clear that the Royal College of Surgeons, England, and the Royal College of Physicians, London, are unwilling to take action, although the committee of delegates appointed by these Colleges expressed the opinion in 1885 that the curriculum and examinations for their M.R.C.S. and L.R.C.P. were equal to those required by most of the universities for degrees in Medicine and Surgery. The following is the text of the report:

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.

Report dated the 7th of July, 1885, of the Committee of Delegates appointed by the Royal College of Physicians of London and the Royal College of Surgeons of England, to consider the question of the advisability and practicability of granting the title of "Doctor" to persons who have received the diplomas of the two Colleges.

The Committee have to report that they have fully considered the question referred to them—namely, the advisability and practicability of granting the title of Doctor to persons who have obtained the diplomas of the two Colleges.

They have also considered the memorial, signed by more than 600 teachers, practitioners, and students in medicine, and referred to them, advocating the amalgamation of the two Colleges into one Royal College of Medicine, for the purpose of granting Degrees in Medicine and Surgery.

After careful deliberation, the Committee have unanimously agreed to the following resolutions as expressive of their opinion on the subject:

"1. That it is desirable that persons examined by the Royal College of Physicians of London and the Royal College of Surgeons of England conjointly, and found duly qualified, should, in virtue of the examination, have a Degree in Medicine and Surgery conferred upon them.

"2. That the curriculum of study and the examinations to be undergone for the Licence of the Royal College of Physicians of London and the Diploma of the Royal College of Surgeons of England are equal to those required by most of the Universities for Degrees in Medicine and Surgery."

In conclusion, the Committee are of opinion that, should the two Colleges approve the foregoing resolutions, means could be found for giving effect to them.

WILLIAM JENNER,
7th July, 1885. *Chairman.*

I agree with one of your correspondents, who advises men holding these diplomas to unite and ask each university of the United Kingdom to admit them to one final examination for the M.D. degree. As this will take a long time, even if it is ever accomplished, I meanwhile urge these men whose experience has been similar to mine to act as I have.

Neither I nor my parents, at the beginning of my medical career, knew anything about the relative advantages of diplomas or degrees, so I was sent to the nearest provincial medical school, which was not at that time (1884) affiliated to a university. I entered for the examinations for the M.R.C.S., L.R.C.P., because I found nearly all my fellow students doing so, and it was only in my third year that I fully realized the advantage of an M.D., but it was then too late to retrace my steps. I therefore took these diplomas, and resolved that when I reached the age of 40 I would take the M.D. Durham for practitioners of fifteen years' standing. But being out of practice three years ago, and on the point of buying one, I decided to devote my whole time to reading for the M.D. Brussels, rather than to wait for another three years and read for the M.D. Durham whilst in the midst of a busy practice. I agree with another of your correspondents, who says that the examinations for these two M.D. degrees are equally difficult; the only drawback is that the Durham degree can be registered, while the Brussels degree cannot at present.

If all men with a similar experience to mine would take the M.D. Brussels, it would soon become such a scandal that so many well-qualified men have to go abroad for an M.D., that the matter would be remedied.

I may add that it is the custom in my neighbourhood of all practitioners *minus* an M.D. degree to put Dr. on their doorplate; and of all those who hold an M.D. degree to go one better, and put M.D. on their doorplate. I am now putting M.D. on my doorplate, and am not aware that I am acting unprofessionally or illegally in so doing.—I am, etc.,

April 24th. M.D. BRUSSELS, M.R.C.S. ENG., L.R.C.P. LOND.

THE OVERCROWDING OF THE MEDICAL PROFESSION.

SIR,—All must feel indebted to Dr. Gordon for again bringing this grave question before the profession. He, however, greatly understates his case. His figures make it out that in 1900 there was in England and Wales 1 medical practitioner to every 1,412 of the population. But he does not drive home the fact that all the population do not pay medical fees. For a medical man to make a respectable livelihood it has been estimated that there should be 1,200 persons capable of paying fees to each practitioner. Now, we all know that those who go to hospitals, fever hospitals, Poor-law establishments, free vaccination, and the multitude of free charitable institutions, such as convalescent homes, asylums, homes for the poor, etc., do not pay fees. The same is true of the army, navy, mercantile marine, police, etc. I think one is not overstating the point if it is laid down that there is about 1 practitioner to every 300 fee-paying persons. I do not include the some six million club patients, but who practically are charitable patients, nor the many who do not pay their doctor's bills—a vast army if we are to judge from County Court proceedings, the number of debt collectors, etc. Those interested in this grave question should obtain a copy of the Fourth Statistical Report of the General Medical Council of the number of practitioners in England and Wales, published in 1898, and sold by Eyre and Spottiswoode. It shows that from 1881 to 1886 there was an increase of 2.42 per cent. per annum of practitioners. In the same time there was 1 practitioner to 2.479 acres; in 1886 1 practitioner to 2.199 acres. In 1881 there was 1 practitioner to 1,747 persons; in 1886 1 to 1,662. While the profession increased at the rate of 2.42 per cent. per annum, the population increased only 1.40 per cent. per annum. In 1886 each practitioner had 85 less persons than in 1881. Again, it must be recollected that there are some 8,000 chemists who do a great amount of prescribing. I do not include the host of medical herbalists, masseurs, electricians, female nurses, and midwives who are now each and all taking away from many practitioners their income-earning power. As to the income of practitioners, Dr. Gordon, I think, places this far too high. Perhaps he means their gross income, that is, without the deduction for "business expenses." He places it at £410 in 1880 and £290 for 1900. How does he arrive at such exaggerated figures? Some years I worked out the net income of each practitioner at £160 per annum. If one takes the figures of these practices for sale, and as advertised in the BRITISH MEDICAL JOURNAL, say for six months, this will explain. But here we must recollect that not 50 per cent. of those practices will stand up against the scrutiny of an honest accountant. In financial language, they are "inflated." Again, many of them include appointments. Is there anything so fearful and ghastly to read as the for sale advertisement of a practice of £500 per annum, "with good hunting (!), fishing, shooting, and society." Why not say, "a good workhouse near, and charity or free school for family?"

Is Dr. Gordon right when he states that the annual death-rate furnishes the only available statistics of the general decrease of illness. I think if he will obtain the quinquennial returns of the actuaries to the large Friendly Societies, from the head constables of police forces, the army and navy returns, he will find valuable facts. He will find that the average days bedfast (not "walking") sickness per member per annum is from nine to twelve days. If he will also take the number of cases notified of any infectious diseases this will help, and if he will multiply these numbers of sicknesses with the average number of days' illness of any infectious disease, he will arrive at fairly accurate conclusions. One need only mention also births and vaccinations.

If one wishes to take about 50 per cent. off the annual income of practitioners, let him attempt to have the Continental system, where it is generally illegal for practitioners to dispense. I reckon that in twenty-five years there will be very few general practitioners. There will be cheap specialists, homes for all kinds of illnesses and practising nurses and midwives. I see no business men in Liverpool putting their sons into medicine, and I have made a deep search for such. Dr. Gordon makes a strong point when he says that too many doctors is not a gain to the public.—I am, etc.,

Liverpool, May 17th. ROBERT R. RENTOUL.

CONICAL CORNEA.

SIR,—I frankly own that the paper published in the BRITISH MEDICAL JOURNAL of February 23rd, 1889, by Mr. Richard Williams, of Liverpool, had escaped my notice, or I would certainly have given him the credit of initiating non-perforation of the cornea.

I may, however, remind him that my paper was published in *The Practitioner*, in 1895, and it is only now that he has called my attention to his own prior communication, thus showing that his knowledge of the literature of the subject was also somewhat wanting.

My chief claim to originality lies in the creation of two distinct zones of varying depths and a small central spot which in the process of healing exercise a graduated pressure, and I venture to hope that Mr. Williams will give this method a trial.—I am, etc.,

Harley Street, W., May 19th. ANDERSON CRITCHETT.

THE INTERNATIONAL MEDICAL MANIFESTO.

SIR,—Any statements or opinions expressed by Dr. Beddoe must command respect from all members of our profession, and from none more than from me. I do not of course dispute his facts, but the inference he draws from them appears to me at least questionable. I am able to produce many examples of sober parents who have defective children, and of drunken parents who have apparently normal children. It is evident, therefore, even if parental inebriety does affect offspring subsequently born, that it is not the sole cause, or even a constant cause, of filial degeneracy. It follows that the problem whether it is ever a cause cannot be settled by an appeal to isolated instances. It is so surrounded by difficulties that only statistics very carefully compiled and on an enormous scale would help us. None such exist. Other sources of investigation, however, are open, and supply evidence which I cannot but think is conclusive against the view held by Dr. Beddoe.

1. Prolonged biological research appears to indicate that the offspring of the higher plants and animals are not affected by the conditions to which their parents have been exposed. Apparently the sole cause of variations is the intermixture of dissimilar germ plasms. Thus the offspring of sexual generation always vary, whereas the offspring of asexual generation invariably present exact copies of their parents.

2. If paternal inebriety affects offspring it must of course be through the germ cells. The defect in the child will then be blastemic in origin, that is, it will be a congenital or inborn trait, a "variation." But congenital traits are known to be transmissible, not only to offspring, but to remoter descendants. Intemperance in subsequent generations will accentuate the defect. It is obvious, under such conditions, that the race will grow increasingly degenerate till, ultimately, it suffers extinction. This degeneracy is in fact alleged in "the international manifesto." Now, many races have been drinking for thousands of years. Which of these races are degenerate, and in what particular? Which drinking races have suffered, or are undergoing, extinction. The British have been drinking since beyond the dawn of history; in what respects are they more degenerate than Tierra del Fuegians or Australian Blacks who have had no experience of alcohol? Again—appealing to other forms of poisoning—what races have become degenerate through continuous saturation with opium or the toxins of malaria, tuberculosis, or syphilis?

On the other hand, if parental inebriety does not affect offspring, it is evident that the principle of natural selection comes into play. The elimination of the unfittest (that is, those most inclined to excess) will result ultimately in a greater racial tendency to sobriety. A race afflicted by alcohol will then tend continuously to grow more and more temperate. Now, it is the simple fact that every race throughout the world that commands a sufficient supply of alcohol is temperate strictly in proportion to its past experience of the poison; and this irrespective of religion, nationality, climate, potency of liquor, and so forth. Similarly races that have longest used opium are the most moderate in its use, and races that have longest been afflicted by malaria, tuberculosis, syphilis, or any other deadly disease are the most resistant to them.

Since all the races of mankind sprang from a common origin, but are now so widely divergent, and since every race is especially fitted to the environment in which it is placed, it is manifest therefore that they have undergone evolution. For example, the Englishman survives in London, but perishes of malaria in West Africa; whereas the West African survives in his forests, but perishes of tuberculosis in London. I think if Dr. Beddoe will consider the matter he will find reason to conclude that if it be true that agencies which injuriously affect the parent are causes of filial degeneration, then the doctrine of evolution by natural selection must be abandoned. That doctrine and the doctrine of filial degeneration cannot both be true. Filial degeneration leaves no room for natural selection, since, under its operation, there could be no favourable variations. All would be unfavourable. It must be remembered that all races when first introduced to alcohol suffer extremely (that is, are excessively inclined to excess), just as they suffer extremely when first introduced to opium or to any deadly disease. The start they make is an extremely bad one; and, as I say, if Dr. Beddoe is right, they would rapidly become extinct.—I am, etc.,

Southsea, May 5th. G. ARCHDALL REID.

ROYAL MEDICAL BENEVOLENT COLLEGE JUBILEE.

SIR,—Your admirable article upon this institution should prove a powerful appeal to all members of the profession who do not live simply for themselves. I desire to offer a practical suggestion which would further substantiate your common-sense direction to the "power of littles." Many people are scared at the thought of allowing their names to go down as stewards, believing this involves them in a very heavy donation, and it would be well to make known what is believed to be a reasonable minimum sum. But there is a further suggestion I should like to make; it is this: Let every member of the profession who would like, but is not able, to share the banquet and enjoy what will doubtless be a most entertaining evening, reckon up the cost his journey to London would be, and add this to the conventional ticket guinea, and forward cheque to be received by Dr. Holman, the energetic Honorary Treasurer, on the day of the festival. and I shall be surprised if the £10,000 is not readily forthcoming. This, at any rate, is what I intend, and shall induce as many more here as I can to do.—I am etc.,

Old Trafford, May 19th. JAS. BRASSEY BRIERLEY.

*** The office of the Royal Medical Benevolent College is at 37, Soho Square, W.C.

THE DIAGNOSIS OF DIPHTHERIA.

SIR,—I recently saw a case I diagnosed as nasal diphtheria. My diagnosis was confirmed by the health department of the borough, who reported numerous diphtheria bacilli present. In spite of this, which was duly reported by me on my notification form, the child was returned home and the parents informed that it was not a case of diphtheria. The only justification for such a course seems to have been that the membrane had separated before the child was removed. However, with the bacteriological report, it seems very hard that a practitioner should be put to the vexation of having his case returned.—I am, etc.,

Blackfriars Road, S.E., May 18th. G. R. ELWIN, M.D.Lond.

PLAGUE ON BOARD SHIP: A CORRECTION.

SIR,—My attention has been called to the following statement which appeared in the BRITISH MEDICAL JOURNAL of May 16th:

Plague on Board Ship.

The ss. *Orizaba* from Sydney called at Plymouth on April 27th, and reported that one of the native crew was landed at Suez believed to be suffering from plague. Bacteriological information has confirmed the suspicion. The vessel was admitted to *pratique* at Naples, Marseilles, and Gibraltar, but at Plymouth the Local Government Board ordered that it should be treated as an infected ship.

I have to inform you that the statement as to the bacteriological examination confirming the suspicion is quite wrong. The bacteriological examination was made on the patient being landed at Suez by the health authorities at that port, but their examination proved the case to be not one of plague, and the information was telegraphed to Naples and other Mediterranean ports where the ship was admitted to free *pratique*. The vessel also received *pratique* at Plymouth and London, but only after a regrettable delay. As the statement you make is likely to cause anxiety not only to the passengers who were on board, but to the friends and relatives whom they may have visited on landing, I shall be glad if you will contradict the statement in your next issue.—I am, etc.,

E. A. VEALE,
Secretary.

Orient Steam Navigation Company, Limited,
London, E.C., May 19th.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE ROYAL ARMY MEDICAL CORPS.

THE following is the text of an official document which, we understand, will shortly be issued by the War Office to the Deans of all the medical schools in the United Kingdom:

The Army Medical Service, under the Royal Warrant of 1902, gives greatly increased advantages to officers of the Royal Army Medical Corps, and offers an attractive career to young medical men.

The provisions of the new warrant ensure:

1. Sufficient pay to enable the officer to support himself from the date of his entering the service. (See Appendix, Schedule of Pay, p. 1239.)
2. Increased rates of pay to officers in charge of hospitals, or when selected for specialist appointments.
3. Opportunities of professional improvement by work in the Royal Army Medical College, by the study of disease in foreign countries, and by original research.
4. Advancement on account of professional ability and merit, and not only by order of seniority.
5. Permission to retire at the end of three years' service, and to join the reserve of the corps, receiving a small annual honorarium. Permission may be given to officers of this reserve to rejoin the corps within a certain period.
6. The certainty of obtaining a gratuity of £1,000 on retirement after nine years' service, and of obtaining a pension of £1 a day, on retirement after twenty years' service, with increased rates of pension after longer terms. Pensions at higher rates are paid to officers who retire on account of injuries received when on duty.

Pensions are granted to the widows and children of officers.

THE ENTRANCE EXAMINATION.

A competitive examination for commissions in the Royal Army Medical Corps takes place in London twice a year—in January and July. The number of vacancies is announced before each examination, and varies from 30 to 40 at each competition. After passing the ordinary physical examination for entrance into the army, and being accepted by the Advisory Board for Army Medical Services, the candidate comes before the Board of Examiners for the Entrance Examination.

The examination is conducted so as to test the candidates' practical knowledge and experience in general medicine and surgery. It is expected that candidates with a good knowledge of their profession will succeed in passing this test without the necessity for special reading in the earlier subjects of the medical curriculum. The written part of the examination consists of commentaries on cases set by the examiners, and of reports on patients examined by the candidates. The viva voce part of the examination is of a clinical character, and includes the subjects of pathology and surgical anatomy only to the extent required in a general examination on practical medicine and surgery.

The Board of Examiners consists of eight physicians and surgeons appointed from the hospitals and medical schools of the United Kingdom.

On obtaining a place the candidate is gazetted as a lieutenant on probation, and passes into the Royal Army Medical College in London, where he receives a two months' course of instruction by the professors of the College, in hygiene, bacteriology, military surgery, and military medical administration. He resides in the College, and has the advantage of associating with other officers of the corps. At the end of this course he is examined in the subjects of hygiene and bacteriology, and then proceeds to Aldershot, where, at the Training School of the Royal Army Medical Corps Dépôt, he receives a further course of instruction for a period of three months on the military part of his future duties, such as routine medical duties in military hospitals and barracks, the drills and exercises of the corps, the practical work of field ambulances, military law, etc.

The sum of the marks gained at the Entrance Examination, the Examination at the Royal Army Medical College, and at the Aldershot examination, determines his seniority in the Army List. On qualifying at these examinations his commission as lieutenant in the corps is now confirmed.

The number of marks obtainable in three examinations is as follows:

	Maximum Marks.
1. The entrance examination by the Board of Examiners	800
2. Examination at the Royal Army Medical College	100
3. Examination at Aldershot	100

APPOINTMENTS IN CIVIL HOSPITALS.

If officers at the time of entering the corps, hold, or have an immediate prospect of holding, resident appointments at any one of the large general hospitals recognized by the Advisory Board, they may be "seconded" for the space of one year while holding such posts. They have thus the privilege of retaining their places in the Army List, and the time of tenure of the appointment is counted as service towards promotion and pension, but they do not receive army pay.

FOREIGN SERVICE.

On leaving Aldershot the lieutenant is appointed to a military hospital, and in about a year from the date of joining he will proceed to India or to one of the Colonies, and will probably be attached to a battalion, regiment, or other unit. This opportunity of proceeding abroad is usually regarded as one of the most pleasant episodes in the medical officer's career. He sees fresh countries and life under new conditions, and has the opportunity of securing the confidence of his military charge and of gaining experience in practice. In addition to the experience afforded by the military hospitals under his immediate care, there are in in India and in most of the Colonies civil hospitals where facilities for observation are never denied him, and where he can study the diseases peculiar to the countries in which he may serve. In the same way as an officer of the Indian Medical Service he is permitted to engage in civil practice, which in some stations affords him a considerable increase of income. Such private practice is also permitted in Colonial stations. Until recently there was much well-grounded complaint of the inadequacy of the pay of the British medical officer in India, but with the augmentation sanctioned by recent regulations this ground of complaint no longer exists. The pay of the young officer goes further abroad than it does at home, and in India and elsewhere it is sufficient to enable him to live comfortably, and to take part in the sports and amusements of his brother officers.

PROMOTION TO CAPTAIN.

At the end of three and a-half years after joining the Royal Army Military College the officer, after passing a practical examination in the military duties of his rank, is promoted to be captain. On completing his tour of foreign service of three or five years, according to the period of his station, he returns home, and during home service, is appointed to the Royal Army Medical College for a course of six months' study. This is largely occupied in attendance on the clinical practice of various London hospitals, under selected clinical teachers in medicine, surgery, and in certain special subjects.

The teachers for the year 1903 are the following:

Medicine	Dr. Sharkey.
	Dr. Hale White.
Surgery	Mr. Pearce Gould.
	Mr. Stanley Boyd.
Dental Surgery	Mr. Badcock.
Dermatology	Dr. Colcott Fox.
Laryngology	Mr. Steward.
Midwifery and Gynaecology	Dr. Dakin.
Ophthalmology	Mr. Treacher Collins.
Otology	Mr. Cheatle.
Paediatrics	Dr. Garrod.
Psychological Medicine ...	Dr. Craig.
Specific Fevers	Dr. Foord Caiger.
Bacteriology	Major Leishman, R.A.M.C., Professor of Pathology, R.A.M. College. Assistant Professor, Captain Harvey.
Skiagraphy	Surgeon-General Stevenson, C.B., Professor of Military Surgery, R.A.M. College.
Advanced Operative Surgery	Surgeon-General Stevenson, C.B., Professor of Military Surgery, R.A.M. College.
Hygiene	Major R. H. Firth, R.A.M.C. Professor of Hygiene, R.A.M College. Assistant Professor Captain Fowler, R.A.M.C.
Pathology and Tropical Diseases	Major Leishman, R.A.M.C. Captain Harvey, R.A.M.C.

PROMOTION TO MAJOR.

At the end of this course of instruction the captain is ready for his examination for promotion to the rank of major. This examination, like the entrance examination, is of as practical a character as possible, and includes general medicine and surgery, bacteriology and hygiene, and a special subject chosen by the candidate. This examination forms a very important event in his career in the army. An officer who shows special proficiency at this examination may gain acceleration of promotion to the extent of three months, six months, twelve months, or eighteen months, and those who have shown aptitude in the special subjects chosen in their examination may be subsequently selected to hold specialist appointments at various army centres, receiving increased pay at the rate of about £45 per annum.

The officer, after from ten and a-half to twelve years' service from the date of entering the Royal Army Medical College, and on qualifying at this examination, is promoted to the rank of major, and various important and responsible appointments become open to him. After completing a period of home service he proceeds on his second tour of service abroad, and will be in all probability posted to a position of responsibility, when his pay and allowances will amply meet all his needs.

PROMOTION TO LIEUTENANT-COLONEL.

After the fifteenth year of service the officer proceeds to his last examination, which deals with those purely military subjects with which he has gradually become familiar during his career. This examination is also of a practical character, and is intended to ascertain his administrative ability in view of further promotion.

After passing this examination the officer becomes eligible for selection to the rank of lieutenant-colonel. Officers of this standing occupy prominent positions in the army; they command the dépôt at Aldershot, they form the staff of the Director-General, they have the charge of large hospitals, and may become entitled to a very considerable increase in pay, amounting in some cases to as much as £180 a year. After twenty years' total service the officer may retire upon a pension of £1 per diem.

PROMOTION TO THE HIGHER GRADE OF LIEUTENANT-COLONEL AND COLONEL.

Lieutenant-colonels are on selection advanced to a higher rate of pay, and from this higher grade of lieutenant-colonels are selected the colonels of the corps. Colonels are promoted on selection to the rank of surgeon-general, and from the surgeon-generals the Director-General is appointed.

BREVET PROMOTION FOR DISTINGUISHED SERVICE.

Brevet promotion, which implies advancement in army rank as distinguished from regimental rank, as in other branches of the service, is now granted to medical officers for distinguished service in the field, and for distinguished service other than in the field, such as distinction in original investigation and research.

OFFICERS ELIGIBLE FOR SPECIAL HONOURABLE RECOGNITION.

The officers of the Royal Army Medical Corps are eligible for military honours and rewards at the hand of the Sovereign, and there are six Honorary Physicians and six Honorary Surgeons to the King appointed from among the officers of the Royal Army Medical Corps.

It is worthy of notice that a large proportion of Victoria Crosses have been awarded to medical officers for valour.

APPENDIX.

EXPENSES, SPECIAL ADVANTAGES, PAY.

The expenses of all officers have been considerably reduced as the result of recent legislation, by which the Government provides furniture in their quarters at a low rent, gives them a free field service outfit, etc.

The medical officer has, in common with all other officers of the army, the following advantages, namely, the occupation of Government quarters, or allowance in lieu thereof; military precedence, according to seniority; horse allowance, when mounted; the employment of soldiers as servants, honorary membership of messes, etc.

In large stations, such as Aldershot, Netley, London, Rawal Pindi, Lucknow, etc., there are messes of the Royal Army Medical Corps.

Pay and Allowances of Medical Officers at Home.

Rank.	Pay.		Servant Allowance.		Lodging Allowance.		Fuel and Light Allowance.		Forage & Stabling Allowances.		Total per Annum.
	Per Diem.	Per Annum.	Per Diem.	Per Annum.	Per Diem.	Per Annum.	Per Diem.	Per Annum.	Per Diem.	Per Annum.	
	£ s. d.	£ s. d.	s. d.	£ s. d.	s. d.	£ s. d.	s. d. (average)	£ s. d.	s. d.	£ s. d.	£ s. d.
Lieutenant and lieutenant (on probation)	0 14 0	255 10 0	1 0	18 5 0	2 3	41 1 3	0 8¾	13 0 0	—	—	327 16 3
Captain	0 15 6	282 17 6	1 0	18 5 0	3 0	54 15 0	1 0¾	18 14 11	—	—	374 12 5
And after 7 years' full pay	0 17 0	310 5 0	1 0	18 5 0	3 0	54 15 0	1 0¾	18 14 11	—	—	401 19 11
And after 10 years' full pay	1 1 0	383 5 0	1 0	18 5 0	3 0	54 15 0	1 0¾	18 14 11	—	—	474 19 11
Major	1 3 6	428 9 6	1 0	18 5 0	4 0	73 0 0	1 5¾	26 10 11	2 2	39 10 10	586 4 3
Major after 3 years' service as such	1 6 0	474 10 0	1 0	18 5 0	4 0	73 0 0	1 5¾	26 10 11	2 2	39 10 10	631 16 9
Lieutenant-Colonel	1 10 0	547 10 0	1 0	18 5 0	4 6	82 2 6	1 5¾	26 10 11	2 2	39 10 10	713 19 3
Lieutenant-Colonel specially selected for increased pay after 8 years' service abroad	1 15 0	638 15 0	1 0	18 5 0	4 6	82 2 6	1 5¾	26 10 11	2 2	39 10 10	805 4 3
Colonel	2 0 0	730 0 0	1 0	18 5 0	5 6	100 7 6	1 8¾	31 8 3	4 1	74 10 5	954 11 2
Surgeon-General	3 0 0	1,095 0 0	2 0	36 10 0	11 0	200 15 0	2 3¾	42 1 1	6 0	109 10 0	1,483 16 1

Pay in India.

	Rupees per Mensem.
Lieutenants	420
Captains	450
After 7 years' service	530
,, 10 ,,	650
Majors	789
After 15 years' service	826
Lieutenant-Colonels	1,100
Specially selected	1,200

Charge pay, from 60 rupees to 240 rupees per mensem, according to size of hospital.

Specialist pay ... 60

Captains and majors, after qualifying in special subjects, if appointed specialists, draw 2s. 6d. a day (£45 12s. 6d. per annum, 60 rupees per mensem in India) in addition to pay.

Charge pay up to £180 per annum (240 rupees per mensem in India) according to number of beds, is given to officers in charge of military hospitals.

The following are examples of the emoluments which may be obtained by medical officers of various ranks:

Captain (say of 10 years' total service)—

	£ s. d.
Pay and allowances	474 19 11
Specialist pay	45 12 6
Charge pay	45 12 6
	566 4 11

Major (say of 10½ years' total service)—

	£ s. d.
Pay and allowances	586 4 3
Specialist pay	45 12 6
Charge pay from £91 5s. to	182 10 0
	814 [illegible]

Lieutenant-Colonel (say of 18½ years' total service)—

	£ s. d.
Pay and allowances	713 19 3
Charge pay from £91 5s. to	182 [illegible]
	896 9 [illegible]

If commanding Dépôt Royal Army Medical Corps, extra pay of £92 per annum is given.

Lieutenant Colonel (selected for higher rate of pay, say, at 23 years' service)—

	£ s. d.
Pay and allowances	805 4 3
Charge pay	182 10 0
	£987 14 3

Professors at the Royal Army Medical College receive pay and allowances of rank, *plus* £200 per annum.

Assistant Professors at the Royal Army Medical College receive pay and allowances of rank, *plus* £80 per annum.

Officers can retire at the following periods, and obtain the several gratuities and pensions enumerated:

	£
Gratuity—	
After 9 years' service	1,000
,, 10 ,, ...	1,250
,, 15 ,, ...	1,800
,, 18 ,, ...	2,500
Pension—	
Major or Lieutenant-Colonel—	

	Per diem. £ s. d.	Per annum. £ s. d.
After 20 years' service	1 0 0	365 0 0
,, 25 ,, ...	1 2 6	410 12 6
,, 30 ,, ...	1 5 0	455 15 0
Lieutenant-Colonel of the higher grade after 3 years, or after 30 years' total service	1 10 0	547 0 0
Colonel after 3 years' service ...	1 15 0	638 5 0
Surgeon-General after 3 years' service	2 0 0	730 0 0

ARMY MEDICAL REPORT FOR 1901.

THIS report, which has been issued a few weeks later than usual, possesses the accuracy and fullness, without redundancy, which is characteristic of these annual reports. The excellent charts and diagrams with which this volume is enriched show at a glance points which it would take many words to describe.

The statistics for 1901 do not include any part of those connected with the war in South Africa; which, we understand, are being prepared as a whole; some effects of the war can, however, be traced in these statistics.

Although in 1901 we had an immense army in South Africa there was, notwithstanding, a strength of 196 796 of all ranks serving at other stations at home and abroad.

General.—The general vital statistics of the army are summarized as follows: The admissions and deaths were under the decennial average, but the invaliding home and final discharges from the service in 1901 greatly exceeded that average; and this may be partly attributed to the war. Among troops in the United Kingdom the admissions and constantly sick rates were higher, but the mortality lower than in 1900; influenza was less prevalent, but enteric fever slightly more; an outbreak of enteric fever at Portland was attributed to the mingling of young soldiers there with convalescent enteric cases from South Africa. We again notice, though no explanation of the fact is afforded, that, while general sickness and invaliding is less among troops quartered in Scotland than in England or Ireland, the mortality remains persistently higher in Scotland.

Venereal diseases were more prevalent in 1901 than 1900, but were below the decennial average.

Malarial fevers furnished a higher admission-rate at Malta, but this was due to Crete, which is included in the Malta returns; it is stated that these fevers were epidemic in Crete, and were attributed to the bites of infected mosquitos, which abound in the marshes near the town of Kandia. In Bermuda, which is non-malarious, malarial fevers caused many admissions, due to an infected regiment arriving in the command from Komati Poort in South Africa; the same thing happened in Ceylon, through the arrival of a malarial infected regiment from India.

In *Egypt* the ratios were higher, chiefly from an epidemic of influenza which prevailed in the hot months, July, August, and September.

Plague.—Although plague prevailed in Mauritius, the troops were free from attack, showing how much that disease can be controlled by strict and suitable sanitary measures. Also in China plague was kept from the troops through sanitary supervision; but there were 2 cases, and a like number in India.

Invaliding.—There was a heavy loss to the army in 1901 through invaliding. The ratio was as high as 42.26 per 1,000, being 9.41 in excess of 1900, and no less than 22.75 per 1,000 above the average for ten years. Of 525 men, however, who were invalided for injuries, 241 had injuries received in action; this was, of course, a direct result of the war, and there were doubtless also many indirect results ending in invaliding.

India. In these annual reports the health of the army in India (strength, Europeans 60,838 in 1901) naturally commands the chief attention; and it is very pleasing to find that "the health of the troops was exceptionally good, and the admission ratio was lower than that for any of the preceding twenty years"; namely, 1,104.3 per 1,000 of strength, showing a decrease of 290.3 on the average of the preceding ten years. The highest admission-rate was in the Deesa district of Bombay, namely, 1,711.4 per 1,000. The mortality showed a decrease of 3.02, and the constantly sick 19.92 per 1,000 from the average.

Cholera.—There were only 12 cases of cholera, but all fatal; against 107 cases, with 88 deaths, in 1900.

Enteric fever demands chief attention in India. An interesting chart shows the curious seasonal prevalence of the disease in the different Indian commands; in Bengal and Punjab it coincides with the hot weather of April, May, and June; in Bombay, the maximum is reached in August, when the rainfall of the monsoon is greatest; in Madras, where the disease is least, seasonal prevalence is less marked.

There can be no doubt that the enlightened and extraordinary supervision, which is yearly increasing, over water and all foods and drinks supplied to the troops in India, is having a marked effect on enteric, as it has already had on cholera; in time, it is hoped, malaria will be similarly combated, in the light of the new knowledge of the nature and spread of the intermittent group of fevers.

ROYAL NAVAL MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: HUGH CLIFT, Surgeon, to the *Melampus*, temporary, May 15th; THOMAS D. HALAHAN, B.A., M.B., to the *Vivid*, May 13th; FRANCIS F. LOBB, Surgeon, to the Royal Marine Division, Plymouth, June 1st; EDGAR F MORTIMER, Surgeon, to Plymouth Hospital, June 3rd.

Civil Practitioner T. FOLEY to be Surgeon and Agent at Ardmore, Ballymacart, and Whiting Bay, May 18th.

HOUSEHOLD CAVALRY.

SURGEON-MAJOR B. W. C. DEEBLE, 1st Life Guards, is promoted to be Surgeon-Lieutenant-Colonel, February 3rd He was appointed Surgeon, February 3rd, 1883; and Surgeon-Major, February 3rd, 1895. He served in the recent war in South Africa, and was made Surgeon-Major 1st Life Guards, July 23rd, 1902.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL W. B. MILLER, M.D., retires on retired pay, May 16th. He was appointed Surgeon, March 31st, 1874; Surgeon-Major, March 31st, 1886; Surgeon-Lieutenant-Colonel, March 31st, 1894; and made Brigade-Surgeon-Lieutenant-Colonel, April 6th, 1898. He was in the Egyptian war in 1882, including the action at Kassasin on August 28th (mentioned in dispatches, medal, and Khedive's bronze star).

The date of appointment to the rank of Lieutenant of the surgeons on probation named in the *London Gazette* of August 8th, 1899, is July 27th, 1899, and not as therein stated.

The date of promotion to the rank of Captain of the Lieutenants named in the *London Gazette* of August 26th, 1902, is July 27th, 1902, and not as therein stated.

The date of appointment to the rank of Lieutenant of the surgeons on probation named in the *London Gazette* of September 3rd, 1901, is June 27th, 1901, and not as therein stated.

The notification in the *London Gazette* of February 7th, 1902, of the retirement of Lieutenant-Colonel C. W. M. Keys, M.D., is cancelled, and the following substituted: Lieutenant-Colonel C. W. M. Keys, M.D., is continued on the active list as supernumerary to the establishment under the provisions of Article 473 of the Pay Warrant.

Lieutenant Colonel C. W. M. KEYS, M.D., is placed on retired pay, November 15th, 1902.

Lieutenant-Colonel W. C. T. POOLE, B.A., M.B., F.R.C.S.I., R.A.M.C. (R.P.), has resigned the charge of the troops at Maidstone.

The undermentioned Lieutenants to be Captains, dated April 25th: T. Biggam, M.B., W. L. Baker, F. W. Cotton, F. M. Parry, M.B., B. R. Dinnis, M.B., W. J. P. Adye-Curran, J. Powell, M.B., R. L. Argles, J. G. Foster, M.B., E. G. Ford, M.B., F. S. Walker, L. M. Purser, M.B., W. Bennett, M.B., P. G. Stock, H. B. Fawcus, M.B., T. E. Fielding, M.B., E. P. Sewell, M.B., C. H. Straton, B. S. Bartlett, R. T. Brown, M.B., G. Carroll, D. O. Hyde, M.B., A. E. Hamerton, G. J. Houghton, J. G Churton, A. D. Waring, M.B., T. H. Stevenson, M.B., J. M. Cuthbert, M.B., F. M'Lennan, M.B., A. F. Weston, J. Dorgan, M.B., C. H Furnivall, J. H. Robinson, FitzG. FitzGerald. Their first commissions are dated April 25th, 1900.

Lieutenant-Colonel G. D. BOURKE, who is serving in the Punjab Command, is appointed to officiate as Principal Medical Officer, Peshawur District, from April 1st.

Captain H. N. DUNN, M.B., is permitted to accept the order of the Osmanieh, 4th class, conferred upon him by the Khedive of Egypt in recognition of valuable services rendered to the Egyptian Government.

Major J. PATERSON, M.B., from half pay, to be Major, *vice* V. E. Hunter, deceased, with precedence next below A. P. Blenkinsop, April 26th. He was placed on half pay on account of ill-health September 26th, 1902.

Lieutenant G. W. G. HUGHES, from the Seconded List, to be Lieutenant, May 2nd.

INDIAN MEDICAL SERVICE.

MAJORS A. O. EVANS, Madras Establishment, and M. A. T. COLLIE, M.B., and W. H. QUICKE, Bombay Establishment, are promoted to be Lieutenant-Colonels, from March 31st.

Colonel J. T. B BOOKEY, C.B., Bengal Establishment, is appointed Principal Medical Officer, Kohat District, from April 1st.

Lieutenant-Colonel T J. H. WILKINS, Madras Establishment, is appointed to officiate as Principal Medical Officer, Burmah District.

The *Pioneer*, an Indian paper, says that the proposal to raise the status of the Subordinate Medical Services in India, under the title of the Indian Army Medical Corps, has been finally negatived.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

SURGEON-CAPTAIN E. DOWNES, M.D., 2nd Sussex, resigns his commission, May 20th.

CHANGES OF STATION.

THE following changes of station amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during the last month:

	From.	To.
Lt.-Col. E. H. Fenn, C.I.E.	India	Salisbury.
,, J. W. H. Flanagan	Bengal ...	Lichfield.
,, J. L. Hall	Maidstone ...	Shoeburyness.
,, D. O'Sullivan...	Bengal	Dublin.
,, W. Heffernan	Bombay ...	,,
,, D. Bruce, M.B.	Home District	Uganda.
,, L. W. Swabey...	Malta	Cork.
,, C. R. Bartlett	Bengal	Hounslow.
,, H. E. Deane	Madras ...	Devonport.
Major R. J. A. Durant...	Devonport ...	Chester.
,, J. J. C. Donnet...	Bombay ...	Portsmouth.
,, J. R. Forrest	York	Sheffield.
,, E. Davis	,, ...	Beverley.
,, S. C. Philson	Shorncliffe ...	Brighton.
,, C. A. Lane, M.B.	Ceylon	Colchester.
,, A. A. Sutton, D.S.O.	—	West Africa.
,, H. P. G. Elkington	Gibraltar ...	Aldershot.
,, H. T. Baylor	Brighton ...	Shorncliffe.
,, J. V. Salvage, M.D.	Crete	Salisbury Plain
,, S. F. Clark, M.B.	Hong Kong ...	Devonport.
,, E. C. Freeman	Bermuda ...	Gosport.
,, H. E. Winter	Strts Settlmnts	Devonport.
,, G. A. T. Bray	Devonport ...	Cardiff.
,, J. W. Jennings, D.S.O.	Chester ...	Manchester.
Captain O. L. Robinson	,, ...	Gibraltar.
,, C. E. G. Stalkartt, M.D.	Dublin	St. Helena.
,, C. W. Duggan, M.B.	Edinburgh ...	Piers Hill.
,, F. R. Buswell	Madras... ...	Portsmouth.
,, J. B. Anderson	Bombay ...	Dover.
,, G. Dansey-Browning	Aldershot ...	Alton.
,, E. S. Clark, M.B.	Punjab... ...	Dublin.
,, C. K. Morgan, M.B....	Bombay ...	Edinburgh
,, J. P. Silver, M.B.	Bengal	Devonport.
,, J. M. Buist, M.B.	Punjab ...	Hounslow.
,, C. F. Wanhill	South Africa...	Dover.
,, J. G. Berne	—	Salisbury Plain
,, J. S. Gallie	Mauritius ...	Dublin.
,, D. E. Curme	South Africa ...	Devonport.
,, A. O. B. Wroughton	Coldst. Guards	Aldershot.
,, W. C. Croly	South Africa ...	Cork.
Lieutenant C. D. Myles, M.B.	,, ...	Dublin.
,, G. F. Sheehan	Hong Kong ...	Strts Settlmnts
,, D. L. Harding	South Africa ...	Dublin.

Lieutenant-Colonel G. H. Sylvester has been selected for increased pay under Article 362 of the Royal Warrant.

Majors G. M. H. Colman and W. H. P. Lewis, of the Reserve, have ceased to do duty in the Royal Army Medical Corps.

The undermentioned retired officers have relinquished the medical charge of troops at the stations respectively named: Colonel H. F. Hensman, C.M.G., Shorncliffe; Lieutenant-Colonel G. M. H. Colman, M.B., Preston; Major W. H. P. Lewis, Home District.

Colonel F. Howard, M.D., retired pay, has assumed medical charge of troops in the Home District; and Lieutenant-Colonel W. C. T. Poole, M.B., retired pay, a similar charge at Maidstone.

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

THE annual dinner of the staff and members of the Volunteer Ambulance School of Instruction took place at the Trocadero Restaurant, London, W., on May 14th.

The usual loyal toasts, given by Brigade-Surgeon-Lieutenant-Colonel P. B. Giles, V.D., F.R.C.S., who was in the chair, having been duly honoured, the toast of "The Royal Army Medical Corps" was proposed by Dr. James Galloway, a member of the Advisory Board, and acknowledged by Colonel Gubbins, P.M.O., Home District, who expressed a strong opinion that brigade bearer companies should be brought up to the full strength, and urged also that regimental commanding officers should be liberal-minded in the matter of supplying a sufficient number of good men to act as stretcher-bearers.

The Director-General, Army Medical Department, Sir William Taylor, K.C.B., proposed "Success to the Volunteer Ambulance School of Instruction." He said that the War Office required from officers and men of the medical branch of the Volunteers certain qualifications before the former could be promoted or the latter classed as efficient; it was therefore necessary for them to pass certain examinations and obtain certificates. Those who were unable to proceed to Aldershot could obtain instruction at the Volunteer Ambulance School of Instruction, started 15 years ago to give instruction to medical officers and regimental stretcher bearers. The immense amount of work which had been done could be estimated by the fact that no less than 550 medical officers from all parts of the world had passed through the school and obtained certificates of proficiency, and that over 3,000 regimental stretcher bearers had also gained the necessary certificates. These results were undoubtedly obtained by the unremitting zeal and exceptional ability in teaching shown by Colonel Giles, senior medical officer, who had been connected with the school since its commencement, and to all the officers and instructors who had from time to time devoted their time to this important subject. In addition to the ordinary pass examination for stretcher bearers, an advanced class for higher proficiency in ambulance bandaging, ventilation, etc., had lately been arranged, together with what is perhaps the most important part of the education of the orderly, namely, the observation of the sick and the nursing of helpless patients. Various prizes for proficiency were given at the termination of these classes, and among them he desired to mention a challenge bowl presented by the late Surgeon-General J. B. Hamilton, whose interest in ambulance work was well known and whose death was much deplored. It was difficult to overestimate the good work which had gone on unceasingly in connexion with the school since its formation, and the proof of its value was apparent soon after the commencement of the war in South Africa. Lieutenant-Colonel Giles was not only senior medical officer of the school but also senior medical officer of the Welsh Border Brigade, and had created and commanded the bearer company of that Brigade, and he was also an important member of the Institute of Senior Medical Officers of Volunteer Brigades. A large number of his men of the bearer company of the Welsh Border Brigade and the Herefordshire Volunteers volunteered for South Africa, some directly in connexion with the R.A.M.C., others as part of the Volunteer Field Hospital of the Rhodesian Field Force; in addition, Lieutenant-Colonel Giles obtained a considerable number of men who had been trained under his own supervision from the School of Instruction, who were passed through the Welsh Border Brigade, and proceeded direct to South Africa. Lieutenant-Colonel Giles was responsible for the dispatch to that country of nearly 100 good men, and for this service he deserved the most hearty and sincere thanks. The Director-General mentioned also the names of Major Sleman and Captain Ryan, both instructors in the school, who, not content with the work of teaching various classes, volunteered and served with the City Imperial Volunteers. He was certain that the experience which they had gained on active service had been of the utmost value to them, and that the officers and men who had had the advantage of their instruction would derive great benefit from being taught by men who knew what the conditions of actual warfare were.

The toast was briefly acknowledged by the Chairman, who said that he was ably seconded in the work of the school by highly competent and enthusiastic officers.

The Chairman then gave the toast of "The Guests," which was acknowledged by Dr. Dawson Williams.

MEDICO-LEGAL AND MEDICO-ETHICAL.

THE RESULT OF AN ILLEGAL OPERATION.

AT the Liverpool Assizes, on May 11th, John Bottomley, herbalist, and Tom Earnshaw, shop assistant, were charged with the murder of Nellie Stephenson.

Mr. Steel, K.C., and Mr. Manfield prosecuted; and Mr. Overend and Mr. Evans defended.

At the outset counsel for prosecution said that the charge of murder against Earnshaw would not be proceeded with. The deceased was a girl, aged about 20. At the beginning of 1902 she made the acquaintance of Earnshaw, and became pregnant. On April 15th, 1903, she went to a house in Bolton, where Bottomley carried on business as a herbalist. It was alleged that he there performed an illegal operation which resulted in the girl's death on April 21st from septic peritonitis. The evidence against the prisoner was the girl's dying deposition. An instrument with which the prisoner was said to have performed the operation was produced and shown to the court.

It was urged for the defence that there was practically no evidence against the prisoner except the statements of the deceased, who was really an accomplice.

After the judge had summed up, the jury returned a verdict of manslaughter without leaving the box.

A charge against Earnshaw of inciting the deceased girl to administer to herself a noxious thing was then proceeded with. It appeared that he had written a letter in which, referring to his sweetheart's trouble, he told her to "get it over as soon as possible," enclosing 10s. for the purpose. The jury found him guilty, but with a recommendation to mercy.

Mr. Justice Lawrance, in passing sentence upon Bottomley, said that he had carried on this illegal business for some years. He believed this kind of crime to be far too common in Lancashire, and he must show that it could not be committed with impunity. The prisoner should have a sentence of fifteen years' penal servitude.

Earnshaw was sentenced to three weeks' imprisonment, to date from the time of his arrest. This meant that he might be at once released.

NEWSPAPER NOTICES OF MEDICAL MEN.

A CORRESPONDENT in Scotland writes to say that a medical man employed by him as a *locum tenens*, but whom he failed to bind down by agreement, has lately started in practice in his neighbourhood, and is calling upon his patients, while a number of local newspapers have published paragraphs announcing that he has started in practice. Such paragraphs, whether inspired by the practitioner himself or by indiscreet friendship, are exceedingly objectionable from a professional point of view. As we have elsewhere suggested, the Divisions and Branches or local medical societies might, we venture to think, consider whether they could not check the practice by addressing letters of remonstrance to the editors of newspapers which insert such announcements.

EPILEPSY AND CRIME.

AT the Central Criminal Court on May 19th, before Mr. Justice Grantham, William Platell, aged 30, was indicted for the wilful murder of a man by shooting him at Blackheath, also with shooting a Metropolitan police officer with intent to murder him. Counsel for the prosecution said that so far as the actual facts relative to the killing of the man by the prisoner were concerned there could be little dispute. The principal question for the jury to determine would be as to the state of mind of the accused at the time he committed the act. From the evidence it appeared that the revolver with which the crime was committed had been sold to the prisoner by a pawnbroker's assistant, who, what is more, loaded it for him, although he believed him to be "in drink," and at other times during the same night the prisoner's demeanour suggested that he was either "drunk or mad." Two shots subsequent to the fatal shot were fired at the police officer, who had not exchanged a single word with the prisoner. Counsel for the defence stated that there was strong evidence in the prisoner's history to indicate that he suffered from delusions and was subject to epileptic fits. Medical evidence was adduced that he had been treated for fits, and Dr. Maudsley, who had examined the prisoner in gaol, said that he did not appear to appreciate the gravity of the charge, that he had told him he recollected

the shooting, the running away, and jumping a fence, but nothing more. Dr. Maudsley was of opinion, judging from all the circumstances, that the prisoner had had an epileptic fit on the day in question, and was not conscious of a knowledge of right and wrong at the time he committed he act. After corroborative evidence as to the prisoner's state of mind at the time had been given by the medical officer of the gaol, the jury found the prisoner guilty but that at the time he was not responsible for his actions, and he was ordered to be detained during the King's pleasure. He will receive proper medical treatment, probably at Broadmoor, and there is power to liberate him if he recovers. But the legal process in this case seems rather a clumsy and expensive way of diagnosing homicidal mania.

MEDICAL TESTIMONIALS IN TRADE ADVERTISEMENTS.

C. W. C.—We quite agree with our correspondent, and have frequently expressed in these columns our disapproval of medical men giving testimonials for the purpose of trade advertisements; the Ethical Committee is prepared to investigate all such cases where the advertisements reach the public. If our correspondent can supply us with evidence that these advertisements of which he complains are sent to the public, we have no doubt the Committee will take up the question. We do not think it possible to prevent manufacturers sending samples to medical men, nor can medical men be prohibited from expressing opinions upon such articles so long as they take care that the opinions are not used for public advertisement.

THE RIGHTS AND DUTIES OF COTTAGE HOSPITAL STAFFS.

COTTAGE HOSPITAL.—There is no universal rule which can be said to be binding upon the committees of cottage hospitals; but the custom, which seems to us an excellent one, is that any of the resident medical men can send a patient to the cottage hospital, the patient paying whatever the hospital requires for maintenance and nursing, while the fees are arranged between doctor and patient. If the committee desires to admit patients to the hospital who are to be operated upon gratuitously, the relations of the medical staff to the hospital must be readjusted, as, clearly, the committee cannot at present call upon any member of the staff to perform an operation. As we understand the custom, all the resident medical practitioners are free to attend any of their own patients, either contract or private, who enter the hospital, but there is no compulsion upon them to do so. If the committee desires to reorganize the hospital and put it upon the basis of an ordinary county hospital with a permanent staff, this should be done after consultation with representatives of the medical profession. So long as the present system lasts the committee has no right to interfere between the patient and the medical practitioner in the matter of fees.

MEDICAL ETIQUETTE.

H. E. R.—(1) A. is called to an urgent case, and on the way finds that B. has been in attendance, but has given up the case as hopeless. A. attends, but refuses to see the case again except in consultation with B. B. declines to see the case either in consultation or alone, on the ground that another doctor has been called in. A. sees B. and talks the matter over with him, but B. declines to see the patient again. What is the duty of A. if urged by the friends to attend? Has B. any cause of grievance? (2) A doctor is called to see a patient who is under the influence of alcohol. The patient tenders the doctor a handful of money in payment of his account, but owing to his condition the doctor declines to accept it at the time. Afterwards, in spite of application, the doctor could not get the money, and he wants to know what he should do under similar circumstances if offered payment by a drunken man?

*** (1) Under the circumstances stated above, A. may take charge of the case and B. has no cause of grievance as he voluntarily gave up the case. (2) The doctor should call in some member of the household to witness what takes place, and then take the sum of money which is fairly due to him.

MEDICAL ADVERTISING.

M.D.—Some little delay has occurred in answering our correspondent, as we wished to obtain a copy of the document referred to. This we have now seen, and we have referred the matter to the Ethical Committee.

OFFENSIVE AMERICAN ADVERTISEMENTS.

S. A.—Our correspondent complains of some advertising blotting pads sent out by a firm in New York. We have received other complaints respecting them, and we agree that they are offensive to our taste. The matter has been referred to the Ethical Committee, and we believe steps are being taken to induce the British agents of the firm to ask for their withdrawal.

PATENTS BY MEDICAL MEN.

X RAYS asks whether it is legal for a medical man to register an article he has invented and, we presume, to derive profit from its sale? In reply, we may express the opinion that no medical practitioner should be interested in the sale of anything which it may be his professional duty to recommend to his patients, nor should he register and advertise any article for sale with his name appended to it—for example, "Jones's soap," or "Smith's patent feeding bottle."

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

New Buildings.—The Buildings Syndicate report that the Downing Street block of the new medical school is built, and that the last stone of the Humphry Museum is placed in position. For fittings and furniture, and electric light, heating, and ventilating appliances, a further sum of some £8,000 is required.

Professorship of Surgery.—At the discussion in the Senate House of the proposal to re-establish the Chair of Surgery, it was suggested that if the professor were not required to reside, a stipend of £300 might suffice. It was however objected by several speakers that a non-resident professor would be of little service to the University. The professor was required not only to manage the surgical examinations, but to take his share of the hospital work and to advance surgical science by his researches.

Degrees.—At the congregation on May 14th the following medical degrees were conferred: *M.D.*: D. G. Hall, Emmanuel. *M.B. and B.C.*: W. G. Chapman, Corpus. *M.B.*: A. E. Hodder, King's. *B.C.*: T. Guthrie, King's; G. R. Rickett, King's; F. W. Goyder, St. John's; W. T. Scott, Clare; H. Ackroyd, Caius; G. A. Wright, Christ's; J. M. Stenhouse, Sid. Suss.; E. A. Ellis, Downing.

VICTORIA UNIVERSITY.

REPRESENTATION ON THE GENERAL MEDICAL COUNCIL.

THE Convocation of Victoria University met on May 13th to discuss the question of the representation of the University on the General Medical Council. Dr. Brown of Bacup submitted the following resolution:

"That in the opinion of Convocation representation on the General Medical Council is a matter in which the co-operation between the three proposed Universities recommended by the Privy Council should take effect. That to facilitate such co-operation a single representative on the General Medical Council of the Manchester, Liverpool, and Yorkshire Universities should be elected by the medical graduates of the three Universities voting by ballot papers."

Dr. Brown urged that the election should be made by the general body of graduates in accordance with the provisions of the Medical Act of 1886, and not as at present by the governing body of the University, and suggested that the proposed Universities in Manchester, Liverpool, and Yorkshire should co-operate in the election of one representative. Dr. Brown said there were 500 medical graduates of the Victoria University, and he thought the present an opportune time to consider whether or not the nomination and election of the representatives should be placed on a broader basis.

The motion was not put to the vote in the absence of a quorum at the meeting. As it at present stands the new Victoria University of Manchester (to be), continuing, as it will do, the corporate existence of Victoria University, and as the new Charter provides that the new University shall have in future the privileges of Victoria University, it does not appear how the new universities are to be represented on the General Medical Council.

THE FUTURE OF THE UNIVERSITY.

Coming events cast their shadows before. At a meeting of the Court of Victoria University held on May 14th the future of the University was outlined by the Vice-Chancellor, Professor Hopkinson. He said that the decision given by the Privy Council decided that a separate university should be incorporated in Liverpool, and in consequence, by the terms of the Charter which the Liverpool College submitted, that College would voluntarily cease to be a College of the Victoria University. With regard to the Manchester petition, the idea was that of continuing the corporate existence of the Victoria University, but under the altered title of the Victoria University of Manchester. The Privy Council asked the Leeds College to submit a Charter with a view to the incorporation of a university in Yorkshire. One important condition which the Privy Council suggested should be imposed upon the new Universities was that there should be strong powers placed in the visitorial authority in the Crown with a view to ensuring that all degrees and instruction should be kept of the highest possible character. For the purpose of carrying out that provision of the Order in Council it was suggested that a clause should be added to the charter under which the Crown was constituted the Visitor of the University. This was in substance the same clause they had at present. It ran: "We reserve to ourselves, our heirs and successors to be the Visitor and Visitors of the University, through the Lord President of our Council for the time being, and, in the exercise of the visitorial authority We, our heirs and successors shall have the right from time to time and in such manner as we or they shall think fit, to direct an inspection of the University, its buildings, laboratories and general equipment, and also the examinations, teaching, and other work done by the University. That clause would apply both to the Victoria University and to Liverpool. Those who were concerned in drafting the charters both of Liverpool and Manchester—and the same thing would, he was sure, apply to Leeds—would be perfectly satisfied that such visitorial powers should be exercised. Their doors would be readily open to that kind of inspection, and they only wished that it might be known and seen as freely as possible by all whom it might concern what was the nature and character of the teaching and the standard and character of the examinations which would be held in the Universities existing either in Manchester, Liverpool, or Leeds. That clause recognized that the Universities should be independent universities—two new ones and the modified Victoria University—but it was also recognized that in the sphere of their influence they would to a certain extent overlap one another. The Privy Council considered it of great importance that they should maintain equally high standards. It had been determined, after conference with the representatives of all three Colleges and the existing University, to have a preliminary examination carried on by a Common Joint Board, so that there should be one common preliminary examination for the three new universities. This was a matter of vital importance to the schools. This arrangement did not in any way affect the idea of having school-leaving examinations of a different type, but it did establish one common preliminary, which he hoped would be adopted. With regard to the alterations which might from time to time be made in the statutes of the new university with regard to examinations, they had suggested, in order to meet the view expressed by the Order in Council, that every statute or alteration of a statute relating to the titles or degrees, the establishment of new degrees, periods of study in the university, and the conditions under which degrees higher than the degree of Bachelor in any faculty were to be granted, should, before becoming operative, be communicated to the universities in Liverpool and Leeds. "If, within one month after the receipt of such communication notice of objection thereto shall have been given by the said universities or either of them, the question so arising shall be considered by a joint committee of the three universities; and in default of agreement any of the universities may, within one month, make a representation in regard thereto to Us or to a Committee of our Council, and in the event last mentioned such statute or ordinance or alteration shall not become operative and have effect until allowed by Us or by such Committee." The statutes of the University would continue in force until altered. There would be power for every student of the University matriculating at the present time to proceed to a degree under the existing regulations, so that whether in Manchester, Liverpool, or Leeds the rights of any undergraduate would in no way be interfered with.

RESIGNATION OF THE CHANCELLOR.

At the same meeting a letter from the Chancellor (Earl Spencer) was read, resigning the office of Chancellor. It was contended, however, that the proper body to whom the resignation should have been sent was Convocation. In any case, the Chancellor is elected by this body. Lord Spencer was President of Council when the first charter was granted, and for twelve years he has filled the high office of Chancellor with great dignity. The Court passed the following resolution: "That the Court, on receiving the letter of Lord Spencer, desires to express its sense of his valuable services, and hears with regret that he intends to place his resignation in the hands of Convocation, and that the Court trusts that the resignation will not take place."

At the same Court the following lecturers of the Owens College were appointed Lecturers of the University: Joseph Collier, M.B., F.R.C.S., Lecturer in Practical Surgery; J. E. Platt, M.S., F.R.C.S., Assistant Lecturer in Systematic Surgery; C. H. Tattersall, M.R.C.S., D.P.H., Lecturer in Public Health; and William Thorburn, M.D., F.R.C.S., Lecturer in Operative Surgery.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN extraordinary Comitia was held on Thursday, May 14th; the President, Sir W. S. Church, Bart., K.C.B., was in the chair.

Admission of New Fellows.

The following members, elected to the Fellowship at the last meeting, were admitted as Fellows: St.C. Thomson, M.D.Lond., E. Goodall, M.D.Lond. (of Carmarthen), G. A. Sutherland, M.D.Edin., E. Cautley, M.D.Camb., J. A. Lindsay, M.D., R.U.I. (of Belfast), W. Gordon, M.D.Camb. (of Exeter), W. W. H. Tate, M.D.Lond., A. Morison, M.D.Edin., B. E. Dawson, M.D Lond., A. M. Gossage, M.B.Oxon., L. Humphry, M.D.Camb. (of Cambridge), J. S. Collier, M.D.Lond., A. P. Beddard, M.D.Camb., R. Hutchison, M.D.Edin., and F. J. Poynton, M.D.Lond.

Liverpool University.

A communication was received from the Liverpool University Committee, requesting the College to appoint a representative to be a member of the Court, or supreme governing body of the University, and upon the nomination of the President, Sir Dyce Duckworth, the Treasurer of the College, was unanimously elected as such representative.

International Medical Congress at Madrid.

Dr. Pye-Smith as the representative of the College, presented a report of the proceedings of the recent International Medical Congress at Madrid, and the President, in thanking him for the report, conveyed a request that it might be presented to the College, and be placed amongst its archives.

By-law.

Dr. Allchin (acting for the Registrar) proposed the enactment for the first time of the following by-law: "That Dr. George Francis Angelo Harris, elected a Fellow on April 30th, being resident in India, be admitted *in absentid*, any by-law to the contrary notwithstanding."

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary Council was held on May 14th, Sir Henry G. Howse, President, in the chair.

Diploma of Membership.

A report from the Court of Examiners was presented in which the number of candidates who qualified at the recent examination for the Membership was stated to be 109.

Regulations Relating to the Fellowship.

A motion, recommended by the Court of Examiners, was adopted to the effect that the words, "or of having passed an examination in this subject at a recognized University" be added at the end of paragraph 7, Subsection II, Section III of the Regulations for candidates for the diploma of Fellow, and that the paragraph be accordingly framed as follows, namely, (7) Of having attended a course of lectures on biology at a recognized medical school, or of having passed an examination in this subject at a recognized University.

Licence in Dental Surgery.

The Board of Examiners in Dental Surgery reported that 54 candidates had qualified for the licence.

Action of the Discipline Committee.

The President was requested by this Committee to communicate with a certain Member of the College in regard to the use of unprofessional circulars.

Bust of the late Sir William MacCormac.

A replica of the bust executed by Mr. Alfred Drury, A.R.A., for St. Thomas's Hospital, was accepted with the best thanks of the Council from the subscribers.

International Medical Congress at Madrid.

A vote of thanks was passed to Mr. Edmund Owen for his attendance in April last at the above Congress as the representative of the College.

University of Liverpool.

The President was appointed a member of the Court of the above University in answer to a request from the Secretary to the Liverpool University Committee asking the Council to appoint a Member to the above Court—the supreme governing body of the University.

Vacancy on the Court of Examiners.

The President announced that the vacancy occasioned by the coming retirement of Mr. Rickman J. Godlee would be filled up at the ordinary meeting of the Council in June.

First Conjoint Examination.

The following resolution passed recently by the Royal College of Physicians was taken under consideration:

"That a committee be appointed to consider and report upon any alterations that may be desirable in the regulations for the First Conjoint Examination. That this Committee be empowered to confer with representatives of the Royal College of Surgeons, and that the College of Surgeons be invited to appoint representatives for this purpose."

Post-mortem Investigations for London Coroners.

A letter from the London County Council asking for advice concerning the above was read and replied to as follows:

"The Council of the College, whilst agreeing with the London County Council that it is desirable that *post-mortem* examinations in inquest cases of a special nature should be entrusted to specially-skilled pathologists, regret that they are not in a position to assist by suggesting the names of well-qualified pathologists with experience of a medico-legal nature to make necropsies and give evidence in such cases. The Council of the Royal College of Surgeons would desire to point out to the London County Council the inadequacy in their opinion of the fee of two guineas proposed for the services required from medical men with such high accomplishments as this would entail."

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

The Laboratory.—We are informed that the number of reports on pathological specimens made by the Reporting Department of the Laboratory during 1902 shows an increase of 26 per cent. as compared with the preceding year. The detailed figures are as follows:

—	1901	1902
Histological	262	331
Clinical	162	239
Bacteriological	1,056	1.208
Total ...	1,480	1,868

PRELIMINARY EXAMINATION STATISTICS OF THE SCOTTISH UNIVERSITIES.

THE Joint Board of Examiners of the Scottish Universities has issued statistics of the March-April, 1903, preliminary examinations in Arts, Science, and Medicine. It is set forth in one table what percentage the number of failures is of the number of candidates in the three subjects in which passes are allowed in more standards than one of the Arts and Science Preliminary Examination in the several Universities, and in the four Universities taken together, namely:

Intermediate and Higher Mathematics:	St Andrews	27.58
" " " "	Glasgow	34.50
" " " "	Aberdeen	31.00
" " " "	Edinburgh	46.52
The four Universities taken together		36.55
Higher Latin: St. Andrews		20.00
" " Glasgow		17.37
" " Aberdeen		32.46
" " Edinburgh		18.10
The four Universities taken together		20.00
Higher Greek: St. Andrews		9.09
" " Glasgow		37.50
" " Aberdeen		12.00
" " Edinburgh		32.00
The four Universities taken together		24.70

It is shown in another table what percentage the number of passes is of the number of candidates entered for four subjects of the medical preliminary examination in the several Universities, and in the four Universities taken together—namely:

Percentage of passes:	St. Andrews	33.33
" "	Glasgow	25.00
" "	Aberdeen	51.28
" "	Edinburgh	33.35
The four Universities together		35.12

The above figures include the number of candidates who failed to pass in one or more subjects at the examination in question, but who passed the whole examination on the principle of compensation.

The following are the statistics of the spring medical preliminary examination at the University of Edinburgh:

Entered for examination, 185, including 13 women.
English, 94 passed and 32 failed.
Mathematics, 59 passed and 84 failed.
Latin, 52 passed and 109 failed.
Greek, 13 passed and 4 failed.
French, 75 passed and 48 failed.
German, 2 passed and 7 failed.
Urdu, 1 passed and 1 failed.
Malayalam, 1 passed.
Dutch, 1 passed.

These figures afford no indication of the number of students qualified to enter on the study of medicine, because the majority of the students now entering the University are exempted from all or part of the medical preliminary examination by leading or other certificates.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

THE RELATION OF THE MEDICAL OFFICER OF HEALTH TO A NOTIFYING PRACTITIONER.

THREE points are raised in the following interesting letter from the Secretary of the Local Government Board to a medical officer of health:

[COPY.]

Local Government Board,
Whitehall, S.W.,
April 1st, 1903.

Sir,—I am directed by the Local Government Board to advert to your letter of the 14th ult., with reference to the complaint made to them by Mr. —— as to your action in connexion with certain cases of diphtheria which he notified to you; and I am to state that in the Board's opinion the certifier's

statement of a notified case of infectious disease should be accepted unless there is reason to believe that he is not acting in good faith. The Board do not consider that it is ordinarily the duty of a medical officer of health to examine personally patients who have been notified as suffering from infectious disease with a view to checking the accuracy of the certificate, and where circumstances may render such an examination desirable it should be made after communication with the medical practitioner in attendance, and, if possible, with his co-operation.

With regard to the reliance to be placed on the bacteriological examination of material taken from patients suspected to be suffering from diphtheria, the Board are advised that a single negative result cannot be regarded as decisive, and is therefore of far less value than a positive result. One examination of throat-swabbing in a given case of diphtheria will not invariably yield evidence of the presence of the diphtheria bacillus in the material, and a careful clinical diagnosis cannot with safety be disregarded in cases which do not on a single test furnish sufficient evidence to warrant their being classed bacteriologically as diphtheria.

I am to add that the Board regard it as highly improper that an inspector of nuisances should under any circumstances collect throat-swabs from suspected diphtheria cases.

I am, Sir, your obedient servant,

JOHN LITHIBY,
Assistant Secretary.

Medical Officer of Health to District Council.

It appears that the medical officer of health in question had been doubtful of the accuracy of notifications of diphtheria sent by a particular practitioner, and had without the co-operation of this practitioner obtained "swabs" from the throats of the patients in question, and on obtaining a negative result to a bacteriological examination of cultures from these swabs had disallowed the fees for the certificates. We are entirely in agreement with the dictum of the Local Government Board that "the certifier's statement of a notified case of infectious disease should be accepted unless there is reason to believe that he is not acting in good faith"; and that when an examination of the patient is desirable this should be made after communication with the medical practitioner in attendance. This is a rule to which there are practically no exceptions; and even when a run of notifications of cases of a particular notifiable disease occurs in the practice of a particular practitioner at a time when no notifications of the same disease are being received from other practitioners in the same district, the first effort should be to come to an understanding as to the nature of the cases with the practitioner in question.

On the second point, the value to be attached to a negative result in the examination of a throat swab, we have previously indicated the lack of value of such a result. It is not infrequent to obtain two, or more rarely even three, negative results in cases which are unmistakeable clinical diphtheria. A positive certificate by a competent bacteriologist may be trusted; a negative certificate simply means that the diphtheria bacillus was not found. It still leaves the onus upon the practitioner to decide whether the case is diphtheria or not. The medical officer of health who refuses a certificate of diphtheria because a negative bacteriological result has been obtained is acting contrary to the interest of his district; and the medical practitioner who thinks he is absolved from his duty to notify a clinical case of diphtheria because of a negative bacteriological examination is not fulfilling his legal duty.

On the third point, the impropriety of engaging a sanitary inspector to obtain "swabs" from another doctor's patients, there can be no difference of opinion. Many "swabs" give negative results because they have not been properly taken; and, apart from this, there are obvious and serious ethical objections to such a procedure.

VACCINATION AND THE GOVERNMENT LYMPH SUPPLY.

Dr. Ernest W. Barnes, Honorary Medical Secretary of the Liverpool Medical Club, informs us that the following resolutions were passed unanimously, after a full discussion of the subject of vaccination by the club. The discussion occupied two meetings, and was attended and taken part in by a representative body of medical men, which included general practitioners, specialists, and past and present public vaccinators.

1. That vaccination should be under the direct control and supervision of the Local Government Board in London.

2. That the post of public vaccinator should be a permanent appointment, and that he be debarred from private practice; and that no certificate of successful vaccination shall be accepted from any private practitioner unless it comes up to the Local Government Board standard.

3. That all private practitioners be supplied free of charge with lymph from the Local Government Board on application on the prescribed forms.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,911 births and 4,441 deaths were registered during the week ending Saturday last, May 16th. The annual rate of mortality in these towns, which had been 17.4, 17.5, and 15.9 per 1,000 in the three preceding weeks, further declined last week to 15.4 per 1,000. The rates in the several towns ranged from 3.3 in Hornsey, 7.1 in East Ham and in Hastings, 7.9 in Warrington, 8.6 in Willesden, 9.1 in Ipswich and in Handsworth, 9.8 in King's Norton, and 10.6 in Devonport to 21.2 in West Bromwich, 21.4 in Oldham, 21.8 in Merthyr Tydfil, 22.2 in Coventry, 22.9 in Stockport, 23.1 in Hanley, 24.0 in Rochdale, and 24.1 in Middlesbrough. In London the rate of mortality was 14.4 per 1,000, while it averaged 15.8 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.5 per 1,000 in the seventy-six large towns; in London also this death-rate was equal to 1.5 per 1,000, while in the seventy-five other towns it ranged upwards to 3.2 in Wolverhampton, 3.3 in Tottenham and in Swansea, 3.4 in Nottingham and in Bootle, 3.8 in Oldham, 4.4 in Merthyr Tydfil, and 5.9 in Wigan. Measles caused a death-rate of 1.1 in Manchester, 1.2 in Bolton, 1.5 in Croydon and in Nottingham, 2.2 in Coventry, 2.4 in Tottenham, 3.3 in Swansea, and 4.2 in Wigan; diphtheria of 1.1 in Oldham, 1.5 in Merthyr Tydfil, and 1.6 in Hanley; whooping-cough of 1.0 in Sheffield, 1.2 in Salford, 1.5 in Merthyr Tydfil, 1.8 in Barrow-in-Furness, and 1.9 in Oldham; "fever" of 1.1 in Wolverhampton; and diarrhoea of 1.6 in Wolverhampton and in West Bromwich. The mortality from scarlet fever showed no marked excess in any of the large towns. Six fatal cases of small-pox were registered in Liverpool, 2 in Leeds, and 1 each in Aston Manor, Bootle, Manchester, Oldham, Rochdale, Burnley, Bradford, Hull, and Gateshead. The Metropolitan Asylums Hospitals contained 60 small-pox patients at the end of last week, against 38, 47, and 60 at the end of the three preceding weeks; 7 new cases were admitted during the week, against 9, 12, and 17 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 1,700, 1,717, and 1,730 on the three preceding Saturdays, had further risen to 1,756 on Saturday last, May 16th; 236 new cases were admitted during last week, against 243, 235, and 229 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, May 16th, 1,089 births and 590 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 18.5, 19.2, and 17.9 per 1,000 in the three preceding weeks, increased again last week to 18.0 per 1,000, and was 2.6 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scotch towns the death-rates ranged from 7.7 in Perth and 12.9 in Aberdeen to 19.3 in Glasgow and 22.5 in Greenock. The death-rate from the principal infectious diseases averaged 2.1 per 1,000 in these towns, the highest rates being recorded in Greenock, Edinburgh, and Paisley. The 292 deaths registered in Glasgow included 9 which were referred to measles, 4 to diphtheria, 12 to whooping-cough, 2 to "fever," and 7 to diarrhoea. Five fatal cases of measles, 2 of scarlet fever, and 7 of whooping-cough were recorded in Edinburgh. Two deaths from diarrhoea occurred in Dundee and in Aberdeen; 2 from scarlet fever in Paisley; and 4 from whooping-cough in Greenock.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

[Specially Reported for the British Medical Journal.]

The Registrar-General has just issued his return relating to the births and deaths registered during the first quarter of this year, and to the marriages during the three months ending December last. The marriage-rate during that period was equal to 17.7 per 1,000 persons living, and was slightly in excess of the average rate in the fourth quarters of the ten preceding years.

The births registered in England and Wales during the quarter ending March last numbered 235,165, and were equal to an annual rate of 28.6 per 1,000 of the population, estimated by the Registrar-General at 33,378,338 persons in the middle of the year. This rate was 1.5 per 1,000 below the average rate in the first quarters of the ten preceding years. The birth-rates in the several counties ranged from 19.6 in Rutlandshire, 21.9 in Sussex, 22.2 in Oxfordshire, 22.3 in Westmorland, 22.4 in Bedfordshire, and 22.7 in Cornwall, to 32.3 in Northumberland, 33.3 in Staffordshire, 33.7 in South Wales, 35.6 in Durham, and 36.0 in Monmouthshire. In seventy-six of the largest English towns, including London, the birth-rate last quarter averaged 30.1 per 1,000, and exceeded the general English birth-rate by 1.5 per 1,000. In London the rate was 29.1 per 1,000, while it averaged 30.5 per 1,000 in the seventy-five other large towns, among which the birth-rates ranged from 17.7 in Bournemouth, 18.8 in Hastings, 20.4 in Hornsey, 22.2 in Bury, 22.4 in Halifax, and 22.6 in Huddersfield, to 36.8 in Sunderland, 37.4 in Hanley, 38.8 in St. Helens, 39.1 in Middlesbrough 40.8 in Merthyr Tydfil, and 44.3 in Rhondda.

The births registered in England and Wales during the quarter under notice exceeded the deaths by 96,890; this represents the natural increase of the population during that period. From returns issued by the Board of Trade it appears that 78,697 emigrants embarked during the last three months for places outside Europe, from the various ports of the United Kingdom at which emigration officers are stationed. Of these 78,697 emigrants, 35,239 were English, 5,541 Scottish, and 4,223 Irish, while 33,694 others were of foreign origin. Compared with the averages of the corresponding quarters of the three preceding years the proportion of emigrants to the total population showed an increase of 76.0 per cent. in England, 81.7 in Scotland, and 1.3 per cent. in Ireland.

During the first quarter of last year the deaths of 138,275 persons were registered, equal to an annual rate of 16.8 per 1,000 persons living, being 2.9 per 1,000 below the average rate in the first quarters of the ten preceding years. The lowest county death-rates last quarter were 14.1 in Surrey, 14.2 in Rutlandshire, 14.3 in Middlesex and in Hertfordshire, and 14.6 in Sussex and in Essex; the highest rates were 18.1 in Warwickshire, in Cumberland, and in Monmouthshire, 18.3 in South Wales, 18.5 in Northumberland, 18.7 in Lancashire, and 18.8 in North Wales. In seventy-six of the largest towns, with an aggregate population of over fifteen millions, the death-rate averaged 17.3 per 1,000; in 103 smaller towns, containing about three and a-half millions, the rate of mortality averaged 15.9 per 1,000; while in the remaining, and chiefly rural, parts of England and Wales, with a population of more than fourteen and a-half millions, the death-rate was 16.5 per 1,000. In London the rate was 17.3 per 1,000; while among the seventy-five large provincial towns the rates ranged from 9.1 in Hornsey, 10.0 in Handsworth, 11.2 in King's Norton, 11.5 in East Ham, and 11.8 in Walthamstow, to 20.1 in Bootle and in Newcastle-on-Tyne, 20.3 in West Bromwich and in Oldham, 21.4 in Manchester, 21.5 in Liverpool, 26.1 in Hanley, and 23.6 in Wigan.

The 138,275 deaths from all causes registered in England and Wales during the three months ending March last, included 2,985 which were

referred to whooping-cough, 2,665 to measles, 1,916 to diphtheria, 1,377 to diarrhoea, 1,130 to scarlet fever, 765 to "fever" and 241 to small-pox. The mortality from small-pox and from diarrhoea last quarter coincided with the average in the corresponding quarters of the ten preceding years; while that from each of the other principal infectious diseases showed a decline. Of the 241 deaths from small-pox during the quarter under notice, 72 belonged to Liverpool, 12 to Manchester, 9 to Birmingham, 6 to Leeds, 5 each to London, Leicester, Bury, and Oldham, and 4 each to Birkenhead, Bootle, Burnley, and Wakefield.

The rate of infant mortality in England and Wales last quarter, or the proportion of deaths among children under 1 year of age to registered births, was equal to 131 per 1,000, against an average rate of 143 per 1,000 in the ten preceding first quarters. The lowest rates of infant mortality in the various counties were 86 in Hertfordshire, 109 in Wiltshire, 110 in Hampshire, and 111 in Berkshire, Huntingdonshire, and Essex; while the highest rates were 145 in Lincolnshire, in Nottinghamshire, and in Northumberland, 149 in South Wales, 150 in North Wales, and 182 in Rutlandshire. In seventy-six of the largest English towns the mean rate was 135 per 1,000; in London the proportion was equal to 129 per 1,000, while it averaged 138 in the seventy-five large provincial towns, and ranged from 57 in Barrow-in-Furness, 80 in Great Yarmouth, 86 in Burton-on-Trent, 95 in Handsworth and 96 in Leyton, to 169 in Hanley and in Salford, 173 in West Bromwich, 177 in Rotherham, and 181 in Stockport, in Burnley, and in Blackburn. The mortality in England and Wales last quarter among persons aged between 1 and 60 years was equal to 8.3 per 1,000 of the population estimated to be living at this group of ages, and was 1.6 per 1,000 below the average. In the seventy-six large towns the death rate at this age-period was 9.3 per 1,000; in London the rate was 9.4 per 1,000, while it averaged 9.2 per 1,000 in the seventy-five other large towns, and ranged from 4.6 in Hornsey, 4.8 in Handsworth, 5.3 in Kings Norton, and 5.8 in Walthamstow, to 11.9 in Oldham, 12.7 in Manchester, 12.8 in Liverpool, and 15.1 in Wigan. Among persons aged 60 years and upwards the death-rate last quarter was 75.3 per 1,000 of the estimated population at this age-group, against an average rate of 16.9 per 1,000. In the seventy-six towns the mean rate was 77.2 per 1,000; in London the rate was equal to 75.4 per 1,000, while it averaged 78.1 in the seventy-five large provincial towns, and ranged from 42.4 in West Hartlepool, 44.9 in Hornsey, 50.2 in Handsworth, 51.8 in Walsall, and 52.1 in Leyton, to 94.8 in Hanley, 96.3 in Rochdale, 96.9 in South Shields, 97.4 in Wigan, and 103.0 in Bootle

The mean temperature of the air at the Royal Observatory, Greenwich, was 44.0°, being 3.8° above the average in the corresponding quarters of the thirty years 1871-1900; the highest reading of the thermometer was 68.0°, and the lowest 16.0°. The amount of rain measured during the quarter was 5.44 in., being 0.31 in. above the average.

THE EPIDEMIC OF SMALL-POX.

THE reports of small-pox to hand this week are somewhat numerous, and though some improvement is reported at one or two old centres, the general impression to be gathered from the reports is certainly rather depressing. One of the worst features perhaps is that Essex now seems not unlikely to undergo a severe attack, and particulars in connexion with it will be found lower down. In Leicester it is, from an anti-vaccinator's point of view, somewhat sad to relate that the bulk of the people in this stronghold of the Antivaccination League are throwing down their arms in the face of the enemy and applying for vaccination *en masse*. The situation, indeed, is so bad that an antivaccination leader has called for a meeting to promote prompt and vigorous efforts to restore the *morale* of the League's followers. The epidemic in the same town has given rise to a typical example of anti-vaccination literary effort. At Liverpool one of the town council had publicly referred to the advantages shown by vaccination in the town. To this an antivaccinator replied by saying that the number of cases per 1,000 in vaccinated Liverpool was greater than in unvaccinated Leicester. This is luckily true or unvaccinated Leicester would be in a very bad way, for the writer of course quite forgot to mention that while the epidemic at Leicester has only just commenced, that at Liverpool has now existed for months.

In County Durham, South Shields has again had a case, the first for some weeks, while Gateshead has registered its twelfth case. Stockton is also still inflicted.

In Lancashire there is not very much alteration either in the extent of the epidemic or number of cases. At Manchester and Liverpool things appear to be slightly improving, but Melwood and Altcar both appear to be new centres, while at Heywood fresh cases continue to occur. At Rochdale things also look unpleasant, and the disease is said to be spreading with rapidity.

In Yorkshire, Sheffield complains of the frequency with which cases are imported, while at Bradford it is said that there is "an alarming increase" in the number of cases. Normanton, however, appears to be the only fresh centre, but at Barnsley several more cases have occurred. At this place there has been prosecution of a man who, after being warned, went and sat in a public-house when in such a condition as to be capable of conveying infection.

In Nottinghamshire, Hucknall Torkard and Mansfield are still suffering. Nottingham has had some more cases, but they appear to have been imported. This town has been successful in preventing anything like an epidemic, but has had several outbreaks due to importation of cases.

From Derbyshire there is little news, but a second case is reported at Chapel-en-le-Frith, and a new centre has arisen at Alfreton.

In Leicestershire the disease continues to spread in little bursts. The people are resorting freely to vaccination, and the mill owners are discouraging their hands from frequenting populous places, such as fairs, and therefore being accused by Labour leaders of "intimidation."

In Warwickshire the disease appears to be still spreading in Coventry, while in Birmingham, which was believed for a day or two to be free, some fresh cases have occurred.

In Staffordshire, Harts Hill and West Bromwich appear to be fresh centres.

In Essex several cases have now occurred in Colchester, 5 cases having been notified since May 1st. The first case was a boy, aged 15 years, who was employed with others in distributing for a London firm from house to house. Before the case was recognized he had been distributing samples for several days in an actively infectious condition. Very active measures were at once taken to prevent the spread of the disease. The boy was at once removed to the small-pox hospital, and all the contacts whose names could be ascertained were visited, and the majority induced to be revaccinated. The boy slept at what was practically a common lodging-house. The other lodgers, 18 in all, were visited, and most of them revaccinated or kept under observation. Three cases subsequently developed from this case—two unknown contacts and one traceable to the first case. The fifth case was a fresh importation from London in another part of the town. All the cases were promptly removed to the small-pox hospital, which was kept ready and at once available. This outbreak at Colchester is unfortunately, however, not the only one, for it is reported that the disease has broken out at Barking also in a serious form.

From Wales there is not much news, but there are more cases at Cardiff and Wrexham, while Ruabon is a fresh centre.

In Scotland things are going pretty favourably, only 5 cases having been reported since May 1st.

OBITUARY.

EDMUND LLOYD BIRKETT, M.D.CANTAB., F.R.C.P.

THE death of a veteran of the profession, Dr. Lloyd Birkett, took place on May 8th. He was born on February 9th, 1814, and had, therefore, reached his ninetieth year. He was the youngest son of the late John Birkett, senior partner in the firm of Birkett and Son, of Cloak Lane, E.C., at that time well-known family solicitors. After two years at a preparatory school E. L. Birkett proceeded to Eton when only 8 years old, and had as one of his senior schoolfellows Mr. W. E. Gladstone.

Leaving Eton at the age of 19, he went to Caius College, Cambridge, where he had a very successful career. He next studied medicine at Guy's Hospital, and was at that time perhaps one of the best classical scholars in the profession. He graduated as M.B.Camb. in 1838, and took the M.D. in 1847. He remained some years at Guy's, and became Curator of the Museum, joint editor of the *Guy's Hospital Reports*, and Vice-President and Honorary Secretary of the Guy's Hospital Clinical Society. Dr. Lloyd Birkett started as a consultant in Russell Square, and remained there about forty years, in fact until his retirement some 13 years ago. He became F.R.C.P.Lond. in 1848, and was at various times Censor, Examiner in Medicine, and Vice-President of the College.

He had a large practice, and was successively Physician and Consulting Physician to the City of London Hospital for Diseases of the Chest, Victoria Park. He married in 1850 Awdry Heydon, the only daughter of Mr. B. E. Battley. Two sons, both in the Church, and a daughter survive him.

He retired from practice in 1890, and spent the remaining years of his life with his elder son, the Rev. L. B. Birkett, Rector of Westbourne, near Emsworth, Sussex. He much enjoyed the quiet of the country after his busy life, and retained the greatest interest in all matters, both public and private, up to last November, when he had an attack of influenza, from the effects of which he never recovered. He passed quietly and peacefully away on May 8th.

He was a thorough gentleman of the old school—quiet, courteous, always willing to help his professional brethren whenever he could, a good conversationalist notwithstanding a slight impediment in his speech. He was, moreover, in every sense a perfect Christian.

We are indebted to Sir Samuel Wilks for the following interesting notes: When I first entered Guy's as a student in 1841-2, Dr. Lloyd Birkett had taken his degree at Cambridge three years before, being a graduate at Caius College, and was holding a subordinate appointment of Secretary to the Clinical Report Society. This was a voluntary association of students established for the purpose of the more careful reporting of cases; each student had a certain number of patients allotted to him, and of these he took accurate notes, and brought them to the meetings held once a week, when the cases were discussed. These were sorted and entered in a

book by the Secretary. This voluntary society performed a large amount of good work, and only came to an end when the reporting system became obligatory on all students. It had two secretaries, medical and surgical, of whom Dr. Birkett was one.

About the same time Dr. Birkett, who was now a Member of the Royal College of Physicians, was editor of the *Guy's Hospital Reports*. He held the appointment for some years, and the volumes he conducted may be found in the second series of this work. In his last number, in 1853, his preface reads like its obsequies, for he seems to imply that its necessity and utility had passed since the wider circulation of the weekly and other medical journals. In the following year, however, it was resuscitated under new auspices, and became more prosperous than ever.

The editorship of the *Guy's Hospital Reports* and the secretaryship of the Clinical Report Society were the two principal offices which Dr. Birkett held at Guy's. He was also Physician to the Surrey Dispensary, and for some time Secretary to the Hunterian Society. There was, however, another appointment which he held for a short period. A vacancy having occurred in the Pathological Department, Dr. Birkett was appointed Curator of the Museum and Dr. Lloyd Demonstrator of Morbid Anatomy. These two men were totally unlike in character except in one thing—that neither of them felt any interest in the department to which he was appointed. Lloyd was careless in his attendance, and his *post-mortem* reports, whenever they could be obtained, were so wanting in accuracy that Dr. Birkett was at a loss to know what to do with the material which was sent him. This unhappy conjunction did not last long, when fresh blood was introduced and pathology again flourished. The incident, however, calls to mind the name of France, who was the Ophthalmic Surgeon at the time. Dr. Birkett and Mr. France were inseparable friends, and so remained, I believe, during the whole of their long lives. These two gentlemen were always seen together, so that when any one went into the Museum to see the Curator Mr. France was always with him, and their conversation was on the affairs of the Church. These two colleagues were alike in temperament, had views in common, were quiet, retiring, and erudite, and in one word were both the very best of men; this was seen in their after-life by their many benevolent acts. It was often said that this Damon and Pythias would have made far better two excellent clergymen.

At this time Dr. Birkett had a brass plate on a door in Cloak Lane, Cheapside. Soon after he left Guy's he was appointed one of the first Physicians to the City of London Hospital for Diseases of the Chest in Victoria Park, and so became known as a specialist for consumption, and I believe it was in the treatment of cases of this disease that most of his subsequent practice consisted. He was now a Fellow of the Royal College of Physicians. On the death of Dr. Golding-Bird, Dr. Birkett took his house in Russell Square and re-edited his work on *Urinary Diseases*. Here he remained until he retired about 1890, and went to live with his son at Westbourne Rectory in Sussex, where he died on May 8th in his 90th year.

Whilst in Russell Square he was well known for his good works and his devotion to all the institutions belonging to the Church.

GRANTS FOR SCIENTIFIC RESEARCH.

The Council of the British Medical Association desires to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences that it is prepared to receive applications for grants in aid of such research. Applications, which must reach this office not later than May 31st, for sums to be granted must include details of the precise character and objects of the research which is proposed, and must be made on forms to be had of the General Secretary, at the office of the Association, 429, Strand, London.

Every recipient is expected to furnish to the Committee on or before May 31st following upon the allotment of the grant, a report (or, if the object of the grant be not then attained, an interim report to be renewed at the same date in each subsequent year until a final report can be furnished) containing: (*a*) A brief statement for the Report of the Scientific Grants Committee, showing the results arrived at, or the stage which the inquiry has reached; (*b*) a general statement of the expenditure incurred, accompanied, so far as is possible, with vouchers; (*c*) and references to any transactions, journals or other publications in which the results of the research have been printed.

Research Scholarships.

The Council of the British Medical Association is prepared to receive applications for three Research Scholarships which become vacant (two holders are eligible for and seek re-election), of the value each of £150 per annum, tenable for one year, and subject to renewal by the Council for another year.

Applications for Scholarships must be made on forms to be had of the General Secretary, and returned on or before May 31st.

Ernest Hart Research Scholarship.

The Council of the British Medical Association is also prepared to receive applications for the Ernest Hart Research Scholarship of the value of £200 per annum, tenable for one year, but subject to renewal by the Council for another year. The Scholarship is for the study of some subject in the department of State Medicine.

The present scholar is eligible and seeks re-election.

Guy Elliston, *General Secretary.*

MEDICAL NEWS.

Three members of the Midwives Board—Dr. Ward Cousins, Dr. Parker Young, and Professor Sinclair—will sign a minority report dissenting from certain of the regulations for the conduct of midwives sent up to the Privy Council by the majority of the Board.

The opening lecture of the summer course of lectures and demonstrations at the Hospital for Consumption, Brompton, will be given by Dr. Fowler on Wednesday, May 27th, at 4 P.M. The subject selected is the diagnosis of intrathoracic tumours.

At the dinner of the Glasgow University Club, which is to be held on Friday next, May 29th, at the Trocadero Restaurant, the Chairman, Mr. George Wyndham, M.P., will be supported by the Earl of Lytton, Mr. James A. Campbell, M.P., Mr. Scott Dickson, the Solicitor-General for Scotland, and Mr. W. J. Galloway, M.P.

The Prince and Princess Christian of Schleswig-Holstein have been pleased to make the following appointments: Sir F. H. Laking, Bart., G.C.V.O., M.D., to be Physician in Ordinary; and William Fairbank, M.R.C.S., to be Surgeon Apothecary in Ordinary to their Royal Highnesses; and Willie N. Barron, M.R.C.S., to be Surgeon Apothecary to their Royal Highness's Household.

The *Ortona* belonging to the Pacific Steam Navigation Company will make two cruises to Norway, the first commencing on June 13th and the second on July 2nd. The *Panama* belonging to the same company will start for a cruise to the ports of Portugal and Algiers on May 27th. Further particulars will be found in our advertising columns.

A Dispensary for Tuberculous Patients in New York.—The Commissioner of Health of the City of New York has asked the Board of Estimates and Appropriation to provide for the erection of a special dispensary in that city for the treatment of consumptives. The Commissioner purposes to have a staff of nurses and doctors there to treat patients who apply for relief, or, if necessary, to visit them in their homes. Plans for the dispensary are nearly completed, and will soon be submitted to the Board.

At a Local Government Board inquiry held at Midhurst on May 20th, Mr. Taylor, engineer to the King's Advisory Committee, stated that the King's Sanatorium for Consumptives to be erected at Midhurst will probably be ready for occupation about two years hence. The institution will provide accommodation for 150 patients and 50 officers, and it is estimated that the cost will be between £50,000 and £60,000.

Professor E. A. Schäfer will read a paper on the phenomena attending death from drowning, and the means of promoting resuscitation in the apparently drowned at the meeting of the Royal Medical and Chirurgical Society on Tuesday next at 8.30 p.m. The paper will be illustrated by means of the epidiascope. Any members of the profession interested in the subject will be welcomed at the meeting, as will also medical students.

THE annual meeting of the Colonial Nursing Association will be held at Chelsea Hospital on June 11th. Lord Grey will preside, and among those who have signified their intention of being present are Princess Henry of Battenberg (patroness), Lord Selborne, and Sir Harry Johnston.

THE annual meeting and conference of the Dermatological Society of Great Britain and Ireland will be held at 20, Hanover Square, W., at 4.30 p.m. on Wednesday next, May 27th, when Professor Corlett of Ohio, U.S.A., will give the address on the Present Epidemic of Small-Pox throughout the United States, together with a Short Consideration of the Different Types of the Disease, their Recognition, and the Influence of Vaccination, illustrated with lantern slides.

METROPOLITAN ASYLUMS BOARD.—At the fortnightly meeting of the managers of the Metropolitan Asylums District held on May 16th, the re-elected Chairman, Sir R. M. Hensley, said that for the first time in its history the Board was free from the struggle of providing adequate hospital accommodation for the ever-increasing needs of London. According to the report of the Finance Committee, the expenditure incurred in providing small-pox accommodation and transport was £400,000 over the estimates, the main reason for which was the great speed at which the buildings were erected under circumstances of difficulty and pressure.

ANNUAL DINNER OF THE PHARMACEUTICAL SOCIETY.—The annual dinner of the Pharmaceutical Society was held on May 19th at the Hotel Cecil. The chair was taken by the President of the Society, Mr. G. T. W. Newsholme, who, in proposing "The Houses of Parliament," remarked that the Pharmaceutical Society had reasons for not being particularly enthusiastic in regard to the legislative machinery of the country. Mr. J. F. Remnant, M.P., in replying to the toast, referred to the clause in the new Pharmacy Act requiring a director of a company carrying on a chemist's business to be a qualified chemist. An opinion had been given in the House of Lords by which the clause could not apply to directors of limited liability companies. Mr. E. Marshall Hall, M.P., who also responded to the toast, urged the Pharmaceutical Society to apply for powers similar to those of the General Medical Council so that they could deal with questions concerning their members. If the society raised the standard of chemists from within then they could rely on Parliament to protect them from without. The Chairman proposed "The Medical Profession" which was acknowledged by Sir William Church, who said that the world was greatly indebted to the pharmacists for the important advances made in their branch of knowledge, the Pharmaceutical Society had done so much to raise the position of the chemist in Great Britain and would do even more in the future to place him in his proper position. Mr. G. D. Beggs replied for the toast of "The Pharmaceutical Society of Ireland" which was proposed by the Chairman. Sir Arthur Rücker proposed "The Pharmaceutical Society of Great Britain" and discussed the question of a connexion of the Society with the University of London. Mr. W. Giles replied to the toast of "The Local Pharmaceutical Association," and M. Eugene Léger, of Paris, acknowledged the toast of "The Guests," given by the Chairman.

MEDICAL VACANCIES.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column advertisements must be received not later than the first post on Wednesday morning.

BARNSTAPLE: NORTH DEVON INFIRMARY.—House-Surgeon, resident. Salary, £80 per annum.
BETHLEM HOSPITAL.—Two Resident House-Physicians, resident. Honorarium, £25 each per quarter.
BRECON AND RADNOR ASYLUM, Talgarth, R.S.O.—Assistant Medical Officer, resident. Salary, £140 per annum.
BUXTON: DEVONSHIRE HOSPITAL.—(1) House-Surgeon. Salary, £100 per annum. (2) Assistant House-Surgeon. Salary, £70 per annum. Both resident.
CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road.—House-Surgeon, resident. Salary at the rate of £30 per annum.
CHARING CROSS HOSPITAL.—Assistant Physician.
CHICHESTER INFIRMARY.—Honorary Medical Officer.
DENBIGH: DENBIGHSHIRE INFIRMARY.—House-Surgeon, resident. Salary, £100 per annum.
DEVONPORT: ROYAL ALBERT HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.
EAST LONDON HOSPITAL FOR CHILDREN, Shadwell.—House-Physician, resident Honorarium, £25 for six months.
GOSPORTH: CITY ASYLUM.—Assistant Medical Officer, resident. Salary £140, rising to £160 per annum.
GRAVESEND HOSPITAL.—House Surgeon, resident. Salary, £100 per annum.
HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL.—House-Surgeon, resident; unmarried. Salary, £75 per annum.
HEREFORD COUNTY AND CITY ASYLUM.—Junior Assistant Medical Officer, resident. Salary, £100 per annum.
HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Physician, resident. Appointment for six months. Salary, £20.
HOSPITAL FOR WOMEN, Soho Square, W.—House-Physician. Salary, £30 for six months.
LONDON HOSPITAL, E.—Assistant Obstetric Physician.
LIVERPOOL: STANLEY HOSPITAL.—Senior House-Surgeon, resident. Salary, £100 per annum.
MIDDLESEX HOSPITAL, W.—(1) Obstetric Registrar. (2) Director of Cancer Research Laboratories. Salary. £500 per annum, rising to £800. (3) Research Scholarship of £105 at the Cancer Research Laboratories.
NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Assistant House-Surgeon, resident. Salary, £50 per annum.
NORTHAMPTON GENERAL HOSPITAL.—Assistant House Surgeon, resident. Salary £75 per annum.
NORWICH: NORFOLK AND NORWICH HOSPITAL.—House-Physician, resident. Salary, £80 per annum.
PORTSMOUTH BOROUGH ASYLUM.—Assistant Medical Officer, resident. Salary, £120 to £150 per annum.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Professors and Lecturers.
SALISBURY INFIRMARY.—(1) House-Surgeon. Salary, £100 per annum. (2) Assistant House-Surgeon. Salary, £75 per annum. Both resident.
SEAMEN'S HOSPITAL SOCIETY, GREENWICH.—Senior House-Surgeon at the Branch Hospital, resident. Salary, £75 per annum, and £25 for officiating as Registrar.
SOUTHPORT INFIRMARY.—Resident Junior House and Visiting Surgeon, unmarried. Salary commencing £70 per annum.
VIRGINIA WATER: HOLLOWAY SANATORIUM FOR THE INSANE.—Junior Assistant Medical Officer (male), resident. Salary begins at £175 per annum.
WAKEFIELD: CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY. Junior House Surgeon, resident. Salary, £80 per annum.
WESTERN GENERAL DISPENSARY.—Honorary Physician or Surgeon Accoucheur.
YORK COUNTY HOSPITAL.—House-Physician, resident. Salary, £100 per annum.

MEDICAL APPOINTMENTS.

BEVILLE, F. W., L.R.C.P.Lond., M.R.C.S.Eng., appointed Certifying Factory Surgeon for the Denham District, Buckingham, and the Uxbridge District, Middlesex.
BRANDER, W., M.B., Ch.B., appointed Resident-Assistant Medical Officer of the Ecclesall Bierlow Union Workhouse.
BUTLER, T. L., M.R.C.S., L.R.C.P.Lond., appointed District Medical Officer of the Tavistock Union.
CASE, Henry, L.R.C.P., L.R.C.S.Edin., appointed Public Vaccinator for the Withnell District of the Chorley Union.
DICKSON, J. R., M.B., C.M.Edin., appointed Assistant Medical Officer of Health and Bacteriologist of Trinidad.
DIXON, G. B., M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant Medical Officer to the Walton Workhouse of the West Derby Union.
DODSON, Arthur E., M.R.C.S., etc., appointed Medical Officer to the Intermediate Schools of the Wandsworth and Clapham Union.
FLECK, David, M.B., B.Ch., B.A.O., (R.U.I.), M.P.C., appointed Resident Superintendent of the Royal Victoria Homes, Brentry.
JOHNSON, O., L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg., appointed District Medical Officer of the Lincoln Union.
MACKINTOSH, Duncan D., M.B., C.M.Aberd., appointed Medical Officer, Parish of Lumphanan. Also Certifying Factory Surgeon for the Aboyle District, Aberdeenshire.
MACLEOD, R. A. M., M.B., C.M.Edin., appointed Assistant Medical Officer to the West Derby Union Infirmary.
PRYTHERCH, H., L.R.C.P.Edin., M.R.C.S.Eng., appointed Certifying Factory Surgeon for the Beaumaris District, Anglesey.

DIARY FOR NEXT WEEK.

MONDAY.

Odontological Society of Great Britain, 20, Hanover Square, W., 8 p.m.

TUESDAY.

Epidemiological Society, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Mr. Jonathan Hutchinson: On the Etiology of Leprosy.
Royal Medical and Chirurgical Society, 20, Hanover Square, W., 8.30 p.m.—Professor E. A. Schafer, F.R.S.: The Phenomena attending Death from Drowning and the Means of Promoting Resuscitation in the Apparently Drowned. The Paper will be illustrated by means of the Epidiascope.

WEDNESDAY.

Dermatological Society of Great Britain and Ireland, 20, Hanover Square, W., 4.30 p.m.—Annual General Meeting and Conference. Dr. Corlett, of Ohio, U.S.A., will give an address on Small-pox, illustrated with lantern slides.

THURSDAY.

Guy's Hospital Medical School, 4 p.m.—Dr. E. W. Ainley Walker: On the Experimental Pathology and Therapy of Typhoid Infection (Gordon Lectures in Experimental Pathology).

POST-GRADUATE COURSES AND LECTURES.

Charing Cross Hospital. Thursday, 4 p.m.—Lecture on Medical Cases.
Hospital for Sick Children, Great Ormond Street, W.C., Thursday, p.m.—Lecture on Chorea.
Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C. Demonstrations will be given at 4 p.m. as follows:—Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, sciatica; Friday, throat. Lectures will also be given at 5.15 p.m. as follows: Monday, Food Poisoning; Tuesday, Sciatica; Wednesday, Milk Epidemics; Thursday, The Diagnosis of Pulmonary Tuberculosis; Friday, Parasites of the Gastro-Intestinal Canal.
Mount Vernon Hospital for Consumption and Diseases of the Chest, 7, Fitzroy Square, W., Thursday, 4 p.m.—Lecture on the Prevention of Consumption.
National Hospital for the Paralysed and Epileptic, Queen Square, W.C.—Tuesday, 3.30 p.m.—Lecture on Surgery of the Nervous System.
Post-Graduate College, West London Hospital, Hammersmith Road, W.—Lectures will be delivered at 5 p.m. as follows: Monday, Diseases of the Kidney; Tuesday, High Frequency Currents; Wednesday, Mania; Thursday, Treatment of Some Injuries and Emergencies; Friday, The Physiology and Pathology of the Ductless Glands.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

BREE.—On May 16th, 1903, at Manningtree, Essex, the wife of Sidney Bree, M.B.Lond., of a daughter.
CARRUTHERS.—On May 18th, 1903, at 44, Central Hill, Norwood, the wife of S. W. Carruthers, M.D.Edin., of a daughter ("Jean Chrystal").
CASSELS-BROWN.—On May 11th, at Dacre Hill, Rockferry, the wife of Andrew Cassels-Brown, of a daughter.
CAZALET.—On May 17th, at Sutton, Surrey, the wife of Grenville William Cazalet, L.R.C.P.Lond., M.R.C.S.Edin., of a son.

DEATH.

JONES.—At Derngate, Northampton, on May 5th, Edward Francis Jones, M.R.C.S., L.R.C.P.Lond., L.S.A., aged 61 years.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London*. The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London*.

☞ *Queries, answers, and communications relating to subjects to which the special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

H. A. asks for hints as to the use of acetylene lamps for cycles.

A. B. desires to know the name of any towns where hospital residents are appointed subject to the condition of not starting in practice there before the lapse of a certain period.

ANSWERS.

W. M., who is interested in a child, aged 3, who is deficient both mentally and physically, might apply to the Lady Superintendent of the Invalid and Incurable Children's Home, Witney, Oxon.

DR. SUTTON.—If the youth is simply feeble-minded application might be made to the Secretary of the National Association for Promoting the Welfare of the Feeble-Minded, 53, Victoria Street, Westminster. It certifiably imbecile application might be made to W. Howard, Esq., Secretary Earlswood Asylum, 36, King William Street, London Bridge, E.C. Farm and garden work are taught by the former, and a variety of occupations are provided by the latter society.

DRIGALSKI AND CONRADI'S TYPHOID CULTURE MEDIUM.

WE do not know the details of preparation of Kubel and Tiemann's litmus solution. It is excellent, vastly superior to ordinary litmus solutions for use in the making of Drigalski and Conradi's typhoid medium. It can be obtained through Messrs. Baird and Tatlock, 14, Cross Street, Hatton Garden, London, E.C.

ELECTRIC CARRIAGES.

SIR ALFRED COOPER (London, W.) has been good enough to send the following suggestions in reply to a question from Dr. Barton, published in the BRITISH MEDICAL JOURNAL of May 2nd, p. 1068. He writes: Formerly I kept four horses and three carriages, and the cost of them was over £1000 a year. I now do all of my professional and social driving in an electric landaulet supplied by the City and Suburban Electric Carriage Company, Limited, of Niagara, York Street, Westminster, which cost me under £600. The company stores and cleans the carriage, charges it with electricity, and it is sent to me whenever I require it. As regards this carriage, therefore, I have no trouble or expense in connexion with horses, stables, or coachhouse. I pay the company:

For storage, charging, and upkeep of carriage, per year...	£225
,, coachman, at 2 guineas per week ... ,, ,, ...	109
,, livery (say) ... ... ,, ,, ...	15
Total per year	£349

So far I am very pleased and satisfied with the carriage; it is faster than a horse-drawn carriage, and one avoids the anxiety which is always present in the case of valuable horses when they are kept waiting in the cold during theatres, operas, receptions, or professional calls.

LETTERS, NOTES, Etc.

THE MEDICAL GOLF TOURNAMENT.

WE are asked to state that the (sixth) annual Medical Golf Tournament for 1903 will be held on May 28th on the links of the Hanger Hill Golf Club, at Ealing, by kind permission. The tournament will be under the same rules as last year, namely, 18 holes match play—v. Bogey—in two handicap classes (1) 12 and under (2) over 12. Members of Hanger Hill deduct 2 from their handicap; no match to start later than 3 p.m. Foursome Sweepstake v. Bogey in the afternoon. Players arrange their own matches or apply to the hon. sec. for a partner. Entries, stating lowest handicap and enclosing 5s. entry fee, to be made by May 26th to the Hon. Sec., Rolf Creasy, Windlesham, Surrey.

RHYTHMICAL COMPRESSION OF THE CHEST IN INFANTILE CAPILLARY BRONCHITIS.

FLEET-SURGEON W. EAMES, R.N., writes: The article in the BRITISH MEDICAL JOURNAL of April 18th, by Mr. T. Houghton Mitchell, on the subject of rhythmical compression of the chest as a remedial factor in capillary bronchitis, brings to my mind a case of the same affection occurring in a young negro who was admitted into the medical wards of the London Hospital in the year 1879. Upon this patient rhythmical compression of the chest was adopted in the form of Sylvester's method of artificial respiration, which was maintained by relays of assistants, of which I was one, but with, I regret to say, an unsuccessful result. The *rationale* of this procedure and its application in practice in the treatment of the condition noted above would therefore appear to have been recognized many years ago.

THE TREATMENT OF CHRONIC ECZEMA.

DR. W. HARGOOD (Marple, Cheshire) writes with reference to Dr. Heffernan's letter on treatment of chronic eczema locally with iodine to state that in the BRITISH MEDICAL JOURNAL of November 26th, 1898, Dr. Ellis of Folkestone described the same method.

LETTERS, COMMUNICATIONS, ETC., have been received from:

A Academicus: Messrs. Arnold and Sons, London; Association of Registered Medical Women, Secretary of, London; A. B. **B** Dr. C. Buttar, London; Miss M. Beadon, Bushey Heath; Mr. E. W. Barnes, Liverpool; Dr. J. W. Byers, Belfast; Dr. J. Brown, Bacup; J. A. Ball, M.B., Stradbroke; Dr. P. G. Bayon, Würzburg; C. A. Ballance, M.B., London; Mr. L. A. Bidwell, London; Dr. G. B. Batten, London; Dr. J. B. Brierley, Manchester; Mr. W. P. Barrett, Folkestone; Dr. J. Braithwaite, Leeds; Messrs. T. B. Browne, Limited, London. **C** W. B. Clarke, M.B., London; Sir A. Cooper, London; Dr. E. M. Callender, London; Dr. W. H. Calvert, Melrose; Country Doctor; A. Cox, M.B., Gateshead; Mr. J. B. Curgenven, Hildenborough; Dr. W. A. Carline, Lincoln; Dr. J. Campbell, Belfast; Sir A. Critchett, London; Mr. R. Creasy, Windlesham; Dr. A. H. Copeman, Cowes, I.W. **D** Dr. J. Donald, Glasgow; Mr. G. W. Duncan, London; Dr. W. F. Dearden, Manchester; Mr. J. Q. Donald, Edinburgh. **E** Dr. G. R. Elwin, London. **F** Dr. G. Ferdinands, Aberdeen; Fed Up; Dr. T. Fisher, Clifton; Mr. G. Fisher, Guildford; Mr. E. P. Furber, Oxted. **G** Miss S. Gray, Nottingham; Mr. G. de G. Griffith, London; Messrs. Gongalez, Byass, and Co., London; Dr. K. Grossmann, Liverpool; Messrs. R. W. Greeff and Co., London; G. C. C. **H** Mr. G. Hermanni, jun., London; Dr. S. A. Habersbon, London; Messrs. P. Hensel and Co., London; Mr. J. W. Hirst, Manchester; Dr. C. O. Hawthorne, London. **J** Mr. E. Johnstone, Manchester; Dr. G. P. Johnston, Stoke-on-Trent; Mr. G. J. Jolliffe, London. **K** Mr. A. B. Kent, London; Dr. E. D. Kirby, Birmingham. **L** Mr. J. B. Lamb, London; E. W. Lewis, M.B., Jammalamadugu; Mr. R. G. Lund, London. **M** Dr. J. E. Moorhouse, Stirling; Dr. W. J. C. Merry, Eastbourne; E. H. Myles, M.B., Bedford; Metropolitan Asylums Board, Secretary of, London; Mr. H. H. B. Macleod, Shrewsbury; P. McBride, M.B., Edinburgh; Medical Etiquette; Mr. G. W. May, London; Mr. J. Y. W. MacAlister, London; Dr. J. J. Macan, Cheam; Dr. R. W. Marsden, Manchester; Dr. A. W. Mackintosh, Aberdeen; Mr. W. J. Morton, London. **N** Mr. W. J. Nicholls, London. **O** Otological Society, Secretary of, London; Mr. G. S. O'Rorke, Nottingham. **P** Mr. E. Philpotts, Torquay; Perplexed; G. M. Pittock, M.B., Margate; Dr. M. S. Pembrey, London; Dr. V. Pendred, Buckingham; F. J. Pritchard, M.B., East Retford; Mr. C. Palmer, Burton-on-Trent. **R** Dr. W. R. Rice, Coventry; Mr. H. M. Raven, Broadstairs; A. B. Rendle, M.B., London; J. D. Russell, M.B., London; Dr. A. Raffray, Paris; Red Hot; Dr. T. Richards, Birmingham. **S** Dr. L. E. Shaw, London; Messrs. G. Street and Co., London; Dr. W. Sykes, Exeter; Dr. R. M. Simon, Birmingham; Dr. W. H. B. Stoddart, London; Sax; S. F.; B. Strachan, M.B., Sunderland; Dr. G. Sanarelli, Rome; Scow; A. Shillitoe, M.B., London. **T** Teres. **V** Mr. S. Vines, Mossley; Mr. E. A. Veale, London. **W** Dr. B. C. A. Windle, Birmingham; Mr. R. Wilson, Grantham; Dr. A. Whitfield, London; Dr. F. Willcocks, London; Mr. P. S. White, Bugbrooke; J. S. F. Weir, M.B., London; Dr. J. Wheatley, Shrewsbury. **X** X. Y. Z.; X Rays.

BOOKS, Etc., RECEIVED.

Ueber die Ursachen, das Wesen und die Behandlung des Klumpfusses. Von Dr. Julius Wolff. Herausgegeben von Prof. Dr. Georg Joachimsthal. Berlin: August Hirschwald. 1903. M.4.

Die traumatische Spätapoplexie. Von Prof. Dr. Rob. Langerhans. Berlin: August Hirschwald. 1903. M.2.

A Manual of Plague. By Major W. E. Jennings, I.M.S., M.B., C.M. London: Rebman, Limited. 1903. 8s.

The Fraud of the Label; A Warning to Dishonest Tradesmen and Honest Buyers. London: Limpus, Baker, and Co.

Das Augusta Victoria Kranken-und Schwestern Haus vom Rothen Kreuz des Zweigvereins Berlin des Vaterländischen Frauen Vereins mit Berücksichtigung der besonderen Gesicht-spunkte für Gründung, Bau und Betrieb eines Kranken-und Schwestern Hauses vom Rothen Kreuz. Im Auftrage des Vereins und Curatoriums von Dr. Hermann Weber. Berlin: August Hirschwald. 1903. M.4.60.

The Middlesex Hospital, W.: Reports of the Medical, Surgical, Obstetric, and Pathological Registrars for the Year 1901. London: H. K. Lewis. 1903. 2s. 6d. net.

The Geography of Disease. By Frank G. Clemow, M.D.Edin., D.P.H.Camb. London: C. J. Clay and Sons. 1903. 15s.

The Diseases of Infancy and Childhood. By Henry Koplik, M.D. London: Henry Kimpton. 1903. 21s. net.

A Treatise on Diseases of the Eye, Nose, Throat, and Ear. By Various Authors. Edited by William Campbell Posey, A.B., M.D., and Jonathan Wright, M.D. In Two Volumes. London: Henry Kimpton. 1903. Two vols., 32s. net.

Burdett's Hospitals and Charities, 1903. By Sir Henry Burdett, K.C.B. London: The Scientific Press, Limited. 5s. net.

The Hydro-Mineral Cure of Evian. By Doctor Paul Bergouignan. Paris: Jules Rousset. 1903.

The Pocket Therapist: A Dictionary of Disease and its Treatment. By Thomas Stretch Dowse, M.D.Aberd., F.R.C.P. Edin. Third Edition. Bristol: John Wright and Co. 1903. 8s. 6d. net.

Breakfast and Savoury Dishes. By Florence B. Jack. London and Edinburgh: T. C. and E. C. Jack. 1903. 1s.

Hot Puddings, Soufflés, and Fritters. By Florence B. Jack. London and Edinburgh: T. C. and E. C. Jack. 1903. 1s.

The Art of Cooking for Invalids in the Home and the Hospital. By Florence B. Jack. Third Edition. London and Edinburgh: T. C. and E. C. Jack. 1903. 2s.

Les Infames: Prêtres et Moines non conformistes en Amour. Par G. Dubois-Desaulle. Paris: Editions de la Raison. 1902. Fr.3.50.

The Ecclesiastical Supplement to the "Premier" Telegraphic Code, containing 100,000 additional Words, Phrases, etc. London: The Church Agency, Limited. 1903. 25s.

Muco-Membranous Colitis. By Dr. Froussard. London: Baillière, Tindall, and Cox. 1903. 1s.

The Diseases of the Nose, Throat, and Ear. By C. P. Grayson, A.M., M.D. London: Henry Kimpton. 1903. 18s.

Anatomy. By William H. Rockwell, jr., M.D., Series edited by Bern. B. Gallaudet, M.D. London: Henry Henry Kimpton. 1903. 10s.

Practical Pharmacy and Prescribing for Students of Medicine. By James Calvert, B.A., B.Sc., M.D.Lond. Second Edition. London: H. K. Lewis. 1903.

Technique et Indications des Médications Usuelles. Par G. Lemaine. Paris: Vigot Frères. 1903. Fr.7.

. In forwarding books the publishers are requested to state the selling price.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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N.B.—It is against the rules of the Post Office to receive letters at *Poste Restantes* addressed either in initials or numbers.

Remarks
ON
A CASE OF TRYPANOSOMIASIS.

BY
PATRICK MANSON, C.M.G., F.R.S., and C. W. DANIELS, M.B.,
London School of Tropical Medicine.

PROFESSORS BOYCE, ROSS, AND SHERRINGTON have described so recently and so fully the history of the discovery of trypanosomes in man that it is unnecessary to revert to this aspect of the subject of this communication. Suffice it to say, that having had the privilege last August of a demonstration by Dr. Dutton of Mr. Forde's patient,[1] we were led from the clinical features of the case we are about to describe to a provisional diagnosis of trypanosomiasis. The patient was sent to one of us on October 3rd, 1902, by Dr. Habershon for an opinion, Dr. Habershon having been struck by its anomalous characters—so unlike in many respects those of malarial cachexia, the disease for which she had been and was being treated. Subsequently the patient entered the wards connected with the London School of Tropical Medicine at the Seamen's Hospital, Royal Albert Docks, where she became the subject of close and prolonged observation, extending over a period of five months. At first the blood examinations, made with a view of establishing our diagnosis of trypanosomiasis, were negative, but knowing how scarce the parasites sometimes are in this class of disease arrangements were made to test our suspicions by means of injections of the blood into certain of the lower animals. Meanwhile, as the leucocyte count was peculiar, microscopic examination of the blood was persevered in, with the result that trypanosomes were found in it on October 27th and many times subsequently.

History.—Mrs. S., married, aged 40, with a good personal and family medical history, went to the Congo Free State in July, 1900. She resided at Monsembe, a mission station on the Upper Congo, for fifteen months, from August, 1900, to November, 1901. She had one short attack of malarial fever in November, 1900; a second, lasting only a few hours, about four months later; and a third, lasting for a few days, in June, 1901. These attacks promptly yielded to moderate doses of quinine. Her present illness may be said to date from the end of August, 1901. About a fortnight before its commencement—that is, about August 14th, she was bitten on the left leg by some insect or other animal. The bitten part became red, swollen, and very painful, so much so that suppuration was apprehended; under treatment, however, the inflammation subsided in a few days. She states that the bite may have been inflicted by a species of fly about which her husband writes: "The only biting insect I have noticed the natives making a fuss about are what we call 'the blood-sucking flies.' We almost never see them on shore, but are pestered with them so soon as ever we get into a boat or canoe, especially if it has a shelter or awning." On August 28th she commenced to have fever. It set in suddenly like a malarial attack, but without rigor. The associated general aching, and especially the vertical pain and sense of fullness in the head were more intense than in the malarial attacks previously experienced. In addition, she had severe abdominal pains, possibly corrected with her period which occurred about this time. The temperature during the first eight days did not exceed 102° F.; it was usually a little lower, but not normal, in the morning. Quinine up to 40 gr. was given daily. On the eighth day the temperature fell to normal and remained so for thirty-six hours. She got up, but on the afternoon of the ninth day she felt chilly, and the fever returned accompanied with much vomiting. This attack proved more severe than the first, so much so that hyperpyrexia threatening, the large doses of quinine—up to 90 gr. a day—which she had been taking were abandoned and she was treated with cold baths. About the eighth day of the relapse the temperature began to fall, and on the tenth day was again normal. Unfortunately no accurate record of the temperature during the initial fever was preserved, but Chart 1 is a faithful record of the temperatures during this, the second, attack. There was now an apyretic spell of about ten days, which was succeeded once more by a febrile recurrence of about fourteen days' duration. This was milder in character than the two previous attacks, the thermometer rising only to 100° F. or 101° F. Her health not improving she left the Congo on November 21st. On the voyage home she had fever about once a week, the temperature sometimes rising to 103° F. On what were assumed to be apyretic days her temperature was not taken. During the passage she had 10 gr. of quinine daily, a larger dose being administered when fever was pronounced. The attacks at this time were preceded by rigor and followed by profuse diaphoresis. Mrs. S. arrived in England on December 11th, 1901. She kept well for the first week and was able to get about a little, but ever since that time she has suffered from irregular pyrexia of an intermittent, undulant type. Possibly she had feverless weeks, but this cannot be asserted with confidence as her temperatures were not taken regularly. In May, 1902, she had an attack of phlebitis in the left leg, which became swollen as high up as the knee. Swelling partly subsided in a week, but pain persisted for three months, and both legs gradually became more or less persistently swollen.

Condition on Admission.—She is a fair-skinned woman, having a somewhat plump and fictitiously healthy appearance, the result of a patchy erythematous flushing and oedematous fullness of the face and body generally. Her pulse is quick (108) and feeble. Her tongue has a rough and raw appearance, which, she states, is associated with a feeling of soreness and dryness. Her appetite is capricious; her bowels are confined, and she frequently suffers from vertical headache, though less so than formerly. The spleen is very much enlarged, extending to the umbilicus and crest of the left ileum. The area of liver dullness is probably somewhat larger than normal. Ophthalmoscopic examination reveals a peculiar condition of the choroid, to be presently described. The temperature on admission was 102.8° F.; during the following night she had profuse sweating, and next morning the temperature had fallen to 96.6° F. There is marked muscular feebleness and a tendency to palpitation on exertion. Lungs, heart, and urine appear to be normal.

Progress.—During her stay in hospital she seemed at times to be gaining ground; at other times her condition was almost critical, owing to the general weakness and prostration accompanied by palpitation and nervous depression, especially so during and after an attack of mild diarrhoea at the end of November and beginning of December. About this time she suffered much from pain in the left thumb, accompanied by

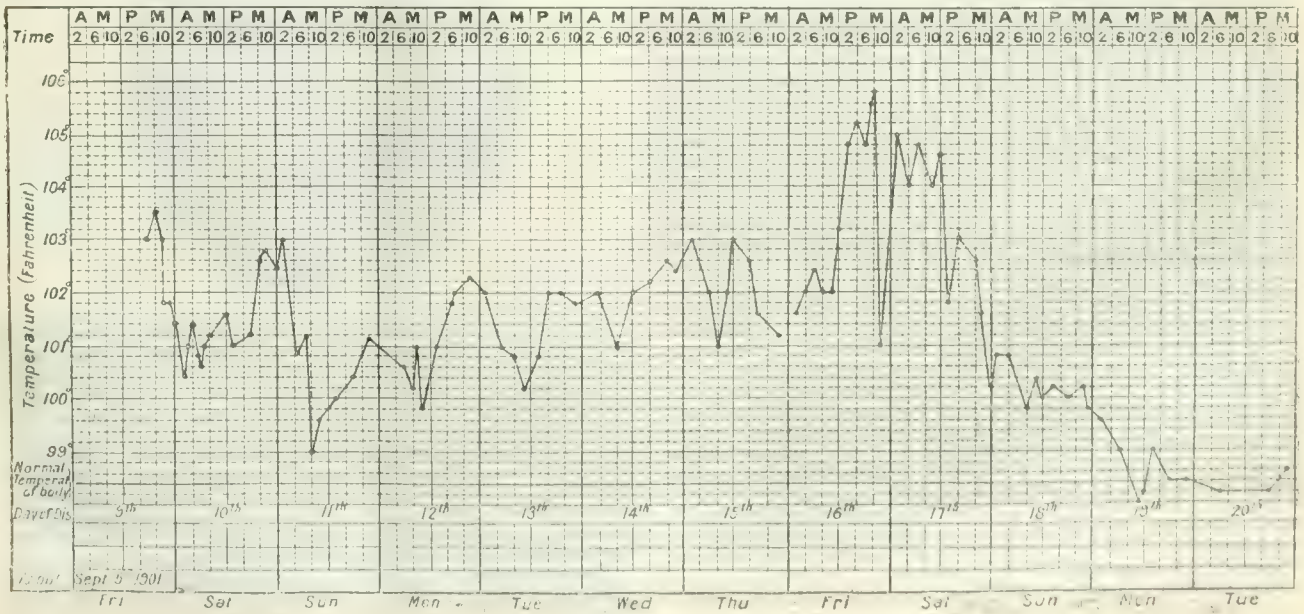


Chart 1.

slight swelling of the part and a tenderness of the upper and outer surface of the corresponding forearm, with slight local discoloration as if from a slight bruise. The pain in the thumb continued for weeks. Part of January and February, 1903, she spent at Eastbourne with benefit to her general health. She returned to hospital on February 24th, and left again for her home in Bristol on March 27th, much in the same condition as when admitted in the preceding October. During the second stay in hospital she had another and more alarming attack of depression, apparently supervening on the course of injections of horse serum, as will be detailed later on. When she left her spleen was much smaller than when admitted, but fever, sweats, palpitation, rapid pulse, and prostration, as well as the skin symptoms and the presence of the parasite in the blood, were practically unaltered.

She was seen again by one of us on May 5th, when the following note was made: Her general condition is much improved. There is now no flushing or puffiness of the face, but there is still distinct patchy erythema of the trunk with slight oedema; there is no oedema of the feet and legs. She walks about freely, but is short of breath on going upstairs or on unusual exertion. If she fatigues herself the evening temperature may rise to 101° F., but there are now no night sweats. The spleen is smaller and softer. In the course of a short microscopic examination of the blood several trypanosomes were discovered. Slides of blood taken from time to time since she left hospital sometimes contained trypanosomes, sometimes they did not. Her left arm and thumb are no longer painful, but they are weak, somewhat smaller than the other side, cold, and blue; the radial pulsation is easily made out.

Details of Special Symptoms.

Temperature.—This as a rule, while in hospital, ranged from about 97° F. in the morning to 100° F. in the evening. It was never absolutely normal for 24 hours on end. Occasionally for a few days it would rise to 101° F. or 102° F. in the evening; these rises were generally succeeded by profuse night sweats and a fall to 96° F. or 96°.5 F. the following morning. Only once was there anything like smart fever—103° F.; this was associated with the horse serum injections alluded to.

The pulse was always rapid and feeble. During exacerbations of temperature it mounted to 140 or even 150, and then palpitation and sometimes headache were complained of.

The erythema, which was so remarkable a feature in the case, was first observed during the primary fever on the Congo. At that time she suffered much from prickly heat; it is therefore possible that the erythema may have been present though unobserved before the onset of the severe symptoms. The skin of the limbs, trunk, and face were all involved, more especially the back of the trunk and the face. The eruption was said to have been more marked during the initial pyrexial period than subsequently. While she was in hospital it showed itself on many occasions only as an obscure patchy mottling; at other times the cutaneous congestion was very pronounced. The individual patches, which were of a very evanescent character, varied in size and form from an inch to many inches across, from distinct rings, or segments of rings, to ill-defined irregular blotches shading insensibly into healthy-looking skin. One or both sides of the face and forehead often presented a flushed appearance as if from wine. There was no pruritus or urticaria.

The Oedema.—This, like the erythema, was most pronounced on the back and face: especially, in the case of the former, towards the flanks and sacral region. The legs were also distinctly implicated, the arms less so. The oedema evidently involved the cutis as well as the subcutaneous tissue, for by pressing firmly with the finger a distinct imprint of the papillary ridges of the finger-pad, as if impressed on a piece of putty, would persist for some time. Although distinct enough, the oedema was nowhere, nor at any time, very great—it was just sufficient to give the appearance of comfortable *embonpoint*. Like the erythema, it fluctuated in degree from time to time, and had perhaps a similar tendency to patchiness in its distribution.

The Spleen.—We were informed that there was no manifest splenic enlargement after the three malarial attacks occurring during the earlier part of the patient's stay on the Congo; but when she arrived in England, in December, 1901, the enlargement was very marked. On admission the organ extended forwards to the umbilicus and downwards to the crest of the left ileum. Subsequently, whether as the result of treatment or spontaneously, it diminished considerably, so that when she was discharged from hospital the edge had retreated about a handbreadth from the umbilicus. There was never any complaint of pain in the splenic region.

Eyes.—We are indebted to Mr. Treacher Collins for the following note on the condition of the patient's eyes on October 31st, 1902:

Vision: R., ⅔, partly Jaeger 1; L., ⅔, Jaeger 1.

Field, tested with hand, normal. Colour vision normal. Pupils active to light and accommodation. Media clear.

Ophthalmoscopic appearances: In the macular region of each eye there is an area of superficial choroidal atrophy with some pigmentary disturbance. In the right eye this area is irregularly star-shaped. In the left eye the pigment disturbance is more marked and forms denser spots than in the right.

Outside the patch of atrophy in the macular region in the right are some small, regularly circular, discrete, whitish dots, situated at a deeper level than the retinal vessels.

In the periphery of the fundus in each eye there are several disseminated small patches of a light colour, apparently due to choroidal atrophy. Some of these are without any, and some have a slight amount of pigmentary disturbance about them.

The optic disc and retinal vessels are normal; there are no haemorrhages to be seen.

The Parasite (Fig. 1).—For observations on the parasite, as

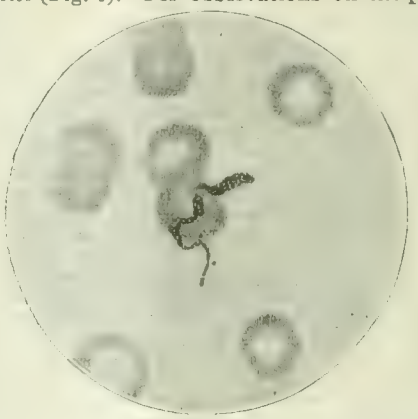


Fig. 1.

well as for long series of blood counts, we are indebted to Dr. Duncan Whyte and Dr. George Low, both of whom devoted much time and conscientious work to the elucidation of these features of the case.

Frequent examinations of the blood were made during the first three days following admission, but, as already mentioned, no trypanosomes were found till October 27th. They must have been present, however, before this date, for when the films prepared by Dr. Duncan Whyte during this period were subsequently re-examined, parasites—though few in number—were found in them. From the date mentioned trypanosomes were almost always found on prolonged examination, and on some days fairly readily.

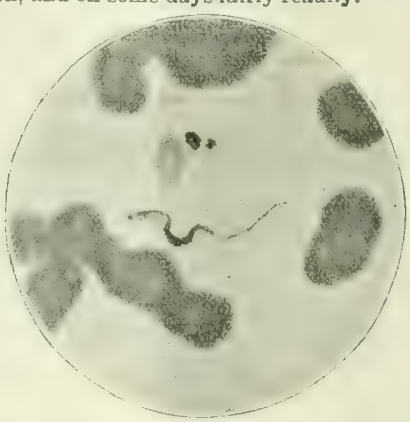


Fig. 2.

The number of trypanosomes present at any time was so small that an estimate based on a count of them in a measured volume of blood was considered unreliable. Accordingly, the number met with in the course of counting 500 leucocytes was taken as a basis for a rough estimate. But as the thin films employed gave only one leucocyte to 8co to 1,500 red blood corpuscles, whereas from estimates made in the usual way it was ascertained that the true proportion of white to red blood corpuscles was 1 to 560, it follows that the actual proportion of parasites to leucocytes, and therefore their number per c.mm. of blood was considerably different from that indicated by the findings in the films.

The accompanying chart (2) prepared by Dr. Whyte gives some idea of the number of trypanosomes per slide and their variations in this respect from time to time. It was noted

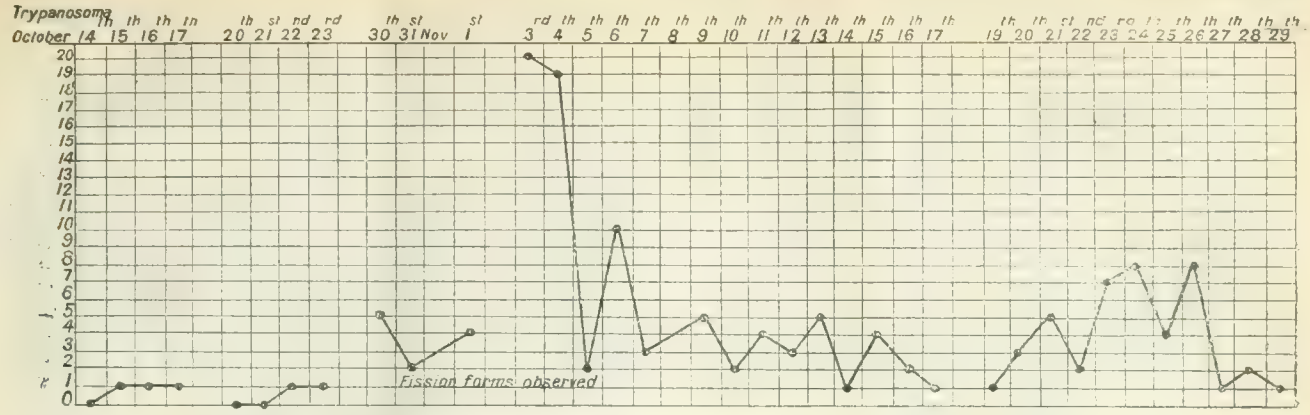


Chart 2.—Showing fluctuation in the numbers of trypanosomes to 500 leucocytes.

that there was no manifest alteration in the condition of the patient corresponding to the fluctuations in the numbers of the parasites present in finger blood.

As regards structure and habits Dr. Dutton's description of the trypanosomes in Mr. Forde's case applies to the parasites found in our patient. Dr. Whyte measured twelve examples (fixed and stained); the longest was 22 microns, the shortest 15 microns; average length 18 microns. Only two dividing forms were found; these occurred two days before a sudden and very marked increase of the number of parasites in the blood. One parasite (Fig. 2) furnished with two flagella at one end was found by Dr. Whyte; in other respects this example appears, judging from the stained preparation, to be normal and shows no indication, such as division of nucleus or of controsome, of being in process of fission.

The Blood.—The red corpuscles were diminished in number but, except for a short time during treatment with horse serum, not to any very great extent. The highest count was 3,880,000. With the exception mentioned, the lowest count was 2,825,000. The haemoglobin was reduced in about the same proportion as the red corpuscles—36 per cent. was the lowest estimate. The red corpuscles were fairly uniform in size; there was no poikilocytosis. Including all the blood examinations only four nucleated red cells were found.

The leucocytes were slightly below the normal number in most counts. The lowest count was 4,200, the highest 8,600; the average of the counts made by Dr. Whyte and one of us was 6,520. The differential leucocyte count showed excess of the mononuclear elements, the excess being due to a marked increase of the large mononuclear cells, not of the lymphocytes. The polymorphonuclear and eosinophile leucocytes were fewer than normal.

	Dr. Duncan Whyte.* 20,000 Cells Counted.	Dr. Daniels.* 6,620 Cells Counted.	Dr. Low.†
Polymorphonuclears ...	51.5	55.2	53.7
Large mononuclears ...	29.75	22.7	19.05
Lymphocytes	16.0	18.4	24.0
Eosinophiles	1.0	1.8	2.5
Mast cells...	0.25	0.48	0.15
Abnormal mononuclears	1.5	1.3	—

* November to December, 1902. † February to March, 1903.

These figures show a marked increase in the large mononuclear elements and a diminution in the polymorphonuclears and eosinophiles, even without allowing for the circumstance that most of the counts showed a diminution in the total number of leucocytes. The lymphocytes were not affected beyond the normal range of variation, and there was a diurnal variation as usual. The large mononuclear elements were increased so as to be in two or three times their normal proportion. Mast cells were in larger numbers than are found in normal blood. The abnormal cells mentioned were mononuclear. They varied in size, had large round nuclei and protoplasm which stained deeply with Leishman's stain. They were quite different in appearance from either the lymphocytes or the large mononuclear leucocytes. It may be remarked that this type of cell is not peculiar to this disease; they are found in small numbers in splenomedullary leucocythaemia, and occasionally in other morbid conditions. The differences in the various counts were not greater than is usual in counts of blood taken at different times and made by different observers.

Inoculation Experiments.—Professor Hewlett carried out a series of experiments with the view of infecting with the trypanosome certain of the lower animals. The blood used was taken from the patient at such times as the parasites were specially numerous. It was immediately diluted with 8 per cent. of a 5 per cent. solution of sodium citrate, and injected as soon as circumstances would permit. Although in the blood so diluted the parasites were hard to find, yet when found, and though kept under observation for periods ranging from two to five hours, their movements continued to be quite active; the citration of the blood, therefore, so far as could be observed, impaired in no way their vitality. The animals injected were as follows: 4 rats, 2 mice, 2 guinea-pigs, 1 rabbit, 1 dog (two inoculations), 2 monkeys, 1 pony, 1 pig. Although these animals were kept under observation for a considerable time—some of them for several months—after inoculation, none of them showed any evidence, either clinical or microscopical, that the inoculation had succeeded. We are therefore justified in concluding that this trypanosoma of man is specifically distinct from those of the rat, of surra, of nagana, of *mal de caderas*, and of dourine.

Treatment.—While in hospital the patient was kept in bed in a warm room and fed well. Arsenic in the form either of arrhenal, sodium cacodylate or arsenate of iron was administered hypodermically. Notwithstanding that the drug was pushed to what appeared to be the limit of prudence it did not seem to have any influence on the parasite or on the disease. Methylene blue was also given with a like result. The visit to Eastbourne, the methylene blue and the cacodylate injections being continued, appeared to benefit the general health.

Laveran[2] injected human blood serum into mice infected with the trypanosoma of nagana with the result that a proportion of the mice so treated recovered from what is almost invariably in them a fatal disease. Laveran reasoned that as man is immune as regards nagana the immunity may be owing to some property of his blood serum, and that if infected mice be treated with this the trypanosoma concerned may be killed. The experiments referred to seemed, in a measure, to bear out this idea. Accordingly, considering the apparent gravity of the case and the futility of the other means already tried, we felt ourselves justified in attempting treatment on similar lines in our patient. Having ascertained that the human trypanosoma could not live in the horse, we selected this animal as a source of serum supply. The table on p. 1253 embodies our results. It may be stated in explanation of the table that prior to the commencement of the serum injections, temperature ranged from normal in the morning to 101° in the evening. On February 25th, 26th, and 27th 10 c.cm. of horse serum were injected into the flank daily; on the 28th the dose was increased to 15 c.cm., and from March 1st to 5th to 20 c.cm. On the 25th the patient became so depressed, her temperature so high, and her pulse so rapid, and at the same time the haemolytic action of the serum so pronounced, the blood count having dropped by one-third within a week, that it was deemed prudent to suspend the treatment. The parasites did not seem to be affected by the serum. On stopping the injections the general condition improved so rapidly and the

Table of Temperature and Blood Observations during period of Horse-serum Injections.

Date.	Time.	Temperature.	Pulse.	Amount of Horse Serum Injected in c.cm.	Red Blood Corpuscles.	Leucocytes.	Haemoglobin per cent.
		°					
February 24th ...	M.						
	E.	101.0					
,, 25th ...	M.	98.6		10			
	E.	101.0					
,, 26th ...	M.	98.8		10			
	E.	101.0					
,, 27th ...	M.	98.0		10	3,280,000	2,540	40
	E.	101.6					
,, 28th ...	M	99.6		15			
	E.	101.6					
March 1st	M.	99.0		20			
	E.	101.6					
,, 2nd	M.	98.0		20	2,330,000	2,500	38
	E.	100.0					
,, 3rd	M.	99.6		20	2,370,000	1,800	38
	E.	101.6	88				
,, 4th	M.	99.6	100	20	2,400,000	6,800	40
	E.	102.4	140				
,, 5th	M.	101.4	116	20	2,146,000	3,100	36
	E.	103.4	132				
,, 6th	M.	102.0	120		1,970,000	6,500	36
	E.	101.6	128				
,, 7th	M.	99.2	116		2,600,000	7,800	42
	E.	102.0	120				
,, 8th	M.	99.0	98		3,000,000	6,000	43
	E.	103.0	128				
,, 9th	M.	101.2	110		2,800,000	5,000	45
	E.	101.0	120				
,, 10th	M.	100.4	110	30	2,920,000	4,000	42
	E.	103.6	120				
,, 11th	M.	102.0	120	30	2,760,000	3,500	42
	E.	102.6	130				
,, 12th	M.	101.8	128		2,380,000		
	E.	101.8	147				
,, 13th	M.	99.8	130		2,990,000	11,800	40
	E.	99.6	120				
,, 14th	M.	97.0	100		2,895,000	4,200	42
	E.	99.4	124				
,, 15th	M.	97.0	90		3,220,000	6,500	45
	E.	99.6	120				
,, 16th	M.	98.0	100		3,500,000	1,500	47
	E.	99.6	112				

blood regeneration was so marked, the count having risen within a few days from two to three millions, that it was deemed safe to resume the injections, and in larger doses of 30 c.cm. Two such injections were given, one on March 10th and the other on the 11th. At once the blood count began to drop, the patient to become depressed, and on the night of the 11th, about 11 p.m., alarming symptoms suddenly developed, namely, choreic movements in the legs extending to the hands, arms, and trunk, together with high fever and rapid feeble pulse. At 10.45 a.m. on the 12th severe convulsive movements of the muscles of the trunk set in, and the patient became dull and apathetic; at the same time the erythematous condition of the skin became more pronounced and more dusky. The temperature was reduced by sponging, and by the 13th had fallen to subnormal in the morning, the general condition also undergoing marked improvement, and the blood count, which had again become seriously reduced, rising once more to 3,000,000. Although there had been some reduction in the number of trypanosomes in the finger blood it was not considered to be safe to resume the injections. When discharged on March 27th the patient had quite recovered from what, had it been pushed much further, might have proved a disastrous line of treatment.

REFERENCES.

[1] BRITISH MEDICAL JOURNAL, 1902, vol. ii, p. 881. [2] *Annales de l'Institut Pasteur*, November, 1902.

PURE DRUGS.—A Bill has, according to *American Medicine*, been introduced into the New York Legislature to prohibit the sale of defective, stale, or otherwise deficient drugs, and to punish persons who make substitution of another drug for the one called for by a customer. The Bill provides that drugs likely to deteriorate in time must be marked with the date of manufacture, and with a statement showing the quality, strength, and genuineness of the drug. A time limit must also be fixed after which the drug will be unfit for use. The Bill was introduced at the instance of the Medico-legal Society of New York.

ON THE POSSIBILITY OF THE OCCURRENCE OF TRYPANOSOMIASIS IN INDIA.

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THE recent discovery of trypanosomiasis in man by Dr. Dutton and Dr. Forde,[1] and the report of further cases by Dr. Manson,[2] naturally lead one to question the possibility of the occurrence of this disease in other parts of the world than those originally reported—viz., the Congo and the Gambia. In the following remarks I hope to show that there is at least some ground for the belief that it may occur in India, and that a species of trypanosoma may be the cause of one of the indefinite varieties of fever occurring in that country, in which the presence of malaria parasites in the blood is not determined or is, at least, only incidentally noted.

The case upon which this theory is based belonged to such a class, whose general features I shall briefly describe before going into details with regard to the individual patient. For want of a better name I may speak of them as cases of "Dum-dum fever," because, as far as my experience goes, the patients usually came either from this cantonment or its immediate neighbourhood. This station of Dum-dum lies about seven miles from Calcutta and is notoriously unhealthy, malarial fevers of all types, dysentery, and enteric being rife. It is excessively damp, and, in the rains, is practically a morass from the fact of its lying so low; it is said to be even a few feet below the level of the Hoogley, which flows within a mile or two of the cantonments. I had a short personal acquaintance with this station in 1890, but the present remarks refer to the features of this form of Indian fever as presented by soldiers invalided on account of it from Dum-dum to the Royal Victoria Hospital, Netley, during the past three or four years. The cases were, as a rule, regarded as having been malarial in origin, and presented, on admission to Netley, an extreme degree of cachexia; it was, in fact, the severity of this cachectic condition and the frequency of its association with Dum-dum—and, more rarely, its immediate neighbours, Calcutta and Barrackpore—which gave rise to the idea that we were dealing with a specific type of fever, whose cause was unknown. Clinically, these cases presented no very definite features distinguishing them from other and commoner forms of tropical cachexia, the chief symptoms being an irregularly remittent type of fever, grave anaemia, progressive muscular atrophy, and great enlargement of the spleen. Digestive and bowel derangements were frequent, the latter often a legacy of previous dysentery. In none of these Netley cases were malaria parasites found in the blood, nor were there any records of their having been found at an earlier stage of the disease.

The difference, then, between these cases of Dum-dum fever and other cases of tropical cachexia, associated with a low form of fever was chiefly one of degree, and this was so marked that one of the first questions one asked a patient suffering from a particularly severe form of cachexia was as to whether he had served recently at Dum-dum. Time after time the reply was either that he had been invalided directly from this station, or that he had quite recently served there. It was at the necropsy of one of these cases of Dum-dum fever that the appearances described below were noted in the spleen, which I now think to have been due to trypanosoma infection.

Private J. B., 2nd Royal Irish Rifles, aged 23, who had been invalided from Dum-dum for dysentery, was admitted to Netley in April, 1900, and died there seven months afterwards. He had not served in any other tropical country. During these seven months he presented in an extreme degree all the general features of the class of cases I have just described, and, in addition, suffered from chronic dysentery for some time after his admission, though this had improved considerably before his death. I examined his blood on many occasions, but never detected any signs of malaria. His temperature was seldom normal, but his chart showed no regular features. At the necropsy, made 38 hours after death, beyond the intense emaciation, the only gross lesions found were in the large intestine and the spleen. The walls of the colon were deeply pigmented and greatly thickened, and were covered with the cicatrices of old dysenteric ulcers; a few unhealed ulcers were found in the neighbourhood of the sigmoid flexure. The spleen was greatly enlarged, weighing 2 lb. 7 oz., and was much congested, the spleen pulp was extremely soft and friable, the organ was sterile on cultivation. 100 oz. of clear serum were removed from the peritoneal cavity.

On making smear preparations from the spleen pulp, I was struck by the curious appearance, among the spleen cells and

red corpuscles, of enormous numbers of small round or oval bodies, 2 to 3 μ in diameter, which corresponded to nothing I had previously met with or had seen figured or described. They stained faintly with methylene blue and with haematein, showing with these stains a sharply contoured circular or oval shape, but no detailed structure; but, on staining them by Romanowsky's method, they were found to possess a quantity of chromatin, of a very definite and regular shape, which clearly differentiated them from blood plates or possible nuclear detritus. This chromatin appeared in the form of a more or less definitely circular mass or ring, applied to which, though apparently not in direct connexion with it, was a much smaller chromatin mass, usually in the form of a short rod set perpendicularly or at a tangent to the circumference of the larger mass. The outlines of the sphere or oval enclosing these masses of chromatin were only faintly visible by this method of staining. (See Fig. 1.) These little bodies were

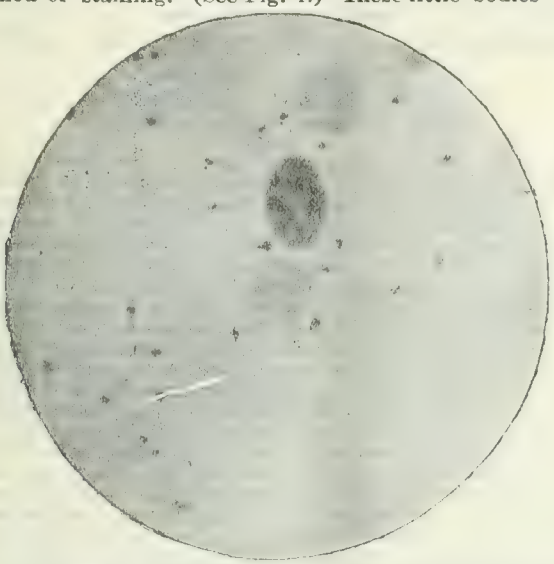


Fig. 1.—Smear preparation from the spleen of Private B., made thirty-eight hours after death and stained by Romanowsky's method. Magnification, 1,000 diameters.

scattered freely among the cells, as a rule isolated one from the other, but here and there aggregated into clumps composed of 20 to 50 members.

As to their meaning I was at the time completely at a loss, nor could other observers, to whom I have from time to time shown them, give me any clue as to their nature. In two fatal cases of the same type of Dum-dum fever which occurred subsequently I failed to find anything of the same nature in the spleen, though in those cases this organ was not enlarged to the same extent as in the case of Private B.

It was only recently, while working with nagana, the trypanosoma of tsetse fly disease, discovered by Lieutenant-Colonel D. Bruce, R.A.M.C.,[3] that I came across the appearances in the blood and internal organs of a white rat, dead of this disease, which, I venture to think, present the key to the puzzle. On examining this animal forty-eight hours after its death, I found in the blood and organs bodies practically identical in shape and staining reaction with those I had met in the spleen of Private B. The same little circular masses of chromatin, most frequently in the form of rings of varying thickness, were seen, and, in many instances, a smaller chromatin dot or rod was noticed lying in apposition to the larger mass. As the blood of this rat on examination shortly before its death was found to be swarming with trypanosomata, there could be little doubt that these chromatin bodies represented the macro-nuclei and micro-nuclei of the adult organisms, and that these structures were practically all that remained of the parasites, the rest of the body and the vibratile membrane, being less resistant to degenerative change, having disappeared. Further experiments soon proved this to be the case, and it was easy to trace every step in these degenerative changes from the death of the trypanosoma onwards.

The white rat, as a rule, dies about ten days after inoculation, with enormous numbers of trypanosomata in the peripheral blood, in all stages of longitudinal fission. After death the parasites very rapidly loose their motility and also their typical flagellate form, shrinking up into ovoid or spherical bodies, which have, to a considerable extent, lost their faculty of staining by the blue element of Romanowsky's stain. The macro-nucleus becomes denser and more circular in shape, and, together with the micro-nucleus, retains its chromatin reaction for as long as I have had the organs under observation. The vibratile membrane is rapidly shed, and, 12 hours after death, these may be seen in large numbers lying free among the dead parasites; occasionally they carry with them the micro-nucleus, attached to one extremity, but, more frequently, this is left behind in the spherulated body of the parasite. Forty-eight hours after death these vibratile membranes can no longer be detected, even by prolonged staining, and the outline of the body of the parasite can only be made out in a few cases. Further shrinkage of the body approximates the macro-nucleus to the micro-nucleus, if the latter has been left behind, and all that remains is the sharply-defined chromatin mass or ring of the altered macro-nucleus with, in many cases, the micro-nucleus closely applied



Fig. 2.—Smear preparation from the lung of a white rat, made thirty-six hours after death and stained by Romanowsky's method, showing various stages of degeneration of the trypanosomata. Magnification, 1,000 diameters.

to it, resembling in shape the young bud thrown out by a yeast cell. Fig. 2, which was taken from a lung smear 36 hours after death, shows several stages in this degenerative process.

But for the fact that the little bodies found in Private B's spleen were somewhat smaller, their staining reactions and shape corresponded almost exactly with those of the degenerated trypanosomata found in the blood and organs of the rat; and it may well be that this difference in size was due to a difference in species.

Without wishing to insist too strongly on the striking resemblance in these two conditions, I think that it at least makes out a prima facie-case in favour of the supposition that, in this particular example of Dum-dum fever, we had to deal with trypanosomiasis, if not as the actual cause of death, at least as a complication. Some other arguments may be advanced in support of this supposition.

First, we have the undoubted fact that in many of these cases of severe tropical cachexia, in particular those of Dum-dum fever, no malaria parasites can be detected either during life or, after death, in sections of the brain or internal organs, and, also, that such cases are altogether uninfluenced by quinine, arsenic or other anti-periodics. Of course such cases may incidentally contract true malaria, but, under suitable treatment, the parasites disappear, leaving the grave cachexia and increasing prostration unaffected.

Secondly, it might be urged that so obvious a parasite as a trypanosoma could scarcely be overlooked on the most cursory blood examination, and that, since such examinations are in daily practice by skilled observers at most Indian stations, the occurrence of trypanosomiasis in India would have been signalled long ere this if it really occurred in man. This certainly would be strong evidence of its non-occurrence were the parasite one which is constantly to be found in the peripheral blood, but we have only to study the progress of the disease in animals to see that a fatal result may follow inoculation without the parasites having been detected at any time in the peripheral blood. The factor which determines whether

the disease shall run the course of a true septicaemia, with numerous parasites occurring and multiplying in the general circulation, or whether their presence shall be restricted to certain of the internal organs, appears to be mainly the resistance of the particular species. The experiments of Bruce,[3] Laveran and Mesnil,[4] Plimmer and Bradford,[5] and of Mantini,[6] show the widely separated limits of the time required by the trypanosoma of nagana to cause death in the different species investigated. Thus, the very susceptible rat dies in a few days, while the guinea-pig may live for several months. Speaking generally, the more resistant the species or individual, the less likely are we to find the organisms in numbers in the peripheral blood during life. Taking the white rat, again, as an example we find the parasites appearing in the blood three or four days after inoculation; they then increase enormously in numbers until, just before death, they may be almost as numerous as the red blood corpuscles. On the other hand, in the rabbit, which shows a considerably greater power of resistance, death being postponed frequently for a month or six weeks, parasites can only rarely be found, and frequently the most careful search of several films fails to demonstrate a single trypanosoma, the organisms in this case being found in large numbers either in some of the internal organs and the bone marrow, or forming accumulations in the lymphatics of certain regions, such as the eye or the genital organs.

It is thus evident that a fatal attack of trypanosomiasis in an animal does not necessarily postulate the occurrence of the parasites in the peripheral blood, in numbers large enough to permit of microscopical detection.

Again, the chronic nature of the disease in the few recorded cases of trypanosomiasis in man and the immunity which man appears to possess to infection by other varieties of trypanosoma, such as nagana, surra, dourine, *mal de caderas*, etc., would appear to show that man is very resistant to trypanosoma infection.

It is not, then, I think, unreasonable to assume, first, that when trypanosomiasis does occur in man the parasites are more likely to multiply and accumulate in the capillaries or lymphatics of the internal organs than to invade the general circulation in large numbers: and, secondly, that the cases which have been recently reported are in reality exceptional cases, in which the resistance of the individual was comparatively low, and in which the parasites were able to develop and multiply in the blood stream, as they do in the case of a horse, rat, or mouse infected by trypanosoma brucei.

It appears to me, therefore, as at least possible that trypanosomiasis may be a much commoner disease of tropical countries, including India, than is generally supposed, and that its non-recognition may be due, as I have suggested above, partly to the tendency of the parasite to confine itself to the internal organs during the life of its host, and partly to the rapid degeneration and loss of characteristic shape which follow on the death of the organism and render its identification, in sections or smear preparations, a matter of difficulty. This difficulty is further increased by reason of the fact that only by Romanowsky staining can the macro-nuclei and micro-nuclei be rendered visible, and then only in smear preparations, since it is very hard to produce satisfactory chromatin staining in sections owing to the chemical alterations induced in the tissues by the various processes of hardening and embedding. I have tried to modify these processes in various ways, but so far without success.

With a view, then, to finding out whether some of these severe tropical cachexias, such as the Dum-dum fever, may not be due to trypanosomiasis, I would suggest that, as a routine practice, necropsies of such cases should include the staining of smear preparations from the spleen, lungs, and liver by Romanowsky's method, and a careful search for the degeneration forms of the parasites which I have described.

Increased facilities for the detection of trypanosomiasis during life are much to be desired. Positive results might be obtained by inoculation of a susceptible animal with blood from a suspected case, although this procedure does not appear to have been successful in Dr. Manson's case, and Drs. Annett and Dutton record that the pathogenicity of the trypanosoma in their case was not marked in white rats. Possibly the monkey might prove more susceptible to the trypanosoma of man. Some of the methods of staining thick blood films by dissolving out the haemoglobin, such as those of Laveran and of Ross, may also give an increased chance of success, and in this connexion I may note that the modification of Romanowsky's stain, described by me in the BRITISH MEDICAL JOURNAL,[7] may be utilized for this purpose by mixing a little of the stain with twice its volume of water, pouring the mixture on to the unfixed film, and at the end of three or four minutes gently washing it off, when the film may be dried and mounted. It has also been suggested that larger quantities of blood may be examined by citrating and employing the centrifuge.

I would further suggest, in conclusion, that the procedure I have indicated might possibly be of service in the investigation of kala-azar and of sleeping sickness, both of which have recently been considered as perhaps due to trypanosomiasis.

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[1] BRITISH MEDICAL JOURNAL, September 20th, 1902. [2] Ibid, March 28th, 1903. [3] *Preliminary Report on the Tsetse Disease or Nagana*, 1895; a further Report, 1897. [4] *Extrait du Bulletin de l'Académie de Médecine*, June 3rd, 1902. [5] *Quarterly Journal of Microscopical Science*, February, 1902, p. 440. [6] *Zeitschrift f. Hygiene*, vol. xlii, p. 341, 1903. [7] BRITISH MEDICAL JOURNAL September 21st, 1902.

THREE CASES OF TRYPANOSOMA IN MAN IN ENTEBBE, UGANDA.

By C. J. BAKER, L.R.C.P., M.R.C.S.,
Medical Officer, Entebbe, Uganda.

CASE I.—A native policeman came to the dispensary at Entebbe on March 12th, 1903, suffering from pain in the head, and on finding his temperature was over 102° F. I examined a fresh film of his blood for possible malarial parasites. Though unsuccessful in this direction, I discovered an elongated, actively motile body which, on closer inspection, I made out to be a trypanosoma. I called in Dr. Moffat, P.M.O. Uganda, and Dr. Castellani, of the Sleeping Sickness Commission, who both happened to be close at hand, and they were able to give their valuable confirmation to my diagnosis. I afterwards found about a dozen of these parasites in the same slide. On admission, the patient, a native of the Usoga district, stated that he had never been outside the Uganda Protectorate, and had lived for the past 12 months in Entebbe, except when he had made three journeys to Masindi (Unyoro district). He had never to his knowledge been bitten by any cattle-biting fly, but had been badly bitten by leeches about a year previously. He had never had a similar attack before, and had been quite well up to two days before admission, when he began to complain of general headache. His temperature was 102.6°, his pulse-rate 100 per minute, his respirations were normal, his organs on examination appeared perfectly healthy, the spleen not being enlarged, and there was no oedema of the skin. After admission his temperature on the second day reached 104°, after which it begun to fall, reaching normal on the fifth day, though he underwent no treatment. At the same time the parasites gradually diminished in number and apparently disappeared from the blood on the same day as the temperature reached normal, and subsequent daily examination of his blood produced only negative results.

CASE II.—Kumour Saba, a native policeman, came to the dispensary on March 28th, 1903, suffering from headache and having a temperature of 101.8°, I examined his blood and found a single trypanosoma, which was also seen by Dr. Nabarro. On admission his temperature was 101.8°, his pulse was 92, and there was the same slight general headache as in the first case. He stated he was one of the Lendu tribe who migrated from the west side of the Albert Nyanza about 1895, since when he had been in the Buddu district of Uganda up till 10 months ago, after which he has always resided in Entebbe. He could give no history of having been bitten by any biting fly, and had had no previous similar attack, and was quite well up to the day before admission. On examination his spleen and other organs appeared to be normal, and there was no oedema of the skin. Though I have since examined several films of his blood, I have not found a single trypanosoma other than the one mentioned above. His temperature dropped to 99° on the second day, and became subnormal on the fifth day after admission, there being a slight rise on the third and fourth days. All headache left him on the second day.

CASE III.—Jardien Murjan, a prisoner, was admitted to hospital on March 31st. On admission his temperature was 101.8°, pulse 110 per minute, respirations normal, and he complained of severe headache. On examination of his blood I found several trypanosomes. His spleen was slightly enlarged but not tender, and he had slight oedema of the skin over the abdomen extending upwards over the lower ribs. He could give no history of a previous similar attack, and was

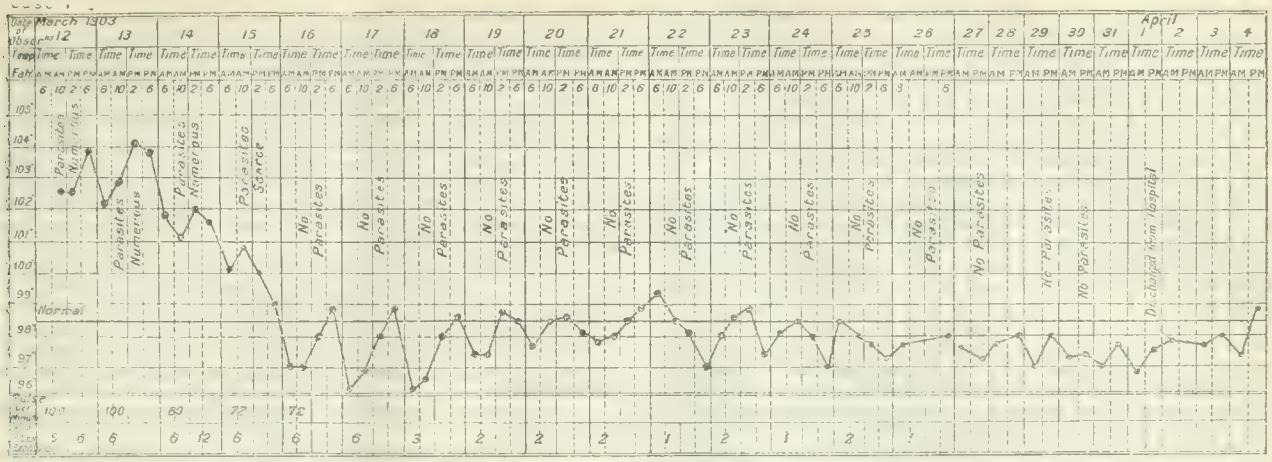


Chart 1. Case

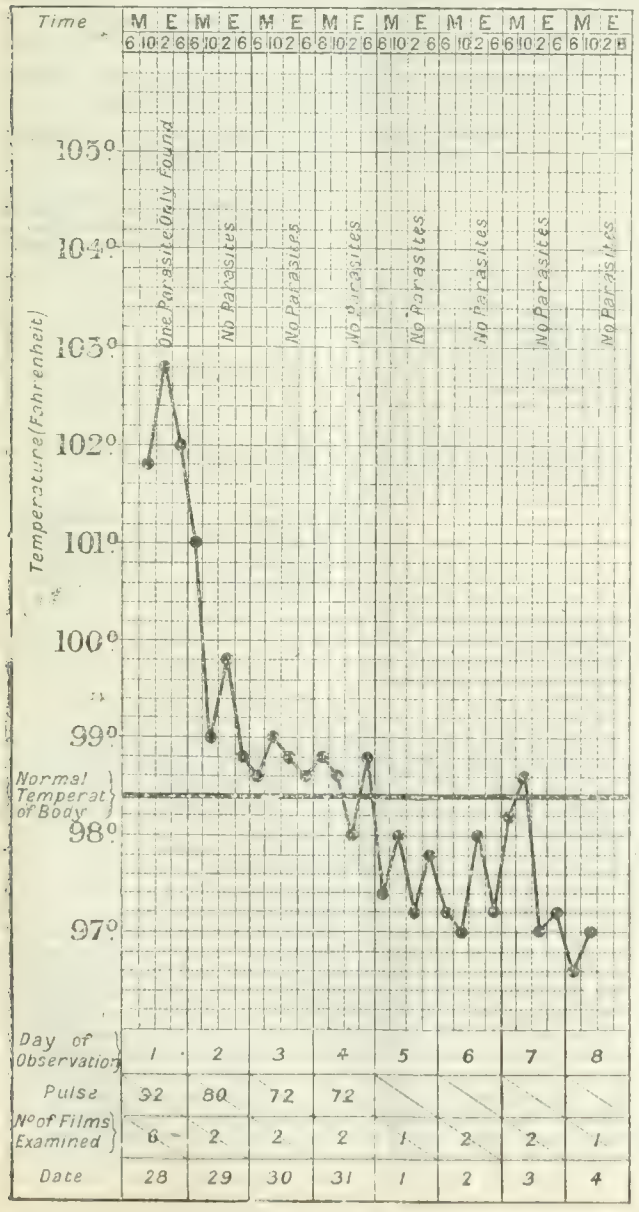


Chart 2.—Case II.

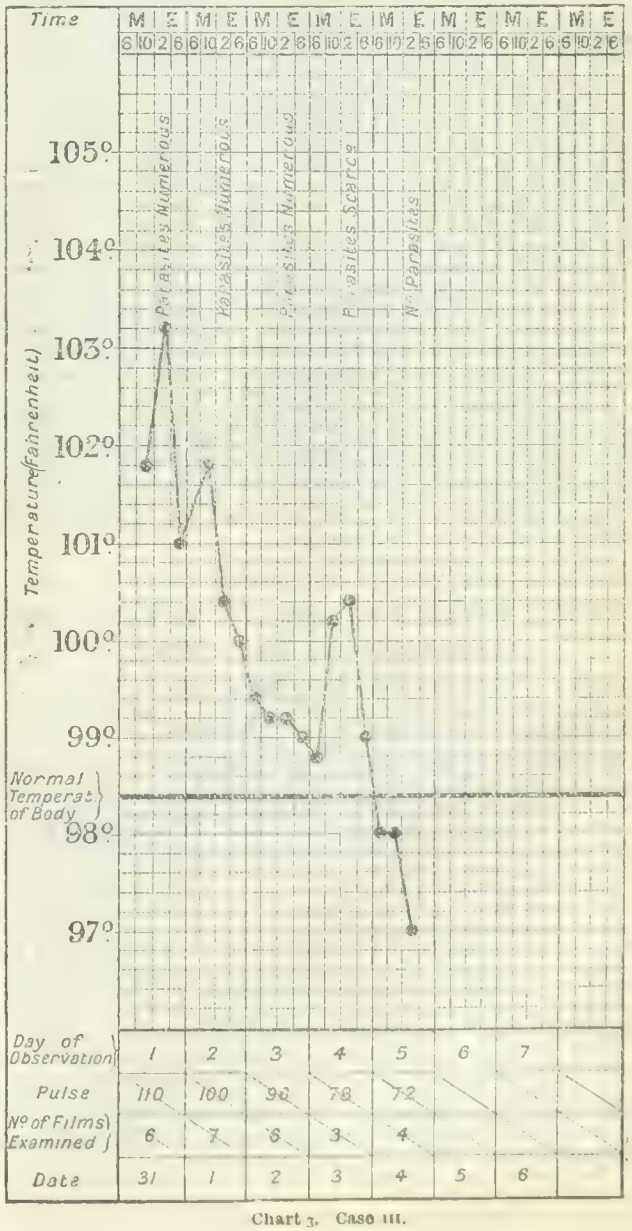


Chart 3. Case III.

quite well up to two days before admission. This patient was a Nubian, who took part in the mutiny of 1898, since when he had been in the Entebbe Gaol. He, like the others, had never been outside the Uganda Protectorate, and had no recollection of being bitten by flies of any sort. His temperature rising to over 103° the same afternoon, gradually sank, almost reaching normal on the fourth morning after admission, on which day it rose again above 100° in the afternoon, and then became subnormal on the fifth day. The headache and oedema also disappeared on the fifth day. The pulse in this, and also in the first two cases, rapid at first, gradually resumed a normal rate. The parasites, more numerous at first than in the first two cases, diminished in number on the fourth day, and on the fifth day disappeared entirely.

REMARKS.

The parasite, in both fresh and stained preparations, is apparently exactly similar in all respects to the trypanosoma described by Dr. Dutton, and also to that which I saw in Dr. Manson's case at the London School of Tropical Medicine last November. Unfortunately undue pressure of other work has prevented my making blood counts in sufficient quantity to be worth recording, though, in the few attempts I made at differential count of leucocytes, there was increase in the percentage of lymphocytes and large mononuclear cells and decrease in the polymorphonuclear cells. I have all these cases still under observation, and shall therefore be able to note any fresh manifestation of symptoms which may occur. They are interesting as showing that the trypanosoma, hitherto found in man only in West Africa, has a wider geographical distribution. They are also remarkable in comparison with Dutton's and Manson's papers on account of the short duration of the symptoms, the absence of hurried respiration, and of wasting, and in the first two cases, of splenic enlargement and oedema of the skin. One is led to think that a certain proportion of cases of short duration, such as I have met with here, in which microscopical examination of the blood reveals no malarial parasites, might reasonably be due to a trypanosoma infection where the number of parasites is small (as in Case II), and therefore easily overlooked. Another point worthy of note is that these cases have occurred in a country reputed to be free from tsetse fly disease among cattle, though the natives have brought me in a fly which Colonel Bruce has assured me is undoubtedly of the tsetse fly group, and he has kindly forwarded specimens to the British Museum for further identification. I have been fortunate in being able to show these cases to Dr. Castellani, Colonel Bruce, R.A.M.C., and Dr. Nabarro, of the Royal Society's Commission for the Sleeping Sickness; and I am indebted to Dr. Moffat for permission to forward these notes.

THE USE OF ACID PHOSPHATE OF SODIUM IN ALKALINITY OF THE URINE.

BY ROBERT HUTCHISON, M.D.EDIN., M.R.C.P.,

Assistant Physician to the London Hospital, and to the Hospital for Sick Children, Great Ormond Street.

A FEW years ago, whilst investigating the behaviour of acids and alkalies in the body, I had occasion to make some experiments on the influence of different drugs on the reaction of the urine. In particular I tried to determine what agents are best adapted to increase the acidity of the renal secretion. The method I adopted was to estimate the acidity of the urine secreted during the night by an individual on a fairly fixed diet on several successive occasions, so as to obtain a standard of normal acidity. The substance the effect of which was to be tested was then administered at bedtime, again on several successive occasions, and the average urinary acidity obtained compared with the standard already observed under normal conditions. The acidity of the urine in these experiments was estimated in two ways:

1. By the method of Freund, which consists in throwing down the alkaline phosphates by barium chloride and subsequently estimating the acid phosphates by titration with uranium nitrate solution.

2. By direct titration with standard alkali solution, phenolphthalein being taken as the indicator.

I am aware that the latter method is open to objection as a means of determining the absolute acidity, but it gives quite trustworthy results for comparative purposes, and, as a matter of fact, I found that it always afforded the same indications as the more accurate method of Freund above described.

My first observations were made with mineral acids—hydrochloric, sulphuric, and phosphoric. I found that the influence of these, even in the largest doses that could be conveniently administered, was extremely slight. The reason for this, no doubt, is that mineral acids are neutralized in the liver or circulation partly by fixed alkalies, partly by ammonium carbonate, and excreted in the form of the corresponding salt. In accordance with this view, I found that the ammonia excretion was always greatly increased after the administration of those substances.

2. Organic acids, of which I tested tartaric, acetic, citric, and lactic, had a slight but distinct tendency to increase the acidity of the urine. On the other hand, the effect was never very great, some of the acid being neutralized as above, as evidenced by an increased excretion of ammonia, and some probably being oxidized in the body and excreted in the form of carbonate.[1]

3. Benzoic and boric acids had no influence on the reaction of the urine.

4. Acid salts were next tried, especially acid phosphate of sodium (NaH_2PO_4), for, that salt being the chief cause of the acid reaction of normal urine, one might reasonably expect its administration to have some effect. This expectation proved to be correct, for sodium acid phosphate had a more direct and marked influence on the reaction of the urine than any other substance tried.

Some of the results are shown in the following table, which is compiled from the averages of many observations:

Influence of Medicinal Doses of Various Substances on the Acidity of the Urine (Average of Several Observations).

	Amount of Urine Secreted.	No. of c.cm. of $N_{10}NaOH$ required to Neutralize 10 c.cm. of Urine.
Normal average	240 c.cm.	5.7
½ dr. ac. phosphor dil.	230 ,,	6.6
2 oz., ¼ per cent. lactic acid	345 ,,	5.5
2 oz., 2½ per cent. acetic acid	390 ,,	4.1
10 gr. benzoic acid	368 ,,	5.3
45 gr. tartaric acid	270 ,,	6.7
45 gr. sodium acid phosphate	250 ,,	10.0

One may state the result from sodium acid phosphate in terms of Freund's method as follows:

	C.cm. of Uranium Solution required to Precipitate Acid Phosphates in 100 c.cm. Urine.	C.cm. of Uranium Solution required to Precipitate Alkaline Phosphates in 100 c.cm. Urine.
Normal average	46	23
Average after administration of 60 gr. of sodium acid phosphate	92	41

It will be observed that by no means all the acid phosphate given is excreted in that form, but that a considerable proportion is neutralized in the body. This is also shown by the fact that the ammonia output is decidedly raised after the administration of the acid phosphate.

Thus the total ammonia excretion stated in terms of $N_{10}HSO_4$ is: Normal, 148; after 60 gr. sodium acid phosphate, 170.

The ammonia increase, however, is always more marked when either a mineral or an organic acid is given.

Having observed these results, one was encouraged to try the effect of acid sodium phosphate in cases of alkaline urine. This I have done in a great many cases, and the results show that the power of the drug to increase the acidity of the urine is quite manifest. It would be tedious to recite cases, but it will be sufficient to say that it has now been used pretty largely in the London Hospital during the last two years in cases of alkalinity of the urine from cystitis and other causes with very satisfactory results. I do not wish to claim too much for it. I do not say that it will immediately render an ammoniacal urine acid, or that it can be depended upon to bring about that result in the severest cases, but I think it will often be found of great assistance. My colleague, Mr. Barnard, has already expressed the high opinion he has formed of the acid phosphate as an aid in keeping the urine

acid after operations on the bladder [2]), and my chief object in writing this paper has been to secure for it, if possible, a more extended trial.

Sodium acid phosphate has the advantage of being very soluble in water and easily administered. It may be given in doses of from 30 to 60 gr. every three hours, but it is better to give smaller quantities oftener so as to secure continuous elimination. A convenient plan is to dissolve 2 drachms in a pint of water and allow the patient to drink small quantities of this from time to time. The only unpleasant effect which I have ever seen it produce has been diarrhoea, but that can be at once checked by suspending the administration and giving a dose or two of chalk mixture.

I should add that sodium acid phosphate will be found a useful adjuvant to urotropin, for the latter, as is well known, acts best in an acid urine.

References.

[1] See also *Virchow's Archiv*, 125, p. 566, 1891. [2] *Lancet*, November 11th, 1901

CLINICAL OBSERVATIONS ON THE TREATMENT OF INOPERABLE CANCER BY FORMALIN.*

By A. F. MEREDITH POWELL, M.B.&C.M.Edin.,
Minster, Thanet.

[Abstract.]

Formalin, as commercially known, is a 40 per cent. solution in water of formic aldehyde made by passing a mixture of methyl alcohol vapour and air over heated platinum and conveying it into water. This preparation is a powerful, highly-diffusible, non-toxic antiseptic and deodorant, possessed of escharotic qualities which must be guarded against in using it. It also possesses the property of hardening tissues, and I may here state that I have taken advantage of all its properties except its escharotic quality in attaining the results I propose to describe. I was led to try my present method from my observation, twelve months ago, that formalin 2 per cent. solution had the property of coagulating egg albumen when whole eggs were immersed in it for a few weeks. Thinking over this action of formalin, and knowing its hardening properties on tissues generally, I argued that if I hardened the morbid tissue, if possible without seriously interfering with the healthy tissues, I should convert the growth into a foreign body, and Nature would proceed to dislodge it. My inference has, I venture to say, proved correct.

In from three to seven days after application the cancer mass begins to detach itself in the same way that necrosed tissue separates in gangrene. A line of demarcation is formed at the edge of the malignant mass, and separation takes place in a few days, the time varying with the size and nature of the disease.

Some twenty-four to forty-eight hours after the first application the objectionable foul-smelling discharges cease, thus showing the powerful deodorizing quality of formalin even in 2 per cent. solution. In proportion as the fetid discharges lessen the patient becomes more bright and cheerful. In from twelve to sixteen days I was able to remove the growths in three cases—a sarcoma of the breast, a scirrhus of the breast, and an epithelioma of the lip (recurrent), leaving in its stead healthy granulating tissue, the skin gradually growing and closing the wound up. I have repeatedly reapplied formalin during the healing process without any effect on the granulation tissue left, thus showing that no signs of the original growth remained, for skin will not grow over unhealthy tissue. The process of separating is completed by the aid of a pair of forceps and scissors to snip the fibrous bands that pass into the underlying granulations. It would appear that a fight for supremacy had been going on between the healthy tissue and morbid growth, the former being unable to dislodge its saprophytic enemy until the formalin reduced the greater vitality of the malignant mass, then Nature proved itself superior in the hitherto unequal fight.

The strength of formalin solution should be between 1½ per cent. and 2 per cent. If weaker than this the hardening process is not satisfactory, and the application must be continued for a longer period, thus losing time, and the process is extremely painful to the patient. Likewise if 2 per cent. is exceeded the application is painful, the diseased mass becomes surface hardened, separation is difficult, and the risk of destroying the skin around becomes greater the stronger the solution used, until the escharotic qualities of the formalin manifest themselves.

The method of application is as follows: Absorbent lint soaked in 2 per cent. formalin solution (made by adding 19 parts distilled water to 1 of commercial formalin) and laid on the tumour; this is covered with jaconet and cotton wool and bandaged on. The dressing should be changed six-hourly. After the third or fourth dressing the discharges and fetor ceases; the further process is an aseptic one. In three to seven days the tumour loses its elasticity and becomes darkened, friable, and insensitive—the further use of formalin is painless, and separation takes place as above described. Formalin 2 per cent. solution appears to exert a selective power on morbid tissue, or perhaps it is that the tissue, being more tender by virtue of its younger age and rapid growth, is less resistive to its action than the more mature tissue. It also acts as a powerful stimulant, thus aiding Nature to get rid of its unwelcome parasite. The treatment of the healing surface resolved itself into the ordinary method with alternate boric fomentations or sal alembroth gauze as occasion suggested itself.

Dr. J. D. McFeeley, of Dublin, read a paper at the Surgical Section of the British Medical Association last year on the treatment of rodent ulcers with formalin (published in the British Medical Journal of November 8th). His method and mine are widely different; and I may here state I devised my plan of treatment quite independently, not having seen his published papers till my attention was drawn to it lately. McFeeley avails himself of the escharotic qualities of formalin, which he applies, full strength, under an anaesthetic, either local or general, and keeping his patient under the influence of morphine until the escharotic action is produced; the hardened tissue formed is subsequently allowed to slough off. The disadvantage of his plan of treatment appears to me to be that the whole of the disease may not be attacked (in case of a large sarcoma): the leathery eschar formed takes five or six weeks to slough off, it is therefore not an aseptic process; it is extremely painful to the patient; there is the risk of destroying healthy surrounding skin, in short, the process is similar in all respects to what obtains when chloride of zinc is used.

My method is practically painless to the patient: with it no narcotics are required, and no anaesthetics local or general being necessary. The formalin has time to select other foci should such exist. The whole of the malignant mass is permeated and hardened throughout, and after separation only healthy tissue is left. No sepsis occurs, and the fetid smell is entirely destroyed after a few hours' treatment. The malignant mass is completely removed in sixteen to twenty-four days.

[Several cases were shown illustrating the results obtained by this formalin method.]

* Read before a meeting of the South-Eastern Branch of the British Medical Association.

GUAIACOL IN THE TREATMENT OF SMALL-POX.

By J. J. RIDGE, M.D. and M.D. (State Med.), B.S., B.A., B.Sc.Lond.,
Enfield.

The continued prevalence of small-pox in some parts of England prompts me to report the results and treatment of a small number of cases which came under my care last year as medical superintendent of the temporary small-pox hospital erected by the Enfield Urban District Council.

The results may be presented briefly in a tabular form, giving those treated at Enfield and a nearly similar number sent to South Mimms Small-pox Hospital.

Enfield.				South Mimms.			
	Recovered.	Died.	Total.		Recovered.	Died.	Total.
Adults ...	34, 1 unvac.	1, vac.	35	Adults ...	47, 4 unvac.	3, vac.	50
Children	9, 4 unvac.	4, unvac.	13	Children	3, 2 unvac.	1, unvac.	4

The ages of the children treated at Enfield were five under 1 year; one between 1 and 2; three, 3 years; one, 4; one, 7; one, 8; and one, 9. Those that died were 10 months, 4 months, 4 months, and 2 weeks.

The ages of the children treated at South Mimms were 4, 4, 5, and 8; three were unvaccinated, and one of these died.

It will be seen that no young infants were sent to South Mimms, while there were no less than five at Enfield, all unvaccinated, and that four of these died. If these almost hopeless cases are put on one side, it will be noted that there was but one death in 44 cases. That case was one of confluent small-pox in a man aged 47, of intemperate habits and not vaccinated since infancy.

This favourable mortality seems to me to lend some ground to the belief that the special treatment adopted had some beneficial influence. This is further suggested by the fact that among the 35 adults under treatment there were no less than seven of a very severe confluent type, or with some special cause of danger.

CASE I.—C. C., female, aged 37, vaccinated in infancy, was confined on third day of illness at term; admitted next day, second of rash, which was completely confluent on face, head, and extremities, and very thick on the trunk. Temperature on admission 102.6°, but fell next day to 100.2°, and on the third morning to 99°. It rose on the tenth day to 101.6°, but fell next day to 100°, and she made a good recovery without delirium or any special symptom. The way in which the pustules withered and dried up, apparently after maturating, was remarkable.

CASE II.—A. L., female, aged 13, vaccinated in infancy. Rash very thick, and semi-confluent on face, legs, and arms; had had severe haemorrhage from the mouth before admission, and slight on next day. Evening temperature 103.4°, next day 100°, and continued from 98° to 100° for a week; after that subnormal. Good recovery.

CASE III.—A. L., female, aged 25, vaccinated in infancy. Pregnant five months; did not abort. Confluent on face and hands, thick elsewhere. Temperature only once above 100°, namely, on tenth day (100.6°), next day 99.6°; afterwards subnormal.

CASE IV.—E. C., female, aged 27, vaccinated in infancy. In third pregnancy; confined on fifth day of eruption, at eight months; normal labour. Eruption thick all over, but discrete. Temperature 100.6° on evening of admission, after that never above 100°, and after third day of confinement only 99° on three days. Recovered. The infant was vaccinated on day of birth, and three days later, but both failed to take. Later, he had a few modified spots, but was never really ill.

CASE V.—E. J., female, aged 57; vaccinated in infancy. Confluent on face, arms, and legs, thick elsewhere. No special symptoms except slight rigors on the ninth, eleventh, and twelfth day of disease, and slight delirium on the twelfth day. Good recovery. Temperature on tenth, eleventh, and twelfth days 101°, and on fourteenth 101.6°, then fluctuated for three days under 100°, and after that was normal.

CASE VI.—T. R. S., male, aged 43, navvy; vaccinated in infancy. Confluent on face, arms, and legs in great blisters. On the ninth day of disease most of the pustules on the legs, arms, and trunk were haemorrhagic, but no delirium. On the fifteenth day the note is, "Scabs have formed on face, but are already coming away, leaving no ulcers; skin of arms likewise coming away in large flakes, leaving raised, flat, red, glazed patches without pus." Temperature, which had been from 101° to 102.6°, began to fall on the twelfth day, and by the fifteenth was normal, and so continued. Good recovery.

CASE VII.—A. J. W., male, aged 47, a free drinker; vaccinated in infancy Admitted on fifth day. Confluent on head and limbs, semi-confluent on trunk. Delirious after seventh day, and died on eleventh.

In all the cases that recovered the secondary fever was either entirely absent or very slight indeed. I was much struck with the remarkable way in which, in most cases the vesicles, even in the confluent cases, either dried up without maturating, or, if they maturated, produced comparatively little discharge. Although I had had a large experience of small-pox in the epidemic of 1870, I had never seen confluent cases behave in this way. The haemorrhagic case—No. 6—was most surprising.

I attribute the favourable course of these cases chiefly to the use of guaiacol dissolved in olive oil—1 part to 80. The whole surface was anointed with this with a swab of cotton wool at least every four hours. The patients were most eager for it as it allayed the irritation, and after a few applications almost abolished it. It seemed also to reduce the temperature and prevent consequent delirium. It appeared to check the maturation, and cause the pustules to dry up, and I send these notes in the hope that some others may be able to give it an extended trial. The medicine given was a hydrochloric acid mixture. The diet was a simple milk and broth diet till convalescence set in, and no alcohol was given in any form or during residence; this, no doubt, contributed to the favourable result. I may add that a collateral advantage of the guaiacol treatment was the almost entire abolition of the loathsome odour from the eruption, so that the wards were as sweet as those for the treatment of general disease.

MEDICAL MAGISTRATE.—Dr. Clement Palmer, of Barton-under-Needwood, has been appointed a Justice of the Peace for the county of Staffordshire.

A MERCURIAL INJECTION FOR USE IN THE INTRAMUSCULAR TREATMENT OF SYPHILIS.

BY LIEUTENANT-COLONEL F. J. LAMBKIN, R.A.M.C., Hong Kong.

FOURTEEN years' experience of dealing with syphilis by the above method, during which time I have given all forms of mercury—namely, perchloride, sal alembroth, sozoiodol, and metallic mercury, extended trials convince me that the metal itself is far the most efficacious. I have retried the soluble salts, but have had to revert to the metal in the form of a cream consisting of mercury, lanolin, and ol. carbol.

The advantages which this cream possessed over all other forms of mercurial injections are two very important ones:

1. It is much less painful.
2. Its effects on the symptoms and the ultimate cure of syphilis are far more marked than those following the use of other forms of mercurial injections.

That it possesses these two important advantages is strongly my opinion, the reason for No. 2 being, perhaps, that it is more slowly absorbed. At the same time the cream had some disadvantages, one being that in cold weather it became semi-solid, rendering it impossible of injection, and to obviate this and to bring it back to a proper consistence for injection heat and manipulation were required. These took time and trouble and brought the cream into disrepute.

For years I have been on the look-out for some means to correct this, and at last have succeeded. I now use the following prescription: ℞ Hydrarg. ʒij; lanolin anhydrosis ʒij (by weight). Both these to be well rubbed up until the mercury disappears, and then add: Paroleine (Burroughs and Wellcome) ʒiv; carbol 2 per cent. (by measure); 5 to 10 minims once a week as an intramuscular injection.

From this it will be seen that I substitute carbolized paroleine for the carbolic oil as hitherto. The latter becomes semi-solid in fairly low temperature, whereas paroleine does not change its consistence in cold. I have kept it for two hours in an ice chest, and was able to draw it into my syringe immediately on taking it out.

A great difficulty, then, has been removed, and the above prescription suits admirably, and ought to prove a great boon, especially in the United Kingdom and other cool climates in carrying out the intramuscular treatment of syphilis.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

CASE OF APPENDICITIS IN A WOMAN AGED 78: OPERATION: RECOVERY.

MISS S., aged 78, has suffered from constipation for many years. She is of rheumatic habit, and has had sciatica. The heart's action is feeble and somewhat irregular, and from time to time there is oedema of the legs and feet, but not to any marked extent. The is a slight trace of albumen in the urine.

On March 12th she was seen by Dr. J. Walters, and found to be suffering from pain in the abdomen and constipation. She had not been feeling well for a fortnight, but previously she had no special symptoms. A mild aperient was prescribed.

On March 13th the temperature was 102°, and the pulse 120. There was vomiting, and she was still constipated, with pain and swelling and tenderness in the right iliac fossa. On March 14th the pain and swelling had increased. She was still sick, and there had only been slight action of the bowels. The temperature was 100.3° and the pulse 104. In the afternoon there was marked increase of the swelling in the right iliac fossa and general tympanites, with a great deal of pain.

Operation was decided on after consultation with Dr. Holman, and performed by Mr. A. R. Walters assisted by Dr. Holman and Dr. J. Walters. The usual incision having been made and the peritoneum opened, there was a gush of turbid serum; the caecum was found to be covered with lymph. The appendix was adherent to the wall of the pelvis; it was swollen, bent on itself, and filled with muco-pus; there was considerable difficulty in separating and removing it. The stump was invaginated into the caecum, and secured by a

pursestring suture after being ligatured. The upper and lower ends of the wound were sutured in layers, and a drainage tube packed round with iodoform gauze was placed in the wound leading down to the caecum.

The patient stood the operation remarkably well, and made a good recovery. The only anxiety was caused by weakness and irregularity of the heart's action, requiring free administration of strychnine and other stimulants. She is now (five weeks after operation) up and getting about with the wound soundly healed.

Reigate. A. R. Walters.

A CASE OF SENILE GANGRENE: RAPID RECOVERY.

J. B., aged 81, was admitted into the Grantham Hospital under my care, on April 1st, suffering from gangrene of the left foot, extending up to the lower part of the leg; a slight line of demarcation had formed. The pain the patient was suffering from was extreme, and it was his express wish that the limb should be removed. On April 5th I performed a flap amputation of the thigh as near to the knee-joint as possible; the sutures were removed on the ninth day after the operation, the stump was quite healed; on the eleventh day after the amputation the patient was able to be removed on to a couch. He left the hospital on May 6th quite well, and able to move about on crutches.

Richard Wilson,
Surgeon to the Grantham Hospital.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Alfred Willett, F.R.C.S., President, in the Chair.

Tuesday, May 26th, 1903.

Death from Drowning and Means of Resuscitation.

Professor E. A. Schäfer presented the report of a Committee appointed by the Society in 1892 to make an inquiry into the phenomena attending death from drowning and the means of promoting resuscitation in the apparently drowned. The other members of the Committee who had taken an active part in the investigation were Mr. Pickering Pick and Mr. Henry Power. The report consisted of two parts: physiological experiments upon dogs, and experiments on the amount of air which could be taken into and forced out from the lungs by various methods of artificial respiration. The method adopted in the latter part of the investigation was first described; in it the natural channels of the mouth and nostrils were preserved. Observations on the dead body proving fruitless others were prosecuted on the living subject. The natural respiration was abrogated by inducing a voluntary hyperoxygenation of the blood. The necessity for keeping an open glottis could be met by a little practice in an educated person. Such observations were made on five subjects. The principles of the methods which might be used in artificial respiration in man were described. These were increasing the capacity of the thorax by raising the ribs; forcing air out of the thorax by direct compression; and driving air through the air passages into the lungs by means of a pump or bellows. The methods of artificial respiration which were tested in the manner indicated were simple traction (and relaxation) by both arms, the subject being in the supine position; traction by both arms, with alternating pressure upon the thorax, supine position; intermittent pressure on the thorax, supine position; simple traction (and relaxation) of both arms, the subject being in the prone position; traction by both arms, with alternating pressure upon the back of the thorax, prone position; intermittent pressure on the back of the thorax, prone position; traction by one arm only, the subject lying upon the opposite side with the oppsite arm underneath, lateral position; traction by one arm, with alternating pressure upon the thorax, lateral position; intermittent pressure on the thorax, lateral position; rolling the subject alternately from the lateral or latero-supine to the prone position, with alternating pressure upon the back of the thorax. All these methods were found competent to effect a sufficient exchange of air to maintain the oxygenation of the blood. The least amounts were those obtained by the simple traction method. Intermittent pressure alone was adequate, but the rolling method combined with pressure on the back gave much higher results. This method, with that of simple rhythmic pressure on the back, seemed especially worthy of recommendation. Secondly the experiments on the effect of immersion on anaesthetised dogs was described. The water that had gained entrance into the lungs was found to be absorbed, and there was no evidence that any water was swallowed. Observations were made with sea water and fresh water. Even when the animal was completely drowned in fresh water and no attempt made at resuscitation no water exuded from the lungs on cutting into them. The water found in the lungs in some cases of drowning probably gained entrance after life had become extinct. The experiments showed how very long an immersion—in one case nearly eight minutes—might be followed by recovery after artificial respiration; in other instances, after a short immersion death suddenly occurred. This appeared to be due to deficient aëration of the blood by the artificial respiration, which was probably due to failure of the air to diffuse owing to frothy mucus in the bronchi. The amount of froth appeared, therefore, to have an important bearing on recovery, and this depended on an excessive secretion of mucus and convulsive respiratory movements. It was suggested that in such circumstances the bellows method might be successful. In some cases where recovery did not occur, although no excess of frothy mucus was present, death was attributed to failure of the heart to recover from the paralysis produced by asphyxia. These were the results with fresh water; with sea water there was little or no absorption of water; the amount of froth was greater, but its fluidity also was greater. The rapidity and certainty of a fatal result were rather less than with fresh water. Recovery by artificial respiration seemed easier, and natural respiration seemed to be resumed more easily. Tracings showed that in different cases very different effects were caused by drowning on the circulation and respiration, the explanation of which was not at present forthcoming. The injection of suprarenal extract had only a slight and transitory effect on the blood pressure and pulse.

Dr. H. R. Silvester, in alluding to the conclusions relating to the methods of artificial respiration described in the report, took exception to the use of a face mask by the Committee and the method of experimenting on the living subject. The method of artificial respiration in the prone position and by the rolling method had this objection that they tended to force the contents of the stomach into the pharynx, which then might get into the air passages. The method of traction and pressure in the supine position employed by the Committee differed from the method known by his name in that the conditions had not been accurately complied with. It was essential to place the body on an inclined plane, which had not been done by the Commitee. He alluded to the fallacies of experimenting on living animals in a state of unconsciousness. The conclusions arrived at by the Committee were, he thought, of a retrograde character.

Dr. R. L. Bowles considered that the report confirmed that of Dr. Marshall Hall, Silvester, and of the Committee of 1862. He described the methods they had employed for Dr. Marshall Hall of obviating the fallacy arising from rigor mortis. By the Marshall Hall method better results in regard to entry of air were obtained than by the present Committee. The method of pulling the tongue forward and fixing it there was not the universal practice; he and those who thought with him did not use that plan. He objected greatly to the supine position and to the support given to it in the report. It was not possible easily to draw the tongue forward and fix it thus. The use of anaesthetics and morphine also introduced a fallacy in comparing the experiments with ordinary drowning. The need for gentleness in employing methods of artificial respiration was emphasized.

Inspector-General H. D. Woods, R.N., said a certain amount of water must be got rid of from the lungs. The St. John Ambulance Association did this first by turning the body on the chest and pressing on the back, and then employing the Silvester method. The employment of this method was often imperfect in practice in regard to pressure on the chest.

Dr. F. W. Hewitt referred to the analogy of death by drowning and from anaesthetics, and asked as to the muscular escape in drowning as compared with the spasms of asphyxia under anaesthetics. Such spasm made it very difficult to apply remedial measures; often impossible, indeed, to force air in and out of the chest. He asked if the method of inflation could be elaborated to meet this difficulty.

Dr. M. S. Pembrey did not think that whether an extra 100 c.cm. of air could be forced into the lung or not was of importance. The influence of the nervous system was of the utmost significance, and this had not had its full influence in

these experiments, because of the anaesthetic and because dogs were accustomed to water. As to the amount of water in the lungs it was obvious that absorption would be very rapid if the animal were alive—if the water in which the animals were employed were coloured its course could be followed. The method of inflation was of great use and wide applicability.

Professor SCHÄFER replied.

CLINICAL SOCIETY OF LONDON.

HOWARD MARSH, F.R.C.S., President, in the Chair.

Friday, May 22nd, 1903.

ILEO-CAECAL INVAGINATION PRODUCED BY A MECKEL'S DIVERTICULUM.

DR. J. P. ZUM BUSCH read notes of the case of an acrobat, aged 21, who first came under observation on November 21st, 1902, suffering from dull pain in the abdomen.

The history and a slight resistance over the caecum pointed to a possible intestinal growth. He was sent to the German Hospital, but only came on November 23rd, after having performed on the stage twice daily. His condition was then very grave, and there was no doubt that an intestinal invagination with complete obstruction existed. Laparotomy was done at once, and it was found that about 3 ft. of ileum had become invaginated into the caecum. After a very difficult disinvagination it was seen that the primary cause of this invagination was a Meckel's diverticulum, which, through a lipoma in its apex, had become invaginated into the ileum. The whole invaginated mass being gangrenous, 3 ft. of ileum were removed and the ends joined by lateral anastomosis. The patient recovered, and was discharged on January 7th.

The condition described was a very rare one, only twelve cases having been published up to now. The prognosis was very grave, as of eight operated cases only two recovered, one in whom disinvagination was easy and no excision was necessary, and one after excision of the invaginated intestine.

Mr. W. G. SPENCER described a somewhat similar case, in which the appendix was coiled up, and was the last part drawn out of the intussusception.

Mr. E. M. CORNER stated his views as to the mechanism of intussusception by a Meckel's diverticulum, both in acute and chronic cases.

Dr. ZUM BUSCH replied.

SEQUEL TO A CASE SHOWN AT THE SOCIETY IN 1901 AS CONGENITAL MORBUS CORDIS; DIFFUSE ENDARTERITIS OF THE PULMONARY ARTERIAL SYSTEM.

Dr. PERCY KIDD described the case.

A girl, aged 21, was shown in February, 1901, suffering from dyspnoea and attacks of cardiac pain dating from early childhood. The patient was very small, and her face was cyanosed. There was no clubbing of fingers. Physical examination indicated hypertrophy and dilatation of the right side of the heart. There was a very loud second sound everywhere, most marked over the pulmonary area, and in this region a faint diastolic murmur was occasionally heard with the second sound. The case was regarded as one of congenital morbus cordis by nearly all the members of the Society who examined it. The patient died six months later during a dyspnoeic attack. At the necropsy the right heart was much dilated and hypertrophied. The valves were healthy, and there was no congenital defect of any kind. But the pulmonary artery was highly atheromatous down to its smallest branches. The lungs were engorged, but were otherwise healthy. All the other organs were unaffected. The enlargement of the right side of the heart must be attributed to the widespread atheromatous condition of the pulmonary arterial system.

The history suggested that the arterial disease originated during intrauterine life.

Dr. HORTON-SMITH said the case was one of simple endarteritis with very little fatty change, to which latter condition the term atheroma in this country was usually applied. The endarteritis was entirely limited to the pulmonary arteries, and was not found at all in the arteries arising from the aorta.

Dr. BATTY SHAW discussed the occurrence of a diastolic murmur over the pulmonary area; and referred to a case in University College Hospital in which such a murmur was so pronounced that it was variously attributed to a pericardial rub in the diastole, and to aortic regurgitation. Neither of these conditions were found *post mortem*, but mitral disease pure and simple. The haemoptysis was probably due to infarction caused by the endarteritis.

Mr. W. G. SPENCER remarked that the ductus arteriosus and the hypogastric artery underwent endarteritis in the course of their degeneration in intrauterine life. Possibly the origin of Dr. Kidd's case was likewise congenital.

Dr. PARKES WEBER inquired if there was dilatation of the right auricle as well as of the right ventricle, since tricuspid stenosis might produce the murmur just as relative mitral stenosis caused it.

Dr. EWART thought the murmur might be due to regurgitation through the aortic valve, thrown out of gear by the great disease present in the pulmonary arteries. He thought the disease was a progressive one; if it was congenital the patient would not probably have survived for so many years in apparent health.

Dr. PERCY KIDD, in reply, agreed that the case was a remarkable one. The diastolic murmur was never very definite. He thought it was possible to have a diastolic as well as a presystolic murmur in mitral stenosis. He preferred this hypothesis to that of pulmonary regurgitation. Both the right cavities of the heart were uniformly enlarged. The congenital nature of the disease was pretty obvious. The patient was small for her age; although 21 years old she might have been taken for 13; and she presented a peculiar reddish cyanosis. There was no clubbing of the finger tips. She had had cardiac symptoms since 2 years of age. He thought the condition was due to intrauterine endarteritis, but the disease was very probably of a progressive character.

UNUSUALLY GREAT DILATATION OF THE HEART.

Dr. J. P. PARKINSON related the further history of this case.

The patient had been shown to the Society in January, 1901, when the heart was greatly enlarged, reaching from beyond the right nipple to the anterior axillary line in the sixth space. There was a systolic and presystolic murmur both at the apex and in the region of the right nipple. There were remarkably few symptoms, dropsy only appearing during the last few weeks of life. He died in December, 1902. At the necropsy the heart was seen to be immensely enlarged, occupying almost the whole space of the front of the chest below the second costal cartilages. The pericardium was universally adherent. All the chambers were enlarged, but especially both auricles and the right ventricle. The mitral orifice was exceedingly stenosed, and the tricuspid valve thickened and the orifice somewhat stenosed. The heart weighed 30 oz. empty of blood.

The specimen was shown with the object of demonstrating that a systolic pulsation in the region of the right nipple was produced by the right auricle, which lay beneath, and not by the left auricle, which, though much enlarged, did not show to any great extent on the front aspect of the heart.

Dr. EWART thought the specimen would occupy a historical position in this group of preparations. He referred to a case of systolic pulsation which was due to regurgitation from an enlarged right ventricle into the auricle.

Dr. CHAPMAN remarked that he had recently exhibited before the Medical Society a boy, aged 12, with double aortic, mitral systolic and tricuspid murmurs, thrills over each valvular area, and cardiac dullness increased in most directions; but with absolute absence of symptoms. The child was able to play games like other children. This latter fact had its bearing on the author's case.

Dr. PARKINSON replied.

ANNUAL MEETING.

The report of the Council dwelt on the continued prosperity of the Society. Twenty new members had been elected during the year, and the ordinary members now numbered 608. Four members had died—namely, Dr. W. H. Crosse, Dr. W. M. Ord, Dr. T. J. Maclagan, and Dr. J. W. Washbourn; and two honorary members—namely, Professor R. Virchow and Dr. C. Gerhardt. The Treasurer's statement of accounts showed a balance of £770, of which £640 were invested. Special votes of thanks to the retiring President, Mr. Howard Marsh, and to the retiring Treasurer, Dr. Frederick Taylor, were voted. The officers and council nominated by the retiring council were unanimously elected, namely, Dr. Frederick Taylor, President; Dr. D. B. Lees, Dr. H. A. Lediard, Sir W. R. Gowers, M.D., F.R.S., Mr. H. H. Clutton, Mr. H. Norris, and Mr. C. H. Golding-Bird, Vice-Presidents; Mr. G. H. Makins, C.B., Treasurer; and Mr. A. A. Bowlby, C.M.G., and Dr. W. Pasteur, Hon. Secretaries.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The eighth meeting of the session was held in the Medical Library, University College, Bristol, on May 20th. Mr. G. MUNRO SMITH was in the chair, and 103 members and visitors were present.—Professor JOHN CHIENE, C.B., of Edinburgh, gave an address on "Movement," laying special stress on the importance of voluntary movements in the treatment of fractures and sprains.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—In the report of the Ophthalmological Society, published in the BRITISH MEDICAL JOURNAL of May 9th, the following sentence occurred in Mr. A. F. MacCallan's paper: "The vascular constriction produced by adrenalin *prevents* the absorption of other drugs." The word "prevents" was a misprint for "assists."

REVIEWS.

DISEASES OF THE STOMACH.

MR. MANSELL MOULLIN'S volume on the *Surgical Treatment of Ulcer of the Stomach*[1] is to be regarded not as a general treatise on gastric ulcer, but rather as a collection of practical considerations relating to the clinical features of this affection illustrated by cases. In the introductory sections a good description is given of the variety of structural lesions included under the title of simple ulcer of the stomach; the appearances of some when presented in the living body differing very much, it is stated, from those of similar lesions revealed *post mortem*. From his extensive experience of gastric ulcer, and from a study of statistics collected and analysed by the Registrars of the London Hospital, the author has been led to the conclusions that the proportion of severe and "hospital" cases, which is cured in the full sense of the term, is not nearly so high as is generally imagined, and, also, that there would be much saving of life, and of pain and suffering, if there were more frequent recourse in properly selected cases to operative intervention. The conclusions with regard to the curability of gastric ulcer, based as they are on hospital material, and on the clinical statistics of a hospital which, it may be assumed, contains a large proportion of the poorest and most careless of patients, seem to be too narrow for general application. This, we find, is really admitted, for though a general statement occurs in one place "that gastric ulcer recurs or relapses in at least two-fifths of the cases which are apparently cured," the author in another page in which the mortality of this affection is considered, states that "he deals only with the graver cases such as would be admitted into hospitals." The views of the author on surgical treatment seem to be that in cases of gastric ulcer marked by persistent symptoms of a grave and distressing character, as in cases of relapsing and more or less persistent appendicitis, direct operative intervention is indicated. In discussing the treatment of gastric ulcer the author advocates a more frequent recourse to operative intervention in cases marked by persistent symptoms of a grave and distressing character. Such intervention should, it is held, be directly applied to the seat of the lesion, and consist in thorough exploration of the stomach, and excision or constriction by ligature of the ulcer. Indirect treatment by gastro-enterostomy is not very favourably regarded. This operation, in Moullin's opinion, should be reserved for cases of haemorrhage in which the source of bleeding cannot be found, or the gastric ulcer is too large to be directly attacked; but even as a means of arresting haemorrhage gastro-enterostomy, it is held, cannot be regarded as reliable. Although the author is not sanguine that his conclusions with regard to the treatment of gastric ulcer will be generally accepted, he has done much in these pages to convince surgeons of the advisability of dealing with obstinate cases of this affection on the same lines as with relapsing and persistent appendicitis. We are disposed to think, however, that the indications for such treatment as the author advocates are not very clearly laid down, and certainly it may be questioned whether every gastric ulcer that has ceased to be acute and has become chronic requires operation. Many cases of chronic gastric ulcer may, there can be no doubt, be successfully treated—as is, indeed, suggested by the author—by thorough and prolonged rest.

The little book on *Dilatation of the Stomach*, by MAURICE SOUPAULT,[2] gives a most excellent account of dilatation of the stomach, and can be strongly recommended to all readers familiar with French. The author divides the subject into dilatations of pyloric origin and those which are due to insufficiency or atony of the walls of the stomach. In this connexion we notice that he admits, in a somewhat guarded manner, the possibility of pyloric obstruction being due to simple spasm, although he thinks such dilatation can never be great or lead to retention of contents, and he is decidedly opposed to the view that spasm alone can account for extensive dilatation with retention, of which he thinks satisfactory evidence is entirely wanting. He is of opinion that atony of the muscular walls is mainly dependent upon congenital debility of the muscular fibre of the stomach, and that nervous debility, neurasthenia, over-work, etc., are only auxiliary and aggravating factors in its production, but he recognizes the remarkable influence on its development of debilitating diseases, such as chlorosis, tuberculosis, or severe acute affections, of which typhoid fever is a good example. He goes so far as to say that "atonic dilatation is a congenital affection, and never acquired." Such a statement seems to us to be extravagant, it does not seem possible to say whether a given person has or has not this congenital weakness of the muscular wall of the stomach, and it is arguing in a circle to assert that only those congenitally affected persons are liable to get dilatation of the stomach should they become neurasthenic or have an attack of typhoid fever. M. Soupault points out very truly how many of these cases are latent and only recognized by a systematic exploration of the abdomen, especially by insufflating the organ by means of effervescing powders. He rejects Professor Bouchard's doctrine of auto-intoxication as explaining the frequency with which the subjects of dilatation of the stomach are attacked with other diseases, particularly tuberculosis and typhoid fever. He supports, with much greater show of reason, the view that both the dilatation and the general diseases are connected with functional derangement of the nervous system, and we wonder that he should not consider this a sufficiently satisfactory explanation without desiring to put forward his very doubtful theory of a congenital defect of the muscular wall of the stomach. The general principles of treatment are thoroughly sound, though we may object to certain details. For example, we doubt the wisdom of giving very large powders of insoluble antacid substances such as bismuth and chalk, for if these are to be continued for any length of time there must be a considerable risk of the formation of intestinal calculi. He is an energetic advocate of surgical interference in dilatation due to pyloric obstruction, but he does not recommend it in atonic cases. He says that he has only had three cases of the latter class operated upon; two underwent gastro-enterostomy and one pyloroplasty, neither was benefited, in two the condition was aggravated, while the dilatation persisted in each case. He is, however disposed to regard favourably the operation of gastropexy when there is marked enteroptosis and vertical dislocation of the stomach, but this should not be resorted to until all other means have been tried, especially the use of a belt, which he finds sufficient for the purpose in most cases.

HYGIENE AND PUBLIC HEALTH.

THE small volume on *Natural and Artificial Sewage Treatment*,[3] by Lieutenant-Colonel ALFRED S. JONES, V.C., and Mr. ROECHLING, can scarcely be described as a systematic study of the subject of sewage treatment, but rather as a series of essays by its authors on different aspects of this question. It is full of interesting and important matter, which is none the less useful that the authors show a strong bias in favour of natural systems of treatment of sewage on land as opposed to artificial bacterial methods. Their experience gives, in fact, a strong prima-facie case in favour of their preference, and in these days, when septic tanks are being represented as a panacea—they have recently in these columns been urged by representatives of the fish trade as the remedy against sewage-polluted oysters—it is a wholesome corrective to have the advantages of land treatment of sewage clearly set out. The description of the conversion of the Aldershot "Sewage Marsh" into a wholesome farm is worth reading. The authors claim that, while both natural treatment on land and artificial treatment of sewage equally remove suspended matters, the natural treatment removes a much larger percentage of dissolved organic matter than does artificial treatment. Furthermore, natural treatment removes pathogenic germs, utilizes a large portion of the manurial elements, and reduces greatly the quantity of fluid; while with artificial methods the effluent is, bacterially, practically crude sewage; all manurial elements escape into the rivers; and there is no appreciable reduction in quantity of liquid. All these points are somewhat debateable, but the views stated by the authors of this suggestive book will be a useful corrective to those who have trusted too blindly in the merits of bacterial systems.

[1] *The Surgical Treatment of Ulcer of the Stomach.* By C. Mansell Moullin, M.D.Oxon., F.R.C.S., Senior Surgeon and Lecturer on Surgery at the London Hospital; Member of the Council of the Royal College of Surgeons; Examiner in Surgery at the University of Cambridge. London: John Bale, Sons and Danielsson, Limited. 1903. (Demy 8vo. Pp. 52. 2s. 6d.)

[2] *Les Dilatations de l'Estomac.* Par Maurice Soupault, Médecin des Hopitaux de Paris. Paris: Librairie J. B. Baillière et Fils. 1902. (Crown 8vo, pp. 96. Fr. 1.50.)

[3] *Natural and Artificial Sewage Treatment.* By Lieutenant-Colonel Alfred S. Jones, V.C., and H. A. Roechling, M.Inst.C.E. London: E. and F. N. Spon. 1902. (Demy 8vo, pp. 104.)

FIRST AID.

As Dr. Robertson remarks in his preface, the books on first aid are many, but as his *Practical First Aid*[4] has reached a third edition it may be said to have "supplied a want." It is, however, not better than several other such books, and, having many competitors, it would have had greater chance of success if the revision had been more careful. The obvious error (p. 27) that "the flow of blood in the pulmonary veins is *away* from the heart and the current in the pulmonary arteries is *towards* the heart" is made worse by the author's italics. The illustrations are good, and sections on sick nursing have been added to make this edition more complete than its predecessors.

The favourable opinion expressed in the notice of the first edition of Warwick and Tunstall's *First Aid*[5] in July, 1901, seems to have been endorsed by teachers and students of the subject, for within eighteen months the third edition is published and the issue of the book has reached the twelfth thousand. The second edition was merely a second printing without alteration, but in this third edition the authors have embodied some suggested alterations and have added one or two new illustrations, whilst a few others have been improved. The result has been to add to the value of a book which has already taken its place as a standard work on the subject of first aid to the injured and sick.

The *Manual for the Church Lads' Brigade Medical Corps*[6] is based upon that of the Royal Army Medical Corps, and the simpler stretcher drill now in use in the army is used in this edition for the first time. The amount of information on first aid in this *Manual* is considerable, and perhaps too much, considering it is intended for lads. For instance, the table of special poisons and their treatment on page 58a is calculated to puzzle a lad in the excitement of an emergency, whilst on the other hand no directions are given as to the management of cases of poisoning by an unknown poison.

Dr. Meyer's book on *First Medical Aid in Sudden Illness and Accidents*[7] is essentially a book for medical men, as its title indicates. It is to be classed with the manuals on minor surgery rather than with the textbooks on first aid to the injured for unskilled persons. It gives directions for the emergency treatment of accidents and sudden illness under circumstances in which the medical man may be without the necessary appliances for complete surgical treatment, though skilled knowledge is taken for granted. For instance, the subcutaneous injection of a solution of camphor in ether or oil is recommended in cases of severe shock, since every medical man, we are told, is now provided with his pocket dispensary for subcutaneous injections. Tracheotomy, also, is mentioned as the first necessity in certain cases of foreign bodies in the air passages, and it is pointed out that this operation can be performed in an emergency with a pocket knife, a couple of hairpins being utilized to take the place temporarily of a cannula. The various sections of the book are written by experts. Professor E. von Bergmann treats of first surgical aid in accidents; Professor Carl Gerhardt writes on first medical aid in illness: Professor Oscar Liebreich deals with the first medical aid in cases of poisoning; Professor August Martin gives directions for first medical aid in gynaecological and midwifery cases; and Professor George Meyer is responsible for the section on first medical aid in cases of unconsciousness. The book should prove of great value to medical men in country places and in the Colonies, and especially to those who are travelling in the sparsely-populated boundaries of civilization.

[4] *Practical First Aid.* By Wm. Robertson, M.D., D.P.H. Third Edition. Paisley: Alexander Gardner. (Fcap 8vo, pp. 192. 1s. 6d.)

[5] *First Aid to the Injured and Sick.* An Advanced Ambulance Handbook. By F. J. Warwick, B.A., M.D.Cantab., etc., and A. C. Tunstall, M.D., F.R.C.S.Edin. Third edition. Bristol: John Wright and Co. 1903. (Fcap. 8vo, pp. 252. 2s. 6d.)

[6] *Manual for the Church Lads' Brigade Medical Corps.* Third Edition. London: Church Lads' Brigade. 1902. (32mo, pp. 140. 6d.)

[7] *Erste ärztliche Hülfe bei plötzlichen Erkrankungen und Unfällen.* Bearbeitet und herausgegeben von Professor Dr. George Meyer Berlin: A. Hirschwald. 1903. (Cr. 8vo, pp. 454. M.8.)

The annual meeting of the Medico-Psychological Association of Great Britain and Ireland will be held at the rooms of the Medical Society of London, 11, Chandos-street, W., on July 16th and 17th, and not on the date previously announced.

THE MEDICAL DEFENCE UNION.

The annual general meeting of the Medical Defence Union was held on May 21st, at the registered offices of the Union, 4, Trafalgar Square, London. The chair was taken by Mr. M. A. Messiter, the President of the Union.

The annual report and statement of accounts for 1902 were presented.

Report of Council.

The report stated that the number of cases dealt with had increased, and that the membership had grown more rapidly than in any previous year. The Council felt that the imposition of an entrance fee was just, right, and proper. The fee of 10s. now imposed might in the future be increased to 1 guinea. An account is given of cases taken by the Union into the law courts or before the General Medical Council, as have been reported from time to time in our columns. We quote the following statement as to the policy of the Council of the Union:

The legal expenditure of the Union has necessarily increased in proportion to the increased membership, and any case taken to and won in the law courts is not only an advantage to the individual member, but also to the whole body of the profession. The Council, whilst carefully guarding the expenditure, never hesitates to employ its funds for the best interests of its members, and shirks no costs in the matter of the employment of the leading counsel at the Bar, feeling sure that for every case won in the courts at least three or four others are prevented from coming into court by the knowledge that no compromise is ever effected, and that once an action is started it is carried through in the most efficient manner, and with the best regard to the serious issues involved.

Solicitor's Report.

The report by the Solicitor, Mr. W. E. Hempson, contains the following observations upon the nature of the cases undertaken by the Union, and the principles of procedure followed:

At the present time the membership of the Union numbers approximately 6,000 as compared with just over 5,000 for 1901, and in the course of the past year there have been referred to me 155 cases as compared with 146 for the year 1901, all of which have necessitated either legal action being taken on behalf of the members concerned, or legal advice and assistance being accorded to them.

The total expenditure for law charges and expenses is £1,350 13s. 1d., of which sum £557 16s. 5d. is attributable to out-of-pocket payments made by me.

On analysing these figures I find that the costs and expenses of defending twelve actions alone amounted to £930 2s. 6d., the general and domestic work of the Union involved a cost of £37 16s. 10d., and the remaining cases were adjusted at a cost of £382 13s. 9d.

Of the twelve cases which I have quoted above as necessitating an expenditure of £930 2s. 6d., it may be mentioned that four of them averaged a cost of £180 each, which was conserved to the four members whose defence was undertaken in these cases at a pecuniary cost to them of 10s. Verily I think it may be claimed a sound investment on their parts.

As in former years, it has been found that the chief items of expenditure have been incurred in cases in which, although the Union have proved successful, they have been unable owing to the pecuniary position of the litigant to obtain any portion of the costs awarded to them.

The man who has nothing to lose has everything to gain, and if he can find a solicitor who is prepared to undertake his case on the chance of securing either a favourable compromise or a verdict in his client's favour, then the litigant is well content.

The determination with which the Union, by the faithful adherence to its principle of "no compromise," have shown throughout the years that it has been established has, in my opinion, done more to crush litigation with this particular class of people than anything else. A solicitor who takes up such a case under the circumstances which I have indicated trades upon the knowledge, common to all, that whatever the result of an action may be it is extremely distasteful, and in more instances than not injurious to the interests of the professional man who is sought to be implicated. Therefore there is believed to be a good prospect of some pecuniary compensation being extorted, and in the course of proceedings which, as Solicitor to the Union I defend, this is a phase which I am constantly brought in contact with.

The lesson to be read, however, from the policy which the Union adopts is that solicitors of the class to which I refer are now extremely wary of carrying an action to any great length when they find that the medical man concerned is a member of the Union, and have probed the position sufficiently close to ascertain whether or not there is a prospect of the matter being compromised. Proceedings commenced under these circumstances reach a certain stage, and then when it comes to providing the more serious sinews of war courage evaporates and the action is dropped.

Contrasting the figures which I have given above with those for the year 1901, it will be found that, with an increased membership of 900, 9 cases have in 1902 been placed in my hands in excess of the number for 1901, and that notwithstanding this fact the legal costs and expenses for the year 1902 are £33 10s. 4d. less than those for the year 1901, although the out-of-pocket expenses for 1902 are £96 11s. 2d. in excess of those for 1901.

It was suggested to me some years ago that facility of reference to cases was obtained by classifying them under specific heads, and giving thereunder illustrations of the more typical and interesting ones which had occurred in the past year under review. I have accordingly since adopted this principle, and adhere to it in this report, placing them as heretofore under the four heads of "libel and slander actions," "malpraxis actions," "personal and miscellaneous matters," and "prosecutions of unqualified persons and the suppression of unqualified practice."

Of the 155 cases to which the report extends libel and slander actions are again in the ascendant, 45 cases alone falling under that particular head. Thirty-six cases have involved the defence of and assistance accorded to members in malpraxis actions, 18 are incident to the suppression of unqualified practice and the prosecution of unqualified practitioners; and of the remaining 56 cases which I class under the head of personal and miscellaneous matters, 24 are directed to a variety of different circumstances associated with the adjustment of questions relative to appointments held by members of the Union, 4 have involved the solution of matters under the Poor-law Officers' Superannuation Act, and 5 have had relation to the arbitration upon and determination of partnership disputes.

In the course of the year two actions have been decided adversely to the members involved.

Particulars of these two cases are given. Particulars are also given of the number of libel and slander actions, of malpraxis actions, and of personal and miscellaneous actions. It is further pointed out that the work of the Union with regard to prosecutions of unqualified persons and the suppression of unqualified practice brought to light various cases of impersonation in which prosecutions were successfully undertaken, the practice employed in this offence being thus publicly exposed.

The following statistics for the year 1902 show the position of the Union at the end of that year:

Number of members on register, 5,549.
Number of new members from January 1st to December 31st, 896.
Number of members deceased, 35.
Number of resignations and erasures, 159.
Number of life members, 34.
Amount of guarantee fund, £7,909 15s. 6d.

ANNUAL MEETING.

The CHAIRMAN, in moving the adoption of the report, said that the members of the Union could congratulate themselves on the successful work of the past year. The Union was full of vigour; more work had been done than in previous years, and all the work taken in hand had been thoroughly well handled, both by the Council and by the General Secretary (Mr. Bateman) and Mr. Hempson, the Solicitor. One interesting matter he had to discuss was the question of the entrance fee of 10s. that each new member had to pay in addition to the annual subscription of 10s. The reasons for the adoption of an entrance fee were somewhat as follows: It would be remembered that it was foreshadowed last year that an entrance fee might be charged or the annual subscription raised. The Union was a going concern, and was universally recognized as an institution of great power, and as a sure rock of defence for the medical profession. It had also to be considered that the Union was doing more work a head than it had done before. When the case of the old members was examined it was recognized that those who had stood by the Union in its early days and had borne the burden and heat of the day, when success had to be striven for, ought to be put in a better position than members entering at the present time. Of course the annual subscription might have been raised all round, but that plan of procedure would have entailed an alteration in the laws of the Union, necessitating expense. The alternative plan was to impose an entrance fee, and that was adopted, and it was thought best to begin with an entrance fee of 10s. That meant that for 2½d. a week any member of the profession could receive and enjoy all the benefits of an insurance against attacks from unscrupulous persons. There had been, however, some fear expressed that new members might be deterred from coming forward, and the Union might fail to keep up its number of members. That fear had hardly been justified, for since the imposition of the entrance fee 278 new members had been elected, as against 333 during the last year. Those 278 members represented £278 to the Union, whereas the 333 members mentioned only represented £166. On reviewing the work done by the Union it would be seen that the Council had not been idle. In fact, the work had been excessive. It had been varied and important. Strong measures had been taken in regard to unqualified practice, and the question of Medical Aid Societies had been taken up, as well as that of advertising and covering. On those points they had had test cases, and distinct judgements had been given enabling the Union to establish on a firm footing certain lines of action for guidance in the future. In the report from Mr. Hempson, the Solicitor to the Union, there would be found not only the fact that the Union advises its members, but an account of the different kinds of legal work undertaken by the Union. There were cases of libel, of slander, of malpraxis, of the suppression of unqualified practice, of members in conflict with the Boards of Guardians, of medical staffs of hospitals in conflict with Hospital Boards, and of cases affecting the Superannuation Act, with the Treasury, with the Local Government Board, with the Lunacy Act, and with the Infectious Diseases Act. Acting throughout on the principle of never compromising any action he was glad to say that in every one of those cases they had brought matters to an absolutely satisfactory conclusion not only as regards the Union itself but also as regards the interests of the members concerned.

Dr. W. S. A. GRIFFITH, in seconding the adoption of the report, said that an entrance fee was necessary because the work of the Union was increasing and the expense of the work was increasing. Without the addition of that small sum it would have been difficult to take up any work except that of pure defence of the members of the Union, therefore every one would feel that, even if the Council were to raise the entrance fee to 1 guinea instead of 10s., they would be acting in a most justifiable manner.

After Dr. VINRACE, Dr. ROSE, and Dr. BENNETT had addressed the meeting, the resolution was carried unanimously.

Dr. HEDLEY HILL proposed, and Mr. J. T. MACNAMARA seconded, the adoption of the accounts, which was duly carried.

Dr. CAMPBELL POPE proposed, and Dr. W. RIGDEN seconded:

That £165 3s. be paid to the provincial members of the Council for railway fares when attending Council meetings.

This was put to the meeting and duly carried.

Dr. BEVERLEY, J.P., Dr. GARRETT HORDER, and Dr. W. RIGDEN were re-elected members of the Council.

On the proposition of Dr. LANGLEY BROWNE, seconded by Mr. M. HALLWRIGHT, the Auditor was reappointed for the year, after some discussion in which Dr. ROSE and Dr. GREENWOOD joined.

A hearty vote of thanks to the President and Council concluded the proceedings.

LEPROSY.

THE adjourned discussion on Mr. Jonathan Hutchinson's address on Leprosy[1] was held at the Polyclinic, London, on May 21st, with Dr. RADCLIFFE CROCKER in the chair.

The discussion was opened by Mr. JONATHAN HUTCHINSON, who briefly recapitulated the leading points of his address. He added that according to his calculations every Christian convert increased his risk of contracting leprosy, thirty-fold in the case of the Salsette Christians, and more in other parts. He proposed that the Standing Committee of the Polyclinic on Leprosy should make extensive inquiries into the relation of fish to leprosy by systematic correspondence with those best able to supply the desired information. In regard to the question of the contagiousness of leprosy, he asked why leprosy picked out the Christians to so great an extent in India. That must be from the change in the kind of food, and that change was from the ordinary diet of the Hindu to a diet comprising fish.

Dr. M. I. FINUCANE (Fiji) asked if the question was whether leprosy was caused by salted or putrid fish, or whether it came from all kinds of fish. In Fiji the natives had fresh fish, and the incidence of leprosy was 200 cases to every 10,000. It seemed to him there were other causes of leprosy, namely, the filthy conditions of life of the coolies and their insanitary surroundings. He suggested that the Polyclinic Committee on Leprosy should consider the question of segregation of lepers, about which the medical officers were continually receiving inquiries from the Government. He noticed that the Roman Catholic native settlements in Fiji were in a far more insanitary condition than other Christian settlements, and leprosy was more common in the dirty Roman Catholic parts than in the others, which fell into line with the sanitation theory he had mentioned.

Mr. HUTCHINSON explained that his assertion was that all fish was dangerous if eaten in a state of decomposition. Wherever fish was largely eaten, especially in hot countries, there leprosy was to be found.

[1] BRITISH MEDICAL JOURNAL, May 23rd, p. 1217.

Dr. H. D. MCCULLOCH (Kashmir) pointed out that the people in the valleys in Kashmir lived on fish throughout the year, both fresh and smoked, though perhaps not salted. These people did not suffer particularly from leprosy. The mountaineers were the people who afforded the cases of leprosy, and they lived chiefly on milk and vegetable food, fish being difficult, in fact almost impossible, for the mountaineers to get.

Dr. PHINEAS ABRAHAM said that it seemed to him that Mr. Hutchinson had made up his mind to welcome the smallest tittle of evidence in favour of his fish theory, but to view with scepticism anything that might be advanced against it. Dr. Abraham was particularly anxious to ask Mr. Hutchinson what was meant in the report of his address in the daily papers by the statement attributed to Mr. Hutchinson that on the whole the Commission on Leprosy were favourable to his fish theory.

Mr. HUTCHINSON explained that he said that the Commission gave a somewhat unfavourable opinion upon the fish theory based upon the fact that in the leper asylums there were a certain number of lepers who denied ever having eaten fish; but nevertheless, though they returned a somewhat adverse verdict, yet on the whole they were favourable to it.

Dr. ABRAHAM said that on page 339 of the report of the Commission there were the following words: "In the opinion of the Commission, there was no doubt that the consumption of fish is not the cause of leprosy." He thought that Mr. Hutchinson should communicate with the press concerning the matter. Dr. Abraham concluded by asking how Mr. Hutchinson could account for the diminution of leprosy in Norway, where fish was eaten as much as ever.

Mr. HUTCHINSON explained that it must be due to the fact that the Norwegians were curing their fish better.

Dr. C. J. S. HANCOCK (Assam) said that leprosy was very prevalent in Upper Assam under the Himalayas among all classes, and fish was obtainable by them all the year round.

Dr. VAN DAM (British Guiana) said that leprosy was rampant in that region and increasing day by day, and the consumption there of rotten fish was also very great and was increasing. There was no doubt that the population there was fed on tainted salt fish.

Dr. CUNNINGHAM AFFLECK having addressed the meeting,

The CHAIRMAN (Dr. Crocker) pointed out that until the fish in question was investigated and the lepra bacillus demonstrated there was little use in carrying on discussions. If Mr. Hutchinson contended that leprosy was not contagious then he had undertaken a very heavy task, because with a disease that was undoubtedly bacillary strong evidence was required to prove that it was not contagious.

Mr. HUTCHINSON said that the Chairman had asked for more than proof in requiring actual demonstration of the bacillus in fish, but in Mr. Hutchinson's opinion many things could be proved and were proved before they were demonstrated. In regard to the mountaineers of Kashmir furnishing so many cases of leprosy, and the people in the valleys, where fish was eaten furnishing so few cases, he pointed out that a parallel existed in the case of South Africa, where the agricultural labourers fed in the harvest season with salt fish from Cape Town developed leprosy, but the boatmen who caught the fish and ate it fresh were practically exempt. Mr. Hutchinson concluded his remarks by suggesting that the Standing Committee should continue to encourage investigations, and should have an early meeting to draw up certain questions to be sent to medical men in India for information on the subject of leprosy. Parliament and the public should be appealed to for funds to investigate the fish supply with a view to finding the bacillus.

The proceedings then terminated.

AMERICAN ELECTRO-THERAPEUTIC SOCIETY.—The American Electro-Therapeutic Society was founded in 1890, and held its first annual meeting in 1891. The last annual meeting (the twelfth) was held in 1902, when the question of the use of the *x* rays in the treatment of malignant disease bulked large in the programme. At the next annual meeting, which is to be held in Atlantic City, New Jersey, on September 22nd, 23rd, and 24th, 1903, the same subject will also occupy a prominent place. The activity and practical usefulness of the Association are evidenced by the fact that the name of some member has been more or less intimately connected with nearly every electro-therapeutical discovery or development of the last twenty years. The Association is the oldest of its kind in existence.

ASSOCIATION OF CERTIFYING FACTORY SURGEONS.

THE annual meeting of this Association was held on May 22nd at the Hotel Cecil, London, and was well attended by certifying surgeons from all parts of the country. The retiring President, Dr. T. F. YOUNG, of Liverpool, took the chair.

The HONORARY SECRETARY gave a statement of the work of the Association during the year, the most important having been the reviewing of the report of the Home Office Committee on Industrial Accidents. The report of Committee on the Conditions of Ventilation in Factories was also referred to, as well as the promise made at the Manchester meeting of the British Medical Association that the factory surgeons' organization would investigate this particular question. The advisability of defining "slight" and "severe" in their relation to factory accidents, and the making of some general rules for the guidance of surgeons when making their examinations for certificates of fitness were also brought to the notice of the meeting.

Drs. KEAY, BRASSEY BRIERLEY, ERDINGTON, HOLMES, FORT, and C. F. MOORE took part in the discussion on the report.

Dr. T. F. Young was unanimously re-elected to the office of President, as were also Drs. T. Watts and W. F. Dearden to the positions of Honorary Treasurer and Honorary Secretary respectively. The Corresponding Secretaries were elected as follows: Scotland, Dr. Alex. Campbell, of Dundee; Ireland, Dr. Chas. F. Moore, of Dublin; London, Dr. Oxley. Drs. R. Patrick and J. C. Eames again became the Auditors for the year.

The annual dinner took place in the evening at the Hotel Cecil, London. The principal guest was to have been the Home Secretary, but in his unavoidable absence his place was well filled by Sir Kenelm Digby, the permanent Under-Secretary for Home Affairs. Fully 100 took their places at table, and this number included a goodly sprinkling of guests drawn from amongst those who have gained more or less distinction in connexion with factory legislation or administration. Parliament was well represented by Sir W. E. M. Tomlinson, Sir Charles Dilke, Sir J. Batty Tuke, Sir Michael Foster, Sir F. S. Powell, the Right Hon. C. H. Hemphill, K.C., Mr. J. H. Whiteley, Mr. T. P. O'Connor, Mr. Chapman, Mr. Austin Taylor, Mr. McIver, and Mr. Hoult; Mr. Cunynghame, Mr. Murdoch, and Mr. Troup from the Home Office; Dr. Whitelegge, Dr. Legge, and several of the principal inspectors from the Factory Office, with Professor Thorpe, Dr. T. Oliver, Dr. Dawson Williams, Mr. W. Burton, Mr. G. A. Grindle, Mr. H. Dreschfeld, and the Mayor of Greenwich assisted in making the gathering representative.

After the usual loyal toasts had been duly honoured, the PRESIDENT (Dr. T. F. Young) proposed the toast of "The Home Department of His Majesty's Government." In giving expression to the universal regret at the absence of the Home Secretary, he pointed out that members had foregathered from the furthest corners of the British Isles for the purpose of meeting the supreme head of the department in social intercourse, and not to have their expectations realized was a great disappointment. Factory surgeons, as a body, were getting away from their former position of isolation, and year by year came more into contact with the responsible representatives of the various branches of factory administration; he therefore felt justified in expressing his conviction that it only needed the presence of Mr. Akers-Douglas that evening finally to cement and consolidate the bond already existing. He asked Sir Kenelm Digby to convey his assurance of the pleasure Mr. Akers-Douglas's presence would have given to his hosts, and that it was the earnest hope of all that his health and strength would soon be restored to the fullest extent. In dealing with the toast he drew particular attention to the fact that the newspapers, whilst continually criticizing other departments, had so very little fault to find with the efficiency of the Home Office, and gave it as his opinion that this could only be regarded as a proof of the universal confidence of the public in those who were responsible for this branch of administration. He thought it a matter for great congratulation that, in this age of reformation, not one attempt had been made to reform the Home Office. His particular experience had been gained in factory administration, and he could confidently vouch, from his own personal knowledge, for the all-round efficiency of that Department. It was a department that was not "marking time," but was one of the most progressive in this most evolutionary era. He went on to state that the wealth of nations lay in the number of the healthy units constituting their

populations, and that the time was now present when those responsible for the general welfare fully realized that this was not the worst heritage they had got. Out of early work, unhealthy occupation, unfenced machinery, disease, and death had been evolved the Factory Acts, and it is justly the due of those directing their administration to be regarded as amongst our greatest national benefactors.

Sir KENELM DIGBY, in responding, echoed the wish expressed by the Chairman that the Home Secretary could have been present. A family bereavement, the pressure of official work, and the fact that he had only just got out of the doctor's hands, had been instrumental in preventing his coming amongst them, but he was certain that nothing would have given Mr. Akers-Douglas greater pleasure than to have been able to take his allotted place that evening. He went on to refer to the President's flattering eulogy of the Home Office, which, if he had only a free hand, would undoubtedly have had the effect of carrying him away with enthusiasm in his endeavours to respond suitably. He was, however, not disinclined to accept Dr. Young's view respecting the universality of interest involved, though the department, as at present existing, could only be regarded as a relic of a great institution whose functions had been gradually encroached upon by newer and more grasping departments. Certain important functions had, nevertheless, been left to them. They exercised a beneficent supervision over the life of the subject from his birth to his death; they saw that he behaved himself properly when on this earth and that he was correctly buried when he was dead, and if any misfortune landed him into prison they carefully attended to him whilst there, and duly liberated him on the expiration of his sentence. Not the least beneficent supervision, however, was that placed in the hands of the particular branch of the department which was represented there that evening. It was certainly one of their most important branches, and it would be hard to find another so far-reaching in its facilities for doing good. He was glad at being afforded the opportunity of coming into contact with so many of its representatives.

Professor C. J. WRIGHT took charge of the next toast, "The Factory Department of the Home Office." He referred to the occasion as the first on which the principal officials of the Home Office had come into such close contact with the particular branch of their department which he had the honour to speak for that evening, a branch which he thought he could safely style as more useful than ornamental. Though constituting a trades-union they had never been on strike, but were a body of working men only too proud to glorify themselves in their association with the powers that be. He was pleased to note the great interest shown by Dr. Whitelegge in the certifying surgeon, though he found as a result that the work increased whilst the pay did not. Whilst admitting that the occasion did not provide the proper time and place to refer to such matters, he ventured to think that with such an obliging Chancellor of the Exchequer, who, by the way, had only recently left the Home Office, the prerogative of mercy which had been so gracefully brought into play in other directions might be extended to an able body of workers whose constant wish was to support the Home Office in every possible way. He referred to the association with Dr. Whitelegge, of Professor Thorpe and Dr. Oliver, and the manner in which, under their fostering influence, not only mural decorations but pottery, dresses, and even table beer had been supervised for the public good. He noted that the physical degeneracy of our race was a common subject of comment, and said that, though the particular work in connexion with his University Chair had rather to do with the coming race, he regarded it as a proper connexion in so far as it enabled him to speak with authority on the need for further supervision of women employed too soon after confinement.

Dr. WHITELEGGE, in returning thanks, lightly referred to the friendly nature of the criticism to which he had been subjected. He acknowledged that the work of the department was ever on the increase, and instanced that, besides the large number of factories mentioned by Dr. Young, buildings, docks, and even ships had been included within their operations. With the greater amount of detail required the work became harder every year, but it was always the endeavour to get through with it without fear or favour. Certifying surgeons had an Association which he was glad to say was growing, and he realized to the full the value of the work accomplished by it. He was also pleased to note the increase in the standard of the men who came forward to fill the vacancies as they arose. He would therefore assure them that if more and more was asked from them such was not done without thought, but had for its incentive a real desire for information. He alluded to the importance of ventilation in factories and workshops, to the manner in which the spread of phthisis was bound up with it, and to the important fact that, under the Act of 1891, a statutory standard of ventilation could be secured. Referring to the Manchester meeting of the British Medical Association, he mentioned the great pleasure it had afforded him to preside over the new and important Section of Industrial Hygiene, and to the great amount of good likely to accrue from the excellent quality of the papers and discussions connected therewith. He gave expression, with marked emphasis, to the sincere hope that factory work would never be any the worse for the medical influence brought to bear on it. Going on to the subject of accidents, he stated that in spite of the annual number having risen to 90,000, statistics did not and could not give any indication of the numbers prevented, though it was undoubted that, great as the increase in numbers must be, the number prevented must still be greater still in proportion. He stated that certifying surgeons might be considered as a body of self-sacrificing men who were destroying their opportunities for usefulness through their own efficiency, instancing the diminution in the number of cases of industrial poisoning as a result of the supervision placed in their hands. At the same time he expressed his conviction that this could not be allowed to go on without proper recognition from the Home Office. Speaking of dangerous trades, he noted the general increase of activity in connexion therewith of recent years, the extension of the work, the more intelligible nature of the rules leading to their being better understood by those engaged in the processes, and to the undoubtedly beneficial results. He thought that as the certifying surgeon was brought more into contact with this class of work he would be enabled to exercise a greater and certainly more beneficial control over children and young persons working at a dangerous employment.

Dr. WHITELEGGE concluded his remarks by proposing the toast of the "Association of Certifying Factory Surgeons," and this was suitably responded to by Dr. YOUNG.

INFANTILE MORTALITY IN RELATION TO MILK SUPPLY.

THE series of articles on the milk supply of large towns, which has been appearing in the BRITISH MEDICAL JOURNAL, are an index of our sense of the importance of a pure milk supply as a means of reducing infantile mortality. The most unfavourable feature in the sanitary history of the last 40 years is the fact that the infantile mortality has not been reduced; has, in fact, become on the average higher than it was. This is clearly indicated by the following table:

England and Wales.

Period.	Annual Mortality of Infants under 1 year of Age to 1,000 Births.	Annual Death-rate from all Causes per 1,000 of Population.
1838-42	152	—
1847-50	154	—
1851-60	154	22.2
1861-70	154	22.5
1871-80	149	21.4
1881-90	142	19.1
1891-95	151	18.7
1896-99	157	17.8
1900...	154	18.2

Thus, comparing 1851-60 with 1896-99, we find that the infantile mortality has increased about 2 per cent., while the death-rate from all causes together has declined about 21 per cent. Clearly there is reason for profound dissatisfaction with the failure of infantile mortality to follow the rule of the general mortality. Some light is thrown on the causes of excessive infantile mortality by a statement of the local incidence in the counties of England. Thus, according to the Registrar-General's report for 1899, the infantile mortality varied from 106 per 1,000 births in Rutlandshire and 108 in Herefordshire to 191 in Lancashire. The order of the counties, beginning with the one having the lowest infantile mortality, was as follows:

1. Rutlandshire.
2. Herefordshire.
3. Westmorland.
4. Wiltshire.
5. Huntingdonshire.
6. Oxfordshire.
7. Hertfordshire.
8. Shropshire.
9. Buckinghamshire.
10. Suffolk. } Dorsetshire.
11. Somersetshire.
12. Cambridgeshire.
13. Berkshire.
14. Cumberland.
15. Northamptonshire.
16. Sussex.
17. Cornwall.
18. North Wales.
19. Worcestershire. } 20. Bedfordshire.
21. Surrey.
22. Devonshire. } 22. Gloucestershire.
23. Norfolk.
24. Kent. } 25. Derbyshire.
26. Lincolnshire.
27. Hampshire.
28. Middlesex.
29. North Riding, Yorks.
30. East Riding, Yorks. } Essex.
31. Leicestershire.
32. West Riding, Yorks.
33. Cheshire.
34. London.
35. Monmouthshire.
36. Warwickshire.
37. Staffordshire.
38. Durham.
39. Northumberland.
40. South Wales.
41. Lancashire.

The distribution of infantile mortality shows that it is much greater in counties in which urban populations predominate, being especially great in the counties in which mining and manufacturing industries are chiefly found.

The excess of infantile mortality in towns is no new thing. Thus Dr. Price[1] shows that—

In London, even in its present improved state, and according to the most moderate computation, half the number born die under 3 years of age; in Vienna and Stockholm under 2; in Manchester under 5; in Norwich under 5; in Northampton under 10.

Dr. Price wrote the above remarks in 1763. He adds the following comment:

In general.....the excess of the burials over the births and the proportion of inhabitants dying annually are more or less as the wns are greater or smaller. In London itself, about 160 years ago, when it was scarcely a fourth of its present bulk, the births were much nearer to the burials than they are now. But in country parishes and villages the births almost always exceed the burials; and I believe it never happens, except in very particular situations, that more than a fortieth part of the inhabitants die annually.

In the Fifty-fourth Annual Report of the Registrar-General is an interesting study of infantile mortality, which has important bearings on our present subject. In this report the causes of death of infants born in different parts of the country who die in the first year of life out of 100,000 liveborn children are thus given:

Age.	Of 1,000 Born, the Numbers Surviving at each Age.		
	Three Rural Counties.	Five Mining and Manufacturing Counties.	Three Selected Towns.
At birth... ...	1,000	1,000	1,000
3 months ...	948	921	909
6 ,, ...	931	886	856
12 ,, ...	903	831	782

The town infantile death-rate is shown in this report to be in excess of the rural death-rate not only for the aggregate of the year but for each fraction of a year. It is important to note, however, that the town rates are most in excess in the later months of the first year of life. Thus, in the first month the town rate exceeds the rural rate by 27 per cent., in the second month by 121 per cent., the excess going on increasing, until in the sixth month it amounts to no less than 273 per cent. This is the highest point, though the excess remains nearly as great during the rest of the first year of life. The causes of the differences between town and rural urban mortality are equally suggestive. Under the head of diarrhoea and enteritis the mortality is more than seven times as great in the town as in the country. The mortality from measles and scarlet fever is more than three times, and the mortality from premature birth nearly twice, as high in the towns as in the country.

Clearly, then, the conditions of town life are in many respects unfavourable to the survival of infants beyond the first year of life, and as food is the prime and chief necessity of health and life, and as in the absence of maternal milk cow's milk is the chief food of infancy, it is not surprising that increasing attention is being drawn to the condition of cow's milk as supplied in our towns. The importance of artificial feeding in increasing infantile mortality cannot easily be exaggerated. Did we know the proportion of infants who are now artificially fed as compared with the number so fed, say in 1851-60, it would be practicable to give a numerical expression to the influence of artificial feeding on mortality. This information is, unfortunately, unobtainable; and we must content ourselves by agreeing with the general opinion that, in connexion with the more general urbanization of the English population, the increased employment of young mothers in occupations away from home, and the unfortunate reluctance of many mothers to discharge their primary maternal duties, there has been a reduction of the proportion of children who receive the immense advantage of breast food. Similar information comparing the two groups at the present time in a manner that avoids statistical fallacies are almost equally scanty, but the figures obtained by Dr. Meredith Richards in an investigation at Chesterfield are valuable and suggestive. In a somewhat extensive inquiry into habits of feeding, not only among those dying of diarrhoea but also among those who had not so died, the following results were obtained:

	Survivors per Cent.	Deaths from Diarrhoea per Cent.
Breast only	42	11
Breast and foods	42	22
Cow's milk and foods ...	16	67

While it does not follow that the phenomena of excess of diarrhoeal mortality and excess of children fed by foods other than breast milk are in the relationship of cause and effect, the above table suggests this conclusion somewhat forcibly, and the recurrence of the same coincidence in other instances makes such a conclusion almost inevitable.

Why artificial feeding increases infantile mortality is not difficult to understand. It is usually the substitution of a living aseptic food for one which has undergone transit from remote farms, been exposed to bacterial multiplication, and consequent injurious changes since it first left the cowshed to the time when it reaches the household, and subsequently up to the later time at which it forms part of the infant's food.

The main expression, then, of the evil effects of artificial feeding of infants will have to be sought in the incidence of epidemic diarrhoea, though it is not unlikely that under other less defined headings as marasmus, convulsions, and so on are to be found evidence of the evils of substitution of cow's milk and patent foods for mother's milk. Diarrhoea is, like enteric fever, a "filth disease," and the following diagram, showing that its incidence has not declined in recent years, indicates the importance of a pure milk supply and of discouraging the substitution of artificial feeding for breast food, unless under the instructions of the medical adviser, who should have the very strongest reasons for giving this advice.

It will be noticed that according to the curve A in the diagram on p. 1267 there is no improvement in infantile mortality, and, in fact, some deterioration in this respect. Curve B in the same diagram shows the number of deaths which have each year since 1868 been caused by diarrhoea. This is stated, as suggested by Dr. Newsholme,[2] and in terms of the number of births, inasmuch as the vast majority of deaths from diarrhoea occur in infancy. With respect to curve B, it is necessary to bear in mind the fact that for some years past there has been an increasing tendency on the part of practitioners to certify deaths from diarrhoea as due to enteritis, and deaths thus certified do not appear in the curve. Consequently the diarrhoeal mortality has increased in recent years considerably more than is shown in curve B of the diagram. On the other hand, it should be noted that a disproportionate number of summers in the last decade have had a deficiency of rainfall and an excess of temperature above the average, conditions which it is known favour diarrhoeal mortality. Making due allowance for these facts, it is still disconcerting to find that infantile mortality, and particularly infantile mortality caused by diarrhoea, has increased in recent years.

The food of infants is almost certainly the main cause of this increase; this excessive mortality occurring chiefly among handfed infants.

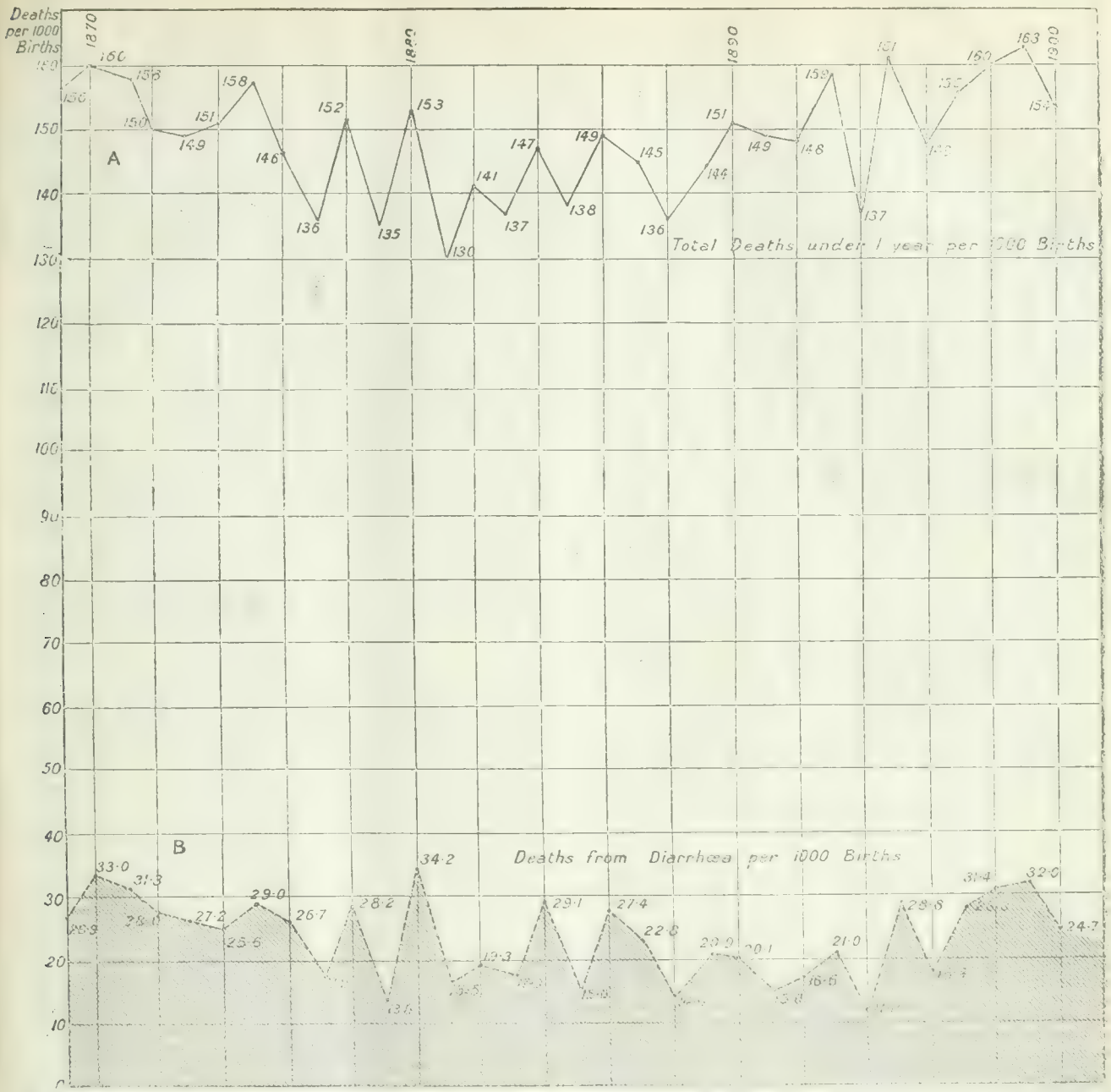
Professor Delépine, in an important paper[3] on The Bearing of Outbreaks of Food Poisoning upon the Etiology of Summer Diarrhoea, arrives at the conclusion that

milk, which is the most common cause of epidemic diarrhoea in infants, is usually infected at the farm or (through vessels) in transit.

[1] *servations on Reversionary Payments, etc.*, vol. i, p. 264 (1783).

[2] *Public Health*, December, 1899.

[3] *Journal of Hygiene*, vol. iii, No. 1, and BRITISH MEDICAL JOURNAL.



Dr. Newsholme, on the other hand, remarks [4]

the question arises whether milk most commonly receives the contagium of diarrhoea at its source on the farm, in transit, or during delivery and storage at home. The last is, I believe, the most common point of infection, though the filthy conditions under which cows are commonly milked must largely help in the same direction.

In confirmation of this last expression of opinion he gives the facts relating to the sources of milk supply of 191 cases of diarrhoea in Brighton in 1900-2. Of these 9.4 per cent. were breast fed, and 44 per cent. were fed solely on condensed milk; the remainder on cow's milk.[5] A very similar percentage is given by Dr. Richards, based on the experience of Croydon.[6]

From these results it is clear that domestic infection of milk must not be ignored. When we remember the possibilities of infection by dust, by actual faecal matter, by the operations of flies, by handling of bottles and teats with dirty hands, and in other ways, this need cause no wonder. But this, while showing another aspect of a most important subject, does not minimize the importance of a milk supply pure at its source and kept pure during its transit.

Professor Delépine's researches prove that properly cooled milk contains fewer bacteria, and is less frequently pathogenic than milk which has not been cooled. These facts, and others like them, indicate the supreme importance of an improved milk supply. A recent discussion at a meeting of the Incorporated Society of Medical Officers of Health has brought out several important points.[7] As suggested in the discussion we require:

1. A standard of cleanliness, so far as amount of deposit of solid matter from milk is concerned.
2. A bacteriological standard, indicating the maximum number of bacteria permissible in milk in summer.
3. A temperature standard, which would insure the proper cooling of milk and its maintenance during transit in this cooled condition.
4. A prohibition of the sale of milk that could not be boiled without coagulating within six hours after purchase.[8]

[4] *Public Health*, December, 1899.
[5] Annual Report, Brighton, 1902, p. 5c.
[6] Annual Report, Croydon, 1902, p. 24.
[7] *Public Health*, May, 1903.
[8] Dr. Richards, *Public Health*, May, 1903, p. 462.

LITERARY NOTES.

The current number of the *Quarterly Review* contains an interesting and well-documented article on Leprosy by Mr. George Pernet. Speaking of the leprosy of the Bible, he says that it has been doubted whether the word *Caraath* means true leprosy. "The leper white as snow" was suffering more probably from leucoderma, which has nothing to do with leprosy. Leucoderma, says Mr. Pernet, is not contagious, but it is difficult to understand why such minute directions for disinfection and segregation should have been given in the Old Testament in the case of a non-contagious disease. In Western India two kinds of leprosy are popularly recognized. One is called black leprosy, or, in Marathi, *raktapiti*: the other, white leprosy, goes by the name of *kod*. The former is true leprosy, but the latter is now, and corresponds, no doubt, to leucoderma or vitiligo, which has nothing whatever to do with leprosy. The word *Caraath* perhaps included leucoderma and other non-leprous diseases, such as the itch, but possibly true leprosy also. According to the late Sir Richard Burton, leprosy was regarded by Moslems as a scriptural malady on account of its prevalence among the Israelites, "who, as Manetho tells us, were expelled from Egypt because they infected and polluted the population." The Arabs also distinguish two kinds of leprosy—*bahak* or *baras*, the common or white, and *juzam*, the black or true leprosy, which latter in Morocco goes by the name of *djdem*. But, according to a recent writer, *baras* in Morocco includes vitiligo, cicatricial conditions, morphoea, and so forth: in Algeria it applies to leprosy. In Morocco there is also a word used for pigmented or black spots—namely, *behegh*. Again, in Turkestan, two diseases are distinguished—*machan*, or true leprosy, and *pjes'j* or vitiligo (leucoderma). Mr. Pernet shows that the statement often made, that leprosy was imported into Western Europe by the Crusaders, is incorrect; but he says it cannot be doubted that there was a recrudescence of the disease and an increase in the number of lepers about that period. One important statement made by Mr. Pernet may be commended to the careful attention of Mr. Hutchinson:

> About the end of the fifteenth century leprosy was subsiding in Europe, and by the sixteenth it had lost its endemic character.

This fact alone knocks the bottom out of Mr. Hutchinson's extraordinary theory that the cause of the disappearance of leprosy was the abolition of fish-eating on days of fasting and abstinence at the Reformation. Mr. Pernet strongly combats the fish theory on scientific and clinical grounds. The article is well worth reading by all who are interested in leprosy, whether from the pathological or the historical point of view.

The *Cornhill Magazine* is publishing a series of articles entitled Prospects in the Professions. In the June number medicine is dealt with. The article is, on the whole, sound and sensible. We hardly think, however, that the Director-General of the Army Medical Service would agree with the writer that "the army has now no difficulty in getting its pick of some of the best men in the schools." The writer also paints the prospects of the Indian Medical Service in too roseate hues when he says that "with an ample pension and the accumulated profits of a good civil practice it is not surprising to find many officers of the Indian Service returning to England in middle life in affluent circumstances." The time was when an Indian career was a short way to fortune for many; now this is only for the few, and the outlook for the many becomes greyer year by year. Speaking of the consultant branches of the profession, the writer says:

> Thanks to the competition that exists for hospital positions, they are able to command from year's end to year's end the assiduous and devoted services of their large staffs of highly-trained visiting physicians, surgeons and specialists, and of a brigade of junior officers waiting for promotion and eager to prove their parts, practically without paying anything at all for them. It has been plausibly estimated that the existence of the medical schools, most of which are in themselves self-supporting, virtually adds the value of £50,000 a year to the charitable resources of London, and the estimate is probably within the mark.

We invite the Hon. Stephen Coleridge to read, mark, learn, and inwardly digest this estimate of the financial value of medical schools to the hospitals with which they are connected.

In the *Pall Mall Magazine* for June "One who has been Cured" gives an account of the open-air treatment of consumption as carried out in a sanatorium situated in the Highlands of Scotland. The following passage throws an instructive sidelight on the system "made in Germany," as to the merits of which perhaps more than enough has been heard: "Now let me emphatically state that the enormous stuffing which originated with a well-known German institution, and which many have asked us to believe is essential to successful treatment, found no favour here. Here there was no occasion for indulging in any highly scientific system of pocketing food in order to get it out of the sight of the inexorable doctor." The writer further sounds a note of warning which we fully agree with him is rendered necessary by the sensational article entitled "The Cry of the Consumptives," published in the *Nineteenth Century* for January, 1899. He says: "That article did untold good, in so far as it directed the attention of the public to the curability of phthisis by open-air treatment. But it also did untold harm, and led to much painful disillusionment on the part of those who, accepting its oversanguine anticipations, put the directions of its author to the test and found them wanting." Our own opinion is that any good Mr. Gibson may have done by calling attention to a fact which had often been impressed on the public mind before was far more than counterbalanced by his absurd overstatement of his case, and by the unfounded hopes raised thereby in the hearts of many sufferers whom neither the Mecca in the Black Forest nor its prophet could cure.

The *Memoires et Bulletins de la Société de Médecine et de Chirurgie de Bordeaux* for 1902, just published, contains among much other interesting matter a report of the address delivered by Dr. Pitres on January 2nd, 1902, on his installation as President in succession to M. Hirigoyen. Finding no inspiration in any matter of *actualite*, he turned to the records of the Société de Médecine de Bordeaux, from which the Société de Médecine et de Chirurgie is lineally descended, to see, as the fashion is nowadays, what its members were busying themselves about just a hundred years before. He found, however, that in the first week of January, 1802—or, to use the style then in use in France in Nivôse of the year X—the official record laconically stated that no meeting was held because the weather was bad, and the President, the secretaries, and many other members were ill. The illness was doubtless, said M. Pitres, due to the great epidemic of influenza which raged all over Europe from 1799 to 1803. In the winter of 1801-2 it caused a veritable panic at Bordeaux, which, it is comforting to read, was not shared by the medical profession. The President of the Society was Pierre Guérin, Mastery in Surgery, and the author of treatises on ophthalmology. The assistant secretary, Caillau, was a man of learning and a poet, who was awarded a prize by the Toulouse Academy of Floral Games. In the reports the discourses of the presidents are invariably described as "eloquent," an epithet which even at the present day is generally held to belong to a presidential address by the same prescriptive right as the title of "swift-footed" belongs to Achilles. Of the discussions of the Society several examples are given by M. Pitres. The reigning epidemic in the beginning of 1802 furnished the theme. It was debated whether the influenza was a *febris catarrhalis epidemica* or a simple *tussis epidemica*. There was much talk of the "morbid constitution" which engendered the disease and of the epidemic character (*génie*) which fostered it. The more learned members naturally referred to accounts of similar epidemics given by older writers, which, it is allowable to conjecture, they had carefully read up for the occasion. There was, of course, much discourse about treatment, some declaring their faith in blood letting, others in intestinal derivatives, others again in cutaneous revulsives. It does not appear that the members of the Bordeaux Society at the dawn of the nineteenth century knew more about influenza or its treatment than we do now in the year of grace 1903. The Society was fond of appointing committees on all sorts of matters. By means of one of these—the Commission des Consultations Gratuités—the Society appears to have done the work of a dispensary or out-patient department. This Committee did not report to the Society, but not infrequently submitted cases for diagnosis or recommendations as to treatment. It also sometimes asked for advice as to the fitness of a case for gratuitous treatment. There was a Committee on Prevalent Diseases which reported twice a year on the "constitution" of the diseases of the autumn and the spring. There was a Committee on Periodicals, whose duty it was to report every month on the contents of the journals received by the Society. This Committee was at first composed of six members, two physicians, two surgeons, and two pharmacists. For a long time the Committee gave no sign of life except by keeping for the use of its members the periodicals which were the property of the Society. As it was found impossible to extract monthly reports from the Committee, the Society passed a self-denying ordinance

that quarterly reports would suffice. This concession proved useless. The Committee presented no reports and in due course died a natural death, probably keeping possession of the journals to the last. One can hardly blame the Committee, for the task imposed upon it must have been, even in that early period of the development of medical journalism, almost too much for man, of whom brief life is here the portion, to perform. On another committee was laid an equally burdensome duty. It had to read all the books and papers sent to the Society and at as early a date as possible present a detailed analysis of them and express a definite judgement as to their value which, whether favourable or otherwise, was conveyed to the author. Naturally in these circumstances the judgement was mostly favourable. Sometimes, however, the reporters acted on the principle expressed in the motto of the *Edinburgh Review*, "*Judex damnatur cum nocens absolvitur*." Thus reporting on an account of a spring recently discovered at Bagnères de Bigorre, sent by Citizen Pinac, Citizen Lucadon states that "this pamphlet is, properly speaking, nothing else than the announcement of the discovery of the new mineral well in that district, and that before a judgement as to its efficacy can be formed, the verdict of analysis and experience must be waited for." Citizen Caillau, again, reporting on a Latin edition of the *Epitome de Curatione Morborum* of Theophanes Nonus, published by Steph. Bernard, winds up by pointing out how deplorable it is that Steph. Bernard, whose erudition is prodigious, has not made a better use of the time which he has spent in editing Nonus. One cannot help agreeing with the compiler of the minutes of the meeting, who adds that "this report, which was listened to with the greatest interest, is doubtless of more worth than the 1,200 pages of Nonus, and makes a perusal of them unnecessary." The Society found, however, that such frank criticism was not appreciated by authors, and that reviewers were for their own comfort more inclined to prophesy smooth things than to deal faithfully with the works handed to them for judgement.

THE EPIDEMIC OF SMALL-POX.

There is still nothing very good to say about the small-pox, as, though there is decidedly an improvement in some places, the disease is as decidedly spreading in others, while the same monotonous story of tramps continues to be told in all the reports.

In Co. Durham there is a distinct increase at old centres, and a spread of the disease to new ones. Thus Gateshead, Bishop Auckland, Durham, and Hartlepool have added a considerable number to their records, and fresh foci are notified from Tynemouth, West Pelton, and Sunnybrow.

At Tynemouth, chicken-pox, locally known as "jag marks," has been placed on the list of notifiable diseases for a period of three months.

From Westmorland and Northumberland there are no reports to hand.

In Lancashire there is little change at either Liverpool or Manchester, but Bury, Elton, and Holcombe appear to be fresh centres, while Altcar, Heywood, and Southall have notified more cases.

In Yorkshire, Leeds had 74 cases under treatment at the date of the last report, while the number of apparently fresh centres reported in other parts of the county is unpleasantly large. Keighley and Brighouse both believed to be free, again figure in the list, while Bradford and Halifax have had to remove several more cases. Thorne, Cleckheaton, and Elland appear to be new centres.

In Cheshire, Chester itself, which has hitherto kept practically free, has had a sudden outbreak amounting to about 20 cases, and is much alarmed. It has been noted that all the patients are persons who have not been vaccinated since childhood, if at all, and the people are flocking to the vaccinators. At Ruabon there have been one or two more cases, while Rambottom seems to be a new centre altogether.

In Leicestershire, Ashby is a new centre, while another case has occurred at Loughborough. At Leicester itself the disease is making quiet but fairly steady progress.

In Oxfordshire the only reports are from Oxford itself, where there are several new cases under treatment.

In Staffordshire, Dudley has had some new cases, and Willenhall is a fresh centre.

In Warwickshire, there are no reports from Birmingham, but a few new cases are noted in Warwick. In Coventry things appear to be improving, though there were still some 20 cases under treatment at the date of the last report.

In Nottinghamshire, Hucknall Torkard continues to supply cases and more have occurred in Nottingham itself, while in the Blackwell Rural District what is stated to be "an alarming outbreak" is reported.

In Shropshire a "serious" outbreak has occurred in Wellington.

In Derbyshire, Alfreton is the only place from which a fresh report comes.

In Essex only 1 fresh case appears to have occurred at Colchester, and nothing more at present at Barking.

In the London district some cases are said to have occurred near Hendon.

In Wales things are going on very much as before: Garthbeibio and Newport being fresh centres, while Barry has had one or two new cases. Cardiff, besides one or two new ones of its own, has imported others from the shipping.

From Scotland there are no fresh reports to hand.

THE PLAGUE.

Prevalence of the Disease.

India.

During the weeks ending April 25th and May 2nd the deaths from plague in India were returned as 28,146 and 24,333 respectively. All the worst infected parts of the country share in this decrease, and only in such mildly affected places as Karachi, Hyderabad State, Central India, and Kashmir is there an increase. During the week ending May 2nd the deaths from plague were distributed as follows: Bombay City 845, Bombay Presidency 1,923, Calcutta 228, Bengal 965, North-West Provinces and Oudh 2,031, Punjab 16,085, Rajputana 64, Kashmir 65, Central Provinces 152, Hyderabad 83, Central India 685, and Mysore 69.

A plague scare was created in jute mills near Calcutta by the appearance of a few dead rats; the alarm had, however, subsided by May 9th.

The extent of the increase of plague in India during recent years is readily understood from the following figures: The recorded deaths from plague in 1897 amounted to 56,000, in 1898 to 118,000, in 1899 to 135,000, in 1900 to 93,000, in 1901 to 274,000, in 1902 to 577,000. During the first three months of 1903 the mortality from plague amounted to 331,000, the returns for March alone showing 136,000. This number exceeds the records of March, 1022, by about 30,000.

We are seldom informed of the proportion of plague cases to deaths from plague in India, but recent returns show that in the Punjab during the two weeks ending April 11th and 18th the cases numbered 24,436 and 27,932, whilst the deaths were returned as 14,604 and 16,860 respectively.

Some alarm has been created at Ootacamund in the Nilgiris owing to a few cases of plague having occurred at some villages in the Nilgiris.

Cape Colony.

During the two weeks ending April 25th and May 2nd the plague report is as follows:

Port Elizabeth.—Fresh cases of plague, 8 and 4; deaths from disease, 7 and 2 respectively. On May 2nd, 13 cases of plague were being treated in the hospital.

East London.—Fresh cases, 1 and 2; deaths, 1 and 1; 2 cases remained under treatment on May 2nd.

King Williamstown.—Fresh cases, 3 and 4; deaths 0 and 3; 5 cases remain under treatment.

At neither *Graaff-Reinet* nor *Burghersdorp* were any cases of plague reported, nor were any dead rats found infected by plague.

At *Queenstown* plague-infected rats were found at the railway goods shed. Europeans seem to be attacked by plague in South Africa to a greater proportionate extent to natives than in any country except Australia.

At *Port Elizabeth* 1 European died during the week ending April 25th, and at *King Williamstown* out of the 7 cases reported no less than 3 were Europeans.

Mauritius.

For the weeks ending May 14th and 21st the fresh cases of plague in Mauritius numbered 0 and 2, and the deaths from the disease 1 and 1 respectively.

Hong Kong.

For the week ending May 16th the fresh cases of plague in Hong Kong numbered 117, and the deaths from the disease 99.

Peru.

A telegram dated Callao, May 12th, states that 4 fresh cases of plague were reported in Callao on May 7th, but that no further cases had been reported.

THE PREVENTION OF CONSUMPTION.

Devon and Cornwall.

The report of the Executive Committee of the Devon and Cornwall Branch of the National Association for the Prevention of Consumption and other Forms of Tuberculosis was presented to the third meeting of members on May 13th. This report shows that during the year 1902 the energies of the Committee were largely employed upon the establishment of a sanatorium, and as a result the Didworthy Sanatorium for Consumptives will shortly be opened. The work of recommending preventive measures to county and borough councils was actively continued, and information was obtained from medical officers of health throughout the two counties showing the prevalence of tuberculous diseases in the different districts, and the measures which are in operation with a view to prevention. This information is printed with the report, to which it forms an interesting and valuable addition. The Committee draws the attention of medical men and sanitary authorities to the value of voluntary notification, which has been introduced in several districts, and urges also the need for a home for advanced consumptives and a seaside sanatorium for scrofulous children. The report contains evidence that the branch is doing valuable work, and that the Executive Committee has lost none of the activity which has characterized the Association since its foundation.

AUSTRALASIA.

Victoria.—The *Australasian Medical Gazette* states that Mr. Zwar, the honorary secretary of the Victorian Association for the Prevention and Cure of Consumption, claims that the Association has already done valuable work. It has addressed municipal authorities all over the State on the subject of prevention, distributed a large number of circulars, advised hospital committees, and prepared a short circular in popular form for distribution among consumptive patients. Recognizing that the sanatorium accommodation now provided is miserably inadequate, the Association approached the Committee of the Victorian Sanatoria with offers of assistance. A Joint Committee was formed and journeys were undertaken with the object of determining the best possible site for a sanatorium. The result was the strong recommendation by the Association of a district regarded as eminently suitable; but there the matter rests, and the health authorities have so far shown themselves apathetic.

New South Wales.—A new sanatorium was opened at King's Tableland, near Wentworth Walls, New South Wales, by the State Governor on February 18th. The institution is situated in the heart of the Blue Mountains and surrounded by magnificent scenery. The cost of the site and the buildings amounted to about £5,000. The property covers an area of 300 acres. In the construction the honorary architects, Mr. H. C. Kent and Mr. G. Sydney Jones, have closely followed the lines laid down for the King's Sanatorium which is to be erected at Midhurst, Surrey. The New South Wales Government is said to be contemplating the erection of a hospital for advanced cases of consumption near Sydney.

UNITED STATES.

Maryland.—The trustees of the Hospital for Consumptives at Towson are making plans for the establishment of a branch of the hospital at some place in the Blue Ridge Mountains, and a philanthropist has promised to give 25,000 dols. (£5,000) for the furtherance of the scheme if an equal sum can be raised by the trustees. It is expected that the plan will take definite shape before long. A small farmhouse will be rented for use during the coming summer as a kitchen and dining-room, while the patients will sleep in tents. The site has not yet been decided upon. The trustees have secured the co-operation of the Quarter Club in the movement, and that body has raised about 3 000 dols. (£600), which will be devoted to the carrying into effect of the plans for the mountain hospital.

Minnesota.—The idea of a State hospital for consumptives has been favourably received by the Legislature, and the erection of such an institution is in contemplation.

New York.—The eighteenth annual report of the Adirondack Cottage Sanatorium, issued at the end of 1902 by Dr. E. L. Trudeau, states that during the past year many improvements were made, several new buildings erected, and much valuable land added to the property of the sanatorium. Dr. Trudeau sums up the work of the year as follows: 271 patients have been treated. To 234 of these the institution has furnished the best possible means of restoration to health at a nominal cost, and to 37 entirely free of cost to them.

CONTRACT MEDICAL PRACTICE.

THE PROSTITUTION OF THE MEDICAL PROFESSION.

DR. EDWARD JEPSON (Durham) writes: A member of a lodge pays 3s. a year to his doctor, whom he calls in whenever he is ill or disabled, and demands from him strict attention and skill; the same member is the owner of property, and his daughters earn money as teachers; and when his wife and children are ill he employs another medical man, whom he pays in the proper way when a bill is presented. This abuse of the profession exists in every town where there is club practice. A Medical Aid Association is managed by a committee of working-men; there is no wage limit; canvassing by agents and by means of handbills often indulged in; the doctors are sweated; all the proceeds do not go to the medical staff, in fact sometimes the balance may be devoted to some other purpose. Here we have a brief sketch of the kind of association which is springing up in towns in the north; and the "Warning from the Midlands" in the BRITISH MEDICAL JOURNAL of May 23rd should rouse the profession against such a vile prostitution of the medical faculty. Will readers kindly furnish me with full particulars of Medical Aid Associations in different towns, as I propose to bring forward a resolution bearing upon this organization at the next meeting of the Ethical Committee?

MEDICO-LEGAL AND MEDICO-ETHICAL.

BLACKMAIL.

THE *Freeman's Journal* for May 22nd contains a report of one of the most outrageous charges against a medical practitioner which has ever come to our notice. As a correspondent who has written to draw attention to the case truly remarks, a perusal of the report "makes one tremble to think of the precipice upon which a physician stands when he is consulted by unscrupulous people."

The facts of the case were shortly these: Dr. Gordon, who carries on a general practice in Rathmines (near Dublin), was consulted by the complainant on August 6th, 1901. Shortly after this he discovered that she was pregnant and informed her of the fact. He asked her if she was married and she said no. He then advised her to get married as soon as possible. Upon a subsequent occasion she said that a Mr. Fitzgerald was the father of the child, and she got married to him six months afterwards. Dr. Gordon continued to attend her until her confinement, and his books showed that his last visit was paid on March 2nd. She visited his house in May, when she told him that she was going away and that she had come to say good-bye. He asked her to pay his fees. She paid him £2 on account, although there was a larger sum owing. This is an accurate account of Dr. Gordon's dealings with his patient, but for some obscure reason Mrs. Fitzgerald and her husband formulated and persisted in a charge of the very vilest nature against him. Thus it was alleged that on two occasions when Mrs. Fitzgerald called at his house he indecently assaulted her in his surgery. The flimsy nature of the charge and the extraordinarily minute possibility of its bearing any semblance of truth becomes apparent upon the most casual examination of the facts which were brought to light at the hearing before Mr. Swifte, the magistrate of the Dublin Southern Divisional Police-courts. To begin with, the complainant was, to put it mildly, a lady of indifferent character. She could not say who the father of her first child was. She had upon several occasions adopted different names. On neither occasion when the alleged indecent assaults were taking place did she cry out or ring the bell, although it was shown that there was a maidservant in constant attendance in the hall, and a waiting-room full of patients, any one of whom could have come to her assistance. The only corroboration of her apocryphal story was furnished by her husband, a man who was addicted to drink, and who, upon his own admission, had commenced, but subsequently abandoned, a *crim. con.* action against Dr. Gordon.

In these circumstances it is not surprising that the learned magistrate dismissed the complaint. In giving judgement he said: "Would any one for a moment hesitate which to believe: a woman of this kind, who has practically no corroboration except the corroboration, such as it is, of her drunken husband, or Dr. Gordon? He is stated to be a man of good character and of respectable practice. I have no hesitation in saying that a jury would scout this case out of court, and I refuse the informations. If Mrs. Fitzgerald still thinks that she is not getting justice, she can go elsewhere for justice."

We congratulate Dr. Gordon on his courageous defence to the charge. At the outset a suggestion was made that the case should be heard in camerâ, but Dr. Gordon boldly stated that he was not afraid of open criticism. In bringing the methods of these blackmailers into prominence he has performed a valuable service, not only to his profession, but to the public, who are afforded an opportunity of witnessing the effect of fearless denunciation of these pests of society.

PERSONATION.

MR. V. B. NESFIELD, who is a house physician at St. Mary's Hospital and also a lieutenant on probation in the Indian Medical Service, has recently been the victim of an impersonation of an unpleasant and dangerous kind. A man called upon him late at night, some six weeks ago, representing himself as the son of a Dr. Bodkin, whose address he gave correctly. He stated that he was a medical student, and had his pocket picked at Queen's Hall; and that consequently, unless assistance were tendered him, he would be unable to return home to Essex. He was given a sovereign, and Mr. Nesfield, when asked by the "borrower" to whom the money should be returned, being on duty and in a hurry, incautiously gave him a card which happened to bear an indication of his official status in the Indian Medical Service. With this card and the sovereign the borrower went off, and, having had a copy made of the card, subsequently represented himself to several persons as Mr. V. B. Nesfield himself. His story now was that he had come up from Huddersfield where he had relations (and where there happens to be another medical practitioner of the name of Nesfield), but, having lost his money, was unable to return. Several medical men in succession believed his story, and lent him various sums of money, but at length he went to the wrong man in the person of a house-physician at Brompton Hospital. The latter recognized at once that he was an impostor, and promptly handed him over to the police. The result was that he was tried and convicted. His real name is said to be Goring.

AN UNQUALIFIED ASSISTANT.

THE *Times* reported in its issue of May 19th a case of illegal practice of medicine tried at Marlborough Street. The defendant, Thomas Dixon, *alias* Dr. Cowen, of Great Portland Street, W., was proved to have examined and supplied medicine to a clerk sent by the solicitor of the Medical Defence Union, and to have examined and given a certificate which he signed "Dr. R. Cowen," to another clerk sent by the same solicitor. In the one case the defendant was paid 2s. 6d., and in the other 2s. To one of the "patients" he represented that he was Dr. Cowen, and both were seen by him in a house which had a red lamp outside, and "Surgery" written on the windows. The report further states that Mr. R J Cowen, L.R.C.S.Irel., L.R.C.P.Irel., deposed that he was in practice in Halfmoon Street, Piccadilly, but had rooms in Great Portland Street, which he used as a surgery, and that the defendant was assistant, and had been discharged. The latter was sentenced to pay a fine of £10, with 10 guineas costs, or, in default, two months' imprisonment.

RETAINING FEE FOR A MIDWIFERY ENGAGEMENT.

A. (in general practice) is engaged by letter dated at the beginning of November, 1902, to attend a lady in her confinement in May following. He has previously attended the lady professionally, and also her family

At the end of January A. receives a letter from the lady's husband saying that "owing to the nurse engaged by them disappointing them he has decided to make other arrangements with regard to doctor and nurse." B. (in general practice in the same neighbourhood) is called in to attend. Is A. entitled to charge a retaining fee? Should A. inform B. that he was previously engaged?

*** 1. A retaining fee is sometimes charged, but it would be much better if this were asked for and paid at the time the engagement is booked. A. may justify such a charge on the ground that as the amount of work he can do personally is limited he can only accept a certain number of engagements, and the fact that he has undertaken to attend one case may exclude another.

2. There does not appear to be any reason why A. should inform B. that he was previously engaged, as the patient's husband had a right to alter his choice of medical attendant, and A. having been politely dismissed, B. was entitled to take the case.

MEDICAL ETIQUETTE.

W. H. P.—A. is in attendance upon the child of C. when C. himself is taken ill. A. is sent for, but is out; B. is called in, and his services are retained, while A. is asked to continue in attendance upon the child. We are asked to say what should be the action of A. and B. with regard to the case of C.? Neither A. nor B. had previously attended the family.

*** We do not see that any difficulty need arise if A. and B. take an opportunity of meeting and of talking the matter over. It is not so very unusual for two medical practitioners to be in attendance upon different members of the same family, and they surely ought to be able to meet at the house, if this should happen, without unpleasantness.

SAX.—R. called in C., to give an anaesthetic to K., and later on to join him in certifying that K. was of unsound mind. K. upon returning home fell ill again, and called in C. to attend him. C. took the case without letting R. know. We are asked to say whether this behaviour on C.'s part is in accordance with medical etiquette.

*** The rule which forbids a practitioner who is called in consultation, or to assist, to take charge of the case to the prejudice of the original medical attendant, must not be extended to subsequent illnesses, or it would be almost impossible, in small places where there is no recognized consultant, for practitioners to render assistance to one another without getting in course of time quite a large number of persons tabooed to them. It is therefore recognized that the prohibition only extends to the particular illness for which the second practitioner has been called in.

GLASGOW.—A. and B. are in partnership. A. is suddenly obliged to withdraw owing to severe illness. C. purchases, through B., A.'s share of the partnership. Is it in accordance with medical etiquette for B. to introduce C. to A.'s late patients, who are almost all known personally to him?

*** Yes, if A. is unable or unwilling to introduce C. himself.

PARTNERSHIPS AND APPOINTMENTS.

X. Y. Z. asks the following question: A. and B. were in partnership, and last year there was a dissolution by agreement, both partners being permitted to practise independently, and the proceeds of certain appointments being equally divided. This does not work well, and A. wishes to know what would be a fair price to pay B. for his share in the said appointments.

*** A fair price would be one and a-half year's value of B.'s interest in the appointments; but whether A. can insist on B. selling his share must depend on previous agreements, and would be governed by the original deed of partnership or amendments of the same.

MEDICAL ADVERTISING.

R. H. asks whether a medical practitioner may advertise in a medical journal for resident patients with a view to the treatment and cure of a particular affection, provided, as we understand, that he does not give his name? We are further asked to say whether the General Medical Council would be likely to object to such an advertisement?

*** To the first part of the question we can only say that the medical journals contain numerous advertisements of institutions and homes for the treatment of insanity, inebriety, mental and nervous disorders, and pulmonary tuberculosis, which in many cases are owned by medical men whose names appear. We are not aware that the attention of the General Medical Council has ever been drawn to these advertisements.

FEES FOR MEDICAL EVIDENCE AT INQUESTS.

M.D. (Huddersfield) encloses a subpoena received from the coroner asking him to make an "external inspection" of the body of a deceased person upon whom an inquest is about to be held, and to give evidence thereon. For this the fee of 1 guinea was paid.

*** Unless a complete necropsy of the body was made and ordered by the coroner, he is not entitled by statute law to pay more than 1 guinea. But unless the medical witness views the body and makes some general inspection of it, he would be of little use at the inquest. The coroner receives information, with a certain history of the case beforehand, which guides him as to whether a necropsy is required, and if he thinks not, he may yet deem it desirable to have medical evidence, and would then send a summons asking the medical man to view and inspect the body and give evidence thereon. We think our correspondent must rest content.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following are appointed Surgeons in His Majesty's fleet, with seniority of May 16th, and are appointed to the *Duke of Wellington* for Haslar Hospital: A. W. IREDELL, W. K. D. BRETON, F. C. ROBINSON, C. H. DAWE, C. E. C. CHILD, R. THOMPSON, W. A. ILLINGWORTH, M.B., M. T. MALE, M.B., R. KENNEDY, M.B., J. H. L. PAGE, J. J. H. ROONEY, E. S. WILKINSON, M.B., W. E. ORMSBY, B.A., M.B., E. A. G. WILKINSON, B.A., A. F. FLEMING.

The following appointments have been made at the Admiralty: HUGH CLIFT, Surgeon, to the *Pegasus*, June 5th; ALFRED H. L. COX, Staff Surgeon, to the *Pembroke*, for the *Northumberland*, May 20th.

Civil Practitioner S. COPLEY, M.D., is appointed Surgeon and Agent at Boyne and Clogher Head, and G. BYERS, M.B., to Belhelvie, N.B., both to date May 1st.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL G. D. BOURKE is promoted to be Colonel, *vice* W. J. Fawcett, M.B., promoted, April 1st. Colonel Bourke was appointed Surgeon, September 30th, 1874; Surgeon-Major, September 30th, 1886; granted the rank of Lieutenant-Colonel, September 30th, 1894; and made Brigade-Surgeon-Lieutenant-Colonel, April 13th, 1898. He was with the Nile expedition in 1884-5 (medal with clasp and Khedive's star); with the Egyptian Frontier Field Force in 1885-6, including the engagement at Giniss; with the Burmese expedition in 1887-9 (medal with clasp); with the Chin-Lushai Expeditionary Force in 1889-90 (mentioned in dispatches, clasp); and in the campaign on the North-West Frontier of India in 1897 with the Tirah Expeditionary Force (mentioned in dispatches, medal with two clasps).

Lieutenant-Colonel E. V. A. PHIPPS retires on retired pay, May 27th. His commissions are thus dated: Surgeon, February 3rd, 1883; Surgeon-Major, February 3rd, 1895; and Lieutenant-Colonel, February 3rd, 1903. Lieutenant-Colonel E. V. A. Phipps served in the operations in Zululand in 1888, and in the South African war in 1900, including the relief of Kimberley also operations in the Orange Free State, including those at Paardeberg, actions at Poplar Grove, Driefontein, Houtnek (Thoba Mountain), Vet River, and Zand River; operations in the Transvaal, including actions near Johannesburg, Pretoria, and Diamond Hill; in the Transvaal, west of Pretoria, including action at Elands River; in Orange River Colony, including action at Wittebergen; and in Cape Colony, south of Orange River (Queen's medal with six clasps).

ARMY MEDICAL RESERVE.

SURGEON-MAJOR R. S. SMITH, M.B., having resigned his appointment in the Volunteers, ceases to be an officer in the Army Medical Reserve.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL S. H. BROWNE, M.D., C.I.E., Bengal Establishment, Principal and Professor of Medicine, Lahore Medical College, is appointed Inspector-General of Civil Hospitals, Bengal, from April 10th. He is promoted to be Colonel from the same date. He joined the department as Assistant Surgeon, March 31st, 1874, and was made Brigade-Surgeon-Lieutenant Colonel, December 4th, 1899. He was in the Afghan war in 1879, was mentioned in dispatches, and received the medal. He was appointed a Companion of the Order of the Indian Empire, January 1st, 1896.

Colonel J. T. B. BOOKEY, C.B., Bengal Establishment, is granted the rank of Surgeon-General while officiating as Principal Medical Officer, Punjab, *vice* Surgeon General Reid, on leave.

Lieutenant-Colonel H. K. MCKAY, C.I.E., Bengal Establishment, is granted the rank of Colonel while officiating as Principal Medical Officer Kohat District.

MILITIA INFANTRY.

SURGEON-LIEUTENANT J. RAMSAY, M.D., 3rd Battalion the Prince of Wales's Own (West Yorkshire Regiment), resigns his commission, retaining his rank and uniform, May 20th.

IMPERIAL YEOMANRY.

SURGEON-CAPTAIN H. BRAMWELL, M.D., Gloucestershire (Royal Gloucestershire Hussars) to be Surgeon-Major, May 20th.

Surgeon-Major T. F. S. CAVERHILL, Lothians and Berwickshire, to be Surgeon-Lieutenant-Colonel, May 20th.

Surgeon-Lieutenant-Colonel G. R. T. PHILLIPS, Pembroke, resigns his commission, is granted the honorary rank of Surgeon-Colonel, and retains his uniform, May 20th.

Surgeon-Lieutenant J. H. BEILBY, M.B., Worcestershire (the Queen's Own Worcestershire Hussars), to be Surgeon-Captain, May 20th.

ROYAL ARMY MEDICAL CORPS (MILITIA).

CAPTAIN A. R. H. OAKLEY resigns his commission, May 27th.

The promotion of Lieutenant H. E. DALBY to the rank of Captain, which was announced in the *London Gazettee* of May 5th, bears date March 28th, 1903, and not as therein stated.

VOLUNTEER RIFLES.

MR. FREDERICK S. BRERETON (late Captain Royal Army Medical Corps), to be Captain in the 3rd Volunteer Battalion the King's (Liverpool Regiment), May 20th.

Surgeon-Lieutenant S. HILLIER, M.D., 2nd Volunteer Battalion the Suffolk Regiment, to be Surgeon-Captain, May 20th.

Captain J. H. A. LAING, M.B., the Queen's Rifle Volunteer Battalion the Royal Scots (Lothian Regiment), resigns his commission, and is appointed Surgeon-Captain, with precedence next above Surgeon-Captain J. A. Clark, M.B., August 20th, 1894.

Surgeon-Lieutenant J. P. PENDLEBURY, 3rd Volunteer Battalion the King's (Liverpool Regiment), resigns his commission, May 27th.

Surgeon-Lieutenant J. BRUCE, M.B., 3rd Volunteer Battalion the Lincolnshire Regiment, to be Surgeon-Captain, April 25th.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

SURGEON-LIEUTENANT P. E. BARBER, 4th West Riding of Yorkshire, to be Surgeon-Captain, April 25th.

ROYAL ENGINEERS (VOLUNTEERS).

SURGEON-LIEUTENANT E. GRAY, 2nd Cheshire (Railway), to be Surgeon-Captain, May 27th.

Surgeon-Lieutenant E. H. KELLY, 6th Lanarkshire, resigns his commission, retaining his rank and uniform, May 27th.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

LIEUTENANT W. M. STEINTHAL, the Manchester Companies, to be Captain, May 27th.

VOLUNTEER INFANTRY BRIGADE BEARER COMPANY.

LIEUTENANT H. W. WEBBER, M.D., the Devon Company, to be Captain, May 27th.

THE NEW VOLUNTEER REGULATIONS.

SURGEON-MAJOR REGINALD SLEMAN (Cambridge Street, W.) writes: I write with reference to "Surgeon-Lieutenant's" letter which appeared in the BRITISH MEDICAL JOURNAL of May 2nd, p. 1062. I can see nothing to grumble at in the "new" Volunteer Regulations which were published in a special Army Order on April 22nd last year. In the first instance a regimental medical officer is efficient on the certificate of his commanding officer that he is competent to execute and has satisfactorily performed all the duties of his appointment during the year. There is no fixed number of drills to attend, doubtless owing to the fact that these medical officers have to examine recruits before enrolment. There is no compulsory camp; in other words, the matter is left to the discretion of the commanding officer.

In the Royal Army Medical Corps (Volunteers) and the brigade bearer companies the regulations are different and a set number of attendances is required, but here again the commanding officer has considerable power.

1. In cases where a medical officer is unable through stress of professional work to complete the requisite number of attendances, he may be returned as efficient on a certificate to this effect signed by his commanding officer. On this certificate the number of attendances he has made should be stated.

2. In special cases in which professional engagements prevent a medical officer from attending camp, he may be returned as an efficient, although he has not attended a camp in the preceding year, provided that he completes the necessary number of attendances. The commanding officer will furnish the necessary certificates, which must be based on his personal knowledge of the reason in every instance.

I believe that any regulation which compelled medical officers to leave their professional work for even a short period of seven days would not work well.

THE INDIAN MEDICAL SERVICE.

PROSPECTS OF JUNIOR OFFICERS.

BOMBAY SERVICE writes: The excellent article on the present position of the Indian Medical Service and on the numerous grievances from which the members of that service suffer, which appeared in the BRITISH MEDICAL JOURNAL of March 14th, has given great satisfaction, especially in the Bombay Presidency, where dissatisfaction is widespread.

There are certain corrections, however, to be made: First, as regards the pay drawn by officers in civil employ. A long column is given, derived, it is stated, from information supplied from the India Office. In it the pay of "first-class" civil stations is given in a way which would suggest to a person not cognizant of the actual facts that such stations often fall to the lot of junior men. It ought to be clearly understood that such stations only go to lieutenant-colonels, and very rarely indeed to senior majors. The greater portion of the first part of this column, therefore, may be deleted.

An officer who is compelled to take "sick leave" during his first three years is given about two-thirds of the passage-money for the journey homeward only, if no troopship is available, and not for both ways as stated. The passage money for the outward voyage (about £40) has to be met out of his furlough pay of £200 per annum. He gets no rise of pay till he has five years' service; if, however, he goes home sick after three years' service he is not given any assistance in the matter of passage money, because he is a "captain."

When a man is officiating in civil employ, which means the first three years of such employ, he is cut 50 rupees a month on account of his "lucrative private practice": it need hardly be said that this private practice has no existence. This 50 rupees is deducted in the case of all "second-class" civil stations.

As the Regulations for Intending Candidates sent out by the India Office are misleading, it may be of use to state what the ordinary man may expect to go through during the first ten years of his service. When he joins his pay is 350 rupees. It remains at this till he has passed the Lower Standard Examination in Hindustani. A reference to the Army List will show that it now takes the average man twelve months to pass it. The standard of this examination is now artificial. After passing this examination he obtains an officiating appointment to a native regiment; his pay is then 400 rupees a month. It must be understood that it is possible for a bachlor to live on 350 rupees a month in a large station, only by practising the very strictest economy. It is quite impossible for a married man to live on it; such people [illegible] life in India by getting hopelessly into debt. This matter cannot be too strongly emphasized.

After four years' service (about) he obtains a substantive appointment to a native regiment; his pay is then 450 rupees a month. He then probably goes to officiate in civil employ. It should be said that if during the time that he is officiating in a regiment he is sent on active service he immediately drops to unemployed pay, that is, 350 rupees. In other words, he is actually fined for the privilege of going on service. There are no field allowances for junior Indian Medical Service officers when on service.

On entering civil employ his pay drops to 400 rupees. It has already been stated that in second class stations there is, as a rule, no private practice at all. In a few there are gaol appointments to be had. These bring in 75 to 100 rupees a month, a remuneration absurdly small for the labour and responsibility such appointments involve. If, however, the officer goes into civil employ before he has obtained a substantive appointment in the military department, his pay is not 400 rupees, but 375, that is unemployed pay *plus* half the difference between it and the full officiating pay. Similarly, if at the end of three years' officiating work, there happens to be no vacancy in the substantive civil appointments for him, he loses the lien on his regiment, and drops some of his former pay, even when continuing in precisely the same civil appointment; this being calculated on his unemployed pay in the manner above described. These rules are most unjust, and without reason.

It is stated in the BRITISH MEDICAL JOURNAL that one officer was known to have had three moves in twelve months. This is nothing unusual. It ought to be clearly understood by intending candidates that for the first twelve years of service, save in exceptional circumstances, a man is never free from money worries. The amount of indebtedness among junior members of the Indian Medical Service is something astonishing.

It may be asked: "If things are so bad, why do the men stay in the service?" The answer is that the men are not staying. A good many men now take their first pension. Others take their second pension at twenty years. Several of the most junior men have recently sent in their resignations; some of these resignations have been refused. Debts in India is the reason that keeps most of the discontented junior men in the service. Others are only waiting in the hope that the reforms which have recently been brought about in the R.A.M.C., and especially the improvement of their prospects when in India, may shortly be extended to the Indian Medical Service.

THE PROSPECTS OF CIVIL EMPLOY.

PUZZLED writes: One of the inducements held out to candidates for the Indian Medical Service is that after a certain period of military duty officers can go in for civil employ; this was very nice in the old days when private practice was plentiful. At present, after being in medical charge of a regiment, the pay for which is after five years' service Rs.600 per mensem, an officer going into civil employ is graded as "civil surgeon or residency surgeon, 2nd class," and his total pay comes to Rs.500, so that he is a loser of £80 a year by leaving military duty. This loss could be made up in former days by private practice; but in the present day, unless an officer is exceptionally lucky in getting a big city, the private practice in my experience does little more than pay for the dispenser and medicines and other expenses; in other words, the much-talked-of civil employment of the Indian Medical Service is really, in a great many cases, a loss of £80 per annum to an officer leaving military duty.

MAJOR I.M.S. writes with reference to the same article: I have the honour to point out an inaccuracy as to the pay of officers of the Indian Medical Service in charge of prisons. It is only after eighteen years' service (not sixteen) in the gaol department that medical superintendents are eligible for the higher salary of Rs. 1200 per mensem. Few officers are appointed to the Gaol Department under five years' service, so that their maximum salary till twenty-three years' service is Rs. 950 per mensem, that is, Rs. 50 less than their contemporaries, who are enjoying the *dolce far niente* of military life on Rs. 1000 at twenty years' years' service.

GAOL APPOINTMENTS AND RESPONSIBILITIES.

JAIL writes: In the editorial article on the Indian Medical Service, which appeared in the BRITISH MEDICAL JOURNAL of March 14th, you have not touched upon one point to which the attention of all intending candidates for commissions in Indian Medical Service should be drawn. When, by good luck, an officer obtains civil employment, he must (he has absolutely no choice in the matter) take over the charge, medical and executive, of the local gaol, in addition to the civil surgeoncy of the second class district to which, as a junior officer, he is appointed. As medical officer of the gaol he will have anything from 20 to 100 patients to see every day, and will have to examine all new admissions into gaol. As superintendent he is directly responsible for all the *matériel* in the gaol, for hundreds of pounds worth of rations, for the proper construction of new buildings, for the punishment of the prisoners being properly carried out, and for two or three executions every year, for which he must see that all is ready, and at which he must be present. All his subordinates, from the gaoler down, are notoriously corrupt, and, if they are not making away with gaol goods, they are trying their best to wring money out of the prisoners or their relations. Should the superintendent fail to carry out each of the hundred odd financial regulations, he is responsible in pocket for all defalcations committed by his staff; and unless he carefully takes a stock twice a year, he is responsible for any shortage in the grain stocks or the raw materials of the factory. If any professional brother who is also an M.P. reads these lines, he cannot do better than call for a return showing (1) how many gaol subordinates in India have during the last ten years been suspended, reduced in rank, or dismissed for "errors" in their accounts or direct bribe taking; and (2) how many who, during their service, have been suspended or reduced or fined for the like delinquencies are still in the service.

For his multifarious duties the I.M.S. officer receives 50 or 75 rupees (according to the size of the gaol) a month in addition to his pay, but this allowance carries no exchange compensation, and ceases when he is on leave. Does any member of the British Medical Association consider that this pittance is adequate remuneration for work which is forced upon men whose training has not been that of a grain dealer, nor a factory foreman, nor an accountant? There's the sting—the officer has no choice in the matter. And, as during the period October to April a civil surgeon must be out of headquarters on inspection tour for at least ten days in every month, it seems to me to be unfair to saddle on him the responsibility for what occurs during his enforced absence from the gaol, which has been in the hands of a junior civilian or native magistrate of whose ignorance of detail and conscious freedom from responsibility the gaol staff are prone to take advantage.

AN ESTATE HOSPITAL.—A hospital intended for the treatment of patients on the estates of the Duke of Bedford was opened on May 22nd at Woburn. It is built on high ground, and contains 12 beds. There is a separate ward for infectious cases.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1903.

SUBSCRIPTIONS to the British Medical Association fall due on January 1st each year. All members who have not yet paid should forward, without delay, postal order or cheque for 25s., to the General Secretary, 429, Strand, London, W.C., or, in the case of Colonial members, to their Branch Treasurer.

British Medical Journal.

SATURDAY, MAY 30TH, 1903.

THE RULES FOR MIDWIVES.

UNDER the Midwives Act passed last year the Central Midwives Board was directed to make rules regulating its own proceedings, and defining the conditions under which midwives should be admitted to the roll, and for the regulation, supervision, and restriction of their practice within due limits. The Board began its statutory existence on April 1st last, but its members had been chosen at a much earlier date, and numerous informal meetings were held during the previous five months under the chairmanship of Dr. Champneys, who has now been formally elected Chairman of the Board.

Since April 1st the Board has gone about its official business so diligently that it was able at the end of last week to send up to the Privy Council draft rules and regulations. These rules were at once transmitted by the Privy Council to the General Medical Council, and, having passed through the hands of a special committee, will be considered at a meeting of the English Branch Council called for noon this day (Friday, May 29th). Unfortunately the Midwives Board was not unanimous, and hard upon the heels of the majority report followed a minority report signed by three of the five medical men who are members of the Board. Although the rules are very long, and the minority report not short, it has seemed well to print them in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of this week, inasmuch as questions arise in connexion with them which are of considerable importance to the public health and of no little interest to the medical profession.

In the first place, it is to be observed that, as has already been announced in these pages, the Board has by a majority decided that its meetings shall be held in secret. We entirely agree with the observations on this matter in the minority report, and see no reason why the precedent of the General Medical Council should not have been followed. Moreover, it appears from an answer given by Sir William Anson to a question put by Sir Walter Foster in the House of Commons a few weeks ago that not even the minutes of the Board are to be published. This is a suicidal policy, and if persisted in must bring the proceedings of the Board under suspicion and greatly diminish the influence for good which it might otherwise exercise over midwives and their practice. We trust that the General Medical Council will make a strong representation on this subject to the Privy Council.

It would be impossible in the space at our disposal to deal with all the rules submitted by the majority of the Board, but we may draw attention to a few points, and would invite all those who are interested in the matter to study the rules themselves, and the exceptions taken to them in the minority report. In the first place, the provisions with regard to the standard of education and the curriculum of special instruction are unsatisfactory. There is no provision at all with regard to preliminary education, although the examiners are given power to reject a candidate who at the examination shows a want of acquaintance with the ordinary subjects of elementary education. It would have been far wiser and more business-like to have named a minimum standard, as might easily have been done after consultation with the Board of Education, or with any person of experience in the work of elementary schools.

The rules lay down no period over which the curriculum must extend, the candidate must have attended twenty labours and nursed twenty lying-in women during the ten days following labour, and must have attended a course of instruction, but there is nothing to prevent a woman taking the practical and theoretical instruction at the same time, and, so far as we can see, an intelligent housemaid might become a certified midwife in the course of a month or six weeks. Again, the syllabus of subjects for the examination is drawn in a way calculated to invite ambitious young women to exceed the duties which properly belong to a midwife. Leaving aside the unfortunate wording of the clause with regard to haemorrhage, we would draw particular attention to the clause which directs examiners to ask questions with regard to the management (including feeding) of children during the early months of life. We fail to understand what business a midwife can have with the feeding of infants in the early months of life; her duty is to instruct the mother that she should suckle her baby. If it appears that the mother cannot do so, the midwife should be required to insist upon the mother obtaining medical advice. Again, under the head of obstetric emergencies, the examination is to include questions showing that the candidate possesses "some knowledge of the drugs commonly needed in such cases, and of their administration." For our own part, we believe that it is not safe to permit midwives to prescribe; if a patient requires such drugs as ergot, morphine, or chloral, she is in a condition which calls for medical attendance. The whole of the general rules under Section E for the regulation, supervision, and restriction within due limits of the practice of midwives require detailed revision and expansion in the directions indicated in the minority report; they are, as they stand, so inadequate, that, to quote the words of that report, "they are equivalent to abrogation of its functions by the Board."

The rule laying down the duty of the midwife in the case of death of a mother or child is one of the most extraordinary productions that we have ever known to be put forward by a public body. The rules everywhere presuppose that in cases in which danger arises the midwife must at once send for a medical man, and every one must at once recognize that she would be exceeding her responsibility to continue in charge of a case in which death was threatening. It should at once pass under the care of a duly registered medical practitioner. Yet this rule gives instruction to the midwife as to what she is to do in the case of death of a mother unattended by a medical practitioner; if by death sudden death is meant, then the fact should have been clearly expressed, otherwise the rule as it stands will be a distinct encouragement to midwives to suppose that they may continue in charge of a woman in a condition in which life is threatened. Moreover, the

rule directs the midwife to report the death to the local supervising authority; thus by a side wind does the Midwives Board amend the Registration Acts and the Coroners Act. Obviously the rule must be withdrawn and redrafted. The character of the rules illustrates, we think, the point we endeavour to make above; the errors of omission and commission which may be observed would have been avoided had the meetings of the Board been held in public, because public attention would at once have been called to the defects, which the Board would then have had an opportunity of correcting.

THE IRISH DISPENSARY DOCTORS.

The proceedings at the meeting of the Ulster Branch, reported in the Supplement to this issue of the British Medical Journal, have a special interest at this moment, in view of the general movement which is taking place in Ireland for the redress of the grievances of the medical officers in the Poor-law Service. The practical unanimity which now exists in the determination to resist the continuance of the evils which are associated with the Irish medical service, is the result of many years of protest and of disappointed hopes. The Government has, through its various chief secretaries, ignored the appeals of the dispensary medical officers, and has given its official sanction to the continuance of a system which bristles with outrageous wrongs. If to-day there is a resolve to force the local and central authorities to recognize these, and to provide some remedy, the guardians and the Local Government Board have only themselves to thank. It may be thought a not altogether satisfactory position that the members of a profession should combine to secure better terms for their services, but it is the only thing left, when their masters have for generations deliberately ignored all peaceful representations, and treated them much as they would their day labourers.

The address which Professor Byers delivered at Belfast is a reiteration of the claims of the members of the medical service, and it has the advantage of coming from one who is not himself a Poor-law officer. The points which he urges with so much force have been brought forward time after time by the Journal, and he very rightly emphasizes the strength which the movement obtains from the sympathy and the support of the 18,000 members who constitute the British Medical Association. The younger members in Ireland perhaps need to be reminded that that is not a new position. In the Supplement to the Journal of May 2nd last we gave a short sketch of the special efforts which have been made by the Association and the Journal to ventilate the subject, and to suggest means by which amelioration could be secured; and the report, which appears this week, shows the advantages which may be secured by the discussion of the evils at the various Branch meetings.

Dr. Byers thinks that efforts towards success may be helped by combination, and perhaps by the issue of a commission to inquire into the whole question of Poor-law reform in Ireland. Combination already exists, and is growing in strength every day. Occasionally the policy of abstention from becoming candidates for appointments breaks down, and some young men apply for the vacancies which occur. Their inexperience of the ways of Poor-law guardians in Ireland is the only excuse to be offered. Soon they will be disillusioned, and they will be found clamouring against evils which they might have avoided had they taken the advice of their seniors. We hope that they will think seriously before they help to impede reform by their action, and follow a course which will only lead to miserable disappointment.

The alternative of a commission of inquiry is not one which will, we suspect, at the present moment receive much support. The dispensary medical officers will remember that it was urged upon Mr. Balfour years ago, and advocated strongly by Sir William Thomson during his presidency of the Dublin Branch. It would have been admirable then; but there is always danger that a commission may end with the collection of evidence only, and that the suggested reforms arising from it may be hidden away in some pigeon-hole. The Government has lost its chance, and the medical officers are to-day in a position so strong that they cannot afford to give it up. We hope they will stick to their guns.

The time for truce has not been reached. If the medical officers will only resist all blandishments there can be no doubt that terms satisfactory to them and beneficial to the public will be obtained.

BLANKETS AND BACILLI.

The blanket discovery made by the Sanitary Authority of the Port of London last week was an opportunity for which the more sensational dailies were thankful and of which they availed themselves to the fullest extent. A great many wild stories were of course set afloat, and the real facts as they have slowly crystallized out are as follows:

Ten cases of typhoid fever having occurred on the training ship *Cornwall* early in April, an investigation into its origin was duly undertaken, and as no other cause was found attention was at last directed to certain blankets recently taken into use. Stains on them awakened suspicion, and examination by Professor Klein, F.R.S., proved that the blankets were swarming with typhoid bacilli in an active condition. The blankets in question had been offered to the authorities of the ship at an unusually low rate, and as the sample submitted was good, a considerable number were at once bought. The vendor was a merchant in the East End, and on investigation it turned out that the *Cornwall* blankets were merely a very small part of a very large consignment recently received by the vendor from another merchant, the bulk of which had been already distributed to many different localities in England. The City of London authorities at once warned the medical officers of health of all districts known to be concerned, and the latter immediately seized and disinfected all blankets from the same source which they were able to find. In a good many cases the blankets had been bought by the public and used without evil result, and no cases of typhoid except those on the *Cornwall* have been traced to this cause. All the blankets concerned were army blankets, and the question that next arose was how they came to be upon the market at all, whether clean or unclean.

Blankets are treated differently to other military stores, and before being sold are by regulation torn into four pieces, and so converted into such form as to be useless except for floorcloths or paper manufacturers. These blankets, however, were whole, and theories were started that either they had been sold out of the hospital ships or transports, or brought home and recklessly sold by the War Office itself, or that the standing orders had been broken by some dishonest official for his own benefit. All these stories are

proved incorrect, and it is admitted that the blankets were sent by a merchant from South Africa, where they were bought in the open market at a sale of military stores. The official inquiry is as yet incomplete, but some clue as to how whole blankets came to be sold at all, may be found in the fact that orders were sent from England that no textile fabrics of any sort were to be returned home.

Usually no stores of any sort are sold until they have been examined and overhauled by a Board specially convened, but these were sold under a general order. Hence the sale included not only blankets which, under ordinary circumstances, might have been condemned, but others in perfectly good condition, and even new. This will possibly be found to be the reason why the ordinary regulations were not carried out.

It does not explain, however, how infectious blankets came to be among those sold. It was at first taken for granted that they came from the hospitals, but it can be said with confidence that this is not the case. The army medical regulations as to blankets are complete and quite clear, and apart from official assurances on the point, inquiries made by ourselves among civilians who worked in South Africa as matrons, nurses, and other positions in the hospitals show they were faithfully carried out. "Stoves" were freely supplied to all recognized hospitals and freely used. All bedding from typhoid cases went into them regularly, and, besides this, by a special order at the end of the war no blankets were returned from hospital to store until "stoved," whether known to have been used for infectious cases or otherwise. The elimination of hospitals from the question, however, does not make the answer more difficult. Hundreds of men suffering from enteric reached the lines of railway at various points, being brought in from trekking parties or from small outlying camps unprovided with hospitals. They were put into trucks and carriages and proceeded to the nearest hospital, and sometimes their blankets got there too. As often as not, however, the men and those with them (if any) were too ill and weary to worry about kits and blankets, and hence they were left on the line, at intermediate stations, or left in the carriages and trucks. Railway officials would collect such blankets and anything else, hand them into the nearest army store, whence they would eventually reach Cape Town. Besides this there must have been hundreds of blankets left from time to time in small camps, many of which must have been used by sick men, and except those stolen by Kaffirs, etc., all would eventually find their way to head quarters.

The same sort of thing must inevitably occur in any big war, and the moral is that no textile stores at the end of a campaign, whatever their supposed use, should be sold without all being carefully disinfected on the off-chance of some of them being in a dangerous condition. A further moral is that to avoid all question with regard to hospital blankets the medical department should insist upon those served out to it being of a different pattern from all others. At present it is quite impossible to tell whether a given blanket has ever been in charge of the medical department or whether it has not, for all are precisely alike. The textile portions of all kits brought to hospital by patients should also be "stoved" before being returned to them or other disposition being made of them as a matter of routine, irrespective of the disease for which the owners have been admitted.

THE NEW UNIVERSITIES IN THE NORTH.

THE schemes for the establishment of Universities in the North are developing with great rapidity; Manchester and Liverpool are understood to be practically ready with their draft charters, and on Wednesday last the Council of the Yorkshire College agreed upon the principles upon which the charter for the proposed new Yorkshire University shall be based. The Yorkshire College at Leeds is to be merged in the University, which is to have a non-federal basis, though it is to be empowered to affiliate other institutions at which attendance on courses of study may be accepted in place of such part of the courses at the University itself as may from time to time be determined. The co-operation between the three Universities of Manchester, Liverpool, and Yorkshire is to be provided for by a joint Board to deal with such questions, including that of a common matriculation examination. Although no canvass for the necessary funds has yet been made the coalowners of Yorkshire have decided to erect a mining department and have collected £5,500 for the purpose, and three friends of the College have each promised £5,000, while a fourth has promised £2,000. The Clothworkers' Company of London has offered to transfer to the new University the whole of the buildings and equipment of the textile industries dyeing and art department, and has promised an annual sum of not less than £4,000 in perpetuity. Meanwhile, Sheffield is putting in a strong claim for a University of its own, and our Sheffield correspondent has sent us the following account of recent events: There can be no doubt as to the fervour and energy with which the University question is now being pursued. It has enlisted the interest of all classes in a most remarkable manner. From Shefield's own Duke—the Duke of Norfolk—to the humblest citizen, the interest is felt by all alike. This was testified to in a most marked manner by the unusually large and representative attendance at the town's meeting on May 18th, called by the Lord Mayor at the requisition of a large number of prominent citizens to discuss the matter. In the opinion of many who have been accustomed to town's meetings for years past this was the largest and most influential ever held. Those who, from their position, might be expected to be interested in educational matters, were present, as also were representatives of the wealth of the city, and there were not wanting members of the working classes who were there to show their interest in the matter. The enthusiasm displayed was such as to be of good omen for the cause. Sheffield is not lacking in men of eloquence and knowledge of affairs, who are placing the subject well before the public. It is fortunate that the present Master Cutler is a man of energy, and a forceful and convincing speaker. The speech he delivered at the meeting, filled to overflowing as it was with matter of special interest on the subject, was a marked feature of the gathering. The resolution that the city heartily supports the application for a charter for a University for Sheffield was most enthusiastically carried. Earlier in the day the meeting of the Court of Governors of the University College had been held, when the decision of the Council to apply for university powers for the College was unanimously confirmed. The Duke of Norfolk, President of the College, presided, and he has placed himself with his accustomed energy at the head of the movement. The City Council has not been content merely to adopt a resolution in support of the scheme for a University, but has done more in a most practical manner, for it has undertaken in the event of the charter being obtained, to give a grant not exceeding 1d. in the £ on the rates, in support of the arts, science, and medical departments. This, it is calculated at the present time, will be equal to a yearly sum of between £5,000 and £6,000, and before long it will be larger still. It is therefore equivalent to a capitalized sum of about £200,000. On May 22nd, through the courtesy of the Master Cutler of London, the Master Cutler of Sheffield, Mr. Hobson, was enabled to entertain at a banquet in the Cutlers' Hall the Lord Mayor and Sheriffs of London and also the members of the various City Guilds. Among those present were the

Duke of Norfolk and several others from Sheffield who are identified with the university scheme. The object of the dinner was to enlist the sympathy and support of the wealthy City Companies in the project the Master Cutler has so much at heart. The Lord Mayor and Sheriffs are to visit Sheffield on June 30th in State to lay the foundation stone of what it is hoped will be the university buildings. The Master Cutler took the opportunity to invite the members of the City Companies present at his banquet to visit Sheffield also on the same occasion. He assured them of a hospitable reception.

PLAGUE IN INDIA.

THE answer given by the Secretary of State for India to the question asked in the House of Commons last Tuesday is extremely unsatisfactory since it would appear to indicate either that Lord George Hamilton is unacquainted with the history of the plague in India, or that he deliberately cries peace when there is no peace. Experience has shown that a decrease at this season was to be expected. Every year for seven years plague has diminished in May and has remained at a low level throughout the summer months. To quote this temporary abatement is no answer to the question as to the steps the Government intend to take to check the recurrent epidemic. It can in no way satisfy those who take a wide view of the matter and who realize that there is every reason to expect that with the autumn plague will once more increase in virulence. It is an occasion for the exercise of an intelligent anticipation of events before they occur not only by Lord George Hamilton but also by the only begetter of that famous phrase. Year by year, as shown in our report of plague in this issue, the number of victims from this disease has increased by tens of thousands with each recurring outbreak, and we look forward with alarm, justified by past experience, to a recrudescence of plague with increased virulence in the winter and spring of 1903-4. What seems evident to all unprejudiced persons is that the measures hitherto adopted in India against plague, be they inoculation, segregation, or disinfection, have proved inadequate not only to stamp out plague, but even to check its spread or lessen its virulence. The officers of the Indian Medical Service and of the Indian Civil Service are being diverted from their normal duties to plague duties, and with a limited staff it is plain that some part of the work of the Government of the country is being interfered with or wholly neglected. The regard paid to the "customs and prejudices of the people of India" may in such a matter as plague be carried too far, and we believe that it would be better to appoint a number of medical men with executive powers to deal with the disease on broad sanitary lines. Experience shows that native prejudice quickly gives way when the wisdom of the steps taken becomes apparent to them by the results.

A SALVATION ARMY OFFSHOOT.

MANY adjectives denoting different and contrary qualities have been applied to the Salvation Army by its admirers and their opposites, but it is by most people admitted that its leaders have a thorough comprehension of the needs of the people, and endeavour to meet them in what are usually thoroughly practical ways. It preaches the gospel of Leviticus not less than that of the New Testament, and the latest offshoot of its work will be watched with interest by medical men. It is truly an offshoot, for the work in question has not been undertaken by the Army as a body, but is the private experiment and enterprise of one of its most practical leaders, Mrs. Bramwell Booth. This lady holds two strong views, one of which is that the populations of cities, and especially the poorer inhabitants thereof, are much too afraid of fresh air; while the other is that the health of the world in general would be greatly improved by the adoption of a much simpler diet than that at present in fashion. Not to put too fine a point upon it, Mrs. Booth is herself a vegetarian of a practical kind, and though there is no evidence that she desires to see the use of meat entirely abolished, she does wish the world to recognize more clearly that bread rather than meat is the staff of life. It is certainly true that the poor spend much of their small means upon foods that are not only unnecessary but unwholesome, and the cockles and the pickled trotters of the East End may be cited as examples. It is a recognition of this fact, forced upon her by her work among the poor, that led Mrs. Booth to give up all meat food some years ago herself, and the object of her present experiment is to show as many people as possible that there is no incompatibility between health on the one hand and the presence of fresh air and the absence of meat food on the other. With this idea in view she has accepted the offer of a "cottage" with a small sanatorium annexe, standing in five acres of meadowland at Loughton on the edge of Epping Forest. The "cottage" is not elaborately furnished, but it contains everything really required, and will be reserved as a "hygienic home of rest" for tired workers of any persuasion to the number of 20. The "simpler food" idea will be provided for by the absence of meat preparations at any meal, while experimental research on the part of the inhabitants into the virtues of fresh air will be enforced by a very simple method, namely, the windows are all padlocked, open top and bottom, and cannot be closed except by the authorities. The sanatorium annexe is of the ordinary "open air" type, and contains room for eight patients. It will be reserved for cases of early phthisis, which will be under the supervision of a resident lady doctor. Here, again, no meat will enter into the dietary, and the experiment gains additional interest from the fact that the building, though it conforms to the ordinary type in broad outline, is not of very recent construction nor built in any elaborate or expensive fashion. If good results are obtained in it, they will have an unanticipated importance, for they will show that elaboration of structure is not essential to a successful sanatorium. This would be no small gain, for the enormous expense at which sanatoria are at present being put up threatens to seriously retard, if not actually kill, the whole movement. The Salvation Army is not prepared to take up the scheme as an Army project, but Mrs. Booth personally seeks contributions toward the experiment.

RESUSCITATION OF THE APPARENTLY DROWNED.

WE publish elsewhere a necessarily very condensed notice of a report presented to the Royal Medical and Chirurgical Society on May 26th by Professor Schäfer, Chairman of the Committee appointed in 1892 to report upon the best methods of resuscitating the apparently drowned. The President, Mr. Alfred Willett, recalled the facts as to the work done by the Society in the matter. For many years Dr. Marshall Hall's method—that of rolling the body from the lateral to the prone position and back again—was the recognized method of attempting resuscisation, until, in fact, late in the Fifties, when Dr. H. R. Silvester (who was present at the meeting) brought forward his alternative method—that of expansion of the chest by traction on the arms, with the body in the supine position. Thereupon the Society appointed a Committee for the purpose of investigating the rival methods. In 1862 its report, which supported the views of Dr. Silvester, was presented. As a consequence, the Royal Humane Society recommended the Silvester method, but the conclusions of the Committee were by no means universally accepted, Dr. Benjamin Howard of New York and Dr. R. L. Bowles being especially active in criticizing the findings of the Committee, and the latter in advocating Hall's method. In 1892 a fresh Scientific Committee, with Professor Schäfer as its Chairman, was formed by the Society, and the work had been carried out by Mr. Pickering Pick and Mr. Henry Power, in conjunction with Professor Schäfer and his assistants. The inquiry consisted of two parts—the one on the best methods of artificial respiration in the living and conscious human subject; and the other on the effects of immersion on anaesthetised dogs, particularly in regard to respiration and circulation, and the physiological

phenomena that attend recovery from the drowned condition. The methods of artificial respiration investigated were 10 modifications of the traction and compression methods, separately or conjoined; the most effective in promoting the entry of air in five persons whose ages varied from 25 to 52 was the Marshall Hall method of rolling and pressure. The next was the Silvester method of traction and pressure; the third was the unilateral method of traction and pressure; the last was traction alone. The important point in this relation was that all the methods, even the least effective, were competent to produce the necessary oxygenation of the blood. The experiments on dogs showed that one of the chief obstacles to recovery by artificial respiration was the accumulation of frothy mucus in the bronchi. This was apparently due to an excessive secretion of mucus and to its being churned up by the convulsive respiratory movements. It was comparable with that occurring during ether narcosis, and it was suggested that by the bellows method the obstruction might be overcome, but precise observations on this method were not made by the Committee although it was recognized that such were desirable. A fatal result, however, occurred quickly in several cases, and appeared to be due to sudden cardiac paralysis. Although the report was in a sense inconclusive, and although no actual recommendations were either made or had been asked for, yet Professor Schäfer said that he personally would prefer to adopt the prone or semi-prone position, exerting intermittent pressure, as in this method much greater pressure could be applied to the back than to the front of the chest without injuring the patient; the absolute amount of air got into the chest by the method was shown to be sufficient, and other considerations were of greater significance, as the escape of water and mucus from the mouth and air passages. The reading of the report occupied so long a time that the usual hour for adjournment had arrived when Professor Schäfer sat down. Though the Society sat on for another half hour it cannot be said that the speakers who followed threw much new light on the subject.

THE SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS.

THE Society for the Relief of Widows and Orphans of Medical Men held its annual meeting at 11, Chandos Street, London, on May 20th, and the opportunity was taken by Mr. Christopher Heath, who occupied the chair, to draw attention to some important points in connexion with the advantages offered by the Society. After congratulating the members on the excellent financial position of the Society, Mr. Heath proceeded to explain how much good the Society was doing and how much more it could do if its benefits were more generally appreciated by medical men. The best proof of what might be done could be gathered from a study of the paper issued by the Royal Medical Benevolent College, Epsom, for the forty-ninth election of pensioners and foundation scholars. On looking through the list of candidates for the five vacancies to see how many of the applicants would have been eligible to receive benefit under the rules of the Society for the Relief of Widows and Orphans of Medical Men, Mr. Heath noticed that there was an application from the widow of a doctor who practised for nine years in Battersea and Queensland. That widow was 63 years of age and had very limited means, and if her husband had taken advantage of the benefits of the Society she would have received immediate assistance because the fact that her husband had died in Queensland would not have rendered her ineligible for the receipt of relief. Curiously enough, two or three years ago the Society had to deal with a very similar case: A lady applied whose husband had died in Australia, leaving her with a large family. Happily for the widow, before that gentleman went out to Australia he had become a subscriber to the Society for the Relief of Widows and Orphans of Medical Men, and he had kept up his subscription. The Society granted that lady £50 a year and an allowance for each of the children, the total amount she received annually from the Society being £125. This case served as an excellent example of the benefits that any medical man may secure for his family by joining the Society and keeping up the yearly subscription. The fact that a life membership of the Society can be secured by the one payment of 20 guineas up to 30 years of age, 25 guineas up to 40 years of age, and 30 guineas after that was worthy of the widest circulation. It is a matter of regret that in spite of this means of making timely provision for widows and orphans, so few medical men are found to avail themselves of it. Mr. Heath read out a very sad list of widows and orphans applying to the Royal Medical Benevolent College, Epsom, and said that it was only a sample of the kind of thing that happened every year. The Society for the Relief of Widows and Orphans of Medical Men had no power to make any grant whatsoever except to the widows and children of those who had been subscribers, but it was only too happy to relieve the wants of the widows and orphans of those gentlemen who had taken the opportunity of becoming members of the Society, and had fulfilled the conditions required by the regulations. The Society was in the possession of the necessary funds, and no one entitled to relief was ever sent away because there was no money available. Pecuniary resources were at the disposal of the Society in abundance, its funds were large and well invested, and all claims were settled in full. Dr. S. Felce remarked that for a medical man to say he would not join the Society because it did not need assistance, and because he thought his wife and children were never likely to want, was an argument that was not borne out by the facts of everyday life, for it was a matter of common knowledge that misfortune might happen to the most prosperous, and no one knew when those near and dear to him might need assistance.

A NEW DEPARTURE.

THE new Ophthalmic Hospital and School established by the Metropolitan Asylums Board at Swanley were formally opened on May 23rd. The gathering comprised representatives of London Boards of Guardians and other persons. The principal speakers were the Right Hon. H. Chaplin, who was President of the Local Government Board when the now completed idea originally had its birth, and Mr. William Crooks, Labour member for Woolwich and Chairman of the Children's Committee, which is immediately responsible for the carrying out of the project in its present form. Mr. Chaplin gave an account of the facts that had led to his speeding the project on its way and then declared the school open, while Mr. Crooks concluded the oratorical part of the proceedings by telling the assembly that some tea would be waiting to revive it when it had finished its task of looking over the premises for which as representing the London ratepayer it would eventually have to pay. The tea was certainly required, for the great sum which the place had cost to build and will cost to keep up was obvious, and it was impossible not to wonder whether practically as good results could not be obtained in a less expensive way. It was equally impossible, however, not to admire the conception of the scheme and the very complete way in which it has been carried out. The underlying idea is that all children for whom the guardians are responsible and who suffer from ophthalmia shall be removed to this place, and not only duly treated for their disease, but be educated at the same time. A further idea is that the conditions of home life shall be imitated as closely as possible. For this purpose all the children are divided into batches of twelve, each batch living in a separate cottage under the immediate charge of a home-mother. The cottages are arranged in pairs, of which three form a settlement, and each settlement is under the care of a settlement nurse. The latter lives in a cottage adjoining the cottages under her supervision. With her live two or more servants, who are responsible for the heavier part of the household duties in the cottages of the section, while the mother or nurse is responsible for general supervision, and for carrying out such medical treatment as any of her children may require. Each settlement, again, of which there are five, is

under the general supervision of a matron who is the chief resident officer, and has an assistant matron to help her. These, with the female laundry staff, storekeepers, etc., live in a large administration block. Besides this there is at a little distance an infirmary with twelve beds and an isolation cottage for two patients. Further off, again, there is a very elaborately-equipped laundry, with cottages for the married male staff. In addition, there are two school houses fitted with all the latest educational armamentaria. The whole place is in medical charge of a medical man who is to live in the village, but not at present, on the premises. There is also a visiting oculist from London, and a dentist is presently to be added. All requirements of the medical officers are very amply provided for. The grounds are about 50 acres in extent, and adjoin those of the convalescent hospital belonging to St. Bartholomew's Hospital. They are undulant meadow land, and will presently be very pretty. The cottages themselves are very prettily and scientifically built and nicely furnished, but the most striking thing about them is the arrangement for bathing and washing. Each has an elaborate bathing room, where there are no baths; all ablutions are to be carried on by sprays. They are beautiful to look at, and are as magnificent in theory as they must have been magnificent in cost; but in practice they will certainly cause endless trouble. It will be impossible to wash the children without the "mother" getting wet through, and regulation of the water temperature will require the greatest care. Inquiries made fully confirmed these views. The contract price for which the ground was bought and buildings erected seems to have been about £120,000. What the other expenses were was not disclosed, and what the up-keep will come to is yet an unknown quantity. The whole place is certainly very pleasing from many points of view, and a splendid example of how things can be done, but whether it is a good example of how things need be done is another question.

SENSATIONS.

THE *Daily Mail* last week thoroughly enjoyed itself in characteristic fashion, and invited the public to share its happiness in its usual generous way. The cause thereof was a case of congenital cataract in an adult, recently operated on in Glasgow, the chief interest of which lay in the attempts made to ascertain how far the revelations of acquired vision corresponded with the patient's previous conception of things. Objectively a few points of interest were ascertained, or rather confirmed, among others the fact that distance judging over even very limited spaces is a faculty primarily entirely due to vision and experience. Subjectively the facts were more difficult to ascertain, and the correspondence between things as seen through the sense of touch and through the eyes appears to have been less close in this case than in some others. This is possibly due either to the patient's vocabulary being limited or that he lacked imagination. The *Daily Mail* correspondent, however, naturally lacked neither, and the patient's sensations as translated by him are nothing if not picturesque. Hence the public as well as the patient has reason to be thankful for his recovery. "From amid the beauties of Nature, of whose glories he could not tell, he went to dwell in the gloomy building planted in the midst of business offices in West Regent Street, Glasgow, and here, after operations the success of which forms one of the sensations of the surgical world to-day, he enjoyed his first vision of things on earth, etc." It was in his "humble home" some nights later that he told the story of his recovery to the *Mail's* correspondent. Primarily his recovery was due to a passing medical student, who saw the patient by accident, recognized that the condition was curable, and persuaded his friends to send him into Glasgow for operation. Such cases are sufficiently rare to be always interesting, but the greatest interest of this one lies in the extraordinary fact that it is now proved to be possible for a curable case of congenital cataract to go untouched for thirty years even in so civilized a country as Scotland. In semi-civilized countries such cases are not so uncommon. In all of them after successful operation it has been found that colour sensations are a particular source of pleasure to the patient, and that some difficulty is experienced in identifying by the eyes alone persons and objects previously perfectly familiar to the patient, through his ears and hands. In the Glasgow case the patient, according to the *Daily Mail*, appears to have been particularly struck by the unexpected beauty of the opposite sex, and is wisely not going to be in a hurry to get married. "There are sae many beautiful women it will be rather hard to make a choice." A correspondent has related to us a case where a similar patient was apparently equally struck by the same fact, but found it less difficult to come to a decision. The patient, a Greek young woman of 19, blind from her birth, was operated on with equal surgical success but other results of a less desirable character. As in the Glasgow case the first person she saw was her doctor, the second the male friend of another woman patient. She expressed no open admiration for him, but the third day she vanished from the hospital in his company, and her next appearance there some months later was as a patient of an entirely different character. Surgically the case was a great success; morally it left something to be desired.

POWERS OF SANITARY INSPECTORS.

ON Friday, May 15th, at the West London Police Court, a judgement was given by Mr. Rose, one of the Metropolitan magistrates, which may be found somewhat seriously to limit the powers of entry of a sanitary inspector. The facts appear to have been these. A sanitary inspector employed by the Fulham Borough Council desired to inspect a confectionery shop at 833, Fulham Road, in the occupation of Mary Ann May. The inspector was refused admission. It appears that ice cream is made on the premises, and the local authority consider it desirable that such places should be regularly inspected. The prosecution did not allege a nuisance or any infringement of the law, but contended that under the Public Health (London) Act, 1891, the sanitary authority was empowered to enter premises at will. Section 1 states that "it shall be the duty of every sanitary authority to cause to be made from time to time inspection of their district, with a view to ascertain what nuisances exist calling for abatement," etc. Section X lays down that "the sanitary authority shall have a right to enter from time to time any premises for the purpose of examining as to the existence thereon of any nuisance," etc. Section XL provides also for entry for examination of sanitary conveniences, and Sections CXV and CXVI lay down the powers of enforcement of these sections and provide for obtaining a magistrate's warrant. Until 1899 it was held that these sections gave a medical officer of health or a sanitary inspector powers of entry at any reasonable time for inspectorial purposes. But in that year St. Pancras Vestry took a case to the High Court of the Queen's Bench, which came before Justices Channell and Lawrance. The case was cited as Vines *v.* the North London Collegiate Schools for Girls. A lady inspector, Miss Vines, was refused admission to the school in question. On applying for a magistrate's order this was also declined as the inspector was not prepared to furnish a reason for admission and did not suspect any nuisance. The Court upheld the magistrate and dismissed the appeal. Unfortunately this case has been held as covering the matter, and its influence is apparent in the recent judgement of Mr. Rose. We understand that owing to judgement being given on facts an appeal is impracticable. But it seems to us that whilst it is important and necessary that rights of entry, inspection, etc., should be jealously guarded, it will be a very serious matter if milkshops and places where food is prepared are to be able to keep out sanitary inspectors, except when the latter may be in possession of knowledge implicating the occupier. If such is to be the case all house-to-house, milkshop, and general inspection is seriously interfered with. We think there can be no doubt that the framers of the London Public Health Act most certainly meant to grant reasonable rights of entry for sanitary inspection and supervision.

THE LONDON COUNTY COUNCIL.

AT the last meeting of the London County Council a long debate arose over the cost of building the new County Asylum near Epsom, known as the Horton Manor Asylum. The building, which was opened in March, 1902, was erected by the Works Department, the original estimate of the cost being £284,445. No contractor could be found to undertake the job at less than £296,575, or more than £12,000 above the architect's estimate. Owing to a variety of causes the final cost works out at £39,500 above the estimate. In the course of debate it was alleged that the total cost, including equipment, would be little short of £500,000, or £250 a bed. This sum appears excessive, and lends strength to the view which has from time to time been advanced in these columns, namely, that some alternative mode of accommodating the lunatics chargeable to London should be attempted. We therefore regret that the Asylums Committee of the Council in the new asylum which it is about to erect on the Horton Estate has not shown more originality, and is, indeed, content to make a replica of its last design and employ the same architect for the work. The Public Health Committee has been turning its attention to the sanitary condition of premises where aërated waters are manufactured. It is believed that the amount of aërated water now consumed is as much as one-third or even a half of the amount of cold water drunk by the London population. It is accordingly seeking powers to prevent the manufacture of mineral waters under conditions likely to give rise to contamination. The London County Council is also proposing to obtain Parliamentary powers to spend £500 a year on scientific investigations relating to public health.

THE ENFORCEMENT OF THE DENTISTS ACT.

TWO convictions obtained under the Dentists Act and reported in the *Sussex Daily News* a short time ago are of considerable interest, as convictions on similar grounds could not have been obtained under the Medical Acts. Although the Dentists Act was drawn on the general lines of the Medical Acts, it is not in its wording identical with them, and in any amendment of the Medical Acts the Dentists Act might with advantage be imitated in certain respects. Its prohibitory clause not only forbids the use of titles categorically enumerated, but also forbids the use by an unregistered person of titles, additions, or descriptions "implying that he is specially qualified to practise dentistry." It has been ruled on several occasions that the words "specially qualified" are to be interpreted as meaning "specially competent," and not as having reference to qualifications in the technical sense. In the first case a Mr. Deuchars had used the titles D.D.S. and also Doctor of Dental Surgery, claiming to possess a diploma granted in Kansas City; he was fined £5 on the first and £2 10s. on the second summons, and costs on both. In the second case, amongst other things, the defendant Mr. Harris described himself as Diplomist of America, Specialist in Artificial Teeth, and American Dental Institute. It was elicited under cross-examination that his American diploma was "got through friends," but it does not appear in the report which of the various American diplomas obtainable on these easy terms he had procured. He also claimed to have been registered in France, but this only on the strength of "having practised in France." He was fined £5 on the first summons, and costs on all three summonses.

THE LEAGUE OF MERCY.

THE Prince and Princess of Wales as Grand President and Lady Grand President of the League of Mercy entertained some 1,500 of the presidents, vice-presidents, and members of the different branches of the League at a garden party at Marlborough House on Friday, May 22nd. About 100 of the guests assembled first in the saloon, where their Royal Highnesses held a formal meeting. Mr. Harrison, M.V.O., read a report of the previous year's work, after which the Prince of Wales addressed the meeting. He wished to make it clearly known that the League of Mercy was purely for raising money for the King's Hospital Fund, with which it was closely allied, both having in view the same benevolent object. It was announced that Lady Pirbright had that day sent a donation of £500 in memory of the late Lord Pirbright, late President of the Guildford district. Afterwards their Royal Highnesses proceeded to the gardens, where an investiture of the Order of the League followed. About fifty of the members were presented to the Prince of Wales by Lord Wolverton, and decorated with the Order. Meanwhile, all the other guests had assembled in the grounds, which looked their best bathed in sunshine, and the Prince and Princess with their children strolled about, stopping frequently to talk with those who were known to them. The band of the Royal Marine Light Infantry from Chatham played a good selection of music, and under awnings round the side of the house tea was served on tables smothered in wonderful roses, which, with touching thoughtfulness, the Princess ordered to be afterwards sent to the Cancer Hospital. The League of Mercy was founded in 1899 to collect money for King Edward's Hospital Fund, and during the four years it has existed £22,000 have been contributed to the Fund. This branch of the work is firmly established in the home counties as well as in London, and through its members the League has been able to render most valuable services. It is proposed to establish a "Samaritan Wing," or Branch of the League of Mercy, in order that those who wish personally to aid inmates of hospitals may be amalgamated under its supervision. The offices of the League are at 29, Southampton Row

HAY FEVER SERUM.

AS a sequel to Sir Felix Semon's letter on this subject which appeared in the BRITISH MEDICAL JOURNAL of May 23rd, we publish this week a communication from the Ichthyol Company, Hamburg, which is virtually a repudiation of the action of Mr. Gustav Hermanni, jun., in sending out the circulars concerning Professor Dunbar's hay fever serum, to which we referred in the JOURNAL of May 23rd. This may be taken as a sign of grace, and we congratulate Messrs. Cordes, Hermanni, and Co. on their declared intention to refrain from pushing the sale of the remedy until the researches as to its properties are completed—in fact, till it is shown to be a remedy. This, as we have said, is far from being the case at present, and the sale of a serum of whose powers for good or for evil nothing is yet definitely known could only bring discredit on all concerned. We accept the assurances of the Ichthyol Company that they have had nothing to do with the issue of the objectionable circulars; and, indeed, it is impossible to believe that a firm of such standing could have done anything so foolish. Serumtherapy is still in a very early stage of its evolution, and there are many difficulties in its way; it cannot therefore afford to have its products placed by public opinion in the same category with the wares of the cheap-jack.

THE STUDY OF PRIMITIVE MAN.

THE natural history of mankind is not perhaps precisely the same thing as the history of man in his natural state, but there are few people who do not take an interest in either the one study or the other. The term "anthropology," however, covers them both; it is the more curious therefore that the list of members of the Anthropological Institute should be less remarkable for its length than for the personal distinction of many of those comprised in it. The term itself possibly puts off many modest-minded people who might otherwise desire to become members, but a glance into the pages of the *Journal* of the institute should encourage all such persons. It is wonderfully well got up, well printed, well illustrated and contains nothing that any person of ordinary intelligence could not understand and much that would interest every one. To the number which covers the communications to the institute from July to December last year, four medical men have contributed, but two of them figure in its pages less on

account of their profession than because they have travelled or are resident among savage tribes. To medical men the most interesting paper perhaps will be that of Dr. Seligmann, who was a member of the Cambridge Anthropological Expedition to the Torres Straits. Partly by personal inquiry and partly through the Government agent for the Rigo district, he gathered a number of curious facts as to the medical and surgical conceptions of the Sinaugolo tribe. This is at present an inland tribe, but appears to be the coming people of British New Guinea, and to be gradually pushing its way to the coast. The number of diseases which they recognize by special names is not great—malaria, dysentery, rheumatoid arthritis, leucoderma, tinea, and yaws constitute almost the whole list. The latter they attribute to a weaned child managing to suckle while its mother is asleep or to cohabitation between mother and father before the child is weaned, which they consider wrong. Burns are covered by a sticky substance which excludes air, fractures are put up in leaf-padded splints without immobilizing the joints either above or below, and haemorrhage is arrested by the binding over the wound a split banana stalk. They take a great deal of care of their sick as far as personal attention goes, but do not appear to have many remedies beyond free tattooing, bathing with salt and water, and recourse to the incantations of witch men and women. They rely chiefly, it appears, upon enlargement and pigmentation of the breasts for the diagnosis of pregnancy, in which connexion some of our readers will recall a recent clinical lecture by Dr. W. S. A. Griffith. They have no knowledge of the existence of a uterus, believing that the child is first formed behind the breasts and that it drops as it grows heavier, into the abdomen. Cohabitation is considered wrong during pregnancy as well as during lactation, and deformities of infants ascribed to it. Pre-conjugal connexion is considered natural and even quite correct, but pre-conjugal babies are considered highly objectionable and seriously diminish the mother's marriageable value.

LONDON SCHOOL OF TROPICAL MEDICINE.

The entries at the London School of Tropical Medicine this session amount to twenty-four, the largest number so far recorded. Every seat in the laboratory is occupied and the authorities have been compelled to refuse students who wished to enter for short courses. All the students, except three, have entered for the full course of eight weeks. Five of the students are ladies. Among the students are twelve medical officers of the Colonial Service. Arrangements have now been made by which all students belonging to the Colonial Service will at the end of the eight weeks' course be required to submit themselves for examination: unless this is passed satisfactorily their appointments in the Colonial Service will not be confirmed. Good progress is being made in the erection of the new school buildings, and it is hoped that adequate laboratory accommodation will be ready by October 1st. We congratulate the School on its constantly increasing usefulness and on the success with which it is carrying on a work of vast importance to the future development of the British Empire and to the welfare of the numerous races under its flag.

COUNTY COUNCILS AND THE MIDWIVES ACT.

A meeting of the Central Midwives Board was held on May 28th, when the set of draft suggestions for county councils with regard to the local supervision of midwives was further considered. We understand that the draft will require many amendments to bring it into accord with existing law and practice. Since midwives will be required to hand over an abnormal case to a registered medical practitioner, special provision must be made to this end; and it is obvious that in drawing up rules regard must be had to the working of the existing Poor-law system.

Dr. W. Collingridge, Medical Officer of Health for the City of London, will preside at the 11th annual meeting of the Church Sanitary Association at the Church House, Westminster, S.W., on Wednesday, June 4th.

MEDICAL NOTES IN PARLIAMENT.

[From our Lobby Correspondent.]

Vivisection at University College, London.—Sir Frederick Banbury asked the Secretary of State for the Home Department last week what was the nature and amount of the anaesthetic given to the brown dog operated upon consecutively by vivisectors at University College, London, on February 2nd last; how long before the animal was brought into the theatre by Dr. Bayliss was that anaesthetic administered; would he state who was the licensee who performed the experiment involving the two cutting operations upon the dog before it was operated upon in another part of its body on February 2nd last by Dr. Bayliss; and under what certificate was the experiment involving these two operations performed. Mr. Akers-Douglas answered that if, as he understood was the case, there was an action pending in connexion with statements which had been made regarding the operation performed at University College on February 2nd last by Dr. Bayliss, he did not think he ought to go into detailed points such as those mentioned in the first two paragraphs of the question. He had already in previous answers given fully the main facts of the case. As to the two last paragraphs, Professor E. H. Starling performed the experiment referred to under Certificates B. and E.E.

Death Certification.—When the Local Government Board vote comes on in Committee of Supply after the Whitsuntide recess, Sir Walter Foster will, according to notice, move to reduce the salary of the President by £100, in order to call attention to the neglect of the Government to deal with the law as it affects the registration of deaths. The Select Committee reported in 1894 in favour of amendment of the law, and recent cases in the law-courts, as well as the report of the Committee on regulations under the Cremation Act of last year, strengthen the case for early legislation.

Plague in India.—Sir Walter Foster asked the Secretary of State for India on Tuesday, in view of the fact that plague had recurred with increasing virulence in India annually since 1896, so that during parts of March and April last the deaths from this cause averaged between 4,000 and 5,000 daily, what steps the Government intended to take to check the ravages of the disease in India and the increasing risk of its dissemination to other countries. Lord George Hamilton answered that the Government of India and the several local Governments were using every means in their power, due regard being had to the customs and prejudices of the people, to check the spread of the epidemic, and to bring medical aid to the sufferers. Efforts had been, and were being, successfully made to induce the people to submit to inoculation, and a large staff of doctors had been sent out to India for this purpose. The people also were being encouraged to give early information of outbreaks, to evacuate infected dwellings, to isolate the sick, and to submit to disinfection in accordance with the recommendations of the Plague Commission. To prevent the dissemination of plague to foreign countries stringent precautions were taken at the ports, and the provisions of the Venice Convention were strictly observed. The latest returns showed a satisfactory decrease in mortality.

Emigrants at Liverpool and Infectious Diseases.—Mr. Weir on Tuesday last asked the President of the Local Government Board why two houses at Liverpool (Nos. 19 and 28, Great George Square) were not registered as emigrant lodging-houses, and the number of cases of infectious disease removed from these houses during each of the last three years. Mr. Grant Lawson said that he had made inquiry, and that the houses were not common emigrant lodging-houses, and were therefore not registered as such. No. 19 was the residence of the emigration agent of the American line; No. 28 was the residence of the emigration agent of the Canadian line; and both were reserved exclusively for second-class passengers. During the period referred to there had been no cases of cholera or typhus in these houses, and only one case of small-pox, which occurred this year. The number of cases of other infectious diseases were 12 in 1900, 7 in 1901, 9 in 1902, and 3 in 1903.

The Liverpool Small-pox Hospital.—On Tuesday Mr. Weir asked the President of the Local Government Board whether he was aware that five patients recently escaped from their

beds in the Liverpool Small-pox Hospital to the adjoining grounds, and that one of the patients subsequently found his way to a farmhouse, where he saw the farmer and other inmates, who were subsequently vaccinated at the suggestion of the hospital authorities; and would he consider the expediency of ordering some inquiry with a view to patients in this hospital being more carefully guarded. Mr. Grant Lawson said that he was informed by the Town Clerk of Liverpool that he had caused inquiry to be made as to the statement that five patients had escaped from the hospital. He found that there was no foundation for the statement. The patient referred to in answer to a previous question found his way to the farm mentioned, but as was then stated the incident was not attended with any ill-effects, either to the man or any one else. It was not proposed to take any steps in the matter.

The Plague at Hong Kong.—The Secretary of State for the Colonies was asked by Mr. Weir whether he was aware that 117 cases of plague, resulting in 99 deaths, were reported to have occurred at Hong Kong in one week during the present month; and would he state when he proposed to lay upon the table of the House the reports of the medical and sanitary experts, Professor Simpson and Mr. Robert Chadwick, who visited Hong Kong last year in connexion with the plague. Mr. Chamberlain said he was aware of the facts quoted, which were reported to him by the Governor in a telegram which was communicated to the press. He did not propose to lay the reports referred to on the table, but he had caused them to be placed in the Library.

Infected Army Blankets and Typhoid Fever.—On Monday last Sir Thomas Dewar asked the Secretary for War whether he was aware that a number of army blankets which were condemned in South Africa were sold to the training ship *Cornwall*, where an outbreak of enteric fever had occurred among the boys on the ship and was directly traceable to the infected blankets; that the Public Health Department of the Metropolitan Borough of Stepney had detained 40 tons, probably 30,000, of the same consignment in a warehouse, in Assam Street, Whitechapel, as they were found to contain the enteric fever bacilli in large numbers, and that the blankets sold in South Africa were stored in Whitechapel; and, if so, would the War Office consider the advisability of having them returned in order that they might be either destroyed or disinfected. Mr. Brodrick replied that he had ascertained that a large number of blankets had been sold by tender in South Africa. He was afraid that he had no power whatever to recall those blankets which had been sold. The Ordnance Regulations laid down that no condemned blankets should be sold before they had been torn into four pieces, and careful instructions were also included in the medical regulations as to disinfection in every case of infectious disease. He had also issued special orders to South Africa two years ago neither to sell there nor to send home any textile fabric which might convey infection, and he had called upon the general officer commanding to investigate and report fully on the matter, and to take steps to have any infected blankets still remaining in South Africa destroyed. Mr. David Morgan asked if the attention of the President of the Local Government Board had been called to an outbreak of typhoid on the training ship *Cornwall*, lying off Purfleet, and, if so, what steps he proposed to take. Mr. W. Long said his attention had been called to the matter, and the acting medical officer of the Port of London had been in communication with his department on the subject. The blankets which were considered to be the cause of the outbreak were all removed to the disinfecting station of the port authority and thoroughly disinfected and cleansed. In addition, every article of bedding was removed from the ship and submitted to the same process. The infected quarters on board had also been thoroughly disinfected. He understood that not more than ten cases of fever occurred on board the vessel, and he was glad that no fresh case had been notified since May 4th.

Parochial Medical Officers in the Crofting Counties.—Mr. Cathcart Wason asked the Lord Advocate if he would say how many parish councils in the crofting counties of Scotland had at present no parochial resident medical officer, and what steps were being taken in such parishes to secure medical attendance for the poor. Mr. Graham Murray answered that parish councils were bound to provide medical attendance for paupers. He was informed that all the parishes in the counties in question, with the exception of Gigha, had regularly appointed medical officers who resided either in or near the parishes for which they held office. In the case of Gigha a doctor was employed by the parish council when necessary.

Poor-law Medical Relief in the Highlands and Islands.—Mr. Cathcart Wason asked the Lord Advocate if the Committee of the Scottish Local Government Board, who had been making inquiry into the subject of Poor-law medical relief, had also inquired into the grievances of the parochial medical officers in the Highlands and Islands of Scotland; and, if so, would he state what steps the Government proposed to take in the matter. Mr. Graham Murray answered that the Committee in question was a departmental one to inquire into and report on the methods and conditions under which Poor-law medical relief was at present administered in Scotland, and on what changes, if any, it was advisable to make in regard thereto, or in the regulations for distributing the sum contributed from the local taxation account to the cost of Poor-law medical relief and trained sick nursing, or in the rules and regulations for the management of poorhouses, and it was only incidentally, therefore, that the subject of the hon. member's question could come within the terms of reference. In any case, the Committee not having reported, it was not possible as yet to say what steps it might be the duty of the Government to take in the matter. In answer to a further question the Lord Advocate said that it was not possible to promise any legislation in the matter at present.

The Amalgamation of Poor-law Unions in Ireland.—Mr. J. P. Farrell asked the First Lord of the Treasury on Monday if he would state whether any, and, if so what, steps had been taken to form the Commission on Amalgamation of Unions in Ireland, the terms of reference to the Commission, and the names of the Commissioners; and would he undertake that in case the Commission was not wholly departmental or judicial, some Irish members of Parliament would be asked to serve on it? Mr. Wyndham replied that the Commission was appointed on May 12th. The Commissioners were Mr. G. Murnaghan, M.P., Dr. Coey Bigger, Medical Inspector of the Local Government Board, and Mr. W. L. Micks, Chairman. The terms of reference were as follows:

I. Whether any Poor-law unions could be dissolved with advantage to the ratepayers, and without hardship to the sick and destitute poor; and if any such dissolution be deemed desirable, what arrangements by amalgamation of unions or otherwise should be substituted therefor.

II. Whether, in the event of any unions being amalgamated and the workhouses thereof being no longer required for Poor-law purposes, such workhouses could with advantage be taken over by county councils for auxiliary lunatic asylums under Section LXXVI of the Local Government (Ireland) Act, 1898, or could be otherwise utilized for any public purpose.

III. Whether it would be possible, either by an arrangement for the maintenance of paupers in adjoining workhouses, or by combining a number of unions for the purposes of indoor relief, to make better provision for the classification and treatment of the inmates, especially the aged and infirm, sick, lunatics, and children chargeable to the said unions; and whether any changes in the law and procedure as to the administration and chargeability of relief would be desirable in the event of such combination of unions being carried out.

IV. Whether, having regard to the number and capacity of workhouses, hospitals, and infirmaries existing in any county, union, district, or locality, and to the other provisions for the relief of the sick poor, any additional accommodation is now required for the proper treatment of the sick poor, and if additional accommodation is necessary how it might best be provided.

V. Generally to inquire and report whether any and what administrative and financial changes are desirable in order to secure a more economical system for the relief of the sick, the insane, and all classes of destitute poor in Ireland, without impairing efficiency of administration.

Poor law Guardians in Ireland and Medical Relief to the Police.—Mr. Murphy asked the Chief Secretary to the Lord Lieutenant of Ireland whether he would consider the advisability of amending the law to relieve Boards of Guardians in Ireland from the obligation of affording hospital relief to policemen in receipt of full pay without being able to enforce payment by such policemen of the cost of such relief. Mr. Wyndham answered that this question was founded on a misconception. Under Section v of the 25 and 26 Vic., cap. 83, a Board of Guardians was entitled to be repaid "the full average daily cost of maintenance and establishment charges, medical and surgical treatment," incurred by police constables in the circumstances mentioned. No amendment of the law was called for.

THE SUMMER SESSION OF THE GENERAL MEDICAL COUNCIL.

NOTES.

The English Conjoint Board.—An inquiry made by Sir Victor Horsley, whether the Examination Committee were going to report to the Council upon the Visitors' reports on the chemistry, physics, and biology examinations of the English Conjoint Board resulted in a curious coil. Mr. Bryant, the Chairman of that Committee, explained that his position as representative of one of the bodies adversely criticized was difficult, and asked for a definite command of the Council to give such a report, in which case it would be furnished. His interlocutor replied that he was not moving, or going to move, such a resolution, but that he was merely asking the question whether the usual course was going to be followed or not in this case, as he did not see it down on the programme. Mr. Bryant appeared to think that a bargain had been struck at the last meeting of the Council that this report should not be considered until the other similar examination had been inspected and reported upon, to which it was replied that there was no such bargain, and that another report on the similar examination of the Apothecaries' Hall was already in the hands of the members. A proposition of Mr. Bryant that the report be referred back to the Visitors for reconsideration was met by a flat refusal on the part of Dr. Windle to reconsider it at all, and interruptions on the part of several members of the Examination Committee indicated that the Committee was not at one with its Chairman and repudiated his representation of their attitude; the Committee will doubtless, therefore, hand in its report before the conclusion of the session.

The University of Dublin.—The report upon the final examinations of the University of Dublin contained a notice of the fact that two candidates who had been rejected in medicine were admitted a month afterwards to re-examination in the subject of mental diseases only, and were passed, apparently, by a single examiner. The Visitor and Examiner considered that they had been rightly rejected, and add the comment that there was apparently nothing to justify the re-examination. At the Council Dr. Little, the Regius Professor of Medicine in the University, took the whole responsibility upon himself, and the representative of the University, Dr. Bennett, did not offer to share it. The chief ground alleged was that one of the rejected candidates was known to be a good man, he having obtained sundry prizes and scholarships, and that it was the examiner in mental diseases who had objected to their passing. Dr. Little, however, admitted that he perhaps ought not to have taken this action, and said that he should not do it again, speaking with such *bonhomie* and charm of manner as to disarm adverse comment, which could hardly take any other form than that of personal censure. So the incident was allowed to pass, though perhaps the object of the inspection will be attained by the publicity given to the matter.

The Apothecaries' Hall, Dublin.—The inspection of the examinations of the Apothecaries' Hall of Dublin also disclosed an irregularity. It appears that a student, who had spent some nineteen years in the obtaining of his qualifications, was admitted to the final examination, but was exempted from examination in surgery, he having previously passed in this subject alone at the English College of Surgeons. He passed and obtained the licence. The legal advisers of the Council gave the opinion that it was never intended by the Act that any person should pass a final examination piecemeal, taking different parts of the examination at the hands of different qualifying corporations. The Apothecaries' Hall of Dublin has from time to time complained through its representative that its examinations should alone be subject to continual inspection, and certainly the expense and trouble entailed are very disproportionate to the absurdly small number of candidates who seek its licence. But the disclosure of an irregularity such as this points to the necessity of their continuance so long as this corporation is ranked amongst the qualifying bodies.

School Board Certificates.—On a complaint emanating from the Birmingham School Board, Mr. J. Dugald Maclean was called before the Council on the ground that he had given medical certificates exempting a boy from school attendance without seeing and examining him. It appeared that the boy went to work instead of going to school, and the Birmingham magistrates, by whom the father of the boy was fined after adjourning the case for further inquiry, took a sufficiently serious view to impound the medical certificates. The evidence placed before the Council consisted in the main of the accounts given by School Board officers of Mr. Maclean's statements made to them when they called upon him in the interval between the first hearing and the adjournment, which accounts were given in evidence before the magistrates. Mr. Maclean, though aware of the adjourned hearing, had not attended to offer any explanation. On the other hand, the magistrates had not been actually trying the issue whether these certificates were wrongly given, though they evidently had formed an opinion as to this, and there was a serious conflict of evidence before the Council. Mr. Maclean denied on affidavit that he had made the admissions stated by the School Board officers, and handed in at the last moment statutory declarations from the boy (aged 14), the mother of the boy, and another woman, to the effect that on the days specified in the charge the boy had attended at his surgery, and had been seen by him. The Council is always in a difficulty when there is an absolute conflict of evidence, as it can neither summon nor swear witnesses, and it came to the conclusion that the charge had not been proved.

Purity Pamphlets.—However mischievous in effect and shocking in subject matter we may deem the literature purveyed by the apostles of Social Purity to be, they may be credited with good intentions. Three pamphlets on this subject were before the Council, in each of which, in almost identical terms, the offer was made to supply to applicants the name and address of a trustworthy physician who had given especial attention to these matters. The name was supplied on lithographed forms, which it was admitted were furnished and paid for by the practitioner. The pamphlets bore no date of publication, but the least objectionable of the three purported to be a lecture delivered by Mr. Varley some 20 years ago, and this gentleman stated that this had been long in circulation, and had been issued before the others into which, he believed, the paragraph in reference to a physician had been copied. The line of defence offered was that Mr. Varley was a personal friend, whom the practitioner knew to be interested in these matters, and that lithographed forms were supplied to save him time and trouble in replying to young men who might make application to him. Although aware that these forms had passed into the possession of and were used by Mr. Varley's publisher, in Mr. Varley's absence, he denied any knowledge whatever of two pamphlets published by Mr. Kensit, and stated that at the time he was unacquainted with Mr. Varley's booklet and did not know that it contained a reference to a physician. The Council found the facts to have been proved, but in consideration of the practitioner's assurance that he would refrain from any similar conduct, decided to proceed no further in the matter.

Restoration of Names.—A proposition that applications for the restoration of names which had been expunged from the *Register* should be first considered by the Penal Cases Committee rather than as now by the Executive Committee, based on the ground that the former body might be expected to be more familiar with the facts, was, on the advice of the legal advisers of the Council, not adopted.

Belated Reports.—We have repeatedly called attention to the inconveniences arising from the reports of the various Committees being only drawn up during the session, and so not being in the hands of the members long enough for their due consideration. But on this occassion there was actually not enough material ready to fill up the time of the Council on the second day of the session, and it had to rise early for want of business to go on with. This was in part the result of its having been found impracticable to commence the penal business before the commencement of the next week, such business having usually been taken early, but it is an emphatic endorsement of the justice of the remarks which we have made on the subject.

[The full report of the proceedings of the Council down to the time we go to press will be found in the Supplement.]

Scotland.

The Royal Visit to Edinburgh.

In connexion with the King's recent visit to Edinburgh a baronetcy was conferred on the Lord Provost of Edinburgh, a knighthood on the Treasurer of the City of Edinburgh and on the President of the Royal Scottish Academy. Considerable adverse comment has been made on the paucity of this list of honours, and particularly with reference to the absence of the name of the President of the Royal College of Physicians from the list. Perhaps the central function of His Majesty's visit was the opening of the new City Hospital for Infectious Disease at Colinton Mains. Surely then it might have been considered a fit and graceful act to honour the head of the College of Physicians, and in and through him the medical profession in Edinburgh and Scotland. The President of the Royal College of Surgeons is already a knight. Apart from his being for the time being the titular head of the Royal College of Physicians of Edinburgh, Dr. Clouston, the present President, is a man of outstanding eminence in his own department of medical science; and Lord Balfour of Burleigh would have been well advised if he had submitted his name, along with that of the President of the Royal Scottish Academy, to his Majesty, and it is a pity he failed to do so.

The Edinburgh Medico-Chirurgical Society.

A clinical meeting of the Medico-Chirurgical Society was held in the large out-patient theatre of the Royal Infirmary on Wednesday, May 20th, under the Presidency of Sir Thomas Fraser, when many specimens and patients were shown.

The Harveian Festival at the Royal College of Physicians of Edinburgh.

The 121st Harveian Festival will be held in the Hall of the Royal College of Physicians of Edinburgh on June 5th. The society will meet at 6 30, when the President, Professor John Chiene, will deliver the Harveian Oration on "The Early Days of the Edinburgh Royal Infirmary." Dinner will follow at 7.30. Every Harveian is expected to let the Secretaries know, by letter, whether he intends to attend the festival or not. This should be done not later than the day before the festival.

Edinburgh Royal Infirmary Residents' Club.

The annual general meeting of members of the Edinburgh Royal Infirmary Residents' Club will take place in the North British Railway Station Hotel, Edinburgh, on June 12th, at 7 p.m., when the Secretary's and Treasurer's reports will be presented. Dinner will follow at 7 30, when Sir Thomas Fraser, President of the club, will occupy the chair. Members intending to be present should send their names to the Honorary Secretary, Dr. Claude B. Ker, City Hospital, Edinburgh, on or before the 10th day of June.

The Neurological Society.

The Committee which had been formed to make arrangements in connexion with the visit of the Neurological Society to Edinburgh met on Friday, May 15th, in the University Physiological Laboratory, when Saturday, June 27th, was fixed as the date of the visit.

Glasgow Medical Corps and the Royal Visit.

To the Glasgow companies of the Royal Army Medical Corps Volunteers was assigned the task of providing ambulance detachments for the six-miles drive of King Edward through the Glasgow streets on the occasion of the recent royal visit. Lieutenant-Colonel George T. Beatson, C.B., has received from Colonel Rutherford, the officer commanding the Glasgow District, the following letter of thanks for the excellence of the arrangements made:

Dear Colonel Beatson,—Please accept my sincere thanks to you, your staff, and all the officers and non-commissioned officers and men who worked with you on the 14th inst. in such an admirable way, and which led to such a signal success. Had it not been for your most perfect arrangements in the ordering and organisation of the system of ambulance and speedy relief, a very different report might have been received. As it was, your report received and transmitted to Sir A. Hunter at 10 p.m., May 14th, was of the most satisfactory character. His Majesty personally thanked me for the military arrangements, and I told him of your report to me at the time I left the University—"No casualty of a serious nature up to that time." His Majesty said he was very pleased to hear it, and it would add to the Queen's and his pleasure of that day. For all this safeguarding the soldiers and the public I have to thank you and all your good men in a measure.—Yours very sincerely,

Richard Rutherford.

Ireland.

Lady Dudley's Nursing Scheme.

Lady Dudley, who a short time ago appealed for help to supply Jubilee nurses in the poorer districts of Ireland, writes to the papers to say that she is now in a position to appoint three. Mr. H. Smiley gives £250, Sir Ernest Cassel £105, Mrs. Rube £105, Mrs. Coats £100, and over £300 a year has been promised by other supporters. She asks that still further help may be given to enable her to meet the great need that undoubtedly exists in many parts of Ireland.

Proposed Belfast Sanatorium for Consumptive Poor: Offer of a Site.

At the meeting of the Belfast Board of Guardians held on May 19th, a letter was read from the Roman Catholic Bishop of Down and Connor (Dr. Henry), conveying an offer of a free site for a consumptive sanatorium for upwards of 100 patients at Orlands, Kilroot, co. Antrim, the lately acquired convalescent home of the Mater Infirmorum Hospital. The site is in many respects an excellent one, about 12 miles from Belfast, over 2 miles from the nearest town of Carrickfergus, but easy of access, being about 1 mile from the little station of Kilroot. It has a south-east aspect, but perhaps rather open to the east winds. Other sites that have been mentioned as suitable for a general consumptive sanatorium are the Holywood Hills, on the co. Down side of the Lough; the rising grounds facing south in the neighbourhood of Dundonald; or in some of the southern aspects of the Castlereagh Hills. The offer is a generous one, and the best thanks of the Board were tendered to Bishop Henry; and the question was referred to the Infirmary Committee.

Commission on Destitute Sick and Lunatics.

Mr. William Lawson Micks, of the Local Government Board, Ireland; Mr. George Murnaghan, M.P.; and Dr. E. Coey Bigger, Medical Inspector, Local Government Board, Ireland, have been appointed by the Lord Lieutenant to inquire into the provisions now existing in Ireland for the relief of the various classes of destitute sick and lunatic poor, workhouses, hospitals, etc.

Royal College of Surgeons.

The report to be submitted to the annual meeting of the Royal College of Surgeons in Ireland shows that during the year 15 Fellows, 44 licentiates, 7 licentiates in dental surgery and 29 diplomates in public health were admitted during the year. There are now living 10 honorary Fellows, 440 ordinary Fellows, 2,832 licentiates, 6 honorary diplomates in public health, 154 ordinary diplomates in public health, and 503 licentiates in dental surgery; 9 Fellows and 2 licentiates have died during the year. The receipts amounted to £3,917 11s. 4d. and the expenses to £4,455 19s. 4d. The investments produced £394 7s. 11d. The annual election will take place on Monday, June 1st, when Mr. Lambert Ormsby will be re-elected president, Mr. Arthur Chance, vice-president, and Sir Charles Cameron, secretary. The new candidates for Council are Mr. Wm. Stoker, Mr. Pratt, Mr. L. A. Byrne, Mr. E. H. Taylor, Mr. G. Jameson Johnston, Mr. R. C. B. Maunsell, Mr. Robert J. Harvey, and Mr. Thomas O'Connell Redmond.

Granard Nursing Scandal.

At the meeting of the Granard Guardians on Monday a letter was read from the two nursing nuns employed in the workhouse hospital—Sister Mary Michael Clancy and Sister Mary Rose Sharry—tendering their resignation by direction of their ecclesiastical superiors. Mr. Masterson testified to the excellent work these ladies had done. The Board had suddenly been deluged with reports by "this man"—meaning Dr. Kenny—and these synchronized with insulting language towards the nuns and priests of the Church to which "he alleged he belonged." He proposed a motion refusing to accept the resignation and pledging the Board to support them. This was carried unanimously. A deputation was sent to the Rev. Mother, and reported on its return that the nuns complained of Dr. Kenny's bearing towards them since the inquiry. The Rev. Mother would consent to allow the sisters to remain only on condition that the guardians would insist upon the doctor not using insulting language towards them in the interval. A ruling to this effect was then passed. A resolution was passed asking the Local Government Board to go into the "real root of the evil" namely, "the want of harmony between Dr. Kenny and the nursing staff."

ASSOCIATION NOTICES.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 8th day of July next, at 2 o'clock in the afternoon.

May, 1903. GUY ELLISTON, *General Secretary.*

ELECTION OF MEMBERS.

ANY candidate for election should forward his application upon a form, which will be furnished by the General Secretary of the Association, 429, Strand. Applications for membership should be sent to the General Secretary not less than thirty-five days prior to the date of a meeting of the Council.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

NOTICE is given that the Library will be closed on Whit-Monday, June 1st.

GUY ELLISTON, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

BATH AND BRISTOL BRANCH.—Names of candidates for election as Representative Member of the Branch on the Central Council of the Association (each candidate must be nominated by three electors) must be sent to the Secretary, Dr. J. MICHELL CLARKE, 28, Pembroke Road, Clifton, Bristol, on or before June 12th.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.—Notices: (1) Nominations for the offices of President-elect, Treasurer, two Honorary Secretaries, and two Representatives of the Branch in the Council of the Association, may be made by any three members of the Branch, in writing, to Mr. J. T. J. Morrison, 3, Great Charles Street, Birmingham, on or before June 6th. (2) A special meeting of the Branch will be held in the Medical Institute, Birmingham, on Thursday, June 11th, at 4.30 p.m. Business: Adoption of Rules for the Branch. (Members are requested to bring the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of March 7th, 1903, containing Draft Model Rules.) (3) The forty-ninth annual meeting of the Branch will be held in the Medical Institute, Birmingham, on Friday, June 26th, at 4 p.m. The retiring President, Dr. Henry Malet, will introduce his successor, Mr. Jordan Lloyd, who will deliver an address. The business to be transacted will be duly notified to each member by circular. (4) The annual dinner will be held on the same date as the annual meeting, June 26th, at 7 p.m., in the Grand Hotel, Birmingham. Tickets 5s. each. Members may introduce guests.—J. T. J. MORRISON, F.R.C.S., T. S. SHORT, M.D., Honorary Secretaries.

BORDER COUNTIES BRANCH.—The annual general meeting of this Branch will be held in Carlisle on Friday, June 26th. Gentlemen wishing to read papers or to show cases or specimens are requested to communicate as early as possible with the Secretary, FRANCIS R. HILL, 12, Bolton Place, Carlisle.

DORSET AND WEST HANTS AND WEST SOMERSET BRANCHES COMBINED.—Notice is hereby given that the names of candidates for election as a member of Council of the Association for these Branches must be sent to either of the undersigned on or before Tuesday, June 16th next. Each candidate must be nominated in writing by three Branch members.—WILLIAM VAWDREY LUSH, Weymouth, W. B. WINCKWORTH, Taunton, Honorary Secretaries.

EAST ANGLIAN BRANCH.—Preliminary Notice.—The annual meeting will be held at Chelmsford on Thursday, June 11th. Members wishing to read papers, or show cases or specimens, will kindly communicate with the General Secretary, B. H. NICHOLSON, M.B., East Lodge, Colchester.

EDINBURGH BRANCH: SOUTH-EASTERN COUNTIES DIVISION.—The annual meeting of this Division will be held in the Railway Hotel, Newtown St. Boswells, on Friday, June 5th, at 3.30 p.m. Business: (*a*) To elect office-bearers, the Representative of the Division on the Branch Council, and the ordinary members of the Executive Committee; (*b*) To elect the Representatives of the Division in representative meetings of the Association; (*c*) To receive the Annual Report of the Executive Committee; (*d*) To consider the business of the Annual Representative Meeting; (*e*) To make new rules, or alter or repeal existing rules; (*f*) To transact any business that may be transacted at an ordinary meeting. The members will dine together at 5.30 p.m., and it is hoped as many as possible will be present. All intending to dine must notify the Secretary one week before the date fixed.—W. HALL CALVERT, Melrose, Honorary Secretary.

GLASGOW AND WEST OF SCOTLAND BRANCH.—This Branch is entitled to two representatives on the Council of the Association. Nominations for the office, signed by three members of the Branch, should reach the Honorary Secretary on or before June 15th.—JAMES H. NICOLL, Senior Honorary Secretary, 4, Woodside Place, Charing Cross, Glasgow.

METROPOLITAN COUNTIES BRANCH.—The fifty-first annual meeting of the Branch will be held at the Hotel Cecil on Tuesday, June 30th, at 6 p.m. The business to be transacted is to appoint officers for the ensuing year, to receive the reports of the Treasurer and of the retiring Council, and to hear an address from the incoming President, Mr. H. W. Kiallmark. At 7 p.m. precisely the members will dine together, the President in the chair. The charge for the dinner will be 8s. 6d. each, exclusive of wine.—H. BETHAM ROBINSON, 1, Upper Wimpole Street, W., GEORGE ROWELL, 6, Cavendish Place, W., Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: HAMPSTEAD DIVISION.—The first annual meeting of the above Division will be held in the Concert Hall of the School for the Blind, Swiss Cottage, N.W., on Wednesday, June 3rd, at 4.45 p.m., for the purpose of electing officers and representatives, and for other business.—J. DILL RUSSELL, Osman House, Fortis Green, N., Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: KENSINGTON DIVISION.—The annual meeting of this District will be held at the Kensington Town Hall, High Street, Kensington, at 4.30 p.m., on Wednesday, June 10th, with H. Campbell Pope, M.D.Lond., in the chair, for the purpose of (1) confirming the election of officers and representatives; (2) for the purpose of instructing the representative of the Kensington Division with regard to the voting at the forthcoming meeting at Swansea; (3) other business.

METROPOLITAN COUNTIES BRANCH: ST. PANCRAS DIVISION.—The annual meeting of this Division will be held at the North-West London Hospital, Kentish Town Road, N.W., on Tuesday, June 9th, at 4.30 p.m. Dr. Wm. Wynn Westcott, Chairman of the St. Pancras Division, will preside. Agenda: Confirmation of minutes of April 27th. Election of officers for the year 1903-4: Chairman, Vice-Chairman, Secretary, a delegate to the representative meeting of the Association, two representatives on the Branch Council, and seven members of the Executive Committee. To transact any business that may be transacted at an ordinary meeting. Dr. Wm. Wynn Westcott will read a paper on the Overlying of Infants.—R. C. M. POOLEY, M.R.C.P., 35, Highbury Grove, N., Honorary Secretary.

MIDLAND BRANCH.—The annual meeting of this Branch will be held at Derby on Friday, June 5th. The President invites members to luncheon at the Midland Hotel at 1 p.m. A meeting of the retiring Council will be held at the Royal Infirmary at 2.30 p.m. The annual meeting will be held also at the Royal Infirmary at 3 p.m. Agenda: Minutes of the last meeting; reception of the report of Branch Council; consideration of new rules provisionally approved by Central Council; election of Branch officers; address by the new President; discussion on the new Branch organization. As this is the first meeting of the newly organized Branch, and as matters of considerable importance will probably be discussed, it is hoped that as many members as possible will make it convenient to attend. A meeting of the new Branch Council will be held after the annual meeting to decide on the next place of meeting for the Council, and other business. The annual dinner will take place at the Midland Hotel at 6.30 p.m. Tickets, 7s. 6d. each, exclusive of wine.—FRANK M. POPE, Leicester, Honorary Secretary and Treasurer.

NORTHERN COUNTIES OF SCOTLAND BRANCH.—The annual meeting of this Branch will be held at the Pump Room, Strathpeffer, on Saturday, June 13th, at 11 o'clock. Business: (*a*) To elect office-bearers and representative of the Branch in representative meetings of the Association. (*b*) To consider the business at the annual representative meeting. (*c*) Adopt rules for the Branch. (*d*) Any other competent business. In accordance with By-law 22, I hereby give notice that the names of candidates for election as members of Council to represent this Branch must be sent to me on or before June 13th. Each candidate must be nominated in writing by three members of the Branch. After the business meeting Dr. Fortescue Fox, Strathpeffer, will give a demonstration at the Baths. The members will lunch at the Spa Hotel. As it is expected that a number of the members of the Aberdeen, Banff, and Kincardine Branch will be present, it is hoped that there will be a good attendance from the Northern Counties Branch. A golf match between members of the two Branches has been arranged, and those wishing to play might kindly communicate with me.—J. MUNRO MOIR, Inverness, Honorary Secretary.

NORTH OF ENGLAND BRANCH.—The annual meeting of this Branch will be held at Alnwick on Friday, June 12th. Trains leave Newcastle at 12.20. Drive round Alnwick Castle Park. Meeting at 4 p.m. Dinner at 5.30, price 6s. 6d. Fuller notice will be sent to every member by circular.—ALFRED COX, Cotsfield House, Gateshead, Honorary Branch Secretary.

NORTH OF ENGLAND BRANCH.—The nomination of candidates for the office of Elective Members of Council (Branch Representatives) for the ensuing year must be made by three electors, and in writing, to the Honorary Secretary of the Branch, Dr. ALFRED COX, Cotfield House, Gateshead, on or before June 6th next.

NORTH LANCASHIRE AND SOUTH WESTMORLAND BRANCH.—The annual meeting will be held at Lancaster on June 24th. Members wishing to show cases or specimens or to bring any business before the meeting are requested to communicate with the Honorary Secretary, A. S. BARLING, High Street, Lancaster.

PERTHSHIRE BRANCH.—The summer meeting will be held at the Golf Club, Moncreiffe Island, on Friday, June 5th, at 3.40 p.m. Business: (1) Read minutes. (2) Appointment of representative member. (3) The Secretaries will read letters regarding the position of the Branch in reference to reorganization. After the meeting a golf competition will be held against Dundee. All golfing members who intend to come forward will kindly send postcard to Dr. Taylor before May 31st saying they intend to be present.—A. R. URQUHART, W. A. TAYLOR, Honorary Secretaries.

SHROPSHIRE AND MID-WALES BRANCH.—The spring meeting of the Clinical and Pathological Section of this Branch will be held on Tuesday, June 2nd, at 5 p.m., at the Salop Infirmary; Dr. T. Law Webb, Chairman, will preside. Agenda: Dr. Gardner will show a case of Muscular Dystrophy. Mr. Godson will show a case of Gastric Ulcer; perforation; successful suture. Mr. Dix will show a case of Infantile Paralysis and read a note of the treatment. The Chairman will read clinical notes of a case of Tuberculous Disease in Advanced Life. Mr. Russ Wood will read a short paper on the Etiology and Treatment of Conjunctivitis. Mr. Macleod will show some remarkable foreign bodies removed from the stomach. The specimens which have been added to the Museum since

the last meeting will be exhibited. It is hoped that members will bring forward any cases or specimens of special interest they may wish to show, even though notice may not have been given; but those on the agenda will have precedence.—H. H. B. MACLEOD, Shrewsbury, Honorary Secretary.

SOUTH-EASTERN BRANCH.—The annual meeting of this Branch will be held at the Lion Hotel, Guildford, on Thursday, June 25th, at 2 p.m. Mr. A. A. Napper, President-Elect, kindly invites members of the Branch to lunch at the hotel between 1 and 2. Dinner at 6.30 p.m.; charge 7s. The local committee provides wine.—T. JENNER VERRALL, 97, Montpellier Road, Brighton, Honorary Secretary.

SOUTH-EASTERN BRANCH.—In accordance with By-law 22, I give notice that the names of candidates for election as members of Council to represent this Branch must be sent to me on or before Saturday, June 6th. Each candidate must be nominated in writing by three members of the Branch. The Branch is entitled to elect three representatives on the Council.—T. JENNER VERRALL, 97, Montpellier Road, Brighton, Honorary Secretary.

SOUTH MIDLAND BRANCH.—The annual meeting will be held at the Council Chamber, Wellingborough, on Thursday, June 18th, under the presidency of Dr. W. E. Audland. The President invites members to lunch at the Central Hall, High Street, at 1 p.m. sharp. Members who intend to be present at lunch must communicate with the President, Dr. W. E. Audland, Oxford Street, Wellingborough, not later than June 14th; Branch Council meet at Council Chamber 12.15 p.m. same day. Dr. Hollis of Wellingborough will show two cases of Congenital Oedema. Members wishing to read papers or show specimens must inform the Secretary not later than June 7th.—E. HARRIES JONES, Northampton, Branch Secretary.

SOUTH MIDLAND BRANCH.—In accordance with By-law 22, notice is hereby given that names of candidates for election as members of Central Council to represent this Branch must be sent to the Honorary Secretary on or before Saturday, June 13th. Each candidate must be nominated by three members of the Branch. This Branch is entitled to one member only.—E. HARRIES JONES, Northampton, Honorary Secretary.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—Nominations of candidates as representatives on the Central Council of the Association must be sent in writing and signed by three members of the Branch, to the Secretary of the Branch, D. R. Paterson, M.D., 15, St. Andrew's Crescent, Cardiff, on or before June 14th.—D. R. PATERSON, M.D., Honorary Secretary.

SOUTH-WESTERN BRANCH.—The sixty-fourth annual meeting of this Branch will be held on Wednesday, June 3rd, at the Guildhall, Launceston, at 3 p.m., when Mr. J. Delpratt Harris will resign the chair to Dr. W. T. Thompson, who will deliver an inaugural address. The report of the Branch Council will be presented to the meeting, and the officers of the Branch elected for the year 1903-4. Luncheon, by kind invitation of the President-elect, will take place from 1 to 2.30 p.m., at the Guildhall, and the annual dinner will be held at the White Hart Hotel at 7 p.m. Tickets (exclusive of wine), 6s., which can be obtained from the Honorary Secretary. The President-elect has kindly arranged visits to the Priory Ruins and Church, and the Castle. After the meeting a Garden Party will be held at the residence of the President-elect. The nomination of candidates for the office of Elective Members of Council (Branch Representatives on the Central Council) for the ensuing year, must be made by three electors, and in writing, to the Honorary Secretary of the Branch, G. YOUNG EALES, 1, Matlock Terrace, Torquay, on or before May 20th.

STAFFORDSHIRE BRANCH.—The annual meeting of this Branch will be held at Stafford, on Thursday, June 11th.—G. PETGRAVE JOHNSON, Stoke-on-Trent, Honorary General Secretary.

WEST SOMERSET BRANCH.—The sixtieth annual meeting of this Branch will be held at the London Hotel, Taunton, on Tuesday, June 16th, at 12.30 p.m., under the presidency of Dr. David Brown. Agenda: Minutes of last meeting; report of Council; Treasurer's report; election of President-elect; election of other officers. President's address on Some Medical uses of Chloroform. Lunch will be served at the London Hotel at 1.45 p.m. It is proposed to pay for this out of the funds of the Branch in the case of all members who signify their intention to be present to the President, Dr. D. Brown, Hamdon, Taunton, on or before Saturday, June 13th. In the case of others, and of tickets for guests, a charge of 3s. will be made; in all cases exclusive of wine. After lunch, arrangements have been made to enable members to play tennis (4 courts) and croquet (2 grounds) on the Somerset County Cricket Ground, where they will also be entertained to tea by the President. The Curator of the Museum of the Somersetshire Archaeological and Natural History Society (Mr. H. St. George Gray) will be very pleased personally to conduct any members over the Castle and Museum, which has been recently rearranged, during the afternoon. In the event of the afternoon being wet, an alternative programme will be arranged.—W. B. WINCKWORTH, Taunton, Honorary Secretary.

WORCESTERSHIRE AND HEREFORDSHIRE AND GLOUCESTER BRANCHES.—Election of a Member of Council to represent these Branches on the Central Council of Association. It has been arranged that the Worcestershire and Herefordshire Branch should have the nomination for the first three years, Gloucestershire for the next three years, and so on alternately. Nominations made by three electors must be sent in writing to the undersigned on or before June 16th.—GEO. W. CROWE, M.D., 43, Foregate Street, Worcester, Honorary Secretary.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH: HEREFORDSHIRE DIVISION.—The annual meeting of this Division will be held at the Herefordshire General Hospital, Hereford, on Wednesday, June 24th, at 3.30 p.m. All members of the Association living in the Division, which includes the county of Herefordshire (except the town of Bromyard), New Radnor, and Presteign, are requested to attend this meeting.—HERBERT JONES, Hereford, Honorary Secretary.

YORKSHIRE BRANCH.—The annual meeting of this Branch will be held at the Library, the Medical School, Sheffield, on Wednesday, June 24th, at 4 o'clock, at which the officers will be elected. Candidates to represent the Branch on the General Council of the Association must be nominated by three members of the Branch, and such nominations must be sent to the Secretary before Tuesday, June 16th. The Branch is now entitled to only two members on the General Council. The annual dinner will take place at 6.30 at the Royal Victoria Hotel. Members intending to read papers, make any communications, propose new members, etc., are requested to communicate at once with the Secretary, ADOLPH BRONNER, 33, Manor Row, Bradford.

SPECIAL CORRESPONDENCE.

MANCHESTER.

Dalton Centenary.—Wilde Lecture.—Honorary Degrees Conferred on Professors Clarke and Van't Hoff.—Conversazione at Owens College.—City Coronership.—"Pedestrianitis."—The Royal Infirmary.

SIXTY years—all but one—have elapsed since the death of John Dalton. Since then Manchester has become a university town with a university "having its seat in Manchester," and just a little over fifty years ago Owens College was founded. It was therefore appropriate and fitting that both institutions should do honour to his memory. On May 19th the members of the Literary and Philosophical Society did honour to the memory of John Dalton, who for many years was an active member of this institution, and its President at the time of his death. The proceedings began by the reading of addresses from scientific societies. The message from the Russian Physico-Chemical Society ran:

The notion of atoms having united through chemistry the whole philosophy of Nature has immortalized the name of John Dalton in science. Highly reverencing his memory, the Russian Physico-Chemical Society begs you to accept their congratulations on the day of the Manchester celebration in honour of the founder of modern atomism Glory to Dalton!

Congratulations were offered by Professor Van't Hoff, who, speaking on behalf of the chemists of Germany, said that they felt "deep admiration and thankfulness for the work of your great citizen." An address read from the Royal Society of London contained the following:

"In constructing these ideas, first announced to the world just 100 years ago, and in taking the earliest steps in their experimental development, Dalton laid the foundation on which the vast fabric of modern chemistry has since been built." The Royal Society also congratulated the Literary and Philosophical Society on having known how to embrace the privilege and opportunity of providing a home for the scientific activity of their illustrious member, who was afterwards for a long period their honoured president, and on having been the channel for the publication to the world of scientific advances that will maintain their importance throughout ages to come, at a time when their author was to outward appearances only an inconspicuous private citizen in their community.

In the BRITISH MEDICAL JOURNAL (May 16th, p. 1171), an account of the lifework of Dalton has already been given. The address of Professor F. W. Clarke—the Wilde Lecturer of the year—to the members of the Literary and Philosophical Society on the Atomic Theory set forth the achievements of Dalton and their influence upon science. In a succinct review of the progress of chemical science, Professor Clarke stated that from 1820 to 1850 the growth of chemistry was mainly on the organic side, but every step forward was dependent upon Dalton's theory. Professor Clarke described these steps, and said that without the atomic theory organic chemistry would be quite unintelligible—a mere dustheap of unrelated facts. "The acceptance of Dalton's atomic theory leads at once to two other problems of great interest. What is the nature of the atom? And is all matter one at bottom, or of many kinds? On the latter subject most philosophical chemists are now of the belief that our elements are not ultimate; and the only evidence in favour of their elementary nature is the fact that with our present resources we are unable to decompose them. On the other hand, they are connected by so many close relations that something belonging to them in common must underlie them all." "The nebulae are chemically simple, the hotter stars more complex, the finished planets most complex of all. It is possible, then, that the evolution of planets from nebulae has been accompanied by an evolution of the elements themselves. If these considerations are valid, then the Daltonian atoms must be complex bodies." His own opinion coincided with J. J. Thomson's conclusion that the atoms are clusters of small corpuscles.

The functions of the afternoon were followed by a dinner in the evening. As bearing on the great University question which lies so near the hearts of Lancashire and Yorkshire, we quote from the speech of Sir William Ramsay in proposing "The University of Manchester": He gave the new scheme his hearty good wishes, and spoke of the talk about "the

lowering of the value of degrees" by the multiplication of universities as "absolute rubbish" and "unmitigated rot." Sir William Ramsay commended the administrative methods of the German universities as preferable to the red-tape methods of, for example, the London University, and he urged that everything should be done in the new University to cut down the administrative duties for the actual working staff to as small a degree as possible, so that they would have available more time for teaching and research.

On May 20th it was the turn of Victoria University and Owens College respectively to pay their tribute to the memory of Dalton. The University ceremonial took place in the forenoon in the Whitworth Hall of the College. Earl Spencer, Chancellor of the University, presided with his accustomed dignity. The felicitous speech in which in opening the proceedings he referred to Dalton and to the two recipients of honorary degrees will bear quotation: "We are met," he said, "to do honour to a great name intimately connected with Manchester, and it is meet and right that we should do so, for Manchester loves to do honour to its great citizens. Now all the world knows that he has made one of the greatest discoveries science ever made." Lord Spencer quoted from Professor Clarke's Wilde Lecture on Dalton the phrases: "Dalton created a working tool of great power of usefulness, something which none of his forerunners had been able to do. In the growth of chemistry since his day the guiding clue has been the atomic theory." "It is right," the Chancellor continued, "that this University should do homage to that great man who one hundred years ago, when education, and especially science, was not esteemed as it is in the present day, gave lustre and honour to the city where he lived by his great discoveries." Referring to Professors Clarke and Van't Hoff, on whom the honorary degrees of D.Sc. were about to be conferred, the Chancellor said: "It is a further cause of gratification that the two recipients belong to two nations with whom we Englishmen desire to increase the ties of amity and concord."

On the same day Owens College exerted itself to do honour to Dalton. One of the most interesting parts of the proceedings was the meeting of the Chemical Society to offer a welcome to Professor J. H. Van't Hoff and Professor Clarke. The large chemical lecture room was filled. An album containing an expression of the Society's "respectful homage" was presented to Professor Van't Hoff. The Council of the Colleges are about to extend the chemical laboratories, and Professor Van't Hoff was asked to lay the foundation of the new laboratories. Afterwards he gave an interesting address on his own work and on the recent speculation of chemistry in space. Much was said as to the advances of chemistry in Germany, but perhaps one nation was omitted, for Professor Van't Hoff is a Dutchman, and was professor in Amsterdam before he was called to Berlin.

In the evening there was a *conversazione* at Owens College. There was an exhibition of personal relics of Dalton. In the chemical laboratories were displayed the original and comparatively simple apparatus used by Dalton in his meteorological, chemical, and physical investigation. A special exhibit on colour vision was arranged by Professor Stirling in the Schorlemmer Laboratory. It consisted of actual objective displays of mistakes made by colour-blind persons, and of coloured sketches made by colour-blind persons. One of the latter, a copy of a lithographed coloured wallflower lent by Dr. Edgar A. Browne of Liverpool, attracted much attention. There were also exhibits of the methods used for testing the field of vision for colours and testing for colour blindness, experiments in colour contrast, after images, and stereoscopic colour vision. There was also a large display of portraits and of the published works of those whose studies had contributed largely to our present knowledge of colour vision, including Thomas Young, Purkinje, George Wilson, Holmgren, Helmholtz, Donders, Brücke, W. Kühne, and many others.

At last Manchester has got a coroner. The nomination of Mr. Ernest Gibson was confirmed by the Council on May 20th, and on May 21st Mr. Gibson commenced his duties. Addressing the jury, he said he would do all he could to make genuine inquiries in the court, and if necessary searching inquiries, and he desired to gain the friendship of all. Jurymen might rely upon it that he should not forget they were business men whose time was valuable, and he should try to conduct the work so as to save as far as possible the time of those who were often present at a great personal sacrifice. He hoped later to make arrangements with a view of saving a considerable portion of the time of the court.

"Pedestrianitis," as it has been called, has set in in Manchester and the neighbourhood, and is of a virulent type. Indeed it is claimed that it originated in Manchester and not in London. Be that as it may, on Saturday, May 23rd, 107 individuals set out to walk from Manchester to Southport, a distance of 41½ miles. The time occupied by the winner was 7 hours 11 min. 8 sec., the second pedestrian arrived 2 sec. later. This works out at an average pace of 5.8 miles an hour. A hundred reached Southport within ten hours, only four competitors fell out on the way, and two young women also did the journey in good time. The walkers were drawn from all ways of life.

The Board of Management of the Royal Infirmary held a meeting on May 25th, to consider the question of the rebuilding of the infirmary. A great deal of preliminary business has to be done before the Board can make a selection from the architects who have sent in plans for the new building. Several members of the Board intend in the course of the Whitsuntide vacation to visit the principal hospitals of the United Kingdom in order to determine certain points on which at present there is perhaps some difference of opinion.

SOUTH WALES.

Small-pox in Glamorgan.—Banquet to Sir John Williams, Bart. —Parliamentary Bills.—Infected Blankets.

THE prevalence of small-pox in Cardiff and neighbourhood shows signs of abating, and the sanitary officials have been unremitting in their efforts to prevent the spread of the disease. There are at present in the small-pox hospital several cases under treatment and three fresh cases were notified during the week ending May 23rd. The Borough of Swansea and the administrative county have been free for many weeks, with the exception of a few cases in the Llandaff and Dinas Powis Rural District and one imported to Barry last week. The few typhus fever cases that occurred at Cardiff lately are now convalescent.

A banquet will be given on June 12th to Sir John Williams, Bart., K.C.V.O., on the occasion of his coming to reside in Wales. It is expected that many of the leading members of the profession in Wales and the metropolis will be present.

The Western Valleys (Mon.) Sewerage Bill is now being heard before a Select Committee of the House of Commons, presided over by Sir A. Hargreaves Brown. The Bill is promoted by the various urban district councils in the Western Valleys, Monmouthshire, for the constitution of the Western Valleys Sewerage Board. The petitioners have already been heard, and the evidence of the opposition is now being heard. The only dissentient district council is Nantyglo and Blaina, by whom, together with the owners of important works, etc., the Bill is opposed. The area drained by the proposed main trunk sewer is extensive and populous, including some 90,000 population. It is unfair to criticize the merits or demerits of this Bill at the present stage, but all are agreed that these places, which are proverbially insanitary, should be sewered with as little delay as possible. The Llandrindod Wells Improvement Bill, which was promoted by the Urban District Council of Llandrindod, sought powers to provide land for the establishment of pump rooms for the distribution of mineral water, the erection of municipal buildings, fire station, slaughterhouse. The promoters' application was not granted.

Two lots of infected blankets have been traced to Glamorgan. The stains on some of these blankets are now being bacteriologically examined at the Cardiff and County Public Health Laboratory.

SYDNEY.

The Annual Meeting of the New South Wales Branch of the British Medical Association.—Proposed Consumption Hospital at Hornsby.—Preservatives in Foods.—Prevalence of Typhoid Fever.

THE annual meeting of the New South Wales Branch of the British Medical Association was held on March 27th. The report of the Council on the work of the year showed a large amount of good work done, and the Branch now stands first in number of members and in importance and influence among the medical societies of the Southern Hemisphere. The retiring President, Dr. G. E. Rennie, delivered his address. After dealing briefly with some matters of interest in the report of the Council, he proceeded to speak on the physiology of voluntary movements. At the close of the

address a vote of thanks was accorded with acclamation on the motion of Professor Anderson Stuart. A pleasing feature of the meeting was the presentation of a cheque for £150 to the Honorary Secretary, Dr. G. T. Hankins, as a mark of esteem from the members of the Branch for the large amount of good work done by him in the interests of the profession in New South Wales during the last four and a-half years. Dr. Hankins briefly replied, thanking the members for the handsome and totally unexpected gift. The ballot for officers and Council resulted in the following being elected for the ensuing year:—*President:* Dr. A. J. Brady. *Vice-President:* Mr. A. MacCormick. *Council:* Drs. Hankins, Crago, Rennie, Dick, Abbott, Pockley, Hinder, Beeston, Fiaschi, Foreman, Worrall, Newmarch.

For some considerable time past the question of building a hospital for the advanced and chronic cases of pulmonary consumption which are inadmissible to the large metropolitan hospitals has been engaging the attention of the Government. An admirable site was selected by a medical committee deputed to inspect sites in different localities. This is situated about twenty miles from Sydney, in an elevated position. Unfortunately, a large amount of local opposition has been aroused by persons having vested interests in the neighbourhood, who contend that the building of a consumptive hospital in the district would lead to a great danger of their wives and families becoming infected with consumption; and last, but not least, to a great deterioration in the value of their property. It seems useless to try to convince the public that the dangers of infection by patients in a well-supervised hospital are infinitesimal; and the opposition is all the more illogical, as the district is at present largely used by patients suffering from consumption, who are living in ordinary boarding houses, or at any rate are not under any proper supervision. In the meantime the large number of cases of chronic and advanced phthisis have no resting-place except in their own homes, where they are a source of infection to their families, or in the asylum for the destitute at Liverpool, where no proper skilled attention can be given to them.

In a recent issue of the *Government Gazette*, an important series of regulations bearing on the question of the use of preservatives in foods was published. This matter has been engaging the attention of the Board of Health for many months past, so that these regulations are not the result of any hurried or ill-considered decisions. The regulations are seven in number. The second enumerates the substances which, for the present, are considered as preservatives. The fifth regulation permits the use of four of these, namely, sulphurous acid, salicylic acid, benzoic acid, and boric acid and their preparations, and also fixes the proportions in excess of which they may not be used. Sulphurous acid may be mixed with all foods in a proportion not exceeding $1\frac{3}{4}$ gr. of sulphurous acid to the pint or pound, except milk and its products, canned and bottled fruits and foods, temperance drinks, fresh fish, pickles and condiments. It may be used in the specified proportion or less in all kinds of beers and in small goods. Salicylic acid and benzoic acid are also forbidden in the above list, and, in addition, in preserved fish, all flesh foods, and in beer, cider, and perry. Boric acid is forbidden in milk and in cream intended for use as such. It is permitted in bacon and ham, and in preserved fish, though forbidden in the other articles already enumerated. Boric acid is allowed in butter in the proportion of 35 gr. in the pound, which the trade in general on both sides of the world consider necessary.

All preservatives are forbidden to be mixed with milk and cream intended "for consumption as such." As regards milk, there is an absolute consensus of opinion as to the needlessness of chemical preservatives in it, as regards the ill-effects on the production of milk caused by the use of chemical preservatives, and thirdly as to the extreme inadvisability of permitting the admixture of drugs with a liquid which is the sole sustenance of infants and the sick. Nothing is said in the regulations as to the admixture of preservatives with milk or cream intended for manufacture into butter. But cognizance will be taken of butter as it appears in the market. It does not matter when or by whom the boric acid is added, so long as the finished article does not contain a larger proportion than 35 gr. to the pound.

These regulations have been framed under Section LXXXVI of the Public Health Act of 1902, and the Board points out that while this section fixes a penalty for failing to declare the presence and proportion of preservatives in foods containing any, it merely says that food with which a preservative is mixed in contravention of a regulation made under it shall be deemed unfit for human consumption. The penalty for selling food unfit for human consumption is fixed by Section LXXVIII of this Act, and is a fine of not less than £2 nor more than £10 for a first offence, for a second offence £20, and for a third or subsequent offence £50. But if any adulterated article has been so adulterated as to be injurious to health, then the Court may impose five times the above penalties, and in addition to the increased penalty a term of imprisonment with or without hard labour for any period not exceeding six months. The regulations are not to take effect for ninety days from March 20th last.

The epidemic of typhoid fever at Coonamble, referred to in my last letter, has now almost subsided, only a few sporadic cases being reported. But the disease has been very prevalent in many other towns in the country, and several deaths of prominent citizens have been reported from it. It is probable that the droughty conditions prevalent in the country, with the accompanying bad water supply, deficiency of fresh milk and fresh foods, is responsible for the large number of cases and the mortality from the disease this summer. But the sanitary conditions in many of the country towns are lamentably deficient, and it is no wonder that filth diseases of all kinds should prevail.

CORRESPONDENCE.

MILKSHOP *VERSUS* FARM.

SIR,—Having been made miserable by the report of the inquiry into the milk supply of large towns, published in the BRITISH MEDICAL JOURNAL, which resulted, for me, in a visit to the farm where I had been dealing for my household milk, I have been much exercised where to go for clean milk for my family.

I live in a large town in which there are so many milk shops—all more or less nice-looking—that it is a case of *l'embarras du choix*. As if to help me to make up my mind, a dairy more attractive than any of the others was unexpectedly opened, and I decided, if possible, to deal there. It is a branch of a very large London firm, and has been most lavishly fitted up. Nothing could be more ideal for a dairy—walls of milk-white tiles, with a dado of cocks and hens and ducks and geese, while the butter and cream stand upon marble counters under glass frames to protect them from the dust. Green linen awnings keep the shop cool, and as I asked to see the manager I felt I was going to see some one who understood his business.

I explained to him that I was anxious to deal with him, but that I must see the farms from which he got his milk supply. He assured me it was quite unnecessary that I should give myself all that trouble, as their contracts with the farmers were most strict. He produced one of these contracts, and read it out to me. It certainly seemed to include every point about which I was anxious, including water supply, cleanliness of cowsheds, grooming and washing of cows, and rules for the milkers, who were to wear white linen coats and oil-skin caps (being easily washed), and to wash their hands before milking each cow.

I was more anxious than ever to visit the farms now to see what a really perfect one was like, and, as I suppose the manager saw that I was not to be turned from my purpose, he gave me the names of the five farms at which they dealt, situated in different parts of the county, muttering, as he wrote them down, that he wished every one was as sensible as I was.

Before leaving I was taken into a large room—really a roofed-in courtyard—behind the shop. There the milk was cooled, stored, and manipulated, and the bottles and churns washed by steam. Next door was a yard where the hand carts were kept ready for their rounds. I peeped into many of the cans, which hung in groups of four, one inside the other, according to size: they were spotless.

The next morning I started for my first farm. I got out at a country station, and a half-witted looking yokel directed me to the farm. I was to go half a mile down the road, climb over a stile, and cross the fields, and then I had better ask. All this I did, and when I asked I was told to turn to the right and walk straight on until I came to some large buildings. I hurried along, and after walking what in the heat of

the sun seemed miles I arrived at my destination. That yokel was evidently fond of practical joking, for I found that from the farm you could almost throw a stone into the railway station, at which I had arrived half an hour earlier.

The farmer was expecting me, he said (quick work on the part of the manager), and led me at once to the byres. It was a large farm, and the two big sheds housed nearly 100 cows. The approach to the sheds was through a regular wilderness of manure, and although I had heard the expression "the smell would knock you down," I had never properly experienced the sensation myself until now, for that liquid manure must have been there for years, or at any rate months, and perhaps the recent rains had affected it.

The large square yard beside the sheds was banked high with it, as also the outsides of the byres, and I found that the inside walls could not have been whitewashed for ages. The cows waded in filth, and their hind quarters were covered with it. The story of the child who was taken to a farm by its mother and given a cup of warm milk to drink, which it saw milked, flashed across me: "I don't like milk from the nasty cows, mamma; I like milk out of the nice clean shop." I felt in deep sympathy with that child.

"Why don't you clear away all that manure?" I asked the farmer. He laughed indulgently. "Bless you, we have other things to do beside that," he said.

It would, indeed, with the present accummulation of ages, be a Herculean task.

"When they clean out the byres you should make them wheel it a hundred yards from the cowsheds. The smell is very injurious to the milk." He shrugged his shoulders.

"If I told my men to wheel it 100 yds. off they'd tell me I had better do it myself."

The buildings were not at all bad, and the animals looked good milkers; here was the old story—slackness and want of method. I asked feebly whether the milkers washed the cows' hindquarters and their own hands before milking. I knew he would say Yes, and I felt guilty at making him tell such an evident lie. Of course he said Yes. The cows spoke for themselves; that washing of hands and clean linen coats and oil-skin caps for the milkers was a special hobby of his, I could only in charity imagine. He seemed an intelligent man, and I felt sorry that a farm which, with some trouble and very little expense, might have been nearly perfect, should have been so deplorable. I tried to fire him with enthusiasm, and to make him realize that he would lose the the sale of his milk.

"In the old days none of that new-fangled nonsense was heard of; what was good enough for my grandfather and my great-grandfather is good enough for me; my own children have it and I don't have no complaints from Messrs. ——— (mentioning the firm whose beautiful shop had attracted me).

There was nothing for me to do but to wish him good-bye. When I got back I went straight to the shop and asked for the manager.

"I am sorry I can't deal with you," I said, "but that farm was in a very unsatisfactory state."

"I am very sorry, I'm sure," he said angrily, "I suppose we'll have to shut up shop."

"I am glad you realize that," I replied, "for in these days of fierce competition, and just now when the subject of pure milk from inspected farms is one of burning interest, if one firm is too slack to insist upon common cleanliness in the milk supplied them by farmers, the public will naturally deal with firms who see the conditions in their contracts carried out. When I write to your committee and to the papers——." The effect was magical. This whited sepulchre said that busy ladies were not as a rule appreciated by business men, but for his part he thought that if there were more like me the world would be a very different place. The slackness of the trade was due to slackness of the public; if their customers were content to drink dirty milk—not that he admitted for one moment that their milk was dirty—the trade would not tell them to inspect the farms and insist upon special conditions. But he would take the matter up, and would begin by going out to all their farms himself, and he could safely promise me that if I gave him a fair time all my wishes would be carried out. I shall visit that farm again in two months.

The moral of my story is, that if I, an ordinary individual, can by a little trouble ensure clean, pure milk for the families supplied by that particular dairy, cannot the same thing be done in other dairies by women, having perhaps a touch of philanthropy in their natures, and who at any rate would wish for clean milk in their own nurseries?—I am, etc.,

May 25th. MATERFAMILIAS.

THE OPERATIVE TREATMENT OF CHRONIC FACIAL PALSY OF PERIPHERAL ORIGIN.

SIR,—The question raised by Dr. Kennedy's letter in the BRITISH MEDICAL JOURNAL of May 16th, p. 1182, is of great scientific and practical importance. When a patient desires operative interference for the relief of the deformity caused by facial palsy the surgeon should be able to communicate to the patient as accurate a knowledge as possible of the extent of recovery, partial or complete, which operation offers. If any injustice has been done to the admirable work of Dr. Kennedy by the necessarily brief reference in the paper in the JOURNAL of May 2nd by my brother, Dr. Purves Stewart, and myself, it was quite unintentional. It might have been stated perhaps that Dr. Kennedy's patient 470 days after operation had recovered voluntary and reflex movement of the orbicularis papebrarum, but from Dr. Kennedy's own account the movements of the mouth and cheek could not be well co-ordinated. In no sense, therefore, could the cure be considered complete, since in talking and laughing the deformity would still be visible. I have again carefully read Dr. Kennedy's paper in the *Philosophical Transactions*, and the clinical picture in his case does not differ materially from that of the 6 cases recorded in the JOURNAL of May 2nd. I may add that since the writing of that paper Case VI has recovered associated movement. I should be greatly indebted to Dr. Kennedy if he will kindly tell us what is the present condition of his patient, especially with reference to the following points:

1. Whether during talking and laughing the movements of the mouth and cheek are now symmetrical?
2. Whether during movement of the right side of the face there is any alteration of tension in the sterno-mastoid and trapezius?
3. Whether the shoulder can be raised without movement of the face?

In the paper already referred to published in the JOURNAL of May 2nd, a case was described in which I grafted the facial on to the hypoglossal nerve. A few days ago Professor Bernhardt of Berlin sent me a reprint of a paper by Professor Körte and himself from the *Deutsche medicinische Wochenschrift* of April 23rd on the same subject, with an account of a case. Professor Körte's case was operated on twelve months before mine. I am therefore anxious that this fact should be known, though I was entirely unaware of Professor Körte's work previous to the receipt of Professor Bernhardt's communication. Professor Bernhardt writes to me:

> The patient in laughing moves the mouth, and movements of expression can also be carried out through the facial. I believe, however, that there are associated movements of the tongue which escape observation, as the tongue is confined within the mouth, but they in no way trouble the patient nor are they noticed by those around her. From all that I have observed, I entirely agree with you that in grafting the facial for the relief of facial palsy, it is, better, notwithstanding the opinion of Körte, to choose the hypoglossal rather than the spinal accessory..... I have had a recent opportunity of confirming this opinion, as Professor Gluck at a meeting of the Berlin Gesellschaft für Psychiatrie und Nervenkrankheiten showed a boy in whom he had grafted the peripheral end of the paralysed facial on to the spinal accessory. Here only associated movements of the facial muscles were present. As in Kennedy's case, it was only when the boy raised his arm that the muscles of the face contracted, but in neither of their cases could movements of expression be brought about.

Professor Bernhardt's high authority, therefore, supports the view that facio-hypoglossal anastomosis is the operation to select.—I am, etc.,

Harley Street, W., May 19th. CHARLES A. BALLANCE.

THE EARLY HISTORY OF CLINICAL THERMOMETRY.

SIR,—In the recent correspondence respecting the priority in the clinical use of the thermometer, the observations and teaching of Dr. Currie, of Liverpool, made at the end of the eighteenth century, although referred to by Sir Samuel Wilks, appear to have been very inadequately recognized. Currie's name is well known in connexion with the treatment of ardent febrile conditions by affusion of cold water. He adopted this practice in 1797 at the suggestion of Dr. Wright, who employed it in Jamaica in 1768. A perusal of Currie's cases, carefully recorded in his *Medical Reports*, published in 1805, shows that he made constant use of thermometry, and that he laid down definite rules for practice and prognosis as the outcome of his observations. He had small mercurial thermometers made with a movable index to register the temperature, and preferred to use them under the tongue. He declared that

"in the use of all remedies, and particularly of opium and wine, the strictest attention was paid to the heat of the patient, without which he who undertakes the treatment of fevers seems to me to walk in darkness." His views on febrile heat were combated at the time by Dr. Erasmus Darwin, and a correspondence ensued between them on the subject. Currie appears to have overcome Darwin's objections, and described how he had found the heat of the body to subside as sweating set in, "a fact ascertained by the thermometer." "Is it possible," he asked, "to restore the actions to a state of health with the heat at a hundred and four?" He recorded temperatures up to 112° F., the highest he had ever met with in cases of scarlet fever. Currie was one of the most learned and sagacious physicians of his day, and was a great clinical observer with large opportunities at the time when the town of Liverpool was a hotbed of zymotic fevers of the worst type.

I was under the impression that the renewed use of the clinical thermometer in Britain was largely due to the obsersation of Professor Gamgee of the Veterinary College in Edinburgh upon rectal temperatures in animals about 1860, and I remember that these were at first somewhat contemptuously regarded. Wunderlich's monograph on the subject, published a few years later, placed our modern knowledge on a sound and recognized basis.—I am, etc.,

Grafton Street, Piccadilly, May 23rd. DYCE DUCKWORTH.

SIR, —In connexion with the question as to when the thermometer was first used clinically, it is interesting to note that in the year 1800 its use had been recognized, although apparently not frequently employed. I have in my possession a copy of the *Medical and Physical Journal* published in 1800; in its pages I note two allusions to the clinical use of the thermometer.

In the first, dated September 9th, 1799, Dr. Blane communicates "an account of a man who lives upon large quantities of raw flesh." Whilst investigating the general condition of this case, Dr. Blane inquires, "What is his heat by the thermometer? I have often tried it, and found it to be the standard temperature of the body. His pulse is now 84, full and regular." The second allusion to the clinical thermometer is made by a certain Dr. Geo. Mosman, in the course of some "observations on the benefit derived from the application of cold water in cases of scarlatina cynanchica." In an account of one of his cases, apparently occurring in July, 1799, he remarks, "I had not an opportunity of applying to him the thermometer, but his skin felt intensely hot."—I am, etc.,

Walbrook, E.C., May 15th. ARTHUR R. RENDLE, M.R.C.S.

SIR,—I have in my possession a case containing a glass urine measure with a urinometer and a clinical thermometer of similar make to that described by Dr. Henry Willson. It was made by Millikin, of the Strand, and was used by my uncle, Peter Brendon, F.R.C.S., in the Thirties and Forties of last century. I think the use of the thermometer was more general at the beginning of last century than is supposed.—I am, etc.,

Hildenborough, Kent, May 18th. J. B. CURGENVEN.

SCHOOL HYGIENE.

SIR,—Your paragraph dealing with the report of the Royal Commission on Physical Education in Scotland prompts me to draw attention to the fact—which will strike any one acquainted with the elements of school hygiene that there is in the report no condemnation of the obsolete school furniture in use in nearly all the schools, training colleges, and university buildings. I question whether there is a single educational building in Scotland which is provided with proper adjustable desks and seats for scholars and students. The desks and seats now in use in most of the Board schools are of a design which was long ago condemned as being one of the primary factors in causing physical deformity in young children. At present children of all statures are seated at desks and on seats of uniform size. Some schools try to meet the requirements by providing desks and seats in three sizes for different "standards." But stature and intellect do not invariably correspond, so the result is equally bad! There are other matters, such as the incorrect lighting of schoolrooms, the use of improper blackboards, slates, etc., to which no reference is made.

The report, while lamenting the waste of money in lime and stone to the neglect of proper provision for physical exercise, does not sufficiently deprecate the continued erection of these large palatial school-buildings—"educational manufactories"—in which over a thousand children congregate and where the individual scholar can get scant pedagogic attention. Was there no one to remind the Commission of the many and varied advantages of smaller school-buildings?

It is to be hoped that with the appointment of a qualified medical officer to the permanent staff of the School Boards, these elementary requirements of school hygiene will receive speedy attention.—I am, etc.,

Aberdeen, May 12th. GEORGE FERDINANDS.

CANCER MORTALITY.

SIR,—In the number of the BRITISH MEDICAL JOURNAL published on May 16th, is the last of the series of interesting articles upon cancer mortality by Dr. Alfred Wolff, of London. The following sentence occurs: "Braithwaite's suggestion that salt influences the production of cancer seems to be founded on a fallacy as he supposes that cancer does not occur among Jews which is certainly not correct." As this is very unfair to me perhaps you will kindly allow me to reply. The sentence involves two mistakes. The first is that I suppose cancer does not occur amongst Jews. In my pamphlet published by Messrs. Churchill, and in the abstract of the pamphlet published in the *Lancet* on December 7th, 1901, I distinctly said it is cancer of the uterus from which Jews, or rather Jewesses, are practically free. This is substantially true. I have had 28 years of out-patient and in-patient practice at the Hospital for Women and Children and the General Infirmary at Leeds, at both of which institutions large numbers of Jewesses attend, and I have not met with a single case of cancer of the uterus amongst them. I have only in my life seen one case and that was a private one from Bradford. The experience at the London Hospital is the same, for I obtained their statistics through the kindness of Dr. Herman and of the Obstetric Registrar of that hospital. The Jews as a whole are subject to cancer, but probably owing to their comparative poverty and not owing, as I originally supposed, to their taking less salt than we do, they are less subject to it than the general population of the country.

The second error or mistake contained in Dr. Wolff's reference to my theory is that I founded it upon this fact about the Jews. At page 6 I expressly say that my theory is not so founded, and that the exemption of Jewesses from cancer of the uterus was "not advanced as any scientific proof." My impression is that the immunity of Jewesses from cancer of the uterus is owing to circumcision, and that the local irritant is the smegma bacillus.

I think that my theory as to the causation of cancer by the habitual use of an undue amount of salt in the diet, added to three other factors, of which one is local irritation, in some cases by bacilli or bacteria, of which none are specific, embraces all the facts connected with the disease. If any one will carefully read my paper and then go over in his mind the various apparent causes of cancer with which he is familiar, I think he will see how every fact falls into its place and becomes explainable. A few of these facts are the following: The connexion of the disease with geological formation as shown by Haviland in his cancer map of England and Wales; cancer houses; the high mortality of sailors, fishermen, and rich men of no occupation; the low mortality of the poorer classes, even when they live in low waterlogged situations such as the Isle of Dogs in London; the fact that savages are exempt from cancer (Roger Williams), and also wild carnivora; the curious fact that Professor McFadyean, Principal of the Veterinary College, has never met with a case of cancer in a pig, whilst other domestic animals are not uncommonly subject to it. There is, so far as I know, no fact which is out of harmony with it. This theory may be called the "natural" one as it supposes the stimulus of diseased cell growth to be merely an excessive amount of the natural stimulus to healthy growth—namely, salt. Salt is the *sine qua non* without which no cell metabolism can take place. The theory, however, is too simple to be readily accepted by the profession, who want something more tangible and, if possible, visible. They are not content with an increase of the natural stimulus plus an over-nourished condition of cell, and some local irritation. This, however, I believe to be the true explanation.—I am, etc.,

Leeds, May 19th. JAMES BRAITHWAITE.

SO-CALLED ANTHRACOSIS AND PHTHISIS IN COAL MINERS.

SIR,—The effects of coal-dust inhalation *per se* are entirely mechanical. It has long been recognized that the chief reason why coal-miners, as a class, stand at the top of the list, whilst tin-miners occupy the bottom, in mortality returns for dust-inhaling occupations, is that in the former the microscopical particles are free from angles, and so cause no damage to the lung. That there is, in addition, some inherent property in coal dust which is inimical to the propagation and spread of phthisis is suggested by the fact that coal-miners suffer less from this disease than males generally (ages 25 to 65 years), though for other diseases of the respiratory organs (not tuberculous) the figure is a little higher.

During a year's practice, some years ago, as a colliery surgeon at Cambois and Ashington (adjoining Dr. Trotter's district) I only remember one case in which "black spit" was a prominent symptom in a case of phthisis (that of a man 75 years of age, who had worked in the mines from the age of 8 years until a few years before his death).

Other three cases of phthisis in coal-miners that I can recall were all cases in houses which one might describe as phthisical; that is to say, other members of the family were tuberculous.

When Dr. Trotter states that "the average coal-miner often works in the mine under more healthy conditions than those in which he lives at home" he states a fact that in my experience is indisputable. The reason why this is so is that the ventilation of the mines is supervised by Government inspectors, who try to attain as a standard of perfection that 6,000 cubic feet of fresh air be supplied for every man employed, "though it has been found impossible in some cases to insist on a standard of purity as low as 0.25 per cent. of CO_2 in the air."

On the other hand, although the houses of the Northumbrian miners are, on the average, as good as those of other miners, the accommodation is not such as to ensure an adequate supply of fresh air per head. The houses are lamentably overcrowded, the sanitation is primitive, the yards are unpaved, and very often the ashpits and middens are sadly neglected. Thus in the summer there is a high infantile mortality from epidemic diarrhoea.

It is also a fact that the women and girls as a class suffer more than the men, and this is attributable to their surroundings, a greater part of their life being spent in the crowded dwellings. The Northumbrian miners as a class are men of more than average intelligence, and delight to argue things out for themselves. That they have never seriously taken up this matter of housing is probably due to their attention never having been much drawn to the subject.

A fact worthy of notice also is that in the best ventilated mines there is a greater amount of work done by the men and a larger output of coal, other things being equal.

Thus, it might be argued that if it pays the owners commercially to have the mines adequately ventilated, any extra cost in house construction and anything that tended to increase the efficiency of the men as working units ought also indirectly to pay for initial outlay.

I hope, now Dr. Trotter has brought forward this subject, that the responsible authorities in mining districts, especially in Northumberland, will insist on less segregation of population, more attention being given to sanitary principles in building construction, and the removal of refuse being more frequently and efficiently carried out.—I am, etc.,

London, W., May 22nd. J. S. PURDY, M.B., C.M.Aberd.

POST OFFICE MEDICAL APPOINTMENTS.

SIR,—I was glad to read Dr. Hamilton's remarks on the above subject in the BRITISH MEDICAL JOURNAL. The failure to advertise the vacant appointment in the Brompton postal district, the division of a comparatively small area into four portions, and the passing over of all the candidates for the positions thus created, are points which, in the public interest, invite and even compel criticism, and which seem to call for some official explanation. It may appear at first sight that this is a matter of purely local interest, but in reality this is not the case. It is because there is a possibility that the action of the authorities may be treated as a precedent for the similar treatment of other postal medical appointments, when they become vacant, that I venture to reinforce the letters of Dr. Hamilton and "T.R.A.," for I believe that a repetition of the attitude adopted in this instance might be fraught with evil consequences alike to the profession, the general public, and the postal employés. If London postal medical districts are to be divided into small fractions, and if local practitioners are to be given no opportunity for putting forward their qualifications for the posts, while the wishes of the employés themselves are altogether ignored, it can hardly be expected that this important Government department, with its thousands of hands, will always be able to obtain professional services of an efficient character. It is to be hoped at least that the pernicious principle of selecting medical officers simply on account of their proximity to the various postal centres will not be allowed to prevail.

I do not think it can be held that a person who has acted as deputy to a medical officer, even for a term of years, has any prescriptive right to the succession, but to pass over men in this position, together with a number of applicants, in favour of gentlemen who have had no connexion with the work, and who have not entered themselves as candidates, is certainly a strong and somewhat inexplicable proceeding, only to be justified, one would think, by circumstances of an exceptional character.

I cannot but think that the profession and the public are entitled to know who is responsible for the peculiar action taken in this case. Mr. Austen Chamberlain has such a reputation for astuteness and business ability that it is difficult to believe that he is really accountable for the attitude adopted by the department.—I am, etc.,

Alexander Square, S.W., May 12th. DENNIS VINRACE.

THE EVOLUTION OF THE VOLUNTEER MEDICAL SERVICE.

SIR,—The evolution of the volunteer medical service is an interesting study as a branch of the medical profession.

1. Beginning in 1859-60 as a body of regimental medical officers, it is to-day in a far more efficient condition of independence and autonomy.

2. *Major Maclure's Work.*—Major Maclure, London Scottish Volunteers, in the Seventies began to develop and train the volunteer regimental bearers. He on certain occasions formed scratch bearer companies, called "Maclure's Mixture" from their heterogeneous component parts drawn on loan from all sorts of units of the volunteer force. It was the day of small things; but it was a step forward, and his name cannot be forgotten.

3. *The Movement of '81.*—In 1881 I began to write in the medical journals of the need of training medical students in ambulance work; and in 1883, in conjunction with Mr. Cantlie, of Charing Cross Hospital, pushed forward the movement for an independent Volunteer Medical Corps, which Mr. Cantlie formed in 1885, and which now numbers many efficient units and has sent hundreds to the wars.

4. *The Infantry Volunteer Bearer Companies of Volunteer Brigades.*—These after years of strain and struggle as temporary organizations are now gradually being definitely formed in the counties, and real rank in the army has now been given to the bearer company officers, a great step towards efficiency and *esprit de corps*.

5. *Recent Action of the Manchester Companies R.A.M.C. Volunteers.*—In my opinion very special attention should be given to the action taken by the Manchester Volunteer R.A.M.C. in raising a company in their corps and earmarking it specially for the Manchester Volunteer Infantry Brigade. I regard this as a very important and epoch-making departure towards the future unity of the Volunteer Medical Service, and I am only sorry that it is not possible as yet to amalgamate the bearer companies of the London Volunteer Infantry Brigades with the London R.A.M.C. Volunteers, earmarking these companies for special duty with their brigades, but all the while forming part of the R.A.M.C. Volunteers as must eventually be the case.

6. *Further Steps needed.*—It is, in my opinion, essential to drop the title of Volunteer Infantry Brigade Bearer Companies now used by these units attached to volunteer infantry brigades, and to call them simply companies R.A.M.C., with the local prefix, as Devon Company R.A.M.C. Volunteers, Hampshire Company R.A.M.C. Volunteers, still earmarking the company for duty with its brigade, but making them the primary element of the county corps of R.A.M.C. Volunteers needed in the future in every county. When other companies are later on raised in each county for the artillery, engineer, or other volunteer services, these companies would be the 2nd Devon or 2nd Hampshire Companies R.A.M.C. Volunteers; but instead of being scattered

units, they would be linked into a county corps with the earlier company, and so gain unity and *esprit de corps*, and have a local dépôt and a local home.

7. *Amalgamation of Existing Regimental Medical Officers of Volunteers with these Local Companies or Corps R.A.M.C. Volunteers.*—I now recommend that all medical officers of regiments in the Volunteer Service endeavour to secure that they be gazetted with real military rank in the local R.A.M.C. unit, and with this substantial rank and commission they can then get themselves attached to any artillery, engineer, or infantry volunteer unit, and have their substantive army rank, a thing now not possible for regimental medical officers of volunteers. In this way all the volunteer medical officer of a county would form a county medical corps graded like any other battalion or unit, and it would be possible to increase the number of brigade surgeons if necessary, and to give to every county corps an honorary colonelcy, as in ordinary volunteer battalions. The present isolation of the infantry brigade bearer companies from the R.A.M.C. Volunteers, and the want of real rank for regimental volunteer surgeons, are both weak points in volunteer organizations, and are easily removed as I suggest. In this way the path will be made readier for a still closer union of the regular, militia, yeomanry, and volunteer medical services which the least threat of another large war will surely bring about, that is to say, the amalgamation or grouping together of the various county medical units, regular, militia, yeomanry, and volunteer organizations into a district brigade R.A.M.C., each unit still maintaining its autonomy and perfect independence, but combined for command under the district P.M.O. representing the central medical administration of the army.

8. *The Yeomanry Medical Squadron*.—One link in this chain is still missing, namely, the Yeomanry Medical Squadron organized as a medical military unit under Yeomanry conditions and Yeomanry medical officers with real rank in the Yeomanry Service and able out of this squadron to furnish a well-equipped Mounted Yeomanry Bearer Company and field hospital ready for war. We need a "Cantlie" of the Yeomanry Medical Service to do this latter thing—which would require to be founded in some populous centre in each district so as to secure recruits. Finally, in all these movements there should always be a county link or tie of a strong character—and once a definite facing and uniform is fixed as now for the Medical Service there is no reason why county badges should not be worn on the collars of the coats or tunics of County Companies nor in the case of Scottish Medical Volunteers of the dice border cap worn by Scottish troops. We need local attachments with centralized direction to secure efficiency—we must never forget the county tie. I foresee that all these things will surely come true either in an evolutionary manner by time—or in a rapid and hasty manner by the advent of a great war.—I am, etc.,

Salisbury. GEORGE EVATT.

THE DIAGNOSIS OF DIPHTHERIA.

SIR,—Dr. Elwin's letter draws attention to a very serious and growing evil. The staff at the various fever hospitals seems to take a savage delight in belittling the efforts of general practitioners. Letters are written all round—to relations, friends, and even clubs—accentuating differences of opinion in diagnosis. Having suffered in somewhat the same way as Dr. Elwin, and at the hands of the same staff—that at Hither Green—where they seem to have thrown good professional feeling to the dogs, I intend to bring the matter strongly before one of the medical defence societies, and should be glad if those with similar experience would communicate with me on the subject. Of course this question has a public aspect, inasmuch as many men refuse to notify cases about which they are in doubt.—I am, etc.,

Blackfriars Road, S.E., May 26th. J. V. C. DENNING.

THE ANTIVIVISECTORS' METHOD.

SIR,—There is not a word or suggestion in the note referred to by Dr. Pembrey which implies that his experiments on respiratory exchange were objected to as vivisections.

The objection taken to them was that they were performed at the physiological laboratory, Guy's Hospital.

If institutions such as our great hospitals, or the schools partially maintained out of their funds, are to provide experiments on hibernating animals with costly laboratories wherein to carry out researches that have, if any, only the remotest connexion with the healing of the sick, it is not unfair criticism for the BRITISH MEDICAL JOURNAL to object to the practice.

A study of the last six years' accounts of Guy's Hospital discloses the fact that the school attached to this hospital absorbs considerable sums from the hospital's funds which are entered in the accounts as being spent on "rates and external repairs." The report for 1901, p. 45, gives £424 5s. 4d. as devoted to that purpose. With every desire to be fair to Dr. Pembrey, it seems to me that medical students would be better employed in studying the respiration of human beings that that of marmots and hedgehogs.—I am, etc.,

THE EDITOR OF THE "ZOOPHILIST."

Victoria Street, S.W., May 26th.

THE OVERCROWDING OF THE MEDICAL PROFESSION.

SIR,—I am obliged to Dr. Rentoul for drawing attention to facts which need to be known. But I am anxious not to be misunderstood. If Dr. Rentoul will be so good as to re-read my paper, he will see that my figures (£410 and £290) are merely comparative; I made no attempt to gauge the actual average earnings of medical men. My object was simply to show that the profession is seriously overcrowded and that therefore certain much-needed reforms can be carried out without fear of depleting it. I quite agree with Dr. Rentoul as to the fate before the general practitioner, if things are let drift. But they must not be let drift.—I am, etc.

Exeter, May 26th. W. GORDON.

THE TREATMENT OF CONICAL CORNEA.

SIR,—May I be allowed to thank Sir Anderson Critchett for his letter which appeared in the BRITISH MEDICAL JOURNAL of May 23rd, in which he unreservedly admits the claim I made in my former letter on the above subject? I should also like to say, as regards his method of "two distinct zones," that I shall certainly be disposed to give it a trial when opportunity arises in a suitable case. I must add, however, that later experience has tended to show me that operation can be avoided in many cases by a suitable pair of glasses, combined with general treatment.—I am, etc.,

Liverpool, May 25th. RICHARD WILLIAMS, M.D.

INTERNATIONAL MEDICAL CONGRESSES.

SIR,—I must beg, most respectfully, to protest against your statement that "it was a mistake to include dentists" in the International Medical Congress at Madrid, on p. 1220 of the BRITISH MEDICAL JOURNAL.

I am quite sure that if you will reflect for a moment, you will withdraw such a dictum, as it implies such ignorance of the importance of dental surgery as the "first line of defence" in the efficient treatment of most diseases of the alimentary tract, to say nothing of its importance in neurology.—I am, etc.,

Brook Street, W., May 25th. S. J. HUTCHINSON.

HAY-FEVER SERUM.

SIR,—It has been brought under our notice that a circular has been distributed in Great Britain by Mr. Gustav Hermanni, jr., 20, High Holborn, London, W.C., for the purpose of impressing upon the medical profession to use Professor Dunbar's hay-fever serum, which is prepared and sold by us, although this serum has proved to be effective as yet in laboratory only.

We declare herewith that the said circular has been issued and distributed without our knowledge and without our consent; that Mr. Gustav Hermanni, jr., is not a member of our firm; that he had no right whatever to interfere with this matter. We also express our sincerest regret that Mr. Hermanni, jr., acted as he did, as his *modus procedendi* is quite contrary to our own principles and intentions.

We had the intention—and have it now as before—to refrain from pushing the remedy until more reliable experiences had been made with it, concerning the treatment by this means of actual hay fever.

We shall feel much obliged by your kindly publishing this letter in the next number of your esteemed journal, and are, etc.,

ICHTHYOL COMPANY
(Cordes, Hermanni, and Co.)

Hamburg, May 23rd.

MEDICAL MAGISTRATE.—Dr. Thomas Sheldon has, upon the nomination of the Lord Lieutenant, been placed on the Commission of the Peace for the County of London.

OBITUARY.

WILFRED MARTIN BARCLAY, F.R.C.S.,

Surgeon to the Bristol General Hospital.

MR. W. M. BARCLAY was born in India on May 15th, 1863, being the youngest son of Deputy-Surgeon-General George Barclay of the Madras Army. Educated at Clifton College and the Bristol Medical School, he took the M.R.C.S. and L.R.C.P. in 1886 and the Fellowship in 1889. He distinguished himself as a painstaking and diligent student and gained many prizes. His subsequent career was closely associated with the General Hospital, at which institution he was successively Assistant House-Surgeon, Physician's Assistant, Assistant Surgeon, and Surgeon, which post he held at the time of his death.

Mr. Barclay's contributions to medical literature are chiefly to be found in the *Bristol Medico-Chirurgical Journal*, to which he supplied for many years an abstract of the most recent advances in surgery. These articles were always most carefully prepared, being throughout characteristic of Mr. Barclay's method of doing all things well.

He was a man of good literary tastes, and wrote articles that were emphatically readable, being clear, and making the important points in a decisive manner. In this he was much assisted by his wide knowledge of English literature, more particularly of the drama and poetry. Mr. Barclay did not of late years mix much with his colleagues or attend regularly the meetings of the societies held in Bristol, but whenever he did, and spoke on any subject, his words were well chosen and his delivery good.

Only a few months ago his health began to fail, and he was advised to go to an open-air sanatorium. The treatment, however, did not stay the disease, and he died of phthisis on May 15th. Mr. Barclay was married, and leaves a widow but no family.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Florimond Kops, President of the Fédération Médicale of Belgium, aged 68; Dr. Hermann Gutschow, Surgeon-General of the German Navy and head of the medical department of the Imperial Naval Bureau; Dr. Felix Beetz, formerly a member of the staff of the *Deutsche Medizinische Wochenschrift*, aged 54; Dr. R. Osgood Mason of New York, author of *Hypnotism and Suggestion in Therapeutics, Telepathy, and the Subliminal Self*, and other works dealing with related subjects, aged 72; Dr. Thomas George Morton, of Philadelphia, one of the leading authorities on orthopaedic surgery in the United States, and author of *The Transfusion of Blood and its Practical Application*, and Dr. J. M. Bonilha de Toledo, Professor of Hygiene and Bacteriology in the School of Pharmacy, Suo Paulo, Brazil, and author of numerous contributions on pathological subjects, aged 32.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

Department of Ophthalmology.—A new department of Ophthalmology has recently been formed at Oxford, and Mr. Robert W. Doyne has been appointed reader. We are asked to state that any qualified medical man who desires to do research work in any way connected with ophthalmology will be afforded facilities in the department, and, so far as funds will permit, will be supplied with the necessary accommodation and apparatus free of cost. There will also be a course for medical men during the second and third weeks in July, further particulars as to which can be ascertained by reference to our advertisement columns.

UNIVERSITY OF LONDON.

Faculty of Medicine.

A MEETING of the Faculty of Medicine was held at the University on Friday, May 22nd, at 2 P.M. Mr. Bailey, the Dean of the Faculty, was in the chair, and 40 members were present.

The Faculty had under its consideration a proposal by the Board of Studies in Dentistry to institute special degrees in that subject. Two schemes for a curriculum and examinations were submitted. The scheme recommended by the majority of the Board required that all candidates for a dental degree should previously have obtained the Degrees of M.B., B.S. of the University. The minority scheme required all candidates to have passed the Intermediate M.B. Examination of the University before submitting to a special examination. Full details of each scheme were circulated before the meeting, together with a copy of a petition from the Royal Dental Hospital and National Dental Hospital to the University of London Statutory Commissioners praying that a degree in dentistry should be established.

It was moved by Mr. Badcock, seconded by Dr. Farriston Shaw, "That in view of the fact that the University of London should institute a degree in dentistry." As an amendment it was moved by Mr. Morton Smale, and seconded by Mr. Mapps, "That, after consideration of the report of the Board of Studies in Dentistry, the Faculty of Medicine is of opinion that it is not desirable at present to establish special degrees in special departments of Medicine and Surgery." The amendment was carried by 16 votes to 13, and subsequently adopted as a substantive resolution.

ROYAL UNIVERSITY OF IRELAND.

AT the recent examinations in the Faculty of Medicine the following gentlemen passed in Honours and obtained Exhibitions: W. A. McKee, £25 (Second Examination in Medicine); W. J. Wilson, £30, and O'C. Sullivan, £20, (Third Examination in Medicine); N. d'E. Harvey, £40, and T. Carnwarth, £25 (M.B., B.Ch., B.A.O. Degrees Examination). R. K. Brown was awarded a gold medal in the M.D. degree examination.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE following gentlemen having passed the necessary examination have been admitted Fellows of the College: C. Cooper, Miss A. N. V. Johnson, R. P. McDonnell, R. F. C. Talbot, and J. Trumbull. The following passed the principal part of the examination: I. Allaun, R. F. Hayes, T. Brooke-Kelly, and P. D. Sullivan.

Dental Examination.—The following candidates have passed the primary part of the examination for the Licence in Dental Surgery of the College: T. Flanagan, H. D. Griffith, J. W. Harvey, and W. Ogilvy.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

AT a Stated Meeting of the College, held on Friday, May 8th, the President admitted as Licentiates in Medicine the undermentioned registered medical practitioners: J. J. FitzGerald, L.R.C.P. & S.Edin., L.F.P.S.Glasg., L.A.H.; D. J. O'Connor, M.B., B.Ch., B.A.O., M.D., R.U.I.

TRINITY COLLEGE, DUBLIN.

THE following gentlemen have passed the previous medical examination in the subjects undernoted:

Anatomy and Institutes of Medicine.—W. F. Samuels, C. E. C. Williams, H. H. White.

Physics and Chemistry.—T. Creaser, W. J. Thompson.

Botany and Zoology.—M. FitzGibbon, H. Wright, T. W. E. Henry, J. W. Lane, W. J. Thompson, C. B. Jones, C. R. W. Stoney.

The following have passed the Final Examination in Surgery:

W. G. Harvey, W. R. P. M'Neight, R. J. Fleming, R. H. Lee, J. M. Holmes, H. O'H. May, A. L. Otway, J. H. Askins, D. B. Thomson, D. C. Pearson, R. W. T. Clampett, A. H. Marks, S. H. Vickery, H. R. Nelson, A. B. Tighe, B. . Middleton.

CONJOINT BOARD IN IRELAND.

CANDIDATES have passed the Second Professional Examination as undernoted under the Old Regulations:

Honours.—P. D. Sullivan, T. A. Brook-Kelly, R. Hayes, D. McCormack, V. J. Cullen, L. A. Andrews, E. G. Condon, W. Walsh.

Pass.—M. J. A. Ahern, I. M. Alcorn, J. W. Bell, F. L. Bradish, T. W. Browne, F. J. Cairns, R. Calnan, S. C. Clarke, W. J. Connolly, C. Cooper, V. J. Cullen, J. Dwyer, T. J. Calligan, D. Hampson, H. S. Misstear, J. Murnane, J. J. McNelis, B. A. Oalum, A. O'Reilly, E. Purcell, W. D. Sammon, S. W. Talbot, W. J. Trimble.

New Regulations (1902).—J. Corboy, M. I. Coyne, L. M'Guinness.

Candidates have passed the Third Professional Examination as undernoted:

Under the Four Years' Scheme.—W. E. Brunshill, M. Hurley.

Under the Five Years' Scheme (Old Regulations).—H. A. Cecil, J. I. Gibney, M. W. Kelly, T. Kelly, I. S. Reeves.

New (1902) Regulations.—Honours: J. S. Sheill, M. I. Ryan. *Pass (All Subjects):* A. I. Bracken, C. A. Cusack, P. A. Denison, W. Kelly, W. F. B. Loughnan, P. Maher, T. J. O'Donnell, J. Parker, B. H. Peters, I. Quiske, S. H. Robinson, Miss A. Taylor. *Completed Examination:* P. Kinsella, T. B. Moriarty.

Candidates have passed the Final Professional Examination as undernoted:

All Subjects.—W. Creenin, J. P. Ziervogel.

Completed the Examination.—J. P. Falls, J. F. Fitzmaurice, T. Keogh, T. J. Lloyd, P. M'Dermott.

The undermentioned candidates have obtained the Diploma in Public Health: Lieutenant-Colonel G. F. A. Smythe, R.A.M.C. (Honours); Captain J. Dorgan, M.B., R.A.M.C. (Honours); G. Hamill, F.R.C.S.I.; M. C. Beatty, M.B., B.Ch.Edin., R.A.M.C.; R. A. Campbell, L.R.C.P.I., L.R.C.S.I.; J. O'Hare, M.B., B.Ch., B.A.O.R.U.I.; W. C. Rivers, M.R.C.S.Eng., L.R.C.P. Lond.; Colonel R. W. E. H. Nicholson, R.A.M.C.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

Admission to the Fellowship.—At a meeting of the College held on May 18th the following gentlemen, having passed the necessary examinations, were admitted Fellows of the College: A. M. Fleming, C.M.G., M.B., C.M.; E. C. Hadley, M.R.C.S.Eng., L.R.C.P.Lond.; D. H. Malins, M.B., C.M.; A. A. Martin, M.B., Ch.B.; R. M. Mitchell, M.B., Ch.B.; C. B. Paul, M.B., Ch.B., J. Richards, M.B., C.M.; F. D. Simpson, M.B., Ch.B.; C. H. Watson, M.B., Ch.B.; A. S. Wells, M.B., Ch.B.; and H. H. Wigg, M.R.C.S.Eng., L.R.C.P.Lond.

Bathgate Memorial Prize.—The medal and set of books forming the Bathgate Memorial Prize, presented to the College by Colonel William Lorimer Bathgate in memory of his late father, William McPhune Bathgate, Fellow of the College, was awarded to Miss Nettie Bell Turnbull for the highest marks obtained in competitive examination in materia medica and therapeutics.

CONJOINT BOARD IN SCOTLAND.

THE following gentlemen, having passed the requisite Examinations of the Conjoint Board, were admitted Diplomates in Public Health: T. C. Caldwell, M.B., Ch.B., R. J. Geddes, M.B., C.M., A. Gilmour, M.B., Ch.B., R. A. Glegg, M.B., Ch.B., C. W. Howe, M.B., Ch.B., J. Hume, M.D., H. A. Knight, M.B., Ch.B., and W. B. Turnbull, M.B., C.M.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following gentlemen, having passed the necessary examinations and conformed to the by-laws, have been admitted Members of the College: E. W. Allin, M.D., C.M. Trinity Univ. Toronto, Trinity Medical College, Toronto; J. J. Armitage, St. Thomas's Hospital; G. E. Aubrey and

T. P. Baldwin, St. Bartholomew's Hospital; J. H. H. Baillie, M.B., Ch.B., B.Sc.New Zealand, Otago University and University College Hospital; W. Bain, Middlesex Hospital; H. E. Barnes, St. Mary's Hospital; M. R. Blake, M.D., C.M.Trinity Univ. Toronto, Trinity Medical College, Toronto; J. L. Blakie, Otago University and Middlesex Hospital; H. F. Bodvel-Roberts, M.A.Camb., L.S.A.Lond., Cambridge University and St. Bartholomew's Hospital; L. T. Booth, University College and Royal Infirmary, Liverpool; W. Braddock, L.D.S.Eng., Owens College and Royal Infirmary, Manchester; J. D. Bridger, Guy's Hospital; G. L. Buckeridge, Oxford University and Guy's Hospital; R. Burges, H. L. Burgess, and H. R. Cran, London Hospital; D. W. Carmalt-Jones, B.A.Oxon., Oxford University and St. Mary's Hospital; W. B. Clark, King's College Hospital; A. F. Cole and G. R. H. Crozier, St. Mary's Hospital; C. H. Cox, University of Birmingham; W. B. Crowfoot, B.A.Camb., Cambridge University and St. Bartholomew's Hospital; S. N. Crowther, Westminster Hospital; C. H. Dawe and J. F. Douse, Guy's Hospital; C. F. Day, Charing Cross Hospital; W. F. L. Day, B.A.Camb., Cambridge University and St. Mary's Hospital; O. C. Dorman, M.D., C.M.Dalhousie, University College, Dalhousie, and Middlesex Hospital; D. H. De Souza, B.Sc.Lond., and F. R. Edmonds, University College Hospital; E. A. Ellis, B.A.Camb., Cambridge University and London Hospital; R. S. W. FitzHenry and P. G. Foulkes, Middlesex Hospital; H. H. Formby, M.B., B.S.Melb., Adelaide and Melbourne Universities and London Hospital; J. W. Fox, Sheffield Medical School and London Hospital; W. E. Gibson, M.B., Ch.B., New Zealand, Otago University, and University College Hospital; E. G. Goldie and H. M. Goldstein, Guy's Hospital; J. L. Goldstein and E. M. W. Hearn, London Hospital; W. H. Hamilton, R. J. Hanbury, and W. C. F. Harland, St. Bartholomew's Hospital; H. G. L. Haynes, Cambridge University and Westminster Hospital; J. W. Heslop, M.B., B.S. Durh., Durham University; J. Howard, Owens College and Royal Infirmary, Manchester; B. Hudson, M.A.Camb., Cambridge University and St. Bartholomew's Hospital; W. Ibbotson, Sheffield Medical School and St. Thomas's Hospital; C. W. W. James, General Infirmary, Bristol, and St. Mary's Hospital; H. W. James, University College, Cardiff, and St. Bartholomew's Hospital; T. W. Jeffery, London Hospital; S. Johnson and S. W. Jones, St. Mary's Hospital; H. Jones, University College, Cardiff, and St. Mary's Hospital; C. R. Keed, H. A. Kellond-Knight, and C. S. Kingston, St. Bartholomew's Hospital; F. S. Kidd, B.A.Camb., Cambridge University and London Hospital; C. J. I. Krumbholz, M.B.Lond., University College Hospital; C. L. Lakin, Charing Cross Hospital; P. W. Leathart, B.A. Camb., Cambridge University and St. Bartholomew's Hospital; A. C. Le Rossignol, B.A.Oxon., Oxford University and London Hospital; E. C. Lindsey and H. M. Major, St. Mary's Hospital; H. E. McCaskie, B.A.Camb., Cambridge University and St. George's Hospital; J. C. S. McDouall, Otago University and University College Hospital; S. D. Mackenzie, M.D., C.M.McGill, McGill College, Montreal; H. C. C. Mann and G. Moir, Guy's Hospital; E. H. Milner-Moore, St. Mary's Hospital; H. J. Moon, Owens College and Royal Infirmary, Manchester; C. A. Moore, General Infirmary, Bristol; J. C. Mottram, University College Hospital; P. K. Muspratt, Cambridge University and London Hospital; C. Newland, M.B., B.S. Adelaide, Adelaide University and London Hospital; W. C. Nimmo, Westminster Hospital; J. H. Le B. Page, St. Mary's Hospital; P. N. Panton, B.A.Camb., and H. I. Pinches, B.A.Camb., Cambridge University and St. Thomas's Hospital; F. S. Pope, M.D. Toronto, Trinity Medical College, Toronto, and University College Hospital; F. G. Quinby, L.D.S.Eng., University College, Liverpool; J. D. Pearson, W. W. Read, E. Roberts, and F. C. Robinson, Guy's Hospital; B. I. Rahim, King's College and Guy's Hospital; H. Rischbieth, M.A. Camb., Cambridge University and London Hospital; H. J. Robinson, B.A.Camb., Cambridge University and St. Thomas's Hopital; C. Russ, St. Mary's Hospital; J. N. Sergeant and F. W. W. Smith, St. Thomas's Hospital; H. H. Serpell, St. Bartholomew's Hospital; C. R. Shattock, L.D.S Eng., King's College and Guy's Hospital; J. G. Slade, M.A.Camb., Cambridge University and St. Bartholomew's Hospital; W. C. Smales, King's College Hospital; M. W. S. Smith, University College Hospital; C. S. Stollerforth, University College and Royal Infirmary, Liverpool; F. Talbot, Charing Cross Hospital; H. T. Thompson, M.A.Camb., B.Sc.Lond., Cambridge University and London Hospital; H. Watts, St. George's and Guy's Hospital; E. Weatherhead, Cambridge University and London Hospital; B. H. Wedd, H. C. Winckworth, Guy's Hospital; E. G. H. Weir, M.D., C.M.Toronto, Trinity Medical College, Toronto, and Middlesex Hospital; G. S. Welham, Charing Cross Hospital; E. A. G. Wilkinson, B.A.Oxon., Oxford University and St. George's Hospital; F. Whitaker, B.A.Camb., and H. L. Wilson, B.A.Camb., Cambridge University and St. Bartholomew's Hospital.

SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST, May, 1903.—The following candidates passed in:

Surgery.—E. F. Beaumont (Section II), Middlesex Hospital; W. H. Crossley, St. Bartholomew's Hospital; N. S. Finzi (Sections I and II), University College Hospital; E. Gray, London Hospital; W. P. Jones (Section I), Sheffield; W. S. Lewis (Section II), Birmingham; W. Martin (Sections I and II), St. George's Hospital.

Medicine.—D. Cotes-Preedy (Sections I and II), Cambridge and St. George's Hospital; E. H. Drinkwater (Section I), Liverpool and St. Bartholomew's Hospital; H. J. Gater (Sections I and II), Guy's Hospital; L. C. A. Salvatard (Sections I and II), Manchester.

Forensic Medicine.—D. Cotes-Preedy, Cambridge and St. George's Hospital; E. H. Drinkwater, Liverpool and St. Bartholomew's Hospital; J. M. King, University College Hospital.

Midwifery.—A. J. Ambrose, Westminster Hospital; C. C. Bernard, Royal Free Hospital; R. H. Cooper, Charing Cross Hospital; F. F. L. How, University College Hospital; J. E. Jones, Bristol; P. J. Pagonis, Athens; H. A. Parker, St. Thomas's Hospital; N. O. Roberts, Cambridge and St. Mary's Hospital; J. W. Watson, Manchester.

The diploma of the Society was granted to E. F. Beaumont, D. Cotes-Preedy, W. H. Crossley, E. Gray, and W. Martin.

THE muzzling order for Llandovery has been withdrawn.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

AT a meeting of the Council held at their rooms, 9, Copthall Avenue, E.C., on May 21st, 1903, in a discussion on future vaccination legislation, Dr. Holder, of Hull, pointed out that the contemplated transference of vaccination to the sanitary authorities would be attended with evil consequences in certain important respects. Unless a special exception were made in the amending Act, public vaccinators throughout the country having seats on Borough and Town Councils would be compelled to vacate them. In his opinion it was highly desirable both for the public and the profession that such seats should be held by medical men, and some means should be adopted whereby their services might be retained on such Councils.

After some discussion it was unanimously resolved that the subject should be brought under the notice of the promoters of any future vaccination legislation.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 9,018 births and 4,490 deaths were registered during the week ending Saturday last, May 23rd. The annual rate of mortality in these towns, which had been 17.5, 15.9, and 15.4 per 1,000 in the three preceding weeks, rose again last week to 15.5 per 1,000. The rates in the several towns ranged from 3.2 in Hastings, 8.5 in East Ham, 8.6 in Hornsey, 9.1 in Handsworth, 9.8 in Walthamstow, in King's Norton, and in Aston Manor, and 10.0 in Tottenham and in Stockton-on-Tees, to 20.2 in Sheffield and in Swansea, 20.3 in Manchester and in Salford, 21.8 in Wigan, 21.9 in West Bromwich, 22.0 in Sunderland, 22.2 in Grimsby, and 24.7 in Huddersfield. In London the rate of mortality was 14.8 per 1,000, while it averaged 15.8 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.6 per 1,000 in the seventy-six large towns; in London this death-rate was equal to 1.7 per 1,000, while it averaged 1.6 in the seventy-five other large towns, and ranged upwards to 3.2 in Wolverhampton, 3.3 in Hanley and in Middlesbrough, 3.4 in Oldham and in Sheffield, 3.5 in Smethwick, 3.6 in Merthyr Tydfil, 3.8 in Swansea, 4.0 in Great Yarmouth, and 4.7 in West Bromwich. Measles caused a death-rate of 1.1 in Sheffield, 1.4 in Salford, 1.6 in West Bromwich and in Middlesbrough, and 2.2 in Wolverhampton and in Swansea; scarlet fever of 1.1 in Huddersfield, 2.2 in Merthyr Tydfil, and 3.0 in Great Yarmouth; diphtheria of 2.5 in Hanley; and whooping-cough of 1.1 in West Ham and in Oldham, 1.5 in Sheffield, 1.6 in Grimsby, 1.8 in Rotheram, and 2.7 in Smethwick. The mortality from "fever" showed no marked excess in any of the large towns. Six fatal cases of small-pox were registered in Liverpool, and 1 each in Leicester, Oldham, Burnley, Bradford, Leeds, and Gateshead, but not one in any other of the seventy six large towns. The Metropolitan Asylums Hospitals contained 64 small-pox patients on Saturday last, May 23rd, against 60 on each of the two preceding Saturdays; 19 new cases were admitted during the week, against 12, 17, and 7 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 1,717, 1,730, and 1,756 at the end of the three preceding weeks, had further risen to 1,759 at the end of last week; 234 new cases were admitted during the week, against 235, 229, and 236 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, May 23rd, 1,007 births and 563 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 19.2, 17.9, and 18.0 per 1,000 in the three preceding weeks, declined again last week to 17.2 per 1,000, but was 1.7 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scotch towns the death-rates ranged from 13.4 in Dundee and 14.6 in Edinburgh to 18.6 in Glasgow and in Perth and 23.3 in Greenock. The death-rate from the principal infectious diseases averaged 1.6 per 1,000 in these towns, the highest rates being recorded in Glasgow, Leith, and Greenock. The 282 deaths registered in Glasgow included 3 which were referred to measles, 3 to diphtheria, 13 to whooping-cough, and 10 to diarrhoea. Two fatal cases of measles and 3 of whooping-cough were recorded in Edinburgh; 2 of diarrhoea in Dundee and in Aberdeen; and 2 of whooping-cough in Leith and 3 in Greenock.

POOR-LAW MEDICAL OFFICERS AND THEIR DEPUTIES.

WE see by the *Shrewsbury Chronicle* that at a recent meeting of the Atcham Board of Guardians the system of nursing now in operation at the workhouse of that Union was considered at some length, and that it was decided to make various alterations in the nursing department, and at the same time to appoint one additional nurse. It is very satisfactory to note this, as it would appear that in the past the night nursing has not been in any respect satisfactory. This question having been disposed of, in accordance with the recommendation of a committee which had been appointed to report on it, a further important matter was next considered, namely, the personal responsibility of the medical officer of the institution when acting in his official capacity, and on this matter the same committee also presented a report: "That the medical officer who has allowed his assistant to do his personal duties must in the future do his duties himself." This recommendation appears to have been supported by the chairman, who is stated to have said, "It does not matter whether the assistant is fully qualified or not, the doctor must attend the infirmary himself."

We cannot regard this off hand statement of the chairman as being even approximately correct. It certainly does matter, and this materially whether the doctor's assistant is qualified or not, as if qualified, he is eligible to be nominated by his principal to act as his substitute; but if

unqualified, and consequently not registered as a medical practitioner, any such nomination would have no force whatever, and the guardians would not be justified in allowing him to act as their medical officer's deputy.

There is reason to doubt whether the regulation of the Local Government Board which refers to work done by way of assistance to Poor-law medical officers is generally so well recognized as it should be, and this perhaps is to some extent excusable, as the regulation itself, though it has been in force for over fifty years, is far from being explicit; it is No. 200 of the Consolidated Order of July 24th, 1847, and is as follows:

"Every medical officer shall, as soon as may be after his appointment, name to the guardians some legally-qualified medical practitioner to whom application for medicines or medical attendance may be made in the case of his absence from home or other hindrance to his personal attendance, and who will supply the same at the cost of such medical officer, etc."

This regulation has in the past often given rise to a difference of opinion, and many difficulties have cropped up in consequence. Some Boards of Guardians have contended that their consent or confirmation is required to this nomination before the substitute can be allowed to act. This view, however, we believe, is not generally held, and it is much to be regretted that the question should have been allowed to remain so long in doubt. We do not gather from the local press whether the medical officer of the Atcham Workhouse has ever nominated a substitute, but if the assistant whose services are declined by the Atcham Guardians is legally qualified, and has been nominated to act as the medical officer's deputy, we can only regard the decision of the Atcham Board as being *ultra vires*, and, if so, one which they may at any time be called upon to rescind.

VACCINATION OUTSIDE DISTRICT.

E. J., public vaccinator of the —— District of the —— Union, during the recent epidemic of small-pox, vaccinated nine persons, the inmates of a house in which was a case of small-pox in the adjoining district of —— in the same Union. Payment for these cases has been disallowed on the ground that they do not reside in his district. He asks whether he is entitled to payment for these cases of successful revaccination.

*** No payment can be claimed for these cases if they are not resident in "E. J.'s" vaccination district. The only exception admissible would be in the case where "E. J." was district medical officer for the district in which the persons resided, and was as such in attendance on the case of small-pox. Under these circumstances he could claim the same fee as that to which the public vaccinator for the district would be entitled. We presume, however, that the vaccination and medical districts are coterminous, as is usually the case, and then no claim could be sustained.

SUPPLY OF DRUGS BY MEDICAL OFFICERS OF WORKHOUSES.

Guardian.—We assume that our correspondent has engaged to supply all medicines and appliances which he considers the patients in his workhouse require for their proper treatment. If this is the case it is for him to decide whether the articles he enumerates are necessary or not; if he considers them to be so, it is for him to supply them and for the nurses to administer the same according to the directions given by him. In some workhouses linseed meal for poultices is supplied by the guardians, but in the absence of any stipulation to this effect we believe the Local Government Board hold that the medical officer is bound to supply it himself.

THE PRESUMPTION OF A SANITARY INSPECTOR.

Vexata writes:—A few days ago I was called in to see a patient (a young man aged 19 years), and found him suffering from an extensive scarlet rash and sore throat. I returned the case to the local sanitary authority as scarlet fever; the sanitary inspector, not a medical man, called, and went up to the bedroom, and examined the patient in bed, said he was not at all satisfied, as he thought the man was suffering from measles, and requested another medical man should be sent for immediately; he afterwards went for a neighbouring practitioner himself, who came, saw the patient, but would not give his opinion, and told the sanitary inspector it was his business, having got a report, to have the man removed to the sanatorium. Now, sir, my opinion is that the sanitary inspector greatly overstepped his duties, that he had no right whatever to insist on seeing the patient, much less in making a pretence of examination, and that suggesting the calling in of another medical man to my patient was unwarrantable.

*** We entirely agree, and would recommend our correspondent to move the Division of the British Medical Association to which he belongs to call the attention of the borough council to the irregularity.

MEDICAL NEWS.

The prize of £200 offered two years ago for the best piece of scientific research work done in America by a woman has been awarded to Dr. Florence R. Sabin, Assistant in Anatomy at the Johns Hopkins University School for an investigation on the origin of the lymphatic system.

On May 19th Lady Mary Howard opened the new buildings of the Sheffield Children's Hospital. These extensions comprise an administrative block, a home for nurses, and an out-patient building. The hospital is now completed, and is an excellent-looking building, facing the site of the new University College buildings.

We recently reported the election of Dr. Crean to the Ardee Dispensary at a salary much below that adopted as a minimum by the profession in Ireland. He referred to it as "a win" for the guardians. Dr. Crean has now asked to be relieved from the appointment owing to an anonymous circular which has been published.

The Madrid Congress.—Dr. Calleja, the President, and Dr. Fernandez Caro, the General Secretary of the Fourteenth International Medical Congress recently held at Madrid, were entertained at dinner by some three hundred of the most prominent medical practitioners of Spain. The oratory was copious and fervid, the organizers of the Congress being congratulated on having earned the gratitude of the human race, and added glorious pages to the science of life.

Dr. Joseph Smith, Chairman of the Chiswick Urban District Council, had the honour of being presented to their Majesties the King and Queen on the occasion of the opening of the Kew Bridge, on Wednesday, the 20th. Dr. Smith at the same time presented to the King, on behalf of the inhabitants of Brentford and Chiswick, a silver tankard, a magnificent specimen of the jeweller's art, dated 1721. His Majesty graciously accepted it and expressed himself much pleased with the gift.

University of Buda-Pesth.—On May 13th the University of Buda-Pesth celebrated the one hundred and twenty-third anniversary of its foundation. After a solemn mass, the annual meeting was held under the presidency of Professor Kétly, Rector Magnificus. The Dean of the Medical Faculty, Professor Thanhoffer, presented a report on the essays offered in competition for prizes, and the prizes were distributed by the Rector Magnificus.

Bequests and Donations.—The honorary secretary of the Crewe Cottage Memorial Hospital has received a cheque for £5,000 from Mr. F. W. Webb, the retiring chief mechanical engineer of the London and North-Western Railway Company, towards the endowment fund of the hospital. Mr. Webb previously subscribed a large amount, which, together with that given by Mr. Henry Yates-Thompson, of Liverpool, made the erection of the hospital possible.

Freemasonry.—A meeting of the Cavendish Lodge took place at the Royal Palace Hotel, Kensington, on May 20th. Among the business transacted it was unanimously agreed to present a donation of 10 guineas to the Royal Medical Benevolent College, Epsom. The election of Worshipful Master for the ensuing year was next proceeded with. On the motion of Worshipful Brother Percy Dunn, I.P.M., a Past Master's jewel was unanimously awarded to Worshipful Brother Herbert Menzies, in appreciation of his services to the Lodge during his year of office as Master.

Complimentary Dinner and Presentation.—At the close of the last fortnightly meeting of the Aston Board of Guardians they entertained to dinner, in the Board Room of the Gravelly Hill Workhouse, Dr. E. S. Machin, of Erdington, who lately retired from the position of medical officer to the Aston Union, which he had held for 38 years. After the dinner Dr. Machin was presented with a silver salver and claret jug by the guardians and officers of the Union in testimony of their high appreciation of his services.

Sir G. W. Truscott presided over the festival dinner of the City of London Hospital for the Diseases of the Chest, held on May 20th, in the hall of the Stationers' Company. In reply to the toast of "The Medical Staff," proposed by Mr. S. Forde Ridley, M.P., Dr. Heron drew attention to a request received by the authorities of the hospital for information to be presented to the Congress on Tuberculosis to be held in Paris in 1904. The report will deal with what is being done in various countries by the working men's societies to assist in preventing the spread of consumption. The Chairman, in proposing "Prosperity to the Hospital," referred to the fact that it stood in one of the most densely populated areas in the metropolis. There were 140 beds in actual use, and there was no debt on the hospital. There was urgent necessity for funds to build a nurses' home, and reopen 24 beds now unoccupied. He thought if, by means of a biograph, the daily work of the hospital could be shown, it would appeal strongly for assistance. He deprecated any money being taken from the rates, but urged that all hospitals should be freed from paying rates. The Secretary then read a long list of subscriptions, amounting to about £2,000. Sir Edmund Hay Currie testified to the excellent administration of the hospital aided by the medical staff, and proposed the toast of "The Committee and Executive Staff," which was acknowledged by Sir Edward Sassoon.

MEDICAL STUDENTS IN SWITZERLAND.—The number of medical students in the universities of Switzerland in the current summer semester is 1,865. Of these, 601 are matriculated at Berne, 444 at Zurich, 398 at Geneva, 275 at Lausanne, 147 at Basle.

CHELSEA CLINICAL SOCIETY.—The sixth annual dinner of the Chelsea Clinical Society was held at the Holborn Restaurant on May 24th. The President of the Society, Dr. C. C. Gibbes, occupied the chair, and gave the toasts of "The King" and "The Queen and Royal Family," and when these had been honoured the Chairman gave that of "The Chelsea Clinical Society." He observed that the Society owed its origin to the distaste of some members of the medical profession for the high-and-dry characteristics of certain societies which met in Hanover-square and indulged in evening meetings of such a superlatively "high-falutin'" order of merit that they were outside the interest of ordinary mortals. One object of the Chelsea Clinical Society was to enable the medical men in Chelsea to present a united front against the unscrupulous attacks of the general public, and in that way alone its usefulness was very great. Dr. Vincent Dickinson, the President-elect, replied for the Society, and was followed by Dr. Ewart, who proposed "The Kindred Societies," which was acknowledged by Dr. Hale White. Dr. Herschell having also replied, Dr. Foster Palmer proposed, and Dr. Hector Mackenzie and Dr. Hyslop acknowledged, the toast of "The Visitors." Other toasts followed, the speakers being Dr. C. A. Morris, Mr. Noble Smith, Dr. R. L. Norman, and Dr. A. F. Penny.

MEDICAL VACANCIES.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column advertisements must be received not later than the first post on Wednesday morning.

BARNSLEY: BECKETT HOSPITAL.—Resident House Surgeon, Salary, £100 per annum.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES. Clinical Assistant. Honorarium at the rate of 52 guineas per annum.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road.—House-Surgeon, resident. Salary at the rate of £50 per annum.

CHARING CROSS HOSPITAL.—Assistant Physician.

DEVONPORT: ROYAL ALBERT HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell.—Resident Medical Officer. Salary, £100 per annum.

GRAVESEND HOSPITAL.—House Surgeon, resident. Salary, £100 per annum.

HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL.—House-Surgeon, resident. Salary, £75 per annum.

HAYDOCK LODGE ASYLUM, Lancashire.—Assistant Medical Officer, resident. Salary, £200 per annum.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Physician, resident. Appointment for six months. Salary, £20.

HOSPITAL FOR WOMEN, Soho Square, W.—(1) House-Physician. Salary, £30 for six months. (2) Assistant Physician.

LIVERPOOL: STANLEY HOSPITAL.—Senior House-Surgeon, resident. Salary, £100 per annum.

MANCHESTER ROYAL INFIRMARY.—Surgical Registrar, non-resident. Salary, £80 per annum.

MIDDLESEX HOSPITAL, W.—(1) Director of Research Laboratories. Salary, £500 per annum, rising to £800. (2) Research Scholarship of £105 at the Cancer Research Laboratories.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Assistant House-Surgeon, resident. Salary, £50 per annum.

NORWICH: NORFOLK AND NORWICH HOSPITAL.—House-Physician, resident. Salary, £80 per annum.

PLAISTOW: ST. MARY'S HOSPITAL FOR SICK CHILDREN.—(1) Resident Medical Officer. Salary, £100 per annum. (2) Assistant Resident Medical Officer. Salary at the rate of £80 per annum.

PLYMOUTH: SOUTH DEVON AND EAST CORNWALL HOSPITAL.—Assistant House-Surgeon, resident. Salary at the rate of £50 per annum.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Professors and Lecturers.

ROYAL DENTAL HOSPITAL OF LONDON, Leicester Square.—Two House Anæsthetists, non-resident. Honorarium, £50 per annum.

ROYAL EYE HOSPITAL, Southwark, S.E.—Honorary Assistant Surgeon, with care of out-patients.

ROYAL HOSPITAL FOR WOMEN AND CHILDREN, Waterloo Bridge Road, S.E.—Resident Medical Officer. Salary at the rate of £70 per annum.

SEAMEN'S HOSPITAL SOCIETY, GREENWICH.—Senior House-Surgeon at the Branch Hospital, resident. Salary, £75 per annum, and £25 for officiating as Registrar.

SETTLEMENT OF WOMEN WORKERS, Canning Town. Assistant for Out-patient Department (female), qualified and resident.

SOUTHPORT INFIRMARY.—Resident Junior House and Visiting Surgeon, unmarried. Salary commencing £70 per annum.

VIRGINIA WATER: HOLLOWAY SANATORIUM FOR THE INSANE.—Junior Assistant Medical Officer (male), resident. Salary begins at £175 per annum.

WAKEFIELD: CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY. Junior House Surgeon, resident. Salary, £80 per annum.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Junior House-Surgeon. Salary, £50 per annum.

WESTERN GENERAL DISPENSARY.—Honorary Physician or Surgeon Accoucheur.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) House-Physician. (2) House-Surgeon. Both resident.

MEDICAL APPOINTMENTS.

RIDDLE, H. G., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer and Public Vaccinator for the St. Peter's District of the Isle of Thanet Union.

BRACEY, W. E., L.R.C.P. & S.Edin., L.F.P.S.Glasg., appointed Medical Officer and Public Vaccinator for the Wednesbury District of the Axbridge Union, *vice* R. P. Tyley, M.D.St.And., M.R.C.S., resigned.

CANN, Thos. P., M.D., B.S. Durh., appointed Certifying Factory Surgeon for the Newhaven District, Sussex.

COADY, Daniel Patrick, F.R.C.S.I., L.R.C.P. & S.Edin., appointed Certifying Factory Surgeon for the Nass District, County Kildare.

COLEMAN, F., M.R.C.S., L.R.C.P., L.D.S.Eng., appointed Dental Surgeon to the Metropolitan Hospital.

CONSTAN, A. F., M.B., Ch.B.Vict., appointed House-Surgeon to the Manchester Royal Infirmary.

CRIDLAND, A. B., M.R.C.S., L.R.C.P., appointed House-Surgeon to the Wolverhampton Eye Infirmary, *vice* Wm. Anderson, M.B., Ch.B., Aberdeen, resigned.

CROOKS, James, M.D., C.M.Toronto, L.R.C.S.Edin., appointed Certifying Factory Surgeon for the Axminster District, Devonshire.

DEWAR, D. L., M.B., C.M.Glasg., appointed District Medical Officer of the Teesdale Union.

EDMONDS, A. J., M.B., Ch.B.Vict., appointed House-Physician to the Manchester Royal Infirmary.

ELLIS, M. F., L.R.C.P. & S.Edin., L.F.P.S.Glasg., appointed District Medical Officer of the Holsworthy Union.

FAIRCLOUGH, Thomas B., L.R.C.P. & S.Edin., appointed Certifying Factory Surgeon for the Dewsbury District of the West Riding of Yorkshire.

GARDNER, F. G., M.R.C.S.Eng., appointed Medical Officer of the Warwick Union Workhouse.

GIBSON, Thomas, M.D.Edin., D.P.H.R.C.P.S.Lond., appointed Medical Officer of Health for Wakefield, *vice* W. S. Wade, L.R.C.P.Edin., L.F.P.S.Glasg.

GOODALL, J. Strickland, M.B.Lond., etc., appointed Lecturer on Physiology in the Medical School, Middlesex Hospital, *vice* R. A. Young, M.D., B.Sc., M.R.C.P., resigned.

HEARN, E. M. W., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Superintendent of the Bolingbroke Hospital, Wandsworth Common, S.W.

HENRY, John P., M.D., B.Ch.Univ. Dub., reappointed Oculist to the London School Board.

JACK, J. G., M.B., Ch.B.Edin., appointed Certifying Factory Surgeon for the Falkland District, Fifeshire.

MACTIER, H. Carter, B.A., M.B., B.Ch., B.A.O.Dubl. Univ., appointed Assistant Surgeon to the Wolverhampton Eye Infirmary.

MEAGHER, William, L.R.C.P. & S.I., appointed Certifying Factory Surgeon for the Ferbane District, King's County.

MUSGRAVE, C. B. T., M.D.Lond., appointed District Medical Officer of the Launceston Union and of the Tavistock Union.

OGILVY, Stewart Grant, M.B., C.M.Edin., appointed Certifying Factory Surgeon for the Fauldhouse District of Linlithgow.

PRYTHERCH, Hugh, L.R.C.P.Edin., M.R.C.S.Eng., appointed Certifying Factory Surgeon for the Beaumaris District, Anglesey.

PURDY, J. S., M.B., C.M.Aberd., appointed House-Surgeon to the London Male Lock Hospital, *vice* E. J. O'Neill, M.B., Ch.B. (N.Z.), F.R.C.S.Edin., resigned.

RAINBIRD, P. H., L.R.C.P. & S.Edin., appointed District Medical Officer of the Lincoln Union.

RAY, J. A. C., M.B., Ch.B.Vict., appointed House-Surgeon to the Manchester Royal Infirmary.

RICE, J. D., M.B., B.Ch., R.U.I., appointed Medical Officer and Public Vaccinator for the New Eltham District of the Lewisham Union.

SIMPSON, C., M.B. & C.M.Aberd., appointed Certifying Factory Surgeon for the Towcester District, Northamptonshire.

TURNER, D. D., M.R.C.S., L.R.C.P.Lond., appointed Assistant to the Medical Superintendent of the Paddington Parish Infirmary.

WALES, E. Garney, M.A., M.B.Cantab., M.R.C.S., L.R.C.P., appointed Medical Officer of Health to the Urban District of Downham Market, Norfolk.

WILSON, W. Cheyne, M.D.Edin., appointed Honorary Physician to the Plymouth Public Dispensary, *vice* E. L. Fox, M.D.Camb., resigned.

WOOD, M. S., M.B., Ch.B.Vict., appointed House-Physician to the Manchester Royal Infirmary.

WORBOYS, Thos. Sanders, M.R.C.S., L.R.C.P.Lond., appointed Certifying Factory Surgeon for the Winterton District, Lincolnshire.

DIARY FOR NEXT WEEK.

WEDNESDAY.

Obstetrical Society of London, 20, Hanover Square, W., 8 p.m.—A discussion on Chorion-epithelioma and the occurrence of Chorion-epitheliomatous and Hydatidiform Mole-like Structures in Teratomata will be opened by Dr. John H. Teacher, of Glasgow (introduced by Dr. Eden), by a Paper and Epidiascope Demonstration. The following have notified their intention to speak and show specimens: Dr. Peter Horrocks, Dr. F. W. N. Haultain, Dr. W. E. Fothergill, Mr. Henry Briggs, Dr. Arthur Helme, Dr. Herbert Spencer, Dr. A. H. N. Lewers, Dr. W. H. Tate, Dr. T. W. Eden, Mr. J. H. Targett, Dr. F. G. Stevens, Dr. J. Munro Kerr, Dr. J. F. McCann, Dr. E. W. A. Walker, Dr. Russell Andrews and Dr. Cuthbert Lockyer. Specimens will be exhibited at 7.30.

THURSDAY.

Roentgen Society, 20, Hanover Square, W., 8.30 p.m.

Guy's Hospital Medical School, 4 p.m.—Dr. E. W. Ainley Walker: On the Relation of Bovine to Human Tuberculosis (Gordon Lectures in Experimental Pathology).

North-East London Clinical Society, Tottenham Hospital, N., 4 p.m.

FRIDAY.

Laryngological Society of London, 20, Hanover Square, W., 5 p.m.—Cases, specimens and instruments will be shown by Mr. W. H. N. Stewart, Dr. Furniss Potter, Mr. de Santi, Dr. Wyatt Wingrave, and others.

POST-GRADUATE COURSES AND LECTURES.

Charing Cross Hospital. Thursday, 4 p.m.—Lecture on Medical Cases.

Hospital for Consumption and Diseases of the Chest, Brompton, S.W., Wednesday, 4 p.m.—Lecture on Empyema.

Hospital for Sick Children, Great Ormond Street, W.C., Thursday, 4 p.m.—Lantern Demonstration upon the Lesions of Rheumatic Fever.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C. Demonstrations will be given at 4 p.m. as follows:—Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, eye. Lectures will also be given at 5.15 p.m. as follows: Wednesday, Nasal Polypus; Thursday, Hæmaturia; Friday, Parasites of the Gastro-Intestinal Canal.

Mount Vernon Hospital for Consumption and Diseases of the Chest, 7, Fitzroy Square, W., Thursday, 4 p.m.—Lecture on Digestion, Assimilation and Dietetics in Phthisis.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C.—Tuesday, 3.30 p.m.—Lecture on Myasthenia.

Post-Graduate College, West London Hospital, Hammersmith Road, W.—Lectures will be delivered at 5 p.m. as follows: Tuesday, The Diseases of the Stomach amenable to Surgical Treatment; Wednesday, Uterine Hæmorrhage; Thursday, Treatment of Some Injuries and Emergencies; Friday, The Physiology and Pathology of the Ductless Glands.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

MACLEOD.—On the 23rd May, at 76, La Broke Grove, W., the wife of C. E. Alex. MacLeod, F.R.C.S., of a son.

DEATHS.

JONES.—On May 20th, 1903, at Brighton, very suddenly, of pneumonia, David Jones, M.R.C.P.Edin., M.R.C.S.Lond., aged 76, late of Everton, Liverpool.

SMITH.—On May 23rd, at Powis Square, Brighton, Helen, the dear wife of Thomas P. Smith, M.B.Lond., of Beauly, Rowlands Road, Worthing, and formerly of H.M.'s 104th Regiment.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to the subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

E. K. would be glad to knew where to obtain maps to indicate (preferably by colour) at a glance the prevalence in England of cancer, rheumatism, phthisis, and stone.

ELECTIONS TO HOSPITALS.

DR. PHILIP HICKS (Leamington) writes: I shall be very grateful to the secretaries of any hospitals throughout the country where election to the medical and surgical staff obtains by means of "an Election Committee," if they will forward me simple details of the scheme they are personally acquainted with; their opinion as to the advantages of this method over election by the governors at large would further add to my indebtedness.

THE DRUG DRUMMER.

A CORRESPONDENT writes to complain that he is "many times weekly" worried by the visits of travellers seeking for orders for drugs, and asks whether nothing can be done to mitigate the nuisance. He says he has no objection to calls from representatives of the firms with which he is in the habit of doing business, but that these are people with whom he has nothing to do.

*** We must confess that our correspondent has good ground for complaint if he has to receive travellers several times a week. We would suggest that he should write a letter to their principals requesting to be spared these visits.

GREEN TEA.

A. T. writes: I have recently been informed that green Ceylon tea is very useful in the treatment of cases of Bright's disease. Can any of your correspondents tell me if there is any foundation for this statement, which appears to be prevalent amongst lay people?

LETTERS, NOTES, Etc.

THE BATTERSEA MILK DÉPÔT.

IN the description of the milk dépôt of the borough of Battersea, published in the BRITISH MEDICAL JOURNAL of April 25th, 1903, p. 973, the composition of the milk mixtures prepared was not clearly given. The proportions of milk and water were correctly stated in parts, but the amount of milk, sugar, and cream added was by inadvertence stated in ounces, and the mixtures used were made up in the following proportions, using milk containing not less than 3.75 per cent. of fat and cream, with not less than 50 per cent. of fat. The prescriptions should be read as follows:

Class I.—Milk ... ... 1 part
Water ... ... 2 parts

To each gallon of this mixture add 6 oz. of cream and 6 oz. of milk sugar.

Class II.—Milk and water equal parts.

To each gallon of this mixture add 4 oz. of cream and 4 oz. of milk sugar.

Class III.—Milk ... ... 2 parts
Water ... ... 1 part

To each gallon of this mixture add 2 oz. of cream and 2 oz. of milk sugar.

Dr. McCleary, the Medical Officer of Health, has been good enough to inform us that since the dépôt was visited for us the milk contract has been altered and the milk supplied is not quite so rich in fat, the minimum per cent. being lowered from 3.75 to 3.25, consequently more cream in proportion is now added to each mixture. Dr. McCleary has also been good enough to inform us that the sterilization of the milk is carried out at 212° F., at which temperature it is kept for from five to ten minutes. He also states that the shop front bears the words, "Battersea Borough Council Infant Milk Dépôt" in large letters.

HERMAPHRODITISM.

DR. FRED DE LISLE, D.P.H. (District Health Officer, Hawkes Bay, N.Z.) writes: In the BRITISH MEDICAL JOURNAL of February 7th, p. 330, there is a very interesting article with reference to two hermaphrodite girls, or should I say boys? Some further information on the subject would be interesting. What was the condition of the clitoris? Was it larger than is normal in the female, and did it approximate rather to the penis in the male? What was the experience of the elder during coitus? Did the act cause pain, was pleasure obtained, or was the recipient apathetic? Were the sexual desires strongly developed, as would be expected in the male, or only slightly so, or even entirely absent, as is usual in the female? Gooch, in an old work on midwifery, mentions some cases of women with abnormally short vaginae in whom the passions were well marked. Though there is no evidence of it in the book, these may have been cases of hermaphroditism which were unrecognized.

*** Hengge reports the elder "sister" as married for nine years. The clitoris was not large, and its glans was covered by the prepuce. She had regular but not very frequent connexion with her husband, as a rule simply for his satisfaction: occasionally, however, she felt sexual desire, and connexion was pleasurable. The younger "sister" was single. The clitoris was not enlarged, and with its glans was covered by the prepuce; there was an annular hymen unruptured, but two fingers could be passed through it into the short vagina without lacerating it.

LETTERS, COMMUNICATIONS, ETC., have been received from:

A Messrs. Arnold and Sons, London; A.; Arrolithic Ltd., Manager of, London; F. Anderson, M.B., Newcastle-on-Tyne; Author of Scientific Research; A. T. **B** Mr. N. G. Bacon, London; Mr. T. W. S. Browne, Chatham; C. A. Ballance, M.B., London; Bacteria; Mr. J. P. Bush, C.M.G., Clifton; Mr. W. G. Bunn, London; Mr. J. R. Blackett, London; Mr. L. A. Bidwell, London; Dr. C. A. Beck, Langsett. **C** Dr. A. E. Cooper, London; Mr. W. R. E. Coles, London; W. W. Cheyne, C.B., M.B., London; Dr. J. M. Clarke, Clifton; Mr. C. W. Cunnington, London; Dr. A. V. Clarke, Leicester; A. Cox, M.B., Gateshead; Miss N. Creighton, Portballintrae; Messrs. T. Christy and Co., London. **D** Miss L. Dean-Pitt, London; Mr. E. A. G. Doyle, Trinadad, W.I.; Dr. G. Dean, Elstree; Mr. R. W. Doyne, London; Sir D. Duckworth, London; Mr. H. Downes, Hemyock; Mr. W. F. Dearden, Manchester; Mr. J. V. C. Denning, London. **E** Ex-Pathologist; E. K.; Mr. H. Elliot-Blake, Boznor. **F** F. E. S.; F. F.; F. P. **G** Dr. J. G. Glover, London; Dr. W. Gosse, Sittingbourne; Glasgow; Guardian; Dr. J. Gairdner, Crieff. **H** Mr. B. F. Hartzhorne, London; Mr. S. J. Hutchinson, London; Dr. S. H. Habershon, London; Dr. P. Hicks, Leamington; F. R. Hill, M.B., Carlisle; J. W. Hainsworth, M.B., Greengates; Mrs. Hampson, London; R. T. Halliday, M.B., Glasgow; Mr. L. Hall, London; Dr. W. Harris, Norwich. **I** I. M. S.; **J** Mr. G. J. Jolliffe, London; Dr. E. Jepson, Durham; Dr. R. Jones, Woodford Bridge. **K** Kin Hee Ltd., Manager of, London; Kennett. **L** Dr. W. V. Lush, Weymouth; Dr. B. Laquer, Wiesbaden; Dr. T. Lajos, Buda-Pesth; Dr. H. C. Lawrence, Cheltenham; Dr. V. A. Latham, Chicago; Dr. T. G. Lyon, London; T. Longmore M.B., Walsall. **M** Metropolitan Asylums Board, Clerk of, London; M.D. Glasgow; Mr. E. Montgomery-Smith, London; Mr. F. C. Melhado, London; J. McPherson, M.B., Salina Crux; Dr. P. McBride, Edinburgh; Dr. G. N. Meachen, London; Mr. E. S. Machin, Birmingham; A. F. MacCallan, M.B., London; C. H. Milburn, M.B., Hull; L. McNabb, M.B., South Shields; Dr. J. D. R. Monro, London. **N** J. H. Nicoll, M.B., Glasgow. **O** Mr. G. S. O'Rorke, Nottingham; Old Style. **P** Mr. A. C. Pearson, Pirbright; Mr. J. S. Purdy, London; Dr. F. J. Poynton, London; Pensioner; Dr. J. P. Parkinson, London; Mr. C. B. Pasley, Cahir; P. S. S. **R** Ramasawmy; Mr. W. H. Rowthorn, Rotherham; Dr. P. Ramachandrayya, Madras; R. N.; Mr. C. A. K. Renshaw, Sale; R. T. C.; Dr. T. A. Ross, Ventnor, I. of W. **S** Mr. R. L. Spicer, London; Mr. J. Smith, London; Mr. J. H. Sutcliffe, London; Dr. L. E. Shaw, London; Dr. J. H. Stowers, London; Mr. J. H. Spitzly, London; Senex; Messrs. W. B. Saunders and Co., London. **T** Ted Lambton. **U** Dr. C. L. Urriola, Panama. **V** Mr. E. A. Veale, London; Mr. E. D. Vinrace, London; A. S. Vallack, M.B., Sydney; Mr. T. J. Verrall, Brighton. **W** N. S. Whitney, M.B., Eastbourne; Dr. A. O. Ward, London; Mr. W. B. Winckworth, Taunton; Mr. J. B. Wilkinson, London; Dr. F. Willcocks, London; Dr. W. H. White, London; Dr. J. A. H. White, Coventry; Mr. H. E. Wilkinson, London; Dr. J. W. Watson, Limavady; Mr. R. Williams, Liverpool. **Z** "Zoophilist," Editor of the, London.

BOOKS, ETC., RECEIVED.

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A Class Book of Botany. By G. P. Mudge, A.R.C., etc., Lond., F.Z.S., and Arthur J. Maslen, F.L.S. London: Edward Arnold. 7s. 6d.

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S. E. & C. Railway. Popular Coast Guide. By W. T. Perkins. London: McCorquodale and Co. 6d.

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Travaux de Chirurgie. Anatomo-clinique. Par Henri Hartmann. Voies urinaires estomac. Paris: Georges Steinheil. 1903.

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Remarks
ON
THE RED-LIGHT TREATMENT OF SMALL-POX.

IS THE TREATMENT OF SMALL-POX PATIENTS IN BROAD DAYLIGHT WARRANTABLE?

BY PROFESSOR NIELS R. FINSEN, M.D.,
Director of the Finsen Medical Light Institute of Copenhagen.

TEN years have elapsed since I first advocated red light in the reatment of small-pox. During my investigations on the effect of various rays of light my attention was directed to some old reports, especially American and English, on the injurious influence of light in small-pox, which coincided with my own observations as to the effect of light upon the skin. Knowing full well, if this were so, that the injury was due to the chemical rays of light, I recommended that the patients be protected against these rays by placing them in red light, exactly in the same way that photographers protect their plates from the chemical rays. In the course of years this treatment was tried in many places, meeting everywhere with unquestionable success. At the present time about twenty physicians in various countries, mostly, however, in Scandinavia, have given this treatment a trial, and all of them, have obtained most favourable results when the treatment has been properly conducted.

From numerous trials, together with various simultaneous controlling experiments, it may be considered as an irrefutable fact *that daylight and especially the chemical rays have a most injurious effect on the course of small pox, as the suppuration of the vesicles is due to the effect of light*, and that, accordingly, it is possible to avoid the suppuration and its consequences by protecting the patients from the action of light. On the other hand, light seems to have no action on the small-pox infection itself, and death caused by the latter cannot be prevented by excluding the chemical rays. But even the avoidance of suppuration is in itself of the greatest importance, for it is a well-known fact that the suppuration stage is the most dangerous of the various stages of small-pox. Moreover it may be stated that the greatest number of deaths are due to suppuration, which ceteris paribus would be prevented if no suppuration were present. Further, the numerous complications and sequelae due to suppuration may be avoided, as well as the disfiguring pitting, which is no small consideration. Small-pox is one of the most terrible diseases known, but the appalling feature which makes it so much dreaded is mainly due to the suppuration and its consequent sequelae. When after the teaching we have received one hears for the first time that suppuration is due to light, especially to the blue, violet, and ultra-violet rays, and may with certainty be avoided if these rays are kept off, one is naturally somewhat sceptical. When it is demonstrated, however, that this observation rests on a *fact established by practical experience, which fully agrees with scientific theoretical investigations*, this scepticism must gradually give way to what is both rational and scientific.

The action of light on the course of small-pox is astonishing, and the effect of the red-light treatment is one of the most striking results known in medicine. Even in cases of confluent small-pox or in unvaccinated persons the method very rarely fails, supposing, of course, that the patient comes under treatment early enough. If suppuration has begun or is on the point of beginning the red-light treatment will not stop it.

As stated above, it is now ten years since I first proposed this treatment. At that time I wrote several papers on the subject, which were published in English, French, and German, my object being to have it as widely known as possible. It has been difficult, of course, to get the method generally accepted or even tried; it was too marvellous and gave rise to scepticism. I do not know to what an extent it is used at the present time, but I am under the impression that it is far from being used to the extent it ought to be or that it will be. This apparent tardiness is greatly to be regretted when the results are so excellent. Is it not a pity that so many should die from small-pox and so many others be disfigured for life because medical men are sceptical of a method that is too strange even to be given a trial?

The reason why I take up this subject again is from an article I read a few days ago in an American paper, which, quoting an article published in some magazine about my investigations of light, added that it was remarkable to see the great number of people pitted by small-pox during the epidemic which had so largely prevailed in America during the past four years, when pitting might have been done away with altogether by keeping the patients in red light. About the same time I saw a copy of the *Lancet* (February 14th, 1903), wherein were given some statistics of the mortality in London during 1902. It may be seen here that there were 7,798 cases of small-pox with 1,314 deaths, or about 16 per cent. From the figures I am convinced that the red-light treatment was not resorted to, or that at least it was not properly applied. I may add as my opinion that, unless this epidemic was of an *exceptionally fatal character*, at least one-half of these deaths might have been avoided by the treatment I have suggested.

The American article and the statistics in the *Lancet* having prompted my writing further on the injurious influence of light on small-pox, I think it better at this time to present what I have to say in a popular and less technical manner. In this way I may succeed at last in giving to the public the great boon resulting from this treatment.

After all, what we are dealing with here is not, properly speaking, medical *treatment*: it is more a preventive measure against the injurious effect of light. In the case of a disease where it is open to the patient to choose his doctor it may be said that he has himself to blame if he chooses a physician who does not know how to protect him from the dangers that threaten him. But when the disease *in question is one in which the public health authorities oblige the patient to go into a particular hospital, he has a right to ask that he shall not there be unnecessarily exposed to dangers that may be fatal or at least are liable to disfigure him for life.*

It seems to me expedient to present the subject from this standpoint. From the foregoing I believe that the question put as the title of this paper must be answered peremptorily in the negative. Furthermore, from a modern scientific point of view *it must be considered absolutely unwarrantable on the part of the public health authorities to treat serious cases of small-pox, in which suppuration might be expected, in hospitals where patients are exposed to daylight.* As to the private physician it must be considered *a gross shortcoming if, as soon as he diagnoses small-pox, he does not make preparations to prevent the patient from being exposed to daylight.* It is a most simple measure, which may be carried out everywhere, for everywhere it is possible to darken the windows, hanging up something before them. A candle will supply all the necessary light. The incompetency shown by the physician who allows the patient to lie in daylight is no less stupendous than if he neglected the ordinary aseptic measures in performing a capital operation.

I take the liberty of dedicating this article particularly to *Public Health Authorities* and to the Local Government Board. My various former papers on light and small-pox—which may be found in the annexed list and to which I beg to refer—are all of a technical scientific nature. But the subject has, after all, a popular side, and the red-light treatment will be much quicker and more effectively brought into general use, if the necessary measures are taken in hand by the sanitary authorities instead of attempting to win over each single small-pox doctor, one after the other, by means of scientific papers. What would have happened, I wonder, if vaccination had been entirely left to the discretion and care of each medical man? For one cannot help comparing the red-light treatment with vaccination. Both of them are of great importance to small-pox, but one of them is applied to the sound, the other to the sick only. If vaccination can be enjoined upon every healthy person, it should be still more easy to make obligatory the red-light treatment, as suggested by some authors. In Denmark and in several other places the public hospitals for infectious diseases are provided with permanent red light wards for small-pox patients. But whilst in this country small-pox is very rare, it is in England now and then an epidemic disease. If the method was officially accepted in England it would prove an enormous gain, as it would, no doubt, be spread to the colonies and countries far beyond the seas, where small-pox is of still more common occurrence.

If this method were introduced it would not only be of the greatest advantage to the patients, but it would be to the benefit of the taxpayers generally. In fact, as might have

been expected as a matter of course, the disease has proved to be of much shorter duration when the red-light treatment has been carefully adopted; as a consequence the stay in the hospital is shorter, and this renders an epidemic less expensive to the taxpayers. Some authors are even of opinion that the danger of infection is lessened when suppuration is prevented.

It may perhaps be thought that I have been using too many words in endeavouring to prove the advantage in the management of small pox of avoiding the suppuration of the vesicles. The essential point is therefore as to the correctness of the statement that light is of such great influence and that suppuration may be prevented—a statement many do not accept. But even if there is no belief in scientific investigation and proofs which are now before the world and which, in my opinion, are absolutely convincing, the matter, I think, is of sufficient importance to be inquired into. The evidence given by so many men of science from all countries who have tried the method is, no doubt, of sufficient weight to justify an inquiry.

I should greet with the greatest pleasure the appointment of a Commission to make a thorough investigation of the matter, and I should be very happy to place myself at its disposal with all information at my command. If this proposal meets with approval, may I suggest that the Commission should consist, besides small-pox physicians, of dermatologists who are acquainted with the action of light on the skin?

I can hardly believe that scepticism in regard to this method is so great that the idea of a careful scientific investigation would be flatly refused at a moment when the therapeutic importance of light—as a means of treating lupus and other diseases of the skin—must be said to be generally admitted everywhere.

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American Congress of Tuberculosis.—An American Congress of Tuberculosis is to be held in St. Louis in July, 1904. There will be about sixty delegates from each State and Territory in the United States making an aggregate of about three thousand official representatives. It is expected that in addition to these hundreds of students and others, interested in tuberculosis will be present.

RECENT ELECTROTHERAPEUTICS,

WITH SPECIAL REFERENCE TO MALIGNANT DISEASE.

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Many of the recent discoveries in physical science have attracted great attention of late in the medical profession because of the possibility of applying them in the region of therapeutics. Long before the Roentgen rays had attained a permanent place in diagnosis the accidental dermatitis which occasionally took place suggested the possibility of their being used in the treatment of certain affections. The results of experiment came somewhat slowly at first, but of late the utmost activity has prevailed in many schools at home and abroad and in consequence a considerable amount of hope has been raised as to their therapeutic value in number of affections, but most of all in malignant disease. While it might be fair to say that just as in the department of physics Roentgen's original paper has stimulated unexpected and serious research in other branches of science, so in medicine the result has been to create profound interest not only in the newer forces but also in others which had been previously known to the profession. For example, Tesla's great work was followed by the now historical physiological researches of D'Arsonval, and in view of the great interest taken in high-frequency currents of late it is difficult to understand how they failed to stimulate thought to a greater extent previous to the year 1896. Again, in the year 1893 Finsen gave us his researches in phototherapy in small-pox to be followed by another important paper in 1895 upon light as a stimulant. Two years later came his still best known work upon the treatment of lupus by concentrated chemical rays. Downes, Blunt, Duclaux, Arloing, Roux, Geissler, and Buchner had previously claimed for light a bactericidal influence, Thayer had submitted patients to the influence of sunlight by means of a convex lens, Mehl had in addition to the layman tried the effect of a burning glass in lupus, and Zieglroth and Lehmann had also used the electric light—facts which Finsen himself fully acknowledges—but the credit of the great development of this special agent is due to Finsen. Clearly, therefore, these two examples may be quoted as showing the direction of men's minds in therapeutics previous to Roentgen's discovery, although research in this branch of science has by comparison of results caused greater interest in both since 1895.

Relationship between these Forces.

In the first part of this paper I shall group the different forces in order to show that they bear some relationship to each other, that some of them at least possess properties in common, although each may possess some thing or things not found in others. This statement will be found to apply to the different forces, whether studied from the standpoint of the student of physical science or that of the clinical observer. For example, some can be polarized but others cannot. On the other hand, many of them act on the photographic plate, such as light, radiant matter (Crookes), and even heat (Abney). In the same way, in therapeutics we find that radiant heat, light, natural and artificial, and *x* rays possess certain properties common in different degrees, but they differ in other respects. Great power of penetration is possessed by the *x* rays, and the tendency to flow over large and extensive surfaces as is characteristic of high-frequency and high-potential currents.

In Fig. 1 a diagrammatic spectrum is represented based upon the familiar one of the spectrum of light. On the left there are first the electric waves, next heat waves, then follow the usual light waves divided into the red, yellow, blue, violet, and ultra-violet. Further, to the right, are groups of waves which have only recently become familiar to us in the studies of fluorescence, such as Becquerel rays, and some of the rays recently described as emanating from radium and polonium. Lastly, we have on the extreme right the *x* rays, that is, granting they are transverse vibrations in

ether. In connexion with the last two kinds mentioned points of interrogation have been placed in the diagram because of the incompleteness of our knowledge. The figures in the diagram refer to the periodicity of each force.

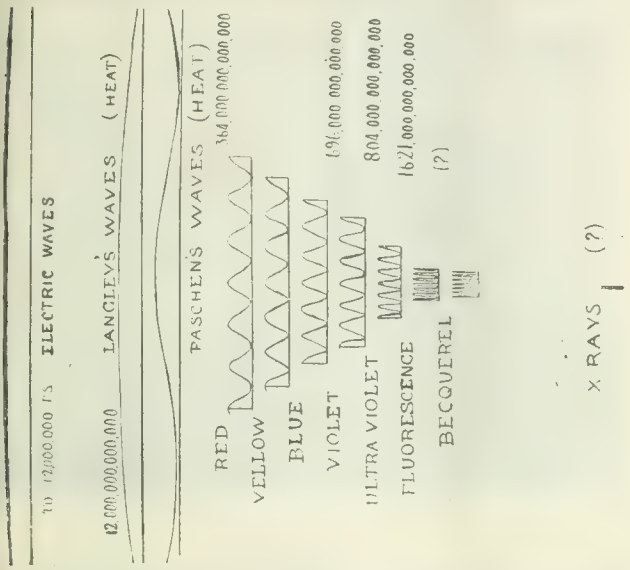


Fig. 1.—Diagrammatic representation of different waves in ether to the right and left of the ordinary light spectrum and including this.

From the clinical standpoint something may also be said of these forces in the same way speaking more particularly of their recent applications in the treatment of chronic affections. Taking them in the same order as above, the constant, faradic, and sinusoidal currents may have been used to improve the general health, but with the exception of the constant currents in rodent ulcer and mercuric cataphoresis lately tried in malignant disease (Massey) they do not at present directly interest us. Of high potential currents as produced by the static machine and so long known to the profession some experimental work has recently been recorded. Much more has been heard of high-frequency currents (so prominently associated with the names of Tesla, E. Thomson, and D'Arsonval) in the treatment of malignant disease, but these will be more fully dealt with in a particular part of this paper. So much for the electric waves.

As far as the heat waves are concerned, we know how much has been done in the past to alleviate pain, and more recently we have had parts of the body subjected to dry radiant heat at temperatures thought to be impossible in the past. Beyond this at present we need not say anything further. When we come to the question of light, however, while less attention has been paid to the red, yellow, and green waves with the exception of Finsen's work in small-pox, the waves, known as violet and ultra-violet have been largely employed, particularly in lupus. Thus we have Finsen's apparatus modified by Lortet, Génoud, Sequeira, and still more recently Bang's iron arc lamp and the applications of the spark of the coil itself by Goerl, Walsham, and Dawson Turner. Of the next force in order less has been heard of in therapeutics in the past, but it is not unlikely something more may be made of them in the future. In all probability physical science will soon fill in some of the gaps in this spectrum between the ultra-violet and the *x* rays.

Thanks to the magnificent researches of Crookes, Becquerel, and M. and Madame Curie, we have the Becquerel rays or the fine bodies of matter coming from them, the so-called electrons given off by uranium salts or from radium and polonium and their salts. These important discoveries have already given some results in the physical world, and three kinds of waves have already been described as coming from the extraordinary radio-active substance known as radium, which is constantly giving out heat and light from some source unknown at present. It will easily be comprehended that if we could stimulate the tissue and produce similar effects as are at present got from the excited Crookes tube by simply applying a salt directly to the parts, much complication in apparatus would be avoided.

Owing to the difficulty in obtaining this ray substance few experiments have yet been made, but the following may be of interest. I obtained some bromide of radium, and having tested its physical properties, such as fluorescence of barium, platino-cyanide, and other salts, the passage of the radio-active substance or waves through wood, aluminium, and the power of making the air a conductor by discharging an electrified body, the following experiment was tried: Keeping in view the resemblances between these phenomena and those observed by means of the *x* rays in the ordinary way, and the dermatitis which followed, I applied two or three milligrams to the skin of my arm. The experiment was so arranged that the waves had to pass through a layer of air and one of mica for one hour only. The immediate result was erythema. Next day there was evidence of a dermatitis the area of which was six times larger than the size of the original salt. On the third day it was evident that the epidermis had been destroyed, and on the fourth there was a small ulcer in the centre of the inflamed patch. For days afterwards there was slight though distinct pain. The evidence of irritation did not disappear for many days afterwards. Becquerel has reported burning of the skin of the abdomen from a few milligrams of radium in a small glass tube which he carried in his pocket, the sore lasting for several weeks. As the result of these and similar observations I am at present conducting some experiments in therapeutics, the results of which, of course, are at present too premature to record.

Of the *x* rays, the last of the forces to which we have here to refer at present, it may be said at once that in the treatment of malignant disease they have been more frequently applied than any of the others. Reference to the medical journals will show that whatever success has been obtained in the treatment of rodent ulcer and superficial epithelioma, most of it is due to the application of the *x* rays. The light treatment has not proved of much service in my own cases at least, and I am pleased to say that Dr. Walsham (to whose apparatus I have already referred, and of which those in charge of the electrical department of the Royal Infirmary think highly) takes the same view. In a private communication to me Dr. Walsham, whose opinion is based upon careful, accurate observation and extensive experience of light treatment particularly, says he prefers *x* rays in rodent ulcer and malignant disease. As far as my own experience goes, if I were asked the question in reference to superficial malignant disease, or in the cavities of the nose, mouth, and throat, which agent I had found the most efficacious, I should unhesitatingly say the *x* ray tube. In stating so I am purposely not saying the *x* rays from the Crookes tube because the electric field outside the Crookes tube, as well as the *x* rays themselves, have to be considered, and I have seen a case of rodent ulcer completely cured with a *x*-ray tube excited in the usual way, but purposely made of such a high vacuum that no *x* rays could be detected by means of the fluorescent screen. My first case treated in this way was one of the most successful, and it was in a patient who had been three times previously operated on surgically. The satisfactory result was obtained in three weeks, and there was no recurrence. The rays were applied nearly four years ago.

APPARATUS.

The apparatus necessary for the production of these different forces is necessarily complicated, and in the diagrams here produced some of the apparatus employed in the Glasgow Royal Infirmary and my private laboratory will be seen. The electrical pavilion in the hospital is an extension of the electrical department which has been in existence since the year 1887, and the necessary funds were obtained owing to the generosity of some of the subscribers and citizens. The new building is independent of the general hospital, but the currents have been carried by means of wires to the different wards. The supply may be divided into three distinct installations. First, the rooms themselves are lighted by the 250-volt circuit from the mains; secondly, a transformer which gives 55 volts and 50 ampères from the Corporation supply; thirdly, there is a gas engine, with dynamo and secondary cells, giving 56 volts and 30 ampères. The last two are intended for all medical and surgical purposes, whether for diagnostic or therapeutic use, and by means of turnover switches either can be used, so that, in the event of a breakdown with the Corporation supply through the transformer, the gas engine and cells can be utilized, or vice versa.

A main switchboard has been fitted up on the Corporation side of the transformer, which controls the whole supply to

the department. This is provided with the necessary starting switches. On the other side of the transformer is



Fig. 2.—Interior of electrical pavilion, Glasgow Royal Infirmary.

a large distributing board with six switches going to different rooms, so as to send the energy where it is required.

The transformer was specially built for medical work, and the voltage was selected because the first apparatus in the house was worked from a similar supply; hence the old as well as the new instruments can be used. It is, moreover, safe to work with such a voltage.

Fig. 2 gives a general view of three of the rooms and in Fig. 3 a transformer and switchboards are seen, as well as three of the sets of Finsen's apparatus for light treatment. In addition, Bang's modification with iron electrodes has been



Fig. 3. Room for transformers and light treatment, Glasgow Royal Infirmary.

fitted up, and Walsham's apparatus for utilizing the electric spark directly from the coil forms a part of the installation.

In Fig. 4 will be seen the static machine for medical purposes and also for the treatment of lupus and other chronic affections, which was built specially for the hospital by Lord Blythswood in his laboratory at Renfrew. The machine is of the Wimshurst type, and has forty plates of 36 in. diameter. It is driven by a one-horse power electro-motor, and has a special fan motor with ventilating shafts and apparatus for driving out any gases which form within the case when the machine is in action. Suitable insulating stools, and tables with discharge rods and spark-gap apparatus, form part of the installation, and there are also a number of electrodes for giving the current to different parts of the body.

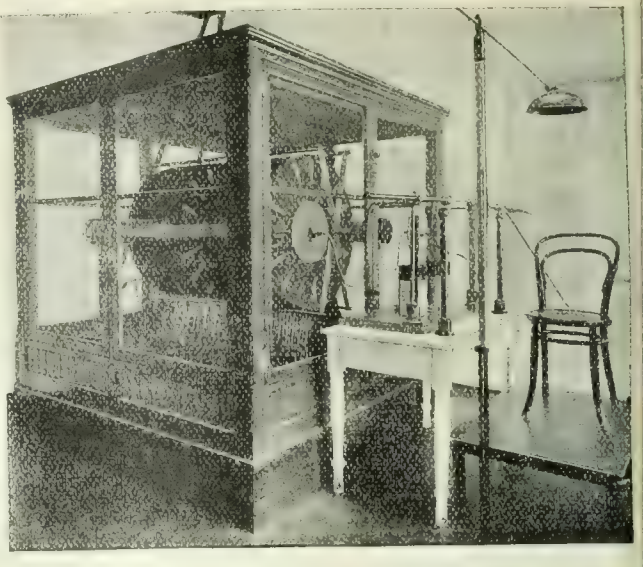


Fig. 4.—Wimshurst machine for high-potential currents, Glasgow Royal Infirmary.

Fig. 5 shows the arrangement made for high-frequency currents. The pattern of D'Arsonval's apparatus employed is that constructed by Dean, of London. On the switchboard, all the arrangements for measuring high-frequency currents, reversers and rheostats for the motors, are provided. A large number of electrodes, including Oudin's resonator, brushes, vacuum tubes, etc., for use in nervous and muscular affections, as well as in the treatment of lupus and rodent ulcer, are included in the equipment. The current is applied to the patients while resting on a specially devised couch.



Fig. 5.—High-frequency apparatus, Glasgow Royal Infirmary.

In Figs. 6 and 7 the arrangements for x-rays are represented Five large coils, capable of giving 10 in. to 14 in. spar respectively, have been included in the installation. All th ordinary forms of interrupters have been fitted up, includin the Wehnelt. A specially-designed switchboard has bee attached to the wall, with rheostats for motors, volt ar ampère meters. There is also a special set of switches, that any one of the interrupters with suitable condensers ca instantly be employed as required for different purposes. Stan and vacuum tubes (Queen's, Dean's, and Cox's record design have been provided as well as fluorescent screens, and all t most recent accessories for therapeutic as well as photograph

purposes. Couches have been provided for taking photographs from above or from below and for therapeutic work, also localizers of the most recent design for detecting the situation of foreign bodies. All the apparatus necessary for the taking and demonstration of stereoscopic photgraphs has been added to the department.

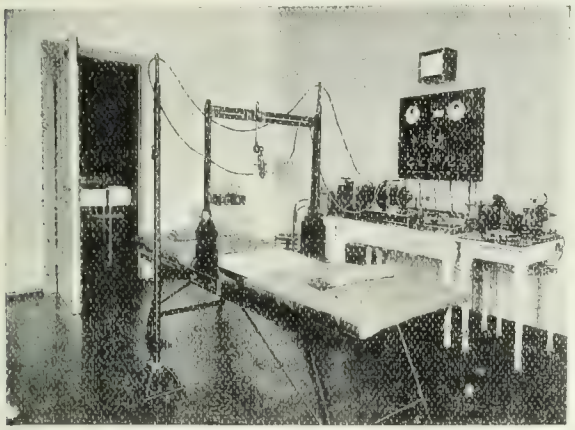


Fig. 6.—*X*-ray department, Glasgow Royal Infirmary (showing arrangement for taking photographs, with dark room, and therapeutic work).

In Fig. 8 will be seen the largest size of Gaiffe's machine built. It consists of a 20-plate machine, each 21 in. in diameter, driven by a one-horse continuous current motor with suitable rheostats to control the speed. The plates are made of vulcanite and can be run up to a 1,000 revolutions per minute at least without risk of fracture. The plates are sectorless, and the great feature of this excellent machine is the quantity of current as well as the high potential obtained.



Fig. 7.—*X* ray department (showing arrangement for taking photographs and therapeutic work).

In this illustration will be seen my own arrangement for utilising the static machine to give high frequency currents, and to which reference will be made further on in this paper.

In addition, there are rooms containing all the rest of the apparatus for medical and surgical purposes, such as illumination of the cavities, transillumination, constant and faradic currents, drills, electro-magnets, and general electric appliances which do not at present interest us, however.

Selection of a Particular Force.

The operator has to consider which of the forces we have been describing will best suit a particular case. In coming to a decision much depends upon the experience of the surgeon himself, but he is influenced by many of the conditions present. Whichever he tries may fail, and it may be necessary to try more than one. For example: In Figs. 10 and 11 will be seen a case of epithelioma which came under my observation. The lady, aged 58, had for many years suffered from what was considered lupus. When I saw her the diagnosis clearly pointed to malignant disease, and this was afterwards confirmed by microscopic examination. She consulted, at my request, Dr. Sequeira, who very properly refused light treatment. She had *x*-ray treatment in London, however, with some success, but recurrence took place. In February, 1902, the mass completely filled the nasal cavity, and had destroyed its contents. Eight months afterwards the whole neoplasm had disappeared under the *x*-ray treatment, while high-potential currents, at first tried, completely failed. Since then a new development took place at the end of last year. The gums near the incisor teeth took on a spongy, swollen, ulcerated condition. This also yielded to six weeks' treatment with the same agent. All pain has disappeared in this case, breathing is thoroughly re-established; but the septum and turbinated bones have all been destroyed. When last seen, three months ago, the interior of the nostril was quite healed over.



Fig. 8.—Twenty-plate sectorless machine (showing arrangement for using high-frequency apparatus).

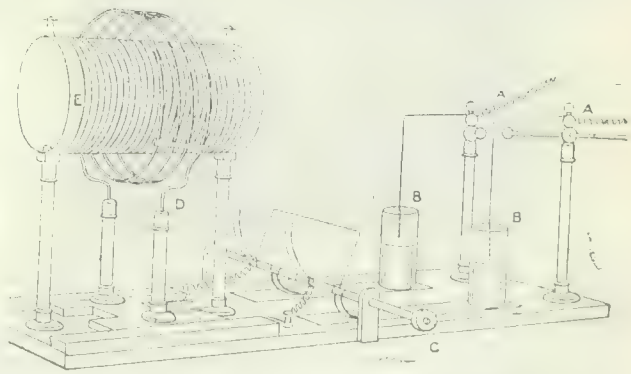


Fig. 9 Diagrammatic representation of Fig. 8.

While in all experimental work it is better to keep to one agent alone, still we have now reached such a stage that in certain cases it may be permissible to combine high-frequency currents or the static machine with the *x* rays. The one may be given constitutionally, and the other locally. Further, much depends upon what is hoped from treatment. For example, alleviation only may be all that can be expected, such as the reduction in size of the tumour itself, the removal of fungating growth, the arrest of foul discharges and haemorrhage. On the other hand, the hope may be to completely remove the neoplasm. Again, the situation of the affection is of the utmost importance, because the best results so far obtained have been either in the superficial parts of the body, or in accessible cavities. Notwithstanding all that has been written upon the subject, we have little to report in carcinoma of the deep structures and internal organs. That *x* rays penetrate and act at some distance is possible. Sheppegrell has reported a successful case of malignant disease

of the larynx with the rays applied through the neck, but in this instance there was no microscopic examination of the tissue to confirm diagnosis. In my own experience, in one case only have I seen even a partial result of this kind. The patient suffered from a large carcinoma of the neck and throat of old standing, and the inner end of the mass filled the hyoid fossa, pressed the epiglottis to the one side, and interfered slightly with breathing, but more with swallowing. After



Fig. 10.—Epithelioma of nasal fossa (February, 1902).

three weeks' treatment, when an *x*-ray dermatitis had been caused externally, the inner end of the mass became inflamed and the throat generally very painful, sloughing took place with slight haemorrhage, and ultimately the pharynx became practically normal, while breathing and swallowing were accomplished with perfect ease. The great mass of the tumour persisted however, and during a month's interval of rest from treatment, the patient unfortunately exposed himself to cold, and, as might have been expected in a man 64 years of age and weakened by disease, died from peritonitis.



Fig. 11.—The same patient as seen in Fig. 10 (September, 1902).

Bryson Delavan, in a paper on the *x* rays in laryngeal cancer (*Medical Record*, October, 1902), says "up to the present time not a single case of carcinoma of the larynx has been cured by the *x* rays." The case above referred to has been published since then. The fact that so little has been reported by way of improvement with the *x* rays in laryngeal cancer is very striking, especially when we consider the number of cases reported as improved at least, and which occurred in the nasal and buccal cavities, and of superficial epitheliomata generally. It is all the more so when we think that the larynx is so situated as to be practically a superficial organ.

Apart from the disease being on the surface, its extent may help one to decide. One case of lupus was sent to me, a lady 54 years of age and who had been 46 years ill. One eye was completely destroyed, the other nearly so, while the face and neck were covered with sores. The disease had invaded the whole of the nasal and buccal cavities, and it was for this last condition she saw me. Nearly all the ordinary methods of treatment had been tried during her lifetime with slight success and constant recurrence, but nothing seemed to arrest the disease. In this case the whole surface and cavities healed up after eight months' treatment with the *x* rays. She offered herself for treatment at one of the London hospitals, but the surgeon refused to try Finsen's light in this instance.

Further, the acute or chronic nature of the case, idiosyncracies, and the fact that some patients suffer more from *x* rays than others may induce the operator to try the high-frequency or the still less painful and irritating high-potential currents. As the result of my own experience I should say that in malignant disease certainly the most powerful influence of all is the *x*-ray tube, because there you have quantity of energy. I go further, and say that if one wishes this agent pushed to its maximum, the best result is got when the tube is excited by means of the coil rather than the static machine or high-frequency current. The question of quantity of energy, however, will be referred to again in this paper when speaking of high-frequency currents. In certain instances it is only by experience that one gets to know what is suited for a particular case, and on this account let me say that most serious results may follow, such as dermatitis and its consequences. Not only, therefore, must a patient be watched as far as the local results are concerned, but the general condition must also be strictly recorded, and the excretory and secretory organs in particular. The changes taking place in the last-mentioned may cause one to change the agent employed.

Question of How the Forces Act Upon the Tissues.

It may at once be said that for the most part we are here dealing with theory. Finsen, recognizing the work of Downes, Blunt, Marshall, Ward, in addition to his own, founds his practice on the bactericidal power of light, and for this reason profoundly impresses his readers with the necessity of expressing all the red colouring matter of the blood from the part upon which the violet rays have to act. This view, however, is not everywhere altogether received. To begin with, if he had failed to satisfy himself about the action upon micro-organic life, his own paper on light as a stimulant might have been quoted in support of the theory that the waves may stimulate the tissues to cast out or destroy micro organic life. Further experience has taught us that the *x* rays can cure lupus without the precautions of pressure referred to, and we have experiments by Wolfenden and others which would seem to indicate that the *x* rays, far from destroying the vitality of micro-organisms, in some instances at least seem to stimulate them. Then, there is a serious difficulty in accepting the bactericidal theory, inasmuch as in rodent ulcer, sarcoma, and carcinoma we have no proof as yet that they are due to micro-organisms at all. Others fall back upon the theory that these forces merely stimulate unknown forces of Nature inherent in all the tissues, or, as we say, the *vis medicatrix Naturae*, which, of course, is a term that explains nothing. Others have tried to reconcile these two views by saying that the tissues are first stimulated, and then the germicidal action begins through their agency. It has been suggested also that while *x* rays first stimulate the growth of micro-organisms, the reproduction is so active and rapid that in the end the virulence becomes attenuated. A recent theory is based upon the view that the tissues of neoplasms have much lower vitality than the normal ones, so that in the destructive action of these different forces the former die before the latter. The truth is, however, that at present we do not know, and much investigation will be necessary ere we do.

Clinical Results.

My own experience in malignant disease agrees with all I have learned of the subject, and the results may be classified under three headings:

First, whatever force is used, in a number of cases the results have been a complete failure.

In the second class amelioration or alleviation of symptoms only has been obtained. There can be no doubt that many workers have seen great alleviation of pain. Indurations have disappeared, oedema and glands (even at a distance as recorded by some) have also been reduced, ulcerated surfaces have been known to take on healthy action and heal after long duration. Proliferating or fungating masses have unquestionably diminished in size, and in some instances the healthy granulations which take their place have been covered with healthy epidermis. General improvement in the patients has been recorded, and in some instances, owing it may be to the restorations of functions, an increase of weight when the patient has previously been wasting has also been seen. In many instances, however, the effects have been temporary only. In my own experience I can say that I have seen some of these results follow the application of high-potential currents and also high-frequency currents; but I should say for indurations, oedema,

glands, and ulcerating neoplasms, *x* rays have been the most efficacious, and, of course, only in cases of superficial carcinoma or within accessible cavities.

In the third class of cases—a smaller one—the lesions have altogether disappeared. It is to such cases that the term cure, if admissible, is to be applied. In saying so, I wish it to be clearly understood that I do not here refer to lupus or scrofuloderma, but to sarcoma and epithelial affections. Even if we regard rodent ulcer as a form of carcinoma, from its clinical history, glandular involvement (or absence of it), slow progress, and rare recurrence, it had better be kept in a class by itself. For therapeutic purposes, whatever be the ultimate outcome of the discussion between different pathologists as to this affection being classed as a carcinoma or not, such an arrangement may save confusion. It is scarcely necessary to point out that when such cases are described as successful cures of carcinoma the layman is not unlikely to interpret the statement as if it meant "cure of cancer." What the public mean by cancer usually is the virulent and serious type affecting too often the internal organs. Such views are apt to mislead our patients or their friends, and to raise false hopes in a class of cases for which none of these forces can as yet bring about a cure. That rodent ulcers have been known to heal by one or other of these agencies must now be accepted as a fact, and many cases are recorded from different centres. In a smaller number of cases—when we think of the many workers and the number of experiments made, it would be fair to say in a very small number of cases—genuine malignant tumours of the skin, mammae, and some within accessible cavities have disappeared. Such cases I have myself seen and placed on record. In a still more limited number of cases sarcomatous tumours have also disappeared. What the proportion of satisfactory results may be to the number of failures we cannot now say, and time will be required for the elaboration and collection of statistics ere an authoritative opinion can be ventured upon.

With regard to the agent employed with any prospect of success, in my own experience the *x* rays have been the most efficacious, and a reference to medical literature will show that most workers have selected this agent. It need hardly be pointed out that before any reasonable or accurate view can be taken of a case or series of cases, the true diagnosis is of vital importance, and whenever possible it ought to be confirmed by microscopical examination. This has, of course, been done in some of the cases reported, and even the histological changes before the disappearance and during absorption of the tumour as well. At present, whatever views may be held upon the subject, it should be remembered that these processes are not without danger, as it has been stated that in some instances dissemination has taken place and other organs have become affected. A few workers in *x* rays have developed malignant disease, and in one case at least there was a fatal termination. Further, there is the great question of recurrence which undoubtedly has occurred. Generally speaking, it is impossible at the present day to given an opinion about this, inasmuch as sufficient time has not yet elapsed to supply statistics upon which we may rely. Certain it is that notwithstanding that these agencies have been for the most part employed in advanced cases, most operators as yet would not suggest that the ordinary surgical procedures should be set aside for them. Most workers have so far recommended them in cases of recurrence after surgical operation or in inoperable cases. Lastly, I think it fair to say, however hopeful a view any one may be inclined to take of the results, one is less impressed with the success which has yet attended the applications than the amount of work yet to be done.

High-Frequency and High-Potential Currents.

High-frequency and high-potential currents differ in one respect clinically interesting, inasmuch as the former is an alternating current, and so each electrode is alternately negative and positive, whereas with the latter one side of the machine is negative and the other positive. The possibility of doing away with the current on one side in high-frequency apparatus has often suggested itself, and it is not unlikely that this will one day be accomplished. When this is done—and I have already partly succeeded in so doing—one will be able to compare the effects of the two methods better than at present. As a rule the high-frequency coil is excited from the mains by means of an alternator, or in this country most frequently by means of an induction coil. It is possible, however, to use the static machine instead of the coil, and in Figs. 8 and 9 will be seen my own arrangement for so doing. This consists of a static machine with Leyden jar condensers, suitable in size, and a small d'Arsonval coil. With a view to being able to utilize the active or passive discharge when applying them to the patient I have introduced a reverser with very satisfactory results. My own experience has been limited to the excellent apparatus of Cox, Dean, and Gaiffe.

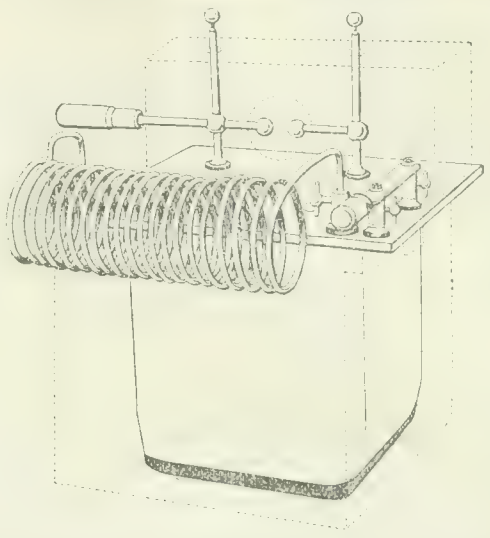


Fig. 12.—Gaiffe's arrangement with oil condenser for high-frequency currents.

When reading the accounts in the medical journals one is constantly struck with the tendency to speak of the great intensity or its effect—the so-called *effleuve*—as measured by the length of the spark. In my own experience, whether dealing with *x* rays or any of the other forces under consideration, I have found it of great advantage to have quantity, and this remark applies to *x*-ray photography as well. I know that other workers do not agree with this, and some Continental operators seem to think that the high frequency current excited by the static machine, not the coil, will be found more efficacious in the treatment of malignant disease. I do not wish to speak dogmatically upon this point, but others share my views. To my friend Dr. Lenard of Philadelphia I am indebted for the full description of a high-frequency apparatus manufactured by Leeds and Northrup, the distinguishing feature of which is the enormously powerful discharges or sparks, some of them ⅝ in. thick and 6 in. in length, which may be obtained with this machine. What the effects of such a quantity of energy may be remains to be seen, but the apparatus seems to be well constructed and capable of the finest gradation. In this connexion Mr. Isenthal has shown me an electrode for local treatment in which the sparks are very thick, and the results of the application of which will be watched with interest. For general application of the high frequency on the couch I have found the apparatus seen in Fig. 12 of the greatest advantage. It is made by Gaiffe, and consists of an oil condenser with one single thick spiral copper wire or tube really. Here there is no secondary coil, but by using a lesser or greater number of turns of the apparatus and tuning by means of a suitable number of plates in the condenser and the spark gap, the effects are most satisfactory. With such an arrangement, it is easy to give from 100 to 500 milliampères or more. Speaking of high-potential currents in connexion with this question of quantity, the new twenty vulcanite plate machine of Gaiffe's which is sectorless gives a magnificent result. In my own experience I confess to having pushed quantity in both high-frequency and high-potential currents to a very great extent.

Both forces may be applied generally to a patient or locally by means of special electrodes. High-frequency currents may be applied in various ways, the principal being auto-conduction auto-condensation, or locally. In this country the two latter are mostly used. In the first the patient or a part of his body is enclosed in a solenoid. In auto-condensation the patient is resting on one or other of the well known forms of couch made for the purpose. With this method it is easy to get comparatively accurate measurement of the dosage given, a fact of great importance.

While many workers when treating a localized affection of

the skin or accessible cavity, whether it be simple or malignant, prefer to apply the current locally by the well-known electrodes of Oudin and Bisserie, still many of them like to combine the general with the local treatment. Further, in one reported case which caused considerable interest owing to the so-called cure of a tumour in the region of the cervix uteri, the treatment was entirely general.

In dealing with neoplasms I have seen improvement with the high-potential currents as well as the high-frequency. The latter I regard as more powerful, while the former is less painful. The methods and results obtained are described in the *Transactions* of the Glasgow Medico-Chirurgical Society during the last two years. Suitable electrodes for introducing into the nasal and pharyngeal cavities for both currents are also there described, and one or other was chosen not because they were better than the *x* rays, but simply because they could be applied where it was impossible to use the latter.

While it is not within the scope of this paper to deal with the general physiological and therapeutic effects of these currents it is necessary in trying to do so briefly to explain what is occasionally seen when treating patients for malignant disease. For example, improvement without cure may take place in this as well as in any other chronic affection; but the same remark may be made about any other form of treatment which relieves suffering or gives strength to the patient. While the physiological effects of the static machine have been studied—and the general invigoration and soothing effects of these are well known—still more work has been done in connexion with high-frequency currents. In this connexion let me say that the profession is greatly indebted to Dr. Denoyes, of Paris, for the collection of facts to be found in his work on high-frequency currents published last year. The results therein described as having been obtained by d'Arsonval, Tuerton, Quillaume, Tripet, and others on the circulation, respiration, and secretion may be studied with advantage by every one engaged in this work. Now, it is generally claimed for these currents that they will produce analgesia, changes in the arterial tension, increased activity in the action of the skin on the respiratory and secretory organs, and in some cases diminution of toxicity when these currents have been passed through a diphtherial toxin. Many patients in general terms describe the immediate effects as exhilarating, although this is often followed by a period of marked depression. Accepting these statements for the moment as being accurate, let us ask the question how far they may explain improvements in patients suffering from malignant disease. Pain may be soothed and it is quite possible that vasomotor changes by alteration of the blood supply may reduce the fungating mass which is giving off offensive discharges or blood. Nutrition may improve, the patient's weight may increase, sleep may be less disturbed, and yet as far as the malignant tumour is concerned the patient may not be cured, indeed he may be very far from it. The more carefully one watches relief to each of these symptoms the more one is impressed with the necessity and difficulty of giving the true value to each. As an example of this let me quote two cases bearing upon the subject of pain. In one case of severe neuralgia of the second division of the fifth nerve, where after months of intense suffering and consequent loss of general health and when nearly everything else had been tried of a constitutional or local nature to increase the strength or assuage the pain the removal of the teeth and afterwards of the alveolar process by surgical procedure had failed, the pain completely disappeared after three weeks' treatment by direct local application with Oudin's electrode, using high-frequency currents. There was no recurrence for six months, at the end of which time the patient I believe died of malignant disease of the liver, but the medical attendant assured me the pain in the face never returned. So far this case raised considerable hopes in the method. In a second case, however, where, after months of suffering and great deterioration of the general health and where 1 in. of the third division of the fifth nerve had been cut out after opening the canal, recurrence took place with the same intense pain. The same method above described was tried with success because for one year there was no pain. The patient herself anticipated when recurrence took place that another course of high-frequency currents would be followed by the same result, but the application of them, and in mild doses, exaggerated the pain so much that I at once recommended an operation sufficiently extensive to remove the whole of the inferior dental nerve on the affected side. For these and other reasons, I do not look upon high-frequency currents as a substitute for operation, although they may sometimes stand between the ordinary remedies and operation. The same necessity for lapse of time before forming an opinion, and the need of great care in drawing conclusions applies to nearly every other symptom which may be ameliorated by the methods of treatment to which we at present refer.

Granting, therefore, that high-frequency or other currents may cause improvement locally or constitutionally in those afflicted with malignant disease, the grave question has to be faced, in view of the expectancy which has been raised in certain quarters, how far they have as yet effected cures.

Had these hopeful views of cure been expressed or founded upon the results which have already been obtained by means of the *x*-ray tube, they would probably have been more easily understood. Reference to medical literature will show that most workers prefer the latter. Dr. James Allan (*West London Medical Journal*, July, 1902) reports disappearance of the tumours with high-frequency currents in two cases of sarcoma and one of epithelioma, and other cases have been recorded, a number of these being in the region of the uterus. With high-frequency and high-potential currents in genuine malignant disease so far in my experience, while I have seen amelioration I am not in a position to speak of any case as cured. Not only so, but I have taken the opportunity, wherever it was possible, to ask many active workers if they could refer me to any real cases of cure where the diagnosis had been verified by microscopic examination. The invariable answer has been amelioration, not cure. While this applies more particularly to superficial cases, or where the disease was within accessible cavities, it does much more so in what the public mean by cancer, that is to say, the gravest cases of all and those situated in the internal organs, for all of which very little, if anything, has been done. In making this statement I do not wish it to be assumed that developments in the future may not take place, or that even better results will not be obtained, but I am speaking mainly of the results as they present themselves at this time.

THE *X* RAYS IN THE TREATMENT OF LUPUS, RODENT ULCER, AND OTHER SKIN DISEASES.

BY

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THE therapeutic potency of the *x* rays has of late been vaunted with so much sensational exaggeration in the daily newspapers that there is some danger of this promising method becoming enveloped in a miasmatic vapour of quackery that must seriously interfere with the development of its practical usefulness. The mischief thus wrought is twofold: False hopes of cure are excited in the minds of sufferers and their friends; and the treatment itself comes to be regarded by medical practitioners as pitch that defiles them that touch it. In this way, a thing having in it large possibilities of good may be unjustly discredited in the eyes both of the profession and the public. Hence it is at the present time especially important that the results obtained by means of the *x* rays by practitioners whose work is open to the inspection of their professional brethren should be fully and accurately recorded with the single purpose of showing what has been attempted and what has been done. Observers of equal honesty receive different impressions from the same phenomena, and even their records of facts take the colour of their mental temperament. Inexperience is generally prone to an unfounded optimism. On the other hand impatience and want of attention to detail lead to an equally unfounded pessimism. One of the obstacles to the progress of medicine is what may be called the summary mode of dealing with methods on their trial. A method should not be condemned because, applied improperly and in unsuitable cases, it fails. These are perhaps truisms, but we think it necessary to insist upon them here because we have seen enough both in this country and abroad to convince us that the want of success obtained by some who have tried Finsen's light treatment and the *x* rays is to be attributed not so much to the method as to the operator.

In previous papers[1] we have reported the results obtained

by us in the treatment of lupus, rodent ulcer, and other affections of the skin by Finsen's method, alone or combined with the *x* rays. It may be stated in general terms that our results, though not so brilliant as those recorded by Finsen and others, have on the whole been satisfactory. Of 65 cases of lupus vulgaris, 11 may fairly be claimed as cures, no relapse having occurred for periods varying from six months to two years. In all these, with one exception, the area of disease was small. In no case in which it was widespread has a complete cure been effected, though in many the extent of the disease was greatly reduced. In most of the remaining cases there has been noted a degree of improvement proportionate to the length of time they had been under treatment. In cases in which ulceration was a marked feature the light method was less useful, but healing rapidly took place under the influence of the *x* rays; the latter also was employed in cases in which the seat of the disease was a mucous membrane to which the light could not be accurately applied. Of 11 cases of lupus erythematosus, treated by Finsen's method alone, great improvement was observed in 7. Of 27 cases of rodent ulcer, in most of which the two methods were used in combination, favourable results were noticed in 12; in most of these, however, slight relapses have called for further treatment. In 9 of the 27 cases the disease was in the non-ulcerative stage and of small extent.

We would here interpose a word of caution as to the interpretation of these statistics. Mere figures do not convey an adequate impression of the beneficial effects of the treatment. In many of the cases every known method of treatment had previously been tried in vain, and in some of the worst where no visible improvement could be brought about in the disease itself, its spread was checked. It must further be remembered that our whole experience covers a period of only three years, too short a time for the definitive cure of diseases so refractory to all other methods of treatment.

In the papers to which reference has been made we have discussed the mechanism of Finsen's light treatment, the conditions which favour operation, and those which tend to hinder its effect. In the present communication we propose to deal more especially with the *x* rays. The use of these and of the light treatment has, however, been so intermingled in our practice that it is not altogether easy to consider them separately. By some writers, indeed, the *x* rays have been included under the general designation of light treatment. It may not be superfluous, therefore, to recall the fact that they have nothing to do with light in the ordinary sense of the word. The term "light treatment," as we have pointed out elsewhere,[2] should be reserved for the use of the rays of ordinary spectroscopic light and the ultra-violet rays; in fact for all practical purposes it may be restricted to the chemical or actinic rays, namely, the blue, visible violet, and ultra-violet, which are the therapeutically active rays.

The mode of action of the *x* rays on diseased tissue has not yet been clearly determined. Their action was at first believed to be mainly bactericidal. This theory had, however, to be given up for two reasons. On the one hand, it is very doubtful whether the rays possess the property of destroying micro-organisms—indeed, the majority of investigators believe that they stimulate their growth; on the other, good results have been obtained in diseases in the production and evolution of which microbes play no part whatever.[3] Their effect has also been attributed to the corrosive action of minute platinum particles; to the generation of ozone in the skin (Tesla); and to electric waves given off from the tube (Schiff). They appear to have a marked influence in retarding osmosis. London[4] thinks it possible that it is in this property of the *x* rays that the secret of their biological and therapeutic action lies. By retarding the osmotic processes throughout the system they cause changes in metabolism which must influence the nutrition of the tissues.

On the skin the *x* rays often cause an inflammatory reaction varying in intensity according to the distance and degree of exhaustion of the tube; the quantity and potential of the current; and the construction of the interruptor, coil, or other apparatus employed. Neisser compares the action of the rays on the skin to the local reaction produced by tuberculin. Kaposi held that they acted on the blood vessels, producing an alteration in tone, bringing about healing and absorption of the granuloma by fatty degeneration or molecular change. Scholtz experimented on various animals and found microscopic changes consisting of swelling and oedema of the epithelial cells and clumping and shrinking of the nuclei with vacuolation of the protoplasm of the cells. Mitoses were rarely seen, but many of the epithelial cells showed nuclei which seemed to be in process of dividing. There was marked oedema of the corium, its fibres being swollen and staining badly. The elastin was more resistant than the collagen. The connective-tissue cells were affected in a similar manner to those of the epidermis, as were also the cells of the sweat glands and hair follicles and the intima of the larger blood vessels. There was abundant inflammatory infiltration of cells, chiefly leucocytes. Masses of leucocytes were present beneath the epidermis. The mast cells in the corium were increased. Towards the centre of the lesions there were superficial vesicles in the stratum corneum. Scholtz concluded that the rays cause a slow degeneration of the cellular elements of the skin both of epidermis and corium, the nucleus as well as the protoplasm being affected. There is also a less-marked degeneration of the fibrous elements. As soon as the cellular degeneration reaches a certain degree an inflammatory reaction occurs in which the blood vessels become dilated, and there is an extravasation of serum and leucocytes. The latter seem to act as phagocytes and completely destroy the degenerated cells. The microscopic changes caused by the action of the *x* rays on the tissues in various pathological conditions will be referred to in connexion with the diseases in the treatment of which they have been used.

Diseases Treated by the X Rays.

The *x* rays can be used either alone, as a preliminary to the light treatment, or as complementary thereto. The diseases in which they are said to have been successfully employed are lupus vulgaris—especially the ulcerative form—scrofuloderma, tuberculous osteitis and tuberculous glands, rodent ulcer, epithelioma, sarcoma, lupus erythematosus, acne rosacea, actinomycosis, mycosis fungoides, Paget's disease, xanthoma, naevi, eczema, psoriasis, favus, sycosis, ringworm, and hypertrichosis. The list of affections in which the rays are used is constantly lengthening, and only the more important diseases in the treatment of which we have personal experience will be dealt with here.

Lupus Vulgaris.

We have treated the majority of our cases of lupus vulgaris with the Finsen light, and the *x* rays have mainly been employed as a preliminary in cases in which there was extensive ulceration or considerable oedematous thickening. The effect of the rays in bringing about rapid healing of ulcers has in our experience been so marked that we look upon ulceration as a definite indication for their use. Their drying effect is particularly striking. Even one application often causes a notable diminution in the discharge from an ulcerating surface; this fact suggests that extraction of moisture from the part may be an element in the healing properties of the rays. In cases of severe deep ulceration relatively better results have been obtained than in slight superficial sores. This may be accounted for by the fact that in the deep ulcers little of the lupus growth is left and the new tissue is more healthy. When the ulceration is superficial healing may occur over a mass of deep-seated lupus, and breaking down is more likely to occur. In a case in which there was severe ulceration of the mucous membranes of the lips and corners of the mouth some improvement followed the continued application of the Finsen light, but permanent healing resulted from a few exposures to the *x* rays. In another case a small superficial ulcer of the skin of the neck proved refractory to the light treatment but the application of the *x* rays produced rapid healing. In this instance, however, the healing was not permanent, and the ulcer had eventually to be excised.

Rapid absorption of oedema under the influence of the *x* rays has been observed in several of our cases. In one in which there was marked oedema and protrusion of the upper lip with ulceration of its under surface and of the gums, the lip regained its normal shape and consistence, and the ulceration healed. This case was treated over a year ago and no recurrence has taken place. In the case with ulceration of the angles of the mouth referred to above, the upper lip was also tense and protruding owing to oedema, and the result of treatment with *x* rays was equally satisfactory. Improvement is also taking place in two cases of extensive oedema of both sides of the face, in one of which there is also oedema of the lobes of the ears.

When the disease is extensive the *x* rays may be used as a preliminary to the light treatment. The advantage of this plan is that a large area may be treated at a time. In dealing with extensive surfaces care must be taken not to cause severe dermatitis. We think it doubtful, however, whether permanent

results can be obtained without the production of some degree of inflammation.

When mucous membranes (lips, gums, nostrils, etc.) are the seat of lupus, the *x* rays are, in our experience, more effectual than the Finsen light. When the inside of the nostrils is involved there is no choice, as the region is inaccessible to the light rays; in all such cases, therefore, we have used the *x* rays. The immediate results have been very encouraging, obstruction being quickly relieved, discharge ceasing, and ulcers healing after a few applications. It is only after a long course of treatment, however, that results of any degree of permanency can be obtained, and the tendency to relapse is very marked. We have treated only one case in which the palate was affected; it was extensively scarred from frequent scraping operations, and the *x* rays produced no beneficial effect.

Another point on which we wish to lay stress is the palliative use of the *x* rays. Patients who, either owing to advanced age, ill-health, exigencies of occupation, residence at a distance, or other causes are unable or unwilling to give up much time to treatment may get considerable relief from a short course of *x* rays. More than once we have succeeded by this means in checking the spread of the disease. It may be added that this statement also holds good in regard to cases of malignant ulceration.

Although the immediate effects of *x*-ray treatment, especially in cases in which there is extensive ulceration are so good, our experience so far has been that the initial rapidity of improvement is unfortunately not maintained. Secondary conditions (ulceration, discharge and oedema) are relieved almost at once; but in respect of eradication of the disease, progress is disappointingly slow, and failure is not infrequent. Opinions differ as to the possibility of entirely destroying the granulomatous tissue. Many cases have been reported in which nodules have remained after long-continued treatment. In non-ulcerative lupus the results seem to be less satisfactory as regards complete destruction of the foci of disease. Observers also differ as to the advisability of producing a reaction in the part. It seems probable that unless a certain amount of inflammatory change be set up there is little chance of permanent destruction of the granuloma and that a somewhat severe reaction is more likely to bring this about than a slight superficial inflammation. An intense reaction is, however, very painful, and if this be aimed at only a small area can be exposed at a time. The scar also suffers if suppuration ensues. In some of our cases marked improvement in the disease has followed severe reaction, but even when this has been repeatedly produced relapse has occurred again and again. In the case of an ulcerated surface there seems to be less risk of dermatitis. It is the epidermic cells, more especially in hair follicles, which react so readily to strong stimulation, not the underlying connective tissue. It may be mentioned that very inflammatory cases of lupus react more quickly and severely, the stimulation of the rays adding to the inflammation already present. Milder applications and longer intervals between them are therefore required in such cases. By microscopic examination of fifteen foci at various intervals after exposure to the rays Scholtz found that they caused a great alteration in the character of the lupus nodule; the cells were swollen and there were large numbers of leucocytes, especially polynuclear, between the plasma cells, with a number of exceptionally large giant cells.

Rodent Ulcer.

Much of what has just been said concerning lupus may be applied to rodent ulcer. Even in apparently hopeless cases the *x* rays may be productive of marked benefit. They sometimes cure, and scarcely ever fail to relieve. It may indeed be said that there is no case beyond reach of the palliative action of the rays. Relatively better results are obtained in extensive ulcers. Unless underlying bone or periosteum is involved the base of the ulcer is generally fairly healthy, the active disease being to a large extent limited to the spreading edge; healthy granulating tissue is rapidly formed and heals with a sound scar. Sometimes where destruction has been rapid the spreading edge itself seems to have been ulcerated away and large cavities left after healing present no trace of the disease. In several of our cases deep cavities in the cheeks and other parts of the face have healed and have since remained sound. In the majority of ulcers, however, some of the infiltrating growth remains at the edge, and requires prolonged and strong applications of the rays before it yields; sometimes it proves absolutely refractory. In one or two cases, after large areas of ulceration have completely healed, small foci have remained on which no effect has been produced by the *x* rays. Invasion of bone also makes the case much less favourable for treatment by the rays. When the ulcer is small it heals, as a rule, before the hard edge disappears; in such circumstances we have found a few applications of the Finsen light sufficient to destroy the edge. We have treated a considerable number of small non-ulcerative rodent ulcers with Finsen light alone with excellent immediate results. As, however, relapse has taken place in several of these cases, it is now our practice to use the light first to break down the growth and cause exfoliation, following up this result with the use of the *x* rays.

As in the case of lupus, we think that a certain degree of reaction is beneficial, and leads to more rapid absorption of the growth. In general terms, it may be said that rodent ulcers require stronger applications than lupus, and as the extent of the disease is generally smaller than in lupus such applications are better borne. In a very extensive case involving the eyelids and nose[5] marked improvement followed prolonged treatment. Recurrence, however, soon took place and the treatment was pushed until a rather severe dermatitis was set up, since when there has been no recurrence. The cases of rodent ulcer we have treated have been in all stages. We have found that the small non-ulcerative varieties of rodent ulcer are more effectually treated by Finsen's method followed, if necessary, by *x* rays, and the large ulcers by *x* rays followed, if necessary, by the light treatment. In other words, if there is no ulcer the tissues should first be broken down by application of light; if there is an ulcer it should be treated with the *x* rays, any remaining growth being treated by the chemical rays. Relapse has occurred in the majority of our cases after a longer or shorter interval of time, but some have remained free from recurrence for varying periods up to the present time. In a few cases we have been able to do no more than hold the disease in check, relapse occurring as soon as treatment is discontinued.

Carcinoma.

The *x* rays are, as far as present experience goes, applicable to the treatment of carcinoma only with strict limitations. The progress of rodent ulcer is so slow, and metastasis so rare, that there is no risk in the employment of measures which take some time to produce their effect. On the other hand, in the case of carcinoma, every hour is of importance, and in all cases where the disease is still completely within reach of the surgeon's knife, immediate operation is imperative. But in cases that are past all surgery a hope, not indeed of cure, but considerable palliation, is opened up by the use of the *x* rays. The drying and healing effect of the rays on ulcerating surface in lupus has already been pointed out. The same holds good, though to a less extent, with regard to the ulcerations of malignant disease. The most marked effect of the rays, however, in cases of cancer, is the relief of pain. In this way life has been made fairly comfortable in many cases where previously it was little better than a prolonged agony. But though the palliative effect is considerable, up to the present nothing in the nature of a cure has been reported.

Another direction in which the rays find a useful application is in the prevention of recurrence after the disease has been removed by the knife. Superficial nodules can be destroyed as soon as they appear. In the treatment of carcinoma by the rays our experience has been that inflammatory reaction is harmful; this should therefore be carefully avoided. We are inclined to think that weak exposures should be given, especially in acutely inflammatory conditions. The chronic indolent cases appear to do best, while any pre-existent inflammation is likely to be aggravated by the stimulant or irritant effect of the rays. With regard to the histological changes resulting from the action of the *x* rays on cancerous growths there is not much to be said. According to W. F. Brook the epithelial elements of the cancer disappear, but the fibrous tissue remains unchanged, the loosening of the adhesions being due rather to general relaxation from diminution in bulk than to any dissolution of cicatricial tissue. In a case under his care in which the "lump" after 50 exposures, gradually increased to three-quarters of an hour, was reduced to half its original size, excision was performed, and an examination of the tumour was made by Mr. Shattock, who reported to the Pathological Society of London[6] that no degeneration of any kind or cell lysis had been induced in the carcinomatous epithelium, no phagocytic invasion of the epithelium was in

progress, and on every side the growth was in an extending condition. There was nothing in the amount of lymphocytic infiltration in the mast cells and Unna's plasma cells which might not be met with in cases where no treatment had been carried out. The clinical diminution in size of the mass and the loosening of its deep connexions were difficult to explain; possibly they were due to the disappearance of a sub-inflammatory oedema. Mr. Shattock expressed "profound disappointment" at such a negative finding. One of the most recent writers on the subject, E. A. Codman, of Boston,[7] thinks the effects of the *x* rays in cancer are due to stimulation of the nutrition of the part rather than to destruction of the malignant tissue.

OTHER DISEASES.

In regard to the effects of the *x* rays in other diseases we can only give a rapid summary of cases reported by various workers; our own experience does not yet justify us in expressing a definite opinion on the value of the results. Some mention of them is necessary in order to show the range of therapeutic possibilities offered by the rays.

Keloid.—We have treated a few cases of keloid with the *x* rays, in some of which there has been decided diminution in the growth. The effect of the treatment in easing pain has, however, been very marked.

Lupus Erythematosus.—This intractable disease yields much less readily to the therapeutic influence of light than lupus vulgaris, and the results of *x*-ray treatment are still less favourable. All our cases save one have improved considerably under the light treatment, although the improvement in some of them has been slow. In most there has been a tendency to relapse soon after discontinuance of the treatment. We have not treated any cases with the *x* rays, but good results have been obtained by Schiff, Jutassy, and others.

Acne and Rosacea.—Hyde, Montgomery, and Ormsby report that in two extensive and very severe cases of acne, which had resisted for months all efforts at treatment, the eruptive symptoms disappeared completely under the influence of the *x* rays. Jutassy, Scholtz, Schiff, and Hahn also observed favourable results in rosacea.

Eczema.—Good results have been reported by Hahn and Albers-Schonberg, Hyde, Montgomery, and Ormsby, and others. Childs treated a case of eczema of the perineum and thigh in which the itching and then the eczema disappeared after six exposures.

Psoriasis.—We have seen good results in chronic patches of psoriasis. Hyde, Montgomery, and Ormsby treated thirty-two cases, causing in each a temporary disappearance of the lesions. From four to ten treatments in a given group of lesions were usually sufficient to cause these to disappear entirely. Codman[8] says that in his own experience the effects of the *x* ray in causing the disappearance of psoriasis and chronic eczema is "little short of the miraculous."

Hypertrichosis.—Schiff holds that radiotherapy is the only radical treatment for hypertrichosis, even when compared with electrolysis. In May, 1898, he reported with Freund, a series of seven cases of epilation. Jutassy also had good results. In nine cases treated by Hyde, Montgomery, and Ormsby, the hairs were removed in from sixteen to twenty treatments on a given area. In five there was a return at the end of six weeks or two months of a considerable portion of the hairs. After another period of two months a few hairs are again returning.

Sycosis.—In Schiff's experience, after the shedding of the hair no new pustules appeared, and secretion and scab-formation ceased; but even before the shedding of the hair there was a noticeable diminution of the inflammatory processes, and the more striking inflammatory infiltration in the surrounding tissue disappeared. After seven to eleven sittings the hair became loose and fell out spontaneously or with slight traction. The redness and all other appearances of the disease disappeared in the course of the next ten or twelve days. The affection returned in certain cases after from two to four months, but in a number of cases the hair grew again as before without any relapse.

Ringworm.—Whitfield showed a case of ringworm which he had treated by means of *x* rays at the Dermatological Society of London.[9] Exposures of ten minutes to a moderately high tube at a distance of 4 in. were given. After fourteen exposures a slight blush was present and the hair seemed to be loosening. Treatment was then stopped, and in the following week a rapid shedding of the hair took place, the sound hairs coming away before the stumps. The patch became completely bald and was apparently cured. At the time the case was shown the hair on the patch first treated was just beginning to show itself again in the shape of fine and healthy down. Hyde, Montgomery, and Ormsby report "no success whatever," but they feared to use the rays freely for fear of producing permanent alopecia.

Favus.—Schiff treated favus by exposing the whole hairy scalp to the rays, and continuing the treatment till complete epilation was produced. All his cases have remained permanently cured. It may be doubtful, however, whether this result is due exclusively to the *x* rays, as carbolic ointment was applied after epilation.

Mycosis Fungoides.—This terrible disease on which no treatment previously tried had any effect, has to a certain extent yielded to the *x* rays. Allan Jamieson[10] has recorded a case in which "not only did the tumours melt wholly away, but the thickened patches likewise disappeared under the influence of the rays." Jamieson thinks that "what has been accomplished in the way of cure of the fully established disease warrants the hope that attacked betimes still better results will be obtained." A striking illustration of the beneficial effects of the rays in mycosis fungoides was displayed at a meeting of the British Society of Dermatology on May 13th by E. Stainer. The patient appeared to be completely cured—for the time at least. The *x* rays have also been employed by various practitioners with more or less advantage in alopecia areata, naevus, xanthoma, varicose ulcers, actinomycosis, Paget's disease, elephantiasis, Hodgkin's disease, and leprosy.

CONCLUSIONS.

Our experience of the *x*-ray treatment may be summed up in the general statement that, while it has a well-defined sphere of usefulness, it is in the case of lupus vulgaris much inferior in curative efficacy to Finsen's light treatment. The use of the rays, however, supplies certain shortcomings of the light treatment, as they can be applied to cavities inaccessible to the latter. In dealing with lupus of mucous membranes the *x* rays are more effective. For the healing of ulcerated surfaces and for the relief of pain they are especially indicated. The combination of the two methods, reinforced, if need be, by the use of pyrogallic, salicylic, or carbolic acid, or other caustic applications, may be trusted to give good results in cases of lupus, in which the disease is not too extensive to be overtaken in its development by the therapeutic agencies. As to the permanency of these results it would be rash at present to speak too confidently. But there is good reason to believe that the disease may be kept under control if the case is watched and treatment applied as there is any appearance of recurrence.

In regard to rodent ulcer, practically the same thing may be said with certain limitations. Here in our experience relapse after a varying period of time is the rule, and in some cases the most that can be done is to keep in check the extension of the disease.

Our experience of the *x*-ray treatment in other skin affections is too limited to form the basis of a definite conclusion.

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FURTHER OBSERVATIONS UPON THE TREATMENT OF RODENT ULCER BY THE *X* RAYS.

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IN February, 1901, I published in the BRITISH MEDICAL JOURNAL a preliminary paper upon the treatment of rodent ulcer by the *x* rays. My observations were based upon 12 cases treated at the London Hospital between June, 1900, and January, 1901. The immediate value of the treatment was demonstrated in a striking manner, but, of course, nothing could be said as to the permanence of the results. Since the date of the publication of that paper I have had nearly 100 cases of rodent ulcer under my care at the London Hospital and privately, and the satisfactory results of the *x*-ray treatment then reported have been fully maintained, and a large number of successes have been published by other workers. I propose to put on record here the impressions which my further experience has given me, and shall especially refer to the changes produced in the growth, the question of recurrence and also to the selection of cases, and the conditions which favour success.

THE CHANGES PRODUCED IN THE GROWTH.

That rodent ulcer is a form of cancer is generally recognized, but there is still doubt as to the exact elements of the skin in which the growth starts. It begins obviously in the derma, and originates in some of the glandular elements, but whether the actual starting point is the hair follicle, the sebaceous gland, or the sweat gland is still debateable. In some of my sections the character of the cells of the neoplasm and the effect of staining reagents lead me to the belief that in many cases the starting point is the hair follicle. In several instances the point of origin has been a mole. On the other hand, there appears to be evidence that the growth may start in the sebaceous glands. The point of origin is of interest therapeutically, because we know that the *x* rays have a marked effect upon the hair bulbs, causing a rapid shedding of hair. Changes are observable in the nuclei and in the

protoplasm of the cells of the rodent growth. The nuclei become disorganized, and the cell plasm breaks up, often becoming fatty. These changes have been observed in all the cases examined, and the statement on this point made in my previous paper has been confirmed. At the same time there is an infiltration of leucocytes, and at present it is impossible to determine whether the damage done to the epithelial cells is the direct effect of the rays, to the "bombardment of the cells," to quote a phrase recently applied to these phenomena; or whether the effect is indirect and due to the leucocytic infiltration or to obscure nervous and vascular changes. While the destruction of the epithelial cells is going on, there is a marked activity of the connective tissue elements. There is an infiltration of round cells, of mononuclear cells, and later on the formation of firm scar tissue. This remarkable activity of the connective tissue is well seeen in the rapid filling up of cavities left by the rodent ulceration. I must here acknowledge the valuable work which has been done in the Dermatological Department of the London Hospital by Mr. Spencer Scott, who studied this subject for his Thesis for the M.B.Camb. Mr. Scott's observations upon portions of growth removed from cases before, during, and after treatment, confirm my own, and I am indebted to him for much valuable assistance.

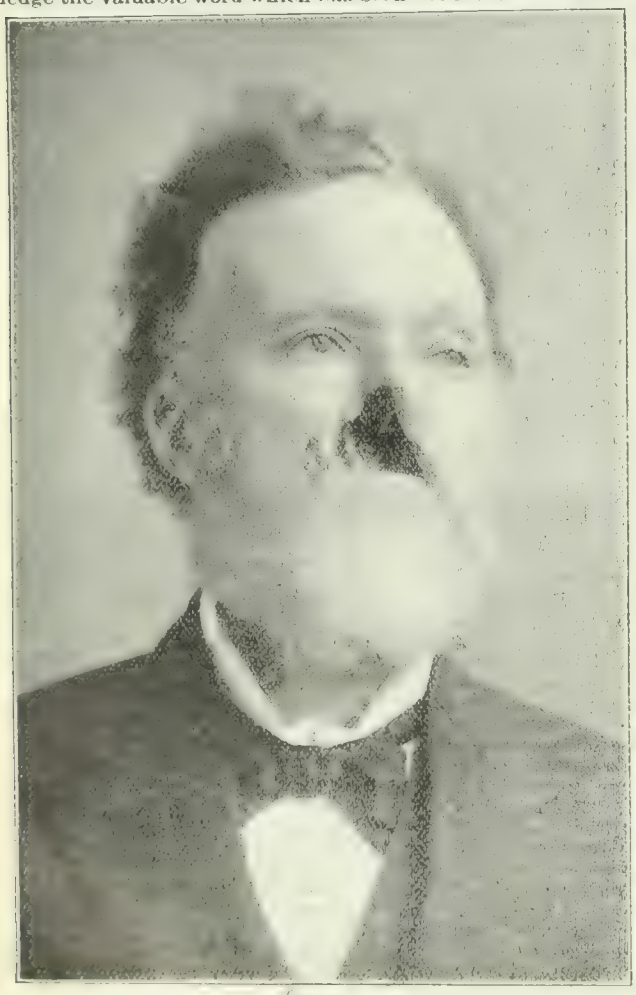


Fig. 1.

We have, as will be seen at once, a process which appears to be ideal for the cure of growths which are locally malignant. The cancerous cells are destroyed and sound scar tissue is formed. But recurrences are by no means uncommon, and the question which has still to be decided is whether the relapses are due to the fact that some of the outlying cells have escaped the action of the rays or whether they are true recurrences. Some of the sections which we have made support the former contention, for we have found that in cases which were apparently quite cured there were cells in which we were unable to detect change. The fact also that some of the patients have been free from recurrence for nearly three years shows that it is probable that the recurrences were due to some portions of the neoplasm escaping the action of the rays. As a matter of practical import the recurrences are usually easily removed by a fresh application of the rays.

Selection of Cases.

I do not advise the *x* rays where the growth is very small and where there is a possibility of its complete removal without much deformity. In such cases complete excision with a fair margin of healthy skin affords a rapid and successful method of treatment. But in many cases, even when seen quite early, the position of the ulcer, as in the inner canthus of the eye, with the involvement of the lachrymal sac, or on or near the eyelids, is such that complete removal by the knife is impossible without the production of great deformity. A partial removal is worse than useless, because the growth will certainly extend, and if further operation is undertaken still greater deformity results, with hideous disfigurement, as is seen in one of the cases described on p. 1310 (Case 1, Fig. 1). Scraping and cauterizing are so likely to be followed by recurrence that they should be abandoned.



Fig. 2.

Where the disease is extensive, or where entire removal is impracticable, or again, where the patient shrinks from operation, the *x* rays give most satisfactory results. Those cases in which there is the greatest destruction often do the best; large ulcers fill up, and there remains only the hard, rolled edge to treat. This sometimes proves very resistant, but as a rule will disappear if the treatment is persevered with. In some cases time appears to have been saved by the preliminary destruction of the edge with the cautery before the application of the rays, but this is very rarely required.

In two cases in which the orbit was completely excavated temporary relief was afforded, but owing to intercurrent

illness both patients had to forego treatment, and when subsequently seen the meninges were exposed and treatment had to be abandoned. Both patients have since died from meningitis.

Two cases have proved rebellious to the treatment. In one, an old lady of 70, the ulceration extended in spite of it. The disease involved the root of the nose and both lachrymal sacs. The patient was very nervous and complained of great pain, so that I was unable to push the treatment as far as I should have liked, and finally had to abandon it. The site of the lesion did not appear to be the cause of failure, for I have had other cases in a similar position which did well. There was no doubt as to the diagnosis, as a small portion of the edge was excised and examined microscopically.

In another case, figured in my previous communication, the disease has also spread in spite of treatment. The ulcer had involved the right ear, and had extended on to the occiput. The diagnosis of rodent ulcer was confirmed by microscopical



Fig. 3.

examination. Here the ulcer healed up in parts, but has continually spread towards the middle line, and there is now a large cavity below the superior curved line.

Cases in which the cartilage is involved are as a rule difficult to heal up completely. I think that this is due to the fact that the skin and cartilage are so closely united that it is impossible to get the requisite contraction for sound healing, just as we find that an ulcer of the leg which is attached to the tibia will not close up.

Recurrence.

This important point has already been touched upon. Some of my earliest cases are quite free, and one extensive ulcer of thirteen years' duration, and which healed with three months' treatment by the *x* rays, has remained free from recurrence for two years and eight months. I have many cases free from recurrence for a year. But in nearly half of all the



Fig. 4.



Fig. 5.

cases there have been slight recurrences, small nodules appearing at the margins, and, as already mentioned, these are probably due to the escape of small outlying parts from the action of the rays. In some, recurrences have been seen more than once. As a rule, however, these recrudescences are easily dealt with by a fresh application of the treatment.

It is very difficult to give any accurate idea as to the time which a given case will have to be subjected to the rays. This is an important consideration with many patients. I have had small ulcers which have entirely healed with from ten to a dozen exposures; but where there are large cavities, and especially where there is a very tough, nodular edge, months may be required. The points considered in the preceding paragraph indicate the special difficulties.

I am accustomed to apply the rays on alternate days in the slighter cases and daily in the more extensive ones. I still use tubes which spark at from 4 to 6 in., but I find that the therapeutic value of the tubes is a very variable thing, and one which at present it is impossible to explain. "High" tubes are valuable, as the rays can be applied until there is a definite inflammatory reaction. Actual "burning" is not necessary, and some of the best results have been obtained without any obvious inflammatory reaction at all. I protect the surrounding skin with leaden masks, but I have used Cossor's tubes with advantage, but find that they can rarely stand heavy out-patient work, as at the London Hospital, where the tubes are worked for several hours daily.

I have no hesitation in saying that the *x* rays still hold the field as the best therapeutic agent for the treatment of rodent ulcer in those cases in which complete excision of the growth cannot be carried out. The following are details of two interesting cases:

CASE I.—T. W. R., aged 55, a draper's assistant. For eighteen years the patient had suffered from rodent ulcer. The disease began at the right ala nasi and slowly extended. It was diagnosed as lupus, and several operations were done in New Zealand. The upper lip, the nose, and finally a large part of the upper jaw and palate were involved and removed by operation. The result was the formation of a hideous cavity in the middle of the face, the base of the ulceration being irregular, and exuding a foul, purulent discharge. The unfortunate patient was obliged to wear a black silk mask to hide his deformity. The condition is shown in Fig. 1. The patient was under treatment for nearly nine months. The rays were applied for ten minutes a day, and with but short periods of rest. The ulceration healed up in a remarkable manner, and a large part of the cavity filled up. The condition after the *x*-ray treatment is shown in Fig. 2. As soon as the scar was sound I called my colleague, Mr. Frank Farmer, Dental Surgeon to the London Hospital, into consultation, and he undertook to try and repair the deformity. He first fitted a plate to take the place of the upper jaw and palate, and when this was in position the patient was able to swallow and to masticate. After this a false nose with an extension for the upper lip was made, and a false moustache added, and the result proved most satisfactory. The condition of the patient when he left Mr. Farmer's hands is seen in Fig. 3. The patient returned to New Zealand, and when last heard of was still well.

CASE II.—The patient, a woman aged 31, had suffered from the disease for nineteen years. It thus began at the age of 12, and is, I believe, the earliest on record. The diagnosis of rodent ulcer was obvious from the appearance of the ulcer, with its hard, raised, nodular edge, which are well shown (Fig. 4). It was verified by the microscopical examination of a portion excised before treatment was begun. In this case the ulcer started as a small warty growth at the right ala nasi, and gradually extended. No operation had been performed. The ulcerated area soon healed under the rays, but the hard rolled edge proved very resistant, and was treated at intervals for six months. Applications were made about three times a week. The hard edge entirely disappeared (Fig. 5). The patient has been free from recurrence for six months. The dark colour of the scar is due to pigmentation which has almost disappeared since the photograph was taken.

The comparison of these two cases is very instructive. Both started at the right ala nasi, and both had lasted nearly twenty years before coming under the *x*-ray treatment. In one frequent operations had been performed, with the result that hideous deformity had been produced. In the other no operation had been performed, and the result is excellent. A case under my care in which there had been no recurrence for over two years is figured in the *Medical Annual* for 1903.

REGISTRATION OF TRAINED NURSES IN AMERICA.—The Governor of New York State has signed the Bill passed by the Legislature providing for the registration of trained nurses in the State, under the auspices of a Board of Examiners to be appointed by the regents of the University of the State of New York. Nurses passed by the Board, and certain nurses qualified by long service prior to the passage of this law, are entitled to the designation of "registered nurse," and to attach the initials "R.N." to their names. The registration of nurses has also been adopted by the States of North Carolina, Illinois, New Jersey, and Virginia.

TREATMENT OF LUPUS BY *X* RAYS AND ULTRA-VIOLET RAYS.

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IT is highly important that the results of the *x*-ray treatment should be emphasized by full and detailed publication. There is undoubted evidence that the benefit to be derived from *x* rays is almost illimitable—the great aim of those who adopt this method of treatment is to endeavour to utilize to the fullest the healing qualities and power of the rays. Keen observation and sound judgement are essential, and I have no hesitation in asserting that the success attained is in proportion to the exercise of these faculties. The results already achieved are of an excellence and endurance sufficient to give substantial indication of what one may expect from the rays in—let us hope—the near future.

X RAYS AND OPERATION COMPARED.

The advantage of *x* rays over operative treatment are principally cosmetic in effect. After healing they leave a soft pliable skin devoid of contractions, and the face is not disfigured by the unsightly scars which are the inevitable consequence of the use of the knife. The risk from anaesthetic is obviated, and the patient cured without pain or shock. It is an established fact that in many skin diseases the application of the *x* rays abolishes the necessity for operation. Those under treatment can also at the same time carry on their ordinary avocations. Many who fear the danger of an operation hesitate, and in this way the disease is spread and becomes more difficult to cope with. In *x* rays, however, a discovery has been made which entirely overcomes this objection.

This is a general and broad view to take of the question, and it becomes necessary to particularize in order to form some guidance in *x*-ray treatment. With this object in view I have quoted below twelve cases of lupus successfully treated by me. From my experience of these and many others, together with cases of cancer, rodent ulcer, lupus erythematosus, and various skin diseases, curative treatment is dependent upon earnest consideration of the following points: The character of coil; the voltage used; the condition of the tubes; the distance of the target from the patient; the duration and frequency of sittings with the interval between each; and finally, whether or not any other treatment is concurrently applied.

ATTENTION TO DETAILS.

These are details too often overlooked, but they are of vital importance in the attainment of the end desired. No hard-and-fast rule can be adopted, but I have come to the conclusion that the effect of the rays can be applied to individual cases and regulated to suit stages of disease by strict attention to the injunctions enumerated. This applies more especially to the condition of tubes and the limitation or extension, according to requirements, of the exposures given to patients. At the same time full notes should be taken, for the worries and anxieties of a busy practitioner do not admit of an infallible memory. I have found that careful observation, attention to detail, and a close study of each case are the greatest factors in successful treatment. For instance, I frequently test the variety of tubes at my disposal, and am, therefore, always well acquainted with their condition and capabilities.

There are many who place too great reliance in the length of the sitting. In many articles I have read the period of exposures adopted by the writers was stated to be from ten minutes to an hour every day. This theory has not held good with me. It has always been my object to obtain rapidly a tangible result consistent with safe treatment. Instead of daily exposures I have adopted a system of giving sittings two or three times a week, lasting from three to five minutes. The brevity of the period I attribute to the fact that I use a 14-in. coil, and always obtain an ampèrage of from six to eight, and a forty-volt pressure. When beginning treatment it is impossible to exercise too much care. At this stage I always use a low tube—and then watch the case. The primary object is to produce a mild reaction. Perhaps it may be necessary for this purpose to use a still lower tube, and increase the length of the sitting. This is where the faculty of judgement enters into the treatment, and when the individual necessities of the patients must be considered.

I am firmly convinced that in order to cure, a mild reaction

must at the outset be promoted, and then steadily, and even skilfully maintained. The extent of this reaction must be determined slowly by discretion in the regulation of tubes and exposures. Once having found a tube to suit a particular case I obtain the desired effect by increasing or decreasing the interval and length of sittings, the distance between the patient and the target, and at the same time controlling the current through the coil. In obstinate cases which do not respond readily to treatment I use lower degrees of tubes until I have succeeded in producing a sufficiently severe reaction. Then I suspend the sittings for three or four days or until the result of the exposure is apparent. Upon this I base the course of future treatment. In the majority of cases the dermatitis has become evident within two or three days—somewhat less than the experience of others. The subsequent healing process is tolerably speedy, and the skin, formerly diseased, then assumes a smooth appearance. The severity of the reaction necessary, however, must always depend upon the character of the case and the susceptibility of the patient under treatment. I am greatly in favour of the use of low resisting tubes for superficial surfaces. For this purpose I have compared them with the hard tubes, and find that if judiciously regulated they give more speedy and sure results. Where penetration is necessary, as for deep-seated ulceration, tubes of a hard nature are undoubtedly the most efficacious. This is perhaps the only theory approaching generality which I would be prepared to propound. For instance some tubes apparently the same in resistance and spark length produce different effects. The obvious deduction to be drawn is that complete success is to a large extent attributable to a varied supply of tubes, the capabilities of which are well-known and recorded.

In dealing with some cases I combined the ultra-violet rays (lupus lamp) with the *x* rays. I have also tried the lupus lamp (Leslie Miller) alone. With the ultra-violet rays there is very little subsequent discoloration in the situation of the surrounding tissues. The same does not apply to the *x* rays, the pigmentation being more apparent when low tubes are used. I am of opinion that for small areas the lupus lamp is most effective, but the following conditions must be complied with: Smear the affected parts with vaseline, use ice, and apply adequate pressure. The use of vaseline appears to increase the value of the light. I never give any accessory treatment with either the lupus lamp or *x* rays. One point upon which I would insist is the necessity for personal supervision by medical practitioners. The apparatus should never be left in charge of incompetent persons, for without constant observation and strict attention to detail the fullest possible benefit cannot be derived.

The lupus cases which I quote below are taken at random from my list. I have always succeeded in effecting a complete cure, and the method adopted is fully explained. I trust that this contribution will lead other practitioners to relate their experiences, for on such a subject, when there is so much to learn, details are in great demand. Nevertheless, the cases mentioned may be regarded as typical. Some of them were obstinate, whilst other yielded readily to treatment. That proves at least that no definite procedure can be adopted—much must depend upon the patient and the practitioner. It is too early yet to assert definitely that the cures will be permanent—even operation does not ensure that. There is good reason to believe, however, that the disease will not recur, and the patients at least are well satisfied with the relief attained, even presuming it were only temporary.

CASE I.—A woman, aged 54. Duration of disease four years. The nose and both sides of the face were a mass of lupus, extending on the right cheek to just below the eyelid, beneath which the ravages of the disease had left a deep cavity. The upper lip and interior of both nostrils were affected, but there was no perforation. In 1899 I operated three times, finally under an anaesthetic, when I used the knife and spoon freely, and also grafted healthy skin where necessary. Six months later the patient returned, and the only portion cured was that beneath the eyelid. This was denoted by a well-marked scar. The remaining lupus tracts were in a worse condition than before the operation, the passages of both nostrils being entirely closed with lupus nodules and the resultant inflammation. Subsequently she had recourse to "quack" remedies, but again visited me in November, 1901. During the interval the disease had developed so rapidly that her nose was now very much swollen, and, together with her lips, was covered with ulcerated tubercles which bled freely when touched. I then gave her *x*-ray sittings of five minutes' duration twice a week—fourteen in all. From the first the pain about which the patient had complained disappeared, the swelling diminished, and a gradual improvement set in. On January 10th, 1902, I increased the sitting to ten minutes, but owing to the dermatitis which followed, the treatment was interrupted for eleven days. On the 14th I made an examination; the nose was again very much swollen, tender, and painful. On the 21st, however, there was no sign of lupus on the nostril and upper lip, but the interior of the nostril was still affected. I also noticed that the scar under the eyelid was not so prominent. I recommenced the *x*-ray treatment with five-minute sittings, twice a week, until the end of February, when all traces of the disease seemed to have been eradicated. She came back once more on March 20th, 1902, in consequence of a slight return of the lupus at the edge of the right alae and also at th end of the nostril. The places where the skin had formerly been diseased were blanched and pigmented. The scar under the right eyelid had practically gone. Only four more sittings were considered necessary. At the end of October, 1902, a small spot—almost microscopical in appearance—recurred on the right side. This is now under treatment, and there is no doubt that after a few applications it will depart entirely and so complete the cure. With the single and slight exception referred to, the place has resumed a normal appearance. To a large extent attribute this exceedingly satisfactory result to the react on prompted by a low tube and extended sitting.

CASE II.—A woman, aged 50. Duration of disease ten years. Four years ago the patient was subjected to mercurial treatment for a year. No improvement resulted, and she then came to me. This was about two ears ago, and she was under my treatment for a year. I could find no specific history to justify mercurial treatment. Both cheeks had been affected, the lupus spreading over the lower part of the nostrils, inside each of which was a mass of nodules. The result was perforation of the septum to such an extent as to admit the small finger. I operated four times in 1901, thoroughly scraping and touching the parts with pure carbolic acid. The fourth operation, on March 20th, 1902, was conducted under an anaesthetic. again removed the diseased tissues with spoon and knife, and several days after grafted healthy skin. Within four months the lupus reappeared, and a month later was even more severe and extensive. I subjected the patient to *x*-ray treatment from August to the end of October, 1902. She had five-minute sittings three times a week, the target of a fairly low tube being placed 9 in. from the face. A 10-in. coil was used, with a voltage of twelve, and ampèrage of from six to eight. After fourteen exposures no improvement was shown, but when another ten had been given, the nodules disappeared, with the exception of those in the mucous membrane in the interior of the nostril. With another twelve sittings all traces of lupus, however, vanished. The skin over the former unhealthy portions became blanched, smooth and soft with slight pigmentation, but no evidences of scar. There has been no recurrence, and the normal facial appearance has been reassumed. This cure has been attained after thirty-six sittings, involving a total of three hours before the rays.

CASE III.—A girl, aged 18. Duration of disease seven or eight years. A lupus patch about an inch in circumference in the centre of the right cheek. This patient had been twice operated on before coming under my treatment. In March, 1900, I removed the lupus with the knife, making a deep incision well clear of the growth, nd grafted the cut surface. Ten months later the lupus recurred and was made additionally unsightly by the large scar. During April, May, and June of 1901 I gave her twenty-five *x*-ray sittings of five minutes duration each. By this time the disease had practically disappeared. I the had recourse to a very low vacuum tube, but after the fourth application severe dermatitis ensued. This involved the loss of some hair. The healing process occupied a month. Then the hair commenced to grow again, and the lupus entirely vanished. There has been no recurrence, and it is now over a year since the patient was discharged cured after my treatment. There is no scar to be seen, and the portion formerly affected can hardly be distinguished from the surrounding skin, with the exception of slight blanching and pigmentation.

CASE IV.—A woman aged 40. Thirteen years ago lupus commenced with a small nodule on the tip of the nose. About seven years ago the part was scraped. The disease returned a year later, and extended over the nose to the left cheek. The roof of the mouth was also attacked. The operation of scraping was again carried out. Six months later the disease recurred more severely, and four years ago the patient went to a large infirmary in the north. Her upper teeth were removed, and the gums, roof of the mouth, nose, and affected parts of the face were for the third time scraped. On March 18th, 1902, the patient visited me (Fig. 1). Her condition at that time was as follows: The tip and sides of the lower half of the bridge of the nostrils were covered with nodules, extending to the left side of the face, cheek, and upper lip, with ulcerations and crusts. The mucous membranes in both nostrils were covered with tubercular ulceration, and the septum was consequently perforated. The roof of the mouth presented a mass of tuberculous tissue, and in two situations the bare bone was displayed. The gums and the upper jaw were dotted with tuberculous ulceration. Both tear ducts were obstructed, and tears ran over the face. In thi case I combined the ultra-violet rays (Leslie Miller lupus lamp) with the *x* rays. I gave the patient ten-minute sittings twice a week with the lupus lamp—six in all. A great improvement was then noticeable. All the scabs dropped off, and were replaced by a healthy epithelium. The tuberculous tissue of the skin had disappeared, but the inside of the nostrils, the gums, and the roof of the mouth were unchanged. I then treated her with the *x* rays from a 14-in. coil. I gave her sittings of about four minutes' duration. At the outset I used low tubes, but found that this was responsible for too severe reaction. I substituted a higher tube, and the results then attained were exceedingly satisfactory (Fig. 2). At the end of August, 1902, the passage of the tear duct was free, and tears could now pass into the nostrils. The ulceration of the nostrils had, of course, been eradicated, but the gums and mouth were still affected. The improvement was, however, maintained. I then utilized a specially-constructed tube to focus the rays of the mouth, and the case can be regarded as genuinely cured. The place of perforation in the septum is being treated with a nasal electrode from the high-frequency

current, and this is now perceptibly smaller. The same patient was suffering from tuberculous periostitis and osteitis of the tarsal bones, causing some lameness. Concurrent with the lupus treatment I gave exposures for the foot, using a hard tube. All pain vanished, the swelling abated, and the parts resumed normal shape and condition.



Fig. 1.—Case IV; condition on March 11th, 1902.



Fig. 2.—Case IV; condition on August 22nd, after four hours' application of *x* and ultra-violet rays combined.

It may be of interest to add that this patient's brother was under the high-frequency current treatment for phthisis. A great improvement resulted. I treated another brother for a tuberculous wrist, which had been operated upon at a large infirmary in the North. The scar was visible and had broken down, leading by a fistulous opening to an abscess in the wrist. After twelve applications the disease was eliminated, and the patient, who had been out of employment six months, was able to resume work. It is a coincidence that another relative has been under my treatment for lupus.

CASE V.—Boy, aged 15. Duration of disease four years. From May until August, 1898, was under medical treatment: subsequently admitted to an infirmary from October to November, and underwent an operation—scraping. A renewal occurred in May, 1899. The patient was admitted to another hospital, but eventually visited me on April 25th, 1902. (Fig. 3.) The whole of the end and sides of the nose were covered with lupus nodules. The tips of both alae were eaten away, and the disease had extended partially on to the upper lip, the inside of which, together with the gums surrounding the first four front teeth, were ulcerated. A slight portion of the hard palate was also attacked and ulcerated. The patient presented a most unsightly appearance, and had been in the habit of wearing a bandage across his nose. He came twice a week for five to ten minute sittings with the ultra-violet lamp. After twenty exposures the nose and upper lip yielded to treatment. The reason why the



Fig. 3.—Case V; condition on April 25th, 1902.



Fig. 4.—Case V; condition on October 24th, after five hours' application of *x* and ultra-violet rays combined.

time taken did not compare favourably with other cases was the reluctance of the patient to allow pressure to be applied as firmly as was essential. I next used the *x* rays—14-in. coil—and focussed the interior of the mouth with a special tube. On one occasion a low vacuum tube and an extra long sitting caused a reaction in the form of swelling of the upper lip, gums, and roof of the mouth. Treatment was consequently interrupted for about a fortnight, and when the swelling had abated I found that the facial appearance had materially improved. With this experience to guide me I then used a fairly low tube, which had a tendency to maintain a necessary reaction. Although the mouth and nostril were being focussed the remainder of the affected area received some proportion of the rays. The total number of sittings was fifty, and the patient may now be regarded as entirely cured (Fig. 4). Of course, it is too early to pronounce permanency, but there is every reason to believe that the disease will not return. The patient is able to obtain employment—a practical result of the treatment.

CASE VI.—A man, aged 35. Duration of disease, several years. Description: Three large patches. One of these measured 3 in. by 3 in., and extended from the left ear over the side of the jaw and down to the upper neck. There was also a smaller patch on the right side, and another 1 in. by ½ in. on the cheek to the right of the nostril. On March 18th, 1902, treatment commenced with the lupus lamp. After ten sittings the left side improved but the right did not progress satisfactorily. I then substituted the *x* rays, and in this way treated a larger area than hitherto. I always used a low tube in order to cause some reaction, and gave sittings at the outset once a week and then twice a week. Some excoriation was noticeable, but eventually a complete cure was effected. In the place of raised scars the skin became supple and pliable, and resumed normal appearance. In this case slight dermatitis was regularly and purposely caused by a soft tube, but always healed in a week's time and left a tangible improvement.

CASE VII.—A woman, aged 40. Duration of disease ten years. The affected parts had been scraped and cauterized on thirteen different occasions. The whole of the sides and end of the nose were a mass of tuberculous nodules which bled freely and were covered with scabs. The interior of the nostrils showed slight ulceration. The patient came under my treatment on April 4th, 1902. (Fig. 5.) I gave her sittings on alternate days. Twelve exposures with the *x* rays lasting three minutes did not seem to have the desired effect. Then on two occasions I increased the limit to ten minutes, using a low vacuum tube. Following the course



Fig. 5.—Case VII a; condition on April 4th, 1902.



Fig. 6.—Case VII a; condition on August 20th, 1902, after four hours' application of *x* and ultra-violet rays combined.

which I had always found most effective I purposely created a reaction. Owing to the severity of this I had some difficulty in persuading the patient to continue the treatment. I then gave her an additional twenty sittings of five minutes with the lupus lamp. A gradual improvement set in and the lupus diminished. As it was however impossible to bring adequate pressure to bear on the interior and edges of the nostrils, I had again recourse to the *x*-ray treatment and the result was exceedingly satisfactory. There has been no recurrence of the lupus, but owing to a fissure inside one of the nostrils I am giving the patient a few more sittings. The nose is now of ordinary shape, there is no scar to be seen and no pigmentation, the only change being the acquisition of a rose-coloured tint. (Fig. 6.)

CASE VII B.—The mother of the former patient developed lupus a year later than her daughter. The situation was the same, but the character of the disease was not so severe. (Fig. 7.) The front and sides of the nostrils were affected, and the lupus had extended slightly up the nostril, where there was some little ulceration. She was accorded the same treatment as her daughter with the exception that only a mild reaction took place. She did not attend regularly, however, and ceased treatment before I considered her absolutely cured. (Fig. 8.) The result is that she is again under treatment for an infinitesimal spot which will however be eradicated with a few applications.

CASE VIII.—Boy aged 16. Duration of disease five years. No surgical treatment had been applied. Description: Lupus in front of the right ear to the extent of 1 in. by ½ in. The patient came to me on August 20th, 1902, and was cured by the lupus lamp after eight applications of eight minutes each. This is the most speedy cure effected by me. There has been no recurrence.

CASE IX.—Woman aged 48. Duration of disease six years. This patient had been operated upon on one occasion, but the disease recurred six months later. The affected area was above the tip of the nose, half an inch in extent, and was spreading rapidly (Fig. 9). Commencing April 3rd, 1902, I gave her twenty applications of seven minutes' duration with the lupus lamp, and by the end of May all trace of the disease had

disappeared, and there was not the slightest disfigurement (Fig. 10). The patient, who had complained bitterly of neuralgic pains in the diseased parts, was completely relieved and restored to health.



Fig. 7.—Case VII B; condition on April 11th, 1902.



Fig. 8.—Case VII B; condition on August 20th, 1902, after two hours' application of x and ultra-violet rays combined.

CASE X.—Woman, aged 63. Duration of disease fifteen years. Three years after development of disease the right nostril was thoroughly scraped and cauterized. The patch on the right side of the cheek measured about 2 in. in circumference. Five years ago chloroform was administered and the diseased parts again scraped and cauterized. On May 16th, 1902, the patient came under my treatment. The lupus by this time had spread over the right alae of the nose and ½ in. into the interior of the nostril. There was also a patch about ½ in. in circumference under the chin. I gave the patient a total of thirty-two applications. After twenty sittings with the lamp of seven minutes' duration the easily-accessible portions on the cheek and underneath the chin disappeared, slow improvement having set in from the outset. The patch on the nose I treated with x rays of about five minutes' exposure; the patient, however, had an obstinate ulceration about 1 in. up the nostril on the septum. I combated this with a local application of high-frequency current electrode, using a voltage of 36 and an ampèrage of 6. The result was surprisingly rapid. There was no ulceration after five applications. Whether the high-frequency current or the x ray was responsible I cannot definitely state. The scar consequent upon the early operations disappeared, and with the exception of loss of tissue in the situation of the right alae, there was no disfigurement or pigmentation.



Fig. 9.—Case IX; condition on April 3rd, 1902.



Fig. 10.—Case IX; condition on June 15th, 1902, after two hours and twenty minutes' application of ultra-violet rays.

CASE XI.—A girl, aged 17. Duration of disease five years. Early in 1897 the affected part was cauterized, but there was no improvement. The lupus on the nose spread rapidly. The patient was then placed under hospital treatment, and the operation of scraping performed. She was discharged cured after three weeks had elapsed, but a month later the disease recurred. She became an in-patient in another hospital, but the treatment had little, if any, tangible result. Subsequently she was under an eminent specialist in skin diseases, and within three months two operations were performed, the parts being thoroughly scraped. The disease once more recurred, and the patient was under hospital treatment. Another operation had no better results, and she was next sent to a private institution. An operation was performed under chloroform, but again the disease reappeared in a severe form. Later the patient went to a London skin hospital, and was daily under the x-ray treatment for three months, but returned home at the end of December, 1901. She first came to me on August, 23rd, 1902. (Fig. 11.) Her condition by this time was as follows:—Scar over the sides, end, and tip of the nostrils, and extending to part of the upper lip. There was also a scar about the size of a five-shilling piece on the right cheek. Dotted here and there over the scar on the nose were fresh tubercles, whilst the same applied to the scar on the right cheek, especially about the periphery. Some of these were already in a state of ulceration. There were also tubercles inside the nostrils and considerable thickening of the bone was noticeable. I gave the patient a total of twenty x-ray sittings. The first five or six applications were of a duration of four minutes each, and I used a very hard tube, giving a spark length of 6 in. to 7 in. I was not satisfied with the progress made, and this prompted me to substitute a soft tube with a 1 in. spark gap. I also reduced the sittings to two minutes for each part and succeeded in maintaining a mild reaction. Then the nodules on the nose disappeared fairly rapidly. Recently I prolonged half-a-dozen sittings to a period of five minutes. A severe reaction was the consequence and this development compelled me to give the patient a sitting every third or fourth day instead of every second day as hitherto. At present all the lupus is apparently eradicated and the unsightly scarring



Fig. 11.—Case XI; condition on August 23rd, 1902.



Fig. 12.—Case XI: condition on January 3rd, 1903, after two hours and a half of x and ultra-violet rays.

is much less pronounced. As a precaution, however, I am giving a few more exposures in order to make the prospect of permanency more definite. The photograph (Fig. 12) shows the condition after cure had been completed.

TUBERCULOSIS OF THE CONJUNCTIVA CURED BY X RAYS.

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TUBERCULOSIS is one of the rarer diseases of the conjunctiva, and, according to my own experience, is met with about once in one thousand eye cases seen at a children's hospital. It is a chronic process, generally affecting persons under 20 years of age. It often appears to be primary—that is to say, not to be associated with obvious tuberculosis in other parts of the body. This can easily be explained by the exposed position of the conjunctiva, and the frequency of tubercle bacilli in the air derived from dried phthisical sputum. Foreign bodies, too, as Fuchs supposes, may readily play an important part in the transmission of infection. Then, as more than one writer has pointed out, an ulcerated phlyctenule—a condition common enough in the neglected children of the poor—may well be the place whereby infection enters the conjunctiva. Lastly, cases of direct operative inoculation have been reported. A family or personal history, however, of tubercle is not uncommon in these cases. It may, indeed, form part of a generally disseminated miliary tuberculosis, as in a case published by me in the BRITISH MEDICAL JOURNAL of May 3rd, 1902. The patient, a female child aged 17 months, suffered from a tuberculous ulcer of the conjunctiva, with localized destruction of the free edge of the lower lid, a typical tubercle of the choroid, and tubercle of the lungs and of the meninges. The case was fatal.

Tuberculosis of the conjunctiva has several clinical varieties, but it consists essentially, first, in the deposition, and, then, in the disintegration of the tuberculous material in the conjunctiva, palpebral or ocular. Its positive diagnosis implies the discovery of the bacillus tuberculosis in discharge from the eye or in morsels of diseased material removed from the

conjunctiva. This may be an easy task or the reverse. The specific organisms, in my experience, can usually be found in scrapings from miliary ulcerations, if such are present; but, on the other hand, they are difficult to find in the prominent granulations characteristic of some varieties of the disease. Dr. J. W. H Eyre, who has published an excellent account of the disease, especially from the bacterioscopic point of view,[1] has never succeeded in finding the specific microbe in the discharges from the eye, although some other writers have been successful in that respect. There is now a consensus of opinion that in difficult cases experimental inoculation of a rabbit or a guinea-pig with diseased material from the eye is necessary to make a positive diagnosis. The following case has been closely followed throughout its course:

History.—M. H., aged 4, was brought to the eye department of the North-Eastern Hospital for Children on November 12th, 1902, on account of a drooping of the upper lid of the left eye and a swelling of the corresponding side of the face. There was said to be no "consumption" on either side of the family. The patient was one of seven children, of whom five are living. One child died at 6½ years from "inflammation of the kidneys," and the other at 13 months from "measles and cold and inflammation of the lungs." Eighteen months ago the patient had measles, and this was closely followed by whooping-cough. Two months ago (September, 1902) it was noticed that the glands below the left lower jaw were enlarged, and that the left eye looked heavy, was red, and discharged "matter." Since these symptoms were observed, the child has lost flesh.

State on Admission.—A pallid-looking child, weighing (with clothes) 38 lb. There is marked swelling of the left side of the face and neck, due partly to induration of the preauricular and submental glands, and partly to a diffuse lymphangitis of that side of the face. To be more precise, below the centre of the left half of the inferior maxilla is an enlarged gland about 1 in. by ⅝ in. It is free from tenderness, and does not appear to be undergoing any degenerative changes. There is another gland, about ⅝ in. in diameter, circular in shape and freely movable, situated in front of the left sterno-mastoid, about 1 in. below the gland mentioned above.



Fig. 1.

The left preauricular gland is enlarged. The posterior cervical and the inguinal glands upon both sides are slightly enlarged. No glandular swellings can be felt in the axillae. There is commencing caries of the first molar tooth on the left side of the lower jaw. The tonsils are swollen, but not inflamed. No abnormal physical signs can be detected in the lungs. Neither the liver nor the spleen appears to be enlarged. No lupus either of skin or of mucous membrane. No tubercles in the choroid. Tongue lightly furred. Urine, acid, contains urates, but neither albumen nor sugar. Left eye: The lids are semiclosed and obviously thickened, probably, like the side of the face, from lymphangitis. There is a considerable amount of trachoma-like material in connexion with the semilunar fold. On everting the eyelids the lower palpebral conjunctiva is found to be bestrewn with miliary granulations and folds of cockscomb-like tissue (see Fig. 1), but no ulcerations can be found. Similar changes affect the superior retrotarsal folds. The tarsal conjunctiva of the upper lid, on the other hand, can scarcely be said to be involved by the morbid process. The cornea is clear. Right eye not affected.

Diagnosis.—Some of the more prominent granulations were excised from the left lower eyelid, hardened in rectified spirit, embedded in celloidin, and cut upon a Leitz's microtome. The sections, when examined microscopically, showed a typical picture of tuberculosis, the giant-celled systems being especially well-marked. A restricted number of tubercle bacilli were found, but only after many specimens had been examined. Inoculation experiments were undertaken with a positive result.

Progress and Treatment.—The affected conjunctiva was treated by exposure to the *x* rays at a distance of 6 to 10 in. from the focus tube for an average period of ten minutes at each sitting. Between December 2nd, 1902, and January 1st, 1903, nine such exposures were made, with the consequence that the local condition underwent a great improvement. Beyond bathing the eye three times a day with 1 in 5,000 sublimate lotion, and giving cod-liver oil and steel wine internally, no other treatment except the *x* rays was adopted.

Owing to an attack of varicella, the child was discharged from the hospital on January 7th, 1903. It may be noted in passing that during her detention the temperature had risen once only to 99° F. The child was readmitted on January 20th. The conjunctival malady was then practically cured. The enlarged glands below the jaw and in the neck, however, had become larger and adherent to one another. An operation for their removal was therefore undertaken on February 6th by a surgical colleague, Mr. Henry J. Curtis. Two separate incisions were made, one below the jaw and the other in the neck. One of the cervical glands was adherent to the internal jugular vein, and had to be carefully separated from the latter vessel. One of the glands removed by Mr. H. J. Curtis was cut open, and several cover-slips smeared with material from the raw surface. These, when stained by the Ziehl-Neelsen method, showed scattered tubercle bacilli. Another gland, examined with the microscope, was found to be caseating and sections stained with carbol gentian violet and counterstained with vesuvine, showed tubercle bacilli stained blue-black on a brown background. On February 16th, 1903, the sutures were removed from the incisions in the neck and below the jaw, and the wounds had healed.

The left eye was exposed on four more occasions (February 21st and 28th, March 5th and 10th) to the *x* rays, the eye being distant 6 in. from the focus-tube, and each exposure lasting ten minutes. On April 3rd, 1903, the general condition of the patient was excellent. The left eye was as widely open as its fellow. The conjunctiva appeared to be wholly free from disease, and the only cicatrices present were those produced by the removal, for diagnostic purposes, of diseased material.

The diagnosis of the foregoing case admits of no doubt. The histological characters of the growth and the discovery of the B. tuberculosis would be conclusive, apart from the experimental production of the disease in the rabbit's eye. The bacilli, as in all forms of chronic tuberculosis, were not present in large numbers. Treatment up to now has consisted in the more or less thorough removal of the materies morbi by excision, scraping, or burning, combined with the liberal use of iodoform. When the affection is not too far advanced, such methods have been followed by very good results. For example, in a case I reported in the British Medical Journal of May 3rd, 1902, the cure thus obtained has remained permanent. In that case I excised a tuberculous ulcer from the lower palpebral conjunctiva, and covered the raw spot with a skin graft taken from the patient's upper arm. All such methods of cure, however, are inevitably followed by scarring of the parts, and even by deformities of the eyelids. In the present patient cure has been obtained without any visible cicatrization, except such as was produced by excision of material for diagnosis, and it would be difficult to tell from the present condition of the conjunctiva that any disease had been present. The treatment by *x* rays is simple, painless, and free from danger. To judge from a single case, it is likely in the future to displace the other methods of treating tuberculosis of the conjunctiva. There is one source of fallacy in the case I have reported, namely, the possibility of a spontaneous cure. That contingency is doubtless extremely rare in any case. That it may actually occur is, nevertheless, clearly shown by a well-recorded case recently published by Dr. A. Levy.[2]

A little lad, 3 years of age, suffered from a large tuberculous ulcer of one lower lid, associated with tuberculous glands under the jaw. Tubercle bacilli could not be found in morsels of diseased tissue nor in cultivations, but a rabbit was inoculated with positive result. The conjunctival ulceration healed spontaneously in the course of five months with the production of scar tissue. There was no recurrence during the year the child remained under observation.

Spontaneous cure, I think, may be excluded from my case, inasmuch as an improvement in the state of the conjunctiva was observed to follow every fresh application of the *x* rays. I have to thank Mr. E. C. Penniger, House-Surgeon to the North-Eastern Hospital, for his careful application of the *x* rays to my patient.

References.

[1] *Archives of Ophthalmology*, January, 1900. [2] *Klin. Monatsbl. f. Aug.*, May, 1901.

Presentation.—Dr. Barclay Wiggins, of Hoyland, near Barnsley, was, on May 28th, presented with a handsome silver kettle and stand by the members attending his class at Blacker Hill in connexion with the St. John Ambulance Association.

The prizes to the successful students of the medical school of St. Thomas's Hospital will be distributed at 3 p.m. on Thursday next by Sir A. W. Rücker, Principal of the University of London.

FURTHER WORK ON AMOEBIC DYSENTERY IN INDIA.

THE MODE OF FORMATION OF SECONDARY AMOEBIC ABSCESS OF THE LIVER, WITH A NOTE ON THE SERUM TEST FOR DYSENTERIES.

(*With Coloured Plate.*)

By LEONARD ROGERS, M.D., M.R.C.P., F.R.C.S.,
Indian Medical Service.

IN 1881 D. D. Cunningham described the development of amoebae derived from the intestinal canal, but his observations have not yet been confirmed, and have been criticized on the ground that they were carried out before the days of careful bacteriological technique, and that his culture media of cholera fluids and cow-dung were not proved to be sterile. In 1891 Councilman and Lafleur published their observations on amoebic dysentery at the Johns Hopkins Hospital, which has been followed by further papers from that hospital and from other places, but this important subject does not yet appear to have received much attention in India, where it is of the greatest interest on account of the frequency of liver abscess, and in connexion with the much-disputed question of the relationship of liver abscess to dysentery, about which such different opinions are still expressed, no doubt owing to the prevalence of different forms of dysentery in different proportions in various places. It is well known that amoebic dysentery occurs in tropical countries, Lafleur going so far as to give the term "tropical dysentery" as a synonym for the disease; but we are still ignorant as to what proportion of all cases of dysentery it forms in India, and how it can be differentiated from the ordinary catarrhal form, now attributed with increasing frequency to bacilli of the coli group. During the last two years, in the course of my investigations into the etiology of liver abscess, I have met with a number of cases of amoebic dysentery, a study of which convinces me that it is easily distinguished by its naked-eye and microscopical characters from the commoner bacillary form of the disease in fresh specimens, although in preserved ones important features are largely lost, so that coloured plates are essential for demonstrating them satisfactorily. A case of amoebic dysentery was recently recognized at once *post mortem* by a medical officer who had seen a number of coloured drawings of the disease in my possession, so that it may be advantageous to give a brief account of the appearances met with in my series of cases, with an illustration showing typically every stage of the disease, which are only exceptionally met with in a single specimen. Some recent observations on the mode of formation of amoebic liver abscess will also be recorded, together with observations on the use of the serum test for the differentiation of the dysenteries, and the results of bacteriological examinations will also be given.

In order to avoid repetition later on, it will be well to commence with a summary of the principal points established in my recent contribution to the debate on dysentery at the last meeting of the British Medical Association, which was published in the BRITISH MEDICAL JOURNAL of September 20th, 1902, for the present paper is essentially complementary to the former. I there gave tables to show that the amoeba was found in the wall of 35 out of 37 liver abscesses in Calcutta, the two failures having occurred in cases which were not examined until twelve days or more after the abscesses had been opened and drained. Further, two-thirds of the abscesses were sterile when first opened, so that the amoeba was the only organism constantly associated with the disease. Further, when both a clinical history and a necropsy was obtained, over 90 per cent. of the cases showed dysentery associated with the liver abscesses; and in 95 per cent. of such cases there was evidence that the dysentery preceded the formation of the liver abscess. Lastly, the dysentery found in these cases *post mortem* was of the amoebic type. If these conclusions are correct, it is obviously of great practical importance to be able to recognize the amoebic variety of dysentery, and to clearly differentiate it from the bacillary form as the first step towards clearing up the complicated question of the dysenteries as a class, and the following is an attempt to make a start in this direction as far as India is concerned.

THE NAKED-EYE CHARACTERS OF AMOEBIC DYSENTERY.

The following description of the changes met with in the large bowel in the amoebic form of dysentery is based on 13 cases in which the amoebae have been demonstrated in the ulcers at the time of the necropsy, and in some of which also sections were cut and the organism seen within the tissues. These cases all occurred at the Medical College Hospital, Calcutta, within the last two and a-half years. All but 2 of these cases were associated with liver abscess, and in one of the remaining ones a post-colic abscess was the cause of death, and it was commencing to involve the liver by direct contact. The other case was complicated by phthisis of a severe degree. In every case, then, the dysentery was complicated by some serious disease which was the principal, or at least an important, contributory cause of death. It should, however, be mentioned that patients presenting themselves with chronic dysentery are very seldom admitted to the Medical College Hospital, so that no conclusions as to the relative prevalence and fatality of the uncomplicated disease can be drawn from the cases here dealt with, a point which will be discussed under the head of serum diagnosis.

The Early Stages of the Ulcers.—The lesions of amoebic dysentery vary very much in degree in different cases, or even in different parts of the bowel in the same case, as is well seen in Plate I; but every gradation between pinhead-sized lesions up to huge ulcers covering several inches of the bowel are seen in different specimens. It will simplify matters if the early stages are first described and the process traced up to the more extensive lesions of chronic cases. The earliest lesions are small red raised dots, but little larger than a pinhead. As soon as these reach a slightly larger size a yellow spot appears in the centre of the dark red raised patch, due to loss of epithelial portions of the mucous membrane allowing the gelatinous pale yellow infiltration of the submucous coat to appear, this being the stage of commencing ulceration. This very early stage is seldom seen, but is well illustrated in the lowest part of the large bowel in Plate I. The earliest type found in the majority of cases is in the form of ulcers varying from the size of a pea up to an inch or so in length, the smaller ones being circular and the larger ones oval, with their long axis in the direction of the folds of the mucous membrane—that is, at right angles to the long axis of the bowel, and for the most part situated on the summits of these folds. They still present essentially the same characters as the smallest ulcers—namely, raised patches with well-defined thickened margins, often showing a narrow red or purple ring of intense congestion around them, inside which is the characteric yellow gelatinous material filling up the ulcer, the whole being evidently produced by loss of the epithelial layer from infiltration over the submucous coat in the centre of the affected portion of the bowel wall. In this stage of the disease the most remarkable feature is the healthiness and absence of all thickening of the mucous membrane immediately beyond the raised affected patches, the raised oval ulcers thus standing up and projecting above the level of the unaltered mucous membrane around them, thus being in marked contrast to the depressed, worm-eaten, very irregular ulcers on a generally uniformly much thickened mucous membrane so commonly seen in the ordinary chronic form of the bacillary type of dysentery.

Advanced Stages of the Disease.—In addition to the small ulcers just described, others of a larger size and somewhat different appearance will nearly always be found in some part of the large bowel, being most marked in the caecum and ascending colon, and not rarely limited to these parts of the intestine. In this stage the ulcers have lost the regular rounded and oval forms of the smaller lesions, and are seen either as long irregular ulcers extending along the folds of the mucous membrane, or in the form of considerable areas of extremely thickened, raised patches, with a light yellow or tawny sloughy, ragged surface, as seen in the upper portion of the bowel depicted in Plate I. The edges of these areas are usually sharply defined by a very thick raised edge projecting abruptly from an apparently nearly or quite normal mucous membrane, the edge often being demarcated by a very distinct purple or dark red line of intense congestion, as is well shown on the borders of some of the ulcers in Plate I. A microscopical examination of the tawny material filling up these ulcers will usually easily reveal numbers of active amoebae, although sometimes they are not so easy to find in these large ulcers as in the smaller ones. In a few cases a still further change is seen—namely, the appearance in some of the large ulcers of black sloughs in the form of half-detached shreds of mucous membrane, but in these cases there are usually multiple abscess of the liver containing micrococci in addition to amoebae, so that this gangrenous

process appears to be due to secondary invasion of bacteria rather than primarily due to the action of the amoeba dysenterica. In one such case the lower half of the large bowel, including the anus itself, was in a gangrenous condition, accompanied by a fetor, which is quite foreign to ordinary cases of amoebic dysentery, which in my experience are noteworthy for an absence of the strong and characteristic odour of chronic dysenteries of the bacillary type.

Healing Processes.—In addition to the above typical lesions of amoebic dysentery some modifications are met with in cases which show evidence of commencing or advanced resolution of some or all of the ulcers. In the first place much of the yellowish gelatinous infiltration of the bases of many of the ulcers may have disappeared, and their surfaces may present a depressed aspect, and are then usually of a greyish-yellow colour, but still with thickened raised edges. At a still later stage, when healing has commenced, the surface will be distinctly depressed, but still of a more or less yellowish appearance, but with narrow, thick, wavy, or crinkled edges, and perhaps some puckering of the mucous membrane around due to the contraction of an originally large ulcer. This condition was met with in all the ulcers in one case in which one large abscess of the liver had opened into the hepatic flexure of the colon, another separate large abscess being also present in the upper part of the right lobe of the liver, both the abscesses and the ulcers containing living amoebae. A still more chronic form was found in the caecum only of a case in which there was an old thick-walled abscess of the liver opening into a larger one in the lung. The caecal ulcers were small, narrow, thick-edged slits, with dense fibrous bases, but amoebae were found in them and in the lung abscess. Scars of healed ulcers are sometimes pigmented, unless only of very recent origin, when they may be white. Occasionally, in very chronic cases, there may be a general thickening of the mucous membrane of the large bowel, together with some narrowing from contraction of the old healed ulcers; but even here the remaining ulcers show the characteristic tawny infiltration of the bases of the ulcers and the congested ring around some of them. Chronic peritonitis and adhesions may also result from the spreading of the process through the wall of the bowel in these cases.

Distribution of the Lesions.—The parts of the large bowel affected in the amoebic variety of dysentery is a point of great importance, for, contrary to what takes place as a rule in the bacillary form of the disease, the lesions produced by the amoeba dysenterica are nearly invariably much more marked in the upper part of the large intestine, and are often limited to those areas, thus accounting for the frequent absence of tenesmus in these cases and the commonly latent character of the symptoms. When the disease is slight in degree the ulcers are usually only found in the caecum and ascending colon, but more commonly the distribution shown in Plate I is seen—namely, the larger and older ulcers are found in these upper parts of the bowel, while the smaller and more recent ones extend lower down in the colon, but are seldom well marked in either the sigmoid flexure or rectum, which parts often suffer most severely in the bacillary form of dysentery. Again, the amoebic form is strictly limited to the large bowel, and does not invade the ileum, the lower few inches of which so often show a granular and swollen condition in the ordinary form of the disease. On the other hand, the vermiform appendix is often severely affected by the amoebae, as is well illustrated in the plate, in which a perforation of this piece of the bowel is seen which caused fatal peritonitis. On the contrary, in the bacillary form of dysentery, in my experience, the appendix often escapes infection even in cases which have involved the whole length of the large bowel, including the caecum. The great activity of the amoeba dysenterica may perhaps account for this difference. This common limitation of at least the most marked lesions to the highest part of the large intestine is of great importance in relationship to the frequency with which the symptoms of the disease are entirely latent in cases in which such complications as liver abscess may cause fatal results. Thus in the one case there was a history of dysentery two years before, yet there were no symptoms of the disease during the nine days the patient was in hospital for liver abscess before his death took place. In another case with a very similar distribution of the ulcers, which were, however, of a more chronic type, there was neither a history of previous dysentery nor symptoms of the disease during five days the patient was in hospital for fatal liver abscess. This accounts for the not uncommon cases in which no clinical history of past or present dysentery can be obtained in cases of amoebic abscess of the liver, although, as I have mentioned above, when necropsies can also be obtained as well as a clinical history of the cases, proof of dysentery can be obtained in upwards of 90 per cent. of cases of tropical liver abscess. The extreme chronicity of some of the cases, which last for years with alternate periods of latency and exacerbation, I have also pointed out in my previous paper.

The Microscopical Changes in Amoebic Dysentery.

The examination of sections of different stages of amoebic ulceration of the large intestine of several of the cases dealt with in this paper have revealed characters which so closely correspond with those described in this disease by Councilman and Lafleur in America that it is scarcely necessary to go into much detail concerning them. They can best be studied in the smallest ulcers with thick raised borders and in sections through this thickened part, such as is shown in Fig. 2, p. 1317, in which the whole thickness of the bowel wall as seen under a low power is depicted, and which shows the thickened part just outside the edge of the actual ulceration. The most striking feature is the enormous thickening of the submucous coat, which is several times thicker than even the muscular one, instead of being the narrowest of all the coats. On the other hand, the mucous layer of tubular glands shows remarkably little alteration with the exception of some cellular infiltration and epithelial degeneration, although the part shown is in immediate contact with the thickened submucous coat beneath it, and quite close to the actual ulcerated part where this layer has been shed. The muscular and peritoneal coats also show but little change in this early stage. The greatly thickened submucous coat does not show the usual signs of an acute bacterial infection, the amount of leucocytic infiltration in particular being comparatively slight, as was pointed out by the writers referred to above. On examining this portion of the bowel wall with a high power lens, as depicted in Fig. 3, p. 1317, the amoebae can be seen in greater or less abundance as oval or round bodies of a larger size than the tissue cells around them, and often with an oval nucleus, which does not stain so deeply as those of the leucocytes and other cells of the tissue. The amoebae shrink greatly in the process of dehydration, and thus appear to be much smaller than when seen in the living state, yet the characters noted serve to differentiate them from the tissue cells, although very thin sections obtained by careful embedding are necessary to demonstrate them satisfactorily. Another point to be noted is the distance beyond the actual superficially-ulcerated part to which this submucous infiltration extends, and which is relatively greatest in the smallest and earliest ulcers. In these the mouth of the ulcer may be so narrow that both edges can be seen in a single field of a low power, yet the thickened infiltrated area may extend for several fieldbreadths beyond this, the tube glands of the mucous coat showing extremely little change immediately beyond the mouth edges of the actual ulcer. This clearly shows that the process is at first essentially an infiltration of the submucous coat by the yellow gelatinous material which appears in the floors of the ulcers, and not an affection of the mucous membrane itself, as it is to a large extent in the ordinary bacillary form of dysentery.

In the later stages, met with in the larger ulcers, the essential features are the same as those just described, only differing in degree and in the extent to which the different coats of the bowel are involved. The mucous coat will now have disappeared over a very much larger extent of surface, while the infiltration of the wall of the bowel will be very much greater, so that it may be $\frac{1}{2}$ in. or more in thickness. The process is no longer limited to the submucous coat, but extends deeply between the planes of the muscular layers, and may thus reach the peritoneal coat. The amoebae may now be much more difficult to demonstrate, the superficial layers of the infiltrated parts being much broken up and often free from them, but they can now be seen in the deeper layers, and in the intramuscular planes in smaller numbers as a rule than in the early stage. These differences in the later stages are thus rather ones of degree than of kind, and at the edges of the ulcers very similar changes to those seen in the smaller ones are found.

Complications.—As we have seen above cases of amoebic dysentery commonly prove fatal through some secondary affections, which may be either of the nature of an inflammatory process set up by the spread of the disease through the wall of the large gut, or the passage of the amoebae to some distant organ, which is nearly always the liver. The former class include both

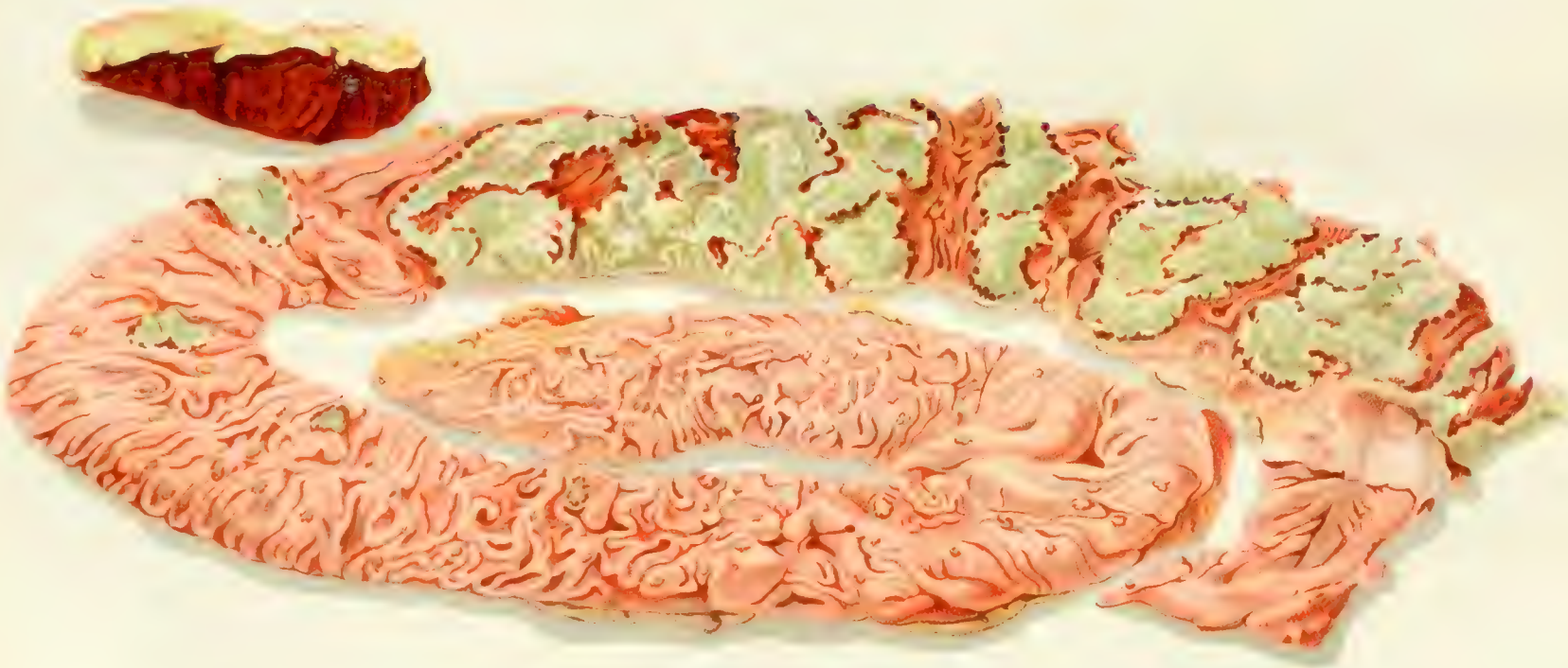


Fig. 1.—Advanced stages of amoebic dysentery in the caecum and ascending colon, and early changes in the rest of the large intestine. From a case of fatal peritonitis due to perforation of an amoebic ulcer in the vermiform appendix, and also complicated by a single large amoebic abscess of the liver, a piece of the wall of which is shown in the left upper corner of the drawing.

acute and chronic forms of peritonitis and post-colic inflammation of a suppurative nature, each of which has been met with the small series of cases here dealt with. Thus, in the case whose large intestine is depicted in Plate I death resulted from acute peritonitis caused by perforation of an ulcer in the vermiform appendix at the point where the yellow slough is seen, living amoebae having been found in the large and small ulcers in the large intestine, and also in the open surface of the perforated ulcer, and in the inner wall of the liver abscess, a small piece of which is depicted on the left hand side of the plate to show how similar in appearance is the liver abscess surface to that of the large ulcers in the bowel. In another very remarkable case numerous old adhesions were found in all parts of the abdominal cavity, the liver also being adherent to the anterior abdominal wall and to the stomach. A loop of the small intestine was tightly strangulated by a firm band of adhesions, this having been the direct cause of death; while in addition to all this there was a very chronic abscess with dense fibrous walls in the left lobe of the liver, which had opened into the stomach. Finally, the caecum shows scars of old dysenteric ulcers. Living amoebae were found in the wall of the liver abscess. Another complication of great interest was found in one case, namely, a very large sloughy post-colic abscess in the right lumbar region, which had been opened during life, caused by the post-peritoneal perforation of an amoebic ulcer in the ascending colon. The large bowel shows extensive ulceration of a

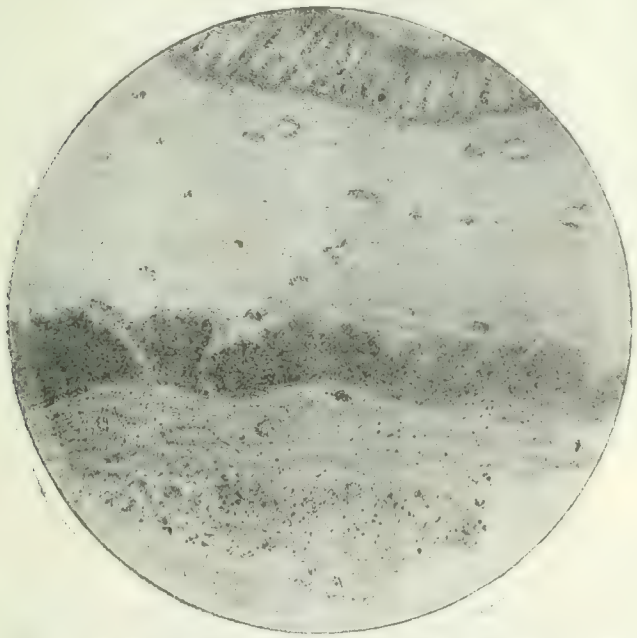


Fig. 2.—Section through the thickened edge of a small amoebic ulcer of the large intestine, showing the enormous thickening of the submucous coat. (Zeiss objective A, ocular No. 2.)

chronic type, while the bowel wall is thickened and also somewhat narrowed in the descending colon and sigmoid flexure. Another point of great interest in this case is the fact that the lower part of the right lobe of the liver was adherent to the ascending colon—a not uncommon event in these cases; and at the point of adhesion the inflammatory process has spread to the liver close to the perforation in the bowel wall, and a commencing abscess of the liver by direct infection is seen at this point, an important fact which will be referred to again immediately.

Liver Abscess and its Mode of Formation.—The great frequency of liver abscess as a complication of amoebic dysentery has already been sufficiently dwelt on, but the very important and difficult question as to how the amoebae travel from the large bowel to the liver remains for consideration. If the path is the portal vein, how is it that these abscesses are so frequently single, while in the great majority of them only from one to three or four large abscesses are found in the organ as a result of amoebic dysentery? In discussing this point in my previous paper on amoebic abscess of the liver I referred to the frequency with which these abscesses are found close to the surface of the organ even when of no great size, and are situated superficially just under the capsule at the upper part of the right lobe close to the suspensory ligament, or beneath adhesions between the colon and the under surface of the liver. These facts, taken with the observations of Councilman and Lafleur with regard to the power of the amoeba dysenterica to work its way through the bowel wall into the peritoneal cavity (where it will either excite local inflammation producing adhesions, or be carried by the currents towards the lymphatics on the under surface of the diaphragm, and so reach the upper surface of the liver), suggest that single abscesses may not infrequently arise from indirect infection by amoebae from the large bowel across the peritoneal cavity, with or without previous adhesions. This will also account for the occasional occurrence of amoebic abscesses which appear to have commenced between the liver and the diaphragm, producing superficial erosion of the upper surface of the organ only, as occurred in several cases in the Calcutta Medical College records. Certain cases in these records also point to the possibility of such abscesses very rarely forming in the base of the right lung or in the spleen alone, but these are of old date and there is no record of their having been examined for the amoeba.

The above method of indirect infection will not, however, explain by any means all the cases, as fair-sized abscesses may be met with deeply within the organ, and occasionally multiple abscesses all containing amoebae are seen. Quite recently I have been fortunate enough to meet with the very earliest stage of such multiple abscesses following amoebic dysentery, a study of which has thrown some light on this vexed question.



Fig. 3.—A portion of Fig. 2, under a higher power (Zeiss objective A, ocular No. 4), showing numerous amoebae in the submucous coat, mostly with faintly-staining oval nuclei.

In two of these cases a number of small abscesses were found without any large ones; in the other several large abscesses and a number of small ones were found. In neither of these cases had suppuration in the liver been suspected during life, their histories being very instructive from the point of view of the frequent latency of the symptoms in these cases. The first was admitted for peri-urethral abscess and commencing extravasation of urine, which was relieved by operation. He was also suffering from dysentery, which soon became very severe, and he died ten days after admission. *Post mortem* extensive ulceration, most marked in the caecum, hepatic and splenic flexures, in the form of raised yellowish-white patches, some of which showed black shreddy sloughs, were found, which contained numerous active amoebae. The liver showed six small raised soft swellings on the surface, and on section about twenty small abscesses from the size of a pea to that of a walnut, some of which were near the surface and others deeply in the substance of the organ. Numerous active amoebae were found in the abscesses, and staphylococci were cultivated from them. Sections of the liver showed that the smallest abscesses were situated within the interlobular branches of the portal veins, as is shown in Fig. 4, p. 1318, which was taken from this case. The clot within the portal veins showed amoebae with the high power, and some of the abscesses showed commencing softening of the vessel walls and infiltration of the outer zone of the liver lobules around with leucocytes, this process being similar to the earlier stage of a pyaemic abscess, and consequently probably due to the staphylococci present rather than to the amoebae, which appeared to be mostly entangled in the blood clot within the lumen of the vessels. These were the conditions found in the smallest abscesses, and clearly prove that in this case both

the amoebae and the staphylococci reached the liver through the portal vein.

The second case was one in which the patient was admitted for gangrene of the rectum and sloughing dysentery, and died two days later. *Post mortem*, the upper half of the large intestine showed extensive large yellowish-white raised patches of ulceration, very similar to those shown in Plate I, some of which presented black shreddy sloughs, while the lower half also showed similar ulcers which were all sloughing, so that the bowel wall was so soft as to break during removal. The liver contained a number of small abscesses up to the size of a walnut, some of which were deeply placed within the substance of the organ, and contained both amoebae and staphylococci, the latter being obtained in pure culture. At the time of the necropsy a search for amoebae in the sloughing ulcers failed, but they were subsequently found in the deeper parts of the lesions in sections, showing that in this advanced stage of amoebic ulceration with sloughing the amoebae may not be found in the superficial sloughs, although present within the deep layers of the wall of the bowel.

The third case is even more instructive. It was that of a boy admitted for compound fracture of the femur, in the treatment of which tenotomy of the tendo Achillis was performed, the wound of which suppurated. When otherwise apparently doing well he died suddenly after sitting up in bed. *Post mortem*, pus was found extending 2 in. or 3 in. up the sheath of the tendo Achillis. The large intestine showed two small ulcers with raised edges in the descending colon and scars of small recent ulcers. The liver showed six soft swellings on the surface, and on section these were found to be abscesses communicating with each other and containing cores of necrosed liver substance. Numerous active amoebae were found in the abscesses, and both streptococci and staphylococci were obtained on culture. One of the abscesses on the under surface of the organ appeared to have ruptured into the hepatic vein; and as both lungs and pleurae showed numerous petechial haemorrhages, this rupture was probably the cause of the sudden death. There was no suspicion of liver abscess during life, although the process was evidently an acute one with rapid necrosis of the liver substance, with no attempt at the formation of the limiting fibrous wall, such as is found in most cases of tropical abscess of the liver.



Fig. 4.—Earliest stage of multiple abscesses of the liver due to a mixed infection of amoebae and staphylococci secondary to sloughing of an amoebic dysentery, showing clotting in the interlobular branch of the portal vein, with commencing cellular infiltration and softening of its walls. The bile duct and hepatic artery are intact. (Zeiss objective A, ocular No. 2.)

In each of these cases of multiple abscess of the liver following amoebic dysentery there was a mixed infection of amoebae and pus-forming organisms; and on looking over my notes, I find that in nearly every case in which there were more than two large abscesses in the liver a similar mixed infection was found. On the other hand, the majority of cases in which only one or two large abscesses were present they were sterile and contained only amoebae.

The formation of multiple abscesses due to the mixed infection as a result of an amoebic dysentery with gangrenous sloughing of some of the ulcers was found in both of the two first-described cases, and I have not met with it in any case without such black shreddy disintegration of some of the amoebic ulcers, with the exception of the third case, in which there was another source of septic complication. In these cases both the amoebae and the cocci reach the liver simultaneously through the portal veins and lodge in the interlobular branches, where the cocci soften the wall of the veins and allow both organisms to escape and break down the liver substance, and so form multiple rapidly fatal acute abscesses. The third case given above is of exceptional interest in this connexion, for here there were only two small ulcers and scars of other recent ones in the large bowel, while the abscesses were comparatively large and presented the appearance of necrosis of areas of liver substance of some size, such as is found in the earliest stage I have seen *post mortem* of single amoebic abscess. Yet they contained pus-forming cocci as well as active amoebae, the former being nearly certainly derived from the septic wound, subsequently to the commencement of the formation of the amoebic abscesses, and not from the bowel simultaneously. The rapid softening of the liver substance and the perforation of one of the abscesses into the hepatic vein was probably much helped by the cocci present. If this view of the case is correct (and the great resemblance of the general appearance of the abscesses to those of purely amoebic origin convinced me that they did begin as such), then we may conclude that these abscesses began insidiously as amoebic abscesses secondary to amoebic ulceration of the large bowel through the portal vein, and that the secondary septic process so hastened the fatal termination of the case that the rarely seen early stage of necrosis of considerable areas of liver tissue produced by the amoebae was seen, which would ordinarily have gone on to become limited by a fibrous wall, which is so characteristic of the later stages of tropical abscess of the liver before death took place. It remains to be explained how the amoebae can produce such a limited focal necrosis in the liver resulting in a single large abscess when it reaches the liver through the portal vein, and although my observations are not sufficiently complete to prove how this takes place, yet I would suggest the following as the most likely explanation of the facts known. As I have already pointed out in the case of the small multiple abscesses of mixed infection, the amoebae are found entangled in blood clot in the interlobular branches of the portal vein, a point which is illustrated in Fig. 5. Now sections of this first stage of the abscesses show that these clots often extend for some considerable distance along these veins, completely blocking them. If only a few amoebae settle in any one small area of the liver they may thus become entangled in the blood clot and (being in this case unaided by the solvent action of pus-forming cocci) may be unable to work their way through the wall of the veins, but perish without doing much harm, the clot being ultimately absorbed. Should, however, they happen to reach some particular area of the liver in unusually large numbers, then they may produce sufficient clotting in the vessels as to cut off the blood supply from that part to such a degree as to interfere gravely with its nutrition, and so

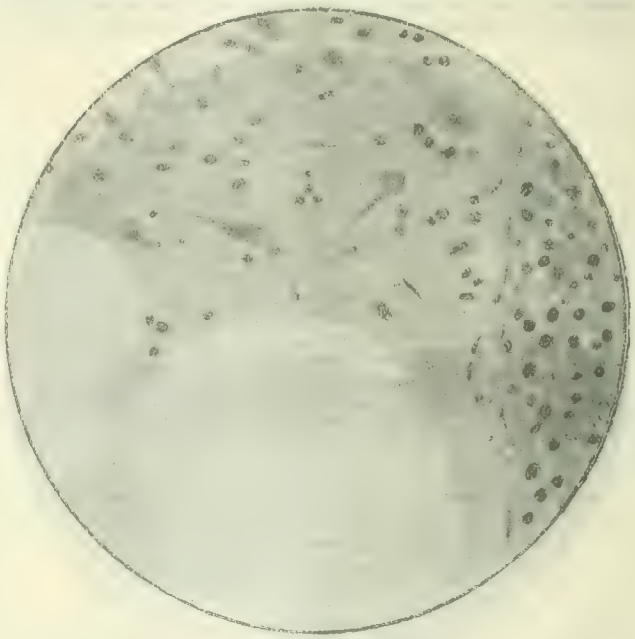


Fig. 5.—Very early stage of amoebic abscess of the liver (from a different case from the above), showing amoebae in the blood clot within a branch of the portal vein. Some of the amoebae show granular degenerative changes.

produce a focal necrosis which will soften the tissues and lessen their vitality sufficiently to allow of the escape of the amoebae from the veins, to continue their destructive action in ever-widening circles until their progress is limited, or at least checked, by the reactive formation of fibrous tissue around it, and the typical amoebic abscess results. This view is also supported by the conditions found in another class of cases, namely, those in which around an acute progressive type of large amoebic abscess of the liver a number of smaller abscesses are seen, for these on microscopical examination I have also found to be spreading along the interlobular veins, causing clotting within them, which, when sufficiently extensive, will also lead to necrotic changes, thus causing an extension of the abscess; the large single abscesses being thus produced by a slow, but progressive, process from a single original necrotic focus, and containing amoebae, but no micrococci at any time.

The Value of the Serum Test in Differentiating the Bacillary from the Amoebic Type of Dysentery.

The recognition in India of the amoebic form of dysentery and of its intimate relationship to liver abscess naturally suggests the use of the serum test in order to differentiate the common bacillary form of dysentery, which is not in my experience ever followed by the large tropical form of liver abscess, from the amoebic disease with its many and serious complications, and frequently chronic and at times latent course. As cases of severe dysentery are comparatively seldom admitted to the Medical College Hospital, except when occurring in European patients, necropsies on uncomplicated cases of this disease are not very frequently obtained. Nevertheless I have been able to make bacteriological examinations after death in a few cases, and have usually succeeded in isolating organisms which grow in the depths of a glucose agar culture without the production of any gas bubbles, and in one case, also, obtained a similar culture from the spleen. In other respects these bacilli closely resembled that described by Shiga as the cause of dysentery in Japan; while Flexner, in America, and other observers have also confirmed Shiga's original observations on the etiology of this disease. It seemed advisable, therefore, to test the serum reactions of a series of cases of dysentery with different strains of dysentery bacilli, including that isolated by myself, in order to see if the bacillary form of the disease could be differentiated clinically by this means, as the amoebic type is said not to react with the dysentery bacillus. For this purpose I obtained bloods from dysentery patients in the Campbell and Police Hospitals, through the kindness of Major Vaughan, I.M.S., who was in charge of these institutions at the time. The results have appeared in the *Indian Medical Gazette* for February, 1903, so they need only be summarized here. In all, 17 cases were tested with both Shiga's and my own bacilli, and all but 1 reacted with one or the other, and 11 of them with both. Two gave reaction with Shiga's and not with my organism, and 3 others reacted with mine and not with Shiga's. In 4 of the cases which reacted necropsies were subsequently obtained, and in each of them the ordinary bacillary type of dysentery was found, and in 3 of them cultures were made and organisms growing like Shiga's bacillus in glucose agar were isolated, although it is often necessary to inoculate a number of tubes in order to get a positive result. In none of these cases was anything resembling amoebic dysentery found *post mortem*. On the other hand, in the remaining case which gave no reaction very numerous active amoebae were found in the fresh stools during life, and typical amoebic dysentery was found after death with many active amoebae in the floors of the ulcers. Thus the only case of the whole series which failed to give any reaction proved to be one of amoebic dysentery. In six of the cases a bacillus obtained from Europe as that of Flexner was tried, but with entirely negative results, and similarly 6 cases were tested with an organism obtained as Krause's dysentery bacillus, also without any positive result having been obtained. Possibly the dysenteries met with in America may differ slightly from those of India, or the organisms sent me as Flexner's may not have been correct.

The above results are certainly suggestive, although the number of cases tested is too small to base any very definite conclusions on, and it is only the fact that the severance of my temporary charge of the Medical College laboratory prevents my pursuing the subject for the present that seems to warrant my placing them on record for the guidance of others who may be working at the subject. It is, however, of interest to note that all, except one amoebic case, gave reactions indicating that they were of the bacillary type of dysentery, as this supports the conclusions which I have arrived at from the study of the Medical College cases, namely, that the common type of dysentery in the tropics in India is that due to Shiga's bacillus, while the amoebic type, which is complicated with liver abscess in so large a proportion of the cases, is much rarer, and its synonym of "tropical dysentery" is a misnomer. Should these observations be confirmed by the examination of a larger series of cases, then the serum test will prove of as great value in the differentiation if the varieties of dysentery as it already has been in helping to clear up the classification of the fevers met with in tropical India.

Summary and Conclusion.

1. Amoebic dysentery is most frequently found in patients dying from large tropical liver abscess, in the walls of which I have previously shown amoebae can always be found unless they have been opened for some time. The disease is chronic, and often latent, and not very often fatal by itself, but usually through complications.

2. Amoebic dysentery has naked-eye and microscopical characters which enable it to be easily distinguished from the more common bacillary type of the disease.

3. Its most important complications are large abscess of the liver, chronic or acute peritonitis, and post-peritoneal abscess.

4. Amoebic abscess of the liver secondary to this form of dysentery may be produced (1) by infection across the peritoneum, with or without previous adhesions; or (2) through infection by the portal vein producing sufficient clotting in its branches to cause a focal necrosis in one or more parts of the liver, concentric extension taking place by means of a similar process.

5. If staphylococci reach the liver with the amoebae, as especially occurs when gangrenous sloughing of the bowel wall complicates amoebic dysentery, then multiple small abscesses in the interlobular branches of the portal vein containing both amoebae and staphylococci result.

6. The bacillary form of dysentery is much commoner in Calcutta than the amoebic one, and is due to Shiga's bacillus, which is clumped by the blood of cases of ordinary dysentery, although not by that of the amoebic form, thus furnishing a method of differentiation between them clinically.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

HYDRAMNIOS WITH ANENCEPHALY IN A PRIMIPARA.

Miss S., aged 16 years and 9 months, was confined by me on March 4th. During the last three months of pregnancy she had become much larger in proportion, and had suffered from several attacks of vomiting, probably due to over-distension of the uterus. Calculation led one to believe that the confinement was post-mature to the extent of fourteen days. Abdominal examination revealed a large rounded and smooth uterine tumour. The succussion thrill was easily obtained, but the fetal parts could not be located with any degree of certainty. Well-marked ballotement, however, confirmed the diagnosis of hydramnios. The vaginal examination revealed a large bulging bag of membranes surrounded by a fully-dilated os. Through the membranes I could feel what seemed to be an ear, also a semilunar, rough, nodular surface. Upon rupturing the membranes a flood of liquor amnii rushed out, saturating the bed and bed-clothes, and flowed into vessels placed on the floor. The liquor amnii seemed normal, but no chemical examination was made. On re-examination I found protruding through the os a small head about the size of a cricket ball, with a peculiar rough posterior surface directed anteriorly. Little progress was made during the next half-hour. Abdominally several fetal parts could now be made out. The position was dorso-left-anterior. After a few good pains the head of an anencephalic fetus passed through the vulva with the umbilical cord twisted once round its neck; this was easily removed. Another pain brought the body, which was excellently formed, the shoulders being especially broad. The cord pulsated for thirty seconds only, and then ceased. There was no attempt at breathing. The third stage caused no trouble. The placenta was very soft and flabby. Although bleeding was no more than normal, a stiff dose of

ext. ergot. liq. was administered to the mother and a binder applied. The patient made an uninterrupted recovery. The first stage of labour lasted eighteen hours, the second forty minutes, and the third ten minutes.

The fetus weighed 7½ lb., and was a female. On dissecting it the cutaneous nerves were found with exceptional ease. The bony vault of the skull was rudimentary and the encephalon absent. The basal skull bones were much more convex than normal.

In the family history of the mother mental weakness and eccentricity were marked.

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Bedlington, Northumberland.

FISSURE OF THE STERNUM: ECTOPIA OF THE HEART.

On January 25th Mrs. F. had a natural labour, and was delivered of a full-grown female child. The heart was entirely outside the body, lying bare on the chest wall and pulsating. The middle line of the chest was quite soft, and there appeared to be no sternum. There was also a round swelling about 3½ in. in diameter occupying the epigastrium, which I took to be a displacement of the liver, but unfortunately could not verify it owing to the parents not consenting to any surgical interference nor to a necropsy. The child had also a slight hare-lip. It lived just twenty-seven hours, dying, in my opinion, from exhaustion.

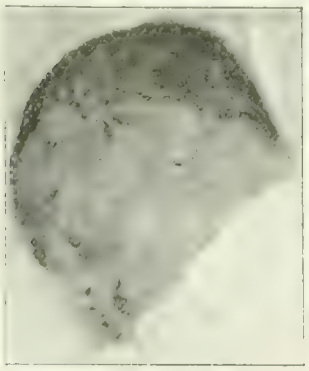


The accompanying illustration is from a photograph I took half an hour before death.

Exeter. Jas. Lilwall-Cormac, L.R.C.P. & S.E., etc.

MAL-DEVELOPMENT OF EXTERNAL EARS.

The subject of the accompanying photographs was a prematurely-born male child (8 months) which lived only thirty-four hours. The left ear was a mere tubercle of skin; the external auditory meatus was represented by an aperture only admitting the end of a hairpin; no bony opening could be discovered by this, nor by a careful examination with the finger: all underneath the skin in the situation of the ear appeared perfectly smooth and without depression.





Dr. Dent, who saw the child with me after death, made a careful examination, and agrees with me in the foregoing particulars. He kindly took the photographs. The right ear was normal in development. As the complete occlusion of the bony part of the auditory meatus seems to me rare, I should be glad to hear if any cases of this kind have been observed by others.

Cheltenham. William Powell, M.R.C.S.

CONGENITAL DEFORMITY OF FOOT.

Whilst marching from Dera Ismail Khan to Dera Ghazi Khan, on the north-west frontier of India, with the 22nd Punjab Infantry, a native presented himself at a village named Notak with a curious congenital deformity of the left foot, of which Lieutenant-Colonel Rattray, commanding the regiment, kindly took a photograph. Unfortunately the plate was broken later, but the print shows the condition sufficiently well.



The second and third toes were joined together and projected in a large mass about 3 in. in front of the line of the other toes. Two small hollows above showed where the nails should have been. The bones were felt to be much enlarged. There was no movement between the two digits. The man said they had gradually become upturned from use. He was able to run fairly well, and was, like most Mohammedans, quite averse to parting with the thing.

M. H. Thornely,
Captain, I.M.S.

Dera Ghazi Khan, India.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

RADCLIFFE INFIRMARY, OXFORD.

CASE OF BULLET WOUND OF THE HEAD; EXTRACTION FOUR AND A-HALF YEARS AFTER THE INJURY; RECOVERY.

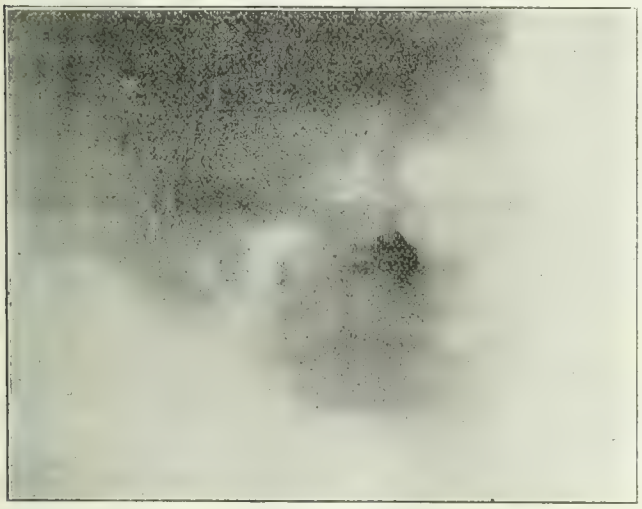
(By G. W. S. Farmer, M.A., M.B., M.Ch.Oxon., F.R.C.S., Surgeon to the Infirmary; Lichfield Lecturer in Clinical Surgery, University of Oxford.)

The following case serves to illustrate how a foreign body, for example, a bullet, may remain embedded in tissues for a considerable time producing practically no discomfort, and then gradually give rise to symptoms increasing in severity and demanding operative interference.

History.—A.H., age 37, a metropolitan policeman, came under my care at the Radcliffe Infirmary on November 15th, 1902. His account was that about four and a-half years previously, in performance of his duty, he was shot with a revolver by a prisoner who was out on bail. The prisoner took him unawares as he and a fellow policeman were about to conduct him into court for trial. The bullet entered just behind his right ear, and he was conveyed to hospital. He was not quite clear with regard to the length of time he was laid up in

London. A radiograph was taken, but no attempt made to extract the bullet. Since the injury he had suffered slight neuralgic pains, but it was only recently that these pains became very severe, in fact, almost unbearable. These pains he described as beginning over the right temple and spreading over the whole of the right side of the face.

State on Examination.—On examining the patient a small scar, not much larger than a pea, was seen immediately behind the lobule of the right pinna. His face was symmetrical on feeling the bones on both sides, and there was no facial paralysis. There was some tenderness, however, on deep pressure just below the right zygomatic arch and he would place his finger on this spot as indicating the locality from whence the pain started before becoming general. From here he said the pain wonld begin by shooting up into the right temporal region. A radiograph taken through his head showed the following points: An irregular dark mass, about the size of a fairly large hazel nut, in the region of the prominence of the malar bone; in addition in front of the neck of the mandible, about ¾ in. below the zygoma, a slender curved mass about ½ in. in length was seen lying vertically. This latter was about 1 in. behind the other mass seen. On



Fragment Bullet

comparing the radiograph with that taken at the time of the injury there was no difference except with regard to the detail of the facial skeleton, which was much clearer, owing no doubt to improved apparatus. The patient was very anxious that something should be done to relieve him of a pain which completely incapacitated him from work. I therefore decided to attempt the extraction of what was undoubtedly the bullet and separated fragment.

Operation.—The patient was anaesthetised with chloroform, and the right cheek well retracted. An incision was made through the mucous membrane of the mouth about 1 in. in length below the malar process of the maxilla. The mucous membrane was thoroughly separated with a raspatory from the bone until the malar process of the maxilla and the outer surface of the malar bone could be thoroughly explored digitally. Nothing abnormal could be felt. A shell of bone was then chiselled away from the lower border of the malar bone and the lower surface of the malar process of the maxilla. On examining this shell of bone it was noticed that its deep surface was discoloured, small specks of lead also being visible. The bullet could now be felt firmly wedged in bone, and with a little further chiselling was easily removed. The fragment in front of the mandibular neck was easily found by making a small oblique incision over the region indicated by the radiograph and dissecting down to the masseter muscle, upon which it was lying. The patient made an uninterrupted recovery, and has been quite free from pain since the operation.

REMARKS.—I think this case is a marked instance of the value of the *x* rays. It would have been a most hazardous operation to have undertaken but for the exact localization of the bullet and its fragment. It is surprising that no more damage was done. From the position of the old scar the bullet must have entered in the groove between the lower part of the concha and the mastoid process; thence it must have coursed forwards through the parotid gland external to the neck of the mandible, to be lodged, after leaving a piece behind, in the facial bones above stated. The most surprising point is that the facial nerve, judging from there being no facial paralysis, escaped scot-free. The bullet weighed 118 gr.

REPORTS OF SOCIETIES.

EDINBURGH OBSTETRICAL SOCIETY.

JAMES RITCHIE, M.D., F.R.C.P.E., President, in the Chair.

Wednesday, May 27th, 1903.

COMPRESSION OF TRACHEA BY ENLARGED THYROID.

DR. ANGUS MACDONALD read a note of a case of fatal tracheal compression by enlarged thyroid in a newborn infant.

The specimen exhibited at the March meeting showed uniform hypertrophy of both lateral lobes, each of which was about the size of a large marble, and of the isthmus, which was about the size of the adult little finger. The swelling caused profound asphyxia at the time of birth, which, however, paased off temporarily under treatment by usual methods, rhythmic traction on the tongue being found of much value. Respiration remained extremely difficult, and as matters were becoming worse, an attempt was made, about four hours after birth, by Mr. Harold G. Stiles, to perform tracheotomy. The enormous congestion of surrounding veins rendered this very difficult, and it was found impossible to reach the trachea below the isthmus. Accordingly the isthmus was ligatured and divided, but the infant succumbed while this was being done. The child, a male, was born prematurely at the end of the eighth month. Labour was not delayed, but was rather rapid, and hydramnion was present. The swelling did not seem to favour forehead presentation, as in other recorded cases, but from the tightness of the skin of the neck over the swelling seemed rather to limit complete extension. The previous obstetric history of the mother, who was 24 years of age, consisted of one child at the eighth month, living twenty-four hours, and another, over the eighth month, surviving five weeks. No definite syphilitic history. From second month till time of last birth, she was kept on potassium chlorate and iron with a view to preventing a third miscarriage.

As regarded the etiology of the condition, neither parent nor any relative was the subject of goîtrous enlargement. Attention was drawn to the possibility of the administration of potassium chlorate throughout pregnancy as a factor in the etiology. Congenital goître had followed the administration of this drug in cases recorded by Sir J. Y. Simpson in the *Monthly Journal of Medical Science*, xx, p. 350, 1855; A. R. Simpson, in the *Glasgow Medical Journal*, 38, i, 181, 1866-7; and J. T. Hewetson, Birmingham, in the BRITISH MEDICAL JOURNAL of March 21st, 1903; and in a case not yet published occurring under the notice of Dr. W. E. Fothergill, Manchester. Dr. Ballantyne's *Antenatal Pathology* was referred to for valuable references to the literature.

The paper was discussed by the PRESIDENT, and Drs. J. W. BALLANTYNE, D. BERRY HART, and NICHOLSON; and Dr. ANGUS MACDONALD replied.

PAPILLARY CYST OF LABIUM MINUS.

Dr. JESSIE MACGREGOR read a note of a case of papillary cyst of the labium minus.

The patient, aged 28, was healthy, except for neurasthenic symptoms, but complained of a small growth in the genital region. The growth had caused no symptoms, had been present for at least three years, possibly longer, and had not increased in size during the last eighteen months. On examination a small cystic growth was found in the left labium minus and interlabial sulcus. It measured ¼ in. by ⅓ in., was painless to touch, and without surrounding infiltration. There was no glandular enlargement. The cyst was excised, and on excision was found to contain some clear serous fluid and a papillary outgrowth which incompletely filled the cavity. The papillary growth had many dendritic processes growing from a narrow pedicle-like base. On microscopic examination it was found to be composed of fine, branching, fibrous tissue processes, covered with epithelium, varying in type from long, narrow, columnar cells to flattened cubical epithelium. There was no evidence of malignancy. The whole growth presented a striking resemblance to a portion of an ovarian papillary cystoma.

The interest of the case lay in the unusual nature of the cyst and in the question of its origin. Miss MacGregor could only find two records of such cysts one described by Werth in 1878, and one mentioned by Gebhardt in his *Pathologie d. weib. Sexualorgane*. The accounts so closely resembled her own case that she thought a non-malignant papillary cyst must be included in the list of the growths which might occur in the labia. As regards the origin of the cysts there were three possibilities: (1) the Wolffian duct, (2) Bartholin's gland, and (3) aberrant portions of glands abnormally present in the interlabial sulcus. The nature of the cyst was so exactly that of an ovarian papillary cystoma that the Wolffian duct

suggested itself at once, but the position of the cyst was so far removed from the lowest point the Wolffian duct was said to reach, that this source seemed excluded. The Bartholin gland seemed also too far removed for an aberrant spur to be responsible for the cyst, and further there was no reason why such a spur should give rise to a papillary growth. The third source, aberrant portions of glands in the interlabial sulcus, was a likely one, since Schauta had seen remnants of tubular glands in this region. It was possible that the insignificant character of the growth might be responsible for the paucity of information as to such small cysts, and that future cases might be recorded which might throw light on their origin.

Dr. BERRY HART made some remarks on Miss MacGregor's paper.

CHORION-EPITHELIOMA (DECIDUOMA MALIGNUM).

A case of deciduoma malignum was communicated by Dr. MUNRO KERR and Dr. J. H. TEACHER, of Glasgow, the former dealing with the clinical history, the latter with the pathology.

CLINICAL HISTORY.

A woman of 23, who had no family, had always had good health prior to this illness, was admitted to Ward XVII of the Glasgow Western Infirmary on May 17th, 1901, suffering from abdominal pain and uterine haemorrhage. There was a history of a "miscarriage" in September, 1901, which was followed by pain and constant bleeding. On admission she was anaemic, had a pulse of 130, a temperature of 103° to 105°. On May 23rd the uterus was cleared out (by Professor M. Cameron) with the finger and a curette, and several masses of what were thought to be placental tissue were removed. These were not preserved for microscopic examination. Bleeding then ceased, and temperature became less febrile for a time. Then it began to show an evening rise, registering 103° on one occasion. Septic infection was suspected. Intrauterine douching had no effect. Dr. Munro Kerr came on duty at the infirmary at the end of July, and in consequence of another bleeding he examined the patient under an anaesthetic. The uterus was explored with the finger, and a large rough mass was found at the fundus. Profuse bleeding followed. The diagnosis of chorion-epithelioma was made and the uterus was removed. The patient died soon after the operation.

A necropsy was refused, and it was therefore impossible to say whether the mass removed was a metastatic growth or not. The broad ligament was certainly quite free, and the uterus moveable.

PATHOLOGICAL REPORT.

Dr. TEACHER reported that the tumour consisted of a raised nodular mass about as large as a five-shilling piece occupying the fundus and posterior wall of the uterus, partly covered by mucous membrane, partly ulcerated, and to a considerable extent it consisted of firm blood clot. Microscopically it presented the typical structure of a chorion-epithelioma, showing an unusual amount of the cells which were regarded as transition forms. The typical elements were: (1) Multi-nucleated masses of protoplasm of all shapes and sizes, rounded, elongated and irregular bands and whorls. They were often much vacuolated, and the vacuoles might contain blood or leucocytes. Their protoplasm was opaque, and stained deeply with eosin and dyes of that class. (2) Individual cells of polyhedral shape, with single nucleus and very clear finely reticular protoplasm, arranged in groups which were usually enclosed by the sprawling masses of syncytium very much as in the normal placenta. (3) Cells with one or two, three, or more nuclei, and with protoplasm presenting all characters intermediate between the preceding types. The nuclei for the most part were of very large size, contrasting strongly with those of the unaltered Langhans's layer cells, and still more with the small nuclei of the maternal tissues. They were rich in chromatin, which formed a distinct network and contained large nucleoli. All stages in the development of these from Langhans's layer cells were readily traceable. There were also individual cells which had one or more nuclei, and in general characters appeared to be distinctly derivative of the syncytium. The individual cells formed a large part of the cell masses, and especially they were found where the tumour was infiltrating maternal tissues. In the cell masses there was no connective tissue stroma, whether alveolar, like that of a carcinoma, or more diffuse, like that of a sarcoma, and no blood vessels. The tumour cells infiltrated any maternal tissues with which they were in contact. They were also seen in the blood vessels, either growing into their mouths and infiltrating their walls from within, or creeping in the wall under the endothelium. Evidence of destruction of the maternal tissues in the way of atrophying muscle cells and shreds of connective tissue among the tumour cells was very clear. There was also distinct evidence of inflammatory reaction in the connective tissue. The tumour tissue was broken up by masses of extravasated blood, and where this had been clotted for some time the tumour cells showed evidence of degeneration amounting in the innermost parts to complete necrosis. These clots and also the fluid blood in the maternal vessels contained large numbers of polymorphonuclear leucocytes. The uterine mucous membrane showed marked inflammatory infiltration, but no change in the direction of decidua. The uterine glands were quite distinct and characteristic.

Drs. HAULTAIN, BERRY HART, and J. W. BALLANTYNE spoke on the paper, and Dr. MUNRO KERR replied.

SPECIMENS.

Specimens were shown by Drs. MUNRO KERR, J. LAMOND LACKIE, and GEORGE BARBOUR SIMPSON.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.—At a meeting held on Monday, May 11th, in the Faculty Hall, Mr. A. E. MAYLARD, President, in the chair, Dr. JAMES HINSHELWOOD (for Professor T. MCCALL ANDERSON, who was unavoidably absent) showed and read notes of (*a*) a case of Hodgkin's disease (?), and (*b*) a case illustrating the diagnosis of tuberculous from hereditary syphilitic ulceration.—Dr. A. MAITLAND RAMSAY showed a patient who had been totally blind from congenital cataract, and had recovered his sight after operation at 30 years of age; Dr. Ramsay read notes on the phenomena which followed the operations; the case was one of quite exceptional interest.—Dr. A. N. MCGREGOR showed three cases and read a paper on intussusception, with special reference to recurrence.—Dr. NAPIER showed a case of dermatitis exfoliativa with peripheral paralysis and joint deformity.—Dr. R. M. BUCHANAN showed specimens (naked eye and microscopic) from a case of glanders in man, and experimental glanders relating to the investigation of it.—Dr. JOHN W. FINDLAY showed microscopical preparations from a case of spleno-medullary leukaemia.

ROYAL ACADEMY OF MEDICINE IN IRELAND.—At a meeting of the State Medicine Section, held on May 1st, Dr. NINIAN FALKINER, President of the Section, in the chair.—Sir CHARLES A. CAMERON, C.B., read a paper on the notification of measles, giving the history of the notification throughout the three kingdoms, showing that it was in force in but an insignificant number of towns, and that many towns after adopting it had since reversed their action; he recommended that it should be restricted to first cases of the disease, when an epidemic had been established. The paper was discussed by Drs. DAY, KIRKPATRICK PARSONS, MCGUINNESS and BYRNE, and Sir CHARLES CAMERON replied.—Professor E. J. MCWEENEY read a paper on a method of isolating the typhoid bacillus from soil, water, faeces, etc., with special reference to (and a demonstration of) the new method of Drigalski and Conradi. The paper was discussed by Drs. FALKINER, TICHBORNE, and Sir CHARLES CAMERON; and Professor MCWEENEY replied.

SOUTH EASTERN BRANCH OF THE BRITISH MEDICAL ASSOCIATION: EAST SUSSEX DISTRICT.—At a meeting held at Lewes on May 21st, Mr. G. VERE BENSON, in the chair, Dr. FAWSETT (Lewes) read notes of a case of head injury to a boy, followed by a rash which appeared shortly after the injury and only on the face and neck above the clothing. He described the case:

The boy fell off the beam of a horse-driven chaffcutter and was, in falling, hit on the forehead by the machine as it revolved. He was conscious and could stand, but staggered on walking; there was no sickness, nothing abnormal in the papillary appearance or reaction, and no paralysis. There was right subconjunctival haemorrhage immediately after the injury, and on the next day there was also similar haemorrhage on the left side. The rash persisted for five days and there was never any rise of temperature after the first day.

Dr. Fawsett asked for a diagnosis as to nature of head injury and of the rash. A discussion followed.—Mr. LOVELL-KEAYS (East Hoathly) read notes on a case of double perforating gastric ulcer, death following. He brought the specimen of the stomach which showed two typical "punched out" perforations, one on the anterior and one on the anterior wall, and almost exactly opposite. The case, apart from the unusual condition of a perforation occurring in two places almost simultaneously, was remarkable on account of the extreme mildness of the accompanying symptoms; the patient being averse to medical aid until within a very short time of her death.—Dr. GABBETT (Eastbourne) read a paper on The Diagnostic Value of Blood Examination. The paper was illustrated by diagrams showing the various forms of the blood corpuscles both in health and disease. Dr. Gabbett explained the value of the different results from the blood count in various pathological states both as regards prognosis and diagnosis, pointing out some divergencies from the regular rule and their explanation. He considered no blood count reliable that was not made from blood taken on the spot and protested against the habit of sending specimens of blood to a distance with the idea of obtaining an accurate estimation. The methods of counting corpuscules, of estimating haemoglobin, and of staining blood films were demonstrated.

LIVERPOOL MEDICAL INSTITUTION.—At a meeting on April 30th, Mr. RUSHTON PARKER, President, in the chair, Mr. G. P. NEWBOLT read notes of two cases of intestinal obstruction caused by bands and successfully operated upon. In one, a woman of 31, there was a recurrence of the condition six

months later, when a second successful operation was done at Damascus. In the other, a woman of 60, two operations had already been performed for strangulated umbilical hernia, and the third obstruction was due to a thick omental band under which a coil of intestine had slipped. The PRESIDENT mentioned the importance of treating intestinal obstruction by starvation and opium; he quoted a case in which this line of treatment was successful; a recurrence took place and operation was necessary, as the symptoms did not yield to treatment.—Dr. F. W. BAILEY read a note on somnoform. He alluded to the difficulty of knowing when anaesthesia was complete. In his opinion the development of a full and bounding pulse was the most reliable sign. No bad effects were noticed after single administrations, but after repeated doses he had met with violent headache, and in one case collapse. Dr. FINGLAND thought that whatever could be done by somnoform could be better done and more safely with nitrous oxide. Dr. F. E. MARSHALL said the chief objections to somnoform were its uncertainty of action and its disagreeable taste. It was extreme portable. He, too, had noticed extreme throbbing headache, coming on several hours after administration. He thought Bauer's or Ormsby's ether inhaler preferable to the handkerchief mask usually employed. Dr. STOCKDALE, Mr. SHEARS, and the PRESIDENT spoke, and Dr. BAILEY replied.—Dr. D. M. HUTTON read a short communication on some therapeutic applications of chloretone. He had found the drug of great service in the vomiting of pregnancy, menstrual sickness, and in sea-sickness. As a hypnotic and analgesic in organic disease of the stomach he could not speak with any confidence. Drs. MACFIE CAMPBELL, LESLIE ROBERTS, WARRINGTON and MCKENNA also spoke, and Dr. HUTTON replied.—Mr. EDGAR STEVENSON read a paper on the influence of the semicircular canals and labyrinth upon the movements of the eyes and head. He rapidly reviewed the anatomy and nervous connexions of the canals, and alluded to experiments made by himself and others. He suggested they were the end-organs of a seventh sense, that of orientation, and further that muscle tone was maintained by the integrity of the canals. The paper was illustrated by lantern slides, and the gyrations of some Japanses dancing mice. Dr. GROSSMANN said that vertigo was not exclusively due to auricular causes, or to a continuation of inertia after movement. Some forms were exclusively ocular. Drs. WARRINGTON, GILL, and EDGAR BROWNE spoke; and Mr. STEVENSON replied.

CHELSEA CLINICAL SOCIETY.—A meeting of the Society was held on Tuesday, April 21st, at the Jenner Institute of Preventive Medicine, Grosvenor Road, S.W., Dr. C. C. GIBBES, President, in the chair.—Dr. J. D. MORTIMER brought forward a communication from Dr. D'ESTRÉES, of Contrexéville, on the association of diabetes with the uric acid diathesis. It was to the effect that Dr. D'Estrées's thirty-five years' experience at Contrexéville enabled him to state (1) that 95 per cent. of diabetic cases were "d'origine arthritique," a term which might be translated as "due to the uric acid diathesis"; (2) that this diabetes of arthritic origin disappeared as uric acid was eliminated by the Contrexéville mineral water treatment; (3) that when a diabetic, whether the amount of sugar passed was small (under 5 per cent.) or large (12 per cent.) did not eliminate uric acid as a result of the Contrexéville course of treatment, the results were not so satisfactory, although Dr. D'Estrées claimed that whatever the cause of the diabetes the quantity of sugar was always reduced and the general condition of the patient improved. Dr. D'Estrées considered that this expulsion of uric acid in the form of microscopic crystals or of gravel, coupled with the disappearance of sugar, which commonly occurred towards the end of the course (although no special regimen might have been adopted) was a proof of the community of origin of gout and diabetes, which had been already strongly urged by Marchal de Calvi and other French physicians. He did not insist, however, that the community of origin was absolute in all cases of diabetes. Notes of 100 cases were appended. A discussion followed, when the opinion was generally expressed that whilst Dr. D'Estrées's conclusions were no doubt correct as regards the class of patients (many of whom might be expected to suffer from "gouty" or "alimentary glycosuria") who frequented Contrexéville they could hardly be regarded as of wider application.—Mr. C. EDWARD WALLIS read a paper on such dental information as was of value to the medical practitioner. He gave a summary of the common dental affections that were met with, and made special remarks on the subject of the sterilization and hygiene of the mouth. Specimens were shown of dental erosion, excessive deposit of salivary calculus, etc., and a demonstration was given of the latest methods of conservative dentistry, with models and specimens of dental crowns, bridges, and plateless dentures, the obvious advantages and disadvantages of each being explained and discussed. Mr. Wallis pointed out that unless every precaution was taken to sterilize roots on which crowns and bridges were to be placed they were doomed to failure; that when bridges were applied representing several teeth it was necessary that the roots on which the abutments were placed should be absolutely aseptic and possess a living periodontal membrane, and at the same time that they should not be subjected to a mechanical strain greater than they could bear.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.—At a meeting held on May 15th, Dr. FREDERICK TAYLOR in the chair, Dr. J. PORTER PARKINSON showed a specimen of colloid cancer of the peritoneum removed from a child aged 12 years. During life the abdomen was distended with free fluid, and she was thought to be suffering from tuberculous peritonitis. On removal of the fluid large cells filled with colloid deposit were found in the detritus. An irregular hard swelling was then palpable in the hepatic area, and some scattered nodules elsewhere could be felt. An abdominal section was subsequently made, and the peritoneum was found to be sown with small masses of growth of a sodden, semi-transparent appearance, which, microscopically, were colloid cancer. Subsequently the abdomen became completely filled with irregular masses of growth, which surrounded all the contained organs. Remarks were made by Dr. THEODORE FISHER (Bristol) and Dr. A. E. SANSOM; and Dr. PARKINSON replied.—Dr. A. A. H. PARTRIDGE showed a boy, aged 10½ years, the subject of interstitial keratitis, who simultaneously developed an affection of the hands. The joints looked to most people like those of osteo-arthritis, but he supposed they must be considered due to the general condition. An interesting point about the case was that the left hand became affected after the left eye, and the right later on. This happened in November, 1901. The right eye failed in January, 1903. Dr. EDMUND CAUTLEY was inclined to consider it a case of osteo-arthritis arising in a child the subject of inherited syphilis. The case was further discussed by Dr. G. A. SUTHERLAND, Dr. GEORGE CARPENTER, Dr. F. PARKES WEBER, and Dr. FREDERICK TAYLOR; and Dr. PARTRIDGE replied.—Dr. EDMUND CAUTLEY showed the stomach and oesophagus of an infant aged 18 months who had died from diphtheria. The child was admitted for constipation and anuria, and ten days later developed bacilluria, the variety being the bacillus coli. Subsequently it became feverish, profoundly asthenic, and died in twelve days from the onset of the fever. The oesophagus contained membrane in the upper third. One-third of the mucous membrane of the stomach towards the pyloric end was covered with yellowish-grey membrane.—Dr. J. PORTER PARKINSON showed a case of enlarged bronchial glands in a child aged 4½ years, which was associated with a paroxysmal cough like whooping-cough. The associated signs were those of bronchitis, with weaker breath sounds on the right side, and in places somewhat bronchial in quality. There was much sputum, which was free from tubercle bacilli. The fingers and toes were clubbed. He thought there were enlarged mediastinal glands pressing on the right bronchus, with secondary dilatation of the tubes, and that the "whoop" was occasioned by irritation of the vagus nerve. The case was discussed by Dr. FREDERICK TAYLOR, and Dr. G. A. SUTHERLAND; and Dr. PARKINSON replied.—Dr. FREDERICK TAYLOR showed a case of athetosis in a child with mitral disease. The girl was suddenly attacked with right-sided hemiplegia during sleep, and some twitchings of the right arm and leg were noticed at the onset. Involuntary movements commenced in the right hand and foot two days after the hemiplegia began. Dr. A. E. SANSOM said there was no question as to the embolic plugging of the left middle cerebral artery. Plugging in a purely rheumatic case of heart disease was not quite so common as people thought. Remarks were also made by Dr. EDMUND CAUTLEY, Dr. G. A. SUTHERLAND, and Dr. GEORGE CARPENTER; and Dr. F. TAYLOR replied.—Dr. FREDERICK TAYLOR showed a case of acute anterior poliomyelitis involving the abdominal muscles, as well as the legs and lumbar muscles. The case was discussed by Mr. A. H. TUBBY, Dr. THEODORE FISHER, and Dr. G. A. SUTHERLAND; and Dr. TAYLOR replied.—Dr. E. C. WILLIAMS (Bristol) read a paper upon a case of infantilism in a child aged 10 years, who had not grown since 4 years old. Her weight was 26 lb. and her height 3 ft. She was awkward to manage, and rather dirty in her habits. She could read her

letters and count, and answer simple questions fairly intelligently. There was no heart disease; she was free from congenital syphilis and rickets, and she had lost weight under thyroid treatment. Dr. G. A. SUTHERLAND and Dr. GEORGE CARPENTER discussed the case.—Dr. JOHN MCCAW (Belfast) read a paper on a case of splenic leukaemia in a child aged 18 months. There was no history of syphilis, and she was not rickety. The accessible lymphatic glands were enlarged. The spleen reached to the umbilicus and the liver also. The urine was loaded with oxalates, and contained a trace of albumen. There was intense leucocytosis—the lymphocytes reached 99.2 per cent. of the leucocyte count. The red corpuscles were diminished by more than half, and a few nucleated corpuscles were seen. The haemoglobin was 39 per cent. She subsequently developed purpura, and died soon afterwards. The spleen diminished in size very considerably before death, and was not nearly so hard to the feel. The swelling of the lymphatic glands disappeared to a large extent, and they were not so hard.

MALTA AND MEDITERRANEAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.—At the annual meeting of this Branch, held on May 11th, Professor CASSAR in the chair, Dr. J. C. BORG reported a case of early menstruation. About five years ago he was asked to examine a child, 7 months old, who had a discharge of blood from the vagina which lasted three days. He found that this discharge caused no discomfort to the child, who was very healthy. Her mammae were developed, and she looked rather big for her age. Since then he had never lost sight of her. She passed the ordeal of teething with perfect ease, and never suffered from any disease. She was now about 5 years old; in height and intelligence she was above the average child, and she continued to have her monthly courses regularly, which lasted three days each time. Her parents were of a very good constitution, and had a large family of girls in whom no irregular menstruation had ever been observed.

SOUTHPORT MEDICAL SOCIETY.—At a meeting held on April 29th, Dr. F. J. BAILDON, President, in the chair, Dr. E. S. YONGE mentioned two cases of malignant disease of the larynx on which he had successfully operated. Persistent dry hoarseness in a patient over 50 years of age with loss of motility and sluggish movements in the vocal cord on one side were suspicious symptoms. Thyrotomy, with immediate closure of the wound, was advocated—an important point being the application of cocaine to the larynx during operation.—Dr. S. B. FENN read notes of a case of malarial fever complicating the puerperium and simulating septic infection.—Dr. WILLIAM CARTER, of Liverpool, read a paper entitled "Some Clinical Reports and the Lessons they Teach." The value of the following procedures, amongst others, was insisted upon: (1) Antiseptic nasal douching in persistent feverishness; (2) slow dilatation in stricture of the cardiac orifice of the stomach; (3) removal of sources of irritation in stricture of the bowel from cancer, etc.; (4) counter irritation in hypertrophic cirrhosis of the liver; (5) inunction of animal fats—for example, bacon fat—in wasting diseases.

REVIEWS.

DERMATOLOGY.

THE first edition of Dr. RADCLIFFE CROCKER'S excellent work on *Diseases of the Skin*[1] was published in 1888, and, after being out of print for some little time, a second edition appeared in 1893. This in turn was out of print for three years, and has now been followed by a welcome third edition. The merits of the work are so fully recognized by the profession at home and abroad, and its position in this country is so clearly established that it is unnecessary to offer any detailed criticism. The author's grasp of his subject and his clear and vigorous exposition are fully apparent in the present edition. The practical character of the book, both to the student and practitioner, and its value as a work of reference are fully maintained. We may therefore do little more than call attention to the issue of this new edition, and congratulate the author on the high standard attained. The work is worthy of the school which boasts amongst the exponents of dermatology the names of A. T. Thomson, Edmund Parkes, Thomas Hillier, William Jenner, and Tilbury Fox. The multiplication of clinics and laboratories, of teachers and workers in dermatology all the world over, and the consequent increase of literature, make it more and more difficult for the busy man to devote the time necessary to the proper sifting and assimilation of this incessant output. In the attainment of this end, however, the author has been successful. Many sections have been recast, others added to, and numerous new clinical entities have demanded recognition. The unavoidable increase in bulk, almost entirely on the clinical side, has necessitated the division of the work into two volumes of convenient size. The original plan has been conserved, so that the student can without trouble at first confine his attention to the most important features of the commonest diseases, while he can use it as a work of reference as his practical knowledge increases. The anatomy and physiology of the skin, as in former editions, has been omitted. The clinical side of dermatology is made the strong feature of the work, and the author gives ample evidence of his industry in keeping in touch with recorded cases of disease. Thus, for instance, the section on herpes zoster has been thoroughly brought up to date, and that on scleroderma we regard as one of the best descriptions of this disease existing. Moreover, the present edition has the advantage of the author's own extended experience, and the reader may rely on good descriptions of diseases, clear directions for diagnosis, and excellent indications for treatment, to which department the author has made valuable contributions. Pathology, and especially pathological anatomy, have been purposely kept somewhat in a secondary plane, and the dermatological expert cannot help a feeling of regret that the expositions under these heads are somewhat unequal. Another portion of the work which does not quite satisfy us is Part I, especially the sections dealing with general semeiology, etiology, pathology, and diagnosis. We should have appreciated a masterly summing up of the laws governing the morphology of elementary lesions, the building up of composite areas, and the distribution of eruptions. We miss, also, a succinct review of the pathological anatomy of skin diseases, on which such a vast amount of work has been done in recent years. It is obvious that a work of this importance must furnish numberless debateable points in which the author does not see eye to eye with other observers, but it is outside the scope of this review to discuss these. We will only therefore refer to a few matters which have attracted our attention. The theory of existence of struma or scrofula is still preserved by the author. Acrodynia is not recognized as caused by arsenical poisoning. The description of urticaria papulosa in infants is to our mind inadequate considering its extreme frequency and the difficulties experienced in the diagnosis of many cases. Prurigo is described as a disease, and we miss any adequate discussion of Besnier's conception, but it should be stated that in a practical work of this kind the author avoids elaborate discussion of hypotheses. Probably many readers will think, also, that Dr. Radcliffe Crocker has not given adequate recognition to the valuable work done by Sabouraud on seborrhoea oleosa, and streptococcus and staphylococcus infections. At any rate, modern methods of investigating streptococcus infections should have been more fully insisted on. However, if any minor imperfections exist in the book, they cannot detract from its general high standard, and we cordially congratulate the author on his new edition.

The *Treatise on Diseases of the Skin*,[2] by Dr. STELWAGON, the Clinical Professor of Dermatology in the Jefferson Medical College of Philadelphia, is certainly among the best and most complete works on the subject. The introductory portion deals in some detail with the anatomy and physiology of the skin; and this is followed by interesting general remarks on symptomatology, etiology, diagnosis, and treatment which will well repay perusal. The various affections of the skin are adequately and clearly described, a feature of the treatise being the very complete bibliography attached to each disease. The author has evidently been at great pains in this respect to be exhaustive, and also to give credit where credit was due—as, for instance, the recognition of the late Tilbury Fox's work in connexion with dermatitis herpetiformis. And, although the book states on the title-page that it is for the use of

[1] *Diseases of the Skin: their Description, Pathology, Diagnosis, and Treatment.* By H. Radcliffe Crocker, M.D. Lond., F.R.C.P. Third edition. In two volumes. London: H. K. Lewis. 1903. (Demy 8vo, pp. 1419, 4 plates, 112 illustrations. 25s.)

[2] *Treatise on Diseases of the Skin.* For the use of Advanced Students and Practitioners. By Henry W. Stelwagon, M.D., Ph.D. Philadelphia and London: W. B. Saunders and Company. 1902. (Roy. 8vo, pp. 1115, 220 illustrations and 26 plates. 25s.)

advanced students and practitioners, there is no doubt it will be found valuable by professed dermatologists as a work of reference, the more so as it is provided with a good index. Following the example of the Viennese school, the acute exanthemata are included in this volume. They are from the pen of an expert, Dr. Welch, of the Philadelphia Municipal Hospital for Infectious Diseases, and are well done. But notwithstanding, it may be objected here that such diseases are really part and parcel of general medicine, and not strictly dermatological. For some readers, however, it may prove convenient for ready reference to have them in a book on skin diseases from the differential diagnostic point of view. The formulae which are given in the paragraph on the treatment of each disease are also expressed in terms of the metric system, a commendable innovation which will no doubt be appreciated by Continental readers, to whom our symbols have become practically incomprehensible. The spelling, as in all American books, sometimes appears strange to British eyes, as for instance edema for oedema. The book is profusely illustrated, a number of coloured plates from the same publishers' *Hand Atlases of Diseases of the Skin and of Syphilis*, by Mracek, having been used. As to the others, they are uniformly good and well selected.

The *Treatise on Diseases of the Skin*,[3] by Professor SHOEMAKER of Philadelphia, has been well received by the profession in the United States, for it has reached a fourth edition since 1888. The introductory portion is much on the same lines as in other books of the same size. The remarks on treatment will repay perusal. The classification employed by the author is *sui generis*. The work begins with the disorders of secretion and excretion; syphilis and acne are dealt with under exudations; and psoriasis and lichen ruber are included in the hypertrophies. Unlike English books on diseases of the skin, this contains an account of the acute exanthemata, following the Austrian example. The sections vary greatly in quality. A great deal of space is devoted to eczema, and rightly so, for that morbid condition is the touchstone of practice. This portion is well worth reading as the outcome of much experience. On the other hand, many of the subjects dealt with are but weakly and insufficiently handled. The author does not appear to have grasped the important part played by staphylococci in the production of various conditions, such as sycosis, for instance, which Dr. Shoemaker still calls non-parasitic, a misleading term, for it is really just as parasitic as tinea barbae (or tinea sycosis). The qualifications coccogenic and hyphogenic respectively, suggested by Unna, for these two forms of sycosis are now usually employed. The point is important, and the fact that various conditions have been shown to be due to pus cocci has led to rational treatment. On the whole the book cannot be said to be entirely satisfactory. It will appeal rather to the rule-of-thumb practitioner, the more so as it is furnished with a copious formulary, than to the dermatologist. The illustrations vary in quality. Fig. 25 of microsporon furfur is, to say the least, very primitive. The headings of the pages are not as useful as they might be. They merely indicate the classification divisions, instead of serving as finger-posts to the various diseases.

Professor EDUARD LANG, of Vienna, in a practical work on diseases of the skin,[4] gives a straightforward account of the various cutaneous ills. In accordance with the Viennese school, the acute exanthemata are described. Professor Lang would have been better advised had he described the various syphilides, and omitted descriptions of variola, scarlatina, and so forth. That he has published a book on syphilis separately may have been his reason for practically ignoring syphilitic rashes in the present work. A little more space, too, might well have been devoted to more ample details of plastic operations in lupus vulgaris, a department in which Professor Lang has done much work. This be it mentioned in passing, although it is well known the author has written a special monograph on the operative treatment of that condition. He still adheres to the Viennese notion that pityriasis rosea of Gibert is to be included under dermato-mycosis circinata maculosa, or tinea circinata. This is not the correct view of the matter, for pityriasis rosea is most certainly a disease *sui generis*, and quite different from tinea circinata. Taking the book as a whole, it will no doubt achieve some success, chiefly as a clinical guide. The figures call for no particular remark.

We have received the first part of a work on diseases of the skin now being brought out by Dr. RASCH of Copenhagen.[5] After a short survey of the anatomy of the skin and a description of the various lesions met with, the author goes on to describe the morbid conditions due to animal parasites, thus reversing the order usually followed. Indeed, as far as this fasciculus is concerned, the three divisions dealt with are respectively: diseases due to animal parasites, those due to fungi, and skin affections brought about by microbes. There is something to be said in favour of such an etiological classification; indeed, it is the thing to aim at, but at the present moment there are difficulties in the way. Take botryomycosis, for instance, which is included in the second division; there is every reason to believe it is staphylococcal in origin. Again, lupus erythematosus is dealt with among the diseases due to microbes, but the fact is the true etiology of this disease is not yet known, a point the author himself readily admits. The illustrations are good, and judiciously selected from various sources. Altogether the work, when completed, should prove of great value to the Scandinavian medical profession. Readers familiar with Danish will find some interesting facts gathered by our northern friends, especially as regards their earlier work, which has passed unnoticed, owing to our want of familiarity with sister tongues. In the part before us a selection of bibliographical references is given at the end of each disease.

The fifteenth fasciculus of the New Sydenham Society's *Atlas*[6] contains a plate representing framboesial syphilis in Englishmen, which was left out of the preceding part devoted to framboesia. It is probable that these exuberant lesions met with occasionally in syphilis are due to a secondary infection (by staphylococci) *in loco*, and that the same thing occurs in yaws, a disease which at present must be regarded as separate from syphilis. Mr. HUTCHINSON'S remarks on xanthelasma and xanthoma are specially directed to emphasizing the association of xanthomatous conditions with disorders of the liver. He also suggests possible alliances between the diseases and such conditions as lichen planus, psoriasis, and urticaria, but his reasons for this are not very convincing. With regard to urticaria pigmentosa, the term "xanthelasmoidea" was first used for this disease by Tilbury Fox (1874). As regards Dr. Barr's case, which is referred to in the text as a mixed form in association with urticaria pigmentosa, it may be mentioned that Radcliffe Crocker (*Diseases of the Skin*, third edition, 1903, vol. ii, p. 693) says that the case was one of urticaria pigmentosa without doubt. It is interesting to know that a summary of histological observations on the various forms of xanthoma will be given on a future occasion. It is to be hoped that it will be illustrated by actual sections, and it would be further advisable to show the microscopical appearances in urticaria pigmentosa for purposes of comparison. The bibliographical reference on p. 39 (top second column) should be 1892 instead of 1902. The plates are an interesting collection.

M. BODIN, Professor of Bacteriology in the University of Rennes, has written for Masson's series of handbooks a volume on the parasitic fungi of man,[7] a subject to which he has made a good many original contributions. The matter is dealt with in a clear and succinct manner, and the volume will well repay perusal as it gives a good account of the fungi of favus and ringworms, actinomycosis, and also of the oïdium, aspergillus, and yeast parasites. Some of the views expressed will probably not be acceptable in some quarters without qualification or criticism; howbeit, Dr. Bodin's presentations of the subject will be read with interest and instruction.

[3] *A Practical Treatise on Diseases of the Skin.* By John V. Shoemaker, M.D. Fourth Edition. London: Kimpton. 1902. (Demy 8vo, pp. 892: 12 chromogravure plates, 26 illustrations. 21s.)

[4] *Lehrbuch der Hautkrankheiten.* [Diseases of the Skin.] Von Eduard Lang. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister.

[5] *Hudens Sygdomme og deres Behandling.* [Diseases of the Skin and their Treatment.] Af C. Rasch. Første Levering. Kobenhavn: Gyldendalske Boghandels Forlag. 1902. (Demy 8vo, pp. 176, 48 figs. K. 6.)

[6] *An Atlas of Illustrations of Clinical Medicine, Surgery and Pathology.* Fasciculus XV (Double Number). Xanthelasma and Xanthoma. Compiled by Jonathan Hutchinson, F.R.S. London: New Sydenham Society. Agent: H. K. Lewis. 1902. (Fcap. 8vo, 22 plates (7 coloured), with letterpress. Non-subscribers, 21s.)

[7] *Les Champignons Parasites de l'Homme.* Par E. Bodin. Paris: Masson

We have received the first part of a work on *Skin and Venereal Diseases*[1] by Professor Rille of Innsbruck who has quite recently been appointed Director of the Dermatological Clinic of the University of Leipzig. The work was originally intended to form part of Professor von Mering's *Lehrbuch der inneren Medizin*, but, the limits having been greatly exceeded, it was decided to issue the section on diseases of the skin as a separate or supplementary volume. As the work will be reviewed on its completion, it is not necessary to go into details at this stage. Suffice it to say now that the feature of the first part consists in giving a concise description of the various morbid conditions. There are no introductory details, diseases being dealt with from the very first page. The illustrations can only be said to be fair. There are no bibliographical references.

A GUIDE FOR THE PRESCRIBING OPTICIAN.

A book on *Refraction*,[2] published by the Anglo-American Optical Company, is stated to be written by Guy E. Druiff, though who he is, what he is, and what qualifications he possesses we are not told. "Believing that even perfect rules lose much of their value if their reasons are unknown, he has sought to give all needful scientific information as to the anatomy and physiology of the eyes," and this is how he proceeds to accomplish his task.

He informs us on p. 3 that "the Iris, which divides the interior of the ball into two chambers; a small one, called the 'anterior chamber,' situated between the posterior surface of the Cornea and the front of the Iris; and another, larger called the 'posterior chamber,' which is situate between the Iris and the anterior surface of the Retina." On p. 4 we are told that it is "the abundance of them" (that is the rods and cones) "that renders the 'yellow spot' so exceedingly sensitive." One would have thought that any one with even an elementary knowledge of the eye would have known that the yellow spot does not possess a single rod. One of the most startling statements occurs on p. 4, where we are told that the aqueous fluid "fills the anterior cavity of the eyeball, situated between the back of the Cornea and the front of the Crystalline Lens, and is supplied by the Lachrymal Gland (which also supplies the tears.....). This gland can, in about eight hours, replace the Aqueous Humour in the event of leakage from accident or from such an operation as the removal of cataract," while we are told on p. 6 "It is erroneous to imagine that cataract is merely a skin over the eye, and that this only is required to be removed in order to cure the disease." It is, to say the least of it, remarkable that such an important function as that which Mr. Druiff attributes to the lachrymal gland should have remained undiscovered until now. Throughout the "ciliary muscles" are talked about, though we are not told how many we are likely to find in any one eye.

The anatomical drawings are, we suppose, original, for they have about the same value and are about as inaccurate as the text they illustrate. Prisms, we are told, should never be prescribed for constant wear, and when speaking of accommodation we are surprised to hear that "At ten years of age it is at its strongest," though on what experiments this original statement rests we are left to imagine. In speaking of loss of accommodation we are told, on page 52, that "it is impossible to postpone this failing of the ciliary muscles to perform their work," and that "this lessening of power of the refractive media which is due to the weakening of the ciliary muscles." This is evidently considered of more importance than the hardening of the lens, which is not in this place mentioned, though it is given as a cause on page 143. There is one point with which we are in entire agreement with the author, and that is when he states that he "is very strongly opposed to the use of drugs" (that is, of cyclopegics) "by others than a properly qualified medical man." One could hardly imagine an optician doing such an excessively dangerous thing as putting powerful drugs into an organ about which he knows nothing.

One other startling statement ought not to be missed, it occurs on page 63, where, speaking of hypermetropia, it is said, "*In practice*, however, it is often found that the ciliary muscles are too weak, on account of their having been so constantly exerted." Had the author dissected a hypermetropic eye, and understood what he saw, he would have found the much hypertrophied ciliary muscle, which is always under these conditions developed. Many more inaccuracies could easily be quoted, but enough has been said to show how utterly unreliable the book is.

Attention is called to the "glossary" which is given at the end of the book in which terms used in ophthalmic work are explained, and we may take a few specimens:

Anaemia. Denotes a lack of nourishment.
Chiasma. The point of separation of the optic nerves.
Ecchymosis. A black eye.
Embolism. A patch.
Fundus. Bottom.
Oedema. A swelling.
Thrombosis. A clot of blood.

A good deal of the book is given up to describing the by no means reliable method usually adopted by the prescribing optician. Had the author been content to stop at this the book would have passed muster as such, but when he attempts to teach the anatomy and physiology of the eye, when he shows gross ignorance of its elementary principles, he exposes himself to criticism.

The final sentence in the preface so gives the keynote to the style of the book that we here quote it: "Finally, it has often been the reproach of untaught refractionists, that they so readily betake themselves to the use of potent drugs, atropine and others. This work will, it is believed, show a more excellent way, and will enable the careful refractionist to do his work not only as well, but even far better, without cycloplegics than with them."

LITERARY NOTES.

King's speeches, Acts of Parliament, and official proclamations and documents of all kinds, not even excepting the utterances of that Olympian body, the General Medical Council, often enough furnish matter of criticism for the minor censors of literary style. It may be some consolation to patriotic Britons to learn that even the United States Senate—and we know from Mr. Brander Matthews that America is the true well of pure English undefiled—sometimes exposes itself to the lash of the grammatical Zoilus. The *New York Times* has recently given an amusing example of the struggles of the senatorial mind to express itself in classical diction. When the Bill to increase the pension of the widow of the late Dr. Walter Reed was under consideration a Senator proposed that the following words should be added to the Bill:

In special recognition of the eminent service to mankind of said Walter Reed in the discovery of the cause and cure of yellow fever.

Another Senator suggested that the wording might be amended as follows:

In the discovery of the means of preventing the transmission and propagation of yellow fever.

This was considered to be more satisfactory, but when reduced to writing it appeared as follows:

In discovering the cause and method as well as the means of preventing the transmission and propagation of yellow fever.

It is not surprising to learn that this wording was somewhat severely criticized. The Senators interested in the Bill then proceeded to write out a number of phrases and submit them to each other for approval. Their efforts culminated in the production of the following triumph of literary art:

In discovering the cause and method of as well as the means of preventing the transmission and propagation of yellow fever.

The numerous "of's" in this extraordinary collocation of words was offensive to the musical sense of an aesthetic Senator, and the framers of the sentence were invited to try again. The final result of their efforts was the following:

In special recognition of the eminent services of the said Walter Reed, in discovering the means of preventing as well as the cause and method of the transmission of the propagation of yellow fever.

Though the English of the American senators is not exactly in the style of Thackeray their unsuccessful labours remind us of a delightful story of that great writer. He was charged in a review with carelessness in the composition of a certain chapter. Thackeray took this criticism much to heart. "Carlessness!" he growled. "Why I wrote that chapter at least twelve times—each time worse than the last!"

Imperial Service Order.—The *London Gazette* of May 29th contains a list of appointments to the Imperial Service Order, with the grant of the Imperial Service medal. The following are included among those appointed Companions of the said Order:—Frederick Montizambert, Esq., M.D., Director-General of Public Health, Department of Agriculture of the Dominion of Canada; Patrick Fletcher Macleod, Esq., Medical Superintendent of the Lunatic and Poor Asylums, and Medical Officer of the Prison, Island of Grenada.

[1] *Lehrbuch der Haut und Geschlechtskrankheiten* [Skin and Venereal Diseases]. Von Professor Dr. J. H. Rille. Jena: Fischer. 1902. (Royal 8vo, pp. 176. 34 illustrations. M. 4.50.)

[2] *Refraction: A Simple and Concise Treatise on Practical Sight-Testing.* By Guy E. Druiff. With 135 cuts and diagrams. Published by the Anglo-American Optical Company. 1902.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1903.

SUBSCRIPTIONS to the British Medical Association fall due on January 1st each year. All members who have not yet paid should forward, without delay, postal order or cheque for 25s., to the General Secretary, 429, Strand, London, W.C., or, in the case of Colonial members, to their Branch Treasurer.

British Medical Journal.

SATURDAY, JUNE 6TH, 1903.

THE CURE OF CANCER.

IN past ages a vast amount of time and intellectual energy was spent in the search for the elixir of life. The hope of discovering the secret of making the body immortal has long been given up, though sanitarians still dream of annihilating many, if not all, the diseases which cut short its natural span of life. The task of the hygienist, however, may not unfitly be likened to the labour of Sisyphus, for what is gained at one period of life is to a considerable extent lost at another. However we may try to explain the fact, more people die of cancer at the present day than was the case even twenty or thirty years ago. No formidable array of statistics is needed to prove this statement, for every one's experience in his own limited sphere of acquaintance bears witness to its truth. There is no problem in pathology that more urgently calls for solution than the causation of cancer; nor is there any of greater importance in preventive medicine, for the disease seeks its victims not among those whose lives are, in an economic sense, of no value, but in the main among those whose productive power and usefulness to the community are at their highest. Hitherto, it must sorrowfully be confessed, medical science has been unsuccessful in dealing with this terrible scourge.

Surgery, working in the light of a more accurate pathology and with the help of asepsis, can indeed show better results than it did even a couple of decades ago; anything that can fairly be called a cure, however, is still the exception. Moreover, surgery is applicable only within a comparatively narrow range, and there are evident limitations to its possible developments. Hence if a real cure for cancer in the full meaning of the term is to be found it must be sought for elsewhere, and it cannot be too strongly urged that it must be sought for with an open mind. The surgeon whose general formula is to cut through everything soft, saw through everything hard, and tie everything that bleeds—a type rarer than it was in the previous generation, but by no means extinct is apt to look upon cancer simply from an operative point of view; whatever is beyond reach of his knife he regards, as St. Augustine looked upon antipodeans, as outside the scheme of salvation. On the other hand, there are many practitioners gifted, or rather afflicted, with a capacity for self-suggestion which makes them see things as they wish them to be, and not as they really are. These readily delude not only themselves but their patients as to the effects of any new remedy; in a sense different from that of the poet, they find good in everything.

It is natural that the victims of cancer, getting no message of hope from the oracles of science, should in their despair turn to futile shrines. And the newspaper scribes, whose business it is to satisfy the public craving for something sensational, are always eager to act of guides. We need not blame those writers too severely; they are only, like Falstaff, labouring in their vocation, and they have the excuse that they know not what they do. But the evil they do is simply incalculable. Not only are sufferers from a cruel disease buoyed up with false hopes of recovery, but encouragement is given to the vilest of all the quacks who prey upon mankind, and the progress of knowledge is hindered. The true scientific spirit must suffer detriment when the interviewer and the descriptive reporter invade the laboratory, and crude speculations and inconclusive experiments are, by a premature publicity, given to the world as the mature fruits of research.

This evil has greatly increased of late, and not only the laboratory but the out-patient room and the hospital ward are coming to be treated as hunting grounds by the seeker after sensational "copy." Nor is it the newspapers alone that are responsible for what is becoming a public scandal. It is too plain that certain London hospitals encourage the visits of the reporter as a means of advertisement. We have illustrated accounts of the treatment of cancer by *x* rays and high-frequency currents exactly in the style of interviews with "beauty specialists" and professors of palmistry. We have frequent paragraphs setting forth the completeness of the equipment for the light treatment or what not at a particular institution, with allusions to the interest taken in it by the Queen or other members of the Royal Family. We have articles on new methods of treatment, written in the worst possible taste and full of misleading statements and downright untruths, obviously intended to glorify some particular hospital. All this, we are willing to believe, is done with the best motives; but the fact remains that the public mind is being systematically misled with regard to the efficacy of the methods of treatment referred to, and when disillusion comes the hospitals as a whole will suffer for the sins of the few, and the medical profession will be discredited by reason of the want of judgement of some of its members.

The time, therefore, seems opportune for a temperate and judicial statement, based on the work of trustworthy observers, of what has actually been done in the treatment of cancer by the new scientific methods, especially the *x* rays and the high-frequency currents. A careful study of the papers on this subject published in the present issue of the BRITISH MEDICAL JOURNAL will, we think, give the impartial reader a correct notion of what these agencies have done and what so far they have not done. We invite special attention to the article contributed by Dr. John Macintyre, one of the highest authorities in this country on the subject of which he treats. Dr. Macintyre classifies his results under three headings: (1) In a number of cases the result of treatment, whatever agency was used, was complete failure. (2) In a very large proportion of cases pain has been relieved, indurations have disappeared, oedema and enlarged glands have been reduced, ulcerated surfaces have healed, proliferating or fungating masses have diminished in size. Improvement in the general condition of the patient was often noted. In many instances the good effects of the treatment have been merely temporary. (3) In a small number of cases of sarcoma and epithelial affections the lesions have altogether disappeared. In a much smaller number of cases genuine malignant tumours

of the skin, breast, or other easily accessible region have disappeared. That rodent ulcers have been healed by one or other of the new agencies must, says Dr. Macintyre, be taken as a fact. Here we take occasion to endorse his suggestion that for practical purposes rodent ulcer should be classed apart from other malignant growths. If the cure of a rodent ulcer is reported as the cure of a cancer, an utterly misleading idea is conveyed to the lay mind.

Of the agencies in question, the *x* ray has in Dr. Macintyre's experience been the most effective; with high-frequency and high-potential currents in genuine malignant disease he has seen amelioration but never cure. His experience in regard to this is confirmed by that of many other workers whom he has interrogated. What has been said applies more especially in cases in which the disease is superficial; for internal cancers little or nothing has yet been done.

The experience of Mr. Malcolm Morris and Dr. Dore is that in the case of rodent ulcer recurrence after a varying period is the rule, and in many cases the most that can be done is to keep the disease in check. In Dr. Sequeira's cases recurrence has been observed in half the total number. In many of the reports, of which abstracts appear in the EPITOME, no mention is made of recurrence. Evidently some observers are either more fortunate or more optimistic than their fellows.

The facts, so far collected, seem to show that the *x* rays have a definite though limited field of usefulness in the treatment of malignant disease. In inoperable cases they may give the patient great relief by easing pain and promoting the healing of ulcerated surfaces. They may be used with excellent effect on the first sign of recurrence after operation. As for the high-frequency currents it would appear that in regard to the treatment of cancer they have had premature greatness thrust upon them by those who inspire the daily newspapers in such matters. There is little or nothing in scientific literature to justify the pretensions that have been put forth on their behalf. In saying this we are speaking of their effect on the progress of malignant disease. It is well known that high-frequency currents, like other forms of electric treatment, sometimes cause a marked amelioration in the general condition. Pain may be subdued and nutrition improved; the patient may even recover the appearance of health. But the cancer which has fastened its fangs in him continues to gnaw his vitals unchecked by the treatment.

The whole question of the therapeutic virtues of the *x* rays, high-frequency currents, and other forces now being used in the treatment of cancer must be regarded as still far from settled. Our knowledge of them is still in its infancy, and our experience of the agencies is far too short to allow any solid judgement to be formed as to their real value. The evidence so far accumulated seems to justify a hope that the field of usefulness may in time be enlarged, and that their action may be made more efficacious. At present they must be regarded as useful adjuncts, but in no way as substitutes for the knife.

THE ANNUAL MEETING OF THE ASSOCIATION, 1903.

A SHORT account of the arrangements made for the annual meeting of the British Medical Association, which will begin at Swansea on Tuesday, July 28th, together with a brief description of the town itself and of its environs, will be found in the SUPPLEMENT to this issue, and it will be seen that everything promises a useful and agreeable meeting.

Swansea may perhaps be described as a black diamond in a beautiful setting. The town itself has sacrificed to Plutus and Vulcan, but not far off Pan still tunes his pipe, and a rocky, much-indented sea coast makes that appeal which so seldom fails to call forth a response in the heart of the natives of these islands. A number of distinguished foreigners have accepted invitations to be present and take part in the work of the Sections and it is hoped that many members of the British Medical Association from the Dominion of Canada, from the Commonwealth of Australia, from New Zealand, and from other parts of the empire, will take the opportunity of sharing in the duties and pleasures of an annual meeting, of becoming better acquainted with their brethren at home, and of seeing something of a part of Wales very typical of that combination of restless industry and quiet rural beauty which is characteristic of the Principality of the present day. For the benefit of those who do not love, in July, to be in populous city pent, the local Executive Committee has had the happy idea, as it seems to us, of proposing to establish a camp on a piece of heather-covered rising ground between Bracelet and Limslade Bays. Members will be able to get out to the camp from Swansea by tramway, and the camp will be conducted on the lines of an officers' mess of a regiment under canvas. The realization of the scheme must depend on whether a sufficient number of members send in their names without very much delay.

The President-elect, Dr. T. D. Griffiths, who at this meeting succeeds Mr. Walter Whitehead in the chair, will give his address on the evening of Tuesday, July 28th, and the Addresses in Medicine and Surgery will be delivered on subsequent days by Dr. Frederick Roberts and Mr. Mayo Robson respectively. The arrangements already made for the work of the eleven Sections promise, as will be seen, many useful discussions on matters of current interest and practical importance; and, with the object of increasing the value of these debates, the Council has arranged that a syllabus of the introduction to each shall be published beforehand in the JOURNAL. We would appeal to the honorary secretaries of the several sections, and to those gentlemen who have undertaken to introduce the subjects selected, to co-operate in this task, for without their punctual attention it will be impossible to carry out the plan successfully.

An interesting feature of this annual meeting will be the first annual representative meeting of the Association. The assembling of this body on Tuesday, July 28th, and the first meeting, on the morning of July 29th, of a Council elected under the new regulations, will mark the completion of what may be called the mechanical part of the reorganization of the Association under the constitution adopted a year ago. The delimitation of Branches and Divisions, initiated by the Reorganization Committee at Manchester on July 31st last, was, so far as the United Kingdom is concerned, completed by the Council on February 26th. The details of representation, both as to the election of the Central Council by Branches and of the representative meeting by Divisions, have been since adjusted. The columns of the JOURNAL during the last three months have borne witness to the activity with which the reorganized Branches and

newly created Divisions have proceeded or are proceeding to set their houses in order, by determining their rules and electing officers, committees and representatives on the central bodies.

It is gratifying to observe that some Divisions and Branches have already made use of their power to initiate the policy of the Association, both as to internal and external affairs, and that they have not been prevented by the engrossing domestic concerns to which we have alluded from finding time to adopt and give due notice of important motions for the consideration of the annual representative meeting. These which were published in the JOURNAL of April 25th cover a wide field, affecting the By-laws of the Association and its future action as to such grave and difficult questions as contract practice, the Irish Poor-law medical service, and death registration. These, with the reports of the Council and committees, election of committees, and other routine business, promise to make the office of the first representatives of Divisions in an annual meeting of the Association by no means free from work or responsibility.

THE DILEMMA OF THE GENERAL MEDICAL COUNCIL.

To the critical observer it is very apparent that the large size of the General Medical Council does not conduce to the dispatch of business. The division of the Victoria University into three separate universities threatens a still further addition to its numbers, if each body is to send its own representative, and Sheffield also seems about to enter the field. A motion brought forward by Mr. Jackson proposed that the three universities to be established in Manchester, Liverpool, and Leeds respectively should unite for this purpose and send a single representative. The seats of the three new universities are not far apart; an hour's journey separates either Liverpool or Leeds from Manchester, so that it would not be difficult for a joint representative to keep in touch with all three.

A charter creating a new university does not confer a right to grant medical qualifications. This can be given only by an Act of Parliament, but when this has been done a machinery exists whereby the Privy Council, on representation made by the General Medical Council, can confer on the university the right to send a member to the Council. In the case of Birmingham, the newest of our universities, this machinery was not employed, but a special clause was inserted in the Act conferring an absolute right to a representative. As regards the Victoria University, this question had already been raised by Dr. Brown, of Bacup, before its Convocation, but no vote could be taken owing to the want of a quorum (thirty members); it was, however, pointed out that the new charter reserved to the Victoria University all its former rights, and no great disposition to surrender this particular one was displayed.

Dr. Pye-Smith proposed by way of an amendment to Mr. Jackson's motion that the number of members of the Council should be reduced. Though this amendment was not hostile to the original motion, inasmuch as it merely carried further the underlying principle, the members of the Council did not respond to the invitation to self-immolation. The motion was lost, not, however, without eliciting considerable support. In his desire to keep it impersonal Dr. Pye-Smith did not mention the fact, which he might have cited, that in 1901 one body represented had not conferred a single qualification, and that some others had only conferred an insignificant number; but this impersonality reduced his amendment to the expression of a pious opinion the application of which was indefinite. It would not be difficult to find instances in which, though the number of qualifications conferred by Conjoint Boards may be considerable, the diplomas conferred by the individual bodies are few, so that the continued justification for their independent representation may well be challenged.

Some indication of a feeling—in our opinion narrow and undesirable—that a chief if not the primary function of a member of the Council is to fight for the interests of the body which he represents, has often been apparent; and so long as this idea exists it is hardly to be expected that any qualifying body will willingly forego its separate representation. Though this form of local patriotism may form one part of his duties, the more liberal view that the general welfare of the profession should be placed far above the supposed interest of a corporation might well guide the conduct of every member of the Council. Is this a counsel of perfection? The more narrow view might find some justification if each corporation provided for the expense of its own representative. No vote was taken upon Mr. Jackson's motion, apparently because there was a general feeling that it was not within the province of the Council to make a suggestion to the Privy Council on this head. It would appear, therefore, that unless the Council decides to oppose clauses in the Bills relating to new universities to give them representatives, it is not improbable that sooner or later each will add another member to the Council, and render it more unwieldy than ever.

The President, in the memorandum on the present inadequacy of the income of the General Medical Council, which he presented at the beginning of the session,[1] laid stress on the point that some part at least of the increased and increasing expenditure which causes the annual deficit is due to the very material increase in the members of the Council, from twenty-four to thirty-one, which has taken place since it was first called into existence by the Act of 1858. According to a table embodied in this memorandum the annual average expenditure in fees and expenses for the attendance of members of the Council increased from £1,931 in the ten years ending 1878, to £3,374 in the ten years ending 1902, an average annual increase of £1,442. Sir William Turner attributed the increase to the growth in the number of members, but this can hardly account for the whole of it, and something must be attributed to longer sessions.

The report of the Finance Committee shows that the deficit for 1902 amounted to £1,332, but the Council had a windfall last year in the shape of the surrender value of the sinking-fund policy. This amounted to £408, and but for it the deficit would have been £1,740. The unsatisfactory financial position of the General Medical Council is now admitted on all hands, and the President's memorandum was adopted by the Council as a basis of an appeal to the Government for financial assistance. The main ground for such an appeal is that the financial embarrassments of the Council are due to the fact that Parliament, while adding to the number of its members and imposing upon it additional duties for the welfare of the community, has not provided for

[1] SUPPLEMENT to BRITISH MEDICAL JOURNAL, May 30th, 1903, p. lxv.

any increase in its income. Meanwhile the Council resolved to practice certain economies which will be found enumerated in our report, and adopted a suggestion that the fee for the restoration to the *Register* of a name removed under Section XIV, and for the registration of additional qualifications, should be raised from 5s. to £1. Dr. Mackay calculated that this alteration would add about £680 a year to the revenue of the Council. We do not understand upon what basis this calculation is made, but even assuming that it should prove not too sanguine it will not enable the Council to balance its books, and will not remove the necessity for an increase of its income from some other source.

SHALL WE TAKE OUR THERAPEUTICS FROM THE DRUGGISTS?

A CORRESPONDENT sends us a pamphlet issued by Messrs. Allen and Hanburys, entitled "On the Choice of an Aperient;" he protests against this as an attempt on the part of a firm of druggists to instruct the medical profession upon methods of treatment and asks for our comments thereon. Unfortunately this is no isolated instance, and therefore it would be invidious for us to condemn in harsh terms a practice which has been followed by most of the chief wholesale manufacturing houses in Germany and in America, and to a less extent in England, for many years. We are not sure that the resentment which our correspondent expresses, and with which we sympathize, is really shared by the whole profession. Nay, on the other hand, we cannot but believe that there are many who are glad to receive hints conveyed to them in these publications, that they order the remedies suggested therein, and that the publishers continue them because they find them to pay. If it were not so we do not think we should see their number increasing annually, and more money being spent upon their style and appearance. It is well known that there are many practitioners who always try to order something new; if they wish to give a patient lithia they prescribe thialion, they prefer heroin to morphine, and so forth; their choice seeming to be dictated by the desire to give the patient something with an unfamiliar name. To such minds the druggists' circular with its fanciful nomenclature (produced in the present instance by the not very original orthographical method of combining together the former and latter extremities of two words—for example, cascara sagrada=cascada) constitute a perennial and fruitful source of new suggestion. To some extent this weakness is due to defects in our system of medical education. It must be admitted that few students take the trouble to write prescriptions, and such prescription writing as is done at the final examinations is by no means creditable. The use of fixed formulae in hospital practice no doubt accounts for this in a large measure, but not altogether, as there are many hospital physicians who make a point of prescribing in full when ordering for in-patients. Physicians as a rule do not rate highly the art of prescription writing, and consequently lay no stress upon it in their teaching. It seems hard to reject a man who has passed satisfactorily in the rest of his examination because he has made a very clumsy attempt at writing a prescription: it is hoped that he will soon pick up this in practice. We fear mis hope is too frequently not realized, and that these then find it easier to take their formulae ready made from the druggists. Hence the shoal of archives, reports, circulars, and pamphlets with which we are so plentifully supplied, and of which our correspondent complains. The remedy would be to make prescription writing a subject at the intermediate examination, and to insist upon a real familiarity with the principles and practice of the art. If this were done, we might hope to get a generation of practitioners independent of the druggists' circulars.

PROPOSED HOSPITAL AND NATIONAL TRAINING SCHOOL FOR MIDWIVES.

IT is not surprising that the scheme which Miss Gregory has been advocating for some months past in the London newspapers with so much persistency has, at length, called forth a protest from a representative of one of the lying-in hospitals at which midwives are taught. Miss Gregory is anxious that gentlewomen should be trained as midwives, and expresses the opinion that a period of instruction extending over only, at most, six months would be inadequate. Starting from this assumption she arrives at the conclusion that it is necessary to establish a training school for midwives with attached general and maternity hospitals, where the pupils shall receive a training in general nursing, midwifery, and hygiene to fit them for their future work, and where they shall also "be imbued from the first day of their training with the knowledge of the serious responsibilities and claims of their high calling." This midwives' training school, combined with general and maternity hospitals, is to be established if the public will send contributions to Miss Gregory at St. Paul's Deanery, in "the thickly populated outskirts of South London," where it is stated such institutions are urgently needed. The Vice-Chairman of Queen Charlotte's Lying-in Hospital states that the pupils who enter for training there are sufficiently well educated, and that many of them are gentlewomen. With regard to the period of instruction, he states that his hospital will be governed by the decision of the Central Midwives Board. As we know, this Board has shirked the question, but the English Branch Council has recommended to the Privy Council that the period of instruction shall be not less than six months. The Vice-Chairman of Queen Charlotte's Hospital goes on to protest against the establishment of a new hospital which would entail heavy expenditure at a time when London hospitals generally are in need of special help, and he argues that such expenditure would not be justifiable, seeing that the existing institutions are capable of carrying on the necessary work. Miss Gregory's proposal is a further illustration of the absence of co-ordination in the schemes for medical relief in London. She frankly admits that one of her chief motives in advocating her plan is to find employment for gentlewomen, and asserts incidentally that there is a need not only for a new maternity hospital, but for a new general hospital, in a certain unnamed district on the outskirts of South London. It is impossible to verify Miss Gregory's assertion, owing to its indefinite nature, but we trust that before the public responds to her appeal it will await an expression of opinion from the Committee of King Edward's Hospital Fund for London, which is in a better position than any other organization with which we are acquainted to form a correct estimate of the needs of the various districts of London.

THE GLASGOW UNIVERSITY CLUB.

ONE of the most successful dinners which this club has held took place in the Trocadero Restaurant on May 29th, when Mr. George Wyndham, M.P., the Lord Rector of the University, presided. Many men of eminence connected with the ancient university at Gilmorehill—among them Lord Kelvin, Lord Lister, Principal Story, the Bishop of Stepney, the Director-General of the Army Medical Department, the Solicitor-General for Scotland, Sir William T. Gairdner, Sir William Ramsay, Professor Dewar, and Mr. James A. Campbell, M.P.—were unavoidably prevented from being present, but the Chief Secretary for Ireland was supported by a company numbering over 120, which included the Earl of Lytton, Lord Shand, Professor Bradley, Professor Tilden, Professor J. M. Thomson, Professor William Lang of Toronto, Professor W. P. Ker, Professor John Adams, Professor Finlay, Mr. William Johnson Galloway, M.P., and Lieutenant-Colonel Babtie, V.C. The Lord Rector, in proposing "The University and the Club," said that the Club existed to promote good fellowship among those who had academic interests and personal associations with the University of Glasgow. He thought it very fit and

proper that a Club representing one of the most ancient seats of learning in the country should exist in London, because London had ceased to be the capital of England only, and had become the heart and centre of a world-wide Empire, an Empire of which no portion rendered so many services or so many servants to the State as Scotland. Especially were the Scottish Universities—which could claim records dating back close upon five centuries—remarkable for having sent throughout the world, wherever the banner of Great Britain waved, men who were permeated by tradition and by all that was best in the great past of which they were proud, and who, because they were animated by the traditions of a great past, were more adventurous in attacking the no less great problems of the present and future; men whose hearts beat with the strongest patriotism for their native land, but who were capable of embracing all the possibilities of the world-wide dominion to which they belonged, who could face responsibilities with a light heart because they remembered with intensity the sentiments fostered in their youth and in the homesteads. With his accustomed felicity, and in a speech that was brimful of oratorical power and happy exposition, Mr. Wyndham thus connected the Scot with the Empire and the "illimitable veld," and expressed his conviction that in Scotland and in Scottish Universities there existed a force which, more than any other, would extend civilization throughout the world, leavening it with the arts and humanities, and combining it with the great traditions of an historic past. Professor Bradley gave "The Houses of Parliament," to which the Earl of Lytton and Mr. Galloway, M.P., responded. Lord Shand proposed "The Guests," and elicited a humorous and pithy reply from Mr. Edmund Owen, and a graceful response from Mr. C. M. Drew, the President of the Glasgow Students' Union. In acknowledging the toast of his own health, proposed at the end of the evening, the Chairman expressed his sense of the honour which Glasgow University had conferred on him by electing him to the proud position of Lord Rector. Inadvertently he fell into the terrible mistake of speaking of an eminent surgeon as "Doctor" So-and-So, and being speedily made aware of his *faux pas* by murmurs of dissent, he aptly proved his adaptability to the novel circumstances of his academic position by an ample apology and an ingenious suggestion that probably the surgeon of to-day desired to be looked upon as an expert rather than as a learned man. Such pleasing wit was a welcome and much appreciated indication that in her present Lord Rector the University possesses a man who is not only a statesman and a scholar, but also a humorist who can fit his jest to the occasion.

THE FRENCH VACCINATION SYSTEM.

WE publish elsewhere (p. 1342) an article on vaccination in France. As reported by our Paris Correspondent in his letter published on February 21st (p. 463), the new Public Health Act makes vaccination and revaccination compulsory in France, the former in infancy, and the latter in the eleventh year and again in the twenty-first year. The Comité Consultatif d'Hygiène Publique de France and the Académie de Médecine are charged with the duty of advising the Government as to the necessary measures to be adopted for carrying out the Act. The Academy appointed a Committee to draw up a report on the matter, and in our issue of February 21st there were given the measures recommended concerning the vaccine material. To-day's article gives the measures recommended regarding vaccination itself, and they will be found interesting to medical men on this side the Channel. In one important respect the system recommended in France resembles that which has now been departed from in this country. Stational vaccination, as distinguished from domiciliary, appears to be assumed as a matter of course in France; at least no mention is made of the other, excepting perhaps where the person to be vaccinated is living in an infected house, in which case he "shall be vaccinated separately." The buildings used as stations are to be clean, large, well ventilated, warmed, "and frequented usually by healthy persons." Schools and town-halls are indicated as examples. This brings us to another point of difference. The opportunities for free vaccination are not to be nearly so frequent as in this country. "In each commune one or several *séances* of free vaccination shall be held annually," after public notice duly given. In addition there is a recommendation to physicians and parents to take other opportunities for vaccination, instead of waiting for the annual *séances*. The term "vaccination officer" is evidently equivalent to our "public vaccinator," and the duty of intimating that there are infants requiring vaccination is to be laid on the parents themselves, who are to go to the town-hall for this purpose, after which the municipalities will draw up the lists. For the first revaccination, teaching institutions are to supply the necessary information, and for the second (at 21 years) apparently the duty is laid on the persons about to reach that age. Every one must be able, when he reaches 22 years old, to show his revaccination certificate. After a primary vaccination has been twice postponed on account of a medical certificate of unfitness, a third certificate can be granted only by the "vaccination officer." Foreigners living in France are to be required to produce for themselves and their children certificates of vaccination or revaccination, or else to submit to the operation.

UNDUE INFLUENCE.

THE amount of undue influence which is sufficient to justify the Court in setting aside a contract apparently entered into by a person of sound memory and discretion was recently illustrated in the well-known "Spooks" action. That case would seem to show that a settlement signed under the influence of "spiritualism" may be set aside. The general theory of the law in regard to acts done and contracts made by parties affecting their rights and interests, is that in all such cases there must be a free and full consent to bind the parties. Consent is an act of reason, accompanied with deliberation, the mind weighing, as in a balance, the good and evil on each side. And, therefore, it has been well remarked by a great lawyer that every true consent supposes three things: first, a physical power; secondly, a moral power; and thirdly, a serious and free use of them. The question of undue influence sometimes become important in cases where medical practitioners receive gifts or legacies from their patients. A presumption is often raised against the validity of such transactions by reason of the semi-fiduciary relationship which is held to exist between a physician and his patient. The following is an extreme case in which a gift was set aside. A surgeon and apothecary obtained from a patient 85 years of age, an agreement to pay him £25,000, professing to be founded partly upon gratitude for past services—which had been completed two years before the agreement was signed, and the regular charge for which had been previously paid—and partly upon the consideration that the patient should have medical and surgical assistance free during the remainder of his life. This settlement was carefully drawn up without the assistance of a third person, and was concealed until after the death of the patient. The Court held that the agreement could not be enforced, on the ground that the patient had never, in fact, given his assent to the arrangement, and that his signature must have been obtained by fraud. Many other cases might be mentioned in which, although it was not proved that the practitioner was actuated by any sinister motive, the very fact of his being the donor's medical adviser has caused the Court to set aside the gift. No medical man should ever accept any exceptional gift, or consent to be mentioned in a will, unless he is confident that his patient has had the advantage of independent advice.

DRAWBACKS TO THE INJECTION OF PARAFFIN.

ALTHOUGH the method of injecting paraffin under the skin for sunken noses and a number of other surgical deformities must be credited with many successes, defects being remedied which caused life to be unbearable to the

patients, it is certain that mistakes are still made, chiefly through the use of unsuitable paraffin. Another very important consideration is to choose the best possible spot for the seat of the injection. A case was reported recently to the Société de Chirurgie of Paris by M. Lejars, in which a woman aged 34 was treated to correct a slight nasal deformity. Three months later she rapidly developed swelling of the nose, of both upper eyelids, and of the left under lid. These complications were evidently caused by the infiltration of the paraffin. By making a small incision into each of the upper eyelids a number of small blocks of solidified paraffin were extracted. Unfortunately swelling, undoubtedly caused by fresh fragments of paraffin, occurred again. In the course of the discussion on M. Lejars's case, M. Tuffier mentioned a case in which, after injection of paraffin into the breast, inflammatory symptoms supervened, which, if it had not been known that paraffin had been injected, might have suggested syphilitic gumma. These regrettable failures must undoubtedly be attributed, not to the method itself, but to its defective application.

STABBING IN ITALY.

THE existing criminal law of Italy dates from 1899. It contains numerous and precise restrictions on the kinds of arms, knives, etc., which may be carried on the person. But the pocket knife is not touched unless it be more than 10 centimetres long; it must not have a fixed handle, nor must the blade be fixable by a catch or otherwise. Stabbing in Italy is still lamentably common, but it is not effected by means of any of the proscribed instruments or arms. In at least 80 per cent. of the cases, the instrument used is the common pocket knife. In 20 per cent. or less butchers' knives or the like, awls, sickles, or other trade tools are used. The ordinary pocket knife, costing about a franc, is a most formidable instrument, 8 centimetres long, ending in a very sharp point, curved in front, hollowed at the back, with a stiff spring. It is well adapted for puncturing the chest or ripping up the abdomen. As a matter of fact, in two-thirds of wounds penetrating a large cavity, that cavity is the abdomen. In the June number of the *Rassegna Nazionale*, an important magazine published in Florence, attention is drawn to these facts by Sir Willoughby Wade. Various modifications in the present type of knife are suggested. These, while leaving unimpaired the legitimate uses of the knife, would prevent the illegitimate ones. But perhaps the most important suggestion is that a Commission should be appointed to go into the whole question, and especially to determine the best model, and that which could be adopted without affecting the price of the article.

A "SURGICAL MARVEL" AT THE LONDON HOSPITAL.

THAT modest institution the London Hospital, which does so much good by stealth and doubtless blushes to find it fame, and which has been the scene of so many surgical triumphs, has, if the *Pall Mall Gazette* is to be believed, almost beaten its own record. A man was "stabbed through the heart" and afterwards "had the puncture sewn up at the hospital." The operation, says our contemporary, was, though not unique, a very remarkable one. Remarkable indeed it must have been beyond anything in the annals of surgery if the description of it given by the *Pall Mall Gazette* is correct. After being informed that "an operation on the heart is difficult, not only owing to the paramount importance of the organ, but because of its deeply-imbedded position in the body, and in order to do his work the surgeon had to temporarily displace the breast, cartilage, ribs, and lungs," we are further told that "it was at first thought that *the heart itself would have to be removed*." Fortunately this formidable contingency was avoided, for, "on washing away the blood clots and raising it a little the puncture was found." The man, we are glad to learn, continues to improve, and we hope that he will live long in undisturbed possession of the heart which he so nearly lost.

THE GERMAN EMPEROR AND THE MEDICAL PROFESSION.

THE Emperor William has lately, it is said, delivered himself of an opinion that there are too many lawyers in Germany, and declared that more young men should study medicine. The Imperial utterances are always interesting even when they are not particularly illuminating, but the interest in this case is, we fear, of a somewhat melancholy character as far as our brethren of the Fatherland are concerned. They are already complaining bitterly of the overcrowding of the profession. There are now 28,174 medical practitioners in the German Empire, and during the last five years the number of doctors has increased by 18.6 per cent., while the general population has increased by 7.8 per cent. The professional struggle for life is no where more severe than in Germany, and, in addition to the stress of competition caused by numbers, practitioners have to fight for a pittance against quacks who to a large extent are not interfered with, and in some parts of the Empire are actually protected by the law. That the Emperor should wish for fewer lawyers is inteliigible enough; but why he should wish for more doctors is a mystery which we cannot pretend to fathom. Would it be *lèse majesté* to suggest that His Imperial Majesty spoke in his haste without thinking, or without knowing the conditions of life among an important section of his own subjects?

CAVEAT EMPTOR.

THE general rule that there is no implied warranty or condition as to the quality or fitness for any particular purposes of goods supplied under a contract of sale is subject to certain exceptions, some of which ought to be noticed with peculiar care by all chemists and druggists. Thus if a customer makes known to the chemist, either expressly or by implication, the particular purpose for which he requires an instrument or some piece of apparatus, and he does this in such a way as to show that he relies on the chemist's skill and judgement; and, further, if the article in question is of a description which it is in the course of the chemist's business to supply, then there is an implied condition that the article shall be reasonably fit for the purpose. In other words, it is no longer a case of *caveat emptor*, or of "buying with all faults." This exception does not hold good in the case of the sale of a specified article under its patent or other trade name. Chemists frequently sell surgical instruments and apparatus for purposes which are freely discussed at the time of the sale. A recent case in the High Court affords an illustration of the risk which is run if the goods sold are not in proper condition. The plaintiff, who was a draper by trade, went to the shop of a retail chemist, and asked for an indiarubber hot-water bottle for the use of his wife, who was suffering from cramp. According to the chemist's story, the plaintiff asked him if the bottle would stand boiling water, and he said it would not, but that it would stand hot water. Eventually the plaintiff bought the bottle. After his wife had used it for four nights it burst and scalded her severely. In these circumstances an action was brought against the chemist for damages. The jury found as a fact that although the chemist had expressly stated the bottle could not be used for boiling water, it was unfit for use with hot water. They were, however, unable to agree on the question whether the chemist was guilty of negligence, but they assessed the damages provisionally at £40 for expenses, and £100 for pain and suffering. The judge was asked to decide any questions not covered by the findings of the jury. It was argued on the part of the chemist that the maxim *caveat emptor* applied, and that the customer had taken the bottle with all risks. The learned judge, however, found that there had been an implied warranty that the bottle was fit for the particular purpose for which it was acquired; that this warranty had been broken, and that the plaintiff was entitled to £40. As there was no contract between the wife, who sustained the injuries, and the chemist, the £100 could not be recovered. This judgement was affirmed by the Court

of Appeal. The Master of the Rolls said: "There was a sale of a specific chattel for a particular purpose, and the circumstances show that the buyer relied on the seller's skill or judgement. This was an inference of fact to be drawn from all the circumstances of the case, and the inference ought not to be excluded merely because the article is sold simply as a hot-water bottle." This statement of the law seems to accord with justice and common sense. In selling the bottle the chemist acted, to a limited degree, in an advisory capacity. Had the plaintiff bought the same article at an indiarubber shop, without asking any questions, it is most probable that his action would have failed.

WAR AGAINST MOSQUITOS IN NEW YORK.

THE medical practitioners of New York have been requested by the Health Department to report promptly all cases of malaria which come under their notice. They have also been asked to keep patients suffering from malaria under mosquito bars in order to avoid the further spread of the disease. The Board of Health has made arrangements to follow up all reported cases of malarial fever, and will endeavour to destroy all mosquitos wherever cases of malaria have occurred. An attempt is being made to educate the owners of property as to the necessity for taking proper steps to destroy mosquitos and to protect all standing water against the inroads of these insects. The Health Department has issued a number of leaflets giving instructions to the public on the relation between mosquitos and malaria, and the best methods of destroying the insects. The co-operation of the Park Department has been enlisted, and an appeal has been made to the public to further as far as possible the efforts of the sanitary authorities in their war against mosquitos.

OBSERVATION AND MEMORY.

DR. DIEHL in an interesting monograph[1] sums up the result of a series of experiments on the power of observation and memory. For the purpose of investigation printed numbers, lines, angles, and colour discs were used. Combinations of these were exposed under uniform conditions of light, time, exposure, etc., at each *séance* to the individuals observed. These came up for examination at the end of 24 hours, 30 hours, and so on, and the results were tabulated. Taking first the simultaneous exposure of a single number, two numbers in conjunction and a direction; at the end of 24 hours eight mistakes occurred in the single numbers, eleven in the double numbers, and three in the direction. Similar experiments made on consecutive days showed a steady increase in errors due to the persistence of former stimuli. Thus, of 15 tests made daily on 8 consecutive days the correct answers were 14, 14, 10, 6, 11, 11, 3, 6. A point of considerable importance is that throughout the experiments it was noted that the subjective feeling of certainty bore no relation to actual accuracy in answering. Where impressions had been carefully committed to memory, answers given on the following day showed a greater percentage of errors than after an interval of two days and there were still less after three. This is in entire agreement with the common experience of the sudden appearance in conscious recollection of something—a name or a phrase in music—which one had for days vainly sought, and may further, in some cases, explain inconsistencies in the evidence of witnesses at law.

THE UNIVERSITIES OF MANCHESTER AND LIVERPOOL.

THE draft charters of the Victoria University of Manchester and of the University of Liverpool were issued by the Privy Council last week. Both charters contain provisions for the creation of a joint Board, to embrace also the University of Yorkshire when that has been established, to regulate the conditions and subjects of the matriculation examination which constitutes the entrance to the degree courses of the University, together with any exemptions and variations from it. In the case of the Victoria University of Manchester the University Court will include the Lord Mayor of Manchester and the Chairman of the County Council of Lancashire, persons nominated by the Lord President of the Council, by the Crown, by the Chancellor, and by Convocation, representatives of the Senate of Owens College and of the Court of Governors of the Owens College. In the case of the University of Liverpool the Court will include, in addition to members of the University, five persons appointed by the municipality of Liverpool, one by the House of Keys of the Isle of Man, two by the county council of Lancashire, one each by the counties of Cheshire, Cumberland, Shropshire, and Westmorland, one each by the boroughs of Barrow-in-Furness, Birkenhead, Bootle, Chester, Crewe, Lancaster, Leigh, Preston, St. Helens, Southport, Warrington, Widnes, and Wigan, and one by the district councils of Runcorn and Wallasey, the M.P.'s for Liverpool and Birkenhead, and not less than ten M.P.'s for the boroughs and divisions of counties or boroughs in the counties of Lancashire and Cheshire to be nominated by the Court; the Governor of the Isle of Man, the Lord Lieutenants of the counties of Lancaster and Chester, the Lord Mayor of Liverpool, the Chairman of the Lancashire and Cheshire County Councils, the Vice-Chancellor of the Duchy of Lancaster, the Bishops of Liverpool, Chester, Sodor and Man; the Roman Catholic Bishops of Liverpool and Shrewsbury, and representatives of the Presbyterian Church of England, Congregational Union, Wesleyan Methodist Church, Baptist Church, the Presbyterian and Unitarian ministers, various officials of public bodies in Liverpool, Lancashire, and Cheshire; and representatives of various educational institutions in these districts. The Court will be the supreme governing body of the University, but the executive will be a Council; there will also be a Senate, which, subject to the control of the Council, will regulate and superintend the education and discipline of the University. The Senate is to consist of the Vice-Chancellor, the Deans of all the Faculties, all the professors of the University, and the Librarian. The Principal of University College, Liverpool, Dr. Dale, is nominated as the first Vice-Chancellor.

SANITARY INSPECTION IN LONDON.

A RETURN has recently been presented to the London County Council by the Medical Officer of Health, which shows that either upon their own initiative, or sometimes after stimulation by the County Council, the various metropolitan borough councils have seen fit to increase their sanitary staff. Roughly speaking, there has been since 1893 an increase of 60 per cent. in the number of sanitary inspectors employed in the metropolis. This increase has been steady—from 188 employed in 1893 to 301 employed in the current year. Of the 301 sanitary inspectors 20 are women; of these, 4 are employed in the borough of Southwark, and from inquiries we have made we learn that their zeal, sympathy, and conscientiousness in the performance of their duties are highly appreciated alike by the inhabitants of the district and by the authorities under whom they work. The census of 1901 reminded us that there were 571,768 inhabited houses in London and 1,019,546 tenements. Of the latter, 672,030 are holdings of less than five rooms in which 2½ millions of the 4½ millions of Londoners dwell. At the rate of two persons a room as an allowable standard, no fewer than 124,773 tenements were found to be overcrowded. It is to such tenements that sanitary authorities and sanitary inspectors must devote their chief attention. We find that on an average throughout London there is one sanitary inspector to every 415 overcrowded tenements, one to every 1,900 inhabited houses, and one to every 15,072 inhabitants. In Shoreditch, Stepney, Bethnal Green, Finsbury, Marylebone, and St. Pancras, it would appear from the return that, in

[1] *Zum Studiums der Merkfaigigkeit.* Berlin: S. Karger. London: Williams and Norgate. 1902. (Demy 8vo, pp. 39. 1s.)

in spite of recent additions, there is still room for improvement. For any sanitary district to exhibit laxity in the necessary inspection of houses let in lodgings is to invite the undesirable class of tenant within its borders. Unless a fair standard of sanitation is required all round, the negligent area will suffer first and most but the other areas will also suffer with it.

MEDICINE IN CHINA.

WE have all of us heard a good many stories of the curious customs of the Chinese in matters medical and otherwise, but every one is not aware of the endeavours that have been made and are still in progress to introduce among our confrères of the East at least a leaven of the scientific medicine of the West. The Hong Kong College of Medicine, however, is now more than fifteen years old, and appears to be making steady, if slow, progress in the graces of the people. The College is intended purely for Chinese students, and very wisely it does not open its doors too widely. It is devoting its energies to turning out a few thoroughly well-taught medical men rather than a number of men with a mere smattering of Western science. It insists therefore upon a curriculum of at least five years, and this has to be preceded by a matriculation examination. At the latter the standard is equivalent to that of the sixth standard of the Hong Kong Board of Education. Before admission to it, it is required of every candidate that he shall sign an agreement by which he undertakes if eventually successful in obtaining the licence of the College to serve the Hong Kong Government, should he be requested to do so, for three years at a salary of either 50 or 100 dollars a month, according as whether private practice is or is not permitted to him. Up to date the licence of the College has only been given to seventeen students, but twenty-four more are still pursuing their studies, while twenty-seven others have at one time and another thrown up the work on finding the examinations more difficult than they anticipated, or from other cause. Besides a Dean and other functionaries, the College has a teaching staff of fourteen European medical men, while clinical lectures are also given by the staffs of the Alice Memorial and Nethersole Hospitals. The total expense in fees of a licence is 300 dollars, and three scholarships are awarded annually. The College has always been encouraged by Government, but owed its foundation mainly to the energies of certain medical men then resident in the East, namely, Dr. Patrick Manson, the late Dr. William Thompson, and the late Rev. Dr. Chalmers. Mr. Cantlie also had a good deal to do with it in early days. To some extent it may be considered one of the good works for which the tropics owe gratitude to Dr. Manson, for though Hong Kong and its neighbourhood is hardly tropical, we notice that at least half of the licensees of the College are working in the Malay Peninsula.

CHRISTIAN SCIENCE AND THE LAW.

THE Supreme Court of Pennsylvania has affirmed the ruling of a lower court refusing to grant a charter to a Christian Science Association. The charter was refused on the ground that "it would be injurious to the community to incorporate a group of citizens who would preach the doctrine that there is no such thing as a contagious disease, or any disease, and practise the art of curing what are called contagious diseases by inaudible prayer whether in the presence of the sick or at a distance." The Supreme Court has found no reason for reversing the previous decision, holding that when persons make a business of practising medicine without registration they violate the law intended to prevent medical practice by non-qualified persons.

HORSE SICKNESS IN NATAL.

THE Government of Natal has issued the second interim report on horse sickness by Mr. H. W. Pitchford, Government Bacteriologist and Director of the Veterinary Department. The results of Mr. Pitchford's experimental investigations have convinced him that horses which are protected from the attacks of winged insects, either by efficient stabling or in gauze-protected boxes, by generating a smoky atmosphere, or by other means, enjoy immunity from horse sickness. He therefore concludes that the carrier of the infection is a flying insect, probably a mosquito, and finds that no evidence is forthcoming to support the theory that dew, damp grass, water, earth, or other such agency is concerned in the production of the disease.

THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE annual election for members of Council will be held at the College of Surgeons on Thursday, July 2nd, at 2 p.m. There will be three vacancies, Mr. Willett retiring after having served a second term, and Mr. Butlin and Sir Frederick Treves, after completing their eight years since they first became members in 1895. A blank form of the requisite notice from a candidate and of his nomination may be obtained on application to the Secretary; it must be received by him, duly filled up, not later than Monday, June 8th. A voting paper will be sent by post to each Fellow of the College whose address in the United Kingdom is registered at the College on Monday, June 22nd, and Fellows will not be required to apply for voting papers. We publish at p. 1352 our annual analysis of the Council, with the dates of election of the members and the proportionate representation of the schools, London and the provinces. We understand that neither Mr. Willett nor Sir Frederick Treves will seek re-election, but Mr. Butlin will again be a candidate.

THE Harveian Lectures of the Harveian Society of London will be delivered by Dr. D. B. Lees next November. The subject of the course will be the treatment of some acute visceral inflammations.

THE subjects selected for discussion in the Section of Medicine at the annual meeting at Swansea are the medical treatment of inflammations in the caecal region, susceptibility and infection, and the treatment of gastric ulcer.

THE annual dinner of the Indian Medical Service will take place at the Café Monico, Piccadilly Circus, on Thursday, June 11th, at 7.45 p.m., Surgeon-General Sir Annesley De Renzy, K.C.B., in the chair. Officers who intend to be present should communicate at once with the Honorary Secretary, Mr. P. J. Freyer, 46, Harley Street, W.

SOME of the English patients and friends of Professor Schott, of Nauheim, took advantage of the fact that he last month attained the twenty-fifth anniversary of his commencing practice in Nauheim to address a letter of congratulation to him and Mrs. Schott; at the same time, a small sum of money was collected to purchase a souvenir of the occasion for presentation to Dr. Schott. By his desire, however, this sum will be applied towards the erection of a memorial bust to his late brother, Dr. Arthur Schott, who initiated the treatment for which Bad Nauheim is now so renowned.

OVER eighty Fellows and visitors attended the meeting of the Obstetrical Society of London on Wednesday night, June 3rd, when Dr. J. H. Teacher, of Glasgow, read a communication on Chorion-epithelioma or Deciduoma Malignum, giving in addition a demonstration of a number of preparations by aid of the epidiascope. The discussion was adjourned until Tuesday, June 16th. A large number of mounted specimens were exhibited, including a case of a tumour resembling deciduoma in the mediastinum of a man.

MEDICAL NOTES IN PARLIAMENT.

Relative Rank of Naval Medical Officers.—Mr. Carew asked the Secretary to the Admiralty last week, with reference to the portion of the statement issued by the First Lord of the Admiralty with the Navy Estimates as to the readjustment of the relative rank of medical and accountant officers of the Royal Navy, when he expected to be able to give the details which were then in process of being worked out. Mr. Arnold Forster replied that details of the readjustments in question were still under the consideration of the Board of Admiralty, but an announcement on the subject might be expected shortly.

Vivisection in the Metropolis.—Mr. Weir asked the Secretary of State for the Home Department on Wednesday in last week if he would state the number of laboratories in the metropolis at which vivisection was practised, and the number of dogs subjected to experiments at these laboratories during the year 1902. The Home Secretary said that he must refer the hon. member to the annual return under the Act of 1896 for the year 1902, which would be presented immediately and would soon be issued to members. This would give the information desired, except that the experiments on cats and dogs were not distinguished in the report made to the Secretary of State and entered in the return.

The Pay of R.A.M.C. in India.—Dr. Thompson asked the Secretary of State for India if he would explain why certain increases of pay and charge pay, granted by Royal Warrant of March 24th, 1902, to officers of the Royal Army Medical Corps, and drawn all over the world since that date, were still withheld in India. Lord George Hamilton replied that the Royal Warrant of March 24th, 1902, amended certain articles of the Pay Warrant, and was therefore subject to the last clause in the preamble of the Pay Warrant which declares that it was not in force in the Indian Empire. The question of the pay of the Royal Army Medical Corps in India had, however, been under consideration; and revised rates, giving a substantial increase to the ranks of lieutenant, captain, and lieutenant-colonel had been sanctioned with effect from November 24th, 1902. Dr. Thompson also asked the Secretary of State for India if he was aware that certain officers of the Royal Army Medical Corps serving in India were receiving less pay than if they were at home; and, if so, whether he would, with a view to promoting contentment amongst the officers of this corps, assimilate the pay of these officers in India and at home. To this question Lord George Hamilton replied that the Secretary of State had been in correspondence with the Government of India in regard to the rates of pay of officers of the Royal Army Medical Corps serving in India, and a revised scale had been sanctioned to have effect from November 24th, 1902. The rates of pay under this new scale, when converted into British currency, were superior to the rates recently laid down for the Royal Army Medical Corps at home, except in the case of officers holding brevet rank. It was not in accordance with the general practice of the Government of India to grant higher pay to an officer holding rank of this description.

Ophthalmia and Epidemic Disease in Hanwell Schools.—On Thursday in last week, Mr. Herbert Samuel asked the President of the Local Government Board whether he was aware that an outbreak of ophthalmia at the Hanwell Poor-law schools had affected 230 children between April 4th and May 16th of this year; whether he had any official reports showing that this outbreak had been due to the premature return of partially-cured children from the ophthalmic school to the main school; and, if so, would he state what steps were being taken in the matter. Mr. Long replied that he was aware of the outbreak which had recently occurred at the schools referred to. The managers obtained the services of Dr. Sydney Stephenson, and he had seen a report by him on the subject. It appeared that the outbreak was a mild form of conjunctivitis or blight. This was an ailment which was very prevalent among children, and which readily yielded to suitable treatment. He was not aware of any report to show that the outbreak was due to the cause referred to in the question. Indeed the evidence indicated that the infection was introduced into the schools by a child recently admitted from Southwark. He was informed that the managers reopened a portion of the former ophthalmic school for the reception of the children affected, and he understood that the action which they had taken on the advice of Dr. Stephenson was being attended with success. Only 60 of the children now remained isolated and under treatment. Mr. Herbert Samuel also asked the President of the Local Government Board during how many weeks in the past twelve months there had been epidemics of illness in the Hanwell Poor-law Schools. Mr. Long answered that it appeared from a return which he had received from the clerk to the managers that during the year ended May 23rd there had been three slight epidemics of illness at these schools. Thus, there were 59 cases of influenza during nine weeks, 43 cases of chicken-pox during twelve weeks, and 26 cases of whooping-cough during ten weeks. The total number of cases of all other diseases for the year was 9. During thirteen weeks there was no case of disease in the schools. He was informed that there had been no deaths there since June, 1901. This reply did not take account of the mild attack of "blight" which had recently occurred in the schools.

Poor-law Nursing.—Mr. Talbot asked the President of the Local Government Board whether he had taken into consideration the Report of the Departmental Committee on Poor-law Nursing, dated November 10th, 1902; and whether it was still his intention to recommend the training of a class of qualified nurses in the smaller workhouses. Mr. Long answered that he could only state at present that the report referred to was under his consideration.

Glycerinated Calf Lymph and its Cost.—Mr. Weir asked the President of the Local Government Board, in view of the fact that the Local Government Board for Scotland paid to Dr. Blaxall, of the Government Bacteriological Laboratory in London, £105 for 2,220 tubes of glycerinated calf lymph during the year ending March 31st last, to state whether this lymph was produced at the cost of the Local Government Board. Mr. Long answered that the lymph referred to was prepared from calves in the stables of the Local Government Board, and was uniform with other lymph issued by them, but the cost of its production and preparation was borne by Dr. Blaxall. He should add that Dr. Blaxall was not required to devote his whole time to the service of the department.

Plague.—In reply to Mr. Weir, Lord George Hamilton said that the number of persons employed on relief works in India had risen from 23,227 at the end of January to 46,793 at the end of April. The number of deaths from plague among relief workers was not known, but as relief works were confined to the Raipur District in the Central Provinces, which district had so far been free from plague, it might be presumed that no deaths were due to that disease, and that protective inoculation was not offered to the relief workers. In reply to a further question from Mr. Weir, Lord George Hamilton stated that the number of persons who had died of plague in the Punjab, whose population is 22½ millions, between January 1st, 1903, and May 2nd (the latest date for which figures had been received) was 141,789. The returns did not distinguish deaths of inoculated persons from deaths of persons not inoculated.

The Local Government Board in Ireland.—In reply to Dr. Thompson, Mr. Wyndham stated that no application had been made by the Governors of the County Monaghan Infirmary for permission to see the report of the Local Government Board inspector relative to the condition of their hospital and its suitability as a training school for nurses. Mr. Wyndham added that such reports were confidential, and that it would be contrary to practice to make them public.

Sanatoria for Consumption.—Mr. Wyndham has informed Dr. Thompson that the Local Government Board is not aware that any definite action has yet been taken by any county council in Ireland to establish a sanatorium for consumptives, though some preliminary steps had been taken by the Belfast Corporation, and the Cork Branch of the Association for the Prevention of Tuberculosis was urging upon the local authorities the necessity for taking action.

Infected Army Blankets.—The President of the Local Government Board informed Mr. Yoxall that in consequence of the action taken by the Medical Officer of Health for Nottingham in notifying the persons in certain villages who had purchased the said blankets, the whole had been sent back to the firm in Nottingham who supplied them, and the blankets which reached Nottingham, some hundreds in number, were in process of disinfection.

THE SUMMER SESSION OF THE GENERAL MEDICAL COUNCIL.

NOTES.

Reports on Inspections of Examinations.—The ordinary session of the General Medical Council—as will be seen from the full report published in the Supplement to this issue—came to an end on Saturday last, May 30th, but the reports of the Examination Committee, which it is stated sat for over twelve hours altogether, were only completed on a late day of the session. It became evident, therefore, that there would not be time for their adequate discussion unless the Council sat over Whitsuntide. This led to the proposal that a special extra session of the Council should be held for their consideration. The issues were somewhat confused between the general question of postponement and that of the date to which the postponement should take place, and—as was pointed out with justifiable warmth by Sir John Tuke—the decision of this point consumed over an hour. It was finally decided that the Council should meet for this special purpose in the middle of July, but it was resolved that the reports should be at once received and entered upon the minutes, so that they become public and are available for comment. They bring to an issue the dispute between the English Royal Colleges and the Council, and also contain strictures upon the examinations of the Universities of Oxford and London.

Practical Work for the D.P.H.—The Public Health Committee advised that certain military districts under the charge of army medical officers devoted to sanitary work exclusively should be recognized for the purpose of the D.P.H. curriculum. Satisfactory arrangements have also been made by which the fever hospitals of the Metropolitan Asylums Board will in future be available for study. A candidate for the D.P.H. diploma taking his course of study at these institutions will be placed for a period of three months in the position of a clinical assistant without remuneration beyond the allowance of residence and rations.

The Draft Rules of the Midwives Board.—The Special Committee reported to the English Branch Council that certain amendments in the draft rules proposed by the Central Midwives Board were necessary. Some of the proposed changes were adopted, whilst others were rejected at a meeting of the Branch Council on Friday. The Chairman of the Committee, Sir John Williams, had presented a minority report, signed by himself alone, in which he urged that the rules should be approved *en bloc*, although subsequently he was willing to accept one at least of the amendments. It was urged that the Midwives Board did not contain a majority of medical men, and that its medical members were not agreed, as was shown by the minority report published in the Supplement to the British Medical Journal of May 30th, so that it was proper for the Council to scrutinize the rules closely. A good many of the proposed amendments were directed to the elimination of phrases which might tend to extend by implication the proper province of the midwife, and the principal difference of opinion had regard to whether particular provisions had or had not this tendency.

Reciprocity with Canada in the recognition of medical qualifications was brought up by a question addressed to the President by Mr. Tomes. The President in his address appeared to have assumed that the Act introduced by Dr. Roddick and passed in the Dominion Legislature was virtually a dead letter, its operation being dependent upon its adoption by all of the provincial Legislatures, one of which had now rejected it. He therefore concluded that some other means, such as the recognition of individual provincial diplomas, was the only resource left. Dr. Roddick's Act provided for the establishment of a common register for all Canada, the establishment of a Medical Council, and the equalization through its means of the standard of the various provincial diplomas. We understand that it has been suggested that the Dominion Parliament might entertain an amendment bringing the Act into operation so soon as five or more of the provinces adopted it, and as a matter of fact all save Quebec have fallen into line on the subject. Such a course would seem to be so far preferable to any piecemeal recognition of separate and varying diplomas, the standard and value of which it would be difficult for the General Medical Council of the United Kingdom to assess, that the President was invited to convey this suggestion to the proper authorities. This course, rather than the submission of any formal memorial, was adopted, because it was thought undesirable that the Council should take any step which might be interpreted as hostile to the adoption of reciprocity.

Alleged Advertising.—A complaint was lodged by the Medical Defence Union against Mr. Cloete Smith, that he had sought to attract practice by circulars and inspired articles in the lay press wherein the treatment of cancer by electricity was advocated in connexion with his name. The documents put in in support of the application were circulars handed out at the hospital, an article in the *Pall Mall Gazette*, subsequently reprinted separately, and a letter written by a Mrs. Black, of which a number of copies were printed and issued. It was stated in evidence that the hospital, at which out-patients only were treated, was supported entirely by Mr. and Mrs. Thompson, that no funds were collected for it, that the circular was drawn up by them, and merely contained the name of Mr. Cloete Smith as being surgeon to the hospital, and that the article in the newspaper did not contain the name of the practitioner, but indicated the locality, though the letter contained his name. No direct proof of his having had prior cognizance of these documents was offered, but the complainants urged that upon internal evidence he must be taken to have supplied the matter. This he denied, and Mrs. Black, who was the writer of the article as well as of the letter, was tendered as a witness on his behalf. She described herself as writing for the press, and stated that the plain meaning of the words she had used was not in accordance with the facts, in so far as the "doctor" of one paragraph described as having given her the information was not the "doctor" of the preceding paragraph described as having the electrical workshop, but referred to the late Mr. Wimshurst the electrician, who was not a medical man. The letter was stated to have been the outcome of a drawing room meeting, and to have been printed to send to friends inquiring upon the subject. Of the 2,000 copies printed a large number had been destroyed, and the rest were locked up. Mr. Cloete Smith's defence was, therefore, in effect that he had been placed in his present position by the misdirected zeal of his friends, and that no evidence had been offered connected him with the documents. The Council after deliberating on the case decided that the facts of the charge had not been proved to their satisfaction.

A Charge of Covering against Dr. Moses Blok was founded on the allegation that, whilst residing at Canonbury, he conducts his practice almost wholly in Aldgate among the foreign population; it was alleged that he left an unregistered assistant in the latter place, and allowed him to carry on practice. It appeared that the surgery in Aldgate was locked up at night, but that there was a notice in English and in Yiddish that night calls were to be made at another address, which was the residence of the assistant. In defence it was stated that Dr. Blok's residence could be reached in a quarter of an hour in a cab, and that the assistant was instructed to send to him in this way when attendance at night was requisite, and that owing to so many of his patients being unable to speak and read English it was necessary to refer them to the assistant, who was acquainted with Yiddish, in order to arrange what might be necessary. It was admitted that the assistant had overstepped what was right in the particular instance cited, but Dr. Blok had dismissed him at once, and had since engaged a registered assistant. The Council decided that the charge was not proved.

Dental Cases.—A charge against David Anthony, a dentist practising in Cardiff, presented certain points of interest. It was found by the Dental Committee that he had employed an unqualified person, and allowed him to attend patients and perform operations; that after receiving the Council's summons he had formed a "one-man" company, under the memorandum of which "thorough practical persons" were to be employed, and that he had still in his employment an unqualified person. He did not appear before the Council either in person or by counsel, and the Registrar was instructed to expunge his name from the *Dentists' Register*. It seems to be no far-fetched inference that he will continue his practice under the aegis of the company. An entirely new issue arose in the case of Mr. MacKeown, a dentist somewhat recently qualified. He entered the service of two unregistered persons

practising as dentists in Lincoln, apparently under the guise of a company, and they utilized his possession of a qualification to send a circular to the medical men of the district, pointing out that they could, in consequence, administer anaesthetics without contravening the Council's resolution. It may be remembered that the Lincoln Medical Society in February last addressed an inquiry to the Council as to their real position under these circumstances. The complaint against Mr. MacKeown was in effect a charge of covering his principals, and the Dental Committee, which is a statutory body, found that the facts were proved. The Council taking into account the special circumstances of the case, its novelty, and particularly the fact that Mr. MacKeown had severed his connexion with the firm or company, had expressed regret that he had associated himself with them, and was on the point of leaving the country to practise in Africa, decided to proceed no further in the matter. In two other dental cases the facts had been found to be proved by the Dental Committee, but the practices complained of having been abandoned, and definite promises having been given that they would not be renewed, no further action was taken by the Council.

Preliminary Examinations.—The reports of the Examination Committee upon the visitation of the English Conjoint Board's examination in physics, chemistry, and biology, and of the corresponding examination held by the Apothecaries' Society of London, are now placed upon the minutes. Seeing that time was asked for in order to produce these reports, we are a little disappointed with their scope, to which we shall have to recur again. One function of the Examination Committee in drafting its report is to summarize the material placed before it, and this has been done. But another function is so to discuss this material so as to facilitate the task of the Council in coming to a conclusion upon it. In this respect the report seems to us weak. After perusing it several times we do not feel that we are in a much better position to draw conclusions than after the perusal of the Visitors' reports and of the answers of the bodies thereto.

Finance.—The report of the Financial Relations Committee was received and discussed, and certain economies proposed by it were adopted. These, however, will not prove adequate to meet the annual deficit, and further sources of revenue are to be sought. The President's memorandum was adopted, and an endeavour will be made to obtain a grant from the Treasury to meet the increased expenses pertaining to the penal work of the Council. It was decided to postpone the further consideration of any amending Act until the result of this application were known. It was also resolved that leave be sought to raise the price of the *Register* to an amount which would cover its cost, and that fewer copies be printed; that the fee for re-entry upon the *Register* be raised to £1, and that the fee for the insertion of additional qualifications be raised to £1. It seems possible that this latter change may not give rise to so large an increment as was expected, as it may diminish the number of additional qualifications placed upon the *Register*. The Irish Branch again required a subsidy to the amount of £300, and the resources of the English Branch are diminished by the selling out of £1,000 Consols, and the borrowing from the Dental Fund of an additional £600, raising its indebtedness to that fund to £1,200.

Ireland.

CHANGES AT THE UNIVERSITY OF DUBLIN.

THE Council of the University of Dublin has approved of the admission of women to the examinations and degrees of the University, and it is believed that the King's letter authorizing the changes will shortly be granted. The Board has approved of the abolition of Greek as a compulsory subject in the ordinary courses for the Arts degree, and it is expected that before long permission will be given to substitute a modern language.

ROYAL MEDICAL BENEVOLENT FUND.

Mr. L. H. Ormsby, President of the Royal College of Surgeons, occupied the chair at the annual meeting of the Royal Medical Benevolent Fund on Monday, June 1st. The report showed that the total grants amounted to £1,289 for the year. There were 79 applications from widows, 6 from orphans, and 3 from medical men. The dividends on stock amounted to £689 19s. 2d.; subscriptions through the central treasurer to £178 13s. 6d.; and from the Branches to £520 1s. 1d. Belfast and the Antrim Branch head the list with a contribution of £161 0s. 3d., including £15 subscribed by those present at the inaugural dinner of the Ulster Medical Institute, on the suggestion of the Branch President, Sir William Whitla, to whom the Society owes much, as well as to the Secretary, Dr. Richard Pardon. The usual resolutions were passed, the speakers being Mr. Ormsby, Sir C. Cameron, Dr. Tweedy, Colonel Backhouse, Mr. Jameson Johnston, Dr. Wallace Beatty, Sir George O'Farrell, Surgeon-General Potter, and Surgeon-General Joynt.

A QUESTION OF PENSION.

Dr. Albert Speedy has resigned his position as medical officer of No. 3 Dispensary District in the North Dublin Union after forty years' service. The solicitor stated that the guardians were bound to pay a certain proportion of the superannuation on the civil service scale, but they had a discretion as to emoluments. A proposal was made to grant the maximum of £256. Then amendments of £113 6s. 8d., £200, and £150 were in turn defeated, and finally the original proposal was lost. One enlightened guardian said that when men gave their lives to the service of the Board they should be treated in a generous spirit, and a notice of motion for next meeting was handed in fixing the sum at £230. Country Boards are often denounced for their harshness in dealing with officials who have become worn out in their service. Here are guardians in the metropolis of Ireland who higgle over a reward which in any other service would be accorded as of right. Dr. Speedy is suffering from the law which makes retirement necessary before the amount of pension can be considered. It is one of the scandals which justify the dispensary doctors in Ireland in the attitude which they have at last assumed on the question of salaries.

THE PRIVATE PRACTICE OF A RESIDENT MEDICAL OFFICER.

The Local Government Board has informed the guardians of the South Dublin Union that any medical practitioner appointed to be a resident medical officer of a workhouse should be required to devote all his time to the services of the guardians. The resident medical officer must not be such in name only, and unless Dr. Dunne was prepared to give all his time the Board could not sanction his appointment. The Chairman thought they ought to stand by the permission which they had already given Dr. Dunne, and a resolution to that effect was adopted.

DR. E. THOMPSON, M.P., AND THE OMAGH GUARDIANS.

Following the action of the Omagh Guardians, Dr. Thompson has, through his solicitor, applied for payment of £12 12s. for his services as *locum tenens*. The Board resolved to tender £3 3s., but as it is not likely that this will be accepted the case will probably go into the Courts.

A DENTAL PROSECUTION.

The Irish Branch of the British Dental Association has summoned before the Limerick Magistrates "Jaffe, Surgeon Dentist, Limited," and Marcus Lionel Jaffe, for using the description of dentist and surgeon dentist, not being duly qualified in that behalf according to law. There were several other defendants. Mr. Samuels appeared to prosecute and Mr. Healy, K.C., M.P., defended. The company consisted of two drapers, three married women, a spinster, and one dental mechanic. It was argued that the defendants had no qualification whatever to entitle them to practise dentistry, and that the company had been formed with the object of defeating the provisions of the Act, and imposing on the public by fraudently using the title of surgeon dentists, implying that they were registered. Mr. Healy said they had always failed in such cases in England, and the prosecution was taken in Limerick because the plaintiffs were afraid to bring one in London. Judgement was reserved.

THE IRISH MEDICAL ASSOCIATION.

The Tyrone Branch of the Irish Medical Association having adopted the "Mayo Resolutions" recently conveyed their gist to the Omagh Board of Guardians stating in addition that they will be strictly enforced. These resolutions as conveyed to the Board were that dispensary officers ought to be paid not less than £200 a year, and workhouse medical officers not less than £120, a *locum tenens* in the one case being paid £4 4s., and in the other £3 3s. a week; consultations to be paid for according to scale. The latter conveying

this information concluded by stating that all existing arrangements between the Board and its medical officers would at once cease, and that no consultations would be held with, or help of any sort extended to, any medical officer or other practitioner who did not actively assist the Association in obtaining redress for legitimate grievances. The guardians decided to refer the latter to the Local Government Board for reply.

DAIRIES, COWSHEDS, AND MILKSHOPS IN BELFAST.

The Belfast City Council has just issued some draft regulations on the sale of milk. These are an improvement on the former regulations. The chief points of public interest are that every one carrying on the trade of cowkeeper, dairyman, or purveyor of milk must be registered in the office of the Public Health Department, reasonable inspection must be allowed, 500 ft. of air space—presumably cubic feet—must be allowed for each cow, there must be sufficient lighting and ventilation, and cleansing must be regularly carried out, the floor of cowsheds must be of impervious material, and allowance made for drainage, and the water supply must be ample. There are also regulations to secure the cleanliness of milk stores, milk shops, and of milk vessels, and that milk must not be stored in improper rooms; the udder and teat of the cow at the time of milking, as well as the hands of the milker, must be thoroughly clean. Regulation 19 is somewhat vague; there is nothing to show whether the words "on any outbreak of infectious or contagious disease within the building or upon the premises" refers to human beings, or animals, or both; it would appear to refer to animals, as, immediately lower down, the words "among the persons employed in his business" occurs. The two conditions might very well be put in two rules, avoiding any chance of misinterpretation. No mention is made as to the necessity of the cows being in good condition and health. No one would care to drink the milk of a cow with tuberculous udder, even although she were milked under aseptic precautions. No mention is made of dairies and cowsheds outside the boundary, nor of the dangerous habit of one milkman selling milk to another on the streets.

IRISH WORKHOUSE REFORM: VICEREGAL COMMISSION.

The appointment of a Viceregal Commission to inquire into the question of workhouse reform in Ireland has been received with satisfaction amongst the profession in the North. The medical men in Belfast are glad to have the opportunity of congratulating Dr. Biggar on his appointment as member of the Commission. Dr. Biggar till lately resided and practised in Belfast, and has long and valuable experience in Poor-law matters. It seems incredible, however, that among the five heads of inquiry no reference to the grievances of the Poor-law medical officers appears; there is a very real fear that such omission of a very pressing question may seriously damage the usefulness of the Commission. It is probably the best thing that could have happened for the medical officers themselves. All waverers and moderate men have now no option; they are forced to join with the extremists, a very unfortunate name, as the demands of the extremists have all along been very moderate. The feeling among medical men is very strong on all sides. It is inexplicable how such an omission could have been permitted, and the general opinion in Belfast is that if the Commission fails in in its object from want of loyal support Mr. Wyndham and his advisers have only themselves to blame. It could surely have done no harm to inquire into these questions; if the demands made by the Poor-law medical officers were unreasonable, to have expressed an opinion to that effect and given the reasons; if, on the other hand, an injustice were proved, why should it not be remedied? It is extremely unfortunate, but boycotting seems to be the only remedy left.

PATHOGENIC OYSTERS IN MANILA.—For some time the sale of oysters taken from the Malabon River has been prohibited in Manila, but the law has, according to the *Boston Medical and Surgical Journal*, been almost a dead letter. An American resident lately sent numerous samples of these oysters to the Board of Health for examination, with a view of having the prohibition of sale removed. The examination was made in the Government laboratories, and as a result the bacilli of cholera and typhoid fever were found to be present in some of the specimens. The prohibition of the sale of the Malabon oysters has therefore not been withdrawn, and more vigorous efforts will be made to secure its enforcement.

Scotland.

SANITATION IN EDINBURGH.

DR. A. MAXWELL WILLIAMSON, the Chief Sanitary Inspector, has just issued his annual report for 1902 on the Sanitary and Market Departments of the city of Edinburgh. It extends to 113 folio pages, and contains matter of much interest and value. A large part of his department's time was, as heretofore, taken up with the investigation of all forms of nuisance under the Public Health (Scotland) Act, 1897, and also under the powers contained in other general and local Acts. There had been 22,487 complaints, and 22,027 had been abated, and the remainder were for the most part being abated. Much attention had been given to improving the sanitary conditions of old properties inhabited chiefly by the working and poorer classes. New sanitary appliances were being substituted. Dark and unventilated waterclosets were being gradually superseded. There still remained a considerable number of city properties where it might be advisable to put in force the recently-acquired powers contained in the Corporation Order of 1901. The sanitary condition of "open spaces" in the neighbourhood of tenement dwellings, of kitchens in hotels and restaurants, inspection of shops in which food stuffs of all descriptions were kept, in turn are referred to. It is stated that during the year 1,653 small houses of a total capacity not exceeding 2,000 cubic ft. had been measured and ticketed. This kind of work had been attended by most satisfactory results. The work done in regard to the prevention of overcrowding; the general cleansing of houses, offensive trades, and cemeteries is detailed. All the cemeteries in the city have been kept under observation, and their condition generally found satisfactory. In a former special report on this subject reference was made to the practice, carried on in some of them, of leaving what were termed "common graves" open until the full number of coffins which the graves were capable of accommodating had been placed in them. This was now found to exist in very exceptional cases only. Several of the cemeteries did not now permit what were called "common burials," and the demand for accommodation of this description is decreasing. Water supply (with cistern inspection), common stair painting, common lodging-houses, dairies, ice-cream shops, cow byres, Sale of Food and Drugs Acts, Margarine Act, Shop Hours Act, seats for shop assistants, meat inspection, tuberculosis in cows, beef, mutton, and pork brought in the city from abroad, have all received careful attention. A number of valuable tables are given. Altogether Dr. Williamson is to be congratulated on his fifth annual report, and the excellent work which it sets forth in the department under his supervision.

EDINBURGH MORTALITY FROM ZYMOTIC DISEASE.

During the week ending at midday, May 30th, 12 deaths out of a total mortality of 103 were recorded as due to zymotic diseases; of these, 2 were due to diphtheria, 2 to scarlet fever, 1 to enteric fever, 1 to erysipelas, and 6 to whooping-cough. In the previous week, that ending May 23rd, there were 6 deaths due to zymotic causes—1 to scarlet fever, 2 to measles, and 3 to whooping-cough.

THE GLASGOW AND EDINBURGH OBSTETRICAL SOCIETIES.

Dr. Howard A. Kelly, of Baltimore, Honorary President of the Glasgow Obstetrical and Gynaecological Society, will deliver the presidential address in the hall of the Faculty of Physicians and Surgeons, Glasgow, on June 17th, at 8.30 p.m. The subject of the address will be the History of Appendicitis in Great Britain, and all medical practitioners are invited to be present. On the following day the Edinburgh and Glasgow Obstetrical Societies will meet in the same hall at 5.30, when Dr. Kelly will introduce a discussion on Extirpation of the Uterus and Appendages in Serious Pelvic Inflammation. Afterwards the two societies will dine together in the Windsor Hotel. Edinburgh Fellows will travel by the train leaving the Caledonian Station at 4 p.m., returning by the 9.50 train from Glasgow Central Station. A large representation of Edinburgh Fellows is desired, and those who propose to be present are requested to intimate their intention to the Secretaries not later than Saturday, June 13th.

THE ABERDEEN ROYAL INFIRMARY.

It is understood that a sum closely approaching £20,000 will be available from the Shaw and Clark Trust, enabling the directors of the Aberdeen Royal Infirmary to build and

partially endow a sanatorium for consumptive patients. The directors have been occupied for some time time past in the consideration of such a scheme, but the necessary expense has prevented any practical realization of their wishes. Even should such a sum be only sufficient to provide accommodation for some thirty patients in a sanatorium, and at the same time provide a reasonable capital sum for endowment, it will be a distinct benefit to the community, the accommodation at the infirmary and other charitable institutions being only sufficient for a fraction of the early cases of phthisis which come up for treatment. Dr. William Sinclair, at present Assistant-Surgeon at the Aberdeen Royal Infirmary, has been appointed to the post of Medical Superintendent of that institution in place of Dr. Angers, who has recently been chosen as Superintendent of the Aberdeen and District Lunacy Asylum at Kingseat.

THE REFORM OF CONTRACT PRACTICE.

CONTRACT practice in one form or another is universal. In theory it is economically sound, and in some forms it is, perhaps, one of the pleasantest ways in which a medical man can earn his living by the exercise of his profession. As carried on, however, in connexion with associations whose members pay for themselves, and nominally belong to "the working classes," there are numerous objections to it. Some of these objections have been lessened of late years in certain localities, but in others, and those the majority, the conditions of "club" or other analogous contract practice remain as bad as ever. Nor are there wanting signs that, in default of combined action on the part of medical men, the difficulties and drawbacks of club practice are likely to increase rather than the reverse.

The network of Friendly, Medical Aid, and similar Societies throughout the country is being drawn closer every year, and there is considerable danger that if the medical profession does not equally draw together both locally and generally, the central body which represents the societies referred to will become so powerful both socially and politically as to have a serious influence on the whole medical profession.

We have a great belief in the ultimate virtue of all natural evolutions, and do not doubt at all that what is best for the public as a whole is ultimately best both for the medical profession as a body and its members as individuals. That it is good for the public that the working classes should provide in time of health for their medical attendance in time of sickness is certain; and not less certain is it that the amounts which suffice for such provision should be settled, so as to be within the means of the majority of those concerned.

It cannot, however, possibly be good for the public that from want of foresight and union on the part of the medical profession, independence and liberty of action should be wrested from a vast number of its members, and such a condition of things imposed upon them, by the combined action of the working classes, as must necessarily lead to scamped work. This, however, is what has occurred, and this is the condition of things which the medical profession as a whole should steadily set itself to remedy.

These views are probably shared by all those who have had anything to do with club work at all, or who have perused the information which we have supplied for some years, under the heading of "Contract Medical Practice," practically in every week's issue.

In a great many places, as our readers are aware, there have not been wanting public-spirited medical practitioners who at the cost of considerable self-sacrifice have endeavoured to set things right, and in many cases their efforts have met with considerable success. It is these efforts which have led to the term "the battle of the clubs," and what we all wish to see brought about is not a continuance of isolated "battles," but a steady war throughout the country conducted in every place in which, by a large majority, the medical profession does not express an opinion that the conditions under which club practice is locally conducted are in every way right and desirable. It is a contest in which all sections of the medical profession should unite, for, apart from any moral question of *esprit de corps*, one section of the profession cannot be dragged down without damaging the rest. Besides this, those who prefer to look at all questions from a general public, and not a professional, point of view, have to remember that it is the public itself, and especially the working classes, who will ultimately suffer most from the degradation of club practice. The conditions of the contest are not equal. The clubs are only anxious to get their contracts taken up by medical men at the cheapest possible rate, and therefore pursue one line only. Medical men, however, approach the matter from very varying moral and practical standpoints. To some few there seems unfortunately nothing wrong in undertaking more work than they can possibly perform properly. To others, who undertake a certain amount of club work, the fact that it does not directly pay seems unimportant in comparison with other advantages in which they consider it results in their own case. Others, again, are entirely under the thrall of club managers, and are afraid to make any move to help themselves. Furthermore, the wages and expenses of the working classes differ considerably in different parts of England and Scotland, and the net result of these and many other factors is that no line of action as to details can be laid down for all places alike. Each community of medical men must decide for itself what course local conditions make most desirable, and the only essential common factor of all plans of action is that the medical profession in all places should be true to itself, and that minorities should loyally stand by the decision of majorities.

The contests of the past supply a good deal of useful information as to the courses that may be successfully adopted under various local conditions, and we propose to publish an account of what has happened in various places where the question of club practice has been definitely taken in hand. In most, if not in all, instances there are certain essential points on which decisions have to be made in every case, and in every account of a contest the decision taken on these points will be formally noted under a number. Leaders of movements will in this way be able to pick out for themselves the cases which seem likely to be the best guide under the conditions of their own localities.

The following notes are not, we are aware, complete; and while expressing our thanks to those gentlemen who so obligingly answered the questions which we submitted to them, we desire to add that we shall be glad to forward a copy of these questions to any member who can afford further information likely to be useful as a guide to others.

I.—DURHAM.

The following notes are based partly on information supplied by Dr. Edward Jepson, President of the County of Durham Medical Union:

1. A new medical organization was formed for the purpose of establishing and maintaining a minimum rate of payment for medical contract work in relation with miners, all classes of workmen, Friendly Societies, sick and other clubs, lodges, insurance and other companies and societies.

2. After the formation of a new society as above stated, under the title of the County of Durham Medical Union, other societies such as those at Darlington, Stockton and Bishop Auckland, as well as the South Shields Medical Society, either became part of the Union or were affiliated to it.

3. The initial steps for the formation of this organization were taken by three practitioners. They, however, did not appear in the matter personally, but at their instigation a well-known firm of solicitors issued a circular suggesting a meeting of all medical men in practice in the county of Durham. The suggestion was favourably received, and at the meeting which ensued it was resolved to form an association, and a committee was appointed to draft rules and a constitution. The initiators of the movement were in club practice, but others, not interested in contract medical work, became early and active participators in it.

4. An endeavour was made to include every practitioner in the county of Durham in the movement, by issuing circulars to each of them, and out of 400 medical men 260 now belong to it. After things had got under way, endeavours were made to bring about meetings in the smaller localities, so that things might be talked over quietly, and men who hung back induced to unite in action.

5. Medical men who would not join the movement were simply left alone, after a reasonable amount of persuasion had been brought to bear on them, but those imported by the miners, etc., in consequence of the action of the Union, were boycotted if they accepted work at a lower scale of fees than that fixed by the Union. Action was also taken against one or two medical men who employed unqualified assistants.

6. Before the question of reform was taken in hand, the

rate of pay for contract work at the mines, etc., varied very much. In some districts it was at the rate of 6d. a fortnight for a man and his family, while lodgers and sons over 21 also paid 6d. each per fortnight. In other districts, sons over 21 as well as lodgers, escaped payment altogether. Friendly Societies paid at the rate of 2s. 6d. to 3s. a member for the year. Members of private clubs were generally charged the same rates as those prevailing at the pits of the district.

7. In order to bring the views of the Medical Union to the knowledge of the miners, etc., a deputation was sent from it to the chiefs of the Miners' Association, who, however, declined to have anything to do with the matter. Consequently notices were sent to each individual Lodge of the Miners' Association, pointing out the necessity of an increased rate of payment, the reasons therefor, and offering to send a deputation to discuss matters with each lodge. In some cases the Lodges agreed to the increased rate without much demur, but in most no notice whatever was taken of the offer of the Union. Under these circumstances, a notice embodying the terms upon which alone work would be undertaken in the future, was signed by every medical man in the district concerned, and either sent to the Lodge, posted up at the pit head, or circulated in some way among the men. In the case of Friendly Societies, etc., a simple notice in writing was sent to each of them by each medical man concerned.

8. The notices originally sent to the Lodges proposed an increase of payment from 6d. to 9d. per fortnight, and explained that the work could no longer be done at the lower rate—which was fixed forty or fifty years before—owing to the increased cost of medical education, rise in the salaries of assistants, and of the price of instruments and general accessories of modern practice.

9. As shown by paragraph 7, the representatives of the miners simply refused for the most part to consider matters at all, so the negotiations resolved themselves into a declaration of the lowest terms medical men would accept after a certain date. The districts involved being numerous, and differing to some extent in circumstance, the immediate results of the movement varied very much. In some the medical men were timid and not easily brought to unite together, but in most they stuck to their guns, while to assist some who were at first hard hit by, so to speak, going on strike, an "indemnity fund" was formed. Attempts were made by the miners in some districts to get the work done by imported medical men, but the Union issued counter advertisements, and as a rule those who accepted service under the miners were in some way undesirable persons. Those who did come were boycotted by the resident medical men, and for one reason or another most of them eventually left.

10. The present position now, some years after the Union was formed, is that more than half the members of the Union, who are in club practice, have gained an increase of income of from 30 to 50 per cent., while others, though they have no increase of income, do less work for the same money. Besides this, the formation of the Union has greatly improved the relationship between medical men, and has much enhanced the dignity and position of the profession.

11. As a secondary outcome of the Union, endeavours are being made to suppress unqualified practice, and a Judicial Committee for Durham and Northumberland, which includes representatives of the consultants of the North, as well as representatives of the Unions of Northumberland and Durham, has been formed. This Committee deals with cases of alleged undesirable conduct on the part of medical men in Durham and Northumberland, and especially with cases in which medical men are found to actively oppose the objects and aims of the two unions.

II. GATESHEAD.

This report is partly founded on information supplied by Dr. Alfred Cox, Secretary of the North of England Branch of the British Medical Association.

1. A special Association of the medical men practising in Gateshead was formed for the purpose of dealing with all questions connected with local contract practice.

2. As the Association which took the matter up was entirely new, there were no complications with regard to the inclusion of medical men not belonging to it.

3. The birth of the Association was due to a casual suggestion made at the end of a meeting of medical men called for another purpose, "Why not form an Association for talking over the various business matters that crop up from time to time?" The idea seemed good to all present, and the machinery of the Association was "roughed out" on the spot, a secretary being appointed and charged with the duty of looking up and recruiting all medical men who did not happen to be present at the meeting.

4. The Secretary, appointed as above, called on or wrote to every medical man, pointed out the advantages of the Association, and invited them to become members of it. A few men refused when first invited, but were subsequently converted by their own particular friends.

5. Within two months of the birth of the Association every medical man in the town had joined, and the only man who does not now belong to it is one who has never been invited to join it—that is, one imported by the miners in opposition to the Association.

6. At the time the Association was formed practically every practitioner in the town was engaged more or less in contract practice, and about half of them also had "private clubs" of their own. Most practitioners did work for one or more Friendly Societies, and one or two medical men held a great many. At most of them the fees paid were 3s. per annum, while there were one or two at 2s. 6d. and a few at 3s. 6d. There was also a female "lodge" at 3s., and three or four juvenile clubs at 2s. per annum. There were no "medical aid" clubs. The private clubs were very numerous. The rate paid was 6d. a fortnight a family. There was no wage limit, and as the money was collected by collectors, who were paid by commission, the canvassing for new members gave rise to a great deal of ill-feeling.

7. The views agreed upon by the Association were brought to the notice of the Friendly Societies by the Secretary, who wrote asking each of them to send a representative to meet representatives of the Association.

8. The proposals made by the Association were (1) that the minimum rate should be 4s. a member per annum; (2) that there should be security of tenure, that is, a guarantee that the services of no medical officer should be dispensed with without proper notice, as had several times been the case.

9. The representatives of the Friendly Societies agreed as to security of tenure, and notice of six months on either side was arranged. As for the 4s. rate, they were hostile, and subsequently wrote formally that they could not afford to pay it. The Association met to consider their answer, and while many were in favour of strict adherence to the original proposals, and "a strike" if again refused, the weak-kneed ones prevailed. The final result therefore was the following compromise: The Association agreed that their members should continue to fulfil their existing contracts, but should refuse to accept any new members or clubs at less than 4s. a head, female lodges not being accepted at any price, and "juvenile clubs" at no less rate than that for adults. There were a few cases in which members had agreed with Friendly Societies to take wives and children at "family club" rates. It was agreed that all these agreements should cease, since the chief legitimate reason for taking Friendly Society appointments at all, was that it served as an introduction to private practice among the families of members.

10. The position now—four years after the Association was formed—is as follows: The members have adhered to their promises, and there have been only one or two instances in which remarks have had to be made to members who appeared inclined to regard the letter rather than the spirit of their agreement. At least 40 per cent. of the lodges now pay the 4s. rate, which was at first refused. This has come about partly through lodges changing their doctors, partly by new lodges being formed, partly by some members of the Association obtaining the increase by direct request. The Friendly Societies, in fact, are beginning to see that the 4s. rate is not exorbitant. When the medical officer has been changed or a new lodge formed, many attempts have been made to get some of the younger men to accept less than 4s., but they have never been successful. As regards private clubs the fee has been raised to 9d. a fortnight, and they are much less numerous than they were. Canvassing has much diminished, partly owing to the action of the General Medical Council, and partly to a growing feeling that the system is not respectable.

11. Some of the younger men in the town from time to time suggest that the Association should insist on the rate being at once raised to 4s. all round, but the process of permeation going on seems likely to bring about the rise by itself. These younger men have a valid reason for impatience, inasmuch as the interests of the older men are to some extent unduly protected by the compromise arrived at; members of lodges which pay 3s. being less ready than formerly to change their medical man, since change means a 4s. rate.

CONTRACT MEDICAL PRACTICE.

SHEERNESS.

WE are informed that a medical man, who not long ago went to Sheerness to take the place of the former medical officer of the Sheerness Medical Benefit Society, has died quite recently, and that an endeavour may not improbably be made to import or otherwise obtain some one to succeed him. The former medical officer had looked after the club for six years, and only left it because, after long and patient effort, he found it impossible to convince its managers that the terms upon which he was engaged ought in justice and all reason to be altered. He was paid only a halfpenny a week a head, and out of this sum was expected to pay for a dispenser and a boy, and the rates, taxes, and rent of a surgery, not at his own house, but in another part of the town, as well as for medicines, splints, and all other medical and surgical appliances.

There were long negotiations, and amended terms had nearly been arranged, when unfortunately the club, in spite of a warning which was freely circulated, managed to persuade a medical man to come into the town and accept its work at the old absurd rate. It is this medical man who, we are informed, has recently died, so the club is again without a medical officer.

The state of club practice in Sheerness is most lamentable, for the clubs finding that they have been able to get a medical man on practically any terms they please, treat the profession with very scant respect. We had very full accounts of the condition of things in this place not long ago, and it was decidedly not pleasant reading. The present occasion offers an opportunity of effecting an improvement, and it is to be hoped that no medical man not in Sheerness will pay any attention to any inducements that may be offered him to fill the vacant post. In this case the medical profession in Sheerness will have the fair opportunity, which should be secured for it by the *esprit de corps* of medical men elsewhere, of upholding the position of the profession in general, and securing proper terms for the old medical officer if he is prepared to reopen negotiations, or, failing him, make some equitable arrangement. If it will only unite and put aside any small differences between its members which the conditions of club practice may have forced upon it in the past, it is bound to succeed. It is a duty which it owes to itself, for, apart from other questions, it is not to be forgotten that improvement in the conditions of engagement of the medical officer of a club are commonly followed by amelioration in those of others.

BIRMINGHAM AND DISTRICT.

A statistical inquiry into club practice of much general interest was carried on throughout the year 1902 on behalf of the Birmingham and District General Medical Practitioners' Union, and the report embodying the results has recently been adopted by the Executive Committee of that body. The object of the inquiry was to ascertain how far the financial benefits of club practice compare favourably or unfavourably with those of private practice among patients of the same nominal class—that is, the working class. For this purpose it was necessary to find out, first, what was the average fee charged in Birmingham to private patients of this class, and, secondly, what was the average number of visits paid by club medical men to their official patients and how much they received for this work, and then to compare the two.

It was found that the fee charged to patients of the working class in Birmingham was 2s. 6d. for a visit at the patient's house, and 1s. 6d. for a surgery-consultation or "repeat medicine," and that medicine, if necessary, was included both in the visiting fee and the surgery-consultation fee. To ascertain the second point was more difficult, since practitioners do not as a rule keep any record of work done for clubs. The members of the Union, however, were asked to do so for the space of a year, and eleven kept records with sufficient accuracy and detail to make them available for statistical purposes. It would have been more satisfactory, perhaps, if a greater number had sent in detailed returns, but as the eleven who did so dealt between them with 34 clubs, the resulting figures are sufficiently large for deductions to be drawn from them with some confidence.

These gentlemen paid between them 3,063 visits at the houses of club patients, and, including repeat medicines, held 13,042 consultations at their surgeries. In return for this work they received from the clubs an aggregate payment of £786 19s. 7d., which is only 57 per cent. of what they would have received had these club patients been private patients of the lowest class. Under the latter circumstance the sum received would have been £1,361 0s. 6d. The above calculation has reference to all the club work done by these gentlemen throughout the year, and include a limited number of clubs of which women and children as well as male adults are members. Even, however, if the latter clubs are excluded and only those considered which are open to ordinary male adults, the figures remain almost equally bad. That is to say, the sum actually received in respect of work done for such clubs was only 65 per cent. of what it would have been had the patients not belonged to clubs.

The observers, therefore, conclude that the club payments are very much too low, and that the smallest sum for which a man of the working classes in Birmingham ought to be able to assure himself medical attendance during sickness is 6s. per annum, instead of 3s. 4d., which is the average rate paid by all clubs in Birmingham. The city, it is to be noted, is well provided with hospitals, and but for this circumstance the number of visits would certainly have been far greater, and the comparison still more unfavourable. It is further pointed out in the report that the year 1902, as judged from the mortality returns, was probably a healthier year than usual, inasmuch as the death-rate was only 18 per mille, against an average of 20.2 during the previous ten years.

This report is of great utility, reducing as it does mere surmises to definite and irrefutable figures, and those who are responsible for it and who contributed towards it are to be congratulated on their public spirit and energy. Similar inquiry in other places where the conditions of club practice are not satisfactory would greatly strengthen the hands of those who are desirous of improving them.

A copy of the forms used could, it is believed, probably be obtained from the Honorary Secretaries of the Union, who are Dr. E. D. Kirby, Edgbaston; Dr. James Neal, Birmingham; and Dr. E. W. Parsey, King's Norton.

THE ELECTROTHERAPEUTIC TREATMENT OF CANCER.

A TOUR IN SEARCH OF FACTS.

[FROM A CORRESPONDENT.]

ELECTROTHERAPEUTICS are not much in favour with general practitioners, and the descriptions of its application to new growths given of late by sensational newspapers and undisguised quacks have been absolutely nauseating. Nevertheless, as there is always an attraction about the unknown, many men with cancer cases on their hands have been led to wonder whether there might not be "something in it after all"; but it has not been easy to find out, for those best qualified to speak have hitherto been somewhat silent. By way, therefore, of trying to find out for himself how things stand, the writer has recently made a tour of the electrical departments of a good many hospitals, with results that seem worth recording. He has failed to form any definite view, but the general impression left upon his mind may be summed up briefly as follows: An immense amount of quiet solid work has been, and is being, done in many of the hospitals in London and elsewhere, but what effect it will or rather ought to have upon older methods of dealing with cases of malignant disease, it is impossible for any one to say. Though the personal experience of some operators is very considerable, the results they have obtained by treatment have varied so much that they themselves apparently feel a difficulty in deducing from them any general rule. One man is depressed by a recent series of failures, another elated by a day of apparent success, and the inquirer who goes from one hospital to another necessarily recognizes this and feels it impossible to form a general view which shall be a safeguard to his own conduct. What however he feels equally, is that between one man's work and another's, such a mass of evidence and experience has now been accumulated that, if it were collated and examined as a whole, an assessment of the value of all existing forms of electrical treatments of new growths might be made at once, which would be free from all personal equations and practically decisive. If this examination were undertaken the result would certainly be valuable, but not until then can the ordinary medical man cease to feel in any difficulty when consulted as to the value of electricity, or when he has to decide for himself on the treatment of a case in which ordinary surgical methods seem for some reason or other to be contraindicated. Besides the foregoing general impressions a few details as to the electrical outfits at some of the hospitals may be interesting.

Middlesex Hospital.

At the Middlesex Hospital the electrical department is housed in a compact building of the temporary hospital variety which has recently been put up in the forecourt of the main block. Its electrical supply comes from the main, a pressure of 200 volts being connected with a switch board, and thereon divided up as required. Ward work, however, is done with storage batteries on trolleys, as there is some difficulty in laying on a supply from the main. Two *x* ray tubes are in use, and are of Cox's last model, with 12-in. coils and mercury interruptors. There are also two varieties of high-frequency apparatus; in the one the current from the main passes first through a galvanometer, thence to a motor, and after through a transformer, a Ruhmkorff coil, and on to two brass rods. One of the latter is movable, and the strength of the current to be diverted into the water-filled test tube by which it is applied to the patient can be regulated by diminishing or increasing the spark gap. The other machine is one made by Cox. The current passes first through Leyden jars and a spark gap, and can then be made to pass through both a solenoid and a resonator, or either. Experiments are also being made with some bromide of radium discs and a Hewitt mercury vapour lamp. The latter gives a curious violet light, supposed to be free from all red; but as the container is ordinary glass it is not very obvious how it can have any therapeutic effect. For other classes of work there are also two modifications of the Finsen lamp and a Leslie Miller iron electrode lamp. The whole department is in charge of Mr. Lyster, who has one qualified assistant and two nurses to help him.

St. Bartholomew's Hospital.

At St. Bartholomew's the electrical department is of very long standing. It is housed in a separate building of considerable size, and, as most of its machinery is encased, it is less imposing to the outsider than some of the more recently-installed departments. It has an unusually large supply of electricity at its command—namely, a pressure of 100 volts from the City main, which is an alternating current; a similar pressure laid on from the constant-current main of the Charing Cross and District Company; two static machines, and a large battery of sixty Leclanché cells. Most of the work is done with an *x*-ray tube, Leslie Miller lamps, the static machines, and baths. Of the latter there is a great variety, among others Schnee's "extremity baths," which can be worked either with continuous, interrupted, or sinusoidal current. There is also a rather cunning adaptation of an ordinary metronome to the uses of medicine. By lengthening the upper arm its dip is made to regulate the current from the alternating main, and hence secure a rhythm which allows muscle stimulation to continue uninterruptedly. The arrangements for dividing up currents as required are also very complete. The department is under Dr. Lewis Jones, assisted by Dr. Walsham and a sufficiency of attendants.

King's College Hospital.

At King's, the department has not nearly as much space at its command as it deserves. Its electrical supply of 100 volts comes from the Charing Cross alternating main, connected with a rheostat. An *x* ray, a modification of the Finsen lamp, and a high-frequency apparatus are in use. The *x* ray tubes are fitted with heavy anode regulating tubes by which the vacuum can be increased or diminished as desired, and the apparatus also has a number of lamps for varying resistance. The high-frequency apparatus, when more space can be obtained, is to be used with an electrolytic interruptor, which appears to have the advantage of great rapidity. The other interruptors in use both depend on mercury, one being a "jet" apparatus, and the other a dipper of the Mackenzie Davidson model. A great deal of trachoma work is being done here with *x* rays as originally suggested by Mayou, and to facilitate it and save the operator's fingers, Mr. Reid, who is in charge of the department, has contrived a rather ingenious eyelid retractor.

London Hospital.

At the London Hospital the department has a very imposing set of rooms on the second floor of the new out-patient building, separate sets of rooms being provided for Finsen light, *x*-ray, radiograph, and ordinary electrotherapeutic work. Electricity is manufactured on the premises by a dynamo, and stored in accumulators, each of which is equal to 12 to 14 volts. Three *x*-ray tubes are in use for therapeutic purposes, and are worked with motor dip interruptors. The high-frequency machine used is Dean's modification of d'Arsonval's apparatus, the solenoid and resonator being in one. The light department is extensive and very elaborate, several varieties of "Finsen" being in use, including, besides the original model, the Finsen-Reyn and Dr. Sequeira's own modification of the Lortet-Genoud lamp. The fitting of the electro-therapeutic section is not yet complete.

The foregoing are good examples of electrical departments, but they by no means constitute a complete list; for the work and its possibilities are being studied at most leading hospitals, as well as at some which in other ways are not very prominent. As has been stated, a report founded on an examination of all the results obtained up to the present by the various workers would probably make it possible to decide definitively the real use of, and indications for, any of the existing forms of electrical treatment of new growths. It is to be presumed that the Cancer Research Fund or some other body will shortly take this in hand. If a prophecy as to the result is permissible, the verdict will probably be that no existing form of electrical treatment has anything more than a very limited field of legitimate application, and that the effects are palliative and analgesic rather than truly curative in respect of all cancerous growths other than rodent ulcer. In any case, whatever value may be ascribed to *x* rays, the vaunted high-frequency current seems likely, in connexion with new growths, to be relegated to the lowest position of all. If this proves to be the verdict it will certainly be disappointing to the public, which has been wrongfully led to expect so much. It will not, however, make further research in this direction useless, for if there is any quality in an *x* ray which can be relied on to influence new growths favourably in any way, the obvious next step is to make out what that quality precisely is, and try to obtain it in such form as may make it more effective. But this is a task rather for the physicists than for the physicians. Meantime, for the practitioner and in ordinary cases of cancer, early diagnosis and early recourse to the surgeon remain as important as ever.

VACCINATION IN FRANCE.

Vaccination is now compulsory in France during the first year of life and revaccination during the 11th and 21st years. It was made compulsory by Section 6 of a law entitled Loi Relative à la Protection de la Santé Publique, bearing date February 15th, 1902. The clause may be thus translated:

> Antivariolous vaccination in the course of the first year of life is compulsory, as is also revaccination in the course of the 11th and the 21st years.
>
> Parents or guardians are held personally responsible for the execution of this provision.
>
> An order of the public administration issued after consultation with the Académie de Médecine and the Comité Consultatif d'Hygiène Publique of France shall prescribe the measures necessary for the application of this section.

In a previous number of the British Medical Journal (February 21st, 1903, page 463) mention was made of the report of the Vaccination Committee to the Académie de Médecine and the measures for the supply of calf lymph were given in extenso. As the question of vaccination must shortly be fully discussed in England, it will be interesting to consider the second part of the report of the Vaccination Commission dealing with the proposed "measures concerning vaccination."

Article 5.—In each commune one or several *séances* of free vaccination shall be held annually. These shall be announced by posters, recalling the legal obligation and the penalties involved. During the fifteen days which follow this public announcement, parents are bound to declare at the town hall their children of age to be vaccinated or revaccinated. In addition to the annual *séances*, physicians and parents are recommended to seize every opportunity to vaccinate or to be vaccinated and revaccinated.

Article 6.—The vaccinating officer shall be nominated by the public authority and shall have an official character. Every one, however, is free to be vaccinated by the physician of his choice on condition that he shall produce, when called on to do so, a medical certificate indicating the result of the operation.

Article 7.—Vaccinations shall not take place in any localities in which an infectious disease, other than small-pox, is epidemic or threatens to become epidemic. Persons living in a house in which at the time of the public vaccination there is a case of small-pox or contagious disease, shall not go to the public *séance*, but shall be vaccinated separately.

Article 8.—Lists of persons for whom vaccination or revaccination is compulsory shall be drawn up by the municipalities as stated lower down.

Article 9.—On these lists the vaccinating officers indicate, with regard to each name, the date of the vaccination and its results whether the person shall have been vaccinated at one of the *séances* specified in Article 5, or whether he produces a certificate given by the physician or midwife who shall have performed this operation.

Article 10.—If the vaccination officer or the family physician is of opinion that, owing to his state of health, the person cannot be vaccinated at the time of the *séance* of vaccination, he delivers a certificate stating such impossibility. This certificate is produced at the *séance*, and mention of the fact is noted on the list opposite the person's name. In such a case the vaccination shall be performed at a later date as soon as it is judged possible.

Article 11.—Whenever, in a circumscription, the vaccinations performed by the physicians give a too large number of unsuccessful operations, these are grounds for inquiry as to the causes of such an unfavourable situation.

Article 12.—Whenever a person under obligation to be vaccinated shall have been twice dispensed on the score of medical certificate, the third dispensation can only be granted by the official vaccination officer.

Article 13.—At each vaccination *séance* the vaccination officer fixes the place, the day, and the date to again see the persons he has vaccinated. After verification of each vaccination, the officer shall deliver personal certificates according to the prescribed forms. In case of unsuccessful vaccination, the operation must be repeated a second, and if necessary a third, time, as soon as possible, and at the latest at the next *séance* of vaccination.

Article 14.—The list of persons for whom vaccination or revaccination is compulsory is drawn up in the following manner:

1. For the first vaccination the list comprises:

(*a*) All infants aged more than 3 months and under 1 year on the day of the *séance* of vaccination, born in the commune and extracted from the register of the *état civil*.

(*b*) Infants of the same age limits born in another locality and residing within the commune.

(*c*) Older infants who could not be vaccinated at an earlier date for any reason whatever.

(*d*) Those who, previously vaccinated, must undergo a new vaccination, the first having proved unsuccessful.

2. For the first revaccination the list comprises, from information furnished by the directors of public and private teaching institutions, all the children on the school books who have reached their 11th year at the time of the *séance* of vaccination, and those who, whatever their age, shall not have been vaccinated or undergone their first revaccination. Those children who receive instruction at home must be notified in the same manner and placed on the list.

3. For the second revaccination, the list comprises all persons who have reached their 20th year and reside in the commune. The persons concerned must show a certificate of revaccination during the first month of their 22nd year.

Article 15.—The administration convokes individually the children inscribed on the list of vaccinations. The convocation papers state: (1) The date, the place, and the hour when they must be presented to the physician; (2) the obligation of bringing the children a second time on the day fixed by the physician for verification of the results obtained; (3) the obligation to produce medical certificates for children who have had small-pox, or who have been already vaccinated, or are seriously ill; (4) the penalties incurred by parents or tutors for contravention of the law; (5) lastly, printed instructions as to the manner of treating the children to prevent accidents during the development of the vaccine eruption.

Article 16.—Vaccinations shall be performed in buildings which are clean, sufficiently large, well lighted and aired, properly warmed, and frequented usually by healthy persons (schools, town halls). When possible there should be a subdivision into a waiting room and an operation room. Special care must be taken that they shall never be crowded.

Article 17.—The children must be brought to the *séance*, and kept after the operation in a condition of scrupulous cleanliness. The region inoculated especially must be kept from all unclean touch, more particularly by persons affected with ulcers, skin eruptions, erysipelas, etc. Every affection, however slight, coming on after vaccination should call for medical advice.

Article 18.—The children to be vaccinated must be examined with care before the operation. If necessary the parents shall be questioned as to their usual state of health. The vaccination and revaccination of children afflicted with chronic disease susceptible of prejudicial effects on their nutrition and the constitution of the humours, shall be adjourned to a later date, unless exceptional circumstances which the vaccination officer can appreciate shall justify him in taking no notice of such. During a small-pox epidemic there is no valid exception to the rule.

Article 19.—The vaccination officer is free to use any method of inoculation he may prefer. But, whatever method he adopts, the inoculation must be considered a surgical operation, and carried out according to rule to prevent traumatic infection.

Article 20.—Vaccinated persons shall be examined at the soonest on the seventh day after the operation. On the day fixed at the time of the vaccination *séance* the inoculated children must be brought for inspection by the vaccination officer. If a child can not be brought to the place appointed for the purpose, either on account of illness, or because it lives in a house in which there is infectious disease, then the parents or their representative must inform the vaccination officer of the circumstance, at the latest on the day fixed for such inspection.

Article 21.—The parents and tutors of children subject to the original vaccination and the first revaccination, and all other persons after their twenty-second year for the second revaccination, must, under the penalties fixed by the law, prove at every demand of the public authorities that they have fulfilled the obligations of the Act.

Article 22.—At the conclusion of the *séances* of vaccination, a copy of the lists shall be sent to the prefect or under-prefect in each arrondissement, who sends the names of the defaulters to the judicial authority. At the end of each year statistics of the operations performed in each department are forwarded to the Minister.

Article 23.—A foreigner at the time he makes to the parish authority the declaration prescribed either by the decree of October 2nd, 1888 or by the law of August 8th, 1893, must produce proof that he has been vaccinated (if he is a major, that he has been vaccinated at the latest during his 21st year). A foreigner living in France who has already made his declaration is subject, for himself and his children, to the prescription of the present regulation.

Article 24.—The Académie expresses its desire that during the course of their studies students shall be obliged to become familiar with the vaccine service by frequenting vaccinating centres and by repeatedly assisting at *séances* of public vaccination.

Such is the basis of the regulation as proposed by the Vaccination Commission. M. Kelsch, the reporter, suggests that a mixed Commission, composed of doctors and administrators, should unite to co-ordinate these and make a code compatible with the actual organization of the public services and with the customs and national temperament. Vaccination does not meet with serious opposition in France. The question is treated with indifference rather than opposition. Abstention is doubtless partly due to the carelessness of the parents, but also largely to the present want of uniformity in the organization of the service. It is not sufficient to decree the obligation of the protective measure; it must be brought within the reach of all and it must be gratuitous. The people must be convinced and not forced.

THE EPIDEMIC OF SMALL-POX.

THE reports to hand this week are not very numerous, and upon the whole those received encourage the belief that there is at length some improvement. At the same time, however, there is an extension of the disease in some of the new centres and outcries from some places which have been too eager to proclaim themselves out of the wood.

In County Durham things are not going very favourably at Bishop Auckland, but there are no reports from any other part of this county.

Northumberland also sends no news, nor yet Cumberland and Westmorland.

In Lancashire things appear to be decidedly improved at Liverpool. At St. Helens, however, one of the places that proclaimed itself free, there has been a fresh case. Others also are reported at Heywood, while at Altcar a good many cases have occurred in the military camp. Great activity has been shown in dealing with the outbreak, and it is said that 1,500 soldiers were vaccinated in a fortnight.

From Yorkshire the news is not so good. The outbreak continues at Leeds, while Rotherham, another place reported free, has again had cases. There appear also to be fresh centres in the county. Bradford has

had more cases, while at Pontefract, Cleckheaton, Ravensthorpe, and Brighouse, things do not look very promising. York itself has also had a case or two to record.

In Northamptonshire, Peterborough figures for the first time in the returns, but there are no reports from elsewhere.

In Shropshire, a good deal of uneasiness is felt at Wellington, where five cases occurred in rapid succession.

In Derbyshire an outbreak has occurred at Chapel Milton, close to the Isolation Hospital, while Alfreton and Derby itself have again reported cases.

In Nottinghamshire, Nottingham itself is not yet free, while Kirby-in-Ashfield reports some more removals. At Newstead several cases have now been certified as small-pox which were supposed to be simple varicella until considerable fever set in.

In Warwickshire the only reports come from Birmingham, which still has 39 cases under treatment.

In Leicestershire a fresh batch of cases have been notified at Loughborough and others at Pleckney. Leicester itself gets its two or three cases every two or three days with considerable regularity.

In Worcestershire there appears to be nothing fresh.

On the other side of England, Lincolnshire has reported nothing for a long time, while Rutland has still to enter the lists. Norfolk and Suffolk also appear to be free.

Nearer London things are very quiet, but 3 cases have occurred at Southend.

In Colchester cases still continue to be notified in the town, and since May 1st 14 cases have been notified. Four of the later cases took place in the workhouse infirmary, and it is somewhat noteworthy that all 4 patients were over 65 years of age; 3 of the patients have died. A well-equipped small-pox hospital is available, to which all cases are promptly removed, while additional accommodation can be at once provided if required by means of tents. Except for a separate importation from London which was responsible for 2 of the cases, all the cases have been notified from one part of the town.

In London itself cases here and there are reported pretty constantly, but the total number is very small. In Poplar, Dr. Alexander, the Medical Officer of Health, has had to deal, and is still dealing, with what appears to be rather a dangerous outbreak centreing more or less round a laundry. Its origin has been investigated with much care, and is ascribed to a work girl who remained away from work for some days towards the end of April, and then returned to the laundry with spots on her face about May 12th. Some three weeks previously she had been in contact at a "club" with a man in an infectious condition, who escaped from the London Hospital and was "recaptured" in a doctor's surgery. If these facts are correct, 19 cases can be traced to this one cause. Before this outbreak Dr. Alexander had dealt successfully with a small outbreak of 9 cases, 5 of which were from one of the Borough shelters.

In Wales a good many cases continue to occur at Cardiff and in the Pontcanna district five or six cases have been discovered, where the patients had gone through their illness in apparent ignorance of what their malady was. From other parts of the Principality there are no fresh reports.

In Scotland things are still quiet, but 6 cases occurred in Dundee in the last fortnight of May, 1 in the Burgh of Glasgow, and 1 in that of Coupar Angus.

CORONERS' SOCIETY OF ENGLAND AND WALES.

ANNUAL MEETING.

THE annual meeting was held at the Holborn Restaurant on May 28th. The retiring President, Mr. H. J. Robinson, Coroner for Blackburn and Burnley, took the chair, and Mr. Henry White, Coroner for Hants and Winchester, was unanimously elected President, and took the chair. After thanking the members for electing him as their President, Mr. WHITE proposed a vote of thanks to the retiring President, and referred to the interest he had shown in the affairs of the Society and the diligent manner in which he had discharged the duties of President during the past two years. Mr. G. F. ROUMIEU, J.P. (Coroner for Surrey) seconded, and the motion was carried unanimously.

Mr. ROBINSON briefly responded.

Mr. S. T. Butcher (Lancashire) was re-elected Vice-President, and Mr. G. Perceval Wyatt (South London and Surrey) was chosen to succeed Mr. White as Vice-President.

The PRESIDENT said that all the members knew something of the work Mr. Schroeder had done as Honorary Secretary, but only the members of the Council could realize the amount of work that devolved upon him. The duties of the office were apparently increasing, and it was to all of them a source of extreme gratification when, after considerable pressure, Mr. Schroeder was induced to undertake the office. Having regard to the time and work he gave, and to the courteous and happy manner in which he met them on all occasions, he was sure they would be only too pleased to re-elect him as the Honorary Secretary of their Society.

In seconding the motion, which was adopted unanimously, Mr. S. T. BUTCHER cordially endorsed all that had been said.

Mr. WALTER SCHROEDER, in reply, expressed his sense of the honour done to him in electing him to a post the importance of which members of the Council knew, owing to the variety of subjects that came under his attention almost daily. Although the work entailed a great expenditure of time, yet so long as he was assured of the support of the Council he felt pleasure in discharging the duties. In preparing the annual report he had given an epitome of the correspondence of general interest. In the appendix to the report would be found illustrations showing specimens of certain coins discovered at Colchester found at the inquest to be treasure trove, and a copy of a sketch showing an inquest presided over by Mr. Thomas Wakley, by whose side stood Charles Dickens. The drawing recalled the work of George Cruikshank, who, as he knew, used to attend inquests held by Drs. Lankester and Hardwicke.

Mr. Perceval Wyatt was elected Honorary Treasurer, and he consented to hold the office along with that of Vice-President. Mr. Sampson (Coroner for Liverpool) and Mr. Gibson (Coroner for Manchester) were unanimously elected to fill the vacancies on the Council created by the deaths of Mr. Smelt (Manchester) and Mr. Carlton (London).

Mr. WALTER SCHROEDER moved the following addendum to Rule 1 of the Society:

> And that coroners and deputy coroners outside England and Wales be admissible as extraordinary or corresponding members.

The need for this addition to their rules was, he said, to enable coroners in other parts of the empire and elsewhere to join the Society as corresponding members. During the past year a coroner from India and two from America had called upon him in reference to coroners' matters.

The motion was carried unanimously.

The meeting then proceeded to consider *seriatim* the paragraphs dealing with the various subjects in the Council's report, and after discussion the report, with the exception of one matter, was adopted on the motion of the PRESIDENT, seconded by Mr. HENRY ROBINSON.

On the motion of Dr. AMBROSE, seconded by Mr. J. H. BELL, and spoken to by Dr. DANFORD THOMAS, it was agreed:

> That this annual meeting of the Coroners' Society desires to call attention to the present unsatisfactory state of the law dealing with the provision of places for the holding of inquests and the performing of *post-mortem* examinations, and requests the Council to approach the Home Secretary on the matter.

The meeting closed with cordial votes of thanks to the officers of the Society.

ANNUAL DINNER.

The annual dinner took place in the evening under the chairmanship of the President.

After the usual loyal toasts had been duly honoured, M BUTCHER of Bury, proposed "The Houses of Parliament.'

Lord MONKSWELL, Chairman of the London County Council, responded for the House of Lords in a witty and amusing speech, and Mr. LUKE WHITE, M.P., Coroner for the East Riding, replied for the House of Commons.

Mr. MCMORRAN, K.C., M.P., in proposing the toast of "The Coroners' Society," spoke of the value of the public work done by it, referring especially to the improvement in legislation with regard to factories and workshops, infant life protection, and midwives. The toast was acknowledged by the PRESIDENT, and that of "The Guests" by Sir ALBERT DE RUTZEN.

The PRESIDENT then gave "The Officers of the Society," and in doing so thanked Mr. Wyatt for undertaking the duties of Honorary Treasurer in addition to those of Vice-President, and congratulated him upon the excellent state of the Society's finances. He paid a generous tribute to the work of Mr. Walter Schroeder, who had come to the aid of the Council when it was suddenly deprived of its late Honorary Secretary.

Mr. SCHROEDER, in acknowledging the toast, said he had accepted the office with some apprehension, but had found that the difficulties he had anticipated did not arise. It would always be his earnest desire to maintain the ancient status and dignity, and rights and privileges of the coroner's office. He confessed that he might sometimes be accused of appearing ready to favour new ideas; but if he did so it was because he recognized that changes were for the benefit of the public and coroners, and were desirable and necessary to meet the changed conditions of the times.

THE dinner of the Durham University Medical Graduates Association will take place at the Café Royal, Regent Street, London, on June 25th. The chair will be taken by Dr. Frederick Spicer (President).

ASSOCIATION NOTICES.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 8th day of July next, at 2 o'clock in the afternoon.

May, 1903. GUY ELLISTON, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

BATH AND BRISTOL BRANCH.—Names of candidates for election as Representative Member of the Branch on the Central Council of the Association (each candidate must be nominated by three electors) must be sent to the Secretary, Dr. J. MICHELL CLARKE, 28, Pembroke Road, Clifton, Bristol, on or before June 12th.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.—Notices: (1) Nominations for the offices of President-elect, Treasurer, two Honorary Secretaries, and two Representatives of the Branch in the Council of the Association, may be made by any three members of the Branch, in writing, to Mr. J. T. J. Morrison, 3, Great Charles Street, Birmingham, on or before June 6th. (2) A special meeting of the Branch will be held in the Medical Institute, Birmingham, on Thursday, June 11th, at 4.30 p.m. Business: Adoption of Rules for the Branch. (Members are requested to bring the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of March 7th, 1903, containing Draft Model Rules.) (3) The forty-ninth annual meeting of the Branch will be held in the Medical Institute, Birmingham, on Friday, June 26th, at 4 p.m. The retiring President, Dr. Henry Malet, will introduce his successor, Mr. Jordan Lloyd, who will deliver an address. The business to be transacted will be duly notified to each member by circular. (4) The annual dinner will be held on the same date as the annual meeting, June 26th, at 7 p.m., in the Grand Hotel, Birmingham. Tickets 5s. each. Members may introduce guests.—J. T. J. MORRISON, F.R.C.S., T. S. SHORT, M.D., Honorary Secretaries.

BORDER COUNTIES BRANCH.—The annual general meeting of this Branch will be held in Carlisle on Friday, June 26th. Gentlemen wishing to read papers or to show cases or specimens are requested to communicate as early as possible with the Secretary, FRANCIS R. HILL, 12, Bolton Place, Carlisle.

BORDER COUNTIES AND NORTH LANCASHIRE AND SOUTH WESTMORLAND BRANCHES.—Election of joint representative: The nomination of candidates for the office of joint representative of the above Branches upon the Central Council must be made by three electors, and in writing, on or before June 19th next to FRANCIS R. HILL, 12, Bolton Place, Carlisle, Honorary Secretary, Border Counties Branch.

DORSET AND WEST HANTS AND WEST SOMERSET BRANCHES COMBINED.—Notice is hereby given that the names of candidates for election as a member of Council of the Association for these Branches must be sent to either of the undersigned on or before Tuesday, June 16th next. Each candidate must be nominated in writing by three Branch members.—WILLIAM VAWDREY LUSH, Weymouth, W. B. WINCKWORTH, Taunton, Honorary Secretaries.

EAST ANGLIAN BRANCH.—The annual meeting of the East Anglian Branch will be held at the Shire Hall, Chelmsford, on Thursday, June 11th, 1903. President, Mr. W. G. Wyllys, Great Yarmouth; President-Elect, J. C. Thresh, M.D., D.Sc., Chelmsford. Programme of proceedings: 11.30 a.m., meeting of the Council of the Branch in the Shire Hall; 12 o'clock noon, general meeting of the Branch in the Shire Hall. Agenda: (1) Minutes of last meeting. (2) To receive report of Council of Branch. (3) To receive report of result of election of officers. (4) J. C. Creswell, M.R.C.S., L.R.C.P., of Billericay, will show a case of fracture of femur and read notes on a case of strangulated hernia. (5) Herbert H. Brown, M.D., F.R.C.S., Ipswich, will read notes of a case of intussusception of small intestine successfully treated by intestinal drainage and subsequent resection, with specimen. 1 o'clock p.m.: Luncheon at the Shire Hall by invitation of the President-Elect, J. C. Thresh, M.D. 2.15 p.m. Resumed general meeting. (6) Introduction of new President by retiring President; thanks to the retiring President. (7) President's address. (8) J. H. Sequeira, M.D., F.R.C.S., of the London Hospital, will read a paper on the Treatment of Certain Skin Diseases by the *X* Rays and Finsen's Light, with lantern demonstration. (9) H. C. Thompson, M.D., M.R.C.P., of the Middlesex Hospital, will read a paper on Some Principles Underlying the Psychical Treatment of Epilepsy. 4.30 to 5.30, afternoon tea, to which ladies also are invited by Dr. and Mrs. Thresh, at the Shire Hall. Exhibition of surgical instruments by Messrs. Down Bros., and by Messrs. Lemmon and Co. Electro-surgical and medical appliances, drugs, etc., by Messrs. Burroughs, Wellcome and Co.—H. NICHOLSON, H. G. BALLANCE, J. GUTCH, Honorary Secretaries.

EDINBURGH BRANCH.—The annual meeting of the Edinburgh Branch will be held in the hall of the Royal College of Physicians, 9, Queen Street, on Friday, June 19th, at 4.30 p.m., when the draft model rules will be considered, and the office bearers of the Branch elected.—NORMAN WALKER and A. LOGAN TURNER, Secretaries.

EDINBURGH AND FIFE BRANCHES.—The names of candidates for election as members of Council to represent these conjoint Branches must be sent to Dr. Logan Turner, 27, Walker Street, Edinburgh, on or before June 22nd. Each candidate must be nominated in writing by three members of the conjoint Branches, which are entitled to elect two representatives.

GLASGOW AND WEST OF SCOTLAND BRANCH.—This Branch is entitled to two representatives on the Council of the Association. Nominations for the office, signed by three members of the Branch, should reach the Honorary Secretary on or before June 15th.—JAMES H. NICOLL, Senior Honorary Secretary, 4, Woodside Place, Charing Cross, Glasgow.

METROPOLITAN COUNTIES BRANCH.—The fifty-first annual meeting of the Branch will be held at the Hotel Cecil on Tuesday, June 30th, at 6 p.m. The business to be transacted is to appoint officers for the ensuing year, to receive the reports of the Treasurer and of the retiring Council, and to hear an address from the incoming President, Mr. H. W. Kisllmark. At 7 p.m. precisely the members will dine together, the President in the chair. The charge for the dinner will be 8s. 6d. each, exclusive of wine.—H. BETHAM ROBINSON, 1, Upper Wimpole Street, W., GEORGE ROWELL, 6, Cavendish Place, W., Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: KENSINGTON DIVISION.—The annual meeting of this District will be held at the Kensington Town Hall, High Street, Kensington, at 4.30 p.m., on Wednesday, June 10th, with H. Campbell Pope, M.D.Lond., in the chair, for the purpose of (1) confirming the election of officers and representatives; (2) for the purpose of instructing the representative of the Kensington Division with regard to the voting at the forthcoming meeting at Swansea; (3) other business.

METROPOLITAN COUNTIES BRANCH: ST. PANCRAS DIVISION.—The annual meeting of this Division will be held at the North-West London Hospital, Kentish Town Road, N.W., on Tuesday, June 9th, at 4.30 p.m. Dr. Wm. Wynn Westcott, Chairman of the St. Pancras Division, will preside. Agenda: Confirmation of minutes of April 27th. Election of officers for the year 1903-4: Chairman, Vice-Chairman, Secretary, a delegate to the representative meeting of the Association, two representatives on the Branch Council, and seven members of the Executive Committee. To transact any business that may be transacted at an ordinary meeting. Dr. Wm. Wynn Westcott will read a paper on the Overlying of Infants.—R. C. M. POOLEY, M.R.C.P., 35, Highbury Grove, N., Honorary Secretary.

NORTHERN COUNTIES OF SCOTLAND BRANCH.—The annual meeting of this Branch will be held at the Pump Room, Strathpeffer, on Saturday, June 13th, at 11 o'clock. Business: (*a*) To elect office-bearers and representative of the Branch in representative meetings of the Association. (*b*) To consider the business at the annual representative meeting. (*c*) Adopt rules for the Branch. (*d*) Any other competent business. In accordance with By-law 22, I hereby give notice that the names of candidates for election as members of Council to represent this Branch must be sent to me on or before June 13th. Each candidate must be nominated in writing by three members of the Branch. After the business meeting Dr. Fortescue Fox, Strathpeffer, will give a demonstration at the Baths. The members will lunch at the Spa Hotel.—J. MUNRO MOIR, Inverness, Honorary Secretary.

NORTH OF ENGLAND BRANCH.—The annual meeting of this Branch will be held at Alnwick on Friday, June 12th. Trains leave Newcastle at 12 20. Drive round Alnwick Castle Park. Meeting at 4 p.m. Dinner at 5.30, price 6s. 6d. Fuller notice will be sent to every member by circular.—ALFRED COX, Cotsfield House, Gateshead, Honorary Branch Secretary.

NORTH OF ENGLAND BRANCH.—The nomination of candidates for the office of Elective Members of Council (Branch Representatives) for the ensuing year must be made by three electors, and in writing, to the Honorary Secretary of the Branch, Dr. ALFRED COX, Cotfield House, Gateshead, on or before June 6th next.

NORTH LANCASHIRE AND SOUTH WESTMORLAND BRANCH.—The annual meeting will be held at Lancaster on June 24th. Members wishing to show cases or specimens or to bring any business before the meeting are requested to communicate with the Honorary Secretary, A. S. BARLING, High Street, Lancaster.

SOUTH-EASTERN BRANCH.—The annual meeting of this Branch will be held at the Lion Hotel, Guildford, on Thursday, June 25th, at 2 p.m. Mr. A. A. Napper, President-Elect, kindly invites members of the Branch to lunch at the hotel between 1 and 2. Dinner at 6.30 p.m.; charge 7s. The local committee provides wine.—T. JENNER VERRALL, 97, Montpellier Road, Brighton, Honorary Secretary.

SOUTH-EASTERN BRANCH.—In accordance with By-law 22, I give notice that the names of candidates for election as members of Council to represent this Branch must be sent to me on or before Saturday, June 6th. Each candidate must be nominated in writing by three members of the Branch. The Branch is entitled to elect three representatives on the Council.—T. JENNER VERRALL, 97, Montpellier Road, Brighton, Honorary Secretary.

SOUTH-EASTERN BRANCH: ISLE OF THANET DIVISION.—The first meeting of this Division will be held at the Royal Sea-Bathing Infirmary, Margate, on Thursday, June 11th, at 3.30 p.m. Business: Election of chairman for the Division. Election of honorary secretary for the Division. Consideration and adoption of rules for the government of the Division. Election of any other officers required by the rules thus chosen. (If time permits) adoption of ethical rules for the guidance of the Division. It is hoped that every member of the British Medical Association resident in Thanet will make it a point of duty to attend and be prepared to take his share in the work of the Division, so that a new era may be fitly inaugurated.—C. E. HALSTEAD, R. T. BOWDEN, G. B. COURTNEY, President and Vice-Presidents of South Eastern Branch; HUGH RAVEN, late Deputy Secretary of East Kent District.

SOUTH-EASTERN OF IRELAND BRANCH.—The annual meeting of this Branch will be held at Clonmel on Wednesday, June 24th, for the purpose of electing officers and for other business.—RAYMOND W. ORPEN, Begnalstown, Honorary Secretary.

SOUTHERN BRANCH.—The annual general meeting of this Branch will be held at Ventnor on Friday, July 3rd. Particulars as to time, place, etc., will appear in a later issue. Members wishing to read papers are requested to communicate with the Honorary Secretary, Mr. H. J. MANNING, Laverstock House, Salisbury.

SOUTH MIDLAND BRANCH.—The annual meeting will be held at the Council Chamber, Wellingborough, on Thursday, June 18th, under the presidency of Dr. W. E. Audland. The President invites members to lunch at the Central Hall, High Street, at 1 p.m. sharp. Members who intend to be present at lunch must communicate with the President, Dr. W. E. Audland, Oxford Street, Wellingborough, not later than June 14th; Branch Council meet at Council Chamber 12.15 p.m. same day. Dr. Hollis of Wellingborough will show two cases of Congenital Oedema. Members wishing to read papers or show specimens must inform the Secretary not later than June 7th.—E. HARRIES JONES, Northampton, Branch Secretary.

SOUTH MIDLAND BRANCH.—In accordance with By-law 22, notice is hereby given that names of candidates for election as members of Central Council to represent this Branch must be sent to the Honorary Secretary on or before Saturday, June 13th. Each candidate must be nominated by three members of the Branch. This Branch is entitled to one member only.—E. HARRIES JONES, Northampton, Honorary Secretary.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—Nominations of candidates as representatives on the Central Council of the Association must be sent in writing and signed by three members of the Branch, to the secretary of the Branch, D. R. Paterson, M.D., 15, St. Andrew's Crescent, Cardiff, on or before June 14th.—D. R. PATERSON, M.D., Honorary Secretary.

STAFFORDSHIRE BRANCH.—The annual meeting of this Branch will be held at Stafford, on Thursday, June 11th.—G. PETGRAVE JOHNSON, Stoke-on-Trent, Honorary General Secretary.

WEST SOMERSET BRANCH.—The sixtieth annual meeting of this Branch will be held at the London Hotel, Taunton, on Tuesday, June 16th, at 12.30 p.m., under the presidency of Dr. David Brown. Agenda: Minutes of last meeting; report of Council; Treasurer's report; election of President-elect; election of other officers. President's address on Some Medical uses of Chloroform. Lunch will be served at the London Hotel at 1.45 p.m. It is proposed to pay for this out of the funds of the Branch in the case of all members who signify their intention to be present to the President, Dr. D. Brown, Hamdon, Taunton, on or before Saturday, June 13th. In the case of others, and of tickets for guests, a charge of 3s. will be made; in all cases exclusive of wine. After lunch, arrangements have been made to enable members to play tennis (4 courts) and croquet (2 grounds) on the Somerset County Cricket Ground, where they will also be entertained to tea by the President. The Curator of the Museum of the Somersetshire Archaeological and Natural History Society (Mr. H. St. George Gray) will be very pleased personally to conduct any members over the Castle and Museum, which has been recently rearranged, during the afternoon. In the event of the afternoon being wet, an alternative programme will be arranged.—W. B. WINCKWORTH, Taunton, Honorary Secretary.

WORCESTERSHIRE AND HEREFORDSHIRE AND GLOUCESTER BRANCHES.—Election of a Member of Council to represent these Branches on the Central Council of Association. It has been arranged that the Worcestershire and Herefordshire Branch should have the nomination for the first three years, Gloucestershire for the next three years, and so on alternately. Nominations made by three electors must be sent in writing to the undersigned on or before June 10th.—GEO. W. CROWE, M.D., 43, Foregate Street, Worcester, Honorary Secretary.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH: HEREFORDSHIRE DIVISION.—The annual meeting of this Division will be held at the Herefordshire General Hospital, Hereford, on Wednesday, June 24th, at 3.30 p.m. All members of the Association living in the Division, which includes the county of Herefordshire (except the town of Bromyard), New Radnor, and Presteign, are requested to attend this meeting.—HERBERT JONES, Hereford, Honorary Secretary.

YORKSHIRE BRANCH. The annual meeting of this Branch will be held at the Library, the Medical School, Sheffield, on Wednesday, June 24th, at 2 o'clock, at which the officers will be elected. Candidates to represent the Branch on the General Council of the Association must be nominated by three members of the Branch, and such nominations must be sent to the Secretary before Tuesday, June 16th. The Branch is now entitled to [illegible] on the General Council. The annual dinner will take place at the Royal Victoria Hotel. Members intending to read papers [illegible] any communications, propose new members, etc., are requested to communicate at once with the Secretary, ADOLPH BROOKE, 3, Manor Row, Bradford.

SPECIAL CORRESPONDENCE.

LIVERPOOL.

Draft Charter of the University.—Meeting of the Anatomical Society.—Complimentary Dinner to Sir W. Turner and Professor Cunningham.—Soiled Army Blankets.

MUCH satisfaction is felt in Liverpool at the issue by the Clerk of the Privy Council of the draft charter incorporating the University of Liverpool. It is a fundamental condition of the constitution of the University that there shall be no religious tests imposed on either teachers or students, and that no theological teaching shall be given by or under the authority of the University. Colleges and institutions in which theological teaching is given, may, however, be recognized by affiliation or otherwise. Women are to be eligible for any office in the University, and for membership of any of its constituent bodies; and all degrees and courses of study in the University are to be open to women, subject to such conditions and regulations as the statutes of the University may prescribe.

The Anatomical Society will hold its summer meeting this year at University College, Liverpool, on June 19th and 20th. The programme includes meetings for the reading of papers and the exhibition of specimens, and the Society's dinner, which will take place at the Adelphi Hotel on June 19th, at 7.30 p.m. An excursion to Chester and Eaton Hall has been planned for the afternoon of Saturday, June 20th. Professor B. C. A. Windle has kindly undertaken to act as guide for those desirous of seeing the interesting archaeological objects in the city. Dr. A. N. Walker is the local Secretary of the Society. On the evening of Thursday, June 18th, the Manchester Edinburgh University Club will entertain Principal Sir William Turner and Professor D. J. Cunningham at dinner at the Liverpool Adelphi Hotel. The club will welcome any members of the Anatomical Society who can attend. Tickets are 10s. 6d. each, exclusive of wine.

At the meeting of the Health Committee on May 28th, the Chairman communicated a report from the Medical Officer of Health. On its becoming known to the Medical Officer of Health that army blankets had been sold to certain persons within the City of Liverpool, inquiries were immediately made, and in the various premises parcels containing army bell tents or army blankets were found. Others, it was ascertained, had been redistributed from Liverpool to other places in the country. In these cases the sanitary authorities in the districts were duly notified. With regard to those which were found in Liverpool, all of them were removed for disinfection. The worst sample was found at one of the day industrial schools. The blankets, fortunately, had not been in use, but when examined a considerable number of them were found to be in a filthy condition, some being soiled with blood and excrement. These blankets were destroyed. The medical officer has referred to the Town Clerk the question as to whether action cannot be taken under the Public Health Act against the firm which transmitted blankets in this condition, as it appears that in other similar blankets innumerable typhoid bacilli have been found. It is understood that the Town Clerk has under consideration the question of the liability of the firm.

MANCHESTER.

Presentation of Portrait of the late Dr. Little to the Medical School of Owens College.—Final Stages in Transfer of Infirmary Site.

A GRACEFUL little ceremony was enacted in the main and spacious corridor of the Medical School of Owens College in the afternoon of Wednesday, May 27th, when Mr. Walter Whitehead, President of the British Medical Association, unveiled the portrait of the late Dr. David Little, which was presented to the college by his widow, Marian Little. Mr. Whitehead, in a few apt and appropriate sentences, spoke as one of the oldest friends of Dr. Little, and in passing emphasized the fact that although Dr. Little was Lecturer on Ophthalmology for nearly a quarter of a century in Owens College, he was never known to miss a lecture. The portrait would, he felt sure, be a stimulus to students, and would guarantee to all of them an unfailing and abiding remembrance of Dr. Little. Dr. Dixon Mann, in moving a vote of thanks to Mr. Whitehead, in equally sympathetic terms spoke of Dr. Little as a friend and colleague. Dr. Glascott, who succeeded Dr. Little as Lecturer on Ophthalmology in the college in 1899, seconded the vote of thanks, and in doing so spoke as one who had served under and with Dr. Little for a very long period—a period of the greatest harmony and concord. He also expressed in graceful language a high tribute to his predecessor in Owens College.

On May 27th the City Council formally approved of the insertion of a clause in the Corporation Bill to empower the purchase of the infirmary site in Piccadilly, and to give effect to the decision of the infirmary trustees to build a new infirmary on the Stanley Grove site. Thus the later developments in the solution of the infirmary question—or rather, the new development—have been as quick as the earlier stages—they can hardly be called developments—were slow.

The formal assent of Parliament to the necessary Bill is all that now stands between the citizens of Manchester and their possession of the infirmary land in Piccadilly.

ADELAIDE.

The Registration of Dentists.—The Adelaide and South Australia Branch: Necrology.

THE commencement of this year witnessed the inauguration of the Board for the Registration of Dentists, as provided for by an Act passed in the last session of the State Parliament. Hitherto both in town and country we have been well supplied with gentlemen possessing English or American qualifications, and with others, who, whilst destitute of any diploma, were yet in many cases eminently qualified to practise their art, if we may judge by their popularity with the laity. Naturally in a country such as this, which placed no restrictions upon practice, and where all that was considered necessary was a conspicuous advertisement in one of the busy streets and frequent notices in the daily papers, some undesirables crept into the ranks; in one instance the only apprenticeship undergone was, it is said, that of being a groom to a leading licentiate in dental surgery. It is no wonder that in the past we have had such accidents as teeth dropping into the windpipe. This trifling, though fatal, accident occurred twice in the practice of one individual, and seemed to considerably enhance his reputation; at all events he was promptly made a member of the first Dental Board which was appointed by the Ministry, which consists of two medical practitioners, of two qualified dentists, and of two other dentists, who, though not holding diplomas, are eligible to be registered under the new Act. The duties of the Board are twofold—to register dentists, and to make arrangements for the examination of men who in the future may aspire to practice; for registration it is only necessary to satisfy the Board that the candidate has been in bona-fide practice for about a year before the passing of the Act. As might have been expected, a considerable number of chemists, who have combined with their legitimate dispensing and their frequent counter prescribing an occasional pulling out of a tooth, sought to be registered, but the Board made a firm stand. Their action has been tested in the Supreme Court and upheld, not, however, without the usual disagreement between the judges as to the construction of a perfectly (in the eyes of a layman) plain and straightforward Act. Provision is made for recognizing a diploma granted by the University, but it is not yet announced that this institution has taken any steps in this direction.

The Adelaide and South Australia Branch met on February 26th, after the summer recess, and the session opened with a discussion on midwifery experiences, introduced by Dr. C. H. Souter, of Balaklava, who had been to great pains to obtain from his fellow country practitioners details as to their statistics, and as to the routine antiseptic precautions they were in the habit of adopting. The methods were found to vary from the most haphazard arrangements, attended, it was alleged, by excellent results, to a somewhat elaborate technique, culminating in suggestions as to the advisability of shaving the pubes as a routine measure. A sympathetic and attentive audience was somewhat shocked when a town practitioner of experience and of good standing confessed that he never indulged in any greater refinement than that of washing his hands, and that as regards the use of forceps he was guided by only one rule, and that was never to use them if the baby was born before his arrival at the bedside.

Death has recently been busy among members of the Branch. Dr. Brookes, the Surgeon to the Stockade, who practised at Salisbury, was only 34 years of age when he succumbed to diabetes; he was a Melbourne graduate. A much older member of the Branch was Dr. F. W. Home Popham, of Gawler, who was proud of his descent from the famous Admiral who distinguished himself in the West Indies a century and a half ago. Dr. Popham succeeded his father in his practice, and was principally known outside the town as the Principal Medical Officer for many years of the South Australian Military Forces. Amongst the Emeriti, though not a member of the Association, might fairly be reckoned the late Dr. Morgan Thomas, who was house-surgeon to the Adelaide Hospital before almost any of the medical men now in practice were born. He is said to have made a competence and retired some forty years ago, and his existence was scarcely known save to a few. He was 85 at the time of his death, and when his will was read it was found that he had left the residue of his estate, after the payment of a few legacies, to the Public Library, Museum, and Art Gallery of the State. It is announced that these institutions will benefit to the extent of more than £50 000.

CORRESPONDENCE.

HOSPITAL ACCOMMODATION ON MAIL STEAMERS.

SIR,—May I call the attention of your readers to the necessity which seems to me to exist for the provision of suitable hospital accommodation on board the large mail steamers carrying passengers from the tropics to England?

Recently the need for such accommodation was strongly impressed upon the passengers of a mail steamer from Bombay and Australia. This fine ship came from Sydney, picking up Calcutta and China passengers at Colombo, and Bombay, East Africa, and Somaliland passengers at Aden. During most of the voyage the able surgeon of the ship had his hands full, as there were several cases of illness on board and two deaths. Now, both in the interests of the sick passenger and of the others who have to share a cabin with him or her, I plead for separate hospital accommodation on all large liners.

Any one can imagine how unsuitable the ordinary ship cabin is for the treatment of a serious case of illness. On the ship referred to above we had a fatal case of chronic heart disease with dropsy and other attendant complications, and a fatal case of blackwater fever. One may fancy being compelled to treat a case with high fever (106° F.) in a small cabin, and one can easily imagine the feelings of the other passengers after a patient had been douched with plenty of cold water and ice on the floor of that small room. This is fair neither to the sick man nor to those who have to share the cabin.

Again, none of these ships have any arrangements for nursing, and a sick passenger is left to the kindness of his fellow passengers, as in the two fatal cases above referred to where the kindness and attention of several ladies and gentlemen could not be surpassed. Surely on these liners, which must often have to carry home sick passengers from many parts of the empire, it is not too much to ask for a special hospital ward and for some better nursing arrangements than one of the hardworked stewards being told off "in addition to his other duties."

In writing this I only voice the often-expressed feelings of many of the passengers on the voyage above referred to, and I am sure the experience of many other medical men must be the same.—I am, etc.,

W. J. BUCHANAN, M.B., D.P.H.,
Major I.M.S.,
Inspector-General of Prisons, Bengal.

St. Leonards.

THE EVOLUTION OF THE VOLUNTEER MEDICAL SERVICE.

SIR,—I am very glad to see General Evatt in the arena again, and to read his testimony as to the value of the work of Major Maclure and Captain Cantlie; many have been decorated who have not done a tithe of the public work these officers have done.

The great difficulty with the Volunteer Medical Service is the want of discipline and cohesion of the medical officers. Under the present brigade system the Infantry medical officers are fairly welded together, and have good organization; but in the Yeomanry, Artillery, and Engineers there is absolutely none; and in these branches the predominating *esprit de corps* is the unit, and not what it should be—the medical department.

The War Office considers the system of the Guards—that of regimental medical officers—as best adapted for the volunteers; and if their object is to decentralize and keep the Volunteer Medical Service from effectual cohesion, they are right; but if they want a department well organized and fit for duty on an emergency, they are wrong.

Some two years ago I made a canvass of the entire Volunteer Medical Service. I sent out 1,141 circulars. I received 704 replies, and find in the Infantry 62 to 38, and in the other branches 29 to 71 in favour of a department, as against the regimental system.

I am certain no real position will be taken by Volunteer medical officers until, when they are gazetted to their unit, they are at the same time in a departmental list, so that promotion to senior medical officers of brigades be open to all, irrespective of the branch of the service they belong to.

Really a union is wanted which could send a member, who knows the wants of the services, into the House of Commons irrespective of politics, and I know no one better than General Evatt. I cannot say what was the position of the medical departments of metropolitan corps when General Evatt—then Surgeon-Major Evatt—commenced to write in 1881; I think they were behind that of many of the provincial. because, generally, the provincial corps began their annual camps in 1872, and so a need of some medical *personnel* was created. Personally I know, and have a photograph of the medical department of the 1st Volunteer Battalion Herefordshire in 1874; it consisted of myself, another assistant surgeon, a hospital sergeant, and 5 orderlies. The surgeon-major generally came in a cocked hat to the annual inspection lunch. The hospital sergeant had been a hospital orderly during the Crimean war, was celebrated for his Imperial (aperient) pills No. 9, and when he died, in 1892, the bearer company raised a marble tombstone to his memory; the orderlies were selected, and I had to train them in first aid and bandaging; they did duty at the regimental hospital, and when the regiment drilled I or the other assistant surgeon had to attend with material, two orderlies, and a Crimean stretcher, the property of the adjutant, upon which his brother who was killed when just over the brook of Alma, had been carried to the rear.

Our adjutant had seen service in the Crimea, the Indian Mutiny, and China, and like all of his period, though they scouted "rank for the doctor" were practically aware of the fact that sick and wounded were actualities and must be treated. To the disappearance of these old adjutants and of the officers commanding who generally had been in the service, and the substitution of younger adjutants and of purely volunteer officers to the command of regiments, who knew not the certainty of sickness on active service, I chiefly attribute the general apathy, and in fact ignorance of medical detail and organization throughout the volunteer force. So well was our regiment supplied with trained men that I had no difficulty at all in raising a bearer company in 1890 up to its established strength and have since kept it so, with a full complement of regimental stretcher bearers to each regiment, and what our brigade has I know others have done. From his letter, I do not think General Evatt is aware that bearer companies are now companies of the R.A.M.C.V. and are designated with the brigade name over R.A M.C.V.

Now that combatant officers realize the absolute importance of an efficient medical service it is to be hoped that the civilian element at the War Office will not pull the purse-strings. With many volunteer bearer companies desirous of raising their establishment from 63 to 100 if only simply as a *modus vivendi*, and when at least two had recruited up to that number, it seems little short of suicide to refuse permission. Any way, it cannot any longer be said that the Volunteer Medical Service is an unknown factor to the Director-General, for the present Director-General evidently realizes the service has a future, and his personal equation in the next great war would be of the greatest value in drawing a large following from the Volunteer medical officers.

We require (1) better organization; (2) a member in the House of Commons; (3) a Volunteer medical officer at the War Office; (4) a representative on the Royal Commission; (5) a proportionate share of honours; (6) a representative at the Red Cross Society.—I am, etc.,

P. B. GILES,
Bletchley, June 2nd. Brigade-Surgeon-Lieutenant-Colonel.

THE OPERATIVE TREATMENT OF CHRONIC FACIAL PALSY OF PERIPHERAL ORIGIN.

SIR,—I am entirely at one with Mr. Ballance when he states in his reply to my letter in the BRITISH MEDICAL JOURNAL of May 16th that the question under discussion is of great scientific and practical importance, and that a surgeon ought to be able to convey to a patient as accurate a knowledge as possible of the extent of recovery which an operation of the kind offers. It was, indeed, in consideration of this that I thought it worth raising the question at all. I do not of course claim, and never have claimed, for my case a perfect recovery of all facial movements, but only that my patient recovered the power to make independent movements of the orbicularis palpebrarum, giving a practically normal use of the eyelids, independently of any contractions of the sterno-mastoid or of the trapezius, and also that imperfectly co-ordinated movements of other muscles of the right side of the face were recovered.

There is, however, a vast difference of much scientific and practical importance between this degree of recovery, which was both described and illustrated by photographs in my paper, and a condition in which the only movements which can be produced in the face are caused by the patient elevating the shoulder, and I therefore considered it necessary to correct a statement which certainly implied that the latter was the full amount of recovery in my case.

I am glad also to say that this case has undergone improvement since the date on which the account of it was published. On examining the patient to-day I found distinct improvement as compared with the state when examined six months ago, and this is of interest as showing the great length of time (four years) through which the gradual improvement may extend.—I am, etc.,

Glasgow, May 30th. ROBERT KENNEDY.

THE PATHOLOGY OF CANCER.

SIR,—The natural process of repair of tissue by cell proliferation, whether of a slight abrasion or deep wound, or the constant renewal of tissue in health, must be due to an inherent vitality, either of the organism as a whole or the cells individually; during the healing of a wound the natural tendency to growth must increase in activity in that particular area to a considerable extent; but the wound being healed, the lost tissue replaced, why does this excessive activity cease? Unless there is some definite controlling power of cell activity every slight abrasion ought to become cancerous.

The usual results would be explained on the theory that there is a definite inhibitory or controlling action of cell growth: that it is temporarily removed over any given area for the purposes of repair, just as the blood supply is locally varied by central influence; and that normally the inhibitory force comes again into action when the need for excessive activity has ceased. Any conditions which would so increase the nutrition of a cell prior to, or during such a period of special activity, or, for instance, excess of common salt, might conceivably give it such a fund of vitality that it would be capable of independent existence, and pass beyond the control of the inhibitory influence of the parent organism. Any of the forms of prolonged local irritation, so usual in the history of cancer, would supply the necessary cause for the removal of the normal inhibitory control as a preliminary to repair. This may not be far removed from the explanation given by Dr. James Braithwaite. In his letter to the BRITISH MEDICAL JOURNAL of May 30th this sentence occurs, "..... an increase of the natural stimulus plus an over-nourished condition of cell, and some local irritation." I would only suggest the addition that the "natural stimulus" is always in excess, but held in reserve, that it is always on the increase or decrease locally in all states except that of absolute health, when it may be said to be in equilibrium, and that it is the failure of some cells to return within the influence of central control after a period of increased activity, which is the essential factor. Physiology and medicine teach that no one organ of a complete animal can go about its business independently of the others. Why then should cancer, which, so far as anything is known to the contrary, is a perverted physiological process, be always considered from an external or peripheral point of view?—I am, etc.,

June 1st. P. W.

TREATMENT OF INOPERABLE CANCER BY FORMALIN.

SIR,—In the BRITISH MEDICAL JOURNAL of May 30th you publish some "Clinical Observations on the Treatment of Inoperable Cancer by Formalin," by Dr. A. F. Meredith Powell. Dr. Powell claims his method as original, but from a careful perusal of his paper I fail to find that it differs in any respect from the method described by myself except in the strength of solution used. My paper on the same subject was published in the JOURNAL on February 11th, 1899, p. 337, and Dr. Powell's observations are almost a replica of my own. Mr. McFeely, of Dublin, published his paper in the JOURNAL of July 29th, 1899, p. 272, and in it referred to the previous paper on the subject. I do not know of any literature dealing with this use for formalin prior to my own observations, but very likely some one else may have used it before me, for "there is nothing new under the sun," or very much less than we often think.—I am, etc.,

Bradford, May 30th. WILLIAM MITCHELL, M.B.

A COMPARATIVE STATISTICAL STUDY OF CANCER MORTALITY.

SIR,—In the BRITISH MEDICAL JOURNAL of May 9th, p. 1111, it is stated that blacksmiths show an exceptionally high rate of death from cancer.

So long ago as 1896, in my annual report for 1895, I maintained that cancer was prevalent among the occupants of houses exposed to the fumes from the blacksmith's chimney. The fumes consist of iron, manganese, arsenic, phosphorus, sulphur, and silicon, do not readily mix with the air, and may be carried a considerable distance. They have a strong affinity for trees. The deposit is green, and the tree is injured.—I am, etc.,

JAMES GAIRDNER,
Medical Officer of Health.

Crieff, N.B., May 26th.

P.S.—The report referred to was criticized by you under the heading Metallic Fevers.

THE EXTERMINATION OF MOSQUITOS IN SIERRA LEONE.

SIR,—Having been absent on a tour in the Protectorate for some weeks, my attention has only recently been drawn to an annotation in the BRITISH MEDICAL JOURNAL of January 17th, entitled the Extermination of the Mosquitos in Sierra Leone, and as the report from which the extracts were made has, as usual, been sent to the lay papers, and contains one or two misleading statements, I trust you will give this correction the same publicity.

Dr. Taylor states that "since the men of the expedition stopped clearing up yards and emptying out the water containing *Culex* larvae, no one else has taken up the work; that in fact the rubbish is beginning to accumulate as before; several Europeans were complaining to me of being much annoyed by *Culex* and *Stegomyia*," and that "this means that unless the Government and the school will keep on the work, the money the school has spent on it will be almost thrown away." These statements are so inaccurate that I beg to protest against them.

The removal of refuse from the town is carried on now, as it has been for some years, by the sanitary department of the municipality. The town is divided into six districts, which are under the charge of a sergeant, an assistant sergeant, and eight sanitary constables, who regularly visit every yard in the town, and serve notices on all whose yards are found in an insanitary condition. When the notices are not complied with within a certain number of days summonses are taken out against the defaulters, and I may remark that in 1902, while the Liverpool Expedition was actually at work, it was found necessary to issue 4,155 notices. Especial notice is given to the removal of tin pans and other receptacles capable of breeding larvae, and any vessels containing larvae are at once emptied. In a new Sanitary Bill which will be introduced shortly a clause will be inserted making provision for the compulsory covering of all vessels containing water, and making it a punishable offence to have vessels containing larvae in the yard, which I trust will become law.

At present the law places upon the householder the duty of keeping his yard clean and depositing all rubbish in shoots on the shore, or in dustbins from which it is removed by the sanitary carts, and hundreds of loads are removed monthly in this way. The native is by no means easy to deal with, and as the Liverpool Expedition actually sent labourers into the yards to clean them, naturally they were very pleased to have the work done free of expense, and the result has been that in several instances lately there has been some difficulty in getting the work done, owing to this very fact. No doubt dirty yards will be found in town at any time, as in any English town, but this is due to the rapid accumulation of rubbish which always takes place in a tropical country, owing to luxuriant vegetation, etc. (a fact which Dr. Taylor appears to have overlooked), but I venture to state that Freetown at the present moment will compare very favourably from a sanitary point of view with the great majority of tropical towns. Just now, well on in the dry season, the town is practically both *Anopheles* and *Culex* free, but within the next three months, when the rains begin, I will undertake to demonstrate the presence of *Anopheles* in any part of the town, and this will continue to be the case until the system of permanent surface drainage, which I advocated so long ago as 1896, and which is now being carried out by His Excellency the Governor Sir Charles King-Harman, is completed.

The West Coast of Africa owes a great debt of gratitude to Major Ross and to the Liverpool School of Tropical Medicine for the energy which they have thrown into the campaign against malaria, and which has resulted in attention being drawn to the need of sustained efforts and the necessity for the expenditure of money for sanitary purposes, but as regards the actual improvement which is said to have been effected in Freetown, up to the present, as shown by the native death-rate and the fever-rate in Europeans, the results are imperceptible, and it is only to be expected that it should be so. In a city with the physical configuration of Freetown, and an annual rainfall of about 160 in., the improvement in the health of the town is not to be effected in eighteen months by scratching a few shallow mud drains, oiling a few puddles, or removing a few empty tin pans, but by the system of permanent surface drainage to which I have referred, and by attention to the general sanitation of the city, such as the closure of cesspits, etc. Dr. Taylor would be surprised if he were to hear the outspoken comments of the Europeans and the medical profession in the town on the very sweeping conclusions which he has drawn in connexion with the work here, and I venture to think that sanitary progress is rather impeded than otherwise by wild generalizations of this kind, which are incapable of proof, and by the practice of invariably appreciating the labours of the Liverpool School of Tropical Medicine, and belittling the work of others in the same direction. I can assure you that the Government and the municipality are fully alive to the necessity of sanitary improvements; but these, however, can only be effected gradually, must be carried out as the finances of the colony and city permit of them; and must, above all, if they are to be of any use, be accompanied by the education and co-operation of the native population. With apologies for troubling you at such length, I am, etc.,

W. T. PROUT,
Principal Medical Officer and Medical Officer of Health, Freetown, Sierra Leone.

Sanitary Office, City Council, March 23rd.

FRIGHT AND CHLOROFORM DEATHS.

SIR,—In connexion with your very interesting leader upon Fright and Chloroform Deaths in the BRITISH MEDICAL JOURNAL of February 21st, may I call your attention to a pamphlet upon *Observations on Blood Pressure, with Special Reference to Chloroform*, which I published in 1901 as a University of Toronto study? That pamphlet contained the results of work done under the auspices of the Scientific Grants Committee of the British Medical Association, and I came to the conclusion there (page 22) that "most deaths which occur in practice in the administration of chloroform are *not* cases of poisoning from the drugs, *but are due to syncope resulting either from the pain of an operation commenced too soon or from fear.*" (The italics are in the text.) I discussed the matter fully, about 125 lines being devoted to this purpose. It is very interesting to me to read that Dr. J. A. Bodine, of New York, has reached the same conclusion. Of course the idea is not a new one—Simpson, Snow, Brodie, Cooper, and many others have called attention to it; but it is nevertheless very generally forgotten, and in any given fatal case a discussion arises as to *how* the chloroform produced death (whether by poisoning of the heart muscle, the respiratory centre, or the vasomotor centre, etc.), when the question should rather be, *Did* it cause death at all?

In Canada, where every death which occurs during the administration of chloroform gets into the daily papers, the public greatly dread the administration of the drug. This very dread is, I believe, the chief danger with which we have got to contend.—I am, etc.,

R. D. RUDOLF.

Toronto, March 5th.

*** A short notice of Dr. Rudolf's pamphlet was published in the BRITISH MEDICAL JOURNAL of June 14th, 1902, p. 1478.

EPILEPSY AND "TOXAEMIA."

SIR,—In the observations of Dr. J. M. Rhodes under this question-begging title there would seem to be room for some misunderstanding, either as to the meaning of toxin, or as to the demonstration of its existence. If toxin means a poison in general, or a ptomaine, or any other variety in particular, he has not proved its existence. Nobody has proved anything of the kind, but it is as a guess no longer in its pristine freshness. If he only proposed to prove results of food ingestion, he has not shown these results to be toxic, and moreover there is ground of a sort of doubting if the fact is so. Of those who see a good deal of epilepsy, though not in brand-

new colonies, some take these manifestations to be the result of simple stimulation, perverted to simulate the results of irritation (temporarily acute, sufficiently different in degree to require some other term of description, as they undoubtedly produce manifestations other than normal) as a consequence not at all of distal injury, but of central instability. Since even lucidity is obscure to some, one may crudely compare the stomach of the epileptic with the temper of the neurasthenic, apt to "fly off the handle" for no earthly reason, unless the central organ is otherwise preoccupied, distracted by having to put out energy in muscular effort. To recognize the existence of an opinion is not to accept it, but to accept figures, particulars, etc., and assert them to prove that with which they may have no connexion, is wasting time and adding to the confusion of the inexperienced. That dyspepsia is one of the greatest troubles of the epileptic, and by way of being his universal trouble, hardly needs assertion, unless to separate the observations of those experienced in the human subject from the impressions of those familiar with the ebriety of the American horse; but one might just inquire what can be the use of mixing up common-place fact with promiscuous conjecture. We all knew the dyspeptic difficulty before. Can Dr. Rhodes explain how it is these patients are so perversely prone to this condition? The blessed word "toxin" does not explain any thing, nothing left obscure by "idiopathie" at least. He says he "held" "that the cause of epilepsy is a toxin." Very good. He may be right or he may be wrong; so we have not got far yet. Can he give us a reason for holding likewise? His opinion may very well be true in fact; it is indeed plausible. But so is the opposition theory already just indicated. The real question is who knows how, or when, or why, or what? Who has any definite fact, and a logical argument built upon it?—I am, etc.,

Fordcombe. HAMILTON HALL.

THE DETERMINATION OF SEX.

SIR,—In connexion with your interesting leader on this subject in the BRITISH MEDICAL JOURNAL of May 9th and the reference to Professor Lenhossék's theories on the origin of sex, it may be interesting to quote my recent experience among horses.

A farmer who breeds horses near here is a firm believer in Lenhossék's theory that the mother alone determines the sex but he goes further, and thinks the sex will come alternate every rutting period. Suppose a mare has a filly foal and goes to the horse on the ninth day after foaling and becomes pregnant the foal will be a colt, for at her last rutting time she became pregnant with the recently born filly. I may say he has correctly foretold me the sexes of his foals for the last five years. I am aware that what applies to animals may not do so to human beings, but the difficulty lies in disproving it, for obvious reasons, and the fact that ovulation and menstruation are not synonymous terms, and menstruation may not be analogous to rutting in animals; but if the farmer's theories are correct in so small a trial, surely it is or is not a fact that could be proved by careful notes on a large scale. Experience leads me to think that the healthier the parents the more likely they are to have females, and that many families with a preponderance of girls frequently have boys later in life, that is, the younger and last children are more likely to be boys.—I am, etc.,

Horsham, May 12th. L. M SNOW.

OBITUARY.

DAVID JONES, M.R.C.S.ENG., M.R.C.P.EDIN.

WE regret to announce the death, at the age of 76, of Mr David Jones, which took place on May 20th, at Brighton, from pneumonia, after a very short illness.

He received his arts education at Bala College and Edinburgh University, and then studied medicine at St. Bartholomew's. Nowadays the student in search of post graduate information makes for Vienna or Berlin, but in his day the young English doctor made Paris his head quarters. for French anatomy and surgery commanded great respect then So young Jones spent a year in Paris, and then settled down in Everton, Liverpool, where he practised for nearly forty years.

He obtained the M.R.C.S.Eng. in 1851. He became Licentiate of the Royal College of Physicians of Edinburgh in 1861, and Member of the same College in 1882.

At the time he settled there, Everton was still the home of many of the Liverpool upper classes, but it soon began to fall in rank as a residential suburb, and now has lost all claim to the title. He became one of the best known and most respected general practitioners in the neighbourhood. He enjoyed a large and good-class practice for forty years, and ten years ago, owing to failing health, he retired and went to live in the South of England.

One who knew him well writes: Though failure of health compelled Dr. Jones to give up practice, there are many who still remember their old doctor with affection, and there are not a few members of his own profession still in work who were his friends in former days. He was the very type of the trusted family practitioner. He was a very "presentable" man to begin with, and always dressed well and with care; as he stepped out of his neat brougham, with man and horse well groomed, there was no mistaking him for anything but a successful doctor. And he deserved success; for he was a man endowed both with a most kindly heart and with admirable common sense, so that it was no wonder that his patients respected and confided in him. He never took any part in public matters. He devoted himself to his family practice, but he was ever as ready with his services to the poor man as he was to the rich. He was a type of the general practitioner of former days. They had not so many 'ologies at their fingers' ends as those of the present time, but the fierce competition of to-day did not exist then, and so they had time to think over their experience and make use of it, while their general conduct and their behaviour to each other was always honourable and productive of respect among the public. His widow survives him, and one son is high in the Army Medical Service, while the other is superintendent of the London County Asylum at Sutton.

HENRY GOODRIDGE DELLER, M.A., M.B., B.C.CAMB.

THIS only too short but brilliant and useful life ended on May 26th at Davos Platz. Dr. Deller was never of a robust constitution, and on that account he was educated privately, but his abilities were not slow in showing themselves, for at the age of 16 he passed the Matriculation Examination of the University of London in the first division. It was then that he decided to adopt the profession of medicine, and became a pupil of his uncle, Dr. Emmett, of Portsmouth. During the two years of his pupilage he passed the first examination of the Royal College of Physicians of London. In 1891 he entered Trinity College, Cambridge, where he had ample scope for his love of scientific studies. In 1894 he obtained a first class in the natural science tripos, and took the B.A. degree

A few months later he won the Entrance Scholarship in Science at St. George's Hospital open to students of the Universities of Oxford and Cambridge. During the time he was a student at St. George's he won twice the Webb Prize in Bacteriology. It was just before he took his final qualifications of M.B., B.C.Cantab., M.R.C.S.Eng., L.R.C.P.Lond., in 1898, that he discovered on examining some of his own sputum that he was suffering from pulmonary tuberculosis. All ideas of holding the various house appointments at his hospital had to be abandoned, and he was advised to go to South Africa. He remained at Aliwal North for a few months, but the disturbed state of the country caused him to return to England in September, 1899 It was then quite evident to his relatives that the disease had made considerable progress, and he decided to try Davos Platz, where the climate did much to prolong his life, his only regret being that he did not go there earlier.

Not only to the medical profession, but also to the photographic world, the loss of Dr. Deller is deplorable. He took up photography as a hobby, and, like everything else he undertook, he soon became a skilled photographer, and a master of the details of the art, so much so that his advice was frequently sought in difficulties. It is thought by some of his friends who wintered at Davos that his enthusiasm to obtain some good snow scenes during the past winter caused him to overtax his strength. Moreover, he had also undertaken the bacteriological work at the English laboratory. It was a real pleasure to him to learn that six of his photographic enlargements were accepted for exhibition by the Alpine Club in London last month. During his last illness he corrected the proofs of a series of articles on telephotographic work, written for and now appearing in the *Photogram* each month. During the last six weeks of his life he was entirely confined to his bed, but even this was made much more endurable by the kindness, skill, and devotion of Dr. Huggard.

It will be seen that Dr. Deller's health never permitted him to practise his profession, although he was always so keenly interested in it, and by those who knew him best it can fairly be said that he was good and conscientious in the highest degree, and had he been gifted with greater physical strength would have made his mark in the medical world; but it was willed otherwise, and to the deep sorrow of those who had the privilege of his friendship, he now, after only thirty-one years of life, lies at rest in the little cemetery on the side of the mountain at Davos Platz.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

AN UMBRELLA SHELTER.

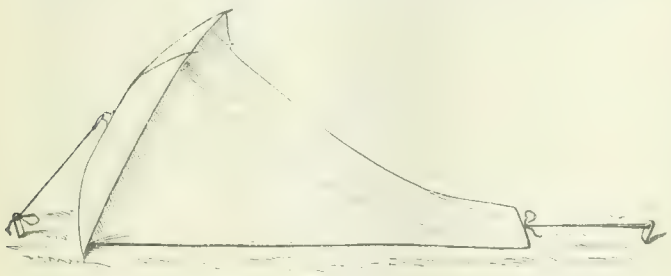
By VALENTINE MATTHEWS, Major R.A.M.C. (Vol.)

As it not infrequently happens in war that while it is possible to get to the wounded it may not be possible to move them for a considerable time, the contrivance shown in the accompanying diagrams is suggested as a means of providing temporary shelter, while the wounded are lying in the field, to mitigate the suffering caused by exposure to sun and weather.

It is suggested that a certain proportion of stretcher-bearers should carry these umbrellas and put them up over the wounded, after their immediate necessities have been attended to, until they can be carried back to the dressing station or field hospital.

This umbrella shelter consists of a strong umbrella of about the size of an ordinary carriage umbrella, with a metal hook or handle at the end of the stick, which is thrust like an anchor into the ground, while the umbrella parts rests on the ground on the ends of two of its ribs. To the upper part of the







umbrella as it is pitched is attached an extending curtain or tent, which is fastened into the ground at the other end by a small peg of metal or wood attached to it by a cord, whilst the upper end of the stick is steadied in a similar way. The umbrella and curtain are made of khaki-coloured material and the curtain is easily detachable, so that the other part can be used as an ordinary umbrella if desired.

The length of the umbrella when folded is about 3 ft. 8 in., the weight about 6 lb., and the diameter at the ribs on the ground about 40 in., providing sufficient breadth to shelter two men.

ROYAL NAVY MEDICAL SERVICE.

By order in Council of March 24th, 1902, the list of medical officers was increased to the following numbers:

Nineteen Inspectors-General and Deputy-Inspectors-General of Hospital and Fleets, of whom not more than 5 may be Inspectors-General; 62 Fleet Surgeons, Staff Surgeons, and Surgeons. The Navy Estimates 1903-4 by Votes 3, 12, and 13, provide for the above number of inspectorial officers, but in the May Navy List, as for some time past, there are but 4 Inspectors and 14 Deputy-Inspectors-General

Such a reduction in the number of Inspectors-General indicates the reliance to be placed on Admiralty regulations as regards the medical service; as but two Inspectors-General are at present employed, the authorized number of 5 was considered as provision for the recognition of good service among the Deputy-Inspectors-General as promotion to the higher rank ensured increase of half and retired pay, as also of widow's pension, even if unemployed in the rank, owing to the very limited number of appointments open to them. A Fleet Surgeon also loses promotion to the rank of Deputy-Inspector-General, with the advantages attaching to such promotion.

By the May Navy List the number of Fleet Surgeons, Staff Surgeons, and Surgeons indicated is 468, which, with the 15 surgeons newly entered, gives a total 483, or 19 below the authorized number of these medical officers.

The following appointments have been made at the Admiralty: ERNEST A. PENFOLD, M.B., Staff Surgeon, to the *Britannia*, for the *Aurora*, June 11th; HAMILTON MEIKLE, Staff Surgeon, and LLEWELLYN LINDOP, Surgeon, to the *Leviathan*, June 16th; A. MCCLOY, M.B., Surgeon, to the *Hawke*, June 16th; JOHN O'HEA, Surgeon, to the *Ariadne*, for the *Columbine*, May 27th; M. F. LAFFAN, B.A., M.B., Surgeon, to the *Minerva*, June 11th; ELIJAH R. L. THOMAS, Surgeon, to the *Vivid*, for disposal, May 22nd; JOHN T. DUDDING, Surgeon, to Haslar Hospital (lent), June 1st.

The Entry.

STAFF SURGEON writes: To any one acquainted with the conditions under which naval medical officers serve at present as compared more especially with those offered in the sister service, the fact that the Admiralty at the last examination succeeded in inducing fifteen men to accept commissions is an amazing one, and may be accepted as striking evidence of the overcrowded condition of the medical profession.

THE NURSING SERVICE.

ON Friday, May 29th, Her Majesty the Queen presented badges to two head sisters and twenty-two nursing sisters of Queen Alexandra's Royal Naval Nursing Service at Buckingham Palace. Rear-Admiral John Durnford, C.B., D.S.O., a Naval Lord of the Admiralty, Inspector-General Sir Henry F. Norbury, M.D., K.C.B., K.H.S., R.N., Director-General of the Medical Department, and Staff Surgeon W. J. Colborne, R.N., Assistant to the Director-General, also attended and had the honour of being presented to her Majesty.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL W. L. CHESTER, M.B., who has been serving in the Bengal Command, is appointed to officiate as Principal Medical Officer, Rawal Pindi District.

INDIAN MEDICAL SERVICE.

THE promotion to Colonel of Lieutenant-Colonel J. P. GREANY, M.D., Bombay Establishment, which has already appeared in the BRITISH MEDICAL JOURNAL, has received the approval of the King.

His Majesty has also sanctioned the retirement from the service of Lieutenant-Colonel W. OWEN, M.D., Bengal Establishment, and of Lieutenant-Colonel J. W. CLARKSON, Bombay Establishment; both of which announcements have already appeared in the BRITISH MEDICAL JOURNAL.

Colonel J. T. B. BOOKEY, C.B., Bengal Establishment, Principal Medical Officer Kohat District, is granted the temporary rank of Surgeon-General from April 15th, while officiating as Principal Medical Officer Punjab Command.

Lieutenant-Colonel H. K. MCKAY, C.I.E., Bengal Establishment, is granted the temporary rank of Colonel from April 15th, while officiating as Principal Medical Officer Kohat District.

THE WAZIRI OPERATIONS.

MAJOR-GENERAL SIR CHARLES EGERTON'S report on the recent operations against the Darwesh Khel Waziris has been published. In summarizing the results of the expedition, General Egerton brings to notice the services rendered by the officers under his command, and says of Colonel J. T. B. Bookey, C.B., Indian Medical Service, that to his power of organization was due the success of the medical arrangements for the force.

DISTINGUISHED SERVICE ORDER.

IN the *London Gazette* of May 29th it is announced that the Distinguished Service Order is henceforth to rank next to, and immediately after, the Royal Victorian Order.

FIRST AID IN THE FIRING LINE.

A. M. S. writes: As it is now considered impossible to render surgical assistance in the line of fire, I trust army surgeons of all ranks with experience of war will answer the appeal of Major E. Palliser, Army and Navy Club, Pall Mall, for their views (not for publication) as to the experiments proposed of fire-zone motors to relieve the sufferings of soldiers. Major Palliser writes: "A well-known motor company is preparing for experiments one of their motors to mitigate the sufferings of our soldiers in the firing lines owing to want of water, surgical attendance, and ammunition." Major Palliser has received letters from officers as to their possible usefulness as ammunition and water carriers; and asked for communications from the Royal Army Medical Corps as to the possible usefulness for removing or aiding wounded. The shield of the motors is to be of nickel steel for resisting rifle fire. The motor and shield will be heavily fired at when shielding a dummy soldier receiving first aid from two other dummies.

VOLUNTEER MEDICAL ASSOCIATION.

THE Ambulance Shield Competition of the Volunteer Medical Association will take place on June 6th at 3 p.m. Competing squads may sleep and board at the head quarters of the London Company, R.A.M.C.V., in Calthorpe Street, W.C. The shield and badges will be presented to the winning squads by Major-General A. E. Turner, K.C.B., R.A., Inspector-General of Auxiliary Forces. The entries close on May 31st. Further particulars can be obtained from the Honorary Secretary, Lieutenant Montgomery-Smith, 36, Abbey Road, N.W.

MEDICO-LEGAL AND MEDICO-ETHICAL.

UNQUALIFIED PRACTICE OF DENTISTRY.

ON May 26th the case of Brown *v.* Whitlock, which raised an important question under the Dentists Act, 1878, was heard by the Lord Chief Justice, Wills and Channell, JJ. It came before the court on appeal from a police magistrate who had dismissed a charge against the respondent for unlawfully taking and using a description implying that he was then registered under the Acts, or that he was specially qualified to practise dentistry. It appeared that in November, 1902, the respondent was practising at 521, Fulham Road. His name was not on the *Dentists' Register*, nor was he a legally-qualified medical practitioner. On the front railings in the Fulham Road there was a white marble slab with the words, "Mr. W. Lawson Whitlock, 10—5" upon it. At the side door were the words "Mr. R. C. Stent, R.D.S.Eng., Surgeon Dentist," on a black marble slab, and a gas lamp fixed on a standard in a forecourt had upon it the words, "Messrs. Stent, Surgeon-Dentists. Estd. 1840." Upon the appellant paying a visit to the premises, and asking for Mr. Stent, he was told by the respondent that Mr. Stent was dead, and that he (the respondent) was Mr. Whitlock. The respondent alleged (1) that he had a perfect right to do what he was doing: (2) that he had purchased the practice from Mr. Stent's personal representatives; (3) that he had come from Australia, and would soon get over the difficulty by turning himself into a company. The magistrate dismissed the information.

The Lord Chief Justice, in giving judgement, said he regretted that he was unable to interfere with the magistrate's decision. He had a strong feeling that Stent's name had been kept up in order that the respondent might identify himself with Stent and lead people to suppose that he was a duly qualified practitioner. This, however, was not the offence with which the respondent was charged. The words of the summons were that the respondent took and used an addition or description implying that he was registered under the Act. This was a question of fact with which he could not interfere.

The other members of the Court concurred.

SENSATIONAL SURGERY IN THE NEWSPAPERS.

A CORRESPONDENT sends us a cutting from the *Clonmel Chronicle*, which describes under the heading "Difficult Surgical Operation at Union Hospital, Clogheen," the performance of lithotomy upon a patient named John Lonergan by Dr. W. P. Walsh, who, we are told, "applied for and obtained the necessary permission to call in the aid of two expert medical practitioners," Dr. Henessy (Clogheen) and Dr. Cusack (Cahir), Dr. Walsh himself "being the actual operator." At the foot of the paragraph is the word "correspondent," implying that this choice piece of news was communicated by some one not on the ordinary staff of the newspaper. We should be glad to see something done to check the growing frequency of such puffs. It is difficult, if not impossible, to show that the practitioners named are responsible for these publications, and in certain instances we know that they are not. The practice might be stopped if the Divisions of the Association or local medical societies would remonstrate with the editors and the practitioners concerned.

THE PECULIAR PEOPLE.

AT the Stratford Police Court, on May 26th, Thomas Moon, a labourer, and his wife, of Barking, were charged with the manslaughter of their daughter, Emily Moon, aged 9 years and 11 months. According to a report in the *Times*, May 27th, the prisoners were members of the sect known as "Peculiar People." It appeared that on May 16th the child was taken ill. On May 19th the parents, thinking it was suffering from diphtheria, called in a Dr. Fenton who offered to remove it to the hospital or treat it at the home. To this the prisoners would not consent, as they intended to isolate themselves and treat the child at home. On May 21st the child was so bad that Dr. Fenton was summoned again, and the mother told him he could have the child removed or could treat it at home if he wished. The child died soon after this. At the inquest Dr. Fenton told the jury that death was the result of collapse following diphtheria, and added that the child had suffered pain which medical aid could have relieved, and that the life of the child would probably have been saved. The jury returned a verdict of manslaughter, when the prisoners were both arrested.

MEDICAL BIOGRAPHIES IN COUNTY DIRECTORIES.

SIX MEMBERS.—We have had this question submitted to us from several localities. It is, in our opinion, highly undesirable that medical practitioners should allow their portraits and biographies to appear in such a publication. We believe that this has been the view generally taken.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Degrees.—At the congregation on May 28th, the following degrees were conferred:—*M.D.*: S. H. Long, Caius. *M.B.* and *B.C.*: J. McBryde, King's; F. H. Pearce, Trinity; W. H. Brailey, Queen's; H. T. Thompson, Christ's; G. W. Greene, Downing. *M.B.* only: H. W. Atkinson and R. F. Williams, Caius. *B.C.* only: F. S. Kidd, Trinity; J. E. Spicer, Trinity; J. E. Frere, Pembroke; H. Statham, Christ's; W. B. Crowfoot, Emmanuel.

UNIVERSITY OF LONDON.

In the report of the meeting of Convocation, held on May 12th, which was published in the BRITISH MEDICAL JOURNAL of May 16th, at p. 1184, the fate of the resolution proposed by Mr. W. R. Warren, LL.B., was not definitely stated. Both that resolution and the amendment thereto were after considerable discussion (which we duly reported) withdrawn, and not the amendment only. As a correspondent suggests that the report thus "makes it appear that victory was with the reactionaries" who supported the motion, "whereas they were glad to withdraw their motion to avoid defeat." We append the account of the transaction which appears in the official minutes of the meeting:

It was moved by W. R. Warren, LL.B., and seconded by H. Hanford, B.A.,

"That in the opinion of Convocation some of the changes in the curricula and schemes of examination approved by the Senate are calculated to impair the value and lower the reputation of the degrees conferred by the University of London."

After considerable discussion it was moved by R. W. Hinton, B.A., and seconded by H. A. Nesbitt, M.A.,

"That the House pass to the next business on the agenda."

After further debate both motions were, by leave, withdrawn.

VICTORIA UNIVERSITY.

RESIGNATION OF THE CHANCELLOR.

EARL SPENCER formally notified his resignation of the office of Chancellor of Victoria University to the Court. The Vice-Chancellor has sent the Chancellor's letter to Convocation, which elects the Chancellor. The Chancellor defines his position under date May 10th, 1903.

"When the question of reconstituting the Victoria University, of which I had the high honour of being Chancellor, arose, I deeply regretted that I differed from a large number, and probably from a majority of the members of the University. But I felt strongly on the subject, and I thought it my duty both to express my opinions at Courts at Manchester over which I presided, and to join in the opposition to the proposed changes before the Privy Council. The Privy Council decided against the views which I held. It was not at first clear to me that I could legally continue to hold the office of Chancellor, when the alteration in the character of the University which had elected me came into force. You now assure me that in the new Charter no actual change will be made in the Chancellor's position. As I accept this view, I feel (though with genuine regret) it my duty to ask you to place my resignation of the great office which I hold in the hands of those who elected me to it. I do this both because I find myself differing from many members of the University on a question of great educational importance, and also because many circumstances which existed when I had the honour to be elected will in future be materially altered. In taking this step I desire to express my warm appreciation of the kindness and support which I invariably received from all those with whom I have been officially in contact since my appointment, and to say that I shall all my life be proud of having been for a considerable time Chancellor of Victoria University. I place my resignation in your hands. You will best judge when it should take place. I need not assure you that I wish to resign at the time which is most convenient and most conducive to the welfare of a University in whose continued success I shall always have the deepest interest."

At the meeting of Convocation to be held on June 17th a motion to the following effect will be submitted:

"That Convocation desires to place on record its high appreciation of the great services rendered to the University by the Right Hon. Earl Spencer, K.G., as Chancellor, and to express its sincere hope that he will reconsider the question of his resignation, and that the University may continue to have the great benefit of his presidency."

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE COMING COUNCIL ELECTION.

THE Council is at present constituted as follows:

President.

Sir H. G. Howse, Kt.; C, (1) 1889, (2) 1897.

Vice-Presidents.

1. Mr. J. Tweedy; C, (1) 1892, (2) 1900 (substitute for Mr. Davies-Colley till 1904).
2. Mr. Mayo Robson; C, (1) 1893, (2) 1901.

Other Members of Council.

Mr. Bryant; C, (1) 1880, (2) 1888, (3) 1896; P, 1890-2.
Mr. Willett; C, (1) 1887, (2) 1895.
Mr. Pick; C, (1) 1888, (2) 1896.
Mr. Langton; C, (1) 1890, (2) 1898.
Mr. H. Morris; C, (1) 1893 (substitute), (2) 1898.
Mr. T. R. Jessop; C, (1) 1891, (2) 1899
Mr. Howard Marsh; C, (1) 1892 (substitute); (2) 1894, (3) 1902.
Mr. Alfred Cooper; C, (1) 1895 (substitute), (2) 1900.
Mr. Butlin; C, 1895.
Sir F. Treves; C, 1895.
Mr. Owen: C, 1897.
Mr. Rickman Godlee; C, 1897.
Mr. Watson Cheyne, C.B.; C, 1897 (substitute), (2) 1901.
Mr. Richardson Cross; C, 1901.
Mr. H. W. Page; C, 1899.
Mr. Pearce Gould; C, 1900.
Mr. J. Ward Cousins: C, (1) 1895 (substitute), (2) 1897 (substitute), (3) 1900.
Mr. R. C. Lucas; C, 1901.
Mr. J. H. Morgan; C, 1902.
Mr. H. H. Clutton; C, 1902.
Mr. C. W. Mansell Moullin; C, 1902.

The following list shows the proportional representation of metropolitan medical schools, of special hospitals in London and of the provinces:

St. Bartholomew's	4	
Charing Cross	1	
Guy's	3	
King's College	1	
London	2	
Middlesex	2	
St. George's	1	
St. Mary's	2	
St. Thomas's	1	
University College	2	
Total number attached to London schools ...		19
Members attached to special hospitals in London		1
Provincial members (Leeds 2, Bristol 1, Southsea 1)		4
Total		24

Thus, the three members last elected in 1895—Mr. Willett, Mr. Butlin, and Sir F. Treves—retire, leaving three vacancies. As no member of Council has died during the past year there will be no substitute members.

CONJOINT BOARD IN IRELAND.

THE name of Dr. F. G. O'Donohoe, of Castlerea, was accidentally omitted from the list of successful candidates for the D.P.H. of the Conjoint Board of Ireland published last week, p. 1292.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE annual meeting of Fellows was held on May 30th, Mr. L. H. Ormsby (President) in the chair. The report of the Council was read and adopted.

The President addressed the meeting, showing that the College was in a good financial state. The receipts during the year were above the average, and notwithstanding a large extra expenditure of over £1,200 on painting and decorating the College halls, the bank account showed a large credit balance, and the College was entirely free from debt. During the year 16 candidates, having passed the examinations, were admitted to the Fellowship; 44 candidates, having passed the Conjoint Examination with the Royal College of Physicians, received the Diploma in Surgery and Midwifery; 29 candidates, having passed the Conjoint Examination with the Royal College of Physicians, received the Conjoint Diploma in Public Health; 7 candidates, having passed the examinations, received the Licence in Dental Surgery; 52 candidates, having passed the Conjoint Preliminary Examination with the Royal College of Physicians, received certificates. There are at present living: 10 Honorary Fellows, 445 Ordinary Fellows, 2,832 Licentiates, 6 Honorary Diplomates in Public Health, 157 Ordinary Diplomates in Public Health, and 503 Licentiates in Dental Surgery.

The annual election of President and Council was held on June 1st, when the following was elected, *President:* L. Hepenstal Ormsby. *Vice-President:* Arthur Chance. *Secretary:* Sir Charles A. Cameron, C.B. *Council:* Sir Philip Crampton Smyly, Henry Rosborough Swanzy, Edward Hallaran Bennett, William Stoker, Sir Charles Alexander Cameron, C.B., Austin Meldon, D.L., John B. Story, Sir William Thomson, C.B., Sir Charles B. Ball, Sir Thomas Myles, John Lentaigne, Richard D. Purefoy, Henry G. Sherlock, R. Bolton M'Causland, Robert H. Woods, Thomas Donnelly, William Taylor, Edward H. Taylor, G. Jameson Johnston. The new members are Messrs. William Stoker, Edward H. Taylor, and G. Jameson Johnston.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 8,662 births and 4,307 deaths were registered during the week ending Saturday, last, May 30th. The annual rate of mortality in these towns, which had been 15.9, 15.4 and 15.5 per 1,000 in the three preceding weeks, declined again to 14.9 per 1,000 last week. The rates in the several towns ranged from 7.2 in Wallasey, 8.0 in Hornsey, 8.2 in Handsworth and in King's Norton, 8.5 in Croydon, 9.1 in York, 9.9 in Tynemouth, and 10.1 in West Hartlepool, to 19.8 in Liverpool, 19.9 in Sunderland, 20.3 in Huddersfield, 20.4 in Merthyr Tydfil, 21.0 in Rotherham, 22.1 in Rochdale, 23.0 in Manchester, 23.6 in Burnley, and 26.9 in Middlesbrough. In London the rate of mortality was 13.9 per 1,000, while it averaged 15.3 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.5 per 1,000 in the seventy-six large towns; in London this death-rate was equal to 1.4 per 1,000, while it averaged 1.5 in the seventy-five other large towns, among which the highest death-rates from the principal infectious diseases were 3.2 in Nottingham, 3.3 in Hanley, 3.4 in Leyton, 3.8 in Middlesbrough, 3.9 in West Bromwich, 5.0 in Wigan, 5.9 in Wolverhampton, and 7.2 in Coventry. Measles caused a death-rate of 1.6 in West Bromwich, in Middlesbrough, and in Swansea, 1.9 in Nottingham, 2.2 in Wolverhampton, 2.5 in Walthamstow and in Wigan, and 5.0 in Coventry; diphtheria of 1.4 in Southampton and 2.5 in Hanley; whooping-cough of 1.2 in St. Helens and in Rochdale, and 1.9 in Oldham; and diarrhoea of 1.6 in Warrington and 3.8 in Wolverhampton. The mortality from scarlet fever and from enteric fever showed no marked excess in any of the large towns. Four fatal cases of small-pox were registered in Liverpool, 3 in Leeds, 2 in Leicester, 2 in Manchester, 2 in Hull, and 1 each in London, Willesden, Oldham, Burnley, Bradford, and Newcastle-on-Tyne. The Metropolitan Asylums Hospitals contained 60 small-pox patients at the end of last week, against 60, 00, and 64 at the end of the three preceding weeks; 10 new cases were admtted during the week, against 17, 7, and 19 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 1,730, 1,756, and 1,759 on the three preceding Saturdays, had further risen to 1,771 on Saturday last, May 30th; 225 new cases were admitted during last week, against 229, 236, and 234 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, May 30th, 1,093 births and 601 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 17.9, 18.0, and 17.2 per 1,000 in the three preceding weeks, rose again last week to 18.4 per 1,000, and was 3.5 per 1,000 above the mean rate during the same period in the seventy-six large English towns. The rates in the eight Scotch towns ranged from 10.8 in Perth and 16.8 in Aberdeen to 19.7 in Edinburgh and 22.0 in Dundee. The death-rate from the principal infectious diseases averaged 2.1 per 1,000 in these towns, the highest rates being recorded in Glasgow and Paisley. The 270 deaths registered in Glasgow included 6 which were referred to measles, 2 to scarlet fever, 3 to diphtheria, 16 to whooping-cough, 2 to "fever," and 9 to diarrhoea. Three fatal cases of scarlet fever, 2 of diphtheria, and 6 of whooping-cough were recorded in Edinburgh. Four deaths from diarrhoea occurred in Dundee and 2 in Aberdeen; 2 from "fever" and 2 from diarrhoea in Paisley; and 2 from whooping-cough in Leith and 3 in Greenock.

HEALTH OF HASTINGS.

THE Report of the Medical Officer of Health for the Borough of Hastings (Dr. Scarlyn Wilson) for the year 1902 shows that the estimated population during the year was 65,900. This is about 500 more than the average of the preceding ten years. The census in 1901 showed that 41 per cent. of the population were men and 59 per cent. females. The disparity thus shown between the sexes is slightly less than formerly, but the diminution is accounted for by the inclusion of new areas within the borough. Disparity in proportion of sexes is a more common feature of health resorts than of other towns. The corrected death-rate per 1,000 of estimated population was 14.35, being slightly less than the average of the preceding ten years. It includes 49 deaths from zymotic disease, or 0.74 per 1,000 of population, the greater number being due to measles and diarrhoea. This zymotic death-rate is not high, but quite high enough for a health resort, especially as the infectious disease notification table shows that the attack-rate of diphtheria and membranous croup was 1.09 per 1,000. In the notification table are also included 12 cases of enteric and 5 of small-pox; of the latter, 4 cases were directly imported from the metropolitan area and successfully dealt with, while 5 of the enteric cases also seem to have been imported, and some others are ascribed to infected oysters.

The birth-rate was only 18.22 per 1,000 of population. It is low at all health resorts, but at Hastings it appears to be more steadily decreasing than elsewhere in spite of the recent inclusion of areas where birth-rates ought to be high. Over 8 per cent. of the births were illegitimate. This is very high, but also a common feature of health resorts. Why? The infant mortality was 109 per 1,000 births, which cannot be considered low for a non-manufacturing district. The death-rate per 1,000 from phthisis is not given, but seems to be about the same as that in all England. A town like Hastings of course gets a great many imported cases. The return of proceedings taken under the Food and Drugs Act shows apparently that the usual difficulty exists in getting magistrates to take a sufficiently serious view of milk adulteration.

The concluding return of the report brings the health statistics of Hastings into comparison with towns in England generally. It would be better to compare figures well, and a more useful comparison would be between Hastings and other seaside towns of about the same size.

HEALTH OF PAISLEY.

THE Report of the Medical Officer of Health for the Scottish Burgh of Paisley (Dr. Alexander Robb) for the year 1902 shows that the population is increasing apparently at the rate of about 2 per cent. per annum, and was estimated for the year at 81,150 persons. Calculated on the acreage of the burgh this works out at a little under 23 persons to the acre. The birth-rate during the year was 30.29, which is nearly 2 per 1,000 more than the birth-rate of England during the same period, and of these only 4.5 per cent. were illegitimate.

The death-rate per 1,000 of estimated population was 17.8, which is slightly higher than the average of towns of corresponding size. The infant mortality was 121 per 1,000 births. This for a manufacturing town is fairly satisfactory. The zymotic death-rate was 2.2 per 1000 of population against 2.6 per 1,000 during the preceding year. The phthisis death-rate was 1.2 per 1,000, and is decreasing here as elsewhere with some steadiness. The death-rate from enteric was only 0.160 per 1,000, and much lower than in previous years. There were no cases of small-pox, but, on the other hand, there were 6 cases of typhus fever with 1 death, and 4 cases of cerebro-spinal fever, all occurring in the same month. Scarlet fever appears to be endemic in the town, and there were 486 cases with 27 deaths. Measles also were more prevalent than in later years. The Infectious Diseases Hospital appears to be a fairly popular institution and received nearly 90 per cent. of all notified cases of scarlet fever, 80 per cent. of all the enteries, and corresponding percentages of all other notifiable disorders.

LEGISLATION AS TO CHILD LABOUR IN AMERICA.

THE Child Labour Committee in the United States has, we learn from the *Medical Record*, prepared Bills for the restriction of child labour. Four have been introduced into the Senate by Senator Hill, of Buffalo; three into the Assembly by Mr. Finch, of New York; and one by Mr. Agnew, of New York. Their most important provisions are the following: (1) In order to secure a certificate allowing employment in factories and mercantile establishments the parent of a child must file with the Board of Health incontrovertible evidence that such child is actually fourteen years of age or upward. The forms of evidence specified in the Bills are: A transcript of the child's birth certificate, or of its baptismal certificate, or some religious record or passport. In addition, the school record of the child, called for under the present law, must now include a statement of the child's age as entered on the school records. The only evidence of age called for under the present law is the affidavit of the parent; (2) The existing laws prohibiting the employment of children under fourteen years of age in mercantile establishments, and regulating the hours of employment of such children between the ages of fourteen and sixteen are extended to cover children employed in connexion with telegraph, messenger, delivery, or other offices, and hotels, restaurants, and places of public amusement; (3) The provision in the existing law is repealed which allows vacation work in factories to children fourteen to sixteen years of age who have not had the full schooling required for securing employment throughout the entire year, and the corresponding provision is repealed which allows vacation work to children twelve to sixteen years of age in mercantile and other establishments named in Section 2. This latter repeal, however, applies only to cities of the first and second class; (3) The employment of children between fourteen and sixteen years of age more than nine hours in any one day is prohibited in factories, mercantile and other establishments named in Section 2. The existing laws place a ten-hour limit, but adds as an exception, that such children may be employed more than ten hours in any one day, if this is done, in order to make a shorter workday of the last day of the week—an exception which makes the law almost impossible of enforcement; (5) No child under 10 years of age shall work as a newsboy, bootblack, or street pedlar in cities of the first class, and no child 10 to 14 years of age shall so work later than 9 o'clock in the evening.

MILK LEGISLATION IN THE UNITED STATES.

A BILL which has recently become law in New Jersey provides that no person shall distribute or sell, or offer to distribute or sell, or have in his possession with intent to distribute or sell, any milk which has been produced by cows that have not been daily supplied with pure and wholesome water; and no person shall wash or attempt to cleanse any can or utensil used for handling or transporting milk in water which he shall have reason to believe is polluted, contaminated, or impure. A penalty of 50 dollars is imposed for each violation.

REVACCINATION.

SENEX (P.V.) writes: In view of the fact that cases of revaccination of children under 10 years of age are not chargeable to Boards of Guardians, does a public vaccinator incur any responsibility if he refuses, in his official capacity, the request of a parent to revaccinate his child under 10 years of age and that child subsequently contracts small-pox?

*** No; but we can imagine circumstances where the fact of exposure to small-pox and inability to pay for private vaccination would make it advisable to accede to the request, even though no charge could be made.

DRY EARTH SYSTEM.

F. A. H. desires to know where he can find full details of the most efficient methods of working the dry earth system of excreta disposal for a village.

REMOVAL OF PAUPER LUNATICS.

H. D. asks for our opinion as to the method of dealing with pauper lunatics in a provincial union. He illustrates the practice there adopted by the following case: The medical officer in attendance informs the relieving officer that a lunatic must be removed (we assume that he means to an asylum). On receipt of this information the relieving officer moves the patient to the workhouse, and the medical officer of the workhouse subsequently certifies the patient as fit for an asylum. This method of proceeding is contrary to the spirit of the Lunacy Act, and is consequently generally regarded as irregular and objectionable; and if this removal to workhouse is the only action taken in reference to the case by the relieving officer, it cannot be held that he has performed his duty. By Section XIV, Subsection 3 of the Act of 1890, the relieving officer, after having received information from the medical officer or otherwise that a pauper is deemed to be a lunatic and ought to be sent to an asylum, is required within three days to give notice thereof to a magistrate. If such notice is not given by the relieving officer he fails to comply with the requirements of the Act in question.

HOSPITAL AND DISPENSARY MANAGEMENT.

GUY'S HOSPITAL.

THE report of Guy's Hospital for 1902 practically covers all the period that has elapsed since the great renovation and re endowment crusade was commenced six years ago. It therefore contains besides accounts and statistics a great deal of interesting information as to what has been done and what still remains to be effected, and also an historical survey of the institution and all its connected charities. The reconstitution of the nursing arrangements and the home appears to be practically complete, and is pleasant reading when the hole-and-corner arrangements for nurses still in force at many hospitals are remembered. Little by little the hospital has managed to reopen many of the wards which for want of funds and other reasons had had to be thrown out of use, and last year the number of cases treated in the wards reached a total of 8,091. This is an increase of 2,500 over the number treated ten years ago, and good testimony to the efficiency of the work. The authorities have only yet received half of the half million which they aimed at collecting when the renovation was commenced, so though much has been carried out still more remains to be done to put this, one of the three famous old hospitals of London, upon a proper footing. The medical school also requires further endowment, and it is to be wished that some of those philanthropic millionaires who are on the look-out for useful ways of spending money would turn their attention to this ancient hospital and school.

THE ROYAL LONDON OPHTHALMIC HOSPITAL.

THE report of this hospital (better known as "the Moorfields Eye Hospital") for 1902 shows that 1,979 in-patients were treated during the year, being 26 patients to each bed in use, the average stay of each patient being thirteen days, and the number of beds constantly occupied 74 out of the 88 available. The new out-patients numbered 32,442, while 350 other applicants were refused treatment after inquiries had been made as to their financial circumstances. Twenty beds still remain unused for want of funds, but, considering the recent date at which the hospital moved to its new and larger quarters, its financial position does not appear at all unsatisfactory. It has a debt of £5,463, but its income from annual subscriptions and donations appears to be steadily, if not very rapidly, increasing. The ground rent paid for the new site is rather a heavy item (£1,210), and the Committee is endeavouring to raise a special "Rent Investment Fund" to meet this annual charge. The report notes that tablets recording the names of all the medical staff since the foundation of the institution in 1803 have been placed in the Entrance Hall of the new building, which seems a step worthy to be imitated.

CENTRAL MIDWIVES BOARD.

WE have received the following communication from Mr. G. W. Duncan, Secretary of the Central Midwives Board:

"I am directed to inform you that a meeting of the Central Midwives Board was held on Thursday, May 28th, at the Privy Council Office, Whitehall, when the following business was transacted:

"1. A letter was read from the Secretary of the Liverpool Ladies' Charity and Lying-in Hospital, praying for the recognition of their certificate in midwifery as a sufficient qualification under Section II of the Midwives Act, 1902. The Secretary was instructed to reply that the application would have the careful consideration of the Board when they came to deal with the question of the acceptance of 'other certificates under Section II.'

"2. A draft form of notice of the effect of the Act for the use of local supervising authorities was considered, amended, and approved.

"3. The Secretary reported as to negotiations for acquiring suitable offices for the Board, and further instructions were given to the Subcommittee in charge of the matter.

"4. The Secretary was instructed to prepare for the consideration of the Board at their next meeting draft forms of (*a*) Midwives Roll, (*b*) certificates under the Act."

MEDICAL NEWS.

THE annual dinner of the Royal Army Medical Corps (Militia) will be held at the Trocadero Restaurant on Monday, June 8th. The chair will be taken by Colonel Sir James Clark.

BRITISH DAIRY FARMERS IN FRANCE.—The British dairy farmers have held their annual conference this year in France, or rather in Normandy, with a flying visit to Paris, which they reached on May 16th. A hundred and thirty-two persons of both sexes took part in the expedition. On May 18th a visit was made to a teaching farm of over 300 acres at Plasir Grignon. Chaumont was next visited, and the party inspected a farm which sends its milk supply to Paris, where it is sold at 2½d. a litre. Before leaving Paris a grant banquet was held in the Hotel Central. Professor Long, who presided, toasted the French Republic and the King of England, and expressed the gratification of all present at the cordial welcome accorded to them in France. The party reached Normandy on May 20th and visited the agricultural schools of Chaumont-en-Vexin, Vernon, Honfleur, Caen, Bayeux, Saint Pierre-sur-Dives, Mézidon, Serquigny, and Dieppe.

ORAL INSTRUCTION OF THE DEAF AND DUMB.—The report of the Association for Oral Instruction of the Deaf and Dumb (11, Fitzroy Square) for 1902 shows evidence of progress, and we note that no less a sum than £136 18s. 9d. has been received as Government grant in respect of pupils in the practising school—the best testimony of official approbation. Unfortunately the state of the funds does not keep pace with the requirements of the institution, and it is hoped that a festival dinner (to be held on June 11th) will hel the Association's finances. As this institution was the first publicly to introduce into this country the pure oral system of teaching the deaf, some 33 years ago, it should not be allowed to languish for want of funds. Both as regards teachers and pupils trained, its record of success is very meritorious, and its work has much helped on the public provision now made for the elementary education of the deaf.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN.—The members of the Dermatological Society of Great Britain and Ireland and their friends dined together at the Café Royal on Wednesday, May 27th, and spent a very enjoyable evening, Dr. J. H. Stowers, President of the Society, being in the chair. The chief guest was Professor William Thomas Corlett, of Cleveland, Ohio, U.S.A., whose highly interesting and striking lantern demonstrations of the small-pox epidemic in the United States, delivered the same afternoon at the Society's rooms, should have been witnessed by Mr. Bernard Shaw and his antivaccination friends. The toast of "The President of the United States of America" was proposed in a few well chosen words by the Chairman, and cordially responded to. Professor Corlett, in returning thanks for the hearty manner in which his health had been proposed and received, emphasized the Chairman's remarks as to the living bonds which united the English-speaking peoples on both sides of the Atlantic. Mr. Howard Marsh, who represented the Clinical Society, stated that, according to information received from Nigeria, things dermatological were on a large scale out there. The acarus scabiei, for instance, was as large as a date stone; and the native children played at marbles with the desiccated spores of the ringworm fungus. The speaker did not state if his informant was Mr. Lemuel Gulliver. The enjoyment of the evening was largely contributed to by Mr. Barrett, Mr. Reginald Groome, and Mr. Upton, who discoursed music, song, and humorous stories in their usual excellent way.

A TRAVELLERS' HEALTH EXHIBITION.—A small exhibition was held recently at the Examination Hall on the Victoria Embankment, in connexion with the Livingstone Missionary College. The exhibits consisted of articles of personal and domestic outfit for the use of persons residing or travelling in tropical climates and uncivilized lands. During the day a lecture was delivered by Dr. Sambon on the chief disease scourges of the tropics in their irrelation to the development of Great Britain, and six or seven demonstrations were given on cooking requisites and feeding arrangements while camping or on the march, on medicine chests, ambulance outfits and the use of disinfectants, mosquito protections and sleeping arrangements, water purification, the use of concentrated foods during health and illness, and those various minutiae of travel which tend to add to its comfort or diminish its risks. The most interesting exhibit was Dr. Livingstone's own medicine chest, shown by Dr. John Robb, late of H.M. Indian Medical Service. It contains bottles, etc., for fifteen drugs. Several of them have lost their labels, but the others were for paregoric, arnica, peppermint oil, brandy, jalap, tartaric acid, bromide of ammonia, strong ammonia, ipecac. powder, sulphuric ether, and blistering fluid, and, of course, plaster, caustic, and a lancet.

MEDICAL VACANCIES.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column advertisements must be received not later than the first post on Wednesday morning.

BATH: ROYAL UNITED HOSPITAL.—House Surgeon, resident. Salary, £80 per annum.

CANTERBURY: KENT AND CANTERBURY HOSPITAL.—House Surgeon, resident. Salary, £80 per annum.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road.—House-Surgeon, resident. Salary at the rate of £50 per annum.

CROYDON BOROUGH.—Senior Assistant Medical Officer for the new Mental Hospital at Wallingham, resident. Salary, £160, rising to £180 per annum.

DUDLEY: GUEST HOSPITAL.—Assistant House-Surgeon, resident. Salary at the rate of £40 per annum.

DUNDEE COMBINATION EAST POORHOUSE AND HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

GREAT NORTHERN HOSPITAL, Holloway Road.—(1) Senior House-Surgeon. (2) Senior House-Physician. (3) Two Junior House-Surgeons. Appointments for six months. Salary for (1) and (2) at the rate of £60 per annum, and for (3) at the rate of £30 per annum.

HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL.—House-Surgeon, resident. Salary, £75 per annum.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Assistant Surgeon.

HOSPITAL FOR WOMEN, Soho Square, W.—House-Physician. Appointment for six months. Salary, £30.

KING'S COLLEGE, LONDON.—Senior Demonstrator in the State Medicine Laboratories.

LANCASHIRE COUNTY ASYLUM, Winwick.—Assistant Medical Officer, resident. Salary, commencing at £150 and rising to £250 per annum, and to £350 on promotion.

LIVERPOOL: STANLEY HOSPITAL.—(1) Senior House Surgeon, resident. Salary, £100 per annum. (2) Third House-Surgeon, resident. Salary, £70 per annum.

LONDON COUNTY COUNCIL.—Pathologist of the London County Asylums, non-resident. Salary, £250 per annum.

LONDON HOSPITAL, Whitechapel, E.—Obstetric Physician.

LONDON HOSPITAL MEDICAL COLLEGE, Mile End.—(1) Demonstrator of Chemical Physiology. Salary, £800 per annum. (2) Lectureship on Biology. Salary, £100 per annum and class fees.

MAIDSTONE: KENT COUNTY OPHTHALMIC HOSPITAL.—Surgeon.

MANCHESTER CORPORATION.—Fourth Medical Assistant of the Monsall Fever Hospital, resident. Salary, £100 per annum.

NEWCASTLE-ON-TYNE: ROYAL INFIRMARY.—Two Medical Registrars.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road.—House-Surgeon, resident. Salary at the rate of £80 per annum.

PLYMOUTH: SOUTH DEVON AND EAST CORNWALL HOSPITAL.—Assistant House Surgeon, resident. Salary at the rate of £50 per annum.

ROYAL DENTAL HOSPITAL OF LONDON, Leicester Square.—Two House Anæsthetists, non-resident. Honorarium, £50 per annum.

ROYAL HOSPITAL FOR WOMEN AND CHILDREN, Waterloo Bridge Road, S.E.—Resident Medical Officer. Salary at the rate of £70 per annum.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck Street, W.—Honorary Obstetric Physician.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington.—Lecturer on Physiology. Salary, £300 per annum.

SHEFFIELD ROYAL HOSPITAL.—Junior Assistant House-Surgeon, resident. Salary, £50 per annum.

SOUTHPORT INFIRMARY.—Resident Junior House and Visiting Surgeon, unmarried. Salary commencing £70 per annum.

VIRGINIA WATER: HOLLOWAY SANATORIUM FOR THE INSANE.—Junior Assistant Medical Officer (male), resident. Salary begins at £175 per annum.

WAKEFIELD: CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY. Junior House Surgeon, resident. Salary, £80 per annum.

WARRINGTON INFIRMARY AND DISPENSARY.—Senior Resident House-Surgeon. Salary, £120 per annum.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Junior House-Surgeon. Salary, £50 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House-Surgeon, resident. Salary, £100 per annum.

MEDICAL APPOINTMENTS.

BARRON, W. N., M.R.C.S., L.R.C.P. Lond., appointed Medical Officer for the Winkfield District of the Easthampstead Union.

CARTWRIGHT, J. A. T., M.R.C.S., L.S.A., L.M., reappointed Medical Officer of Health for Wigmore Rural District.

COLMAN, Frank, L.D.S., appointed Dental Surgeon to the East London Hospital for Children, Shadwell.

CUSCADEN, George, L.R.C.P. & S. Edin., appointed Honorary Surgeon to Out-patients at the Women's Hospital, Melbourne.

DICK, G. W., L.R.C.P. & S. Edin., appointed Certifying Factory Surgeon for the Shotts District, Lanarkshire.

EDWARD, A. A., M.D. Edin., C.M., appointed Certifying Factory Surgeon for the Haslingden District, Lancaster.

FORSYTH, Charles W., M.R.C.S., L.R.C.P., appointed Assistant Medical Officer to the St. Mary's Islington Infirmary, Highgate Hill.

GREIG, Janet, M.B., Ch.B. Melb., appointed Honorary Assistant Anæsthetist to the Melbourne Hospital.

GRIMWADE, Alfred, M.B., Ch.B. Melb., appointed Honorary Assistant Anæsthetist to the Melbourne Hospital.

HAWDEN, Reginald, M.B., Ch.B. Melb., appointed Resident Medical Officer of the Warrnambool Hospital, Victoria.

JOY, Charles Holmes, M.D., B.S. Durh., appointed Certifying Factory Surgeon for the Tamworth District of Staffs.

KNOX, Charles Frederick, L.R.C.P. Edin., M.R.C.S. Eng., appointed District Medical Officer of Port of Spain, and Medical Inspector of Immigrants in Trinidad.

MCGILL, J. M., M.B., C.M. Edin., appointed Certifying Factory Surgeon for the Annbank District, Ayrshire.

MORISON, H. B., M.B., appointed District Medical Officer of the Bromley Union.

PERSHOUSE, Frank, M.R.C.S., L.R.C.P. Lond., appointed District Medical Officer of the Orsett Union.

PHILIP, A., M.D., appointed Certifying Factory Surgeon for the Newport District, Fifeshire.

REID, W. A., L.R.C.P. & S. Edin., appointed Junior House-Surgeon at the Clayton Hospital and Wakefield General Dispensary.

SHEPHERD, Arthur Edmund, L.R.C.P., L.R.C.S., appointed Honorary Gynæcologist to the Adelaide Hospital.

SINCLAIR, Wm., M.B., C.M. Aberd., appointed Medical Superintendent of the Aberdeen Royal Infirmary, *vice* Charles Angus, M.B., C.M. Aberd.

THOMSON, Arnold J., M.R.C.S., L.R.C.P. Lond., appointed Medical Officer to the Stourbridge Union Workhouse, *vice* John Thomson, L.R.C.P. & S. Edin., deceased.

WOOD, W. W., M.B., C.M. Edin., appointed Certifying Factory Surgeon for the Grangemouth District, Stirlingshire.

ST. THOMAS'S HOSPITAL.—The following gentlemen have been selected as House Officers from Tuesday, June 2nd, 1903:

House-Physicians.—O. Hildesheim, B.A., M.B., B.Ch. Oxon.; H. W. Sexton, L.R.C.P., M.R.C.S.

Assistant House-Physicians.—B. N. Panton, B.A. Cantab., L.R.C.P., M.R.C.S.; J. N. Sergeant, L.R.C.P., M.R.C.S.

Obstetric House-Physicians.—(Senior) W. M. G. Glanville, B.A., M.B., B.Ch. Oxon.; (Junior) H. Spurrier, B.A. Cantab., L.R.C.P., M.R.C.S.

Clinical Assistants in the Special Department for Diseases of the Throat.—J. Coates, L.R.C.P., M.R.C.S.

Clinical Assistants in the Special Department for Diseases of the Skin.—W. Ibbotson, L.R.C.P., M.R.C.S.

Clinical Assistant in the Special Department for Diseases of the Ear.—E. A. Ross, M.B., Bc. Cantab.

Several other gentlemen have received an extension of their appointments.

DIARY FOR NEXT WEEK.

TUESDAY.

Royal College of Physicians of London, 5 p.m.—Dr. C. E. Beevor: On Muscular Movements and their Representation in the Central Nervous System. (Croonian Lecture I.)

Royal Medical and Chirurgical Society, 20, Hanover Square, W., 8.30 p.m.—Dr. William Aldren Turner: A Statistical Inquiry into the Prognosis and Curability of Epilepsy based upon the Results of Treatment.

Medico-Legal Society, 20, Hanover Square, W., 8.30 p.m.—Adjourned discussion on Dr. J. G. Garson's paper on The Position of Medical Jurisprudence in London, especially in reference to the Investigation of Cases of Death from Violence. Dr. Wynn Westcott: On Overlying in Infants. Discussion on the Workman's Compensation Act, to be opened by Dr. Fred. Smith. Mr. R. Henslowe Wellington: Notes on the recent Southwark Poisoning Case.

WEDNESDAY.

Dermatological Society of London, 11, Chandos Street, Cavendish Square, W., 5.15 p.m.—Demonstration of Cases of Interest.

THURSDAY.

Royal College of Physicians of London, 5 p.m.—Dr. C. E. Beevor: On Muscular Movements and their Representation in the Central Nervous System. (Croonian Lecture II.)

British Gynæcological Society, 20, Hanover Square, W., 8 p.m.—Dr. C. H. F. Routh: On some Directions and Avenues through which probably a more Successful Treatment of Cancer may Result, and perhaps Cure (adjourned discussion). Dr. Mansell Moullin: On the Treatment of Hæmatocolpos and Hæmatometra.

Ophthalmological Society of the United Kingdom, 11, Chandos Street, Cavendish Square, W.—Card Specimens at 8 p.m. by Dr. L. Werner, Mr. A. S. Morton, Mr. N. B. Harman, Drs. W. E. Thomson and Ballantyne, Mr. G. Hartridge, Mr. A. Ogilvy, and Mr. S. Stephenson. Papers at 8.30 p.m.—Major H. Herbert, I.M.S.: Glaucoma. Mr. N. B. Harman: Masticatory Winking Movements. Dr. L. Werner: A Case of Intraocular Echinococcus Cyst, with Brood Capsules. Dr. G. M. Scott: Retinitis Proliferans and Detachment of the Retina. Mr. H. W. Dodd: A Case of Melano-sarcoma of the Upper Eyelid.

Guy's Hospital Medical School, 4 p.m.—Dr. E. W. Ainley Walker: Modern Views upon the Causation of Cancer (Gordon Lectures in Experimental Pathology).

POST-GRADUATE COURSES AND LECTURES.

Charing Cross Hospital, Thursday, 4 p.m.—Lecture on Surgical Cases.

Hospital for Consumption and Diseases of the Chest, Brompton, S.W., Wednesday, 3 p.m.—Lecture on Asthma.

Hospital for Sick Children, Great Ormond Street, W.C., Thursday, 4 p.m.—Lecture on Inguinal Hernia.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C. Demonstrations will be given at 4 p.m. as follows:—Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, throat. Lectures will also be given at 5.15 p.m. as follows: Monday, Diarrhœa in Infants; Tuesday, The Relation of Carcinoma to Nerve and Tropic Areas; Wednesday, Ophthalmia; Thursday, The Etiology and Treatment of Hæmoptysis; Friday, The Surgical Treatment of Gastric Ulcer.

Mount Vernon Hospital for Consumption and Diseases of the Chest, 7, Fitzroy Square, W., Thursday, 4 p.m.—Lecture on Hæmoptysis.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C.—Tuesday, 3.30 p.m.—Lecture on Charcot's Joint-Disease.

Post-Graduate College, West London Hospital, Hammersmith Road, W.—Lectures will be delivered at 5 p.m. as follows: Monday, Examination of Stomach and Gastric Contents; Tuesday, Operations performed on the Stomach, including Intestinal Anastomosis; Wednesday, Demonstration of Clinical Cases at Hanwell Asylum (at Hanwell); Thursday, Some Common Diseases and Injuries of the Knee. Friday, Food Poisoning.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

DEATHS.

MEREDITH.—May 29th, at Wellington, Somerset, Sophia, the wife of John Meredith, M.D., aged 65 years.

WRIGHT.—On May 25th, Percy Phillips Wright, L.R.C.P. Lond., of 12, Tollington Park, London, N., aged 39. R.I.P.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to the subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

CLUBFOOT would like to ascertain what is the earliest period of life a case of talipes could be operated upon by Professor Lorenz's method.

M. C. would feel obliged for suggestions as to treatment and prognosis in a well-marked case of simple anosmia resulting from a fall on the occiput.

X RAYS AND THE EXAMINATION OF CALCULI.

P. S. S. asks to be recommended a book on x-ray work, a method of determining the composition of vesical calculi, and a way of ascertaining the character of the nucleus apart from the history of the case.

*** He would probably find Dr. David Walsh's book on *The Roentgen Rays in Medical Work* (London: Baillière, Tindall, and Cox, 1902, 12s. 6d.) suitable for his purpose. The third edition was reviewed in the BRITISH MEDICAL JOURNAL of October 18th, 1902, p. 1253. References to methods for ascertaining the composition of urinary calculi are given in v. Jacksch's *Clinical Diagnosis*, Fourth Edition (London: Charles Griffin and Co., 1899, 24s.) at p. 290 and elsewhere. To investigate the nature of the nucleus the calculus might be cautiously pulverized, or it might be sectioned.

ANSWERS.

W. D., F.R.S.C.—We are unable to recommend the motors of individual makers. We would refer our correspondents to the articles by Mr. Worby Beaumont in the BRITISH MEDICAL JOURNAL, vol. i, 1901, p. 1086, and Dr. Phillips, vol. ii, 1902, p. 981.

ACETYLENE LAMPS FOR CYCLES.

T. L. writes in reply to "H. A." to suggest the following rules in using acetylene lamps for cycles: Always empty out the chamber where the gas is generated at the end of a night's work and clean it. Also empty the water reservoir. Clean the burner thoroughly of any soot which may have collected, and pass a fine wire (one similar to that used in a hypodermic needle) down the minute apertures whence the gas issues. These tiny passages tend to get blocked. In course of time "H. A." will be able to estimate the amount of carbide to put into the generating chamber for the time his journey will take, to avoid having to throw in out unused carbide. The water supply is regulated by turning a lever "T. L.'s" lamp—the "Perfecta"; it is better not to let the lamp burn itself out, as the small flame at the end tends to block the burner by soot formation; for the same reason do not keep too small a flame. If the water supply is not flowing freely a smart tap with the finger on the lamp will usually improve matters.

LETTERS, NOTES, Etc.

MR. J. HERBERT PARSONS (Royal London Ophthalmic Hospital, E.C.) desires to call attention to the fact that the title of the work *Elementary Ophthalmic Optics*, published recently by Dr. Freeland Fergus, is almost identical with that of his work *Elementary Ophthalmic Optics including Ophthalmoscopy and Retinoscopy*, published a couple of years ago, and reviewed in the BRITISH MEDICAL JOURNAL, 1902, vol. ii, p. 708.

POST-MORTEM EXAMINATIONS FOR CORONERS IN LONDON.

AN EX-PATHOLOGIST writes: If the London County Council has no power to give a higher fee than £2 2s. to pathological experts, why does it not ask each general hospital to nominate one pathologist who should perform all the medico-legal necropsies in that hospital's district? It would be worth the pathologist's while to do this work at the ordinary fee for each case, when he is obviously ill-paid for a single difficult case. It is true that such an arrangement would take the work entirely out of the hands of the practitioners, but for this they ought to be thankful. It is exceedingly troublesome for one engaged in practice to perform a necropsy, and by no means free from danger to his midwifery patients, while the pecuniary loss to each individual practitioner by not being thus engaged would be so small as to be incommensurate with the advantages.

MEDICAL GOLF TOURNAMENT.

THIS annual tournament, the sixth, was held on Thursday, May 28th, on the links of the Hanger Hill Golf Club—to which club thanks are due for their courteous hospitality. There was a large entry in both classes and scoring would have been better but for a heavy thunderstorm bursting over the links accompanied by torrents of rain which flooded some of the greens. The results were as follows:

1st Class: 1st prize, Mr. Rolf Creasy, 2 down to bogey; 2nd prize, tied for at 3 down by Drs. Vassie and Maclaren; best last 9 holes, Dr. James Taylor, with good score of 2 up.

2nd Class: Resulted in a tie at 4 down between Drs Alderson, Gordon, Watson, and Schofield; best last 9 holes, Dr. Schofield with all square.

A keenly contested foursome competition against bogey in the afternoon was won by Drs. Seymour Taylor and Lyle, with the good score 2 down.

THE SELECTION OF A LOCUM TENENS.

DR. EDMUND HAY (Victoria Dock Road, E.) writes to advise any medical practitioner who may be thinking of engaging a *locum tenens* during the approaching holiday season, not to rely entirely on the recommendation of the medical agent, but to make as full inquiry as possible into the candidate's antecedents. "This method," he adds, "though somewhat troublesome is the only safe one. I have found it quite practicable and workable, and it has saved me from many a disastrous experience. Only on two occasions, when taken suddenly ill, have I engaged a *locum tenens* recommended to me by the agent alone, and on both occasions I was obliged to discharge the trustworthy (as advertised) gentlemen on the third day for hopeless drunkenness."

LETTERS, COMMUNICATIONS, ETC., have been received from:

A Dr. W. Atterbury, London; G. Arthur, M.B., Burton-on-Trent; Mr. F. W. Alexander, London; A.M.S. **B** Mr. W. F. Brook, Swansea; Dr. C. Buttar, London; Dr. J. Beddoe, Bradford-on-Avon; Dr. C. W. Buckley, Buxton; Sir W. M. Banks, Liverpool; Dr. J. Beard, Edinburgh; Mr. L. A. Bidwell, London. **C** Messrs. T. Christy and Co., London; Mr. A. Cotgreave, London; Clubfoot; Colonial Surgeon, Gold Coast; Mr. S. W. Cole, Cambridge; C. L. W.; Mr. R. Creasy, Windlesham: Mr. H. V. Craster, Stillington. **D** Mr. P. Dunn, London; Dr. G. Dean, Elstree; Discontented; Mr. G. W. Duncan, London; Dr. J. J. Douglas, London; Messrs. Down Bros., London. **E** Mr. A. P. Eldred, Walthamstow; Eden; Dr. R. Emmett, Portsmouth; E. R. F. **F** Dr. P. J. Freyer, London; F.R.S.C., Devon. **G** Mr. H. H. H. Graham, London; Mr. V. P. Gonsales, London; Dr. E. E. Goodbody, Great Bardfield; Dr. K. Grossmann, Liverpool; Mr. J. D. Gimlette, Ipoh, Perak; Dr J. Galloway, London: Mr. P. B. Giles, Bletchley; Dr. W. Gosse, Sittingbourne. **H** Mr. J. R. Hatfield, Worthen; Dr. C. F. Harford, London; E. Hay, M.B., London; Mr. F. A. Hyne, St. Mawes; Mr. J. L. Hamilton, Brighton: H. G. A.; Miss A. J. Hobbs, London; Dr. W. Harris, Hellesdon; F. R. Hill, M.B., Carlisle; H. T. Hinton, M.B., Heytesbury; J. Howell, M.B., Cheltenham; Mr. S. F. Holloway, London. **J** Mr. R. Jones, Eaglehawk; Mr. M. Jenkins, Port Dinorwic. **K** Dr. R. Kennedy, Glasgow. **L** Mr. C. Legg, London; Mr. J. B. Lamb, London; Mr. C. W. Lawson, Rothbury; Dr. T. Laffan, Cashel. **M** M.D.Edin.: Manchester Pathological Society, Secretary of, Manchester: Mr. A. E. May, South Hayling; Mr. R. L. C. Morrison, Tenby; Dr. W. MacCallin, London; Dr. W. J. C. Merry, Eastbourne; Mr. H. J. Manning, Salisbury; W. Mitchell, M.B., Bradford; M. C.: M. L. M. **N** J. H. Nicoll, M.B., Glasgow. **O** Mr. G. S. O'Rorke, Nottingham; Mr. T. H. Ollerhead, Wrexham; Old Style; Mr. R. W. Orpen, Bagnalstown; Mr. F. G. O'Donohoe, Castlerea; Old Subscriber. **P** J. G. Pardoe, M.B., London; J. Petrie, M.B., Melmoth; P. W.; Dr. W. H. Packer, Cressage; Purchaser; A. W. Paterson, M.B., Ipswich; Mr. F. Pfister, London. **R** Dr. A. Robertson, Glasgow; R. W. M.; R. M.; A. W. Russell, M.B., Glasgow; Mr. J. R. Riddell, Glasgow; Dr. Roethlisberger, Baden; Dr. W. Russell, Kimberley. **S** Dr. T. Sheldon, London; A. A. S. Skirving, C.M.G., M.B., Edinburgh; St. Thomas's Hospital Medical School, Secretary of, London; Dr. S. Sunderland, London; Six Members; Rev. J. Stratton, Wokingham; Staff Surgeon; Mr. J. A. Southern, Derby; Dr. W. Sykes, Exeter; S. Stephenson, M.B., London. **T** Thanks. **V** Vexata. **W** Worker; Mr. A. O. Wiley, Castletown, I. of M.; W. D.: Dr. O. K. Williamson, London; Dr. A. J. Wallace, Manchester; Dr. C. P. White, London; Mr. B. Wiggins, Hoyland; Dr. F. Willcocks, London; Dr. S. Whitaker, Liverpool; Dr. T. J. Wood, Bradford; etc.

BOOKS, Etc., RECEIVED.

Handbook of Physiology. By W. D. Halliburton, M.D., F.R.S. Fifth Edition. London: John Murray. 1903. 14s.

Tuberculosis. By N. Bridge, A.M., M.D. London: W. B. Saunders and Co. 1903. 6s.

Nothnagel's Encyclopedia of Practical Medicine. Diseases of the Liver, Pancreas, and Suprarenal Capsules. Edited by R. H. Fitz, M.D., and F. A. Packard, M.D. London: W. B. Saunders and Co. 1903. 21s.

Nothnagel's Encyclopedia of Practical Medicine. Diseases of the Stomach. By F. Riegel. Edited by C. G. Stockton, M.D. London: W. B. Saunders and Co. 1903. 21s.

A Textbook of Legal Medicine and Toxicology. Edited by F. Peterson, M.D., and W. S. Haines, M.D. In two volumes. Vol. I. London: W. B. Saunders and Co. 1903. 21s.

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The Croonian Lectures

ON

MUSCULAR MOVEMENTS AND THEIR REPRESENTATION IN THE CENTRAL NERVOUS SYSTEM.

Delivered before the Royal College of Physicians of London.

BY CHARLES E. BEEVOR, M.D.,

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LECTURE I.

METHODS.

[AFTER expressing his sense of the honour done to him by his selection as Croonian lecturer, Dr. Beevor proceeded to consider the methods by which it had been sought to determine the action of a muscle:

1. *The anatomical method*, by which (*a*) the muscle was dissected out and pulled up, the resultant motion being taken to be the action of the muscle during life; or (*b*) by which its action was deduced from its origin and insertion. The objections to this method were that it gave the action of the individual muscle alone, gave all the possible motions of a muscle, and postulated that it took part in all, whereas there was hardly an instance of movement in which only one muscle took part; and it did not follow that, because a certain movement could be produced by traction on a dissected muscle, it must take part in that movement during life.

2. *The electrical method*, employed with such great success by Duchenne. Its results were valuable, and where the muscles were superficial enough to be reached by the current was preferable to the anatomical method, but it was open to the same objection that it showed the action of the individual muscle alone and not in association.

3. *The physiological or natural method*, which he had himself employed. In it a living person was told to perform a definite movement, and the muscles taking part in it were observed.

Dr. Beevor continued to the following effect:]

Certain precautions have to be taken in using this method, the most important being that the person shall perform by fixation of the limb only that movement which is required, so that if told to pronate the forearm he must not at the same time abduct the shoulder and thereby bring into action other muscles than those concerned directly with pronation. The means which I have used for determining whether a muscle is taking part in any given movement are inspection and palpation either of the muscle as a whole or of its tendon. I have examined both normal persons and patients who have lost the use of some of their muscles. The movements have been performed in three ways:

1. By moving the limb only without any extra weight.
2. By moving the limb loaded with different weights.
3. By attempting to move the limb which is fixed by an opposing force.

The first procedure gives the minimum work which the muscles entering into any movement are called upon to do. The least possible work that a group of muscles can do is to overcome the inertia of a joint. This can be accomplished in the elbow by placing the upper arm on a support in a horizontal position and then flexing or extending the forearm on it in a horizontal plane; by this means the action of gravity can be neutralized. Or with the upper arm resting horizontally the forearm can be placed vertically and the movement of pronation and supination can be carried out. The next degree of work is that afforded by lifting the limb against gravity as in flexing the forearm when the humerus is in the vertical position alongside the trunk.

The third procedure gives the strongest work that the muscles can perform; and as by reason of the fixation of the limb, there is no alteration in the angle of the joint the error is avoided of assuming that the tightening of a tendon from the stretching of a passive muscle is evidence of contraction of the muscle.

The second method would give the intermediate conditions between the two extremes of maximum and minimum work.

The amount of work done by the muscles was measured by spring balances or by the traction scale of a clinical dynamometer.

With the exception of Winslow[1] and Duchenne I am unable to find that writers on anatomy as a rule take their knowledge of the action of muscles from the living subject. James Benignus Winslow, whom Duchenne rightly styles the Admirable Winslow, and who, although his name has an English sound, was Professor of Physick, Anatomy, and Surgery in the University of Paris in the eighteenth century, speaks with no uncertain note when he writes that "the experiments made on dead bodies, by pulling the muscles after they have been raised, are very fallacious." To be sure, list of muscles are given under the different heads of flexors, extensors, rotators, abductors, adductors, etc., but these lists are made by putting into one category, for instance, all the single muscles which are called flexors, etc., and such a list does not express a combination which has been verified by actual inspection during life. I venture to think that, if all the muscles contained in some of these lists contracted, the movement produced would not be the one which is expected.

In examining a case of muscular atrophy the chief difficulty consists in knowing what movements to ask the patient to perform in order to find out whether a particular muscle is acting or not. I trust the time will come when the actions of muscles will be taught on the living subject, together with the part which they take in the performance of simple movements.

MOVEMENTS OF THE FINGERS.

Taking first some of the movements of the upper limb and first those of the fingers, I would recall that the first phalanges of the fingers are flexed on the metacarpal bones by the interossei and lumbricales, an anatomical discovery made by Columbus and Fallopius in 1559 and 1561, which, according to Duchenne, was lost sight of till he (Duchenne) again called attention to it, but this is hardly correct, as it was mentioned by Winslow,[2] and John Hunter[3] refers to it in his Croonian lecture delivered before the Royal Society in 1777. The first phalanges are also flexed by the tendons of the flexores digitorum on their way to the terminal digits. If, however, it is required to flex the two last phalanges of each digit but not the first, the extensor communis digitorum is brought into action, a muscle which extends the first phalanx more than the last two phalanges. If the movement of flexion of the fingers is required without any movement of the wrist, then along with the flexores digitorum the extensores carpi radialis longior and brevior and ulnaris contract.

The extension of the second and third phalanges is as is well known produced by the two sets of muscles, the extensor communis digitorum and the interossei and lumbricales which are inserted into the common extensor tendons. The action, therefore, of these small muscles is to flex the first phalanx and to extend the second and third phalanges. Duchenne[4] is strongly in favour of the theory that the action of the extensor communis digitorum on the last phalanges is exceedingly limited, and that it is not an extensor of all the phalanges, but that it only has a true action on the first phalanx and he proposes to call it the extensor of the first phalanx. He also states that the interossei and lumbricales are in reality the sole extensors of the two last phalanges and the sole flexors of the first phalanx. It is no doubt true that when the extensor digitorum is paralysed, the last two phalanges can be extended by the interossei and lumbricales, and also that in the "claw hand" there is inability to extend the last digits when these small muscles are paralysed. In the latter cases if the first phalanges be kept passively flexed on the metacarpus the person is able to extend the terminal digits, so that it seems probable that the inability of the extensor digitorum to extend the terminal phalanges is due to its energy being expended on the first phalanges, which are not prevented from extending by the interossei and lumbricales which are now paralysed.

The extension of the proximal phalanges on the metacarpal bones by the extensor communis digitorum is accompanied, as Duchenne[5] pointed out, by contraction of the flexors of the carpus, namely, the flexores carpi radialis and ulnaris and palmaris longus. In lead poisoning, where there is paralysis of the extensor communis digitorum and not of the extensores carpi "the patient can, if he keeps his fingers flexed, extend the hand on the forearm. But if he wishes to extend his fingers, his first phalanges remain immovable and his hand is flexed on the forearm with as much energy as he makes in his greatest effort to obtain extension of the fingers." The explanation of this combination will be discussed later when we consider the synergic action of muscles.

The lateral movements of the fingers are adduction toward the middle finger, and abduction away from the line of the middle finger. Adduction is performed by the palmar

interossei and abduction of the three large fingers by the dorsal interossei, but with abduction of the index finger and the little finger other muscles come into action. It it exceedingly difficult to abduct the index finger without adducting or flexing the thumb, from the fact that the first dorsal interosseus or abductor indicis arises from the metacarpal bone of the thumb as well as from that of the index finger, so that if it is required to abduct the index finger alone the extensores ossis metacarpi and primi internodii of the thumb are called into action to prevent the thumb moving. Abduction of the little finger is performed by the special abductor minimi digiti, but as this arises from the pisiform bone, this latter has to be fixed by the flexor carpi ulnaris, and to obviate the special action of the flexor carpi ulnaris on the wrist, the extensor ossis metacarpi pollicis contracts, and when the hand is in a line with the forearm it is apparently impossible to abduct the little finger without the extensor ossis metacarpi contracting; if, however, the hand be first adducted to the ulnar side the contraction is less marked.

THE MOVEMENTS OF THE THUMB.

Flexion and extension take place in a plane parallel to the palm of the hand, of all three joints of the thumb, and abduction and adduction of the metacarpo-carpal joint in a plane at right angles to the one just mentioned. In addition there is opposition of the thumb to the fingers.

With regard to the movements of the first metacarpus on the carpus, in the movements of flexion and extension which take place in a plane parallel to that of the palm of the hand the palmar surface of the thumb is at right angles to the palm of the hand, but in the movement of abduction it seems to me that it is difficult to perform this movement without rotating the thumb inward, so that the palmar surface of the thumb is opposed to that of the fingers. Therefore in abducting the thumb it passes naturally into the position of opposition, and from that position it can be advanced towards the tips of the fingers in succession, but more rotation will be required to oppose it to the index finger than to the fourth finger.

Taking the terminal phalangeal joint of the thumb first, flexion, as is well known, is performed by the flexor longus pollicis, and if this movement alone be required the extensor primi internodii contracts to prevent the first phalanx being flexed on the metacarpus. Extension of the last phalanx is performed by the extensor secundi internodii pollicis, but, as was pointed out by Duchenne, this simple movement cannot be performed without also calling in the action of the abductor pollicis, the flexor brevis pollicis, and the adductor pollicis, as these small muscles send prolongations to the tendon of the extensor secundi internodii (Sabatier, Bouvier, and Duchenne), so that by the action of these small muscles the last phalanx can be extended without extending the first phalanx.

The movements of the metacarpo-carpal joint of the thumb are more complicated, and, besides flexion and extension, there is opposition.

Flexion of the metacarpal bone of the thumb is caused by the opponens pollicis and by the abductor flexor brevis and adductor pollicis—transversus and obliquus, as they are now called—when flexion of the first phalanx is also required; but when flexion of the metacarpal bone is required, with extension of the phalanges, there is also some action of the extensores primi internodii pollicis. Flexion of the metacarpal bone is also affected by the flexor longus pollicis after the metacarpal joints are flexed.

Extension of the metacarpal bone is performed by the extensor ossis metacarpi, and also by the extensor primi internodii. At the same time, as was pointed out by Duchenne, it is not possible to extend the metacarpal bone and the first phalanx of the thumb without putting into action the extensor carpi ulnaris, and also, I would add, the flexor carpi ulnaris, which, however, does not come into action so soon as the extensor. The reason why these muscles are brought in will be discussed later on; at present I would lay stress on the impossibility of extending the thumb without putting these other two muscles into action, and also that this action occurs in all positions of the wrist, even when it is in that of extreme abduction, a position in which it would not be possible for the extensor ossis metacarpi to move the wrist further in the direction of abduction.

Abduction of the thumb is performed by the small thumb muscles, namely, the abductor pollicis, opponens pollicis, and outer head of the flexor brevis, and also by the extensor ossis metacarpi and primi internodii. This is not in accordance with Duchenne,[6] who from electrical observations states that the extensor ossis metacarpi is one of the opposing muscles of the thumb and not its abductor, while the extensor primi internodii is not an extensor of the first metacarpal, but is the only direct abductor. If by abduction is meant carrying the thumb away from the first finger in a plane at right angles to the palm, I think that there is no doubt that the tendons of both these two extensors of the thumb can be felt to contract. There is one important point with regard to this movement, and that is that though it is possible to abduct the thumb when the extensors of the thumb are paralysed, it is quite impossible for the extensors of the thumb to abduct in the slightest degree when the small thumb muscles are paralysed; in fact inability to abduct the thumb is one of the best tests for the absence of the small muscles of the thumb.

In adduction of the thumb from the position of abduction it rotates from within outwards, and this movement is performed by the adductor transversus and probably the obliquus and by the extensor secundi internodii, as shown by Duchenne. When, however, the thumb has passed the middle point of its movement, I find that the flexor carpi ulnaris, also contracts, probably to counteract the extension of the wrist by the extensor secundi internodii.

Opposition is best performed after abducting the thumb, and from that position advancing it to meet the fingers; the muscles which take part in this movement are the abductor pollicis, the opponens pollicis, the flexor brevis, the adductores pollicis.

According to Duchenne,[7] the abductor chiefly opposes the thumb to the two first fingers, and the flexor brevis to all the fingers, while he also includes among the opposers the extensor ossis metacarpi, which, according to him, is one of the chief opposers of the metacarpal bone and not its abductor; but it seems to me that although it does act in abducting the thumb and putting it in the position of opposition it ceases to act as soon as any resistance is made to the opposition. The movement of opposition is therefore preserved when the extensor ossis metacarpi is paralysed and lost when the thenar muscles are paralysed.

It is interesting to note that Duchenne[8] from electrical observations ascribes to the adductor pollicis four different actions on the metacarpal bone of the thumb—namely, adduction, abduction, extension, and flexion. With this I am unable to agree, as I cannot find that the muscle takes part in abduction or extension, in any position of the bone, and I think it is an instance where the actions obtained by electrical stimulation of a muscle do not find their counterpart in the voluntary movements in the living body. It postulates that a muscle may act as a primary mover in two movements which are diametrically opposed to each other, a condition which I believe does not exist in the human body, and which I shall refer to later.

COMBINED MOVEMENTS OF THE FINGERS AND THUMB.

In grasping all the muscles which flex the different joints of the fingers and thumb come into action, and, in addition to these muscles, the extensors of the wrist take part in the action just as they take part in that of flexion of the first phalanges of the fingers. This combination was definitely pointed out by Duchenne,[9] who stated "that the synergic action of the extensors of the wrist is absolutely necessary to the flexion of the fingers, and the force of their contraction is then proportional to the energy of this flexion."

THE MOVEMENTS OF THE WRIST.

Flexion.—In addition to the definite flexors of the wrist—namely, flexor carpi radialis, flexor carpi ulnaris, and palmaris longus—the flexors of the fingers become also flexors of the wrist, but this depends on where the resistance is made. If the resistance is made against the phalanges, then the flexors digitorum do flex the wrist after they have flexed the fingers, but if resistance is made against the metacarpal bones so that only pure flexion of the wrist is required, then I do not think that the flexors of the digits contract. With regard to the thumb muscles, the extensor ossis metacarpi, as stated by Duchenne,[10] is a flexor of the wrist.

Extension of the wrist is performed by the three extensors of the wrist, and also by the extensor secundi internodii to a slight degree, but not by the other two extensors of the thumb. The question of the part played by the extensors digitorum will be discussed presently.

Abduction is performed by the flexor carpi radialis, the three extensors of the thumb, and the extensor radialis longior.

Adduction by the flexor carpi ulnaris and the extensor carpi ulnaris. It is interesting to note that Duchenne[11] from electrical stimulation denies that the flexor carpi ulnaris is an adductor or that the flexor carpi radialis is an abductor of the wrist. In reply to that I would say that in performing the movement of adduction and abduction these muscles can be felt to contract, and it shows how important it is that results obtained by electric testing should be verified by reference to the living body. The action obtained by electrical stimulation is that of the muscle acting alone, a condition which does not exist in the body unless all the other muscles are paralysed. In passing round from flexion of the wrist to adduction the flexor carpi ulnaris is either contracting with the palmaris longus in flexion or with the extensor carpi ulnaris in adduction. It is quite possible that if this last muscle, the extensor carpi ulnaris, were absent, the flexor carpi ulnaris would not be able to adduct the wrist alone. Now, according to Duchenne,[12] faradization of the extensor carpi radialis longior and of the extensor carpi ulnaris alone produces extension with abduction and adduction respectively, so that these two muscles acting alone could not produce pure abduction or adduction; to do so each must act with the flexor carpi radialis and ulnaris respectively.

In reference to the movements of extension and flexion of the wrist, an important question arises as to the part taken by the extensors and flexors of the fingers in this movement. It is mentioned by Duchenne[13]—and whether he was the first to point it out I do not know, but it is an observation which has been frequently confirmed, and I have already referred to it in speaking of the synergic action of the fingers and the flexors of the wrist—that in lead paralysis affecting the extensor communis digitorum but not the extensores carpi, as long as the person keeps his fingers flexed, he can extend with force his hand on the forearm; but if he should wish to extend his fingers, his first phalanges remain immovable, and his hand is flexed on the forearm with as much energy as the efforts he makes to produce extension of the fingers. Sir William Gowers,[14] in his work on *Diseases of the Nervous System*, states, in speaking of lead paralysis, in which the extensores digitorum are paralysed but not the extensores carpi, that "as long as the special extensors of the wrist retain power this joint can still be extended when the fingers are flexed so as to close the fist, although the wrist cannot be extended when the fingers are also extended. The reason for this seems to be physiological. When in health the hand and fingers are both extended, the special extensors of the wrist act very little if at all; the movement at the wrist-joint is effected by the long extensor of the fingers; if, however, the fingers are flexed the extension of the wrist is effected by the special extensors." So that, according to Duchenne, if a person with paralysis of the extensor digitorum tries to perform the movement of extending his fingers, the only result he obtains is flexion of the wrist; and, according to the extract just given from Sir W. Gowers, a patient with paralysis of the extensor digitorum has no power to extend the wrist as long as he tries to do it with the fingers straight. These conditions are frequently met with in cases of lead paralysis.

The problem before us (which has, as far as I know, never been explained) is—Why do not the extensors of the wrist, which in this case are healthy, come to the rescue, and help the paralysed extensors of the fingers to extend the wrist? They certainly do not contract, and there must be some explanation of the inability of the person to make them do so.

Let us observe what happens in the normal condition? With the fingers flexed so as to form a fist, if the wrist is to be extended, the work is done by the three extensores carpi and their tendons at the wrist and especially the extensores carpi radialis longior and ulnaris can be felt to contract. If now in the course of this extension the fingers be suddenly extended, the extensors of the carpus immediately cease to contract and the work of extension is done by the extensors of the fingers. But the extensors of the fingers cannot act without at the same time causing the flexors of the wrist to contract, and by putting one's thumb and finger on the tendons respectively of the extensor carpi radialis and the flexor carpi ulnaris, it will be found that when the fingers are extended the extensor carpi can be felt to relax and the flexor carpi ulnaris to contract. The wrist can therefore be extended fully by the extensors of the fingers without the help of the extensors of the wrist, but as the extensors of the fingers have to do this against the contraction of the flexors of the wrist there is a feeling of constraint. Now what will happen if strong resistance be made to the extension of the wrist by the extensors of the fingers, which are weak muscles, will the extensors of the wrist—so to say—come to the rescue and take part in the movement of extending the wrist. As a matter of observation I have found that they will come and help. But, and I think that this is a most important point and one which I believe has not been shown before, as long as the fingers remain extended the extensors of the wrist will not help until a certain resistance has been reached and when this amount of resistance is reached the extensor tendons of the wrist will be felt to contract. On the other hand if the extensors of the fingers retire from the contest and let the fingers flex, the extensors of the wrist instantly contract no matter how slight the resistance may be. It, therefore, seemed to me important in extending the wrist by means of the extensors of the fingers to find out: first, the amount of resistance necessary to cause the extensores carpi to contract; secondly, the amount of resistance necessary to cause the flexores carpi to cease contracting.

The experiment was made with the forearm placed on the flat surface of a table, with the palm downwards, and with the hand projecting beyond the edge of the table, and with the hand in a line with the forearm, and with the fingers extended. Resistance was applied in one of two ways: in the one by passing a broad band over the extended fingers, taking care to keep it beyond or peripherally to the metacarpo-phalangeal joint, and then to attach this band to a fixed point, with a dynamometer interposed. Against this fixed point the person extended the wrist-joint, while the finger of the observer was placed on the tendon of the extensor carpi radialis longior. The other method consisted in keeping the fingers extended, and by means of an assistant increasing the traction on the band until the tendon of the extensor carpi could be felt contracting. The latter was found to be the better method, as the wrist being fixed it was more easy to ensure that other movements should not be made which would prevent the tendon being felt.

The result of several examinations gave in my own case that the pressure of 3 lb. to 4 lb. was required to be applied to the extended fingers before the extensor carpi radialis longior could be felt to act.

It might be thought that the flexores carpi would cease to contract as soon as the extensores carpi took up the work. But this was not found to be the case, and in some instances more pressure was required, as much as 10 lb. having to be applied before the tendons of the flexores carpi relaxed. The relaxation of the flexors of the carpus is a much more difficult matter to determine, as in some trials they seemed to leave off contracting at once, while in others they were still contracting even with a pressure strong enough to overcome the resistance of the wrist. I think that the following is the explanation:

If the fingers be actively extended to the full amount, or if they be quickly extended, the flexors of the wrist are felt to contract synergically, and if in this condition pressure be made against extension of the wrist, the flexors of the wrist will not relax; but if the extension of the fingers be made very slowly and not to the full degree, the flexors of the wrist will hardly be felt to contract, or very slightly, and in that condition very little pressure against the extension of the wrist suffices to relax them altogether. It therefore appears that if the predominant idea is extension of the fingers, then the flexors of the wrist contract, and remain contracted if this combination be required to take part in the superadded movement of extension of the wrist. Now, if the movement of extension of the fingers is not made to the full extent, and the superadded movement of extension of the wrist becomes the predominant one, the flexors of the wrist cease acting as soon as pressure is applied to the dorsum of the first phalanges, although the extensor communis digitorum is taking part in the movement and its tendons can be seen to stand out.

I think these experiments show that if the movement of extending the wrist be performed with the fingers extended, the extensors of the fingers have to do all the work themselves, and against the contraction of the flexores carpi until the amount of work done amounts, as in my own case, to 3 lb. to 4 lb., when the extensores carpi will join in and help them.

Now to apply this to what we find in lead paralysis. In paralysis of the extensors of the fingers due to lead, if the movement of extension of the wrist be started by that of attempting to extend the fingers, the extensores digitorum, being paralysed, cannot move at all and so cannot possibly reach the amount of 3 lb., which, as we have seen, is required for them to attain before the extensores carpi will come in and help them. The important point is that the patient has no power to make the extensors of the carpus contract, and the only resulting movement is flexion of the wrist due to the synergic action of the flexores carpi. It rather reminds one

of some highly-organized establishments where if one of the servants is incapacitated it is no one's place to do the work, which is consequently left undone.

I have already mentioned that the flexors of the fingers take part in the flexion of the wrist, and they do so very readily. It is also to be noted that when the flexores digitorum act as flexors of the wrist the synergic action of the extensores carpi does not occur. When, however, we cause the fingers and thumb to contract powerfully, as in grasping, and while this is occurring we flex the wrist, we get an entirely different condition. Here we have taking part in the movement of grasping the flexors of the thumb and fingers, and also the synergic action of the extensors of the wrist, and the question is, What will happen if we now flex the wrist? Will the movement be done by the flexors of the fingers, or will the flexors of the wrist come and help? And, lastly, will the extensors of the wrist relax? It will be observed that if this movement be attempted while a strong grasp is maintained, and also if the flexion of the wrist be made slowly, there is a considerable feeling of strain, and a certain amount of tremor due to the antagonism between the acting muscles.

To determine the three above-mentioned points the following method was used:

1. It was first necessary to ensure that the grasp of the hand was being maintained throughout the observation, and this was done by means of a dynamometer, which was grasped in the hand, and the index of which could be watched, for I found that in flexing the wrist against resistance as soon as the grasp was relaxed the flexors of the wrist immediately contracted, even in the slightest degree of flexion, and, as I have already mentioned, the whole experiment depended on the grasp being maintained.

2. The forearm was put in the position midway between supination and pronation, and a band was passed round the metacarpal bones, and either traction was made horizontally in the direction opposed to flexion of the wrist, or flexion was made by the wrist against a fixed point; a spring balance was attached to the band, and the amount of traction was read off at which the tendons of the flexors of the wrist were felt contracting, and also the amount of traction required to make the tendon of the extensor carpi radialis relax.

In my own case I found that the tendon of the palmaris longus could be felt first when the balance measured 3 lb., whereas the tendons of the flexores carpi radialis and ulnaris were not felt till 5 to 6 lb. traction was made. On the other hand, the tendon of the extensor carpi radialis was not felt to relax till as much as from 14 to 16 lb. traction had been made.

The strained feeling would therefore seem to be due to the antagonism between the extensors of the wrist and the flexors of the wrist.

These experiments show that the combination between the extensores digitorum and flexores carpi, and also between the flexores digitorum and extensores carpi, is so strong that the muscles which flex and extend the wrist will oppose each other rather than sever their connexion with the finger muscles, when the wrist is being extended or flexed in conjunction with extending the fingers or flexing the fingers and thumbs.

While discussing the question of the action of the extensors of the wrist with the flexors of the fingers, it will be advisable to say a few words about the nature of this combination. Duchenne calls attention to the definite association between the above-mentioned muscles, as well as that of the extensors of the fingers and flexors of the wrist, and that of the extensor ossis metacarpi pollicis and the extensor carpi ulnaris. He speaks [15] of the "moderating synergy," and he describes

that the synergic contraction of the flexors of the hand on the forearm is inseparable from the muscular function which ought to produce voluntary extension of the first digital phalanges. To place the common and special extensors of the fingers in the greatest elongation in order to augment their dynamical power: such is the useful end of this instinctive combination of the flexors of the hand during extension of the fingers.

He refers to the over-extension of the wrist which occurs in extending the fingers when the flexors of the wrist are paralysed, and the explanation which he gives is that "the common extensors of the fingers, being up to a certain point at the same time extensors of the hand on the arm, their contraction renders necessary the moderating synergy of the flexors of the wrist." One of the earliest mentions that I can find about a muscle passing over two or more joints is that of William Cowper who [16] reproduces Bidloo's splendid anatomical plates. He gives various reasons for this occurrence, but he does not mention the bringing in of other muscles. John Hunter [17] in his second Croonian lecture delivered before the Royal Society in 1777, was, as far as I can ascertain, the first to enunciate the doctrine of synergic muscles. He says: "Muscles often go over two, three, or four joints, and only move the third and fourth, as the flexors of the last joints of the fingers; but to prevent the first and second joints being moved by this action the extensors of the intermediate joints are obliged to interfere and keep them bending." This is really the use of these synergic muscles, and although the flexors of the wrist do act in placing the extensors of the fingers in the greatest elongation in order to augment their dynamical power, and to such a degree that when the wrist is flexed to a right angle the grasp is about one-half what it is when the hand is in a line with the forearm, that I think is not their object. For if the wrist be extended passively as far as it will go, and if then the fingers be actively extended, the flexor carpi ulnaris will still be felt to contract without remedying the position of the wrist-joint, even though the extensors of the fingers are working at a great disadvantage. Surely if the function of the synergic muscles was to put the extensors of the fingers in the most advantageous position, they would flex the wrist and bring the hand into the position in a line with the forearm. Their function appears to be to fix the wrist in whatever position it is required to be, so that the fingers will have a secure basis to work upon. Following the opinion cited above of John Hunter, I think the condition may be stated thus: When a muscle by passing over two or more joints has two or more different actions, then, if only one of these actions is required, other muscles are brought into the movement whose actions are antagonistic to those of the muscle which are not required. In the above quoted case the extensors of the fingers, by passing over the wrist, are extensors of the wrist as well as extensors of the fingers, and as extension of the wrist is not required the antagonists to this action, namely, the flexors of the wrist, are brought into the movement, and the resultant movement is extension of the fingers without extension of the wrist. This rule applies, as far as I have been able to observe, throughout the muscular system. These muscles, which are brought into action to neutralize an action which is not required, I should propose to call "synergic muscles," a term used by Duchenne.

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Observations

ON

THE TREATMENT OF CANCER OF THE RECTUM.

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THE treatment of cancer of the rectum practically resolves itself into three alternatives, namely, (1) to leave the disease alone; (2) to perform colotomy; or (3) to remove the affected portion of the bowel. I may say a few words on each of these points.

1. Where the disease is left alone, the treatment consists in the relief of symptoms as they arise, and the adoption of a variety of palliative expedients, such as local injections to keep the part clean, laxatives to keep the bowels open, scraping away the fungating masses if they are causing obstruction, opium, etc. There is no doubt that a certain number of cases get on very well on these lines; and so long as the disease has not spread to neighbouring organs or involved nerves, such as the sacral plexus, the patient is in many ways more comfortable than with colotomy, because he still retains his sphincter and is able to go about. The cases suitable for this kind of treatment are those where there are fungating masses, chiefly growing from one side of the rectum, as distinguished from those in which there is an encircling and constricting growth.

2. Colotomy. This removes the risk of obstruction. It may also relieve some of the symptoms, such as tenesmus and the pain due to the passage of faecal material over the

raw surface, and it is of great value where other organs such as the bladder are involved. It is also strongly held by some that the operation of colotomy may delay the spread of the disease, that just as the rectum tends to atrophy after the operation so the disease that is growing in it may do likewise, the more so as it is no longer irritated by the constant passage of faecal material over it. I must confess that I have not been able to convince myself that colotomy has any very marked effect in leading to arrest of the growth of the cancer, and I certainly should not advocate its performance in a case where that was the sole or chief reason that could be urged in its favour. On the other hand, colotomy does not stop the severest form of pain which occurs in these cases, namely, that due to involvement of the sacral plexus, nor does it avert, although it may diminish, the troubles due to extension of the disease to neighbouring organs. It is a very disagreeable alternative to sensitive patients and it makes even a strong man more or less of an invalid. Most patients dislike the result extremely and I have heard more than one say that had they at all realized what it meant they would have refused to have had it done. In fact, when performed comparatively early in the disease—when of course it is most safely done—patients, not realizing what it has saved them, are very apt to look on it as an unnecessary and serious addition to their troubles and to reproach their surgeon for having prolonged their existence by this means. The chief point for discussion is, I think, the period at which colotomy should be performed and in my own opinion, while it frequently gives great relief to the patient and prolongs his life, it should not be performed in the early stage while the patient is still comparatively comfortable.

3. In marked contrast to these two methods, which after all condemn the patient to die of his cancer and only try to prolong his life and make him somewhat more comfortable, we have the third procedure in which an attempt is made to rid him of his disease. Opinions differ very much as to this question of excision of the rectum, some rejecting the operation almost entirely, while others go to the other extreme and advocate it even in very advanced cases. The majority of surgeons, however, agree as to the value of the operation when performed in suitable instances.

The answer to the question of radical treatment depends, in the first instance, on what the probabilities are of getting rid of the disease by excision, and, in the second place, on the risks which will be run in the attempt. Many papers have been written advocating colotomy as opposed to excision and vice versa, but the footing on which each stands is entirely different. Colotomy leaves the patient with his cancerous rectum and is merely a palliative operation, while excision aims at ridding the patient of his disease. It seems to me that if by excision of the rectum in any individual case we can feel that there is a fair probability of ridding the patient of his disease, at any rate for a considerable period, and if that can be done without undue risk to life, this operation should be proposed to the patient, and under such circumstances there can be no discussion as to whether he should have excision or colotomy done. Should be decide against excision of course the position is altered, but so far as the surgeon is concerned I fail to see where the contrast between the two operations comes in. The case is either suitable for excision or it is not.

Two questions therefore arise with regard to excision of the rectum for cancer, namely (1) the value of the operation as a radical procedure, and (2) the risks which it involves. In many cases of cancer situated elsewhere, no one hesitates to carry out a radical operation with the view of prolonging life or even of getting rid of the disease entirely. And the question here is whether cancer of the rectum falls into line with cancer in other situations; whether favourable results as regards non-recurrence may also be expected from excision of the cancerous rectum, or whether the results are so bad that they do not compensate for the risk.

Now in the rectum, as in the intestine generally, the form of cancer which occurs is probably in the majority of cases more slowly growing than cancer in a good many other places, notably in the tongue; and were it not for the obstructive troubles which are so apt to follow, the length of life of a patient with intestinal cancer would compare very favourably with that of patients with cancer of the tongue. Hence in the majority of cases there is nothing inherent in the form of cancer which occurs in the rectum that is against an attempt at a radical operation. Nor is there anything in the situation which renders complete removal of the disease particularly difficult in suitable cases. The greater part of the rectum is comparatively easily accessible from below, and the whole of it can be reached by a combined abdominal and perineal operation. The lymphatic glands run in close contact with the intestinal wall, and, provided that the operation is done at an early period of the disease and that the glands are comparatively slightly affected, the disease is readily enough removed. As a matter of fact, experience shows that a very considerable proportion of patients in whom excision of the rectum has been performed for cancer remain well for a long time. In my own experience I have a number of patients remaining alive and well, as far as one can tell, for periods extending up to nine years since the operation, and in published statistics of other surgeons very satisfactory results are also recorded. I have not had time to work out exact statistics in this matter, but in Kocher's statistics, published some years ago, he had 28 per cent. of cases operated on from three to sixteen years previously which showed no recurrence. I have no hesitation in saying that, as regards the question of removal of the disease, cancer of the rectum shows in suitable cases a very fair percentage of recovery as compared with cancer elsewhere.

It appears, however, that in cancer of the rectum the proportion of suitable cases which come under observation is less than, for example, in cancer of the breast, of the extremities, etc. In fact, when I wrote the Lettsomian lectures and went into this matter carefully, I calculated that only about 20 per cent. of the patients as they present themselves to the surgeon will be found to be suitable for a radical operation from the point of view of the probability of the complete removal of the disease; possibly with the recent improvements in the operative procedure this percentage might be somewhat increased. I may point out, however, that, apart from complete recovery lasting several years, the operation may, even in cases where recurrence takes place elsewhere, prolong life and save the patient an immensity of suffering. Provided the recurrence does not take place actually at the divided portion of the bowel, the patient is often considerably benefited, because he escapes the obstructive troubles just as he does after colotomy; and he has this advantage over colotomy, that he also escapes the extension of the disease to other pelvic organs with its accompanying suffering; in fact, he probably lives longer and dies in a much less distressing way than if the cancer of the rectum had been left alone and colotomy performed.

As regards the mortality of operations for excision of the rectum, it is no doubt much higher than the mortality after operations through unbroken skin, such as amputation, excision of the breast, etc.; in the latter cases the mortality is extremely slight—probably under 1 per cent.; whereas in cancer of the rectum the mortality ranges from 5 to 30 per cent. in different statistics. I should reckon the mortality of excision of the rectum as from 5 to 10 per cent. as the result of recent improvements in the operation. Hence my own opinion as regards excision of the rectum, from the point of view of whether it is worth doing or not, is that in suitable cases it is a very valuable procedure, and that the risk run by the patient is not at all in excess of what ought to be run seeing the advantages which may be gained.

The next question, therefore, which arises is this: Is the particular case under consideration suitable for radical treatment or not? The indication for radical treatment is an extremely important point for discussion, and it will be very valuable to hear the opinion of the Fellows of the Society on this matter, as well as to learn their experience of the results of excision both from the point of view of removal of the disease and of the danger of the operation.

I may state my own opinion as regards the suitability of cases for excision as follows: I need not go into the question of how far the general condition of the patient affects the decision, because I presume all surgeons will be agreed that operation is only to be undertaken in patients who are in a fair state of health, who are likely to stand a severe operation and, it may be, a prolonged convalescence, who are not suffering from any other organic disease, and in whom there are no evidences of extension of the malignant disease to other parts of the body.

As regards the local conditions which have to be taken into consideration, the question practically is, Can we or can we not remove the affected portion of the bowel with a good chance of its not recurring at least locally? The chief local contra-indication to my mind is the fixity or otherwise of the affected portion of the bowel. Once the bowel becomes fixed we know that the disease has infiltrated the whole thickness of the rectal wall, and has begun to spread into the surrounding

tissues. Under those circumstances we no longer have to deal with disease confined more or less completely within a tube, but with disease which has escaped from its definite limitations, and which may be spreading far and wide beyond what we can detect either by palpation or by sight. Hence, in my opinion, anything like distinct limitation in the mobility of the affected portion of the intestine is a contraindication to an attempt at a radical cure. This, however, is a point on which it will be very important to hear the experience of the Fellows of this Society, for some surgeons do not take such a rigid view of the matter as this, and do not hesitate to operate even when the disease has passed through the wall of the rectum and has infiltrated neighbouring structures, such as the prostate, the wall of the bladder, etc. One exception I might make to this question of adhesion, and that is where a tumour situated low down become adherent to the posterior wall of the vagina. Where such adhesion is comparatively slight, I have in more than one case removed a V-shaped portion of the posterior wall of the vagina along with the rectum without any local recurrence having taken place. In one patient about four years have now elapsed since the operation was done. The upper portion of bowel was brought down to the anus, and the patient still remains in perfect health, with complete control of the bowel and without any communication with the vagina.

The other point which is held by some to be also a very strong contraindication to operation is the situation of the cancer. It has been stated that if the cancer is so situated that the finger cannot reach the upper limit it is then inoperable. I think, however, that that dictum is, perhaps, carried a little too far, and, while admitting that a high position of the cancer is a serious matter, I do not think that it is a complete contraindication. It seems to me rather to raise the question of the method of operation than to contraindicate operative interference, for it is quite possible to remove the disease from the rectum when very high up by an abdominal operation or, if considered desirable, by a combined abdominal and perineal operation. By opening the abdomen with the patient in the Trendelenburg position, and by keeping the intestines well out of the way, the bowel can be divided above the cancer, the vessels leading to the lower portion can be easily commanded, and the lower end may be invaginated, or indeed completely removed, if it is deemed necessary, and if it is quite clear that the upper end cannot be brought down to the anus it may be brought out at a colotomy wound. The patient is thus left with a colotomy wound, just as if he had had an ordinary colotomy performed, but with the advantage over that operation that he is also possibly minus his malignant disease.

I may, in conclusion, raise three points with regard to the method of operation, namely:

1. The question of a preliminary colotomy.
2. The best method of reaching the growth.
3. The procedures to be adopted for the avoidance or diminution of sepsis, and the method in whith the divided end or ends of the bowel should be dealt with.

1. *The Question of a Preliminary Colotomy*.—This is a point which has given rise to very considerable difference of opinion. Some surgeons advise that in the great majority of cases colotomy should be performed some time before the operation of excision is proceeded with. The advantages claimed are that after the subsequent excision faecal material will no longer pass over the raw surface, and the chances of severe sepsis will thus be very much diminished; and, further, that in cases where the divided ends of the bowel have been brought together they will unite much more certainly. There is no doubt that from these two points of view, especially from the latter, there is a good deal to be said in favour of preliminary colotomy. At the same time I think the disadvantages outweigh the advantages, and, in my opinion, it is only in exceptional cases that this procedure is called for. As regards the question of infection of the wound from the divided intestine, unless the end of the intestine is brought out at the skin or unless it is invaginated into the lower end of the bowel, infection of the wound will almost certainly occur quite apart from the passage of faeces over it. No doubt it may be of a worse type if faecal material is also present; but, as I shall presently point out, this can be avoided in other ways. The chief value of colotomy is in cases where end-to-end suture of the divided bowel is carried out, but by varying the method in which the bowel is united from an end-to-end suture to an invagination of the upper into the lower portion the force of this argument is very much diminished. On the other hand, the disadvantages are very considerable. In the first place, if the case is successful it means that the patient has to go through two, or it may be three, severe operations instead of one. In the second place, although colotomy in itself is not an operation of any great danger, nevertheless, especially in cases where it is not thought advisable to open the bowel for some days after it has been brought out, the patient does go down hill very considerably, and it is a matter of two or three weeks at least before he is well enough to undergo the severe operation of excision of the rectum. But during this time the cancer in the rectum has been going on growing, and it may quite well be that when the patient is ready for the radical operation it is found that the case is no longer an operable one. Then, again, the fixation of the intestine to the abdominal wall at the upper part may in some cases seriously interfere with the pulling down of the rectum during the operation of excision, and still more seriously with the pulling down of the rectum sufficiently to allow of union between the upper and lower parts of the bowel. And, lastly, I may point out that in cases where the disease is situated high up, and where an abdominal or a combined abdominal and perineal operation is necessary, the presence of a colotomy wound is a very grave complication, and may lead to infection of the peritoneum during the operation. Hence, my own opinion is that colotomy preliminary to excision of the rectum should be regarded as an exceptional procedure rather than as one to be adopted as a general rule.

2. *As regards the Methods of Gaining Access to the Disease*, I need say very little. Four chief methods are employed—namely, the perineal, the sacral, the vaginal, and the abdominal or the combined abdominal and perineal. These four methods fall into two groups, the perineal and vaginal being only suitable for cases where the disease is quite low down in the bowel, the sacral and the abdominal or combined abdominal and perineal operations for cases where the disease is situated higher up. In the majority of cases the sacral method is the most suitable. The perineal operation does not give at all the necessary amount of room for dealing with the disease, and especially with the extension of the glands upwards, unless in cases where the disease is situated very low down; and besides, in the perineal operation one is working more or less in the dark, while in all cases of malignant disease it is an axiom that one should have plenty of room and see what one is doing.

The vaginal operation is also chiefly suitable where the disease is situated comparatively low down. At the same time I have employed it very satisfactorily in three cases where the disease was not entirely limited to the lower part, and the operation is a comparatively easy one. Of course it implies careful preliminary disinfection of the vagina. Apart from the ease with which one gets at the rectum and the peritoneal reflexion, I may point out that in cases where the bowel can be brought down to the anus additional support to keep it in its place may be obtained in stitching up the vagina by making the stitches catch hold of the muscular wall of the bowel as well.

As regards the combined abdominal and perineal operation as introduced by Quénu, this procedure is still on its trial, and so far the mortality has been very considerable. His procedure consists in ligature of the internal iliac arteries, division of the rectum, formation of a colotomy opening, and subsequent removal of the lower part of the rectum and anus from below. Personally, I prefer to remove the affected portion of the intestine above a clamp, invaginate and stitch up the lower end of the bowel and leave it in position, while the other end is brought out in the groin, and the ligature—which has been applied around the bowel before the removal of the disease—left in situ for two or three days if possible. There is really no very great advantage in dissecting out the lower part of the rectum, and it adds very considerably to the shock and loss of blood and the prolongation of the operation.

3. *The Avoidance of Sepsis and Methods of Dealing with the Divided Bowel*.—In performing these operations I consider that although the situation is one where complete asepsis is highly improbable, still all the usual precautions should be taken. The perineum should be shaved and disinfected, the rectum should have been previously washed out, and all the ordinary precautions as regards hands, instruments, etc., employed. In addition, the surgeon should avoid any examination from the rectum at the time of the operation. He should have ascertained all that he requires to know on a previous occasion; otherwise, it is very difficult to cleanse the finger afterwards; and, even if he wears an indiarubber glove, he is very apt to soil the skin, instruments, etc.

In fact, in addition to disinfecting the perineum, I always stitch up the anus tightly so as to prevent any escape of material from it during the course of the operation. Further, wherever it is possible I peel down the glands and ligature the bowel in two places, the ligatures being left long, and bring the rectum as far as possible outside the wound before the bowel is divided. This of course is not always possible, but in cases where the lower end has to be taken away the whole lower portion of the rectum can be brought out of the wound in the neighbourhood of the sacrum and dealt with outside, and thus the risk of infection of the wound is very much reduced. In addition to these procedures, I generally employ prophylactic injections of antistreptococcus serum. Although there are many other bacteria than streptococci which may enter the wound, still the chief destructive process, namely, the diffuse cellulitis which extends up in the hollow of the sacrum, and which is the chief cause of the fatal results, is essentially streptococcal in character. Since I have employed these injections I have seen very little of this severe form of cellulitis, but I must say that I have at the same time been dealing with the end of the gut in a different manner to that which I formerly employed, and it is quite possible that the chief success is due to that rather than to the serum.

As regards the method of dealing with the divided end of the bowel, the first point to be determined is whether the proximal end can be united to the distal portion or not. In a considerable number of cases, no doubt, one can unite the two ends; and I observe that Sir Charles Ball, in his recent lectures at the College of Surgeons, speaks of a large number of cases in which he has recently been able to do so; after what he has said, I feel sure that we shall try to bring down the upper end to the anus more frequently than we have done. As regards the method of uniting the ends of the bowel, I do not think that the ordinary end-to-end union, such as one employs in the intestine higher up, is a good procedure, and, as a matter of fact, if I cannot get the ends to overlap more than is necessary to have a single or double row of stitches at the point of junction, I prefer to make a sacral opening. My own experience of end-to-end union of the rectum, where there is tension on the upper portion, is that it is very apt to give way somewhere or other, and thus a severe cellulitis may result, while, if the patient recovers, the convalescence is very prolonged, and fistulae may be left which are very distressing to the patient. I believe that the best method is to draw the proximal end down into the interior of the distal end for at least ½ in. to 1 in. Under such circumstances the mucous membrane is stripped off from the upper part of the distal end for a corresponding extent. The lower end of the proximal portion is then pulled into the tube, which is thus denuded of its mucous membrane, and secured there by stitches passing through the whole remaining thickness of the lower tube and the muscular coat of the upper. In some cases, indeed, the upper portion can be pulled right down to the anus, and the result is then practically perfect, and this should be aimed at as far as possible. In any case, by this procedure the chance of the occurrence of a fistulous opening is very much diminished, as is also that of infection of the wound.

On the other hand, where this procedure is not possible I believe a sacral opening is the proper procedure, but in doing that I do not stitch the open end of the bowel to the skin wound. Before the intestine is divided a double ligature is applied above and below the point of division, and the ligatures are left long. By means of the ligature the divided end of the bowel is kept outside or at the wound and covered by a piece of dressing, and the wound is then stitched up with silkworm gut, a drainage tube being inserted in front where the anus was. The skin around the point of exit of the rectum is then stitched to the muscular coat of the bowel as far above the divided end as possible, and the ligature is left on. In fact, if I can manage it I stitch up the wound and complete the operation before cutting off the lower end of the rectum with the tumour. In the first instance, the ligature of the bowel prevents infection of the wound from that source, and in some cases it does so for a sufficient length of time to allow the large wound to heal by first intention. No doubt gangrene at the seat of ligature commences pretty early, and then there is septic discharge in that situation, but by that time the deeper parts of the wound are often sufficiently sealed. The actual discharge of faeces does not occur in this method until the third or fourth day, when the ligature separates, and by that time the healing of the wound is usually safe. I must say that since I have adopted this plan I have been extremely pleased with the results, and I have more than once obtained complete healing in from ten to fourteen days. As a rule, however, a certain amount of infection occurs in the immediate neighbourhood of the bowel, but it seldom extends to any depth.

The chief objection to this procedure is that by the ligature the escape of gas from the bowel is completely prevented, and some patients do suffer a good deal from flatulence. At the same time, I have not in any case found it necessary to divide the ligature in order to relieve the patient. That, however, is always a possibility. To meet this objection it may be advisable, especially in feeble patients, to remove the ligature at the time of the operation, after the bowel has been fixed to the margin of the wound and the wound stitched up, and introduce a small Paul's tube into the bowel and tie it in. Under these circumstances there is no trouble with flatulence; but in one instance, which I operated on recently, where I used a fair-sized Paul's tube, it apparently pressed too much on the lower end of the rectum, and led to sloughing and failure of union. I think this plan should be reserved for exceptional cases, and that in most instances retention of the ligature is best.

As regards the subsequent functional result, I think that in cases of sacral anus benefit is derived from Gersuny's suggestion of giving the bowel a half or three-quarter turn before bringing it out, and I always follow that plan now. In one of my cases, where about six years have now elapsed since the operation, the patient, who at first wore an apparatus, has now discarded it, and goes about even without a pad, and he has no trouble from the artificial anus. That, however, is quite an exceptional condition.

THE SURGERY OF THE SIMPLE DISEASES OF THE STOMACH.

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[After thanking the members of the American Surgical Association for the invitation to present a paper at the meeting, Mr. Moynihan discussed the subject of the surgery of the simple diseases of the stomach under the following headings:

1. Perforation of gastric or duodenal ulcers.
2. Haemorrhage from gastric or duodenal ulcers.
3. Chronic ulcer; its various clinical types.
4. Hour-glass stomach.

1. Perforation.

The experience derived from 12 operations for perforation, of which six were successful was briefly related.

He then proceeded as follows:]

2. Haemorrhage.

The bleeding from gastric or duodenal ulcers is recognizable either as haematemesis or melaena. In lesser degree these symptoms are seen not infrequently; in their severer forms they are of dire significance, and may be the sole cause of the patient's death. It is but rarely that the surgeon is called upon for so momentous a judgement as is necessary in cases of severe haematemesis or severe melaena. For the condition of the patient is poor, even, at times, desperate. Operative intervention is therefore hazardous, yet a continued bleeding will inevitably end in death.

It is necessary at the outset to emphasize the fact, a fact frequently ignored, that haemorrhage may manifest itself under entirely different circumstances in different patients. In some it is the earliest and for a time the only, symptom of gastric disturbance; in others, it is the last expression in a long and tedious course of symptoms. In other words the haemorrhage may occur from an acute or from a chronic ulcer of the stomach or duodenum. It will be found when the clinical history of a series of cases is examined that whereas in the latter the bleeding varies within the widest limits both as regards quantity and frequency, in the former the clinical history is repeated in case after case in a most remarkable manner.

Haemorrhage from an Acute Ulcer.

Under the term "acute ulcer" of the stomach are probably included several varieties of pathological conditions which are different in causation, different in destiny, but alike in the

single fact that their clinical recognition is due to the bleeding which occurs from them in abundant quantity. There is the ordinary peptic ulcer, there is the minute erosion barely recognizable even on close scrutiny, which yet opens up a vessel, and there are "weeping patches" and "villous areas" and similar indeterminate conditions which have been recognized when the stomach has been explored during life. To the clinician all these conditions are betrayed by their tendency to haemorrage.

In almost every instance the haemorrhage is the first symptom. Even on close inquiry it is difficult to elicit any history of antecedent gastric discomforts. The vomiting of blood comes unexpectedly and suddenly, a large quantity of blood is lost, and the patient suffers, often in an extreme degree, from the symptoms of haemorrhage; the pulse becomes feeble and fluttering, the face waxen, the breathing rapid and shallow, the body surface cold or clammy. For a time the symptoms may give rise to serious alarm, but a rally is seldom long delayed. The bleeding is checked spontaneously and vomiting is rarely repeated, or if repeated the quantity of blood lost is but small.

In several of my cases a sudden, apparently causeless, haemorrhage has ushered in a long train of symptoms of dyspepsia. The acute ulcer has been the precursor, or rather the earliest stage, of a chronic ulcer.

The characteristics of haemorrhage from an acute gastric ulcer are, therefore, spontaneity, abruptness of onset, the rapid loss of a large quantity of blood, the marked tendency to spontaneous cessation, the infrequency of a repetition of the haemorrhage in anything but trivial quantity, and the transcience of the resulting anaemia.

Haemorrhage from a Chronic Ulcer.

The bleeding from a chronic ulcer of the stomach or duodenum may vary within the widest limits both of frequency and of quantity. For convenience of description I should arrange the cases in four groups.

1. In the first the haemorrhages are latent or concealed. The blood is small in quantity, and may be recognized only after minute examination of the stomach contents or of the faeces. The estimates given by various writers as to the occurrence of haemorrhage in ulcer vary between 20 and 80 per cent., and we are entitled to assume that this wide divergence of statement is due not so much to differences in the symptoms of ulcer, but rather to the varying degrees of closeness with which the cases are observed, and to differences in the frequency and minuteness of examinations of the stomach contents or the faeces. It would probably not be rash to assume that all ulcers of the stomach or duodenum bleed at some time or other, but if the bleeding be trivial and infrequently repeated, it is never likely to obtain clinical recognition.

2. In the second group those cases should be included which are characterized by intermittent haemorrhage. The bleeding is copious, but transient, and occurs at intervals of two, three, or more months. An exemplary instance of this class is the following:

A. S., female, aged 28. In May, 1898, the patient had a sudden attack of profuse bleeding from the stomach. She was in bed six weeks. For 18 months after this her health was very poor, indigestion was constant, vomiting was occasional. Constipation was invariable. For six months she was then in fairly good health, and was able to take food much better. In April, 1900, indigestion became severe and a copious haemorrhage again occurred. Treatment was continued for six months with much benefit. In January, 1902, she had a third attack of haematemesis and fainting. After this she was kept in bed for four weeks. In September, 1902, again haematemesis was as severe as before. From then to January, 1903, she was under constant treatment, but improvement was very slow. Anaemia has been a prominent symptom since April, 1900. At the operation a large ulcer was found in the stomach and a second in the duodenum. Gastro-enterostomy was successfully performed.

In all the cases in this group indigestion is a prominent symptom. The haemorrhage often occurs without cause, but at times there may have been noticed an exacerbation of gastric discomfort and uneasiness for a few days. Anaemia is almost constant.

3. In the third group the cases are characterized by haemorrhages which are rapidly repeated and on all occasions abundant. In the majority of patients the symptoms of indigestion which have been noticed for months or years before have undergone an appreciable increase in the recent days. Then suddenly the haemorrhage occurs, a large quantity, a pint or a pint and a-half, of blood is vomited. The patient may faint from loss of blood; he shows, always, the general symptoms of bleeding. For twelve or twenty-four hours the vomiting ceases, to reappear at the end of this time, without apparent cause and in equal or greater quantity. A second latent period is followed by a further haemorrhage, and so the patient becomes in a condition of the gravest peril.

No better example of this class could be cited than the following:

M. W., female, aged 24. Has suffered from symptoms of gastric ulcer, pain, vomiting, and inability to take solid food for fifteen months. Eleven months before admission to hospital all her symptoms became worse. Vomiting became frequent; pain was almost intolerable. During the five weeks before admission she vomited daily, and on almost all occasions some blood came. While waiting in the hospital she vomited three times in five days, and on each occasion about half a pint of blood came. She was very blanched; pulse 112. The motions were tarry on two occasions. At the operation two old scars and one showing recent inflammation were seen. Gastro-enterostomy led to perfect recovery.

4. The fourth group would comprise those cases in which the haemorrhage occurs in enormous quantity, inundating the patient and leading to almost instant death. The opening of the splenic artery, the aorta, the vena cava, or the pancreatico-duodenal vessels allows of the so rapid escape of blood that the patient dies as surely and as swiftly as if his carotid or femoral vessels were divided. Such cases fortunately are rare. In my own experience only one such example has occurred, a large oval opening being then found in the splenic artery.

If then we accept the classification of cases of haemorrhage from gastric or duodenal ulcer into the four groups suggested we may define their characteristics as follows:

1. The haemorrhage is latent or concealed, is always trivial and often conspicuous.

2. The haemorrhage is intermittent, but in moderate quantity occurring spontaneously and with apparent caprice at infrequent intervals. The life of the patient is never in jeopardy from loss of blood though anaemia is a persisting symptom.

3. The haemorrhage occurs generally, but not always, after a warning exacerbation of chronic symptoms. It is rapidly repeated, is always abundant, its persistence and excess cause grave peril, and will if unchecked be the determining cause of the patients death.

4. The haemorrhage is instant, overwhelming and lethal.

The Treatment of Haemorrhage.

A. *From an Acute Ulcer.*—If what has been said of the characteristics of haemorrhage from an acute ulcer prove to be true it is clear that the aid of the surgeon will rarely need to be invoked. Medical means alone will suffice in almost every instance to ensure the recovery of the patient. Though the haemorrhage is alarming from its suddenness and intensity it may confidently be predicted that, in the majority of cases, it will not recur; or that if it recur the quantity lost will almost certainly be small.

There are, however, a few cases in which the haemorrhage may be both copious and recurring, and may threaten the life of the patient. Under such circumstances an operation may be required. An examination of the recorded cases has convinced me that wherever surgical treatment is deemed advisable gastro-enterostomy speedily performed will prove the surest means of leading to the arrest of the bleeding. In not a few records one reads that the whole surface of the mucosa seemed to be "weeping blood," that multiple points of oozing appeared scattered irregularly over the stomach wall, or that a definite source of the blood—any point from which the blood chiefly ran—could not be ascertained. The surgeon has then fallen back upon styptics, or the cautery, or the ligaturing of a villous patch in mass. It is difficult to convince one's self that any of these procedures have had the smallest effect for good, and in some the bleeding has recurred after the operation, and has determined the fatal issue. A search for a bleeding point is futile, harmful, and, in my judgement, quite unnecessary. The performance of gastro-enterostomy will prove more effective than any other procedure both in checking the haemorrhage and in preventing its recurrence.

B. *From a Chronic Ulcer.*—It is mainly in regard to the cases included in Group 3 of the classification given above that the question of surgical treatment will arise. If we picture to ourselves the pathological conditions present in such a case, it will be seen that, though the bleeding may be spontaneously checked for a time, it will show a marked tendency to recur. The base of the ulcer is, as a rule, densely hard, and the vessel traverses it like a rigid pipe. The vessel is eaten into, as it were, by the ulcer, which

erodes one side, leaving a ragged hole. Owing to the stiffening by chronic inflammatory deposit the artery is unable to contract or retract, and the bleeding can therefore only be checked by the plugging of the opening by a thrombus. That such a plugging does occur there can be no doubt, for in one case I have seen it during life; on gently detaching the clot, the bleeding began at once with furious onset. The tendency, indeed, even in a chronic ulcer such as I have depicted, must be to spontaneous cessation, for in no other way can the stopping and recurrence of bleeding constantly seen be explained.

There is some condition, as yet uncertain, which is responsible for the detaching of the plug. This condition, I venture to think, is distension of the stomach, whereby the base of the ulcer is stretched and the clot disturbed. For my record of cases shows indisputably that a gastro-enterostomy performed upon a patient suffering from this form of bleeding suffices to check the tendency to further haemorrhage and permits of the speedy healing of the ulcer. In all patients so suffering a prolonged search for the ulcer in the stomach is injudicious, and the ulcer when found may, as the result of firm fusion with an adjacent structure, be irremovable. In two cases I have excised the ulcer. In the first the ulcer was on the posterior surface of the stomach, and to the opening left by its removal I anastomosed a loop of the jejunum; in the second the ulcer lay on the anterior surface, near the lesser curvature towards the cardia. In this I did not perform gastro-enterostomy. In all the other cases that I have operated upon I have not attempted to deal directly with the ulcer, but have hastened to perform gastro-enterostomy. Of all the patients, the one upon whom I did not perform a gastro-enterostomy was the only one I lost; the others recovered speedily and without further sign of haemorrhage.

In some cases an examination of the stomach may reveal two chronic ulcers, or more, from each one of which the blood may be coming. To deal with each would be inadvisable or impossible. Cases, moreover, are recorded in which after an ulcer had been incised or ligatured in mass, the bleeding had recurred and proved fatal.

In all cases, therefore, of haemorrhage from a chronic ulcer an operation ought to be performed at the earliest possible moment. Search for, and local treatment of, the ulcer or ulcers are not necessary. A gastro-enterostomy will, without doubt, prevent a recurrence of haemorrhage and lead to a rapid healing of the ulcer from which the blood has come.

3. CHRONIC ULCER.

Chronic ulcer of the stomach may present itself clinically in a great diversity of form. In some the onset is brusque, a copious haemorrhage from an acute ulcer being the first manifestation of gastric disease: after the lapse of a few days or weeks, however, gastralgia, vomiting, and other symptoms appear and the chronic ulcer is established. In others the onset is latent and the early symptoms subdued. A patient may say that for several months a trivial, vague uneasiness has been experienced, that would have been forgotten but for the later accession of severer symptoms. In still others the course of the disease may present very remarkable intermissions. For several weeks the symptoms may be most marked and disabling, haemorrhage may occur on one or more occasions, but gradually an improvement is observed, and after a time all the distress may rapidly subside, leaving the patient in good health. The appetite may be restored, and the body weight may increase by a stone or even more. After a few months' interval a recurrence of the symptoms is observed, all the details of the former illness are repeated and fresh haemorrhage may occur. And so the history may be repeated. In these circumstances the symptoms are due, perhaps, to the breaking-down in the scar of a solitary ulcer, or to the fresh outbreak of ulcerated patches in other parts of the organ; of the two possibilities the former is certainly the more frequent. It is not necessary to describe several different varieties of chronic ulcer as is often done; it is probably more correct to say that chronic ulcer may present symptoms of different character in individuals, or in the same individual under differing conditions. Thus an ulcer which is latent in onset may give rise to haematemesis and may become latent again, and so the recurrence may continue for prolonged periods. If the illness caused by chronic ulceration persists for several years the patient may be reduced to the very extremity of weakness. His disease may then show close resemblance to pernicious anaemia or to advanced malignant disease of the stomach.

I have no doubt that many patients who have died from supposed malignant disease of the stomach have suffered from nothing but chronic ulceration. The induration which a persisting ulceration may cause is remarkable both for its extent and for its extraordinary mimicry of the appearances of malignant disease. In some of my own cases, and especially in one case of hour-glass stomach, the mass of inflammatory tissue was, with the knowledge I then possessed, absolutely indistinguishable by inspection and palpation from a malignant growth. Recently, however, I have in doubtful cases been able, I think, to distinguish chronic inflammatory masses by their perfect smoothness of surface. A malignant growth is always irregular, knotted, nodular, or "gritty" on the surface; an inflammatory mass is more smoothly rounded off, and there is often a milky opacity of the peritoneum. The frequency with which carcinoma will develop in chronic ulcer is now generally acknowledged. Hauser estimates the frequency at 6 per cent., a proportion which seems to me be in excess of the truth. In my own experience only one case has been recognized.

The pathological conditions caused by chronic ulceration in the stomach are of great variety. When marked cicatricial contraction occurs the viscus is narrowed at the site of the ulcer, and an hour-glass stomach, or a trifid stomach, or a dilated stomach due to pyloric or duodenal stenosis results. If the ulcer slowly deepen a perigastritis is produced, and the stomach may become ankylosed to the abdominal wall, or the pancreas, or the liver, or any other neighbouring structure. In all these conditions, and in others where no warping of the stomach can be found, an inveterate dyspepsia is a common symptom.

It has been the immemorial custom to look upon dyspepsia as due, chiefly if not solely, to deficiency in the quantity or quality of the gastric juice, to some lack of adequate power in the stomach as a secreting organ. But dyspepsia of the intractable, constantly-recurring form is more often a matter of physics than of chemistry. In several cases, as my records will show, I have operated for no other symptom than intolerable dyspepsia, when no diagnosis of pyloric obstruction, hour-glass stomach, or other mechanical deviation from the normal could be made. Yet at the operation abundant proof has been obtained that there was obvious distortion, or puckering or adhesion at one part or another of the organ; and that the stomach was crippled in the freedom of its action by these after-effects of ulceration. One observation I have repeatedly made in operating upon cases of chronic gastric and duodenal ulcers is that such ulcers are often multiple. If a well-marked ulcer is found at, say, the pyloric end of the stomach on the anterior surface, a second ulcer may be found, perhaps at an exactly opposing point in the posterior surface, perhaps elsewhere in the stomach. Chronic gastric ulcers are in my experience rarely solitary.

My own records of cases show that a duodenal ulcer very seldom exists without unmistakable evidence of gastric ulcer. Clinical observers have long appreciated the difficulty in the discrimination of gastric from duodenal ulcers. The differentiation, however, is of little moment, for if a duodenal ulcer is present we may be almost certain that a gastric ulcer will also be found. It is indeed not unlikely that the duodenal ulcer is secondary to, and directly caused by, the gastric ulcer. For there are reasons, which need not be repeated, which go to prove that duodenal ulcer is due to the action of the gastric juice on the mucous membrane. The ulcers are formed most frequently at the very beginning of the duodenum, and the further the distance from the pylorus the less likely is an ulcer to be present. May it not be that the digestion of the duodenal mucous membrane is accomplished only, or at the least most easily, when there is an excess of free hydrochloric acid? And this condition of hyperchlorhydria is a common if not a constant factor at some stage in the history of a gastric ulcer. The sequence of events would then be gastric ulcer, hyperchlorhydria, duodenal ulcer. The sensitiveness, as it were, of the duodenal mucosa to acid contact is shown by the fact, demonstrated by Pawlow, that the pylorus does not relax to allow of the passage of food until the duodenal contents are alkaline in reaction. Vomiting is an inconstant symptom of chronic ulcer. In the typical case of dilated stomach the vomiting is copious in quantity, and occurs at intervals of two or three or more days. The stomach fills slowly till its capacity is exhausted, and then an outburst of vomiting empties away the stagnant fluids. In cases of chronic ulcer without dilatation the patient may be rarely troubled with vomiting. On inquiry it will be found that the

abeyance of this symptom is due to self-imposed restrictions in the diet. Indulgence in food will often elicit the latent symptom. In one of my earliest and worst cases of hour-glass stomach, the patient, who was in bed and under observation in the hospital for over a week, never vomited, yet the constriction between the two pouches would barely admit the end of a pair of pressure forceps.

The indications for operation in chronic ulcer of the stomach are of widely different character. When the ulcer is near the pylorus a dilated stomach will probably be the chief clinical sign; when the ulcer is in the body an hour-glass stomach may be caused; when the ulcer is nearer the cardiac end gastralgia and dyspepsia may be the only indications.

I feel sure that, speaking generally, the time of the onset of pain after food is some guide to the position of an ulcer. The nearer an ulcer lies to the pylorus the later will be the period of onset of the pain, and vice versa. Some of the seeming exceptions to this rule are due to the fact, which is commonly overlooked, that multiple ulcer of the stomach and duodenum is the rule. For example, a patient who makes constant complaint of pain within half an hour of food may be found at the operation to have a stenosed pyloric antrum due to ulcer. Yet on examination a second ulcer may be found within 3 or 4 in. of the cardiac orifice, and may at first glance be overlooked. Of such a case I have had personal experience.

The evidences of old ulceration in the stomach are at times difficult to discover. A thin fibrous adhesion, a little crumpling of the surface, or a whitish blot on the serous coat, may be all that is left of a patch of ulceration. When the stomach is pinched up between the fingers a little local thickening may be felt, or the mucous membrane may not, as it should, roll away from the muscular coat on gentle pressure. If in performing gastro-enterostomy the needle has to be passed through the stomach wall at the margin of an old ulcer, the different and greatly increased resistance to its passage is ample evidence of the change that has taken place. Inveterate dyspepsia is in itself an ample warrant for surgical treatment. Cases are within the experience of all in which prolonged medical treatment, most thoroughly and carefully supervised, proves ineffective, or, if temporarily beneficial, is powerless to ward off the recurrence of dyspepsia. In such cases, be the physical signs what they may, an operation is desirable, and in my experience abundant justification for it will almost always be found when the stomach comes to be examined.

[Details were then given of the operative treatment and a full account of the operation of gastro-enterostomy.]

4. HOUR-GLASS STOMACH.

By hour-glass stomach (bilocular stomach, hour-glass contraction of the stomach) is understood that condition in which the stomach is divided into two compartments by the narrowing of the viscus at or near its centre. The two loculi so formed may be almost equal in size, or one—generally the cardiac pouch—may be very much larger than the other. In one instance (Case XIV) I have seen the stomach divided into three pouches, and in another (Case XV) a condition of hour-glass duodenum was associated with hour-glass stomach, so that four pouches—two larger in the stomach, two smaller in the duodenum—were seen. The isthmus connecting the two parts of the stomach is generally found at or near the middle of the viscus, but owing to stasis of the food the cardiac compartment becomes dilated, and is then much larger, thicker, and more capacious than the pyloric. The pyloric pouch is, however, not seldom dilated also, and in such circumstances a pyloric or duodenal stenosis will also be found.

Pathogeny.

Hour-glass stomach is usually described as being "congenital" and "acquired." Of these forms, the congenital is said to be the more frequent.

I have carefully considered the question as to the existence of hour-glass stomach as a congenital deformity, examining all the specimens that I could find, and reading carefully the records of, I believe, all the published cases; but I remain confident in my belief, expressed in a paper in the *Lancet* two years ago, that there is no evidence whatever which will establish the claim of those who assert that the disease is often congenital in origin. Since I first threw doubts upon the congenital origin of many of the cases of hour-glass stomach, and showed that in almost all obvious evidence of old ulceration could be found, several investigators have supported my conclusion by observations made during the course of operation or on necropsy. There is, indeed, no inherent improbability in the existence of congenital hour-glass stomach, but it lacks proof.

Acquired hour-glass stomach may be caused by (1) perigastric adhesions; (2) ulcer, with local perforation and anchoring to the anterior abdominal wall; (3) chronic ulcer generally at or near the middle of the organ; (4) malignant disease.

1. Perigastric adhesions may result from many causes—gastric ulcer, old tuberculous peritonitis, inflammatory affections of the gall bladder, and so forth. In rare instances these adhesions may be the sole cause of the partition of the stomach; in many they are no more than contributing causes. They were well seen in a case related by Cumston.

2. Ulcer, with local perforation and anchoring of the stomach to the anterior abdominal wall; this was the condition I found in my first case. It results from gradual deepening of a chronic ulcer. As the ulcer approaches the serous coat of the stomach a few adhesions form, binding the viscus to the anterior abdominal wall, and preventing the bursting of the ulcer into the general peritoneal cavity. If the ulcer be on the posterior surface, a soldering to the pancreas may result, as in one case I have recently seen. When the stomach is anchored in its middle, the pouches on each side, but more especially on the cardiac side, show a tendency to sagging, and this, with the cicatricial contraction taking place in the ulcer, results in the hour-glass form of the stomach.

In four recorded cases an ulcer at the isthmus of an hour-glass stomach has perforated into the peritoneum and caused death. The first case was related by Siewers, the second by my friend Mr. W. H. Brown, the third by Thomsen, and the fourth by Bidwell.

3. Chronic ulcer. A chronic ulcer of the stomach is characterized by the thickness and induration at its base. In the healing of such an ulcer, especially if large in size or circular, a considerable amount of contraction will necessarily take place and a high degree of narrowing may result.

Symptoms of Hour-glass Stomach.

An hour-glass stomach can be diagnosed with certainty if attention be paid to a certain combination of symptoms. In my first 6 cases only 1 was diagnosed; in my last 9 cases, 7 were diagnosed with certainty; in one of these the diagnosis was made by the medical attendant, Dr. M'Gregor Young, before I was asked by him to see the patient. The symptoms will naturally vary according to the position of the constriction in the stomach; if this lies near the cardiac orifice, the clinical picture will resemble that given by oesophageal obstruction low down; if near the pyloric orifice, the symptoms are those of dilated stomach. But, wherever the narrowing may be, attention to the following signs will, in almost every case, enable a diagnosis to be made with confidence.

1. If the stomach tube be passed, and the stomach washed out with a known quantity of fluid, the loss of a certain quantity will be observed when the return fluid is measured. Thus, if 30 oz. be used, only 24 can be made to return, as in Dr. M'Gregor Young's case already mentioned. Wölfler, who called attention to this sign, said that some of the fluid seemed to disappear "as though it had flowed through a large hole"—as, indeed, it has, in passing from the cardiac to the pyloric pouch (Wölfler's "first sign").

2. If the stomach be washed out until the fluid returns clear, a sudden rush of foul, evil-smelling fluid may occur; or, if the stomach be washed clean, the tube withdrawn and passed again, in a few minutes several ounces of dirty, offensive fluid may escape. The fluid has regurgitated through the connecting channel between the pyloric and cardiac pouches (Wölfler's "second sign").

3. Paradoxical dilatation.—If the stomach be palpated and a succussion splash obtained, the stomach tube passed, and the stomach apparently emptied, palpation will still elicit a distinct splashing sound. This is due to the fact that only the cardiac pouch is drained; the contents of the pyloric pouch remain undisturbed, and cause the splashing sound on palpation. For this phenomenon Jaworski has suggested the appropriate name, "paradoxical dilatation." Jaboulay has pointed out that if the cardiac loculus be filled with water, a splashing sound can still be obtained by palpation over the pyloric pouch. The sign of paradoxical dilatation is best elicited after washing out the stomach in the ordinary manner. When the abdomen is examined at the completion of the washing, and when the stomach has been apparently drained quite dry a splashing sound is readily obtained, for

some of the fluid used has escaped into the pyloric pouch through the connecting channel.

4. Von Eiselsberg observed in one of his cases, that on distending the stomach a bulging of the left side of the epigastrium was produced; after a few moments this gradually subsided and concomitantly there was a gradual filling up and bulging of the right side.

5. Von Eiselsberg also called attention to the bubbling, forcing, "sizzling" sound which can be heard when the stethoscope is applied over the stomach, after distention with CO_2. If the two halves of a seidlitz powder are separately given, and the stomach be normal or dilated, no loud sound is heard anywhere, except at the pylorus; if a constriction is present in the stomach, a loud, forcible, gushing sound can be easily distinguished at a point 2 in. or 3 in. to the left of the middle line.

6. I first called attention two years ago to a sign which I have since found of great service in establishing a diagnosis of hour-glass stomach. The abdomen is carefully examined, and the stomach resonance percussed. A seidlitz powder in two halves is then administered. On percussing, after about twenty or thirty seconds, an enormous increase in the resonance of the upper part of the stomach can be found, while the lower part remains unaltered. If the pyloric pouch can be felt, or seen to be clearly demarcated, the diagnosis is inevitable, for the increase in resonance must be in a distended cardiac segment. If the abdomen be watched for a few minutes, the pyloric pouch may sometimes be seen gradually to fill and become prominent.

7. Schmidt-Monard and Eichorst have both seen a distinct sulcus between the two pouches, inflated with CO_2. In Case XI in my list the two pouches with a hard, as I thought, malignant mass between them could be readily seen. When both pouches were distended with CO_2, alternate pressure upon them showed unmistakably that they communicated through a very narrow orifice, for the one could be emptied slowly into the other, and the fluid could be felt to ripple gently through. The diagnosis in such a case is simplicity itself. In Case VIII a distinct notch was seen at the lower border of the inflated stomach.

8. Ewald has called attention to two signs which he considers of value in establishing a diagnosis. When the stomach is filled with water and examined by gastro-diaphany the transillumination is seen only in the cardiac pouch; the pyloric pouch remains dark.

9. The deglutable indiarubber bag of Turck and Hemmeter is passed and distended: the bulging caused thereby is limited to the cardiac pouch which lies to the left of the middle line.

The two aids to diagnosis of greatest value are, it will be seen, the washing out of the stomach and its formation with gas by the administration of a seidlitz powder in two portions. The fluid used for the washing must be carefully measured before use; the tube is then passed and the stomach emptied, the contents set aside in a separate dish, and the washing commenced. All the fluid now returning is collected in a separate vessel and carefully measured. The two signs of Ewald are of little importance—a correct diagnosis can always be made without them.

Differential Diagnosis.

The two conditions for which an hour-glass stomach is liable to be mistaken are obstruction in the lower part of the oesophagus and pyloric stenosis. If the constriction in the stomach is within an inch or two of the cardiac orifice the upper loculus of the stomach will be very small in size, and capable, therefore, of holding only small quantities of food. Food when swallowed may be regurgitated within a few minutes almost unaltered, and the patient may tell the same story of difficulty in "getting the food down" as is told by one whose oesophagus is obstructed. A correct diagnosis can be made by introducing the oesophageal bougie; if the bougie passes over 16 in. from the teeth the obstruction does not lie in the stomach.

If the constriction be near the pylorus, the cardiac complement will be dilated, and will present the same appearances and signs as a dilated stomach. Wolfler's two signs (1 and 2 in the list given) will generally enable a correct diagnosis to be achieved.

If the obstruction should lie at any point between the two mentioned, there should be no difficulty in making a correct diagnosis.

Treatment.

The treatment of hour-glass stomach may be beset with difficulties. If the stricture is near the cardiac, or if the cardiac complement be bound up in adhesions, there may be great mechanical hindrance to the performance of any operation. When the abdomen is opened, a thorough examination of the whole stomach must first be made. The dilated pyloric sac may so completely resemble the whole stomach as to lead to the performance of a gastro-enterostomy between it and a loop of jejunum. Several cases are recorded in which this mistake has been made, and it is therefore necessary to emphasize the importance of an examination of the whole stomach up to the cardiac orifice in every case, no matter how obvious the diagnosis of "dilated stomach" may have seemed.

In many cases of hour-glass stomach no single operation will suffice to relieve the symptoms. This is due to the fact that where a stricture is present in the body of the stomach, a second stricture near the pylorus may also be found. If there be any dilatation of the pyloric complement, a constriction at the pylorus or in the duodenum will certainly be found. This dual stenosis, which has not received adequate attention from any writer, accounts for the lack of permanent improvement seen in many of the recorded cases. If in such circumstances a gastro-enterostomy is performed between the cardiac pouch and the jejunum, the pyloric pouch becomes a reservoir, incapable of efficient emptying, wherein food lodges and becomes sour. Symptoms of stasis are then observed, acid bitter eructations, occasional vomiting, a sense of heaviness and heat at the epigastrium and distaste for food, and, as in case recorded by Terrier, a second operation is necessary. If a gastroplasty is performed the stomach cannot empty itself because of the pyloric stenosis, and the symptoms are unrelieved. Such a condition of double stenosis can therefore only be adequately treated by the performance of two operations at the same time—gastroplasty and pyloroplasty—gastroplasty and gastro-enterostomy from the pyloric pouch, gastro-gastrostomy and gastro-enterostomy, or a double gastro-enterostomy, a loop of jejunum being opened at two points, at the upper into the cardiac pouch, at the lower into the pyloric.

The following are the operations that may be practised:—(1) Gastroplasty; (2) gastro-gastrostomy or gastro-anastomosis; (3) either of the foregoing, with gastro-enterostomy from the pyloric pouch, in cases of dual stenosis; (4) gastro-enterostomy from cardiac pouch, when the pyloric pouch is so small that it can be ignored; (5) gastro-enterostomy from both pouches; (6) partial gastrectomy.

The number of cases upon which this paper is based is as follows:

Perforating gastric or duodenal ulcer—12 cases, of which 6 recovered; gastro-enterostomy for chronic ulcer, etc.—70 cases with 1 death; pyloroplasty—3 cases, of which all recovered; hour glass stomach—15 cases with 3 deaths; gastroplication—1 case, which recovered; and excision of ulcer for haematemesis—1 case, which died.

CASE OF (SO-CALLED) IDIOPATHIC DILATATION OF THE OESOPHAGUS.

WITH A SUGGESTION AS TO ITS NERVOUS ORIGIN.

By C. B. LOCKWOOD, F.R.C.S.,

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In November, 1901, Professor James Swain published in the BRITISH MEDICAL JOURNAL (p. 1453) a case of idiopathic dilatation of the oesophagus. Last year the same patient was placed under my care by Dr. Forbes Fraser. The various treatments which had been tried had been most unsatisfactory, and it was considered that the time had arrived when it had become justifiable to perform gastrostomy. Professor Swain says that he had considered this question, but did not think the operation was "desirable so long as the patient was keeping up her nutrition." The patient was a single woman, aged 27. It was clear that all the symptoms mentioned in the first account of her case still persisted, and that her life was one of extreme discomfort. The mucus which she swallowed, and likewise her food, lodged in the oesophagus. The first few mouthfuls of food passed onwards into the stomach, but the remainder did not. At first, before the condition was recognized, the food was allowed to remain in the oesophagus until it underwent decomposition, but afterwards it was washed out with an ordinary stomach tube. The presence of food in the oesophagus caused great pain,

which ceased after vomiting or after washing out. The food was neither digested or acidified.

Professor Swaine had already come to the conclusion that there was no oesophageal pouch. A full-sized oesophageal tube always passed with ease and never got entangled. To make sure we administered about a pint of rather thick fluid with some bismuth in suspension, and then with the *x* rays saw quite clearly the shadow of the dilated oesophagus; the dilatation was fusiform, and reached from about the left bronchus to the diaphragm. It was large enough to hold about half a pint. About this time Dr. Gottstein was at St. Bartholomew's Hospital and very kindly tried to insert his oesophagoscope, but the attempt was not successful.

The patient was very anxious to submit herself to any operation, for she was living in great discomfort. For two years she had fed herself twice a day with an oesophagus tube and funnel. She had been sent up with the view of having gastrostomy done. My own experience of that operation has shown me that its dangers are small, but that its discomforts are considerable. The latter she was prepared to face. But it was difficult to see how a mere gastrostomy could succeed. It is true that it would obviate all swallowing of food, and might thus be supposed to give the oesophagus rest. But it could have no influence whatever upon the swallowing of mucus, and that is always going on to a larger extent than many are aware of. Clearly gastrostomy required to be supplemented with forcible dilatation of the cardiac opening of the oesophagus. But my experience of forcible dilatation of other orifices, more particularly of the anus, teaches that the paralysis can only be relied upon to last for a few days. Besides, as I shall presently show, it is quite feasible to dilate the cardiac aperture without resorting to a cutting operation.

Hardly anything is known about the causation of this fusiform dilatation of the oesophagus. I suppose we may assume that it is due to some disturbance of the nervous mechanism. The history of the onset in the case under discussion seems to me to support this view. The history says that four years ago she fell from a bicycle[1] with such violence that she remained unconscious for several hours, and was confined to bed for five weeks. The difficulty in swallowing began soon after the fall. At first the food could be got down with the help of mouthfuls of water, but afterwards, as I have said, it had to be introduced with a tube. It is of course difficult to see how a mere fall could affect the nervous mechanism of the oesophagus. But I attach great importance to another point in her clinical history. After the accident her right kidney was found to have been loosened, and has remained loose and displaced ever since. Now there exists a nervous intercommunication which would be profoundly influenced by a sudden displacement of the right kidney.

The accompanying semidiagrammatic figure shows how each great splanchnic nerve swells out into the semilunar

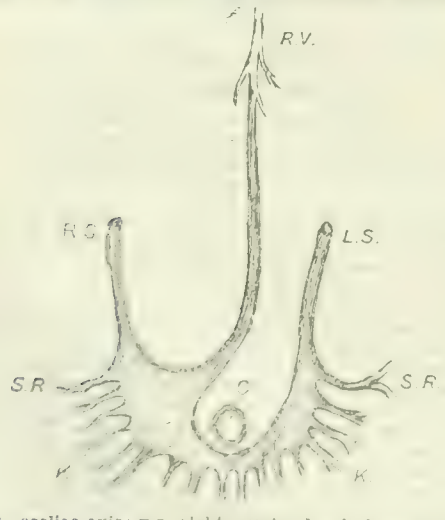


Fig. 1.—C., coeliac axis; R.S., right great splanchnic nerve; L.S., left great splanchnic nerve; R.V., right vagus, giving off branches to the plexus gulae; S.R., suprarenal branches of semilunar ganglia; K., branches to kidneys.

ganglion. Next, how nerve branches run from the convexity of the semilunar ganglia into the kidneys and suprarenal bodies. So far this anatomical arrangement has nothing to do with the oesophagus. But now observe how the right vagus passes down the back of the oesophagus and joins the right semilunar ganglion. It joins in such a manner as to form a loop with the right splanchnic nerve, and this loop is known to anatomists as the Memorable loop of Wrisberg. I have never been able to find out why it goes by this strange name. In its course down the oesophagus the right vagus unites with the left to form the plexus gulae, from which the nerves of the oesophagus are supplied.

It is hardly necessary to point out how a sudden and violent displacement of the right kidney would act almost directly upon the right vagus. This is as far as it seems reasonable to go. The anatomy and physiology of the solar plexus do not seem to have received from physicians the attention which they undoubtedly deserve, nevertheless they are probably the clue to many hidden mysteries. A patient under my care has a pulse-rate of 73 to 75. During a moderate attack of appendicitis it fell to about 50. There seems no impossibility in this to the anatomist who traces the continuity of nerve tissue from the appendix to the solar plexus, and thence to the right vagus and onwards to the heart. The whole of this important branch of anatomy has been rendered difficult by the habit which the systematic anatomists have, with the exception of Hirschfeld, of describing the visceral nervous system as though it consisted of separate and distinct parts. Biologists have done much to inculcate more general ideas. Even the admirable Sappey gives but a truncated figure (vol. ii, fig. 608).

Acting upon the assumption that the dilatation of the oesophagus was secondary to spasmodic contraction of the cardiac orifice, I determined to try the effects of stretching. Acting under my instructions Messrs. Krohne and Sesemann made an instrument which consisted of an ordinary oesophagus tube with a distensible rubber bag around the last four or five inches of its stomach end. This bag could be distended with air by means of an ordinary hand-pump, the air being transmitted by a small tube which ran down the inside of the oesophagus tube. Inasmuch as the patient had become a great adept in passing tubes down her oesophagus there was no difficulty whatever in using this instrument. The immediate effects seem to have been excellent. Dr. Fraser, to whom I am much obliged, writes that at first it was used thrice a day before meals and afterwards twice a day, until it burst. After this she had no pain or difficulty in swallowing ordinary meals, whilst on a holiday she put on 14lb. in weight. But inasmuch as some difficulty returned a stronger airbag was obtained, and I understand that the distressing symptoms have gone and that the patient can again swallow with comfort.

NOTE.

[1] Professor Swain says she fell downstairs and remained unconscious two hours.

THE

BENEFICIAL RESULTS OF GASTRO-ENTEROSTOMY IN SOME CASES OF IRREMOVABLE CARCINOMA OF THE STOMACH, IN WHICH THE PYLORUS IS NOT OBSTRUCTED.

By BILTON POLLARD, B.S., F.R.C.S.,

Surgeon to University College Hospital.

In cases of carcinoma of the stomach presenting symptoms of obstruction of the pylorus, other surgeons besides myself must have opened the abdomen with the intention of either removing the diseased portion of the stomach or of performing gastro-enterostomy, and have been placed in a dilemma by finding that in spite of the symptoms the growth did not obstruct the pylorus. Removal of the growth would be the proper course if the growth were a small one and favourably located for removal. But if the growth were not favourably located for removal, and if it were thought that the risks attendant on removal were too great to warrant the attempt being made in the particular case, the surgeon would have to decide between doing nothing for the patient's relief and doing gastro-enterostomy without much hope of benefit in the absence of recorded cases or personal experience of beneficial results. The difficulty in deciding whether or not to do gastro-enterostomy would be still further increased in cases where the growth extended so far over the anterior and

posterior walls of the stomach as to make it likely that the gastro-enterostomy opening would be obstructed as soon as the pylorus.

During the last two years I have operated upon three very similar cases in which these difficulties presented themselves. In the first two I closed the abdomen without further ado; in the third I did gastro-enterostomy with very marked benefit.

CASE I.—A woman, aged 40, was admitted to University College Hospital on October 28th, 1901, with a history that in the previous June she began to suffer from pain in her stomach after food. This symptom continued, and in the last week of September she vomited a quantity of coffee-coloured frothy material with immediate relief from the intense pain from which she was suffering. From that time onwards the sickness frequently recurred, and the patient steadily lost flesh. On admission to the hospital she was very emaciated, but she was not anaemic in appearance, and she was bright and cheerful. In the epigastric region there was a slightly movable lump which descended during inspiration. There was a well-marked succussion splash, and the stomach resonance extended from the fourth costal cartilage to the umbilicus. The residual contents of the stomach were usually about a pint, and three pints could be introduced without discomfort. Analysis of the residual contents of the stomach showed the presence of free hydrochloric acid and the absence of lactic acid. On November 1st I operated, and found a hard new growth occupying the pyloric portion of the stomach without involving the pylorus itself, and without causing mechanical obstruction. The growth involved almost the whole of the lesser curvature of stomach, and extended thence into the upper part of the anterior and posterior walls. In the patient's condition it appeared to be too extensive for removal. I was preparing to do posterior gastro-enterostomy when the wisdom of subjecting the patient to the risks of that operation when the pylorus was not obviously obstructed was questioned. I deferred to this view and closed the abdomen. The patient was none the worse for the operation but her symptoms continued unabated. She was unable to take solid food owing to the pain it caused. Even on a liquid diet she suffered severely from pain, which disturbed her sleep, and she vomited a quantity of brown liquid nearly every day. She began to get up on the twentieth day after the operation and was discharged three days later. She lived about two months after leaving the hospital.

For some unexplained reason this patient had much less discomfort than before the operation, but she got rapidly very anaemic and cachectic. Although there was no mechanical obstruction the patient had obstruction of some kind, for her stomach never emptied itself, and she usually vomited a quantity of fluid every day. This may have been due to spasm of the pylorus set up by irritation of the growth by food, and the pain after food was doubtless due to the same cause. If a free opening between the stomach and the small intestine had been established, it is reasonable to expect that the stomach would have quickly emptied itself into the bowel, and that the pain after food would have been relieved, and that the patient's nutrition would have been kept up for a longer time.

CASE II.—The patient was a woman, aged 51, who had suffered from dyspeptic symptoms, chiefly flatulence, for about two years, and from severe pain in the region of the stomach after taking food, together with vomiting after nearly every meal for about six months. There had been no haematemesis. During this time the patient had wasted considerably. On admission to the surgical wards at University College Hospital on August 14th, 1902, there was a tumour just above and to the right of the umbilicus, which was thought to be carcinoma of the pyloric portion of the stomach. On August 16th I did an exploratory laparotomy, and found that the growth involved nearly the whole of the small curvature of the stomach and extended over both surfaces, especially in the pyloric region, but it did not involve the pylorus itself. It was possible to invaginate the wall of the stomach near the large curvature, and to pass two fingers through the pylorus. In this case, as in the first, the growth was too extensive to be safely removed; the pylorus was not implicated, and it seemed probable that a gastro-enterostomy opening would be invaded by the growth as soon as the pylorus. I therefore again decided against gastro-enterostomy, and closed the wound. The wound healed by first intention, and the patient was sent back to the medical wards on the fifteenth day after the operation. Her symptoms continued unabated. She got steadily thinner, and every day or two she vomited large quantities of dark-coloured fluid and partially-digested food. She had a good deal of pain, for which opium was given. She went home about six weeks after the operation, and died about three weeks later.

Both these patients went downhill very rapidly, and died from two to three months after the exploratory laparotomy, and about nine months after the onset of acute symptoms. Many patients suffering from carcinoma of the stomach, which involves and partially obstructs the pylorus, live in comparative comfort and freedom from pain for nine months or more after gastro-enterostomy. In these cases, because the condition of the stomach was thought to be more favourable, owing to the freedom of the pylorus, nothing was done, with the result that the patients suffered more pain and died more rapidly than is usually the case with patients affected with carcinomatous obstruction of the pylorus who have been treated by gastro-enterostomy. These considerations led me to think that I had made a mistake in not performing gastro-enterostomy, and I determined that in future, in cases of irremovable carcinoma of the stomach, with pain and symptoms of pyloric obstruction, even though no mechanical obstruction of the pylorus was found at the operation, I would unite the stomach to the jejunum, and so by means of the short-circuit allow the food to avoid the ulcerated carcinomatous growth, and pass quickly into the intestines.

CASE III.—The patient, who came under my care at University College Hospital in September, 1902, was a man aged 39. About eighteen months previously he began to suffer from vomiting after food. The vomiting occurred about two hours after a meal, and at first was only occasional. The vomiting became more frequent—once a day, then twice a day, and on admission it occurred after every meal. He had never noticed any blood in either the vomit or the motions. He had a dull aching pain in the epigastric region. Solid food caused so much pain that for nearly eighteen months he had been living almost entirely on liquid nourishment. He was much troubled with flatulence. On admission the patient was a thin, pale-looking man with every appearance of having lost a good deal of flesh. He weighed only 9 st. 2 lb., whereas two years previously he weighed 11 st. The area of stomach resonance was increased, and there was a well-marked succussion splash. Three and a-half pints of fluid were received by the stomach. After digestion the residual contents of the stomach varied from 15 to 20 oz. On September 18th I opened the abdomen in the middle line above the umbilicus, and found a tumour involving nearly the whole of the small curvature of the stomach, and extending on the one hand upwards into the small omentum and on the other downwards over both surfaces of the stomach in the pyloric region without actually involving the pylorus. By invaginating the wall of the stomach near the greater curvature, two fingers could be passed through the pylorus. Altogether the conditions presented were almost the exact counterpart of those met with in the other two cases. Removal of the growth seemed quite out of the question, and so I did posterior gastro-enterostomy. The patient made a normal recovery, and on the twelfth day after the operation he was taking without any discomfort jelly-bread and butter, and eggs, in addition to liquid diet, whereas for eighteen months before the operation he had rarely succeeded in retaining any solid food. The patient was discharged to a convalescent home on the twentieth day after the operation. He was then looking much better, and felt much better, and was putting on flesh. As already mentioned, the patient on admission to the hospital, weighed 9 st. 2 lb. Between then and the operation he lost a good deal, but there is no record of his weight until his discharge, when he weighed 8 st. 6 lb. He returned from the convalescent home in a month, and reported that he had been taking ordinary solid diet just like the other patients, and that he had been free from pain, and had not been sick since he left the hospital. He weighed 10 st. 1 lb., that is 1 st. 9 lb. more than he did when he left the hospital. A month later his weight was 10 st. 13 lb. 8 oz., which is only 3 oz. less than his weight before the onset of his illness. It is now six months since the operation, and the patient continues well and maintains his weight. For a time he went back to his work as a scaffolder, but he has now relinquished that for lighter work.

This case has been very successful, and has more than justified the hopes entertained of gastro-enterostomy, and is, I consider, valuable as showing that at least temporary relief can be obtained by gastro-enterostomy in cases of carcinoma of the stomach in which there is no mechanical obstruction; for although there was no mechanical obstruction in this case there was in it, as in the other cases, an obstruction of some kind which interfered with the passage of food from the stomach to the duodenum. And just as in simple ulceration the irritation of food causes pain and vomiting and interference with nutrition, which can be relieved by gastro-enterostomy, so also in malignant ulceration similar relief, if only for a time, can be given by the same operation.

My conclusion is that the clinical signs afford the most important indications for treatment, and that in cases where these indicate obstruction to the passage of food from the stomach to the intestines, and that where in cases of malignant disease of the stomach feeding causes pain and vomiting, the surgeon may perform gastro-enterostomy with every hope of benefiting his patient even when the growth does not obstruct the pylorus.

MEDICAL STUDENTS IN GERMANY. The following are the numbers of medical students on the books of the several German universities for the current semester: Berlin 1,219, Bonn 240, Breslau 204, Göttingen 149, Greifswald 186, Halle 188, Kiel 315, Königsberg 203, Marburg 167, Erlangen 231, Munich 1,057, Würzburg 461, Freiburg 287, Heidelberg 235, Giessen 351, Jena 133, Leipzig 529, Rostock 132, Strassburg 259, Tübingen 181. The total number of students of medicine in Germany at present is therefore 6,727. Of these, 2,871 belong to Prussia, the remaining 1,585 being distributed through the other German universities.

CASE OF HYPERTROPHIC PULMONARY OSTEO-ARTHROPATHY.

By SYDNEY W. CURL, M.A., M.B.CANTAB.,
Late Assistant Resident Medical Officer to the Royal National Hospital for Consumption and Diseases of the Chest, Ventnor.

THE following is the record of a good example of this rare and interesting disease:

History.

The patient was a man, aged 26, a pawnbroker, who was admitted into the Ventnor Consumption Hospital on July 4th, 1902. He has always had a cough and his voice had always been husky; he has never had rheumatism, gonorrhoea, or syphilis. His mother, two sisters, and three brothers are alive and well and no brothers or sisters dead; his father is rheumatic. There is no history of pulmonary tuberculosis or any other chest complaint in the family.

Two years ago he had an attack of dry pleurisy on the left side. He was laid up for a month, but soon after returned to work feeling quite well. Six months later his appetite fell off, he lost strength, his cough became worse, and the amount of expectoration increased. During the attack of pleurisy he coughed up a few streaks of blood, and has done so since at intervals of about a month, but has never coughed up any large quantity of blood. He used to be troubled with sweating but this has lately diminished. He complains of shortness of breath and has lost a stone in weight. According to the patient's account, the tips of his fingers have always been large as have also his hands. Two years ago his wrists, ankles, and knees commenced to enlarge, but there has never been any pain in them.

State on Examination.

The patient is pale, thin, and the skin is rather yellow. The appetite is good, the tongue slightly furred, but there are no digestive troubles, and the bowels act daily. The expectoration averages 4 oz. in the twenty-four hours, is frothy, muco-purulent and slightly fetid. The urine is acid; its specific gravity is 1010, and it contains neither albumen nor sugar. The pulse rate is 96; it is regular and of good volume and tension. There is an enlarged lymphatic gland under the lower jaw on each side and in each axilla, and there are a few slightly enlarged glands in each groin. The apex beat of the heart is in its normal position; the area of superficial cardiac dullness is slightly diminished in extent from above downwards, its upper border commencing at the fifth left costal cartilage. The heart sounds appear normal, the chest is poorly covered, and expansion at the upper part of the right side in front is feeble, and the vocal resonance is increased over this part. The percussion note is impaired at the right apex in front down to the second rib and in the right supraspinous fossa. Expiration is prolonged all over the chest, and there are a few sibilant rhonchi over the right side in front. Cavernous breathing and whispering pectoriloquy are heard in the first and second interspaces on the right side close to the sternum. Vocal resonance is increased at the right apex front and back, and scattered crepitations are heard over the whole of the right lung front and back, and in the upper part of the right axilla. On laryngoscopic examination no definite signs of disease could be detected in the larynx. Examination of the blood gave the following result: Red cells, 4,800,000 per c.mm.; white cells, 26,585 per c.mm. Relative proportion of white cells: polymorphonuclear, 74.4 per cent: lymphocytes, 16.9 per cent.: large mononuclear, 7.5 per cent; eosinophiles, 1.1 per cent. The hands are very large, the ends of the fingers markedly clubbed, and the fingers and thumbs thickened throughout their length. (Fig. 1.) The nails



Fig. 1.

are broad, their roots can be easily felt, but they are not longitudinally striated, nor do they appear to be abnormally brittle. Measurement round the bases of the fingers on a level with the metacarpo-phalangeal joints gave as a result 8½ in. in each hand. There is marked fullness over both wrists, back and front, and the lower ends of the radius and ulna in each forearm appear to be thickened. Movements at both wrist-joints are limited, but the finger-joints are quite supple and there is no oedema over or around the affected parts. Each wrist measured 7½ in. round just above the styloid process of the radius. Nothing abnormal can be detected about the elbow joints beyond slight pain over the external condyle of the left humerus when the arm is bent at the elbow. The shoulder-joints appear normal, but the patient complains of aching pains in them when the arms are stretched out on a level with the shoulders. There is marked fullness around both ankles and over the dorsum of the feet and the lower ends of the tibia and fibula on each side appear to be thickened; there is no limitation of movement at the ankle-joints and no oedema of the skin. Measurement around the heel and over the front of the ankle-joint in each leg gave as a result 13½ in. The ends of both big toes are clubbed otherwise he does appear



Fig. 2.

normal. Both knees are much swollen, but the edges of the bones forming the joint are not lipped, nor is there excess of fluid in either joint. The patellae appear very large and each measures 3⅛ in. across transversely. Flexion and extension at the knee-joints to their full extent causes pain. The hips are apparently unaffected, but the patient complains of slight pain on the inner side of each thigh when the leg is rotated. There is no curvature of the spine and the shape and size of the head and lower jaw appear normal.

Diagnosis.

Although tubercle bacilli were never found in the sputum, the patient was considered to be suffering from tuberculosis of the lungs, with consolidation and possibly a vomica in the right upper lobe.

Progress.

During his stay of ten weeks in the hospital he improved considerably in his general health gaining 5 lb. in weight, and only on two occasions did his evening temperature rise above 99° F. His daily amount of expectoration diminished to 2 oz., but remained the same in character occasionally being tinged with blood. Before leaving the hospital patient not said his hands and wrists were smaller, but measurement did reveal any appreciable diminution in size. A few crepitations appeared at the upper part of the left axilla shortly before he left the hospital, otherwise the signs in the chest were the same as on admission. From an examination of the *x*-ray photograph of the right hand and forearm it appears that the enlargement of the fingers, hands and wrist is due both to increase in size of the bones and hypertrophy of the soft tissues.

This case, I think, belongs to that group of interesting cases described by Marie as "l'osteo-arthropathie hypertrophiante pneumique."[1]

From the English and American literature of the last ten years I have only been able to collect 25 cases of this peculiar complication of chest disease, and of these the larger number has followed either phthisis or pleural effusion (simple or



Fig. 3.

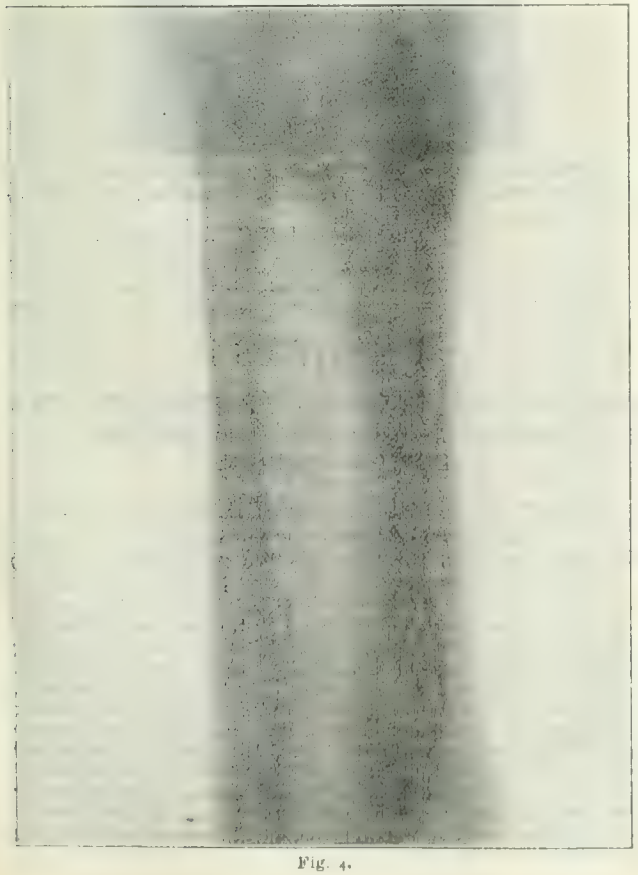


Fig. 4.

purulent), a few were the result of bronchiectasis and one complicated a case of tubercle and cancer of the lung.[2]

Thorburn,[3] who has reported 3 cases, thinks that the affection is really a benign tuberculosis of the bones and joints. Godlee,[4] however, disagrees with this conclusion, since the changes in the bones and joints may occur in non-tuberculous patients.

One may conclude by saying that so far no satisfactory explanation has been given of the changes occurring in the bones and joints in this complication of thoracic disease.

I am indebted to Dr. Ross for allowing me to publish this case.

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MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

THE RAPID EFFUSION OF A LARGE AMOUNT OF FLUID INTO THE PLEURAL CAVITY.

THE publication of Dr. W. Westwood Fyfe's interesting case on p. 1204 of the BRITISH MEDICAL JOURNAL for May 23rd, induces me to send you the following figures concerning a woman, aged 22, who was admitted under my care into Guy's Hospital in 1892. She suffered from tubal nephritis, together with mitral constriction and incompetence. On December 16th, 1892, her right pleural cavity was aspirated, and, as far as I could ascertain, I removed all the fluid, which was 36 fl. oz. Thirty hours after, on December 17th, 106 fl. oz. were aspirated; 78 hours after this, on December 20th, 120 fl. oz. were aspirated; 30 hours after December 20th, on December 22nd, 50 fl. oz. were aspirated; and on February 12th, 1893, 30 fl. oz. were aspirated, making a total of 342 fl. oz. of clear serum removed from the right chest. It appears, therefore, that after the first aspiration, the fluid collected at the rate of $3\frac{1}{2}$ fl. oz. an hour, and after the second and third at the rate of about $1\frac{1}{2}$ fl. oz. an hour. In a paper I published in the *Lancet* for March 25th, 1893, p. 649, the suggestion is thrown out that in cases of very rapid pleural effusion the azygos veins are thrombosed.

W. HALE WHITE,
Physician to Guy's Hospital.

Harley Street, W.

TWO CASES OF ECLAMPSIA SUCCESSFULLY TREATED BY MORPHINE.

THE first case was that of a young country woman, about five months pregnant, with a history of two previous miscarriages. I was summoned to this patient because she had suddenly fallen into a fit. I found her in a dazed condition, being unable to comprehend any question put to her. I gathered that about breakfast time she had lost her sight for a time, and that she had "fainted," falling on the grate, rather severely burning her face; and that during the day she had complained of great headache, and about 7 p.m. had developed the fit referred to, in which she was much convulsed, had gone black in the face, and had bitten her tongue. It being so early in pregnancy, the os being undilated, and not more than two fits having occurred, I decided that the morphine treatment should have a trial, and accordingly gave a hypodermic injection of morphine sulphate gr. $\frac{1}{4}$, at the same time placing croton oil (mij) upon the tongue, and wrapping her in a big blanket wrung out of very hot water. The next day I found the patient quite sensible, having had no more fits, and having had free action of the bowels and skin. She was given no further morphine, but was put on strict milk diet, diaphoretics, diuretics, and bromides. She had now developed the typical puffed, oedematous, white face of acute Bright's disease. Water was passed in the smallest quantity on the second day, but became more free on the third, when it contained much albumen. In the course of a few days the evidences of renal disturbance entirely cleared up. The woman eventually miscarried some three weeks later, the fetus having apparently been dead for some time. She progressed satisfactorily.

The second case was that of a multipara, 8 months pregnant, having had a family of 13, in addition to two miscarriages. She had had six fits during the early hours of

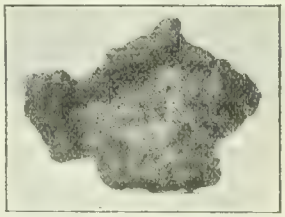
April 18th, the first at 4 a.m. I was sent for at the onset of the sixth fit: by the time I reached the house the convulsion had passed off, leaving the patient semi-comatose. On the strength of the success in the case already alluded to I gave straightway a hypodermic injection of morphine sulphate (⅓ gr.), there being no signs of labour setting in. From the time of the injection no recurrence of fits took place. At the same time I had the woman given a hot pack, and had the bowels well cleared out. The same evening I gave another hypodermic injection of ¼ gr.: by this time the woman clearly understood what was said to her. Urine had been passed during the convulsions, but none during the day. Next day, however, a little was passed, which on examination contained half albumen. She then commenced to make daily the most satisfactory progress, the urine on the eighth day being free from albumen, and passed copiously. Judging from its activity the child, too, is in the best of spirits. The woman gives a recent history of the "liver being out of order," with headache, sickness, and visual disturbances.

Swindon, Wilts. W. BOXER MAYNE, L.R.C.P., M.R.C.S.

NASAL CONCRETION.

A. W. was admitted to the North Riding Infirmary, Middlesbrough, some time ago under my care for the purpose of having a nasal polypus removed, which was supposed to be all he was suffering from. The left side of the face, especially the eye and nose, were very much swollen. He suffered great pain and had lost the senses of hearing and smell on that side. When I passed the forceps into the nose to remove the polypus it struck against something hard and rough which, for the moment, I took to be diseased bone. I soon, however, realized I had a large stone to deal with. The removal was accomplished with some difficulty, but without anything noteworthy, and the case did quite well. Mr. Stead, analytical chemist of Middlesbrough, kindly made a section and analysis of the stone and found it composed of a cherrystone in the centre as a nucleus with a surrounding mass of carbonate and phosphate of lime. It measured 1½ in. from before backwards and 1¼ in. perpendicularly. (The illustrations give a very good representation of the shape and nearly of the size of the stone.) The patient had no re-



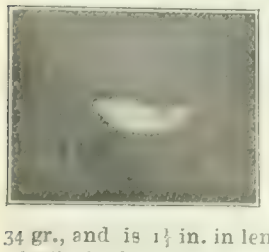


collection of how the cherrystone got into his nose. It doubtless got there during some previous act of vomiting. I made search in several surgical authorities at the time of the operation, but could find no record of so large a rhinolith ever having been removed before.

GEO. LONGBOTHAM, M.R.C.S.Eng.
Ilkley. Late Honorary Surgeon North Riding Infirmary.

SALIVARY CONCRETION.

THE annexed figure is a photograph of a stone I recently cut out from the left Wharton's duct of a woman. The patient told me she had suffered for twenty years with a swelling under the tongue and pain which was increasing. The point of a needle confirmed my diagnosis, and I removed it under cocaine with knife and forceps. The sharp end shown in the photograph lay forward under the fraenum of the tongue. The stone weighs 34 gr., and is 1½ in. in length.



Leatherhead. J. DUNBAR BRUNTON, M.B.

VESICAL CALCULI.

THE accompanying photographs show two stones which I have removed from the bladder. There was nothing out of the ordinary about either cases or operations. I send the photographs merely for any interest the size and weight of the stones might afford. I may say the photographs are taken to the exact size of the stones. The larger spherical stone, weighing 3¾ oz., was removed from the male bladder by suprapubic operation, and had a history of 22 years' formation. The triangular stone, weighing 1¼ oz., was removed



Stone removed from male bladder (suprapubic operation).



Stone removed from female bladder (vaginal operation).

from the female bladder by vaginal operation, and had a history of 14 years' formation.

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Honorary Physician to the Bendigo Hospital; formerly Medical Inspector of Lepers for the Government in Hawaii.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

CENTRAL LONDON SICK ASYLUM, HENDON, N.W.

A PECULIAR CASE OF ENDOCARDITIS.

(By JOHN HOPKINS, F.R.C.S., Medical Superintendent and JOHN S. F. WEIR, M.B., B.Ch. R.U.I., Senior Assistant Medical Officer.)

E. B., aged 27, a cabminder, was admitted to the Central London Sick Asylum, Hendon, on January 27th, 1903, having been transferred from Cleveland Street Sick Asylum.

History.—He had been treated in Cleveland Street in June, 1902, for ulcerated legs, when the following notes were made: "Small-pox five weeks before admission; a soft short systolic murmur at the apex; pulse 72: no albumen in the urine." No rheumatic history and none of any other serious illness was obtained. He came into Cleveland Street this time for dyspnoea and swelling of his feet and legs. He was unable to work on account of the dyspnoea. There was no history of syphilis.

On Admission to Cleveland Street.—His temperature was 104°. His skin was pungent. The pulse was 110. An examination of the lungs showed nothing abnormal. Legs swollen and scars of old ulcers. Liver enlarged. He had a dry cough.

On Admission to Hendon.—Skin pale, but mucous membranes of a good colour. No oedema, no cyanosis. Temperature 97° F., pulse 104, respirations 44. He complained of pain in the splenic region. The lungs showed nothing abnormal. The heart's apex beat was just visible in the sixth interspace in the nipple line. The impulse was heaving in character; no thrill. The superficial cardiac dullness extended to the lower border of the third rib—outwards to the left nipple line and inwards to the mid sternum. A double murmur (systolic and diastolic) was heard all over the precordium. A soft prolonged diastolic murmur was heard in the aortic and pulmonary areas; it was conducted downwards along the left side of the sternum. It was also heard along the right side of the sternum. The pulse was markedly "water-hammer" in character. The liver was enlarged downwards, and was very tender on pressure. The spleen was enlarged and tender.

Internal strabismus was present, which he stated he had had since birth. The knee-jerks were brisk; plantar reflexes very brisk, and slight ankle-clonus was obtained on both sides. There was no oedema, but there were scars of old ulcers on the legs and pigmentation over the scars. Albumen was present in the urine.

Progress.—January 28th. Last evening the temperature rose to 104° F., pulse 116, skin very hot. No cough. A herpetic condition of the lips and sordes on the teeth. Does not feel very ill. No rigors.

January 31st. Patient has a moderate amount of albumen in his urine, and also some blood. Had a sharp lumbar pain yesterday morning.

February 1st. Liver now extends 4 in. below the costal margin. Splenic dullness continuous with that of the liver; spleen cannot be felt.

February 5th. Temperature still high and irregular—101.4° last evening. Patient has been on digitalis and nux vomica since admission. The character of the aortic diastolic murmur has markedly altered; it is now quite whistling and cooing in character. A small amount of blood in the urine and sordes on the teeth. Taking his food well. Patient looking sallow and anaemic.

February 13th. Patient is not so well this evening; looks dazed, and pulse at times is very irregular; there is marked pallor of the face and extremities. About 10.30 p.m. the same night patient became unconscious; the right pupil was dilated and insensible to light, and the cornea was also insensitive. Left reacted normally. The coma gradually deepened and patient became very spastic in all extremities; Cheyne-Stokes respiration set in, and he died at 6 a.m. the following morning.

Necropsy.—The pericardium contained 3½ oz. of straw-coloured fluid; no adhesions. The mitral and tricuspid valves were competent; the aortic valve was markedly incompetent. On exposing the aortic segments three or four large pale vegetations were seen on one of the segments, and this one had also a large perforation or rupture (about size of a No. 10 catheter) in its centre; the edges of the rupture were rough and torn. The rest of the segment and the other parts of the valve were much thickened. There were two small, recent vegetations, bright red in colour, on the wall of the left ventricle just below the valves. The mitral orifice was slightly contracted, but there were no vegetations or ulceration on it. The tricuspid and pulmonary valves were normal. Heart weighed 9¾ oz. Slight hypertrophy of the left ventricle. The lungs showed some congestion and oedema of both bases. There were about 4 oz. of free fluid in the peritoneal cavity; no peritonitis; intestines normal. The liver was much enlarged, its weight 67½ oz.; it was early nutmeg and slightly fatty. The spleen was enlarged, its weight 19¾ oz.; one recent and one old infarct were present. The left kidney was much enlarged, weight 17¾ oz.; capsule not adherent; cortex and medulla markedly congested; no infarcts were discovered. No trace of a right kidney or ureter could be found though a very careful examination was made; there was no scar on the parietes indicating an old nephrectomy, nor was there a collection of fat in the normal position of the kidney. Beneath the dura mater over the left frontal convolution there was a small haemorrhage, and this was seen to communicate with a cavity in the lobe. On making a section of the frontal lobe a cavity about the size of a tangerine orange was found; this was filled with recent clot and necrotic brain tissue. This cavity communicated with the left lateral ventricle which also contained a large clot. Numerous punctiform haemorrhages were scattered over the left hemisphere and the pons; there was a small clot in the right lateral ventricle. The cerebellum and medulla were normal.

REMARKS.—The chief points of interest in the case are: (1) The congenital absence of one kidney; (2) the absence of any definite exciting cause for the endocarditis; (3) the case seems to belong to the group on the borderland between a simple and ulcerative endocarditis; all the emboli were simple, not septic; (4) the remarkable change in the aortic diastolic murmur which probably followed the rupture of the valve; (5) the mode and cause of death from cerebral haemorrhage.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

ALFRED WILLETT, F.R.C.S., President, in the Chair.

Tuesday, June 9th, 1903.

THE PROGNOSIS AND CURABILITY OF EPILEPSY, BASED UPON THE RESULTS OF TREATMENT.

DR. ALDREN TURNER communicated a paper on this subject founded on the records of 366 cases, chiefly derived from the out-patient department of the National Hospital for the Paralysed and Epileptic. Only cases of genuine idiopathic epilepsy which had been under constant observation and treatment for a period of at least two years had been taken. All cases of "symptomatic" epilepsy, or cases otherwise complicated, were as far as possible eliminated. The cases had been divided into three series, according as they had responded, successfully or otherwise, to treatment: Arrested, improved, and confirmed. The influence of the various conditions modifying prognosis were mentioned in detail, the results of the observations being stated in percentages. A family history of epilepsy was found more frequently amongst those who had become confirmed epileptics, but a hereditary history of epilepsy did not necessarily militate against the prospects of arrest or improvement of the disease in any given case. The age at the onset of the disease had an especial bearing upon the prognosis. The most unsatisfactory cases were those in which the disease commenced under 10 years of age; they showed the smallest percentage of recoveries and the largest of confirmed cases. If the disease arose between 15 and 20 years of age an almost equal percentage of arrested and confirmed cases might be expected. The greatest percentage of confirmed cases was found amongst those in whom the disease began between 25 and 35 years of age; from which time onwards there was a steady increase in the expectations of arrest, and diminution in the number which became confirmed. The duration of the malady influenced the prognosis to the extent that arrest or improvement was much more likely during the first five than the second five years; cases might, however, be arrested even after a duration of from 20 to 30 years. The greatest percentage of confirmed and the lowest percentage of arrested cases occurred in those epileptics who were subject to daily or weekly attacks, while conversely, the smallest percentage of confirmed and the highest of arrested cases occurred in those whose fits were as infrequent as once or twice a year. The character of the seizures influenced the prognosis to the extent that the major attacks were the most tractable, then followed combined major and minor seizures, and lastly the minor attacks occurring alone. Marriage exerted little, if any, influence upon epileptic fits. Some patients were relieved, others were made worse. In the majority of cases the disease remained unaffected. Pregnancy had little influence on the seizures; at the best, there might be only a temporary respite. On the other hand, the puerperium seemed to be especially favourable for the recurrence of fits, while lactation also was not without an exciting influence in their production. The common incidence of epileptic fits was an irregular periodicity. There were types, however, which had been described as increasing or decreasing, according as the fits increased or decreased in number in a definite period of time, or in which there was a shortening or lengthening of the intervals between the fits. A case of increasing type might by treatment be converted into one of the decreasing variety. Long remissions, induced either by successful treatment or from spontaneous cessation of the fits, sometimes lasting for several

years, were not unusual in epilepsy; they were of favourable prognostic value but were not synonymous with a cure of the disease. From the collected statistics, a period of remission for at least nine years had been fixed as the basis on which a cure of epilepsy might be established. With this definition of a cure 10 2 per cent. of epileptics were regarded as curable. There were some cases of epilepsy which might be regarded as belonging to a curable type of the disease. These presented little or no mental impairment, notwithstanding that fits might have existed for a long period. In the cases in which arrest took place, cessation of the fits occurred within the first year of continuous treatment in over 50 per cent.

Dr. Fletcher Beach referred to the observation that those cases of epilepsy in which there was no heredity improved the most. He asked why the cases under 10 years of age should present such a large number of confirmed cases. The fits that occurred by night were not so frequently arrested as those occurring by day; it was a question, therefore, whether night cases could not be turned into day cases. In regard to marriage, the rule was that the disease was more likely to be transmitted if both parents were affected than if only one. The increase of frequency of fits during lactation seemed to depend on the lowered vitality and strain induced by that process. In regard to menstruation, by many patients its onset had been given as the cause of epilepsy. This was, of course, a mistake. From the results in the paper, it would seem that cases must continue under treatment for nine years.

Dr. G. Shuttleworth, from his experience of epilepsy in children, could only record one instance of recovery out of a large number of cases. Further, as one of the medical officers of the London School Board, he had seen some 340 cases of epilepsy in children with a view to determine their educational possibilities. The proportions were, of 340 cases, 17 per cent. were considered fit to continue at the elementary schools; 27 5 per cent. were not fit for ordinary classes, but were intellectually suitable for the special schools; and 40 per cent. were fit only for special institutional treatment. About 13 per cent. were said to be congenital, in 12 per pent. of cases the disease had appeared under 1 year, 15 per cent. under 5 years, and 12 per cent. under 10 years of age, while only 3 per cent. occurred between 10 and 14 years, most of which were attributed to some traumatic cause. As to the influence of marriage, in many cases an epileptic mother having an epileptic child had got married with the idea of getting rid of the fits herself. Of one family of ten, of epileptic parents, eight had had fits. In only one case was pressure of education assigned as the cause of the fits.

Dr. W. Blake was impressed with the observation that the curability of the disease was not much greater after than before bromide days. He himself had had very good results with sodium sulphocarbolate and dieting, in some cases accompanied with strophanthus. Giving sodium salicylate before catamenial periods had seemed to relieve the fits in those cases apparently associated with menstruation.

Dr. G. Newton Pitt referred to two points: That there was no greater proportion of cures since the introduction of bromides than previously; and that practically the majority of cases which failed to yield to treatment during the first year were not hopeful. As regarded the number of years of freedom which might be taken as cure, it was noteworthy that relapse occurred sometimes even after nine years. It seemed hardly fair to put aside, in estimating cures, all cases that drifted into asylums; they must form a large proportion of the total number of cases in the country. If a patient had had no fit for two years, how much bromide should the patient take after that interval? If there had been freedom for four or five years, should bromide be continued, and if so, how much as the dose? He asked why patients beginning between 30 and 35 should be more unfavourable cases?

Dr. Batty Shaw referred to Sir W. Gowers's statistics that 41 per cent. of cases had a hereditary history of epilepsy, and compared them with Dr. Turner's cases with 37 per cent. He alluded to the difficulties of arriving at trustworthy statistics from observations on out-patients from their ceasing attendance.

Dr. D. A. Shirres asked if the toe phenomenon had been investigated in epilepsy by Dr. Turner, and if he had found internal antiseptics of any use in epilepsy.

Dr. Turner replied.

Metropolitan Counties Branch of the British Medical Association: Richmond Division.—At the first annual meeting of the Division, held on May 28th, Dr. R. Langdon Down in the chair, a paper was read, and illustrated with lantern slides, upon the relation of the nervous system to carcinoma, by G. Lenthal Cheatle, C.B., F.R.C.S., and a discussion followed.

CLINICAL SOCIETY OF MANCHESTER.

T. Arthur Helme, M.D., in the Chair.

Tuesday, May 19th, 1903.

Acute Recurrent Hydronephrosis.

Dr. Arnold W. W. Lea read a paper based on four cases treated by operation. The condition was marked by recurrent attacks of acute abdominal pain with severe constitutional disturbance and associated with rapid swelling of the kidney and temporary hydronephrosis. It might be found along with mobile kidney, but extreme mobility might exist without any hydronephrosis. Mr. Bruce Clarke in 1893 described this condition as "acute renal dislocation," the kidney slipping down below the costal margin. In the cases described by Dr. Lea reduction of the kidney, even under an anaesthetic, was impossible owing to the greatly-increased size of the organ. The cause of the condition was temporary ureteral obstruction. Slight degrees of ureteral obstruction were common in mobile kidney, producing some hydronephrosis, but in the acute cases an additional element was introduced, namely, sudden kinking or torsion of the ureter. Valvular folds were frequently found in the upper part of the ureter, near the renal pelvis. Sometimes also strictures occurred from various causes. Reference was made to an interesting type by Bary of Paris,[1] who had examined the ureter and renal pelvis of a large number of newly-born infants. Among 68 cases, only 15 were found in which the ureter was absolutely normal; valvular folds, narrowings, and kinking or torsion to some extent, were present in 31 cases. These arose in the wall of the ureter itself. The pelvis of the kidney also showed great variation in size and shape, and the angle of insertion of the ureter might be vertical or horizontal. The form most liable to lead to hydronephrosis was a voluminous renal pelvis, with the ureter entering at an acute angle. In these cases, which were rare, sudden strain or effort might produce obstruction of the ureter and hydronephrosis. Other factors, such as congenital stenosis, valves, and twists, also conduced to the production of recurrent hydronephrosis, so that this condition was largely dependent on the disposition of the ureter and renal pelvis. In these cases slight descent of the kidney, not recognizable clinically, might lead to acute ureteral obstruction. The symptoms might be very severe. In one case the attack came on at frequent intervals without obvious cause, and was accompanied by intestinal obstruction due to displacement of or traction on the colon. A distinct tendency existed for the attack to occur just before the menstrual period. This occurred in two cases, and might suggest a pelvic cause for the symptoms. The attack might last three to five days, and then within a few hours the kidney might return to the normal size and all the symptoms disappear. In the intervals the patients might be well, but they were usually neurasthenic and had constant aching in the loin. The diagnosis was easy if a definite tumour could be felt, but in the earlier stages of ureteral obstruction with dilatation of the pelvis the symptoms might be very severe, even in the absence of any definite tumour. The treatment must be mainly surgical, palliative measures could rarely effect a cure. The kidney must be exposed, and in the great majority of cases nephrorrhaphy effected a permanent cure. In slight cases it was unnecessary to drain the renal pelvis; if, however, the kidney was hydronephrotic, the pelvis must be incised and a careful examination made of the upper end of the ureter. If no obstruction was found, the pelvis might be sutured and the kidney fixed. Nephrorrhaphy was carried out by Dr. Lea in all the cases, in three the pelvis of the kidney was opened, and in one it was thought advisable to drain for a few days. In each case a permanent cure was obtained. It was important not to delay operation too long, as otherwise the kidney might be irretrievably damaged. There was also a great tendency to the development of pyonephrosis in these cases, due to an ascending infection from the bladder, or possibly to adhesions forming between the colon and the perirenal tissues.

Bronchocele.

Mr. J. E. Platt presented a communication upon broncho-

[1] *Rev. de Chir.*, February, 1902.

cele, especially from the point of view of treatment. He briefly reviewed the various forms of chronic bronchocele and referred to a few points in their etiology, pathology, and symptomatology. In cases of parenchymatous bronchocele he had found considerable benefit from the administration of iodine and potassium iodide internally, but these and all other internal remedies were practically useless in adenomatous cases. In the latter the only effective treatment was operation with enucleation of the tumour. The general parenchymatous enlargement of the gland, which often accompanied adenoma, usually subsided after the removal of the adenoma. In simple parenchymatous cases which resisted medicinal treatment, operative measures should consist in partial excision of the gland or scooping out of its interior. Mr. Platt also referred to the symptoms of absorption of thyroid secretion which sometimes occurred after operation, and showed a number of charts illustrating special observations upon this point.

HARVEIAN SOCIETY OF LONDON.—At a meeting held on May 21st, Dr. W. WINSLOW HALL, President, in the chair, Mr. LAMING EVANS showed an infant with swelling of the right foot involving the four outer toes and the dorsal and plantar surfaces of the foot to the level of the bases of the metatarsals. The swelling was for the most part firm and solid. The three middle toes were webbed, and there was increase in the circumference of the leg and of the right buttock. The thigh appeared normal. A skiagraph showed that the phalanges of the four outer toes were expanded, that the second and the third were irregularly placed, and that the third phalanges of the third and fourth toes were conjoined. The rest of the bones were normal. Probably the case was one of congenital hypertrophy involving vessels, nerves, bones, muscles, and fibrous tissues, the chief characteristic being hyperplasia of the subcutaneous tissue with special involvement of the lymphatics. Other possibilities were fibro-chondroma or naevo-lipoma. The treatment suggested was dissection of the growth from the dorsal and plantar surfaces, with removal of the fifth metatarsal bone and all the phalanges, leaving the great toe intact. Mr. JAFFREY thought the case likely to be one of naevo-lipoma. Mr. CRISP ENGLISH considered that the child was suffering from congenital hypertrophy, especially as the calf and buttock on the same side were also hypertrophied. In reply to the PRESIDENT, Mr. EVANS said he saw no reason for interfering with the swelling on the calf and buttock.—Mr. T. CRISP ENGLISH showed a girl aged 5, with a congenital facial cleft. An operation had previously been performed, but no further particulars could be obtained. The cleft extended from the right side of the upper lip to the inner canthus. The right side of the nose and the right nostril were completely absent, and the palate was very highly arched. The question of improvement in appearance by plastic operation was raised. Mr. English was inclined to think that injection of paraffin might be of use.—Mr. CRISP ENGLISH also showed a woman aged 30, suffering from a large "desmoid" or fibrous tumour of the abdominal and thoracic walls. The patient had had one child. The tumour had existed for eight years, and at the present time occupied the greater part of the anterior abdominal wall, and extended upwards over the thorax, involving the left breast. In reply to the PRESIDENT, Mr. CRISP ENGLISH said that the tumours appeared always to originate in the abdominal wall. In the present case, for the last four years the tumour had steadily decreased in size without any special treatment.—Dr. ALEXANDER MORISON showed a case of mitral valvular disease with much hypertrophy of the heart, and probably adherent pericardium, in which he considered that the chief mechanical difficulty was the reflux of blood through the auriculo-ventricular orifice and some virtual stenosis of the same from enlargement of the ventricular cavity. He showed the patient on account of the wide area of audibility of the systolic *bruit*. There was also a palpable thrill. The *bruit* could be heard in the back as low down as the sacrum, and in front of the pubes, but not in the femoral arteries. The second sounds at the base were normal, and could at times be heard to reduplicate at the level of the fourth left costal cartilage. Sphygmographs showed a well-marked aortic notch, and cardiographs the flat top of systole from a hypertrophied ventricle. In reply to a question by Mr. ENGLISH, Dr. MORISON believed that there were cases of adherent pericardium, discoverable only by exploratory operation, which were amenable to surgical methods. He based his opinion on *post-mortem* observations.—Mr. FRANCIS JAFFREY showed a man, aged 47, with oesophageal obstruction. There had been difficulty in swallowing for about three months, and his condition was becoming more acute, so that he could only swallow fluids. He asserted that some ten days ago he vomited a pint of bright blood. The day after admission to hospital he brought up 7 oz. or 8 oz. of bright blood, and immediately afterwards he could swallow with greater ease. A bougie passed 12 in., and impinged on what appeared to be a hard growth. Owing to the bleeding, however, it had been suggested that the obstruction might be due to a leaking aneurysm. During a week in hospital the man had increased 6 lb. in weight. No sign of aneurysm was apparent by the *x* rays. Mr. Jaffrey considered the case to be one of carcinoma, and proposed to do gastrostomy when the patient's condition became worse. Mr. CRISP ENGLISH made remarks on the case.

GLASGOW OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.—At a meeting held on May 27th, Dr. J. NIGEL STARK, President, in the chair, Dr. JARDINE showed a child born by the breech which only lived a few hours, and which had various deformities, external and internal. The *post-mortem* report of the case was given by Dr. DOUGLAS. The scalp was very loose and redundant. The interior of the cranium was normal. There was a double talipes varus. The external genitals were those of a male, but the penis was impervious and the scrotum was empty. The abdomen contained a large tumour, which before death was thought to have been a distended bladder. The tumour was found to be cystic, and to contain a turbid mucoid fluid, which was devoid of fat, but contained many cells similar to the seminal cells which secrete the fluid part of the semen. On either side of the tumour was a tube and ovary. The kidneys were cystic, especially the left; the right one had no ureter attached. The child was probably a transverse hermaphrodite.—Dr. LOUISE MACILROY showed (for Dr. KELLY) a large tumour of the uterus, which had been diagnosed as fibroid complicated with malignant disease of the omentum. The clinical history was recounted. On section the whole tumour was found to be attached to the uterus, and on microscopic examination part was found to be malignant.—Dr. RUSSELL showed (for Dr. KERR) a fibroid uterus removed by the supravaginal method; tube and ovary from a case of old-standing pelvic inflammation; ovarian cyst removed from a patient three and a-half months pregnant; in all recovery had taken place.—Dr. STUART NAIRNE showed: Undeveloped ovaries removed from a patient with dysmenorrhoea; an enlarged ovary and tube removed from a patient, from whom a carcinomatous breast had been previously excised; colloid disease of ovary and tube; extrauterine pregnancy sac.—Dr. CARSTAIRS DOUGLAS demonstrated Saul's test for determining whether milk had been sterilized or not. The amount of pasteurization which vitiated the test was noted. The test was considered to be due to the presence of a ferment in the milk which was destroyed by boiling.—Dr. STUART NAIRNE read a paper on menstrual epilepsy. He had begun his observations upon this disease in females in 1886, and had only now thought that he had any progress to report. The histories of a few cases were read and the effect of treatment upon the fits was touched upon. The treatment advanced was for the cure or improvement of the disease, and was not specially carried out for the sake of the pelvic disease. Dr. Nairne showed a number of sheets to illustrate his views, and attached to the menstrual symbols were the number of fits in each case. A number of cases were said to have been so much improved that no fits had since been noted (during a period of even five years). The treatment advocated was dilatation in cases of stenosis, curettage, the application of the actual cautery to the fundus, and removal of the ovaries if diseased. The paper was discussed by Drs. ADAMSON, DOUGLAS, and MACLENNAN, and the PRESIDENT; the consensus of opinion being that the epilepsy had nothing to do with the menstrual phenomena, and that disease in the pelvis ought to be treated on its own account. Dr. ADAMSON made the pertinent remark that the question of other treatment being simultaneously employed had not been noted. Dr. NAIRNE stated that it had not, and that he did not claim to have cured the disease, but diminished the fits, and he wanted more observation of the complaint from this point of view.

GLASGOW NORTHERN MEDICAL SOCIETY. At a meeting held on April 7th, Dr. J. S. MUIR, President, in the chair, Dr. A. MAITLAND RAMSAY, with the assistance of his staff, gave a

series of demonstrations with special reference to diseased and injured conditions of the eye. As there were several patients present by arrangement, these were shown first and their conditions explained. The first class of cases referred to an operation for ptosis. The operation which had been performed was a modification of that of Mules. The advantage of it was that if it were not successful it could be easily done again, and it left very little, if any, scar. The upper lid was suspended on a loop of wire, which remained permanently in the tissues. The next class of cases calling for attention consisted of three patients in whom a paraffin stump had been supplied after enucleation. The great difficulty with the artificial eye was its sunken, flat, and dead-like appearance. The operation described went a good way to overcome this drawback. When liquid paraffin was injected into the capsule of Tenon the artificial globe in front could move about, and it was very difficult to detect that it was artificial. Another class of considerable psychological interest was demonstrated in which sight had been restored after many years of more or less total blindness. In one case a dark dislocated lens had been found blocking up the pupil, and was removed, after which the patient had good vision. A man aged 30 was present who had been born blind. A cataract had been found in each eye. Both lenses were removed. The man now saw very well, and could tell the time on a watch. It was intended that his sister should now be operated upon as well, as she was also blind. Several preparations, including cultures and microscopic slides, were shown, demonstrating the bacteriology of the conjunctiva, and arranged by Dr. J. C. McLure, Bacteriologist of the institution. In the electric room, Dr. JOHN GILCHRIST explained the various apparatus, including the *x*-ray appliances.—Dr. RAMSAY afterwards delivered a lecture on iritis, in the class room. The clinical features were illustrated by hand-painted coloured slides, while the pathological aspect was clearly demonstrated by means of microscopic specimens thrown on the screen by the projection microscope. It was thus possible to have two pictures shown at once.

NORTH OF ENGLAND OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.—At a meeting held at Leeds on May 15th, Dr. J. E. GEMMELL, President, in the chair, a series of card specimens were shown by Dr. J. B. HELLIER (Leeds).—Dr. E. O. CROFT (Leeds) showed two uteri removed for malignant disease of the cervix.—Specimens; Dr. WALTER (Manchester) showed a fibromyoma uteri undergoing degenerative changes.—Dr. LLOYD ROBERTS (Manchester) showed a tumour removed from the fimbriated end of the Fallopian tube during the course of an operation for ruptured ectopic gestation. It was attached to one or two of the fimbriae, and presented appearances which indicated that it was a dermoid cyst. The specimen was discussed by the PRESIDENT and Drs. C. J. WRIGHT and WALTER. Dr. W. MCGREGOR YOUNG (Leeds) read notes of a case of acute mercurial poisoning from intrauterine injection. The case was of special interest, because it was complicated by retention of a piece of placenta in utero. The delicate, anaemic patient had been ill more or less throughout her fourth pregnancy. Retention of the placenta after delivery with forceps necessitated manual removal which was followed by an intrauterine douche of a 1 in 3,000 solution of biniodide of mercury, followed by one of plain water. On the tenth day there set in indications of sepsis, and a bit of placenta was removed from the uterus. Later, the classical symptoms of acute mercurial poisoning became well-marked. Further exploration of the uterus disclosed another piece of placenta which was removed. By the nineteenth day the patient was progressing well, but a recurrence of the mercurial symptoms took place. Ultimately the patient made a good recovery. Salivation and stomatitis were absent throughout, but there were soreness and stiffness of the jaws, preventing mastication, severe headache, coppery taste in the mouth, and severe purging and tenesmus. The PRESIDENT remarked that solutions made by the dissolving of tabloids were apt to be imperfectly mixed, if used hurriedly, the solution at the bottom of the vessel being much stronger than that higher up in the same vessel. Dr. HERBERT ROPER (Leeds) suggested that the uterus might have been perforated during the administration of the douche. Dr. E. O. CROFT thought it was unnecessary to advance trauma as the explanation of the symptoms that had been described. He agreed with the President's remarks anent the imperfect solution of powders or tabloids, and commented on the difficulties in distinguishing the diarrhoea of sepsis from that due to mercurial poisoning. Professor WRIGHT (Leeds) said that for some years he had used mercurial solutions in no greater strength than 1 in 5,000 or 1 in 6,000, and then only with the greatest care. He considered weak boracic or carbolic solutions were better for intrauterine use than sterilized water. Dr. LLOYD ROBERTS agreed with Professor Wright that for intrauterine work weak solutions of boracic acid, carbolic, or iodine were all that was required. Dr. MCGREGOR YOUNG, in replying, referred to a paper by Professor Marshall of St. Andrews on poisoning by mercurial solutions in obstetric practice. This writer thought that many deaths resulted from the use of such solutions, but were not recognized as such. The diagnosis was certainly difficult where a piece of placenta was retained and high temperatures developed. The absence of stomatitis was not against mercurial poisoning, as ulceration of the mouth and ptyalism did not usually occur in these acute cases. There was no question of the uterus having been perforated, as the acute symptoms preceded the operation.—Dr. A. RABAGLIATI (Bradford) read a paper on the causes and prevention of cancer. After a brief review of the principal theories at present before the profession, he propounded his own view that cancer was from first to last a disease of over-feeding. He adduced many arguments in support of this theory and indicated the lines of treatment to be followed on its basis. The PRESIDENT remarked that well-nourished persons were more often attacked by malignant disease than those less well nourished. Dr. LLOYD ROBERTS and Dr. RICHARDSON (Leeds) also spoke, and Dr. RABAGLIATI replied.

JAMAICA BRANCH OF THE BRITISH MEDICAL ASSOCIATION.—At a meeting held on April 14th, Dr. ROBINSON, the President, who was in the chair, showed photographs of the disease prevailing in Trinidad (along with Dr. Bridgers's report).—Dr. ALLWOOD read a report of two cases of suprapubic prostatectomy. Some time last year Mr. P. J. Freyer announced a new operation for the removal of the prostate gland by the suprapubic route, which he had devised, and described anatomical relations of the prostate which he claimed to be new. Enlarged prostates were not, in Dr. Allwood's experience, common in Jamaica, but soon after the publication of Mr. Freyer's paper the two following cases came under his care:

Case I. W. M., aged 72, was admitted to hospital with a history of gradually increasing distention of his abdomen, pain in the belly and constipation; he never mentioned anything about being unable to pass his urine and it was only after a careful examination of his abdomen had revealed the fact that the distension was caused entirely by the bladder being enlarged considerably above the umbilicus that any history of the actual condition could be got. A large prostatic silver catheter was passed with some difficulty and 30 oz. of ammoniacal urine were drawn off. During this operation it was found that there was something projecting into the neck of the bladder over which the catheter had to ride before the urine could be reached. By the rectum the prostate was found to be uniformly and enormously enlarged, forming an appreciable tumour and no doubt being largely responsible for the constipation. His general and local condition was carefully attended to for a few days and then he was operated on. The bladder was opened suprapubically, after previous filling with warm boric lotion, leaving the catheter inside. On introducing his finger into the wound Dr. Allwood found the prostate gland uniformly enlarged and a pedunculated "tumour" (the middle lobe presumably) about the size of a plum acting as a sort of ball-valve to the bladder end of the urethra. Passing a pair of scissors into the wound the mucous membrane of the bladder was snipped a little to the right of the middle line. Through this wound the finger was introduced and the gland gradually shelled out, no difficulty being encountered except at the apex of the gland where it was bound down by firm fibrous tissue. A finger in the rectum, however, helped to steady the gland and to push it forwards and it was soon freed. It was so large that it had to be divided into three before it could be delivered through the wound in the anterior bladder wall. All during the operation the bladder was kept constantly irrigated with warm boric lotion. The haemorrhage in truth was formidable but was ultimately checked with hot lotion and sponge pressure. A large drainage tube was inserted into the suprapubic wound, the redundant portion being sutured with silkworm gut. The bladder was irrigated daily through the catheter, and on the fifth day the drainage tube was removed. In twenty-seven days the old man was able to pass his urine naturally and to hold it for five or six hours at a time. In five weeks the wound in the bladder was soundly healed, and the patient was walking about feeling quite well. The gland showed weighed 4 oz.—Case II. W. T., aged 44, was operated on in the same way. There was much greater difficulty in shelling the gland out on account of the dense attachments at the apex, but it was ultimately delivered whole. This patient died thirty-six hours after operation from complete suppression of urine. At the necropsy it was found that he had small white kidneys. The prostate gland in this case was much smaller than the last and presented a series of blunt frills into the bladder. With regard to the urethra, in the first case the floor was damaged, but in the second case the gland shelled out leaving the urethra in tact.

Mr. Freyer's operation offered complete relief, with comparatively little danger, from a condition at best almost intolerable; and which, with the commencement of catheter life, was soon in Dr. Allwood's experience fatal.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—At a meeting held on May 21st, Dr. E. SYMES THOMPSON, President, in the chair, the officers and Council for the ensuing session were unanimously elected. The report of the Council on the state and prospects of the Society was read and adopted.—Dr. GEO. OLIVER (Harrogate) gave an address entitled a Few Jottings in Physiological Medicine. After some preliminary remarks on the importance of physiology and of employing physiological methods in balneological practice, Dr. Oliver sketched the results of a recent more thorough inquiry on the effects of digestion, exercise, temperature, and altitude on the arterial, capillary, and venous pressures. He showed that each meal produced a prolonged wave-like disturbance in the arterial and capillary pressures, traceable for two and a-half to four hours, which persisted through the temporary variations of the blood pressure induced by other causes, such as exercise, temperature, etc.; that the rise of capillary pressure thus produced probably increased the exudation of tissue fluid, a fact which further inquiry might demonstrate; and that in this digestive circulatory disturbance the venules played an important rôle in raising the capillary pressure. The value of static contraction of the muscles was shown in the treatment of hypertonic states of the arteries, arterioles, and venules (as in chronic goutiness, etc.). The sensitiveness of the circulatory mechanism to thermic variations of the weather was illustrated by a serial daily record of blood pressure and temperature for three months during the past winter. The effects of altitude on the arterial pressure in winter observed during a recent visit to Switzerland were shown to be a lowering of that pressure by the medium altitudes (from 1,000 ft. to 4,000 ft.), and a raising of it in the higher altitudes (from 4,000 ft. to 8,000 ft.), the rise being due to a compensation caused by an increase of the output of the heart and of the arterial tonus. Dr. Oliver concluded with some remarks on the greater value of clinical methods which demonstrated facts to others over those which were merely personal to the observer, and on the probable adoption of some mode or other of reading the blood pressure in the medicine of the future.—On the same evening the annual dinner was held at the Café Monico, the chair being taken by Dr. SYMES THOMPSON, President.

REVIEWS.

DISEASES OF THE INTESTINE.

IF our sole object were to write a laudatory review of Dr. HEMMETER'S two huge volumes of over 700 pages each on *Diseases of the Intestines*,[1] we could not do better than quote from the author's preface an account of the excellent work which has been done in this department by Americans, and the high ideal which the author thinks he has attained.

> My own efforts in the present publication have been directed to furnishing the practitioner with a complete work from which he may readily instruct himself concerning the most approved and modern methods of diagnosis and treatment of intestinal diseases. As can be seen from the bibliography quoted, almost the entire modern literature on this subject has been gone over and systematized, and, after the application of conservative critical judgment, I have attempted to derive from this literature those scientific deductions that appeared of genuine value, marked a distinct advance, or promised an actual help to diagnosis and treatment.

Knowing Dr. Hemmeter's admirable work on diseases of the stomach, our appetite has been thus whetted to discover what new pabulum he has provided in his extended field of practice, which now covers the whole of the digestive tract. At the very outset, however, our teeth have been somewhat set on edge by his American spelling and the use of such barbarisms as the verb "to loan" in all its moods and tenses in place of to lend. The section on the anatomy and histology of the intestines is from the pen of Dr. J. Holmes Smith, that on the examination of the faeces and urine is by Dr. Harry Alder, that on intestinal bacteria by Dr. Wm. Royal Stokes, and that on diseases of the rectum is by Dr. Thomas Charles Martin. The rest of these large volumes is by Dr. Hemmeter, which certainly shows that he wields the pen of a ready, and, from the point of view of the reviewer, a too fluent writer.

The section on descriptive anatomy and histology is clearly written, and the excellent diagrams help to elucidate the subject. The section on the physiology of the intestines is an admirable digest of the excellent work which has been done by numerous investigators, and well exhibits the clear mental attitude of its author. The chapter on intestinal bacteria occupies 70 pages, is succinctly and clearly written, and affords much information in this fertile field, though since these pages were written much important work has been done, notably as to the cultural peculiarities of the typhoid, colon, and allied bacilli. The methods and technics of diagnosis are well described, but in this country we are content to draw our conclusions without the aid of the electrodiaphane. The examination of the faeces is not a very savoury subject, but we are convinced that the information thus attainable is too generally neglected, and we hope that the excellent chapter by Dr. Alder may stimulate more systematic attention to this matter. Dr. Hemmeter has practised duodenal intubation in thirty-four patients, and by this means in a case of blocking of the common bile duct he was able to obtain the pancreatic secretion in a fairly pure condition. It is unnecessary to say that the method requires very great dexterity on the part of the operator and consequently is one which should only be adopted after considerable experience on the cadaver.

The second part of the first volume is devoted to diet, therapy, and the materia medica of intestinal diseases. The twelfth chapter on the principles of dietetic treatment is very valuable. The nutritive value of foods, and the importance of a varied selection are clearly depicted. From the experiments of Moritz, Voit, Hemmeter, and others, it is concluded that the diet should consist of about 16 to 17 per cent. of proteids, 8 or 9 per cent. of fats, and the rest of carbohydrates. It is shown that the nutritive value of a food does not depend entirely on its caloric value, but also on its digestibility and on the amount which can be utilized. Thus 1 gram each of fat, of carbohydrate, and of proteid yields respectively 9.4, 4.1, and 4.1 calories, but the nutritive values assigned are 8.4, 3.8, and 3.2 calories respectively. He enters fully into the dietary, prophylaxis, and hygiene during epidemics of cholera, typhoid fever, and dysentery. There are a series of important dietary scales in intestinal diseases. The original work of the author on rectal alimentation gives that chapter a special value. After quoting the statement of Leube that complete nutrition of the body can be attained by extrabuccal means, he says:

> At present, however, with a very extensive experience with these methods of feeding, it must be stated that they cannot replace completely the normal processes of feeding by the mouth..... Bacteria do not make peptone for any philanthropic purposes; the peptone they give rise to is an intermediate stage in a long series of decomposition products. It does not remain peptone, but is rapidly decomposed into amido-acids, ammonia, tyrosin, etc., and does not occur in the intestine as peptone pure and simple, but mixed with a number of other derivatives of albumen, some of which are proved to be toxic.

The preparation and administration of rectal enemata are well detailed. His chief experience with subcutaneous feeding seems to have been with injections of sterile olive oil. For this purpose we can commend to his attention the use of 5 per cent. of glucose in normal saline solution. The remainder of this division of the work is occupied with a discussion of mineral springs, medicinal agents, intestinal auto-intoxication, intestinal antiseptics, individual idiosyncrasies, massage, hydriatics, electricity, etc. Chapter XIV is devoted to diarrhoea, obstipation or constipation, and coprostasis. The following loose method of prescribing belladonna and strychnine in cases of obstipation associated with excessive hyperacidity must be strongly condemned.

> ℞ Magnesiae ustae (calcined magnesia), gr. cxxxxiss.
> Pulvis rad. rhei (powdered rhubarb), 11ss.
> Natri carbon. (sodium carbonate), gr.lxx½.
> Ext. belladonnae.
> Ext. strychninae, of each, gr.¹/₁₀.
> Sig. One-half teaspoonful three times daily half an hour after meals.

Chapter XIX is devoted to enteritis. At page 449 there is a very carelessly written paragraph:

> Fever is absent entirely in most cases of acute enteritis, especially with adults. The disease may, however, commence with repeated chills, even very severe ones. If the increase in temperature remains for several days at about 112° F., we may suspect a case of enteric fever, especially when the acute enteritis causes swelling of the spleen (Fischl). The result of the Widal test, careful measurements of temperature (in case of typhoid fever gradual increase of the fever) the nature of the pulse,

[1] *Diseases of the Intestines: Their Special Pathology, Diagnosis, and Treatment.* By John C. Hemmeter, M.D., Ph.D., Professor in the Medical Department of the University of Maryland. In Two Volumes. London: Kebman Limited. 1902. (Roy. 8vo, pp. 1422. 508.

which in feverish acute enteritis generally rises quickly, the absence of typhoid spots, guard against mistaken diagnosis, etc.

The chapter on dysentery is very good. He condemns ipecacuanha, but does not mention copper arsenite nor injections of hydrogen peroxide recommended by the late Sir B. W. Richardson.

The chapters on ulcers of the intestine and on intestinal neoplasms are well illustrated and the text is up to date.

In the second volume are embraced those pathological conditions which occupy the borderland between internal medicine and surgery, and we must add that, although the view is that of the physician, every question is also carefully studied from a surgical standpoint. The volume opens with a lengthy chapter on appendicitis, and here we prefer the well-balanced judgement of the American physician to the often too bold surgery of the American surgeon. He offers the following explanation of the greater frequency of the disease in the male sex:

Simple appendicitis and typhlitis are observed much oftener in men than in women, because the intestines of the former are exposed to more injurious influences as a result of faulty diet and manner of living.

For many this would have sufficed, but our author rushes on from the region of fact into that of conjecture.

There is another explanation for this—namely, the fact that females are supposed to have a greater blood supply than males, both in actual quantity and in proportion to the size of the appendices in the two sexes. Clado has described a fold of peritoneum extending from the appendix to the ovary, the appendiculo-ovarian ligament, which carries a blood vessel to the appendix. This, together with the fact that the appendix of the female is smaller than that of the male, may account for the comparatively small percentage of attacks among women and girls.

Some might be disposed to think that a greater blood supply would have increased the liability to inflammation. Breuer and Nothnagel dispute the contentions of Clado and Van Cott regarding the blood supply of the appendix, and Nothnagel considers the two principal causes of appendicitis to be the deleterious influence of bacteria and coprostasis or coproliths. His description of the symptomatology of the affection is lengthy, and burthened with many repetitions. His views on treatment are sound. He is no advocate for indiscriminate operations, but he says:

I believe that no experienced clinician will hesitate to call in the surgeon in those cases where he has detected suppuration or the formation of abscesses, or has reason to suspect them. The views of the surgeons differ only as to the choice of the time when the operation shall be performed. Some of them (Weir, Deaver, Morris, Finney, Kraft, Roux, and others) have proposed to perform it as soon as possible, for the following reasons: (1) It would be easier technically; (2) those adhesions which would prevent recognition of the pathological territory would yet be absent; (3) the formation of extensive abscesses and the development of diffuse peritonitis would be prevented; (4) therefore the resection of the appendix would be easier. Others have emphasized another point of view, namely, that if the special and individual circumstances allow of waiting, in this period of time the abscess may become walled off, and that when it afterwards empties itself the opening of the peritoneal cavity will have been avoided. This opening of the general peritoneal cavity is, after all, a critical matter, and can rarely be avoided in the early operation. At present we cannot decide which of these opinions is the correct one. Besides, we cannot formulate definite rules concerning the exact time when an operation is necessary and when not. This must be decided in each individual case. In some cases which start violently great improvement may soon set in, which may permit a delay; in others which commence mildly the surgeon may be compelled to perform an operation very suddenly, because the symptoms of occlusion or of a threatening perforation peritonitis may appear suddenly. . . . After the operation has been decided upon the case should not altogether be left to the surgeon to decide whether it should be performed at once or not; the attending practitioner's experience is very valuable in forming an opinion of the general condition of the patient and any previous diseases that may have weakened it.

He quotes the statement of N. Senn that:

The medical treatment has an important place in the management of every case of appendicitis, and should never be ignored.

In his description of the symptomatology of chronic or relapsing appendicitis it is to be hoped that he describes the American rather than the English patient in the following sentence:

The patient is, as a rule, compelled to live near his medical adviser. The constant state of uncertainty renders him timid, irritable, and neurasthenic. The enfeeblement of the patient is proportional to the frequency in the recurrence of the attacks and the shortness of the intervals of comparative freedom intervening between them.

A few such patients might be an important source of income, but half-a-dozen of them would be sufficient to make any medical adviser's life miserable. Perhaps the solution of the problem will be found in his observation that:

Chronic appendicitis requires differentiation from similar symptoms caused by neurasthenia, hysteria, and hypochondriasis.

Edebohls's method of palpating the appendix is given in detail, but there is nothing peculiar in it, and, moreover, it presupposes that the appendix always runs in the direction from the anterior superior iliac spine to the umbilicus, which it certainly does not. The appendix is usually best palpated by placing the palmar surface of the fingers in the iliac fossa at right angles to a line drawn from the anterior superior spine to the umbilicus, applying deep pressure and at the same time exerting rapid lateral movements. Edebohls recommends the fingers to be held parallel to the above line, and uses the right hand, whereas the left is to be preferred. It is to be noted that the position of the appendix is very variable in different individuals, hence no rule will apply to all cases except that deep pressure is invariably required. We agree with our author that:

Pressure sufficient to feel the appendix when there is suppuration is a dangerous procedure.

The article on intestinal occlusions occupies 244 pages, and is a valuable contribution to the subject. On the question of therapeutics he says:

The main reliance of internal treatment is based on avoidance of purges, quieting the intestine by the means of small doses of opium or morphine, not taking food or drink by the mouth. Just as in perityphlitis, the administration of purges is absolutely forbidden, so at the present day there can be no reasonable doubt that the purgation is not only useless, but positively harmful. The only exceptions are those cases of intestinal occlusion which are caused by coprostasis.

In diagnosis he lays considerable stress on leucocytosis and on the presence of indican in the urine.

According to my experience, it is a reliable sign for the location of the obstruction in the small intestine if considerable indicanuria occurs on the second or third day after an acutely developing occlusion, and in the absence of symptoms of peritonitis.

In the chapter on operative treatment he says:

There are two factors which, above all others, control the success of operations for intestinal occlusion. First, the definiteness and accuracy of the diagnosis. Nothing so much enhances the success of the surgeon as a consciousness of a reliable knowledge of the seat and the nature of the occlusion. This will enable him to have a clear view and understanding of the object to be accomplished by the operation. The second important factor is the time at which the operation is undertaken. The sooner it is undertaken after the diagnosis of obstruction is first made the more favourable will be the result.

We quote the above view, with which we are in thorough accord, because we recently heard a surgeon say that he did not believe in making a diagnosis until he got inside the abdomen.

In all strangulations or incarcerations, volvulus or knot formations, inflections, bendings and kinking, and invaginations medical treatment should not be prolonged over forty-eight hours.

This volume closes with an excellent and well illustrated chapter on diseases of the rectum, by Dr. T. C. Martin.

NOTES ON BOOKS.

THE twelfth volume of the *Encyclopaedia Medica*[1] which ranges from syphilis to typhus fever is of unusual practical interest, as compared with the majority of its predecessors. Considerations of space, however, forbid more than a mere enumeration of some of the more meritorious articles. Mr. D'Arcy Power contributes a practical, clear, and of course succinct account of syphilis; Dr. Mott treats of tabes dorsalis in the manner which we have learned to expect of him; Dr. Ballantyne writes in an interesting way on teratology; Dr. William Murrell contributes a short but useful article on serumtherapy; Dr. G. R. Murray writes on the medical affections of the thyroid gland; Dr. Herbert Tilley on the affections of the tonsils; Dr. Dixon Mann on toxicology; Dr. Thomas Oliver on dangerous trades; Dr. Alexander Crombie on unclassed tropical fevers, Dr. Theodore Shennan on tuberculosis; Mr. Bland-Sutton contributes a masterly dissertation on tumours; Dr. Beatson writes on the treatment of inoperable tumours, and Dr. Claude Ker on typhus fever.

The third volume of the twelfth series of *International Clinics*[2] for 1902 is especially well furnished with practical papers on the treatment of disease. Among others deserving special notice are Dr. O. T. Osborne's paper on the treatment of typhoid fever, Dr. Noël Manger's on the treatment of

[1] *Encyclopaedia Medica*. Under the general editorship of Chalmers Watson, M.B., F.R.C.P.Edin. Vol. xii. Edinburgh: W. Green and Sons. 1902. (Roy. 8vo, pp. 534. 25s.)

[2] *International Clinics*. Edited by H. W. Cattell, A.M., M.D. Vols. iii and iv. London: J. B. Lippincott Co. 1902. (Demy 8vo, pp. 640. 10s. 6d. each.)

intestinal perforation in the same disease, Dr. T. D. Crothers's paper on the treatment of morphinism, Dr. G. M. Debove's on the treatment of dilatation of the stomach, and one on a similar subject by Professor Cardarelli. Other valuable papers are one on the urticarias by Professor Hallopeau, one on the differential diagnosis of tuberculous pleurisy by Dr. Dieulafoy, a critical study of the theory of inflammation by Dr. Hans Schmaus, and a second article on the function of the digestive glands, based on the researches of Professor J. P. Pavlof and his pupils by Dr. Peter Barissof, of St. Petersburg, being part of a special paper prepared at the request of Dr. Pavlof. The fourth volume also contains several highly interesting papers, among them being that of Dr. J. A. Bodine on fright and deaths in chloroform narcosis, to which reference was made in the BRITISH MEDICAL JOURNAL of February 21st, 1903, p. 446. M. Lancereaux contributes a paper on the treatment of aneurysms by gelatine in hypodermic injections, in which he recounts additional favourable cases, and explains the causes of some of the failures. He concludes his paper as follows: "I am of opinion that at the present time these injections of gelatinized serum constitute the only method of treatment that is harmless and capable of curing true aneurysms of the aorta that are not applicable to surgical treatment." Dr. Charles Fox Gardiner describes a sanitary tent for the home treatment of phthisis by the open-air method. He insists that not only should the tent be capable of constant perfect ventilation, but that it should be furnished as comfortably and completely as an ordinary bedroom. The volume contains biographical sketches of Dr. Horatio C. Wood and Dr. W. W. Keen. A long article, extending to nearly one hundred pages, and entitled A Monograph on the Blood in Health and Disease, with a review of the recent important work on this subject, is contributed by Dr. Thomas R. Brown, of the Johns Hopkins Medical School.

YEAR BOOKS.

The *Medical Annual*,[3] published by Messrs. J. Wright and Co., of Bristol, is so favourably and widely known, that any extended notice of its later numbers is a work of supererogation. It is particularly valuable now that *Braithwaite's Retrospect* is a thing of the past. It is well known to the profession as, above all things, practical and easy of reference.

The *Dental Annual*[4] is a new year-book, intended primarily to be a record of work published in the year and of facts of interest to the dental profession, but, being its first issue, some matters not strictly belonging to the period have been included; correspondence is invited in order to make future issues as complete as possible. The editorial work has been well done, and, as a rule, references and summaries have been entered under headings which render them easily found. Amongst other matters we note that reports of legal cases relative to dentistry have been included, the dental business of the General Medical Council summarized, full information as to the dental curriculum and the various dental schools given, and a number of useful formulae set out. The editor's name is not given, but we may congratulate him on the result of his endeavours, and we have no doubt that the book will meet with the success it deserves as a guide to the literature and resources of dentistry.

PLAIN COOKING.

To those to whom the sound of the breakfast bell is closely allied with everlasting bacon and eggs or kippered herring, Miss Florence Jack's little book on *Breakfast and Savoury Dishes*[5] will be as welcome as water to a thirsty soul. It contains 138 capital recipes, and they all seem thoroughly practical and most of them inexpensive. It would be a good thing to hand over the book to the cook and tell her to do two or three of the recipes each morning until she had got through the book and then to begin it all over again. Miss Jack does not forget to tell how tea, coffee, and chocolate should be made, and recipes for oatcakes, scones, and toast—so often a failure—are also given. It is a wonderful book for a shilling, and we prophesy that the first edition will soon be sold out. Miss Jack has published simultaneously a book on sweets, entitled *Hot Puddings, Soufflés, and Fritters*.[6] This touches upon steamed and boiled puddings, baked puddings, *soufflés*, omelets, fritters, and sauces. The book opens with some thoroughly practical hints in pudding and *soufflé* making, and the recipes are so clearly given that one can imagine Miss Jack having tried each one herself. In some cookery books many of the dishes given are so costly that only the very rich could dream of trying them, but we can recommend this book on puddings as being suited to people of moderate incomes as well as to their richer neighbours.

We have also received the third edition of *The Art of Cooking for Invalids in the Home and the Hospital*,[7] by the same writer, according to the title-page, revised and enlarged. In 1897 the first edition contained 198 pages of text, the third edition 199; one extra page is not sufficient, and we repeat that we should have liked to see an account of the preparation of malted foods and special instructions on cooking, without using sugar and flour, for the diabetic. We agree with Miss Jack that "patients should not as a rule be consulted about their meals, but the nurse should tactfully try to discover their likes and dislikes, and exercise some forethought to see that these are provided for." It is quite true also that a spotless tray cloth, shimmering silver, and a few fresh flowers go a long way to tempt an invalid to eat a meal, although Miss Jack's recipes are tempting enough in themselves.

[3] *The Medical Annual: A Year Book of Treatment and Practitioners' Index*, 1901 and 1902. Bristol: John Wright and Co. (Cr. 8vo, pp. 794 and 758. 7s. 6d. each.)

[4] *The Dental Annual*, '03. London: Baillière, Tindall, and Cox. 1903.

[5] *Breakfast and Savoury Dishes*. By Florence B. Jack. Edinburgh: T. C. and E. C. Jack. 1903. (Crown 8vo, pp. 148. 1s.)

[6] *Hot Puddings, Soufflés, and Fritters*. By Florence B. Jack. Edinburgh: T. C. and E. C. Jack. 1903. (Cr. 8vo, pp. 140. 1s.)

[7] *The Art of Cooking for Invalids in the Home and the Hospital*. By Florence B. Jack. Third Edition. Edinburgh: T. C. and E. C. Jack. 1903. (Crown 8vo, pp. 213. 2s.)

REPORTS AND ANALYSES

AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEDICINAL AND DIETETIC PREPARATIONS.

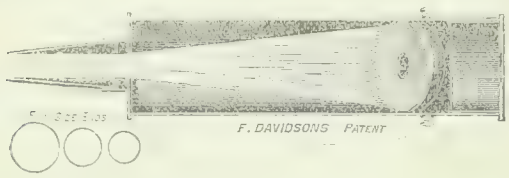
Self-Raising Flour.—At present there exists no legal or other definition as to the composition of self-raising flours, and no objection can therefore be raised against the sale of such articles under this name so long as they do not contain injurious ingredients or adulterants in the form of foreign meals—such as maize meal—and providing that the chemicals added to secure the "raising" are present in small amounts, and are in themselves unobjectionable. We have examined a sample of "Health Self-Raising Flour," prepared by Mr. E. J. C. Palmer, of the County Mill, Gloucester, and we find that this consists of genuine wheat flour, containing small amounts of tartaric acid and sodium bicarbonate, with a slight amount of added sugar. The flour is free from alum, and is also free from traces of lead, which is a common impurity in inferior kinds of tartaric acid. The claim that the use of this self-raising flour will "aid digestion," however, is one which, we think, it would be better for the manufacturer not to make. A claim of this kind in regard to such an article is not warranted by ascertained scientific facts. Assuming that the quality and proportions of the materials employed remain unaltered, and that proper guarantees to this effect are regularly given by the manufacturers, we consider that the preparation may be accepted as a satisfactory and reliable one of its kind.

Malted Cocoa.—We have examined a sample of malted cocoa manufactured by Messrs. J. S. Fry and Sons, of Bristol. It is stated to be "a combination of pure cocoa deprived of the superfluous oil, with Allen and Hanburys' extract of malt." The results of our analysis of the sample submitted to us show that this sample consisted of an unadulterated cocoa "essence" mixed with a substantial proportion of extract of malt, and that it contained a moderate amount of fat (18·5 per cent.). The article, as represented by the sample analysed, is a good one of its kind, and will no doubt be found useful.

MEDICAL AND SURGICAL APPLIANCES.

An Improved Otoscope.—Dr. J. B. Ball, Physician to the Throat and Ear Department of the West London Hospital, writes: A magnified image of the drum membrane often reveals changes not otherwise discernible. Instruments in

which a speculum, a reflector, and a magnifying lens are combined in one piece have long been used for inspection of the ear. Mr. Davidson, of 140, Great Portland Street, has constructed, at my suggestion, an otoscope of this kind. It is small and very portable. The interior of the otoscope and specula, instead of being bright, as in the otoscopes at present most in use, is dead black. This brings out, by contrast, the image of the parts to be examined with striking clearness. It

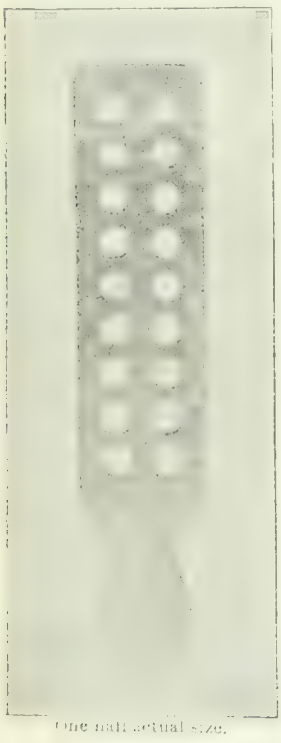


can be used with good daylight, sunlight, or artificial light. It is fitted with three specula of different sizes, which can be used separately with the frontal mirror, if desired. The interior of the specula is first bronzed, and then blackened, and they may be sterilized by boiling without the blackened surface being affected. The exterior of the instrument is heavily plated, so as not to tarnish. The price is more moderate than that of other instruments of the kind.

A Pocket Refractometer.

Dr. Karl Grossmann, F.R.C.S.E. (Liverpool) writes: I am pleased to see on p. 1092 in the British Medical Journal of May 9th, Mr. Simeon Snell's recommendation of the use of a simple refractometer. I have had a trial lens frame, almost identical in appearance, constructed for my daily use, as far back as ten years ago, for the purpose of retinoscopy. I have shown the little instrument to medical friends both here and abroad, but have never published it. As, however, Mr. Snell's publication may induce a larger number of ophthalmic surgeons to have a refractometer made on these lines, I think it will not be unwelcome to them to know of the instrument which I have used hitherto. The refractometer consists, similarly to the one described by Mr. Snell, of a series of trial lenses set in a vulcanite frame, one for 18 convex, and one for 18 concave glasses. The glasses are:

0.5	1	1.5	2	2.5	3	3.5	4	5
14	13	12	11	10	9	8	7	6


One half actual size.

The diameter of the glasses is ⅝ in. The vulcanite frame (the illustration is one half actual size) is 6¾ in. long and 1⅛ in. wide. The weight of both frames together is 1⅛ oz. The great advantage I find in my pocket refractometer is its size and easy portability, and the range of glasses. The size of the glasses is large enough for any atropinized pupil, and numbers stronger than 8 D, both convex and concave, I find to be an every-day requirement.

This refractometer can also be used as a test of sphericals for the patient's own use, but I make a point of never allowing a patient to handle any test glasses at all. The subsequent amount of cleaning required wastes more time and labour than I am willing to give. I had this pocket refractometer first made abroad, ten years ago, in a wooden frame; but about five years ago I had vulcanite substituted by Messrs. Curry and Paxton. The cost was 50s.

It has been modified abroad by making the range of glasses more complete, placing two or even three lenses one over the other, but I find the shape in which I used the refractometer the most serviceable and handy.

Dr. A. Ogier Ward (London, E.C.) writes: Mr. Simeon Snell describes his refractometer as modified from one described by a Dr. Wurdemann of Milwaukee. I do not know whether Dr. Wurdemann devised this for himself; but I do know that twenty years ago this arrangement of lenses was in constant use in Professor Kuster's poliklinik at Leipzig, and I have my set by me now. Further, I devised a little addition. A metal plate slides up and down, having an astigmatic slot cut at right angles to the stick or handle. On the outer surface is a dial index and a free hanging pointer, which instantly and accurately indicates the obliquity of the astigmatic index, if any exist.

Bequests to Hospitals.—Under the will of the late Mr. Duncan Kaye, of Drumpark, near Dumfries, £26,000 has been bequeathed to the Dumfries and Galloway Royal Infirmary, and £4,500 to the Glencaple Convalescent Home near Dumfries.

THE REFORM OF CONTRACT PRACTICE.

(Continued from p. 1340.)

In the British Medical Journal of June 6th we gave some particulars with regard to controversies which have taken place between the medical profession and the managers of workmen's medical clubs and other similar organizations in Durham and Gateshead. We now present particulars with regard to some other localities. The statements in all cases are founded upon or corrected by information furnished to us by correspondents in the locality in answer to the following questions which we ventured to submit in each case.

1. Was a new medical organization formed for the purpose of conducting negotiations with the Friendly Societies and clubs, or did a medical society already existing take up the matter?
2. If an already existing medical society took up the matter, what was done about medical men in the district who were not members of it?
3. If a new and special organization was formed, what were the early steps taken for its formation, and by whom were they taken (that is, Were the early steps taken by men in club practice, or did those not so engaged take part in the early stage of the movement?)
4. What steps were taken to include all the medical men in the town or district in such organization, and how far were they successful?
5. Whether the movement was in the hands of a new organization or of an already existing medical society, what steps were taken about medical men, if any, who would not join in it?
6. What, in general terms, was the state of club practice in the district before the question of reform was taken in hand? Please differentiate in answering between Friendly Societies, medical aid clubs, and private clubs.
7. In what way were the views of the medical society or medical organization brought to the notice of the Friendly Societies and clubs, etc.?
8. What were the proposals thus laid before the Friendly Societies or clubs for their consideration?
9. What was the result?
10. What is the present position? In answering this, please state among other things what services are not included in the weekly or other routine payments, and under what circumstances, if any, a club patient, although in need of medical aid, is not entitled to free attendance?
11. Are there any other circumstances of your organization which it seems to you desirable to mention?

III.—Rotherham.

The following is partly founded on information supplied by Dr. F. B. J. Baldwin:

1. At Rotherham, when the question of club and contract practice came up in an acute form, no medical society existed, but one was formed for the purpose of dealing unitedly with the business aspects of contract practice.

2. As the society was entirely new there were no difficulties as to placing it in the power of every medical man to take part in the movement.

3. The movement for the formation of the association was initiated by medical men engaged in club practice, but invitations to attend a meeting to consider whether it would not be well to form an association were sent to all medical men in the district, without distinction.

4. Every medical man was invited to attend the preliminary meeting, and all were able to come. The matter was thoroughly discussed and a unanimous resolution arrived at which resulted in the formation of "the Rotherham and District Medical Guild."

5. Every medical man in the town and district having assented to become a member of the Guild, there was no necessity to consider what should be done about those who would not.

6. When the Guild came into being the rate at which Friendly Society medical work was done was 4s. a head per annum, while "juvenile clubs" paid less.

7. In order to bring the views of the Medical Guild before the Societies it was decided that a common circular should be drawn up. This was done, and each member of the Guild engaged in contract practice arranged to transmit it to those clubs in which he was interested. Besides these circulars, there was a certain amount of individual discussion of the question between those engaged in club practice and the members and managers of the Friendly Societies, but the Guild as a body took no part in them. Such discussions, in short, were explanatory and not "official."

8. The upshot of the discussion of matters by the Guild was an agreement to the effect that the rates paid both for adults and juveniles were inadequate, and the following resolution was passed:

Resolved: That the fee for each adult member of a club shall be 5s. per annum, and that this resolution shall take effect from January 1st, 1902, —that is, six months after date. It was carried unanimously. A further resolution to the same effect with regard to the

juvenile clubs was passed with only one dissentient. The "proposal," therefore, made to the Friendly Societies was simply a notice of this resolution.

9. The result of the circular notice to the clubs was that a Medical Aid Association was formed, into which a certain number of the Friendly Societies drifted or were forced. But the better class Friendly Societies accepted the 5s. rate, and are now it appears quite content with it.

10. The members of the Guild continue to attend members of clubs which accepted the 5s. rate. If any well-to-do man gets into them and presents himself as a patient he is remonstrated with civilly. In cases where the patient could obviously pay ordinary fees, the Guild declines to accept such members as patients on club terms. Common sense usually prevails, and they agree to pay as private patients. Minor surgery unless an anaesthetic is required is usually not charged for, but operations of any other character of course are.

11. The imported medical man who works for the Medical Aid Association is kept in strict quarantine in all respects both by the Guild and consultants in the neighbourhood.

There are symptoms that the associated clubs who form the Aid Association are getting dissatisfied with their position, and that they would like to come to terms with the Guild.

The formation of the Guild has certainly done much good, it has secured respect for the profession, and probably no man has suffered by its action, for many patients who formerly belonged to clubs are now private patients. Above all, it has created a good feeling of *esprit de corps* among the medical men, and there is strong confidence in the future.

IV.—CHATTERIS.

The following account is founded in part on information kindly supplied by Dr. Martin O'Connor, of Chatteris, Cambs:

1. Chatteris is a very small town, and it can scarcely be said that any regular association was formed for the purpose of dealing with the business aspects of contract practice. The two resident medical men, however, did agree to unite in endeavouring to remove some of the abuses of club practice and put it upon a better footing.

2. There are only two medical men in the town, and none of those in neighbouring places were approached on the matter.

3. The action was undertaken by mutual consent of the two medical men concerned, both of whom do club work.

4. No attempt was made to organize the medical men throughout the district, action being entirely confined to Chatteris.

5. Under the circumstances no question of what course should be adopted as to colleagues who would not join in the movement could arise.

6. At the time the attempt to improve the condition of club practice was made the whole of club work was shared, each member on joining choosing that one of the two medical men he preferred. In other respects the condition of club practice was as follows: In earlier days the membership of the Friendly Societies was limited to the working classes. Of late years, however, they had taken in practically any one who chose to apply. Owners of property and well-to-do tradespeople became members in such numbers as seriously to diminish the possibilities of private practice. Besides this, it was found that these well-to-do members exacted much more attention than others, refused to have any regard to surgery hours, or to bring their own bottles. They were also offended if made to wait in the ordinary "club" waiting room, and expected to be admitted to the consulting rooms set apart for private practice, and required their medicines to be sent to them by special messenger. A good many of them belonged to several clubs, but only paid for medical attendance at one of them; nevertheless, they expected the medical officer to sign sick-pay certificates in respect of all of them. The rate paid was 4s. per annum. "Juvenile clubs" in connexion with the adult Friendly Societies had also been established; they only paid 3s. a head per annum, and still further encroached on private practice. Medical aid clubs had existed, but the action of the General Medical Council practically killed them, and there were no private clubs.

7. The views of the medical men were brought to the notice of the societies by a discussion between them and two representatives from each of the clubs. After this, further negotiations took place between the medical men and a secretary who was selected to represent all the societies.

8. The proposals laid before the societies were:

(*a*) That the capitation rate per annum should be raised from 4s. to 6s. for adults and from 3s. to 4s. for juveniles.

(*b*) That a radius of two miles should be established instead of the vague three or four mile understanding that existed before.

(*c*) That outside this radius a charge of 1s. a mile should be levied.

(*d*) That teeth extractions, previously done for nothing, should be charged 1s.

(*e*) That there should be a charge of 2s. for examination before admission to the club.

(*f*) That cases of fracture and dislocation, etc., should be regarded as private practice.

(*g*) That every patient should supply his own bottles.

(*h*) That certificate forms should be supplied by the lodges and not by the medical officers.

(*i*) That messages should be sent, and patients attend at fixed surgery hours, and

(*j*) That the admission to lodge membership of wealthy people should be discouraged.

9. The result of the negotiations was that all the points were conceded except the first, the annual capitation fee was allowed to remain at 4s. for adults and 3s. for juveniles.

10. The present position may be inferred from the preceding paragraphs—visits at a distance of over two miles are charged 1s. a mile over this distance, and fractures, etc., and teeth extraction are not included in the annual fee.

11. The movement in Chatteris was not entirely successful, but has still very considerably improved matters. A great deal more might be done if the movement, as it is hoped it may, lead to an organization of the whole profession in the North Witchford Union, or, better still, for the whole Isle of Ely or County of Cambridge. United action might practically remove all the degradation and degeneration caused by club practice, but the isolated action of a few medical men can do little.

V.—WALSALL.

We are indebted to Dr. F. Clayton, Secretary of the Walsall Medical Society and Walsall Dispensary, for information which has been used in the compilation of the following:

1. At Walsall an ordinary medical society already existed, and at the beginning of last winter session it was decided that some endeavour should be made to put contract practice upon a more desirable footing.

2. With a view to securing unity of action the Secretary of the Walsall Medical Society was directed to send invitations to all medical men in practice in the district, irrespective of whether they were or were not members of the society. The invitation stated that a special meeting was to be held to consider the question of club practice, and asked every one to try and attend. A sufficient number of men in all sections of practice attended to make the meeting quite representative, and at the subsequent meetings with the same object medical men not members of the society have attended regularly.

3. The movement, as stated above, was initiated by the existing medical society, which comprises many men engaged in club practice, and, beyond the fact that for this purpose it included in its councils men who were not members of it, but who were anxious to see the conditions of medical practice improved, it cannot be said that any new organization was formed. Later on, however, a new society was formed to work "the Walsall Dispensary," which developed from the deliberations above referred to.

4. The steps taken to include all medical men in the movement were as follows: At the very first meeting a resolution was subscribed by all present that on and after a given date all "private club" work should cease. Those who had not been present at the meeting, and therefore had not pledged themselves to this decision, were subsequently called on or written to and invited to do so. Some agreed to do so at once, others did not, but later on, on further application, fell in with the proposal. Until it was quite clear that any individual was resolved to take no part in the movement, invitations to every meeting were sent to every medical man, irrespective of whether he had signed the resolution or whether he had not.

5. It was decided that all professional dealings should cease with medical men who persisted in refusing to join in the movement for the suppression of private family clubs. When these clubs were first dropped the canvassing collectors who lived by them endeavoured to sweep all the patients into the clubs of those who stood out from the movement. To meet this two measures were adopted. In the first place, it was decided to watch for canvassing and bring the matter to the notice of the General Medical Council if evidence of it could be obtained, and of this intention the medical men concerned were duly informed. In the second place, it was determined

to provide for the needs of the former legitimate club patients by instituting "the Walsall Dispensary."

6. The condition of matters in Walsall before the question was taken up in the way above narrated was certainly very bad. A great many men, if not all, had "private medical clubs" in connexion with their practices, and in those clubs the sum paid was 1d. a week a head, or 4d. a week for a whole family. Members were admitted as a rule to these private clubs by peripatetic agents, and the sums due were also collected by them. It rested with them to allot the patients to whatever medical man they pleased: most of them worked for several or any, and they were indifferent as to whether a member was ill at the time of his admission to club membership or whether he was not, and were quite as ready to take on well-to-do people as poor ones. They were paid 25 per cent. of all the money they collected, and, by way of bonus on every new member, all he paid for the first five or six weeks of his membership. It need scarcely be said that such a system inevitably resulted in touting and canvassing. Besides these "private medical clubs," there were also a great many ordinary "Friendly Society" lodges, a good many public-house "slate clubs," and a "Medical Aid Association." The pay of these organizations varied considerably, the average, perhaps, being 3s. 6d. a head per annum; very few, however, paid more, and a good many paid less.

7. No steps were taken to bring the views of the Medical Society and those working with it, before the Friendly Societies. All efforts so far have been concentrated on dealing with "private medical clubs," and the canvassing, touting and other abuses inevitably connected with them. No notice therefore to any societies were necessary, but in order to let all persons connected with private clubs know what was going on, a notice was put in the local papers stating that the clubs of all those who had signed the resolution would be dissolved at a date six weeks after the insertion of the notice.

8. As above stated, no proposals were made to or concerning Friendly Societies, the work of which has not yet been considered. The members of the private clubs were simply told as above that the clubs would be dissolved. Subsequently they were told of the dispensary it was intended to establish.

9. The result was that most private clubs are defunct, and it is believed that most of those who belonged to them will eventually join the dispensary.

10. The present position is that, except for the Friendly Societies and the dispensary, no medical men except the recalcitrants are now undertaking contract work. The latter have also been forced to stop their collectors collecting from house to house, and have undertaken that no payments shall be made except at the house of the collector.

11. The new dispensary has only just started work, and every medical man in the town will be asked to become an active or honorary member of the staff. The latter position will entail no work, and those who refuse it will be considered to be in opposition to its aims, and be left to proceed on their way alone.

Persons admitted as dispensary patients can choose their own doctor, but cannot change more often than half-yearly. Well-to-do persons are not admitted, and all have to be "passed." Fees are received by a paid secretary at an office, and there is no collecting or commission. Midwifery, vaccination, surgical operations, treatment of fractures and diseases brought on by the patient's own misconduct are not included in the dispensary payments. A special fee is also due for special visits by day and for night visits. The general charges are higher than those that existed at most of the former private clubs which the dispensary is intended to replace.

VI.—BOURNEMOUTH.

We are indebted to Dr. S. Leonard Clift, Bournemouth, for giving much information in reply to our inquiries.

1. A new association was formed for the purpose of dealing with contract, and especially club and Friendly Society practice. Although a new association, it was practically the daughter of the existing Bournemouth Medical Society. The matter was discussed at a special meeting of that Society, and a scheme for dealing with it was overhauled, but it was thought that a special organization should be formed for carrying it out.

2. Membership of the new association was open to all medical men in Bournemouth, whether they were or were not members of the parent society.

3. The idea of the new association really originated with the committees of the two local hospitals. At both of these, home visiting of out-patients by the resident staff, etc., was in practice, but the work had increased to such an extent that the committees of the hospitals desired to give it up after finding if possible some substitute on provident lines. They called a number of medical men into counsel, and the result was that a committee of seven medical men was appointed to put the idea on a working basis. Some of these medical men were in club practice, but the majority were not.

4. A draft of the scheme when completed was sent to all medical men other than specialists and consultants, and they were asked to take part in it, each being at liberty to say how many patients he would be prepared to undertake. The majority of medical men expressed their readiness to take part in the scheme.

5. No definite steps were taken with regard to those who refused to join in the scheme. They were not many, and some of them, although refusing definite co-operation, assimilated their club prices to those of the new association.

6. As will have been seen from the foregoing, the direct and immediate object of the scheme was less reform of contract practice than abolition of the existing form of out-patient work at the hospitals, and due provision of something to replace it. There was also an amalgamated Friendly Societies' Medical Association, with its own doctor, and one or two other independent Friendly Lodges served by private practitioners. In addition there were a good many slate and private clubs carried on by men whose practice lay among the poorer classes.

7. The objects of the new association were communicated to a representative of the Amalgamated Friendly Societies' Medical Association, and through him a conference was arranged between delegates of the new association and of the various Friendly Societies.

8. The proposal made by the new association was that the Amalgamated Friendly Societies' Medical Association should be absorbed into a "provident association," each Friendly Society member having the choice of any medical man in his neighbourhood who belonged to the new association. Besides this, each member of the new association informed the members of any "slate" or "private" clubs with which he was connected that while he would continue the old rates to old members, new ones would have to pay the rates of the new association.

9. The Friendly Societies accepted the proposal, but stipulated for and obtained special rules for their members. These are rather too complicated for mention here. In the main they provide for all existing members of Friendly Societies being accepted without question as patients of the new "Provident Association" at the rate of 4s. for adults and 2s. for members of a "juvenile" branch of a Friendly Society. "Family members" of registered Friendly Societies pay 4s. 8d. for adults, 2s. 4d. for children, not more than four children in one family being charged for. The above rates apply only to clubs ensuring sick pay; members of other clubs pay the ordinary rates of the new provident association, but must be admitted without medical examination or entrance fee. With regard to future members of Friendly Societies, the only essential difference between their treatment and that of ordinary members of the Provident Association is that there can be no wage or income limit. All have to be passed medically, and while the payment for adults remain 4s. per annum, that for juvenile clubs is raised to 3s.

10. The present position at Bournemouth is stated to be satisfactory, and things are working smoothly. Medical men who join the Association sign an agreement by which they undertake to pay an entrance fee of £2 2s., to remain in it for not less than a year, to give a quarter's notice of retirement or of ceasing to admit any fresh members to their lists of possible patients, to examine any candidates for admission for the specified fee, to accept members allotted by the Committee, to treat them and supply such medicine as they require, to accept payment in proportion to the number of names on their lists, not to canvass in any way for patients, to accept no appointments on lower terms than those of the Association, to "discourage" any medical man who does so or who works for a medical aid or other allied association. The rules for members are that families earning not more than 30s. a week pay 1½d. a week for each parent, and for each child in receipt of wages. Between 30s. and 40s. twopence a week is paid as above. One penny a week is paid for children of members not earning wages. Applicants for admission must be passed by the medical man, and pay 1s. for the certificate. They can choose their own medical man, provided he consents, and except in consequence of

change of residence cannot change their medical attendant except at quarter days. They must attend at his house, or if too ill must send a notice before 9.30 a.m., except under special circumstances. They supply their own bottles. A first confinement is charged 21s., others 15s., paid a month in advance. Unless confined by one of the medical officers belonging to the Association no medical attendance is given for six weeks after the confinement. An extra charge is made for surgical operations and consultations, and 6d. each for each certificate beyond one. No child is eligible for membership under the age of one year, unless its birth has been attended by an officer of the Association.

11. The only other circumstance connected with this Association is the question as to whether under the circumstances it would be legitimate for it to canvass for members. No person is eligible if, being single, his income is over 30s. a week, or if a member of a family with a collective income of over 40s. Many such people do not know of the Association, and as any medical man can become a member of it, and any patient can choose his own medical attendant, the Committee is inclined to ask whether it would not be right under the circumstances practically to canvass for members.

THE MEDICAL RELATIONS OF LIFE INSURANCE.

"Second Class Lives."

The Third Congress of Medical Officers of Life Insurance Companies, held in Paris from May 25th to 28th last, has continued the discussion of the conditions under which second-class lives may be insured. Soon after the Amsterdam meeting we summarized[1] the reports then presented, which dealt with such subjects as albuminuria, diabetes, heart disease, purulent discharge from the ear, and appendicitis.

At the recent meeting, Dr. Sven Palme (Stockholm) read a report upon the experience of Swedish insurance companies in the insurance of unsound lives, and showed that the average mortality of 18,132 individuals accepted at special rates had been, at least for those aged between 20 and 40 years, less than the death-rate of the English table for ordinary lives. This report and the general tone of the meeting seem to have been decidedly optimistic and favourable to these defective cases.

Gout.

Dr. L. Lereboullet (Paris) reported in favour of admitting gouty persons, especially if they were more than 35 years of age, and if their general condition was good; below this age, as Dr. Mauriac pointed out, the occurrence of gout points to a very special predisposition, and often to the presence of other serious tendencies; cases in which cardio-vascular or renal lesions are present must, however, be refused; young gouty persons, or those with definite joint troubles, might be accepted under special conditions.

Acute Rheumatism.

Dr. Grosse (Leipzig), in his report on acute rheumatism, recommended the acceptance of the subjects of a single attack where the heart was sound and there was no family history of joint troubles; where more than one attack had occurred he recommended waiting two or three years after the last attack, and even then to require an additional premium. This report was accepted, with the addition that two years must have elapsed after a single attack in order to permit the applicant to be accepted at ordinary rates.

Asthma.

Dr. Mahillon (Brussels) recommended the acceptance of young asthmatics who were the subjects of essential nervous asthma, provided the attacks only occurred at long intervals, that there was no hereditary tendency to tubercle, and that the heart and arteries were sound; he would refuse all cases over 45 who were fat and showed either arterio-sclerosis or emphysema, or whose bronchi were frequently choked.

Emphysema.

Dr. Hirtz (Paris) took a very unfavourable view of emphysema as often concealing latent pulmonary tuberculosis. He advised the examination of the chest by means of the spirometer, and would reject all cases giving less than 2,000 c.cm.; he would also refuse any case in which the difference between forced inspiration and forced expiration did not reach 3 cm. at least. Although some doubt was thrown upon the value of the spirometer, the conclusions of Dr. Hirtz were finally adopted.

[1] British Medical Journal, 1901, vol. ii, p. 1099.

Old Pleurisy.

Dr. Bourcy (Paris) recommended the admission of cases of old pleurisy subject to careful examination; the more recent the case the greater the risk; young persons were more open to suspicion than those of riper age; he regarded women less favourably than men in this respect.

Tuberculous Bone Disease.

Healed tuberculous lesions of bone were not considered by Dr. Poels (Brussels) to constitute an objection under all circumstances, and Dr. Weill-Mantou (Paris) expressed a similar opinion, and stated that since 1889 it had been his custom to accept all persons who had suffered from hip joint disease in infancy if they had reached the age of from 35 to 40 years, and that this practice had proved quite satisfactory. In affections of the spinal column there was greater room for doubt. Dr. Schulthess, of Zurich, would only accept such cases for limited terms, and on the proposition of Dr. Brouardel, of Paris, the Congress passed a resolution that angular curvature of the spine constituted in all cases a ground for refusing to consider the life as first class, but admitting the possibility of insurance under special conditions, where the deformity caused no interference with the functional activity of important organs. A similar conclusion was arrived at in respect to non-tuberculous deformities of the spine and thorax.

Gall Stones.

Some difference of opinion was shown with regard to the amount of importance to be attached to a single attack of gall stones, but it was finally decided that where all the organs were healthy an attack of biliary colic which had occurred some time before, or an operation performed four years before and quite healed, would not constitute a reason for postponing the acceptance of an applicant.

Renal Calculus.

Upon the report of Dr. Gillet, of Paris, it was agreed that an attack of renal colic which had not recurred for from three to five years and had not required an operation would not be a cause for rejection, but that any operation would justify a refusal.

Obesity.

The Congress also discussed the question of obesity but without coming to any definite conclusion.

Pregnancy.

At the Amsterdam meeting it was decided, in accordance with the principles of British offices, to postpone the acceptance of primiparae, but at the recent Congress it was strongly urged by the Scandinavian and German members and finally agreed that all healthy pregnant women should be accepted at ordinary rates and that companies might take what measures they considered necessary to protect themselves against fraud.

Practice of British Offices.

The result of the deliberations of the Congress does not differ greatly from what has been long known and practised in England as may be seen by reference to Dr. Pollock's *Medical Handbook of Life Insurance* published in 1889.

It has been the custom of some of the best British offices to take second-class lives under special conditions, but in order to protect themselves it is usual to require the applicant to see the company's principal medical officer. Under such conditions the insurance of defective lives has been shown to be not only possible but profitable to the companies concerned and an act of justice to the applicants, who would otherwise be deprived of what what is fairly their due. We are glad to see that these facts are coming to be recognized abroad, although tardily and by somewhat cumbrous means.

THE MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY.

The twentieth annual general meeting of this Society was held at 11, Chandos Street, W., on May 28th, under the presidency of Dr. de Havilland Hall, Chairman of the Executive Committee.

The Chairman in his annual address said that the number of new proposals during the year was 156; after deducting resignations and deaths this left a net gain of 84, thus bringing the membership of the Society at the end of 1902 to 2,177. He regretted that this number was far short of the five thousand he had hoped the Society would have numbered by

that time. In addition to new members, 41 members had increased their benefits, and it was proposed to reduce the period of probation before increasing benefits from 5 to 2 years. The amount paid in sickness during the past year was £9,350 17s., the largest since the foundation of the Society, but in spite of the large amount paid out, the sickness fund had increased by more than £5,000, the sickness premium being over £13,000. For the first time in the history of the Society the sickness experienced had been rather higher than was expected, but still the margin was so large that members might be quite certain that all demands in the future would be met. A letter had been received within the last few days from an original member of the Society now resident in New Zealand requesting that he might be allowed the privilege of paying his subscriptions without receiving any benefit, as a mark of his appreciation of the benefits he had received when incapacitated from work some years back. Though this kind offer could not be accepted it showed the immense appreciation of the services of the Society. The Executive Committee had again had under consideration during the past year the question of sickness pay after 65 years of age, but had reluctantly come to the conclusion that it could not advise the Society to make that provision; the premiums would be so high that it was doubtful whether sufficient members would be willing to pay them. Eleven members had surrendered their deferred annuities, and had received in payment £1,008 16s. He regretted that so many members surrendered their deferred annuities for cash payment, as he thought that one of the most useful objects of the Society was the provision of deferred annuities. There were at present seven members drawing them, and the number would be increased from time to time. The Society did no fresh business in this branch of its work, but referred all applicants to the Rock Life Assurance Company. Three death claims, amounting to £600, had been paid during the year. The amount of the management expenses, £857 7s. 8d., was less than half what the rules allowed. The Investment Reserve Fund had been increased by £1,121, being the amount of interest above 2½ per cent. received on the securities, which was the percentage at which they estimated their return. The whole funds of the Society amounted to £164,712 9s. 1d., being an increase on the year of £10,000, which, though not so large as in the past, was a very substantial addition to the reserve. In view of the special appeal for funds being made by the Royal Medical Benevolent College, the Executive Committee had given a donation of 100 guineas in addition to the usual annual subscription of 20 guineas. The votes obtained were used exclusively for the benefit of members of the Society or their families, and he was glad to be able to say that all the candidates supported by the votes of the Society had hitherto been elected, and he hoped this would be the case with regard to the new candidates. The Society had lost through death Dr. William Miller Ord, and by resignation Dr. Stephen Mackenzie, both of whom had acted as trustees of the Society. The Committee proposed to increase the number of trustees, in order to avoid the necessity of transferring the securities of the Society more often than was absolutely necessary, as it cost a good deal of money. It was therefore proposed to elect the following gentlemen as trustees in addition to Dr. Heron, their present trustee: Sir Dyce Duckworth, Sir Victor Horsley, Mr. W. E. Hempson (Solicitor to the British Medical Association), and Dr. Dawson Williams (Editor of the BRITISH MEDICAL JOURNAL). The Society was also fortunate in its treasurers and arbitrators, and as a proof of its smooth working he would mention that only once during its existence had recourse had to be made to arbitration. He hoped members would do their utmost to extend the membership of the Society, not for the sake of the Society, but for the members of the medical profession. The monthly meetings of the Executive Committee had been well attended. As in previous years, he would like to acknowledge the able way in which the work of the Society was carried on by its Secretary, Mr. Addiscott, and his assistant. He concluded by moving:

That the report, carrying with it the proposed alteration to Rule IV, be received and adopted.

The resolution was seconded by Dr. PALMER, and, after some discussion on the question of continuing sickness pay after 65 years was adopted.

On the motion of Dr. VINRACE, seconded by Dr. LESLIE THORNE, the officers for the ensuing year were elected.

It was proposed by Dr. GUBB, seconded by Mr. BRINDLEY JAMES, and resolved:

That the attention of the Executive Committee be directed to the propriety of requesting members to forego the quinquennial bonus in favour of a fund to be devoted to the assistance of members over 65, such fund to be administered by the members of the Executive Committee as they may deem advisable.

A vote of thanks to the Chairman for presiding was proposed by Dr. VINRACE, seconded by Mr. BRINDLEY JAMES, and carried with acclamation.

THE PREVENTION OF CONSUMPTION.

SANATORIA FOR WORKMEN.

A SPECIAL meeting of the Board of Delegates of the Metropolitan Hospital Saturday Fund was held on May 23rd to receive the report from Mr. G. W. Smyth of his recent visit to the German sanatoria.

The Right Hon. Sir Savile Crossley, Bart., presided, and a deputation from the National Association for the Prevention of Consumption and other Forms of Tuberculosis, under whose auspices the German visit was arranged, attended.

Sir William Broadbent explained the objects of the Association, and pointed out the need for additional sanatoria in the neighbourhood of London.

Dr. R. B. D. Acland, late Chairman of the Fund, moved a resolution calling upon the executive of the Hospital Saturday Fund to form a committee of representatives of all organizations of the workers of London to consider the advisability of providing such sanatoria. The resolution, which was seconded by Mr. W. G. Bunn, Secretary of the Fund, was carried unanimously.

Dr. Thomas D. Lister moved a resolution in favour of the voluntary notification of cases of phthisis. This was seconded by Mr. A. J. Dear, and after some remarks by Sir Herbert Maxwell and Sir William Broadbent was carried.

Mr. Malcolm Morris moved that indiscriminate spitting in public places and on public vehicles should be prevented and should be discouraged in all workshops and places of business. This was supported by Dr. Alfred Hillier, Secretary to the National Association, and carried unanimously.

WINSLAY CONSUMPTIVE SANATORIUM FOR THE COUNTIES OF SOMERSET, GLOUCESTER, AND WILTS.

The ceremony of laying the foundation stone of the open-air sanatorium at Winslay took place under the most favourable conditions of weather on June 4th. The sanatorium is intended to provide accommodation for the consumptive poor of the three counties of Somerset, Gloucester, and Wilts, and the subscriptions towards its erection have been collected by the Branch of the National Association for the Prevention of Consumption of those counties.

The position of the sanatorium is well chosen, for it will be situated on the edge of a wide and lofty plateau reached by a fairly steep ascent of about a mile and a-half from Limpley Stoke Railway Station on the G.W.R. Many years ago quarrying was carried on extensively on the site, and a large bay was left in the hillside in which the sanatorium is now being erected, the front facing the south, and the back protected on the north side by the side of the old quarry.

The building has been designed by Messrs. Silcock and Reay after a personal inspection of many like buildings abroad. It consists of a long, narrow block, one room deep, with a corridor running the whole length behind. It will be of two stories, except at the ends, where an additional story will provide accommodation for servants. The kitchen and offices are detached from the main buildings, being approached by a paved walk roofed over.

The funds collected up to the present do not permit the Committee to undertake the building of the whole sanatorium, and so a start is being made on the administration block and rooms for 20 patients, the other 60 beds being added when circumstances allow.

Sir John Dickson-Poynder presided at the ceremony, and among those present were Lady Dickson-Poynder, Lord Edmond Fitzmaurice, M.P., Mr. J. M. Fuller, M.P., Sir John and Lady Goldney, Lady Pitman, the Mayor of Bath, the Mayor of Swindon, the Bishop of Bristol, Prebendary Boyd, and many gentlemen of the neighbourhood interested in the sanatorium. Many of the medical profession of Bristol, Bath, and other towns were also present.

The General Secretary, Dr. J. Michell Clarke, having read letters of apology for absence from Lord Pembroke and Sir William Broadbent, the Chairman addressed the meeting, and said that the ceremony about to be performed would be the first step in the history of the "Three Counties Sanatorium." The warmest thanks of those present were due to the

Executive Committee, of which Dr. Lionel Weatherly was chairman, for their indefatigable efforts to raise the necessary money for the work. Many circumstances had diverted money to other channels, not the least the lack to realize the direful effects of this fell disease, and the doubts of some as to the efficacy of this method of treatment. Then, too, the site had been objected to as too far from many spots in the three counties, but these objections one and all had been met and answered. A sanatorium of this nature was now a necessity, and it was his belief that no better site or better situation could have been selected. With true prudence the Committee had decided to build only as much as the funds allowed, but he hoped that the necessary additional £9,000 would soon be found, and the sanatorium completed on the plans laid down. The sanatorium was for the poor; only a small charge would be made on a sliding scale. This was not merely a philanthropic scheme, but a great movement striking at the root of national life, health, and prosperity. There were at the present time only 2,000 beds for the 200,000 cases of phthisis in England and Wales, and he was glad to see that public bodies had contributed a share in the work. The public health should be our first consideration, for a country might be rich in trophies, in museums of science and art, and the inhabitants civilized; but if the population decreased and the physique deteriorated, the history of that country would soon be the history of the past.

Dr. Lionel Weatherly presented a statement of the progress of the undertaking. To March 26th, 1903, they had collected £9,758. Of this, £3,918 had been spent on the site and improvements, etc. Since March 25th another £1,000 had been promised, so they had now £6,840 in hand. The contract for the building was £6,877, furniture and electric light £1,450, for a laundry £1,000. They still wanted £9,000. The beds would be maintained as follows: City of Bristol, 4; Bath Corporation, 2; Swindon Corporation, 2; Gloucester Corporation, 1; Messrs. Fry and Sons, Bristol, 1; J. B. Clark, Esq., of Street, 1; W. S. and Mr. Clark, of Street, 1; while the Great Western Railway employés at Swindon, and the Dean Testimonial Fund of Swindon, each had provided a bed and hoped to maintain them, and Trowbridge was doing the same.

After a short service by Prebendary Boyd, Rector of Bath, assisted by the Bath Abbey choir, Lady Dickson-Poynder laid the foundation stone with a silver presentation trowel, and the Bishop of Bristol offered a prayer and pronounced the benediction.

Speeches were also made by Dr. A. Hillier, Lord Edmond Fitzmaurice, M.P., and the Mayor of Swindon, the last two proposing and seconding respectively a vote of thanks to Lady Dickson-Poynder for her kindness in being present and laying the stone, for whom Sir John Dickson-Poynder replied.

The proceedings terminated with the National Anthem.

THE DIDWORTHY SANATORIUM FOR DEVON AND CORNWALL.

The Devon and Cornwall Branch of the National Association for the Prevention of Consumption and other forms of Tuberculosis, and the subscribers to the Didworthy Sanatorium for Consumptives, held meetings at Brent recently, and afterwards the sanatorium at Didworthy, some two miles distant, was formally opened by the Earl of Mount-Edgcumbe, President of the Branch. The establishment of this sanatorium is the outcome of a public meeting called by the Mayor at Plymouth in May, 1901, at the instance of the Devon and Cornwall Branch of the National Association.

The cost of the sanatorium has been £6,600, of which some £1,200 has still to be raised. The cost of maintenance will have to be met by subscriptions and by the payments by sanitary authorities for patients sent to the sanatorium by them. The cost of each bed will be £75 a year. At present the accommodation is very limited, but it is hoped that it may soon be extended.

STAFFORDSHIRE.

In accordance with a resolution, passed by the Sanitary Committee of the County Council last February, asking for a report from the County Medical Officer of Health as to the provision of a sanatorium for the treatment of phthisis, Dr. George Reid has presented a report giving much useful information on the subject.

After a sketch of the history of the disease and its causation with the measures necessary for its prevention and cure, Dr. Reid discusses the provision of sanatoria by local authorities, showing what has been done in other counties. The scheme which he advocates is on similar lines to that approved by the West Riding of Yorkshire County Council. He estimates the cost of the site and buildings, including furnishing, for fifty patients at £19 900 and the annual expenditure, including interest and repayment of loans, at £2,407, and an additional £2,600 a year to be paid by local authorities for the patients sent by them, namely, £1 a bed a week. Thus the cost of maintenance would be £5,000 annually, of which the County Council would pay about one half, representing a rate of 0 163d. in the £.

Provision for advanced cases should be made, and would practically entail an equal expenditure with that for the early cases accommodated in the sanatorium, so far as maintenance was concerned, though special building need not be built. The small-pox isolation hospitals were empty for long periods and could then be utilized for this purpose.

BOURNEMOUTH.

The forty-eighth annual report of the National Sanatorium for Consumption and Diseases of the Chest, Bournemouth, for the year 1902, shows an increased number of patients treated during the year. This has resulted in a deficit in the accounts of £109, which leaves the institution £540 in debt. Under these circumstances the Committee makes a special appeal for funds. The number of patients actually received in 1902 was 217 (109 men, 108 women), which, with the 60 patients remaining from the previous year, brings the total under treatment up to 277. Of these, 69 were much improved and 123 improved, and 64 remained under treatment when the report was made. The average stay of each patient was 62.10 days; the total cost of each patient was £1 6s. 3d. per week. Plans have been prepared for a further extension and adaptation of the present structure which will improve its efficiency and give six or eight additional beds. The cost of this is estimated at £1,200, towards which £633 has already been subscribed.

From the medical report, the figures in which do not appear to agree exactly with those in the general report, the majority of the patients are cases of pulmonary tuberculosis in an advanced stage of the disease, those admitted in the early stage showing a considerable falling off compared with the previous year. Under these circumstances, the results obtained must be considered very satisfactory.

THE ANTITUBERCULOUS CAMPAIGN IN LATIN AMERICA.

Dr. Emile R. Coni, of Buenos Aires, President of the Permanent International Commission for the Prophylaxis of Tuberculosis in Latin America, gave an account in a recent number of the *Medical Record* of what is being done in South America for the prevention of consumption. In January, 1901, the first Latin American Congress, which met in Santiago, the capital of Chile, formed a permanent international Commission for the purpose of combating tuberculosis in Latin America, according to a plan approved by the Congress. Dr. Coni was chosen President of that Commission. Inquiry showed that many South American countries had undertaken such work some years previously, while others had done nothing. Investigation of statistics showed that tuberculosis prevailed extensively in Brazil, Chile, Peru, and Venezuela; to a lesser degree in the Argentine Republic, Uruguay, Paraguay, Colombia, Mexico, and San Salvador; while in Bolivia and Ecuador the disease was comparatively rare, being, indeed, almost unknown in some of the centres of population of those countries. The first step taken by the Commission was the foundation of a journal for the purposes of propaganda. That journal was the means of awakening Governments and people from their apathy; and now antituberculosis leagues exist in Brazil, the Argentine Republic, Chile, Uruguay, Paraguay, Bolivia, Ecuador, and Cuba; and others are projected or in process of formation in Peru, Colombia, Venezuela, Mexico, San Salvador, and Costa Rica. In Peru the Government on January 5th, 1900, named a commission of eminent physicians, who were charged to "seek the causes of tuberculosis in the country, and study measures to combat it, or at least reduce as far as possible the ravages of the disease." In Columbia the Academy of Medicine of Bogotà has approved a series of motions bearing upon the prophylaxis of tuberculosis. The same is true of Venezuela. Mexico, through its Superior Counsel of Health, under the presidency of Dr. Liceaga, has been engaged in the antituberculous war for some years. San Salvador, Guatemala, Nicaragua, and Costa Rica have also taken an active part in the work.

As to the other countries in which leagues have already been formed, it may be stated that the Argentine Republic occupies

the first rank in South America, and Cuba in Central America. The problem has been dealt with in both these countries in a very practical manner, by the creation of antituberculous dispensaries, sanatoria, vacation colonies, seaside hospitals, and promot on of popular education through an active propaganda. Moreover, the authorities have issued decrees concerning prophylactic measures of the greatest importance. Contrary to the conditions obtaining in Europe in relation to tuberculosis, where private initiative plays a large part, Latin America is obliged to depend almost exclusively upon public co-operation in its campaign against tuberculosis, the latter having, as it were, a semi-official character. The better classes have failed to respond to the appeal made to them, and even the medical profession in general exhibits the greatest indifference to the noble but arduous task undertaken. Brazil, Chile, Uruguay, Ecuador, Peru, and Cuba have planned, or have in course of construction, sanatoria in localities which leave nothing to be desired. The Argentine Republic has, for two years, possessed a sanatorium in the province of Cordoba, to which the Argentine Parliament has granted a subsidy of about £16,800. The Argentine League has, in the fifteen months of its existence, distributed more than 600,000 pamphlets dealing with antituberculous education. It has extended its instructions concerning tuberculosis and alcoholism to the most remote sections of the Republic. Finally, it has promulgated useful prophylactic knowledge through printed instructions upon match-boxes. In Brazil the initiative in the work was taken by Dr. Clemente Ferreira of Sao-Paulo as early as 1898, when he outlined a plan for the purpose of combating tuberculosis through instruction in prophylaxis and the hygienic education of the people, as well as by the establishment of sanatoria for indigent tuberculous patients. The Paulist Society of Public Sanatoriums was founded under the patronage of the Medical and Surgical Society, and constitutes in itself an antituberculous league. Other cities of Brazil which have followed the example of Sao-Paulo are: Rio de Janeiro, Bahia, Pernambuco, Juiz de Foro, Curytiba, Campos, etc. The Municipal Council of Rio de Janeiro in 1901 issued regulations concerning the prophylaxis of tuberculosis. The Chilian League, having its headquarters in Santiago, was founded May 26th, 1901. It has done some important work, and disseminates instructions through booklets, notices attached to walls, etc. At present it is occupied in the creation of a hospital and dispensary, the latter of which is to be opened in the course of the present year. At the Institute of Hygiene, the league has established a bacteriological service for the gratuitous examination of sputum. An antituberculous league was founded at Montevideo, the capital of Uruguay, in July, 1902. The first dispensary is now in operation in the quarters occupied by the league. The Institute of Hygiene offers gratuitous examination of sputum. The Cuban League has published, since June, 1902, a monthly report of its work. It has sent missions to the interior of the island, and has obtained the formation of a commission for the special study of questions pertaining to tuberculosis. The provisional Government, desirous of establishing a sanatorium for tuberculous patients, submitted the project to the league. The committee named for this purpose has selected the property of Asuncion, which has been acquired by the Government. Fernandez de Castro has ceded to the league land at the mouth of Jaruco river as a site for a hospital for the treatment of tuberculous children. The first antituberculous dispensary in Latin America was established in Rio de Janeiro, January 26th, 1902, by the President of the Brazilian League, Dr. Azevedo Lima. The second was established in Havana in February, 1902, by the Cuban League against tuberculosis. Two others in Latin America are situated in Buenos Aires. The first was opened on July 1st, 1902, the second in September of the same year.

SUGAR, SALT, AND CANCER.

CAPTAIN E. R. ROST, I.M.S., attributes the rise in cancer mortality to an increased consumption of sugar, in the form of sweetmeats and other delicacies of modern confectionery, and a corresponding diminution in the use of salt-preserved articles of diet. His theory is[1] that malignant disease is parasitic in origin, and is due to the invasion of the body by a saccharomycete, the growth of which is favoured by glucose, but inhibited by chlorine-containing substances, and only admissible when the amount of chlorine in the body falls below normal. Some of his experiments, which he records in support of this view, are rather remarkable. He has cultivated saccharomycetes from a variety of tumours on sterile cane sugar, and has also prepared what he describes as "a kind of tumour jam," by preserving portions of tumours in the same medium. Sections of this "jam" show "the tumour cells as usual, but the saccharomycetes abounding in and between them." He passed chlorine gas through his cultures of saccharomycetes, and found that it "rapidly killed the organisms, and it is evidently the chlorine that is the active agent." We do not find a record of any control experiments to show that chlorine gas when passed into cultures of organisms which have no connexion with cancer leaves their vitality unimpaired.

According to Captain Rost, the guiding principle in the treatment of cancer should be to diminish the amount of glucose in the body and increase the amount of chlorine, thereby rendering the patient's body an unfavourable culture medium for the specific micro-organisms. He has put this theory into practice upon ten patients, his treatment consisting, "first, of a strict diabetic diet; and, secondly, of piling in sodium chloride into the body, and preventing its excretion as much as possible." The results are said to have been most successful, but, unfortunately, the patients themselves do not appear to have been unanimous as to the advantages of the treatment they were receiving, since four out of their number ran away. Experiments were also tried upon animals, cancerous material and "saccharomycetes" obtained by culture from cancers being used for inoculation; various lesions were produced, and in some instances the influence of a salt diet upon the affected animals was studied. We are told that "one guinea-pig and one cat absconded," apparently before the benefits of sodium chloride had been accorded to them. If a prescience of the treatment which might have been in store for them had anything to do with their "absconding," we must regard this as one of the most remarkable instances of animal sagacity which has ever been placed on record.

Malignant disease is such a terribly serious subject, and we are so completely in the dark as to its etiology, that any endeavour to elucidate the problem deserves to be appreciated for the excellence of its intentions rather than reproached for the inconclusiveness of its results. But there is the danger in the premature publication of scientific work that popular reports of it, written by irresponsible persons who betray no evidence of scientific knowledge, may appear in the daily press and prove misleading to the general public. Not that any serious harm is likely to arise in this instance. The announcement that sweetmeats predispose to cancer, if it finds its way into the cheaper sensational journalism, may prove alarming to sundry juvenile and feminine readers; but if it checks their appetite for confectionery it will at least improve their digestion; and although the use of sodium chloride as an antidote would engender a thirst which might be slaked unwisely, there is little fear of so unpalatable a remedy becoming popular. Still, we think that Captain Rost would have been wise in deferring the publication of his theories until he had established them on a somewhat broader scientific basis; in the meantime, we wish him every success in his experiments, and hope, in the interests of science, that in future he will secure both experimental animals and patients who are not afflicted with that irritating propensity to "abscond."

[1] *Indian Medical Gazette*, April, 1903.

GENERAL MEDICAL COUNCIL.

DISCIPLINARY CASES.

WE have received a letter from Mr. H. Varley, complaining of a passage in the report of the proceedings before the General Medical Council on May 25th, published in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of May 30th, page lxxii. It was there stated that the representative of the London and Counties Medical Protection Society, in addressing the Council, described the pamphlets to which he was directing the attention of the Council as obscene. Mr. H. Varley indignantly denies that his pamphlet is obscene. Our report of the proceedings before the Council was, we believe, accurate; and while we do not question the excellence of Mr. Varley's motives we doubt the wisdom of allowing such pamphlets to be sold to the general public.

THE annual dinner of the Association of British Postal Medical Officers will be held at the Hôtel Métropole, London, on July 17th. Among those who have accepted invitations to be present is Postmaster-General Mr. Austen Chamberlain.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1903.

SUBSCRIPTIONS to the British Medical Association fall due on January 1st each year. All members who have not yet paid should forward, without delay, postal order or cheque for 25s., to the General Secretary, 429, Strand, London, W.C., or, in the case of Colonial members, to their Branch Treasurer.

British Medical Journal.

SATURDAY, JUNE 13TH, 1903.

PRELIMINARY MEDICAL EDUCATION.

THE controversy between the General Medical Council and the Royal Colleges of England, to which frequent reference has been made, reaches a new and interesting stage by the publication of the reports of the Education and the Examination Committees of the Council. The steps of the controversy may be briefly described as follows. The Council held that the Conjoint Board, by the recognition for the first year of medical study of ordinary schools and institutions not approved by the Council for this purpose, had in effect shortened the five-year curriculum. The Colleges took their stand upon their legal rights, denied the competence of the Council to interfere in the matter, and ceased to require students' registration. The Council then obtained, through the Conjoint Board, returns setting forth the particulars of study at the disputed institutions, and subsequently inspected the examinations held in the first-year subjects, (physics, chemistry, and biology) by the Conjoint Board.

On the subject of scientific education some divergence of opinion prevails: some, amongst whom we may cite the eminent chemist, Professor Armstrong, hold that perpetual preparation for examinations cramps the work of the student, and the distinguished American surgeon, the late Dr. Bigelow, held this view to some extent. Such would direct efforts in the way of reform rather to the improvement of teaching than to the extension of examinations. Others hold that, notwithstanding all that can be said as to the imperfections of examinations as tests, they are in practice the only means yet devised to secure that the average student shall work, whilst of course the licensing bodies have the further important duty of securing that persons entering into practice shall not be incompetent.

In medical education some endeavour has been made to meet each and all of these considerations, and to strike a mean between the extreme views. By the imposition of a lengthy curriculum, which can only be taken in places where every facility for learning exists, it is tacitly acknowledged that the examination test is not alone to be relied upon to produce a satisfactory result; the horse is to be taken to the water and kept there, and the necessity of facing examinations from time to time will, it is hoped, stimulate him to drink, if not his fill, at all events something. And at the end of the student's career examination is relied upon to ascertain whether he has made himself competent or not as a practitioner.

As to the relative weight which shall be attached, on the one hand, to the conditions under which he has been taught—in other words, to the curriculum—and, on the other, to the examination test, opinions, as has been said, differ, and no doubt always will differ. Certain of the licensing bodies—some, indeed, whose degrees have always stood deservedly high in public and professional esteem—look less closely into the details of curriculum than others; and the wording of the Medical Acts, under which the General Medical Council has no means of taking any action short of a representation that a particular diploma does not afford a guarantee of sufficient professional knowledge, seems to contemplate some latitude in these directions.

If, then, we grant that the rigid enforcement of the curriculum and the stringency of examination may in some measure be complementary the one to the other, in what position do the Royal Colleges now stand? It is demonstrated that, so far as the first year is concerned, there is some laxity in the enforcement of the regulations as to the curriculum, for it is possible to take courses at schools and institutions at which the hours spent are so few that it it seems a farce to call it a "year" of education. Is this remedied by an examination of such character that the student who has reduced his year of study to this minimum has virtually no chance of getting through it? We are told emphatically by a Visitor and an Inspector, one of whom, at all events, is conversant with, and practically concerned with, not only medical education, but education in its widest sense, that it is not. In effect they tell us that the examination is poor and affords little real proof of knowledge of a proper kind, and that this is not the fault of the examiners, for the application of a more searching test would lead to the rejection of the vast majority of candidates. The net result, then, is that there is very little to show for the first year of medical study—at all events by the candidates at the English Conjoint Board—and it must be remembered that this Board confers a far larger number of qualifications than any other. It seems, then, hardly too much to say that in the case of many of these candidates the first year of medical education has, for all useful purposes, disappeared, or at least been wasted.

The Royal College of Physicians is willing to investigate the question, but the Royal College of Surgeons, through its Council, strenuously defends its procedure, and points out that comparatively few students do, in fact, obtain their qualification in five years. This, however, hardly appears to be *ad rem*, for we are not told at what period in their career the extra time is spent. If they are unable to pass a low standard of examination in physics, chemistry, and biology at the end of their first year, it is self-evident that the course of study has been inadequate. If, on the other hand, it is at later stages that they fall behind, it may be that their knowledge of these preliminary subjects was insufficient to enable them to approach physiology and other subjects intelligently, which, according to the reply of the College, is the primary object with which the syllabus and the examination have been arranged upon a standard which is the best attainable under present conditions.

If this view is correct the issue is at once extended far beyond any controversy between the Colleges and the General Medical Council, and calls for dispassionate investigation. Unless we are to suppose that the medical profession is so unfortunate as to draw upon a grade of students below the average in capacity, such a statement is a wholesale condemnation of secondary education in this country. It amounts to saying that the mental equipment of boys leaving school is not such as to enable them

to make any good use of their first year of study of scientific subjects, in other words, that secondary schools have failed in their object.

If, on the other hand, it be thought that the curriculum is so overloaded as to be beyond the capabilities of the average student, and that a year is not a long enough period, the question arises whether some elementary scientific knowledge should not form an essential part of such preliminary examinations as are recognized for entry by the licensing bodies, so that scientific study of some sort should commence earlier. Such opportunities exist at many places, and doubtless in the past quarter of a century the teaching of science in ordinary schools has advanced much, though it is evident from the returns that, even in schools which must in a measure be taken as specially selected as affording facilities for science teaching, it has not yet taken any prominent position.

It would, however, take strong evidence to convince us that if a year of bona-fide study had been devoted to the preliminary subjects, the average lad could not present himself in a better state of preparation than, according to the evidence of this report, he does. The knowledge thus acquired would facilitate each subsequent step in his studies. In other words, so far as evidence yet before us goes, it is the waste of the first year which is in fault. We do not suggest that the Conjoint Board and the Society of Apothecaries stand alone in this respect, but so far the evidence and, therefore, the range of discussion is limited to them.

GENIUS AND MATRIMONY.

MEN of genius are proverbially unhappy in their marriages, a fact which Lombroso and his school seek to explain by calling genius a neurosis akin to and often associated with epilepsy. We need not, however, grope in the depths of pathology for an explanation which lies on the surface. Marriage is a condition in which happiness is to be found only in a perfect blending of wills, aims, and efforts, of hopes and sympathies, a process necessarily involving a large sacrifice of self in both parties. Of such sacrifice genius is too often incapable; it is self-centred, busy with its own creations, and lives almost wholly in an invisible world into which the domesticities are not suffered to intrude. It is exacting, asking for all, and giving little or nothing in return. This self-absorption and aloofness of genius render impossible that union of souls which lifts marriage into something higher than a natural arrangement for the continuance of the species. It is the penalty of greatness that it must dwell apart, like a star; when it stoops to mix with the clay of ordinary humanity the result must almost inevitably be disastrous.

Of this general truth a striking example is furnished by the sad story of the married life of Thomas Carlyle, which has recently been told anew by Sir James Crichton-Browne,[1] with a truer insight into the meaning of facts than was shown by James Anthony Froude, and without the obsession by a preconceived idea and the marvellous talent for misrepresentation which made the name of that famous writer a byword and a reproach among students of history. The new letters of Mrs. Carlyle, now published by Mr. Alexander Carlyle, will add nothing to her reputation as a correspondent, but they fully maintain it; in that branch of literature her place is with Madame de Sevigné and Lady Mary Wortley Montague. The most interesting part of the book from our point of view is the introduction contributed by Sir James Crichton-Browne. He has rekindled the fire of an angry controversy which raged for some time after the death of Carlyle and blackened the fame not only of the departed prophet but of his biographer. Whether it was wise to stir the ashes of a forgotten scandal is a question that need not be discussed by us. Our business is solely with the medical aspects of what is called the secret of Carlyle's married life.

Briefly put, Sir James's view is that whereas Froude described Carlyle as having broken his wife's heart by neglect, the truth is that Carlyle "a vigorous earnest man with his keen susceptibilities; not easy to make happy, was wedded..and was happy, and made his wife happy in as full measure as the vials of their felicity would allow." On the other hand, the wife, instead of being "a *femme incomprise* and sadly injured woman," as Froude painted her, was a highly neurotic subject, with an inherited tendency to nerve disorder, and the victim, even as a young girl, of sick headaches which continued to torture her at frequent intervals throughout her married life. She suffered besides from innumerable attacks of influenza—according to Harriet Martineau she had "eight influenzas annually." Moreover, she had frequent catarrhs, periodical in character, occurring almost invariably in spring and autumn. The instability of her nervous system made her morbidly sensitive to noise, and during the greater part of her life she was haunted by the demon of sleeplessness. She tried to exorcise him by the use of morphine, a drug of which, as pointed out by Sir James Crichton-Browne, a secondary effect is "to induce unfounded suspicions and even delusions of persecution in those who habitually indulge in it." Her own letters afford ample proof that her life was a long disease; as Sir James Crichton-Browne puts it, they are pervaded by a sick-room flavour, with frequent invocations of castor oil.

In 1846, when she was 45 years of age, the low spirits, engendered by chronic ill-health, deepened into the gloom of a persistent mental nightmare, in which she was the prey of morbid suspicions and phantoms the offspring of her own frenzied imagination. In this condition, which lasted ten years, she wrote the "Journal," which is cited in evidence of Carlyle's neglect and ill-treatment. The impartial medical student of that "Journal" will, we think, fully agree with Sir James Crichton-Browne that, whatever it may be taken to prove against Carlyle, it establishes beyond all possibility of question the fact that the mind of the writer was not well balanced, and that sometimes the balance inclined across the border line. Those familiar with such cases cannot fail to recognize in the sufferings of the patient, described by herself with marvellous vividness, the symptoms of climacteric melancholia. Sir James Crichton-Browne is careful to explain that Mrs. Carlyle's mental disorder was not "insanity in the crude sense of the term, but a derangement of the feelings, with consequent delusional beliefs, having no rational foundation, and irremovable by demonstrative proof of their untenability, all due to disease of the brain and nervous system which it is customary to call functional, because of the invisibility of the changes that accompany it and their irremediable character." The disease of the mind was emotional throughout, and did not in any appreciable degree affect her intellectual powers.

[1] *New Letters and Memorials of Jane Welsh Carlyle.* Annotated by Thomas Carlyle, and edited by Alexander Carlyle, with an introduction by Sir James Crichton-Browne, M.D., LL.D., F.R.S. With 10 illustrations. In two volumes. (John Lane: The Bodley Head, London and New York. 1903. 24s.)

While we hold that Sir James Crichton-Browne has made out his case as to Mrs. Carlyle, we do not think that he has succeeded in vindicating Carlyle's character as a husband. No ingenuity in explaining away his use of the word "remorse" can wipe out the record of his unavailing contrition when he found what a tragedy he had made of her life. It would be idle to blame him; he was wrapped up in his work, and took the self-sacrifice of his wife, as he took his morning porridge, as a matter of right. Thackeray, the arch-enemy of snobs, confesses that in his heart he was himself a snob. Carlyle, less sensitively self-conscious, never seems to have suspected that he, the denouncer of shams, was himself deluded by shams, giving to poor hopeless souls who asked for the bread of guidance the stone of a vague appeal to the Veracities and Silences. From such unsubstantial fare his wife, whose religious belief he had undermined, could extract no spiritual nourishment, but he seems to have been able to comfort himself with shams in capital letters. It should be added that he too was neurotic and a martyr to life-long dyspepsia, or as Dr. G. M. Gould contends, of eye strain causing widespread disorder of the nervous system.

Thomas Carlyle was a great man, and, as far as is ordinarily understood by morality, a good man. Sir James Crichton-Browne himself, however, admits that he was "gey ill to deal wi'." This, if we understand him aright, he considers natural, "for," he says, "when we come to think of it, so are most men except the nincompoops." We hope that clever young men who read this remark will not be led by it to the belief that sourness and irritability and disregard of the feelings of others are marks of genius. For our own part we agree with Robert Louis Stevenson that "gentleness and cheerfulness, these come before all morality; they are the perfect duties." We frankly say that we think Carlyle would have been a better man had he been somewhat less austere in the morality for which he is justly praised and more careful to make his wife happy.

Into the question of Carlyle's physical fitness for marriage, which is now being debated with somewhat indecent freedom in the public press, we prefer not to enter here. Every London physician has doubtless heard what Mr. Andrew Lang calls "gentlemen's stories" relative to this matter. Whether there is any truth in them we are not in a position to say.

The moral of the sad and somewhat sordid drama is that neurotic persons—especially if they have genius—should not marry at all unless they can find mates content to save them from the jolts and frictions and worries of life without better reward than the occasional smile or word of recognition bestowed on a devoted drudge. Shakespeare says:

> Let me not to the marriage of true minds
> Admit impediments.

But, unhappily, the marriage of true minds is likely to be marred by selfishness and ill-temper, to say nothing of impediments connected with the body.

THE LIFE AND WORK OF LONDON.

The report by Mr. Edgar Harper, Statistical Officer to the London County Council, upon the Registrar-General's preliminary report on the census of 1901, discusses a great mass of curious information.

The area of the administrative County of London was considerably altered by the London Government Act 1899, and it has consequently been necessary to take special care in making comparisons between the census of 1901 and previous censuses in order to ensure that the areas compared were identical. The net result of the changes has been to reduce the area in the administrative county by about 650 acres, nevertheless the population between 1891 and 1901 increased by over 300,000, and the inhabited houses by over 25,000 in round numbers. While the population and number of houses in London have increased greatly the valuation of property has increased much more rapidly. In 1871 the rateable value per head of population was £6.11, in 1891 it had risen to £7.80, while in 1901 it reached £8.77. The rateable value per house shows a still greater increase, for in 1871 it was £44.15, in 1891 it was £56.21, and in 1901 it was £65.00. The great increase in the rateable value, which has recently been brought about is shown by the fact that in 1896 the value per house was £60.05. The rateable value per house varies of course enormously in different districts, thus in Plumstead it was only £22.14, in the City it was £483.36, in one district of Westminster £771.58, and in Finsbury (Charterhouse) it touched the enormous amount of £1,657.50; the lowest rateable value per head of population in 1901 was in Poplar, where the amount was £4.63 and the highest in the City, £180.90.

With regard to the sex distribution a curious point, to which attention has already been called, is again brought out. The total population of London enumerated in 1901 was 4,536,541; the females exceeded the males by over a quarter of a million (252,371), so that there were 1,118 females to every 1,000 males, as against 1,116 in the census of 1891, and 1,064 in England and Wales in 1891, the last census for which these figures are available. In considering these ratios it is necessary to take account of the large number of domestic servants, who come into London from the country, also the addition to the proportion of males made by the presence of soldiers in barracks, and the large number of males among alien immigrants, thus there were over 234,000 female servants, while there were only in round numbers 15,400 male servants; on the other hand, the total foreign population consisted of 79,000 males and 55,500 females. If the persons in these three categories are excluded the proportion of females to 1,000 males in London is 1,033, a somewhat lower proportion than prevails in the country. The metropolitan borough with the largest number of females in proportion to males is Hampstead, then come Kensington, St. Marylebone, Paddington, Stoke Newington, Chelsea, and Wandsworth; in Hampstead at the ages from 19 to 30 there are twice as many females as males. The excess in Hampstead, Kensington, Paddington, and St. Marylebone is attributed mainly to the large number of domestic servants, but in the latter borough there are also a large number of dressmakers.

The well-known fact that the birth-rate has been declining prepares us for statistics showing that there has been a great decrease in the proportion of children in the population of London, although the decreased death-rate has contributed to bring about the same result. In 1851 the proportion of persons between the ages of 55 and 65 per 10,000 of population was 521, in 1901 it had risen to 572; the increase in the age period, 65 to 75, is still more conspicuous, since the proportion in 1851 was 265, while in 1901 it was 293. In spite of this tendency to readjust the balance it is disquieting to notice that the average annual mortality of infants under 1 year does not show a diminution at all comparable with that observed in the general death-rate; the latter fell from 24.4 in the decennium ending 1870, to 17.6 in the decennium ending 1901, whereas the infant mortality per 1,000 births fell only from 162 to 149.

No attempt is made in the report to analyse the causes for the continued high infantile mortality, but there can be no doubt that one great cause is errors in feeding, and in particular the use of milk which has become contaminated during distribution or in the homes of the poor. We shall hope to publish in an early issue an article giving grounds for this conclusion, which applies not only to London, but to some other large towns.

It appears that the proportion of married adults is greater in the whole of England and Wales than in London alone, and that this is especially true of females. This peculiarity is attributed to the later age at which people in towns marry, although it is added that the large number of unmarried female servants in London must be taken into account. On the other hand, it is rather surprising to observe that the number of married women residing in London is greater than the number of married men; this would seem to be further evidence that, in spite of the improvement and the cheapening of communication, there is still room for considerable centrifugal movement of homes into the suburbs.

Another statistical fact which will run counter to the views of some sensational writers, whose opinions have gained recently perhaps rather an undue prominence, is that the proportion of persons born in Scotland who reside in London is very small, and has not increased during the last forty years; more than two-thirds of all persons residing in London are born in London, and of the remainder more than two-thirds were born in England and Wales. The proportion of Irishmen resident in London is decreasing, but it is still larger than the proportion of Scotchmen; the Irishmen and the Scotchmen taken together about equal the proportion of foreigners in London. The total number of foreign-born persons residing in London rose from 60,000 in 1881 to 135,000 in 1901. This large increase is mainly due to immigrants from Russia, who reside in the boroughs of Stepney and Bethnal Green, but there is also an increase in the number of Italians, Austrians, and Hungarians. The number of Poles increased rapidly between 1881 and 1891; after that date the increase was slight. The Germans are still mostly to be found in Stepney, but the number there has greatly decreased; while there has been a substantial increase in St. Pancras and St. Marylebone, corresponding in all probability to increased individual prosperity. The French congregate mostly in Westminster, St. Pancras, and St. Marylebone; the Italians in Finsbury, Holborn, and Westminster; the Austrians and Hungarians in Stepney; the Swiss in Westminster and St. Pancras; and the Dutch in Stepney. The trade most affected by foreigners is tailoring, the number so employed being over 16,600; next come domestic servants, numbering 7,500.

Mr. Harper makes several suggestions for increasing the value of information contained by censuses. We need refer to one only: he says, as we think wisely, that it would be desirable to take a day census of London in order to ascertain the place of occupation of persons residing in different districts. Such information would be of the greatest assistance in considering the requirements of London with regard to housing and locomotion. He points out two ways in which information on this head could be obtained, first, the inclusion of a column in the householders schedules' to show the place of work or business, though he points out that the information so obtained would not be very useful unless the system were carried out in the whole of the counties surrounding London. A more accurate return could be obtained if a day census were taken throughout London of all persons engaged in work or business of any kind in different parts of the county.

In common with every one engaged in the study of vital statistics Mr. Harper makes an appeal for a more complete quinquennial census of London, and he recalls the desirability of including in the next quinquennial census particulars as to age, sex, relationship to head of family, and birthplace, as was urged upon the Local Government Board by the London County Council, the British Medical Association, the Royal Statistical Society, the Society of Medical Officers of Health, and the Institute of Actuaries. It is to be hoped that the opinions expressed by these influential bodies, representing as they do all the interests connected with vital statistics, may be successful, for, having regard to the expense necessarily entailed in taking any census, the additional cost of fuller particulars should not be allowed to prevent information being obtained which would be of the greatest value in connexion especially with the burning questions of housing and locomotion.

THE EPSOM FESTIVAL.

THE Council and Treasurer of the Royal Medical Benevolent College, Epsom, are sincerely to be congratulated on the result of the special appeal which they have made to the medical profession and to the public to place the benevolent side of the work on an assured basis. The Prince of Wales, whose father and grandfather had on many occasions given their powerful aid to the work, showed the deepest personal interest in the success of the appeal, and not only presided at the festival dinner on Wednesday, but paid a special visit to the College on the previous day. He was supported at the dinner by Lord Rosebery, President of the College, the Duke of Somerset, the Earl of Clarendon, Sir Henry Burdett, K.C.B., and a large number of the most distinguished members of the medical profession. The speech which His Royal Highness made in proposing success to the College was simple, direct, and manly, and the tone of conviction with which it was delivered gave it an eloquence which more ornate phrases could not have possessed. He had the gratification of knowing that the result of his efforts was to add the sum of £6,500 to the benevolent resources of the College. Dr. Holman, the Treasurer, who was much congratulated upon the success of the occasion, laid stress in his speech upon the fact that the appeal was made solely for the benevolent part of the work, and that the school itself was self-supporting. In his reference to the Prince's appeal for contributions from the general public he was able to show that the medical profession itself gave largely to this and to other medical charities. We believe that a hope was entertained that the sum of £10,000 might have been reached; and if the appeal has escaped the attention of any of our readers, it is still not too late to send contributions to the Treasurer at the office of the College, 37, Soho Square, London, W.

THE KING AND HOSPITAL SUNDAY.

"HOSPITAL SUNDAY" in London is fixed for June 14th but in anticipation of it, and possibly by way of drawing attention to it, His Majesty expressed his intention of being present at the ordinary afternoon service at St. Paul's Cathedral on Sunday last, and his wish that the "Hospital Sunday" collection should be made on that occasion. The service was attended not only by the King and Queen, but by the Prince and Princess of Wales, the Duke of Cambridge, the Duke and Duchess of Connaught, Prince and Princess Christian, Princess Beatrice, Princess Henry of Battenberg, and many other members of the Royal Family. Adequate preparations had been made in advance by the Cathedral and City authorities, but the befitting keynote of the whole proceedings

was a studied absence of pomp and splendour. The Cathedral was well filled, and a large crowd awaited Their Majesties' arrival outside; but except the invited presence of a large number of nurses in uniform, the characteristics of an ordinary afternoon service were successfully preserved. The Bishop of Stepney, the preacher, referred to the readiness of all men to relieve individual cases of acute and obvious suffering which come under their notice, and said that by Hospital Sunday over 100,000 in-patients, and not far short of 2,000,000 out-patients, were, so to speak, laid at their door. The great hospitals—St. Bartholomew's, St. Thomas's, Guy's, the London, and St. George's—stood in their midst, ever silently crying, "Lest ye forget; lest ye forget the true greatness of the City of London, which should be the relief of the poor and suffering." The public had doubtless done much, but much more remained to be done and must be continually done, before it could be said that the wealth of London had risen to the full height of its opportunities. The hospitals could if need be doubtless fall back upon the rates for support, but since their support was a public duty it should be performed voluntarily and not under pressure of a legal "must." It would be a great moral downfall for London if ever the familiar words "supported by voluntary contributions" had to be removed from the front of hospital buildings. After the collection, which reached £4,300, Their Majesties left the building again without other ceremony than a salute from a guard of honour of the London companies of the R.A.M. Volunteers. These companies, which have attended St. Paul's Cathedral for Church Parade on Hospital Sunday every year since their formation as the Volunteer Medical Staff Corps some 17 years ago, turned out on Sunday with 12 officers and over 200 non-commissioned officers and men, under the command of Lieutenant-Colonel J. Edward Squire. The guard of honour, 3 officers and 100 men, with the drum and fife band, was drawn up facing the steps of the west entrance, while the remainder were posted on the steps, where was also a party of the Bearer Company of the City of London Infantry Brigade (now also R.A.M.C.V.), under Captain A. C. Tunstall. The King and Queen were received on their arrival with a Royal salute, the band playing the National Anthem, and a similar salute was given on their departure. A noticeable feature of the parade was the transport section of the London companies, composed of the drivers of the ambulance wagons, whose Bedford cord breeches and putties distinguish them at once from other members of the corps. At the conclusion of the ceremony, the London companies, headed by their band, marched to Charing Cross, and the detachment of the bearer company to their City rendezvous.

REMOVAL AND RESTORATION OF NAMES FROM THE *MEDICAL REGISTER*.

As the General Medical Council has determined that the fee for the restoration to the *Medical Register* of a name removed under Section XIV of the Medical Act, 1858, shall in future be £1, it may be well again to call attention to the provisions of this section, and to the procedure followed by the Registrar of the General Medical Council. In a memorandum presented to the Council at its meeting in November, 1899, it is stated that the action taken by the registrars is governed generally by the consideration that the *Medical Register* is an official work, the publication of which is directed by statute, and the correction of which is provided for by specific provisions, the duty of the registrars being stated in the Act to be "to keep their *Registers* correct in accordance with the provisions of the Act." It is, therefore, held that such methods for securing accuracy of detail as may be used in the case of a private publication cannot be employed, so that though information as regards a practitioner's change of residence or death may be in the possession of the office, derived from private sources which may be known to be absolutely reliable it is not thought proper to make any change of address or erasure in the *Register* without documentary authority. The Act provides for the issue of letters of inquiry by the registrars at their discretion, and Section XLV directs that registrars of death shall send certificates to the Council. It is not the practice to send letters of inquiry annually to all persons on the *Register* owing to the great expense and labour such a course would entail, and the inconvenience which would be caused to the profession by an excessive use of the provisions of this section, since busy men might now and again forget to reply to the oft-recurring inquiry, and the names of great numbers might thus be removed from the *Register*. In doubtful cases, or when information has reached the offices of the Council from any source showing the inaccuracy of an entry, a letter of inquiry is issued, and in this way many corrections are obtained. When no reply is received the name is removed; the removals in this way numbered 345 in 1900, 279 in 1901, and 345 in 1902. A considerable number of the voting papers sent out for the election of direct representatives come back through the Dead Letter Office, and advantage is taken of the information thus received to correct the *Register*. Further, advertisements are inserted in the leading medical journals calling the attention of practitioners to the importance of communicating with the office of the Council in regard to changes of address, and at the request of the Registrar the editors of such journals call attention to these advertisements with the result that a large additional number of corrections has been received. The attention of the Registrar-General has on more than one occasion been drawn to the fact that local registrars sometimes fail to report deaths, and he has issued special instructions on the point. When it is observed that deaths announced in the obituary columns of the medical journals have not been reported inquiries are sent to the registrars in the locality. No such returns, however, are received from the Colonies or foreign countries, and some years ago 3,500 circular letters were sent out to all registered medical practitioners in the Colonies or in foreign countries; several hundred corrections were received, while one hundred letters were returned undelivered. Under a system instituted a few years ago, a special circular of inquiry is addressed once in five years to every person whose name appears upon the *Medical Register* in addition to the papers sent out during an election of direct representatives. Under the present circumstances of England, therefore, every registered person ought to get three notices in five years. All circulars coming back through the Dead Letter Office are compared with Churchill's *Medical Directory*, and a second inquiry is sent if the address there given differs from that in the *Register*; if no information is received in reply the name is erased. From letters which we receive from time to time, we know that the operation of the Act and the practice followed under it occasionally cause a great deal of inconvenience to individuals, who not unnaturally have expressed their sense of wrong in forcible terms, but the purity of the *Medical Register* is of so much importance to the public and to the profession itself that we can only impress upon every member of the profession the necessity of notifying a change of address to the General Medical Council, and of promptly replying to all inquiries which may be received.

FOREIGN MILK.

A SHORT and interesting discussion was raised in the House of Commons last Monday by Sir E Strachey, the member for South Somersetshire, with regard to foreign milk. He complained that the Board of Customs refused information with regard to the names and addresses of persons to whom foreign milk was consigned, and by whom it was sold. The information was desired, not to stop the sale of foreign milk, but in order that the purchaser might know whether he was buying foreign or English milk. The conditions under which foreign milk was produced were at present unknown to the Customs, to the seller, and to the public who consumed it. Mr. Elliot (Financial Secretary to the Treasury), who replied on behalf of the Government, said that it was desired that milk food

might be put on the market without regard to the place from which it might come. Without fresh legislation there was no power to cause a statement to be put up over a man's shop to show where the goods he supplied came from. We are glad to observe that this official reply did not satisfy the House. Captain Norton, speaking as a London member, maintained that the people of London had a right to inquire where their milk supply came from, and might reasonably resent foreign milk being thrust upon them, which had been produced under insanitary conditions. Mr. Chaplin also urged that the subject was one affecting the public health, and said that when he was President of the Local Government Board he had reason to believe that some of the preservatives used were injurious. Finally, Mr. Elliot rose again to express the opinion that legislation would be necessary, and after this the amendment was negatived. It does not seem unreasonable that the public should wish to be protected against vendors who sell foreign milk for English. By all means let them import foreign milk, provided they have seen the farms from which it comes and have means of knowing that proper sanitary precautions are observed and carried out, and provided they have the honesty to sell it as foreign milk. But considering that the milk has been imported into England from Holland, Norway, France, and even from Victoria and New South Wales, it must be a little difficult to vouch for the sanitary state of the farms and the scientific handling of the milk, even if the consumers did not object to milk several days or weeks old. There are processes of freezing and also of injecting pure gases in order to preserve milk for a long period, but our information is that after about a fortnight the milk separates or deteriorates in other ways. Though it has been found difficult to trace milk arriving in England from abroad, yet experience shows that this can be done by careful investigation. Thus, milk arriving in large drum-shaped tins has been traced at any rate to one dealer in London, and there is reason to believe that it has been mixed with really fresh milk. As the mixture is up to the required fat standard, there are no grounds for legal action under the existing law. The Government evidently fails to appreciate the importance of this matter from the public health point of view, otherwise the Board of Customs would not be supported in its refusal to inquire into the matter. So far as we can ascertain, the importation of milk from abroad has not hitherto had much commercial success, for statistics show that the quantity, which was never really large, has gradually diminished, so that the importation must have been of the nature of an experiment.

MEAT INSPECTION AT HULL.

For some time past it appears that public attention has been drawn to the unsatisfactory state of meat inspection at Hull. Prosecutions having been instituted recently by the East Riding County Council against different persons who had been in possession of animals proved to have been suffering from anthrax, and it having been shown that the carcasses of such animals were forwarded to Hull and passed as good meat, the whole matter has been inquired into. This action has been largely due to the medical members of the Sanitary Committee of Hull, and particularly, we gather, to Dr. Robinson, who certainly deserve the gratitude of the community for their work. As a result of the inquiry it has been proved "that the inspection of meat in the City of Hull is extremely lax, and that the standard set for what is fit for human food is far too low." The Committee of Inquiry finds that anthrax carcasses have, in fact, been passed as good meat by the meat inspectors of the Corporation, who have "deliberately falsified their official books in order to deceive the Sanitary Committee and to save themselves after having passed unsound meat." The Committee adds an expression of its strong opinion "that officers who are guilty of conduct of this kind cannot retain the confidence of the Corporation." The Committee also strongly condemns the conduct of farmers and others who send into Hull meat which they know to be unsound and deliberately place upon the inspectors, who do not, of course, know the history of the animal, the responsibility of deciding whether the meat is fit for human food or not. It appears that on an average more than 400 carcasses are brought into Hull every month, and that the inspectors have passed as good meat the flesh of animals killed owing to their being diseased. The Committee after a searching inquiry made the following recommendations: (*a*) Upon the whole of the evidence taken, dealing with the three specific outbreaks of anthrax which occurred at Sutton, Burton Agnes, and Huggate, and with matters pertaining thereto, especially the falsification of the books and with the question of meat inspection generally, the Committee feels that it can no longer place any confidence in the two meat inspectors, and recommends that they be requested to place their resignations in the hands of the Sanitary Committee; (*b*) that a chief meat inspector be appointed, and that in the appointment of such inspector attention be given to his qualifications to detect by bacteriological and microscopic examination diseased tissues in animals; (*c*) that an assistant, a practical man, be appointed under the chief meat inspector; (*d*) that in the interests of the public health, and for the disposal of sound meat, it is desirable that carcasses of meat intended to be sold to retailers should be brought to a common centre in the city for supervision; (*e*) that the inspectors be instructed that it is no part of their duty to pass, as fit for human food, meat sent in to private shops or slaughterhouses, and that unless such meat is sent to the central dépôt for inspection it will be exposed for sale at the risk of the person having it in his possession; (*f*) that all condemned meat be sent to the destructor, as by sending it to the manure works there is a grave danger of infectious disease being spread; and (*g*) that whenever the inspector seizes an animal which has been affected with any contagious or infectious disease, he notify at once the superintendent of police of the district from which the animal has come. On the whole we think these recommendations are satisfactory and adequate. The suggestion of a well-qualified bacteriologist being chief meat inspector is perhaps open to criticism, and anything less than a thoroughly-trained bacteriologist with an intimate knowledge of pathology is likely to be a dangerous sort of safeguard. The idea of choosing a meat inspector with some knowledge of bacteriology is, in our opinion, unwise. The sooner it is understood that bacteriology is now a science requiring very special training so much the better. It has been found in practice that bacteriology is rarely needed in meat inspection, and when it is something more than a smattering is required. The Committee also concluded that greater uniformity in meat inspection should be insisted upon throughout the country, and they furnish an appendix of particulars as to the practice in twenty-eight large towns. Curiously, they omit reference to the methods adopted in the metropolis, where a vast mass of experience must have been obtained. Further, it will be remembered that in 1899 the Local Government Board drew the attention of local authorities throughout the country to the importance of greater uniformity in meat inspection and the employment of property qualified inspectors. This memorandum was repeated in September, 1901, and many of the more important towns have brought their practice in these matters into line with the instructions of the Board. It appears that Hull has not done this, but has been employing unreliable men as meat inspectors, and, further, that owing to various circumstances these inspectors have not been acting under the immediate supervision of the medical officer of health. If the medical officer of health had been in a position to inspect the implicated carcasses, and to examine regularly the official books, it would appear that this grave difficulty would not have arisen. But given no strict supervision, and given meat inspectors apparently ignorant of the differences between diseased and sound meat, and also apparently capable of deliberate falsification of their books—given these conditions everything is provided for complete inefficiency and its results. From the evidence, we think it is these local matters which have been open to

criticism, and not the general practice throughout the country, greatly though that may need stricter inspection and more uniformity. Hull is to be congratulated that at the eleventh hour some of its councillors have been able to bring these matters to light, and we trust the revelation will have a salutary effect on meat inspection throughout the country, both in urban and rural districts.

ANTIVIVISECTIONIST INCONSISTENCY.

ONE of the most intesting features, from a psycho-pathological point of view, in the mental structure of the antivivisectionist is the inconsistency which leads him to select as presidents of his societies men whose only title to fame is that they are mighty hunters before the Lord who find amusement in the slaughter, involving an incalculable amount of pain and mutilation, of animals, for the most part defenceless. Three or four years ago a noble predecessor of Lord Llangattock mingled his denunciation of vivisection with paeans in praise of "sport," standing the while under a banner blazoned with the lines

He prayeth best who loveth best
All things both great and small!

It may be remembered that Sir Frederick Banbury, who is promoting a Bill against vivisection, recently talked out Mr. Corrie Grant's Prevention of Cruelty to Animals Bill, which is designed, as a justly indignant correspondent says, to suppress "the gross and wanton barbarity of turning a defenceless dishorned stag out of a cart and subjecting it to repeated chases by bloodthirsty dogs." The most amusing instance of such inconsistency that we have so far met with is afforded by a letter from Admiral Kennedy which appeared in the *Humanitarian* for January, 1903. The gallant admiral is the author of a book entitled *Sport in the Navy*. In that book there is an account of the slaying of a reptile which moved a critic in our contemporary to express the opinion that "evidently the Lagâto is almost as insensible to physical violence as some sportsmen are to the instincts of decency and good taste." The admiral warmly protests that no man is more fond of animals or kinder to them than himself. There is, however, a limit to his kindness: he has no sympathy with reptiles. He declares that he is a member of the Antivivisection Society—we might have guessed this—and has the greatest abhorrence of "the disgusting proceedings of the vivisectionists"; he draws the line, however, at "cold-blooded creatures which have but little feeling." When the "vivisectionists" have ventured to point out that cold-blooded animals are comparatively insensitive to pain, they have been howled at as prevaricators. It would, however, seem that members of the Antivivisection Society may treat reptiles with as little mercy as noble sportsmen show to pheasants and stags without exciting remonstrance from his fellows. Apparently the antivivisectionist doctrine is that an animal may be butchered in any way, however barbarous, that is thought necessary to make a sportsman's holiday, but must on no account be used for the gaining of knowledge that may be of priceless value in relieving human suffering.

THE ORGANIZATION OF CIVIL MEDICAL AID IN WAR.

"THE South African civil surgeons' dinner" was held, under the chairmanship of Sir William Thomson, C.B., on June 5th at the Hotel Cecil, Strand. Amongst those present were Lord Rosmead, Sir William Church, Surgeon-General Keogh, Colonel Babtie, V.C., Mr. A. A. Bowlby, Mr. W. Watson Cheyne, Mr. G. H. Makin, Mr. Clinton Dent, Dr. Tooth, Mr. F. C. Wallis, Mr. Raymond Johnson, and Colonel Stevenson, R.A.M.C. Mr. Clinton Dent, in proposing "The Imperial Forces," referred to the endurance of the private soldiers in the Boer war, and discussed their remarkable propensity, from a statistical point of view, for recovering from the severest operations of all kinds, a characteristic which endeared "Tommy" especially to those who submitted him to operative inconveniences. In time of war the empire was closely knit, but that union was apt to become looser in time of peace, for in war time they quarrelled with some one else, and in peace they were inclined to quarrel with one another. He emphasized the fact that in the time of national trouble it would be absolutely necessary to call on the civilian medical men to help in the work of supplying medical service to the military forces. It seemed a pity that some attempt was not made to organize the civilian medical element. Surgeon-General Keogh, in responding to the toast, said there were indications that the civilian portion of the medical community had at length recognized its duties to the State in regard to helping the military forces in the time of war. The fact was undoubted that in future wars they would have to rely on the help of civilian medical men. He regarded the meeting as evidence of a great awakening of the civil members of the medical profession with regard to the army. He was glad that the time was passed when the Royal Army Medical Corps had reason for complaining that military medical matters did not receive that attention from the civil medical profession which they were entitled to receive. The civil medical profession should be organized in peace in order to give assistance in time of time. Surgeon-General Stevenson also replied to the toast, but unfortunately his speech was not audible to our reporter. After Major Bonham Christie had also replied, Mr. G. H. Makins proposed "The Health of the Chairman." In responding to this toast Sir William Thomson observed that because in the time of peace the taxpayer would not pay for a sufficiently strong army medical department the necessity would arise for seeking help from civilian medical men, and the future success of the medical department in any future war would depend on the organization of the civilian medical community. He urged that a combination should be effected between all those medical men, no matter what department they had belonged to, who had served in the war.

DIPHTHERIAL INFECTION IN POST-SCARLATINAL EAR DISCHARGES.

IN a note on the frequency of the presence of diphtheria bacilli in ear discharges following scarlet fever, and the importance of isolating such cases, published in the current number of the *Journal of Pathology and Bacteriology*, Dr. Duncan Forbes gives the results of the bacteriological examination during five weeks (November and December, 1902) of forty post-scarlatinal ear discharges at Monsall Fever Hospital, Manchester. Thirty-two of those contained diphtheria bacilli on culture. During the five weeks during which the observations were made, a daily average of 440 scarlet fever cases were in hospital, compared with a daily average for the year of 327 cases. The hospital was therefore comparatively crowded. Post-scarlatinal faucial diphtheria was also at its maximum; according to the yearly report, 1.4 per cent. of cases of scarlet fever, on an average, showed clinical signs of diphtheria. The importance of isolating such cases seems obvious when the profuseness which sometimes characterizes these discharges, and the fact that often the diphtheria bacilli are in almost pure culture are borne in mind. Other points of interest are:—(1) That infection of the ear discharge is due to inspiration of the bacilli into the nose and their spread along the Eustachian tubes; (2) that patients suffering from an infected ear discharge show no clinical sign of diphtheria, and seem to be immune from the subsequent faucial or laryngeal infection; (3) that antitoxin acts neither as a prophylactic nor a curative agent. The effect of isolation of such cases, as soon as they become infected (on an average about the fifth day from the commencement of the discharge) on the percentage incidence of post-scarlatinal diphtheria requires prolonged study before any absolute statement is made as to its influence.

CHALLENGE SHIELD OF THE VOLUNTEER MEDICAL ASSOCIATION.

THE annual competition for the valuable challenge shield belonging to the Volunteer Medical Association took place on June 6th at the Guildhall in the presence of Major-General Sir A. E. Turner, K.C.B., Inspector-General of Auxiliary Forces, and many others. There were ten competing squads, and some showed a very high degree of

efficiency in all the subjects in which they were examined as shown by the marks obtained, the winners gaining 323 points out of a possible 350. The shield has again gone to Scotland, the Glasgow Highlanders coming in first for the second time in succession. The 2nd Volunteer Battalion Royal Fusiliers made a very good second, and they were closely followed by the 1st Cadet Battalion King's Royal Rifles and the London Rifle Brigade. In presenting the badges to the two first squads, Sir Alfred Turner expressed his gratification at the excellent work he had seen, which showed what men could do, and congratulated not only those who gained the badges but the next two teams for having done so well. A vote of thanks to Sir A. Turner, proposed by Brigade-Surgeon-Lieutenant-Colonel A. Clark, and seconded by Brigade-Surgeon-Lieutenant-Colonel W. R. Smith, was carried by acclamation. The arrangements were excellently organized by Lieutenant Montgomery-Smith, the Honorary Secretary of the Volunteer Medical Association, and carried out by him and Major Marshall.

AMERICAN AND BRITISH MILITARY SURGEONS.

THE Enno Sander Prize of the Association of Military Surgeons of the United States has this year been conferred upon Major Frederick Smith, D.S.O., of the Royal Army Medical Corps. The subject of Major Smith's essay was the Differential Diagnosis of Typhoid Fever in its Earliest Stages. The announcement of the fact that the prize went this year to an officer of the British Service was received with generous and prolonged applause, and much pleasure was expressed at the honour which the Association was enabled to show to a member of a service toward which American medical officers entertain, we are assured, most kindly feelings. It is hoped that this award, and the spirit in which it has been received by the American military surgeons, will go to cement still further the friendly relations which exist between Great Britain and the United States, and to advance the labours of the members of the medical departments of the two great English-speaking nations. In this aspiration the civilian members of the profession in this country will join with their military brethren most heartily.

A MEDICAL "CONSCIENTIOUS OBJECTOR."

THE views of ordinary "conscientious objectors" to vaccination as expressed before the magistrate are sometimes of a remarkable character. It is in the opinions of the medical objector, however, that the quintessence of crankiness is to be found. In a recent number of the *Vaccination Inquirer* we find a letter from Dr. Josiah Oldfield who complains that during this year he has had to suffer the personal unpleasantness of having his name associated with thieves and disorderly vagrants because he refused to allow his twin girls to be vaccinated. He would not apply for exemption on the ground of conscientious objection, because his "poor lay brothers have been so heckled by magistrates and bullied for their conscience sake" that he felt bound to refuse to submit to a possible similar indignity. Dr. Oldfield has always failed to understand why his neighbour's vaccinated child can possibly be afraid of his unvaccinated child. Does he mean us to believe that he does not know that, thanks to him and his fellows, there are other unvaccinated children about? And does he wish to teach that no one but himself need have any care about the welfare of his children, whom, on his own showing, he in this particular matter neglects? He says that personally he is of opinion that "vaccination has a limited power of prophylaxis against small-pox." Why, therefore, does he not give his children the benefit of this limited protection? We must give the answer in his own words, for it is indeed, as Sir Toby Belch would have said, a most exquisite reason. "Personally, however, I am of opinion that the purity of the sacred blood stream of the human race is of such transcendant importance that it is as mystically dangerous to mix it with animal lymph as it would be desecrating to marry the daughter of a royal line of kings to a negro husband. All religions have stringently forbidden the intermingling of the animal and human life forces, and I believe that modern science is arrogantly oblivious of the mystic experience of spiritual teachings when it advocates the inoculation of the human infant with animal-obtained lymph." Here, we believe, must be the great Aryan mystery at last revealed to mankind. Such being Dr. Oldfield's conscientious objection, we cease to wonder that he should have preferred not to state it before a non-mystical magistrate.

THE WEST LONDON POST-GRADUATE COLLEGE.

THE annual dinner of the old house-surgeons of the West London Hospital and of the past and present members of the Post Graduate College attached to the hospital was held at the Trocadero Restaurant on June 8th, under the chairmanship of Dr. J. A. Mansell Moullin. After the toast of "The Imperial Forces" had been proposed in a witty speech by Mr. C. B. Keetley, and had been responded to by Sir Henry Norbury (Director-General, R.N.), the Chairman gave the toast of "The West London Hospital"; it was acknowledged on behalf of the Staff by Mr. F. S. Edwards. Mr. L. A. Bidwell, the Dean of the hospital, replied for the Post Graduate College established in connexion with the hospital in 1895. He said that clinical instruction was given to medical men who had been in practice in the country and in the Colonies, and a large number of medical officers of the Navy and Army were constantly in attendance. Since the establishment of the College over 600 medical men had attended, and since the beginning of the year 166 new members had joined. There was also a large contingent of the practitioners in the neighbourhood of the hospital who took advantage of the benefits offered, and as many as 61 of these gentlemen were life members. Mr. Bidwell emphasized the fact that the College was the only establishment of its kind attached to a general hospital where the practice and teaching was reserved entirely for qualified men. Major Hendley answered for "The Past Residents," Mr. Bruce Clarke proposed "The Visitors," which was acknowledged by Sir William Church, President of the Royal College of Physicians, who said that post-graduate teaching was almost an impossibility in connexion with the large medical schools in London, because if senior men were admitted the result would be that the junior students might be elbowed out. The way in which the West London Hospital had recognized the want of post-graduate teaching, and had turned the opportunity to so good a purpose, justified him in looking forward to the hospital maintaining and increasing its reputation in the metropolis. Dr. Seymour Taylor having proposed the Chairman's health and a suitable reply having been given, the proceedings came to an end.

THE AFFILIATED BENEFIT NURSING ASSOCIATIONS.

THE annual report of the "Affiliated Benefit Nursing Associations and Cottage Nurses Registry," states that the Association has a President, an Honorary Secretary, an Assistant Honorary Secretary, a Secretary and Treasurer, six Organizing Secretaries, a Banker, an office, and a registered telegraphic address. Besides this there is a General Council, a Legal and Medical Advisory Committee, and a General Committee. The General Committee consists apparently of 88 persons, and the serious spirit in which its members regard their duties is shown by the number who attended its biannual meeting. It was seven. The General Council consists of thirty-seven ladies and gentlemen. What its functions are is uncertain, since, though General Councillors are allowed to be present at the meetings of the General Committee if they wish, they can only speak by its special favour, and are not allowed to vote under any circumstances. The Legal and Medical Advisory Committee consists of twenty-four persons, chiefly medical men. Last year, the ninth of the Association's existence, it was decided to cease to send women who have only received "Maternity" training, to take nursing charge of ordinary cases of sickness. The object of the Association is to promote the supply of

"nurses" on the "Holt-Ockley system." The general ideas underlying this system are perhaps sufficiently indicated by the above reference to its practice. The honorary secretary's report is full of references to the disadvantages of "over-training." Anything over six months is apparently considered to constitute this, and very much less has hitherto been considered desirable. "Training" under the Association's own eye is advised, because in its "homes" practice can be gained in tending cases of measles, influenza, typhoid fever and diphtheria, "which do not find their way into the hospitals." It was also stated that cottage nurses who have worked under the auspices of the Association have no difficulty in finding posts afterwards as district nurses and assistant nurses in small hospitals and large workhouses. The Honorary Secretary is Miss B. M. Broadwood, and it is stated that all nursing associations can become "affiliated" "if the Honorary Secretary on examination of their rules finds them to be in accordance with the principles of the Holt-Ockley system of nursing."

THE BRITISH LYING-IN HOSPITAL.

HER ROYAL HIGHNESS THE PRINCESS OF WALES visited the British Lying-in Hospital in Endell Street, St. Giles's, on June 8th, and formerly declared the new nurses' home open. The ceremony took place in the domed underground dining room of the new home, in the presence of a number of ladies and gentlemen more or less closely connected with the institution, and included the presentation of a number of purses to the Princess by some small children. Two of them were babies in arms, and it was an anxious moment when the time came for them to part with their temporary playthings. However, they were equal to the occasion. The new building, the erection of which has been made possible by the falling in of a lease, provides twenty beds in separate rooms on three floors, a general dining room in the basement, and a sitting room for the nurses and one for the midwives on the ground floor. The bedrooms are necessarily small, but each has a fireplace and is neatly furnished. On the whole it may be said that they are more home-like rooms than most nurses enjoy. The opening of the home will increase the accommodation for patients by two wards. A considerable increase has taken place in the extent of the hospital's work during the last few years, and, like almost every other hospital, it is calling for more support. A charge of extravagance in administration was made against it not very long ago, but it is believed that such financial reforms as were called for have now been effected. The benefits of the hospital, it should be noted, are reserved for women who can produce their marriage lines, and all patients before admission are called upon to do so. This is scarcely a defensible regulation in a hospital that appeals for public support, whether such appeal be made on the ground of common humanity, or on the considerations involved in the quotation with which the appeal is headed: "The health of English mothers and the healthy birth of English children cannot but be regarded as conducive to national prosperity." Women who are unfortunate enough to become mothers without being married require assistance quite as much, if not more, than their more fortunate sisters. Their circumstances are commonly worse, and the mortality among their infants is higher.

GOLF, CRICKET, AND BOATING AT THE ANNUAL MEETING.

MEMBERS of the British Medical Association attending the annual meeting at Swansea will be made temporary members of the Swansea Bay Golf Club. The links of this club, an excellent sporting seaside course of eighteen holes, are within ten minutes of the town. It is hoped to arrange an international match on the afternoon of July 30th. Any member who is likely to be able to take part in the match is asked to communicate as early as possible with Dr. Norman Walker, 7, Manor Place, Edinburgh, for Scotland; Dr. Raw, 66, Rodney Street, Liverpool, for England; or with Dr. Reid, 200, St. Helens Road, Swansea, for the Colonies, Ireland, Wales, etc. Good golf can be obtained also at Burry Port, Tenby, and Porthcawl, all within easy reach of Swansea. Visitors will also be welcomed for the week by the Swansea Cricket Club for cricket or tennis. Excellent bathing, boating, and sailing can be had at the Mumbles, where the Bristol Channel Yacht Club will extend hospitality to members.

THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

LITTLE interest has been displayed by the Fellows in general in the coming elections to the Council of the Royal College of Surgeons of England. Nobody has come forward from the provinces, and as no provincial surgeon retires this year the representation of the College outside London will remain unaltered, and some surprise is felt that the Fellows outside the metropolitan area remain apathetic. There are only three candidates in the field besides Mr. Butlin who seeks re-election. The senior candidate, in order of date of Fellowship, is Mr. Clinton T. Dent (Fellow, December, 1877). The second and third are of the same date (December, 1878) but one Mr. G. H. Makins, C.B., is senior to the other, Mr. F. S. Eve, as a Member, the former qualifying in July, 1875, the latter in August, 1876. Mr. Clinton Dent is well known as Surgeon to St. George's Hospital, at present represented in the Council by one member, Mr. Pick. Mr. Makins won renown as Consulting Surgeon to the South African Field Force, and is on the staff of St. Thomas's Hospital, represented at present by one member on the Council, Mr. Clutton; whilst Mr. Eve as a Surgeon to the London Hospital, would, if elected, replace Sir Frederick Treves; Mr. C. W. Mansell Moullin would otherwise be the sole representative of that institution on the Council. Mr. Eve is well known for his valuable pathological work undertaken when Pathological Conservator to the Museum of the College.

DINNER TO DR. HERMAN.

ON June 8th, Dr. Herman was entertained at dinner at the Café Royal by his old Resident Accoucheurs, on the occasion of his retirement from the post of Senior Obstetric Physician at the London Hospital. In the unavoidable absence of Mr. Horrocks Openshaw, C.M.G., the chair was taken by Dr. Fenton, the senior present. In proposing the toast of the evening, the Chairman eulogized Dr. Herman's valuable work at the London Hospital during the past twenty seven years and dwelt upon his admirable contributions to obstetrics and gynaecology and the important services he had rendered to his pupils by his teaching and example. The gathering was most successful, gentlemen coming from all parts of the country to show their affection and loyalty to their former chief.

VIRCHOW MEMORIAL FUND.

THE collection of funds in differents parts of the world for the memorial to Rudolf Virchow continues to make good progress. A considerable sum has recently been sent to the Central Committee, Berlin, by Professor Hjalmar-Schiotz, of Christiania, President of the Norwegian Committee, and a large Committee has been formed in Japan under the presidency of Professors Ogada and Yamagiwa.

A NEW TEST OF MEDICAL MERIT.

El Figaro of Cuba not long ago invited its readers to express their opinion on the question, Who is the best doctor in Cuba? We refrain from giving the name of the gentleman who received the largest number of votes, but we cannot help quoting the following estimate by the newspaper in question of the value of this novel form of *plébiscite*. After giving the names which stood first and second on the list, our contemporary says: "Those are our best in the judgement of the public which reads us, and it is a cultivated method of learning the opinion of the public with greater truth than in political elections." With the honesty of political elections in Cuba, or for that

matter in Great Britain or Ireland, we have at present no concern. But is it true that newspaper popularity—for that is what it really comes to—is the best test of the relative merits of medical practitioners? We know the sort of person whose name figures most largely here. But perhaps things are different in Cuba.

THE residential part of the Royal Army Medical College has been removed from the Hotel Belgravia to St. Ermin's Hotel, Westminster.

THE meeting in Oxford of the Pathological Society of London will be held in the Pathological Laboratory of the University on the afternoon of Saturday, July 4th.

THE Corporation of the City of London intends, it is said, to apply to Parliament for powers that will enable it to make by-laws forbidding spitting in the streets and places of public resort.

THE new buildings of the serum department of the Jenner Institute of Preventive Medicine, which has been removed to Queensberry Lodge, Elstree, Hertfordshire, will be formally opened on July 3rd, when a garden party will be held.

PROFESSOR CLIFFORD ALLBUTT, F.R.S,, will deliver the Cavendish Lecture before the West London Medico-Chirurgical Society at the Town Hall, Hammersmith, on June 26th, at 8.30 p.m., the subject selected being atheroma of the ascending aorta.

IN the annotation headed "Stabbing in Italy," published in the BRITISH MEDICAL JOURNAL, June 6th, the date of the existing criminal law in Italy was inadvertently given as 1899 instead of 1889. The law has therefore been in force sufficiently long to test its efficiency.

WE understand that three sets of plans for the remodelling or rebuilding of the hospital are now under the consideration of the Medical Council of St. Bartholomew's, and that a report will shortly be presented to the Lord Mayor's Committee.

THE Asylums Committee of the London County Council are about to appoint an assistant to Dr. F. W. Mott, F.R.S., Pathologist of the London County Asylums. The assistant will be required to give his whole time to the duties of his office. The salary offered is £250 a year without residence. Further particulars will be found in our advertisement columns of June 6th.

MEDICAL NOTES IN PARLIAMENT.

[FROM OUR LOBBY CORRESPONDENT.]

The Infected Army Blankets.—On the reassembling of the House on Monday last, the President of the Local Government Board stated, in reply to Sir Thomas Dewar, that he had sent a circular letter to about two hundred sanitary authorities in England and Wales in whose districts some of the discarded hospital blankets sold in South Africa had been received, and advised the necessary safeguards to be taken. He had not received reports from all the authorities, but, so far as his information went, he had every reason to be satisfied that his instructions were being carried out. In reply to a further question by the same member, the Secretary of State for War said that the general officer commanding in South Africa reported, in October last, that owing to the rapid demobilization of the troops there was an enormous stock of general unwashed service blankets returned to the store by the troops. They were stored at the Cape Town ordnance stores in the open under tarpaulins. Efforts were made to have them washed and properly stored, but meanwhile the stacks took fire by spontaneous combustion, and endangered the entire ordnance department. Prompt action became imperative, and the chief ordnance officer gave instructions for large numbers of those in the worst condition to be destroyed by fire, and accepted tenders for the sale of 80,000, provided they were removed within three days. These blankets were not unserviceable, though they had not been washed. The amount realized by the sale was £1,495. Medical officers had, under the regulations, power to destroy any articles of public property on sanitary grounds, and were expressly ordered to disinfect all soiled bedding which had been in contact with the sick. He was not prepared to issue so wide an order as that all textile fabrics which had been used in the field should be disinfected before being sold. As previously stated, the ordnance and medical regulations contained clear instructions as to the disposal of condemned or infected articles; and he also issued special orders forbidding the sale in South Africa of any articles which might convey infection. There appeared to have been an error of judgement on the part of the responsible officer, who had otherwise done excellent service. The military authorities were investigating the matter.

Discarded Military Tents and Infection.—In reply to yet another question by Sir Thomas Dewar, the Secretary of State for War stated that about 2,760 tents were known to have been sold, of which only four were hospital marquees. They were sold by auction and tender. The amount realized was £970. Under the medical regulations medical officers were authorized to destroy public property on sanitary grounds when necessary, and were also in possession of stringent instructions regarding disinfection. He had no reason to suppose that these instructions were disregarded.

The New Workhouse at Tetbury.—On Monday last the President of the Local Government Board, in reply to Lord Edmond Fitzmaurice, stated that he had informed the Tetbury Guardians that the erection of a workhouse on this limited and inconvenient site was undesirable, and had requested the guardians to reconsider the matter.

The Biolytic Treatment of Sewage at Longmoor Camp.—Mr. Brodrick has informed Mr. Heywood Johnstone that it was not contemplated to drain the camp at Longmoor directly into any brook or river. The sewage would be subjected to biolytic treatment on approved principles, and the effluent would, as a further safeguard, be subjected to land treatment in accordance with the views held by the Local Government Board.

The Medical Act (1886) Amendment (No 2) Bill is a new Bill introduced by General Laurie in place of the Bill previously brought forward by him. The object of the measure is to facilitate the admission of colonially-trained and registered medical men to practise in Great Britain and hold appointments in the imperial service. The Act of 1886 provided for reciprocity between the mother country and the self-governing Colonies under certain conditions, but the Act expressly stipulated that when any Colony had a provincial and a federal organization, such reciprocal arrangements should be made with the Federal Government. In the case of Canada a difficulty was thereby created, as the British North America Act (1867) expressly provides that education shall be entirely under the control of the provincial Governments. It has been found impossible, in consequence of this, to apply the Act of 1886 to Canada, and it has proved equally impracticable to amend the British North America Act and transfer the control of education to the Federal Government. The Bill meets the difficulty, without in any way interfering with the principle of the Act of 1886, by enabling reciprocal arrangements to be entered into either with the Federal or Provincial Governments. The Bill in this new form is supported by Sir Walter Foster and Sir John Tuke, and so may be assumed to have the approval of the General Medical Council. It is very possible that the Bill may find its way on to the Statute-book this session.

Nurses and Clasps with South African Medals.—Sir John Leng asked the Secretary of State for War whether he would explain why, seeing that the doctors, nurses, men, and orderlies serving in hospitals in South Africa had all been allowed hitherto to wear clasps with their medals, the privilege had been withdrawn from the nurses, and from them only. Mr. Secretary Brodrick answered that the grant of clasps was confined to those persons who were either combatants or intended to go under fire. The privilege could not, therefore, be extended to the nurses.

Scotland.

The Harveian Festival at Edinburgh.

The 121st Harveian Festival was held in the hall of the Royal College of Physicians, Edinburgh, on June 5th, when the President, Professor John Chiene, C.B., gave the annual oration on

The Early Days of the Edinburgh Royal Infirmary.

Ever since he found among the Goodsir papers the hospital ticket of Professor John Goodsir's grandfather printed on a ten of clubs the President had been impressed with the "canniness" and economical habits of the founders of the Infirmary, and had been desirous to study their ways. By the kindness of the managers he had read their early minute books, and although he could find no record of old playing cards being used as a cheap form of hospital ticket, still there were many things of great interest. The Edinburgh Royal Infirmary attained its majority in 1749, and it was of the time before that date that he desired to speak. For many years a surgeon-apothecary had been appointed by the town to attend the sick poor, and the College of Physicians gave advice and medicine gratis in their Hall in Fountain Close, off the High Street.

John Monro, who was a surgeon in the army, retired and fortunately for them settled as a surgeon in Edinburgh about 1700. His son, afterwards Monro Primus, was then 3 years old. John Monro joined the College of Surgeons in 1703. He was President in 1712. His grandson, Monro Secundus, says that about the year 1720 his grandfather "communicated to the physicians and surgeons at Edinburgh a plan, which he had long formed in his mind, of founding a seminary of medical education in Edinburgh." The scheme was incomplete without a hospital, and "a scheme was therefore proposed by John Monro and others to Members of the Royal College of Physicians and the Board of Surgeons to raise subscriptions," and he further states that Monro Primus "published" (Chambers says "circulated") a pamphlet in 1721 setting forth the advantages that would attend such an institution. This pamphlet was anonymous, written by "well-disposed persons," and of an "exhortatory character." John Monro was a very far-seeing man. He should really be called "Monro Primus." In 1725 this pamphlet bore fruit, and the College of Physicians (assisted by George Drummond, then for the first time Lord Provost of Edinburgh) took up the matter, subscribed themselves, obtained subscriptions, and acquired stock in a Fishery Company which was then dissolved, and on February 18th, 1728, called together a meeting of citizens with Archibald Macaulay, then Provost, in the chair. £2,000 had been promised, and a start was made. A "little house" at the head of Robertson's Close was hired from the College Committee of the Town Council at a yearly rental of fifty pounds Scots (£4 3s. 4d.) for nineteen years, with a break every third year. Six patients were admitted. For 12 years this was the infirmary of Edinburgh, costing for upkeep about £100 a year, the interest of the £2,000. In 1736 a Royal Charter was obtained at a cost of £94 4s. 2d., and the ground called "Thomson's Yeards" was bought from the George Watson Trustees from £420, "the sum which they had paid for the ground." On this site the Royal Infirmary was built. William Adam was architect, and the building committee consisted of two men—George Drummond and Alexander Monro.

The foundation stone was laid on August 2nd, 1738, and the House was opened in the end of 1741. During the rebellion of 1745 the building was used for sick soldiers and sailors (only six civilian patients were admitted between August, 1745, and the middle of summer, 1746). In 1746 George Drummond was again Provost, and a fresh start was made, and the whole building was used for the first time for its primary objects, the relief of the sick poor "from whatever quarter they came," and the training of students in physic and surgery. In 1749 the *History and Statutes* of the Royal Infirmary was printed, and from that date to the present the Infirmary has steadily advanced with the times.

It is interesting to note that the new Infirmary was built on the grounds of George Watson's Hospital. The history of the Infirmary of 1736 was repeated in 1870. George Drummond was the presiding genius, a most remarkable man (the best account of his life is in the *Scots Magazine* for 1802), a strong Hanoverian who raised a company of College students and marched from the Lawnmarket to fight Prince Charlie, but when he reached the West Port many of his "fighting men" had deserted him, and he dismissed those who had followed him. Next day the Cameron Highlanders entered Edinburgh. Drummond returned to Dunbar to meet Sir John Cope and after the battle of Prestonpans he retired with Cope to Berwick. He returned to Edinburgh and his beloved infirmary in November, 1746. A great hand at figures as a boy, he, when a lad of 20, was appointed in 1707 Accountant-General of Excise. Subsequently he became Commissioner of Customs with a salary of £1,000 a year. Six times Lord Provost, the husband of four wives—the last a Quakeress with a dowry of £20,000, the founder of the Exchange in the High Street, and as Grand-Mason he laid the foundation of the North Bridge. He died in the year before the first house was built at the east end of Princes Street. It has been said that no public monument reminds the citizens of Edinburgh of George Drummond. The new town of Edinburgh is his monument.

This, in brief, was the outer history of the Infirmary known to all. Let the inner life now be looked at—the staff, the patients, the wages, how money was raised, the constant struggle to make ends meet, and the ultimate crown of success. How, led by Drummond, they plotted and planned. Above all, how kindly they were. Leaning on Drummond, they never, even in the darkest days, lost confidence.

The managers held their meetings in John's Coffee House till 1742. After that date they met in the Board-room of the Infirmary.

The Staff.

On August 1st, 1727, the College of Physicians bound itself by a minute "that one or more of their number shall attend the hospital faithfully and freely, without any prospect of reward or salary, until the stock of the said hospital shall be so increased that it can afford a reasonable allowance for one or two physicians."

A minute of the managers, under date December 10th, 1737, ordained that on account of the "inconvenience of so many physicians attending the Infirmary, the attendance shall be performed by such physicians only as are Fellows of the Royal College." This was supplemented on January 14th, 1738, by a marginal note to the effect that "Doctor William McFarlane and Doctor Alexr. Martin, Licentiates of the Royal College, have in their turn carefully attended the Infirmary as Physicians with the Fellows of the Royal College from the very first establishment of the Infirmary, and have on all occasions done all in their power for its honour and interest," and that the former minute does not exclude them. In 1757 two ordinary physicians, Dr. David Clerk and Dr. Colin Drummond, were appointed. Their salary was £20 per annum, afterwards increased to £70. The first surgeon who offered his services was Alexander Monro; but the managers, after consultation with the College of Surgeons, appointed six Fellows. After August, 1738, all Fellows of the Surgeons' College were *ipso facto* surgeons to the Royal Infirmary. From the beginning to 1748, for twenty years, the surgeons "out of their own shops," gave the medicines gratis to all the patients.

How the Money for the Building was Collected.

With £2,000 as a nucleus the managers appealed to the Presbyteries of Scotland, but apparently with little result. They then turned their eyes to the "invalid fund," apparently a Government fund for sick soldiers, but although they used every endeavour they did not get this help till 1755. A Poor's Box was made with two keys (one kept by a physician, the other by David Spence, treasurer), and this box is still in the lobby of the Infirmary. The first time it was opened, three months after the "small hired house" was started, it contained £4 6s. 6½d., a sum so large as to give the managers some anxiety, and they forthwith enacted that it should be opened weekly, so that the Infirmary should not be exposed to an attempt at robbery. The enactment was not strictly adhered to. Church-door collections and house-to-house visitations were regularly undertaken. In 1731 the managers considered "how they could lay their hands on" £1,000 from the Earl of Thanet's trust. In this, the first attack out of Scotland, they were successful. The Dancing Assemblies and the Musical Society gave much help. On August 27th, 1738, the managers carefully estimated their income. They arranged for 66 patients—40 of the charity, and 26 servants—their masters paying all charges. They estimated the expenses of building the east block at £573 16s. 2d., and their income as follows:

	£
100 pupils at £2 2s. each	210
Collections	450
Interest on revenue	450
Advocates	50
Writers and Freemasons...	180
Donations in kind and keep	428
Yearly revenue	£1,768

In this estimate (the managers did not foresee the rebellion of 1745) two things were noteworthy, the donations in "kind and keep,"—wood, slates, glass, wool for blankets; and the assistance of the workmen. At the laying of the foundation stone it is to be noted that "Infirmary friends" gave £98, and "erector's friends" (that is, friends of the surgeons and the Surgeons' Hospital), £34. The Surgeons' Hospital, with its capital of £500, was handed over to the Infirmary in 1738. The Erectors' Hospital was used along with other lodgings in the neighbourhood of the "little house" to accommodate patients. The building was sold in 1744, and the lease of the "small hired house" had been given up in the preceding year. About this time the Duke of Buccleuch gave £100, and General Wade £50. The famous preaching Quakeress, Mrs. May Drummond, was the means of getting much money from England, especially from the Quakers. Through her Newcastle glassworkers gave glass, the barber surgeons of Newcastle £10, and the Town Council of Newcastle £50. She was thanked by the managers in 1740. In her later years she became a "kleptomaniac," and lost all her friends. In 1740 the Prince and Princess of Wales gave £100 "as an earnest of what they would do in the future, when it shall be more convenient." One wonders if the convenient season ever came. Scotsmen in all parts of the world were appealed to; nor were the appeals limited to Scotsmen. Thomas Penn of Pennsylvania, the Archbishop of Canterbury through the Bishop of St. Asaph, the Duke of Devonshire—then the Lord-Lieutenant of Ireland—and Dean Jonathan Swift in Dublin, all received letters, and in many instances gave efficient help. As a result the Infirmary was built and opened in 1741, but it was a long time before the accounts were paid, and there is much evidence that the managers were sorely put to it. On February 1st, 1748, the Infirmary had cost £10,597 12s. 2¾d., and the managers were still owing £400. It ultimately cost, with some additions, upwards of £12,500. After the building was opened the Marquis of Tweeddale gave £100, Lord Erskine sent yearly a sloop of coals to Leith from Alloa, and the Earl of Hopetoun may be said to have saved the situation, giving £400 a year—half his salary—as one of the Lords of Police. In their darkest hours the managers were summoned for accounts unpaid. They each subscribed to pay law expenses, for which they were personally liable. Luckily at this juncture Jamaica sent £500, which was divided equally among the creditors, and so the storm was stayed. There can be little doubt that the Rebellion of 1745, assisted by the Earl of Hopetoun, saved the managers, because they were paid for the soldiers and sailors who filled the building, "amounting in whole to some thousands."[1] Soldiers were first admitted in August, 1744, at 2s. 6d. a week a head. Along with the English soldiers came a regular "flesh diet." The 2s. 6d. was afterwards raised to 2s. 7½d. The diet table for the various days before the English soldiers appeared on the scene was given. The names of the physicians who attended the patients were not given in the records. Even in the "little house" there was a "sallivating room."

Mrs. Nesbit was the first matron. She was soon discovered to be guilty of "great extravagancy" and dismissed. She was succeeded by Mrs. Waldie, whose salary was £5 a year, raised afterwards to £8. Mrs. Waldie was succeeded in 1744 by Mrs. Waddell, recommended by the Earl of Hopetoun. The first President Physician was Robert Mackinlay, engaged by Drummond in 1741 at a salary of £10, which by the way he did not get till 1745. Robert had many duties carefully specified. Among others he had slowly to read over the cases to the students at 3 p.m. on Saturdays. He seems to have made an early endeavour to obtain 3d. a page for transcribing them for the students. This sum the students would not pay, so he suggested 2d., but history failed to tell if the students were satisfied. Mackinlay was principally famous for his quarrels with Mrs. Waldie and David Spence, the treasurer. Both Robert and Mrs. Waldie were reprimanded, but in respect of the treasurer Robert was rebuked for his impertinence, censured, and humbly apologized to avoid dismissal. It was probable that Robert had no diploma because it was minuted that his successors must have some medical knowledge. They were appointed in 1747, Mr. Petrie and Mr. Sutherland, at a salary of £10 a year each. The nurses were appointed by the matron. In 1745 the meetings of the managers were often dissolved in the absence of a quorum, but when Prince Charlie was living in Holyrood they found time to order two garden seats "at the most frugal rate." Water was laid on from the town reservoir, and £9 a year spent on cartage was thereby saved. Baths were instituted on Monro's suggestion in 1747. In 1735 the surgeons sent in a memorial asking that a professed lithotomist be appointed. Accordingly, George Balderston was appointed to "cutt for the stone." He was not a success, for he left the country in 1738. In 1741 the town of Edinburgh asked the College of Surgeons to appoint a town's lithotomist. The College would not. In 1744, Taylor, Oculist to His Majesty, asked leave to lecture to the students in the operating theatre. The request was unanimously refused. As to the patients received for treatment, no incurable case was admitted, none very old or decrepit, no idle vagabond beggars, no tedious lingering diseases such as king's evil, or malign infectious one such as French pox, or itch, etc.

Necropsies were obtained with difficulty. Five managers had to sign the permit, and leave was only granted when some good would come of the examination. From the *Scots Magazine* for 1747 it would appear that 676 patients were admitted during the years 1742 to 1746 both inclusive. Of these 317 were cured, 108 recovered so as to be able to go about their business, 146 were incurable, 60 left on account of irregularities or by their own desire, and 45 died. When the managers were very pressed for money they appointed a committee to consider what employment the patients could do whereby something might be gained to the house, their cure advanced, and the bad effects of idleness prevented. The students were divided into two groups—students and apprentices; the latter at first only paid £1 a year, but in 1748 all paid alike £2 2s. a year. There is ample evidence of a strong Jacobite element on the Board. Almost every minute contains allusion to the admission of lunatics, and almost in every case at reduced rates. Thus in 1745, because "there were no magistrates," they took Martha French in as a lunatic gratis for a year. In 1746 it is noted that the magistrates had returned, and poor Martha was removed from her comfortable quarters to a cell in the House of Correction. An apothecary's shop was started in 1748 to relieve the surgeons who had supplied the medicine since 1729. In February, 1748, there was seen the germ of clinical teaching, when Dr. Rutherford suggested giving clinical lectures, but said that as he found students wishing to attend who had no Infirmary tickets he would delay till the beginning of next session in October, when the Infirmary tickets were issued. On this the managers, showing their kindly interest in the students, said, "Begin at once, because lectures will be of great service to the students and an advantage to the house."

The President concluded by expressing the hope that some day an authentic history of the dear old Infirmary would be written. It was the heart of the Edinburgh School from 1729 to 1880. He thanked his good friend Dr. John Smith for much help in preparing his oration. It had been said that the history of a time was best illustrated by attention to little details. That was his excuse for the nature of these reminiscences. They, perhaps, gave some idea of the early struggles of the men who founded the Infirmary. He thanked the Harveians for electing him President for the year.

A vote of thanks was given to the President for his oration.

Annual Dinner.

Thereafter the annual dinner took place. After dinner "The King," "The Queen," "The Imperial Forces," and "The Immortal Memory of Harvey" were given from the chair. The toast of the "Retiring Secretaries"—Professor A. Crum Brown and Dr. Cadell—was given by Dr. Crawford Renton (Glasgow), and Professor Crum Brown replied. "The Clergy" was given by Dr. Jamieson, and the Rev. Mr. McLean replied. "The Guests" was given by Dr. Craig, and Mr. Archibald Grant replied. "The President" was given by Dr. Strachan. "Floreat Res Medica" from the chair brought the evening to a close. Fifty-three Harveians sat down to dinner.

Sanitation in Glasgow.

The annual report for the year 1902 of the Sanitary Department of Glasgow, compiled under the direction of Mr. Peter Fyfe, Chief Sanitary Inspector, has recently been published. It deals with all the branches of sanitary work, and amongst the matters that are discussed and reported on are smoke

[1] *Scots Magazine*, 1747.

prevention, housing of the poor, and the adulteration of food. Many interesting statistical tables are given, especially those relating to the occurrence of epidemics of infectious illness. On the whole the sanitary condition of the city for the past year has been satisfactory, and this is specially noticeable in the comparative absence of infectious diseases. There were only 13,432 infectious cases, which is at the rate of 17 out of every 1,000 of the population, whereas in 1901 the number was 21,145, and the average for the three preceding years was 17,824. The number of small-pox cases was one-third of that of the previous year, and the enteric fever cases about one-half. More than one-half of the total cases were due to measles and whooping cough, so that only some 8 5 persons out of every 1,000 suffered from any of the other infectious fevers.

THE LABORATORY OF THE SCOTTISH ASYLUMS.

Dr. W. Ford Robertson, Pathologist of the Laboratory of the Scottish Asylums, has, at the request of its Executive Committee, recently furnished a memorandum on the alterations in the scheme of the Laboratory's work which are called for by the existing requirements of psychiatric research. The Scottish Asylum Laboratory was equipped in 1897, but only for the study of pathological anatomy, and at that time the more comprehensive scheme now contemplated would have been impracticable, even if its necessity had been foreseen. Since then, while progress in the pathology of insanity has been great, epoch-making advances have occurred in the collateral sciences of physiology, general and experimental pathology, bacteriology, and physiological chemistry. The mechanism by which the living body defends itself against inimical forces has been revealed, and it is evident that the cause of morbid alteration of cells must be sought not in the cells themselves but in their environment. The doctrine of immunity has in short revolutionized general pathology.

The Pathology of Insanity.

Dr. Robertson believes that the pathology of insanity can be brought into line with that of general disease, and that it is only by investigations carried on from this standpoint that advances in the prophylaxis and therapeutics of insanity can be expected. The teaching of some of the Continental schools of psychiatry confirm his belief that acquired insanity is dependent on the action of inimical forces in the environment of the brain cells, and that this inimical force is commonly a form of intoxication. Cases of acquired insanity form so large a proportion of the whole that its effective study is a matter of prime importance. It is an elementary proposition among modern pathologists that the nature of toxic actions cannot be elucidated merely by study of the clinical phenomena and morbid tissue changes to which they give rise. In fact the investigation of the pathogenesis of any disease whatever, or in other words the tracing step by step of the battle between inimical forces on the one hand, and resisting tissues on the other, demands all the resources of clinical investigation and the sciences of chemistry, bacteriology, general and experimental pathology, all must be pressed into the service. If the disorders of bodily nutrition which determine the incidence of insanity can be traced from beginning to end, there is some hope of finding means of preventing or curing them. Work to this end is being done abroad, but under present circumstances Scottish pathologists have to look on idly.

Foreign Experience and Opinion.

These views, Dr. Robertson contends, are not peculiar to him, but are supported by facts and authoritative opinions drawn from other sources. The New York State hospitals have lately moved their pathological institute so as to bring it into immediate touch with clinical investigation, and the laboratories both of the London County Council and of Lancashire and Yorkshire are located at asylums. Professor Tamburini in 1901, in his address to the Italian Association for the Study of Insanity, after describing the intimate connexion between visceral and brain disorders, and the part played by toxic processes in the production of nerve disease, drew a striking picture of the triumphs which await those students of alienism who are young enough to follow up the paths laid open to them by modern discoveries in collateral science, and congratulate asylum physicians on the hopeful way in which they can now go about their work. Italian asylums are excellently provided with everything required. So the address was befitting, but to workers in Scotland the words used would be a mockery, since they have neither time nor equipment to follow the paths laid open. Professor Bianchi, after a visit to Scotland, recently congratulated Italian workers on being so much better off than those in Scotland in spite of their relative poverty, for he said that though much money was spent on some of the Scotch asylums the administrators seemed afraid to provide the apparatus absolutely necessary to progress. How, he asked, was progress in any case possible unless the laboratory was in close touch with the asylums, and the director was free from technical difficulties and unnecessary preoccupations?

A Central Laboratory for Scotland.

Having thus supported his case, the writer goes on to say that boards and medical superintendents of asylums in Scotland do not as a rule appear to realize their responsibilities with regard to the advancement of knowledge of the pathology of insanity. It is necessarily excluded from the work of general hospitals, and its promotion is therefore a solemn duty laid upon those who are responsible for asylum work. An ideal central laboratory for Scotland would be one situated at a large asylum and fully equipped for study in all the sciences mentioned. The departments of pathological chemistry and pathological anatomy would each be in charge of specialists who would meet on common ground in the department of bacteriology. It would act as a research centre, a school for asylum pathologists, and a place at which an expert opinion could be obtained by the staffs of any asylum. Every asylum would shortly have to be provided with a pathologist, who, after being trained, would have his time absorbed by diagnostic investigations. He would have no time for therapeutic and prophylactic investigations, and for training purposes the central laboratory would always be necessary.

Such a scheme was ideal, and must depend upon outside endowment, but an efficient central laboratory was possible even under existing circumstances. The existing laboratory should be transferred to any asylum which was fairly centrally situated and willing both to provide space for it and place clinical material for research at its disposition. None of the Asylum Boards would object if they could be got to understand how essential it was that for efficient research work the laboratory should be in immediate touch with clinical material. The laboratory, however, should not be regarded as in any way belonging to the asylum at which it worked, and in order to avoid any appearance of its existing for the especial benefit of such asylum, the latter, like all others, should have its own pathologist. None of the asylums, however, should depend on the laboratory except for help in special difficulties; but they should be at liberty to send members of their staff to it for study. Practically the only additional expense entailed would be the provision of a complete equipment, but this was in any case called for. A Central Laboratory Endowment Fund should be started, and if the need for it became known the public might subscribe to it so liberally as to make it independent of contributions from the Asylum Boards. The laboratory should be placed under the supervision of the Board of Lunacy, a result which would naturally follow if it were placed at one of the asylums.

THE ROYAL HOSPITAL FOR SICK CHILDREN, GLASGOW.

The Glasgow Royal Hospital for Sick Children was opened 20 years ago, and the 74 beds then provided are now found inadequate to meet the demands made on the institution. There are, in fact, usually 100 patients under 12 years of age waiting for admission. The pressure will, however, be in some measure relieved by the opening this week at Drumchapel, four or five miles from the city, a country branch to which suitable cases will be sent. This branch is the gift of Miss Montgomery Paterson of Edinburgh, and the building, which has been erected from plans prepared by Mr. R. A. Bryden of Glasgow, will provide two wards of 12 beds each. Provision is made for the addition of two other similar wards when that is necessary. An important feature of the building is that it has a sun room, 40 ft. by 10 ft., into which the children can be wheeled in their beds. The roof of the sun room is available also for airing the patients. All the details of the buildings have been carefully adjusted, and the new branch should be a great assistance to the staff in their treatment of many of the children's ailments. There are about 30,000 attendances in the year at the dispensary of the Sick Children's Hospital. The institution has also a well-equipped home in the country.

Ireland.

A PROPOSED ISOLATION HOSPITAL FOR DUBLIN.

THE Vice-Chancellor has been engaged for some days at Dublin in hearing an application for an injunction to restrain the Rathmines and Pembroke Joint Hospital promoters from erecting a building at Clonskea for the reception of small-pox and other infectious cases. Counsel for the applicants said that the population numbered 58,000, and the hospital was in the centre of the two districts. But the Medical Commissioner of the Local Government Board had declared that there was danger to persons living within a mile radius, the disease being conveyed through the air.

Dr. Thresh, Medical Officer of Health to the Essex County Council, gave evidence regarding the hospital ships in the Thames. He found that as soon as there were 60 or 70 cases on the ships an outbreak followed in the shore parishes opposite, and the death-rate from small-pox there was five times higher than in any other part of the country. There had been no direct communication between the ships and the opposite shore, the cases being brought down from London in boats. As soon as the disease died out on the ships it disappeared on the shore. He knew no standard book in which it was not admitted that small-pox might be airborne. In cross-examination he said he did not know whether in any case in which he had given such evidence the theory had been accepted by the Court. Dr. McWeeney and Sir John William Moore gave supporting evidence.

For the defence Dr. Hope, Medical Officer of Health, of Liverpool, said that assuming the hospital to be properly conducted with regard to the discipline in an infectious hospital, he did not apprehend that it would be a source of danger to the neighbourhood. That opinion was based upon his own experience. The conclusion forced upon him was that the spread of the disease admitted of ready explanations and that there was no need to call in the theory of aërial convection. He had the greatest suspicion of that theory.

Dr. Marsden, Medical Officer of Health, Birkenhead, gave his experience of small-pox in a very congested area in that town and in two hospitals which were surrounded by dwellings. There was not a single case that was not traced to its source. Land in the neighbourhood of the new hospital which they had built had gone up 400 per cent.

Dr. J. M. Day, of Cork Street Fever Hospital, said he did not see any danger in the hospital under proper discipline. Dr. R. Brown, Dr. Cranny, and several other witnesses gave like evidence and the case was adjourned.

HEALTH OF BELFAST.

At the monthly meeting of the City Council the Superintendent Medical Officer of Health reported that 194 cases of zymotic disease had been reported, of which 70 were typhoid fever and 51 simple continued fever; 44 deaths were registered as due to zymotic disease, 113 from phthisis, and 157 from diseases of the respiratory organs; the annual death-rate from all causes was 21.2 per 1,000 of population. The minutes of the Public Health Committee showed that they had met a committee of the Poor-law guardians with reference to the erection of a consumptive sanatorium for the poor, of whom there were over 200 to 300 in the workhouse infirmary, and about 4,000 to 5,000 in the town generally. Provision for providing day shelters on the German plan for consumptives in the parks and elsewhere was also considered. General support was also given during the discussion to the endeavour to stamp out spitting in public conveyances and halls.

THE PREVENTION OF CONSUMPTION IN BELFAST.

The annual meeting of the Ulster Branch of the National Association for the Prevention of Consumption was held in the Medical Institute, Belfast, on June 5th. Sir William Whitla occupied the chair, and there was a large attendance of ladies and gentlemen. The Honorary Secretary (Mr. Robert Brown) read the annual report, which showed that much work had been done in bringing before the public the facts relative to tuberculosis. The chairman formally moved the adoption of the report, drawing attention to the fact that the Public Health Committee was now taking steps to deal with the enormous amount of consumption in the city. Dr. A. K. Chalmers, M.O.H. Glasgow, in seconding the adoption of the report, delivered an interesting lecture on the main principles to be followed in preventing the disease. Councillor Dr. Williamson, who moved the re-election of the office bearers, said that as the death-rate from consumption was three to four times the death-rate from zymotic diseases, so it was three or four times more urgent to have a consumptive sanatorium with proper organization to prevent the disease than a fever hospital. Dr. Charles O'Neill seconded. The Rev. Dr. Hamilton proposed a vote of thanks to Dr. Chalmers. Dr. King Kerr, who seconded, pointed out that the Health Committee had done much, and was prepared to do more if the people were willing to pay the necessary cost.

FIRE AT THE ULSTER MEDICAL INSTITUTE.

A fire which might have had serious consequences was discovered early on June 1st by the caretaker. At about 6 a.m. crackling was heard in the roof above the caretaker's room; there was no opening in the ceiling or in the roof, but an electric wire, a gas pipe, and a water pipe all ran close together, and it is supposed that the wire became overheated at a junction, and that some wood took fire which melted both gas and water pipes. Luckily the library and large lecture hall escaped, but the fine staircase was somewhat spoilt by the water used in putting out the fire.

TRIENNIAL VISITATION OF QUEEN'S COLLEGE, CORK.

The triennial visitation of Queen's College, Cork, was held on June 6th in the Examination Hall of the College. The visitors were Lord Justice Holmes, Dr. Macan (President Royal College of Physicians, Ireland); Mr. Ormsby (President Royal College of Surgeons, Ireland); the President of the Queen's College (Sir Rowland Blennerhassett, Bart., LL.D.) and the corporate body of the College were all present. The medical members represented were Professors C. Y. Pearson, M.D., F.R.C.S., Ashley Cummins, M.D., M.Ch., J. J. Charles, M.A., D.Sc., M.D., Henry Corby, B.A., M.D., M. M. Hartog, D.Sc., M.A., A. Dixon, M.D., A. W. Sandford, M.D., M.Ch., J. Dundon, M.B., B.Ch., B.A.O., F.R.C.S.I., T. O'Sullivan, M.D., A. E. Moore, M.B., B.Ch., D. D. Donovan, L.R.C.P.&S.I. The President, after welcoming Lord Justice Holmes for the second time since becoming President of the College, said that during the three years which had elapsed since the last visitation much solid work had been done and the utmost harmony had prevailed between all engaged in working the institution. He referred to the distinguished students of Queen's College, Cork, in both medicine, arts, and engineering in various parts of the world, and to the more immediate success of the Cork students in obtaining first class honours at the last Royal University Examinations. He called attention to the want of an enlarged chemical laboratory and a chair of pathology. Dr. Macan inquired specially as to the teaching of midwifery and gynaecology, in which he was specially interested, and Mr. Ormsby as to the clinical teaching available at the various hospitals. Both having been answered satisfactorily, Professor Corby asked leave to read from his evidence given before the Royal Commission on University Education in Ireland.

In that statement (referring to Dr. McKeown's Belfast statistics) he shows that in the ten years ending 1900 the number of students from Cork College who obtained medical degrees at the Royal University was 18.8 per cent. of the whole. We may fairly assume that that was the average proportion of Cork students who obtained medical degrees at the Royal University during its existence. Let us now turn to the honours list, and what do we find? Since the foundation of the Royal University, honours (first and second class) at the final examinations were awarded to 78 students, and 23 of these 78 received their education in Cork: that is to say, of all the students who obtained honours at the Royal University at the final examination in medicine, 29.5 per cent. were students of the Cork Queen's College. To put it in another way, the students of Cork Queen's College who obtained their medical degrees formed not quite one-fifth of the whole, yet they managed to carry off not very short of one-third of all the honours awarded. In a word, in proportion to their numbers they won nearly double the honours as against all the other candidates.

Lord Justice Holmes thought they might say the visitation was very satisfactory. They had inspected the College, and he was informed by the President of the College of Physicians and by the President of the College of Surgeons that, having regard to the means at the disposal of the College, it was exceedingly well equipped. He hoped that some means would be taken to provide a chair in pathology.

BEQUESTS TO HOSPITALS.—Under the will of the late Mr. William Tunstill, of Nelson, Lancaster, the sum of £500 has been bequeathed to the Burnley and District Victoria Hospital for endowment purposes. Miss Ellen Thorp, of Hastings, bequeathed £300 to the Royal Hospital for Incurables, £200 to Guy's Hospital, and £200 to the Cancer Hospital at Brompton.

ROYAL MEDICAL BENEVOLENT COLLEGE.

FESTIVAL DINNER.

HIS ROYAL HIGHNESS THE PRINCE OF WALES presided, on June 10th, at the Hotel Cecil, Strand, over the twenty-ninth Festival Dinner of the Royal Medical Benevolent College, Epsom.

After dinner, the PRINCE OF WALES called upon the company, which numbered about 420, to drink the health of "The King, the Patron of Epsom College," and the toast was enthusiastically honoured.

The PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS (Sir William Church) then proposed the toast of "Her Majesty Queen Alexandra, Their Royal Highnesses the Prince and Princess of Wales, and the other Members of the Royal Family." When the Queen first came to this land she captivated the nation by her beauty and graciousness, and since then she had endeared herself to the nation by her thoughtful care, her kindness, and her ready sympathy to those in distress. He thanked His Royal Highness for having undertaken the duties of Chairman, and recalled the fact that the King was present when the College was opened by the Prince Consort in 1855, and so recently as 1895 had visited it and laid the foundation stone of the Lower School. In connexion with the toast he could not forbear specially mentioning in that assembly Princess Christian, who had done so much to improve the management and nursing in hospitals.

The PRINCE OF WALES thanked Sir William Church for the kind and flattering terms in which he had proposed this toast. He knew from the Queen and the other members of his family that the medical profession might ever rely on hearty sympathy and ready support in their work, and in every undertaking which tended to mitigate suffering. The Queen remembered with great pleasure the visit she paid to the College with the King when he laid the foundation stone of the Lower School eight years ago. As Sir William Church had said, the Prince Consort opened the College almost fifty years ago, and on that occasion he was accompanied by the King. Not very many years ago the King took the chair at one of the festival dinners, and on that occasion he got the largest collection of those days, but the Prince hoped that it would be beaten. He trusted that his presence would be regarded as a proof that he continued to take the same interest in the College that his family had shown since its foundation. As President of five of the large London hospitals, he knew what splendid service was rendered by the medical profession to those institutions. Also as President of the King's Hospital Fund for London he fully realized the valuable gift of their experience and time in assisting those who controlled the administration of the Fund. This assistance was most especially valuable in the all-important work of visiting and reporting upon the hospitals that were desirous of receiving help from the Fund. Deeply impressed as he was with what the public owed to the doctors and surgeons of the country, it gave him the greatest pleasure to take the chair.

HIS ROYAL HIGHNESS again rose and said: I have now the pleasure of proposing the toast of the evening, which is "Success to the Royal Medical Benevolent College." No excuse is necessary for pleading the cause on behalf of which we are assembled here to-night. The charitable institutions of our country are among those national characteristics of which we are justly proud; and I can hardly imagine that there are any more deserving of public support than those whose object is to help members of the medical profession or their families, who, through misfortune or otherwise, are brought to reduced circumstances. I feel I am uttering a mere commonplace in stating that we all owe a debt of gratitude to the doctor—we cannot get on without him. He is with us on our entry into the world, and when we leave it, and is our confidential friend from the cradle to the grave. We consult him, confide in him, trust him, though he often has to tell us disagreeable truths. There are few of us who have not reason to be deeply grateful for his knowledge, tender care, and patient watchfulness, by which we have been brought through a severe and dangerous illness. Certainly I myself can speak feelingly as one of that number. But I go further: for over and above our individual thanks, you will I know agree that our medical profession has earned the heartfelt gratitude of the whole nation; for, thanks to the marvellous progress in medicine and surgery, and individual knowledge and skill, the life of our beloved Sovereign was, under the blessing of Providence, preserved to us during the past year. We must also remember, in estimating the splendid work accomplished by our hospitals, that nine-tenths of the medical advice—and this is certainly the best in the country—is given practically gratuitously. But the debt to the doctor is not merely one which is to be considered as discharged as soon as his bill for professional service has been paid. There remains the sense of gratitude, which, I am glad to say, often not only finds expression in a sincere and lasting friendship between doctor and patient, but in thank-offerings by which this institution with other medical charities has materially benefited. The question may be asked whether the medical profession should not be able to support its own charities without appealing to the public. In answer, I would remind you that the popular idea that doctors are rich men is a very erroneous one. True it is that there are a few wealthy members of the profession, but these you may probably count on your fingers. I know also that great generosity is shown among these few to their necessitous brothers. Some are able to make a fair income and perhaps to save money, but too many are underpaid and struggle in an overstocked market, and the fact remains that there is an enormous residuum of medical men who only live from hand to mouth. Another common idea seems to be that doctors live for ever. Unfortunately, here again is another fallacy. Too many succumb to a hard life of exposure by which their constitutions are undermined, or to the dangers of infection. The two following cases are among those recently before the notice of the College: A medical man was summoned to go over the Wiltshire Downs to see a child who had been burned. On the way there he himself was struck by lightning and killed, leaving a widow and a large family. A surgeon-major in the Army Medical Staff was compelled to retire from the service on account of complete loss of sight resulting from overwork and hardship on active service. He has a wife and five young children, is not strong himself, possesses but limited means, and partly supports his mother. But it is not only with these conditions of everyday life that the medical practitioner has to contend. We know how in actual warfare he risks, and indeed often loses, his life while tending those who have fallen in battle: and we must not forget that many (I know that some of them are here to-night) gave up the comforts of home life, and, regardless of any pecuniary sacrifice, volunteered for service in South Africa. To meet this distress about £14,000 a year is given by three great medical societies in the metropolis—the Medical Benevolent Fund, of which my old friend Sir William Broadbent is President, the Society for the Relief of Widows and Orphans of Medical Men, and the Epsom Medical College. The College was founded by Mr. John Propert in 1855 to supply the want which his experience as a family and medical practitioner forced upon his notice. The school supports fifty boys on the foundation, the boys being clothed, educated, and maintained. There are also fifty aged or necessitous medical men or their widows who receive £30 a year, and to maintain these £8,000 a year is necessary. I am very glad to have had the opportunity yesterday of personally visiting the College at Epsom. I was delighted with everything that I saw there; indeed, one could not help feeling that the wishes and aspirations of the founder have been to a great extent fulfilled. I heartily congratulate the head master, Mr. Hart Smith, on the happy and healthy-looking boys under his charge, whom I had the pleasure of seeing in the cricket field. But I wish it to be clearly understood that this appeal is not for the school proper, which is conducted as a public school and is self-supporting. It is for necessary funds to support its medical foundation, that is, the education of the 50 foundationers, and to maintain the pensions to which I have just referred. And I am glad to be able to state there are strong reasons for believing that if we receive to-night liberal support, it will not be necessary to have recourse to further special appeals. My only regret is that this appeal has not been urged by some one more eloquent than myself. But no one could speak with more profound conviction than I do of the worthiness of the claim which the Royal Medical Benevolent College has upon the sympathy and generosity of us all. I now beg to propose "Success to the Royal Medical Benevolent College," coupling with it the names of the President, my noble friend Lord Rosebery, and the Treasurer, Dr. Holman. In its President the institution has to be congratulated; for Lord Rosebery, while ably fulfilling the duties of that office, proves himself to be a true friend and neighbour, showing a keen interest in the general welfare of the College as well as in the boys, their work, and their recreation. I feel it presumptuous for me to speak

about Dr. Holman—his name is familiar to every one who knows Epsom College; he is the mainspring of its life. Associated with the charity since its foundation, he has for sixteen years worked unceasingly as Treasurer, and has left a lasting proof of his efforts as an Honorary Local Secretary in the £8,000, which sum he has collected during thirty-eight years in that office.

Lord Rosebery, in acknowledging the toast, said: My task on this occasion is happily a very small and insignificant one, for it is only to obliterate myself as soon as possible in favour of my working partner, Dr. Holman. Indeed, Sir, if I had had any idea of making an extended speech, that would have been dispelled by the one to which we have just listened. The only part of that speech which I venture to disagree with is that in which you said there can be a better and more effective Chairman than yourself. I venture to challenge any orator, however practised he may be, to vie with the pathetic, the eloquent, and what is more, the true terms in which you have spoken of the medical profession. We have so many of them here to-night that I hardly dare to think, and I scarcely venture to conjecture, what may be the effect on their patients in London. The titled cynics of the profession in whose immediate neighbourhood I am sitting have given vent to their conjectures on the subject, but I will not venture to imitate them. I will only hope that all may be for the best, and I think that I will pause there for fear I should give utterance to some imprudent sentiment. I confess that I do not like to call myself an impostor, yet that is the thought that is present in my mind now, but I am, strange as it may seem, an ornamental figure on this occasion. I am, indeed, President of Epsom College, but I am responsible neither for its teaching nor for its discipline as other presidents of other colleges are. If I were I might have to give a less favourable report on both than I conscientiously can on the present occasion. If I had my way I should like to exchange my office with the Bishop of Winchester and become a Visitor of the College, because in that capacity I am genuine and frequent, and should not blush to reply on behalf of the College as I do now. I am, indeed, at Epsom happily a neighbour, and I have the great pleasure and privilege of being frequently a visitor of Epsom College—owing to local circumstances, much more frequently, I suspect, than any occupant of the See of Winchester. Well, I can offer no report on the studies of the place, and Mr. Hart Smith gives me no access to them and never asks my opinion or judgement on them; but as regards the more athletic features of the College I can say from some experience—as you, Sir, have been able to say from your experience of yesterday—that a finer and healthier and manlier lot of students exist in no other educational establishment; they live in the finest air in the world, they are kept carefully exempt from the temptations which are associated with the name of Epsom, and they are, I believe, prepared to go anywhere or do anything. There is only one drawback connected with the College, and I hope that it may be the result of this meeting to-night to remove that drawback: it is the word "benevolent" in the title which I think is a considerable drawback to its success. I have lived for some years as President of the Royal Medical Benevolent College of Epsom, and if I can die President of the College I shall be content. I hope, Sir, it may be your destiny to night to accomplish that great work. There have been many chairmen before you and there have been many successful banquets before this one, but I hope when this is over we shall be able to say in the words of the Psalm of Triumph that whereas the chairmen before you have collected their thousands you have collected your tens of thousands.

Dr. Holman (the Treasurer) also replied to the toast, and said that on behalf of his colleagues on the Council of Epsom College he could only reiterate the thanks offered to His Royal Highness by Lord Rosebery for his presence and for the terms in which he had commended the cause of the pensioners and foundation scholars of Epsom College. They were the more grateful when they considered the claims made upon his time by the Metropolitan Hospital Fund and the appeals for Guy's and the London Hospital. These appeals had their warmest sympathy, but it needed no argument to show how those great efforts handicapped their endeavours to make the pecuniary result of the meeting all that could be desired. The gathering was the largest ever seen in the metropolis in the cause of a medical charity, and he hoped His Royal Highness would accept it as the grateful recognition by the profession of his kindness in presiding. It was not given to them to know whether the spirits of those gone before looked down upon those they had left: but, if it were so, John Propert would be more than satisfied to see how his work had prospered. He could not pass over the great loss so many had sustained in the death of John Lumsden Propert. The governors of the College still believed in the name of Propert, and had returned a representative of a third generation in Mr. Archibald Propert. Personally he would thank His Royal Highness warmly for his speech. It contained much of what had been his opinion for many years on the relation of the public with the medical profession, and coming from His Royal Highness would leave a stronger and more lasting impression than coming from any medical man. He gratefully acknowledged the practical sympathy received from some members of the public who had recognized the services the medical profession rendered to Society and to the public health. Since he had been engaged in preparing for this dinner he had come to handgrips with an attitude of mind which had apparently militated against a more generous recognition of the claims which the medical profession might justly make upon every section of society, and that His Royal Highness should have recognized and placed them before the meeting was a matter of intense satisfaction. His Royal Highness had touched upon the question of those medical men who earned large incomes. Those men begin to earn late, and their earning years were short. Sir Thomas Watson never earned £500 in fees till he was 50; Sir James Paget never took £400 till he was 47. Their work was personal, and their harvest-time short, and he, Dr. Holman, desired to bear testimony that they gave generously to the relief of the necessitous of their profession. Large incomes were a matter of comparison; looked at through medical spectacles they would be called large, but looked at through commercial glasses they would almost be called failures. There was a considerable class who might give each year sums which they would not miss, but they seemed to shrink from giving because the amount would look small. This sort of false shyness he would combat most warmly. The *Lancet* had stated how much good would accrue if 10s. a year was contributed by each medical man, but if every practitioner in the United Kingdom would give 2s. 6d. yearly there would be no further anxieties for Epsom College. He thanked His Royal Highness for recognizing why there must be suffering, want, and distress amongst them. Accident and disease must attend upon the practice of medicine, and when the breadwinner was gone how terrible were the straits to which the widow and children of such a man could be reduced. He endorsed His Royal Highness's reply to the question "Did doctors try to help themselves?" most thoroughly, and at the same time he gratefully acknowledged the assistance received from the Masonic charities and the charity schools of England. He ventured also to endorse His Royal Highness's opinion that the medical profession had claims upon the public which were not sufficiently recognized, not so much perhaps from want of will as from want of thought. Hospitals were built and maintained by the public. Was sufficient thought given to those by whose labours the relief of sickness and suffering was secured within their walls? The medical profession supplied the staff, but to be a physician or surgeon to a hospital did not ensure success in private practice. There was much fashion in the employment of doctors. Quite lately they had dealt with the case of a surgeon who for sixteen years was on the junior staff of a metropolitan hospital; he did not earn enough to supply the needs of his wife and children. He emigrated and died, and his widow and children were now in want. On the last occasion on which he, Dr. Holman, had spoken in that room he was told that he made the most eloquent speech of the evening when he announced that a guest would send one thousand guineas in the morning. It came in notes and the desire that the donor's name should be withheld had been most religiously obeyed. They could not thank him enough—it had been a great help. To-night he had the pleasure to announce that since the preparations for the dinner had been in hand the two daughters of the late Mr. Leach, of Shaw, near Oldham, had given the Council £1,000 to found a Leach Memorial Scholarship of £30 a year tenable for four years, to be awarded without competition to a boy requiring assistance to enter at either Oxford or Cambridge, preference being always given to the orphan sons of medical men. The Anstie Memorial Scholarship held for the like term would now enable a scholarship to be awarded every two years. For fifty years they had worked hard and been honoured by the confidence of the Royal Family.

From the very commencement Queen Victoria and the Prince Consort were keenly interested. His Majesty the King, when about 12 or 14 years of age, came with the Prince Consort to open the College. Years after he took the chair at a dinner, and had a record success. Again, accompanied by the Queen, he had laid the foundation stone of the Lower School, and now, representing the third generation, His Royal Highness had come to help them.

THE SECRETARY read out a list of subscriptions, and stated that the total amounted to £6,526.

PRELIMINARY MEDICAL EDUCATION.

REPORTS TO THE GENERAL MEDICAL COUNCIL: THE CONJOINT BOARD IN ENGLAND.

THE REPORT OF THE EXAMINATION COMMITTEE.

THE reports of the Inspector and Visitor upon the examinations in physics, chemistry, and biology, held by the Conjoint Board of the English Royal Colleges, and upon that held by the Apothecaries' Society of London, at which last there were not many candidates, present so many points in common that it is hardly necessary to notice them separately; the report on the Conjoint examination, being the first, is the fuller of the two; it will chiefly be quoted in the following remarks.

The report is distinctly unfavourable to the standard of the examination, and the reporters, Drs. Windle and Dr. Campbell Brown, remark that the candidates for the most part had failed to obtain any clear idea of the simplest general principles of biology; that in chemistry a candidate "might very well pass—and does pass—with only an empirical knowledge of a few facts crammed up, and with no understanding of elementary principles," while the examination in physics is spoken of as the most deficient of all. The average training of the candidates is declared to be far too low, and to be no adequate preparation for the study of physiology and the other subjects of a medical curriculum. Further, the opinion is expressed that, if a higher standard had been adopted, it must have led to the rejection of the vast majority. In justification of this somewhat sweeping condemnation, the details of the examination are discussed at some length, but it is admitted that, as this was the first examination inspected, it could be compared only with an ideal standard set up by the Visitor and Inspector.

The syllabus is criticized as ill adapted to its purpose, and it is declared to be a false step to start the student on his career with the idea that a poor smattering of a subject is all that is required of him.

In biology out of 65 candidates 45 passed: of the 65 who entered 49 had taken out their biology course at medical schools, and it is interesting to note, in connexion with the parallel report of the Education Committee, that the percentage of passes among these candidates did not compare favourably with that of candidates educated elsewhere. In physics and chemistry out of 109 candidates 73 passed: no less than 95 had taken courses in these subjects at medical schools, and the percentage of passes among them compared favourably with that of candidates from other institutions.

The Royal College of Physicians deems it inexpedient to reply in detail, but states that the criticisms of the Inspector and Visitor are under consideration. The Royal College of Surgeons on the other hand defends the examination at all points and maintains that it is an error to suppose that the examination is not sufficient for its purpose. It cites a report from its examiners in biology to the effect that they are familiar with many types of biological examination and consider this one to be well adapted to distinguish between the outcome of cramming and of proper teaching, but it is added that the syllabus in physics has been revised. Finally, it is urged that both syllabus and examination have been devised to secure that the student shall have obtained such a knowledge of the subjects included as shall place him in a position to profit by the teaching he will receive in physiology and other subjects of the more strictly medical course, and to this end the College thinks it sufficient.

But this is just the point on which the Inspector and Visitor join issue. They do not consider that the sort of knowledge required is of a kind to serve this useful and, indeed, indispensable purpose.

At the Apothecaries' Society all the candidates had studied at medical schools or at institutions recognized by the General Medical Council, no large number of candidates presented themselves for this diploma, however, and on the occasion of the inspection there were only two for each part of the examination. In 1902 as nearly as possible 50 per cent. of the candidates passed. The reporters state that the standard is somewhat low; of the practical chemistry they remark that it is not chemistry but a game with chemical substances as counters. Thus it will be seen that, so far as any conclusions can be drawn from so small a number of candidates, attendance at schools recognized by the General Medical Council is not a cure for every ill; at the same time it must be kept in mind that since the Apothecaries' Society accept the corresponding examination of the Conjoint Board, whilst the Conjoint Board do not reciprocally accept that of the Society, the standard can hardly rise above that of the larger institution, nor is it likely that candidates will present themselves in any large numbers.

The Examination Committee of the Council has endorsed the chief conclusions of their Inspectors and cites many of their arguments, but we have preferred to refer to the original report rather than to their comments upon it, as they do not appear to carry the matter much further. The Committee was placed in a somewhat delicate position owing to its chairman being the representative of one of the bodies criticized, and that body the one which took up the position of strongest opposition to the criticisms and suggestions.

THE REPORT OF THE EDUCATION COMMITTEE.

In summarizing and commenting upon the returns furnished by the Conjoint Board upon the instruction in physics, chemistry, and biology at institutions recognized by it for the purposes of the first year of professional study, but not approved for this purpose by the General Medical Council, the Committee remarks that, had the Conjoint Board made a full investigation, the number of such institutions to which it would have been able to accord its recognition would hardly have exceeded one-third of the present list.

The report is drawn up with much care and detail, and it is possible here to allude to a few salient points only.

In most of the institutions less than fifteen hours a week are devoted to these subjects, in some very much less. Thus it is possible for a period of six months of medical study to consist of four or five hours a week during school hours at an ordinary grammar school, or at a technical school, where, maybe, only evening classes are held. Where biology is also taught a whole year of medical study may be counted. No directions appear to be issued by the Conjoint Board prescribing the number of hours which will be accepted as sufficient, and the representative of the Royal College of Physicians states that the principle acted upon has been that, in the presence of adequate appliances and a competent teacher, the syllabus and subsequent examination will sufficiently regulate the conditions of study. It is only in those cases in which the course of study in these subjects is taken after the passing of the preliminary examination and is to be counted as a part of the five years curriculum that the Colleges require any certificate of attendance. A student who is prepared to do so may, therefore, present himself for examination in them at any time after passing his preliminary examination, but in that case the five years is not curtailed. In a large number of the schools the scientific courses hold only a subordinate position in the ordinary school work, whilst at polytechnics and technical schools there would not appear to be any obligation that any particular time or course should be taken. Indeed, one polytechnic states that its matriculation class in physics satisfies the Conjoint Board; this course consists of an hour's lecture and an hour and a half of practical work once a week on Saturdays. On the face of this report the objection raised by the Council to the recognition of the disputed institutions is abundantly justified.

THE INVESTIGATION OF MALARIA.

A WHITE PAPER was issued on June 9th containing a number of documents relating to the investigation of malaria and other tropical diseases and the establishment of schools of tropical medicine. The first of these is a circular letter dated May 28th, 1903, from Mr. Chamberlain to the Governors of all Colonies. After summarizing what has been done by the Colonial Office in the way of encouraging scientific inquiry into the causes of malaria and of promoting special education in tropical medicine for the medical officers of the Crown Colonies, the Secretary of State for the Colonies gives an account of the work of the Malaria Committee, consisting of Drs. Daniels,

Stephens, and Christophers, and of the experiments as to the means of preventing malarial infection conducted in the Roman Campagna by Drs. Sambon and Low. He then passes in rapid review the work of the Liverpool School of Tropical Medicine, and the various expeditions which it has sent out to the Gold Coast and Southern and Northern Nigeria, and the steps taken for the provision of trained private nurses for the Crown Colonies. All the facts set forth by the Colonial Secretary, and the results of the researches to which he refers, have been published from time to time in the BRITISH MEDICAL JOURNAL. Mr. Chamberlain concludes his circular as follows:

The above is an outline of what has been attempted in the direction of improving health and sanitation in the tropical Colonies and Protectorates, and the Governments concerned will, I think, realize that the contributions which they have given have been applied to objects second to none in importance and public usefulness. But it is clear that the work cannot stand still, and as long as those who can speak with the authority of science are confident that by human effort the rate of mortality from malaria and other tropical diseases can be greatly reduced, and the strength and efficiency of European residents in unhealthy climates can be sensibly increased, so long, in my opinion, ought funds to be forthcoming for carrying on what has been so well begun. It will be seen from the important letter from Sir M. Foster, of which I enclose a copy, that in his opinion greater expenditure and more extended effort is required to grapple with the whole problem of exotic diseases among not only human beings, but animals also, and to systematize the knowledge of such discoveries as may be achieved. The details of such a scheme would require very careful consideration, but in any case the Colonies are likely to be vitally concerned for many years to come with the following objects: Research into malaria and other tropical diseases, in which I am assured that the Royal Society, to whom my warm acknowledgements are due, will continue to co-operate; the Schools of Tropical Medicine, pre-eminently those of London and Liverpool; and the supply of trained nurses. One or other of these objects may more specially commend itself to this or that Colony; but I am inclined to think that, as a fund was successfully formed for the double object of the London Tropical School and the Malaria Commission, so Colonial contributions, if and when made, might with advantage continue to be paid into a common fund, out of which the objects which have formed the subject of this dispatch might be subsidized. Should I find that this opinion is shared, and that there is a general desire on the part of the Crown Colonies and Protectorates to give moderate donations or subscriptions in aid of medical and sanitary training and research, I should propose to appoint a Board to advise the Secretary of State as to how the moneys received can at any given time be best allotted, such Board to consist of the medical adviser of the Colonial Office, a representative of the Royal Society, some leading London physician, one or more representatives of the Crown Colonies, and one or more members of the Colonial Office.

The appendices include a memorandum by Sir Michael Foster, Secretary of the Royal Society; reports by Dr. Stephens and Dr. Christophers, who, with Dr. Daniels, of British Guiana, formed the Malaria Commission; a report by Sir William MacGregor, who, with Major Ronald Ross, made a study of malaria in Egypt and Italy; and the report of the Institute for Medical Research in the Federated Malay States, by Dr. Hamilton Wright.

ASYLUM WORKERS' ASSOCIATION.

THE President, Sir James Crichton-Browne, M.D., F.R.S., took the chair at the recent annual meeting of this Association. He moved the adoption of the report and financial statement in an eloquent address.

The report stated that the total membership had advanced from 4,116 in 1901 to 4,902 in 1902. Aggregate receipts for 1902 amounted to £470 9s. 3d., and payments to £401 15s. 7d.; but the credit balance had been reduced during the year, chiefly owing to the additional cost of *Asylum News* in its enlarged form. Seventeen nurses and attendants had been helped from the "Homes of Rest" fund. Two gold and two silver medals had been granted for long and meritorious service in asylum nursing, Mr. Marshall and Miss Buckle taking the former, and Mr. J. Lynch and Miss A. G. Jackson the latter. Prizes to encourage the study of standard works of fiction amongst asylum workers had been instituted, and Mr. Rider Haggard had himself promised a special prize. The statutory provision of assured pensions for workers in public asylums was one of the aims of the Association, and, though the present time did not seem opportune for lunacy legislation, influence had been brought to bear upon Members of Parliament, and representations made to the Lord Chancellor, the Secretary for Scotland, and others in favour of such provision. Much sympathy having been expressed by members of the Association with the staff of Colney Hatch in their splendid struggle to save life on the occasion of the calamitous fire at that asylum, it was resolved to offer a memorial brass inscribed as follows:

In appreciative commemoration of the heroic conduct and self-sacrificing devotion to duty displayed by the members of the staff of Colney Hatch Asylum in rescuing from the flames 296 lives of patients in peril by fire on January 27th, 1903. This tablet is placed by the Asylum Workers' Association.

This tablet will, it is hoped, be placed in the entrance hall of the Asylum. The Association has now representatives in most of the asylums of the United Kingdom and in some Colonial asylums; and it is hoped that the feeling of *esprit de corps* and responsibility thus fostered will tend not only to raise the status of asylum service, but to the benefit of the patients under care.

LITERARY NOTES.

WE are informed that the *Journal of the Royal Army Medical Corps*, which has been for some time in the incubation stage, is likely soon to make its appearance. It is hoped that the first number will be issued on July 1st. The new periodical, which is to be a monthly, will be published by Messrs. Bale, Sons, and Danielsson. The editor is to be Major R. H. Firth, F.R.C.S., Professor of Hygiene in the Military Medical College.

The June number of the *Nineteenth Century and After* contains an article on the increase of cancer by Dr. Alfred Wolff, the author of a series of papers on cancer mortality which recently appeared in the BRITISH MEDICAL JOURNAL.

Messrs. J. and A. Churchill will publish the following works in the course of the present month:—*The Microscopical Examination of Foods and Drugs*, by H. G. Greenish, Professor of Pharmaceutics at the Pharmaceutical Society; *Serumtherapy*, by Dr. R. T. Hewlett; *Disinfection and Sterilization for Nurses and Others*, by Dr. F. W. Andrewes of St. Bartholomew's Hospital; *Modern Bullet Wounds and Modern Treatment*, by Major F. Smith, D.S.O., R.A.M.C.; *On Syphonage and Hydraulic Pressure in the Large Intestine*, by Dr. R. W. Leftwich; *An English Handbook to the Paris Medical School*, by Dr. A. A. Warden, Physician to the Hertford British Hospital, Paris. The same firm announces a second edition of *Infant Feeding*, by Dr. E. Cautley; a fourth edition of *Lectures on Medicine to Nurses*, by Dr. H. E. Cuff; and a fifth edition of *Uric Acid*, by Dr. A. Haig.

Mr. Heinemann has ready for publication a small volume entitled *Hay Fever and its Successful Treatment*, by Dr. Hollopeter, Clinical Professor of Pediatrics in the Medico-Chirurgical College of Philadelphia. Sections are devoted to the history, causes, time of occurrence, duration, etc., of the affection, and the pollen theory is fully discussed. The author makes a special point of dietetic treatment. There is an appendix in the form of a bibliography, from which the reader desirous of studying the subject can obtain a large body of references.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

DURING the weeks ending May 9th and 16th, the deaths from plague in India numbered 20,246 and 15,400 respectively. During the four weeks commencing April 25th the drop in the number of plague deaths has amounted to almost 4,000 weekly: the death-rate is still, however, double that of the same period in 1902. The Punjab continues to be the most severely stricken district, more than four-fifths of the deaths from plague in India occurring there. In other districts the fall in plague mortality has been quite sharp, the only return showing numbers of 1,000 for the week ending May 16th being the Bombay Presidency and the united Provinces (North-West Provinces and Oudh).

In Bombay during the week ending May 16th, there were in the City of Bombay 315 deaths from plague, being 110 less than in the previous week.

At Bangalore Sawhney heat dessicator is being tried on a large scale for plague disinfection. No definite results have been published, but the Government have resolved to continue its use for six months. It is recommended that both Mysore and Bangalore be completely disinfected by this system.

CAPE COLONY.

During the two weeks ending May 9th and 16th, the plague report in Cape Colony was as follows:

Port Elizabeth.—Fresh cases of plague, 5 and 2; deaths from the disease, 3 and 1 respectively. On May 16th ten cases remained under the treatment.

East London.—Fresh cases, 4 and 3; deaths, 2 and 2. Three cases remained under treatment on May 16th. [In the report for May 2nd 2 cases instead of 1 were shown in error in the telegraphic report.]

King Williamstown.—Fresh cases of plague, 3 and 1; deaths from the disease, 2 and 1. Five cases remained under treatment on May 16th.

At no other town on district in the Colony were fresh cases of plague reported; but at Queenstown and in the Cathcart District plague-infected rats were discovered. No plague in either man or rats is reported recently from Graaff-Reinet or Burgersdorp.

MAURITIUS.

During the week ending May 28th one fatal case of plague was reported in Mauritius.

HONG KONG.

During the weeks ending May 23rd and 30th, the fresh cases of plague in Hong Kong numbered 136 and 123, and the deaths from the disease 123 and 103 respectively. Four Europeans died of plague during each week.

ASSOCIATION NOTICES.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 8th day of July next, at 2 o'clock in the afternoon.

May, 1903. GUY ELLISTON, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m. Members can have their letters addressed to them at the office.

GUY ELLISTON, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

ABERDEEN BRANCH.—It is requested that nominations (signed by three members of the Branch) of a representative of the Branch on the Central Council be sent to Dr. Gray, 5, Bonaccord Square, Aberdeen, by June 27th. —H. M. W. GRAY and J. F. CHRISTIE, Joint Honorary Secretaries.

BATH AND BRISTOL BRANCH.—The annual meeting of this Branch will be held on Wednesday, June 17th, at the Medical Library, University College, Bristol, at 4.30 p.m., when Dr. H. Waldo will resign the chair to Dr. Barclay J. Baron, President-elect, who will deliver the Presidential address. The business of the meeting will be to receive the report of the Council and the annual financial statement; to elect the officers of the Branch; to receive the report of the election of members of Council and of the representatives of Divisions; to transact the necessary business; and to consider such subjects connected with the interest of the Branch and of the profession as may be brought before it. The Secretaries will be obliged if members will send them notice of any alteration in their diplomas or addresses. The dinner will be held at the Clifton Down Hotel at 7 p.m. Dinner tickets, 7s. 6d. each; the wines will be served at moderate charges. N.B.—The Bristol Secretary particularly requests that members will inform him by Monday, June 15th, whether it is their intention to be present at the dinner. The Secretary cannot undertake to provide places for members at the dinner without notice beforehand. —J. MICHELL CLARKE, Honorary Secretary of the Bristol District, 28, Pembroke Road, Clifton, Bristol; W. M. BEAUMONT, Honorary Secretary of the Bath District, 4, Gay Street, Bath.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.—The forty-ninth annual meeting of the Branch will be held in the Medical Institute, Birmingham, on Friday, June 26th, at 4 p.m. The retiring President, Dr. Henry Malet, will introduce his successor, Mr. Jordan Lloyd, who will deliver an address. The business to be transacted will be duly notified to each member by circular. The annual dinner will be held on the same date as the annual meeting, June 26th, at 7 p.m., in the Grand Hotel, Birmingham. Tickets 5s. each. Members may introduce guests.— J. T. J. MORRISON, F.R.C.S., T. S. SHORT, M.D., Honorary Secretaries.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: COVENTRY AND NUNEATON AND TAMWORTH DIVISIONS.—A joint meeting of these Divisions will be held at the Coventry and Warwickshire Hospital, Coventry, on June 24th, at 3.30 p.m., for the purpose of electing a representative for representative meetings. At the termination of this meeting a meeting of the Coventry Division will be held to elect a representative on the Branch Council. Members of the Division who are desirous of reading papers or exhibiting specimens or cases at any of the meetings are requested to communicate with the Honorary Secretary, E. H. SNELL, Knighton House, Coventry.

BORDER COUNTIES BRANCH.—The annual general meeting of this Branch will be held in Carlisle on Friday, June 26th. Gentlemen wishing to read papers or to show cases or specimens are requested to communicate as early as possible with the Secretary, FRANCIS R. HILL, 12, Bolton Place, Carlisle.

BORDER COUNTIES AND NORTH LANCASHIRE AND SOUTH WESTMORLAND BRANCHES.—Election of joint representative: The nomination of candidates for the office of joint representative of the above Branches upon the Central Council must be made by three electors, and in writing, on or before June 19th next to FRANCIS R. HILL, 12, Bolton Place, Carlisle, Honorary Secretary, Border Counties Branch.

DORSET AND WEST HANTS AND WEST SOMERSET BRANCHES COMBINED. —Notice is hereby given that the names of candidates for election as a member of Council of the Association for these Branches must be sent to either of the undersigned on or before Tuesday, June 16th next. Each candidate must be nominated in writing by three Branch members.— WILLIAM VAWDREY LUSH, Weymouth, W. B. WINCKWORTH, Taunton, Honorary Secretaries.

EDINBURGH BRANCH.—The annual meeting of the Edinburgh Branch will be held in the hall of the Royal College of Physicians, 9, Queen Street, on Friday, June 19th, at 4.30 p.m., when the draft model rules will be considered, and the office bearers of the Branch elected.—NORMAN WALKER and A. LOGAN TURNER, Secretaries.

EDINBURGH AND FIFE BRANCHES.—The names of candidates for election as members of Council to represent these conjoint Branches must be sent to Dr. Logan Turner, 27, Walker Street, Edinburgh, on or before June 22nd. Each candidate must be nominated in writing by three members of the conjoint Branches, which are entitled to elect two representatives.

GLASGOW AND WEST OF SCOTLAND BRANCH.—This Branch is entitled to two representatives on the Council of the Association. Nominations for the office, signed by three members of the Branch, should reach the Honorary Secretary on or before June 15th.—JAMES H. NICOLL, Senior Honorary Secretary, 4, Woodside Place, Charing Cross, Glasgow.

LANCASHIRE AND CHESHIRE BRANCH.—The annual meeting of this Branch will be held in Chester on Tuesday, June 23rd, at 2 p.m. Members wishing to read papers, show cases or specimens, etc., should communicate with the Honorary Secretary, T. ARTHUR HELME, M.D., 3, St. Peter's Square, Manchester.

LEINSTER AND SOUTH-EASTERN OF IRELAND BRANCHES.—The nomination of candidates for election as members of the Central Council of the Association must be sent to the Honorary Secretary not later than Monday, June 29th. Each candidate must be nominated in writing by three members of either Branch. The Branches are entitled to jointly elect two members of Council.—ARTHUR H. WHITE, Honorary Secretary, Leinster Branch.

METROPOLITAN COUNTIES BRANCH.—The fifty-first annual meeting of the Branch will be held at the Hotel Cecil on Tuesday, June 30th, at 6 p.m. The business to be transacted is to appoint officers for the ensuing year, to receive the reports of the Treasurer and of the retiring Council, and to hear an address from the incoming President, Mr. H. W. Kiallmark. At 7 p.m. precisely the members will dine together, the President in the chair. The charge for the dinner will be 8s. 6d. each, exclusive of wine. —H. BETHAM ROBINSON, 1, Upper Wimpole Street, W., GEORGE ROWELL, 6, Cavendish Place, W., Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: BRIXTON DIVISION.—The first annual meeting of the above-named Division will be held at Clark's College, 76, Brixton Hill, on Friday, June 19th, at 5 p.m. The business will include the election of officers and representative, etc.—JAMES SCOTT, Honorary Secretary (*pro tem.*), 19, Raleigh Gardens, Brixton Hill, S.W.

METROPOLITAN COUNTIES BRANCH: CITY DIVISION.—The first annual general meeting of this Division will be held on Thursday, June 25th, at 4 p.m., in the Committee Room of the London Institution, Finsbury Circus, E.C. Agenda: Minutes of the last meeting. Correspondence. Election of officers. Consideration of ethical model rules suggested for adoption by the Division, as published in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of March 7th. Consideration of the notices of motion given for the annual representative meeting of the Association to be held at Swansea on July 28th to 31st (see JOURNAL for April 25th, p. 994). Any such business as may arise.—E. W. GOODALL, Honorary Secretary, Eastern Hospital, Homerton, N.E.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The annual dinner of this District will be held at the Royal Forest Hotel, Chingford, on Tuesday, June 23rd, at 6.45 p.m., Mr. H. E. Powell, Vice-President of the District, in the chair. Price of the dinner, 7s. 6d., exclusive of wine; morning dress. Members intending to be present are requested to send their names with the number of guests to be introduced as soon as possible, and not later than Thursday, June 18th, to C. J. MORTON, 56, Oriord Road, Walthamstow, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: WALTHAMSTOW DIVISION.—The first annual meeting of this Division will be held at the King's Head Hotel, Chigwell, on Tuesday, June 16th, at 6.30 p.m. Business: To elect officers, representatives, and Executive Committee. To consider the business of the annual representative meeting. General business.—C. J. MORTON, 56, Oriord Road, Walthamstow, Honorary Secretary.

NORTHERN COUNTIES OF SCOTLAND BRANCH.—The annual meeting of this Branch will be held at the Pump Room, Strathpeffer, on Saturday, June 13th, at 11 o'clock. Business: (*a*) To elect office-bearers and representative of the Branch in representative meetings of the Association. (*b*) To consider the business at the annual representative meeting. (*c*) Adopt rules for the Branch. (*d*) Any other competent business. In accordance with By-law 22, I hereby give notice that the names of candidates for election as members of Council to represent this Branch must be sent to me on or before June 13th. Each candidate must be nominated in writing by three members of the Branch. After the business meeting Dr. Fortescue Fox, Strathpeffer, will give a demonstration at the Baths. The members will lunch at the Spa Hotel.—J. MUNRO MOIR, Inverness, Honorary Secretary.

NORTH OF ENGLAND BRANCH.—A joint meeting of the Bishop Auckland, Chester-le-Street, and Durham Divisions will be held at the Wear Valley Hotel, Bishop Auckland, on Tuesday, June 23rd, at 4 p.m., to elect a representative and to consider business in connexion with the annual representative meeting.—JOHN PAXTON, Bleak House, Butterknowle, R.S.O., co. Durham, Honorary Secretary.

NORTH LANCASHIRE AND SOUTH WESTMORLAND BRANCH.—The annual meeting will be held at Lancaster on June 24th. Members wishing to show cases or specimens or to bring any business before the meeting are requested to communicate with the Honorary Secretary, A. S. BARLING, High Street, Lancaster.

NORTH WALES BRANCH.—The last annual meeting of this Branch, before its amalgamation with Shropshire under the new Constitution, will be held at Barmouth, the beginning of July. Members having papers to read, or cases to communicate, are requested to intimate by June 27th.—W. JONES-MORRIS, Portmadoc, H. JONES-ROBERTS, Pen-y-groes, Honorary Secretaries.

SOUTH-EASTERN BRANCH.—The annual meeting of this Branch will be held at the Lion Hotel, Guildford, on Thursday, June 25th, at 2 p.m. Mr. A. A. Napper, President-Elect, kindly invites members of the Branch to lunch at the hotel between 1 and 2. Dinner at 6.30 p.m.; charge 7s. The local committee provides wine.—T. JENNER VERRALL, 97, Montpellier Road, Brighton, Honorary Secretary.

SOUTH-EASTERN OF IRELAND BRANCH.—The annual meeting of this Branch will be held at Clonmel on Wednesday, June 24th, for the purpose of electing officers and for other business.—RAYMOND W. ORPEN, Bagnalstown, Honorary Secretary.

SOUTHERN BRANCH.—The annual general meeting of this Branch will be held at Ventnor on Friday, July 3rd. Particulars as to time, place, etc., will appear in a later issue. Members wishing to read papers are requested to communicate with the Honorary Secretary, Mr. H. J. MANNING, Laverstock House, Salisbury.

SOUTHERN BRANCH: PORTSMOUTH DIVISION.—The first annual meeting of this Division under the new Constitution will be held at 5, Pembroke Road, Portsmouth, on Tuesday, June 23rd, at 3.30 p.m. The business to be transacted will be as follows: Minutes. Correspondence. The accounts for the past year. Librarian's report. The election of the following officers to form the Executive Committee: Chairman, Vice-Chairman, Secretary (who shall also act as Treasurer), three members of the Branch Council, and ten other members. The meeting will then resolve itself into a general meeting of the constituency formed by this Division and that of the Isle of Wight, and after the election of a Chairman will proceed to the election of a representative of the constituency in representative meetings of the Association. It is then proposed to discuss: (1) The notices of motion, etc., for discussion by the annual representative meeting. (2) The provisions of the Midwives Act, which is shortly to become law. (3) Any other business.—J. G. BLACKMAN, Poplar House, Kingston Crescent, Portsmouth, Honorary Secretary.

SOUTH MIDLAND BRANCH.—The annual meeting will be held at the Council Chamber, Wellingborough, on Thursday, June 18th, under the presidency of Dr. W. E. Audland. The President invites members to lunch at the Central Hall, High Street, at 1 p.m. sharp. Members who intend to be present at lunch must communicate with the President, Dr. W. E. Audland, Oxford Street, Wellingborough, not later than June 14th; Branch Council meet at Council Chamber 12 15 p.m. same day. The following papers, etc., are promised: Presidential Address. Dr. Major: On Certain Difficult and Delicate Incidents in Medical Practice. Dr. Hollis: Two Cases of Congenital Oedema. Dr. Milligan: (1) Successful Removal of Large Gall Stone from Small Intestine of Aged Woman (specimen); (2) Abdominal Section for Perforated Gastric Ulcer, Recovery; (3) Gastrotomy for Haematemesis, Recovery. Mr. Gifford Nash: (1) Four Cases of Enterectomy (two caecum); (2) Photograph and Notes of a Case of Symmetrical Alopecia Areata and Bullous Dermatitis of Face; (3) Congenital Cystic Kidneys from a Boy, aged 15.—E. HARRIES JONES, Northampton, Branch Secretary.

SOUTH MIDLAND BRANCH.—In accordance with By-law 22, notice is hereby given that names of candidates for election as members of Central Council to represent this Branch must be sent to the Honorary Secretary on or before Saturday, June 13th. Each candidate must be nominated by three members of the Branch. This Branch is entitled to one member only.—E. HARRIES JONES, Northampton, Honorary Secretary.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—Nominations of candidates as representatives on the Central Council of the Association must be sent in writing and signed by three members of the Branch, to the Secretary of the Branch, D. R. Paterson, M.D., 15, St. Andrew's Crescent, Cardiff, on or before June 14th.—D. R. PATERSON, M.D., Honorary Secretary.

ULSTER BRANCH.—The annual meeting of this Branch will be held on Friday, July 10th, in Belfast. Any member having any business to bring before the meeting should communicate with the Secretary on or before July 2nd. Voting papers for the various officers have been sent out to each member, and are required to be returned on or before July 7th. If any member has not received the necessary forms, communication might be sent to the Honorary Secretary, WILLIAM CALWELL, M.D., 1, College Square North, Belfast.

WEST SOMERSET BRANCH.—The sixtieth annual meeting of this Branch will be held at the London Hotel, Taunton, on Tuesday, June 16th, at 12.30 p.m., under the presidency of Dr. David Brown. Agenda: Minutes of last meeting; report of Council; Treasurer's report; election of President-elect; election of other officers. President's address on Some Medical uses of Chloroform. Lunch will be served at the London Hotel at 1.45 p.m. It is proposed to pay for this out of the funds of the Branch in the case of all members who signify their intention to be present to the President, Dr. D. Brown, Hamdon, Taunton, on or before Saturday, June 13th. In the case of others, and of tickets for guests, a charge of 3s. will be made; in all cases exclusive of wine. After lunch, arrangements have been made to enable members to play tennis (4 courts) and croquet (2 grounds) on the Somerset County Cricket Ground, where they will also be entertained to tea by the President. The Curator of the Museum of the Somersetshire Archaeological and Natural History Society (Mr. H. St. George Gray) will be very pleased personally to conduct any members over the Castle and Museum, which has been recently rearranged, during the afternoon. In the event of the afternoon being wet, an alternative programme will be arranged.—W. B. WINCKWORTH, Taunton, Honorary Secretary.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH.—The annual general meeting of this Branch will be held at the Worcester Infirmary on Thursday, June 18th, to elect officers and Council, to make rules and any other business.—GEORGE W. CROWE, 43, Foregate Street, Worcester, Honorary Secretary.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH: HEREFORDSHIRE DIVISION.—The annual meeting of this Division will be held at the Herefordshire General Hospital, Hereford, on Wednesday, June 24th, at 3.30 p.m. All members of the Association living in the Division, which includes the county of Herefordshire (except the town of Bromyard), New Radnor, and Presteign, are requested to attend this meeting.—HERBERT JONES, Hereford, Honorary Secretary.

YORKSHIRE BRANCH.—The annual meeting of this Branch will be held at the Library, the Medical School, Sheffield, on Wednesday, June 24th, at 4 o'clock, at which the officers will be elected. Candidates to represent the Branch on the General Council of the Association must be nominated by three members of the Branch, and such nominations must be sent to the Secretary before Tuesday, June 16th. The Branch is now entitled to only two members on the General Council. The annual dinner will take place at 6.30 at the Royal Victoria Hotel. Members intending to read papers, make any communications, propose new members, etc., are requested to communicate at once with the Secretary, ADOLPH BRONNER, 33, Manor Row, Bradford.

SPECIAL CORRESPONDENCE.

BERLIN.

The Case of Plague.—New Laboratory for Cancer.—Proposed "Codex Alimentarius."

WHILE working with cultures of plague bacilli, a young doctor, Dr. Milan Sachs, infected himself with the disease. At first his symptoms seemed those of pneumonia, an illness from which Dr. Sachs, who was slightly tuberculous, had already suffered some time ago. He was, however, isolated in the Charité Hospital, and all precautions against further infection taken. The case ended fatally after a few days. As soon as plague was diagnosed, all persons who had come in contact with the patient from the day when he began to feel ill were segregated in special pavilions in the Charité grounds, and subjected to serum injections. At present all are in normal health, with the exception of a young male nurse, who attended on Dr. Sachs. Since Dr. Sachs's death he has been completely isolated, and when he began to sicken—on the morning of June 8th—a young assistant-doctor, Dr. Pflugmacher, volunteered to undertake the case, both as doctor and nurse. He is now isolated with his patient, and only communicates with the outer world by means of the telephone. In accordance with international agreement, the Imperial Chancellor has informed all Governments that a death from plague has occurred in Berlin. A special meeting was held in the "Cultus-ministerium" to decide on the measures to be taken in order to prevent the spread of infection, and an acting Committee appointed, consisting of Drs. Kirchner and Schmidtmann, of the Medical Department of the Cultus-ministerium; Schaper, the Director of the Charité Hospital; Strassmann, of the scientific deputation for matters connected with public health; Wehmer, of the Police Committee; and Paalzow, of the Medical Department of the War Ministry. The medical man who attended Dr. Sachs in his lodgings at the beginning of his illness, and who induced him to go into hospital, the Charité hall-porter, who received the patient, and all who were in communication with him during his illness, are in quarantine in a special pavilion, as are also the whole family with whom he lodged; and all the belongings of the latter, furniture and all, have been burnt. No visitors are allowed to come near the quarantine pavilions, which are strictly guarded by police. All these precautions have been made public in order to prevent anything like panic.

The new laboratory for cancer research in the Charité was opened on June 8th. Professor v. Leyden, the moving spirit of the new institute and its appointed director, was in the chair, supported by several official personages and many distinguished medical men. In his opening address, v. Leyden reviewed the whole course and development of modern cancer research. Though conscious—he said—that at his age, success in this field could hardly be for him, but would belong to the generation to come, still he felt full of courage and enthusiasm for the work before him, in which he would be assisted by young helpers. He named specially his assistants, Drs. Blumenthal, F. Meyer, L. Michaelis, and Wolf. Dr. Althoff, of the Cultus-ministerium, expressed the interest felt by the Government in the new institute, and the proceedings terminated by an inspection of the laboratories. Two pavilions for cancer patients are connected with the new institute, and will be ready for occupation in the course of a few weeks.

At the close of the Congress for Applied Chemistry which

has just been held in Berlin, a resolution was passed expressing a wish for a general *Codex Alimentarius* on lines similar to those of the *Pharmacopœia*.

MANCHESTER.

Whit-week Vacation.—National Physical Training.—Victoria University Charter and the Medical Acts.

THE new plan of having a complete recess in the Medical Department of Owens College during Whitsuntide seems to work satisfactorily, as it compensated by an earlier beginning of the session. The Whitsuntide holiday is a speciality of Manchester folk generally, so that it boots little to carry on classes when the local circumstances are such that a fair proportion of students are likely to be absent. The laboratories remain open so that those who wish to profit by individual study can do so. It also allows those who are members of the Medical Staff Corps or are Volunteers to enjoy the full advantages of camp life without missing lectures, demonstrations, or other work.

For nearly six weeks a really valuable and useful series of articles by "all sorts and conditions of men" on National Physical Training has been appearing in our contemporary, the *Manchester Guardian*. The subject has been treated from nearly all possible aspects. According to one who sums up pretty tersely, a nation's physical attributes depend "more on its mothers than either its statesmen or its drill instructors." The Cassandra-like cry of decadence of the race was vigorously combated by Dr. Arthur Newsholme, who challenged the statement of degeneracy and boldly asserted that the town dwellers are as good, if not better, than our fathers and grandfathers who lived in the country. The explanation is perhaps to be found in the conditions of country life in the past where, as it has been said, nothing was good or cheap but "air and scenery." Some of the data on which Dr. Newsholme forms his opinion are statistics of army recruiting, and he gives reasons why these figures must be rejected as evidence of national degeneracy; others are those of various commissions, Royal and otherwise. Dealing with the question of the wage-earners who compose the vast majority of the total population, he comes to the conclusion that our national statistics

lend no support to the idea that our urban populations are degenerating, though they do not contradict the view that urban are still less robust than rural populations. The abolition of the corn duties in 1846 probably effected more for the national health than any other influence for or against it during the nineteenth century. In 1837-46 the price of wheat averaged 58s. 7d. per quarter; .....in 1898 it was 25s. 8d.

Sir T. Lauder Brunton, who also entered the arena, in his contribution to the "open debate," appears to assume the degeneration of physical standard, for he says, "in two or three generations we may hope to find the standard of English physique again rising to its proper height," provided certain conditions regarding the feeding and training of boys and girls are duly fulfilled. To Sir Lauder, the most thorough system of physical education appears to be the Swiss. Clergymen, philanthropists, politicians, statesmen, and army men have all expressed their views as the subject has appeared to them.

In the minds of some, if one may judge from the expressions used, there is some ambiguity as to the real position of the Victoria University. One hears of the division of the University—the stage of disruption is past. Perhaps the position may be made clear by citing some clauses from the preamble of the Manchester Charter, and the important Clause I of the same charter now before the Houses of Parliament.

Whereas by charter of Her late Majesty Queen Victoria dated the 20th April, 1880, the Victoria University was founded and constituted, having its seat in the city of Manchester,

And whereas the Owens College, Manchester, was thereby constituted a college in the University, and provision was made that other colleges might from time be admitted as colleges in the University in the manner and subject to the conditions therein prescribed,

And whereas it was thereby provided that meetings of the University Court and Council and of the Convocation of the University should be held in the city of Manchester,

And whereas charters of Her late Majesty dated respectively the 20th March, 1883, and the third June, 1898, were granted supplemental to the said charter,

.....

And whereas the Owens College, Manchester, has presented to us in our Council a humble petition, under the common seal of that College, praying that a new or supplemental charter may be granted so as to constitute and continue the Victoria University as a university in Manchester, in association with the Owens College alone,

Now therefore know ye that We, by virtue of our Royal prerogative and of all other powers in that behalf enabling us, of our special grace, certain knowledge, and mere motion, by these presents do for us, our heirs and successors grant, will, direct, and ordain as follows:

I.

The Victoria University, constituted by the charters granted by Her late Majesty as aforesaid (herein referred to as the University), shall hereafter be called and known as "the Victoria University of Manchester," having its seat in the city of Manchester, and under the name and style of "the Victoria University of Manchester," shall remain and continue one body politic and corporate ..... and other the powers in this our charter prescribed and ordained, free from liability to admit or remain in association with any college other than the Owens College and (during the term hereinafter mentioned) the Yorkshire College, but subject to the regulations and conditions or restrictions herein set forth. Such powers, regulations, and conditions or restrictions shall be deemed and taken to be as from the date of this our charter in substitution for those contained in the charters granted by Her late Majesty as aforesaid except as herein otherwise provided.

Thus the Victoria University does not cease to be, but the Victoria University of Manchester continues its corporate existence with all its rights and privileges.

BIRMINGHAM.

Mr. Thomas Best's Legacies.—Gifts to Birmingham Hospitals.—Birmingham Medical Benevolent Society.—Somnoform.

THE will of the late Mr. Thomas Best, of Edgbaston, has just been published. The deceased gentleman, who was the survivor of two brothers who some years ago had a manufacturing business in the city, has left his entire fortune, amounting to more than £100,000 to charitable purposes. No less than £51,000 has been left to the various Birmingham charitable institutions. This includes:

£		£	
5,000	to the General Hospital,	2,000	to the Children's Hospital,
5,000	,, General Dispensary,	2,000	,, Orthopaedic Hospital,
4,000	,, Blind Institution,	2,000	,, Women's Hospital,
4,000	,, Deaf and Dumb Institution,	1,000	,, Eye Hospital,
3,000	,, Queen's Hospital,	1,000	,, Ear and Throat Hospital,

and a number of other bequests to other institutions. The residue of his estate, which will probably produce upwards of £50,000, he left to the Lord Mayor and Corporation of the city for the time being upon trust, to invest and apply in aid of charitable and benevolent institutions of the city and Midland counties.

A pleasant meeting took place in the General Hospital last week when the Committee of the famous Aston Villa Football Club attended to present a cheque for £1,250 to the hospital to endow a bed in the hospital. The fund had been inaugurated by Mr. Margoxhis, and had been collected and subscribed for entirely by members of the club and their friends. The Queen's Hospital has just received the sum of £230, which is 5 per cent. of the gate money taken at the National Trades Exhibition held during the past two months at the Bingley Hall, Birmingham. The hospital has been presented with an annual contribution from this source since 1898, the total amount received during the six years being £1,372 7s. These gifts are particularly welcome just now to the Birmingham hospitals. With the rapid growth of the city their work becomes yearly greater and greater while the subscription lists do not increase in the same ratio. Almost without exception every one of the hospitals this year shows a deficit in its accounts, and it is becoming an anxious question with the managers of some of the institutions how the expenses are in future years to be met.

The Birmingham Medical Benevolent Society was established in the year 1821, and at the meeting held last month the eighty-first annual report was presented. The invested funds amount to £15,688 4s. 6d., and by the will of the late Mr. Henry Duncalfe, of Sutton Coldfield, who died in October, 1901, they will be augmented by the amount of £5,000, less legacy duty, that sum having been bequeathed to the Society subject to certain life interests. The money is to be invested and called the "Duncalfe Benevolent Fund." The good work which the Society is doing in giving relief to those who are in need of assistance has been performed, as usual, in a quiet and unostentatious manner, and there is no doubt that the help given has been urgently needed and gratefully received. Attention was drawn in the report to the very large number of practitioners in the district who have not yet availed themselves of the advantages of membership of the Society, and an appeal was made to all those who are interested in the welfare of their professional friends who are not members to try to induce them to join. Any medical practitioner regularly practising his profession within fifty

miles of Birmingham, or within the distance of ten miles of the residence of any corresponding member, is eligible as a member. The result is that the area from which members may be drawn is very large, and really spreads over a district with a radius of sixty miles around Birmingham. During the past year 22 new benefit members were admitted, the total at the end of the year being 414. Seventeen annuitants were on the books at the commencement of 1902; 1 has since died, and 2 new annuitants have been added to the list during the last twelve months. The annual value of grants ranged from £20 to £40, and the sum expended in this way was £605. In addition, the directors were able to give a donation of £3 to each of the annuitants at Christmas, making a further expenditure of £54. Mr. M. A. Messiter (Dudley) was appointed President for the ensuing year. Mr. Bennett May (Birmingham), Dr. Langley Browne (West Bromwich), and Mr. H. Eales (Birmingham), the retiring directors, were re-elected. Dr. Malins (Birmingham) was appointed President-elect for the ensuing year, and Dr. Cureton (Shrewsbury) and Mr. E. V. Whitby (Birmingham) were elected Vice-Presidents. Dr. T. Savage and Mr. T. F. Chavasse were reappointed Treasurers; Mr. W. F. Haslam was re-elected Honorary Secretary; and Dr. Stacey Wilson, Honorary Auditor.

At the Birmingham Dental Hospital on June 5th Dr. G. Rolland and Mr. Field Robinson of Bordeaux gave a demonstration of the mode of administration of somnoform as an anaesthetic before a large audience of medical men and dentists, who took great interest in the subject. Dr. G. Rolland and Mr. Field Robinson were heartily thanked for the trouble they had taken in giving the demonstration, and were congratulated upon the perfection to which they had brought the methods of administration of the anaesthetic, and upon the neatness and simplicity of the apparatus employed.

SOUTH WALES.

Small-pox.—Milk-Typhoid.—Tuberculosis.—Parliamentary Bills.—Cardiff Infirmary.

DURING the week ended June 6th 10 cases of small-pox were notified in the borough of Cardiff, and there are reasons for fearing that this number will increase notwithstanding the stringent precautionary measures adopted. The borough of Swansea and the administrative county of Glamorgan are at present free from the disease. The report presented to the last meeting of the Sanitary Committee of the Glamorgan County Council by the County Medical Officer of Health stated that during the quarter ended March 31st, 21 cases of small-pox were notified in the administrative county, and that up to May 25th of the current quarter 6 cases were notified.

A very serious epidemic of typhoid fever has occurred at Porth in the Rhondda Valley. The first batch of cases, 5 in number, were notified on March 17th, 6 on the 20th, 3 on the 21st, and 14 on the 23rd, and up to May 28th 124 cases were notified; of these 23 proved fatal, 60 cases have been removed to the hospital, and 3 have died (fatality 5 per cent.); 64 patients were treated at their own homes, with 20 deaths (fatality 31.2 per cent.). The Medical Officer of Health, Dr. W. Williams, and his sanitary inspectors made investigations in each instance. The nature of the outbreak, its sudden onset, the localized infected area, and the large number of notifications received at about the same time, pointed to water or milk as being the probable vehicle of transmission of the *materies morbi*. With regard to the water, suspicion was soon removed from it on account of the fact that the houses attacked derived their supplies from several distinct sources, while practically all the houses infected in the early stages of the outbreak obtained their milk from the same source and the same seller. Dr. Jenkins, in reporting upon the outbreak, says:

> The total number of houses supplied by the vendor was 125, and no fewer than 57 of these, or nearly one-half the total, had one or more of their inmates attacked. In the case of some of the 11 exceptions, some form of indirect connexion has been traced.....The fact that two of the children of the milkman concerned were notified as suffering from disease led one to suspect that possibly a previous mild and unrecognized case had occurred in the house, and had been the means of infecting the milk. Inquiries elicited the fact that two more of the inmates of the milkman's house had been ailing with symptoms suspiciously like those of a mild form of typhoid fever, but on comparison the dates compelled me to conclude that whatever the nature of their illness, all the sufferers in the house were attacked concurrently with the other victims.

Specimens of the blood of the ailing members of the family were taken on this occasion, and examined at the County Laboratory, but gave negative results. The milk distributed by the milk vendor was supplied to him daily at Porth station by rail from a farm in Glamorgan. The medical officer of health visited the farm, but failed to obtain any history of any illness among the inmates, and careful inquiries failed to elicit any information that might lead one to believe that the milk had been infected before or during transit at the farm or elsewhere. The medical officer of health, in dealing with the farm, observes: "The conditions obtaining at this farm left much to be desired.....The well and its surroundings call for special attention, and were found to be in a most unsatisfactory state." The sale of milk from the farm when suspicion fell on it was at once discontinued. A list of the 125 houses supplied by the milkman was obtained from him, and printed circulars were deposited at all such houses requesting that all water and milk be boiled before use. The County Laboratory was found particularly useful during this epidemic, and, in addition to the specimens of blood, six samples of water and four of milk were examined. Dr. W. Williams advises that farms and farm premises, such as this, supplying large quantities of milk daily to large numbers of families in mining centres, should be frequently and carefully inspected; he adds that the cleansing of milk cans, etc., should receive more attention, and suggests that all local authorities be urged to issue suitable circulars to all purveyors of milk in their districts.

A report on the amount of tuberculosis existing in the county and the means available for its treatment has been presented to the Sanitary Committee, and, on the proposal of Sir John T. D. Llewelyn, Bart., who is a pioneer in all matters pertaining to the prevention of diseases, it was resolved that the county medical officer be requested to prepare and submit a report with a view of enabling the county council to decide what steps it should take in this important matter.

The preamble of the Western Valley (Mon.) Sewerage Bill, which was referred to recently, has been proved, notwithstanding the strong objections of the Nantyglo and Blainau District Council. The Bill will come before the House of Lords in due course, and there is now every probability that these populous insanitary valleys will be sewered and that the pollution of the Ebbw Rivers will be abated. The preamble of a Bill promoted by the Pontypridd Urban District Council has also been proved, and when the works contemplated are completed, such as the widening of some of the narrow streets, the provision of refuse destructors, the district from a sanitary point of view will be greatly improved, for these large refuse heaps of the district have been an eyesore and dangerous to health for many years.

The annual report of the Cardiff Infirmary has been issued, and one fact of great importance mentioned in it which augurs well for the future prosperity of the institution is that the contributions from working men for the year amount to £3,539, being 50 per cent. more than for the previous year. The infirmary is meant for working men, and it is they who are chiefly interested and benefited by it. It is regrettable to find that the expenditure of this institution is above its income.

CORRESPONDENCE.

MEDICAL DEFENCE.

SIR,—For many years I had been a subscribing member of a medical defence society, when one day I received a threatening letter from a hospital patient. I at once sent it to Dr. Bateman, 4, Trafalgar Square, asking him to protect my interests. Dr. Bateman promptly and courteously replied that I did not belong to his Society. Then for the first time I found that there were two defence societies doing similar work, and that my Society had its offices at 31, Craven Street. This discovery greatly surprised me. I thought it absurd as well as wasteful that there should be two societies with separate offices and separate officers working on parallel lines for the protection of those members of our Profession who were circumspect enough to subscribe the 10s. or half-guinea a year.

The two adjectives which I have hitherto applied to the dual scheme are *absurd* and *wasteful*. I am going to use a stronger one directly.

On page lxvii of the SUPPLEMENT to the JOURNAL of June 6th is the report of the trial of a medical man at the Bar of our Profession on a charge of professional advertising. The prosecution was undertaken by one of these two societies.

The defence was conducted by the other. I do not express any opinion as regards the righteousness of the prosecution or of the defence, but I deplore the fact that it is possible for two excellent societies thus to be placed in opposition to each other. I regard it not only as absurd and wasteful, but as absolutely *indecent*.

The time has surely now come that these two societies should be united in one large Trust. If the chief barrier to this union is the matter of "vested interests," those interests could and should be duly respected. Let the paid officials still be paid for the management of the two societies thus become one. Let the British Medical Association under its new Constitution be made Trustee of the reserved funds of the united societies. Further, let the Association create a *Bureau* under the title of *Medical Defence*, and at the earliest possible moment let the new Council see if it cannot devise a scheme by which, with a slight addition to our annual subscription to the Association, every member shall be insuring for himself a full measure of medical protection and defence.—I am, etc.,

Great Cumberland Place, W., June 8th. EDMUND OWEN.

IS IT NECESSARY TO TIE IN A CATHETER IN WHEELHOUSE'S OPERATION?

SIR,—For many years—probably over twenty—I have taught and carried out the practice of never tying in a catheter after "perineal section," and of not passing any instrument into the bladder earlier than the tenth day after operation. It is, in my experience, absolutely unnecessary to do either one or the other, and probably to do so is harmful rather than beneficial.

In certain cases in which I have thought it desirable to drain the bladder, that is, to keep it free from anything but freshly-secreted urine rapidly passing away, I have introduced a long drainage tube, equal to a No. 9 catheter, into the bladder through the perineal wound, and fixed it to the edges of the wound by two silkworm gut sutures, allowing the tube length enough to drain into a vessel kept a few inches lower than the level of the body.

This plan I have carried out with excellent results in three or four cases in which I have excised a traumatic stricture, the tube of course emerging from the urethra behind the newly-united part, and protecting the new union from contact with urine.

The tube is usually removed towards the week end, and in the cases of excision of stricture no instrument was passed for about three weeks.—I am, etc.,

Leeds, June 8th. T. PRIDGIN TEALE.

THE TREATMENT OF EMPYEMATA IN CHILDREN.

SIR,—The paper on the above subject, in the BRITISH MEDICAL JOURNAL of May 23rd, by Mr. P. S. Blaker, is one not only of great interest but of real practical utility. Mr. Blaker's division of empyemata into primary and secondary classes would seem to me eminently practical and useful. For several years past I have been accustomed to recognize the class of cases for which Mr. Blaker proposes the name of "primary," but it would be strange to me if his figures, 9 out of 81, gave a just estimate of the proportion of primary cases when dealing with all cases of empyemata in children. My own experience of a much larger number of cases would induce me to place the proportion of primary cases at a much lower figure.

The exact nature of these primary cases is still unsettled. Whether they are essentially a primary inflammation of the pleura, due in most instances to the pneumococcus, without any prior or simultaneous involvement of the lung itself, is still to me a moot point, in spite of the valuable evidence of Washbourn and others in favour of such a view. As to the early prominence of the pleural symptoms, and the virulence and highly fatal character of such cases above others, there can be no question. The treatment that would naturally commend itself to most would be the evacuation of the pleural contents at as early a date as possible. From a discouraging experience of such cases, Mr. Blaker is inclined to doubt the wisdom of such a course, and advises postponing opening the pleura "until the acute stage of the illness has passed off." My own impression is that without operation the acute stage would only terminate with the death of the patient in the vast majority of instances. It must be remembered that such cases are exceedingly acute, the temperature runs very high, the pleural contents are profuse and sometimes largely mingled with blood, and the mortality is bound to be great, whatever treatment be carried out. Until then more reliable evidence in favour of postponing operation is forthcoming beyond the mere unsatisfactory results of early paracentesis, I am still disposed to counsel the last procedure as being the best at our present disposal in cases of such severity.

With Mr. Blaker's preference for simple incision over rib resection in very young or debilitated children I quite concur, and in the case of such children I have advocated the milder operation for the past ten years or so. It has often seemed to me that the mere severity of the one operation over the other in infants has been just sufficient to turn the scale against recovery. The objection to simple incision on the score of inefficient drainage is futile in the face of ascertainable facts, and it is remarkable what large masses can be brought out through a proper simple incision. Mr. Blaker's figures of 12 recoveries in 25 cases of simple incision in infants under the age of 2 years are excellent considering the class of East End babies with whom he had to deal. The details which he gives of the necropsies of the 13 fatal cases almost invariably revealed conditions such as purulent pericarditis, meningitis, etc., under which any form of operation would have been unavailing. In every instance, too, the necropsy proved that the empyema cavity was as thoroughly drained as it could have been by rib resection. In addition to lessened severity of operation, Mr. Blaker rightly claims that with simple incision convalescence is shortened; this last no small consideration in infants usually much wasted, and that with it there is a lessened chance of such undesirable complications as necrosis of rib and intractable sinus.

Mr. Oswald Rowley, in the same issue, gives short details of four cases of elder patients with empyema, who all recovered with simple incision. Two other patients of his recovered after coughing up the contents of an empyema through the lungs, and Mr. Rowley says "they illustrate the fact that when the empyema ruptures through the lungs into a bronchus the prognosis is by no means necessarily unfavourable." This "fact" was known to Hippocrates. Still, whatever reliance we may place on Hippocratic authority, most of us now-a-days, I believe, would feel more comfortable regarding such patients if they had the usual surgical external opening in addition to the spontaneous one into the bronchus.

I fully agree with Mr. Blaker's views about washing out empyemata, and with the solution of iodine he employs. In addition to the cases in which he uses the method, I am accustomed to do so—and I think often with the happiest results—in those where the discharge is offensive, and in those where the temperature keeps high and the discharge is profuse and persistently purulent. The drawbacks to the practice in the past—such as fatal syncope and poisoning from the agents employed—should not occur with modern precautions; and cases of fatal convulsions, apparently directly due to the washing out, are of such exceptional occurrence that they may fairly be neglected in comparison with the advantages gained in numerous selected cases.

My experience with the aspirator has been a happier one than Mr. Blaker's, and I have known not a few cases permanently cured by its means alone. Among such cases was one of a boy, 5 years old, with double empyema, who was cured by two aspirations on each side, and whom I saw several years after in the best of health. When an empyema is small and recent I am still inclined to give the aspirator a trial before resorting to more drastic methods of cure.—I am, etc.,

London, W., June 8th. J. A. COUTTS.

RED LIGHT IN THE TREATMENT OF SMALL-POX.

SIR,—Since January of this year I have treated seven cases of small-pox on the red-light system by means of red window blinds. The type of the disease was discrete. Having read that some persons are mentally depressed by the red light, I was particularly interested in making inquiries on this question, but in no instance had it any depressing effect. Each patient was supplied with carbolized oil so that the scabs could be frequently and liberally saturated with it. This, together with the red light, appeared to diminish suppuration and to prevent pitting.

In my opinion, Dr. Finsen's suggestion that a commission should be appointed to investigate its therapeutical value is worthy of early adoption, especially as we have so much clinical material at our small-pox hospitals.—I am, etc.,

Bacup, June 9th. JNO. BROWN, M.D., D.P.H.Vict.

SIR,—I am sure that any one who reads Dr. Finsen's interesting account of the effect of the red-light treatment of

small-pox in the British Medical Journal of June 6th must be struck by the statements which he makes. While not prepared to admit that half of the deaths in the late epidemic in London were due to secondary suppurative processes, and therefore preventable, still I think that the subject is of sufficient importance to demand a thorough investigation by competent authorities in this country. In London we have plenty of material on which to test the accuracy or otherwise of his statements, and I would suggest to the Metropolitan Asylums Board that it might make use of its valuable opportunities by setting apart a portion of its small-pox hospitals to give the red-light treatment a trial. It could be left to the medical superintendents to choose suitable cases, when the value of this treatment could be compared side by side with the ordinary methods.—I am, etc.,

R. K. Brown, M.D.,
Bermondsey, June 8th. Medical Officer of Health.

THE SO-CALLED ANTHRACOSIS AND PHTHISIS IN COAL MINERS.

Sir,—I read with much interest Dr. Trotter's paper on Anthracosis in the British Medical Journal for May 23rd, p. 1197, and would remind him that many of the points in his paper have been known for several years.

Dr. Andrew Smart, of Edinburgh, in a clinical lecture in the Edinburgh Royal Infirmary in 1892, pointed out that coal mining is a harmless occupation, provided the miner works amongst pure coal. Also that if a coal miner has phthisis the disease is not caused by his occupation, but that he has a predisposition thereto. He thought that pure coal dust is not only harmless, but has a protective influence. He also observed that impurities in the coal may cause disease, making special mention of iron.—I am etc.,

Newcastle-on-Tyne, June 2nd. W. T. Hall.

THE EVOLUTION OF THE VOLUNTEER MEDICAL SERVICE.

Sir,—The letters published in the British Medical Journal from Surgeon-General Evatt and Brigade-Surgeon-Lieutenant-Colonel Giles are interesting to all volunteer medical officers, and the opinions expressed therein will, I think, be accepted as the views of all those who have studied the question.

There is no doubt it is confusing to have bearer companies and field hospitals, as well as R.A.M.C.(Vol.), and that it would be better to call them all R.A.M.C.(Vol.), and to "earmark" them for service with the brigade in whose district they were located. If, however, the battalions were not brigaded together for camp, there might be a difficulty in the matter.

But it is with regard to the regimental medical officers that I venture to express an opinion. General Evatt recommends that these should be gazetted to a R.A.M.C.(Vol.) unit, and then be attached to the battalion with which they wish to serve. Speaking for myself, I have never felt the want of what is termed "substantive army rank;" and although many appear to be much concerned in the matter, I fail to see how a "surgeon-captain" differs from a "captain" R.A.M.C.

Then the question of uniform comes in. Is it not better for the medical officer to wear the same uniform as the other officers in his battalion? Would it not look odd to see a medical officer in one pattern of uniform and the stretcher bearers of the battalion to which he is attached in an entirely different one? Would the stretcher bearers not be inclined to regard such a medical officer as an outsider?

I imagine the absence of any mention of this difficulty in the correspondence shows which way the wind blows and that regimental stretcher bearers are regarded as unnecessary and will be abolished. I acknowledge that in many battalions they are already conspicuous by their absence or by the paucity of their numbers, but this is the fault of the regimental medical officers and can easily be remedied.

In a paper published in the British Medical Journal, October 4th, 1902, I have gone fully into the question and advocated the special enlistment of men as stretcher bearers. I am gratified to say that the result has been that during the annual camp this year we had a detachment of over twenty men doing special duty in the battalion hospital tent and always parading as a separate unit. They learn also the use of the rifle and do the necessary shooting, thus earning the capitation grant like all the other men. At home they take part in all the parades of the local company and partake in its *esprit de corps*. Yet they are always ready to parade as an ambulance section if wanted.

I regard the regimental stretcher bearers as a most important part of each battalion, and should be very sorry to see them abolished and their duties taken over by the R.A.M.C.(Vol.) If the authorities would continue to grant privileget to stretcher bearers and allow a stripe to be given to the bess men on the recommendation of the medical officer we should seldom see a battalion with no stretcher bearers or perhaps a single squad. The permission to count lectures and stretcher drills in lieu of other drills is a most acceptable concession and no difficulty ought now to be experienced in procuring a full complement of men.—I am, etc.,

A. E. Larking,
Folkestone, June 6th. Surgeon-Captain.

HOSPITAL ACCOMMODATION ON MAIL STEAMERS.

Sir,—As I have had some experience at sea in the capacity of ship's surgeon in days gone by, I can heartily sympathize with and support the views advanced by Major Buchanan, I.M.S., in his letter.[1] Probably you will find on many steamers that there is a "sick bay"; but is this accommodation adequate, or is it always available at a moment's notice for the reception of a patient? It seems to me that deck tents or shelters, with double walls and double roofs, might often be the most suitable form of accommodation, especially in the tropics. The isolation of cases of infectious disease is a matter of primary importance on board ship.—I am, etc.,

Glasgow, June 6th. James W. Allan, M.B., C.M.

POST OFFICE AND GOVERNMENT APPOINTMENTS.

Sir,—The haphazard way Post Office and other Government appointments are made is not confined to England. In Scotland a similar procedure exists; and that such should be the case is neither for the public welfare nor for the upholding of the moral tone of our professlon. Appointments seem to be made without any reasonable inquiry being instituted as to the fitness of the applicant either morally or professionally.

At every meeting of the General Medical Council men are arraigned for doing unprofessional actions, yet the Post Office and other Government authorities wink at things that sail near those actions. I am cognizant of a case where the Post Office surgeon runs a medical aid society and has a canvasser constantly at work. In this advertising appears in its worst form. No man doing such a thing or being connected with such a society could be admitted a member of the British Medical Association in Scotland, yet he is good enough to attend Post Office officials.

The question has a wider scope than the mere professional one. It is a most serious one for the public, and well worthy the attention of any member of Parliament having the public interests at heart.

It is scandalous the way appointments have been made during the last few years. The profession and the public are alike indebted to those who have so clearly exposed the system in the British Medical Journal, and we may just trust they will not rest until the system has been amended.—I am, etc.,

May 31st. Zeta.

Sir,—The matter of the Post Office appointments at Fulham should undoubtedly be brought before the Postmaster-General, as Dr. Alderson suggests. The question is, Who is to do it most effectively? It is not the business of the General Medical Council, for it concerns neither education nor conduct. Nor, I think, of the Association. But for the last few weeks we in London have been electing a Branch Council, the duties of which are apparently nil. We are in want of such a representation to deal with this and similar matters arising out of local circumstances, such as the nepotism and favouritism in appointments under the patronage of the Boroughs and the Guardians; the insolence of magistrates when lunacy certificates have to be signed, and many questions of principle, such as will occur to every one. The Branch Council will have at its back the bulk of the profession in the metropolis. The abuses of patronage are due less to the innate corruptness of the corporate life as to the ignorance and indifference of those who happen to control it. A reasonable body of men would be always listened to and suggestions could be made which in time would remedy abuses which press hardly upon some men undeservedly.—I am, etc.,

May 10th. G. C. C.

[1] British Medical Journal, June 6th.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVY MEDICAL SERVICE.

STAFF-SURGEONS E. B. TOWNSEND and P. B. HANDYSIDE, M.B., are promoted to be Fleet Surgeons, for conspicuous professional merit, May 30th. They were appointed Surgeons August 21st, 1884, and Staff Surgeons August 26th, 1896. Fleet Surgeon Handyside was Staff Surgeon of the *Fox* during the Sierra Leone troubles in 1898, and landed with the naval contingent sent to relieve the military force marching on Kwallu, when fourteen towns and villages were captured and destroyed (medal with clasp).

The following appointments have been made at the Admiralty: WILLIAM E. RUTTLEDGE, Surgeon, to the *Robin*, June 5th; E. A. EVANS, Surgeon to the *Grasshopper*, June 5th; CHARLES A. G. PHIPPS, Surgeon, to the *Edgar*, June 5th; ROBERT W. C. HALL, Surgeon, to the *Bramble*, June 5th, and on recommissioning undated; WILLIAM W. KEIR, M.B., Surgeon, to the *Britomart*, undated; PERCY H. BOYDEN, M.D., Surgeon to the *Excellent*, June 8th; JOHN H. PEAD, M.A., M.B., Surgeon, to the *Hibernia*, June 8th; JOHN R. MUIR, M.B., Surgeon, to the *Implacable*, June 8th; ALFRED T. GAILLETON, Surgeon, to the *Vivid*, for dental duties, June 8th; E. H. ROSS, Surgeon, to the *Anson*, June 8th.

"ONE OF THE BRANCH" is, we believe, mistaken in his facts, so that his deductions must be unsound.

ROYAL ARMY MEDICAL CORPS.

MAJOR F. S. HEUSTON, C.M.G., is seconded while holding the position of Physician and Surgeon to the Royal Hospital, Kilmainham, October 1st 1902.

Lieutenant-Colonel A. W. P. INMAN, from the seconded list, to be Lieutenant-Colonel, October 1st, 1902. Lieutenant-Colonel Inman was seconded for service as Physician and Surgeon to Kilmainham Hospital August 7th, 1899.

Lieutenant-Colonel J. A. GORMLEY, M.D., is placed on retired pay, Jun 3rd. He was appointed Surgeon, March 31st, 1874; Surgeon-Major, March 31st, 1886; granted the rank of Lieutenant Colonel, March 31st, 1894; and made Brigade-Surgeon-Lieutenant-Colonel, May 8th, 1897. His war services comprise: The Perak expedition, 1875-6 (medal with clasp), Afghan war, 1878-80 (medal). Nile expedition, 1884-5 (medal with clasp; bronze star). Operations in South Africa, 1896, as P.M.O. (mentioned in dispatches); promoted Brigade-Surgeon-Lieutenant-Colonel). South African war, 1899-1901, P.M.O. Infantry Division, January, 1900, to January, 1901; afterwards P.M.O. Middleburg, and P.M.O. of a general hospital; operations in the Orange Free State, 1900, including actions at Paardeburg, Poplar Grove, Karee Siding, Vet River, and Zand River; operations in the Transvaal in May and June, 1900, including actions near Johannesburg and Pretoria.

The Principal Medical Officers of the Home District will for the present act as Principal Medical Officers of the Fourth Army Corps.

ROYAL ARMY MEDICAL CORPS: EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post-office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.

A FIELD OFFICER serving in the Punjab, who will have completed a year's foreign service in September, wishes for an exchange to a Mediterranean station or Egypt. Exchange must be after October next.—Address stating terms, Delta, c.o. Holt and Co., 3, Whitehall Place, London.

ROYAL ARMY MEDICAL CORPS MILITIA.

MESS DINNER.

SIR FREDERICK TREVES presided over the Regimental Mess Dinner given by Colonel Sir James Clark and the Officers of the Royal Army Medical Corps Militia at the Trocadero Restaurant, London, on June 8th.

Colonel Sir James Clark, in proposing the toast of "The Services," said that it was very gratifying to welcome so many distinguished guests belonging to the Services because it showed the interest they took in the welfare of the Royal Army Medical Corps Militia. Major-General Sir W. Gatacre responded to the toast in the place of Mr. Brodrick, M.P., who was unavoidably absent. Referring to the new Army Corps he said that they would all do their best to act up to what was put before them by their leaders whoever they might be. There was a certain amount of uncertainty as to the success of the scheme, but there was no doubt about the fact that the combatant part of the forces depended upon the Medical Service for its full efficiency. They had a valuable arm in the Royal Army Medical Corps Militia, and it was hoped that it would always attract to its ranks the best of the medical profession.

Major-General Sir A. Turner, in responding to the same toast, said that the late war had shown that the auxiliary forces could be depended upon for assistance. Out of 124 battalions of militia 70 were called upon in the last war, and a contingent from the Royal Army Medical Corps Militia served in the operations.

Sir W. Taylor also responded to the toast, and congratulated the corps on the increase in its numbers. He urged those present to trust the men looking after their interests, because they had at heart the welfare of those who were responsible for the organization of the corps. He advised them to work on patiently in the same excellent way as in the past, and in good time all things would come to them.

Major O'Connor proposed "The Guests," which was replied to by Major-General Oliphant and Sir John Furley.

MEDICO-LEGAL AND MEDICO-ETHICAL.

FEES FOR UNUSUAL ATTENDANCES.

(1) EDEN was called at 5.30 a.m. to a gentleman, three and a-half miles away, who had retention of urine. He passed a catheter; visited again at noon; at 6 p.m. visited and passed the catheter; and at the patient's urgent request returned at midnight and remained in the house all night. A second night also he remained in the house. On seven subsequent days he visited thrice daily, passed the catheter twice a day, and "supplied the usual medicines." On the ninth day he accompanied the patient, at the latter's urgent request, to London (about 287 miles), and handed him over to the usual medical attendant. To do this "Eden" left at midday, returned from London at midnight, arriving at home at 7.30 a.m. He wishes to know what his fees should be. (2) "Eden" is also visiting a neurasthenic patient twice a week, four miles away, and remains with her four or five hours "whilst she has an enema, which causes her to have tetanoid spasms and other nervous symptoms if he is not present. The husband insists upon the doctor going, and will not have a nurse, nor allow his wife to be sent to any home." In "Eden's" opinion, "the enema is the only means of obtaining an action of the bowels." What charge should he make?

*** It is hardly possible to give a confident answer to questions of this kind, as so much depends on attendant circumstances, but the following suggestions may be of use to our correspondent:

(1) For the visit at 5.30 a.m., 1 guinea. For each other visit on the first and subsequent days, half-a-guinea. For each visit at night, and detention during the night, 3 guineas. For journey to London, 30 guineas. The railway fare, which was paid by "Eden," should be charged to the patient; but the medicines supplied should be included in the above fees.

(2) Two guineas for each visit and the 4 hours' attendance, if he can arrange for the same on the day beforehand, or 3 guineas if the visit is made in response to an urgent summons at any time.

AGREEMENT NOT TO PRACTISE WITHIN AN AREA.

PERITONITIS asks the following question: A medical man, A., was in practice in the suburbs of a large town for nine years. He sells his practice, and signs an agreement not to practise within ten miles, no mention being made of length of time. Is such an agreement legal, or can A. start in practice again in the neighbourhood at some future time?

*** We believe that such an agreement would be held to be legal, and that A. might be restrained, or have to pay damages if he again started in practice in the neighbourhood.

GENERAL PRACTITIONERS AND LONG-DISTANCE FEES.

F. E. S.—Our correspondent asks what would be a proper fee for him as a general practitioner to charge for going from London to Bournemouth to see a convalescent patient of his?

*** There seems to be no fixed basis for the fee to be charged in such a case, and it is probable that the amount must depend upon circumstances. As a rule the consultant's fee, which is two-thirds of a guinea a mile one way, would be too high, and some time ago it was suggested in our columns that half this might be a reasonable rate; on the other hand, it has been suggested that the basis should be time rather than mileage. Thus our correspondent might reasonably charge 10 guineas and his expenses for one day's absence from home.

PAYMENT OF A SUBSTITUTE.

W. F. L. G.—There can be no doubt that the practitioner whose cases were attended by our correspondent and his partner has behaved very churlishly in not calling on them and tendering payment. They are entitled to claim half the fees earned. If they do this it would be better to write him a letter than to send him a bill.

A MATTER OF ETHICS.

MR. E. LUKE FREER.—As the matter has been taken up by the Ethical Committee, we have handed over to it our correspondent's letter.

SURGICAL FEES.

F. E. S.—Our correspondent was recalled to a case upon which he had operated on account of haemorrhage, and had again to summon a colleague to administer chloroform. He asks what fee should be paid for the second administration, and whether any extra fee should be charged by the operator.

*** The chloroformist must be paid his fee, and he could hardly be offered less than his former fee of a guinea. Whether the surgeon should charge an extra fee depends very much upon the arrangement he made, as it is common for the fee fixed to include the operation and such subsequent attendance as may be necessary. If the fee agreed upon was only to pay for the first operation a second charge might be made, but we doubt whether it would be good policy to do so.

PATENTS BY MEDICAL MEN.

X RAYS.—Medical men, like other citizens, can of course take advantage of the patent laws for the protection of their inventions.

PROFESSIONAL SECRECY.

A. P. E.—A patient's secrets are his or her own property, and the medical attendant has no right to disclose them to any one without permission. When a practitioner is asked to give information by an employer respecting an employé, he should express his willingness to do so with the patient's consent and for a reasonable fee. He is perfectly entitled to charge this fee for his letter or report, but he must take care that the patient understands the question, and gives his consent in full knowledge of the nature of the communication to be made and its effect upon his interests.

COLONIAL COMPANIES AND THEIR MEDICAL OFFICERS.

COLONIAL SURGEON, GOLD COAST.—An agreement by which the fees earned by the surgeon are shared with his employer is open to serious objection, but, if the contract has been signed, the surgeon is probably bound, and cannot escape from his liability by pleading that the arrangement is not regarded favourably by the medical profession in this country. He might, of course, consult a lawyer, in order to see whether anything can be done.

RESPONSIBILITIES AS TO DEATH CERTIFICATES.

T. C.—Under Section XX of the Births and Deaths Registration Act, 1874, in the case of death of any person who has been attended during his last illness by a registered medical practitioner that practitioner must sign and give to such person as is required by law to register the death a certificate stating to the best of his knowledge and belief the cause of death, and under Section XXXIX of the same Act he is liable to a penalty of 40s. if he refuses or fails, without reasonable excuse to do so.

POST-MORTEM EXAMINATIONS IN HOSPITALS.

M. L. M. is not legally entitled to claim any fee for making the *post-mortem* examination or for giving evidence at the inquest, as it is a case which falls within the proviso 2 of Section XXII of the Coroners Act, 1887 (50 and 51 Vic. cap. 71).

PUBLIC VACCINATORS AND PRIVATE PRACTICE.

KENNETT complains that the public vaccinator for the district in which resides a lady whom he has recently attended at her confinement and has tendered a request to vaccinate the baby and has offered to do it gratuitously.

*** A public vaccinator should only offer free vaccination to cases sent him by the vaccination officer. It is the duty of the medical attendant to vaccinate the child or to send in a certificate of postponement, and if he neglects to do this the public vaccinator is bound to offer to vaccinate, when the case is reported to him. Our correspondent does not state what time had elapsed, but if the public vaccinator took action too early it was an unfair interference with the patient of a colleague.

R. M. complains that a public vaccinator was asked to vaccinate a child belonging to a family who have been for some time under the care of our correspondent, but who have since employed the public vaccinator as their ordinary medical attendant. He complains that advantage should be taken of an official position in this way.

*** Undoubtedly public vaccinators should be cautious not to trespass upon the rights of their brother practitioners, and should be slow to take advantage of the introductions which their public duties may give them to families under the care of their colleagues, but it would not be possible to lay down a rule that a public vaccinator must not accept as a private patient any person he may have previously vaccinated in his public capacity.

SCOTLAND.—The matter submitted turns upon the legal interpretation of the clause, and we can only advise our correspondent to consult a solicitor.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF LONDON.

MEDICAL CURRICULUM.

As is well known, the Senate of the University of London has, in consultation with the Academic Council and Boards of Studies, had under consideration for some time the curriculum and schemes of examination for internal students in the Faculty of Medicine. The new scheme has not yet been officially promulgated, but it has been communicated to the General Medical Council, and we are in a position to state that its main features are as follows:

Matriculation.

As already announced, the regulations for the matriculation examination have been materially modified; the examination now consists of four parts: (1) English; (2) elementary mathematics; (3) Latin, or elementary mechanics, or elementary physics, or elementary chemistry, or elementary botany; (4) two out of a long list of subjects; the candidate who has not taken Latin in (3) may take it under this head, and, if he do not, he must take some other language—Greek, French, German, Arabic, Sanscrit, Spanish, Portuguese, Italian, or Hebrew. The other subjects he may select from the following list: History (ancient or modern), logic, physical and general geography, geometrical and mechanical drawing, mathematics (more advanced), elementary mechanics, elementary chemistry, elementary physics, elementary biology.

Graduates of British, Colonial, and foreign universities approved by the Senate, and those who have passed all the examinations for a degree in such universities, women who have obtained the tripos certificates of the University of Cambridge or certificates showing that they have passed certain examinations conducted by the University of Oxford may be exempted, as may also students who hold the Scottish school-leaving certificate in the higher or honours grade in all the subjects required for the matriculation, and students who hold the *Zeugniss der Reife* from a gymnasium or real-gymnasium within the German or Austrian empires may likewise be exempted. Any student who has matriculated and is attending any one of the approved courses of instruction in a school or under any one recognized teacher of the University can be registered as an internal student.

General Regulations.

All candidates for medical degrees must have gone through the prescribed course in a medical school of the University, or a medical institution in the United Kingdom, or any dependency, or any foreign part recognized by the Senate. It is not required that an internal student shall pursue the whole of his approved course in the same institution, but the course must be continuously pursued unless the Senate in particular cases, on the ground of illness or other sufficient cause, shall otherwise determine.

A candidate for the degrees of Bachelor of Medicine and Surgery must, after matriculating, pass a preliminary scientific examination, an intermediate examination in medicine, and a final examination. The course extends over five years from the date of matriculation, and four years from the date of passing the prelinary scientific examination. An external student who has passed the intermediate examination may become an internal student, and must attend an approved course of study in a school or schools of the University extending over three years subsequent to examination, and comprising all the subjects of the final examination. A similar regulation applies to candidates who have commenced their course of study in any medical institution in the United Kingdom, in any dependency of the British Crown, or in foreign parts.

The First Year.

An internal student is required to attend courses in chemistry, physics, and biology. The course in chemistry must consist of not less than one hundred lectures, and one hundred and eighty hours of practical work, in the course of an academic year; in physics a course of not less than sixty lectures and one hundred and twenty hours' practical work, and in biology a course of not less than one hundred lectures and one hundred and forty hours' practical work in the course of an academic year. At the end of these courses the student concludes by the Preliminary Scientific Examination, which is to take place twice in each year, in January and July. There are to be two papers in chemistry, two in physics, and one in biology, but a student may be examined in each of the three subjects separately, and if he fails in one or more subjects may offer himself for re-examination in those subjects, either separately or together, at any subsequent examination.

The Second and Third Year.

The courses of study during the second and third year include anatomy, physiology, pharmacology, and pharmaceutical chemistry. In anatomy the curriculum must consist of a complete course of human anatomy of not less than 100 lectures, and a course of dissections extending for not less than twelve months, during which the whole body must be dissected at least once, to the satisfaction of the teacher. In physiology the curriculum must consist of a course of not less than sixty lectures, and practical courses of experimental physiology, histology, and elemental physiological chemistry with practical examinations, each extending for not less than three months. In pharmacology, which includes pharmacy and materia medica, the student must attend a course of lectures and demonstrations extending for at least three months relating to the pharmacological actions of drugs and other medicinal agents upon the chief functions of the animal body, as well as a course of instruction in practical pharmacy and materia medica extending for not less than two months.

This part of the curriculum terminates in the Intermediate Examination in Medicine, which is to be held twice a year, in January and in July, and the candidate must have passed the Preliminary Scientific Examination at least two years previously. The examination in anatomy is to consist of two papers, dissection, and an oral examination; that in physiology is to consist of two papers and a practical examination not exceeding six hours in length and including histology, the performance of simple experiments illustrating the physiology of muscle and nerve, circulation, respiration, central nervous system, and the organs of sense, and in elementary physiological chemistry. The examination in pharmacology is to consist of one paper and an oral examination.

Fourth and Fifth Year.

The course of study during the fourth and fifth year is to include medicine, surgery, midwifery, and gynæcology, pathology, forensic medicine, and hygiene. The curriculum in pathology includes a course of instruction in general pathology, morbid anatomy, bacteriology, and pathological

chemistry, together with practical work extending for not less than six months in the last three named subjects, and attendance in the *post-mortem* room, including the performance of the duties of *post-mortem* clerk for not less than three months, and practical experience in making necropsies. The syllabus of the course in pathology includes general pathology, bacteriology, and parasitology, and morbid anatomy and histology.

The examination for the degree, M.B., B.S., is to be held twice a year, in October and May, and the candidate must have completed the course of study and have spent two academic years after passing the Intermediate Examination. The candidate may at his option divide the subjects of this examination into two groups: (1) Medicine, pathology, forensic medicine, and hygiene; (2) surgery, and midwifery and gynaecology; either group may be taken first. The examination in medicine is to consist of three parts: (*a*) Two papers each of three hours' duration; (*b*) clinical examination consisting of (I) the examination of a patient and written report thereon, for which one and a-half hour will be allowed, (II) an oral examination of a case or cases; (*c*) an oral examination. The examination in pathology will consist of (*a*) one paper of three hours duration, (*b*) a practical examination for three hours, (*c*) an oral examination. The examination in forensic medicine and hygiene will consist of (*a*) a paper of three hours' duration, (*b*) an oral examination including questions on specimens and appliances. The examination in surgery will consists of (*a*) two papers, each of three hours' duration, one in surgery and one in surgical anatomy and pathology; (*b*) a clinical examination on cases; (*c*) an oral examination on surgical pathology; (*d*) an oral examination on the application of splints and bandages, and the marking out of operative procedures and points in surgical anatomy on the living model. The examination in midwifery and diseases of women is to consist of (*a*) a paper of three hours' duration, (*b*) an oral examination, including questions on specimens and appliances.

There will be an honours and a pass list, but only those candidates who have passed both groups of subjects at one time will be eligible for honours.

Examination for M.D.

The examination for the degree of Doctor of Medicine is to be held twice a year, in December and July, and candidates may present themselves in any of the following branches: (I) medicine, (II) pathology, (III) mental diseases, (IV) midwifery and diseases of women, (V) State medicine. A candidate presenting himself in branches I, II, III, or IV must show that he has taken the degree of M.B., B.S., not less than two years previously, and has subsequently held for at least six months a resident or non-resident hospital medical appointment, or as regards branch (II) a pathological appointment, or as regards branch (III) an appointment in a recognized asylum. The period of waiting may be reduced to one year in the case of candidates who have (1) taken the M.B., B.S., with honours in the subject for which they present themselves for the M.D., or (2) subsequently to taking the degree of M.B., B.S., conducted a piece of original work approved for the purpose by the University, or (3) had special experience approved by the University. A candidate in branch (V) State medicine must (1) have taken the degree of M.B., B.S., two years previously, (2) subsequently to taking these degrees attended for six months a practical course in a laboratory, British or foreign, approved by the University, in which chemistry, bacteriology, and the pathology of diseases of animals transmissible to man are taught, and also (3) of having been for six months diligently engaged in acquiring a practical knowledge of the duties, routine and special, of public health administration under the supervision of an M.O.H., and (4) of having attended for three months the practice of a hospital for infectious diseases, at which opportunities are afforded for the study of methods and administration. Under circumstances similar to those mentioned above the period of probation may be reduced to one year.

A candidate for the degree of M.S. must have passed the M.B., B.S. two years previously, and subsequently held for at least six months a resident or non-resident surgical hospital appointment, but the period of probation may be reduced to one year under conditions similar to those enumerated above.

Brown Animal Sanatory Institution.

A DONATION of £500 to the funds of the Brown Animal Sanatory Institution has been received from the executors of the late Mr. Reyms Hurrell.

Physiological Laboratory.

On June 9th Captain Leonard Rogers, I.M.S., gave a lecture on the physiological action of snake poisons. A course of lectures on the physical and chemical conditions of the living state is now being given on Tuesdays at 5 p.m. by Dr. N. H. Alcock, and a course on the recent advances in the physiology of vision by Mr. W. McDougall, M.A., M.B., Lecturer on Experimental Psychology at University College on Fridays at 5 p.m. Any member of a London School of Medicine, whether an undergraduate of the University or not, is entitled to a card of admission to be obtained on application to the Academic Registrar.

London Hospital Medical College.

Mr. Jonathan Hutchinson will give a course of lectures on diseases in India during June and July. The lectures will be given on Fridays, commencing June 12th, at 4 p.m., and are free to all students of the University and to medical graduates.

Middlesex Hospital Medical School.

A research scholarship at the Cancer Research Laboratories of the value of 100 guineas, tenable for one year, but renewable on the recommendation of the Cancer Investigation Committee, is now vacant.

The following candidates have passed the M.B. Examination:

Second Division.—J. Acomb, Yorkshire College; S. B. Atkinson, B.Sc., University Cambridge and St. Bartholomew's Hospital; Ruth Balmer, London School of Medicine for Women; S. M. Banham, University College; Annie Thompson Barnard, London School of Medicine for Women; H. E. Barnes, St. Mary's Hospital; P. G. A. Bott, St. Mary's Hospital; W. F. Box, Guy's Hospital; E. W. C. Bradfield, St. Mary's Hospital; J. Braithwaite, Guy's Hospital; A. Brown, King's College; H. S. Brown, Guy's Hospital; Dora Eliz. Lidgett Bunting, London School of Medicine for Women; V. A. Chatelain, London Hospital; T. Chetwood, London Hospital; F. W. W. Dawson, Westminster Hospital; T. C. English, St. George's Hospital; F. W. Fawssett, Guy's Hospital; Bessie Marion Gilford, London School of Medicine for Medicine; L. S. H. Glanville, Guy's Hospital; E. G. Goldie, Guy's Hospital; A. C. H. Gray, Guy's Hospital; O. C. Gruner, Owens and University Colleges; A. F. Hamilton, St. Bartholomew's Hospital; T. H. Harker, St. Bartholomew's Hospital; Anne Elizabeth Hooper, London School of Medicine for Women; D. M. Hughes, University College and University College, Cardiff; O. Ievers, St. Mary's Hospital; I. D. Jones, Middlesex Hospital; G. Lewin, Guy's Hospital; L. H. Moiser, Guy's Hospital; D. L. Morgan, Guy's Hospital; G. P. Mosseron, London Hospital; H. McD. Parrott, Guy's Hospital; C. C. Robinson, St. Bartholomew's Hospital; F. H. Rotherham, London Hospital; C. Russ, St. Mary's Hospital; A. R. Schofield, London Hospital; A. B. Smallman, Owens College and Manchester Royal Infirmary; G. W. Smith, Guy's Hospital; H. S. Stannus, St. Thomas's Hospital; E. W. Strange, Guy's Hospital; W. H. Tattersall, Owens College and Manchester Royal Infirmary; E. Taunton, University College; H. Tipping, Guy's Hospital; D. H. Trail, Guy's Hospital; W. F. Tyndale, St. George's Hospital; A. H. E. Wall, Guy's Hospital; A. B. Waller, London Hospital; E. C. Whitehead, Westminster Hospital; E. C. Williams, St. Bartholomew's Hospital.

UNIVERSITY OF CAMBRIDGE.

Lectureships.—Mr. A. C. Seward, F.R.S., has been appointed University Lecturer in Botany. The University Lectureship in Midwifery will be vacant at Christmas by the resignation of Mr. Stabb. Applications are to be sent to the Vice-Chancellor by October 20th.

Recognized Fever Hospital.—The City Isolation Hospitals, Bristol, have been recognized by the Medical Board for the attendance of candidates for the M.B. degree.

Affiliation.—University College, Cardiff, is to be affiliated to the University of Cambridge. The affiliation is mainly in the interest of medical students, who after studying three years at Cardiff and passing certain examinations, desire to complete their course at Cambridge.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following gentlemen have passed the First Professional Examination for the Fellowship:

J. E. Adler, London Hospital; J. V. Arkle, M.R.C.S. Eng., L.R.C.P.Lond., New Zealand University and St. Thomas's Hospital; I. G. Back, B.A.Camb., Cambridge University and St. George's Hospital; W. G. Ball and R. A. Bowling, St. Bartholomew's Hospital; J. D. Barris, B.A.Camb., Cambridge University and King's College, London; A. O. Bisson, Lausanne University and London Hospital; L. H. Burner, Guy's Hospital; T. C. Clare and J. B. Dawson, Birmingham University; G. Coats, M.D.Glas., Glasgow University and King's College, London; J. D. Cooke, M.B., B.S.Melb., Melbourne University and London Hospital; V. Z. Cope, St. Mary's Hospital; C. H. Cross and R. C. Elmslie, M.B., B.S.Lond., M.R.C.S. Eng., L.R.C.P.Lond., St. Bartholomew's Hospital; J. Dundon, M.B.R.U.Irel., F.R.C.S.Irel., Queen's College, Cork; W. Edmondson, Yorkshire College, Leeds; T. J. C. Evans, St. Mungo's College, Glasgow; R. J. Ferguson, M.D., M.Ch.R.U.I., Queen's College, Belfast and King's College, London; E. R. Flint, Yorkshire College, Leeds, and Owens College, Manchester; H. G. Frankling, M.R.C.S. Eng., L.R.C.P.Lond., London Hospital and King's College, London; J. G. French, M.B.Lond., M.R.C.S.Eng., L.R.C.P.Lond., St. Mary's Hospital; J. G. Gibb and R. Jamison, St. Bartholomew's Hospital; R. F. Hebbert, St. Thomas's Hospital; C. A. B. Horsford, M.D., Ch.B.Edin., Edinburgh University and King's College, London; R. R. James, St. George's Hospital; A. G. Jones, Guy's Hospital; R. E. Kelly, M.B., Ch.B., B.Sc.Vict., University College, Liverpool; C. Killick, M.B., B.C.Camb., M.R.C.S.Eng., L.R.C.P.Lond., Cambridge University and St. Mary's Hospital; W. B. Kirkcaldy, M.D., C.M.Edin., and Angus McNab, M.B., Ch.B., B.Sc.Edin., Edinburgh University and King's College, London; J. W. McIntosh, M.B., Ch.B., B.Sc.Edin., Edinburgh University and London Hospital; C. B. McNeile, Middlesex Hospital; J. C. Mead, St. Bartholomew's Hospital; J. T. Macnab, B.A.Camb., and E. S. Molyneux, London Hospital; L. Noon, M.A., B.C.Camb., Cambridge University and St. Bartholomew's Hospital; M. H. Phillips, M.B.Lond., M.R.C.S.Eng., L.R.C.P.Lond., and W. J. H. Pinniger, University College, Bristol, and King's College, London; J. A. Roberts, M.B.Toronto, University of Toronto and King's College, London; F. A. Rose, M.A., M.B., B.C.Camb.,

M.R.C.S Eng., Cambridge University and St. Bartholomew's Hospital; F. W. F. Ross, M.D., C.M.Edin., M.R.C.S.Eng., L.R.C.P.Lond., Edinburgh University and University College, London; C. W. Rowntree, M.B.Lond., M.R.C.S.Eng., L.R.C.P.Lond., Middlesex Hospital; W. A. Scott, M.B.Toronto, M.R.C.S.Eng., L.R.C.P.Lond. Toronto University, University and King's Colleges, London; G. S. Thompson, St. Mary's Hospital; C. F. Walters, M.R.C.S.Eng., L.R.C.P.Lond., University College, Bristol, and King's College, London; A. J. Walton, London Hospital; and P. R. Wrightly, M.R.C.S.Eng., L.R.C.P.Lond., Owens College, Manchester.

One hundred and twenty-eight candidates presented themselves for this examination, of whom 49 passed, and 79 were referred.

Erratum.—In the list of members of the Council of the College of Surgeons in the British Medical Journal of June 6th, p. 1352, "Mr." was placed instead of "Sir" before the name of Alfred Cooper.

TRINITY COLLEGE, DUBLIN.

The following candidates have passed the Final Examination in Midwifery:

B. L. Middleton, W. Wiley, J. F. W. Leech, J. M. Holmes, J. F. Nicholson, E. V. Collen, H. Stokes, W. Boxwell, H. O'H. May, R. W. T. Clampett, T. Crean, A. B. Tighe, R. Bailey, J. T. M'Entire, A. L. Otway.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION OF ENGLAND AND WALES.

The annual general meeting of this Association will take place on Tuesday, June 30th, at the Trocadero, Regent Street, W., at 6.30 p.m. At 7.30 the members and their friends will dine together, Dr. Farquharson, M.P., the President, being in the chair. Any Poor-law medical officer wishing to be present is requested to communicate with the Honorary Secretary, Dr. M. Greenwood, 9, Copthall Avenue, London Wall, E.C.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 7,738 births and 4,145 deaths were registered during the week ending Saturday last, June 6th. The annual rate of mortality in these towns, which had been 15.4, 15.5, and 14.9 per 1,000 in the three preceding weeks, further declined to 14.3 per 1,000 last week. The rates in the several towns ranged from 6.4 in Walthamstow, 6.9 in Reading, 7.1 in Burton-on-Trent, 8.0 in Hornsey, 8.2 in Willesden, 8.8 in Bristol, and 9.0 in Southampton, to 19.9 in Liverpool, 20.6 in Bury, 21.0 in Wigan, 21.3 in South Shields, 22.0 in Warrington, 22.6 in Handsworth, 22.8 in Preston, 23.4 in Rochdale, and 29.1 in Middlesbrough. In London the rate of mortality was 13.8 per 1,000, while it averaged 14.6 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.4 per 1,000 in the seventy-six large towns; in London this death-rate was equal to 1.5 per 1,000, while it averaged 1.3 in the seventy-five other large towns, among which the highest death-rates from the principal infectious diseases were 3.0 in West Ham, in Great Yarmouth, and in Nottingham, 3.2 in Wolverhampton, 3.3 in East Ham and in Middlesbrough, and 3.4 in Wigan. Measles caused a death-rate of 1.1 in Nottingham, 1.2 in Bolton and in Sheffield, 1.4 in East Ham, 1.6 in Wolverhampton, 2.2 in Coventry and in Middlesbrough, and 3.4 in Wigan; and whooping-cough of 1.1 in Croydon and in Swansea, 1.5 in Merthyr Tydfil, and 1.8 in Preston. The mortality from scarlet fever, from diphtheria, from "fever," and from diarrhoea showed no marked excess in any of the large towns. Two fatal cases of small-pox were registered in Manchester, and 1 each in Liverpool, Bradford, Gateshead, and Cardiff, but not one in any other of the seventy-six large towns. The number of small-pox cases under treatment in the Metropolitan Asylums Hospitals which had been 60, 64, and 60 at the end of the three preceding weeks, had risen again to 72 at the end of last week; 24 new cases were admitted during the week, against 7, 19, and 10 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on Saturday, the 6th inst., was 1,785, against numbers increasing from 1,662 to 1,771 on the seven preceding Saturdays; 210 new cases were admitted during the week, against 236, 234, and 225 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, June 6th, 1,108 births and 596 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 18.0, 17.2, and 18.4 per 1,000 in the three preceding weeks, declined again last week to 18.2 per 1,000, but was 3.9 per 1,000 above the mean rate during the same period in the seventy-six large English towns. The rates in the eight Scotch towns ranged from 10.8 in Perth and 15.1 in Paisley to 18.8 in Greenock and 19.1 in Glasgow and in Edinburgh. The death-rate from the principal infectious diseases averaged 2.0 per 1,000 in these towns, the highest rates being recorded in Edinburgh and in Greenock. The 289 deaths registered in Glasgow included 16 from whooping-cough, 6 from diarrhoea, 5 from scarlet fever, 4 from measles, and 2 from diphtheria. Six fatal cases of diphtheria, 5 of whooping-cough and 4 of measles were recorded in Edinburgh; 5 of diarrhoea in Aberdeen, and 3 of whooping-cough in Greenock.

HEALTH OF IRISH TOWNS.

During the week ending Saturday last, June 6th, 589 births and 334 deaths were registered in six of the principal Irish towns. The mean annual rate of mortality in these towns, which had been 18.4, 20.6, and 19.1 per 1,000 in the three preceding weeks, fell last week to 16.2 per 1,000, being 1.9 above the mean rate during the same period in the seventy-six large English towns. The death-rates ranged in these six Irish towns from 6.8 in Limerick, and 7.8 in Waterford, to 21.4 in Londonderry, and 24.4 in Dublin. The death-rate in the six towns from the principal zymotic diseases averaged 1.3 per 1,000, the highest rates being recorded in Londonderry and Waterford. The deaths registered in Dublin included 3 which were referred to small-pox, 2 to measles, 1 to whooping-cough, 3 to enteric, and 1 to diarrhoea. No deaths from small-pox occurred elsewhere, but Belfast recorded 2 deaths from measles and Waterford 1, while Cork and Londonderry each had 2 deaths from whooping-cough. Limerick had no deaths from zymotic disease at all.

SMALL-POX AT SOUTHEND.

Dr. Nash, M.O.H. Southend, informs us that only one case of small-pox was notified in Southend during the week ending May 30th, and not three as printed last week.

MEDICAL NEWS.

The Earl of Derby, who is President of the Brompton Consumption Hospital, has contributed £1,000 to the funds of the country branch of the hospital for the open-air treatment of consumption which is now being erected at Heatherside, near Frimley.

The first general meeting of the Belgian National League against tuberculosis will be held at Brussels on Sunday, June 14th. An address on Tuberculosis as a Social Disease will be delivered by Professor Calmette, Director of the Pasteur Institute, Lille.

Presentation.—Dr. George A. Davies, J.P., of Newport, Mon., was recently presented with a diamond ring and a silver tea-set, kettle, and tea-caddy, by his numerous friends and old patients, on the occasion of his retiring, after 30 years' practice in Newport, on account of ill-health. The testimonial was accompanied with expressions of appreciation of his professional ability, esteem for his personal character, and a desire for his speedy recovery.

MEDICAL VACANCIES.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column advertisements must be received not later than the first post on Wednesday morning.

AYLESBURY: ROYAL BUCKINGHAMSHIRE HOSPITAL.—Resident Surgeon. Salary, £80 per annum, rising to £100.

BARNSLEY: BECKETT HOSPITAL.—Resident House-Surgeon. Salary, £100 per annum.

BIRKENHEAD BOROUGH HOSPITAL.—Junior Male House-Surgeon, resident. Salary, £80 per annum.

BIRMINGHAM GENERAL DISPENSARY.—Three Qualified Resident Locums. Terms, 4 guineas per week.

BIRMINGHAM GENERAL HOSPITAL.—House-Surgeon, resident. Salary at the rate of £50 per annum.

BRISTOL GENERAL HOSPITAL.—Assistant Surgeon.

CANTERBURY: KENT AND CANTERBURY HOSPITAL.—House Surgeon, resident. Salary, £90 per annum.

CHESTER GENERAL INFIRMARY.—House Physician, resident. Salary, £90 per annum.

DUDLEY: GUEST HOSPITAL.—Assistant House-Surgeon, resident. Salary at the rate of £40 per annum.

DUNDEE COMBINATION EAST POORHOUSE AND HOSPITAL.—Resident Medical Officer. Salary, £160 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark.—Four Qualified Clinical Assistants; also Unqualified Clinical Clerks in the Out-patient Department.

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—Resident House-Surgeon. Salary, £100 per annum.

HOSPITAL FOR WOMEN, Soho Square, W.—House-Physician. Appointment for six months. Salary, £30.

LIVERPOOL: STANLEY HOSPITAL.—Third House-Surgeon, resident. Salary, £70 per annum.

LONDON HOSPITAL MEDICAL COLLEGE, Mile End.—(1) Demonstrator of Chemical Physiology. Salary, £200 per annum. (2) Lectureship on Biology. Salary, £100 per annum and class fees.

LONDON SCHOOL OF MEDICINE FOR WOMEN, Hunter Street, W.C.—Second Demonstrator of Anatomy.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Assistant. Salary, £160 for first year, rising to £180.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Assistant House-Surgeon, resident. Salary, £50 per annum.

NORTH STAFFORDSHIRE INFIRMARY, Hartshill.—House Physician, resident. Salary, £100 per annum, rising £10 yearly.

PLYMOUTH: SOUTH DEVON AND EAST CORNWALL HOSPITAL.—Assistant-House Surgeon, resident. Salary at the rate of £50 per annum.

RYDE: ISLE OF WIGHT COUNTY HOSPITAL.—Resident House-Surgeon. Salary, £90 per annum.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington.—Lecturer on Physiology. Salary, £300 per annum.

SHEFFIELD ROYAL HOSPITAL.—Junior Assistant House-Surgeon, resident. Salary, £50 per annum.

SOUTHAMPTON COUNTY BOROUGH.—Assistant to the Medical Officer of Health. Salary, £150 per annum.

SUNDERLAND, MONKWEARMOUTH AND SOUTHWICK HOSPITAL.—House-Surgeon, resident. Salary, £80 per annum.

UNIVERSITY COLLEGE HOSPITAL.—Assistant Physician.

VIRGINIA WATER: HOLLOWAY SANATORIUM FOR THE INSANE.—Junior Assistant Medical Officer (male), resident. Salary begins at £175 per annum.

WAKEFIELD: CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY. Junior House-Surgeon, resident. Salary, £80 per annum.

WARRINGTON INFIRMARY AND DISPENSARY.—Senior Resident House-Surgeon. Salary, £120 per annum.

WEST LONDON HOSPITAL, Hammersmith Road.—(1) House-Physician. (2) House-Surgeon. Both resident.

WIGAN: ROYAL ALBERT EDWARD INFIRMARY.—Senior House-Surgeon, resident. Salary, £100 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House-Surgeon, resident. Salary, £100 per annum.

YORK DISPENSARY.—Resident Medical Officer. Salary, £120 per annum.

Corrections.—In the list of vacancies published last week it should have been stated that it was the office of Assistant to the Pathologist of the London County Asylums that was vacant, and not Pathologist as printed. The salary attached to the post of Demonstrator of Chemical Physiology at the London Hospital Medical College is £200 per annum.

MEDICAL APPOINTMENTS.

RADCOCK, C. H., B.A.Cantab., M.R.C.S., L.R.C.P., appointed House-Surgeon to Salisbury Infirmary.

CARRINGTON, George H., M.R.C.S., L.S.A., appointed Medical Officer of Health for the Borough of Poole and to the Port Sanitary Authority.

EMPEY, C. T., M.D., C.M.Kingston, L.R.C.P.Edin., appointed District Medical Officer of the Keighley Union.

EVERED, F., L.R.C.P., L.R.C.S.Edin., appointed District Medical Officer of the Westbourne Union.

HARRIS, R. J., M.R.C.S., L.R.C.P.Lond., appointed District Medical Officer of the Rochdale Union.

HARVEY, G. H., M.B., C.M.Aberd., appointed District Medical Officer of the Parish of Camberwell.

HUTCHINSON, J. R., M.B., Ch.B.Vict., appointed Junior Resident Medical Officer to the Chorlton Union Workhouse Infirmary, Withington.

JONES, Miss Helena G., M.B., B.S.Lond., appointed Assistant Medical Officer of the Greenwich Union Infirmary.

O'CONNOR, Caroline Elizabeth, M.B., Ch.B.Edin., appointed Superintendent of Special Schools to the City of Birmingham Education Committee.

PERCIVAL, Beaumont, M.B.Cantab., appointed Physician to the Essex and Colchester General Hospital.

PHILLIPS, C. M., M.D.Brux., M.R.C.S., L.R.C.P., appointed District Medical Officer of the Parish of Bristol.

RUDD, W. A., M.D.Durh., M.R.C.S.Eng., L.R.C.P.Lond., appointed Divisional Surgeon to the Metropolitan Police at Acton, W., *vice* Dr. Lingham, deceased.

TELFORD, E. D., M.A., B.C.Cantab., F.R.C.S.Eng., appointed Resident Surgical Officer to the Manchester Royal Infirmary, *vice* Charles Roberts, M.B.Lond., F.R.C.S.Eng.

VALLANCE, E., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer of the West Ham Union Infirmary.

WHITE, A. E., L.R.C.P., L.R.C.S.Edin., appointed District Medical Officer of the Barnsley Union.

DIARY FOR NEXT WEEK.

TUESDAY.

Obstetrical Society of London, 20, Hanover Square, W., 8 p.m.—The discussion on Chorion-epithelioma opened by Dr. Teacher, of Glasgow, on Wednesday, June 3rd, has been adjourned to the above date, when Dr. Galabin will be the first speaker. The following have intimated their intention to take part in the discussion:—Dr. Herbert Spencer, Dr. A. H. N. Lewers, Dr. T. W. Eden, Mr. J. H. Targett, Dr. W. H. Tate, Dr. F. J. McCann, Dr. Cuthbert Lockyer, Dr. Russell Andrews, Dr. T. G. Stevens, and Dr. Herbert Williamson.

Royal College of Physicians of London, 5 p.m.—Dr. C. E. Beevor: On Muscular Movements and their Representation in the Central Nervous System. (Croonian Lecture III.)

THURSDAY.

Royal College of Physicians of London, 5 p.m.—Dr. C. E. Beevor: On Muscular Movements and their Representation in the Central Nervous System. (Croonian Lecture IV.)

Guy's Hospital Medical School, 4 p.m.—Dr. E. W. Ainley Walker: A Resumé of the Doctrine of Immunity (Gorlon Lectures in Experimental Pathology).

FRIDAY.

Anatomical Society of Great Britain and Ireland, University College, Liverpool, 10 a.m. Specimens and papers by Professor Patten, Mr Jones, Dr Kelly, Professor A. Thomson, Dr T. H. Bryce, Professor Symington, Professor A. Fraser, Dr A. W. Campbell, Professor Robinson, Dr. C. Addison, Dr. Thurstan Holland, Dr. David Morgan, and Dr. Waterston.

SATURDAY.

Anatomical Society of Great Britain and Ireland, University College, Liverpool, 10 a.m.—Specimens and papers by Mr. J. Cameron, Mr. F. G. Parsons, Professor A. H. Young, Dr. Peter Thompson Mr. I. Dunlop Lickley, and Dr. T. H. Bryce.

POST-GRADUATE COURSES AND LECTURES.

Charing Cross Hospital. Thursday, 4 p.m.—Lecture on Medical Cases.

Hospital for Consumption and Diseases of the Chest, Brompton, S.W., Wednesday, 4 p.m.—Lecture on Cases of Arrested Pulmonary Tuberculosis.

Hospital for Sick Children, Great Ormond Street, W.C., Thursday, 4 p.m.—Demonstration of Selected Cases.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C. Demonstrations will be given at 4 p.m. as follows:—Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, ear. Lectures will also be given at 5.15 p.m. as follows: Monday, Uric Acid as a Cause of Circulation Diseases; Tuesday, Uric Acid as a Cause of Anaemia; Wednesday, Meningitis in Childhood; Thursday, Hysteria and its Diagnosis; Friday, The Physical Requirements of the Public Services.

Mount Vernon Hospital for Consumption and Diseases of the Chest, 7, Fitzroy Square, W., Thursday, 4 p.m.—Lecture on The Clinical Varieties of Pneumothorax.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C.—Tuesday, 3.30 p.m.—Lecture on Diseases of the Cerebellum.

Post-Graduate College, West London Hospital, Hammersmith Road, W.—Lectures will be delivered at 5 p.m. as follows: Monday, Examination of Stomach and Gastric Contents; Tuesday, The Immediate and Remote Results of Operations on the Stomach; Wednesday, Uterine Haemorrhage; Thursday, Renal Surgery; Friday, Skin Cases.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

COX.—On June 5th, at St. Tudy, R.S.O., Cornwall, the wife of H. P. Cox, M.R.C.S., L.R.C.P., of a son.

HAWTHORNE.—On May 1st, at "Warrawee," Mudgee, N.S.W., Australia, the wife of E. Sydney Hawthorne, F.R.C.S.I., L.R.C.P.I., of a son.

JOHNSON.—On June 5th, at Rokeby, Newington, Hull, the wife of Arthur G. Johnson, L.R.C.P., L.R.C.S.Edin., of a daughter.

WHITTAKER.—On June 3rd, at Chaplain's House, Banstead Downs, Sutton, Surrey, the wife of the Rev. H. Whittaker, of a son.

MARRIAGES.

HEWLAND—ALLEN.—On June 6th, at St. Mary Abbot's, Kensington, by the Rev. Canon Somerset Pennefather, D.D., Mary Josephine, youngest daughter of the late David Allen, Esq., J.P., of Belfast, to George Vickerman Hewland, M.D., of St. Leonards-on-Sea.

HILL—BARKLIE.—On June 3rd, at Ballynure Presbyterian Church, by the Rev. William Kerr, assisted by the Rev. J. L. Donaghy, Samuel W. Hill, M.B., B.Ch., of Pound Street, Larne, son of James Hill, of Ballynure, to Lizzie Hay, youngest daughter of James Barklie, of Lismenary.

PARKINSON—STUART.—At Kenley, Surrey, T. S. P. Parkinson, M.B., to Esther Molyneux Stuart, M.B.

PRITCHARD—ROBERTS.—On June 1st, at Llanllechid C. M. Chapel, by the Rev. Robert Williams, M.A., W. G. Pritchard, Surgeon, to Mrs. R. Pritchard Roberts, both of Bethesda.

DEATH.

JOHNSTON.—On June 8th, at University College Hospital, London, after much suffering, Frances Mary (Fannie), wife of John Somerville Johnston, of 13, Pepys Road, Tooting, London.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

WE would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only, and when sending more than one question to put them on separate slips.

☞ *Queries, answers, and communications relating to the subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

W. L. asks: What is the best thing to do with a child, aged 3½ years, who bites his toe and finger nails and pick his nose?

R. N. asks for information about a trio of purifying reagents called "Syniodules," which are represented by the French firm that prepares them as effective destroyers of typhoid and other pathogenic germs. Have the French experiments been confirmed by other scientists, and is the product of the final reaction harmless to man? Information as to the exact constituents and reactions in the process would be welcome.

NASAL CATARRH.

SURGEON desires to hear of a speedy and reliable cure for nasal catarrh.

ANSWERS.

M.D. and EXTORRIS—British doctors can under existing conditions practise in Italy provided they treat only their own compatriots.

E. R. F.—St. Mary's Home, Painswick, Gloucestershire, might, we believe, receive a cripple of deficient intelligence such as our correspondent describes. Applications should be made to Miss Wemyss, Washwell House, Painswick.

CANTAB.—Our correspondent might consult *The Pathology and Treatment of Sexual Impotence*, by Victor G. Vecki, M.D. (London: Rebman, Limited, 1899, 12s.). As an alternative he might recommend his patient to obtain the opinion of a consulting surgeon of experience.

THROMBOSIS AFTER ENTERIC FEVER.

IN answer to an inquiry from "W. D. E." on the above subject (BRITISH MEDICAL JOURNAL, May 9th, 1902, p. 1128), the following personal experiences of a medical man may be useful. He got enteric abroad nineteen years ago, and during his illness had no particular medical attention. He remembers having pain and swelling in the groin, but paid no attention to it, and a diagnosis was only made when he returned home on sick leave. It was then brought about by his tailor pointing out that the patient's left leg was ¾ in. bigger than his right. Up to this time the patient had supposed that he was simply slack, and unable to walk for that reason. After that he ceased to endeavour to walk far, and when his leave was up went to a place where the cheapness of ponies made much walking unnecessary and unusual. Enlargement of the external abdominal vessels became pronounced about a year later. It eventually became very marked indeed, while the leg decreased 2 in. The patient remained in this place suffering no inconvenience for ten years, leading a very active life, but never walking any great distance. Then he moved to a place where a good deal of walking was necessary, but his leg gave no trouble until a number of abdominal vessels got divided subcutaneously by a blow from a blunt sabre at an *assaut d'armes*. After that the leg swelled again, but soon subsided. For the following five years the patient felt nothing, but since his return to England, where he has been about a year, he has been conscious of a sense of weight in the affected leg. He does not think he walks more or even as much as formerly, but that it is due to the slackness induced by the change to a town existence. The affected leg is only about 1 in. bigger than the other. The secondary effects of thrombosis appear to him to be purely mechanical, and not amenable to definite "treatment."

LETTERS, NOTES, Etc.

"OPHTHALMIC OPTICS."

DR. FREELAND FERGUS (Glasgow) writes: I regret that instead of writing to myself personally Mr. Parsons should have communicated a grievance to the columns of the BRITISH MEDICAL JOURNAL and to those of some other journals. Had Mr. Parsons written to myself, I think he would have found me anxious to do everything courteous and proper to a reputable colleague. Mr. Parsons seems to be annoyed that a small book recently written by me, and published by Messrs. Blackie, has the title *Elementary Ophthalmic Optics*, which is nearly the same as one written by himself. My book was written for the students attending my own classes. It is essentially intended for beginners, and in it I endeavoured to include those parts of geometric and physical optics which for many years I have thought it necessary to explain as preparatory to physiological optics.

Any one reading the two books will, I think, find that they are entirely different, both in aim and in the treatment of the subject. The only point of semblance is in the title. This title was suggested to me by a friend who read the proofs, and although I had perused Mr. Parsons's book, the similarity of title escaped my notice. While admitting this, I confess I do not see why Mr. Parsons should feel aggrieved. If a man in London writes a book on organic chemistry and calls it "A Manual of Organic Chemistry," does that debar a man in Manchester who writes on the same subject calling his production "A Manual of Organic Chemistry"? I have on one of my bookshelves no fewer than three books by different authors entitled "Elementary Algebra." It would surprise me to learn that any one of the authors had written to any of the journals dealing with mathematical affairs complaining of plagiarism in the title. I have five books by different authors in the titles of all of which the words "Differential Calculus" appear, and yet I do not think that any one author has complained of the others. Nor has Mr. Percival, of Newcastle-on-Tyne, who has written a most scholarly book which must be a standard with scientific ophthalmic surgeons for many a year, and has entitled it *Ophthalmic Optics*, felt aggrieved by Mr. Parsons having those words as part of the title of his volume. May I assure Mr. Parsons that nothing would give me greater pain than ruthlessly to give cause of offence to an honourable and reputable colleague? I regret that this matter has found its way into the columns of the BRITISH MEDICAL JOURNAL at all.

A DRUG RASH.

DR. BERNARD F. HARTZHORNE (London, N.W.) writes: There was a note in the BRITISH MEDICAL JOURNAL of April 25th, 1903, p. 964, on a case of rash produced by Doan's backache and kidney pills. A patient came recently to me having a thick scarlatina-like rash all over the body. There was no rise of temperature or sore throat. He told me that a friend of his was taking these pills and had persuaded him to do so. I asked if he had backache or kidney trouble, to which he replied no, but thought they might do him good all the same. How fond the public are of taking physic!

SHALL WE TAKE OUR THERAPEUTICS FROM THE DRUGGISTS?

MR. C. G. BURTON, M.R.C.S. (Lower Edmonton) writes with reference to the paragraph published under this head in the BRITISH MEDICAL JOURNAL of June 6th to express the opinion that the universal scattering of druggists' pamphlets is a proof that they are supplying a great want, and adds: With regard to your remarks that the art of prescription writing is not learnt before qualifying, what else can the medical student do except learn by heart a few prescriptions? Is it not a knowledge of pharmacy and pharmacology we require, and can this be acquired while at hospital? Therapeutics, the most important branch of medical knowledge, is not taught in our medical textbooks, which often sum up the treatment in such phases as "arsenic should be exhibited" or "a course of iodides given." Our therapeutical books are generally written by consulting physicians who never make up a bottle, and whose prescriptions have to be made palatable by the chemist. And finally, how is it any firm of manufacturing chemists can so easily improve upon the compound preparations of our *British Pharmacopœia*?

THE TREATMENT OF CONGENITAL PHIMOSIS.

DR. GEORGE H. F. GRAVES (Edinburgh) writes: In the JOURNAL of May 2nd many general medical practitioners must be glad to read Mr. Herbert Snow's opinion on the method he advocates for the cure of congenital phimosis. As one who has invariably succeeded in curing the condition by gradual and gentle dilatation of the prepuce, after separating the adhesions, I cannot but endorse all Mr. Snow says regarding this method of treatment. The trouble in congenital phimosis, as Mr. Snow puts it, "depends on adhesion of two contiguous mucous surfaces with consequent retention of secretion." I find that these adhesions can, in most cases, be easily broken down by passing a probe between prepuce and glans, and cautiously moving it in a semicircular manner over the glans until the point of the probe, reaching the corona glandis, is swept round and enters the fossa on either side of the fraenum. By then introducing a long-bladed pair of dressing forceps and expanding the blades, the prepuce can be gradually stretched all round until it can be reflected entirely over the glans; any pent-up secretion around the fraenum or behind the glans can then be freely removed. The following day it is not always advisable to repeat the retraction of the foreskin as there is usually a certain amount of swelling of the prepuce. By the day after, however, swelling has subsided; the prepuce can be retracted gently with finger and thumb and the parts freely sponged. The nurse or mother is instructed to carry out this procedure daily, when at the end of a week or ten days the prepuce can be naturally retracted and secretion kept from collecting. If the method of dilatation is given a fair trial circumcision will seldom have to be resorted to. It is certainly a radical operation, but many of the results one sees are anything but artistic, and too often give rise to pretty severe criticism on the part of the child's parents.

THE TREATMENT OF OCCIPITO-POSTERIOR PRESENTATION.

DR. ALEXANDER DUKE (London, W.) writes: Surely the simple method of dealing with these cases, described by Dr. Pritchard in the BRITISH MEDICAL JOURNAL of April 11th, cannot be put forward as original on his part, the proceeding I believe originating with Smellie more than a century ago, as mentioned by the late Dr. Leishman in his work on midwifery. He states: "More than a century ago Smellie bethought him of trying to turn the face backwards into the hollow of sacrum. Success attended his first effort, a result which gave him great joy!" Clarke Burns and others have stated that rectification could be brought about in many cases by the use of the finger alone (Leishman), and Drs. Murphy and West, well known as capable obstetricians, have emphatically expressed their views in favour of the feasibility of the proceeding.

EXALTATION OF BACTERIAL VIRULENCE BY PASSAGE IN VITRO.

DR. CHARLES POWELL WHITE (St. Thomas's Hospital, S.E.) writes: There is one defect which is common to the communications of Dr. Ainley Walker and Dr. E. A. Shaw on this subject. In neither case was the procedure adopted with regard to the control cultures the same as that used with the cultures which were passed through serum. In Dr. Ainley Walker's experiments the cultures which were subjected to the action of the serum were plated out at each step, whereas the control cultures were merely transferred from tube to tube. Dr. Shaw also transferred his control cultures direct from tube to tube, but, in the case of the cultures which were submitted to the action of the serum, the subcultures were made from very dilute emulsions of the bacilli. It is well known that simple plating-out has a marked effect in increasing the motility of the typhoid bacillus, so that a sluggish culture can be made to regain its motility by plating it out two or three times in succession, and cultivation from very dilute emulsions has the same effect. If plating-out has such an effect on motility, may it not have a corresponding effect on the virulence? In these and all similar experiments the control culture should be subjected to exactly the same procedure as the other cultures, the conditions only being varied—in this case by substituting another fluid for the serum.

LETTERS, COMMUNICATIONS, ETC., have been received from:

A Mr. H. E. Allen, London; A. G.; J. W. Allan, M.B., Glasgow; Mr. H. G. Armstrong, Crowthorne; Mr. F. Addiscott, London; Messrs. Arnold and Sons, London. **B** Mr. J. F. Briscoe, Alton; Dr. C. Buttar, London; H. L. Barnard, M.B., London; Dr. C. E. Beevor, London; Bamboozled; Dr. A. T. Brand, Driffield; H. Burrows, M.B., London; Dr. R. K. Brown, London; Mr. W. M. Beaumont, Bath; Mr. C. G. Burton, London; Dr. J. G. Blackman, Portsmouth; Dr. J. Brown, Bacup; Mr. L. A. Bidwell, London; Dr. J. Beatty, Northampton; Dr. F. Bushnell, Plymouth; Dr. C. Butler, Burnham. **C** Messrs. W. H. and L. Collingridge, London; Miss A. Churton, London; W. J. Cant, M.B., Lincoln; Cantab.; Messrs. J. and A. Churchill, London: Cheltine Foods, Limited, Manager of, Cheltenham; Cramp. **D** Dr. B. Duke, London; Messrs. Down Bros., London; Dr. L. G. Davies, Pelsall; Dr. W. Dinsmore, Newcastle-on-Tyne. **E** Messrs. Evans, Gadd, and Co., Exeter. **F** Mr. E. L. Freer, Birmingham: Dr. F. R. Fairbank, Dorking; Dr. W. T. Freeman, Reading; Dr. A. F. Fergus, Glasgow; Dr. D. Fornes, Manchester; Mr. G. B. Ford, Rochford. **G** Dr. L. Grant, Ballachulish; Mr. W. J. Greer, Newport, Monmouthshire; Dr. L. G. Gunn, Dublin; H. M. W. Gray, M.B., Aberdeen; Mr. J. W. Gill, Bath. **H** Mr. F. J. Hughes, Pontypridd; W. T. Hall, M.B., Newcastle-on-Tyne; Mr. J. R. Hatfield, Worthen; Mr. J. S. Hamilton, Coalville; Hygiene; J. R. Halliday, M.B., London; Mr. G. T. Hankins, Sydney; Dr. T. A. Helme, Manchester; Dr. J. W. Hamill, Manchester: Mr. J. Houston, London; Mr. J. D. Howe, Preston; H. B.: Mr. H. L. P. Hulbert, London; Dr. W. Harris, Norwich. **I** I.M.S.; Iota. **J** Mr. G. O. Jacobsen, Milton under-Wychwood; Mr. S. James, London. **K** Mr. R. M. Kalapesi, London; S. Keith, M.B., London; Dr. L. Kidd, Enniskillen; S. Kent, M.B., Bexhill-on-Sea. **L** Dr. Laver, Laverton; Mr. E. A. R. Laing, Hong Kong; Dr. A. E. Larking, Folkestone. **M** Mr. J. G. McCandlish, Leeds; Mr. H. E. M. Muir, Glasgow; Mr. T. H. Morse, Norwich; Dr. C. J. Morton, Walthamstow; Dr. E. J. Maclean, Cardiff; Mr. F. C. Melhado, London; M.D. **N** Mr. C. W. H. Newington, Edenbridge; Nitor in Adversum; Dr. J. T. C. Nash, Southend-on-Sea. **O** Dr. D. J. O'Connor, Cork; Observer; Mr. E. Owen, London; Old Style. **P** Mr. F. H. Perry-coste, Polperro; Dr. J. F. Payne, London; Mr. R. Plumbe, London; Pard; H. S. Pendlebury, M.B., London. **R** Mr. H. M. Raven, Broadstairs; Rex, Yorkshire; J. D. Russell, M.B., London; Dr. W. F. Robertson, Edinburgh; S. J. Ross, M.B., Bedford; Red Hot. **S** Surgeon-Lieutenant-Colonel (Nemo); Dr. W. Sykes, Exeter; Mr. J. H. Spitzly, London; Scotland: Surgeon; Dr. W. M. Stevens, Cardiff; Dr. E. H. Snell, Coventry; Dr. C. Steele, Clifton; Stapes; A. Shillitoe, M.B., London; S. Stephenson, M.B., London. **T** G. G. Turner, M.B., Newcastle-on-Tyne; F. E. Tylecote, M.B., Macclesfield; T. P. Teale, M.B., Leeds: Threatened; Dr. J. C. Thresh, Chelmsford; A. H. Tubby, M.B., London: Dr. P. Thomson, London. **U** Mr. A. J. Urry, Birmingham; Dr. A. R. Urquhart, Perth. **V** Mr. H. Varley, London; Viator. **W** Mr. A. C. Wickens, London; Mr. C. G. Watson, London; Dr. T. A. Williams, East Barnard; Dr. W. H. White, London; Mr. A. H. White, Dublin; Dr. H. C. Woodhouse, Dawley; Dr. F. Willcocks, London; W. L.; W. H. P.; Williamson Patent Pipe Co., Manager of, London. **Z** Zeta; etc.

BOOKS, ETC., RECEIVED.

La Pratique des Autopsies. Par M. Letulle. Paris: C. Naud. 1903.

Die Gallensteinkrankheit, ihre Häufigkeit, ihre Entstehung, Verhütung und Heilung durch unere Behandlung. Von Dr. Walther Nic. Klemm. Berlin: Georg Klemm. 1903. M. 1.

Diseases of the Heart and Arterial System. By Robert H. Babcock, A.M., M.D. New York and London: D. Appleton and Co. 1903. 25s.

High Frequency Currents in the Treatment of some Diseases. By Chisholm Williams, F.R.C.S.Edin. London: Rebman, Limited. 1903. 10s. 6d.

A Model Sanatorium for the Treatment of Pulmonary Tuberculosis. By Alexander G. R. Foulerton, F.R.C.S., D.P.H.Camb., with R. Langton Cole, F.R.I.B.A. London: Rebman, Limited. 1903.

The "B. N." Guide to Motor Cycling. Birmingham: The Colmore Press. 1903. 6d.

Protozoa and Disease. By J. Jackson Clarke, M.B.Lond. Part I. London: Baillière, Tindall, and Cox. 1903. 7s. 6d.

Manual of Medicine. By Thomas Kirkpatrick Monro, M.A., M.D. London: Baillière, Tindall, and Cox. 1903. 15s.

La Gastro-enterostomia: metodi operativi indicazioni resultati. Por Dott. Aristide Mattoli. Roma: Società editrice Dante Alighieri di Albrighi Segati e C. 1903. L. 7.50.

Handbuch der allgemeinen und lokalen Anästhesie. Von Professor Dr. F. L. Dumont. Berlin und Wien: Urban and Schwarzenberg. 1903. M. 7.

Die Krankheiten der oberen Luftwege. Von Professor Dr. Moritz Schmidt. Dritte Auflage. Berlin: Julius Springer. 1903. M. 18.

Die Krankheiten der oberen Luftwege. Zweiter Teil: Die Krankheiten des Rachens. Von Profes or Dr. Ottokar Chiari. Leipzig und Wien: Franz Deuticke. 1903. M. 8.

12,000 Fälle von Haut- und Geschlechts-Krankheiten. Erstattet von Dr. Karl Pezzoli und Dr. Alexander Porges. Leipzig und Wien: Franz Deuticke. 1903. M. 3.

Die Krankheiten des Kehlkopfes und der Luftrohre. Von Dr. Philipp Schech. Zweite Auflage. Leipzig und Wien: Franz Deuticke. 1903. M. 7.

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The Croonian Lectures

ON

MUSCULAR MOVEMENTS AND THEIR REPRESENTATION IN THE CENTRAL NERVOUS SYSTEM.

Delivered before the Royal College of Physicians of London.

BY CHARLES E. BEEVOR, M.D.,

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LECTURE II.

THE RADIO-ULNAR ARTICULATIONS.

THE muscles producing pronation are the pronator teres and pronator quadratus, and if the resistance to the movement be applied to the hand as it usually is, the flexor carpi radialis and palmaris longus contract. The pronator quadratus cannot be felt contracting, but it is one of the muscles whose action must be inferred from its position. Supination is performed by the supinator brevis, biceps, and, when the resistance is applied to the hand, by the extensor carpi radialis longior and brevior and by the extensors of the thumb. The strongest supinator is the biceps, and its action as such was described by Winslow.[1] Ten years ago I published in *Brain*[2] an observation on the supinator longus, and I came to the conclusion that while it took an active part in flexing the forearm, no action in it could be discerned in the movement of pronation and supination. I think now, however, that on extreme pronation, and when considerable strength is used, there is some slight action at the end of this movement. This is a point which any one can prove for himself by supinating or pronating the forearm against resistance, taking care that no flexion of the forearm occurs. I think it will be found that no contraction of the supinator longus will be seen except in extreme pronation, but the moment that the slightest flexion is made the muscle instantly stands out in strong outline. I therefore conclude that the supinator longus, or the brachio-radialis, as it would be better to call it, does not take part in supination, and only in strong movements of pronation.

No doubt the biceps is a flexor as well as a supinator, and it may therefore be asked: Why does not the elbow flex in supinating the forearm when the biceps is contracting so strongly? There must be some opposing force to prevent flexion. We have here, in fact, an example of a muscle having two actions, supination and flexion, of which the latter is not required, and therefore the antagonist to this flexor action must be brought into the movement. The antagonists to the flexors of the elbow are the extensors of the elbow. In other words, it is not possible to have strong pure supination without contraction of the triceps. Apparently it is not the whole triceps which takes part in this movement, for of the three heads by which the triceps arises the fibres of the outer and inner head contract, but not those of the long head arising from the scapula; this head is an adductor of the humerus; now the only counteraction required in supination is extension of the forearm and not adduction of the humerus, therefore the part of the triceps which performs this movement of adduction does not contract. The pronator radii teres is also a flexor of the forearm on the arm as well as a pronator, and to neutralize its flexor action there is contraction of the triceps, but to a much less degree than in supination, as the flexor action of the pronator teres is much less than that of the biceps.

ELBOW: FLEXION.

The muscles which take part in flexion are the biceps, brachialis anticus, supinator longus, pronator radii teres; and when the hand is closed there is very slight action in the flexores carpi, but none in the extensores carpi. We have, therefore, the supinator longus and the pronator radii teres acting as a flexor pronators, and the biceps as a flexor supinator. The association of flexion or extension with pronation or supination produces some interesting combinations. For instance, if while flexing the elbow the forearm be supinated, the pronator radii teres, which was acting as a flexor of the elbow, seems to cease as soon as the movement of supination is required to be performed; but, on the other hand, the biceps does not cease acting in flexing and pronating at the same time. The biceps contracts during the combined movements of extension of the elbow and supination of the forearm, and therefore the action of the extensors of the elbow must be stronger than the flexor action of the biceps, otherwise there would be no extension.

What part do the flexors and extensors of the carpus take in the movements of the elbow? My experience is that their action is exceedingly slight as flexors of the forearm on the upper arm. I have tested the amount of work done by flexion of the elbow when the flexors of the wrist took part in the movement and when they did not, and with the result that the power of flexing the elbow by the muscles of the carpus is very slight and is almost a negligible quantity. The extensor carpi radialis longior has been considered to be a flexor of the elbow-joint, but when the wrist is lax I cannot find that there is any contraction of this muscle when strong flexion of the elbow with the forearm pronated is made against resistance

ELBOW: EXTENSION.

Extension of the bones of the forearm on the humerus is performed by the triceps and anconeus, and I am unable to find that the extensors of the wrist or fingers take any part in the movement.

HUMERUS AND SCAPULA.

In the antero-posterior plane, the humerus starting from the hanging position is moved forwards, flexed as it is also called, to the horizonital line and thence it is elevated to the vertical position, on the return journey the humerus is depressed through 180° to the hanging position, and thence it can be carried backwards or retracted. In the lateral plane the humerus can be abducted to the horizontal line and thence to the vertical, and on the return journey it is adducted through 180° to the hanging position. In the horizontal plane the humerus is horizontally adducted when it is moved towards the middle line and horizontally abducted when away from the middle line to the lateral plane, behind which it is horizontally retracted. Besides the above movements there is rotation in and out.

In advancing the humerus the anterior fibres of the deltoid, the clavicular fibres of the pectoralis major, the biceps, and probably the coraco-brachialis, contract and carry the humerus forward nearly to the horizontal line. This action tends to rotate the scapula and to push its inferior angle towards the spinal column, but this is prevented by the contraction of the acromial fibres of the trapezius—which Duchenne showed to be the fibres taking part in this movement and not the clavicular fibres—and also, as I consider, by the contraction of the inferior fibres of the trapezius.

Just before the horizontal line the serratus magnus comes to their assistance and draws the lower end of the scapula forwards, raises the acromion with the humerus, and thus the arm is elevated to the vertical position. Now, the serratus magnus is considered to fix the lower end of the scapula at the beginning of this movement; but I have seen cases in the last few years which seem to negative this idea.

CASE I, a girl who had wasting of the lower part of the trapezius, below a line drawn horizontally from the spine of the scapula to the vertebral column. The rest of the trapezius acted well, and the serratus magnus was not affected, which was well shown by the patient being able to push forward with the advanced arm against resistance. On telling the patient to advance the arm slowly, I observed that the first action on the scapula was to rotate it, so that the inferior angle moved ½ in. towards the vertebral column and the posterior border of the scapula projected like a wing; this projection reached its maximum when the humerus was advanced through about 45°. Then the serratus magnus contracted, and as it drew the lower end of the scapula forwards the deformity diminished and finally disappeared.

The explanation that I would offer for this occurrence, which does not happen with normal muscles, is that, though the serratus magnus is mechanically in the position to fix the scapula and prevent its lower angle being rotated towards the vertebral column, it is not its function, when the movement is one of advancing the shoulder, to act on the scapula until the humerus has been moved by the deltoid through about 45°. The lowest part of the trapezius apparently is the proper muscle to fix the scapula in advancing the humerus, and when these inferior fibres are paralysed the serratus will not step into the breach, so to say, and do the work for the trapezius, which consequently is not done at all.*

CASE II.—I have lately had the opportunity of examining a case under the care of Dr. James Collier where the whole trapezius had wasted and practically disappeared from a lesion of the spinal accessory nerve in the

* A patient (under the care of Dr. Ormerod) who had paralysis of the inferior fibres of the trapezius was shown at the lecture to illustrate this movement of the scapula inwards.

neck, with the result that at rest the scapula was ½ in. lower than on the other side and the acromion was rotated downwards and forwards so that the base of the scapular spine was 2 in. further away and the inferior angle was ½ in. further away from the vertebral column than on the other side. On making this patient abduct or advance the humerus it was seen that the inferior angle moved inwards or backwards for ¾ in. and when the movement of the arm was resisted for as much as 1 in., until the humerus had moved through an angle of 45°, when the inferior angle of the scapula was drawn forwards by the serratus the deformity disappeared and the humerus was powerfully carried upwards to the vertical position.

In this case as the trapezius was the only muscle paralysed the deformity and backward movement of the scapula must be due to its absence, and the only conclusion that we can draw is that although the serratus magnus is in the anatomical position to be able to act and is generally supposed to fix the scapula, the will has apparently no power to make it act before its appointed time, otherwise why does it not take the place of the paralysed trapezius? Whether it would be possible to educate the serratus and by practice to induce it to contract sooner I am not in a position to state, but if the condition may be taken as the same as that of paralysis of the extensors of the fingers in lead paralysis, I should think it doubtful.

What determines the period at which the serratus begins to act it is difficult to say, but it seems to have some relation to the angle which the humerus makes with the scapula or to the degree of contraction of the deltoid and the tension it produces on the scapula. Normally in advancing the arm the scapula does not move till the humerus makes an angle of about 45°, and then the inferior angle begins to move outwards by the commencing action of the serratus, and when the humerus is horizontal the angle with the scapula remains constant, and the elevation of the humerus to the vertical position is completed by the serratus. If, however, the deltoid is paralysed or the shoulder is fixed, the serratus begins to act at once and the scapula moves outwards at once; so much so that this movement of the scapula is a diagnostic sign of one of the two above conditions. It is quite easy to imitate this movement normally by rotating the inferior angle of the scapula forwards and the acromion upwards without first moving the humerus, but in none of these conditions is the movement imitated by the action of the deltoid, and there is no displacement of the inferior angle of the scapula backwards or towards the spine.

Another point of interest, occurring incidentally, is that the projection or winging of the scapula may be caused by paralysis of the trapezius, and especially of its lower fibres, as well as by the well-known paralysis of the serratus magnus, and the difference between the two conditions is that the deformity due to the absence of the trapezius is less than that of the serratus, the scapula projecting only ½ in., and that the projection reaches its maximum when the humerus is advanced through 45°, after which the deformity diminishes and disappears when the humerus is horizontal; moreover, the humerus can be elevated to the vertical position. With paralysis of the serratus magnus, the deformity increases as the arm is advanced and reaches its maximum when the humerus is horizontal, beyond which level there is no muscular power to raise it. The diagnosis of paralysis of the serratus is also confirmed by the ease with which the scapula can be displaced backward by pushing against the advanced arm, which is not the case with the trapezius paralysis.

The action of the upper fibres of the pectoralis major in advancing the arm is important and was described by Winslow.[3] It is an action which does not appear in some people until the arm is advanced nearer to the middle line than the antero-posterior plane, and it can be best brought out by advancing the humerus to the horizontal line, and then carrying it inwards towards the middle line, and at a definite angle of the humerus, the muscle will be seen to come into action, when the arm is elevated above the horizontal line.

The description just given of advancing the humerus applies equally well to the movement of abducting the humerus with the exception that the middle part of the deltoid and the supraspinatus abduct the humerus and the pectoralis major does not act, but the same condition is met with in regard to the movements of the scapula and its relation to the trapezius and serratus, as in the movement of advancing the humerus. Advancement and abduction of the shoulder are also attended by contraction of the erectores spinae.

Depression of the humerus in the antero-posterior plane from the vertical position above the head through 180° is performed by the sternal fibres of the pectoralis major, the pectoralis minor, the latissimus dorsi, the teres major, the teres minor the infraspinatus, and by the long head of the triceps, and perhaps by the subscapularis.

The superior or clavicular fibres of the pectoralis major are not from my observations depressors of the humerus, and I cannot agree with Duchenne[4] that these fibres are at the same time depressors and elevators of the humerus according to the position of the limb, that is, depressors only from the vertical to the horizontal line, and that they are, as Duchenne gracefully describes, the agent used equally by the enemy to strike with a sword or by the priest to bless the faithful. I cannot discover that the upper fibres contract at all in forcibly depressing the humerus in any position, and I was glad to find that Winslow[5] states that the superior fibres serve chiefly to raise the arm forward. Duchenne's opinion was evidently founded on the fact that if the humerus be elevated vertically, and the superior fibres be stimulated electrically, they will depress the humerus to the horizontal line; but according to my observations they do not contract voluntarily to depress the humerus, and although they are in the anatomical position to depress the humerus, they are not included in the group of muscles told off to perform this movement.

Of the other muscles depressing the humerus I would refer to the long head of the triceps. As it cannot contract without extending the elbow there is also, if only pure adduction be required, slight synergic action on the part of the biceps and supinator longus to neutralize the extensor action of the triceps. This action of the long head of the triceps is very well seen in cases—of which I have one under my care at the present time at the National Hospital—where the triceps is unaffected, while the flexors of the elbow are paralysed; here every time that the patient depresses or adducts the humerus, the elbow is extended by the unopposed long head of the triceps.

Retraction of the hanging humerus posteriorly to the vertical line is performed in addition to the depressors by the posterior half of the deltoid, and by the pectoralis minor, but not, I believe, by the pectoralis major, so this movement is a means of separating the action of these two muscles.

Adduction of the humerus is performed by the same muscles as take part in depressing the humerus, with the addition that both parts of the pectoralis major, and also the posterior fibres of the deltoid, act as adductors, as Winslow[6] pointed out. According to Duchenne,[7]

electrical experiment shows that the posterior one-third of deltoid acts synergically with the other fibres of the same muscle to elevate the humerus, through an angle of 45°, but above this point the posterior fibres become depressors of the humerus and antagonists to the other fibres down to that point of elevation which results from the contraction of the posterior bundle. This justifies the opinion of Bichat,[8] contested by many anatomists, that the deltoid can be at the same time both elevator and depressor of the humerus.

My observations would make me join the ranks of the contestors of this opinion, as I cannot find that the posterior fibres of the deltoid take any part in elevation of the humerus; they are, in my opinion, adductors. On this question I would again like to point out that, because a muscle can produce two opposite movements when stimulated by faradization, we cannot be certain that it performs these two opposite movements when acted on by the will. We have first to prove that the muscle is actually contracting in each of these opposite conditions.

In both movements of depressing the humerus and adducting it, the scapula has to be fixed by the rhomboids and the lowest fibres of the trapezius, so that when the former are absent the inferior angle of the scapula is drawn into the axilla by the teres muscles, as was first pointed out by Erb; and when the lowest fibres of the trapezius are absent, the scapula is lifted upwards by the rhomboid and the teres muscles. The contraction of the rhomboid is, however, stronger than that of the trapezius, and in some cases the latter appears not to act in adduction. Conversely, when the adductors are weak and the rhomboid is normal, it carries the inferior angle of the scapula to the spine in the movement of adducting the humerus.

The pectoralis minor also fixes the scapula in depressing the humerus, and when it is absent, as I have lately seen in a case, the scapula is elevated and the coracoid process projects under the skin.

In depression and in adduction of the humerus from the horizontal line there is contraction of the abdominal muscles, as was pointed out by Winslow,[9] and especially of the rectus abdominis and external oblique, which fix the ribs, and prevent them from being drawn up by the pectoralis major. In depression I have found that the recti of both sides act, but

those of the same side much more, and sooner, than those of the opposite side, while in adduction the rectus of the same side only contracts, but in addition the erector spinae of the same side takes part. The question is whether the abdominal muscles are essential for the performance of the movements, or whether it is possible to perform them without co-operation of these muscles.

I find that the amount of work required to be done before the rectus abdominis contracts in the movement of depressing or adducting the upper limb from the horizontal line is exceedingly small, and that in the erect position with the arm in the horizontal position the rectus abdominis could be felt to contract when the scale only registered from 4 lb. to 7 lb., and as this includes the dead weight of the arm, which was found to be 2½ lb., the actual work done by the muscles was 1½ lb. to 4½ lb., and this small amount was sufficient to bring in the fixing action of the rectus abdominis. The smallness of this amount is further shown when compared with the maximum amount of force which can be produced by this movement. In my case it was 30 lb., so that the earliest contraction of the rectus abdominis occurred when only about one-fifteenth of the maximum strength had been used. It therefore occurs not at the end of a strong movement, but so early that the movement can hardly take place without it. As this action of the rectus takes place equally well in standing, sitting, or lying down, its participation is not necessary for maintaining a certain position, and therefore I think it must be included in the list of muscles which are essential for the movement of depression and adduction of the humerus.

The movement of horizontal adduction which takes place when the humerus is advanced to the horizontal line is carried out by the anterior fibres of the deltoid, the coracobrachialis, and by the pectoralis major, and, where there is no resistance, by the upper fibres only, but where an obstacle is to be overcome both parts of this muscle act. The pectoralis major is a muscle consisting of two parts, clavicular and costo-sternal, which can either act in unison or in antagonism. The best way to bring out the actions of the two parts working together is to advance the upper arm passively to the horizontal line, and then to tell the patient to carry his hand towards the middle line against resistance. If he then raises his hand upwards against resistance the upper fibres alone contract, and if he depress his hand the lower fibres alone contract. In fact, as Winslow said, the pectoralis major may be looked upon as two distinct muscles, and I have published[10] cases of complete absence of the lower fibres, due to infantile paralysis, with perfect preservation of the upper fibres. Associated with the loss of the lower pectoral fibres there was complete paralysis of the latissimus dorsi and triceps.

In horizontal abduction the different fibres of the middle part of the deltoid successively come into action until the posterior fibres act, together with the latissimus dorsi teres muscles and subscapularis.

Associated with horizontal abduction of the humerus is the fixation of the scapula by the trapezius, in which all but the clavicular and acromial fibres take part. This is the best movement to bring out the trapezius and particularly the middle part, which it is often very difficult to make out. For this purpose the upper limb in put in the advanced horizontal position parallel to the middle line, and it is then passively pushed backwards so as to make the posterior edge of the scapula visible. If now the patient be directed to abduct the humerus horizontally against resistance, the fibres of the trapezius, and especially those inserted into the spine of the scapula, are well seen against the sharp edge of the posterior border of the scapula, and they have a direction almost horizontal and not so oblique downwards and outwards as the fibres of the rhomboideus minor with which they might be confounded.

Of the rotators of the humerus, the rotators in are the pectoralis major both parts, deltoid anterior fibres, teres major, latissimus dorsi, and probably the subscapularis. In rotation in, especially when the humerus is horizontal, the rhomboid chiefly acts to fix the scapula, and in rotation out the lowest fibres of the trapezius perform this function. Consequently in paralysis of the trapezius there is great displacement of the scapula in rotation out of the humerus, but not with rotation in.

The scapula has also the movements which are independent of those of the humerus, namely, elevation, depression, advancing, retraction, and rotation with the acromion upwards, which has already been described.

Elevation is performed by the trapezius, and especially by the acromial fibres, though the clavicular do also contract in some patients, though apparently not in all, and by the levator anguli scapulae. According to Duchenne,[11] the inferior part of the serratus magnus is an elevator of the shoulder, as shown by electrical faradization. Upon being stimulated the serratus first rotates the scapula with the acromion upwards and then elevates it. Nevertheless, Duchenne states that when he made a person elevate the shoulder and he applied strong resistance to its point, he found that the trapezius, rhomboid, the upper part of the pectoralis major alone contracted, but not the serratus magnus. Yet as soon as the patient raised his arm the muscle contracted at once. He explains that the reason why the serratus magnus does not act is probably because its contraction would interfere with respiration in keeping elevated the ribs on which it takes its origin. I venture to think that the will has not the power to leave a muscle out of a group if it is included in it, even if it interferes with respiration, and that the explanation is rather to be found in the fact that the serratus magnus is not an elevator of the shoulder, and also that the electrical results are not to be relied upon, unless they are corroborated by voluntary movements. I also think that Duchenne is not distinguishing between the two different movements of (1) elevation of the acromion where the scapula is rotated by the serratus magnus, and (2) elevation of the whole scapula as in shrugging the shoulders where the serratus magnus does not act.

The levator anguli scapulae, in some cases, takes part with the serratus magnus in advancing the scapula, and perhaps it counteracts the rotation of the scapula, with the acromion upwards, by the serratus magnus.

Movements of the Spinal Column.

The chief movements of the lumbar spine are flexion and extension, lateral flexion to either side and rotation to either side.

The chief flexors of the spine are the recti abdominis with the pyramidales, and also the external obliques, but whether the internal obliques also take part I have had no means of ascertaining. In testing the action of the recti abdominis the person lies flat on his back and crosses the arms on the chest, and the thighs are then fixed by passive pressure. It is then often sufficient for the person to bend the head forwards for the recti to tighten up sufficiently to be felt. The complete movement of sitting up from the recumbent position consists of two stages; in the first, the sternum is approximated to the pubes by the recti abdominis flexing the lumbar spine, and then the pelvis with the spine is flexed on the femora by the psoas and iliacus and other flexor muscles. It is often important, especially in cases of tumour of the spinal cord, to know if any part of the recti abdominis is paralysed, as they are long muscles which are supplied from the sixth to the twelfth dorsal spinal roots.

I observed some years back a symptom which enables the observer to tell if there is any weakness of the upper or lower parts of the recti; this symptom is the movement of othe umbilicus. In health, in the movement of sitting up the umbilicus does not alter its position, but if from a lesion of the lower part of the cord or its nerves the part of the recti below the umbilicus be paralysed, the normal upper part of the recti draws up the umbilicus sometimes to the extent of an inch. As the abdominal wall, and presumably the rectus, at the level of the umbilicus is supplied by the tenth dorsal root, any marked elevation of the umbilicus in the act of sitting up would show a lesion between the tenth and twelfth dorsal segments of the cord, or the roots coming off from them.

The extensors of the spine are the erectores spinae which can be well felt at their origin on either side of the lumbar spine but whose divisions into ilio-costalis and longissimus dorsi I do not think that it is possible to make out. The action of these muscles can best be made out by making a person, while lying down prone on a bed, lift up the neck and the upper part of the trunk, when the musles can be felt and seen on either side of the lumbar spinal column; or by making the patient extend the spine from the position of bending forwards either in the standing or sitting position.

In connexion with the actions of the flexors and extensors of the lumbar spine are the muscular movements which regulate and maintain the erect posture, that is, standing with the feet together in the position of attention. These muscles have to be continually counteracting the influence of gravity, and although when work is being done, as in pushing forwards against an obstacle or as in keeping a door shut, the flexors

of the spine act yet when a person bends forwards from the erect position without having to overcome an obstacle, it is not the flexors of the spine which act but the extensors, and conversely in extending the spine as in leaning backwards from the erect position, it is not the extensors of the spine which act, but the flexors.

This condition has been, I venture to submit, much overlooked in books of general anatomy, and also in special books on anatomy for artists. In the one by the late Mr. John Marshall[12] I cannot find any allusion to this point. And in a recent similar work[13] the following passages occur:

> This bulging of the muscles on either side is particularly noticeable when these muscles (erectores spinae) are in a powerful state of contraction as when a person.....is bending backwards..... If the figure be bent backwards the median furrow is deepened and the erectores spinae are rendered more prominent, owing to the fact that they are now in a powerful state of contraction.

If in the above description each movement of bending backwards starts from the erect posture and is not made against resistance, I am afraid that I could not agree with it. Merkel[14] also states that in bending forwards the groove in the middle of the back disappears and vertebral spines become visible, and the back becomes smooth and round; in bending the body backwards the long back muscles become very tense and appear in the lumbar region as thick swellings. On bending to the side (presumably without effort) the long back muscles of the bent side form a stronger projecting swelling than those on the stretched side.

On the other hand, according to W. Adams,[15] the muscles of the spine are in a state of least action when the spinal column is in the erect position. Instead, therefore, of the muscles of the spine in this position being in a state of active tension, it is more correct to describe them as in a state of vigilant repose, as soon as the equilibrium is disturbed and the body is inclined to one side the spinal muscles on the convexity of the nerve are put on the stretch. Richet[16] also states that on bending forwards the extensors come into action, and, on bending backwards, the flexors of the spine, so that the action is somewhat of a parodox. But we must go further to find similar opinions expressed by Winslow,[17] who stated that

> The muscular recti serve to support the trunk of the body when inclined backwards .....for when we stand straight they have no hand in bending the body forward, except we be striving to overcome some resistance.

And going further back still we find that Galen,[18] in describing his fourth movement of muscles, refers to the contraction of a muscle where there is no movement as in the case of maintaining the advanced arm in that position against gravity, so that he evidently recognized that the behaviour of a muscle is different according to whether gravity has to be overcome or not. I agree with the opinion expressed above by W. Adams that in the erect position there is a state of least action of the muscles, as very little action is to be felt in the erectores spinae or in the recti abdominis; but by producing a forward movement of the trunk, as by bending the head forward so as to displace the centre of gravity, the erectores spinae instantly contract, and prevent the trunk moving further in the direction of flexion, whilst the flexors of the recti abdominis relax. In the same way, by extending the head backwards, the centre of gravity is displaced backwards, and the recti abdominis contract and check any further movement in a backward direction, whilst the erectores spinae are relaxed; but, if it be desired to bend the trunk gradually forward, the contracted erectores gradually relax and let out the weight of the trunk in the same way as a heavy weight is slowly lowered to the ground by a crane. This action of these muscles can best be illustrated by the upper limb. If, when the upper limb is is horizontal extension the forearm be slowly flexed on the upper arm, the flexors of the elbow contract until the forearm is just past the vertical line, when they cease to act and become quite flaccid, while the triceps then contracts and lets the forearm gently flex on the upper arm. Conversely, if in that position the forearm be slowly extended the triceps contracts until just past the vertical line, when it ceases, and then the biceps and the other flexors contract and let the forearm be gradually extended. So that in flexing the forearm in the horizontal position the first half of the movement against gravity is done by the flexors, and the second half with gravity by the extensors. This applies to all the muscles of the body, and it may be expressed thus: In every slow movement which is made in the direction of gravity the muscles which act in the direction of the movement are relaxed, while their antagonists contract and support the part, and if the movement is continued they gradually relax to their full extent.

The contraction of the erectores spinae when the body falls forward occurs automatically, and apparently without any effort of the will, and it can be demonstrated by leaning forwards, supporting the weight of the body on one hand. On suddenly taking the supporting hand away the body falls forward, and the erectores spinae instantly contract. The contraction is an instinctive preservative action, performed automatically, and it takes place unless a voluntary effort is made to inhibit the contraction, when it can be prevented from acting.

In lateral flexion to one side, where an obstacle has to be overcome, the rectus abdominis and erector spinae of that side can be felt to contract, together with the external oblique, and probably the quadratus lumborum, but in inclining the trunk to one side in the direction of gravity, where no obstacle has to be overcome, the muscles of that side are relaxed, and the muscles on the opposite side—the antagonists—contract, just in the same manner as the erectores spinae contract in flexing the spine forwards. In rotation of the spine to the right the left external oblique acts, but neither the erector spinae nor the rectus abdominis can be felt to contract, but whether the internal oblique of the same side right contracts it is difficult to say.

While speaking about the movements of advancing or abducting the humerus, it was stated that these were attended by contraction of the erector spinae. This is a point to which attention has been directed by Dr. Hughlings Jackson.[19]

When a person stands erect so that there is no contraction of the erectores spinae, and then advances one upper limb, with or without a weight in the hand, to the horizontal line, both erectores spinae contract, and if the advanced arm be slowly carried outwards through an angle of about 45° the erector spinae on the same side as the advanced arm ceases to contract, and on the arm being carried through another 45° the rectus abdominis of the opposite side will be felt to take part in the movement.

The question arises whether this contraction of the erectores spinae is an essential part of the movement of advancing the shoulder in the same way as the right abdominal muscles take part in depressing or abducting the humerus—that is, whether it is possible to advance the humerus without bringing the back muscles into action. I think the matter can be proved in the following way: If, when the arm is advanced and the erectores spinae are felt contracting the spine be extended, the erectors will be felt to relax when the weight of the trunk behind the centre of gravity just balances the weight of the advanced arm in front; and if now the arm be dropped and then advanced again no fresh contraction of the erectores will be felt. I think that this shows that the contraction of the erectores is not an essential part of the movement of advancing the humerus, as it does not always occur, but is of the nature of a postural contraction, and only takes place to prevent the equilibrium of the trunk being disturbed.

This point, whether the erector spinae muscle of, say, the left side is an essential component of the movement of abducting the right arm is interesting in relation to hemiplegia. In right hemiplegia, where a patient has lost the power of abducting the right arm, the question arises as to whether he has any paralysis of the left erector spinae, which, as we have seen, acts when the right arm is abducted. If the action of the erector spinae were an essential component of this movement of the arm, one would expect that when the movement of the arm was paralysed all the components of this movement would also be paralysed, including the erector spinae; but if the action of the erector spinae were not an essential component, but only acted to preserve the equilibrium of the spine, then we should not expect it to be paralysed. I have not examined a sufficient number of cases to say whether the left erector spinae is paralysed or weakened in right hemiplegia. Dr. Hughlings Jackson[20] has, however, expressed the opinion that in some cases of hemiplegia the erector spinae on the side opposite to the paralysis is weaker than on the other side, that is, in right hemiplegia the left erector spinae is the weaker, and that the muscle is probably supplied by the direct (ventral) pyramidal tract.

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THE RAPID ESTIMATION OF THE QUANTITY OF CHLOROFORM VAPOUR PRESENT IN MIXTURES OF CHLOROFORM VAPOUR AND AIR.

BY

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A METHOD for the rapid estimation of $CHCl_3$ vapour in mixtures of $CHCl_3$ and air by means of the alteration of pressure produced by absorption of the $CHCl_3$ vapour by olive oil is described in the BRITISH MEDICAL JOURNAL of July 12th, 1902, and was demonstrated last July to the Physiological Society.[1]

It was then stated that the method is applicable to mixtures of chloroform and air between 2 and 10 per 100, and the statement was confirmed by Professor Dunstan for amounts between 3 and 12 per 100.[2]

The original purpose of the present observations was to test the method for mixtures below 2 per 100. The actual determinations have been made in this laboratory by Dr. Victor Geets, of Brussels, who has, in prosecuting the inquiry, adopted a very simple method of control, which is in itself a very satisfactory laboratory method for the quantitative estimation of the percentage of chloroform vapour in a mixture of chloroform and air.

This method consists in the direct weighing on a chemical balance of a flask of known capacity (*circa* 500 c.cm.), (*a*) filled with air, (*b*) filled with the mixture of chloroform and air.

The adequacy of this datum as regards an estimation of percentage will be made clear by the following considerations: 500 c.cm. of a 1 to 10 per 100 mixture of chloroform and air implies 5 to 50 c.cm. of $CHCl_3$ vapour, weighing (on the assumption that 1 gram of liquid $CHCl_3$=200 c.cm. $CHCl_3$ vapour) 25 to 250 mg. *minus* the weight of the volume of air displaced by the $CHCl_3$ vapour.

The weight of a litre of $CHCl_3$ vapour at 0° C.

$$=\frac{12+1+106}{2}\times 0.0895=5.325 \text{ grams.}$$

Ditto, of a litre of air=1.293 grams.

So that a litre of chloroform vapour is 4.032 grams heavier than a litre of air. Or each c.cm. of chloroform vapour replacing 1 c.cm. of air gives an increased weight of 4.032 mg.

Taking, then, 4 mg. as the additional weight due to the presence of each 1 c.cm. $CHCl_3$ in the mixture of air and chloroform (corrections for temperature and pressure not included), we have: In a 500 c.cm. flask each 1 per cent. (= 5 c.cm.) giving an increment of 0·020 gram.; and in a 250 c.cm. flask each 1 per cent. (= 2.5 c.cm.) giving an increment of 0.010 gram.

For practical purposes we can avoid calculation and estimate the percentage of $CHCl_3$ vapour by a direct reading of the difference of weight of a 250 c.cm. flask, (*a*) filled with air, (*b*) filled with the mixture of chloroform and air to be titrated. The excess of the latter, counted in centigrams, gives the percentage of the mixture:

Thus, an excess of 0.010 gram = 1.0 per 100
" " 0·050 " = 5·0 "
" " 0·027 " = 2.7 "

The weighing is easily made within the error of ± 1 mg., equivalent to an absolute error of ± $\frac{1}{5}$ of 1 per cent., and to a relative error of ± 10 per cent. to ± 2 per cent. for absolute percentages between 1 and 5.

Both the manometric and the gravimetric methods are rapid and mutually control each other, giving estimates in reliable steps of at least 0.1 per cent. The manometric estimate is adapted to hospital use in the absence of a chemical balance; the gravimetric method is more rapid and more exact.

The chief practical advantages of a rapid method of estimating chloroform in air differ according as the chloroform question is viewed from the experimental or from the clinical standpoint. Experimentally it is important to possess a ready means of *frequently* gauging the percentage of chloroform administered and exhaled. Clinically it is important to possess a ready means of *familiarizing students with the smell of mixtures of known percentage.* It is an easy matter for a laboratory expert to distinguish by smell whether there is more or less than 1 or 2 per 100 of chloroform vapour in a given atmosphere. Until it is possible to rapidly verify the percentage and to offer to inhalation by his students mixtures of known percentage, even the most experienced teacher of anaesthetics is not entitled to use clear arithmetical language, and to say that chloroform for the safe induction of anaesthesia in ordinary cases should be maintained between the limits of 1 and 2 per 100. But with a rapid method of estimation at hand, this all-important fact can be taught by smell, which after all is, and must remain, the most valuable indicator immediately at command of the practical anaesthetist.

The following table gives the comparative results of a preliminary series of parallel estimates by oil-absorption and by weighing:

Weight Readings and Calculations by Dr. Geets. Manometer Readings by Mr. Shapiro.

Percentage by Manometer.	Percentage by Weight.	Percentage by Manometer.	Percentage by Weight.
5.20	5.95	1.50	1.49
4.50	5.08	1.50	1.49
4.50	4.96	1.50	1.49
3.50	3.72	1.50	1.49
3.50	3.72	1.50	1.44
2.90	3.47	1.50	1.44
2.85	3.10	1.50	1.39
2.80	2.98	1.60	1.36
2.80	2.98	1.50	1.36
2.80	2.73	1.50	1.34
2.15	2.48	—	1.30
2.30	2.28	1.60	1.30
2.00	2.11	1.60	1.30
2.00	2.08	1.45	1.29
2.00	1.98	1.45	1.26
1.50	1.86	1.48	1.12
1.50	1.61	1.30	1.12
1.50	1.59	1.30	0.99
1.50	1.54	—	—

The individual discrepancies in the two series of this table are such as might be expected from experimental errors occurring in a first trial of two new methods by two independent observers. The error has been relatively more considerable at the lower percentages (below 2 per cent.) but is also considerable at the higher percentages. It is more probably attributable to imperfect graduation of the manometer than to incorrect weighing. To determine this point will, however, require further observations.

Corrections for temperature and pressure are of secondary importance in determinations of the present character. The temperature error for + 15° is within + $\frac{1}{20}$ of the nominal percentage, and can be practically eliminated by taking flasks = 260 c.cm capacity, that is, the usual 250 c.cm. flask + 10 c.cm. of its neck above the mark.

The usual corrections for T and H are, however, readily made, in accordance with the following formula, applicable to any flask capacity:

$$\log P = 1.8391 + \log m - \log v + \log T - \log H$$

P being the required percentage, *m* the observed increment of weight in mgs., *v* the flask capacity in c.cms., *T* the absolute temperature, *H* the barometric pressure, and 1.8391 a constant derived from the density of chloroform vapour at 0° (273° T) and 760 mm. Hg.

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THE PHYSIOLOGICAL ACTION OF ETHYL BROMIDE AND OF SOMNOFORM.

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[From the Physiological Laboratories, Cambridge.]

THE object of the experiments described below was the investigation of a new anaesthetic sold commercially under the name of "somnoform." This is a mixture containing ethyl chloride 65 per cent., methyl chloride 30 per cent., ethyl bromide 5 per cent. It has been largely used in France for producing anaesthesia for minor operations, and the

manufacturers of it claim that it is very readily administered, the anaesthesia is produced very rapidly, is unattended with danger, and that there are no ill after-effects. There is no published account of the physiological action of such a mixture of drugs, and it seemed desirable to investigate their action both alone and in various proportions with a view to discovering, if possible, a reliable and safe anaesthetic for general use. This paper must be regarded as a preliminary account, for at present my experiments on ethyl and methyl chlorides are not complete.

Historical.

Ethyl bromide was first employed as an anaesthetic by Nunnely[1] in 1849. Its use has been rather intermittent, but at the present time it is somewhat extensively used in America and on the Continent as a general anaesthetic, chiefly, however, for minor operations, such as those in the throat. For longer operations it has been employed as a preliminary to ether by Williams,[2] and to chloroform by Hartmann and Bourbon.[3]

The chief characteristic of bromide of ethyl as an anaesthetic is its strikingly rapid yet transient action. A suitable dose in about a minute produces unconsciousness lasting on an average one or two minutes, from which the patient awakes and regains almost at once his normal state. (Quoted from A. Brown Kelly, Bromide of Ethyl Anaesthesia in Operations in the Throat, BRITISH MEDICAL JOURNAL, 1902, vol. ii, p. 588.)

Ginsburg[4] gives the best account of the physiological action of ethyl bromide, his experiments being performed on rabbits and dogs. He finds that with small doses, yet sufficient to produce anaesthesia, the blood pressure is not lowered, the pulse becoming more rapid, and not irregular. With larger doses there is a fall in blood pressure, an irregular, rapid pulse, and a quickening of respiration. Death is produced by cessation of respiration, which precedes that of the heart. He ascribes the quickening of the heart to stimulation of automatic cardiac centres or of peripheral accelerator nerves. The fall in blood pressure with large doses is due, according to Ginsburg, to paralysis of peripheral vasomotor nerves. He states that ethyl bromide has no effect on the vagus, vasodilator centres, or peripheral vasodilator nerves. Thornton and Meixell[5] obtained similar results, the chief source of danger being stoppage of respiration. Ethyl chloride has been used locally as an anaesthetic in dentistry, and also as a general anaesthetic for minor operations (W. J. McCardie)[6]. Its physiological action seems to be similar to that of ether, but it is liable to produce death by paralysis of respiration[7].

As far as I am aware methyl chloride has not been used as a general anaesthetic.

Experimental.

My own experiments are 20 in number, 12 being on rabbits, 3 on cats, and 5 on pithed frogs.

The animal was first anaesthetised, by ether in the case of rabbits, and chloroform followed by the A.C.E. mixture in the case of cats. The effect of the somnoform or ethyl bromide was tried whilst the animal was only lightly under the influence of the preliminary anaesthetic. Tracheotomy was performed in all cases, and the anaesthetic administered by the tracheal tube.

The constituents of somnoform are all highly volatile, the boiling points being: Methyl chloride, −23° C.; ethyl chloride, 12° C.; ethyl bromide, 40.7° C. For this reason it is difficult to regulate nicely the amount that it is desired to administer.

The drug is sold in hermetically-sealed bottles that can be fitted with a valved nozzle. I generally allowed about 5 c.cm. to boil over into a bottle containing some cotton wool, and into this bottle I introduced one limb of the Y-shaped tracheal tube that was used in all my experiments. The other end of the tracheal tube was left open for the first few seconds, being closed when I desired to give the animal a larger dose. The objection to this method of administration is that the air reaching the lungs contains a high percentage of the drug. The advantage is that it allows the various effects to be well seen, owing to their rapid development.

I will now proceed to describe the results I have obtained, dealing separately with the effects observed on the several functions of the body.

Effect on Respiration.

The effect of somnoform on respiration was studied on 6 rabbits and 2 cats.

Methods.

On Rabbits.—A record was taken of the contractions of the slip of the diaphragm passing to the xiphisternum, and isolated after the method of Head.[8]

On Cats.—The movements of the sternum were recorded by means of two tambours.

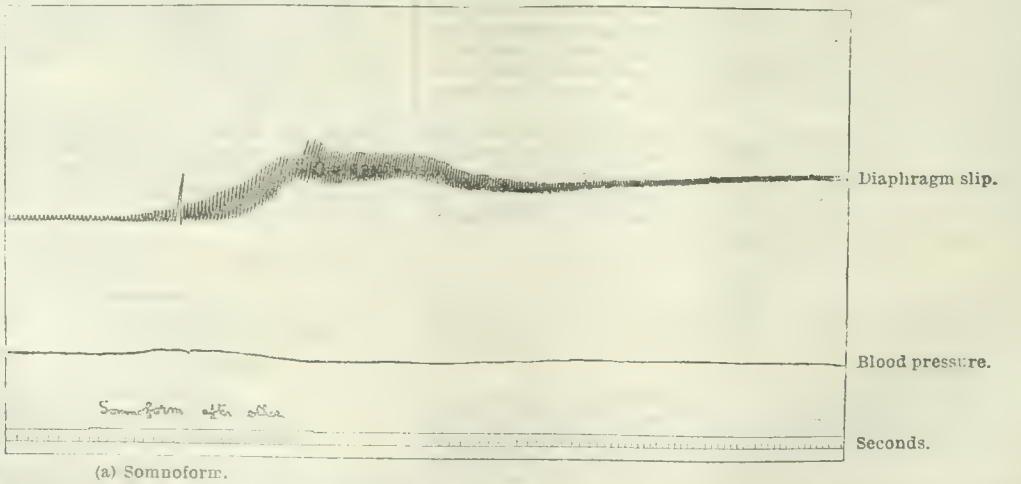
Somnoform has an immediate and pronounced stimulating effect on the respiratory centre, which is manifested in three ways: 1. An increase in the size of contraction; 2. an increase in the rate of contraction; 3. an increase in the tone of the diaphragm.

With large doses this stimulation of the centre is so great that the diaphragm is finally brought to a standstill, remaining in a state of strong tonic contraction until death ensues, the heart still beating strongly.

After section of the vagi inhalation of the drug shows its effect on the centre by an increased height of contraction, the rate and tone being not so markedly affected as in an animal with intact vagi. Also after section of the vagi it is difficult, in fact almost impossible, to cause cessation of respiration with the diaphragm in a state of tonic contraction. Under these circumstances the diaphragm becomes relaxed owing to an apparent exhaustion of the respiratory centre.

An important point in connexion with the use of somnoform as an anaesthetic is that this cessation of respiration does not take place until some considerable time after the causation of complete insensibility. Also that with all but very large doses it is very easy to re-establish breathing by artificial respiration. This is probably due to the fact that the heart is so little impaired by even prolonged inhalation of the drug, so the medullary centres do not become anaemic.

The effect of somnoform on respiration is shown in Figs. 1, 2, and 3.



(a) Somnoform.

Fig. 1.—The effect of somnoform on the contractions of the diaphragm and on the carotid blood pressure of a rabbit. Contraction of diaphragm slip caused upward movement of lever. At point indicated somnoform was administered by tracheal tube, the administration lasting for 25 seconds. The blood pressure rose very slightly during the administration, falling to its previous height after discontinuing somnoform. Respiration was almost immediately affected, the contractions of the diaphragm becoming larger and more rapid, the tone of the diaphragm also increasing considerably. After discontinuing the drug the contractions decreased in size and rapidity, the tone, however, remaining high for over 3 minutes, when it gradually fell to its previous state (8 minutes).

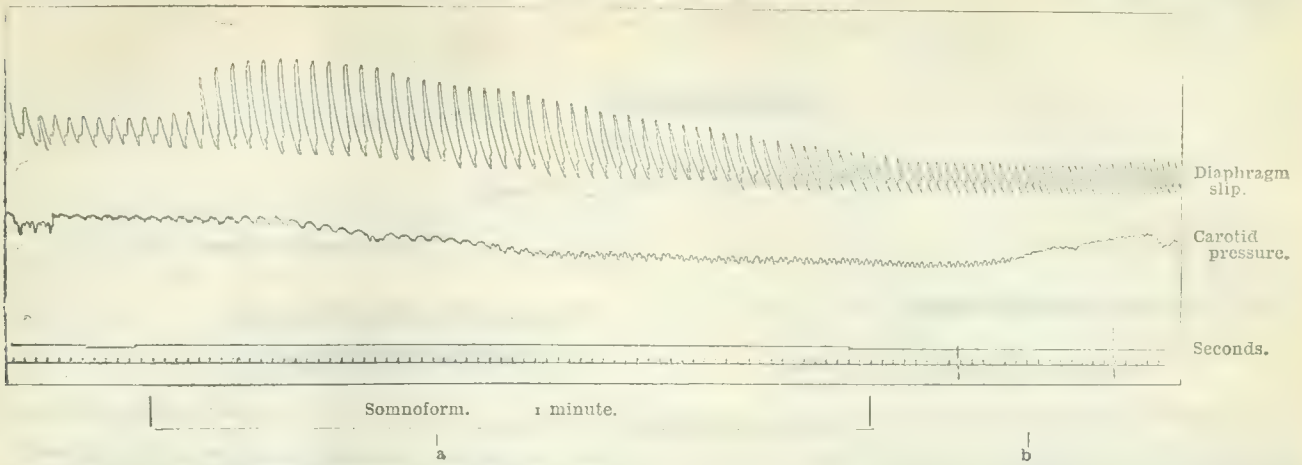


Fig. 2.—The effect of somnoform on the carotid blood pressure and on the contractions of the diaphragm of a rabbit after ether narcosis. Both vagi had been previously cut high up in the neck. Blood pressure fell slightly and slowly during the inhalation of somnoform, rising rapidly afterwards, the heart becoming irregular in its action. At the point marked "a" the heart beats were suddenly reduced to exactly half their previous number, this effect passing off with equal suddenness at the point marked "b." The respiratory contractions were increased in size at the commencement, but returned to their original magnitude before the drug was discontinued. There was no increase in rate or tone.

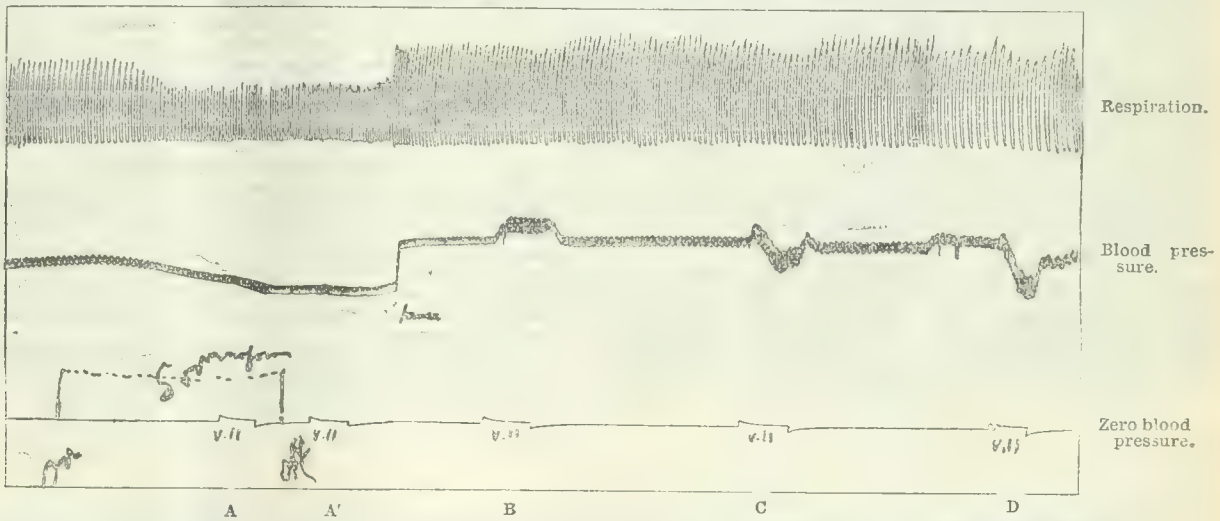


Fig. 3.—The effect of somnoform on the carotid blood pressure and on the respiratory movements of a cat, anaesthetised by chloroform. Both vagi had been cut high up in the neck. The animal had previously had a rather large dose of chloroform, and its blood pressure had not fully recovered when somnoform inhalation began at the point shown. The blood pressure fell very slightly during the inhalation of somnoform. The drum was stopped for two minutes, during which time the pressure rose considerably. The peripheral end of the left vagus was stimulated at A during the inhalation, at A' just after, and at B, C and D some time after stopping the inhalation, in all cases with the coil at 7 c.cm. At A and A' no slowing of the heart or fall of pressure took place. At B, C and D there was a distinct slowing of the heart, the pressure rising at B and falling at C and D. The experiment thus shows that somnoform produces a temporary paralysis of the peripheral endings of the vagus. The respirations became faster and shallower.

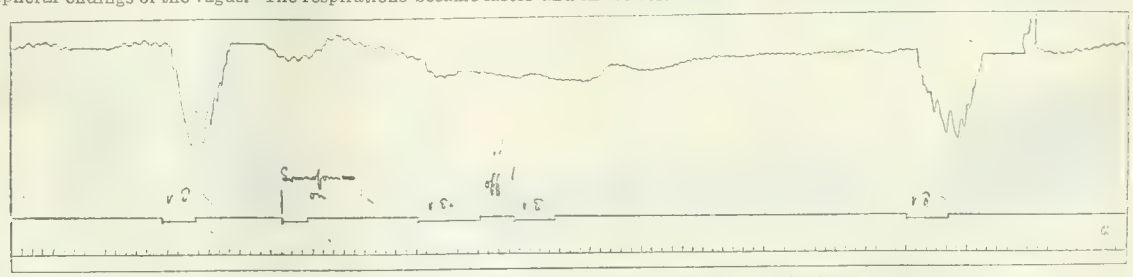


Fig. 4.—Effect of somnoform on the carotid blood pressure of a rabbit. Ether was given as a preliminary anaesthetic. Both vagi divided in the neck. At V8 the peripheral end of the right vagus was stimulated with the secondary coil at 8 cm. It can be seen that during and just after the inhalation of somnoform stimulation of the vagus is without effect on the heart.

Effect on the Heart.

Methods.—1. The examination of the blood-pressure tracings. 2. Direct records were taken of the contraction of the auricle and ventricle in rabbits. This was done in five rabbits. In all cases the thorax was opened and artificial respiration maintained either by the hand bellows or by the apparatus made by the Cambridge Scientific Instrument Company. In opening the thorax care was taken to ligature the intercostal and internal mammary arteries of both sides. The loss of blood was usually small. The pericardium was opened by a median incision, and the cut edges stitched to the parietes of the chest. In this way the movements of the heart were but little affected by the inflations of the lung. In four cases the contractions were recorded by levers attached to a thread passing over a pulley, the further end of the thread being fastened to a small hook inserted in the ventricle and auricle. In two cases I chose the left auricle and ventricle, and in the other two the right. 3. In the fifth case I recorded the contractions by means of the ingenious myocardiograph described by Roy and Adami.[8] The results obtained were the same as with the simpler method.

The effects of somnoform are shown on: (1) The rhythm; (2) the strength of contraction; (3) the conduction.

1. As regards the rhythm, I find that the rate is increased

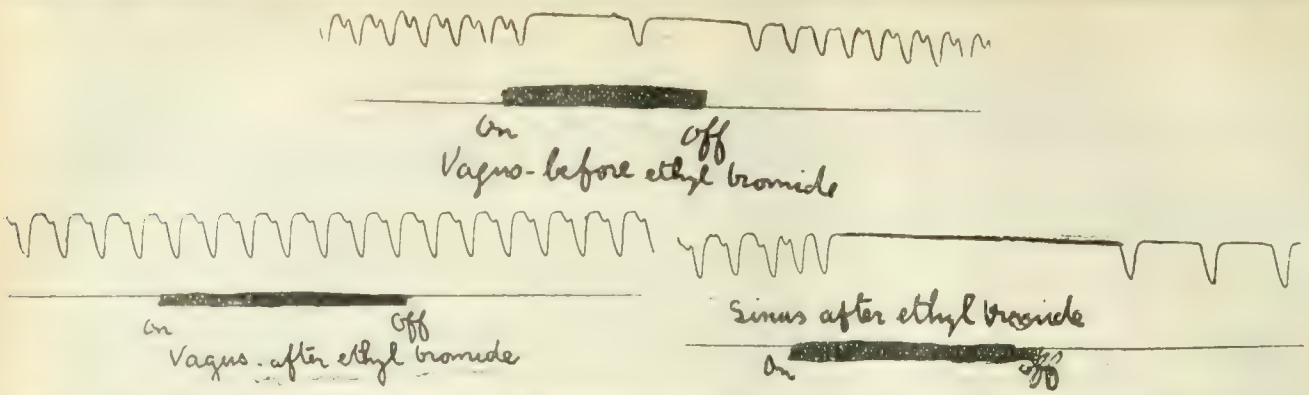


Fig. 5. The effect of ethyl bromide on the endings of the vagus in a pithed frog. Normal saline saturated with ethyl bromide was dropped on the heart after the first tracing had been taken.

with small doses both with intact and cut vagi. With larger doses a slowing is produced in both cases.

This increase of rate with intact vagi is due to all or some of the three following causes: (1) The paralysis of the vagal nerve endings; (2) a direct stimulation of the cardio-accelerator and augmentor fibres; (3) a direct action on the heart itself. I describe later experiments that show conclusively that the preganglionic endings in the cardiac ganglia are paralysed or depressed by somnoform. This would to a certain extent account for the quickening of the heart with the intact vagi. I have frequently observed an acceleration of the heart during administration of the drug, even after section of the vagi. This is probably due to a stimulation of the cardiac accelerator centre or nerves.

2. The strength of contraction is always decreased, both before and after section of the vagi. This is particularly noticeable with large does. The effect is produced by ethyl bromide alone, as well as by somnoform.

3. In Fig. 2 I show a blood-pressure tracing from a rabbit, in which the oscillations were suddenly reduced to half their number 30 seconds after somnoform was given. This lasted until 15 seconds after the somnoform was removed. I have seen a similar effect in three rabbits. In all cases the vagi were cut, and the only explanation I can offer is that it is due to the ventricle failing to contract owing to a depression of conduction in the auriculo-ventricular ring. I have not been fortunate enough to obtain the effect with the heart exposed. A similar result has been described by Gaskell and Shore during chloroform administration. With ethyl bromide alone I have observed a quickening of the heart with intact vagi, and also once with cut vagi. Ginsburg, who failed to notice the depression of the vagal nerve endings, ascribed the acceleration of the heart under ethyl bromide as entirely due to stimulation of the accelerators, either peripherally or centrally.

Effect on the Blood Pressure.

With small doses of somnoform the blood pressure is not usually affected to any great extent. Any alteration that does occur is generally in the upward direction. With large doses the pressure remains high for a good length of time, and then gradually falls. This is especially the case if the vagi are intact. After section of the vagi a rise has never occurred in my experiments. Usually a gradual yet distinct fall in pressure takes place.

A very common effect is that during the administration of the drug the blood pressure remains unaltered. After

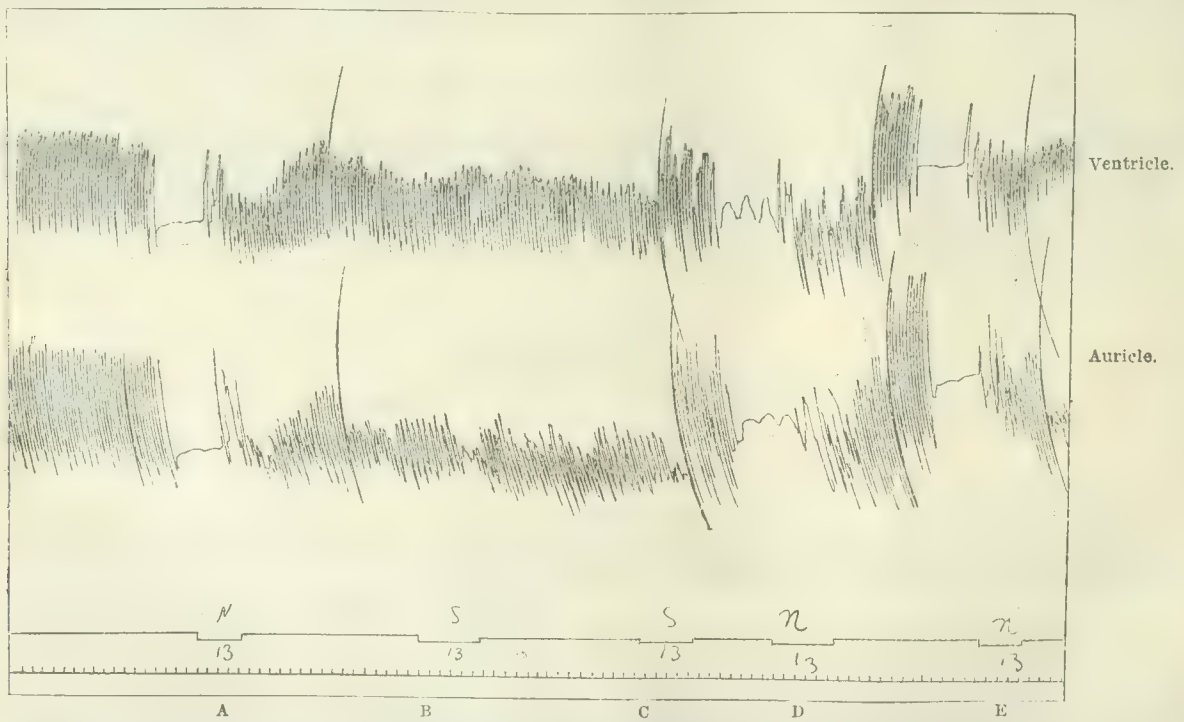


Fig. 6.—Record of the contractions of the ventricle and auricle of a rabbit, with effect of somnoform on peripheral ends of vagus. (Ether was given by tracheal tube during the preliminary dissection.) Stimulation of cut end of left vagus (coil at 13) at A produced stoppage of heart. Somnoform was inhaled for 25 seconds, the drum started, and the vagus stimulated again at B and C without producing any effect. The drum was stopped for one minute (somnoform having been discontinued). On stimulating at D a distinct inhibitory effect was produced. Stoppage of the heart was produced after the expiration of another half minute (E) Auricular tracing above.

cessation of the inhalation it rises considerably. I have not determined the cause of this after-rise.

The rise in pressure seen in an animal with intact vagi is due, I think, to the removal of the inhibitory vagal impulses, the rise being usually accompanied by an acceleration of the heart. The subsequent fall is due to the direct action of the drug on the heart.

Effect on the Vagal Nerve Endings in the Heart.

I find that during the inhalation of somnoform or of ethyl bromide, the endings of the vagus in the ganglia of the heart are paralysed. I have observed this in 2 cats and 7 rabbits, in every case in fact in which I have looked for such an effect.

In the frog I have found that the post-ganglionic endings in the heart itself are not paralysed by ethyl bromide, stimulation of the sino-auricular junction by a weak interrupted current producing marked inhibition, whilst stimulation of the trunk of the vagus is entirely without effect. This is shown in Fig. 5.

Effect on the Cardio-inhibitory Centre.

Owing to the depression of the vagal nerve endings I have been unable to ascertain the effect of the drug on the cardiac centre in the medulla. And owing to this peripheral depression it seemed unnecessary to investigate this point, for any impulses that would be originated in the medulla could not affect the heart's action.

Effect on the Vasomotor Functions.

I have performed two experiments on cats with an intestinal plethysmograph to ascertain the effect on the blood vessels, using somnoform and ethyl bromide. I was quite unable to detect any alteration. The intestinal volume increased with a rise in blood pressure, and decreased with a fall. I found this to be the case even with a very large dose, and am therefore unable to agree with Ginsberg, who states that ethyl bromide paralyses the peripheral vasoconstrictor fibres.

Effect on the Skeletal Muscles.

A striking effect of the drug is the peculiar rhythmic movements of the limbs, jaws, and tail that nearly always supervene with somnoform and ethyl bromide inhalation. The muscles are quite firm, even during deep coma. The struggling movements occur when it is quite impossible to obtain the corneal reflex, and are due to an excitation of the cord or higher centres. They cease immediately on section of the motor nerves to the parts.

Effect on the Non-skeletal Muscle.

In the case of the bladder I have observed a most distinct and rapid rise of pressure in a cat that was being experimented on by Mr. T. R. Elliott, of Trinity College, Cambridge. Since the increase in pressure could only be obtained when the pressure in the bladder was high, we concluded that it was due to a direct effect on the musculature of the viscus.

Effect on the Pupil.

It is difficult to estimate the action on the pupil owing to the effect of the previous anaesthetic. Whenever the pupil was small under the influence of ether, somnoform caused a dilatation, passing into a constriction with large doses.

Conclusions.

The chief indications that my experiments afford as to the use of somnoform as an anaesthetic are:

1. The chief danger being a paralysis of respiration; careful watch must be kept over the respiratory movements.

2. Owing to the depression or paralysis of the peripheral endings of the cardio-inhibitory fibres, and the comparative slight action on the heart itself, there is no danger of heart failure provided respiration has not ceased.

3. After cessation of the respiratory movements it is easy to restore the animal by artificial respiration.

I am of opinion that the paralysis of the cardio-inhibitory fibres by ethyl bromide renders that drug a very valuable anaesthetic. Embley[9] has recently shown that the sudden death that not infrequently occurs in chloroform anaesthesia is due to inhibition of the heart through stimulation of the cardio-inhibitory centre. This is usually only seen in the early stages of chloroform administration, the danger passing off when the medullary centres are exhausted.

I venture to suggest that a valuable anaesthetic for prolonged operations could possibly be obtained by combining ethyl bromide with chloroform. During anaesthesia produced by ethyl bromide the vagi are paralysed; chloroform would then be deprived of one of its great dangers. It might be possible to get well past the stage of excitation into that of depression of the medulla before ceasing to give ethyl bromide and maintaining anaesthesia by chloroform alone, ethyl bromide being discontinued owing to its paralytic effect on respiration. I hope shortly to test this possibility.

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THE INFLUENCE OF ETHER ADMINISTRATION ON NITROGENOUS METABOLISM.

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THE question upon which the following research was made has already received a certain amount of attention. In the larger number of cases chloroform has been the anaesthetic employed, but since my own observations have been conducted with ether as the anaesthetic that work does not strictly come within the scope of the present paper.

It may be incidentally remarked, however, that the results of Terrier[1] (whose work on the nitrogen excretion of rabbits and man after chloroform is careful and exhaustive) bear a general resemblance to the results to be detailed below.

Thompson,[2] working with the human subject, found that ether anaesthesia produces diuresis and an increase in the total nitrogen and urea excretions.

Haig[3] found, under similar circumstances, that "the rise of urea was enormous."

I have been unable to find any literature dealing with the excretion of uric acid and xanthin bodies under similar circumstances. Previous writers have for the most part been contented with estimating variations in urea, few of them entering even into the question of total nitrogen excretion.

METHODS.

The patients whose urine was investigated were in the wards of the Westminster Hospital. It will be seen that in most cases the patient were young adults suffering from surgical ailments which did not greatly interfere with their general health, and whose kidneys were, with one exception, absolutely healthy.

Below are given short details of the cases themselves:

CASE I.—J. G., female, aged 17. Laparotomy for tuberculous peritonitis. Temperature raised irregularly. Milk diet before and after the operation.

CASE II.—Mrs. K., aged 50. Removal of deltoid bursa. Fish before operation; milk to twenty-four hours after, then fish. No temperature.

CASE III.—R. T., male, aged 18. Radical cure of varicocele. Temperature to 100° on third day after operation, then normal. Diet ordinary before, milk to third day after, then fish.

CASE IV.—T. G., male, aged 18. Radical cure inguinal hernia. Temperature 99.8° third day after, then normal. Ordinary diet before, water to twelve hours after, then milk.

CASE V.—S. M., male, soldier, aged 24. Bilharzia. No cutting operation, only cystoscopy. No temperature. Ordinary diet before anaesthesia, and from twelve hours after. The complete table of estimations of this case is quoted in Tables I and II.

CASE VI.—K. W., female, aged 23. Tuberculous abscess of breast. No temperature. Ordinary diet before; water twelve hours after, then milk.

CASE VII.—T. H., male, aged 28. Wiring of fracture. No temperature. Ordinary diet before; milk and beef-tea to third day, then fish.

CASE VIII.—C. C., male, aged 25. Radical cure of inguinal hernia. Ordinary diet before; milk and beef-tea after operation.

CASE IX.—R. T., male, aged 18. Removal of sequestrum. No temperature. Ordinary diet before operation; fish after.

CASE X.—A. S., male, aged 22. Removal of sequestrum. No temperature. Ordinary diet before; milk and beef-tea afterwards.

CASE XI.—T. S., male, aged 15. Removal of tumour from sphenoid. Much haemorrhage. Temperature 100° second day, after then declined. Ordinary diet before operation; milk and beef-tea after.

CASE XII.—Mrs. P., female, aged 30. Radical cure femoral hernia. No temperature. Fish diet to day before, then milk.

CASE XIII.—Mrs. H., female, aged 25. Dilatation of cervix uteri under

anaesthetic. No cutting operation. No temperature. Ordinary diet before; resumed 8 hours after operation.

The operations were thus of all types of severity, but, speaking generally, were followed by little or no pyrexia; the haemorrhage was slight, and the diet was by no means of a highly nitrogenous nature. It may be mentioned that the mean total nitrogen of three separate estimations of average hospital beef tea was 2.46 grams per litre, and that in no case was this quantity of beef-tea exceeded in twenty-four hours. Tested similarly, milk gave an average 4.95 grams total nitrogen per litre, and not more than 1½ to 2 litres would be given in twenty-four hours.

The urine of the twenty-four hours was collected, and mixed, and measured, and a sample was used for the various estimations. In all cases the total nitrogen, urea, and uric acid were estimated directly; the xanthin bases were estimated by subtraction.

The total nitrogen was estimated by Kjeldahl's method, urea by the sodium hypobromite method in Dupré's apparatus, and uric acid by Hopkius's method. With regard to the estimation of urea, it must be noted that I have indicated in another place[1] that the addition of 10 per cent. glucose to the urine increases the amount of urea nitrogen by about 9 per cent. In the results given below correction has therefore been made for this factor, and for the error in the particular apparatus employed, as determined by estimating a 2 per cent. watery solution of chemically pure urea.

Examination was made of the urine passed by the patient on the day before the operation and the three days succeeding the operation. These four periods are hereinafter denoted by the Roman figures I, II, III, IV the operations thus occurring between I and II.

In some instances it was unfortunately impossible to obtain the full twenty-four hours urine, as some was lost with the faeces; but cases in which this source of error could be definitely excluded agree so well with the others in their essential points that it is probable that no serious source of error has been introduced thereby.

RESULTS.

It will be convenient if at the outset tables are given (Tables I and II) of the entire series of estimations made in a typical case, and (Tables III and IV) of the condensed and combined results in the 13 cases.

In the selected case (No. 5, S. M., in list) anaesthesia was produced for the purpose of cystoscopy, nothing further was done and the total administration of ether lasted about 20 minutes. The patient preserved a normal temperature, and resumed full diet twelve hours after the administration.

TABLE I.—*S. M., 24 years Case 5.*

Day in Roman Figures as noted above.	Amount of Urine in 24 hours in cubic centimetres.	Percentage of Total Nitrogen (Kjeldahl).	Percentage of Urea.	Percentage of Uric Acid.	Percentage of Nitrogen Passed as Xanthin Bodies.	Total Nitrogen Excretion in 24 hours.	Total Urea in 24 hours.	Total Uric Acid in 24 hours.	Total Nitrogen Passed as Xanthin Bodies in 24 hours	Remarks.
	c.cm.									
I	1077	1.54	3.20	0.05	0.02	16.58	34.46	0.54	0.32	Anaesthetic
II	1256	0.91	1.60	0.07	0.15	11.44	20.09	0.88	1.77	
III	877	1.56	2.81	0.07	0.22	13.69	24.64	0.61	1.99	
IV	1559	1.15	2.24	0.02	0.09	17.93	34.92	0.31	1.54	

TABLE II.*

Day.	Total Nitrogen Excretion.	Total Nitrogen Passed as Urea.	Total Nitrogen Passed as Uric Acid.	Total Nitrogen Passed as Xanthin Bodies.	Percentage of Total Nitrogen Passed as Urea.	Percentage of Total Nitrogen Passed as Uric Acid.	Percentage of Total Nitrogen Passed as Xanthin Bodies.	Remarks.
I	16.58	16.08	0.18	0.32	97.90	1.09	1.01	Anaesthetic.
II	11.44	9.38	0.29	1.77	81.90	2.53	15.48	
III	13.69	11.50	0.20	1.99	84.00	1.40	14.54	
IV	17.93	16.20	0.10	1.54	90.85	0.56	8.59	

* Summary of nitrogen excretion in above case, with percentages deduced from total nitrogen per cent., urea per cent., and uric acid per cent. The "xanthin" columns are in every case estimated by subtraction from the total nitrogen of the group in which they are placed, and hence are probably not strictly correct with one another beyond the first place of decimals. This, however, is immaterial.

TABLE III.*

Case.	Day.	Total Nitrogen in 24 hours in grams.	Total Urea. Ditto.	Total Uric Acid Ditto.	Total Xanthins. Ditto.	Percentage of Total Nitrogen Passed as Urea.	Ditto as Uric Acid.	Ditto as Xanthins.
I ...	1	8.85	13.68	0.24	2.40	71.90	0.90	27.20
	2	10.62	19.50	0.80	1.26	85.60	2.40	12.00
	3	9.78	15.93	0.22	2.29	75.80	0.70	23.50
	4	15.85	22.65	0.46	5.20	66.00	0.90	33.10
II ...	1	8.92	16.08	0.43	1.29	83.90	1.50	14.60
	2	5.40	10.15	0.44	0.57	87.00	2.50	10.50
	3	10.24	18.48	0.17	1.44	85.40	0.49	14.11
	4	6.42	12.70	0.19	0.57	90.30	0.70	9.00
III ...	1	6.54	13.28	0.25	5.61	58.80	1.20	40.00
	2	7.47	14.72	0.45	0.48	91.80	2.00	6.20
	3	16.33	30.93	0.57	2.72	88.20	1.10	10.70
	4	17.25	25.87	0.79	4.95	69.70	1.50	28.80
IV ...	1	8.22	17.13	0.23	0.22	97.30	0.84	1.86
	2	8.79	16.80	0.71	0.71	89.10	2.60	8.30
	3	18.33	35.69	0.33	1.63	90.50	0.66	8.90
	4	6.35	13.39	0.14	0.08	98.10	0.60	1.30
V ...	1	16.58	34.46	0.54	0.32	97.90	1.09	1.01
	2	11.44	20.09	0.88	1.77	81.90	2.53	15.48
	3	13.69	24.64	0.61	1.99	84.00	1.46	14.54
	4	17.93	34.92	0.31	1.54	90.85	6.56	8.59
VI ...	1	7.16	13.30	0.27	0.68	85.00	1.20	13.80
	2	8.54	14.57	0.40	1.65	79.50	1.50	19.00
	3	17.16	21.36	0.72	6.98	52,00	1.30	46.70
	4	Specimen lost						
VI .	1	11.88	24.42	0.20	0.44	95.40	0.50	4.10
	2	6.07	10.05	0.49	1.42	73.90	2.60	23.50
	3	10.88	19.40	0.68	1.63	83.40	2.62	10.50
	4	22.99	41.99	0.23	3.30	84.90	0.30	14.80
VIII ...	1	19.32	35.18	0.23	2.87	84.70	0.30	15.00
	2	3.25	6.61	0.18	0.13	96.00	1.40	2.60
	3	24.74	40.72	0.44	5.63	76.60	0.50	22.90
	4	18.06	25.61	0.38	6.04	65.80	0.60	33.60
IX ...	1	12.08	21.10	0.14	2.67	77.60	0.30	22.10
	2	3.84	6.33	0.24	0.82	76.50	2.08	21.42
	3	8.8	15.13	0.20	1.18	85.90	0.90	13.62
	4	8.7	9.58	0.42	4.15	50.80	1.60	47.60
X ...	1	13.08	16.01	0.84	5.38	56.70	2.10	41.20
	2	5.29	8.61	0.37	1.18	75.40	2.20	22.40
	3	18.57	31.15	1.03	3.78	78.00	1.60	20.40
	4	25.77	35.25	0.81	9.05	63.70	1.04	36.26
XI ...	1	12.85	12.37	0.36	6.99	44.70	0.90	54.40
	2	4.49	7.39	0.26	0.98	76.30	1.70	22.00
	3	8.83	14.86	0.33	1.79	78.40	1.20	20.40
	4	12.65	24.73	0.36	1.05	90.70	0.90	8.40
XII ...	1	6.33	14.24	0.31	0.09	97.20	1.40	1.40
	2	2.83	5.89	0.04	0.15	96.40	0.30	3.30
	3	12.32	23.03	0.68	1.24	88.00	1.80	10.20
	4	4.89	6.99	0.18	1.57	66.60	1.20	32.20
XIII ...	1	9.93	16.51	0.43	2.09	77.50	1.40	21.10
	2	5.53	9.06	0.33	1.20	76.30	1.90	21.80
	3	7.64	14.87	0.35	0.59	90.70	1.50	7.80
	4	8.75	13.96	0.44	2.09	74.40	1.70	23.90

* Totals of nitrogen, urea, uric acid, and xanthins passed on each "day" by the 13 cases. Also percentages of total nitrogen accounted for by urea, uric acid, and xanthin bodies. For the purposes of this paper the term "xanthins" must be considered as equivalent to "nitrogen passed as xanthin bodies."

TABLE IV.—*Composite Table of all Cases in Table III.*

Case.	Day.	Average of Total Nitrogen in Grams.	Ditto of Urea.	Ditto of Uric Acid.	Ditto of Xanthins.	Average Percentage of Total Nitrogen Passed as Urea.	Ditto as Uric Acid.	Ditto as Xanthins.
Composite of Nos. I to XIII	1	10.87	17.12	0.34	2.49	79.00	1.06	21.4
	2	6.43	11.52	0.41	0.95	83.70	1.94	14.6
	3	12.71	23.57	0.49	2.45	81.40	1.17	16.6
	4	22.14	22.22	9.41	3.29	70.91	0.91	37.0

TOTAL NITROGEN EXCRETION.

The most striking result with regard to the total nitrogen excretion (Table IV) are: (1) That there is a marked fall

on the day after etherization; (2) and a considerable rise on the two subsequent days.

So much is this the case that according to this table, on the day after the operation the total nitrogen excretion is little more than half the excretion on the day before the operation, whereas on the fourth day the total nitrogen excretion is practically double the normal. In only four cases was the rule of a fall on the day after the operation not observed. With reference to the subsequent rise, although Table IV. shows that the maximum occurred on the fourth day, this was not absolutely true in the individual cases, for in six cases the maximum occurred on day 3. It may therefore be concluded that a rise in total nitrogen excretion may be expected on days 3 or 4.

EXCRETION OF UREA.

In spite of the dogmatic assertions that have been made as to the behaviour of urea excretion after anaesthesia, it has been impossible in this set of experiments to speak with absolute certainty.

The total urea columns in Tables III and IV show that there is a general tendency for urea to fall on the day after etherization, and in Table III this fall occurs in 9 out of 13 cases. In half of the cases which show a rise, that rise is only fractional. As might be expected from the total nitrogen results, in every case except IX and XIII the maximum urea excretion was reached on days 5 and 4, and was in excess of that on day 1. The percentage columns in Table IV, to which special attention is drawn, show that there is a general tendency for the percentage excretion of urea nitrogen on day 2 to rise above, and on day 4 to sink far below, its percentage on day 1. Such a fall, in the face of the average doubled output of total nitrogen on day 4 and the low amount and low percentage excretions of uric acid nitrogen, is most significant, and points to a profound change in the composition of the urine, in virtue of which nitrogen tends more and more to be eliminated by other bodies than urea. In the individual cases, such a fall in percentage on day 4 is shown in 8 cases out of 13.

EXCRETION OF URIC ACID.

One of the most interesting results in the whole investigation has been that in connexion with uric acid. In every single case the anaesthesia has been followed by a marked rise in the percentage excretion of uric acid, and in every case but one (XII) the maximum is reached on the day after the operation. Naturally, this result is very well marked in the composite case, which also shows clearly that the average daily excretion on days 2, 3, and 4 is almost always in excess of that on day 1. The regularity of this increase in percentage excretion of uric acid contrasts so strongly with the irregularity observed in the individual cases in respect of the excretion of urea and xanthins as to suggest the existence of some constant physiological factor in the case. Halliburton includes amongst conditions leading to an increase of uric acid (*a*) diminution of oxidation processes, (*b*) processes leading to metabolism of nucleins. The former condition certainly obtains in ether administration by the closed method; the latter is the necessary consequence of most surgical operations and of the starvation diet accompanying them. Besides which in two cases (not included in my series) prepared for operation, but not operated on, a distinct percentage rise of uric acid nitrogen took place on day 2 and day 3 respectively. This suggests that the nervous state of the patient may have something to do with the phenomenon.

EXCRETION OF XANTHIN BODIES.

From the method in which these bodies were calculated it will be seen that in total amount and percentage they must vary inversely as the urea, and that in consequence their accuracy is at best relative, and stands or falls by the correctness of the urea estimations. It therefore merely remains to attempt to account for their presence and proportionate amount.

Mr. Tyrrell[5] quotes a patient's statement with approval, that "taking ether for an hour and a-half is very hard work," and there certainly is an analogy between the effects of prolonged etherization and exhausting bodily work.

Drs. Dunlop, Paton, Stockman, and McAdam state that in all persons severe muscular exercise is followed by increased output of total nitrogen and of urea, but that if the person is out of condition the output of uric acid and extractives is also increased.

Whilst probably none of the cases in the present series were in any athletic conditions, it is noteworthy that of the whole series those five cases whose total xanthin percentages for the four days exceed the average as determined by the composite table include both the tuberculous cases and the necrosis and sarcoma cases (Cases I, VI, IX, and XI), and only one case who was presumably in fair condition, namely, Case X. The other cases were in general health or as (in Case V, bilharzia) had been for a long time under hospital treatment, which is clinically known to put a patient in the very best position for standing an operation or anaesthetic.

I have only in conclusion to tender my sincerest thanks to Dr. W. S. Lazarus-Barlow for permitting me to make all the estimations in the Westminster Hospital Clinical Laboratory, and for much help and advice; and to the staff of the hospital—most especially to Mr. Spencer—for permission to make use of the cases under their care.

I also desire to state that I have previously worked at urea excretion in collaboration with Dr. Eldon Pratt, now of Henfield, Sussex. My departure on active service brought our joint experiments to an abrupt conclusion. I have therefore left the question of publication entirely in his hands.

REMARKS.

1. Percentage of total nitrogen contributed by urea. "Eighty-six per cent. is not below the average determined by Gumlich and Bohland."[7]

2. Average daily excretion of uric acid as here determined may be compared with Smith-Jerome's determinations. In my cases the diet is certainly not highly nitrogenous, and the uric acid average compares fairly with that given by him both for "ordinary" and "nuclein" diets.[8]

3. If it be granted that my results coincide fairly with those of the above mentioned authorities as to urea and uric acid, my reduced figures with regard to xanthin bodies may be allowed as fairly accurate. They are, I think, larger than is usually admitted.

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THE PROCESS OF CHEMICAL SYNTHESIS IN LIVING THINGS.*

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SOME years ago—it was in 1896 that I began experimental work on this subject—I was struck by the fact that nothing was known of the manner in which the synthetic process occurred in living organisms, although, concerned as it must be in such elementary functions as tissue nutrition and the growth and multiplication of the tissue units, it is ultimately the most fundamental phenomenon of life. Building up and breaking down of tissue considered together constitute what is known as metabolism, and are the constant characteristics of all forms of life, down to the simplest organism known. They must, too, be considered together, for, as it is the object of this paper to set forth, they are but phases of one and the same process, and it is because the process of breaking down has not been fully understood in the past that the process of building up has not been seriously studied at all, but, on the contrary, has been relegated to a realm outside the exact sciences, and ascribed to a mysterious "vital" force of an only less mysterious protoplasm.

Foster, in his introduction to his *Textbook of Physiology* (ed. v, 1891), divides physiology into two great divisions, one having to do with the renewal of substance and the replenishment of energy, the other having to do with the setting free of energy. With regard to the general problem of how metabolism of living substance takes place, he says, "the answers which we can at present give can hardly be called answers at all."

From theoretical considerations alone, I was able to construct a hypothesis for the anabolic process in which intracellular ferments played a leading part, but it required for its justification the experimental proof that ferment action, at that time known only in connexion with chemical change in

* Abridged from a Thesis for the M.D. degree in the University of Cambridge.

a single direction, was, in fact, a reversible process, and that synthetic changes of metabolism, just as the analytic, proceeded always in the direction of chemical equilibrium, and not in the contrary direction by interference of a vital force, as was at that time the more general opinion either openly expressed or vaguely hinted at.

Soon after this, I was able to show a reversible action for one ferment at least, and published the fact in 1898. Meanwhile, the list of intracellular ferments already known was added to by the very important one obtained from yeast by Buchner, the one that induces the alcoholic fermentation of glucose. Buchner's results undoubtedly stimulated the search for intracellular ferments, and now they have been separated in great variety from almost all the tissues of the body and their number is still rapidly increasing. The discovery of new oxidases and peroxidases in various animal and plant tissues, in connexion with the already well-known oxidation processes, is another indication of the leading part taken by ferments in the essential phenomena of life, and it becomes the less surprising that in sympathetic processes also ferments are primarily concerned.

There follows—under the heading of reversibility of enzyme or ferment action—a short account† of such fresh work as I have been able to do on this subject since 1898, and it will be seen that the results then obtained have been confirmed and extended both by myself and by other observers, so that the hypothesis advanced in 1898 that the property of reversible action is common to all ferments seems now to deserve acceptance. The subject of synthesis in the organism will be further discussed after the experimental part has been dealt with, and especially will the chemical equilibrium of the cell or tissue, in health and disease, be touched upon, and certain physiological and pathological modifications of tissues as occurring more particularly in man.

Reversibility of Enzyme or Ferment Action.

In some former experiments communicated to the Chemical Society in 1898[1] I showed that the hydrolysis of maltose to glucose by yeast maltase in concentrated solution was incomplete, and that the phenomenon was due to polymerization of the glucose by a reversible process, so that in solutions of maltose or glucose or of the mixed sugars, synthesis and hydrolysis took place until the system approached a chemical equilibrium, while the point of equilibrium was a function of the concentration of the solution.

In the first stage of polymerization of glucose a large number of isomeric bioses are conceivably possible, but one would expect that with any particular enzyme, or group of enzymes, only those would be formed which are capable of being split back again to glucose by the same enzyme; further, of such substances formed, only those would be found at the end of the reaction which are in equilibrium with the rest when in appreciable concentration, and, the higher the initial concentration of the glucose, the larger might be the number of such substances in appreciable concentration at the end. Again, other conditions equal, an increase in variety of enzyme would increase the total amount of glucose changed.

I have obtained experimental evidence bearing on these points with yeast extract, taka-diastase, and with the enzymes of the pig's pancreas respectively. The products of the synthetic action were not completely identical in these cases. The differences may be due to one or more of the following causes:

1. Specific differences in the enzymes; for example, the maltase of yeast extract being different from that of taka-diastase.
2. Difference in the variety of enzymes present.
3. Difference in the proportion of enzymes present.

So far as concerns yeast extract and taka-diastase, the second and third factors seem to have been chiefly effective.

In every instance, on diluting the products of the synthetic action, it has been possible to split them back to glucose by the enzyme used in their synthesis. Further, the synthetic products of the action with yeast extract were found to be split by taka-diastase, and those of the action with taka-diastase by yeast extract. Preliminary notes on these results were published (taka-diastase and reversed ferment-action;[2] synthetic action on glucose with pancreatic ferments;[3] although it is likely, or at any rate possible, that maltase acting on glucose may produce isomers, it is not proved that, by itself, it can produce anything but maltose, as it has hitherto been impossible to obtain it free from other enzymes. In fact, in making a preparation of any enzyme, it is never possible to exclude admixture with unknown enzymes, although particular-known ones may be excluded. That a considerable part of the synthetic product obtained by the action of yeast extract on concentrated glucose solution is possibly formed by the agency of other enzymes than maltase is suggested by fermentation experiments. Saccharomyces Marxianus is a yeast which was found by Hansen in 1888 to ferment glucose, but not maltose. I made use of this yeast in 1900 for separating maltose from glucose in mixtures of these two sugars, and published a note on the details of the method.[4] If the product obtained by the action of yeast extract on concentrated glucose solutions, including thus the synthetic product and the unchanged glucose, is fermented with S. Marxianus, only the unchanged glucose is fermented. If, on the other hand, one ferments with a maltase-containing yeast—and I have tried several varieties, each in pure culture—not only is the glucose fermented, but also a part of the synthetic product, the larger part, however, which is not maltose, being unattacked. If, lastly, one treats the product after dilution, first with some yeast extract, similar to that used in its formation, to hydrolize it, it is then fermented completely by S. Marxianus. Evidence has been obtained that the smaller portion of the synthetic product, which is fermented by maltase-containing yeasts, consists of maltose, or partly maltose, and partly-higher polymers of maltose. The larger portion, however, which is unfermented unless previously hydrolysed, has optical and reducing properties between those of maltose and those of glucose. It consists mainly of a biose which is not identical with any known sugar, and which I have called "revertose."

The analysis of the product of the action of yeast extract on concentrated glucose solutions was performed by examining the residues left after fermentation of the product (1) with S. Ellipsoideus I, (2) with S. Marxianus, and subsequent fractionation with alcohol.

The analysis of a series of fractions of the residue after fermentation with S. Ellipsoideus I showed that only one sugar remained. This sugar is proved by combustion of its osazone to be a biose, and is the one I have called revertose. The osazone crystallizes in needles, melting at 173° to 174° (corrd.) It is distinguished from Fischer's isomaltosazone,[5] which had an

$$[\alpha]_D = +7°$$

by being optically inactive.

Revertose itself is a hygroscopic sugar, which has only been obtained crystalline by dehydrating the vitreous sugar, either slowly in an exsiccator over lime, sulphuric acid, or anhydrous cupric sulphate, or, on the other hand, by heating *in vacuo*, when it gives up water and assumes a crystalline state; this takes place at 100°, but much more rapidly at 110° or 115° in a glycerine bath. The sugar has not been obtained in detached crystals. It has a sweet taste. Its optical and reducing properties are as follows:

$$[\alpha]_D = +91.5° \pm 1°$$
$$R = 47.5$$

Analysis of a series of fractions of the residue after fermentation with S. Marxianus, on the other hand, showed that two sugars remained—the one revertose, and the other, fermentable by all maltase-containing yeasts, is a sugar of higher optical activity. It could not be separated completely from revertose, but the fractions in which it preponderated showed optical and other properties which approached those of maltose. The osazone from these fractions, itself fractionated as described in my former paper, yields a fraction crystallizing in plates which resemble those of maltosazone.

There is, therefore, little doubt about its being maltose. It is, perhaps, hardly necessary to point out that the identity of the sugar is not relevant to the question of the reversibility of its formation, because in any case, it can be reconverted to glucose by the same ferment used in its synthesis. It is, however, in accordance with theory for some maltose to be formed when maltase is present, but it is not necesaary that there should be sufficient formed and remaining at the end of the reaction to be recognized as such, and it would be quite consistent with the theory for this sugar, which has been found, formed as it is by a strictly reversible process, to be another isomeric biose. There is, however, nothing in any of the tests I have as yet been able to apply, either analytically or by fermentation, by which I can distinguish it from maltose. Not more than about one part of this sugar to about five parts of revertose is formed, but the total amount of

† A full account will be found in the *Transactions of the Chemical Society* for May, 1903.

glucose changed in 41 per cent. solution by yeast extract, is nearly one-third of the whole. It is considered also that more maltose is formed in the reaction than appears as such at the end, as part seems to be converted to dextrin by the diastase in the yeast extract.

The question then arises, Is revertose formed by maltase or by another enzyme in the yeast extract? Fermentation experiments, on the one hand, might seem to show that the yeast extract which is prepared from dried Bern yeast contains an enzyme capable of synthesizing revertose, but not present as such in the fresh maltase-containing yeasts, and therefore distinct from maltase. Another explanation is, however, possible; when maltose is fermented by a maltase-containing yeast, the splitting probably takes place intracellularly. The conditions of equilibrium prevailing within the cell may be much more favourable for the splitting of maltose than for the splitting of revertose; they must be somewhat so, as on comparing the equilibrium of maltose $\rightleftharpoons$ glucose with that of revertose $\rightleftharpoons$ glucose in sugar concentration of 40 per cent., it is seen that the splitting of maltose is much nearer completion; or, looking at it from the synthetic point of view, much less of maltose is formed than of the other biose. The equilibrium of maltose with glucose is the more favourable for hydrolysis, of revertose for synthesis.

The products obtained by the action of taka-diastase on 60 per cent. glucose solutions have not been separated. The quantity of glucose converted is actually greater than appeared when stated in terms of conversion to maltose,[1] as the optical activity and cupric-reducing power of the mixed synthetic products lie between those of maltose and those of glucose. This is true both of the products obtained with yeast extract and with taka-diastase; but in the case of the latter there are also other products not yet investigated, which diminish the optical activity of the total products.

Fermentation experiments with the synthetic product of the taka-diastase action show that, just as with the products of yeast extract, a portion not fermented by S. Marxianus is yet fermentable by maltase-containing yeasts, the remainder not being directly fermented even by these. The change observed with pancreatic extract on 60 per cent. glucose solutions was small and probably incomplete on account of destruction of maltase by trypsin. It was verified, however, after subsequent fermentation of the unaltered glucose with S. Marxianus.

Since I published my first paper on this subject there have appeared from time to time, besides some small contributions by myself, observations by others of a similar nature, further extending the list of ferments for which a reversible action has been noted. Kastle and Loevenhart found that lipase had a reversible action on ethyl butyrate.[6] Hanriot also independently observed the reversible action of lipase.[7] Wroblewski was able to detect a reversible action with invertase, but I have not had the opportunity of seeing his original paper.[8] O. Emmerling has recorded another synthesis with yeast extract, namely, that of amygdalin from glucose and amygdalo-nitril-glucoside.[9] Recently, Emil Fischer and E. F. Armstrong have noted the reversible action of kephirlactase on a new biose, isolactose, which yields glucose and galactose on hydrolysis.[10] And more recently still, Acree and Hinkins have found the hydrolysis of triacetylglucose by pancreatin to be reversible.[11] These results, together with my own further results, make it increasingly more probable that the view I put forward in 1898 is a correct one, namely, that all ferment actions are reversible, and warrant, I think, the adoption of such a view as a sound working hypothesis.

THEORETICAL CONSIDERATIONS.

When it was supposed that ferments were concerned only with breaking-down processes it was customary among some writers to speak of the substance which a ferment could break down as its "substratum." Terms are wanted to indicate not only the substances broken down by a given ferment, but also the simpler substance into which the "substratum" is broken down, and on which the same ferment is also capable of acting, but in a synthetic fashion, for they also are a substratum and a ferment works between two strata. I will, for purposes of description, now use the terms ana-products and kata-products, as these will readily be understood to denote the synthetic on the one hand and the broken-down, or split, products on the other.

Ferment action, so long as the ferment is undestroyed and is in the presence of its ana-products or kata-products, never ceases, and only becomes inappreciable when equilibrium between the ana-products and kata-products is sufficiently nearly approached. If either the ana-products or kata-products are removed from the sphere of action as fast as produced, the other product will be entirely transformed. In this way, as I formerly pointed out,[1] the reversibility of ferment action is sufficient to explain the synthetic processes of life which may, and probably do, occur in stages, so that the ana-products of one ferment are the kata-products of another, the final ana-products usually having a very low solubility. There is thus a series of stages in which the change may be in one direction or the other, but which under ordinary circumstances will be in the same direction for the whole of one series. A unit of living matter must be considered to include many such series, the direction of change varying usually among the several series. The production of isomera by ferments increases their capability for a double rôle in metabolism, for, as has been shown, the equilibrium point of each with the common substances from which they are formed may be different, the one favouring synthesis rather than the other.

The part played by cell membranes and nuclear membranes is no doubt conservative—preventing ferments, zymogens, and other complex substances from diffusing out, while allowing simpler substances to pass both in and out. The equilibrium points of all the intracellular reactions will be constantly changing, depending as they do on the absolute as well as the relative concentrations of the ana-products and kata-products of each, and these in turn dependent not only on the reaction itself, but also on the diffusion rates, and the osmotic relations of the cell and its surroundings. If, for instance, a cell takes up water so that the concentration of its soluble contents is lowered, there will be a general shifting of equilibrium points, so that the velocity of the katabolic changes is increased relatively to that of the anabolic; if, on the contrary, a partial dehydration occurs, the reverse will take place and may result in spore-formation and the like. Yeast in a 1 per cent. solution of glucose or maltose forms very little intracellular glycogen, but in 10 per cent. or 20 per cent. sugar solutions it forms much.[12] But in the higher organisms at least, it is known that the cell equilibrium in health is under the control of the nervous system, though the process by which the metabolism is thus influenced has not yet been made out. It is suggested here, whether electrolysis plays a part or whether something quite different first occurs, that at any rate in the result, water is taken up by the cell or vice-versa, and thus metabolic changes are influenced. It is to be noted that a small change in equilibrium in the direction favouring katabolism may result in the transformation of a minute quantity of a zymogen to a ferment as one reaction, and this may in turn accelerate another reaction out of all proportion to the initial change in equilibrium, for in many reactions, doubtless, the state of equilibrium may already be favourable for change and awaiting only the liberation of free ferment. The atrophy of tissue that follows the cutting off of trophic nerves must be attributed to excess of katabolic over anabolic changes following disturbance of chemical equilibrium.

In a thesis by the author for the M.B. degree, entitled Nervous Hyperglycaemia, it was suggested that certain forms of hyperglycaemia which depend on a nervous lesion were to be explained by the alteration of the cell equilibrium, that is, by passage of water into the liver cells, and that such hyperglycaemia, resulting in glycosuria, was to be explained as a paralytic secretion of the liver. Whether the so-called internal secretion of the pancreas acts on the nervous system, or whether it is a ferment resorbed by the liver, I do not wish to discuss, as it is a subject rather for experiment; but with regard to the pathology of alimentary glycosuria, associated with a so-called gouty habit, I would say that in some cases there seems to be a temporary disorder of cell equilibrium depending on circulatory disturbance in the liver, and relieved by salicylates; in others there is probably an actual diminution of the ferments or their zymogens which are necessary for the metabolism of carbohydrates, including the assimilation of sugar. Then as regards senile change in general. In what does it consist? Premature senility can usually be traced to toxic influences, and it is known that tissue poisons are substances which are destructive of ferments. The toxins of disease have not been sufficiently studied from this point of view, but will doubtless follow in the train of alcohol, chloroform, and the other antiseptics, at one time supposed to differentiate between organisms and enzymes, but now shown conclusively to have a destructive action on the latter. By the total destruction of one ferment in a metabolic series, disaster might

befall a cell or tissue unit, or again recovery might be perfect if the zymogen were left intact. Numerous and varying degrees of injury as the result of accident or disease may thus occur, leading to more or less premature senility in a tissue. Physiological senility is probably the slow and gradual diminution of certain of the tissue ferments, and is in accord with the fact that all metabolic changes become slower with advancing age, and so less food can be dealt with in a given time. The peptonizing of nutrient foods may replace the natural process of digestion, but assimilation requires ferments just as much as digestion, and at present this deficiency cannot be made good.

I have spoken of a unit of living matter. If these remarks had applied only to yeast, possibly the word "cell" would have sufficed, but so often the unit is obviously not the cell. In a plasmodium for instance, there are no cells, while in nucleated cells, not even the nucleus in one sense is a unit, for it is not structureless; in another sense not less than the whole organism is a unit, whether it consists of one cell or many. Even in the latter sense and in the highest organisms at one period of life a single cell is the unit, namely, the fertilized ovum, which must contain the parent substances of all the ferments of the fully-developed individual. From the positive results obtained in the direction of artificial parthenogenesis, it seems likely that the female reproductive cell, and perhaps also the male, contain these independently, and yet not in the best proportion until they are averaged by the process of fertilization. Variation amongst the offspring is to be explained by small variations in the proportions of ferments in the germ-cells, which are characters impressed on these cells and their descendants. In development of the individual, differentiation of the cells takes place from difference in position and surroundings, whereby an "impressed character" is received, and a cell on division always divides into two cells identical with the parent cell, thus are tissues derived (Hertwig.) It is here suggested that the "impressed character," acquired by position or surroundings, is to be explained as a modification of the cell-ferments in number or in proportion. How, then, does reversion to a former type occur? It has been suggested above that variation is due to the modification of ferments in the germ-cells or their descendants and it has also been suggested that complete destruction of a ferment may be recovered from if the zymogen be left; similar recovery would be possible if the zymogen were also destroyed but the prozymogen left and so on to the *n*th degree. Reversion may be due to some such recovery from an impressed character at some period of the individual's life-history.

The cells of more embryonic type, that is, cells that have received fewest impressed characters, if included in situations that are not normal to the individual, are a source of danger, as they are at too much advantage for undergoing growth and reproduction as compared with their neighbours, and they often form tumours. Malignancy in neoplasms may be determined to some extent by the two following factors, a comparative freedom from impressed characters on the part of the cells which multiply and form the growth, and a comparative senility on the part of the invaded tissue. But the latter factor often seems very small. It has been suggested that irritation, which sometimes seems a factor in epithelial cancer, may act by injuring the neighbouring tissue or limiting membrane; but perhaps the change is in the first cancer-cell and consists in the introduction or development of a necessary ferment, is in fact the removal of an impressed character. All that is urged on the matter here is that a comparison of the intracellular ferments of a cancerous growth with those of the normal tissues of the type from which such a growth started might lead to useful results.

It is not intended to discuss fully the pathology of those forms of disease that have been mentioned in the foregoing remarks, but merely to indicate the points of contact with my own conclusions based on the special experimental work I have described.

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THE Russian Gynaecological Society will hold its first meeting in St. Petersburg at the beginning of January, 1904.

CASE OF TUBERCULOUS MENINGITIS IN AN ADULT, WITH UNUSUAL SYMPTOMS.

BY

T. H. MORSE, F.R.C.S.Eng., and A. J. CLEVELAND, M.D.Lond., M.R.C.P., Norwich.

THE following case is of interest on account of the unusual and misleading nature of the symptoms, together with the fact that the disease ran a very acute course in a patient in whom there was no reason to suspect any primary tuberculous lesion.

CASE.—The patient was a married woman, aged 40, who since 1897 had been under treatment for pelvic trouble, for which she was operated on in November last by Mr. Morse, and an abscess in connexion with the left ovary and tube dissected out. The cause of the pelvic abscess, apparently of old standing, was not obvious, but at the time of the operation there was no reason to suspect a tuberculous origin. The patient's family history was excellent; she herself had nothing about her suggesting either a tuberculous taint or any active or latent tuberculous process. After the operation she put on weight and seemed in excellent health. Mr. Morse was called to see her on January 1st, 1903, and found her suffering from sickness and diarrhoea, ascribed to an error in diet. She quite recovered from this in a day or two, and remained in very good health till January 20th, when Mr. Morse again saw her for severe headache and sickness. The headache was very intense and was not referred to any particular part of the head, at times seeming most severe in the left occipital region, at others referred to the root of the nose as well, and sometimes to the vertex. The sickness occurred about three or four times a day, with no relation to food. This condition remained for a week, during which time the pain in the head became very severe, once waking her thirteen times in one night, and it became necessary to give morphine in order to relieve it. Her pulse during this time was nearly always 64, her normal rate being 70, and her temperature as a rule 97.8°, never rising above normal. Her mind was perfectly clear; she had no paralysis anywhere; the pupils were equal and active, and the knee-jerks normal.

On January 27th it was noticed that she constantly misused and misplaced words, being aware of the fact, as she complained of "being muddled this morning." Thus she ordered her bed to be put on the dressing table, and instead of "be in the end bedroom," she said "be in the bendendroom."

It was thought that possibly the disordered speech might be the result of the morphine, and that a decayed tooth might account for the headache. Gas and ether, which she had had twice previously, was accordingly administered and two teeth removed. Just before taking the anaesthetic she complained of seeing double. After the removal of the teeth she walked back to bed and was quite rational for about an hour, when she suddenly became restless, noisy, her speech was quite incoherent, and she recognized no one.

On January 28th we saw her for the first time in consultation. She was lying curled up in bed on her left side, away from the light, with both hands on her forehead as if in pain, constantly moving about and muttering to herself, unable to recognize any one or understand anything, though she would open her eyes and look at any one when loudly roused. There was no deviation of the eyes, no squint, pupils rather small, equal and active, no paralysis or weakness anywhere; reflexes normal; Kernig's sign absent. Just below each mastoid process she was very tender to pressure. The optic discs were quite normal, and the membrana tympani normal on both sides. There was no discharge from the nose or mouth. Her temperature had risen a degree since the day before, and was now 98.4° in the axilla. Heart and lungs normal.

Dr. Newton Pitt, of Guy's Hospital, saw her in consultation on the evening of January 28th, and agreed that the most probable diagnosis was one of cerebral abscess. He thought she still had some degree of sensory aphasia, for, although it was very difficult to get her to respond to any commands, she would occasionally put out her tongue when told to open her eyes. This, with the fact that she had continually misplaced words on the previous day, made it possible that the seat of the lesion was in the neighbourhood of the left auditory word centre or of the tract connecting it with the frontal lobe, but the localization was too indefinite to warrant an exploratory operation.

On January 29th she remained in much the same condition,

except that she was quieter, and her temperature rose to 100°. On January 30th she was much better, recognized people, and talked a little quite sensibly, but had no recollection of the last few days' illness. Temperature subnormal.

At 2 a.m. on January 31st she became drowsy, recognized no one, and would not respond to any questions. Her eyes were deviated to the right and upwards, axes parallel; she could look in any direction, and there was no oculo-motor paralysis or nystagmus, but when at rest the eyes assumed the position just noted. The discs were normal. We saw her again in consultation the same afternoon, and noticed that the frontalis muscle over the right eyebrow was more contracted than on the left side. Whilst remarking on this, she repeatedly and rapidly put her right hand to her mouth, then suddenly pursed up her lips, and the right angle of the mouth was drawn strongly outwards. Next the right side of the face became contracted by clonic spasms, and the convulsion spread to the right arm and then to the whole of the body. the eyes were turned to the left and upwards, she frothed at the mouth and became a little cyanosed. She soon recovered from the fit, and was found to have no weakness or paralysis anywhere. The right knee-jerk was absent and the left normal; no plantar reflex on either side. We thought that the occurrence of this Jacksonian convulsion supported the opinion originally formed of a gross lesion, probably an abscess, being present just below the termination of the Rolandic fissure. The severe symptoms with slight rise of temperature, which occured after the extraction of the teeth, might have been caused by a little meningitis over such a lesion, while the fit was an indication of the process spreading upwards. We therefore advised an operation as holding out the only chance of recovery, but this was refused by the patient's friends.

On February 1st at midday she was much worse, respirations 40, and of the Cheyne-Stokes rhythm, pulse rapid and weak, temperature 98 4°.

On February 2nd she was much the same except that the eyes were divergent, both being turned outwards. She gradually sank and died on February 3rd without regaining consciousness or having any more fits.

Necropsy.—At the necropsy, which was limited to the brain, the substance of the organ on section looked quite normal everywhere. The convolutions on both sides seemed a little flattened, but there was no distension of the ventricles. The pia arachnoid at the base of the brain in front of the optic chiasma was injected and studded with small tubercles, especially along the Sylvian fissure on the left side; there was no lymph exuded, no matting, and no excess of fluid.

The only symptom in this case which did not fit in with our diagnosis of cerebral abscess on the left side was the conjugate deviation of the eyes. If there had been such a lesion the eyes during the convulsion should have been turned to the right instead of to the left, while when at rest they should have looked to the left. The symptoms certainly seemed to warrant the diagnosis of a cerebral abscess in a situation that could easily be reached by an operation, but fortunately, as it turned out, the decision of the patient's friends saved us from a procedure which would have been quite useless.

SOME OBSERVATIONS ON THE MORPHOLOGY OF THE TRYPANOSOMA FOUND IN SLEEPING SICKNESS.

BY DR. ALDO CASTELLANI.

IN my preliminary note read at the Royal Society on May 14th, 1903, and in a more complete paper of mine published in the *Journal of Tropical Medicine*,[1] June 1st, 1903, I stated that in sleeping sickness I had found very frequently a trypanosoma which I thought to be the probable cause of the disease. I found the trypanosoma in the cerebro-spinal fluid taken during life by lumbar puncture in 70 per cent. of the cases. The trypanosome may be found also in the blood, and I actually found it there in a case as far back as December, 1902, as can be seen from the tables attached to my preliminary note. In this note I propose to give briefly a few details on the morphology of the parasite observed in fresh and stained preparations.

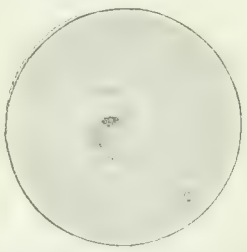
Fresh Preparations.

The parasite has the usual general outline of the other trypanosomes. It has a worm-like shape; one end terminates with a flagellum, the other is more or less bluntly conical; there is an undulating membrane and a vacuole. The protoplasm does not appear to have quite a uniform structure, but rather an alveolar one, as described by Bradford and Plimmer in trypanosoma brucei, although apparently far from being so well marked. At first the parasite moves fairly actively in a screw-like fashion, as described in the other species of trypanosomes. On observing the preparation for some time with the microscope one sees that the movements become more sluggish, until they stop altogether. Frequently the trypanosome stops near a leucocyte, which by degrees engulfs it. On several occasions I have observed trypanosomas with apparently two well-marked flagella; the parasites were probably in a stage of longitudinal division.

Stained Specimens.—Leishman's modification of the Romanowsky's method gives very good results. Staining the trypanosome in this way the macro-nucleus, micro-nucleus, and flagellum appear red, the protoplasm blue, while the undulant membrane remains almost unstained. The nucleus is generally large and of variable shape; it is as a rule situated in the posterior half of the parasite. The micro-nucleus (Plimmer and Bradford) or centrosoma (Laveran and Mesnil) does not show any apparent structure. It stains red, but of a much more vivid colour than the nucleus. It is situated very near the posterior end of the parasite, and generally outside the vacuole. The vacuole is oval and of rather large dimensions; it is situated anterior to the micro-nucleus.

The flagellum takes origin apparently from the micro-nucleus; then, following the external edge of the undulating membrane, reaches the anterior end, where it becomes free. The free portion of the flagellum is apparently longer than in other trypanosomes.

The protoplasm does not stain evenly, nor very deeply; it does not show many chromatic granules. The total length of the parasite is from 18 μ to 26 μ. The width is from 2 μ to 2.5 μ.



Photograph of the trypanosoma found in the cerebro-spinal fluid of a case of sleeping sickness. × 1,000.

Developmental Forms of the Parasite (?).

In the blood taken from the finger, especially during the last stages of the disease, in the blood of the heart, as well as in the cerebro-spinal fluid, I have seen frequently large roundish bodies 14 μ to 16 μ in diameter with one or more vacuoles, which on superficial observation might be taken for amoebae if it had not been that they did not emit pseudopodia. These bodies stained by the Romanowsky-Leishman method showed two or more points where the chromatin collects. I am inclined to consider these bodies as developmental stages of the trypanosome. Something similar has been described by Kempner and Rabinowitch in trypanosoma lewisi.

Identification of the Parasite.

The only species of trypanosoma so far known in man is trypanosoma gambiense (Dutton). Though others may have seen it before (Nepvue, Forde) there is no doubt that Dutton was the first observer to describe it scientifically. Dutton and Forde were the first to draw attention to its relation with a specific fever which principally attacks Europeans in the tropics. This species of trypanosome has hitherto been found in the blood only. No trypanosome of any sort had ever been found in sleeping sickness.

As regards general shape and size the trypanosoma gambiense and the one I have found in sleeping sickness do not differ much, but according to my experience differences may exist in the position of the micro-nucleus, the vacuole, and the flagellum. In the trypanosome of sleeping sickness the micro-nucleus is generally much nearer the extremity, and as a rule outside the vacuole; the vacuole is generally larger. The flagellum takes origin apparently from the micro-nucleus; the free portion of the flagellum is longer.

These morphological differences, according to my experience, are frequent, though far from being constant. Although I have not yet performed inoculation experiments in the lower

animals, I am inclined to think that it may possibly turn out to be a new species. I am supported in this hypothesis by a recent communication by Kruse to the Medical Society of Bonn.[2] I do not see any reason why man should not be attacked by different species of trypanosoma, each of which might give rise to a different disease. This fact has been clearly demonstrated in the lower animals. The horse, for instance, is liable to be infected by three different species of trypanosoma—trypanosoma brucei, the cause of nagana; trypanosoma evansi, the cause of surra; trypanosoma equiperdum (Doflein), the cause of the disease called "dourine."

Some observers have tried to identify trypanosoma brucei with trypanosoma evansi, but the most recent investigations have clearly proved that they must be considered two different species, although their morphological differences are slight and inconstant.

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MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

THE DURATION OF LIFE AFTER GASTROSTOMY FOR CANCER OF THE OESOPHAGUS.

As a contribution to this question I may mention the following case:

A gentleman, aged 64, was brought to me in 1900 with all the symptoms of stricture of the lower end of the gullet. Difficulty of swallowing had been noted for two months, and the patient, when I first saw him, could barely swallow any fluid. The bougie was arrested at the termination of the oesophagus. The patient was much emaciated but was still able to walk about. I performed gastrostomy on July 7th, 1900.

There was a cancerous growth involving the termination of the gullet and extending into the stomach. So extensive was the malignant disease in the stomach itself that it reached nearly the whole length of the lesser curvature. The oesophageal opening was practically closed. There were no secondary deposits visible in the liver. The patient lived until June 9th, 1903—a period of three years less one month. Dr. Batchelor, of Staines, who attended the patient throughout with the utmost care and devotion, writes as follows in a letter to me in which he announces the patient's death: "He was practically free from pain all through his long illness, and the gastrostomy wound has never given the slightest trouble."

Wimpole treet, W. FREDERICK TREVES.

TRAUMATIC RUPTURE OF THE ILEUM.

By an accidental discharge of dynamite during blasting operations a native labourer was struck on the abdomen towards the left iliac fossa by a piece of rock. I saw him about half an hour after. There was merely a slight abrasion externally, but the man complained of great abdominal tenderness, and lay with his legs drawn up. As nothing definite could be made out by examination a sedative was administered, and he was placed in bed for observation small quantities of iced water being allowed to allay his intense thirst.

Vomiting commenced soon after the accident, and was very persistent. Symptoms of acute peritonitis came on rapidly, and the question of a laparotomy was considered, but had to be ruled out of court owing to local circumstances. His temperature rose rapidly to 104° F. His pulse twenty-four hours after the accident was imperceptible at the wrist, and he rapidly sank, and died about six hours later.

Post-mortem examination showed the presence of extensive peritonitis, the omenta and intestines were reddened and covered with patches of flaky lymph. A rupture was found in the lower part of the ileum; the opening was large enough to admit the end of the thumb, and from it the bowel contents were freely escaping. There was also a tear of the mesentery of the ileum, at some distance from the intestinal wound; this was about 3 in. in length, and involved the whole thickness of the mesentery, but only a small amount of haemorrhage had taken place. The bowels were loaded, which doubtless predisposed to rupture when the sudden compression took place. The tear in the mesentery was evidently due to the forcing against it at this point of a loop of distended bowel. There was no indication of any other injury to the abdominal viscera.

Salina Cruz, Mexico. JOHN MCPHERSON, M.B., Ch.B.

RECTAL SERUMTHERAPY.

I WAS much interested to read in the BRITISH MEDICAL JOURNAL of May 23rd, p. 1195, Sir Dyce Duckworth's case of ulcerative endocarditis treated by rectal injections of antistreptococcus serum, as for the last two years the rectal use of serums has been in constant use at the London Temperance Hospital. Our results have been excellent in the case of antidiphtherial serum, but antistreptococcus serum by rectal injection has shown the same uncertainty of effect that it does when administered by the subcutaneous method. Its rectal injection is, however, free from the disadvantages and dangers which may attend the subcutaneous method, such as local abscesses or spreading erysipelatous inflammations, and for this reason may be preferred, as there seems no doubt that it is rapidly absorbed. The rectal method was introduced to the London Temperance Hospital by Dr. Rhodes, the Senior Resident Medical Officer, who is personally responsible for its success.

J. PORTER PARKINSON,
Physician to the London Temperance Hospital, etc.
Wimpole Street, W.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

ROYAL COLONIAL HOSPITAL, FREETOWN, SIERRA LEONE.

CASE OF ABSCESS OF THE LIVER.

(By W. RENNER, M.D.Brux., M.R.C.S.Eng., Assistant Colonial Surgeon and Medical Officer to the Hospital.)

J. N., aged 35, a male domestic servant, was admitted into the hospital on September 29th, 1902.

History.—He was a native of the Colony, and had always enjoyed good health. About nine months ago he was engaged as a servant to a miner, whom he accompanied to Sekondi, Gold Coast Colony. They travelled up to Kumasi, and underwent a good deal of hardship. They slept many nights in the bush, and had bad drinking water. He had an attack of looseness of the bowels seven months ago in the bush, and was sent down to Sekondi on the seacoast, from whence he embarked for Freetown. He has been in Freetown for about four months. The looseness of the bowels had stopped. For the last two months he had been losing flesh, and his belly he noticed had swollen. He had had pain on the right side of the belly, and had been suffering from fever (low fever, as he called it).

State on Examination.—Patient was very emaciated, with abdomen enlarged, and a want of symmetry in its contour. The circumference at the umbilicus was 48 in. The liver was found enormously enlarged, the lower border being about 2½ in. above the anterior margin of the ilium and occupying a large portion of the abdominal cavity. About 2½ in. from the margin of the right costal cartilage a large prominence was noticed. The skin was tense, shiny, and pitted on pressure. Adhesion between the skin and peritoneum had already taken place. Palpation gave the idea of fluid. Exploring with a hypodermic syringe a chocolate-coloured fluid was withdrawn.

Operation.—On November 9th the patient was placed under chloroform. An incision of 1½ in. was made through the skin, and a puncture was made with a No. 3 trocar and cannula, to which was attached a rubber tubing of an inch calibre. A large quantity of coffee-brown fluid first escaped, and towards the end it was mixed with pus. A drainage tube an inch in calibre was placed in the wound, and attached to the margins of the skin, and run down to a large wide-mouthed bottle by the side of the bed which contained (1 in 20) carbolic lotion.

Progress.—The abscess cavity was thus continuously drained and washed out twice a day with (1 in 10) hot izal lotion. On November 11th the tube was unfortunately removed from the

abscess cavity, and it was found very difficult to replace it, as the openings into the liver through shrinkage had shifted underneath the margins of the ribs. The wound was now left alone, and there was slow drainage going on. On November 18th the wound had closed, and a large quantity of pus had recollected.

Second Operation.—Patient was again placed under chloroform, and a wound nearly 3 in. long was now made through the skin and adherent liver tissue; pus to the amount of 3½ pints escaped. The abscess cavity was syringed with hot perchloride solution (1 in 1,000). The margins were brought together, and the drainage tube replaced and stitched carefully to the side of the wound.

After-Progress.—From this date the patient continued to improve. A small sinus leading down to the liver continued to discharge a small quantity of purulent matter which merely stained the dressing. On February 14th, 1903, the sinus had completely closed; there was no sign of reaccumulation, and evidently the liver cavity had completely cicatrized. The patient was quite strong and moving about, and was about to be discharged in a few days.

REMARKS.—Abscess of the liver as a sequela of dysentery is very uncommon in this Colony and its Hinterland as compared with the Gold Coast Colony. Although the attacks are severe the mortality is not very great.

CANTONMENTS GENERAL HOSPITAL, MANIKHET, INDIA.

CASE OF SUPRAPUBIC LITHOTOMY: ASPHYXIA UNDER CHLOROFORM: RECOVERY.

(By Captain ERNEST E. BOURKE, R.A.M.C., Medical Officer in Charge of the Hospital.)

IN reference to the correspondence in the BRITISH MEDICAL JOURNAL concerning the causation of death during the administration of chloroform, the following case may be of interest:

History.—Tej Singh, Hindu by caste, was admitted on May 27th, 1902. During the two years previous to admission as he states he had considerable pain and difficulty in passing urine, and it was generally attended with the passage of blood.

Condition on Admission.—The patient, aged 64, was very feeble and debilitated; heart sounds feeble, but regular; no organic murmur could be detected. On examination of the urine the specific gravity was found to be 1016, faintly acid, and containing traces of albumen and a considerable quantity of mucus. The patient could only pass his urine in small quantities at a time. On passing a sound calculi could be detected situated behind the prostate, which was considerably enlarged. Salol (10 gr.) was ordered three times daily.

Operation.—As the patient could not be induced to remain long enough in hospital to get his bladder in a more healthy condition, and was anxious that an operation might be performed at once, accordingly, on May 28th, that is, the day after admission to hospital, I performed a suprapubic lithotomy, with the assistance of Assistant Surgeon Matthews, I.S.M.D. Chloroform on lint was administered; the patient did not take the anaesthetic very well, and it took about fifteen minutes to get him fully under its influence. The bladder was then washed out with warm boracic solution, and afterwards distended with the same solution; considerable difficulty was found in distending the bladder, and only about 5 oz. of fluid could be injected through a metal catheter; this was plugged and allowed to remain in the bladder. The usual incision was made, the bladder being exposed without much difficulty, but it was rather hard to hook up owing to its not being fully distended; on opening the bladder its walls were found to be much thickened; immediately after opening the bladder and previous to withdrawing the calculi, the patient suddenly, and without any warning, ceased to breathe (the pulse could be felt for nearly one minute after respiration had ceased); 4 drachms of chloroform had been given; the operation was immediately suspended, the patient's tongue pulled forward, and artificial respiration immediately commenced (Silvester method) at the same time a weak faradic current was applied over the course of the phrenic nerve and ℥v of liq. strychnine hypodermically injected, followed at intervals by hypodermics of ether or brandy. At the end of forty minutes, during which time artificial respiration had been kept up, the case seemed hopeless, no respirations or heart sounds could be detected, the skin being quite cold and the patient to all appearances moribund, still artificial respiration and faradism were continued and in fifteen minutes it appeared as if there were some faint attempts at respiration, that is, exactly fifty-five minutes after the patient had collapsed and ceased to breathe, a few minutes later the pulse became faintly perceptible; the artificial respiration was continued and kept up for a further period of half an hour, the patient then being practically out of danger, that is, one and a-half hour after the initial collapse. The hypodermic of strychnine was repeated and the operation completed; no drainage tube was employed. The abdominal wound was brought together with silver wire sutures and the bladder washed out. When passing a catheter on the following day the patient fainted and was brought round with some difficulty, otherwise the progress of the case was uneventful, the temperature never rising over 99°. Five days after the operation the patient feeling so well insisted on leaving the hospital and returning to his native village, the wound was then practically healed up and there were no signs of suppuration. The operation was almost bloodless and no vessels required ligature.

REMARKS.—The case is of interest, I think, for the following reasons: (1) The sudden occurrence of asphyxia without any warning, and the fact that the pulse was perceptible for almost one minute after respiration had ceased; (2) for the lesson it teaches not to abandon hope of saving life too soon, and to continue artificial respiration for hours if necessary. In this case it was only after the lapse of fifty-five minutes that the first signs of life appeared, and artificial respiration had to be continued for an hour and a-half before it was considered that the patient's life was out of danger; (3) the rapid recovery and absence of constitutional symptoms following a severe operation in a patient so old and debilitated and who moreover was suffering from chronic cystitis and otherwise unfitted for operation.

REPORTS OF SOCIETIES.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

CHARLES E. UNDERHILL, M.B., F.R.C.P.E., Vice-President, in the Chair.

Wednesday, June 3rd, 1903.

ROENTGEN RAYS IN THE DIAGNOSIS OF LUNG DISEASE.

DR. D. LAWSON (Nordrach-on-Dee Sanatorium, Banchory) read a paper on this subject. The movements of the diaphragm as seen upon the screen were vertical. In pneumothorax the position of the diaphragm not only stood at a very low level upon the affected side, but was practically motionless. The movements were interfered with by the presence of fluid or by pleuritic adhesions. Where there was even a very slight tuberculous deposit in one lung the movements of the diaphragm on the affected side were distinctly lessened. The lighting up of the healthy or emphysematous apex, which took place during deep inspiration, easily marked it out from a non-illuminable lesion on the other side. The existence of extra-bronchial pressure (as of an aneurysm or enlarged glands) might not be able to be decided by ordinary methods of examination, but was at once seen on the screen. The movements of the ribs during inspiration were also plainly demonstrated on the screen; but where the interference with the movements of the ribs was limited to a small section of the chest, as frequently occurred in tuberculous disease, the screen was of real value. Dr. Lawson next showed a skiagraph of a normal chest, and directed attention to the bones, the heart, the diaphragm, the transparent appearance extending up to the extreme apex of the lungs, and the presence of a vertical shadow to the right of the cardiac dullness. This last had been thought by some to correspond to the junction of the pleura and pericardium. Professor Cunningham had suggested that it might be due to the puckering of the outer edge of the pericardium during cardiac systole.

A series of screens was shown to illustrate various points:

I. *Extra-pulmonary*—(1) Bones. Irregular shape and flattening of the ribs in a man aged 50, "who suffered from repeated and protracted attacks of whooping-cough in infancy;" "roof tile" or "water-fall ribs;" pulmonary tuberculosis complicated by disease of the vertebral column. (2) Pleura: (*a*) Thickening, (*b*) fluid. (3) Heart and great vessels: Modifications in size and position. (4) Glands.

II. *Pulmonary.*—(1) Appearance of a normal lung under *x* rays; attention was directed to the various points; (2) infiltration (tuberculous) showing the commonest lesions; the amount of air present was diminished, and the lesion was represented by a relatively dark appearance; a screen showed tuberculous infection, which had taken place in an imperfectly resolved lobar pneumonia; (3) chronic fibroid phthisis was described and

illustrated; (4) cavity formation, apical and basal; and (5) collapse were demonstrated; (6) emphysema was not shown; (7) foreign growth (actinomycosis) was illustrated by a skiagraph.

Drs. ALEXANDER JAMES, GARDINER, ALLAN JAMIESON, LOVELL GULLAND, MCCALLUM, NORMAN WALKER, and the PRESIDENT spoke; and Dr. LAWSON replied.

THE NAUHEIM BATH AND RESISTANCE EXERCISES TREATMENT IN SOME HEART CASES.

Dr. A. WEBSTER read a paper on this subject. He said the special treatment was indicated in enfeebled states of the heart, such as might be due to physical strain; to psychical stress or worry; to toxins; to obscure conditions causing the state of ill-health known as "nervous" and "pseudo-angina;" to muscular weakness after acute diseases, as influenza; and also to some cases of valvular disease—all leading to more or less loss of tone, nutritive defects, irregular action, and dilatation of the muscular walls. From describing the effects of the ordinary cold water bath in decreasing the rate of the heart, he compared the effects of the saline effervescing bath as regarded the temperature of the water, the salts, and the CO_2, and brought out the following results in the correspondence between the physical remedy by the special bath, and the heart tonics — arsenic, strychnine, nitrites, and digitalis. The temperature, which he showed to be exaggerated in its action by the ingredients 10° to 20° F. lower, corresponded in its action on the heart to digitalis. The salts corresponded in their action on the heart and tissues of the skin to arsenic, and on the vessels to the nitrites; the CO_2 by its stimulation of the sensory nerves and consequent powerful reflex effect to strychnine. The bath acted as a great stimulant both thermic and mechanical, acting reflexly with special determination to the vagus. The general effects of a course of these baths was a steadily increased sense of well-being, good sleep, improved appetite, skin warmer, and increase of body weight. The particular effects were stated as decrease in the rate of the heart's beat, increase of force, and rectified rhythm. Several cases were read illustrating the points of the paper.

Dr. CHURCH spoke on the paper.

SIALOGOGUES: THEIR THERAPEUTIC EMPLOYMENT.

Dr. W. G. AITCHISON ROBERTSON presented a communication on this subject. The inquiry was directed to find what agents or drugs which, when locally applied, were really provocative of a true salivary secretion, and to find whether the secretion thus induced varied in its amount, alkalinity, or starch-converting power. Portions of each of the substances experimented with were masticated for a period of thirty minutes, the amount of saliva being collected and measured every two minutes. In this way it was noted whether the flow was constant and uniform, or whether it varied. The starch-converting power was estimated by allowing a measured quantity of the saliva secreted under the stimulation of each agent to act upon a measured quantity of starch mucilage for a definite period. At the end of this period the amount of sugar produced and the degree of dextrinization of the starch which remained was determined. It was found that rhubarb, mustard, pimento, cinnamon, marsh mallow, and some others called forth but a relatively small increase, whilst such agents as calumba, orange peel, gentian, cinchona, and cusparia induced a much more copious secretion, and heading the list were found such as pyrethrum, colchicum, ginger, horseradish, and black pepper. The alkalinity of the saliva was found to vary within such small limits that for practical purposes it might be said to have been uniform. As regarded the starch-converting power of the saliva, it was found that catechu, rhubarb, alum, borax entirely inhibited the action of the ferment, and no sugar was formed whilst they remained. On the other hand, most of the drugs which induced a copious flow of saliva exerted what might be called a normal sialocinetic action, that was that the secretion exerted a very normal action on starch mucilage. A fairly large number of persons found more or less difficulty in the comfortable digestion of starchy matters. Great benefit and even cure could be obtained in many such by enforcing a properly slow mastication and insalivation of the amylaceous constituents of the diet. In more aggravated examples of such dyspepsia Dr. Aitchison Robertson had found that the patient derived the greatest benefit from the slow chewing of some one of those vegetable agents which exerted a distinct sialocinetic influence. The dyspeptic was advised to masticate his food slowly, and after the meal to chew slowly for ten minutes or so one or other of the more potent sialogogues, and in numerous cases no trouble was then experienced in the digestion of starchy materials. It must be remembered that ptyalin remained active in the stomach for about an hour, and thus there was abundance of time for all the starch which had been consumed to be changed into dextrines and maltose before the presence of free hydrochloric acid put a stop to the process. In cases of hyperchlorhydria the aim should be to secure the digestion of the amylaceous constituents of the meal before the free acidity checked proteolysis. This could be done by increasing the flow of normal saliva, which also by its alkalinity delayed the presence of free acid. In many cases of feeble gastric digestion the fault was due solely to a lessened activity in the gastric secretion, both pepsin and hydrochloric acids being present in less than their normal amounts. When saliva was introduced into such a stomach, it had the effect of stimulating a more copious and also stronger secretion, and thus the more saliva introduced the larger was the amount of gastric fluid secreted. In many such cases the author had found that a stimulation of the salivary secretion by means of palatable and pleasant vegetable sialogogues, for example, ginger, gentian, pepper corns, cusparia, etc., had been of the greatest benefit. By such treatment patients had been enabled to digest with ease many amylaceous articles of diet which they had previously been obliged to give up. In certain cases other means of treatment must first be employed. For example, multiple fermentations in the stomach required treatment by lavage and the administration of antiseptic agents. In cases of defective mobility of the stomach, stimulation by massage, electricity, etc., must be made use of in the first place along with the internal administration of nerve tonics as strychnine. Having, however, by suitable means cured these grosser affections, the simpler remedies above indicated might be employed with benefit.

Drs. KEPPIE PATERSON, CHURCH, WEBSTER, CRAIG, and the PRESIDENT spoke; and Dr. AITCHISON ROBERTSON replied.

CASES, ETC.

Patients were shown by Dr. CHALMERS WATSON, card specimen by Mr. SCOT SKIRVING, photographs by Dr. EDWIN BRAMWELL, and Dr. CHALMERS WATSON gave a microscopical demonstration of the histological appearances of the skin of a seventh-month fetus, a sister of a patient shown suffering from ichthyosis.

OBSTETRICAL SOCIETY OF LONDON.

EDWARD MALINS, M.D., President, in the Chair.

Wednesday, June 3rd, 1903.

CHORION-EPITHELIOMA.

DR. JOHN H. TEACHER read a paper on chorion-epithelioma and the occurrence of chorion-epitheliomatous and hydatidiform mole-like structures in teratomata, and gave a demonstration illustrated by specimens and lantern slides. The author discussed and illustrated by drawings and photographs of microscopic preparations the nature and origin of chorion-epithelioma and its relations to the placenta, hydatidiform mole, and certain tumours not related to a pregnancy, but showed the same histological characters. The clinical features, difficulties of diagnosis and treatment, and certain facts which appeared to warrant a more hopeful prognosis than it had been the custom to offer were also considered, and three new cases which had been observed in Glasgow since 1901 were described. The conclusions which the author sustained were: (1) The so-called deciduoma malignum is a tumour arising in connexion with a pregnancy, and originating from the chorionic epithelium (or its forerunner the trophoblast), which is of fetal epiblastic origin (the view of Marchand). (2) That these tumours form a quite characteristic group clinically, pathologically, and developmentally, and that they should be classified neither as sarcomata nor as carcinomata, but as a distinct group *sui generis*. The most appropriate name is chorion-epithelioma. Malignant hydatidiform mole may be treated as a variety of this disease. (3) That in addition to the common tumours developing from a pregnancy there are tumours containing precisely similar structures which are not connected with a pregnancy, and may occur in other parts of the body than the uterus, and in either sex. The most probable explanation of them is that they are teratomata, originating from some structure which has the morphological value of an included ovum, and the chorion-epitheliomatous tissues represent the actual trophoblast (chorionic epithelium) of the included ovum.

Dr. PETER HORROCKS considered the paper an important contribution to the solution of a vexed question. It was

necessary, however, to correct the statement that this Society had some years ago come to a conclusion on the matter. As a fact, the Society never did come to conclusions. The opinions of individual Fellows did not commit the Society as a whole, and at the discussion referred to by the author, so far from the views expressed by the late Dr. Kanthack and Dr. Eden and others being accepted, the records of the Society would show that such was not the case. Specimens had been shown and discussions had been held upon them indicating a variety of opinion. As recently as January, 1902, Dr. Lockyer had shown a specimen, and had stated his opinion that there were two kinds of malignant growth associated with pregnancy—one a mesoblastic sarcoma of decidual, and therefore of maternal, origin, and the other a syncytial carcinoma or chorion-epithelioma, and therefore of fetal origin. Dr. Lockyer stated that the malignant sequela of the vesicular mole was invariably a syncytioma. Now, Dr. Horrocks exhibited a specimen which seemed to prove that this statement was incorrect. The patient came under his care at Guy's Hospital, when his colleague, Dr. Galabin, resigned his position. The woman was moribund, and only lived a week or two afterwards. She began bleeding during a pregnancy in the early part of 1902, and then was delivered of a vesicular mole. The bleeding stopped, and she menstruated normally three times before bleeding set in, which it did in November, 1902. When she came into the hospital she had extensive cancer in the uterus, which reached as high as the navel; in the vagina, from which nodules protruded so as to be visible; and in the lungs, giving rise to haemoptysis. At the necropsy the usual condition of things was found. But the chief interest in this specimen lay in the fact that, in spite of this being a genuine case of a sequela of hydatidiform degeneration of the chorion, yet no syncytium could be found in the growth nor in any of the secondary growths. Both had been carefully examined by his colleagues, Mr. Targett and Dr. Hicks (the obstetric registrar at Guy's). The specimen was shown, and also microscopical sections, and the characteristics were more those of sarcoma than of carcinoma. One point was to be well noted—namely, that the woman menstruated normally three times after passing the mole, whereas in most cases the patient never really got well after delivery, but kept on losing more or less as the disease progressed. Still it was a sequela, but whether post or propter he could not say; only it must no longer be alleged that this form of growth following hydatid mole was invariably a syncytioma. Again, in 1901, he had shown a specimen of so-called "deciduoma malignum" at that Society, removed from a woman who was sent into Guy's with a history of a miscarriage with subsequent haemorrhage, and she was operated on with the idea of removing retained products of gestation. At the operation it was discovered that there was a growth in the body of the uterus, and so vaginal hysterectomy was done, and the patient recovered. But this specimen was submitted to the Pathological Committee of the Society, and whilst fully agreeing that it was a typical syncytioma, they expressed their doubt as to there being any evidence of a recent pregnancy. She was 47 years of age, and the history of miscarriage was by no means conclusive. She had a flooding, and thought it must be an early miscarriage, but it was doubtful whether she had missed a period, and there was nothing in the nature of an ovum ever seen. Hence, if it were assumed that this woman had not been pregnant recently, there was a typical chorion-epithelioma, or a syncytioma with no fetal or ovular origin. He did not feel that they were in a position yet to state that all these cases were of maternal or of fetal (ovular) origin. Indeed, he felt inclined to believe with Dr. Lockyer and others that there were two kinds of malignant growth associated with pregnancy—one of decidual (maternal) origin of a sarcomatous type, for which the term "deciduoma malignum" was appropriate, and the other a chorion-epithelioma of fetal (ovular) origin of a carcinomatous type. But he would like to ask two questions: (1) Were all malignant tumours of the uterus following and associated with a pregnancy that contained syncytium *ipso facto* of fetal (ovular) origin—that was. did the presence of syncytium prove ovular origin? (2) Was it possible for a malignant growth associated with pregnancy to be of fetal (ovular) origin, and yet to be of the sarcomatous type without syncytium, or were all such growths of decidual or maternal origin?

Dr. HAULTAIN thanked Dr. Teacher for his admirable communication, which from its completeness would stand as a classic on the subject in the English language. Although, as Dr. Horrocks had said, the Obstetrical Society did not commit itself as a whole to the opinions expressed in the discussion of 1896, yet the individual members without exception committed themselves to the sarcoma theory, and naturally this was accepted by the Continental observers as the expression of British opinion, no other discussion of the subject having been published. In 1898 a case of so-called deciduoma malignum had come under his care; this was cured by vaginal hysterectomy, and the woman was still well. In consulting the literature at that time he was much struck by Dr. Teacher's paper describing Dr. Kelly's case, and on investigating the subject for himself he had at that time absolutely adopted the view promulgated by Marchand—namely, the new growth in question was epithelial, and ovular in origin. Since then he had become more and more convinced of the correctness of that view, and absolutely concurred in what Dr. Teacher had stated. When he presented his paper before the British Gynaecological Society in 1899 the general trend of expert opinion was just commencing to turn towards the adoption of the ovular origin, which was now very generally accepted. Everything pointed in this direction—the similarity of the cells of the growth to those of the chorionic coverings, and the frequency of the occurrence of the new growth after hydatid mole, which in itself was due to marked proliferation of Langhans's cell and the syncytium. It seemed to him there was no weak link in the chain of evidence. From the completeness of Dr. Teacher's demonstration it was unnecessary, after stating complete concurrence, to enter further into the pathology, but clinically there were one or two points of importance he should like to mention. As regarded the indication for radical treatment by hysterectomy, the simple demonstration of syncytial masses in uterine scrapings was not sufficient, particularly after the expulsion of a mole, as portions might be retained without assuming malignant action, and could be cured by curettage, as he had twice seen. When, however, violent haemorrhage was associated with the curettage, the prognosis was much more unfavourable, and the cavity of the uterus should be at once explored by the finger for the detection of a growth. He was much interested in the cases of spontaneous cure after metastases. This might be accounted for by the tendency of the growth to kill itself by the free extravasation of blood-choking cell growth, the particular rôle of these cells being to penetrate blood vessels and flourish in the circulating blood stream.

Dr. T. ARTHUR HELME (Manchester) expressed surprise at the sweeping character of some statements in the paper. He had understood Dr. Teacher to say that no case was on record that supported the sarcomatous nature of these tumours, and that no deciduoma with solely sarcomatous tissue had been recorded, that all these tumours were chorion-epitheliomata, and that he had never seen maternal tissues growing after a fashion at all comparable with the cells of these tumours. In order to clear the way for these opinions, Dr. Teacher ruthlessly brushed aside the maternal origin of those tracts of cells which were to be found in the intervillous spaces, and which they had looked upon as "decidual" (maternal), and boldly said that they were all of trophoblastic or ovular production. In support of this, he (the speaker) had failed to hear any evidence adduced by Dr. Teacher, except the similarity of appearance of the cells—an unsafe basis of opinion—and a drawing, one of Dr. Haultain's preparations, which had been shown upon the screen; this drawing had been "made in Germany," and doubtless the artist had unconsciously allowed his imagination to tinge his product with the ideas which he wished to represent: that was not sufficient evidence for the important statement made. He (Dr. Helme) had brought to the meeting a specimen of deciduoma which had occurred in his practice some three or four years ago but had not been recorded, as, on examination, he had found that it supported the prevailing opinion that these tumours might be of "decidual" origin. On hearing Dr. Teacher's opinion of the impossibility of such an origin he thought the specimen might be of some value; and though, in the short time at his disposal, he could not do the case justice, he would briefly allude to it, and report the case more fully subsequently. Dr. Helme then gave a brief history of the clinical symptoms and appearances. At the necropsy there was found the tumour in the uterus with metastases in ovary, vagina, vulva, and both lungs. The microscopic appearances of all the growths, primary and metastatic, were identical. There were tracts of huge cells, evidently of short life-history, with larger necrotic areas, wide blood spaces, haemorrhages, and fibrinous deposits. The cells he supposed Dr. Teacher would claim as the offspring of the

cells of Langhans's layer, but he thought they were of decidual origin. He had been unable to find any of those spreading protoplasmic masses characteristic of the syncytium. Some years ago he had made observations upon the histology of the pregnant and puerperal uterus (especially in the rabbit), and if one thing had impressed him more than any other it was the enormous hypertrophy which the maternal connective tissue cells underwent, and he would call Dr. Teacher's attention to those huge plasmodia of maternal origin, which were to be found, not only in the uterine, but also in the vaginal tissues. Shortly, he might state that the tumour which he now exhibited resembled in its broad features the sarcomata, but at the same time possessed special characters, which demanded that it should be placed in a special class, for which the name "deciduoma" seemed eminently suitable. He claimed that this specimen showed the possibility of the decidual—that was, connective tissue—origin of some at least of these tumours. As to the chorion-epithelioma ta, the theory that they had differentiated in the chorion a stratum of tissue which was neither fetal nor maternal and which was capable of giving rise to a malignant growth in its host, which was neither sarcomatous nor carcinomatous, was fascinating, but before accepting a doctrine which would so completely affect the views as to the origin of tumours, they should demand explicit proof, and it seemed to him that this would not be forthcoming until it was demonstrated that what they had considered to be cells of maternal (connective tissue) origin were really of trophoblastic origin, and until the source of the syncytium itself was identified.

Dr. F. W. Andrewes expressed his agreement with the main thesis of Dr. Teacher's paper, namely, that the tumour formerly known as deciduoma malignum was of fetal origin and derived from the chorionic epithelium. He was, however, of opinion that the term "syncytioma" was preferable to chorion-epithelioma, as being less cumbrous and expressing the striking histological feature of the growth without implying any theory of its origin. The term "chorion-epithelioma" also tended to suggest a relation to the carcinomata which Dr. Teacher was anxious to avoid. He referred to the great theoretical importance of admitting the fetal origin of the growth pointed out by Adami, inasmuch as the invading cells were derived from another organism and rendered the assumption of an adventitious infecting microbe unnecessary. With regard to those syncytial tumours of the uterus which appeared to have no connexion with a pregnancy, he was of opinion that the ground was much less certain: the supposed teratomatous origin of such growths required careful scrutiny. It was necessary to show that an aberrant included ovum might actually give rise to chorionic structures, and to find syncytial tumours arising in connexion with undoubted teratomata. Until the present meeting he had never seen such proof. Both sarcoma and squamous-celled carcinoma might originate in dermoids, but Dr. Ritchie had shown that evening a syncytial tumour arising in a dermoid of the mediastinum in the male. Dr. Andrewes thought this the most important of the many valuable specimens shown at the meeting, but it was a rarity, and more such cases were needed to establish Dr. Teacher's position. It was not shown that these rare cases of syncytial tumour of the uterus, in which a pregnancy could be excluded, were so absolutely identical with the ordinary form that it was needful to invent an included ovum to explain them. The acceptance of the view that ordinary syncytioma malignum was of chorionic origin did not compel them to accept such an origin for every syncytial tumour. Syncytial sarcoma was not a very rare thing. (Two specimens of mixed-celled endosteal sarcoma of bone were shown under the microscope, containing immense syncytia, almost comparable with those of chorion-epithelioma.) Might not the rare cases of syncytial uterine growth, having no connexion with pregnancy, be perhaps of this nature? Such a possibility was an additional reason for preferring the term syncytioma to chorion-epithelioma.

Dr. James Ritchie (Oxford) described the case of a young man who during life was considered to be suffering from a malignant tumour of the anterior mediastinum of three months' duration, with secondary growths in the lungs. *Post mortem* there was found in the region named a mass, which consisted partly of a dermoid cyst, partly of a solid tumour, which microscopically had the precise characters of a chorion-epithelioma. Secondary growths existed in the lungs, liver, and spleen, and had the same microscopic appearances as the solid part of the primary tumour. Dr. Ritchie considered that this tumour was to be looked on as a teratoma developed from an included ovum, the part of which corresponding to the trophoblast had developed in a manner analogous to that part of the trophoblast from which an ordinary chorion-epithelioma might arise. He would welcome, however, the discovery of other similar tumours, as the possibility of the dermoid part of the tumour having arisen from an epithelial inclusion from the third branchial cleft might be advanced. In such a case the malignant part of the growth might be looked on as an angiosarcoma of an accidental association. He had, however, never seen any tumour of those usually classed either as angiosarcomata or endotheliomata which at all resembled a chorion-epithelioma.

Dr. W. E. Fothergill (Manchester), with reference to Dr. Teacher's definition of the so-called chorion-epithelioma as a tumour of the uterus occurring in connexion with pregnancy, asked if it would be possible to retain this definition and at the same time to continue to include under the name "chorion-epithelioma" (1) growths occurring in the female, but leaving the uterus perfectly healthy, and (2) growths occurring in the male subject? The neoplasms in question had now been described as occurring in (*a*) the male subject; (*b*) the young female apart from pregnancy; (*c*) females suspected of recent pregnancy; (*d*) females known to have been pregnant recently; (*e*) elderly females not suspected of recent pregnancy. In the case of, for instance, a female with a problematic pregnancy followed by a "syncytial" tumour in the vagina, how would it be possible to say whether the growth was due to pregnancy or not? Was it proved, as Dr. Teacher had asserted, that the trophoblast was a distinct histological entity? Could its presence be detected infallibly by inspection, and could a new growth derived from trophoblast be recognized as such? The speaker understood Dr. Teacher to remark that cases in which actual chorionic villi were observed had a more favourable prognosis than those in which no villi could be found. Did not this clinical observation suggest that the cases investigated formed two categories? Might not the more serious be instances of new growth not causally connected with pregnancy, the less severe being examples of more or less pronounced invasion of the maternal organism by chorionic villi? Dr. Teacher held that none of the cases reported gave any support to Veit's view that villi might be included within masses of new growth of maternal origin. Would it not, however, be easy to write descriptions of any or indeed of all the published cases in such a manner as to support Veit's theorem? Dr. Teacher further considered Veit's view to be finally negatived by the demonstration of certain changes in the walls of blood vessels whose lumina contained chorionic elements. But could not similar changes in the walls of vascular structures be demonstrated in certain angiosarcomata quite apart from the presence of chorionic structures? The above questions were some of those which had occurred to the speaker, but he had risen mainly in order to point out that the authors of certain papers referred to by Dr. Teacher appeared to have ignored the work of the late Dr. Kanthack and of Dr. Eden. For these gentlemen had long since pointed out the similarity between the so-called choriomata and other neoplasms, more especially certain growths of the testis. In the year 1896 they argued as follows: "The testicular and other neoplasms in question are sarcomata; therefore, until conclusive evidence to the contrary is produced, we prefer to regard the similar growths of the uterus as being sarcomata also." At the present time attention was again being called to the similiarity between the various neoplasms in question, but in the opposite sense. The uterine growths were now supposed to be accepted as choriomata, therefore the similar growths of the testis and other organs they were told must also be choriomata. Eden and Kanthack had argued from the fairly well known to the unknown. The more recent authors had reversed the process; for it had by no means been proved that the growths in question were genuine embryomata. Granting that they were embryomata, the speaker thought that, if only out of consideration for the student of the future, care should be used in applying the same name to things so different as a chorionic growth affecting the mother, and an embryoma in a male subject. The theory expounded so clearly by Dr. Teacher was so simple and so attractive, one might say so fascinating in character, that it was sure to be accepted as a working hypothesis by all but the most sceptical critics. But granting that all the growths in question were of ovular—of trophoblastic—origin would it not be well to adopt a nomenclature which would distinguish clearly those connected with pregnancy from those arising independently from that state? It was clear that a mother fatally invaded by the trophoblast of her own

child would be a person of one generation killed by a tumour belonging to a person of the next generation—matricide in fact. But a man slain by an embryoma in his testis would be a victim not of his own child, but of a potential brother or sister—a case of fratricide—a very different matter, and one worthy of a different name. It was easy to say that an individual had a trophoblast be he your child or your brother, but the statement would not be easy to prove. They were aware that a trophoblast was essential to the implantation in utero of certain mammalian ova, but who would say that a chorion was essential in the development of a dermoid cyst?

The discussion was adjourned.

SPECIMENS.

Lieutenant-Colonel A. STURMER (Madras): Uterus removed from a Hindu woman by vaginal hysterectomy two years after labour.—Dr. F. W. N. HAULTAIN (Edinburgh): Uterus removed by vaginal hysterectomy for chorion-epithelioma six months after passage of a vesicular mole, 1898. Patient well, 1903.—Dr. HORROCKS: Deciduoma malignum without syncytium. Death eight months after passage of a vesicular mole.—Dr. BRIGGS (Liverpool): Two specimens of chorion-epithelioma.—Dr. THOMAS G. STEVENS: Chorion-epithelioma five months after passage of a vesicular mole. Vaginal hysterectomy; death in three days.—Dr. J. M. MUNRO-KERR (Glasgow): Chorion-epithelioma following abortion, September, 1901. Curetted March and May, 1902. Then vaginal hysterectomy when diagnosis made.—Dr. F. W. ANDREWES: Endosteal sarcoma of femur, showing syncytial structures.—Dr. HERBERT WILLIAMSON: Syncytioma of uterus from a patient who died three years ago at St. Bartholomew's, fifteen months after passage of a vesicular mole. Secondary growths (?) in lungs, liver, and vagina.—Dr. T. A. HELME (Manchester): Chorion-epithelioma of uterus and metastatic growths in lungs.—Dr. JAMES RITCHIE (Oxford): Embryoma of anterior mediastinum from a male, aged 24, with secondary tumour in lungs.—Dr. CUTHBERT LOCKYER: Chorion-epithelioma of uterus with vaginal parametric and pulmonary metastases. Secondary growth appeared in labium two months after labour.—Dr. HERBERT SPENCER: (1) Chorion-epithelioma of uterus, cervix, and lungs; (2) case observed in Great Britain in 1889, published in France in 1895.—Dr. RUSSELL ANDREWS: (1) Chorion-epithelioma of uterus. Specimen from London Hospital labelled cancer, etc., and in museum for many years; (2) chorion-epithelioma in uterus and vagina in woman, aged 50, whose last confinement was eleven years before. Metastases in lungs.—Dr. W. H. TATE: Chorion-epithelioma of uterus removed by vaginal hysterectomy, following abortion eighteen months previous.—Dr. F. J. MCCANN: (1) Chorion-epithelioma of uterus with secondary deposits in vagina and lungs, aged 46; (2) chorion-epithelioma of uterus removed by vaginal hysterectomy in 1901. Patient remained well; (3) chorion-epithelioma in woman of 53 years of age.—Dr. GALABIN: (1) Myxoma of fundus uteri following passage of a vesicular mole curetted four times. Patient was well ten years later; (2) vesicular mole showing syncytium partially differentiated into cells; (3) carneous mole, exhibiting prolonged vitality of chorionic villi without malignancy.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—The annual meeting and conference of this Society was held on May 27th, when the following gentlemen were elected as officers for the ensuing session:—*President:* J. H. Stowers, M.D. *President-elect:* H. Waldo, M.D. *Vice-Presidents:* P. S. Abraham, M.D., R. L. Bowles, M.D., Jas. Galloway, M.D., A. J. Harrison, M.B., J.P., J. F. Payne, M.D., H. H. Phillips-Conn, M.D., P. H. Pye-Smith, M.D. *Treasurer:* C. H. Thompson, M.D. *Honorary Secretaries:* A. Shillitoe, F.R.C.S., W. B. Warde, M.D. *Council:* Wallace Beatty, M.D., H. A. G. Brooke, M.B., Sir Alfred Cooper, F.R.C.S., H. Radcliffe Crocker, M.D., A. Eddowes, M.D., Willmott Evans, F.R.C.S., W. T. Freeman, M.D., A. J. Hall, M.D., E. Graham Little, M.D., Geo. Pernet, M.R.C.S., Geo. W. Sequeira, M.R.C.S., Ed. Stainer, M.D.—Dr. WILLIAM THOMAS CORLETT, Professor of Dermatology and Syphilology, Western Reserve University, Cleveland, delivered an address on the present epidemic of small-pox throughout the United States, together with a short consideration of the different types of the disease, their recognition, and some of the influences of vaccination, illustrated by lantern slides. After a brief historical introduction, attention was called to the variability in severity of the different epidemics that from time to time had swept over the country, as well as to the various clinical types of the disease. The importance of this could not be too strongly emphasized. The epidemic of 1898 appeared within a few months in various States remote from each other. Thus, in Boston and New York the disease assumed a virulent form and was from the first very fatal; whilst in Philadelphia, only about 100 miles away, it was so mild that the health authorities experienced difficulty in maintaining strict quarantine measures. In Ohio so mild was it that a correct diagnosis was not at first made, the disease being regarded as a severe form of varicella. Into New York and Boston small-pox was thought to have been introduced from Europe; into Ohio from Cuba, where it was endemic, via the Southern States. A series of photographs illustrating the various types and stages of the disease was thrown on the screen. The first series represented small-pox in the unvaccinated "variola vera"; the second, small-pox modified by vaccination; the third, cases of varicella to demonstrate the main features of differentiation; the fourth, malignant type—haemorrhagic case, secondary pus invasion, giving the appearance of erythema multiforme or impetigo bullosa. Finally, abnormalities not classed in the above two factors Dr. Corlett thought must be taken into account in controlling or modifying small-pox. (1) Vaccination and (2) the as yet unknown condition of the variola virus itself. By vaccination the disease might be stamped out of any community, as had been done in Germany, and it must be impressed on the laity that revaccination at least every ten years, or oftener during epidemics, alone ensured complete immunity. As to the second factor, all that was known was that epidemics varied greatly in severity independently of the influence of vaccination. In the Cleveland epidemic the death-rate increased from about ½ to 1 per cent. for the first year to nearly 20 per cent. in the third and fourth years. The virus was supposed to have developed more virulent properties by successive transplantations. In conclusion, Dr. Corlett spoke of the exclusion of the actinic rays of the solar spectrum in the course of treatment. The exclusion of these rays in no way influenced the variola virus itself.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—At a meeting held June 5th, Mr. RICKARD W. LLOYD, President, in the chair, Mr. SWINFORD EDWARDS showed the following three cases:—(1) A man, aged 71, who for five years had been unable to pass his urine except by means of the catheter. Nine days before admission to the hospital he had some difficulty in passing the instrument, and a good deal of bleeding owing to false passages. The prostate was felt bimanually to be enlarged, soft, and elastic. Prostatectomy was performed through a suprapubic incision on April 15th of this year. The tube was removed on the fourth day after operation, and on May 9th the patient was passing his urine naturally. He had no rise of temperature above 99.6°, and by May 24th the wound was healed. He now passed his water quite naturally. (2) A man, aged 30, who for three weeks before admission had suffered from suprapubic pain and increased frequency of micturition. The base of the bladder was found to be indurated, and with the cystoscope was seen to be covered with granular patches with a few discrete tubercles, the disease being specially marked round the left ureter. On May 11th injections of tuberculin were begun. At that time the patient's temperature was 102°, and his urine contained a trace of albumen, some mucus, and pus. There was no reaction after the injections, and the patient was now very much better. He no longer got up at night to pass water, and he could hold it for three hours in the daytime. The first injection was $\frac{1}{20}$ mg., which had now been increased to ½ mg. (3) A labourer, aged 32, who for some months had had increased frequency of micturition, with a burning sensation in the perineum. There were threads in his urine, pointing to former attacks of gonorrhoea. There was tenderness on pressure over the left Cowper's gland. This could be distinctly felt, and was removed through a transverse incision. The patient was now free from discomfort. Remarks were made by Mr. PARDOE.—Dr. E. FURNISS POTTER showed a girl, aged 13, who had suffered from suppurative disease of both middle ears for the past seven years, following an attack of scarlet fever. In October, 1902, the left mastoid antrum was opened, the posterior wall of the osseous meatus was cut away, and the antrum, attic, and tympanum thrown into one cavity. The diseased tissues were removed with a curette, the cavity packed with gauze, and the external post-aural wound sutured; fourteen days later the wound was reopened, and a graft, taken from the inner side of the thigh, was applied to the surface of the operation cavity. At the end of five weeks the healing of the cavity was complete. The case showed the great advantage of skin-grafting in conducing to rapid healing. Mr. PERCY PATON discussed the case.—Dr. ARTHUR SAUNDERS showed two sisters suffering from valvular disease of the heart as the result of acute rheumatism. The elder girl, aged 14, had a well-marked systolic murmur at the apex. The first sound also was explosive in character, and after exertion a pre-systolic murmur could be heard, showing that with increased demand upon the heart, some obstruction became evident at the mitral orifice in addition

to the incompetence. In the younger sister, aged 9, the aortic valve was affected: there was a loud roaring diastolic murmur audible at the right base and down the left side of the sternum. In both sisters the heart was now hypertrophied, and compensation had been well established, so that for the last twenty months they had been able to live ordinary healthy lives, without the enforced consciousness of having anything wrong with them. The treatment in each case had been rest, milk diet, and sodium salicylate during the stage of acute pains; followed by a course of alkaline treatment and gradual indulgence in increased exercise. The patients were shown as illustrating the incidence of acute rheumatism upon particular families, its varied effects upon the valves in different individuals, and the readiness with which, under due care, compensation of a lasting character might be established.—Dr. SEYMOUR TAYLOR showed a painter, aged 24, who had suffered from epilepsy. For the last six weeks he had been getting darker in colour, and he had fainting attacks. Although the cardinal symptoms of Addison's disease, namely, vomiting and intense prostration, were absent, there were typical signs present, such as pigmentation of scars and extra deposit of pigment in such parts of the body as were normally pigmented. The skin was for the most part pale, but there was a mousey-brown tinting over the shoulders where the braces pressed, and in the groins and on the dorsum of the penis. Well-marked patches were also seen on the upper lip and on the mucosa of the roof of the mouth. The scars of his primary vaccination were also extremely dark. Examination of the blood showed a diminished amount of haemoglobin and a slight degree of leucocytosis. Dr. Taylor proposed to administer a course of adrenalin. Mr. MCADAM ECCLES, Dr. A. E. RUSSELL, Mr. PARDOE, and Mr. PATON also discussed the case.—Mr. GARRY SIMPSON showed a woman with well-marked tuberculous syphilides on the lips and chin. He also mentioned the case of a girl, aged 8, with a chancre on the lower lip, who had acquired it by using articles that had been infected by her parents, who were both under treatment for mucous patches and other secondary manifestations of the disease in the mouth.

GRIQUALAND WEST BRANCH OF THE BRITISH MEDICAL ASSOCIATION.—At a meeting held at the Hospital, Kimberley, on April 15th, Dr. W. RUSSELL, Vice-President, in the chair, the inaugural address for the year was delivered by the PRESIDENT (Dr. Watkins) on diagnostic doubts and surgical difficulties.—The following case was shown: Dr. WATKINS showed a patient, an elderly man, on whom he performed Pirogoff's operation on the foot for a perforating ulcer of the heel. It was shown that the os calcis had failed to unite to the ends of the leg bones.

REVIEWS.

OPHTHALMOLOGY.

A WELL-KNOWN book, though one which has not been brought up to date since the fifth edition in 1885—*Diseases and Injuries of the Eye*, by Mr. GEORGE LAWSON[1]—has just been issued in a revised and almost unrecognizable form by Mr ARNOLD LAWSON. It now consists of nearly 600 pages, is divided into 27 chapters, and is provided with an appendix and a most copious index. As is usual in a book of this description, we find an early chapter on reflection and refraction of light, and the first eight chapters deal with the errors of refraction and their treatment. As surgeons are not yet all agreed as to the details of the treatment of refraction, we find some methods of treatment advocated that would not find universal acceptance. Thus for children with myopia, if of a moderate or low degree, it is recommended that they should not wear their glasses constantly for fear they should become so dependent upon them that they would be greatly put about if they had not got them on, whereas a myope who has not been corrected gets to know objects by their rough outline seen with the defective vision he possesses. The full correction of hypermetropia is not recommended, and the weakest glass that will enable the patient to see to read is the one that should be ordered for presbyopes. In treating of purulent ophthalmia, the danger of using zinc and alum owing to the tendency they have to destroy the corneal epithelium and to irritate the iris if it shows any tendency to become involved in the inflammatory processes at work, might perhaps have been pointed out a little more clearly. The conjunctival diseases caused by bacteria are well discussed. Mr. Arnold Lawson has done so much and such excellent work in this department, that this textbook is certainly the most up to date in this respect. Diseases of the various parts of the eye are taken in a systematic manner, and the numerous references to published papers show that great care has been expended in looking up the literature of the various subjects. Indeed, there is little newly published work which has not been consulted and referred to in its proper place throughout the book. It cannot, of course, be expected that the subjects can be treated in the detailed manner of an original paper, though admirable judgement has been shown in this respect; perhaps, however, the discussion of neoplasms, though sufficient for all practical purposes, might have been a little more elaborated. There is an excellent article on *x* rays—Mackenzie-Davidson's method of localization. The affections of the extrinsic muscles of the eye are well described, and there is a description of the apparatus in common use for the detection of heterophoria. The important subject of diseases of the eyelid is by no means neglected, and several operations for the restoration of the lid and lid margins are described and illustrated. The treatment of distension of the frontal sinuses is the last thing described, and for this it is advised that an india-rubber drainage tube be passed from the sinus into the nose, and retained *in situ* for five or six months. Possibly the throat and nose surgeons, in whose domain this disease falls, would think the method rather old-fashioned. No trouble or expense has been spared in producing this book, and it is one which, from its old associations as well as from its own intrinsic worth, cannot fail to become popular. The illustrations are excellent; and although it is rather difficult to appreciate any but coloured drawings of the fundus, yet for black and white nothing could be better than the way in which these are reproduced. As a textbook we trust it will have the popularity it undoubtedly merits. We most heartily congratulate Mr. Lawson on the production of this volume, which is a thoroughly reliable guide for students and practitioners.

A very practical book on *Squint*[2] has recently been published by Mr. CLAUD WORTH. Successive chapters deal in an original and practical manner with binocular vision (its normal development in infancy), convergent squint, the etiology of squint, amblyopia (congenital and acquired), methods of investigating squint, treatment of convergent squint, fusion training, divergent squint, heterophorias, and operations. The author has been for many years engaged in the clinical investigation of squint, and his conclusions are drawn from detailed notes which he has made of 2,337 squints and heterophorias, 1,729 of which were cases of convergent squint. In cases of constant monolateral squint which have been treated merely by glasses and operation the squinting eye is usually very blind, and the acquisition of binocular vision a rare exception. The author claims that cases which are treated by the methods he describes almost invariably have perfect sight in each eye, and usually have stereoscopic binocular vision also; and he gives statistics in support of these statements. Both his views and methods of treatment are in many respects novel, but they appear to rest on a sound basis of common sense and clinical experience, and he carefully avoids making any statement which is not amply borne out by statistical and experimental evidence. The work is a valuable addition to ophthalmic literature, and describes successful methods of dealing with a class of cases the treatment of which has hitherto been very unsatisfactory.

Professor GREEFF has undertaken the subject of the pathological anatomy of the eye in Professor Orth's *Textbook of Special Pathological Anatomy*.[3] The first part which is now before us deals with conjunctiva, cornea, sclera, iris, and ciliary body. Professor Orth contributes a chapter on inflammation of the cornea from the general and experimental

[1] *Diseases and Injuries of the Eye with their Medical and Surgical Treatment.* By George Lawson, F.R.C.S. Sixth edition revised, and in great measure rewritten, by Arnold Lawson, F.R.C.S. London: Smith, Elder, and Co. 1903. (Demy 8vo, pp. 588. 249 Illustrations. 15s.)

[2] *Squint: Its Causes, Pathology, and Treatment.* By Claud Worth, F.R.C.S. London: John Bale, Sons and Danielsson. 1903. (Demy 8vo, pp. 229; 33 illustrations. 6s.)

[3] *Lehrbuch der speciellen pathologischen Anatomie.* Von Dr. Johannes Orth. Neunte Lieferung, 1 Haelfte: Die pathologische Anatomie des Auges, von Professor R. Greeff. Berlin: A. Hirschwald. 1902. (Demy 8vo, pp. 270. M. 7.)

point of view. The bacteria found in the different forms of conjunctivitis are figured and described. The subject of trachoma is considered in much detail, and the author expresses the opinion that it is contagious and due to some specific micro-organism not yet isolated. The interesting subject of primary and secondary tubercle of the iris is discussed, and the large subject of keratitis receives ample treatment. Each chapter is prefaced by a description of the normal anatomy of the part under consideration, and references to the most important papers are given. The text is elucidated by many illustrations, though one would have been glad of even more; among them may be mentioned those showing the development of phlyctens, the different stages of pannus, amyloid degeneration of the cornea, endarteritis in syphilitic iritis, the changes in the uveal layer of the iris in diabetes, and typical tubercle of the iris. As a guide to the subject of which it treats, this work should be appreciated by the student taking up the special study of diseases of the eye. The same may be said of the volume by GINSBERG[1] (*The Pathological Histology of the Eye*), which covers the same ground in much the same way, but the whole subject is concluded in one volume, and there is prefixed a detailed table of contents, which is wanting in Greeff's work.

A book on the *Refraction of the Eye and the Anomalies of the Ocular Muscles*[5] by Mr. KENNETH CAMPBELL has recently been added to the long list of similar works that are already in circulation. Its title tells its scope, and diseases of the eye are not discussed. It is divided into 13 chapters which deal with the subject in a systematic, clear, and lucid manner. In order to understand the book it is by no means necessary to have an extensive acquaintance with mathematics, for the author has acted on the words he quotes of Professor Tait that "True science is itself simple, and should be explained in as simple and definite language as possible." Thus there is a notable absence of trigonometrical formulae which though interesting and important theoretically are by no means necessary in practice. The subjects of asthenopia and anomalies of the extrinsic eye muscles are very well described and are made far simpler than is the case in some other works. There is a short appendix giving the eyesight regulations for admission of candidates to the public services. The volume is well got up and illustrated and should become popular with those who require a special book on this interesting subject.

HOMES, SANATORIA, AND HEALTH RESORTS.

WE have received a small book with the rather catchpenny title, *Where Shall I Send My Patient?*[6] According to the preface, its object is to supply in a handy form as much concise information as can be obtained about the various health resorts and institutions where patients can be treated in Great Britain and the neighbouring islands. A list of hotels and boarding-houses is also given, and the compilers rather disarm criticism by confessing that the work is incomplete, and that they will gladly receive corrections and suggestions for future issues. Looking over the book we find it contains: (1) A list of lunatic asylums; (2) of convalescent homes; (3) of institutions for the blind; (4) of homes for defective children; (5) for epileptics; (6) for idiots and imbeciles; (7) for incurables; (8) for inebriates. After this follows some account of the Association of Medical Men Receiving Resident Patients, and an explanation of a system of numbers and of what the compilers call "*noms de plume*," which we think would be better called pseudonyms, under which the various members are described in order, we suppose, to avoid the suspicion of advertising. This part of the book contains a series of paragraphs, of which we may give the following as an example:

> 16. "R.N." Bournemouth. Married, no family. Large detached house standing in its own grounds. Patients of either sex received, mental or otherwise. Private sitting room and nurse if required. Medicated and sea-water baths. Carriage exercise. Photo of house can be sent.

We notice there are 126 of these paragraphs. Lists of hydropathic establishments, nursing homes and institutions, and sanatoria are then given. After this there is a section upon health resorts in which the medical advantages of the different places are briefly given, the names of hotels and the mode of access; for example:

> Ashby-de-la-Zouch (the compilers spell this name with a final "e," which is not usual). A small clean town in Leicestershire, about 400 ft. above the sea, with a good summer climate, but rather cold in winter. The waters, though saline, contain sufficient iron to give them tonic properties. They are beneficial for gout, muscular and articular rheumatism, scrofula, chronic skin diseases, neuralgia, and debility. Hotels: Royal, Queen's Head. Access: Midland and L. and N.W. Railways.

The concluding section of the book is a list of hotels. The obvious criticism which occurs to us is that the work is very incomplete. If we take the list of asylums, for example, we notice that many of the best known of those taking paying patients do not appear in the list. It is possible that the managers of these institutions, feeling themselves independent, have been unwilling to agree to the terms asked for notice, but in a list purporting to be a guide for the use of the profession the exclusion of some of the best institutions seriously detracts from its value. This is not only true of asylums, but also of nursing homes and hotels. The book is inferior to Bradshaw's *Guide to Bathing Places and Climatic Health Resorts*, as this includes foreign as well as British and Irish stations, but it is distinguished from it by the tabulated lists of asylums and similar institutions; these however are, we venture to think, more adequately given in Burdett's *Hospital Annual*. To illustrate its defects, we may say there is only one sanatorium given in the whole of Wales, although there must be a dozen along the north coast alone. In looking over the list of hotels we notice there is only one hotel given at Torquay, none at Folkestone, none at Eastbourne. Only one hotel is given at Birmingham, but Birmingham is hardly a health resort, and we do not see why it is included. There is no mention at all of Braemar or Strathpeffer under the list of hotels in Scotland, but they are named among the health resorts, and in order to be useful in a guide of this sort cross references are indispensable. These are serious defects, so great as to make the book an untrustworthy guide except in so far as it may afford a list of medical men who are also members of the publishing association who receive resident patients.

HOSPITAL ACCOUNTS.

SIR H. BURDETT has done many services to the London hospitals; he is generally credited with a large share in the planning, as he certainly has a large share in the management, of King Edward VII's Hospital Fund, and he both cherishes, and always strongly expresses, a firm confidence in the stability and the excellence of the voluntary principle as opposed to the "municipalization" of our hospitals. But by no means the least of his services in this respect is that he has devised a *Uniform System of Accounts*,[7] and has been able to get the use of this system made a condition of assistance from the Sunday and Saturday and King's Funds. The system is admirable, and is explained in the book before us with a fullness and lucidity which leave nothing to be desired. It has been tried for ten years, and has now been adopted, as our author tells us,

> by all the principal hospitals and great institutions, including the London and provincial hospitals, many of the large general charities, and a host of smaller institutions of all kinds. It has been accepted by the Governments of the Colonies of Victoria and Queensland.

It is clear, therefore, that the system meets a public want, by affording a ready method of comparing one hospital with another in the matter of economy, and also (or perhaps we should say therefore) enforcing a due regard for economy on the managers. We are, of course, aware that economy is not necessarily the same thing as good management. The first object of management is not to save the money, but to cure the patients, and therefore expenditure may be perfectly justifiable at one hospital which would be rightly condemned at another. And we are also aware that no system of accounts can secure absolute uniformity. Thus it seems that in estimating the total cost per bed occupied during the year, some

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[1] *Grundriss der pathologischen Histologie des Auges.* Von Dr. Siegmund Ginsberg. Berlin: S. Karger, and London: Williams and Norgate. 1903. (Demy 8vo, pp. 487, 107 illustrations. 13s.)

[5] *The Refraction of the Eye and the Anomalies of the Ocular Muscles.* By Kenneth Campbell, M.B.Edin., F.R.C.S.Eng., Surgeon to the Western Ophthalmic Hospital. London: Baillere, Tindall and Cox. 1903. (Demy 8vo, pp. 222. 107 illustrations. 5s.)

[6] *Where Shall I Send My Patient? A Guide for Medical Practitioners and Book of Reference to the Health Resorts and Institutions for Patients of Great Britain.* Bournemouth: Printed for the Association of Medical Men Receiving Resident Patients by E. J. Frampton. 1903. (Cr.8vo, pp. 284. 2s. 6d.

[7] *The Uniform System of Accounts for Hospitals and Public Institutions, Orphanages, Missionary Societies, Homes, Co-operations, and All Classes of Institutions.* With Special Forms of Accounts, Complete Sets of Books, certain suggested Checks upon Expenditure, Forms of Tender, and other Aids to Economy. Together with an Index of Classification, whereby every Item of Expenditure may be dealt with under Identical Heads by every Group of Institutions. By Sir Henry Burdett, K.C.B., author of *Hospitals and Asylums of the World*; *Burdett's Hospitals and Charities, being the Yearbook of Philanthropy*; *Cottage Hospitals*; *Pay Hospitals of the World*: editor of the *Hospital*, etc. London: The Scientific Press, Limited. 1903. (Demy 8vo, pp. 113. 4s.)

hospitals reckon in the board, etc., of their officers and nurses, while others omit those items; and other similar discrepancies may be found in other details. But the system provides a ready way by which they may be detected and set right, and it affords at once the means of suggesting economies in all materials purchased by contract, without in any way interfering with the comfort of the patients. It also makes it impossible for the funds of a charity to be administered in the interest of its secretary or manager. Sir H. Burdett is aware of the imperfections of his system indicated above. He admits them (on p. 9) and has made an attempt to remedy them, or some of them—an attempt which we believe will be successful if honestly administered. He has also added to this edition a new chapter, extending the plan to other charitable institutions, which he hopes

will result in an increase to the funds of all institutions the managers of which have the public spirit and knowledge to adopt the uniform system.

We should have liked to quote from the preface the terms in which our author expresses his confidence in the stability and vitality of the voluntary system of hospital management, but our space is exhausted. Every one interested in the subject will procure the book itself, and for those concerned in the active management of the institutions (secretaries, stewards, etc.) it is indispensable.

NOTES ON BOOKS.

Dr. Alexander Brand, of Driffield, has published as a pamphlet his interesting presidential address on the etiology of cancer which he delivered before the East York and North Lincoln Branch of the British Medical Association. As those who read the abstract of Dr. Brand's address published in the British Medical Journal in July, 1902, will remember, he is a convinced adherent of the infective theory of cancer, and states in a terse and logical manner the evidence which supports this view. He also discusses the opinions of those who consider it untenable. Dr. Brand considers that there is full justification for putting into practice the methods of prophylaxis which are used against recognized infective diseases, and quotes from the report of the Medical Officer of Health for Driffield the following sentence: "I am of opinion that cases of phthisis and malignant disease should come under disinfection as well as the notifiable diseases."

REPORTS AND ANALYSES

AND

DESCRIPTIONS OF NEW INVENTIONS

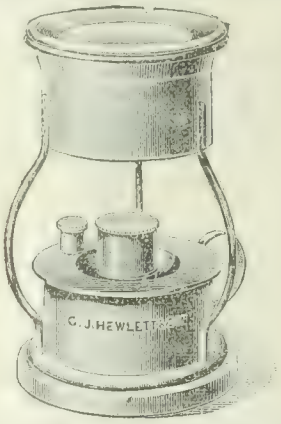
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEDICAL AND SURGICAL APPLIANCES.

Gas Water-heating Apparatus.—We have had an opportunity of seeing in work at the showrooms of Messrs. Ewart and Son, 346, Euston Road, N.W., an installation for supplying hot water at various points in a building at any time. An automatic gas-fired boiler, called "the Califont" (B pattern), at once converts an incoming stream of cold water into an outflowing stream of hot water, the temperature of which can be regulated as long as the cold water continues to flow and the gas remains alight. By means of a by-pass the gas is kept constantly alight, and on turning on any of the taps the gas is turned up automatically; when the tap is turned off the gas also is turned off, leaving only a small pilot flame to relight the burner when a hot-water tap is again opened. A considerable saving in the cost of fuel is thus effected, as the gas only burns when hot water is actually required. The automatic boiler (Califont) is made in various sizes, and a comparatively small machine will amply supply an operating theatre. The machine which we saw in operation was, it was stated, of a size suitable for a hospital having from twelve to twenty beds, with two or three baths, slop sinks, and operating theatre. The invention appears to us to be thoroughly practical, and we would commend it to the attention of those who may have to consider the fitting-up of cottage hospitals where it may often be exceedingly convenient to be confident of having an adequate supply of hot water at all times of the night and at all seasons of the year. It is also likely to be convenient in infectious hospitals and in nursing homes; there are circumstances also under which it might be found a useful adjunct to the operating rooms of large hospitals. Messrs. Ewart, we understand, will be pleased to show the apparatus to any person interested who will visit their showrooms.

A Binder for Umbilical Hernia in Infants.—Dr. Collingwood Fenwick (Clapham) has sent to us a binder for infants, designed to give support to the umbilical ring and prevent hernia. It consists of a double layer of lint, 6 in. in breadth, with tapes attached to the extremities. A pocket in front encloses a disc of cork, which is to cover the umbilicus. The device certainly affords a mechanical support to the abdominal wall if firmly adjusted, and though at first its wearer would give the nurse some wakeful nights an infant soon accommodates itself to discomforts. It is a question, however, whether the pressure exerted by such an appliance does not favour the occurrence of the condition which it is designed to prevent; continuous pressure on the structures surrounding the umbilical ring cannot favour the solidification of the scar, which is the natural and satisfactory opponent to hernia.

Hot-water Bath for Unna's Pastes.—The apparatus illustrated in the accompanying drawing is made by Messrs. C. J. Hewlett and Sons, 35, Charlotte Street, London, E.C., for melting gelatine pastes. It consists of the usual spirit lamp and water bath, which are neatly and strongly made. A porcelain dish is supplied which fits on to the rim of the



bath. The gelatine pastes are supplied in the form of flat discs corresponding to the size of the dish. The apparatus is a useful one for the purpose in view, but the dish might have been made deeper so as to take more than one disc when large areas of skin have to be dealt with. To make the thing complete, a good brush ought to be added by the manufacturers. The bath can be used for other purposes on an emergency.

A University for Milan.—An interesting action against the city of Milan for neglecting to found a university under the terms of the will of a pious founder has recently been decided. Signor Siro Valerio, who died in 1893, left all his fortune, with the exception of a few legacies, to the city of Milan for the purpose of serving for the foundation or transference to Milan of a university for the study of science, or at least some departments of science. Among the objects of his bequest the testator placed first the creation of a Faculty of Medicine and Surgery for the utilization of the hospitals of Milan for teaching and clinical and anatomical investigation. The city of Milan having failed to give effect to the wishes of Signor Valerio, an action was brought by his heirs. The Court decided that the city, by assigning the interest of the money left by Signor Valerio to the Post-graduate Institutes of Medical Study, has not carried out the provisions of the testator's will. The Court saw no reason, however, to declare that the city has forfeited the bequest, or to fix a limit of time within which the will should be executed on pain of forfeiture.

Malaria in Russia.—The Pirogoff Society of Russian Medical Practitioners has equipped two expeditions for the study of malaria in Russia. One of these is to work in the Woronesh Government, while the other will proceed to the Caucasus. The Woronesh Expedition is under the direction of Dr. Nicolai Berestuew, *Privat-docent* in the University of Moscow, and a well-known bacteriologist.

NOVA ET VETERA.

THE EYE AS A PATHOLOGICAL STORM CENTRE.

DR. GEORGE M. GOULD, of Philadelphia, whose name is known to the whole medical world as a lexicographer, and who is also one of the leading ophthalmologists of the United States, has recently produced a most interesting and suggestive book,[1] the object of which is to show how large a part in the causation of several diseases of everyday occurrence, which have hitherto been unsolved riddles to pathologists and the mere despair of physicians, is played by the eye. We will leave Dr. Gould to expound his thesis in his own words which it may be mentioned, he prints in italics (p. 153):

> Even up to the last years the diseases called biliousness, headache, dyspepsia, acute lithaemia, and by many other terms were entirely misunderstood, and treatment was in the highest degree unsatisfactory. But there was brought into practical use during the last quarter of the nineteenth century a discovery of as great medical importance as any made during the century, and so far as the relief of actual suffering is concerned, of far greater significance than any. Astigmatism, its influence upon the general health and character, and the methods of correcting it, is the discovery of which we speak, and with the discovery the last stronghold of the ancient and mediaeval superstition of the humoral pathology was taken. Whenever the symptoms of functional, cerebral, mental and digestional disease, such as headache, dyspepsia, "biliousness," sick headache, migraine, neurasthenia, anaemia, vertigo, insomnia anorexia, constipation, eructation of gas, languor, ill-temper, melancholia, etc., are temporary or acute and dependent upon well-known excess or abnormalism in eating and drinking, the patient is more than stupid if he does not tell you of the fact. When these symptoms are dependent upon organic disease, you are equally inexcusable if you do not soon discover it. The vast majority of such cases, say at least 90 per cent, are not caused by dietary or organic disease, and of these over 90 per cent. are reflex ocular neurosis—that is, due to "eyestrain," a term denoting morbid function, not over-use of normal function. Most eyestrain is due to astigmatism, but astigmatism and all its dependent ocular and general results is not to be corrected by the oculist whose motive is fame, success, or money. It is not corrected by machinery or without a mydriatic. The work of the optician also conditions success, and recorrection is necessary, say every year.

Dr. Gould traces the history of the discovery and growth of knowledge relative to astigmatism from Thomas Young, through Airy, Donders, Helmholtz, and others. These investigators, however, dealt with the subject purely from its optical and physiological side, and this is declared by our author to be "to-day the certain and sole cause that many millions of people are needlessly enduring lives of intense suffering and wretchedness." To Dr. Weir Mitchell is assigned the credit of having first taught the pathological significance of astigmatism and eyestrain, "and that the prescription of cylindric lenses is of vast importance in the cure and prevention of systemic diseases." For this, according to Dr. Gould, he "must be recognized as one of the greatest medical discoverers and benefactors of the race." He adds that since Dr. Weir Mitchell called attention to the fact that eyestrain is often the unsuspected cause of headache and worse disorders, "many an American oculist has personally seen thousands of such cases in which, as if by a miracle, lives have been changed from abject misery to happiness." Further, "as he looks over the world, and especially the European world, he knows that there are millions suffering in the same way who could be immediately cured were it not for the false conception of astigmatism and other forms of ametropia entertained by medical men and ophthalmologists."

The scope of Weir Mitchell's discovery has been extended—mainly by Philadelphia specialists—in various directions indicated by Dr. Gould. Among these are the application of the method of estimating and correcting astigmatism to the hyperopic, compound hyperopic, mixed, irregular, and unsymmetrical varieties; the practical correction of anisometropia; the invention of bifocal spectacles; the perfecting and making practical of the art of retinoscopy; the recognition of the pernicious influence of eyestrain upon the digestive and assimilative system in the production of functional, gastric, and intestinal diseases, chorea, hysteria, epilepsy, etc. In this work Dr. Gould himself has taken a leading part. He may, indeed, be called the Prophet of the New Ophthalmology, as Philadelphia is its Mecca.

In addition to the many physical ills which he attributes to eyestrain, he lays stress on its evil psychological influence. Children suffering from ametropia, he says, have their intellects and dispositions warped, injured, or wrecked: "The subtle, malign influence of eyestrain upon character is of enormous importance." Further, it is "one of the great causes of weakening vital resistance, so that other diseases secure easier foothold." Lastly, "it creates many of the defective and criminal classes." This sweeping indictment is all the more terrible, as we gather that it is in Philadelphia alone that salvation is to be found. In that centre of ophthalmological light there are to-day, we are told, a hundred or more conscientious and skilled oculists, who are, "before and above all, physicians, convinced of the clinical value of refraction when estimated by subjective tests under cycloplegia, in curing numerous types of headaches, neuralgia, vertigo, functional diseases of digestion, assimilation, and of the nervous system." Naturally these apostles of the Philadelphia gospel "know that such diagnoses and such cures cannot be made by the methods in vogue in Europe." We are indeed somewhat surprised to learn that they can be made any where but in the City of Brotherly Love, but it appears that the art is learnt directly or indirectly from "the so-called Philadelphia school." Hundreds of disciples of the Prophet "are finding a noble life work throughout the United States, and are giving a million patients the indubitable proof of personal experience that eyestrain is the cause of terrible and varied diseases, the cure of which, by spectacles, is one of the greatest medical discoveries of the nineteenth century."

Dr. Gould illustrates his thesis by "biographic clinics" of five men of genius—Carlyle, Darwin, De Quincey, Browning, and Huxley—who all their lives suffered more or less from ill-health, which puzzled themselves and their physicians. De Quincey, as all the world knows, was the victim of neuralgia, and twitchings in the region of the stomach for the relief of which he took to opium, reaching at one time a daily dose of 8,000 drops of laudanum. He conquered the habit for a time, but under the compelling of "derangement of the liver" fell again under its sway. He finally almost overcame the craving, and, after four relapses, enjoyed an old age of quiet and repose. He died in his 75th year, "his death being ascribed rather to exhaustion of the system than to specific disease." The author of the *Confessions of an English Opium Eater* himself believed that his troubles were due to opium, but Dr. Gould traces them to eyestrain. His daughter testifies that "to the last he was able to read without the help of spectacles, one eye doing all the work, the other one being invariably closed while either reading or writing." His eyes began to trouble him when he was about 65; he had pain and conjunctival trouble which made reading troublesome and sometimes impossible. Dr. Gould reproduces a most interesting portrait by James Archer which shows that De Quincey had "what the American oculist calls 'exophoria' and the European names 'insufficiency of the interni.'" There was in all probability no squint, but only divergence of the eyes at rest. This explains the statement that in his later years De Quincey used but one eye when reading and writing, "the other being invariably closed." "If," says Dr. Gould, "this unused eye had been always or permanently divergent it would not have been closed, because it would have been blind, amblyopic, or its visual activity psychically ignored.....so that there would have been no need of shutting it out by the closed lid." Dr. Gould holds that at any time of his life a proper pair of spectacles would have relieved De Quincey of his sufferings, would have enabled him to give up opium eating, and would have allowed him to pursue a far more wonderful literary career."

Dr. Gould's clinical study of Carlyle is of especial interest at the present moment. His lifelong disease was believed to be indigestion. Froude says that at the age of 23 "he was attacked with dyspepsia, which never wholly left him, and in these early years soon assumed its most torturing form—'like a rat gnawing at the pit of the stomach.'" He was also a martyr to insomnia, biliousness, headache, hypochondriasis, nervousness, "physical misery," impatience, irritability, melancholy, weariness of life, and despondency. Before he was 30 he said he must have swallowed hogsheads of castor oil, in addition to a vast amount of mercury. He tried all manner of "cures," including hydropathy, but he found that "water taken as medicine, was the most destructive drug he had ever tried." All his work was done under a crushing load of physical suffering; he could find relief only when he laid aside his pen and verified Sydenham's aphorism that the outside of a horse is the best thing for the inside of a man. In short, when he worked he was ill, but when he was no longer

[1] *Biographic Clinics: The Origin of the Ill-health of De Quincey, Carlyle, Darwin, Huxley and Browning.* By George M. Gould, M.D., Editor of *American Medicine*, author of *An Illustrated Dictionary of Medicine, Biology, etc., Borderland Studies, The Meaning and Method of Life*, etc. London: Rebman, Limited. 1903. (Crown 8vo, pp. 223. 5s.)

troubled with the agonies of literary parturition and the vagaries of the printer's devil he was comparatively well.

Dr. Gould is very angry with Froude—the "unendurable" he calls him, and more cryptically, "this caricature Greek chorus"—for suggesting that Carlyle saw his sufferings "through the lens of his imagination." Yet Froude—whose own deficiencies might have been charitably attributed to eyestrain—was not a fool, and he knew Carlyle. Dr. Gould takes all Carlyle's complaints, which when not humouristically exaggerated are often distinctly hysterical, quite seriously, and speaks, with the enchantment that distance lends to the view, of his "beautiful character." With curious inconsistency, just after abusing Froude for explaining Carlyle's irritability and melancholia as due to "his nature," Dr. Gould admits that the Seer was at times "gloomy, irritable, morose, harsh, etc.," but pleads in excuse that "it was his essential nature to be so!" (p. 63).

Not the least of Froude's misdeeds appears to be that he does not supply sufficient data to prove the theory that all Carlyle's sufferings were due to eyestrain. "As regards the actual ocular conditions, the refraction, etc., we have in Carlyle's case the indefiniteness we should expect." But Dr. Gould does not let this trifling obstacle stand in his way; leaving the faint track of ascertained fact he travels confidently on the high *a priori* way. The following is his reading of the riddle of Carlyle's ill-health:

> The first complaint of "dimmed sight" is at 40. At 42 "reading proof wasted and fretted him to a thread, and made his tongue as dry as charcoal." At 56 the painter of his portrait could not help carrying to the canvas the pained, exhausted look of eyestrain to be seen in all the later portraits of him, and which tells the oculist with the first glance at many patients the epitome of years of morbid ocular labour. Carlyle saw the picture was that of "an idiot that had taken Glauber's salts and lost his eyesight," and he was disgusted in a Carlylean way. At 57 he spoke of "half blind eyes." At 58 the note about "specs." is so vague we cannot draw any conclusions from it. It only shows the old, old popular folly of picking up mother's specs. or grandmother's, when irreparable injury has been done, and life nearly lived out and suffered away. "Eyesight gone a little" at 58 tells probably of the amblyopia that finally follows long lack of correction of ametropia; and "eyes very dim even with abundant light" at 59 emphasizes the fact, and also almost demonstrates the existence of astigmatism, which failed accommodation revealed, and which no common optician's (spherical) lenses could help. That the ametropia was not due to cataract is certain because he retained useful vision for twenty-six years afterwards. Headaches with proof reading at 62 show the return of the reflex neurosis to the head instead of as formerly, almost solely to the digestive organs.

While admitting that "the diagnostician who from the hundreds of references made to his symptoms by Carlyle would seek to gather any definiteness of pathologic finding will fail," Dr. Gould none the less holds that his troubles are "unexplainable except upon the theory that eyestrain was the cause of his trouble." Well, it may have been, and Carlyle's physicians may deserve all the contempt expressed by him and echoed by Dr. Gould. But our own verdict on the case is "not proven."

Dr. Gould gives an equally minute analysis of the symptoms in the cases of Darwin, Huxley, and Browning. With regard to Darwin he says:

"The loss of accommodation ended the lifelong struggle of the ciliary muscle to overcome the compound hypercpic astigmatism of his eyes, the existence of which will alone explain the mystery of Darwin's ill-health. His symptoms—vomiting and other functional digestional disorders, insomnia, vertigo, headache, apathy, and neurasthenia—are precisely those which the best American oculists find are the most common symptoms of this refractive anomaly of the eyes."

Astigmatism is also pronounced to be the true cause of the ill-health of Huxley and Browning.

Enough has, we think, been said to give an idea of the contents of this fascinating book. For fascinating it is, as much, perhaps, from the personality of the author, revealed in every sentence, as from the nature of its contents. But it must be read and studied in order to gain an adequate notion of the industry in the collection of "documents," the ingenuity in explanation, the subtlety and frequent cogency in argument, and the vigour of style which it displays. Whether the theory propounded therein be sound or not, the work is a valuable contribution to medical literature. In these days of jejune treatises and compilations which are as ashes in the mouth, a book like Dr. Gould's *Biographic Clinics*, which has the freshness, the brilliancy, and the rushing force of a mountain stream, is as welcome as summer when it does come in this dreary climate.

CANCER IN IRELAND.

The special report on cancer in Ireland, issued recently from the office of the Registrar-General for that country, is in most respects an interesting example of how a statistical report should not be presented; and in view of this fact, and in view of the publicity which its contents have received, it is our duty to devote some space to its criticism.

The first part of the report deals with Ireland as a whole, and tables and a diagram indicate the rise in the recorded death-rate due to cancer from 2.7 per 10,000 living in 1864 to 6.5 in 1901. In England the increase in the corresponding period was from 3.9 in 1864 to 8.3 in 1900, and in Scotland from 4.3 to 8.0. A table is given showing the cancer death-rates in various European countries and cities, and in some of the United States of America; but as no clue is given as to the relative completeness of the registration of deaths in these different countries, we are, so far as this report is concerned, in the dark as to the value of the comparison. The chief value of this table appears to lie in the fact that in some cities, as in Copenhagen, there may be a death-rate from cancer of 15 per 10,000, while in other cities, as in Brussels, it may be as low as 3.8 per 10,000. Whether the view be taken that this difference is real, or in part real and in part apparent, there are obviously possibilities of increase in the registered mortality from cancer in Great Britain and Ireland much beyond the present figures.

Table III (page 8) gives the most satisfactory information contained in the report. It comprises a statement of the deaths from cancer registered in Ireland during the year 1901, classified by age, sex, and parts affected; also the conjugal condition of the deceased. This is the only table in which any mention is made of age and sex as affecting the problem of amount of cancer. Throughout the rest of the report it is assumed—by omission of the chief data for the necessary corrections—that cancer is equally prevalent in the two sexes and at all ages; and the report is, in consequence of this fundamental defect, deprived of the greater part of its value.

Almost the only facts that can be culled as to the death-rate from cancer of the different organs are summarized from p. 10 of the report in the following table:

Death-rate per 10,000 living at each Age-period.

	55-65.		65-75.		75 and upwards.	
	Male.	Female.	Male.	Female.	Male.	Female.
Cancer of stomach	8.75	6.92	11.63	9.83	5.92	6.46
Cancer of liver and gall bladder	2.96	3.63	5.61	4.23	2.41	2.50
Cancer of rectum ...	1.89	—	2.18	—	2.41	—
Cancer of intestines ...	1.42	—	1.14	—	1.32	—
Cancer of breast... ...	—	3.90	—	5.28	—	3.21
Cancer of uterus... ...	—	3.74	—	3.28	—	—

In Table VI are given the deaths of males aged 15 and upwards, classified according to occupation and age. Attention is drawn to the fact that "by far the greatest number of deaths from cancer during the year 1901 occurred amongst farmers and labourers." We are then gravely informed that 49 deaths amongst pensioners, 21 among carpenters, and so on occurred. What value these figures possess apart from a consideration of the number of persons living in each of these groups, which numbers might easily have been obtained from the recently issued Irish census returns, it is impossible to conceive. They are furthermore deprived of any potential value that they might possess by the fact that the rough classification as to age-distribution in each group would not enable correct comparative mortality figures to be obtained.

We next come to the part of the report dealing with the distribution of cancer in Ireland according to counties. In the years 1897-1901 the death-rate from cancer varied from 2.63 per 10,000 living in Kerry to 10 47 in Armagh, the next highest to Armagh being the county and county borough of Dublin. The death-rates for each county are given per 10,000 of total population, no attempt being made to make corrections for variations of the population of each county as to age and sex. There is the less excuse for this omission in the fact that the recently-issued census returns give the necessary data by which the corrections might have been applied.

As the means of making this correction appears to be ignored, and as we have had recently on several occasions to draw attention to its importance, we venture to give an example derived from the exceptional experience of Armagh.

The census population of Armagh as given in the recent census report for each sex and at each age-period have been taken, and to these have been applied the death-rates of Ireland at the corresponding age-period given in the report now under discussion. By this means the number of deaths that would have occurred in the male and female population respectively of Armagh, had its cancer mortality been the same as that of the whole of Ireland, are calculated. Thus—

Males.

Ages.	Population of Armagh, 1901.	Cancer Death-rate per 10,000 at each Age-period in whole of Ireland.	Calculated Number of Deaths among Males from Cancer in Armagh.
Under 20	25,406	0.12	0.31
20-25	4,857	0.32	0.16
25-35	7,786	1.09	0.85
35-45	6,363	3.38	2.15
45-55	5,631	11.26	6.35
55-65	5,055	24.94	12.61
65-75	3,137	36.24	11.30
75 and upwards ...	1,448	38.16	5.53
	59,773	—	39.32

Females.

Under 20	25,320	0.11	0.28
20-25	6,278	0.40	0.25
25-35	9,711	1.49	1.44
35-45	7,605	7.39	5.62
45-55	6,701	16.94	11.35
55-65	5,533	25.33	14.02
65-75	3,064	36.77	11.27
75 and upwards ...	1,407	34.19	4.81
	65,619	—	49.04

The total number of deaths from cancer in Armagh, on the supposition that its cancer death-rate at each age and in each sex was identical with that of Ireland, would have been:

$$39.32+49.04=88.36$$

The standard death-rate of Armagh is therefore

$$\frac{88.36\times 1000}{125392}=7.05$$

Now the death-rate from cancer in Ireland during 1901 was 6.5. This ought to have been the same as the calculated death-rate for Armagh (7.05) had the age and sex constitution of the two populations been identical. Clearly, then, the registered death-rate from cancer in Armagh must be lowered in the proportion of 6.5 to 7.05 in order to make it comparable with that of the whole of Ireland. Thus:

$$\frac{10.47\times 6.5}{7.05}=9.63$$

When the death-rate of the county and county borough of Dublin is treated in the same way, the standard death-rate is found to be 5.32. Hence the registered death-rate from cancer in Dublin (8.48) must be raised in the proportion of 6.5 to 5.32, in order to make it comparable with that of the whole of Ireland. Thus:

$$\frac{8.48\times 6.5}{5.32}=10.36$$

Taking these two instances, in the case of Armagh a difference in the registered death-rate of 8 per cent. in one direction, and in the case of Dublin of 26 per cent. in the opposite direction is made when due corrections for age and sex constitution of population have been calculated.

We have not made the necessary calculations for other counties, but the instances already adduced sufficiently indicate that the differences in death-rates from cancer in the Irish counties are in part fictitious, and can to this extent be removed by simple arithmetical calculations. Such corrections do not cover the entire ground, and it is particularly unfortunate that the Registrar-General for Ireland, in his special report, does not give us any information as to the conditions under which registration of causes of death is carried out in each county. Much light would be thrown on the distribution of cancer mortality did we know for each county (1) the number of unregistered deaths, (2) the number of deaths returned as due to unrecognized or ill-defined causes, and (3) the number of medical practitioners in proportion to population and to extent of area. These points are entirely ignored, and we are left in doubt as to whether we ought to regard the relatively high cancer mortality of Armagh—interspersed in certain parts of Armagh with districts of very low cancer mortality—as really high or only apparently so, or in part both. As necropsies are less often obtained in Roman Catholic than in Protestant communities, and as the registration of deaths is nearly always more accurate in urban than in rural districts, information on these points is also desirable. Meanwhile, we cannot follow the surmises as to the causes of the prevalence of cancer in the districts of Armagh quoted from reports of the registrars of deaths, which range from damp earthen floors to heredity, from clay pipes to tea-drinking, from bogland to forests, etc. One registrar ascribes rectal cancer to the irritating effect of flour bread, which has taken the place of bread and porridge, made with wheaten meal and oatmeal!

A few remarks are called for respecting the last part of the report, which gives a summary of inquiries made by registrars into the individual cases of cancer occurring in their districts. Most of these registrars are medical men, some are not. Fifteen pages of the report are devoted to these notes—an almost entirely worthless contribution. The mere fact that previous cases had occurred in the same family or house is accepted as evidence of heredity or of house infection. The previous occurrence of tuberculosis in the same family is accepted as evidence of a relationship between the two diseases. There is no allowance for the fact that in regard to diseases so common as tuberculosis and cancer, the occurrence of multiple cases in the same family or in the same house is no more evidence of heredity or house infection or relationship between the two diseases than would be consecutive deaths from any other two distinct diseases. From this point of view the summary of facts which ends the report is very unsatisfactory. It suggest conclusions which are unjustified by the facts. The report would have been a useful contribution to the subject if it had been confined to a statement of facts, with the essential points as to age and sex distribution of cancer properly set out.

INCOME-TAX ASSESSMENT.

SINCE the appearance of an article on this subject in the BRITISH MEDICAL JOURNAL of April 11th a number of letters have been addressed to us in which correspondents have asked for further information. We have submitted these to "Barrister-at-Law," who writes as follows:

Perhaps I may take this opportunity of saying that by an oversight which has been pointed out by your correspondents, the Income Tax Repayment Agency, I omitted to mention in my previous article that when the practitioner resides in the house where he carries on his practice, he is entitled to deduct a proportion, not exceeding two thirds, of the rent when making out his return. Your correspondents have also been good enough to point out that the following deductions, which did not occur to me when compiling my previous list, may also be made:

1. Rates on such proportion of a private residence as is used for the purposes of the practice, and rates on premises exclusively used for professional purposes.
2. Cost of cleaning professional premises and such part of the private residence as is used for professional purposes.
3. Cost of stationery and receipt stamps.

The suggestions which I have made with regard to deductions, etc., were intended to act as a guide to the practitioner in estimating the amount which he thinks he ought to pay, and were not meant to be exhaustive, or to contain the whole of the existing law and practice. The main principle which the practitioner should bear in mind when making his return is, that expenses incurred solely in connexion with his practice are, and personal or household expenses are not, admissible deductions from profits for income-tax purposes. He should also note that while he is not bound to return anything but the actual result in the first instance, if challenged, he might be called upon to satisfy the officials as to the method by which he arrived at his figures. In these circumstances he would find it convenient to be able to produce his calculations.

The letter from the Income-Tax Repayment Agency, already referred to, states that:

The article is marred by serious faults attributable to its source—the writer frankly admits that he is indebted to an official at Somerset House

for many valuable suggestions. We must confess that the enemy's camp would be the very last place where we would seek for advice, except perhaps with the intention of not following it...

After touching on the matters referred to above the letter continues:

The following are statements made by the author of the article, which we venture to contradict as being erroneous:

(*a*) That repairs to premises are to be averaged instead of the full amount being entered in each year's account; as a matter of fact, the average acts automatically.

(*b*) That doubtful debts are to be deducted according to their estimated value. It is just the contrary; they should be estimated according to their estimated loss or deficit.

(*c*) That one-half is a fair proportion to charge to the practice if the doctor's wife occasionally uses his carriage. Seven-eighths would be nearer the mark.

(*d*) That the cost of carriages, horses, and harness are expenditure of capital; if so regarded, depreciation must be allowed as a deduction. Either "supply" or "depreciation" but not both.

(*e*) That only a partner claiming exemption can ask to be separately assessed. In the yellow form, No. 11, it is distinctly stated that a partner claiming abatement or accounting for separate concerns can ask to be separately assessed.

(*f*) That incomes earned abroad and not brought into the United Kingdom must be set forth on p. 4 of the yellow form. In the case of Colquhoun *v.* Brooks it was decided that such income was not assessable, and consequently it is not to be declared.

(*g*) With reference to the remark that the declaration of the senior partner in Great Britain is sufficient, in our experience we have never known a medical practice carried on with some of the partners residing out of the United Kingdom. If such a case occurred the partner resident in England would not have to make a return for the partners resident abroad, and would only have to declare profits accruing to him personally and coming to Great Britain.

Dealing with these criticisms in order:

(*a*) *Repairs.*—My original statement was quite correct, and follows the wording of the Act. Whether the "average acts automatically" or not depends entirely on the manner in which the practitioner keeps his accounts. If he annually debits repairs in his books as a business expense, it follows that only the average repairs are claimed, in making a return on the basis of the average profits of the three preceding years; if repairs are not annually debited in the practitioner's books care must be taken, in allowing for them afterwards, that only the average amount spent on repairs is claimed as a deduction.

The point is an absolute technicality.

(*b*) *Doubtful Debts.*—This objection to the phraseology used is a mere quibble. Obviously the deduction claimed for a doubtful debt would be the difference between its full amount and the amount it was in fact likely to produce—that is, the loss accruing in respect of it.

The debt would be taken at its estimated value and a deduction claimed for the difference between the nominal value and this estimated (depreciated) value.

(*c*) *Amount to be Claimed for a Carriage used for both Private and Professional Purposes.*—The correct proportion is entirely a question of fact, and would necessarily vary with each individual case.

(*d*) The original cost of motor car or carriage and pair (see original article) is essentially a capital charge. If a horse subsequently died another horse of the same value might be bought to replace it and charged as a permissible business expense, but this is quite another point. So with the motor car and carriage.

(*e*) A partner claiming abatement or partial exemption can ask to be separately assessed as well as one claiming total exemption. This is apparent from the statements contained in my article.

(*f*) There is a clerical error in my previous article which it will be well to correct. The paragraph at the foot of the second column on page 860 should have been inserted before and not after subhead (*d*) of the heading "What income is not to be entered"; and the phrase "heads (*a*) to (*d*)" which occurs twice in that paragraph should read "heads (*a*) to (*c*).

(*g*) The case of a practice being carried on in the United Kingdom with some of the partners residing abroad is no doubt rare—the provision of the Act applies more to commercial concerns—but the statement made in the article is quite correct, and would apply if such a case arose.

That "the partner resident in England would not have to make a return for the partners resident abroad....." is an altogether erroneous statement. If a trade or business is carried on in the United Kingdom, the whole of the profits made therefrom are assessable, even though a part of such profits is paid to a foreign resident.[1]

[1] See the dicta of Lord Watson in the case of Grainger *v.* Gough [1896], A. C., 325.

One correspondent ("Sana") asks:

Are deductions allowed for expenses contracted in taking out classes for a public health degree or diploma when one is compelled to keep an assistant to enable one to gain the necessary time in which to attend the classes? It may be taken for granted that the object is the betterment of one's practice.

As I stated in my previous article, the salary of any assistant, nurse, or secretary employed exclusively for the purposes of the practice may always be deducted. As to any other expenses to which the practitioner may be put, in order to obtain a D.P.H., such as lecture fees, etc., I have no hesitation in saying that they are not allowable, any more than the cost of the rest of the practitioner's education is allowable. Both are obviously for the "betterment of the present or future practice," but both are equally capital outlay from which a return is looked for in the future.

"Palinnous" writes:

I notice that "Barrister-at-Law" states that "income from any office or employment in the public service or under any public body" should not be entered upon the return. Does this include the "office and employment" of public vaccinator and district medical officer under guardians and Local Government Board? I have always been accustomed to enter it upon the return in the column intended for it. They charged me twice over under Schedule D and E. I wrote to headquarters at Somerset House, and regained over £9.

The salary of a medical officer and the fees of a public vaccinator are taxed under Schedule E, and should not be entered upon the yellow form. "Palinnous" will probably have a form for a return under Schedule E sent to him in due course.

Dr. Samuel Crawshaw writes:

I have read with interest the article under the above heading There is one point which needs a little clearing up—at least to my mind.

In the seventh paragraph it is written, "Taking the sum total of receipts which are entered in the books as having been paid as the starting-point, the following deductions are allowed:

2. *Bad Debts*, etc."

Now I take it this means the actual cash receipts from all sources. If so, it will be found in actual practice that bad debts cannot be deducted. I know, because I have tried it. If you take the gross bookings *plus* ready money receipts as the gross income then bad debts may be deducted. In other words you may deduct them from one side of your balance sheet after you have put them on the other. To the average medical man accounts are, I think, bewildering things, and not the least bewildering thing about them is the way the income side of a balance sheet is made up. I cannot get into the way of calling a thing income when it only appears in ink in my books. It may (or may not) have potentialities in that direction, but I am only certain of that fact when they have become actual, and I hear the jingle of it in my own pocket. Whether you may deduct bad debts depends on whether you have reckoned them in the potentialities. This is a matter that needs a little attention, and if I am wrong I shall be only too glad to learn.

With reference to the difficulty alluded to by Dr. Crawshaw, I admit that the words "as having been paid" (which occur in Paragraph 7) give rise to some confusion. He states quite correctly that after taking gross bookings *plus* ready-money receipts as the gross income, then bad debts may be deducted.

Of course, if a practitioner starts to make up his income-tax return from his cash receipts only instead of from his gross bookings *plus* ready-money receipts, he cannot again claim for bad debts; since if he starts from cash receipts, unless a debt is paid he will not include it on the credit side of his account. There will probably not be much difficulty in estimating whether a debt is bad or not. A doubtful debt may be deducted according to the estimated deficit arising from it.

Dr. C. E. Saunders writes:

There is an omission in a "Barrister's" communication, under the head of "Insurance Premiums," which it may be well to supply—namely, a limitation to British insurance offices of income-tax rebate. Premiums paid to American (and presumably other foreign insurance offices, if there are any doing business in England) are not exempt, so that the slightly lower rates charged by American offices are more than counterbalanced by their non-participation in the exemption to which premiums paid to British offices is allowed. The moral of this is that it is better to stick to the old-established British insurance offices. It would have been useful if a "Barrister," had recited the sliding scale of rebates on income, and he might have done well to point out the vexatious conditions under which these are made, and possibly exercise his legal influence to get some of them relaxed. The trouble involved to establish the right to rebates on incomes under certain amounts acts as deterrents to many—perhaps it is intended that it should—who would be glad of the means of reduction such rebates at first sight offer. Out of regard to your space I will not further particularize, but hope that a "Barrister" will somewhat amplify his remarks, which are, on the whole, useful, if not quite exhaustive.

The importance of Dr. Saunders's communication will be

apparent to all medical practitioners, and ought to act as an inducement to them to insure in British companies. He complains of the trouble in getting an "abatement" allowed. If he takes care to fill up his form properly he should not have the slightest difficulty, and any official engaged in income-tax work would explain a doubtful point.

There is no need to pay a fee to a repayment agent to get an assessment adjusted or repayment made; the proper officials give the public all reasonable assistance without fee, and a practitioner who keeps his books properly need not get into difficulties over his income-tax.

It has been suggested that a few words should be said anent the sliding scale of rebates on income.

Exemption may be claimed when the income from all sources does not exceed £160 per annum.

Abatement of duty on £160 may be claimed when the income exceeds £160 but does not exceed £400.

Abatement of duty on £150 may be claimed when the income exceeds £400 but does not exceed £500.

Abatement of duty on £120 may be claimed when the income exceeds £500 but does not exceed £600.

Abatement of duty on £70 may be claimed when the income exceeds £600 but does not exceed £700.

For the purpose of estimating "income" in order to obtain an abatement, the claimant must set forth every source from whence the income is derived with the amount derived from each source.

Where income is derived from a profession, office, employment, or vocation, he must state the nature and particulars thereof, and where carried on.

It should be carefully noticed that in returning income for the purpose of obtaining abatement, the claimant is to be guided by rules different from those which hold good when making his return on p. 3 of the yellow form. The object of the Legislature being to relieve persons of small means, the income-tax authorities require to have particulars of the claimant's income from every source, whether taxable under Schedule D or not. Thus a medical officer of health who required an abatement would mention his income as medical officer, although he would not take it into account for the purpose of making his income-tax return.

THE LONDON HOSPITAL.

OPENING OF THE NEW WING BY THE KING AND QUEEN.

THE King and Queen visited the London Hospital in semi-State on Thursday, June 11th, for the purpose of formally opening the new out-patients' department of the hospital. This new wing was built to replace the old west wing, which was cramped, badly-ventilated, and dark. In order to provide a site, over forty houses on the hospital estate were demolished. The new building is entered through a vestibule (in which are the ticket and registration offices) leading to the large hall used as a waiting-room by the patients, sitting room being provided for 1,000 persons. In the centre wall of the hall there is a marble tablet, on which is engraved:

This out-patients' department was opened by His Majesty King Edward VII and Queen Alexandra, June 11th, 1903. The building cost £80,000, of which £25,000 was given by a friend of the hospital.

In this hall some 1,200 supporters of the hospital assembled to witness the interesting ceremony, and so bright was the scene—the light gowns of the ladies, rivalled by the brilliant coloured academic robes of the medical men, and later by the scarlet ones of the members of the Corporation, with the flower-decked platform and galleries, in one of which a delicate note of colour was introduced by the sisters and nurses in their light blue gowns and snowy caps—that it was hard to realize the brilliant assembly dispersed, and suffering humanity occupying their places.

By way of beguiling the time, Mr. SYDNEY HOLLAND made a humorous but none the less earnest little speech to the assembly. He first explained the ceremonial to be observed when the Royal party arrived:

"When the King and Queen appear," he said, "you must cheer and wave your handkerchiefs to show them how welcome they are, and after you sing 'God save the King,' a gentleman whom I have posted in the gallery, and who has a voice like a fog-horn, will propose three cheers for His Majesty, in which you will join heartily. The preparations for this ceremony have been costly, and I hope you will not allow the hospital to suffer in consequence. The 1,200 people who are in this hall will find a card on the seat—on which they are probably sitting—and if the cards are filled in for £10 each the hospital will receive £12,000. I will now ask the band to play, 'He won't be happy till he gets it.' I see the bandmaster is shaking his head. Well, I will ask him to play, 'Hard times come again no more.'" This the band did amid cheers.

As Mr. Holland finished his address prayerfully, plates were handed round for the collection of money and cards.

At 4 punctually the National Anthem announced the arrival of the Royal party. The King and Queen, having been received at the entrance by the Duke of Cambridge as President of the hospital; Mr. Sydney Holland, the Chairman; Mr. Buxton, the Treasurer; Dr. Stephen Mackenzie, Senior Physician; Mr. Mansell Moullin, Senior Surgeon; Sir Frederick Treves, Consulting Surgeon; the Bishops of London and Stepney, and Mr. Morris, Secretary, ascended the platform. Faithful to Mr. Sydney Holland's instructions the King was received with cheers and wavings of handkerchiefs and the National Anthem, and the hymn "O God, our Help," having been sung, the Duke of Cambridge welcomed Their Majesties to the hospital, and Mr. SYDNEY HOLLAND read an address explaining that the new building was the result of the rapidly increasing number of patients seeking the help of the hospital, and the inability of the staff to work in impossible surroundings such as those afforded by the old wing. The object was to remove all the out-patient work from the hospital itself into this new department. This had now been in use for three months, and considerably over a thousand patients on several occasions had been treated in one afternoon in addition to those treated in the special departments. A friend had given £25,000 towards the building. He had attached to his gift two conditions: (1) That all letters of admission should be abolished; (2) that those patients who could afford to do so should be expected to pay something towards the cost of the medicines and bandages supplied to them. The conditions had been accepted, with the result that the first ended an intolerable hardship, the second a manifest abuse. Mr. Sydney Holland expressed his gratitude to the Queen for introducing the Finsen light cure into England through the London Hospital, and to the King, Prince of Wales, members of the Stock Exchange, brewers in the neighbourhood, and the Lord Mayor, for their generous support. Constant encouragement had been received from their President, the Duke of Cambridge, and her late Majesty Queen Victoria herself laid the foundation stone of the wing given by the Grocers' Company, and now Their Majesties were giving still further encouragement by opening this new building.

Dr. STEPHEN MACKENZIE, having been presented by the HOME SECRETARY, said:

May it please your Majesty,—Sir Frederick Treves, representing the consulting staff, Mr. Mansell Moullin, as senior surgeon, and I, as senior physician, speaking on behalf of the medical and surgical staff of this hospital, venture most respectfully to endorse all that has been said by our Chairman, and to assure your Majesty that, having a building like this, graciously opened by your Majesty and Her Majesty the Queen to-day, will be of great advantage to the patients and to those of us who have to work here. The presence of your Majesty and of our gracious Queen will be an encouragement to us to continue to devote our services to the cure of disease and the relief of suffering of those who seek advice in this out-patient department.

HIS MAJESTY THE KING made the following reply:

It gives myself and Queen Alexandra great pleasure to be here to-day and to open this building. It is a great satisfaction to me to see such a great advance in hospital construction and policy, and I am glad to think that the out-patients in this hospital will be treated with greater care and attention than were possible in your old building. I am unable to thank the generous donor who has given £25,000 to this building; but it must be a pleasure to him to see his gift so well bestowed; and I am specially glad to learn that the benefits of the London Hospital are open to all who are poor and ailing without having previously to wait to obtain a letter from some subscriber. [Cheers.] I note also with satisfaction the help the hospital has received from the great employers in the neighbourhood; and, looking at the report, I notice as a matter of satisfaction that your treasurer, Mr. John Henry Buxton, succeeds his father as treasurer, and has also a son on the committee. I note also the very generous help the hospital has received, especially from the Lord Mayor and several great societies. You have rightly alluded to the interesting fact that the Duke of Cambridge has presided over this hospital for 50 years. [Loud cheers.] We are all delighted to see him here to-day, and trust he may long be spared to continue his duties as president. I well remember the visit of Queen Victoria, my beloved mother, and I know of the great interest she took in this hospital. Speaking for Queen Alexandra, I can say that she is very much pleased with the way in which this hospital has carried out the trust she imposed on it; and it is a very great satisfaction to me that she has been able to introduce into this country from her own country the invention of her distinguished countrymen Dr. Finsen for the treatment of lupus, which has already produced such satisfactory results. We shall have great satisfaction in inspecting the building; and before declaring it open I wish to express my deep feeling of gratitude to this hospital, which, at the time of my severe illness, provided me with such a distinguished surgeon as Sir Frederick Treves—[loud cheers]—with an anaesthetist in Dr. Hewitt, and two such nurses—Nurse Haines and Nurse Tarr—[prolonged cheers]—whose unceasing attention I cannot too highly praise. I declare this building open, and may God's blessing rest on all those who come to it and on all those who work in it.

Three cheers were given for the King and for the Queen, after which Their Majesties proceeded to make a detailed inspection of the various departments.

In the section devoted to the Roentgen-rays treatment, the Queen presented badges to those nurses whom she herself had sent out to South Africa at the beginning of the war. Twenty-six went out, and before they started in December, 1900, Queen Alexandra, then Princess of Wales, herself tied round their arms brassards of white linen, with her own coronet and cypher and the Geneva Cross embroidered in scarlet upon them. These brassards, much faded, were worn by those nurses who awaited the King and Queen, these being Miss Beecher, R.R.C., Miss McCarthy, R.R.C., Miss Greenham, R.R.C., Miss A. Thomas, Miss V. P. Squires, Miss E. Fry, Miss E. Baldry, Miss L. Humphreys, Miss G. A. Thorpe, Miss N. E. Tate, Miss H. Parminter, and Miss N. H. Holloway.

Mr. SYDNEY HOLLAND presented the nurses to the Queen, and said he had felt sure when she had selected them that they would do their duty faithfully and unselfishly.

In reply, the QUEEN said:

I am glad to see my nurses back. I was confident when I sent them out that they would do honour to the training they have received from Miss Lückes at this hospital, and I now wish to give each of them a little memento of their service abroad for me.

The badge, designed by the Queen herself while she was Princess of Wales, consists of a white enamel cross on gold, bearing the initial "A." and surmounted by a red enamel crown. At the back is engraved "Alexandra, Princess of Wales, 1900. Faith, Hope, Charity." It is suspended from a red ribbon, and each nurse received it from Her Majesty's hands.

Their Majesties visited the electro-therapeutic department where Dr. Morton exhibited a small specimen of radium, the possibilities of which interested the King intensely.

The Finsen light department was next reached, and here a large number of patients were under treatment. Two large lamps (one of which was given by the Queen) occupy the centre of the room, round each of which lie four patients, while lights are disposed along the side walls of the ward at which others are treated.

In asking Her Majesty the Queen graciously to declare the rooms open Mr. SYDNEY HOLLAND stated that since the Queen first gave a Finsen lamp to the hospital no fewer than 450 patients had been treated. A hundred are treated each day. Addressing Her Majesty Mr. Holland said:

Unknown to me the patients have collected among themselves, entirely of their own accord, 60 guineas. They have done this to mark their earnest gratitude to your Majesty for giving them the chance of once again enjoying life, which, with the ravages of lupus upon them, was impossible.

The QUEEN replied:

I am glad indeed that my countryman Dr. Finsen's discovery is so successful, and I am pleased to know that the trust I put upon this hospital has been so well carried out. I thank the patients for their touching mark of gratitude, and hope they will all soon be restored to health. I declare these rooms open.

The King and Queen left the hospital amid the ringing cheers of those who, in spite of the drenching rain, had assembled outside and drove to the Mansion House, where they took tea with the Lord Mayor and Lady Mayoress.

Before dispersing the general company was shown round the different departments by members of the staff, whose courtesy to their guests added greatly to the success of the function. As the visitors noted the perfection of the surgical and medical equipments one may have been reminded of the story of the man who went over a well-known orphanage. The children taken in belonged to the slums, but were protégés of philanthropic ladies, and nothing was neglected for their education. He was conducted through rooms where French, German, music, and singing classes were going on, and through a large, beautifully-fitted gymnasium with all the most modern appliances. On reaching the door he thanked the matron for showing him over, saying "I have £500 to give to some institution for the poor, but I am happy to see you don't require it," and he bowed himself out.

EXPERIMENTS ON LIVING ANIMALS.

THE return of Professor G. D. Thane, Inspector under the Act, showing the number of experiments on living animals during the year 1902 under licences granted under the Act 39 and 40 Vict. c. 77 has just been issued.[1]

ENGLAND AND SCOTLAND.

The total number of experiments performed in England and Scotland during 1902 was 14,906, being 3,261 more than in 1901. Of these experiments 2,130 were performed under an anaesthetic, while in 12,776 (consisting mainly of inoculations and hypodermic injections) no anaesthetic was used. Of the experiments performed under an anaesthetic the larger part (1,185) were unattended with pain, because the animal was kept under an anaesthetic during the whole of the experiment. In the remainder the initial operations were performed under anaesthetics, from the influence of which the animals were allowed to recover. The operations were performed aseptically, and the healing of wounds as a rule took place without pain. If the antiseptic precautions failed and suppuration occurred the animal was required to be killed. In no case has a cutting operation more severe than a superficial venesection been allowed to be performed without anaesthetics.

Of the 12,776 experiments performed without anaesthetics most were inoculations; a few were feeding experiments or the administration of various substances by the mouth or the abstraction of a minute quantity of blood for examination. In no instance has a certificate dispensing with the use of anaesthetics been allowed for an experiment involving a serious operation. It is pointed out that in a very large number of the experiments performed without anaesthetics the animals suffer no inconvenience whatever from the inoculations; these experiments, therefore, are absolutely painless. In some in which pathogenic substances are infected, poisoning or disease may be set up which, though not accompanied by acute suffering, is held to be a proceeding "calculated to give pain," and therefore experiments of this kind come within the scope of the Act which provides that they must be performed under a special certificate.

In connexion with inoculations, etc., attention is directed to the large numbers of such procedures carried out for the preparation of remedies, and on behalf of various public authorities. Five licensees performed 3,857 inoculation experiments for the testing of antitoxins. Seventeen licensees report together 3,997 inoculation experiments, nearly the whole of which were performed for official bodies, including the Local Goverment Board, the House of Commons Ventilation Committee, the Royal Commission on Tuberculosis, the Board of Agriculture, several county councils and many municipal corporations. The experiments comprised a very large number for the purpose of testing milk for tuberculosis, others to ascertain whether hair was infected with anthrax, for the examination of sewage and atmospheric air, and the like. The number of injections made during the year 1902 for the diagnosis of rabies in dogs was 153.

During the year the usual inspections were made by Sir James Russell and Professor G. D. Thane. They found the animals everywhere suitably lodged and well cared for, and the licensees desirous of acting in every way in accordance with the letter and spirit of the Act. A few instances of irregularity are reported.

The total number of licensees during 1902 was 319, of whom 112 performed no experiments.

Tables are appended giving the names, licences, and certificates of all experimenters, with the names of the scientific authorities recommending licences and granting certificates, and the names of the registered places in which the experiments were performed; lists of the holders of licences and certificates who performed no experiments during 1902; and a full statement of the number and nature of the experiments performed, with the names of the licensees who performed them.

IRELAND.

The report of Sir William Thornley Stoker, Inspector for Ireland, states that the experiments performed were 65; 22 being under licence alone, and 43 under certificates. The animals experimented on were: Guinea-pigs, 15; rabbits, 47; dogs, 3. The experiments performed were all of the nature of inoculations or injections with the exception of six of a physiological character. All the inoculations and injections were, in the opinion of the inspector, directed to useful ends. Some were for the diagnosis of canine rabies, some for the study of pneumonia and of continued fever, while others were directed to the elucidation of the question of the conveyance of the germ of typhoid fever from shellfish to the human subject.

[1] London: Printed for His Majesty's Stationery Office, by Eyre and Spottiswoode, Printers to the King's Most Excellent Majesty, and to be purchased, either directly or through any bookseller, from Eyre and Spottiswoode, East Harding Street, Fleet Street, E.C., and 32, Abingdon Street, Westminster, S.W.; or Oliver and Boyd, Edinburgh; or E. Ponsonby, 116, Grafton Street, Dublin.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1903.

SUBSCRIPTIONS to the British Medical Association fall due on January 1st each year. All members who have not yet paid should forward, without delay, postal order or cheque for 25s., to the General Secretary, 429, Strand, London, W.C., or, in the case of Colonial members, to their Branch Treasurer.

British Medical Journal.

SATURDAY, JUNE 20TH, 1903.

IN ACCOUNT WITH THE NATION.

IN days gone by when we were monks, and when the leading physicians were bishops, the poor, who received from monasteries whatever benefits lightened their lives, looked to them for relief in suffering and disease. Either by continuous inheritance from the monks as at St. Bartholomew's, or by imitation, the system of gratuitous treatment of the poor has lasted ever since. Often as it has been decried, often as it has been misused, it yet remains the greatest effort made by man for the relief of misery, the greatest work of pity that the world has ever seen. What is done on a large scale by the hospitals is done in little by every one of our profession. There is not one of us who does not, constantly, so constantly that he thinks it natural, give his time and his skill to the poor without hope of reward. There is not one from whom men do not expect kindness as they look for rain from the clouds, or in happier countries heat from the sun. Nor can it be otherwise. Always there will be a vast number of wretches who when ill befalls them can pay nothing for its cure. Always there will be others who can pay but a trifle in comparison with what they need and receive. Always, too—let us thank God for it—will pity be natural to the heart of man, and gentleness to his hands. Those who see suffering as we see it cannot but act as we act.

For those who obtain charity when they ought not, or who do not pay their doctors when they ought, there need be little pity. We defraud not ourselves only, but the deserving poor, when we yield to such. For the disgraceful sweating of the Medical Aid Associations we have ourselves alone to blame. But there will always remain a large proportion of work which from sheer humanity will not be refused, and from sheer inability cannot be paid. Lord Rosebery speaks of an overstocked profession. It is overstocked for its returns; it is not at all overstocked for the work that has to be done.

But what does this mean to us? To most of us, alike in the ordinary and in what are called the highest ranks of the profession, it means a life of ceaseless toil, of small means, of great anxiety. How many of us can feel that if we die to-morrow there is enough for the comfort of those we leave behind? How many, falling early from one of the many risks we daily run, leave a family almost wholly without support? And what does it mean to the nation? To it we continually supply, either for nothing, or for an inadequate fee, the great bulk of the medical work which its poor of necessity requires. It prides itself on its large hospital funds, sees their beautiful arrangements, the wonderful operations that take place, and it thinks all this is the work of its own hands, and to be laid to its own account. But it starves its Poor-law doctors, and it pays its hospital doctors nothing.

This might be pardonable were it acknowledged and deplored. It is true that proper payment for medical attendance to the poor would be a huge addition to the heavy burden of the rates. It is true that some return is obtained by us in the experience which we thus acquire. But an immense residue of debt remains. This the public ought to realize, and we hope that the speech of the Prince of Wales at the Epsom College Festival dinner may have helped them to realize it. They ought to acknowledge, as their best members always do, that to us they are under large obligations, not only for our daily treatment of their poor, but also for the efforts and successes of preventive medicine, which undertaken for no hope of gain, has saved the nation even more than its wars have cost. What sum would be paid for a patent which should bring such profit? Tens of thousands of pounds would be too little. And what has been paid to our profession on that account? Nothing.

We claim, then, that the public should recognize the work we do, and the debt it owes us. We claim that it should confess that our charitable funds have a right to its support. And, lastly, we claim that the education upon which it is wholly dependent, the medical schools upon whose teaching its health and its life depends, should be considered, not as institutions to be jealously watched and severely restricted, but as equally important and as much deserving of public aid as those colleges where our youth are trained in the newer arts or in the older learning.

DEATH CERTIFICATION AND "INFORMATION."

THE discussion on the laxity of the administration of the existing law with regard to death certification, raised by Sir Walter Foster in Committee of Supply in the House of Commons last week, will serve a useful purpose in recalling public attention to a matter of great practical importance.

Ten years ago a Select Committee of the House of Commons was appointed "to inquire into the sufficiency of the existing law as to the disposal of the dead, for securing an accurate record of the cause of death in all cases, and especially for detecting them where death may have been due to poison, violence, or criminal neglect." Under the existing law a local registrar may register a death on the statement of a "qualified informant," who produces a medical certificate of the cause of death when the deceased has been attended in his last illness by a registered medical practitioner, or on the certificate of the finding of a coroner's jury. If neither of these documents be forthcoming the registrar is authorized to accept the qualified informant's statement as to the cause of death, and such deaths are returned as uncertified.

The Committee recommended among other things that in no case should a death be registered without production of a certificate of the cause of death signed by a registered medical practitioner, or by a coroner after an inquest, or in Scotland by a procurator-fiscal, and that it should be made a penal offence to bury or otherwise dispose of a body, except in time of epidemic, without an order from the registrar stating the place and mode of disposal. While admitting that the percentage of uncertified deaths had diminished within the last twenty years, Sir Walter Foster showed from the reports of the Registrar-General that in fifty-five registration districts the

percentage of uncertified deaths was nearly 7, and that in some districts the percentage reached 15, and even 18. He suggested that, without any alteration in the law, which by the rules of the House he was precluded from discussing on this occasion, a notable improvement might be effected if registrars were instructed to accept only certificates of death on the prescribed form accurately filled up, and to refer all other deaths as to which they received information either to the coroner or to the medical officer of health.

The action of the Registrar-General in this respect has been vacillating, although we are not prepared to say how much of the weakness shown is due to the scruples of the Registrar-General himself and how much to the fears of his political superiors. Some two or three years ago the Durham County Council, acting upon a report from Dr. Eustace Hill, the medical officer for the county, called the attention of the Registrar-General to the large number of uncertified deaths which occurred in that county, and especially in a particular district. The Registrar-General, in reply, expressed himself as fully sensible of the evils arising from this cause, and suggested that, in the absence of fresh legislation, which, though he considered it necessary, he was not in a position to initiate, the only way to decrease the proportion of uncertified deaths was to prevail upon the coroners to hold inquests upon some of them. The county council then asked the Registrar-General to direct the district registrars to report to the coroners all uncertified deaths, and eventually the Registrar-General, in deference to this request, instructed the registrars in the districts indicated to report to the coroners previous to their registration all deaths the causes of which had not been duly certified by a registered medical practitioner. Within three months the Registrar-General suspended this special instruction on the ground that delay in registration was thereby caused, but an alderman of the county council explained that the withdrawal of the order had followed an interview which the local M.P.'s had had with the Registrar-General.

A somewhat similar incident occurred more recently. A coroner having held an inquiry as to the cause of death of an unregistered individual, who had been attended by a person signing himself "M.D., U.S.A.," found that a material error in diagnosis had occurred, and announced his intention of holding inquests upon the bodies of all persons within his jurisdiction whose deaths were not certified by registered practitioners. Hereupon the Registrar-General instructed the registrars to report to the coroners all such deaths. Again, however, the Registrar-General withdrew his instruction, having apparently been overruled by the Home Secretary, Mr. Ritchie, who thought fit to read coroners a lesson, and to express the opinion that any coroner would be exceeding his duty who decided to hold an inquest solely on the ground that the deceased during his last illness had been attended by an unregistered medical practitioner.

Sir Walter Foster's contentions were supported by Dr. Farquharson in the debate last week and the reply of the President of the Local Government Board, while yielding one point, namely, that the question of death certification was one which ought to be dealt with and stating that the matter was engaging his attention, was in other respects far from satisfactory. He dwelt upon the increased expenditure which a bill founded upon the recommendations of the report of the Select Committee of 1893 would entail, and seemed to magnify the risk of undesirable postponement of burial.

The matter has on many occasions been before the British Medical Association and as may have been observed due notice has been given by the Cleveland Division of a resolution for the annual Representative Meeting at Swansea next month expressing the opinion that the present system of death certification and registration renders unreliable the statistics of death from disease, tends to encourage and assist quack practitioners in their impositions upon the public, and facilitates the concealment of crime. The resolution will further instruct the Council to take steps to bring about an early amendment of the law. The subject is already engaging the attention of the Medico-Political Committee, which has, we understand, resolved to take an early opportunity of representing to the Registrar-General the defects of the existing system, and of urging first that the Government should introduce into the next session of Parliament a Bill for the amendment of the law based on the reports of the Select Committee of 1893, and further that pending such legislation the Registrar-General should issue a general instruction to registrars to refer to the coroner all cases in which the cause of death is not certified by a registered medical practitioner.

GENIUS AND EYESTRAIN.

Lawrence Sterne was, in the words of Sir Thomas Browne, "knaved out of his grave," and his body was recognized on a dissecting table at Cambridge. The fleshly garment of the author of *Tristram Shandy* was doubtless dealt with as the chance treasure trove of the resurrection man; the idea of anatomizing genius had not been conceived in his day. Though Dryden has said that "great wits are sure to madness near allied," the intimate connexion between genius and disease does not seem to have been suspected till comparatively recent times. It is true that poetry is said to have been defined by the French medical philosopher, Cabanis, as a disease of the small intestine, but no one seems to have succeeded in verifying the reference. Nowadays genius is, in Tennyson's elegant phrase, "ripped up like a pig," or rather it is scientifically dissected. Great men are everywhere knaved out of their graves. Sir Thomas Browne himself has shared the common lot; Beethoven's ear, Gayarre's larynx, the skulls of Cromwell and Richelieu, to mention but a few, have been scrutinized, probed, and measured. A book has been written on Gambetta's brain; the bones of St. Cuthbert and St. Thomas of Canterbury have been the subjects of anatomo-pathological research.

In default of material for dissection, medical commentaries are written on the infirmities of genius—on Cervantes's cardiac dropsy, on Swift's "vertigo," on Napoleon's epilepsy and the "itch" which is said to have afflicted him, on St. Teresa's hysteria, on Jean Jacques Rousseau's genito-urinary troubles, on the pathological phenomena noted or inferred or suspected in Columbus, Petrarch, Tasso, Schopenbauer, and Goethe. That interesting collection of literary necropsies, *La Chronique Médicale*, ably edited by Dr. Cabanès, is a mine of information as to the illnesses of celebrated persons. So great is the interest taken in the physical infirmities of genius—using that word in the widest sense—that an elaborate monograph was written by Dr. Toulouse on Zola's constitutional peculiarities during the life of that writer.

It is scarcely fair, perhaps, to class Dr. George M.

Gould's *Biographic Clinics* with the works of the literary body snatchers to which reference has been made. While their object is merely the satisfaction of curiosity, his book is an important contribution to science. His study of the mysterious sufferings which nearly wrecked the lives of Carlyle, Darwin, Browning, Huxley, and De Quincey has been made with a serious purpose. Convinced of the far-reaching constitutional effects of eyestrain, he wished to illustrate his teaching by a series of striking examples. He has certainly succeeded in drawing clinical pictures of the greatest historical interest, which immensely increase the admiration we feel for the great men who achieved so much under conditions of difficulty and disability that would have crushed ordinary men. We frankly say that we do not think he has established his case by scientific proof; but this failure can scarcely be laid to his charge, for there is too slight a basis of fact on which to rest a solid conclusion. The evidence largely consists of the illustrious patients' own testimony, which, moreover, is given in casual remarks without any particular sense of responsibility. It must be borne in mind that Carlyle and De Quincey were markedly neurotic, and that Browning was a poet. Huxley, too, had a highly-cultivated gift of expression. Descriptions of their own sensations and sufferings made by such men in correspondence or private intercourse cannot be accepted without a considerable discount for unconscious or half-conscious exaggeration. We have heard that a famous orator who went over to the majority some years ago occasionally misled his medical attendants by the lurid colours in which he painted agonies which, as a matter of prosaic fact, there was good reason to believe he had not to endure.

We are quite willing to admit that writers who must of necessity also be great readers, and a considerable part of whose work is the correction of proofs, are very likely to overuse and thus damage their eyes. But this is not what Dr. Gould means by eyestrain, which he holds to be due to astigmatism. It may further be granted, for the sake of argument, that astigmatism is responsible for the manifold nervous and gastric, hepatic, and other derangements which he attributes to it—that, in his own words, "the whole system must often become the vicarious sufferer for the sins of the eye." Even if we admit that "at least 80 per cent. or 90 per cent. of headaches and a very large proportion of digestional or nutritional diseases are dependent upon eyestrain," and that there are in the civilized world "at least 10,000,000 to 15,000,000" victims of that infirmity, it does not follow that the individual men of genius whose biographical records Dr. Gould has studied were the subjects of astigmatism or eyestrain. This particular fact, we repeat, he does not seem to us to have proved, and, in the absence of definite clinical proof, his explanation of the sufferings of Carlyle, Darwin, and the others, ingenious and plausible as it undoubtedly is, is merely "bookish theorick."

We confess we have but little faith in master keys which unlock all the secret chambers of pathology. Some years ago the nose was declared by some to be the cause of nearly all the ills which afflict mankind. Now the eye is put forward as a rival; with a little ingenuity we have no doubt that a good case could be made out against the ear. We can easily imagine Hogarth's "Enraged Musician" the victim of a devastating storm of reflex disturbances. If Dr. Gould's theory be true, nine-tenths of the illness not only of geniuses but of common folk would be cured as by a magician's wand by properly fitting glasses. The world's eyes are out of joint, he says in effect, and spectacles are the only wear. Only they must be made in America.

To sum up: While fully recognizing the importance of Dr. Weir Mitchell's discovery that eyestrain is often the unsuspected cause of headache and other disorders, and the practical value of the labours of Dr. Gould and his fellow-workers in developing that discovery, we think that the case has been overstated to such an extent as to make its acceptance by reasonable men very difficult, if not impossible. Dr. Gould thinks statistically in millions as Cecil Rhodes, according to his admirer Mr. Stead, thought in continents. Largeness of view is an excellent thing in medicine as in other things, when it does not lead to neglect of detail. Medical science, however, is built not on theories but on facts.

THE INCREASE OF THE GENERAL MEDICAL COUNCIL.

THE Bill which separates University College, Liverpool, from the Victoria University and merges it into the new University of Liverpool has passed the House of Lords and has been sent down to the Commons. By it (Clause 10) the University of Liverpool is empowered to hold qualifying examinations in medicine, surgery, and midwifery for the purpose of registration under the Medical Acts.

An additional corporation, with the right of conferring medical qualifications, will thus come into existence, for, following the precedent set by the University of Birmingham, power is being taken in the Bill to send a representative to the General Medical Council. This in effect goes behind the provision of the Medical Acts, by which the General Medical Council is empowered to represent to the Privy Council that it has become desirable that a new qualifying body should be represented upon it. This provision seems to have become a dead letter, and it is pretty certain that each new body will endeavour to follow the precedent set by Birmingham and Liverpool. This is to be regretted, as the provision mentioned above was quite adequate to secure representation so soon as the new bodies, by the number of their graduates, had acquired adequate importance as licensing bodies. In 1902 only 43 medical qualifications were conferred by the Victoria University—31 on candidates from Owens College, Manchester, 4 on candidates from University College, Liverpool, and 8 on candidates from the Yorkshire College, Leeds.

We have no means of ascertaining in what proportion the students of Manchester, Liverpool, and Leeds sought the degrees of the Victoria University or went elsewhere for qualifications, nor can we estimate how far their conduct in this respect will be altered by the establishment of the two new universities, but it is safe to assume that any change which may occur will take place gradually. The new University of Liverpool then would not have been likely to suffer any substantial injustice if the claim for a representative had been postponed until the University was in full swing, when the General Medical Council could have been moved to act under the special provision already indicated.

We are, however, ready to admit that this line of argument is by no means conclusive, and that it fails in not taking a sufficiently wide view of the question at issue. Since it was called into existence by the Medical Act of 1858 the membership of the General Medical Council has been increased from 24 to 31, and it cannot justly be contended that the bodies which have been given representatives

since the Act of 1858 are less worthy to be represented than some of those enumerated in the schedule to that Act. The question of a reform in the constitution of the Council and the intimately-related question of its financial position will have to be faced, and it will not be an unmixed evil if the relatively-rapid growth in the number of its members forces an early decision. Everybody now admits that something must be done. On the one hand, we have those, following the President of the Council, who build their hopes on a Government subsidy, and will see in the action of the House of Commons in sanctioning the appointment of another member a further argument with which to convince the Treasury, and possibly an opportunity of bringing the matter to the attention of the House when the Liverpool University Bill comes on for second reading. On the other hand, there are those—comprising, we believe, a majority of the medical profession—who consider that a root-and-branch reform in the constitution of the General Medical Council is desirable in the interests of the public, and of the satisfactory conduct of the business of the profession in its relation to the State.

The question of the constitution of the General Medical Council is one which must be considered in any future amendment of the Medical Acts, and we understand that a scheme will be put forward in the draft Medical Acts Amendment Bill which has been prepared by the Medico-Political Committee for presentation to the Council. Opportunity will no doubt be afforded for a discussion at the annual Representative Meeting of the principles involved.

FACTORIES AND WORKSHOPS.

The annual report of the Chief Inspector of Factories and Workshops for the year 1902, which is the first under the Consolidating Factory and Workshop Act of 1901 and completes the century since the first Factory Act of 1802, more than maintains the reputation of its predecessors. We hope to give in an early issue a review of the work done by the Factory Department of the Home Office during last year. That it has been a busy one is apparent from the 100,424 factories and 145,721 workshops that have had to be inspected, and the 328,500 statutory reports that had to be considered, exclusive of the reports of accidents and overtime. To deal with all of these, the Factory Department at Whitehall has a staff of 138, including the lady inspectors. Each year the number of places under inspection increases, new industries are developing, and while machinery is replacing hand labour, electro-motor force is displacing steam and gas engines. The work of the certifying factory surgeons, too, keeps increasing. New duties are imposed upon them. At the end of 1902 there were in the United Kingdom 1,986 certifying surgeons. The subject of the ventilation of factories is dealt with at considerable length, and in this respect the valuable work done by Dr. Haldane and Messrs. Osborn and Pendock is at once apparent. There is an increase in the number of accidents, fatal and non-fatal. The total number of accidents was 90,355 as against 83,760 for 1901. As regards accidents in factories it is interesting to note that in March and April, 1902, the Institution of Mechanical Engineers invited the factory inspectors in London to two meetings at which the fencing of machinery was discussed. Considerable stress was laid upon the advisability of makers sending out machinery with all the dangerous parts securely fenced, but while this has been a recommendation of the Home Office for several years past, the suggestion has never met with any great success. As an illustration of how the suggestion has been ignored, it is stated that "in the experience of one firm of machinery makers, tenders for guarded machinery are never accepted by manufacturers, and that another firm openly repudiates all concern for the safety of the machinery they supply."

ADULTERATED MILK.

In the course of the discussion on the vote for the Local Government Board in England last week, Mr. Kearley drew attention to the extensive adulteration of milk, particularly in the metropolis. He said that the average proportion of adulteration of milk in the twenty largest towns, excluding London, was 8.3 per cent., whereas in the metropolis as a whole it was 15.2 per cent. In the City the proportion was 21 per cent., in St. Pancras 34 per cent., in Shoreditch 30 per cent., and in Hackney 36 per cent., whereas in Manchester, where the Acts had been carefully administered for some years, the adulteration of milk had been reduced to 3½ per cent. That proved what efficient administration of the Acts could do, and the surest way of getting efficient administration was to insist upon the local authorities taking a large number of samples. He suggested that the Local Government Board should appoint special inspectors to suppress milk adulteration in London, and that if fines were not found sufficient, imprisonment should be resorted to. The House, as is its manner in supply, drifted away to quite other matters, but was brought back by Sir Edward Strachey, who contended that if adulteration had been reduced and almost stamped out in Manchester, it was not impossible to do the same thing in London. He feared that there was collusion in the matter, the result being that the offenders were not brought to justice as they should be, and supported the suggestion that the Local Government Board should appoint inspectors if the local inspectors shirked their duties. Mr. Long, in the course of his reply, urged that the Act had not long been on the statute book, and said that when the local authority did not do its work thoroughly the department at once urged the importance of taking samples, and that good results had thus been produced. It would, he thought, be fatal to let the local authorities imagine that the Local Government Board was willing to do their work for them and pay for that work. There had been slackness in London, and he would urge the municipal authorities to do their work more effectually and at their own cost. Mr. Philipps, who followed, observed that the physique of the nation was at stake, and that it was necessary to protect the farmer and and the consumer against adulteration by the retailer, while Mr. Kearley contended that under the Act of 1899 it was the duty of the Local Goverment Board to compel the local authorities to enforce the Adulteration Acts. As no fewer than 34 members supported Sir E. Strachey we may hope that the Board will take some steps to recall the local authorities, and the Councils of the Metropolitan Boroughs in particular, to a sense of their duties and to simplify the procedure in taking samples. As it is the local authorities, as a rule, strictly limit the number of samples which may be taken annually for analysis. There are wheels within wheels. Borough Councils have trade members, who do not exactly encourage the strict enforcement of the law. There can be little doubt that most of the adulteration of milk goes on at the wholesale factories. The wholesale dealers insist upon a guarantee for pure milk in their contract with the farmers, while refusing to give any such guarantee themselves to the retailers they supply. If found with an adulterated sample, the wholesale dealers blame the farmers, and if the small retailers are caught the wholesale merchants are protected by their contracts, or in some cases arrange with the retailers to pay their fines if they are caught selling milk deliberately adulterated by the wholesale dealers. Dr. Sykes, M.O.H. for St. Pancras, has advised that the amendments in the law for the protection required by the public are: (1) A clause empowering farmers to securely close and lock the receptacles in which they convey milk to their customers, and if they neglect this, to refuse any plea of adulteration in transit; (2) a clause compelling all retailers to obtain warranties with their milk from the middlemen or vendors, if they neglect to do so refusing any plea of

selling the milk in the same state as delivered, and making it penal for a middleman or vendor to pay the fine of a retailer or customer; (3) a clause empowering a local authority to take samples in transit at any place, whether within or without the district of the authority, between a consignor and consignee of any milk sent to any person within the district of the local authority or to any person outside the district supplying a person within. The appointment by the Central Government of inspectors completely independent of local authorities has been found to work well in Germany and other countries, and we may have to come to this unless indeed a co-operative system sweeps away middlemen and milkshops from off the face of the earth. Meanwhile, as the English nation is slow to move, would a circular addressed to wholesale milk dealers by the Local Government Board, begging of them to supply the milk and the water in different vessels do any good?

LONG-DISTANCE WALKING.

MR. HERBERT SPENCER, in his work on education, wrote: "To be a good animal is the first requisite to success in life, and to be a nation of good animals is the first condition of national prosperity." Education, however, as Spencer pointed out, has a threefold character—intellectual, moral, and physical. The true ratio between these three has still to be decided. At one time there was a craze to be on wheels; but the recent revival of walking as a test of physical endurance has led to numerous long-distance competitive walks in the northern counties. No doubt many of them are promoted for advertising purposes; but even from these some facts of importance can be gleaned. This amateur pedestrianism is a protest against the decadence of the physique of town-dwellers, and certainly some of the walkers have shown marvellous staying power. Men, some of them cooped up in offices day by day, have walked 30 or 40 miles without a rest. We are glad to see that professionalism is excluded from these contests. Pedestrianism is not yet extinct. It may be useful to quote some of the classic records and compare them with the present. In 1809 Captain Barclay, of Ury, walked 1,000 miles in 1,000 consecutive hours, 1 mile in each and every hour. In 1813 Glanville walked 142 miles in thirty hours less fifteen minutes; another walked 172 miles in forty-nine hours. We have also Mr. Butler's record of 21 miles in three hours, and that of the late Mr. Sinclair, who walked 100 miles in in nineteen hours and forty-one minutes. Allen, the vegetarian, walked from Leicester to London—97¾ miles—in twenty hours and twenty minutes. Allen intends to try to walk 1,000 miles in twenty days. In his first attempt he started from Glasgow on May 25th for the Mansion House, London. He covered 455 miles in nine days, but on the morning of the tenth day, when preparing to resume his journey from Sheffield, owing to soreness of his foot he was obliged to give up the task. Owen Davies accomplished the distance from Manchester to Northwich —22 miles—in three hours thirty-two minutes and thirty-five seconds. At Heywood, a distance of 13 miles had been walked in two hours twenty-one minutes. Similar competitions have taken place at Liverpool. In one, the distance from New Ferry to Llangollen—37½ miles—was accomplished in six hours thirty-nine minutes, an average of 5⅝ miles an hour; one-third of the route chosen involved severe hill climbing, one gradient alone being ten miles long. An "interchange" walk from Birkenhead to Chester by a circuitous route—distance 25 miles—was done in four hours twenty-three and a-half minutes, an average rate of 5⅝ miles an hour.

THE ANNUAL MEETING OF THE EAST ANGLIAN BRANCH.

THE annual meeting of the East Anglian Branch held at Chelmsford on June 11th was a very successful gathering. A full report of the proceedings will be published in the next SUPPLEMENT to the BRITISH MEDICAL JOURNAL. A special feature of the meeting was the luncheon which the new President, Dr. J. C. Thresh, with commendable public spirit, gave to the members and a considerable number of guests, including the Mayor of Chelmsford and the Rector; and an account of it will not be out of place here. In proposing the health of their Majesties the King and Queen, Dr. Thresh said that in all things Their Majesties set excellent examples to their subjects and especially in their acknowledgements of the benefits derived from the services of members of our profession. Their gratitude had not been confined to words, but had received expression continuously in their actions. Everything connected with the health of the people received their sympathy and support, whether it were the provision of nurses for the poor, the establishment of sanatoria for consumptives, or the increased efficiency of hospitals. That day Their Majesties were giving another practical proof of their interest in their profession and in their work by attending the hospital with which he had the honour to be connected, in order to open two new departments. The King would that afternoon declare open the new out-patient department, whilst the Queen would open the department in which she took so much interest and to which she had subscribed so liberally, namely, that in which diseases were treated by various electric lights and rays. Dr. Thresh said his only regret that day was that he could not be in two places at the same time so that he could have welcomed the members and guests at Chelmsford, and also have assisted in giving a right loyal welcome to Their Majesties on their visit to the London Hospital. He said he must atone for his absence from the opening ceremony by asking them to show their deep appreciation of Their Majesties' services by drinking this toast with all the enthusiasm of which they were capable. The Mayor, in proposing "The East Anglian Branch of the British Medical Association," heartily congratulated the members upon the excellent selection they had made in placing his friend Dr. Thresh in the presidential chair. In Chelmsford they knew Dr. Thresh as one who had on several occasions rendered them most efficient and most reliable services. Dr. E. Barnes, whose name was coupled with the toast, briefly responded. Dr. W. A. Elliston (Ipswich) moved a hearty vote of thanks to Dr. Thresh for his hospitality. They had looked forward with pleasure to meeting at Chelmsford under the presidency of so distinguished a man as Dr. Thresh, one of the foremost sanitarians of the country. In responding, Dr. Thresh referred to the changes which had been made in the organization of the Association, and urged the members to take an interest in their respective Divisions and to support the officers who have been elected by attending as many of the meetings as possible, and in bringing forward subjects for discussion. After the final meeting the members partook of afternoon tea. We congratulate Dr. Thresh on his election as President of the East Anglian Branch, and the Branch itself on its choice of so distinguished a President. We have the confident hope that, under Dr. Thresh's energetic and tactful direction, the Branch may grow in numbers and also in usefulness to its members and to the Association of which it is so important a part.

BOGUS DEGREES.

A RECENT case in the courts sheds a curious light upon the system under which some of the so-called American universities distribute degrees. It seems that there is an institution called the Harriman University, Tennessee, U.S.A., which was originally founded as a "Temperance University," owing to the fact that Harriman is a protection city where no public-houses are allowed. This institution was described as being among "the thirteen leading universities in the United States." Let us look at the real facts as stated by the witnesses in the case under notice. One of them said: "This is one of the worst universities in this part of the country. In fact I could not conceive anything worse. They give degrees for almost nothing. There is really no school there, except a very poor public school, which forms the preparatory department for the university. Perhaps there are a few classes in college courses, taught by men who make

their living at other things." Other interesting facts were also proved. The greater number of the persons whose names appeared on the Harriman University Register had never been to the town in their lives. The university buildings are apparently occupied by private individuals as residences. A visitor to the university stated: "I saw one class who were being taught arithmetic of a very elementary kind. The library was inadequate, books not up to date, and the room was exceeding dirty and had not the appearance of being in real use. The professor of astronomy was a practising dentist!" After the candidates have passed certain examinations, this institution confers, for the sum of 10 dollars apiece, the degrees of B.A., M.A., B.D, D.D., and "S.T.D.," which latter, being interpreted according to the Latin of Harriman, means "*Sacra Theologia Doctoris.*" The marvel is that no medical degrees are conferred. The medical profession has suffered severely at the hands of bogus American universities. We rejoice to find that the methods of at least one of these "degree stores" should have been brought before the public through the medium of a libel action in our own courts.

BRISBANE HOSPITAL.

Australia in some ways still seems so new a land that it is a little surprising to be faced by the fifty-fourth annual report of any hospital there. The hospital at Brisbane (Queensland) is certainly one of the earliest, and dates from 1849, but there are one or two others of considerably earlier foundation. It has twenty wards, containing 254 beds. The total cubic space of the wards is given as 333,429 cubic feet, so the average amount of cubic space per bed appears to be a little over 1,300 ft. The average number of beds constantly occupied during 1902 was 219, the total number of patients occupying them being 3,646. Of these 1,383, or a little over one-third, were female patients. The average duration of each patient's stay, including surgical and medical cases, seems short, being 20.9 days; this, however, includes a large number of cases which died very shortly after admission. The total number of deaths was 313, or about 9 per cent. of the admissions, but, as has already been noted, many of the deaths, that is, about one-sixth of them, occurred within twenty-four hours of entry. Of the rest, nearly 3,000 were discharged either relieved or cured, and the balance for some other reason. The hospital has two out-patient departments—one at the hospital itself and the other a branch department at South Brisbane. At these the total number of attendances was 28,243, of which 7,278 were new cases, being about 4 attendances for every case. There was until lately only one operating theatre, but a second has now been contrived by the conversion of the room previously used for the induction of anaesthesia. The number of operations is given as 839, so the one room must have been pretty constantly occupied; of the operations, however, 222 were of a minor character. The rest included 65 operations for new growths and about 200 gynaecological and abdominal operations. There were only 4 cases of hydatid disease under treatment during the year, and 3 of them died, but on the other hand there were only 7 deaths among the 156 cases of enteric, the treatment of which was completed during the year.

THE NATIONAL SOCIETY FOR THE EMPLOYMENT OF EPILEPTICS.

No medical man requires to have explained to him the misery that may be caused in a family, which might otherwise be happy, by the presence of an epileptic patient in its midst nor the dangers to which both the epileptic himself and his friends are alike exposed. Among the richer classes suitable provision may often be made for his due care while living with his friends, and the fact that, however able he may be in many respects, he is unfit to follow any regular occupation is of little moment. Among the poor, however, this is not the case, and the strain and anxiety which is thrown upon the members of his family place it at a constant disadvantage in the battle of life. The epileptic is rarely able to keep a situation long, and the bread-winning capacity of a second member of the family is often diminished by the care and watching which the epileptic's condition demands from whose who are either attached to or responsible for him. The existence which the sufferer himself leads under such circumstances is depressing and demoralizing, and it commonly results in serious aggravation of his disease. To meet these evils the National Society for the Employment of Epileptics was formed some ten years ago, and its annual report recently issued shows that it has met with a considerable measure of success. The chief way in which it seeks to attain the object for which it was founded is the establishment and maintenance of home colonies in which patients whose condition is not so bad as to render them incapable of any occupation whatever may be, according to their age, sex, and condition, educated, industrially trained, and suitably employed under skilled supervision. The medical report shows that during last year it was possible to discharge four patients as permanently cured, while many others were considered so far recovered that it was possible for them to leave the Society's colony at Chalfont in order to resume their occupations in outside life. The Society at the beginning of this year had accommodation for 196 patients, while its 210 acres of farm land, gardens, orchards, workshops, laundries, and other buildings represented a capital expenditure of £40,000. So far it has been able to pay its way, but its success year by year increases the number of applications for admission, and without further assistance it will be unable to rise to the occasion. It therefore asks for help. The Secretary of the Society is Mr. G. Penn Gaskell, and the offices are at 12, Buckingham Street, Strand, W.C.

A WHITE WITCH.

While medical men are complaining of increasing competition and of diminishing receipts, their irregular rivals, the medical botanists, appear to derive a not despicable income from the exercise of their business, especially if it be mingled with the practice of the occult art. Recently the Exeter city magistrates fined a person £20 in each of five cases (£100 in all) for obtaining from divers persons various sums of money by unlawful and subtle means, with intent to cheat and defraud. The alternative to the payment of these fines was one month's imprisonment in each case, five months in all. The fines and costs were, however, paid. The prisoner is both a medical botanist and a "white witch." His "practice" is of no mushroom growth, books being produced bearing the date of 1822. His income from both businesses amounts on an average to £300 per annum, and from January 10th to April 17th of the present year he actually received £100. While medical men are fighting Friendly Societies for fees of 4s. a member per annum, his charges equalled those of the most successful physician, his fees varying from £2 2s. to £3 3s., though on occasions he accepted as little as 10s., and for his purely medical advice he condescended still lower. His patients came from all over the Western Counties. The nature of the troubles for which his aid was sought varied from the illness of human beings to the maladies of cattle and pigs, or the loss and damage of vessels. His pathology was simplicity itself; the patient or his family or property had been "overlooked" by some malignant neighbour. His therapeutics were equally simple, and consisted of a white powder, which was to be scattered over the person or thing injured, or around the house or homestead between the hours of 9 and 12 at night, to the accompaniment of the Lord's Prayer. Sometimes he condescended to such mundane means of cure as a draught or a drench, or even ordered the mysterious white powder to be taken internally, but generally the method of treatment seems to have been prayer and the powder-scattering indicated. Some of his patients acknowledged his skill and curative power, according to the *Devon Express*. "Yes, I've heard what you'm doing," said one of his patients to the police inspector, "but I b'aint going to say nothing agin' Mr. Thomas. He's a gentleman, and has done me good and my missus good and my cows." Others were not so well

satisfied. A Beaworthy man lost two valuable horses, and when he interviewed Thomas he was asked whether he suspected any one of "overlooking" them. The bewitched person was unable to fix upon the guilty party, whereupon he was told that if he handed over 3 guineas the overlooking would be stopped. The cash was paid, "but," said the payer, "he gave me no medicine, and did me no good." Another applicant, a farmer, was troubled because things were not going right on his farm. "I know it," was the response, "and more will go wrong yet. It is your next door neighbour." This farmer was told to put his money on the table and go home, and he (Thomas) would put it right. A sovereign was put down. This was not enough. "Put down another." And another was put down. They were taken up and pocketed by the "white witch," who gave the farmer a packet of powder and told him to give it to the pigs. In another case he warned his patient "that he ought to have been consulted before, because some one was up against him, and it was a relative." Both the solicitor for the defence and the prosecuting solicitor declared that it was the occult portion of this man's business that was illegal, while that of a herbalist was an honest and bona-fide and beneficial business. We wonder what the Apothecaries' Society will say to this contention? That the man's methods were positively injurious was stated in the course of the case by the prosecuting solicitor, who instanced the case of a man who had nearly been driven out of his village, and his life made almost unbearable, because the witch doctor told another inhabitant that his wife had been "overlooked" by this unfortunate neighbour, and it soon spread over all the village that this wretched individual had "witched" the woman, and was to be hence avoided. Such a story is a curious comment on the education and civilization of England in the twentieth century. But does it excel in anything the unreproved quackery of the advertisements of the daily and monthly press?

WELSH WELCOME TO SIR JOHN WILLIAMS.

SIR JOHN WILLIAMS, Bart., M.D., K.C.V.O., who has recently relinquished his practice in London, and returned to spend the remainder of his life at the Plas Llanstephan, in his native county of Carmarthenshire, was the guest at a banquet given in his honour at the Royal Hotel, Cardiff, on June 12th. The company, which was large and representative, consisted principally of the medical men of Cardiff and the county. The Mayor of Cardiff (Alderman E. Thomas) presided. The toast list was printed in Welsh, and a part of the musical programme consisted of the singing of penillion by Eos Dar to the accompaniment of the harp. After the usual loyal and patriotic toasts had been duly honoured, the Mayor gave "The Health of Sir John Williams," whom he cordially welcomed back to his native land. The presence of so many distinguished Welshmen and of so large a number of the medical profession was eloquent proof of their high opinion of their guest. He sincerely hoped that Sir John would devote a little of his leisure time to shaping and guiding the destinies of the Cardiff Medical School. He wished him many years of good health to enjoy the rest he had so richly deserved. Sir Alfred Thomas, M.P., in supporting, said his excuse for speaking to the toast was his desire to welcome Sir John on behalf of the University College of South Wales and Monmouthshire. As Welshmen they all rejoiced in his brilliant career. They were all united in the hope that his future would be as blessed as his past had been brilliant. The toast having been drunk, Sir John Williams was given an ovation on rising to respond. In a few well-chosen remarks he spoke of the difficulty he felt in expressing his gratitude for the honour done him by the great town of Cardiff, officially represented by the Mayor. To acknowledge such laudatory speeches was much more difficult than lecturing to a class of medical students. He recognized many old friends, but there was one he was especially glad to see, namely, Dr. Ebenezer Davies, of Swansea, who had given him his start in the medical profession. He was thankful to Dr. Davies for much valuable advice, and he thanked the company for honouring him so generously on his return to Wales. Dr. Ebenezer Davies, Judge Gwilym Williams, and Dr. Griffiths (Swansea) joined in welcoming Sir John back, and all three stated that they had known the guest of the evening in his student days, and had watched his progress and success with genuine delight. Judge Williams said that the late Queen and the King of England had, in honouring Sir John honoured Wales, and they as Welshmen were proud of him. Dr. H Owen (London) gave the toast of "The University of Wales," remarking that their object should be to raise the education of the nation as a whole and to produce students and scholars. Their motto should not be Wales for the Welsh, but the British Empire for the Welsh. Principal John Rhys of Oxford, responded, and said that every member of the Welsh University agreeed in welcoming Sir John Williams back to Wales. Sir John had already made himself useful to the Welsh University in many ways, and speaking generally, there was a lively sense of gratitude for favours to come. They looked forward eagerly to his services in connexion with the medical school of the University College, Cardiff. Sir John Williams, who was again loudly applauded on rising, next proposed the toast of "The University College of South Wales and Monmouthshire." He hoped that the University of Wales would before long obtain powers to grant degrees in medicine, and in conclusion he referred to the death of Principal Viriamu Jones, the first Principal of the College, and also to his successor, Principal Griffiths, whom he believed to be eminently fitted for the post. Principal Griffiths and Professor Dixon responded, the latter remarking that the present was a very critical time in the history of the College—a time at which they needed support—and it rested with the people of South Wales to decide now whether they would have a great College or have the work of their College checked. They could not go on much longer as they were; unless help came the fees would have to be raised.

ARMY BLANKETS AND THE AËRIAL CONVECTION OF TYPHOID.

IN his report to the Sanitary Committee of the City of London, Dr. William Collingridge, Medical Officer of Health, has recounted the steps which were taken for the detection and arrest of the now historical army blankets. The outbreak of typhoid fever on the *Cornwall* was reported to him on May 19th by Dr. Hancock, the Acting Medical Officer for the Port of London, who had traced the infection to the blankets returned from South Africa. They were in a grossly filthy condition and were reported by Professor Klein to contain innumerable typhoid bacilli. They had come from a firm in Whitechapel through two City firms. These facts were at once formally reported to the Director of Army Contracts, the Under-Secretary of State for War, and the Local Government Board. The blankets in the possession of the City firms were seized and removed for disinfection. An undertaking was obtained from the Director of Contracts that no further issue would be allowed, and there then remained the question of the blankets sold by the two City firms—about 20,000 in all—which had been distributed to 289 persons or firms in 250 different towns in the United Kingdom. From both the sources of supply a list of purchasers was obtained and a circular letter was at once sent out informing them that the blankets must not be sold or used without the sanction of the medical officer of health for their district. To each of the 250 medical officers of health concerned a notification of the above facts was sent and disinfection of all they could obtain possession of was strongly advised. In regard to the Colonies and other places abroad that were implicated notice was given to the representatives of the respective Governments. It had been ascertained when the report was issued that large numbers of the distributed blankets had been burned, others disinfected and in several instances they had been returned to the wholesale dealers. All those thus returned and all remaining in stock were in course of disinfection and would be thoroughly cleansed before they were released. A large number had been purchased by the managers

of institutions, convents, and industrial homes, who were no doubt attracted by their low price. Fortunately most of such purchasers had held them in reserve. Dr. Collingridge has earned the gratitude of the country for the prompt measures he took to obviate infection. His letter to the sanitary authorities in the implicated districts was received, it appears, some five days before the circular of the Local Government Board, and it alone contained the important information of the names of the firms who had purchased parcels of the blankets, to whom he also had previously sent a letter of caution. Down to May 26th 175 medical officers of health out of the 250 had notified that the blankets in their districts had been dealt with, and now that attention has been so widely and forcibly directed to the matter it is not likely, as Dr. Collingridge says, that such a wholesale dissemination of filthy, and in some cases infected, articles will occur again. Some further good will have come from this "visitation" if it should convince all and sundry that the water supply is not the only means of spreading typhoid infection. It is now many years since Dr. William Cayley gave a quite convincing instance of the spread of typhoid infection by soiled bed clothing at the Middlesex Hospital, but this was of course on a comparatively microscopic scale. In the present instance the illustration of the principle involved may unfortunately be called diagrammatic. An army blanket is certainly a voluminous carrier of infection when compared with a speck of dust, but a speck of dust is not less huge when compared with a typhoid bacillus, and in neither case is the carrier essential to infection.

MEDICAL MISSIONARIES.

Livingstone College, Leyton, which celebrated its Commemoration Day on June 10th, has for one of its principal objects the medical preparation of missionaries for the life that lies before many of them. It has often been pointed out before, and was mentioned by more than one speaker at this commemoration, that "natives" of every uncivilized country have a most profound belief in the virtues of the white man's medicine. References to this fact are made in practically every tale of missionary life, and nearly every old traveller has some more or less amusing anecdote of his experiences as a *médecin malgré lui*. Missionaries in particular often relate that medicine is the only open sesame to the religious instruction that is to follow. Of his wisdom as a teacher, "natives" may and often do have the most undisguised suspicion, but in his skill as a physician they have, primarily at any rate, an entirely childlike faith. That the individual missionary should be tempted to take advantage of this is quite natural, but how far are the administrators of missionary enterprise justified in doing so and how far is it wise? That they are fully justified in sending forth missionaries who are also qualified medical men there cannot be any doubt, for they are doing their best to send men who come up to the "native's" belief as nearly as a normal course of tuition can make them. But how far are administrators justified in buying the native's confidence with coin which he believes to be gold, but which is really copper? And how far is it necessary? The fields of missionary enterprise to which medicine forms a necessary introduction are daily growing narrower, and the number of missionaries who are qualified medical men is large, so large that if properly distributed it would seem as if they might easily cover the whole of them. But are they properly distributed? There is strong doubt on this point among many who have worked abroad, and any one who scans the distribution list of the medical men of almost any missionary society must be struck by the very large proportion of them who are stationed at places which have hospitals and teem with lay practitioners of Western medicine. There, too, medical missions may have a legitimate function to fulfil; but surely administrators should first fill those outlying fields of missionary enterprise in which medicine is the only passport with men in every way worthy of the trust that the natives show in them. This College and its work were the subject of friendly criticism by us soon after its institution some years ago. Now, as then, nothing but approbation can be awarded to that part of its work which is intended to fit the missionary to guard his own health in tropical climates, but criticism of its second object gains force as the years go on. It is true that those who enter the College sign an undertaking not to assume the title or position of a qualified doctor; but how can the simple native distinguish between a "qualified doctor" and a man who habitually ministers to their bodies as well as to their souls? No one who is conversant with missionary literature can doubt that, whether they call themselves medical missionaries — which in missionary parlance means a qualified man who is also a missionary—or whether they do not, missionaries commonly trade upon the scraps of medical knowledge they possess, and are encouraged to do so by their superiors. Unless absolutely necessary it certainly is not right, and that it is absolutely necessary there is strong reason to doubt.

A HINT AND A WARNING.

Our advertisement columns contain a warning to which we desire to draw special attention. It is with regard to offers made of the post of surgeon to any colliery in the Counties of Durham and Northumberland, or that of medical officer to any Friendly Society in or near the towns of Darlington, Stockton, Newcastle, or Sunderland. We would strongly recommend any one who may receive an offer of an appointment in these localities to apply for information regarding them to Messrs. Graham and Shepherd, 32, John Street, Sunderland, or Mr. Garforth Drury, 55, Pilgrim Street, Newcastle-on-Tyne, Secretaries of the County of Durham Medical Union and the Northumberland and Newcastle Medical Association respectively. These two medical bodies began some two or three years ago an endeavour to improve and maintain in a healthy condition the circumstances of club and contract practice. The effort was begun by no means before it was called for, not less in the interests of the public than in that of the dignity and financial welfare of the medical profession in the North. The rate of payment for medical attendance and medicine usually allowed at that time by Friendly Societies was only three shillings a head per annum, a sum which at the lowest computation is at least 25 per cent. less than that at which honest work can possibly be done by any one who is not prepared to regard club work as a charitable enterprise and nothing further. The statistics collected by the Birmingham and District General Medical Practitioners' Union, and published in the British Medical Journal of June 6th, p. 1341, with regard to club work in the town of Birmingham, show in an irrefutable manner that the sum at which persons of the working and artizan classes should be able to compound for yearly medical attendance and medicine is not less than 6s. per annum even in towns well provided with hospitals. The two medical unions of the North, however, contented themselves with endeavouring to increase the existing rate of 3s. a head per annum by one shilling only. It was a very modest demand, but nevertheless a successful issue to the question raised was not achieved without much trouble to the unions and at the expense of some temporary self-sacrifice on the part of individuals. After so much trouble they have no intention of allowing things to relapse into the old state, and as these associations are united powerful bodies whose members thoroughly understand the virtues of loyalty, unity, and *esprit de corps*, there is no reason why they should. Indeed, any medical man who takes up work in the North in opposition to the admirable principles which these associations uphold will find his position as unpleasant as his best enemy could desire.

THE PROPOSED YORKSHIRE UNIVERSITY.

The draft scheme for the proposed university for Yorkshire was issued this week, and appears to follow the general lines of the draft charter of the University of Liverpool, more especially with regard to points upon which it is intended that the three universities should co-operate. The constitution includes a university court, a council, a senate,

and convocation. There are to be four faculties—arts, science, medicine, and technology, but power is taken to add other faculties from time to time. The faculties are to be represented on the council of the university, and convocation is to be composed of the chancellor, vice-chancellor, pro-vice-chancellor, the members of the senate, the lecturers, and the graduates of the university.

DR. P. H. PYE-SMITH has been re-elected Vice-Chancellor of the University of London for the year 1903-4.

THE Prince of Wales has addressed to Dr. Holman, Treasurer of the Royal Medical Benevolent College, Epsom, a letter in which he expresses the pleasure with which he found himself supported by so distinguished a body of medical men at the festival dinner on June 10th, and at the warmth of his reception.

MEDICAL NOTES IN PARLIAMENT.

[FROM OUR LOBBY CORRESPONDENT.]

Death Certification.—The vote for the Local Government Board came on in Committee of Supply on June 11th, and Sir Walter Foster took the opportunity of calling attention to the question of death certification. He said that the passage of the Cremation Act of last year had necessitated the drawing up of rules to guard against cremation being used to cover crime, and that the Southwark poisoning case had shown how the existing law of death registration often failed to discover deaths from foul play. The judge in that case had congratulated the jury that the bodies had not been cremated; but the fact was that any attempt to cremate the body of a person who had been poisoned was, under existing rules, vastly more likely to lead to the detection of the crime than the burial of the body. The Departmental Committee which had been appointed to draw up regulations for cremation under the Act of 1902 had reported that in some cases they had found "that the bodies of murdered persons were buried without any certificate of the cause of death," and that "in other and more numerous cases the certificate had been given without sufficient inquiry, sometimes by a medical man who had not seen the deceased in his last illness nor the body after death." He admitted that the percentage of uncertified deaths had diminished in the last twenty-five years, but contended that the law was still dangerously lax, and offered facilities for the concealment of crime which were a serious danger to the community. The Select Committee of 1893 had reported that it "was forced to the conviction that vastly more deaths occur annually from foul play and criminal neglect than the law recognizes," and yet ten years had passed without any amendment of the law. It was dangerously lax both with regard to certified and uncertified deaths, and the vital statistics of the country were impaired by the present system of administration. He showed from the reports of the Registrar-General that in 55 registration districts the percentage of uncertified deaths was nearly 7, and that in some cases the percentage reached 15 and even 18. This condition was dangerous to public health, and in one case at the instance of the Durham County Council the Registrar-General had required such cases to be submitted to the coroner, but this instruction had been subsequently suspended, and thus an attempt at better administration in the public interest had been revoked. The Registrar-General had called attention in a recent report to a recommendation of the Water Gas Committee, which had gone beyond its reference to suggest in the interest of accurate registration of the causes of death that every coroner's certificate sent to the Registrar-General should be accompanied by medical evidence of the cause of death. He asked that this should be done, and as he was precluded by the nature of the debate from going into legislative proposals, he suggested that administrative reforms should be effected by instructing the registrars to accept certificates only on the prescribed forms accurately filled up, and to refer uncertified deaths for inquiry to either the coroner or medical officer of health, as was the practice in Manchester, Glasgow, and Edinburgh. Dr. Farquharson, who followed, said that as a member of the Select Committee of 1893 he strongly supported the views expressed by the member for Ilkeston, and urged the necessity of early steps for remedying the present loose and inefficient method of registration. Mr. Long, in reply, said that with regard to the question of death certification, he entirely agreed that it was a subject with which it would be well to deal if it were possible. He did not think the facts were quite so alarming as the hon. gentleman the member for Ilkeston would have the Committee believe; but none the less the subject was a very serious one. The difficulties of dealing with the question were of a serious and practical character. The practical difficulty was that if the proposals of the Bill which was prepared in 1894 were enforced, not only would very considerable additional expense be incurred, but also very considerable difficulties would probably result in the indefinite and altogether undesirable postponement of burial. The matter, however, had been engaging his attention, and if he saw his way to an amendment of the law which would be practicable and would carry out what they all desired, the hon. gentleman might rely upon it that he would not fail to do his best to carry it through.

The Treatment of Poor-Law Children.—This subject occupied a good share of the debate on the Local Government Board vote and all the methods from barrack schools to boarding-out came in for some criticism. Mr. Ernest Flower said that of the 50,000 children under the control of the guardians in England and Wales, only 8,500 were boarded out, and that the success which had attended the experiments morally and physically justified the extension of what was an ideal system. Following the lead of Dr. Farquharson he strongly condemned the barrack schools and called attention to the lamentable prevalence of preventable diseases in these institutions and in some other schools, as in the Hollymount case. Mr. Crooks made a speech full of practical experience as to the difficulties of dealing with Poor-law children by the boarding-out system, although he admitted that it was a good system. Sir John Gorst, on the other hand, strongly supported boarding-out, and deprecated further expenditure on barrack schools. He praised the Sheffield system of scattered homes. Mr. Toulmin said the Hollymount School had undergone a radical change for the better, and was now satisfactory. He suggested that the rate at which children were taken out of workhouses and boarded-out or otherwise treated must necessarily be slow, and that adequate and frequent inspection was necessary to make any system satisfactory. Sir F. Powell, Mr. T. W. Russell, and Mr. Cameron also spoke. Mr. Long, in his reply, said that all agreed that children should be taken out of the workhouses, but the great difficulty was found in selecting another way of dealing with them. By the Act of 1899 guardians were given power to deal with deserted children; but he thought they should proceed very carefully when it was proposed to board-out children who had both parents or one parent living. There was a danger of interference by the parents of the child with the foster parents. He hoped, however, to be able to extend the boarding-out order. It had been said that, notwithstanding the promise made by his predecessor, additions to these large Poor-law institutions had been sanctioned by the Local Government Board. That was a complete misapprehension. It was true that in some cases when the necessity arose for the improvement of the existing accommodation that improvement had been sanctioned; but he believed he was right in saying that in every such case the number of children accommodated had been reduced. He confessed he thought the barrack system had been a little hardly dealt with, but it was too late to take that view now. They were tried and were condemned, and in the case of the great Sutton schools had already been broken up. When the guardians now made proposals for dealing with their children the Department never lost an opportunity of recommending them to adopt the cottage home or the boarding-out system. It was no doubt true that the boarding-out system was only superior when they got good foster mothers and a very active and energetic committee. He had had before him cases where the boarding-out system was as bad and unsatisfactory as anything they could find in a barrack school or any other form of accommodation. A great deal depended on the locality; in each case the guardians must be governed by its local knowledge, and the Department would do its best to guide and help them to carry out what Parliament had practically decided they should do, namely, that they should not keep their children in the workhouses, but should provide for them in establishments outside. The Hollymount School was not a Poor-law school, but a religious institution certified by the Local Government Board, and thus enabled to take in children sent by Boards of Guardians. The condition of

things that had existed there was extremely unsatisfactory, and much to be regretted. He did not renew the certificate until he had satisfied himself that there would be a complete change in the system. He had given instructions that the school should be periodically visited, and that returns should be made to the Local Government Board.

Vaccination: Its Cost and the Supply of Lymph.—In some form or other vaccination continually cropped up during the debate on the Local Government Board vote. First Mr. Channing called attention to the present scale of fees and charges under the Acts. Before 1898 the cost of administration by the guardians was £72,625, since it had gone up to £237,000. He also complained of the independent action of vaccination officers and quoted the case at Wellingborough. Mr. Partington urged that the charges made by public vaccinators ought to be reduced and suggested the supply of lymph to all medical men. Mr. Soares supported this suggestion and inquired as to what became of the calves used for obtaining lymph. Mr. Spear advocated the opening of stations for revaccination and condemned the high scale of fees. Mr. Long said he had been at some pains to try and find a satisfactory settlement of the fee question. In spite of conferences with medical men and local authorities he had not been able to arrive at a conclusion, and so he had determined to seek a report from a small departmental committee. He could not hold out the hope of supplying lymph to private practitioners. The Jenner Institute was making arrangements to supply lymph, and the ordinary mercantile supply was, he thought, generally satisfactory. The case of the vaccination officer at Wellingborough would be the subject of a local inquiry. The calves were sold in the ordinary way.

The Adulteration of Milk.—Mr. Kearley criticized the administration of the Adulteration Acts, and called upon Mr. Long to intervene as President of the Local Government Board. In London the adulteration of milk was simply rampant, and while the percentage of milk adulteration in the twenty largest towns was 8.3, in the metropolis it was 15 2. In the City of London it was 21 per cent., in St. Pancras 34 per cent., in Shoreditch 30 per cent., and in Hackney 36 per cent., while in Manchester it was only 3.5 per cent. It was calculated that in London £30,000 a year was spent on purchasing water instead of milk. Mr. Strachey moved to reduce the vote by £100 in order to direct attention to the adulteration of milk, and strongly urged the intervention of the central authority. Mr. Long explained that the Act of 1899 had not long been on the statute-book, and that he took every opportunity of pressing the local authorities to do their duty. It would be unwise to do it for them unless in the last resort. Mr. Phillips and Mr. Kearley considered the defence lame, and took a division, when the reduction was rejected by 91 to 35, and the vote agreed to after having occupied the whole of Thursday's sittings.

Inoculation for Plague in India.—The Secretary of State for India informed Mr. Weir last week that the number of persons inoculated for plague and the number of persons inoculated who had subsequently died of plague were as follows: Madras 21,404, subsequent deaths not known; Bengal 34,332, 31 deaths; United Provinces 8,538, 26 deaths; Punjab 480,737, deaths 1,158; Central Provinces 10,649, deaths 34; Coorg 3, no deaths; Berar 2,407, deaths 9; Bombay 599,857, deaths 1,482.

Vivisection at University College.—In answer to a question put by Mr. Weir last week with regard to the number of dogs subjected to experiments without anaesthetics at University College from April 1st, 1902, to March 31st, 1903, by Dr. Bayliss and Professor Starling respectively, Mr. Cochrane answered that there were none He added that in reference to an answer given May 11th, in which he said that 77 experiments of the nature of feeding experiments or inoculations were performed without anaesthetics, he should have stated that 4 only were so performed.

Vaccination Prosecutions.—On Friday in last week Mr. Seymour Ormsby-Gore asked the President of the Local Government Board if his attention had been drawn to the fact that officers of the Local Government Board had directed prosecutions to be instituted against persons for non-compliance with the Vaccination Act of 1898 in the town of Gainsborough, and that these proceedings had been taken without previous consultation with the Board of Guardians; and whether, seeing that the Board of Guardians had decided not to prosecute cases coming within the Act, he would state what steps he proposed to take in the matter. Mr. Long replied that a medical inspector of his department pointed out to the vaccination officers that it was their duty under the Vaccination Acts to take proceedings in cases of default, but he did not direct prosecutions to be instituted. As regards the last part of the question, he did not propose to take any steps in the matter. It had been decided by the High Court that a vaccination officer was empowered to take proceedings of the kind referred to notwithstanding directions from the guardians not to prosecute.

The Liverpool University Bill has passed though the House of Lords and has been sent down to the Commons. It is a private Bill, and will probably have a relatively easy time. Its object is to separate University College, Liverpool, from the Victoria University, and to merge it in into the University of Liverpool, with all its property and liabilities. It gives powers to absorb the Liverpool Royal Institution, to hold examinations in medicine, surgery, and midwifery for the purpose of registration under the Medical Acts, and to choose one representative to be a member of the General Medical Council.

Experiments on Dogs without Anaesthetics.—Mr. Perks asked the Secretary of State for the Home Department on Monday whether, as reported at a recent meeting of the Committee of the Royal Medical and Chirurgical Society, Professor Schäfer had obtained permission to conduct experiments on dogs without anaesthetics for the purpose of investigating the phenomena of death from drowning; was he aware that these experiments had hitherto been conducted under chloroform; and would he take steps to prevent the infliction of cruelty which the experiments authorized involved? Mr. Secretary Akers-Douglas answered that Professor Schäfer had obtained the certificates required by the Act to enable him to perform certain experiments on dogs for the purpose of investigating not the phenomena of death from drowning but the best means of effecting resuscitation in cases of apparent drowning. The experiments would be performed on behalf of the Royal Medical and Chirurgical Society of London, who had appointed a committee to consider this question. He was aware that Professor Schäfer had performed experiments on the effect of immersion on anaesthetised dogs, but he was informed that the use of anaesthetics frustrated the object of the experiments. In view of the great importance of the subject in connexion with the saving of human life, and of the strong recommendations received in support of the experiments, he had not felt justified in disallowing the certificates.

The Royal Commission on Tuberculosis.—Dr. Farquharson asked the President of the Local Government Board on Monday what progress had been made in the investigations by the Royal Commission on Tuberculosis during the past twelve months on the two farms at Stansted lent by Sir James Blyth, and whether a report would shortly be issued. Mr. Long replied that he was informed that considerable progress had been made in the investigations instituted by the Royal Commission. It was stated, however, that the ground to be covered by the experiments was very extensive, and that some time must necessarily elapse before any report by the Commission could be issued.

The Irish Poor-Law Medical Service.—Dr. Thompson asked the Chief Secretary to the Lord Lieutenant of Ireland if, in view of the dissatisfaction existing in the ranks of the Irish Poor-law medical officers, he would consent to appoint in the near future a Royal Commission to inquire into the working of the Irish Poor-law system in all its branches. Mr. Wyndham answered that the Commission recently appointed would consider the general question of the amalgamation of unions, and certain other reforms in Irish Poor-law administration which had been indicated in the published warrant constituting the Commission. The deliberations of the Commission had been limited in their scope with a view to the completion of the necessary inquiries in the shortest possible time, and to the avoidance of matters which were regarded as contentious. As at present advised he was not prepared to recommend the appointment of a Commission to investigate the larger question of the working of the Poor-law system in all its branches.

Scotland.

EIGHTH ANNUAL REPORT OF THE LOCAL GOVERNMENT BOARD FOR SCOTLAND.

THE annual report of the Local Government Board for Scotland grows in bulk, as well as in interest, year by year. There is in Scotland no "supplement containing the report of the medical officer to the Board," embracing a record of original research undertaken at the instance of the Board, a circumstance probably to be attributed to the parsimony of the Treasury. The Scottish report is a severely business-like document, furnishing a chronicle, in considerable detail, of the administration of the Poor-law and Public Health Acts in Scotland.

Parochial Relief.

The number of persons, including dependants, in receipt of parochial relief on May 15th, 1902, was 100,848, an increase of 1,820 as compared with the previous year. In ratio to population, however, there was no increase of pauperism, the rate per 1,000 of the population standing, as in the three preceding years, at 22. Included in these figures are the lunatic poor, who numbered 13,849, being at the rate of 3.1 per 1,000 of the population, a rate fractionally higher than in the preceding year. The lunacy rate has risen slowly but steadily, and without intermission, from 1.8 in 1868 to its present level. Of the ordinary poor, 10,865 were indoor, 76,019 outdoor. One very satisfactory feature in the Scottish system is illustrated in the fact that of 6,693 pauper children, 5,721 were boarded-out in rural districts.

Notification of Phthisis.

Probably the most interesting and important part of the report is that in which the Board deals with the question of the notification of phthisis. The Board was approached by several local authorities during the year as to the desirability and competency of extending the application of the Infectious Disease (Notification) Act to phthisis. The Board's view on the subject was that while phthisis may be correctly classed as an infectious disease, it differs in important respects from the diseases scheduled in the Notification Act. The Board was doubtful how far the provisions of the Public Health Act are adapted to dealing with phthisis. The ordinary methods of dealing with infectious diseases are in large part directed against conditions of infectivity which do not apply in the case of phthisis, and it overlooks some conditions which do apply. Having regard to all the circumstances of the case, the Board's decision was that it would not at present be expedient to approve the proposal. At the same time, the Board urged that local authorities should not lose sight of the subject. It points out that coincidently with the application of general sanitation in the chief cities of this country, and without specific recognition of the infectivity of the disease, the mortality from phthisis has steadily diminished, in some cases as much as 40 per cent. in twenty-five years; and it insists upon the importance of the performance of the ordinary statutory duties of local authorities in respect of the abatement of overcrowding, the improvement of ventilation, and the removal of insanitary conditions generally in the houses of the working classes. The Board was of opinion that in the first instance experience ought to be acquired rather by the voluntary than by the compulsory notification of phthisis, when the medical profession and the public would have the opportunity of learning what are the advantages and disadvantages of notification.

Infectious Disease and Vital Statistics.

The report furnishes interesting information as to the incidence of infectious disease in, and as to the vital statistics of, Scotland in 1901. One point of interest which emerges in connexion with the prevalence of infectious diseases is that the mean scarlet fever case-rate in the rural districts of Scotland was nearly 2 per 1,000 higher than the mean of the principal towns. The mean rural death-rate was 15·0 as compared with 18.6, the mean burghal rate. The death-rate was higher in the burghal than in the rural areas of all the counties of Scotland, excepting in Fife, Kinross, Stirling, Sutherland, and Zetland. It is noted that the deaths exceeded the births in the rural portions of the county of Bute, and in the burghal portions of Wigtownshire. The mean infantile death-rate in rural Scotland was 103, as contrasted with 141 in burghal Scotland. The mean birth-rates in the classified divisions of Scotland were as follows: Principal towns, 30.7; large towns, 31.2; burghs under 10,000, 27.3; rural districts, 28.7. The mean death-rates were: principal towns, 19·4; large towns, 17.2; burghs under 10,000, 16.5; rural districts, 15.0.

A PORT SANITARY AUTHORITY FOR THE CLYDE.

The Local Government Board for Scotland has issued the draft of a provisional order, which they propose to confirm on the expiry of twenty-one days, establishing a sanitary authority for the Customs Port of Glasgow. The Board's Commissioner, Mr. Jamieson, K.C., who held a local inquiry on the subject some eighteen months ago, had reported that the result of the inquiry "had clearly established a case for the constitution of a port sanitary authority for the Customs Port of Glasgow." It appears that the Customs Port of Glasgow embraces the higher navigable reaches of the Clyde, and includes waters now within the jurisdiction of the sanitary authorities of Glasgow, Govan, Partick, and the eastern district of Dumbartonshire. The Corporation of Glasgow is, under the order, constituted the port sanitary authority for this area, with power to levy contributions, on the basis of valuation, upon the other sanitary authorities concerned towards the expenses of the port sanitary administration. The other authorities are to have no representation upon the port local authority. The order leaves the lower reaches of the river, included in the Customs Port of Greenock, as at present, in the hands of the sanitary authorities of Greenock and Port Glasgow. The Corporation is authorized to establish a boarding station for ships proceeding to the Customs Port of Glasgow, within the jurisdiction of the Greenock local authority. The Glasgow Health Department will henceforth control, so far as the public health is concerned, all the shipping that passes what is locally known as the Tail of the Bank at Greenock. Greenock itself will retain its powers over the shipping bound for that port and Port Glasgow. But the prevention of the introduction of diseases from abroad by ships coming up the river to the harbour of Glasgow and all its docks will be in the hands of one authority, at the head of which will be the Medical Officer of Health of Glasgow.

The result is not regarded as wholly satisfactory; it is pointed out that the opportunity has been lost of establishing one port sanitary authority for the whole port of the Clyde. The order sins against the fundamental constitutional principle that taxation and representation should go hand in hand; the sanitary authorities of Govan and Partick will have to contribute to the cost of the new port sanitary authority without having any voice in the management. The order offends against another generally accepted principle by authorizing the intrusion of one local authority into the domain of another.

SOMNOFORM IN DENTAL PRACTICE.

On Wednesday, June 10th, Dr. Rolland and Dr. Field Robinson, of Bordeaux, gave a demonstration of the use of somnoform in the dental department of the Edinburgh Royal Infirmary similar to that which, as was stated in the BRITISH MEDICAL JOURNAL of June 13th, they gave recently in Birmingham. A number of the staff and of prominent medical men in the city were present. Somnoform is a mechanical mixture of ethyl chloride 60 per cent., methyl chloride 35 per cent., and ethyl bromide 5 per cent. Since 1896 ethyl chloride has of course been largely used in general anaesthesia on the Continent, and particularly in France and Germany. In the latter country it has largely displaced nitrous oxide in dental surgery. It occurred to Dr. Rolland that the pure ethyl chloride might be improved on by mixing it with a proportion of the more volatile methyl chloride and so hasten the absorption and promotion of anaesthesia, while the addition of a small amount of bromethyl tended to prolong the anaesthesia and analgesia. The apparatus shown was somewhat similar to the bag and facepiece of a Clover's inhaler by means of which air is excluded at the anaesthetist's will, and a better anaesthesia obtained. Many of the cases were certainly very successful, the anaesthesia was rapidly induced in from 30 to 40 seconds, and an available period of 60 to 75 seconds obtained. The patients did not suffer from pain and vomiting. At the same time Dr. Luke, the Anaethetist to the Royal Infirmary, who has been using pure ethyl chloride in much the same way for some months, cannot see any great advance or difference, while this drug has the advantage of being more stable and less apt to undergo changes than such a mixture as "somnoform." There is always the risk of free bromine separating in bromide of ethyl, and this perhaps accounts for the indifferent results,

nausea, etc., caused when the remnant in a bottle kept for some time was used. To avoid this, Dr. Rolland prefers to keep the mixture stored in glass bulbs, each containing 5 c.cm., sufficient for one dose. Such a method of storing is expensive, and each administration costs 8d., or about 1 franc.

DEATH UNDER CHLOROFORM.

In relation to the above paragraph, it is not inappropriate to quote the following from the *Scotsman* (Edinburgh) of June 9th:

A young woman, Euphemia Stevenson Thomson (24), daughter of Mr. Alexander Thomson, butcher, 60, Raeburn Place, Edinburgh, died yesterday in a dental surgeon's premises in the neighbourhood, whither she had gone to have teeth extracted. Chloroform had been administered to her under the direction of a doctor.

We have no doubt that chloroform in this case was administered with skill and caution, although one may doubt the wisdom of administering chloroform in "a dental surgeon's premises," instead of in the patient's own home and bed; but one may hope that the day is not far distant when chloroform will never be used as the anaesthetic for teeth extraction.

EDINBURGH ROYAL INFIRMARY RESIDENTS' CLUB.

The annual general meeting of members of the Club took place in the North British Station Hotel, Edinburgh, on June 12th, when the reports of the secretary and treasurer were presented. Thereafter the ninth annual dinner was held, Sir Thomas R. Fraser, President of the Club, occupied the chair, and was supported by Drs. David Christison, John Fraser, Alexander James, George A. Gibson, and James Ritchie. In all 59 past and present residents were present at the dinner, and several others put in an appearance later in the evening. The President, after proposing the usual loyal and patriotic toasts, gave the toast of the evening, "The Residency," in a most interesting speech full of reminiscences of the infirmary. A most pleasant evening was spent. Songs were sung by Drs. Alex. James, Hill Thompson, Rowan, and Mr. George Chiene. The menu card was a great artistic success, and suggested the work done by the President on the subjects of strophanthus hispidus, Calabar bean, and cobra venom. Before the proceedings terminated Dr. Burn Murdoch in a brief speech, proposed the toast of "The President," which was enthusiastically honoured. The evening closed with "Auld Lang Syne." Sir W. Mitchell Banks has been elected president, and Mr. H. J. Stiles and Dr. Edwin Bramwell succeed to the vacant places on the committee. Dr. R. J. A. Berry has resigned his position of treasurer which he has held from the formation of the Club, and Dr. W. Macrae Taylor succeeds him.

NEW EDINBURGH DISTRICT ASYLUM.

At a meeting of the Edinburgh Parish Council held on Monday, June 15th, Dr. John Keay, Medical Superintendent of Inverness District Asylum, was appointed Medical Superintendent of the new Edinburgh District Asylum, now in course of erection at Bangour. The salary is to be £500 for two years, with an increase to £800 at the end of that period, with house and allowances, but without board.

SCOTTISH MICROSCOPICAL SOCIETY.

At a meeting held in Edinburgh on June 12th the following gentlemen were elected office-bearers of the Society:

President: David Hepburn, M.D., F.R.S.E.; *Vice-Presidents:* W. C. Crawford, F.R.S.E., and R. A. Robertson, M.A., B.Sc.; *Secretaries:* W. G. Aitchison Robertson, M.D., D.Sc., F.R.C.P.E., and J. A. Terras, B.Sc.; *Treasurer:* Alexander Fraser, M.A.; *Curator:* The Rev. A. B. Morris, F.I.S.; *Council:* R. H. Traquair, M.D., F.R.S.; J. B. Buist, M.D., F.R.C.P.E.; Professor Charles Workman, M.D.; Francis Crawford, F.R.S.E.; Miss L. H. Huie; George Hunter, M.D., F.R.C.P.E.; Professor James Hunter, F.R.C.S.E.; John Cameron, M.B., Ch.B.; and G. W. Watson, L.D.S.

Two communications were made to the Society: (1) Some pathological conditions of the dental pulp, with lantern demonstration, by Mr. G. W. Watson, L.D.S.; and (2) on the origin of the pineal body as an amesial structure, deduced from the study of its development in amphibia, by Mr. John Cameron, M.B., Ch.B.

BEQUESTS TO HOSPITALS.—Under the will of the late Mrs. Mary Susannah Catherine Chapman, of London, £200 has been bequeathed to the East London Hospital for Children at Shadwell £100 each to the Brompton Consumption Hospital, the National Hospital for the Paralysed and Epileptic, and the National Hospital for Diseases of the Heart and Paralysis, and £50 each to Queen Charlotte's Lying-in Hospital, the Cancer Hospital, and the Chelsea Hospital for Women.

Ireland.

THE GRANARD NURSING SCANDAL.

THERE is likely to be considerable trouble before the hostilities aroused by the nursing scandal in the Granard workhouse come to an end. The Chairman of the Board suggested a conference between representatives of the nursing nuns, the medical officer, and the guardians, and a meeting was convened for June 11th. Dr. Kenny did not send a representative, but forwarded a letter in which he intimated that he would rely on the decision of the Local Government Board. Neither did the nuns send a representative, the matter having been taken out of their hands by the Roman Catholic Bishop. In the course of a letter to the Board that prelate says:

You must bear in mind that in the present matter there is no question of forgiveness of injuries so much as of retaining a situation that requires as a condition of success, character, friendly sympathy, mutual co-operation, and, on the part of the nuns at least, a religious devotion to the sick poor. Now I ask you, in the remembrance of your late investigation and official decision, is there even a possibility that such virtues could find a home in Granard Union Hospital as at present constituted? I am convinced there is not, and, therefore, I not only approve of the nuns' resignation, but I insist upon their retiring at once. Religion, morality, and self-respect demand it. In writing thus I have not been unmindful of the reasons that suggest a contrary decision:—(1) That this resignation may seem to some an acknowledgement of guilt on the part of the nuns. (2) That their resignation will be a victory for their adversary. (3) That they must lose their pension or retiring allowance by resigning now, probably on the eve of amalgamation. To all of these I give answer—no amount of money, no achievement of success would be an equivalent of another year's misery and peril in this hospital. I regret to be obliged to say that, in my opinion, the action of the Local Government Board in this case bodes incalculable evil for our public institutions in the future.

There is a further suggestion that some one has been guilty of perjury. A number of the guardians have intimated that they will resign if the nun nurses are withdrawn, and as the Bishop appears to be inflexible, there may be much change in the constitution of the present Board. Perhaps that would be an advantage; but in any case the workhouse hospital will go on. The guardians will be able to secure the services of trained lay nurses, as has been done in so many other places. At a meeting of the guardians on June 15th the resignation of Mother Rose and Sister Mitchell was accepted, and the following resolution was passed:

That we solemnly renew our protest against the action of the Local Government Board in refusing to give judgement on the question of the harmony in the hospital. The Board insisted on having this matter included in the referendum given to the inspector, and the Local Government Board reluctantly conceded. Why, therefore, should we not have judgement on this point? Shall we be driven to suspect that the fountain of justice has been polluted, and that the object is to screen the guilty person?

Thereupon the mover of the resolution gave notice that he would move on that fortnight that the resolution to pay Dr. Kenny's substitute be rescinded.

NATIONAL MATERNITY HOSPITAL.

At the tenth annual meeting of the National Maternity Hospital, Holles Street, Dublin, the report showed that 842 maternity patients had been treated; 150 in the gynaecological wards; extern cases attended at their own homes, 925; at dispensary, 4,891. Two adjacent houses have been purchased for the purpose of erecting a new wing. The governors have applied for and have obtained a charter.

THE PREVENTION OF TUBERCULOSIS.

The annual meeting of the Dublin branch of the National Association for the Prevention of Tuberculosis was held in the Royal College of Physicians, Dublin, on Monday, June 15th, under the presidency of Mr. R. O'Brien Furlong, C.B. The report submitted by Dr. A. E. Boyd (Honorary Secretary) showed that the deaths from tuberculosis in Ireland in 1901 were 12,323, or 2.8 per 1,000—15.6 per cent. of the total death-rate of the country. In England the death-rate from this cause had been falling since 1842, and during the ten years 1891-1900 averaged 2 per 1,000 of the population. In Dublin there were 1,871 deaths from this cause, equal to 4.98 per 1,000, while the corresponding average in London—the Administrative Council area—for the previous ten years was 2 53 per 1,000. The report emphasized the importance of isolating those infected with the disease. The income of the branch amounted to less than £25. The following resolutions were passed:

That this meeting views with grave concern the continued prevalence of consumption and other forms of tuberculosis, especially in Ireland, and urges, with a view to the prevention of these diseases, (1) the adoption of a thorough system of notification of consumption; (2) the provision, for isolation and curative treatment, of sanatoria for the poor by our sanitary authorities and county councils; (3) the establishment of a public bacteriological laboratory, in order that the aid which modern science can render in the diagnosis of disease may be placed at the disposal of the poor; (4) the legal prevention of spitting in public vehicles.

That it is desirable that an inquiry should be held into the causes of the exceptionally high death-rate from consumption in Dublin, and the best methods to reduce it.

Dr. Macan, President of the Royal College of Physicians; Mr. Lambert H. Ormsby, President of the Royal College of Surgeons; Dr. James Craig. Mr. Culverwell, F.T.C.D., Sir Charles Cameron, C.B., Dr. Joseph O'Carroll, Dr. A. Roche, and Dr. More O'Ferrall were among those who addressed the meeting.

CORK LUNATIC ASYLUM.

The annual report of the Cork Lunatic Asylum for the past year again records an increase in the number of inmates, there being 43 more than in previous years. The total number of patients under treatment for the year was 1,898; of these, 122 were discharged recovered. The overcrowding continues, as there are 327 patients above the number which the asylum is designed to receive. The Youghal Auxiliary is rapidly being finished, and will accommodate 400 patients; but, as the city and county workhouses are to be relieved of a number of lunatic patients too, it is feared that the overcrowding in the Cork District Asylum can only be partially relieved. During the past decade the number of patients has increased by 550; over the whole of Ireland the increase has been 5,147, while the expenditure has increased from £258,341 to £325,884. Dr. Woods, the Medical Superintendent, speaking from an experience of thirty years, expresses the opinion that, until a decided effort is made to check hereditary influences, insanity will go on increasing. Intoxicants and ill-health act as exciting causes to bring on insanity, but in nearly all these cases there is the predisposing cause of heredity lying dormant, to be lit up at the critical epochs of life by any exciting cause. In over 40 per cent. of admissions last year heredity was acknowledged. Dr. Woods believes there is "much unregistered insanity still in the country, and much neurotic disease existing, easily to be turned into active insanity by the slightest exciting cause."

REMUNERATION OF POOR-LAW MEDICAL OFFICERS.

The Bandon Branch of the Irish Medical Association has intimated to the Bandon Board of Guardians that it has adopted as the minimum scale of fees for extra-professional services the scale contained in the Mayo resolutions.[1] It was further resolved that the minimum fee for consultation in difficult midwifery and surgical cases shall be at night up to three miles, 2 guineas; up to 12 miles, 3 guineas; during the day, up to twelve miles, 2 guineas. For all other consultations, up to twelve miles, 2 guineas.

THE REFORM OF CONTRACT PRACTICE.

(Continued from p. 1383.)

IN the BRITISH MEDICAL JOURNAL of June 6th and 13th, and under the above heading, accounts were given of steps that have been taken during the last few years to amend the conditions of club and contract practice at Durham, Gateshead, Rotherham, Chatteris, Walsall, and Bournemouth. The series of accounts was prefaced by a statement of the considerations which have led to its compilation, and which demand the attention of all medical men, whether they have any direct interest in club practice or whether they have not. There are certain points upon which decisions will have to be made in all places in which it is resolved to make an endeavour to improve the conditions of club practice, and care has been taken to show what those decisions were in each recorded case.

The following notes are in continuation of the series:

VII.—EAST RETFORD.

The following account is based upon information kindly supplied by Dr. F. J. Pritchard, East Retford:

1. There was no medical society in East Retford, but, in order to deal with the question of club practice, a kind of organization was called into being.

2. As no previous organization of any sort or for any purpose existed, there were no difficulties as to membership.

3. All medical men in East Retford engage to a greater or less extent in club practice. There had been a good deal of private discussion at one time and another about contract practice, and things were brought to a head by one member of the profession calling on each of the others, and taking his opinion as to the desirability of arranging a formal general meeting.

4. After this, a notice was sent to every medical man in the town, asking him to be present at a meeting at a given date and hour. All of them, without exception, accepted the invitation, and all attended. After the matter had been discussed, it was unanimously agreed that they should initiate a common movement for reform of club practice. Only men in practice in East Retford were invited to the meeting or took part in the movement, but subsequently the practitioners in the surrounding country districts were informed of what had been done, and of the conclusions at which the East Retford town practitioners had arrived.

5. The question of what attitude should be adopted towards those who would not join in the movement did not have to be considered, since without exception all joined.

6. When the question was taken up, the rate paid by the clubs was 4s. a head per annum for adults, while members of juvenile affiliated clubs paid only 2s. 6d. a head. These sums included all attendance within a radius of three miles from the centre of the town, except midwifery, and also all medicine and appliances. There were no "private clubs," but in one or two adjacent villages there were small clubs which paid 5s. a head per annum.

7. The views of the medical men were brought to the knowledge of the clubs by a letter addressed to the secretary of each of them. These letters were signed by all the medical men in the town.

8. The proposals thus made to the clubs were that in future the price paid per adult per annum should be 6s. instead of 4s., and that the rate for juveniles should be raised from 2s. 6d. to 4s. It was also proposed that the radius of club attendance should be diminished to two miles from the centre of the town. The letter further stated that if the clubs would not accept this reform, the medical men would cease to attend on them after the lapse of six months.

9. The result was as follows:—The clubs held meetings among themselves, and then proposed that a meeting should be held between them and the medical men to talk over matters. The medical men replied that if the object of such a meeting was to try and persuade them to reduce their terms it would be futile. To this the clubs sent no reply, but started an Amalgamated Medical Aid Association, and advertised for a medical man to work it. The medical men in their turn advertised the facts in the papers, and gave notice to the consultants of the large towns near, and to the medical men in the country districts.

10. The clubs succeeded at last in importing a medical man to work for them, but he is kept in strict quarantine by the local medical men, both professionally and socially, as also by consultants in neighbouring towns. One or two clubs have stood out from the amalgamation and prefer to pay the increased rates, while a good many members of the amalgamated clubs, have, as individuals, accepted the terms offered and returned to the doctors who formerly looked after them, and pay 6s. each.

11. The movement only began about six months ago; the results so far are not unfavourable, and the district is hopeful of its eventual entire success.

VIII.—LINCOLN.

We are indebted to Dr. W. A. Carline, ex-President of the Midland Branch of the British Medical Association, Lincoln, for information which has assisted us in compiling the following account:

1. The question of club practice at Lincoln was taken up about seven years ago by the existing Lincoln Medical Society.

2. The Society invited to its meeting on the subject every member of the profession in the city irrespective of whether he belonged to the Society or otherwise.

3. As stated, no new organization was formed, but for the special purpose in view all were invited to associate themselves with the old Society. The matter was taken up at the request of four "whole-time" medical officers of two Friendly Society medical institutions.

[1] BRITISH MEDICAL JOURNAL, 1902, vol. i, p. 357.

4. All medical men were invited to take part in the movement, and all did so.

5. As no one refused, no question arose as to the attitude to be adopted towards those who stood aloof.

6. At the time action was taken, the majority of practitioners were not interested in club practice. There were a very few private clubs, and an expiring medical aid society. All Friendly Society work was done by the four whole-time medical officers of two medical institutions run by the Friendly Societies. A great many well-to-do tradesmen belonged to these Societies, and efforts were being made to sweep more into the net. These four medical officers were very dissatisfied with their position under the Societies, and drew up a scale of fees and wage limit, and asked the Lincoln Medical Society if it would support them if they tendered their resignations in default of reforms on the lines of their proposals being made by the Societies. This the Medical Society, after calling a general meeting of the profession, agreed to do, and a resolution embodying the terms of the Society medical officers was signed by every practitioner in the city.

7. The views of the medical men were brought to the notice of the Societies by the four medical officers in their employ by the latter sending in a statement of the reforms they thought necessary, and tendering their resignations in default of their being accepted.

8. The views thus expressed were that there should be a wage or income limit in all "clubs" of £2 a week or a rental of £20 a year. That male adults and children (not exceeding 4 in any one family) should pay 4s. 4d. per annum, and female adults 5s. if the income was over £1 a week; and if not, 4s. 4d. for men and 4s. for women and children. Members of juvenile clubs 4s. 4d. per annum in all cases. Dislocations, fractures, and major operations to be paid for at the same rate as allowed by the Local Government Board. Minor operations, 5s. Confinements, 10s. 6d., or if operative, 15s. Teeth, 1s. Consultations, 5s. Examination before admission, 2s. 6d. Extra certificates for sick pay from other clubs, 1s. each. The medical officers to receive the whole of the fees after deduction of legitimate expenses. Three months' notice on either side before termination of a medical officer's engagement.

9. The Friendly Societies refused to accept these terms, and the four medical officers concerned sent in their resignations, which were accepted. One of them, however, broke his word and "ratted" at the last moment, and, with three medical men who have since been engaged, continues to serve the Societies.

10. The present position is that a large number of well-to-do club members have become patients of private practitioners, while a larger number of artizans than formerly now employ private practitioners in any case of serious illness. The status of the club doctors has declined, and all four are kept in strict quarantine by their fellow practitioners in the city. Touting for members by the clubs appears to have been abandoned. As far as can be discovered no cases of hardship to the less well to do practitioners have resulted from the movement.

11. The Lincoln Medical Society recently appointed a subcommittee to inquire into the present position of things; and to draw up a report upon the subject. The result of part of this inquiry is shown in the preceding clause. The rest contained an expression of certain views, the spirit of which is worthy of careful note by the whole profession. They were as follows: (1) That any reversal of the policy determined on in 1896 would result in a general weakening of the position of the profession throughout the country in connexion with club questions, and (2) in a loss of prestige by the profession in Lincoln, and a recrudescence of the evils which it was the object of the policy adopted to combat. (3) That inasmuch as at the time of the movement a considerable amount of financial support was received from the profession at large (a guarantee fund was formed) "we in Lincoln are bound in honour to adhere to the position then taken up." It is then suggested that the policy should be reaffirmed and the expressed adherence to it of sundry medical men who have come to Lincoln in the interval obtained, and that the relation of the profession to the club doctors should be more closely defined as follows, namely, that in ordinary cases of sickness medical attendance should be entirely refused so long as medicine or attendance of any sort are received from club sources, but that it should be accorded under certain special circumstances: (*a*) sudden emergencies threatening life where instant help is needed; (*b*) medico-legal cases involving the giving of evidence in a court of law; (*c*) cases under the Workmen's Compensation Act and in connexion with Accident Insurance Companies. All such exceptional cases to be reported to the Secretary by the member concerned, to be brought before the society at its next meeting. This report was unanimously adopted.

IX.—Dolgelly.

Dr. Hugh Jones of Dolgelly has been good enough to supply information which has been used in compiling the following account of what was done in his locality.

1. There is no medical society at Dolgelly, and the movement that occurred with regard to the question of club practice was of rather an informal character.

2. In the absence of any formal society, either existing or proposed, there were no difficulties as to membership.

3. The greater part of the club practice in Dolgelly was in the hands of two partners, and the movement for reform originated with one of them. The first definite step taken was an informal meeting at which all the medical men practising in Dolgelly were present. At this meeting it was resolved and recorded in a document signed by all present that the Friendly Societies, male and female, should not in future be attended for less than 5s. a head for each adult.

4. Every medical man in the town was invited to be present on the evening when the matter was discussed; all came, and all agreed to move together in the matter.

5. No one stood out from the movement, so no question was raised as to what the general attitude should be towards any one who would not join in it.

6. The state of club practice when the movement took place was as follows: The rate for male adults per annum was 3s. 6d., while clubs for women paid only 3s. a head. The distance included in club rates was ten miles from Dolgelly. This, in a hilly mountainous country, was a very serious matter, especially if, as was not infrequently the case, visits had to be repeated day after day. There are no private medical clubs in Dolgelly, nor any associations for medical aid except the various Friendly Societies. All medical attendance is included in the club rates except midwifery, and, though there is an idea that illness brought on by a patient's own folly or debauchery disentitles him to club treatment for it, no real effect is given to it in actual practice.

7. Before there was time to communicate the views of the medical men to the clubs, the latter got wind of what was going on, and sent through their secretaries to ask for formal information. This was accorded them.

8. The only resolution come to by the medical men was the one quoted—namely, that 5s. a head should in future be the lowest rate for any Friendly or other Society, and that every member should be free to choose his own doctor, and this is what the societies were informed. The question of a limited radius was not gone into, nor any other question discussed except the rate a head per annum.

9. The result was that the clubs held a meeting to consider the matter. They were in favour of their members being each allowed to choose his own doctor, but unanimously rejected the increase of pay from 3s. 6d. to 5s. They communicated their views to the medical men, who refused to accept them. Then they tried to import a medical man. They succeeded at last in getting one, but on some remarks being made by the British Medical Journal about him, he threw his position up. After trying in vain to get some one to replace him, the clubs again approached the medical men and offered to increase their rate a head to 4s. 3d. This offer was considered at a meeting of the medical men, and, after discussion, accepted by a majority of votes.

10. The present position is that the clubs now pay 4s. 3d. a head all round, the members having the right to choose their own doctor. The radius question remains as before. One medical man has adhered to his original decision and refused to accept any club patients for less that 5s. One large club has now accepted these terms so far as he is concerned.

11. The association, such as it was, was only of a temporary character. It succeeded in increasing the rate to some extent, but left many other important questions untouched. As one medical man has been successful although standing out by himself, there can be little doubt that the limited movement would have been entirely successful if greater firmness had been shown. Even 5s. is a very low rate for a ten-mile radius in such a bad country for travelling as that round Dolgelly.

An Ophthalmological Society has just been founded in Vienna. Professor Schnabel has been elected President.

THE EPIDEMIC OF SMALL-POX.

DURING the fortnight that has elapsed since the last notice on the progress of the small-pox epidemic, the hopeful view then taken has, upon the whole, been fully justified. From one or two localities the news is not entirely reassuring, and the absence of reports from others does not necessarily mean that they are entirely free from the disease. Nevertheless the general trend of matters supports the view that the epidemic is at last coming to an end.

From Northumberland and the County of Durham no reports have been received for a long time, nor yet from Westmorland and Cumberland, which counties have never figured in these notices to any great extent. Lincolnshire, Rutland, Cambridge, Suffolk, and Norfolk also send no reports, and may be said to have practically escaped altogether, one or two isolated cases alone having been recorded in any of these counties since these notes began.

Yorkshire, perhaps, should be excluded from the favourable view taken, but even here there is decidedly an improvement noticeable. At Leeds, though at the date of the last report to hand there were still 80 cases under treatment, the average number of reports is decreasing with considerable steadiness.

Brighouse has had another case after an interval of over three weeks, and at Halifax there has been a sharp recrudescence, 12 cases having occurred in one week. At Bradford also a good many new cases have had to be notified, some of which were due to an unfortunate error of diagnosis whereby a case was hurriedly admitted into a ward full of scarlet fever cases, the early small-pox flush being taken for that of scarlet fever. In the presence of an outbreak of scarlet fever it is a very comprehensible mistake. Unfortunately the parents of many of the children in the ward refused to allow them to be vaccinated, and infection occurred in the cases of some children who meantime were discharged to their homes on recovery from scarlet fever.

At Dewsbury things appear to be going well, though during the past weeks a considerable number of cases have had to be taken in hand from Ravensthorpe. Sheffield also at the date of the last report was not entirely clear.

In Lancashire matters are certainly improving, the decrease in the number of notifications being very marked at Liverpool. Salford kept clean for about ten days, but then got another case. The total number of notifications at this place appears to have been about 150. Neither Heywood nor Blackburn are apparently as yet entirely free.

In Nottinghamshire there has been a sharp outbreak at the colliery village of Newstead, with one or two cases at Selston and Gotham. At the first village named the disease was at first believed to be chicken-pox until the cases developed fever, and some 20 cases occurred in rapid succession. Hucknall Torkard, on the other hand, has at length been able to reopen its schools. The county indeed in general appears to have nearly shaken itself free, though it is too early at present to congratulate it.

In Leicestershire the epidemic upon the whole appears to be subsiding. The notifications at Leicester are now very intermittent; but the disease cannot be considered to have been as yet stamped out, often as the Leicester papers say that it is. Loughborough, too, has had a sharp little renewed outburst in the form of 8 cases.

In Derbyshire also things are going well, a case at Ripley, imported from Alfreton, being apparently the only one which has required action recently.

From Staffordshire and Warwick there are no reports to notice; but Wellington and West Bromwich are understood to have had a few cases comparatively recently.

In Shropshire, Ludlow has had an unfortunate experience. The isolation hospital, after use for small-pox cases, had just been disinfected and put into order, when an old drover who did not belong to the town fell sick in it and developed small-pox.

In Worcestershire, the disease is said to be still smouldering at Dudley, though cases do not apparently occur very often.

In Essex, a number of fresh cases have been notified at Colchester, but there are distinct signs of a decrease, no case having been notified since June 9th. In all there have been 23 cases since May 1st, with 4 deaths; 5 of the cases came from the workhouse infirmary, but as all the other inmates have been vaccinated, and the last case was removed on June 3rd, fresh cases from that source are not anticipated. The outbreak there may probably be ascribed to the original case having been in the receiving ward for two days, while infectious, before a diagnosis was made. According to the monthly report of the medical officer of health to the Council, of the 13 cases admitted to the hospital, 8 showed no evidence of vaccination, while none of the remaining 5 had been vaccinated within sixteen years or ever revaccinated at all.

In the London district, the disease appears to be making little if any headway.

In Wales, Cardiff is apparently slowly getting rid of the disease, and the same may be said of the rest of Wales, Pontcanna being the only place that has recently had more than a case or two. From this latter place, Dr. Walford, medical officer of health for Cardiff, was able to quote to his authority rather a striking example of the virtues of vaccination. There were 4 children in a house where a case of small-pox occurred, and 3 of them were vaccinated. The father of the fourth was a "conscientious objector," and his child developed the disease, while the others escaped.

From Scotland there is very little to report, but Dundee is not free, and has 10 cases in hospital and 16 contacts in the reception house.

LITERARY NOTES.

DR. H. E. RANDALL, writing in *American Medicine* of April 25th, says, in reference to a case in which a patient suffering from vesical calculus tried to crush and break the stone himself, cited by Gould and Pyle in their *Anomalies and Curiosities of Medicine*, that an old book, entitled, *Surgeons and Hospitals of Paris*, by F. Campbell Stewart, M.D., published by A. Burke, of Buffalo, contains an account of the case of General Claude Martine. In the biographical notice of Civiale the following passage occurs:

Frequent attempts had been made by the older surgeons to accomplish the desirable end of removing stone from the bladder without having recourse to lithotomy and even as far back as 400 years before Christ Hippocrates conceived the idea that such a result was practicable Since his time, and through almost every succeeding age, numerous attempts, always progressing, have been made both by professional men and those wholly unacquainted with the principles of our art. No positive advance was made, however, notwithstanding the valuable fact communicated by the experience of General Claude Martine, who positively accomplished the partial destruction of a stone contained in his own bladder by the assistance of a small file, which he introduced through a catheter, and with which he broke off small fragments from the calculus, which were afterwards expelled.

Writing in *Nature* of May 21st, Mr. Edward McClure states that in a work called *Opera Nuova Intitulata il Perché, Utilissima ad Intendere le Cagioni di Molte Cose*, etc., published in Venice in 1520, the following passage occurs:

Dal sputo del Tisico o da la sua boca viene fuora un vapore fetido e acuto che entra poi per la boca de colui che conversa con quello e corrode simelmente il palmone de esso e in questo modo genera tisica. (From the sputum of the consumptive or from his mouth there comes forth a fetid and pungent vapour, which then enters the mouth of anyone holding converse with him, and in like manner corrodes the former's lung and in that fashion breeds consumption.)

If for "vapour" we substitute "particles containing bacilli," we have the modern conception of the mode of transmission of phthisis.

The sixth annual meeting of the American Association of Medical Librarians was held on May 16th, under the presidency of Professor Osler. A large number of librarians and physicians representing the medical libraries throughout the United States were present. The following were elected officers for the ensuing year: *President:* Dr. William Osler (Baltimore). *Vice-President:* Dr. Abraham Jacobi (New York). *Secretary:* Mr. Albert T. Huntington (Brooklyn). *Treasurer:* Dr. George D. Hersey (Providence). *Executive Committee:* Mr. John S. Brownne (New York), Mr. Charles P. Fisher (Philadelphia), and Dr. James M. Winfield (Brooklyn). *Manager of Exchange:* Miss Marcia C. Noyes (Baltimore). The next meeting will be held in June, 1904, at Atlantic City, New Jersey.

The third number of the *Health Resort*, which we have just received, is full of interesting information likely to be of great use to holiday makers. Judge Adams, K.C., contributes a valuable article on Kilkee; Lady Markham writes on the Mineral Baths of Jamaica, and Mr. Walter Jerrold on the Surrey Highlands, dealing more particularly with Hindhead and the Hog's Back. "Climaticus" writes in praise of Llandrindod Wells as "a progressive spa." The periodical is excellently printed and beautifully illustrated.

We have received communications from Dr. W. Owen Jones, Dr. Purdon, Dr. A. Humphry Davy, and Mr. Henry L. P. Hulbert calling attention to the fact that the red-light treatment of small-pox was employed by John of Gaddesden. Mr. Hulbert quotes the following passage from the *Rosa Anglica* written by him between the years 1305 and 1315. The following is the passage:

Deinde capiatur scarletum rubrum et involvatur variolosus totaliter vel in panno alio rubro sicut ego feci de filio nobilissimo regis Angliae quando patiebatur istos morbos et feci omnia circa lectum esse rubra—et est bona cura. Et curavi eum in sequenti sine vestigiis variolarum.

Freind in his *History of Physick*, London, MDCCXXVI, comments on this passage as follows:

Notwithstanding this (that is, the doubt in which he often leaves us as to whether he be a better Physician or a Poet) John made some figure, I don't question, even for his learning in his time and was reckoned a man of judgement in his Practice. For I find him employed at Court, where he had the care of the King's son (one of Edward the First, or the second at least, I suppose) in the Small Pox. Here he played his game very well, and to show his skill in inflammatory distempers, he with a proper formality and a countenance of much importance, order'd the patient to be wrap'd up in scarlet; and everything about the bed to be red; no doubt the room was hung in the same manner. This, he says, made him recover, without so much as leaving one mark in his face; and he commends it for an excellent way of curing. He seems to have improved this hint from the old women's receipts he found in Gilbert: but he certainly judg'd right; and knew very well of how much weight it is to keep up outward appearances and sometimes to lay the greatest stress upon trifles.

In a paper on the Red-light Treatment of Small-pox, contributed by Professor Finsen to the British Medical Journal of December 7th, 1895, he begins by stating that "in the Middle Ages small-pox patients were treated by wrapping them in red coverings and by putting red balls in their beds," and he goes on to recall the fact that John of Gaddesden treated a Prince of Wales for small-pox by surrounding him with red objects. He adds that red is still much employed in different places in the popular treatment of small-pox. In Roumania, according to Dr. Capitanowitz, the small-pox patient's face and hands are covered with red cloths; Dr. Lassabatie states that in Tonkin the patients are placed in alcoves which are closed with numerous red carpets; whilst Dr. Sassakawa reports that in Japan the patients are covered with red blankets, and children with small-pox are given red toys.

In a paper on the nervous affections of the heart contributed by Dr. G. A. Gibson to the June number of the *Edinburgh Medical Journal*, the effect of fear in stopping the heart and sometimes causing death is illustrated by the story of a French king who, for some error on the part of his jester, held a mock trial, when he was condemned to death. A masked headsman and a block in solemn black were introduced. The jester was made to kneel at the block, but instead of beheading him the executioner simply sprinkled a few drops of water on the back of his neck, and the whole Court, thinking this an excellent jest, broke into a fit of laughter. To the consternation of all, however, the jester never moved a muscle, and, on examination, was found to be dead. In a footnote a similar incident which occurred in Edinburgh is related. One of the servitors of the University had made himself obnoxious to the medical undergraduates, and was consequently arraigned before a mock tribunal and condemned to death. With every circumstance of the solemnity befitting the occasion, the servitor was brought to the block, and, almost as in the case of the French jester, was gently flicked on the back of the neck with a wet towel. A similar tragic termination occurred in this instance. The secret was well kept, but some inkling of the facts leaked out, and for long afterwards in the streets of Edinburgh, any youth bearing the semblance of a student used to be greeted by the mob with the grim pleasantry: "Who killed Downie?"

In a recent number of the *Presse Médicale* Dr. Laverenne tells a story which shows that dichotomy, or division of the fee, was not unknown among the doctors of the Grand Monarque. In 1693 Louis XIV, then 55, was beginning to feel the touch of age. His physicians had prescribed monthly bleeding, and Maréchal, the surgeon entrusted with the performance of the operation, was always near the king. An ambitious young surgeon conceived the idea of getting the job. The difficulty was to approach the king. The first step was to obtain an introduction to Daquin, the chief Court physician, and offer to give him 10,000 ecus if he would procure for him an opportunity of bleeding the king. Daquin, who loved money, succumbed to temptation. A chance soon presented itself of carrying the scheme into effect. Maréchal took a brief holiday. Daquin, keeping the young surgeon at hand, visited the king as usual, pretended to be alarmed at the state of the royal pulse, and declared that immediate venesection was necessary. The king hesitated to submit his arm to any one but Maréchal, but at last yielded and allowed himself to be bled by the young surgeon. In the meantime Maréchal, who had been summoned, returned in hot haste, and was greatly surprised and annoyed at what had taken place. Suspecting some trickery on the part of Daquin, he sought out the young surgeon, and extracted from him an avowal of what had taken place. He then informed the king, who, in a transport of rage, had Daquin arrested and haled before the Council of State. The obsequious Council found the chief physician guilty of "trafficking in the blood royal," and unanimously voted the death sentence. The king, however, graciously spared the physician's life, but dismissed him from his service and banished him from the Court. Daquin did not long survive his disgrace, for he died in 1696.

Persons with the "old gold" hair, characteristic of what is known among artists as the Venetian type of beauty, are believed by some to be peculiarly predisposed to tuberculosis. It is an old belief that red hair is a mark of consumptive tendency. Professor H. Huchard, of Paris, has unearthed a reference to the subject in the letters of Gui Patin, a Paris physician who flourished in the seventeenth century. In Letter LXII of an edition published at Rotterdam in 1689 there occurs the following passage:

It is well known that inflammation of the lung is fatal to red-haired people. The late M. de la Vigne, one of our physicians of the Faculty, had very red hair. I had him once called in consultation about the case of a secretary of the king, named Collier, who was 75 years of age, and who was also red-haired and suffering from inflammation of the lung—facts which made me predict that the disease would prove fatal. M. de la Vigne asked me where I had learnt this prognostic point as to red-haired people. I replied that I had always observed it, and besides I had heard it mentioned by Nicolas Pietre, who had learnt it from his brother, big Simon Pietre, and that the reason was that red-haired persons abound in acrid and malignant serosity. He told me that he had always remarked the same thing. I have since read it in the *Ephemerides* of Baillou.

ASSOCIATION NOTICES.

COUNCIL.

NOTICE OF MEETING.

A Meeting of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 8th day of July next, at 2 o'clock in the afternoon.

May, 1903. Guy Elliston, *General Secretary.*

ELECTION OF MEMBERS.

Any candidate for election should forward his application upon a form, which will be furnished by the General Secretary of the Association, 429, Strand. Applications for membership should be sent to the General Secretary not less than thirty-five days prior to the date of a meeting of the Council.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m. Members can have their letters addressed to them at the office.

Guy Elliston, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

Aberdeen Branch.—It is requested that nominations (signed by three members of the Branch) of a representative of the Branch on the Central Council be sent to Dr. Gray, 5, Bonaccord Square, Aberdeen, by June 27th.—H. M. W. Gray and J. F. Christie, Joint Honorary Secretaries.

Birmingham and Midland Counties Branch.—The forty-ninth annual meeting of the Branch will be held in the Medical Institute, Birmingham, on Friday, June 26th, at 4 p.m. The retiring President, Dr. Henry Malet, will introduce his successor, Mr. Jordan Lloyd, who will deliver an address. The business to be transacted will be duly notified to each member by circular. The annual dinner will be held on the same date as the annual meeting, June 26th, at 7 p.m., in the Grand Hotel, Birmingham. Tickets 5s. each. Members may introduce guests.—J. T. J. Morrison, F.R.C.S., T. S. Short, M.D., Honorary Secretaries.

Birmingham and Midland Counties Branch: Coventry and Nuneaton and Tamworth Divisions.—A joint meeting of these Divisions will be held at the Coventry and Warwickshire Hospital, Coventry, on June 24th, at 3.30 p.m., for the purpose of electing a representative for representative meetings. At the termination of this meeting a meeting of the Coventry Division will be held to elect a representative on the Branch Council. Members of the Division who are desirous of reading papers or exhibiting specimens or cases at any of the meetings are requested to communicate with the Honorary Secretary, E. H. Snell, Knighton House, Coventry.

Border Counties Branch.—The annual general meeting of this Branch will be held in Carlisle on Friday, June 26th. Gentlemen wishing to read papers or to show cases or specimens are requested to communicate as early as possible with the Secretary, Francis R. Hill, 12, Bolton Place, Carlisle.

Dundee, Perth, and Stirling Branches.—The nomination of candidates for office of elective member of Council for the ensuing year must be made in writing on or before July 4th to Dr. Moorhouse, 1, Glebe Avenue, Stirling. Each member may nominate a candidate, but no name will be voted on unless supported by three nominations.—R. C. Buist, M.D., 166, Nethergate, Dundee: W. A. Taylor, M.B., 10, Marshall Place, Perth; J. E. Moorhouse, M.D., 1, Glebe Avenue, Stirling.

East York and North Lincoln Branch.—The annual meeting of the above Branch will be held at the Royal Infirmary, Hull, at 4 p.m. on Tuesday, June 30th, and will be followed by the annual dinner (tickets 6s. 6d. each) at 7.45 p.m. at the Imperial Hotel, Hull.—E. M. Hainworth, 16, Albion Street Hull, Honorary Secretary.

Edinburgh and Fife Branches.—The names of candidates for election as members of Council to represent these conjoint Branches must be sent to Dr. Logan Turner, 27, Walker Street, Edinburgh, on or before

June 22nd. Each candidate must be nominated in writing by three members of the conjoint Branches, which are entitled to elect two representatives.

LANCASHIRE AND CHESHIRE BRANCH.—The annual meeting of this Branch will be held in Chester on Tuesday, June 23rd, at 2 p.m. Members wishing to read papers, show cases or specimens, etc., should communicate with the Honorary Secretary, T. ARTHUR HELME, M.D., 3, St. Peter's Square, Manchester.

LEINSTER AND SOUTH-EASTERN OF IRELAND BRANCHES.—The nomination of candidates for election as members of the Central Council of the Association must be sent to the Honorary Secretary not later than Monday, June 29th. Each candidate must be nominated in writing by three members of either Branch. The Branches are entitled to jointly elect two members of Council.—ARTHUR H. WHITE, Honorary Secretary, Leinster Branch.

METROPOLITAN COUNTIES BRANCH.—The fifty-first annual meeting of the Branch will be held at the Hotel Cecil on Tuesday, June 30th, at 6 p.m. The business to be transacted is to appoint officers for the ensuing year, to receive the reports of the Treasurer and of the retiring Council, and to hear an address from the incoming President, Mr. H. W. Kiallmark. At 7 p.m. precisely the members will dine together, the President in the chair. The charge for the dinner will be 8s. 6d. each, exclusive of wine. —H. BETHAM ROBINSON, 1, Upper Wimpole Street, W., GEORGE ROWELL, 6, Cavendish Place, W., Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: CITY DIVISION.—The first annual general meeting of this Division will be held on Thursday, June 25th, at 4 p.m., in the Committee Room of the London Institution, Finsbury Circus, E.C. Agenda: Minutes of the last meeting. Correspondence. Election of officers. Consideration of ethical model rules suggested for adoption by the Division, as published in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of March 7th. Consideration of the notices of motion given for the annual representative meeting of the Association to be held at Swansea on July 28th to 31st (see JOURNAL for April 25th, p. 994). Any such business as may arise.—E. W. GOODALL, Honorary Secretary, Eastern Hospital, Homerton, N.E.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The annual dinner of this District will be held at the Royal Forest Hotel, Chingford, on Tuesday, June 23rd, at 6.45 p.m., Mr. H. E. Powell, Vice-President of the District, in the chair. Price of the dinner, 7s. 6d., exclusive of wine; morning dress. Members intending to be present are requested to send their names with the number of guests to be introduced as soon as possible, and not later than Thursday, June 18th, to C. J. MORTON, 56, Orford Road, Walthamstow, Honorary Secretary.

NORTH OF ENGLAND BRANCH.—A joint meeting of the Bishop Auckland, Chester-le-Street, and Durham Divisions will be held at the Wear Valley Hotel, Bishop Auckland, on Tuesday, June 23rd, at 4 p.m., to elect a representative and to consider business in connexion with the annual representative meeting.—JOHN PAXTON, Bleak House, Butterknowle, R.S.O., co. Durham, Honorary Secretary.

NORTH LANCASHIRE AND SOUTH WESTMORLAND BRANCH.—The annual meeting will be held at Lancaster on June 24th. Members wishing to show cases or specimens or to bring any business before the meeting are requested to communicate with the Honorary Secretary, A. S. BARLING, High Street, Lancaster.

NORTH WALES BRANCH.—The last annual meeting of this Branch, before its amalgamation with Shropshire under the new Constitution, will be held at Barmouth, the beginning of July. Members having papers to read, or cases to communicate, are requested to intimate by June 27th.—W. JONES-MORRIS, Portmadoc, H. JONES-ROBERTS, Pen-y-groes, Honorary Secretaries.

SOUTH-EASTERN BRANCH.—The annual meeting of this Branch will be held at the Lion Hotel, Guildford, on Thursday, June 25th, at 2 p.m. Mr. A. A. Napper, President-elect, kindly invites members of the Branch to lunch at the hotel between 1 and 2. Dinner at 6.30 p.m.; charge 7s. The local committee provides wine.—T. JENNER VERRALL, 97, Montpellier Road, Brighton, Honorary Secretary.

SOUTH-EASTERN OF IRELAND BRANCH.—The annual meeting of this Branch will be held at Clonmel on Wednesday, June 24th, for the purpose of electing officers and for other business.—RAYMOND W. ORPEN, Bagnalstown, Honorary Secretary.

SOUTHERN BRANCH.—The thirtieth annual meeting of this Branch will be held at the Royal National Hospital for Consumption, Ventnor, on Friday, July 3rd. The President kindly invites the members to luncheon at the Royal Hotel, Ventnor, at half-past one o'clock. The general meeting will be held at the Royal National Hospital at 2.30. At this meeting new Branch rules and ethical rules will be submitted for approval by the Branch Council. Members desirous of reading papers are requested to forward the titles to the Honorary Secretary at once. No communication must exceed seven minutes in length, and no subsequent speech must exceed five minutes. An address will be delivered by Dr. R. Robertson, President. Members intending to be present at luncheon are requested to communicate with Dr. Robertson, St. Catherine's House, Ventnor, not later than June 30th. Notice is hereby given under By-law 22 that the names of candidates for the office of representative on the General Council of the Association, each nominated by three electors, must be sent to the Honorary Secretary of the Branch on or before July 3rd.—H. J. MANNING, Honorary Secretary and Treasurer, Laverstock House, Salisbury.

SOUTHERN BRANCH: PORTSMOUTH DIVISION.—The first annual meeting of this Division under the new Constitution will be held at 5, Pembroke Road, Portsmouth, on Tuesday, June 23rd, at 3.30 p.m. The business to be transacted will be as follows: Minutes. Correspondence. The accounts for the past year. Librarian's report. The election of the following officers to form the Executive Committee: Chairman, Vice-Chairman, Secretary (who shall also act as Treasurer), three members of the Branch Council, and ten other members. The meeting will then resolve itself into a general meeting of the constituency formed by this Division and that of the Isle of Wight, and after the election of a Chairman will proceed to the election of a representative of the constituency in representative meetings of the Association. It is then proposed to discuss: (1) The notices of motion, etc., for discussion by the annual representative meeting. (2) The provisions of the Midwives Act, which is shortly to become law. (3) Any other business.—J. G. BLACKMAN, Poplar House, Kingston Crescent, Portsmouth, Honorary Secretary.

ULSTER BRANCH.—The annual meeting of this Branch will be held on Friday, July 10th, in Belfast. Any member having any business to bring before the meeting should communicate with the Secretary on or before July 2nd. Voting papers for the various officers have been sent out to each member, and are required to be returned on or before July 7th. If any member has not received the necessary forms, communication might be sent to the Honorary Secretary, WILLIAM CALWELL, M.D., 1, College Square North, Belfast.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH: HEREFORDSHIRE DIVISION.—The annual meeting of this Division will be held at the Herefordshire General Hospital, Hereford, on Wednesday, June 24th, at 3.30 p.m. All members of the Association living in the Division, which includes the county of Herefordshire (except the town of Bromyard), New Radnor, and Presteign, are requested to attend this meeting.—HERBERT JONES, Hereford, Honorary Secretary.

YORKSHIRE BRANCH.—The annual meeting of this Branch will be held at the Library, the Medical School, Sheffield, on Wednesday, June 24th, at 4 o'clock, at which the officers will be elected. The Branch is now entitled to only two members on the General Council. The annual dinner will take place at 6.30 at the Royal Victoria Hotel. Members intending to read papers, make any communications, propose new members, etc., are requested to communicate at once with the Secretary, ADOLPH BRONNER, 33, Manor Row, Bradford.

SPECIAL CORRESPONDENCE.

MANCHESTER.

Diminution of Noises at Night.—Electrical Transit and its Effect.—Infant Mortality.

"PEACE, perfect peace," should reign at night outside the hotels or domiciles where humanity sleeps, or attempts to do so. This is not always the case. Much might be done to lessen the noise of heavy traffic in busy streets by the use of wood pavement. A very interesting case in point has arisen in connexion with the new Midland Hotel in Manchester, which is surrounded on every side by streets paved with "setts," which are conducive to noise-making, and are therefore sleep-dispelling. The City Council has agreed to substitute wood paving for the setts. The case of churches is not quite parallel, because services are conducted on Sunday, when the street traffic is practically suspended, and, moreover, people are not supposed to go to church to sleep. Every contrivance that lessens the jar of noise is to be welcomed in a great city, where the other conditions of life are usually sufficiently harassing to the nervous system.

Electrical transit is rapidly altering the conditions of life in our great cities, and is destined to produce still greater changes. Given the opportunity the public will embrace it. This is clearly shown by what happened in Manchester during Whit week in regard to the receipts of the city tramways. In this single holiday week a sum of £16,000 was taken in tramway fares. Municipalization of the tramways is thus proving "a boon and a blessing to men," as well as to the Corporation and ratepayers. Everywhere along the suburban tram lines new dwellings are springing up. The physical conditions and environment are better than in the crowded city, so that ultimately the effect of tramway extension beyond the city boundaries is sure to have a good influence on the health of those who are bound to spend their days in the busy workshops of the city proper.

The report of the medical officer of health for the first quarter of this year shows the heavy death-rate among children in the city. During the three months 2,903 deaths were registered, and no fewer than 1,233 were of children under 5 years of age. Whereas the total death-rate was equal to 21 in every 1,000 persons, the death-rate among children was no less than 71, as compared with 63.9 in the five previous years. The effects of education and sanitary surroundings are to be traced in the fact that whilst the death-rate in North Manchester did not exceed 49.3 per 1,000, in South Manchester it rose to 75.7, and in the Manchester Township itself to 91.8 per 1,000. The fresh cases of infectious sickness reported were 1,138. This contrasts with 1,134 in the immediately

preceding quarter, and 636 cases as the average number in the corresponding quarters of the previous five years. The cases included 245 of small-pox, 575 of scarlet fever, and 142 of diphtheria. The cases of small-pox were equal to an annual rate of 1.77 per 1,000. Of the twelve selected notification towns of Lancashire and Yorkshire which together contain a population estimated at 3,109,460, none had a clean bill, and the ratio was equal to 2.05 per 1,000 of the aggregate population. In speaking of measles and whooping cough, it is mentioned that in order to enable the health department to learn of the outbreak of those diseases immediately school children are attacked the School Board authorities now furnish the medical officer of health with postcards immediately any cases come to the notice of the attendance officers. These are forthwith entered on special inquiry forms and handed to the sanitary inspectors. The inspectors call at the homes of the children and explain the printed instructions, at the same time warning the parents not to allow the patient to come in contact with other children—in the case of measles for four weeks after the beginning of the illness, and of whooping-cough till the whoops have ceased.

BERLIN.

Laboratory Plague: Probable Mode of Infection: Precautions.—Ultra-microscopic Particles.

THERE have been no further cases of plague, and Marggraf, the male nurse who caught the infection from Dr. Sachs, is on the high road to recovery. In a few days the quarantine will be over, and the persons (twenty in number) segregated and lodged in the quarantine pavilions will be dismissed to their homes. At this week's meeting of the Verein für innere Medizin on the evening of June 15th, Professor Kirchner read a paper on the two plague cases. Dr. Sachs's tragic death, he said, proved that in spite of all precautionary measures there must be a gap somewhere. Probably the infection came about in the following way. During the process of taking lymph from a guinea-pig infected with plague bacilli, a little air entered the syringe, so that the fluid was ejected not as a drop, but as spray; and particles might possibly have been inhaled by Dr. Sachs. As for Marggraf—the second case—he had the advantage of being treated with plague serum from the first. He had been given 185 c.cm. of the French plague serum in all, and the effect was remarkable. After the third injection the temperature fell to 36.4° C., and had been normal since then. The precautions against the spread of the disease, Professor Kirchner reported, had not been confined to persons who had come in contact with Dr. Sachs. All persons living in the building in which Dr. Sachs lodged were watched and the children kept from school. The drains in that district had been searched for rats.

A few months ago the physicists, H. Siedentopf and R. Szigmondy, published an article in the *Annalen für Physik* on a Method for Rendering Visible and Determining the Size of Ultra-microscopic Particles. Abbe and Helmholtz calculated the limit of microscopic visibility, and, to all intents and purposes, the efficiency of our best microscopes coincides with the theoretic calculation. Messrs. Siedentopf and Szigmondy, however, have succeeded in extending the limits of microscopic visibility. Ruby-coloured glass owes its colour to gold particles, which, however, are too minute to be recognized separately under the ordinary microscope arrangement. The limit of the ultra-microscopic surface area is probably 36 square $\mu\mu$.

CORRESPONDENCE.

MEDICAL DEFENCE.

SIR,—Mr. Edmund Owen, in his letter published in the BRITISH MEDICAL JOURNAL of June 13th, deals with a few points touching the two Societies engaged in the work of defending medical men who are unjustly attacked.

Mr. Owen's first complaint is that there is no need for two such Societies. In holding this view he is on the side of the majority. On numerous occasions the amalgamation of these two Societies has been discussed. If Mr. Owen will make himself acquainted with the published facts of those discussions, he will then blame for the existing state of things only those who are blameworthy. Even a little knowledge of the subject he criticizes is sometimes useful to the critic.

Mr. Owen's next complaint is that those two Societies were opposed to one another, one in defending, while the other attacked a medical man, whose case was recently tried by the General Medical Council. Mr. Owen describes this action of the societies as "absurd, wasteful.....and absolutely indecent." His tactful use of adjectives, and the sweet reasonableness of his words, may possibly fail to impress so deeply as Mr. Owen wishes those who are interested in the affairs of medical defence. The Medical Protection Society has for its first duty the defence of its members. This duty, in proper cases, the Society will always do, no matter by whom the attack may be led.

On the part, I think, of the majority of those who have given much attention to the subject of medical defence, there is a strong wish to see that very important matter taken in hand by one powerful society. I am glad to find Mr. Owen among those whose opinion it is that the British Medical Association is the body best able to undertake medical defence. To this conclusion I think practically all must come who study the question. There are many matters of importance to be carefully thought out before, in my opinion, the Association can safely commit itself to so vast an undertaking as the medical defence of all its members, or even of those among them who might choose to entrust it with their defence. But it seems to me that if at the earliest opportunity—say at the Swansea meeting—a carefully selected Committee were appointed to inquire into this large question, all the important facts affecting it, in its suggested connexion with the British Medical Association, could be laid before the Association shortly after the Easter holidays of 1904.—I am, etc.,

G. A. HERON,
Treasurer and Chairman of Council of the London and Counties Medical Protection Society.

Harley Street, June 15th.

SIR,—I have read with much interest the extremely opportune letter of Mr. Edmund Owen, published in the BRITISH MEDICAL JOURNAL of June 13th, on the important question of medical defence, and I fully endorse his view that the time has come when this question must be considered by our Association.

The British Medical Association was founded for "the promotion of medical and the allied sciences, and the maintenance of the honour and interests of the medical profession." In other words, our Association has a twofold function: first, the promotion of medical and the ancillary sciences; and, secondly, the maintenance of the honour and interests of the medical profession. During its past history the Association has, by its annual and Branch meetings, by its scientific grants, and, above all, by its admirably conducted JOURNAL, discharged the first of its dual functions; but it has not interested itself sufficiently in the maintenance of the honour and interests of the medical profession; and it is owing to this fact that we have so many organizations and defence associations spread all over the three kingdoms, leading to an altogether useless waste of money spent in working the machinery of these societies, as well as to a constant drain on the pockets of the members.

Now, Sir, it was because I felt, with so many others, that the new constitution of our Association would help in furthering this second object for which it was founded (that is, "the maintenance of the honour and the interests of the medical profession"), that I cordially supported the reorganization scheme which was passed at the Cheltenham meeting, and which will first come into full force at Swansea. The question of medical defence and the establishment of a central benevolent fund to meet cases of distress among our profession are subjects which I hope will be discussed by the representative meeting; and if it is suggested that the new Council should see if it cannot devise such schemes, I shall most heartily support the movement.—I am, etc.,

Belfast, June 13th. JOHN W. BYERS.

IS IT NECESSARY TO TIE IN A CATHETER IN WHEELHOUSE'S OPERATION?

SIR,—I read with much interest Mr. T. Pridgin Teale's letter *re* the above question. His answer is that it is "absolutely unnecessary," and I am glad that my conclusions from a shorter experience agree with Mr. Teale's riper experience. I have not tied a catheter in the bladder for the last ten years in Wheelhouse's or any other operation upon the urethra, and

on many occasions I have advised the removal of a catheter from the bladder with much relief to the patient's suffering.

The ingenious plan which Mr. Teale adopted of draining the bladder in cases of excision of the urethra is, I would respectfully submit, only necessary in a few exceptional cases; at the same time his method is, in my opinion, a distinct advance upon the usual means of draining the bladder by tying a catheter through the meatus in cases of urethrectomy. I have latterly adopted the same plan of treatment in urethrectomy as that taught by Mr. Teale in "perineal section," and the result has been all that one could wish.

In the three cases of traumatic stricture which I have excised I allowed the patients to pass their urine over the newly-united urethra as soon as the act of micturition became necessary. Two of my cases were reported at the last annual meeting of the British Medical Association, and my third case is, I think, worthy of notice, as it occurred in a man aged 61; no instrument could be passed through the stricture, neither would air pass beyond it in examination with the aëro-urethroscope. The case was of six months' standing, and the ends of the completely torn urethra had become fixed in different planes, having a small sinus between them to allow the escape of urine. The immediate result was most gratifying to the patient; a full stream replaced the constant dribbling of urine, and there was no irritation of the bladder or any psychical disturbance during the ten days he remained in the nursing home.

In my cases of urethrectomy I periodically examine the calibre of the urethra with the aëro-urethroscope, and so far I have found no indication for the passage of any instrument, as there is apparently no liability to further contraction after the first month from the date of the operation.—I am, etc.,

Cardiff, June 15th. J. LYNN THOMAS, C.B.

IDIOPATHIC DILATATION OF THE OESOPHAGUS.

SIR,—It seems clear that traumatism played a definite part in the production of the idiopathic dilatation of the oesophagus in the case referred to by Mr. Lockwood in the BRITISH MEDICAL JOURNAL of June 13th, but I question whether the suggestion as to its nervous origin in association with the existence of a movable kidney is at all probable.

The occurrence of movable kidney after a distinct fall or blow is fairly common, and various well-known reflex nervous phenomena may follow; but idiopathic dilatation of the oesophagus is a rare condition, and its association with movable kidney must be so infrequent that their relation in the sense of cause and effect is highly problematical. In the particular instance referred to it appears most likely that the co-existence of a movable kidney and idiopathic dilatation of the oesophagus is a coincidence; for, although a movable kidney was found after the accident which preceded the difficulty in swallowing, I find from my private casebook that the patient had previously suffered from, and had worn a belt for, a movable right kidney.—I am, etc.,

Clifton, Bristol, June 15th. JAMES SWAIN.

DIPHTHERIAL INFECTION IN POST-SCARLATINAL EAR DISCHARGES.

SIR,—In the BRITISH MEDICAL JOURNAL for June 13th you published an annotation on a paper in the current number of the *Journal of Pathology and Bacteriology*, by Dr. Duncan Forbes, under the above heading. Although it is true that a considerable number of scarlet fever patients do undoubtedly suffer from a concurrent diphtherial infection, I think it would be advisable to await a fuller account of the tests employed by Dr. Duncan Forbes for determining the true nature of the bacilli isolated by him from the ear discharges at Monsall Fever Hospital, before concluding that they were true diphtheria. It is the experience of all bacteriologists who make frequent examinations of the noses and ears of patients, that a bacillus morphologically indistinguishable from the short diphtheria bacillus, but non-virulent, and not forming acid in glucose litmus broth, in fact a pseudo-diphtheria bacillus, is met with in a very considerable number of cases. The statement that "patients suffering from an infected ear discharge show no clinical signs of diphtheria," and that "antitoxin acts neither as a prophylactic nor a curative agent" in Dr. Duncan Forbes's cases points to the bacillus described by him being of this nature. Seeing that the relation of the pseudo-diphtheria bacillus to the Klebs-Loeffler bacillus is as yet undecided, and its power to set up true diphtheria problematical, it would be wise to refrain from speaking of this infection as "diphtherial" until more conclusive evidence has been produced that the organism isolated was in fact the diphtheria bacillus.—I am, etc.,

P. J. CAMMIDGE, M.B.Lond.,
County Bacteriologist for the West Riding
Wakefield, June 15th. of Yorkshire.

THE PROGNOSIS AND CURABILITY OF EPILEPSY.

SIR,—As I do not wish to pose as a pessimist with regard to the results of the treatment of epilepsy, may I be allowed to explain that the opening sentence of my remarks upon Dr. Aldren Turner's paper at the Royal Medical and Chirurgical Society (as reported on page 1374 of the BRITISH MEDICAL JOURNAL of June 13th) had reference exclusively to cases in an asylum for idiots and imbeciles, of which I was formerly superintendent? By way of confirmation of Dr. Turner's statement that the gloomy views of the French writers on the subject were in great measure due to their statistics having been gathered from cases in asylums, etc., I mentioned that I could only call to mind one case of permanent cure, judged by Dr. Russell Reynolds's standard of freedom from fits for from four to eight years, amongst some 120 cases treated by bromides, borax, and other remedies at the Royal Albert Asylum; but I did not intend to imply that the results were equally unsatisfactory in the case of patients not mentally affected.

With reference to the School Board statistics, I may perhaps be allowed to add that the 40 per cent. of the 340 epileptic children seen in my first investigation of these cases reported as requiring special institutional treatment, comprised only such as seemed likely to benefit by education as well as care in a boarding establishment under medical supervision; and that there was a residue of 15 5 per cent. only fit for hospitals or asylums. Further epileptic children were subsequently seen, and in the aggregate 470 were reported on, and I think I should be justified in estimating that it would be beneficial for at least 200 children known to the school authorities of the metropolis to be educated in a special residential school for epileptics, such as is contemplated under the Defective and Epileptic Children's Act passed in 1899, but which, owing to its exacting requirements as to the small size of houses of residence (which must each not contain more than fifteen, and can only be grouped four together), has hitherto remained a dead letter, much to the detriment of the rising generation of epileptics. The majority of these poor children are not educated at all, or are being educated under inappropriate conditions; and as experience shows that a healthy locality, outdoor occupation, and regular instruction of a proper kind are valuable factors in the successful treatment of epilepsy in the young, it seems high time that these obstructive requirements should be relaxed.—I am, etc.,

Richmond, Surrey, June 15th. G. E. SHUTTLEWORTH, M.D.

THE TRAINING OF MIDWIVES.

SIR,—As a country general practitioner holding office as medical officer under the Local Government Board in a densely-populated district, I have had naturally many opportunities of observing the practice and manipulations of the class of midwives who were supposed to attend the poor in my district, and who were expected to send for me when any difficulty arose. They were, no doubt, well-intentioned women, but their ignorance was intense, and the results in many cases disastrous to their patients. Every Poor-law medical officer will bear me out in this statement I feel assured.

For the last seven years the people here have had the advantage of the services of a qualified midwife and her assistant, both ladies, and the condition of the suffering poor has been immensely relieved by their care and knowledge. Personally, I am thankful that the Obstetrical Society and the Government are taking up the matter of qualified midwives, but I do think that besides the necessary curriculum of work in a lying-in hospital the Obstetrical Society should require that the candidates for the L.O.S. should present certificates of having attended a course of general nursing for at least a year.—I am, etc.,

A COUNTRY DOCTOR.

RESUSCITATION OF THOSE DEPRIVED OF AIR.

SIR,—Reading Professor E. A. Schäfer's paper, as reported in the BRITISH MEDICAL JOURNAL of May 30th, p. 1259, I am particularly struck with the want of practical suggestions for the use of the student of medicine. Those also who joined

in the debate did not appear to advance any important matter.

It is not necessary to discuss *in extenso* the physico-chemical changes in acute cyanosis, for that is appreciated by all practical physiologists; yet it has a very important bearing on every subject who is suffering from asphyxia. It is a fact, I trust we are all agreed upon, that directly air is shut off from the lungs regular and systematic changes occur in the vascular system, and subsequently in the softer organs like the liver. The heart does its very utmost to overcome the physico-chemical obstruction, and its pulsations rapidly increase to a very high degree of frequency till the pulse at the wrist is to be felt like a thread. Fibrillar action of the organ quickly follows with paralysis and extinction of life. Now, if it were possible for the student of medicine to discern the softer structures of the body by means of the *x* rays, the following would be the interpretation of the radiograph or the skiagraph. Both auricles would be seen enlarged, but the right one in particular distended and bulging prominently forward. The whole venous system would show engorgement, with haemorrhages here and thereinto the tissues, and the arterial system would appear more or less empty. This is the picture I carry in my mind of a person suffering from acute asphyxia, and which I think every one of us should consider when confronted with cases of drowning.

With regard to artificial respiration I will only allude to it, adding, however, that I prefer the Howard system to that of the Marshall Hall or Silvester. As many of us know, it was introduced between the Seventies and the Eighties. But each case should be treated on its own merits, for to give either of the three a preference must be left to the individual skill of the operator. If rupture of the liver is an attendant evil of artificial respiration in cases of drowning, then I say why practise it in the first stages of resuscitation, and the stages of resuscitation should run very quickly into one another like the stages of the extraction of a tooth. Now, I think a large number of us pin our confidence too much on artificial respiration neglecting one of the most powerful agencies we possess for asphyxia, namely, venesection. If the most important phenonenon in suspended animation is venous engorgement, and this is lost sight of, then I say the operator will neglect the most important treatment. In all cases of cyanosis nothing increases corpuscular activity as does bleeding, and this can subsequently be assisted by saline injection. So that when the strangled vessels are relieved by blood-letting in moderation, in most cases very little else is required to restart the pendulum of life. I repeat open your vein; remove the fluid from the chest: keep up constant shampooing of the upper and lower extremities: apply heat to the body; and, if blood does not flow, try a drop or two of nitrite of amyl to the nostrils. Briefly, endeavour to produce an elastic intake of air and at the same time encourage an elastic outtake of blood. This will equalize matters and relieve the vascular paralysis. If the steps of the procedure in cases of asphyxia from drowning were carried out more thoughtfully, skilfully, and quickly I believe we should have many more recoveries. But if the operator is too enamoured of artificial respiration and has the fashionable craze for drugging, then I pity him and his patient.—I am, etc.,

Alton, Hants, June 2nd. J. F. BRISCOE.

RED LIGHT IN THE TREATMENT OF SMALL-POX.

SIR,—In the BRITISH MEDICAL JOURNAL of June 6th appears an article by Professor Finsen advocating the treatment of small-pox by red light, and lamenting that so many persons have been allowed to die of, or to be disfigured by, that disease, by the neglect of a method of treatment the efficacy of which he claims to have been conclusively demonstrated. As the physician responsible for the treatment of most of the cases of small-pox which occurred in London during the epidemic of 1901-2, perhaps you will allow me space for a brief reply.

I have no desire to enter into a controversy as to the merits of this method of treatment. It is being tried here at the present time in carefully-selected cases, and until the trial has been sufficiently complete it would be premature to say much about the results. But I think it would not be proper to allow to pass unchallenged Professor Finsen's statement that there can be no question as to the results he claims, and that some six or seven hundred of last year's deaths from small-pox were avoidable. The difficulty of judging such a question from fatality figures is illustrated by this statement itself. Professor Finsen qualifies it by the words "unless this epidemic was of an exceptionally fatal character." It was of an exceptionally fatal character. In the previous ten years the small-pox fatality in the hospitals of the Metropolitan Asylums Board was slightly less than one-half the fatality during the epidemic of 1901-2. In the current year, again, 148 cases of small-pox have come under treatment, and of these only 5 have died or are likely to die.

The types of small-pox, indeed, are so manifold as to make it extremely difficult to estimate the curative effect of any particular method of treatment, and the fact that it has appeared to succeed in isolated cases or in small series of cases can hardly be called convincing evidence in its favour. It is for this reason that the cases related in Professor Finsen's *Phototherapy* do not bring to my mind that conviction which they undoubtedly carry to his own. The results related, and especially the photographs and temperature charts depicted in it, are just such as might be obtained in an ordinary small-pox hospital ward. And the cases which hitherto I have myself seen treated by his method do not suggest a different judgement.

If the evidence at present available seems hardly to show that Professor Finsen has made out a prima-facie case, still less can it be admitted that this evidence is so conclusive that it is "absolutely unwarrantable on the part of public health authorities to treat serious case of small-pox ..... in hospitals where patients are exposed to sunlight." While it is very desirable that the method should receive a fuller trial, the facts do not appear to me at present to justify the expense and inconvenience which would attach to the wholesale adaptation of small-pox hospitals to the red-light treatment.—I am, etc.,

T. F. RICKETTS,
Medical Superintendent.

Long Reach Hospital, Long Reach, Dartford, Kent,
June 12th.

CONICAL CORNEA.

SIR,—With regard to the correspondence on the treatment of conical cornea by cautery, I beg to bring to your notice the following dates as to its "initiation" and modifications:

1. Andrews. BRITISH MEDICAL JOURNAL, November 8th, 1884.
2. Cant. BRITISH MEDICAL JOURNAL, July 23rd, 1887.
3. Williams. BRITISH MEDICAL JOURNAL, February 23rd, 1889.
4. Critchett. *Practitioner*, 1895.
5. Critchett. *Transactions of the International Congress*, 1899.
6. Critchett. Reprint in pamphlet form, 1903.

Since my communication in 1887 I have performed the operation a number of times, with modifications according to the case, and have always found it followed by marked improvement of vision and arrest of the disease.—I am, etc.,

Lincoln, June 6th. W. J. CANT, M.B., Ch.B.

THE INFLUENCE OF WIND ON PHTHISIS.

SIR,—On reading Dr. Gordon's interesting article in the BRITISH MEDICAL JOURNAL of May 23rd upon the adverse effects of strong wet winds upon phthisical patients, it occurred to me that such effects might be due to one of two causes.

In the first place, strong winds seem to excite the nervous system of many people, and there is a large class of phthisical people who seem to do best with repose and rest to the lung, most easily secured in calm weather.

But, in the second place, it is a fact which has long been noticed by meteorologists, that the right front of a cyclone or bad weather system brings with it atmospheric conditions which produce unpleasant effects upon many healthy people—a general feeling of languor, pains in rheumatic joints, neuralgias, headaches, aching corns, restlessness, and so on. On debilitated people, no doubt, the effects would be more marked. Possibly these effects are due to interference with skin and lung elimination, produced, I am inclined to think, by some other factor than mere wind and wet.

Now in our islands, especially in the western parts, most of the storms come from the south-west, and bring over us on their right front close, muggy, damp weather, with strong south to west winds. As they pass, the rear winds from the north-west bring drier, crisper, brighter weather. In this district, on the other hand, owing to a large mass of hilly land to the west, we do not get much of our rain from the south-west or west, yet I have noticed the relaxing and debilitating effects of these winds even when dry. Again, we do get much of our rain from the rear side of cyclones going down the coast, or forming over Western Europe, with north-west to north-east winds, and they do not, though strong, seem to have such a depressing effect, that is, on healthy people.

If the harmful effects noticed by Dr. Gordon be owing to the relative position of the weather in the cyclonic system, then in the southern hemisphere the north-east and north-west winds will be the prejudicial ones, the south-west the beneficial. If to mere rain and wind then in many places in our islands, where the rainy winds are chiefly north and east, such effects will still be noticeable. The latter places are chiefly on the east coast, where high lands lie to the west.—I am, etc.,

Rothbury, May 27th. C. W. LAWSON, M.A., L.R.C.P.&S.E.

POST OFFICE MEDICAL APPOINTMENTS.

SIR,—I am very glad to note that the letter which you were good enough to insert for me in the BRITISH MEDICAL JOURNAL of April 11th has led to this subject being so well ventilated in your columns. I think that any one reading Dr. Vinrace's letter must realize the serious objections which exist to such a procedure as was adopted in the Brompton District, and I thoroughly agree with him that it would be desirable to know what official was really responsible for the department's action. Probably the best way of getting to the bottom of the matter would be, as Dr. Alderson suggests, for the British Medical Association to approach the Postmaster-General on the subject. There would be ample justification for such a course, as the question is far from being one of purely local significance. The precedent created in this instance may be followed elsewhere in the future with very unfortunate results. It seems to me that in his letter in the JOURNAL of June 13th "G. C. C." has made an excellent suggestion as to the manner in which the influence of the British Medical Association might be brought to bear. The Metropolitan Counties Branch would do most useful work for the profession by taking up matters of this kind, and the question of postal medical appointments would be an excellent one on which to make a start.—I am, etc.,

Sydney Street, S.W., June 13th. JAMES HAMILTON.

*** We venture to think that Dr. Hamilton's suggestion is a good one, and that a continuance of this correspondence will not advance matters.

OBITUARY.

JOHN BIRKBECK NEVINS, M.D.,

Consulting Physician to the Stanley Hospital, Liverpool.

THE death of Dr. Nevins removes from Liverpool a figure which had come to be looked upon almost as an indispensable feature in the professional, the public, and the literary life of that great city. At a time when men now past middle age were at school, Dr. Nevins was taking a leading part in medical and scientific work in Liverpool, and until a few weeks ago he was still a power in the city, always to the front on public occasions, and still evincing a lively intelligent interest in whatsoever concerned the well-being of the community or the medical profession.

Dr. Nevins was born in 1818 at Leeds, where his father was a banker and cloth manufacturer, his mother belonging to the Birkbeck family which had long been associated with philanthropic work. When 10 years old he was sent to Wakefield Grammar School, and two years later to a boarding school at York. At the age of 15 he left school and spent a year with his father in the cloth mill, but this occupation not proving congenial, he was apprenticed at the age of 16 to a family practitioner in Leeds, and thus entered upon his long medical career. As an apprentice he, of course, had to dispense medicines, and he thus laid the foundations of that grasp of the details of practical pharmacy which he turned to such account in the preparation of some of his works. At the same time he evinced many qualities which showed that he was fitted to become a careful observer and student of Nature, and developed a sound botanical and zoological knowledge by frequently taking long walks in the country, a practice which he had already acquired when at school. On attaining the age of 21 he entered at Guy's Hospital, and afterwards attended the Rotunda in Dublin. In 1840 he qualified as M.R.C.S., the next year he graduated M.B. with honours in the University of London, and then practised in Leeds for a year, after which he accepted a tutorship at Guy's Hospital. As the duties of this post occupied him only during the winter session he went as surgeon during the summer to Hudson's Bay in one of the old Hudson's Bay Company's sailing ships. On these trips he was ever active in the pursuit of knowledge, and acquired a considerable degree of proficiency in navigation and astronomy. At the end of his second voyage he was offered the position of Lecturer on Chemistry and Natural Philosophy at the newly formed Collegiate Institute, in Shaw Street, Liverpool, now known as the Liverpool College, an appointment which led to his settling in Liverpool in March, 1844. He retained this position till 1868. In 1846 he took the degree of M.D. and from 1848 to 1877 he was lecturer on botany, materia medica, and chemistry in the Liverpool School of Medicine. He used to take his botanical pupils for long rambles, to give them practical instruction in the fields. From 1849 to 1858 he was medical officer to the then West Derby Union Hospital, the duties of which post absorbed a large portion of his time and attention. In 1853 he was appointed assistant-surgeon to the Eye and Ear Infirmary, and subsequently surgeon, a post which he retained until 1877, when he retired and was appointed consulting surgeon. On the foundation of the Stanley Hospital in 1868 he was appointed consulting physician to the institution, and always manifested a special interest in its growth. He was chief medical referee to the Royal Insurance Company for many years and only retired in 1899. In 1886 the medical profession in Liverpool conferred on him the highest honour it was possible for them to bestow by electing him President of the Medical Institution. Many of the members will still recall with interest his charming presidential addresses, in one of which he described and compared the sanitary arrangements of various communities—the Hebrew Camp, Liverpool, Manchester, and Edinburgh—while in the other he gave a succinct and highly interesting account of disposal of the sewage of Manchester.

Dr. Nevins was one who combined the life of the scholar with that of the man of affairs. His published works cover a wide range of subjects, some of which chiefly interest the student and the philosopher, while others appeal strongly to the active workers in science and philanthropy. In his own profession he is best known as the author of the translation of the new *London Pharmacopoeia*, a work with which he incorporated a vast amount of valuable original observation and practical information. He also wrote a work on materia medica, and translated and edited the *Prescriber's Complete Handbook* by Trousseau and Reveil. He held strong views in opposition to the Contagious Diseases Acts, and as President of the society for their abolition, and by various writings, he had no doubt a considerable share in securing their suspension. He was a most active member of the various literary and scientific societies of Liverpool, and actively participated in their work until extreme old age. In fact he was engaged in completing the correction of the proofs of an antiquarian paper a few days before his death.

As a speaker, Dr. Nevins was always interesting. The vast stores of his memory always seemed to lie ready to his hand, and whenever he was called upon to speak at any scientific, philanthropic, or social gathering he always had something happy and appropriate to say. As an instance of the freshness of his memory and the vivacity of his intelligence in advanced age, his delightful address at the special meeting of the Medical Institution on the occasion of the death of the late Queen Victoria may be recalled. He charmed the members with his vivid description, derived from his own personal recollection, of events which took place in the childhood of Her late Majesty. His mood was often playful, and he would sometimes indulge in good-natured banter, but never said anything to wound the feelings of the most susceptible.

Dr. Nevins, whose wife died some years ago, leaves two sons and one daughter. His eldest son, Dr. Ernest Nevins, is physician to the Brownlow Hill Union Hospital.

The interment took place in St. James's Cemetery on June 13th, and was attended by a large concourse, consisting of members of the medical profession, representatives of numerous philanthropic, literary, scientific, and religious bodies, and members of the general public. The Rev. Canon Irving in the course of an address paid an eloquent tribute to Dr. Nevins, who, he said, had been for more than half a century a conspicuous figure not only among men of the medical profession, of which he was a distinguished and honoured member, but also in literary and philanthropic circles. Eager to acquire knowledge, and of great mental application, he was a man of extensive and varied reading, and what his brain gathered his memory retained in a wonderful way. Combined with that literary taste there was a large-hearted charity that found vent continually in rendering most willing aid to the needy and the afflicted. The blind, the orphan, and the deaf and dumb of the city had in him one of their truest and best friends, and he was rarely absent when

any public appeal was made on their behalf. In the cause of temperance, purity, philanthropy, and true religion he was ever ready and willing to lecture, and what he did was done with a geniality, graciousness, and kindly sympathy which made him friends wherever he went.

We regret to have to record the death, at the age of 59, of Mr. George Samuel Watson, of Tunbridge Wells. He was educated at Kensington Grammar School, and after beginning his medical studies with Dr. Loadman, of Hammersmith, completed them at St. George's Hospital. Here Mr. Watson gained several prizes and obtained the diplomas of M.R.C.S. 1865, and L.S.A. 1867. Among the appointments he held were those of Resident Medical Officer to the Marylebone Infirmary, Acting Surgical Registrar to St. George's Hospital, and Surgeon to the Orphans' Home, Tunbridge Wells. In 1867 he went to Tunbridge Wells to join the late Dr. Trustram, whose third daughter he subsequently married. He afterwards practised for ten years at Thaxted, in Essex, but returned to Tunbridge Wells in 1881, and remained in practice there till his death. He was a member of the South Eastern Branch of the British Medical Association. Of late years his health had been anything but satisfactory, and he had been in the habit of spending some of the winter months on the Mediterranean. While at Algiers about two months ago he was asked to see professionally an English lady suffering from influenza. He caught the disease himself, but recovered. Mr. Watson was returning home, feeling stronger after his stay in the South, but he suddenly succumbed to heart failure while in the train between Marseilles and Lyons on May 28th. He was brought home and buried at Tunbridge Wells on June 3rd. One of the most charming of men, he combined great professional ability and tact with a character at once loveable and respected. Although abundantly employed in the working of a large practice, he found time to read widely and to travel. Mr. Watson was a great collector of old bibles, and his name was well known in this connexion to all dealers and connoisseurs. Always a loyal St. George's man, he sent both his sons, who at his death were in partnership with him, to that hospital for their medical examination.

By the death of Dr. John Macrae Yair, which occurred recently in New Mexico, where for reasons of health he had for some years made his home, there passed away one who will be much missed and genuinely mourned by many friends in Scotland. He was educated at Glasgow University, where he graduated in medicine in 1879; he first settled in practice at Kilcreggan, where from his abilities and amiable qualities he was much esteemed, but being a martyr to asthma he was forced on that account to give up his practice there, and indeed the rest of his life may be said to have been a brave struggle with ill-health and the search for that robustness which, alas! never came. He spent five years in South Africa, then "home" again, then lived at Bournemouth, then went out to New Mexico, which latter place seemed to improve his health considerably, but in the end his life-long enemy, his chest, asserted itself, and he died of pneumonia still a comparatively young man. A singularly amiable and single-hearted man, his long struggle with ill-health did not in any way sour Dr. Yair, but rather brought out the latent sweetness of his disposition, and in him there has passed away one who was ever upright and honourable in all his dealings with his fellow men, a warm friend, a charming companion, and one of whom it might truly be said that he had not an enemy in the world.

We regret to announce the death of Dr. R. Crean, which took place at Higher Broughton on June 13th. He suffered from an attack of influenza a few days before Whit week. Apparently he recovered, and about a week ago he was again attending to his practice, but later a double pneumonia set in, which proved fatal. He will be greatly missed, especially in Higher Broughton, where he was highly esteemed both for his medical skill and for his social qualities. He received his medical education at the school of the Catholic University, Dublin, took the licences of the Royal College of Physicians and the Royal College of Surgeons of Ireland in 1868, and the degree of M.D.Brux. in 1880. He held the posts of House-Surgeon to the Birkenhead Borough and Manchester Clinical Hospitals, and was at one time Honorary Assistant Surgeon to the Manchester Royal Eye Hospital. He was a member of the British Medical Association and of the Manchester Medical Society, and Surgeon to the 17th L.R.V.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

HYGIENE IN THE FRENCH NAVY.

Dr. Henry Thierry has contributed an interesting article upon hygiene in the French Navy to the *Revue d'Hygiène* of May 20th. It is founded on a study of the working of the man-of-war *Suffren*.

Water.

Water may be brought from the shore or distilled on board. The former is always dangerous and under suspicion. The water tanks, which are of iron, are on most boats wide at the base, with a narrow aperture covered with a lid. Some are uncovered, exposing the water to pollution by rats, mosquitos, and sometimes by drippings from the ship. On board some ships the same tank is used for distilled water and water from the shore. Water tanks should always be kept closed, and the water drawn off by a pipe. The *Suffren* possesses separate tanks: (1) For distilled water for drinking closed and filled by a marine pump solely employed for that purpose; (2) for fresh water for cooking and washing. The first of these is cleaned out periodically by a man who climbs down into it and removes deposits. On board the *Suffren*, before being allowed to enter the tank, he is obliged to take a bath. But even so it is a dangerous practice. It has been suggested that the man should be clothed with sterilized combinations closed at the neck and having thick hands and feet, and that he should wear a linen cap. His clothes should be sterilized after the operation, as also the instruments used. Cleansing of some sort is necessary, as the iron deposit causes the water to become brown and undrinkable after a time. A suggestion that the insides should be lined with Portland cement is under consideration, and this would do away with the necessity of frequent cleansing. The vessel used to measure the share of water allowed daily in the ship on the *Suffren*—20 litres a head—should be discontinued. In the merchant service the sailor drinks out of a pipe directly communicating with the water taken. Apart from the disgusting nature of this practice, it causes dangers of contamination by tuberculosis and syphilis. A cup attached to the end of a chain is used on men-of-war; a glass tumbler, which could be periodically rinsed out in boiling water, would be better.

Sleeping Arrangements.

On war ships the sailors sleep in hammocks; in mercantile ships in berths. The berths are often extremely filthy; being very close to each other they are difficult to clean; they are also damp, and wet mouldy clothes add their odours. Swinging hammocks have the advantage of being easily washed and disinfected. Disinfection should be insisted upon, especially when troops are being conveyed. One of the causes of the deterioration of men on board ship is the want of sleep. Sleep on board men-of-war is too interrupted; the men never have an entire night's rest; at anchor only one in four. A man sleeping in a hammock can only partially undress. From the point of view of health there is no comparison between sleeping between sheets and between the bottom of a hammock and blankets. The hammock has a thin mattress of horsehair and wool, which in summer becomes saturated with perspiration. The mattress becomes hard and uneven, and the covers are stained with sweat which irritates the skin. Even if the soft water supply was sufficient to make it possible to wash the hammock frequently, the difficulty of drying quickly enough would make it impracticable. In the winter impurities, very difficult to avoid, owing to the primitive washing arrangements on board, accumulate in the blankets. On the *Suffren* sac sheets are used. They open at both extremities, the top being split half way down where it is secured by a gusset; the under sheet is fixed to the bottom of the hammock. Sheets allow of the man undressing before going to sleep, the action of the skin is consequently facilitated, and risks in hot climates of intestinal disorders diminished, for the man must keep his stomach covered; and as 20 centimetres are allowed beyond the necessary length, his feet are protected from cold and mosquitos.

Tuberculosis and Contagious Diseases.

The statistics for 1902 show that one-quarter of the deaths were due to tuberculosis; in addition there were many cases of chronic bronchitis suspected of being tuberculous. Tuberculosis on board men of war appears to occur during the first year of service. Men of tuberculous tendency will develop

it from change of surroundings and unaccustomed fatigue. A searching examination of young recruits is therefore strongly recommended. Men living below in men-of-war should be allowed as many opportunities as possible to go on deck and to breathe fresh air. They should, if possible, sleep in airy quarters. Unfortunately, in most ships the men are obliged to sleep in close, badly ventilated places, with a very high temperature. Gymnastics and as much exercise in the open air as possible should be allowed as a preventive of tuberculosis.

Personal Hygiene.

On board the *Suffren* each man has a separate metallic basin—a vast improvement on the common basin generally in use, which is highly dangerous as a carrier of infection. Each man also has a locker where he can keep his towel, brush, comb, and toothbrush.

Printed notices are put up on board many men-of-war, telling the men in simple language how to avoid contagious illnesses such as tuberculosis, etc. This plan should be adopted in merchant ships and sailing vessels. It is also recommended after sweeping to give a final touch with a wet mop in order to remove dust which has only been displaced.

Spittoons are indispensable, and should be large. Most spittoons justify the definition, "a spittoon is a recipient around which one spits." In default of sand water can be used, and it should be daily emptied into the sea.

It is recommended that a course of hygiene should be given in naval schools. Since August, 1902, the Minister of Marine, M. Pelletan, has prescribed the use of arsenical green paint and of white lead paint in men-of-war. It would be advisable in the merchant service that at any rate the interior of the ships should be painted with lime-wash, which is not only antiseptic, but costs so little that it can easily be renewed. Milk of lime freshly prepared is also advised for use in urinals and closets.

Alcohol and Diet.

Alcoholism and tuberculosis are closely allied, and alcoholism is rife among sailors. The bad practice which existed formerly in the French navy of serving out 6 centilitres of brandy to the men every morning is considered to have encouraged alcoholism. It was abolished in 1897 by Admiral Besnard. The unpopularity of this step was mitigated by the fact that at the same time the food supply was improved. The improvement in discipline has been noteworthy since the brandy ration was abolished.

Much has been done to improve the food. On the *Suffren* the food, of excellent quality, and of sufficient quantity, is prepared in stoves called *cuisines cubain*, in which charcoal is burnt. With them it is possible to cook varied meals instead of the everlasting boiled meat. Bread is made by electricity, and baked in Schweitzer stoves, which turn out 600 kilog. of bread in nine hours. M. Pelletan is insisting in the navy upon rules (which it would be equally simple for the mercantile service to follow) for care in the preparation of food—cleansing of hands, boiling of vessels, etc. The old wooden and india-rubber vessels are replaced by bottles, and the tables on which the meat is cut up are carefully scrubbed. In order to assure the cleanliness of the hands of the men who prepare the food, they have to pass in single file on their way to the kitchens, dipping their thumb in a bowl of soft soap and then proceeding to their basins to wash their hands. The quantity which sticks to the thumb is considered sufficient for the purpose of cleansing the hands.

The rations consist of $\frac{1}{4}$ litre of wine at each meal, 750 grams of bread a day in three times (bread having replaced biscuit), 20 grams of coffee, or some soup if they prefer it, and green vegetables.

It is strongly urged that in the mercantile and steamer service, especially in vessels used for the transport of troops, the example set in men-of-war as regards the preparation and distribution of food should be followed, and it is recommended that all bread should be made by machinery. It is well known that in sailing and fishing vessels the difficulties of preparing food are so great that the men allay their hunger by drink, causing the deterioration of individuals and of the race.

Swimming.

Dr. Thierry states that 60 per cent. of the sailors in the French navy and merchant service cannot swim. Swimming should be made compulsory, just as a cavalry soldier has to go through the riding school.

First Aid and Transport.

The chief accidents in fishing and merchant ships are burns, falls from the rigging, and injuries by machinery. The Guézennec hammock is recommended for merchant and fishing boats. When it is necessary to land patients from a man-of-war they are lowered into steam launches on stretchers covered with awnings to protect them from sun and rain. The launches, also covered, are fitted so as to receive two stretchers, which can be placed lengthways or crossways, according to the pitching or rolling of the sea.

ROYAL ARMY MEDICAL CORPS.

THE VOLCANIC ERUPTION IN ST. VINCENT.

IT is now a year ago since the volcanic eruptions in the West Indies, causing terrible loss of life and suffering in Martinique and St. Vincent, occurred, and although numerous accounts of these disasters have been published, little reference has been made to the medical expedition which went to rescue and relieve those burned and injured by the falling volcanic débris.

When the news of the calamity at St. Pierre reached Barbadoes a detachment of the Royal Army Medical Corps volunteered to assist the injured and proceeded to Martinique under the command of Major Will, R.A.M.C. They found, however, that they could not render any service, as St. Pierre had been reduced to a mass of smouldering ruins without a sign of life of any kind—a veritable city of the dead.

On returning to Barbadoes, their help was asked for on behalf of the sufferers in St. Vincent, and there they went. In St. Vincent over 200 of the inhabitants living in the vicinity of the volcano had survived their injuries, but most of them were terribly burned, while a small number had sustained wounds and fractures, chiefly of the vault of the cranium, from falling stones thrown up by the volcano. Relief hospitals were established, nine large hospital marquees being used.

After being six weeks in St. Vincent the detachment left, and as a mark of appreciation of their services the following address, signed by all sections of the community, was presented on the eve of their departure:

Major Jas. Will, R.A.M.C.

Sir,—We, as representative inhabitants of this Island of St. Vincent, are of opinion now you are leaving for Barbadoes that we should be lacking in proper spirit if we allowed you to go without giving expression to our high appreciation of the noble, generous, and unselfish services you and the members of your staff have rendered to the unfortunate sufferers by the recent terrible calamity.

Our local medical staff, already seriously reduced in numbers, would have been unequal to the enormous strain put on it unexpectedly, to say nothing of the increased advantage of the services of those trained and accustomed to organizing medical and surgical work on a large scale.

As voicing the opinions of the people of this colony at large, we tender you and your staff our hearty thanks for the inestimable services given at a time when many would have shunned our stricken shores, and the memory of these deeds of goodness performed in view of the flaming mountain will ever remain in our minds as in the minds of those whose sufferings you were instrumental in alleviating.

You carry with you our sincere good wishes for your future welfare.

THE STRENGTH AND DISTRIBUTION OF THE ARMY MEDICAL SERVICE.

THE following table shows the present strength and distribution of the Active List of medical officers:

Distribution in Monthly Army List for June, 1903.

Ranks.	Home.	South Africa.	Other Foreign Stations.	Not Posted.	Total.	Remarks. Seconded.	On Probation.	Attending Medical Staff College.
Surgeon-Generals.	5	1	4	—	10	—	—	—
Colonels	13	2	13	—	28	1	—	1
Lieut.-Colonels ...	75	20	80	7	182	3	—	1
Majors	111	24	120	6	261	3	—	2
Captains	86	41	173	6	306	14	—	27
Lieutenants	71	9	82	4	166	8	32	1
Total...	361	97	472	23	953	29	32	32

Considerable changes have taken place since our last analysis, which was founded on the March Army List.

There has been an increase of 11 at Home, a decrease of 17 in South Africa, and a decrease of 8 at other Foreign Stations. The total strength has fallen from 965 to 953. This is partly to be accounted for by the removal of retired officers to the

non-effective list; members of the reserve of officers are no longer employed; even the retired officers employed at £150 a year, plus retired pay, have now sunk from over 90 to 63.

Duty at home is evidently, therefore, falling more and more into the hands of medical officers on the active list; but we do not know the number of civilian surgeons still employed. The total strength is as near as possible the number of medical officers (954) voted for the current financial year. The distribution between home and abroad is apparently falling into normal lines.

The number of lieutenants on probation is the same as in March; we observe that several of them are seconded, in italics being those, presumably, who are completing house-surgeoncies in civil hospitals before joining the service for good. No less than 27 captains and 1 lieutenant are attending the Royal Army Medical College, so that leave for purposes of study, so long promised but withheld, is now a reality.

Deducting the officers at the College, and the probationers, the numbers available for general duties are somewhat under 900; while if those seconded or holding special appointments be also deducted, the number is still further reduced to about 860.

CHANGES OF STATION.

THE following changes of station amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during the last month:

	From.	To.
Colonel G. D. N. Leake	Woolwich ...	Chatham.
Lt.-Col. H. C. Kirkpatrick, M.D.	Bombay ...	Bordon.
,, D. O Sullivan	Dublin	Belfast.
,, W. Heffernan	,, ...	Templemore.
,, L. W. Swabey	Cork	Fermoy.
Major R. H. Clement	Halifax, N.S. ...	Bulford.
,, H. A. Haines, M.D.	York	Leicester.
,, R. L. R. Macleod, M.B.	Dundalk ...	Dublin.
,, R. H. Hall, M.D.	Dublin	Cork.
,, W. H. Pinches	Hounslow ...	Shorncliffe.
,, S. J. W. Hayman	— ...	Dublin.
,, J. Donaldson	Cork	Tipperary.
,, G. Bent	Chester ...	Birmingham.
,, E. E. Powell	Coldst. Guards	Gibraltar.
Captain C. J. Healy, M.B.	Newbridge ...	Dublin.
,, J. E. Brogden	China	Bombay.
,, D. J. Collins, M.B.	Bombay ...	Fermoy.
,, J. B. Anderson	Dover	Shorncliffe.
,, D. Lawson	Bengal	Netley.
,, E. B. Steel, M.B.	,, ...	Chester.
,, J. S. Gallie	Dublin	Belfast.
Lieutenant C. H. Carr, M.D.	— ...	Edinburgh.
,, R. B. Black, M.B.	Aldershot ...	Salisbury Plain
,, S. B. Smith, M.D.	— ...	Kinsale.

Lieutenant-Colonel W. C. T. Poole, M.B., retired pay, has relinquished the medical charge of troops at Maidstone.

THE INDIAN MEDICAL SERVICE.

ANNUAL DINNER.

THE annual dinner in London of the Indian Medical Service took place at the Café Monico on June 11th. In the absence of Sir Annesley De Renzy, K.C.B., owing to domestic bereavement, the chair was taken by Surgeon-General Sir Joseph Fayrer, Bart., K.C.S.I. The following is the list of those present:

Guests.—Sir William Church, Bart., K.C.B., President Royal College of Physicians, Sir James Dick, K.C.B., R.N., Surgeon-General Sir William Taylor, K.C.B., Director-General A.M.D., Professor Clifford Allbutt, F.R.S., Surgeon-General T. Walsh, A.M.D., Mr. A. Willett, President Royal Medical and Chirurgical Society, Mr. Howard Marsh, Professor R. C. Leith, the Editor the *Lancet*, the Editor BRITISH MEDICAL JOURNAL.

Members.

Surgeon-Generals.—G. Bainbridge, W. W. Beatson, Sir W. R. Hooper, K.C.S.I., A. Scott Reid, C. Sibthorpe, C.B., P. W. Sutherland.

Colonels.—G. H. Banks, W. E. Cates, H. Cayley, C.M.G., D. Hughes, B. Williamson, W. A. S. Wynne.

Lieutenant-Colonels.—M. L. Bartholomeusz, G. H. Bull, A. Crombie, C.B., H. H. Dimmock, J. Duke, A. Duncan, P. J. Freyer, G. S. Griffiths, P. de H. Haig, W. H. Henderson, J. Lewtas, J. R. Lyon, C.I.E., D. P. Macdonald, D. ff. Mullen, J. O'Brien, J. Parker, G. S. Sutherland, W. H. Thornhill, J. F. Tuohy, A. H. Williams, E. W. Young.

Majors.—E. H. Brown, W. J. Buchanan, W. S. Caldwell, P. Carr-White, B. B. Grayfoot, A. G. Hendley, H. Hendley, J. Jackson, M. A. Ker, C. H. L. Meyer, L. Rogers, B. J. Singh.

Captains.—H. Boulton, S. H. Burnett, A. W. F. King, W. Murphy, J. Penny, Hayward Pinch, E. R. Rost, W. B. Turnbull.

After the usual loyal toasts given by the Chairman had been duly honoured, Colonel Cayley, C.M.G., proposed "The Sister Services," and Sir James Dick, K.C.B., late Director-General, R.N., and Sir William Taylor, K.C.B., Director-General A.M.S., responded.

The toast of "The Guests" was then given in a humorous speech by Lieutenant-Colonel Crombie, C.B., and acknowledged by Sir William Church, President of the Royal College of Physicians.

The toast of the evening, "The Indian Medical Service," was given by the Chairman in an optimistic speech. It was acknowledged briefly by Sir William Hooper, K.C.S.I., and more at length by Surgeon-General A. Scott Reid, who said that it was impossible to ignore the fact that much dissatisfaction with their present position and prospects was felt by many officers of the service. In the higher ranks promotion had been checked by the amalgamation of the military medical services and the abolition of administrative appointments; there was now want of suitable appointments for the senior men. While admitting many social advantages of the regimental system he felt that there were serious objections to it, and referred to the defects in the hospitals of native regiments. He then touched upon the frequent transfers of junior officers, so that sometimes an officer had as many changes as he had months of service. One disadvantage of these frequent changes was that the officer had little or no chance to qualify in the vernacular, and thus lost an increase of pay which he would otherwise have been able to earn. Formerly, the chance of civil employment was one of the greatest inducements to enter the service, but now cases frequently occurred in which officers who had put down their names for civil employment refused it, and he had known instances in which officers in civil employment sought to be transferred to the military side. This was due to several causes: with similar or identical pay officers disliked the isolated stations to which they were appointed on the civil side; further, the recent regulations of the Government of India with regard to fees from native princes and nobles not only curtailed the sources of income, but were resented as a reflection upon the profession. Changes were required in the position and pay of all ranks, beginning with the Director-General, who ought to have the rank of lieutenant-general and pay adequate to support his position; at present he drew about the same pay as a second class commissioner. Further, he ought to be a member of the Council and Secretary of the Government of India in the Medical Department. So also the Inspector-General of Civil Hospitals in the Provinces should be a member of the Provincial Council, and Secretary of the Provincial Government in the Medical Department. Another point which caused disappointment was the paucity of honours and rewards given for professional distinction. Each point made by the speaker was warmly applauded.

The toast of "The Secretary of the Dinner Committee" was given from the Chair and acknowledged by Lieutenant-Colonel P. J. Freyer, who made a sympathetic reference to the death of Surgeon-General Rice, Chairman of the Dinner Committee. He supported generally the statements of Surgeon-General Scott Reid with regard to the cause of dissatisfaction in the service, and referred especially to the regulations with regard to fees.

The toast of "The Chairman" was then given by Surgeon-General Bainbridge, and briefly acknowledged by Sir Joseph Fayrer.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: ANTHONY KIDD, Fleet Surgeon, and WILLIAM M. L. CHERRY, Surgeon, to the *Hood*, June 25th; J. S. BROWN, Fleet Surgeon, to the *Magnificent*, July 1st; EDWARD J. MORLEY, Staff Surgeon, and F. E. ANLEY, Surgeon, to the *Hyacinth*, July 21st; H. C. ROSS, Surgeon, to the *Seahorse* (lent), June 11th; RICHARD MILLER, M.B., Staff Surgeon, to the *Spartan*, June 14th; GEORGE H. FOOTT, Staff Surgeon, to the *Sappho*, June 13th; ROBERT HILL, Staff Surgeon, to the *Victory*, for the Osborne Cadets' Sick Quarters, June 15th; HORACE B. MARRIOTT, Staff Surgeon, to the *Tribune*, June 15th; EVAN ST. M. NEPEAN, Staff Surgeon, to the *Eolus*, June 19th; WILLIAM G. STOTT, Staff Surgeon, to the *Melampus*, June 10th; SAMUEL H. WOODS, Surgeon, to the *Pembroke*, additional, for disposal, June 13th.

ARMY MEDICAL SERVICE.

LIEUTENANT-COLONEL THOMAS SILLERY COGAN died recently. His commissions were thus dated: Assistant-Surgeon, April 1st, 1867; Surgeon, March 1st, 1873; Surgeon-Major, April 1st, 1879. He retired from the service with the rank of Lieutenant-Colonel, February 20th, 1889. He was engaged in the Abyssinian war in 1867-8, receiving the medal.

Brigade-Surgeon ALEXANDER CRAWFORD, M.D., died in London on May 15th. He was appointed Assistant-Surgeon, June 1st, 1855; Surgeon, December 24th, 1870; and Surgeon-Major, March 1st, 1873, retiring with the honorary rank of Brigade-Surgeon, January 25th, 1882. He served in the Indian Mutiny campaign in 1857, including the siege and capture of Lucknow and subsequent operations in Oudh (medal with clasp); he was also in the Zulu war in 1879 (medal with clasp).

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL T. A. DIXON, M.D., retires on retired pay, June 15th. His commissions are thus dated: Surgeon, February 5th, 1881; Surgeon-Major, February 5th, 1893; and Lieutenant-Colonel, February 5th, 1901. He has no war record in the Army Lists.

Lieutenant-Colonel H. C. KIRKPATRICK, M.D., has been appointed Principal Medical Officer, 5th Brigade, 3rd Division, First Army Corps.

Captain C. E. G. STALKARTT, M.D., has been appointed Senior Medical Officer at St. Helena.

ARMY MEDICAL RESERVE.

SURGEON-LIEUTENANT-COLONEL G. R. T. PHILLIPS, having resigned his appointment in the Imperial Yeomanry, ceases to be an officer in the Army Medical Reserve.

Surgeon-Lieutenant E. DOWNES, M.D., F.R.C.S.E., having resigned his appointment in the Volunteers, ceases to be an officer in the Army Medical Reserve.

INDIAN MEDICAL SERVICE.

COLONEL A. M. BRANFOOT, M.B., C.I.E., Madras Establishment, Principal Medical Officer, Bangalore and Southern Districts, is permitted to retire from the service from May 19th. He was appointed Assistant Surgeon, March 20th, 1872, and became Surgeon-Colonel, March 1st, 1898. He was made a Companion of the Order of the Indian Empire, May 21st, 1898.

Captain STUART ALEXANDER CHARLES DALLAS, Madras Establishment, of Khandwa, India, died on May 28th, at the age of 35. He joined the department as Surgeon-Captain, July 28th, 1891.

Lieutenant-Colonel H. B. BRIGGS, M.B., Bombay Establishment, has been advanced to the higher position of his rank, with effect from October 1st, 1898, in recognition of his services during the operations on the North-West Frontier of India in 1897-8.

IMPERIAL YEOMANRY.

SURGEON-CAPTAIN E. W. WELCHMAN, Staffordshire (Queen's Own) Royal Regiment), to be Surgeon-Major, June 6th.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

LIEUTENANT W. L. BENTLEY, the Manchester Companies, to be Captain, June 13th.

VOLUNTEER INFANTRY BRIGADE BEARER COMPANY.

LIEUTENANT A. W. SHEEN, M.D., the Welsh Company, to be Captain, June 13th.

LOVAT'S SCOUTS.

THE undermentioned gentlemen are appointed Surgeon-Lieutenants, dated June 10th: JOHN LEACH, M.B., and JOHN R. KENNEDY, M.B.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

SURGEON-LIEUT. A. W. CUFF, M.B., 4th West Riding of Yorkshire, to be Surgeon-Captain, May 9th.

Mr. JOHN R. LONG is appointed Surgeon-Lieutenant in the 1st Cinque Ports, June 13th.

Mr. JOHN H. F. WAY, late Captain, to be Surgeon-Lieutenant in the 2nd Hampshire, June 13th.

SUBMARINE MINERS.

JOHN Y. MACKAY, M.D., to be Surgeon-Lieutenant in the Tay Division, June 13th.

VOLUNTEER RIFLES.

SURGEON-CAPTAIN R. A. NEWTON, 1st Volunteer Battalion the Royal Warwickshire Regiment, to be Surgeon-Major, June 6th.

Mr. WILLIAM P. MILES is appointed Surgeon-Lieutenant in the 4th Volunteer Battalion the South Wales Borderers, June 6th.

Surgeon-Lieutenant T. M. CARTER, 3rd Volunteer Battalion the Gloucestershire Regiment, resigns his commission, and is appointed Lieutenant, June 6th.

Surgeon-Lieutenant A. WAUGH, M.B., 3rd Volunteer Battalion the Duke of Wellington's (West Riding Regiment), and Surgeon-Lieutenant J. LEA, M.B., 1st Volunteer Battalion the Loyal North Lancashire Regiment, resign their commissions, June 6th.

Surgeon-Lieutenant E. V. EAMES, 1st Volunteer Battalion the Sherwood Foresters (Nottinghamshire and Derbyshire Regiment), to be Surgeon-Captain, June 6th.

The undermentioned Surgeon-Lieutenants are promoted to be Surgeon-Captains, dated June 13th: J. ORTON, 2nd Volunteer Battalion the Royal Warwickshire Regiment: A. F. WILSON-GUNN, 4th Volunteer Battalion the Cameronians (Scottish Rifles); R. ROCHE, 1st Cadet Battalion the King's Royal Rifle Corps.

Surgeon-Captain W. J. HARNETT, 22nd Middlesex, resigns his commission, is granted the honorary rank of Surgeon-Major, and retains his uniform, June 13th.

Surgeon-Major J. W. MARTIN, M.D., 1st (Hallamshire) Volunteer Battalion the York and Lancaster Regiment, to be Surgeon-Lieutenant-Colonel, June 13th.

Surgeon-Lieutenant H. G. COWIE, M.D., 2nd Volunteer Battalion the Gordon Highlanders, resigns his commission, June 13th.

THE NEW VOLUNTEER REGULATIONS.

SURGEON-LIEUTENANT-COLONEL NEMO writes: In answer to Surgeon-Major Sleman's letter in the BRITISH MEDICAL JOURNAL of May 30th with reference to new regulations of Army Order for April, 1902, I can talk from actual experience and say I had the greatest possible difficulty in getting exemption from camp duty, though I stated I had professional engagements which would prevent me from being able to attend camp, notwithstanding the fact that I did a fortnight's attendance at the previous brigade camp. The officer commanding absolutely refused me leave, and said I would require to pay the capitation grant, and if I did not do so he would take me to court. It is stated in the regulations mentioned if we "are competent to execute and have satisfactorily performed all the duties of the appointment during the year," the officer commanding may at his discretion grant us leave, but when you have an officer commanding who says he supposes you are competent, though you have passed all the requisite examinations, and in my case I had been returned for nineteen years consecutively as efficient, and who declares because I did not go to camp, he could not return me as having performed all the duties satisfactorily, and hence would return me as non-efficient, what are you to do to obtain redress?

TWO GATEWAYS OF THE ARMY.

DOUBLE SENTRIES writes: There are two "gateways to the army" over which I propose to post a medical sentry:

No. 1 Gateway.—I propose that a medical officer of rank be attached to the office of the Inspector-General of Recruiting, who is a military officer with no medical knowledge whatever, and who is endeavouring to preside over a technical medical office like that of recruiting. A trained medical officer, able to study the medical aspects of recruiting as a whole, will be No. 1 sentry, with the title of Deputy Inspector-General of Recruiting.

2. No Permanent Medical Officer Sits on the Chelsea Hospital Invaliding Board.—The other "gateway of the army" is the exit gateway of Chelsea, with its masses of invaliding yearly. On this important Board of final invaliding no permanent and specialized medical officer sits. It is said the already-busy Director-General of the Army Medical Service "looks in" there now and then; but we need a permanent medical commission for this post, to watch the great "waste" of the army and to guide us in the path of prevention.

It seems absurd that this "sentry on No. 2 post" has never yet been established, and it shows the happy-go-lucky, unscientific methods, or want of methods, of our army that such should have been the case for all the long years. The growing physical degeneracy of the race where crowded in "slum" cities is forcing on a full consideration of these national questions of recruiting and invaliding, and I now suggest these appointments of medical specialists to study and watch these matters.

MEDICO-LEGAL AND MEDICO-ETHICAL.

EMERGENCY VACCINATION: CLAIM FOR DAMAGES.

A CASE affecting the rights of medical officers of health was heard at Bury County Court on June 15th. The plaintiff was a child who sued through her father, and the allegation against the defendant, Dr. Brindley (M.O.H. for Bury), was that whilst the child was an inmate of the Bury Infectious Diseases Hospital he vaccinated her.

The case for the plaintiff was that the child was admitted to the Bury Infectious Diseases Hospital on March 5th suffering from scarlet fever, and when she was discharged on April 18th, the father found that she had been vaccinated. In November, 1898, he obtained an exemption from vaccination for this child, and a letter was sent to Dr. Brindley claiming £5 damages as compensation for assault, the letter stating that heavy damages were not claimed as all that was desired was to vindicate the rights of parents to prevent their children being vaccinated. A reply was received in which defendant stated that the child was in his custody during this period. A case of small-pox occurred in the ward in which the plaintiff was detained, and as she had been in contact with the child which was suffering from small-pox, acting on his best judgement he vaccinated the plaintiff. The defendant admitted the fact of vaccination.

Dr. Brindley said that there had been ninety-two cases of small-pox in Bury, and from October last until March 22nd there had been between sixty and seventy cases. During the time the plaintiff was in the scarlet fever ward a case of small-pox occurred. The affected patient was an unvaccinated child, and it died from the disease. There were twenty other unvaccinated children in the ward, and he felt it was necessary to act promptly, and he vaccinated the whole of them. It was submitted that there was no time to communicate with the parents in order to obtain their consent.

His honour Judge Bradbury held that the medical officer was under a statutory obligation and legal liability to take all proper steps to secure the safety of the whole of the children and patients under his charge. The question was one of principle as to the practice to be observed in public institutions in emergencies of that kind. No one could say that the doctor had been guilty of conduct which could be said to be morally reprehensible. He acted to the best of his judgement in the interest of the children committed to his charge. While he was not entitled to do something which was against the law, the question was whether in the circumstances, having regard to the imminent peril to which the children were subjected, he did what was right. He gave judgement for the defendant, but granted plaintiff leave to appeal.

SENSATIONAL SURGERY IN THE NEWSPAPERS.

WE had recently occasion to direct attention to a paragraph in the *Clonmel Chronicle* which, under the heading of "Difficult Surgical Operation at Union Hospital, Clogheen," described an operation of lithotomy mentioning the names of the operator and practitioners who assisted him. We have since received a letter from one of the medical men who attended the case enclosing a cutting from the same newspaper which shows that the paragraph was promptly disowned by the gentleman mentioned, and he complains that the correspondent who forwarded us the original notice should have suppressed the disclaimer, and with this we entirely agree. He goes on to say, however, that we should not find fault with humble practitioners whose names appear in this way, while we have no word of censure for those "giants of the profession" who append their names to the bulletins concerning royal and other distinguished patients. We think our correspondent does us in this respect less than justice. We have clearly laid down (see BRITISH MEDICAL JOURNAL, October 5th, 1901, p. 1004) the principles involved. In the case of Royalty bulletins signed by the medical attendants have been the rule for a hundred years and have been sanctioned by professional and public opinion, and seem to be justified on account of the grave national interests at stake; but speaking generally we disapprove of the publication of the names of the medical attendants and shall always be ready to act up to this principle.

GIFTS TO PARTNERS.

PARD asks what is usual under the following circumstances where medical practitioners are in partnership: (*a*) If a present is made to one of the partners by a patient? (*b*) If the present takes the form of a cheque? (*c*) Where a legacy is left to one of the partners? (*d*) Where a larger amount is paid than charged by the firm, the surplus being sent as a mark of gratitude?

*** (*a*) Where presents are made in kind it is usual for the partner to whom they are sent to retain them himself. (*b*) Where the present takes the form of cash, he can only do so with the consent of his partner.

Legacies usually go to the legatee only, but this ought to be laid down in the deed of partnership. (*d*) This is governed by the answer to (*b*).

NEWSPAPER PUFFS.

Mr. Alexander Paul Swanson (Liverpool) writes to say that the letter which appeared in the *Liverpool Daily Post* of June 9th, praising the Liverpool Cancer and Skin Hospital, Dr. Swanson, the matron and nurses, and expressing gratitude for the kindness shown to the writer's child, was not published with his knowledge or consent.

*** This is the sort of case where a remonstrance should be sent to the editor from some representative medical society. He should be told that such letters are sometimes written merely as advertisements and are always open to suspicion, and therefore to allow a correspondent to mention Mr. Swanson's name in such a letter is calculated to do him injury in the eyes of his profession, as it lays him open to the suspicion of having been in some way a party to the publication of the letter.

MEDICAL ADVERTISING IN LAY NEWSPAPERS.

R. H. asks whether a medical practitioner may advertise in a lay newspaper for resident patients with a view to the treatment and cure of a particular affection, provided that he does not give his name? We are further asked to say whether the General Medical Council would be likely to object to such an advertisement?

*** Many hydropathic establishments are advertised in the most objectionable way, and, except where the doctor's name has been put prominently forward, no complaint has hitherto been made, but there is grave objection to a medical practitioner advertising in a lay newspaper a home for the treatment of a particular class of disease, even although his name may not appear, and we feel sure that it will be necessary to fight for the principle that such advertisements should only be permitted in medical journals. We do not know that the question has ever been before the General Medical Council, and therefore we are unable to say what view the Council would take of it.

PURCHASE OF A PRACTICE.

Purchaser asks: In purchasing a practice (1) is the price to be based on the gross receipts, without deductions? (2) Is it usual to pay cash down, or by instalments? (3) What is to be considered a reasonable introduction?

*** (1) The basis of price is the gross receipts. (2) The price is usually paid by instalments. One and a half year's purchase would be in the case of many practices a fair value. (3) This would depend on the character of the practice. A longer time would be required in the case of good-class practice than in the case of a middle or poor-class practice.

AGREEMENTS NOT TO PRACTICE WITHIN AN AREA.

H. B. asks whether it is usual in a dissolution of partnership for the outgoing partner to sign an agreement not to practise either as a principal, *locum tenens*, or assistant, within a certain radius for a given time. He has no objection to signing with regard to principal or assistant, but he objects to being deprived of the chance of acting as *locum tenens*.

*** Such an agreement is usual. The remaining partner might reasonably object to the outgoing acting as *locum tenens* to a rival practitioner within the prescribed area.

Threatened writes that he has dissolved partnership, and under the deed of dissolution it is agreed that the outgoing partner shall not practise within a radius of three quarters of a mile of his residence. He now threatens to take a house just outside the three-quarters of a mile, and practise as before.

*** The outgoing partner may take a house outside the above limit, and practise there, but he may not visit any patient within the prescribed area, or accept any medical appointment necessitating his so doing. In event of violation of these conditions, our correspondent can bring an action against him for damages, and obtain an injunction to restrain him from continuing such unlawful conduct.

A NEW HEALER.

J. W. T.—We have no knowledge of the person whose performances have roused curiosity in Bristol, though it is of course possible that if his career were traced it might be found that he had been before the public under another name. The chief constable should take steps to discover the man's antecedents.

THE MULTIPLICATION OF DOOR PLATES.

C. W. B.—The rule is that medical practitioners should not affix name plates upon houses where they have no tenancy, except in widespreading districts where it may be necessary for them to indicate houses at which messages may be left for them. There seems to be no reason of the kind to justify our correspondent in doing so.

THE TRANSFERABILITY OF PUBLIC APPOINTMENTS BY SALE.

Teres.—We are asked to say whether, when a practice is sold which includes public appointments, it is unprofessional for other practitioners to compete with the purchaser by applying for such appointments. As a rule the price to be paid for a practice depends in part upon the extent to which the appointments are secured by the purchaser; and in the case of a death vacancy it may happen that the neighbouring practitioners agree to help the widow and facilitate the sale by not competing for the appointments. Under these circumstances it might be unhandsome to apply.

THE EXHIBITION OF AN *X*-RAY APPARATUS AT A BAZAAR.

Scow.—Provided that the exhibitor does not seek to illustrate the uses of the *x* rays in the treatment of diseases and confines himself to demonstrations of radiography and diaphanoscopy, no reasonable objection can be made.

PROFESSIONAL SECRECY.

W. D. P.—Our correspondent has not acted quite in accordance with the spirit of our reply. He should have told the agent of the insurance company that he would consult the representatives of the deceased person, and if he obtained their permission he would be glad to give the information required upon being paid a reasonable fee. We do not understand his hostile attitude towards the man, which seems to have been carried to the verge of personal violence. Such inquiries on the part of insurance companies are not to be regarded as impertinent. They are within their rights in seeking to obtain such information, and the rule above indicated defines clearly the conditions under which it may be supplied by medical practitioners.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Surgery.—The Professorship of Surgery was duly re-established on June 11th. An election will be held during the summer.

Degrees.—At the same congregation the following degrees were conferred:—*M.D.*: G. C. Garratt, Trinity. *M.B. and B.C.*: H. Robinson, Trinity; L. E. Wigram, Trinity; J. A. Wood, St. John's; W. J. Sasmann, Caius. *M.B.*: H. D. Ledward, Trinity; F. H. Parker, Pembroke; W. W. Jeudwine, H. Selwyn. *B.C.*: G. W. Micklethwaite, Trinity; G. B. Norman, St. John's; R. S. Drew, Pembroke.

Examiner.—Dr. D. MacAlister has been appointed an additional Examiner for the Third M.B. Examination, Part I; he has also been reappointed Assessor to the Regius Professor of Physic for the next academic year.

Research Degree.—Mr. J. C. Simpson, advanced student, of Caius College, has been approved for the B.A. degree in respect of his original researches on the Organization of a Thrombus.

UNIVERSITY OF LONDON.

St. Thomas Hospital Medical College.

The prize distribution of the Medical School of St. Thomas's Hospital took place on June 11th in the Governors' Hall.

Mr. J. G. Wainwright (the Treasurer) said that 16 new beds were to be added within a few days to those at present in use, and in the next two years he looked forward to the addition of 40 beds. Referring to the loss the hospital had suffered by the death of Dr. Barry Blacker, Mr. Wainwright said that it was through him that St. Thomas's Hospital could claim to be the first hospital to establish an *x* ray department. Dr. Blacker had introduced an important improvement in electrical treatment, which had been the means of making it more available and more applicable. In consequence of the exposure to the *x* rays Dr. Blacker's hands became much affected, and the irritation was followed by a further serious development, which caused his death. It was satisfactory to know that the services rendered to the country and to the world by Dr. Blacker had not been overlooked from a pecuniary point of view by the Government.

Sir A. W. Rücker then presented the prizes to the successful students. Mr. H. J. Nightingale secured the first Entrance Science Scholarship of 150 guineas, and Mr. A. C. F. Turner the second scholarship of £60. The Mead Medal was gained by Mr. G. C. Adeney, and the Cheselden Medal was won by Mr. H. S. Bennett. Mr. A. E. Boycott, amongst other prizes, received the Seymour Graves Toller Prize.

Sir A. W. Rücker then addressed the meeting on the subject of the growing closeness of the relations between the great medical schools and the University of London. He first showed that the medical profession was organized on the assumption that hospitals and medical schools were connected. The outside world should understand more clearly than it did that the educational work of the great hospitals helped and depended upon the more purely philanthropic work. The success of a hospital must depend on the education and ability of the men who were turned out to be the physicians and surgeons of the future. If it were true that aid to hospitals was almost a direct aid to medical schools, then the converse was also true that aid to medical schools was direct assistance to the great hospitals. In the reorganized University of London they possessed a machinery of the most extraordinary flexibility. The actual government of the University was complicated because its organization was on a democratic basis. The institutions connected with the University all had a share and voice in the way the subjects in which they were interested should be taught. The relation of the University to the great medical schools was something like that of the Universities of Oxford and Cambridge to their colleges; they were absolutely independent but were represented on the governing body of the University. Sir A. W. Rücker then proceeded to explain in detail his reasons for believing that the University of London would become the great centre for post-graduate work. Since October 1st last, 206 graduates of other universities had been entered on the books of the University of London.

VICTORIA UNIVERSITY.

Owens College.—The following appointments on the teaching staff have been made: Mr. W. P. Montgomery, M.B., F.R.C.S., Lecturer in Orthopaedics; Mr. James Niven, M.D., Special Lecturer on Public Health Administration; Mr. J. W. Smith, M.B., F.R.C.S., Assistant Lecturer in Operative Surgery.

The following have passed the M.D. Examination:

*A. E. Ash, Owens. Thesis: The Enteric Fever of South Africa, with a Report on 550 Consecutive Cases. G. Ashton, Owens. Thesis: Relation of Pathological Conditions of the Choroid Plexuses to Mental Diseases. *H. J. Crompton, Owens. Thesis: A Contribution to the Pharmacology of Selenium and Tellurium, including the Results of Some Comparative Experiments with Arsenic. *E. N. Cunliffe, Owens. Thesis: The Blood in Malignant Disease. *A. E. Finney, Owens. Thesis: The Islands of Langerhans in their Relation to Morbid Conditions of the Pancreas, and Diabetes Mellitus. J. F. Hodgson, Owens. Thesis: Some Remarks on the Causation of Epilepsy. W. E. Livsey, Univ. Thesis: Tobacco Amblyopia: Its Etiology, Statistics, Symptoms, Pathology, Prognosis, and Treatment, with a Record of 77 Cases. H. A. C. Magian, Owens. Thesis: A Contribution to the Study of Chlorosis. J. Moreton, Owens. Thesis: The Treatment of Pulmonary Tuberculosis. *J. W. Miller, Univ. Theses: (1) Plague, its Dissemination and the Measures used against it; (2) Some Observations on over 5,600 Cases of Inoculation

against Plague in the Punjab, 1902. *C. A. Ricketts, Owens. Thesis: A Research on the Cell-Lamination of the Human Cerebral Cortex and its Bearing on the Localization of Function. S. J. Ross, Univ. Thesis: Diphtheria. E. Turton, Yorks. Thesis: Defective House Drainage, and an Inquiry into its Influence on the Etiology of Typhoid Fever and Diphtheria.

No gold medal was awarded.

* Theses commended.

UNIVERSITY COLLEGE, LIVERPOOL.

New Lectureships.—Three new lectureships have been established in the Medical Faculty of University College. They are a Clinical Lectureship on Venereal Diseases, a Lectureship on Experimental Medicine, and a Lectureship on Comparative Pathology. Dr. Armand Bernard, M.B., B.A., of the University of Dublin, for many years surgeon to the Lock Department of the Liverpool Royal Infirmary, has been appointed to the first office; Dr. A. S. F. Grünbaum, M.D., M.A.Cantab., F.R.C.P., Director of the Liverpool Cancer Research, has been appointed Lecturer on Experimental Medicine; and Dr. H. E. Annett, M.D., D.Sc.Vict., D.P.H., has been appointed Lecturer on Comparative Pathology. Dr. Annett is an old student of University College and of the Royal Infirmary, and has also studied in London and Berlin. In the latter city he studied diseases of animals for two years under Professor Koch. The study of comparative pathology and the diseases of the lower animals is of the greatest importance in a city like Liverpool, on account of the enormous trade in cattle from abroad in which it is engaged.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary Council was held on June 11th, Sir Henry G. Howse, President, in the chair.

Fellowship Examination.

Thirty diplomas of Fellowship were issued to the candidates found qualified at the last Pass Examination.

Examination in Dental Surgery.

It was determined that candidates for the First Professional Examination for the Licence be required in future to provide themselves with certain instruments, of which a detailed list has been drawn up. The instruments are for that part of the examination which consists of mechanical dentistry. The detailed list will be issued to the dental schools and to candidates.

Court of Examiners.

Mr. W. F. Haslam (Birmingham) was elected examiner in surgery in the vacancy of Mr. J. R. Godlee.

Purchases.

It was announced that a portrait in oil by Mr. George Richmond, R.A., of the late Mr. Henry Hancock, President of the College in 1872, and a doctor's signboard of the seventeenth century had been purchased.

Votes of Thanks

were accorded to Mr. Thomas Bryant for his services as the representative of the College in the General Medical Council, and to Mr. Alfred Willett and Sir Frederick Treves for their services as members of the Council.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE BACTERIOLOGICAL EXAMINATION OF MILK.

THE Metropolitan Dairymen's Society recently held a conference of the dairy trades of the metropolis under the presidency of Mr. George Basham. The object of the meeting was to consider the following clauses prepared by the Camberwell Borough Council for insertion in the Sale of Adulterated Butter Bill now before the House of Commons:

(*a*) The provisions of the Sale of Food and Drugs Acts, 1875 to 1899, shall apply to samples of milk or butter which shall be proved to contain bacteria capable of producing disease in man; but no prosecution shall lie under this section unless the seller shall have been informed at the time of purchase that such sample was, or samples were, intended for bacteriological examination, and no sanitary authority shall undertake any prosecution under this section except upon the certificate of a bacteriologist, who shall be a registered medical practitioner, and possessed of qualifications satisfactory to the Board of Agriculture (Local Government Board).

(*b*) In any prosecution under the preceding section the certificate of a bacteriologist duly qualified and appointed shall be accepted as evidence in the same manner and to the same extent as if he were a public analyst appointed under the Food and Drugs Acts, 1875 to 1879. Provided always that it shall be lawful for any sanitary authority to appoint as bacteriologist its public analyst, being a registered medical practitioner, and possessed of qualifications satisfactory to the Board of Agriculture (Local Government Board).

The Chairman condemned the clauses root and branch, mainly on the ground of the time and expenses which would be involved in making such bacteriological examination of milk. He argued that to be effective the work would have to be carried on in all parts of the kingdom, and that the cost to the ratepayers of the appointment of men qualified to do such work would be so large as to be unjustifiable. A resolution protesting against the clauses was carried unanimously, as was a resolution moved by Mr. John Welford pledging the members of the Metropolitan Dairymen's Society and the Dairy Trade and Can Protection Society to place themselves in communication with their respective parliamentary representatives with a view to obtaining from them an assurance that should such proposed legislation be introduced it would receive their most careful consideration "in the interests of the public and the dairy trade." A vote of thanks to the Chairman brought the meeting to an end.

It is very kind of the Chairman to take such a deep interest in the pockets of the ratepayers, and doubtless he deserved a vote of thanks for his good intentions. We cannot help thinking, however, that if the ratepayers realized what a source of danger and contamination lies in milk supplied under conditions which too generally prevail, they would gladly pay for the appointment of well-qualified men to protect them from milk too often coming from insanitary and uninspected farms, and sowing broadcast the seeds of disease. Persons belonging to and interested in the milk trade are, perhaps, not those best able to form an unprejudiced opinion on the question whether the public may wish their milk inspected or not. We cannot refrain from expressing our regret that large dealers, who have done much to improve the milk trade, should, for the reasons advanced at this meeting, join in opposing measures designed to improve the unsatisfactory conditions under which the trade is at the present time being carried on, without at least suggesting some alternative means of protecting milk from the gross bacterial contamination which now commonly occurs.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 9,343 births and 4,022 deaths were registered during the week ending Saturday last, June 13th. The annual rate of mortality in these towns, which had been 15.5, 14.9, and 14.3 per 1,000 in the three preceding weeks, further declined last week to 13.9 per 1,000. The rates in the several towns ranged from 4.7 in Hornsey, 5.3 in Smethwick, 5.7 in Willesden, 6.4 in Walthamstow, 8.5 in Croydon and in York, 9.0 in Tottenham, and 9.1 in Handsworth, to 18.8 in Oldham, 19.3 in Liverpool, 19.4 in Burnley, 19.6 in West Bromwich and in Preston, 21.5 in Coventry, 22.5 in Middlesbrough, and 25.1 in Great Yarmouth. In London the rate of mortality was 12.4 per 1,000, while it averaged 14.6 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.4 per 1,000 in the seventy-six large towns; in London this death-rate was equal to 1.2 per 1,000, while it averaged 1.5 in the seventy-five other towns, among which the highest death-rates from the principal infectious diseases were 3.1 in West Bromwich, 3.2 in Wolverhampton and in Preston, 3.8 in Oldham, 6.6 in Middlesbrough, 7.9 in Coventry, and 8.0 in Great Yarmouth. Measles caused a death-rate of 1.5 in Leyton and in Walthamstow, 1.7 in Wigan, 1.8 in Sheffield, 2.7 in Wolverhampton, 3.3 in Middlesbrough, and 5.7 in Coventry; diphtheria of 1.4 in Coventry and 3.0 in Great Yarmouth; whooping-cough of 1.1 in Middlesbrough and 1.5 in Oldham; "fever" of 1.1 in Middlesbrough and 1.6 in West Bromwich; and diarrhoea of 1.6 in Hanley, and 4.0 in Great Yarmouth. The mortality from scarlet fever showed no marked excess in any of the large towns. Three fatal cases of small-pox were registered in Liverpool, and 1 each in Leicester, Derby, Bootle, Bolton, Manchester, Oldham, Rochdale, Halifax, Bradford, and Sunderland, but not one in any other of the seventy-six large towns. The Metropolitan Asylums Hospitals contained 64 small-pox patients at the end of last week, against 64, 60, and 72 at the end of the three preceding weeks; 9 new cases were admitted during the week, against 19, 10, and 24 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 1,759, 1,771, and 1,785 on the three preceding Saturdays, had declined again to 1,710 on Saturday last, June 13th; 145 new cases were admitted during last week, against 234, 225, and 210 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, June 13th, 1,112 births and 574 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 17.2, 18.4, and 18.2 per 1,000 in the three preceding weeks, further declined last week to 17.5 per 1,000, but was 3.6 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scotch towns the death-rates ranged from 13.7 in Dundee and 13.8 in Paisley to 18.8 in Glasgow and 26.3 in Greenock. The death-rate from the principal infectious diseases averaged 1.5 per 1,000 in these towns, the highest rates being recorded in Paisley and in Greenock. The 285 deaths registered in Glasgow included 10 which were referred to whooping-cough, 2 to "fever," and 11 to diarrhoea. Three fatal cases of whooping-cough and 3 of diarrhoea were recorded in Edinburgh; 3 of diarrhoea in Aberdeen, and 4 of whooping-cough in Greenock.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday last, June 13th, 574 births and 357 deaths were registered in six of the principal Irish towns. The mean annual rate of mortality in these towns, which had been 20.6, 19.1, and 16.2 per 1,000 in the three preceding weeks, rose last week to 18.2 per 1,000, being 4.3 above the mean rate during the same period in the seventy-six large English towns. The death rates ranged in these six Irish towns from 11.7 in Waterford and 16.4 in Londonderry to 19.2 in Belfast and 23.7 in Dublin. The death-rate in the six towns from the principal zymotic diseases averaged 1.1 per 1,000, the highest rate—2.5—being recorded in Londonderry, while Limerick and Waterford had no deaths from zymotic diseases at all. The deaths registered in Dublin included 1 which was referred to small-pox, 5 to whooping-cough, 2 to enteric, and 1 to scarlet fever. No deaths from small-pox or scarlet fever occurred elsewhere, but Belfast recorded 5 deaths from measles and 1 each from whooping-cough and diarrhoea. Cork had 1 death from whooping-cough and 1 from diarrhoea. In Londonderry 1 death was due to enteric and 1 to whooping-cough.

HEALTH OF WOOLWICH, 1902.

THE estimated population of Woolwich is 122,505, and the birth-rate for 1902 was 29.0. The death rate was 14.7. Dr. Davies, the Medical Officer of Health, calculates that the saving of 422 lives in the last two years in this borough represents a money gain of £84,400. The zymotic rate was 1.8, and the infant mortality 124. Dr. Davies draws attention to the occurrence of several cases of nasal diphtheria without obvious membrane. Voluntary notification of phthisis was in force during the year, and 189 cases were notified. Efforts have been made by the sanitary authority to prevent promiscuous expectoration, and to join with neighbouring districts in the provision of a consumptive sanatorium. Fourteen samples of milk were examined for the tubercle bacillus, with a negative result in all cases. During the last two years twenty-two samples have been thus examined, and 2, or 10 per cent., found to contain tubercle bacilli.

HEALTH OF LAMBETH, 1902.

LAMBETH contains 4,079 acres and a population of 305,102 persons, which gives a density of 74.8 persons to the acre. Dr. Priestley reports the corrected death-rate for 1902 as 17.7 per 1,000, and the birth-rate 29.7 as compared with 28.4 in London. The corrected infant mortality-rate was 127.4. Some 70 or 80 pages of the report deal with the outbreak of small-pox in Lambeth, to which reference has previously been made in our columns. The zymotic death-rate was 1.8. The decline in diphtheria still continues. Antitoxin is supplied by the borough council gratis, and during the year 78 bottles were distributed. The bacteriological laboratory proved very useful, as many as 466 examinations being made (212 suspected tuberculous sputum, 91 blood specimens, 154 throat swabs, 3 urines, and 6 ice-creams). Tubercle bacilli were found in 50.0 per cent. of the sputa, 37.4 per cent. of the bloods gave positive Widal reaction, and 10.4 per cent of the swabs yielded B. diphtheriae. Voluntary notification of phthisis was adopted during the year, following the practice of a number of other metropolitan boroughs, and 315 cases were notified from June 1st to December 31st. Dr. Priestley incorporates in his report a large amount of most valuable information on a great variety of subjects, including reprints of various special reports he furnished to his authority during the year. These include a report on restaurants, kitchens, etc., ice-creams, bacteriological work, 1899-1902, Midwives Act, Manchester Sanitary Congress, Underground Bakehouses, and Small-pox.

HEALTH OF COVENTRY, 1902.

DR. HUGH SNELL reports the death-rate for Coventry in 1902 as 14.0 per 1,000, which is lower than in any previous year on record. The infantile death-rate of 107 has not been lower since the records were kept. The principal reason for these exceptional features in the vital statistics was the almost entire absence of the usual summer incidence of infantile diarrhoea. The zymotic death-rate was 1.1 per 1,000.

PUBLIC HEALTH CONGRESS IN LIVERPOOL.

THE Annual Congress of the Royal Institute of Public Health will be held in Liverpool, beginning on July 15th and terminating on July 21st. An elaborate programme has been issued, comprising papers and discussions on a great variety of subjects affecting the health of the community, several social functions and excursions to places of interest in the neighbourhood. On Wednesday evening, July 15th, the proceedings will be opened by the delivery of an address by the President, Lord Derby, at 8 p.m., in the Small Concert Room, St. George's Hall, after which the Harben medals for the years 1901 and 1902 will be presented to Sir Charles A. Cameron, C.B., M.D., etc., and Professor William R. Smith, M.D., D.Sc. On the following day there will be a *soirée* at the Walker Art Gallery, and on Friday, July 17th, a garden party by invitation of the Lord Mayor. Saturday will be entirely devoted to various excursions. On Sunday the Congress will attend service in the Cathedral, when the Bishop of Liverpool will preach. On Monday the Congress dinner will take place at 7 p.m. The strictly business part of the Congress is divided into nine Sections: (1) Sanitation of Congested Areas and Rehousing the Dispossessed; (2) Preventive Medicine and Vital Statistics; (3) Bacteriology and Comparative Pathology; (4) Tropical Sanitation; (5) Municipal Hygiene and Sanitary Legislation; (6) Engineering; (7) Child Study and School Health; (8) Port Sanitary Administration; (9) Ladies' Committee and Section of Domestic Sanitation. The Sections all meet on July 16th, 17th, 20th, 21st at 10 a.m. Dr. E. W. Hope, Medical Officer of Health for Liverpool, is the Honorary General Secretary.

APPLICATION FOR APPOINTMENT NOT ADVERTISED AS VACANT.

STATHERN writes: A. is a medical officer for a parish, but does not live within it. He has held the appointment for several years, but in consequence of his non-residence has to be annually reappointed. At the end of one of A.'s years of office B. lodges an application for the post on the understanding that there is annually a potential vacancy. Is B committing a breach of professional etiquette?

*** Unless the vacancy in question has been advertised, or in some other way publicly notified, we consider it would indicate bad taste if B. were to apply for the appointment.

SPECIAL SERVICES OF MEDICAL OFFICER OF HEALTH.

THE medical officer of health of a rural district, who also engages in private practice, is sent by the rural council to inspect a hospital in a distant part of the county and to report in connexion with a proposed isolation hospital in his own district. He asks whether he can require remuneration other than travelling expenses from the council.

*** We think he would be unwise to do so, though in the absence of details as to the conditions of his appointment a confident answer cannot be given. To report as to the best means of providing isolation accommodation is part of the duty of the medical officer of health.

TEMPORARY HOSPITALS.

A CORRESPONDENT asks the following question: By the by laws of the district in which he lives buildings of iron and wood are not permitted for the purpose of habitation, the only exception made being "in the case of buildings erected as hospitals for temporary occupation." It is proposed to erect, in the grounds of a public institution in this district, an iron building for occasional use as an isolation hospital, and it is stated that the by law in question forbids this. Against this it is argued that although the hospital will not be pulled down in any specified time, it is "temporary" in the sense of being only in occasional use. We are asked whether this view is correct, and whether there are any decided cases bearing on the point.

*** The case is one in which, failing an agreement, a legal opinion should be sought. We believe that such an opinion will be found to be adverse to the continuance of the temporary structure. A better plan would probably be to come to terms with the local authority, as, for instance, by undertaking to remove the erection within six months whenever notice to this effect is served.

MEDICAL NEWS.

DR. GALLOWAY will deliver the annual oration before the Dermatological Society of Great Britain and Ireland to be held at the house of the Royal Medical and Chirurgical Society, Hanover Square, on Wednesday next at 5 p.m. The subject of the oration will be the relations of different forms of erythema, especially to lupus erythematosus.

PRESENTATION TO PROFESSOR OSLER.—The ex-resident physicians and associate physicians of Johns Hopkins Hospital gave a dinner on May 15th, at the Maryland Club, Baltimore, in honour of Dr. William Osler, at which the eminent physician was presented with the *Dictionary of National Biography*, a work which he had long desired.

WE are asked to draw attention to the new by-law of the Royal Medical and Chirurgical Society of London which provides that officers of the Royal Navy Medical Service, the Royal Army Medical Corps and the Indian Medical Service can be nominated for election as Fellows by a single Fellow from personal knowledge, in place of the three signatures required in the case of ordinary candidates. Further, the entrance fee for such candidates has been reduced to 3 guineas and the annual subscription to 1 guinea; during absence abroad the annual subscription will be remitted.

WE published on January 31st the programme of the eleventh International Congress of Hygiene and Demography, which is to be held at Brussels this year from September 2nd to September 8th. We are asked to state that the latest editions of the programme and of circulars giving information with regard to travelling and hotel arrangements may be obtained from Dr. Paul F. Moline, Honorary Secretary of the British Committee, 42, Walton Street, Chelsea, S.W.

ASSOCIATION OF MIDLAND RAILWAY SURGEONS.—The first annual general meeting of the above Association will be held at the Wyvern Hotel, Leicester, on Thursday, June 25th, at 3.30 p.m. As important business is to be transacted, it is hoped that all the surgeons to the Midland Railway Friendly Society will make an effort to attend, and Midland Railway surgeons whose names are still unknown to the Association are invited to attend the meeting or to communicate with Dr. A. E. Payne, Honorary Secretary *pro tem.*, 2, Melbourne Street, Leicester.

THE ROYAL BRITISH NURSES' ASSOCIATION.—The annual meeting of the Royal British Nurses' Association took place on June 6th, Princess Christian presiding. The reports presented showed a slight balance of income over expenditure, but that the Association still owes about £250. Another £70 had been due to the Honorary Treasurer, Mr. John Langton, but remitted by him. During the year 1902-3, 118 nurses applied for registration, 93 being accepted; while 105 new members were elected and 17 resigned. The success of the "Nurses' Settlement" and the establishment of a branch in South Africa were mentioned. A discussion on State registration was included in the proceedings, which concluded by a vote of thanks to Princess Christian for her active interest in the work.

THE MEDICO LEGAL SOCIETY.—A meeting of this Society was held on June 9th, the President, Sir William Collins, being in the chair. The adjourned discussion upon Dr. Garson's paper on the Position of Medical Jurisprudence in London, especially in Reference to the Investigation of Cases of Death from Violence, was continued. This was followed by a paper by Dr. Wynn Westcott on the Overlaying of Infants. Dr. P. Smith read a paper on the Workmen's Compensation Act; and Mr. R. Henslowe Wellington presented a communication on the Recent Southwark Poisoning Trial. This meeting was the last of the first session of this newly-organized Society. It already consists of over 70 members, and has thus made a very successful start. Its secretaries are Dr. W. McCallin and Mr. R. Henslowe Wellington.

DONATION TO HOSPITAL.—The Board of Managers of the Birmingham General Hospital have received from the Aston Villa Football Club a cheque for £1,250, which sum was raised by subscription for the endowment of a footballer's bed in the hospital.

EGYPTIAN OPHTHALMIA.—Mr. A. F. MacCallan, M.B. Cantab., F.R.C.S., has been appointed by the Egyptian Government to direct the ambulant dispensaries which, as already announced, are to travel in Egypt for the treatment of ophthalmia in accordance with the arrangements made under the trust formed by Sir Ernest Cassel. Mr. MacCallan, who was formerly senior house-surgeon at the Royal London Ophthalmic Hospital and is at the present time clinical assistant there, will have the title of Inspector of Travelling Ophthalmic Dispensaries, and is leaving for Egypt immediately. Each dispensary will have a couple of tents with beds for the more serious cases and for those requiring operative treatment.

ASSOCIATION FOR THE ORAL INSTRUCTION OF THE DEAF AND DUMB.—Earl Carrington presided at a Festival Dinner in aid of the funds of this Society, held at the Hotel Cecil on June 11th. He was supported by the Earl of Crewe (President of the Association), Monsignor Stanley, the Rev. C. H. Parez, Dr. Phillips, Mr. A. H. Cheatle, and others. The Chairman, in proposing the toast of "The Association," claimed for it a pioneer position in the oral training of the deaf, it having been founded in 1870 by the late Baroness Mayer de Rothschild, chiefly for the benefit of poor Jewish children. Its benefits were now open to all classes and denominations, and it had both a training college for teachers and a school for deaf children at 11, Fitzroy Square, of which Mr. William van Praagh was the director. Structural alterations and improvements were necessary owing to the extension of subjects of instruction, and to meet the expenses the festival dinner—one of three only given since the foundation of the Society—had been organized. As a result donations and subscriptions to the extent of £3,400, including £20 from H.R.H. the Prince of Wales, were announced, a fair instalment of the sum of £5,000 which is required to place the finances on a satisfactory basis.

MEDICAL VACANCIES.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column advertisements must be received not later than the first post on Wednesday morning.

ABERDEEN UNIVERSITY.—Additional Examiner for Graduation in (1) Physiology, (2) Zoology, (3) Geology, (4) Medicine, (5) Midwifery, and (6) Diploma in Public Health.

ARGYLE AND BUTE ASYLUM, LOCHGILPHEAD.—Assistant Medical Officer, resident. Salary, £160 per annum.

AYLESBURY: ROYAL BUCKINGHAMSHIRE HOSPITAL.—Resident. Sargeon Salary, £80 per annum, rising to £100.

BATH: ROYAL UNITED HOSPITAL.—House-Surgeon, resident. Salary, £80 per annum.

BIRKENHEAD BOROUGH HOSPITAL.—Junior Male House-Surgeon, resident. Salary, £80 per annum.

CANTERBURY: KENT AND CANTERBURY HOSPITAL.—House Surgeon, resident. Salary, £90 per annum.

DEVONPORT: ROYAL ALBERT HOSPITAL.—Assistant House-Surgeon, resident. Salary at the rate of £50 per annum.

DUDLEY: GUEST HOSPITAL.—Assistant House-Surgeon, resident. Salary at the rate of £40 per annum.

EAST SUSSEX COUNTY ASYLUM, Hellingly.—(1) Second Assistant Medical Officer. Salary, £200 per annum. (2) Third Assistant Medical Officer. Salary, £160 per annum. Both resident.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark.—Four Qualified Clinical Assistants; also Unqualified Clinical Clerks in the Out-patient Department.

HALIFAX ROYAL INFIRMARY.—Third House Surgeon, resident. Salary, £80 per annum.

KENSINGTON DISPENSARY, Church Street, W.—Vacancy on Honorary Medical Staff.

LIVERPOOL DISPENSARIES.—Assistant Surgeon, resident. Salary, £100 per annum.

LIVERPOOL EYE AND EAR INFIRMARY.—House-Surgeon, resident. Salary, £80 per annum.

MANCHESTER CORPORATION.—Fourth Medical Assistant at the Monsall Fever Hospital, resident. Salary, £160 per annum.

MANCHESTER: OWENS COLLEGE.—Junior Demonstrator in Physiology. Stipend, £100 per annum, rising to £150 per annum.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Assistant. Salary, £160 for first year, rising to £180.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Assistant House-Surgeon, resident. Salary, £50 per annum.

NORTH STAFFORDSHIRE INFIRMARY, Hartshill.—House-Physician, resident. Salary, £100 per annum, rising £10 yearly.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road, N.W.—Assistant Resident Medical Officer. Salary at the rate of £50 per annum.

RYDE: ISLE OF WIGHT COUNTY HOSPITAL.—Resident House-Surgeon. Salary, £90 per annum.

UNIVERSITY COLLEGE HOSPITAL.—Resident Medical Officer.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Junior House-Surgeon. Salary, £50 per annum.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, Welbeck Street.—Medical Registrar. Honorarium, 50 guineas per annum.

WESTMINSTER HOSPITAL, S.W.—Administrator of Anaesthetics. Honorarium, £25 per annum.

WIGAN: ROYAL ALBERT EDWARD INFIRMARY.—Senior House-Surgeon, resident. Salary, £160 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House-Surgeon, resident. Salary, £100 per annum.

YORK DISPENSARY.—Resident Medical Officer. Salary, £120 per annum

MEDICAL APPOINTMENTS.

BALL, W., L.S.A., Second Assistant Medical Officer of the St. George's Union Infirmary.

BARRON, W. N., M.R.C.S., L.R.C.P.Lond., District Medical Officer of the Easthampstead Union.

CARSTAIRS, J. Lindley, M.A., M.B., C.M.Glasg., Outdoor Physician for North-Western District, Glasgow Maternity Hospital.

COOK, J. B., M.B., Ch.B.Vict., M.R.C.S., L.R.C.P., House-Surgeon to the Royal Alexandra Hospital for Sick Children, Brighton.

COPLANS, Myer, M.B.Lond., Resident Medical Officer to the North-West London Hospital.

DAVIS, Henry, M.R.C.S., Anaesthetist to the French Hospital.

ERHARDT, C. C. J., M.R.C.S., L.R.C.P.Lond., District Medical Officer of the Skipton Union.

FLEETWOOD, Leonard M., L.D.S.R.C.S.Eng., Honorary Surgeon-Dentist to the Chichester Infirmary.

FLETCHER, R. Brennand, M.B., Ch.B.Vict., Resident Medical Officer to St. Mary's Hospital, Manchester.

GAULD, G. O., M.B., B.S.Aberd., District Medical Officer of the Pocklington Union.

HARLOCK, HARRY, L.R.C.P.Lond., M.R.C.S.Eng., Physician to the Chichester Infirmary, *vice* Arthur Buckell, M.D.Lond.

LYLE, H. Willoughby, M.D., B.S.Lond., F.R.C.S.Eng., Honorary Assistant Surgeon to the Royal Eye Hospital, Southwark.

ROCH, Professor Antony, M.R.C.P., L.R.C.S.Irel., Lecturer on Hygiene to the Department of Technical Education and Agriculture for Ireland.

STEPHENS, J. W., M.R.C.S., L.R.C.P.Lond., District and Workhouse Medical Officer of the Cardigan Union.

SUTTER, R. R., M.D., M.S.Aberd., District Medical Officer of the St. Ives Union.

THOMPSON, A. F., M.B., Ch.B.Vict., House-Surgeon to the Manchester Royal Infirmary.

THORP, Winifred, M.B., B.S.Lond., House-Surgeon to the Kettering General Hospital.

YOUNG, G. R., M.D., M.Ch.R.U.I., Medical Officer of the Langley House Receiving Home of the Poplar Union.

DIARY FOR NEXT WEEK.

MONDAY.

Odontological Society of Great Britain 20, Hanover Square, W., 8 p.m.

TUESDAY.

Royal College of Physicians of London, 5 p.m.—Dr. J. L. Payne: On English Medicine in the Anglo-Saxon and Anglo-Norman Periods. (Fitz-Patrick Lecture I.)

Royal Medical and Chirurgical Society, 20, Hanover Square, W., 8.30 p.m.—Dr. Guthrie Rankin: The Treatment of Aneurysm by Subcutaneous Injection of Gelatine. Mr. D'Arcy Power and Mr. G. H. Colt: A case of Aneurysm of the Abdominal Aorta treated by the Introduction of Silver Wire, with a description of instruments invented and constructed by Mr. G. H. Colt to facilitate the introduction of wire into aneurysms; with demonstration by means of the Epidiascope.

THURSDAY.

Royal College of Physicians of London. 5 p.m.—Dr. J. L. Payne: On English Medicine in the Anglo-Saxon and Anglo-Norman Periods. (Fitz-Patrick Lecture II.)

Guy's Hospital Medical School, 4 p.m.—Dr. E. W. Ainley Walker: Recent Work upon the Nature of Immunity (Gordon Lectures in Experimental Pathology).

POST-GRADUATE COURSES AND LECTURES.

Charing Cross Hospital. Thursday, 4 p.m.—Lecture on Surgical Cases.

Hospital for Consumption and Diseases of the Chest, Brompton, S.W., Wednesday, 4 p.m.—Lecture on Some Unusual Auscultatory Phenomena met with in the Examination of the Lungs.

Hospital for Sick Children. Great Ormond Street, W.C., Thursday, 4 p.m.—Demonstration of Selected Cases.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C. Demonstrations will be given at 4 p.m. as follows:—Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, eye. Lectures will also be given at 5.15 p.m. as follows: Monday, Diseases of the Tongue; Tuesday, Preparation, Methods, and After-treatment in Operations; Wednesday, Meningitis in Childhood; Thursday, Diseases of the Tongue; Friday, Intrathoracic Tumours.

Mount Vernon Hospital for Consumption and Diseases of the Chest, 7, Fitzroy Square, W., Thursday, 4 p.m.—Lecture on The Hygienic Treatment of Pulmonary Tuberculosis.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C.—Tuesday, 3.30 p.m.—Lecture on Cases in the Wards.

Post-Graduate College, West London Hospital, Hammersmith Road, W.—Lectures will be delivered at 5 p.m. as follows: Monday, Glaucoma; Tuesday, Appendicitis; Wednesday, Medico-legal Relations of Insanity; Thursday, Renal Surgery; Friday, Electric Light Treatment.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

BELFRAGE.—On June 16th, at 1, Montagu Place, W., the wife of S. Henning Belfrage, M.D., of a son.

BEST.—On June 11th, at the Firs, Waltham Cross, the wife of F. H. de Graves Best, M.R.C.S., L.R.C.P., of a daughter.

CAMPBELL.—On June 13th, at 56, Warkworth Street, Cambridge, the wife of Edward McClure Campbell, L.R.C.P., L.R.C.S.Edin., of a son.

COX.—On June 14th, at 2, Carlingford Villas, Radstock, the wife of Franklin Cox, M.R.C.S.Eng., L.R.C.P.Lond., of a daughter.

DICKSON.—At Braehead, Lochgelly, on June 17th, the wife of D. Elliot Dickson, M.B., C.M.Edin., of a son.

LELAND.—On June 13th, at 77, Wimpole Street, Cavendish Square, W., the wife of Dr. A. B. Leland, of a daughter.

PHILLIPS.—On June 16th, at Hamilton House, Penge, S.E., the wife of Harry Harding Phillips, M.R.C.S., etc., of a daughter.

SIMPSON.—At Ealing, on June 14th, the wife of Lieutenant-Colonel R. J. S. Simpson, R.A.M.C., of a daughter.

MARRIAGES.

PINCHES—YEATS.—On June 13th, at St. Mary's Parish Church, Walmer, by the Rev. Canon Venn, William Hooper Pinches, Major R.A.M.C., son of the late William B. Pinches, of Highgate, to Lilian Edith, younger daughter of Richard Oliverson Yeats, of Babsdene, Walmer, Kent.

WILKINSON—STEVENS.—On June 11th, by licence at St. James's Church, Handsworth, by the Rev. T. S. Cave, M.A., assisted by the Rev. A. D. Wilkinson, M.A., James Howard Wilkinson, M.R.C.S.Eng., L.R.C.P.Lond., D.P.H.Oxon., to Elsie Maude Stevens, only daughter of James Stevens, Esq., The Larches, Handsworth.

DEATHS.

GALTON.—At his residence, Chelsea, on June 14th, John Charles Galton, M.A., M.R.C.S., F.Z.S., F.L.S., eldest son of the late Rev. J. L. Galton, Rector of St. Sidwell's, Exeter, aged 63.

JOLLEY.—On June 16th, 1903, at Cranbourne Cottage, Sutton Scotney, Hants, of typhlitis, James Henry Jolley, L.S.A., deeply regretted. Age 33.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar-street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

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☞ *Queries, answers, and communications relating to the subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

R. H. has received a pathological report upon a sample of blood taken from an anaemic patient to the following effect, "Leucopenia and eosinophilia." He desires to know what treatment would be appropriate.

M. asks for information on the following points: (1) What type of motor tricycle would be best for a hilly country for daily use? (2) What would the annual upkeep of such a machine cost? (3) Is such a machine difficult to ride?

E. A. W. wishes to know for how many weeks he could administer gr. ½ of the solid extract. nucis vomicae three times a day with safety, that is, until spasmodic twitchings and rigidity about the jaws indicate that sufficient of the drug has been given.

ANSWERS.

OLD PRACTITIONER.—The "poultice" has, we believe, almost, if not quite, disappeared from the practice of most hospitals.

ANXIOUS.—We can hear of no publication on penmanship likely to be of use to our correspondent. Theoretical treatises would, however, be of little use unless study of them were followed by practical instruction, and this could be most readily gained from some good elementary school teacher who makes a speciality of handwriting.

EDUCATION OF DEAF BOY.

STAPES.—A boy, aged 7, who is absolutely deaf owing to middle-ear disease, will probably require to be taught lip reading, and this could be learnt, together with the subjects of ordinary education, at the School for the Oral Instruction of the Deaf, 11, Fitzroy Square, London, W. (Director, Mr. Van Praagh); at the College for Training Teachers for the Deaf, Castlebar Hill, Ealing, W. (Secretary, Mr. Kinsey); or at the Yorkshire Institution for Deaf, Eastfield House, Doncaster.

KOCH'S POSTULATES.

BACTERIA will find in the following articles Koch's statements as to the conditions it is necessary to fulfil in order to prove that a micro-organism is the cause of a particular disease: *Investigations in the Etiology of Traumatic Infective Diseases*, by Dr. Robert Koch. London: The New Sydenham Society. 1880; *On the Investigation of Pathogenic Organisms* (*Mittheilungen aus dem k. Gesundheitsamte*, vol. i. Berlin. 1881); *The Etiology of Tuberculosis* (*Mittheilungen aus dem k. Gesundheitsamte*, vol. ii, 1884). Translations of the two last-mentioned articles of Professor Koch's are to be found in the volume of the New Sydenham Society for 1886.

NASAL CATARRH.

DR. H. HOWARD MURPHY (East Twickenham) writes in reply to "Surgeon": I have had a frequent personal experience, and tried everything suggested for years. As a result I would say the best remedies are antipyrin, cocaine, morphine, adrenalin chloride, menthol, and hazeline as snuffs, in solutions, or in vaseline ointment; they can be applied to the mucous membrane. I would give the best character to the first three combined in a snuff.

M.R.C.S. writes: I can recommend, from personal experience, a lotion composed of one part glycothymoline to six of warm water, used night and morning by means of a glass "Bermingham" nasal douche. This requires a little practice, but is by no means unpleasant to use. I cured myself of a very troublesome catarrh of a year's standing in about a month. Perhaps "Surgeon" will not consider that speedy, but I can assure him that it is reliable.

THE STUDY OF THE BLOOD.

J. R. H., who desires to collect information respecting the various epochs in the history of the study of the blood, might consult the following works: (1) *Physiology* (with references), Schäfer's *Textbook of Physiology*, vol. ii (Edinburgh and London: Young J. Pentland. 1900) (2) *Immunity*, etc. (with references), Muir and Ritchie's *Manual of Bacteriology*, 3rd edition (Edinburgh and London: Young J. Pentland. 1902. 12s 6d.). (3) *Clinical Examination*. Cabot's *Guide to the Clinical Examination of the Blood*, 4th edition (London: Longmans, Green and Co. 1901. 16s.). Coles's *The Blood: How to Examine and Diagnose its Diseases*, 2nd edition (London: J. and A. Churchill. 1902. 10s. 6d.). Ewing's *Clinical Pathology of the Blood* (London: Henry Kimpton. 1901. 18s.). Da Costa's *Clinical Haematology* (London: Rebman Ltd. 1902. 22s. 6d.). Ehrlich and Lazarus's *Histology of the Blood* (Cambridge: University Press. 1900. 5s.); and the article on the Blood in vol. i of the *Encyclopaedia Medica* (Edinburgh: Wm. Green and Sons. 1899. 25s.).

LETTERS, NOTES, Etc.

PROPHYLACTIC SERUM.

DR. T. M. ALLISON (Newcastle-on-Tyne) writes: In Mr. Watson Cheyne's masterly paper on rectal cancer, published on June 13th, the prophylactic injection of antistreptococcus serum is mentioned, and I would like to add a mite of testimony when it is used in this way. Its specific powers are not so great as that of antidiphtherial serum, except it be used even earlier in the attack than the latter, when it is most satisfactory, and as a prophylactic I think it superior. Given by the mouth at bedtime I find after using it in scattered cases over some years that, apart from its specific influence, it has fair hypnotic powers, inducing sleep without after-depression, and also lowers temperature a degree or two, and a patient next morning has a cleaner tongue and improved appetite and appearance. In surgery I believe it would be good practice to give 10 c.cm. by the mouth the night before an operation, and the night after also if sepsis were feared, provided there was no sickness, when it might be injected. And in every case of confinement, especially in primiparae, it should be given the night following birth as a matter of routine. It is, of course, nothing like opium in power, it will not relieve pain, but it has much more specific characteristics, and is without drawback except price.

LETTERS, COMMUNICATIONS, ETC., have been received from:

A Dr T. M. Allison, Newcastle-on-Tyne; A. M. B. **B** Dr. J. W. Byers, Belfast; C. W. Budden, M.B., Hoylake; Dr. F. Bushnell, Plymouth; Dr. F. W. Bonis, Bury; Mr. L. A. Bidwell, London; Dr. R. Bell, Glasgow; Mr. H. T. Butlin, London. **C** Mr. R. T. Caesar, Bearsted; E. Chichester, M.B., Colchester; Mr. J. B. Curgenven, Hildenborough; P. J. Cammidge, M.B., Wakefield; Hon. S. Coleridge, London; E. W. S. Carmichael, M.B., Edinburgh. **D** Mr. A. S. Duke, Haslemere; Messrs. Down Bros., London. **E** Estorris; E. A. W. **F** Dr. E. Fraser London; Dr. J. F. Fergus, Glasgow. **G** Miss Gill, London; Miss A. Gregory, London; Mr. J. C. W. Graham, High Wycombe; Guise; Mr. G. P. Gaskell, London; Dr. E. M. Guilleaume, Spa. **H** Dr. C. F. Harford, London; Mr. T. Hennessy, Clogheen; Mr. C. C. Haviland, Frimley Green; Mr. P. H. V. Hammersley, Leek; Mr. R. Harrison, London; Dr. J. Hamilton, London; Mr. A. Hannam, London; H. S. P.; Dr. A. Humphrey-Davy, Bournemouth; Dr. R. S. Hubbersty, Sunderland; G. C. R. Harbinson, M.B., Matlock. **J** J. W.; Mr. W. O. Jones, Bowdon; Mr. R. Jones, Eaglehawk. **L** Miss W. A. Loxton, Birmingham; Mr. J. P. Lavery, Dundalk. **M** Dr. E. Mozourelli, Mandermados; Mr. V. Matthews, London; Dr. A. Macfadyen, London; Member; Dr. J. J. Macan, Cheam; Dr. H. H. Murphy, East Twickenham; M.R.C.S.; Mr. J. C. McWalter, Dublin; Motor; Member of the London and Counties Medical Protection Society; Mr. B. Miller, Bombay; Mr. P. E. Middleton, Knottingley; M.O.H.; Mr. J. Y. W. MacAlister, London; P. F. Moline, M.B., London; Dr. C. J. R. McLean, Doncaster. **N** Nemo; J. S. Norwell, M.B., Perth. **O** Old Practitioner; Obstetrical Society, Secretary of, London; Mr. F. A. Osborn, Dover. **P** Puzzled; Major J. E. Pilcher, Carlisle, Pa.; Mr. E. Phillpotts, Torquay; Dr. E. F. Potter, London; W. J. Penfold, M.B., Newcastle-on-Tyne; Dr. J. F. Payne London; J. G. Pardoe, M.B., London; Mr. E. J. C. Palmer, Gloucester; Polly Titian. **R** Mr. E. Reid, Reynoldston; Dr. T. F. Ricketts, Dartford; Mr. H. M. Raven, Broadstairs; J. S. Riddell, M.B., Aberdeen; R. Ramsey, M.B., Glasgow; Mr. L. W. Reynolds, High Wycombe; Mr. C. A. K. Renshaw, Sale; R. H. **S** Strathern; Mr. S. F. Smith, London; Mr. A. P. Swanson, Liverpool; Mr. J. Sheffield, Sowerby Bridge; Mr. G. Stoker, C.M.G., London; Dr. H. Snow, London; Scientific Press, Assistant Manager of, London; Mr. J. L. Stretton, Kidderminster; Mr. F. W. Stoddart, Bristol; Dr. J. Swain, Clifton; Messrs. Speirs and Co., Glasgow. **T** Dr. J. C. Thresh, Chelmsford Mr. J. W. Taylor, Bristol; Mr. J. L. Thomas, C.B., Cardiff. **U** Mr. A. M. Upton, London. **V** Dr. E. Vidal, Paris; Mr. E. D. Vinrace, London. **W** Dr. A. J. Wallace, Liverpool; Dr. A. Whitfield, London; Dr. W. H. Wright, Derby; Mr. M. Whitehead, Lucano; Dr. F. Willcocks, London; Mr. J. F. Woodyatt, Halifax; Dr. W. B. Warde, Tunbridge Wells; Dr. H. Waldo, Clifton; etc.

BOOKS, ETC., RECEIVED.

Abhandlungen aus dem Gebiete der Krebsforschung und verwandten Gebieten. Herausgegeben von Professor Dr. M Schuller. Heft I. Parasitäre Krebsforschung und der Nachweis der Krebsparasiten am Leberden. Berlin: Vogel und Kreienbriuk. 1903. M 2.

Indian Medical Service: Past and Present. By Surgeon-General W. B. Beatson, M.D., M.R.A.S., F.R.C.P.Lond. Second edition. London: Simpkin, Marshall, Hamilton, Kent and Co., Limited. 1902-3.

Le Traitement de la Constipation. Par Dr. Froussard Paris: J. B. Baillière et Fils. 1903. Fr. 1 50.

Introduction to the Study of Malarial Diseases. By Dr. Reinhold Ruge. Translated by P. Edgar, M.B., C.M. Edin., and M. Eden Paul, M.D.Brux., M.R.C.S., L.R.C.P. London: Rebman, Limited. 1903. 8s.

Die Krankheiten der Warmen Länder. Ein Handbuch für Ärzte. Von Dr. B. Scheube. Dritte umgearbeitete Auflage. Jena: Gustav Fischer. 1903. M. 16.

Bacteria in Milk and its Products. By H. W Conn, Ph.D. London: Rebman, Limited. 1903 6d.

On Syphonage and Hydraulic Pressure in the Large Intestine. By Ralph Wigington Leftwich, M.D. London: J. and A. Churchill. 1903. 3s.

The Microscopical Examination of Foods and Drugs. By Henry George Greenish, F.I.C., F.L.S. London: J. and A. Churchill. 1903. 10s. 6d.

Die Rekto-romanoskopie auf anatomisch-physiologischer Grundlage. Von Professor Dr. Julius Schreiber. Berlin: August Hirschwald. 1903. M. 8.

Medical Microscopy. By T. E. Oertel, M.D. London: Rebman, Limited. 1903. 9s.

Progressive Medicine: Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., assisted by H. R. M. Landris, M.D. Vol. I. March, 1903. London: Rebman, Limited. 1903. 15s. per vol.

St. Thomas's Hospital Reports. New series. Edited by Dr. H. P. Hawkins and Mr. W. H. Battle. Vol. XXX. London: J. and A. Churchill. 1903. 8s. 6d.

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The FitzPatrick Lectures
ON THE
HISTORY OF MEDICINE.

Delivered in the Royal College of Physicians.

BY JOSEPH FRANK PAYNE, M.D.,
Fellow and Harveian Librarian.

LECTURE I.

[ABSTRACT.]

IT is right that before entering on the subject of these lectures I should in a few words explain the origin and aim of this new foundation. This lectureship owes its existence to the munificence of a lady, Mrs. FitzPatrick, who desires in this way to honour the memory of her late husband, Dr. FitzPatrick, a Member of this College, a physician of great worth, learning, and accomplishments; and at the same time to promote an object which Dr. FitzPatrick himself had much at heart—the advancement of the study of medical history. This pious and generous gift deserves not only what have been gladly rendered—the most cordial thanks of our College—but due recognition from all who are interested in the progress of the two sciences, medicine and history, which it is designed to serve.

In assigning the history of medicine as the subject of this lectureship, the foundress has been guided by the wise advice of our eminent Fellow, Dr. Norman Moore, who was an intimate friend of our deceased Member.

While, therefore, the warmest thanks of the College are due, and have been already expressed, to Mrs. FitzPatrick for her munificent gift, we must also recognize the great services of Dr. Norman Moore, to whom are due, we understand, the conception of this scheme, and the plan under which it is to be carried out. It may seem to many, as it seemed to myself, that he would most appropriately have filled the post of the first FitzPatrick lecturer. I would rather that he had been here instead of myself. It was only when I was assured that he, with generous self-abnegation, but decidedly, declined to be appointed, that I felt justified in accepting the honourable task which the President and Censors have entrusted to me. I can only say that I will do my best.

We must confess, with some shame, that our own country has been and is behind most civilized nations in the bulk and value of its contributions to the history of medicine. Germany, France, and Italy have produced on this subject works both profound and brilliant, which remain our standard authorities. The smaller countries, such as Holland and Switzerland, have not been behindhand; while our cousins across the Atlantic, the American physicians, are now displaying characteristic energy and zeal in the study of the antiquities of medicine.

Compared with the interest shown, and the positive results achieved in relation to medical history by the medical profession in all these countries, our own countrymen have displayed, we fear, lamentable apathy and but little industry. In one department of the subject only, that is in medical biography, have we any important works to show; for the Roll of our College as written by our late librarian, Dr. Munk, is certainly unequalled, if not almost unparalleled, in any foreign country.

But in general it is true, that while England is distinguished above other countries for the zeal with which her political, social and literary history has been investigated, and particularly for the unrivalled series of records and memorials which have been collected for these investigations; the history of science generally, and especially of medicine and of medical institutions has been conspicuously neglected.

I do not forget the excellent work which has been done of late years in connexion with the history of our great Colleges of Physicians and Surgeons, and in relation to the history of our universities. But it is remarkable that while we have done little for the history of medicine in general, we have done relatively almost less for the history of medicine in our own country. The history of medicine in Britain, it is not too much to say, remains to be written. If in the standard histories of medicine, chiefly German and partly French, we may sometimes think that the history of British medicine is inadequately represented, this is not the fault of the historians. It is our fault for not having supplied them with adequate materials.

The foundation which is this day inaugurated is the first attempt to have the history of medicine taught or expounded in this country. In considering, therefore, what department of the vast field of medical history could be advantageously treated within the narrow limits of these two lectures, it seemed best to begin with that part which has been most neglected, the history of medicine in our own country.

The range of the inquiry cannot be wide. It is limited no less by the powers and knowledge of the lecturer than by the short time at his disposal. It would be impossible to cover more than a small period of history, and that imperfectly. But if we were to attempt, however inadequately, to lay something like the first stone of the history of English medicine; to make a rough beginning which it is to be hoped may be revised and corrected, as well as continued by other and better equipped investigators; this attempt, humble as it is, may be not without fruit. And the words English medicine, which it seems necessary to employ, imply a still further limitation. There was no doubt in all the Celtic countries a traditional popular medicine which had little or nothing to do with the subject of these lectures. In Ireland there was in early times what may be called a learned medicine also. In Wales there seems to have been something like an organized medical profession. But with Celtic medical history the lecturer is totally incompetent to deal even in the most superficial way.

It remains, then, to begin with the earliest record of the English people settled in England, our Anglo-Saxon ancestors, and to try and form for ourselves some idea of what medical science and medical practice meant in those early times. It is there that we find the actual beginning of English medicine. Now, although the history of medicine among the Anglo-Saxons has never been written from a medical point of view, a large amount of material has been collected by the labours of non-medical scholars. During the past generation nearly all, if not the whole, of Anglo-Saxon literature bearing on science and medicine has been collected and translated into modern English by a succession of learned and laborious inquirers. It is to such men as Mr. Thomas Wright, the Rev. Oswald Cockayne, the editors of the Early English Text series, Professor Earle, and others, not forgetting the important contributions made by German philologists, that we owe these important materials for medical history. The following sketch of medicine in Anglo-Saxon times is entirely based upon the labours of these eminent men; and, indeed, to one quite unacquainted, as the lecturer is, with the Early English or Anglo-Saxon tongue, it could not be otherwise.

The beginning of Anglo-Saxon civilization and learning must be dated from the introduction of Christianity into Saxon England by Augustine in 597 A.D. This must also be taken as the beginning of Anglo-Saxon medicine. For, though there are some vestiges of earlier popular medical beliefs based on the heathen mythology, they are comparatively scanty and unimportant. Whether the Christian missionaries from Rome introduced into England, as modern missionaries often do into heathen countries, some of the medical lore and practice with which they were familiar—that is, the medicine of the Latin world—it is very difficult to say. The earliest hint of anything like medical teaching in England is in connexion with the school at Canterbury founded by Archbishop Theodore in the latter half of the seventh century—about 670. Theodore was a Greek monk from Tarsus, who with a learned colleague, the Abbot Adrian, taught both Greek and Latin with such success that many of his pupils, Bede says, knew both the ancient tongues as well as their own. This proficiency in Greek may have had some importance in the study of medicine; but the question is a difficult one. The only evidence that some medical lore was taught at Canterbury rests upon an authentic story told by Bede of one of Theodore's pupils, John of Beverley, afterwards Bishop of York. This divine—who had a reputation for working miracles—being called in to visit a nun in whom bleeding had been followed by dangerous symptoms, found that she had been bled on an improper day. He severely rebuked those who had ordered the bleeding, and quoted some cautions on the subject which had been taught him by his master, Archbishop Theodore. This is an isolated fact, but shows that learned men among the Anglo-Saxons had some pretensions to medical knowledge and imparted it to their pupils.

It is not clear that this was true of the greatest name in the Anglo-Saxon Church, the Venerable Bede (died 735), whose learning was as remarkable as his piety and zeal. Bede wrote, beside theological and historical works, some scientific treatises *On the Nature of Things*, and *On Times* or Seasons,

dealing chiefly with astronomy and meteorology. There is nothing distinctly medical in his known writings, but a manuscript fragment in the British Museum of later date and doubtful authenticity contains certain rules as to the dangerous days for bleeding, which are attributed to him. This fragment is so late as to have no authority, but the fact that it refers to a subject which Bede's episcopal predecessors, Theodore and John of Beverley, thought of great importance, and one not unconnected with the subject of his known works, gives it some plausibility. In Bede's writings there are references to "leeches" or physicians, showing that there was something like a regular medical profession.

After this the only documents bearing on medicine in England belong to the kingdom of the West Saxons, and the first date of any importance relating to medicine is that of King Alfred the Great (848-901). This great ruler, who took as much pains to educate his people as to give them laws or to make them successful in war, translated himself, and caused to be translated from the Latin into English, books of history and philosophy, but nothing bearing directly on medicine. By this, however, he set the example which was afterwards followed in the translation of purely medical works into the vernacular. He kept up relations with Italy and the East even as far as India, by which books of all kinds, probably some medical, were brought into England. It appears from an Anglo-Saxon MS. that the Patriarch Helias, of Jerusalem, sent to Alfred from the Holy Land medical prescriptions relating to such drugs as scammony, tragacanth, and others, the produce of Syria, and also to the celebrated Greek compound medicine, the "theriaca of Andromachus," or "triacle," which could not have been made in England. This shows some interest on Alfred's part in the progress of medicine.

Soon after the death of Alfred is the date of the most important Anglo-Saxon medical work which has been preserved. It is a "Leech Book," or treatise on medicine in two books. A third book which is appended evidently does not belong to it. By an inscription at the end we learn that it was the property of one Bald, who ordered one Cild to write it. The presumption is that Bald was a "leech" or physician, and that Cild was the writer; but whether the writer was merely the scribe, or the author, that is, compiler, is not quite clear. This book is a sort of treatise on diseases, beginning with the head and going down to the feet, as was the custom of the later Greek physicians, and almost universally followed in the Middle Ages. Many diseases are mentioned, but the account of their pathology and symptoms is very meagre. The most important passages bearing on these subjects, making, according to the editor, Mr. Cockayne, perhaps one-fourth of the book are borrowed without acknowledgement from later Greek physicians, especially from Alexander Trallianus, and in a few cases from Paulus Ægineta. The question naturally arises whether the Anglo-Saxon compiler read these authors in the Greek or in a Latin version. For various reasons, which it would take too long to enumerate, it is probable that the latter supposition is correct. Some late Latin writers, such as Marcellus Empiricus and Plinius Valerianus, were also laid under contribution, though none of these authors, Greek or Latin, are named except Pliny. In the book two Anglo-Saxon leeches, Dun and Oxa, are mentioned, and reference is made to "the leeches" generally; so that it supplies evidence of the existence of a regular medical profession. The patriarch Helias is the only other person quoted.

The treatment of disease is generally discussed at greater length than the signs and symptoms. Many prescriptions are borrowed from the Greek physicians, but many cannot be thus traced. A conspicuous feature is the great abundance of herbal medicines prescribed. The Anglo-Saxons were acquainted with a large number of native herbs, a knowledge which could not have been acquired from their Greek authorities, and used them empirically along with some exotic drugs. Their pharmaceutical methods were exceedingly simple, herbs being boiled in water or soaked in beer, vinegar, or milk; sometimes mingled with honey. Ointments were made with butter.

The surgery of the Leech Book is extremely rude. Wounds were treated with decoctions or poultices of herbs and with honey. For broken bones similar applications are recommended, and the limb was to be wrapped in softened elm bark. In one place a splint is spoken of. Amputation is advised for gangrenous limbs, but no details are given as to the method of performing it. An operation for harelip is described, but hardly in such a way as to show that the writer had actually performed it. Blood was taken by venesection, cupping and scarification. Various kinds of baths are recommended and carefully described.

Besides these methods of treatment the Leech Book contains a number of charms, incantations, and magical rites, but not so many as some others of the Anglo-Saxon works. The discussion of this subject is deferred.

The Leech Book of Bald is found in one MS. of the British Museum, and has been printed in the collection called *Anglo-Saxon Leechdoms*, vol. ii., edited by the Rev. O. Cockayne, and published in the Master of the Rolls Series.

The general impression derived from this book, which is our only example of the familiar manual of the Anglo-Saxon leech, is that it shows little or no originality but a praiseworthy zeal in trying to obtain the best available knowledge on the subject, new or old, English or foreign. There is nothing in any Continental literature of the same period, or for some time later, at all comparable with it. Indeed, out of Italy there was hardly any scientific literature, and none at all in any vernacular language. In this respect the medical literature of the Anglo-Saxons was as much without a rival as their general literature. The misfortune was that this compilation was made when the level of European medicine was at its very lowest. The works of the ancients were mostly inaccessible and nothing else had arisen to take their place. The school of Salerno, the oldest medical school in Europe, had not yet come into prominence.

The next important book which requires notice is the Anglo-Saxon translation of what is known as the Herbarium of Apuleius, a book of medical botany, illustrated with coloured figures. Of this translation no less than four MSS. have survived, a remarkable number considering the scanty remains of Anglo-Saxon literature which exist, and showing that the book enjoyed great popularity. The most remarkable MS. is one in the British Museum which must originally have been a magnificent book decorated with coloured drawings. It is believed to have been written between 1000 and 1050 A.D.

From this and other MSS. the text has been printed in the Rolls Series, edited by Mr. Cockayne, with a version in modern English, as volume i of *Anglo-Saxon Leechdoms*. The original work is in Latin, and is attributed to a possibly fictitious writer called Apuleius Platonicus. It is believed to date originally from about the fifth century, but no copy anything like so old as this is known. It was for centuries the most popular botanical book in Europe, being multiplied in numerous Latin MSS. up to the fifteenth century, when it was first printed.

Associated with this book in a large number of Latin MSS., as in the Anglo-Saxon version, are three other short Latin treatises, one on the plant vettonica or betony, attributed probably falsely to Antonius Musa, the Physician to the Emperor Augustus. There are also a series of descriptions of medical plants professedly taken from Dioscorides, and a treatise on medicines obtained from animals bearing the name of Sextus Placitus, a Roman physician of the fourth century, all with coloured figures. Who first united these four books in one collection is not known; but taken together they formed a sort of compendium of medical natural history. The essential feature in all of them was the series of illustrations, which as the actual descriptions of the objects are few and meagre, served or were intended to serve for the identification of the plants and animals named by the original writers. A large number of Greek and Latin synonyms are given for most of the plants, and an enumeration of the diseases for which they were supposed to be useful.

All this constitutes according to our ideas a very poor book, whether from the botanical or medical point of view. The accounts of medical uses are meagre and often trivial. Even the illustrations, having been handed down by a long succession of copyists, with ever-increasing remoteness from the original objects, are conventional in drawing, and often quite unrecognizable in their present form whatever they may have been in the original. The whole bears no comparison with the genuine work of Dioscorides on "Materia Medica," which is the great treasury of ancient science relating to the natural history and uses of drugs.

Nevertheless, the Anglo-Saxons showed their usual intelligence and zeal for knowledge in translating it. It was the best book on the subject they could find; they turned it into their own vernacular tongue, and carefully copied the precious illustrations, by which they no doubt hoped to identify the plants of their own woods and fields, and thus find the key to their virtues and uses as understood by the ancients. This was a distinct step towards the advancement of botany in England; a definite scientific achievement; and,

as such, without a parallel then or for some time after in any European country.

With regard to the coloured figures of plants which occur in two of the Anglo-Saxon manuscripts, most conspicuously in that splendid book already spoken of, a few words must be said. It may cause surprise, and be thought a fault, that the artists did not supply original figures of the plants described. Anglo-Saxon art, which had reached so high a level in decoration, and showed considerable skill in drawing the human figure, might be thought to have been equal to this task. But to supply new figures would not have carried out the object they had in view, which was identification. The artists, therefore, contented themselves with copying the traditional figures which had already passed through the hands of many generations of copyists. Rude as these figures are, they represent a real survival of old Graeco-Roman art; and even in their most degraded form preserve some of the features characteristic of classical art in general. The figures are usually nearly symmetrical on both sides, and



Fig. 1.—SATYRION = ORCHIS. From Anglo-Saxon MS. translation of Apuleius Platonicus, Brit. Mus., Cottonian, Vitellius, C. III, fol. 27.

show a sense of balance and proportion which may be fairly regarded as classical; also they are not so much portraits of individual plants as diagrams constructed from a general knowledge of the object. (Figs. 1, 2, and 3.)

If we compare the series of figures in the various manuscripts we find them for the most part the same, though with occasional varieties, the figures of the same plant in different manuscripts being sometimes quite unlike.

The temptation was for a clever artist to treat the figure from a decorative point of view, rather than as a mere transcript from Nature. Occasionally he allowed his imagination free play, and produced figures which are plainly fabulous. This is especially the case with such plants as the mandragora, of which many fabulous stories were told. The forked tap root of this plant was thought to be in the shape of a man, and hence the artist gave it not only two legs, but arms and a trunk. The head is here represented by a tuft of leaves, but in other (probably later) drawings, a regular human head with all its features complete is pictured. It



Fig. 2.—"GLADDEN" = SCILLA. From Anglo-Saxon MS. translation of Apuleius Platonicus, ibid, fol. 34.

was regarded as dangerous to pull it up, because (according to some stories, but not in this text) it uttered a shriek, which brought death to the hearer, or at least madness. Hence it was to be cautiously loosened in the earth, and tied with a cord. The other end of the cord was to be tied to the neck of a hungry dog to whom meat was offered, so that he could not reach it except by tugging up the plant. It is not



Fig. 3.—MANDRAGORA. From Anglo Saxon MS. translation of Apuleius Platonicus, ibid, fol. 57.

recorded (at least by Apuleius) that anything happened to the dog (Fig. 3). Of this plant the Anglo-Saxons had of course no practical knowledge; they merely translated the account in the Latin manuscript. These features are clearly seen in some copies now exhibited of the drawings from the manuscripts.

This seems the opportunity to say something about the botanical knowledge of the Anglo-Saxons generally. It must not be supposed that they derived their knowledge of their native plants from Latin and Greek sources. A large number of medicinal herbs are named in the various prescriptions of the *Leechdoms* which are not included in the translated herbals. We have another source of knowledge in the "glossaries" which give the Anglo-Saxon equivalents for Latin and Greek names of plants.

Of these glossaries no less than six, written before the middle of the twelfth century, which may be taken as the extreme limit of Anglo-Saxon literature, have been preserved. They show the keen interest which our forefathers took in the knowledge of herbs. From these and other sources, Mr. Cockayne has compiled an exhaustive list of the Anglo-Saxon names of worts and trees, amounting in all to between 700 and 800. Omitting all mere transcriptions of Latin names, synonyms, and some names which do not strictly belong to the period now considered, about 500 remain, which are either pure English names or Latin and Greek words so altered as to have become vernacular. This is a very large number. The herbarium of Apuleius, with the additions from Dioscorides, gives only 185 names; and of these some were exotic plants which the Anglo-Saxons could not identify. Evidently, then, a large surplus remains which represents an original English nomenclature of native plants.

That the Anglo-Saxons had 500 botanical names would not necessarily show that they knew 500 species, for some may have been inaccurate or synonymous; but it is evidence of a much more extensive knowledge of botany than they have been generally credited with. Indeed, this science seems to have stood at a higher level in those days than in mediaeval times, when little was added except some French names, and much was forgotten. On the whole, we must agree with the hard saying of Professor Earle that "there was a great decadence of botanical knowledge in England between the eleventh and the sixteenth centuries."

In the next lecture some other books in the Anglo-Saxon medical library will be considered, and also the charms and magical rites which occur in many of them.

The Croonian Lectures

ON

MUSCULAR MOVEMENTS AND THEIR REPRESENTATION IN THE CENTRAL NERVOUS SYSTEM.

Delivered before the Royal College of Physicians of London.

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LECTURE III.

[Abstract.]

Movements of the Head.

I have not much to add about the muscles which are usually given as flexors and extensors, adductors and rotators of the head, except with regard to the sterno-mastoids which are the chief flexors of the head, and they can be seen strongly acting when a person is told to raise his head from the pillow when lying on his back, and when this is done powerfully the recti abdominis also contract to fix the sternum, as was pointed out by Winslow.[1] These two sets of muscles are associated together in certain rhythmical spasmodic contractions, as in a case which was under my care lately, where a man had clonic spasm of both recti abdominis, and also in both sterno-mastoids. In addition to the sterno-mastoids the platysma myoides, the omo-hyoids, and the other depressors of the hyoid bone act. The only muscles which can be felt to contract on extension of the head are the clavicular part of the trapezii, the complexi, splenii capitis, and probably the trachelo-mastoids. The sterno-mastoids have been described as extensors of the head, when the head is in the extreme position of extension, but I made some observations on this point, and I failed to find that they acted in any position as extensors of the head.

The Respiratory Muscles.

In dyspnoea one of the first extraordinary muscles of respiration to come into action are the sterno-mastoids, and as these muscles then take their fixed point from the skull, the head has to be fixed by the extensors of the head. I have never seen any action of the pectoralis major in dyspnoea, and I think that the action which is attributed to this muscle is really performed by the pectoralis minor. The origin of the pectoralis major from the cartilages of the ribs and the direction of its fibres is also against its having much power as an inspiratory muscle, and it does not come into action till the end of a forced inspiration. Of the other extraordinary muscles, the latissimus dorsi, the serratus magnus, the scaleni, and the clavículo-occipital fibres of the trapezius are the chief that can be observed. The serratus magnus I have observed not to be acting in one case of severe dyspnoea.

With reference to the expiratory muscles, and especially those used in such violent efforts as coughing and sneezing, I would refer to the latissimus dorsi. I observed a few years back that it is a powerful expiratory muscle, and this is an action which any one can prove for himself by putting the hand on the posterior fold of the axilla, and on coughing a strong contraction of the latissimus dorsi will be felt. This muscle acts also as an inspiratory muscle, using the fibres which take origin from the lower ribs to elevate them, and therefore it is a muscle which acts in both inspiration and expiration, a circumstance which it is rather difficult to explain. In expiration it doubtless acts by compressing the posterior part of the abdomen, in which action it is joined by the external obliques and recti muscles, so that the abdominal cavity is compressed in all directions; and as the origin of the latissimus dorsi from the lower ribs interdigitates with the origin of the external oblique, and as this contracts violently in expiration, it seems probable that the costal origin of the latissimus dorsi in expiration acts to fix the ribs to allow the external oblique muscle to act with precision. The lower part of the trapezius also contracts in expiratory cough, but whether its action is for the purpose of fixing the scapula it is difficult to say. The action of all the respiratory muscles is bilateral, and the relation between the bilateral and the unilateral actions of the latissimus dorsi will be referred to later on, but the time at my disposal will not permit me to say anything about the movements of the lower limb or of the ocular or facial movements.

Action of the Antagonists.

It is necessary in any account of the action of muscles to consider the various views which have been held as to the action of antagonists. The antagonists of a movement are those muscles which move the joint in a direction which is diametrically opposed to the movement.

Winslow considered that to move a part all its muscles, including the antagonists, co-operate, but he makes the important proviso that the want of their action is supplied by the weight of the part or by external resistance. This limits very considerably the occasions when, according to Winslow, the antagonists act, for if they do not act when a movement is being performed against gravity, or when any resistance has to be overcome, the occasions are narrowed down to unopposed movements taking place in the horizontal plane, where gravity cannot act. Such a movement would be that of flexion or extension of the terminal phalanges of the fingers in the horizontal diraction, or of the elbow in the same plane, or of rotation of the head to the right or the left.

In his Croonian lecture before the Royal Society, John Hunter[2] describes the actions of muscles as immediate, producing immediate action of the part, the secondary producing the assistant supporting regulating actions, as in walking, when the right leg moves, the muscles of the left side of the trunk act to support the whole on the left leg.

Duchenne states that he has

> demonstrated experimentally that all the movements of the limbs and trunk result from a double nervous excitation by virtue of which the two orders of muscles.....the impelling and the moderating associations are put simultaneously into action, one to produce the movements, the others to moderate them. Without.....this *concert* of the antagonists the movements lose inevitably their precision and certainty.

I gather from this that Duchenne considers that in all voluntary movements the antagonists take part. On this subject interesting papers have been published by Beaunis[3]

and by Demeny[4] The latter has made some most important observations by means of two Marey's myographs fixed on to the biceps and triceps by which tracings of these muscles under varying conditions were obtained. He concluded that if static resistance is made against an effort tending to produce flexion or extension, the antagonists of this movement relax. The antagonists are relaxed also during the movement every time that an external resistance acts in the way of their action whether this resistance be overcome or not by the muscles contending against it, and whether these muscles shorten or elongate. In natural movements (where there is no resistance), where they are of a slow and uniform rate, there is a simultaneous action of the antagonists; where the rate is variable, the antagonists act as moderators of the rate and come into play a little before the movement has ceased or changed its character. Demeny's observations are, therefore, in confirmation of Winslow's rather than those of Duchenne.

On the other hand, experiments have been made by Sherrington[5] on the action of the antagonists by electrical stimulation of the excitable cortex, and he has found that in addition to contraction of the principal muscles taking part in a movement there is not only relaxation but inhibition of the tone of the antagonists of this movement. Sherrington and Hering[6] have also more recently shown the same thing by electrical stimulation of the part of the cortex where movements of flexion of the elbow were represented. They found that when the biceps contracted there was relaxation of the triceps. It therefore seems probable that the inhibitory action of the antagonists starts in the same part of the cortex and takes the same course in the pyramidal tract as the excitatory action of the principal movers. Sherrington's observations therefore agree with those of Demeny so far as strong opposed movements are concerned. With regard to weak movements, Sherrington has informed me that even with minimal stimulation he still obtains relaxation of the antagonists, there is therefore apparently a difference between the results produced by stimulating the excitable cortex in the monkey and those of making a person perform a slow unopposed movement, as the antagonists were found to be relaxed on stimulation according to Sherrington, and to contract in the case of slow voluntary movement according to Demeny.

From my own observations I have held that, in strong movements against resistance, the antagonists are always relaxed, and I expressed that opinion in a paper which I wrote in 1891.[7] This power of relaxing a group of muscles by getting the patient to powerfully contract the antagonists against resistance I have for some time employed for clinical examination, and the cases in which it is most useful are affections about the shoulder-joint, where a patient is unable to abduct the arm without the inferior angle of the scapula moving outwards at once, a sign that either the deltoid is paralysed or that it is not acting owing to painful rheumatic changes in the joint, or that the joint is ankylosed. If the deltoid be contracted, it can be relaxed by first passively abducting the humerus as near the horizontal line as possible, and then directing the patient to actively adduct the humerus against resistance, when the deltoid will be relaxed; on then again directing the patient to try and keep the arm abducted the deltoid will be felt to contract if it is not paralysed.

With regard to the question as to whether the antagonists act in all unopposed movements as the experiments of Demeny would seem to show, I should like to point out that in the movement of rotation of the head we have an exceptional opportunity of examining the sterno-mastoid muscles, and, in addition, the movement of the head being in the horizontal plane, there is no chance of any error from the action of gravity. Here one of the muscles is a principal mover while its fellow of the opposite side is its antagonist, so that in rotating the head with the face turned to the patient's right, the left sterno-mastoid is a principal mover and the right sterno-mastoid is its antagonist. On rotating the head slowly or quickly I am unable to find either on inspection or on palpation that there is any contraction of the right sterno-mastoid; and, further, if the head be turned very quickly and be suddenly checked there is still no contraction of the right sterno-mastoid. It is quite possible that some of the other rotator muscles may act as a check to the movement, but I should say that the right sterno-mastoid certainly did not, and the muscle is so superficially situated that it would hardly be possible to escape observation.

To sum up: I should myself agree with Winslow that in all movements where there is extreme resistance, or where the weight of the limb has to be moved against gravity, the antagonists do not act. On the other hand, in the unopposed movements of rotating the head to the right where gravity does not act, I cannot find that there is any action of the right sterno-mastoid the antagonist to this movement, and also Sherrington found by cortical stimulation that the antagonists to the resisting movement were relaxed.

Before leaving the question of the antagonists, I should like to mention a clinical case where these muscles acted in a way which I have not seen before:

It was the case of a girl, aged 18, who had incomplete right hemiplegia and hemianaesthesia. She had, however, no signs of organic disease, and the case was considered to be one of functional or hysterical paralysis. The great point of interest about the case was that whenever she was asked to perform a certain movement the first action observed was that of the antagonist muscles. For instance, on being told to extend the elbow, the first muscle observed to contract was the supinator longus, one of the antagonists to the movement of extension. This contraction of the supinator longus was followed immediately by that of the triceps, and there was then a confusion with to-and-fro movements due to the alternate contraction of the extensors and flexors of the elbow. A similar thing occurred when she was told to flex the elbow, then the triceps was felt to contract first, and was followed by a movement of the flexors of the elbow, and then the joint moved to and fro with much confusion.

I have observed a similar condition occur in dorso-flexing the ankle, a joint in which the typical to-and-fro, hesitating, confused movement is so often seen in these cases of hysterical paralysis.

In another case on asking the patient to extend the knee, the first contraction was felt in the flexors of the knee. In all these cases as the patient improves this symptom passes off, and the joint is then moved in the normal way.

This condition of the antagonists acting before the principal movers begin I have never seen in any other conditions besides those of so-called hysterical or functional paralysis. I therefore venture to think that it is a diagnostic symptom of this condition.

PARALYSIS OF A MUSCLE FOR ONE MOVEMENT AND NOT FOR ANOTHER.

A muscle may take part in two different movements, as for instance the biceps brachii takes part with the supinator brevis in the group of muscles set apart for the movement of supination, and also takes part with the brachialis anticus, supinator longus, and pronator teres in that for the performance of the movement of flexion of the forearm. It is therefore possible that if one of these movements is lost by an organic lesion of the central nervous system and not the other, the biceps, which takes part in both movements, may be paralysed for the one movement and not for the other. I have seen cases of hemiplegia where the movement, of supination was lost but not that of flexion of the elbow. Another movement which is often lost in hemiplegia when the arm is paralysed is that of elevation of the shoulder. Now, the muscles which take part in the elevation of the shoulder can also, taking their fixed point from the shoulder, draw down the head and neck to that side, such muscles are the trapezius (clavicular fibres), and levator anguli scapulae. I have observed cases of hemiplegia where these muscles were paralysed when they acted as elevators of the shoulder but not when they acted as lateral flexors of the neck. A condition which would probably signify that the movement of elevating the shoulder was represented in a different part of the excitable cortex to that of adducting the head to that shoulder. The same thing occurs with the ocular muscles where each internal rectus can act when it takes part in conjugate movements with the external rectus of the opposite eye, but when the two internal recti act together in converging the eyes they are paralysed.

Some of the above cases are instances of paralysis of a muscle for one form of unilateral action and not for another, but there is another class where a muscle may be paralysed for a unilateral movement of the arm, but not when it takes part in the bilateral action of respiration.

Dr. Hughlings Jackson was the first to call attention to the paralysis of the clavicular fibres of the trapezius in elevating the shoulder in hemiplegia, while it was still able to act as a bilateral muscle in deep inspiration. I have already described how the latissimus dorsi takes part in inspiration and expiration, and that it can be readily felt to contract on coughing. The muscles of both sides here act together, and, as far as I know, it is not possible for a person to inspire voluntarily or expire as in coughing, using only the muscles of one side of the chest. Besides this bilateral movement there is the unilateral action of the muscle as an arm muscle, where it takes part in the movement of adducting the humerus. As I

pointed out in a paper read before the British Medical Association in 1898,[8] the latissimus dorsi of both sides takes part in the violent expiratory movement in the production of a cough or a sneeze. A cough can be produced reflexly or voluntarily, but a sneeze only reflexly, and we have, therefore, three conditions under which the latissimus dorsi may act, namely:

1. Acting with the muscle of the opposite side as an expiratory muscle.
   (1) Reflex coughing or sneezing.
   (2) Voluntary coughing.
2. Acting independently of the other side as an arm muscle.

The next question is what will be the action of this muscle in cases of hemiplegia. I have examined a great many cases of hemiplegia in which the arm was paralysed and in which there was complete loss of the movement of adducting the humerus to the chest wall and where consequently the action of the latissimus dorsi as an adductor was absent. Of the 12 cases which I described in my original paper, in 10 the lesion was presumably cerebral and probably in the internal capsule, while in 2 the lesion was ascertained and was in 1 case a tumour of the ascending frontal convolution and in the other a tumour of the centrum ovale. In all of these cases with the exception of two the following conditions were found:

1. In reflex coughing or sneezing the expiratory action of the latissimus dorsi was about equal on the two sides.
2. In voluntary coughing the action of the latissimus dorsi was obtained on both sides, but it was frequently diminished in action or occurred later on the paralysed than on the normal side.
3. On attempted voluntary adduction of the humerus there was no action of the latissimus on the paralysed side.

In two of the cases of hemiplegia where there was an exception to the general rule given above it was found that no movement was obtained on the paralysed side in voluntary coughing, but in reflex coughing or sneezing the latissimus dorsi on the paralysed side was seen to contract. A lesion, therefore, of the, let us say, left motor cortex or of the internal capsule will paralyse the right latissimus dorsi as a unilateral arm muscle, but will not paralyse it when it acts as a bilateral muscle of respiration reflexly, and in most cases when it so acts voluntarily.

This bilateral action of the latissimus is of value in diagnosing cerebral lesions from those of the spinal cord and peripheral nerves in those cases in which the arm and leg of one side are involved without the face. In the case of a lesion, as a tumour, pressing on one side of the spinal cord between the respiratory centre and the brachial enlargement, all the movements of the latissimus dorsi, including unilateral arm movement, bilateral voluntary coughing, and reflex coughing would be lost, while in lesions above the level of the respiratory centre the reflex bilateral movement of coughing would be preserved.

Another example, but of a different kind, of paralysis of a muscle for one movement and not for another I have observed in the case of the upper or clavicular fibres of the pectoralis major. This muscle I have already referred to as one which has two actions: it acts with its lower or sternal fibres in adducting the humerus to the middle line, and it also acts with the deltoid in advancing the humerus. In certain cases where the deltoid is paralysed, although the clavicular fibres of the pectoralis major can be felt to act well in conjunction with its sternal fibres in adducting the humerus, they make no attempt to advance the humerus, or when it is passively advanced to contract and keep it in that position. The first case which I published[9] was one of paralysis after an accident, and was due to lesion of the brachial plexus or of the cells of the anterior horns of the spinal cord. I have seen several other cases occurring in lesions of the cord or brachial plexus.

This class of case differs from the preceding in that we have here paralysis of a muscle for one movement and not for another, arising not from a cerebral lesion, but from a lesion of the cord or of the brachial plexus. This selective paralysis from a lesion of the cells of the anterior horns is in favour of the theory that these cells are arranged in a physiological rather than an anatomical manner, but as there are reasons against this theory is it possible that there is any other explanation? Is it possible that the upper fibres of the pectoralis major which act with its lower half are not the same as those which failed to act with the paralysed deltoid? I do not think so, because there were no signs of degeneration to electrical testing in the pectoralis major, and it is not probable that the same fibre should have a double nerve supply from different parts of the brachial enlargement. Another explanation might be that when the upper fibres of the pectoralis major act with the deltoid in advancing the arm, they can only do so after the deltoid has acted first, and that, as the deltoid does not act at all, the pectoral will not start the action; but against this explanation is the observation that normally the weight of the arm is sufficient to bring out the action of the upper fibres of the pectoralis major and that strong resistance is not required, as in the case of the relation of the extensors of the wrist to that of the extensors of the fingers, in the movement of extending the wrist. At the present time I am not able to give a definite explanation of this selective paralysis of the upper fibres of the pectoralis major.

Action of a Muscle in Diametrically Opposite Movements.

Another question which has arisen in the examination of the actions of muscles is whether a muscle ever takes a principal or direct action in a movement which is diametrically opposed to its usual action.

In considering this point it is obvious that the query could not be made in the case of a hinge joint, such as the elbow, as the triceps could not possibly take a direct part in the action of flexion of the elbow. It is, however, in joints like the radio-ulnar (rotatory) articulations, or in ball and socket joints, that it would be possible for a muscle to take part in two opposite movements. If a list be made of the muscles which are considered by anatomists to have this double action, it would be found to contain the following muscles: The supinator longus, the pectoralis major (clavicular fibres), the deltoid (posterior fibres), and both sterno-mastoids acting together. As I have pointed out, the supinator longus has been considered by many anatomists to be both a pronator and a supinator. With this opinion I find that I cannot agree, as from the examination of the muscle on the living subject I consider that it certainly does not take part in extension, and I cannot find that it contracts in supination, its action besides flexion of the elbow-joint being, perhaps, very slight pronation at the end of a strong movement. The clavicular fibres of the pectoralis major were considered by Duchenne to be both elevators and depressors of the humerus, when the arm was above the horizontal line. From my observations these fibres do not act in depressing the humerus, a movement which is performed by the inferior or sternal fibres of the pectoralis major.

The posterior fibres of the deltoid were considered by Duchenne to be elevators of the hanging humerus as far as an angle of 45° to the vertical, beyond which they became depressors and antagonists to the rest of the deltoid; in other words, after an angle of 45° the posterior third of the deltoid suddenly changes its mind, so to say, and takes part in a movement which is diametrically opposed to the action of its previous movement. From my observations I consider that the posterior third of the deltoid only takes part in adduction and never in abduction, an opinion which I was glad to find was expressed by Richer.[10] The last movement which I have cited is that of the two sterno-mastoids acting together. Their ordinary action is to flex the head forwards as in lifting the head from a pillow, but most anatomists describe that when the head is put back far enough these muscles act as extensors of the head. I have already expressed the opinion that I do not think that this action occurs. In cases of progressive muscular atrophy affecting the extensor muscles of the head at the back of the neck, but not the sterno-mastoids, the head falls forwards till the chin rests on the chest, due to the inability of the extensors to hold up the head against gravity; but if the patient leans far back in a chair, so that the head can be allowed to extend backwards as far as it will go, there will still be a slight contraction of the flexors—namely, the sterno-mastoids—to counteract gravity. Now if while in that position the patient be told to extend the head further against resistance, he cannot do so, owing to the paralysis of the extensors at the back of the neck, but the sterno-mastoids, so far from contracting, actually relax.

There may be other muscles which might act in two opposite ways, but of those which I have cited I cannot find that any one of them takes a principal part in a movement which is diametrically opposite to its usual action.

There is, however, one muscle which certainly takes part in two opposite movements—namely the latissimus dorsi, which contracts in both inspiration and expiration, though the action is stronger in expiration than in inspiration. I have already referred to this point, and I would only say now that I think the part of the muscle arising from the three lower ribs must have a different action to the main part arising from the spine

and the iliac crest. In inspiration this costal origin acts by elevating the ribs; on the other hand, in expiration these costal fibres fix the ribs and enable the external oblique muscles, whose origin interdigitates with that of the latissimus dorsi, to vigorously contract, while the main part of the latissimus acts within the external oblique as a principal mover in compressing the abdominal cavity. I should therefore look upon the costal fibres as prime movers in inspiration and as synergic muscles in expiration. I think, therefore, that one is justified in making the statement that a muscle does not take a principal part in a movement which is diametrically opposed to its usual action, or, in other words, in two movements which are opposite in direction.

I make this qualification with regard to muscles taking a principal part in a movement, as in my paper in *Brain*[11] I did not make this qualification; but I had not then noted the various muscles which act as synergic muscles in a movement. For instance, in both supination and pronation of the forearm the triceps acts to counteract the flexor action of the biceps and of the pronator teres; but as the triceps is not a principal mover in either of these movements its action would not be against the statement I have made.

Association of Muscles.

I believe that in the case of a single muscle which is stimulated through its nerve, physiologists hold that all the fibres of the muscle contract, and that the minimum amount of work is produced not by using only some of the muscle fibres, but by using all the fibres to a slight degree of contraction, while when the maximum work is required the same fibres contract strongly. According to Gotch this must be modified.[12] The question arises whether the same principle can be applied to groups of muscles, and we have to determine, in producing the minimal force, whether all the muscles taking part in the movement contract, or only certain muscles in the group. Or, to take a simile from marine engineering, whether, when a ship is travelling at half speed, all the boilers are working at half their full pressure, or only half the boilers are working.

It is not very easy to find a group of muscles the individual members of which can be examined, and the order in which they take part in a movement noted. I think that the movement of supination, which is effected by the supinator brevis and the biceps, is one in which it is possible to ascertain how soon the biceps takes part in the movement. For this purpose, if the elbow be rested on a table and the forearm be kept in a vertical position midway between flexion and extension and at right angles to the upper arm, it will be found that the forearm can be supinated, if there be no resistance, without any contraction of the biceps, a point which can be ascertained by hooking the forefinger round the tendon of the biceps at the elbow. If, now, resistance be made to the supinating forearm, the biceps will be felt to contract after the resistance has reached a certain amount. I have measured this amount, and find that it comes to 1 lb. It therefore appears that the supinator brevis will do the work of supination when only the inertia of the bones has to be overcome, but as soon as work over 1 lb. is required to be done, the biceps is called in to help. The relation of the extensores digitorum to the extensores carpi in extending the wrists is another illustration.

These two examples, I think, show that there is a definite order in which the muscles for the performance of a movement come into action. All the muscles which are grouped together for the performance of a movement do not come into action when only slight effects are required, but a certain increase of work has to be encountered before they all act.

In connexion with this it is interesting to note that Sherrington[13] has found a similar condition in reflex actions, as on stimulating electrically the posterior root of the fifth cervical nerve with a Kronecke secondary coil at 15, good contraction of the supinator group was obtained in the monkey; but to evoke contemporaneous action of the biceps with the supinator a much stronger current of 90 was required.

Besides the muscles directly concerned with the movement other muscles are put into action. In performing the different movements of flexing the fingers, of flexing the fingers and thumb as in grasping, and of flexing or extending the wrist we put into action only the muscles which are directly concerned with these movements, if the force exerted is slight or moderate; but if these movements are performed more powerfully other muscles are seen to join in the movement. These other muscles which are brought into the movement are the flexors and extensors of the elbow. I have therefore made some observations to ascertain which of the movements of the wrist and digits are accompanied by contraction of the flexors of the elbow, which by the extensors of the elbow, and which by both these sets of muscles. I have also measured the amount of force required to be exerted before these muscles acting on the elbow join in the movement, and also to test the influence of position the observations have been made when the forearm was in the position of pronation and when in that of supination.

Sequence of Movements in Upper Arm to Movements of Hand in Positions of Supination and of Pronation.

Movement Performed.	Position of Forearm.	Amount of Work required to be done before Triceps Contracts	Amount of Work required to be done before Biceps Contracts.
Fingers flex	Supinated	No contraction	18 lb.
Traction at right angles to line of forearm ...	Pronated	1½ lb.	No contraction to 18 lb.
Fingers extend	Supinated	4 lb.	No contraction
Fingers extend	Pronated	No contraction	No contraction
Thumb extend	—	No contraction	—
Thumb and fingers flex (grasping)	Supinated	24 lb.	33 lb.
Thumb and fingers flex (grasping)	Pronated	13 lb.	30 lb.
Wrist flex	Supinated	No contraction to 32 lb.	22 lb.
Wrist flex	Pronated	2 lb.	No contraction
Wrist extend	Supinated	4 lb.	No contraction to 24 lb.
Wrist extend	Pronated	No contraction	22 lb.

In these observations the forearm was laid flat on a table in the position of pronation or supination, the elbow was placed at a right angle and relaxed, and the amount of work done was either registered by a dynamometer, which was grasped in the hand, or traction was made on the joints under observation, by a band passed over the phalanges or the metacarpal bones, and connected with a spring balance which registered the amount of work which the movement had to resist before the biceps or triceps contracted. The contraction of the biceps was ascertained by the finger hooked round its tendon near its insertion, and the contraction of the triceps was easily felt by the finger and thumb placed on either side of it just above the elbow.

In some cases a very slight amount of resistance brought out the co-operation of the triceps. For instance, in the position of pronation the triceps is called into action when the resistance to the flexion of the fingers or wrist was only 1½ lb. to 2 lb., and in the position of supination the triceps contracts when the resistance to the extension of the fingers and wrist was only 4 lb.

First, taking the forearm in the position of supination, it will be seen on looking at the table that in flexion of the fingers, whereas the biceps contracts when the resistance to the movement of flexion amounts to about 18 lb. (8 kilos), the triceps does not contract at all. Also in extension of the fingers the triceps contracts when so little resistance as 4 lb. (1¾ kilos) is experienced, and no contraction of the biceps occurs even with a pressure which can overcome the extension of the fingers. These observations show that in the supinated position of the forearm flexion of the fingers, when opposed, is followed by contraction of the biceps, and extension of the fingers, when opposed, is accompanied by contraction of the triceps. Secondly, that in grasping with the fingers and thumb, which, as we have seen in a previous lecture, is performed by the flexors of the thumb and fingers and the extensors of the wrist, the contraction of the biceps and triceps both occur, but that of the triceps first. Thirdly, in extension of the thumb only, a movement which would probably not affect the elbow-joint, I could not discover any contraction of the biceps or triceps. In other words, the muscles producing flexion or extension of the elbow are brought into a movement which is in the direction of flexion or extension respectively, either to reinforce it or to counteract the tendency of the resistance to move the elbow in the opposite direction. While in a movement like grasping, which is not in the direction of flexion or extension, both sets of muscles (triceps and biceps) contract and the elbow is kept fixed. That this sequence is very much due to position is shown by the opposite results which were obtained according as the forearm was pronated or supinated. For instance, in flexion of the fingers or of the wrist in the supinated position the biceps contracted at 18 lb. and 22 lb. respectively, but not at all in the pronated position. This is probably because when the fingers or wrist are flexed against resistance with the forearm supinated, the opposition to movement of

flexion of the fingers or wrist is in the direction of extension of the elbow, and the biceps contracts so as to prevent the elbow being extended when the pressure on the wrist or fingers reaches a certain amount. But when the forearm is in the pronated position the conditions are reversed, the direction of the opposition to the flexion of the wrist is now in the direction of flexion of the elbow, and to prevent the elbow being flexed it is now the triceps which contracts and not the biceps.

To elucidate still further the question of position I have made experiments on the movement of grasping with the fingers and thumb, (*a*) with the forearm resting free on a flat surface, (*b*) with the forearm fixed immovably. It will be seen on looking at the table that in the movement of grasping the contraction of the triceps occurs sooner than that of the biceps. As there was evidently some disturbance of the position of the elbow which necessitated contraction of the triceps before that of the biceps, the forearm was fixed to prevent any movement of the elbow. It was found that in the position of supination, whereas with the forearm resting freely, the triceps contracted when the grasp registered 24 lb.: with the forearm fixed, it did not contract till the grasp was almost doubled, that is, 45 lb. In the position of pronation with the forearm free the triceps contracted when the grasp was 13 lb., and with the forearm fixed at 29 lb. The same conditions were obtained when the forearm was in the mid-position between supination and pronation. The contraction of the biceps was not influenced by the position of the forearm being free or fixed. These observations showed that the contraction of the triceps must be to counteract some action of flexion of the elbow by the muscles taking part in grasping, and on carefully watching the movement of grasping when the forearm rested free on a flat surface, a certain degree of flexion of the elbow was seen. I have measured the force of this flexion of the elbow by a band round the lower end of the forearm, which was attached to a fixed point with a spring balance interposed, and I find that the force exerted by the flexion of the elbow in grasping amounts to 1 lb. I have also ascertained that it makes no difference whether the grasp is 24 lb. or the maximum 54 lb., as the amount of force produced by this slight flexion of the elbow is in both cases 1 lb. This would mean that in the supinated position whatever the strength of the grasp, the triceps so adapts itself that it will not permit flexion of the elbow of more strength than 1 lb.

Another question which arises is, Why in the supinated position does the triceps not co-operate till the grasp has reached 24 lb., whereas in the pronated position it takes part in the movement when the grasp has reached 13 lb., and in the mid-position at 20 lb. between the two other figures? It means probably that in the position of pronation the forearm muscles produce flexion of the elbow sooner than in the position of supination, and, therefore, that the triceps must intervene sooner to prevent flexion of the elbow. If this be true it is in harmony with what was stated in a previous lecture—that patients who have lost their proper flexors of the elbow manage to flex this joint by first putting the forearm into the position of pronation and using their forearm muscles.

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THE ETIOLOGY OF NEW GROWTHS.

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ALTHOUGH it is not unusual to speak of the cell growth of benign tumours as typical and that of malignant tumours as atypical, such terms are applied to cell relationships and not to cell types. That new growths are composed of aberrant cells, often markedly different morphologically from those of the organ of origin, is long recognized; from the physiological side, also, it has been shown that the vegetative properties of such cells are developed at the expense of the specialized functions of those of the organ of origin. So far is this alteration in type recognized that many pathologists have assumed a reversion to an "embryonic" state as an essential in all tumour growth. The use of the term embryonic has been with reason condemned by Adami; if the term is used in any strict sense it is inaccurate; the cells of many new growths have no demonstrable morphological resemblances to embryonic types, and physiologically their one resemblance is the preponderance of the vegetative properties.

It appears to be correct to state that all tumour growth is error, typically speaking; it is the purpose of this paper to examine this type variation and its significance.

CELL ACTIVITY.

All cellular activity is the resultant of bio-chemical action and reaction, and, did our knowledge admit, all cell phenomena would be definable in terms of this action and reaction from a comparatively simple phenomenon, such as that of secretion, to the infinitely elaborate processes which result in the evolution of the body and its parts from a simple cell. During this evolution, cell types are continuously built up of wide morphological differences and performing ultimately widely different functions.

Such characteristic cell types maintain themselves in virtue of an inherent selective activity on the assimilable material available to them, enabling them to build up characteristic chemical compounds.

Cell potentiality may be stated conversely—all cells react to bio-chemical stimulation, and the result depends on two factors, the nature of the stimulus and the inherent capabilities of the cell to form chemical combinations in response. By the term stimulus is to be understood any incidental condition which calls forth chemical change of whatever character in the cell. The secretory cell of a salivary gland depends for the performance of its characteristic functions on the availability of suitable assimilable material, and also, at any rate as regards its degree of activity, on impulses transmitted through the nervous system—an example of the transformation of energy.

The discoveries of Professor Ehrlich in his investigation of immunity have thrown much valuable light on the question of cell activity generally. It is perhaps too early to generalize on this matter, but it may be provisionally stated that the selective power of a specific cell type in presence of the available food material, depends on its possession of "receptor" groups corresponding to "haptophore" groups in the assimilable material, and the production as a chemical reaction of molecular combinations which may be used up in cell maintenance, or under other circumstances, and in the case of other cell types, in the formation of a secretion of approximately constant character. A consequence of the reaction of receptor and haptophore groups is the reproduction of receptors, and this saturation and reproduction would appear to exercise an influence of first importance on the variations of cell activity and their cyclical regulation.

CELL PROLIFERATION.

The response of cells to "stimulation" is frequently expressed as reproduction. A great variety of forms of stimulation, using the term in the sense already defined are capable of initiating this reproduction; alteration of chemical conditions such as those evoked by heat and moisture are well recognized methods of encouraging multiplication among the simpler form of animal and vegetable life, and among these forms the influence of a variety of organic and inorganic salts on this multiplication has been the subject of researches.

The same class of conditions also governs multiplication of the tissue cells of the human body—examples of such conditions are to be found in (1) increase of available food material of normal type, (2) the alteration of physico-chemical conditions which is brought about by mechanical irritation, and (3) the activity of certain microparasites and their products. Almost all cells of the body are capable of multiplying in response to such stimuli, the probable exceptions are the more highly specialized cells of the nervous system, and possibly others similarly specialized: others in varying degree appear to retain a vegetative function.

This vegetative function is part of the normal life-cycle of the parenchyma of the ovary and testis: in other tissues it is, for the most part, potential: in this function, as in all cell activity, the nucleus appears to exercise a controlling influence, and its changes are readily demonstrable histologically.

First, a word on the most simple of the three conditions named above—proliferation as the result of increased, or

increased availability of food material. The stimulus here is the normal food material. Under ordinary circumstances this is attached to the cell by specific affinities or receptors, and utilized in the chemical changes which are peculiar to the cells concerned. Muscle cells will serve as an example. Under the exceptional circumstances of increased supply the cell goes beyond the performance of its normal function, and the nucleus, which is an index of all cell changes, divides as a whole. New muscle fibres are formed, in part at any rate, by, first, a multiplication of nuclei; and, secondly, a separation off of a new individual cell body corresponding to each. We are not aware of the necessity of any constituent change in the food supply stimulus necessary to evoke this vegetative function; possibly there is some change in molecular tension; but that it is increased supply, and not constituent change, which is responsible, is, I think, supported by the result—that result being the production of a cell similar in type to the parent cell in all ascertainable respects.

It is necessary to explain this last argument further. If we are to consider the vegetative function one dependent on chemical conditions, we must assume that it obeys such chemical laws as are universally followed in other chemical reactions. It has long been the custom to speak of this vegetative function as physiological, suggesting that it belongs to the class of so-called vital functions, to the interpretation of which we are supposed to possess but scanty clues. The burden of proof now lies with those who suggest or maintain that this so-called vital process has any basis other than a chemical one. The differences of opinion on cell processes generally are well illustrated by the recent discussions on the reactions of toxin, cell, and antitoxin; the present consensus of opinion is also shown by the almost universal acceptation of Ehrlich's view that these reactions depend on chemical affinities and not on some physiological reaction distinct from chemical combination, which was the view put forward by Büchner, Wassermann, and others.

If, then, we are dealing with a bio-chemical problem in this question of muscle-cell multiplication, the result, which is the production of a cell of a type exactly resembling the parent, throws some light on the character of the process; it supports the view that the real effective cause of the multiplication in this case is an increase in available quantity or assimilability of the normal food supply, the normal assimilable material. If it depended upon some change in this assimilable material, and consequently upon new chemical reactions, we should expect not a daughter cell of type exactly resembling the parent cell, but a daughter cell of type variant to a greater or less degree.

We are not able with our present knowledge to go deeply into this matter, but I think the following corollary may be stated with probable accuracy—in regard to the vegetative function of cells, when this is evoked by an increase in quantity or assimilability of the normal assimilable material, the daughter cell is similar in type to the parent cell.

I do not propose to dwell on proliferation dependent "on the alteration of the physico-chemical conditions which is brought about by mechanical irritation," but to pass to consider that which results from the activity of certain micro-parasites and their products.

Proliferation in Micro-parasitic Infections.

Proliferation of this type takes place in response to the action of assimilable material, which is usually called toxic owing to one aspect of the result of its activity. An example is the proliferation of the fixed connective-tissue corpuscles, which results in certain cases from the action of the tubercle bacillus—any of the so called inflammatory processes would serve, but it is well known that the extent to which proliferation is evoked by the different infective agents varies greatly.

We may express the effect of the tubercle bacillus and its products on the connective-tissue corpuseles in the following way:

Assimilable Stimulant, that is, Tubercle Bacillus, and products { Haptophore Group—Receptor Group } Connective tissue Corpuscles
{ Germinal Group—Germinal Group }
= Proliferation of connective-tissue corpuscles.

Now of course this only represents one aspect of the action of the bacillus, other aspects are the death of the corpuscles or possibly their stimulation to the production of antitoxin, though the source of antitoxin bodies is uncertain; in these various effects, common receptor and haptophore groups are very probably concerned. However that may be, numbers of new cells are produced related by descent to the connective-tissue corpuscles. They are not the result of increased supply of normal assimilable material, but of assimilable material of foreign and abnormal character. We should expect therefore that while showing resemblances to the connective-tissue corpuscle they would show variations in type, in fact if the view of cell proliferation as a bio-chemical reaction is correct this variation must apparently follow. Morphologically the new cells show evidence of this variation, associated presumably with alteration in their constitution. From this evidence and for these reasons we are justified in stating that the result of the action of this micro-parasitic infection is the production by proliferation of cells of a type variant from the normal type and therefore possessing new bio-chemical characteristics and affinities.

These new cells thus produced are in a state of unstable equilibrium, which is shown usually by their death in large numbers, and their disappearance during processes of healing. This disappearance has an active and passive aspect. On the one hand, they die as a result of the toxic or over-stimulating action of the parasite and its products; on the other hand, being dependent for their maintenance on chemical conditions of a temporary character, if these latter disappear, the new type will fail to maintain itself, degenerate, and be absorbed, or will revert to the normal type under the influence of the normal assimilable material, which, after neutralization of the infective agent, becomes the only food available.

The extent to which this reproduction reaction to stimula- takes place varies very much—the factors being, first the nature and persistence of supply of the assimilable stimulus, second, the specific receptor activity of the cells with which this is brought in contact.

In the case of the so-called toxin bodies, their selective activity on certain tissues and cells is well known—for example, the tetanus toxin, which acts selectively on the cells of the central nervous system. In the same way, certain microparasites exert this reproduction reaction specifically—for example, the coccidium oviforme excites proliferation of the epithelial cells of the bile ducts, the infective agent of syphilis excites proliferation of the connective-tissue cells.

Granulomata.

In the case of some contagious disorders there result what are spoken of as granulomata. These consist of cells produced as a reaction to the stimulus of an invading agent; cells of such a type and with such relations to the assimilable stimulus that they are comparatively persistent—for example, gummata. But, however active the proliferation, the cell type of the gumma is unstable; the factors above referred to lead either to death or to reversion. The influence of potassium iodide on this cell growth is of interest; its action is probably one of neutralization of the assimilable material which is able to originate proliferation, and owing to the availability of which the new cell type is able to maintain itself for a time.

The gumma is a new growth arising from the basis of the connective-tissue corpuscles; venereal disease also supplies us with an example of a new growth originating as epithelial proliferation—the condyloma.

It is interesting to note statements that these condylomata are not true tumours; for example, in a textbook on pathology, the first edition of which is not two years old, I read of this growth "being due to irritation, it is not in a strict sense a tumour." The meaning of this is, of course, that being definitely etiologically related to certain forms of irritation, it cannot be called a true tumour, because part of the definition of true tumours is that they arise without assignable cause. Such argument is based on the dogma that there is no such thing as a formative irritant; a dogma energetically preached by Weigert and others, but which seems to require modification.

To leave this point; the condyloma acuminatum is a new growth which is histologically a papilloma; it arises as a consequence of the stimulation of the skin by certain contagious infective agents. From the cells of the rete are produced by this reaction cells of a variant type which continue to multiply and also maintain themselves indefinitely.

Such an example serves to enable us to make the following statement: As a result of the action of external and communicable stimulants there result, by proliferation, new growths of cells of variant type, the persistence of which is variable, in some cases transient, in others indefinite.

Cell Types of the So-called True Tumours.

We have considered the question of the decadence of the new cell type and the agencies, active and passive, by which

it is brought about—we now have to consider the persistence of the variant cell type.

This may be discussed in relation to one of the benign new growths, for example the adenoma.

In the very valuable paper by Professor Adami, in the British Medical Journal of March 16th, 1901, the author states his view that cell proliferation occurs

where the tensions acting on the cell are reduced and certain energies, which before were necessary to counteract opposing forces, are freed and become thus capable of diversion from their purpose, or again where stimulation from without results in increased assimilation—he considers that "owing to these agencies the proliferated cells assume a 'habit of growth' as contrasted with a 'habit of work' (for example, the performance of their normal functions) and acquire momentum to continue performing the proliferative act."

When this habit of growth is inaugurated the cells can continue to grow and multiply in the complete absence of those conditions which initiated their proliferation in the first place.

The last part of this quotation is that with which I am really concerned. How is it that the proliferated cells can continue to grow and multiply indefinitely? Professor Adami considers this explainable on the ground of momentum.

This explanation does not, I think, take sufficiently into consideration the resistance to which these cells are subjected at every stage of their life-history; from beginning to end they have to maintain themselves in the face of reactionary forces. Granted their habit of growth—but why do they survive and as it were become colonists and settlers, seeing that they are outlanders and foreigners?

It seems to me that we must look to the question of cell type for an explanation, this question being one of chemical characteristics and affinities, and we may go again to bacteriology for an illustration. A certain type of bacillus may be possessed of a habit of growth of high degree, but it will obtain no footing whatever in the human body unless it is possessed of such chemical affinities as enable it to attach itself to elements of the material of the body, and so to maintain itself and survive reactionary and lethal forces. This survival is a question of bacterial type, and only secondarily one of proliferative energy.

Valuable supporting evidence of this view is also afforded by transplantation experiments, of which I will take those of Jensen and Leyden. Jensen[1] was able to transplant a cystic adeno-carcinoma and a melano-sarcoma of the mouse through a long series of animals of the same species; attempts to transplant into other animals were uniformly unsuccessful. V. Leyden[2] transplanted a sarcomatous growth through forty-eight generations of white rats; but in white mice, guinea-pigs, and rabbits no growth resulted. In these experiments we have examples of the habit of growth of a high degree, but while the cell type was able to maintain itself in the species of origin, this was impossible in other species, because of its inability to form such bio-chemical relationships in the new species as would enable it to survive and vegetate.

From these examples I turn again to the question why certain types of abnormal proliferate cells persist, survive, and multiply indefinitely, and the answer seems to be that they are initially possessed of certain affinities which are able to attach themselves to certain corresponding elements of the available assimilable material, and in consequence maintain their equilibrium. The matter resolves itself into a question of immunity.

To discuss fully how this stable, this immune cell type is or may be evoked would entail consideration of the various etiological theories; I shall content myself with repeating that variant cell types can only be called into existence by alterations in chemical conditions, and we may speak of the abnormal materials as stimuli or as new assimilable materials with characteristic affinities: these are synonymous terms. I think it probable that there exist a variety of such stimuli capable of generating stable variant cell types and thus originating new growths; that among these certain micro-parasites have a place is at any rate a reasonable theory.

With regard to the different cell characteristics of simple and malignant growths, it is becoming increasingly evident that all degrees of malignant and benign growths exist and that the demarcation between the groups has a rather shadowy existence. I will take as examples the three types: adenoma, rodent ulcer, and carcinoma.

I have already said that the conditions of life of the cells of growths are really studies in immunity.

The cell type of the adenoma is stable, but only locally, in the organ of origin, it shows no capacity for extending or maintaining itself outside the range of certain restricted relationships, only within the range of these relationships is it immune to influences which would overturn its equilibrium, for chemical conditions outside these relationships it possesses a negative chemotaxis, or at any rate an indifference.

Rodent ulcer is clinically and pathologically a well-defined type of new growth; it differs from the adenoma in that the cells have a wider range of possible relationships; they transgress the normal relationships of epithelium and connective tissue, and invade the latter. This power of invasion is, however, limited; the growth is always comparatively superficial, and does not extend to the deeper lymphatic channels and glands. The cell type is, then, one which is stable, but with chemical affinities, capable of satisfaction only within a range histologically definable; on the other hand, in virtue of these affinities the type exhibits a positive chemotaxis for conditions other than those of its original seat, and in virtue of this it invades or, as we say, infiltrates. It is usual to speak of this infiltration as governed only by conditions of mechanical resistance; it seems probable that, at any rate, its direction and limitations are defined by this principle of chemotaxis, which, again, is dependent on the chemical affinities of the cell type.

If we in the third place consider a carcinoma of a high degree of malignancy, we find we have to do with a cell type capable of maintaining itself under a great variety of conditions; for example, a carcinoma mammae with metastases in liver, lungs, bones, and brain. Even in such growths we find limitations and preferences. For example, observations have shown that certain organs are more commonly the seat of secondary growths irrespective of their anatomical relation to the primary focus. Although metastatic cells from a carcinoma mammae must necessarily pass through the lungs before reaching the liver and many be arrested there, yet secondary growths are more common in the latter than in the former.

The two chief factors in malignancy, infiltration and metastasis, are then dependent on the extent of the range of stability and immunity of the variant cell type originally evoked. Infiltration is a question of positive chemotaxis. Metastasis is in the first instance governed by mechanical conditions, but in regard to its extension and development is dependent on the power of the cell type to maintain its integrity, resist reactionary influences and utilize material as nutriment under varying bio chemical conditions.

I may now attempt to summarize the various points of this paper.

1. Cell activity and cell type must always be the resultant of bio-chemical reaction of the principles of which the researches of Ehrlich and others have enabled us to obtain some information.

2. Cell proliferation as a form of cellular activity is always the resultant of such reaction. When it takes place as the result of increased availability of normal food material, the new cells produced conform to the type of the parent cells. When it follows the action of assimilable materials of abnormal constitution new cell types are evoked, variants on the type of the parent cells.

3. Cell proliferation of the latter type takes place in certain microparasitic infections.

4. The new cell types thus evoked exhibit various degrees of instability.

5. In the granulomata (*Infectionsgeschwülste*) their stability is considerable; in certain growths which result from infective agents (for example, condyloma) the equilibrium of the new type appears to be stable.

6. In the so-called true tumours, cell types arise as variants on the normal cells of the organ or tissue of origin. The ways in which such cell variants may be evoked is not discussed, but that they may result in some cases from the action of micro-parasites is a reasonable view.

7. These cell types are stable; their stability is due to the capacity of the particular variant to attach to itself and assimilate material in conformity with its type.

8. In the simple tumours they are only locally stable, and are not immune to reactionary influences outside the tissue of origin and the normal relationships of parenchyma and connective tissue.

9. In the malignant growths they possess a wide range of stability and immunity, and the degree of this is the measure of their capacity to form metastases, while local infiltration, the other histological characteristic, is dependent on the principle of chemotaxis, the cells extending in those

directions in which their variant and aberrant bio-chemical affinities enable them to annex material conformable to the building up of their characteristic type.

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A CRITICISM OF CURRENT DOCTRINES CONCERNING HERNIA.*

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ALTHOUGH hernia is one of the commonest of surgical diseases and the subject of an abundant literature, both ancient and recent, surgeons have by no means attained to anything like unanimity either with regard to its pathology or its treatment. The root of this diversity is the want of a generally accepted theory of causation. Indeed, there exists in most textbooks, and in the minds of many surgeons, what I believe to be a fundamental misconception on this subject, which I shall attempt to show is responsible for much confusion in treatment. Stated briefly, this misconception consists in the belief that the majority of inguinal hernias are acquired, whereas there are, I think, conclusive reasons for believing that all, or almost all, are congenital. The pouch of peritoneum which passes down the inguinal canal into the scrotum and forms the peritoneal investment of the testicle and the tunica vaginalis, under normal circumstances becomes completely obliterated between the tunica vaginalis and the internal abdominal ring, within a short but not accurately-known period after birth. In a person in whom this piece of development has been completed in normal fashion, an inguinal hernia can only arise by the protrusion through the inguinal canal of an entirely new sac of peritoneum carried in front of the intestine or other organ which happens to protrude. Such a condition would be a true acquired inguinal hernia and would be explicable on exactly the same principle as the post-operative hernias. That is to say, it would be the effect of normal or excessive expiratory effort acting on a weak or undefended part of the abdominal wall. This is exactly the view which is commonly held. On *a priori* grounds there is no objection to this view. There is no greater difficulty in believing that abdominal strain may force gut and peritoneum through the inguinal canal than in believing it capable of causing a hernial protrusion in an abdominal scar. Nevertheless the evidence against inguinal hernia at any rate of the ordinary oblique variety being ever really acquired in this way, independently of any developmental defect is, I think, quite conclusive. The crux of the question is this: does oblique inguinal hernia ever arise without a pre-existing sac formed by a patent or partially patent funicular process?

There is absolutely no reason to suppose it does, and many reasons against such a supposition. In the first place, it is known that inguinal hernia does sometimes arise from a patent funicular process, because in one form the protruded viscera actually lie in the tunica vaginalis, and this form has always been named the congenital variety. But if this occurs when the whole peritoneal pouch remains open, surely it will occur just as readily when only the upper part remains open, and the condition then is anatomically precisely what is found in the ordinary oblique inguinal hernia. But there are many other arguments in support of this view besides its inherent probability. In every oblique inguinal hernia, if examined soon after its appearance, there is a well-marked neck; the aperture of exit is small in relation to the size of the whole sac, which has the shape of a sausage or a pear. In traumatic hernias, on the other hand, the aperture of exit is relatively large, and the whole hernia has a roughly hemispherical form. Moreover, many inguinal hernias of considerable size appear quite suddenly; in other words, the sac is already there to receive the protruded viscus. If it were not so, it is almost inconceivable that a pear-shaped pouch of peritoneum several inches in length, and of still greater circumference, could be suddenly extruded from the belly by a single expiratory effort. Any attempt to produce such a condition artificially on the cadaver would certainly rupture the peritoneum.

Again, a hernia may be of congenital origin, namely, due to a pre-existing patent funicular process, and yet not appear at birth or even in infancy. The admittedly congenital variety in which the viscera lie in the tunica vaginalis may make its first appearance at any age. In other words, a patent funicular process may exist for an indefinite number of years without giving rise to hernia, until some extra violent effort, or some weakening of the sphincter muscles of the inguinal canal, forces or permits the descent of a portion of the viscera into the sac. If therefore the first appearance of the hernia, that is, the first descent of the viscus into the sac, may be delayed for years in a person in whom the tunica vaginalis communicates freely with the peritoneal cavity, there is no difficulty in believing that a patent funicular process exists from birth in every oblique inguinal hernia, whatever the age at which the hernia first appears. This supposition, moreover, is not a mere hypothesis. The existence of a patent funicular process in patients with no hernia has been several times actually demonstrated as in a case quoted, as by Mr. Langton in his Bradshaw Lecture on the Association of Hernia with Descent of the Testis. I have myself made a similar observation in two cases; one in which an operation for radical cure was accidentally performed on the wrong side, where a patent sac was nevertheless found; another in a case of encysted hydrocele of the cord where the funicular process above the cyst was found widely patent, although previous to the operation there was no hernial impulse or swelling.

Again, Sachs, quoted by Stiles, states that he found the funicular process completely or partly open in 59 per cent. of male children under four months old—obviously a much larger proportion than those possessing hernias at that age.

Lastly, if ordinary oblique inguinal hernia were in some cases due to a pre-existing congenital sac and in others due to the formation of an entirely new protrusion of peritoneum, we should expect to find that the majority of hernias in young children were hernias into the tunica vaginalis, that is "congenital" according to the present nomenclature of the textbooks. As a matter of fact this is not the case. The great majority of the inguinal hernias of young children are precisely like the majority of adult cases, that is the sac of the hernia is completely shut off from the tunica vaginalis. With regard to this point all who have operated on many young children are unanimous, and my own observations, which are numerous, entirely confirm it. The evidence therefore appears to me to establish conclusively the presumption that in all oblique inguinal hernias there is a pre-existing sac formed by a congenital patency of the whole or of the upper portion of the processes vaginalis. That the sac of any oblique inguinal hernia is ever formed by an independent protrusion of peritoneum unconnected with the processus vaginalis there is on the contrary no evidence whatever; indeed the only proof possible would be the demonstration of the coexistence of an unclosed processus vaginalis with a separate hernial sac alongside it. This, so far as I know, has never been observed. It will be noted that the above arguments apply exclusively to the ordinary oblique inguinal hernia which enters the internal ring outside the epigastric artery and traverses the whole length of the inguinal canal; which has in fact the exact anatomical relations of the processus vaginalis. It is obvious that the direct inguinal hernia which leaves the abdomen on the median side of the epigastric artery and emerges directly at the internal ring is not explicable in the same manner. It must, I think, be attributed to the same causes as post-operative ventral hernia, that is, it is a genuine newly-formed protrusion of peritoneum and viscera through a naturally weak spot in the abdominal wall. With regard to this hernia the most important point is that it is uncommon. In 120 operations I have met with only two. Like all hernias due primarily to strain the sac is short and wide and never passes far into the scrotum.

The view that many inguinal hernias, beside those into the tunica vaginalis are really congenital in origin is not of course new. Many surgical writers have recognized it. But the merit of first clearly enunciating the view that in practically every inguinal hernia the sac is a pre-existing vestigial structure, and the chief factor in its etiology rests with Mr. R. Hamilton Russel, of Melbourne, whose paper on "The Etiology and Treatment of Hernia in the Young,"[1] published in 1899, has not, I think, attracted as much attention as it deserves. It was, however, alluded to and endorsed by Mr. Harold Stiles in his paper on "The Radical Cure of Hernia in Children," read at the annual meeting of the British Medical Association last year.[2]

* Read before the Birmingham and Midland Counties Branch of the British Medical Association.

Mr. Russel has recently published a suggestive paper, in which he gives reasons for believing femoral hernia also to be really due to a pre-existing sac due to developmental causes. Mr. Lockwood, in his well-known little book on hernia, admits that many inguinal hernias, especially those in children, are the result of a congenital defect of development. He attempts, however, to draw a vital distinction between hernias due to this cause and those which he regards as truly acquired, and he bases his practice largely on this distinction. Acquired hernia he attributes primarily to two chief causes—muscular flaccidity and undue length of the mesentery, the latter being either congenital or acquired. He advises strongly against attempting to cure such cases by operation. But if we examine the evidence by which Mr. Lockwood seeks to discriminate between congenital and acquired varieties we find it resolves itself into a question of age and the state of the abdominal muscles, and there is really nothing in his statements to refute the presumption that all oblique inguinal hernias are really congenital in origin. Moreover, although I agree with him that if flaccid parietes were the primary factor it would be futile to expect permanent cure from sutures, I have not hesitated to act on the opposite assumption, even in cases which, judged by his tests, would be quite unsuitable for operation. In other words, I have several times operated on elderly men with large hernias and flaccid abdomens. The time is still too short to test the permanence of the result, but all are at present well, following their occupation without wearing any kind of truss or bandage, and one of them is a man of 61, a gardener, on whom the operation was performed a year and nine months ago.

It is obvious the question of the congenital or non-congenital origin of the ordinary inguinal hernia is not of mere academic interest. If we accept, as I think we must, the congenital origin, several practical deductions must immediately be drawn. The first deduction is that every case could be certainly cured by an efficient removal of the congenital malformation—that is, the sac—provided the operation is done soon after the first appearance of the hernia, or, at any rate, before the presence of the hernia or the pressure of a truss have produced secondary distension and atrophy of the muscles of the inguinal canal. In other words, delay, whether a truss is worn or not, increases the difficulty of radical cure by operation. This furnishes an additional argument, if any were needed, in favour of operative treatment, and against the prolonged use of a truss. In the past the use of a truss has been the rule and radical operation the exception. I cannot but believe that this practice will soon be reversed, and the truss reserved merely as a clumsy palliative for those who, owing to age or infirmity or any other reason are unwilling to submit to operation. It is my own practice to offer operation to every able-bodied adult patient up to the age of 60 unless there are special contraindications. I do not press the operation, but content myself with pointing out the advantage of dispensing with a truss, and among hospital patients, at any rate, I find an increasing desire for the operation of radical cure. With regard to children the question stands on a somewhat different footing, because there can be no doubt, at any rate, when the hernia appears during the first year, that the use of an efficient truss enables in many cases the patent funicular process to undergo its natural obliteration. The truss in such cases is not, therefore, a mere palliative as it is in adults, but an efficient mode of treatment. It has, however, many disadvantages. It is excessively troublesome, and even when well used by no means certain in its results. If it cannot be left off by the age of 2 years there is little prospect of cure by continuing its use. In hernias which first appear after the first or second year a truss seldom cures. The operation in children is now so simple and expeditious, so certain in its result, and attended by such slight risk, that I recommend it in every case beyond the age of 9 or 10 months, and have sometimes for special reasons operated earlier, in one case at three months.

There is no need to describe the various methods of operating for the radical cure of hernia. Every surgeon has either invented a method of his own or adopted some other. For my own part, I have no hesitation in expressing my belief that the method described and practised by Kocher is by far the simplest, the easiest, and in all respects most satisfactory method ever devised.

With regard to the after-treatment, there are two directions in which surgical opinion is moving, as I believe, towards greater simplicity. One of these is in discarding the use of a truss after the operation in all but cases where the inguinal region has been greatly weakened by age or by long presence of large hernias. For my own part, it is difficult to see much advantage in an operation for radical cure which leaves the patient, as far as the truss is concerned, in the same position as before, except, of course, where the hernia has been previously irreducible. The other practice, which I think is being gradually modified, is that of keeping patients five or six weeks in bed after the operation. I regard this as quite unnecessary. The average stay of my patients in bed has been ten to fourteen days, and I allow them to resume work at the end of the third week.

I hope at some future time to publish a complete account of my operations and their results at the end of three years after the operation, a time which gives a fair though not, of course, complete account of the liability to recurrence- for recurrence, when it occurs at all, usually takes place within twelve months. Since 1899 I have done about 110 cases of inguinal and 10 of femoral hernia. All of these cases have been kept under observation, and so far I know of only 3 recurrences. Not one of them, I should add, has worn a truss since the operation except these 3 cases, and they only after the recurrence was noted. Two of these were young men with inguinal hernias, and recurrence took place in both within six months. Both were among my early operations, and in both the recurrence was a small direct hernia. In one I omitted to suture the inguinal canal, although the external ring was large and the muscles somewhat lax. In the other the operation was probably also inefficiently performed. The third case was an inguinal hernia in a middle-aged multiparous woman with very flaccid abdomen and a violent chronic cough. She has since died, two years after the operation, but I have not been able to find the cause of death. It was probably from phthisis. Of the remaining cases, I have examined most of them at the end of twelve months, and have heard from all who have completed two years. All are perfectly sound. The cases are all consecutive and unselected. Many of them were very large. Twenty-two were under 3 years of age, many of these under 18 months. The youngest 3 months. Ten were over 40 years of age, two of these over 60, and one 75. The latter had a large irreducible hernia containing the bladder, and causing much discomfort and misery.

Excluding strangulated cases, there has been only one death, which occurred in a female child aged 2 seven hours after operation for double inguinal hernia. The necropsy revealed nothing except a marked florid engorgement of one lung only. The exact cause of death is obscure, but it was not due to shock, for the temperature rose quickly after the operation until death. Chloroform was the anaesthetic used. Only eight cases suppurated mildly, and they healed without difficulty and left no sinus. Suppuration in no case injured the success of the operation. This is one of the great advantages of Kocher's method. Suppuration in a Halsted's or Bassini's operation is often fatal to the result, and leads to rapid production of an ordinary ventral hernia.

References.

1 *Lancet*, November 18th, 1899. 2 Ibid., May 31st, 1902.

ETIOLOGY AND TREATMENT OF MUCO-MEMBRANOUS COLITIS.

By Dr. BOTTENTUIT,

Consulting Physician at Plombières.

Symptoms.

The symptoms of muco-membranous colitis differ according to the form it takes and its intensity and cases may be divided into three classes: 1. Those who are habitually constipated; 2. those who suffer alternately from constipation or diarrhoea; 3. those who suffer from persistent diarrhoea.

The first two classes are more frequent than the third; those who suffer from alternate constipation and diarrhoea are rather less than those who are habitually constipated. Of the cases I myself have attended at Plombières 50 per cent. were habitually constipated, 40 per cent. suffered alternately from constipation and diarrhoea, and 10 per cent. suffered habitually from diarrhoea.

The first symptom which attracts the attention of the patient is the presence of slimy matter and false membranes, which are generally evacuated with the stools. In some cases these secretions are sufficient in quantity to provoke of themselves an evacuation, and in these cases it is found that they are the sole constituents of the excreted mass.

The form, the consistence, the colour and the quantity of these masses are very variable; sometimes they present a membranous form, and are composed of long filaments, cylinders, tubes, with often a ribbon-like appearance. This last form explains why they have so often been mistaken for taenia. Perhaps the most frequent is the glairy form. In this the dejecta may appear as amorphous matters, sometimes mixed with faecal matters, at other times they form a voluminous mass large enough to fill a tumbler, in other cases they resemble sputa.

When the false membranes are evacuated as they have been formed in the intestine, they may have the form of cylinders and bear on their surfaces the marks of the folds and the villi of the intestine. These marks often lead the patients to think that a fragment of the intestine has been evacuated. When they are divided into segments they are like ribbons, I have seen them as long as a metre, and the patient often compares them to macaroni or to rather large vermicelli. Sometimes when the divisions are clearly marked they resemble oxyuris vermicularis or a grain of rice. Sometimes they take the form of small flat discs which are compared to confetti; all these different forms may be found in the same subject. The colour of the secretion is variable, it depends on the length of sojourn in the intestine or it may undergo a change by mixture with the intestinal secretions or with the products of digestion. They sometimes exhibit streaks of blood, but this is rare, except when the patients suffer from haemorrhoids. In some cases the expulsion of these matters accompanies every action of the bowels, sometimes they are quite separated from the faecal matter.

But whatever the form or whatever the amount expelled, the composition of the mass is always identical. It is formed of amorphous matters, semi-transparent, containing in its centre some epithelial cylindrical cells, leucocytes, salts, fatty granules, and invariably large colonies of bacteria. Amongst the numerous bacilli which have been found the most frequent are the coli bacilli.

The alternation of constipation and diarrhoea or *débacle*, is rather less frequent than constipation (40 per cent). It is characterized by periods of constipation lasting several days, followed by a motion composed of hard matter with a fetid odour. After that some liquid motions, later on motions completely liquid, and then constipation recommences. The diarrhoeic form is much less frequent than the others. I called attention to this in 1892, I had observed it in only 10 per cent. of cases under my care. The patients did not suffer from constipation, and had never previously suffered from it. Often the diarrhoea had existed long before the muco-membranous colitis had shown itself.

One of the most important symptoms present in almost all cases of muco-membranous colitis is pain. Generally patients suffer from an uncomfortable feeling over the whole of the great intestine, which is usually more severe on the right side, over the hepatic flexure, and on the left side over the splenic flexure. Next in frequence to these are painful points in the iliac fossa on the right or left side near the caecum or the sigmoid flexure. There is another point, making the fifth, between the umbilicus and the ensiform appendix. The pain in all those points is often spontaneous, but can always be provoked by pressure.

If the pains are violent an error may be committed, and they may be taken for hepatic or gastric colic, or for pain situated in the appendix, whilst in reality it is the tranverse colon which is the seat of the pain. In many cases there is cutaneous hyperaesthesia in the regions of the sigmoid flexure, sometimes on the right, sometimes on the left side.

Patients often complain also of various disagreeable feelings, such as weight, tension, writhing, or throbbing, and often suffer from very painful attacks, which may last several days or several weeks. Errors of diet, or a strong purgative or fatigue, or any kind of excess, or even moral causes, may produce it. A period of constipation generally precedes these attacks. There is a great increase of the digestive troubles—anorexia, gastric pains, flatulence of gastric or intestinal origin, meteorism, vomiting, prolonged constipation, and also of nervous troubles. The pain is generally around the umbilicus and in the region of the sigmoid flexure. There is also tenesmus, but this last symptom is more frequent when the irritation is near the rectum.

Nearly all these patients are of a neuro-arthritic type. They are of a nervous disposition, and have suffered from rheumatic or hepatic troubles, and there is an excess of uric acid in their urine. They are subject to headaches, weak circulation, and haemorrhoids.

Digestive troubles have been the first symptoms, such as flatulent gastric dyspepsia, with a coated tongue, a capricious and irregular appetite, dilatation of the gastric and intestinal regions, eructations, and a tendency to sleep after meals. In almost all cases I have found hyperchlorhydria. The stomach is generally dilated, and there is displacement of the right kidney. There is also a flaccid abdomen, atonic and wallet shaped. The muscles of the abdominal walls are loose, there is lowering of the intestines, and later on of the stomach. The liver is generally swollen, sensitive, and even painful. Some authors have found the liver diminished in size as often as in half the cases. I have not myself found this to be so. I have found it in only a small number, but in more than half the cases I have seen I have found a decoloration of the faecal matter, as in fact have almost all those who have studied this disease. Often in these cases there is difficulty of respiration, ranging from shortness of breath to dyspnoea, with palpitation, arrhythmia, and even attacks of cardiac pain, which resemble angina pectoris.

In a remarkable discussion which took place at the Académie de Médecine (1896), Dr. Reclus brought forward observations on 20 cases of muco-membranous colitis which had preceded appendicitis. This however was exceptional. Neither Potain, Charrin, or Comby have mentioned in their works on this subject any cases in which appendicitis was a consequence of the muco-membranous colitis. In my own experience at Plombières of 1,000 cases I have not found one of appendicitis. Taking into consideration these statistics, Dieulafoy stated that real appendicitis, as proved by an operation, was a very rare and exceptional fact.

But alongside of these acute and infectious cases of appendicitis, there are others of subacute form which Dieulafoy calls entero-typhlo-colitis. I have seen many cases of this kind of typhilitis or cartarrhal appendicitis at Plombières. On such cases the effect of the waters has been most satisfactory. They are sometimes accompanied by muco-membranous colitis, but rarely. In fact, patients suffering from muco-membranous colitis are not more exposed to the dangers of appendicitis than other persons.

Intestinal lithiasis often coincides with muco-membranous colitis. I have seen many such cases. Attention has been called to this fact within the last twelve years by E. C. Jones, Edward Shattock, R. S. Thompson, Delépine, Dieulafoy, Matthieu, etc.; while Sir Dyce Duckworth and Dr. Archibald Garrod have written an interesting paper on this subject (*Medico-Chirurgical Transactions*, 1902). One often finds in the faeces small grains of sand of a yellowish colour, which are evacuated either with the mucus or without it.

The passage of this sand from the bowels is not always felt, but sometimes it is, and accompanied by colic, pains, nausea, and vomiting. It is important that these crises of pain should not be mistaken for hepatic colic or for those of appendicitis. Dieulafoy considers that this intestinal lithiasis is of the same kind as the others, and is dependent on a gouty or arthritic diathesis. These salts are composed of phosphates and carbonate of lime, and also of ammonio-magnesian phosphates. They also contain some organic matter.

Etiology.

Muco-membranous colitis occurs at all ages. The number of children affected is about 7 to 8 per cent. Some authors consider that constipation is the constant cause of this illness. I gave in 1892 some statistics on this point, to-day they would come to nearly 6,000, only half of these suffered from real constipation with intestinal atony. The others suffered from alternate constipation and diarrhoea; one-tenth suffered from diarrhoea. I attended 2,000 persons suffering from constipation, but showing no signs of muco-membranous colitis.

Doubtless constipation plays an important part in the affection. The presence of hardened matters irritates the mucous membrane of the intestine, but we must not forget that a faulty digestion is an important agent of infection and auto-intoxication. All persons of an arthritic diathesis are subject to catarrhal irritation of the mucous membrane, of the bronchial tubes, larynx, and uterus. Constipation may only be an exciting cause. Sometimes, however, muco-membranous colitis is a sequel of enteritis and dysentery.

Some authors consider that neurasthenia is the first phenomenon. My own statistics and those of Langenhagen are in opposition with this theory, but it is certain that the neurosis of arthritic patients is greatly increased by the presence of muco-membranous colitis.

Half the cases of muco-membranous colitis were men or children and the other half women. Three-quarters of them had no affection of the womb or its annexa.

Diagnosis.

The presence of slimy matter and false membranes in the faeces enable us at once to recognize muco-membranous colitis. When the pain is situated over the colon or McBurney's point one must take care not to attribute it to appendicitis, or when over the hepatic flexure, to the presence

of hepatic or renal calculi, or when over the splenic region, to tumours of that part.

Diagnosis is difficult only when there are paroxysmal crises. In such cases the intensity of the pain, the feverish conditions, and the vomiting may make one mistake them for appendicitis, hepatic or renal colic, or ovarian pain.

Prognosis.

It is rarely a fatal disease, but it is an affection of long duration, difficult to cure and causing numerous complications; amongst others it induces cachexia accompanied by a neurasthenic condition of great gravity.

In children there is loss of flesh and appetite, low spirits, and a general want of development. In the case of girls, the appearance of the menses is delayed.

Treatment.

We must take into account the previous treatment. Almost all the patients I have attended had used purgatives much too freely. In the first stage of the illness purgatives appear generally to be of some service; but in the course of time their good effects diminish and their prolonged use irritates the mucous membrane, and thus augments the constipation and the secretion of mucoid matter. This is especially true of drastic purgatives and saline purgative waters. All the patients I have attended have previously been subjected to milk diet, but without good results.

The diet ought to be the same as is given in gastro-intestinal dyspepsia or in dilatation of the stomach. In the first place, it is most important that all food which leaves residues after eating, such as tendons, fibrous tissues, grains, and those which the juice of the stomach and intestine are incapable of dissolving and digesting, should be avoided. Their passage keeps up the inflammation of the intestinal mucous membrane and their presence provokes sometimes peristalti ccontractions which are often painful, but which produce an action of the bowels. From this action arises the reputation of salads, green vegetables, and fruits as having a laxative action, but often they do not act in this manner and on the contrary the constipation increases. It is easy to demonstrate in what state the residue of such food after having passed through the intestine, is evacuated. If the faeces are placed on a fine sieve and water is poured on them sufficient in quantity to break them up and one continues to pour it till the water which is passed on the faecal matter has ceased to be coloured and has lost its odour, we then find on the sieve the residue of the food, that is to say fibres of salads, of French beans and tendinous fibres of meat and the skin of farinaceous vegetables.

It is especially necessary to advise such patients to eat slowly, to masticate their food carefully in order that it may be thoroughly broken up and well mixed with the saliva. Food should be taken in small quantities but of a very nutritious kind, such as eggs prepared in any way except hard boiled. Light meats, whether roasted, grilled, or baked with their gravy, may be taken, but without any sauce. If the patient has not good teeth he ought to have the meat hashed or even passed through a masticatory. All high meats or these badly cooked, and especially all kinds of food which are in a state of decomposition (such as certain cheeses), which are in consequence full of toxins and microbes, must never be eaten.

We may allow white fish, boiled or fried, but if fried the skin should not be eaten. Farinaceous vegetables (potatoes, peas, French beans, lentils, chestnuts), if passed through a sieve, may also be allowed. I recommend my patients to eat the tables with their meat, and to be careful not to swallow their food too quickly. If kept some time in the mouth, the effect of the saliva on them will be to help their digestion. Maccaroni and rice are also permitted. Toast in small quantities may also be given, but I prefer breakfast biscuits. Also milk soups, thickened with pastes, also such fruits as have no pips, peaches, apricots if quite ripe, especially when cooked, may be allowed; but, on the other hand, fatty foods, sour fruits, underdone food, sauces, ragouts, game, shellfish, pork (excepting the lean part of ham), must be forbidden; also wine, beer, and all alcoholic drinks are not allowed.

A small amount of water or tea taken at meals is useful and we are in the habit of prescribing at Plombières before each of the two principal meals a glass of the water of the Source des Dames (125° F.). For patients whose dejections are wanting in colour, and who have a sluggish liver, I add to the glass of water 1 gram (15 gr.) of Carlsbad Sprudel salts. The two glasses of water contain, therefore, 2 grams (30 gr.) of Sprudel salts every day. In eight or ten days the faeces have a natural colour, and the fetid odour has disappeared. It is necessary in these cases to insure a regular action of the bowels either by laxatives or enemata. One of the best laxatives is castor oil but when it is not tolerated, we must have recourse to magnesia, sulphur, cream of tartar, either separate or mixed in equal quantities. Sometimes when purgatives which are generally successful fail some other medicine will succeed; sometimes one must have recourse to cholagogues, and often to calomel, especially in cases of sluggish liver. Often glycerine suppositories are very useful or, when there is a spasmodic condition of the rectum, suppositories of belladonna. Sometimes when the constipation is very marked we have to use all these remedies combined.

When there is diarrhoea bismuth salicylate should be used, and the intestines should be washed out and mild antiseptics given; when there are paroxysmal crises hot compresses on the abdomen, poultices and frictions with belladonna should be prescribed.

Baths also are a source of great relief. The baths of Plombières water of 40 minutes to an hour duration at 35° to 37° C. have a great and sedative effect both on the nervous and circulatory system. They are of great use in cases where there is spasm of the colon or crises of enteralgia. Their first effect is to produce sleep, often they cause a disappearance of the mucoid matter, regulate the action of the bowels and diminish the attacks of diarrhoea.

Together with the laxatives washing out of the intestine ought to be resorted to. These washings not only help the discharge of the faecal matters and the muco-membranous secretions, but they also soothe the pain due to intestinal irritation and spasm. They are not given only as a mechanical means of evacuating the intestine, but as a therapeutical agent, which, thanks to the specific power of the Plombières water, acts on the intestinal mucous membrane. These douches must, however, be given with great care. The pressure must not be too strong, or it will provoke painful crises or exaggerate the spasms. The vessel which holds the water should be placed at 40 or 50 cm. above the patient's bed. The temperature of the water should be from 38° C. to 45° C. The amount introduced into the intestine ought not to be very large, the injection of 1½ to 2 litres into the intestine at the same time will often provoke pain and spasm. I generally prescribe only ½ litre for each injection. It should be retained for some minutes, but no great effort ought to be made to retain it. The patient should lie first on the left side, then on the back, then on the right side, so as to enable the water to circulate through the whole of the colon and caecum. When this water has been rejected, and after resting for a few minutes the same amount of water should be reinjected, I always advise my patients to take this washing out after they have had an action of the bowels, because it is not to be looked upon as a mechanical means of evacuating the intestine, but as an intestinal bath.

In each bathroom at Plombières there is a sofa on which the patient lies, and at the foot of the sofa is the recipient for the water fixed at a height indicated by the doctor. There is also a thermometer with a dial which gives the temperature of the water in the recipient. Attached to this vessel containing the water is a tube which descends as the water in the vessels lowers; there is also attached to the tube a little instrument which descends with the water. This has the advantage of enabling the patient to know exactly how much water has been injected into the bowel. The number of these bathrooms at Plombières in 1897 was 15, now there are 100. During the last six years the number of baths has increased from 3,000 to 28,000.

In the treatment of muco-membranous colitis we must not forget to consider the special indications to which the different complications give rise. The more frequent are gastric affections, hyperchlorhydria, floating kidney, uterine or utero-ovarian affections, and neurasthenia.

CASE OF PERFORATION OF THE AORTA BY A PIN ACCIDENTALLY SWALLOWED.

By Sir ISAMBARD OWEN, M.D.,
Physician and Lecturer on Medicine to St. George's Hospital.

The accident which occurred in the following case, though not unprecedented, is decidedly rare:

A stone-carver, aged 53, was admitted into St. George's Hospital, under my care, for haematemesis, on January 24th, 1903.

Condition on Admission.

He was suffering from severe pain in the left half of the thorax, shooting from the spine along the track of the intercostal nerves from the fourth to the sixth; most severe in the flank and inframammary region, and shooting across the epigastrium. The pain was said to vary by change of posture, being relieved by turning on the left side and aggravated by lying on the back, but it was doubtful if this was the fact. In person, on admission, he was well nourished, but was pale and looked very ill. The tongue was greatly furred and coated with grey, the pulse was small and contracted; it became hard when the pain was especially severe. There was slight tenderness on percussion over the lower dorsal vertebrae, and marked tenderness in the left flank and inframammary region of the chest; none in the epigastrium. The lung signs and heart sounds were natural; a weak apex beat was felt about ½ in. to the left of the normal situation; the left inframammary region was hyper-resonant; nothing abnormal was detected in the abdomen; abdominal breathing was intact.

History.

The pain precluded any extended inquiry into past history. The patient said it had attacked him suddenly on the 17th, and had continued ever since, lessening when he kept still, and increasing when he moved about or lay in certain positions. On January 22nd he had attended the hospital as an out-patient. He then complained also of "soreness of the chest," and some catarrhal sounds were heard over the lungs; but no physical signs were found to account for the pain. Later in the day he vomited about half a pint of blood. This was repeated once on the same day, twice on January 23rd, and once on the day of admission.

Treatment and After-History.

The most plausible presumption, notwithstanding the absence of direct evidence, being that there was an intrathoracic aneurysm, oozing into the oesophagus, the patient was placed on rectal alimentation and morphine administered subcutaneously. At 8 p.m. he vomited 14 oz. more of blood; and another 5 oz., bright red and frothy, at 4 a.m. Morphine was again given hypodermically, and Ruspini's styptic internally. The patient sank and died without further symptom.

After his death, his wife informed us that the onset of the illness was sudden pain in the chest and difficulty of swallowing, coming on as he was eating a potato.

Necropsy.

A necropsy was made by Dr. Salusbury Trevor, who reported to the following effect: On the anterior wall of the oesophagus were two injected areas, each about the size of a sixpenny bit, one at the level of the cricoid, and the other 2½ in. lower. In the middle of each a scratch could be seen with a hand lens. Below the lower injected area was a longitudinal scratch, leading downwards towards a traction diverticulum in the usual situation above the right bronchus. Opposite this pouch, on the left postero-lateral aspect of the oesophagus, was an oval opening, nearly ⅜ in. long and ¼ in. across the centre, where the edges were ragged, from which projected, with the head towards the mouth, an ordinary pin 1½ in. in length, blackened, roughened, and a little bent. The pointed end was engaged in the hole. In the wall of the aorta (descending part of the arch), at a slightly lower level than the hole in the oesophagus, was a small ragged opening, to which clot adhered, and from which a probe could be passed directly into the oesophagus. The aorta and oesophagus were adherent along the left side of the latter from the wound downwards, and the tissue between them infiltrated with blood nearly down to the diaphragm. The aorta was rather atheromatous and partly dilated. The alimentary canal was otherwise healthy, but the stomach contained a pint of blood, and the whole intestinal canal was full of blood, emitting an offensive odour.

Dr. Trevor concluded that the pin had been swallowed head downwards, the head being arrested in the pouch and the point accordingly tilted against the opposite wall, in which it stuck. Death was obviously from loss of blood.

As no inquiry obtained from the patient elicited the necessary clue subsequently furnished by his wife, so exceptional a lesion was undiagnosed during life. The seat of the disease could be surmised without much difficulty; the sensory nerves of the parts affected are partly derived from the vagi and partly from the first four or five dorsal ganglia, chiefly of the left side, which are in direct communication with the adjacent intercostal nerves of the same side. The source of pain was presumably the stretching of the parts infiltrated with blood, which had extended as low down as the diaphragm. The subsidence of the blood downwards probably accounted for the fact that it was the intercostal nerves connected with the lower of the said dorsal ganglia which were the chief seat of pain.

The specimen, which was shown by me at a meeting of the West London District held at St. George's Hospital on March 25th, will shortly be placed in the Hospital Museum as No. 5328.

BEQUESTS TO HOSPITALS.—Among the legacies bequeathed under the will of the late Mr. Henry Noble, Norwegian and Swedish Consul in the Isle of Man, are £1,000 each to the Seamen's Hospital and the Eye and Ear Infirmary in Liverpool.

THE EPIDEMIOLOGY OF PLAGUE: NOTE ON THE FLEAS OF RATS.

BY FRANK TIDSWELL, M.B., CH.M.SYD., D.P.H.CAMB.,
Principal Assistant Medical Officer to the Government of New South Wales.

IN opposition to Simond's hypothesis that bubonic plague is disseminated by fleas from infected rats, it has been urged that the fleas of rats will not bite human beings. Simond himself, whilst admitting his inability to pronounce upon the species of the fleas found by him upon rats, nevertheless clearly states that they bit human beings upon whom they were placed. Professor Galli Valerio, of Lausanne, has reported that the species of fleas found by him upon rats are *Typhlopsylla musculi* and *Pulex fasciatus*, and that neither of them will bite man. Simond's observations were made in India and Galli Valerio's in Europe, and it seemed by no means improbable that their conflicting results were due to the fleas found by them being of different species.

It does not follow that the fleas harboured by the rats in two widely different places would be exclusively of the same species. With a view to determine this point a collection of fleas was made from the rats coming under my examination during the recent epidemic of plague at Sydney. Of 100 fleas obtained, 10 were identified as *Pulex fasciatus*, 8 as *Typhlopsylla musculi*, 1 as *Pulex serraticeps*, and 81 as *Pulex pallidus*. It will be seen that no less than four species were represented, and most abundantly one (*pallidus*) not hitherto mentioned, as far as I am aware, as occurring on ordinary rats. Its stated hosts are *Mus albipes* of Socotra and *Herpestes ichneumon* of Egypt. This species bit us in laboratory trials, as did also *Pulex fasciatus* upon one occasion. *Pulex serraticeps* is well known to attack man. The remaining species, *Typhlopsylla musculi* did not bite us. The details of the observations form part of a forthcoming official report, but in the meantime it may be noted that they tend to remove an otherwise fatal objection to Simond's views.

POTASSIUM PERMANGANATE IN THE TREATMENT OF LUPUS.

BY J. HALL-EDWARDS, L.R.C.P.,
Surgeon Radiographer to the General Hospital, Birmingham.

DURING my observations of a large number of cases treated by means of the *x* rays I have tried the action of a number of drugs in conjunction with the rays. Some have been used for the purpose of bringing about a more speedy reaction; others with the object of limiting the dermatitis. During these experiments I was early struck by the good effects produced by potassium permanganate, not only as an adjunct to *x*-ray treatment, but in clearing up patches left after the administration of the rays.

After having used the drug for a considerable length of time, and in a variety of ways, I discovered that the treatment of lupus by this means was not new; and my attention was drawn to an article in the BRITISH MEDICAL JOURNAL, April 5th, 1902. It appears that the use of this drug for the treatment of lupus vulgaris and erythematosus was first suggested by Butte. In the article mentioned Dupuy[1] gives the results of his observations on a number of cases treated by Butte's methods. Butte used a compress of a 2 per cent. solution of potassium permanganate, which was applied for twelve to fifteen minutes daily, for about a fortnight, or, in non-ulcerative patches, the powdered drug was spread over the part with a spatula, a piece of dry absorbent wool applied, and the whole left on the part for a quarter of an hour. This latter method is somewhat severe, and produces a considerable amount of inflammation. Dupuy maintains that the action of permanganate is more rapid than scraping, and the resulting cicatrices are softer, flatter, and less likely to contract than those following other methods. One disadvantage (he says) is that the tissues are considerably stained.

After trying many methods I have now for some time used one, with such good results, that I make no apology for bringing it before your readers. I use a saturated solution of the salt, which is made by dissolving a drachm in an ounce of distilled water. In non-ulcerative cases I first wash the patch with carbolic or ichthyol soap, and afterwards wipe it over with a pledget of cotton wool moistened with methylated spirit. When dry I apply the solution of potassium

permanganate with a brush. In cases covered with crusts the surface is cleaned as well as possible without removing them, and the crusts themselves are saturated with the solution. The applications are repeated every day or every other day until relief is obtained.

In many cases of lupus treated by the *x* rays, the centres of the patches rapidly get well, whilst the edges continue to spread slowly. In these I have met with my best results. In most of these I have continued the *x*-ray treatment in addition to the application of permanganate, so that it is difficult to judge the effects of either method alone. Recently, however, I have treated several cases with the permanganate alone, and have been surprised at the results obtained. In several typical cases of large areas of lupus, where the centres of the patches have undergone cicatrization, whilst the edges have been marked by a thick line of dry crusts, two applications of the paint have caused the crusts to fall off, leaving a dry, healthy scar behind them, the active points remaining being painted over and over again until they finally disappear. The potassium permanganate treatment appears to have little or no effect upon those indurated, shiny, non-ulcerative, slow-growing patches, which are so difficult to treat either with light or the *x* rays. In all other cases the method suggested is worthy of consideration, and I shall be most anxious to hear of the results achieved in other hands. As an adjunct to *x*-ray treatment I consider potassium permanganate invaluable. I am trying its effect in several other diseases, and shall hope to report thereon on some future occasion. I have not noticed any staining result from this method of treatment.

REFERENCE.

1 *Thèse de Paris*, 1901.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

PYREXIA AND RIGOR FOLLOWING DOUCHING IN THE PUERPERAL WOMAN, WITH A THEORY OF THEIR CAUSATION.

Dr. Sykes's communication on the above subject in the British Medical Journal of May 16th, p. 1145, is interesting and suggests food for reflection.

A good many years ago I had a case that might be said to come under this category. A thin anaemic person had had a tedious labour owing to inertia, but was progressing satisfactorily enough until the third or fourth day, when the nurse administered a douche of Condy. The same evening I was sent for and found the patient in great distress, and with a temperature of 103°. Thinking that the nozzle might have entered the uterus, I proceeded to examine the position and condition as to dilatation of the os, and in doing so discovered a large clot imprisoned, on the removal of which all trouble speedily disappeared, the temperature being normal next morning. I was thus led to regard the clot, with commencing sapraemia, as the cause and the use of the douche as a coincidence.

Sunderland. B. Strachan, M.B.

TURPENTINE IN THE TREATMENT OF PNEUMONIA.

I wish to bring to notice the usefulness of turpentine in the treatment of pneumonia, those cases more especially which too often complicate influenza. For many years I have used this drug in these cases, and such is the result of my experience—which is fairly extensive—that I have come to regard it almost as a specific. I can recall cases of the worst type recovering by its use, and seldom have I known it fail. It must, however, be given early, persistently, and in adequate doses.

My usual method is, after giving an efficient dose of calomel, to prescribe the following mixture:

℞ Ol. terebinth. pur., ʒij to ʒiv
Pulv. trag co., ʒj
Spt. amm arom. } āā ʒij
Spt. chloroform. }
Aq. ad. ʒviij. M.

Sig., two tablespoonfuls every four hours.

Patients take this mixture—it is not so unpalatable—without demur, and it hardly ever disagrees. Amelioration of symptoms is soon apparent, and it is wonderful how it cleans and moistens a dry, furred tongue, improves the appetite, and keeps the bowels open. Children take it without difficulty and it acts well on them. On two occasions only have I known it produce stranguary and once diarrhoea. Once or twice I have given a drachm every four hours, but the usual dose is from 15 m to 30 m; children in proportion. The virtue of the drug probably lies in its antiseptic properties, and the ease by which it is absorbed. It is also a stimulant and so much safer to administer than the depressing coal-tar products.

Perhaps what I have tried to say is not very convincing, and I will conclude by stating that if medical men will only give the oil of turpentine a fair trial in pneumonia they will find it a safe and most effective remedy in this, one of the most fatal of acute diseases.

Rhyl. W. Thomas, M.R.C.S.Eng.

CHICKEN-POX ERUPTION ON THE CONJUNCTIVA.

I think the above condition must be of sufficient rarity to be worth noting, as I can find no mention of it in the textbooks. It occurred in the case of a child aged 2½, and was in the form of a distinct pock on the bulbar conjunctiva at the outer canthus of the right eye. The eruption was present on the mucous membrane of the mouth, and there was marked enlargement of the lymphatic glands all over the body. The child was quite unconscious of any inflammation in the eye, and there was practically no constitutional disturbance, the disease running its usual mild course.

Guards' Camp, Pirbright. Allan C. Pearson, M.B., D.P.H.

CASE OF ACUTE ALCOHOLIC POISONING IN A CHILD, AGED 6 YEARS.

In the British Medical Journal of May 16th, Mr. Forster reports a case of recovery from alcoholic poisoning in a child of 4 years. In his case the child had taken 2 oz. of neat whisky. Some months ago I had to treat a case in which a child of 6 years had taken 9 or 10 oz. of pure whisky and yet made an excellent recovery.

On December 2nd, F. B., a little boy, aged 6 years, was found by his parents at 8 a.m. sound asleep in bed with an empty whisky bottle beside him. The father stated that the bottle, of a pint capacity, was left by him half full on the table the previous night. At 5 a.m. the father and mother heard the boy get out of bed but thought nothing of it. It appears that the boy had taken the bottle to bed with him at that time and drunk the contents. On trying to waken the child at 8 a.m. the parents could not rouse him, and therefore at once sent for me. I found the boy lying on his back with face deeply suffused. He was deeply comatose; the pupils were widely dilated and fixed; the conjunctival reflex was absent; the pulse was small, very rapid and irregular, and could not be counted; respiration was deeply stertorous. Without delay I passed the stomach tube, and washed out the viscus five or six times until the liquid returning was perfectly clear water. The liquid first withdrawn smelt strongly of whisky, and was mixed up with much "coffee ground" material, evidently proceeding from the congested mucous membrane. A hypodermic injection of strychnine (gr. 1/30) was then given and repeated in half an hour. Thereafter the child was flicked over the face and chest with cold wet towels. Recovery was rapid. In about an hour the conjunctival reflex returned, and although the boy remained dull and somnolent throughout the day he was perfectly well again next morning.

The interesting points in this case are (1) the large amount of spirit taken—at least 9 oz. of neat whisky; and (2) the fact that although three hours and a half had elapsed before treatment was commenced, recovery was rapid.

Muswell Hill, N. J. D. R. Monro, M.D.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

PUBLIC HOSPITAL, KINGSTON, JAMAICA, W.I.

TUMOUR OF LEFT KIDNEY WEIGHING 9 LB. 10 OZ.: REMOVAL: RECOVERY.

(Reported by J. Aldred Allwood, M.B., M.S.)

M. G., black, aged 36, was admitted on September 1st, 1902.

History.—Eight years ago he noticed a small swelling in his

left side just below the ribs, which steadily increased in size, until now it filled up the whole of his abdomen. There had been no pain, but the condition was causing him great discomfort by reason of the size and weight of the swelling. About two years ago he had an attack of dysuria, accompanied with haematuria, which lasted for about two months, and from which he recovered completely. With this exception he had never had any urinary trouble. On this occasion he was told by the medical man who treated him that he had an enlarged spleen and a stone in his bladder. During the last eighteen months he had been afflicted with a constant and intolerable itching all over his skin, which was so bad as to keep him awake at night. For this he had so far failed to obtain any relief, and it was mainly on account of it that he sought admission.

Present Condition.—He is thin, somewhat anaemic, and irritable. The conjunctivae are slightly tinged yellow; the tongue is clean; there is no enlargement of the liver; the urine is of pale straw colour (specific gravity 1,020), free from albumen and deposit. There is a tumour, nearly filling up the abdomen, extending from the margin of the ribs on the left side to the level of the iliac crest, and stretching across the middle to the nipple line on the right side. It is freely movable in all directions, and with respiration; painless on movement or palpation; rounded in outline; deeply notched on its anterior (right) border; and for the most part firm, but giving a sense of fluctuation in two places. There is absolute dullness all over it except along the outer surface, where there is slight resonance on light percussion, but the colon could not be felt. The stomach was crowded upwards and the splenic dullness almost obliterated.

Diagnosis.—It was considered to be a tumour of the left kidney, probably cystic.

Operation (September 5th).—An incision was made in the left semilunar line, which had to be carried the whole length of the abdomen, and another incision obliquely in the lumbar region. The tumour was found to grow up between the layers of the mesocolon, and had the descending colon on the outside flattened out between it and the abdominal wall. The outer layer of the mesocolon was incised along the whole length of the tumour, and with great difficulty stripped off it and carried over to the right side. The ureter and vessels were cleared, ligatured and cut through, and the tumour delivered through the anterior wound. The wounds were sutured with silkworm gut, and a large drainage tube was inserted through the lumbar incision, which, except for the drainage and facilitating somewhat in the delivery of the tumour, did not prove very useful.

Progress.—The shock was severe. He had very little sleep, and was restless all night; the pulse was weak and thready, and the temperature 100°. By next evening the temperature had risen to 105°; there was persistent hiccough; the pulse was scarcely to be felt, and he was delirious. He continued more or less in the same condition until the morning of the 8th, when the temperature dropped to 100°, and he was somewhat better except for the awful hiccough, which nothing checked. The temperature fluctuated between 100° in the morning and 102° in the evening until the 18th, when it dropped to normal, and did not rise again. The hiccough continued incessantly for six days, and then ceased. During all this desperate time the abdomen was flat, the tongue clean, and appetite excellent. He insisted that he was all right except for the hiccough, to which, however, he was accustomed, as he had had it quite as badly on previous occasions. He continued to improve slowly, and by October 8th the anterior wound was quite healed, the posterior wound nearly so, and the patient was able to move about comfortably; the itching of the skin had completely left him, and he felt quite well. The tumour weighed 9 lb. 10 oz., and was completely covered by the capsule of the kidney. The outline was irregular and nodular. On section, a small portion of kidney substance was found at the upper and back part. The rest of the mass was made up of a series of lobules, for the most part firm and pinkish yellow, but in two places there was dark brown semi-gelatinous material.

MICROSCOPIC EXAMINATION BY DR. E. E. MURRAY.

Matrix.—Fibro-cellular, in places showing small round-cell infiltration; in places haemorrhages have occurred.

Epithelium.—Consists of tubules lined by epithelial cells. These tubules bear a striking resemblance to convoluted tubules of the kidney. In some tubules the cells are undergoing necrosis.

REMARKS.—To what category does the tumour belong? Is it carcinoma or adenoma? Bland-Sutton[1] says: "..... I am convinced, from my own investigations, that a large proportion of such tumours are in reality sarcomata, but I am equally certain that in a few 'encephaloid' tumours of the kidney abnormal development of epithelium is a distinguishing feature." He also refers to a case described by Sharkey, in some parts of which there were alveoli lined with regularly arranged epithelium. "In such parts the tumour presented a rough but striking resemblance to the tubular structure of the kidney." It is noteworthy that the itching of the skin cleared up entirely after the removal of the kidney.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

ALFRED WILLETT, F.R.C.S., President, in the Chair.

Tuesday, June 23rd, 1903.

THE TREATMENT OF ANEURYSM BY SUBCUTANEOUS INJECTION OF GELATINE.

DR. GUTHRIE RANKIN communicated a paper on this subject, in which he first gave an account of the work done by Lancereaux, Pauleno, Dastre, and others. Though not universally accepted, there was considerable evidence to prove that the results obtained were due to an increased power of coagulability produced by the gelatine on the blood. The best results were obtained when the use of gelatine was combined with rest in bed, restricted diet, and potassium iodide given internally. Four cases were related which had been treated at the *Dreadnought* Hospital, and which went some way to confirm the favourable views expressed by Lancereaux. Lancereaux advocated the injection of 250 c.cm. of a saline solution containing 2 per cent. of gelatine, and thought a minimum of from 12 to 15 injections necessary. Huchard preferred a 1 per cent. solution, which he considered safer. In the cases related treated at Greenwhich 100 c.cm. of a 2 per cent. solution of gelatine were injected at each sitting after the first; and the average number of injections was 17. The inner aspect of the thigh was chosen as the most convenient situation for the operation. The solution consisted of 1 oz. of gelatine and 131 gr. of sodium chloride in 50 oz. of sterile distilled water. A detailed record of the four cases treated was given; three were of aortic and one of abdominal aneurysm. In all four cases more or less marked improvement was observed. The conclusions arrived at were that gelatine injections given with proper precautions were safe; they produced alleviation of all the subjective and many of the objective symptoms; the relief of symptoms was probably to be explained by shrinkage of the aneurysmal sac and consequent diminution of pressure on the surrounding parts; such diminution could be demonstrated in three out of the four cases treated; the after-histories afforded evidence that the beneficial results of the treatment were probably permanent.

CASE OF ANEURYSM OF THE ABDOMINAL AORTA TREATED BY THE INTRODUCTION OF SILVER WIRE WITH A DESCRIPTION OF THE INSTRUMENTS DEVISED FOR THE PURPOSE.

Mr. D'ARCY POWER and Mr. G. H. COLT made this contribution. The patient was a farrier, aged 29, who had acquired syphilis at the age of 17, and had only been treated with mercury for a short time. He had noticed a pulsating swelling in the right side of his abdomen for two years and a-half, and had been constantly under treatment. On five occasions he had received injections of gelatine in the gluteal region without any marked alteration in the progress of the aneurysm. The sac of the aneurysm was extremely thin in places, and as his life seemed to be in danger it was determined that the sac should be exposed, and the artery from which it sprang should be ligatured, or, if this were impracticable, the sac should be filled with silver wire. The swelling was diagnosed as an aneurysm of the coeliac abscess, or of one of its branches. The sac was accordingly exposed, and, as it was impossible to isolate it, 80 in. of silver wire, with a clotting surface of 3.7 sq. in., were introduced by means of an instrument devised and made by Mr. G. H. Colt. The actual introduction of the wire took only two minutes and a-half, and there was no trouble in closing the hole in the sac with a few point sutures. The patient had a good night after the operation, and was fairly comfortable on the following day. His pulse continued

[1] *Tumours Innocent and Malignant* (subject Carcinoma), p. 256.

to rise, however, and he died fifty hours after the operation. The necropsy showed that the aneurysm sprang from the abdominal aorta just below the diaphragm. The sac was full of recently-clotted blood, in which the wire was entangled. On cutting across the aorta, a 7-in. loop of the wire was found projecting up into the arch of the aorta. The rest of the organs were normal, and the heart was healthy, except for a patch of adherent pericardium. The following instruments for the introduction of wire into aneurysmal sacs, were invented and constructed by Mr. Colt:

Instrument 1 worked on the principle enunciated in the following terms: "If what is known to the mechanical engineer as a milling tool be made to revolve at a less distance than the diameter of the wire employed from the inner surface of the dorsal wall of a hollow tubular needle, the ventral wall of which has been cut away, the milling tool will grip the wire between itself and the needle, and will wind it off the reel, and drive it through the needle with a force only limited by the force at the disposal of the operator. It will, at the same time, snag or mill the wire." To carry out this principle a quarter-curved tubular needle was embedded for about two inches of its length in the substance of a brass carrier. A semi-circular incision was then made down to it through the brass, so that the lumen of the needle was exposed. A milling tool was introduced at this spot to compress the wire with a steady grip as it passed through the needle, the pressure being made between the milling tool and the dorsal wall of the needle. The mounting of the needle was then bolted to the mounting which carried the milling tool, and it was then so geared up as to give the operator room to use the instrument without getting his hands too near the wound. A second hole was made in the tubular needle distal to the milling tool, and along this a stilette was passed to block the hollow needle to its point whilst it was being pushed into the sac of the aneurysm. The instrument was further provided with a handle by which to hold it, and with a second handle to revolve the milling tool. In the second instrument there were no gear wheels, and the milling tool was driven direct. The needle was sufficiently long to remove the mechanism to a distance from the wound, and the instrument was capable of taking a thinner wire than the first. No stilette was required, and, by a simple device, the wire, which was introduced in coils, could be divided into lengths at the will of the operator, without withdrawing the needle from the sac of the aneurysm, thus obviating the increasing resistance to introduction of the wire and the possibility of loops being forced into the aorta. The third method consisted in the introduction of one or more cages of steel wire, which were so constructed as to form cylinders when they were compressed, and these could be passed through a fine cannula into the sac of an aneurysm, when they immediately expanded. Half cages or "wisps" were considered better than complete cages, and less likely to damage the sac.

Dr. R. Maguire had treated 8 cases of aneurysm by the gelatine method; in 7 there was considerable improvement, and in the other there was but little to effect, as the aneurysm was almost cured beforehand. Details of 3 of the more instructive cases were given. In 1 case an aortic murmur was noticed to disappear under treatment, and the sac was seen to contract under daily injections. In another case the patient returned to his work as a carpenter but eventually died from "weakness." In a third case there was a large bulging mass to the left of the sternum, and the skin seemed to be about to give way, when he was treated for six weeks with three sets of four consecutive daily injections, with an interval of two weeks between each set, with the result that he was now doing his work and feeling perfectly well. Examination with the x rays in this case showed no visible expansion of the aneurysm. The ordinary medical treatment of aneurysm of the aorta was unsatisfactory; it was also the cause of much distress to the patient. But there was danger in the gelatine injections. The first patient died from tetanus as he believed, and similar cases were recorded at Guy's Hospital. In his case the house was in a garden, the room itself contained plants, and it was suggested that the germs came from the outside. A mechanism to prevent the contamination of the gelatine was described. The deaths from tetanus as the result of gelatine injections were of considerable frequency in Germany, where it was used for the arrest of haemorrhage, suggesting that preventive measures were not carefully taken in the emergency. Certain researches were referred to which showed that commercial gelatine frequently contained tetanus germs, and that these could be destroyed by boiling. Reference was also made to the disadvantage of the pyrexia sometimes caused and the risk of setting up clotting in other vessels. He thought it a good method where surgical measures were not applicable.

Dr. F. Hawkins alluded to one case in which he had seen the gelatine injection employed for an abdominal aneurysm. The injection was followed by a severe rigor and great collapse. The patient, however, recovered and returned to work, but he died after some eight months. At the necropsy there was found some clot in the aneurysmal sac. It was yet to be seen whether patients lived longer after this treatment than after ordinary methods.

Dr. A. J. Whiting asked how soon after the first injection in the case that died from tetanus described by Dr. Maguire the first symptoms appeared, as the incubation period of tetanus was usually ten or twelve days; and if it occurred under this, as he had understood, it might suggest the possibility that the spasms were not tetanus. He also asked whether boiling the gelatine to sterilize it altered its solidifying power.

Dr. Maguire said that the onset of the first symptoms of tetanus in his case occurred about a week after the first injection. He thought he had read of a case of tetanus in which the incubation period was twenty-four hours. Boiling the gelatine did not seem to materially alter its solidifying power.

Dr. Guthrie Rankin, in reply, said he had never seen any untoward effects from the method such as pyrexia or the setting up of clotting in other vessels. He emphasized the obvious and almost immediate good effects occurring after the ordinary methods of treatment had been tried without good result.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

William Lang, F.R.C.S., President, in the Chair.

Thursday, June 11th, 1903.

Subconjunctival Fistula Formation in the Treatment of Chronic Glaucoma.

Major Herbert, I.M.S., described how this could be done either by producing a subconjunctival prolapse of the iris or by infolding the conjunctiva. The report dealt with 130 cases in which the iris was left prolapsed under a conjunctival flap, and in all but 18 eyes a small iridectomy was combined. A large number of these eyes were in an advanced stage of the disease, and were therefore not very hopeful when an iridectomy only was done. For this reason a large incision was dangerous. The visual results of operations done from six months to upwards of three years previously were given. Only one eye had suffered from late infection, and this gave way rapidly to treatment. In two eyes there was iridocyclitis immediately following the operation. In one case it caused partial occlusion of the pupil, and in the other, which was somewhat neglected, it led to sympathetic ophthalmia, with total loss of both eyes. The sight of another was lost through protracted delay in filling of the anterior chamber. These serious early complications were less numerous than when simple iridectomy was done. It was claimed that a filtering cicatrix could be obtained with certainty, and that in some cases this was the only way to relieve the tension. At any rate, the risk was far less than if the tension was not relieved by the iridectomy. On the whole, the visual results were much better than could have been expected from typical iridectomy. Many cases of so-called atrophy of the optic nerve after operation were in reality due to unrelieved tension. A fistulous cicatrix was indicated (1) when iridectomy had already failed, (2) where it was likely to fail such as in advanced cases and (3) when the patient was not expected to return for a second operation if one was required. The danger to the other eye was very remote and would probably yield to mercurial treatment or enucleation. The connexion of the iris with the prolapse could, if desired, be severed by a subconjunctival sclerotomy, cutting up through the attached base of the iris. The second method by a subconjunctival infolding into a small sclerotomy wound had proved effective in a number of cases. The aim was to establish a fistula unconnected with the uveal tract. By a special suture the flap could be kept in place long enough to keep separate the lips of the wound so as to form a permanent subconjunctival fistulous track. The 10 cases in which this was done were of too recent date to give a correct appreciation of its value. Other successful cases of conjunctival infolding without suture had been under observation for periods up to nearly two years. Many other attempts, however, failed to relieve tension through the flap not remaining infolded long enough; and in one eye the tension was far too much reduced. Apparently infective mild iritis came on and eventually detachment of the retina. Twenty-three operations were performed without suture, or with imperfect suture.

Mr. Priestley Smith, Mr. Treacher Collins and Sir Anderson Critchett made remarks; and Major Herbert briefly replied.

A CASE OF MELANO-SARCOMA OF THE UPPER LID.

Mr. WORK DODD's paper was taken as read.

The patient was a woman, aged 83, who had noticed a lump in the upper lid for six weeks. There was no pain at first, but latterly there had been some. The tumour was situated in the centre of the upper lid, and was about the size of a hazel nut; there was no redness, oedema nor tenderness. On the under surface the growth was soft, jelly-like, and vascular. The eyeball was almost hidden by the growth, but its movements were free. The patient had several wart-like growths about the body. The contents of the orbit were removed, the lower lid only being left. A Thiersch graft was afterwards applied.

Only 45 cases of primary sarcoma of the eyelid had been recorded, 10 were melanotic, and 4 of these originated in the palpebral conjunctiva. Van Duyse stated that: (1) Of the few arising from the palpebral conjunctiva most were pedunculated, while those from the skin or mucous membrane were papillary in form. (2) These attained a considerable size before extending into the surrounding tissues. In this case the tumour was pedunculated, and it had affected chiefly the free surface, leaving the skin, orbicularis muscle, and tarsal plate intact and healthy. All these circumstances pointed to its origin being in the palpebral conjunctiva.

INNERVATION OF THE ORBICULARIS PALPEBRARUM MUSCLE.

Mr. N. BISHOP HARMAN read a paper on this subject. He outlined the observations which had led Mendel to the formulation of his hypothesis "that the frontal and orbicularis muscles, although peripherally supplied by the facial nerve were 'eye muscles,' and formed the 'oculo-facial' group whose central innervation was the oculo-motor nucleus." He contended that the operation of excising these muscles in young animals which had been followed by a diminution of the cellular elements of the third nerve nucleus did not prove that the lost nerve cells were the central connexions of the nerve to the excised muscles, for by the very conditions of Mendel's operation—by the stitching the eyelids together—he had interfered with at least one proper eye muscle connected with the third nucleus, the levator palpebrae superioris, into the region of whose nucleus Mendel sought to attach the orbicularis. Mr. Harman traced the ancestry of these facial muscles. In man there were superficial and deep layers of muscles more or less differentiated owing to the vigorous facial action of man; in lower animals—for example, lemurs—there were simple muscle sheets. In the sharks the earliest representatives of these muscles were found in connexion with well-developed eyelids and nictitating membranes. By an embryological investigation he had shown that these muscles were primarily the muscles of the spiracle gill, which had been dragged forward for the service of the eye. In these fish the innervation was from the facial complex, the nerve proper to this gill. By reference to the work of Gaskell, which pointed out the different values of segmental nuclei, he showed how difficult it was to conceive the transference of the innervation of a "splanchnic" muscle, from a splanchnic nerve and a splanchnic nucleus such as the seventh to a somatic nucleus such as the third; the thing was without parallel. In the phenomenon not rarely found in man, that of "associated jaw-winking movements," of which he exhibited a case, there was evidence that the arrangements found in the fish still held good for man. In these cases there was partial ptosis of one upper lid; on putting into action the external pterygoid of the same side, the eyelid was promptly elevated. This he showed was an "atavistic anomaly," the occurrence of that associated movement between jaw and gill which was always seen in the breathing of fish. When the mouth of the fish opened the operculum covering the gills was relaxed. In these cases of jaw-winking movement in man, when the deep gill muscle (pterygoid) contracted there was an associated relaxation of the superficial gill muscle (orbicularis) which allowed the weak levator to pull up the lid.

OTHER PAPERS.

Two papers were taken as read—one by Mr. M. SCOTT and the other by Dr. LOUIS WERNER.

LARYNGOLOGICAL SOCIETY OF LONDON.—At a meeting held on June 5th, Dr. P. MCBRIDE, President, in the chair, Mr. E. B. WAGGETT showed a girl, aged 9, with a large post-pharyngeal swelling first noticed nine months ago, and had latterly increased in size as to cause some difficulty in breathing during sleep. A number of enlarged glands were present below the angle of the jaw on the right side. These had been noticed shortly after an attack of measles three years ago. The child appeared to be in good health, and no family history of tubercle was available. Mr. Waggett, in reply, said he believed the swelling to be a broken-down tuberculous mass.—Dr. FURNISS POTTER showed a case (exhibited at the last meeting) of a man who had had a large swelling on the right side of the naso-pharynx which completely obscured the right choana, in which the diagnosis was uncertain (? malignant disease or gumma). Under the administration of potassium iodide the swelling had completely disappeared.—Dr. WYATT WINGRAVE showed a case of supranasal cyst in an infant aged 15 months.—Dr. L. H. PEGLER showed a section of recurrent growth of the septum.—Mr. P. DE SANTI showed: (1) A case of gumma of epiglottis which had disappeared rapidly under the administration of potassium iodide; (2) a specimen of large fibro-lipoma of larynx.—Mr. F. J. STEWARD showed: (1) A case of infiltration of soft palate of doubtful nature; (2) a specimen of epithelioma of pyriform sinus.—Dr. W. H. KELSON showed a case of laryngeal fistula. The patient was a man, aged 58, who had cut his throat in November last, dividing, amongst other structures, the thyro-hyoid membrane, stylo-pharyngeal, the myo-hyoid, and sterno-hyoid muscles, the result being that the larynx had fallen downwards and forwards. The aperture was from $\frac{1}{4}$ in. to $\frac{1}{2}$ in. in diameter, through which the interior of the larynx was plainly visible.—Dr. H. L. LACK showed (1) a case of thickening of the left vocal cord, with deficient movement, of some months' duration; (2) a case of multiple sinus suppuration, showing results after operation on the sphenoidal sinus with a new instrument.—Dr. H. TILLEY showed a boy, aged 6, with a freely moveable pedunculated tumour, the size of a tangerine orange, growing from the right tonsillar region. It had been first noticed two months ago. Since then it had been twice removed, but had rapidly recurred. It did not bleed when manipulated. There was a small hard gland behind the angle of the right jaw.—Sir FELIX SEMON, having regard to the rapid recurrence after removal and the present appearance, was of opinion that this would be found to be a malignant growth.

BRITISH GYNAECOLOGICAL SOCIETY.—At a meeting held on June 11th, Dr. HEYWOOD SMITH, President, in the chair, Dr. C. H. F. ROUTH read a paper on some directions and avenues through which cancer might possibly be more successfully treated and perhaps cured. He considered cancer to be hereditary, inoculable, and occasionally communicable from one person to another; to be favoured by certain localities, and to be nearly everywhere on the increase; and that though the particular micro-organism to which it was due had not been determined, the disease might safely be accepted as of specific origin. It had been known to disappear spontaneously, and experiments suggested that this was owing to the growth having been acted on by oxygen. Reviewing the effects of oxygenation on the bacteria of chronic ulcers, on tubercle, and on abdominal dropsy; the effect of vibrations, simple and electrical, on the life of some bacteria; the treatment of diphtheria by antitoxins produced by electrolysis; and the power of liquid hydrogen to destroy bacteria, such as the typhoid bacillus, and the probability of its similar action in cancer, Dr. Routh suggested as measures to be taken for the prevention and treatment of cancer: the supply of pure water and efficient drainage, especially by the electrolyzation of sea water; the free use of oxygen, and the investigation of the possibility of destroying micro-organisms by electrical shock or vibrations, or by the use of liquid air or hydrogen. Dr. HERBERT SNOW said investigation had been hampered by using the term "cancer" in the vague sense of a single disease. There were many forms of malignant disease differing from one another in the causes to which they were due and in the clinical phenomena they exhibited. He could not agree that cancer was hereditary, and thought it was rarely if ever communicated. The statement that certain localities seemed favourable to it was open to the objection that in the so-called "cancer houses" the cases were of different varieties of the disease. He did not admit that cancer ever disappeared spontaneously. The treatment by oxygen and the proposal to destroy the micro-organism by vibrations depended on the idea that cancer was due to some organism, but he thought that there was the strongest presumption that it was not so. After remarks by Dr. BEDFORD FENWICK, Mr. SKENE KEITH said he had known a cancer to disappear as in the case of papilloma mentioned by Dr. Routh. Under the x-ray treatment many cases seemed to do well. Dr. MANSELL MOULLIN did not think papilloma to be malignant, certainly not in its early stages. The PRESIDEN

related a case in which he believed cancer had been conveyed from one operation case to another four days later.—Dr. Routh having replied, Dr. Mansell Moullin read a paper on the treatment of haematocolpos and haematometra. When the atresia was situated at the vaginal orifice or at the cervix the conditions were far less formidable than when the vagina was partially or entirely wanting. In the former cases he recommended free incision and gentle douching. The great danger to be feared and avoided was sepsis; reflux through the Fallopian tubes from contraction of the uterus need not be feared, as the retention of the fluid implied that the cavity was closed at its upper as well as at its lower end, and the freer the exit the less the danger. Whenever dissection would be necessary to reach the sac, he thought the abdomen should be opened. The sac might be incised, evacuated, and marsupialized in the abdominal wound, or better still the uterus might be removed by subperitoneal hysterectomy at the level of the inner os, the ovaries, if healthy, being left; the remnant of sac left would not be likely to give any trouble.—The paper was discussed by the President, Dr. Snow, and Dr. Bedford Fenwick and Dr. Mansell Moullin replied.

Dermatological Society of London.—At a meeting heldon June 10th, Dr. J. H. Stowers in the chair, Dr. T. Colcott Fox showed (1) An elderly woman who had attended among his out-patients with a cicatricial baldness resulting from lupus erythematosus on the scalp; he had ordered her salicin internally, and almost immediately there had appeared a widespread acute erythematous eruption over the face; the question arose whether this eruption was an acute outbreak of the original disease, or was due to the salicin: a careful examination of the parts rather suggested the former alternative; the salicin had been stopped, and the redness was disappearing, but now that this had occurred the patient had consented to take more salicin to determine whether the eruption was due to the drug or not; (2) a young man who had been suffering for a week or two with gonorrhoea and a gonorrhoeal arthritis of the left wrist; without the administration of any drug he had suddenly developed some small papules all round the lower part of the abdomen and loins; when first seen these were minute red elevations covered with a tiny vesicle, but the latter had dried up into a scale before the case was seen by Dr. Fox himself; there was no suspicion that the rash was syphilitic, and the case was shown for diagnosis; psoriasis was the only diagnosis suggested by some of the members.—Dr. J. Galloway showed a man with a marked, brownish-red, infiltrated eruption all over the body, and especially affecting the lower limbs. Over the ankles the epidermis had undergone enormous hypertrophy, so as to produce an actually verrucose condition over the front of the joint. The question was what was the underlying dermatosis. The rash appeared to begin as small uniform follicular papules somewhat suggestive of lichen planus or pityriasis rubra pilaris, though there were no plugs in the mouths of the follicles. The question was asked whether the patient had had much arsenic, and to this Dr. Galloway could give no answer.—Dr. J. A. Ormerod showed a mother and child, both of whom had suffered ever since birth from the occurrence of bullae on the fingers and toes in summer only. On exhibition, there were clear bullae at roots of the middle toes in both the patients.—Mr. Willmott Evans showed a case of actinomycotic infection of the skin of the left side of the face in the region of the angle of the jaw. No connexion with a tooth had been found, but it was believed that the skin was infected secondarily to the deeper tissues. On exhibition, the whole of the right side of the face and neck were greatly swollen, oedematous, and of a bluish-red colour. There were also two or three sinuses with sprouting granulations present, and out of these the characteristic pus could be easily expressed.—Dr. A. Whitfield showed a case of congenital keratoma of the palms and soles in a man aged 22 years. The history showed no trace of any skin affection in any member of the family.

South Midland Branch of the British Medical Association.—At the annual meeting held on June 18th, Mr. Audland, President, in the chair, Dr. Major (Bedford) read a paper on some difficult and delicate incidents in medical practice, referring particularly to two well-known cases of poisoning by antimony and arsenic which had not been diagnosed during life. He pointed out the difficult position of the practitioner who suspected that his patient was being secretly poisoned, and advocated the removal of such cases to private nursing homes, with the adoption of careful clinical examinations, which were now rendered so easy by the aid of the Clinical Research Association. The President, Drs. Hichens, Kennish, Messrs. Gifford Nash, Sworder, and Baxter discussed the paper.—Dr. Hollis (Wellingborough) showed two cases of hereditary oedema of the lower limbs in a brother and sister. The condition had started when the patients were aged 10, and the mother suffered in the same way. There was no apparent cause and treatment had been unsuccessful. Drs. Buszard, Hichens, Milligan, and Stone discussed the cases; and Dr. Milligan alluded to a similar case which had occurred at Northampton Hospital some years ago.—Dr. Milligan read notes of three cases: (1) Successful removal of large gall stone from the small intestine of a woman aged 59; acute obstruction was present, and the stone when removed (by a longitudinal incision) measured $4\frac{3}{4}$ in. long and $3\frac{3}{4}$ in. in circumference; (2) abdominal section for perforated gastric ulcer in a young woman; recovery; Dr. Milligan urged that success in these cases depended largely on early interference; (3) gastrotomy for haematemesis in a woman; recovery; surgical interference in acute cases of haematemesis was strongly deprecated. Drs. Hichens and Hollis, Messrs. Percival Nash and Evans took part in the discussion; and Dr. Milligan replied.—Mr. Gifford Nash then showed: (1) Congenital cystic kidneys from a boy aged 15, who had died of septicaemia following a boil on the neck, death being probably accelerated by the inefficient character of the excretory organs; (2) photographs and notes of a case of symmetrical alopecia areata and bullous dermatitis of face, resembling pemphigus.

REVIEWS.

CLINICAL MEDICINE.

The *Practitioner's Guide*,[1] as its title indicates and its preface states, is intended as a work of reference to which the general practitioner can turn in the doubts and difficulties which are inseparable from the active practice of his profession. Useful manuals of this kind exist for each separate province of our art, but the present is designed to combine their value within the compass of one handy volume. The description of major operations and indeed of all other than emergency surgical procedures is accordingly omitted, and the subject of midwifery is excluded altogether. We are inclined to doubt the wisdom of this step, which the authors, Dr. Walter Carr, Mr. Pickering Pick, Mr. Alban Doran, and Dr. Andrew Duncan state was only determined upon after careful consideration. Some seventy odd pages are given up to tropical diseases, and without disparaging Dr. Duncan's excellent articles—of which we shall have more to say presently—we feel that most practitioners would have been more grateful if the same, or even a little more, space had been devoted to those problems arising out of difficult labour upon their skill in coping with which so much of their reputation and success must always depend. The book is unequal, and careful examination leads us to believe that this depends in the main upon differences in the aims of the several authors. To begin with, we have no hesitation in stating our opinion that within the limits imposed by the space available the gynaecological section is the equal of any with which we have hitherto met. Many of the most difficult and delicate questions with which a general practitioner has to deal come within this category. In such cases he will find no more judicious guide than Mr. Doran's sane and temperate articles. We would select for especial commendation those upon dysmenorrhoea, hernia of the ovary, and cancer of the uterus. Mr. Doran is, rightly as we think, particularly explicit and thorough in his accounts of treatment, and his discussion of the therapeutics of malignant disease of the cervix is a model of clear, scientific, and impartial analysis. Nor can the high ethical tone which pervades the whole of this section be too highly commended in these days of furor operativus. Dr. Andrew Duncan's carefully-written accounts of tropical diseases derive special value from the copious manner in which the author has drawn upon his

[1] The *Practitioner's Guide*. By J. W. Carr, M.D., F.R.C.P., Physician Royal Free Hospital and Victoria Hospital for Children; T. Pickering Pick, F.R.C.S., Consulting Surgeon, St. George's Hospital and Victoria Hospital for Children; Alban H. G. Doran, F.R.C.S., Surgeon to the Samaritan Free Hospital, and Andrew Duncan, M.D., B.S., F.R.C.S., M.R.C.P., Physician Seamen's Hospital and Westminster Dispensary. London: Longmans, Green and Co. 1902. (Demy 8vo. pp. 1,112. 21s.)

experience in India. His views as to the maladies of that country are throughout reinforced by the record of the results of his own campaigns against them. The article on cholera is particularly able, while that on malaria includes a judicious summary of the present state of our knowledge respecting its etiology. With regard to ankylostomiasis, we note that there is no reference to Looss's researches on the penetration of the embryos through the skin. Dr. Duncan is a believer in the chemical theory of sunstroke, and recommends the wearing of red flannel as one of the aids to prophylaxis. The surgical section is valuable as far as it goes, and of course Mr. Pick's opinions have the supreme merit of soundness. We find, however, that this subject is somewhat sketchily treated, and, moreover, that the author's point of view is not always entirely modern. This is more especially true of the portions relating to diseases of the eye. It is, however, the articles on general medicine with which we have to find most fault. Dr. Carr appears to have been led away by the alphabetical arrangement of the book into adopting what we may call the catalogue system in his individual contributions. This may be of great value to a candidate immediately before his examination, though we doubt whether these catalogues are, as a rule, sufficiently complete for that purpose, but is scarcely what the practitioner requires. Of what use to him, for example, can it be to know the seven causes enumerated on p. 459 of hypertrophy and dilatation of the right ventricle? Nor do we think that he or his patient would derive much benefit from the method of blowing up a dilated stomach given on p. 891. In other places the author can hardly be said to be abreast of modern views. Thus the articles on diseases of the nervous system betoken no acquaintance with the neurone theory, and the pathological descriptions, for example, that of the morbid anatomy of tabes, are often out of date. There is also a section entitled "Bacteria," which does not seem necessitated by the scope of the book, and is, moreover, inadequate from the present standpoint of knowledge.

Dr. SAVILL'S *System of Clinical Medicine*,[2] the first half of which has been issued in a single volume, is conceived upon a somewhat unusual plan. It is arranged not pathologically, nor strictly speaking anatomically, but rather according to symptoms. Thus a certain region of the body being selected the principal symptoms to which its disorders give rise are recounted; this leads up to a discussion of the differential diagnosis and treatment of these disorders, their anatomy and pathology being deliberately accorded a subsidiary position. Such a scheme is admirably adapted, if combined with the alphabetical order, for an index of symptoms, but we cannot regard its application to a more or less complete system of clinical medicine as a successful experiment. A book which is intended primarily for the use of students should be above all orderly and logical in arrangement, and in this Dr. Savill's work, though obviously the fruit of much labour, is found wanting. But even apart from this there are many points upon which we are inclined to join issue with the author. The sections relating to treatment are in general very inadequate; thus the treatment of typhoid is given in about a page, in which the use of the cold bath is not mentioned. Nor should we be inclined unhesitatingly to accept a statement such as that on p. 419 that syphilitic stricture of the intestine can be relieved by the use of iodides. As regards physical signs, too, Dr. Savill states that the pulse in mitral stenosis is hard (p. 93) and that in aortic aneurysm a diastolic murmur is the one most commonly met with (p. 100). His notions as to physiological chemistry are somewhat vague, and his nomenclature—for example, "an alkaline albumen" (p. 479)—at times original. Thirty pages are devoted to diseases peculiar to women, a subject which, if not out of place in such a work, calls certainly for less summary treatment. The book contains quite an unusual number of misprints; it is embellished with two excellent plates illustrative of the facial eruption in measles and small-pox.

The fourth volume of Dr. ALLCHIN'S *Manual*[3] forms a complete, and in every respect adequate, treatise on diseases of the chest. It is the work of fewer contributors than its predecessors, no more than six names appearing in the list of authors. Where the interrelation of the different parts of the subject-matter is so close as in the present case this must be regarded as a distinct advantage. It opens with an account of the general anatomy and physiology of the respiratory system by Dr. Leonard Hill, who has compressed a summary of a vast store of learning within the space of 24 pages of small print. Much of this is, of course, purely physiological and too recently established to have been made use of as yet in practical medicine, but the sections on coughing and sneezing, and particularly the account of asphyxia, have considerable clinical importance. Diseases of the upper respiratory tract are succinctly discussed by Dr. Lewis Smith. His account of hay fever is careful and thorough, but the section on adenoids is hardly quite up-to-date. No mention, for instance, is made of the frequent occurrence of giant cells and tubercle bacilli in these growths. The section treating of diseases of the lower respiratory tract, comprising nearly half the volume, has been entrusted to the capable hands of Dr. Hector Mackenzie. It is arranged on a system which we do not remember to have met previously in treatises on the lungs, and which is certainly not to be surpassed from the scientific point of view. There is, first, an account of the general etiology of pulmonary diseases, in which their various predisposing and exciting factors are briefly set forth. Then follows a description of their morbid anatomy and general pathology, which is both full and well illustrated. such subjects as the pathology of bronchiectasis and emphysema and the morbid anatomy of the various forms of pulmonary tuberculosis being particularly well treated. General symptomatology is next discussed, lucidly and systematically; we may select for especial commendation the account of the causes of dyspnoea. The physical examination of the chest is a difficult subject to treat satisfactorily, but Dr. Mackenzie has got through his task with credit, although he cannot expect every one to agree with his nomenclature of physical signs; he has, moreover, omitted to describe the method of examining the larynx. The accounts of the various forms of pulmonary disease are, on the whole, concise, well-ordered, and accurate. Many excellent prescriptions are given, but there is occasionally rather a tendency to the enumeration of a catalogue of remedies without any indication as to that which the author has found most useful. Thus eleven methods are mentioned for treating pain in pneumonia, without any guidance being given as to selection. In connexion with this disease we do not find any reference to leucocytosis, and the influenzal type receives perhaps hardly enough consideration. In the treatment of broncho-pneumonia attention might perhaps have been called to the value of leeching the precordia when there is dilatation of the right ventricle. In the excellent account of phthisis albuminoid disease is not given as a cause of diarrhoea. Diseases of the pleura and mediastinum are accurately described by Dr. de Havilland Hall; the value of albumosuria as a sign of obscure empyema might, however, have been mentioned. Dr. Allchin himself gives a brief but interesting account of diseases of the diaphragm. The subject of disorders of the circulatory system is prefaced by a physiological introduction by Dr. Leonard Hill, who has, as is well known, made a special study of this department, and has contributed not a little to the elucidation of certain of the problems connected with it. He here gives a judicious summary of those facts which are of most value from the clinical point of view. The diseases of the circulatory system are described in 150 pages by Dr. Mitchell Bruce, and a more admirable exposition of the subject within these limits could hardly be conceived. The accounts of the general course and prognosis of heart disease and of the symptoms and treatment of cardiac failure are written from a broad and scientific standpoint, but are withal clear and eminently practical. In these sections, perhaps more than any other, the volume attains its ideal of a trustworthy guide to the busy practitioner as well as to the examination-haunted student. The volume concludes with a thoroughly sound and modern account of oedema by the editor, who is sincerely to be congratulated on the approaching completion of a work, the permanent value of which becomes more evident with the appearance of each successive instalment.

The fact that Dr. MUZIO'S work, *The Practical Physician*,[4] has reached its third edition within a very short time, speaks sufficiently favourably as to its value. The author has dealt

[2] *A System of Clinical Medicine.* By Thomas D. Savill, M.D., Physician to West End Hospital for Diseases of the Nervous System and to St. John's Hospital for Diseases of the Skin. Vol. I. London: J. and A. Churchill. 1903. (Crown 8vo, pp. 726; 2 plates, 108 illustrations. 12s. 6d.)

[3] *A Manual of Medicine.* Edited by W. H. Allchin, M.D.Lond., F.R.C.P., F.R.S.Ed., Senior Physician and Lecturer on Clinical Medicine, Westminster Hospital, etc. Vol. iv, Diseases of the Respiratory and of the Circulatory Systems. London: Macmillan and Co. 1902. (Demy 8vo, pp. 493, with illustrations. 7s. 6d.)

[4] *Il Medico Pratico* [The Practical Physician]. Del Dott. Carlo Muzio. Third edition. Milan: Ulrico Hoepli. 1902. (Fcap. 8vo, pp. 492. L.5.)

succinctly with a large majority of the diseases and conditions which form the bulk of everyday practice. The book is divided into twenty-five chapters, and differs somewhat from the usual plan of such works (at any rate as far as English works are concerned) in including chapters on obstetrics, serum-therapy, opotherapy, hypnosis, balneology, chemical analysis, *post-mortem* examination, public health, and pharmacology. The inclusion of chapters on radiography and medullary cocainization show that the author has brought his work well up to date. There is a useful little table giving the equivalent weights in grams and grains of other nations as compared with the Italian system of notation. Indeed, the amount of information crowded into so small a space is astonishing, and as a reminder of what one has learnt from larger textbooks or from experience, this handy manual, being easily carried in the pocket, completely justifies its existence.

OBSTETRICS.

Dr. Jardine has been for eleven years on the staff of the Glasgow Maternity Hospital, and in that time has had a "varied and extensive" obstetrical experience. From that experience he has written *Clinical Obstetrics*.[5] It is a didactic elementary treatise on midwifery, illustrated, and we with pleasure say, made more interesting and instructive by records of cases which have occurred in the author's practice. These cases are as a rule well chosen: they are not put in to fill up space, but because they are deserving of record. The value and attraction of the book lies in the strong personal individuality that pervades it. The author is neither an echo nor a copyist; but an observer who has formed his opinions for himself. Herein lies not only the charm, but also the weakness of the book,; for it is not possible for one person, even in eleven years spent in the service of the Glasgow Maternity Hospital, to exhaust all the possibilities of difficult labour, and finally decide on the best treatment of everything. Dr. Jardine often frankly and boldly expressed decided opinions sometimes contrary to those held by most obstetricians, without adducing or referring to evidence in support of his views. Thus, in speaking of concealed accidental haemorrhage, he says: "Rupturing the membranes has been advocated, but this I consider dangerous, as the uterus is paralysed, and will not contract." This is apparently a mere opinion, and the statement is contrary to the experience of most accoucheurs. Moreover, the reason given for not rupturing the membranes applies with even greater force to the *accouchement forcé*, which is next described. The author expresses his intention, if he gets another bad case, to try Porro's operation. Ramsbotham says that in his practice of 25 cases of accidental haemorrhage, "of very aggravated nature," 23 were successfully treated by rupture of the membranes. The mortality of Porro's operation has not yet been reduced to this. For *post-partum* haemorrhage, the author strongly recommends the intrauterine injection of suprarenal extract, ℥j to two pints of hot water, but does not say how often he has used it. He advises plugging the uterus, but does not mention bimanual compression: nor does he tell the reader that in bad cases plugging has been known to fail. In many respects the teaching of this book is better than that of some recently published American books. Dr. Jardine informs the student of the ease with which in occipito posterior positions the occiput can be manually rotated to the front, but omits to say that the chin also can, when the face comes down with the chin behind, be manually rotated forwards. He has used Ramsbotham's decapitating hook, and found that it will cut through the neck easily—a fact apparently unknown to most American obstetricians. Puerperal eclampsia is discussed at some length, and 21 cases are recorded. The author strongly advocates the treatment of this disease by saline infusion, but as yet not enough cases treated in this way have been recorded to show that its results are better than those of the general run of cases. The profession has to thank Dr. Jardine for a book well worth perusal.

We need not say much of the second edition of Dr. Haultain's *Practical Handbook of Midwifery*,[6] as its first edition was reviewed in the British Medical Journal of February 10th, 1894. It gives the student his obstetric food in the most concentrated form: in short detached sentences like the syllabus of a lecture; dogmatic affirmations, without explanation, and without ambiguity or hesitation. Many will find such a presentation of the subject helpful to them. In the main, Dr. Haultain's teaching is sound and good. We submit, however that such a textbook should not to-day contain the statement (p. 17) that a patient, "if infected (by scarlatina) during puerperium, it (the scarlatina) forms one of the most virulent types of puerperal fever, and the patient seldom recovers." This teaching was current fifteen years ago, but in 1888 Dr. Boxall not only knocked away its supports, but proved the exact contrary, and showed that scarlatina, when it affected an aseptic puerpera, was exactly the same disease as it is apart from the puerperal state. Will Dr. Haultain pardon also our questioning the statements (p. 227) that in pelvic cellulitis pain is "an inconstant symptom;" and that "the leg of the affected side is *usually* flexed on the abdomen?" In a lecture recently published in these columns figures were given which showed that flexion of the thigh was present only in about 10 per cent. of cases.

[5] *Clinical Obstetrics*. By Robert Jardine, M.D Edin., M.R.C.S.Eng., F.F.P. and S.Glasg., F.R.S.Edin., Senior Physician to the Glasgow Maternity Hospital, Examiner in Midwifery to the University of Glasgow, etc. London: Rebman Limited. 1903. (Crown 8vo, pp. 685, 47 illustrations. 15s.)

[6] *A Practical Handbook of Midwifery*. By Francis W. Nicol Haultain, M.D., F.R.C P.Ed., Lecturer on Midwifery, Edinburgh School of Medicine, etc. Second edition. London: The Scientific Press, Limited. (Fcap. 8vo, pp. 261, 18 illustrations. 6s.)

NOTES ON BOOKS.

By inadvertence we have hitherto omitted to mention the receipt a couple of months ago of the thirty-third annual edition of the *City of London Directory* for 1903 (London: W. H. and L. Collingridge. 12s. 6d.). It is a useful work of reference, giving very full particulars with regard to the corporation, livery companies, and charities of the city of London together with street, commercial, and trade directories. We do not quite understand the principle upon which the classified lists of medical practitioners are arranged, and would suggest that the inclusion of names of practitioners who reside outside the City, more especially when placed under specialist heading, is undesirable. Of the value of the work for ordinary purposes of reference there can be no two opinions.

FROUDE AND CARLYLE.

THE IMPUTATION CONSIDERED MEDICALLY.

By Sir James Crichton-Browne, M.D., LL.D., F.R.S.

In his paper, *My Relations with Carlyle*, recently published, Mr. James Anthony Froude has fitly crowned the column of calumny which, as Carlyle's trusted friend and biographer, he busied himself, not without profit, for five years after that great man's death in building up—a column, notwithstanding its rhetorical adornments, hideous, distorted, ungainly, on the top of which the true image of the man is lost to sight.

Froude's well-woven falsifications will be unravelled elsewhere, but I desire here to submit to the judgement of the medical profession one cruel imputation of his against Carlyle, upon which it alone can properly decide, but which Froude has not hesitated to lay bare before the general public. When accused of indiscretion in revealing the most sacred privacies of Carlyle's domestic life, and in printing his most secret meditations and those of his wife, Froude and his supporters have invariably taken refuge behind the familiar plea—so often a shelter for rancour—of the frank biography. But the frank biography has its limits, and has not hitherto been held to include the history of a man's sexual experiences. It has been reserved for Froude to set a most pernicious example and inflict a stain on English literature by proclaiming abroad a genital defect in the man whose life he had been commissioned to write, and whom he affects to hold up to admiration as one of the noblest and best of his species. Had this allegation of Froude's been a detached spurt of spite, it might have been passed unnoticed, and left to be blown away by a breeze of popular disgust or to fall back, sink, and vanish in the broad and deep unveracity of the man making it. But it is made the key to the lives of Carlyle and his wife, and is offered as the explanation of much that seemed strange and unsightly in Froude's portraiture of them, and so it is necessary that its validity should be examined.

Froude's allegation, which is set forth fn the most uncompromising terms, is that Carlyle was one of those persons who ought never to have married, that he laboured under some physical defect which prevented the consummation of his marriage, and which was the cause of his failings and

aberrations of temper and character, and of his wife's misery. In short, Carlyle was impotent.

In inquiring into the truth of this allegation, it is first necessary to ascertain what authority Froude had for making it, and here we discover that he trusted entirely to rumour, to "hints that were dropped in the circle which were gathered in the house at Cheyne Row" that "the marriage was not a real marriage but only companionship," and to a confidential communication made to him by Miss Geraldine Jewsbury, an intimate friend of Mrs. Carlyle.

As regards rumour in such a matter it can be scarcely necessary to point out that it is unworthy of a moment's consideration, and the wonder is that Froude should have sought support from it. He does not name any one besides himself who had heard these mysterious hints dropped at Cheyne Row, and one almost hopes that he was mistaken and that the distinguished people who assembled there found something better and chaster to talk about than the conjugal relations of their host and hostess. The facts that Mr. and Mrs. Carlyle during their life in London occupied separate bedrooms, and that their union was sterile, may have set the gossiping tongues of the unclean-minded a-wagging, but the first fact was sufficiently accounted for by the intense susceptibility of both of them to nocturnal noises and the distressing insomnia from which they suffered, and the second might be accounted for in many different ways, the least probable of all of which was that which Froude tells us was the favourite amongst the tattlers of Cheyne Row. Married couples occupying separate bedrooms have often large families, and physical defect preventing the consummation of marriage is very rarely the cause of sterility.

I am inclined to think that Froude has considerably antedated the origin of the rumour as to Carlyle's conjugal relations which he has so greedily adopted and which has undoubtedly obtained wide circulation. He can produce not one scrap of evidence that there were floating suspicions on the subject during the life of Mrs. Carlyle, and all that I have been able to learn shows that the rumours did not gain currency in London until after he and Miss Jewsbury had laid their heads together over Carlyle's biography. That he had himself had doubts on the subject it is impossible to deny, for he says he was not unprepared to hear Miss Jewsbury's story, "I had felt all along that there must be some mystery of the kind," but the likelihood is that, looking back after he had been startled by her "weird and uncanny" disclosure, his myth-breeding imagination conjured up confirmation in the past where none really existed, and it is to be remembered that Froude was censured by Carlyle for his fondness for "indecent exposure in writing." But even if a rumour of the kind to which he alludes had been widely prevalent long before Miss Jewsbury told her tale, he was not entitled to adduce it in support of the definite statement he has promulgated, for he must have known very well that such rumours have been set afloat from time to time with reference to many eminent men, in some cases with flat contradiction by the march of events, that they are easy to ignite but difficult to stamp out, and that they never are by themselves of the smallest value.

The anonymous rumour on which Froude several times dwells must be peremptorily put aside, and the sole foundation therefore of his vile imputation is the confidential communication made to him by Miss Geraldine Jewsbury. The whole edifice which he has with so much ingenuity and apparent ingenuousness erected rests on the credibility of this witness.

Froude did not of course fail to realize that it was of paramount importance to his theory of Carlyle's impotence and other delinquencies that Miss Jewsbury should be believed, and he has therefore taken pains to show that she had the best opportunities of knowing what she spoke about, and was a faithful, guileless creature, and in doing this he has resorted to methods which I am compelled to characterize as dishonest. Mrs. Carlyle, he tells us, spoke and wrote of Geraldine Jewsbury as her Consuelo, but if she did so she must have used the appellation in an ironical sense, for their correspondence proves clearly that she never took any bit of advice that Miss Jewsbury offered, and snubbed her unmercifully when she ventured to express an opinion. That they were on terms of close intimacy is undoubtedly true, but the intimacy was not of the sort which Froude would have us believe, and which he indicates by the untrue statement that Miss Jewsbury "was about Mrs. Carlyle's own age," the truth being that there were eleven years between them—Mrs. Carlyle having been born in 1801 and Miss Jewsbury in 1812. Miss Jewsbury was never admitted to the penetralia of Mrs. Carlyle's thoughts and feelings, but was kept waiting and serving in the courts without, and there was always an element of patronage and protection in Mrs. Carlyle's attitude towards her. Mrs. Carlyle was flattered by the worship she offered and was grateful for the many delicate attentions she bestowed, but from first to last she treated her as a weak and wayward being, destitute of discretion and good sense, and it is surely a significant fact that Froude deliberately suppressed every letter of Mrs. Carlyle's in which her candid opinion of her friend is set forth. In the *Letters and Memorials* that Froude selected and edited there is nothing reflecting unfavourably on Miss Jewsbury, whereas in the *New Letters and Memorials* may be found abundant proofs of the light esteem in which Mrs. Carlyle held her. She describes her as a fussy, romantic, hysterical woman, a considerable fool, with her head packed full of nonsense. "It is her besetting sin," she said, "and her trade of a novelist has aggravated it—the desire of feeling and producing violent emotions." Miss Jewsbury's intrigues and love affairs are often contemptuously alluded to by Mrs. Carlyle. "Geraldine," she wrote, "has one besetting weakness. She is never happy unless she has a *grande passion* on hand, and as unmarried men take fright at her impulsive and demonstrative ways, her *grandes passions* for these thirty years have been all expended on married men." In another place she mentions that she was "openly making the craziest love to a man" who was engaged to be married, and in another that she was in "a frenzy over a letter from her declared lover, an Egyptian." And beyond all this Miss Jewsbury's feelings towards Mrs. Carlyle herself, which were well known to Froude, were of a nature that should have made him pause before listening to her revelations on ticklish topics. They were highly extravagant, and in some degree perverted. The manifestation by Mrs. Carlyle of some preference or supposed preference for another woman led on one occasion to a wild outburst of what Miss Jewsbury herself called "tiger jealousy." "which," says Mrs. Carlyle, "on the part of one woman towards another it had never entered into my head to conceive. I am not at all sure she is not going mad." Other instances of violent emotional perturbations over Mrs. Carlyle are recorded, and the language of Miss Jewsbury's letters to Mrs. Carlyle, preserved by Mrs. Ireland, is often highly charged and erotic. It is not customary for a woman of 32 years of age to write to her female friend, eleven years her senior, in such terms as these: "You are never out of my thoughts one hour together;" "I think of you much more than if you were my lover;" "I cannot express my feelings even to you—vague undefined yearnings to be yours in some way." Of delicate, nervous, highly-strung constitution, Miss Jewsbury became a morbid, unstable, excitable woman, constantly complaining of headaches and other ailments, and suffering from mental depression, for she chronicles of herself: "For two years I lived only in short respites from this blackness of despair. It is not sorrow; one could endure that. Oh, it is too frightful to talk about. The depression which falls upon one in a moment, enveloping one body and soul for hours or days as it may be, and the horrid lucid interval which we spend in dread of its return, knowing full well that it will come." All the biographical details of Miss Jewsbury which we possess, and they are ample, establish that, notwithstanding her interesting personality, her brilliant conversational powers and fine literary talent, she was utterly unreliable and erratic, or, as Carlyle summed her up, "a flimsy tatter of a creature."

And this is the sole witness called by Froude to support his case and to brand Carlyle as a Narses. Purely in the interests of the frank biography this unmarried woman came to Froude, who was not a medical man, and discussed with him the marital inefficiency of the man for whom she had professed undying gratitude, and the causes of the barrenness of the woman whom she called her dearest friend. We need not suppose that Miss Jewsbury suffered from maidenly embarrassment or was suffused with blushes during her interview with Froude, for we have Mrs. Carlyle's authority that she had herself allowed that she had "absolutely no sense of decency." She sought an interview when a letter would have done quite as well, and she and Froude seem to have gone into considerable and, as he said, "curious details," for we learn that it was on the nuptial night that Carlyle discovered his infirmity, that it was Mrs. Carlyle's disappointed longing for children that was at the

bottom of all their quarrels and unhappiness, and that at one time Mrs. Carlyle made up her mind to go away and even to marry another person. Not one line or word, be it noted, could Miss Jewsbury point to in all her confidential correspondence with Mrs. Carlyle extending over a quarter of a century, or in Mrs. Carlyle's secret journal and most retired communings with herself, when her bitterness against her husband was at its height, giving the faintest colour to the revelation.

It depended upon her memory of alleged conversations with Mrs. Carlyle, about which she could produce no collateral evidence; and yet, without an atom of corroboration, Froude accepted as gospel her wild and whirling words. Nor did he think fit to test Miss Jewsbury's statement in any way, although he regarded it not as a mere bit of idle talk, but as of vital importance, and made it the keynote of his whole biography. Carlyle was alive; many medical men who had attended Mrs. Carlyle were accessible; judicious friends of hers, like Mrs. Russell, of Thornhill, who had been in far more confidential relations with her than Miss Jewsbury, might have been appealed to; but no step did Froude take to apply the touchstones which lay ready at hand. He received Miss Jewsbury's disclosure with avidity. He was prepared for it. He had scented a mystery from afar. He had had "anonymous letters" on the subject, he tells us. Anonymous letters! Save the mark! And why should the anonymous miscreants have written to him rather than to any other of the Carlyle's large circle of friends? Froude simply appropriated the slander, allowed it to tincture all his writings about Carlyle, and left it behind him as a sweet-smelling legacy to his children. He was bent on writing a "popular" life of Carlyle, so he has told us, and popular means one that will sell, and there can be no doubt that the tragic element and contentious material which he introduced into the volumes for which he was responsible, and the discussions to which these gave rise, added largely to their piquancy and increased the sales.

In connexion with Miss Jewsbury's disclosure to Froude, we have another illustration of the extraordinary and persistent inaccuracy of the man. He tells us that Miss Jewsbury came to him with her secret when she heard he had been selected to write Carlyle's biography; that was according to his own statement in 1873; and then two pages further on, evidently forgetting what he had written, he tells us that Miss Jewsbury died soon after—that is, soon after communicating her so-called facts to him. But the truth is that Miss Jewsbury did not die until 1880, and therefore lived seven years after her communication to Froude, who thinks that "soon after" correctly describes the sequence of two events separated by the tenth part of a human life. This strange Miss Jewsbury seems to have been not only a supreme fabulist herself, but the constant cause of fabulation in others; for we have Mrs. Ireland, her biographer, telling us that "the short time spent by the bedside in St. George's Hospital (on which Mrs. Carlyle's dead body lay) had shorn away much of what remained of the buoyancy of her keen and ardent spirit." "A violent shock had been given to those mysterious links which bind men and women to life." There began the "process of ceasing to live." But the truth is that Miss Jewsbury survived her visit to St. George's Hospital by fourteen years, and died of cancer, which it would be as reasonable to connect with a meal of tomatoes as with shock at her friend's sudden death.

Miss Jewsbury must have known very well that it would not do to ascribe Carlyle's impotency to any physical malformation, known to himself before his marriage. Who would believe that this man of noble soul, of unimpeachable honour, would blight a young woman's life by drawing her into a marriage that was no marriage. No! No! that would not do, and besides any allegation of that kind might have been readily refuted. There were those who had seen Carlyle bathing. During the later years of his life he suffered from an inguinal hernia, and the person who many times adjusted his truss is still alive and is ready to testify that he was in all respects normally formed. A visible physical cause of impotence could not be maintained and therefore Miss Jewsbury and Froude fell back on some occult state of his organization or "physical constitution" of which Carlyle was not cognizant when he married—but which was speedily brought home to him. "The morning after the wedding day," says Froude (on the authority of Miss Jewsbury), "he tore to pieces the flower garden at Comely Bank in a fit of ungovernable fury." But, unfortunately for Miss Jewsbury, there was no flower garden at Comely Bank, but only a bit of a border, in which there were not likely to be many flowers in Scotland on October 18th, the day after the wedding, and the violent wrecking of which must have been carried out under the observation of neighbours, probably on the alert from knowledge of the fact that a newly-married couple had on the night before taken possession of this house in a row. The supposition that a man of Carlyle's temperament and sagacity, finding himself incapable of normal coitus on the first night of his marriage, would conduct himself like a raving lunatic in public view is too preposterous to be for one moment entertained. Medical men, and especially those practising in honeymoon resorts, are familiar with the effects of first-night failures, and I am sure they will not include in them fits of ungovernable fury. Prostration, anxiety, trepidation, terror, even suicide, they may have seen, but fury in a flower garden, I imagine, never! Had Carlyle found himself impotent on the first night of his marriage—of which there is not one vestige of proof beyond Miss Jewsbury's reminiscences of Mrs. Carlyle's conversations, he would have exercised that patience under which trouble of the kind due to mental impressions so often disappears, or would have consulted some member of the faculty in Edinburgh, or perhaps his brother John, who was a qualified physician.

I have dealt with everything that Froude has to say in support of his contention that Carlyle was impotent—and what does it all amount to? Nothing; and yet on nothing—on the figment of Froude's prurient imagination or the weeds of Miss Jewsbury's prolific imagination—there has been based a most cruel aspersion on Carlyle and his wife. Miss Jewsbury sowed, Froude watered, and the calumny has seeded apace—at any rate in the metropolis, in that fertile soil for piquant and lewd chatter about prominent persons which a high civilization never fails to afford. I have heard it stated in London society many times, with and without facetious accompaniments, that Carlyle was impotent, and that that was the clue to his life-history, and I have invariably asked for authority for or proof of the statement, and the answers I have received have all resolved themselves into these four: (1) It is so reported. (2) Froude said so. (3) Sir Richard Quain said so. (4) The house-surgeon at St. George's Hospital who examined Mrs. Carlyle's body declared that she was *virgo intacta*.

As to report, I need say no more. Detached from a definite and approachable point of origin, it is as the idle wind, which it would be the height of folly to regard. As to Froude, I need merely remark that the fact that he said anything is the best possible reason for disbelieving it. As to Sir Richard Quain, I need scarcely remind my professional brethren that the ascription of the rumour to him is a palpable lie. Sir Richard (then Dr.) Quain was professionally consulted by Mrs. Carlyle, treated her for a number of years and gave her death certificate; and was not, as Chairman of the General Medical Council, likely to commit an act, infamous in a professional respect, by divulging a secret confided to him by a patient in his professional capacity. No one who knew him will believe that he did so, and that he did not do so I have the strongest reason to maintain, for on one occasion on which I dined with him at the table of Woolner the sculptor, when our host propounded the theory as to Carlyle's impotence, Sir Richard laughed it to scorn as a bad joke. I am informed that when Sir Richard was attending Mrs. Carlyle, sometime in the Sixties, he had on one visit, after leaving Mrs. Carlyle's bedroom, an interview in the drawing-room with Mrs. Venturi (the Hon. Mrs. Stansfeld's sister), who was acting as Mrs. Carlyle's friend and taking his directions, he added to these: "You may tell Mr. Carlyle that he may resume marital relations with his wife." To which Mrs. Venturi replied: "I would rather you would tell him yourself."

Froude's final anathema on Carlyle has been delayed so long that much of the evidence that might have been called to prove it unjust has gone beyond our reach. Dr. T. J. Maclagan, who attended Carlyle for two years, and during his last illness, and was supporting his head when he died, has, to the sorrow of all of us, just passed away. He must have had special opportunities of obtaining information, and I have heard him denounce this rumour as to Carlyle's impotency as a foul falsehood. I have applied to Mrs. Maclagan thinking that he might have left some biographical notes, but none have been found. Mrs. Maclagan, however, empowers me to say that she has again and again heard her husband speak in the highest terms of affection and respect for Carlyle. He used to say, "If ever a hasty word escaped Carlyle's lips it was instantly followed by a kind word or look that took away all the sting. His life was grand

and guileless." In describing Carlyle's death-bed he said to Mrs. Maclagan, "That was the end of a great and good man's life, let the world say what it will."

As regards the statement that the house-surgeon at St. George's Hospital pronounced Mrs. Carlyle *virgo intacta* it is almost superfluous to identify it as of the coinage of Ananias and Sapphira. Mrs. Carlyle died suddenly in her brougham on April 21st, 1866, at about 4 o'clock in the afternoon. Her death was discovered at a point in Hyde Park just opposite the Achilles Statue, and her body was immediately conveyed to St. George's Hospital 200 yards distant. Within two hours the hospital was visited by Miss Jewsbury and Froude who thus describes what he saw, "There on a bed in a small room, we found Mrs. Carlyle beautifully dressed, dressed as she always was in quietly perfect taste. Nothing had been touched. Her bonnet had not been taken off. It was as if she had sat on the bed after leaving the brougham and had fallen back upon it asleep." The recollection of the Secretary of the hospital is that Mrs. Carlyle's body was laid on a bed, not, as Froude states, in a small room, but in one of the wards, where it was screened off; but let that pass. "Two points had to be immediately considered," Froude goes on; "how to communicate the news to Carlyle, and how to prevent an inquest and examination of the body, which Forster said would kill him. Forster undertook the last." And so successfully did Forster manage it that there was no coroner's inquest, no necropsy, and the body was removed to Cheyne Row the same evening.

Now, does any one conceive that in one of our great public hospitals such an outrage would be committed as the examination of the body of a lady temporarily deposited there on the question of her virginity? What could suggest such a gratuitous outrage? The idea of such a thing is a foul libel which must be scouted with indignation. And if in the providence of Satan there had happened to be in 1866 some blackguard young medical man or student at St. George's Hospital to undertake such an examination, his report on the result of it would have been absolutely worthless. I believe no gynaecologist will contradict me when I say that, in the case of a woman of 65 years of age who had never had a child, contraction to an extreme degree may have taken place as a result of changes occurring after the menopause, and yet the subject may have had complete sexual relations for many years. Even an expert dare not under such circumstances venture on a positive opinion, to say nothing of an inexperienced youth. Habrida, the Professor of Legal Medicine at Vienna, has lately stated that in at least 50 per cent. of the medico-legal cases examined by him he has been unable to make a positive statement upon this very point. Numerous cases of pregnancy with unruptured hymen have been reported. Achenlach has recorded 25 such cases, and Kanony has collected 43 from the literature of the subject.

But I am in a position to state in the most positive terms that no examination of the body of Mrs. Carlyle took place. Dr. Ridge-Jones, who was Resident Medical Officer at St. George's Hospital, on April 21st, 1866, writes to me as follows: "I remember distinctly attending the late Mrs. Carlyle when brought to St. George's Hospital in her brougham from Hyde Park in 1866. She was dead when I saw her, and *no examination was made or thought of.* Being the paid and permanent Resident Medical Officer (I had held that appointment for six years) at the time, no one would have dared to make an examination of the body of any kind without my sanction. Therefore you may take it from me *as a fact* that no examination was made. The late Mr. Froude called at the hospital very soon after Mrs. C. was brought in, and I had a long talk with him. There was no coroner's inquest, and I do not remember to have given the certificate of death."

I have, I believe, disposed of everything that has been urged in support of the hypothesis of Carlyle's impotence. Let me advance a few considerations on the other side. Is the splendid virility of his writings to count for nothing? Was there in his style, his manner, his voice, his appearance, his conduct, one of the traits which we associate with maimed manhood? Quite the opposite. He was every inch a man. And then Mrs. Carlyle. What of her? If there was any frigidity in the union it was on her side. During the courtship, she wrote to him a year before their marriage, "I love you.....but I am not *in love* with you—that is to say, my love for you is not a passion which overclouds my judgement and absorbs all my regards for myself and others. It is simple, honest, sincere affection." But as time went on, and especially after a visit to Hodham Hill, her feelings grew warmer. "I love you," she wrote, "tenderly, devotedly. I am yours, oh! that you knew how wholly yours," in response to some ardent expression of Carlyle's, whose anticipations of matrimony were normal enough. "Here," he wrote from Scotsbrig, "are two swallows in the corner of my window, that have taken a house this summer, and in spite of drought and bad crops are bringing up a family together with the highest contentment and unity of soul. Surely, surely Jane Welsh and Thomas Carlyle here as they stand have in them the wisdom of many swallows. Let them exercise it then, in God's name, and live happy as these birds of passage are doing." Mrs. Carlyle's letters after the marriage, and, indeed, at every period of their married life, bear no trace of sexual disappointment. Six weeks after her marriage she wrote to her mother-in-law, "We are really very happy, and when he falls to some work we shall be still happier. Indeed, I should be very stupid or very thankless if I did not congratulate myself every hour of the day on the lot which it has pleased Providence to assign to me. My husband is so kind! in all respects after my own heart!"

During one of her first separations from him, when visiting her mother at Templand, she addresses him, "Kindest and dearest of husbands, are you thinking you are never to see my sweet face any more? I wish I were back and to give you a kiss for every moment I have been absent.....Dearest, I do love you. God bless you, my darling.—Ever, ever your true Wife." Is this the sort of thing one would expect from a young wife whom Miss Jewsbury represents as the brooding and aggrieved victim of an unconsummated marriage? Mrs. Carlyle was no fool, no raw uninitiated school girl. She was 25 years of age when she married; shrewd, practical, and, as her prenuptial letters prove, keenly alive to the obligations and responsibilities of matrimony on both sides. Surely she would have communicated to her mother the baulking of her reasonable expectations; and surely her mother, at first not too complacent to Thomas Carlyle, would have intervened or consulted her trusted friend, Dr. Russell—"a sound-headed, honest-hearted man" Carlyle called him. But no breath of complaint ever escaped Mrs. Welsh, and as time went on her feelings towards her son-in-law became more and more cordial.

Carlyle's letters to his young wife even more forcibly than hers to him negative Froude's monstrous reproach. Here is a passage of his reply to the first letter she wrote to him, six months after their marriage, when he had gone to Dumfries on business: "Not unlike what the drop of water from Lazarus's finger might have been to Dives in the flame was my dearest Goody's letter to her husband yesterday afternoon.....No, I do not love you in the least; only a little *sympathy* and *admiration* and a certain *esteem*, nothing more! O my dear, best, wee woman! But I will not say a word of all this till I whisper it in your ear with my arms round you." Is this the language of the eunuch or of the man addressing the woman to whom he has done a grievous wrong which she is bitterly resenting?

At Comley Bank and Craigenputtock—that is to say, for the first eight years of their married life—Mr. and Mrs. Carlyle occupied the same bedroom, and it was only after they migrated to London, with its multitudinous noises, that they had separate apartments. Mrs. Carlyle expressly states that their accommodation when they first came to London (they were living in lodgings in Ampton Street, Gray's Inn Road) consisted of a drawing-room, with a small bedroom opening from it with large folding doors. Froude's statements about the separate-room system are entirely wrong, and, as usual, tinged with malice. He represents that the arrangement was adopted for the sake of Carlyle, who required a bedroom to himself, and was part of his general neglect of his wife. The truth is that it was suggested by Mrs. Welsh, Carlyle's mother-in-law, during one of her visits to Cheyne Row, solely on account of her daughter's state of health at the time, a somewhat significant fact. That it was Mrs. Carlyle who wished to sleep alone is certain. Carlyle told his niece, Miss Mary Aitken, that on one occasion when he and his Jane had gone to Addiscombe they found that there was only one bedroom for them, so that he had to ride home to Chelsea after 11 p.m. to sleep there. Miss Mary Aitken said, "Surely you could both have slept in the same bed for one night," to which he replied with a look of surprise, "It wasn't I that objected."

But besides the inferential evidence as to Carlyle's connubial relations direct testimony bearing upon them is not wanting. Miss Annie Aitken and Miss Margaret Aitken, now living in Dumfries, inform me that upon two separate occasions Mrs. Carlyle when at Craigenputtock intimated to their

mother, the late Mrs. Aitken, that she was in the family way, and consulted her about her preparations. Carlyle, Mrs. Aitken used to add, took it very quietly and seemed grieved when nothing came of it. Miss Mary Aitken, afterwards Mrs. Alexander Carlyle, when on her aunt's death she became her uncle's housekeeper, was much touched to find in a drawer at Cheyne Row a little bundle of baby clothes made by Mrs. Carlyle's own hands. This reminds us of Carlyle's pathetic and significant allusion in the *Reminiscences* to the child's chair which his wife had herself used when young, and kept in her house with feelings no woman can fail to understand. "Her little bit of a first chair, its wee arms, etc., visible to me in the closet at this moment, is still here and always was; I have looked at it hundreds of times, from of old with many thoughts. No daughter or son of hers was to sit there; so it had been appointed us, my Darling. I have no book thousandth part so beautiful as *Thou:* but these were *our* only children, and in a true sense they were verily *ours*, and will perhaps live some time in the world after we are gone, and be of no damage to the poor brute chaos of a world, let us hope. The will of the Supreme shall be accomplished: Amen."

As I have pointed out in my introduction to the *New Letters and Memorials*, Mrs. Carlyle's childlessness was probably the main cause of whatever unhappiness existed at Cheyne Row, unhappiness which Froude has hugely exaggerated and wholly misunderstood, setting it down to Carlyle's selfishness and cruelty. There was a void in Mrs. Carlyle's life which must have been all the more aggravating because she was conscious that she was herself responsible for it. The history of the Carlyle and Welsh families leaves little doubt that the infertility was on her side. All Carlyle's brothers and sisters who married had families, most of them large families. Mrs. Carlyle was an only child, born prematurely, and during her life her family became extinct, so that when Carlyle came to make his will there was no Welsh left to whom he could bequeath Craigenputtock. In the last year of her life Mrs. Carlyle wrote: "One thinks it so sad that one's family should die out. And yet perhaps it is best (nay, of course it is best since God has so ordered it) that a family lying under the doom of a hereditary deadly malady should die out and leave its room in the Universe to healthier and happier people." Darwin has remarked that the last surviving members of a dying-out family are likely to be barren.

Mrs. Carlyle was an invalid from her girlhood upwards. Froude has with unfailing obliquity traced her broken health to the hardships she underwent at Craigenputtock, where, as a matter of fact, she spent her happiest and healthiest days. The real sources of all her sufferings are to be found in an inherited delicacy of constitution, in an injudicious upbringing, and in the shock of her father's death. She was precocious, and her precocity was encouraged. She was studious, and was allowed to study inordinately. She did her best to ruin her health, often reading a great part of the night when a girl of 12. Three or four years before her marriage her health was permanently broken. She was afflicted by frequent sick headaches, which she called bilious attacks, respecting which she wrote to her friend Miss Stodart in 1825: "I have been engaged in this same warfare now for several years, and have never been able to work out more than a few weeks of truce." A little further on she wrote: "One day I am ill and in bed; the next in full puff of an entertainment." I need not rehearse all the symptoms I have elsewhere enumerated which combine to show that Mrs. Carlyle became a highly neurotic woman, and that the vagaries of her condition inflicted much and prolonged suffering on her husband, which he bore with noble patience and forgiveness. How different it might all have been had Mrs. Carlyle had an infant to dandle and a child to rear! But the emptiness of the little chair must I think be attributed to her sterility and not as Froude has without a shadow of sound foundation argued, to her husband's impotence.

Bold, filthy, scurrilous assertions like Froude's respecting Carlyle's impotence may mislead the unwary and the ignorant, and the blind appetency with which they have been received by a section of the Press is amazing, but they will scarcely deceive the elect who have been admitted into the communion of medical science. In the epitaph in Haddington Churchyard Jane Welsh is described not as "the faithful companion" but as "the spouse of Thomas Carlyle," "for 40 years the true and ever-loving helpmate of her husband." Carlyle was a true man, no hypocrite or slave to convention, and he would not have used these words had Jane Welsh never been his spouse in any true sense, but his ill-used thrall, who had been often on the point of leaving him. To any one with a spark of knowledge of human nature, Carlyle's long and passionate mourning for his wife, his lonesome visits to her grave, when he knelt down and reverently kissed the green mound, must betoken a tenderer tie than mere platonic fellowship.

LITERARY NOTES.

MESSRS. MACMILLAN AND CO. will shortly publish, in their series for practitioners, a work by Messrs. A. H. Tubby and Robert Jones, entitled *Modern Methods in the Surgery of Paralyses, with Especial Reference to Muscle Grafting, Tendon Transplantation, and Arthrodesis.* The volume contains reports of many cases which have been operated upon by the authors, and will be illustrated by numerous figures. So much good work has been done lately in this direction, and the methods constitute so great an advance in the treatment of paralyses that the authors have deemed it advisable to bring the question succinctly before the profession.

A work entitled *La Pratique des Autopsies*, by Dr. M. Letulle, has recently been published by C. Naud, of Paris. A review will appear in due course, but we may be allowed to say here that on turning over the pages we have been struck by the extraordinary vigour and fidelity to nature of the drawings by M. Reignier. We have never seen anatomical drawings which give a more vivid or more accurate impression of the methods of exposing the internal parts of the body and of what is actually seen in a necropsy. They are realistic in the best sense without being in the least repulsive. In the preface the author pays a well-deserved tribute of praise to the artist.

Writing of references in medical literature to the red-light treatment of small-pox, Dr. W. Owen Jones, of Bowdon, Cheshire, quotes the following account from Sir Thomas Watson's *Principles and Practice of Physic:*

He (Gaddesden) surrounded the half-suffocated patient with red curtains, red walls, red furniture of all kinds; everything he saw was to be red: for in that colour there was, John pretended, a peculiar virtue. This John of Gaddesden, by the way, was a very sad knave, and the first Englishman, I believe, who had the luck to be made Court Physician. He had one medicine so good as to be fit for the rich only; and he recommended a double dose for the wealthy—*Duplum sit si pro divite.*

Dr. Owen Jones further quotes the following passage from Gregory's *Lectures on the Eruptive Fevers.*

What think you of a prince of the blood royal of England (John, the son of Edward the Second) being treated for small-pox by being put into a bed surrounded with red hangings, covered with red blankets and a red counterpane, gargling his throat with mulberry wine, and sucking the red juice of pomegranates? Yet this was the boasted prescription of John of Gaddesden, who took no small credit to himself for bringing his royal patient safely through the disease.

H. S. P. calls attention to the fact that Sir Erasmus Wilson in his work on *Skin Diseases* (6th edition, p. 487) refers to John of Gaddesden's method of treating small-pox.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

DURING the weeks ending May 23rd and 30th, the deaths from plague in India numbered 10,573 and 8,678 respectively, being a drop of nearly 30 per cent. in the death-rate from plague during the weeks ending May 9th and 16th respectively. The report of plague inoculations in the Punjab is being prepared, and as nearly half a million of the inhabitants of the Punjab have been inoculated, it should be possible to arrive at some really reliable information. There has been an outbreak of plague in Assam. So far a few cases only have been reported, but as this is the first appearance of plague in Assam the authorities fear a panic amongst the people, and already many of the Marwari traders have left the district.

CAPE COLONY.

During the week ending May 30th, the plague report in Cape Colony was as follows:

Port Elizabeth.—Fresh cases, 5; deaths, 1. On May 30th 12 cases remained under treatment at the Plague Hospital.

East London.—Fresh cases, 2; deaths, 1. On May 30th 6 cases remained under treatment at the Plague Hospital.

King Williamstown.—Fresh cases, 5; deaths, 1. Nine cases remained under treatment.

In Graaff-Reinet, Burghersdorp, and Queenstown no cases of plague were reported during the week. At Port Elizabeth, King Williamstown, and Queenstown plague-infected rats continue to be found.

MAURITIUS.

For the weeks ending June 11th and 18th the fresh cases of plague in Mauritius numbered 2 and 2, and the deaths 2 and 2 respectively.

HONG KONG.

During the weeks ending June 6th and 13th the fresh cases of plague in Hong Kong numbered 136 and 126, and the deaths from the disease amounted to 94 and 78 respectively. During the two weeks the number of Europeans attacked by the disease numbered 4 and 12 respectively. Six cases of plague are reported on H.M.S. *Ocean*, on the China station.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1903.

SUBSCRIPTIONS to the British Medical Association fall due on January 1st each year. All members who have not yet paid should forward, without delay, postal order or cheque for 25s., to the General Secretary, 429, Strand, London, W.C., or, in the case of Colonial members, to their Branch Treasurer.

British Medical Journal.

SATURDAY, JUNE 27TH, 1903.

THE NEW ERA AT THE UNIVERSITY OF LONDON.

THOSE who for many weary years worked to bring about the reorganization of the University of London in the belief that in that way alone, and not by the establishment of another university which must necessarily have been the competitor and rival of the old, could London come into possession of a real university worthy of the metropolis of the Empire, must have witnessed with feelings of deep satisfaction the striking ceremony which took place in the Albert Hall on the evening of June 24th. The occasion was the annual presentation of degrees, but special distinction was lent to it by the fact that honorary degrees were to be conferred by the University for the first time in its history. The proposal that the University should grant honorary degrees was opposed by a body of graduates with an energy and persistence which it is a little difficult to understand. While we join with the Chancellor (Lord Rosebery) in hoping that the University may in the future be strict and parsimonious in using its prerogative of conferring honorary degrees, and that it will not be frequently exercised, much less that it should become a matter of annual routine, we believe that the general body of graduates will recognize that the Senate has done well to follow the custom of other universities in offering this compliment to the Royal and distinguished persons who have now received it.

In enrolling the Prince of Wales among its graduates as an honorary Doctor of Laws the University recognizes the keen interest which the heir to the throne has shown in the advancement of higher education, while the degree of Doctor of Music conferred upon the Princess of Wales is a graceful expression of the affection with which the womanly qualities of his consort have inspired the nation. The honorary degree of Doctor of Science conferred upon Lord Lister and upon Lord Kelvin can add nothing to the reputation of the two men who stand at the head of biological and physical sciences respectively at the present day in this country; but it is well the University should have an opportunity of showing its appreciation of the work which they have achieved for the good of humanity and to the honour of the nation.

The report on the work of the University during the year 1902-3, presented by the Principal, Sir A. W. Rücker, was not only an interesting summary of what has been accomplished, but a significant indication of the spirit with which those to whom the fortunes of the University are now confided are imbued. It was, perhaps, optimistic, but the new avenues of work which have been opened up in connexion with schools, with university extension, and with the colleges, including the medical schools and polytechnics, are undoubtedly matters for unmixed satisfaction. Students have entered for the Matriculation Examination in larger numbers than ever, and though this may be due in part to the fact that the examination held this month is the last under the old regulations, this can hardly account for the whole increase of 700. The force of the attractions which the University is now able to offer is shown by the fact that 209 graduates of other universities have registered in the books of the University as entering upon courses of study, and the Principal was able to state that the authorities of institutions connected with the University had in all cases shown the most anxious desire to work in harmony with it, and to arrange their classes to meet the conditions which the Senate has laid down. The least satisfactory part of the report was that touching on the financial needs of the University. So far only £25,000 has been contributed towards the endowment which is so urgently needed, whereas for the incorporation of University College alone at least £100,000 is necessary. The Senate has approved a scheme for the establishment of a central institute of medical sciences, in which instruction will be given in subjects ancillary to medicine, thereby relieving the medical schools of work and expenses for which at present they are compelled to be responsible. For the adequate endowment of such an institute also a large sum will be required. The University has an immense work before it, not merely in the better organization of teaching, but in making provision for research. We are glad to observe that the establishment of the physiological department of the University—the first effort towards an institute of higher studies—was mentioned by the Principal, and that the pioneer work done by Dr. Waller, who during the year has devoted the whole of his time to the interests of the laboratory, met with the recognition it unquestionably deserves. The example set by the teachers of physiology in the University, who have cordially co-operated to make the new department a success, has been followed by the botanists, who, with the consent and assistance of the trustees of the parochial charities of the City of London, have arranged courses of post-graduate lectures at the Chelsea Physic Garden.

The changes in the curriculum and examinations for the medical degrees of the University, of which some account was given in our columns a fortnight ago, were briefly touched upon in the report. The examination in surgery for the M.B. degree, condemned as insufficient in the reports to the General Medical Council, is reformed altogether; the joint degrees of M.B., B.S., will be conferred as the result of a combined examination, and the requirements in surgery will be made much more stringent. This combined degree will be the registrable qualification and not as heretofore the M.B. alone. Fears have, not unnaturally, been entertained that the somewhat drastic changes which are being made might so alter the character of the University that its degrees would cease to command the respect which has been won for them in the past. A careful study of the scheme will, we believe, lead to the conclusion, so far as the medical faculty at least is concerned, that there are good reasons to believe that these fears will prove to be groundless. Time alone can show, and much will depend upon the spirit in which the medical schools in London, now constituent colleges of the University in the medical faculty, take up their new parts, and how far they may continue to prove themselves ready to sink the rivalry which has multiplied buildings but starved laboratories.

DECIDUOMA MALIGNUM IN THE MALE.

THAT the problem of malignancy has an embryonic or antenatal aspect is becoming more and more evident. Not only did Professor Adami[1] in his address on the causation of cancerous and other new growths, which appeared in the BRITISH MEDICAL JOURNAL two years ago, lay emphasis upon the light that the examination of teratomatous and teratoid tumours might throw upon this subject, but recent investigations would seem to be bearing out Adami's prediction in a somewhat striking way. Schlagenhaufer's[2] work is a notable case in point. He has recorded how a man, 43 years of age, suffered from a tumour of the left testicle of a friable nature; there was a secondary growth in the lung. Under the microscope tissue corresponding to embryonic lung, lymph follicles, smooth muscle, and fibrous connective tissue was present; but the chief elements in the tumour were two varieties of cells closely associated with each other and arranged to form irregular bands or circular structures and extend into spaces filled with blood. The one variety of cells consisted of masses of dark-coloured protoplasm without cell division and multi-nucleated, that is to say syncytium; and the other of polyhedral cells with light-coloured protoplasm heaped upon one another without intercellular substance, that is to say, cells like those of Langhans's layer in the placenta. The metastatic growth in the lung showed only the two cellular elements, the syncytium and Langhans's layer. Schlagenhaufer has also re-examined microscopically a tumour described by Breus in 1878. It came from the testicle of a man, 40 years of age.

At the necropsy the testicular growth (which consisted of cystic spaces filled with a yellowish or brownish fluid, and separated from one another by compact septa) was found associated with secondary growths in the veins of the spermatic cord which could be traced continuously through the vessels of the spermatic plexus, right internal spermatic vein, and inferior vena cava into the right auricle of the heart. The growth in the right auricle extended both through the tricuspid orifice into the right ventricle and through the open foramen ovale into the left auricle and ventricle; it consisted of finger-like processes, and under the microscope was found to be made up of a myxomatous tissue covered by a layer of epithelial cells. The primary tumour in the testicle was also composed of bands of myxomatous and fibrous connective tissue, and between these were nests of sarcomatous and carcinomatous tissue. In the secondary growths multinuclear syncytial masses could also be recognized, consisting of a structure similar to that seen on the chorionic villi.

Schlagenhaufer regarded the case as a hydatidiform mole in the male, and Breus himself in the discussion which followed the reading of Schlagenhaufer's paper seems to have been of the same opinion although at the time (1878) when he published the case he had little thought that he had to do with a hydatid mole in a man's heart!

The question now at once arises, if structures histologically identical with deciduoma malignum—or, better, the chorio-epithelioma—and the hydatid mole can arise in testicular teratomata and in the metastases associated with them, what light does this throw upon the origin of the teratomata themselves, and upon that eminently malignant growth, deciduoma malignum? With regard to the latter question, it may be stated that Schlagenhaufer's observation goes to establish the view that deciduoma malignum is a growth of fetal and not of uterine origin; for if it be held, as it is still held by some, that this tumour arises from elements which are part of the mucous membrane of the uterus, then in order to explain the appearance of such a tumour in the testicle, it is necessary to imagine the presence in that organ of the *anlage* of the uterus. This idea is hardly thinkable. For the same reason the case affords an additional argument in favour of the origin of the epithelial covering of the villi in the placenta from the fetal epiblast.

The mode of origin of teratomata of the testicle or of any other organ is a very complex and difficult problem. There are many theories and few facts. We may, for instance, suppose that an ovum has somehow or other got into the tissue of the testis, has become fertilized there somehow or other, and has gone so far in development as to produce some of the parts of the embryo if not the embryo itself. We may suppose this, but in view of what is known regarding the occurrence of true hermaphroditism in the higher vertebrates it will scarcely be more than an unsupported hypothesis.

The theory of *fetus in fetu*, also, hardly accounts for the facts of the case; neither is there any evidence that a spermatozoon can by itself form any of the parts of an embryo. It seems, on the whole, most probable that in a very early stage of the individual's antenatal history, when in fact the individual is little more than a morula mass or segmentation sphere, one or more blastomeres (or perhaps a polar body) becomes separated, displaced, and ultimately incorporated among the structures which go to form the testicle, and that at a later period it is capable of producing tissues representing all the three layers of the blastoderm. Dr. John Beard, at a recent meeting of the Royal Society of Edinburgh, in a communication upon the embryology of tumours, adduced facts from comparative embryology to show that such a wandering of germ cells into the tissues may and does take place.

In whatever manner, however, the teratoma in the testicle arises there remains unsolved the problem of why it stops short of the formation of an embryo, and why it sometimes takes on a malignant character. Nearly all the cases of teratoma in the testicle have been in adults, and it would almost seem as if some secretion, some antitoxin, or some serum were present which in youth inhibited the irregular or unlimited proliferation of some of the elements of the tumour. This tendency of morbid processes to have their action delayed, this postponed effect of antenatal pathological states, as Dr. Ballantyne has called it,[3] is certainly a most pressing problem. If tumours, and more especially if malignant tumours, are to be traced back to morbid states which have arisen before birth, then some explanation must be forthcoming to explain the delay in their evolution or in the assumption of the characters of malignancy by them. Does the thymus or some other of the transitory organs of the fetus or infant secrete a substance which has this retarding or inhibiting effect upon exuberant and unregulated tissue growth? *Veritas temporis filia.* With the coming years may come also the reading of this hard riddle of malignancy.

[1] BRITISH MEDICAL JOURNAL, p. 621, March 6th, 1901.

[2] *Zentralblatt. f. Gynäkologie*, xxvii, p. 32, January 17th, 1903; *Wien. med. Wochenschrift*, May, 1902; vide also H. W. Carey's article in the *Johns Hopkins Hospital Bulletin*, xiii, 275, 1902.

[3] *Manual of Antenatal Pathology*, p. 22, 1902.

A COMIC RELIEF.

IN a recent lecture on Chauvinism in Medicine Professor Osler deplores the growing practice of "borderland pharmaceutical houses" sending out "bastard literature" for the purpose of foisting nostrums on a too-confiding profession. The class of "literature" he refers to will occur to every one whose name is on the *Medical Register*. It is difficult to imagine that such "literature" can be provocative of as much harm as Professor Osler supposes, at least on this side of the Atlantic, for the claims advanced by it in favour of the various specialities are too absurd and fantastic to produce any serious influences on the mind of any properly-qualified medical man—indeed, of any reasonably well-educated layman.

Personally, we confess to having glanced through a number of the pamphlets in question during leisure moments, and it is seldom that they have failed us as a source of genuine amusement. The practice usually followed of throwing such "literature" immediately into the waste-paper basket, generally unopened, is attended with the disadvantage of often depriving the recipient of information of a novel and surprising character unobtainable elsewhere and not a little innocent amusement.

Only lately, in a pamphlet of the sort, we read a distressing account of a case of enlarged prostate in a woman, and in another some pithy remarks on the toilet of the scrotum in the female sex. Had we followed the ordinary custom, too, we should have missed, a few months back, a dainty poem, circulated by the "Sanmetto" Company, with the delicate subject of incontinence of urine for its theme, entitled "When Willie wet the bed." From another pamphlet, moreover, we were pleased to learn that amongst the prescribers of "Neurilla" diagnostic skill had reached such perfection that one practitioner was able to decide in a woman seven months pregnant that "fetus (was) very nervous and altogether too active."

Great as was the pleasure with which we read these last oracles, it absolutely pales before that excited by an article in a recent number of the *Uric Acid Monthly*, by Dr. R. W. Blakeslee, on Uric Acid in the Causation of Eye, Ear, Nose, and Throat Disorders. When we read that Dr. Blakeslee was not only an M.D. but also a Bachelor of Ophthalmology and Doctor of Optics, we looked forward to the perusal of his article with a feeling of gentle pleasure, but were totally unprepared for the intense gratification it caused. Lest any one should suffer a loss by missing it, the editor calls attention to the article by a prefatory notice, and he has, moreover, labelled it "special." In the prefatory notice the editor naïvely remarks that he does not *quite* catch the drift of Dr. Blakeslee's argument at all points, and we are "confused with admiration." If the assertion that he had been able to follow it to a point which just stops short of complete comprehension be not an idle boast, it shows that, like Jack Bunsby, the editor carries a weight of mind easy that would swamp any man of ordinary tonnage at once, or else that he has sources of private inspiration not generally available. A very few quotations will serve to justify our appreciation of Dr. Blakeslee's essay. "I claim," he writes, "that it is electricity and not oxygen which purifies, filters, and throws off venous blood from the anterior, middle and posterior arteries of the circle of Willis, and to such an extent that at times the ears become clogged with excessive secretion, which by its contained uric acid substance dries readily in the open air, in the external orifice (as well as dandruff of the scalp), and the mucopurulent secretions of the eyes, and thickened débris or scaly deposits at the roots of the eyelashes, which I have long contended were cremated hairs." Before we have had time to grapple with this intricate and abstruse proposition, we are abruptly informed that "In disease, *micrococcus*, for example: In this group the cells range in different species from 0.5 to 2 m. (*sic*) in diameter; but most measure about 1 m." Compared with the ravages of these Brobdingnagian micro-organisms in the human body, those caused by the "infernal horizontal parallax" mentioned in Mark Twain's volume must sink into insignificance. It is far from reassuring, too, to learn in the next sentence that "Before division they may increase in size in all directions." After dealing somewhat briefly with the division of micro-organisms, he enlightens our ignorance with the information, "To all these forms the word micrococcus is generally applied." After what has gone before, we are not wholly surprised to learn later that "the action which takes place during sneezing, blowing of the nose, and crying, as in epiphora or lachrymation, is *electrical*. The nitrogen and oxygen of the air, coming in contact with secretive carbon mucocele, causes combustion which generates electrical currents. These pass through the membrane of the air cells into the blood, from venous to arterial (also causing the rhythmic action of the heart), thus showing that the air cells secrete carbon, and that this function is one of the most important essences of life." It evidently behoves us, then, to examine carefully into the condition of our "secretive carbon mucoceles." One other choice item of pathological novelty we glean from Dr. Blakeslee: "A certain percentage of atmospheric oxygen is consumed by means of the chemical action taking place in the air cavities during healthy breathing. The refuse of this process is exhaled as carbon dioxide and various mucilaginous secretions which show up as 'blackheads' in the skin." To quote merely is to do an injustice to the sustained high level of Dr. Blakeslee's article: it should be read in its entirety. It can truly be described as being "all plums" and "no suet." Macaulay wrote that a History of England, written in the style of Sir James Mackintosh's fragment on the Revolution would be the most fascinating book in the language. Fascinating would, probably, be but a feeble word with the medical world for a work on general medicine by Dr. Blakeslee on the lines of his Uric Acid fragment; if indeed such a work would not prove too exciting reading for any one outside the realms of Bedlam.

Many things have been said to the discredit of uric acid; let us hasten to add one in its favour. It has led to the establishment of the *Uric Acid Monthly*, and the discovery of Dr. Blakeslee, Doctor of Optics.

THE LOCAL GOVERNMENT BOARD.

THE constitution of the Local Government Board has lately engaged the serious attention of students of our Parliamentary machinery, and able articles by Sir Michael Foster and Mr. D. A. Thomas have pointed out some strange anomalies in its working. Although it is officially described under the somewhat magniloquent title of a Board, the Lord President of Council, the Lord Privy Seal, the Chancellor of the Exchequer, and the Secretaries of State take no part in its deliberations; the Board in its corporate capacity holds no meetings, and the President and the Parliamentary

Secretary do all the work that is done by members of Parliament. Since its construction in 1871 its duties and its responsibilities have largely increased; it is now the representative of the old Poor-law Board, its jurisdiction extends to the powers and area of local authorities, with local finance, and public health, and the establishment of county, parish, and district councils in 1888 has thrown an enormous mass of complicated and difficult detail on its already over-burdened shoulders. On the other hand, the work of the Home Office has shrunk yearly by transference to other departments. The Board of Trade, the Agricultural and the Scotch Office have in succession interfered with the monopoly of its duties, and lightened more especially the parliamentary labours of its responsible Ministers. And yet the amazing fact remains that the President of the Local Government Board, whose duties have so largely grown, gets only £2,000 a year, as against £5,000 enjoyed by the fortunate holder of the Principal Secretary of State, the business of whose department is so rapidly shrinking; and this disparity of financial treatment extends also to the clerks, who are recruited by the same examination, and do the same class of work, but yet who are placed on an inferior scale of salary. This anomalous state of matters cannot be defended, but Mr. Austen Chamberlain, in answer to Mr. D. A. Thomas, tried to explain it by saying that, in the opinion of the Treasury the work in the offices of the Secretaries of State, taken as a whole, requires higher qualifications than does that of other departments. But surely this is adding insult to injury. Can it be seriously maintained that the complicated and delicate investigation into epidemics and public health questions conducted by the Local Government Board require less intelligence, and should therefore be more scantily remunerated, than the more purely official and dry routine work which engages the attention of the majority of the officials of the Home Office? We hope that this most important question will be considered by the Committee recently appointed to consider the work of the various public departments, and that means may be taken to revise an arrangement made years ago under conditions vastly different to those which now exist. For our own part, we think that the head of the Local Government Board, if that cumbrous and unreal title is to be retained, should have the rank and status of a Secretary of State, ranking with the Home Secretary, and that it should be understood that the occupant of the office should always be a member of the Cabinet.

THE ANTIVACCINISTS' LAST DITCH.

The Liverpool Antivaccination League has issued a leaflet in criticism of a statement recently made by Dr. Hope regarding the value of vaccination during the outbreak in Liverpool. Dr. Hope stated that during the last six months 71 children below 5 years old were attacked by small-pox, and that of these, 66 were unvaccinated, while the remaining 5 had been vaccinated very imperfectly. These 5 had a mild attack and recovered, while in the unvaccinated cases the illness was very severe, and there was a fatality-rate of 30 per cent. During the last five years the fatality-rate among the vaccinated was 2 per cent. and among the unvaccinated 37 per cent. Within the last eighteen months there have been 80,000 revaccinations, and from among this large population not a single case of small-pox has been admitted to hospital. It is not surprising that the local antivaccinists should have been anxious to diminish the effect of these very striking figures. They state that it has been frequently pointed out by antivaccinist writers that in a well-vaccinated city like Liverpool the unvaccinated class includes all the children whose vaccination has been postponed on account of ill-health, and that the majority of children who escape vaccination are found in the poorest and most insanitary districts of the city. It is quite true that this has in the past been frequently urged, but in recent years the opponents of vaccination have themselves furnished the most crushing reply to their own contention. The neglect of vaccination in places like Gloucester and Leicester has made it quite impossible to say that the unvaccinated there belong either to a specially unhealthy or to a poverty-stricken class of the community. Yet in such towns small-pox never fails to make the same kind of differentiation between the vaccinated and the unvaccinated as it has done in Liverpool. It attacks far more in proportion of the unvaccinated than of the vaccinated. If the comparison be confined to households invaded by small-pox, to persons living under absolutely the same conditions in every respect, breathing the same vitiated or unvitiated air, eating the same good or bad food, surrounded by the same degree of cleanliness or dirt, small-pox yet succeeds in picking out the unvaccinated for its victims, and in passing by the vaccinated, to such a degree as to leave no other possible explanation open to any reasonable being than that it is vaccination which makes the difference. In the same way as regards fatality rates, whether the epidemic be severe in type as in Gloucester, or mild in type as in Leicester, the fatality-rate is much higher in the unvaccinated than in the vaccinated, and the difference between the rates is all the greater according to the recentness of the protective operation. In tables of statistics where age-periods are separately compared that truth has been demonstrated over and over again, and the Royal Commission in dealing with the matter took special care to deduct all deaths under 1 year of age so as to answer any criticism based on the high fatality of small-pox in the earliest months of life, before vaccination is obligatory. As concerns recent revaccination, the story of Liverpool supports the story of Glasgow. In Glasgow the recently revaccinated numbered 400,000, and not one of them was notified as suffering from small-pox. In Liverpool the experience of the 80,000 recently revaccinated was identical. The straits to which the Liverpool "anti's" are reduced in seeking to get away from these facts are pitiful. They say that a majority of the 80,000 were not revaccinated until after exposure to small-pox. Whether that is so we know not, though the proportion seems excessive; but in any case, how does it help to weaken the case for vaccination? It is an accepted part of the doctrine of vaccination that if the operation be performed within a short time after exposure to infection, and the vaccine vesicle duly results, small-pox can be prevented. Supposing that in the 80,000 there were 50,000 contacts of this sort, surely their escape is a triumph for vaccination. Then again, as to the alleged minority—say of 30,000—who were revaccinated without exposure to small-pox, is not their entire freedom from subsequent seizure a sufficiently large statistical fact to prove the value of vaccination to all who are capable of receiving proof? Is it not also a confirmation of the much more extensive experience of Glasgow above referred to? In the course of the tract we have the usual insinuations about the medical profession being financially interested in the maintenance of vaccination, and about its statistics being untrustworthy. These are innuendoes that come home to roost, and we do not doubt that the people of Liverpool will be able to estimate them at their proper value.

AN IMPROVED AMBULANCE SYSTEM FOR LONDON.

We have from time to time called attention to the unsatisfactory provision available for dealing with street accidents and casualties in London as compared with other large provincial towns and certain foreign cities. We thought some action was likely to be taken to remedy this state of things by the local authorities. Last year a valuable report was published by the London County Council in which the shortcomings of the metropolis in the matter of ambulance service for street casualties were fully exposed. Thus, not to go further afield, Manchester and Liverpool have horsed ambulances summonable by telephone street alarms; Birkenhead, Burnley, and Bradford work ambulance systems in connexion with their fire brigades. Yet in London we almost daily hear of, or witness, cases of fractured ribs or thigh, dragged from beneath the wheels of an omnibus, van, or motor, and thrust into a cab, and so conveyed to hospital. These things ought not to be. From inquiries we have made we are led to believe that London, the

capital of the empire, is again suffering from the divided jurisdiction which contrives to muddle its affairs. The County Council had the matter well in hand and appeared to be propounding a remedy. The Metropolitan Asylums Board has now appeared upon the scene, and has circularized the bewildered borough councils in terms which seem to imply that it is the body which is alone capable of doing all the ambulance work of London. Meanwhile the Home Secretary's police have to keep the streets clear, and, with this as their primary duty, appear to be satisfied that the present system, or want of system, is all that is required. Perhaps the new chief of the fire brigade will be able to plan a scheme for bringing succour to threatened life and limb as speedily and effectively as means for the salvage of property are brought by the fire brigade.

SIR FREDERICK TREVES.

WE learn that Sir Frederick Treves, Bart., F.R.C.S., has made up his mind to retire from practice at the end of this season, that is to say, at the end of next month. Sir Frederick Treves has had twenty-five years of continued and most exacting work, and the success which he has attained has been due almost as much to his industry and perseverance as to powers of mind and dexterity of hand. No one can dispute his right to follow his own inclination in this matter, but his retirement at a comparatively early age, and in the full vigour of health and strength, will be a serious loss to surgery in this country. He intends to continue to live in London and to go on with his work in connexion with the Army Medical Service, and we venture to hope that he will utilize his leisure to report some of the immense number of observations which he must have made, and to record the conclusions to which they have led him.

THE SURGERY OF BRIGHT'S DISEASE.

A DISCUSSION[1] on Dr. Edebohls's operation, known as renal decapsulation for chronic Bright's disease, to which reference was made recently,[2] took place at a subsequent meeting of the Medical Association of New York. Dr. Kinnicutt observed that a routine treatment for all cases, or even one method for the same patient in all attacks, was not only unscientific, but inefficient and harmful. He dwelt on the dyspnoea most common in the interstitial form, probably from the almost constant arterial changes present. Arterial dilatation was best induced by nitroglycerine, though chloral hydrate was sometimes efficacious. Hypodermic injection of morphine in combination with those drugs occasionally relieved the dyspnoea when the arterial dilators alone proved useless. The dilators were very efficient for vomiting associated with high arterial tension; when there was gastric catarrh, lavage gave relief to the dyspnoea as well as to the vomiting. Dr. Kinnicutt strongly advocated venesection for acute renal disease, whether in children or adults, when uraemic convulsions occurred, to be followed by an intravenous saline injection of double the amount of the blood withdrawn. In the convulsions of chronic parenchymatous nephritis the heart's action was usually feeble and the arterial tension low, so that vaso-dilators were contraindicated and the best results could be obtained by the combined use of cardiac stimulants, intestinal irrigations with salt solutions of a high temperature (115° F. to 120° F.) and hot packs daily for considerable periods. Dr. Homer Wakefield supported the surgical treatment of Bright's disease, saying that it added to the blood supply of the kidneys and that the increased amount of oxygen brought into those organs had a great deal to do with the good results; Dr. Wakefield himself had successfully treated uraemia in cases of heart disease by oxygen and the Schott treatment. Saturated solutions of sodium bicarbonate injected into the colon proved of great service by increasing the alkalinity of the blood. Dr. Leonard Weber suggested that decapsulation allowed the rapid growth of a vascular network spreading from the arteries of the fatty capsule upon and over the surface of the denuded kidney, and thus improved the obstructed circulation in the cortical substance and collaterally carried off venous blood and lymph through other channels besides the renal vein. Dr. Andrew Smith, the President, observed that in chronic Bright's disease there was a deposit in the kidney all the way from the pelvis to the glomeruli. Consequently the circulation from the centre towards the periphery was greatly impeded, as the blood had to be driven through vessels compressed by the deposit around them. Through decapsulation the blood was brought from the exterior directly to the glomeruli. As soon as the profession came to understand that the operative mortality from the operation amounted practically to nothing, it would be undertaken earlier and with much better chance of success. A most encouraging verdict from a presidential chair, no doubt, and the profession in America trusts Dr. Edebohls, as is amply proved by the fact that eight of the patients operated upon were medical men, all very ill and convinced that their only chance of living depended on renal decapsulation. Three died, in two the improvement was but moderate, whilst in the remaining three the results were most gratifying. The profession across the Atlantic seem to give a very limited interpretation to "operative" mortality in renal decapsulation. The enthusiast, however, must remember Dr. Edebohls's most reasonable warning that the operation should never be performed except by surgeons who are already more or less familiar with renal surgery in general.

[1] New York *Medical News*, March 7th, 1903.
[2] BRITISH MEDICAL JOURNAL, April 18th, p. 921.

THE DAILY ROUND OF THE CONSUMPTIVE.

M. COSTE DE LAGRAVE, who is physician to a sanatorium for consumptives at Gorbio, has reprinted from the *Revue Internationale de la Tuberculose* (January, 1903) an article on the daily life of tuberculous patients undergoing the open-air treatment, in which he records what, according to his own experience, is the ideal routine. He makes some unusual recommendations, and advances some usual suggestions in an unusual way. He holds, for instance, regularity in rising in the mornings as an article of faith. His hypothetical patient may choose seven o'clock, or half-past seven, or eight, but having made his choice he must uniformly adhere to it, by rising then without waiting even for five minutes; he has the benefit of beginning the day, as he says, with an act of regularity. Another matter on which he lays considerable stress is what he describes as the toilet of the lungs to be made each morning by the patient. By this is meant emptying, by coughing, the cavities in his lungs of the secretions that have accumulated in them during the night. The method he recommends is for the patient to take five or six deep inspirations in rapid succession. This serves not only to empty the vomicae by exciting the necessary amount of coughing, but it also gives exercise to the lungs and develops the chest. The basis of breakfast should be hot milk, and while advising that much butter should be eaten he suggests that it may be added to the hot milk, or to coffee or chocolate. The morning ration of cod-liver oil is best taken, he considers, immediately before breakfast, and the tuberculous patient who can take cod-liver oil and digest it may be considered to be rescued from death. He does not give it at all, however, in the three or four hottest months of the year, and he regulates the amount in the other months according to the atmospheric temperature, more when it is cooler and less when it is warmer. Gentle exercise and rest on a couch are equally part of the treatment; the one indeed is the complement of the other. On an average there should be such recumbency about six hours in the twenty-four, and he allows from eight to ten hours for rest in bed. He entirely proscribes smoking. The patient should eat more than he wants, and if all his energy is given to digestion nothing but good will result. The limit of alimentation is thus not to be appetite but digestive power. He very strongly recommends that after each of the two principal meals of the day a dose of tannin should be given in water or wine and water. The initial doses should be about 25 cg. and the later up to 1, 3, or even 6 grams. This agent he considers is of especial value in cases where the patients

put on flesh under cod-liver oil while retaining a small and active cavity in the lung. Where digestion is fickle he would give the tannin in milk or prepared with an egg, and he ranks it with cod-liver oil as a specific drug in tuberculosis; its use, he is convinced, abridges the duration of treatment by one-half. As articles of diet, he upholds eggs, from four to twelve a day, and fresh pork. An hour and a-half is allowed for dinner, and after it the mouth is to be cleansed. As an aid to active digestion gentle walking exercise immediately after a meal is inculcated. Singing and pianoforte playing and laughter after a meal are forbidden, but gaiety is encouraged. Cards and all games for money are prohibited; the gambling tuberculous patient, says he, is surely destined to die. Billiards and croquet are recommended for some patients, and photography, with the proviso of a well-ventilated dark room, for all. He insists on the hygiene of sleep including the open window all the year round, the degree depending on the outside temperature. He advises hot-water bottles for the feet in winter, and that the bed-clothing should be light and warm. The time he allows for a so-called cure is from one to three years according to temperament.

A LEPER COMMUNITY IN JAPAN.

In a paper published in the *Proceedings* of the Philadelphia County Medical Society, Dr. Judson Daland states that all the islands of Japan are affected with leprosy excepting Yezo, the northernmost of them, the inhabitants of which are supposed to be aborigines and are quite isolated from the rest of the Empire. In the February number of the *Sei-I-Kwai Medical Journal* we find it stated that a member of the Sanitary Board of Japan has recently estimated the number of lepers in the Empire at not less than fifty thousand, and the number is said to be increasing from year to year in a frightful manner. The disease is considered to be contagious by most of the inhabitants as well as by medical practitioners: the marriage of lepers is prohibited, and leprous wet-nurses are not permitted to suckle healthy babies. The disease especially affects the peasants, although many cases occur among the well-to-do. The mucous membrane of the upper air passages is much less frequently attacked than in other countries. In Tokyo there are two private leper hospitals containing from fifty to eighty beds. During the past fifty years there has been a hospital for lepers at Gotemba, at the foot of Fujiyama. An interesting account of the Gotemba Leper Asylum is given in the number of the *Sei-I-Kwai* above referred to. It is there related that fifteen years ago a Catholic missionary, the Rev. F. Testevuide, on one of his mission journeys met, in the neighbourhood of Gotemba, a leper woman who, forsaken by her husband and blinded by the disease, waited for death in a wretched hovel. The case aroused in his heart a great pity for the lepers, of whom he met many begging in the roads and about the gates of temples and cemeteries. He succeeded in obtaining possession of a house, which he fitted up as an asylum; in February, 1888, it contained six lepers. So many applications, however, were received that the asylum soon became utterly inadequate, and an appeal was made to public charity. There was a generous response, and after a time a site was found in a solitary and uncultivated plain near the village of Koyama. This site covers an area of about half a mile square, and is surrounded on the north and east by mountains, bounded on the west by a river, and on the south it is open towards the sea. Part of the site is already covered with buildings, which when completed will form a quadrangle, with a chapel in the centre. The buildings already erected constitute nearly two-thirds of the whole plan; they comprise the chapel, seventeen rooms for lepers, ten of which are occupied by men and seven by women, consultation rooms, a pharmacy, a dressing-room, a parlour, a lecture room, a kitchen, bathrooms and offices. The missionary director of the asylum lives in a house 100 yards to the north. As it stands, the establishment could lodge from 90 to 100 persons, but, owing to lack of funds, the number of patients has never exceeded 80. Among the remedies that have been found most useful are the Hoang-non (Hoany-nan, strychnos Gautheriana, a vine belonging to the Logoniacae family, found wild in the mountains between Lower Tonkin and the valley of the Meikong) and chaulmoogra oil. The use of these remedies is combined with a hygienic environment; a diet, consisting principally of milk and vegetables; moderate labour; regular and virtuous conduct; and above all, gaiety. The wards are furnished in the Japanese fashion, and in each are lodged from six to eight persons, who form a little community. The staff, in addition to the director, comprises only a physician who comes once a week and whenever called for, and an agent who transacts business with outsiders; the lepers themselves do all the work in the establishment. Being mostly peasants, the men cultivate the land belonging to the hospital and raise all the vegetables required for the establishment. The women wash the linen and make the clothes. The evening is given to recreation; some play at chess or other games; others amuse themselves with riddles and stories. Every other Sunday there is a lecture with magic lantern views; sometimes a theatrical performance is given by the lepers themselves. Religious influences are brought to bear upon the patients. Nearly all the patients are Christians, although this is not made a condition of admission. Thanks to the limited number of employés and to strict economy, the ordinary annual expenses have so far amounted only to about 4,500 yen. The receipts have generally covered the expenses. The director, Père Bertrand, who receives no salary, is at once manager, steward, and chief sick nurse; in the duties of the last-mentioned office he is largely helped by the lepers.

ZEBRULES.

The opening up of Central and Eastern Africa has revealed the fact that instead of zebras being nearly extinct, these animals exist in large numbers on the banks of the Tama river and in the province of Ukamba. Unlike horses and cattle, they are proof against horse sickness and the fatal tsetse fly. At the present time, for land transport in war, mules are almost universally employed, and they are used for the carriage of mountain batteries. Professor Cossar Ewart has at Penycuik since 1895 been endeavouring by zebra-horse hybrids to "evolve" an animal that shall be be superior to the mule for the purposes for which that animal is usually employed. There are three kinds or types of zebras—namely, Grevy's zebra of Shoa and Somaliland, the mountain zebra (equus zebra), once common in South Africa, and known as the common zebra, and the widely-distributed Burchell group of zebras. The zebra-horse hybrids were obtained by crossing mares of various sizes with a zebra stallion, a Burchell's zebra; and the new animals get the name of "zebrules." They seem excellently adapted by their build and general make, as well as by the hardness of hoof, for transport purposes and artillery batteries. The zebra striping is often distinct, though in colour they more generally resemble their dam. They stand 14 hands high, with a girth measurement of 63 in. Their temper seems to be better than that of the ordinary mule, and they are exceedingly active, alert, and intelligent. The Indian Government are giving them a trial in Quetta for mountain battery work, and they are being put, also, to a practical test in Germany. It appears from the experiments of Mr. Hagenbeck of Hamburg that zebrules go in harness quite well, and the Jamrack of Toun-on-the-Alster is introducing them into Germany and America. It is predicted that the zebrules will be the "mule" of the twentieth century.

ILLNESS OF JURYMEN.

In the course of the trial of the *Veronica* murder case which was recently held at Liverpool, one of the jurymen fell ill, and was unable to remain in court. The learned judge thereupon impannelled another juror, reswore the jury, and directed that the evidence which had already been given should be read out. The case then proceeded, and the prisoners were found guilty. Although the course adopted seems at first sight to be the most rational, as a

recapitulation of the evidence for the benefit of one juror might seem to be a waste of time; it is clear, however, from a consideration of the authorities, that the procedure was not in accordance with precedent. In a case decided in 1812, where one of the jurymen fell down in a fit while the prosecutor was giving his evidence, and a medical man who examined him there and then said he was unfit to continue to hear the case, the judge discharged the jury and had them resworn with another on the panel. The trial was then commenced *de novo*. Similarly in a case which came before the Privy Council some years ago on appeal from Australia, a new trial was ordered on the ground that the evidence had been read over in this way, although with the prisoner's consent, and with an opportunity afforded to counsel on either side of asking further questions. It is a mistake to consider the question only with reference to the prisoner. The object of a trial is the administration of justice in a course as free from doubt and miscarriage as human administration can be—not the interests of either party. This consideration lessens the importance of a prisoner's consent, even when he is advised by counsel, and substantially, not of course literally, affirms the wisdom of the common understanding in the legal profession that a prisoner can consent to nothing. But this is not all. The most careful note must often fail to convey the evidence fully in some of its most important elements, those for which the open oral examination of the witness in the presence of prisoner, judge, and jury is so justly prized. It cannot give the look or manner of the witness; his hesitation, his doubts, his variations of language, his confidence or precipitancy, his calmness or consideration; it cannot give the manner of the prisoner, when that has been important, upon the statement of anything of particular moment; nor could the judge properly take upon him to supply these defects. "It is in short," to use the words of Lord Coleridge, "but the dead body of the evidence without its spirit, which is supplied when given openly and orally by the ear and eye of those who receive it."

THE SECOND ROYAL SOCIETY *CONVERSAZIONE*.

THE majority of the exhibits were the same as those on the earlier occasion at the second *conversazione*, or ladies' night, of the Royal Society on June 19th, but there were several additions of interest. Mr. Henry Crookes, F.C.S., showed the results of an investigation into the bactericidal power of the emanations from radium. Plates inoculated with cultures of various bacteria had been exposed in part to the action of 10 mg. of radium bromide placed at the bottom of a shallow cylinder and covered by a screen of mica. The plate was superimposed so that a circular patch in its centre was exposed to the radium at a distance of about 1 in. The plates, after being thus subjected to the emanations for various periods, were incubated for twenty-four, forty-eight, or more hours. In every case a bare space free from bacterial growth was left at the point opposite which the radium had been placed. The plates exhibiting this effect were cultivations of B. coli communis, B. prodigiosus, and B. liquefaciens. Upon close inspection it was apparent that the distinction was most complete in the "smear" preparations, showing that in the others the action of the radium was to some extent inhibited by a layer of gelatine. On the other hand, one preparation of B. coli communis exposed to radium through a cross-shaped aperture in a sheet of lead showed some slight inhibition of growth even in parts protected by the lead. One exhibit of direct medical interest was the very ingenious method of Professor W. J. Sollas, F.R.S., for determining the specific gravity of blood. It is adopted from a procedure invented by Professor Sollas for use in metallurgy. In its application to blood, a fluid heavier than blood, and with which blood will not mix (chloroform *plus* benzole, specific gravity 1070) is first introduced into a corked test tube. An equal quantity of a much lighter but otherwise corresponding fluid (benzole *plus* chloroform, specific gravity 1040) is then gently added so as to float upon the surface of the first fluid introduced. Little by little the two fluids mix by diffusion so as to form a column of which the specific gravity varies regularly from below upward. A drop of blood from a pin prick is then allowed to fall into the tube, and sinks in the column until it reaches a level at which the specific gravity of the fluid is identical with its own. To enable the observer to read off this level two tiny glass beads of different sizes are dropped into the tube, so that one floats at some distance above and the other at some distance below the droplet of blood. The specific gravity of these two beads is known, and the space between them thus forms a definite scale in the column of fluid, the upper and lower limits of which are known. It is easy, therefore, to calculate that of the drop of blood as it lies floating between them. As the quantity of blood required is so small and the determination simple and rapid, this method seems calculated to be of considerable utility, for the precise relations between disease and the specific gravity of blood are as yet but ill understood. Mr. Charles Baker exhibited an apparatus for obtaining monochromatic illumination with a microscope. It is so arranged that light from any part of the spectrum desired can be brought into the field of the microscope. The apparatus appears to be a modification of one suggested by Dr. E. J. Spitta. Its advantage is said to be that when light from the violet end of the spectrum is brought into focus on the substage the resolving power of the objectives is much increased. Mr. T. H. Blakesley, M.A., also had upon view a light apparatus of some interest in the form of a direct vision spectroscope. Vision is made direct for the central ray by making the refracting angle of the prisms such that this angle is equal to the minimum deviation it produces. Four prisms are necessary for one element, and any number of such elements can be employed together. In each element the first and fourth prisms are extended into right-angled triangles.

SWISS MEDICAL CONGRESS.

THE annual congress of Swiss medical men was held at Lausanne early this month. At the inaugural meeting, under the presidency of Professor Dind, on the evening of June 12th, about 200 members were present; and, after the President had welcomed the guests, papers were read by Dr. Taillens on antidiphtherial serum, by Professor Marc Dufour upon the space sense, and by Professor Bourget on parallel and simultaneous auscultation of the lungs by means of a special stethoscope very much resembling one employed in England under the name of the differential stethoscope. On the morning of June 13th a series of demonstrations were given at the Cantonal Hospital, and later in the day a general meeting was held, in which papers were read by Professor Kocher on goître, by Professor Bard on the position of laboratory examinations in practical medicine, and by Professor His on the varieties and treatment of chronic articular rheumatism. The annual report of the Swiss Medical Commission was also read. Dr. Stuart Tidey, to whom we are indebted for these particulars, informs us that Professor Kocher dealt in the first place with the uses, limitations, and dangers of the iodides, which he said were not only useless but actually harmful in the hard fibrous goîtres of old people. In such persons they often produced symptoms of iodism and reduced the patient so much as to render the risk of operative interference extremely great and even without it to place life in jeopardy. He also referred to similar dangers following a course of treatment by thyroid extract. The iodides were of use in proportion to the amount of the active secretory elements of the gland which remained, they were indicated in cases of recent origin where the gland retained some amount of softness and elasticity—a condition found chiefly in the younger patients. He preferred administering the drug for a period of fourteen days or so twice a year well diluted and especially in the form of natural waters. At the close of the meeting a resolution was carried to the effect that a combined effort should be made to combat the prevalence of goître in Switzerland. This, which Dr. Tidey informs us, was the first medical congress for all Switzerland, was very successful, the total number of members

registering their names being over 400, and it is hoped that similar national congresses may be held in the future.

THE BRITISH DENTAL ASSOCIATION.

The British Dental Association had a very successful meeting this year which, beginning on Thursday, June 18th, concluded on the following day, at the Royal Pavilion, Brighton. The President for the year is Mr. Walter Harrison, of Hove, and the Association, which was welcomed by the Mayor at a *conversazione* on June 17th, met in considerable force. A large number of papers were read and followed by useful discussion, but the greater number were of too technical a character for their true value to be appreciated by other than dental specialists. Among those of a more general character was the opening address of the President, who devoted part of it to a consideration of the need for State and other public intervention in the question of children's teeth. The Association had already been successful in persuading some Boards of Guardians to pay a little attention to the matter, and he considered that though Royal Commissions moved very slowly, the appointment of one would do much good in the long run. Dental decay and defective teeth being one of the primary causes of physical deterioration among the youth of the nation, those responsible for legislative measures might well spare a few hours for consideration of a matter which in some aspects was of not less importance than that of education. In the afternoon Dr. Newsholme, Medical Officer of Health of Brighton, read a paper on the relation of the dental profession to the public health. He was of opinion that though there is no convincing evidence that the physique of the nation has upon the whole deteriorated, yet the lowering effect of bad teeth upon the general health cannot be disputed. Good teeth, indeed, and consequent powers of efficient digestion, being essential to proper development, it is a matter of national importance that the teeth of the young should receive adequate attention. Medical men should make a practice of inspecting the mouths of all children with whom they are brought into professional contact, and of impressing upon parents and other responsible persons the necessity of oral hygiene, and early recourse to skilled attention. Mr. W. Rushton, in discussing the same subject, thought that the British Dental Association might do much good by putting a brief exposition in the hands of such bodies as the National Union of Teachers. The first day concluded by a *soirée* given by the Southern Counties Branch of the Dental Association, and the proceedings were finally brought to an end on June 19th by the annual dinner, which was held in the Dome. The meeting next year will be at Glasgow in August, Mr. W. H. Williamson of Glasgow being President-elect.

PATHOLOGICAL SOCIETY OF LONDON.

The Pathological Society of London will meet at Oxford in the Pathological Laboratory, South Parks Road, on Saturday, July 4th, from 4 until 6 p.m. There is a train from Paddington to Oxford at 1.45 p.m. Dinner will be provided at 6.45 at Magdalen College. Members who propose dining are requested to give notice to the Regius Professor of Medicine, Oxford, before July 1st. Dinner tickets, including wine, 7s. 6d. Return train to London at 9.20 p.m. Communications will be made by Drs. Beddard, Pembrey, Spriggs, Dreyer (Copenhagen), Haldane, Ritchie, and Muir.

We understand that the Ventilation Committee of the House of Commons will resume its sittings on Tuesday, June 30th, under the chairmanship of Sir Michael Foster. Mr. Akers-Douglas, late First Commissioner of Works, who was formerly Chairman, being now Home Secretary, finds it impossible to give up the amount of time required for the inquiry.

An examination for thirty commissions in the Royal Army Medical Corps will commence on July 29th, and an examination for sixteen commissions in the Indian Medical Service on August 3rd. We think that candidates for the Indian Medical Service would do well to read the articles published recently in our columns, and to weigh well the relative advantages of that service and of the Corps.

At the meeting of the Zoological Society of London on June 16th, the last of the present session, Mr. F. E. Beddard, F.R.S., exhibited on behalf of the Memorial Committee a bust of the late President of the Society, Sir William Henry Flower, K.C.B., who before he became Director of the Natural History Museum was Curator of the Museum of the Royal College of Surgeons. The bust has been executed by Mr. Thomas Brock, R.A., and will be placed in the Natural History Museum.

MEDICAL NOTES IN PARLIAMENT.

[From our Lobby Correspondent.]

The Physical Training of Children.—On the Scotch Education vote last week a most interesting discussion arose in reference to the reports of the Commission on Physical Training. The Lord Advocate, in explaining the estimates, drew attention to the Commission, and said the report opened up an almost new view of school life, and that the statistics given were not only interesting but startling. Mr. Shaw-Stewart referred to the necessity of feeding the children on some organized system if they were to undergo regular physical training. He also advocated regular medical inspection, by the employment of the medical officers of the burghs and counties under the school authorities. Sir John Gorst afterwards discoursed at length on the subject, and quoted the results recorded by Dr. Leslie Mackenzie and Professor Matthew Hay. In Aberdeen, which was taken as presenting a healthy standard of child life only 0.5 per cent. were in poor health, while in Edinburgh the percentage was 19.7. In Aberdeen 9 per cent. of the children were badly nourished, in Edinburgh 29.83 per cent. Mental dullness was observed in Aberdeen in 8.8 per cent., in Edinburgh in 12.33 per cent. In the North Canongate School 38 per cent. were reported as suffering from diseases due to want of nutrition. In Edinburgh 31.5 per cent. of children had defective sight, and 42 per cent. bad hearing; no less that 70 per cent. were suffering from some kind of disease or other. If half the percentage only interfered with education then some 10,000 children in Edinburgh required attention. He said the reports were appalling, and asked how could an imperial race be raised under such conditions. He urged a periodical medical inspection in every school at the public expense, as well as feeding the children. As to the ventilation of schools he showed from reports how bad and impure the air of schools often was, and as fresh air was a necessity for child life he urged more care in the matter of ventilation. Dr. Farquharson also spoke, and referred to the deterioration of the race mentioned in the report and advocated action in the direction named. Without good food children could not be well trained mentally or physically, and he recommended periodical medical inspection such as had been instituted by the London School Board with good results. Colonel Denny also strongly supported thorough medical inspection, and the Lord Advocate in his reply said they were considering the question of medical and sanitary inspection, but before dealing with it must confer with the school boards and the Treasury. He thought the speeches made in the debate would advance the question. A reduction was afterwards moved in connexion with the answer given as to the leaving certificate, and the vote was not obtained when the House rose.

Defective and Epileptic Children.—On Friday, last week, the Elementary Education Amendment Bill came on for third reading, when Sir John Gorst protested against what he called surreptitious legislation. The Bill had passed through Committee without much consideration, and it repealed a clause passed a few years ago to protect defective and epileptic children from being herded together in institutions. He condemned great aggregations of healthy children as injurious to physical health and to moral character, and still more so in the case of the mentally weak. He quoted largely from reports in favour of small homes not exceeding eight inmates, and condemned the mixing of children with older people. He objected to the children being sent to the Chalfont institution on these grounds. It ought not to be a question of a small saving of expense

and he pressed for an inquiry, and moved that the Bill be sent to a Select Committee. Sir Francis Powell supported the motion on the ground that the existing powers should be properly exercised before larger were granted. Mr. Heywood Johnstone, who had charge of the Bill, said that all the misgivings as to the system of aggregation were misplaced, and that inquiry had already been made, and a valuable report had been presented. Sir John Tuke supported the Bill as a means of extending the usefulness of existing machinery. He praised the institution to which reference had been made, and said that under the Bill there would be great benefit to young and curable epileptics. Sir W. Anson said the Act of 1899 was a dead letter, and he thought this Bill would make it a useful Act. Forcible representations had been made to him by the National Society for the Employment of Epileptics and by the London School Board as to the impossibility of working the Act of 1899 under present conditions. He had taken expert opinion, and it was in favour of the Bill. It was impossible under the Act to provide homes for children who could not go to school without risk, and so it was necessary to provide homes for sufficient numbers where they could be nurtured and taught. There was no idea of herding these children together, but it was desirable that they should be kept together in sufficient numbers to be properly taught, and to have opportunities of companionship. The reference to a Select Committee was rejected by 149 to 87, and the Bill was read a third time without a division.

The Explosions of Septic Sewage Tanks.—Sir John Rolleston asked the Secretary of State for the Home Department last week whether his attention had been called to explosions of septic tanks at Exeter during the experimental stages, at Walton-on-Naze in December last, and at Sheringham in Norfolk on May 1st last, the last of which caused the death of three people and injuries to several others; and if so, whether, in view of the number of septic tanks which had lately been erected throughout the country, he would consider the advisability of making these tanks subject to a special licence. Mr. Long answered at the request of the Home Secretary that he was aware of the unfortunate explosion at Sheringham, and had received some information as to the other two cases referred to. The Royal Commission on Sewage Disposal were at present investigating the various methods and appliances for the disposal of sewage, including septic tanks; and he understood they had caused special inquiry to be made into the circumstances of the accident at Sheringham. Legislation would be necessary to give effect to the suggestion contained in the question, but it would seem to be desirable to await the report of the Commission before determining whether any legislation should be undertaken on the subject.

Inspections under the Vivisection Act.—Dr. Shipman asked the Secretary of State for the Home Department last week how many inspections of registered places had been made during the year 1902 by the inspectors appointed under the Act 39 and 40 Vic., c. 77 (the Cruelty to Animals Act, 1876) in England and Scotland and in Ireland. Mr. Secretary Akers-Douglas answered that the number of inspections of registered places in England and Scotland made in 1902 was 118. As to Ireland, where the administration of the Act did not lie with him, he was informed that no exact record had been kept of the number of inspections made.

Infected Army Blankets.—Mr. Secretary Brodrick stated last week, in reply to Sir Thomas Dewar, that there were at Woolwich 20,000 blankets which had been handed over from transports coming home. These were washed before being handed over by the Admiralty, but as an additional precaution they were being disinfected. It was not known whether any of these blankets were used in the field, nor could any date of dispatch from South Africa be specified, as they were only taken over by the War Department in bulk.

The Hanwell Poor-law Schools.—Mr. Herbert Samuel asked the President of the Local Government Board whether he would refuse to sanction any proposal of the managers of the Hanwell Poor-law Schools to increase the certificate of that school by 387 beds by certifying the old ophthalmic block for the reception of normal children. Mr. Long replied that he had not received an application from the managers for an increase of the certified accommodation at these schools, but he was recently informed by them of a proposal to utilize some of the iron buildings until lately occupied by ophthalmic children. Before expressing an opinion on this proposal he had asked for further particulars, and at the same time pointed out to the managers that he would not be prepared to sanction an increase of the maximum number of children maintained at the schools.

The Medical Officer of Macroom Workhouse.—Dr. Thompson asked the Chief Secretary to the Lord Lieutenant of Ireland whether his attention had been called to the fact that the Secretary of the Local Government Board, in April, 1902, intimated to Dr. Barrett, recently medical officer of the Macroom Workhouse, against whom no charge of neglect of duty had been made during his service, that if he did not resign within a week he would be dismissed without further notice and without pension; and, if so, would he state whether this action was taken with his sanction; and whether the Local Government Board would furnish Dr. Barrett with copies of its order and correspondence in relation thereto. Mr. Wyndham answered that for a number of years there had been constant friction between the officers of this workhouse, a condition of things for which Dr. Barrett was held to be mainly responsible. In 1899 the guardians suspended him from the performance of his duties, and the Local Government Board thereupon directed a sworn inquiry to be held into the matter, as a result of which the Board came to the conclusion that the step taken by the guardians was justified. Dr. Barrett was made aware of the charges preferred against him in the ordinary way. Subsequently to this inquiry he gave an undertaking to work harmoniously with the other officers of the union, and in view of this undertaking the Local Government Board did not at the time press for his resignation. He continued, however, to be a source of constant trouble to the guardians, and the Board accordingly formed the opinion that in the interests of good government of the workhouse he should be called upon to retire from the position of medical officer, failing which the extreme step of dismissal would be resorted to. An intimation to this effect was duly conveyed to him in April, 1902. He resigned, and was granted a retiring pension. It was not proposed to furnish him with a copy of the correspondence that had passed in the matter.

The Death at the Middlesex County Asylum.—Mr. William Redmond asked the President of the Local Government Board if his attention had been called to the death of Charles Joseph Smart in the Middlesex County Asylum, and, if so, would he state whether this man was just before his death placed in a strait jacket without the doctor's orders, and whether inquiries would be made into the whole matter. Mr. Long, in reply, said his attention had been called to the case, and that he was in communication with the guardians of Brentford Union on the subject. It appeared that the man was removed to the workhouse on May 27th as an alleged lunatic, and that on the 30th he was taken to the asylum, where he died on the following day. The medical officer of the workhouse stated that on arrival at the workhouse the man was extremely violent, and the assistant medical officer deemed it advisable to order that a restraint jacket should be used. The medical officer saw the patient early next day, and kept him under constant observation until his removal to the asylum. It was by the express direction of the medical officer that the patient was removed in the restraint jacket. Mr. Long said that he understood the case would come before the guardians at their next meeting. Meanwhile, he had applied to the coroner for a copy of the depositions taken at the inquest, and on receipt of them he would consider whether it was necessary to take any further action.

Small-pox in North Staffordshire.—In reply to Mr. Coghill, the President of the Local Government Board stated on Tuesday, that, according to the returns received, it appeared that during the past eleven weeks 37 cases of small-pox had occurred in the Potteries. He was informed that there had been no deaths from small-pox in the district during the last ten days. Except for a few cases at Hanley, the epidemic seemed practically to have ceased. The hospital referred to (Bagnall Joint Hospital) was under the control of the North Staffordshire Joint Small-pox Hospital Board, which represents fourteen sanitary authorities. The Joint Hospital Board was only recently constituted, and the accommodation provided for small-pox cases was intended to meet the emergency which then existed. It was not such as in ordinary circumstances he should approve.

Scotland.

Dr. Howard A. Kelly of Baltimore.

The arrangements for the visit of Dr. Howard A. Kelly to Glasgow last week were carried through with great success. Dr. Kelly had been elected Honorary President of the Glasgow Obstetrical and Gynaecological Society, and in the Faculty Hall on the evening of June 17th he delivered his presidential address before a crowded audience of professional men and women. The subject was "The History of Appendicitis in Great Britain," and Dr. Kelly traced the development of our knowledge of appendicitis as a separate disease and its surgical treatment from the beginning of the nineteenth century, pointing out the important part Britain had played in that development. The address was interesting and racy, and was evidently meant as a compliment to British physicians and surgeons. Needless to say, it was enthusiastically received. On the afternoon of June 18th there was a combined meeting of the Glasgow and Edinburgh Obstetrical Societies, when a discussion took place on Extirpation of the Uterus and its Appendages in Serious Pelvic Inflammation, Dr. Kelly introducing the discussion. In the evening of the same day Dr. Kelly was entertained to dinner in the Windsor Hotel. The President of the Glasgow Society, Dr. Nigel Stark, occupied the chair, and there was a large gathering, which included the leading members of the profession in both Glasgow and Edinburgh. In proposing "The Health of Dr. Howard Kelly," the Chairman paid a high tribute to his distinguished services to surgery, eulogizing the improvements he had inaugurated which had made his name famous all over the world. Dr. Kelly, in reply, thanked the Glasgow Society for the great honour it had paid him by electing him its Honorary President, and dwelt on the cordiality of the relationship that exists between Britain and the United States.

Clinical Teaching in Glasgow University.

An adjourned meeting of the Court was held on June 18th, when the principal item of business discussed was the proposed increase of the fees for clinical classes. More money is required, and it is proposed to rearrange the fees for various classes, making them similar for all the Scottish universities. In this rearrangement it is proposed to alter the method of taking fees for the clinical classes. Up till now the student has paid the sum of 20 guineas to the infirmary, for which he got all his clinical instruction and could attend the various classes as often as he pleased. It is now proposed to make the charge of 10 guineas for the infirmary alone, and the fees for teaching separate—namely, 4 guineas for a winter course, and 3 guineas for a summer course. As the students as a rule have at least three winters and three summers at the infirmary, this change would involve the additional outlay of ten guineas to each student, and the prospect is understood to give little satisfaction amongst the undergraduates. It was also strenuously opposed in the Court by Dr. McVail, chiefly on the ground of the hardship involved to those students who did not benefit from the Carnegie Trust. In the case of the Carnegie men the extra fees would ultimately be paid by the Trust, but there were men who would not accept the benefit of Carnegie's bequest, and it would be unfortunate if the whole university population of Scotland was going to be subsidized by the Carnegie Trust. It would also be unfortunate if any alteration of the fees would tend to encourage the students to take fewer clinical classes. The matter was submitted to the Finance Committee for further consideration.

Holyrood Drains.

The story of the Holyrood drains and the Lord High Commissioner, who is the representative of the Sovereign at the General Assembly of the Church of Scotland, throws an instructive light on the theory and practice of the Office of Works. On the principle that "all's well that ends well," the incident is amusing, though it might have been otherwise. The Lord High Commissioner generally resides at Holyrood Palace; but when it came to the knowledge of Lord Leven, the present holder of the office, that an examination previous to the contemplated vision of the King had shown that the condition of the drains was unsatisfactory, Lord Leven at once communicated with the Office of Works. Sir Schomberg McDonnell replied, "There is no danger to you or your household, but it would be a very different thing for the King and his Court." It does not appear whether the High Commissioner enjoys a special immunity in virtue of his ecclesiastical office, or whether Royalty is specially susceptible to the mephitic influences that emanate from bad drains. The King stayed at the palace of a duke near by, and Lord Leven also took no risks, he and his household taking up their abode in an hotel. It appears that the ecclesiastical office of High Commissioner was at one time a comparatively lucrative one. "*O quæ mutatio rerum!*" Now the Commissioner has to dine something like 1,200 people, and they require sixty or seventy, and on occasion thirty or forty additional retainers to wait upon them. This, it appears, leads "to a great strain on the drains." Evidently the drains could not stand the strain, and Lord Leven did wisely in seeking the comforts of an inn. This brought upon his lordship the remark that "he ought to face the typhoid because he was paid for it." The methods of vivisection are stated by some to be bad enough, but when it comes to asking a Lord High Commissioner—not to mention his household retainers—to be the *corpus vile* upon which experiments should be made, we agree with Lord Rosebery that "the informal note of Sir Schomberg was brutal in its frankness."

Home Help to the Poor.

At the International Congress for the discussion of the methods best suited to help the poor and distressed either in their own homes, or under conditions of homelike character, held at Antwerp in September last, under the presidency of M. Van Den Heuvel, the Belgian Minister of Justice, it was resolved that the meeting in 1904 should be held at Edinburgh. At a recent meeting, convened by Sir John Sibbald, he explained the aims and objects of the Congress. A General Committee and an Executive Committee were formed to take steps to ensure as far as possible the success of the Congress. The Congress will probably be held in the month of June.

The Edinburgh Meeting of the Neurological Society.

At the Edinburgh meeting of the Neurological Society on Saturday, June 27th, there will be a physiological and pathological demonstration in the Physiological Laboratory of the University from 10 to 11.30. From 12 till 1.30 there will be a clinical demonstration in the Royal Infirmary. At 7 p.m. there will be a dinner in the Balmoral Hotel.

Diseased Meat in Edinburgh.

During the month of May there was the enormous amount of 13,628 lb. of unsound meat seized in the city of Edinburgh. The matter is under the consideration of the Public Health Committee, and it is expected that prosecutions will follow.

Ireland.

An Action for False Imprisonment.

An action of some interest to the profession at large was before the King's Bench Division, Dublin, on Monday, on a motion for discovery of documents. The plaintiff is Mr. I. M. Hutchison, and the defendants are Dr. M. Walsh (New Ross) and Dr. N. J. Meehan (Wexford). The claim is for £5,000 damages for alleged false imprisonment, in causing the plaintiff to be detained in the House of St. John of God, Sandymount, Dublin; and for libel and assault and battery. The defendants plead justification.

Veterinary Surgeons as "Medical Practitioners."

The Court for Crown Cases Reserved in Ireland, had before it on June 26th, a curious case in which Mr. Charles Allen, a veterinary surgeon, claimed exemption from attendance as a juror on the ground that he was freed from serving on a jury in any court, he being a licensed medical practitioner. The questions to be decided were whether he was so entitled to exemption, and to remission of the fine inflicted. It was argued for the appellant that veterinary surgeons were included under the term "licensed medical practitioners" and were therefore entitled to the privilege provided by the various Medical Acts. For the Crown it was contended that "medical practitioner" could only mean a person practising medicine in the ordinary sense. Their grievance must remain, as in the case of dentists, until some future Act of Parliament relieved them from the duty. The Lord Chief Baron said the majority of the Court were of opinion that the appellant should be exempted and the fine remitted. The decision as reported does

not declare the grounds upon which it is based. It seems to be quite fair that veterinary surgeons should be relieved from the duties of jurors; but the Court cannot have decided this upon the contention that they are medical practitioners within the meaning of the Acts.

Granard Nursing Question.

The guardians have passed a resolution refusing to carry out any improvements in the workhouse until justice has been done to the nursing sisters. A trained nurse has, however, been appointed to the hospital, the nuns having stated that they could not remain for a week longer. Argument with a body of men in such temper is not of much use, but of course it will be the duty of the Local Government Board to see that the necessary improvements are made, even at the cost of issuing a sealed order, or of relieving the guardians of their functions altogether.

Medical Men and the Superannuation Bill.

A resolution was received by the Youghal Board of Guardians from the Abbeyleix Board requesting the Irish Parliamentary Party to take such steps as would exclude the medical officers from the benefits of the Superannuation Bill unless the present unreasonable demands were withdrawn by the medical profession. One member of the Board thought that was too strong; the farmers, he said, combined, and he thought the doctors had a perfect right to do the same. The farmers were getting a good Land Bill, and they wanted to sit upon others. The resolution was marked "read."

The New Professor of Anatomy, Trinity College, Dublin.

The Board of Trinity College, Dublin, on Tuesday last appointed Mr. Andrew Francis Dixon, M.B., to the Professorship of Anatomy and Surgery, vacant by the resignation of Professor D. J. Cunningham, who has accepted the invitation to succeed Sir William Turner, K.C.B., in the University of Edinburgh. There were many candidates. Mr. Dixon was educated in the Trinity School, where he was medical scholar, and was awarded many distinctions of the first class. He graduated in 1893, and in 1895 was Senior Demonstrator of Anatomy in the school. He was subsequently appointed to the Chair of Anatomy in the University College of South Wales and Monmouthshire, Cardiff, and as Dean of the Faculty of Medicine he has been largely responsible for the organization and administration of the medical school and of the good work which has been accomplished. He has contributed many papers on anatomy and development to the societies and journals, and has already attained an excellent reputation.

Cork Branch of the National Association for Prevention of Consumption.

A deputation of the Cork Branch of the National Association for Prevention of Consumption appeared before the Cork Rural District Council recently in connexion with the rate which the Council would agree to contribute annually towards the maintenance of a sanatorium for consumption. Circulars had been sent out some time ago to all the district councils in the county, but though the majority of them had expressed their approval of the proposal to establish a sanatorium, only two had definitely fixed the sum in the pound they were willing to guarantee. Naturally the other district councils were waiting for Cork to take the lead. The district councils and the sanitary authorities were the only bodies having power to levy a rate for the purpose, and if their assistance was not got there would be no possibility of maintaining a sanatorium. Youghal Urban Council had agreed to pay 1d. in the pound, and Midleton ½d. in the pound, and it was expected that the Cork Council would lead the way for the rest of the urban councils to follow. The deputation pointed out that the Executive Committee of the Association intended to apply to the Government for a grant to build the sanatorium, and would be in a stronger position to do so if they had a statement of the definite amount which the different councils would agree to pay for its maintenance. The building would cost £12,000. After some discussion the following resolution was agreed to by the Council:

That we approve of the principle of the erection of a sanatorium for consumption in the County of Cork, and, provided the Government will subscribe the required amount for building, we will guarantee to subscribe, according to our valuation, to the upkeep of the institution, provided the several sanitary authorities in the county subscribe in the same proportion.

JENNER INSTITUTE OF PREVENTIVE MEDICINE.

New Serum Department.

The new serum department of the Jenner Institute of Preventive Medicine has been occupied since September last, and invitations have been issued to attend an inspection on Friday next, July 3rd.

The department was first situated at the "Poplars," Sudbury, Harrow, but, owing to encroachment by the Great Central Railway Company, it became necessary to obtain a new site. A suitable property was found at Queensberry Lodge, Aldenham, near Elstree, and acquired last year by the Institute. The department is situated about three miles from Elstree Station on the Midland Railway. It is under a mile from the nearest telegraph office, and is on the National Telephone Company's system. The various blocks are connected by intercommunicating private telephones.

The buildings are on the summit of a small hill, and stand on a site of about 28 acres of grass land, which again is surrounded on all sides by open fields. Queensberry Lodge itself has been retained practically as it was when the estate was acquired by the Institute, and is now used for the accommodation of the assistant bacteriologists (Drs. Todd and Petrie), administrative offices, etc. The bacteriologist in charge (Dr. Dean) lives in a separate house. The laboratories, which have been built by the Institute, designed by Mr. Paul Waterhouse, are of the most modern type, with papyrolith floors, rounded corners, glazed adamant walls with a dado of white tiles, and large windows; they are warmed by open fireplaces. There is a good gas and water supply, and the buildings are lighted by Welsbach incandescent gas burners. The laboratories comprise:

Routine Laboratory.

This is a large room with both side and roof lights, fitted with centre and side benches, fume chamber, etc. This is used for the filtration of diphtheria toxin, chemical work, section cutting, and the usual laboratory routine, such as blow-pipe work, fitting up apparatus, etc.

Research Laboratories.

There are two private research laboratories, one of which is reserved for the bacteriologist in charge, while the other is used by other members of the staff. Both these have a north-east aspect with large windows, and are very well lit. They are fitted with low benches for microscopical work, and with separate Hearson incubators, shelves for chemicals, media, etc.

Serum Laboratory.

The serum laboratory is used for the filtration and storing of the various serums. The windows are of ruby glass, so as to ensure a non-actinic light. Two large ice-safes for storing serum occupy the centre of the room. This laboratory is reserved entirely for serum.

Incubating Room.

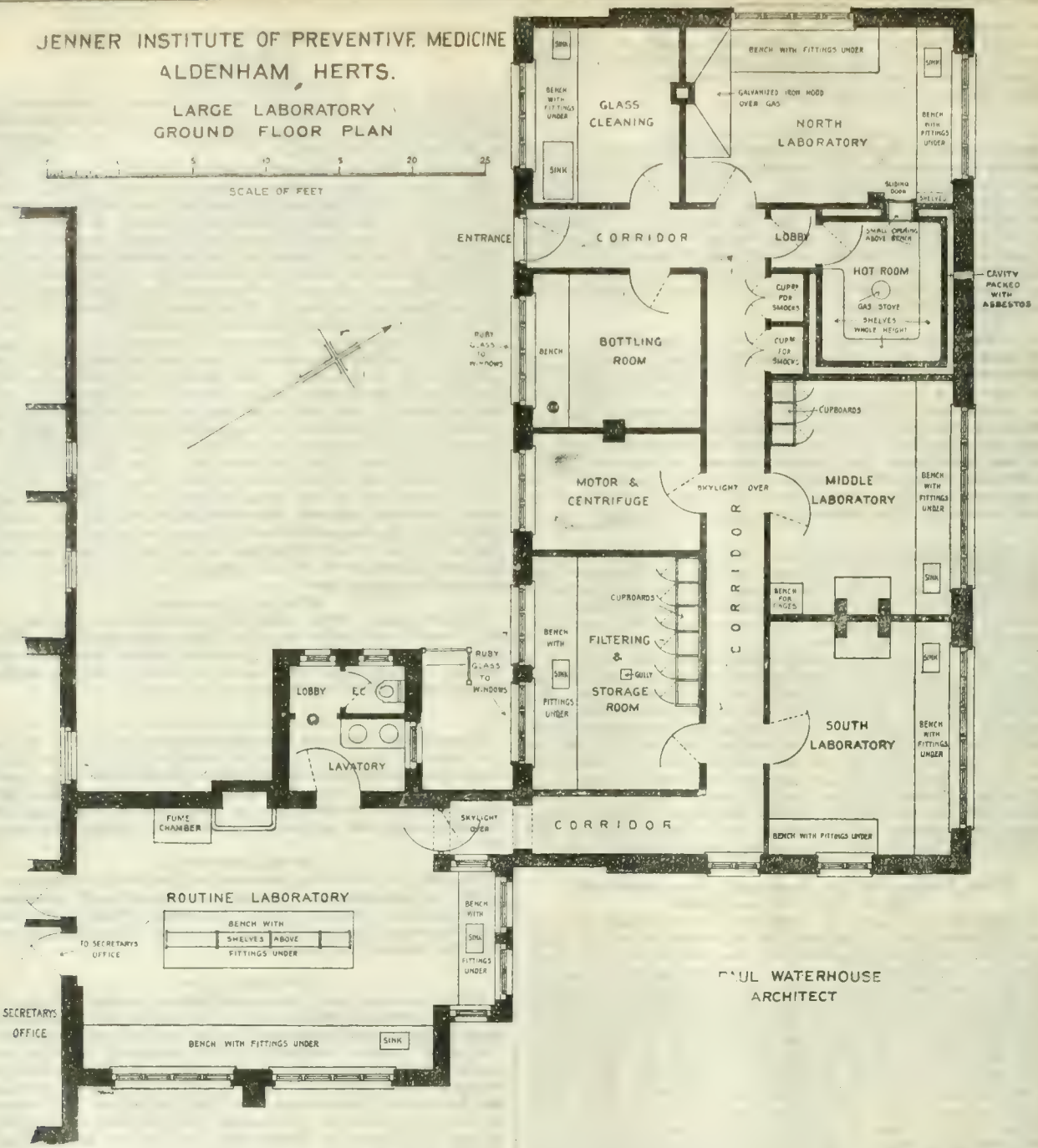
The incubating room is a small dark room with double walls, the space between which is packed with asbestos. There are two doors with a space between forming a small antechamber or "air-lock" which is entered before entering the hot room itself; an in-rush of cold air on opening the door is thus prevented. The walls are fitted with shelves from floor to ceiling, and by means of a gas stove and Roux regulator the temperature is maintained at body heat. The diphtheria bacillus is grown in flasks on these shelves for the production of diphtheria toxin.

Engine Room.

The engine room is fitted with a gas engine driving a large centrifugal machine and disintegrator, and also a Root's blower which supplies sterile air to the bottling room. There is also a water pump supplying a vacuum and high pressure air.

Bottling Room.

After the serum has separated from the clot under aseptic conditions, as an additional precaution it is filtered through Berkefeld filters into the large flasks in which it is stored. These flasks are connected with the filters and the whole sterilized in the autoclave directly before use, so that the serum after passing through the filter goes directly into the sterile flask in which it is to be stored, thus allowing no possibility of infection. In filling the small vials in which the serum is sent out for use somewhat elaborate precautions are taken: The bottling room which is reserved for this purpose is an air-tight room with tiled walls, papyrolith floor, and



rounded corners. Before bottling the room is washed out and then disinfected with formalin vapour, which is allowed to remain in the room all night. In the morning the formalin is expelled by a current of air which has been sterilized by passing through a large cotton-wool filter occupying one side of the room near the floor, an exit plugged with wool being provided in the roof at the opposite side of the room. The floor is then swabbed with oil so as to prevent the raising of any dust which may be brought in by the boots of persons entering the room, and the current of air is maintained throughout the process of bottling. In this way a positive air pressure is obtained in the room so that the opening of the door results in the flow of air in an outward direction only, and a practically sterile atmosphere can be maintained in the room during the process of bottling. The vials into which the serum is to be decanted have been previously washed, the necks plugged with wool and sterilized by hot air. The actual filling of these vials has always been done personally by one of the staff, who takes a vial, withdraws the wool plug with sterile forceps, passes the neck of the vial quickly through the flame of a Bunsen burner so as to flash off any particles of wool that may adhere to the neck, and then places the bottle under the nozzle of a special burette which is arranged to deliver the required volume of serum. This nozzle is shielded from any falling dust particles by a glass hood in the form of an inverted wine glass. The vial being filled it is handed to an assistant, who with sterile forceps inserts a rubber cork which has been previously sterilized, and which, before being put into the vial, is passed through the flame. The corked vial is then passed to a second assistant, who dips the neck and cork in melted paraffin wax. Under certain circumstances the serum is filled by the same method into small flasks with narrow necks, which are then sealed off in the blow-pipe flame.

Sterilizing Room.

The culture medium and sterilizing room is provided with

autoclaves, steaming apparatus, thermostats, and vessels for the preparation of bouillon. Here the various media required are prepared. This room communicates with the hot room by a small opening with double doors through which the flasks can be passed after inoculation so as to avoid lowering the temperature of the hot room by repeatedly entering it.

Cleaning Room.

The glass-cleaning room contains a dry-heat disinfector for sterilizing glass, a still, and separate sinks for the cleaning of used and unused glass.

Isolated Laboratories.

An isolated laboratory stands entirely apart from any other building. It is used for the preparation and filtration of tetanus toxin and for the necropsy of small animals.

The main work of the serum department is the preparation and investigation of diphtheria, tetanus, and antistreptococcus serums, but provision has been made in a separate laboratory erected at some little distance, with a detached stable for dealing with other infectious diseases.

Animal Houses.

The animal houses are ordinary garden greenhouses which have been adapted and serve excellently for the purpose as they are easily kept to an even temperature. The larger is used as an experimental animal house for the housing of animals employed in the testing of serum, toxin, etc. The roof is covered with vines which have been retained as affording a shelter from the sun in summer. The two smaller houses are used for breeding purposes. The three houses are heated by a system of hot water pipes.

Stabling.

The principal stables form two blocks of buildings about 200 yds. from the laboratories. They are of brick, and of the most modern type and very well ventilated. There are two yards, the first of which is covered by a high glass roof, and opening from this yard is the operating room where the horses are injected and bled. The stabling consists entirely of loose boxes which are all of large size so that the animals have ample room to move about freely.

In the vicinity of the operating room is a small isolated room with slate benches where the blood flasks are allowed to stand, and where the serum is decanted. There is also a cottage for the head-groom, and quarters for the unmarried grooms, harness room, coach-house, fodder-room, etc.

In one of the meadows, at a distance from the stables, is a loose box which is used as an isolation box, where all new horses undergo a period of quarantine. The horses are selected for the work by a veterinary surgeon after a thorough examination, including the mallein test. There are several other loose boxes in the various meadows, altogether thirty-six horses can be put up and in addition there are an isolated cowshed, goat-house, pigeon-house, rabbit-runs, etc.

Many of the horses after immunization are in better condition than at the time of their entry into the Institute's stables. One horse, producing tetanus antitoxin, has been in use for a period of about six years. During a great part of this time the animal has been resting—that is, he has neither been receiving injections, nor has he been bled. One exceptionally good horse, used for diphtheria antitoxin, has been in the Institute's possession for over four years, and is now in excellent condition; it has yielded over the period during which it has been actively used a very large quantity of powerful antitoxin which at its highest reached 1,000 units per c.cm. It has been roughly calculated that this horse during that period has given about 17,000 doses of diphtheria antitoxin, each containing 2,000 antitoxic units. Several horses have given antitoxins of at least equal strength to this, but none of them have given it of such high value for such a long period. It has been the aim of the Institute to prepare antitoxins of the highest quality, and the main energies of the department have naturally been devoted to this object.

Work of the Department.

The work of this department began in the autumn of 1894, its object being the investigation of the problems of immunity and the preparation of antitoxins. The research work of the department has been largely directed to the study of methods for the improvement of the therapeutic value of the different antitoxins. Among those who have worked in the past in the department were Drs. Ruffer, Washbourn, Hunt, Bulloch, Symmers, Nolan, and Salter.

The papers published from the department include those on diphtheria by Hunt, on immunity by Ruffer, on antipneumococcus serum by Washbourn, and on antistreptococcus serum by Bulloch. Among more recent publications may be mentioned a paper by Dean on diphtheria immunity, in which it was suggested that the views then held in regard to the methods of obtaining antitoxins of high value, though apparently based on correct theoretical grounds, were practically defective, and a method was suggested by which the strength of antitoxins could be considerably elevated. Subsequent experience has fully confirmed the views there expressed.

Dr. Dean also investigated some time ago, in conjunction with Dr. Todd, a limited outbreak of diphtheria which was clearly associated with the consumption of the unsterilized milk of certain cows.[1] These cows were found to be suffering from lesions of the udder, and from these lesions, as well as from the milk, pure cultivations of the diphtheria bacillus were obtained. Further investigation appeared to establish that the cows had in the first place suffered from a vesicular eruption, and that this had become infected with the diphtheria bacillus, probably in the process of milking, for, as the investigators remark: "The disgusting habit the milkers in this part of England have of spitting on their hands before milking would easily account for the infection of the lesions, even in the absence of obvious diphtheria in the cowman, knowing, as we now do, that apparently healthy individuals are not uncommonly the host of the diphtheria bacillus."

Drs. Dean and Todd have also recently performed[2] at the suggestion of Lord Lister a series of experiments to ascertain whether the tubercle bacillus of human origin undergoes any marked change in virulence towards the bovine species by passage through certain other animals. The material employed was the sputum from well-marked cases of human pulmonary tuberculosis, and the animals used were the pig, cat, rabbit, rat, and mouse. The experiments were in the main negative, but important and interesting results were obtained in the case of the pig. Professor Koch, in the paper in which he formulated his recently-expressed views as to the essential difference between the bacillus of human and of bovine tuberculosis and as to the consequent slight danger to the human subject from ingestion of tuberculous material of bovine origin, based his views largely on certain experiments on various domestic animals. Among other experiments Professor Koch inoculated two pigs with pure cultures of the tubercle bacillus; he failed to produce infection. Drs. Dean and Todd inoculated six pigs with human tuberculosis sputum; all the animals were infected, and the character of the infection was at least as severe as that described by Professor Koch as a result of inoculation of a pig with bovine tuberculosis. Professor Koch, however, used pure cultures of the bacillus, and it is suggested that the difference in the results obtained is probably to be attributed to this fact, in which case the greater infective power of the tuberculous sputum may be due to various factors—for example (1) in the sputum the bacillus probably retains its original virulence, and has undergone no modification, as may be the case on cultivation; (2) the associated organisms or their products in the sputum may assist in the process of infection. Experiments were also made by giving tuberculous sputum to pigs. Professor Koch obtained some form of infection in three of the six animals employed by him; Drs. Dean and Todd used three pigs, and all contracted a local but very definite infection, followed by great wasting and death. The tuberculous lesions appeared hardly sufficient to account for death or for the emaciation, but it is to be noted that the animals were somewhat younger than those employed by Professor Koch, and that the feeding was commenced at the period of weaning when young animals are liable to catarrhal intestinal disturbances. Moreover, the sputum employed, having been sent by post, was usually twenty-four hours old, and contained numerous putrefactive organisms and their products.

Among other papers published recently founded on work done in the department the following may be enumerated:

On a New Pathogenic Streptothrix, by G. Dean. *Trans. Jenner Inst. Prev. Med.*, vol. ii. Experiments on Immunity in Relation to the Pancreas and its Ferments, by G. Dean. *Trans. Path. Soc. Lond.*, 1901. Experimental Haemoglobinuria caused by a Bacterial Toxin, by C. Todd. *Lancet*, 1901. On the Haemolysin of Bacillus Megatherium, by C. Todd. *Trans. Path. Soc. Lond.*, 1902; *Journ. Hyg.*, 1902. A Disease of the Rat caused by an Acid-fast Bacillus, by G. Dean. *Centralbl. f. Bakt.*, etc., Jena, 1903.

[1] *Journal of Hygiene*, 1902.
[2] *Journ. of Path. and Bact.*, 1903.

THE ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

The meeting of the Anatomical Society held in Liverpool on June 19th and 20th was an extremely interesting event in respect both of the subjects discussed and of the number of distinguished men whom it brought together. A large number of very interesting exhibits were displayed in the Practical Anatomy Rooms, and several important papers and demonstrations were given in the Lecture Theatre.

Exhibits.

Amongst the exhibits must be specially mentioned the models prepared by Professor Patten illustrating the visceral anatomy of the Hainau gibbon, and the thoracic and abdominal viscera in man; the model prepared by Mr. F. W. Jones from sections of an early human embryo; the splendid series of radiographs prepared by Dr. Thurston Holland and Dr. David Morgan; the specimens of the circle of Willis prepared by Dr. R. E. Kelly; the exhibition of a brain and some photographs of the cord of the porpoise by Dr. Waterston; and specimens of human lung exhibited by Dr. Bradshaw.

Demonstrations and Papers.

Dr. T. H. Bryce, whose work in connexion with karyokinesis is so well known, gave a lantern demonstration of the cells of the embryo of lepidosiren. Professor Symington brought forward some further work on the relations of the deeper parts of the brain to the surface, a subject on which he has been engaged for some time past. Professor A. Thomson gave a most interesting and highly suggestive paper on the evolution of man's cranial form, which he illustrated with some ingenious models. The paper gave rise to an excellent discussion, in which Sir William Turner, Professor Cunningham, Professor Thane, and many others took part.

The work on Thursday terminated with a short account of the important investigations now being carried out by Dr. A. W. Campbell, of the Rainhill Asylum, Lancashire, which show that there exists in the cerebral cortex a direct correlation between physiological function and histological structure.

On Saturday morning Dr. C. Addison gave some further information on the surface marking of the abdominal viscera. Professor Arthur Robinson showed some beautiful specimens illustrating the development of the base of the cranium, and gave a brief outline of the conclusions at which he had arrived; he also gave the results of his observation on the development of the vitreous body. Professor A. H. Young and Dr. Peter Thompson read a paper dealing with the development and morphology of the renal arteries, with horseshoe kidneys and with the ventrally-situated pelvis of the ureter, of which deformity they showed several specimens. Mr. Lickley gave a paper on the relations of the seventh and eighth ribs to the sternum in man, and Mr. J. Cameron a lantern demonstration of sections of amphibia which showed the pineal body to be developmentally an amesial structure. Dr. T. R. Bradshaw demonstrated a number of preparations and drawings made by Dr. A. T. H. Waters when writing his Fothergillian Prize Essay for 1859 on the Anatomy of the Human Lung. The preparations showed the arrangement of the air sacs branching off from the terminal bronchial tubes. Special attention was drawn to Dr. Waters's observations, which proved at that early date that the blood in the bronchial arteries returns to the left side of the heart by way of the pulmonary veins, and not to the right side by the bronchial veins, which merely return blood from the structures at the root of the lung.

Dinner to Sir William Turner and Professor Cunningham.

The social functions in connexion with the meeting were brilliant and interesting. The Manchester Edinburgh University Club seized the occasion of the presence of so many distinguished anatomists in Liverpool to entertain Sir William Turner, K.C.B., the retiring Professor of Anatomy in the University of Edinburgh, and his successor, Professor D. J. Cunningham, at dinner in the Adelphi Hotel. Professor Paterson, of the Liverpool University College, presided over a brilliant gathering of Edinburgh graduates and visitors, among whom were members of the Anatomical Society and representatives of the medical profession in Liverpool. The Chairman, Professor Paterson, proposed "The University of Edinburgh." He extended a hearty welcome to Sir William Turner and Professor Cunningham, and said there were several reasons why that was a peculiarly appropriate occasion. He would remind them, in the first place, of the indebtedness which the Edinburgh University owed to Lancashire, because Sir William Turner was a Lancashire man. In the second place, one felt that Lancashire had gained much from Edinburgh University, and if Lancashire had given she had in many ways gained. Lancashire was teeming with Scotsmen and with men trained in Scotland. Some of those in Manchester and Liverpool had done good work in the academic life of the cities. At Owens College the traditions of Edinburgh was carried on by men trained in Scotland. The same had occurred in Liverpool, and the influence of Edinburgh had been carried into the foundation and the progress of University College. Now, when the cities of Liverpool and Manchester were parting company, it was felt that, as a university was about to be established, many of the best features would be introduced that were characteristic of the reformed up-to-date Scottish University. In Scotland there was no doubt they had academic institutions which, if not absolutely perfect, were as nearly ideal as anything to be found in England, and the features of the new Universities of Manchester and Liverpool, which would impress the public and give them confidence, would be the features which were copied from the reformed Scottish Universities. Sir William Turner, in response, said it was impossible for any university to fill its proper place in the great educational arrangements of the country if it worked on a crystallized system. Its system must be elastic, capable of adapting itself to the many changes in educational methods, in the needs of the people, and in the needs of the country in which the university was situated. In his capacity of Principal of the Edinburgh University he hoped to see the day when they would acquire a more elastic system than they at present possessed, so that they might be able to meet the changing conditions and wants of the people with much greater ease and rapidity than was now possible. Professor D. J. Cunningham, in acknowledgement, said that no one could fail to be proud that the aspirations of Liverpool and Manchester were about to be realized so far as the establishment of a University was concerned. Sir William Banks, in proposing "The Club," alluded to the great part which had been played in the national life of the country by the older universities, and said that he hoped they would maintain their splendid reputation, and continue to develop along their old lines. The new universities had also a great future before them, and were in a special sense the universities of the poor man. The University of Edinburgh had for its great attraction the romantic element which lay in its splendid history and in its beautiful surroundings. In his student days in Edinburgh there was located within its walls a splendid galaxy of talented professors such as had never been seen together before or since, and their mantles had fallen on Turner and Cunningham. He coupled with the toast the name of Dr. E. Jones. Dr. E. Jones responded. Dr. J. W. Smith, Secretary of the Club, proposed "The Visitors," and Mr. C. B. Lockwood and Mr. J. W. Alsop replied. Dr. Smart entertained the company with an amusing imitation of the various lecturers he had known in Edinburgh.

Dinner of the Society.

On the evening of Friday, June 19th, the annual dinner of the Society took place in the Adelphi Hotel, Mr. C. B. Lockwood, the President, occupying the chair. Sir W. M. Banks proposed the toast of "The Society;" Professor Thane proposed "The Visitors," and Mr. Leslie Scott replied. The toast of "University College," proposed by Sir William Turner, was replied to by Dr. Caton and Professor Paterson. Dr. R. E. Kelly greatly amused the company by two humorous demonstrations which he gave after dinner, the first being the Ophicleid, and the other the Proper Method of Inflation of the Head, after Arthur Thompson, illustrated by models. A capital vocal and instrumental programme was rendered by Professor Patton, Professor Musgrove, and Dr. J. C. Mathews.

Excursion to Chester.

On Saturday a number of the members and others made an excursion to Chester. Professor Paterson entertained a large party at luncheon on the steam yacht *Lady Beatrice*, which sailed up the Dee beyond Eaton Hall. A most enjoyable afternoon was spent.

THE IRISH MEDICAL ASSOCIATION.

ANNUAL MEETING.

THE annual general meeting of the Irish Medical Association was held on Wednesday, June 17th, in the Town Hall of Enniskillen, and was well attended. The recent demands which have been made at the instance of the Association to many provincial Boards of Guardians that the minimum salaries to dispensary doctors shall be £200 a year, and the controversies that have arisen in consequence, lent special interest to a meeting at which it was known that the matter would be discussed, and all parts of the country were well represented both by delegates of Branches and by individuals. The proceedings commenced at 2 p.m., when the chair was taken by the outgoing President, Dr. J. J. CRANNY, who directed that the report of the Council for the year should be read.

The report stated that there had been a large access of members during the year, and that the number on the roll was now 781. A special general meeting was held last October for the amendment of the articles of association. It resulted, among other things, in the annual subscription being raised to £1 1s. a year from January 1st, 1903, in order that the executive of the Association should be in a position to defend its members if need be in any legal proceedings that might be brought against them, and that it should also be able to give financial aid to country branches to assist them in their efforts to secure reform. The question which the Association had immediately before it, and which it had already to some extent taken in hand, was the unjust position in which Poor-law medical officers were placed. Nothing but organization and union would effect redress, and the members of the Association had happily recognized this fact. Even organization, however, could not be expected instantly to effect a reform of evils which had been exposed and combated by individuals for at least a quarter of a century. In that time Boards of Guardians had paid no attention to the pleadings and representations addressed to them, but it was certain that a few years of determined work by the Association of a very different kind would force those who were wilfully deaf to hear and comply with the just demands made to them. The life of a Poor-law medical officer, who depended on his salary, was one of practical slavery on a wretched pittance, out of which it was difficult to live and impossible to save, accompanied by a risk, and, in many cases, by a certainty of being refused any superannuation allowance when the time came that he was no longer fit to work.

OFFICE BEARERS FOR THE YEAR.

The annual report having been adopted, the result of the ballot for the election of new officers for the year was announced, and was as follows:

President: Dr. Leonard Kidd (West Bridge, Enniskillen). *Vice-Presidents*: Ulster—Sir William Whitla (Belfast); Munster—Dr. Cotter (Cork, Leinster); Dr. Charles O'Connor (Cilbridge, Connaught); Dr. Kinkead (Galway). *Honorary Treasurer*: Dr. Joseph Graham Burne (Dublin). *Honorary Secretary*: Dr. Thomas Donnelly (Dublin). The results of the elections for local and general councils were also announced.

VOTE OF THANKS TO THE OUTGOING PRESIDENT.

This business being concluded, Dr. Cranny left the chair, and the new President, Dr. Leonard Kidd, was inducted into it.

A motion by Professor KINKEAD that the cordial thanks of the Association should be accorded to Dr. Cranny, who had infused such life and vitality into the Association, was accepted enthusiastically.

Dr. CRANNY expressed his thanks in a brief reply, in which he stated that his work had been a labour of love, and that he thought that the fact that during his term of office as President he had signed papers for the establishment of twenty-three new Branches was a satisfactory proof of the progress of the Association, remarks which were greeted with much applause.

THE PRESIDENT'S ADDRESS.

The PRESIDENT then delivered his address. He thanked the members for the honour they had done him in electing him at the beginning of a year which would have to be one of vigorous work to redress the grievances under which the entire profession was suffering. The Association was entering on a new phase of struggle, and was determined to emerge from it victoriously. Since the last annual meeting the articles of association had been extended, and they might congratulate themselves on a greatly increased membership under a pledge of mutual support which read as follows:

I promise not to oppose any practitioner in any course of action he may take with the consent of the Council, in his official capacity, concerning any appointment he may hold, either to improve his position or resist additional burden to, or new condition of, his duties, and not to take an appointment vacant by the discharge or resignation of a practitioner under the above circumstances; and not to seek any appointment under the Irish Poor-law service the amount of which is less than the amount considered equitable by the Council.

When these conditions of membership were adopted some fear was expressed lest they should lead members and non-members into conflict, but the answer given had proved correct. "The Association will become so strong that outsiders in their own interest will seek membership." The principal business to be transacted that day was to arrive at some decision with regard to the disabilities which were mentioned in the agenda as being the four principal ones under which officers in the Poor-law medical service suffered. The demands that it was proposed should be made on these points were for (1) increased remuneration; (2) superannuation as a right; (3) annual vacation with payment of a *locum tenens* as a right; (4) construction of a scheme of promotion. The questions of fixed fees for *locum tenens* and consultation work were of lesser importance. It was perhaps natural that some doubt should from time to time have been expressed as to the genuineness of the grievances under which medical officers suffered, seeing that the worst paid appointments had hitherto been ever keenly sought, and while successive Chief Secretaries had taken full advantage of this fact as an excuse for indifference and neglect, Mr. Wyndham, though he admitted the reality of the grievances, deferred action on the plea of the contentions which would arise, and the expense, etc. Nothing, it was quite certain, would move the authorities except force—organized force of the kind which had been brought to bear on the War Office with regard to the R.A.M.C. The medical schools should take part, and the British Medical Association at its forthcoming meeting at Swansea would be asked to help set the force in motion. The people too should be taught that their interests and that of the profession were one. An example or two would serve to do this; for instance, how could a medical officer of health who received a miserable fee of £10 or £15 a year, and whose duty it was to help to save the community from the expense and loss of epidemics, be blamed if he hesitated to endanger his practice by reporting things about his best patients to an indifferent local authority? Nearly half the medical men in Ireland now belonged to the Association, and none of them would in future accept Poor-law posts unless the remuneration were brought up to the standard which the Association was now about to discuss and decide. As for the attitude to be adopted towards non-members, the Council would not countenance anything illegal or unconstitutional, but if such non-members degraded themselves and lowered the honour and status of the profession, members of the Association would act rightly if they refused to have any dealings with them. The subject of dispensaries, which was unfortunately not included in the work of the recent Commission, would have to be taken in hand by a special Committee of Inquiry. It was such a big subject that that was perhaps the best course, and efforts would be made to convert the Poor-law medical service into a State civil medical service. The subject of payment for consultations was hedged in by difficulties created by existing laws such as the Poor-law Relief Act and the Medical Charities Act. In view of this and also of the comparative rarity of such consultations, it was thought by some to be better not to burden their present programme with this question. In all their demands they must be moderate, and endeavour to take the public sympathy along with them. At any inquiry into dispensaries that might be held, returns of work done were certain to be required, so medical officers should in future insist on being furnished with either a red or a black ticket, as the case might be, with every dispensary patient. The fight before them would require ample funds, and he would like to see a Voluntary Guarantee Fund established, so that no deserving member should suffer from his loyalty to the common cause, and that nothing should be left undone which might help to achieve the ends they had in view. He would be glad to start such a fund with £5 himself. The poorer members of the Association might not be able to contribute to such a fund, but those who were richer would have an opportunity of showing their *esprit de corps*. The Fund would prove the earnestness of the protestations made against the rottenness of the Poor-law medical service, and show that behind its annual subscriptions the Association had also latent resources. Upon the termination

of the President's address, letters expressing regret at inability to attend the meeting were communicated to the assemblage from Sir William Thomson, Sir Thornley Stoker, Professor Byers, and Mr. M'Ardle.

The meeting was then invited to consider the various proposals which were to be submitted to it.

SALARIES OF DISPENSARY DOCTORS.

Dr. M'DONNELL proposed that the following recommendation, which had been made by the Council, should be formally adopted as a resolution of the Association:

That the minimum salaries of dispensaries be £200 per annum, for workhouses £120, and for both combined £300.

The proposal was seconded by Dr. AGNEW.

Dr. J. DILLON-KELLY, speaking as President of the Westmeath Branch of the Association, stated his opinion that this proposal should be accepted and immediate effect be given to it, for why, said he, should the successors alone of existing Poor-law medical officers reap the benefit of these exertions?

Dr. KIDD (Carlow) thought that the meeting should be strictly moderate in its demands, and ask for nothing beyond what they might in all reason expect to obtain. He was in favour, upon the whole, of only demanding that the salaries of the dispensary doctors should start at not less than £150 a year, and that there should be an annual increment of £10 a year up to £200. This scale, however, should be retrospective in its effect.

Dr. O'SULLIVAN, a delegate from the Kerry Branch, considered that any such compromise was useless. What the Boards of Guardians would grant was what was wrung from them by the Association and nothing else.

Dr. HICKEY (New Ross) did not think that all Boards of Guardians could properly be lumped together. His experience with the Wexford Boards had convinced him that they desired to prove themselves reasonable and sympathetic.

Mr. TOBIN (Dublin) expressed his approval of the original proposal, and said that in Dublin the young medical men were being educated up to the fact that £200 per annum was the lowest sum for which dispensary work could properly be undertaken.

Dr. C. J. O'CONNOR (Celbridge) spoke in favour of the resolution. He was strongly of opinion that the meeting should express its approval of the recommendation which had been made by the Council, and formally fix upon £200 per annum as the minimum salary.

Dr. L. F. ROWAN (Kildare) thought that the sum fixed upon by the meeting as a minimum should certainly not be less than £200 per annum. His own Branch of the Association had already caused that amount to be claimed from the County Kildare Board of Guardians, and a case of considerable importance to the profession in his county depended on the final decision of the meeting. Pending this decision, the county Branch had approved the continuance in office of a medical man who had recently obtained an appointment at the Rathmore and Kill Dispensary under a pledge to the Branch that he would shortly apply for the raising of the salary to a minimum of £200. He had done this, but his application had been refused, and, before calling on him to resign, the Kildare County Branch awaited the decision of the general meeting of the Association upon the general principle. The motion proposed by Dr. McDonnell was then adopted by the meeting.

SUPERANNUATION.

Dr. MCDONNELL then proposed the following resolution:

That medical officers in the Poor-law Service be entitled as a matter of right to superannuation in the civil service scale.

This was seconded by Dr. KELLY and passed by the meeting.

ANNUAL VACATION.

It was then proposed by Dr. S. COATES, and seconded by Dr. Olpherts:

That all medical officers in the Poor-law Service be entitled to four weeks' annual vacation, and that the payment of the *locum tenens* be as provided by Section v of the Local Government Amendment Act, 1902.

The resolution was adopted.

MINIMUM FEES FOR TEMPORARY DUTY.

The following resolution was then put before the meeting by Dr. P. DONNELLY and seconded by Dr. OLPHERTS:

That the minimum fees for discharge of temporary duty be: Dispensaries, £4 4s. a week; workhouses, £3 3s.; both combined, £5 5s. a week; for periods less than a week, £1 1s. a day.

The meeting adopted it.

AN INSTRUCTION TO THE COUNCIL.

The final proposal laid before the meeting was:

That it be an instruction to the Council to take the necessary steps to have such alterations of the law made as will enable the Treasury to pay one-half the amount of any increase of salary granted by Boards of Guardians and sanctioned by the Local Government Board.

This resolution was passed.

A vote of thanks to Dr. Leonard Kidd for presiding terminated the official proceedings. In the evening the annual dinner was held in the Town Hall, and brought a very successful meeting to a final conclusion.

UNIVERSITY OF LONDON.

HONORARY DEGREES.

PRESENTATION DAY was fixed for Wednesday evening last at the Albert Hall, and a brilliant assemblage quite filled the building. The occasion was special, it being the first time the Senate has conferred honorary degrees, the recipients of which were the Prince and Princess of Wales, Lord Kelvin, and Lord Lister. Whilst the audience was assembling, Sir Frederick Bridge, King Edward Professor of Music in the University, and Mr. H. L. Balfour gave an organ recital. The graduates about to be presented entered the hall in procession, and walked to the tiers of seats beneath the organ. The Chancellor's procession entered at 9 p.m., and moved to places reserved for its members upon and around the platform. It was composed of the Registrars, members of the Senate, and other officials, the Principal, the member for the University, the Chairman of Convocation, Lord Kelvin, Lord Lister, the Vice-Chancellor, the Prince and Princess of Wales, and the Chancellor (the Earl of Rosebery, K.G.). The audience remained standing whilst the members of the Royal Choral Society, about 500 in number, sang "God Bless the Prince of Wales." The scene when all were again seated was brilliant, a very large proportion of the men in the audience and many of the ladies wearing academic robes. The Prince of Wales wore the red robe with blue-lined hood of a Doctor of Laws, whilst the Princess was adorned in the scarlet robe with cream-lined hood of a Doctor of Music.

The PRINCIPAL (Sir A. Rücker) read his report for 1902-3, which indicated that the main outlines of the educational scheme of the reconstituted University have now been settled, and that the various professors and lecturers are at work; the County Council has paid its first annual grant of £10,000; Trinity College has given £5,000 for the establishment of a Chair of Music; the Goldsmiths' Company has made munificent gifts for the installation and maintenance of the University Library; Mr. G. W. Palmer has contributed £1,000 for the endowment of the Physiological Laboratory; and various other valuable gifts have been received, so that, apart from the above-mentioned grant of the County Council, a sum of about £25,000 has been given to the University in the course of the past year. New avenues of work have been opened in connexion with schools—with university extension, with the colleges, and with medical schools and polytechnics, and students are entering for the ordinary matriculation examination and for post-graduate study and research in unexpected numbers. But large sums of money are still required to enable the University to fulfil all its duties—"to make good the apathy of the past, and to secure the promise of the future." The report finally stated that the entry for the matriculation examination had increased by 700 candidates, and that 209 graduates of other universities had been registered as entering on courses of study.

The VICE-CHANCELLOR (Dr. Pye-Smith) next presented the Prince of Wales for the honorary degree of Doctor of Laws in the following terms:

My Lord the Chancellor, I present for the degree of Doctor of Laws His Royal Highness the Prince of Wales. [Cheers.] Born to greatness he has achieved it by the narrow and tiresome path of duty. [Cheers.] He has seen many cities and many men; and when, with his Royal Consort, he made the circuit of the globe, he saw none but loyal supporters of his father's throne, and helped to bind by indissoluble links this sceptred isle to her most distant offspring. [Cheers.] The Prince of Wales in the fourteenth century chose the double motto—Haut Mout and Ich Dien. In our day the Prince of Wales, treading in the footsteps of his Royal father, has shown his mounting spirit by care for the education and consequent prosperity of the nation, and by serving the afflicted and the poor. [Cheers.] Long in health and wealth may he live, the father of a like-minded line of Kings! [Loud cheers.]

The CHANCELLOR then formally admitted the Prince.

In presenting the Princess, the VICE-CHANCELLOR said:

My Lord the Chancellor, this University was the first to open her doors to the fairer and better half of mankind. [Laughter and cheers.] It is

therefore fitting that one of our honorary degrees should be given to an illustrious lady who has the art of winning loyalty and love, in whose life is the law of kindness, who has the *scientia scientiarum* which is wisdom, and the sympathy which is half the art of healing. [Cheers.] But all these gifts are united in harmony, and it is therefore for a degree in music that I present Her Royal Highness the Princess of Wales. [Loud cheers.

When the Princess returned to her seat, the National Anthem was sung by all standing.

Honorary degrees were next conferred upon Lord Kelvin and Lord Lister.

Professor TILDEN, in presenting Lord Kelvin for the Honorary Degree of Doctor of Science, said:

I present to you William Thomson, Baron Kelvin of Largs, for the degree of Doctor of Science, *honoris causa*. The illustrious son of a family famous for mathematical talent, for more than half a century Lord Kelvin filled the office of Professor of Natural Philosophy in the ancient University of Glasgow. Two generations have passed since he entered on his professorship, and the advances in physical science which have distinguished the nineteenth century from all preceding epochs have been largely due to the influence of Lord Kelvin in promoting true ideas concerning the conservation of energy, the laws of thermo-dynamics and their application to the mechanics and physics of the universe. His untiring intellectual activity has led him also to inquire into problems interesting to the chemist and geologist, as well as those which are important to the physicist and engineer. He has calculated the probable size of atoms; he has studied the structure of crystals; he has estimated the age of the earth. But the world knows him best as the man who has shown how practically to measure electrical and magnetic quantities, and has made it possible to link together distant continents by the electric telegraph. It is he who has shown how to neutralize the effects of iron on the compasses of ships, and how to predict the tides, and who has thus taught the mariner to steer safely over the surface of the ocean, and to sound, as he goes, its depths and shallows. A greater philosopher than Democritus, in him are united the qualities of Archimedes and Aristotle. Regarded with affectionate reverence by his contemporaries, it cannot be doubted that his name will shine brightly through long future generations. In offering a place of honour to such a man, the University confers lustre on itself.

Mr. BUTLIN, the Dean of the Faculty of Medicine, presented Lord Lister for the honorary degree of Doctor of Science. He said:

Since the reconstitution of the University the Faculty of Medicine has been almost continuously engaged in arduous, and not always pleasant, work; and to-night, as if in compensation, there falls to its lot—for I am but the mouthpiece of the Faculty—the agreeable task of presenting my Lord Lister for one of the first four honorary degrees of the University of London. While every person in my profession is familiar with the work which he has done, and his name has become a household word in every part of the civilized world, comparatively few persons are acquainted with the obstacles which he has overcome. It is not only that, sitting down many years ago in front of a difficult problem of pathology, Lord Lister solved the mystery which had puzzled the brains of the greatest surgeons of all time, or that he then invented a means of meeting and overcoming surgical infection, but that he stood by his theory, and fought manfully for it until at length, in spite of opposition, of envy, of lack of faith, and even of ridicule, he succeeded in carrying conviction to the minds of his own profession and of the world at large. And all this was done, and these things were borne, not for the sake of gain—care for which has never been a part of Lord Lister's character—but for the sake of science and for the relief of human suffering. It is well-nigh impossible for those among whom a great man lives to form a just estimate of the value of his work, whether in art or in science, but I venture to predict that the name of Lord Lister will be handed down from generation to generation, from century to century, until, more than 2,000 years hence, he will be acknowledged by our descendants as the Father of Surgery, in like manner as Hippocrates is regarded by this present generation as the Father of Medicine.

The other degrees were then conferred. Ninety-two graduates received the degree of B.Sc., 47 that of M.B., 8 that of B.S., 9 those of M.B. and B.S., 15 that of LL.B., 142 that of B.A., one B.A. and Art, Theory, and History of Teaching, 4 that of B.D., and 12 that of Art, Theory, and History of Teaching. Two graduates were presented for the Degree of M.S., 21 (amongst whom were 10 ladies) for that of M.A., 1 M.A. in the Art, Theory, and History of Teaching, 13 for that of D.Sc., 14 for the M.D., 2 for State Medicine, 1 for LL.D., and 1 for D.Litt. Then followed the presentation of undergraduates and graduates who had won distinctions during the year.

After the conferment of the degrees the CHANCELLOR rose and said:

May it please your Royal Highnesses, ladies and gentlemen, this is no occasion, and certainly this is not the place, for any speaking; but I have been asked to conclude our auspicious proceedings by a single sentence. I think that this evening marks a distinct step forward in the annals of the University of London. For the first time the University of London has exercised its undoubted privilege of conferring honorary degrees, and I think that, by the consent of all, its exercise of that prerogative must be held as eminently judicious. [Cheers.] In the Prince and Princess of Wales we pay honour to that dynasty to which we owe so much, which we love so well, and which is the symbol and bond of our world-wide Empire. [Cheers.] We honour them, too, because on the steps of the Throne itself they have heard and have obeyed the call of duty. [Cheers.] In Lord Kelvin and Lord Lister we hail princes of science. [Cheers.] We rejoice to place their names on the roll of the graduates of the University of London, and, highly as I honour that University, it is difficult to say which receives and which gives illustration on that occasion. [Cheers.] I think on one point we are all clear—that having once exercised the prerogative of conferring honorary degrees we shall be strict and parsimonious in exercising it in future. [Cheers.] I hope with all my heart—and I believe in that opinion I voice the judgement of the Senate—I hope that this will not be an annual celebration; that it will not be the task of the University at recurring periods to find persons worthy to receive their honorary degree, and that it shall only be persons worthy to stand on the same plane with our doctors of to-night whom we shall ever summon to this dais to receive that degree in future. [Cheers.] With these words, which I think represent the feeling of the University of London, I would close the sentences that I have uttered with this final wish, that the honorary degree that we have for the first time conferred to-night may be the most rare and the most precious in the annals of any University. [Loud cheers.]

The Chancellor's procession finally left the hall in the reverse order of entry, whilst the choir sang "Hail, bright abode!" (*Tannhäuser*).

ASSOCIATION NOTICES.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 8th day of July next, at 2 o'clock in the afternoon.

May, 1903. GUY ELLISTON, *General Secretary*.

BRANCH MEETINGS TO BE HELD.

ABERDEEN BRANCH.—It is requested that nominations (signed by three members of the Branch) of a representative of the Branch on the Central Council be sent to Dr. Gray, 5, Bonaccord Square, Aberdeen, by June 27th.—H. M. W. GRAY and J. F. CHRISTIE, Joint Honorary Secretaries.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: WEST BROMWICH DIVISION.—The first meeting of the West Bromwich Division of the above Branch will be held in the Council Room of the Town Hall, West Bromwich, on Monday, June 29th, at 4 p.m. Business: Adoption of rules, election of Council, officers, representative delegate, member of Council, and other business.—H. LANGLEY BROWNE, Moor House, West Bromwich, Honorary Secretary.

CAMBRIDGE AND HUNTINGDON BRANCH.—The annual meeting of the Cambridge and Huntingdon Branch will be held at Saffron Walden on Thursday, July 2nd. The President-elect, Dr. Carr Sprague, of Saffron Walden, has invited the members to luncheon at 1 p.m. Business: Election of officers; consideration of by-laws. Dr. Sprague: Motor Vehicles for Medical Men. G. Wherry, F.R.C.S.: Remarks on Ophthalmia Neonatorum. Dr. Anningson and Dr. Armistead: (title not yet forwarded). Dr. L. Humphry and Mr. T. S. P. Strangeways: A Case in which the Clinical Diagnosis was Typhoid Fever and the *Post-mortem* Diagnosis was Paratyphoid. Cultures, etc., shown. Mr. H. C. Bartlett: The Vagaries of Movable Kidney.—F. E. A. WEBB, Newmarket Road, Cambridge, Honorary Secretary.

DUNDEE, PERTH, AND STIRLING BRANCHES.—The nomination of candidates for office of elective member of Council for the ensuing year must be made in writing on or before July 4th to Dr. Moorhouse, 1, Glebe Avenue, Stirling. Each member may nominate a candidate, but no name will be voted on unless supported by three nominations.—R. C. BUIST, M.D., 166, Nethergate, Dundee: W. A. TAYLOR, M.B., 10, Marshall Place, Perth; J. E. MOORHOUSE, M.D., 1, Glebe Avenue, Stirling.

EAST YORK AND NORTH LINCOLN BRANCH.—The annual meeting of the above Branch will be held at the Royal Infirmary, Hull, at 4 p.m. on Tuesday, June 30th, and will be followed by the annual dinner (tickets 6s. 6d. each) at 7.45 p.m. at the Imperial Hotel, Hull.—E. M. HAINSWORTH, 16, Albion Street Hull, Honorary Secretary.

LEINSTER AND SOUTH-EASTERN OF IRELAND BRANCHES.—The nomination of candidates for election as members of the Central Council of the Association must be sent to the Honorary Secretary not later than Monday, June 29th. Each candidate must be nominated in writing by three members of either Branch. The Branches are entitled to jointly elect two members of Council.—ARTHUR H. WHITE, Honorary Secretary, Leinster Branch.

METROPOLITAN COUNTIES BRANCH.—The fifty-first annual meeting of the Branch will be held at the Hotel Cecil on Tuesday, June 30th, at 6 p.m. The business to be transacted is to appoint officers for the ensuing year, to receive the reports of the Treasurer and of the retiring Council, and to hear an address from the incoming President, Mr. H. W. Kiallmark. At 7 p.m. precisely the members will dine together, the President in the

chair. The charge for the dinner will be 3s. 6d. each, exclusive of wine. —H. BETRAM ROBINSON, 1, Upper Wimpole Street, W., GEORGE ROWELL, 6, Cavendish Place, W., Honorary Secretaries.

MUNSTER BRANCH.—Election of Representatives of the Branch on the Central Council. Nomination of Representatives signed by three electors must be forwarded to me (in writing) on or before Saturday, July 11th. —PHILIP G. LEE, 25, Patrick Hill, Cork, Honorary Secretary.

NORTH WALES BRANCH.—The last annual meeting of this Branch, before its amalgamation with Shropshire under the new Constitution, will be held at Barmouth, the beginning of July. Members having papers to read, or cases to communicate, are requested to intimate by June 27th.—W. JONES-MORRIS, Portmadoc, H. JONES-ROBERTS, Pen-y-groes, Honorary Secretaries.

SOUTHERN BRANCH.—The thirtieth annual meeting of this Branch wil be held at the Royal National Hospital for Consumption, Ventnor, on Friday, July 3rd. The President kindly invites the members to luncheon at the Royal Hotel, Ventnor, at half-past one o'clock. The general meeting will be held at the Royal National Hospital at 2.30. At this meeting new Branch rules and ethical rules will be submitted for approval by the Branch Council. Members desirous of reading papers are requested to forward the titles to the Honorary Secretary at once. No communication must exceed seven minutes in length, and no subsequent speech must exceed five minutes. An address will be delivered by Dr. R. Robertson, President. Dr. Ward Cousins, F.R.C.S., will make some remarks on the Midwives Act, 1903, and will relate a case of Ligature of the Carotid for Aneurysm in a patient 75 years of age. Mr. Childe, F.R.C.S., will exhibit a New Surgical Operation Case. Other contributions are expected. Members intending to be present at luncheon are requested to communicate with Dr. Robertson, St. Catherine's House, Ventnor, not later than June 30th. Notice is hereby given under By-law 22 that the names of candidates for the office of representative on the General Council of the Association, each nominated by three electors, must be sent to the Honorary Secretary of the Branch on or before July 3rd.—H. J. MANNING, Honorary Secretary and Treasurer, Laverstock House, Salisbury.

ULSTER BRANCH.—The annual meeting of this Branch will be held on Friday, July 10th, in Belfast. Any member having any business to bring before the meeting should communicate with the Secretary on or before July 2nd. Voting papers for the various officers have been sent out to each member, and are required to be returned on or before July 7th. If any member has not received the necessary forms, communication might be sent to the Honorary Secretary, WILLIAM CALWELL, M.D., 1, College Square North, Belfast.

SPECIAL CORRESPONDENCE.

MANCHESTER.

Port Sanitary Authority and Faulty Construction of Ships.—The Jewish Colony.—Noxious Fumes.—Deputy City Coroner.—Bolton Infirmary.

A VERY important question is raised in the annual report for last year of the Medical Officer of the Manchester Port Sanitary Authority (Dr. Pringle). Urban authorities have control over a house during its construction. It is suggested that the Port Sanitary Authorities should have the same control over ships during their construction, and thus be able to control the sanitary arrangements and accommodation generally of the crew. These suggestions are based on the fact that during last year 144 cases of sickness were investigated. It is clear that with the progressive increase in the trade of the port Manchester is becoming more and more liable to the invasion of seaborne infectious diseases. In no small proportion of cases the defects of sanitary arrangements and accommodation in the ships examined were due to initial faulty construction, faults which efficient control at the hands of trained individuals during the construction of the ships would have effectually prevented. Yet every one of these boats had been examined and passed as fulfilling the requirements of the Merchant Shipping Act. Not only so, but the defects discovered were, in many instances, either direct contraventions of the provisions of the Merchant Shipping Act, or due to non-fulfiment of some one or other of its provisions.

We take the following regarding the Manchester Jews from the evidence given by the Medical Officer of Health for the City before the Alien Immigration Commission. It appears that the majority of aliens in this city are Jews. There is also a small colony of Italians and Poles. The total number of Jews is probably about 25,000. Their children are strong and of good mental capacity. The vitality of the Jews is remarkable, their birth-rate is high and their death-rate low, even including the death-rate of infants. Their staple food consisted of brown and black bread, barley, oatmeal, rice, split peas, oil, potatoes fried in oil, herrings, sugar, jam, treacle, and cheese made from sour milk. There was a tendency to use cheap food. They ate a great quantity of fish, and they possessed an advantage over the native-born person in that they did not drink. Consumption was not so prevalent amongst them as among the natives. The alien Jew lived in Manchester on the space between the valleys of the Irk and Irwell, which had steep inclines and was well drained. The aliens were believed to be fairly cleanly in their person, but many wore old and dirty clothes. There was overcrowding, and their houses were very dirty in the sense that dust was allowed to accumulate, but it was very rare that filth was observed inside. There was no reason to suppose that there was much more overcrowding amongst the poor Jews than among the corresponding class of the English population, taking into account that they did not appear to resort to common lodging houses. The sanitary defects observed in Manchester amongst the alien Jews up to now had been such as to be amenable to the ordinary methods of sanitary administration, and had, in fact, to a large extent been remedied, partly through persuasion and partly through pressure.

The annual report of the Chief Inspector of Alkali Works states that there are in England, Ireland, and Wales 1,044 works carried on under the Alkali Works Acts. Of these, 75 only are works decomposing salt, and so scheduled as alkali works: while the remainder 969 carry on processes which are scheduled under the Acts of 1881 and 1892. There are also 124 works registered in Scotland, bringing the total number of works registered in the United Kingdom to 1,168. Notwithstanding the fact that the number of infractions of Act limits of escape of hydrochloric acid, found by the inspectors up till October, 1902, has borne a small proportion only to the number of tests taken, and that the infractions have never been found to be of long duration, but due to accidental causes, and not to wilful negligence, complaints of damage from Widnes, Runcorn, and St. Helens have been more frequent than for many years past. They have emanated principally from residents whose land lies in a westerly direction from the source to which the damage was attributed. In one case, where the nuisance complained of lasted for several days, the direction of the wind was steadily from the west, the distance of travel being about sixteen miles from Widnes and Runcorn. Close investigation elicited the important fact that the vapours complained of proceeded from the higher chimneys in these localities, which delivered the acid gases into higher atmospheric strata travelling at an increased velocity in an easterly direction as compared with those discharged at lower levels. It appears that the highest chimneys in Widnes are those belonging to metallurgical works, over the conduct of whose operations the inspectors under the Alkali Act have no powers of control or even suggestion. It is known that the smoke from these chimneys is acid in character. In the case of complaints attributable to Widnes it was impossible to assign the damage to one class of works exclusively, whether chemical or metallurgical, as both emitted the same acid gases of sulphur. No serious complaint reached the Department of the conduct of salt works during the year. The depression in the Cheshire districts has been of such long duration that many works belonging to the Salt Union have been off the register for several years continuously. Certainly it may be said that the area within which damage is sustained by the aggregation of works in a limited space, notably at Winsford, Cheshire, is less than formerly, and that vegetation is re-establishing itself in places where before it could not thrive. The inspector heartily acknowledges the willingness of manufacturers, managers, and chemists to co-operate with the inspectors.

The Manchester City Coroner (Mr. Ernest Gibson) has appointed Dr. W. Sellars of Manchester to act as Deputy Coroner. Dr. Sellars is a barrister practising on the Northern Circuit. From 1883 to 1900 he acted as Medical Officer of Health for Radcliffe.

The corner stones of a large extension—to cost £10,000—of the Bolton Infirmary were laid on June 20th. The cost is being largely defrayed out of the Diamond Jubilee and Coronation Funds. The new block will include a new accident department, an out-patients' room, and a dispensary.

CORRESPONDENCE.

MEDICAL DEFENCE.

SIR,—It is to be hoped that the question raised by Mr. Edmund Owen as to the British Medical Association taking up medical defence will be considered carefully in all its bearings before being either answered in the affirmative or negative. I do not think for one moment that any personal matters will be allowed to weigh in the discussion of this subject, and I for one have no intention of raising such. There are, however,

many considerations which require to be taken into account before a proper decision can be arrived at, and I venture as one who has had an active experience of medical defence for over sixteen years, to mention some of these.

If the British Medical Association can by any alteration of its Memorandum or Articles of Association undertake the duties of defence of individual members the first matter involved is one of finance. It may at once be taken as final that such duties can only be undertaken for members living in Great Britain and Ireland: it would be absolutely impossible to undertake the defence of Colonial and Indian members owing to distance and the inability to control the "conduct" of legal actions tried outside the United Kingdom.

This factor would at once make a distinction between the rights and privileges of members residing in the United Kingdom and those outside that area, and this point raises the question of the subscription at once. To do the defence work thoroughly a large expenditure would be necessary, and to meet this expenditure one of three courses must be adopted. (*a*) An increased subscription must be charged to members living in the United Kingdom. (*b*) A certain moiety of the present members' subscriptions must be earmarked and paid into a medical defence fund, and the amount utilized for purposes of defence. (*c*) The subscription might be voluntary and only paid by those who desire to join the Medical Defence Department.

The first of these, making as it would a compulsory addition to the already increased subscription claimed from existing members of the Association, would be, I fear, objected to by a great many. The second scheme is a matter which without knowledge of the income and present expenditure of the Association it is almost impossible to discuss. If from the existing profits could be taken each year a sum representing about £6,000 to £8,000 that would be an excellent method of meeting the defence expenditure but it must be taken, not from the general funds, but from profit accruing from the membership fees of those living in the United Kingdom only —that is to say, only those who might reap the benefit of the defence should be called upon to subscribe to the cost.

It would be manifestly unfair to call upon any others outside the area of protection to defray any of the expense. I have put the expenditure down as between £6,000 and £8,000 a year, and I cannot believe the work could be done for less. There would have to be, for example, a special staff created with offices and an executive officer who would have to devote his whole time to the work and to be adequately paid. A small committee with full powers to act would have to be formed, and as the meetings would be numerous their services too would have to be paid for properly. Medical defence to be of the slightest use must be prompt; cases cannot be allowed to drift for three or four months before being dealt with, and the committee therefore would require plenary powers and not have to await the consent of the Council. In the work of the Medical Defence Union cases are dealt with daily, and legal instructions given which, if left for over the time necessary to call a meeting of the Executive Committee, would be endangered considerably; rapid and accurate action must be adopted to ensure any chance of success.

The third suggestion—namely, that of limiting the defence to members who will insure themselves in the Association voluntarily is not worthy of any consideration whatever, as it possesses absolutely no advantages over those granted to members of any of the existing societies, and I doubt whether any of our members would leave the Union to risk joining what, to all intents and purposes, would be simply another "rival" organization without the experience of the older existing societies.

Having touched upon the "finance," there is another matter which I must ask leave to mention.

It has been held by the High Court that when cases of a penal nature are brought before the General Medical Council by any association acting as complainants, no member of that association must sit upon the Council which is to try the case. Should the British Medical Association, therefore, clear the ground of the existing organizations for defence, and have to take up penal cases before the General Medical Council, it would involve the resignation from membership of the Association of all the members of the Council.

In conclusion, I wish to refer to one other matter. Certain objection has been taken to the fact that there are two societies aiming at the protection of the profession. May I remind your readers that there are really three, one more lately having been established in Scotland? I merely mention this as an illustration of the proverb "Imitation is the sincerest flattery;" and unless the British Medical Association obtained as members of its defence bureaux all the profession in the United Kingdom, I am afraid that nothing could be done to prevent similar insurance societies being formed by men outside the Association. I am not in the least objecting to one strong and powerful body being formed for the purposes of medical defence, but it will require serious consideration. I venture to think that because there are several smaller societies at present, no blame can be attached to the Medical Defence Union. A member of the profession once called upon me to complain of the opposition he met with in his practice in a country district. I went into the matter with him, and found that the "opposition" of which he complained was due to the fact that he had started practice in a place where there was already an old-established practice, and that he was "opposed" by the practitioner who had been there for many years before he went into the district. *Verb. sap.*—I am, etc.,

Queen Anne Street, W., June 22nd. A. GEORGE BATEMAN.

SIR,—The proposal that the British Medical Association should undertake the duties of medical defence was considered in 1895, when at the annual meeting in London it was carried unanimously:

That it is to the interest of the public and of the medical profession that the Council of the Association should take power and authority to protect both the individual and collective interests of the medical profession, and that the Council be requested to take such steps as may be necessary to enable it to actively undertake these duties, and to devote a portion of the income and funds of the Association for these purposes.

Those who were advocating the proposal during the following year brought the matter before the Branches, and obtained an overwhelming majority. Nearly all the home Branches considered the question, and only one Branch voted against the proposal that the Association should undertake medical defence. In 1896 two general meetings were held, one in Birmingham and one in London, at which a special resolution was passed instructing the Council to take such steps as might be necessary to carry the wishes of the members into effect. The proposal was now referred by the Council to the Branches, and again a majority was obtained in favour. Lastly, a poll was taken of individual members, and the requisite majority was obtained, but as only some 60 per cent. of the members returned their postcards, the Council drew attention to the supineness of the members and the proposal was dropped. It is difficult to see what more was left to be done by the supporters of the proposal to induce the Council to effect this obviously much-needed reform, and that it was allowed to be dropped is only one more example of the hopeless ineptitude of the medical profession, which is illustrated in nearly all our relations with the public.—I am, etc.,

June 23rd. X.

SIR,—Medical men are so frequently the recipients of threatening letters and the victims of actions for slander that it is quite time we took steps to prevent this evil. However successful we may be in actions of this sort it is almost impossible to make it sufficiently clear during the trials how utterly groundless many of the accusations are.

There is a natural desire amongst us all to protect our patients from themselves, even when they are repaying us in such an abominable manner for the endless trouble we have taken with them. This is so often mistaken for weakness both by the patients and by the public that one wonders whether it would not be really better in the end if one made noteworthy examples of some of them.

Not infrequently the publicity given to these action discloses the fact that many other doctors had been similarly threatened by the same individuals and that they would gladly have come forward with the most damning evidence had they known in time.

We are therefore forced to recognize the fact that there are many people roaming about consulting one doctor after another, apparently, with no other object than that of entrapping one or more of them with a view to an action for damages of some sort. How, then, can this be prevented?

Mr. Edmund Owen has very opportunely drawn attention to the absurdity of having two societies for the purpose of medical protection, and has, of course, suggested that the two should unite. If this were accomplished the remedy for the above evils would be very much simplified, as there would then be only one medical mutual protection association representing, one would hope, every self-respecting British medical man.

This society would ask and expect every member who received a threat by letter or otherwise to inform them at once, so that they might deal with the matter at the time in the way they thought best, and then register the particulars in case other members should make similar reports about the same individuals.

By this and other means there would gradually be accumulated and arranged such a fund of useful information that many a case that seemed so simple could be shown up in its true light, and much injustice and worry would be prevented.

We should then, perhaps, find ourselves in a position to inform many of these "injured innocents," whom we previously thought were merely the victims of their own too lively imaginations, that they were coming into much too intimate contact with "a suit of armour that had entirely lost its polish and attractiveness," and that if they did not recognize this fact they might find themselves the unwilling guests of the State instead of the recipients of large sums in damages.—I am, etc.,

ARTHUR JAMES, M.D., D.P.H.

Gloucester Terrace, W., June 22nd.

THE PROPOSED CAMP AT THE ANNUAL MEETING AT SWANSEA.

SIR,—Those members who have had experience of the crowding, discomfort, noisy situation, stuffy air, indifferent accommodation, and withal increased charges at hotels where the British Medical Association has met on some occasions, must feel very grateful indeed to Mr. Brook, F.R.C.S., and Mr. Thomas, M.B., of Swansea, for so thoughtfully and kindly proposing to organize a camp of completely furnished, separate tents, "far from the madding crowd" and night-long rumbling of traffic, in pure air, amid heather and ferns, and charming scenery, with all the comforts of a mess, and yet having a steam tramway to town at the door. For this to prove an accomplished fact, however, a certain number of names must be sent in at once, and it is to be hoped that so delightful a project may be well supported. Then, in addition to its other attractions, the meeting at Swansea will be remembered as the one combining work in the city with residence in the country under the most health-giving and pleasurable conditions.—I am, etc.

Winchester, June 19th. W. M. HARMAN.

OBITUARY.

ALFRED HAVILAND, M.R.C.S.

THE recent death of Mr. Alfred Haviland removes one who had done good work in a branch of investigation which he had made in a special sense his own. He held for some time an appointment, probably unique in its character, that of Lecturer on the Geographical Distribution of Disease at St. Thomas's Hospital, London, and the title of this lectureship indicates his special field of work. His wide and accurate knowledge of geology and physiography rendered him peculiarly efficient in this work, and, quite irrespective of the value of his main conclusions, his descriptions of the geology of England, and particularly of that of the Lake District of Windermere are full and complete and will always be valuable for reference.

The chief results of Mr. Haviland's work are embodied in a large volume on *The Geographical Distribution of Disease in Great Britain*, a second edition of which was published by Messrs. Swan Sonnenschein and Co. in 1892. In this volume he expanded and confirmed by the death returns for 1861-70 the conclusions which he had previously based on his investigation of the national death returns for 1851-60. He investigated the incidence of mortality from certain definite causes in the 630 registration districts of England and Wales. He thus arrived at the conclusion that "the fields of the deadliest struggles with either cancer, phthisis, or heart disease in the 1851-60 campaign are identical in the majority of cases with those marked in the map for 1851-60; and that the least deadly fields of the earlier corresponded with those of the later decenniads." Having established by his statistics that for twenty years certain districts had an excessive mortality from the above diseases, Mr. Haviland announced as the result of his climatological and geographical study of these districts: (*a*) That cancer was more fatal among women in clayey, flooded areas than on elevated calcareous soils; (*b*) that heart disease and rheumatism were more fatal in the unventilated valley-system of England and Wales than in the open areas freely exposed to the prevailing winds and sunshine; and (*c*) that those tainted with phthisis succumbed readily to the full blast of prevailing winds.

In view of the loss to medical science by Mr. Haviland's death, a restatement of his main conclusions is appropriate. They will serve, it may be hoped, to set others to work in reviewing his conclusions, and in testing them by statistics in which the age and other corrections which we now know to be necessary shall have been made. Mr. Haviland's results as to cancer particularly deserve attention, and it ought to be possible to obtain accurate corrected statistics for 1891-1900, by which his important deductions might once more be checked and possibly confirmed.

Mr. Haviland made other contributions to medical literature, among the best known of these being his *Geological and Aspect Map of Brighton*, 1882; *Brighton as a Health Resort*, 1883; *Climate and Aspect in Wheat Culture* (with maps), 1886; Cancer Houses, *Lancet*, 1895; *Medical Geography as an Aid to Clinical Medicine*, 1897.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

DEGREES.

AT a Congregation held on June 18th the following degrees were conferred:

Doctors of Medicine.—G. G. Davidson, New College, and J. E. H. Sawyer Christ Church.

The following candidates have passed the M.B. Examination in the subjects undernoted:

Organic Chemistry.—S. F. Moore, Trinity College; M. V. F. Nash, Exeter College; A. E. Taylor, Trinity College.

Materia Medica and Pharmacy.—G. D. H. Carpenter, non-collegiate; C. H. D. Corbett, University College; M. W. Flack, Keble College; S. Hartill, New College; J. F. Hornsey, Wadham College; G. R. Hughes, Exeter College; R. Jamieson, Trinity College; J. R. Kay-Monat, Hertford College; B. G. Klein, Corpus Christi College; A. S. MacNalty, non-collegiate; S. R. Mutch, Brasenose College; H. A. Philpot, New College; H. L. Tidy, New College; J. Wallace, Exeter College; S. E. Whitnall, Magdalen College; W. C. Wigan, St. John's College.

Human Anatomy and Human Physiology.—G. H. H. Almond, Hertford College; B. E. A. Batt, Trinity College; C. Blards, Jesus College; O. E. R. Berkely-Hill, Trinity College; H. B. Billups, Worcester College; L. C. W. Brigstocke, Jesus College; D. Davidson, Brasenose College; C. J. Douglas, Magdalen College; S. Nockolds, Keble College; C. T. Raikes, Trinity College; H. R. Ramsbotham, Brasenose College.

Pathology.—W. B. Billinghurst, St. John's College; H. Frankish, Worcester College; A. G. Gibson, Christ Church; H. H. Hogarth, Christ Church; R. E. H. Leach, Merton College; H. C. Lecky, Christ Church; F. P. Nunneley, Brasenose College; P. N. B. Odgers, Lincoln College; J. H. D. Phelps, Queen's College; D. R. Pike, Jesus College; A. Shelley, Keble College; J. H. Thomas, Trinity College; P. F. Tinne, Magdalen College; J. A. Vlasto, New College; A. R. Wilson, Wadham College.

Medicine, Surgery, Midwifery, and Forensic Medicine.—J. M. Bickerton, Merton College; C. L. Coode, Hertford College; D. W. C. Jones, Corpus Christi College; H. W. Kaye, Magdalen College; R. E. H. Leach, Merton College; H. C. Lecky, Christ Church; A. C. Le Rossignol, Exeter College; T. G. Longstaff, Christ Church; J. H. D. Phelps, Queen's College; W. B. Prowse, Pembroke College; W. E. Robinson, non-collegiate; C. Rolleston, New College.

The following passed the examination for the degree of Master in Surgery:

G. B. Ferguson, Hertford College; F. E. Fremantle, Balliol College; E. H. Hunt, Balliol College.

UNIVERSITY OF CAMBRIDGE.

Degrees.—At the Congregation on June 18th the following medical degrees were conferred:—*M.D.*: Hon. G. H. Scott, Trinity; R. F. C. Ward, St. John's; H. E. Symes-Thompson, Christ's; F. C. Eve, Emmanuel. *M.B. and B.C.*: H. A. Gould, Trinity; F. Richmond, Clare; L. Bousfield, Pembroke. *M.B.*: A. G. Bate, King's; J. E. Spicer, Trinity. During the academical year, which closed on June 24th, the numbers of medical and surgical degrees conferred were: M.D. 23, M.B. 59, B.C. 83.

Professorship of Surgery.—The electors to the Chair of Surgery will meet on July 20th to make choice of a professor.

Raymond Horton-Smith Prize.—This prize for the best M.D. thesis of the year is awarded to the Hon. George Hepburne Scott, M.A., M.D., B.C., of Trinity, for his work, On the Classification of the Cells found in the Blood in Health and Disease.

The following have passed the Third Examination for Medical and Surgical Degrees in the subjects undernoted:

Part I. Pharmacology and General Pathology.—E. E. Atkin, B.A., Cai.; J. R. Bentley, Emm.; G. T. Birks, B.A., King's; C. W. Bowle, B.A., Trin.; A. R. Brailey, M.A., Down.; A. D. Brunwin, B.A., Trin.; N. C. Carver, B.A., King's; S. Child, B.A., Pemb; J. S. Cooper, M.A., Jes.; D. V. Cow, B.A., Trin.; G. E. Davidson, B.A., Cai.; W. F. L. Day, B.A., Cai.; C. E. Droop, B.A., Trin.; A. H. Fordon, B.A., Christ's; S. Gooding, B.A., Joh.; R. E. G. Gray, B.A., Pemb.; J. M. P. Grell, B.A., H. Selw.; P. Hardy, Trin. H.; A. G. Harvey, B.A., Joh.; W. H. Hastings, B.A., Trin.; S. A. Henry, B.A., Trin.; W. H. Hills, B.A., Pemb; T. G. M. Hine, M.A., King's; A. B. Howitt, B.A., Cla.; W. E. Hume, B.A., Pemb.; N. H. Illingworth, M.A., Cla.; C. L. Isaac, B.A., Joh.; W. D. Keyworth, B.A., H. Selw.; C. Lillingston, B.A., Pemb.; J. H. McAllum, M.A., Christ's; H. B. M'Caskie, B.A., Cai.; F. S. G. MacDonald, B.A., Joh.; J. McIntyre, B.A., King's; L. H. L. Mackenzie, B.A., Trin.; E. H. Mayhew, B.A., Emm.; R. C. Mott, M.A., Trin.; P. K. Muspratt, M.A., Christ's; B. H. Pain, B.A., Emm.;

H. I. Pinches, B.A., Sid. Suss.; W. O. Pitt, B.A., Emm.; C. A. W. Pope, B.A., Trin.; R. Rees, Down.; H. J. Robinson, B.A., Joh.; H. C. Sidgwick, B.A., Cla.; J. M. Smith, B.A., Christ's; A. T. Spanton, M.A., Trin.; S. J. Steward, Down.; B. N. Tebbs, M.A., Queens'; H. A. R. E. Unwin, B.A., H. Selw.; J. A. Venning, B.A., Trin.; G. T. Western, B.A., Pemb.; W. P. Williams, B.A., Down.; J. L. Wood, B.A., Trin.; R. Worthington, B.A., Cla.

The following have passed the Second Examination for Medical and Surgical Degrees in the subjects undernoted:

Human Anatomy and Physiology.—G. D. Alexander, B.A., Cai.; F. O. Arnold, Trin.; A. L. Baly, B.A., Emm.; J. Barcroft, M.A., King's; G. B. Bartlett, B.A., Sid. Suss.; J. W. B. Bean, B.A., H. Selw.; W. T. Briscoe, B.A., H. Selw.; D. W. A. Bull, B.A., Cai.; R. Burgess, B.A., Cai.; C. Cassidy, Sid. Suss.; A. de C. C. Charles, Magd.; H. J. Clarke, Trin.; F. J. Cleminson, B.A., Cai.; A. I. Cooke, B.A., Cai.; W. D. Coplestone, B.A., Jes.; G. W. Craig, B.A., Emm.; N. R. Cunningham, B.A., Cai.; R. Davies-Colley, B.A., Emm.; G. H. Davy, Cai.; J. R. Draper, Joh.; A. C. D. Firth, B.A., Trin.; C. F. Fothergill, B.A., Emm.; N. H. Gandhi, B.A., Cai.; H. J. Gauvain, B.A., Joh.; L. H. Goh, B.A., Emm.; W. B. Grandage, B.A., Cla.; C. W. Greene, Emm.; M. Grundy, B.A., Joh.; J. E. Hailstone, M.A., H. Selw.; O. Heath, B.A., Trin.; N. G. Horner, B.A., Cai.; J. H. Iles, B.A., Cai.; C. H. T. Ilott, B.A., Cai.; T. A. Jones, B.A., Cai.; J. L. Joyce, King's; A. A. H. Lawrence, B.A., Emm.; C. N. le Brocq, B.A., Pemb.; J. W. Linnell, B.A., Joh.; W. B. Marshall, B.A., Joh.; R. M. Miller, B.A., Cla.; A. W. Moore, Emm.; H. W. Moxon, B.A., Joh.; G. W. de P. Nicholson, B.A., Jes.; H. F. G. Noyes, B.A., Cai.; H. E. H. Oakeley, B.A., Joh.; G. G. Packe, B.A., Trin.; H. A. Pontifex, B.A., Pemb.; J. M. Postlethwaite, B.A., Emm.; C. H. Rippmann, B.A., King's; C. T. Scott, M.A., Sid. Suss.; P. H. Smith, B.A., Pemb.; W. H. R. Streatfeild, B.A., Queens'; C. Strickland, B.A., Cai.; F. B. Treves, B.A., Cai.; B. Wanby, Non Coll.; A. Walker, B.A., Emm.; G. H. H. Waylen, B.A., King's; G. L. Webb, B.A., Cai.; P. C. West, Cai.; E. G. Wheat, B.A., Christ's; E. Wight, B.A., Sid. Suss.; N. Wilson, B.A., Pemb.; L. Worrall, B.A., Christ's; F. Worthington, B.A., Joh.

The following have passed the First Examination in Medical and Surgical Degrees in the subjects undernoted:

Part II. Elementary Biology.—D. Allan, Joh.; F. R. Armitage, Pemb.; M. W. Baker, Joh.; M. E. Balston, Trin.; C. C. H. Binns, Cai.; D. C. Bluett, Emm.; W. Boys-Stones, Cai.; R. D. D. D. Brownson, Joh.; H. T. H. Butt, Christ's; F. G. Caley, Pemb.; W. H. Cam, Cai.; H. B. Carlyll, Joh.; A. E. A. Carver, Cai.; R. G. Chase, Trin.; C. N. Coad, Joh.; K. Comyn, H. Selw.; R. Cox, Cai.; A. H. Crook, Christ's; A. E. Cullen, Joh.; B. Day, B.A., Cai.; G. F. Drysdale, Joh.; H. B. Elton, Cai.; L. A. Exham, H. Selw.; A. J. S. Fuller, B.A., Emm.; P. St. J. B. Grigson, Joh.; J. D. Gunn, Pemb.; A. Hamilton, Christ's; H. A. Harris, B.A., Emm.; A. N. Hodges, Queen's; P. C. V. Jones, Joh.; J. E. S. Jones, Magd.; K. S. Koh, Joh.; E. M. Lauderdale, Cai.; H. Lee, Joh.; R. J. B. Leney, Cai.; R. H. Mawhood, Trin.; E. Mellanby, Emm.; A. Morgan, Corp. Chr.; P. Newton, Cla.; E. E. Paget-Tomlinson, Trin. H.; H. Parsons, Cai.; F. N. Pethick, Trin.; L. Powell, King's; H. E. H. Pratt, B.A., Down; R. F. Priestley, Cai.; A. C. Radford, Cai.; T. R. Rearden, Trin.; E. D. W. Reid, Christ's; W. F. Rhodes, H. Selw.; R. P. M. Roberts, Queens'; F. A. Roper, Trin.; F. S. Scales, Jes.; O. R. Smale, Cai.; H. E. S. Stiven, Trin.; T. S. Suan, Christ's; L. B. C. Trotter, Cla.; R. P. Varwell, Joh.; P. J. Verrall, Trin.; G. B. Wainwright, B.A., Trin.; J. Walker, Cla.; W. E. Wallis, Cla.; C. Whitaker, B.A., Emm.; A. D. J. B. Williams, Cai.; A. J. Williams, Cai.; R. Gregson Williams, Cai.; P. F. Wilson, Cai.; A. E. Woolf, Emm.; C. S. E. Wright, Emm.; J. F. W. Wyer, Emm.

Part I. Chemistry and Physics.—D. Allan, Joh.; A. C. Anderson, Down., F. R. Armitage, Pemb.; E. W. Atkinson, Cai.; C. C. H. Binns, Cai.; R. D. D. D. Brownson, Joh.; H. T. H. Butt, Christ's; F. G. Caley, Pemb.; W. H. Cam, Cai.; R. N. Chopra, Down.; C. N. Coad, Joh.; T. A. B. Cocksedge, Cai.; K. Comyn, H. Selw.; R. Cox., Cai.; A. H. Crook, Christ's; A. E. Cullen, Joh.; J. P. H. Davies, Jes.; A. P. Denby, Jes.; E. G. Fisher, Emm.; A. J. S. Fuller, B.A., Emm.; F. J. Gordon, Christ's; J. L. Graham-Jones, B.A., Emm.; A. H. Habgood, Jes.; W. M. Jeffreys, B.A., Trin.; P. C. V. Jones, Joh.; R. Knowles, Down.; K. S. Koh, Joh.; E. M. Lauderdale, Cai.; A. C. C. Lawrence, Trin.; H. Lee, Joh.; H. McLean, B.A., Cai.; R. H. Mawhood, Trin.; E. W. Nelson, Christ's; W. Oats, Cai.; H. Parsons, Cai.; L. Powell, King's; R. F. Priestley, Cai.; K. D. Pringle, Cai.; A. C. Radford, Cai.; A. J. Rae, Cai.; E. D. W. Reid, Christ's; E. L. N. Rhodes, H. Selw.; W. F. Rhodes, H. Selw.; R. P. M. Roberts, Queens'; F. A. Roper, Trin.; F. S. Scales, Jes.; H. E. S. Stiven, Trin.; T. S. Suan, Christ's; A. C. Tait, Sid. Suss.; R. B. Taylor, Cla.; R. M. Vick, Jes.; G. B. Wainwright, B.A., Trin.; J. Walker, Cla.; W. E. Wallis, Cla.; V. T. P. Webster, Emm.; A. D. J. B. Williams, Cai.; H. B. Wilson, Pemb.; W. B. Wood, Jes.; A. E. Woolf, Emm.; C. S. E. Wright, Emm.; J. F. W. Wyer, Emm.

UNIVERSITY OF EDINBURGH.

GIFT BY SIR WM. TURNER.

AT a meeting of the Edinburgh University Court on June 15th, a letter from Principal Sir William Turner was read requesting the Court to accept, for the use of his successors in the Chairs of Anatomy and the students in the Anatomical Department, of a gift from him of a large stock of diagrams, drawings, and anatomical preparations together with several microscopes and other instruments, as well as a number of books. The Principal was most cordially thanked, the objects presented being, in the opinion of the Court, of great intrinsic and educational value.

VICTORIA UNIVERSITY.

AT a meeting of Convocation held at Owens College on June 17th, the letter of May 12th last from Earl Spencer offering his resignation of the office of Chancellor of the University was considered. Earl Spencer has been Chancellor for eleven years. Elected thereto by Convocation, Earl Spencer did not approve of the policy that ultimately prevailed in regard to the so-called disruption of Victoria University. The two reasons which his lordship gave for offering his resignation are, first, because he found himself differing from many members of the University on a question of great educational importance, and the second reason, because many circumstances which existed when he had the honour to be elected will in future be materially altered.

High encomiums were passed on the manner in which Earl Spencer fulfilled the duties of the office, and on the gracious dignity with which he fulfilled all the ceremonial functions on great academic occasions. The following resolution was carried unanimously:

"That Convocation desires to place on record its high appreciation of the great services rendered to the University by the Right Hon. Earl Spencer, K.G., as Chancellor, and to express its sincere hope that he will reconsider the question of his resignation, and that the University may continue to have the great benefit of his presidency."

Earl Spencer, on June 19th, in acknowledging the receipt of the above resolution, expresses himself as willing "to comply as far as possible with the flattering request that he should continue Chancellor." At all events for the present Lord Spencer will not press his resignation on the University.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following gentlemen having passed the necessary Examination and conformed to the By-laws have been admitted Fellows of the College:

H. W. Lyle, M.B., B.S.Lond., L.R.C.P.Lond.; E. A. Peters, M.B., B.C.Camb., L.R.C.P.Lond.; W. G. Mumford, M.B.Lond., L.R.C.P. Lond.; F. E. Freemantle, M.B., B.Ch.Oxon., L.R.C.P.Lond.; H. S. Jenkins, M.B.Lond., L.R.C.P.Lond.; G. A. Roberts, L.R.C.P.Lond.; A. Martin-Leake, V.C., L.R.C.P.Lond.; R. F. Moorshead, M.B., B.S.Lond., L.R.C.P.Lond.; B. A. Nicol, L.R.C.P.Lond., D.P.H.Camb.; E. L. Lilley, M.B., B.S.Lond., L.R.C.P.Lond.; C. W. Wirgman, M.B., B.S.Lond., L.R.C.P.Lond.; H. Collinson, M.B., B.S.Lond., L.R.C.P.Lond.; R. R. Cruise, L.R.C.P.Lond.; W. Gough, B.Sc., M.B., B.S.Lond., L.R.C.P.Lond.; P. W. L. Camps, M.B., B.S.Lond., L.R.C.P.Lond.; W. S. Dickie, L.R.C.P.Lond.; E. H. Hunt, M.B., B.Ch.Oxon., L.R.C.P.Lond.; R. Jaques, L.R.C.P.Lond.; E. D. Telford, M.A., B.C.Camb., L.R.C.P.Lond.; N. Maclaren, B.C.Camb., L.R.C.P.Lond.; J. Atkins, M.B.Lond., L.R.C.P.Lond.; F. E. Murray, M.B., B.C.Camb., L.R.C.P.Lond.; A. J. Fairlie-Clarke, M.B., B.C.Camb., L.R.C.P.Lond.; B. S. Jones, L.R.C.P.Lond.; A. G. Pitts, L.R.C.P.Lond.; I. Stusser, L.R.C.P.Lond.; P. N. B. Odgers, B.A.Oxon., L.R.C.P.Lond.; F. W. Marlow, M.D., C.M.Trin. Coll. Toronto, L.R.C.P.Lond.; H. H. Formby, M.B., B.S.Melb., L.R.C.P.Lond.; R. J. Howard, M.B., B.S.Lond.

TRINITY COLLEGE, DUBLIN.

The following candidates have passed the Examination for the Diploma in Public Health:

Part I.—W. F. Erskine, J. H. Douglass, T. W. G. Kelly.

Part II.—T. G. Moorhead, G. Raymond, W. C. Oram, R. G. H. Tate, T. W. G. Kelly, T. F. Telford.

The following have passed the Final Examination in Medicine, Section A.:

J. A. Pringle, J. W. Houston, J. B. B. Whelan, C. Kelly, E. G. Scroope, J. W. Burns, W. Thunder, T. Creaser, R. Kelly, C. E. C. Williams, R. A. Askins, H. H. White, W. F. Porter, and H. Stewart.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: HERBERT W. G. DOYNE, Staff Surgeon, to the *Mercury*, June 14th; RAMSEY M. RICHARDS, Surgeon, to the *Mercury*, lent, June 18th; CHARLES W. BUCHANAN-HAMILTON, Fleet Surgeon, to the *Leviathan*, June 20th; ALEXANDER G. ANDREWS, Staff Surgeon, to the *St. Vincent*, June 20th; THOMAS B. SHAW, M.B. Surgeon, to the *Hyacinth*, July 21st; W. A. BLATCHFORD, Surgeon, to the *Empress of India*, July 21st.

Inspector-General MICHAEL WAISTELL COWAN, M.D., of Leigh, near Worcester, died on June 23rd at the age of 72. He was appointed Surgeon, July 13th, 1854; Staff Surgeon, September 30th, 1864; Fleet Surgeon, November 9th, 1870; Deputy Inspector-General, June 11th, 1883; and Inspector-General, May 14th, 1888. He retired from the service, November 25th, 1890. He served in the Black Sea during the Russian war, was at the attacks on Kertch and Yenikale, and had temporary charge of Russian wounded in the hospital at the latter place (medal with clasp).

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL L. A. WADDELL, M.B., C.I.E., Bengal Establishment, has been selected for the new appointment of Principal Medical Officer, Burmah.

Captain STUART ALEXANDER CHARLES DALLAS, Madras Establishment, died at St. George's Hospital, Bombay, on May 28th, from abscess of the liver. He joined the department as Surgeon-Captain, July 28th, 1891.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

LONDON COMPANIES: ANNUAL INSPECTION.

THE London Companies R.A.M.C.(V.) paraded on Saturday afternoon at Wellington Barracks 300 strong, with eleven ambulance and general service wagons, and marched to Hyde Park to be inspected by Colonel Gubbins, R.A.M.C., Principal Medical Officer of the Home District. The corps was under the command of Lieut.-Colonel J. Edward Squire, V.D., with whom were Majors V. Matthews, and T. H. Openshaw, C.M.G., and Captain Gibbard, R.A.M.C., the Adjutant, in addition to the company officers. On the ground opposite Knightsbridge Barracks the corps received the inspecting officer with a general salute, and, after the usual inspection in line, marched past in column with the transport wagons following. A very thorough inspection of the various branches of the work of the corps then took place. One company was detailed for company drill, others for stretcher and wagon drill, bandaging and first aid, pitching and striking tents, etc. Messages were sent by the signallers, squads were called out of the ranks to take off and replace their equipment, whilst the transport drivers were ordered to take the horses out of the wagons, strip them, and then harness up again, the operations being timed by the inspecting officer. The men were then formed up on three sides of a square, and addressed by Colonel Gubbins; after which, headed by the band, the corps returned to the barracks, having been under arms about three hours.

GLASGOW COMPANIES: CHURCH PARADE.

Through the courtesy of Principal Story the annual church parade of

the Glasgow companies was held in the Bute Hall of the University on the afternoon of June 21st. The parade, numbering nearly 500 officers and men, marched to the University under the command of Lieutenant-Colonel Beatson, C.B., V.D., and the service was conducted by the chaplain, the Rev. Dr. Adamson. A collection was made for the Queen Victoria School for the Sons of Scottish Sailors and Soldiers, and amounted to £26 10s. This institution is a Scottish memorial to Queen Victoria and to the Scottish sailors and soldiers who died in South Africa, and is being founded by General Sir Archibald Hunter, K.C.B.

ERRATUM.—In the BRITISH MEDICAL JOURNAL of June 20th, p. 1470, col. 2, 16 lines from bottom, for Brigade-Surgeon Alexander Crawford read Brigade-Surgeon Alexander Crawford *Robertson*.

R.A.M.C. SOUTH AFRICA FUND.

A SUM of about £110 remains in the hands of the honorary treasurer, the greater portion of which has been returned from South Africa, being the unexpended balance of an amount sent there for local requirements during the war. With a view to closing the fund finally it is proposed to hand over the money to the Compassionate Branch of the R.A.M.C. Fund lately organized by the Director General, as it will then be available for cases of need amongst the men, women, and children of the Corps. H.R.H. the Princess Christian has graciously signified her approval of the suggestion.

Should no expression of dissent be received from subscribers within the next few days, it will be assumed that they concur.

(Signed) M. SYMONDS, Honorary Treasurer.
M. L. MUIR, Honorary Secretary.
H. S. MUIR, Chairman of Committee.

149, Oakwood Court, Kensington, W., June 24th.

MEDICO-LEGAL AND MEDICO-ETHICAL.

AN ACTION FOR SLANDER WHICH "OUGHT NEVER TO HAVE BEEN BROUGHT."

ON June 18th the Lord Chief Justice, sitting with a special jury, heard the case of Tute *v.* Sedgwick. This was an action for damages for an alleged slander brought by Mrs. Helen Elizabeth Tute, of 9, Kildare Gardens, Bayswater, against the defendant, Dr. Leonard W. Sedgwick, of Gloucester Terrace, Hyde Park.

The plaintiff appeared in person; Mr. Clavell Salter represented the defendant, whose defence was undertaken by the London and Counties Medical Protection Society.

It appeared that from September until November, 1902, the defendant had acted as the plaintiff's medical adviser. On November 15th, when calling upon him to obtain advice she asked him "if he was prejudiced against her in any way, because she was not living with her husband." The defendant then—according to the plaintiff's story—flew into a bad temper, said she was not an honest woman, and told her to leave the house. This was the alleged slander. She stated that she then summoned a Dr. James, who practised in the same building, but independently of the defendant, and told him what had taken place. Dr. James, who was called as a witness for the plaintiff, said that in the defendant's presence he had tried to explain to her the defendant's point of view, and that it was, in his view, an insult for a lady to ask a medical man such a question.

The defendant who said that he had been in practice for a number of years, admitted that he had told the plaintiff that the question was an insult to him. He had told her that she had not behaved honestly in the matter of putting a question of that kind to him. He had asked Dr. James in to help him to quiet the plaintiff.

At the conclusion of the evidence,

The Lord Chief Justice told the jury that they must return a verdict for the defendant. All that passed on the occasion in question was privileged, and there was no evidence of malice. The action ought never to have been brought.

Verdict and judgement were entered for the defendant accordingly.

PROSECUTION UNDER THE MEDICAL ACTS.

ON June 22nd, Mr Kennedy, sitting at Marlborough Street, heard a summons under which Caleb Charles Whitefoord, of 31, Upper Marylebone Street, was charged with falsely using the title "Doctor" and other titles implying that he was a qualified medical practitioner.

Mr. Muir Mackenzie appeared on behalf of the General Medical Council; Mr. Schultess-Young for the defendant.

It appeared that in 1891 the defendant's name had been struck off the *Register* for an offence under the section of the Act relating to convictions for misconduct. He continued to practise, however, and was subsequently prosecuted and fined under Section XL of the Medical Act. The present charge was similar to that preferred on the former occasion, namely, that he had used the titles "Doctor" and "Accoucheur." It was also stated that he was advertising as Dr. Whitefoord. It appeared that a clerk in the employ of Messrs. Hempsons, solicitors to the Medical Defence Union, went to the defendant's premises. He said that the words "Dr. Whitefoord, accoucheur," were on a brass plate at the door, and on the facia of the shop were the words: "Dispensary and liver pill dépôt," and upon the window appeared the words "Appendicitis pills: the Whitefoord Provident Dispensary."

It was urged for the defence that it was necessary, in order that a conviction should follow, to show that a person in using the title "Doctor," did so with some intent to deceive "wilfully and falsely." There was nothing in the case to show that this poor unfortunate old gentleman had done anything of the kind, nor had he implied that he was registered. He was willing to destroy every notice with the word "doctor" in front of his name unless followed by the word "disregistered." He had been forced to practise again, as he was turned out of the St. Pancras Workhouse with the suggestion that he should trade in pills. Other evidence was called to show that the defendant gave instructions to assistants that customers must pay in advance, and that they were to be informed that he was not on the *Register*.

Mr. Kennedy said he was clearly of opinion that the case came within the meaning of the Act. The defendant would have to pay a fine of £10, with 3 guineas costs.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 8,914 births and 4,138 deaths were registered during the week ending Saturday last, June 20th. The annual rate of mortality in these towns, which had been 14·9, 14·3, and 13·0 per 1,000 in the three preceding weeks, rose again to 14·3 per 1,000 last week. The rates in the several towns ranged from 4·7 in Hornsey, 6·2 in Willesden, 6·3 in Handsworth, 6·7 in Tottenham, 7·1 in East Ham, 7·4 in King's Norton, 7·6 in Ipswich, and 8·0 in Southampton, to 19·0 in Sheffield, 19·8 in Grimsby and in Huddersfield, 21·0 in Rotherham, 22·0 in Birkenhead, 23·0 in Middlesbrough, 26·5 in Wigan, and 28·7 in Coventry. In London the death-rate was 13·1 per 1,000, while it averaged 14·8 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1·4 per 1,000 in the seventy-six large towns; in London this death-rate was equal to 1·5 per 1,000, while it ranged upwards, in the seventy-five large provincial towns, to 2·9 in Merthyr Tydfil, 3·3 in Aston Manor and in Middlesbrough, 3·8 in Sheffield, 4·0 in Great Yarmouth, 4·1 in Oldham, 5·9 in Wigan, and 8·6 in Coventry. Measles caused a death-rate of 1·2 in Birmingham, 2·0 in Sheffield, 2·2 in Wolverhampton and in Middlesbrough, 4·2 in Wigan, and 6·5 in Coventry; scarlet fever of 1·5 in Merthyr Tydfil; diphtheria of 1·1 in Oldham; whooping-cough of 1·2 in Sheffield, 1·4 in Birkenhead, and 1·6 in Burnley; and "fever" of 1·6 in Grimsby. Of the 7 fatal cases of small-pox registered last week, 3 belonged to Oldham, 2 to Liverpool, 1 to Manchester, and 1 to Bradford. The METROPOLITAN Asylums Hospitals contained 70 small-pox patients at the end of last week, against 60, 72, and 64 at the end of the three preceding weeks; 16 new cases were admitted during the week, against 10, 24, and 9 in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had been 1,771, 1,785, and 1,710 on the three preceding Saturdays, had further declined to 1,649 on Saturday last, June 20th; 170 new cases were admitted during the week, against 225, 210, and 145 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, June 20th, 1,083 births and 558 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 18·4, 18·2, and 17·5 per 1,000 in the three preceding weeks, further declined last week to 17·0 per 1,000, but was 2·7 per 1,000 above the mean rate during the same period in the seventy-six large English towns. The rates in the eight Scotch towns ranged from 13·7 in Leith and 14·5 in Paisley to 18·2 in Dundee and 20·1 in Perth. The death-rate from the principal infectious diseases averaged 1·4 per 1,000 in these towns, the highest rates being recorded in Paisley and Greenock. The 271 deaths registered in Glasgow included 4 from measles, 8 from whooping-cough, 2 from "fever," and 11 from diarrhœa. Three fatal cases of measles, 2 of scarlet fever, and 4 of whooping-cough were recorded in Edinburgh, and 2 of measles and 2 of whooping-cough in Paisley.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday last, June 20th, 546 births and 345 deaths were registered in six of the principal Irish towns. The mean annual rate of mortality in these towns, which had been 19·1, 16·2, and 18·2 per 1,000 in the three preceding weeks, rose slightly last week to 18·8 per 1,000, being 4·5 above the mean rate during the same period in the seventy-six large English towns. The death rates ranged in these Irish towns from 12·6 in Londonderry and 17·8 in Cork to 20·8 in Dublin and 21·9 in Limerick. The death-rate in the six towns from the principal zymotic diseases averaged 1·01 per 1,000, the highest rate—1·9—being recorded in Belfast, while Waterford and Limerick again had no deaths from zymotic diseases at all. The deaths registered in Dublin included 3 from small-pox, 6 from whooping-cough, and 1 each from scarlet fever and measles. In Belfast there were 4 deaths from measles, and 3 each from whooping-cough, enteric, and diarrhœa. Cork and Londonderry each had a death from whooping-cough. Except for the 3 deaths in Dublin, there were no fatalities from small-pox in any part of Ireland.

INFECTION AND EXPOSURE.

BERKSHIRE asks our advice under the following circumstances: One member of a family is attacked with diphtheria; this is duly reported to the sanitary authority, who through their officer warn the other members of the family that they must not appear in public. This they refuse to do. Are they—the family—acting illegally, and can they be prosecuted?

*** The question cannot be answered either affirmatively or negatively without more detailed and exact information. The law forbids the exposure of any infected person or article. Diphtheria may be conveyed by intermediaries, hence if persons who are daily in contact with a diphtheria patient mix freely with others they may render themselves liable to legal proceedings. If, however, the patient is carefully isolated in a detached part of a house, those members of the houshold who have nothing to do with the patient or his attendant could not properly be excluded from appearing in public. Certain further possibilities need to be borne in mind in diphtheria. Persons apparently well may harbour infection in their throats. The case of school children must also be exceptionally treated. They, although apparently well, should not be allowed to attend school from a house in which a diphtheria patient is being treated.

FEES OF M.O.H. FOR GIVING PARLIAMENTARY EVIDENCE.

M.O.H.—It is probable that the council would pay the fees of our correspondent's *locum tenens*, and a further fee to cover any probable loss he has incurred by being away from home. It would have been wiser to have made a definite arrangement with the Corporation before coming up to London to give evidence.

HOSPITAL AND DISPENSARY MANAGEMENT.

HOSPITAL FOR EPILEPSY AND PARALYSIS, MAIDA VALE, LONDON.

THE new buildings in Maida Vale were opened on June 13th by Her Royal Highness the Princess Louise, accompanied by His Grace the Duke of Argyll. The Princess was received by the President, the Earl of Hardwicke, the Committee, and the medical staff, who were then presented. Her Royal Highness was afterwards conducted to one of the large wards, where about 200 invited guests were assembled. The President gave a short sketch of the history of the hospital from its foundation in 1866. The new buildings which, with the exception of about one-third of the front façade, are now complete, afford ample accommodation for forty beds, out of the sixty which the complete building will eventually contain. Mr. Knapp-Fisher, a member of the Committee, gave some details as to the way in which the funds for the building were obtained, and what further funds would be required to complete the building, and to pay working expenses.

After the Princess had declared the building open, the Lord Bishop of London held a short service.

The Rev. Canon Duckworth, one of the vice-presidents, was called on to propose a vote of thanks to the Princess, which was seconded by Dr. George Ogilvie, the Senior Physician, who explained that the hospital was a special hospital for treatment of diseases of the nervous system. The majority of the patients came, not from the immediate neighbourhood, but from Greater London and its outlying districts. Many also came from the provinces, Scotland, and even Ireland, so that the area from which the patients were recruited was a very large one. The medical staff had therefore great opportunities for studying nervous diseases, and, while trying to do something to add to human knowledge and to the relief of human suffering, they never forgot that *si c'est la curiosité des maladies qui fait le savant, c'est l'amour des malades qui fait le médecin.*

The Duke of Argyll returned thanks for the Princess, in a short and humorous speech. Prosperity to the hospital was proposed by the Mayor of Marylebone, and seconded by Sir Henry Burdett.

The inspection of the hospital then followed, when the Princess was taken over the building by the matron, Miss Oldham, the secretary, Mr. Howgrave Graham, and the architect, Mr. Keith Young. The building has four floors and a basement, each floor being provided with a broad balcony in front communicating with the interior by wide doors. At the back, the roof of the out-patient department is also converted into a roof garden, accessible from the first floor.

The basement is given up to the kitchens, battery room, and other offices, and the ground floor of the main building to provision for the administrative department.

All the wards are on the first and second floor, which are identical in appearance and accommodation provided. Each has a ward for eight beds, one for seven beds, four for one bed each; a large day room, ward kitchen, wardroberoom, bathroom, and two sets of sanitary offices, which are complete and well arranged.

The top floor is formed of rooms for the use of the resident staff. There are eight bedrooms for the nurses, one for the matron, five for servants, and three bathrooms and other offices. There is also a pleasant and nicely-furnished sitting-room for the nurses when off duty, with a balcony of the same general type as those on the lower floors.

The cooking apparatus is heated by gas, but the lighting of the building is electric, while for warming, the building depends chiefly upon hot-water radiators, a boiler room with a separate system for baths being duly provided. The arrangements for ventilation appear to be sufficient. The upper third of all ward windows are made to drop inward, and other air inlets are provided by sets of perforated bricks with trumpet openings which can be closed or left open at will. The windows of the smaller rooms are arranged on the Hinckes-Bird system, which provides for ventilation between the upper and lower sashes. A lift runs from top to bottom of the building, and is sufficiently powerful and large for a bed, patient, and two attendants. Provision has also been made for conveying to each ward a battery current for therapeutic purposes.

The out-patient department is at the back of the building on the level of the ground floor. It has a separate entrance, is compactly arranged, and appears to be sufficient for the probable needs of the hospital.

MEDICAL NEWS.

THE dinner of the British Electro-Therapeutic Society will take place at the Café Monico, Piccadilly Circus, W., on June 26th.

NEW OPERATING THEATRE AT THE KIDDERMINSTER INFIRMARY.—A new operating theatre was opened on June 17th in the Kidderminster Infirmary as a Queen Victoria memorial. It is the result of a public subscription, and it contains all the most recent appliances for operative surgery.

OPHTHALMIA NEONATORUM.—At a meeting of the Obstetrical Society of London to be held at 20, Hanover Square, W., on Wednesday, July 1st, a discussion on ophthalmia neonatorum will be opened by Dr. Sydney Stephenson, introduced by Dr. W. S. A. Griffith. The Hon. Secretaries will be glad to hear from any who, not being Fellows of the Society, desire to take part in the discussion.

THE subject for the essay for the Howard medal of the Royal Statistical Society for the year 1903-4 is the effect, as shown by statistics, of British statutory regulations directed to the improvement of the hygienic conditions of industrial occupations. The essays must be sent in to the Secretary of the Society, 9, Adelphi Terrace, Strand, W.C., from whom further particulars can be obtained, on or before June 30th, 1904.

THE annual general meeting of the Brussels Medical Graduates' Association will be held at the Trocadero, Regent Street, W., on Tuesday, July 7th, at 6.30 p.m. At 7.30 p.m. the members and their friends will dine together, Dr. A. G. Haydon, the President, being in the chair. Any Brussels medical graduate wishing to be present at the dinner is requested to communicate with the Honorary Secretaries, Dr. M. Greenwood, 243, Hackney Road, N.E., or Dr. F. H. Edwards, Camberwell House, Camberwell, S.E.

CORK MEDICAL AND SURGICAL SOCIETY.—The annual general meeting was held on Wednesday, May 27th; Dr. P. T. O'Sullivan, President, in the chair. The statement of accounts showed a balance of £68 to the credit of the Society. The following officers were elected for next session: *President:* J. Cotter, M.D. *Vice-President:* N. Henry Hobart, M.B. *Honorary Secretary:* D. J. O'Connor, M.D. *Honorary Treasurer:* P. J. O'Brien, M.B. *Council:* P. T. O'Sullivan, M.D. (retiring President); C. Y. Pearson, M.D.; T. G. Atkins, M.D.; W. Ashley Cummins, M.D.; H. R. Townsend, M.D.; E. Murphy, L.R.C.P.I.; P. G. Lee, L.R.C.P.I.; and Lucy E. Smith, M.D. Dr. N. J. Hobart, who has retired from active practice after a professional career of fifty-seven years, was unanimously elected an honorary life member of the Society.

ANTICIGARETTE LEGISLATION IN CANADA.—It was stated in the BRITISH MEDICAL JOURNAL a few weeks ago that the Legislature of the Dominion of Canada had determined to put down cigarette smoking. It is a fact that in the Canadian House of Commons a motion for the prohibition of the manufacture, importation and sale of cigarettes, was recently carried by a vote of 103 to 48. It appears, however, that the motion was only a test, as it was not introduced as a Government measure. It is said, indeed, that the Prime Minister had advised the House to reject it. On May 18th the Bill was ruled out of order by the Speaker, as it had not originated in committee of the whole House.

METROPOLITAN PROVIDENT MEDICAL ASSOCIATION.—On June 19th a general meeting of this Association was held at 20, Portman Square, under the presidency of Mr. William Bousfield. Among others who were present and took an active part in stating the claims of the Association were Mr. Edmund Owen, the Rev. Russell Wakefield, Sir Alfred Lyall, and the Mayor of Marylebone. A resolution was moved by the Mayor of Marylebone in favour of establishing provident dispensaries in every district of the metropolis, under the system of the Association, to be worked in co-operation with the hospitals, under rules approved by the medical profession. It was seconded by Mr. Edmund Owen, who pointed out that the giving of gratuitous medical relief was demoralizing, and was not appreciated by its recipients. The out-patient departments of hospitals must go on, but the system required modification, which the Provident Medical Association would help to bring about.

MEDICAL VACANCIES.

This list of vacancies is compiled from our advertisement columns, where ful particulars will be found. To ensure notice in this column advertisements must be received not later than the first post on Wednesday morning.

ARGYLE AND BUTE ASYLUM, LOCHGILPHEAD.—Assistant Medical Officer, resident. Salary, £100 per annum.

BRADFORD ROYAL INFIRMARY.—Honorary Assistant Medical Officer for Electrical Department.

CARDIFF: UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.—Professor of Anatomy.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, E.—Second House-Physician, resident. Salary at the rate of £30 per annum.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Honorary Medical Officer.

CROYDON ASYLUM AND MENTAL HOSPITAL.—Senior Assistant Medical Officer, resident. Salary, £250, rising to £350 per annum.

DEVONPORT: ROYAL ALBERT HOSPITAL.—Assistant House-Surgeon, resident. Salary at the rate of £50 per annum.

DUBLIN: TRINITY COLLEGE.—Professor of Chemistry.

HALIFAX ROYAL INFIRMARY.—Third House Surgeon, resident. Salary, £80 per annum.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House-Physician. Honorarium, £25 for six months.

MANCHESTER: OWENS COLLEGE.—Junior Demonstrator in Physiology. Stipend, £100 per annum, rising to £150 per annum.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Assistant House-Surgeon, resident. Salary, £70 per annum.

ROYAL VETERINARY COLLEGE, N.W.—(1) Professor of Chemistry. (2) Professor of Physiology and Histology.

ST. MARY'S HOSPITAL FOR SICK CHILDREN, Plaistow.—Resident Medical Officer. Salary at the rate of £100 per annum.

SEAMEN'S HOSPITAL SOCIETY, "Dreadnought," Greenwich.—House-Physician, resident. Salary, £65 per annum.

SHEFFIELD: JESSOP HOSPITAL FOR WOMEN.—House-Surgeon, resident. Salary, £75 per annum.

STOCKPORT INFIRMARY.—Junior Assistant House-Surgeon, resident. Salary at the rate of £40 per annum.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Junior House-Surgeon. Salary £50 per annum.

WITHINGTON URBAN DISTRICT COUNCIL.—Resident Medical Officer at the Baguley Sanatorium. Salary, £250 per annum.

YORK DISPENSARY.—Resident Medical Officer. Salary, £120 per annum.

MEDICAL APPOINTMENTS.

ANDREWS, Henry Russell, M.D., B.S.Lond., M.R.C.P.Lond., appointed Assistant Obstetric Physician to the London Hospital.

ATKINSON, H. N. C., M.R.C.S., L.R.C.P.Lond., District Medical Officer of the Melton Mowbray Union.

BRATTIE, Robert, M.D., M.Ch.R.U.I., Medical Officer of Health for Dewsbury.

BLAKE, A. F., M.R.C.S., L.R.C.P.Lond., Medical Officer of the Children's Homes of the Stepney Union.

BOTHAM, R. H., M.R.C.S.Eng., L.S.A., District Medical Officer of the Teesdale Union.

CROSS, Harold R., L.S.A., Assistant Medical Officer to the West Riding Asylum, Wakefield.

GILLIES, M. H., M.D. Toronto, Clinical Assistant to the Chelsea Hospital for Women.

KEAY, John, M.D.Glas., F.R.C.P.Edin., Medical Superintendent to the Bangour Asylum.

KELLOCK, Thomas H., M.D. Camb., B.C., F.R.C.S.Eng., Surgeon to the Hospital for Sick Children, Great Ormond Street.

KOCH, Wilfred V. M., M.D.Edin., Assistant Surgeon to the Medical Department of Hong Kong.

LEWIS, C. T., M.R.C.S., L.R.C.P.Lond., District Medical Officer of the Luton Union.

MOORHEAD, G. H., L.R.C.P.& S.I., District Medical Officer of the Bridgwater Union.

PARKER, Herbert George, L.R.C.P., F.R.C.S.Edin., Honorary Ophthalmic Surgeon to the Bolton Schools and Workshops for the Blind, and Examiner for the St. John Ambulance Association.

DIARY FOR NEXT WEEK.

WEDNESDAY.

Obstetrical Society of London, 20, Hanover Square, W., 8 p.m.—Specimens will be shown by Dr. Russell Andrews, Lieutenant-Colonel Sturmer, and others. Short communication on Extirpation of Uterus and Vagina in a Child 12 months old for "Grape like" Sarcoma of the Cervix, Fungating into, and Infiltrating the Walls of the Vagina (with specimen), by Mr. H. J. Curtis (introduced by Dr. Herbert R Spencer). Discussion on Ophthalmia Neonatorum to be opened by Dr. Sydney Stephenson (introduced by Dr. Griffith).

THURSDAY.

Roentgen Society, 20, Hanover Square, W., 8.30 p.m.—Annual general meeting.

Royal College of Surgeons of England.—Exhibition of the Physiological and Pathological additions made to the Museum during the year.

North-East London Clinical Society, Tottenham Hospital, N., 4 p.m.—Annual meeting.

Guy's Hospital Medical School, 4 p.m.—Dr. E. W. Ainley Walker: Recent Work upon the Nature of Immunity (Gordon Lectures in Experimental Pathology).

FRIDAY.

West London Medico-Chirurgical Society, West London Hospital, Hammersmith, W., 8.30 p.m.—Address by the President, Mr. Rickard Lloyd: The Administration of Anæsthetics in Rectal Diseases. 9 p.m.—Annual General Meeting. Presentation of annual report and election of officers for ensuing session.

Ophthalmological Society of the United Kingdom, 11, Chandos Street, Cavendish Square, W., 8 p.m.—Card specimens by Messrs. W. C. Rockliffe and J. H. Parsons, and Dr. Leslie Buchanan. 8.30 p.m.—Papers: Dr. Leslie Buchanan: Keratitis with special reference to the part played by the corneal cells. Mr. W. H. H. Jessop: Cases of Proptosis. Mr. C. W. Dean: Primary Papilloma of the Cornea. Mr. Simeon Snell and Mr. E. T. Collins: Three cases of Plexiform Neuroma of Temporal Region, Orbit, Eyelids, and Eyeball, with histological examination. 10 p.m.—Annual general meeting.

SATURDAY.

Pathological Society of London.—Meeting to be held at Oxford in the Pathological Laboratory from 4 to 6 p.m. See fuller announcement under the head of "Week."

POST-GRADUATE COURSES AND LECTURES.

Charing Cross Hospital, Thursday, 4 p.m.—Lecture on Dermatological Cases.

Hospital for Consumption and Diseases of the Chest, Brompton, S.W., Wednesday, 4 p.m.—Lecture on The Selection of Chest Cases for Operation.

Hospital for Sick Children, Great Ormond Street, W.C., Thursday, 4 p.m.—Lecture on Enuresis and Faecal Incontinence.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C. Demonstrations will be given at 4 p.m. as follows:—Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, ear. Lectures will also be given at 5.15 p.m. as follows: Monday, Diseases of the Tongue; Tuesday, Preparations, Methods, and After-treatment in Operations; Wednesday, Harelip and Cleft Palate; Thursday, Diseases of the Tongue; Friday, Eczema.

Mount Vernon Hospital for Consumption and Diseases of the Chest, 7, Fitzroy Square, W., Thursday, 4 p.m.—Lecture on Phthisis in Relation to Life Assurance.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C.—Tuesday, 3.30 p.m.—Lecture on Surgery of the Nervous System.

Post-Graduate College, West London Hospital, Hammersmith Road, W.—Lectures will be delivered at 5 p.m. as follows: Monday and Tuesday, Certain Symptoms of Throat, Nose, and Ear Disease; Wednesday, Some Diseases of the Nervous System; Thursday, Treatment of some Injuries and Emergencies; Friday, Cases of Skin Disease.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

BODDIE.—On Friday, June 19th, at 73, Bruntsfield Place, Edinburgh, the wife of Dr. George P. Boddie, of a daughter.

SARJEANT.—On June 17th, at 65, Parkhurst Road, Holloway, N., the wife of John F. Sarjeant, M.R.C.S., L.R.C.P., of a daughter.

MARRIAGES.

ALDRIDGE—ELLIS.—On June 17th, at St. John's Church, Chester, by the Rev. Canon Scott, Vicar, assisted by the Rev. W. V. Chilwell, Handsworth, cousin of the bridegroom, Arthur William Aldridge, M.B., B.S., M.R.C.S., L.R.C.P., Northfield, Worcestershire, eldest surviving son of Mr. William Aldridge, of Birmingham, to Harriette Elizabeth (Cissy), eldest daughter of the late Mr. Herbert Ellis and Mrs. Ellis, of Brook Lynn, Chester.

ANTROBUS—HOGGAN.—On June 17th, at Sefton Park Church, Liverpool, Edmund Antrobus, M.D., of The Chase, Great Malvern, to Mary Louisa, third daughter of the late Edward Hoggan, M.D., of Liverpool, and of Mrs. Hoggan, Princes Park, Liverpool.

POOLE—ROBERTS.—On June 17th, at St. John's Church, Buxton, by the Rev. R. Granville Monckton, M.A., Arthur H. Poole, L.R.C.P.Edin., and M.O.H. Tottington, Bury, to Alice A., elder daugater of the late R. K. Roberts, Esq., and Mrs. Roberts, Tottington Hall, Bury.

SPURGIN—MILDRED.—On June 20th, at Walton-on-Thames, Percy B. Spurgin, L.R.C.P., M.R.C.S., of Wimbledon, to Hilda Gertrude youngest daughter of the late William Mildred, Esq., and Mrs. Mildred.

DEATHS.

CREAN.—At his residence, Hanover Square, Higher Broughton, Manchester, June 18th, Richard Crean, M.D., aged 57.

GROSVENOR.—On June 22nd, at Hungersheath, Arnside, Richard Moberley Clayton, dearly-loved child of Dr. and Mrs. Clayton Grosvenor, aged 3 years 11 months.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aetiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

WE would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only, and when sending more than one question to put them on separate slips.

☞ *Queries, answers, and communications relating to the subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

T. A. L. asks whether it is necessary when prescribing thyroglandin in myxoedema or in obesity to restrict the patient to any special diet. Also he would like to know if thyroidin is considered as useful in obesity as thyroglandin.

H. asks for hints as to the pathology and treatment of a painful condition of the heel which he has observed in several patients, mostly over 60: there is no swelling or redness, or increased heat or tension; there is some tenderness on deep pressure, and the pain is especially severe on first putting the foot to the ground.

DELTA would be glad to know of any drug treatment that would relieve a case of nervous dyspepsia, in which the chief symptoms are constriction round the throat and a sense of oppression beneath the sternum, both symptoms being relieved by food for a short time; not affected by dieting, tea being the only thing that seems hurtful.

CYCLING DURING PREGNANCY.

CONNAUGHT RANGER asks for information regarding cycling for ladies during pregnancy. Have any of the readers of the BRITISH MEDICAL JOURNAL met any cases where evil resulted from the use of the bicycle either to the mother or to the child? Is the practice to be condemned altogether or is it in any way beneficial?

VACCINATION AFTER SMALL-POX.

VACCINATOR writes: We are taught to believe, and experience goes to prove, that vaccination properly performed confers immunity from small-pox. Is the converse of this true that small-pox makes a patient immune from vaccination? While I have no trouble in gleaning statistics on the former point, I am unable to obtain anything satisfactorily bearing upon the latter.

*** Our correspondent will find the question discussed in an article, Vaccination after Small-pox, in the BRITISH MEDICAL JOURNAL of January 31st of the present year, at p. 265. No contribution of facts on the subject followed the publication of the article, but we are still open to receive communications on the subject.

WORKS ON BACTERIOLOGY.

F. F. M. asks to have recommended a book on bacteriology, which is full, clear, and suitable for use in doing practical work.

*** On the subject of general bacteriology, including an account of methods, either Dr. R. T. Hewlett's *Manual of Bacteriology, Clinical and Applied*, 2nd Edition, London: J. and A. Churchill. 1902. (Demy 8vo, pp. 545, 10s. 6d.), which was reviewed in the BRITISH MEDICAL JOURNAL of November 29th, 1902, p. 1715; or Drs. Muir and Ritchie's *Manual of Bacteriology*, 3rd Edition, Edinburgh and London: Young J. Pentland. 1902. (Cr. 8vo, pp. 548. 12s. 6d.), would probably prove suitable for his purpose. On the subject of laboratory methods he might find useful Dr. J. W. H. Eyre's *Elements of Bacteriological Technique*, Philadelphia and London: W. B. Saunders and Co. 1902. (Medium 8vo, pp. 371. 10s. 6d.). The two latter books were reviewed in the BRITISH MEDICAL JOURNAL of February 28th, 1903, p. 499.

ANSWERS.

P. I.—*The Nomenclature of Diseases* recognizes convulsions as a synonym of eclampsia, and specifies three special forms—infantile, puerperal, and uraemic. A footnote points out that the terms "eclampsia" and

"infantile convulsions," being the names of symptoms, should only be used when more precise information is wanting; when the cause is known the returns should be made under the heading of that cause.

R. W. M. might commence his studies by a perusal of *Man, Past and Present*, by Professor A. H. Keane. Cambridge University Press. 1899.

C. L. W.—(1) The life of Cornaro is to be found mainly in his own treatises. More than thirty editions of the English translation have been published. The most recent reprint, as far as we are aware, is that published by the Eastbourne Art Printers' Company, 1900. It is entitled, *A Treatise on Temperance and Sobriety. Translated by Master George Herbert, with a Biography by his Granddaughter.* It is edited by Dr. G. Symes Saunders. (2) A list of the works of the physician in question may be found in the *Medical Directory*.

NASAL CATARRH.

DR. E. FRASER (London) writes: "Surgeon" should use "glycothymaline," to be obtained from Messrs. Christy; or a nasal douche of solution ac. carbol 1 in 120, with a "Kress" douche, also sold by Christy. I have found either very good.

MONRO'S POINT.

A. M. B.—In a paper on Improvements in Performing the Operation of Paracentesis in Tapping of the Belly, Professor A. Monro drew attention to the danger of wounding the deep epigastric artery if the puncture were made through the muscular part of the belly wall, and to avoid the danger he suggested that the trocar should be introduced at a point situated midway between the umbilicus and the anterior superior spine of the ilium. It is a matter of opinion whether or not this is the best point to choose; nevertheless it is "Monro's point." A. Monro was Professor of Anatomy in the University of Edinburgh from 1720 to 1758, and, as he was succeeded by two other professors of the same name, he is usually known as Monro Primus. The paper to which reference is made above is included in his collected works which were published in 1781.

RISKS TO EYES AND HAIR FROM X RAYS.

DR. COLE BAKER.—We have referred our correspondent's question to a recognized authority on the subject, who writes: I have never heard much complaint of risks to the eyes during the use of Roentgen rays, unless in one instance where the hair of the eyelashes, the eyebrows (in the case of an operator whom I knew, and who was exposed for long periods to the rays), and the conjunctiva got very much inflamed. With that exception, I have no experience of mischief with the eyes. With regard to the hair, there have been many accidents, and I think both skin and hair should be protected. In fact, the more protection a patient can have during exposure the better. I take great care to cover everything except the parts to be exposed with lead masks. As far as I can gather, most accidents have occurred when the patient has been subjected frequently to the rays, or where the tube is low vacuum and a single exposure has been prolonged. With regard to literature, a very good work for a general view of the subject is *Medical Electricity*, by Lewis Jones, published by Lewis. Another good work is the *Roentgen Rays in Medicine and Surgery*, by Williams, published by Macmillan and Co. Another work is *A New System of Instruction in X-ray Methods, and Medical Uses of Light, Hot Air, Vibration, and High-frequency Currents*, by Morell, published by Pelton, and to be obtained from Messrs. Rebman and Co., London.

LETTERS, NOTES, Etc.

ERRATA.—The following corrections should be made in Dr. A. Croft Hill's paper on the Process of Chemical Synthesis in Living Things, published in the BRITISH MEDICAL JOURNAL of June 20th: Page 1428, 1st column, line 20, for sympathetic read *synthetic*: line 56, for enzyme read *enzymes*: 2nd column, line 3, delete hyphen; line 38, delete I. Page 1429, 1st column, line 12 from bottom, for substance read *substances*; 2nd column, line 14, for isomera read *isomers*.

WARNINGS.

DR. SIDLEY I. LIGHTFOOT (Ebor House, Watford, Herts) informs us that a man, named Spurgeon, has recently been calling on medical men in his district purporting to represent a society, which he calls the "Medical Protective Association, Temple Chambers, Temple Avenue, London, also Charing Cross Road." The object of this association, as stated in his printed prospectus, was for the collection of debts. He also gives a printed receipt for the subscription of one guinea. Dr. Lightfoot finds on inquiry that the association is not known at the addresses given, and his letters have been returned through the Dead Letter Office.

MR. YOUNG J. PENTLAND (Publisher, Edinburgh and London) writes: An individual, styling himself J. W. Longford, canvassing for books on commission, is calling on medical men in the Yorkshire district, and stating that he is authorized to receive cash on my account for orders placed with him. I desire to warn those physicians and surgeons on whom he calls that he has no authority whatever either to collect or receive money on my behalf.

CHORIO-EPITHELIOMA.

DR. CUTHBERT LOCKYER (London) writes: I wish to draw attention to an important error in the report of specimens exhibited at the Obstetrical Society on June 3rd: The insertion "Dr. Cuthbert Lockyer: Chorion-epithelioma of uterus with vaginal, parametric, and pulmonary metastases" should have read "Chorio-epithelioma of the body of the uterus, with *pancreatic*, renal, pulmonary, and vaginal metastases." I have never met with a case of this disease which had involved the parametrium, and have only found one case in the literature in which there was a swelling in the pelvis external to the uterus; this was not proved to be growth by microscopical examination, so that I think this point—the absence of parametric infiltration—establishes a cont far between chorio-epithelioma and sarcoma of the body of the uterus. me e-

DARWINISM AND THE INCREASE OF CANCER.

DR. F. J. ALLEN (Cambridge) writes: It is odd that among the many suggestions to account for the supposed increase of cancer we hear little reference to the bearing of the Darwinian law on the subject; for this law gives us a clear *a priori* reason for expecting the increase. In man's war against disease the fittest diseases must survive. We have learnt how to defeat plague, cholera, small-pox, tuberculosis, typhoid, and other diseases which formerly caused a large percentage of deaths; but we have not gained a corresponding power over cancer, and the result should be an increase in the ratio of deaths by cancer. In fact, many persons who in times past would have died of the former diseases should now escape them to die later of cancer. The medical art is directed against the elimination of the unfit; and one of its results must be to increase the relative number of persons of poor constitution and feeble resistance to disease. These should succumb earlier to most diseases; but cancer especially, owing to the comparative defeat of its rivals, hence the earlier incidence of the disease than formerly. When we defeat cancer we shall give advantage to still hardier diseases, and so *ad infinitum*.

A FINNISH METHOD OF BURIAL.

DR. JOHN MCPHERSON (Salina Cruz, Mexico) writes: On reading the note in regard to Finnish burial customs in the BRITISH MEDICAL JOURNAL of May 2nd, p. 1044, I was interested to compare them with some burial customs of the Labrador Eskimo, a people closely allied in habits if not in descent to the Finns. The Eskimo of Ungava Bay and also on the eastern coast of Labrador usually, but not invariably, enclose the body in a rude wooden coffin, and this is then conveyed to the top of some neighbouring knoll or mound. If it is winter the coffin containing the body is simply deposited in the open. If it is the summer season a heap of stones is piled on the remains. Near Rigolet, on the shores of Hamilton Inlet, there are to be seen many large piles of stones in which have been found from time to time skeletons and other relics. Where the natives are under the influence of the Moravian missionaries the bodies are usually buried in the earth.

EXCISION OF THE TONSILS DURING AN ATTACK OF ACUTE TONSILLITIS.

DR. MOZOURETTI (Mandamados, Mytilene) writes with reference to the memorandum by Dr. Bleasdale in the BRITISH MEDICAL JOURNAL of January 10th, p. 75, to state that about a year ago he had under his care a child aged 12, and a woman aged 20, both suffering from acute tonsillitis; both were of the lymphatic type, and both had had previous attacks of tonsillitis. In both cases the tonsils were enormously oedematous, and pressed together in such a way that breathing through the mouth was impossible, and milk could not be swallowed. Dr. Mozouretti excised a piece of tissue about the size of a small almond from both tonsils in each case, and subsequently prescribed an ordinary gargle. The result was satisfactory, and the patients have been in good health since the operation.

APPENDICITIS: A SUGGESTED REASON FOR ITS INCREASE.

MR. S. KELLETT SMITH, F.R.C.S.Eng (Liverpool) writes: The occurrence at the same time in one's own private practice of three cases of appendicitis, each demanding operation, is provocative of thought. Ten years ago cases of "perityphlitis" came under notice occasionally, and a certain number of people took ill and died from "inflammation of the bowels," or "acute peritonitis," in whom an appendicitis was probably at the root of the mischief. My recollection is that such cases were rare, and I do not remember an appendicectomy at the Royal Infirmary, Liverpool, during my period of studentship—1887-91.

At the present time, appendicitis is about us on every hand. The reason for its sudden increase has yet to be shown. I do not believe it to be due to any process of evolution; the same people are having appendicitis now who did not have it ten years ago. The cause, whatever it is, must be one affecting the mass of the people, rich and poor; it must be common to all countries of high civilization and big towns; it must be coincident with the increase in the disease.

The present conditions of food supply and distribution may give the key to the situation. Probably four-fifths of the chief perishable comestibles are frozen or chilled for transmission or collection before reaching the consumer. Chilled or frozen meat, fish, poultry, rabbits, game, etc., are notoriously prone to rapid decomposition when removed from cold store; also they degenerate more rapidly after cooking than unfrozen articles. Following the argument, it may be that the ingestion of chilled or frozen food especially liable to rapid decomposition may result in a more septic state of the intestine than in the pre-cold storage days, and this greater septicity may in its turn account for the greater virulence of those irritations to which the caecum and appendix have always been prone.

PHYSIOLOGICAL DIFFERENCES IN THE PHYSICAL SIGNS ON THE TWO SIDES OF THE CHEST.

DR. J. EDWARD SQUIRE writes to say that there is an error in the print of his paper on this subject in the BRITISH MEDICAL JOURNAL of May 23rd, under the head of "Vocal Fremitus," page 1199, column 2. It should have been stated that an increase in "vocal fremitus" was the most constant physiological sign at the right apex instead of "resonance" as printed.

THE TREATMENT OF CONGENITAL PHIMOSIS.

DR. HERBERT SNOW (Portman Square, W.) writes: Considering the great prevalence of the condition, this subject must be of interest to numerous members of the profession, for family and personal reasons alone, without going further; and I should like to express my indebtedness to Dr. George Graves, of Edinburgh, for his very judicious letter, with its courteous reference to myself, in the BRITISH MEDICAL JOURNAL of June 13th. Some years ago I perpetrated a booklet on the topic; and although my work has since been in an altogether different direction, I rejoice to see that its conclusions denouncing circumcision for congenital phimosis as a needless barbarity seem now to be receiving some measure of acquiescence. But one or two points of detail require to be cleared up; and I cannot entirely endorse the method of procedure adopted by Dr. Graves. It must be rather tedious and painful, whereas retraction under anaesthesia has no such disadvantages. Moreover, he advocates repeated subsequent retractions of the prepuce by the mother

or nurse. I prefer to leave the organ severely alone until the child has reached an age when he can cleanse the mucous membrane himself. The thick white lumps of smegma which one finds under the prepuce in congenital phimosis, and which cause so much irritation, do not, I think, again accumulate in sufficient quantity to cause harm until puberty is reached. I am under the impression, indeed, that they are largely of antenatal origin. But however that may be, experience has shown that when once the prepuce has been efficiently retracted and cleansed further manipulations are needless. They seem, moreover, open to serious objection. As the question with me is personal rather than professional, and as I feel rather strongly thereon, may I add that I shall be pleased to demonstrate, without fee or reward, the dilatation method to any practitioner desirous of employing it in his practice? Dr. Graves hints at the bad results often following circumcision; and we know that parents not of that persuasion usually strongly dislike having their child Judaized. Yet it seems one of the commonest of surgical operations.

TRAUMATISM OF THE SOLAR PLEXUS.

DR. G. C. R. HARBINSON, M.B., B.Ch. (Matlock), writes: In connexion with Mr. C. B. Lockwood's opinion, in the BRITISH MEDICAL JOURNAL of June 13th as to the results of traumatism of the solar plexus the following case may be interesting. A healthy looking young lady, aged 27, consulted me on April 24th for amenorrhoea, constipation, continual coldness with icy hands and feet, and constant gnawing pain, referred to the region of the right kidney, and relieved by lying down; all of which symptoms made their appearance after a severe fall from her bicycle in May, 1901, and have continued since. She lost 11 lb. in weight in two weeks after the accident, and this has never been recovered. She weighed nearly 11 st. and was perfectly healthy before the accident, and menstruated regularly, though scantily. Since then she has menstruated only six times, and not at all since November last. There has not been at any time menstrual pain or leucorrhoea. The pulse varied at the several consultations between 49 and 56, was regular and compressible, and the circulation very slow. Appetite was poor, bowels very constipated, and temperature 98·2°. The patient perspired easily with any excitement, and complained of giddiness now and again with some dyspnoea. Examination revealed no disease of heart, lungs, or other part, save a somewhat small uterus and a loose right kidney, which descended to the pelvic brim. An abdominal belt with kidney pad succeeded in keeping that organ in position and relieving the distressing gnawing pain; and a course of hydropathy so far improved the general health that, though the circulation remained slow, scanty menstruation appeared again in due course, and the patient felt she was "living" once more.

In the light of Mr. Lockwood's suggestion this case would read thus: Accident: forcible displacement of the right kidney; injury to part of the solar plexus; the right vagus nerve involved through its connexion with the solar plexus; the heart slowed; as a result slowing of the whole circulation and secondary to this the other symptoms.

MEDICAL INCOME-TAX ASSESSMENTS.

DR. J. FLETCHER LITTLE, L.C.C. (Harley Street, W.) writes: Mr. Ritchie, in his Budget speech, admitted the injustice of the manner in which the income tax is at present assessed and levied, and promised to give the matter his consideration with a view to reform. Whilst he is doing this, it would help him to arrive at a right decision if the hard case of the medical profession were laid before him. The long and costly training; the arduous nature of the work, by night as well as by day; the inevitable and heavy expenses; the few prizes, and the small average net incomes; the strictly personal and precarious character of the work, which causes all earnings to cease during illness or incapacity; the short average of life, which is less than that of other professions, such as the clerical and the legal, and the warning increase of insanity from the intolerable strain, form strong grounds for claiming more lenient treatment than is at present accorded to us. I beg to suggest that the Medico-Political Committee of the Association have the hard case of the medical profession drawn up and laid before the Chancellor of the Exchequer.

June 23rd. Since writing the above, which I sent you on June 19th, I have read with much pleasure the further discussion in the BRITISH MEDICAL JOURNAL of June 20th on Income-Tax Assessments, which my previous letter initiated, and I hope that the other suggestions I have made will be carried out. A further proof for the necessity of altering the arrangement by which the officials are paid a percentage on the amount they collect has recently been brought to my notice. One of these officials has conceived the gruesome notion that a medical man goes on earning money after he has been laid in the grave. The partner and successor of a deceased practitioner has shown me a correspondence which throws a flood of light upon the views held by the modern tax gatherer when he is paid a commission. Mr. Ritchie has appointed the Select Committee, and Sir Michael Hicks-Beach is the Chairman. The matter is therefore urgent, and no time should be lost.

DR. NOEL F. ROWSTRON (Sunderland) writes: With reference to the article on Income-Tax Assessment in the BRITISH MEDICAL JOURNAL of June 20th, it may interest Dr. C. E. Saunders and "Barrister-at-law" to know that at least one American insurance office—namely, the New York Mutual—refunds the amount of income tax payable on the annual premium, on application. Perhaps other American offices do the same.

LETTERS, COMMUNICATIONS, ETC., have been received from:

(A) Dr. F. J. Allen, Cambridge; Mr. F. Alcan, Paris; Mrs. E. Garrett Anderson, M.D., London; Messrs. Armour and Co., London. (B) Berkshire; Dr. C. E. Beevor, London; Dr. W. B. Bell, Liverpool; Dr. J. W. Byers, Belfast; Mr. D. W. Burden, Brentry; A. G. Batemau, M.B., London; Dr. A. C. Brown, Rock Ferry; Mr. L. A. Bidwell, London; Mr. P. B. Bentlif, St. Heliers; Mr. A. H. Buck, Brighton. (C) J. Crombie, M.B., Aberdeen, Mr. A. J. Coke, London; Dr. T. S. Clouston, Edinburgh; Country M.O.H.; Dr. J. M. Clarke, Clifton; Connaught Ranger; G. B. J. Crallan, M.B., Bournemouth; Dr. W. H. Calvert, Melrose; W. J. Cale, M.B., Bury St. Edmunds; C. C.; Camphylene Co., Manager of, London; Civil Surgeon; Mr. J. Clark, Clay Cross; Dr. H. Corby, Cork. (D) A. Dingwall, M.B., Glasgow; Dr. J. M. Day, Dublin; Dignity; Dr. S. J. O. Dickons, Cowfold; Delta; Diabetic; Mr. A. S. Duke, Haslemere; Dr. W. G. Dun, Glasgow; Devonshire Hospital, Secretary of, Buxton; Dr. J. Dulberg, Manchester; D. C. (E) Eucryl Limited, Secretary of, Hull; E. R. F.; E. P. (F) Dr. E. Fraser, London; E. R. Fothergill, M.B., London; N. S. Fraser, M.B., St. John's, Newfoundland; Fil-li-loo. (G) Mr. H. F. Girdlestone, Bournemouth; Dr. E. Guillemume, Spa; Guy's Hospital, Secretary of, London; Dr. C. E. Goddard, Wembley; Mr. P. B. Giles, London; Dr. L. Grant, Ballachulish; Mr. C. G. Grant, London. (H) Mr. J. S. Hamilton, Contvelle; J. F. Hunter, M.B., Helensburgh; Dr. W. M. Harman, Winchester; G. C. R. Harbinson, M.B., Matlock; A. C. Hill, M.B., London; Dr. T. A. Helme, Manchester; Dr. R. T. Hewlett, London. (I) Inebriate Home. (J) Mrs. H. Johnstone, London; J. A. W.; Mr. R. Jones, Englehawk; Dr. A. James, London. (K) Mr. R. Kershaw, London; King's College, Secretary of, London; Dr. L. Kidd, Enniskillen; Mr. A. E. Kennedy, London. (L) Messrs. Lorimer and Co., London, Mr. E. W. Lewis, London; J. P. Little, M.B., London; Dr. C. Lockyer, London; Dr. S. I. Lightfoot, Watford. (M) Dr. A. C. Mills, Brussels; A. E. Maylard, M.B., Glasgow; W. H. Mayne, M.B., Warrenpoint; J. McPherson, M.B., Salina Cruz; Messrs. Macmillan and Co., London; J. P. L. Mummery, M.B., London; M.B.; Dr. J. E. Moorhouse, Stirling; Mr. J. McOscar, Woking; Messrs. S. Maw Son and Sons, London; T. F. Macdonald, M.B., Geraldton; Dr. R. Maclaren, Carlisle; Metropolitan Publishing Co., Manager of, New York; Mrs. Moxon, London; M.D.; Mr. T. H. Morse, Norwich; Mr. J. G. McCandlish, Leeds. (N) Mr. J. S. Nairne, Glasgow; R. B. Ness, M.B., Glasgow. (O) Omega; Old House Surgeon; Sir I. Owen, London; Dr. J. Ormsby, Dover. (P) A. E. Payne, M.B., Leicester; Mr. C. B. Pasley, Cahir; W. J. Penfold, M.B., Newcastle-on-Syne; Dr. R. Purdon, Belfast; P. I.; Mr. R. W. Partridge, London; Mr. G. W. Parker, Dover; Mr. Y. J. Pentland, Edinburgh; Dr. J. Priestley, London; Mr. S. Paget, London; Dr. W. H. Peake, London. (Q) Quaestor. (R) Mr. A. Robertson, Dumbarton; Messrs. Rebman Limited, Manager of, London; Dr. A. Raffray, Paris; R. W. M.; N. F. Rowstron, M.B., Sunderland. (S) Messrs. Speirs and Co., Glasgow; J. E. H. Sawyer, M.B., Birmingham; Sir J. Sawyer, Birmingham; Scott, Jamaica; Mr. T. K. Smith, Liverpool; Mr. M. Shire, London; Dr. W. E. S. Scott, Manchester; Sandowner; Surgeon R.N.; Dr. R. M. Simon, Birmingham; Mr. R. B. Sergeant, London; Subscriber; S. Stephenson, M.B., London. (T) Dr. J. Taylor, Chester-le-Street; A. H. Tubby, M.B., London; W. J. H. Tritton, London; Dr. P. Thompson, London. (U) Dr. A. R. Urquhart, Perth. (V) Vaccinator; Vaccina; Vexatus. (W) Mr. C. H. Warren, London; W. Wright, M.B., Birmingham; Messrs. H. Welfare and Co., London; Dr. L. Williams, London; Dr. F. Willcocks, London; Mr. P. Waterhouse, London; Dr. H. Woods, London; Dr. L. Whitfield, Monrovia, Cal.; Mr. C. Williams, London; Mr. A. H. Walker, Cranleigh; Mr. W. B. Winckworth, Taunton. (X) X.; etc.

BOOKS, ETC., RECEIVED.

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Rural Water Supplies. By C. J. Russell McLean, M.D., M.Ch., D.P.H. London: Sanitary Publishing Co. 1s.

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AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(1) Albuminuria and Life Assurance.

STOKVIS (*Wien. med. Woch.*, May 3rd and 10th, 1902), as consulting physician to the "Mutual" Company, protests against the indiscriminate rejection of candidates for assurance on account of albuminuria—that is, after a merely chemical examination of the urine. In every case in which albumen is found microscopical examination of the sediment obtained by centrifugalization is essential for the avoidance of unnecessary rejections. There are two fundamentally distinct forms of albuminuria, the renal and the extrarenal. The latter is indicative merely of a functional or organic lesion of the genito-renal tract, which is not necessarily or even usually dangerous to life. Extrarenal albuminuria is characterized by its transitory and intermittent nature. Since, however, some forms of renal albuminuria are equally transitory and intermittent, the final distinction between the two is based on the microscopic examination of the sediment. The presence of blood, pus cells, epithelium from the mucosa of the urinary tract, spermatozoa, and shreds of mucus, in the absence of renal elements, is decisive of an extrarenal origin. Probably in many cases of so-called physiological albuminuria the origin of the albumen is extrarenal. Zechnisen found albumen in the urine of 21 out of 144 ophthalmic patients; in 60 per cent. the presence of blood, vesical or urethral epithelium, pus, or spermatozoa pointed to an extrarenal origin. Von Noorden found albumen in the urine of 154 apparently healthy soldiers, which in 106 originated extrarenally. Flensburg examined the urine of those soldiers in which he had unexpectedly found albumen at the end of their two years' service: in the majority every trace of albumen had disappeared and in the remainder there was no single symptom of nephritis. In every case of albuminuria the presence of blood should be excluded, for traces of blood too minute to be detected by Heller's or the spectroscopic test will nevertheless give the reactions of albumen. In extrarenal albuminuria nucleo-albumens preponderate. In doubtful cases the urine should be obtained by catheterism, so that every source of contamination may be avoided. Albuminuria of renal origin may be either temporary or permanent, functional or organic. Organic lesions are characterized by persistence. But persistence is not an absolute bar to acceptance, for cases occur, though rarely, in which albuminuria with renal casts continues indefinitely without any disturbance of health. If, however, there are polyuria, casts, cardiac hypertrophy, or dilatation, arterio-sclerosis, retinitis, uraemia, and oedema, nephritis is obviously present. Every case should be judged on its merits. Even without albuminuria, endarteritis, or any one of the above-mentioned symptoms, combined with persistently-increased diuresis and a specific gravity between 1010 and 1012, is extremely suggestive of an organic renal lesion. The functional form of renal albuminuria is transitory or intermittent, and is mostly due to intoxication or autointoxication. The toxic symptoms produced must decide in each case whether the applicant should be accepted. The most important variety is that which occurs after exercise, and which points to a metabolic instability which may possibly become dangerous. Renal albuminuria which persists during convalescence from infectious diseases is of no more significance as a sequela than slight bronchitis; if there are no cardio-vascular changes the candidate may be passed. Some of the most difficult problems are connected with cases of ascending infection from the bladder. If the process is tuberculous the candidate should clearly be rejected. In other cases the question whether the kidney is involved will be decided by the effect produced and the condition of the heart and arteries. Many cases of functional albuminuria are due to circulatory disturbances. Of this nature is probably that form known as "cyclical" or "postural," in which there is usually some circulatory disturbance, as evidenced by cardiac dilatation, tachycardia, palpitation, or anaemia, though doubtless heredity and other factors are involved. It is the rule to reject these applicants, but as the prognosis is usually excellent there is no reason why they should not be accepted after a period of probation. This form of albuminuria is practically identical with the albuminuria of cardiac disease.

(2) Convulsions in Typhoid Fever.

C. HÖDLMOSER (*Wien. klin. Woch.*, No. 23, 1902) reports an interesting complication of typhoid fever. The clinical history is as follows:—The patient was a schoolmaster, aged 40, and was taken ill one week before admission into hospital. He was a weakly individual, and was pale and thin. The symptoms of his illness were well marked, consisting of fever, dry, furred tongue, slight bronchitis, and enlargement of the spleen. During the following week the stools were frequent and typical of typhoid. Up to this time he had shown no disturbances of cerebral function. A little later peculiar movements of the head and twitchings of the corners of the mouth were seen. The movements became extremely intense on the ninth day of his stay in hospital, and on the following day, although the temperature had been lower during the few days preceding than before, the patient became very restless, was delirious, and at about midnight was attacked by very severe convulsions, which lasted for about an hour a-half. The movements of the head and twitching of the mouth continued during the next day, and at night time the convulsions again returned. These appear to have been of the type of eclamptic convulsions, and were of great severity; they kept on recurring for about three hours. The temperature had become raised again during the attacks. During the rest of the night he lay quite unconscious, and on the following morning he was only so far conscious as to be able to utter some inarticulate sounds. The urine had remained during the whole period free from albumen. The patient made an uninterrupted recovery after the second night of convulsions. The diagnosis of enteric fever was confirmed during convalescence by a markedly strong Widal's reaction. Hödlmoser discusses the significance of the attacks at some length.

(3) Paroxysmal Tachycardia.

ALFRED MERKLEN describes (*Thèse de Paris*, 1902,) a peculiar group of cases of obscure etiology and of which paroxysmal tachycardia is the leading characteristic. First described in 1889 by Bouveret these cases have not received the attention they deserve. The most noteworthy feature is the extreme rapidity of cardiac action coming on suddenly and disappearing in the same manner. There may be no other symptoms or signs and thus the condition may escape observation, but often the patient complains of palpitation and other circulatory disorders which draw attention to the heart. These cases are divided into two groups according as the duration of the attack is short or long. In the first there may be vague sensations of vertigo with a feeling of epigastric constriction and pericardial pain radiating down the left arm. More usually, however, the attack comes on suddenly without such prodromal symptoms. The pulse rises from 80 to 175 or 250. Usually the pulsations are regular and rhythmical. Occasionally the rhythm becomes altered and the pulse beat irregular. It is sometimes impossible to count the pulsations in the vessels and auscultation of the heart is the only means of counting the number of beats. The face is usually pale, as cyanosis and dilatation do not occur in these shorter attacks. There is generally polyuria, and sometimes glycosuria. Respiration is little altered, being in marked contrast with the extreme acceleration of the heart. The other functions are unaffected, except that there may be insomnia, but some patients sleep during the attacks. In a few cases slight elevation of temperature has been noticed. The general condition of the patient is little affected; he may feel obliged to sit or lie down, but one case is quoted in which most comfort was obtained by taking long walks. These cases usually terminate as abruptly as they began. In the second group tachycardia is of much longer duration, all the other symptoms being similar to those just described. There are in addition certain complications such as venous stasis, cardiac failure, with dilatation of the cavities, dyspnoea, cough, and pulmonary oedema. Anorexia is complete, urinary secretion is diminished, and the general symptoms become grave. These symptoms appear about the fifth or sixth day. Such cases sometimes end as abruptly as those of the first group, but not infrequently the termination is fatal, death coming suddenly or sometimes gradually with coma. Such are the principal features of paroxysmal tachycardia. The cause is difficult to explain. Heredity and a neurotic constitution seem to predispose, and one condition in particular, namely, asthma,

has been described as an important feature in these cases. According to the writer this particular necrosis may be induced in predisposed persons by sudden shocks, accident, exhaustion, certain reflex irritations from gastric, intestinal, renal, or uterine disease. Thus, hepatic colic, pregnancy, menstrual disorders, ovarian operations may bring about paroxysmal tachycardia. Also certain infective or toxic conditions, such as alcoholism, tobacco, tea, and lead, influenza, acute rheumatism, and tuberculosis. The presence of any organic disease renders the prognosis much worse.

SURGERY.

(4) "Foreign Body Tuberculosis" of the Tongue in Tumour Form.

M. Silbermark (reprint from *Deut. Zeit. f. Chir.*) records the following case: A woman, aged 58, applied for surgical treatment at the General Hospital in Vienna, for a tumour of the tongue. She was employed in a wool factory, and had to make up the finished wool into skeins. Her past history was good, and the family history left nothing to be desired. There was no ground for suspecting syphilis or alcoholism. She had never had a cough or night sweats, and had not been in contact with the secretions of tuberculous individuals, nor yet in contact with dogs, parrots, or monkeys. The present condition began nine years previously; at that time she noticed a small nodule protruding from the surface of the tongue. At first it was red and not painful; a little later it became painful, and a yellow head formed on it. The nodule increased in size, and soon burst, discharging a few drops of yellow fluid. The opening then healed up, and the nodule remained about the same size, and gave rise to no inconvenience. Six weeks before Silbermark saw her severe pain set in, and the nodule was noticed to have increased in size. The size of the growth and the pain caused her so much difficulty in speaking and eating that she determined to have it removed. On examination, no abnormality beside the tumour in the tongue was found. The tumour was situated about half an inch from the tip of the tongue on the surface of the left half, and was of the size of a hazel nut. The covering epithelium showed no unevenness or other defect. The growth was hard, not very tender, and did not present any soft or fluctuating spots. Surrounding it the tongue was normal. The lymphatic glands were not enlarged. The differential diagnosis lay between cystoid, lipoma, fibroma, actinomycosis, gumma, tuberculous growth, and sarcoma. It was regarded as a fibroma. It was excised, and the wound was closed by catgut sutures. The sutures had entirely disappeared on the fifth day, and the wound gaped a little. Thirteen days later only a very small depression could be seen, and as this was well covered by epithelium, as seen through a lens, the patient was discharged. On section, the tumour proved to be solid. Its sharp definition, hardness, and the absence of enlarged glands justified the diagnosis. Cystoid and lipoma could be at once put out of court. Tuberculosis in tumour form was considered unlikely, because there was no ulceration or softening. Actinomycosis was thought of, but from the fact that the tumour was situated in the parenchyma, and covered by a normal surface, this was also put aside. The situation further excluded the diagnosis of "struma aberrans" (wandering goitre). The rapid increase of the growth made it impossible to exclude a malignant growth, but sharp definition and absence of enlarged glands rendered this diagnosis improbable. There was no reason to regard the tumour as a gumma. On microscopical examination, it was found to be made up of five isolated nodules, each of which was surrounded by a broad stripe of small cell infiltration. In the surrounding tissue, partly toward the surface and partly toward the deeper surface, there were similar miliary nodules, some of which were arranged in groups. The epithelium near these groups was thickened, and the papillae were enlarged. The nodules consisted of polygonal cells with large nuclei, having distinct structure. In the centre of many of the nodules, there were numerous typical giant cells with many nuclei. The small cell infiltration was made up of small mononuclear leucocytes. In no nodule could the least suggestion of caseation be discovered. In some of the nodules was seen, closely surrounded by giant cells, an object, more or less cylindrical in shape, refracting light strongly, and showing an outer layer, which was deeply stained with haem-alum, and an inner portion, which was coloured a light greenish-yellow tone. In the inner portion there was seen a central body, which showed some structure. No bacilli or cocci were found. Silbermark came to the conclusion that he was dealing with a "foreign body tuberculosis" in tumour form, and believes that the foreign body—the light-refracting object—was an animal hair. He deals with the possible method by which it gained an entrance and produced the tissue changes.

(5) Resection of the Ankle-Joint.

Koenig (*Deut. med. Woch.*, August 14th, 1902) refers to the operative treatment of tuberculosis of the foot-bones, and says that one cannot do better, if one wishes to study this subject, than read the publication of the New York surgeon Mass on resections of the bones of the foot. The material which this author uses is made up of 200 operations performed under Koenig. Of these 80 took the shape of a method which he now wishes again to describe. The results were in so far satisfactory that 44 of the 80 patients were able to walk about on what he terms very useful feet. The majority of tuberculous lesions of the bones of the foot begin in the astragalus, and by far the greater number of astragalus appear in the junction of the trochlear portion and the head. Further, the majority of tuberculous lesions of the synovial membranes begin in the anterior aspect of the joint. He therefore considers that the incisions should be two large ones, each to the front side of the malleoli. He begins the incisions about ½ in. above the joint, and continues them almost immediately along the edge of the malleolus on each side. On the inner side it reaches the scaphoid and on the outer side the "tarsal sinus." The soft parts are then dissected from their attachments, and the bridge of tissue thus formed is hooked up. He deals with some arguments why the older methods of operating lead to unsatisfactory results as compared with the method by the two large incisions. Next the chisel is applied to the malleoli and layers of bone cut through; these layers are left in connexion with the ligaments and with the periosteum above. This procedure will offer great difficulty if attempted on the corpse or on healthy hard bone, but on diseased joints it can be carried out with ease and safety. The plates of the tibia are now levered up and removed, and one now comes to the astragalus. Only rarely will it suffice to remove the trochlea alone, as the other joint surfaces are in such close neighbourhood with the astragalo-crural joint that it is not safe to deal only with one. One can therefore remove the whole astragalus, and after this is done one can deal with the os calcis, either with a chisel or sharp strong spoon, and also the scaphoid, which may be partly or entirely removed. Koenig carefully repeats the steps of the operation (the paper was read before the Surgical Society in Berlin), demonstrating on two anatomical preparations. In conclusion he strongly recommends the operation to other surgeons, and in order to bring the uses of it clearly to the minds of his audience he exhibited a number of patients on whom he had operated by this method, and who had been cured thereby. The operation is carried out as a bloodless one, the wounds are sutured, and either a short drainage tube or a piece of gauze is inserted about the middle of each side. The foot is then put up in a right angle, and firmly bandaged or otherwise secured, and kept fixed for fourteen days. As soon as the drain is removed and the wound is closed he puts on a plaster-of-paris bandage, which the patient must wear for as long a time as possible.

MIDWIFERY AND DISEASES OF WOMEN.

(6) Necrosis and Spontaneous Elimination of a Large Uterine Fibroid.

Schmauch (*Centralbl. f. Gynäk.*, No. 45, 1902) reports a case of some interest in relation to the recent discussion on absorption of fibroids. A woman, aged 43, came under his care for a tumour which reached as high as the umbilicus. She had not been pregnant for nineteen years. The period had been regular and free; for four years it was associated with severe hypogastric pain and the discharge of fragments of tissues. Recently she was troubled with free watery discharge. There was great pallor, but the blood was not much below its normal standard. The uterus was converted into a hard, tuberculated, freely movable tumour. From the vagina issued a dirty-coloured, faint-smelling, though not fetid, watery discharge, containing fibrous shreds. The os was completely dilated, and a mass soft to the touch, not unlike a flaccid amnion, presented. Fragments of fibre hung down in the uterine wall; the seat of attachment could not be defined owing to the size of the uterus. The

fibrous masses were found to be fragments of a myoma in a state of necrobiosis, as in intrauterine maceration of a dead fetus. In three days nearly 1 lb. of tissue was removed by daily application of the volsella without the least haemorrhage. Sublimate injections were thrown up, but they caused painful uterine contractions, and were discontinued. After a few days there was a rise of temperature to 102°, but it fell rapidly. No bleeding occurred. Ergot was given, with lysol douches; at the end of a month the uterus was reduced to the size natural at the tenth week of pregnancy. The uterine cavity measured $3\frac{3}{4}$ in.; the tip of the finger could not be passed into the os externum, and the cervix had assumed its normal shape. Fragments of tissue kept coming away spontaneously and during the douching. Schmauch notes that discharge of sloughing fibroid tumours is common, but spontaneous discharge of uninfected myoma tissue is very rare. He quotes several cases: first, Doran's, recently criticized by Murdoch Cameron; then Poloff's, where the patient was a nun, and all local treatment forbidden, the tumour gradually came away in fragments. Lastly, he refers to Bäcker's case, where a patient suffered from bleeding interstitial fibroid. Electricity was tried, the bleeding ceased, then big and little masses came away, till the tumour was reduced to half its size before treatment. The thrombosing properties of electricity had brought about this result; the same had been noted in other cases. In this instance the patient was not kept in bed during treatment, and there was no rise of temperature. Schmauch dwells on necrobiosis of fibroids as distinguished from sloughing, which involves septic infection. It is caused by the tumour growing too large for its blood supply, which is often limited to two or three small vessels running from the capsule into the growth. The process begins in the deepest part of the tumour; it is a kind of liquefaction, and the fluid which infiltrates the fibres gradually breaks them down. This fluid infiltration is, perhaps wrongly, reckoned as oedema by many observers. Schmauch concludes that it is by a process of this kind that uterine fibroids slowly disappear about the menopause, so that, according to his views, true absorption of fibroids and necrobiotic changes in fibroids are parts of the same process, the latter being a later stage of the former.

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(7) Hermaphroditism: Sex determined by Ovariotomy.

UNTERBERGER (*Monats. f. Geb. u. Gyn.*, vol. xiii, 1902, part 4) reports a case where a patient was admitted into hospital with a big abdominal tumour. She was over 14 years of age, and had marked hypospadias, the clitoris being as big as a thumb. The labia looked like a divided scrotum, each the seat of a hernia, and between them a raphé ran from the root of the clitoris to the anus. At the middle point of the raphé was the meatus; there was no vagina. Show had once been seen about a year previous to examination; afterwards frequent irregular hypogastric pains occurred. Indications of internal organs could be detected on rectal exploration. The left mamma was more developed than the right. The patient was a very big girl with powerful limbs, large bones, and a relatively small pelvis. The sex was not quite certain. The tumour felt like an ovarian sarcoma; it proved to be so at the operation. It had developed in the left ovary; the tube was long and well fimbriated. The right tube was shorter but bore normal fimbriae; the right ovary was small. The uterus was ill-developed, flat, and soft, as usual in such cases. There was a faint indication of an os externum; the vagina was very rudimentary. The patient was clearly a female.

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(8) Primary Chorion-Epithelioma of Vagina.

HÜBL (*Centralbl. f. Gynäk.*, No. 48, 1902) publishes full notes of a somewhat important case of a form of deciduoma malignum. His patient, under treatment in February last, was then 36 years old. She had been through three complete pregnancies followed by an abortion at the third month, then another pregnancy to term, August, 1899. In June, 1900, a vesicular mole was removed by operation. In December, 1901, she was delivered of a macerated child over $4\frac{3}{4}$ lb. in weight; seven weeks later haemorrhage set in, and at the end of three weeks was so severe that the parts were examined. The patient was anaemic and distinctly cachectic. A tumour as big as a walnut was detected in the vagina posteriorly and inferiorly, the mucous membrane was perforated and bled, there was also a bleeding ulcerated point on the tumour. The uterine mucosa and the rest of the uterus and appendages were normal. The vaginal tumour was freely excised and sutures applied to the seat of excision. The tumour was made up of syncitium and cells of Langhans's layer in the midst of a haematoma. Ten days after the operation the wound had healed well, but bleeding soon set in, and on the twentieth day several deposits had appeared; they were spreading all over the vagina. At this stage Hübl's report was published. The case agrees with another described by Peters where a primary deciduoma of the vagina proved as malignant as is a uterine growth of the same kind. Schauta has implied that vaginal deciduoma is not essentially malignant. Hübl remarks that Schauta's opinion was based on three cases recorded by Schmit and Schlangenhauser, but all were operated upon very early, and in one which Hühl examined there was a haematoma entirely surrounding the new growth, whilst in his own case the new growth had spread beyond the haematoma.

THERAPEUTICS.

(9) Antistreptococcus Serum for Scarlatina.

A. BAGINSKY (*Berl. klin. Woch.*, December 1st and 8th, 1902) says that he observed long ago that in cases of diphtheria followed by scarlatina the diphtheria bacilli were replaced both in cover-glass and culture preparations by cocci just before the scarlet rash appeared. Examining the throats, bone, medulla, and blood of scarlatinal subjects bacteriologically, he found that streptococci are almost constantly present. In 701 throats of patients he only failed to demonstrate the streptococci in 6 cases. In nearly 100 corpses he found the cocci in all in the organs. It therefore appeared to be very probable that the streptococci were etiologically related to the disease, and he considered that one was justified in attempting to treat scarlatina with antistreptococcus serum, and hoped in this way to be able to support his views with regard to the etiology of the disease. Marmorek's serum, on being tried, proved useless, and was therefore put aside. Aronson and Baginsky sought to produce an active serum by utilizing cultures of streptococci got from the bone medulla of patients who had died of scarlatina, and obtained a serum which in doses of from 0.1 to 0.03 was able to protect mice from 0.000015 of a highly virulent culture. This culture was fatal to mice even in doses of one hundred millionth of a c.cm., but the dose used not only killed the control mice, but also those pretreated with Marmorek's serum. Before attempting to form any conclusions of the value of such a serum, Baginsky sought to determine what the mortality of scarlatina during the past twelve years is, and found that this mortality-rate was a very unreliable guide, since it varied between 13.4 and 34.8 per cent. He next selected a group of cases occurring between the end of January and the end of April, which were treated in the usual way. The mortality-rate was 14.3 per cent.; the total number of cases was 63, and 27 of these were complicated cases. His injected cases numbered 58—or, if 4 cases, to be mentioned presently, are included, 62. The 4 cases were fatal ones, and might be excluded from the statistics. One died of tuberculosis, another of a necrotic process of the lower lobes of the lungs, a third died four hours after injection, and the fourth eleven hours after injection. Adding to these 4 cases 3 other deaths, one obtains a death-rate of 11.3 per cent. The difference between these rates is too small to draw any conclusions. He divides his injected cases into four groups, and in considering the cases more closely he deals at some length with the first group, which extended from January 1st to 15th. Among the cases of this group there were some which appeared to run such extraordinary courses that he gives the details of 4 such cases, and comes to the conclusion that the symptoms were more due to the serum than to the disease. The doses of serum used in each of these cases were large. However, on finding that none of the cases terminated fatally, and as Aronson had produced an improved serum, he again injected his cases. The new serum did not produce any bad effects, and he obtained the impression that the serum does good. The temperature fell slowly after the injections, and did not rise again after. He found that the affection of the fauces generally disappeared rapidly, and although he saw a fair number of complications, he regards this as being due to the severity of the cases. Taken all in all,

he says that the serum has not that powerful action which is seen in diphtheria antitoxin, but has an action which, although slow, is lasting and continuous. He compares his researches with those of Moser, and finds that the serum used by him differs from this investigator's serum, in that the virulence is artificially increased by passages through the animal body. Moser's serum is said to act much more powerfully than his, but he urges caution in accepting brilliant results of any medicament. He thinks that Aronson's improved serum is safe and worthy of a careful trial.

(10) Intravenous Injections in Syphilis.

Bonzitat (*Thèse de Paris*, July, 1902) advocates intravenous injections of mercury in syphilis. He uses a 1 per cent. solution of the cyanide injected into one of the veins in the bend of the elbow. Injections are made with a glass syringe with a platino-iridium needle, 1 c.cm. of the solution being injected every other day. If there is salivation or diarrhoea, the injections must be stopped for a time. In severe cases, such as cerebral gumma or myelitis, injections should be made daily. The advantages of this method are said to be as follows: Simple techniques, painlessness, absence of induration, rapidity and certainty of action, small dosage, less liability to mercurialism, exact dosage; also the injections can be made more often than in the case of hypodermic or intramuscular injections. If performed carefully and aseptically, no reaction occurs at the puncture. The disadvantage is said to be the danger of thrombosis or embolism; but this, according to the author, is theoretical. It was thought that if perchloride of mercury was used for injection, it might cause coagulation of the blood in the circulation, as it does in blood removed from the body, but the quantity injected is so small compared with the mass of blood, that such an event is hardly possible. The only contraindication to the method is in cases where the veins are not sufficiently prominent, as in some women and fat subjects. The injections may be used in all forms of syphilis and at all periods; but they are most useful in grave cases which require energetic treatment, such as phagadenic chancre, severe ulceration, early syphilis of the nervous system, etc. In tertiary syphilis, according to the author, the best results are obtained. Finally, the author thinks it possible that intravenous injections may be successful in general paralysis, tabes, aneurysm, and other parasyphilitic affections, which possibly resist certain methods of treatment, but not others.

(11) Cure of Rodent Cancer by Electricity.

W. R. Fox, of Melbourne (*Australasian Med. Gaz.*, June, 1902), gives an account of this operation, and details of a case upon which he successfully operated. Referring to its disputed nature, he gives twelve of the different names by which it has been known. It stands upon the border-line of cancer, being locally of great malignancy, but never causing secondary deposits. Paget, Billroth, Bryant, Quain, and others class it among cancer. Histologically, Payne considers that it closely resembles flat-celled epithelioma, but differs in origin. Its local action, though slow, is as remorseless as the worst forms of cancer. Of the three new methods of treatment namely, the destruction of the growth by electricity, application of the *x* rays, and application of the Finsen light—the first only, that by electricity, is dealt with in this paper. Stohrer's bichromate battery is used, with a potential of 160 volts, and the voltage can be increased by pushing the sledge along to the required point. The two wires are attached each to a holder containing a platinum needle. A switch is placed in one of the handles by which the current is turned on or off. A milliampère meter of the "dead beat" variety is used to give a reading instantly. A current of from 300 to 1,000 milliampères should be employed. Under anaesthesia the needles are inserted into the healthy tissue on one side of the growth, ½ in. apart: a current of 40 or 50 volts is switched on and the milliampère meter read. The current is kept on for one or two seconds only, then interrupted and reversed, and again sent through in the opposite direction for one or two seconds. The current must be increased until the necessary effect is produced. This effect is made evident by a striking and instant change of colour of the soft tissues between the needles. They become yellowish-white, all circulation in them having ceased; they are, in fact, dead. One needle is then withdrawn and reinserted a similar distance on the opposite side of the other needle, so as to take up a fresh piece of tissue, and this is destroyed in the same manner, and so on until the growth is completely encircled and the whole of the invaded tissue destroyed. The slough separates in from three to six days, healthy granulations cover the remaining cavity and quickly fill it up, a scar only remaining. The treatment consists simply in aiding the separation of the slough and in keeping the wound clean. Fox used a current considerably beyond 1,000 milliampères in the case described, causing spasmodic contraction of all the muscles of the body. Though he considers there is no danger in using such a current, he recommends ether or A.C.E. mixture as the anaesthetic under such circumstances. He claims that electricity has important advantages over the three old methods of treatment, namely, excision, the application of the actual cautery, and the application of powerful caustics and escharotics. It is free from the intense pain caused by the cautery or escharotics; after electricity there is no pain whatever; it is also a more efficient operation. There is no haemorrhage, and therefore it is easy to avoid removing more healthy tissue than absolutely necessary. The possible contamination of the surrounding healthy parts by a knife which has just passed through invaded tissue is avoided. No sutures are required, and therefore their consequent irritation which may be a factor in causing the disease to return is absent. The cicatrix is less than after excision, as is also probably the risk of recurrence.

(12) Lenigallol for Non-parasitic Skin Affections.

Eczema, which frequently follows scrofula and rachitis, is mostly a very chronic affection, and a most difficult one to deal with. W. N. Clemm (*Therap. Monats.*, September, 1902) reports of the action of the triacetate of pyrogallol, which is known as lenigallol, in these non-parasitic skin affections, and gives a very favourable opinion. He does not adhere to the original directions of changing the dressing twice a day, but applies it in the form of a 20 per cent. paste, made up with starch and vasoval or other vehicle, which he allows to remain *in situ* for several days. Another method which he has found useful is to powder the lenigallol simply on the surface, and to cover the powder with protection of strapping. The eczema cleared up in his cases in from two to three days to a fortnight, although they were stubborn long-standing cases. He further tried it on his own skin for a granulating wound, which refused to heal with other means, and found it answer very well. In conclusion, he says that lenigallol deserves to be much better known than it is.

PATHOLOGY.

(13) Infection with Paracolon Bacillus.

Berg and Libman (*Journ. Amer. Med. Assoc.*, June, 1902) relate a case of systemic infection by a paracolon bacillus probably secondary to typhoid fever, with the clinical picture of acute cholecystitis. A man, aged 33, was suddenly taken ill with vomiting and severe symptoms of general infection, pain in the epigastrium, distension of the abdomen, and fever. All symptoms subsided after purgation. Seven days later diarrhoea, with pain of colic character, resembling gall-stone colic; jaundice also was present. The liver was not enlarged; in the region of the gall bladder was a tumour the size of a lemon. The diagnosis made was probably liver abscess. At the operation the gall bladder was found thickened and enlarged, distended with bile which could not be expressed; no stone either here or in the ducts. Eight days later death with high fever and icterus. The bacteriological results were as follows: From the bile removed at the operation a pure culture of a paracolon bacillus. Blood cultures were made three days after the operation, and some hours before death. On the first occasion the paracolon bacillus was present in pure culture; on the second there were also present streptococci and staphylococci. Shortly before death staphylococcus albus was present in the urine, together with the paracolon bacillus; the latter was present also in the heart blood shortly after death; it was not found in the intestine in spite of careful search. The patient's blood was examined daily with regard to its reaction to the B. typhosus: two days before death it gave a positive result with a dilution of 1 in 200. At the necropsy there were found perihepatitis, cholecystitis, and cholangitis; parenchymatous nephritis; in the intestine healed ulcers, swollen mesenteric glands, and enlarged spleen with necrotic areas.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(14) Meningeal Forms of Typhoid Fever.
NERVOUS symptoms are not unusual in typhoid fever, and most usually consist in hyperaesthesia, contracture, tremor, etc. There are, however, certain cases which present a distinct meningeal form. These have recently been studied by Dabout (*Thèse de Paris*, 1902). Cases of typhoid manifesting meningeal symptoms may be divided into three groups. In the first, which is at the same time the commonest, diagnosis is easy, as the usual symptoms of typhoid are present, and meningeal complications may be diagnosed when hyperaesthesia, contracture, stiffness of the neck, intense headache, and especially Kernig's sign, appear. This last is possibly one of the most important indications. The onset of these symptoms is very variable, as they sometimes occur early, at other times much later in the cases. They also vary in different persons and in different epidemics. In the second form diagnosis is much more difficult, as meningeal symptoms dominate all others. After a short period of *malaise* the patient may suffer from convulsions and high temperature. The presence of albuminuria may mislead the unwary into regarding the case as one of uraemia. Kernig's sign, strabismus, grinding of the teeth, and delirium may all be present. In the course of some days—it may be twelve—the rose spots characteristic of typhoid fever appear and the meningeal symptoms subside. In the third form the symptoms are those of cerebro-spinal infection, and diagnosis is impossible. Serum diagnosis and examination of the cerebro-spinal fluid obtained by lumbar puncture may show the case to be one of typhoid. The fluid obtained by lumbar puncture in any of the above forms may present different appearances, being clear, limpid, or opaque, and may contain the Eberth bacillus, or, lastly, the fluid may be absolutely purulent, and contain staphylococcus pyogenes, streptococcus, Eberth's bacillus, pneumococcus, or Weichselbaum's diplococcus intracellularis. One interesting point brought out by Dabout's investigations is that Kernig's sign is not infrequently present in typhoid fever, and that a fatal result is three times more frequent in those cases in which it is present. Relapses are three times more numerous—thus the presence or absence of this sign is of some importance in prognosis. Further, the presence of Kernig's sign is an important indication for treatment. Thus, cases in which it is present do not bear cold applications such as the Brand method. Warm baths up to 38° C. applied every three or four hours, from five to six minutes, according to the age of the patient, give much better results. They soothe the nervous system and promote reaction. This method has been introduced by Netter, who applies it not merely in those cases of typhoid showing meningeal symptoms, but also in cerebro-spinal meningitis. Repeated lumbar puncture gives variable information as to the progress of the cases.

(15) Thrombosis in Acute Rheumatism.
A. HESS (*Deut. med. Woch.*, June 26th, 1902,) reports two cases of thrombosis of veins occurring in the course of rheumatic fever. The first was that of a young man of 32 years, who was attacked for the first time with acute rheumatism, ten weeks before; he had suffered from joint pains, and later from palpitation of the heart and dyspnoea. There were signs of early aortic stenosis, and a small pleural effusion on the right side, and the ankle-joint was slightly swollen and very tender, but these symptoms were obviously not sufficient to account for the acute state of illness. The patient became extremely cyanotic on the least exertion, and the pulse was small and irregular. The temperature was normal. Gradually intense pain in the abdomen set in, and a little later, first the right and then the left arm became intensely swollen, while the joints remained practically unaffected. The diagnosis of venous thrombosis was confirmed by the existence of a painful cord in the axilla. That there was also thrombosis of the inferior vena cava was probable, for the abdominal pain increased and the liver became enlarged, and later on ascites appeared. At this time the general condition of the patient became so bad that a fatal termination was momentarily expected, but nevertheless he improved during the course of the following days, and the oedema gradually went back, the recovery being temporarily barred by the occurrence of haemorrhagic nephritis. The history of the second patient was as follows: Male, aged 25, had suffered from rheumatism for the last nine years, but had been otherwise well. Five days before admission he had had joint pains, the ankles, knees, and wrists were swollen and painful, there was tonsillitis, slight pyrexia, broncho-pneumonia of both lower lobes, cyanosis, and dyspnoea, and insufficiency of the mitral valve, as well as want of clearness of the aortic sounds. Later, the joint affection subsided and the pneumonic condition became less marked, but the cardiac symptoms increased in severity. Signs of aortic regurgitation next became apparent, and some days later pericardial friction was heard. An effusion in the pericardial sac soon collected, and on the same day as this was noted, the patient was seized with a short fit, accompanied by "asystole" and momentary cessation of respiration. On the following morning a doughy swelling of the left arm and left side of the neck was seen, the attacks were repeated as on the previous day, but after a time there were no more tonic spasms, but only sudden cessation of the action of the heart and of the respiration. Both pleural cavities were rapidly filled with serous fluid, and all the symptoms pointed to a thrombosis of the superior vena cava. The patient died after having been in hospital for eleven days. At the necropsy besides serous pericarditis, hypertrophy and dilatation of all parts of the heart, fresh and old valvular deposits, double broncho-pneumonia, and pleural effusion, there was found thrombosis of the superior vena cava, and of the left jugular and subclavian veins. Microscopically the walls of the veins were found to be acutely inflamed, and small-cell infiltration penetrated into the surrounding tissue.

(16) Pneumococcus Arthritis.
JAMES B. HERRICK (*Amer. Journ. of the Med. Sciences*, July, 1902,) discusses this subject in the light of all the published cases of the disease. To those previously published, he adds 9—3 seen by himself, the other 6 by Billings, Prebble, Hektoen, and Quine, all in Chicago. Cave has collected 31 cases; 3 seen by himself. To these 31, Herrick adds the 9 Chicago cases, 7 cases reported by Nathan Raw, 1 by Allen and Tull, and several older cases which had escaped the notice of Leroux and Cave. Altogether he makes a list of 52 cases. The diagnosis of all these cases was established by bacteriological examination of the exudate (generally thick creamy pus) found in the joint. The conclusions of the author are briefly as follows: The lesions are usually non-articular (61.5 per cent.), the larger joints being oftenest involved; the knee-joint most frequently of all. It may be primary in the joint, but generally occurs in association with croupous pneumonia, during the attack, or more often after the crisis during convalescence. In primary cases severe and even fatal constitutional symptoms may result from the toxaemia thus induced; in these cases of primary pneumococcus arthritis, pulmonary localization may or may not occur. The diagnosis can only be established by exploratory aspiration and bacteriological examination of the fluid. The gonococcus must be carefully excluded. Previous damage to a joint, as by trauma, rheumatism, or gout, favours the localization of the disease. The lesions may be limited to the synovia, or may be more extensive, involving the cartilages or bones. The periarticular structures may be involved. The subacute cases are sometimes highly destructive to the joint, and the same is true of some of the acuter ones. The prognosis is grave—mortality 65 per cent.—largely because of the accompanying bacteriaemia and involvement of the other more vital parts (meninges, pleura, pericardium). Yet spontaneous recovery occasionally follows even where there is a purulent exudate. The treatment should be by immediate incision and drainage. Serous arthritis may often be healed by aspiration, rest, and compression.

SURGERY.

(17) Surgical Shock.
GEORGE W. CRILE recently read a paper before the Chicago Pathological Society on surgical shock (*N.Y. Med. News*, November 29th, 1902). He said that surgical shock is an exhaustion of the vasomotor centre. Neither the heart muscle nor the cardio-inhibitory centre, nor the cardio-accelerator centre, nor the respiratory centre is other than secondarily involved. Therapeutic doses of strychnine are inert, physiological, dangerous, or fatal. If not fatal, it is followed by exhaustion. There is no practical distinction to be made between

external stimulation of this centre, as in injuries and operations, and internal stimulation as by strychnine. Each in sufficient amount produces shock, and each, with equal logic, might be used to treat the shock produced by the other. The blood does not tolerate much dilution with saline solution. Its volume, can be increased but little by saline infusion. Elimination takes place through the channels of absorption. It accumulates in the splanchnic area, and if in sufficient amount, the diaphragm and the ribs become fixed, and death is caused by respiratory failure. Saline solution has a strictly limited field of usefulness. Adrenalin acts upon the periphery. Adrenalin will raise the blood pressure in normal animals in every degree of shock; with the medulla cocainized, or in the decapitated animal. It is rapidly oxidized by the solid tissue and by the blood. Its effect is fleeting; it must therefore be given continuously. By this means the circulation of a decapitated animal was maintained ten and a-half hours. The pneumatic suit provides an artificial peripheral resistance, and gives an absolute control over the blood pressure within a range of 25 to 40 mm. mercury.

(18) Bladder Trouble and the Cause of Appendicitis.

BLADDER troubles are not common in the course of appendicitis. They either form part of the general symptomatology of disease, or may constitute the most striking symptoms in some cases in which the ordinary features are little pronounced and uncertain. F. Lancien (*Thèse de Paris*, 1902) records several cases of appendicitis in which bladder symptoms were important. Most usually there is retention, or micturition may be difficult, and accompanied by marked dysuria and abnormal frequency of micturition. Such symptoms have been recorded by Guyon as reflex, and may be observed in almost any painful condition of the abdomen, intestinal or otherwise. In almost all the recorded observations of appendicitis accompanied by bladder trouble, the patients had acute appendical symptoms. In some of the cases symptoms of appendicitis were mixed, the bladder trouble being very marked. In such cases it is impossible to explain the vesical symptoms as due to a reflex irritation. It is more logical to believe that an inflammatory focus is the cause. Bladder symptoms are then more important, retention and dysuria being marked. Such cases sometimes end by an appendical abscess pointing into the bladder and setting up cystitis, pyuria, or even pyelocystitis. A fistula may be permanently established, giving rise to communication between the bladder and an abscess cavity, or even with the intestine itself directly or indirectly, according as this latter opens into the abscess cavity or directly into the bladder. In the case of stercoro-vesical fistula the urine contains pus, gas, and faecal material. It is therefore important to note carefully any bladder symptoms arising in a patient who may possibly be the subject of appendicitis.

(19) Removal of the Gall Bladder.

PARK (*Amer. Med.*, July 12th, 1902), in discussing the question, "Why should we not treat the gall bladder as we do the appendix?" points out that these two organs and their pathological conditions closely resemble each other. It is held that the diseased and troublesome gall bladder, like the diseased and troublesome appendix, should be removed, and that surgeons should now formally recognize cholecystectomy as an ideal operation corresponding to appendicectomy. The author's personal experience of a relatively large number of cases of diseased gall bladder has taught him that one operation is not more dangerous than the other, and is equally satisfactory. He would now scarcely think of leaving an evidently diseased gall bladder, after exposing it, any more than he would think of partial operations upon the appendix. It is fair to maintain, he states, that when the gall bladder is occluded and contains calculi, and more or less inspissated or altered mucus, it has ceased to perform its proper function, and is a source of offence. An astonishing degree of toxæmia may proceed from the contents of a diseased and occluded gall bladder, and, although acute gangrenous affections are much less common in this organ than in the appendix, nevertheless, in some acute cases of cholecystitis, there are strong and unmistakable resemblances to those of acute appendicitis. The author, in conclusion, asserts that he has never regretted removing a gall bladder, but, on the other hand, has more than once had cause to regret not having done so.

(20) Heusner's Extension Method.

H. WÜLFING (*Münch. med. Woch.*, September 23rd, 1902) wishes to bring Heusner's method of applying extension into prominence, since he has found it very satisfactory, and the ordinary method of using strapping is accompanied with many disadvantages. There are three things necessary for the method: (1) A spray, the bottle of which should be capable of holding from 100 to 150 c.cm. (=about 3½ to 5¼ oz.). (2) The spraying fluid. This is, he says, difficult to dispense, and is best prepared by a good chemist. The formula is as follows: ℞ Ol. ricini, 3.0; resin damarrh., coleph., āā 10.0; terebinth, 1.0; ether spirit, ol. terebinth, āā 55.0. Filtra. (3) The strips of material for the extension. These may be made of flannel, or, as Wülfing prefers it, of a white stuff like flannel, called buckskin or moleskin. The strips should be cut wide enough to cover the whole circumference of the limb. To apply the extension one sprays the whole surface of the limb with the fluid from a distance of ½ to ¾ metre. The malleoli or other bony protuberances are then covered with pledgets of wool, and the strips are then applied. Care must be taken to avoid making creases or folds; over the strips one applies a soft muslin bandage, the left hand stroking each turn of the bandage to make it firm, and "turning" or pulling being avoided. If the extension is to be worn for a long time, one applies a starch bandage over this, the same care being taken to avoid uneven pressure. If applied in this way, the extension will be found to be very firm, not to irritate the skin or produce eczema, and to be easily removable. Wülfing mentions some modifications, which may be employed in special cases, and advises the use of the spraying fluid and strips for fractured ribs and other like conditions.

MIDWIFERY AND DISEASES OF WOMEN.

(21) Primary Cancer of Fallopian Tube.

GRAEFE (*Centralbl. f. Gynäk.* No. 51, 1902) adds one more to the 52 authentic cases of primary cancer of the tube recently collected by Zangemeister. Graefe's patient was a sterile woman aged 51, married 22 years, and apparently hitherto free from any pelvic inflammatory disease. The period, regular till nearly one year before observation, became very profuse, and seemed to reappear after a week's interval. There was in September, 1899, marked retroflexion, and a tense, sausage-shaped tumour lay in Douglas's pouch. The patient declined any operation; in February, 1902, she returned to Graefe, who detected a spherical tumour of the size of a fetal head, freely movable, to the right of the tumour in Douglas's pouch, which had not altered in size. He operated, removing a cyst of the right ovary which had burrowed deeply into the right broad ligament, and a cystic right tube, a hydrosalpinx shaped like a tobacco-pipe. He opened the hydrosalpinx, and found a papillary tumour of the size of a chestnut growing from its inner wall in its ampullary portion. This proved to be a malignant growth; the epithelium of the villous masses was arranged in several layers, and some of it had invaded the deeper tissues in the tubal wall. The patient was free from recurrence eight months after the operation. The history clearly showed that a papilloma of the tube had developed and become malignant. As the mass was small, it could not have been malignant when the hydrosalpinx was diagnosed in 1899.

(22) Operation in late Extrauterine Pregnancy.

NEUGEBAUER (*Monats. f. Geb. u. Gyn.*, November, 1902) states that during the twenty years that he has operated in cases of diseases of women he has had to do with 6 cases of late extrauterine pregnancy. In the most recent he operated at the end of the eighth month by abdominal section, removing a macerated fetus and a macerated placenta which did not bleed. The sac was treated like an abscess cavity, and recovery occurred. In 3 other cases Neugebauer successfully operated; in the fifth where he diagnosed the condition another surgeon operated; in the sixth, still under observation, the patient has gone about for a year and a-half bearing a dead fetus, but declines any operation as she feels quite well. This case is specially remarkable as the period had remained regular throughout, and, besides, there had never been pain throughout the history of the case. By late pregnancy he means gestation near (not at or after) term.

(23) Lipoma of Omentum and Mesentery.

PÉRAIRE (*Bull. et Mem. de la Soc. Anat. de Paris*, June, 1902) publishes a full report of an abdominal tumour which resembled in some respects the

arborescent lipomas of the knee, though of enormous bulk; it was a retroperitoneal lipoma of the "polypous" type according to Virchow. The patient was a woman, 52 years of age. For three years an abdominal tumour had been noted, and it had recently assumed very large proportions. The girth of the abdomen at the umbilical level was 41 in., the length from the ensiform cartilage to the umbilicus 10 in., from the umbilicus to the pubes 8½ in. There were severe pressure symptoms as seen in cases of large ovarian cysts. The pelvis was free and there was resonance for about 5 in. below the ensiform cartilage. Firm masses could be felt below this level, especially in the right iliac fossa. The urine contained 1.5 gram of sugar to the litre. At the operation it was found that the abdomen was filled with a soft fat mass occupying the great omentum and continued on to the mesentery. The peritoneal cavity contained ascitic fluid with much oil in globules, it made the operator's hands greasy, so that the application of the ligatures proved difficult. Several pedicles had to be made in order to get away the mass, which weighed nearly 16 lb., and was made up of exceedingly fine lobules of fat. It was mostly encapsuled between the layers of the great omentum, which formed its capsule, but part of it sprang freely from the surface of the mesentery as friable masses of fatty papillae. The patient recovered.

(24) Malignant Uterine Polypus.

OPITZ (*Centralbl. f. Gynäk.*, No. 49, 1902) reports two cases in elderly women. The first patient was 57, suffering from free discharge and haemorrhage. The curette brought away both carcinomatous and sarcomatous elements. The uterus was removed; an adeno-carcinomatous mass was found in the fundus, and close to it was the attachment of a polypoid tumour of the size of a walnut. The substance showed the characters of a spindle-celled sarcoma, but endothelial elements and cancerous glands lay in its substance. The second patient was 58; the uterus was removed on account of evidence of malignancy, as in the first case; and besides, a polypus as big as a hen's egg protruded through the os into the vagina. Two-thirds of this polypus consisted of epithelial cancer, but the rest included true uterine glands. The pedicle, very long, was attached close to the orifice of the left tube.

(25) Ovarian Pregnancy.

SIMON (*Centralbl. f. Gynäk.*, No. 50, 1902,) writes of a woman, aged 43, with a tumour resembling a dermoid on palpation. The operation proved unexpectedly difficult on account of firm adhesions. The Fallopian tube was practically normal and in normal relation to the tumour which had developed from the ovary. As the escape of dermoid matter into the peritoneal cavity involves danger, the tumour was extracted entire. It was carefully opened after the operation and was found to contain, not dermoid material but an ovum of the fourth month. As the tube was intact Simon concludes that the extrauterine pregnancy was "purely" ovarian; he does not use the word "primary" in his report.

THERAPEUTICS.

(26) Careless Prescribing.

AT a meeting of the New York State Medical Association, New York County Branch (*Med. News*, November 29th, 1902) Harry R. Purdy read a paper on unscientific and careless prescribing. He spoke first of the many incompatible drugs whose combination is attempted in certain prescriptions. It was often forgotten by the general practitioner that cocaine and boric acid formed a chemical compound lacking in most of the qualities of either of the constituent drugs. These two substances were nevertheless not infrequently prescribed together. In cough medicine incompatibles were often joined. Ammonium carbonate, for instance, and syrup of squills were put into the same prescription. The result was often an evolution of gas, which either blew the cork out of the bottle or sometimes burst it into pieces. The acid and alkali in these substances were bound to form a new combination with the evolution of carbonic acid gas. Notwithstanding the frequency with which attention was called to the subject, various tinctures and other preparations containing tannic acid were combined with iron salts, with the result that iron tannate, the main ingredient of ink and the one which gave it its dirty colour, was formed. It was well known that potassium iodide was incompatible with many drugs, yet recently Purdy had seen a prescription in which potassium iodide was combined with hydrochloric acid. Corrosive sublimate was incompatible with nearly everything, yet there were not wanting practitioners who had the hardihood to attempt rather complex combinations of drugs, supposedly containing corrosive sublimate in solution. At times not even the tablet manufacturers were above making mistakes of this kind, and some tablets contained corrosive sublimate in a form in which, owing to the presence of other drugs, it was unavailable for the therapeutic purposes intended.

(27) Marmorek's Serum in Streptococcus Infections complicating Scarlet Fever.

FEDERICO COCO PEREZ (*Rev. de Med. y Cirugia Pract.*, September 28th, 1902) briefly records three cases of scarlet fever in which complications, proved by bacteriological examination to be due to streptococcus infection, were treated with extremely favourable results by the serum of Marmorek. The first case was a boy, aged 8 years, who, twenty days after the onset of scarlet fever, was attacked by pleuritis on the left side of the chest, which soon developed into empyema. He had already had a sharp attack of scarlatinal nephritis and recovered from it. On the fourth day the chest was aspirated, and 500 grams of "laudable pus" removed, with transient relief to the symptoms. Three days later the operation was repeated and 800 grams removed. After six more days 800 grams were again removed by means of the aspirator, and 50 grams were sent to the Municipal Laboratory of Valladolid for bacteriological examination. The report declared the absence of the bacilli of Koch and of Friedlaender, and of the pneumococcus of Fraenkel; but the presence of the common micrococci of pus. It was immediately decided to use Marmorek's serum, and on December 1st (the scarlet fever commenced on September 20th and the pleuritis on November 10th) 20 c.cm. was injected under the skin of the abdomen. On the following day aspiration was again practised and the pleural cavity washed out with warm water. Twelve hours later 10 c.cm. more of serum was injected. From the moment a rapid and most marked change for the better took place in the state of the patient; the breathing became fuller and less frequent, in fact normal; the pulse became regular, the fever disappeared, appetite returned, and in the course of two or three days convalescence was established. The second case was one of scarlet fever in which the pharynx was specially involved and false membranes formed; there was much glandular swelling, and in many respects the case resembled one of diphtheria. A bacteriological examination of the false membrane, however, revealed the presence of streptococci only, and the employment of Marmorek's serum, as in the former case, immediately caused a rapid disappearance of all the symptoms. From his experience in these two cases, and in another of which he does not give the details, Perez concludes: (1) That the serum of Marmorek should be employed in all cases of streptococcus pleurisies before performing the operation for empyema, which has hitherto been the universal treatment; (2) that in streptococcus angina the use of the serum is a rational measure, followed by immediate good results, and rendering the usual tedious and painful treatment by gargles, etc., unnecessary; (3) that in mixed infections, streptococcus and diphtherial, the serum of Marmorek may be employed simultaneously with the antidiphtherial serum.

(28) Infiltration Anaesthesia in Rheumatic Neuralgia.

IN a long paper, which deals with many points of questionable interest, R. Bloch (*Therap. Monats.*, July, 1902) relates his experience of Schleich's infiltration anaesthesia as a diagnostic means and therapeutic remedy for rheumatic neuralgia and myalgia. He has found that when the neuralgic affection is undoubtedly rheumatic the result of Schleich's injections, which are to be carried out in the same manner as for operations, is a very striking one, and that when the injections have no effect it will be found that the condition is not a rheumatic one. In support of this theory he gives the histories, in extract, of some cases, and exemplifies each point. To show that the infiltration method is capable of quickly and permanently curing the rheumatic neuralgias, he describes cases in which the patient refused to allow him to carry out the treatment on the other side (in a case of double supra-orbital neuralgia), and while the treated side was freed from all pain, the patient suffered for many days from pain on the other side; and in another case, when the patient was convinced that the excellent result

obtained in an attack of sciatica was due to some local application and not to the infiltration, when the patient some seven months later was again attacked a repetition of the method was refused, and the attack was both long and of great severity. He quotes two cases to show that when in spite of the clinical appearances pointing to a rheumatic ailment the infiltration did not produce the desired result, the subsequent course of illness proved that it was of a different nature. Even when the rheumatic affection is accompanying some other disease, such as typhoid fever, the infiltration does its work well. He thinks that this method should be of great value to the general practitioner, and especially to the country practitioner, who cannot command the many forms of physical treatment, such as hydropathic, electrical, and mechanical apparatus. But he also thinks that even the rural colleagues, who can apply all these means to their patients, will do well to give Schleich's infiltration anaesthesia trial for rheumatic neuralgias and myalgias.

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(29) Treatment of Enuresis.

Enuresis is a disease which generally commences in early childhood and ends at puberty. Most authors agree that it is a local neurosis, while some regard it as a general neurosis, and classify it among the monosymptomatic forms of hysteria. Dealing with idiopathic enuresis, K. Walko (*Zeit. f. diaet. u. physik. Therap.*, vol. vi, No. 6,) describes some forms of treatment by giving the clinical histories of a series of cases. In one case, the patient, a boy of 15 years, suffered from nightly and occasional daily incontinence of urine. His nervous system presented no abnormality. The symptom had been present since he was 12 years of age. Faradization only produced slight improvement and was discarded as useless. Combined massage, carried out by introducing the finger into the rectum and kneading or stroking the neck of the bladder against the other hand which is applied from the abdominal wall, was carried out twice and succeeded in curing the complaint. There was no return of the trouble during the six months which have elapsed since the treatment. In another case simple massage from the rectum was sufficient to stop the nightly wetting of the bed in a boy of 15 years. A third method is reported in the case of a 14½ years old boy, who suffered from this disorder and who was otherwise healthy. In his case, Walko applied vibration massage to the region of the bladder, this was repeated nine times, and since the last sitting there has been no return. Other cases of a similar type, and treated by one or other of these means, are added. The combined massage, he says, also has given him good results in cases of symptomatic enuresis. As a type of this, may be instanced the case of a boy, aged 11, who suffered from fits together with unconsciousness, and who also wetted his bed nightly for the past year and a-half. The incontinence and the fits apparently had no connexion with one another. His troubles were permanently removed after five sittings. In one case of locomotor ataxy, he utterly failed to relieve the symptoms, while in a second he was able to diminish the incontinence materially by means of the massage. He states that the massage, either simply from the rectum or combined, is much more simply and easily carried out than vibration massage, and certainly does not give better results than the combined method. He is strongly of opinion that no good will be obtained from the use of drugs, and regards the prolonged exhibition of atropine as distinctly dangerous. It is not easy to determine whether the effect of massage depends on a suggestive action or on the actual local effect. That it is capable of completely and permanently curing the complaint proves that it is not due to a faulty development of the muscular tissue.

PATHOLOGY.

(30) The Pathology of Variola.

Five papers on the pathology of variola have recently been communicated to the New York Pathological Society (*Proceedings*, May, 1902). Ewing discusses the interpretation of the vaccine bodies of variola. He believes that red blood cells may be and very frequently are transformed into bodies indistinguishable from vaccine bodies. He has found a scanty or moderate number of structures indistinguishable from these bodies in streptococcus inflammation of the skin, in erysipelas, pemphigus, dermatitis herpetiformis, purpura haemorrhagica, and measles. Their abundance in variola seems to bear a constant relation to the severity of the disease, and especially to the haemorrhagic character of the lesions. Some seem to give evidence of an origin from the cytoplasm of epithelial cells. In the early stages of the lesions the necrosing tissues and their vicinity are crowded with fragments of subdivided red cells exhibiting various polychromatic staining qualities; these, when englobed by epithelia, at once possess the characters of vaccine bodies. If, however, Wasielewski's results of transference of vaccine from cornea to cornea with undiminished number of vaccine bodies are correct, the corneal body is either a parasite or a derivative of the epithelial cell. In this way the observation that the ordinary vaccine body is frequently an altered and englobed red cell does not explain the whole matter. Anna W. Williams has carried out a series of observations on the same subject, bacteriological and histological, to determine if an organism in pure culture could be obtained which would produce typical vaccinia or variola, and to discover the nature of the vaccine bodies. The most important cultural results were obtained from the immersion of vaccinated rabbit's cornea in ascitic broth; these "cultures," although remaining free from discoverable organisms when rubbed on freshly-shaved rabbit's skin produced a typical eruption. Study of the corneal sections showed that the epithelial cells may be phagocytic for leucocytes, red cells, certain bacteria and variously sized and and shaped chromatin-staining bodies, the so-called vaccine bodies, such corneas show as the only constant characteristic appearance these vaccine bodies. W. H. Park reported experiments with filtered vaccine; it is conceivable that vaccine organisms might be small enough to pass through a filter and yet be prevented from doing so by their englobement in the epithelial cells. Vaccine material was therefore crushed with fine sand under pressure, and then concentrated; calves and rabbits inoculated failed, however, to take. Ewing presented a communication on the relation of streptococcus pyogenes to variola. In the cadavers of 29 cases of small-pox this organism was demonstrated in the heart's blood in all cases, and in the cutaneous lesions of about 90 per cent. The abundance of the growth was uniformly proportional to the severity of the disease, and in the primary haemorrhagic cases the cultures were remarkably profuse. The question arises whether the presence of this organism should be classed as a simple secondary infection; the condition is not one of necessary symbiosis, because vaccine produces specific lesions when no streptococcus is present. Ewing looks upon the relation as one of syntoxic parasitism, and believes that certain of the signs of small-pox, especially the fulminant type, are referable to the streptococcus complication. McGill reported some preliminary investigations on the chemistry of the variolous virus. After referring to the fact that positive results are obtainable from bacteria-free lymph and blood, and to the work of Bosq and Roger, which support the protozoic view of the specific organism, he gave a few details of the results of chemical analysis of vaccine pulp. In two instances a hitherto unidentified alkaloidal substance was obtained; from every sample also diastasic material was isolated but of great variation in composition and property. There were apparently three distinct types—one which acts slowly but directly on protein material, one which is stupefying to the animal when injected intravenously, but is transient in action; and a third, which produces rapidly intervening convulsions. These analyses are at present in a preliminary stage.

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(31) New Halteridium and Trypanosoma.

H. Zieman (*Arch. f. Schiffs- und Trop. Hygiene*, November, 1902) has found in a small white owl in Cameroon the same parasite which he found before in the *Athene noctua*, and which Schaudinn identified as a trypanosoma. As before, males and females could be distinguished, but the most careful research did not reveal any further development of the trypanosoma in the owl. Halteridia in all stages were also found. They corresponded to the ordinary halteridia in gamete production, copulation, etc., but were sharply differentiated from them even in the earliest stages by the presence of a dark round granule about 1μ in diameter. The characteristic granule could always be clearly distinguished from the pigment and the chromatin. Attempts to transfer these parasites to other birds gave negative results, while only 30 per cent. of the attempts on birds with ordinary halteridia and 50 per cent. on snakes with drepanidia were successful.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(32) Daily Temperature Oscillations in Phthisis.

KUTHY (*Zeit. f. diät. u. physik. Therap.*, December, 1902,) gives the results of clinical observation of the daily temperature oscillations in phthisis. He employs the word "amplitude" to denote the difference between the maximum and minimum temperature of any given period. The daily amplitude of a healthy man is known to be about 1.8° F. Patients admitted with fever have usually more than the normal daily amplitude; this lessens as the fever abates, an increase of the daily minimum temperature accompanying the decrease of the daily maximum. Thus in one case while a maximum temperature of 100.9° fell to 100°, the minimum rose from 95.7° to 98.2°, so that the amplitude was lessened by 3.4°. The converse result is found to hold. For example a rise of 0.5° in the maximum was accompanied by precisely the same fall in the minimum. Abnormally large amplitudes are, however, often found without fever. In two such cases the amplitudes were 3.2° and 2.8° respectively. Under treatment the amplitude may diminish even to as little as 1°, 0.7°, or even 0.3°, and concurrently the condition of the patient improves. A series of illustrative cases are given. A patient was admitted with a mean amplitude of 3.6°. During the first month it gradually sank to 2.1°, the patient's weight increasing by 3.3 kg. (=7.2 lb.), and the general condition improving. In the next two weeks the amplitude increased again to 2.8°, and the patient meanwhile suffered from night sweats and much expectoration, and the increase of weight was arrested. As the amplitude again fell to 1° these symptoms diminished and the patient's weight increased by 4 kg. (=8.8 lb.). But these variations in the patient's condition may be in part attributed to the fever which was present in this case, as distinct from the fluctuation of daily amplitude. In the next instance the case was afebrile throughout. A woman, aged 22, was admitted with disease of both lungs. The amplitude of 3.2° on admission diminished gradually. When it had reached 1° all the symptoms had improved and the patient had gained 4.6 kg. (= 10.1 lb.) in weight. The physician will therefore adopt a course of treatment calculated to contract the daily range of temperature. With this object antipyretics may be administered, but absolute rest in bed with cold spongings is often found more effectual.

(33) Chorea.

MIRCOLI (*Gazz. degli Osped*, November 23rd, 1902), in supporting the theory of the infective genesis of chorea (rheumatic), points out that a negative bacteriological result need not exclude, for this may result from several causes—for example, spontaneous attenuation of the micro-organisms, germicidal action of organic fluids, plasmolysis, irregular distribution of the bacilli, occlusion (inflammatory) of the communicating channel between the internal cavities of the brain and the perimedullary spaces, stratification of the bacilli in different layers of the fluid, or insufficiency of material taken for test purposes. Any one of these causes might account for a negative result in testing for bacilli, and taken together they may explain the cases of rheumatic chorea where germs have not been discovered. And since every day seems to show more clearly an association between rheumatism and the various pyogenic organisms, it is these that one looks for in chorea. The non-rheumatic choreas may be due to germs not easily cultivated. The author admits that it is impossible to produce experimentally in animals the characteristic symptoms of human chorea by the injection of staphylococci. Chorea, however, does not present a fixed type in man.

(34) Graves's Disease in Infancy.

BARRET (*Journ. de Méd. et de Chir. Prat.*, July 10th, 1902) has collected 42 cases of exophthalmic goitre in children below the age of 15, the youngest being a child 4½ years old. These figures show that the condition is uncommon in childhood, especially in the earlier years. Symptomatology does not differ much from that of the ordinary form, and the three cardinal symptoms of tachycardia, goitre, and exophthalmos exist, though the last is sometimes less marked than in adults, and may be unilateral. Tremor is also uncommon in the child, but, on the contrary, chorea is very frequent. There is great irritability of character. The disease is apt to come on more rapidly in a child, sometimes appearing suddenly, or becoming apparent in the course of a few days, the cardiac phenomena being the first to attract attention. In some cases goitre is present for a considerable time before the appearance of the other symptoms. The writer records some instances in which tremor was the first symptom to appear, and fatigue and headache usually set in early. The duration of the disease is not so long as in the adult. The writer quotes 3 curious cases, 1 in which exophthalmic goitre appeared suddenly and subsided in the course of seven days, while in the 2 others it lasted six weeks. Two to three years, he records, is the limit.

(35) Loss of Knee-jerks in Croupous Pneumonia in Children.

IN the year 1897 M. PFAUNDLER (*Münch. med. Woch.*, July 22nd, 1902) was struck by the frequency of loss or marked diminution of the knee-jerks in children admitted on account of croupous pneumonia. He paid particular attention to the state of the knee-jerk in all cases of croupous pneumonia during the last seven years in the childrens' clinic in Graz, and found that among 200 cases of genuine croupous pneumonia the knee-jerk was either absent or symmetrically diminished in 55 of the children, that is, in 27.5 per cent. of the cases. In healthy children the knee-jerk is very rarely diminished, and is nearly always easy to elicit. As a rule, the absent reflex was noted while the temperature was high, but at times it was seen after the temperature had come down. Absence of the knee-jerk was mostly seen in children not exceeding 12 years of age, and seldom in infants, but since this form of pneumonia is rare in infancy, he makes the last remark reservedly. The localization of the pneumonic process has no influence in the presence or absence of it. On the other hand, the cases with diminished or absent knee-jerk were noted to be frequently severe ones, and often affected with early cerebral symptoms. The type of case in which this peculiarity was noted was not different from the ordinary case. In cases of lobular pneumonia he finds that the knee-jerk is never diminished. Pfaundler is astonished that this peculiarity of croupous pneumonia should not have been noticed before, as he found it much more frequently than herpes in the same condition. The knee-jerk may be diminished or absent before the physical signs have developed, and will then be found of diagnostic importance, as also in differentiating between croupous pneumonia and early meningitis.

(36) Actinomycosis of the Mediastinum.

V. SCHRÖTTER (*Intern. Beitr. z. inner. Med.*, Bd. i, p. 537) relates two fatal cases of actinomycosis, the first of which is of chief interest. The diagnosis in this case was made from the examination of a thin purulent discharge from a sinus in the back. Macroscopically this was seen to contain numerous golden granular bodies, which microscopically proved to be composed of masses of actinomyces clumps and threads. In the sputum also similar bodies were present; no tubercle bacilli. The patient, a child aged 12 years, was treated with potassium iodide 0.5 gram daily. *Post mortem* the disease was found to affect the lungs, the mediastinum, the superior vena cava, and the skeleton of the thorax. The second case was that of a poorly nourished cook, aged 47. In addition to chronic tuberculosis of the lungs and early tubercle of the larynx, the sectio showed actinomycosis of the left pleura, the mediastinum, the pericardium and myocardium, the diaphragm and the chest wall.

SURGERY.

(37) Secondary Growths in the Bones following Primary Tumours of the Thyroid Gland.

As an illustration of the teaching that whenever one meets with tumours in the bones one should be suspicious of sarcoma of the thyroid gland, R. Wagner (*Münch. med. Woch.*, September 2nd, 1902), gives the details a case which he has recently observed. The patient was a widow, aged 48, and stated that she had suffered from scrofula (enlarged lymphatic glands), and that she had had a goitre when a girl. The latter had never caused her any trouble, but recently she had noticed that there was a sort of tight feeling in it when she swallowed. Six weeks previously she had been taken with pains in the left hip and thigh, and a few days before admission she had had sudden and extreme

pain in the hip. She presented the appearance of severe suffering when first seen. On each side of the neck, extending from the anterior border of the sterno-mastoideus to the angle of the jaw, were separate tumours varying in size from a hazel to a walnut. They were freely movable and of soft but firm consistence. Immediately above the sternum there was firm tumour of symmetrical proportions, and of the size of a large fist. The left leg was held in a position of slight flexion, adduction, and internal rotation. The inguinal glands were somewhat enlarged, but not tender. Above Poupart's ligament a small resistant mass was felt, situated deep down. The whole left thigh was tender to pressure, but the anterior surface of the lower end of the femur was exquisitely painful on being touched, while the region of the trochanter was scarcely tender. The trochanter was not expanded, and its position under all circumstances was natural. Passive movements could be carried out freely, but the patient was afraid to perform any active movements. The slightest traction of the heel caused extreme pain. The measurements were equal on both sides. The diagnosis of a new growth of the neck of the femur was made, the following points speaking in favour of this: (1) The somewhat acute course of illness; (2) the extremely sudden attack of pain, the cortical layer of bone having been injured by a sudden increase of weight being thrown on it; (3) the inflammatory condition of the soft parts, as a direct result of this, which inflammatory process was already subsiding; (4) the movability of the joint, and the peculiarly severe pain on the least extension, as well as the tenderness of the distal portions of the femur. In the course of the following weeks the resistance and the enlargement of the lymphatic glands disappeared, but the general condition became worse. The goitre increased in size, and produced dyspnoea. The patient became more and more cachetic, and died about two months after she had been admitted. Only a partial necropsy was allowed, and this was limited to the thyroid gland and the upper part of the femur. In the former a greyish white nodule of about the size of a walnut was found. Microscopically this proved to be a spindle-celled sarcoma, with a large number of giant cells. The limits of the tumour were not well defined. The neck of the femur broke across in taking it out. On sawing it through a tumour could be seen penetrating into the substance of the bone, while in the marrow multiple small growths were found. All these growths had the same structure as the thyroid growth. In the gland, in the immediate neighbourhood of the tumour, some smaller tumours were found. The fact that there were no other secondary growths, the extreme rarity of secondary growths in the thyroid gland, the frequency of primary growths in the thyroid gland to produce secondary growths in bones, the certainty of the smaller growths in the femur being secondary growths, as well as a few other minor points, all point to the probability that the tumour in the thyroid gland was the primary sarcoma, and those in the femur secondary growths.

(38) Disinfection of Hospital Air.

Quénu and Landel (*Bull. et Mém. de la Soc. de Chir. de Paris*, No. 39, 1902) state that the results of experiments carried out by them during the last two years, have led them to the conclusion that oxygenated water used as a spray is the antiseptic agent of election for the disinfection of the air of operating rooms. Carbolic acid spray in such strength as can be tolerated by the operator is much less active and, indeed, but slightly superior to the spray of distilled water, although it acts more rapidly. Sublimate spray has more efficacy, but it has the disadvantage of exciting cough, and, moreover, it temporarily immobilizes the germs without destroying them. Again, condensation takes place rapidly, and the air not being saturated, the bacteria soon reappear in great number. Oxygenated water, it is stated, is not open to any of these objections. When present in large proportion it does not cause any inconvenience to the surgeon. When present in small quantity, as in less than 10 grams to the cubic mètre, it assures the sterilization of air saturated with microbic germs. Unlike pulverized carbolic acid and sublimate solutions it is not rapidly precipitated, and its spray rests in suspension in the air. As a disinfectant of solid surfaces oxygenated water applied as a warm spray has remarkable efficacy, as it quickly destroys the spores of bacillus subtilis with which it comes in contact, while sublimate spray fails to destroy the spores of the bacteria of anthrax. In the practice of the authors the air of the theatre is saturated with the spray of oxygenated water for some time before but not during an operation.

(39) Talma's Operation for Ascites.

The method of fixing the omentum to the abdominal wall in cases of ascites is one which promises to be of some benefit. This operation was first suggested by Talma, and seems to be of particular value in cases of cirrhosis of the liver, the object being to set up adhesions in which new vascular communications will form, and thus establish a supplementary circulation. The method has also been tried in cases of tuberculous ascites. Leport has collected a series of 53 cases (*Thèse de Paris*, 1902), almost all of which were cases of ascites due to cirrhosis, and in which Talma's operation was tried. In 20 there was a complete cure; 11 were considerably improved, and in 22 there was only slight improvement or a fatal result. The operation being in itself simple there are practically no contraindications, and where other methods of dealing with cirrhotic ascites have failed it should certainly be tried. According to the writer the method should not be postponed too long, for when the hepatic functions are considerably impaired, the chances of improvement are less.

(40) Treatment of Congenital Dislocation of the Hip.

Ashley (*N.Y. Med. Journ.*, December 6th, 1902) gives a full description of the details of the functional weight-bearing method of treating congenital dislocation of the hip, as originated and practised by Lorenz. The author, who has seen and participated in 128 operations, states that this method consists in a series of manipulations by which the head of the dislocated femur is reduced into the acetabulum, the dislocating muscles and ligaments are stretched, and the acetabulum is deepened. The limb is then encased in plaster-of-paris, fixed generally in the position of 90 degrees of abduction and 90 degrees of flexion, to remain so for from six to nine months, until Nature has deepened the acetabulum and constricted the capsule around the neck, the stability of the head in the old acetabulum being thus secured. This is followed, usually, after the removal of the plaster-of-paris, by such exercises and massage as will stimulate the muscles, giving stability, and preventing these muscles from contraction, which would tend to produce relaxation. The age most appropriate for this bloodless operation is from 3 to 5 years, when Lorenz thinks he can obtain from 90 to 95 per cent. of anatomical repositions. Operations have been performed upon patients from 1 to 35 years of age, with anatomical reposition in 50 per cent. of his cases, and functional amelioration in nearly all. The treatment is more complicated and prolonged in cases of bilateral dislocation.

MIDWIFERY AND DISEASES OF WOMEN.

(41) Delivery of Patient Dying from Meningitis: Child Saved.

Arzac and Lafond (*Rev. Mens. de Gyn., Obstet., et Paed. de Bord.*, September, 1902) report the case of a woman, aged 21, admitted on April 29th, 1902, into Lefour's maternity. A brother had recently suffered from meningitis. The girl was pregnant, close to term. At the fifth month of the pregnancy she contracted syphilis; a hard sore was still present on one labium majus, and roseola, mucous patches, and alopecia had developed. The patient had been under no treatment. For about a fortnight she had suffered from violent headaches, but she kept at her work till a rigor occurred on April 28th followed by mental derangement. After admission the worst symptoms of acute cerebral meningitis set in. By May 2nd the patient was in a dying condition, and completely comatose. The fetal heart was audible. The patient was placed in the obstetrical position, and the cervix dilated manually; as the membranes were ruptured a considerable amount of liquor amnii came away. A foot prolapsed, but extraction of the aftercoming head was impracticable. Forceps had to be applied, and the child was delivered. It was in a state of suspended animation owing to two coils of the cord constricting its neck, but was easily revived; it weighed over 5 lb. There was no evidence of syphilis. The placenta was large, and free from naked-eye appearances indicating disease. It was delivered manually as haemorrhage had set in; hot injections and ergotin were used. A few hours later the patient died. All the appearances seen in sporadic cases of meningitis were discovered. Pus lay under the arachnoid both at the vertex and the base. The reporters believed that the cerebral disease was due to syphilis; mercurial

treatment had been adopted after admission to the maternity, but clearly, they admitted, too late to allow of benefit or to aid in diagnosis. Fieux recently delivered artificially a woman of a live infant when she was sinking from cerebral disease. She died forty-eight hours later, and a large abscess was discovered in the brain. Lefour considered that had *post mortem* Caesarean section been attempted in Arzac and Lafond's case the fetus would have been certainly lost.

(42) Pregnancy after Removal of Both Ovaries.

BALDWIN (*Amer. Journ. Obstet.*, December, 1902) adds a tenth case to that recorded by Doran (*Trans. Obst. Soc.*, vol. xliv, 1902, p. 231), with notes of eight others. Baldwin operated in March, 1891, on a woman, aged 24, in the third month of pregnancy. He removed a pair of ovarian cysts, each of the size of a small cocoanut. They adhered to each other, but each had a very long, narrow pedicle. They were ligatured in the usual way, and both tumours removed. The patient was delivered at full term in September, 1891. In March, 1900, the patient informed Baldwin by letter that she had borne two children since 1891. It was possible that a small amount of ovarian tissue was left in one pedicle outside of the ligature. Baldwin also reports a case proving the existence of ovarian tissue outside the ovaries. In 1893 he removed both ovaries and tubes in a case where menorrhagia had existed for six years, subsequent to a miscarriage. The bleeding continued; in June, 1894, the curette was used, but without effect. In November, 1894, a mass was detected on palpation to the left of the uterus. It seemed to be tender after the fashion of an ovary. Baldwin operated and removed the mass, which lay between the layers of the left broad ligament, apparently just below the remains of the ovarian ligament. It presented all the characteristics of ordinary ovarian tissue, and no trace of such tissue could be found at any other point. Yet the menorrhagia continued, showing that some must have been left behind.

(43) Uterine Fibroids not Dangerous in Pregnancy.

MÉHEUT (*L'Obstét.*, November, 1902) has collected 85 cases of pregnancy complicated with uterine fibromyoma in the Baudelocque clinic between 1895 and 1902. In 67 cases pregnancy continued to term (over 78 per cent.), in 13 it was premature, in 3 abortion occurred, and in 2 the pregnancy was interrupted by operations. In only 2 cases was the fibroid the direct cause of the patient's death. Thus, though a pregnancy complicated by fibroid requires to be well watched, serious accidents are the exception. When the patient's life is threatened operative interference is necessary at once. In all cases the aim is to let the pregnancy advance as near to term as appears safe. Méheut, however, reports that out of the 85 children, 65 left the clinic alive, whilst 20 (over 23 per cent.) were lost.

(44) Tubal Pregnancy: Dermoid of Both Ovaries.

FENOMENOFF (*Monats. f. Geb. u. Gyn.*, Nov., 1902) reports a case of tubal abortion with a remarkable clinical history. The patient was 34 years old and had borne one child, 11 years old. In 1897 a dermoid of the left ovary was removed. In April, 1902, pain and uterine haemorrhage, very profuse, occurred after six weeks amenorrhoea. A tumour was detected on the right side much larger than a six weeks tubal sac. The patient refused operation and went about, doing active work. At the beginning of May she fell down in a state of collapse when getting out of bed. In the evening she was pulseless. Abdominal section was performed. The swelling on the right was a dermoid ovarian tumour, connected with a gravid tube. The ovum protruded from the dilated ostium, the fetus hanging by its funis. No trace of the left ovary could be detected on the stump of the left pedicle. Rein, in a discussion on this case, observed that there had been tubal abortion. As the fetus was macerated, it must have died some time before the operation; yet though the pregnancy had ceased, free haemorrhage ensued when the arm was in process of expulsion from the tube. Beckman observed that, as has been noted before, the symptoms of collapse were out of proportion to the amount of blood poured into the peritoneal cavity. Fenomenoff's patient recovered speedily.

(45) Dermoid of Fallopian Tube.

ORTHMANN (*Centralbl. f. Gyn.*, No. 49, 1902) recently operated on a woman aged 33 who had been for nearly eight years under treatment for pelvic disease. The portio had been amputated and vaginal fixation performed for retroflexion. Latterly the patient complained of pain on the right side of the pelvis, where enlargement of the tube and ovary was detected on palpation. Abdominal section was performed, and a cystic tumour of the ovary as big as a walnut with an obstructed tube dilated to the thickness of a thumb were removed. The tube contained the typical greasy material found in ovarian dermoids mixed with hair and broken-down tissue. A conical structure sprang from the walls of the tube near the ostium; it was covered with hair and bore a tooth-like body.

THERAPEUTICS.

(46) Agurin.

THE action of digitalis for uncompensated heart disease, accompanied by ascites, is often greatly enhanced if a good diuretic is combined with it; and at times the latter alone suffices to remove the fluid from the peritoneal cavity. L. v. Kètly (reprint from *Die Heilkunde*, No. 8, 1902) thinks that one should welcome a diuretic which does not produce gastric disturbances, and which does not harm the kidneys. As an improvement on diuretin, which is said to produce gastric disturbances, a new preparation called "agurin" has been well spoken of. It is a double salt, the sodium salt of theobromine combined with sodium acetate, and takes the form of a white powder, which is easily soluble in water, has bitter salt taste, and is slightly alkaline. It contains 60 per cent. of theobromine. Kètly has tried it in 34 cases, including cases of cardiac disease with anasarca, chronic tuberculous peritonitis with ascites, cirrhosis of the liver with ascites, arterio-sclerotic granular kidney with general dropsy, primary granular kidney, chronic parenchymatous nephritis, and pleural exudation, both of tuberculous and rheumatic origin. He gave agurin in wafers in doses of 2 to 3 grams (*circa* 30 to 45 gr.) pro die. The majority of the patients stood the drug well, and did not complain of any unpleasant symptoms. In 2 cases some gastric disturbances were produced by the powder, but on giving it in solution in aq. menth. pip. (3 in 100) the preparation was found to be non-irritating. In the heart cases the diuretic effect was seen in about two days, and the urine was increased by about 7 to 10 oz., while on the fourth day the amount, which had before been from 14 to 20 oz. in the twenty-four hours, was increased to $3\frac{1}{2}$ or $4\frac{1}{2}$ pints. At the same time the dropsy disappeared. In cases in which the drug was given continuously the oedema did not reaccumulate, and the daily amount of urine remained at about $2\frac{1}{2}$ to $3\frac{1}{2}$ pints. In those cases of uncompensated disease the action of the digitalis, which had been unsatisfactory before, was increased. This marked diuretic effect took place equally well when the heart muscle was weak as when it was made effectual by digitalis. In the peritonitis and cirrhosis cases, although, of course, the agurin could not produce a curative action, and could not remove the necessity of paracentesis when there was much ascites, the diuresis was found valuable. On the other hand, no appreciable diuretic action could be noted in the chronic nephritis cases, although it acted in the arterio-sclerotic granular kidney cases. The amount of urine was increased in the cases of pleural effusion, but the drug did not exercise any influence on the effusion itself. He therefore concludes that agurin is an excellent diuretic, which does not harm the stomach or kidneys, and that it should be given in doses of 3 grams in twenty-four hours, which will produce diuresis after about two days, and this will last until two or three days after the drug has been stopped. The preparation increases the amount of the urine in the healthy subject, but this action becomes reduced after eight to ten days.

(47) Ziemssen's Modification of the Subcutaneous Application of Arsenic.

JESIONEK (*Münch. med. Woch.*, July 29th, 1902) wishes to emphasize that, although the subcutaneous use of arsenic was introduced by and highly recommended by Koebner, Ziemssen materially improved this form of medication by employing a new solution. The solution is as follows: 1 gram (= $15\frac{1}{2}$ gr.) of ac. arsenic. is boiled with 5 c.cm. (= $84\frac{2}{3}$ minims) of normal sodium hydrate until completely dissolved; the fluid is then diluted to 100 c.cm. (= 3 oz., 4 drachms, 10 minims) and filtered; 2 c.cm. (33 8 minims) of this is poured into small glasses, and after being corked up with cotton-wool plugs these glasses are sterilized by steam. If half the quantity of soda is used the resulting mixture will have the formula of $NaAsO_2 + HAsO_2 + H_2O$. With this

solution arsenic can be applied to better effect than if one uses other solutions. When injected into the muscles it is not irritant, as is Koebner's solution of sod. arsen., and if the fluids are sterilized in small glasses infection need not be feared. He generally begins the treatment with ½ c.cm. (*circa* 8½ minims) of the solution, and rapidly increases this dose to 1 c.cm. In most cases he injected every other day, but sometimes it had to be carried out daily. In the majority of his cases the drug produced no ill-effects, and only in a few did it produce pigment hypertrophy, and in three patients toxic skin eruptions. In all cases in which arsenic was required he employed this method, and found that the quantity of the acid or salt was much smaller than would have been required had other preparations, such as Asiatic pills, been used. The action is rapid and full, while the application is convenient and easy to carry out.

(48) Cryogenine.

GÉLIBERT (*Lyon Méd.*, December 14th, 1902) records the results of some experiments made with the new antipyretic, cryogenine. Messieurs Lumière have discovered that many aromatic semicarbazides have antipyretic properties. Benzamido-semicarbazide has been chosen as the most suitable for general use on account of its solubility and its feeble toxicity, and has been named "cryogenine." It is a white crystalline powder without smell, and with a slightly bitter taste; its solubility in water is 2½ per cent. It is not decomposed by the alkalies or acids which are used therapeutically. The toxicity of cryogenine is very small. Animals have survived the injection of 2.50 gr. for each kilog. of their weight. The relatively small solubility of the substance, however, makes it impossible as a rule to give very large doses on account of the ill-effects caused by the mere volume of the injection. Still, a rabbit weighing 2 kilog. 420 gr. received an injection of 300 c.cm. containing 6 grams of cryogenine, or 2.47 gr. per kilog. The temperature fell from 39.9° to 34.1° C., but rose again in twenty-four hours to 38.9°, and the animal afterwards increased in weight. Guinea-pigs have been given 0.50 gr. per kilog. of weight by subcutaneous injection, and 2 gr. per kilog. by the mouth, and have shown no effect except lowering of the temperature. When given by injection, solutions of cryogenine cause no local trouble, and they are followed by no gastric disturbance when administered by the mouth. If the first dose exceeds one gram sweating may result. Experimentally cryogenine caused a slight delay in the conversion of starch into sugar, the rate being as 86 to 100 in the control experiment. The chemical form in which cryogenine is eliminated has not yet been determined. The effect which the drug caused upon the temperature varied according to whether the temperature of the animals was normal or raised. Tuberculous animals were selected for the experiments with raised temperature. In healthy animals 0.05 gr. (5 cg.) of cryogenine per kilog. of weight always caused a well-marked fall of temperature; smaller doses had no constant effect. In tuberculous guinea-pigs even doses of 1 to 5 mg. per kilog. of weight were followed by a fall of 1° to 1.5°, the effect persisting for about ten hours. Therapeutically the drug has been found satisfactory in tuberculosis, and, according to Gélibert, in typhoid. Cryogenine will not lower all temperatures, however: given in gram doses for three days it had no effect in a case of recurrent appendicitis with abscess: nor was its administration followed by any appreciable reduction of pyrexia in suppurative tonsillitis.

(49) Treatment of Epilepsy.

HALLÉ AND BARONNEIX (*Journ. de Méd. et de Chir. Prat.*, July 10th, 1902) published 3 cases of epileptic children treated by the administration of small doses of bromide after deprivation of salt. It has been noticed that bromide is much more active when ordinary salt is eliminated from the diet. The plan recommended is to put the patient on a milk diet, which represents 2 grams of sodium chloride per diem instead of 14, which is the average for an adult. This end is obtained by giving from 1 to 1½ litre of milk per diem, which contains about that amount of sodium chloride. A certain amount of vegetable may be added to the diet in some cases. Bread as an article of food should be forbidden, as it contains a considerable quantity of salt. On such a diet it seems that small doses of bromide have a very notable and immediate effect, so much so that care must be taken lest the toxic effects of the drug rapidly appear. Under this method of treatment the number of fits is rapidly reduced. In the cases recorded the fits reappeared when the patients were allowed to resume their ordinary diet.

PATHOLOGY.

(50) The Absorption of Tetanus Toxin.

MARIE AND MORAX (*Ann. de l'Inst. Pasteur*, November 25th, 1902) have experimentally investigated the mechanism of the propagation of tetanus toxin from the point of local inoculation. It is well known that this toxin has a remarkable selective affinity for nervous matter. This has been demonstrated *in vitro* by Wassermann, who showed that if a small quantity of an emulsion of cerebral matter is introduced into a solution of tetanine, the poison is fixed and the remaining fluid is inoffensive. Marie and Morax demonstrate that there is also a specific affinity between tetanine and the axis cylinders of peripheral nerves, but that this is not shown *in vitro*, and appears to be conditional on the maintenance of the natural connexion of the nerve trunks with the intramuscular endings. Injected into a muscle the toxin is distributed into the lymph, and passes in part into the blood, where its presence is soon evident. In the inoculation zone the toxin-containing lymph is in contact with the nerve expansions. The motor and vasomotor nerves absorb it and become saturated with it to a vastly greater degree than the other tissues of the vicinity. The diffusion then takes place centripetally, by a movement of propagation which may be compared to the absorption of fluids by the rootlets of a plant. For some twenty-four hours the local nerve filaments are more highly saturated than the nerve elements elsewhere in the body. The corresponding motor neuron is therefore the first saturated by the toxin, and this saturation manifests itself by a localized contracture—a local tetanus. Meanwhile, in other regions the nerve terminations have absorbed a certain quantity of toxin, a sufficient quantity to affect their neuron of origin; when this has taken place general tetanus succeeds the local tetanus. When the toxin is introduced directly into the blood or into viscera, symptoms do not appear until the motor neurons have withdrawn the toxin from the circulating blood; all are saturated to a similar extent and simultaneously. This explains the more delayed onset and the generalization of symptoms in splanchnic tetanus.

(51) Parasitic Worms invading the Liver.

BOSSNAT (*Arch. d. Parasit.*, September 25th, 1902) describes the lesions in the liver of the mole caused by a cestode, and considers the question of liver worms in general. The parasitic larvae which inhabit the liver of the mole are lodged in the parenchyma, never in the vessels or the biliary channels. The lesions determined by their presence are of slight intensity, and not in proportion to the considerable number of the parasites. These are surrounded by a connective tissue sheath similar to the adventitious sheath of the hydatid. Besides this, in certain localized spots a proliferation of the hepatic tissue results in the form of young cells; this is comparable to the compensatory hypertrophy of a lobe of the liver in the case of a hydatid cyst which threatens to destroy it. Numerous observations have shown that in the case of that class of parasites which inhabit the liver in the larval state invasion takes place through the portal vascular system. The embryos which pass only the first stage of their evolution in the liver are provided with means of resisting encystment; the lesions in this case are often severe, in the form of a considerable inflammatory reaction. In other cases, as in the parasite of the mole, the reaction is but slight and encystment complete. Those parasites which inhabit the liver in the adult form find their way thither through the biliary channels; these remain in the biliary channels and resist the process of encystment. Their presence determines a connective tissue formation, which is very intense and progressive, and passes on to atrophic fibrosis of the liver tissue. The distomata maintain themselves in the biliary capillaries, and the nutrition of the cells is much interfered with, resulting in sclerosis and atrophy. The adult parasites which normally inhabit the intestine and which find their way fortuitously into the liver, do so through the bile ducts; they usually cause a considerable traumatism, and as they come from a highly septic medium they produce septic infection and suppuration.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(52) The Roentgen Rays in the Localization of Brain Tumours.

MILLS (*Philadelphia Med. Jour.*, September 27th, 1902) reports the third case on record—including one published by himself in February, 1902—in which the Roentgen rays have been of definite service in the localization of a cerebral tumour. The patient was a girl of 21, whose symptoms had already been present for three years, and who presented all the classical phenomena—optic neuritis, headache, vomiting, etc., together with left hemiparesis and other indications of the presence of a tumour of large size extending from the prefrontal gyrus almost to the occipital lobe on the right side. Skiagraphy showed an abnormal shadow of about 3 in. in diameter, and irregular in outline, lying directly upon the Rolandic area. Over its anterior portion the middle meningeal artery and its branches ran; and the inner table of the skull was seen to be disorganized over the region of the tumour. Operation was performed as follows: The central fissure was located and the cranium opened by the Stellwagen trephine, but the haemorrhage was so severe that the wound had to be packed and further steps postponed. The patient rallied well and was submitted to a second operation. Owing to the severe haemorrhage at the first attempt advantage was now taken of the new method of temporarily closing the carotid arteries recommended by Crile, and both vessels were clamped after his directions. Finally there was discovered and removed, with hardly any haemorrhage, an encapsulated ovoid tumour 3 in. in length, which proved to be a spindle-celled sarcoma. The patient died in a few hours from post-operative shock. The writer insists on the value of *x* rays in cases of cerebral tumour, as affording valuable support to other methods of localization; and that, as the first stage of operation, preparation should always be made for performing at any moment, if necessary, Crile's procedure of temporary clamping of the common carotid arteries.

(53) Affections produced by Trichocephalus Dispar.

IN spite of the general belief that the trichocephalus dispar is a harmless parasite, there are several records in medical literature describing the conditions which have been produced by this worm. To these E. Becker (*Deut. med. Woch.*, June 26th, 1902) adds two cases which he thinks prove that it possesses a greater pathogenic importance than is usually admitted. The first patient was a cook, aged 22 years, who had always been in good health save for an attack of pneumonia fifteen years previously. The present illness began with signs of anaemia in spring of the year before, for which she had been treated in hospital. In the autumn, after she had been somewhat better, she was again troubled with giddiness, pain in the back and chest, cramp, and palpitation. In spite of further hospital treatment, she was compelled to give up her work on account of these symptoms. On admission she was seen to be very pale, but not thin. There was a loud systolic murmur over the pulmonary and mitral areas. The blood showed in fresh preparations, defective rouleaux formation, the red cells were pale, there were a moderate number of poikilocytes, and a few macrocytes and microcytes. In stained preparations no nucleated red blood corpuscles were seen, while the count showed 3,456,000 red cells and 6,250 white cells. The specific gravity was 1040, and the amount of haemoglobin was 35 per cent. Three days after admission the faeces were examined for the first time, and considerable quantities of trichocephalus eggs were seen. At first the patient was treated by liq. ferri perchlor., but no improvement took place, and the blood count after three weeks was nearly the same as at first. The leucocytes were found to consist of polynuclear 69 per cent., lymphocytes 26 per cent., eosinophile cells 2 per cent., and mononuclear 3 per cent. Four weeks after admission she was treated by enemata of benzine, and in all eight were given. This appeared to be of benefit, as the symptoms gradually disappeared, and the examination of the blood showed 4,350,000 red corpuscles after two weeks, and 5,100,000 after three weeks, and haemoglobin 70 per cent. No more eggs were found in the faeces. The second patient was a married woman, who had suffered from anaemia for a long time. On admission, loud systolic murmurs were heard over the whole cardiac area. The red blood corpuscles did not form good rouleaux, and there were numerous poikilocytes and several microcytes and macrocytes. The count showed 2,852,000 red cells and 8,700 white cells, and 25 per cent. haemoglobin. Many nucleated red cells were seen in stained preparations. The stools contained many eggs of trichocephalus dispar. The treatment begun consisted of administration of the perchloride of iron and arsenic, and later attention to the worms was paid. Some improvement took place, in eight days, when the patient had to leave hospital suddenly on account of private reasons.

(54) Prognosis of Tuberculous Peritonitis.

FRED. C. SHATTOCK (*American Journal of the Medical Sciences*, July, 1902) bases some important conclusions on this subject on the results obtained in the treatment of the disease in 98 patients treated at the Massachusetts General Hospital from 1889 to 1900. In 57 of these cases the final result is known. In the remainder of the cases it was not possible to ascertain their progress after discharge from the hospital. Some of the cases were treated in the medical wards some in the surgical. "The treatment on the medical side was in the main symptomatic and hygienic. Tapping was resorted to whenever necessary for the comfort of the patient. The treatment on the surgical side consisted of simple abdominal incision, sponging or washing out of the abdominal cavity with normal salt solution or sterile water, and removal of masses of tuberculous material when possible." Some cases (32) were sewn up tight, others (20) were drained with gauze or tubing. The general mortality of the 98 cases, based on the condition of the patient's discharge, is 13.2 per cent. When the results are followed for a period of two to eleven years the mortality mounts to 47.3 per cent. The ultimate mortality of patients in this series under medical treatment is 68 per cent., under surgical treatment 37.5 per cent.; 2 patients have had recurrences but are now well. The greater mortality under medical treatment is in part to be explained by the fact that these nearly always were complicated with tuberculosis in the lungs or elsewhere. These results are much at variance with those until recently accepted and still set forth in textbooks. Austin Flint, in his *Practice of Medicine*, says: "The termination of tuberculous peritonitis is always fatal, either from the disease itself, or from tuberculosis of the lungs or other organs. The duration is from one to two months to a year or more. It is now known that the disease not infrequently gets well. This knowledge is to be ascribed indirectly to the experience gained by Ephraim McDowell and Spencer Wells in the operative treatment of ovarian disease. The conclusions of Shattock are as follows: (1) Tuberculous peritonitis may be followed by apparently complete recovery, even if complicated by tuberculosis elsewhere, either under (*a*) purely medical treatment, (*b*) tapping, (*c*) incision; (2) as in other forms of tuberculosis, the best obtainable hygienic surroundings are all-important. Consequently, no patient should be kept in the hospital longer than is necessary, especially if more and better air can be secured outside with proper care and food. (3) We are warranted in trying medical treatment for a time, especially under first-rate hygienic conditions, tapping the abdomen if there is sufficient fluid to cause discomfort. (4) If the patient under a month or six weeks of medical treatment fails to improve, or in even less time if he seems to be losing ground, surgical treatment should be advised.

SURGERY.

(55) Morphine-Scopolamine Anaesthesia.

THE advantages of Schneiderlein's anaesthesia are so obvious that K. Schicklberger (*Wien. klin. Woch.*, December 18th, 1902,) considered it necessary to test the method, and accordingly he tried it in a few cases, but discontinued its use after 11 cases, as he found that the results were disappointing. He usually gave three injections of 1 cg. (=circa $\frac{2}{3}$ gr.) of morphine hydrochl., and 1.2 mg. (=circa $\frac{2}{1\,5\,0}$ gr.) of scopolamine hydrobrom. The first injection was given about four hours before the operation, the second about two hours later, and the third about half-hour before the operation. The operations for which this anaesthesia was employed were (1) curetting, (2) amputation of the foot (Gritti's operation) and aspiration of peritoneal fluid, (3) appendicitis operation, (4) vaginal extirpation of the

uterus, (5 and 6) radical cure of hernia, (7) radical operation for umbilical hernia, (8) reduction of displaced fragments of fractured femur, (9) resection of rectum, (10) radical inguinal hernia operation, and (11) excochleation of carious tibia. The first action of the injection was seen in about ten to fifteen minutes after the first injection, and took the form of giddiness, sleepiness, gradually developing hyperaemia of the face, mydriasis, and sluggish action of the pupils. The pupils later became fixed, and the pulse beat increased in frequency to about 160. After the three doses, no disturbance of the breathing nor of the stomach was noted, but not infrequently the patients became very restless, and this proved most disturbing in operations on the abdomen. The sleep lasted for three to eight hours, and on awakening, the patient remained somewhat muddled mentally. The dilatation of the pupil and the abnormal action again became normal after from ten to twenty hours. The tachycardia at times did not disappear for thirty-six hours. In cases when muscular relaxation was required, the injections proved to be insufficient, while in other cases the depth of the anaesthesia was not sufficient to allow of the operation being completed. In these cases, 7 of the 11 in all, general inhalation anaesthesia had to be resorted to. Schicklberger says that it is a great disadvantage to have to wait for four hours before the operation can be begun, although he admits that the preparations are less terrifying to the patient than is the case in chloroform anaesthesia. Scopolamine is too potent a poison to allow larger doses to be employed in order to shorten the time. He thinks that morphine-scopolamine anaesthesia would be found useful in those cases where chloroform and ether are both contra-indicated, but that its action is not narcotic enough to admit of it taking the place of the general inhalation anaesthetics.

(56) Partial Resection of the Prostate by Perineal Prostatectomy.

Rydygier (*Centralbl. f. Chir.*, No. 41, 1902), in a paper on intracapsular resection as a normal operative method in cases of prostatic hypertrophy, states that in enucleation of the enlarged gland by a perineal incision the prostatic portion of the urethra is almost always opened, the after-treatment being thus unduly prolonged and convalescence retarded. With the object of avoiding this complication, which in the old and feeble subjects of advanced prostatic disease is a serious one, the auth r has in his practice recently substituted intracapsular resection for enucleation with the object of leaving the urethra intact and of simplifying the operative treatment of prostatic enlargement. In this method the prostate is exposed by a median incision in the perineum and careful dissection of the soft parts. The capsule of the prostate having been incised on one side of the posterior surface of the gland, the prostatic tissue is shelled out with the surgeon's finger on this side until a large catheter, previously introduced into the bladder, can be felt through the tissues in the median line just over the urethra. A clamp is then applied to the attached portion of the separated half of the prostate, and the enucleated portion is cut away. The same procedure is practised on the other side, and thus the whole of the enlarged gland is removed except the portion surrounding the urethra. This operation, the author states, is a simple and easy one, and is not, as a rule, attended by serious bleeding. Moreover, it is not likely, he has reason to believe, to be followed by growth of the remaining portion of the gland and by consequent recurrence of prostatic trouble.

(57) Tuberculosis of Male Mammary Gland.

Morestin (*Bull. et Mém de la Soc. Anat. de Paris*, June, 1902), remarks that twenty years ago tuberculous disease of the female breast was hardly known, but since then it has been frequently observed. In the male it is extremely rare. He reports a case where the patient was an anaemic French cook, 50 years of age: independently of the anaemia he was robust and of rather massive frame: he had suffered four years before observation from right pleurisy followed by repeated attacks of bronchitis, but without distinct evidence of tubercle. For five months he had noticed a slow, painless enlargement of the right breast. Morestin notes that the affected gland had assumed the form and bulk of half a hen's egg, the nipple was prominent on its surface, the skin healthy. There was no tenderness on pressure nor any oozing on squeezing the nipple. The entire gland was uniformly enlarged, without any irregularities in its surface and without adhesion to the skin and pectoral muscles. It felt firm on pressure and no soft points could be detected. A gland, as large as a cobnut, spherical and movable, was detected in the axilla. The opposite mammary gland was healthy. Diagnosis was difficult. Cancer is by far the commonest affection of the male breast. The glandular enlargement indicated malignancy. The breast was removed, with the surrounding tissues and the axillary gland. Weinberg prepared sections and found that the disease was undoubtedly tuberculous; it had chiefly involved the cells of the acini, and, indeed, was mostly intra-acinous in every part of the enlarged breast.

(58) Treatment of Simple Chronic Glaucoma.

Bull (New York *Med. Rec.*, October 4th, 1902) has noted the post-operative history of 50 cases of this disease, occurring in his own practice. They were all strictly non-inflammatory, and never, while under observation, showed any signs of irritation. All had increased tension, narrowing of the visual field (especially on the nasal side), and impairment of central vision. The operative procedure in all cases was iridectomy, and was done on 94 eyes. A long incision was made, and a broad piece of iris removed in each case. The records show that the best results as to ultimate vision occurred in the cases in which the central vision was the best and the fields were the least encroached upon at the time of the operation; that is, the operative effect of iridectomy is more certain and undeniable the earlier it is done. The slightest narrowing of the field, whether for form or colour, demands operation once the diagnosis is made. The curative action of iridectomy stands in direct proportion to the pre-existing increase of tension. Early operation, while the iris is still mobile, the field but little contracted, and the cupping of the disc slight, often arrests the disease, at least for a long period, and preserves what sight remains.

MIDWIFERY AND DISEASES OF WOMEN.

(59) Pregnancy Simulated by Fibroid and Atrophy of Endometrium.

Volk (*Centralbl. f. Gynäk*, No. 51, 1902) reports a case of total atrophy of the uterine mucous membrane with rapid development of a fibroid of the uterus. The patient was 24 years old, and had been married for over a year; on account of abrupt cessation of the catamenia, nausea, and the development of an abdominal swelling connected with the uterus pregnancy was suspected. The breasts, however, did not swell, the growth of the swelling was irregular, no movements were felt, no fetal heart was audible, and there was no lividity of the vaginal mucous membrane. After the sixth month the tumour felt much less like a pregnant uterus, and when the catamenia had ceased for fifteen months rigors set in with fever and symptoms of partial obstruction. Schauta removed the entire uterus, which was as big as a man's head. A large myoma occupied the anterior wall. During the operation the cause of the amenorrhoea was not apparent. The parts were carefully examined afterwards. There was no trace of any product of gestation in the uterine cavity, but the endometrium was in a condition of extreme atrophy. The ovaries, full of dilated lymph spaces, contained very few follicles. There was some relation between this atrophic state of the ovaries and the changes in the uterine mucosa; the cause of the amenorrhoea was explained. The febrile and obstructive symptoms were due to degenerative changes in the fibroid and rapid increase in its bulk.

(60) Differential Diagnosis of Extra-uterine Gestation, with Rupture and Appendicitis.

Legueu (*Bull. et Mém. de la Soc. de Chir. de Paris*, No. 31, 1902) states that although in most cases of extrauterine gestation with rupture, there is no difficulty in establishing a positive diagnosis, still occasionally error may result from the absence or the undue predominance of a single symptom. For instance attenuation of the signs of internal haemorrhage, localization of pain in the right side, or a high temperature may afford an excuse for the assumption that the patient is suffering from appendicitis. In extrauterine gestation, however, there are, the author points out, certain definite signs by which the surgeon may be guided in the right direction, such, for instance, as the absence of muscular contracture over the right iliac fossa, and the pallid face of the patient strongly contrasting with the leaden aspect of the face of the appendicular subject. Moreover, attacks of syncope or a marked tendency to such attacks, almost always manifested

in cases of tubal rupture, should lead to the suspension of internal haemorrhage. In doubtful cases it is concluded that pallor of the face, absence of muscular contracture in the right groin, and especially syncope, should lead the surgeon to reject the idea of appendicitis and to diagnose extrauterine pregnancy.

(61) Dangerous Haemorrhage from Ovary—Ovarian Gestation?

GOTTSCHALK (*Centralbl. f. Gyn.*, No. 49, 1902) recently reported a case of operation for internal haemorrhage. He afterwards read a communication before the Berlin Obstetrical Society, and showed microscopical sections of a firm clot which he detected in the midst of the blood in the peritoneal cavity. This clot fitted into the cavity of a ruptured follicle in the ovary, which was seen at the operation to be the seat of bleeding. In the interior of the clot was an ovum as big as a pea, with perfect chorionic villi. There was great dilatation of the vessels in the stroma of the ovary adjacent to the ruptured follicle; indeed, blood sinuses had formed. The tube showed no evidence of recent gestation; two of its fimbriae adhered to the clot. There was some discussion on Gottschalk's specimen, and doubts were expressed about the gestation being ovarian. Gottschalk insisted on the ovarian origin of the pregnancy. The seat of rupture was, he said, evident, and he witnessed with his own eyes during the operation that it was also the seat of haemorrhage. No decidual tissue, it is true, was to be found in the ovary, but in any case its development was limited and inconstant. The dilatation of the vessels included distinct hypertrophy of the walls of arterioles, which could not be the result of ligature of the ovarian vessels during the operation, as had been suggested.

(62) Recurrent Parotitis following Recurrent Appendicitis.

FISKE JONES (*Boston Med. and Surg. Journ.*, November 20th, 1902) reports a case where a girl, aged 19, had a first attack of appendicitis in 1897; an abscess developed, spreading into the pelvis, and was opened and drained on the tenth day. Forty-eight hours after the operation the right parotid began to ache and swell; two days later the left became similarly affected. Within a week the pain and swelling began to subside. One year afterwards a second attack of appendicitis occurred; an abscess was opened and drained forty-eight hours after the onset of the symptoms, and two days later the right parotid became inflamed, the opposite gland being involved forty-eight hours after its fellow. In November, 1899, two years and a-half subsequent to the first seizure, a third attack occurred; the appendix was removed and the pelvis drained. Once more the right and then the left parotid became inflamed. There was no rigor and the symptoms were comparatively mild.

(63) Detached Calcified Fibroid in Old Subject.

KNAUER (*Centralbl. f. Gynäk.*, No. 47, 1902) describes a case where a calcified myoma, of the size of a hen's egg, was removed from the anterior wall of the uterus of a woman aged 62. Then, in Douglas's pouch, another calcified fibroid, as big as a man's fist, was found completely detached from the uterus. One ovary was removed, being as big as a pigeon's egg, and very soft. It proved to be the seat of a fibrosarcoma.

THERAPEUTICS.

(64) A New Antiseptic.

SEPTOFORMA is described (*Therap. Monats.*, November, 1902) as a new antiseptic which is said to be non-poisonous and odourless. Septoforma is derived from the condensation products of formaldehyde and substances of the naphthalin and phenol group especially $(C_{10}H_7O)_2CH_2$. It is prepared in the forms of a soap, and of a watery solution. The solution is a transparent yellowish-brown fluid, which lathers on shaking. It has no irritating effect, and makes the skin white and smooth. Von Engels, who tested the bactericidal power of the solution, he found that the 1 per cent. solution killed the cholera vibrio in five minutes, the 2 per cent. killed the cholera vibrio in three minutes, and the prodigiosus in ten minutes. The 3 per cent. solution destroyed the staphylococcus pyogenes aureus in three, the prodigiosus in ten, the cholera vibrio in one, and the typhus bacillus in ten minutes. The 5 per cent. solution arrested the growth of the cholera vibrio after one minute. Septoforma first became known as a disinfectant and deodorant in veterinary practice. De Bruin then employed it for washing out the uterus, and Sternberg in treating unclean, lacerated, and contused wounds, and in seborrhoea and acne, always with good results. Sternberg recommends the 1½ per cent. solution for washing out the uterus, and the 3 per cent. solution for wounds. For disinfecting the hands, the 3 per cent. solution or the soap may be employed, and for instruments the 5 to 10 per cent. solution.

(65) Iodothyrin.

IODOTHYRIN has been used for several years in the hospitals in Freiburg, and E. Roos (*Münch. med. Woch.*, September 30th, 1902) now reports on its clinical value. He says that the failures with the thyroid preparations are chiefly due to giving too large doses and producing symptoms of intoxication. Since he has used moderate doses of iodothyrin he has not seen any bad effects, and the drug has had a chance of doing good. As a rule he gives adults 1 gram in powder form, and this dose was rarely given more than twice a day. This dose represents 0.3 mgr. of iodine in the organic iodothyrin compound. Children received on the average 0.3 to 0.5 gram per diem, while infants of under a year (for example, one of 9 months was given 0.1 twice or three times a week). In cases of goitre he succeeded in reducing the size of the gland in many instances, while in others, although the gland remained as large as it was, the patient was relieved from troublesome symptoms. He admits that the majority of his cases were not severe, and at times were unaccompanied by any subjective signs. The patients refused operative treatment, and wished to be treated by internal remedies. The results which he gained with iodothyrin were better than those with other means, and, as far as he could ascertain, recurrence did not occur. In his more severe cases he painted the skin surface at the same time with iodine. In one case he mentions that the patient was very anaemic, and, in spite of treatment by iron, did not improve. She was then given iodothyrin for her goitre, and after the gland had been reduced the action of iron became evident. He suggests that the iodothyrin has so stimulated the tissue change that the treatment which had before been unsuccessful was enabled to become active. The next condition dealt with is arterio-sclerosis. The preparation does not have any direct effect on the disease, but it appeared to lessen the symptoms, and especially to lower blood pressure. His experience, however of this form of treatment in this condition is small, and he thinks that it is worth while studying the matter further. The effect of the preparation in cases of cretinism is very marked if the disease has not already lasted too long. He has seen some remarkable results.

(66) Olive Oil in the Treatment of Gastric Ulcer.

WALKO (*Centralbl. f. inn. Med.*, November 8th, 1902), of von Jaksch's clinic, having obtained excellent results in the treatment of hyperacid conditions of the stomach by the administration of large doses (3½ oz. to 10½ oz.) of olive oil, has recently applied the method to the treatment of gastric ulcer—a condition almost invariably accompanied by hyperchlorhydria. Exclusively rectal feeding often gives good results, but in other cases the irritation of the ulcer is such that the act of swallowing saliva is sufficient to produce a copious reflex secretion of hydrochloric acid, and to render nugatory the avoidance of food per os. Though milk has the advantage of fixing acids, it is not always tolerated. Riegel has pointed out, that when ordinary milk fails, Gaertner's "fat-milk" may succeed, and it is but a step further to give fat, in the form of olive oil, exclusively. Olive oil fulfils all the conditions demanded by von Ziemssen and von Leube for the successful treatment of gastric ulcer. (1) It is unirritating, has a high nutritive value, is readily absorbed, is not injurious to the motor functions, and does not, even with great gastric dilatation, undergo bacterial decomposition. (2) Pawlow and his pupils have shown that fats, including olive oil, inhibit the secretion of hydrochloric acid, both in normal and hyperacid stomachs. (3) Olive oil removes the constipation, which usually accompanies gastric ulcer, instead of, like milk, aggravating it. The oil, when taken fasting, also acts mechanically and promotes the healing of the ulcer by forming a protective coating over it and preventing access of the acid gastric juice, just as does bismuth in Fleiner's method. As a result the pain rapidly disappears. Even after recent haematemesis there is no more suitable food than olive oil, which is less likely to disturb a freshly formed thrombosis than coagulated milk. With acute symptoms the oil is given in tablespoonful doses, which are rapidly increased to

1½ oz. (50 c.cm.) thrice daily. If the patient has an insuperable objection to the oil 3½ to 7 oz. may be introduced in the form of an emulsion through the stomach tube. In three to six days the acute symptoms usually subside, till then no other nourishment is given by the mouth, though, if thought advisable, rectal feeding may be employed concomitantly. In chronic cases striking results were achieved, and symptoms were ameliorated which had resisted gastro-enterostomy. The duration of treatment is considerably shortened by the administration of oil, and all symptoms usually disappear within a week. The oil should, however, be continued for another fortnight, additions being made to the diet according to the case. There is no objection to carbohydrate food, for the inhibition of acid secretion due to the oil does not interfere with its digestion. The writer also recommends a combination of Fleiner's method of treatment with his own, the oil and bismuth being given together. During treatment absolute rest in bed is essential. Narcotics were never employed.

(67) Treatment of Diabetes.

. Eichhorst (*Therap. Monats.*, September, 1902) considers that the great secret of the treatment of diabetes is not the giving of drugs, but in the dieting. In order to gain a clear idea of the value of any special drug treatment, he says that one should compare the amount of sugar excreted daily in the urine, under equal dieting, with the drug and without it. He has done this, and although he has given salol, which has been highly recommended, as well as salicylic and carbolic acids, he has never seen any diminution in the amount of sugar. Antipyrin proved itself as little efficacious as the other drugs. Next he deals with the course of treatment at various watering places and spas, and the effect of such treatment is frequently thought to be very useful. He believes that the benefit derived from a stay at any of these places is directly due to the enforced rigidity of diet, and not to the waters which the patient has to drink. Many patients are careless enough to disregard all instructions as to diet and *régime*, and for these there can be no doubt that some control is absolutely necessary if he is to receive any benefit. Turning to the question of diet, he points out that the two articles which the patient must avoid are carbohydrates and sugar. That it is extremely difficult for the practitioner to enforce a strict abstinence of these lies in the experience of every one, but one has the advantage of being able to use substitutes which will help materially. The substitute for sugar is saccharin, and if this compound is not taken in too large quantities, its use can only be of benefit to the patient; it should not be forgotten, however that while sugar is of great value in nutrition, saccharin is not an article of diet at all, but merely a sweetening agent. A second substitute for sugar is sucrol, a paraphenetol-carbamide, but this too must not be given *ad libitum*, as its abuse is capable of giving rise to unpleasant symptoms. While there are two substitutes which may be offered to the diabetic instead of sugar, it is not so easy to dispose of the question of carbohydrates. The ordinary so-called diabetic bread is either so objectionable that the patient would rather do without it, or it contains too much starch. When Eichhorst allows bread at all, he finds that Graham bread is the best form, as it satisfies very quickly and is very easily digested. The diet of a healthy person represents from 2,500 to 3,000 calories, but the diabetic requires more, as he is constantly getting rid of considerable quantities of sugar; 1 gram of sugar represents about 4 calories, and thus a daily loss of 400 grams of sugar would mean that 1,600 calories will have to be replaced; 1 gram of albumen represents about 4 calories, and the same quantity of fat about 9 calories. The diabetic who passes 400 grams of sugar in his urine daily will have to take 400 grams of albumen or 180 grams of fat extra to cover his loss. All fat foods are therefore to be given by preference, and the physician should be able to suggest a large variety of different forms of dishes made up of fats. Eichhorst says that he considers it very unwise to put a patient suddenly on a strict diet, but this should be done gradually. He deals with a few other points in the management of patients.

PATHOLOGY.

(68) Epithelioma Contagiosum of Birds.

The study of the disease known as epithelioma contagiosum of birds, or "bird-pox," appeared to be of use, inasmuch as it might throw some light on the pathology of human carcinoma, or perhaps contagiosum molluscum, or Darier's disease, or small-pox, and was undertaken for this reason by E. Marx and A. Sticker, who report their observations in the *Deut. med. Woch.*, December 11th, 1902. They give a short but concise account of the clinical appearances and course of the illness artificially produced in hens and pigeons. In order to gain some knowledge of the virus of this disease they carried out some filtration experiments. A mass of the epithelial growth was finely rubbed in a mortar with 0.85 per cent. of common salt solution, and part was passed through a Berkefeld filter and part through a porcelain (candle) filter. The filtrate of each was tested and found to be free from culturable micro-organisms, and a portion was rubbed into the combs and other parts of hens, the parts having been previously scarified. The disease manifested itself in the hens which had been treated with the Berkefeld filtrate but not in the others. The incubation period was somewhat prolonged and the lesions were very limited, as would be expected as the result of a small diluted quantity of virus. They subjected the filtrate to various tests in order to gain further information as to the character of the virus. In summing up the results of their studies, they say that the virus is to be grouped among the filterable disease organisms, that it differs from all the parasites hitherto described in connexion with this disease, that it possesses great resistance against many influences—these include complete drying and many days' exposure to diffuse daylight and sunlight, long exposure to cold (under 12° C.), one hour heating to 100° C. (the latter when the filtrate had been previously dried and sealed in vacuum tubes), and, lastly, after preserving for many weeks in glycerine. Carbolic acid, in 2 per cent. solutions, destroyed its action. The virus of pigeon-pox is changed by a single passage through hens, in which it is capable of producing the characteristic disease, so that it is no longer virulent to pigeons. Finally, they say that a single attack, if extensive, is productive of immunity.

(69) Physical Chemistry Applied to Toxins.

Svante Arrhenius and Th. Madsen (*Festskrift ved Ind. Statens Serum Institut*, iii, 1902) using tetanolysin, which permits by simple colorimetric methods exact measurement *in vitro*, have made investigations upon the action of, so to speak, neutral bodies upon haemolysis. In regard to the effect of ammonia salts upon the haemolytic action of ammonia, the velocity of reaction is decreased through the addition of salts containing the same ions. It appeared also probable that some soluble product of the combination of the bases with the red blood corpuscles was formed, and that this was necessary for the further progress of the reaction. The solubility of this body would be decreased through addition of similar ions. The solubility or the degree of dissociation of the salts of the strong bases, KOH, NaOH, and LiOH, were almost similar, while that of ammonia was less. The alkaline earths exerted little effects, due probably to the formation of insoluble products of haemolysis. But the salts of the strong bases and of ammonia had an increasing effect upon tetanolysin. This probably depends on a direct action on the red blood corpuscles, which, through the addition of the salt are rendered more susceptible of attack. Sodium nitrate and chloride are about equal in action, sodium sulphate only half as strong. All the ammonium salts decrease the velocity of reaction, the sulphate, chloride, and nitrate equally. Proteids appear to combine in some way with tetanolysin, as they decrease the effect of the lysin, particularly in concentrated solutions. Normal serum has the same effect. It would appear that when either NaOH or NH_4OH is added to albumen or serum, combinations are formed which keep the properties of both bases, but are weaker, or that the proteids act as acids and partly neutralize the bases. Researches have also been carried out upon the action of antitoxin upon toxin. Previous investigations have shown that the toxicity of a toxin decreases when increasing amounts of antitoxin are added. There is a marked resemblance between the neutralization of toxin through antitoxin and of a base through an acid. Through the combination of 1 gr. molecule of tetanolysin with 1 gr. molecule of antitetanolysin 6,600 heat calories are produced. This is about half the amount of heat which is developed by the neutralization of a strong acid with a strong base (137,000 calories at 18° C.). It is probable that during the reaction between toxin and antitoxin one molecule of the former combines with one of the latter to form two molecules of combination.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(70) Sympathetic Irritation in Gastric Ulcer.

KELLING (*Wien. med. Woch.*, November 29th, 1902) is convinced that sympathetic irritation is an important factor to be considered in the diagnosis and treatment of gastric ulcer. Not uncommonly soon after successful gastro-enterostomy patients eat with impunity articles of diet which they have not been able to digest for years. Apart from the improbability of the ulcer having healed in twelve to fourteen days, such an explanation is negatived by the frequency of similar improvement after gastro-enterostomy for carcinoma. The symptoms of ulcer probably depend on the difficulty experienced by the stomach in emptying its contents through the pyloric portion rather than on hyperacidity, which is not infrequently absent. Apart from organic fibrous stricture from chronic ulceration of the pylorus, this difficulty is due to nervous stimuli, which inhibit the reflex mechanism by which the sphincter relaxes. This pyloric spasm may be overcome by increased motor action, so that there is no delay in the food entering the duodenum. The combination of spasm with increased motor movements produces, however, increased intragastric pressure with most unpleasant subjective sensations. Gastro-enterostomy removes these by the formation of an easy exit for the food, and making pyloric inhibition of no account. The symptoms of irritability of the gastric sympathetic nerves, which may also be present in other conditions, such as cholelithiasis, are chiefly the presence of certain tender points. Boas's point is situated slightly to the left of the twelfth dorsal vertebra. Another tender point is over the epigastrium. Boas attributes the tenderness to direct pressure over the region of the ulcer and states that the posterior point may vary in position between the tenth dorsal and first lumbar vertebrae, according to alterations in the position of the stomach. Pariser holds the same view, and believes that Boas's point is only tender if the ulcer is on the postertor wall of the stomach. Others attribute posterior tenderness to adhesions between the ulcer and the parietal peritoneum, or explain it by reflex cutaneous hyperaesthesia. The writer is convinced that the tenderness is deeply seated, and that there is usually no cutaneous hyperaesthesia. He reports cases in which, though Boas's tender point was present, operation showed that the ulcer was on the lesser curvature or the pylorus, and not on the posterior wall, while inflammation and adhesions were absent. The posterior tender spot is, in his opinion, most probably due to the posterior division of the spinal nerve, which is given off close to the intervertebral foramen where the anterior division (intercostal nerve) communicates with the ganglion of the sympathetic. Thus it is easy to understand that irritability of the sympathetic nerves may produce hyperaesthesia of the posterior primary division of the spinal nerves. Similarly the epigastric point of tenderness depends, not on direct pressure of the ulcer, but on reflex hyperaesthesia arising from the solar plexus. This sympathetic irritability and consequent pyloric spasm impede the healing of an ulcer, and whenever present should be combated with sedatives. Thus in addition to treatment by bismuth, milk diet, rest, and warm fomentations, the writer usually orders the following mixture, of which about 4 drachms (15 c.cm.) are injected by the patient thrice daily into the rectum: Potassium bromide 154 gr., codeine 30 gr., and water to 42½ drachms (150 c.cm.). If in addition to gastric symptoms there are headache and neuralgia, antipyrin (77 gr.) may be substituted for the codeine in the mixture. If there is gastric hypersecretion (gastro-succorrhoea) atropin and codeine should be injected hypodermically. Narcotics are thus of more than symptomatic importance. The writer has employed the method in about 50 cases of gastric ulcer in which the diagnosis was confirmed by haematemesis. In some of these cases the combination of diet with narcotics was rapidly successful after ordinary treatment had failed. Apart from cases of arteriosclerotic origin, the greater number of gastric ulcers occur in neurasthenic patients. Incidentally the question is raised how long it is advisable to treat a gastric ulcer before resorting to operation. In patients under 30 internal treatment may be prolonged indefinitely unless urgent symptoms are present. In those above 40 or over this is extremely dangerous, as a chronic ulcer in such patients almost always sooner or later becomes malignant. Thus if there has been haematemesis and symptoms persist after three months' treatment, immediate operation should be advised.

(71) Epilepsy due to Ametropic Eye Strain.

GOULD (*Amer. Med.*, July 5th, 1902) reports six cases of ametropia giving rise to epilepsy in which a complete cure has immediately followed upon correction of the eye strain. (1) A man, aged 36, had during sixteen years been refracted by others without a mydriatic, the ametropic error thus never having been properly corrected. For fourteen years he suffered from gradually increasing insomnia and frequent attacks of unconsciousness, but since his ametropia has been corrected there have only been two or three slight attacks of unconsciousness, and he sleeps better and is greatly improved in health. (2) A man, aged 25, with a family history of insanity and epilepsy, had been obliged to resign his position in a bank on account of occipital and temporal headache, with latterly attacks of *petit mal*, with a sensation of "thickening of the tongue, loss of memory, and blurring of vision." On prescribing glasses to correct his ametropia all the symptoms disappeared, and he improved bodily and mentally. Two years later his ametropia was found to have changed, giving rise to a partial recurrence of symptoms, and necessitating an alteration in the lenses. (3) A woman, aged 45, suffering from eye strain, with a history of chorea and eclampsia seven years previously, followed latterly by attacks of complete unconsciousness occurring every two or three days, had 4 degrees of exphoria and 4 of hyperphoria with considerable compound hyperopic astigmatism, upon correction of which with bifocal lenses she greatly improved in health, and only had one slight epileptic attack during eighteen months. (4) A man, aged 22, during six years had six or seven epileptic attacks in two of which he had bitten his lower lip badly, the aura being a trembling of the left arm. After correcting his astigmatism he began to improve in health, and during the last four years has had no epileptic attacks. (5) A man, aged 43, had been "running down in health" for six months, and suffered from "weakness of the eyes," followed by occipital pain, vertigo, and sleepiness on reading. Attacks of dizziness with nausea occurred two or three times a week when walking, necessitating his being carried home to remain semi-unconscious for the rest of the day. The hyperopia was so slight as to be thought insufficient to account for his symptoms, and in consultation a tumour of the cerebellum was diagnosed. Glasses, however, were prescribed to correct the hyperopia, etc., and he gained 1 lb. a day till he reached his normal weight, and for the last nine years has had no return of any epileptic symptom. (6) A man, aged 37, with a history of severe headaches, indigestion, and *grand mal* attacks for twenty-five years, after having his error of refraction corrected, has had no fits or headaches for two and a-half years, and is in good health. Although eye strain may be a relatively uncommon cause of epilepsy, its treatment should never be neglected as being a possible agent. The fact that the mere prescription of glasses may fail owing either to incorrectness, being improperly worn, or rapid changes in the ametropia, should always be borne in mind.

(72) Empyema in Children.

OLOFF (*Jahr. f. Kinderheilk.*, August, 1902,) publishes 15 cases, out of Heubner's clinic, of empyema in children treated by Bülau's method of tapping and draining through a siphon tube into a bottle of lotion below. He does not find it efficacious in the old standing cases, though these are the very ones in which the suction of a siphon would seem to be of value. In recent cases there is apparently no call for suction as the lung naturally tends to re-expand. In most of the 6 fatal cases the lung was found fully expanded and adherent to the pleura of the chest wall; in one there was still a collection of pus, too viscid to have flowed through the tube. The operation requires no general anaesthetic and produces little shock and on these grounds and on the above-mentioned *post-mortem* appearances the writer on the whole regards the procedure favourably. Examination of the details of these recorded cases affords one evidence most discrediting to this operation of Bülau's. The mortality is high—6 deaths out of 15; one case was discharged uncured. The duration of the 8 successful cases was comparatively long, being on the average fifty-eight days. In 1 case the first puncture was unsuccessful though the existence of pus was proved a little later

at a second attempt. In 3 cases the puncture needed to be repeated a second time and in two others incision or resection was subsequently required to make the drainage sufficient. The large number of cases (6) which proved fatal from complications, such as pneumonia of the other lung, pericarditis, nephritis or otitis media, is a grave warning against substituting tapping for the immediately free and thorough drainage of the resection operation. For, in the former, residues of septic fluid must remain for weeks in a cavity which is in proximity with so many vital organs to which the infection may spread at any time.

SURGERY.

(73) Tropical Abscess of the Spleen.

Fontoynant and Jourdrau (*Arch. Prov. de Chir.*, No. 11, 1902) publish a case of tropical abscess of the spleen treated by free incision. The patient, a male Hova, aged 47, died two weeks after the operation from an attack of pernicious malaria. In their comments on this case the authors point out that the two recognized etiological factors of splenic abscess were present, as the patient suffered from malaria, and the symptoms of suppuration commenced soon after violent and continuous exertion in efforts to catch a runaway bull. The only symptoms noted in this case were intense pain in the region of the spleen, marked dryness of the tongue, dyspnoea, and, finally, fluctuation. This last symptom, which simplified the diagnosis, is rarely observed in cases of splenic abscess, as in one only of twenty-one instances collected by Grand-Mourcel did the purulent collection make its way to the wall of the thorax. There was no rise of temperature in this case, and the dark grumous fluid discharged from the abscess was found on bacteriological examination to be quite sterile. The treatment indicated in splenic abscess is free incision, and if it be possible without infecting the peritoneal cavity, removal of the diseased organ. The authors comment on the difficulty, and, indeed, the impossibility of making a sure diagnosis in the absence of fluctuation near the surface of the thoracic or abdominal wall. They suggest that in a malarial subject with enlarged spleen, who complains of very severe pain in the splenic region, presents anomalous symptoms such as dry tongue and dyspnoea, and, at the same time suffers from such general disturbance as cannot be accounted for by any apparent organic lesion, it might be advisable to direct attention to the spleen, and to make into this organ one or more exploratory punctures.

(74) Carpo-metacarpal Dislocation.

Among the rarest dislocations of the human joints, that of the carpo-metacarpal joints have always been recognized. Bannes (*Deut. med. Woch.*, August 21st, 1902) has observed such a case, and, as far as he is aware, it is the twenty-fifth recorded case. The patient was a groom, who was acting as coachman, when one of the horses got its leg over the trace. Getting down from the driving box he caught hold of the trace in his left hand and applied the whip to the horse's left leg, the whip being in his right hand. The horse thereupon let drive with the left hoof, and kicked the man on the right hand. He was wearing a thick woollen glove. He let the whip drop, and as there was a considerable amount of pain he left the carriage in the care of some one else, and in the course of about eight and a-half hours sought advice at the hospital. The kick had been received on the dorsum of the hand; there was a fair amount of swelling, which reached as far as the radiocarpal joint; in the region of the third and second carpo-metacarpal joints there were two distinct protuberances, standing about ½ in. above the level of the rest of the skin. Immediately above—that is, toward the wrist—there were two corresponding depressions. The skin presented no abrasions or discoloration. Palpation rendered the recognition of the protuberances and depressions more distinct, and in the absence of crepitations it was clear that one was dealing with dislocation of the second and third carpo-metacarpal joints. No measurements were made, but the skiagraph which was made showed, besides the dislocations, distinct shortening of the corresponding fingers. On the following day the swelling had increased so much that it would have been difficult to make the diagnosis save by *x* rays. Having put the patient under ether anaesthesia, Bannes applied strong traction to the second and third fingers, at the same time pressing the dislocated heads of the bones between the hands. This procedure was not successful in reducing the deformity. He then seized the middle finger and applied extension to this alone, at the same time pressing the head towards the palmar surface; both bones slipped into their places with an audible snap. A skiagraph confirmed the actual reposition of the misplaced bones. The patient complained of pain and swelling in the region of the affected joints for a time, but no abnormality of the hand could be made out after three weeks.

(75) Arterio-venous Aneurysm of the Common Carotid and Internal Jugular Treated by Extirpation.

Jonnesco (*Bull. et Mém. de la Soc. de Chir. de Bucarest*, Nos. 2 and 3, 1902) reports the case of a man who, eight days after the receipt of a bullet wound on the right side of the neck, noticed for the first time a small swelling in the carotid region. This swelling gradually increased in size, and when first examined by the author, about one month from the date of injury, presented all the classical signs of an arterio-venous aneurysm. An incision was made along the line of the carotid artery from a point about 2 in. above the clavicle to the angle of the mandible, and the lower pole of the tumour was exposed by careful dissection. After division of both artery and vein, in each vessel between two ligatures, the tumour was detached from the surrounding soft parts, and an endeavour made to secure the vessels attached to its superior pole. This stage of the operation proved to be a very difficult one, as the author had to deal with three large vessels, two carotids, and one jugular, and also with a plexus of small veins. A great number of pressure forceps were used, and at the end of the operation it was found necessary to leave five of these in the wound. The surface of the tumour was closely adherent to muscular structure, and also to the vagus, which nerve, however, after very difficult and tedious dissection, was preserved intact. The patient, it is stated, made a good and speedy recovery, and showed no signs of any disturbance of the circulation or the nutrition of the brain. There remained, however, persistent hoarseness, and indications of a lesion of the cervical sympathetic, which are regarded by the author as results of the original injury. This case, it is asserted, is the only one on record of an arterio-venous aneurysm in the neck being treated by resection of the sac, and shows the possibility of tying the two great vascular trunks of the neck on one side without producing any cerebral disturbance.

(76) Reindeer Tendon.

Stankiewicz (*Monats. f. Geb. u. Gynäk.*, November, 1901), speaks highly of reindeer tendon, introduced for abdominal operations by Snegurieff. It has several advantages over catgut; it is flat instead of cylindrical, it can be tied more safely and easier, and lasts longer. It yields in from ten to fourteen days, and at the end of from two to three months is completely absorbed in the peritoneal cavity. Before use it is carefully sterilized, being placed in ether for forty-eight hours, then in a 1 in 500 solution of sublimate for ten days, and, lastly, kept in alcohol until required.

MIDWIFERY AND DISEASES OF WOMEN.

(77) Pregnancy in Accessory Fallopian Tube.

Demons and Fieux (*Ann. de Gynéc. et d'Obstét.*, October-November, 1902) lay great stress on a case of tubal pregnancy as showing that an accessory tube may be the seat of a fetal sac. A woman, aged 24, underwent operation for symptoms of internal haemorrhage associated with amenorrhoea for over two months, and bloody discharge. About a pound of clot and fluid blood was found in the peritoneal cavity; amidst the coagula a fetus a little over 1 in. length was discovered. The left tube was associated with a sac of the size of a turkey's egg, it was removed without trouble. The right appendages were amputated as recurrence of tubal gestation was feared. The patient had been married for five years, and had never conceived till on this occasion, when tubal gestation occurred. On examining the sac on the left side the Fallopian tube was seen to run over it, the ostium was normal, and quite patulous, admitting a bristle into the tubal canal; the relations of the ostium to the ovary were normal. External to the ostium and a little lower was a circular orifice 1 in. in diameter, bordered by fimbriae. From this orifice issued clot. On examining the parts in section it was clear that the normal canal was not involved in the sac which had developed in an accessory tube bearing fimbriae. The right Fallopian tube also bore a small accessory tube with a

fimbriated extremity. Thus there had been not rupture of the sac, but tubal abortion with tubal haematocele. Demons and Fieux suspect that the chance of development in the other tube was quite 50 per cent.

(78) Abdominal Section for Tuberculous Peritonitis in the Female.

LAUWERS (*Bull de la Soc. Belge de Gyn.*, vol. xiii, No. 3, 1902) reports 32 cases of tuberculous peritonitis in the female, treated by opening of the peritoneal cavity. Two died of the operation, one of these sinking on the second day of double broncho-pneumonia possibly caused by ether, the second succumbed on the fourth day from septic peritonitis. Of the 30 who recovered, 18 are now living; but the operation was performed this year in 4 out of the 18, the last within four months of the publication of the report; 5 cures are over 5 years old, 6 over 2 years. As is consistent with the reports of others, in 7 out of the 11 cases which have continued well for over two years the tuberculous disease was of the ascitic type. Indeed of the 13 cases of ascitic tuberculous disease, including 6 which are recent, only 1 has died; she sank from pulmonary phthisis a few months after the operation. Of the mixed forms (encysted dropsy with dry peritonitis), 2 have died, and 2 recovered. Lastly, as might be expected, the results in the dry types of tuberculous peritonitis (ulcerative and fibrous) are distinctly unsatisfactory. Only 3 perfect cures are registered out of 13 cases; in a fourth case of permanent cure it is significant that fluid had been removed by tapping previous to the operation. In 5 cases faecal fistula developed and caused or hastened death; none of the 13 cases of ascitic peritonitis developed this distressing and dangerous complication. Lauwers has given up flushing of the peritoneum unless there is turbid or purulent fluid, and he has entirely abandoned drainage of any kind. Careful dusting with iodoform all over the tuberculous patches seems to have aided in the satisfactory results. In conclusion, Lauwers agrees with other observers in holding that general ascitic tuberculous peritonitis is benefited by opening of the abdomen, a procedure always to be avoided in the other types unless certain complications arise.

(79) Cancer of Cervix in a Woman aged 93.

FINDLEY (*Amer. Journ. Obstet.*, October, 1902) publishes a full clinical report of a case where a woman aged 93 was in very good general health, but consulted him for bloody discharge from the vagina which has lasted six months. She thought that the period was returning, as the discharge recurred at intervals of from three to five weeks, the flow lasting for four or five days, not unlike her previous catamenia. A cauliflower growth as big as a hen's egg was detected on the anterior lip of the cervix. The vagina was wide, as in a woman in the ages of sexual maturity. The growth was friable and bled on handling. The patient had borne eight children; one had died at 48 from cancer of the uterus, and the mother of the patient herself seems to have died of pelvic cancer. The patient's menopause occurred at the age of 45. During the subsequent forty-eight years no sign of discharge or haemorrhage had been noted until the bleeding from the vagina set in, and led to the detection of the new growth. This appears to be the oldest case of cancer of the cervix. Findley mentioned one other in a patient aged 79, and a second in a patient aged 82.

(80) Diffuse Deciduoma Malignum: No Primary Focus.

BUSSE (*Monats. f. Geb. u. Gyn.*, November, 1902) reports a very unusual case where a woman died six months after an abortion and multiple emboli were detected in the pia mater, brain, lungs, kidneys, and spleen, traced to a large parietal thrombus in the left ventricle, itself clearly secondary. The thrombus, as well as the emboli, exhibited the characters of deciduoma malignum. When the uterus came to be examined no trace of deciduoma could be found. Busse believes that some chorionic villi were detached and got into the circulation during the abortion.

THERAPEUTICS.

(81) Hygiama, a Nutrient Preparation.

E. KRAUS (*Therap. Monats.*, December, 1902) has tried hygiama and reports favourably on it. Hygiama is a light brown, finely-divided powder, tasting of the cocoa, which is added as a corrective so far as the taste is concerned, and is capable of forming a pleasant drink when boiled in milk or water. It has been much recommended by German practitioners of repute. It contains 21.93 per cent. of nitrogenous substances and 49.45 per cent. of soluble carbohydrates. According to its analysis, which has been carried out by Mansfeld, it is a concentrated nutrient preparation, containing a large quantity of bone-producing and blood-producing material in a relatively small bulk. Kraus states that 96 per cent. of the albumin is easily digested, 90 per cent. of the carbohydrate is soluble, and 2.58 per cent. of the dry substance consists of the phosphate of calcium. He tested this preparation in anaemic, rachitic, and debilitated after infectious illnesses (children who were), as well as in those suffering from chronic catarrh of the stomach and nervous dyspepsia; further, in young girls suffering from chlorosis and in nursing women. Nearly all the children like the preparation, while in a few it was found advisable to add a little more cocoa; 1½ to 2 teaspoonfuls of the powder is boiled in ¼ litre (circa 8¾ oz.) of milk or stirred in boiling milk, and this dose is taken two or three times a day, according to the age of the patient. In one case he noted a gain of weight in between two and three months, in a 3-year old child, of 1.6 kgs. (circa 3½ lb.). In all his cases he satisfied himself of its value as a nutrient preparation, and warmly recommends it in children's practice.

(82) Butter-milk in Gastro-intestinal Disorders of Infancy.

MUCH attention has been called of late to the food value of butter-milk, and reports of its usefulness in the feeding of children have been forthcoming from various quarters. From observations made in the Kaiser and Kaiserin Friedrich Hospital in Berlin, Caro (*Arch. f. Kinderheilk.*, September, 1902) is convinced that no better basis for an artificial food for children in the first year of life exists, and further, that in cases of gastro-intestinal disorder in infants, with the passage of fluid, partially digested stools, the administration of a butter-milk diet is attended in most cases with excellent results. Frequently within two or three days the diarrhoea ceases, firm normal stools are passed, and the child begins to increase in weight. It is important that the butter-milk should be derived from the cream of perfectly fresh whole milk. He recommends a food prepared by adding 1 oz. of wheaten flour and 1½ oz. of cane sugar to every two pints of butter-milk, the whole being boiled, with stirring, for two minutes. Quantities varying from half a pint to two pints were given daily, and although the children did not like it at first they soon took it well. In a few cases it was found unsuitable and a more fatty diet resorted to. The infant mortality in the above-mentioned hospital has fallen since the use of this food. The author attributes the good results chiefly to the presence of the casein in a finely divided form, and does not think the diminished fat content of great importance, though most writers consider this factor also of value to feeble digestions. Gilbert and Chassevant (*Compt. Rend. d. Soc. d Biol.*, August, 1902), experimenting on this subject, report that the removal of the fat from milk by skimming lessens the time of digestion in the stomach of the dog by one-third; they also state that in this animal boiled milk is certainly more easy of digestion than raw. In man the evidence as to this point is conflicting.

(83) The Preparation of Antidiphtheria Serum.

DZIERZGOWSKY has had a large practical experience on the subject of immunization against diphtheria at the Imperial Institute of Experimental Medicine in St. Petersburg, which have enabled him to formulate certain propositions on its conditions and methods (*Arch. d. Sci. Biolog.*, t. ix, No. 3, 1902). He states that antitoxin is elaborated in the animal body at the point of injection of the toxin, and that the subcutaneous cellular tissue is the most favourable situation for injection. Injection into muscular tissues is accompanied by a strong local and general reaction, which is unfavourable to the production of antitoxin, nor is intravascular injection to be recommended. The quantity of antitoxin secreted by the cells does not depend on the activity or the absolute quantity of the toxin injected, but on its proportion to the activity and the quantity of that previously injected. A rise of temperature is not an essential part of the reaction, and abnormal general conditions for the most part interfere with the production of antitoxin. For each horse there is a limit of immunity (a limit for the accumulation of antitoxin), and when an animal has reached this, further injections of toxin lower the antitoxic power of its serum. The sensibility of the horse to diphtherial toxin depends on its natural

immunity, but the production of antitoxin depends not on natural immunity or on sensibility to toxin, but for the most part on individual peculiarities. The procedure of immunization by weaker toxins frequently injected determines the smallest possible interference with the general health of the horse; it is therefore preferable to the plan of injecting strong doses of toxin at longer intervals; it also allows of a greater precision in dosage. Immunization should be produced with a toxin of high activity free from toxoid bodies.

(84) Euquinine.

AUDREY (*Lyon Méd.*, December 28th, 1902) has recently had under his charge a case which has satisfied him of the value of euquinine as a substitute for the salts of quinine in common use. Euquinine, or ethyl-carbonic ether of quinine, is a white crystalline substance, only slightly soluble in water, but dissolving readily in ether, alcohol, and chloroform. It differs from quinine in being practically tasteless, and the absence of bitterness indicates its use in the treatment of children. It is easily absorbed, and may be found in the urine one to two hours after administration. The dose is about double that of hydrochlorate of quinine. Audrey's patient, a boy 13 years of age, was admitted into hospital from a district infected by mosquitos, with a three weeks' history of ague. For the first two days after his admission he was untreated by drugs. The malarial attacks were found to be typical, with cold, hot, and sweating stages. The temperature reached its maximum at 10 o'clock in the morning, 39.8° on the first day, 40.7 on the second. The child was feeble and very pale. The spleen was enlarged, having a vertical diameter of 11 cm. For four days 1½ gram of euquinine were administered daily, for the next three days 1 gram, and ½ gram on the eighth, tenth, and fourteenth days respectively. From the first the treatment was followed by complete success. On the first day the temperature reached 38.4°C., but never afterwards, although taken every two hours, was it found to be above 37 5°. There was profuse sweating for the first four or five nights. The child complained of no nausea or epigastric pain. He improved rapidly under treatment, the anaemia disappearing (the red blood corpuscle count increased from 1,530,000 to 4,500,000. He left the hospital practically cured after three weeks' stay, his splenic dullness measuring 6 c.m. vertically. No ill-effect has been noticed to follow the use of equuinine. The only disadvantage to its employment is that it costs more than twice as much as quinine, and should be given in twice the quantity.

(85) The Influence of Morphine on the Formation of Hydrochloric Acid.

H. HOLSTI (*Hygeia*, 1902, vol. lxiv) reports observations made upon six patients suffering with hyperchlorhydria and diminished motility of the stomach wall. The stomach contents were examined one, one and a-half, and two hours after Ewald's test breakfast in regard to the quantity of the contents, the total acidity, and the free hydrochloric acid. After the injection of 1 to 1½ cg. of morphine and a similar test breakfast, at the end of the first hour the water contents were much diminished, and in nine cases were so viscid that they would hardly pass through the tube. At the close of the second hour they were much increased, except in one case in which they were slightly diminished. The total acidity was considerably decreased at the end of the first hour in nine cases, but the free HCl was most remarkably lessened. In the majority of cases it gave no reaction with the usual tests. During the second hour the acidity continued low in four cases, in four others it was a little higher, and in two cases the same as when morphine was not given. A patient took 4 mg. of morphine three times daily for two and a-half weeks. The free HCl entirely disappeared, and the total acidity was reduced by one-half. Two other patients received 4 to 6 mg. of morphine three times daily. The total acidity increased for three weeks, but then fell considerably. When the morphine was stopped, the acidity at once rose to the normal. Holsti differs from Riegel in the results obtained during the second hour. Both agree that the quantity of liquid and the acidity are less than the normal the first hour, but Holsti does not find such constant increase in acidity afterwards. Riegel, however, continued his observations for a larger time after the test meal. It would appear, therefore, that unless the pain is very severe belladonna is preferable to morphine in the treatment of the usual varieties of dyspepsia. Morphine also diminishes the motility of the stomach, and so allows the increase in the liquid contents. This statement is supported by Hirsch's observations of pyloric cramp following morphine ingestion.

PATHOLOGY.

(86) Human and Bovine Tuberculosis.

V. SZEKELY (*Centralbl. f. Bakt.*, September 16th and 26th, 1902), after a long and exhaustive review of the many publications on this subject since Koch announced his researches, draws the following conclusions: In spite of many researches, observations, and inferences, the question of the identity or difference of human and bovine tuberculosis is not yet settled. We may say further that Koch's inferences have not been justified; but from his researches and those of others it must be concluded that the virulence of the bacillus of bovine tubercle is much greater for cattle and other animals which have been the subject of research than that of the bacillus of human tubercle for the same animals. However, it cannot be deduced from this that the bacillus of bovine tubercle is also more virulent for men. It is indeed possible that the tuberculosis of cattle is without special danger for men, although, in the presence of marked predisposition or in the case of children, who notoriously exhibit but slight resistance against most infections, the bacillus of bovine tubercle may be dangerously infective. There must also be taken into account the possibility that the otherwise harmless organism of bovine tubercle may in the bodies of other domestic animals acquire properties which render it dangerous to the human subject. "Who is going to guarantee," says Hueppe, "that the bacillus of cattle does not acquire in the body of the pig a high degree of infectivity for man." For the final solution of the problem further and more circumspect researches are required. In the meanwhile, in accordance with the resolution of the London Congress, the regulations against the conveyance of bovine tubercle to man must be rigidly enforced.—Penrose (*Journ. of Tubere.*, October, 1902) has a preliminary paper on the effects of tuberculin obtained from bovine tubercle bacilli contrasted with that obtained from "human" tubercle bacilli upon the same patient. He recounts one typical case of joint tuberculosis tested with various human tuberculins and with a pure bovine tuberculin. From each a typical reaction was obtained; but with the latter the temperature rose 3° F. higher, the acme was reached one hour sooner, and then the temperature fell to 99° F., where it remained for some time. This more decided result from bovine tuberculin was obtained, though it was used after the others and in a subject who had meanwhile had hospital diet and treatment. Penrose believe his cases to show: (1) That bovine tuberculin positively gives a reaction in human tuberculous patients; (2) that this reaction is more active—in other words, that the bacilli themselves are identical, but the bovine bacilli more virulent. He hopes soon to compare the effects of the two tuberculins upon tuberculous cattle. Until this is done we may well doubt the validity of his logic, especially as to relative virulence.

(87) Protective Action of Digestive Juices against Toxins.

FROM investigations into the toxin-destroying power of the digestive juices (Sieber and Schumoff-Simonowski, *Zeitsch. f. physiol. Chem.*, September, 1902) it appears that a mixture of trypsin and bile is the most effective against the toxins of diphtheria and of tetanus. Trypsin alone is also powerful against the diphtheria toxin, 1 c.cm. of a solution obtained from Pawlow proving able to destroy, at body temperature, 10,000 to 100,000 lethal doses, for the guinea-pig, of that poison. Gastric juice has a marked action on the tetanus toxin, but little on that of diphtheria. The authors have extended these researches to the succus entericus and to the ferment erepsin. The latter body was obtained by O. Cohnheim from the mucous membrane of the intestine, and is able to break down peptone, deuteroalbumose, casein, and certain simpler proteid bodies into amido-acids and bases. Finding that those preparations of this ferment which break down peptone most rapidly also destroy, though but weakly, the diphtheria toxin, they conclude that this toxin belongs in chemical constitution to the group of proteid bodies upon which erepsin acts. The tetanotoxin was found to be undestroyed, and it is pointed out that this substance has been regarded as belonging to the primary albumoses, a class of bodies which are not attacked by erepsin.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(88) Spontaneous Remissions of Tabetic General Paralysis.

Pierret (*Lyon Méd.*, December 21st, 1902) protests against the opinion frequently expressed of late that the failure to cure tabes and general paralysis is due to a lack of faith in a rigorous antisyphilitic treatment. In the first place, tabes and general paralysis are not isolated diseases, with absolutely definite and identical symptoms, so that most neurologists recognize a pseudo-tabes and a pseudo-general paralysis. Pierret agrees with Charcot, who, while admitting the frequency of the syphilitic causation of these diseases, attributes an important place in their etiology to nervous predisposition. Syphilis, he believes, is not the only disease capable of causing the first inflammatory symptoms in tabes. Ergotism, alcoholism, influenza, and even tuberculosis are among the possible causes. Recent authors who have described the cure of general paralysis have not described their cases in sufficient detail to make it certain that they were dealing with true tabetic meningo-encephalitis. Apart from the remarkable cases of complete arrest of the disease after the occurrence of optic atrophy, Pierret has seen many tabetic patients whose disease remained stationary for a long time. But a case of tabes which may in the first place have followed syphilis and later become stationary, may under the influence of another infection—such as influenza or tuberculosis—begin to progress rapidly. This same fact holds good for tabetic general paralysis. Andan, a pupil of Pierret's, has collected 17 conclusive examples of arrest, some of the patients having been treated by Brown-Séquard's fluid, some by iodides in small doses, some by mercury, others by nothing but hygienic measures, and none by an intensive specific treatment; so that the remissions in true tabetic general paralysis may be spontaneous just as in tabes, and it is to be remembered that the tabetic or sensory symptoms are the only fundamental symptoms. Dementia, melancholia, motor troubles may be superadded, but in the absence of sensory symptoms a case should be considered as pseudo-paralysis, which may often be cured by antisyphilitic treatment.

(89) The Pulsatile Aorta.

Huchard, in a clinical lecture (*Journ. de Méd. et de Chir. Pratiques*, July 10th, 1902), showed a patient suffering from exophthalmic goitre. The case was not typical, and one of the most marked symptoms was abdominal pain. When the hand was placed over the epigastrium between the xiphoid cartilage and the umbilicus, slightly to the left of the middle line, a heaving pulse was noticed, and on pressure sharp pain was caused. Spontaneous attacks of pain were experienced at times by the patient. Huchard states that this condition is frequently overlooked or gives rise to errors in diagnosis, the most frequent of which is aortic aneurysm—a mistake made both by Laënnec and Bayle. As a matter of fact, the aorta does show a slight degree of dilatation, and in some cases a slight blowing murmur is heard when the stethoscope is lightly placed over the organ. The chief point of difference between this localized condition of the aorta and aneurysm is that in the former the vessel projects in front, there being no lateral expansion. In aneurysm, on the contrary, expansion takes place all round. It is important to remember the fact that the pain occurs in the form of crises, which may last some weeks and disappear for long periods. These crises occur in neuropathic subjects who suffer from gastro-intestinal disorder, and who not infrequently show prolapse of some of the abdominal organs, especially the transverse colon, thus allowing the aortic pulsation to be more easily felt. Finally—as in the case which forms the subject of the author's lecture—it is frequent in exophthalmic goître. It is difficult to determine the cause of pulsatile aorta, as neither aneurysm or aortitis is present. The treatment of such cases is chiefly sedative. Should the pain be severe, a bladder of ice may be placed on the epigastrium; secondly, drugs causing slight vascular constriction may be employed. The lecturer recommends a pill containing extract of convallaria, hydrobromide of quinine, and ergotin.

(90) Diphtheria.

Godfrey (*Amer. Med.*, October 4th, 1902) analyses 55 cases of clinical and bacteriological diphtheria. The average age of the patients was 10.5 years, and conditions favoured study of early symptoms. There was no mortality. The incubation period could not be fixed. Prodromata were seen in 20 cases for twenty-four hours or less before definite lesions in the throat, and were *malaise*, headache, dysphagia, and sore throat. Injection of the pharynx and mucosal roughening were seen at this time. Onset was usually marked by increased restlessness, but sometimes by dense apathy. Intense facial blanching was almost constant, and vomiting occurred at this time in 10 cases. Temperature, elevated 1-2° during the prodromal period, rose sharply at formation of membrane, average being 103° F. There was no relation between temperature and severity of infection. The pulse was disproportionately fast in the prodromal stage, and increased thereafter, the average being 120 to 130. Lymphadenitis was seen in 20 cases; it occurred early, usually unilaterally, and was often associated with a putrid odour from the throat. Vomiting was persistent and frequent in 3 cases of naso-phryngeal infection. Concentrated antitoxin was used in all cases in initial doses of 2,000 units or more. The injection was made in the subcutaneous tissues of the thigh. Immediate rise of temperature of 1°, and of pulse, 6 to 12, followed. Vomiting ceased, pallor and facies changed, and within 48 hours the membrane was discharged. In less favourable cases double the initial dose was given in twelve hours or less. The average total dosage was 4,500 units. In a severe case of violent onset 15 000 units in twenty-four hours, and in another septic case 20,000 in 32 hours, were successful. Enough antitoxin should be given to control the disease in twenty-four hours. The bacillus persisted in the throat in one case for thirty-seven days, the average being thirteen. Complications were epistaxis (2 cases), albuminuria (7 cases). There were no paralyses. Antitoxin causes urticarious rash in 8 cases, arthropathy (knee and hip) in 2 cases. There was moderate leucocytosis, diminished by successive doses of serum.

(91) Infantile Asthma.

Lemonnyer (*Thèse de Paris*, 1902) states that the diagnosis of asthma in children is easy, but nevertheless the condition is frequently overlooked. This latter statement is made on the authority of Trousseau himself, who seems to have confounded it with broncho-pneumonia until he recognized the fact that asthma may occur in children. The writer has collected several cases, and demonstrates its relations with arthritic conconditions on the one hand and eczema on the other. Infantile asthma presents several peculiarities. Instead of occurring during the night as in the adult, it most usually appears during the day at the same hour, and the crises decrease as time goes on, till finally it disappears completely, though under these circumstances other symptoms may appear. Another fact is that in the child the respiratory movements are gradually increased in number, and possibly to this fact are due many errors of diagnosis. The crises may last from one to four or five hours. Usually the other characteristics are typical, but abortive or eccentric cases may occur which are sometimes difficult to diagnose. Sonorous *râles* without dyspnœa, lasting a couple of days at a time and returning periodically, are suggestive. The musical character of these *râles* is very striking, and may be heard at some considerable distance from the patient. Prognosis is usually favourable, and the disease responds well to treatment. The writer recommends absolute rest in bed, the application of wadding sprinkled with mustard, dry cupping, and an emetic and a mixture containing tincture of belladonna, rosera, lobelia, and grindelia.

SURGERY.

(92) The Operative Treatment of Pulmonary Tuberculosis.

Landerer (*Münch. med. Woch.* November 25th, 1902) remarks that it must still be considered an open question whether surgical interference in pulmonary tuberculosis is to be recommended. He first relates three cases which illustrate the difficulty of satisfactorily draining tuberculous cavities. He remarks that for success such a cavity must be single and circumscribed, and that even in such cases cavities are often from their shape, position, etc., not easily drained, and the records are not good. He then passes to the consideration of the treatment of such cavities by the resection of ribs designed to aid the falling together of their walls, similar to the procedure

for chronic empyema. He remarks that natural healing of such cavities is usually attended by a falling in of the corresponding costal spaces, but where the cavity is large this cannot take place to a sufficient extent, and the condition remains chronic; the cause of this persistence he considers largely a mechanical one—the impossibility of contraction to the necessary extent. He has treated 6 cases on this principle by a more or less free removal of ribs. In one temporary healing resulted, in two satisfactory recovery, one improved and promises healing, in one the result is not yet certain, and in the sixth, a desperate case, the operation, at any rate, did no harm. The operation is suited only to chronic tuberculous cavities; when such a cavity is in the lower lobe the question of opening the cavity in addition to the rib resection should be considered. The resection should overlap the boundaries of the cavity by at least the extent of one rib. The incision must be planned according to the case, and the portions of ribs are removed with wire saw or forceps, except in the case of the first, which may be out of the reach of those under the clavicle, and should be removed piecemeal with the gouge; the third and fourth ribs behind can be reached by separation of the muscular fibres of the shoulder muscles with very slight division. After operation Landerer administers hetol. He considers the operation especially suitable for cavities in the lower lobe, and in a comparatively early stage.

(93) Excision of the Lumbar Lymphatic Nodes and Spermatic Vein in Malignant Disease of the Testicle.

Roberts (*Annals of Surgery*, October, 1902) advocates a more radical procedure in malignant disease of the testicle than those which have usually been adopted. The certainty or even the probability of malignancy being present in this organ should, he urges, determine immediate operation. The first step should be to open the abdomen in the middle line, remove all the accessible lymph nodes in the vicinity of the aortic bifurcation, and excise a couple of inches of the spermatic vein of the diseased side. The second step should be the removal of the inguinal lymph nodes, the spermatic cord from the internal ring downward, the diseased testicle, and the lateral half of the scrotum. By operating in this manner and in this succession, the filter-like nodes and the channels by which the agents of malignant disease enter the system are separated from the patient early, the danger from manipulation of the testicle pressing these morbific agents into the circulation is reduced to a minimum, and the probability of both local and metastatic return is largely decreased. A case is reported in which this treatment was carried out, but in this isolated instance the results seemed to have been far from satisfactory.

(94) Hard Traumatic Oedema of the Hand and Foot.

Vulliet (*Centralbl. f. Chir.*, No. 43) describes a peculiar indurated swelling, due to traumatism, of the dorsum of the hand and of the foot, which, though frequently observed by himself and his colleague Secrétan, he has not found described in any surgical textbook. This swelling, which usually follows a severe blow, consists in hard oedema, most marked at the roots of the fingers and toes, and does not extend to the palm or sole. The back of the hand, the author states, resembles an elastic cushion, the skin being tense and fixed to the subjacent parts. There are no indications of bruising or of inflammation, and in every instance observed by the author fracture of the bones of the hand and foot was excluded by skiagraphy. This oedema, which is regarded as being probably due to a diffuse fibrous exudation between the skin and the bones of the affected extremity, usually persists for several weeks, and is very intractable to treatment. The author has given most benefit by warm baths. Compression by a plaster splint affords no good result, and massage does harm.

(95) Surgical Anatomy of the Middle Cranial Fossa.

Bartlett (*Ann. of Surg.*, November, 1902) has photographed a number of unusual middle meningeal grooves in the parietal bone, and also made careful measurements of the floors of 100 middle cranial fossae in the hope that the averages thus obtained might serve to simplify the difficulties of the intracranial operation for the removal of the Gasserian ganglion. The author's intention of formulating some rule for avoiding the middle meningeal artery in this operation was found to be impossible, as this vessel is so irregular that in 100 middle fossae it can hardly be said to follow identically the same course in any two. As an ideal routine cannot be laid down, it is then of importance, it is stated, that surgeons realize the possibility of meeting the artery at almost any point of the temporal fossa. It may be lying on the inner surface of the bone, be embedded in the same, or, in rare instances, be outside the cranial wall. In determining the various average dimensions of the field of operation, in depicting certain anomalies of the middle meningeal artery, and in calling attention to the fact that this vessel is most easily avoided at the point where it enters the cranial cavity in those cases in which the second and third branches of the trifacial are placed closest together, something has, the author trusts, been done towards perfecting and rendering less difficult and dangerous the procedure which offers victims of trifacial neuralgia their only hope of permanent relief.

MIDWIFERY AND DISEASES OF WOMEN.

(96) Ectopic Gestation Advancing to Term.

T. Smith and H. Williamson (*Journ. of Obst. and Gyn. of the British Empire*, January, 1903) report a case of ectopic gestation advancing to full term without rupture. Patient was examined after labour pains had set in, when the abdomen presented the appearances of a full-term pregnancy; the fetal heart could be heard and movements felt, but the position of the fetus was not made out. The cervix was long and firm, and the external os small. The pains were slight and continued so, and by the end of the week fetal movements could no longer be felt nor the heart heard. A brown watery discharge began, and the size of the abdomen diminished. Unsuccessful attempts were made to dilate the os. After a week's rest the patient felt well except for occasional pain. Three months afterwards an operation was performed, and on opening the abdomen a tumour 22½ in. long was found lying to the left of the middle line between the layers of the broad ligament, the base of the broad ligament forming the only connexion between the uterus and the tumour. An imperforate cord-like structure, either one horn of a bicornute uterus or the proximal end of the Fallopian tube, was inserted into the tumour. The distal end of the tube emerged from the opposite pole of the tumour, its abdominal ostium gaping widely. The ovarian ligament and a fibrous cord, apparently representing the round ligament, were also inserted into the tumour. After its removal from the abdomen an incision was made into the wall of the tumour, which was about ⅛ in. thick, and resembled in appearance uterine wall; microscopically, it consisted chiefly of fibrous tissue with some muscle tissue. The placenta was ⅓ in. thick, shrivelled, and easily detachable from the tumour. Within the tumour a well-developed child was found. The pregnancy was regarded as cornual rather than tubal on the following grounds: (1) The attachment of the round and ovarian ligaments directly into the tumour; (2) the patency of the abdominal ostium of the tube; (3) high degree of development of the sac wall, and the fact that no rupture had occurred.

(97) Pregnancy and Parturition complicated by Rectal Cancer.

Rossa (*Centralbl. f. Gynäk.*, No. 46, 1902) was consulted about a woman, aged 31, at the end of her fourth pregnancy. For two months she had been subject to sacral pain, often severe, with constipation and tenesmus. The symptoms had been very bad for the last three weeks, and the patient took big doses of morphine. Emaciation was proceeding rapidly. It was evident that genuine labour pains had been felt for twelve hours. The os externum measured an inch in diameter, the occiput presented in the first position, the fetal heart sounds were clear. A mass of the size of a small fist protruded into the vagina; it began close above the vulvar cleft, and reached nearly to the promontory of the sacrum. One inch above the sphincter was a hard stricture, barely admitting the forefinger. Above it was a dilatation of the rectum full of hard scybala, which were removed. A quarter of an hour later labour was found to have advanced; the membranes, flaccid before the removal of the scybala, had become tense, the head was now well engaged in the pelvis. At the end of five hours a robust male infant was delivered spontaneously. The patient delayed operation, contrary to advice, two months later Ebner of Graz resected the cancerous rectum after Kraske's method. There was wide injection of the sacral lymphatics. Endelmann has collected 14 cases (ibid., No. 32, 1902), and Rossa finds 1 more re

ported by Lever (*Guy's Hosp. Rep.*, 1843), and 1 by Breslau-Kürsteiner in 1863. When sensations like labour pains are associated with constipation, the rectum must always be explored. Faecal accumulation is in itself prejudicial to uterine contractions in labour.

(98) A Method of Removing Incarcerated Pessaries.

MAROCCO (*Il Policlin.*, December, 1892) describes a method of removing an egg-shaped pessary that had become fixed, which he first advocated on experimental grounds in 1897, but only recently had an opportunity of trying clinically. In the case in question a woman aged 53 had worn an egg-shaped pessary for prolapsus uteri for some four years without having it removed. She then began to suffer from indefinite gastric symptoms which were due to prolapse of the right kidney, but were attributed by the patient to the pessary. Attempts were made to remove the pessary, but ordinary means, for example, with forceps, failed to remove this. The author then drilled a hole in the pessary with a Paquelin and inserted 10 grams of pure chloroform and corked it up, as, however, the cork did not fit very well, it was taken out and more chloroform injected, whilst a better fitting cork was found. Next day the pessary was found so much softened that it could easily be broken up and removed piecemeal. The author gives a sketch of its appearance before and after its removal.

(99) Post-operative Pelvic Haematocele.

NEUMANN (*Centralbl. f. Gynäk.*, No. 51, 1902) gives instructive details of a case of haematocele after laparotomy independent of tubal gestation, a condition doubtless more frequent than published records would lead us to suppose. An operation was performed for chronic disease of the appendages; the ovaries, subject to small cystic degeneration, were imbedded in trough adhesions. The appendages were set free from their morbid attachments; the left tube and ovary were removed. There was oozing from the separated adhesions, and as it seemed moderate and could not be checked by ligature, the abdomen was closed before it had ceased. After the operation, pallor, quick pulse, thirst, and restlessness without fever were observed. On the third day a doughy mass was felt in Douglas's pouch which projected into the vagina. Then came sensations of pressure in the rectum, severe pains, and ultimately distinct intestinal obstruction. The mass in Douglas's pouch was large and tough. On account of these symptoms a wide incision was made in the posterior fornix on the tenth day after operation. A great quantity of fluid blood of the colour of tea came away, free from any pathological product or foreign body. A strand of gauze was kept in the incision till it healed; relief was immediate and recovery rapid.

(100) Nourishment by Ovarian Cystic Fluid.

MANDILLON (*Soc. de Méd. et de Chir. de Bordeaux*, May, 1902) declares that ovarian fluid may feed a patient by absorption, a fact observed before the days of ovariotomy. A patient under his own observation suffered from an ovarian cyst containing over 8 gallons of fluid. Suddenly the patient was attacked with stricture of the oesophagus, which was due to a new growth; henceforward no food could be taken by the mouth. She lived forty days without food; when she died no fluid remained in the cyst. In other words, she was nourished by ovarian fluid. To this condition Mandillon applies the term "cystophagy."

THERAPEUTICS.

(101) Open-air Treatment of Phthisis.

VOLLAND (*Therap. Monats.*, December, 1902) refers to the exaggeration of the modern sanatorium treatment. He considers that it is a very questionable procedure to expose the phthisical patient to all weathers out of doors until 10 o'clock in the night, and then to allow him to sleep indoors only with his windows wide open, despite fog, mist, or piercing cold. He says that he is by no means surprised that one obtains as good results in the out-patients' rooms of the various hospitals, where not only early cases are treated, but late and severe ones as well, as one obtains in sanatoria, where the majority of the cases are chosen. He says further that Davos depends on its reputation for the future, and unless one is willing to moderate the treatment within reasonable limits, the advantages of this place will be lost. He argues that mountain air is of great use in the treatment of pulmonary disease, and doubts if the same results can be gained in other places, such as Holland or other low-lying districts. The best climate, however, is unable to do anything for the consumptive, if one insists in compelling him to expose himself to conditions which produce catarrh, and in Germany he believes that sooner or later the insurance companies for working men will feel much to their cost how little the Heilstaette are doing for the poor consumptive. He, however, hopes that there will be more moderation in the future.

(102) The Value of Argentum Colloidale (Credé) as an Antiseptic.

ARGENTUM colloïdale or collargol was introduced be Credé, and has been praised by many as an antiseptic whose special value is that after introduction into the general circulation it exerts its antiseptic action on general infections. Cohn has (*Centralbl. f. Bakt.*, November 5th and 17th, 1902) conducted a series of experimental researches to test this view. This collargol is a modification of the metal which renders it soluble in water and albuminous fluids. It it produced from a solution of silver nitrate in a supersaturated solution of ammonium citrate by reduction with sulphate of iron, the collargol being the fine black precipitate thrown down. Credé recommended its use chiefly as an inunction —the so-called "unguentum Credé," and in later communications would confine its use to infections produced by the staphylococci and streptococci. He also used it subcutaneously and by the mouth in pills and solution. A number of favourable clinical reports have been published by different authors from time to time. Experimental observations have, on the other hand, shown general general diffusion to follow intravenous injection alone; reports on its antibacterial action *in vitro* are extraordinarily contradictory. Cohn's experiments showed that a solution of 1 in 30 in distilled water killed staphylococcus aureus in ten hours, streptococcus in eight hours, diphtheria bacillus in six hours and B. anthracis in four hours. In blood serum he found it soluble to the extent 5 to 10 per cent., and the solution in blood serum is as active as an antiseptic as the watery solution. Further experiments concerned its action on the animal organism and on infections therein. In the first place intravenous injection was followed by no undesirable symptoms in rabbits, and examination showed wide distribution throughout the body. Forty-five minutes, however, after the introduction into the blood stream the collargol was fixed in the organs and was no longer demonstrable in the serum. This fact, shown by numerous experiments, makes it impossible to accept the view that the substance can act as a general disinfectant in general infections, and further experiments on infections with the cholera bacillus, the B. anthracis, streptococci, and staphylococci confirmed this view.

(103) Internal Antisepsis by Means of Wassmuth's Inhalation Apparatus.

ACCORDING to V. Gerlach (*Therap. Monats.*, June, 1902,) it is of great clinical importance to possess a means of applying various medicaments dissolved in water to the respiratory passages, in a minutely divided form, so that the drops may penetrate to the smaller tubes. He believes that we possess such a means in Wassmuth's apparatus. This apparatus is constructed to divide fluids in the form of a spray, and after having been in action for a short time, the room in which it is placed, is filled with a fog-like atmosphere. He has examined this "fog," and found that it consisted of minute droplets, mostly of the size of red blood corpuscles, together with many smaller droplets. In a room of 78 cubic metres (=2754.18 cubic feet) after one apparatus had been in action for quarter of an hour, there were 45,000 droplets of the size of a red blood cell to each square centimetre (=0.15 square inch), and in a room of 177 cubic metres (=6,249.87 cubic feet) two apparatus were capable of producing 144,000 droplets per square centimetre after the same time. Gerlach says that the smallest droplets were uncountable. He next investigated the action of Wassmuth's fluid, which contains in every 1,000 c.cm. (=circa 1¾ pints): Salt, free from water, 74.36 grams (=1146.144 gr.); chlorine, total, 7.94 grams (=122.2 grs.); chlorine, displacable, 1.59 grams (=24.486 gr.); sodium oxide, 32.24 grams (=496.496 gr.); boric acid anhydride 28.32 grams (=436.13 gr.) Using a 5 per cent. solution of this fluid, which was distributed at the rate of 5 litres (=circa 8 pints) per hour, he tested its antiseptic action on various bacteria. For this purpose, he hung up threads infected with tested cultures, and after exposure to the "fog" at some little distance from the apparatus, he introduced them into culture tubes containing 12 c.cm. of bouillon, a quantity which was sufficient to remove the

restraining action of the droplets themselves by dilution. In the case of tubercle bacilli, he employed injection experiments instead of culture. Every kind of bacteria, which he tested (including staphylococcus pyogenes aureus, streptococcus pyogenes, bacillus pyocyaneus, bacterium coli commune, bacterium typhosis, diplococcus pneumonae, pneumococcus, and bacillus diphtheriae) was killed in the space of one hour. The guinea-pigs were inoculated with the threads (infected with tubercle bacilli) after these had been exposed for an hour, and were killed six weeks later; no tuberculous lesions were found in any of them. In conclusion, Gerlach inquired into the effect of the fluid on the blood cells, and compares this effect with that of other antiseptics. Carbolic acid, alum solution and chlorine damage the red cells, but Wassmuth's fluid does not cause any visible change. He examined the blood of two persons, who had been in the inhalation room for two hours, but was unable to detect anything abnormal in the blood.

(104) Currents of High Frequency in Dermatology.

REGNER (*Progrès Méd.*, May 17th, 1902) gives a summary of the employment of currents of high frequency in dermatology. The peculiar property of these currents is that, without producing any appreciable effect of contraction or sensation in muscles and nerves, they modify sensibility, reducing it to anaesthesia. They also modify the circulation in a manner which has been described as circulatory drainage, which is beneficial in local inflammations with capillary and venous stasis, and in cases of impaired nutrition. Pruritus, often rebellious to other forms of treatment, is frequently improved by these currents. Psoriasis gives variable results. In eczema—especially weeping eczema—the effects are more constant, the itching sometimes disappearing after the first application. Alopecia, zona, molluscum contagiosum, acne and acne rosacea, impetigo, and morphoea have been favourably influenced. Lupus erythematosus may be cured by this method, which appears to be more rapid than phototherapy. The effect in cases of tuberculous lupus is a matter of controversy. The author is of opinion that the method may be used as an adjunct to the light treatment. He states that the effect is partly due to the liberation of ozone. He concludes that high frequency currents are a valuable addition to the therapeutics of a certain number of dermatoses.

(105) Uraemia treated with Veratrum Viride.

OLIARI (*Rif. Med.*, Nos. 222, 223, an. 23) has successfully treated a considerable number of cases of uraemia with veratrum viride. He says that it checks the onset and limits the number of attacks, if there are symptoms of eclampsia or convulsions, and it does this mainly through a marked and rapid lowering of the tension and frequency of the pulse. If given by the mouth this result usually happens in fifteen or thirty minutes. Unfortunately its action is brief, but on the other hand it is not cumulative. The active principles of the drug are veratroidin and viridin, and they appear to exercise a specific action against the toxins which are the cause of the eclampsia.

PATHOLOGY.

(106) Blood Changes in a Severe Case of Anaemia (Lead).

As evidence of a partial myeloid transformation of the splenic function, A. WOLFF (*Berl. klin. Woch.*, September 8th, 1902) uses the haematological changes of a case of lead anaemia. The patient was a man of 30 years, but looked like a man of 55 or 60. He had suffered from lead poisoning (colic, pains in the limbs, anaemia, and paralysis). For the last six years he had had some nephritic trouble, but otherwise he had been fairly well. The condition on examination was that of severe anaemia, and included paleness of the retinae, and of all the mucous membranes. There was 1 per cent. albumen in the urine. The blood count was as follows: Red cells 50 to white cells 1; the former counting 1,250,000; 86 per cent. of the leucocytes were multinuclear neutrophile cells, 6 per cent. were small lymphocytes, and 2 per cent. were transitional forms. The spleen was not palpable. After death, which took place with symptoms of increasing weakness and slight pyrexia, the medulla of the femur and the spleen were subjected to an exact examination. Macroscopically, the former was of a red colour. Stained by various methods, for example, triacid, Michaelis's acetone mixture, eosin-methylene blue stain, non-granulated cells were more numerous than granulated cells, which is different from the normal arrangement; since the blood showed considerable neutrophile leucocytosis, the stress of the production would be thrown on the marrow, and Wolff regarded the non-granulated cells as "indifferent lymphoid cells," which have the power of further developing themselves later on as granulated cells. This suggested that there was a certain insufficiency of the medulla of the bone toward the demand for granular cells, but this insufficiency was so slight that the myelocytes did not migrate into the blood stream. Taking into consideration that there were nucleated red cells, it would seem as if the destruction of the blood corpuscles took place rapidly, which makes the absence of a splenic tumour most inexplicable. The spleen was not enlarged; the microscopical appearance was as follows: beside the normal lymphoid cells without granulation, there were fairly numerous granulated cells, among which were many neutrophile and eosinophile cells, which were well stained by the triacid method. There was no doubt that these were really myelocytes. There were a good number of nucleated red cells, which were especially well shown by the bright green nucleus. This must be accepted as absolute evidence of the myeloid function of the spleen. The lymphatic glands showed cells with protoplasmic margins, many neutrophile granular cells, and only a few red cells, so that Wolff remarks that the neutrophile cells represented much more than would correspond to the red cells. The case, therefore, must be regarded as one in which the myeloid function of the spleen took place as a vicarious function for the changed bone medulla, and he thinks that he has brought fresh evidence of a "metaplastic" in distinction to the metastatic explanation of leukaemia.

(107) The Relation of the Thymus Gland to Marasmus.

STOKES, RUHRÄH, AND ROHRER (*Amer. Journ. of Med. Sciences*, November, 1902) divided cases of marasmus from a pathological standpoint into (*a*) primary, where the cause is at yet unknown and which have hitherto been unassociated with any special or constant lesion; and (*b*) secondary, those accompanying definite diseases. After reviewing the various theories advanced to account for the disease, they consider that the trouble is not due to the amount of food either ingested or absorbed, but is rather due to malassimilation of the food material in the body. In company with other observers the size and condition of the thymus gland as an index to the state of nutrition of the body was noted, and further hitherto undescribed changes in the gland structure are recorded. Eighteen cases of infantile atrophy or marasmus with necropsies were investigated, and, compared with the average normal weight of 18 grams, the thymus in 16 of the cases averaged only 2.2 grams. No abnormal changes were noted after careful examination of other organs, except occasional pulmonary congestions due to terminal infections, and, with these exceptions, atrophy of the thymus gland was the only pathological condition discovered. Histologically the capsule and the trabeculae of the gland are greatly thickened, and, owing to an increase in interlobular tissue, the lobules are cut up into irregular masses. The state of nutrition of infants may be estimated by a microscopic examination of the gland, its structure being unaltered and the cortex and medulla clearly differentiated in normal infants, while in cases of moderate atrophy the medulla and cortex are not easily distinguishable. In severe cases the lymphoid structure of the lobule disappears, and there is an increase in the reticular endothelium, the lobule eventually becoming a mass of capillaries separated by proliferated endothelial cells, and many loose spaces resembling air cells of the lung, with an increase in size and hyaline degeneration of the bodies of Hassall. Careful examination of the stomach and intestines showed no lesions other than *post-mortem* changes. Secondary atrophy of the thymus was found accompanying acute diseases, but was much more advanced when occurring in chronic wasting diseases, and bore out the statement that the weight of the gland is the best index of the nutrition of the body. Feeding with thymus gland in increasing doses of 1 gr. to 3 gr. three times a day was tried, but the cases were too few to allow of definite conclusions being drawn. That atrophy of the thymus always accompanies infantile atrophy, and that its degree, both from weight and microscopic examination, may be taken as an index of the general nutrition of the body, are the general conclusions arrived at as matters of established fact.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(108) Tuberculosis and Cancer.

MacCaskey (*Amer. Journ. Med. Sci.*, July, 1902) refers to the doctrine that Rokitansky is said to have taught that cancer and tubercle are incompatible. He considers that owing to the extensive prevalence of both cancer and tuberculosis their coexistence in one and the same individual ought to be fairly common were no influences at work to prevent this. In the course of many years of special inquiry and investigation in this direction he only met with a single case of the kind, namely, a woman aged 45 years, of wasted appearance, and dying apparently from cancer of the liver and pancreas. Both lungs were found to be studded from apex to base with typical tuberculous nodules. This case was also of interest because it was marked by absence of fever or of tachycardia. In 281 necropsies of phthisical cases (136 by Williams and 145 by Kelynack) cancer was found four times, or in about 1.4 per cent. Stated otherwise, and in accordance with statistical data, it appeared that phthisis was twenty times more frequent in the non-cancerous than in cancerous persons. The coexistence of cancer and active tubercle was rarer still. "Apparently some antagonism existed between the presence of the toxins of tuberculosis and the conditions favourable to the development of cancer." The antagonism was not diathetic; but was probably due to the chemical products of the two morbid processes, that of each being inimical to the other. In view of this apparent antagonism, and the occasional disappearance of cancer after the use of tuberculin (though doubtfully attributable to the latter) it would seem worth while, concludes the author, to try the systematic local injection of tuberculin into the cancerous tissues in properly selected inoperable cases of cancer.

(109) Ascending Paralysis in Graves's Disease.

The following case, reported by M. Rosenfeld (*Berl. klin. Woch.*, June 9th, 1902) appears to throw some light on the pathology of Graves's disease. The patient was 19 years of age, and gave a history of having been ill for two years, although he had been able to follow his occupation. The symptoms which he had suffered from were increasing nervousness, profuse sweating, thirst, and restless nights. On June 11th, 1901, he was seized with headache and sickness, and on the following day he complained of pain in the back and a feeling of tiredness in the legs. On the 13th he went to his work as usual, but the pains and weakness became so severe that he was obliged to give up work, and was brought into hospital in a condition of collapse. The right leg was found to be completely paralysed, and only a minor degree of movement was possible in the left leg. The right patellar reflex was absent, and the left was very weak. An hour later some active movement of the right leg, chiefly of the foot and toes, was noticed, but there was some paresis of the arms. Later on in the day he was incapable of moving legs, arms, trunk, and head: he was, however, quite conscious. Urine had to be drawn off by catheter. The knee-jerks were present, that on the left side being stronger than on the right. There was no difficulty of swallowing, and all the cerebral nerves were natural. The paralysis passed off during the night, and he notes that the thyroid gland at this time was moderate in size, and there was but little exophthalmos. On June 24th the patient was again attacked by paresis first in the right leg and later in the arms and trunk; it passed off after a few hours. The size of the thyroid gland increased: the measurement of the circumference of the neck was 16½ in.: the exophthalmos also increased, more on the right than on the left side. The tendon-reflexes were diminished, and those on the left side of the body were brisker than on the right side. On July 13th the patient was found to be suffering from marked symptoms of motor disturbances; there was tremor of the hands, the pulse-rate was increase to 120. and the general condition of the patient was becoming rapidly worse. He had lost a great deal of weight, and his appearance had become very cachectic. Rosenfeld points out that the paralytic symptoms cannot be ascribed to a hysterical cause, since there was collapse, absence of knee-jerks, and absolute loss of motor power, the legs remaining motionless, even when stimulated by painful impressions such as needle pricks, and there was a faint but definite paresis left after the attacks had passed off. The condition reminded him of Landry's paralysis, but the disturbances did not extend higher than the lower level of the nuclei in the medulla oblongata. The only explanation which he can offer for the condition is that the paralysis was caused by an intoxication, which appears to strengthen the theory of the toxic origin of Graves's disease.

SURGERY.

(110) Cancer formed in a Cicatrix.

Martinelli (*Giorn. dell Assoc. Napol. di Med. e Nat.*, September and October, 1902) relates the case of a patient, aged 45, whose right leg and thigh were severely lacerated twenty years ago. The wounds after several months finally healed, leaving scars. Last September a heavy beam fell on the leg, causing a large wound with considerable haemorrhage, in the site of the old scar. The wound did not heal in spite of three cauterizations, so the case was brought into hospital. There was some rise of temperature and night sweating. The right thigh showed a scar 17 cm. long, and on the anterior and external surface of the lower third of the leg was a large square-shaped ulcer measuring some 18 by 15 cm. The upper half of the ulcer was concave, the lower markedly convex and readily bleeding, with exuberant granulations. The margins, especially the lower, were infiltrated with numerous nodules. The inguinal glands were enlarged. Malignant disease was diagnosed, and the leg amputated at the knee, and the glands excised. The patient was seen twenty months later, and was in excellent health, with no sign of relapse. Microscopic sections proved the presence of a true epithelioma. There was no family history of cancer. In relation to this case, the author has looked up the literature of the subject, and collected a considerable number of references, showing the frequency with which cancer develops in cicatrices or ulcers, whether these exist in the skin or the mucous membranes. How far the development of cancer in cicatrices or wounds can be explained on the current theories about the genesis of cancer it is difficult to say. The *vera causa* of cancer yet remains to be discovered. A cicatrix or a wound, being a *locus minoris resistentiae*, is so far a predisposing condition. Or on Cohnheim's theory, traumatism may be looked upon as a cause rousing into activity aberrant germs hitherto latent in the tissues; and the discontinuity of surface in ulcers offers a favourable condition for the development of microbes. As things are at present, one may choose whichever theory or part of a theory seems to fit the individual case the best. Meantime the author's case and statistical study serve to direct attention to one possible exciting cause which in these days of germs may get overlooked.

(111) Sarcoma of the Third Cervical Segment.

Putnam, Krauss, and Park (*Amer. Journ. of Med. Sciences*, January, 1903) give the notes of a case of sarcoma of the third cervical segment ending in recovery after operation, which they believe to be unique as being the only tumour of the spinal cord in the upper cervical segment hitherto recorded, and which after definite localization was successfully removed without sacrifice of the spinous processes or laminae eventually making an uninterrupted recovery. The record is as follows: Male, aged 45, married, without children, temperate and with good previous history, complained in the autum of 1900 of occasional sudden sharp pains commencing in the back of the neck and radiating round the neck and up the occiput. Lasting from two to five minutes, the attacks gradually increased in frequency from once weekly to several times daily, and on two occasions he lost consciousness. In the intervals he often had dizzy attacks. He suffered from constipation and experienced some difficulty in fully emptying the bladder. In the spring of 1901 he noticed numbness in the left hand, followed by weakness of the muscles of the hand and arm. Some months later the right hand followed suit, and at the end of the year the legs became affected with weakness and disturbed sensation, until in February, 1902, he was unable to walk and his symptoms increased. Coming under observation on April 2nd, all the reflexes were found to be exaggerated, with loss of control over both rectum and bladder. There were no signs of trophic disturbance, with the exception of a large bedsore over the sacrum. Below the clavicles all sensation was totally lost, as also motion in the muscles of the left arm and leg; some

slight power remaining on the right side. There were no signs of muscular rigidity or contractures. The left pupil was smaller than the right, but both reacted normally to light. The patient gradually becoming worse the following operation was performed on April 28th upon the diagnosis of a tumour of the third cervical segment of the cord: Under chloroform, the soft parts having been separated from the posterior vertebral surfaces through an incision extending from the hair line to the vertebra prominens, the arches of the third, fourth, and fifth vertebrae were divided, and the divided portions removed. The exposed dura was distended and dusky, and upon puncture a jet of cerebro-spinal fluid shot up a foot in height, and following upon this relief of intradural pressure the respirations became fuller and increased from eight to eighteen per minute. Upon incising the dura a small reddish tumour (round-celled sarcoma), originating apparently in the pia arachnoid and pressing chiefly upon the posterior columns of the right half of the cord, was removed without much difficulty or haemorrhage, and the wound healed by first intention. The paroxysms of pain disappeared, and ten weeks afterwards motion but not sensation had returned on the right side, and sensation but not motion on the left. Each week, however, showed improvement, though the reflexes remained exaggerated and the urine was still voided involuntarily.

(112) A Method of Preventing the "Circulus Vitiosus" after Gastro-enterostomy.

Fowler (*Annals of Surgery*, November, 1902), with the objects of avoiding the evils of the "circulus vitiosus" and of overfilling of the duodenum, has devised and practised a method of gastro-enterostomy which consists of first securing a communication between a loop of jejunum and the stomach, then an entero-enterostomy between the afferent and efferent portions of the loop, and, finally, obliteration of the lumen of the afferent loop between the two points of anastomosis. To the ordinary method of posterior gastro-enterostomy is added a procedure which occupies but a minute or two, and yet the author asserts absolutely precludes the possibility of direct intercommunication between the stomach and the afferent loop. This step in the operation is accomplished by passing thin silver wire two or three times around the afferent loop at the point selected, and drawing upon the turns sufficiently to occlude the lumen without strangulating the wall of the intestine. The ends are twisted together and cut short, and so disposed in the coil of intestine as not to injure the surrounding structures.

MIDWIFERY AND DISEASES OF WOMEN.

(113) Quinine in Inoperable Cancer of the Uterus.

At the last meeting of the Italian Surgical Society (*Il Policlinico Supplemento Settimanale*, April 12th, 1902) Mariani reported two cases of inoperable uterine cancer cured by the endovenous injection of quinine (Jaboulay's treatment). He began by injecting a dose of 25 cg. of quinine hydrochlorate, after a time giving hypodermic injections of 50 cg. To one woman he gave 35 injections, to the other 30 in three months; in the latter case the drug was given by the mouth for the last five days of the treatment. A fortnight's interval was allowed in the middle of the course. In one case pain and metrorrhagia ceased and the ulcer completely healed; in the other it healed to a large extent. Examination of the blood before and after treatment showed that in one case leucocytosis had entirely disappeared, and in the other had greatly diminished. Histological examination of tissue removed two months and a-half after the conclusion of the treatment showed in one case not a trace of epithelioma; in the other epitheliomatous structure was apparent. With regard to the action of the remedy, the author is inclined to believe that it is due to the antiseptic properties of the drug, acting either directly on the micro-organisms or neutralizing the toxins produced in the cancerous tissues. In the discussion Salomoin said he had used the method in three cases. In one an adenoma-carcinoma of the kidney the result was good; he thinks, however, that there was an error of diagnosis, although the diagnosis was made after an exploratory incision. In the other two cases—an epithelioma of the lower lip and an osteosarcoma of the lower jaw—the result was negative. Durante said he believed that quinine might act on the area of leucocytic infiltration which accompanies malignant tumours, especially if there is ulceration. But he does not think there is any ground for looking upon the drug as a means of radical cure. Tansini had used quinine in a case of operable cancer of the breast, with the result that the evolution of the growth proceeded more rapidly than before.

(114) Rectal Cancer Overlooked in Pregnancy and Labour.

Semmelink (*Centralbl. f. Gynäk.*, No. 3, 1903) shows, in an instructive report, how easily a grave complication may be overlooked in pregnancy should the patient decline examination. He was consulted by a woman, aged 42, in the seventh month, who desired him to attend her in her confinement. As she had borne twelve children already, and all her labours had been spontaneous except one, she declined examination as unnecessary. This decision was considered unwise by Semmelink, as the patient's legs were oedematous, and had been so before the pregnancy. He was furnished with a sample of the urine, and found it free from albumen. His advice to the patient to place herself under her family doctor for the oedema was not followed. At term labour pains set in, and as they grew weak Semmelink delivered the child with forceps. It was a healthy male, over 11 lb. in weight, and was reared. The placenta followed about half an hour later. Four days after the confinement the patient was put in the hands of De Mouchy. In a few days the patient complained for the first time of pain during defaecation, bloody stools were passed. Then the rectum was explored, and malignant disease detected high up the bowel. There was stricture, and an accumulation of faeces above it; it is significant that this complication had neither caused inconvenience nor interfered with the labour. The cancer was quite inoperable, and the patient refused to have colotomy performed. She died within six months.

(115) Melanotic Dermoid Sarcoma of Ovary.

Amann (*Monats. f. Geb. u. Gyn.*, January, 1903) reports a case where the patient was 59 years old, and her hair was remarkable for its intensely dark colour. She had been four times pregnant. The tumour had been noticed for six months and grew rapidly, whilst emaciation was marked. At the operation no adhesions and no extension of the disease beyond the limits of the tumour were detected. The growth, as big as a man's head, was of the cannon-ball or racemose type, and bluish-black in colour; it had developed around a true ovarian dermoid, which contained grease and a few tufts of hair. The tumour itself showed a dark soft surface on section, which became somewhat convex; it was found to be a true melanotic sarcoma, and Amann considered it to be unique. Many so-called "melanotic" tumours of the ovary described by pathologists of a past age were malignant growths stained by haemorrhages into their substance.

(116) Damage to Ureter in Hysterectomy, etc.

Wertheim (*Centralbl. f. Gynäk.*, No. 47, 1902) exhibited an intraligamentary myoma at a society in Vienna, eight weeks after its successful removal. During enucleation the ureter, which ran in the capsule, was cut through in spite of every precaution. Transplantation into the bladder was not feasible owing to the distance of the cut portion from that organ. Wertheim did not adopt Howard Kelly's method of stitching the upper end into a longitudinal slit just below the cut surface in the lower end, but simply invaginated the upper end direct into the lower, and fastened it there with two sutures. As the ureter was much stretched by the intraligamentous growth this union was not difficult to effect, and did not cause tension of the duct after application of the sutures. Wertheim cannot guarantee a sutured ureter against stricture. He referred to Mackenrodt's case (*Monats. f. Geb. u. Gyn.*, April, 1902, Epitome, June 14th, 1902, par. 377), similar in clinical history, where this complication occurred with hydronephrosis and development of calculus in the ureter as results. Eight weeks after the operation the urine in Wertheim's case spurted from the vesical orifice as freely and powerfully as on the sound side.

THERAPEUTICS.

(117) X Rays in the Treatment of Cancer and other Malignant Diseases.

Emil H. Grubbé (New York *Medical Record*, November 1st, 1902) publishes a preliminary report on this subject based on work done in the Illinois *x*-ray and electro-therapeutic laboratory, Chicago. He has treated with the *x* ray, during the larger part of the past year, an average of over seventy patients each day, which he believes to be the largest number of daily *x*-ray treatments yet

reported by any individual. He says if it be admitted that epitheliomas are curable by the *x* ray—and no one in the present light of things can doubt that—it may also be supposed that cancer in any other part of the party is amenable to this treatment. First, because cancer tissue is primarily the same in whatever part of the body it may be found, being composed of epithelial cells; and secondly, because of the ability of the *x* ray to penetrate tissue, there is no part of the body which is beyond its reach. Many theories have been advanced as to the action of the *x* ray in the various conditions for which it has been used. By some the belief is held that restitution of the tissues takes place under *x* ray treatment; that is, cancer tissue becomes transformed or is developed into normal tissue. Others, taking for granted that the parasitic or bacterial theories of the origin of some of the diseases treated by the *x* ray have been conclusively proved, believe that the *x* ray, due to its actinic action, destroys these conditions. These theories seem to Grubbé rather far-fetched, for, apart from the lack of proof of the parasitic or bacterial origin of the diseases referred to, he does not think it probable, from observations made by various investigators, that the success of the *x*-ray treatment in these diseases is exclusively due to any bactericidal power which the rays may possess. Personally, he believes the action of the *x* ray is the same in all the diseases in which it has been found of value, and also that that action is most plausibly explained when viewed from the standpoint of the theory of phagocytosis followed by leucocytolysis. First, it must be admitted that, aside from whatever chemical or electric property the *x* ray may possess, the sum total of its action is that of an irritant. If a certain part of the body is irritated by making frequent *x*-ray exposures, ultimately a simple focal inflammation is produced. Inflammation means the determination of much blood to the part, hyperaemia. Owing to the increased volume of blood, leucocytes accumulate in large quantities and, finally, stasis occurs, the circulation being cut off, the part dies for want of nourishment. When no suitable nutritive material is at hand there is developed a tendency towards degeneration is partly, at least, due to an accumulation of the products of the metabolism of cells. Primarily the *x* ray affects the essential tissue-forming elements of the body. The parts which are walled off decompose chemically and are either dischargad or absorbed. The rapid decrease in the size of some growths under *x*-ray treatment also points to a more general or systemic action, probably due to stimulation of the lymphatics. The fact that nearly every case, no matter how severe, treated by the *x* ray seems to improve at the beginning of the treatment, shows that it exerts an influence which is not only local but also systemic. From his personal observations upon several hundred patients he has come to the conclusion that the nutrition of the entire system is affected, through reflex action probably, and this produces a general stimulating and tonic effect. As to the special characteristics of the *x* ray in different conditions his experience teaches that the vitality of all patients is increased. Relief from pain is found in the majority of cases, although if a neuritis is coexistent with cancer, especially in breast cases, very little can be done for the relief of the pain. In Grubbé's use of the agent the following is the relative order in which we should classify the diseases for which the *x*-ray treatment has been given and the order in which results should be expected relatively; Lupus, epithelioma, nodular returns (post-operative), primary breast cases, tuberculosis of the lungs, tuberculosis of the bones, cancers of soft internal organs, sarcomas, osteosarcomas. In making this classification he does not wish to assert that all the above-named conditions have positively been cured by *x*-ray treatment. Statistics to that effect are not yet available. He is not optimistic enough to assert that all cancers can be permanently arrested or cured by this or any other known method of treatment, but he believes that the *x* ray has established for itself a field in the therapeutics of lupus and epithelioma. Not only that, but the future will see its greatest application in the treatment of patients immediately after operation, to prevent the possibility of recurrence. To prevent the action of the rays upon surrounding tissues, a special lead foil mask is used, which resists the passage of rays to healthy parts. Another precaution might be recommended in order that the "burning" stage may be retarded—this is the application of plain vaseline to the parts exposed directly to the rays. This substance retards the superficial irritation very much, and is especially useful when treating the deeper tissues, and when there is no open ulcer. In all open or broken down conditions a dermatitis should be rapidly produced. The author gives notes of several cases of which the following may serve as samples: (1) A woman, aged 40, recurrent carcinoma of right breast. Radically operated upon first time in August, 1900. Recurrence immediately, followed by second operation. Six months after second operation nodules again began to appear in scar tissue, and third operation was performed. After this the nodules remained away for nearly one year, but finally they appeared again, and the patient underwent *x*-ray treatment. The whole scarred area was filled with a large number of small nodules, each about the size of a pea, which extended even into the axilla. Under *x*-ray treatment these nodules gradually began to fade away. Appetite improved, pains disappeared, and she felt stronger, and was visibly improved in general health, so much so that her friends constantly informed her of her improvement. In this case the treatment was not taken as regularly as recommended. Sittings were given daily for about one month, and on alternate days for nearly four months. Although the patient is not absolutely cured, she certainly shows so much improvement that Grubbé thinks himself justified in calling it a symptomatic or clinical cure. (2) A woman, aged 52. Early in 1900 she complained of pain in the pelvic region. On consulting several physicians the diagnosis of cancer of the uterus was made, and operation was recommended. Operation for removal of the entire uterus was performed March, 1900. Following this operation, a persistent discharge was noticed. The patient caught a severe cold in the month of December, 1900, and symptoms of congestion appeared in the pelvic region, followed by the development of an abscess, which broke and discharged through the vagina. Discharge continued offensive, with occasional very profuse haemorrhages. A second operation was recommended, and performed by a prominent surgeon in May, 1901. On making an incision the surgeon found that the cancer had returned, and was so extensive in character that he decided not to remove anything. The wound was closed, and the husband was told that nothing could be done to save his wife's life, and that she would probably die within a month. During the last week of May, 1901, the patient was brought to Chicago, and *x*-ray treatment was undertaken. Daily treatment of ten minutes' duration were given, and at the end of two months the patient had gained 22 lb., was free from pain, and the foul discharge had almost entirely ceased. At the end of three months she was discharged symptomatically cured, and she remains so to this writing. During the past eleven months she has gained 35 lb., and writes: "I continue to keep well; have not felt so well in my life." Grubbé adds that he has a number of other patients who have undergone *x*-ray treatment, and have remained free from recurrence for periods ranging from six months to a year and a-half. The following is a summary of his conclusions:—In properly-selected cases of so-called "incurable conditions" the *x*-ray has brought about remarkable results. Relief from pain is one of the most prominent features of the treatment. Retrogressive changes are noticed in all primary cancer or tuberculous growths. The *x* ray has a pronounced effect upon internal cancers. The greatest value of the *x* ray is obtained in treating post-operative cases to prevent recurrences. The proportion of clinical cures by this treatment is greater than that obtainable by any other method of treatment. Dermatitis, if properly produced, is within certain limits a desirable feature of *x*-ray treatment. Since the vacuum of an ordinary *x*-ray tube changes constantly such tubes are useless for radio-therapeutic work, and only tubes which allow of perfect control of vacuum should be used. The *x* ray has a selective influence upon cells of the body, abnormal cells being effected more readily than the normal. Haemorrhages and discharges are decidedly lessened, and ultimately cease in the majority of cases. Even in the hopeless, inoperable cases the *x* ray prolongs life, makes the patient comfortable, and the last hours free from pain.

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(118) Current Differentiation in Electrotherapeutics.

Rockwell (*New York Med. Jour.*, October 4th, 1902) insists upon the difficulty and importance of selecting the appropriate form of electricity for treatment. All currents yield mechanical and chemical effects, though when the former are desired we select those of to-and-fro motion; but the physiological

effects, observed only in living tissues, and really a modification of vital processes by electricity, are the most important. The fundamental idea of electro-therapeutics is its nutritional influence, and we have lately learnt that in currents of high frequency and potential the greatest power in this direction lies, but these currents are of magnitude (ampèrage) almost *nil*, and in certain cases only currents of high ampèrage are of any value. The author relates a case in which galvanism succeeded in virtually curing an obscurely-defined spinal case where static and faradic currents had entirely failed, and attributes the value of galvanism to its magnitude. In America static electricity and in France the high frequency apparatus of d'Arsonval are in the ascendant, but the author urges the necessity for more careful and impartial study of the particular applicability of the many possible forms of electrical treatment.

PATHOLOGY.

(119) Sarcoma Idiopathicum Cutis.

This disease, named and described by Kaposi, has been but rarely reported by others. Philippson (*Virch. Archiv*, Bd. cxlvii) relates ten cases which he has had under observation during the last six years. He believes that it must be classed as an infection. The invading agent, whatever it may be, produces locally a proliferation of spindle cells or new growth of the nature of haemangioma or lymphangioma. After remaining localized for a longer or shorter period it is distributed by the blood current, and embolic metastases develop in the skin, particularly that of the hand and foot. From here it is distributed centripetally by the lymph channels to the arm and leg. In a few cases during the course of the disease there is an acute outbreak and embolic growths appear in all parts of the body. Later metastases develop in the internal organs. With regard to the local action of the virus on the tissues, it is limited: after a variable period it ceases to be active, and the proliferation which it has set up retrogrades. The affection has a closer analogy with syphilis than any other condition.

(120) Splenic Changes in Hepatic Cirrhosis.

Azzurrini (*Lo Speriment.*, An. 56, f. 5, 6) discusses the changes met with in the spleen in the common hepatic cirrhosis of drunkards. It has long been known that the spleen is enlarged in these cases. It is also known that in Banti's disease there is enlarged spleen with hepatic cirrhosis, but the changes in the spleen are not the same. In the ordinary hepatic cirrhosis the splenic changes are localized chiefly in the splenic pulp, and consist in a dilatation of the veins and lacunar spaces, whilst the follicles are altered secondarily by a dilatation of their capillaries. The reticulum, unless the disease is of long duration, is not increased. In Banti's disease the alterations are primarily and chiefly localized in the Malpighian corpuscles, whilst the dilatation of the veins either fails entirely or is very little marked. The reticulum, on the other hand, is distinctly enlarged. The author's conclusions are derived from a study of 20 cases of ordinary hepatic cirrhosis—3 early, 14 moderately severe, and 3 very severe. Broadly speaking, the changes seen in the spleen correspond to those which are seen in cases of stasis, and are as follows: (1) Dilatation of the veins and cavernous tissue of the splenic pulp due to accumulation of red corpuscles; (2) dilatation of the capillaries of the Malpighian follicles, proceeding from the periphery to the central artery, escape of blood, and dissociation of the cellular elements constituting the follicle; (3) thickening of the capsule, trabeculae, and adventitious sheaths of the veins; (4) destruction of the red corpuscles above the normal; (5) degenerative changes in cellular elements of the splenic pulp, ending in granular breaking up of the same.

(121) Cultivation of the Bacillus Leprae.

Van Hontum (*Journ. Path. and Bakter.*, September, 1902) reports successful attempts to cultivate the B. leprae. Small portions of a leprous nodule were placed in various media, the successful culture occurring in fish broth. There was considerable difficulty in obtaining subcultures; eventually the organism grew on glycerine beef agar. The organism differed from Hansen's bacillus in that the rods were somewhat thicker, and were decolorized by the Ziehl-Neelsen stain. No satisfactory results were obtained from agglutination experiments; it was found that clumping occurred with a variety of serums, leprous and non-leprous. With leper serum, however, the Pfeiffer reaction was obtained; that is to say, in a dilution of 1 in 50 to 1 in 100 marked bacteriolysis occurred; control experiments with other bacteria showed that this action was specific for the B. leprae; also normal and other serums failed to produce the same bacteriolysis. This appears to show that the organism cultivated is the true bacillus leprae; its differences in morphology and staining reaction from Hansen's bacillus are not discussed.

(122) Hydatid Transplantation by Inoculation of Scolices.

Dévé (*Bull. et Mém. de la Soc. de Chir. de Paris*, No. 30, 1902) has recently communicated the results of an experimental investigation on the inoculability of different parts of a hydatid cyst. These results, Picqué states, in a report on Dévé's paper, are of much interest in their bearing on a disputed question that has of late years been often discussed by French surgeons and biologists, and also on certain points of surgical prophylaxis. Dévé has succeeded in producing extensive hydatid growths in the abdomen and thorax of a rabbit by injecting into these cavities scolices which constitute the white deposit observed at the bottom of a test tube containing hydatid fluid. The possibility of this development of scolices, apart from a daughter cyst, into a hydatid tumour, has been denied on clinical grounds by Protheral, and on biological grounds by Davaine and others. In the concluding portion of his paper Dévé pointed out the practical import of his investigations, and suggested the advisability, with the object of avoiding post-operative hydatid transplantation, of killing the hydatid germs by an injection of some parasiticide solution before free incision of the cyst. In dealing with this subject he studied the comparative actions of mercury perchloride and formol as parasiticides on the scolices and also on daughter cysts. Picqué thus sums up the chief points in Dévé's communition: (1) Scolices (specific microscopic germs) are capable like the daughter cysts (microscopic elements) of giving birth to fresh hydatid cysts; (2) it is of importance, therefore, as demonstrated by clinical and experimental facts, to avoid in the course of a surgical operation on a hydatid cyst dissemination of its contents beyond the sac, and also of retention within the sac of the specific germs contained within the parasitic vesiculi; (3) Dévé's experiments prove that a solution of 1 in 100 of perchloride and of 1 in 200 of formol will in the course of from two to two and a-half minutes, destroy the vitality of hydatid germs; (4) a preliminary parasiticide injection of perchloride or, better still, of formol solution, made into the cyst after laparotomy, and allowed to remain for two or three minutes mixed with the contents of the mother cyst, ought, according to the results of experiments, to prevent any transplantation of the hydatid growth and, consequently secondary post-operative echinocosis.

(123) Tuberculosis of the Pharyngeal Lymphoid Tissue.

Lartigan and Nicoll (*Amer. Journ. Med. Sci.*, June, 1902), in the course of a comprehensive study of hyperplasia of the lymphoid tissue of the throat (adenoids), carried out a series of experimental inoculations and histological examinations on the question of primary tuberculosis there. They remark that most of the researches on this matter have been somewhat incomplete and not sufficiently thorough. The material used was obtained from seventy-five consecutive specimens; it was carefully washed by repeated shakings in sterile normal salt solution, and then cut into pieces, some of which were used for inoculation, others for histological examination. Twelve of the specimens tested induced tuberculosis in the inoculated animals; of these, eight also showed histologically tubercle bacilli and characteristic lesions; the other four showing bacilli, but no characteristic histological lesions, unless the lymphoid hyperplasia was due to the tubercle bacilli. A very searching study was found necessary to demonstrate the tuberculous lesions histologically; the only method recommended is that of animal inoculations controlled by examinations of many sections of the tissue. The lesions are generally close to the epithelial surface, and focal in character; occasionally they lie deeper. The "pharyngeal tonsil" must therefore be considered a portal of entry for the tubercle bacillus.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(124) Pneumonia and its Prevention.

In the *Bulletin* of the Chicago Health Department for the week ended January 17th, 1903, the Health Commissioner, Dr. Reynolds, states that since the census year 1900 pneumonia has claimed more than one-eighth of all the deaths in Chicago, one-third more than consumption, and 46 per cent. more than all the other contagious and infectious diseases combined, including diphtheria, erysipelas, influenza, measles, puerperal fever, scarlet fever, small-pox, typhoid fever, and whooping-cough, the total of which deaths was 4,489 as compared with a total of 6,562 deaths from pneumonia. During the first seventeen days of the current year, out of the total 1,436 deaths reported 299 were from pneumonia, or a little more than one-fifth of the total deaths from all causes. During the first seventeen days of last year 227 pneumonia deaths were reported, the figure showing an increase of nearly one-third (31.7 per cent.) this year over last. Reynolds shows by data compiled from the volumes of vital statistics of the Federal census for the years 1880, 1890, and 1900 that while pulmonary tuberculosis had decreased from 18.21 per 10,000 of population in 1880 to 14.44 in 1900, pneumonia had increased from 12.56 in 1880 to 13.49 in 1900. These figures are for the whole of the United States, and show a decrease of 20.7 per cent. of deaths from consumption, and an increase of 7.4 per cent. of deaths from pneumonia during the twenty years. Similar computations for Chicago, and covering two additional decades, show much greater decreases and increases for the two diseases. Based on the United States census figures of population, the deaths from consumption in 1860 were 25.28 per 10,000 (276 deaths in 109,206 population). In 1900 they were 15.30 per 10,000 (2,599 deaths in 1,698,575 population), a decrease of nearly 40 (39.1) per cent. of consumption mortality in the forty years in this city. From pneumonia the 48 deaths in 1860 represent a rate of 4.40 per 10,000 of the population; in 1900 the 3,389 deaths represent a rate of 19.95 per 10,000, an increase of more than 350 (353.4) per cent. of pneumonia mortality. In reply to the question, What may be done to check this murderous increase of pneumonia mortality? Reynolds summed up the measures upon which both sanitarians and physicians are agreed as follows:—(1) It is well known that pneumonia is a highly contagious disease, the cause of which is a micro-organism in the sputa of those suffering from the malady, and that it is contracted by inhaling this germ; therefore, the same care should be taken to collect and destroy the sputa that is taken in pulmonary tuberculosis, or in diphtheria or influenza. (2) During the illness the greatest pains should be taken to prevent soiling bedclothing, carpets, or furniture with the sputa, and after the illness the patient's room should be thoroughly cleansed and ventilated. (3) The fact that the disease is most prevalent in the winter season, when people are most crowded together and live much of the time in badly-ventilated apartments, makes obvious the necessity of thorough ventilation of houses, offices, factories, theatres, churches, passenger cars, and other public places in order that the air which must be breathed may be kept clean and free from infectious matter. (4) Laymen should be taught not to be afraid of a patient who has pneumonia, influenza, or tuberculosis, but to be afraid of lack of cleanliness about him during his illness, of failure to enforce prophylactic measures, and of close, badly-ventilated apartments during the season when these diseases most prevail. Since pneumonia is most fatal at the extremes of life—the young and the aged—special care should be taken to guard children and old persons against exposure to the infection of those already suffering with the disease, and against cold, privation, and exposure to the weather, which are potent, predisposing causes.

(125) Infantile Eczema.

Rey (*Jahrb. f. Kinderheilk.*, vol. lvi, No. 3) in an interesting paper, treats of the etiology, forms, and treatment of this disease. He is of the opinion, widely held in this country, that, excepting the parasitic and artificial forms, the causation of infantile eczema is usually to be found in disorder of the gastro-intestinal tract, associated either with constipation or with slimy and offensive stools. In an acute case, with pyrexia, in a child of nine months, after various forms of treatment had failed, he was led by the foulness of the evacuations to wash out the bowel morning and evening with physiological saline solution (0.9 per cent. NaCl) with the result that an immediate improvement took place. The success of this rational treatment in a number of other cases, acute and chronic, has convinced him that in eczema in infants not directly attributable to skin irritation, if local treatment, regulation of diet, and the exhibition of drugs, such as calomel and salicylic acid, have not relieved the condition irrigation of the large intestine should be at once tried. From a pint to a pint and a-half of saline solution, introduced by means of a long tube, is used. A weak solution of creolin and ½ per cent. solution of tannic acid have also been found useful. In some of the cases the irrigation was discontinued too soon, and the eczema returned, but yielded again to further treatment. At the same time, in addition to caring for the inflamed skin, the greatest attention must of course be paid to the diet: the omission of milk entirely for a time is often advantageous. It is important to notice that the method was found successful in infants in whom there was no evidence of disorder of the bowels other than some constipation.

(126) Diarrhoea and Hyperchlorhydria.

Surmont and Lerat (*Echo Méd. du Nord*, January 11th, 1903) have met with two forms of diarrhoea in hyperchlorhydria. In paroxysmal diarrhoea the evacuations (two or three) generally occur in the middle of the night, and are repeated after breakfast and dinner during the next day. They are accompanied by severe epigastric and umbilical pain, which disappears after the first defaecation. There is extreme mental depression and fear for recurrence of the attack. Diagnosis must be made from the crisis of locomotor ataxia, Basedow's disease, and intestinal neuroses. In the second variety the diarrhoea is chronic. It occurs in the early hours of the morning, or immediately after breakfast. Pain is variable, and its severity bears a relation to the nature and amount of the ingesta. The faeces are generally of normal character, but bilious stools have been observed, and in some cases vegetables and food particles have been noted which were only eaten an hour to an hour and a-half before. The patients are generally emaciated, with poor appetite and gastric hunger; intense epigastric and umbilical pain follows the ingestion of food. The condition should be diagnosed from enterocolitis with its mucus and scybalae, from the characteristic evacuations of dysentery and from carcinoma and syphilis. The diagnosis should be confirmed by chemical examination of the gastric contents. The condition is probably due to pyloric insufficiency and increased peristalsis caused by the hypersecretion of mucus and water. It is a defensive act against the excessive acidity of the chyme in hyperchlorhydria. The prognosis of the paroxysmal is much better than that of the chronic variety. In the latter cases the patient becomes very emaciated, and often markedly neurasthenic. Treatment must be directed to the exciting cause—the hyperacidity; but when bismuth and alkalies fail to stop the diarrhoea, as they assuredly will, lemonade and chlorides act as almost specifics in these cases.

SURGERY.

(127) Disinfection of the Skin.

At the ninety-seventh annual meeting of the Medical Society of New York, held at Albany on January 27th, 28th, and 29th, 1903, Robert H. Dawbarn, of New York, made some practical suggestions with regard to the warfare that must be carried on between the surgeon and the bacteria of the skin, which he called the surgeon's enemy. He believes that the surgeon should protect his aseptic patient from himself by gloves, and protect himself from the septic or syphilitic patient by the same means. He suggests that gloves may be mended by means of a pyrographic cautery and patches taken from older gloves. For the fingers test tubes are inserted, as in mending stockings forms are used. For patching the palms pressure is produced by two flat-irons. Gloves thus mended will stand boiling and antiseptic solutions. Dawbarn says that the chief danger is from the numberless micro-organisms in every drop of sweat and serum. For this the patient must be protected against himself as well as against the surgeon. By rubbing in a combination of some indifferent powder—as lycopodium, stearate of zinc, or talcum with alum, in a proportion of 4 to 1—the skin will not allow glandular secretion for some time, so that even in the high

temperature of the operating room there will be no sweat for hours. The effect of the astringent is noticeable not only in the skin of the operation site but also on the surgeon's hands. Koenig, of Berlin, has been so much impressed by the dangers to the patient from the secretions of the hands that he has devised a special set of long forceps, which do away with the necessity for the insertion of the surgeon's hands into the abdomen. With these his last 600 cases have been absolutely without a sign of infective reaction. About the genital region especially the skin is apt to harbour micro-organisms. The use of rubber tissue, which covers the skin area, is adherent to the skin, and is cut with it, has been suggested, but it is expensive. The astringent powder method suggested by Dawbarn is especially suitable for these cases in the genital region, and it gives excellent satisfaction in varicocele and in hernia operations. He suggested the use of a concentrated solution of hydrosulphate of sodium (25 per cent.) as a means of removing the hair from the axilla and the pubes instead of by the razor. The solution is faintly greenish in tinge, but is watery and unirritating. It completely removes the hairs, yet without destroying them. In children, in women with high axillae, and in other conditions, it is practically effective. It might be used on the eyebrows without danger, since it is unirritating, and on the lips, since it is not poisonous.

(128) Heredity of Synovial Ganglion.

Fére (*Rev. de Chir.*, No. 10, 1902) points out that teratological heredity plays an important part in the pathology of joints. With regard to synovial ganglia of the hand and foot the slightness of the determining cause has occasionally been noted. According to Schwartz some subjects show a special predisposition to the formation of swellings of this kind, and, under the influence of what might be regarded as a cystic diathesis, become affected with multiple ganglia appearing either simultaneously or in succession, at the extremities. The author of this paper reports an instance of a woman affected with synovial ganglia on both hands, who transmitted the tendency to this form of swelling to seven of a family of seventeen children, extending over three generations. Of eight girls six were thus affected, of nine boys only one. In several of these instances the swelling appeared immediately after some brusque or violent movement, and so seemed to be the result of rupture of a weakened synovial membrane. This synovial weakness, it is suggested, may be analogous to the weakness of aponeuroses characterized by numerous abnormal gaps, which has been often observed in individuals belonging to a neuropathic family.

(129) Dislocations of the Pelvis.

Linser (*Beit. z. klin. Chir.*, Bd. xxxv, Heft. 1) reports a case of complete dislocation of the right half of the pelvic girdle at the ilio sacral and pelvic symphyses, in which the characteristic structural disturbances of this very rare lesion were made out by the aid of the Roentgen rays. The author, in concluding his comment on this clinical record, gives the following results of his investigation of the literature relating to the subject: (1) There are two varieties of pelvic dislocation—one in which a lateral half of the pelvic girdle is dislocated, and the other in which there is displacement of the sacrum from both halves, with or without separation at the pubic symphyses; (2) both forms of dislocation are very rare lesions, fifteen cases only having been hitherto recorded; (3) the second form—that of the dislocation of the sacrum—is almost always fatal, and the first form is so in about half the number of cases; either form of dislocation may be complicated with fracture of the bones of the pelvis; (4) both these forms of dislocation are in most instances caused by direct violence applied to the back of the pelvis, but dislocation of one side of the girdle has in some instances been due to falls on the buttock and on the feet, and also to lateral compression; (5) the therapeutical indication in both varieties is to restore at once the normal position of the displaced bones. Instances, it is stated, have been recorded of spontaneous reduction, but in these there must obviously have been some uncertainty in the diagnosis.

MIDWIFERY AND DISEASES OF WOMEN.

(130) Application of Forceps above the Brim.

W. Gillespie (*Amer. Journ. of Obstet.*, January, 1903) advocates under certain conditions the application of forceps to a head fixed transversely in the brim. Forceps should not be used as long as the head is rotating round the pubes and the sagittal suture receding from the sacrum, but when the head begins to rotate round the promontory and the sagittal suture to approach the promontory forceps are often of service even when the os is not fully dilated. The first blade of the forceps is inserted into the sacral hollow between the posterior lip of the cervix and the head. The second blade is applied over the first, and then by a spiral movement brought half round the circumference of the pelvis to lie behind the pubes, the tips of the blade being somewhat to one side of the sacral promontory grasping the occiput. This rotation of the blade round the pelvis is accomplished with moderate ease on the side removed from the occiput of the child. After first pulling forwards, to fix the head in the brim more firmly, the handles are carried back towards the sacrum of the mother, the fetal head meanwhile rotating round the promontory and entering the pelvis, usually with a perceptible jerk. The forceps tend to slip over the occiput as the head flexes on entering the pelvis. If this happens, the blades are slightly separated, and a firmer grip obtained. Then, carrying the handles forwards in the arc of a circle, the head is brought into an oblique diameter, and the case becomes an ordinary forceps case. Where the transverse fixation of the head in the brim is due to a diminished conjugate forceps should be used in the manner described, when version is contraindicated by the probability of a tedious birth of the after-coming head, as, for example, in the case of primiparae, or where other diameters of the pelvis are also diminished. Again, the method is useful in dealing with transverse fixation caused by excessive tilting of the brim, accompanied by slight diminution of the conjugate, or by defective flexion of the head. Five examples are given of the successful application of forceps under such conditions.

(131) The Physiological Closure of the Umbilical Artery at Birth.

In a paper on this subject (*Arch. f. d. ges. Physiol*, September, 1902) Bucura records a series of observations made on the human cord, and also on dogs and rabbits. He concludes that the chief factor in the automatic closure of the arteries is associated with the anatomical distribution of the muscle fibres. Inside the strong circular coat lie longitudinal muscle fibres arranged in localized patches. In a section of the umbilical artery of a fetus which has died in utero these fibres can be seen lying between the tunica intima and the circular muscle, but not forming a uniform layer round the circumference of the vessel. When a living fetus is born and the cord is subjected to change of temperature and mechanical stimulus, owing to the contraction of these bundles of longitudinal fibres swellings are raised, which project into the lumen of the artery and effectually occlude it. These nodules may be seen on opening the artery after birth, and are found along its whole length, and even in the branches into which it divides on the placenta. The haemorrhage which sometimes occurs after the slipping of an imperfect ligature when the child has been placed in a warm bed is due to the removal of both mechanical and thermal stimulation. The paper is illustrated by representations of sections of the mammalian arteries in the unborn and in the newborn.

(132) Interstitial Pregnancy: Conservative Operation.

Wimmer (*Zentralbl. f. Gyn.*, No. 2, 1903) operated on a woman, aged 36, who had once been pregnant, nine years previously. The last period occurred on February 6th, 1902, after a delay of eight days, and lasted for a fortnight, much longer than usual. On the second day (February 8th) the patient felt ill on rising and fainted; when she revived she felt severe hypogastric pain, but was not conspicuously pale. She was kept at rest for several days. There seemed to be tenseness in the right iliac fossa, but bimanual palpation was impracticable owing to the pain. On March 20th moderate haemorrhage set in for ten days. The patient was not admitted into hospital until April 18th. The uterus lay in the middle of the pelvis and was enlarged; an oval, firm tumour lay on its right side, and external to it the ovary could be felt. The round ligament could not be defined. At the operation the right uterine cornu and adjacent part of the tube were found to form the tumour, which was as big as a goose's egg. The right round ligament was attached a little to the inner side of the outermost limits of the tumour, two-thirds of which lay entirely internal to that band. The wall of the tumour,

clearly a fetal sac, had yielded at the part most distant from the uterus; the sac was full of brownish adherent clot. The sac was enucleated from the uterus, without the normal cavity being opened, and removed with the tube and ovary. The uterine wound was closed in two layers. The contents of the sac were a tubal mole with an embryo ½ in. in length; the ovum was attached to the inner pole of the sac which lay within the uterine walls. Thus the tube was no doubt involved secondarily. Chrobak, in a discussion on this case, asked if the uterus were unusually long without being very broad, as seems to be the rule in this rare variety of ectopic pregnancy, but Wimmer replied that the lengthening was confined to the right side.

(133) Wound of Ureter in Vaginal Operations.

Von Mars (*Monats. f. Geb. u. Gyn.*, December, 1902) operated in a case of advanced extrauterine pregnancy and wounded a ureter. The duct was narrow below and dilated above the wound. The operator trimmed the divided ends and united them, but without success, so he passed a ligature round the ureter and tied it with intent to bring about hydronephrosis and subsequent atrophy of the kidney involved in the accident. Yet the ligature failed to hold, the fistula was then touched with caustic. To the surprise of the operator the fistula closed and the duct, instead of being strictured, resumed its functions. The patient made water normally, without incontinence, and when the cystoscope was used urine was observed to enter the bladder through both ureteral orifices.

(134) Primary Non-inflammatory Hydrosalpinx.

Rio-Branco and Descomps (*Bull. et Mém. de la Soc. Anat. de Paris*, June, 1902) report an instance of cystic dilatation of the tube which was clinically a tumour. There was no evidence of any kind pointing to inflammatory pelvic disease, no sign whatever of salpingitis. The patient suffered for some time from symptoms of pressure in the rectum and bladder associated with a tumour of the size of two fists to the left of the uterus and another on the opposite side as big as a fetal head. For three years the patient had been subject to occasional excessive menstruation. The uterus was pushed to the left and upwards against the symphysis by the right and smaller tumour. The left tumour lay entirely in the abdomen reaching to the level of the umbilicus. Bilateral ovarian cystic disease was diagnosed. The abdomen was opened, and the tumours proved to be large cystic dilatations of the Fallopian tubes. The ovaries appeared perfectly healthy to the naked eye, and were therefore not removed.

THERAPEUTICS.

(135) Treatment of Spastic Constipation.

V. Sohlern (*Berl. klin. Woch.*, September 29th, 1902) regards the treatment of constipation as one of the most difficult problems in medicine, because, as a rule, the physician does not differentiate the forms of disturbance. In dealing with one form of chronic constipation, namely, the spastic form, he says that it is very often not recognized as such, and treated, without success, like the other forms. It occurs in neurasthenic subjects, and takes the shape of a neurosis of the intestine. The characteristic symptoms are constipation, spasmodic pains, and alteration of the stools. On palpation the intestines are felt as stiffened band-like masses, which must not be confused with gut filled with faeces, in which case the masses are kneadable and not painful; the stools are small, and contain too little water; they are either tarry or very hard. At times they present masses of hardened faeces, of the size of a hazel nut or pigeon's egg. A further train of symptoms, which are mostly met with in cases of spastic constipation, are those of the neurasthenia or hysteria from which the patient is suffering. V. Sohlern gives some vivid descriptions of this condition by recounting the clinical histories of some cases. He points out that a striking peculiarity of these cases is that during the intervals between the attacks, even when there had been several days without a stool, and the patient had taken nourishment plentifully, there was no tympanites, nor were there any subjective complaints. The essential points of the treatment are rest in bed, non irritating diet, which at the same time is nutritious, containing such foods as milk, honey, butter, bouillon, etc., warm applications to the abdomen during the day, and cold compresses during the night, and such nerve sedatives as potassium bromide, and the like. The bowels should be opened by injection of oil, with chloral hydrate added per rectum. Tincture of belladonna given internally suffices to remove the pain of the spasmodic contraction of the gut. No drastic aperients should be given, and when it appears necessary to give anything he prefers a glass of pure water during fasting, or at most a glass of Vichy or some Rakoczy water. As soon as one has succeeded in obtaining motions without pain, one may proceed in allowing a normal diet, as long as there is plenty of vegetable and fruit contained in it. In conclusion, he warns that much more harm than good is likely to be done in these cases by the employment of electricity and massage.

(136) Vioform: its Properties in Relation to the Treatment of Tuberculous Joints.

Blake (*Brooklyn Med. Journ.*, October, 1902) has summarized the work of former observers upon this drug, and added the results of his own long labours in the clinic at Bonn. Assuming the value of the antiseptic dry dressing an antiseptic powder is a necessity; and in iodoform we have a valuable but not perfect drug for this purpose. Two years ago a new substitute for it was introduced called "vioform" (its correct name being iodoxychlorchinolin), by Professor Tavel of Berne. His researches showed (1) that the bactericidal power of the drug, as of iodoform, could not be accurately determined—this applies to all antiseptic powders whose bactericidal action only occurs on solution in the culture medium, (2) the percentage of vioform required in culture media to inhibit bacterial growth was much smaller than that of iodoform, (3) introduced intraperitoneally the two drugs were equally poisonous, but subcutaneously vioform much less so. After several months' experience in its use Tavel concluded that the powder, itself practically odourless, had great deodorant powers, was very stable, so that it could be mixed with carbolic or other solutions, was more useful than iodoform in non-tuberculous and at least as useful in tuberculous wounds. He had had no toxic symptoms even after long continued use. Three Continental observers have since confirmed and amplified these conclusions. The writer has latterly inquired into the use of the drug in tuberculous joint lesions, which had not hitherto been investigated. Glycerine was found the best vehicle for emulsion, and in this form the drug was injected into certain joint cavities in many guinea-pigs and rabbits, with very toxic effects, either lethal or confined to emaciation and abscess formation. This latter process occurred in every case, the contents of the cavity being, however, always sterile. The action of the glycerine was carefully eliminated by comparative experiments. The author's conclusions are as follows: The insolubility and stability of the drug, together with its local properties—abscess formation and slow general intoxication—render it absolutely unsuitable for purposes of injection, but, conversely, allow its free use either as powder or gauze in fresh wounds, and in old sinuses, so long as these communicate freely with the external surface. To a higher antiseptic potency than that of iodoform it unites some virtues peculiar to itself, hence he believes that for all purposes, except that of injection, the long-sought ideal substitute for iodoform is found in vioform. It must be admitted that the factors which determine its degree of clinical solubility have not been worked out, and that injection into healthy joints excludes all questions of reaction between the drug and bacterial products.

(137) The Action of Lemon Juice on the Typhoid Bacillus.

In a report to the Health Department of Chicago for the week ending January 17th, Dr. Reynolds, the Health Commissioner, states that the study of the action of lemon juice on the typhoid bacillus and on the colon bacilli, which are the cause of many forms of acute intestinal and other diseases, has been continued in the laboratory with very interesting results. The juices of different specimens of lemons were found to vary materially in germicidal action, that from some specimens requiring as much as 10 per cent. to kill all the exposed germs. Experiments with other fruit juices were also made on an extended scale. Lime juice, apple juice, and grape juice have been tested. While all of these have a more or less inhibiting effect on the growth or vitality of these bacilli, the bottled grape juice found in grocery stores gave the most conclusive results, although

there was a marked difference between the brands. With some brands a proportion of 1 per cent. effectually and permanently destroyed the vitality of both the typhoid and the colon bacilli—"no growth" at the end of seven days' incubation. Cultures of these germs were used to infect both distilled water and water from the laboratory tap, in a strength of about 10,000,000 bacilli to a cubic centimetre—about one-third of a teaspoonful. The bottled grape juice was then added in proportions varying from 1 to 5 per cent. Examinations made at one-minute intervals showed that some brands had killed the germs at the end of the first minute, as did also the lemon juice if of proper strength. The effect is almost instantaneous. The advantage of those brands of bottled grape juice which gave these results is that the quantity required—1 per cent.—does not affect the flavour of the water or disturb digestion, as lemon juice does with some individuals. The freshly extracted juice of the grape prepared in the laboratory had no effect on the bacilli even in a proportion as high as 100 per cent.

(138) Cryogenine in the Pyrexia of Tuberculosis.

Dumarest (*Lyon Méd.*, November 23rd, 1902) has made some clinical experiments with cryogenine, or metabenzamino-semicarbazide, an aromatic substance isolated and prepared by the Messrs. Lumière. When given in 1-gram doses to healthy or apyretic subjects, cryogenine has very little action; it causes in five or six hours a fall of one to two-tenths of a degree (Centigrade), the effect lasting for about twenty-four hours; the pulse is unaffected and there are no subjective symptoms. But when given to febrile patients in doses of 0.6 to 1.2 gram, there follows a rapid fall of temperature of 1°, 1.5° and even 2° C., the effect often persisting till the following day. It is noticeable that some of the greatest thermic depressions followed small doses of the drug. In several cases, the administration of cryogenine was continued for a month or more without ill-effects and without any necessity of increase of the dose. The antithermic effect is the only one, the absence of anodyne or hypnotic properties being seen in cases of facial neuralgia and congestive headache. None of the patients who took cryogenine became cyanosed, nor were there shivers or collapse or sweats or anorexia or cutaneous symptoms observed however long the treatment was continued. When the drug was given at the onset of a febrile attack, its effect was seen in one to two hours, the typical temperature tracing being a plateau of several hours from the onset of its action and then a gradual defervescence which continued until the following day. In cases of tuberculous fever the remedy has proved generally but by no means invariably efficacious. The amelioration was greatest in the case of secondary inflammatory fever, the fever of caseation and hectic fever; less where the pyrexia was due to patches of congestion; and often absent in the continued fever of tuberculous intoxication. Dumarest claims then that cryogenine is the antipyretic *par excellence* of tuberculosis; it is more certain than pyramidon, salicylic acid, or acetanilide: it is not followed by collapse as guaiacol may be, or by the exhausting sweats which quinine and phenacetine cause, or by the cardiac depression and cyanosis which result from antipyrin.

(139) Dry Air Treatment of Hydrarthrosis.

Cahier describes the good results he has had in the treatment of hydrarthrosis and haemarthrosis by means of dry air heated to 115° C. (*Journ. de Méd. et de Chir. Prat.*, July 10th, 1902). The apparatus which he uses is very simple, consisting of a wooden box. In this is placed the affected knee. At one end of the box is a place for a tube which brings in hot air, by means of heating it with a petroleum or spirit lamp. It is necessary to have a thermometer capable of registering high degrees of temperature. The limb is placed in the apparatus for an hour, after which it is massaged, and if necessary electricity applied to the muscles. This treatment should be continued for eight to ten days. The writer states that the results of such treatment are most satisfactory, and it is astonishing to find that high temperatures—115° to 120° C.—are borne without any inconvenience.

PATHOLOGY.

(140) Histology of the Gastric Mucosa in Pathological Conditions.

Einhorn (*Amer. Journ. of Med. Sciences*, October, 1902), in continuation of a previous article upon the histology of the gastric mucosa in pathological conditions, publishes the results of further investigations based upon the examination of 34 cases, and gives several illustrative photomicrographs. In some of the cases examined, the glands were exceedingly small, either uniformly or mingled with glands of normal size, while in others they were increased in size owing rather to a dilatation of the lumen than to any increase in the size of the epithelial cells. Among other pathological conditions an infiltration of leucocytes in the interglandular structure and mitoses often occurs, but an increase in the parietal cells was only observed a few times. In some of the specimens showing an increase of interglandular connective tissue with small glands as evidences of atrophy, two, three, or more glands may appear blended together, parts of each having disappeared, and this atrophic condition is sometimes associated with vacuolization. The atrophic process may, however, be combined with tortuosity and an apparent increase of the glands. In cases of gastric cancer signs of a neoplasm may be seen in the washings, together with signs of atrophy, etc., and under favourable conditions a diagnosis may be made if a direct invasion of the gland substance by epithelial cells is observed, though detached shreds of pavement epithelium are sometimes found in cases having nothing in common with cancer. From a consideration of the cases under investigation, there is no condition of the mucous membrane constant for the various secretory states and organic diseases, each group presenting cases showing in some normality, in others proliferation, and in yet others atrophy and vacuolization. From these varying conditions of the mucous membrane in the same secretory anomalies it is concluded that its pathologic-anatomical state is not the cause of the affection, but that these secretory disturbances are of a functional nature caused by abnormal nerve influences. Treatment then must take into consideration the entire bodily state, and not the condition of the stomach alone, and anomalies in the blood and nervous system must first be corrected by inducing a proper mode of living, giving tonics, etc., if needed, with massage, electricity, and change of climate. Secondly, any alterations in secretion must be treated by suitable diet, medicines, etc., and insistence is made upon seeing that sufficient nourishment is taken. In cases of hyperchlorhydria a diet rich in proteids and poor in carbohydrates should be chosen, while in the opposite conditions of hypochlorhydria and achylia the food should be rich in carbohydrates with a decrease in the proteid allowance, and all foodstuffs should be finely divided in order to lessen any tendency to bowel irritation through imperfect digestion. Butter is indicated in all conditions of altered secretion, and, although a fluid diet may advantageously rest the stomach for a little time, it is better to regulate the diet so as to gradually increase the work of the organs of digestion so that the usual foods may be assimilated.

(141) Fate of Agglutinins during Active and Passive Immunization.

Jörgensen and Madsen (*Festskrift rid Ind. af Statens Serum Institut*, No. 6, 1902) find that after the single injection of cultures of B. typhosus or B. cholerae, there are three distinct phases in regard to the agglutinating power. During three to six days there is little change, then the quantity increases, reaching a maximum about the ninth or eleventh day. This is followed by a decrease, commencing suddenly and passing gradually to equilibrium. This condition occurs even in the case of a fresh animal never before treated. Agglutinin injected into the circulation disappears therefrom, at first rapidly, and later on more slowly. Agglutinin obtained from goats, when injected into the circulation of a cat or a rabbit, disappears very quickly, whilst that from a rabbit remains for a considerable period when injected into a rabbit. But when a mixed agglutinin, obtained from a goat and rabbit, is introduced into the circulation of a goat, there appears little difference in their rate of disappearance. When passive immunity is produced by the injection of typhoid or cholera serum, the typical agglutinin curve which regularly results after the injection of typhoid or cholera culture into an actively immunized organism does not occur. These results are not only of much theoretical interest but of marked practical importance, as during the production of antitoxic serums it is a distinct gain to know as exactly as possible at what moment the maximum quantity of antibody may be obtained.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(142) Beri-Beri.

At a meeting of the Norwegian Scientific and Literary Society in Christiania held on May 30th, 1902, Professor Uchermann gave an account of the investigations of the Committee appointed for the consideration of beri-beri, and showed that the problem has been solved as far as is possible until the poison itself is determined. After briefly referring to the distribution of the disease, its pathological anatomy, and the supposed causes, causes which might be classed under the two heads, indirect or disposing and direct or initiating, both, however, being equally doubtful and unproved, Uchermann mentioned the various theories founded thereon, the most important of which were the following:—(1) Beri-beri is an infectious disease due to a specific microbe, (2) beri-beri is a constitutional disease due to inadequate or physiologically insufficient food, especially the want of azote (albuminates) and fat, (3) it is due to an intoxication through the food, some considering it a rice intoxication, others a fish intoxication, those articles undergoing chemical changes, possibly through the action of micro-organisms. Others consider it an auto-intoxication, the ptomaines of the food and of the intestinal canal being absorbed, while yet others think it an intoxication due to the presence of inorganic poisons, especially arsenic, in the food. None of these theories explain in a satisfactory way the appearance, in late years, of the disease in Europe, and especially on European sailing ships, Norwegian among the number. The material before the Committee was based on the replies to certain questions made through consuls or received by members of the Committee from master mariners and sailors, the information being obtained from 104 ships in all. These facts make it possible for the first time critically to weigh the various views that can be entertained concerning the causes of ship beri-beri. It is evident, says Uchermann: (1) That the general opinion, which places the appearance of beri-beri on Norwegian ships in the last decade of the late century and its especial prevalence after the year 1895, is correct. (2) That the Norwegian ships and, as far as the small number allows a conclusion to be drawn, Scandinavian and Finnish ships are most attacked. The German ships come next in the proportion of cases, while the English suffer very little. (3) That the disease appears to be most common on sailing ships. Of the 104 ships attacked, there was but 1 steamer, and that had 1 patient. (4) That the great majority of the opinions expressed tend to the belief that inadequate food, and especially much tinned food, directly produces beri-beri or indirectly furthers it. (5) That the drinking water cannot be the cause of it. (6) That the disease has appeared on ships where rice has neither been used nor has been on board at all. (7) That the partaking of tinned food is not necessarily followed by an appearance of want of nourishment in the patient. (8) That lime juice is not a sure prophylactic against beri-beri, though it may exercise a certain preventive influence against the disease or occasionally a favourable influence on its course. (9) That the foregoing conclusion holds good also with regard to fruit and fresh vegetables, especially potatoes. (10) That beri-beri appears on sailing ships on long voyages, though they have departed from a region free from beri-beri—this was the case with 10 ships—and though the disease has not previously appeared on board, nor the crew previously had the disease. (11) That there is no indication of any rule for the time of the incubation of the disease, such time varying from the 1st to the 120th day after leaving port. (12) That the dropsical form of the disease is the most common in the ships (only 3 or 4 cases of the atrophic form are mentioned), while in Japan it hardly amounts to one-half the cases. (13) That the disease is afebrile. (14) That animals are also attacked. (15) That in several cases vomiting appears at the very beginning of the disease, but stops immediately the patients come on board another ship and get different food. (16) That, generally speaking, fresh provisions, in the form of meat, fruit, and fresh vegetables, in a short time cure the disease, in the vast majority of cases, when it is not too far advanced. (17) That symptoms resembling scurvy do not appear. After a critical examination of the theories, Uchermann concludes that beri-beri is the Oriental name of multiple neuritis, and is due to a toxin intoxication by tainted vegetable or animal food. The vegetable form closely corresponds with the Asiatic beri-beri, and is usually owing to the eating of tainted rice. The animal form corresponds particularly with the beri-beri which appears on European sailing ships, and is due chiefly to the eating of tainted tinned food. It may, indeed, be supposed that the beri-beri poison may appear not only in vegetable but also in animal nitrogenous food stuffs that are or have been undergoing decomposition of a microbic nature as yet undecided. These microbes are probably not specific, and in all likelihood are different in the animal and vegetable forms of the disease. Nor need the poisons themselves from a theoretical point of view be absolutely identical in both forms, even if they are in all probability homogeneous and in some degree isodynamic. As to the importance of lime juice, potatoes, etc., it may be supposed that the vegetable acids contained in these articles of food enter into compounds with the toxins, generally basic, rendering them innocuous or making them more easily secreted. In accordance with these conclusions the Committee made the following recommendations: (1) A restriction in the use of tinned food (according to French investigations, of the various kinds of tinned food from 70 to 80 per cent. contain viable microbes); (2) that fat be made a component part, even if a limited part, in the scale of diet in warm climates; (3) that potatoes and fresh vegetables be procured for the whole voyage, ships being provided with a better system of preserving these articles; (4) that fresh fruit and fresh provisions be used during the stay in port: (5) that on long voyages the quantity of sugar and dried fruit be increased; (6) that on long voyages the use of a water filter (Chamberland-Pasteur) be enjoined. In addition careful directions are given as to the quality, purchase, preservation, and final packing of the provisions (the food being inspected when purchased and afterwards once a fortnight), and directions concerning how one ought to act should beri-beri, scurvy, or similar food diseases appear at sea (the nearest port to be sought). Finally, lime juice is enjoined on voyages south of 33 deg. N. if the potatoes run short.

(143) Leucocytosis in Lead Workers.

Boston (*Philadelphia Med. Journ.*, September 27th, 1902) has studied the white cells of the blood in 24 cases of plumbism. The longest period any patient had worked before symptoms developed was twelve years; the shortest six weeks. Most were affected in from four to nine months after habitually encountering the poison. Three of the cases gave a leucocyte count below 10,000. The remainder gave counts varying between 10,000 and 25,500. Of the three exceptions to the rule of leucocytosis, one had been under treatment for several weeks, and the other two had history of lead poisoning long before, which suggests that the primary condition only causes this increase. Cabot's 15 cases gave an average leucocyte count of 12,920, the maximum number being 23,400, the minimum 4,500. In the present series the count averaged 12,600, with maximum 25,500, and minimum 4,000. Differential counts showed the increase to be always strictly proportional. A moderate oligocythaemia was the rule; the haemoglobin varied between 32 and 85 per cent.—a degree of anaemia so-called. The colour index was quite inconstant. Films showed a constant poikilocytosis, the erythrocytes staining often feebly or irregularly. Macrocytes and microcytes were common, and nucleated reds, especially normoblasts, not infrequent.

(144) Enlargement of Supraclavicular Glands in Diaphragmatic Cancer.

Lucien Guyard (*Thèse de Paris*, 1902) draws attention to the value of enlargement of the supraclavicular glands in cases of diaphragmatic cancer. In the majority of cases this enlargement is present on the left side, and always appears at an advanced stage of the disease, though it occasionally happens that glandular involvement is noticed before the onset of cachexia. One or more glands immediately above the clavicle at about its middle third may be enlarged. They may be separate or adherent to one another, forming a small nodular mass. They are stony hard, generally movable under the skin and examining finger. They are painless on palpation, and there are no alterations of the surrounding tissues. Recognition of such glandular masses is important from a diagnostic point of view, and further indicates a considerable degree of progress in the disease.

SURGERY.

(145) Prevention of Ventral Hernia after Laparotomy.

HAHN, of Mayence (*Centralbl. f. Chir.*, No. 4, 1903), holds that the occurrence of ventral hernia after laparotomy is due, not so much to tympanites as is supposed by some surgeons, as to defective methods of suturing the external wound. The author, who has paid much attention to this subject, describes his own method, which, he states, has been so successful that he has failed to find a single instance of hernia in 88 cases in which he had performed laparotomy. Special importance is attached to the following details of this method: (*a*) The peritoneal layer, together with the fascia transversalis, should be sutured quite apart from the other layers of the abdominal wall; (*b*) so far as possible aponeurotic and not muscular parts of the different layers should be stitched, the latter when brought together by light sutures are, it is stated, invariably torn through; (*c*) in a corpulent subject the thick layer of subcutaneous fat should be sutured by very fine silk. The author prefers perfectly sterilized silk as the material for sutures. This, it pointed out, is cheap, can be readily manipulated, is non-absorbable, and remains as if it were a portion of the living tissue. This freedom from any reaction of both buried and superficial sutures which is due to the strictest antisepsis, is regarded as the most important point in the prevention of subsequent weakening of the abdominal wall. The author, recognizing the necessity and also the extreme difficulty of rendering the hands quite clean from a bacteriological point of view, describes a method of washing and sterilizing which has the rather serious disadvantage of taking up nearly an hour.

(146) Operative Treatment of Cancer of the Thoracic Portion of the Oesophagus.

DEMOULIN (*Bull. et Mém. de la Soc. de Chir.*, No. 4, 1903), in an important communication, records 2 cases of cancer of the thoracic portion of the oesophagus, in each of which the new growth was removed by way of the posterior mediastinum on the right side of the spine, and by an associated incision in the neck. Faure, who operated on these 2 cases, made a free resection of the second and the four subjacent ribs, and a simple section of the first rib, and exposed the healthy portion of the oesophagus above the growth by a free incision along the anterior border of the sterno mastoid on the right side of the neck. The diseased portion of oesophagus was completely removed in both cases with but slight haemorrhage, and, it is stated, with little resultant shock. In each instance, however, the parietal pleura was wounded, and pneumothorax on the right side thus produced. In both cases death resulted within twenty-four hours after the operation. Both patients, Demoulin points out, died in the same way. There was no haemorrhage, no shock, and no rise of temperature, but extreme dyspnœa with acceleration of pulse. The pneumothorax in the right pleural cavity together with the external pressure of air introduced into the posterior mediastinum by a large drainage tube might, in Faure's opinion, have caused some modification of the intrathoracic pressure, which modification might in time have influenced the venous circulation and thus have produced the rapid pulse. The respiratory and circulatory disturbances might be attributed in some measure to lesion of the small branches of the vagus which takes a considerable share in the formation of the pulmonary plexus, and also of the thoracic cardiac branches of the same nerve which pass to the cardiac plexus. Faure, it is stated here, is the first surgeon who has resected the thoracic portion of the oesophagus in the living subject, and has succeeded in doing this by practising, in addition to a posterior thoracic incision, a free incision in the neck by which it is possible to divide and separate the superior part of the oesophagus. Of the few surgeons who have devised operations for exposing the thoracic portion of the oesophagus some prefer the left side of the chest, whilst others, including Faure, recommend that the right side be selected in order that the aorta may be avoided. The objection raised against the choice of the right side is the difficulty in reaching the oesophagus without wounding the right pleura. In both the cases treated by Faure preliminary gastrostomy had been performed. Demoulin, in concluding his comments on these cases, whilst expressing his doubts as to the future of resection of the thoracic oesophagus for cancer, holds that Faure's method is likely to do good service in cases of impacted foreign body both in this canal and in the bronchi, which it has been found impossible to extract by the natural passages.

(147) The Importance of the Recto-urethral Muscle in Perineal Prostatectomy.

GOSSET AND PROUST (*Bull. et Mém. de la Soc. Anat. de Paris*, No. 5, 1902) state that the risk of wounding the rectum in perineal prostatectomy is mainly due to an angular projection towards the bulbous part of the urethra of the anterior wall of the intestine. This projection, it is pointed out, is produced by a small muscle well known to anatomists, but the surgical importance of which has been overlooked. This, called the recto-urethral muscle, is a flat band of smooth muscular fibres, measuring about 2 centimetres in the antero-posterior direction, and from 7 to 10 millimetres from side to side, extends in the middle line from the membranous portion of the urethra to the front of the rectum, the anterior wall of which at the insertion of the muscle forms a well-marked angular projection. In exposing the prostate by the perineal operation it is an important point, the authors hold, to define this muscle, and to divide it near its urethral insertion, with the object not only of avoiding injury to the rectum, but also of reaching the deep-seated space between the prostate and intestine, which space when thus rendered accessible can be readily opened up with much reduced risks of haemorrhage and injury to the surrounding parts. Such risks, it is stated, are likely to occur if the surgeon, ignoring and leaving intact the recto-urethral muscle, endeavours to force a way to the prostate by passing his finger to one or both sides of it.

MIDWIFERY AND DISEASES OF WOMEN.

(148) X Rays in Cancer of the Cervix.

AT the ninety-seventh annual meeting of the Medical Society of the State of New York, held at Albany on January 27th, 28th, and 29th, 1903 (New York *Medical News*, February 7th, 1903), Thomas S. Scully, of Rome, New York, said that the present treatment of cancer of the cervix uteri was rather discouraging. If found at an early stage, and complete hysterectomy were done, there was some hope of saving the patient's life. Nothing short of hysterectomy, however, gave the patient any hope. In later stages it was recognized that the cases were practically hopeless. Even under the most favourable circumstances, however, complete hysterectomy was followed by an alarming number of recurrences with fatal results. The first case that came under his attention after he had resolved to employ the *x* rays was a so-called cauliflower growth of the cervix. A metal shield was used at first, but this produced electrical induction difficulties, and was liable to cause local irritation. After the first employment of the *x* rays the patient began to improve, and the growth gradually sloughed away. The tendency to haemorrhage ceased after a few applications, and other parts of the growth began to shrivel up. After a number of applications the woman felt so well that, as she was summoned to a distance by her daughter's confinement and serious illness, she gave up treatment, and had written that she considers herself cured. In the second case in which Scully employed them the *x* rays at once gave relief from pain in urination, and relieved the discomfort which had existed for a long time. There had been a very offensive discharge, which began to diminish at once, and ceased entirely in a few weeks. At the date of the reports, as the result of some fifteen applications of the *x* rays, the cervix was practically obliterated, the patient had gained in weight, the ulcerating parts were healed over except at one portion of the posterior vaginal vault, and the outlook was most promising. The patient herself was very well satisfied with the results obtained, and there seemed to be every reason to think that the local condition at least had been obliterated. All cases treated had been benefited. Scully considered that while the present knowledge of the *x* rays did not justify the putting off of operation in cases where the disease had not advanced very far the *x* rays should be employed in most cases of cervical cancer. In advanced cases, where palliative operations were employed, this method should always be considered, even after hysterectomy. Treatment by the *x* rays might prevent development of recurrences.

(149) Spontaneous Amputation of Fallopian Tube by Omentum.

ORTHMANN (*Monats. f. Geb. u. Gyn.*, January, 1903) relates a case of interest as showing one of the numerous effects

of omental adhesions. In 1895 a patient underwent a vaginal operation for salpingitis, with fixation of the uterus backwards. The right tube was amputated and the uterus brought forward by vaginal fixation. In 1902 the same patient underwent hysterectomy for fibromyoma. The left tube was found divided completely into two parts by a band of omentum. The uterine half was completely closed, as was the tubal canal at the point of division on the outer half, whilst the ostium was still patent and the fimbriae perfect.

(150) Actinomycosis of Vulva.

BONGARTZ (*Monats. f. Geb. u. Gyn.*, November, 1902) examined a peasant woman who complained of swelling in the privates. The labium majus was swollen and covered with orifices of fistulae discharging pus. The tracts were slit up freely and scraped, the actinomyces was detected by aid of the microscope. Three-quarters of a year later no signs of recurrence could be detected. Bongartz observes that only two similar cases have been recorded, one by himself, and one by Lieblein of Prague.

(151) Hydatid of Pelvis simulating Uterine Fibroid.

KNAUER (*Centralbl. f. Gynäk.*, No. 47, 1902) reports that a woman, aged 22, was sent into hospital for dysuria caused by a tumour. A mass could be felt reaching upwards to two fingerbreadths below the umbilicus; it felt smooth and elastic. Two smaller swellings lay on each side, and were movable; the round ligaments could be defined; hence the chief mass was taken for the uterus enlarged by a tumour, the lateral swellings for the appendages. The vaginal portion of the cervix was drawn up high, and seemed to run into the main tumour, which pressed uniformly down into the pelvis. The uterine cavity measured 5½ in. Soft myoma of the uterus was diagnosed. At the operation the mass was found to consist of a hydatid cyst developed in the retrocervical connective tissue. The posterior vaginal wall was opened and the cyst enucleated, the cavity being drained. Recovery was speedy. Abundant hooklets were found in the inner wall of the sac.

(152) Intrauterine Amputation of Forearm.

FIEUX (*Rev. Mens. de Gyn., Obst., et. Paediat. de Bordeaux*, November, 1902) delivered a primipara, aged 26, of a live child with two congenital deformities. There was a tail-like appendix, over 2¾ in. long and ⅓ in. thick, attached by a somewhat constricted pedicle to the upper part of the sacral region. This growth was an example of the lipoma pendulum caudiforme of Bartels, a variety of congenital lipoma of the sacrum. The right forearm had undergone amputation, almost complete, at the union of the lower with the middle third. The stump ended in a little depression whence proceeded a fibrous band ⅔ in. long and ⅛ in. broad. It terminated in a well-developed little hand of the size normal in an embryo between the second and third month. Schaeffer as long ago as 1775 reported a case of intrauterine amputation below the knee; a minute foot hung from the stump by a thin pedicle. Fieux, in his case, discovered a long thin band crossing the amniotic cavity, and presumed that it was the cause of the mutilation of the forearm. The hand dried up completely within a few hours, but a piece of the pedicle was fresh enough for microscopical examination. A trace of the radius and ulna was detected.

THERAPEUTICS.

(153) Results of "X"-Ray Treatment.

AT a meeting of the New York Academy of Medicine held on January 12th, 1903 (New York *Medical Record*, February 7th), P. R. Turnure read a paper on the results of *x*-ray treatment, based on observations extending over a period of two years at the New York and Roosevelt Hospitals. The total number of cases treated at the Roosevelt Hospital during the last twelve months was ninety-four, but he had been able to follow and keep satisfactory records of only eighty-two. He had made use of three different coils, each one more powerful than the preceding one. At present he was using a 20-in. coil, and preferred this one, because the results seemed to be more quickly obtained with it. He had been unable to formulate any general rule about *x*-ray tubes further than that the resistance should be low, and the tube should be able to carry a large quantity of current without changing its vacuum. An exposure of five or ten minutes was given, and the method preferred was to give the exposures every day for the first week, then every other day for the second week, and then after an interval of two weeks resume the treatment as before. He had had five cases of epithelioma of the nose, all of which had done well. One now under treatment, after eight exposures, showed marked improvement. There were 3 cases of epithelioma of the lip. One of these had done badly after a vigorous *x*-ray treatment for fourteen days. The treatment caused deep sloughing. He had had 2 cases of epithelioma of the penis, 1 of which only had done well. The general results in all the cases of epithelioma were good, and he thought the *x*-ray treatment was indicated in such cases before operation. The results were quite different in carcinoma. He had had 5 cases of carcinoma of the neck, and 10 cases of carcinoma of the breast, 3 of the latter being primary. Two of these were absolutely inoperable. Of the 7 recurrent carcinomata of the breast, only 1 was successful to any extent. All of them, after a short period of improvement, seemed to follow the natural course of the disease. This temporary improvement could be noticed in all cases, and he attributed it solely to the psychic effect of the new treatment. Sometimes this lasted as long as six weeks, and then the disease progressed as before. In one case, to which great attention had been given, the disease spread quite rapidly, the progress of the disease actually seeming to be stimulated by the *x* ray. In 2 cases of sarcoma, one of the limb and the other of the neck, the pain was relieved for a weeks. He had only treated 3 cases of tuberculous glands of the neck, and all of these were in children. All of them improved greatly after four weeks of treatment, but all of this improvement he attributed to the good care the children received while in the hospital. Two cases of tuberculosis of the larynx were treated, one for four, and the other for six weeks, without any improvement. Two cases of lupus were treated, one for eight and the other for twelve weeks. They appeared to have been cured. Three cases of erythematous lupus were treated. Two did extremely well, though both of them required over four months' treatment. The third, after seven months of treatment, was only slightly improved. Five cases of chronic eczema of the leg were treated by the *x* ray, and all were cured, apparently as a result of the irritation produced; nevertheless, the treatment was much slower than other well-known methods. It was worthy of note, however, in this connexion, that the itching ceased very promptly after the *x*-ray treatment. Turnure said he had treated one woman with the *x* rays for the purpose of removing hair from her face. The treatment had been carried out very cautiously, and after four months the hair had been entirely removed from the area treated without any burning. If this result proved to be permanent, he would treat the rest of her face, because the woman had tried the electrolytic method and had found it very painful. In conclusion, the author stated that the results he had observed in *x*-ray treatment were certainly confusing, but the first thought that occurred to him on studying these records was that *x*-ray treatment, to be successful, must be used upon superficial disease processes. If the *x* ray exerted its influence very deeply, it was almost certain that some of these effects would be observed in *x*-ray workers, which, so far as he knew, was not the case. Glands, which were often secondary to epithelioma, were not really epitheliomatous deposits, but were the results of secondary infection. Undoubtedly many cures were effected in the case of superficial growths, and most of these seemed to be permanent. He had, however, had one recurrence after eight months. H. Lilienthal said that he had watched some of the cases treated by the *x* ray at the hospital. He had seen epithelioma apparently cured, but he had never seen a deep growth cured by the *x* ray alone. At present he had under his care a small round-celled sarcoma of the scapula, which had been proved to be of the malignant type. Through a large incision a piece had been removed for examination. Ordinarily one would not expect this incision to heal, but under the use of Coley's fluid and of the *x* ray there had been a gradual flattening of the tumour, the wound had healed promptly, and the skin had become markedly pigmented. Of course Coley's fluid was used here, and while there was only one reaction from this, and that might have been an accidental infection, the patient was now taking enormous doses of this fluid without any reaction. The patient (a woman) had been exposed to the *x* ray for fifteen minutes on alternate days. The case had been doing so well that he had not felt called upon to operate. Coley was

of opinion that his fluid only benefited when it caused a reaction; if this were true, then it might be very properly argued that in this case the good result was due to the *x* ray and not to Coley's fluid. While the results reported in the paper were disappointing, it was quite possible that they had been altogether too optimistic regarding this agent; for, as a matter of fact, they knew very little about it. The *x*-ray treatment at the present time should be reserved for inoperable cases. Robert T. Morris agreed that, in this experimental stage, only inoperable cases should be subjected to the *x* ray. He had had one case of lupus of the forehead, which was practically well, and a case of epithelioma of the lip in which the cervical glands had been so much involved that he thought operation was not indicated. The latter case was now apparently well. In a case diagnosed as inoperable sarcoma of the parotid, the *x*-ray treatment had apparently produced a complete cure. In another case of very extensive recurrence in the glands of the neck, after amputation of the breast, some improvement had been effected, but the patient had not followed the treatment very closely. He was disposed to feel, with the reader of the paper, that the *x* ray was not of great value where the malignant disease was deeply situated. He had one case of epithelioma of the trigone of the bladder that was being treated by the *x* ray by way of the rectum and a suprapubic incision. At last accounts the case was decidedly better. A very interesting point was that neoplastic deposits in the glands seemed to disappear under the influence of the *x* ray. Carl Beck was convinced that if sufficient treatment were given to any epithelioma it could be cured, but he also believed that this was not so good a method as thorough extirpation of the epithelioma by the knife. The *x* ray should be reserved more especially for special cases—as, for example, epithelioma of the eyelid—where a particularly good cosmetic result was desired. He had seen a number of cases in which the disease had recurred just as rapidly after *x*-ray treatment as after operation. Last spring he had presented to a medical society an old man in whom epithelioma of the upper lid had been completely cured by twenty exposures to the *x* ray, yet very shortly afterwards the disease appeared in the upper lip, showing how widely disseminated were the cancer cells. The use of protective shields was a mistake, because the object should be not only to have the *x*-ray tube as near as possible, but to secure a wide effect. He had noticed that those who used the *x* ray very carefully in the hope of avoiding burns were the ones who obtained only indifferent results. It was often well to run considerable risk of burning the patient. He had met with cases in which improvement had only been effected after the use of very strong doses of the *x* ray. He would not advise the treatment of carcinoma of the stomach and of the bladder by the *x* ray, on the principle that it was unwise to leave for the *x* ray what could could be done by the scalpel. He believed that there was not a case of lupus that would not yield to the *x* ray. Thomas H. Manley thought the paper and the discussion showed clearly that the sphere of *x*-ray treatment should be limited to the treatment of lupoid growths. What had been said about the disappearance of glands bore out his own experience, that when the local source of irritation or infection was destroyed the glands would take care of themselves. Turnure, in reply, said he wished to make clear the fact that one of the cases—indeed the one that had apparently given the best result—had already recurred. He was not in a position to say at present how many recurrences there would be. The scar on the face from *x*-ray treatment had been found much less disagreeable than the scar usually left after a cutting operation. His experience had been that the recurrence from operation was greater than from the *x* ray. This was his present opinion, although it was quite possible that he might have reason to change that opinion in the near future. The result in the removal of hair from the face was certainly far better than from electrolysis.

(154) Eucaine β.

Marcinowski (*Deut. Zeit. f. Chir.*, October, 1902,) gives a comprehensive account of the action and practical utility of eucaine β, and the results of some original observations. He maintains that eucaine β is in every respect superior to cocaine except in the treatment of iritic processes. Eucaine α is to be avoided. Eucaine β produces no irritation unless solutions unnecessarily strong are used, and this is also avoided by the addition of sodium chloride to solutions, 0.6 per cent. for the weaker and 0.8 per cent. for the stronger solutions; solutions should be made at the blood temperature. Eucaine β is at least 3.75 times less toxic than cocaine or eucaine α. It has special advantages for ophthalmic work, in that it causes only very slight vascular dilatation, does not influence the pupil and accomodation, does not alter ocular tension or affect the cornea. The concentration of solutions recommended is as follows: In ophthalmic work 2 per cent.: in the urethra and bladder 2 per cent. up to 60 c.cm.; in the nose and throat 5 to 10 per cent. as a paint or spray: on mucous surfaces generally and wounds 5 to 10 per cent.; in dental work 2 to 5 per cent., 1 c.cm.: for infiltration anaesthesia—Schleich's method—1 per mille to 1 per cent., Reclus's method 2 per cent., Braun's method 1 per mille up to 0.3 gram.: for regional anaesthesia by Braun's method, 1 per cent.

PATHOLOGY.

(155) Mechanical Irritation of the Skin.

L. Török (*Arch. f. Dermat. u. Syph.*, November, 1902) discusses the effect on the skin of scratching, rubbing, and similar mechanical irritation. In his experiments the skin is first cleaned with soap, alcohol, and ether, and the irritation is then effected with a sterilized brush or gauze. He notes that the reaction from the scrubbing is more marked if an irritant has been first applied to the skin. In a case of slight keratosis pilaris, after three and a-half minutes' brushing on the inner side of the arm, pale round elevations of skin on hyperaemic bases appeared, and in a short time the whole affected area became swollen and marked by punctiform and streak-like cuticular excoriation. Except on a few days when the tenderness of the skin made it impossible, the brushing was repeated first once, and later twice a day for seven weeks. At the beginning of the eighth week slight lichenization was present over the affected area. It is doubtful, however, if lichenization can be mechanically caused without a predisposition of the skin. It does not occur in pruritus senilis or chronic urticaria, in spite of constant itching and scratching, but develops at once in Hebra's prurigo. The possibility of producing vesicular and moist eczema by scratching or rubbing is next considered. Such a condition was not reached in the experiments already referred to, and does not supervene in diseases such as lichen planus which are accompanied by constant itching. Török is disposed to abandon his earlier view that secondary patches of eczema are the effect of scratching on a skin predisposed to the disease. They can usually be traced back to the chemical or thermal irritant which has caused the primary patch. Where this is impossible the increased irritability of the skin may have rendered it susceptible to eczema from such chemical irritants as water and soap, which are ordinarily harmless. In cases where both primary and secondary eczematous patches existed, and in which a predisposition to the disease might be assumed, it was found that scratching and scrubbing of the affected parts increased the hyperaemia and oedema and the amount of serum secreted, and in some cases developed moist from dry eczema. But even in such cases the scrubbing of apparently healthy skin caused no vesication and no lasting secretion of serum. The experiments as a whole tend to show that the condition of the vessels is a more important factor in determining the skin reaction than the severity of the scratching and rubbing.

(156) Why Parasitic Worms are not Digested.

Many reasons have been given in the past to explain why the gastric and pancreatic juices do not attack the walls of the digestive tube. We have also been equally in the dark as to how it is that the parasitic worms can live in both the stomach and the small intestines in the presence of strong proteid-dissolving ferments. Weinland (*Bioch. Centralbl.*, January 15th, 1903) has found that the fluid pressed out of round worms from the gut of the pig has the power of preventing the gastric and the pancreatic juice of the same animal from dissolving fibrin. He was able to separate some of the active substance by means of precipitation with alcohol. A similar body was also obtained from the mucous membrane of the stomach and intestine. He therefore regards the resistance to proteolytic ferments which is shown by the gastric and intestinal lining and by parasitic worms as due to an antiferment which opposes itself to the tryptic (or peptic) ferment. The antiferment is destroyed by boiling.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(157) Eyestrain and Headache.

At the ninety-seventh annual meeting of the Medical Society of the State of New York, held in Albany, January 27th, 28th, and 29th, 1903 (*American Medicine*, February 14th), Lucien Howe (Buffalo) submitted an explanation of the manner in which eyestrain caused headache. By the term "eyestrain" he meant the pain experienced by some persons when reading, sewing, or doing other near work. This pain was referred to the eye itself, the forehead or some part of the head, or possibly even to the shoulders. The proposition which he sought to prove was that the pain was due directly to some muscular contraction. According to the theory of Helmholtz, the ligament of Zinn was tense when the eye was at rest, and relaxed more and more in proportion to the degree of accommodation. A better explanation has been offered recently by Tscherning, who contended that the act of accommodation was not altogether passive, as Helmholtz believed, and that on looking at the near point the ciliary muscle was contracted. This drew the edges of the lens, bent the central portion of the anterior surface further forward, and made the lens more convex. On this theory, that near vision was entirely an active muscular effort, it was not difficult to explain the pain in the eyes, which constituted the first feature of ocular headache. Moreover, a certain amount of accommodation always meant a certain degree of convergence of the visual axes, which implied tension of the internal recti, and also, to a certain extent, of the superior and inferior recti. The accessory muscles of the forehead and head were called into action when any special effort was required to maintain accommodation, and it was the tension of these accessory muscles which gave rise to the headache. The occipito-frontalis was an important muscle in this respect, and both the anterior and posterior portions were subjected to strain in connexion with a special effort to maintain accommodation. This explained frontal and occipital headache.

(158) The Significance of Itching as a Concomitant and as a Cause of Disease.

At a meeting of the Society of Alumni of Bellevue Hospital, held on January 7th, 1903 (*Medical News*, February 14th), E. B. Bronson said that in a study of the subject made by him some years ago he had endeavoured to show that itching had its origin in the nerve endings in the epidermis. He believed that the disturbance of the original and primitive sense of contact was the real cause of itching. Connective tissue diseases did not cause itching, even when superficially located. For example, mycosis fungoides was an affection closely allied to sarcoma, and yet was a pruriginous disease. It produced effects on the skin similar to those of eczema, and hence was marked by great itching. An erythematous disease was not *per se* a pruriginous one. The morbid sensation was more apt to be that of smarting or burning. The instinctive impulse in scratching was to attack and remove an irritating something which was vexing the sense of contact. Smarting of the skin had a different mode of production, and required different treatment. Urticaria was liable to occur in nearly all irritative affections associated with hyperaesthesia. In the production of the wheal a disorder of the unstriped muscles of the skin and of the blood vessels was concerned. Scratching always aggravated the condition. In a number of papular pruriginous diseases it was a fact that hypertrophy of the erectores pili were present, pointing to the part played by these muscles in itching. Of all the inflammatory pruriginous diseases eczema was the one in which trophic changes in the epidermis were the most prominent. Pruritus was apt to be marked if the lesions of a cutaneous disorder were situated in the prickle cell layer. Pruritus was almost always associated with acute disturbances or changes in the epidermis, but might be absent when these changes occurred slowly. Again, pruritus might occur without obvious change in the epidermis, and might be generalized over the body. There could be little doubt that the central nervous system comprised centres controlling the nerves of the skin. In essential pruritus the determining cause was probably to be found in the skin itself. In many cases this cause was an initial hyperaesthesia. The common assumption that in the toxaemias, in diabetes, and in icterus, the itching is due to the direct irritation of toxic matter circulating in the blood, lacked proof. A sudden change to cool, damp weather, or the taking of a cold bath would provoke urticaria in certain nervous and susceptible individuals. There seemed to be a curious interaction between disturbance of the temperature sense and the sense of contact. In this connexion it was interesting to recall the fact that a sensation of burning was sometimes produced in the absence of any obvious lesion of the skin. It was really a form of pruritus, and was often preceded by it. Sexual neurasthenia was sometimes the only discoverable cause of pruritus ani or of pruritus progenitalis. Pruritus was sometimes the result of mental suggestion, as when a person suffered from intense itching in the belief that he was a victim of pediculosis, though examination showed this condition to be absent. A gouty diathesis or a neurasthenia was often responsible for a pruritus of the anus or vulva, but after a time a form of eczema developed as a consequence of the pruritus. In such cases if the itching were cured the eczema would take care of itself. Again, there were many pure vasomotor disturbances with more or less decided trophic changes which must be attributed to a pruritus and the consequent scratching. There was a diversity of opinion regarding the position of the papule in the prurigo of Hebra, but it was undeniable that much of the trophic change in this disease was solely the result of scratching. In the treatment of all pruriginous affections measures directed to the relief of itching were of the first importance. Allay the itching and an important etiological factor, and often the essential one in the disease, would be eliminated. In discussing the paper, C. E. Quimby said he had been in the habit of considering the burning sensation experienced after going to bed as a forerunner of apoplexy. This condition he had found almost invariably associated with a persistently high arterial tension. This burning sensation was apt to occur chiefly in the lower extremities below the knees, and according to his experience these cases almost invariably showed a marked accentuation of the second sound of the heart. In reply, Bronson said it had been his experience that neither the vasomotor nerves nor the blood vessels had anything to do with the burning sensation referred to by Quimby. He believed it was entirely a matter involving the nerves connected with the temperature sense. The nerves in the lower extremities were less highly developed, and itching was apt to be most intense here. The reason for itching occurring so commonly in the genitals was probably to be found in the perturbations to which these parts were subjected. Moreover, the aphrodisiac sense was of a low order, and it was just in nerves of this order that itching was most apt to occur.

(159) The Influence of Adenoid Vegetations on the Bodily and Mental Development of Children.

Wilbert (*Deut. med. Woch.*, February 5th, 1903) has studied the condition of the posterior nares of school children, and inquired into the bodily and mental development of those affected. In all, he was able to examine 375 boys, whose ages ranged between $6\frac{1}{2}$ and $12\frac{1}{2}$ years; 231 of them showed some hypertrophy of the post-nasal tonsil, giving a percentage of 62; 33 per cent. of the boys showed some pathological changes referable to the vegetations, 5 per cent. showed nervous disturbances, and 27 per cent. were affected in their hearing. In summarizing these results, he points out that in about half of the cases of hypertrophy of the posterior tonsil he could find definite changes. The number of children affected nervously he believes is too low, as only the more severe forms would be detected. He goes on to deal more minutely with the ear cases, and finds that 16 per cent. of the boys could not hear whispered speech at a distance of 1 metre. With regard to the mental condition, he finds that of the 26 children who were described as bad scholars 22 had adenoids, and that of the 84 boys, forming the bottom 12 in each class, 65 suffered in this way.

SURGERY.

(160) The Influence of Nephrectomy on Absorption.

At a meeting of the New York Pathological Society held on December, 1902 (New York *Medical Record*, February 7th, 1903), William Salant, of the Rockefeller Institute for Medical Research, read a paper by S. J. Meltzer and himself on the influence of nephrectomy upon absorption, in which they gave

the results of their studies upon absorption from the peritoneal cavity of nephrectomized and normal rabbits. They began by injecting a 0.8 per cent. salt solution, which was allowed to remain in the peritoneal cavity for from one-half to nineteen hours. Injection was made immediately after nephrectomy. It was found, contrary to expectation that absorption was much better in nephrectomized than in normal rabbits. In normal rabbits the average per cent. of absorption per kilo was 43 per cent., while in nephrectomized rabbits it was 65 per cent. Since these results might be due to the rise of osmotic pressure in the blood of nephrectomized rabbits, several series of experiments were undertaken with salt solutions of higher concentrations. The next series of experiments was performed with 1 per cent. salt solution, which was allowed to remain in the peritoneal cavity for an hour and a-half. Absorption in normal rabbits was 18 per cent. in one experiment; in another, 60 per cent. more was recovered than was injected, while in neprectomized rabbits absorption was 47 and 43 per cent. The next series was experimented upon with 1.2 per cent. salt solution, which was injected immediately after double nephrectomy or about seventeen to forty hours later, and was allowed to remain in the peritoneal cavity for from one half to six hours. In a number of experiments of this series the average of absorption per kilo. of normal rabbits was $\frac{1}{2}$ per cent., while in nephrectomized rabbits it amounted to 25 per cent. The assumption that there was a rise of osmotic pressure in nephrectomized animals was made more probable by the results of the series with 1.5 per cent. salt solution. In three out of four experiments 10 to 20 per cent. more fluid was recovered than was injected in normal rabbits, while in nephrectomized animals 30 per cent. per kilo. was absorbed. In the next and last series with 2.0 per cent. salt solution, there was negative absorption, that is, more fluid was recovered than was injected; this was, in all probability, an indication that 2 per cent. salt solution was hypertonic for nephrectomized rabbits. Experiments with a stay of six hours in the peritoneal cavity did not show any difference between the normal and nephrectomized rabbits in any of the different series that were considered. Thus they obtained similar results with 2.0 per cent., 0.8 per cent., and 1.2 per cent. salt solutions, which is apparently due to the fact proved by many investigations, that liquids, whether hypertonic or hypotonic, became isotonic with the blood after a longer stay in the peritoneal cavity. The results showed that the power of absorption was considerably increased in nephrectomized rabbits. This held good for at least twenty-four hours after nephrectomy. In one instance it was found that, even after forty-one hours, absorption was better in nephrectomized than in normal animals. In another instance there was no difference. These results would explain the fact that no oedema is seen after nephrectomy in animals. They also explain the clinical observation of anuria persisting for many days without leading to oedema. The cause of all this was that the first effect of nephrectomy was not an increase of transudation of lymph into the tissue spaces, but an increase of absorption from them. Levene, in discussing the paper, asked whether the investigators had considered the possibility that the increase of osmotic pressure in the blood was the cause of the impairment of absorption after nephrectomy. The technical methods of determining the osmotic pressure in the blood were so simple and easy to carry out that he thought the determination should have been made before such important conclusions were drawn as the result of the experiments. Meltzer, in reply, said that in the first place the experiments were carried out with the idea of demonstrating whether absorption was increased or diminished in nephrectomized animals, and the question of the determination of the osmotic pressure of the blood was an entirely secondary matter. Indeed, these determinations had already been made by Koranyi, and were published in one of his articles, although as the reference was in a footnote it might be easily overlooked. In fact, Meltzer and his associate had not known of it until after they had made some of their experiments. Koranyi stated that he found a distinct difference in the freezing point of the blood of normal and nephrectomized animals. In normal animals the freezing point was 0.56° C., in nephectomized animals 0.70° C. Levene further asked if the alterations in the circulation, or vasomotor disturbances due to the operative technique, might not have caused the increased absorption. Meltzer said there was no hyperaemia of the peritoneum after operation. The incisions were made as small as possible, and the necropsies had shown that there was no peritonitis. Besides, peritonitis did not favour but rather retarded absorption. That there was no especial change in the circulation after nephrectomy was shown long ago by v. Limbeck.

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(161) Prognosis of Pharyngotomy for Removal of Malignant Growths.

Orlow (*Rev. de Chir.*, No. 2, 1903), in an elaborate article on pharyngotomy for removal of tumours from the back of the mouth, describes a method he has devised and practised in nine cases. This method which, the author states, is a modification of Kroenlein's, consists in a long stem incision from the mastoid process to the margin of the lip in the middle line, and in section of the mandible. The actual removal of the disease forms but a short stage of a very radical procedure, as it is preceded by a prolonged dissection for total removal of enlarged glands from both sides of the neck and of the submaxillary gland on the affected side, and also by ligature of the external or the common carotid artery with the corresponding jugular vein. One of the nine patients died from secondary haemorrhage on the eleventh day from the date of operation. In three cases recurrence has been noted, and in two other cases recurrence, it is stated, has probably occurred. In two cases, both of endothelioma, one patient was quite well after an interval of twelve months, and the other after the short interval of two months and a-half. The fate of the ninth patient is unknown. This record, it is acknowledged shows no improvement when compared with those of other surgeons, and in the cases of malignant disease there was after every operation a speedy recurrence both *in situ* and in the glands. In nearly all the author's cases, however, the disease was far advanced, and there is some reason to hope, he thinks, that operative treatment applied at an early stage may in cancer of this, as of other regions, give better results.

MIDWIFERY AND DISEASES OF WOMEN.

(162) Retroperitoneal Lipoma.

Knauer (*Centralb. f. Gyn.*, No. 47, 1902) reports another case of this rare condition, similar to that recently published by Doran (*Journ. of Obstet. and Gyn. of Brit. Emp.*, September, 1902; *Trans. Obst. Soc.*, vol. xliv, 1902, p. 265). Knauer's patient was 46, and nulliparous. The menopause had been established about two years before observation, then emaciation gradually came on, attended by enlargement of the abdomen; there was also marked tachycardia, apparently habitual, as no evidence of organic disease of the heart could be detected. A large tumour distended the abdomen; it was three-lobed. The right lobe reached from the sternum to the pelvic inlet, the left from a little above the level of the umbilicus backwards into the loin; it moved distinctly during respiration, a fact which obscured diagnosis. There was a third lobe behind the ensiform cartilage and right hypochondrium; this also moved during respiration. All three lobes were smooth and elastic. The uterus was pressed upon by the right lobe, but was separate from it. The diagnosis was ovarian cyst, with hydatid of liver or hydatids diffused over the abdomen. Knauer operated, and found that the three masses were all lobes of one large retroperitoneal tumour which was attached to the spinal column three fingerbreadths above the umbilical level. It weighed 15½ lb. The result of the operation is not given. Pathologically the tumour was, strictly speaking, a myxomatous fibrolipoma with sarcomatous elements. The mobility of the upper and left lobes was remarkable, considering that the tumour was entirely retroperitoneal, but it projected forwards from a narrow base, and was very bulky and soft, so that this mobility could be understood.

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(163) Parotiditis Following Abdominal Section.

Morley (*Amer. Gynec.*, December, 1902) has prepared an instructive table of 51 cases of this formidable complication, including 1 in his own experience. Seven cases were in males and 44 in females; 26 were ovariotomies, and the remaining 25 were operations on the pelvic viscera (oöphorectomy 2, hysterectomy 3, "uterine tumour removed" 3, operation for suppurative peritonitis 1, herniotomy 1, operation for intestinal obstruction 1, enterostomy 1, removal of omentum 1, gastrectomy 2, operation for gastric ulcer 1, removal of vermiform appendix 2, operation for penetrating wound of abdomen 1, operation for

bullet wound of stomach 1, "abdominal section" 5 (2 of these were most probably ovariotomies). Some of the cases entered as "ovariotomies" were probably removal of the ovaries with diseased tubes; thus the author's new case, where a pair of pus tubes were removed with the ovaries and vermiform appendix, is placed under this head. There is no fixed period of incubation; 9 occurred on the third day, 5 on the fourth, 5 on the fifth, 8 on the sixth, and 5 on the seventh; thus the complication appeared between the third and seventh days in 32 out of the 51 cases. The remaining 19 cases ranged from the eighth to the twelfth days, excepting 3, where the parotid began to swell on the second day. In 16 cases both glands were attacked; in 15 the right, and in 13 the left parotid glands were specified as the seat of inflammation; in 7 the side was not specified. Pus was present in 20, and absent in 31 cases. The bacteriology of parotiditis following abdominal section is, strange to say, very defective, as in a large number of the reports the complication is merely mentioned as an incident in convalescence. The staphylococcus pyogenes aureus was isolated in Bumm's and also in the author's cases; 38 cases recovered and 13 died; pus was detected in 9 out of the 13 fatal cases. Morley maintains that these results justify Stephen Paget's opinion that the deaths were not due to the suppuration of the gland, but the gland suppurated because the patients were going to die.

(164) The Tube and Uterus in Menstruation.

Moltzer (*Monats. f. Geb. u. Gyn.*, January, 1903) in an inaugural thesis (Utrecht, 1902) examined healthy tubes removed from two patients during the menstrual period. In one case there was an ovarian cyst. Before the parts were disturbed a drop of blood was seen issuing from each ostium, and the tubes were markedly hyperaemic. The vessels were found on microscopic examination to be dilated, the lymphatics contained many multinuclear leucocytes, which also lay in quantities under the epithelium. The epithelial cells showed vacuolation. In no part of the tube were they seen to be broken down or deficient. Towards the ostium haemorrhagic infarcts and hyperaemia were more marked than proliferation of leucocytes. There was no true submucous haematoma. As the inner half of the tubal canal was quite free from blood the haemorrhage could not have originated from the uterus. There was no evidence of catarrh or other inflammatory changes, and as the veins in the tube were not more engorged than the arteries, the appearances actually detected could hardly be due to venous stasis caused by the ovarian tumour. In the second case the fimbriae were stained by free blood, and the microscopic appearances of the tube substantially the same as in the first. Moltzer concludes that the tube naturally has a share in menstruation. Blood manages to escape into the lumen without breaking down the epithelium, which is just what De Sinety observed in the menstruating uterus. Most recent researches into the histology of menstruation have been made under favourable circumstances, as in winter where decomposition is least likely to set up misleading changes; it at least seems certain that the epithelium does not break down. The haematomata and defects in the epithelium of a large area of endometrium are always of doubtful import, and most probably signify not menstrual changes, but damage during operation, clumsy section-cutting, or *post-mortem* changes.

THERAPEUTICS.

(165) The Treatment of the Drug Habit.

M. K. Lott, of Cameron, Texas (*Texas Med. Journ.*, November, 1902), described a method of treating drug habits which he says is essentially the same as the secret ones advertised by private sanatoria through the United States, which promise to cure the morphine habit in forty-eight hours. This promise, he shows, is a fallacious one. While the appetite for the drug may be destroyed within this time, the patient is still a man broken in health, his bodily functions impaired, and his nervous system and will power weakened. Many therefore return to the drug unless careful treatment is persisted in to restore the former health. Not only is the morphine habit treated by this method, but also other drug additions. In all cases the method is practically the same, except that in case of the whisky habit the bowels should be carefully moved and the patient induced to leave off the stimulant for a day or two before treatment is commenced. For the morphine habit no preparatory treatment is required. The heart and kidneys should be carefully examined, since serious diseases of these organs may contraindicate treatment. If they are crippled, but the patient otherwise is in fair condition, strychnine in large doses is used throughout the treatment, which may be continued. Little or no food should be given during the first forty-eight hours, since the digestive processes are suspended and feeding is likely to produce diarrhoea. Lott describes the method as follows: The remedies are—duboisin, atropine, strychnine and the hydrobromate of hyoscin, hyoscyamin, pilocarpin. He has used all, but prefers the hydrobromate of hyoscin as the safest and most easily controlled. He usually begins by securing a quiet, well-ventilated room with but a moderate degree of light, and so arranged that the light can be excluded, for under the influence of hyoscin, or atropin, the pupil is widely dilated, and if there be too much light the eyes are liable to be injured. He also secures a careful, competent nurse. He or she should be strong, and able to handle the patient, if necessary, for sometimes, if too much hyoscin be given, the patient will be required to be protected against self-injury. The room should preferably be downstairs. The patient should be given a good bath and put to bed. Lott gives $\frac{1}{150}$ gr. of hydrobromate of hyoscin, and then $\frac{1}{200}$ gr. from thirty minutes to one hour for from twenty-four to forty-eight hours, until the patient has taken from forty to sixty doses, sometimes decreasing it and sometimes omitting the dose altogether, watching carefully the pulse and respiration. The object is to secure hyoscin intoxication, which is readily recognized by the restlessness, dilated pupils, dry throat, hallucination, etc., which it produces. When this stage is reached, Lott gives the drug just often enough to keep up the delirium from twenty-four to forty-eight hours. It may be necessary during this period to give a small dose of morphine, even $\frac{1}{4}$ gr., once, twice, or three times; it will not affect the result in the end. Generally it is not necessary during this period to give anything else, though it may be necessary to give strychnine, or nitroglycerine or digitalis for the heart; but it should be remembered that hyoscin antidotes morphine, and that morphine antidotes hyoscin. If the patient should get too much of one, Lott gives the other. Usually the first few hours, sometimes for four or six hours, but in some instances a much longer period, the patient sleeps. The pupils become widely dilated, and the mouth and throat are very dry, and the patient loses the power of co ordination, and would be unable to stand if permitted to get out of bed: he would likely fall and hurt himself. For this reason a nurse is constantly at the bedside. Usually after a few hours' sleep a delirium comes on and the patient is quite wild. He imagines that he sees and does things that do not occur. During this period it is necessary to give water frequently as the throat and mouth are very dry. At the end of this period generally the patient is permitted to come from under any drug, and after a few hours reason is restored. The patient expresses himself as cured. He no longer craves the drug and would not take it. At the end of the first stage of treatment the hyoscin, duboisin, or whichever of the group may have been used, should be left off; and a second stage of the treatment begun with pilocarpin in $\frac{1}{2}$-gr. doses. This is to be repeated every hour until its physiological effect is secured, then the time between doses is to be lengthened and kept up sufficiently often to maintain the effect, which is elimination of the drugs that have been stored in the cord and in the body; or, in other words, until the last vestige of the symptoms of hyoscin have disappeared. The characteristic sneezing and attempting to yawn now commences. During the past forty-eight hours no nourishment, or very little has been taken, and the diarrhoea has commenced. This will be likely to vex the patient for some days to come, and until now the urine has been scant and high-coloured. At this period, the end of forty-eight hours, the patient has been relieved of the morphine, and thus far there has been very little or no suffering. But now pain in the knees, elbows, and the back often sets in. Sometimes there are cramps. These are to be relieved and here the ingenuity of the physician is called into play; for the next few days the real battle is on, and the necessities, real or imaginary, of the patient are to be met. For the diarrhoea, subgallate of bismuth should be given, in 30-gr. to 60 gr. doses, with fluid extract of coto bark in 20 to 30-drop doses in water at the time of giving the bismuth. This will relieve the diarrhoea in a few days.

It is at this time the use of pilocarpin ¼ gr. and strychnine 1/30 gr. or 1/15 gr. hypodermically should be given. Under this treatment the dryness of the mouth and throat passes away, the urine clears, the skin becomes moist, and the appetite begins to return, and in a week or ten days the stomach will digest almost anything you offer, and the progress is faster. But the patient is nervous and restless. He sleeps poorly, and suffers from pains in the limbs and back. For these and the sleeplessness a bath, either hot or cold, or the faradic current will be found very beneficial. Under these methods the sleep will soon come naturally. But it may be advantageous sometimes to give large doses of the bromides of potassium, ammonium, and sodium a few times, even adding chloral if necessary. But usually it is best to wait for a natural sleep. The pains can be relieved by rubbing with liniments, or by electricity, bathing, pilocarpin, strychnine, atropin, or a few doses of hyoscin. Under the stimulus of wholesome, nutritious food, by the end of a week the patient will begin to relish these, and the brightened eye under the power of an invigorated heart tells of the hope once more kindled in his breast.

(166) The Acid Treatment of Pruritus.

H. Leo (*Therap. Monats.*, December, 1902) reports the case of a man who sought his medical assistance on account of itching of the skin, which had been present for over a year. The only visible abnormality in the skin was the effect of scratching; otherwise there was nothing to be found anywhere. The urine, however, attracted his particular notice on account of an unusual degree of turbidity. This was found to be due to the presence of earthy phosphates. Leo considered the possibility of this alkalinity of the urine being the cause of the pruritus, since he regarded the alkalinity of the urine as an indication of the general increased alkalinity of the blood and tissues. He therefore prescribed hydrochloric acid to be taken internally and watched the effect. Later he found that it was advisable to increase the doses which he had given, and preferred to use sulphuric acid for this purpose. The result of this treatment was to allay the itching, and he was able to convince himself that this was so, as there were no more marks of scratching. He concludes from this that his supposition was proved to be true. In his other cases of pruritus he has not met with this alkalinity of the urine, save in two cases of general pruritus and in one case of pruritus vulvae. In these cases the acid treatment acted well, if not with such marked and rapid effect as in the first case.

(167) Anaesthesine.

Chevalier (*Rev. de Thérap.*, December, 1902) discusses anaesthesine, and compares it with orthoform as a local anaesthetic. Anaesthesine is the ethylic ether of paramido-benzoic acid, with the formula $A2H_2C_6H_4COOC_2H_5$. It is an odourless white powder, only slightly soluble in water, but soluble in alcohol, ether, chloroform, acetones, fats, and oils. Unlike orthoform, it does not decompose when in contact with fats. For hypodermic injections, especially in experimental work, anaesthesine may be conveniently used with oil of sweet almonds, which has the property of dissolving up to 3 per cent. of its own volume of the anaesthetic. The author found that no harmful results followed intraperitoneal injections into guinea-pigs, unless the quantity injected was too large to be completely absorbed. The administration by the mouth to rabbits of as much as 1.15 gr. of anaesthesine per kilogram of their weight caused paralysis, with gradual loss of sensation in the hind legs, dyspnoea, and finally death. No permanent injury followed injections into the veins of dogs. The experiments showed that the action of anaesthesine is similar to, but less toxic than, that of orthoform. Anaesthesine is satisfactory as a local anaesthetic, even in inflamed areas. A few particles placed on the tongue cause anaesthesia, lasting for several minutes. Remnstedt has employed it when operating for whitlow, boils, and anthrax; so far no toxic symptoms have appeared after its use. Von Noorden has employed the drug for two years for a variety of purposes. When given in doses of 0.03 to 0.05 gr. two or three times a day in cases of nervous dyspepsia and ulceration of the stomach, he has found its sedative effect greater and more lasting than that of orthoform. Made into a pomade with lanolin, it gave excellent results in diabetic pruritus, and even in most cases of senile pruritus. As a suppository, it relieved the pain without affecting the tenesmus. For the interior of the larynx he considers it the most satisfactory local anaesthetic he has employed. Kossel again uses the drug in laryngeal practice, giving 20 parts of anaesthesine with 10 to 20 of menthol and 100 of olive oil.

PATHOLOGY.

(168) Congenital Multilocular Cysts of the Kidneys.

Boinet and Raybaud (*Rev de Méd.*, January, 1903) review the subject of congenital cystic kidney, and record a case which they observed in 1900. Their patient, a male child, whose aspect was suspicious of congenital syphilis, died when 6 weeks old from pulmonary congestion and convulsions. The right kidney formed a large lobulated mass, 12 cm. in length by 8 in width. The surface was entirely composed of multiple cysts, with smooth, fibrous, translucent walls. On section, a small quantity of brown ammoniacal fluid escaped. The cysts of the periphery had smooth walls, and did not communicate with one another. The central part of the kidney was made up of spongy tissue, and contained smaller irregular cavities separated by brown connective tissue. There was no trace of papillae or calices. The upper half of the ureter was normal; the lower half consisted merely of a fibrous cord. The left kidney was normal in appearance save at its lower extremity, where a soft-walled cyst was seen, full of a fluid similar to that of the other cysts, and united by a fibrous band to the other kidney. The left ureter and bladder were normally formed. The liver was not cystic. The fluid from the renal cysts contained urea, albumen, and crystals of triple phosphate. Histological examination of the cyst walls showed that the cysts were actually formed from the renal canaliculi. Especially in the central region of the kidney, transitional forms were seen, and here and there islands of true kidney tissue. The small and medium-sized cysts were lined by epithelium. The cystic transformation could not be due to mere mechanical retention, for there was no hydronephrosis, nor were the glomerular cavities dilated. The absence of dilatation of Bowman's capsules excluded the failure of junction of the convoluted and straight tubules, which has been suggested as a cause of cyst formation. An inflammatory origin, due to an interstitial or mixed nephritis of syphilis, was not probable, because embryonic infiltration and consecutive sclerosis were almost absent, and such few groups of round cells as were present could easily be accounted for by the irritation of the cysts acting as foreign bodies. Nor was there any suggestion of an epithelial new formation; there was no epithelial proliferation, and the histological appearance was not that of the mucoid epithelioma, as described by Malassez. Luzzato's theory seemed best to explain the formation of the cysts. The lower embryonic renal system had been injured during its evolution; hence atresia of the ureter, malformation of the pelvis, and absence of the papillae were primary results. But the lesion went deeper, and caused a connective tissue proliferation, from which the destruction of the kidney resulted. The epithelial elements choked by the connective tissue became atypical, and formed cysts. The cysts in their turn by irritation gave rise to such evidences of inflammation as were found. The interpretation of the cyst of the left kidney was more difficult. It might depend upon a similar lesion to that causing those of the right side, or it might be a lyphatic cyst, such as has been described by Rivolta and Luzzato.

(169) The Neutral Red Reaction.

Mabel Fitzgerald and G. Dreyer (*Festskrift vid Ind. af Statens Serum Institut*, No. 9, 1902), from the results of a large number of experiments conclude that the difference in the power of B. typhosus and B. coli to produce their respective colour changes in neutral red is quantitative rather than qualitative. Even when modifications of the older methods are used, it is not possible under the existing conditions to distinguish the members of the typhoid from those of the coli group. They recommend instead the employment of 3 per cent. lactose bouillon, to which ½ per cent. of 1 per cent. watery neutral red has been added. Within four to six days the B. coli produces a red and the B. typhosus a yellow colour. These colour changes appear to be less dependent upon the quantity of free acid or alkali in the medium, and the colours obtained do not change any further. But some strains of B. coli and B. typhosus do not produce the colour clearly, and the precaution of testing the appearances of each sample of neutral red should always be observed, as some "reds" are less reducible than others.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(170) The Significance of Oxaluria.

At a meeting of the New York County Medical Association, held on January 19th, 1903 (*Medical Record*, February 14th, 1903), J. Bergen Ogden read a paper on the significance of oxaluria. He said that oxalic acid might be regarded as a normal constituent of urine, though present in very small quantity. It existed in the urine in combination with calcium as calcium oxalate, which was ordinarily held in solution by the monosodic acid phosphate. Whenever the production of calcium oxalate was excessive, this became insufficient to hold it in solution, and hence crystals were found in the urinary sediment. Properly speaking, the term oxaluria should only be employed in those cases in which the oxalate of lime crystals were present for a considerable period. A few large, primary crystals always showed an overproduction of calcium oxalate, which, in turn, pointed to some underlying pathological condition. One cause was fermentation in the gastro-intestinal tract. Helen Baldwin had produced experimentally in dogs a pronounced oxaluria by feeding these animals on meat and large quantities of cane sugar and glucose. The oxaluria thus produced must have been brought about by other conditions, as, for example, a concomitant gastritis. Up to the time of this research we were without a satisfactory explanation of the cause of oxaluria in many cases, and the treatment was consequently attended by unsatisfactory results. We had yet to learn whether the proteid element was essential, and also whether these fermentative changes, and the consequent oxaluria, could be brought about by the ingestion of carbohydrates alone. Another cause of oxaluria which must be borne in mind was the ingestion of articles of food containing oxalic acid, for example, sorrel, rhubarb, tomatoes, asparagus, spinach, onions, cabbage, and some varieties of grapes and apples. It had been claimed that oxaluria was sometimes produced by the ingestion of fruits containing citric acid. Rhubarb and spinach probably constituted the chief causes of oxaluria arising from articles of food. The tests for idoxyl in the urine were an index of the amount of fermentation taking place in the bowel, and there was found to be a more or less definite relation between oxaluria and an excess of indican in the urine. A distinction of some practical value was the division of the crystals of oxalate of lime into primary and secondary. The primary crystals were those which had separated from the urine inside the body, and usually consisted of the large octahedral and most of the oval and dumb-bell forms. The secondary crystals separated after the urine had been voided. They were usually the very small octahedral forms, and perhaps a few of the circular, oval, and dumb-bell crystals. The primary crystals often produced more or less marked irritation of the urinary tract, especially if they separated in the kidney itself or in the bladder. Blood globules were often an accompaniment of oxalate of lime crystals in the urine. If the renal pelvis were irritated in this way the examiner would usually find in the sediment some of the caudate cells supposed to be characteristic of this region along with blood cells; if the irritation were in the bladder there would be present some of the squamous cells and round cells of that region. There appeared to be a rather close relation between diabetes mellitus and oxaluria. The latter was probably referable to the gastro-intestinal fermentation resulting from an excessive carbohydrate diet or the abundant ingestion of meat in a nitrogenous diet. Not infrequently a marked oxaluria was associated with nervous disorders.

(171) Tuberculosis of the Tonsils.

Sukchiko Ito (*Berl. klin. Woch.*, January 12th, 1903) has investigated the question whether the faucial tonsils, the post-nasal tonsils, the follicular glands at the base of the tongue, and the so-called "valleculae epiglotticae" are to be regarded as starting-points of tuberculous lesions. He utilized as material for his studies the corpses of 104 children under 13 years of age, and examined the faucial tonsils macroscopically in all cases and microscopically in suspicious cases. All the other organs mentioned above were subjected to microscopical examination. The tissues were fixed in saturated corrosive sublimate solution, washed in water, then placed in 30, 60, and 90 per cent., and then in absolute alcohol, in which was added some tincture of iodine to remove the excess of mercury; and, lastly, embedded in paraffin. In all, he made over 8,000 sections. Regarding the diagnosis, he points out that it is accepted that the absence of tubercle bacilli need not negative the diagnosis of tuberculosis, since, when the microscopical appearances are typical of tuberculosis, one frequently fails to find bacilli in the majority of the groups of giant cells. He was able to make a certain diagnosis of tuberculosis in 5 cases in the faucial tonsils, but in none of these were there any grounds for believing that the tuberculosis was primary. He regards them all as instances of secondary infection. In the post-nasal tonsil he found secondary tubercle in two cases, but no primary disease. In the base of the tongue he did not find a single case of tubercle. In the valleculae epiglotticae he found found one secondary instance, and in the opening ducts of the mucous glands he found one instance of secondary tubercle. Thus, in no case did he find primary tuberculosis in the 104 corpses. As the tubercle found in the faucial tonsil of one case was associated with tubercle of the post-nasal tonsil and of the valleculae epiglotticae, and the tubercle of the post-nasal tonsil was associated with tubercle of the ducts of the mucous glands in another case, the number of persons affected with secondary tuberculosis of the fauces, etc., was only 6.

(172) Nycturia in Cardio-vascular Affections.

Péhn (*Lyon Méd.*, February 1st, 1903) states that the proportion of urine passed during the day's work to that passed during the night's rest should be 100 to 50. When the amount at night exceeds that of the day he terms the condition nycturia. This condition has often been noted as occurring in diabetes and in sclerosis of the urinary organs, especially the prostate. In thirty cases Péhn measured the urine carefully, and found the amount passed between 9 p.m. and 6 a.m. to exceed that obtained between 6 a.m. and 9 p.m. in a great variety of diseases, including rheumatic and arterial cardiopathics, subacute and chronic myocarditis, chronic nephrites of all types, bronchitis and emphysema, chronic pulmonary tuberculosis, hepatic cirrhosis, cancer of the head of the pancreas and Addison's disease. As a result of his observations, Péhn believes that the phenomenon is due to myocardial insufficiency, and that nocturnal polyuria is a valuable and early sign of cardiac dilatation.

(173) Syphilitic Tumour of the Stomach.

Einhorn (*Münch. med. Woch.*, December 2nd, 1902) records a case of gastric new growth in which the diagnosis of a syphilitic origin could be definitely made. The patient, a man aged 42, had suffered from dyspepsia, gastralgia, and constipation for some seven years; twelve years before he had had syphilis. On examination of the epigastrium two fingerbreadths below the xiphisternum was a nodular mass about 5 cm. long and 2 cm. broad; the lower border of the stomach was a fingerbreadth below the navel. Hydrochloric acid was present in the gastric juice. The diagnosis was based on the long duration of the symptoms, the slight loss of weight, the presence of hydrochloric acid, and the history of syphilis, and later was confirmed by the disappearance of the tumour and the improvement of the symptoms under antisyphilitic treatment.

SURGERY.

(174) Extirpation of the Gasserian Ganglion.

Lawers (*Journ. de Chir. et Ann. de la Soc. Belge de Chir.*, No. 12, 1902,) reports 3 cases in which he successfully operated by Krause's method on the Gasserian ganglion for the relief of neuralgia. In these cases he practised three modifications which he strongly recommends as means of diminishing to a considerable extent the difficulties and dangers of the operation. The first of these modifications is preliminary ligature of the external carotid artery performed with the object of preventing excessive haemorrhage, both from the superficial and deep temporal vessels and from the middle meningeal, and, thus, of economizing time in the operation. In 2 of the author's cases the external carotid was tied on both sides, but in the third case ligature of the artery on the affected side only was found sufficient to suppress the danger of bleeding from the middle meningeal. That this modification is not a thoroughly satisfactory one is indicated by the acknowledged reason of the second modification which consists in complete removal of the osseous portion of the large flap formed in the temporal region by skin and cranial wall. This

removal, the author states, is advisable on account of the risk of necrosis of the partially detached portion of bone from ligature of the external carotid. The zygomatic arch is also cut away in order to render more accessible the base of the cranium and the Gasserian ganglion. In considering the indications for this radical method of dealing with neuralgia of the trigeminal nerve, the author points out that extirpation of the Gasserian ganglion is not free from danger to life and may result in unilateral loss of sight. Krause, it is stated, has collected 130 cases of extirpation of the Gasserian ganglion showing a mortality of 15 per cent. It is impossible from failure of precise information in all these cases to give any statistical estimate of the risk of loss of sight. One of the author's three patients lost the eye on the affected side, but Krause has observed only two instances of this result in his personal experience of twenty-seven operations. It is inadvisable, therefore, the author holds, to propose and practise extirpation of the ganglion until after the complete failure of medical treatment and of peripheral resection of the affected nerves. Between these peripheral resections and the radical operation of removing the Gasserian ganglion there is the enormous difference that whilst the former method of treatment is often followed by relapse, the latter results in perfect and durable cure.

(175) Operation for Perforating Typhoid Ulcer.

F. J. Shepherd (*Montreal Med. Journal*, January, 1903) reports in detail three successful cases. He has always made use of the lateral incision, and has usually found the perforation near the ileo-caecal valve; by this incision the site of the perforation is more easily found than by the median incision, and with less disturbance to the parts and less moving about of the intestines, and consequently with much less chance of general infection of the peritoneal cavity. The ileo-caecal junction can always be easily found, and from there the bowel followed until the perforation is reached. He has always closed the perforation by turning in the bowel and making use of a continuous Lembert suture, employing fine silk. Other ulcerations in the neighbourhood, which can be easily made out by the dark red colour and induration, are similarly treated in case they might also perforate, and so render ineffectual the successful closure of the first perforation. After closing the perforation the abdomen is irrigated thoroughly with warm normal saline solution, a rubber drain inserted down into the pelvis, and the wound closed either in layers or by through-and-through silkworm gut sutures. There is always suppuration in these cases, and the wound shows but little disposition to heal, and usually there is a hernia as a result; but these are small disabilities in comparison with the saving of a life: the hernia can be kept in place by a suitable truss, or afterwards treated by operation if the patient so desires it. In cases of operation for perforation of typhoid ulcers he has always employed general anaesthesia, and has seen no ill results follow. He has never felt satisfied with local anaesthesia, and, from the cases in which he has seen it used, he believes that there is more shock than when general anaesthesia by means of ether is made use of. The important points in these cases of perforation are: (1) Early operation, in fact as soon as it is positively known that perforation has taken place; (2) rapid operation, and not too much time devoted to the so-called toilet of the peritoneum; (3) it is also important at the time of operation to see that there are no other ulcerations likely to perforate; Shepherd has seen the ulcer first treated heal perfectly, and the patient afterwards die from a second perforation. It is very simple to turn in the bowel opposite where the ulcers are showing, and where the congestion and colouring of the peritoneal surface indicate probable approaching perforation. He feels sure that if early operations were undertaken in every case of perforation, the deaths from this cause would be much reduced.

(176) Suturing of Cardiac Wounds.

Hill (Reprint from the *Medical Record*, November 29th, 1902) publishes a case of successful suturing of the heart. The patient, a negro, aged 13, had been stabbed with a knife, the blade of which entered the fifth intercostal space about a quarter of an inch to the right of the left nipple, and penetrating the apex of the heart, passed into the left ventricle. There was no external bleeding. The radial pulse was almost imperceptible, and the heart sounds could hardly be heard. There was extreme shock, with dyspnoea and restlessness. About eight hours after the wound had been inflicted, the patient having been put under the influence of chloroform, the author began an incision about ½ in. from the left border of the sternum, and carried this along the third rib over a distance of 4 in. A second incision was started at the same distance from the sternum, and carried parallel with the first along 4 in. of the sixth rib. These two horizontal incisions were connected by a vertical incision carried along the anterior axillary line. The third, fourth, and fifth ribs were next divided, and the rectangular musculo-osseous flap thus formed was raised, the cartilages of the divided ribs acting as hinges. The exposed pericardium was found to be enormously distended. The wound in the anterior wall was enlarged by the operator, and exit given to 10 oz. of blood. The heart having been steadied by the fingers of an assistant, the author passed a catgut suture through the centre of the wound in the cardiac wall, and thus controlled the haemorrhage. After the pericardial sac had been cleansed with a saline solution, the opening in its wall was closed by seven interrupted catgut sutures. The musculo-osseous flap was brought down and stitched in position. The operation lasted forty-five minutes. For the first two days the patient was in a critical condition, but afterwards improved rapidly, and began to make an uninterrupted recovery. Appended to this report is a table of 37 other cases of cardiac suturing by different surgeons with various terminations. Unfortunately no analysis of this table is given by the author.

(177) Treatment of Fracture of the Olecranon.

Berger (*Bull. et Mem. de la Soc. de Chir.*, No. 44, 1902,) publishes a case of fracture of the olecranon of a man aged 59, in which perfect consolidation with restoration of all the movements of the forearm resulted from the use of splints and of early massage. In this method of treating fracture of the olecranon it is necessary to have recourse to massage and mobilization of the injured limb not later than the fourteenth day. In practising passive flexion of the forearm the olecranon, it is stated, should be kept in place by the pressure of the surgeon's thumbs. The author who has treated several cases of fractured olecranon in subjects beyond middle age, by this method, has when it has been been carried out with necesary attention and care, always obtained almost perfect results. Although the first French surgeon to practise suture of the olecranon, Berger does not hesitate to acknowledge that in the treatment of fracture of this process, the indications for the open treatment are very much restricted, and that in this, as in almost all other fractures, the surgeon can by simple means obtain a restoration as complete as possible of the anatomical and physiological integrity of the injured limb.

MIDWIFERY AND DISEASES OF WOMEN.

(178) The Treatment of Uterine Fibroids.

At a meeting of the New York Academy of Medicine held on January 22nd, 1903 (*Medical Record*, February 14th), A. H. Goelet presented a paper on the palliative treatment of the fibroid uterus. He said that palliative measures were—oöphorectomy, cutting off the blood supply and ablation of the uterine arteries, dilatation of the cervix with curettage of the endometrium, electricity, and, finally, medication, including the administration of animal extracts. The cases suitable for palliative treatment were: (1) Those in which there was present some local or constitutional condition forbidding the removal of the growth; (2) those in which the patient declined operation; (3) those in which the growth was small or was not producing inconvenience; and (4) in young women when the possibility of removing the growth and leaving the uterus and ovaries behind could no be definitely determined beforehand. Oöphorectomy should be limited to women approaching the menopause and presenting intolerable symptoms, such as pain and haemorrhage. In small, sessile, interstitial growths, this operation should be done as a matter of necessity rather than of choice when the removal was not practicable, or the increased risk was not justifiable in the individual case. The ovarian arteries should be obliterated when the ovaries were removed as a means of relief in cases of uterine fibroids. The cutting off of the blood supply through the uterine arteries was proper in cases of small interstitial fibroids situated below the fundus of the uterus. Curettage should only be done with a blunt instrument, or one with a copper edge. After this, the cavity should be freely

irrigated with hot water or salt solution, and afterwards with a solution of iodine and hot water. Iodine in full strength should not be applied to the endometrium; the strength should be half to one ounce to the pint of water. Electricity would arrest the haemorrhage when the electrode could be brought in contact with all parts of the endometrium. It would also relieve, in a measure, the congestion of the uterus, and diminish the blood supply to the growth. In suitable cases it would bring about a considerable reduction in the size of the growth, and occasionally true myomata would eventually disappear after prolonged electrical treatment. Sometimes electrical treatment would favour the extrusion of the tumour. In the subperitoneal and submucous fibroids electricity was powerless for good. Its use should be limited to small interstitial growths which were not large enough to rise above the umbilicus. The results from electrical treatment were not always permanent; it was advisable to make the application of the galvanic current directly to the endometrium. The faradic current was only useful to relieve the pain in some cases. Potassium iodide and bromide were useful sedatives in some of these cases. Extracts of the thyroid and of the mammary gland were said to exert a decided action on some of these cases, but his experience with them had been negative. Brooks H. Wells read a paper on the operative treatment of fibroid of the uterus. He said that, as there was a definite mortality from the radical treatment of fibroids, this was only indicated when there was persistent haemorrhage or pressure symptoms were present; when there was complicating tubal disease, and occasionally because of the nervous excitement and worry caused by a knowledge of their presence. The palliative treatment was practically covered by curettage, which might require to be repeated several times at intervals of a few months. The vaginal operation was indicated when the tumour was situated in the cervical region, but fibroids in this location were rather rare. Intrauterine fibroid polypus when small could be removed through the dilated cervix; when too large for this they might be removed by a T-shaped incision in front of the cervix and division of the anterior wall to the necessary extent. Even large tumours could be removed by this route by the process of morcellation. The wound in the anterior uterine and vaginal walls should be sutured after the removal of the tumour. The presence of pus tubes was a strong contraindication, and demanded a vaginal hysterectomy. For large tumours he preferred the abdominal route. When operating through the vagina, one should always be prepared for an abdominal operation, as it might be unexpectedly demanded at any time. The mortality after vaginal hysterectomy should be almost nothing if infection could be guarded against, and yet, according to his experience, the mortality was greater than from the abdominal operation. Abdominal myomectomy was the ideal operation, yet in many cases it was not practicable. It should be remembered that any injury to the capsule of a fibroid would cause troublesome bleeding. The tumour, having been freed from adhesions, was lifted from the pelvic cavity, and pedicle ligated in such a way as to occlude the ovarian arteries and the adjacent large venous trunks. The ovaries should be left outside of the ligature unless so diseased as to demand removal. The uterine arteries should be carefully ligated close to the cervix, first on one side and then on the other. Immediately after a hysterectomy a high enema of decinormal salt solution should be given, and repeated in a few hours if there was much shock. Formerly it was the custom to withhold water by the mouth, but he had recently found that these patients did very well if given water by the mouth freely, there being no trouble after the first vomiting, which washed out the stomach and prevented further trouble. If there was much intestinal distention salines should be administered quite early. The patient could usually be allowed to lie on her back or her side. The main causes of death were haemorrhage and sepsis, or general peritoneal inflammation with intestinal atony. In the hands of skilled operators the mortality varied between 4 and 8 per cent. The chances of a secondary infection seemed to be slightly less when the cervix was removed, yet in his hands the supravaginal operation had given the smoothest convalescence and the best ultimate results. Drainage was only used when it was possible to cover large denuded areas. He had done 106 hysterectomies for the removal of fibroids with four deaths. In the discussion Mary A. Dixon Jones said that by the operation of myomectomy a diseased uterus was left behind to develop more tumours. She declared that there never was a tumour of the uterus that did not give rise to symptoms. The cervix in every fibroid uterus was diseased, and in every such case the uterine appendages were also diseased: hence, the best treatment was the removal of the whole uterus. She was of opinion that a great deal of time was lost in tying arteries; total hysterectomy should be associated with very little haemorrhage.

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(179) Craniotomy on the Live Child.

Hofmeier (*Ann. de Gynéc. et d'Obstét.*, January, 1903) discusses the question of craniotomy as opposed to operations which are performed in part, and possibly too much, in the interest of the child. Caesarean section and symphysiotomy are out of the question under many circumstances well understood, but Hofmeier is doubtful if they are always justified under what are reckoned as favourable conditions—that is, of course, in a maternity where there are skilled operators and nurses and the best appliances. He dwells on the great truth that in the case of a woman pregnant for the first time all calculations are purely theoretical when there is but moderate pelvic contraction. Her first delivery will be a "trial labour"—*accouchement repère* or *Protegeburt*—and it often happens that, contrary to all expectation, a live child is delivered spontaneously or by forceps. A Caesarean section in such a case would be a sacrifice of much comfort, and possibly of the mother's life, to pure theory. It is better to allow a first labour to linger a little, and then the child will often succumb; should it be living, it is advisable under these circumstances to sacrifice it so as to save the mother from the risks of infection whilst she is no longer in a condition to undergo an abdominal operation. The course to pursue in any subsequent labour will, on the other hand, be much more clear. Hofmeier also notes that the major obstetrical operations are not always satisfactory when labour has lingered in a multipara, quoting a case under Veit where an asphyxiated child was delivered after symphysiotomy, but died within four days. The mother suffered great pain from infection of the wound. Craniotomy should be reduced to a minimum, but there will always be cases where the child should be sacrificed in the mother's interest.

THERAPEUTICS.

(180) The Prevention of Mouth Infection.

At the County Medical Society, Philadelphia, on January 28th (*Med. News*, February 7th), D. D. Smith presented a paper on mouth infection, speaking from the standpoint of a dentist, who is also a medical practitioner. He said that erupted tooth surface was bacterially infected, and in the adult there were from 20 to 30 square inches of such surface. Pyorrhea alveolaris was never of systemic origin, but always local, due to stagnant accumulations on the teeth. It never occurred where there were no teeth, and it was readily amenable to treatment when seen early. Instead of being caused by kidney affections and uraemia, it might be a cause of the latter conditions. Diseases usually attributed to faulty mastication or dental caries were very often due to neither. Mastication could be dispensed with in many cases without great loss to the individual, the indifference of the stomach to mastication and insalivation being proved by the normal digestion of the edentulous. Complete recovery from digestive disorders often followed extraction of all the teeth of the patient. Nervous, gastric, and renal troubles were caused by foul accumulations on the teeth, and the susceptibility of the person to infective diseases is increased by their presence. In 1894 the author investigated the cause of dental caries and its relation to the deposits on the teeth and the health of the individual. Researches showed that caries of the teeth was due to the accumulations on them. From this he formulated a method of treatment diametrically opposite to that in use before. Instead of confining his work to the repair of carious teeth, he began prophylaxis. This consisted in enforcing a radical and frequent cleansing of the teeth, thus providing a change in their invironment. The removal of all deposits on the teeth, calcareous secretions, etc., was the first step. Then the teeth were thoroughly polished by hand methods, a power polisher never being used for this purpose. Orange wood charged with pumice powder gave the best results. This cleansing not only prevented the beginning of caries in children, but aided greatly in the proper alveolar development. In older persons decay of the teeth was retarded.

The polishing was done at intervals of about one month, or in severe cases much oftener at first. All the patients who have had their teeth systematically cleansed by him by the method outlined, showed some improvement in general health. The breath was freed from offensive odour, inflammatory conditions of the throat cleared up, and cases of intractable dyspepsia were cured or greatly benefited. Two cases of pyorrhea alveolaris were completely cured. One case of nervous dyspepsia and stomatitis was cured after eighteen months' effort. One case of long standing tonsillitis readily yielded after the teeth were kept entirely clean. Germicides would not accomplish this effect, however thoroughly they might be employed.

(181) Mesotan.

In a short note on mesotan in the December number of the *Therap. Monats.*, that substance is suggested as a substitution preparation for oil of gaultheria, which is recommended as an external application in the treatment of rheumatism. Mesotan is a methyloxy-methyl ester of salicylic acid, and takes the form of a clear yellowish, mildly aromatic oily fluid, and is miscible with alcohol, ether, chloroform, and other oils. It is readily absorbed through the skin, and a short time after external application salicylic acid appears in the urine. It acts promptly in all forms of rheumatic affections, both acute or chronic, and in muscular rheumatism, a single application often suffices to remove the pain. As a diagnostic means it can be employed with safety, since the relief of pain only takes place in rheumatic affections. No unpleasant side effects have been noticed, but occasionally a slight localized dermatitis has been seen which, however, rapidly disappears.

(182) Treatment of Otorrhœa.

Ehrenfried (*Deut. med. Woch.*, December 25th, 1902) details a form of treatment which he has found of great use in suppuration of the middle ear and its neighbouring cavities. It depends on the attempt to clear the pus out completely. The ear is first cleared as far as possible of discharge by syringing and air douching, and then a weak solution of lysol is dropped into the ear, the patient lying in a horizontal position with the affected ear uppermost. The solution is introduced by means of an ordinary eye-drop glass, and allowed to remain for ten minutes. Pressing the rubber "sucker" of the eye glass to exclude all fluid and air, he then introduces the point of the tube as far into the ear as possible; so that it lies in the fluid. The sucker is then suddenly liberated, and will fill immediately. This proceeding is repeated even as many as 20 times or more, until particles of pus are freely removed. At times large masses of inspissated pus are caught up at the point of the pipette, and can easily be removed with it. In this way he says that he has cleared astoundingly large quantities of pus out of ears which looked quite clear. He regards the method as a typical method for the treatment of chronic otitis media, and only occasionally does he find it necessary to clear ears out thus in acute cases. He deals at some length with the theoretical working of the suction. Turning to the question of the choice of antiseptic, he finds that lysol solutions are of great use, and recommends that very weak solutions should be used first. Formalin also gives excellent results at times. Alcohol can further be recommended strongly for cases, with polypous exuberances, granulations, and soft hypertrophy of the mucous membrane. Strong solutions of boracic acid in alcohol are often very useful. Lastly, he mentions peroxide of hydrogen. In discussing this preparation he comes to the conclusion that the acid-free preparation of Merck is much to be preferred to all other forms, and is one of the most useful fluids in the treatment of middle ear disease. Since he has employed it, he has very rarely had to trephine the mastoid cells.

PATHOLOGY.

(183) Pathology of Intermittent Hydronephrosis.

Bazy (*Rev. de Chir.*, No. 1, 1903,) holds that hydronephrosis, particularly intermittent hydronephrosis, has its origin in an abnormal congenital condition of the renal pelvis leading to secondary abnormalities in the ureter. The maximum of the conditions favouring the development of hydronephrosis would be realized by a large pelvis placed horizontally and flexed, a conformation the rarity of which is in relation to the rarity of intermittent hydronephrosis. The accessory conditions of the production of this hydronephrosis are: Stricture, flexion, and torsion of the upper extremity of the ureter. Ptosis and mobility of the kidney, though possible causes of hydronephrosis, are, it is argued, more frequently the results of this condition. The development of hydronephrosis is, the author thinks, favoured by stagnation of a small quantity of urine in a renal pelvis of abnormal size, and congenitally disposed to allow of this stagnation when established under the influence of any slight cause. This cause being frequently renewed may cause increasing stagnation until the kidney, increased in volume and weight, may be displaced downwards and thus by subjection to a still further condition of stagnation, may arrive at a crisis of intermittent hydronephrosis. The ureteral torsions and flexions resulting from renal ptosis may be rendered permanent both by adhesions and by the development of parietal scleroses due to a morbid process the result either of attenuated infection or of simple aseptic irritation. These adhesions may convert an intermittent into a persistent hydronephrosis by preventing the renal pelvis from taking its normal position, and also by causing complete constriction of the ureter.

(184) Histogenesis of Saccharomyces Nodules.

Vilhelm Jensen (*Festskrift vid Ind. af Statens Serum Institut*, November 10th, 1902) has investigated the tissue changes occurring at the point of inoculation immediately after the inoculation. Other workers have allowed their animals to live for some time. He finds that a few hours after the injection there is a lively emigration of non-granular and polynuclear leucocytes. These gather round the yeast cells and ingest them. The emigration ceases eight hours after inoculation. When eighteen to twenty-four hours have elapsed, a number of mononuclear, non-granular cells are observed. They apparently arise from the connective tissue cells, and they ingest the yeast cells. After three to four days giant cells appear. Fibroblasts then encircle the yeast cell tumour or divide it into smaller masses. The yeast cells increase in size, and many become encapsulated. At first these altered yeast cells lie free and isolated. Later they increase and form heaps which are surrounded by fibroblasts. The "tissue yeast cells" seem to act chiefly in a mechanical way on the surrounding tissues. But as the mononuclear cells contain vacuoles it is possible that they also exert some toxic action. The nearest lymph glands become swollen during the first few days, and on the fifth day frequently contain "yeast cells."

(185) The Bacillus Coli Communis in Human Infections.

Lartigan (*Studies* Path. Depart. Columb. Univ., 1902), analysing the extensive bibliography of the B. coli, attempts to summarize the present knowledge of this organism. The B. coli is widely distributed in Nature and in the normal body. It is usually present as a saprophyte in all parts of the alimentary canal, and may also be present as such in the lower portion of the common bile duct, on the skin—especially in the neighbourhood of the mouth and anus—and in the anterior portion of the urethra and vagina. During life, under what seem to be normal conditions, it may be carried from the intestine to healthy viscera. This invasion takes place from the intestine into the abdominal viscera, more especially the liver and kidneys, through the portal circulation. It is possible that similar invasions may take place from other parts, especially the mouth, pharynx, etc. Further, it is probable that under conditions similar to these bacteria may sometimes reach the systemic circulation. Agonal and *post-mortem* invasion of the tissues of the body is common, occurring with great frequency under the most diverse circumstances, with or without apparent lesion of the mucous membrane of the intestine. The virulence of the organism is influenced by at least two factors—changes in the physiological activities of the intestine and growth in new host environments. The rôle of this organism as a primary inciting factor in infection is not frequent. It is as a secondary invader of tissue previously occupied by micro-organisms, or of tissue already injured from other causes, that it claims chief attention. It may, however, produce inflammatory lesions, mainly suppurative, in the body tissues; generally the infection may originate in the intestine. Its rôle in acute inflammatory lesions of the intestine, more particularly of the appendix, of the peritoneum, and urinary passages, has been generally over-estimated. Whilst it may be the primary inciting factor, other organisms usually take this part, the B. coli being usually an accessory factor. It appears to be a factor of importance in the in-

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(186) Diagnosis of Intestinal Indigestion. At a meeting of the New York Academy of Medicine on December 16th, 1902 (*Med. News*, January 17th, 1903), John C. Hemmeter read a paper on the treatment of intestinal indigestion with preliminary remarks on its diagnosis. He prefaced his remarks with some hints as to the various forms of intestinal indigestion and their differentiation. The important consideration, he said, with regard to all affections of the digestive tract is, "Are they due to some structural change, or are they only functional or chemical disturbances of digestive processes, the architecture of the intestinal wall remaining unaltered?" The diagnosis of the various phases of intestinal indigestion will never, he said, be complete until we know much more than at present about the two factors that would provide a proper basis for our knowledge. These are the food that is taken and its value and the faeces that are excreted after the taking of that food. Without a good knowledge of these two elements our information as to the cause and course of intestinal indigestion must be imperfect. The faeces are especially important. So far there has been a decided objection on the part of very many practitioners to the careful investigation of the chemistry of faeces. As a matter of fact, with modern facilities and technique, the investigation of faeces is not offensive. Certainly not more than the bacteriological examination of tuberculous sputum, nor necessarily any more deterrent than the proper examination of the urine. Hemmeter said the term "intestinal dyspepsia" is a misnomer. Dyspepsia, being a condition of gastric indigestion, has the true etymological significance of failure of peptic digestion. Needless to say, however, peptic digestion has no place in the intestines, and therefore to talk of intestinal dyspepsia is more or less absurd. Dystrypsia is a better term, since it is usually the digestive ferment from the pancreas that is morbidly altered or absent in cases of so-called intestinal indigestion. In discussing the paper, W. W. Van Valzah said one of the main causes of indigestion of any form must be looked for from the standpoint of the foods consumed. Flesh, starch, and fat, or accessory food materials are very differently digested by different individuals. When there is some difficulty in the digestion of albumen this was followed by the appearance of indican in the urine. The connexion between chronic indigestion and chronic nephritis was supported by the experience of stomach specialists, who found that irritant substances got into the urine during the course of indigestion. The method of examining the stools by finding the amount of fermentation of which they were capable was of value as indicating that undigested starch was present, and this might cause a tendency to diarrhoea. When fats appeared in the stools it was not unusual to find that there was also some passive congestion of the liver. Van Valzah considers that not a little of the difficulty of the digestion of starches and cereals could be overcome by more thorough cooking. Patients who could not eat potatoes after ordinary cooking were often able to digest them very readily if they were doubly cooked before being served, that is, if after having been boiled they were baked before being served. Cereals, as a rule, should be allowed to simmer all night, and then be thoroughly cooked for a half hour in the morning before being eaten. There was no doubt that many drugs ordinarily prescribed for digestive disturbances did more harm than good. The so-called intestinal antiseptics, besides preventing the growth of bacteria, also prevent the fermentative processes of true digestion. The best intestinal antiseptic was calomel, which should be given in small doses, as $\frac{1}{10}$ gr., one to four times every day. If it had a tendency to hurry food through the intestines smaller doses should be employed. Some patients would, however, stand $\frac{1}{20}$ gr. several times a day. If patients were sensitive to calomel the protiodide of mercury should be used. This drug did not produce irritation. Ichthyol was also very useful, and should be given in doses of about four drops, one to four times a day on an empty stomach. It would prevent fermentative and putrefactive processes that had proved annoying for long periods. Beverly Robinson said that while many intestinal disinfectants were undoubtedly harmful, it would be wrong to insist that all disinfectants were so. There were at least three disinfectant substances that he had found of excellent service. These were, first, charcoal, which was useful especially in offensive breath and eructations from the stomach; secondly, the insoluble salts of bismuth, which were not only antiseptic but served to allay irritation; the third was creosote, which, given in small doses, was an efficient intestinal antiseptic. In large doses it often did harm. Calomel was also an excellent intestinal antiseptic. Common sense must be used in the employment of these remedies. They would not, of course, completely overcome fermentative and putrefactive processes. They need not expect to distil eau de cologne from the intestinal contents but they might do very much good.

(187) The Recognition of Incipient Tabes. G. Flanau (*Berl. klin. Woch.*, February 2nd, 1903,) deals with the diagnosis of tabes in the early stages. Referring to the absence of tendon reflexes, he says that the triceps reflex is not only not easy to elicit, partly on account of the difficulty of hitting the tendon cleanly, and partly on account of the difficulty of relaxing the muscle sufficiently, but it has been shown that it is frequently absent in perfectly healthy individuals. With regard to the tendon Achillis reflex, he has found that in 100 persons, who were certainly not suffering from tabes, it was absent on both sides in two cases, and on one side in a further two. In these four patients, the knee-jerks were present, and there was nothing abnormal to be found which could explain the absence of the tendon reflex. In eight of the cases the reflex could not be elicited in the ordinary way, but only could be demonstrated by Babinski's method. Since this method cannot always be carried out, it would appear as if several of the patients had absent Achilles reflexes, and he has come across the same condition in many cases of tabes. Flanau recites the histories of some early cases of tabes, and shows that the diagnosis can be made even when the cardinal symptoms are absent, if one regards the grouping of the signs, however slight they may be. A sluggish reaction of the pupil, an absent reflex, and a very small area of disturbed sensation of themselves will not justify a diagnosis, but when two of these are met with together, even when the anamnesis does not point to tabes, one is often put on the right scent. He illustrates the importance of localized disturbances of sensation in the early diagnosis, but finds it necessary to insist on repeated examination, to prove that this condition is constant. He further illustrates that one must not rely on the history of a past attack of syphilis, in making the diagnosis in doubtful cases, by quoting a case, which was like early tabes dorsalis, and in which there was a history of syphilis, but in which the condition proved not to be of this nature.

SURGERY.

(188) Resection of the Knee without Opening the Joint. G. Marion (*Arch. Gén. de Méd.*, February 17th, 1903) is astonished that the present method of resecting tuberculous knee-joints is not attended by more relapses, seeing that the healthy tissues are divided by a knife previously inoculated by the tuberculous foci. To avoid this he has devised a method of removing the whole joint without opening it, and has performed the operation nine times. He acknowledges that Wolkowitch adopted the same principles in 1896, but employed a different method. Marion's operation is divided into six stages: (1) The classical curved incision, commencing high up laterally, and passing well below the tubercle of the tibia, is made; the skin only is dissected up, and the dissection is carried to well above the upper limit of the suberural pouch. The ligamentum patellae is divided 1 cm. above the tubercle, and the incision extended along the lateral fascial expansions. The periosteum of the tibia, just above the tubercle, is divided horizontally, and this serves as a valuable landmark with regard to the level to which the dissection of the soft parts from the popliteal space should be made before section of the tibia. (2) The quadriceps is divided above the patella with a curved incision until the plane between it and the synovial pouch is reached; the muscle is then separated in this plane from the diseased synovial tissue as far as its upper limit, when the middle fibres inserted into it are divided with a knife. The separation of the pouch from the anterior surface of the femur is easily made with the finger or a blunt instrument. (3) The femur is divided, after protecting the soft parts in the popliteal space by a flat retractor passed behind

the bone, by a narrow saw with a movable back, so as to leave a V-shaped end. The section is made anteriorly at the upper level of the synovial pouch, and is carried obliquely downwards and backwards towards the condyles; posteriorly at the same level in the popliteal space, and is carried forwards and downwards to a point where the former terminated. (4) In the middle line the popliteal vessels and nerves are easily separated with the fingers; laterally the muscles are cut long, for fear of wounding the joint. The dissection is continued to the level on the tibia marked in (1). (5) The tibia is divided so that the upper part is shaped like an inverted Λ, to be received into the angle formed in the femur. (6) The tourniquet is removed and all haemorrhage controlled. No bone sutures are used. The soft parts are carefully sutured, especially the ligamentum patellae, to the quadriceps. A drainage tube is inserted between the bones and the contents of the popliteal space. In spite of all precautions a tuberculous focus may be encountered (*a*) by inadvertently opening the synovial sac, (*b*) incising a fistula or synovial extension, (*c*) by sawing through a focus in the bones. In these cases even the chances of infection are reduced to a minimum, and it is only necessary to change the instrument. Obviously any infected tissue not dealt with by this method is removed by fresh section of bone or dissection. The dressings are removed on the twenty-fifth or thirtieth day, when the drainage tube is removed. It is most important that the parts be immobilized for several months. Nine cases are cited: in one, suppuration necessitated amputation; in another, a synovial diverticulum could not be dissected out and was cauterized, and the patient died several years later of general tuberculosis. The remaining seven were completely cured. Consolidation of bone occurred in two to six months, except in one case, where the patient removed the immobilising apparatus. The cases were observed two to three years after operation. A superficial fistula occurred in one case three years after operation, but no further details are given. Marion claims that (1) that the results are at least as favourable as those by the ordinary method; (2) in no case has the immediate reproduction of tuberculous foci occurred; (3) the consolidation is unaffected by the removal of the periarticular fibrous tissue proving as firm and as rapid. The objection to this method is that it sacrifices 6 to 7 per cent. of the limb; this can be remedied by a high boot and tilting of the pelvis. It should be reserved for cases where the bones are affected, as shown by marked tenderness and enlargement. He does not employ it when the synovial membrane only is involved, in which case synovectomy or arthrectomy are indicated.

(189) Surgical Treatment of Gastroptosis. BEYEA (*Univ. of Pennsylvania Med. Bull.*, February, 1903) describes an original operation for the treatment of gastroptosis by plication of the gastrohepatic and gastrophrenic ligaments. After reference to the medical and mechanical treatment for the relief of this condition a short outline of the few operative measures that have been hitherto adopted is given. The principle of the operation devised by the author consists in shortening the gastrohepatic and gastrophrenic ligaments, thus raising the stomach to its normal position without disturbing its physiological mobility. It is in this respect that the difference from former operations mainly lies, as these had for their object the fixation of the stomach to the abdominal wall, thereby risking the painful results often associated with adhesions. The method of procedure consists in introducing three rows of interrupted sutures from above downwards and from right to left through the gastrohepatic and gastrophrenic ligaments, so as to produce therein a single broad transverse fold. The suturing was strictly confined to the ligaments, the first row beginning in the gastrophrenic ligament and extending across the gastrohepatic ligament, so as to form from above downwards a plication in the centre of these ligaments, including about 4 cm. of tissue. The second row of sutures was introduced 2.5 cm. above and below the first row, while the third row was introduced just above the gastric vessels below, and a short distance below the diaphragm and liver above. The distances between the rows from left to right were increased with the length of the ligaments, being greater towards the right, and each suture involved the greatest possible amount of tissue in order to give the greatest strength and form a wide adhesion. Four cases are reported, in three of which the symptoms were completely relieved, while the fourth is still in hospital, only having very recently been operated upon. Four cases are mentioned in which Bier, of Greifswald, Germany, operated in a somewhat similar manner; but in addition the first suture secured the serosa and muscularis of the pyloric end of the stomach to the capsule of the liver, and in two of them also the serosa of the lesser curvature was attached to the left lobe of the liver. Thus a fixation of the stomach was practised in these cases, and the procedure is not surgically ideal, since abnormal adhesions are formed which may interfere with physiological mobility and function, though such interference would be less marked than in those cases where adhesions to the abdominal wall were obtained. Including Bier's cases, eight cases have been operated upon by the plication of the gastrohepatic and gastrophrenic ligaments, and in all (except the one still recovering from operation) lasting, and complete relief of symptoms and gain in weight has resulted. The complete restoration to health, the simplicity of the operation, and its comparative freedom from danger, are strong recommendations for its adoption in all cases of gastroptosis where the suffering is severe.

(190) Tubercle Bacilli in Hydrocele Fluid. TUFFIER (*Bull. et Mém. de la Soc. de Chir.*, No. 4, 1903) states that for many years he has failed to obtain any save negative results from careful bacteriological examinations of fluid drawn from simple hydroceles. Recently, however, he has submitted to Jousset specimens of the usual pale yellow fluid taken from two cases of typical hydrocele, for examination by this observer's special method by which the bacillus of tuberculosis has been discovered in fluids hitherto regarded as sterile. In one of these cases some few, and in the other case very numerous, tubercle bacilli were found. These two observations, Tuffier states, are published with the object of directing attention to the possible presence of the tubercle bacillus in the fluid of clinically simple and ordinary hydroceles. It is intended to extend these investigations in order to determine the frequency of the instances in which this bacillus is found in hydrocele fluid, and whether or not it will be necessary to include what is now regarded as a simple affection amongst the very numerous forms of tuberculosis of serous membranes.

MIDWIFERY AND DISEASES OF WOMEN.

(191) Curettage in Puerperal Infection. A. W. W. LEA (*Journ. of Obstet. and Gynaec.*, February, 1903) discusses curettage of the uterus for puerperal infection. The curette may be used either (1) to remove retained fragments of placenta or decidua, or (2) to remove as far as possible the mucosa of the uterus when this is infected. In the first case a blunt curette only is needed, and Galabin and Jellett amongst English authors both permit the operation, though Galabin disapproves of it as routine treatment. For the second a sharp curette must be employed, and the operation is a more serious one. It is disapproved of by English authorities and the majority of German and American ones, both because of the accompanying danger and the impossibility of completely removing the infected tissue. The dangers attaching to the use of the curette are: (1) Risk of perforation. This has doubtless often occurred, but can with care be avoided, and is therefore not a weighty objection. (2) Danger of air embolism. This seldom if ever occurs if curettage is deferred until after the third day of the puerperium. (3) Profuse haemorrhage. This can always be controlled by a hot douche and gauze packing. (4) Impossibility of complete removal of the infected area of the endometrium. (5) Risk of causing generalization of the infection. This is the gravest objection urged against curettage. Whether a blunt or sharp curette be employed, mouths of blood vessels and lymphatics must be exposed, and may become the seat of fresh inoculation by organisms remaining in the uterus. Moreover, the protective layer of leucocytes found in the endometrium beyond the necrotic tissue is in danger of injury, and the spread of infection may thus be aided. Probably such injury seldom occurs, and in the most fatal cases no effective zone of this kind exists. On the other hand, recent bacteriological experiments have shown that the old distinction between sapraemia and septic infection can no longer be maintained, and that a fatal septicaemia may be produced by saprophytic organisms. It is thus of the highest importance to

remove infective material as completely and as early as possible, and clinically excellent immediate results are often found to follow the use of the curette. Ferré maintains also that the majority of cases of puerperal infection treated merely by douching suffer afterwards from uterine symptoms, while those treated by curettage recover absolutely. An accurate estimation of the advantages gained by the use of the curette is difficult, since only hospital statistics are available, and the type of infection in hospitals is acknowledged to be mild. Moreover, a large proportion of cases recover under other methods of treatment, and in the most fatal forms of puerperal infection the curette is too dangerous to be employed. While no general agreement exists as to the type of case suitable for curettage, all authorities agree that the operation is inadvisable in cases of (1) virulent streptococcus infection, (2) general septicaemia, (3) peritonitis or inflammation of the appendages, and (4) gonorrhoeal puerperal endometritis.

(192) Pregnancy Protracted to 339 Days.

KAMANN (*Monats. f. Geb. u. Gyn.*, January, 1903) exhibited at the Gynaecological Society of Munich last year a male infant 9 days old, which had been born 339 days, or over 48 weeks, after the last menstrual period. The patient, it is stated in the report, where some doubt is implied, was a girl, aged 18, a primipara. The foetal movements were first felt 189 days before delivery. The infant weighed over 11 lb., and measured 22¾ in.

(193) An Uncommon Case of Extrauterine Gestation.

GALEAZZI (*Gion. dell. R. Accad di Med. Torin.*, January, 1903) records the following case: A woman, aged 39, first menstruated at 15, married at 22, had a child a year later, which she suckled. Menstruation reappeared fourteen months later and continued regular. After this pregnancy she complained of a more or less constant pain in her left hypochondrium. At 31 menstruation ceased for three months, and was accompanied by all the signs of pregnancy. At the end of the three months she was seized with sudden pain (after several hours' washing) in the lower abdomen, lasting for twelve hours, and followed by metrorrhagia for eight days. A certain amount of indefinite pain remained in the suprapubic region, and a year later bladder disturbance set in, consisting of pain, burning, tenesmus, and the passage of pus and mucus in the urine, but no blood. In February, 1901, she had metrorrhagia for fifteen days, and from that day the bladder trouble became much worse, micturition finally becoming necessary every ten or twelve minutes. Some days before admission she had acute retention of urine, due to impaction of a foreign body in the urethra. As this was believed to be a calculus, and another was felt in the bladder, operation was determined upon. A small phosphatic calculus was removed, and on further exploration a fetal bone was detected; suprapubic cystotomy was performed and a considerable number of fetal remains removed from a cavity communicating directly with the bladder. The bones recognized were 2 humeri, 2 tibiae, 1 fibula, 2 clavicles, 1 scapula, several ribs, the lower jaw, and several skull bones. The size corresponded with that of a 3 months fetus. This was therefore a (probably) tubal pregnancy which had burst into the bladder ultimately. The after-history of the case was satisfactory and the woman left the hospital in good health. The author has collected 20 similar cases.

(194) Uterus Bicornis detected at Laparotomy: Subsequent Pregnancy.

AHERN (*Bull. Méd. de Québec*, November, 1902) attended a married woman aged 25, who was regular, but subject for some time to pain in the left side of the pelvis. Abscess of the appendages was diagnosed, but on opening the abdominal cavity the swelling which had been taken for an abscess proved to be the left corner of a double uterus. The abdomen was closed, as the patient desired to have children. Pregnancy afterwards occurred in the right cornu, ending normally at term. The cornua were united at the cervix; each had its Fallopian tube, and round and broad ligaments. The left cornu, tube, and ovary were enveloped in adhesions; the ovary was rudimentary. These conditions were detected when the uterus was successfully removed nearly a month after labour. There was practically but one vagina, into which the right cornu opened, but the left vagina was represented by a narrow duct which opened into the left wall of the right vagina communicating in consequence with the cavity of the left cornu distended with a purulent fluid.

THERAPEUTICS.

(195) Treatment of Scarlet Fever by Antistreptococcus Serum.

GEO. A. CHARLTON (*Montreal Med. Jour.*, October, 1902,) publishes a preliminary note on the employment of an antistreptococcus serum in severe cases of scarlet fever. After referring to the communication made by Paul Moser, of Vienna, as to the results which, in his hands, had followed the employment of an antistreptococcus serum in the cure of scarlet fever (BRITISH MEDICAL JOURNAL October 4th, 1902,) Charlton goes on to say that unknowingly he had since January 26th, 1901, been engaged upon a similar series of studies on the cases of scarlet fever admitted to the Montreal Hospital for Infectious Diseases, and on their treatment. His results are, he thinks, more remarkable than those reported by Moser. During the time Charlton was engaged upon this work 117 cases of scarlet fever were studied bacteriologically. Cultures were taken from the tonsils and pharynx in all these cases, and streptococci were found in 65, or 55.5 per cent. of those examined. From 25 of the most severe cases cultures were taken from the blood during life, relatively large quantities of broth being employed for the purpose. In these he invariably found streptococci when the blood had been obtained during the first five days of the disease. He also always succeeded in obtaining cultures of streptococci from the pus from suppurating cervical glands and in the discharge from the ear in cases of otitis media. The urine, too, in suitable cases, contained streptococci, particularly if the patient had marked albuminuria at the time of examination. Charlton adds that for some months he was engaged in an endeavour to confirm the work done by Class, of Chicago, upon an organism which he termed the diplococcus scarlatinae. There is no doubt that an organism corresponding with that described by Class can be isolated from cases of scarlet fever, especially when the methods of that worker are followed, but Charlton was unable to satisfy himself that it had anything to do with the causation of the disease. On the other hand, neither did the streptococcus appear to be the essential agent in the disease. In mild uncomplicated cases streptococci were not found. Charlton's bacteriological studies, carried on at the time when he was also observing the cases clinically, convinced him that the streptococcus leads to a secondary infection, and that this secondary streptococcus infection is the cause of most, if not all, of the unfavourable complications of the disease. The severity of the attack appears to be due to the concurrent action of this microorganism and the causative agent of scarlet fever upon the susceptible individual, much as it has been noted that streptococcus infection renders diphtheria more severe, though the ill-effects of this symbiosis in scarlet fever appear to be still more marked. The administration of antistreptococcus serum was therefore indicated to counteract the effects of the toxins of the streptococcus and to bring about the destruction of that organism. It appeared that if this could be accomplished the cases would assume a less severe type, and the prognosis would become more favourable. The various antistreptococcus serums have from time to time been tried in these cases by Baginsky and others, including Charlton himself, but with little or no result. Within a few months of the date of his paper, however, Charlton was given the opportunity of testing an antistreptococcus serum produced in the biological department of the firm of F. Stearns and Co., of Detroit and Windsor, under the direction of Dr. Hubbert, head of that department. Full information was given him regarding the mode of production of that serum, and he himself tested and tried the streptococcus employed in the process of production. Since June 24th, 1902, Charlton had used this serum in the treatment of 15 cases. These cases were all severe, and the majority of them would under ordinary treatment, in his opinion, if they had not terminated fatally, at least have suffered from lingering and troublesome complications. As it was, there were 13 prompt recoveries, almost free from complication. Not one of the 13 suffered from albuminuria nor from suppurative otitis media. In all, upon admission to the hospital, there was involvement of the cervical glands, but in only two instances did this go on to suppuration: the usual termination was by resolution within forty-eight hours after the injection of the serum. Desquamation was usually completed by the thirty-second day of the disease, and thus it

frequently happened that a severe case was discharged before a milder one which had been admitted at the same time, but had not been treated by the serum. Two deaths occurred in this group of 15 cases. One of these patients was in a dying condition when admitted to the hospital, and lived only four hours. The other, on admission, was suffering from a severe pneumonia, and though improving somewhat, succumbed five days later to an attack of laryngeal diphtheria. The usual dose of serum injected was 20 c.cm., but in cases which from the severity of the attack seemed to require a larger quantity, this dose was repeated. In this respect the serum appears to be more active than that employed by Moser. The effect was usually prompt: the temperature began to fall within two hours after giving the injection, and became normal in from two to four days. No other treatment was employed in these cases except stimulation during the firstthree or four days, with the usual precautions as to laxatives, diet, and rest. No adverse symptoms, either local or general, have so far arisen from the use of this antistreptococcus serum. The serum does not, says Charlton, cure scarlet fever, but its timely administration in severe cases tends to allay unfavourable symptoms, overcomes complications, and, given at an early stage of the disease, it prevents a fatal termination. He sums up the results of the injection in severe cases of scarlet fever: (1) Rapid subsidence of the pyrexia; (2) an accompanying decrease in pulse-rate with improvement in tension and rhythm; (3) prevention, or at least marked amelioration of such complications as cervical adenitis, otitis media, and albuminuria; and (4) rapid and favourable convalescence in the majority of cases.

PATHOLOGY.

(196) Cutaneous Angiomata and Malignant Disease.

Douglas Symmers of Philadelphia gives (*Med. News*, December 27th, 1902) the results of a statistical study as to the significance of cutaneous angiomata in the diagnosis of malignant disease based on the observation of nearly 400 cases. Within the past few years attention, he says, has been drawn to the association of cutaneous angiomata with malignant disease, more particularly carcinoma, and the view has been put forward that the existence of these tumours in the skin is suggestive of malignant degeneration in some portion of the body. Among the first to observe this condition and to consider it in connexion with malignant disease was Hollander (*Deut. med. Woch.*, 1900). Israels, Langenbeck, Freund, and other surgeons are said to have noted the same condition and to have ascribed to it a like significance. These cutaneous angiomata are described as slightly elevated, more or less sharply circumscribed bodies which vary in size from a mere point to a small seed, bright-red, bluish or purplish-red in colour, painless, and not yielding to pressure, for the reason that they are almost, if not entirely, cut off from the general circulation. They are most frequently found upon the trunk, less frequently upon the extremities, rather commonly upon the cheeks, forehead and scalp, and practically never upon the hands or feet. The German statistics refer to their rather common occurrence upon the lips. Among 700 insane patients examined in the Philadelphia Hospital with particular reference to this point, the condition was not noted in a single instance. Leser (*Münch med. Woch.*, December 1st, 1901) studied 50 cases of cancer with reference to the coexistence of skin angiomata. In 49 cases he was able to demonstrate such tumours in greater or less numbers. At the same time he examined 300 individuals in whom no evidences of cancer were to be detected, and in whom there was no reason to suspect the presence of any such process. The result was that he discovered skin angiomata with striking frequency in those of advanced years, but not commonly in those at whose age cancer is most prone to occur. In the light of this experience he attaches but slight significance to the existence of angiomata in the aged: he regards their appearance in middle life, however, as a suggestive indication of carcinomatous degeneration. Some years before Julius Raff made investigations to determine the relative frequency of cutaneous angiomata (*Münch. med. Woch.*, May 6th, 1902). His statistics were based on the examination of 500 individuals suffering from various diseases; in 180, or 36 per cent. of the entire number, he found angiomata in varying degrees of frequency. He examined 120 persons between the ages of 1 year and 20 years, and found angiomata in 12, or 10 per cent. Between 20 and 30 years of age he found them in 23 out of 132 instances, or in 18.7 per cent. After this period of life they occurred with startling frequency. Between 30 and 40 years of age he found them in 45.3 per cent., between 50 and 60 years in 60 per cent., between 60 and 70 years in 75 per cent., and between 70 and 80 years in 88.2 per cent. of the total number of cases examined. For the purpose of testing the value of this sign Douglas Symmers undertook to examine a large number of cases to determine, first, the incidence of angiomata in the various stages of life, and secondly and more important still, to learn the frequency and extent with which they are associated with malignant changes. Nearly 400 cases were examined, the patients representing almost every variety of disease, acute and chronic, mental and physical. The results of that part of the investigation bearing upon the relative frequency of skin angiomata are shown in the following table:

Age.	Number Examined.	Angiomata Present.	Per Cent.
X to 10	12	0	0 0
10 to 20	21	1	4 8
20 to 30	44	11	25 0
30 to 40	77	31	40.3
40 to 50	81	49	60.5
50 to 60	47	35	74 5
60 to 70	54	42	77 7
70 to 80	28	23	82.0
80 to 90	8	6	75 0
Over 100	1	0	0 0
Total..	373		

Percentage of angiomata present in entire number, 53 1.

From this table it is seen that angiomata occur far too frequently at the age in which cancer is most commonly observed, and that, even if equally comprehensive statistics were gathered from among those with well-established and unmistakable evidences of cancer, the resultant figures could represent nothing more than a coincidence. Gebele, at the surgical clinic in Munich (*Münch. med. Woch.*, January 28th, 1902) examined 200 patients of different ages suffering from a variety of conditions other than cancer. He found cutaneous angiomata present in 86 cases, or 43 per cent. of the entire number. In 114 instances, or 57 per cent., they were wanting. In addition he examined 21 cases of cancer. In 11 cases, or 52 per cent., skin angiomata were found, and in 10 were missing. Combing Gebele's and Raff's cases with those of Symmers, it is found that out of nearly 1,100 persons examined, 464, or 42.2 per cent., presented skin angiomata. During Symmers's investigation an attempt was made to establish some connexion between skin angiomata and a predisposition to malignant disease as expressed in the family history. With this end in view fully 100 patients in whom the tumours were found were closely questioned concerning the cause of death in those of immediate kinship. Those who could give no definite information were rigidly excluded. The results, however, were entirely negative. Turning, then, to actual cancer cases in which there could be no shadow of doubt concerning the accuracy of the diagnosis, 17 cases were examined. The growths were situated in various parts of the body. Of the 17 cases angiomata were present in noticeably small numbers in the skin of 13 and absent in 4, a percentage of 76.4. There was nothing in common between the location of the angiomata and the site of the malignant growth. The average age of these patients was 50.9 years. From Raff's collection of 500 cases it appears that between the ages of fifty and sixty years cutaneous angiomata are present in 60 per cent. of persons free from cancer. In Symmers's statistics the percentage of angiomata occurring at the same period of life is somewhat higher, reaching 74.5 per cent. or 1.9 per cent. less than that which obtains in a comparatively representative number of cancer cases. A combination of 50 cases abstracted from Raff's table and 47 from those of Symmers yields a percentage of 65 of skin angiomata in persons between the ages of fifty and sixty in whom there could be no reason to suspect the presence of any malignant process, "facts and figures," says Symmers, "which are absolutely indisputable, and which disprove conclusively the claim that angiomata and malignant disease bear any definite relationship to one another." Symmers concludes that skin angiomata bear no relationship to malignant disease, and that their existence, even in large numbers, is not to be viewed with any degree of alarm so far as cancer is concerned; and that they form a frequent, practically an invariable, concomitant of the decay of advanced years, and in both young and old are probably significant of some form of well-marked arterial degeneration.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(197) The Fly as a Carrier of Typhoid Infection.

Alice Hamilton read a paper on this subject before a meeting of the Chicago Medical Society (*Med. News*, March 7th, 1903). She made an exhaustive inquiry into the part played by the common house fly in the recent epidemic of typhoid fever in Chicago. Most of her work was done in the laboratory of the Memorial Institute for Infectious Diseases. She summarizes her conclusions as follows: (1) The epidemic of typhoid fever in Chicago during July, August, September, and October, 1902, was most severe in the Nineteenth Ward, which, with one thirty-sixth of the city's population, had over one-seventh of all the deaths from this disease. (2) The concentration of the epidemic in this locality cannot be explained by contamination of the drinking water, or of food, or on the ground of ignorance and poverty of the inhabitants, for the Nineteenth Ward does not differ in these respects from several other parts of the city. (3) An investigation of the sanitary conditions of this region shows that many of the street sewers are too small, and that only 48 per cent. of the houses have sanitary plumbing. Of the remaining 52 per cent., 7 per cent. have defective plumbing, 22 per cent. waterclosets with intermittent water supply, 11 per cent. have privies connected with the sewer, but without water supply, and 12 per cent. have privies with no sewer connexion. (4) The streets in which the sanitary arrangements are worst had the largest number of cases of typhoid fever during this epidemic, irrespective of the poverty of the inhabitants. (5) Flies caught in two undrained privies on the fences of the two yards, on the walls of the two houses, and in the room of a typhoid patient, were used to inoculate eighteen tubes, and from five of these tubes the typhoid bacillus was isolated. (6) When the discharges from typhoid patients are left exposed in privies or yards, flies may be an important agent in the dissemination of the typhoid infection.

(198) Enlarged Axillary Glands in Incipient Phthisis.

C. Fernet (*Bull. de l'Acad. de Méd. de Paris*, March 10th, 1903) states that for several years past he has examined the axillary glands in tuberculous subjects, and he has been struck by the frequency of their enlargement at the beginning of pulmonary tuberculosis. While not so common as enlargement of the tracheo-bronchial glands, which is almost constant, axillary adenopathy is found in about a-third of the cases of tubercle of the apex, and may therefore be regarded as having considerable diagnostic significance. The enlargement is not great—the author speaks of the condition as "latent adenopathy"—but the glands, which vary in size from a lentil or pea to a haricot bean or a hazel nut, can be felt when they are sought for. They roll about under the finger, and are painless; the patients are mostly unconscious of their existence. At the same time some glands are found on the side of the neck above the clavicle. Fernet has never seen these glands soften or subside, at least in the first stage of the lung disease; but he thinks it likely that they diminish in size when softening or ulceration occurs in the pulmonary lesion. Without attaching too much importance to axillary adenopathy as a diagnostic sign, he believes that in cases in which there is a general failure of health without definite functional disturbance or progressive emaciation without apparent cause, and in which there are no certain physical signs, the existence of a unilateral axillary adenopathy should confirm the suspicion of incipient pulmonary phthisis.

(199) Malaria Perniciosa.

From the extensive investigations of Maurer (*Centralbl. f. Bakt.*, Bd. xxxii., No. 10) it appears that it is not difficult even in the earliest stages of the disease to differentiate between the pernicious form of malaria and quartan or tertian; the diagnosis being aided by the observation of the small and striking ring parasites which for the most part are adherent to the wall of the blood discs. An important point is that the ring form is not within, but attached to, the blood cells, and only when later attaining the crescent form and disappearing from the peripheral blood do they enter the blood cells. With this penetration there is an increase of pigment. It is also of diagnostic importance that during the period of the larger ring form characteristic red particles are seen, ring shaped or in the form of streaks and loops, which Maurer looks upon as the invading form. The gamete (crescent) form has a characteric developmental cycle, first from small to large rings. Therapeutically, quinine acts most intensely on the merozoits and the external schizonts, less actively on the internal schizonts. Still less active is its effect on the gametes of quartan and tertian fever, and least of all on the crescents. Treatment must be designed to affect the parasite while free in the blood.

(200) Chronic Granular Kidney.

Claude and Burthe (*Biochem. Centralbl.* February, 1902) have made a large number of observations on the elimination of the solids of the urine in patients suffering from this disease, fed on a constant diet. The urine was examined chemically, and also by a cryoscopic method. They found, confirming the work of others, that both the saline and the nitrogenous constituents of the urine were excreted usually in normal or even in more than normal quantity. The danger of the disease lies in the ease with which any disturbing cause, such as an infection or an intoxication, leads to a sudden fall of excretory power. They point out that the continuance of a sufficient excretion depends on the integrity of that part of the kidneys which is still functionally active, and on the maintenance of the raised arterial tension and the efficiency of the hypertrophied heart. Any interference with these three interdependent factors is liable to cause a failure of excretion and bring on uraemic manifestations.

SURGERY.

(201) Suture of Wounds of the Heart.

At a meeting of the Società Lancisiana degli Ospedali di Roma on January 24th (*Il Policlinico: Sezione Pratica*, February 14th, 1903) P. Milesi reported a case of suture of a wound of the heart. The patient, a man aged 25, was admitted into the Santi Antonio Hospital half an hour after being stabbed with a knife in the left side of the chest. He was in a state of extreme collapse, unconscious, and passing urine and faeces involuntarily. The radial pulse was imperceptible. Respiration was frequent and superficial. At the upper border of the left sixth rib 1½ cm. from the edge of the sternum there was a wound 2½ cm. in length, from which black blood was oozing. Light percussion of the heart area did not reveal any increase of dullness; on auscultation the heart sounds could be heard very faint, but unaccompanied by murmurs. There was no effusion into the pleura. The sixth rib was resected to the extent of 4 cm. for exploratory purposes. Then an incision reaching down to the costal cartilage was made from the insertion of the sixth rib on the left, upwards along the margin of the sternum to the upper border of the fourth rib: it was then directed outwards along the third intercostal space nearly to the outer edge of the pectoralis major. The fifth and fourth ribs were cut through with the periostotome, and the intercostal muscles in the fifth, fourth, and third spaces divided. The upper border of the flap measured 7 cm. and the lower 6 cm., the sternal edge being 8 cm. in length. The wound in the pericardium was enlarged with forceps to the extent of 6 cm.; the opening gave exit to an enormous quantity of blood, and a penetrating wound of the right ventricle about a centimetre and a half in length was seen. To check the bleeding, Milesi compressed the edges of the wound in the cardiac wall between his thumb and forefinger; he then passed a silk suture through the whole thickness of the wall at the middle part of the wound and tied it. This stopped the bleeding almost entirely, but for greater security three other superficial sutures were inserted. After careful toilette of the pericardial cavity, the pericardium itself was stitched up with single sutures except at the lower part, where a tiny piece of iodoform gauze was left between the edges of the pericardial wound. After toilette of the pleural cavity the thoracic flap was replaced in position and fixed with a double row of sutures. Another piece of gauze was left in the pleura, both it and the one in the pericardium projecting through the space left by the resection of the sixth rib. After the operation, which lasted forty five minutes, auto transfusion was carried out and normal saline solution and stimulant agents were injected. The patient rallied, his radial pulse could be felt, and he was able to answer a judicial interrogatory with perfect clearness of mind. Soon, however, increasing weakness became manifest and death occurred fifteen hours after the operation. At the necropsy the pericardial sac was found clean and the suture of the heart perfect. In addition to the wound of the right ventricular

wall, one of the musculi papillares was found to be severed, and there was a perforating wound of the intraventricular septum measuring eight millimetres in length. At the same meeting G. Pecori related another case of suture of a wound of the heart; the patient, a man of 45, died during the operation.

(202) Experiments in Heart Suture.

Merrill Ricketts, of Cincinatti (Reprint of a paper read before the Western Surgical and Gynecological Association, Chicago, in December, 1901) records the results of an experimental research on suture of wounds of the heart. Twenty-five dogs were used in the experiment. Penetrating and non-penetrating wounds of the heart were made and closed with sutures of different material. Interrupted silk sutures were found to be the best. No special aseptic precautions were taken, as all pathological conditions were desired. Ricketts found that the pericardium may be entirely removed without death resulting. Either of the coronary arteries may be ligated at its base without producing death. In a certain class of cases he says it is best to suture the pericardium to the chest wall that drainage may be perfect. It is ideal to suture during systole, but one may be satisfied to secure perfect suturing in systole or diastole. Even though the auricular is thinner than the ventricular wall it may be sutured with equal success. Owing to this difference in thickness the percentage of penetrating wounds of the auricles is much greater than those of the ventricles. Knotting of the sutures should be firmly secured, otherwise they may become untied by the constant action of the heart. The sutures should pass through the bottom of the wound when non-penetrating, and through the endocardium when penetrating. If not in the latter the wound may become enlarged from within. Sutures should not be made tight enough to cut the heart tissue. The mortality is less in wounds of the right than those of the left auricle and ventricle. Bleeding is more severe in wounds from sharp instruments than when due to bullets. Among his conclusions are the following: Injuries and diseases of the heart may be dealt with on the same surgical principles as other parts of the body. The application of surgical principles in certain cases of aneurysm of the heart will, no doubt, be accomplished by suture, electrolysis, or the injection of gelatine or something of a similar character. A cardiac abscess should be incised and drained. Tumours of a pedunculated character on the external surface of the heart can and should be removed. Pedunculated tumours with the cardiac chambers can also be successfully removed. Parasitic cysts (animal or vegetable), when upon the external surface of the heart or in its wall, should be incised and drained. Mitral stenosis, hypertrophy, and dilatation of the heart will sooner or later find complete or partial relief within the domain of surgery. Injuries involving the myocardium are subject to the same surgical principles as injuries to other important organs of the human body. Lacerated or incised, penetrating or non-penetrating wounds of the heart should be sutured. Suturing or any other surgical procedure should not be discontinued because the heart may cease to pulsate. The work can and should be completed within a much shorter time on a quiescent heart. All means should be resorted to, while the suturing of the myocardium is being completed, to re-establish the heart's action. Drainage of the pericardial sac is necessary in many cases of injury of the heart. Exploratory incision of the pericardial cavity and its contents has been shown by both experimental research and operations upon the living human body to be exceedingly rational, valuable, and justifiable. Exploration of the heart itself by puncturing it with a needle or knife to localize a foreign body or to detect pathological conditions within the myocardium or its chambers, will at no far distant day be found useful, necessary, and recognized as an accepted surgical procedure. Ricketts bases this hope on the fact that nine of twenty-seven cases that have been recorded of heart wounds treated by suture have recovered.

(203) Subphrenic Abscess as a Complication of Appendicitis.

Christian and Lehr (*Med News*, January 24th, 1903), in a study of 4,028 necropsies, found death to have been due directly or indirectly to acute appendicitis in 86 cases. In 7 the subphrenic region was involved in the suppurative lesion. This complication appears to occur under the following circumstances: (1) As a localized abscess, part of a general purulent peritonitis; (2) by extension of the disease process from the appendix to the subphrenic region by an intraperitoneal route; (3) by extension by an extraperitoneal route, either by way of the lymphatics or by infiltration through the intraperitoneal tissues; (4) by the blood current as a septic embolic process or as a sequence of liver abscess. The majority of cases are traceable to the second and third conditions. In 4 of the 7 cases extension had taken place from the subphrenic region into the pleural cavity, though in none was the diaphragm perforated. Such involvement of the pleural cavity takes place in appendicitis either from a secondary septic focus in the lung or by direct extension from the abdomen, either by the lymphatics or by erosion of the diaphragm.

MIDWIFERY AND DISEASES OF WOMEN.

(204) Cutaneous Pigmentation and the Genital Functions.

Dalché and Fouquet (*La Gynéc.*, February, 1903) have published a short memoir of considerable interest on this subject, collecting over seventeen cases. The pigmentations of pregnancy are excluded; but the authors include three original cases where catamenial pigmentation occurred in association with disease of the internal organs. In the first melanoderma of the neck and face was observed in a sick nurse aged 47 subject to bleeding fibroid; in the second a similar discoloration of the face and neck in a girl aged 20, subject to salpingitis, simulated a syphiloderm; in the third amenorrhoea suddenly occurred in a parous woman with leucorrhoea; the eyelids and the lips became pigmented when the next period was due. Scleroderma set in suddenly in a girl aged 15, who caught cold when washing clothes during a period. When the catamenia, which were suppressed for several months, recurred, the skin affection, which involved the face, tongue, upper part of the body and the arms, not including the hands, slowly disappeared. In the chlorosis endemic in French silk factories, a brownish coloration of the skin over the joints of the fingers is not rare. Dalché and Fouquet also report numerous cases of pigmentation related closely to menstruation or to amenorrhoea unassociated with any organic disease. Sometimes the patch is as dark as Indian ink, and not rarely the pigment comes off so as to stain linen. As a rule it is the eyelids which become stained in this manner; but the body, or even the extremities, are sometimes affected. In one case an ochre-yellow discoloration of the right and left hand alternately was observed at the periods. In others there is a rash of the erythematous type; in one instance, at least, the catamenial eruption was erysipelatous. Specially remarkable are the cases of blue pigmentation. In one young girl a distinct pale blue pigment appeared around the lids at her first period; two years later it had spread to the neck; the periods had been perfectly regular. It was stated that this subject blushed blue, but this seems doubtful, as the blue pigment could be brushed off the skin by Billard, who observed the case. Stiller reported a case of blue pigmentation in an anaemic, rheumatic, young married woman who had borne children. A few days before every period the blue patches appeared on the chin, upper lip, and lower part of the cheeks. As each period passed away, the patches became pale, assumed a yellow tint, and then vanished. Treatment depends upon many circumstances. Olive oil is good to wash away the black pigmentation of the lids. As an ointment, equal parts of castor oil and cacao butter, with a little zinc oxide and yellow oxide of mercury, and a few drops of otto of roses, make an elegant preparation, useful for friction. In catamenial pigmentation of patients subject to general diseases, ovarian dystrophy seems probable; in cases of chlorosis and swelling of the thyroid, ovarian opotherapy has proved of service in the hands of Dalché and Fouquet.

(205) Polypus in Aged Women Adherent to Vagina.

Chavannaz (*Rev. Mens. de Gyn. Obstét., et Paed. de Bordeaux*, January, 1903) writes of a healthy woman, aged 72, twice pregnant, the period became free when she was 54 and "show" did not cease till three or four years later. Recently a mass began to present at the vulva. The patient was very stout, though she declared she had become much thinner during the past three or four months. A sloughy fetid polypus projected from the vagina, with free purulent discharge; the tumour formed a cylindrical mass which had elongated the vagina so that it measured 9½ in. anteriorly and a little less behind. The fornices could not be reached. There was no dysuria or pain during

defaecation. The removal was undertaken without anaesthetics, as the tumour was fixed it could not be drawn down by aid of a volsella, and it had to be taken away piecemeal. This proceeding proved very difficult as the polypus adhered to the vaginal walls, especially behind. A thin piece of tumour tissue was left posteriorly lest the vagina should be wounded. The pedicle of the polypus was reached and divided at the level of the os externum. But little blood was lost, but after antiseptic injections the vagina was plugged with sterilized gauze. Two days later, when the plug was removed, the vagina measured only 5½ in. in length. Recovery was perfect. the vagina cicatrizing well at the site of the old adhesions.

(206) Uterus and Vagina Septus: Premature Labour.

Péry (*Rev. Men. de Gyn., Obstét., et Paediat. de Bordeaux*, February, 1903) relates an instructive premature labour in a primipara aged 29; the point of special interest was the haemorrhage, which proceeded entirely from the empty half uterus. No malformation was suspected, and the catamenia had been regular until the pregnancy. At the middle or end of the sixth month flooding set in, and a midwife removed a fragment of what she called placenta; the patient had suffered badly from vomiting and was anasarcous. A few days later pains occurred, and clots with a body—apparently decidua—were expelled. In the maternity to which the patient was taken the urine was found to be albuminous. The uterus, clearly gravid, seemed to lie entirely to the right of the middle line; the fetal heart sounds were clear. On vaginal exploration the head could be plainly felt presenting; what surprised Péry was the absence of all trace of blood in the vagina. For over a week the patient was kept on a milk diet and purged, then labour pains set in with extreme tonic contraction of the uterus, and the fetal heart sounds ceased. On exploration a cervix was detected in course of dilatation, but the uterine cavity was empty, though a fetus could plainly be felt to its right. The parts were therefore thoroughly explored, then it was seen that the vagina was divided by a complete septum from the vulva to the fornices, where two uterine cervices were defined at the same level. The uterus was perfectly double, but there was no groove or depression between the right gravid half and its fellow on the left. There was still no trace of blood in the right vagina though labour was well advanced, whilst a little blood lay in the empty left uterus and escaped from the corresponding vagina. The ovum was discharged entire shortly after this examination. The lower third of the vaginal septum was completely torn through during delivery: the placenta on expulsion showed no evidence of retro-placental haemorrhage. It was probable that pregnancy had also occurred in the left uterine cavity, but Péry could not obtain the pieces of tissue taken by the midwife for placenta and decidua, so there was no proof of abortion from the left side previous to premature delivery of the fetus in the right uterine cavity. Menstruation from the left cavity had not occurred during the pregnancy.

(207) A Calcified Ovary Free in Douglas's Pouch.

Milander (*Zentralbl. f. Gynäk.*, No. 8, 1903) performed ovariotomy on a woman, aged 21, married eight months. She had been regular; the cervix was conical with a pinhole os. The tumour was a glandular cyst of the right ovary, with twisted pedicle, a trace of normal ovarian tissue was detected on the cyst wall near the attachment of the pedicle. The left broad ligament was small and thin, the tube atrophied, and no ovary could be found attached to the uterus and the back of the broad ligament. On searching the pelvis a body the size of an almond was discovered in the left side of Douglas's pouch. This free body was a calcified ovary, over 1 in. long, ½ in. broad, and ⅛ in. thick; it weighed 48 gr. In its stroma lay a very hard irregular calculus developed out of a corpus luteum, composed of carbonate, phosphate, and oxalate of lime. It seems to have developed owing to the nutrition of the ovary having been interfered with by the tumour on the opposite side.

THERAPEUTICS.

(208) Hetol in Tuberculosis.

A. Landerer (Stuttgart) (reprint from *Journ. of Tuberculosis*, vol. v, No. 1, January, 1903) says the cinnamic acid (hetol) treatment of tuberculosis may now look back upon a history of twenty years since its beginning. The essence of the method consists in the administration of sodium cinnamate (hetol), an indifferent substance, even when given in large doses to non-tuberculous individuals. It is entirely harmless to the kidneys and blood in the dose in which it is employed. Hetol belongs to a group of substances which therapeutically have not as yet been much studied, to the so-called positive chemiotactic substances, that is, it possesses the property of attracting leucocytes, especially the multinuclear form, from their place of origin (bone marrow, spleen, etc.) to the blood in large numbers. Four to five hours after an intravenous injection of hetol the number of leucocytes in the blood is increased two to five times. After twenty-four hours the number returns approximately to the normal. A normal organism can tolerate a dose of 0.1 gram and more when intravenously injected, without any appreciable changes. Tuberculous patients, especially those in advanced stages, react to a dose of 10 mg., sometimes even to 5 mg., with a rise of temperature of 1° to 2° C. Investigations which have not yet been published prove that hetol is able to neutralize a certain quantity of the tuberculous poison in the body. The effects of hetol on tuberculous tissues have been demonstrated on human beings as well as on animals. The caseous, tuberculous foci are surrounded by a ring of white, principally multinuclear, blood corpuscles; this wall is converted into a fibrous capsule which separates the tuberculous focus from the neighbouring tissue. From this capsule blood vessels and fibrous tissue spread towards the focus; the necrotic caseous masses are absorbed and the bacilli disappear. Finally a radiated cicatrix takes the place of the tuberculous caseous area. In this way the ideal form of a cure of tuberculous processes is effected, namely, their transformation into dense fibrous cicatrices by means of the hetol treatment, whereas other changes of the tubercle, for instance calcification, can only be looked upon as an incomplete cure. The most effective method of administration is the injection of aqueous solutions of hetol directly into a vein. Landerer injects only into the veins at the elbow. Just as in venesection, an elastic bandage is applied to the upper arm, not too tightly; a syringe which can be sterilized by boiling, with a finely pointed cannula, is inserted into the vein at as small as angle as possible, after previously having cleaned the region with cotton dipped in ether. The fluid passes directly out into the circulation when intravenously injected, without causing any swelling, as is the case in the subcutaneous method. Hetol used for intravenous injections must be chemically pure and the solution perfectly free from bacteria. The dose is gradually increased by ½ mg. to 1 mg. until the most suitable dose for the individual case has been reached. The best results are obtained in cases with moderate alterations in the lungs, without fever and without any destructive lesions. In such cases the dose is increased in the course of four to six weeks to 10, 12, or 14 mg.; in women, especially those who are nervous, the maximum dose is sometimes reached with 5 mg.; strong men without fever can easily tolerate 12 mg. to 14 mg.; the maximal dose for children, according to age, is less, 1 mg. to 3 mg. were administered intravenously. The correctness of the dose may be recognized from the fact that no rise in the temperature occurs, and that the patient feels no ill-effect. This dose is given for six weeks. In mild cases the treatment may be completed within three months, but a further course of treatment of four to six weeks is to be recommended, after an intermission of from four to eight weeks, even if no symptoms have meanwhile appeared. The auscultatory phenomena in the lungs gradually disappear. The dullness generally persists (cicatrization); only in very mild cases does it disappear. The expectoration decreases or disappears entirely, as well as the tubercle bacilli in the sputum. The body weight increases, often perceptibly only after completion of the treatment. Landerer has under observation cases of this kind which have remained well for a period of twelve years. A cure may be looked for in about 90 per cent. of cases. In more advanced cases the weaker the patient the smaller should be the dose, and the increase should be much more gradual. The maximum dose may be 5 mg.; later on the patient may tolerate 7 to 8 mg. It appears, however, more rational to administer small doses over a longer period than to employ larger ones. In advanced cases the percentage of patients who are cured is naturally smaller. Small cavities heal in the course of six to eight months. Larger cavities become encapsulated and secrete but slightly, and even the tubercle bacilli may disappear from the sputum. Taking into account all cases of tuberculosis without selection which have been treated by Landerer and others in the past few years, the result is shown

that 70 per cent. to 75 per cent. of all patients treated have been permanently cured or have shown improvement for a considerable length of time. In other forms of tuberculosis the hetol treatment yields the following results: Laryngeal tuberculosis offers a good prognosis so long as it it is comparatively isolated—that is, if it is associated with but moderate changes in the lungs. Patients with laryngeal tuberculosis require large doses (20 to 25 mg.) of hetol. In tuberculosis of the intestine the action of the remedy is favourable. During the treatment, however, signs of intestinal stenosis may appear. In the treatment of renal tuberculosis with hetol the tubercles undergo cicatricial changes, but on the coexisting purulent catarrh it has no influence. In simple tuberculosis of the bladder the prognosis is somewhat better. Good results and permanent cures are obtained in tuberculosis of the epididymis and vas deferens. Abscesses must be opened and drained. Large doses are required—20 to 25 mg. In tuberculosis of glands and scrofulous processes the results are mostly favourable. Suppurating glands should be curetted and dusted with hetokresol (cinnamyl metakresol) and be drained. In surgical tuberculosis the prognosis is also good; alternately a 1 per cent. solution is injected intravenously, and a 5 per cent. solution locally into the fungous masses (1 c.cm. at a given point). Tuberculous wounds heal rapidly when dusted with hetokresol. Tuberculosis of the skin and lupus heal well under cutaneous injections of an alcoholic solution of cinnamic acid (acid cinnamyl 1 part alcohol 19 parts). In cases of brain tuberculosis no improvement has ever been noticed.

(209) Thyroid Extract in Haemophilia.

Eugene Fuller (*Med. News*, February 28th, 1903,) says that over eight months ago a man brought his 15 year old son to his clinic. The people were Hebrews. Four of the boy's mother's brothers had bled to death following circumcision performed as a religious rite. The two elder brothers of this boy had likewise bled to death after circumcision. With this terrible experience the father refused to have the rite practised on this son and also on another one eight or nine years younger. The one daughter in the family has always been perfectly well. The patient in early years was subject to copious bleedings from the nose and lost so much blood during the shedding of his first teeth as to produce alarming symptoms. His joints had swollen repeatedly. The slightest bruising caused extensive subcutaneous haemorrhages which had often confined him to bed for considerable periods. For the last year or so he had been in a very weak state owing to spontaneous attacks of haematuria. The amount of blood lost in this way had been very great. When the urine was bloody the microscope showed abundance of red blood corpuscles, thus excluding the condition known as haemoglobinuria. As the boy was very ill, Fuller, after trying the usual internal treatment by styptics without result, ordered 5 gr. of thyroid extract three times a day, all other medication being discontinued. At the end of a week the father stated that after the second dose all bleeding had stopped and that the boy had greatly improved. The drug was discontinued. At the end of the next week the boy had a fair colour and greater strength than he had had for a very long time. The urine was perfectly clear and normal, and had so remained for the two weeks since beginning the medication. The young brother was also brought for examination. He had never yet had severe haemorrhages, but for the last year or so his joints had swelled. This boy was given 2½ gr. of thyroid extract three times a day. At the end of another two weeks the elder boy reported that he felt all right. His colour was very good; his pulse was full and natural. He had gained considerably in weight, and the swellings of the joints had disappeared. He was exercising and going about in a natural manner, and for the first time in his remembrance no subcutaneous haemorrhages followed as the result of the slight contusions consequent on his bodily activity. Fuller adds a note to the effect that nine months after first seeing the case the elder brother again reported that he had not lost blood in his urine or otherwise since he had first begun using thyroid extract, which drug he had taken continuously since it was first prescribed. He had grown much, had a good colour, and was relatively stronger and more alert mentally than he had been for years. Fuller has since used thyroid extract in a case of haematuria due to granulation of a prostatic sinus for which perineal section was performed. In this instance, also, the bleeding ceased promptly and effectually with the administration of the drug. The patient was a man aged about 55. As surgical measures failed to stop the bleeding, Fuller tried thyroid extract in 5-gr. doses by the mouth three times a day. The haemorrhage promptly and permanently stopped, the wound healed, and the patient left the hospital with perfectly clear urine.

(210) Mesotan.

The application of salicylic acid externally was first suggested by Bourget in 1893, but Unna had already, in 1883, determined the fact that the acid could be absorbed from the unbroken skin. Objections having been raised to the use of salicylic acid as such, various substitutions have been introduced—for example, oil of wintergreen, methyl-salicylate, amyl-salicylate, and in more recent date, a new preparation, methyloxy-methyl-ester of salicylic acid, has been introduced under the name of mesotan. The objectionable odour of the oil of wintergreen, and the irritant effect on the skin, are said to be obviated by this preparation. H. Roeder (*Münch. med. Woch.*, December 16th, 1902) deals with it, and reports the results which he has obtained from its use. His first group of cases consisted of mild chronic or subacute arthritic rheumatism in which the only objective signs were slight tenderness to pressure, and the subjective, some pain, and difficulty in movements. All these cases were relieved from their symptoms by one application. The second group of three patients was less benefitted by the preparation. In these cases he was unable to determine with certainty whether the pain complained of was situated in the muscles of the neck or not. In the third group the patients showed some creaking in the affected joints. The results were exceedingly good. Chronic joint affections with swelling are included in the fourth group. In these cases a number of other methods had previously been tried without success, and mesotan was effective in removing all the subjective symptoms and of materially improving the movements of the affected joints. In only 2 cases among 42 of rheumatism of muscles, joints, and fasciae did the mesotan fail to relieve. In 2 cases of neuritis the application was followed by a universal dermatitis urticaria. The preparation was applied with a brush or cotton wool pledget, and not rubbed in. Mesotan is painted on for from three to five minutes, while a mixture of equal parts of mesotan and olive oil is employed more carefully. Roeder's results lead him to praise the action of the drug highly.

PATHOLOGY.

(211) Renal Elimination of Bacteria.

Streng (*Arbeiten aus dem Pathol. Institt. zu Helsingfors*, 1902, Abtheilung 2, s. 1) has inoculated rabbits intravenously with from 1 to 5 c.cm. of a broth culture of various micro-organisms, and noted how soon the bacteria appeared in the urine. B. coli appeared in less than half an hour, pneumococci took from 1 to 3 hours to appear, staphylococci 6 to 8 hours, streptococci somewhat longer, B. typhosus still longer and then only occasionally, and B. prodigiosus did not appear at all. The times of first appearance were in close correspondence with the times when lesions were first demonstrable in the renal substance. The cultures of B. coli which were used produced renal haemorrhages within half an hour, pneumococci caused pathological changes in the kidneys in one hour, staphylococci took two hours or more to produce severe lesions, and streptococci about six hours. After the bacteria had been in circulation long enough to cause severe damage to the kidneys the urinary excretion of bacteria became much more rapid. The author considers that his experiments prove that bacteria are never excreted through intact renal tissue.

(212) Head Injuries and Brain Infection.

Ehrnrooth (*Arbeiten aus dem Pathol. Institt. zu Helsingfors*, 1902, Abtheilung, 1, S. 101) has performed experiments to show that a blow on the head is a predisposing cause of infection of the brain or its membranes in the case of rabbits to whom an injection of a bacterial culture (streptococci, staphylococci, pneumococci, or B. typhosi) is administered intravenously. The intensity of the infection is increased the more severe the trauma inflicted, and the less the interval of time between striking the blow and giving the inoculation, the more likely is the brain or its membranes to become infected. It appears, therefore, that the temporary hyperaemia, venous obstruction, and haemorrhages which ensue in the brain as consequence of the injury are the essential factors which predispose to the infection.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(213) Alterations in the Pulse in Typhoid Fever.

Marro (*Giorn. della R. Acc. di Med. di Torino*, December, 1902), having had his attention drawn to the above subject in relation to a patient of his, aged 14, who was under his care for typhoid fever, has made a study of the question. Arrhythmia in typhoid may occur early or late, during the disease or during convalescence. In the first case, as it may depend on myocarditis, the prognosis is generally bad. In the second case the prognosis is not bad, but the genesis of the change, which is generally of the nature of bradycardia, and often lasts for a considerable period, is very obscure. It has been attributed to a slow myocarditis, to extreme weakness, or to an intestinal reflex. In the author's case the sudden onset of the bradycardia, the failure of any marked cardiac symptoms, the improvement in the other symptoms, and the favourable issue do not support the myocarditic theory. During the period of arrhythmia the sphygmograph showed long diastolic paresis and low systolic elevations. Experiments with atropine favoured the idea that the cause of the arrhythmia was largely nervous. Atropine is known to paralyse the dilating action of the vagus, and after atropine the pulse was found much more regular. The comparatively slow pulse (when compared with the fever) which is often seen in typhoid has been attributed to the digitalis-like effect of the typhoid toxins, in moderate doses they would produce bradycardia by excitement of the nervous moderating heart centres, in large doses by paralysing this mechanism they would produce acceleration of the pulse. Now, in intestinal haemorrhage, many of these toxins are removed, and if they had been in excess previously, one can see how such haemorrhages (if not copious enough to threaten life) would tend to improve the patient, a fact which has been not infrequently observed. In other words, the bradycardia is due to a lessening in the amount of typhoid toxins (induced by haemorrhage), the excess of which had previously paralysed the heart-moderating centre, and so caused a certain degree of tachycardia.

(214) Pancreatic Lithiasis.

Kinnicutt (*Amer. Journ. of Med. Sciences*, December, 1902) calls attention to the extreme rarity of cases in which the existence of pancreatic lithiasis can be determined by the recovery of the characteristic concretions from the stools, and he gives brief abstracts of the only six cases previously recorded in which a positive diagnosis was made or the condition suspected during life. In his own case the patient, a woman, aged 42, suffered in 1888 from a sudden attack of pain which, starting in the back between the shoulders and gradually extending round the right lower intercostal spaces, was accompanied for several hours by uncontrollable nausea and vomiting. Two severe attacks, believed to be due to a cholelithiasis, occurred in 1897 and 1898. During 1901 there were five more attacks, the first of which was exceedingly severe, and the examination of concretions and detritus passed in the stools showed them to be of pancreatic origin rather than hepatic. Several more attacks followed, the pain always commencing in the middle of the back between the shoulder blades and extending through the body to the central epigastric region. Sometimes jaundice was an accompaniment, and in the two last attacks biliary calculi were passed. The urine at no time gave any trace of sugar. The case is of interest as giving decisive evidence during life of the existence of a pancreatic lithiasis alternating with a cholelithiasis. That the pancreatic lithiasis preceded the cholelithiasis is evident from the history, while investigations upon the composition of the fat ingested pointed to a diminished flow of pancreatic secretion into the intestine prior to the last two attacks, thus rendering it probable that the pancreatic lithiasis also coexisted with the cholelithiasis with partial occlusion of the pancreatic ducts. Of the symptoms pointing to occlusion of these ducts none of the subjective symptoms such as nausea, vomiting, etc., are characteristic, while the pain is indistinguishable from that occurring in cholelithiasis. The presence of abnormal quantities of undigested muscle fibres or of fat in the stools is unreliable, a deficient splitting up of the ingested fat into fatty acids and soaps being the only definite proof of the absence of pancreatic secretion in intestinal digestion. Jaundice, as in cholelithiasis, may be either absent or present, while the presence of glycosuria is suggestive, and the decisive evidence afforded by the discovery of concretions in the stools is exceedingly rare. Although these symptoms individually, with the exception of the latter, are insufficient as a basis of diagnosis their various combinations may be of value, and cases accompanied by glycosuria presenting attacks of obscure epigastric pain, with or without jaundice, and in which large numbers of muscle fibres are present in the stools, may reasonably be regarded as suffering from pancreatic lithiasis.

(215) Traumatic Hysteria.

Mouisset (*Lyon Méd.*, February 22nd, 1903) has observed recently a case of hysteria which dated from a wound of the forehead 16 years previously, and which was cured by excision of the cicatrix of the wound. The first convulsive crisis, accompanied by loss of consciousness, came on at the actual time of the injury. The patient had given up all hope of cure, and so irritable was his condition that turning the eyes to the left was enough to cause a crisis. A distinct pricking sensation in the scar, he declared, was the first symptom of each attack. All medical treatment proved useless, but immediate benefit resulted from the removal of the cicatrix, which was not adherent. The patient was a muscular man, aged 43 years. He was resigned to his ailment, and did not expect relief, so that suggestion seems to be an insufficient explanation of the result. It may be that the removal of an epileptogenous zone, as Brown-Séquard calls it, caused the disappearance of the crises; but Mouisset believes that in such cases the mere administration of the anaesthetic plays a considerable part, both by causing a beneficial nervous shock and by the deep sleep which is hard to procure by other means in neurasthenia. Thus the decreased nervous irritability, usually transient may conceivably at times become almost permanent.

(216) Splenic Anaemia.

Osler (*Amer. Journ. of Med. Sciences*, November, 1902) insists upon the reality of the existence of a special disease under the above heading, the etiology of which is unknown, and among whose peculiar characteristics are chronicity, enlargement of the spleen, anaemia of a secondary type, and haematemesis, with, in the later stages, jaundice, hepatic cirrhosis and ascites; "primitive splenomegaly" and "Banti's disease," being respectively its initial and terminal stages. The subsequent history of 4 cases previously reported are given, together with the notes of 3 new ones, and of 45 unpublished cases occurring in the practices of others 12 came under the classification of "acute anaemia" under one year's duration, with "enlarged spleen," 26 as "chronic anaemia with enlarged spleen," and 2 as "simple splenomegaly," the remaining 5 not being included in the above classification. During the past ten years 15 cases (of which abstracts are given) have been under the author's care arising probably from some unknown intoxication and presenting the features of chronicity; progressive enlargement of the spleen unconnected with any known cause such as malaria, leukaemia, syphilis, hepatic cirrhosis, etc. (primary splenomegaly); anaemia of a secondary type (leucopenia); marked tendency to gastric haemorrhage; and terminating with hepatic cirrhosis, jaundice and ascites (Banti's disease). Occurring chiefly in young male adults, nothing could be discovered to point to the probable etiology, though some observers have noticed an hereditary tendency. Of the symptomatology the duration of the disease is remarkable, cases of 25 years being recorded, and the spleen attaining a greater size than in any other disease, except perhaps leukaemia. Haematemesis is another marked feature and its origin has been variously attributed to a general diapedesis from, or small erosion of, the gastric mucosa, or to rupture of an oesophageal varix, or to venous engorgement of the stomach from torsion of the veins by the pull on the gastro-splenic omentum exerted by the large spleen. The anaemia present may be slight, even in well-defined cases, though the haemoglobin is reduced even with only a slight corpuscular anaemia. In long-standing cases pigmentation of the skin occurs, and splenic anaemia may be eventually followed by cirrhosis of the liver (thus differing from that splenomegaly which follows upon the condition of the liver in alcoholic and syphilitic cirrhosis), the haematemesis being a splenic feature rather than hepatic. The name "chronic splenic anaemia" is selected as most adequately expressing in the present state of our knowledge

this well-defined type of disease, which in conformity with the above-named definition may be separated clinically from among the conditions with which anaemia and enlarged spleen are associated.

SURGERY.

(217) Late Rickets and Multiple Chrondromata.

BOINET AND STEPHAN (*Arch. Gén. de Méd.*, February 24th, 1903) give full details of a case of late rickets associated with multiple chondromata. Ollier, with most writers, admits the occurrence of late rickets, whereas Comby maintains that so-called late rickets is in fact osteomalacia. D'Espine and Picot argue that the explanation of the late appearance of rickets presents no difficulty, because ossification is not complete till the twentieth year, and the rate of growth is increased between the fifteenth and twentieth years. Duplay has shown that late rickets has followed on traumatism, or more frequently infections, local or general. Further, they quote a case recorded by Poncet and Margery in which after an attack of measles at 7, multiple chondromata, marked rachitic deformity of the right upper extremity, and decrease of growth of the left loin, developed without any signs of previous rickets or changes in the central or peripheral nervous system. Their own case presented strong similarities at age of 7, following trauma, various deformities developed. They were limited to the right side of the body, and consisted of atrophy without motor or sensory paralysis, osseous deformities, enlarged epiphyses and cartilaginous tumours. At the age of 30 a fracture into the right ankle-joint was followed two years later by a painful, slow-growing swelling of the right os calcis. Three years later this was removed and examined microscopically, proving to be of mixed cartilaginous and osseous structure, undergoing mucoid degeneration, but without sarcomatous elements. The authors point out the tendency to excessive formation of cartilage in its various forms in the development of the deformities and tumours of this individual and conclude (1) that throughout the whole course of development of the skeleton various troubles may arise from the excessive growth of certain tissues; (2) that the bony changes of so-called late rickets, whether they are or are not related to those of infantile rickets, come under the category of deviations of evolution; (3) that cases in which late osseous deformities of rachitic type develop parallel with multiple chondromata should be arranged in this group.

(218) Multiple Myeloma of Bones.

VIGNARD AND GALLAVARDIN (*Rev. de Chir.* No. 1, 1903) describe a case under their own observation of multiple osseous growths of the kind known as multiple myeloma of bone. From their study of this and other recorded cases, and also of the general subject of primary osseous tumours, they have been led to form the following conclusions: (1) Among the diverse categories of tumours of the skeleton, a group of new growths may be distinguished under the the title of primary multiple tumours of bone; (2) these tumours have the singular character of developing at several points of the osseous system apparently at the same time, thus rendering it impossible in the majority of cases to distinguish the primary from the metastatic growth: this eruption of growths occurs particularly in bones, the sternum, ribs, vertebrae, and flat cranial bones for instance, that contain red marrow; (3) this group of primary and multiple tumours of bone is not a homogeneous one with regard to the pathological histology of such growths in different cases; in some cases they present the characters of lymphademona, in others those of endothelioma; whilst others, such as those described in this paper, present a different and quite special structure to which has been given the name of myeloma; (4) multiple myeloma of bones, in addition to the characters common to it, and other forms of multiple osseous growths, has certain distinctive features, such as extreme multiplicity, a clinical latency, rapid cachexia, fever, terminal coma, and, finally, the presence, which has been clearly made out in some cases, of albumose in the urine. It remains to be determined, the authors conclude, whether this albumosuria is to be regarded as a constant and specific character of this form of multiple osseous growths. The authors in dealing with this part of their subject direct attention to a paper published by Bradshaw (BRITISH MEDICAL JOURNAL, 1900) on the relation between urinary albumens and myeloid disease.

(219) Calomel and Iodoform in the Treatment of Wounds.

FASCHING (*Wien. med. Presse*, January 4th, 1903) recommends equal parts of calomel and iodoform as a local application for wounds. A double salt, consisting of the nascent iodides of mercury and sodium chloride, is formed in contact with the tissues. This compound is strongly antiseptic and soluble, so that it penetrates every part of the wound. It is especially useful in minor surgery—for the treatment of whitlows, cellulitis, abscesses, furuncles, buboes, caries, and suppurating lymphatic glands. Precipitated (not sublimed) calomel is first dusted over the wound with a camel's-hair brush, and then the iodoform, the whole being covered with iodoform or sterilized gauze. In the case of abscesses or cavities in carious bone, the mixed powder is rubbed over the surface on a pledget of cotton-wool held by dressing forceps. The calomel and iodoform should be mixed immediately before use, otherwise excessive cauterization may result. In recent wounds the formation of healthy granulations is stimulated. In suppurating wounds, especially when complicated by cellulitis, the pus loses its thick, creamy character, and becomes viscid and serous. The powder also prevents gauze plugs from adhering to the tissues and renders their removal painless. Excellent results are obtained in suppurative lymphadenitis, and in tuberculous cases it is practically a specific. In tuberculous necrosis and caries, sequestra rapidly become loose and are extruded, and the cavity fills up with healthy granulations. Neglected, septic, and fetid wounds soon become clean when dusted with the powder. The slight causticity of the mixture prevents the formation of exuberant granulations, so that the application of silver nitrate is not required. Some of the best results are seen in not too extensive chronic callous varicose ulcers, which heal, if the powder treatment is combined with rest in bed, more rapidly than under iodoform alone, dermatol, airol, xeroform, amyloform, boracic acid, or nitrate of silver ointments. The dressings do not adhere to the wound, and the treatment is painless. If the ulcers exceed a half-crown piece in size, the mixture is contra-indicated, owing to the possible danger of poisoning. Amyloform should then be employed. Iodoform and calomel together give better results in soft or hard chancres and condylomata than either alone. Not more than 30 gr. to 45 gr. of the mixed powders should be used, and as a rule not more than 7½ gr. to 15 gr. The same mixture has been recommended by Sprengel as an application to carious cavities in the bone, and to tracheotomy wounds. In the former it should be applied to those parts in which there is a doubt as to the complete extirpation of all tuberculous material. It prevents diphtherial infection of tracheotomy wounds.

(220) Ascites (Renal and Hepatic) Treated by Abdominal Incision and Peritoneal Resection.

PLANER (*Der Frauenarzt*, February 20th, 1903) had under his care, in March, 1902, a woman, aged 31, who had undergone paracentesis for ascites several times. She was very anaemic, the lungs were sound, the heart not dilated, the liver greatly enlarged, the spleen big, and the kidneys swollen and tender. Menstruation had ceased for five months, the uterus and ovaries were free from disease. The urine was albuminous, but did not contain sugar. Artificial serum was transfused under the mammae, and the patient placed first under chloroform and then under ether. There were no respiratory or circulatory disturbances. The liver, spleen, and kidneys were deeply congested. The incision was made 7 in. in length; after letting out several quarts of ascitic fluid, 15 in. of the greatly stretched peritoneum were resected at a breadth of 6 in. on each side of the incision; lastly, the remaining parietal peritoneum was closed by continuous catgut suture. The muscle and fascia were united in the same manner, the integuments with fifteen silk sutures. From the fourth day to the forty-second 1½ gr. of gamboge was given daily, and the congestion of the liver, spleen, and kidneys subsided, the patient's appearance improving greatly, and the urine becoming free in amount and devoid of albumen. Menstruation returned. At the end of nine months the patient was in excellent health, and the previously enlarged abdominal organs had regained their former size.

MIDWIFERY AND DISEASES OF WOMEN.

(221) Fibroma and Primary Cancer of Fallopian Tube.

LOW (*La Gynécologie*, February, 1903) reports two cases of a new growth of

the tube. A multiparous woman, aged 34, had been subject for four years to menorrhagia. For nearly a year the patient had been harassed by hypogastric pains. Inflammatory exudation was detected, but an irregular tumour could be defined in the region of the left tube partly embedded in inflammatory products. After rest the exudation disappeared, but the tumour caused as much pain as before; it was therefore removed, and the pain at once disappeared. The growth was a submucous fibroma; a remarkable condition was detected—a second fibromatous growth, forming a complete ring under the mucous membrane. The second patient was a 2 para, aged 50; the menopause had occurred at 44. For six months she had noticed sanious discharge and pelvic pain. The left tube formed a tumour of the size of a sausage, firm and rather tender; the uterus was movable, and felt large for the patient's age, and somewhat tender. Cancer of the body was suspected, and vaginal hysterectomy performed. Then the uterus was found healthy and seemed atrophic. The left tube was dilated, the uterine end of the canal and the ostium were enlarged, the fimbriae covered with red papillary masses, whilst on section similar masses were detected all over the mucous membrane. They were firm and very vascular. On microscopic examination the growth appeared to be a carcinoma; within six months secondary masses could be felt in the pelvis and in the lower part of the abdomen, reaching to the umbilicus.

(222) Adhesion of Appendix to Ovarian Stump.

Ladinsky (*Amer. Gynec.*, December, 1902) recently brought before the New York Academy of Medicine a patient on whom cöphorectomy had been performed twice. The patient continued to suffer from severe pain. On examination under anaesthesia, the appendix was found in the pelvis, adherent to the stump of the previous cöphorectomy. The appendix was removed and the patient relieved of her pains.

(223) Puerperal Pelvic Abscess Simulated by Ovarian Dermoid.

Vineberg (*Amer. Gynec.*, December, 1902) operated on a patient, aged 30, a few weeks after a normal labour. At the end of the third week she was taken with severe hypogastric pains, the temperature rising to 103°. She was curetted, but the symptoms continued. Vineberg found a mass in Douglas's pouch which he suspected to be a pelvic abscess. Vaginal section proved that it was a solid mass. An abdominal operation was performed, and the mass was found to be a dermoid tumour with a twisted pedicle, impacted in Douglas's pouch.

(224) Cancer of Breast: Metastatic Deposits in both Ovaries.

Nadig (*Rev. de Gynéc. et de Chir. Abd.*, January-February, 1903) has published a thesis on this subject (Zurich, 1903); it includes a case of considerable importance. A woman died within a few weeks after the removal of a cancerous breast. A careful necropsy was made in the Pathological Laboratory of the University of Zurich. A few secondary nodules were found in the liver; the left ovary was distinctly enlarged, very uneven and hard, the right was also above the average normal size. On microscopic examination secondary deposits were detected in the ovaries. They were held to be secondary because they had clearly-defined borders separating them from the surrounding normal ovarian tissue; they were also multiple. The case was unusual as, after cancer of the breast, metastases almost confined to the ovaries are rare.

(225) Tubal Sac Opened after Six Later Pregnancies.

Stankiewicz (*Monats. f. Geb. u. Gyn*, December, 1902) operated upon a patient with pelvic tumour which had set up dysuria. There was a history of tubal pregnancy followed by six labours at term, the last requiring the aid of the forceps. The fetus, almost mature, was so thoroughly macerated that it was very hard to clean and put together the bones of its skeleton. A fistulous communication between the tube and the abdominal wound remained, blood escaped from it during the period. It did not close until eighteen months after the operation.

THERAPEUTICS.

(226) Effect of Iron and Arsenic in the Recuperation of the Blood after Haemorrhage.

That anaemic conditions are benefited by the giving of iron and of arsenic needs, indeed, no demonstration. Nevertheless, observations of such a scope as those recently made by Bat mann (*Journ. of Physiol.*, February, 1903) are of value alike to the physician and the surgeon. In this research a quarter of the total blood in the body was drawn from a series of dogs, and subjected to examination as regards the specific gravity, rate of coagulation, number of red blood corpuscles, number and varieties of white corpuscles, and quantity of water, solids, ash, proteids, and haemoglobin. Some were then given inorganic iron (Blaud's pill, gr. 15, t.d.s.), others organic iron (a solution of iron albuminate), others arsenic (liq. arsenicalis, 6 to 12 m bis in die.), and lastly in two cases the same quantities of iron and arsenic were given together. In four animals no drug was given. At the end of a week the blood was withdrawn and examined in each case in exactly the same way as before. The condition of the blood a week after the haemorrhage in those cases in which no drug was used formed a standard of comparison. When iron in an inorganic form was given the deterioration produced by the loss of blood was considerably lessened, and the haemoglobin was even increased above its original value. With the albuminate of iron similar but less striking results were obtained. Arsenic alone produced little effect, while iron and arsenic together were found to give optimum results both as regards the number of the corpuscles and the solids of the plasma, while the proportion of haemoglobin was but little less than normal.

(227) Theocin.

In the December number of the *Therap. Monatsh*, a new diuretic named theocin is reported on. It is an alkaloid, a derivative of xanthin and is identical with theophylin. Like theobromine, it is a dimethyl-xanthin, and only differs from it in the position of the methyl groups. It is prepared synthetically from acetic acid. Comparing it with diuretin, the diuretic effect of theocin is as 6.3 : 3 8. The urinary salts especially are said to be increased in the diuresis produced by this alkaloid. When first produced, theocin was difficult to obtain and very expensive, but since it can be prepared synthetically, it is relatively cheap. It represents the first instance of an alkaloid which can be produced synthetically. The diuretic action is most strikingly illustrated in cases complicated with severe oedema. In one heart case, the quantity of urine was increased within twenty-four hours from 820 to 7,600 c.cm. While it excites the nervous system, it does not extend this action on to the heart. A few patients complain of sickness and loss of appetite, but this can generally be avoided by giving the drug in greater dilution and after meals. Theocin occurs in colourless platelets, containing one molecule of water of crystallization, which it loses at 110° C. One part is soluble in 179 times its weight of water at 15 to 18° C., and at 37° C., 1 part is soluble in 85 times its weight of water. It can be given in pure powder form or dissolved in warm tea, in doses of from 0 3 to 0.5 gram (= circa 4.6 to 7 7 gr.).

(228) The Control of Mouth Breathing at Night.

Stewart W. Tufts (*Amer. Med.*, January 31st) believes that the most simple method for preventing mouth-breathing that can be devised is to stick a piece of silk isinglass court plaster, about $\frac{3}{8}$ in. by $1\frac{1}{2}$ in. across the closed lips. It can be very quickly removed, and does not irritate the lips. The writer finds that at least 90 per cent. of his patients with acute and chronic diseases of the respiratory tract are mouth breathers at night. A nose to be normal must be used constantly. If it is not so used the mucous membrane congests and gradually thickens from hypernutrition. Air inspired through the nose receives from 20° to 40° of heat, and becomes at least two-thirds saturated with moisture, and thus the nose becomes a most effective germ filter. The mouth has none of these functions, and when it is used for breathing the lungs must receive many germs and suffer injury from the unmodified air. When the immense mortality from lung diseases is considered, the importance of this subject can better be realized. Tufts finds his general results better in the treatment of respiratory diseases since the use of this method.

(229) Thyroid in the Pruritus of Jaundice.

Gilbert and Herrscher (*Comp. Rend. d. Soc. de Biol.*, August, 1902) have been led to give thyroid in cases of obstructive jaundice, since an increase in the colloidal substance of the gland was noticed by Hürthle and by Lindemann to accompany blocking of the common

bile duct. They found that the thyroid gland or the extract exerted a favourable action on the pruritus which so often accompanies jaundice, this symptom becoming much less troublesome, or ceasing altogether while the thyroid was being taken. At the same time the bile salts, tested for by Hay's sulphur reaction, gradually disappeared from the urine; this also occurred in cases free from pruritus. There was no alteration in the pigments of the urine, as shown by Gmelin's test. They conclude that in the body the biliary salts are modified by the thyroid extract, and their irritative effect on sensory nerve endings thereby lessened. The toxicity of ox bile for the rabbit was also diminished by thyroid extract. On the other hand, they did not find any evidence with Hay's reaction of the destruction of the biliary salts by thyroid *in vitro*.

(230) Formalin in Whooping-cough.

THE *Bulletin* of the Health Department of Chicago for the week ended February 7th contains the following:—"The frightful mortality from whooping-cough this winter induces the department to call public attention to the claim of Dr. Cenex, of Bohemia, that the vapour of formalin is a specific and preventive of this disease. After citing a number of cases in which the cough was cut short within twenty-four hours, he concludes that (1) by the proper inhalation of the vapours of formalin it is possible to destroy the germs of whooping-cough—those existing on the mucous membrane of the respiratory organs and also those in the surroundings of the patients. By this means the disease is cut short and further infection inhibited. (2) In accordance with these experiences, it seems advisable that schools, hospitals, churches, and other localities should from time to time be thoroughly disinfected. It is hardly necessary to add that the treatment should be directed or administered only by a medical practitioner."

(231) Treatment of Gonorrhoeal Rheumatism.

GLÉPIN (*Prog. Méd.*, June 21st, 1902) points out that gonorrhoeal rheumatism is not directly proportional to the acuteness of the urethritis or the virulence of the microbes. It usually appears at the decline of the urethritis, and even when this appears to be cured. Nevertheless we can usually find urethral threads or signs of infection in the para-urethral or genital glands. The rational treatment depends on the following points: (1) A urethral, para-urethral, or genital infection; (2) a course of stagnation of the infectious or toxic products in some point of the genito-urinary track, where they may be reabsorbed; (3) causes predisposing to localization in the articular tissues. Hence it is necessary to determine the point of origin of the general infection in the urethra, from the meatus to the prostate, the glands of Littré, the vesiculae, Bartholin's gland, and the uterus in women. This also concerns congenital and acquired stricture of the urethra, inflammatory or cicatricial obliteration of the glandular ducts, spasm of the constrictor muscles, paresis of the excretory apparatus of the glands, catheterism, incomplete evacuation of a glandular abscess, traumatism, etc. (1) The first rule in treatment is to remove the stagnation of the products of infected glands, in the glands, or in the urethra. The first step is to restore the calibre of the urethra; atresia of the meatus and stricture of the urethra, if present, should be divided. After this there is a discharge of the pent-up secretion of the glands. Digital compression aids the evacuation of the glands. This is useful in the case of stagnant secretions in the prostatic glands and vesiculae. Digital compression must be distinguished from massage of the prostate. After emptying the bladder a little warm boracic lotion is injected. The patient then kneels down on a bed, and the prostate is explored by the finger. The dilated glands are felt per rectum and gently compressed; if there is pain the operation should be suspended, for fear of causing an acute attack of prostatic congestion. Digital compression may be used in cases of acute prostatitis when the painful symptoms have subsided; and in chronic prostatitis after a period during which other methods have been used; such as suppositories, catheterism, irrigation, etc. The compression usually has to be repeated at certain intervals. The author precedes compression by the passage of a soft bougie. Any complications in compression are due to faulty operations, such as premature intervention, violence, and excessive prolongation. After compression of the prostate the desire to micturate is less frequent, the bladder is emptied better, the urine is clearer, and local congestion is diminished. The glands of Méry can be compressed easily, and also the glands of Littré in the penile urethra. The orifices of the latter glands often open under a kind of valve situated near the meatus. This tends to retain secretion and may be treated by incision or slight cauterization of the valve. When the affected gland is easily reached an injection into the duct may suffice, but if it is situated beyond the sphincters instillations are required. Nitrate of siver (½ to 2 per cent.) should be used in preference to the newer silver preparations. In cases of glandular fistula, the gland should be incised, drained, and irrigated. (2) The second principle of treatment is to modify the nature of the products and the tissues which secrete them. External remedies include turpentine and sulphur baths, warm and aseptic cataplasms, mercury or iodide ointments. Internal remedies include arsenic, sulphur, and creosote in tuberculous patients, and specific treatment in the syphilitic. In all cases balsams, salol, and urotropin are useful. If shere is a glandular fistula irrigation should be done. (3) Concerning the local treatment of the joint affection, if there is simple arthralgia sedatives and rest without absolute immobility are indicated. If there is hydrarthrosis, the same, and, if necessary, puncture followed or not by injections. If there is acute arthritis arthrotomy should be done freely and followed by antiseptic irrigation, drainage, and immobilization for a short time. The drain should be removed in six or ten days and movement begun in fifteen days. In cases where ankylosis and muscular atrophy have set in Tallermann's hot-air bath, massage, and electricity are useful. Resection of the joint may possibly be required.

PATHOLOGY.

(232) Pathological Histology of Tuberculous Foci in the Brain.

BARBAIN (*Centralbl. f. allgem. Path.*, Bd. xiii, 21) by the injection of small quantities of tubercle bacillus cultures into the cortex of rabbits produced foci macroscopically resembling cerebral tubercle in man, and was able to study the development of the process from a minimum time of twelve hours to a maximum of four months. After twelve to fifteen hours there is an invasion of polynuclear leucocytes at the point of inoculation, which may take up and digest the bacilli which are destroyed in the process. There follows soon an invasion of mononuclear leucocytes, which build up a nodule and the tissues; these persist in spite of the bacilli, and become epithelioid in form. The central part of the nodule caseates; around this is a ring of epithelioid cells among which are giant cells; outside this again is an area of lymphoid tissue. Bacilli are found in the central and in the epithelioid zones, enclosed in epithelioid and giant cells. Occasionally polynuclear cells invade these nodules and absorb the detritus, healing taking place with scar formation and calcification. The nerve cells sometimes take up bacilli, and are destroyed by them with degeneration of fibres. Whether the neuroglia cells take part in the formation of the nodules is uncertain; they do not do so to any marked extent. In the construction of the tubercles the fixed tissue cells have a share as well as the circulating cells of the blood. The results of the inoculations varied with the quantities injected and the virulence of the bacillus.

(233) The Action of Staphylococci on the Lungs.

SILFVAST (*Arbeiten aus dem Pathol. Instit. zu Helsingfors*, 1902, Abtheilung 2, s. 171) has produced pneumonic processes in rabbits' lungs by direct infection with staphylococci, the infection being produced in some experiments by intratracheal injections and in others by compelling the rabbits to inhale a spray containing the organisms. He found that either exposure of the animals to a low temperature or the previous inhalation of mechanical irritants to the lung tissue favoured the pneumonic processes. The pneumonic infiltration was associated with diffuse connective-tissue formation. The lung tissue exhibited very considerable powers of resistance against the staphylococci, and the introduction of these organisms was productive of a well-marked phagocytosis. The staphylococci often succeeded in passing out of the alveoli and making their way along the peribronchial and perivascular lymph spaces into the bronchial lymph glands. The results of these experiments correspond in most respects with those previously made by the author with streptococci, the main difference being the greater amount of connective tissue formation with streptococcus infection.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(234) Intestinal Indigestion and Renal Disease.

At a meeting of the New York Academy of Medicine on December 16th, 1902 (*Med. News*, January 17th, 1903), Leonard Weber related a series of cases in which the relations between the absorption of imperfectly-digested substances from the digestive tract to arterial degeneration and renal disease were illustrated. He says it would not be surprising to find that toxic substances, absorbed from the digestive tract, might cause irritative inflammatory disturbances of the kidneys. Investigators in children's diseases had pointed out that acute cholera infantum is very frequently complicated by acute nephritis, and that the fatal termination of the disease is not infrequently a uraemic coma. Weber thinks it is not too much to conclude that chronic nephritis might be caused by the presence of somewhat less virulent toxins in the circulation whose irritation had been continued for a longer time. He adds that there is no doubt in the minds of most physicians of large experience that nephritis is much more common at the present time than it was a few years ago. Many reasons have been advanced for this. The best seems to be that the greater prevalence of good living has been followed by much disturbance of the intestinal tract, and as a consequence by the absorption of irritating materials that have to be eliminated by the kidneys with inflammatory results. There is no doubt that the beginning of chronic nephritis is not infrequently an infectious disease. Infectious diseases are rarer than they used to be. When individuals have had a serious infectious disease in childhood, however, which has somewhat impaired their renal eliminative powers, the presence of intestinal toxins in the circulation later in life is sure to be followed by very serious kidney disturbance. Weber agrees with the French physicians who insist on the value of small doses of potassium iodide, even in advanced chronic nephritis. In some cases the drug does good, because there is a syphilitic element in the case which makes the kidney condition worse. The usual dose employed, however, is only 5 gr. of the iodide three times a day, and this would not of itself suffice to affect syphilitic lesions to any extent. If syphilis is known to be present, and if it is suspected of being an important factor in the production of changes in the kidneys, then much larger doses of the drug should be employed; at least 30 gr. to a drachm three times a day. The small doses prove, however, of great service in the treatment of non-specific nephritis. Vierordt, after careful investigation of the question of the action of potassium iodide in these cases—an investigation which he began with the idea that he would prove it to be of no service—says that there can be no doubt of the benefit derived from these small repeated doses of potassium iodide. The effect of the drug is to lessen the tendency to the formation of connective tissue in the kidney, to lead to the reabsorption of incompletely formed connective tissue, and to dissolve broken-down material from the system, that is proving a source of irritation, and neutralize its toxic effect upon the kidney substance. Besides this, it serves to soften the arteries, and so makes the general circulation better, and consequently, also, the circulation for the kidneys. The absorption of toxic material from the intestines is often spoken of as autotoxaemia. As a matter of fact, the intestines are outside the body proper, and so it cannot be properly spoken of as self-poisoning. There is, however, a true autotoxaemia due to the production of substances in the tissues themselves that are toxic for other parts of the organism. Such autotoxins occur quite abundantly in certain constitutional diseases, notably gout and affections due to the uric acid diathesis. In diabetes also, especially that form known as pancreatic diabetes, and in which diabetic coma is so liable to assert itself, there is a distinct tendency to the production of poisonous substances as a result of errors of metabolism. Uraemic coma is a manifestation of the same kind being due to something much more serious than the mere prevention of elimination through the kidneys. These true autotoxaemias are especially likely to occur in connexion with pathological conditions of the ductless glands. In Graves's disease, for instance, or in Addison's disease, their effects on the general system are readily seen. Myxoedema and its symptoms are due to errors of metabolism caused by deficiency of the secretion of the thyroid glands. Von Noorden has expressed the opinion that the ovaries have an internal secretion as well as the pancreas and that obstinate cases of chlorosis in young women are usually due to absence or deficiency of the internal function of the ovaries. Blum, a careful investigator, showed experimentally that the removal of the thyroid gland from animals was followed by death after some months from chronic interstitial nephritis. The reason for this is evidently the attempt of the kidney to eliminate certain substances, which are normally neutralized in the system by the secretion of the thyroid gland. Weber is of the opinion then that nephritis is not infrequently due to the excretion of poisons manufactured within the system as well as those which are absorbed from the digestive tract at times when normal digestive processes are disturbed. At the same time there is not infrequently a development of arterio-sclerosis, which by interfering with the circulation acts as a vicious circle in causing further deterioration of the kidney condition.

(235) Digestion in Phthisis.

K. Dluski (*Zeits. f. Tuber. und Heilstät.*, Band iv, Heft 2) discusses the cause of the digestive disorders of phthisical patients. Many examinations of the composition of the gastric secretions have been carried out in such cases, and conflicting results have been attained. Free hydrochloric acid is present in some cases and absent in others, in which, however, there may be no corresponding subjective symptoms. Hildebrand states that free hydrochloric acid is absent where there is fever, and that 2 gr. of antipyrin taken daily, by reducing the temperature, will restore the normal secretion. Schetty examined the gastric juice of each of 19 patients with high temperatures, and found hyperacidity in every case. Nor has any agreement been arrived at as to the impairment of the motor power of the stomach in phthisis or the anatomical changes present in the organ. Klemperer and Marfan affirm that the subjective symptoms depend on a weakening of the motor power of the stomach with atony or dilatation. Croner, Schetty, and others deny the impairment of motor power, even in the last stages of the disease, and Schwalbe, in carrying out necropsies of 25 cases, fonnd dilatation of the stomach rare. Clinical experiences also differ widely. Some authors deny the frequency of digestive disturbances, especially in the initial stage. Others emphasize the frequent occurrence of dyspepsia before any physical signs of tuberculosis can be detected. Some ascribe the digestive disturbances to direct irritation of the mucous membrane of the stomach by the tubercle bacillus. Marfan holds that gastric symptoms are present in the first stage, being then due to anaemia; absent in the second stage; and again present in the third as a result of toxaemic irritation of the mucous membrane of the stomach. It is difficult to understand why symptoms due to anaemia should disappear at a later stage of the disease as the anaemia becomes more pronounced. The author believes that these contradictory results have been arrived at from a too exclusive study of the disease without adequate consideration of the particular organism attacked by the disease, and he believes that the digestive troubles of phthisical patients are usually simply the result of defective hygiene. The statistics considered are mainly compiled from hospital practice. The patients have suffered from over-work, bad food, lack of fresh air, and perhaps excessive consumption of alcohol. These conditions tend to dyspepsia, while at the same time weakening the organism, and rendering it an easy victim to the invasion of the tubercle bacillus. But amongst other than hospital patients the case is different. As long as twenty years ago Jaccoud stated that digestive disturbances were rare among patients living in the country under hygienic conditions, and the reports of modern sanatoria confirm his statement. Turbain of Davos Platz says that in 30 out of 44 cases of phthisis complicated by dyspepsia, treated at his sanatorium in 1891, the gastric symptoms completely disappeared without special treatment, and cases of chronic diarrhoea similarly recovered. Nor are the results due merely to high altitude. The popular sanatoria, which represent a total of about 7,000 patients, and which are situated, some on high and some on low ground, show a mean increase in the weight of patients of not less than 3 kil. (=6 lb. 6 oz.) in the first three months. The subjective symptoms improve in

like manner. Such results show that as a rule no serious morbid changes can be present in the digestive organs. The view that the loss of weight and the gastric symptoms have been caused by bad hygiene is confirmed also by the fact that the improvement usually begins, under the changed conditions of life, before there is any perceptible change in the state of the lung.

SURGERY.

(236) Removal of a Tumour from the Cervical Portion of the Cord.

Henschen and Lennander (Reprint from *Mitteil. a. d. Grenzgebiet. d. Med. u. Chir.*, Band x, Heft 15, 1902) are the joint authors of a long and important contribution to the surgery of the spinal cord. For the history of the case which is of much interest from both a clinical and a therapeutical point of view, the readers of this contribution are indebted to Henschen for a very elaborate and lucid analysis of a complex series of symptoms, and to Lennander for his addition to a somewhat scanty record of a striking instance of successful surgical intervention for the removal of spinal tumour. Further interest is attached to this record, as it presents an example of precision both in diagnosis and localization. The patient was a man aged 50, whose general health up to the beginning of his nervous troubles had always been good. There was no history of syphilis. After some transitory symptoms of nerve lesion, such as numbness and tingling in the extremities, difficulty in micturition, and impaired locomotion, there was from the middle of 1899 a progressive loss of power in the lower limbs and of sensation over most of the body, including the arms. In February, 1890, record was made of: (1) Complete paralysis of the right lower limb; (2) paresis of the left lower limb; (3) anaesthesia of both lower limbs and of the trunk up to the level of the second rib, which was most marked on the right side; (4) anaesthesia over the ulnar half of each forearm; and (5) complete paralysis of the hand and forearm on both sides. On February 8th, 1890, Lennander removed the spinous processes and arches of the fifth, sixth, and seventh cervical vertebrae, and after division of the dura, exposed a firm spindle-shaped tumour, which compressed the back of the cord on the right side and extended for a distance of 3 mm. beyond the middle line to the left side. The upper end of the tumour corresponded to the middle of the fifth cervical vertebra and lower end to the upper margin of the first dorsal vertebra. It was quite movable, and was extracted without difficulty. After its removal a deep impression was observed on the posterior and right lateral surfaces of the cord, which corresponded to the attachments of the sensory nerves. On microscopical examination the growth presented the histological characters of a fibro-sarcoma, the cells of which had undergone hydatid degeneration. The patient made a good recovery, and eight months after the date of operation was able to walk and to leap with both legs, and had also regained complete use of his arms and hands.

(237) The Ambulatory Treatment of Fractures of the Lower Extremities.

Rossi (*Arch. d. Orthop.*, An. 19, 1902, F. 4) speaks very favourably of the above method of treatment which he has practised in 17 cases of fracture of the neck of the femur (mostly in old people), and in 60 cases of fracture of the tibia or fibula. In the case of fractured femur the patient is kept in bed for the first few days, and an extension applied. As soon as all spasm has subsided and the limb is in good position, a rigid apparatus is applied, and the patient is made to get up and walk about, at first in a kind of wheel chair support, and afterwards with the aid of crutches. Experience showed that it was better to make the supporting iron articulate at the knee, so as to allow of early movement in that joint. Of the 17 cases, 2 died as the result of shock, delirium, etc., and one developed a traumatic coxitis; the rest were all much benefited by being allowed to get up and walk about so early. The shortening never surpassed 2 cm., and in some cases was absent altogether. In the leg the results were equally good. Unless the fracture was in the upper third (this occurred in only 3 cases out of the 60) it is not necessary to include the knee in the apparatus. The advantages of this method of treatment are: (1) The patient can move about quite early after the accident, without pain or danger; (2) by the time the fracture is consolidated he is physically fit and well, instead of weakened by prolonged rest in bed; (3) muscular atrophy is lessened: (4) motility is preserved in the articulation. The author gives photographs of some of his cases and of the kind of apparatus used.

(238) Treatment of Tuberculous Disease of the Knee-joint.

Koenig (*Berl. klin. Woch.*, March 3rd, 1903) discusses the treatment of tuberculous disease of the knee-joint by the expectant method and by operation, taking a typical case as an example. The patient was a servant girl, 24 years of age, and gave the past history of a year and a-half suffering, during which period she had spent six months in hospital. The heart and kidneys appeared to be normal, but there were suspicious signs at the apex of the right lung. The right knee-joint was held at an angle of about 10°, the tibia was displaced slightly backwards, and the whole joint was in a position of slight valgum. Only very little movement could be made passively, and this caused great pain. There were no crepitations to be heard or felt in the joint, and no distinct signs of fluctuation. The swelling was spindle shaped, and both above the patella and at the sides of the joint the swelling had the character of soft dough. Nothing could be clearly made out by radiographs. From these clinical signs, Koenig had no difficulty in recognizing the affection as tuberculous, and he made the diagnosis of extensive fibrous and organized fibrous tuberculosis of the joint; whether it was connected with any primary foci in the bones was not diagnosable. In discussing the case, he points out that in an ideal sense the case was not curable, but in a "conservative" sense the question resolved itself into whether the result of treatment by rest and local measures or of operative measures would be the better. In both cases ankylosis can, and in the latter it must, result; but in the former a certain amount of movement may possibly be secured. But it is impossible to estimate the length of time, which will be needed for the conservative method to bring about its results, and at times it may be inadequate, while if the surgeon understands the pathology of the condition, and can operate without using his hands in the wound, the healing of the process by operation is sure and can be measured in point of time. Koenig suggests that the conservative treatment could not heal the present case under two and a-half or three years. For people who have to earn their own living, this loss of time, with all its accompanying expenses, is a matter of impossibility, and he therefore regards resection as the best method in such a case as the one under discussion. He describes the preparation and steps of the operation, and lays special stress on performing a bloodless operation and only touching the wound with instruments. In his case he performed this operation, and found the joint as he expected, and succeeded in obtaining a satisfactory result with but little shortening. One can always promise the patient that he may use his leg again after four or five months, and that the operative treatment is practically free from risk.

MIDWIFERY AND DISEASES OF WOMEN.

(239) Vesico-vaginal Fistula as a Complication of Childbirth.

E. Kraus (*Wien. klin. Woch.*, No. 7, 1903) describes 2 cases in which the existence of vesico-vaginal fistula or scars led to difficulty in parturition. In the first case, the pelvis was a rickety one, and was generally contracted. The previous two labours had been terminated by decapitation once and craniotomy once. The second operation led to the formation of a vesico-vaginal fistula, which was onl healed by a fourth operation. In the third pregnancy, the anterior vaginal wall was replaced by much scar tissue, and no vaginal portion of the cervix was left. Labour set in at the end of the twenty-ninth week, and the patient stated that the pains had lasted already for two days when she was admitted into hospital. After two days the opening into the uterus in the scar only admitted of the passage of a probe, and, although the fetus was small, it was considered inadvisable to attempt to forcibly dilate it. Soon after a distinct contraction ring was felt in the body of the uterus. The patient was then anaesthetised and Porro's operation was performed. The mother made a good recovery but the fetus could not be revived. The second case also presented the history of difficulties in two previous confinements. The first was ended by craniotomy and the second by embryotomy. The pelvis was a generally-contracted rachitic pelvis. The previous parturitions had left the patient with a vesico-vaginal fistula, which had been operated on several times unsuccessfully. The cervix was found to be fixed

high up to the right of the vaginal vault by means of a dense scar. The fistulae admitted of the passage of a finger into the bladder, and were two in number. Labour had already lasted twenty-four hours, when the patient was admitted into hospital, and the waters had broken twenty hours before. The cervix was very carefully dilated, and as soon as two fingers could be passed combined version was performed. A foot was brought down. Later on there was a sudden haemorrhage, which was controlled by gentle pulling on the foot. Continued extension, and the fetus, a dead one, was easily delivered. Immediately after the birth a considerable haemorrhage took place, and was found to issue from a laceration in the cervix. This tear reached up as far as the right parametrium, and as all attempts to arrest the bleeding proved unavailing the abdomen was opened and the tear sutured after the blood clot had been turned out. The patient who was pulseless before the operation, died shortly after. Kraus considers that these cases show that one ought to be extremely careful in attempting to dilate scarred cervices, and also thinks that incisions into scars should not be made. If the scar does not dilate spontaneously it will be found wiser to perform Caesarean section.

(240) Pregnancy after Rupture of Uterus.

Kamann (*Zentralbl. f. Gynäk.*, No. 13, 1903) reports a case of labour where the mother had suffered from complete rupture of the uterus at the preceding confinement. Wiener opened the abdomen, and sutured the laceration; the uterus was found adherent to the parietes after convalescence. Only three months after the rupture conception took place, pregnancy was complicated by dragging pains, and parametritis; later there was less pain. The child was delivered at term alive, Kamann using the forceps. This case shows that after complete rupture of the uterus that organ may be saved, and may resume its functions. In a discussion on this case, Amann reported another where pregnancy and normal labour followed spontaneous healing of a rupture of the uterus. This fortunate sequence to a grave complication seemed only possible in a very limited number of cases where the edges of the rent were smooth and not situated laterally, a condition which allowed of accurate suturing. Every precaution against sepsis was needed if the suture were to heal well, and to ensure so strong a cicatrix as to allow of a natural subsequent pregnancy. Theilhaber recommended that when the edges of the rent were ragged they should be made smooth before the sutures were applied.

(241) Uterine Fibroid: Metastatic Deposits.

Schlangenhaufer (*Wien. klin. Woch.*, 1902, 523) reports that after removing a uterine fibroid with a fatal result, he found five metastatic deposits in the lung and three in the liver. These deposits, like the original tumour, were pure myomata. Schlangenhaufer states that his case is the sixth where metastatic growths have been detected in uterine fibroid disease. In one of the remaining five the primary as well as the secondary growth was a pure myoma. The author suggests that a tumour made up solely of muscle-cells may be more malignant than the more common uterine "fibroid," where there is more or less connective tissue.

THERAPEUTICS.

(242) Massage of the Heart.

Boureau (*Rev. de Chir.*, No. 10, 1902) reviews our present knowledge of the results of massage of the exposed heart, obtained from physiological research, and from application to the human subject in urgent cases of chloroformic or post-operative syncope. The laboratory results of rhythmical compression of the cardiac ventricles do not seem to be very definite, and those obtained by Batelli, the latest investigator of this subject, are decidedly unsatisfactory, as the few animals which were thus brought back to life did not survive for a longer period than twenty-two hours. Twelve cases, the author states, have been recorded in which this method of restoring animation has been tried on man, but in not one of these was any decisive result obtained. It is pointed out that in every one of the dozen instances recourse was not taken to this desperate method of dealing with chloroformic syncope until much time had been spent in a trial of the usual therapeutic means. It is very doubtful, however, the author thinks, whether cardiac massage if applied more promptly would have given better results. It is important for the surgeon to know the approximate duration of the cardiac excitability after apparent death from chloroform, so that he may have some idea of the time he can spend in applying the usual methods, such as artificial respiration, electrical currents, and tracheotomy, before attempting cardiac massage. It would not be justiable to have recourse to this method at the first sign of chloroformic syncope, as in such a condition Sylvester's method of artificial respiration, associated with rhythmical tractions of the tongue, nearly always suffices to restore the patient. It is acknowledged, however, that after this treatment has been properly applied without any success for six months the surgeon may then take to the last resort of cardiac massage by the diaphragmatic way which has the great advantage over the thoracic way of being less violent and of not setting up pneumothorax.—Gallet (*Jour. de Chir. et Ann. de la Soc. Belge de Chir.*, No. 11, 1902,) whilst acknowledging that any intervention, however severe it may be, is legitimate in cases of cardiac syncope, provided it offers any prospect of success, holds that direct cardiac massage is not only useless but hurtful. Of the inutility of this method he has been convinced by its invariable failure both in cases of chloroform poisoning in the human subject, and in an extended series of experiments on animals. By the latter he has been taught that massage of the heart establishes not an artificial circulation but something quite different, namely, a movement in the blood of flux and reflux, an intermittent movement, not a continuous flow. Such phenomenon, it is held, cannot favour in any way the return of life. The method is a dangerous one because whether done through the thoracic wall or from the abdomen through the diaphragm, the traumatism it necessitates is serious. Moreover, an anxious surgeon might by resorting at once to this energetic treatment neglect the simpler measures which alone have hitherto given good results in the very grave condition of cardiac syncope.

(243) Cerebrin in Epilepsy.

Lion (*Deut. med. Woch.*, December 11th, 1902) again reports the results of the use of cerebrin in his hands in the treatment of epilepsy. He has given up the treatment by bromides altogether during the last five or six weeks, and goes as far as not prescribing any special diet. The action of cerebrin is more marked when given alone, and he says that the patients feel better when treated in this way. He either gives tablees of cerebrin or subcutaneous injections. As a rule, he rapidly increases the dose within a period of two to three weeks to 1.8 gram (= circa 28 gr.), given in the form of six tablets of 0.3 gram (= circa 4.7 gr.) in each. The dose is given once every third day. If this dose appears to be insufficient—that is, if the attacks, although less severe and frequent, persist—he gives a dose every other day, or later every day. When applied subcutaneously, he gives 1 to 2 c.cm. (= 17 to 34 minims) every third or second day. In cases where there are neurasthenic symptoms, he has obtained excellent results by giving sperminum together with the cerebrin. This is given either in 20 to 30-drop doses internally of the essence of sperminum, or in severe cases 2 or 3 c.cm. of Pöhl's sperminum subcutaneously. He appends a number of clinical histories of cases treated with benefit in this way. In the same journal Eulenburg also speaks in favour of this mode of treating epilepsy. The latter is more moderate in his praise, and says that he does not share Lion's opinion that cerebrin is able to cure any case, although he has had very good results from its use. He, however, owns that he combined other methods of treatment with this drug, so that one must be careful in ascribing all the benefit derived to the cerebrin. He has not observed any bad effects accruing from the use of the preparation.

(244) Therapeutic Remissions of General Paralysis.

Devay (*Lyon Méd.*, February 15th and 22nd, 1903) has systematically employed an intensive specific treatment since 1896 in forty-two cases of general paralysis, and publishes results, which he believes are satisfactory enough to show the harm which Fournier's theory of parasyphlitic diseases has done by causing the neglect of a thorough trial of mercury and potassium iodide in tabes and general paralysis. The treatment had no result in 19 of the cases: 12 of the 19 were certainly syphilitic, 2 others probably syphilitic, while in the remaining 5 there was no sign or history of syphilis. The 23 cases in which he obtained benefit from the specific treatment Devay divides into four groups: (1) In 3 cases diminution or disappearance of the physical signs were noticed,

with but slight modification of the intellectual trouble: (2) the second group comprised 5 cases in which the somatic signs diminished or disappeared together with the delirium, but the intelligence remained much enfeebled; (3) 5 patients regained their memory and intelligence, while certain physical signs of the disease persisted; (4) 10 patients were cured, for a time at any rate, mental and physical signs completely disappearing. In 3 of these cases, after a remission of some months' duration, death rapidly followed apoplexy. The treatment consisted in injections of calomel and the administration of large doses of potassium iodide. Of these 23 cases, 90 per cent. were undoubtedly syphilitic. Devay found that the earlier the specific treatment was begun after the first onset of the illness the better was the result, but he insists upon the necessity of energetic antisyphilitic medication, however old-standing the case. The course of the cure was the same in each case. Of the mental symptoms the delirium and megalomania were the first to disappear, then in order the memory, attention, and intellectual faculties showed signs of return. Of the physical signs, the fibrillary tremor was first affected, while the inequality of the pupils was invariably the most persistent.

PATHOLOGY.

(245) Is Cancer Contagious?

Bossi (*Gazz. degli Osped.*, April 13th, 1902) answers the above question decidedly in the negative, and he bases his opinion on the results of an inquiry as to the prevalence of cancer between husbands and wives. He says that if contagion is possible or probable, nowhere would it be so likely to occur as between husband and wife during coition, assuming the wife to be affected with cancer of the cervix. The conditions are all in favour of ready infection, for cancer of the cervix may exist for some time without the knowledge of the patient, and certainly without dyspareunia (blood may follow coitus and is sometimes the first index of the disease). The surfaces of contact are relatively large, and in a functional state ready for infection, and both tissues prone to the development of cancer. For these reasons the author thought that if anywhere, proof of contagiousness would be found here. He accordingly selected a series of clear cases brought under his notice during the last ten years—180 in all. He divided them into four classes; in the first (where cohabitation occurred for not less than three months after the cancer of the cervix was discovered) there were 78 cases; in the second (period of six months), 49; in the third (period of nine months), 36; and in the fourth (period of not less than twelve months), 17. In no single case out of the 180 did the husband develop cancer. Further, the author wrote to several well-known gynaecologists asking their experience in the matter; in this way he accounted for some thousands of cases and yet was unable to find a single instance of contagion in this respect. The figures which have been published in support of the opposite view, namely, that cancer is contagious, he explains away on the theory of coincidence.

(246) Persistence of Ductus Arteriosus Botalli.

Congenital heart disease has long been recognized to be caused to a considerable extent by hereditary causes, as is shown by cases which have been recorded in which the parents, and at times the grandparents, have suffered from heart disease, and chiefly acquired disease, further by cases, where several children of one father or mother suffer from congenital heart disease, while the parents themselves are not so affected, and some of the children are also free from it, and lastly, by those cases of congenital cardiac affections in which some of the children of the same family are physically or somatically affected. De la Camp (*Berl. klin. Woch.*, January 19th, 1903) records a striking instance of the hereditary factor. The mother of his patients was healthy, and as far as could be ascertained was not affected with syphilis; the father had been a heavy drinker, and had died of an accident; and neither the parents nor the grandparents were blood relations or showed any hereditary anomalies, such as haemophilia. The children numbered six, and all presented signs and symptoms of congenital heart disease. The two girls were most severely affected; their ages were 15 and 7 years respectively. The boys were less affected, and the two youngest, aged 11 and 5 years respectively, were not much influenced by the condition. In the case of the elder girl, in whom the changes were well marked, de la Camp describes the physical signs minutely. He points out that although there was some blueness there was no clubbing of the fingers. The apex beat was in the sixth space, half a finger-breadth outside the nipple line, and was diffuse and heaving. The upper limits of the cardiac dullness reached to the fourth space, from whence it was bounded by a line to the apex beat on the left, and by a line with its convexity upwards and outwards to the sixth space to the right of the sternum. Apart from this dullness he made out an independent band of dullness to the left of the sternum and above the cardiac area, measuring from 2 cm. to 3 cm. in width and 4 cm. in length. Over this band of dullness one could feel a systolic thrill. On auscultation the first sound at the apex was frequently reduplicated, and the second muffled: both sounds clear over the aortic area; over the pulmonary area, corresponding to the thrill, a loud systolic murmur, and the second sound accentuated. Over the tricuspid one heard a distant systolic murmur; the second sound was muffled. The systolic murmur was conducted into the carotids, but more clearly in the left than in the right. Over the whole lungs, but especially to the left of the spine, one heard a systolic blowing, which was louder during the inspiratory pause than during the expiratory pause. On the Roentgen screen one saw a broadening of the right cardiac "shadow," which showed extraordinarily active pulsation, chiefly in the lower regions. The shadow of the pulmonary artery, left auricle, and ventricle, was broadened outwards and upwards. This shadow underwent a considerable enlargement with each systole. The other cases showed similar signs. He regards these signs as indicative of the persistence of the ductus arteriosus Botalli.

(247) Adrenalin Glycosuria.

Herter and Wakeman (*Amer. Journ. of Med. Sci.*, Jan. 1903) in giving a summary of their observations and experiments upon the pathology of adrenalin glycosuria point out that its intensity and duration depend partly upon the method of administration and partly upon the dosage. Direct applications to the surface of the pancreas of an exceedingly small quantity of adrenalin usually cause a considerable excretion of sugar, while the reaction becomes less in direct proportion according as the administration is intravenous, intraperitoneal or subcutaneous, the result being slightest after dosage by the mouth. This relative inertness when administered by the mouth appears to be due to the readiness of adrenalin to become oxidized, thus losing its blood-pressure-raising properties, and when in the stomach a considerable proportion is destroyed before absorption takes place. Experimentally painting the pancreas of a dog with 0.01 gram of adrenalin substance was productive of 23.4 grams of glucose, but the susceptibility of different dogs to reaction varies considerably. The sugar of the blood becomes regularly increased but falls rapidly with the decline of the sugar in the urine, the volume of which latter is distinctly in excess, and this occurrence of glycosuria was shown to be independent of changes in the general blood pressure. From observations upon the sugar of the blood of the femoral artery, portal vein, and hepatic vein before and after pancreatic painting with adrenalin the relative excess in percentage in the hepatic vein after treatment points to an increased production of sugar in the liver. That adrenalin in producing glycosuria acts chiefly upon the cells of the pancreas is presumed from the fact that the glycosuria is more marked after painting on—or injections into—the gland than after similar treatment of the brain, spleen, liver, or kidneys. The action of potassium cyanide in producing glycosuria when applied to the gland substance, while it has no such effect when introduced into the circulation or into other organs, lends support to the theory that the pancreas is chiefly concerned in the production of adrenalin glycosuria, the glycogenetic function of the liver being stimulated through the sympathetic nervous system. Adrenalin exerts its influence probably by a toxic action upon the cells of the pancreas, more especially in the islands of Langerhans, though lesions of these structures were not a constant accompaniment in experimentally-produced glycosuria, and when present were generally associated with alterations in other structures as well. That the adrenals normally influence carbohydrate metabolism by virtue of their internal secretions seems highly probable, but experimental evidence so far does not afford complete proof, since the glycosuria which follows even slight compression or injury to these organs may be due to some nervous influence as yet imperfectly understood

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(248) Typhoid Spine.

At a meeting of the New York Academy of Medicine on November 21st, 1902, W. Ely read a paper on typhoid spine (*Med. News*, January 17th, 1903). He referred to the summary and analysis of 26 cases reported by F. T. Lord in the *Boston Medical and Surgical Journal* of June 26th, 1902, since Gibney reported his first cases in 1889, and said he had found 3 more cases reported. He gave details of the case of a physician, aged 33, who had a severe type of typhoid fever in January, 1902, complicated with pneumonia and pleurisy. At the end of six weeks, when he began to sit up, weakness of the back was observed. Following the convalescence in March the weakness in the back continued, and was made worse by an attempt to stoop. A lateral curvature and stiffness of the lumbar spine were observed, with some pain and great difficulty in standing erect. On March 23rd a severe chill was followed by pneumonia of the left lung, complicated with pleurisy with effusion. After three weeks, when the patient began to go about, the lateral curvature was marked and was accompanied, as before, by stiffness, weakness, and lumbar pain; no sensitiveness of spine to pressure. The stiffness, weakness, and pain were increased by exertion. A severe cramp in the left lumbar region followed an attempt to rise from his chair, and returned each time he attempted to get up. When quiet in bed the pain did not return. A severe spasm in the left lumbar region, however, followed while turning over in bed. The spasm was tonic in character, lasting thirty seconds, gradually relaxing then returned, and was only relieved, by chloroform inhalation after moderate use of morphine had failed. It was necessary to chloroform the patient when subjecting him to any effort. The pain shifted to the right lumbar region, the spasms became less severe, and were controlled by morphine. Examination showed patellar reflexes exaggerated, intermittent twitchings of the muscles of the thigh, no loss of sensation, no paralysis. Spasms in the back continued, sometimes causing opisthotonos. Spasmodic attacks continued at intervals until the end of July. After this he often had the so-called "starting pain" upon falling to sleep. On September 22nd a mechanical support was applied, and improvement from this on was rapid, but pain and stiffness in the right groin persisted for some time. Stiffness and limitation of the lumbar spine were the only objective signs when he returned to New York in October. Referring to the pathology of typhoid spine, Ely said no necropsy had ever been reported. He believed the condition to be an ostitis probably combined with a periostitis, and a probable neuritis caused by the inflammation of the bone and periosteum. This was generally considered to be the pathology of typhoid spine, but Osler thought it a neurosis and reported 6 cases. Of the reported cases, 26 out of 30 were in males. The symptoms of the reported cases were much like those of lumbar Pott's disease, but more acute, and had the history of typhoid. Rest was the essential in treatment. Local application did little or no good. V. P. Gibney considered the history presented by Ely as the most complete on record, and agreed with him as to the frequency of the affection. There were all degrees of typhoid spine, some very mild and similar to those described by Osler. He had never been able to trace any definite trauma as cause. He was surprised that no relief was experienced from the cautery, as he had obtained good results from it. He thought the cases with kyphosis should not be included in the class of typhoid spines. Sayre referred to a case of what he called "diphtherial spine" following an attack of diphtheria. The disease left a slight nephritis and spinal disturbance attended with a certain amount of lateral deformity and interabdominal abscess formation, presumably the consequence of the diphtherial infection.

(249) The Diagnosis of Tuberculous Pleurisy.

Jousset (*La Grèce Méd.*, January 13th, 1903,) has obtained useful results from the adoption of gastric juice as an aid to the bacteriological diagnosis of coagulable fluids. He has found this method particularly serviceable for the detection of tubercle bacilli in primary pleuritic effusions. Taking advantage of the fact that gastric juice dissolves fibrin and cell protoplasm but leaves the bacilli intact, he waits until coagulation is complete in the liquid removed by tapping and then digests the coagulation with a preparation of gastric juice for two or three hours; solution rapidly takes place, and the material is then centrifugalized and the deposit examined. By these means, in an examination of 20 cases of primary serofibrinous pleurisy, he detected the tubercle bacillus on each occasion. The method has also proved successful with the effusion obtained from cases of tuberculous peritonitis.

SURGERY.

(250) Radical Cure of Aneurysm.

Matas (*Ann. of Surg.*, February, 1903) describes a new operation for the radical cure of aneurysm based upon arteriorrhaphy. The recognized advantages of the radical operation for the cure of aneurysm of the peripheral arteries can, he believes, be greatly increased by the adoption of the proposed method of suture and obliteration of the sac. In the operation described in this paper the sac is, as a rule, not extirpated or disturbed, except in so much as is is required to evacuate its contents and freely expose its interior. No ligature is applied to the main artery, as the circulation in the sac is arrested solely by suturing the arterial orifices found in its wall. In the true sacciform aneurysm, with a single orifice of communication with the parent artery, this method will permit the operator to obliterate the aneurysm without obstructing the lumen of the artery, or interfering with the circulation in the injured or diseased vessel. The limb having been rendered bloodless by preliminary elevation and the application of Esmarch's elastic constrictor, the interior of the sac is exposed by a free incision. The contents of the sac are then evacuated, and the inner surface is gently but thoroughly scrubbed with gauze soaked in sterile saline solution. All openings in the wall of the sac are then carefully closed by interrupted sutures of thin silk or chromic catgut. In the case of a sacciform aneurysm with a single orifice of communication, it is possible, the author states, by careful suturing to obliterate the aneurysmal opening without obstructing the lumen of the parent artery. It is also thought to be possible in favourable cases of fusiform aneurysm of traumatic origin, and in all those in which the structures of the wall of the sac are healthy and pliable, to restore the lost continuity of the artery by building a new channel which will connect the two main orifices of communication and restore the interrupted circulation in the parent vessel. After the arterial openings in the wall of the sac have been closed by suturing, the cavity of the sac is not packed or simply drained, and left to heal by granulation, but is at once obliterated by inverting or infolding its walls together with the attached and overlying skin. The flaps thus formed are sutured to the bottom of the cavity, so that no dead spaces are left to suppurate or to favour secondary complications. The author, whose experience of this method has hitherto been limited to four cases of aneurysm, states that the favourable results thus far obtained are sufficient to encourage its further application.

(251) Antisepsis versus Asepsis.

Lucas-Championnière (*Bull. et Mém. de la Soc. de Chir.*, No. 9, 1903,) in some remarks on a communication made by Quénu that germs are present in abundance in the air of hospitals in both the operating theatre and the wards, pointed out that such a statement if fully demonstrated as he believes it to have been, must be regarded as an important justification of the antiseptic method of treating wounds. If, whatever precautions be taken to effect asepsis of the dressings, of the surgeon's hands, and of the skin of the patient, there may in the course of the operation be a risk of germ invasion against which no effectual defence can be made, a return to the practice of the antiseptic method, which can alone protect the patient from such invasion, must be accepted as an inevitable and necessary event.

(252) Subdural Interposition of Rubber Tissue in Operations for Tic Douloureux.

Abbe (*Ann. of Surg.*, January, 1903) holds that (1) operations upon the Gasserian ganglion for tic douloureux have been carried to an unnecessary degree of severity; (2) that resection of one-fourth or one-half inch of the nerves anterior to the ganglion and within the cranium, with the interposition of rubber tissue, can be relied upon for perfect cure, up to six years at least, with probability of permanency as great as by any other method; (3) that this

is a simple, speedy, and safe method, and thereby fulfils the highest aims of the best surgery. The author advocates that in grave cases of tic douloureux the surgeon, instead of temporizing by any of the external methods of operating, should at once resort to the following method: The external carotid artery may be ligatured with advantage, as a plan of controlling haemorrhage. A vertical incision over the middle of the zygoma carried through the temporal muscle down to bone divides no important nerves or vessels. The muscle is scraped to either side, and held by retractors. A small opening in the skull is then made by gouge and mallet, which may be enlarged rapidly and safely to form an orifice of an inch and a-half diameter. The dura is then pressed away from the middle fossa until the nerves are exposed. The haemorrhage, so much complained of, from the venous sinuses on dissecting up the periosteum, can be effectually and quickly controlled by pressing a strip of rubber tissue upon the seat of bleeding with a firm pad of gauze. The clotting of blood under the rubber tissue takes place very quickly. The nerve trunks are grasped in separate artery clamps, and are divided each close to the foramen of and also separated either by section or forcible rotation from the Gasserian ganglion. The wound having been packed for a few moments with narrow strips of iodoform gauze, a piece one inch and a-half long and three-fourths of an inch wide of thin guttapercha tissue, stiff enough to be easily handled, and sterilized by rubbing with bichloride solution and subsequent immersion in salt solution laid carefully over the foramen ovale and the foramen rotundum, where the nerves have been separated, and pressed gently but firmly into place by iodoform gauze. In a very few moments the gauze may be drawn away and the ganglion allowed to settle down upon the rubber tissue. A small drainage tube should be placed in the lower angle of the wound for a few hours to ensure a perfectly dry healing. The author asserts that it is certainly past dispute that there is no need for the removal of the first branch of the fifth pair in any case of grave tic douloureux unless the origin of the affection is to be found in a tumour of the Gasserian ganglion or behind this structure. The object of interposing rubber tissue is to place a permanent barrier to the reunion of the divided nerves.

MIDWIFERY AND DISEASES OF WOMEN.

(253) Ureteritis in the Female.

Garceau (*Amer. Journ. of Med. Sci.*, February, 1903), writing upon ureteritis in the female, points out that in its acute form simple ureteritis especially affects primiparae. Commencing with rigors there is pelvic pain and vesical irritation, the affected ureter being sensitive to pressure per vaginam, considerable quantities of pus appearing in the urine in a few days. Usually part of a pyelitis or cystitis, the symptoms of ureteritis are often overshadowed by these accompanying affections. In its chronic form simple ureteritis is generally associated with chronic cystitis, though it may follow either a vesical or renal inflammation, and it most probably arises from direct extension along the mucous membrane. Gonorrhoea, calculous pyelitis, pelvic cellulitis and inflamed lymph glands are among other causes of the condition. Frequency of micturition is the chief and most troublesome symptom, which, though usually painless, is so constantly present as to cause considerable neurasthenia from loss of sleep, etc. Increased tenderness and possibly some enlargement of the affected ureter, pressure upon which vaginally causes an almost uncontrollable desire to micturate, is the most important physical sign. Cystoscopically the trigone and vesical neck may be congested with swelling of the ureteral eminence on the affected side, and there is excess of desquamated epithelium in the urine with diminution of urea in that collected from the affected ureter. Preliminary to treatment any concurrent pelvic disease should be rectified and a simple farinaceous diet ordered, with regulated daily exercise alternating with rest. Among drugs acetate of potassium, sandal wood oil, urotropine, and sodium bicarbonate are often of value, and trional should be given for sleeplessness in preference to morphine. Application of silver nitrate solution to the trigone and ureteral eminence, or vesical injections of protargol or ichthyol may do good, but the author has found that direct applications of boracic acid or nitrate of silver solutions to the ureteral canal, by means of a special injector he has devised, have given great relief. Failing everything else a vesico-vaginal fistula is the only remedy left. Gonorrhoeal stricture and calculus are the principal causes of ureteritis with obstruction which may be partial or complete. The symptoms are those of simple ureteritis, and, should gradual dilatation fail, cutting the stricture or transplantation of the ureter, and, if high up, nephrectomy or the establishment of a low fistula may be necessary. In one case of calculous obstruction small punctate ulcers were seen around the ureteral orifice, and there was marked bladder inflammation, although the pelvis of the kidney containing calculi was normal in appearance. In complete obstruction due to fibrous stricture the symptoms may be obscure, the kidney becoming completely disorganized without any pronounced signs. Above the stricture dilatation with considernble fibrous thickening of the ureter are secondary changes, while below an inflammatory condition exists extending into the bladder. The symptoms are usually referable to a cystitis with occasional acute attacks of kidney pain and the *malaise* generally accompanying renal affections. Cystoscopically ulceration of the ureteral orifice is found, and the urine collected separately from the ureters gives an excessive deposit of pus on the affected side diagnostic of pyelitic affections. Nephrectomy, gradual dilatation, cystotomy, or the establishment of an artificial fistula are the courses open according to circumstances, and the method of dilating and catheterizing the ureter and washing out the renal pelvis with antiseptic solutions has afforded relief in some instances. The symptoms of complete obstruction due to an impacted stone are frequently obscure, surgical treatment depending upon the position. In tuberculous ureteritis the symptoms are overshadowed by the renal and vesical accompaniments, but colic due to the passage of a shred of tissue may point to involvement of the ureter. On vaginal examination thickening of the ureter, felt as a solid tender cord, is characteristic in cases of any duration, and pressure causes an urgent desire to micturate. The history, cystoscopic examination, and focal kidney symptoms with the finding of the bacilli confirms the diagnosis. Total nephroureterectomy appears to afford the best permanent results as partial resections may allow the remnant to act as an infecting centre.

(254) The Appendages in Uterine Fibroid Disease.

Daniel (*Rev. de Gynéc. et de Chir. Abd.*, January-February, 1903) have studied this question closely. He finds that changes in the ovaries and Fallopian tubes are more frequently associated with fibromyoma of the uterus than is usually supplied; they exist in 59 per cent. When the appendages seem healthy dissection of the interstitial portion of the tube and their examination under the microscope show almost always distinct lesions. But Daniel includes under morbid changes almost the complete pathology of the ovaries and tubes, as he has seen salpingitis, oöphoritis, ovarian and broad ligament tumours, and tubo-ovarian varicocele in cases of uterine fibroid, nor does he admit of causal relations, indeed he implies that the disease of the appendages is often the result of the uterine tumour, especially when the latter has undergone degenerative changes.

(255) Damage to Bladder and Ureter in Pelvic Operations.

Frédéricq (*Bull. de la Soc. Belge de Gynéc et d'Obst't.*, vol. xiii, No. 4, 1903) reports a case of hysterectomy for impacted fibroid on a maiden lady, aged 40, subject to severe haemorrhages. The tumour was extracted from the pelvic cavity with the aid of a screw. The bladder was seen, and its fundus pushed apparently downwards and forwards away from the site of operation. Then an incision was made across what appeared to be a fold of thickened peritoneum. As the cervix was being separated it was found that the "fold" was a diverticulum of the bladder drawn high up with the parietal peritoneum. When the tumour and cervix were completely set free from their pelvic connexions after a troublesome enucleation the operator saw that the right ureter had been cut through. The wound in the bladder—about 4 in. long—was closed by suture, and the cut end of the ureter sewn into the right extremity of the wound. The short vesical segment of the divided ureter was left alone; indeed, it could not be found. Acatheter was kept in the bladder, and the vaginal wound drained with iodoform gauze. The catheter was removed on the eighteenth day. Five months later the patient was in perfect health and comfort.

THERAPEUTICS.

(256) Acne and Sycosis Treated by Roentgen Rays.

W. Allen Pusey (*Jour. Cutaneous and Gen. Urin. Dis.*, May, 1902) quotes Oudin, Barthelemy, and Darier as having shown (*Monatsh. f. prakt. Dermat.*, xxv, 1897) in studies of alopecia in guinea-pigs, produced by Roentgen rays, that the effects on the epithelial structures of the skin are to increase the vitality of the least differentiated skin elements, while the differentiated elements, nails, hairs, and glands undergo retrogressive changes and atrophy. That these atrophic changes in the appendages of the skin occur is abundantly confirmed in the macroscopic changes in skin exposed for a considerable time to the effect of *x* rays. Another property of *x* rays is their inhibitory effect upon the formation of pus in the skin. This property of *x* rays has been shown in the reports of a number of observers, and Pusey has repeatedly seen it illustrated in the cleaning up of ulcerating surfaces exposed to the effects of *x* rays. These two effects of *x* rays, the atrophy of the cutaneous follicles which they produce and the checking of pus formation, he thinks, furnishes good pathological grounds for suggesting *a priori* the use of the agent in the treatment of acne. Pusey's observations on this subject were first made in patients with slight acne, who were under treatment primarily for hypertrichosis. Following this hint he began, in August, 1901, to treat intractable acnes by exposures to *x* rays. He has used the method in a number of cases with good results. The following may serve as an example: Miss A., aged 22, black hair, with fair skin. This patient was put under exposures to *x* rays in July, 1900, for hypertricho-is. On the chin and around the mouth she had an acne simplex, of moderate severity. The lesions were usually indolent, inflammatory papules, without much induration and rarely with the formation of well-marked pustules. During July, August, and September, 1900, this patient was under exposures to *x* rays, with a production of some dermatitis, and she has been under similar treatment at intervals during the last year. After the development of the first erythema her acne disappeared, and she has had no lesions within the last year. In no case thus far that has been under treatment long enough to expect results has Pusey failed to see a beneficial effect from the treatment. If any conclusion may be drawn from so small a group of cases, he thinks, the method is an advance over any other way of treating acne with which he is acquainted. He does not suggest that this method should be used to the exclusion of other aids in the treatment of acne. He has avoided opening pustules and giving the patient antiseptic applications or other local treatment, and has also, as far as possible, avoided giving any internal treatment, in order that the effect of the *x* rays might be as conclusively shown as possible, but there is, of course, no reason why such patients should not have the benefit of other procedures in their treatment, while still having the exposures to *x* rays. The indications to be met by the use of *x* rays are to cause atrophy of the dilated sebaceous follicles and the prevention of pus formation. In no case has there been any undesirable effect on the skin. The skin is left smooth, soft, and clean looking. Pusey has in one or two instances seen pigmentation which persisted for a few weeks, but never any that caused serious annoyance. Occasionally the erythema has been marked for a few days. There is no other affection which Pusey has undertaken to treat with *x* rays that has proved so tractable as acne. The results have been produced more quickly, and with less effect upon the tissues than he had imagined to be possible. All the cases he exposed to a very weak light, using a fairly soft tube, and as weak a current as would illuminate the tube. The treatment has in each case been stopped at the first sign of pigmentation or erythema, and in no case has improvement failed to appear simultaneously with the development of these evidences of the effect of the *x* rays upon the tissues. Pusey further reports a case of sycosis, which was also treated in the same way with perfect success.

(257) Hypodermic Injections of Paraffin.

Moszkowicz (*Wien. klin. Woch.*, January 8th, 1903), who, as a colleague of Gersuny, the originator of paraffin injections for the correction of deformities and other purposes, has had special opportunities of estimating the utility of the method and the permanency of the results, reviews the present state of the subject. Gersuny employed solid paraffin with a melting point between 36°C. and 40°C., which at ordinary temperatures is of the consistence of lard and can be expressed when cold through the finest hypodermic needle. Stein shortly afterwards recommend a paraffin with a melting point of 42°C. or 43°C. on the assumption that paraffins with a melting point below 40°—a temperature which approaches that of the body and might be exceeded in fevers—would melt in the tissues and be absorbed. Eckstein employed paraffin with a melting point of 61°C. without ill-effects, a procedure which has been imitated by others, especially French surgeons. He rejects soft paraffin, such as that employed by Gersuny, on the grounds that (1) it may be absorbed, (2) it may migrate from the site of injection into undesirable localities, and (3) it may produce embolism. Gersuny, on the other hand, finds no sufficient reason for abandoning soft paraffin and discredits the harder varieties. Eckstein's experiments on the absorbability of paraffin when introduced subcutaneously are open to criticism, and are negatived by those of the writer and by clinical experience. The first injection of paraffin was made by Gersuny in May, 1899, to replace the testicle after castration, and there is as yet no sign of absorption. Even when large quantities—for instance, 65 c.cm.—have been injected the result has been permanent. Stein assumes that the paraffin is slowly absorbed and replaced by connective tissue. The writer shows that paraffin in the subcutaneous cellular tissue becomes encapsuled, but is not absorbed. Specimens were obtained both from animals and man more than a year after the injection, in which the paraffin was intact and surrounded by fibrous tissue. The paraffin is not in a coherent mass, but is contained in a network of fibrous tissue lined by flattened cells resembling endothelium. About ten weeks after injection there is a small-celled infiltration round the mass, and, if the injection is made in cicatricial tissue, numerous giant cells. Paraffin, when injected hypodermically in man, is not toxic. Eckstein's second objection is valid, though it has not been shown that the use of harder paraffin would overcome the difficulty. With soft or hard paraffin migration can be obviated by keeping the parts at rest and protected from injury for a fortnight, when the mass is sufficiently fixed by the reaction of the tissues. Probably soft paraffin is eventually more firmly encapsuled than hard, as the meshwork of fibrous tissue penetrates its substance more readily. As regards the danger of embolism, hard paraffin is not safer than soft. Thus, in a case reported by Pfannenstiel pulmonary embolism followed the injection of paraffin with a melting point of 45° C. for incontinence of urine in a woman, and in one published by Leiser, amaurosis—probably from embolism of the arteria centralis retinae—followed the injection of paraffin with a melting point of 43° C., to correct a "saddle-nose." As these hard paraffins must be injected while hot and fluid, it is obvious that embolism may occur at least as readily as with soft paraffin which is injected cold. In 2 cases the writer has seen pulmonary embolism follow the injection of Gersuny's soft paraffin; 30 to 60 c.cm. were injected without special precautions into the perivaginal tissue and the parametria for prolapse of the uterus. In these cases recovery followed, but in one reported by Kofmann, of Odessa, fatal pulmonary embolism ensued on the injection of 10 c cm. of paraffin (the melting-point is not stated) for vaginal prolapse. The only method of avoiding such accidents is to ascertain before injecting that the needle has not entered a vein. But when hard paraffin is used great expedition is required to complete the operation before the mass solidifies, and there is no time to ascertain the position of the needle. The writer first injects Schleich's solution, then inserts the needle and aspirates with a syringe. If blood is withdrawn, the needle is in a vein; if there is no blood the syringe is removed from the needle, which is left *in situ*. Another syringe, previously filled with paraffin, is then fitted into the needle and its contents are injected. Since taking these precautions neither the writer nor Gersuny has met with any case of embolism. White paraffin of the German pharmacopoeia is sterilized by boiling in a porcelain dish and aspirated into the syringe while liquid. It is then allowed to cool and injected cold. The advocates of hard paraffin admit the difficulty of the operation. If it is too hot, scalding results, if too cold, the needle becomes blocked. All sorts of devices have been introduced to obviate these difficulties, but none are satisfactory. In two cases of progressive facial hemiatrophy the writer injected a mixture of one part of soft paraffin and four parts of olive oil.

Paraffin alone becomes of cartilaginous hardness. With paraffin and oil, the latter is slowly absorbed leaving the former as uniformly distributed small nodules and not as a single large hard tumour. With this method repeated injections of small quantities should be made, the effect produced being studied after each. Striking photographs of the improvement brought about by this method are given. Giersuny and the writer have employed paraffin injections in 28 cases of deficient nasal bridge, 3 cases of facial hemiatrophy, incontinence of urine and faeces to support the sphincters, prolapse of the uterus and vagina, and a variety of other conditions with good results. In 2 cases after removal of the synovial membrane for tuberculous disease, about 100 c.cm. of melted paraffin was poured between the articular surfaces to prevent the occurrence of ankylosis. A movable joint resulted in both, though in one some of the paraffin escaped eventually from a fistulous opening.

(258) Climatic Treatment of Tropical Diseases.

F. Plehn (*Arch. f. Schiffs- und Tropen-Hygiene*, November, 1902) discusses the climatic treatment of chronic tropical diseases. The plan to be adopted when the patient's life will be endangered by his remaining in the interior is often difficult to determine. In acute illness no question arises. The dangers of a journey are too great for it to be attempted, and the patient must be treated on the spot, and, if possible, in a hospital. In chronic disease the first method open to the physician is to treat the case in the colony itself either at a hill station or by the sea. Thus patients suffering from an obstinate tendency to malarial relapses or from anaemic and nervous conditions may be sent to the hills, while cases of congestion of the liver or of dysentery do better by the sea. But this form of treatment may be impracticable where there are no suitable sanatoria in the colony or in specially serious or obstinate cases. In such an event the patient may be sent home, although this must not be indiscriminately recommended. The voyage is not in itself dangerous, and in summer the change of climate is often quickly beneficial, but a sudden change to a winter climate is attended by a risk which increases with the age of the patient and the duration of his residence in the tropics. Plehn therefore frequently advises his patients to stop at some health resort on the way home, there to seek recovery, or at least strength to withstand the dangers of an abrupt change. Two such stopping places are specially suggested: the Canary Islands for invalids returning by the Atlantic Ocean, and Egypt for travellers by the Suez Canal. Las Palmas, on the Great Canary Island, is on the direct route of steamers homeward bound from the West Coast of Africa and the East Coast of America; it has a magnificent climate, and there are mountains within easy reach when the plain becomes too hot in spring. At Teneriffe, with its mighty Peak, its peculiar wind conditions, and its relative proximity to Sahara, the climatic conditions are still more varied and favourable. There are convenient arrangements for visitors at a few of the principal places on this island, and in particular a small sanatorium, under English management, at Guimar. On the Great Canary Island the visitor will find good hotels and hospitals, with experienced doctors. In Egypt patients are practically restricted to the neighbourhood of Cairo, for Upper Egypt is difficult of access, and has no doctors. Cairo itself is noisy and dirty, but affords hospital treatment where this is a necessity. At Menahouse and Helouan, in the neighboorhood of Cairo, the patient obtains skilled treatment and pure desert air. Menahouse is near to the Nile, and it can only be recommended when the river is not in flood. Helouan, further from the Nile, has natural mineral springs, which are useful in the treatment of tropical diseases. Plehn has for three years known excellent results to be obtained there in cases of obstinate malaria, and he considers the place admirably suited for invalids from the tropics. It has been suspected in Europe of being within the malarial area, but though some cases occurred at one period the disease appears to have died out.

PATHOLOGY.

(259) Experimental Production of Cancer. At a meeting of the New York Academy of Medicine held on March 5th, 1903 (New York *Med. Record*, March 14th), John C. Hemmeter, of Baltimore, said that he had taken up the study of the experimental production of cancer about three years ago, having been led to do this by receiving a carcinoma from the stomach of a dog. It was remarkable how much surgical damage could be done to the stomach of the dog, and how completely it would be repaired. Silbermann had found that by denuding the gastric mucosa in the neighbourhood of the pylorus, and depriving the animal of haemoglobin by the injection of pyrogallic acid, a permanent lesion could be obtained. This observation he had confirmed, as well as of certain observers to the effect that such an ulcer sometimes became carcinomatous without any effort at inoculation. Continuing his experiments he found that 4 out of 10 dogs so treated were subsequently inoculated successfully with carcinoma, and that, in another series, 5 out of 10 dogs developed carcinoma around the edges of the gastric ulcer by the injection of a cell-free extract of carcinoma. All digestive ferments were just as much catalysers in their action as was colloid platinum—that is, they accelerated or retarded chemical action without entering into the resulting chemical product. The percentage of salt in normal salt solution was theoretically that of the blood plasma, and one would expect that a cancer cell would act like a normal blood cell in the blood plasma or in normal salt solution; however, it had been found that the cancer cell became swollen when so treated. This had led to certain studies in osmotic pressure. These changes in the cancer cell in normal salt solution were very suggestive, because they indicated an inherent tendency to growth. The immediate causes of cell subdivision were as yet unknown. According to Virchow it was formerly held that not only the form of the cells, but their growth, could be affected by external stimuli. Weigert held that tissue growth might result from the removal of the normal inhibition of tissue growth. All of the chemical processes in a cell were conceived to be due to catalytic agents. The growth of a cell necessitated the synthesis of albumin. All of the intracellular and constructive and destructive processes probably went on by virtue of enzymes. Modern bacteriologists had imagined the structure of the cells to be like soap foam, though infinitely more finely subdivided. If normally a cell were made up of myriads of small cells each containing its separate enzymes, then it was easy to understand that very slight damage, causing a breakdown of the partition and a mingling of enzymes which should be kept separate, might cause anarchy in a previously orderly household. This was the chemist's conception of the origin of a malignant neoplasm. Enzymes were affected by heat, a fact which was of interest in connexion with his experiments in the production of cancer, for he had found that after heating the solutions to be inoculated up to 60° C., he could no longer succeed in artificially producing cancer. Somewhere between the cavity of the stomach and the intestines the peptones and albumoses must be reconstructed again into albumin in order to be available for the uses of the system, and it was probable that this was affected by the same enzymes which broke them down. It should be remembered that the end products of digestion were peptones and albumoses, and that these substances were not found in the blood; indeed, peptone was a poison and if injected into the jugular vein of an animal would cause the death of that animal. This reversibility of the enzymes just referred to, although not fully demonstrated, was probably a fact, and it probably afforded a self-governing factor in cell growth. In Virchow's great work on cellular pathology three modes of extension of cancer were recognized, namely (1) immediate extension, (2) dissemination by metastasis, and (3) a transference by means of liquids which possessed the power of creating an infection, thus causing the individual parts to form a reproduction of the same mass which was originally present. The speaker thought it possible that in this third mode of extension Virchow saw the possibility of the dissemination by means of catalysis or the action of enzymes. It was possible that the serum contained a substance capable of destroying cancer cells unless the latter were present in inordinate quantities. If this were true, it was most important to discover a means of augmenting this natural defence. At this point the speaker digressed to say that while the results of his experiments had presented the histological appearance of cancer, he did not wish to be quoted at the present time as claiming that he had actually produced cancer experimentally. He had certainly produced a histological condition closely resembling carcinoma of the stomach, but it was possible that if the animal had been kept alive longer this abnormal proliferation would have disappeared, or at least would not have continued to grow.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(260) Uricaemic Pseudo-meningitis.
G. Carrière (*Arch. Gén. de Méd.*, March 17th, 1903) gives full clinical report and pathological details of two cases of pseudo-meningitis due to uric acid. In both cases the symptoms and signs were identical with those of meningitis: dissociation of pulse-rate and temperature; inequality and irregularity of the pulse; respiratory pauses; convulsions, delirium, and semi-comatose condition; pupil changes; cutaneous hyperaesthesia; exaggarated reflexes; signs of Kering and Babinski: vomiting and constipation. In the first case, a boy aged 6½ years, on the day after the first symptoms manifested themselves, 675 c.cm. of urine were passed containing 0.81 per cent. of urea and 0.195 per cent. of uric acid. The aqueous extract of the faeces was toxic in 8-gram doses—that is, possessed the normal toxicity only. Blood examination showed 5,200,000 red corpuscles; 3,650 white, formed by 20 per cent. lymphocytes, 70 per cent. polynuclears, 10 per cent. mononuclears, 2 per cent. eosinophiles; 35 c.cm. of a limpid fluid with granular flakes in suspension were withdrawn by lumbar puncture. This proved sterile by cultural and inoculation experiments. Microscopically, neither red blood corpuscles nor leucocytes were present, but the granular flakes proved to be crystals of acid sodium urate. Typical crystals were obtained from the blood also by Garrod's method. On the fourth day, when the symptoms were much abated, the cerebro-spinal fluid proved to be free from acid sodium urate, and the blood no longer gave Garrod's reaction. In the second case, a male of 22½ months the symptoms of meningitis presented themselves. On the third day of the attack 175 c.cm. of urine were passed, containing 4.15 grams of urea, 1.70 gram of uric acid. The blood count showed 5,140,000 red cells; 7,641 leucocytes, made up of 66 per cent. polynuclears, 20 per cent. lymphocytes, 14 per cent. mononuclears; 30 c.cm. of cerebro-spinal fluid were withdrawn by lumbar puncture, which proved sterile by culture and inoculation. Suspended through the clear fluid were some white flocculent masses of crystals of acid sodium urate. Examination of the blood gave similar crystals. On the fifth day the symptoms had much subsided, and the cerebro-spinal fluid and blood were free from acid sodium urate. The general treatment for uricaemia was employed, and piperazine was administered. Both cases made a good recovery. The author points out that, without the assistance of laboratory methods, the diagnosis of similar cases is impossible; for the examination of the cerebro-spinal fluid excluded tuberculous meningitis, and the normal toxicity of the faeces that of intestinal auto-intoxication. He relies upon the following points in the diagnosis: (1) The presence of an hereditary uric acid tendency, and the absence of a history of tubercle: (2) the appearance of the syndrome of meningitis in a child who has previously shown uric acid symptoms; (3) the sharp and intensely sudden onset: (4) the absence of all symptoms capable of explaining the appearances of meningitis, such as auto-intoxication, worms, dentition, etc.; (5) the careful examination of the urine, cerebro-spinal fluid, and blood. He concludes by asserting his ignorance of the frequency of these cases; but, for his own part, in over 500 examinations of cerebro-spinal fluid obtained by lumbar puncture since the first publication of Quincke to the present time, he has only noted the presence of acid sodium urate on three occasions.

(261) The Joint Affections of Haemophilia.
Vulliet (*Rev. Méd. de la Suisse Rom.*, December 20th, 1902) records three cases of haemophilic joint affections occurring among males of the same family. He points out the importance of the differential diagnosis of tuberculous disease and this affection, when any operative interference is contemplated. He recalls the researches of König, who subdivides the affection into the three stages of (1) haemarthosis, occurring without appreciable injury, with slow absorption, complete disappearance, but with repeated recurrence; (2) reactionary synovitis, characterized by changes in the synovial membrane and cartilage, consisting of thickening, fibrinous deposit, villous growths, and foreign bodies; (3) cicatrization, accompanied by partial or complete ankylosis, often in faulty position with contractions or dislocations. The knee-joint is most often affected, and it especially is prone to suffer the alterations of the three stages. The differential diagnosis between haemophilic and tuberculous joints is often impossible from the physical signs alone. The joint in the first stage and in hydrops tuberculosis presents the same appearance, but in the former the onset is more sudden, the pain more acute, and walking is impossible. During the second stage the general condition remained unchanged in haemophilia. In tuberculous disease there is marked impairment. Further, the thickening of the capsule and enlargement of bone is less marked in haemophilia. In the third stage the conditions are identical. The most characteristic feature in haemophilia is the multiplicity of the joints affected; for, though one joint mainly suffers, others are frequently involved to a lesser degree. The joint trouble may be the sole manifestation of haemophilia. With regard to treatment, he advises pressure exerted on the immobilized joint. One interference only is justifiable, namely, puncture of the joints; incision is attended with almost certain death. The author quotes Lombard, who has recently ascribed haemophilia to a variation in the cryoscopic properties of the blood, and who suggests that aqueous solutions of gelatine should be given by the mouth as a remedy; and he concludes by suggesting that trial should be made by injecting the joint itself with gelatine.

(262) The Contagiousness (?) of Rickets.
Amantini (*Gazz. degli Osped.*, March 22nd, 1903) reports the following case as a possible example of contagion in rickets: A healthy woman, living in the country in a salubrious district, gave birth to eight children. The first child died two days after birth. The second and third child were healthy and showed no signs of rickets. Just before the birth of the fourth child a neighbour lost a child from rickets and offered the clothes and cradle of the dead child to the mother of the expected infant. The clothes and cradle were accepted, and the fourth child when it arrived was clothed with the aforesaid garments and put into the cradle. This child developed rickets at eight months, from which it eventually died. A fifth child also developed rickets and died. The conditions as to feeding and living had been the same all the time. The mother nursed all the children. The cradle and clothes were burnt, and the two succeeding children born were free from rickets. The father had removed to another house during the birth of these two later children. In 1901 he returned to the old home, and the eighth child born there developed rickets. Whether infection could cling about a house for so long a period and then prove active is perhaps doubtful, and only a series of cases and careful examination could settle the point.

SURGERY.

(263) A New Method of Ligaturing Arteries.
Dawbarn (*Ann. of Surg.*, January, 1903) points out that the surgeon in tying a large divided artery gently so as just to stop the bleeding, in accordance with the admitted principles of modern teaching, runs a risk—regarded by the author as a very real one—that the forcible impact of the blood by its incessant action may in a few hours roll or push the ligature off the end of the vessel on to the end of the stump. The following are the steps taken by the author to prevent this accident in amputation of the leg: The bones having been sawn, there remain perhaps a dozen or more artery clamps upon the face of the stump. All the clamped vessels with the exception of the three main arteries may be twisted or tied. The three main arteries, as the chief source of danger, need special attention. Each clamp is made to include in its bite the two veins with the artery. These are drawn upon to make them tense, while with a semi-circular needle armed with chromicized catgut, a purse-string suture is made to surround them. The needle enters and leaves the surrounding soft parts not more than three or four times in completing the circle, and goes as close to the vascular sheath as seems wise, at a depth of about 2 cm. from the clamped ends. Now the catgut ligature is tied gently, the first half of a friction knot being used, the ligature ends are caught together with artery forceps, and the forceps fixed on the ends of the vessels removed. This procedure having been carried out in all the large vessels—anterior and posterior, tibial and peroneal—the tourniquet is removed, and the surgeon can now observe whether the three ligatures are tight enough. If so, the knot should be completed; but if, on the other hand, some one vessel bleeds a little, it is an easy matter to tighten the

first half of the knot before completing it by making the second half. The "friction knot" is what is commonly known in this country as "the surgeon's knot," which differs from the ordinary "granny" or the "reef-knot" by two turns instead of one turn of the ligature being made at the first loop.

(264) Laryngeal Cancer and its Lymphatic Extension.

Cuneo (*Gazz. des Hôp.* vol. lxxv., p. 1385) divides the lymphatics of the larynx into two groups—a supraglottic group, including those from the epiglottis, the aryteno-epiglottic folds, the superior vocal cords, and the laryngeal ventricles; and a subglottic group. In the intermediate zone between these the lymphatics are fewer, this zone corresponding to the position of the true vocal cords, injection of which usually shows it to be connected with the supraglottic group. Posteriorly the lymphatics of one side communicate with those of the other, but not anteriorly. The channels of the supraglottic group end in the highest glands of the internal jugular chain; those from the subglottic are in two groups—anterior or supracricoid, and posterior or subcricoid. The anterior pierce the crico-thyroid membrane and connect with three sets of glands—prelaryngeal between the two crico-thyroid muscles, prethyroid on the thyroid isthmus, and pretracheal above the sternal notch; the trunks from these groups communicate with the lower glands of the sterno-mastoid chain. The posterior or subcricoid lymphatics communicate with glands lying alongside the recurrent laryngeal nerve, and the trunks from these end also in the lower sterno-mastoid glands. Laryngeal cancer is divisible into supraglottic, subglottic, glottic, and diffuse. The supraglottic growths usually invade the pharynx, and tend to make their way through the thyro-hyoid membrane posteriorly. Subglottic cancer usually extends toward the trachea. Cancer of the true vocal cords is frequent; it extends to the opposite cord, and then upwards to the supraglottic region. Except for epithelioma of the epiglottis and arytenoid area, growths remain confined to one side for a considerable time; their principal direction of extension is posterior. This is explained by the arrangement of the lymphatics. Extension to the glands is rare, earliest in the supraglottic growths. In the latter the highest glands of the sterno-mastoid group are involved, in subglottic the lower glands of the same group. The tendency of cancer of the larynx to remain localized to one side has an important bearing on the justifiability of excision of half the larynx.

(265) The Prevention of Chloroform Accidents.

Feilchenfeld (*Centralbl. f. Chir.*, No. 7, 1903), who about three years ago first advocated the frequent administration of tincture of strophanthus in 5-drop doses for some two or three days before an operation under chloroform, with the object of strengthening the heart and of counteracting the effects of prolonged mental excitement and anxiety, publishes some further and more detailed notes on this subject. He insists on the importance of frequent examination of the heart before the administration of chloroform, even though this organ at the primary examination might seem to be quite sound. In the case of a strong and robust man preliminary strengthening of the heart is quite unnecessary. In cases of nervous irritability of the heart indicated by dullness of the cardiac sounds, by a somewhat diffused and indistinct apex beat, and by a small and very rapid pulse, the author would give small doses (not more than 5 drops) of tincture of strophanthus and tincture of digitalis three times daily for some days before the time fixed for the operation. The good effects of such treatment are shown by a reduced pulse-rate, less mental depression and anxiety, improved appetite, and good sleep. The pulse-rate, it is stated, should be reduced to 80 at the highest before a subject of cardiac irritability can be placed under chloroform without risk. In a second group of cases in which there is distinct evidence of muscular degeneration varying from slight forms of muscular weakness to grave myocarditis, the author would endeavour to fortify the flagging heart and to improve the rapid and irregular pulse, and, with such object in view, would substitute for the first described method of treatment warm baths, carbonic acid baths, and injections of strychnine, the administration of digitalis being continued in the form of infusion. In cases of this kind ether should be used as the anaesthetic in preference to chloroform. The most difficult cases to deal with are those of hypertrophy of the cardiac muscles. These need careful prophylactic treatment, and the action of the anaesthetic should, the author states, be assisted by an injection of morphine at the seat of operation. In conclusion, it is pointed out that nothing can be done by preliminary treatment to prevent the great danger attending the administration of chloroform in cases of severe myocarditis.

(266) Fracture of the Metatarsus the Result of Marching.

Caccia (*Il Policlin.*, January, 1903) has reported twelve cases of fracture of a metatarsal bone (usually the second) in young soldiers after a more or less prolonged march. He says the accident is more common than is generally supposed. Swellings of the dorsum of the foot which are put down to periostitis are not infrequently really fractures of the metatarsus. It generally happens during the first year of military service, either as the result of ordinary marching in full equipment or from jumping or running; it is more likely to occur if the foot is unduly arched. Of the author's cases, six happened during marching, three in jumping, and three in running. Tripping against a stone or over a gully are common exciting causes. Fracture takes place chiefly in the second metatarsal at the junction of the anterior and middle third. Probably the second is more often fractured because it is longer and more slender than the other metatarsal bones; it is also more firmly fixed at the base, and by a transverse rather than an oblique articulation. The symptoms are pain in the dorsum of the foot (which, however, does not prevent walking), followed two or three hours later by swelling and inability to walk. Ecchymosis of the phalanx is a later and important sign. Crepitation and increased mobility may be made out, and of course radiography is useful if it is available, but it is quite possible to make the diagnosis without that. If recognized and adequately treated by rest in bed, the foot gets well in two or three weeks. In view of these cases it may be well to remember that a high arch may be as bad for the young soldier as flat foot.

MIDWIFERY AND DISEASES OF WOMEN.

(267) No Essential Fever of Pregnancy.

Pinard (*Ann. de Gynéc. et d'Obstét.*, March, 1903) absolutely denies the existence of the fever of pregnancy described by Burns, of Glasgow, in 1809. Tarnier and Budin admitted that fevers in pregnant women offered no characteristic symptoms, they must therefore be most probably multiple. Vinay in 1894 showed how modern experience had proved that pregnancy plays an entirely secondary share in the production of the fevers with which it is sometimes associated. Pinard insists that there is distinct danger in maintaining a belief in an essential fever of pregnancy. It may cause the medical attendant to overlook many conditions little known in the days of Burns, such as appendicitis, torsion of ovarian tumours, and dilated tubes, cholecystitis and other diseases, which often complicate pregnancy, and involve rises of temperature. When such a rise occurs, the cause, which is never the pregnancy as such, should be sought for. In the course of 1902 Pinard observed many "temperatures" in pregnant women under his care in the Clinique Baudelocque, many of the patients were nearing term, but some were in very early pregnancy. One woman had distinct fever in the fourth month, and the cause was not clear, apparently there was no local tenderness. An exploratory incision was made, and an ovary full of pus was detected and removed. "That's what her 'fever of pregnancy' meant," concludes Pinard.

(268) The Treatment of Skull Depression in the Newborn.

Vicarelli (*Giorn. dell R. Acc. di Med. Torino*, January, 1903) discusses the above subject and reports 7 cases treated by him, also certain experiments made on the dead fetus and accurate models of various types of contracted pelvis. The prognosis depends largely on the extent and degree of the injury and on the resisting power of the child, but if untreated it should be somewhat reserved spoon-shaped depressions, because they are usually associated with fracture, and depressions in the frontal bone are the most unfavourable. Those depressions which take the form of grooves are, on the other hand, more favourable. As showing the gravity of spoon-shaped depressions, out of Schroeder's 65 cases 32 died as a more or less direct result of the lesion. The author thinks that attempts should be made to remedy these deformities as early as possible, and his method is to shave and disinfect the scalp, excise the periosteum, apply the point of a kind of trephine (*tirafondi*) to

the centre of the depression, and, having raised the depressed parts, suture and bandage. It is not necessary to perforate the inner table of the skull; no anaesthetic is necessary. Photographs of the author's cases are given before and after operation, most of the depressions occurred on the parietal bones. Where the depression was in the centre of the parietal bone no trace of fracture was to be seen, but if it was situated on the periphery, and affected the temporo-frontal region, fracture was almost always present, with effusion of blood from rupture of the middle meningeal artery. In experimenting it was found that a force of from 20 to 54 kg. was required to push or pull an average fetal head through an average contracted pelvis.

(269) Early Menstruation.

C. Wischmann (*Norsk. Mag. f. Laeg.*, April, 1903) relates the case of a child aged 18 months, in which twelve distinct menstrual periods occurred during sixteen months. Each lasted from five to ten days. The child was neither rickety or hydrocephalic. The mammae were voluminous and glandular, the mons veneris was well marked and covered with long light coloured hair. Hair was also present over the labia majora, on the mammary areolae, and in the axillae. The mother's menstrual history was normal, and there were only two other children. All cases of early menstruation may be placed in two main groups: (1) When the prognosis is doubtful from the presence of rickets, hydrocephalus, tubercle, or ovarian tumours; (2) when the sexual instinct is fully manifested. In the latter the parents should always be informed of the possibility of coitus and gravidity.

(270) Stenosis of Cervix from Chancre: Dystocia.

Wayer (*Wien. med. Presse*, December 28th, 1902) observed a case of lingering labour in a woman aged 26; the pains had continued for four days. The margin of the os externum was very indurated; the cervix presented a pearly appearance when the speculum was introduced. Incisions were necessary; then the labour was concluded by aid of the forceps. The chancre had developed three and a-half years before Wayer attended the case: the family doctor detected an ulcer and prescribed general remedies. Menstruation became very painful. The cicatricial tissue developed when a chancre of the cervix heals is very tough, and has been known before the date of Wayer's case to cause dystocia. Fortunately it is very rare. Out of all carefully-observed cases of hard sore in the female, not 6 5 per cent., according to Neumann, are situated on the cervix.

(271) Gonorrhoeal Vulvo-vaginitis in Children.

Woods (*Amer. Journ. of Med. Sci.*, February, 1903) from his own observations and from cases reported considers that most instances of vulvo-vaginitis in children are gonorrhoeal in nature, and therefore much more dangerous than is generally supposed. The importance of local treatment, care of the eyes, and prevention of infection to others, as well as of the medico-legal aspect that may arise cannot be overestimated. While there is very little doubt of the gonorrhoeal origin of most of the reported cases, the mere finding of diplococci in the vaginal discharge is not positive evidence, since nothing short of cultivation and inoculation of the gonococci can be so considered. Among other causes of vulvo-vaginitis, filth, the exanthemata, rape, masturbation, injury, oxyurides, and pathogenic bacteria may be enumerated. It is, however, a good rule to consider all cases infectious until their non-infectious character has been microscopically determined. Gonorrhoeal infection may be contracted from towels, baths, sheets, etc., the prominent and unprotected vulva in children apparently being easily accessible to the gonococci. Symptomatically the vulva is bathed in a yellowish thick discharge exuding from the vagina on pressure, and the parts are swollen, red, and painful. Constitutional symptoms may be marked and there is slight feverishness. Painful micturition, although not constant, is often present when the urethra is involved. Ophthalmia, cardiac lesions, and arthritis may result, but the most dangerous complication is acute peritonitis caused by the ascent of the infection through the uterus and tubes to the peritoneum, and in some instances purulent salpingits has resulted. Sanger is of opinion that unexplained pelvic disease in virgins may generally be referred back to a quiescent infantile salpingitis originating from a vulvo-vaginitis, a like origin accounting for many of the deformed and underdeveloped uteri with associated dysmenorrhoea. Treatment consists in cleanliness, proper hygiene, regulation of the bowels, and quinine or iodide of iron internally, and local douching with a solution of potassium permanganate twice daily followed by boric acid powder blown into the vulva and vagina. The greatest care should be taken to prevent ophthalmia by confining the hands and washing the eyes in a bichloride of mercury solution every morning. Notes are given of five cases which in the author's opinion were gonorrhoeal in origin, although in two only was the infection proved by culture, one being uncertain, one negative, and no culture being made in the fifth.

THERAPEUTICS.

(272) The Treatment of Itching.

At a meeting of the Society of Alumni of Bellevue Hospital, New York, held on March 4th, 1903 (*Medical News*, March 21st), E. B. Bronson presented a paper on this subject. He said that two facts in the pathogenesis of itching were to be considered: hyperaesthesia, and the surcharge of nervous excitement. In a large proportion of cases the treatment must be based upon general principles. It was natural for every animal to attempt to relieve itching by scratching. How was this relief brought about? The act of scratching tended to divert the engorgement of the skin into other channels, and for the instant the accumulated nerve excitement was dissipated. However, the resulting hyperaemia would probably do more than offset the temporary diversion which the scratching afforded, and, as a result, the nervous excitement was increased. It was possible to secure the same amount of relief in safer ways. All irritating contacts should be scrupulously avoided, such as from coarse clothing, excessive dryness or scaliness of the skin, sudden changes of temperature. Ichthyol, resorcin, tar, benzoin, and sulphur preparations would relieve the hyperaemia, and had a decidedly healing effect on catarrhal inflammation, but they were not true antipruritics. Firm pressure on the itching surface would sometimes give almost as much relief as scratching. Vinegar lotion, lemon juice, eau de cologne, camphor and chloroform in various solutions all acted in this way by producing more or less stinging or smarting of the skin, thus substituting a more definite sensation for the vague one of itching. Menthol relieved itching as it relieved pain by substituting for these sensations a disturbance of the temperature sense, and producing a sensation of cold. This drug might be used in ointment, in oily solution, or as a dusting powder, but it was most effective in 2 per cent. alcoholic solution. It could be used very freely if there was not too much inflammation. Thymol and chloroform were useful adjuvants, particularly in urticaria. Hot water, when applied for a certain length of time, was decidedly sedative, and was especially useful in itching of the genitals. He had not found the use of opium, belladonna, stramonium, and others of the same class of much benefit. The action of cocaine and orthoform on the intact epidermis was nil. Tannic acid was useful when used in connexion with menthol. It was the property of certain antiseptics, such as carbolic acid and mercuric chloride to retard vital action. The concentrated solutions of these substances produced decided anaesthesia of the skin. Of all local antipruritics carbolic acid was the most reliable, and had the most lasting effect. The danger of absorption and carbolic acid poisoning was not very great if ordinary caution were exercised. The danger of injury to the skin from its corrosive action was greater. This action could be neutralized to some extent by the addition of alcohol, but he had found linseed oil the best corrective. The following prescription was well adapted for use over limited areas of pruritus, but should not be used oftener than once a day: Liquor potassae, 1 drachm; carbolic acid, 2 drachms; linseed oil, 1 oz.; oil of verbena, 2 minims. The best time to apply it was at night. Apart from general medication addressed to the special requirements of individual cases, there was not much to be said about internal medication in cases of pruritus. The condition could be temporarily relieved by narcotics, but when the narcosis passed off the itching was apt to be worse than before. Antipyrin had been used with some success, but it had to be employed in large doses, and it often gave rise to rashes. Such general sedatives as the bromides were often useful, and at times almost indispensable. In urticaria there was an indication for motor depressants to overcome the spastic contraction of the skin muscles. Atropine was a recognized remedy when given in large doses, but he would not often resort to it. The same was true of pilocarpin. In chronic

toxic urticaria there was an indication for antiseptics, such as creosote and the salicylates. Where the urticaria followed an error of diet or the administration of some special drug, speedy relief usually followed a brisk purgative. In cases of senile pruritus associated with eczema the attention should be mainly directed to the eczema, but when there was no eczema harsher methods of treatment were indicated, such as vigorous rubbing of the skin, faradization with the metallic brush, and the internal use of cannabis indica. Strychnine was also an appropriate remedy. For those subject to winter pruritus the diet should be carefully regulated and the parts kept warmly covered. Points of excoriation should be covered with some healing salve, and some soothing ointment, such as cold cream, should be used after the bath. Bath pruritus was hard to treat. A superfatted soap should be used in the bath, and after the bath the skin should be lightly dried with the softest towels. In the localized forms of pruritus occurring about the anus underlying constitutional conditions should be carefully sought for. When inflammation was also present this must first be controlled, and then a more efficient antipruritic used. Cocaine was sometimes indispensable when the itching was intense, but it was not a good remedy for prolonged use, and was of value only on the mucous membranes or on abraded surfaces. The same was true of orthoform. Applications of hot water were sometimes very beneficial, the temperature of the water being gradually raised to 110° F. The sovereign remedy was carbolic acid. A single application of the strong oil already mentioned would sometimes give complete relief for the whole night. The principal seat of the itching in these cases was just at the junction of the mucous membrane and skin, and the application should be confined to this portion. In the milder forms a 5 per cent. solution of menthol in oil or a watery solution of ichthyol, 1 drachm to the ounce, would be found of benefit. J. W. S. Gouley said that about eighteen years ago an old physician had told him that it was his practice to relieve the burning and itching sensation of acute erysipelas by the application of lemon juice and vinegar. The speaker said that he had accordingly suggested the use of a 10 per cent. solution of glacial acetic acid on the erysipelas cases in Bellevue Hospital, and the reports from the internes extending over many years were to the effect that this application gave very marked relief in the majority of cases.

(273) Yeast in the Treatment of Pulmonary Affections.

Jean Lardier (*Thèse de Paris*, 1902) gives a very favourable account of the use of yeast in pulmonary troubles (mainly bronchitic), especially among elderly patients. Since Brocq (1899) gave a full list and description of patients cured of furunculosis by the systematic taking of brewers' yeast, the following troubles have also been shown to yield to its administration both locally and internally, namely, acneiform and phlegmonous dermatosis, folliculitis and cutaneous sycosis, and vaginitis of gonorrhoeal or septic origin. In 1899, Couturieux prepared an extract from yeast (levurine), and showed that it gave results similar to fresh yeast, though the latter was the most certain and effective to use as compared with the above and other "extracts." Lardier gives the dose of fresh yeast as from 5 to 20 grams, given in water with a little sugar according to taste. This is used internally, and with less water (so as to form a paste) externally. It can also be locally injected into boils. Yeast has been given in various catarrhal inflammatory affections. The author's special list of observations include 15 cases of pulmonary trouble distributed as follows: 4 cases of chronic bronchitis in patients of from 68 to 86 years of age, 3 cases of chronic bronchitis and emphysema in patients of from 71 to 79 years, 4 cases of acute bronchitis in patients of from 70 to 75 years, and 4 cases of lobar pneumonia. Of the 15 patients, 6 were males and 9 females. The results were very constant and gratifying in all the cases of bronchitis, and in those of pneumonia there was also some improvement to record. Expectoration was lessened, coughing and distress were alleviated, and the bronchial catarrh diminished. The author believes that the drug acts by producing as the result of the growth of the yeast fungi (in the liquid or paste administered) a substance which is inimical to the growth of other lowly organisms such as the various streptococci and staphylococci. Hence its demonstrated usefulness in furunculosis and gonorrhoeal vaginitis, as also in erysipelas and other forms of cellulitis. It is now also shown above to be beneficial in the catarrhal inflammations of the lungs, especially in elderly subjects.

(274) Iodism and Hyperchlorhydria.

Bjelogolowy (*Russ. Wratch.*, No. 44, 1902) calls attention to the relation which exists between iodism and increased secretion of hydrochloric acid. In 16 patients he observed rapid iodism after the administration of small doses of potassium iodide. In these cases the free hydrochloric acid was present in abnormally large quantities. Probably the hydrochloric acid liberated the free iodine, which in its nascent form became more active. The gastric juice always gave the starch-iodine reaction, which was neither removed by prolonged boiling or by the addition of soda.

PATHOLOGY.

(275) The Etiology of Acne Vulgaris.

T. Caspar Gilchrist (*Journ. Cut. Dis.*, March, 1903) gives details of an elaborate research into the etiology of acne vulgaris made in the Pathological Laboratory of the Johns Hopkins Hospital, Baltimore. He summarizes the results as follows: (1) Definite bacilli, which he has already named bacillus acnes, were present in all smears taken from 240 typical acne lesions from 86 patients. (2) Pure cultures of bacillus acnes were obtained from 62 lesions (chiefly acne nodules) from 29 patients, 82 cultures being sterile (about 70 of these were sterile because the proper media were not used), and the remainder showed either a growth of bacillus acnes mixed with staphylococcus pyogenes or epidermis albus, or the latter organism was in pure culture. (3) Sections of an excised comedo, of an early acne papule, of an acne pustule, and of five acne nodules from 6 patients demonstrated the stages of the disease. The sections from the acne nodules showed quite profound changes, extending deep into the corium, surrounding in some nodules a magnified and markedly hypertrophied follicle. The lesion was made up of masses of cells, many giant cells, plasma cells, which were very numerous in some nodules, but not in others, their place being taken by lymphoid cells or connective tissue cells. Very many polymorphonuclear cells were also present and were massed in some sections so as to form miliary abscesses; numerous phagocytes were seen, and also many pigment cells, especially in one nodule where they were in large numbers. The blood vessels were numerous and dilated. In one section a large group of bacilli acnes were situated deep in the corium beneath the follicle, but inmost of the section only a few small clumps or scattered bacilli were found. Some of the giant cells contained bacilli. (4) Bacilli acnes have been shown to be pathogenic in mice and guinea-pigs. (5) Bacillus acnes is present as a short, thick bacillus in the smears, but in culture it often becomes much longer and thicker; and in old cultures assumes distinct branching forms. It grows when planted *en masse* on acid glycerine agar, and forms a pultaceous, easily-movable mass. (6) By the clumping of bacillus acnes by the serums of patients affected with acne vulgaris it is to be inferred that a specific toxic body derived from the presence of the bacilli in the tissues is absorbed by the blood, resulting in the production of a specific agglutinin. Gilchrist, therefore, thinks it may be taken as definitively proved that the bacillus acnes is the primary cause of acne vulgaris. The organism is always present in the lesions; pure cultures have been obtained directly from the lesions many times (62); it is pathogenic in animals, and it has been demonstrated that the blood serum of acne patients agglutinates these bacilli. Gilchrist suggests that we may be taking a wrong view in considering the anaemia, constipation, headache, coated tongue, etc., as always predisposing causes of acne vulgaris, whereas these symptoms may be the result of the continued absorption of toxins from the enormous numbers of bacilli present in all the lesions. As far as the principle is concerned the disease can be compared with erysipelas. In erysipelas the streptococcus pyogenes invades the skin, an acute local inflammatory process is set up, and the toxin is absorbed rapidly into the blood, which causes the constitutional symptoms—namely, fever, headache, coated tongue, constipation, loss of appetite, etc. Gilchrist does not say that these symptoms are the predisposing causes of erysipelas, but that they are the results of the disease.

Erratum.—In paragraph 242 headed Massage of the Heart, published in the Epitome on April 11th, the word "months" in the middle column, line 28 from the bottom, should read "minutes."

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(276) Cryoscopy of the Urine in Infectious Disease.

TERESITA RUATA (*Annali della Facoltà di Medicina, Università di Perugia*, 1901. Vol. i, Fascicoli 3rd and 4th), says: The name "cryoscopy" is due to Raoult whose method of determining the molecular weight of dissolved substances is founded on the observation of the freezing points of their solutions. The cryoscopic value of a liquid [spoken of for the sake of brevity as Δ] is defined as the freezing point of the liquid. In pathological inquiries it is usually a minus quantity, but throughout this paper it is said to rise when it increases numerically and to fall when it diminishes numerically, the minus sign being neglected. The best cryoscopic apparatus is Beckmann's, which consists of a test tube placed in a refrigerating mixture of ice and sodium chloride and containing a thermometer divided into hundredths of a degree, and a platinum agitator which keeps the solution homogeneous and hinders it from undergoing irregular concentration. The first application of cryoscopy to physiological questions was Dresers's investigation of the freezing point of normal human blood. Later Koranyl based his theory of renal secretion on cryoscopic researches, and stated that "The glomeruli filter off a pure, or almost pure, solution of sodium chloride which is concentrated in the canaliculi by the reabsorption of water, and is enriched by materials extracted from the blood by molecular exchange in such a way that, for every molecule passing from the blood into the urine, one molecule of sodium chloride passes from the canaliculi into the blood." This theory and the cryoscopic observations supporting it were denied by Claude and Balthazard. Koranyl also proved that in health the Δ of the urine of an individual leading a life regular in all respects is almost constant, and suggested that where it varies from the normal we ought to suspect the existence of disease. It is at present impossible to explain all cryoscopic variations, but enough has been observed to assure us that an alteration in the Δ of the blood or urine represents an alteration in the functions of the different organs, and especially in the renal functions. Cryoscopic changes show in the simplest form the increased concentration of the blood and the lessened concentration of the urine in deficient renal depuration—as, for instance, in nephritis. This is very well marked in interstitial nephritis at the time of onset of uraemic symptoms. In cardiac affections cryoscopy has been employed chiefly by Koranyl, Claude, and Balthazard, and it is claimed that in such cases, while compensation is adequate, cryoscopy gives only normal results, but that the effects of fatigue or excess are shown by it before they can be appreciated by clinical methods. Cryoscopy also shows clearly the results of treatment by digitalis, theobromine, and other drugs. In enteric Waldvogel found that the Δ of the blood serum was much higher than normal, even reaching to — 1·68°, the maximum change being found during convalescence. He stated that where this change did not take place, the disease always led to death. He attributed the change to the presence of antitoxins or of specific agglutinins in the blood. But Rumpel stated that Waldvogel's experiments were conducted with very defective apparatus, and were otherwise open to grave objections. Similar experiments carried out by Rumpel gave negative results; he found the Δ of the blood serum to be unaltered in enteric. In tuberculous meningitis Widal states that the Δ of the cerebro-spinal fluid varies from 0.48° to 0.55°. In health and in diseases other than tuberculous meningitis it varies from 0.62° to 0.75°. In eclampsia gravidarum, contrary to what might have been expected, no cryoscopic change occurs in the blood serum. Cryoscopy has also been used as a guide to the desirability of removing or leaving a diseased kidney, the removal being said to be contra-indicated when the Δ of the blood serum is appreciably raised. Finally, cryoscopy may be applied to determine whether a person whose body is found in water has died before or after submersion. In most of the above classes of inquiry Ruata does not raise definitely the question whether cryoscopic investigation gives results which cannot be more simply obtained. The author then describes her own cryoscopic observations on 23 cases of pneumonia and 3 cases of enteric. The urine was examined at first daily, afterwards on alternate days, the blood serum less often. Beckmann's apparatus was used, and the results were compared throughout with those derived from a systematic quantitative and qualitative examination of the urine, and an occasional microscopic examination. Notes are given of the condition of patients on admission and of the changes in their state from day to day. It is claimed that on the whole, though exceptions are noted, the records of cases of pneumonia establish the following points, as well as others of less importance: (1) The specific gravity and the Δ of the urine were closely related, and this relation was not altogether accounted for by the phosphates, chlorides, and urea. (2) The Δ of the urine was low at the onset of the disease, rose for a few days, reaching a maximum at or soon after the crisis, and fell again when resolution was well established. (3) Free action of the bowels had a marked influence in lowering the Δ of the urine. (4) Profuse sweats slightly increased the Δ of the urine. (5) The Δ of the urine was lowered by extension of the disease, and much lowered by considerable pleural effusion. (6) When renal difficulties were shown by abundant albumen, casts, etc., the Δ of the urine fell. (7) The Δ of the blood serum was lower than normal during the stages of infiltration and hepatization, and rose when resolution was fully established. The greater the extent of lung involved the greater the lowering of the Δ of the blood. (8) In fatal and in other severe cases the Δ of the urine was low, and conversely the prognosis was good in proportion to the slightness of the fall in the Δ of the urine. Somewhat similar observations are made on the 3 cases of enteric, but the author considers that no valuable deduction can be made from so small a number of cases.

(277) Iritis as a Complication of Mumps.

A. COLLOMB (*Rev. Méd. de la Suisse Rom.*, January 20th, 1903) states that the recognized ophthalmic complications of mumps are dacryoadenitis and optic neuritis with amblyopia. Iritis is so rare that its connexion with parotitis is not mentioned in many textbooks. In June, 1902, a previously healthy, muscular man, aged 29, consulted the writer. He had never had syphilis, gonorrhoea, or rheumatism. Three weeks previously his stomach had been out of order, and immediately afterwards the right eye became red and the cheeks swollen. Mastication was slightly painful, and caused a humming noise in the ears. There were considerable disturbance of vision and irregular frontal headaches. Thus the eye was affected at the onset. Three weeks later both parotid glands were still considerably swollen. The right eye was red and tender, with intense ciliary congestion. The tension was almost normal. The pupil was irregular and slightly dilated; the iris was "muddy." At the upper and outer segment was a firm posterior synechia, which approached the normal centre of the pupil. There were diffuse haziness of, and some opacities in, the vitreous. The disc appeared to be hyperaemic with dilated and tortuous veins, but was not easily seen. V.=$\frac{1}{3}$. Colours were readily distinguished, and there was no contraction of the visual field. Repeated small doses of calomel, the frequent application of atropine drops, purgatives, and a milk diet were prescribed. At first the dilatation of the pupil was unsatisfactory, owing to a ring of posterior synechiae, but a few days later there was complete mydriasis except at the outer and upper segment. The ciliary congestion and the periorbital pain had diminished, the vitreous was less cloudy, and vision had improved. A fortnight after the beginning of treatment the headache and ciliary congestion had completely disappeared, though some haziness of the vitreous and hyperaemia of the optic disc persisted. V=$\frac{2}{3}$. The atropine was continued, and potassium iodide was given in a mixture. On July 17th, at least six weeks after the onset of parotitis, he consulted the writer about his left eye. For some days there had been periorbital headache, ciliary congestion, slightly diminished tension of the globe, "muddiness" of the iris, and lessened visual acuity (V.=$\frac{1}{2}$). The vitreous was normal. The optic disc was slightly hyperaemic. Numerous posterior synechiae were present, which slowly yielded to the frequent application of atropine and calomel internally. A few opacities persisted in the right vitreous. At the end of a week the left eye was normal except for two large posterior synechiae. V.=1. The parotid swelling had diminished greatly. A somewhat similar case has been published by Péchin (*Rec. d'Ophtal.*, June, 1901). There were

bilateral iritis and unilateral keratitis, which, however, did not appear until late in convalescence, instead of simultaneously with the parotitis as in this case. The two cases resembled one another in that in both the inflammation was subacute, and accompanied by less pain than is the rule in syphilitic and rheumatic cases. In spite of the apparent mildness, there were, in the writer's case, unusually tough posterior synechiae, and changes in the right optic disc and vitreous.

SURGERY.

(278) Duodenal Fistulæ.

Cackovie (*Arch. f. klin. Chir.*, Bd. lxix, Heft 3) reports a case in which transperitoneal nephrectomy for sarcoma of the right kidney in a patient aged 37 years was followed by persistent and profuse discharge of sero-purulent fluid from a fistulous opening in the cicatrix of the external abdominal wound. As the discharge became much more profuse after each meal, and after breakfast gave off a distinct odour of coffee, the author concluded that he had to deal with a fistula in the upper part of the digestive tract, and, as in removal of the kidney it had been found necessary to detach the duodenum from the tumour and to divide and tie some of its blood vessels, it was also evident to him that this fistula opened into the descending limb of this portion of the small intestine. After a fruitless attempt to arrest the discharge by close packing, jejunostomy was performed, but with no good result, as the feeble and anaemic patient, who had been much exhausted by the effects of the nephrectomy and by a subsequent attack of hypostatic pneumonia, died on the following day. External duodenal fistula, the author states, is extremely rare, only eight cases having hitherto been reported. In two of these cases, as in the case reported by the author, it followed an intra-abdominal operation, and, as is shown by these two records, may result from injury to the intestine or its blood vessels caused during choledochotomy. In most instances, however, the fistula had been the consequence of a perforating ulcer of the duodenum. The diagnostic signs of duodenal fistula are not very clear, but such affection may be suspected if with an open subphrenic or peritonitic abscess, or after an abdominal operation performed near the duodenum, the discharge from the abscess cavity or the wound rapidly increases; and if this discharge is dependent on the amount of nourishment that is taken becoming more abundant as the general condition of the patient improves, and being poured out in excess soon after a full meal. The presence of bile in the discharge is a sure indication that the fistula is situated below the duodenal papilla. This symptom would be one of very grave import as indicating a loss of the secretions of the liver and pancreas, but the author points out that the distinction between suprapapillary and infrapapillary fistula has no great practical significance, as duodenal ulcer, the most frequent cause of fistula, is usually situated in the upper part of this intestine. In the treatment of duodenal fistula the surgeon has the choice of three operations: duodenorrhaphy, gastro-enterostomy, and jejunostomy. The first of these, though a radical operation, is too severe in most cases, as the patient is usually very feeble in consequence of previous surgical treatment or of failure of nutrition. With regard to gastro-enterostomy, it is pointed out that if the pylorus remains patent the food may continue to pass into the duodenum. Jejunostomy is held to be the most suitable operation, as it is a less dangerous and a simpler method than either of the other two, and allows a prompt and abundant supply of much-needed food.

(279) Arterial Suture.

Delbet (*Bull. et Mém. de la Soc. de Chir. de Paris*, No. 12, 1903), in a report on an interesting case communicated by Wiart, of suture of a large wound of the external iliac artery produced in the course of a surgical operation, insists on the importance in arterial suture of avoiding perforating stitches and of passing the needle through only the external coat of the artery and the sheath. In Wiart's case, the results of which have proved very successful, it was found necessary, in consequence of extreme urgency and the absence of a suitable needle, to perforate the whole thickness of the arterial wall. Eight months after the date of operation the patient was quite well, and the limb supplied by the sutured artery apparently quite sound. Distinct pulsation could be felt along the external iliac, and also along the corresponding femoral artery, but below the bifurcation of the latter vessel into superficial femoral and profunda, pulsation was very evident, and afforded, in Delbet's opinion, a sure indication that the superficial femoral artery was obliterated. As the youth and the sound general condition of the patient were opposed to the idea of arterial thrombosis, Delbet concludes that the arterial obliteration is the result of the detachment of a clot formed over the perforating sutures, and of its impaction at the bifurcation of the common femoral into its two branches. This clinical fact, together with the decided results of experimental investigation on arterial suturing, may be regarded as clearly in favour of the view that in closing a wound in an artery the stitches should not perforate the whole thickness of its coats.

(280) Post-operative Haematemesis.

Bardesco (*Bull. et Mém. de la Soc. de Chir. de Bucarest*, Nos. 4 and 5, 1902) states that haematemesis has often been observed after operations performed under general anaesthesia, and mentions four cases in his own practice, one of which was fatal. Careful consideration of these cases has led the author to the conclusion that this post-operative complication is not due either to embolism or to the eliminative action of chloroform, but is rather the result of violent vomiting of a reflex order from which some subjects suffer after surgical intervention. In all the author's cases the vomiting of blood commenced on the third or fourth day, and at a period when the elimination of chloroform had ceased. It was always ing of aqueous or biliary matter, and the blood appeared when the patient had nothing beyond this to reject.

(281) Eggshells and Appendicitis.

Boldt (*Amer. Journ. Obstet.*, March, 1903), after fixing a prolapsed uterus to the abdominal walls, in a patient, aged 45, removed the vermiform appendix, as it had been the seat of almost constant dull pain. The appendix was much thickened; in its interior were found some faecal concretions and also a piece of eggshell. It was verified as eggshell when examined in a chemical laboratory.

MIDWIFERY AND DISEASES OF WOMEN.

(282) Sudden Death after Delivery: Obliterated Pleural Cavity.

Chéron and Jeannin and Perret (*L'Obstétrique*, March, 1903) report two cases of death within a few hours after delivery, in each of which there was complete obliteration of the right pleural cavity. The patient in Chéron and Jeannin's case said that she was subject to cough. During delivery she suffered from acute dyspnoea, it increased afterwards, with rise of temperature. There was no flooding, venesection was performed, but the patient died within two hours. All the viscera were found normal except the lungs. The left was congested, with much tubercle in the apex, and some pleural adhesions; there were 8 oz. of fluid in the pleural cavity; the right pleural cavity was completely obliterated, the lung could not be detached at any point without laceration; its surface was covered with tubercle, in part calcified. There was no embolism, and the lesions described could not of themselves have caused death, but the strain of labour proved too much, the sounder lung being much disabled by the presence of fluid in the pleura. Perret's case, reported in his summary of the work in Tarnier's clinique in 1902, was very similar. The patient, aged 29, was at the end of her sixth pregnancy; the fetal heart sounds had ceased. The fetus was expelled spontaneously, and the placenta and membranes followed one hour and ten minutes later. No dyspnoea was noted during delivery and the patient seemed perfectly well till three hours later, when she was seized with acute dyspnoea, and died suddenly. The right lung was tuberculous and the pleural cavity completely obliterated; the left lung was similarly affected, and there were 14 oz. of fluid in the pleural cavity; there was no embolism, and the other organs were healthy. The chief difference between the second case and the first (where the age of the patient and the number of her pregnancies was not given, whilst the pulmonary lesions were suspiciously similar) lay in the absence of dyspnoea in the second patient until just before death; whilst in the first the breathing was already harassed during labour, and she sweated freely from the first. Schwab and Talamon, in a discussion on the first case, reported two instances of sudden death from dyspnoea, where only slight pleural effusion existed, neither associated with pregnancy.

(283) Fatal Puerperal Mammary Abscess.

PERRET (*L'Obstétrique*, March, 1903), in his statistics and observations in Tarnier's clinic for 1902, reports a case in which a primipara, aged 19, was delivered spontaneously on July 31st; the placenta was entire and healthy. All went well until the evening of August 6th, when the temperature rose to 100°, and lymphangitis and galactoöphoritis of the left breast were diagnosed. From August 8th to 12th the breast was pressed and kept covered with ice, until an abscess was detected; the temperature rose as high as 105°. On the 13th the abscess was opened, but the temperature did not fall; antipyrin was given, and the patient was cupped as she had a slight cough. On the 20th Marmorek's serum was administered; but the patient died on August 24th, the twenty-fifth day after delivery and the eighteenth after the mammary complication was first detected. The breast was infiltrated with pus, which issued from the nipple on pressing the ducts. Numerous subpleural ecchymoses were detected in the right lung. The peritoneum and its cavity were absolutely normal; it was not even markedly vascular. The uterus was small, its muscular tissue healthy, but the endometrium was fungating, and on scraping it with the bistoury a few yellow spots like purulent foci were discovered. No bacteriological appearances are noted.

(284) Neuroses and Fibroma of Abdominal Wall.

SCHAUTA (*Zentralbl. f. Gynäk.*, No. 12, 1903) dwells on some remarkable symptoms in a patient, aged 22, who had once borne a child and once aborted. The miscarriage occurred three years before she came under observation, then attacks of pain in the left groin and great nervousness set in. Spasm of the parietal muscles rendered palpation difficult, but Schauta noted for some time that the centre of the hyperaesthetic area lay in a small swelling which he at first took for an enlarged inguinal gland. After a few months the sensitiveness of the swelling, which slowly increased in size, became intense, general clonic spasms occurred when the patient tried to move, and mental delusions were observed. The swelling was therefore removed; it was a "desmoid" tumour, or true fibroma of the fascia of the internal oblique, as big as a hen's egg. It was made up of loose tissue, wavy, tendinous fibres, through which in certain places small fine nerve fibres ran. The presence of nerves must assuredly account for the hyperaesthesia, which was so great and prolonged as to affect the patient's mind. After the operation the local sensitiveness and the delusions both passed away.

(285) Removal of Ruptured Tube and Cholecystotomy for Gall Stone.

STRASSMANN (*Zentralbl. f. Gynäk.*, No. 11, 1903) operated upon a woman, aged 40, with symptoms of ruptured tubal gestation sac and a clear history of abnormal pregnancy. She had not been pregnant for ten years, and on the last occasion aborted and suffered afterwards from inflammation of the left appendages, which were removed by Martin. Her recent general health had been bad and she had felt pains in the epigastrinm. An incision was made by Strassmann through the old cicatrix. The ovum half protruded into the peritoneal cavity through a rent in the right tube. The operator declared, when reporting this case before a Society, that the fetus, only 2 cm. (a little over ¾ in.) in length, could be seen to move! The tube and ovum were removed and the abdominal wound extended upwards to the right. The gall bladder was stitched to the parietes and opened; a gall stone as big as a plum was extracted from its anterior, which also contained clear bile. The ducts being found free the gall bladder was sewn up in layers. The upper end of the wound was tamponed, the gauze being removed on the tenth day. The patient was quite well one month after the operation.

(286) Haematometra: Operation: Subsequent Pregnancy.

BUDIN (*L'Obstétrique*, March, 1903) reports the case of a woman who menstruated at 14, but the period, never regular, ceased at 15. A swelling developed, which was correctly diagnosed as a haematometra. When the patient was 16 Quenu made an incision, which proved to be situated ⅝ in. from the closed os externum. Dark fluid escaped, the catamenia returned, and the patient married. Pregnancy occurred, and Budin asked the members of the Société d'Obstétrique de Paris whether the dangers of labour at term should be anticipated. It was the general opinion that normal labour should be awaited. One month later Budin announced at the same Society that spontaneous delivery had occurred. The vertex presented; the os externum dilated. It was remarkable how the cicatrix of the surgical incision shifted its position. At the end of about twenty-four hours a fetus, weighing over 6½ lb., was delivered, and the puerperium was normal. Budin suspected that an exaggerated anteflexion was probably the original cause of the retention of menstrual blood.

THERAPEUTICS.

(287) The Light Treatment of Lupus.

A. J. HARRISON AND W. KENNETH WILLS (*Bristol Med.-Chir. Journ.*, March, 1903) report the results obtained by them with the light treatment in lupus vulgaris, lupus erythematosus, and rodent ulcer in the Bristol General Hospital from December 9th, 1901, to the end of December, 1902. At first only two lamps were used—Lortet-Genoud, made by Marshall and Woods, of London; but from May 23rd, 1902, two other lamps (constructed by Leslie Miller, of London) were added. The current used was an interrupted one—five to ten ampères, about 12 volts, and the time of each sitting at the lamps was from five to twenty minutes. Several of the patients had two, three, or four sittings on each day of their attendance, and especially where the extent of the affected parts was great, or the disease was situated in several parts of the body—one part being treated at one sitting, another part at another sitting. In many instances *x* rays were employed; often in cases of lupus vulgaris, where the parts were ulcerated, and very especially so in cases of lupus erythematosus, rodent ulcer, acne pustulata, and Paget's disease. During the time there were treated 42 cases of lupus vulgaris, 3 of lupus erythematosus, 12 of rodent ulcer, 1 of the late stage of actinomycosis, 3 of acne pustulata, 1 of adenoma sebaceum, 2 of Paget's disease, and 1 of advanced carcinoma of the right breast and axilla. Taking the lupus vulgaris cases first—16 males and 26 females were treated, their ages varying from 4½ years to 73, and the duration of the disease from 1 to 45 years. From the above statements it will be readily conceived that many of the cases had been under various kinds of treatment for years, and many of them had been treated with caustic applications, or scraped, once or many times. Many of them, therefore, were the accumulation, so to speak, of years. It was observed that the cases responded best to treatment that had never been more or less severely dealt with. The results so far obtained may be briefly summarized: Improved and continuing under treatment, 26; relieved—to be kept under observation, 5; relieved—in one or more parts, whereas other parts have to be treated, 4; not improved, 1; unsatisfactory, through non-attendance, 2; cases under treatment, but time too little to judge of effect, 4.

(288) Radiotherapy in Cutaneous and other Cancers.

C. W. ALLEN of New York who has had during the last year a somewhat varied experience with radiotherapy, gives an account of his efforts and results (*Journ. of Cut. Dis.*, February, 1903). He says that there would seem to be no question that, aside from the production of a burn-like dermatitis, the ray has a predilection for attacking tissues which are not highly vitalized—embryonic, and also for highly differentiated but misplaced structures—cell growths. Epithelial overgrowths can be seen to melt away at times without undergoing the usual necrotic or ulcerative changes, and in their place healthy tissues are produced in such a manner as to lead to the belief that normal cell growth is stimulated. At times, indeed, the two processes can almost be observed to occur *pari passu* over limited areas. If this new therapeutic measure consists in a bombardment of infinitesimal particles carried along ethereal waves travelling at an enormous velocity, one can almost imagine them attacking the infinitely minute particles of matter which go to make up the cell nuclei, the cells themselves and the microscopic organisms which may possibly lie back of the faulty direction which the cell growth has taken. The connective-tissue cells would appear to be often unacted upon, and being left behind, form what has been designated as a mat or basis structure, through and above which the new growth, now no longer malignant, can take place. Necrosis *en bloc* seems, at times, to be imitated and the casting-off process hastened, so that, with pronounced suppurative inflammation, rapid destruction takes place. Of 47 cases of cancer which Allen has treated 10 were breast cases, 1 rectal, 1 uterine, 1 involving the glands and tissues of the neck, 3 were sarcoma, and 1

supposed to be sarcoma. This leaves 30 more or less dermatological cancer cases. Of these, 2 involved the chin, being epithelioma or cutaneous carcinoma; 9 the nose or the nose and cheek; 3 were multiple (epitheliomatosis), 1 being in a subject of xeroderma pigmentosum, whose eyes were likewise involved, one globe having been wholly destroyed necessitating surgical enucleation; 5 were upon the cheek and near the eye, 4 were of the lip, and 2 of the arm. The results in these cases are as follows: Ending fatally, 5; discharged cured, 25; ceased treatment, improved, 3; ceased treatment, unimproved, 5; improved and under treatment, 9. The following is the author's own summary of his conclusions: (1) The *x* ray possesses decided therapeutic power and may produce marked injurious effect. (2) From the study of the present series of cases, the writer is warranted in stating that the *x* ray as a therapeutic measure is not a passing fad to be dropped after a brief existence. (3) The effect of the method is at times to produce severe symptoms, referable to the heart, lungs, and other internal organs, and systematic effects pointing to absorption of disintegration products thrown into the circulation more rapidly than they can be eliminated. (4) Metastases occur at times in grave forms of cancer more rapidly than we are accustomed to see in patients not so treated. (5) Cancer itself may be produced by the injurious effect of the ray in a person not known to be predisposed, as instanced in the case reported of the tube maker, whose arm had to be amputated for carcinoma developing in the *x*-ray cicatrix. (6) The *x*-ray dermatitis, and many of the good effects as well, depend upon the proximity of the tube, the degree of vacuum and the degree of heating of the anode. (7) Tubes may at times get into a "burning state." This condition of tube must at present be learned by experience and observation with the tube in question, as there is nothing to indicate just when this condition is present aside from the effects produced. (8) The method is not one to be solely relied upon in all cases of cancer. (9) In the nodular, wart-like and dry growths upon the skin, other means of removal, preferably by arsenical paste, should first be employed, and the rays may then be applied. (10) The indiscriminate application of the ray to all forms of disease as claimed to be practised by advertising institutions and by charlatans, and the deceit practised by calling other rays by this name, are apt to bring much unmerited reproach upon a method really useful, whose effect is at times almost magical but most often disappointing.

(289) Hetol in Tuberculosis.

Krone, who is an advocate of intravenous injection of hetol in cases of phthisis, also recommends (*Die Heilkunde*, February, 1903) its administration by mouth where for any reason it cannot be given as an injection. Aufrecht at Berlin has demonstrated the presence of benzoic acid in the sputum of phthisical patients who have taken hetol in the form of Peru cognac for a long period, and has thus proved that absorption into the blood takes place when hetol is administered by mouth. Peru cognac is an undesirable remedy because of the alcohol it contains. Krone recommends that a combination of hetol and sanguinal in the form of hetol-sanguinal pills should be given in its place. He has found sanguinal to improve the appetite and general condition in chlorosis, anaemia, and conditions of weakness, and the results of his experience are confirmed by other doctors. Hetol-sanguinal pills when given in early phthisis will therefore act through the sanguinal upon the general condition, and through the hetol upon the local condition in the lung. In more advanced cases the pills may be given as a continuation of a course of treatment by intravenous injection. They are directly beneficial in these as in the other cases, and they are of use indirectly, because the patient while taking them still feels himself an invalid and more carefully observes the general instructions given to him. Five such cases are given. Two remained for a month under observation on the spot while taking the pills, and showed steady improvement throughout the time; two returned home where they were not under the care of any doctor; one of these improved, and the other became worse in spite of the treatment. The general and local condition of the fifth patient, who was under the observation of a doctor at home, continued steadily to improve. The administration of hetol-sanguinal is not a substitute for sanatorium treatment, but is useful when such treatment cannot be obtained.

PATHOLOGY.

(290) Active Immunization against Plague, Cholera, and Typhoid.

Besredka (*Ann. de l'Inst. Pasteur*, December, 1902) considers the methods of immunization against plague, cholera, and typhoid. The so-called passive immunization method by inoculation with immune serums has the advantage of conferring immunity rapidly, certainly, and without risk: it would be ideal if it were not so very transitory. In the so-called active immunization by means of the injection of virulent or attenuated or dead cultures, the immunity lasts a long time, first appearing about the twelfth day, and continuing for many months. This active immunization is not without risk; the immunized individual develops pyrexia, and up to the time of the development of resistance is specially susceptible to the infection. Attempts have been made to combine the advantages of both active and passive immunization by injecting immune serum and bacterial culture at the same time, but it appears that the desired end, to obtain a prolonged immunity, has not been achieved by this method. Besredka has produced a vaccine, according to the indications of the researches of Ehrlich and others, which is claimed to be both harmless and efficient. Agar culture of plague bacillus suspended in physiological salt solution, and heated for an hour at 60° C., is mixed with antiplague serum; the bacilli are agglutinated and sink in flocculi. These agglutinated bacilli are separated from the serum by repeated washings with salt solution. The bacilli thus washed exhibit remarkable capacity for conferring immunity in injected animals; corresponding results were obtained with cholera and typhoid. In cholera and typhoid this immunity appears in twenty-four hours, in plague after forty-eight hours; and, an important advantage, the susceptibility of the animal during the process of immunization was not increased, but rather diminished. These serum vaccines produced no alarming symptoms, and remained active and effective for a long period. It is clear that such "vaccines" derived from agglutinated bacteria may also be found effective in the case of other infections: the problem of active immunization without risk appears from these researches to be approaching solution.

(291) Immunity and Anaesthesia.

Certain conditions such as excessive tiring, cold, hunger, and thirst are capable of interfering with immunity to diseases, and to this list of causes anaesthesia has been added. In inquiring how far anaesthesia is capable of removing an existing immunity, J. J. Snel (*Berl. klin. Woch.*, March 9th, 1903) remarks that many bacteria are destroyed by special tissues, including the lung tissue, and it appeared to him to be of practical importance to decide whether anaesthesia affected this bactericidal action of the pulmonary tissue. He performed a number of experiments on guinea-pigs with anthrax baccilli. (Guinea-pigs are not immune to anthrax, but their lungs appear to possess a considerable power of killing the bacilli.) The results of the experiments were that ether as well as chloroform anaesthesia destroys the natural immunity, or at all events temporarily removes it, inasmuch as animals, which had been infected by anthrax bacilli into the lung, without any lesion being produced, died of anthrax when it was narcotized immediately after, while those which were not anaesthesized or were anaesthesized before the infection did not even sicken. Snel considers it likely that post-operative pneumonia may be explained by a temporary loss of the bactericidal action of the lungs. He suggests that whenever it is possible, the surgeon should disinfect the mouth and fauces of the patient before anaesthetising him, and that operations should only be performed in rooms where the air is as pure as it can be.

(292) Acardiacus Amorphus.

Dienst (*Monats. f. Geb. u. Gyn.*, March, 1903) describes an authentic case of this sub-variety of acardiac twin, extremely rare in the human species. The monster was as big as a fist, three-lobed, and invested with skin bearing lanugo. Its cord was very short, and ran into that of the normal twin, the placenta being, of course, common to the two; it had been twisted off, and was dilated and blunt at its termination. Dienst had the parts and the monster carefully dissected, and could plainly detect the inversion of circulation, the admitted cause of the extreme arrest of development in an acardiac twin. The umbilical arteries brought used-up blood through the same arteries in the brother.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(293) Tuberculous Appendicitis.

BOUGLÉ (*Arch. Gén. de Méd.*, February 3rd, 1903) believes that careful histological examination will show tuberculous appendicitis to be a much commoner disease than is generally thought. True tuberculous appendicitis, that is, tuberculosis limited to the appendix and not ileo-caecal tuberculosis, with involvement of the appendix, has of late been described by many authors. The naked-eye appearance of the tuberculous appendix is very variable. It may be small, shrunken, and sclerous, or enlarged and lardaceous. The sclerous or atrophic form is practically indistinguishable without the microscope from chronic simple appendicitis. In a case which Bouglé himself has observed, the appendix was much enlarged, greyish-white in colour and lardaceous. At its free end was a perforation leading to a small circumscribed abscess. The patient suffered from pulmonary tuberculosis; in many cases one or more subserous caseating patches have been found, and more rarely small granulations on the serous surface. Tuberculous lesions are very apt to develop at the base of the appendix in the region of the valvule of Bauhin, and this fact is of great importance to the surgeon as it necessitates a partial resection of the caecum instead of simple ligature at the base of the appendix. The glands are involved more often in tuberculous than in simple appendicitis. Under the microscope the most marked lesions are seen to be in the deep part of the mucosa and in the submucosa of the appendix. Here are found caseous masses rich in giant cells and in Koch's bacilli. There is usually also a chronic vegetant endarteritis, but without thrombosis. Undoubtedly the usual course is from the mucous coat, with or without actual ulceration towards the muscular and serous coats. But the infection may also be carried by the blood, as has been proved experimentally by Charrin and Gouget, who have shown by intravenous injections that the appendix is one of the seats of "elective localization." Clinically, these cases of tuberculous appendicitis often remain latent. The symptoms are the same as those of simple appendicitis, but tend to be less acute, the temperature being lower and the peritoneal reaction less intense. Recurrences are very frequent. The enlarged appendix of the lardaceous form may form a tumour easily palpable. The enlarged glands and the presence of other tuberculous foci are valuable points for diagnosis. The removal of the tuberculous appendix is often a matter of great difficulty, owing to the dense adhesions. When this removal has been impossible relief has often followed simple laparotomy, but it is better practice to exclude the diseased organ by an intestinal anastomosis.

(294) Typhoid Meningitis.

ABOT AND NEVOL (*Lyon Méd.*, March 9th 1903) record a case of meningitis, almost certainly caused by Eberth's bacilli, but associated with chronic tuberculosis. Their patient, a girl 6 years old, came into hospital apparently convalescent, with a month's history of typhoid fever. The second night after admission she became suddenly delirious and feverish without appreciable cause. A week later she suffered from obstinate constipation, with pyrexia and general hyperaesthesia. Milk diet, baths, and glycerine enemata caused a temporary improvement, but the child died a month after admission from exhaustion, no convulsions or loss of consciousness having been observed. The blood gave a positive serum reaction (1 in 50), causing complete agglutination in about an hour. At the necropsy the intestines showed typical typhoid lesions of much greater gravity and extent than usual in children. Five of the patches formed regular oval ulcers with grey bases, the long diameter being across the gut. The mesenteric glands were swollen, and the spleen a little enlarged. At the summit of the right lung was a fibrous patch the size of a haricot bean, with a caseous centre. Between the membranes and the convexity of the cerebral hemispheres was found an abundance of clear yellow pus. This occurred in greatest quantity on the left side over the fissure of Rolando. In the occipital region there was little exudate, but intense hyperaemia. On the right side the frontal region was most affected, but strands of pus followed the paths of the large blood vessels. The base of the brain was practically free from lesion save a slight thickening of the pia mater. The cerebellum and medulla, however, were covered by the exudate. Great care was taken to remove the pus without contamination. Immediate examination showed an abundance of mobile organisms with all the characteristics of Eberth's bacilli. Cultures were grown on serum-gelatine, and gave short mobile bacilli, which would not take Gram's stain. The result of these examinations, together with the existence of the intestinal lesions and the positive serum reaction, seems to put the nature of the case beyond doubt.

(295) Congenital Hypertrophic Pyloric Stenosis.

FLYNN (*Australasian Med. Gaz.*, December 20th, 1902) finds unsatisfactory the theories of a nervous lesion or congenital gastric spasm, and seeks a phylogenetic explanation. On looking at the alimentary canal as a whole from a biological standpoint, he observes that those parts which are anatomically variable in different species—the pylorus, the caeco-appendix, the oesophagus, the oral and anal orifices—are especially susceptible to disease. Both individually and ancestrally the pars pylorica is a site of considerable variation. The antrum pylori is a trace of a second gastric chamber. Both the muscularis and the mucosa of the pyloric valve are exceedingly variable in different subjects; and, as we ascend the animal scale, we note that this region is the site of the "gastric mill," a peculiar crushing mechanism in the insecta and the crustacea. In the birds, amongst vertebrates, the "gastric mill" reappears in the well-known gizzard, which corresponds to the pyloric region of the mammalian stomach; and the "gastric mill" persists in certain of the edentata, such as the great ant-eater, and in some of the armadillos. The individual variability and the ancestral instability of the pyloric region, coupled with the Darwinian dictum that "structures normally present in the human embryo may become abnormally developed, though in a manner which is normal in the lower members of his group," make it probable that congenital hypertrophic pyloric stenosis is an instance of reversion to the edentate pylorus. The conditions are anatomically similar, namely, hypertrophied circular muscle fibres. The ant-eater's pylorus is the physiological type of what is found in man only under abnormal conditions, and both are lineal descendants of the crustacean "gastric mill" or grinding stomach.

(296) The Normal and Pathological Duration of Gastric Proteolysis.

JOHANNES MÜLLER (*Verhand d. physikal.-mediein. Gesellsch. zu Würzburg*, XXXV, 4, 1903) records a series of observations upon the length of time occupied by the process of gastric digestion of proteids in healthy and diseased individuals. A test meal was given, consisting of beef that had been cooked soft and minced, together with a certain amount of the bouillon. After an hour the gastric contents were expressed and the nitrogen of the fluid and undissolved portions carefully estimated. In 8 normal subjects, on an average, 28 per cent. of the proteid was found to be dissolved; this agrees with the results obtained by Schmidt-Mühlheim, Hofmeister, and others upon animals, and confirms their view that the solution of the proteid of the food is mainly accomplished by the agency of the gastric juice. It is an interesting fact that, in spite of the active proteolysis, free hydrochloric acid was never found in the stomach at the end of the hour; there was, in fact, usually a marked deficiency of HCl. If starch, in the form of rice, was taken at the same time, proteolysis was facilitated, so that, on an average, 35 per cent. of proteid was dissolved; this establishes for man the animal experiments of Schiff and Pawlow. Pathologically, the author found that in superacidity and also in simple supersecretion the digestion of proteid was enormously accelerated, especially when there was accompanying stenosis of the pylorus. In one such case 97 per cent. of the meat was dissolved. On the other hand, as was to be expected, proteolysis in chronic gastritis with subacidity, and in carcinoma of the stomach, was very slight, in one case only 9 per cent. in the hour.

SURGERY.

(297) Hepaticotomy.

DELAGÉNIÈRE (*Bull. et Mém. de la Soc. de Chir. de Paris*, No. 10, 1903) communicates a case of successful hepaticotomy, by which term he denotes direct incision of the hepatic duct for the extraction of biliary calculi. In this operation, which is rarely indicated, only six other cases having been recorded, the calculi were impacted near the hilum of the liver and at some distance from the common duct. The author, in describing

the steps of the operation, states that in this as in other interventions on the biliary ducts, he prefers an incision about 5 in. in length along the outer border of the rectus. This incision, he states, affords free and sufficient access to both the common and the hepatic ducts, and in one instance enabled him to practise a transduodenal choledochotomy without having recourse to an additional transverse incision. When the peritoneal cavity has been opened the difficulties of the operation will depend almost wholly on the extent of the adhesions about the gall bladder and the ducts. These, it is stated, should be divided with the greatest care. After the lower surface of the gall bladder has been set free as far as the cystic duct, the duodenum should be felt for and pushed inwards. The gall bladder is now freely incised, with the objects of removing any calculi that may be present in its cavity, and also, if it is possible to do so, of directly abstracting any impacted calculi from the cystic or hepatic ducts. In the author's case, after the liver had been held upwards by a broad retractor, a calculus could be distinctly felt in the dilated hepatic duct. After incision of the duct and prompt and easy removal of the calculus, a second one was found, the extraction of which was attended with some difficulty. The wound in the duct was readily closed by a continuous suture applied by a small curved needle. The author advocates suturing for all incisions made in the biliary ducts, but acknowledges that such suturing is rarely perfect, and needs to be associated with drainage of the accessory ducts and of the gall bladder.

(298) The Surgical Treatment of Cirrhosis of the Liver.

GREENOUGH (*Amer. Journ. of Med. Sci.*, December, 1902) estimates the value of operation in cirrhosis of the liver from a consideration of 122 published cases. He quotes the two procedures generally adopted: (1) Talma's operation for suture of the omentum, with a view to obtaining an increased anastomosis between the vessels of the portal system and those of the systemic circulation, thus relieving the portal congestion and consequent ascites; and (2) Delagénière's method of cholecystostomy and maintenance of a biliary fistula, based upon the theory that hypertrophic cirrhosis is due to an infection of the bile ducts proceeding from the intestine. Of the 17 cases recorded of this latter operation, 13 were relieved, but a greater number of observations are needed before its exact value can be estimated, though the existing evidence seems to show that in a certain number of cases its performance is justified and gives promise of relief. The adhesions necessarily formed between the gall bladder and abdominal wall by cholecystostomy may have been a factor in relieving the symptoms of ascites which existed in some of the cases recorded, thus fulfilling to a certain extent the conditions presented by Talma's operation. In addition to the theory of mechanical origin of the ascites in cirrhosis upon which Talma's operation depends, it has been contended that the toxaemia resulting from the destruction of liver cells may be another factor in its production. Other observers have advanced the theory that the ascites, especially if of long duration, may be caused by a coexisting peritonitis or perihepatitis, though the former may often be accounted for as resulting from previous repeated tappings. Of the 122 collected cases of Talma's operation, 17 were deducted in which the ascites was due to other causes than uncomplicated cirrhosis; and of the 105 remaining, 44 were improved; while 60, either from death or want of improvement, obtained no benefit from the operation. Various adaptations of the operation originally recommended by Talma have been tried, varying from merely suturing the omentum to the margin of the abdominal incision, with irritation of the peritoneal surface of the liver and spleen, to a spreading out of the omentum between the layers of the abdominal wall, and this latter modification appears to afford slightly better results without increasing the mortality. The danger of resulting intestinal obstruction is a real though rare complication. Thus it would seem that in cases of biliary cirrhosis with enlarged liver, jaundice, and fever, without ascites, in which symptomatic treatment has failed, and where there is evidence of infection of the bile ducts, cholecystostomy may be resorted to with advantage. In cases where ascites is present the modification of Talma's operation, in which the omentum is sutured between the layers of the abdominal wall, is of benefit in a limited number of cases, primarily for the relief of the ascites, and secondarily to improve other symptoms of portal congestion. Operation is contraindicated where the ascites is due to other causes than cirrhosis, or in which complications of renal or cardiac mischief are present; and it is pointed out that greater judgement in the selection of suitable cases should be exercised than has hitherto been the case.

(299) Treatment of Fracture of the Patella.

BERGER (*Bull. et Mém. de la Soc. de Chir. de Paris*, No. 8, 1903), in the course of a discussion on the operative treatment of fracture of the patella, whilst holding that suture and encircling ligature remain the best methods of dealing with this injury in the absence of decided contraindications, points out that such treatment, especially when practised by inexperienced surgeons, is not free from danger and from complications so serious as to enforce the necessity of not neglecting the older and more simple methods. The disastrous results of one case of suture of a fractured patella under the author's care, and also of other cases treated about the same time at certain hospitals in Paris, showed that even in the practice of most skilful surgeons and of those renowned for the perfection of their aseptic methods, this method is far from being absolutely safe. In considering the occasional occurrence of lamentable results from such treatment, which surgeons even with the best prospects of success cannot always avoid, Berger has been led to insist on the necessity of a more careful study of the contraindications of the operation of suturing a broken patella, such contraindications being considered with regard to the age, the general condition, the calling and social position of the patient, and the state of the injured limb. It is held that surgical teachers, in dealing with doubtful cases and even with some cases not regarded as doubtful, should return to the older method of treatment by splints, not only with the object of ensuring their patients from calamitous results, but also to prove to students that it is possible with these unjustly-neglected means to obtain without danger, though with a greater expenditure of time and pains, results almost as good as those gained by operation. It is pointed out that the operative treatment of fracture of the patella, though it may be justifiable in a large hospital, cannot without imprudence be commended to those whose future lot it may be to practise in localities far away from important centres of surgical work.

MIDWIFERY AND DISEASES OF WOMEN.

(300) Puerperal Eclampsia.

PARTRIDGE (*Amer. Journ. of Obstet.*, March, 1903) enjoyed unusually good opportunities of studying this condition when recently house-physician in the Lying-in Hospital, Providence, Rhode Island. That institution was specially made use of for the worst complications in obstetrics, so that Partridge attended no less than 19 cases of eclampsia in 694 labours. Of the 19 cases, 15, or 78.9 per cent., were married; 5, or 21 per cent., single. Nine, or 47.3 per cent., were primiparae; and 10, or 52.7 per cent., multiparae—contrary to the proportions taught in textbooks, where primiparae are the subjects of eclampsia in 70 per cent. of all cases. The average age was 27 years. Of the 19 mothers, 5 died, a mortality of 26.3 per cent; of the 17 children living in utero, 2 died, a mortality of 11.7 per cent. In 2 of the 19 cases the child was macerated when delivered. As to date of onset of the convulsions, in 13 cases they set in before labour (68.4 per cent.), in 4 during labour (21 per cent.), and in 2 after labour (10.5 per cent.). Of the 5 fatal cases, 4 died before labour, 1 after, but none during the process. There was no case of twins. In 11 cases (57.8 per cent.) the convulsions ceased with delivery, in 3 they seemed to increase. In the 5 fatal cases the average number of convulsions was 9.4, and in the 14 which recovered, 7.9. In every case the urine contained albumen, and there was more or less oedema. In only one was blood found in the urine. Most of the convalescents showed traces of albumen in the urine when discharged, but without casts. Unfortunately, a necropsy was not permitted in any of the fatal cases, nor were the chemical constituents of the urine carefully analysed.

(301) Intestinal Obstruction after Removal of Uterus and Appendages for Primary Cancer of Tube.

DANEL (*Journ. des Sciences Méd. de Lille*, March 14th, 1903) relates a case where a woman, aged 47, married and twice pregnant, was admitted under Duret of Lille for suspected uterine fibroid. Two years previously she had an attack of inflammation of the appendages and an abscess burst into the bowel. For five

months she was troubled with acute attacks of lumbar pain and free leucorrhoea. The period continued regular and moderate. The uterus was fixed and a tender mass occupied Douglas's pouch. On July 16th, 1902, the uterus, which contained small interstitial fibroids, was removed with the appendages. The left tube and both ovaries showed signs of inflammation; the right tube was like a large sausage coiled round the ovary; it contained masses of exuberant papillary growths, which penetrated the serous coat at one point. The growths showed all the characters of epithelioma. The patient did well for a few months, but was readmitted into hospital on October 10th with symptoms of intestinal obstruction of several days' duration. She appeared cachectic. High up in the rectum a firm ring could be felt, over which the mucous membrane slid freely. Inguinal colotomy was performed, but the patient died in nine days. No necropsy was permitted, but no evidence of cancer was detected in any part of the pelvis, except the right tube, at the first operation, nor were there any symptoms indicating infection of the connective tissue around the rectum.

(302) Knee-Chest Posture in Operation for Tumour of the Female Bladder.

HOWARD KELLY (*Amer. Journ. Obstet.*, No. 1, 1903,) relates how he removed a vesical papilloma through an incision in the septum with the patient in the knee-chest posture. He has already dwelt upon the advantages of that posture in some operations upon the vesical end of the ureters (*Journ. Amer. Med. Assoc.*, August 9th, 1902). The distended bladder in this posture is far less vascular than in any other position. Any blood that escapes runs towards the fundus and does not obscure the field. The cut bladder is much thinner than in the contracted state. The vesical walls can be everted into the vagina to a remarkable degree, whilst after pulling out a tumour and the adjacent mucosa the traction necessary to hold the mass steady during removal can be lessened by simply placing the patient on her side. The bladder wall can be resected and sutured with security in this way. In conclusion as to the advantages of this posture, the easy removal of the stitch through the speculum makes it possible to use silk or even fine silver wire ligatures and sutures in the bladder in supra or infrapubic operations with the expectation of taking the sutures out in this simple way at a later date. Kelly's patient was 51, she suffered from haematuria and frequent desire to micturate. The urine became purulent. The right kidney was suspended. Five weeks latter, as the urine was still infected, the patient was examined in the knee-chest posture. Then a pink, lobulated, pedunculated mass, nearly an inch broad, was detected. It hung from the extreme right of the anterior vesical wall behind the pubic ramus. Afterwards the tumour was removed, the patient being placed in the same posture. Air was let into the empty bladder and a median incision 2 in. long was made through the septum. The tumour (a malignant papilloma), as well as a similar growth adjacent to it, was removed. The bladder was drained for eight days by a mushroom catheter; a few days after the removal of the instrument the part of the wound through which it passed closed spontaneously. Five months later the patient returned for examination and the bladder seemed perfectly normal, with a little linear cicatrix and a small pit, about one millimetre in diameter, in the place of the excised tumour.

(303) Deciduoma Malignum after the Menopause.

F. J. MCCANN (*Journ of Obstet. and Gynaec.*, March, 1903) reports a case of deciduoma malignum occurring after the menopause. The patient was 53 years of age and had borne ten children. Menstruation ceased eighteen months before her admission into hospital on March 21st, 1902, and during twelve months there was no loss of blood. In October, 1901, a sudden gush of blood came from the vagina, and the flow continued for one day. The haemorrhage recurred every four or five days until three weeks before admission, its severity being such that the patient was confined to bed during the flow. On examination the uterus was enlarged to about the size of a three-months pregnancy, was uniform and soft in consistence, and freely movable. On passing a sound into the uterus under chloroform blood literally poured out, and a gauze plug was employed to check the haemorrhage. Two days later vaginal hysterectomy was performed, and though the patient rallied from the operation her subsequent progress was unsatisfactory, and death occurred on the sixth day from suppression of urine. On cutting into the uterus the whole cavity was found to be filled with clot, some recent and some of old standing, while the uterine wall was intensely vascular; there was no evidence of new growth in the clot. Sections cut at different levels demonstrated the existence of new growth between the clot and the uterine wall, and some cells penetrated the wall. The growth was composed of multinucleated masses of protoplasm, and of a loosely reticulated tissue containing in its meshwork rounded cells with deeply-staining nuclei. The remainder of the section was composed of fibrin and blood clot. The Pathological Committee of the Obstetrical Society of London reported that the specimen was undoubtedly an example of deciduoma malignum.

THERAPEUTICS.

(304) The Effect of Drugs in Producing and Relieving Bronchial Spasm.

IN the course of researches on the bronchial muscles Dixon and Brodie (*Journ. of Phys.*, vol. xxix, No. 2, pp. 97-173) have found that reflex constriction of the bronchioles is best obtained, as other observers have found, by stimulating the nasal mucous membrane, and particularly a small area well back on the nasal septum. They point out the importance of these reflex effects in elucidating certain points in the pathology of spasmodic asthma. Little, if any, result was obtained by stimulating the sciatic, the central vagus, superior laryngeal nerve, or the cornea. Pilocarpin and muscarine, which produce tonic contraction of the involuntary muscle of the stomach, intestines, bladder, etc., produce typical bronchial constriction. This effect is abolished by atropine. Physostigmine is also a powerful constrictor of the bronchi, as also is digitalin. These agents produce the effect by acting on the peripheral ends of the vagus nerve. Barium chloride, veratrine, bromine, and salts of many of the heavy metals—for example, chloride of gold—produce bronchial constriction by acting on the bronchial muscle, and this effect is not antagonized by atropine. The inhalation of carbonic acid gas causes constriction by acting both centrally and peripherally. Atropine, hyoscyamine, and hyoscine induce dilatation of the bronchioles when constriction is present. The authors express the opinion that the radical cure of spasmodic asthma consists in removing the source of peripheral irritation, but they point out the impossibility of an attack when the patient is under the influence of atropine, and that during an attack an injection of atropine will quickly abort it. This, they say, is well recognized by clinicians, and the inhalations of stramonium fumes forms the routine method of treatment. Chloroform, ether, and urethrane produce slight dilatation of the bronchioles. Hydrocyanic acid, by injection or inhalation of minute quantities, produces a gradual relaxation of the involuntary muscle, which is peripheral and probably due to the weakening of both nerves and muscles. Nicotine at first produces constriction, which is soon followed by dilatation. Two preparations of lobelia were investigated—lobeline, which was found to be inactive, and the ethereal tincture of the *B.P.* This produces a marked rise in blood pressure and slight constriction of the bronchi. If the bronchial tubes are at all constricted lobelia produces a quick dilatation which rapidly passes off and the original constriction returns. This effect is in marked contrast to that of atropine, after which the dilatation is permanent. Large doses of morphine cause considerable constriction of the bronchi after an initial transitory small dilatation. Small doses are followed by a slight dilatation only, which is better marked if there had been previous constriction. Suprarenal extract and ergot produce very little, if any, effect on the bronchi.

(305) Incompatibles.

THE following summary of incompatibles, which is taken from *Merck's Archives* for March, may be useful to prescribers: *Alkaloids*.—Great care is necessary in prescribing these, because, most of them being potent drugs, precipitation may cause serious consequences, by an overdose of the alkaloid being poured out in one dose. Alkaloids should not be prescribed with potassium hydrate, carbonate and bicarbonate; sodium hydrate, carbonate, bicarbonate and borate (also phosphate); ammonium water and ammonium carbonate; lime water, iodides, bromides, tannic acid (or substances containing tannin); mercuric chloride; gold chloride. Besides the foregoing, quinine also is incompatible with salicylates and acetates. The reason the alkaloids are

incompatible with the above enumerated substances is because the alkaloids are precipitated by them. For instance, if morphine sulphate and ammonia water or ammonium carbonate (or the aromatic spirit of ammonia which contains those substances) is prescribed, pure alkaloidal morphine, which is but very slightly soluble, will precipitate; if morphine sulphate and tannic acid is prescribed, morphine tannate will precipitate; if strychnine sulphate and mercuric chloride are prescribed, a double salt of strychnine and mercury will precipitate. [N.B.—The alkaloids, or their salts, official in the *Pharmacopoeia*, are: Apomorphine, atropine, cinchonidine, cinchonine, quinidine, quinine, cocaine, codeine, morphine, hydrastinine, hyoscine, hyoscyamine, physostigmine, pilocarpin, sparteine, strychnine; in practice, codeine may be prescribed with alkalies, because the pure alkaloid is itself quite soluble in water.] *Tincture of Ferric Chloride.*—The principal incompatibles of this tincture and all ferric salts, are: Salicylates (formation of deep violet-blue colour and precipitate of ferric salicylate); benzoates (flesh-coloured precipitate of ferric benzoate); tannates (inky colour and precipitate of ferric tannate); antipyrin (red colour); the iodides and bromides (liberation of iodine and bromine); mucilage of acacia (gelatinous precipitate, unless well diluted); carbonates and bicarbonates (precipitation of ferric carbonate and oxide). When prescribing quinine sulphate with tincture of iron, it is not necessary to order some acid, because the tincture of iron is itself sufficiently acid to dissolve the quinine. It is also well to remember that oil of wintergreen (and oil of sweet birch) will give a deep violet colour with ferric salts, because it is chemically methyl salicylate. *Mercurial Compounds.*—Their incompatibles are: Potassium and sodium hydrate, carbonate and bicarbonate; ammonium hydroxide (ammonia water) and carbonate; lime water (precipitates as an oxide); hypophosphites (reduced to the metallic state). Besides it is necessary to emphasize the incompatibility of mercurous iodide with potassium iodide and other iodides (the mercurous iodide decomposes into mercuric iodide and metallic mercury) and of mercuric compounds with alkaloids and borax. *Silver Nitrate.*—The only real incompatibily of silver nitrate that occurs in practice is with sodium chloride and perhaps sodium bicarbonate. The reason physicians sometimes commit the absurdity of prescribing these substances together is because they know that the salts neutralize the caustic effects of the silver nitrate. As to organic substances, the dictum that they are all incompatible with silver nitrate needs revision. It is true that they reduce the nitrate to the state of an oxide, but it is always the astringent effect of the nitrate that is sought when argentum nitricum is administered. Is it not frequently the constitutional effect of the silver that is wanted? When the astringent effect on the intestinal canal is desired, silver nitrate should be administered in keratin-coated pills, and the diluent should be an indifferent substance like kaolin. *Hydrogen Peroxide.*—The incompatibles are: Potassium permanganate, carbolic acid, chlorine water, ferric chloride, iodides, ammonia water, potassa, soda. *Acids and Salts.*—The strong acids, as a rule, decompose the salts, but the incompatibility is not a very important one; very often an acid and a salt—usually a carbonate or bicarbonate—are prescribed deliberately, in order to get a new salt in fresh condition. Thus, sodium bicarbonate and salicylic acid are prescribed in order to get fresh sodium salicylic. Salicylates and benzoates, however, should never be prescribed with acids, because salicylic and benzoic acid are liberated, and, being but very slightly soluble in water, they float about in flakes or are precipitated to the bottom of the vessel. *Miscellaneous Points.*—(1) Ichthyol is insoluble in strong alcoholic media, and incompatible with, because precipitated by, strong acids and iodides. (2) Iodine or tincture of iodine should not be prescribed with water or glycerine, unless some potassium iodide is ordered at the same time. (3) Hydrochloric acid, when added directly to potassium chlorate, liberates chlorine; this is sometimes done deliberately, when the physician wants a mixture containing free chlorine. (4) Menthol, thymol, chloral, and camphor liquefy when rubbed together; while they may be prescribed in a liquid preparation, they are absolutely incompatible when ordered in powders or capsules. (5) Potassium permanganate is incompatible with most organic substances, and when prescribed internally should be prescribed with kaolin as the diluent, and petrolatum or woolfat as the excipient. (6) Chlorine water should be prescribed alone, because it combines very readily with other substances.

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(306) Methyl-Atropine Bromide.

IN the January number of the *Therap. Monatsh.* there is a report on a new atropin derivative, which is called methyl-atropine bromide. Its formula is as follows: $C_{16}H_{20}O_3{=}N\begin{cases}CH_3\\CH_3\\Br\end{cases}$ or $C_{17}H_{26}NO_3Br$. It crystallizes in white platelets, which fluidify at 222° to 223° C. It is freely soluble in water, in dilute alcohol; not so, however, in absolute alcohol, acetone, and chloroform. Experiments on cats show that 2 drops of a 1 per cent. solution instilled into the conjunctival sac produce complete mydriasis in five minutes, which lasts for four hours, and after six hours the dilatation has completely disappeared. Control experiments with a 1 per cent. solution of atropine show that the complete dilatation is much slower, the first signs of it taking place in ten minutes, while it lasts for three days. The methyl-atropine bromide acts less accelerating on the cat's heart. The preparation has been tried in practice, both as a mydriatic and to control the secretion of sweat and saliva. Two drops of a 1 per cent. solution produce a dilatation of the pupil, which disappears within four hours. For the night sweats of phthisis a daily dose of from 0.006 to 0.012 gram (=0.09 to 0.184 gr.) was capable of fully relieving, without producing any of the objectionable side effects of atropine, such as dryness of the mouth and throat. The same good result was gained by the smaller dose for abnormal salivation and sweating of neurasthenia and hysteria.

PATHOLOGY.

(307) Etiology of the Summer Diarrhœa of Infants.

DUVAL AND BASSETT (*Centralbl. f. Bakt.*, December 22nd, 1902) make a preliminary report of an investigation on the summer diarrhœas of infants. A careful study of the bacterial flora of a number of these cases was made, and from 42 typical cases the authors succeeded in isolating from the stools B. dysenteriae of Shiga. The specific organism was secured also from scrapings of the intestinal mucosa at necropsy and in one case from the mesenteric glands and liver. It was present often in large numbers in the stools of acute cases, but was secured with difficulty from cases of mild character and those of long duration, on account of its presence in relatively small numbers and the antagonism of the normal intestinal bacteria. Agglutinative reactions were obtained when the organisms were tested (*a*) with the blood serum of the patients from whom they were secured, (*b*) with the serum of other infants suffering from summer diarrhœa, (*c*) with the serum of adult patients suffering from dysentery, and (*d*) with antidysenteric immune serum. The bacillus was not found in the stools of 25 healthy children, nor of those suffering from simple diarrhœa, nor did the blood serum of these latter agglutinate the bacillus.

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(308) Double Penis.

VOLPA (*Il Policlin.*, January, 1903) reports the following case owing to the extreme rarity of the deformity from which he suffered. The child was born of healthy parents and was itself normal, except that it had two penes and two scrota, and its anus was occluded. The left penis, which started from the usual situation, was 3½ cm. long, and the glans was completely covered by the prepuce. The right penis started 3 mm. to the right of the first, was 3 cm. long, and void of prepuce. Each penis had a urethra. In the left scrotum one testis had descended. The right scrotum was well formed and provided with a median raphé. The child died of intestinal obstruction twenty-nine days after birth. During life the urine was emitted exclusively from the left penis. At first faecal matter came from the right penis, but five or six days later faecal material came through the left urethra as well. *Post mortem* the two urethrae communicated with two separate bladders, into which opened two large intestines with ileo-caecal valves. There was only one kidney, one ureter, and one testicle

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(309) The Urine after Epileptic Attacks.

K. INOUYE AND T. SAIKI (*Zeit. f. phys. Chemie.*, Bd. xxxvii, p. 203) find that after the attack in epilepsy albumen is not commonly met with in the urine. They, however, have frequently observed large quantities of dextro-lactic acid, and consider that this is due to poverty of oxygen during the attack rather than to any disturbance of liver functions.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(310) Syphilitic Heart Disease.

M. M. BREITMANN (*Gazz. des. Hôp.*, February 21st, 1903) maintains that, although there are no specific signs of syphilitic disease of the heart, there is a combination of symptoms and a peculiar method of onset which particularly characterize it. Further, syphilis, in attacking the heart, seems to afford experimental proof of the function of several parts of the heart in a way that physiological experiment is unable to do. The function of the interventricular septum is not dealt with by physiologists, and the pure effect of ablation is rendered impossible by reason of the damage to other parts during the operation. On the other hand, syphilis, by causing a gumma of the interventricular septum, and leaving intact the other parts of the heart, affords us an opportunity of studying the symptoms of such a lesion. During the primary and secondary stages of syphilis the cardiac symptoms may be due either to the circulating toxin or to the dynamical effects of the anaemia. During the tertiary stage the author first deals with lesions of the myocardium (1) of the left ventricle, in which four clinical varieties are recognized: (*a*) In which the gummata are small and have given rise to no symptoms during life, and have not been the cause of death: (*b*) in which relatively large gummata have not given rise to any symptoms during life, but produce sudden death in young and otherwise healthy individuals; sudden death occurs most frequently when the gummata are situated near the apex; (*c*) in which the clinical symptoms are insignificant, simulating, may be, a pseudo-anginal attack of gastric origin, but in which sudden death is apt to occur; (*d*) in which the onset is slow and the symptoms point to a diminution of the kinetic force of the heart, as evidenced by unfilled arteries, passive hyperaemia, venous stasis, palpitations, precordial weight and distress, lassitude, headache, giddiness; murmurs are absent, as the valves are intact, but the sounds are muffled and feeble; the impulse may be imperceptible. In another class of case, in which the muscular wall is little destroyed and the gummata act as foreign bodies only, the surrounding muscle fibres become stimulated, and an increased activity develops in other parts of the ventricle, producing an irregular and excited cardiac contraction with forcible impulse and loud first sound. The stasis that results from this form gives rise to functional troubles of gastro-intestinal, renal, and hepatic origin, which frequently recur after each recovery. Contrary to what is observed in cardiopathies of rheumatic and other origin, and notwithstanding the functional alterations in syphilitic disease of the heart, generalized dropsy is very rare, generally not well-marked, except in the last stages of the disease. (2) Of the right ventricle, in which there are often no symptoms present, and sudden death is much rarer. Dyspnoea is the most frequent symptom, and consists of an acceleration of the respiratory rhythm without any irregularity, accompanied by cyanosis and respiratory distress. Death is often rapid, and usually occurs before a complete insufficiency is established. (3) Of both ventricles, in which symptoms may be absent or may point to one or both ventricles; thus we may observe stasis and dyspnoea, or dyspnoea and palpitation. Sudden death may occur. The author distinguishes four forms of syphilitic fibrosing myocarditis: (1) The weakened muscular tissue yields to the intracardiac pressure, and dilatation results. The symptoms are similar to those of dilatation from other causes, except that they are more severe than the degree of dilatation would explain. Sudden death is frequent, especially if gummata or aneurysm are also present. (2) The wall is thinned, but rigid and firm, and suffers no dilatation. The signs are those of diminished kinetic force (see 1 (*d*) above); further, unlike those of fatty or ordinary fibrous degeneration, they do not yield to the ordinary cardiac tonics. (3) In addition to dilatation hypertrophy is also present. But the symptoms are those of dilatation only, for the hypertrophy is due to increase of fibrous tissue only, and muscular hypertrophy occurs in the presence of some complication alone, such as chronic valvular lesion, aortic aneurysm, or arterio-sclerosis. (4) The wall yields in a limited zone, producing a partial aneurysm of the heart, situated usually near the apex of the left ventricle. Thrombi may form with consecutive emboli. If situated on the interventricular wall and rupture has occurred, the signs are those of congenital lesions due to the persistence of the foramen of Botal. If, however, the aneurysm is situated near the ventricular or aortic valves, the signs are those of lesions of the respective valves, with anginal syndrome. Death is often sudden, and is due to (*a*) cardiac paralysis, (*b*) lack of co-ordination, especially if the aneurysm is situated near the apex, (*c*) rupture. Gummata of the septum are especially prone to interrupt the synchrony of the two sides, the right side, being the weaker, is principally affected, and the symptoms resemble those of right-sided disease. Lesions of the auricles give rise to symptoms similar to those of the ventricles, but of less intense character. The author recognizes the following changes in the pulse-rate as due to syphilis. Tachycardia may be produced by the presence of a gumma in the wall of an undilated heart. It is distinguished from that of nervous origin by its long duration, its regularity, its great frequency, its rapid disappearance under specific treatment, and its intractability to ordinary cardiac tonics. Bradycardia may be caused by a gumma near the aortic valves acting upon the co-ordination of the heart or upon the nervous mechanism, or by obliterative arteritis of the coronary arteries interfering with the automatic centres. Irregularity may accompany either of the former, is often present in all varieties of syphilitic heart disease shortly before death, and is observed in cases with excited action and forcible impulse. The diagnosis of these cases is important, because the results of treatment are brilliant and neglect often terminates by sudden death. The antecedents should be carefully inquired into, the condition of other organs examined for evidences of tertiary syphilis, and all other causes excluded before the diagnosis of syphilitic disease is established. The course of the disease may terminate (1) by intercurrent disease without symptoms, (2) by sudden cardiac failure without symptoms, (3) after symptoms of slow and chronic character, with aggravation of these with each exaccerbation of tertiary disease in other parts of the body. In 33 to 50 per cent. death occurs suddenly after some exertion, (4) with cachexia and asthenia and cardiac insufficiency. The prognosis is good if the treatment is commenced in the initial stage before the gumma becomes organized and obliterative endateritis sets in. There is no relation between the severity of the attack of syphilis and its cardiac manifestation. Treatment consists essentially in the administration of iodide of sodium and mercury in its various forms. Ordinary cardiac tonics are beneficial in direct proportion to the amount of healthy cardiac tissue remaining. The improvement is maintained longer than in non-specific cases treated by cardiac tonics. Yet relapse occurs, and an intermittent treatment should be carried out to prevent recurrence. If the treatment is too energetic there is a danger of so rapid an absorption of gumma that a weak scar may allow a partial aneurysm to form. The general condition should be carefully attended to by diet, fresh air, and general tonics. Thirty references to the literature of the subject are given.

(311) Paroxysmal Tachycardia of Epileptic Nature.

BELLISARI (*Rif. Med.*, March 11th, 1903) publishes some cases supporting the view that certain types of paroxysmal tachycardia may be of epileptic origin, just as some attacks of angina, vomiting, gastric crises, etc., may be. As in epilepsy, the family history, heredity, trauma must be considered in tracing the etiology of these cases of tachycardia. Attacks coming on only at night are suggestive of epilepsy. The attack may have an aura (vertigo, anguish, visual disorders, or aural sensations), just like an epileptic aura. Some of the cases have had slight pyrexia during the attack. The most marked analogies between epilepsy and tachycardia are to be seen in the field of the various reflex and symptomatic forms. During the actual attack itself there is nothing to distinguish the tachycardia, which is the equivalent of an epileptic fit, from the so-called essential tachycardia. The diagnosis depends on the history, the nocturnal character of the onset, the nature of the precursory and consecutive phenomena, and the influence of bromide treatment. Pathologically they are probably due to arrest of the inhibitory function of the vagus caused by cortical irritation. Speaking generally, the prognosis need not be so guarded as in other forms of tachycardia, although, if the attacks are very frequent, some permanent weakening of the heart may arise.

(312) Typhoid Bacilli in the Urine of Convalescents.

Vincent (*Sem. Méd.*, March 18th, 1903) finds that in 19 per cent. of typhoid patients the bacilli are to be found in the urine, and make their appearance generally from the eleventh to the seventeenth day. They may persist long after recovery; he has found them on the nineteenth and thirty-seventh day afterwards, and thinks they may continue for even longer. The number of bacilli excreted varies very considerably from day to day, according as the urine is more or less acid. As the bacilli may be found in the urine when there is no evidence whatever of renal derangement he does not think that they are due to renal elimination, but regards it as a significant fact that their occurrence in the urine may sometimes be stopped by washing out the bladder with permanganate of potash. It is in the bladder that they grow, nourished in the favourable culture medium of urine regularly renewed.

SURGERY.

(313) Surgical Treatment of Pancreatic Cyst.

Cumston (*Journ. de Chir. et Ann. de la Soc. Belge de Chir.*, No. 1, 1903) in the course of clinical comment on an original case here recorded of cyst of the pancreas, deals at some length with the treatment of this affection. As far as the treatment of cysts of the pancreas is concerned, surgical interference, it is stated, is the only one. In such treatment the surgeon has to choose one of two methods: incision and drainage on the one hand, total extirpation of the cyst on the other. The situation of the incision in the abdominal wall should, the author thinks, depend entirely on the situation of the swelling. In most cases, however, the abdomen was opened in the middle line; in some few instances over the most prominent part of the swelling. If after division of the gastro-colic ligament and of the peritoneal covering of the cyst the tumour be found quite free, or if its adhesions can be readily separated, total extirpation is undoubtedly indicated. In the presence of contrary conditions the only alternative that is left to the surgeon is incision and subsequent drainage. After the cyst has been isolated, it should be fixed by sutures to the abdominal wall, or simply to the parietal peritoneum. If the abdominal viscera be carefully protected by sterilized gauze, it is of very little importance whether or not any of the fluid contained in the cyst be withdrawn by an aspirator before the application of the sutures. The author recommends suturing of the parietal peritoneum to the peritoneal covering of the cyst. When the cyst has been emptied and its cavity thoroughly irrigated with sterilized salt solution, the cavity should be drained by means of a glass tube, and be packed with gauze. If the surgeon can rely on his antiseptic methods it will be unnecessary to carry out this treatment in two operations. In cases treated by stitching the cyst to the abdominal wall and by drainage, it would seem, the author finds, that there is a great possibility of recurrence. It should also be borne in mind that interminable fistulae may result, which often give rise to various complications. Regarding total extirpation of the cyst, this, though a most radical operation, is not devoid of danger. In the first place, on account of the deep situation of the pancreas, the control of haemorrhage is a most difficult matter; and, secondly, important organs are liable to be damaged unless great care be taken. If complete extirpation be attempted, it is held to be better to first dissect the tumour from the peritoneal covering, and then to continue the dissection from the pancreas, and, after the growth has been completely removed, the abdominal cavity should not be closed until all haemorrhage has been effectually controlled. If in attempting total extirpation of the cyst the adhesions are found tougher than was at first supposed, or severe haemorrhage results, it would, the author holds, seem better practice to desist from removing the cyst, and to simply stitch it to the abdominal wall with a view to subsequent drainage.

(314) Operative Treatment of Tuberculous Kidney.

Garceau (*Annals of Surgery*, October, 1902) draws the following conclusions from an analysis of 415 collected cases in which some operation was performed for renal tuberculosis: (1) Tuberculosis is rarely, if ever, primary in the kidney, the original focus usually existing in some other organ in more direct contact with the external air; (2) the presence of a primary focus of disease in the body, even if the disease has been thoroughly eradicated from the urinary tract, makes the ultimate prognosis in such cases doubtful at least; (3) such foci may remain permanently quiescent, but they may also become excited to activity by a low condition of the system, or by some unknown cause; (4) patients should be told of their danger as regards their future, and they should lead lives of the greatest regularity, and pay strict attention to hygiene; (5) cures of long duration have been reported, but instances of this kind are rare; (6) nephro-ureterectomy should be done in all cases in which the ureter is diseased and the patient's condition is favourable to such treatment; (7) an abandoned tuberculous ureter is an especial source of danger on account of the great liability of subsequent tuberculosis; (8) nephrotomy alone should be rejected except as a preliminary to nephrectomy; (9) partial resection is not justifiable, for the surgeon can never be sure that the portion removed includes the whole of the disease.

(315) Treatment of Unreduced Traumatic Luxation of the Hip (Posterior Variety).

Denis (*Rev. d'Orthop.*, No. 2, 1903) holds that the irreducibility in an old case of traumatic luxation of the hip is due much more to cicatricial contraction of the rent in the capsule than to muscular shortening, and to complete or partial obliteration of the cotyloid cavity. In the treatment of unreduced posterior luxation prolonged extension and tenotomy are considered to be useless methods, and the choice, the author states, rests between resection of the head of the femur and simple arthrotomy. The first method, it is stated, results in considerable shortening of the limb, and in too free mobility of the upper end of the bone. The preference is given to arthrotomy performed by the anterior method, in which an incision made along the inner margin of the sartorius muscle is carried downwards between the rectus and the psoas. A case is reported in which the author performed this operation with good results for an old luxation on the dorsum ilii. Whilst acknowledging that reduction cannot in every case be effected by simple anterior arthrotomy, he holds that it is both theoretically and practically indicated to expose the displaced head of the femur by this operation. It is only by the anterior incision that the surgeon is enabled to obtain a good view of the cotyloid cavity, and to divide the articular capsule around the confined neck of the femur. This operation, it is held, affords the best chances of success, and has the advantage over posterior arthrotomy of not necessitating, as one of the first steps, section of the femoral neck.

MIDWIFERY AND DISEASES OF WOMEN.

(316) Thrombosis of the Inferior Vena Cava in Puerperal Septicaemia.

Fothergill and Gordon (*Jour. of Obstet. and Gynaec.*, March, 1903,) describe a case of puerperal septicaemia presenting two features of interest (1) thrombosis of the inferior vena cava, and (2) a temperature of 111.2° F. five weeks before death. The patient, a woman of 30, had previously given birth to two children. She was confined on March 21st, 1903, labour being easy and apparently normal. Symptoms of infection were observed the day after the confinement, and on March 26th she was admitted to the Monsall Hospital as a case of puerperal fever. On admission the patient was a thin woman of careworn appearance, complaining of a dull pain in the lower part of the abdomen especially in the right iliac fossa, of headache and of nausea. The temperature was 101.5°, respirations 24, pulse 84. There was some fetid muco-purulent discharge. On examination the abdomen was generally slightly distended and moved well with respiration; the uterus could be felt above the pubes and was tender; there was no abnormal dullness in the abdomen; the os was patulous. Next day the uterus was explored with the finger and the mucous membrane found to be soft and friable throughout. In spite of daily intra-uterine douches, the patient on March 31st became worse, vomiting frequently and being in great pain. The uterus was now thoroughly curetted and several pieces of placenta came away. The free bleeding which followed the operation necessitated plugging the uterus and vagina with sterilized gauze, but on the removal of the plugs next day the uterus contracted firmly and during the rest of the illness nothing abnormal arose in connexion with the pelvic organs. The temperature, however, remained high and remittent and rigors occurred at intervals. On April 6th the temperature as registered by three thermometers was 111.2° F., there were no signs of collapse, the patient being conscious and in good

spirits, and the temperature quickly dropped to normal after hot sponging and the administration of phenacetin. On examination there was pain and tenderness at the saphenous opening on the right side. Signs of thrombosis of the femoral and saphenous veins on the same side were quickly evident, and after two days the same process followed on the other side. Both legs became oedematous and a cord could subsequently be felt in the situation of each popliteal vein. From this time onwards the temperature continued remittent and there were repeated rigors. Vomiting and diarrhoea were present from time to time, but were not persistent; albumen appeared in the urine a week before death; there was no sign of suppuration or embolism in any of the organs. The patient's strength steadily diminished and she died on May 14th, the immediate cause of death being oedema of the lungs. The necropsy showed that all veins below the heart were filled with *ante-mortem* clot, which was hard and tough in the veins below the bifurcation of the vena cava, softer in the vena cava itself and in the renal veins.

(317) Three Cases of Ruptured Uterus Successfully Treated by Tampon.

TÓTH (*Zentralbl. f. Gynäk.*, No. 6, 1903) reports three cases of this grave condition treated by the tampon: (1) Patient, aged 43, 8 children; almost pulseless. Fetus drawn by the feet out of the peritoneal cavity (into which it had escaped), the placenta extracted by pulling on the cord, prolapsed intestine reduced, and the tampon applied to the rupture and uterine cavity. Symptoms of peritonitis set in on the third day, an abdominal abscess formed and discharged much pus, a hernia developed at the site of the abscess. (2) Patient, aged 32, 7 children, version for transverse presentation at fifth labour. Two hours after examination, labour seeming to progress favourably, violent pain set in; pulse 124. Under chloroform rupture of uterus detected, the head of the fetus, still alive, had escaped into the peritoneal cavity. Reduction of head, craniotomy, extraction of fetus and placenta. The tampon was applied, and the patient was sent to a lying-in hospital, where the uterus was removed entire. Recovery was rapid. (3) Patient, aged 29, 7 children, born spontaneously; the last two died before birth. A midwife delivered the patient on this occasion of a macerated fetus, and was under the impression that a twin remained undelivered. But clots escaped from the vagina, the abdomen was tender and tympanitic, the bladder extremely distended. A transverse semilunar rent was detected in the vagina, and a laceration, which ran from in front backwards and high up was discovered in the cervix. The promontory of the sacrum lay immediately behind the posterior part of the laceration in the cervix, and had been taken for a fetal head by the midwife. The tampon was applied, and the patient made a good recovery.

(318) Pregnancy in a Woman aged 51.

M. SCHARLIEB (*Journ. of Obstet. and Gynaec.*, April, 1903) reports a case, diagnosed as a degenerating fibroid of the uterus, but proving to be one of pregnancy. The patient, aged 51, had previously borne nine children, the youngest being 4½ years old. Shortly after her last confinement she noticed a swelling the size of an egg on the left side of the abdomen. This grew steadily larger, and after two years she went to the Great Northern Hospital, and was told she had a "bleeding tumour." The tumour continued to grow and was somewhat painful, the menstrual periods were too frequent and the discharge was at time offensive. The periods stopped three and a-half months before admission, being replaced by an offensive discharge. This was accompanied by an increased pain which was always present, and the patient grew thinner. On admission, the abdomen was prominent chiefly below and to the right side of the umbilicus, and a rounded hard tumour, freely movable from side to side, was found reaching to the level of the umbilicus. No certain signs of pregnancy were present and there was no mammary development. On opening the abdomen the uterus was found enlarged to the umbilicus, smooth and somewhat globular, and containing a fetus of about three months growth. There was discoloration of the tissues on the dorsal surface, showing that the fetus had been dead for some time.

THERAPEUTICS.

(319) Pyranum.

E. SCHLESINGER (*Therap. Monats.*, January, 1903) has made some experiments with a new drug called pyranum. It is a combination of benzoic acid, salicylic acid, and thymol, and takes the form of a soluble sodium salt. Its chemical composition is benzoyl-thymol sodium benzol-oxy-benzoicum, and has a weakly aromatic taste, and occurs in white hygroscopic crystalline powder. According to Piorkowski, it is non-poisonous to animals. Healthy persons also stand the medicament without ill-effect when given in doses of from 1 to 5 grams (about 15½ to 77 gr.) three times a day. At times 2 grams produced slight sweating. The blood pressure was slightly depressed during the first two or three hours, and then returned to its previous level. When taken early in the morning, while fasting, salicylic acid could be found in the urine after twenty minutes; this reaction increased during the first three-quarters of an hour, and then remained fairly stationary for about six hours, when it began to diminish, and at the end of ten hours, the acid was no longer found. The excretion of thymol, in the form of thymol-glucuronic acid, could be still made out after twenty-four hours. The drug possesses an antipyretic action which Schlesinger tried in 139 cases. This action is not a severe one, but it has the advantage of not carrying with it any unpleasant effects, and at the same time it improves the subjective condition of the patient. As an antineuralgic, and when given for headache, and merely to ease pain, it works well. The pain in these cases disappeared about half an hour after the pyranum was taken, and even in a severe case of sciatica complete relief was given by 8 grams, extending over two days. In acute rheumatism, 10 to 12 grams, extending over three days, was found to be sufficient to reduce the fever and to remove the pain. Chronic rheumatism was also improved by its use when given in small doses—for example, 0.5 to 0.75 gram three times a day for several weeks. For tonsillitis, bronchitis, and conditions like influenza, he found it useful in easing the headache and pains in the limbs. Large doses, as 2 grams twice a day for eight to ten days, increased the diaphoresis in pleurisy, and a diminution of the serous effusion was always obtained. Children received from quarter to half of the adult dose according to the age. He has not seen any bad effects arising from its use, and he regards it as a useful mild antipyretic, a powerful antirheumatic, and an excellent antineuralgic.

(320) Treatment of Acute Pneumonia.

M. KLIPPEL (*Arch. Gén. de Méd.*, February 17th, 1903) describes the treatment applicable to a case of pneumonia commonly seen now, but described less frequently in the past. The attack commences with repeated shivering, without rigor, resembling thus an attack of pleurisy, in a patient who, a fortnight previously, had caught cold and had remained at work. Besides the common indications in fevers—especially the cleansing of the mouth, which is the usual habitat of the pneumococcus—he employs calomel, blisters, and Todd's draught. The action of the blister cannot be explained by the withdrawal from the general circulation of a small quantity of fluid, although that may be toxic. It may act reflexly upon the vasomotor nerves of the lung when placed over it; for in animals the muscles subjacent to a blister present a change in colour, although there are no direct vascular connexions with the skin. Thirdly, the blister may stimulate the production of leucocytes from the bone marrow; for in the fluid of the blister there are present great numbers of Erhlich's eosinophile corpuscles, and it is in grave cases of pneumonia, in which leucocytosis is absent, that a fatal termination ensues. Lastly, the cantharidin absorbed may act directly upon the hepatization. Pain is best treated by wet cupping. Digitalis is useless in healthy subjects with sound hearts, but is indicated when the cardiac muscle fibre is altered, and when the pulse points to a feeble and irregular systole. For sudden cardiac failure he recommends caffeine hypodermically; for delirium, musk, valerian and warm baths; for hyperpyrexia, cold baths. During convalescence there is marked increase in the nitrogenous elements in the urine; this appears to correspond with the absorption of the pulmonary exudation, which is rich in nitrogen. A diet rich in albuminoids is therefore indicated during convalescence. Prophylactic measures should be directed to disinfecting the mouth, as that cavity is the principal habitat of the pneumococcus.

(321) Sanatorium Treatment of Phthisis.

NEISSEN (*Zeitschrift für Tuberkulose und Heilstättenwesen*, Band iv, Heft 2) describes the result of the treatment of phthisis at the Hohenhonnef Sanatorium. Out of 1,731 patients 278 re-

covered, 621 almost recovered, and 412 improved. Recovery is said to have taken place when all *râles* disappear, and the spectrum, if any, is free from tubercle bacilli, while the patients' aspect, vigour, and power of work nearly approach that of a healthy man. Some impairment of resonance and changed breath sounds remain at the end of the treatment in all but slight cases. The prognosis depends largely on the stage reached by the disease when treatment is begun, and Neissen believes that statistics of results will be of far greater value when a system of classification according to the stage of the disease on admission to a sanatorium is more generally adopted. He defines the first stage of phthisis as that in which there is slight or moderate infiltration of part of a lobe, if at the apex, reaching not further than the third or fourth rib, the breath sounds being always abnormal. In the second there is infiltration of a whole lobe, and tissue destruction is beginning. In the third the infiltration is still more extensive, and pronounced cavities are usually present. Out of 408 patients at different stages on admission good results were obtained in 98.4 per cent. of these in the first stage, 96.2 per cent. of those in the second, and only 41.7 per cent. of those in the third. It is of great interest to know to what extent patients who recover are able to bear the strain of ordinary life; and Neissen has attempted to ascertain the later history of all patients "cured" at the sanatorium who left three years ago or earlier. The number on the books was 259. Of 11 no information could be gained; of the remaining 248, 40 had gradually lost ground, often as the result of unfavourable conditions, as, for example, overwork, but only 9 had died, 3 of the deaths being due to causes other than phthisis. The remaining 208 were still well after periods ranging from three to eleven years. All but one of these patients were in the first or second stage of the disease on admission. In the case of the patient in the third stage a circumscribed cavity was present, which healed under treatment. The diagnosis of phthisis was confirmed in almost every case by the demonstration of tubercle bacilli in the sputum. In the remaining cases the patients either reacted to the tuberculin test, or the physical signs were such as to leave no doubt of the presence of phthisis. That the cases were not especially slight ones was shown by the presence of fever in more than half the cases at the beginning of treatment. Complications were not infrequent, the pleurae being often involved, and less frequently the larynx. The mean duration of residence at the sanatorium was between seventy and eighty days. On leaving the patients were warned that re-entrance into ordinary life was an experiment, and that life at home should be regulated as far as possible in accordance with the rules of the sanatorium.

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(322) The Razlag Treatment of Leprosy.

In the *Public Health Reports* of January 30th, 1903, Adolph Razlag, an American practitioner in South China, gives an account of his method of treating leprosy in a report submitted to the Treasury Department as an enclosure in the report of the United States Consul at Canton. The results in the first four patients are said to have been most satisfactory. Although they had been but four months under treatment, three have returned to their ordinary work practically cured, while the fourth, who was in most desperate condition, is still under treatment. Razlag places great dependence upon open-air life and cleanliness. Baths are of the greatest importance. He uses cold or warm baths with fresh water, salt water and baths medicated with such drugs as iodine, tannic acid, and potassium permanganate, as the condition of the patient may require. Wounds are treated with zinc chloride or zinc sulphate, hydrogen peroxide, ichthyol, chrysarobin, arsenic, iodine, creosote, croton oil, and salicylic acid. He never uses iodoform. For the massage and friction of anaesthetic skin, croton or chaulmoogra oil, in combination with olive oil, is employed. He reduces the oedema by the judicious application of leeches. Internally he employs jaborandi or simply strong coffee or tea as a sudorific. Arsenic is used routinely in combination with strychnine and ichthyol. Soda salicylate and creosote have also a place in the treatment. Great care must be taken that the wounds heal slowly, as the quick closing of ulcers will generally lead to the reappearance of nodules. Our first duty after isolation is to endeavour to heal the skin lesions, relieve the patient of all pain, and then begin our routine internal treatment. The average time of successful treatment is at least one year under favourable conditions. He believes that the perpetual isolation of lepers is demanded, and that the utmost care should be taken in placing such leper colonies in the best hygienic conditions. Razlag's success seems to have been due to his thorough acquaintance with leprosy in all its stages. There is nothing specific in the treatment he advocates, and, indeed, it appears to have succeeded largely on account of the intelligent and persistent manner in which it has been conducted.

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(323) Prevention of Malaria on Sea Voyages.

Rudolf Pöch (*Archiv für Schiffs- und Tropen Hygiene*, March, 1903) describes measures taken for the prevention of malaria during a voyage along the coasts of Senegambia and Upper Guinea, with the results obtained. To exclude risk of infection except when mosquitos were on the vessel, only the captain and the doctor left the ship during the voyage. With one exception, mosquitos were only found on board when the ship anchored for the night in a river mouth near to the bank, and the number of mosquitos was found to vary from night to night with the strength and direction of the wind. The two methods of protection attempted were (1) protection by mosquito nets, and (2) by the prophylactic administration of quinine. Mosquito nets were used to shut off the doors, portholes, and air shafts of the cabins, and to surround any one who slept on deck. All the framework required for this purpose was made on board, and only a trifling expense was incurred; but complete protection could not be achieved in this way, for men on night watch could not work under mosquito nets, and great importance therefore attaches to the efficacy of the other method, that is, to the prophylactic administration of quinine. This was begun on the first night on which risk of infection occurred, and continued for thirteen days after all danger of fresh infection had ceased. At first 1 gram of quinine was given every fifth day, but although always taken before sleep to avoid as far as possible unpleasant after-effects, these were so marked that actual hindrance to work occurred. The principal symptoms were giddiness, singing in the ears, and tremor of the hands. They were more noticeable on the homeward journey, when the men's health had suffered from the effects of climate and frequent absence of fresh meat. The dose of quinine was therefore reduced to ½ gram every fourth night, and this was borne without inconvenience. Out of 33 persons, 4 refused to take quinine, and 1 of these had a severe attack of malaria after an incubation period of ten to twelve days. The remaining 29 remained well while actually taking quinine; 3 were attacked by malaria about a fortnight after the administration of quinine was discontinued, in the fourth and fifth weeks after the probable date of infection. The course of the disease was mild in each case. To explain the prolonged incubation period it is suggested that while quinine is being taken the malarial parasites cannot begin to develop. Pöch recommends that on future voyages (1) the administration of quinine should begin on the first night on which risk of infection occurs, and should continue for at least four weeks, even without any second possibility of infection, and (2) the amount given should be, if possible, 1 gram every fifth night, or, where this is impossible, ½ gram every fourth night.

PATHOLOGY.

(324) Combination of Tuberculosis and Carcinoma of the Mamma.

Kallenberger (*Arbeit. a. d. Gebiet d. pathol. Anat.*, Bd. iv, 1902, p. 58), discussed the different phases through which Rokitansky's doctrine of the mutual exclusion of cancer and tuberculosis has passed. Rokitansky has himself modified his views and states that the association of the two conditions is very rare and that when it occurs cancer usually follows the tuberculosis. Lebert contests the mutual exclusion; Martins considers that they do not occur simultaneously in the same organ; Virchow rejects Dittrich's view that tuberculosis occurs usually secondarily. The combination of the two processes in the same organ was first described by Friedreich, subsequently by many others. The combination has been explained as an accident, or as a secondary invasion of tuberculosis on a tissue rendered less resistant by the presence of cancer, or in some cases the view has been taken that the tuberculosis in some way led up to the carcinoma. Kallenberger describes a case of cancer and tubercle of the breast; he considers that the carcinoma was secondary, induced in some way unexplained by the tuberculous process.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(325) Neurasthenia in Children.

CAPPELLETTI (*Rif. Med.*, April 29th, 1903) draws attention to the fact that neurasthenia, which is usually considered a disease of adult life only, may occur—just as is the case with hysteria, which was at one time looked upon as a peculiarly adult malady—in childhood, and he publishes two cases in children of 11 and 12 years respectively. Owing to the natural joyousness of youth the psychical symptoms of neurasthenia are not of so depressed a character as in the adult. One very important element is the state of mental doubt which colours all the actions of the neurasthenic. The judgement is in a state of fluidity, of ready instability, so that it becomes impossible to arrive at any definite conclusion or to act promptly. Each point as it comes up is rapidly succeeded and transplanted by some fresh idea, hence the vacillating, dilatory character of all their actions. And as corollary of this comes the fatal habit of auto-analysis, which is the scourge of the adult neurasthenic. This mental attitude is, in the author's opinion, one of the most important helps in the differential diagnosis of the malady in question. Children may also present any of the physical symptoms of neurasthenia—for example, the peculiar compressive kind of headache, slight vertigo, insomnia, amyosthenic phenomena, gastro-intestinal disturbance, genital irritability—masturbation, spermatorrhoea — irritable heart, vasomotor and secretory disturbances, respiratory troubles — this only very rarely—and, lastly, signs of degeneration.

(326) Dreams Premonitory of Migraine.

CH. FÉRÉ (*Rev. de Méd.*, February 10th, 1903) records two cases of great interest in which dreams were the precursory symptoms of attacks of migraine. From the remotest times great stress has been laid upon the diagnostic and prognostic value of dreams. During sleep, in the unconscious state, the slightest internal irritation, unnoticed during the waking hours, is capable of producing a picture more or less vivid according to the irritability of the individual. Whereas a slight irritation of short duration may provoke a very vivid picture, a destructive lesion beyond repair may produce a distorted image which is with difficulty recalled in the conscious state. Only rarely do dreams give warnings which are subsequently verified, yet, without placing too great reliance upon them, they should be carefully inquired into, especially if the dream is repeated in the same form and with regularity. The dream may be the first symptom of visceral disease, before any signs are apparent; or of a psychopathia whose early treatment may prevent the evolution of the disease. He draws attention to the fact that among certain epileptics dreams form the premonitory symptoms of an attack, whereas in others the dream only occurs, constituting a miniature attack. Considering the close relationship between epilepsy and migraine, it is scarcely surprising that analogous dreams should be present in the latter. The premonitory dream may be a disturbing nightmare; and in some cases each attack of migraine is preceded by the same dream. Two cases are quoted in full. In the first case dreams of very violent character, embracing storms, volcanic eruptions, and fires, occurred for several months before the commencement of the attacks of migraine. The dreams occurred during the night, and the picture always presented itself on the right side. On the following morning the patient suffered from an attack of right-sided ophthalmic migraine. The dreams never occurred independently of the attack, nor the attack of the dream. In the second case a white figure of religious character and marvellous beauty, appearing from the right and quickly disappearing, formed the character of the dream. For six months the dreams only occurred; then, as sequel, a right ophthalmic migraine with paresis and anaesthesia of right upper and lower extremity, with movements of the head to the left, and with one hour to one hour and a-half's duration. The dream was always followed by migraine after its first occurrence, and the migraine was always heralded by the dream. He considers that the hemianopsic dreams should be compared with hemianopsic hallucinations, and that the connexion of visual dreams with ophthalmic migraine appears to indicate an analogy of the physiological process between hallucinations and sensory migraines.

(327) Hodgson's Disease and Valvular Insufficiency.

BARJON (*Lyon Méd.*, April 12th, 1903) records two cases of aortic atheroma with dilatation, the so-called Hodgson's disease, in which during life a double murmur was constantly present at the base of the heart, and other signs considered pathognomonic of aortic incompetence were observed, but *post mortem* the aortic valves were found by the water test to allow no regurgitation into the ventricle. On opening the heart the valves were seen to be healthy, supple, and without adhesions. In each case the aorta was found much dilated and rigid from deposit of lime salts. The phenomena, including in one case a pulse of the typical Corrigan type, and the double crural murmur of Duroziez, could not be explained by temporary functional insufficiency, for they were observed not to vary during some weeks in both cases. The aorta being permanently in a state of hyperdiastole, the systolic murmur was certainly aneurysmal. Barjon believes that the diastolic murmur was caused by regurgitation of blood into the dilated aorta from the healthy part beyond, occurring as soon as the ventricular contraction was over and the valves closed by suction. This explanation would account also for the peripheral signs (the absence of which in one case was probably due to the pressure of glands greatly enlarged upon the main arteries). The signs then would have an arterial but not a valvular origin. It would seem, then, very difficult to diagnose between the two conditions giving rise to these signs during life, but the presence of the so-called *choc en dôme* (absent in both the cases recorded) points to the existence of true valvular disease.

SURGERY.

(328) The Operative Treatment of Hernia of the Linea Alba.

SCHÜTZ (*Wiener Klinik*, April, 1903), in discussing the treatment of hernia of the linea alba, holds that this affection, even when it causes very little if any pain, and gives no trouble to the patient, should not be neglected. The subject of this protrusion, like the subject of any other form of external hernia, is liable at any time to be attacked by severe and even threatening complications. Active treatment is particularly indicated in those cases in which the bearer of hernia of the linea alba is compelled by the conditions of his calling to make forcible muscular exertion. The only cases in which operative treatment might be regarded as contra-indicated would be those in which the hernia is associated with emaciation from chronic disease, or with an affection of some abdominal organ, as, for instance, ulcer of the stomach and cholelithiasis. The author advocates a treatment in most cases by an operation for radical cure. An abdominal bandage, he holds, cannot be readily applied so as to bring adequate pressure on the seat of the protrusion; consequently the hernial contents are usually retained only for a short time, and with any forcible effort of the patient, and even with coughing or sneezing, are likely to fill the sac. Some rare instances have been reported of cure of this form of hernia by the pressure of a belt, but such an event, it is thought, can hardly be expected except in cases the subjects of which lead quiet and passive lives and are free from the necessity of making vigorous muscular efforts. The use of a truss with a hard convex pad is strongly objected to, as the pressure of this tends rather to enlarge than to contract the opening in the abdominal wall. The usual operation for the radical cure of hernia of the linea alba is regarded as a safe and very successful procedure, and should, the author holds, be recommended in every case in which the contraindications of chronic and emaciating disease and of some grave abdominal affectionare not present. It is pointed out, however, that the pain and dyspeptic troubles so often associated with this kind of hernia may be of a neurotic character, and consequently may not cease promptly and completely after the operative treatment.

(329) Late Recurrence of Surgical Cancer after Operation.

GUINARD (*Bull. et Mém. de la Soc. de Chir. de Paris*, No. 14, 1903) publishes a case of recurrent lingual cancer in a man, aged 69, who had remained free from this disease during an interval of eighteen years after the removal of the left half of the tongue by Verneuil in 1885, by an extensive operation involving the soft parts of the sublingual and submaxillary regions. During the long interval between the date of this operation and the time of the recurrence of the

disease in the form of ulceration, not in the cicatrix, but on the margin of the right half of the tongue, the patient with regard both to his general condition and the state of his mouth remained, it is stated, in perfect health. This case is regarded as one of much interest from two points of view: it indicates that after removal of cancer of the tongue speedy recurrence is not always inevitable, and that the surgeon in dealing with this disease is justified in practising extensive operations. It shows also the necessity of being prudent and circumspect in estimating the action of medicinal methods of treatment and also of the injection of certain sera. If the patient in question had been subjected to serum injections or had even taken quinine in large doses, the miraculous cure of eighteen years' duration would certainly have been attributed to such treatment. In the discussion on this paper, Protherat referred to a case in which a woman, aged 72, under his care with cancer of the rectum, had remained quite free from recurrence of cancer of the tongue during twelve years after removal of the left half of this organ. Roulier also mentioned another case of lingual cancer in which there had been no recurrence after operation during an interval of nine years.

(330) The Diagnosis of Intestinal Injury from Contusion.

Le Conte (*Ann. of Surg.*, April, 1903), basing his conclusions mainly on collected records of cases of abdominal injury, holds that a moderately assured diagnosis of grave injury should be made before operation is undertaken. Of 100 consecutive cases of abdominal contusion, perhaps 30 or 40 will have received a grave injury demanding operation, while the other 60 or 70 recover without any operation. The author is of opinion that in cases of abdominal contusion the surgeon before operating should wait for some symptom or symptoms indicative of intestinal injury. As in the presence of shock a diagnosis of intestinal injury cannot be made, the author would wait for reaction to take place. No one symptom, it is held, is pathognomonic of intestinal injury, but the two most reliable are gradually increasing rigidity and an anxious careworn and painful expression of the face. The latter, which comes on after reaction has taken place and, it is supposed, is concomitant with development of peritonitis, is regarded as the most positive of all the symptoms of severe intra-abdominal injury. In the next group the author would place deep and perhaps radiating abdominal pain, respiration becoming more and more thoracic, vomiting after reaction, abdominal distension, increasing pulse-rate, and secondary fall in temperature. The subject of a severe abdominal contusion should, it is urged, be carefully and constantly watched. Whilst advising delay in doubtful cases, the author does not mean that the surgeon should wait for serious symptoms to become so pronounced that a positive diagnosis is assured, for then operative intervention is for the most part too late. There is a position midway between operating on every case and waiting for an assured diagnosis, where the surgeon can say that owing to the gradual appearance of certain symptoms there is fair reason to think that the intestinal tract may be injured, and that an immediate operation will give the best chance.

(331) Appendicitis in a Newborn Child.

Porak and Durante (*Comptes Rendus de la Soc. d'Obstet., de Gynéc. et de Paed. de Paris*, December, 1902) report the case of an infant brought under their care when 12 days old, in a very septic condition. A large abscess had developed in the region of the right scapula, following injection of serum; on the opposite side a similar injection had caused a collection of fluid to develop; this was absorbed whilst the abscess had to be opened. The umbilicus had suppurated. After a gain of weight, with abnormally low temperature (as the authors have noted in previous severe cases), the infant died suddenly when 21 days old. Acute peritonitis, without effusion of fluid, was detected. The serous coat of the small intestine was deeply injected, the caecum being so much involved as to appear of a violet-red colour, whilst the vermiform appendix was sloughy. There was a small hole at one point near the tip, but whether it represented a pathological rupture or a laceration made during the necropsy the authors were disinclined to decide. The infection clearly came from the suppurating cord and urachus, which was also involved, but not connected with the appendix by adhesions. The germs had succeeded in setting up infective processes in the appendix, which has relatively feeble resisting powers.

MIDWIFERY AND DISEASES OF WOMEN.

(332) The Danger of Intrauterine Injection of Caustics.

Weisswange (*Zentralbl. f. Gynäk.*, No. 19, 1903) recently exhibited before the Dresden Obstetrical Society a uterus removed for adeno-carcinoma. It showed a slough at the fundus extending into the tubes; there was also recent salpingitis. The patient was aged 26. Four months before the uterus was removed, she came under the care of a specialist for endometritis and menorrhagia, and the curette was employed twice; on the second occasion chloride of zinc was injected with every precaution by means of Braun's intrauterine syringe. As adeno-carcinoma was diagnosed on microscopical examination of the scrapings, the uterus was removed. There was much discussion about this specimen and the dangers of injection. Leopold remembered the bad results recorded by Credé, Spiegelberg, and Veit, and wondered that Braun's syringe was still in use; he had himself rejected it for years and warned his pupils against its employment. Peters and Goedecke were of the same opinion. Osterloh, on the other hand, declared that he had used Braun's syringe for twenty-six years, and never had the least evil result; he found that the instrument was most satisfactory and safe provided precautions were taken.

(333) Placental Infarcts.

E. Franke (*Prof. Orth's Festschrift* Berlin: August Hirschwald. 1903. Pp. 414-421), from a microscopic examination of 79 infarcts in 36 full-time placentas, finds that the cause of infarction is an interference with the maternal blood stream, associated with change in the maternal vessels at their point of opening into the intervillous spaces, and with necrosis of the maternal decidua and haemorrhage into its tissue. The changes in the terminal openings of the maternal arteries are laceration of the vessel walls and thromboses. Rupture from its surroundings, inflammatory changes, and pressure from ingrowing villi are amongst the causes of necrosis of the decidua. Infarcts are most frequent where the blood stream is slowest, or where the conditions are most favourable for separation of the placenta, necrosis of the decidua, and venous thrombosis. Hence the frequency of marginal infarcts. The infarcts are closely related to, and generally lie with their broader base upon, the arterial terminations. The growth of large cells is a secondary phenomenon, is most pronounced about the margin of an infarct, and is more active when the infarct is of long standing. Fetal endarteritis is also regarded as a secondary result of infarction.

(334) Interstitial (Tubo-uterine) Gestation.

Steffeck (*Zentralbl. f. Gynäk.*, No. 16, 1903) reports a case where, after the period had been missed for six weeks, severe abdominal pains with symptoms of internal haemorrhage set in. There was no tumour in Douglas's pouch, but a crackling sensation was noted when pressure was made in its direction. The uterus was of the size of the second month, and a soft prominence could be felt on its right side. Abdominal section was performed, and the peritoneal cavity was found to contain much free blood; the intestine adhered firmly to the back of the uterus. On separating the adhesions, free bleeding occurred from the ruptured fundus. The uterus was amputated at the cervix, and the patient made a good recovery. A two-months fetus lay in a cavity in the uterine wall on the right side superiorly; the tube was intact.

(335) Suppurating Abdominal Incision.

Darnall (*Amer. Gyn.*, March, 1903) dwells on the principal causes of suppuration of the wound made in abdominal section. Amongst the most frequent are bruising of the fat by the hands or retractors, small collections of blood, due to carelessness in securing bleeding points, which form foci for infection; deep sutures conveying infection through the skin, and buried sutures of non-absorbable material. Catgut may be septic, and chromicized catgut often contains free chromic acid which irritates the tissues. Abscess develops and bursts; if discovered early the removal of one or two sutures and the evacuation of the pus may restrict the destructive process. But the suppuration often travels the whole length of the incision, which must be reopened, converting the abscess into a widely-open area. To destroy the pus and keep the field clean hydrogen peroxide may be used once or twice daily, followed by a weak perchloride of mercury solution, or solutions of protargol, argyrol, or formalin. When the surface has become healthy

it is not safe to apply sutures, and healing by granulation is tedious, and causes a large irregular scar. Darnall therefore applies the curette to the incision, under anaesthetic, to freshen up the granulations. He next places a narrow strip of iodoform gauze or a few strands of silkworm gut for drainage. A strip of adhesive zinc oxide plaster, about 2¼ in. wide, is now laid on each side of the incision, ¾ in. from its margin, and interrupted sutures are passed between the inner edges of the plaster across the incision without penetrating the skin. An assistant brings the edges of the incision together over the drain by using pressure on each side of the wound. The sutures are next tied firmly across the incision. The two sides of the incision being closely approximated by this means union takes place promptly, and when the drain is removed only a straight linear cicatrix remains.

(336) Ureter Opening into Female Urethra. FISCHER (*Rev. de Gynéc. et de Chir. Abdom.*, March-April, 1903, *Thèse de Zurich*, 1901) made a necropsy on a woman, aged 38, who had died from fibrinous peritonitis; there was apparently no history of urinary trouble. The genito-urinary tract was normal on the left side. On the right there were two ureters. The upper ureter arose from a cystic dilatation in the glandular substance of the kidney, and ended in the urethra ¾ in. behind the meatus. The lower right ureter, completely distinct from the upper, arose from the pelvis of the kidney, and after crossing the upper ureter in the pelvic cavity, passed normally into the bladder.

THERAPEUTICS.

(337) Tuberculous Antitoxin. GUERDER (*Rev. de Méd.*, March 10th, 1903) draws attention to the rôle the liver plays in elaborating antitoxins, and quotes the work of Roger and Charrin, Philasix, and Fraser. Starting from the well-proved advantage of cod-liver oil in tuberculous cases, he advances the proposition of treating local tuberculosis by local injections of its active principles, since generally tuberculous subjects are incapable of digesting sufficient quantities of the oil for it to exert its curative properties. Unfortunately injections of cod-liver oil, however pure, are intolerable on account of the violence of the reaction and the duration of the pain. It is therefore necessary to extract the active principles and incorporate them in a vehicle painless after injection. The injections are made under the strictest antiseptic precautions, on account of the susceptibility of tuberculous tissues to secondary infections; are subcutaneous and in the immediate neighbourhood of the lesion; or, as in hip-joint disease, when the lesion is deep-seated, are made as near to the joint as possible. Where fistulae exist, they are filled with the extract. The quantity injected is 1 to 2 grams every four or five days. The reaction consists of an oedematous swelling, with redness of the skin, pain, and tension. In no case has a roseolous or urticarial rash or articular pain followed the injections. The effect of the injection on pain is remarkable; after three or four injections, in a case of hip-joint disease, it ceases; and this cannot be ascribed to immobilization of the joint, as this is not practised during the injections. The general condition is much improved; but this cannot be attributed solely to the absence of pain, the return of sleep and appetite and the diminished suppuration. The author maintains that it is due to the diminution in the original toxins. Cachexia and albuminuria are equally favourably affected. The local condition improves very slowly; the treatment extends over several months. Abscess may absorbe, or may require opening, when injection of the extract into the abscess cavity causes evacuations of much caseous matter. Abscess formation may be accelerated, with discharge and much caseous matter; this, he considers, is favourable to the ultimate result. When the tuberculous focus is superficial, as in osteitis of hand or foot, subcutaneous nodules often appear after injection, and discharge through the skin; obviously dormant foci are lighted up, and removed by ulceration. Thickened pyogenic membranes disappear slowly by increased suppuration: sequestra exfoliate and discharge more quickly under these injections. Absorption frequently occurs without suppuration, provided the foci are not necrotic. Thickened oedematous areas soften, atrophic muscles increase, shortened bones elongate, and function is restored. He attributes two actions to the injections: (1) Cellular, by which caseous material, pyogenic membranes, and sequestra are evacuated; (2) antitoxic, by which pain, oedema, and albuminuria are relieved, and the general condition improved. Sixty-two cases were treated: 40 cured, 18 remain under treatment, 4 died, of whom one died of albuminuria, another of diabetic gangrene. The cases comprised examples of osteitis, hip joint disease, and adenitis, of suppurative and non-suppurative types: ischio-rectal fistulae and cutaneous tuberculosis. He concludes that: (1) Substances exist, and among them those elaborated by the cells of the cod's liver, which are capable of neutralizing the paralysing effects of tuberculous toxins on phagocytosis. (2) The extract of these substances acts locally when injected. (3) The general effect, which is remarkable, is dependent mainly on the direct local action. (4) Recent cases are curable without any trace of former disease remaining. (5) Prolonged immobilization in tuberculous arthritis is rendered useless, and even harmful, under this treatment. (6) Advanced cases, with suppuration and cachexia, are capable of cure. (7) The mode of action, by stimulating the reaction of the healthy cells, approaches nearly to the method of cure employed by Nature.

(338) The Alkaloids of Ipecacuanha. LOWIN has carried out researches on emitin and cephaëlin, two alkaloids from the ipecacuanha root (*Arch. Internat. de Pharmacodyn. et de Therap.*, vol. xi, fasc 1 and 2). The toxicological symptoms of the two differ but little; both are irritating to mucous membrane, which explains why those who work with powdered ipecacuanha so often suffer from conjunctivitis, catarrh, and cough. On subcutaneous injection they do not, however, show any irritant qualities, and they are therefore correctly said to have a specific irritant effect on mucous membranes. Both alkaloids are cardiac poisons, emetin, however, affects the heart in a much smaller dose than cephaëlin, and affects the rate of contraction, whereas cephaëlin affects rather the force of contraction and causes a lowering of the blood pressure. The characteristic intestinal appearances, inflammation and ecchymosis of the mucous membrane, is caused by both alkaloids about equally, but cephaëlin has a more deleterious action on the kidney. With regard to the lungs after poisoning with cephaëlin definite blood extravasation was found in some cases, whilst after emetin poisoning the lungs were always free from pathological signs. This is contrary to the teaching of Podwyssotzki, who described a high degree of oedema and red hepatization: if the latter were the rule it is difficult to understand how emetin could have any beneficial effect in pneumonia. The most interesting and important difference between the two alkaloids is their comparative effect as emetics, both produce emesis, but whereas cephaëlin is active in this respect, emetin hardly deserves its name, and is much more active as an internal expectorant. The therapeutic value of the two is thus distinct. Different specimens of the root contain very different proportions of the two alkaloids; that from Rio contains 72 per cent. emetin and 25 cephaëlin, that from Carthagena 40 per cent. emetin and 56 per cent. cephaëlin, it is therefore of importance to separate these alkaloids for therapeutic use.

(339) The Value of Rectal Feeding. EDSALL AND MILLER (*Univ. of Pennsylv. Med. Bull.*, January, 1903) have exhaustively studied two cases nourished exclusively per rectum, with determination of absorption, nitrogen-metabolism, and intestinal putrefaction. Two women after severe haematemesis were put upon three nutritive enemata a day, the total amount given in the twenty-four hours being 400 c.cm. of milk and six eggs. Enough salt was added to make the percentage equal to normal salt solution, and three drops of laudanum were added to this mixture, the whole being predigested with pancreatin. A cleansing enema of water was given an hour before the nutrient, which was given through a long rectal tube, the hips being elevated and so maintained for an hour thereafter. There was no evidence of any irritation to affect the results. The first patient had 48 grams food nitrogen in six days; the faecal nitrogen was 29, leaving 19 grams absorbed. The urinary nitrogen was 60 grams. The second patient gave results practically similar. The patients, after eighteen days of rectal feeding, lost about 40 lb. each in weight, though the enemata always relieved their hunger; that, however, immediately and probably by suggestion. The figures showed that at most 40 to 50 per cent. of nitrogenous food and one-third of the fat is absorbed; but this only when small quantities are given, the percentage rapidly falling if more be attempted.

The calories in the first case were equal to 211 as against 2,000 needed per diem, and in the second 319 as against about 2,200. Study of the urinary sulphates showed a large amount of intestinal bacterial decomposition which makes the actual results still worse, especially as regards fat. The authors attribute much of the clinical value of rectal enemata to the absorption of water, which may explain the cases in which weight is gained. In other cases a nutritive balance may be attained, but at a level of subnutrition. If, therefore, the utmost limit of success be attained and the patient be kept from losing weight, we are even then not nourishing him properly, and though this may suffice to bridge over a limited period, its value as a preparation for operation and as an attempt to get the patient into better condition is more than doubtful. The author's conclusion is that rectal feeding only in exceptional cases prevents tissue loss; the best possible result being to keep the patient from losing ground when already in a condition of decided subnutrition.

PATHOLOGY.

(340) The Etiology of Small-pox.

At a meeting of the Boston Society of Medical Sciences, held on April 28th (*Boston Med. and Surg. Journ.*, April 30th), W. T. Councilman announced the discovery of the probable etiology of small-pox. The work which led to this announcement has been carried on for the past two years by W. T. Councilman, G. B. Magrath, and W. R. Brinckerhoff, with the assistance of E. E. Tyzzer and others, at the small-pox hospitals of Boston and at the pathological laboratory of the Harvard Medical School. The material for the investigation was provided through the co-operation of the Board of Health, from the epidemic of small-pox which visited the city during the winter of 1901-2. Bodies of uncertain origin and significance, for upwards of ten years, have been observed in the epithelial cells of the skin in cases of small-pox. Inasmuch as no life-history of these bodies could be made out, opinion varied as to whether they were actually organisms or merely indicative of cellular degenerations. In general the latter opinion prevailed. Councilman and his fellow-workers, carrying the research much further, have been able to demonstrate the fact that these bodies are certainly organisms, belonging to the group of the protozoa; and, further, that they have a definite life cycle both without and within the nuclei of the deeper layer of epithelial cells of the skin. The following points were clearly brought out in Councilman's exposition of the results of the investigation:—That small-pox passes through certain perfectly definite stages in its development on the clinical side, to which correspond equally definite changes in the form of the causative organism; that these changes in form consist first in the appearance in the cell protoplasm of small, homogeneously staining, structureless bodies, about one micron in diameter, not staining so deeply as nuclei, which gradually increase in size coincidently with the degeneration of the cells in which they lie; that with this increase in size the character of these bodies changes, small granules surrounded by circles appear in them, the general outline becomes irregular, with increasing resemblance to an amoeba: that a process resembling sporulation takes place with the breaking up of the amoeboid forms into smaller, spore-like bodies; and that this constitutes the first cycle in the life of the organism. Up to this period the nuclei of the epithelial cells show no changes whatever, but the following alterations in these structures now appear—penetration of nuclei by the small spore-like bodies before spoken of, with the disappearance of such bodies from the cell protoplasm; small ring-shaped bodies become apparent in the nuclei; they also increase in size: the ring shape is at first preserved, which is soon surroundded by a sponge-like body. This whole structure grows, fills and finally destroys the nuclei, and the bodies become free: the bodies again become more homogeneous; ring-shaped bodies again become evident: finally, each ring appears to have a central dot. These final bodies are regarded as the infecting agent of the disease. Two cycles of the organism, corresponding in general to what we know of the protozoa, have therefore been demonstrated: the first—extranuclear—simple; and the second—intranuclear very probably sexual. It also appears to be demonstrated by this work that vaccinia represents the extranuclear phase of the organism, but that the production of true small-pox is dependent upon the invasion of the nuclei—the intranuclear cycle. Vaccinia may be produced by inoculation, for example, in the calf or the rabbit; variola under similar conditions is produced in the monkey. This, also, Councilman and his colleagues are said to have shown. The organism was found in the blood in one case. The difficulties of study are very greatly increased by the extreme rapidity with which the entire process takes place, and by the ease with which the organisms are destroyed: the life history is completed with the formation of the vesicle, hence the absolute necessity of securing early and perfectly fresh material. The rôle of bacteria is regarded as entirely subordinate to the organism described, though the influence, particularly of streptococci, must be taken into consideration in the development of the disease. Councilman expressed the opinion with confidence that the organism which he described as belonging to the protozoa was the essential etiological factor in the production of small-pox. This opinion received confirmation from the testimony of G. N. Calkins, of Columbia University, who was present, and who had previously identified certain of the amoeboid forms as unquestionably protozoa. Calkins's recognized knowledge of the protozoa adds weight to the statement he made at the meeting, that "there is absolutely no doubt that we have to do in the process with an organism which belongs to the protozoa."

(341) Cell Inclusions in Cancer.

Gaylord (*Prof. Orth's Festschrift*, Berlin: August Hirschwald, 1903, pp. 730-744) has obtained evidence of nuclear division in certain cell inclusions found in cancerous epithelium. These inclusions are generally known as "Plimmer's bodies"; but the author, adopting the suggestion of v. Leyden, who has called attention to their similarity in appearance to the eye of a bird, prefers to call them "bird's-eye inclusions." He finds that a series of changes can be found in these inclusions in cancer which closely resemble the process of nuclear division as described by Nauaschin in the amoeboid form of plasmodiophora brassicae, an organism which is known to cause tumours and outgrowths in plants. He also finds that a certain number of spores of plasmodiophora brassicae in the phagocytic cells of both warm-blooded and cold-blooded animals, when fixed and stained with the methods employed in the investigation of bird's-eye inclusions in cancer, present an appearance indistinguishable from these inclusions.

(342) Descending Intrinsic Spinal Tracts in the Mammalian Cord.

Sherrington and Laslett (*Proc. Roy. Soc.*, November 27th, 1902) have performed experiments showing the existence of tracts in the mammalian spinal cord connecting the activity of segments nearer the head with others lying further from the head, and have demonstrated the microscopic course of the channels involved. The method adopted was that of successive degeneration as employed by Münzer. After a first section—transverse division of the cord, or rather excision of transverse portion—an interval of nine or ten months is allowed to elapse for the usual degenerations to develop, then a second partial section distal to the former is made and the additional degeneration noted, after an interval of about twenty days. Thirteen successful complete experiments in dogs were accomplished. The spinal segments examined were the posterior, or lower, cervical, the anterior, mid, and posterior thoracic and the anterior lumbar, and from all of these segments copious systems of fibres running from the anterior or upper to the lower or posterior portions were found to spring. The fibre systems were of two kinds, those leaving and re-entering the same portion of the cord — the short systems, and those leaving one portion of the cord nearer the head and entering another distant portion of the cord nearer the tail—the long systems. Fibres of both kinds were found both in the lateral columns and in the ventral or anterior columns of the cord. The long fibres do not decussate. It is not at present possible to assert that none of the short fibres cross over to the opposite half of the cord—a small proportion may, the majority, at least, do not. Some of the long fibres have a very lengthy course, some for example were traced from the sixth and seventh cervical segments into the sacral region of the cord, that is through nearly thirty segments. The long fibres tend to lie nearest the surface of the cord. Similarly running fibres, less numerous however, may be found in the dorsal or posterior columns of the cord.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(343) Phlebitis as an Early Symptom of Phthisis.

SINGER (*Wien. med. Woch.*, March 28th, 1903) enumerates the common premonitory symptoms of tuberculosis, such as gastric distubances of the type of nervous dyspepsia, cardiac palpitation, permanent tachycardia, neurasthenia, and pseudochlorosis. Hanot and Brun have recently added phlebitis, which they state may occur before there are any demonstrable pulmonary signs, but which on its disappearance is usually rapidly followed by serious symptoms. According to Dumont embolism does not occur in this form of phlebitis, but the following case shows that this point is not characteristic: An athletic, well-nourished man, aged 26, who had previously had good health, was suddenly seized, on the morning of February 24th, 1900, with pyrexia and a rapid pulse. At the bases of both lungs there were fine crepitations. During the following days the pulse was 86 and the temperature did not exceed 101.6° F. There was a scanty amount of blood-stained slimy sputum, in which no tubercle bacilli were found. Nine days later the temperature was normal and the pulmonary symptoms had disappeared. On the tenth day he got up. On the thirteenth day a small amount of haemorrhagic sputum, the appearance of which suggested the presence of a haemorrhagic infarct, was expectorated. At the right base posteriorly were signs of pleuro-pneumonia. The pulse was 86 and the temperature 100.8° F. During the following day the patch of dullness and crepitations spread upwards to the angle of the scapula on the right side, and a smaller patch appeared at the left base. But though the sputum remained characteristic of pulmonary infarction the source of the embolus could not be determined. There was deficient air entry at the left apex and acute tuberculosis was suspected. But repeated examination of the sputum failed to reveal tubercle bacilli. On the fifth day of this second attack pain appeared in the left leg, and the following day there were oedema of the ankle and tenderness along the internal saphena vein. By June 23rd both the pulmonary symptoms and the signs of thrombosis had disappeared completely, though there was some retraction of the lower half of the thorax on the right side. After a holiday he appeared to be in robust health, and there were no abnormal pulmonary signs. In April, 1901, a few blood-stained streaks were expectorated. In July there were no tubercle bacilli in the sputum. In August there appeared an infiltration of the left apex and of both vocal chords. Tubercle bacilli were found in the sputum. The writer assumes that the sequence of events was: (1) Small thrombosis on the wall of the vein, which did not completely block the lumen; (2) pulmonary embolism; (3) complete closure of the vein and signs of thrombosis. Weigert has described cases of acute tuberculosis which began as primary tuberculosis of the veins. But it is doubtful whether the early thrombosis in this case, and in the cases reported by French writers, was due to tuberculous phlebitis. Whatever its nature may be, it is quite distinct from the cachectic thrombosis of the last stage of phthisis, as it may occur in well-nourished apparently healthy subjects.

(344) Compensation in Acute Experimental Cardiac Lesions.

FERRANNINI (*Rif. Med.*, April 8th, 1903) gives the results of his experiments on injury of the aortic valves in dogs. Insufficiency is the only valvular defect which can be experimentally produced, and it is only in the case of the aortic valves that this can be done satisfactorily. By killing the dogs at different times after operation it is possible to study the changes in the heart wall in all stages and uncomplicated by disease. His method is to pass a thin copper wire with a pewter point down the right carotid artery and into the left ventricle. It is then suddenly hooked into one of the semilunar valves, and the valve is torn through or torn away. The resulting phenomena resemble those caused in man by the sudden rupture of a valve. If the animal does not die at once there is a period of cardiac agitation, with frequently repeated abortive systole, and a few stronger and more complete contractions, with periods of diastole lasting sometimes for several seconds. This may go on for as long as twenty-four hours after operation. During this period the blood pressure falls 20 to 30 mm., but rises again after several oscillations, and at an advanced stage of repair may reach double the normal pressure. The initial difficulties of the circulation are met by calling into play the reserve force of the heart muscle, but at a very early date hypertrophy of the ventricular wall, the so-called "myocardial" compensation, takes place. This is much quicker and more complete than in the case of disease. It is also much more lasting. It is due to an increase in the size and number of the muscle fibre, but Ferrannini finds that the process is not so simple as has been supposed. At an early stage of hypertrophy he found always an intense congestion of the heart walls, with sometimes a small-celled infiltration, and especially a connective tissue proliferation round the myocardial vessels. He also found changes in the intracardial ganglia and in the valvar nuclei of the spinal accessory. A second form of compensation is vasomotor—a contraction of the large vessels, leading to a shrinkage of the viscera and superficial tissues. A third form of compensation, and one almost peculiar to acute lesions, Ferrannini calls "instrumental" compensation. It consists in the proliferation and cicatrization of the remains of the valve. It takes place later than the myocardial compensation, and is only possible when the nature of the injuries, the direction of the blood stream, and the moderate character of the hypertrophy allow of the edges of the wound coming fairly into apposition. It is due to this instrumental compensation—very rarely found in ordinary inflammatory lesions—that the heart can recover from the experimental lesions much more thoroughly and for a longer time than from the results of disease. As it occurs when myocardial compensation is already complete, and as it is itself sufficient in favourable cases to neutralize the harm done, the hypertrophy becomes unnecessary, and causes a considerable increase of arterial pressure. Possibly at a still more advanced stage the hypertrophy disappears.

(345) Hiccough in Pneumonia.

THE appearance of this symptom from the fourth to the sixth day after pneumonia is not uncommon. Assailey (*Thèse de Lyon*, 1902) has made it the subject of study. As a rule hiccough is noisy and violent, and occasionally the diaphragmatic contractions cause the patient a great deal of inconvenience. The sitting posture increases the symptom or may cause its reappearance after it has declined. Generally speaking, it is accompanied by severe pain which is most marked in the lumbar region. Digital pressure along the course of the phrenic nerve may reveal the presence of tender spots. Occasionally there is also severe vomiting or retching and very marked insomnia. These latter complications are fortunately of infrequent occurrence and seem to be present in those cases in which diaphragmatic pleurisy or mediastinitis are also present. Hiccough by itself is not necessarily a grave prognostic sign, but it is undoubtedly a fact that when it continues or is severe and accompanied by vomiting, insomnia, restlessness, the strength of the patient is rapidly diminished, and he may be soon brought into a condition of great danger. It is only in exceptional cases that a fatal termination is brought about, as diaphragmatic pleurisy, of which it is an indication, is usually recovered from. This is explained by the fact that diaphragmatic pleurisy is usually of pneumococcal origin, and as such is of good prognosis. The writer, however, emphasizes the fact that hiccough is a complication of pneumonia, and that any complication in this disease requires careful management. As regards treatment, the injection of morphine is the best means of alleviating the symptom.

SURGERY.

(346) General Indications of Treatment of Congenital Club-foot.

A COMMUNICATION to the International Congress, April, 1903, was made by A. Broca upon this subject. He placed himself without reservation with those surgeons who consider that the treatment, when commenced during early infancy, should be entirely orthopaedic, and that the several operations adopted should be complementary to it. He reduces the pathological theories of the origin of club-foot to two, either a primary defect in the development of the bones with a consequent malposition of the foot, or, on the contrary, a primary malposition of the foot with secondary passive deformities of the bone caused by abnormal pressures, and to which the malposition later owes its fixation. He enumerates the various causes assigned for the primary

malposition, but regards them as quite unimportant in the treatment when we consider that it is the malposition itself that is the cause of the secondary changes in the bones. These changes, commencing in the bones before birth, are usually slight at first, but during the first few months after birth, when growth is very active, they become well marked, and the resistance to reduction is greatly increased in tendon, ligament, and bones alike. The classic division of cases into those before and after walking has commenced still remains sound, as it is only in the latter that the inveterate club-foot is seen. The surgeon has thus to decide between the treatment by manual replacement, and, if necessary, a small tarsectomy, or the delayed treatment by Phelps's operation or an extensive tarsectomy. Broca is strongly of opinion that the treatment should be commenced as soon as the deformity is discovered, and regards the arguments against early treatment, such as the dangers of chloroform, the risk of ulceration from pressure of the plaster case, the insufficient support of the latter because it softens with the urine, the long course of the treatment during which the child suffers pain and the parents are much inconvenienced, as altogether fallacious. The dangers of chloroform in the hands of a skilled anaesthetist are no greater at two months than at five years. With care ulceration of the skin and softening of the plaster case can be avoided, and the only objection that remains is a real one—namely, the length of time over which the treatment extends. Broca agrees with Sayre that the treatment should be commenced immediately after birth, without the delay of even a day; and in certain cases a cure can be effected in two to three months, without any operation, even a tenotomy. Broca, adopting the time-honoured directions of Adams, first overcomes the varus and supination by daily manipulations. In the intervals the foot is so bandaged as to tend to produce valgus. Intelligent nurses are instructed to hold the foot in the corrected position as long as possible. At the end of two to four weeks, according to the severity of the case, after the varus and supination are overcome, manipulations are commenced to rectify the equinus. Attention should be particularly directed to the possibility of an apparent correction of the equinus by an acquired hyper-extension of the mid-tarsal joint; manipulation must be made behind these joints, so as to act directly on the ankle-joint. It is the exception, however, to correct the equinus without tenotomy, and Broca practises it by the open incision in order at the same time to divide the posterior ligament of the ankle-joint. Advantage is taken of the anaesthetic to perform a short modelling rectification at the same time. The daily manipulations might well be called a modelling rectification, but that term is usually applied to a procedure by which the deformity is corrected under chloroform at one operation. Delore of Lyons first used this method many years ago; but its present adoption is due to the precision with which Lorenz has established the technique. Each element of the deformity should be dealt with in a methodical order; adduction and inversion at the mid-tarsal joint; equinus at the ankle-joint; lastly, the supination. The foot should then be soft and supple, and the "return force" to the deformed position completely abolished, so that the retentive apparatus has only to maintain the new position and not to act as a correcting agent. Broca prefers that the plaster case be removed after two to three weeks, and daily manipulations and massage be applied, thus differing from Lorenz, who retains the plaster case much longer. The commencement of walking is the critical period in the case; if the foot is plantigrade, nothing beyond the weight of the body is required to finish the cure; whereas if the weight acts in the wrong direction, it quickly undoes all the previous treatment. When the child commences to walk, it is necessary that it should wear a soft laced boot with lateral supports and with the sole raised 1 cm. throughout the whole length of the outer border. Often by these means at the age of 2 the child will be able to wear sandals or even go barefooted without any perceptible deformity. With children when treatment has been delayed till they have walked, the deformity is much increased, and though some surgeons still adopt orthopaedic methods for these cases, such as tarsoclasia with special instruments. Broca prefers tarsectomy.

(347) Accidental Wounding of the Bladder in the Radical Cure of Hernia.

Verhoef (*Jour. de Chir. et Ann. de la Soc. Belge de Chir.*, No. 2, 1903) reports two cases in which the bladder was accidentally wounded in the course of an operation for the radical cure of inguinal hernia. In one of these cases there was a distinct hernial protrusion of the bladder; the other case, it is stated, shows that this organ may be wounded, although it takes no part in the hernial mass. The usual practice in isolating the sac before it is ligatured and resected is to free the upper portion as high up as possible, and to dissect it to a level beyond the internal ring, where it is surrounded by subperitoneal fat. The internal surface of the sac, the author points out, is in close proximity to the bladder, and indeed may be closely attached to this organ. Hence in forcibly dragging down the neck of the sac the prevesical fat may also be drawn into the region of the operation, and an artificial cystocele be thus produced. The surgeon, if he meets with, on the inner surface of the neck of the sac, an unusually thick layer of fat which cannot be readily dissected away from the serous membrane, should be on his guard and not apply his ligature or divide the sac above the lower limit of this fatty mass. The treatment of accidental wounds of the bladder in operations for radical cure should, it is held, vary according to the form of vesical protrusion with which the surgeon has to deal and the state of the urine. If this secretion be quite free from infective germs, and the wound be a strictly extraperitoneal one, the author, departing from the usual practice in cases of this kind, would simply drain the bladder by the wound and not attempt to suture the vesical wound should such attempt require manœuvres likely to prolong the operation for radical cure and to interfere with its success.

(348) Nephrectomy.

Weidner (*Zentralbl. f. Gynäk.*, No. 16, 1903) has summed up in a thesis a very complete report of the renal surgery in the Munich clinic during the last ten years. Nephrectomy was performed 30 times, the cases being as follows: Hydronephrosis 4, pyonephrosis 5, tuberculous disease 6, nephrolithiasis 2, floating kidney 2, injury (without external wound) 4, malignant disease 7. The mortality was 18.518 per cent. Bergmann's and Simon's incision was made in most cases. Weidner, in commenting on the treatment of obscure renal diseases, insists that diagnosis can only be made sure by cystoscopy and ureteral catheterism, methods now practised in all such cases admitted into the Munich clinic.

MIDWIFERY AND DISEASES OF WOMEN.

(349) Double Pregnancy in a Double Uterus.

J. B. Hellier (*Journ. of Obstet. and Gynaec. of the British Empire*, May, 1903) describes a case of double pregnancy in double uterus. The patient, a woman aged 34, had had three previous normal labours, and there was no reason to suspect any abnormality of the genital organs. She ceased to menstruate in May, 1902. During pregnancy the uterus was unusually large, and the patient complained of abdominal pain and swollen feet. Labour began on January 28th in the forenoon, and a living female child was born at 5.30 p.m., the head presenting; the placenta followed. The presence of a second child was then recognized, but the uterus showed little tendency to expel it. At 11 p.m. Beetham (the doctor in charge) introducted a hand into the uterus and found it empty. At 12 p.m. the patient was examined by Hellier and Beetham, and a second os uteri was found above, in front, and to the left of the first. A second fetal head was just within touch. It was possible to grasp the septum dividing the uterus between the finger placed on the left and the thumb in the right os. There was no trace of a septum within the vagina. By podalic version a living male child was delivered from the left side of the uterus. There was nothing to suggest that the two pregnancies were not of the same date. At an examination of the patient a month later it was found that the septum uteri was retracted within the os, and might easily escape notice on a simple vaginal examination. The bifid fundus was obvious.

(350) Tetany after a Perineal Operation.

Goth (*Zentralbl. f. Gynäk.*, No. 15, 1903) performed a plastic operation on a patient, aged 25, four months after her fourth confinement. At the third labour rupture of the perineum had occurred and had healed badly. A bifurcate cicatrix ran up the posterior vaginal wall, so that a triangular piece of healthy tissue lay between the two branches of the scar. This tissue was dissected up, then all the scar tissue

excised, and the triangular flap brought down and fixed to the healthy tissues laterally with silver sutures; finally, deep sutures were applied to the perineum and the skin united carefully. The patient had weaned her child when this operation was performed. There was much vomiting after the patient was put to bed, and on the second day the characteristic carpopedal contractions of tetany appeared. The attacks occurred about every twenty-five minutes, lasting from two to three minutes. They seemed to give intense pain. Trousseau's, Erb's, and Chvostek's phenomena were observed. Bromides were given in moderate doses. By the third day the attacks had become milder and less frequent; by the eighth they hardly came on twice in twenty-four hours. On the eleventh the deep perineal sutures were removed; the parts had healed by first intention. Shortly after the dressing several severe attacks came on, specially marked in the toes. The last was noted on the thirteenth day. After convalescence the patient wrote to say that they had never recurred.

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(351) Wolffian Relics in the Ovary.

WIHOSER (*Rev. de Gynéc. et de Chir. Abd.*, March-April, 1903) has summed up, in a thesis read before the University of Zurich, some valuable researches bearing on the histology of the human ovary which tend to support the theory maintained by Coblenz, Doran, and Bland-Sutton that papillomatous cysts of the ovary and broad ligament, and also parovarian cysts, arise from the tubes of the Wolffian body. Kossmann is inclined to ascribe these tumours to the Müllerian duct, a theory most probable in relation to free papilloma of the broad ligament. Wihoser examined ovaries from a seven-months fetus, an infant born at term, a child aged 2, and a girl aged 14. He detected relics of the Wolffian body in the tissue of the hilum of the ovary or epoöphoron, in the medullary portion of the oöphoron, and lastly, as the well-known paröphoron or parovarium between the layers of the broad ligament. The relics in the substance of the oöphoron, or ovary proper, seem perfectly well-defined tubules or canaliculi derived from the glomeruli of the Wolffian body; they are sometimes spread over a wide area of the ovarian stroma; and Wihoser declares that they may proliferate.

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(352) Fatal Perforating Appendicitis in the Puerperium.

PORAK AND DANIEL (*Bull. de la Soc. d'Obstét. de Gynéc. et de Paed. de Paris*, January-February, 1903) observed at the Maternité, Paris, a primipara, aged 28, admitted two days after spontaneous delivery in the eighth month. About a week before labour slight colicky pains were felt in the right iliac fossa, there was no previous history of any illness. On the night after delivery several rigors occurred, with rise of temperature. All the symptoms of acute peritonitis set in and puerperal infection was diagnosed. As the uterus was almost fixed, and there was deposit on the left as well as on its right side, the curette was used, lactoserum was also injected. There was no vomiting; death occurred on the fifth day. The peritoneal cavity contained over two pints of fetid pus. The appendix was entirely retro-caecal in position, and ran vertically upwards. The tip was sound, but the appendix was completely separated from the caecum at its insertion, yet held in place by adhesions; close to the line of separation was an oval perforation ½ in. long, and just outside it a calculus as big as a haricot bean, and weighing 12 gr. Suppurative inflammation had destroyed the walls of the appendix close to the caecum. Pinard, discussing this case, remarked that it supported Potocki's observations, which showed that a certain proportion of febrile phenomena after labour were due to other causes than puerperal infection. He noted how a rigor followed very closely on delivery—not the rule in puerperal septicaemia—and believed that the labour was brought about by the appendicitis; it was significant that the child was living and well. Pinard had observed three deaths of children born healthy within two months in cases of puerperal septicaemia.

THERAPEUTICS.

(353) Local Treatment of Pulmonary Tuberculosis.

MENDEL (*Arch. Gén. de Méd.*, March 17th, 1903) describes a new method of treating pulmonary tuberculosis by local applications. The original practice was commenced in 1887 by Rosenberg and Beehag, who injected menthol dissolved in oil into the trachea by the aid of a laryngoscopic mirror. The technical difficulties of the procedure has retained the practice in the hands of a few laryngologists, whereas the method now described can safely be employed by all practitioners. He condemns as unnecessarily severe the method of Féré, who passes the left forefinger into the mouth until it reaches the epiglottis, and uses it as a guide for the nozzle of the syringe manipulated by the right hand. Mendel's method is based upon the principle that liquid poured into the glosso-epiglottidean sulcus falls by its own weight through the larynx into the trachea, provided that the mouth is held open and the tongue drawn well forwards. He acknowledges that this assertion is new, and gives experimental evidence of its correctness in the dead body—in a living dog and in the living human subject. From these experiments he draws the following conclusions: (1) All fluid injected into the glosso-epiglottidean sulcus passes round the epiglottis and reaches the air passages; (2) this passage of fluid gives rise to no reflex action; (3) if the fluid reaches backwards to the oesophageal opening, it can only pass down by a voluntary act of swallowing, and can be spat up at will. He uses Beehag's syringe fitted with different shaped nozzles to pass more easily through different mouths. He seats the patient opposite him in a good light, and holds the tongue well forward in a napkin with the left hand; he then passes the syringe backwards until the nozzle is over the glosso-epiglottidean sulcus, when he sharply delivers its contents. During the several operations neither cough, spasm, nor nausea is experienced. The injection is felt to pass down the chest, and imparts an agreeable sensation of freshness, due to the essential oil. An interesting point is here brought out, that this sensation is not equally distributed throughout the chest; if one lung is affected the sensation in the corresponding side of the chest is diminished: in other words, each lung receives the vapour of the injection in direct ratio to its respiratory surface. Further, as a consequence of treatment, the respiratory surface of the affected lung increases and the area over which the sensation is received correspondingly enlarged. At first, it is necessary to warn the patient to spit up any of the injection that remains in the mouth; but the swallowing of a little does not produce any harm: after a short experience in the treatment, none remains in the mouth. Previous observers have used menthol and creosote in oil. The author thinks these drugs too irritating and employs eucalyptus, thyme, wintergreen, iodoform, and guaiacol. Each of these drugs was tried on dogs before being used on man. At the commencement of treatment, before the idiosyncrasy of the patient is observed, a 1 per cent. solution of eucalyptus in employed: this is rapidly and progressively increased in strength to 5 per cent. Nine c.cm. of the solution are injected every fourth day for one month. No other drug treatment is used. After the lapse of one or more weeks, according to the condition of the patient, treatment is resumed for another month, and so on. The contra-indications are (1) constriction of the vocal cords, (2) acute tracheitis, (3) violent haemoptysis, (4) well marked cachexia. The drug employed acts first as an antiseptic and is then absorbed, thus combining the advantages of a local antiseptic and a hypodermic injection. One hundred and ten cases were treated by this method. In one-fifth of these, the treatment had no effect; in one-third the improvement was marked in the general and local condition; whereas in the remainder the auscultatory signs disappeared or were markedly diminished after a month's treatment.

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(354) Hetol in Tuberculosis.

IN spite of a considerable mass of literature dealing with the treatment of tuberculosis by injections of hetol, S. Cohen (*Berl. Klin. Woch.*, March 30th, 1903) considers that it has not yet been clearly shown what the real value of it is. He therefore selected cases for trial, and states that the patients were all in good circumstances, so that they could be properly fed, could spare a sufficient time without having to work, and could be well looked after. Thus he was able to carry out the treatment almost as if he were combining the hetol with the open-air treatment. The patients received three injections weekly of from 0.005 gram. to 0.009 gram, according to their constitutions. The injections were made into a vein in the arm. In all he treated 14 patients in this way, and although many of the patients showed subjective improvement, he cautions

against accepting this as evidence of real improvement. Reviewing his results from an objective standpoint only, he finds that none were cured, 1 was improved, but not very markedly, 7 remained stationary, 5 were worse after the treatment, and 1 died. He gives short summaries of the clinical histories. He is forced to come to the conclusion that, instead of obtaining the marvellous results which some other observers claim to have got, his experience does not speak well for the value of a "curative means," especially as the large majority of his cases were mild and early.

(355) Indications for Treatment of Epilepsy from the Reaction of the Blood.

Pugh (*Brain*, 1902, p. 501) has made researches *inter alia* into the reaction of the blood in epileptics (on the suggestion of Dr. F. W. Mott and under his supervision at the laboratory of the County Council, Claybury), the results of which formed part of his thesis for the M.D. degree of the University of Edinburgh, for which a gold medal was awarded. The conditions under which the neurons functionate is one of alkalinity, and it therefore appeared probable that any appreciable diminution in the alkalinity of their surroundings might bring about abnormal manifestations of activity. The following are some of his conclusions: The alkalinity of the blood during the period between the paroxysms is lower than the average of the control cases. The diminution is gradual and progressive, and is more marked in those cases which are suffering from gastric catarrh and constipation. There is a marked, sudden, and pronounced fall immediately prior to the onset of the fit. There is a further fall in the alkalinity after the fit is over; this diminution is seen from three to ten minutes after the attack. This after-diminution depends upon the duration and severity of the muscular twitching, and upon the degree of the alkalinity in the interval between the paroxysms. There is a gradual return of the blood to its normal alkalinity which takes place in five or six hours, the rise being more marked in the first hour. If the alkalinity keeps at a low value, it may determine the onset of another fit. The diminution after the fit is due to the chemical end products of muscular metabolism, such as sarcolactic acid and carbonic acid, and not to substances supposed to be in direct relation to the epilepsy. The diminution after a nocturnal fit takes a longer time to return to the normal than the diminution after a day fit. The exact rôle which a diminution in the alkalinity of the blood plays in the production of the epileptic attack is difficult to estimate. The author has obtained good results in the treatment of epilepsy by maintaining the alkalinity of the blood within physiological limits; by doing so the number of the fits was much diminished. Unfortunately the effects of drugs on the alkalinity is transient, and it is impossible to elevate and maintain the alkalinity within physiological limits for any appreciable length of time. The bromides elevate the alkalinity even to the normal of the control cases for a certain time, but on continued administration, and even when the dose is increased the alkalinity falls. The best results were obtained from strontium bromide and potassium bicarbonate, 15 gr. of each three times a day; the alkalinity was thereby maintained at a high value for some time, but only to fall again. The administration of suprarenal exact had little effect on the alkalinity, and the number of the fits was increased.

(356) The Action of Oxygen on the Heart.

D. H. Lingle, of the University of Chicago, has found by experiment (*Philadelphia Med. Jour.*, December 13th, 1902,) that oxygen has the power of directly sustaining the beats of a strip of heart muscle, removed from a turtle, and of keeping it beating from twenty-four to seventy-two hours. Then the muscle stopped, only because dissolution began. While it was known that the heart was extremely sensitive to oxygen, this was formerly thought to have been due to its purifying action in the blood. Lingle claims, however, that his experiments show that stimulation of the heart by oxygen causes rhythmic beating.

PATHOLOGY.

(357) The Histology of Miliary Tubercle.

C. Benda (*Professor Orth's Festschrift.* Berlin: August Hirschwald, 1903, pp 520-553) after a brief survey and criticism of the literature dealing with the histology of tubercle, describes his investigations into the development of miliary tubercles in the renal glomeruli. When the bacilli are carried to the glomerulus which subsequently becomes affected, they are not accompanied by leucocytes, but are entangled in a fibrinous coagulum. Then follows a limited necrosis of the immediately contiguous tissues, a determination of polymorphonuclear leucocytes, and, as the lezion increases in size, the appearance at its peripherys lymphocytes and plasma cells. The proliferation of the fixed connective-tissue cells is also described in detail. From a consideration of the parts played by these various types of cells in successive stages of the developing tubercle, the author finds he cannot agree with Baumgarten's view, that the tissue proliferation is the main element in the formation of the tubercular lesion, and that the inflammatory processes are only subsidiary. Nor on the other hand, can he accept the doctrine of Metchnikoff and his school that the inflammatory processes are the main factor, and the proliferative changes unessential. Benda, following Orth, holds that the specific action of the tubercle bacillus cannot be subordinated to any one general principle, but must be recognized as manifesting itself in at least two radically different ways; it acts as an incentive to inflammation and as a stimulus to tissue-cell proliferation. These two modes of action may exhibit themselves either separately, combined, or in succession. The author thinks they depend not so much on difference in quantity as on difference in quality of the toxic agent present.

(358) Chromophile Bodies in the Paroophoron and Paradidymis.

L. Aschoff (*Prof. Orth's Festschrift.* Berlin: August Hirschwald, 1903, pp. 383-391) records a very interesting piece of research on the relationship of the paroöphoron and paradidymis to those minute portions of aberrant suprarenal tissue which are commonly met with in early life, and have occupied the attention of Marchand and many subsequent observers. Starting from the fact that cells in the medullary portion of the suprarenal capsule give a brown reaction with chronic solutions, Aschoff has applied this test to sections made through the sexual organs of a number of male and female fetuses and newborn children. He finds that both in the paroöphoron and paradidymis chromophile bodies are very frequently present, though they may vary greatly in number and size, and are, as a rule, only visible microscopically. But although homologous to the medulla of the suprarenal, they exhibit no relationship to the genuine aberrant suprarenals of Marchand, and the author thinks that, owing to their giving the chromophile reaction, they may have frequently been confused with the latter in the works of previous investigators. He finds them in very intimate relationship with the gland tubes and glomeruli of the paroöphoron, and thinks that both in the paroöphoron and paradidymis they must be considered as a specific source of tumour formation.

(359) The Life Duration of the Typhoid Bacillus.

Levy and Kayser (*Centralbl. f. Bakt.*, March 20th, 1903) describe some experiments on the vitality of typhoid bacilli derived from the stool. The faeces of a typhoid patient were deposited undisinfected in a cemented pan, remained in this for five winter months, and were then placed in a clay soil for fifteen days at the winter temperature. From this soil, in amounts proportionately small, typical typhoid bacilli were cultivated on plates kept at a low temperature. The bacillus appears thus to retain vitality under ordinary circumstances for a long period. Such results point to the absolute necessity of disinfecting typhoid stools and urine before disposing of them.

(360) The Pathological Anatomy of the Psychoses.

Meyer (*Prof. Orth's Festschrift.* Berlin: August Hirschwald, 1903, pp. 55-100) has made a careful survey of the literature on the pathological anatomy of the psychoses, and concludes his article with a valuable list of nearly three hundred references to work which has been published on the subject since 1895. The histological changes in the nerve cells, nerve fibres, neuroglia, and blood vessels of the brain are discussed in their relationships to progressive paralysis, senile dementia, idiocy, epilepsy, alcoholic and so-called "functional" psychoses. The article is an epitome of the views of the leading authorities on these questions and does not lend itself to further condensation. It will prove of great assistance to those who are working on the subject.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

THE X RAYS IN MALIGNANT DISEASE.

(361) The Use of the X Ray in Cancer. E. A. CODMAN (*Johns Hopkins Hospital Bulletin*, May, 1903) states that at the Massachusetts Hospital the therapeutic *x*-ray work is at present mainly done by Dodd and Vose, who are working on malignant disease for the Cancer Commission, and by Burns, who does the routine work of the skin department. Though many cases of deep malignant disease have been faithfully exposed, few have essentially improved and none have been cured. There have been a few encouraging signs in some cases as relief from pain, gain in weight, shrinkage, softening, breaking down of the tumour, etc., but since these events occur in the course of untreated malignant disease the positive advantage of the *x* ray can hardly be proved. On the other side, of cases of epithelioma, about a hundred have healed or are healing. Occasionally one is referred to the surgical department for excision. J. C. Warren operated on an unusually hopeful case of cancer of the tongue in April, 1902. As far as could be seen the disease was entirely removed and the wounds healed well. Codman began the *x* ray in May for prophylaxis, and kept the floor of the mouth and sides of the neck of the patient on the edge of troublesome dermatitis until September, by which time the disease had so far recurred in the mouth and neck as to make the *x* ray a mere nuisance. Since October 4th he has treated a case of cancer of the breast, which had never been operated upon. He has kept the skin constantly exfoliating and at times blistered. The growth remained, so far as he could tell, practically the same on April 14th, 1903. In a breast case operated on by A. T. Cabot in October, 1901, there were seven spots of cutaneous recurrence on December 4th, 1902, about the size of lemon seeds. These were in the skin rather than below the skin, but were not ulcerated. All seven spots had disappeared on April 14th, 1903. Codman does not mention this case as even benefited, because with seven skin recurrences the disease must also have recurred in the deeper tissues. He merely wants to point out that in some cases it is possible to remove by the *x* ray the recurrent skin nodules. He has exposed without success two cases of cancer of the penis. On one case the cancer was but ¼ in. in diameter, but was so obstinate to *x*-ray treatment that an amputation was done, as there were other smaller areas of a similar nature on the glans. If he had spoken in October, 1902, he would have said that the only cases of malignant disease in which he had seen unequivocal improvement from treatment with the *x* ray were those of epithelioma and superficial post-operative recurrence. A year ago, in an article on *x*-ray burns he stated that there was no good evidence that the deeper tissues were affected, unless the skin overlying them also was injured. He would have used this as an *a priori* argument against probable improvement in subcutaneous malignant disease. Since then, however, he had had a case which may be taken as the exception which proves the rule. On November 10th, 1902, J. C. Warren referred to him a patient with sarcoma of the sterno-clavicular region on whom he had just operated. A small incision had been made and a piece of the growth removed, and found to be a round-celled sarcoma. The tumour proved to be inoperable, and within a short time Codman began the *x*-ray treatment. At that time the tumour was 5 in. by 2½ in. At the date of report nothing remained but a slight thickening about and behind the clavicle. The weak point of the case is that when the tumour subsided a subluxation of the clavicle was revealed. This fact suggested that the periosteum might have been torn and have formed a callus. Codman adds that he has seen other cases of sarcoma faithfully followed by the *x* ray and yet steadily grow worse. Referring to "certain rosy articles on the use of the *x* ray in the more terrible forms of malignant disease, of the disappearance of sarcoma and cancer," Codman said that at the Massachusetts Hospital they did not get such good results, and in his private practice he did not get such results. He said, however, that the effect of the *x* ray in causing the disappearance of psoriasis, chronic eczema, lupus and superficial epithelioma was little short of the miraculous. In some cases recurrence took place, perhaps after too brief treatment. He believed, too, that though few reliable reports of success in deep cancer and sarcoma had yet appeared, considering the immense number of such cases which have been treated, the *x* ray offered at least some hope. It seemed to him that the effects were due to stimulation of the nutrition of the parts rather than to destruction of the malignant tissue, because: (1) The effect often did not take place for days and sometimes for weeks. (2) From the analogy of so-called burns the primary effect was increased stimulation of the skin as evidenced by hyperaemia and exfoliation. (3) In one case of massive malignant disease of the breast which had been long and faithfully exposed no destruction of the cells was found. Degeneration in the interior of such cancers which had not been treated was often found. (4) The appearance sometimes found of shrunken cancer cells surrounded by granulation tissue might be explained by the activity of the tissue. (5) In a case of varicose eczema of the leg which he treated the eczema not only disappeared, but the leg shrank to its normal size and its circulation became active. (6) The good effects occurred chiefly in those diseases characterized by a disordered or indolent local nutrition, which Nature, when stimulated by other means, had at least a chance of throwing off. For instance, they all knew that chronic eczema, psoriasis, lupus, rodent ulcer, epithelioma, even ulcerated cancer of the breast, might under improved conditions heal in whole or in part. Even in deep-seated malignant disease they might find cases of spontaneous absorption of sarcoma, perhaps coincident with some outlandish treatment. (7) That of the above-mentioned forms of disease Nature was more likely to help in those in which the *x* ray was most efficacious, while in cases where the malignancy of the cancer growth was great even the *x* ray cannot check it. (8) That good and bad effects alike occurred chiefly in the skin, the nutrition of which seemed in a more delicate balance than that of the deeper tissues. This method was to expose for ten minutes at 10 in. as a standard dose; to repeat this twice a week until hyperaemia appeared or the end of the third week was reached. By this means the accumulated dose at the end of the third week only reached 60 min. at 10 in., then, if necessary, to increase it, never allowing a burn of the second degree if it could be avoided, but keeping the parts hyperaemic, pigmented, or exfoliating. In most individuals slight dermatitis usually appeared in from two to three weeks with his apparatus, a Kinraike coil. In one case he caused a slight dermatititis by an exposure equivalent to 15 min., but usually it required 40 to 100 min. at 10 in. in added exposures. Before reaching this point psoriasis and eczema might disappear, but in his experience the tide turned in epithelioma at about the same time as dermatitis appeared. To cases which did not show at least slight improvement in six weeks he gave a bad prognosis. He did not believe that it was yet justifiable to use the destructive power of *x* ray to cause necrosis in the manner of the old-fashioned cancer pastes, etc. Finally, it should be remembered that cancer might arise in an *x*-ray burn. Two such instances were on record already, and one sad case had occurred in Boston. Cancer appeared simultaneously in the ring fingers of both hands, necessitating amputation at the first phalanges. The hands had been in a chronic state of ulceration from an *x*-ray burn for several years.

(362) The X Ray in Cancer. M. M. JOHNSON in the *Yale Medical Journal*, May, 1903, discusses what has been accomplished in the treatment of cancer by the use of the *x* ray, and gives an estimate of its therapeutic value. He says the *x*-ray treatment of cancer is yet in its infancy, and while it is far too soon to know what the final results will be, it still is an unquestioned fact that this treatment does exert a controlling influence over all cancerous growths; but however much the *x* ray may be developed, however far perfected, it is certain that the delay in applying for treatment and the consequent inroad of the growth and its far-advanced stage, will baffle the *x* ray as much as it has the surgeon's knife. As examples of what has been accomplished by the *x*-ray treatment, he quotes the statement of J. E. Gillman, who says that in 25 cases of cancer he has lost but 2, 1 an epithelioma of the throat, and the other a scirrhous cancer of the breast. Gillman has at present over 100 cases of cancer under treatment, and in the last four years he has treated over 200 cases, with a record of recoveries greater than the recoveries of typhoid fever in private practice. Fisk of Brooklyn has reported

the case of a man, aged 70, who had been operated upon six times at the New York Hospital for recurrent round-celled sarcoma of the neck. He was treated elsewhere with erysipelas toxins without success. In addition, his external carotid artery had been tied with no effect on the growth. In December, 1901, Fisk commenced the *x*-ray treatment. At the end of six weeks the growth had entirely disappeared. The patient was exhibited at the Academy of Medicine in March, 1902. No trace of the disease was present at that time, but he subsequently developed metastatic tumours in the axilla and both groins. These yielded to the treatment of the *x* ray. On January 23rd, 1903, the patient was still free from recurrence. In the treatment of carcinoma of the breast, especially if it be an advanced case, the *x* ray should be used from four to six weeks, after which the breast should be amputated and the operation followed as soon as possible by the use of the *x* ray. In a carcinoma of the breast, as soon as the cancerous cells break down, the lymphatics carry the infection to the surrounding tissues and from these form new foci of infection. While the glandular enlargement may not be sufficient to be perceptible to the sense of touch, it will nevertheless be active. These outlying centres of infection will be destroyed by the *x* ray and the chances of a return of the cancer will be lessened. After the *x* ray has been used from four to six weeks, the tumour will be found to have been reduced to less than half its original size, and when the breast thus treated is removed the tissues will be found to be hard and fibrous and will offer considerable resistance in the cutting. Bleeding is less abundant and the blood from the arteries does not spurt out, as it does when the amputated breast has not been exposed to the ray, but it rather flows out. Johnson finds it difficult for a patient to sit in a chair and maintain a specified position for from ten to fifteen minutes without moving so as to throw the rayed surface out of focus. He therefore uses a massage couch, 6 ft. long and 2 ft. wide, mounted on 5-in. castors and easily movable. The patient is placed on this couch and allowed to adjust himself to an easy position and remain entirely quiet for as long as it is necessary to continue the treatment. When the growth to be treated is situated on the head or face, it is necessary to use a screen to protect the healthy tissues. Sheet lead, tinfoil, or sheet rubber is generally used for this purpose. All are sufficiently opaque to the *x* ray to answer the purpose, but there is an objection to the metal screens being used as they have a tendency to attract the electric current from the terminals of the *x*-ray tube. This at times disturbs the patient. Johnson prefers the sheet rubber screen, as it affords ample protection to the healthy tissues and does not attract the current. An opening is made in the screen of the size and shape of the tumour to be treated, and each patient should have his, or her, own screen. In the adjustment of the screen and the retaining of it in position, the fact that the patient is lying down will be found of advantage, for the protecting screen may be laid on the surface to be protected and it will be maintained in its proper place by force of gravity, while, if the patient were in an erect position, it would be necessary to fasten the screen by means of strings or straps about the head to keep the screen from slipping down. While much has been accomplished in the treatment of internal malignant growths, it has yet been decidedly difficult to reach them successfully. Johnson thinks this difficulty will be obviated by a new device consisting of a metal sphere, which entirely covers the globe of the *x* ray tube and which has in a direct line of the anode, a circular opening 2 in. in diameter, which admits of the passage of the ray through a speculum, by means of which the growth may be directly reached. By the use of this device, the *x* ray, when turned on, is thrown directly to the location of the cancerous growth, and whether it be a cancer of the rectum, throat, or uterus, the *x* ray may be applied with as much effect as it could be to a superficial growth. From among the cases that he has treated with the *x* ray, Johnson selected five (tuberculous tumour of abdomen, epithelioma of face (2) lupus of temple, and goitre) to show something of what has been done. In the two cases of epithelioma the result of the treatment was complete disappearance of the tumour, the lupus was cured and the other two cases nearly cured. Nothing is said about recurrence.

(363) The Value of the Roentgen Rays in Cancer.

A. R. Robinson (*Canadian Jour. of Med. and Surg.*, December, 1902), after a careful review of the subject, concludes as follows: "The Roentgen ray is a very valuable addition to our armamentarium for the treatment of cancer. Some cases of advanced epithelioma are incurable except by the rays. Many of the cases cured and regarded as inoperable by other means could have been quickly cured in an early stage of the disease. The majority of the cases so far reported as cured have been cases that could have been cured much more quickly by the knife or caustics, especially by the latter. In cutaneous cancer the scar is sometimes better after the ray treatment than after the use of caustics, but for the majority of cases caustics are preferable, as their action is definite and there is a great saving of time to the patient. In many cases of cutaneous cancer the ray is a valuable agent in combination with other methods, and when the disease is situated around the important blood vessels it is the only proper agent to employ, except in some cases on the extremities, where amputation would be advisable. All cases of carcinoma of the breast, except those seen in a very early stage, should be treated by the rays before resorting to the knife. The rays should also be used in all inoperable cases and in all cases after amputation has taken place. According to our present knowledge, the *x*-ray treatment is not curative in internal cancer of any part of the body, mouth, larynx, stomach, uterus, etc. To obtain the best results there must be no fault in the technique of the operation, in order to avoid a serious burn and to get the desired action on the cancer tissue."

(364) Treatment of Superficial Cancer by the X Ray.

W. Allen Pusey (*Amer. Pract. and News*, February 15th, 1903) says the most interesting development of the last year in the use of *x* rays has been in the treatment of cutaneous carcinoma. He reports one case, that of a woman, aged 68, with the following history: About twenty years ago a wart appeared in the right supraclavicular space and gradually increased in size. Three years later the surface broke down and an ulcer developed, which, after two years' duration, was excised by a well-known surgeon. The disease recurred in the upper angle of the scar and enlarged until 1894, when she came under Pusey's care. It was then the most extensive epithelioma he had ever seen, covering almost the entire upper third of the back and extending over the right shoulder to the clavicle. During 1894-5 she was in St. Luke's Hospital, in the services of John E. Owen and L. L. McArthur, where vigorous attempts were made to extirpate the diseased tissue. A large part of the tumour was destroyed and extensive grafts were made, so that the diseased area over the back was converted into scar tissue, which had remained healthy. The area over the right shoulder, from the spine of the scapula behind to a point below the clavicle in front, an area covering the entire upper surface of the shoulder, was not cured. For two years past it had not been thought feasible to make any further attempt at extirpation. At the time she presented herself for treatment with the *x* rays, the growth involved the greater part of the area over the right shoulder. The largest lesion was situated at the junction of the neck and shoulder, and consisted of three confluent ulcers, forming in all an ulcer with a diameter of 3 in. This was a typical epitheliomatous ulcer with elevated, rolled, hard, pearly borders. In addition, there were about 20 other epitheliomatous ulcers, varying in size from a finger-nail to a small pea, located around and posterior to the large ulcer. Extending down over the front of the shoulder was a triangular space with the apex below the clavicle, which contained numerous small epithelioma ta. Some of these were ulcerating, but most of them were intact nodules. All the tissue of the affected area was inflamed and indurated. There was no evidence of involvement of contiguous glands or of the underlying tissue. There was free discharge from the ulcers, and for many years the patient had suffered severe pain. The tissue removed for microscopic examination presented the typical histological picture of superficial epithelioma. The tissue has also been examined for blastomycetes with negative results. A section made seven years ago also showed characteristic epithelioma. The patient was put under exposures to *x* rays on January 15th, 1901, and had almost daily sittings until February 14th, eighteen in all. Within a week the discharge from the ulcers almost entirely ceased, and the patient stated that her shoulder was free from pain, and that for the first time in many years she was able to sleep comfortably. Since the first week there had been practically no discharge from the ulcers, and scarcely any pain. On February 4th

the ulcers were decreasing rapidly in size, and the rolled edges were shrinking. On that date the patient was hurt by a fall, and was not able to appear for further exposures until March 13th. From that date to May 4th, she had twenty sittings, varying from daily sittings to sittings at intervals of from four to five days. By April 5th the evidences of epithelioma were limited to a small ulcer not larger than a little finger-nail at the site of a previous large ulcer, and to two rows of very characteristic nodules in the supraclavicular space. Up to that time the exposures had always been made so that the greatest intensity of light fell on the shoulder, and the lesions over the clavicle, therefore, had received less of the rays. After April 5th the upper service of the shoulder, which had been getting exposures of 15 min., was given exposures of 5 min., and the lesions over the clavicle were given direct exposures of 15 min. Within five days the nodules in the supraclavicular space began to shrink, and by April 16th, that is after ten direct exposures of 15 min. each, they had entirely disappeared, leaving no trace of their existence. Sittings were discontinued on April 16th, as the shoulder showed slight dermatitis. By April 29th this irritation had entirely ceased. Between April 29th and May 8th the smaller ulcer on the upper surface of the shoulder, the last trace of epithelioma, entirely healed. Her condition at the date of report is one of perfect health.

(365) The Value of Radiotherapy in Cutaneous and Other Cancers.

C. W. ALLEN (*Trans. Amer. Derm. Assoc.*, 1903) says that when the rays are applied to the normal skin, no subjective or objective evidence of action occurs unless for reasons connected with the tube or with the individual in the nature of idiosyncrasy, conditions simulating those of burn or tanning occur. When applied to morbid processes upon the surface, either no apparent action is noted, or we may get a charring of certain kinds of tissues, or a necrosis. It has been observed and demonstrated that with a low tube, the rays from which do not penetrate deeply but are absorbed in the skin, the tendency to burn is greater; and in high tubes, whose rays pass through the tissues and are not absorbed, the tendency to burn is less. What occurs in tissues showing gross change has not yet been fully investigated; but in the case of a maker of tubes, for a time under Allen's care, in which there was severe dermatitis of the arm resulting in atrophic and cicatricial changes, contractions, deformity, and carcinomatous degeneration, necessitating high amputation and wide excision of lymph nodes, the histological pathology was now being worked out in the New York Post-graduate Pathological Laboratory. There would seem to be no question that, aside from the production of a burn like dermatitis, the ray has a predilection for attacking tissues which are not highly vitalized and embryonic-like, or highly differentiated structures, or cell growths—so to speak—out of place. Epithelial overgrowth can be seen to melt away at times without undergoing the usual necrotic or ulcerative changes, and in their place healthy tissues are produced in such a manner as to lead to the belief that normal cell growth is stimulated. At times, indeed, the two processes can almost be observed to occur *pari passu* over limited areas. If this new therapeutic measure consists in a bombardment of infinitesimal particles carried along ethereal waves travelling at an enormous velocity, we can almost imagine them attacking the infinitely minute particles of matter which go to make up the cell nuclei, the cells themselves and the microscopic organisms which may possibly lie back of the faulty direction the cell growth has taken. The connective tissue cells would appear to be often unacted upon, and, being left behind, form what has been designated as a mat or basis structure, through and about which the new growth, now no longer malignant, can take place. Necrosis *en bloc* seems at times to be imitated and the casting-off process hastened, so that, with pronounced suppurative inflammation, rapid destruction takes place. Summarizing his results, Allen says that of 47 cases treated 10 were breast cases, 1 rectal, 1 uterine, 1 involving the glands and tissues of the neck, 3 were sarcoma, and 1 supposed to be sarcoma. This leaves 30 more or less dermatological cancer cases. Of these 2 involved the chin, being epithelioma, or cutaneous carcinoma, 9 the nose or the nose and cheek, 3 were multiple, 1 being in a subject of xeroderma pigmentosum, whose eyes were likewise involved, one globe having been wholly destroyed and necessitating surgical enucleation; 5 were upon the cheek and near the eye; 4 were of the lip, and 2 of the arm. The results in these cases are as follows: Ending fatally, 5; discharged cured, 25; ceased treatment, improved, 3; ceased treatment, unimproved, 5; improved and under treatment, 9. The following are his conclusions: (1) The *x* ray possesses decided therapeutic power and may produce marked injurious effect. (2) From the study of the present series of cases, he thinks himself warranted in stating that the *x* ray as a therapeutic measure is not a passing fad to be dropped after a brief experience. (3) The effect of the method is at times to produce severe symptoms, referable to the heart, lungs, and other internal organs and systemic effects pointing to absorption of products of disintegration thrown into the circulation more rapidly than they can be eliminated. (4) Metastases occur at times in grave forms of cancer more rapidly than we are accustomed to see in patients not so treated. (5) Cancer itself may be produced by the injurious effect of the ray in a person not known to be predisposed, as instanced in the case case reported of the tube maker, whose arm had to be amputated for carcinoma developing the *x*-ray cicatrix. (6) The *x*-ray dermatitis, and many of the good effects as well, depend upon the proximity of the tube, the degree of vacuum, and the degree of heating of the anode. (7) Tubes may at times get into a "burning state." This condition of tube must at present be learned by experience and observation with the individual tube, as there is nothing to indicate just when this condition is present, aside from the effects produced. (8) The method is not one to be solely relied upon in all cases of cancer. (9) In the nodular, wart-like, and dry growths upon the skin, other means of removal, preferably by arsenical paste, should first be employed, and the rays then applied. (10) The indiscriminate application of the ray to all forms of disease, as claimed to be practised by advertising institutions and by charlatans, and the deceit practised by calling other rays by this name, are apt to bring much unmerited reproach of a method really useful, whose effect is at times almost magical, but most often disappointing.

(366) Radiotherapy and Phototherapy for the Treatment of Carcinoma, Tuberculosis, and other Skin Diseases.

As to the comparative values of these two procedures, Hyde, Montgomery, and Ormsby (*Journ. Amer. Med. Assoc.*, No. 1, 1903; *Therap. Gaz.*, May 15th) say they are unable as yet to draw definite conclusions. Though radiotherapy is easier of application, and apparently has a wider field of usefulness, phototherapy, in lupus erythematosus, has repeatedly given excellent results in cases where the *x* rays failed. In the treatment of tuberculosis of the skin, too, the better results are obtained with phototherapy, there being better cosmetic effects and no danger of deep burns. In superficial carcinoma involving considerable areas radiotherapy is undoubtedly preferable to all other known methods of treatment. Superficial lesions more circumscribed are equally amenable to treatment with the *x* rays, though in many instances small tumours can be removed more promptly by complete erasion or excision. For many of these circumscribed growths it may be best to advocate removal either with the knife or curette, followed by a series of treatments with the *x* rays. In operable carcinoma of the skin which includes deeper tissues, there should be complete extirpation followed by *x*-ray treatments. Where the growths are inoperable radiotherapy offers a probable chance of recovery or lessening of the discomfort of the patient. There is a possible danger in the treatment of carcinoma that has not been sufficiently recognized. In exciting an inflammation in carcinoma the operator to some extent encourages an extension of the growth, through a dissemination of the cancer cells to normal or inflamed tissue surrounding the growth. The value of radiotherapy in extensive cases of hypertrichosis has been fairly well established. Excellent results have been obtained in the majority of cases of psoriasis treated. It has unquestionably been used successfully in many of the chronic inflammatory diseases of the skin, especially in acne rosacea, folliculitis, and suppurating wounds, but until it can be used with greater accuracy it should be reserved for those cases in which better known and better controlled methods are not successful. The current used was from from induction coils having a voltage of from 10 to 12, and an amperage of from 1½ to 3 (rarely 4 or 5). The distance from the anticathode of the lesion

exposed to the *x* rays varied from 5 to 15 in., the duration of the treatment from 3 to 10 min., and the interruption from 800 to 1,200. For all superficial lesions a medium soft tube was used; for deeper tissues a fairly hard tube proved more efficacious and safer. Lead plates were used to protect the patient. As a matter of convenience and for the better protection of the tissue immediately about the area treated, the latter was exposed through an opening in a small disc of lead, which was closely fitted to the surface, and fastened with pieces of tape or adhesive strips. A much larger flat sheet of lead, with an opening smaller than the area covered by the first lead disc, is supported by an adjustable rest between the patient and the tube. Each lesion treated has its individual small disc of lead, while the large sheet answers for a number of areas of about the same size in the same or different patients. The head, if lesions on it are to be treated, is supported by a photographer's rest. As to the susceptibility of different persons to radiotherapy, after all is said, the important fact remains that the only guide at present is the reaction obtained in each case. In phototherapy, Sequeira's modification of the Finsen light is probably the better. In it the carbons are brought within 2 in. or 3 in. of the area to be treated. Ten or fifteen minutes' exposure thus produces as much reaction as an hour's exposure by the original Finsen apparatus. The patient is protected from the light by a hollow shield, in the centre of which are two rock-crystal lenses, front and back, between which cold water constantly circulates and absorbs all heat rays. The part to be treated is rendered anaemic by pressing it firmly on the face of the front lens. The reaction after treatment with the lamp occurs in from six to twenty-four hours, and may vary in degree from an erythema to a vesicular or bullous dermatitis. No inflammation of tissue deeper than the skin is produced. The induced inflammation usually subsides in from three to ten days. In normal skin the reaction is followed by pigmentation, which acts as a protection against the light rays, so that in a given area successive treatments are followed by a constantly diminishing intensity of reaction. In morbid tissue the protective pigment is much less marked or entirely absent. In effect the lamp light differs decidedly from the *x* rays in the following particulars: Reaction occurs promptly; it is always superficial; it leaves a pigmentation; and the final results are apparent usually within a short period of time. With the *x* rays the reaction is much slower in appearing, from one to two or even three weeks; it frequently involves deeper tissue; the normal integument, once the seat of distinct reaction, is usually much more sensitive to subsequent exposure; and, finally, the effects of the radiation are frequently prolonged through several months after the last exposure.

(367) The Therapeutic Use of the X Ray. D. C. BROCKMAN (*Railway Surgeon*, Chicago, March, 1903,) finds that the men who have no faith in the *x* rays as a curative agent have had but little experience with it and that in a very unsatisfactory way either for want of proper instruments, time or patience. They are usually "operating surgeons" who have never had faith in anything but excision in the treatment of malignant diseases. Many writers have made such extravagant claims for the agent that their reports are worthless. That brilliant results are obtained in many cases of superficial carcinomata is evident to any one who will take the pains to use it, or read the reports of those who have. The pain is controlled, tumour disappears, ulcers heal, and to all appearances the disease is cured, Will they return? We are yet in the experimental stage and it is the duty of every surgeon to watch the results of work done with the *x* ray by trustworthy men, use or have it used on all suitable cases and report results of all cases whether good or bad, so that in time we may be able to define its indications. During his summer vacation Brockman made inquiries in a dozen or more of the large hospitals in Chicago, New York, and Canada as to the character of cases they were treating with the *x* ray and the results, and he was surprised to find the greatest diversity of opinion in regard to the scope of utility of this "unknown quantity." He found that the tube was usually excited from a street wire through a coil, although at some institutions they were using the static machine as a generator of the current. Either means seemed to work equally well, and it was largely a matter of convenience which was used. After returning home he wrote to about fifty of the leading surgeons, dermatologists, and laryngologists in the United States asking the results of their experience with the *x* ray in the treatment of: (1) superficial carcinoma; (2) deep-seated carcinoma; (3) sarcoma; (4) lupus; (5) tuberculous laryngitis; (6) tuberculous glands. He found, on analysing the cases reported as a result of this correspondence, that there were 44 cases of sarcomata, 10 cases of which were apparently cured, 1 improved, and 17 not improved. Of these latter most were given only a few treatments; some were nearly dead when they came under observation. All cases treated were inoperable, and the *x* ray was used as a last resort; 4 were then under treatment. Of cancers, 80 cases were reported; 52 superficial carcinomata. Of these 32 were healed or apparently cured; 5 were improved, pain reduced, and tumour decreased in size; 10 not improved; 6 now under treatment. Most of these were situated on the face where the scar following incision would have been disfiguring. Deep-seated carcinomata 28, 4 of which were apparently cured, 5 improved, 15 failures, and 4 under treatment. Brockman was unable to get any reliable information regarding results in tuberculous laryngitis. Several specialists reported "cases under observation," but none were ready to report any opinion as to results. Of tuberculous glands 4 cases were reported, 10 of which were apparently cured, 4 improved, and 27 failures. Several apparent cures are reported of splenic leukaemia. Some surgeons claimed cures of rectal and uterine cancers, but until more light is available on the subject Brockman is of opinion that it will be well to direct most of one's efforts to more superficial growths. Better results might perhaps be obtained with a new tube devised by E. W. Caldwell, of New York, for the treatment of uterine and rectal cancer in which the target was in a long slender horn of the tube. All of the projecting horn was covered with metal foil so as to protect the parts, while the rays were projected into any desired cavity, and applied directly to the affected parts. With this more satisfactory results might be expected in some cases of inoperable uterine and rectal cancers, cancerous and tuberculous laryngitis. Almost every case of lupus on which it was given fair trial was reported cured. The same might be said of acne. Most encouraging reports were received regarding its use in acne, sycosis, and chronic localized eczema. Many cases of other forms of skin disease were reported cured, but the character of diseases and indications did not seem to be well defined. The histological changes that occur in diseased tissue s may be summed up as follows: The short-lived, imperfectly-developed neoplastic cells are devitalized and absorbed. In some cases the devitalization goes on more rapidly than absorption, a genuine tissue necrosis occurs, and a resulting discharge of broken-down débris is thrown off, which process is followed by rapid repair of the cavity by healthy granulation. That the ray has an active bactericidal action is clearly shown by the rapid disappearance of pus and pyogenic bacteria from the cancerous ulcers after irradiation has been instituted. The best results are obtained in cases of lupus, acne, and superficial epithelioma. Almost all these seem to yield very readily to the continued irradiation, the benign diseases responding best to a soft tube at a distance of about 12 in. with 10 to 12 min. seances every day. Sarcoma and epithelioma require a harder tube, one with good penetrating power, sufficient to give but a shadowy picture of bones of hands, with an exposure of 12 to 20 min. at a distance of 4 to 6 in. Exposures repeated every day till a well-marked dermatitis is developed about the lesion.

(368) The X Ray in Laryngeal Cancer. DELAVAN (*Laryngoscope*, December, 1902) reports a case of laryngeal cancer in a man aged 65. The disease was inoperable on account of its wide distribution, the existence of nephritis and rheumatism, and the age of the patient. The growth in the larynx and neck increased greatly in size, and he was placed under the care of Morton for treatment with the *x* ray. About eighteen exposures were given. After the first few treatments the growth began to soften and soon its entire contour seemed to change. Later it seemed that the mass was breaking up. At this period treatment had to be abandoned, and the patient shortly afterwards died from Bright's disease. There appeared to be no doubt that the patient had been distinctly benefited as far as the laryngeal cancer was concerned.

AN EPITOME

OF

CURRENT MEDICAL LITERATURE.

MEDICINE.

(369) Local Cutaneous Anaemia and Hypothermia as an Indication of Functional Disturbance in Internal Organs.

ROSENBACH (*Berliner Klinik*, April, 1903) regards this as a subject of considerable importance which has hitherto received insufficient attention. He distinguishes four classes of these local anomalies of temperature: (1) A persistent subjective coldness of the hands and feet; (2) sudden "deadness" of the hands, which is, in its most characteristic form, an angioneurosis; (3) congestive conditions in the head, in various circumstances leading to a local feeling of chilliness, and usually soon followed by one of heat; (4) a chronic or subacute form, which the author believes to be the ground form of the anomalies in blood distribution of which he treats. He considers that these cases are as a rule not carefully enough investigated for associated symptoms, and are too readily set down as angioneurotic without adequate inquiry into the cause of the central disturbance, local and external conditions not being sufficiently taken into account. Besides such nervous cases, there exist undoubted examples which are due to deficient metabolic activity in the tissues, perhaps themselves arising from circulatory defects in the cutaneous vessels. It is the chronic, non-paroxysmal forms which point to a primary defect in the protoplasm rather than in the nervous system. Local cutaneous anaemia of this kind is commonest over the forehead, neck, abdominal wall, and cheeks; the gluteal region, the external genitals, and the inner surface of the thigh may be affected, the back much less often. There is a sensation of cold, and the sensibility to the application of external warmth is blurred; now and then the chilliness is objective as well as subjective. The patients are abnormally disposed to sweating; exposure of parts of the body to currents of cold air may even bring about increased perspiration. Attacks of local anaemia may last from minutes to days; it is usually best marked on getting up from bed in the morning, but in older people it may recur or even be at its worst at night. In such cases it is very essential to see that the bedroom is properly warmed, and the patient may also require to sleep in blankets or employ a hot bottle. Local anaemia is often accompanied by sensory disturbance, especially in the direction of anaesthesia, hyperaesthesia being much less common. Myalgia is a frequent complication, and sometimes the anaemia may be due to some muscular affection, or the two may arise from a common cause, an abnormal condition of an internal organ or tissue. On the one hand there can be no doubt that popular pathology is in so far correct that a superficial chill may lead to internal disease; similarly local anaemia may cause vertigo, depression, and an irregular pulse, according to the region which it affects. On the other hand certain diseases of internal organs may produce coldness of the skin; that of the forehead often results from abnormalities of the nasal or faucial mucous membrane, and that of the neck from disease of the conjunctiva or posterior part of the throat. Thirdly, both internal and external affection may be due to the etiological factor, such as the climaterie in women or the plethora of middle life in men. The commonest internal disturbances associated with regional anaemia are those of the nervous system, of the digestive organs, and of defaecation. The essential thing is not to attribute everything to disordered innervation without due inquiry into ultimate causes. Treatment must be largely symptomatic, erroneous habits of life being first corrected. Exercise is important and packing with tepid water may be of value. Cold baths lead, after a temporary improvement, to exacerbation of the symptoms. Of external applications most benefit is derived from a combination of dry heat and massage.

(370) Reflexes in Diabetes.

SINCE Bouchard recorded the fact that the tendon reflexes are diminished or lost in diabetes, a great number of confirmatory cases have been observed. Generally speaking, these have reference to the patellar reflexes, and the condition of the others has not been so fully investigated. Moyzes, working under Pieters, has extended the subject (*Thèse de Bordeaux*, 1902), and finds that in 210 cases of diminution or total abolition of the tendon reflexes there were 98 diabetics. Further, the abdominal reflexes are also absent in a greater number of cases than those above mentioned. The cremasteric reflexes are also absent; the pharyngeal were absent in the majority of cases, while the plantar, but to a less degree, show abolition or diminution. On the contrary, notwithstanding the frequency of eye changes in diabetics, examination of the pupils showed little or no alteration in the size of the pupils or their reaction to light or accommodation. This latter factor is of diagnostic importance, as some cases of diabetes have been supposed to be tabetic. The absence of the Argyll-Robertson phenomenon will prevent error in this respect. From the point of view of prognosis, the loss of reflexes constitutes a grave sign.

(371) X Light in Anthropometrical Signalment.

WILLIAM ROLLINS (*Boston Med. and Surg. Journ.*, May 7th) holds that the time will come when the law will require every person on reaching adult age to be signalized. Anthropometry is the foundation of every valuable method of identifying criminals. Any procedure which will make these measures more exact must be valuable, for already the number of signalments is several hundred thousand in France alone. Every day the chances of making a mistake in identification become greater. The difficulty is not in the first separation, but in the last group, in which the measures are most alike. The ordinary measures taken are—height, length of trunk, reach, length of head, width of head, bizygomatic diameter, length of right ear, length of left foot, length of middle finger, length of left middle finger, length of left forearm. Of these measures it may be said that they are of value only when they are accurate. If any of these measures could be taken with twice the accuracy now possible, twice as many persons could be identified. This, he says, it is possible to do by a method he has devised—that of making *x*-light photographs of the bones. He estimates that this method at least doubles the accuracy with which measures of the hand can be taken, and by enabling other measures of the feet, beside the length, to be taken it allows at least four times as many persons to be identified as at present, though the real number will be found to be much greater; for when we consider that *x* light not only gives photographs of the dimensions of the bones but also shows their structure, it is evident that for purposes of fine distinction in the final stage of the identification the method is an advance. In cases of bodies burned or decomposed before they are discovered, the method would have some advantages over any that has been proposed. In other cases where only some of the parts of the body are found, as, for example, a hand or a foot, the method alone might lead to identification. Rollins has designed and constructed apparatus for conducting these *x* light photographic anthropometric signalments. Indispensable requisites for making such measures of value are to have the source of *x* light at a uniform distance from the photographic plate; to have the plate bear on its face evidence of the direction and distance of the source of *x* light and the angle at which the central ray struck. Apparatus for accomplishing these results, to which he has given the name "orienter," was illustrated in the *Boston Medical and Surgical Journal* for 1901, and much more fully in his notes on *x* light in the *Electrical Review*. The apparatus is important to medical practitioners from a medico-legal point of view when *x*-light negatives are used in court for evidence.

SURGERY.

(372) Autoplastic Transplantation of Interepiphysary Cartilage.

ZOPPI (*Arch. di Ortoped.*, An. 19, f. 5 and 6, 1902) found that failure always followed the transplantation of the cartilage of one animal into that of another species, whilst, on the other hand, success followed when both animals were of the same species. And recently the author has had an opportunity of experimenting clinically in the case of a girl aged 12, who after a severe blow eight years ago developed acute periostitis of the right tibia, for which she was operated upon. This was followed eventually by considerable shortening of the leg on that side and also foot, which was in a position of

vara. The fibula had meantime grown normally. The circumference of the right leg in its middle third was 21 cm., the left 24 cm; the right tibia measured 24 cm. in length, whilst the left was 29 cm.; the right fibula 27½ cm., the left 29½ cm. Radiography showed a mere thin line of interepiphysary cartilage on the right side at the lower extremity of the tibia, whilst the fibular cartilage was normally developed. The author removed a wedge-shaped piece of bone and cartilage from the right fibula and inserted it in the interepiphyseal line of the tibia. The results so far are eminently satisfactory. A radiograph taken twenty-one days after the operation showed that the implanted cartilage still remained in its new position and showed no sign of absorption. In previous experiments absorption had always taken place before this period. The appearance of the leg and foot was much improved, as may be seen by the photographs taken before and after operation. At the operation (which lasted twenty-five minutes) the tendons of the anterior tibial and peroneus longus were shortened. What will be the ultimate effect on the growth of the bone time alone will show.

(373) Surgical Treatment of Anuria.

BEVAN (*Ann. of Surg.*, April, 1903) insists on the importance of recognizing three forms of anuria—obstructive, reflex, and non-obstructive. A clear and comprehensive classification of the different causes of anuria, and a consideration of the indications and contra-indications of surgical treatment in each form of the disease, lead to the conclusions that it is imperatively necessary to operate in the obstructive and reflex forms, and that such intervention may be of possible value in the non-obstructive cases. In the two first varieties, the author holds, a rapid nephrotomy on the side of pain, tenderness, and muscular rigidity is the operation of choice. He would not hesitate to make, if necessary, a double nephrotomy. The surgeon should endeavour in such treatment to prevent post-operative and post-anaesthetic anuria by a proper choice of the anaesthetic, rapid operating, and limiting surgical shock. It is thought that nitrous oxide will probably be found the best anaesthetic agent. Prolonged operative action for the permanent removal of the obstruction should be postponed to a later period, when the patient has recovered from the anuria. In case of anuria the operation should be performed early, and by the beginning of the third day.

(374) Post-operative Acute Yellow Atrophy of the Liver.

BALLIN (*Ann. of Surg.*, March, 1903) reports a case in which an operation for acute appendicitis, on a man aged 20 years, was followed on the fourth night by typical symptoms of acute yellow atrophy of the liver. The serious condition lasted five days, and finally yielded to slow improvement after treatment by venesection, followed by intravenous saline infusion. Acute yellow atrophy of the liver is, the author acknowledges, a very deadly disease, but, he states, there have certainly been some recoveries in undoubted cases. The mortality, it is pointed out, seems to be about 95 per cent. The author has collected 9 other cases of post-operative acute yellow atrophy. All 10 cases have in common that one or two days after an operation a slight icterus developed, which was followed by vomiting, violent delirium, coma. Nine out of 10 cases were fatal. In 7 cases chloroform was used as an anaesthetic, and in 1 Billroth's chloroform mixture; in the remaining 2 records the anaesthetic is not mentioned. All the operations, with the exception of one, were performed on abdominal organs; in 2 cases for suppurating appendicitis. In discussing the etiology of this complication, the author expresses the opinion that it is due to infective processes with the help of the toxic influence of chloroform upon the liver. The records here dealt with seem to suggest that a predisposition from alcoholism, lessening the resistance of the liver cells, may be an essential factor.

MIDWIFERY AND DISEASES OF WOMEN.

(375) Phthisis Complicated by Pregnancy.

SEIFERT (*Die Heilkunde*, February, 1903) describes a case of phthisis complicated by pregnancy, in order to demonstrate that, though the outlook under such circumstances is not good, yet recovery may take place even in severe cases. The patient when first seen (in June, 1899) was 31 years old, and the mother of three healthy children. For a year she had suffered from cough, night sweats, loss of strength and appetite, and fever, and for six months from hoarseness. On examination there was dullness over the left apex, with weak bronchial breathing, and fine and medium crepitations. The laryngoscope showed granulations on the posterior laryngeal wall, oedema of the mucous membrane covering the arytenoid cartilages, some thickening of the epiglottis, and slight redness and thickening of both vocal cords. Under general and local treatment the general condition and that of the larynx improved, and the voice became almost normal. In the spring of 1900 the patient had a relapse, but she again improved under treatment, and in October, 1900, her general condition was good, and the morbid changes in the larynx inconsiderable. In February, 1901, the patient, who was now in the fourth month of pregnancy, came again complaining of cough, much expectoration, loss of appetite, pain on swallowing, difficulty in breathing, and loss of voice. There was a wide area of dullness over the left apex, with bronchial breathing and crepitations as before. The laryngeal changes were more extensive and severe, and there was ulceration of both vocal cords. General and vigorous local treatment were adopted. The upper end of the larynx was painted with an antipyrin-cocaine solution, menthol injected, and curetting carried out. Striking improvement in almost all of the symptoms followed, though the loss of voice continued and the lung condition was little altered. In July, 1901, the patient gave birth to a child; the confinement was normal and convalescence rapid; the child did well. At the end of August the patient recovered her voice. In October she looked well, her voice was normal, and she had no difficulty of breathing or swallowing. The crepitations over the left apex had disappeared. Laryngeal examination showed that some thickening of the epiglottis and the mucous membrane of the arytenoid cartilages and the arytenoepiglottidean folds still remained, but there were no granulations on the larynx, and the vocal cords were free from ulceration. The patient was last seen in July, 1902, when examination gave the same results as before, and the patient felt perfectly well.

(376) Cholecystitis: Pregnancy and the Puerperium.

POTOCKI, PINARD, DOLÉRIS, LE GENDRE, AND BARILLON (*Ann. de Gynéc. et d'Obstét.*, April, 1903) publish a series of cases under the heading Cholécystite et Puerperalité. They teach Pinard's doctrine that there is no essential fever of pregnancy (see EPITOME, April 25th, par. 267), and that high temperature after delivery may mean complications other than puerperal infection, such as twisted or inflamed ovarian cysts, appendicitis, and intestinal obstruction. Cholecystitis is not very rare, and speedy operative interference may save life. Potocki performed cholecystotomy eleven hours after delivery; purulent cholangitis had occurred; a large number of small calculi came away. Nearly one year later the gall bladder was removed. Pinard reports a case of cholecystitis in the puerperium. Hartmann successfully operated on the eleventh day after delivery on a patient under Pinard. Much pus came away from the gall bladder, which was stitched to the parietal wound. On the tenth day a calculus as big as a nut escaped from the wound. Doléris attended a case of typhoid fever in the eighth month of pregnancy. Premature labour occurred; the child was alive. A tender spot was felt in the region of the gall bladder. On the seventh day Malartic opened the gall bladder and let out about 2 oz. of purulent bile. The fever became very severe, but ultimately the patient recovered. The child was in good health when the mother was convalescent. Le Gendre reports a remarkable case where a woman, aged 34, had been subject to uncontrollable vomiting for two months with amenorrhoea, so that pregnancy was suspected. The uterus, however, was not gravid. The patient was discharged from hospital, but returned a month later vomiting incessantly. There was no local or clinical evidence of mischief in the gall bladder and ducts. Symptoms of cerebro-spinal meningitis set in, and the patient died six days after admission. At the necropsy marked hyperaemia of the cranial and spinal meninges and of the cerebral cortex was detected. There were no purulent foci. The gall bladder contained 4 oz. of pus, a calculus as big as a walnut lying against the orifice of the cystic duct, and a few smaller facetted stones. The gall bladder

was fixed to adjacent intestine by recent soft adhesions. Barillon operated on a patient six months pregnant for cholecystitis with jaundice, removing a calculus from the gall bladder; delivery occurred at term. It must be remembered that cholecystotomy for gall stones has been performed simultaneously with removal of a gravid tubal sac (Strassmann, EPITOME, May 2nd, par. 285).

(377) Cholecystotomy in Pregnancy: Delivery at Term.

BARILLON (*Comptes Rendus de la Soc. d'Obstét. de Gyn. et de Paediat.*, March, 1903) operated during the sixth month on a married lady, aged 33, pregnant for a second time after a very long interval of years. She had lived fifteen years in Algeria, and had enjoyed good health, excepting a few attacks of gastric pain, without jaundice or rise of temperature. The period ceased in March, 1900. For three months all went well, but in the third week in July symptoms of biliary obstruction set in. The attacks of pain were violent, with rigors and high temperature; jaundice became marked, and by September the gall bladder could be felt much distended. Yet the pregnancy continued uninterrupted, and the fetal heart sounds were quite clear on September 17th, when cholecystotomy was performed and the gall bladder sewn to the parietes. It was not sutured and returned, although the ducts were all clear, as Barillon thought that drainage was a safeguard against several possible accidents which would prejudice the pregnancy. The gall bladder before incision measured over 6 in. in length; it was full of thick green bile, and held an oval calculus ½ in. in long diameter, and with an irregular mulberry-like surface. Directly after the operation the motions became coloured, the pains ceasing. The urine slowly returned to its normal colour. On December 5th the patient was safely delivered of a female child weighing over 7 lb.; the placenta weighed 1¼ lb. and was normal. The operation scar and the biliary fistula were unaffected by the labour pains. There was a rise of temperature to 100.5° on the sixth day, associated with constipation. By the fourteenth day the patient was able to get up; she could not, however, suckle her child. After convalescence there was no trouble save with the biliary fistula, which was to be closed artificially if it failed to do so spontaneously.

(378) Ovarian Cyst in a Girl, aged 8.

DELASSUS (*Journ. des Sci. Méd. de Lille*, March 7th, 1903,) operated on a case where the cyst two years before the operation reached as high as the ribs and was in part cystic, in part solid, according to palpation so that cystic sarcoma or dermoid cyst was diagnosed. It proved to be a mixed growth bearing cartilaginous tissue. The tumour in this case weighed 1¾ lb.

THERAPEUTICS.

(379) Finsen's Light Treatment.

AN official report of experiments undertaken by the Institute of Experimental Medicine at St. Petersburg for the purpose of verifying clinically the claims made for Finsen's method of treatment was published in the *Journal* of the Institute. The following summary is taken from the *Philadelphia Medical Journal*, December 12th, 1902. The objects of the experiments were: (1) To demonstrate practically on patients the efficacy of the method when applied to those cutaneous affections which were treated by Finsen; (2) to broaden the indications for the method so as to include other cutaneous affections hitherto not treated by this method; and (3) to elaborate and modify the method without, however, departing from the original principles on which it is based. The experimental cabinet was in operation from 1900 to 1901, and during that period 44 patients were treated. The cases included lupus vulgaris, lupus erythematodes, verrucose tuberculosis of the skin, epithelioma (rodent ulcer), vascular naevus, and tropic ulcer. The results obtained may be called brilliant, considering the usually irremediable nature of these affections. Thus, of 26 patients affected with lupus vulgaris, 8 (30 per cent.) were cured. Of 9 patients affected with lupus erythematodes, one was cured, three decidedly improved, while the others discontinued treatment. One patient affected with cutaneous tuberculosis was improving when the treatment was discontinued. In 5 patients with naevus marked improvement was observed when treatment was discontinued. Observations were also made on the effect of Finsen's method on some affections of the mucous membranes. The results were no less favourable. It, therefore, seems to be quite evident that in Finsen's method of utilizing the curative virtues of electric light we have a decided step forward in the treatment of a group of diseases which were usually looked upon as hopeless. The only disadvantage in the method is the high price of the outfit, which places it almost beyond the reach of the average practitioner. However, sufficient clinical observations have already accumulated to show that, in the absence of Finsen's apparatus, electric lamps of various colours and intensity may be employed with advantage, especially in the treatment of affections of the mucous membranes. Minin (*Vratch*, 1901, No. 33) obtained excellent results in the treatment of lupus by means of an electric blue lamp of 50-candle power, properly adjusted. He also observed the marked analgesic properties possessed by coloured electric light. Similar observations were made by Siebelt, Matchan, Engel, Kliatchin, Kourdiumoff, and others. Recently, Tsiechanski (*Praktitcheski Vratch*, August 31st, 1902) reported 8 cases of tuberculous joint affections, 5 in children and 3 in adults, successfully treated with electric arc light of 35 to 40 volts and 80 to 120 ampères, or 12,000 candle power. He concludes that the application of ray energy in the form of heat and light gives favourable results in the treatment of articular tuberculosis; that the method is absolutely painless and replaces altogether all the other methods of treatment usually employed. That electricity, that mysterious force, should also be harnessed by the physician for the cure of disease and the relief of human suffering is an achievement well in keeping with the progress of the twentieth century.

(380) The X Ray in Skin Diseases.

ZEISLER (*Trans. Amer. Derm. Assoc.*, 1902) says that during the six months from March 1st to September 1st, 1902, he subjected 81 patients to radiographic treatment, as follows: Lupus vulgaris, 1; lupus erythematosus, 1; scrofuloderma (tuberculosis of the shoulder-joint), 1; hypertrichosis, 11; sycosis, 4; acne (all forms), 34; epithelioma, 9; psoriasis, 3; lichen planus hypertrophicus, 2; dermatitis staphylogenes, 1; eczema, 4; keratosis palmaris, 3; clavus, 1; pruritus, 1; hyperidrosis nasi, 2; non-dermatological affections, 3. In the case of lupus the result was in every way highly satisfactory and far superior to any other method known to him except perhaps that of Finsen. In an inveterate case of lupus erythematosus good results were also obtained. A case of scrofuloderma was also much improved. Zeisler's experience of 11 cases of hypertrichosis has made him rather optimistic concerning what can be accomplished. As regards the final effect upon the skin, he has been unable to verify Ehrmann's observation of an atrophy of the skin following this treatment. Of the 4 cases of sycosis treated, 2 were very severe and inveterate; the result of the treatment surpassed his most sanguine expectations. After two or three radiations pustules ceased to form. In about two weeks the skin looked entirely normal, except slightly pigmented and reddened. These cases had since remained under continued observation. About two months after epilation had become complete, new hair began to show, and had since grown out all over the affected areas. In spite of this there was so far no sign of relapse. The 34 cases comprised several varieties and all degrees of severity of acne. Five of them were instances of acne rosacea; 1 belonged to the type of acne necrotisans; 4 cases were indurated and pustular acne of the back and shoulders. The bulk of them were of the ordinary type of acne of the face, many of them of the very severest and most rebellious nature. Zeisler's plan in these cases was usually to start in with three treatments a week for from two to three weeks. After this exposures were given twice weekly only for a time, and later on about once a week. A beneficial action could usually be noticed during the second week, when few new pustules were noted, and the comedones seemed to shrink and dry up. The accompanying seborrhoea oleosa of the face was very promptly influenced. Some of the severest cases he had ever treated were cured in from four to six weeks, and had so far remained well. His result in nine cases of epithelioma were such as to make him rather enthusiastic about the *x*-ray treatment. His cases were all of the superficial variety. Three were situated on the side of the nose, one on the lower lip, one on the lower eyelid, one near the tip of the tongue, one on the glans penis, one on the back of the hand, and one on the forehead. Three of them were relapsing forms, and had been previously treated by curetting and cauterization. The treatments were given with a strong light, the

distance of the tube being from 5 to 10 cm., the sittings being ten minutes, repeated at daily intervals for a time, and then only every two or three days. A case of epithelioma of the lower lip required ten treatments during a period of four weeks. One of epithelioma of the tongue yielded to twelve exposures given during three weeks. In only one case was there produced a reaction amounting to severe dermatitis. It most the exposures were interrupted at the first sign of a slight irritation, and further results waited for. In all of them the result was recovery—at least for the time. As regards psoriasis, in the three cases only a few regions were invaded by particularly stubborn manifestations; in one of them the knees only, in another the arm, showing a large infiltrated scaly patch; in a third the lower limbs were exposed to the rays. Exposures were made with a mild light at a distance of from 15 cm. to 20 cm. in order to take in the whole affected area. Results were noticeable after from eight to ten exposures, and were on the whole satisfactory. In one of them the benefit has lasted for more than four months. Similar results were obtained in two cases of lichen planus hypertrophicus located over the tibial region. One such patch which had obstinately resisted various plans of treatment even as energetic as thorough curetting disappeared in an almost marvellous way after four strong exposures given at intervals of five days each, and left the skin in a perfectly normal condition. Zeisler has used *x* rays only for isolated, chronic, infiltrated patches of eczema with very encouraging results. The three cases of keratosis palmaris were inveterate forms, and covered in one instance the palmar surface of both hands, including the fingers, and in the other two circumscribed patches of the size of a dollar on each palm. The effect of the rays in these cases was, to say the least, surprising. One case seemed perfectly restored after five strong exposures. A case of multiple corns was cured by the *x* rays. One case of pruritus genitalis was much benefited by three mild exposures. Two cases of hyperidrosis nasi were subjected to radiotherapy, with the expectation that the rays would assist in limiting the excessive oiliness in analogy to their action in acne. Ten mild radiations were given in one of these cases at intervals of from three to four days, and the result as regards the size of the follicles and the secretion was satisfactory. In the discussion A. R. Robinson reported a case of xeroderma pigmentosum in a child 5 years of age. There were about fifteen cancerous lesions, two of them as large as a walnut, on the face. One covered the whole of the upper eyelid. The child was put on thyroid extract, and in four months' time all but two of the lesions had disappeared, and there was less pigmentation and angiomatous condition of the neck and forearms. Finally, but one large lesion remained, and three months previously he began to use the *x* ray on that. The exposures were made very carefully, only once a week, but caused a marked dermatitis. He failed to see a particle of improvement in the cancer nodule. Perhaps the age of the patient makes some difference in these cases. In regard to the cases of cancer of the breast reported by Dr. Allen he mentioned that Johnson and Merrill recently reported seven cases, all of which failed to show any improvement, although his own cases were decidedly benefited. Some cases of mammary cancer show no improvement. In regard to the treatment of sycosis by means of the *x* ray, the trouble was that there is some danger of producing a permanent alopecia. In regard to the treatment of epithelioma, he failed to see why one should take three or four months time in treating a case with the *x* ray, and perhaps produce an alopecia of the face, when the case could usually be cured at a single sitting by the older methods, especially by caustics. In certain cases where epithelioma is near the eye or in the region of the blood vessels in the neck, the use of the *x* rays is advisable, but he had read the report of every case of cutaneous cancer that had been published as cured, both in Europe and in the United States, and he must say that at least 75 or 80 per cent. could be cured much more quickly by caustics. He did not think the *x* rays reliable in a cutaneous epithelioma arising from the prickle layer of the rete. In rodent ulcer they were evidently efficient. J. C. White recorded a case of carcinoma of the skin developing at the site of a prolonged *x*-ray dermatitis.

(381) The Results of X-Ray Treatment.

P. P. Turnure (*N. Y. Med. Record*, February 7th, 1903) gives a summary of 94 cases of malignant diseases treated during the previous two years. His plan was to expose every day for one week, every other day for one week more, and then rest the cases for two weeks; after which he resumed the treatment as at first. He used a low tube of large volume and a powerful coil. Of five cases of epithelioma of the nose some were cured and others were doing well. Of three cases of epithelioma of the lip, one did badly—sloughing being wide and deep. Two cases of cancer of the penis were treated, one of which recovered. The effect in all the cases of epithelioma were good, and he thinks that the *x* ray is indicated in such cases before operation. In carcinomata his results were quite different, all his 15 cases of the neck and breast being failures. He reports three cases of tuberculous glands of the neck in children as greatly improved, but attributes the amelioration not so much to the ray as to the attention received in the hospitals. Two cases of tuberculosis of the larynx were treated from four to six weeks without improvement. Two cases of lupus, several cases of eczema, and superfluous hair were treated with success. In discussing Turnure's paper, D. H. Lilienthal said he had seen epithelioma cured by *x* ray, but had never seen a deep growth cured by *x* ray alone. He reported a case of sarcoma of the scapula which was being treated by the ray in conjunction with the Coley toxin, and had every appearance of recovery. R. T. Morris said the ray should be used only in inoperable cases. He reported a case of epithelioma of the lip too far advanced for operative measures which was cured by means of the ray.

PATHOLOGY.

(382) The Rapidity of Absorption of Poisons.

Paul Masoin (*Arch. Internat. de Pharm. et de Thérap.*, Fascic. v, vi, 1903) describes an investigation into the reason why, in the case of different poisons, there is a longer or shorter interval between the injection of the poison into the blood and the first appearance of symptoms. It is natural to suppose that the duration of latent intoxication depends on the rapidity of fixation of the poison on the tissues. The experiments described, however, conclusively negative this idea. Tartar emetic was chosen as a poison which takes some time to produce its effects, and a series of preliminary experiments showed that the minimal constantly fatal dose for a rabbit was from 1.25 to 1.50 cg. per kilogram of the animal's weight, this dose causing no symptoms for nearly twelve hours. In a second series of experiments the rabbits were subjected to repeated bleedings, beginning thirty seconds after the injection of the poison, and sustained by injection of normal salt solution, and at last by transfusion of blood from another rabbit. By this means it is possible in a period of about ten minutes to withdraw nearly two-thirds of the blood of the injected animal before transfusing into it the blood of the uninjured rabbit. Control animals are injected but not bled. The results obtained are as follows: Animals injected with the minimum fatal dose suffer from the same symptoms and die in the same time, whether they have been bled thirty seconds after injection or not. Animals which have been injected with a much larger dose than is necessary to kill live decidedly longer if bled thirty seconds afterwards than if subjected to no treatment. It appears, therefore, that as much poison as is necessary to kill is absorbed from the blood within thirty seconds, but that larger doses are to some extent retained in the blood for longer periods: but even when the injection is four times as strong as is necessary to kill, the poison is completely removed from the blood in twelve minutes. These results are confirmed by a further series of experiments, in which a second rabbit is injected with blood taken from the first rabbit at varying intervals after the first injection. It is found that ten minutes after a large dose (eight times the fatal dose) of tartar emetic has been injected into an animal its blood is no longer toxic to another animal. The whole of the poison has left the blood and fixed on the tissues. Masoin also refers briefly to further experiments, showing that arsenic and the poisons of tetanus and diphtheria remain in the blood for a still shorter time. The poison of snakes, on the contrary, remains in the blood for some minutes, even in a dose just large enough to kill. Masoin therefore concludes that when the composition of the blood is disturbed by the introduction of any foreign constituent, the normal composition is very quickly restored, the bulk of the extraneous substance being the most important factor in determining the time necessary for its absorption.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(383) Intussusception.

BERCHOUX (*Lyon Méd.*, May 17th, 1903) records a case of intussusception cured without surgical operation. A child, 11 months old, suddenly began to cough, and suffered from abdominal pain and vomiting. When first seen he breathed with difficulty, but examination of the chest showed nothing abnormal. The face was anxious, the abdomen hard and very tender, the pulse rapid and very weak. There was almost continuous bilious vomiting. There was obstinate constipation, and the legs were flexed upon the abdomen. Abdominal palpation caused too much pain to give any satisfactory information. Rectal examination did not allow any tumour to be felt, but caused an evacuation of a mixture of blood and faecal matter and mucus. The child was placed in a warm bath and fed with teaspoonfuls of champagne occasionally. Injections of olive oil and tepid water were then given alternately by means of a long tube passed as far up the rectum as possible. Ten hours later the vomiting had ceased, the colic was abated, and the abdomen was much softer and less tender. The injections of oil were repeated every three hours during the first day, and caused an evacuation of faeces and mucus streaked with blood on each occasion. After the first day tepid water was substituted for the oil, and the injections were only given two or three times in the twenty-four hours. The discharge of blood did not cease for three or four days, nor did the stools become normal until the eighth day, but the child took nourishment well and made a rapid recovery. No massage or gaseous distension was practised. The oil and tepid water were injected very slowly and gently. The good result of this practice in the case recorded is especially gratifying considering the comparative failure of laparotomy as shown by statistics.

(384) Malaria and Malarial Cachexia.

RECKZEH (*Deut. med. Woch.*, April 30th, 1903) reports on four cases of interest. The first three are examples of malaria in subjects who have not been out of Berlin, where malaria is practically unknown, and the question of etiology is discussed, while the fourth is one of malarial cachexia, in which the complication of carcinoma ventriculi offers ground for discussion. The histories of the cases are briefly as follows: A servant girl, aged 23 years, who had always been healthy, sickened six days before admission with vomiting and pain in the loins and legs. Herpes on both lips and in nostrils, slight purulent secretion from nose; heart normal, dullness, soft systolic murmur at mitral orifice; marked tenderness in the lower part of the abdomen at the left side; spleen easily palpable; urine, albumen; bowels constipated. After about a week she had a rigor, accompanied by well-marked cyanosis, and followed by a feeling of heat. Blood preparations showed natural red corpuscles, in one only a translucent space was seen, at the edges of which was a quantity of black pigment. White cells, somewhat increased in numbers, especially of polynuclear forms. Stained by borax-methylene blue, some small ring-form parasites. Other attacks followed, but on exhibition of quinine the spleen became smaller and the attacks disappeared. The second case was that of a boy of 8 years, No previous illnesses. On April 2nd patient was taken ill suddenly with fever, which recurred every third day. It was preceded by a long, lasting, rigor and followed by severe sweating. The attacks lessened after a fortnight in response to quinine. There were some enlarged glands to be felt; the heart was natural; the spleen was enlarged, measuring 4 in. in length. Characteristic tertian malarial parasites with sparse pigment in the blood. The third case was that of a child of 13 years, with a clear past history. The attacks occurred every third day at first, but later at longer intervals. Signet-ring parasites were found in small numbers in the blood. The last case was that of a woman of 32 years, who had also always been healthy; she was taken ill in Bucharest two years previously with attacks of fever and shivering. These attacks recurred every third day, and were accompanied by swelling of the spleen; in April of the year (1901) she returned to Berlin, and complained at times of *malaise* and dyspnoea. There was a slight soft systolic murmur heard at the apex; the cardiac dullness was not enlarged; there was some fluid in the abdominal cavity: the spleen was enlarged: the liver was likewise somewhat enlarged; urine normal; the stools were diarrhoeic, and there was repeated vomiting. The blood preparations showed increase of white elements, chiefly of polynuclear variety, marked poikilocytosis and polychromatophile and granular degeneration of the red cells, and in several of the red cells there were malarial parasites corresponding to the tertian type. The count showed 3,700,000 red cells to 13,500 white, with between 78 to 80 per cent. haemoglobin. After she had been in hospital for six days she was seized with shivering, and became collapsed and almost pulseless. Four days later there was extreme dyspnoea and cardiac weakness, and on the next day she died. The necropsy revealed free fluid in the abdomen, fluid in both pleural cavities and in pericardium. Lungs emphysematous, in the right lower lobe some broncho-pneumonic patches: heart-muscle pale, valves intact. The large omentum was lying rolled up in a line parallel to the left costal margin. In its lower portion there was a large abscess containing fetid matter. The omentum was adherent to the stomach at one point, so that the latter appeared to be contracted like an hourglass. Spleen was dense enlarged, the capsule thickened and opaque, the parenchyma on section dark brownish red, with distinct follicle markings. The fundus of the stomach was nearly entirely taken up by an ulcerating carcinoma, which had become firmly attached to the liver and which had led to a contraction of the stomach. Retroperitoneal glands soft, a thrombus was found in the inferior mesenteric vein. Kidneys, microscopical parenchymatous indistinctness. There were no secondary growths in the liver. In discussing the possible etiology of the first three cases, Reckzeh thinks that infection through water can be put out of court, for the source of water was well known in each case, and for many reasons could not have caused the illness. On the other hand, earth infection could not be dealt with so summarily. In the immediate neighbourhood of the dwellings of the patients there were some works (making of new road) in progress, and the digging of the soil might have something to do with the infection. He mentions the possibility of the parasites being carried by *Anopheles*. He also offers some epicritical remarks on the points of interest of the last case.

(385) Primary Nasal Diphtheria in Nurslings.

MENSI (*Giorn. del. R. Acad. di Med. di Torino*, February-March, 1903) considers especially the pharyngo-laryngeal complications of this disease. He states that primary nasal diphtheria is more common in nurslings than at a later stage of childhood. Hutinel has found it more common than primary pharyngeal diphtheria at this stage of life. This fact is explained by the circumstance that the nasal mucosa is hyperaemic during the first few days of life, and the respiration is then purely nasal. The disease is attended by suffocative paroxysms similar to those occurring in children with laryngeal diphtheria, paroxysms which may be fatal if not promptly treated by washing out the nose. Mensi corroborates the observation of Grenet and Lesné that in many cases the exudation, at first serofibrinous, becomes purulent, mucopurulent, and muco-sanguinolent, and the case exactly resembles one of syphilitic coryza, yet the only bacillus present may be one indistinguishable in every respect from the diphtheria bacillus. Owing to the very feeble power of absorption possessed by the nasal mucosa, the disease is essentially local and distinguished by the absence of symptoms of general intoxication. The course of the disease is usually favourable, and has even been stated to be always favourable. This has been explained by Fischl and Wunscheim on the ground that the blood serum of newborn infants has some power protective against diphtheria, while Schmid and Planz have stated that the milk of a nursing mother contains antibodies which protect sucklings from the action of diphtheria bacilli. Mensi, however, points out that the favourable issue of the disease may be prevented by complications in the pharynx, larynx, lungs, or kidneys. Such complications are very rare, Christeanu and Bruckner relating only one case of broncho-pneumonia and no case of laryngeal infection, while Grenet and Lesné mention only one case of spread to the pharynx, probably due to an attack of measles. Mensi gives notes of two of his cases where the necropsy showed in the one pharyngitis and broncho-pneumonia, in the other

pharyngitis and laryngitis. The small number of these complications observed Mensi explains in two ways. In the first place, the importance of the disease has only recently been recognized, many cases of it being indistinguishable from syphilis except by bacteriological examination, and in the second place the complications may usually be prevented by the early use of antitoxin. His own method is to administer at once to every suspected case of diphtheria 1,000 units of antitoxin, regulating the subsequent treatment by the results of bacteriological examination. If the diagnosis be confirmed, he administers 1,000 units daily, or every alternate day, according to the gravity of the case. The dose does not depend in any way on the age of the patient. Mensi attributes the bad results obtained by Christeanu and Bruckner to their having used insufficient doses of antitoxin.

SURGERY.

(386) The Results of Treatment by the Bloodless Method of Congenital Dislocation of the Hip.

M. E. Kirmisson (*Rev. d'Orthopédie*, May, 1903) gives the results of his practice during the last five years. Although Lorenz maintained, when first introducing the bloodless method in 1897, that this proceedure was a radical cure and not a palliative measure, he was forced in 1898, after the application of radiography to his results, to allow that in the immense majority of cases a transposition of the head above and in front of the acetabulum had resulted. Hoffa, Petersen, and Broca have reported permanent reductions as quite exceptional; whereas Kummell, Redard, and Joachimsthal have estimated them at 16 per cent., 37 per cent., and 73 per cent. respectively. Recently Muller (of Stuttgart) claims reduction in 70 per cent. of unilateral cases, 25 per cent. in bilateral. Kirmisson has treated 27 cases of unilateral dislocation: in 10 no reduction was obtained, because it was not attempted or the attempt failed. The age varied between 2¾ and 13½ years. In 5 cases all shortening was corrected; in 8 others it was less then 2 cm. In only 3 cases was the head of the femur in the normal position, and in 2 of these sufficient time has not elapsed to state definitely that the head will not ultimately be displaced. He quotes one case, aged 6, which two years after reduction presented no shortening and the femoral head in the normal position; yet, a year later, there was 1 cm. shortening and the great trochanter was displaced upwards and backwards. In the large proportion of cases a transposition was effected, the head being above and behind the normal position. This is shown by the pulsation of the femoral artery being internal to the prominence of the femoral head; whereas, in the normal position of the head, the pulsations are felt immediately in front of it. The functional results were for the most part satisfactory, shortening was diminished, and lordosis was corrected. Of the 10 cases where no reduction was obtained an amelioration of the symptoms in some followed fixation of the limb in the abducted position, a subsequent lowering of the pelvis producing an apparent diminution of the shortening. Paci's method is based on this principle. 27 cases of bilateral dislocation were treated; in 21 reduction was effected; in 4 cases the head remained in close proximity to the normal position, but in 2 only was the head found in the acetabulum, once on the right side, once on the left. In 12 the head was transposed just above and external to the acetabulum. In 4 cases the posterior displacement was reproduced, and in 1 case the result was a transposition on the left side and a posterior displacement on the right. Of 6 cases where the reduction failed, 4 were subsequently reviewed; the functional result was good. He concludes by saying that the bloodless method is far from a radical operation; that in the immense majority of cases the head is transposed to a position in front of Nélaton's line and firmly fixed there; the result of this is a good functional limb, but with more or less shortening. Kirmisson's method of operating differs from that of Lorenz. He never employs extension in the bloodless method; for he found, while operating by the open method, that enormous force was required to complete reduction, even after the capsule had been opened. He enumerates a list of sufficiently serious accidents which have occurred to others and himself in effecting reduction by extension, and points out that the dangers of chloroform are greater in this operation than in any other, 3 fatalities having occurred in 360 operations. He has shown that continuous extension prolonged for one month produces only a slight elongation of the limb, and then only up to the age of 2½ years, which is insufficient to procure reduction. For these reasons, Kirmisson manipulates the head into the acetabulum. Extreme flexion of the thigh is first obtained, then full abduction, after division of the adductors by an open incision if necessary. Movements of circumduction are directed to stretch the capsular ligament. With the thigh fully flexed, slightly abducted, and externally rotated, the head is manipulated over the inferior border of the acetabulum. When the thigh is in this position, all the muscles surrounding the joint have their maximal relaxation. This method differs from Schede's, in which the head passes over the superior border of the acetabulum; and from Lorenz's, in which it passes over the posterior. Three or four plaster casings are fitted at intervals of two months, and the treatment lasts six to eight months.

(387) Ultra-violet-Ray Anaesthesia in Minor Surgery.

W. Brockbank (*Amer. Med.*, April 25th, 1903) reports two recent cases in which he used the ultra-violet rays for the purpose of producing local anaesthesia of the skin. Case 1: A man, aged 24, had a clean incised wound of the left forearm, extending from the head of the ulna parallel with the bone for a distance of 2 in., exposing the tendons of the muscles in that region throughout its entire length. After cleansing the parts in the usual manner Brockbank exposed the injured area for fifteen minutes to the rays from a No. 4 Munnin lamp, at the end of which time he put in five interrupted silk sutures without causing the patient any discomfort. He dusted the area with an antiseptic, using equal parts of urasol and aristol powder, covered with 10 per cent. iodoform gauze, a small compress of absorbent cotton, and a roller bandage. The wound healed well. Case 11: A woman, aged 45, had a fatty tumour which she feared to have removed. Brockbank advised removal with the knife under violet-ray anaesthesia, to which she consented. After thoroughly cleansing the site of the operation he exposed it to a No. 4 lamp at 8 in. for twenty minutes, and at slightly greater distance during removal. He made an incision 2 in. long down to the tumour without causing sufficient pain to give any distress. After breaking up adhesion he shelled the tumour out without difficulty. The haemorrhage was slight and readily controlled by pressure. The edges of the wound were brought together and held by fine interrupted silk sutures without complaint on the part of the patient. The wound was dressed with antiseptic powder and iodoform gauze, and a compress held in place by adhesive strips and a roller bandage. The patient suffered no shock or distress of any kind, and made a rapid recovery.

MIDWIFERY AND DISEASES OF WOMEN.

(388) Uterine Action.

William Stephenson (*Journ. of Obstet. and Gynaec. of the British Empire*, May, 1903) discusses "the generally entertained conception of uterine action in its bearing on the management of labour." More particularly he combats the statement made by a leading obstetrician, "that the first point in the prevention of *post-partum* haemorrhage is not to deliver in the absence of uterine contraction," on the ground that the main factor in preventing haemorrhage is retraction of the uterus, a force independent of contraction. The term retraction was introduced by Matthews Duncan in a paper read to the Obstetrical Society of London in 1886, and was held to be a useful term to designate the condition of the walls of the uterus whereby its capacity was permanently lessened in proportion to the diminution in bulk of its contents. But while Duncan believed retraction to be a force independent of contraction, although, like it, dependent on the action of muscular fibre, the general opinion was and is "that retraction was dependent on contraction, and was the permanent shortened condition of the muscle after contraction when the active contraction had passed off." On this theory, retraction without contraction is impossible, and to deliver except during contraction must be unsafe. Stephenson's view is that retraction is a force small in amount, but continuous in its action, independent of contraction, dependent upon the muscle tone of the uterus, the retractility of the peritoneum, and possibly on the action of the yellow elastic fibres distributed throughout. Retraction counteracts the force of the blood pressure, tending to expand the uterus, and must therefore be itself a force. The tonus of healthy muscle might be enough to counteract the

blood pressure, but it is easy to show that a stronger force than this is in time exerted, either by attempting to turn after the liquor amnii has for some time drained away, or by trying to pass the hand through a retraction ring that has closed in front of a retained placenta. The resistance offered is not of the nature of a contraction, tetanic or otherwise, for when once established it is permanent. The action of the peritoneum is next considered. The peritoneum is closely applied to the uterus in the parts where active retraction is manifested, and itself retracts as the uterus diminishes. The expansion of the peritoneum with the gradual increase in bulk of the uterus is an example of the "plasticity" of inelastic substances whereby they spread out under the influence of a small force steadily applied. That it is not of the nature of elastic expansion is proved by the fact that the tension of the membrane is not increased. Nor can the diminution in surface extent of the peritoneum with the emptying of the uterus be considered as an elastic recoil; retraction describes the movement and implies no theory as to the nature of the force. All that can be said on this point is that the shrinking indicates the presence of a considerable amount of internal molecular tension whereby the tissue tends to assume the smallest possible dimensions when freed from external counteracting forces. Such being the property of the serous coat, it is able to take a share in the retraction of the uterus, and there is no reason to believe that its action is affected by exhaustion of the muscular tissue. The conclusion of practical importance is that retraction as a force is continuous and not intermittent, and that its action may be relied upon in the absence of contractions. Examples are given in which retraction reduces the cavity of the uterus in the absence of pains: (1) In Caesarean section, where both child and placenta are removed without waiting for a pain; (2) in various complications of pregnancy where it is deemed advisable to empty the uterus artificially without first inducing labour; (3) in excessive hydramnios the membranes are ruptured, and the author always finds that the uterus retracts steadily without any evidence of contraction; (4) in severe haemorrhage with retained placenta the author invariably introduces his hand into the uterus and removes the placenta. The hand is kept in the uterus until contraction occurs, or more frequently until the cavity lessens by steady retraction.

(389) Childbearing under Sixteen.

PICARD (*Thèse de Paris*, 1903) finds that although the pelvis is undoubtedly ill-developed in very young girls, the joints and bones are much more yielding than in the adult, so that parturition may be relatively easy. In reported cases the catamenia usually appeared early. The ratio of these precocious pregnancies is happily very small, 38 in 31,921 labours. The process of labour itself is essentially normal in these cases; the membranes seem to be tough, so that the liquor amnii is not discharged till late. The average duration of labour is 14½ hours. In 17 out of 38 cases the placenta was inserted on the inferior segment of the uterus; it is remarkable that notwithstanding this frequency the patients did not suffer from the well-known complications so common when low insertion occurs in the adult. In the 38 primiparae under Picard's observation the puerperium was absolutely normal. The child in these cases weighed on an average 3 kilograms, or about 6 lb. 9 oz. It is often rather difficult to rear during the first few days after birth. These young mothers readily become pregnant again, more so it would appear than primiparae of a more mature age.

(390) Gonorrhoea the Chief Cause of Tubal Pregnancy.

HAHN (*Münch. med. Woch.*, No. 6, 1903) concludes, after close study of cases in hospital that undoubtedly gonorrhoea is the most frequent cause of extra-uterine pregnancy. That affection is most common where gonorrhoea is most common—that is to say, in great cities. The number of cases of ectopic gestation has greatly increased of late years, chiefly because of gonorrhoeal infection which, notwithstanding all improvements in treatment and hygiene, has spread more widely than ever, and partly because experience has improved diagnosis so that this condition is now easily recognized and seldom overlooked. In consequence, whilst extra-uterine and, above all, tubal pregnancy, is more common than ever, its treatment is far more satisfactory than it was not so many years ago. The affected parts can be removed with ease and safety when the pregnancy is not advanced.

THERAPEUTICS.

(391) The Red-Light Treatment of Small-pox.

JAY F. SCHAMBERG (*Journ. Amer. Med. Assoc.*, May 2nd, 1903) examines the claims made on behalf of the red-light treatment of small-pox. After a critical summary of the literature (Finsen, Lindholm and Svendsen, Feilberg, Strangaard, Benckert, Mygind, Abel, and others) he states that during the winter of 1902 William M. Welch, Physician in charge of the Philadelphia Municipal Hospital for Contagious and Infectious Diseases, and himself fitted up a room for the red-light treatment of small-pox. Although their experience was limited to two cases, the results were were such as to destroy any confidence in the method they might have possessed. Their red room was complete in its appointments. The window panes were of a ruby-red colour, the gas jet at night was surrounded by a red globe, the walls of the room were painted deep red, and a red curtain covered the inner of the two doors so as to completely exclude the light of day. Two unvaccinated young men (one 16 years of age and the other 20), who started with profuse eruptions, were placed in this room about the third day of the eruption, before the lesions had become frankly vesicular. The course which the disease pursued in both cases was in no wise different from that seen in patients treated in the regular wards. The pustules filled up and became confluent, the secondary fever was high and protracted, and the patients markedly delirious. One of the young men, who was a private case and had a special nurse day and night with every possible attention, succumbed to the disease. The other recovered, but with most disfiguring scars. Owing to the discouraging results obtained in these two cases this method of treatment was abandoned. Schamberg goes on to say that it might be urged with apparent justice that an experience with two cases should not be counted as an offset to the results of treatment in 150 cases. He points out, however, that it must be remembered that the method failed absolutely to exercise any modifying influence on the disease in these two cases under appropriate conditions. Of the 150 cases, nearly all of which did well, other factors might account for the good result. Practitioners differed as to what constituted severity in small-pox. Several photographs of patient treated with red light, who recovered with no scarring or only insignificant scars, published in Finsen's book, represented what in the United States would be regarded as mild and favourable cases, the eruption being on the skin rather than in it. It must, says Schamberg, be remembered that Denmark, Sweden, and Norway are, with the exception of Germany, the best vaccinated countries of Europe. It is illogical and misleading to attribute favourable results to certain measures employed in the treatment of small-pox in persons once vaccinated. The vast majority of such patients recover without scarring under any treatment and even without any treatment. Again, in the absence of severe epidemics—and there have been no severe epidemics in the past decade—young children with variola (who are, of course, unvaccinated) usually escape without permanent scarring. The character of the prevailing form of small-pox, whether mild or severe, is a matter of great importance in determining both mortality and disfigurement. During the year ending June 30th, 1902, there were in the United States 55,857 cases of small-pox with 1,852 deaths (a mortality rate of 3 31 per cent.), and in the year previous 38,506 cases and 689 deaths (a mortality rate of 1.79 per cent.) What would the verdict have been if red light had been used in these cases?

(392) The Therapeutic Action of Glycogen.

J. DE NITTIS (*Arch. Gén. de Méd.*, May 19th, 1903) has studied the action of glycogen as a therapeutical agent. It has been shown that it accumulates in the periphery of new growths by Brault, and of tuberculous granulomata by Loeper and Esmonet. In general terms, it is found in excess wherever there is an active cellular proliferation or a defensive cellular increase. On the other hand, the percentage of glycogen in the blood, which is always small, is diminished among the tuberculous, the cancerous, and the cachectic. Acting upon these facts, Nittis has obtained increase of weight and return of vigour by administering glycogen to tuberculous and cachectic subjects. At the time of his first communication in 1902, he regarded the drug as indicated only during the apyretic periods of disease. The cost of the drug has prohibited its use in sufficiently large doses; but during the last year, having manufactured it himself, he has given it in larger doses with notable effect in febrile cases.

He has employed it with good results in typhoid fever, influenza, pericarditis, and pneumonia. It is especially indicated in diseased conditions in advanced years. He draws attention to the paradox that a few centigrams of glycogen should exert so evident an influence upon the nutrition, when the organism itself transforms more than 1½ kilogram during the day. He ascribes the reason of this apparent anomaly to the fact that glycogen exists in the blood in infinitesimal quantities, and then only combined with the white corpuscles; everywhere else it appears in the form of glucose. The efficacy of therapeutic doses lies in its passage through the circulation in the free state.

(393) Treatment of Raynaud's Disease.

A NEW and successful method of treatment by the tourniquet to counteract the vasomotor spasms of Raynaud's disease is reported by Cushing, of Johns Hopkins Hospital, from Osler's clinic (*Journ. of Nerv. and Mental Dis.*, November, 1902). Since Raynaud's contribution in 1874 on the disease known by his name, the suggestion has appeared that the application of a tourniquet to a limb early in the course of a period of arterial spasm might temporarily throw out of action the peripheral vasomotor nerves and thus interrupt the syncopal attack. The removal of a tourniquet or Esmarch bandage applied to a limb for operative purposes is invariably followed by a flushing of the member with bright arterial blood. This active hyperaemia was the object aimed at in the new treatment. The patient, a woman aged 35 years, had for several months been suffering from local asphyxia of the digits, with daily exacerbations. The attacks were sometimes so severe as to leave slight superficial patches of gangrene. With the object of interrupting the vaso-constriction, the tourniquet was applied in the form of a flat rubber bandage to the upper arm. Its application caused much local discomfort and pain, and on removal after one or two minutes' application "a bright flush of the extremity followed, with increase of surface temperature and a much more readily palpable radial artery" than before. This vaso-hyperaemia lasted only a short time, but it brought a sensation of considerable relief. The tourniquet was applied daily to one or other limb as the symptoms indicated, and the applications finally were extended to periods of five minutes or longer. Relief was very pronounced, especially as regards the burning pains felt in the fingers in an attack. After repeated applications the patient showed local and general improvement, and soon ceased to require morphine to induce sleep. The attacks decreased in frequency and severity, and in three weeks she was able to get up and go about the house without discomfort. Exposure to cold and driving about the open air brought on no further trouble, and the extremities soon resumed their normal appearance. Careful observations on blood pressure showed that no changes of the general systemic blood pressure occurred during her attacks, but that the spasms were purely of local vasomotor character, and that no disturbances of circulation took place in the "splanchnic area." In the winter the patient's symptoms recurred slightly, but were immediately arrested and dissipated by the use of the tourniquet as before. This treatment, from the simplicity of its application and its marked success, is highly commended by the author for future cases of Raynaud's disease.

(394) Levulose as an Article of Children's Diet.

L. FÜRST (*Zeits. für diatet. und physik. Therap.*, February, 1903) strongly recommends levulose as an article of children's diet. It may be used to sweeten infant's milk instead of cane sugar or milk sugar, and gives an agreeable taste to the milk, while never causing those digestive disturbances to which the other forms of sugar so often lead. Slightly older children, who often lose appetite and weight when first put on to solid food, take levulose chocolate or syrup readily. Either of these acts as a food, and by aiding the process of digestion also increases the appetite. Levulose is of benefit to badly-nourished children of any age, and to those recovering from illnesses. When given to children suffering from enlarged glands, tuberculous or non-tuberculous, the effect on the glands equals that obtained from cod-liver oil, and there is no strain on the powers of digestion. Fürst has had no experience of the use of levulose in the treatment of phthisis and diabetes of adults, but several writers have warmly praised its effect on such cases.

(395) Veronal.

ACCORDING to a note in the *Therap. Monatsh*, of April, 1903, veronal is a useful hypnotic. In seeking for synthetic compounds which can act hypnotically, Fischer and Mering found that ethyl combinations attached to the third or fourth position of the carbon atom should give the best results. They examined a number of such compounds, and paid especial attention to di-aethyl-acetyl urea, di-aethyl malonyl urea, and di-propyl-malonyl urea. The first named acts hypnotically about as energetically as sulphonal, while the last-named acts about four times more powerfully. The two last appear to be less fitted for therapeutic purposes, and they therefore suggest that the di-aethyl-acetyl urea, or "veronal" as they have termed it, should be introduced into practice. It exists in the form of colourless, slightly bitter crystals, which fluidify at 191° C., are soluble in 145 parts of water at 20° C. and in twelve parts of boiling water. The adult dose is given at 0.5 gram (about 7½ grs.), or when given to quiet marked excitability 1 gram. Weakly persons frequently are soothed by 0.3 gram. It can be given in powder form or in tablets. No unpleasant side-effects have been hitherto noticed.

PATHOLOGY.

(396) Pathogeny of Tabes Dorsalis.

J. NAGEOTTE (*Presse Méd.*, December 10th, 1902, and January 3rd, 1903), working in Babinski's laboratory, has made researches on the early development of tabes dorsalis which go to show that it depends on a generalized syphilitic inflammation of the meninges, whereby certain of the sensory or motor nerve roots are attacked on leaving the subarachnoid space. The changes resulting implicate first the root fibres in the posterior columns of the cord, and later the roots themselves outside the cord. The process appears to begin at the extremity of the neurons within the cord, and progress outwards towards the trophic centre in the intravertebral ganglion. The process itself is a slow atrophy which attacks only the posterior roots and only special fibres in each root. In addition, the parenchymatous tissues of the cord are implicated in the syphilitic meningitis: the pia mater is thickened with a cellular infiltration and changes in the vessels, especially in the walls of the veins. These changes are more conspicuous in the early stages of the disease, and give place eventually to those characteristic of fully-developed sclerosis. A very important result of the meningitis is a lymphocytosis of the cerebro-spinal fluid, which may be recognized during life by lumbar puncture, as pointed out by Widal. This lymphocytosis may, moreover, be observed before the posterior roots are definitely attacked, and therefore before any symptom of tabes has appeared. It is only in some cases of syphilitic meningitis that a neuritis of the posterior roots is developed, and these alone show the signs of tabes. The supporting connective tissue of the anterior roots is always similarly altered in tabes, and the nerve fibres themselves not infrequently; in their case, however, the fibres are regenerated, while those of the posterior roots are not. The practical indication of these observations is to detect the onset of spinal meningitis in syphilitics by means of lumbar puncture before the onset of any nervous symptoms, and, by appropriate treatment of the syphilitic inflammation, to obviate, if possible, the implication of the nervous structures.

(397) The Presence of Arsenic in the Tissues.

BERTRAND (*Ann. de l'Inst. Pasteur*, January 25th, 1903) has examined by his method for the detection of arsenic the tissues of certain animals, cetacea, birds, and fishes obtained in mid-Atlantic. The object of obtaining the animals from this source was to avoid the possibility of contamination from land sources. All the animals examined from vertebrata to sponges gave positive reactions to the test. The metal is not characteristic of certain groups of animals nor of certain organs. The thyroid gland has been stated to be especially rich in arsenic; other organs, for example, the liver, the muscles, and the testes have been stated to be free of traces of the metal. The method employed by Bertrand demonstrated a certain quantity in these tissues and in all others examined. Certain important conclusions follow from this; the combinations and the condition of the metal in the tissues should be studied; therapeutic indications should follow these studies: the matter has also an important medico-legal bearing.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(398) Etiology of Locomotor Ataxy.

IN a lecture delivered before the Charité Aerzte in Berlin, E. von Leyden (*Berl. klin. Woch.*, May 18th, 1903) deals with three points in the etiology of locomotor ataxy, namely, trauma, over-exertion, and cold. Cases of tabes of traumatic origin have been described by many authors, but it is by no means generally accepted that these cases are really due to the trauma. Leyden briefly tells of a 32-year old man, who had not had syphilis, but who developed tabes in connexion with a fall on his head. The clinical signs of the disease were typical. A 46-year old railway employé had been injured on the left leg, fracturing the malleolus; later, he broke his left thigh, and after this he developed the signs of tabes dorsalis. He then proceeds in detailing some *post-mortem* appearances. A labourer was affected with a progressive paralysis, which had followed a fall; eight months later he died. *Post mortem* the spinal column was found to be uninjured; the whole grey matter of the cord showed small patches of softening, and there was descending degeneration of the pyramidal track and ascending degeneration of the posterior columns. The rest of the cord was unaltered. After referring to the work of Schmaus in connexion with multiple sclerosis and syringomyelia and of Stadelmann, in connexion with late apoplexy after trauma, he posses on to the consideration of Minor's experiments on so-called nervous system concussion. These experiments go to show that the symptoms of concussion are in reality due to slight lesions of the blood and lymph vessels, and Leyden is prepared to believe that some forms of trauma can produce like lesions in the nerve fibres themselves. He argues from these and analogous observations that tabes can and actually is at times caused by the direct effects of trauma. Passing on to over-exertion, he instances some cases of needlewomen who worked for very long times at sewing machines, and without any other possible cause developed tabes. Another case has come under his notice in a man who had to over-exert himself by writing a great deal at night time. At first his symptoms were ascribed to scrivener's palsy, but in course of time they proved to be tabetic. There was no syphilis. Fuerstner's experiments on dogs, who were made to turn their head for a number of times, go to prove that prolonged exertion may lead to degeneration of the lateral columns of the cord. According to Edinger overstimulation of the nervous system produces damage in the ganglion cells chiefly, and Leyden finds that if one explains this in the light of the neuron theory that the molecular arrangements are disturbed, we find but little difficulty in appreciating how over-exertion can lead to such a disease as tabes. Edinger's experiments with rats working in the treadmill support this. In conclusion, he adds a very few words on the effect of cold as a possible etiological factor.

(399) Renal Lesions in Pneumococcal Infection in Children.

COURSAULT (*Thèse de Paris*, 1902,) states that, notwithstanding the relatively favourable prognosis in children, there are cases in which the affection extends to the kidney, the symptoms acquiring thereby a much graver character. When this complication occurs the pneumonia, which before seemed to run its ordinary course, takes on certain characters pointing to nephritis; thus the face is pale and swollen and the eyelids oedematous. There is general anasarca, and a dry hacking cough; the respirations are increased in number. There is generally absence of herpes, the urine is scanty and contains albumen and blood in considerable quantity. Such cases fall into three groups. In the first the pneumonia seems to follow a regular course and the duration of the nephritis is short, not lasting above a fortnight, and recovery is complete. In the second group are cases in which, although the pneumonia rapidly subsides by lysis or crisis, oliguria and oedema persist after defervescence and for several weeks albumen is present. In other words, the nephritis becomes subacute and recovery is tardy. The third group comprises cases in which the pneumococcal infection, at first localized and confined to the lung and kidney, rapidly invades the whole system. Under these circumstances prognosis is grave and the majority of cases end fatally. All cases of pneumonia showing renal complications must therefore be carefully watched from the first, and it does not seem possible to estimate in the earlier period of the disease how severe the renal lesion may subsequently become. Treatment consists in milk only, dry cupping over the chest and loins, and even wet cupping, which latter method has the support of Comby. Tannin given in milk is recommended by Richardière, for gallic acid which is recommended by Comby. Bleeding in bad cases is regarded by Richardière as one of the most useful methods and especially indicated should severe dyspnoea or uraemic symptoms supervene.

(400) High Blood Pressure in the Amaurosis of Lead Colic, Uraemia, and Eclampsia.

J. PAL (*Zentralbl. f. inn. Med.*, April 25th, 1903) points out that the one condition common to the temporary disturbances of vision which may occur in lead colic, uraemia, and eclampsia, is high blood pressure, and not, as has been supposed, uraemia. For in lead poisoning and eclampsia there may be no albuminuria or other sign of nephritis. In this transitory amaurosis the pupils usually react normally, and the fundus is unchanged. (1) In lead poisoning, though amaurosis has long been recognized, there are only about 8 reported cases in which the fundus was examined. In all these the amaurosis appeared during an attack of colic. The pupillary reaction was present in 6, but absent in 2. The retina was normal in all but one case (that of Elschnig), in which there was spasm of the retinal arteries. The following case is typical: A man, aged 41, who had had repeated attacks of lead colic, and had a blue line on the gums, was suddenly, on February 8th, seized with colic, headache, anorexia, and constipation. The pulse was 78, and the blood pressure (taken with the tonometer) 160 mm. of mercury. The urine contained neither albumen nor sugar. Six days later amaurosis appeared. The optic discs were pale, and the retinal vessels tortuous, but otherwise normal. Under iodide of potassium the blood pressure fell and vision returned; it was normal when the blood pressure reached 120 mm. The man was discharged cured with a blood pressure of 75 mm. The rise of blood pressure during lead colic is probably due to spasm of the abdominal, and especially the intestinal vessels. As temporary amaurosis occurs only during the attack of colic, and disappears with it, it is probable that the amaurosis is due to high blood pressure. (2) Uraemic amaurosis of the transitory type, with intact optic fundus and retained pupillary reaction usually occurs during the rise of blood pressure which invariably precedes an attack of uraemia. Thus a man, aged 29, with old-standing aortic regurgitation of rheumatic origin, had acute nephritis with scanty urine. The blood pressure was 220 mm., and later rose to 240 mm. Amaurosis then appeared suddenly, and was followed by convulsions. Some improvement followed the lowered blood pressure produced by an injection of morphine. Then 300 c.cm. of blood were abstracted by venesection and the arterial pressure sank from 210 mm. to 170. Vision returned, the amount of urine increased from 400 to 3,300 c.cm. daily, and though the nephritis persisted the man felt in good health. (3) In puerperal eclampsia transitory amaurosis may occur whether nephritis is present or absent. But before the appearance of convulsions there is constantly a rise of blood pressure. Amaurosis frequently appears in this preconvulsive stage, and is placed by Schauta among the prodomata of eclampsia. Rarely convulsions may be absent, the blood pressure falling after the appearance of amaurosis. The changes which produce transitory amaurosis are probably situated in the occipital lobes, and consist, as the atypical case reported by Elschnig indicates, in contraction of the vessels. How this contraction and consequent cerebral anaemia are produced is uncertain, since an experimentally produced rise of general blood pressure is followed by cerebral hyperaemia.

(401) Splenomegaly in Early Congenital Syphilis.

MARFAN (*Rev. Mens. des Malad. de l'Enfance*, May, 1903) publishes a series of observations upon this subject which he communicated to the recent Congress at Madrid. He divides the subjects of hereditary syphilis into two categories, stillborn infants and nurslings of between 3 weeks and 2 years. As to the former, he confirms Birch-Hirschfeld's statement that the weight of the spleen averages 0.76 per cent. of that of the body, while in nonsyphilitic infants it is only 0.33 per cent. With regard to the nurslings he is of opinion, after comparing his own statistics with those of previous writers, that fully half of those attacked by syphilis have enlargement

of the spleen. Pathologically the lesion is a kind of interstitial splenitis, with fibrous overgrowth, and specially attacks the vessel walls and the Malpighian bodies. There is very often added a perisplenitis, more or less marked, which may lead to adhesions between the spleen and neighbouring organs. The enlargement of the spleen can readily be determined by palpation. The most common associated symptoms are enlargement of the liver and of certain of the peripheral lymphatic glands, especially those of the neck, axilla, and groin. Anaemia is also almost always present, but cutaneous manifestations are far less often seen. The anaemia is usually a myelaemia or pseudo-leukaemia, and is explained by the author as the result of a return to the conditions of fetal haematopoiesis under the stimulant influence of the syphilitic virus. In its gravest form, the splenomegaly of hereditary syphilis assumes the type of splenic pseudo-leukaemic anaemia. These cases are as a rule very severe, and may lead to a profound cachexia ending with an intercurrent and fatal infection; on the other hand, they may slowly improve, and eventually, perhaps after years, recover. Turning to the question of the value of enlargement of the spleen in the diagnosis of infantile syphilis, the author tabulates his observations made upon 376 nurslings under 2 years old. Of these 40 had enlarged spleens; among them 18 had undoubtedly and 13 very probably had syphilis. Six had rickets without syphilis, and 12 the two together. From the difference in the proportions Marfan considers that in these 12 the syphilis was the prepotent factor. In 1 case tuberculosis was the sole cause, and in the remaining 2 no cause could be detected. The author concludes that syphilis accounts for three-fourths of the enlarged spleens of nurslings, and that in the remaining fourth rickets is the most frequent cause. The pseudo-leukaemic cases were all rickety, and some syphilitic as well. Marfan does not profess to give a definite answer to the question whether there is a syphilitic form of rickets or not, but he points out that the haematological findings and the histological characters of the spleen are identical whether the splenomegaly is attributed to rickets or syphilis.

(402) Paratyphus.

In recent time a number of cases of a disease having a considerable likeness to typhoid fever, but yet being distinct from it, have been reported, and the pathology of this disease has been made clear by the researches of Schottmueller, and Brion and Kayser. The causal organisms have been termed "bacterium paratyphi" of variety A and B. H. Kayser now reports on three new cases (*Deut. med. Woch.*, April 30th, 1903). The first case was that of a girl, aged 26, who had complained for some days of *malaise* and headache, and when first seen was subject to irregular remittent fever, the temperature running up to 104° F. The pulse rate varied between 100 and 120. There was slight delirium, and on the fifth day, the patient passed a typhoid-like stool. There were some roseola, but no swelling of the spleen could be made out. After about three weeks fever she recovered completely. The blood test showed the following: With cultures of B. typhosus agglutination took place at a dilution of 1 in 50, while 1 in 100 proved negative; with bacterium paratyphi A agglutination took place in dilution of 1 in 50 and with parathypi B 1 in 1,000; the diagnosis therefore was paratyphoid. The second case behaved clinically and as to the blood test in the same way. This patient was a sister of the first patient. The third case was that of a child 8 years old. The clinical course was severe at first, and absolutely like that of typhoid fever. The pyrexia came to an end in less than two weeks, and the child made a complete recovery from this date. The blood agglutinated paratyphi bacteria of the B type in a dilution of 1 in 200, while it did not affect either the typhoid germ nor the paratyphoid of type B in dilution of 1 in 50. Kayser objects most strongly to the suggestion to call this disease typhoid, since it would cause confusion with enteric fever in those countries in which typhoid fever is reserved for the disease caused by Eberth's bacillus. He points out that the diagnosis is only possible with the help of the agglutination test, and further to the fact that the prognosis is good, the mortality so far being between 1 and 2 per cent.

SURGERY.

(403) Injections of Paraffin.

Sebileau (*Bull. et Mém. de la Soc. de Chir. de Paris*, No. 15, 1903) has recently expressed some doubts with regard to the safety of paraffin injections in the course of a discussion on a case communicated by Lejars, in which this method of treatment was followed by very unsatisfactory and, from a cosmetic point of view, serious results. The history of this case, in which the injection of paraffin into a depressed nose resulted in swelling of the eyelids and disturbance of vision, shows, Sebileau states, that surgeons are not yet in a position to form complete conclusions as to the value of interstitial injections of this agent in the morphological restoration of disfigured regions. This method, which has certainly given good results, is evidently attended with both difficulty and danger. These disadvantages depend, in the first place, on the variable melting point of different specimens of the injected material, which should not be so low as to be influenced by the heat of the patient's body, nor so high as to be capable of burning the tissues; and, in the second place, on the anatomical characters of the region to which the paraffin is applied. Laxity of the cellular tissue, it is pointed out, favours undue diffusion of the injected paraffin, and the presence of large veins into which the injection might penetrate constitutes a probable source of more or less serious and even fatal accidents. The precise mode of reaction of living tissues brought into contact with vaselin and paraffin, it is held, is not known. In a good proportion of cases the mutual accommodation has been all that could be desired, and the restoration has stood test of the time. In some cases, however, this method of treatment has resulted in irritation of the connective tissue, which became hard and hypertrophied, and a form of chronic phlegmon or an artificial fibromatosis was set up, which caused marked deformity of the affected region. In the case reported by Lejars diffused hypertrophy of the nose and eyelids persisted in spite of the removal by surgical operation of large masses of the injected paraffin. In conclusion, Sebileau insists on the importance of a publication of all unsatisfactory and unsuccessful cases of paraffin injection, and suggests that, notwithstanding recent improvements in its technical methods, circumspection should be exercised in the practice of this plan of treatment.

(404) The Surgical Treatment of Facial Paralysis.

Cushing (*Ann. of Surg.*, May, 1903,) publishes an interesting and complete review of our present knowledge of the surgical treatment of facial paralysis by nerve anastomosis. Reference to two previously reported instances of this treatment, one with doubtful results by Faure, the other with full success by Kennedy, is followed by the record of a third case treated by the author of this paper, in which for the relief of traumatic facial paralysis, the proximal stem of the spinal accessory nerve after exposure and division, was transferred *in toto* into the distal end of the injured and paralysed facial nerve. Within four months, evidence of returning control of the paralysed muscles was appreciable, and at the end of the sixth month an almost normal condition was re-established. In the author's operation the spinal accessory nerve was completely divided, and no attempt was made to save the portion of the nerve supply to the sterno-mastoid and trapezius muscles. The disturbance due to the shoulder droop following complete division is regarded as relatively trifling, and the persistence of associated shoulder and facial movements after complete severance of the accessorius in Kennedy's case suggests that this may be a better plan than to attempt to save the portion of the nerve supply to the above-mentioned muscles.

(405) Artificial Production of Pleural Adhesions.

Karewski and E. Unger (*Deut. med. Woch.*, May 7th, 1903) record some experiments which they have carried out on animals with the view of determining a reliable method of producing pleural adhesions artificially. The importance of having such a method lies in the fact that the success of pulmonary surgery depends on early operations, and if one wishes to drain any portion of the lung it is necessary to prevent infecting the pleura and to prevent producing a pneumothorax. Simple suture of the pleura proved of no value as long as silk was employed, and when they substituted wire for the silk the results proved inadequate. Since trauma alone was incapable of producing the desired results, they sought some chemical means, and tried turpentine as well as iodine. The latter caused extravasation of blood and suppuration, and had therefore to be refused; but the former gave better results. Simple injection of turpentine—care being taken to prevent any entrance of air into the pleural cavity—merely produced a fluid exudation, which was rich in leucocytes if small quantities were used, while

larger quantities led to necrosis of the lung. On the other hand, when they employed silk sutures soaked in turpentine, they found that the action of trauma, chemical irritation, and fixing of the pleura were combined. In this way they succeeded in producing pleural adhesions, either linear or circular, which in the course of from five to eight days proved to be sufficiently dense to form a thorough protection to the surrounding tissue. They see no reason for doubting that the method will prove of use in the human subject and render pulmonary surgery more successful than it has hitherto been.

MIDWIFERY AND DISEASES OF WOMEN.

(406) Deciduoma Malignum.

NISOT-WUYTS (*Bull. de la Soc. Belge de Gynéc. et d'Obstét.*, vol. xiv, No. 1, 1903) reports a case where a woman aged 37, who had been delivered normally six times, discharged in June, 1901, a mass resembling a long-retained placenta of the third month. Haemorrhages set in, and were at first taken for the returning catamenia, but by October big clots began to pass, and the patient complained of pain in the left iliac fossa and a sensation of weight in the vagina. These symptoms grew worse and the patient's health deteriorated quickly. In December Nisot-Wuyts took charge of the case. He detected, below the meatus, an oblong mass as big as a large hen's egg, situated in the anterior vaginal wall. It extended to the left labia majora and minora, and was elastic and tender. It blocked the entrance to the vagina and pushed the urethra to the left; there was in consequence great dysuria. Two other tumours of the same consistence but smaller lay in the posterior and inferior wall of the vagina, the mucous membrane which covered them was sloughy and discharged fetid fluid. The os was patulous, the uterus very bulky, as big as the fourth month of pregnancy, and a mass could be felt in its wall on the left extending into the broad ligament so that the organ was almost fixed. Much haemorrhage ensued after this exploration. Cachexia was advanced and a radical operation was out of the question. The sloughy vaginal growths were removed and the uterus curetted, the cicatrices in the vagina granulated well and the uterus became reduced in volume. Yet the cachexia remained very marked until March, 1902; then there was spontaneous restoration to relative health, the local condition remaining stationary for several months. Early in September clear blood began to escape from the vagina, and by the middle of the month all the old symptoms recurred, soon complicated by half-a-dozen attacks of intestinal haemorrhage. The patient died at the end of October, 1902, about sixteen months after the discharge of the placental mass. The vaginal growths and the scrapings from the uterus removed in December, 1901, were carefully inspected; they held no trace of normal vaginal or uterine tissues, but all presented the morbid appearances characteristic of deciduoma malignum.

(407) Recurrent Left Tubal Pregnancy.

HARRIS (*American Gynecology*, April, 1903) attended a patient, aged 24, married five years. She had miscarried twice, first in April, 1902, then in November of the same year. The "miscarriages" were attended by severe colicky pains and tenderness in the hypogastric and left iliac regions, together with fainting spells and weakness. Afterwards menstruation was irregular and characterized by scantiness of flow, which disappeared in two days. The severe colicky pains recurred at irregular intervals, sometimes with painful micturition. On January 19th, 1903, Harris found the patient pale, the abdomen was flat, the mobility of the uterus impaired. There was a small, rather fixed mass about half the size of a man's fist to the left of the uterus; the os was small, the cervix firm and not enlarged. Harris diagnosed ruptured tubal pregnancy, and considered that the severe colicky pains represented rupture of a previous tubal pregnancy. An operation was performed. The abdomen contained about a pint of dark fluid blood. The left tube was ruptured close to the uterus, and from the rent extruded a cystic mass $\frac{5}{8}$ in. in diameter. The ampullar portion was sausage-shaped, less than 1 in. in diameter and over 2 in. long. Beneath the ovary and beneath the ostium abdominale of the left tube another cystic mass was found, bluish-grey in colour and about 1 in. in diameter. The specimen was presented at a Society meeting for diagnosis based on naked-eye appearances; no chorionic villi were found.

(408) Spontaneous Laparocele: Ovarian Cyst.

BARBRY (*La Gynéc.*, April, 1903) detected a large hernial protrusion on the left side of the abdomen in a woman, aged 63. It lay four fingerbreadths to the left of the linea alba, and was of the size of a big fist. There was gurgling on reduction, and no true neck to the sac. A tumour of the size of a child's head occupied Douglas's pouch. It had all the characters of an ovarian cyst, and the diagnosis proved correct; it required enucleation. At the operation for the removal of the tumour, the hernia was repaired. Barbry distinguishes between a traumatic and a spontaneous "laparocele" or hernia in the lateral part of the abdominal walls. The traumatic type follows wounds operative or otherwise. The present case was of the spontaneous variety. According to records of similar examples, spontaneous laparocele may be the result of a congenital defect or of prolonged distension in ascites, repeated pregnancy, and cases of abdominal tumour. In the present, as in most cases, the hernia was of the external variety, far from the linea alba, but in a few instances it passes out from the lower border of Douglas's fold near the outer border of the rectus. The sac may be interstitial or subcutaneous. The treatment consists in radical cure of the hernia by operation.

(409) Extrauterine Pregnancy or Rupture of Uterus?

OLSHAUSEN (*Zentralbl. f. Gynak.*, No. 20, 1903) removed an extrauterine fetus twelve months after its conception; it had died in the seventh month. As the history was not clear the fetus had been taken for a myoma. It lay free in the peritoneal cavity without any membranes, and connected intimately with the fundus uteri; during separation with a knife the uterine cavity was opened. There were a few omental adhesions. Little or no blood was lost. The tubes and ovaries were normal. It seemed questionable if this case were not an example of secondary abdominal pregnancy after rupture of a normally pregnant uterus, a matter only decided after careful anatomical examination of the parts removed.

THERAPEUTICS.

(410) A New Application of Light in the Treatment of Lupus Erythematosus.

NORMAN WALKER (*Scottish Med. and Surg. Jour.*, June, 1903) says that some time ago a student who was under treatment for lupus erythematosus called attention to the fact that his nose, on which the disease was seated, invariably improved after exposure to the glare from the water when fishing in the Highlands. As the relationship between lupus erythematosus and climate had always impressed itself on Walker, the observation attracted his attention. He had treated a number of cases of the disease, which he says seems to be unusually prevalent in Scotland, with *x* rays and the Finsen light, with results sometimes good, sometimes disastrous. It occurred to him to try the effects of light only without pressure or aiming at the blistering effects which the Finsen method has in view. He proceeded as follows, using the London Hospital modification of the Finsen apparatus. The patients were seated about a foot away from the lens, and were exposed to the rays for from twenty minutes to half an hour daily, or on alternate days. Six or eight exposures, roughly $3\frac{1}{2}$ to 4 hours, were usually required before any change was noted, but when improvement had once begun it was usually rapid. In some of the cases the results have been brilliantly successful, and he thinks he may say that all have shown some improvement. Large areas of the disease have disappeared, in some cases more thoroughly than under any other method with which he is familiar. In the early cases he of course used no other treatment; but latterly, having determined the value of the method, he has been using in addition applications of adrenalin chloride (1 to 4,000), which seems to aid in the cure. He has not thought it necessary to present photographs of the results, for the reason that in nearly all the cases the diagnosis and the result are corroborated by his senior colleague, Dr. Allan Jamieson.

(411) Therapeutic Action of Yeasts.

BOIGEY (*Arch. Gén. de Méd.*, April 7th, 1903) draws attention to the various diseases over which yeast exercises a controlling influence, and the different forms and methods of administration. A good sample of beer yeast contains seven-tenths saccharomyces cerevisiae, three-tenths being impurities. In order to preserve the maximum action of yeast, it should be kept in a dry

atmosphere and in a cool place; it is thus capable of secreting its soluble ferments after a long interval of time. Moisture and warmth alter its characteristics rapidly, enabling the impurities to replace in great part the saccharomyces cerevisiae. To this is ascribed the most frequent, if not the sole, cause of the inconstancy of the remedy. The action of beer yeast is allied to that of naphthol, lactic acid, carbon, bismuth, chalk, as intestinal antiseptics. In the presence of yeast cells the elaboration of intestinal ferments is considerably decreased and microbial growth retarded. Debouzy and Brocq have shown surprising results in the treatment of boils and carbuncles, and failure in the hands of others is attributed to the quality of the yeast preparation. The discharge from abscesses, when opened, and the healing of foul wounds is favourably influenced. Infantile diarrhoea, infective and mucomembranous enteritis, are much relieved by the action of beer yeast. Thiercelin and Chevrey have employed it as an injection in dysentery with good results. The author has employed it in cases of diabetes mellitus, adopting the treatment communicated to the Bordeaux Congress by M. Cassaët in 1895. The action of yeast in diabetes depends upon the conversion of all starchy elements into alcohol; thus the invertin which it contains converts cane sugar into glucose; the diastase converts the glucose into alcohol. He maintains that the practical results confirm the theoretical considerations, and that beer yeast is one of the best remedies we possess in diabetes. The author ascribes to yeast (1) a phagocytic action; (2) a toxic secretion, which is bactericidal; (3) a stimulating secretion producing leucocytosis. Inasmuch as these actions are vital, the results will depend upon the condition of the yeast and the intestinal contents at the time of ingestion. He quotes the recent communication of Tacquemin who advocates the use of a pure grape yeast, acclimatized to an acid medium and a body temperature. Beer yeast normally grows in a neutral medium and at a low temperature, and when taken into the stomach undergoes digestion, the quantity of the various secretory products thrown out being inversely proportional to the rapidity of digestion. This author uses saccharomyces of grapes of warm countries active at a temperature of 35° to 39° and grows them on a medium bearing an acidity equal to that of the stomach. He advises that some of the active medium be administered at the same time as the ferment, thereby enabling the cells to continue to elaborate their secretory products. The results obtained from these two ferments are equivalent from the point of view of the constancy of the results: but those perhaps, are most rapidly felt after the employment of a yeast artificially acclimatized to the gastric juice. The most active preparation for administration is undoubtedly a recent growth; but, unfortunately, this is most liable to variation, and its preservation necessitates the employment of cold chambers. Dried preparations are obtained from moist recent growth by evaporation. The powder thus obtained is more easy to handle, but much less active. Many samples contain only the débris of the yeast cells. A good preparation should show under the microscope complete cells, should retain the odour of the fresh preparation, and have the colour of *café au lait*. An inefficient dried preparation not only does not give the therapeutic action, but is responsible for the dyspepsia and diarrhoea frequently observed after its administration. The author urges that, before dried preparations are employed, a microscopic examination should show that the cells have retained their normal dimensions, or at least their form.

(412) The Action of Bismuth.

Since the value of bismuth in the treatment of gastric ulcer is undisputed, it is a matter which has interested many investigators as to how it exerts its action. Some believe that it does good in mechanically protecting the ulcer, while others assign a specific action to it. G. Fuchs (*Deut. med. Woch.*, April 2nd, 1903) has studied the question, and found in his test-tube experiments that mixtures of bismutose in distilled water, when exposed to the light, changes in colour to grey, and later to black. This reduction, he found, takes place in the stomach of dogs, and after a careful survey of his investigations he comes to the conclusions that: (1) Calcium carbonate, magnesia usta, and like chemicals, are not capable of being substituted for bismuth in the treatment of gastric ulcer; (2) the secretion of mucus after the introduction of bismuth subnitrate is not due to the mechanical action of the crystals, but is due to a specific action of the salts of bismuth; (3) the curative action depends on the reduction of the bismuth salt, and the reduced oxydul penetrates into the granulation tissue, and forms a protective to it; (4) bismutose appears to be the most useful preparation of bismuth, on account of its easy reducibility.

PATHOLOGY.

(413) Alcoholic Solutions of Disinfectants.

Engels recently published (*Arch. f. Hyg.*, Band xlv, Hft. 3) the results of some hand disinfection tests in which a comparison was made between watery and alcoholic solutions of lysoform, bacillol, and sublamin; he now (*Centralbl. f. Bakt.*, May 14th) records a series of tests on the comparative action of alcoholic and watery solutions of the same substances on bacterial cultures. Previously he showed that the action on the hands of alcoholic solutions of these substances was much more actively bactericidal than watery solutions of the same strength preceded by the use of alcohol. By the tests with bacterial cultures he was able to show that the bactericidal effect of alcoholic solutions was under these conditions also greater than that of watery solutions. The difference was not, however sufficiently great to explain the marked differences found in the hand disinfection experiments. The advantages on the side of the alcoholic solutions must largely be ascribed to the solution of skin secretions and fatty matters by the alcohol, by which the disinfection is brought into intimate relation with the skin structures. His experiments support those of Fürbringer and many others, which all point to the advantages of alcohol for skin disinfection, and it is also now established that 50 per cent. alcohol is a more suitable vehicle for these disinfectants than more concentrated proportions.

(414) The Origin of the Complement in the Peritoneal Cavity.

Briscoe (*Professor Orth's Festschrift*, Berlin: August Hirschwald, 1903, pp. 396-414) records his investigations into the origin of the complement for normal and artificial haemolytic and bactericidal sera. Whilst is is generally believed that the ultimate origin is from the leucocytes, there is a difference of opinion as to whether it exists in free circulation in the body fluids as continuous secretion of the leucocytes or other cells, or whether, as Metchnikoff holds, it is only produced under special conditions. To elucidate this point the author has studied the different forms of leucocytes met with in the normal peritoneal cavity of the rabbit and guinea-pig, the manner in which they are affected by the injection of different substances, and the changes produced by a second injection at different intervals. He also deals with the presence, relations, and quantity of the complement under these altered conditions, always comparing the form of cell present in the fluid. He finds that in the normal peritoneal cavity of the guinea-pig and rabbit no pseudo-eosinophile cells are to be found, but a varying number of eosinophile cells. Eosinophile cells appear never to be taken up by lymphocytes, and only rarely incorporate bacilli in their protoplasm. Similar changes, exhibiting periodical variations, follow the injection of all fluids, whether containing formed elements or not, whether the animal is immunized or normal. There is no immediate relationship between the pseudo-eosinophile cells or microphages and the presence of bactericidal complement. Bacilli are destroyed in an immune animal immediately, and in a normal animal, injected at an earlier date, after a short time; in both cases before the appearance of the pseudo-eosinophile cells. Probably the haemolytic complement or macrocytase is also free in the fluid of the normal peritoneal cavity, because there is a gradual increase of the complementary power some time (rising from one and a-half to six hours) after the supposed destruction of cells, which further corresponds in its changes to the complement for bactericidal serum. The complementary power for the haemolytic and bactericidal immune bodies after an injection rises in a corresponding manner. This rise occurs simultaneously with the increase of pseudo-eosinophile cells, but, as no immediate relationship exists between the complement and the cells, the accompanying exudation must be the causal factor. This conclusion is further supported by the fact that, with the diminution of the fluid, the complementary power falls, notwithstanding the increased quantity of cells. The author's final conclusion is that the complement, like the immune body, is constantly present in the fluid of the peritoneal cavity and probably proceeds from the exudation or transudation of the blood serum.

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, FEBRUARY 7TH, 1903.

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ASSOCIATION INTELLIGENCE.

PROCEEDINGS OF COUNCIL.

AT a meeting of the Council held in the Council Room of the Association, 429, Strand, W.C., on Wednesday, January 21st, 1903.

Present:

Mr. ANDREW CLARK, Chairman of Council, in the Chair.
Mr. WALTER WHITEHEAD, President.
Dr. GEORGE BAGOT FERGUSON, Past-President.
Dr. T. D. GRIFFITHS, President-elect.
Dr. E. MARKHAM SKERRITT, Treasurer

Dr. EDGAR G. BARNES, Eye.
Dr. PETER BANCROFT, Manchester.
Dr. JAMES BARR, Liverpool.
Dr. MICHAEL BEVERLEY, Norwich.
Dr. LANGLEY BROWNE, West Bromwich.
Dr. R. C. BUIST, Dundee.
Mr. HENRY T. BUTLIN, D.C.L., London.
Mr. COLIN CAMPBELL, Southport.
Mr. JAMES CANTLIE, London.
Mr. JOHN WARD COUSINS, Portsmouth.
Dr. ALFRED COX, Gateshead-on-Tyne.
Dr. H. RADCLIFFE CROCKER, London.
Dr. C. W. DANIELS, London.
Dr. P. MAURY DEAS, Exeter.
Brigade-Surgeon-Lieut.-Col. E. F. DRAKE-BROCKMAN, London.
Mr. GEORGE EASTES, M.B., London.
Dr. WILLIAM A. ELLISTON, Ipswich.
Dr. JOHN H. GALTON, Upper Norwood.
Dr. BRUCE GOFF, Bothwell.
Dr. C. G. GOODING, London.
Dr. DAVID GOYDER, Bradford.
Dr. MAJOR GREENWOOD, London.
Dr. JOSEPH GROVES, Carisbrooke.
Dr. W. M. HARMAN, Winchester.
Mr. W. F. HASLAM, Edgbaston.
Dr. C. HOLMAN, London.
Sir VICTOR HORSLEY F.R.S., London.
Mr. EVAN JONES, Aberdare.
Mr. R. H. KINSEY, Bedford.
Dr. W. A. MACKINTOSH, Stirling.
Dr. RODERICK MACLAREN, Carlisle.
Mr. N. C. MACNAMARA, Chorley Wood.
Dr. C. H. MILBURN, Hull.
Sir JOHN WILLIAM MOORE, M.D., Dublin.
Dr. JAMES MURPHY, Sunderland.
Dr. JAMES MURRAY, Inverness.
Mr. C. H. WATTS PARKINSON, Wimborne.
Dr. CHARLES PARSONS, Dover.
Dr. ROBERT W. PHILIP, Edinburgh.
Dr. FRANK M. POPE, Leicester.
Dr. A. BROWN RITCHIE, Hulme.
Mr. H. BETHAM ROBINSON, M.S., London.
Dr. G. E. SHUTTLEWORTH, Richmond Hill.
Dr. R. SOMERVILLE, Galashiels.
Mr. W. D. SPANTON, Hanley.
Mr. HENRY STEAR, Saffron Walden.
Dr. ROBERT STIRLING, Perth.
Dr. JOHN ROBERTS THOMSON, Bournemouth.
Mr. C. S. TOMES, F.R.S., London.
Dr. W. J. TYSON, Folkestone.
Mr. T. JENNER VERRALL, Brighton.
Dr. NORMAN WALKER, Edinburgh.
Mr. R. W. O. WITHERS, Shrewsbury.
Dr. S. WOODCOCK, Old Trafford.

The minutes of the last meeting having been printed and circulated, and no objection received, were taken as read and signed as correct.

Read letters of apology for non-attendance from Sir W. T. Gairdner, Sir G. H. Philipson, Dr. Henry Barnes, Dr. J. Brassey Brierley, Professor J. W. Byers, Dr. E. J. Cave, Mr. T. H. Cheatle, Dr. G. W. Crowe, Dr. W. Dyson, Professor D. W. Finlay, LL.D., Dr. H. Handford, Brigade-Surgeon T. B. Moriarty, Dr. C. G. D. Morier, Mr. W. Jones Morris, Surgeon-General T. F. O'Dwyer, Professor Saundby, Dr. A. Sheen, Dr. D. Walshe, and Professor E. B. Whitcombe.

Read letter from Mr. Spanton, reporting that he had attended the Cairo Medical Congress as a delegate of the Association.

Resolved: That Mr. Spanton's report be considered at the April meeting of the Council.

The Chairman of Council reported the death of Surgeon General J. B. Hamilton since the last meeting.

Resolved: That the Council learns with profound regret of the death of Surgeon-General John Butler Hamilton, M.D., who has represented the Cape of Good Hope Branch for the past three years. Surgeon-General Hamilton was for many years a most active member of the Association, and an indefatigable worker for the advancement of Army Medical Reform. The Council desires to convey to Mrs. Hamilton and family its deep sympathy in their bereavement.

The Chairman of Council reported that Dr. Frederick Roberts and Mr. Mayo Robson had accepted the invitation to give the Addresses in Medicine and Surgery respectively, at the forthcoming annual meeting.

The Chairman of Council called attention to the Lister Number of the JOURNAL, published on December 13th, 1902.

Resolved: That the Council desires to congratulate the Editor and Assistant Editor on the production of the Lister Number, a publication calculated not only to interest but also greatly to profit readers of the JOURNAL.

The minutes of the Journal and Finance Committee were then considered.

Resolved: That the minutes of the Journal and Finance Committee be received.

The Chairman of Council reported receipt of a communication from the Sanitary Institute asking for the appointment of delegates to their Congress, to be held in Bradford on July 7th to 11th, 1903.

Resolved: That Dr. J. Spottiswoode Cameron (Leeds), Dr. James R. Kaye (Wakefield), and Dr. John Wright Mason (Hull) be appointed delegates to represent the Association at the forthcoming Congress of the Sanitary Institute.

Dr. Roberts Thomson handed over to the Chairman of Council for the benefit of the Association the portrait of Lord Lister painted by Mr. Hugh Riviere and subscribed for by members of Council. The Chairman of Council duly accepted the portrait and ordered that it should be hung in the Library.

Resolved: That it be recommended that the subject of Electro-therapeutics form a subsection of the Section of Medicine at the forthcoming annual meeting.

Resolved: That a syllabus of the introductory paper to each discussion be published in the JOURNAL before the annual meeting. These must be furnished to the secretaries of the respective Sections one month before the date of meeting.

Resolved: That the Council grant £100 from the funds of the Association to further the work of the Imperial Vaccination League.

Resolved: That the accounts for the quarter ending December 31st last, amounting to £14,853 2s. 9d., be received and approved, and the Treasurer be empowered to pay those remaining unpaid, amounting to £2,968 0s. 4d.

The Treasurer reported that he had paid off the balance of the mortgage on the premises of the Association amounting to £5,000, and that the property of the Association was now absolutely free of all encumbrance.

The minutes of the Index Medicus Committee of November 27th, 1902, and January 20th, 1903, were then considered.

Resolved: That the minutes of the Index Medicus Committee be received.

Resolved: That in view of the information received from the Trustees of the Carnegie Fund, the Council thinks it desirable to find out the cost of filling in the gap between the first and second series.

Resolved: That if the publication of an appendix to Neale's *Medical Digest* is considered within the scope of the Association, it is desirable that the next appendix should be published under the direction and at the cost of the Association, and sold at about the cost of production.

The minutes of the Premises and Library Committee were then considered.

Resolved: That the minutes of the Premises and Library Committee be received.

Resolved: That the accounts for the quarter, amounting to £18 7s. 3d., be received and approved, and the Treasurer be empowered to pay them.

Resolved: That the question of the proposed alterations to the premises be deferred, and the architect be instructed to draw up a ground plan of the whole of the property of the Association situated in the Strand, Agar Street, and Harvey's Buildings.

The minutes of the Annual Meeting Committee were then considered.

Resolved: That the minutes of the Annual Meeting Committee be received.

The minutes of the Public Health Committee of December 4th, 1902, and January 9th and 13th, 1903, were then considered.

Resolved: That the minutes of the Public Health Committee be received.

Resolved: That Dr. Edgar Barnes be appointed to the Public Health Committee *vice* Mr. Colin Campbell resigned.

Resolved: That the General Secretary again apply to Dr. Cope to ascertain the result of the inquiries addressed to members of the Public Vaccinators' Association, and that, in view of the recent utterances of Mr. Long regarding vaccination it is desirable no further action for the time being be taken to arrange the contemplated conference with the Poor-law Unions Association of England and Wales.

The minutes of the Colonial Committee of November 21st, 1902, were then considered.

Resolved: That the minutes of the Colonial Committee be received.

It was decided to call attention to the fact that medicine and sanitary science are not represented on the Council of the Viceroy of India or on that of the Lieutenant-Governor of Burmah.

Resolved: That the Council approves of the proposed registration of European medical practitioners in Ceylon as referred to in paragraph 3 of the dispatch from the Lieutenant-Governor of Ceylon.

Resolved: That the attention of the Colonial Committee be directed to By-law 40, namely:

> Each Standing Committee shall appoint from its own number a member of Council as Chairman.

The minutes of the Medical Charities Committee of November 21st, 1902, were then considered.

Resolved: That the minutes of the Medical Charities Committee be received.

With regard to the following minute:

> Resolved: That it be recommended that the annual report of the Medical Charities Committee be sent to the senior physician and surgeon of each of the London and provincial hospitals, accompanied by a covering letter embodying the resolution directed to be sent to the Loughborough Hospital for their guidance in dealing with hospital patients who may be benefiting under the Workmen's Compensation Act,

Resolved: That the Council do disagree with the foregoing.

Resolved: That Mr. T. R. Jessop be added to the Medical Charities Committee in the place of Dr. Buzzard.

The minutes of the Joint Committee of the British Medical Association and the Medico-Psychological Association of December 3rd, 1902, and January 7th, 1903, were deferred, as the Committee has in course of preparation a report setting out in what way it considers the present Lunacy Laws require alteration.

The minutes of the Medico-Political Committee of December 4th, 1902, and January 9th, 1903, were then considered.

Resolved; That the minutes of the Medico-Political Committee be received.

The minutes of the Organization Committee of November 11th and December 9th, 1902, also the minutes of the Temporary Committee on Reorganization of December 9th, 1902, were considered together as bearing upon the question of the proposed Branch boundaries.

The areas of Divisions and Branches shown in the Tables on pp. iii, iv, v, and top of vi, were agreed.

In the case of the areas of Branches and Divisions not agreed (see Tables bottom of vi and vii) it was ordered that they be referred to the Organization Committee with a view to being subsequently confirmed at a special meeting of the Council to be held at an early date.

The minutes of the Ethical Committee of December 17th, 1902, were then considered.

Resolved: That the minutes of the Ethical Committee be received, but that the proposed Draft Model Rules for Divisions and Branches be referred to the Organization Committee before being considered by the Council.

The minutes of the Inebriates Committee of December 22nd, 1902, were then considered.

THE FOLLOWING AREAS OF DIVISIONS AND BRANCHES WERE APPROVED:—

BRANCH.	AREA OF BRANCH.	AREAS OF DIVISIONS.	
		Name.	Area.
CONNAUGHT	The area composed of the areas of the North Connaught, Mid-Connaught, and South Connaught Divisions.	*North Connaught.*	County Sligo and County Leitrim; the North District of County Roscommon.
		Mid-Connaught.	County Mayo; West Roscommon.
		South Connaught.	County Galway; South Roscommon.
		The boundaries of the several Divisions in County Roscommon to be as shown in the official map.	
ULSTER	The Province of Ulster.	*Belfast.*	Belfast City, South Antrim, and East Down.
		Portadown, or Armagh and West Down.	County Armagh; West Down; and East Tyrone.
		Monaghan and Cavan.	County Monaghan; County Cavan.
		Ballymoney, or North Antrim and East Derry.	North Antrim; East Derry.
		Derry.	The County of Derry, except the part included in the Ballymoney Division; County Donegal, except the part included in the Enniskillen Division; North-West Tyrone.
		Omagh or County Tyrone.	The part of County Tyrone not included in other Divisions.
		Enniskillen or County Fermanagh.	County Fermanagh; County Donegal, south of the Donegal and Lifford Railway; the part of Tyrone supplied by the Clogher Valley Railway west of Ballygawly.
		The precise boundaries of the several Divisions to be those shown in the official map.	
WEST SOMERSET ...	All that portion of the County of Somerset which lies south or west of a line drawn from Highbridge through Glastonbury to Yeovil, excluding the towns last mentioned.	*West Somerset.*	The area of the Division to be that of the Branch.
SOUTH-WESTERN ...	The Counties of Devon and Cornwall.	Six Divisions, named and bounded as shown in the official map.	
DORSET AND WEST HANTS	The county of Dorset; in Somersetshire, Yeovil, Milborne Port, and Templecombe; in Hampshire, the portion west of and including Christchurch and Ringwood.	*West Dorset.*	Having such boundaries as the Branch may determine, subject to the approval of the Organization Committee.
		Bournemouth.	
SOUTH-EASTERN ...	The Counties of Kent and Sussex; the County of Surrey, south and east of a line drawn from Blackwater Station to Byfleet, thence to Wimbledon, thence along the south boundary of the postal districts of Wandsworth, Battersea, Clapham, Brixton, and Peckham, and thence northward to the Thames Tunnel.	Twenty-one Divisions, named and bounded as shown in the official map.	
CAMBRIDGE AND HUNTINGDON ...	The Counties of Cambridge and Huntingdon; in Hertfordshire, the portion east of a line drawn from Potter's Bar due north to the county boundary, and north of a line drawn from Potter's Bar to High Ongar; in Essex, the portion north of the line last mentioned and west of a line from High Ongar to Bartlow Station; in Northamptonshire, the portion north and east of Thrapston.	*Cambridge and Huntingdon.*	The area of the Division to be that of the Branch.

THE FOLLOWING AREAS OF DIVISIONS AND BRANCHES WERE APPROVED:—*Continued.*

Branch.	Area of Branch.	Areas of Divisions.	
		Name.	Area.
Metropolitan Counties ...	To include, north of the Thames, London and Middlesex; also the portion of Buckinghamshire east of the line drawn from Windsor to a point immediately northward of Chesham; in Hertfordshire, the portion south of a line drawn from Chesham through King's Langley to Cheshunt; in Essex, the part included by a line drawn from Cheshunt to High Ongar, including the latter in the Branch, and thence through Dagenham Station to the Thames; south of the Thames, the part of London and surrey bounded by a line drawn from Blackwater Station to Byfleet, thence to Wimbledon, thence along the south boundary of the postal districts of Wandsworth, Battersea, Clapham, Brixton and Peckham, and thence northward to the Thames Tunnel.	Fifteen Divisions, named and bounded as shown in the official map.	
Oxford and Reading	The Counties of Berkshire and Oxford; in Gloucestershire, Fairford and Lechlade, and the district east of Chipping Campden and Stow-on-the-Wold; in Buckinghamshire, the portion south of a line drawn from Thame to Chesham, and west of a line drawn from Chesham to Windsor, excluding Chesham.	*Oxford.*	Bounded north by Banbury and Chipping Campden; west by Stow-on-the-Wold, Burford, Fairford, and Faringdon; south by Wantage and Newbury; and east by the Branch boundary, Princes Risborough, Watlington, and Wallingford.
		Maidenhead.	South Bucks, south of Aylesbury (except so far as included in the Oxford Division).
		Reading.	The rest of the Branch area.
South Midland ...	The County of Bedford; in Warwickshire, Rugby; in Northamptonshire, the portion south and west of Thrapston; in Buckinghamshire, the portion north of a line drawn from Thame to Chesham, excluding the latter; in Hertfordshire, the portion north of a line drawn from Chesham immediately south of King's Langley to Potter's Bar, and thence due north to the county boundary.	*Northamptonshire.*	The part of Northamptonshire included in the Branch area, together with Rugby.
		Bedford and Herts.	The County of Bedford, and the part of Hertfordshire included in the Branch area, except the portion included in the Aylesbury Division.
		Aylesbury.	The part of Bucks included in the Branch area, and the part of Hertfordshire served by the L. and N.W. Railway.
East Anglian ...	The Counties of Norfolk, Suffolk, and Essex, except the portion of Essex to the west of a line drawn from Bartlow Station to High Ongar, and thence through Dagenham Station to the Thames.	Ten Divisions, named and bounded as shown in the official map.	
Worcester and Hereford ...	The County of Worcester (except the Northern and Eastern Parliamentary Divisions); the County of Hereford; also in Radnor, New Radnor and Presteign.	*Worcester.*	The part of the county of Worcester included in the Branch area, together with Bromyard.
		Hereford.	The rest of the Branch area.
Border Counties...	In *Scotland*, the counties of Dumfries, Kirkcudbright, and Wigtown; in *England*, Cumberland and Westmorland, north of Ravenglass, Grasmere, Orton, and Kirkby Stephen.	*Scottish Border.*	Dumfries, Kirkcudbright, and Wigtown.
		North Cumberland.	The North Cumberland Parliamentary Division.
		Mid Cumberland.	The Mid Cumberland Parliamentary Division.
		South Cumberland.	The remainder of Cumberland included in the Branch area.
		Penrith.	The part of Westmorland included in the Branch area.

THE FOLLOWING AREAS OF DIVISIONS AND BRANCHES WERE APPROVED:—*Continued.*

BRANCH.	AREA OF BRANCH.	AREAS OF DIVISIONS.	
		Name.	Area.
MIDLAND	Counties of Derby, Leicester, Rutland, Nottingham, and Lincoln (except the Glossop District of Derbyshire, Grimsby Borough, and the Brigg Parliamentary Division of Lincolnshire).	*Stamford.*	Rutlandshire, and as much of the Stamford Parliamentary Division as is not included in the Holland County Council area.
		Boston and Spalding.	The Holland County Council area and the Horncastle Parliamentary Division.
		Lincoln.	The rest of the County, except Grimsby Borough and the Brigg Parliamentary Division.
		Nottingham.	The County of Nottingham.
		Leicester.	The County of Leicester.
		Derby.	The County of Derby.
STAFFORDSHIRE ...	The County of Stafford, as far south and east as the boundary marked on the official map.	*Stoke.* *Stafford.* *Wolverhampton.*	The areas of the Divisions to be such as the Branch may determine, subject to the approval of the Organization Committee.
SOUTH WALES AND MONMOUTHSHIRE.	Cardiganshire, Brecknockshire, the counties south-west thereof, and Monmouthshire.	*South-West Wales.*	The Counties of Carmarthen, Pembroke, and Cardigan.
		Swansea.	Swansea Borough; the Gower Parliamentary Division; the Mid-Glamorgan Parliamentary Division, except the part thereof lying east of a line drawn north and south through Pyle.
		Cardiff.	Cardiff Borough; South Glamorgan Parliamentary Division; the part of the Mid-Glamorgan Division lying eastward of Pyle.
		North Glamorgan and Brecknock.	Merthyr Tydvil Borough; Rhondda Valley and East Glamorgan Parliamentary Divisions; the County of Brecknock.
		Monmouth.	The County of Monmouth.
BIRMINGHAM AND MIDLAND COUNTIES	The County of Warwick (except Rugby); the Parliamentary Boroughs of Birmingham and Dudley; in Worcestershire, the Northern and Eastern Parliamentary Divisions; in Staffordshire, the portion south and east of the boundary marked on the official map.	Seven Divisions, having such boundaries as may be determined by the Branch, subject to the approval of the Organization Committee.	
NORTH LANCASHIRE AND SOUTH WESTMORLAND	Cumberland and Westmorland, south of and including Ravenglass, Grasmere, Orton, and Kirkby Stephen; the County of Lancaster, north of and including Garstang.	*Furness.* *Kendal.* *Lancaster.*	To have such boundaries as may be determined by the members of the Association resident within the area of the Branch, subject to the approval of the Organization Committee.
NORTHERN COUNTIES OF SCOTLAND.	The western portion of Banff, Elgin, Inverness, and the Counties of Scotland north of these.	*Elgin.*	The County of Elgin, and the part of Banff included in the Branch.
		Inverness.	The rest of the Branch area.
ABERDEEN	The Counties of Aberdeen and Kincardine, and the eastern portion of Banff; the Orkney and Shetland Islands.	*Orkney.*	The Orkney Islands.
		Shetland.	The Shetland Islands.
		Aberdeen.	The rest of the Branch area.

THE FOLLOWING AREAS OF DIVISIONS AND BRANCHES WERE APPROVED:—*Continued.*

Branch.	Area of Branch.	Areas of Divisions. Name.	Area.
Dundee	The County of Forfar.	*Dundee.*	The area of the Division to be that of the Branch.
Fife	The County of Fife.	*Fife.*	The area of the Division to be that of the Branch.
Edinburgh	The Lothians, Berwick, Selkirk, Peebles, and Roxburgh Counties.	Five Divisions named and bounded as has been determined by the Branch.	
Glasgow and West of Scotland ...	The Counties of Ayr, Renfrew, Lanark, Dumbarton, Argyll, and the Isles.	Eight Divisions named and bounded as has been determined by the Branch.	
Lancashire and Cheshire ...	Lancashire, except Garstang and north thereof; the Isle of Man; Cheshire; in Yorkshire, the Saddleworth and Todmorden districts; in Derbyshire, the Glossop district; (as far east as the watershed in each case).	Divisions referred back.	

THE FOLLOWING AREAS AND DIVISIONS OF BRANCHES WERE REFERRED BACK TO THE ORGANIZATION COMMITTEE.

Leinster	The Province of Leinster, except the part thereof included in the South-Eastern Branch.	*Dublin.*	The Parliamentary Borough of Dublin.
		East Leinster.	County Dublin; the southern part of County Meath; County Kildare; and County Wicklow (except the extreme southern part thereof).
		North Leinster.	County Louth; the northern part of County Meath.
		North-West Leinster.	County Longford; County Westmeath.
		Mid-Leinster.	King's County; Queen's County.
		South-East Leinster.	The extreme southern part of County Wicklow; County Wexford, except the extreme south-west part thereof.
		The precise boundaries of the several Divisions to be those shown in the official map.	
South-Eastern of Ireland	The area to be composed of the areas of the Carlow, Kilkenny, and Waterford Divisions.	*Carlow.*	County Carlow.
		Kilkenny.	County Kilkenny.
		Waterford.	The southern part of County Tipperary, County Waterford; the extreme south-west part of County Wexford.
Munster	The Province of Munster, except the part included in the Waterford Division.	*South Munster.*	Cork County.
		West Munster.	Kerry County.
		North Munster.	County Limerick; County Clare; the northern part of County Tipperary.
		The precise boundaries of the several Divisions to be those shown in the official map.	
Perthshire ...	The County of Perth.	*Perthshire.*	The area of the Division to be that of the Branch.
Stirling	The Counties of Stirling, Kinross, and Clackmannan.	*Stirling.*	The area of the Division to be that of the Branch.

THE FOLLOWING AREAS AND DIVISIONS OF BRANCHES WERE REFERRED BACK TO THE ORGANIZATION COMMITTEE:—*Continued*

BRANCH.	AREA OF BRANCH.	AREA OF DIVISIONS.	
		Name.	Area.
SHROPSHIRE AND MID-WALES ...	The Counties of Shropshire, Montgomery, and Radnor, except New Radnor and Presteign.	The area of the Division to be that of the Branch.	
NORTH WALES ...	The Counties of Flint, Denbigh, Carnarvon, Anglesea, and Merioneth.	*Flint and Denbigh, North Carnarvon, and Anglesea, South Carnarvon and Merionethshire.*	The boundaries of the Divisions to be those shown in the official map.
LANCASHIRE AND CHESHIRE	Agreed.	Twenty-three Divisions, named and bounded as shown in the official map.	
NORTH OF ENGLAND.	The Counties of Northumberland and Durham; and in Yorkshire, the Cleveland Parliamentary Division.	Twenty-one Divisions, named and bounded as shown in the official map.	
YORKSHIRE	The County of York, except the parts following, namely: The Cleveland Division (to the North of England Branch); in the north-west, Hawes and Settle, and the part included by a line joining these, and drawn from each to the nearest point of the county boundary (to the North Lancashire and South Westmorland Branch); the Todmorden and Saddleworth District, east of the watershed (to the Lancashire and Cheshire Branch; the Holderness and Buckrose Parliamentary Divisions, and the portion of the Howdenshire Division south-east of the railway from Market Weighton to Selby (to the East York and North Lincoln Branch).	Such Divisions, and having such boundaries, as the Branch may determine, subject to the approval of the Organization Committee.	
EAST YORK AND NORTH LINCOLN...	In Yorkshire: Hull, and the Holderness and Buckrose Parliamentary Divisions, and the portion of the Howdenshire Division south-east of the railway from Market Weighton to Selby; in Lincolnshire: Grimsby Borough, and the Brigg Parliamentary Division.	*Hull.* *North Lincoln.*	The part of Yorkshire included in the Branch area, together with Barton-on-Humber. The part of Lincolnshire included in the Branch area, but excepting Barton-on-Humber.
GLOUCESTERSHIRE...	The County of Gloucester, north of and including Sharpness, Berkeley Road, and Dursley; but excluding Fairford and Lechlade, and the portion of the County east of Chipping Campden and Stow-on-the-Wold.	*Gloucestershire.*	The area of the Division to be that of the Branch.
BATH AND BRISTOL...	In Somersetshire, the portion north of a line drawn immediately north of Highbridge, and south of Glastonbury, and Wincanton; in Gloucestershire, the part south of Sharpness, Berkeley Road, and Dursley; in Wiltshire, the part north of a line passing due east and west through a point between Trowbridge and Westbury.	*Bristol.* *Bath.* *Trowbridge.*	Having the boundaries shown in the official map.
SOUTHERN	Hampshire (except the portion west of, and including Christchurch and Ringwood); Wiltshire (except the portion north of a line drawn east and west through a point between Trowbridge and Westbury); and the Channel Islands.	Seven Divisions, named and bounded as shown in the official map.	

Resolved: That the minutes of the Inebriates Committee be received.

Resolved: That the Pharmaceutical Society be asked if there is a reasonable prospect of getting absinthe scheduled under poisons.

The minutes of the Preliminary General Education Committee were deferred, as Dr. Maury Deas gave notice of motion for the April meeting regarding the reply of the General Medical Council to the deputation of the Preliminary General Education Committee.

Resolved: That Dr. Radcliffe Crocker, Sir John Wm. Moore, Dr. F. M. Pope, and Dr. G. E. Shuttleworth be appointed delegates of the Association at the forthcoming Madrid Medical Congress in addition to the Past-President.

Read communications thanking the Council for permitting the General Secretary to collect funds on behalf of the British Medical Benevolent Fund and Royal Medical Benevolent College, Epsom.

Read application from the Royal Medical Benevolent Fund Society of Ireland asking that the General Secretary may be instructed to collect subscriptions on behalf of that Society in the same way as the subscriptions for the English Benevolent Societies are collected by him through this office.

Resolved: That the Council sanction the collection through the General Secretary of subscriptions on behalf of the Royal Medical Benevolent Fund Society of Ireland next year.

The replies received from the Director-General of the Medical Department of the Royal Navy, the Director-General of the Army Medical Service, and the Director-General of the Indian Medical Service, relating to the election of representatives on the Council under By-laws 20 (*c*), 24, and 39 (5) were ordered to be entered on the Minutes.

Read reply from the War Office to the resolution passed in the Section of Navy, Army, and Ambulance, at Manchester, relating to the transport of sick and wounded.

18, Victoria Street, London, S.W.,
November 6th, 1902.

Dear Sir,—I have the honour to acknowledge the receipt of a copy of a resolution passed in the Section Army, Navy, and Ambulance at the Annual Meeting of the British Medical Association on the 22nd ultimo, on the subject of the transport of the sick and wounded, which you kindly forwarded to the Director-General on the 31st idem., and to inform you that the matter is already under consideration.—I have the honour to be, sir, your obedient servant,

M. W. H. RUSSELL (for Director-General).

The General Secretary,
British Medical Association,
429, Strand, W.C

Resolved: That the same be received and entered on the minutes.

The election of candidates was then considered.

Resolved: That the candidates whose names appear on the circular convening the meeting be, and they are hereby, elected members of the British Medical Association.

Read letters, with petition, from the Perthshire Branch, Shropshire and Mid-Wales Branch, and South-Eastern of Ireland Branch, asking that their Branches may remain as at present.

Resolved: That these communications be referred to the Organization Committee.

The Chairman of Council reported that he, together with the General Secretary, had, in accordance with a request from the Worshipful Company of Plumbers, attended a deputation to Mr. Long, President of the Local Government Board, on Thursday, November 6th, 1902, on behalf of the British Medical Association, to support the Bill for the Registration of Plumbers.

The Chairman of Council reported receipt of communication from the Board of Education, forwarding scheme for the administration of the Hartley Institution. Also an application from the Hartley University College asking for three Representative Governors to be appointed from the Branches of the British Medical Association in the four districts of Southampton, the Isle of Wight, Dorset, and Wilts.

Further, that the General Secretary had communicated with the following Secretaries and Districts with a view to the appointment of three Representative Governors:

Dr. A. B. Wade,	for the District	of Southampton.
Dr. G. B. Wood,	,, ,,	Isle of Wight.
Dr. J. E. Gordon,	,, ,,	South Wilts.
Dr. W. Vawdrey Lush	,,	Dorset.

MEDICO-POLITICAL COMMITTEE.

A MEETING of the Medico-Political Committee was held on October 22nd, 1902, when there were present the Chairman of Council (Mr. Andrew Clark), Dr. Langley Browne, Dr. A. Cox, Dr. Major Greenwood, Sir Victor Horsley, F.R.S., Dr. C. H. Milburn, Dr. A. Brown Ritchie, Dr. Norman Walker, and Dr. Woodcock.

Chairman.

Sir Victor Horsley, F.R.S., was elected Chairman of the Committee.

Public Health Amendment Bill.

The GENERAL SECRETARY reported that Sir Francis Powell had promised to reintroduce the Public Health Amendment Bill next year.

Workmen's Compensation Act.

A Subcommittee, consisting of Dr. Langley Browne, Dr. Heron, Mr. Messiter, and Dr. Milburn was appointed to obtain information as to the working of the Workmen's Compensation Act in its relation to the medical profession, and to consider what action, if any, should be taken in reference to it.

Vaccination.

After some discussion it was resolved that the Public Health Committee should be invited to join in the consideration of this matter.

Medical Acts Amendment Bill.

The CHAIRMAN gave a short historical statement of what had been done in the Parliamentary Bills Committee with regard to the question of the Medical Acts (Amendment) Bill, and laid upon the table the Draft Bill of the Association of January 17th, 1900. The further consideration of the subject was adjourned to the next meeting of the Committee.

A meeting of the Committee was held on December 4th when there were present Sir Victor Horsley, F.R.S., Chairman, in the chair, the Treasurer (Dr. E. Markham Skerritt), Dr, Langley Browne, Dr. A. Cox, Dr. Major Greenwood, Dr. G. A. Heron. Mr. M. A. Messiter, Dr. C. H. Milburn, and Dr, Woodcock.

Amendment of the Coroners Act.

On the invitation of the Chairman the following members of the Coroners Act Amendment Committee, Mr. D. B. Balding, Mr. C. H. W. Parkinson, and Dr. Martindale Ward, attended for the purpose of a conference on the following draft Bill:

DRAFT OF A BILL

TO AMEND THE LAW IN RELATION TO CORONERS.

ARRANGEMENT OF CLAUSES.

Clause.

1. Notification of death to coroner by registrar where no medical certificate.
2. Remuneration of medical witnesses.
3. Remuneration of medical practitioner consulted by coroner without inquest.
4. Regard to be had to deaths investigated without inquests in fixing coroner's salary.
5. Fee to coroner for attendance at court.
6. Repeal.
7. Extent of Act.
8. Short title and construction.

BE it enacted by the King's Most Excellent Majesty by and with the advice and consent of the Lords Spiritual and Temporal and Commons in this present Parliament assembled and by the authority of the same as follows:

1. *Notification of Death to Coroner by Registrar where no Medical Certificate.*—A registrar shall, in the case of every death brought to his knowledge, without a certificate of cause of death signed by a legally-qualified medical practitioner, forthwith give notice of the death to the coroner within whose jurisdiction the death occurred, and a registrar shall not register the death until he has received an intimation from the coroner that the coroner does not think it necessary to hold an inquest.

2. *Remuneration of Medical Witnesses.*—(i) A legally qualified medical practitioner who has attended at a coroner's inquest in obedience to a summons of the coroner under the Coroners Act 1887 shall be entitled to receive such remuneration as follows (that is to say):

(A) For every day on which such practitioner so attends to give evidence at an inquest one guinea;

(B) For making a *post-mortem* examination of the body of the deceased without an analysis of the contents of the stomach or intestines or other part of the body one guinea;

Provided that no remuneration shall be paid to a medical practitioner for making a *post-mortem* examination without the previous direction of the coroner.

(ii) A legally qualified medical practitioner shall not be required without his consent to make analysis of the contents of the stomach or intestines or other part of the body and any such practitioner or other persons whom the coroner shall deem competent and who shall make such an analysis in pursuance of the previous direction of the coroner shall be entitled to receive such remuneration not exceeding five guineas as the coroner shall certify in writing to be reasonable.

3. *Remuneration of Medical Practitioner Consulted by Coroner without Inquest.*—(i) A coroner shall pay to any duly qualified medical practitioner whom he may consult as to the cause of any death on which no inquest is held a fee not exceeding one guinea.

(ii) A coroner shall be reimbursed by the local authority any payment made under this section upon rendering within four months an account of that payment as if it was an expense reasonably incurred in and about the holding of an inquest, and Sections XXVI and XXVII of the Coroners Act 1887 shall apply accordingly

4. *Regard to be had to Deaths investigated without Inquests in fixing Coroner's Salary.*—At any quinquennial revision of a coroner's salary regard shall be had to the number of deaths the causes of which he has investigated without holding an inquest, as if in each case an inquest had been held.

5. *Fee to Coroner for Attendance at Trial.*—A coroner attending at any court before or at the opening thereof in pursuance of subsection 3 of Section V of the Coroners Act, 1887, shall be entitled to a fee of a guinea for each such attendance, and that fee shall form part of the expenses of the prosecution.

6. *Repeal.*—Section XXII of the Coroners Act, 1887, is hereby repealed.

7. *Extent of Act.*—This Act shall not extend to Scotland or Ireland.

8. *Short Title and Construction.*—This Act may be cited as the Coroners Act, 1902, and shall be construed as one with the Coroners Acts, 1887 and 1892.

August 2nd, 1901.

The Bill was considered clause by clause, and Dr. HERON suggested that in Clause 2 (1) the following words should be inserted at the end of (A):

"but should the coroner hold his court at a distance greater than two miles from the residence of the said practitioner summoned to his court, and attending there to give evidence, a fee additional to the said guinea, and amounting to not less than 2s. 6d. for each mile or part of a mile of the distance between the place where the coroner holds his court and the residence of the practitioner."

The suggestion was referred to the Committee on Fees to Medical Witnesses.

The Bill as printed was approved by the Conference, and the Secretary was instructed to write to the Coroners' Society asking its consideration for the Bill, and that its approval, if given, should be communicated in time for action to be taken with the view to the introduction of the Bill at the earliest possible date in the next session of Parliament.

Vaccination.

The Committee then sat in conference with the Public Health Committee, which was represented by Dr. J. Groves (Chairman), Mr. W. Jones Morris, Dr. Arthur Newsholme, and Dr. Louis C. Parkes. A memorandum, drawn up by the Secretary of the Committee, on the questions arising in connexion with the amendment of the Vaccination Acts was taken as a basis for discussion, and the Conference resolved that the question of prospective vaccination legislation being an urgent one, it was essential that the broad lines on which legislation should be recommended should at once be considered by the Conference. The Conference resolved to recommend the Council to support the following proposals:

(1) That revaccination be made compulsory by law, and that it be performed between the ages of 10 and 13 years;

(2) That both primary vaccination and revaccination be subject to the same provisions for conscientious objection as in the present Vaccination Act, but that the procedure for exemption should be more strictly defined in any future legislation;

(3) That the Vaccination Act should be administered directly by a department of the Local Government Board;

(4) That in future vaccination legislation no certificate of succesful vaccination should be accepted unless it contain a statement as to the number and area of the vesicles produced;

(5) That all lymph shall be supplied by the Government, or by private establishments under Government supervision and guarantee.

The conference was resumed on Friday, January 9th, when there were present the following members of the Medico-Political Committee: Sir Victor Horsley, F.R.S., in the chair, the Chairman of Council (Mr. Andrew Clark), Dr. H. Langley Browne, Dr. Major Greenwood, and Dr. C. H. Milburn, and the following members of the Public Health Committee—Dr. Groves (Chairman) and Dr. J. C. McVail. It was unanimously resolved, on the motion of Dr. MAJOR GREENWOOD, seconded by Dr. MCVAIL, that the following additional recommendation be added to those adopted at the previous meeting:

"(6) That every private practitioner furnishing the vaccination authority with certificates of successful and efficient vaccination, satisfying a standard fixed by the Local Government Board, should receive a suitable fee for each such certificate."

It was then resolved to transmit the six recommendations to the Council and the conference with the Public Health Committee was dissolved.

The Medico-Political Committee then resumed.

Amendment of the Coroners Act.

The SECRETARY of the Committee stated that he had been informed by Mr. W. Schroeder, Secretary of the Coroners' Society, that he hoped to obtain some expression of opinion from the Council of that Society before the end of January.

The Secretary was instructed to endeavour to obtain an earlier reply from the Coroners' Society.

Resignation.

Dr. W. GORDON intimated his desire to resign his seat on the Committee, as he found that he would be unable to attend its meetings.

Tenure of Office by Scottish Poor-law Medical Officers.

The Committee had before it the following Government Bill, which was introduced into the House of Commons last year, but dropped:

A BILL

TO AMEND THE PROVISIONS OF THE LOCAL GOVERNMENT (SCOTLAND) ACT, 1889, AS TO GRANTS FOR MEDICAL RELIEF AND PAUPER LUNATICS.

BE it enacted by the King's Most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

Application of Duties of Local Taxation Licences and Probate Duty Grant, 52 and 53 Vict., c. 50.—1. From and after the *thirty-first day of March*, in the year *One thousand nine hundred and three*, Subsections IV and V of Section XXII of the Local Government (Scotland) Act, 1889, shall be read as if for the words "in like manner and according to the like scale and regulations as nearly as may be, as in the financial year ending the thirty-first day of March, one thousand eight hundred and eighty-nine" there were substituted the words "in such manner and according to such scale and regulations as may be from time to time prescribed by order of the Local Government Board for Scotland, with the approval of the Secretary for Scotland, provided that a copy of every such order shall be laid before both Houses of Parliament as soon as may be after it is made."

Short Title.—2. This Act may be cited as the Local Government (Scotland) Act, 1889, Amendment Act, 1902.

The Committee resolved to recommend the Council to give the support of the Association to the following addition to the Local Government (Scotland) Act Amendment Bill—namely:

"That all medical officers holding office under the Poor-law (Scotland) Act be only dismissible by, or with the consent of, the Local Government Board."

The Secretary of the Committee was instructed to invite the Secretary of the Scottish Poor-law Medical Officers' Association and the President of the Scottish Society of Medical Officers of Health to direct the attention of their respective societies to the question of superannuation of medical officers as dealt with in the Bill, and that the views of these societies should be communicated to the Association.

Medical Acts Amendment Bill.

The Chairman undertook to have this Bill redrafted in certain particulars and to circulate copies before the next meeting of the Committee.

PUBLIC HEALTH COMMITTEE.

A MEETING of the Public Health Committee was held on Thursday, December 4th, 1902; Dr. J. Groves, Chairman, in the chair. There were also present Mr. W. Jones Morris, Dr. A. Newsholme, and Dr. Louis C. Parkes.

The Committee received the resignation of Mr. Colin Campbell, and, after reading a letter from Dr. McVail and transacting some other formal business, attended the meeting of the Medico-Political Committee for the discussion of amendments required in the existing vaccination law.

A meeting of the Public Health Committee was held on January 9th, 1903 (when there were present Dr. J. Groves (Chairman), in the chair; Chairman of Council (Mr. Andrew Clark), and Dr. J. C. McVail.

New Member. It was resolved to recommend to the Council that Dr. Edgar Barnes be appointed to the vacancy caused by the resignation of Mr. Colin Campbell.

Compulsory Notification of Phthisis.—The Committee at a previous meeting had recommended that the Local Government Board should be asked to give its consent to the compulsory notification of phthisis in districts able to show that they were in a position to undertake the necessary work, such consent being preceded, if thought desirable, by a special inquiry by the Local Government Board into the circumstances of sanitary administration in the district. The Committee resolved, in view of the criticisms with which the proposition had been met, to defer the question for the present.

Minister of Public Health.—A further communication from Dr. Bushnell with regard to the appointment of a Minister of Public Health was considered and the Committee adhered to a resolution adopted in October last, which, while recognizing that the question was an important one deserving careful consideration, expressed the opinion that matters affecting vaccination legislation were more pressing and would for the present absorb the Committee's attention.

COLONIAL COMMITTEE.

A MEETING of the Colonial Committee was held on November 21st, when there were present the Chairman of Council (Mr. Andrew Clark), Dr. C. W. Daniels, Brigade-Surgeon-Lieutenant-Colonel E. F. Drake-Brockman, Dr. J. Groves, Dr. C. G. D. Morier, and Mr. Edmund Owen.

Chairman.—Mr. Edmund Owen was elected Chairman of the Committee.

Death of Surgeon-General Hamilton.—A resolution expressing the sincere sorrow of the members of the Committee at the death of their colleague, Surgeon-General Hamilton, was adopted and sent up to the Council.

Medicine and Sanitary Science in India.—A representation from the Burmah Branch was considered, and the following resolution was adopted, with the recommendation that it should be forwarded to the Secretary of State for India, the Governor-General of India, and the Secretary of the Burmah Branch of the British Medical Association:

"That the British Medical Association desires respectfully to draw the attention of the authorities to the fact that medicine and sanitary science are not represented on the Council of the Viceroy of India or on that of the Lieutenant-Governor of Burmah, while engineering, law, commerce, etc., are directly represented. In the interests of the public health, the British Medical Association is of opinion that medicine and sanitary science should also be directly represented on these Councils.

European Medical Practitioners in Ceylon.—The reply from the Colonial Secretary, transmitting a dispatch from the Lieutenant-Governor of Ceylon referred by the Council at its October meeting to this Committee (see BRITISH MEDICAL JOURNAL, November 1st, 1902, p. 1465), was considered. The following resolution was adopted:

"That this Committee approves of the proposed registration of European medical practitioners in Ceylon as referred to in paragraph 3 of the dispatch from the Lieutenant-Governor of Ceylon.

Paragraph 3 of the dispatch was as follows:

3. The Principal Civil Medical Officer accordingly recommends that all medical practitioners in Ceylon who hold degrees or diplomas entitling them to be registered under the British Medical Acts should be included in the *Register*, which would then comprise Licentiates of the Ceylon and Indian Medical Colleges.

ORGANIZATION COMMITTEE AND TEMPORARY COMMITTEE ON REORGANIZATION.

MEETINGS of the Organization Committee were held on November 11th and December 9th, 1902, when there were present on both occasions Mr. T. Jenner Verrall in the chair, the Chairman of Council (Mr. Andrew Clark), the Treasurer (Dr. E. Markham Skerritt), Dr. H. A. Ballance, Dr. S. Crawshaw, Mr. George Eastes, Dr. J. C. McVail, Professor J. T. J. Morrison, and Dr. J. Roberts Thomson.

The matters which engaged the attention of the Committee at these two meetings were the determination of the boundaries and Branches and Divisions, and a draft of model rules to be suggested to Divisions and Branches. The investigation of the second matter was not completed and its further consideration was deferred.

A meeting of the Temporary Committee of Reorganization was held on December 9th, 1902, when there were present Mr. T. Jenner Verrall (in the chair), the Chairman of Council (Mr. Andrew Clark), the Treasurer (Dr. E. Markham Skerritt), Dr. H. A. Ballance, Dr. R. C. Buist, Dr. S. Crawshaw, Dr. G. W. Crowe, Dr. R. L. Down, Mr. G. Y. Eales, Dr. R. F. Fox, Dr. H. M. W. Gray, Dr. D. Goyder, Dr. E. M. Hainworth, Dr. T. A. Helme, Dr. F. R. Hill, Dr. E. H. Jones, Dr. J. A. Macdonald, Dr. H. B. MacLeod, Dr. J. C. McVail, Dr. J. E. Moorhouse, Professor J. T. J. Morrison, Dr. B. H. Nicholson, Mr. J. H. Nicoll, Mr. C. H. W. Parkinson, Mr. H. B. Robinson, Dr. J. Roberts Thomson, Professor A. H. White.

Reports from the following territorial Subcommittees were read: Scottish, Irish, South-East and East of England, North of England, Midland and Wales, Southern and South-Western; and the Committee had also before it further reports and communications received by the Organizing Secretary from various existing Branches. It was determined that the exact boundaries of Divisions should be recommended by the Standing Organization Committee in conference with the honorary Secretaries of the Branches concerned; and if agreement were not thus reached, that the opinion of the members concerned should be ascertained as to the question of boundaries. The action taken by the Council on the recommendations concerning the boundaries of Divisions and Branches is reported in the report of the proceedings of the meeting of the Council of the Association on Januar 21st.

ETHICAL COMMITTEE.

A MEETING of the Ethical Committee was held on December 17th, when there were present Professor R. Saundby, in the chair; the Chairman of Council (Mr. Andrew Clark), Dr. A. G. Bateman, Dr. W. A. Elliston, and Dr. E. Jepson. The Editor attended on the invitation of the Chairman.

Ceylon.—The Chairman presented a report of the correspondence with Dr. Vanderstraaten, of Ceylon, referred by the Council to the Committee, and on the motion of Dr. BATEMAN, seconded by Dr. JEPSON, it was resolved that the line taken by the JOURNAL in reply to Dr. Vanderstraaten be approved, and that the Organizing Secretary be instructed to write accordingly.

Vaccination in Barbadoes.—The Chairman presented a report of a communication with enclosed documents from the President of the Barbadoes Branch referred by the Council to the Committee with power to act. It was resolved that the President of the Barbadoes Branch be informed:

1. That, while the Committee cannot say what the General Medical Council might or might not consider "covering" or "infamous conduct," in the recent small-pox epidemic in Glasgow medical students and sanitary inspectors were employed to vaccinate in the emergency without complaint; and that certificates of competence to render first-aid are regularly given to persons who attend ambulance courses in this country.

2. That the form of certificate does not appear open to objection, as it does not seem at all likely to be mistaken for a diploma to practise medicine.

3. That, in view of the serious nature of the epidemic which prevailed in the island, the profession in Barbadoes were, in the opinion of the Committee, justified in approving the special measures devised by the Government to meet the emergency.

Trade Advertisements.—The CHAIRMAN called attention to the question of trade advertisements containing the names of members of the medical profession, and it was resolved that in the case of a member of the Association the Organizing Secretary should write a letter to him calling his attention to the matter; and that, in the case of a non-member, the attention of the licensing body from whom the practitioner held his diploma should be drawn to the matter.

Police Surgeons.—The Committee recorded its opinion that when an infectious disease occurred in a house in which a policeman resides, the ordinary course of sanitary administration should be followed, and the notification to the medical officer of health should be accepted by the police surgeon as sufficient evidence of the case being what it was reported to be. A visit to the patient from the police surgeon was unnecessary.

Proposed Medical Aid Society.—The CHAIRMAN stated that his attention had been called to an attempt to establish a medical aid society for well-to-do people in a London suburb; and reported correspondence between himself and the proposed medical officer of the society. This correspondence had resulted in the withdrawal of the practitioner. The action of the Chairman was approved.

PREMISES AND LIBRARY COMMITTEE.

A MEETING of the Premises and Library Committee was held on January 20th, when the following members were present: The Chairman of Council (Mr. Andrew Clark) in the chair; the Treasurer (Dr. E. Markham Skerritt), Dr. Bruce Goff, Dr. Holman, Mr. N. C. Macnamara, Dr. C. Parsons, and Dr. F. M. Pope.

Ventilation.—THE CHAIRMAN OF COUNCIL reported that in consequence of complaints as to the ventilation of the Council chamber, also used as the library, the General Secretary had gone into the matter and certain improvements had been carried out in accordance with the recommendations of the Architect. The improvements included the installation of an 18-inch electric extract-fan, the construction of new louvre ventilators, and measures for the better ventilation of the central stairway. The action of the Chairman of Council and the General Secretary in carrying out these alterations was approved.

Improved Utilization of Office Space.—Owing to the scarcity of room for clerks in the general offices, the Chairman of Council and the General Secretary had been instructed at a previous meeting to bring up a scheme for taking fuller advantage of the space in the building. The architect attended, and presented and explained his proposed plans. The further consideration of this matter was adjourned to a special meeting to be held at an early date.

Library.—The Librarian reported that there has been 1,454 attendances to the Library during the past three months as compared with 1,158 for the corresponding period of 1901. A number of new books and new editions have been received, together with 182 *Thèses de Lyon* for the year 1901-02, and over 100 *Thèses de Paris* for the session just commenced. The latest volumes of the *Transactions* of the various societies had been presented, and the Royal Society had delivered six volumes of the *Catalogue of Scientific Literature*. Certain books

selected from the list of duplicates by the North-East London Clinical Society had been forwarded to it. The Librarian presented the "Suggestion Book," and certain of the volumes suggested were ordered to be purchased. Mr. Louis Taylor, Assistant Editor of the BRITISH MEDICAL JOURNAL, was asked to look over the periodicals sent to the Library, and determine from time to time which should be preserved, and bound, or filed. Letters of thanks from the School of Medicine, Cairo, and from the North-East London Clinical Society for duplicate books presented were read.

INDEX MEDICUS COMMITTEE.

THIS Committee was appointed by the Council to consider whether the Association should undertake to issue a publication similar to Neale's *Medical Digest* or the *Index Medicus*.

A preliminary meeting was held on November 27th, 1902, when there were present the Chairman of Council (Mr. Andrew Clark) in the chair, the Treasurer (Dr. E. Markham Skerritt), Professor T. Clifford Allbutt, F.R.S., Mr. H. T. Butlin, Mr. N. C. Macnamara, and Dr. F. M. Pope. Mr. Louis Taylor, Assistant Editor of the BRITISH MEDICAL JOURNAL, attended by request.

A memorandum was presented by Dr. Pope, and it was resolved to communicate with Dr. H. Foster Morley respecting the Royal Society's *International Catalogue of Scientific Literature*, and to obtain information as to the proposed revival of the *Index Medicus*, and as to the cost of printing and publishing Neale's *Medical Digest*.

The Committee met again on January 20th, when there were present the Chairman of Council (Mr. Andrew Clark) in the chair, the Treasurer (Dr. E. Markham Skerritt), Mr. H. T. Butlin, Mr. N. C. Macnamara, and Dr. F. M. Pope. Mr. Louis Taylor attended by request. Dr. Pope submitted a communication from Dr. H. Foster Morley, Director of the Royal Society's *International Catalogue of Scientific Literature*, transmitting the following resolutions passed by the Executive Council:

1. That in the opinion of the Committee a Catalogue of Medical Literature would not be a success unless the preparation of the material were carried out on an International basis.
2. That with regard to the preparation of an International Catalogue of Medical Literature, if the Committee of the British Medical Association found that the matter was entertained by the leading Medical Corporations and Societies, and that these bodies would support the work if it were undertaken, the Executive Committee would then be prepared to bring the matter before the International Council of the International Catalogue of Scientific Literature.

Mr. Louis Taylor submitted a letter from Dr. G. M. Gould, of Philadelphia, stating that the trustees of the Carnegie Institute at Washington had voted 10,000 dollars a year to revive the *Index Medicus*, but had not consented to fill the gap left by its discontinuance a few years ago. It was resolved: "That in view of the information received from the Trustees of the Carnegie Fund, this Committee thinks it desirable to find out the cost of filling in the gap between the first and second series."

Further information was directed to be obtained as to the cost of the production of another appendix to Neale's *Medical Digest*, bringing it up to date.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1903.

MEETINGS of the Council will be held on April 22nd, July 8th, and October 21st in the Council Room of the British Medical Association, 429, Strand, London, W.C.

Reports of Branch Meetings.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE third ordinary meeting of the session 1902-3 was held in the Medical Institute, Birmingham, on December 11th, 1902, H. MALET, M.D., President, in the chair. There were fifty-eight members present.

Confirmation of Minutes.—The minutes of the previous meeting were read, confirmed, and signed.

Communication from Mr. Francis Fowke.—A letter was read from Mr. Fowke expressing his great appreciation of the resolution passed by the Branch last October, on his retirement from the office of General Secretary of the Association.

[The scientific part of the proceedings was published in the BRITISH MEDICAL JOURNAL of January 10th, p. 82.]

STAFFORDSHIRE BRANCH.

THE first general meeting of the session, 1902-1903, was held at the North Stafford Hotel, Stoke-upon-Trent, on November 27th, 1902. The President, Dr. W. HIND, in the chair. Twenty-four members were present.

Confirmation of Minutes.—The minutes of the last general meeting were read, approved and signed.

The Retirement of Mr. Fowke.—On the motion of the PRESIDENT, seconded by Mr. W. D. SPANTON, and supported by Dr. RIDLEY BAILEY, the following resolution was unanimously adopted:

That the members of the Staffordshire Branch learn with regret of the retirement through ill-health of Mr. Francis Fowke from the position of General Secretary to the Association. They wish to convey to him their appreciation of the value of the work done by him on behalf the Association in the long period of twenty-one years during which he held the office of General Secretary. They gratefully acknowledge the courteous manner in which he has always dealt with the Branch, and hope he may be spared many years to enjoyed his well earned rest.

[The scientific part of the proceedings was published in the JOURNAL of January 31st, p. 255.]

SOUTHERN BRANCH: SOUTH EAST HANTS DISTRICT.

THE autumn half-yearly ordinary meeting was held at Portsmouth on November 11th, 1902. The chair was occupied by Dr. LLOYD OWEN, and there were twenty-four members present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Election of Officers.—The following were elected officers for the ensuing year:—*President-elect:* Dr. Lysander Maybury; *Auditors:* Drs. A. M. Garrington and E. W. Phillips.

Portsmouth Medical Library.—The SECRETARY announced the addition of several new works to the library.

Clinical Evenings.—The SECRETARY also announced that the first clinical evening would be held towards the end of January, 1903.

[The scientific part of the proceedings was published in the BRITISH MEDICAL JOURNAL of January 10th, p. 82.

SOUTHERN BRANCH: SOUTH WILTS DISTRICT.

A MEETING of the South Wilts District was held on January 15th, at the Infirmary, Salisbury. There were present Dr. J. P. WILLIAMS-FREEMAN (Weyhill) in the chair, and Messrs. E. T. Fison, M.D., H. D. Manning, L.S. Luckham (Salisbury), R. L. Willson (Warminster), H. L. Wilks, Gilbert Temple, M.D. (Salisbury), W. J. Harris, M.D. (Shaftesbury), W. Gordon, H. P. Blackmore, M.D. (Salisbury), C. R. Straton, R. T. Richmond (Wilton), and J. E. Gordon, Honorary Secretary.

There were also present Surgeon-General Everett, Colonel Coutts, R.A.M.C., and David Ferrier, M.D.

Confirmation of Minutes.—The minutes of the last meeting were read and approved.

Election of Vice-President.—Dr. W. W. Ord was unanimously elected Vice-President for the ensuing year.

Hartley University College, Southampton.—Mr. C. R. Straton was unanimously elected a representative governor for the Hartley University College, Southampton.

Reconstitution of the Association.—Mr. H. J. MANNING read a paper on the reconstruction of the boundaries of the British Medical Association.

[A report of the scientific proceedings was published in the JOURNAL of January 31st, p. 257.]

SOUTH-WESTERN BRANCH.

THE winter intermediate meeting of this Branch was held at the Atheneum, Plymouth, on January 21st. Mr. J. DELPRATT HARRIS, President, was in the chair, and thirty other members were present.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Deceased Members.—The PRESIDENT spoke in feeling terms of the loss sustained by the Branch since the previous meeting by the death of Dr. J. Harper (Vice-President), Mr. Karkeek (Vice-President), and Drs. G. Evans, Bankart, J. Elliot, and N. E. Norway, and he proposed that a vote of sympathy be sent to the family of the deceased members.—This was seconded by Mr. PAUL SWAIN and carried unanimously.

[The scientific proceedings were published in the JOURNAL of January 31st p. 259.]

ULSTER BRANCH (FORMERLY NORTH OF IRELAND).

THE winter meeting of the Branch was held in the Medical Institute, Belfast, on January 22nd; Professor THOS. SINCLAIR, F.R.C.S.Eng., President, in the chair. Fifty-three members were present.

Confirmation of Minutes.—The minutes of the autumn meeting were read and confirmed.

Report of Council.—The SECRETARY (Dr. Calwell) read the report of Council.

New Members.—James Hamilton Stewart, M.B., R.U.I. 4, Clifton Park Avenue, Belfast; Acheson Aiken, L.R.C.P. and S.I., Tullyhommon, Petigo, co. Donegal; William M'Lorinan, L.R.C.P. and S.I., Cushendall, co. Antrim; John Hope Reford, M.B., R.U.I., Balinderry, co. Antrim; William Nicholson M'William, M.D., Bambridge, co. Down; William Dobbin, F.R.C.S.I., Bambridge, co. Down; William Chancellor, M.B., R.U.I., Bambridge, co. Down; John Lusk Torrens, L.R.C.P. and S.Edin., Connor, Ballymena, co. Antrim.

Formation of Division.—It was reported that the "Armagh" and "North-East" or Ballymoney Divisions had been formed; the new rules for the Branch were under consideration, and would be printed and circulated among the members before the spring meeting; and the Council recommended that the two general meetings in Belfast should in future be held on Wednesdays at 4 p.m. The HONORARY SECRETARY proposed and Dr. GRAY (Armagh) seconded the adoption of the report, which was agreed to.

[The scientific proceedings were published in the JOURNAL of January 31st, p. 257.]

QUEENSLAND BRANCH.

THE annual meeting of this Branch was held at Brisbane on December 5th, 1902.

Election of Officers.—The following appointments for 1903 were made:—*President:* G. Herbert Hopkins, F.R.C.S. *Vice-Presidents:* W. S. Byrne, M.D., M.R.C.P.; P. Bancroft, M.B. Ch.M. *Treasurer:* J. Espie Dods, M.B., B.S., Dip. State Med. (157, Wickham Street, Brisbane). *Curator of Library and Museum:* C. S. Hawkes, M.R.C.S., L.R.C.P. *Council:* A. Jefferies Turner, M.D.Lond.; the Hon. W. F. Taylor, M.D., M.L.C.; W. N. Robertson, M.B., M.S.; Wilton Love, M.B., Ch.M. *Auditors:* A. C. F. Halford, M.D., Ch.B.; E. W. Kerr Scott, M.B., C.M. *Secretary:* A. B. Brockway, M.R.C.S., L.R.C.P.

Report of Council.—The report of Council, which showed a year of good work, was adopted.

Australian Natives Association.—A discussion took place upon the attitude of the profession towards the Australian Natives Association, and it was resolved *nem. con.*:

That as the Australian Natives Association is not a purely benefit society, medical appointments in connexion therewith are inimical to the interests of the profession.

SYDNEY AND NEW SOUTH WALES BRANCH.

THE regular monthly meeting of this Branch was held at the Royal Society's Room, Sydney, on September 26th, 1902; Dr. BRADY, Vice-President, in the chair. There were sixty-three members and one visitor present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

New Member.—The PRESIDENT announced the election of Dr. McDouall of Callan Park.

Next General Meeting.—The HONORARY SECRETARY announced that the next general meeting of the Branch would be held at Newcastle on Friday, October 31st, and that a special general meeting would be held on Friday, October 10th, in the Royal Society's Room to discuss the scheme for compensation as drawn up by the Subcommittee, also the report of the Council on the subject of insurance fees. Drs. MacCormick and Sinclair Gillies would read papers at the Newcastle meeting.

Communications.—Dr. WILKINSON read a paper on influenza and its bacillus, and exhibited some microscopic specimens. A discussion ensued, in which Drs. CHARLES MACLAURIN, JAMIESON, LITCHFIELD, MEGGINSON, STACY, MACPHERSON, BINNEY, FIASCHI, and BRADY took part. Dr. WILKINSON replied.—Dr. MAITLAND read notes on the following cases: (*a*) Strangulated hernia, with excision of 18 in. of gangrenous gut; (*b*) appendicitis in a hernial sac; (*c*) a case of calculous pyonephrosis in a movable kidney—nephro-ureterotomy; (*d*) removal of villous papilloma of the bladder. Drs. HINDER, CHARLES MACLAURIN, FIASCHI, BOWKER, and WORRALL made some remarks on the different cases. Dr. MAITLAND replied.—Dr. W. J. MUNRO exhibited specimens of cysticercus echinococcus multilocularis. Dr. WILKINSON made remarks on the exhibit.

A special general meeting of this Branch was held at the Royal Society's Room, Sydney, on October 10th, 1902. Dr. RENNIE, President, in the chair. There were thirty-three members present.

New Members.—The PRESIDENT announced the election of Drs. W. G. Plummer and Grace Russell as members of the Association.

Fees for Insurance.—The HONORARY SECRETARY moved the adoption of the report of the Council on the subject of fees for insurance: (1) That where certificates of health only are required for insurance under £100 the fee be 10s. 6d.; (2) that in every case where a schedule has to be filled in the fee be £1 1s. Dr. LICHFIELD seconded the adoption. A discussion ensued, in which Drs. READ, ARTHUR, BINNEY, HALL, SINCLAIR GILLIES, MACPHERSON, and RENNIE took part. It was resolved to refer the question to the Council for further consideration.

New South Wales Practitioners' Defence Fund.—Dr. FURNIVAL moved the following resolutions:

1. That a fund be formed to be known as the "New South Wales Lodge Practitioners' Defence Fund."

2. That its objects be to reimburse medical men who may resign lodge appointments at the instigation of or with the approval of the New South Wales Branch of the British Medical Association.

3. That the control of the fund shall be in the hands of three trustees, who shall be elected by the members, and shall hold office for a period of three years each, a treasurer and secretary and ten councillors, who shall be elected at the annual meeting, and shall hold office for one year. All these office-bearers shall be eligible for re-election. The Council shall elect its chairman from among its own members annually, or oftener should a vacancy occur.

4. That the fund shall be raised by annual subscriptions of 21s. and and upwards, and donations.

5. Any medical man desiring assistance from this fund shall make application to the Council of the local Branch of the British Medical Association, and on their recommendation the Committee of this fund shall investigate the case, and decide on the amount of assistance to be granted. In the general interests of the profession, and with the approval of the Council of the local Branch of the British Medical Association, the Committee may, under special circumstances, make grants to non-subscribers.

6. The first Committee, as soon as elected, shall draw up rules and regulations for the general control of the business of the fund.

Dr. THOMAS seconded the resolutions, and Drs. BINNEY, GILLIES, MCKAY, and READ discussed the question. Dr. SINCLAIR GILLIES moved the following amendment:

That a circular be sent to all members of the Branch and all members of the profession eligible for membership of the Branch embodying the resolutions, and asking for an expression of opinion on the question of starting such a fund, and also as to whether they are prepared to become subscribers.

Dr. CLARENCE READ seconded the amendment, which was carried.

The regular general meeting of the Branch was held at the Chamber of Commerce, Newcastle, on October 31st, 1902; Dr. G. E. RENNIE, President, in the chair. Thirty-two members and three visitors were present.

Confirmation of Minutes.—The minutes of the previous general and special general meetings were read and confirmed.

Papers.—The PRESIDENT apologized for the absence of Dr. MacCormick, and asked Dr. CRAGO to read the paper prepared by Dr. MACCORMICK, entitled Notes on Pylorectomy. A discussion ensued, in which Drs. HINDER, BOWKER, HANKINS, and RENNIE took part.—Dr. SINCLAIR GILLIES read a paper on a case of tumour of the spinal cord. Dr. FLASHMAN also made remarks.

The regular monthly meeting of the Branch was held at the Royal Society's Room, Sydney, on November 28th, 1902; Dr. G. E. RENNIE, President, in the chair. There were fifty-two members present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Communications.—Dr. F. A. BENNET exhibited a patient suffering from lichen pilaris.—Dr. HERSCHELL HARRIS gave a lantern exhibition of selected skiagraphs.—Dr. J. L. BEESTON read a paper on removal of fibroid tumour, together with gravid uterus. A discussion ensued, in which Drs. WORRALL, BARRINGTON, MCKAY, and TAYLOR YOUNG took part; Dr. BEESTON replied.—Dr. CHARLES MACLAURIN read a paper on the incidence, symptoms, and treatment of strangulated hernia in elderly people.—Dr. POCKLEY exhibited a growth removed from apex of orbit of a child aged 3 years, with preservation of the globe.

The regular general meeting of this Branch was held at the Royal Society's Room on December 12th, 1902, Dr. BRADY, Vice-President, in the chair. There were fifty-four members present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

New Members.—The CHAIRMAN announced the election of the following new members: Drs. J. Farrington, C. C. Cocks, Mario Giommi, E. S. Hawthorn, and John Leva.

Communications.—Dr. BARRINGTON read a paper on hydroperitoneum in pelvic disease. A discussion followed in which Drs. WORRALL, MCKAY, and BRADY took part; Dr. BARRINGTON replied.—Dr. HANKINS exhibited a foreign body as removed from the ear by a new method.—Dr. SAWKINS read a paper on the administration of anaesthetics in abdominal surgery.—Dr. JAMIESON read a paper on two cases of death under ether. Drs. MCKAY, LITCHFIELD, SINCLAIR GILLIES, SHELDON, TODD, PERKINS, QUAIFE, and WADE discussed the papers; Drs. SAWKINS and JAMIESON replied.

CEYLON BRANCH.

A PATHOLOGICAL meeting was held in the Medical Students' Library, Colombo, on August 1st, 1902. Several short papers were read and microscopical and macroscopical card exhibits were shown. Refreshments, cigars, and cigarettes were served. About sixteen persons attended.

Communications.—Mrs. FYSH first read a short paper on a cases of round worms in the bronchi.—Dr. S. C. PAUL read a report upon the morbid anatomy of suppurative phlebitis of the spermatic cord. He and Dr. Chalmers considered that septic micro-organisms could exist in the blood, and that these coming across the veins of a varicocele damaged by a strain were able to set up an endophlebitis resulting in clotting of the blood, infiltration of the vein wall and the tissue of the cord, in and around the pampiniform plexus, with leucocytes which by dying formed the abscesses. The testicles, vas deferens, and the spermatic artery were healthy.—Dr. CHALMERS showed specimens of *Anopheles ciliaris* and *barbirostris* which he had found in Colombo. He showed for Dr. SINNE-TAMBY a case of aneurysm of the aorta which was most difficult to diagnose owing to the left lung being in an advanced condition of phthisis, secondary to the pressure of the aneurysm on the left bronchus, and to the fact that the right lung was very emphysematous and intervened between the sternum and the aneurysm. There were no pressure symptoms and no signs of any stretching of the recurrent laryngeal nerve, erosion of the vertebrae, or pressure on the oesophagus. The patient had died suddenly from rupture of the aneurysm into the left bronchus.

Specimens.—The microscopical specimens exhibited were: (*a*) Section of an anencephalous chick embryo, age 3 days, and a comparison section of a normal chick embryo of same age; (*b*) high and low power specimens of suppurative phlebitis of the spermatic cord; (*c*) high and low power specimens of the kidney from a case of puerperal eclampsia; (*d*) several specimens of the wing, leg, proboscis, palpi, and scales of *Anopheles*. The macroscopical specimens included: (1) Kidneys from a case of puerperal eclampsia; (2) patent foramen ovale in a man aged 30 years; (3) two cases of cerebral abscess; (4) haemorrhage into the internal capsule of the brain; (5) horseshoe-shape kidney from the lunatic asylum; (6) suppurative phlebitis of the spermatic cord; (7) two aortic aneurysms; (8) round words *in situ* in a bronchus; (9) double ureters.

An ordinary meeting was held at Colombo on October 4th, 1902, Dr. W. G. VAN DORT, President, in the chair. Nine members were present.

Confirmation of Minutes.—The minutes of the two previous meetings were read and confirmed.

Arrears of Payment.—Arrears of payment of subscription were considered, and it was decided to consider the question again at the general meeting to be held on December 20th.

Letters of Condolence.—It was decided that letters of sympathy and regret should be sent to the families of the late Drs. J. S. Johnpulle and D. P. Nicholas, who were members of the Association.

Communications.—Mrs. FYSH showed an interesting case of hernia, probably hernia of the stomach, for diagnosis, and read an account of the case.—Dr. A. J. CHALMERS showed curves illustrating the total number of cases of disease in the western half of the island and in the eastern half of the island, showing that January was the most unhealthy month in both the east and the west, and that the total disease curve closely corresponded with the malarial curves, which he also showed, modified mainly by dysentery and diarrhoea. The eastern total disease curve was very much like the malarial curve. The curves were then compared with curves of the rainfall, and it was shown that the rainfall rose and reached a maximum before either the total disease or the malarial curves rose and reached their maxima. Dr. Chalmers was of opinion that the slow rise of the malarial curve during the rapid rise of the rain curve was due to the old cases of malarial fever getting chills and fever. That the rapid rise of the malarial curve to a maximum one month after the maximum of the rain curve was due to development of *Anopheles* after the heavy rain ceased. The *Anopheles* then found a number of the old malarial cases with the parasite in their blood, and were thus able to disseminate the disease and hence to make it epidemic. November was the month of greatest rainfall and January of total disease, of malaria, and of mosquitos.—Dr. Chalmers read an account of a case of trichorrhexis nodosa barbae, which Dr. E. P. Aserappa had kindly brought to his notice, due apparently to an aspergillus growing in the shaft of the hair.

An extraordinary meeting was held at Colombo on November 15th, 1902, the PRESIDENT in the chair. Nine members were present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Retirement of Mr. Fowke.—The retirement of the General Secretary of the British Medical Association, Mr. Francis Fowke, after thirty-two years' service was announced, and it was proposed by Dr. CHALMERS, seconded by Dr. W. G. VAN DORT, supported by Dr. W. H. DE SILVA, and carried unanimously:

That the Ceylon Branch, which started in his term of office as General Secretary, should present him with an illuminated address.

Five designs for this address were submitted from Mr. Ernest Van Dort, and the second design was chosen to cost Rs. 110. The words on the illuminated address are to be as follows:

To Francis Fowke, Esq.

We the undersigned President, Vice-Presidents, Secretary, and members of the Council of the Ceylon Branch of the British Medical Association on behalf of the members of that Branch, beg to tender to you our deepest regret at your retirement from the post of General Secretary of the Association.

It was during your term of office that the Ceylon Branch was founded, and the President, officers, and members take this opportunity of your retirement to express their thanks for your kindness and sympathy to the Branch and to its representatives while in England.

We trust that you may long be spared to enjoy the rest you have so worthily earned.

The Reconstitution of the Association.—The new rules of the Association were then explained, and especially those which applied to Ceylon, they are as follows: The Association consists of Divisions, which may consist of any number of members; Divisions are united into Branches. Each Division has a definite locality, and every person in that locality who is a member must belong to that Division. Each Branch and Division must have a secretary, who must be a member. Only ordinary members have the right to vote. I. New members can only be elected by the Branch Council. A new member must be a registered practitioner or be possessed of a registrable qualification (Rule III). He must not be disqualified under Rule IX (that is, must have paid up any arrears). He must apply in writing to the Branch Secretary. He must state his agreement to conform to regulations, by-laws, and local rules, and to pay his subscription for the current year. Notice must be given by the Branch Secretary to the Branch Council and to the General Secretary. II. Subscription. The subscription is 25s., and should be all paid to the General Secretary, who will allow 4s. per member in aid of Branch expenses, but in the case of Branches outside the United Kingdom a person may be chosen locally to receive subscriptions. III. Expulsion of members. Any Branch being out of the United Kingdom and having more than thirty members can expel any member on the representation of two members at a special meeting after one month's notice, Rule XLIV (b) under XLIII, if a majority of two-thirds are in favour. IV. Representative. One member of Council can be elected for a Branch of 200 members for three years, and can be continued for eight years. It was decided that the Council should consider the new rules of the Association and modify the Branch rules to suit these and report to the general meeting, particularly with regard to the local subscription, which will have to be raised from Rs. 17/50 to Rs. 19 for out-station members in order to cover the new subscription of £1 5s.

Erection of a Porch.—It was decided that with the aid of the Colonial Medical Library, Colombo, a porch be erected over the door into the museum, to enable members to alight from carriages, rickshaws, etc., without getting wet, a sum of Rs. 130 being voted for the purpose.

Communications.—Dr. S. C. PAUL read an interesting and instructive paper on post-dysenteric arthritis. He said that arthritis developing after dysentery was by no means a common occurrence in the tropics, but European writers had noted epidemics. While acting for Dr. M. Sinne-Tamby in August and September he had seen four cases. The chief characters were the supervention of arthritis of the larger joint immediately or a variable time after dysentery. It might be monarticular or polyarticular. The effusion was chiefly perisynovial, but it might be in the joint itself. It was like gonorrhoeal arthritis, but differed by not causing contraction of the fasciae and ligaments, and in not running a long course. It quickly disappeared by the application of a counter-irritation. It might be due to toxins or to the bacillus infecting the joints. It was not found after amoebic dysentery. It might be a sequela to a special form of dysentery not yet properly understood. The prognosis was good unless pyogenic organisms gained entrance. Treatment: Simple cases should be treated with counter-irritation by means of small flying blisters.—Dr. W. H. DE SILVA exhibited a case of congenital absence of one eye.

ELECTION OF MEMBERS.

ANY candidate for election should forward his application upon a form, which will be furnished by the General Secretary of the Association, 429, Strand. Applications for membership should be sent to the General Secretary not less than thirty-five days prior to the date of a meeting of the Council.

GUY ELLISTON, *General Secretary*.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m. Members can have their letters addressed to them at the office.

BRITISH MEDICAL ASSOCIATION LIBRARY.

List of Presentation of Books, etc.

Presented by the Authors:
Bruce, J. Mitchell. Lettsomian Lectures on Heart Disease in Middle and Advanced life. 1901.
Goo, S. Medical Lectures and Aphorisms. 1902.
Hamer, W. H. A Manual of Hygiene. 1902.
Saundby, R. Medical Ethics: A Guide to Professional Conduct. 1902.
Schofield, A. T. Force of Mind. 1902.
Stirling, Wm. Some Apostles of Physiology. 1902.
Walker, Norman. Introduction to Dermatology. 2nd Edition. 1902.
Williams, Watson. Diseases of the Upper Respiratory Tract. 4th Edition. 1902.

Presented by S. J. Baker, Esq., M.R.C.S. (Abingdon).
Burnett. The Medical Adviser. 1825.
Cooper, Sir A. Lectures on Surgery. 1835.
Porter. On the Larynx and Trachea. 1826.
Rigby. On Midwifery. 1844.

Presented by G. P. Best, Esq., M.B. (Strawberry Hill).
Rayer. Atlas of Skin Diseases. 1835.

Presented by E. R. Dawson, Esq., M.R.C.S. (Leyton).
Symes. Principles of Surgery. 1863.

Presented by the Egyptian Government School of Medicine (Cairo).
Larrey, Baron. Mémoires, de Chirurgie Militaire et Campagnes 4 vols. 1817.

Presented by A. Emson, Esq., L.R.C.P. (Dorchester).
Baillie's Works. 1825.
Burns's Midwifery. 1817.
Cooper, A. Surgical Essays.
Lizars's Anatomical Plates.
And other volumes.

Presented by J. W. H. Eyre, Esq., M.D.
Guy's Pamphlets. Vol. 2. Various dates.

Presented by George Jones, Esq., M.R.C.S. (Lee).
Cooper. First Lines of the Practice of Surgery. 1836.
Davis. Obstetric Medicine. 1841.
Granville. Graphic Illustrations of Abortion. 1833.
Stokes. The Heart and Aorta. 1854.
Velpeau. Embryologie et Ovologie Humaine.
West, S. Diseases of Infancy and Childhood. 1848.

Presented by the Medical Officer to the Local Government Board.
Report by Dr. Buchanan on the Reinspection of Falmouth. 1902.
Report by Dr. Bulstrode. Enteric Fever at Whitehaven. 1902.
Report by Dr. Fletcher. Sanitary Circumstances at Kidsgrove. 1902.
30th Annual Report of the Medical Officer, L.G.B., 1900, 1901, 1902.

Presented by the New Sydenham Society.
Atlas of Illustrations of Clinical Medicine and Surgery. Fasc. 1, 2. New series. 1902.

Presented by Major J. E. Pilcher, U.S.V. (Carlisle, Pennsylvania).
Journal of the Association of Military Surgeons of United States). Vol. 10 1901.

Presented by the Superintendent of Government Printing (Calcutta).
Scientific Memoirs. New series. I.

Presented by the War Office.
Report of the Army Medical Department. 1900.

Presented by the Editor of the British Medical Journal:
Ballantyne. Antenatal Pathology and Hygiene. 1902.
Beauregard, H. Matière Médicale Zoölogique. 1901.
Bennett, W. H. Massage in Recent Fractures.
Cheyne and Burghard. Manual of Treatment. VI (1). 1902.
Cunningham, D. J. Textbook of Anatomy. 1902.
France. Statistique Médical de l'Armée. 1899.
Grassi. Die Malaria. 2 Aufl. 1901.
Heath. Clinical Lectures. 2 Series. 1902.
Hughes (late A. W.) and A. Keith. Manual of Practical Anatomy. Vol. 3. 1902.
Mackenzie, J. Study of the Pulse. 1902.
Marique. Etude sur les Corps Etrangers du Coeur.
Marsh, H. Clinical Lectures and Essays. 1902.
Paget, Stephen. Selected Essays and Addresses by Sir Jas. Paget. 1902.
Schäfer, E. A. Essential of Histology. 6th Ed. 1902.
Sutton and Giles. Diseases of Women. 3rd Ed. 1902.
And other volumes.

Calendars, Reports, and Transactions have been received from the following Bodies:
Aberdeen University Calendar. 1902-3.
American Climatological Association Transactions. Vol. 17. 1901.
American Dermatological Association Transactions. 1901.
American Orthopedic Association Transactions. Vol. 14. 1902.
Anderson's College Medical School Calendar. 1902-3.
Army Medical Department Report. Vol. 42. 1902.
Belfast Queen's College Calendar. 1902-3.
Bristol University College Calendar. 1902-3.
British Congress on Tuberculosis Transactions. 1902.
Calcutta Health Report. 1901.
Calcutta University Calendar. 1902-3.
Childhood Society Transactions. Vol. 1. 1901.
Commissioners in Lunacy. 56th Report. 1902.
Durham University Calendar. 1902-3.
Edinburgh University Calendar. 1902-3.
Glasgow University Calendar. 1902-3.
Hyderabad Assigned Districts. Report on Vaccination. 1901.
Johns Hopkins Hospital Reports. Vol. 10.
Leeds, Yorkshire, College Calendar. 1902-3.
Liverpool School of Tropical Medicine Report on Yellow Fever. 1902.
Liverpool University College Calendar. 1902-3.
Middlesex Hospital Report of the Registrars. 1900.
New Jersey State Board of Health Report. 1901.
New Zealand University Calendar. 1902-3.
Owens College, Manchester, Calendar. 1902-3.
Presbyterian Hospital Report. Vol. 5. 1902.
St. Bartholomew's Hospital Medical School Calendar. 1902-3.
St. George's Hospital Medical School Calendar. 1902-3.
St. Mary's Hospital Medical School Calendar. 1902-3.
St. Thomas's Hospital Reports Vol 29. 1901.
Shanghai Municipal Council Health Report. 1901.
Society of Anaesthetists Transactions. Vol. 4. 1901.
Thompson-Yates Laboratory Reports. Vol. 4.
Toronto University Calendar 1902-3.
University College, London. Reports on Pathological Chemistry. Vol. 4.
University College Hospital Registrar's Report. 1900.
Westminster Hospital Medical School Calendar. 1902-3.

Books Needed to Complete Series:

The Librarian will be glad to receive any of the following volumes which are needed to complete series in the Library:
American Climatological Transactions. Vols. 1, 4, 5, 6.
American Dermatological Association. Transactions. Vols. 5, 7, 8 and 11.
American Journal of the Medical Sciences. New series, vols. 4, 5, 1842-43; vols. 14, 15, 1847-48; vols. 18-30, 1850; vol. 33, 1857; vol. 46, 1864-65; vol. 59; or any parts of these vols.
American Journal of Ophthalmology. Vols. 1-9.
American Laryngological Association. Transactions. Vols. 1-6, 8-9.
American Medical Association. Transactions 1-28, 30, 31.
American Otological Society. Transactions. Vol. 3, part 2, 1883.
American Public Health Association. Transactions. Any vols.
Analyst. Vols. 1-24.
Annals of Surgery. Vols. 11: 13-16; and 26-27.
Archives Générales de Médecine. 1831-39 inclusive; 1846-1855 inclusive; 1857-64 inclusive; 1871.
Archives of Ophthalmology. Vols. 1-3, 6, 7, 14-21.
Archives of Otology. Vols. 1-7, and 20, 21, 22.
Archives of Pediatrics. Vols. 1-11.
Asylum Journal of Mental Science. Vol. 1, 1854.
Bentley and Trimen. Atlas of Medicinal Plants.
Bristol Medical-Chirurgical Journal, 9-20.
British Journal of Dermatology. Vol. 2, part 3.
Caledonian Medical Journal. Vol. 1 prior to 1894.
Carmichael Essays. Laffan, 1879. Rivington, 1879.
Centralblatt für Augenheilkunde. Hirschberg. 1891, January-July, 1892, January, September, and May. 1897.
———— für Bakteriologie. Bound volumes prior to 1899.
———— für klinische Medicin. 1880-1883; all 1888, 1891, No. 26; 1892, No. 17.
———— für medicinischen Wissenschaften. Vols. 1-19.
Congrès Français de Chirurgie. Transactions 1, 2, 3, 6, and 10.
Congrès Internat. d'Obstétrique et de Gynécologie. 1, Bruxelles, 1892; 3, Amsterdam, 1899.
Connecticut State Board of Health Report. Vol. xi. 1887-8.
Denman. Midwifery. 1801.
Dermatological Congress. Paris, 1889; Vienna, 1892, and Paris, 1900
Dublin Quarterly Journal of the Medical Sciences. Vols. 1-10, 13-28, 35-40.
Edinburgh Medical and Surgical Journal. Vols. 67-82. 1847-1855.
Edinburgh Obstetrical Society. Transactions. Vols. 5 and 22.
Fothergill. Midwifery. (Recent).
Gale. Surgery. 1562.
Glasgow Medical Journal. 1833-1868.
———— Pathological Society. Transactions. Vols. 1 and 2.
Guy's Hospital Gazette. Vols. 1-13.
Hare. Therapeutics. Vols. 3-4.
Hunterian Transactions containing 76th Report.
Indian Census Report. 3rd census, 1901.
———— Medical Gazette. 1866-1884.
International Congress of Hygiene. Congresses 1 to 6, 9 to 10.
International Medical Congress (13th). Vol. xi. Transactions.
International Ophthalmological Congress. Transactions of 5th, New York, 1876.
Johns Hopkins Hospital Bulletin. Vols. 1 10.
Journal of Laryngology. Vols. 1-9.
Lancet, 1850, vol. 2, pages 425-6, and August 23rd, 1851.
Pediatrics, prior to 1902.
Ophthalmic Review, January, 1882.
Pollatschek. Therapeutische Leistungen des Jahres. 1894, 1895, 1900.
Provincial Medical and Surgical Journal. 1840. Being the first 52 numbers before October 2nd, 1841
Recueil d'Ophtalmologie. 1801, Jan.-June; 1892, December.
Registrar-General's Annual Summary of Weekly Returns. 1866 73, 1876, 1880, 1887.
Revue Générale d'Ophtalmologie. Prior to 1888, and 1891-92.
St. Bartholomew's Hospital Gazette. Vols. 1-6.
St. George's Hospital Gazette. 1-7.
St. Mary's Hospital Gazette. 1-5.
Semaine Médicale. Prior to 1890, and title and index to year 1892.
South African Medical Journal. February, April, 1895. And Titles for vols. 3 and 4.
Starling. Physiology.
Turner (D). Art of Surgery. Vol. 2. 1725.
University College Hospital Reports. Before 1877 and 1892-93.
Virchow's Archiv. Any vols. prior to 151.
Wiener klinische Wochenschrift. Nos. 5 and 6. 1899. Titles 1892 and 1888.
Willcock. Laws of the Medical Profession. 1836.
Ziemssen's Cyclopaedia. Supplem. Vol.

Applications for duplicates from medical societies forming libraries may be addressed to the Librarian, 429, Strand.

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MARCH 7TH, 1903.

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ASSOCIATION INTELLIGENCE.

PROCEEDINGS OF COUNCIL.

AT a special meeting of the Council held in the Council Room of the Association, 429, Strand, W.C., on Wednesday, February 25th, 1903.

Present:

Mr. ANDREW CLARK, Chairman of Council, in the Chair.
Dr. T. D. GRIFFITHS, President-elect.
Dr. E. MARKHAM SKERRITT, Treasurer.

Dr. EDGAR G. BARNES, Eye.
Dr. JAMES BARR, Liverpool.
Dr. RAYNER W. BATTEN, Gloucester.
Dr. MICHAEL BEVERLEY, Norwich.
Dr. LANGLEY BROWNE, West Bromwich.
Mr. JAMES CANTLIE (Hong Kong Branch), London.
Dr. ALFRED COX, Gateshead-on-Tyne.
Brigade-Surgeon-Lieut.-Col. E. F. DRAKE-BROCKMAN (South Indian and Madras Branch), London.
Mr. GEORGE EASTES, M.B., London.
Dr. WILLIAM A. ELLISTON, Ipswich.
Professor DAVID W. FINLAY, LL.D., Aberdeen.
Dr. JOHN H. GALTON, Upper Norwood.
Dr. BRUCE GOFF, Bothwell.
Dr. DAVID GOYDER, Bradford.
Dr. MAJOR GREENWOOD, London.
Dr. JOSEPH GROVES, Carisbrooke.
Dr. HENRY HANDFORD, Nottingham.
Dr. W. M. HARMAN, Winchester.
Mr. W. F. HASLAM, Edgbaston.
Dr. T. ARTHUR HELME, Manchester.
Dr. C. HOLMAN, London.
Sir VICTOR HORSLEY F.R.S., London.
Dr. W. A. MACKINTOSH, Stirling.
Dr. C. H. MILBURN, Hull.
Sir JOHN WILLIAM MOORE, M.D., Dublin.
Mr. W. JONES MORRIS, Portmadoc.
Mr. C. H. WATTS PARKINSON, Wimborne Minster.
Dr. H. H. PHILLIPS-CONN, Reading.
Mr. H. BETHAM ROBINSON, M.S., London.
Dr. G. E. SHUTTLEWORTH, Richmond Hill.
Mr. W. D. SPANTON, Hanley.
Mr. HENRY STEAR, Saffron Walden.
Dr. ROBERT STIRLING, Perth.
Dr. W. J. TYSON, Folkestone.
Mr. T. JENNER VERRALL, Brighton.
Dr. NORMAN WALKER, Edinburgh.
Mr. DENIS WALSHE, Craigue.
Dr. W. L. WINTERBOTHAM, Bridgwater.
Mr. R. W. O. WITHERS, Shrewsbury.

The General Secretary read notice convening the meeting:

British Medical Association, 429, Strand, W.C.,
Feb 13th, 1903

Dear Sir,—A special meeting of the Council will be held at the office of the Association, 429, Strand, on Wednesday, the 25th day of February, at 10.30 o'clock in the forenoon, to consider business left over from the meeting held on January 21st last, namely:

(1) The Areas of Divisions and of Branches.
(2) The Draft of Model Rules to be suggested to Divisions and Branches.
(3) Draft Model Rules of Branches and Divisions to regulate Ethical Procedure.
(4) The President-elect gives notice that he will move the suspension of Standing Orders under Standing Order 40, in order that he may propose a Section of Tropical Medicine, at the Swansea Meeting, to be added to the Sections already agreed.
(5) Any other business.

I am, yours faithfully,
GUY ELLISTON, General Secretary.

Read letters of apology from the President, Dr. Peter Bancroft, Dr. Henry Barnes, Dr. J. Brassey Brierley, Dr. Adolph Bronner, Mr. Henry T. Butlin, Mr. Colin Campbell, Mr. J. Ward Cousins, Dr. H. Radcliffe Crocker, Dr. W. Dyson, Dr. C. G. Gooding, Mr. Evan Jones, Mr. R. H. Kinsey, Dr. R. Maclaren, Brigade-Surgeon T. B. Moriaty, Dr. C. G. D. Morier, Dr. James Murphy, Surgeon-General T. F. O'Dwyer, Dr. Charles Parsons, Dr. R. W. Philip, Dr. F. M. Pope, Professor Saundby, Dr. A. Sheen, Dr. J. Roberts Thomson, Professor E. B. Whitcombe, and Dr. S. Woodcock.

The minutes of the Organization Committee of February 10th, 1903, were then considered.

Resolved: That the minutes of the Organization Committee of February 10th, 1903, be received.

The following Areas of Divisions and Branches which were referred back to the Organization Committee by the January meeting of Council were then considered, Branch by Branch, and approved as shown on pages xviii and xix.

That the Council be asked to consider the advisability of delegating to the Committee a standing authority to sanction, on behalf of the Council, minor changes in the boundaries of Divisions and Branches which the Committee shall first satisfy itself are agreed upon by those locally concerned.

An amendment was moved and seconded that the words in line 3 "on behalf of" be deleted, and the words "subject to confirmation by," be substituted.

The amendment having been put from the Chair, the same was declared to be lost.

The Chairman of Council reported that, upon a matter of urgency, the President-elect had given notice to move the suspension of the Standing Orders in order to consider the advisability of having a Tropical Medicine Section at the

THE FOLLOWING REFERRED AREAS OF DIVISIONS AND BRANCHES WERE APPROVED:

BRANCH.	AREA OF BRANCH.	AREA OF DIVISIONS.	
		Name.	Area.
LEINSTER	The Province of Leinster, except the part thereof included in the South-Eastern Branch.	*Dublin.*	The Parliamentary Borough of Dublin.
		East Leinster.	County Dublin; the southern part of County Meath; County Kildare; and County Wicklow (except the extreme southern part thereof).
		North Leinster.	County Louth; the northern part of County Meath.
		North-West Leinster.	County Longford; County Westmeath.
		Mid Leinster.	King's County; Queen's County.
		South East Leinster.	The extreme southern part of County Wicklow; County Wexford, except the extreme south-west part thereof.
		The precise boundaries of the several Divisions to be those shown in the official map.	
SOUTH-EASTERN OF IRELAND	The area to be composed of the areas of the Carlow, Kilkenny, and Waterford Divisions.	*Carlow.*	County Carlow.
		Kilkenny.	County Kilkenny.
		Waterford.	The southern part of County Tipperary, County Waterford; the extreme south-west part of County Wexford.
MUNSTER	The Province of Munster, except the part included in the Waterford Division.	*South Munster.*	Cork County.
		West Munster.	Kerry County.
		North Munster.	County Limerick; County Clare; the northern part of County Tipperary.
		The precise boundaries of the several Divisions to be those shown in the official map.	
PERTH	The County of Perth, except the parts thereof included in the areas of the Stirling and Dundee Branches.	*Perthshire.*	The area of the Division to be that of the Branch.
STIRLING	The Counties of Stirling, Kinross, and Clackmannan, and the part of the county of Perth served by the railway from Callander to Stirling.	*Stirling.*	The area of the Division to be that of the Branch.
NORTH WALES AND SHROPSHIRE ...	The six northern Welsh counties; Radnorshire, except New Radnor and Presteign; Shropshire.	*Flint and Denbigh.* *North Carnarvon and Anglesea.* *South Carnarvon and Merionethshire* *Shropshire.*	The boundaries of the Divisions to be those shown in the official map.
LANCASHIRE AND CHESHIRE	Previously agreed.	Thirty-one Divisions, named and bounded as shown in the official map, except as regards the areas marked on the said map "Manchester and Salford" and "Liverpool" respectively, each of which shall be the area of five Divisions having such boundaries between themselves as the Branch may determine, subject to the approval of the Organization Committee.	
NORTH OF ENGLAND.	The Counties of Northumberland and Durham; in Yorkshire, the Cleveland Parliamentary Division; the Town and Liberties of Berwick-on-Tweed.	Twenty Divisions, named and bounded as shown in the official map.	

THE FOLLOWING REFERRED AREAS OF DIVISIONS AND BRANCHES WERE APPROVED:—*Continued.*

Branch.	Area of Branch.	Area of Divisions. Name.	Area.
Yorkshire	The County of York, except the parts following namely: The Cleveland Division (to the North of England Branch); in the north-west, Hawes and Settle, and the part included by a line joining these, and drawn from each to the nearest point of the county boundary (to the North Lancashire and South Westmorland Branch); the Todmorden and Saddleworth District, east of the watershed (to the Lancashire and Cheshire Branch); the Holderness Parliamentary Division; the portion of the Buckrose Division south of and excluding Rillington Junction and Hunmanby, and the portion of the Howdenshire Division south-east of the railway from Market Weighton to Selby and including Market Weighton, Everingham, and Holme (to the East York and North Lincoln Branch).	Ten Divisions named and bounded as shown in the official map.	
East York and North Lincoln...	In Yorkshire: Hull; the Holderness Parliamentary Division; the portion of the Buckrose Division south of and excluding Rillington Junction and Hunmanby, and the portion of the Howdenshire Division south-east of the railway from Market Weighton to Selby and including Market Weighton, Everingham, and Holme; in Lincolnshire Grimsby Borough, and the Brigg Parliamentary Division.	*Hull.* *North Lincoln.*	The part of Yorkshire included in the Branch area, together with Barton-on-Humber. The part of Lincolnshire included in the Branch area, but excepting Barton-on-Humber.
Gloucestershire...	The County of Gloucester, north of and including Sharpness, Berkeley Road, and Dursley; but excluding Fairford and Lechlade, and the portion of the county east of Chipping Campden and Stow-on-the-Wold.	*Gloucestershire.*	The area of the Division to be that of the Branch.
Bath and Bristol...	In Somersetshire, the portion north of a line drawn immediately north of Highbridge, and south of Glastonbury, and Wincanton; in Gloucestershire, the part south of Sharpness, Berkeley Road, and Dursley; in Wiltshire, the part north of a line passing due east and west through a point between Westbury and Warminster.	*Bristol.* *Bath.* *Trowbridge.*	Having the boundaries shown in the official map.
Southern	Hampshire (except the portion west of, and including Christchurch and Ringwood); Wiltshire (except the portion north of a line drawn east and west through a point between Westbury and Warminster); and the Channel Islands.	Seven Divisions, named and bounded as shown in the official map.	

forthcoming annual meeting Upon this being put to the vote, and the necessary three-fourths majority obtained, it was moved and seconded, and resolved, that a Section of Tropical Medicine be added to the list of Sections at the annual meeting at Swansea, and that the Chairman of Council and President-elect invite the necessary officers of the Section to serve.

Upon a matter of urgency the suspension of the Standing Orders was moved, and the necessary majority having been obtained, it was resolved that the Council request the President of the Local Government Board to receive a deputation, in order that the recommendations respecting future vaccination legislation adopted by the Council at its meeting on January 21st, 1903, may be fully laid before him, namely:

(1) That revaccination be made compulsory by law, and that it be performed between the ages of 10 and 13 years;

(2) That both primary vaccination and revaccination be subject to the same provisions for conscientious objection as in the present Vaccination Act, but that the procedure for exemption should be more strictly defined in any future legislation;

(3) That the Vaccination Act should be administered directly by a department of the Local Government Board;

(4) That in future vaccination legislation no certificate of successful vaccination should be accepted unless it contain a statement as to the number and area of the vesicles produced;

(5) That all lymph shall be supplied by the Government, or by private establishments under Government supervision and guarantee;

(6) That every private practitioner furnishing the vaccination authority with certificates of successful and efficient vaccination, satisfying a standard fixed by the Local Government Board, should receive a suitable fee for each such certificate.

Resolved: That the nomination of the deputation be left in the hands of the Chairman of Council.

Upon a matter of urgency the suspension of the Standing Orders was moved and the necessary majority having been obtained, it was resolved: That the question of security of tenure of sanitary officers also be urged upon the President of the Local Government Board.

It was moved, seconded and resolved: That the Draft Model Rules for Branches and Divisions as submitted by the Organization Committee be approved. (See pp. xx to xxiii).

It was moved and seconded: That the Draft Model Ethical Rules be submitted to the Branch Councils for their opinion before being considered by the Council. (See p. xxiii).

Whereupon an amendment was moved and seconded that the Council do now proceed to consider the proposed Draft Ethical Rules.

The amendment having been put from the Chair the same was declared to be lost.

The original motion was then put from the Chair and declared to be carried.

Resolved: That a List of Members of Branches and Divisions be prepared and issued to the Council.

Resolved: That Dr. Tyson be appointed an additional Delegate to represent the Association at the forthcoming Madrid Congress.

MODEL RULES SUGGESTED FOR ADOPTION BY A BRANCH COMPOSED OF MORE THAN ONE DIVISION.

RULES OF THE BRANCH.

Constitution.

1. The Branch shall consist of the , , and Divisions.

Membership.

2. The Ordinary Members of the Branch (hereinafter called Members) shall be the Ordinary Members of the Divisions composing the Branch.

Branch Council.

3. The management of the affairs of the Branch shall be vested in the Branch Council, which shall consist of the Officers named in Rule 4, together with the {Member / Members} of the Central Council of the Association elected by the Branch, and Members elected by the Divisions in the manner prescribed in Rule 6.

Officers.

4. The Officers of the Branch shall be a President, President Elect, (Vice-Presidents), Treasurer, and {Secretary / Secretaries}.

The President shall be elected annually from among those Members of the Branch who have not held the said office during the previous years. He shall take office as President at the Annual Meeting of the year following the year of his election, and until then shall be designated President-Elect.

(The Vice-Presidents shall be elected for a term of years, and at the expiration of such term shall for a space of years be ineligible for re-election to the office of Vice-President.)

The (Treasurer and) {Secretary / Secretaries} shall be elected for a term of one year, and shall be eligible for re-election.

The above Officers shall be elected by voting papers sent to every Member of the Branch not less than 14 days before the Annual Meeting, containing the names of those Members who have been nominated for each office by the Council, or by any three Members of the Branch, in writing, to the Secretary, not less than three weeks before the Annual Meeting.

These voting papers shall be returned to the Secretary not less than three days before the Annual Meeting, and the result shall be ascertained by two scrutineers appointed for the purpose.

Election of Members of Central Council.

5. The Branch shall annually elect Members of the Branch as Members of the Central Council of the Association, in the manner and under the conditions prescribed in By-laws 22, 23, 25, 26, and as to matters not dealt with in the said By-laws, as in Rule 4:—

"(22) The elective Members of Council shall be elected by voting papers sent to each elector by post, the said voting papers containing the names of those candidates who have been nominated each by three electors, in writing, to the Secretary of the Branch, on or before an appointed day of which not less than 14 days' notice has been given in the JOURNAL.

"(23) Each Member of Council elected by a Branch in the United Kingdom shall be elected for one year, and at the end of that time shall be eligible for re-election, unless he has served as such member of Council for eight years successively, in which case he shall for one year be ineligible for election as such Member of Council.

"(25) No person shall be eligible for election as a Member of Council by a Branch in the United Kingdom unless at the time of his election he shall be a member of such Branch.

"(26) The return of the election of each Member of Council shall be communicated in writing to the Secretary of the Association by the President or Secretary of the Branch by which he is elected not less than 14 days prior to the Annual General Meeting of the Association."

Election of Members of Branch Councils by Divisions.

6. The number of Members of the Branch Council annually elected by the several Divisions shall be respectively as follows:—

The Division , the Division , etc.

Such Members shall be elected in the manner prescribed by the Rules in the respective Divisions.

Duties and Powers of Branch Councils.

7. The Branch Council shall have the following duties and powers:—

(*a*) To elect Members of the Association in the manner prescribed in By-laws 1 and 2—

"(1) Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Divisions and Branch to which he may at any time belong, and to pay his subscription for the current year.

"(2) Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association and to every member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than one month after the date of the said notice."

(*b*) To elect Extraordinary Members, subject to the Rules of the Branch, in accordance with Article VI and By-law 9—

"VI. Subject to the By-laws, any division or Branch may elect Extraordinary Members, whether as Associate or Complimentary Members. An Extraordinary Member shall not take part in any vote of the Division or Branch, but otherwise shall enjoy such privileges, and be subject to such obligations, as may respectively be conferred and imposed upon him by or in accordance with the By-laws."

"(9) Extraordinary Members shall be either Associate or Complimentary Members. Any Division or Branch may elect any Ordinary Member of any other Division or Branch as an Associate Member, and any Division or Branch not in the United Kingdom may elect as a Complimentary Member any qualified Medical Practitioner resident within the area thereof, but not eligible by birth or qualification for Membership of the Association. Divisions or Branches may by their local rules confer on Extraordinary Members such privileges other than that of voting, and impose such conditions of election as they may think desirable, subject to the sanction of the Council."

(*c*) To manage the financial affairs of the Branch.

(*d*) To consider the Annual Reports furnished by Divisions, and to furnish an Annual Report to the Central Council as prescribed in By-law 8—

"(8) Every Division shall furnish annually to the Branch Council during the month of January, and every Branch shall furnish to the Council of the Association not later than the 15th March, a Report of its proceedings during the previous year, a statement of its numbers, and a financial statement in such form as the Council may from time to time prescribe."

(*e*) To investigate cases of alleged professional misconduct of Members of the Branch, and to take on behalf of the Branch such further steps in connection therewith as may be required, subject to the Rules.

(*f*) To recommend new Rules, or the alteration or repeal of existing Rules, for the consideration of the Branch in the manner prescribed by Rule 12.

(*g*) To initiate or to consider proposed changes in the

boundaries of the Branch or of its constituent Divisions, and to report to the Branch thereupon.

(*h*) To exercise such other powers, and discharge such other duties, as the Rules of the Branch may for the time being provide, and generally to act on behalf of the Branch in all matters whereon the Rules do not expressly provide otherwise.

Quorum.

The quorum of the Branch Council shall be (one fourth of the total ?).

Vacancies in Branch Council.

8. In the event of the death or resignation of any Officer of the Branch, or of his ceasing to be a Member of the Branch, the Branch Council shall appoint some Member of the Branch to hold the office thereby vacated until the next Annual Meeting.

In the event of a vacancy similarly occurring in the representation of any Division on the Branch Council, the place shall be filled by the Division in accordance with the Rules thereof.

Ordinary Meetings.

9. Ordinary Meetings of the Branch shall be held on such days, at such times, and at such places as may be fixed by the Branch Council, or by the Branch Meeting. A Meeting, called the Annual Meeting, shall be held in the month of {May / June} of each year, and four weeks' notice thereof shall be given in the JOURNAL.

Business of Ordinary Meetings.

10. The business of an Ordinary Meeting of the Branch shall be set forth in the notice convening the Meeting, and shall be:—

(*a*) To transact such routine business of the Branch as may be brought forward by the Council or Officers.

(*b*) To consider any matters relative to the honour and interests of the Medical Profession which may be brought before the Meeting by the Branch Council or by a Division.

(*c*) To receive and discuss communications relative to the medical or allied sciences.

Unless with the sanction of two-thirds of those present and voting, no business shall be discussed under head (*b*) without notice thereof having been given to the Secretary at least 14 days before the Meeting, with the terms of any resolution which is intended to be proposed.

Business of Annual Meetings.

11. In addition to the ordinary business of any Ordinary Meeting, the business of the Annual Meeting shall be:—To receive the report of the election of new Officers, who shall, thereupon take office, unless it be otherwise provided; to receive the Report of the Council on the affairs of the Branch, and the annual financial statement; and to make new Rules, or alter or repeal existing Rules.

Special Meetings.

12. A Special Meeting may be convened at any time by the Branch Council, and shall be convened by the Secretary within 14 days of the receipt by him of a written requisition from any Division within the Branch, or of a requisition signed by Members of the Branch. Such requisition shall state the particular business to be placed before the Meeting. At least 7 days' notice of such Meeting shall be given to every Member of the Branch, and such notice shall state the business of the Meeting, and the exact terms of any resolution it may be intended to submit to the Meeting. No business shall be dealt with by the Meeting other than that which it may have been specifically convened to consider.

Rules.

13. New Rules, or alterations or repeal of existing Rules, may be proposed at the Annual or any Special Meeting by the Branch Council, or by a Division, or by the signatories of the requisition for a Special Meeting, and may be adopted by a majority of two-thirds of those present and voting; provided that if those present be fewer than two-thirds of the Members of the Branch, such change of Rules may be referred by the Branch Council to a vote of the Members of the Branch taken by voting paper, and shall be so referred if required by a resolution of a Division transmitted to the Branch Secretary within one month after the Meeting. In case of such poll of the whole Branch, a simple majority shall decide.

MODEL RULES SUGGESTED FOR ADOPTION BY A BRANCH COMPOSED OF ONE DIVISION.

RULES OF THE DIVISION AND BRANCH.

Area.

1. The area of the Division and Branch shall be such portions of the counties of and as are included within the boundary indicated in the official map for the time being.

Membership.

2. *Membership:*—

(*a*) *Ordinary.*—Every Member of the Association whose registered address in the books of the Association is for the time being situated within the area of the Division shall, *ipso facto*, be an Ordinary Member of the Division.

(*b*) *Extraordinary.*—Extraordinary Members of the Division may be elected in accordance with Article VI and By-law 9—

"VI. Subject to the By-laws, any Division or Branch may elect Extraordinary Members, whether as Associate or Complimentary Members. An Extraordinary Member shall not take part in any vote of the Division or Branch, but otherwise shall enjoy such privileges, and be subject to such obligations, as may respectively be conferred and imposed upon him by or in accordance with the By-laws."

"(9) Extraordinary Members shall be either Associate or Complimentary Members. Any Division or Branch may elect any Ordinary Member of any other Division or Branch as an Associate Member, and any Division or Branch not in the United Kingdom may elect as a Complimentary Member any qualified Medical Practitioner resident within the area thereof, but not eligible by birth or qualification for Membership of the Association. Divisions or Branches may by their local Rules confer on Extraordinary Members such privileges other than that of voting, and impose such conditions of election as they may think desirable, subject to the sanction of the Council."

Branch Council.

3. The management of the affairs of the Branch shall be vested in the Branch Council which shall consist of the Officers named in Rule 4, together with the Representative in Representative Meetings of the Association, and the Member of the Central Council elected by the Branch, and other Members elected in the manner prescribed in Rule 7.

Officers.

4. The Officers of the Branch shall be a President, President-Elect (Vice-Presidents), (Treasurer), and {Secretary, / Secretaries,} and shall be elected in the Annual Meeting.

The President shall be elected annually from among those Members of the Branch who have not held the said office during the previous years. He shall take office as President at the Annual Meeting of the year following the year of his election, and until then shall be designated President-Elect.

[The Vice-President shall be elected for a term of years, and at the expiration of such term shall be for a space of years ineligible for re-election to the office of Vice-President.]

The (Treasurer and) {Secretary / Secretaries} shall be elected for a term of one year, and shall be eligible for re-election.

Election of the Representative in Representative Meetings.

5. The Representative of the Division in Representative Meetings of the Association shall be elected in the manner prescribed in Article XXVII:—

"XXVII.—.....In the case of a Constituency formed within the United Kingdom, the Representative shall be elected by a General Meeting of Members of the Constituency, held not more than three months nor less than three weeks before the Annual Representative Meeting .....Such meeting shall be convened ..... by the Secretary of the Constituency, who, in the case of a Constituency composed of more than one Division, shall be chosen by the Secretaries of those Divisions, and, if they cannot agree, by the Council. The Secretary of each Constituency shall inform, not less than 14 days before the Representative Meeting, the General Secretary of the name and address of the Representative elected by such Constituency, and the General Secretary shall issue to such Representative a ticket of admission to the meeting."

Election of Members of Central Council.

6. The Branch shall annually elect Members of the Branch as Members of the Central Council of the Association in the manner and under the conditions prescribed in By-laws 22, 23, 25, 26:

"(22) The elective Members of Council shall be elected by voting papers sent to each elector by post, the said voting papers containing the names of those candidates who have been nominated each by three electors, in writing, to the Secretary of the Branch, on or before an appointed day of which not less than 14 days' notice has been given in the JOURNAL.

"(23) Each Member of Council elected by a Branch in the United Kingdom shall be elected for one year, and at the end of that time shall be eligible for re-election, unless he has served as such Member of Council for eight years successively, in which case he shall for one year be ineligible for election as such Member of Council.

"(25) No person shall be eligible for election as a Member of Council by a Branch in the United Kingdom unless at the time of his election he shall be a Member of such Branch.

"(26) The return of the election of each Member of Council shall be communicated in writing to the Secretary of the Association by the President or Secretary of the Branch by which he is elected not less than 14 days prior to the Annual General Meeting of the Association."

Election of Ordinary Members of Branch Council.

7. The other Members of the Branch Council shall be in number, and shall be elected annually in the Annual Meeting. Any Member who shall have served for five years consecutively shall be ineligible for re-election for one year.

Duties and Powers of Branch Councils.

8. The Branch Council shall have the following duties and powers:—

(*a*) To elect Members of the Association, in the manner prescribed in By-laws 1 and 2—

"(1) Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

"(2) Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than one month after the date of the said notice."

(*b*) To manage the financial affairs of the Branch.

(*c*) To furnish an Annual Report to the Central Council, as prescribed in By-law 8—

"(8) Every Division shall furnish annually to the Branch Council during the month of January, and every Branch shall furnish to the Council of the Association, not later than the 15th March, a Report of its proceedings during the previous year, a statement of its numbers, and a financial statement in such form as the Council may from time to time prescribe."

(*d*) To bring before the General Meetings of the Division such matters as may seem desirable.

(*e*) To carry out the instructions of General Meetings.

The quorum of the Branch Council shall be (one-fourth of the total ?).

Ordinary Meetings.

9. The Ordinary Meetings of the Branch shall be held , and not less than clear days' notice of every such Meeting shall be given to each Member.

The business of an Ordinary Meeting shall be set forth in the circular convening the Meeting, and shall be:

(*a*) To fill casual vacancies arising among the Officers, Representative in Representative Meetings, {Representative / Representatives} on Central Council, and other Members of the Branch Council.

(*b*) To transact the routine business of the Branch.

(*c*) To consider questions affecting the honour and interest of the Medical Profession.

(*d*) To consider matters pertaining to the medical and allied sciences.

Annual Meeting.

10. A Meeting, called the Annual Meeting of the Branch, shall be held in the month of {May / June} in each year, not less than four weeks' notice thereof being given to each Member. The business of the Annual Meeting shall be:

(*a*) To elect Officers and the Ordinary Members of the Branch Council.

(*b*) To elect the Representatives of the Division in Representative Meetings of the Association.

(*c*) To receive the Annual Report of the Branch Council.

(*d*) To consider the business of the Annual Representative Meeting.

(*e*) To make new Rules, or alter or repeal existing Rules.

(*f*) To transact any business that may be transacted by an Ordinary Meeting.

Special Meeting.

11. A Special Meeting of the Branch may be convened at any time by the Branch Council, and shall be convened within days from the receipt by the Secretary of a notice from the Central Council of the Association, or within days from the receipt of a requisition signed by Members of the Division, requesting the convening of such a Meeting. Not less than clear days' notice shall be given of a Special Meeting.

The business of a Special Meeting shall be set forth in the circular convening the Meeting, and no business shall be dealt with by the Meeting except that which it may have been specifically convened to consider.

Alteration of Rules.

12. No new Rules shall be made, and no existing Rule shall be altered or repealed, except in the Annual Meeting, or in a Special Meeting of the Branch.

MODEL RULES SUGGESTED FOR ADOPTION BY A DIVISION WHICH IS NOT IN ITSELF A BRANCH.

RULES OF THE DIVISION.

Area.

1. The area of the Division shall be such portions of the counties of and as are included within the boundary indicated in the official map for the time being.

Branch.

2. The Division shall form part of the Branch.

Membership.

3. *Membership:*

(*a*) *Ordinary.*—Every Member of the Association whose registered address in the books of the Association is for the time being situated within the area of the Division shall, *ipso facto*, be an ordinary Member of the Division.

(*b*) *Extraordinary.*—Extraordinary Members of the Division may be elected in accordance with Article VI and By-law 9—

"VI. Subject to the By-laws, any Division or Branch may elect Extraordinary Members, whether as Associate or Complimentary Members. An Extraordinary Member shall not take part in any vote of the Division or Branch, but otherwise shall enjoy such privileges, and be subject to such obligations, as may respectively be conferred and imposed upon him by or in accordance with the By-laws."

"(9) Extraordinary Members shall be either Associate or Complimentary Members. Any Division or Branch may elect any Ordinary Member of any other Division or Branch as an Associate Member, and any Division or Branch not in the United Kingdom may elect as a Complimentary Member any qualified Medical Practitioner resident within the area thereof, but not eligible by birth or qualification for Membership of the Association. Divisions or Branches may by their local Rules confer on Extraordinary Members such privileges other than that of voting, and impose such conditions of election as they may think desirable, subject to the sanction of the Council."

Executive Committee.

4. The management of the affairs of the Division shall be vested in an Executive Committee, which shall consist of the officers named in Rule 5, together with the {Member / Members} of the Branch Council elected by the Division, the Representative of

the Division in Representative Meetings of the Association, and other Members elected in the manner prescribed in Rule 8.

Officers.

5. The Officers of the Division shall be a Chairman, Vice-Chairman, and Secretary, who shall also act as Treasurer.

Election of Officers.

6. The Officers shall be elected annually in the Annual Meeting of the Division, the Chairman being elected from among those Members of the Division who have not held the office during the previous years.

Election of the Representative.

7. The Representative of the Division in Representative Meetings of the Association shall be elected in the manner prescribed in Article XXVII:—

"XXVII.—.....In the case of a Constituency formed within the United Kingdom, the Representative shall be elected by a General Meeting of Members of the Constituency held not more than three months nor less than three weeks before the Annual Representative Meeting. .....Such Meeting shall be convened.....by the Secretary of the Constituency, who, in the case of a Constituency composed of more than one Division, shall be chosen by the Secretaries of those Divisions, and, if they cannot agree, by the Council. The Secretary of each Constituency shall inform, not less than 14 days before the Representative Meeting, the General Secretary of the name and address of the Representative elected by such Constituency, and the General Secretary shall issue to such Representative a ticket of admission to the Meeting."

Election of Representatives in Branch Council.

8. The Representatives of the Division in the Branch Council shall be elected annually in the Annual Meeting. Any Member who shall have served as such representative for five years consecutively shall be ineligible for re-election for one year.

Election of Ordinary Members of Executive Committee.

9. The other Members of the Executive Committee shall be in number, and shall be elected annually in the Annual Meeting. Any Member who shall have served for five years consecutively shall be ineligible for re-election for one year.

Duties and Powers of Executive Committee.

10. The Executive Committee shall have the following duties and powers:—

(*a*) To manage the financial affairs of the Division.

(*b*) To furnish the Annual Report to the Branch Council as prescribed in By-law 8—

"8. Every Division shall furnish annually to the Branch Council during the month of January, and every Branch shall furnish to the Council of the Association not later than the 15th March, a Report of its proceedings during the previous year, a statement of its numbers, and a financial statement in such form as the Council may from time to time prescribe."

(*c*) To bring before the General Meetings of the Division such matters as may seem desirable.

(*d*) To carry out the instructions of General Meetings.

Quorum.

The quorum of the Executive Committee shall be (one-fourth of the total?).

Ordinary Meetings.

11. Ordinary Meetings of the Division shall be held , and not less than clear days' notice of every such Meeting shall be given to each Member. The business of an Ordinary Meeting shall be set forth in the circular convening the Meeting, and shall be:—

(*a*) To fill casual vacancies arising among the Officers, Representatives in Representative Meetings, Representatives on Branch Council, and other Members of the Executive Committee.

(*b*) To transact the routine business of the Division.

(*c*) To consider questions affecting the honour and interests of the medical profession.

(*d*) To consider matters pertaining to the medical and allied sciences.

A Meeting called the Annual Meeting of the Division shall be held in the month of {May / June} in each year, not less than four weeks' notice thereof being given to each Member. The business of the Annual Meeting shall be:

(*a*) To elect Officers, the {Representative / Representatives} of the Division on the Branch Council, and the ordinary members of the Executive Committee.

(*b*) To elect the Representative of the Division in Representative Meetings of the Association.

(*c*) To receive the Annual Report of the Executive Committee.

(*d*) To consider the business of the Annual Representative Meeting.

(*e*) To make new Rules, or alter or repeal existing Rules.

(*f*) To transact any business that may be transacted at an Ordinary Meeting.

Special Meetings.

12. A Special Meeting of the Division may be convened at any time by the Executive Committee, and shall be convened within days from the receipt by the Secretary of a Notice from the Central Council of the Association, or within days from the receipt of a requisition signed by Members of the Division. Not less than clear days' notice shall be given of a Special Meeting.

The business of a Special Meeting shall be set forth in the circular convening the Meeting, and no business shall be dealt with by the Meeting except that which it may have been specially convened to consider.

13. No new Rules shall be made, and no existing Rule shall be altered or repealed, except in the Annual Meeting or in a Special Meeting of the Division.

DRAFT MODEL RULES OF BRANCHES AND DIVISIONS TO REGULATE ETHICAL PROCEDURE (AS CONSIDERED AND APPROVED BY THE ETHICAL COMMITTEE)

Draft Model Rules of a Branch (composed of several Divisions) to regulate the procedure thereof in Ethical matters.

1. No question of Medical ethics shall be dealt with by a General Meeting of the Branch, or by the Branch Council, except upon a reference from the Council or Ethical Committee of the Association, or from a Division of a Branch, and matters referred to the Branch shall be deemed to be referred to the Branch Council (or to the Ethical Committee thereof) unless otherwise specified.

2. It shall rest with the Branch Council to deal with all questions relating to the professional conduct of individual members of the Branch, and such questions shall not under any circumstances be discussed in a Branch meeting, unless on a report of the Branch Council.

3. The Branch Council shall each year at its first meeting after the Annual General Meeting of the Branch appoint an Ethical Committee of whom the majority shall consist of elected members of the Branch Council. All Ethical matters referred to the Branch Council shall be investigated in the first instance by the Ethical Committee, which shall report thereon, if desired, to the Council as to (*a*) matters of fact, (*b*) matters of principle involved.

4. The Branch Secretary, on receiving notice of any matter affecting the professional conduct of any member of the Branch which requires investigation by the Branch Council, shall within days convene a special meeting of the Ethical Committee to consider the same.

5. It shall be competent for the Ethical Committee, when investigating any question of individual conduct, to request the attendance of any member of the Branch whose attendance they consider desirable; and it shall be the duty of all members of the Branch to render such assistance by attendance or otherwise, as may be desired by the Committee in connexion with such an investigation.

6. The findings of the Committee shall be communicated by the Chairman thereof to the Branch Secretary, who shall present the same at the next ordinary meeting of the Branch Council, or, in cases of urgency shall within days upon the receipt of such report, convene a special meeting of the Branch Council to consider the same.

7. After considering the report of the Ethical Committee on any case referred thereto by a Division, the Branch Council shall state its decision in one of the following forms, namely:—

(*a*) That in the opinion of the Branch Council the member accused has committed no offence against the rules of the profession.

(*b*) That in the opinion of the Branch Council the justice of the case will be met by calling upon the offender to make a suitable apology to individual members, or to the members of the Division generally.

(*c*) That in the opinion of the Branch Council the conduct of the member accused is detrimental to the honour and interests of the medical profession or calculated to bring the profession into disrepute, and that a representation to this effect be made to the Council of the Association under Article XLIV, Section (*a*).

8. In the case of the opinion of the Branch Council being expressed in the form (*a*) or (*b*), the said opinion, with such comments as the Branch Council may think proper to add thereto, shall forthwith be transmitted by the Branch Secretary to the Secretary of the Division. In the event of the opinion of the Branch Council being expressed in the form (*c*), the same, together with such statement as the Branch Council may approve, with the report of the Ethical Committee, and with a copy of the communication to the Branch Secretary on which the action of the Branch Council was based, shall forthwith be transmitted to the Organizing Secretary of the Association.

9. No rule for the general regulation of professional conduct of members of the Branch and no alteration or repeal of any such existing rule shall be valid unless approved by a majority of three-fourths of those present and voting in a General Meeting of the Branch.

Draft Model Rules of a Division (not itself a Branch) to regulate the procedure thereof in Ethical matters.

1. Any member having a complaint against another shall, in the first instance, communicate with him either personally or by letter, or by the intermediary of some suitable person, in order to afford him an opportunity for explanation.

2. Differences and complaints as to the professional conduct of members of the Division shall be investigated in the first instance by the Executive Committee of the Division, or by an Ethical Committee appointed annually in General Meeting of the Division, of which Committee the President, or Chairman and Secretary, for the time being, shall be *ex officio* members.

3. No case shall be considered unless the Committee shall be satisfied that Rule 1 has been duly observed.

4. The Committee shall confine itself to an investigation of the facts of the case, and shall report thereon to a special meeting of the Division, or to the next ordinary meeting at its discretion.

5. If the members concerned shall jointly desire the Executive Committee, or Ethical Committee, as the case may be, finally to decide the case, this may be done, but in such event it shall not be competent for either party to appeal from such decision to a General Meeting of the Division, or to any higher authority of the Association.

6. The findings of the Ethical Committee shall be received by the General Meeting of the Division without discussion on the facts of the case, and the following motions only shall be capable of being discussed thereon.

(*a*) That the report be approved, and that the case calls for no further expression of opinion from the meeting.

(*b*) That in the opinion of the meeting the facts before it do not show that any offence has been committed against the Ethical rules of the Division, or against the ordinarily accepted rules of the profession.

(*c*) That the report be approved and that one of the parties be held to have violated the rules of the Division in respect to professional conduct or the ordinarily accepted rules of the profession, and that he be called upon suitably to apologize to the other, or to the members of the Division generally.

(*d*) That the report be approved and that both the parties be held to have violated the rules of the Division, or the ordinarily accepted rules of the profession, and that the case be dismissed, or that both be required suitably to apologize to the members of the Division.

(*e*) That the report be approved and that the conduct of one or both of the parties, as set forth therein, is, in the opinion of the Division, detrimental to the honour and interests of the medical profession, or calculated to bring the profession into disrepute, and that the case be referred to the Ethical Committee or to the Council of the Branch for further consideration.

(*f*) That the report be approved and that the consideration of the matter be adjourned in order that the opinion of the Ethical Committee of the Association may be ascertained on any question of principle involved in the case.

(*g*) That the report of the Ethical Committee be not approved and that a special committee be appointed to reinvestigate the facts of the case.

7. The finding of the General Meeting of the Division, if other than those set forth in clauses (*f*) and (*g*) of the preceding rule, shall be final so far as the Division is concerned, unless new facts shall subsequently be brought forward which in the opinion of the Ethical Committee justify the reopening of the case.

8. After a case has been referred to the Ethical Committee of the Division for investigation, neither party shall appeal to any other professional authority until it has been disposed of by the Division.

Draft Model Rules of a Branch composed of one Division to regulate the procedure thereof in Ethical matters.

1. Any member having a complaint against another shall, in the first instance, communicate with him either personally or by letter, or by the intermediary of some suitable person in order to afford him an opportunity for explanation.

2. Differences and complaints as to the professional conduct of members of the Branch shall be investigated, in the first instance, by the Ethical Committee, which shall be appointed annually in General Meeting of the Branch of which the President or Chairman and Secretary for the time being shall be *ex-officio* members.

3. No case shall be considered unless the Committee shall be satisfied that Rule 1 has been duly observed.

4. The Committee shall confine itself to an investigation of the facts of the case, and shall report thereon to a special meeting of the Branch, or to the next ordinary meeting at its discretion.

5. If the members concerned shall jointly desire the Ethical Committee finally to decide the case, this may be done, but in such event it shall not be competent for either party to appeal from such decision to a General Meeting of the Branch or to any higher authority of the Association.

6. The findings of the Ethical Committee shall be received by the General Meeting of the Branch without discussion on the facts of the case, and the following motions only shall be capable of being discussed thereon.

(*a*) That the report be approved, and that the case calls for no further expression of opinion from the meeting.

(*b*) That in the opinion of the meeting the facts before it do not show that any offence has been committed against the Ethical rules of the Branch, or against the ordinarily accepted rules of the profession.

(*c*) That the report be approved, and that one of the parties be held to have violated the rules of the Branch in respect to professional conduct, or the ordinarily-accepted rules of the profession, and that he be called upon suitably to apologize to the other, or to the members of the Branch generally.

(*d*) That the report be approved, and that both the parties be held to have violated the rules of the Branch, or the ordinarily accepted rules of the profession, and that the case be dismissed, or that both be required suitably to apologize to the members of the Branch.

(*e*) That the report be approved, and that the conduct of one or both of the parties, as set forth therein, is, in the opinion of the Branch, detrimental to the honour and interests of the medical profession, or calculated to bring the profession in disrepute, and that a representation to this effect be made to the Council of the Association under Article XLIV, Section (*a*).

(*f*) That the report be approved and that the consideration of the matter be adjourned in order that the opinion of the Ethical Committee of the Association may be ascertained on any question of principle involved in the case.

(*g*) That the report of the Ethical Committee be not approved, and that a special committee be appointed to reinvestigate the facts of the case.

7. The findings of the General Meeting of the Branch, if other than those set forth in Clauses (*f*) and (*g*) of the preceding rule, shall be final so far as the Branch is concerned, unless new facts shall subsequently be brought forward which, in the opinion of the Ethical Committee, justify the reopening of the case.

8. After a case has been referred to the Ethical Committee of the Branch for investigation neither party shall appeal to any other professional authority until it has been disposed of by the Branch.

MEETING OF COLONIAL REPRESENTATIVES ON THE COUNCIL.

ON Monday, February 16th, the colonial representatives on the Council met to appoint a successor in place of the late Surgeon-General Hamilton to serve on the Colonial Committee under By-law XXXIX (4). Brigade-Surgeon-Lieutenant-Colonel Drake-Brockman (representing the South Indian and Madras Branch) took the chair, and there were also present Mr. Cantlie (Hong Kong Branch), Dr. C. W. Daniels (British Guiana Branch), and Dr. Morier (Adelaide Branch). Surgeon-General O'Dwyer (Halifax and Nova Scotia Branch) wrote apologizing for his absence. It was resolved to appoint Mr. Cantlie a member of the Colonial Committee *vice* Surgeon-General Hamilton, deceased. Dr. Daniels reported that he was leaving England for some time and as a consequence must resign his seat on the Colonial Committee, whereupon it was resolved to invite Sir Francis Henry Lovell, C.M.G., to serve on the Committee *vice* Dr. Daniels, resigned.

Reports of Branch Meetings.

BATH AND BRISTOL BRANCH.

THE third ordinary meeting of the session was held at University College, Bristol, on Wednesday, January 28th, Dr. H. WALDO, President, in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

New Members.—The following new members were elected: R. Llewellyn Jones, M.B Lond., M.R.C.S., Bath; J. B. Dunlop, B.A.Cantab., M.R.C.S., L.R.C.P., Bath; D. A. Alexander, M.B., B.Ch.Vict., Bristol; A. H. Style, M.B., B.C.Cantab., Bristol; Everista Laval, M.B., C.M.Edin., Brislington House.

Future Meetings.—It was resolved that the meetings of the Branch should in future begin at 8 p.m.; patients and specimens to be shown at 7.45.

[The scientific proceedings were published in the BRITISH MEDICAL JOURNAL of February 21st, p. 433.]

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE fifth ordinary meeting of the session was held in the Birmingham Medical Institute on February 12th, 1903, Mr. M. A. MESSITER in the chair. An apology for non-attendance was received from Dr. H. Malet, President of the Branch. There were thirty-eight members present.

Confirmation of Minutes.—The minutes of the previous meeting were read, confirmed, and signed.

Subscription for Associate Membership.—It was proposed by Mr. F. MARSH, seconded by Dr. LANGLEY BROWNE, and resolved:

That the annual subscription to the Branch for an associate member be 5s.

[The scientific part of the proceedings is published at p. 550.]

BORDER COUNTIES BRANCH.

A MEETING of this Branch was held in the George Hotel, Penrith, on Friday, February 27th.

COUNCIL MEETING.

New Member.—Dr. A. G. Williams Glenridding, Penrith, was elected a member of the Association.

Next Meeting.—It was decided to suggest to the general meeting the advisability of holding a meeting at Castle Douglas in place of the proposed meeting at St. Boswells, now no longer in the area of the Branch.

General Meeting.—At the general meeting, at which only about a dozen members were present, owing to the severe storm and floods in the district making travelling unpleasant or impossible, Dr. R. Maclaren, of Carlisle, was elected to the chair in place of the President (Dr. Ormrod), who had had to go to Switzerland for the benefit of his health. There were also apologies for absence from Drs. Barnes, Arnott, and Bowser.

Confirmation of Minutes.—After the minutes of the last meeting had been read, approved, and signed by the Chairman, the SECRETARY read the Council's recommendation that the next meeting should be held at Castle Douglas at the end of April. After a short discussion this was unanimously agreed to.

Vote of Condolence.—On the motion of Dr. MAXWELL ROSS, Dumfries, the Secretary was instructed to convey the sympathy of the meeting to the widow of the late Dr. A. Thomson, of Dumfries, a former President of the Branch.

Branch Boundaries.—A short discussion took place upon the alterations recently made in the boundaries of the Branch and its divisions. The SECRETARY pointed out the diminution in the membership of the Branch that had resulted therefrom, and urged members to bring as many of their friends as possible within the fold of the Association.

Dinner.—The members dined together in the George Hotel after the meeting.

[The scientific part of the proceedings is published at p. 550.]

CEYLON BRANCH.

A GENERAL meeting of this Branch was held on December 20th, 1902, in the Colonial Medical Library, Colombo. Dr. W. G. VANDORT (President) took the chair, and fourteen members were present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Financial Matters.—The year started with a balance of Rs.320 63, due largely to the careful work of Dr. H. G. Thomasz, as Secretary and Treasurer of the Branch. A large number of arrears have been collected, and as far as possible the Branch accounts have been brought up to date. The end of the year shows a balance of Rs 479.2. The balance includes a sum of Rs.89.13, which is the balance of 1902 towards the annual dinner. An audited account of the funds of the Association has been printed and circulated to all the members of the Branch.

The Clerk.—Mr. A. John de Silva, the Librarian of the Colonial Medical Library, acts as Clerk to the Branch. It was unanimously decided at the general meeting that his remuneration should be increased from Rs 100 to Rs.120 per annum, on account of his good work for the Branch.

Arrangements for 1903.—The parent Association having increased the subscription, and having decided that all subscriptions shall continue to be paid to the local Honorary Secretary and Treasurer of the Branch, it will be necessary to increase the subscription of out-station members from Rs.17.50 to Rs.19 per annum.

Local Rules.—The local rules of the Branch will require revision early in 1903, in order to bring them in accord with the regulations of the parent Association.

Election of Officers.—The following officers were elected for 1903:—*President:* Dr. T. F. Garvin. *President elect for 1904:* Hon. Dr. W. G. Rockwood. *Vice-Presidents:* Dr. C. T. Griffin and Dr. George P. Schokman. *Secretary and Treasurer:* Dr. Albert J. Chalmers. *Council Members:* Dr. W. G. VanDort, Dr. H. George Thomasz, Dr. H. M. Fernando, and Dr. W. H. de Silva.

Programme for 1903.—The following programme was arranged for 1903: (1) Inaugural Address, January 24th; (2) Ordinary Meeting, February 21st; (3) Clinical Meeting, March 21st; (4) Annual Dinner, April 13th; (5) Ordinary Meeting, May 16th; (6) Pathological Meeting, June 19th; (7) Clinical Meeting, July 18th; (8) Ordinary Meeting, October 24th; (9) Ordinary Meeting, November 27th; and (10) General Meeting, December 19th.

PERTHSHIRE BRANCH.

A COUNCIL meeting of this Branch was held on February 13th, Dr. LIDDELL (President) in the chair.

New Members.—John Gardner, M.B., Ch.B. (Lynome, Blairgowrie), and William Edward Marshall, M.B., Ch.B. (Royal Infirmary, Perth) were duly elected members of the Association.

General Meeting.—At the general meeting at 4 p.m. there were present Dr. Liddell (President), Drs. R. Stirling, Niven, McMillan, Kennedy, McDonald (Dunkeld), Burnett, Porter, Trotter, Marshall, Robertson (Scone), Taylor. Apologies were intimated from Drs. Haig, Paton, and Urquhart.

Confirmation of Minutes.—The minutes of the last meeting were read, approved, and signed by the President.

Invitation from Edinburgh Branch.—The invitation of the Edinburgh Branch for February 20th was announced.

Delimitation of Branches.—Letters were read from the Organization Committee, and after discussion it was agreed that members on the borders should select their own place of meeting.—Dr. R. STIRLING, as representative member, stated that the consideration of the Perthshire Branch appeal had been referred to a future meeting of the Council.

Laboratory.—Letters were read from the Curator of the Royal College of Physicians of Edinburgh *re* the examination of specimens.

[The report of the Clinical Meeting, held on the same day, was published in the British Medical Journal of February 28th.]

HARTLEY UNIVERSITY COLLEGE, SOUTHAMPTON.

A meeting of the Hampshire members of the British Medical Association was held on January 28th at Southampton to elect from amongst their number a Representative Governor on the Board of the Hartley University College. The following were present: Drs. Trend, Mackeith, Gwillim, Cowen, Manning, Briscoe, Humphrey Davy, Renny, Pickthall, Purvis, Shettle, and Wade. Dr. Shettle (President of the Southampton Division) was voted to the chair.

The object of the meeting having been explained, Dr. Trend proposed, and Dr. Briscoe seconded, the election of Dr. Wade as Representative Governor.—This was unanimously carried.

Dr. Wade returned thanks for his election; and it was resolved, on the proposal of Dr. Briscoe, that a report of the proceedings be sent to the Editor of the British Medical Journal with a request for its insertion.

PUBLIC HEALTH BILL.

The following is the text of a Bill to amend the Law relating to the Qualification and Tenure of Office of Medical Officers of Health and Inspectors, and to make further provisions relating to Superannuation Allowances for such Officers and Inspectors; and for other purposes, which is to be introduced by Sir Francis Sharp Powell. The Bill is backed by Sir Walter Foster, Mr. Talbot, Dr. Farquharson, Mr. Henry Hobhouse, Mr. Cripps, Mr. Heywood Johnstone, Sir Michael Foster, and Sir John Batty Tuke.

MEMORANDUM.

The main objects of this Bill are to ensure that none but those properly qualified shall be appointed as officers of health, and to give them the same amount of security in their tenure of office as prevails in Scotland, and as Poor-law medical officers possess in England and medical officers of health have in the metropolis.

It is also proposed to enable them by definite contribution from their salaries paid to a central fund to provide themselves with superannuation allowances as a provision for old age and in case of disablement. Provision is already made for Poor-law medical officers.

In the metropolis the sanitary inspector is designated such by law, but outside London the law names him "inspector of nuisances." The London designation, it is proposed, shall be that universally used.

The duties of medical officers of health and of sanitary inspectors as defined by the Local Government Board are exceedingly responsible, as they require for their efficient performance, knowledge, training, and experience. But, as the law stands, urban and rural sanitary authorities may appoint officers of health on such conditions as to qualifications and tenure of office, etc., as they deem fit. Highly technical duties are required of sanitary inspectors under the several Acts of Parliament passed with a view to safeguard the health of the nation, and one object of the Bill is to secure that they should be duly qualified in all cases.

ARRANGEMENT OF CLAUSES.

Definitions.

Clause.
1. Definitions.

Qualification and Tenure of Office.

2. Qualification of officer of health.
3. Officers of health to hold office till death, resignation, or insanity, or removal by or with the consent of the Local Government Board.
4. Local Government Board to take representation of local authority into consideration.
5. Power to local authority to suspend.
6. Power of officer of health to resign.
7. Provision for temporary disability.
8. Power to Local Government Board to determine other provisions by Order.
9. Designation of inspectors.

Superannuation.

10. Title of officers of health to superannuation allowances.
11. By what authority a superannuation allowance is to be payable.
12. Scale of superannuation allowances.
13. Reckoning service.
14. Power to add a number of years in certain cases.
15. Case of subsequent appointment.
16. Forfeiture for fraud, etc.
17. Return of contributions and power to grant gratuities in certain cases.
18. Notice of proposed grant of allowance.
19. Allowances not assignable.
20. Annual returns to Local Government Board.

Contribution.

21. Obligation to contribute.
22. Scale of contributions.

Financial Provisions.

23. Payment by local authority of contributions to a central fund.
24. Application of central fund.

Miscellaneous.

25. Existing officers.
26. Contracting out.
27. Power of Local Government Board to decide questions.
28. Act not to apply to officers of Local Government Board.
29. Construction of Act.
30. Repeal of enactments.
31. Extent of Act.
32. Short title and commencement of Act.

SCHEDULE.

A BILL TO

Amend the Law relative to the Qualification and Tenure of Office of Medical Officers of Health and Inspectors, and to make further provisions relating to Superannuation Allowances for such Officers and Inspectors; and for other purposes.

Be it enacted by the King's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

Definitions.

1. In this Act unless the context otherwise requires:—

"Local authority" includes a sanitary authority under the Public Health Act, 1875, and the Public Health (London) Act, 1891, or either of them, and a port sanitary authority and the council of a county or county borough;

"Officer of health" includes a medical officer of health, an inspector of nuisances, a sanitary inspector under the Public Health Act, 1875, and the Public Health (London) Act, 1891, or either of them, and a district or assistant sanitary inspector;

"Quarter day" includes the twenty-fifth day of March, the twenty-fourth day of June, the twenty-ninth day of September, and the twenty-fifth day of December.

Qualification and Tenure of Office.

2. *Qualification of officer of health.*—No person shall after the *commencement of this Act* be appointed an officer of health unless he either—

(1) Is the holder of a certificate of the Local Government Board or of some body for the time being approved by that Board that he has by examination shown himself competent for the office to which he is to be appointed: or

(2) Has for *three consecutive years* before the *commencement of this Act* served as an officer of health.

3. *Officers of health to hold office till death, resignation, or insanity, or removal by or with consent of Local Government Board.*—Subject to the provisions of this Act every officer of health appointed by any local authority, whether before or after the commencement of this Act, notwithstanding any contract to the contrary between the local authority and the officer or otherwise made before or after the commencement of this Act, shall not hold office for a limited period but shall continue to hold office until he die or resign, or be required by the local authority after attaining the age of *sixty years* to retire under the subsequent provisions of this Act, or be removed by the local authority with the consent of the Local Government Board, or be removed by that Board, or be proved to be insane by evidence which that Board shall deem to be sufficient.

4. *Local Government Board to take representation of local authority into consideration.*—The Local Government Board shall take into consideration every representation made by a local authority for the removal of an officer of health, whether based on the general interests of the district of the local authority, or the conduct of the officer, or any other ground.

5. *Power to local authority to suspend.*—A local authority may

at their discretion suspend any officer of health holding office under them from the discharge of his duties, and shall forthwith report every such suspension to the Local Government Board. The suspension may be removed by that Board or by the local authority, and in either case if the suspension be removed the officer shall forthwith resume the performance of his duties.

6. *Power to officer of health to resign.*—An officer of health, whether appointed before or after the commencement of this Act, notwithstanding any contract to the contrary between the local authority and the officer or otherwise made before or after the commencement of this Act, may at any time resign his office upon giving *one month's* previous notice in writing to the local authority under whom he holds office.

7. *Provision for temporary disability.*—In any case in which a temporary arrangement for the performance of all or any of the duties of an officer of health is made under section one hundred and nine of the Public Health (London) Act, 1891, or a deputy medical officer of health appointed under section one hundred and ninety-one of the Public Health Act, 1875, the salary of the officer of health for the performance of whose duties arrangement is made or for whom a deputy is appointed shall not cease to be payable during the period of the temporary arrangement or appointment.

8. *Power to Local Government Board to determine other provisions by Order.*—Subject to the provisions of this Act and to the provisions of the Public Health Act, 1875, and the Public Health (London) Act, 1891, the Local Government Board shall have the same powers as they have in the case of a district medical officer of a Poor-law union with regard to the qualification, appointment, duties, salary, and tenure of office of every officer of health.

9. *Designation of inspectors.*—An inspector of nuisances shall, after the commencement of this Act, be described as a "sanitary inspector."

Superannuation.

10. *Title of officers of health to superannuation allowances.*—Subject to the provisions of this Act every officer of health appointed by a local authority, whether before or after the commencement of this Act, who shall become incapable of discharging the duties of his office with efficiency by reason of permanent infirmity of mind or body or of old age, who shall have completed an aggregate service of *thirty-five years*, or who shall have attained the full age of *sixty years*, shall be entitled on resigning or otherwise ceasing to hold his office to receive during life a superannuation allowance according to the scale laid down in this Act. An officer of health shall not be entitled to an allowance on the ground of old age unless he has completed the full age of *sixty years*.

Where an officer of health has attained the age of *sixty-five years*, and the local authority under whom he shall then hold office are of opinion that it would be expedient in the interests of the public service that he should cease to hold office, it shall be competent for that local authority to require him to retire upon payment to him of the superannuation allowance to which he may be entitled under this Act.

11. *By what authority a superannuation allowance is to be payable.*—A superannuation allowance under this Act shall be payable—

(1) In any case where the whole or any part of the salary of the officer of health is paid by a county council or by the town council of a county borough, by the county or town council in question;

(2) In any other case, by the local authority under whom the officer of health holds office at the time of his retirement.

12. *Scale of superannuation allowances.*—An officer of health who has served for *ten years* but less than *eleven years* shall be entitled to an annual allowance equal to *fifteen-sixtieths* of the average amount of his salary during the *five years* ending on the quarter-day which immediately precedes the day on which he ceases to hold office.

With an addition of *one-sixtieth* of such average amount for every additional completed year of service until the completion of a period of service of *thirty-five* years, when a maximum allowance of *forty-sixtieths* shall be granted.

13. *Reckoning service.*—All service by an officer of health under any local authority shall be aggregated and reckoned, whether the service has been continuous or not and whether his whole time has been devoted to the service or not.

14. *Power to add a number of years in certain cases.*—A local authority liable under this Act for a superannuation allowance in computing the amount of that allowance may, in consideration of peculiar professional qualifications or of special circumstances, with the consent of the Local Government Board, add a number of years not exceeding *ten* to the number of years which the officer to receive the allowance has actually served in the aggregate.

15. *Case of subsequent appointment.*—Where an officer of health in receipt of a superannuation allowance under this Act is appointed to any office by any local authority the allowance shall cease to be paid so long as he continues to hold that office if the salary and emoluments thereof are equal to or in excess of the amount of such allowance; if they are not, then, so long as he holds that office, only so much of such allowance shall be paid as will make up the deficiency; and, on the officer of health ceasing to hold that office, he shall be entitled to receive again the annual amount of his superannuation allowance under this Act less the amount of any superannuation allowance to which he shall be entitled in connection with that office.

16. *Forfeiture for fraud, etc.*—Any officer of health who is removed by a local authority with the consent of the Local Government Board, or by that Board, or resigns office in consequence of any offence of a fraudulent character or of grave misconduct, shall forfeit all claim to any superannuation allowance under this Act in respect of his previous service.

17. *Return of contributions and power to grant gratuities in certain cases.*—An officer of health who has not become entitled to a superannuation allowance and who loses his office by reason of bodily injury not caused by his own default or any other cause whatever other than his own misconduct or voluntary resignation, shall be entitled to receive from the local authority by whom his superannuation allowance if he were entitled thereto would be payable, a sum equal to the amount of all his contributions under this Act, but if he claims under this section and subsequently obtains a fresh office as an officer of health he shall not be entitled to reckon his service before obtaining the fresh office towards the superannuation allowance under this Act unless upon obtaining the fresh office he pays the sum so received to the local authority liable for the superannuation allowance in respect of the fresh office. In any such case of loss of office as aforesaid the local authority by whom his superannuation allowance would be payable as aforesaid may also, if they see fit, grant to the officer a gratuity not exceeding twice the amount of his salary during the year ending on the quarter day which immediately precedes the day on which he ceases to hold his office.

18. *Notice of proposed grant of allowance.*—At least *one month's* notice in writing shall be given to every member of a local authority of the time at which any proposal to add a number of years to the number of years which an officer of health has actually served or of any proposal to grant a gratuity under this Act will be considered.

19. *Allowances not assignable.*—Every superannuation allowance granted under this Act shall be payable to or in trust for the officer of health entitled thereto, and shall not be assignable or chargeable with his debts or other liabilities.

20. *Annual returns to Local Government Board.*—Every local authority by whom a superannuation allowance or gratuity is payable under this Act shall make annually to the Local Government Board in the form and at the time prescribed by the Board a return of all superannuation allowances and gratuities paid by them under this Act during the preceding year with such particulars as to the names and ages of the recipients and otherwise as the Board shall require.

Contribution.

21. *Obligation to contribute.*—Subject to the provisions of this Act, every officer of health shall contribute annually for the purposes of this Act a percentage amount of his salary according to the scale laid down by this Act, the amount to be from time to time deducted from his salary by the local authority under whom he holds office, and to be carried to and form part of a central fund as hereinafter provided.

22. *Scale of contributions.*—The percentage amounts to be deducted annually for the purposes of this Act shall be as follows (that is to say):—

In the case of officers with less than *five years'* service at or appointed after the commencement of this Act, *two per centum* of the salary for each year;

In the case of officers with more than *five* and less than *fifteen years'* service at the commencement of this Act, *two and a half per centum* of the salary for each year;

In the case of officers with more than *fifteen years'* service at the commencement of this Act *three per centum* of the salary for each year.

Financial Provisions.

23. *Payment by local authority of contributions to a central fund.*—A local authority by whom deductions from the salary of an officer of health are made or who receive a payment from an officer of health under this Act shall pay the amounts so deducted or paid into the Bank of England at such times, in such manner, and to such account as may be prescribed by the Local Government Board. The fund formed by payments under this section is in this Act referred to as the central fund.

24. *Application of central fund.*—The central fund shall be applied in every year at such times and in such manner as may be prescribed by the Local Government Board in the payment to every local authority by whom a superannuation allowance has been paid or contributions returned under this Act during that year of an amount bearing the same proportion to the superannuation allowances and contributions so paid and returned by that local authority as the total amount of the fund bears to the total amount of all superannuation allowances paid and contributions returned under this Act during that year by all local authorities.

Miscellaneous.

25. *Existing officers.*—Any officer of health not appointed or reappointed after the commencement of this Act may at any time within *three months* after the commencement of this Act signify in writing to the local authority under whom he holds office his intention not to avail himself of the provisions of this Act as to superannuation and contribution, and in that event it shall not be obligatory on him, notwithstanding anything in this Act contained, to make any contributions or submit to any deduction from his salary under this Act, nor shall he be entitled to receive any superannuation allowance, gratuity, or other benefit under this Act.

26. *Contracting out.*—The provisions of this Act shall apply to every officer of health appointed or reappointed after the commencement of this Act, notwithstanding any contract to the contrary, made before or after the commencement of this Act.

27. *Power of Local Government Board to decide questions.*—The Local Government Board may, if they think fit, determine any question which may arise between a local authority and an officer of health, and which may be referred to them by either party as to the right to or the amount of superannuation allowance or return of contributions of that officer under the Act, and the decision of the Local Government Board shall be binding and conclusive.

28. *Act not to apply to officers of Local Government Board* —Nothing in this Act shall apply to a medical officer of health or sanitary inspector appointed by the Local Government Board.

29. *Construction of Act.*—This Act shall be read as one with the Public Health Acts.

30. *Repeal of enactments.*—The enactments specified in the schedule to this Act are hereby repealed to the extent mentioned in the third column of that schedule.

31. *Extent of Act.*—This Act does not extend to Scotland or Ireland.

32. *Short title and commencement of Act* —This Act may be cited as the Public Health (Officers' Tenure of Office and Superannuation) Act, 1903, and shall come into operation from and immediately after the *twenty-ninth day of September one thousand nine hundred and three.*

THE SCHEDULE.

ENACTMENTS REPEALED.

Session and Chapter.	Title or Short Title.	Extent of Repeal.
38 & 39 Vict. c. 55 (1875).	The Public Health Act, 1875.	Section 189 from "and subject as aforesaid" to the end of the section. Section 191 from the commencement of the section to the words "appointed under this Act."
54 & 55 Vict. c. 76 (1891).	The Public Health (London) Act, 1891.	Section 108, subsection (2).

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1903.

MEETINGS of the Council will be held on April 22nd, July 8th, and October 21st in the Council Room of the British Medical Association, 429 Strand, London, W.C.

CONTRACT MEDICAL PRACTICE IN COVENTRY.

ON Wednesday, February 18th, a meeting of medical men practising in Coventry and neighbourhood was held at the Mayoress's Parlour, St. Mary's Hall, to consider the attitude of the profession towards registered Friendly Societies.

Dr. MILNER MOORE, having stated the object of the meeting, asked Dr. H. W. Langley Browne, F.R.C.S., ex-President of the Birmingham Branch of the British Medical Association, who he said had always been most active in medical politics and in all matters in which the profession was deeply interested, to take the chair.

Dr. LANGLEY BROWNE did so, and said he was pleased to have come to Coventry. The subject for discussion was one in which he took a great deal of interest, and two years ago he was a member of a deputation which in London conferred with representatives of the chief Friendly Societies. He was bound to say that on that occasion the professional men met with very fair treatment. The societies' representatives were prepared to admit that doctors were underpaid, and although they were not prepared to admit a wage limit, he believed there was a chance of the profession presently getting fair remuneration. The sum of 5s. per member per annum was suggested, and that might afford a fair basis for an arrangement. Turning to the other subjects which interest the profession locally, the Chairman said the General Medical Council were opposed to canvassers and collectors, and very few of the Friendly Societies now canvassed. He believed that neither the Foresters, Hearts of Oak, Free Gardeners, nor the Oddfellows now canvassed, and there was really no friction between the profession and the leading Friendly Societies. Dr. Langley Browne expressed his willingness to answer any questions which those present liked to ask him, and then invited discussion on the subject for which the meeting had been called together.

Dr. RICHARDSON RICE read a letter he had received from Dr. Pickup, written on behalf of the medical staff of the Coventry Provident Dispensary, excusing their attendance from the present meeting; and

Dr. PHILLIPS read a communication from the Honorary Secretary of the Dispensary announcing the appointment of a deputation from the institution to meet three outside medical men to discuss matters relating to the Dispensary.

Dr. RICE then moved:

That in order to strengthen the hands of the Committee of the Coventry Provident Dispensary in its attempt to increase the remuneration received from the registered Friendly Societies, it is hereby resolved, "That no member of the medical profession shall act as medical officer to a society at a remuneration less than that suggested by the Dispensary—namely, 4s. per member per annum."

He had been asked to move that resolution in order to bring the object of the meeting definitely before the profession, and said the Public Medical Service, at its last meeting, passed a resolution to the same effect; but although that bound the members of the service, it was thought wise to have a gathering of the entire profession locally, so that they might be unanimous, and so co-operate with the Dispensary. There was, so far, no official co-operation, but he did not see why the profession should not be united in the matter. For many years one of the chief grievances against the Dispensary was that it had taken club members at the very low figure of 3s., and it was felt that as long as that remained it was impossible to secure any measure of reform. These club members were not the lowest stratum of the working classes, but the *élite* of working men, small manufacturers, and employers of labour; hence, it was not unreasonable to ask for a sum of 4s. per head—not that he thought that sum was a proper remuneration, but the profession must be satisfied with that as a present basis. He was sorry to add that there were rumours of two outside medical men taking club patients, the one at 3s. 3d. and the other at 3s. 6d. Some clubs threatened to leave the Dispensary if 4s. was insisted on, and it was therefore important that the Dispensary should at this time be supported by the outside medical men, now that the institution had developed into a reasonable line of action.

Dr. PHILLIPS, having said the profession were indebted to Dr. Langley Browne for coming to Coventry, seconded the resolution. As regarded the payment to doctors, he had a scheme to put before the meeting as to how the money received should be dealt with: (1) The money set apart for the doctor should be pooled or paid into a common fund; (2) no special doctor should be appointed as the lodge surgeon, but all practising in the town should be asked to contract at the

rates agreed upon; (3) a member of a Friendly Society falling sick should be allowed to send for the medical man of his choice, or attend at the doctor's house, and present his card of membership with counterfoil, which should be signed at each visit, when he received the requisite treatment; (4) at the end of each quarter these cards should be presented to the club for payment, and it would devolve upon the secretary or secretaries to settle these accounts at the usual quarter days; (5) the sum of 2s. 6d. is suggested for each attendance and medicine, either at the patient's house or at the doctor's. In order to illustrate more fully the scheme of payment, it would be necessary to deal with actual figures, bearing in mind, of course, that each member, when admitted to his club, would be a healthy life. Take a club or combination, 10,000 strong, paying 4s. per head per annum—40,000 shillings, £2,000, or 16,000 half-crowns. Supposing 10 per cent. of this number should fall sick during the year, requiring the doctor to visit them—1,000 in all, with an average of six visits—this would represent 6,000 visits or 6,000 half-crowns. Suppose another 10 per cent. of this number falling sick visit the doctor's house, on an average eight times each, this would be 8,000 attendances—8,000 half-crowns. Then 2,000 half-crowns would be left for extra attendances agreed upon. He thought, and especially after what the Chairman had told them as to what took place in London, that the doctors would be able to dictate their own terms. Under his scheme, the question of a wage limit might be wiped out.

Dr. Hadley placed before the meeting the plan adopted by the National Deposit Society, and said the present difficulty in the matter of club payments was in the hands of the profession.

Dr. Milner Moore said it occurred to him that now that the Coventry Dispensary had appointed a deputation to meet the outside medical men, whether a larger sum than 4s. might not be obtained and whether that sum should not be 5s. Another question was whether the annual meeting of members of the Dispensary would carry out the proposed reforms which a subcommittee of that institution were doing their utmost to bring about. Would the present meeting appoint a deputation to meet the Dispensary deputation in order to attempt to raise the fees?

Dr. Kendrick having raised the question as to whether the resolution, if passed, would be retrospective in character,

Dr. Callaghan said he thought it should be, and supported the resolution, because help should be given to the Dispensary in the present crisis. The profession had been worrying the Dispensary for years, and it had been stated that the reason fees were so low was that that institution was ready to grub up any club that went to it. Now was the time that the outside medical men should work together.

Dr. Collington inquired whether letters had been received from medical men not present at that meeting, because any who did not accord with the resolution might upset what was done that day.

Dr. Richardson Rice replied that he had received no letters of apology for non-attendance, but gentlemen not present could be informed of what was done that afternoon.

Some further discussion followed as to what was the view of the effect of the resolution and as to the probability of men not present being bound by it.

The Chairman said while they could not bind any one outside, yet, if they passed the resolution, he believed they would do an immense amount of good. He did not think it mattered about one or two outside men. This question came up in his own town twenty-five years ago: some men, including himself, lost the whole of their clubs, but those were the men who had been the best off ever since, and, whereas there were then eleven doctors, now there were twenty. He was perfectly certain that the profession were doing better now than they were then.

Dr. Anderson said that in his country district 4s. per member was paid.

The Chairman expressed the opinion that Dr. Phillips's estimate (in his scheme) of an average of six visits was too low.

Dr. Milner Moore then proposed, and Dr. Kendrick seconded, the following amendment to the resolution;

That it is hereby resolved that no member of the profession in Coventry shall act as medical officer to a Friendly Society at a less remuneration than 4s. per member per annum.

Some other gentlemen concurred, while Dr. Richardson Rice pleaded that it would be better to leave the resolution as the proposition before the meeting, thinking that men holding clubs should not be called on to relinquish their clubs at once.

Dr. Webb Fowler remarked that the question at issue was not altogether one connected with the Dispensary, but was a question for the profession itself. Seeing that some men had given up clubs, he thought the matter of payment was more in the hands of medical men now than it had been in the past. They could get fair remuneration if they asked for it, but the whole thing would fall if they continued to hold clubs at 3s. and 3s. 6d., while if they refused to hold at less than 4s. and made the resolution retrospective, he believed the other men outside would fall in. For these reasons he supported the amendment. They would never do any good with the Dispensary unless they put their own house in order.

The Chairman suggested that the clubs might be given notice of the increase at Midsummer, and repeated that the Friendly Societies' representatives admitted that the medical officers were underpaid for their work.

The amendment was then put to the vote and carried by 10 to 2. The amendment having become the substantive proposition,

Dr. Callaghan moved, and Dr. Richardson Rice seconded, as an amendment to it:

That no member of the profession will accept any Friendly Society or club which leaves the Dispensary at less than 4s.

Dr. Milner Moore failed to see the need of the amendment, and said the profession would be able to put pressure on any one or two medical men if they accepted less fees than those settled by the present meeting.

After some further discussion the amendment was withdrawn, and Dr. Milner Moore's resolution was carried unanimously.

The Chairman: That is very good inded, and I congratulate you. Now fix upon the time to carry it out.

It was decided that notice be given at Midsummer. It was further resolved to report the result of the meeting to all local members of the profession.

The meeting then appointed Drs. Milner Moore, Soden, and Phillips a deputation to meet the Dispensary deputation to discuss this and such other matters as the deputation from the outside medical men might determine on.

On the motion of Dr. Richardson Rice, seconded by Dr. Webb Fowler, a vote of thanks was accorded to Dr. Langley Browne for attending what the seconder described as the most unanimous meeting of the profession which he had attended.

The Chairman, in reply, said the local men had had his sympathy for many years, because he knew what a difficult position theirs had been. But he thought they had a good time coming.

The proceedings then terminated.

GENERAL MEDICAL COUNCIL.

EXECUTIVE COMMITTEE.

A meeting of the Executive Committee of the General Medical Council was held on February 23rd, when there were present Sir William Turner, President (in the Chair), Mr. Bryant, Dr. MacAlister, Dr Payne, Dr. Pye-Smith, Dr. Heron Watson, Sir William Gairdner, Dr. Atthill, and Sir Christopher Nixon.

May Session of the Council.

The President pointed out that the Whitsuntide holidays would probably fall during the May session if it were commenced on the day provided in the Standing Order, and it was resolved that the Council should meet on Thursday, May 21st, and the Executive Committee on the preceding day.

Visitation and Inspection of Examinations.

The Chairman reported that he had arranged with Dr. Windle and Professor Campbell Brown to visit, during 1903, the examinations in Chemistry, Physics, and Biology of the Conjoint Board in Scotland and the Apothecaries Society of London, but that he had not completed the arrangements for the visitation of the Conjoint Board in Dublin. Sir George F. Duffey, M.D., was appointed Inspector of Final Examinations for the year 1903.

The Service Examinations.

Tables showing the results of competitions held in November, 1902, for commissions in the Royal Navy Medical Service, and in January, 1903, for commissions in the Indian

Medical Service, were received and referred to the General Medical Council. The following is an abstract of these tables:

Royal Naval Medical Service.

University or Board.	No. of Candidates.	Passed for Vacancy.	Rejected.	Withdrew.
University of Edinburgh	—	—	—	—
,, Aberdeen	1	1	—	—
Royal University of Ireland	—	—	—	—
Conjoint Board in England	11	11	—	—
,, ,, Scotland	1	1	—	—
,, ,, Ireland	3	2	1	—
	22	19	1	1

It thus appears that all the five candidates who held university degrees passed and received commissions. Of the 17 candidates who did not hold university degrees 14 passed and received commissions. Two were rejected. One withdrew.

Indian Medical Service.

University or Board.	No. of Candidates.	Passed for Vacancy.	Qualified but Unsuccessful.	Rejected.
University of Cambridge	4	3	—	1
,, London	4	3	1	—
,, Durham	1	1	—	—
,, Victoria	2	1	1	—
,, Edinburgh	10	4	1	5
,, Glasgow	1	—	—	1
,, Dublin	2	—	2	—
Conjoint Board in England	9	1	6	2
,, ,, Scotland	5	—	—	5
,, ,, Ireland	2	—	—	2
	40	13	11	16

Of the successful candidates who held University degrees, 6 held also the diplomas of the Conjoint Board in England, and 1 those of the Conjoint Board in Scotland. It thus appears that of the 24 candidates who held University degrees, 12 passed and received commissions, 5 qualified but were unsuccessful in obtaining commissions, 7 were rejected, and that of the 16 candidates who did not hold University degrees, 1 passed and received a commission, 6 qualified but were unsuccessful in obtaining commissions, 9 were rejected.

International Pharmacopoeial Proposals.

A communication was read from the Privy Council transmitting a copy of a note from Baron Grenier giving reasons for certain modifications introduced into the draft regulations adopted at the International Pharmacopoeial Conference held in Brussels in September, 1902, relative to tincture of aconite and extract of belladonna. The communication added that the Lord President of the Council presumed that the arrangement might be accepted as a basis of international agreement.

Dr. MacAlister, as Chairman of the Pharmacopoeia Committee, made an explanatory statement, and the Executive Committee resolved to inform the Lord President that the proposed arrangements might properly be made the basis of an international agreement, but that such agreement must, from the nature of the case, be "subject to the powers conferred on the General Medical Council of the United Kingdom by the Medical Acts 1858 and 1862." The Executive Committee therefore suggested that the adhesion of the British Government to the agreement should be qualified by a proviso to this effect.

The Medical Defence Union.

A communication was received from Mr. W. E. Hempson, solicitor to the Medical Defence Union, stating that his firm had received from the officials of the Nottingham Police Court, a sum of £5, the amount of a fine imposed on December 31st ult., on a man calling himself M. Martin, who had practised under the title of Dr. Martin. The prosecution was undertaken by the Medical Defence Union, the defendant gave a written undertaking never again to practise as a medical man in Great Britain until he became registered, and the Court in consequence inflicted a mitigated fine. The expenses of the prosecution fell entirely upon the Medical Defence Union. The Executive Committee resolved that the penalty in respect of the foregoing case should be remitted to the Medical Defence Union as a contribution towards the expenses of the prosecution.

Untrained Nurses.

A letter was received from the Honorary Secretary of the Matrons' Council transmitting a resolution adopted by that Council to the following effect:

That the Matrons' Council of Great Britain and Ireland, an association of superintendents of trained nurses, desire to call the attention of medical bodies to the assumption of nursing responsibilities by untrained persons, and their constant conviction for criminal offences, and, in view of the discredit consequently brought upon well trained nurses, urge medical bodies to consider the matter.

The letter quoted, in illustration of the subject, the case of the two women recently hanged at Holloway in connexion with the murder of infants. One was the proprietor of a nursing home and the other was said to have been trained at St. Thomas's Hospital. The Assistant Commissioner, Criminal Investigation Department, had informed the Matrons' Council that his inquiries tended to show that neither of the women had had any hospital training either as nurse or widwife. The Executive Committee resolved to inform the Matrons' Council that the matter did not come within the statutory duties of the General Medical Council.

Circumcision and Covering.

Communications were received from Mr. M. Russell-Rubens, of the "Covenant of Abraham (Circumcision) Society," inquiring whether a qualified medical practitioner would be considered guilty of covering if he attended a child after it had been badly circumcised and unskilfully treated by a Jewish opertor or "Mohel," and gave a certificate after death? The Registrar had addressed a letter to Mr. Russell-Rubens, in the course of which he wrote:

I can only state that general principle that no registered practitioner should act in any such way as to help or screen the practice of an unregistered person. The dictates of humanity prescribe that the public should not be left to suffer owing to errors in seeking, in the first instance, the services of unqualified persons; but the action of any registered practitioner subsequently called in must be entirely dissociated from that of the unqualified practitioner.

In a further letter Mr. Russell-Rubens stated that a large number of Polish and Russian Jews, who had been hairdressers, sweepers, etc., in their own country, had taken up the business of circumcision in this country, and through uncleanliness and unskilful operating, had caused a great deal of unnecessary illness and death. He added that they were banded into a well-financed society, and managed in many cases to get a medical certificate to escape a coroner's inquest. The Executive Committee resolved to inform Mr. Russell-Rubens that the General Medical Council had no jurisdiction over unqualified practitioners, but they were prepared to consider any complaint as to unprofessional conduct on the part of any duly registered practitioner that might be brought to their notice.

A Throat Hospital Pastille.

A letter was read from Dr. J. E. McDougall, Honorary Secretary of the Liverpool Throat Hospital, under circumstances stated by him as follows:—

A firm of chemists manufacture a throat pastille from the formula of the hospital. This firm has contracted with the Attorney-General to pay a yearly sum to the hospital so long as they continue sole manufacturers. The staff say there is no objection to the receipt of the money, but they object strongly to the bond of secrecy in regard to the formula which the Attorney-General is seeking to put upon them. The staff refuse to serve the hospital under any such pledge, but they also wish to be assured of the support of the Medical Council in their contention, since they would not wish to lay down their charge and witness its being taken up by other medical men who might not take a similar view of what is due to the dignity and position of the profession.

The Executive Committee expressed its agreement with the staff in thinking that it is extremely undesirable for professional men to pledge themselves to secrecy in regard to the composition of any remedy which they may use or authorize in the treatment of patients.

Club Practice.

Correspondence with Mr. F. G. Layton on behalf of certain medical practitioners in Walsall, in regard to family club practice in that district was considered, but its nature was not stated. The Executive Committee resolved to inform Mr. Layton that the Council could not proceed with an inquiry in such a case as the one he had submitted unless a specific charge were made against an individual or individuals supported by statutory declarations, and referred Mr. Layton to

the case of Mr. Robert Rendall of Great Yarmouth considered by the General Medical Council on November 28th and 29th, 1901, and May 29th, 1902, and reported at length in this Journal.

Medical Companies Bill.

The President reported to the Committee the steps which had been taken by the Medical Companies Bill Committee in consultation with the legal officers in regard to the proposed bills for the prevention of medical and dental practice by limited liability companies consisting of unqualified persons. The nature of the action taken was not stated.

Personation.

A report by the Registrar upon the amendments in the Standing Orders rendered necessary by the final report of the Committee on the prevention of personation was considered, the amendments directed to be made, and a new edition of the Standing Orders to be printed.

Penal Cases.

The Committee proceeded to the consideration of the motion adopted at the plenary session of the Council on December 2nd, instructing the Committee to consult the legal advisers on the suggestion that in the Standing Orders as to the restoration of a name to the *Medical Register*, the words "Penal Cases Committee" be substituted for the words "Executive Committee." The Executive Committee was advised by Mr. Muir Mackenzie that having regard to the special functions of the Penal Cases Committee as defined by the Standing Orders and to the powers of the Executive Committee under the Medical Act applications for restoration after penal erasure were most appropriately dealt with by the latter Committee. The Executive Committee will therefore report to the Council that it is not prepared to recommend that the proposed change should be made in the Standing Orders.

Dental Business.

Dental Companies.

A communication from Dr. W. H. B. Brook, of Lincoln, was read. Dr. Brook transmitted a circular recently issued by the managing director of a dental company stating that it had been registered as a limited company at Somerset House as "Surgeon Dentists, etc.," and that it thus had the power and privilege of having the assistance of any medical man for the administration of anaesthetics. Dr. Brook inquired whether registered practitioners were required to give gas or administer any other anaesthetic for a dentist who is on the *Dentists' Register*, but is acting as extractor to a dental company the members of which company are not on the *Dentists' Register*. Dr. Brook further inquired if a registered dentist was allowed to act as extractor for such a company, and whether a medical man would be in any degree liable to be considered to have been guilty of infamous conduct in a professional respect if he administered an anaesthetic for a registered dentist acting as a paid servant of such a company, the members of which are unregistered dentists.

The Committee had before it the following letter from Mr. Tomes, to whom the case had been referred:

It seems to me clear that a medical man who administers an anaesthetic for a registered dentist is, technically, at all events, exonerated from any consequences of the kind alluded to, and is not bound to go behind the fact that the person is on the *Register*, nor to inquire into the conditions under which he is practising. On the other hand, as a matter of ethics, he would probably hesitate to indirectly encourage a state of things which he must disapprove, and it might be mentioned to him that this company practice is not confined to dental practice, but is invading the field of medicine also. With regard to the second question, whether a registered man is allowed to make himself the paid servant of a company of unqualified persons, I am afraid that unless we can get some amendment of the law, the mere fact of his doing so cannot be challenged; but he might possibly run some danger in associating himself with methods of practice which might become the subject of inquiry, such as covering others, associating himself with advertising, &c.

The Committee resolved as follows:

That Dr. Brook be informed that the following is the deliverance on the subject which has been given by the General Medical Council:—"Any registered medical practitioner who knowingly and wilfully assists a person who is not registered as a dentist in performing any operation in dental surgery, either by administering anaesthetics or otherwise, will be liable, on proof of the facts, to be dealt with by the General Medical Council as having been guilty of infamous conduct in a professional respect," and that the Executive Committee can give to Dr. Brook no further answer to his question.

Dentistry in South Australia.

The copy of an Act relating to the practice of dentistry in South Australia, received from the Colonial Office, was directed to be communicated to the Dental Education and Examination Committee for its information.

RECENT INNOVATIONS BY THE CORONER FOR SOUTH-WEST LONDON.

By Major Greenwood, M.D.Brux., LL.B.Lond.,

Barrister-at-Law.

A great deal of dissatisfaction has been excited among the profession in South-west London by the recent action of the coroner of that district. That official has decided to discontinue the custom, up to the present almost universal, of requiring the practitioner called to the case to make the necropsy for the subsequent inquest.

Whether he is doing it on his own initiative, or urged thereto by the London Council, is immaterial to my present object, which is to examine briefly whether the innovation in question is really good for the welfare of the public, which is the reason stated by the coroner for the change.

With regard to expense, there can be little doubt that the draft on the public purse will be greater than under the old system. A fee of two guineas is paid to the new pathologist, and presumedly, as often as possible he is to be the only professional witness whose evidence is to be put before the jury.

At a considerable number of inquests it will be absolutely necessary to subpoena the medical attendant called to the case, and then another guinea must be paid, so that the average expenditure for professional witnesses will be raised from one to three guineas, instead of being, as under the old system, from one to two. It may be admitted that in some inquests, where no necropsy is required, only the medical attendant will be called, but as this will occur in the same proportion under the old and new system, it may be disregarded.

It is clear then, I think, that extra expense must be entailed, and it is only right that the public should be satisfied that they get a fair return for their money. If the gain be great to the public safety the increased cost is of little moment, and I should be the last to object. But if the result is no better, it is at least justifiable to question the utility of the change. If, on the other hand, it is distinctly inferior to the old system, and really retrograde in its tendency, it will open the eyes of the public to the power placed in the hand of the coroner—for he undoubtedly possesses that power—of changing at his will and pleasure, without asking advice of anyone, a practice, which has worked fairly well up to the present time, and of substituting another, not only more expensive, but which may in the long run prove far more dangerous to the public welfare than the old.

To understand this matter, it is necessary to consider the nature of the cases on which the coroner holds inquests. I am aware there is some difference in town and country practice, and, as my experience chiefly relates to the metropolis, I shall confine my remarks to the coroner's practice in large towns, where there are large poor populations. I think there can be little doubt that by far the greater number of cases on which inquests are held are those of persons dying without medical attendance, or where it has been called in so late that the doctor refuses to certify.

I am ready to admit that in about 1 per cent. a special pathologist is a great desideratum. But how about the other 99? With regard to the latter, he is altogether unnecessary, and his indiscriminate employment is more likely to give rise to a false feeling of security than to safeguard the public in any material manner. The chief question to be tried by the coroner's jury in the 99 per cent. will be, not so much the cause of death, as whether there was any neglect of the deceased, or improper treatment, or other circumstance, whereby it might be shown that death was accelerated. What can the most careful dissection of the cadaver do to throw any light on many of these cases?

The medical practitioner called in at the last, and who often has attended the deceased previously, will probably be able to give evidence of far more importance than the pathologist, and in all cases the jury ought to have the opportunity of finding out whether he can or not. I feel sure that guilty parties would far sooner face the pathologist at the inquest than the doctor whom they know, and who often knows them.

Take, again, the numerous inquests on children, whose deaths have been caused by overlying. How is the pathologist to say, in the absence of gross signs of pressure, that the death was not due to natural convulsions. It is quite possible, in cases of eclampsia, to have all the symptoms of death from suffocation without any discoverable pathological lesion to distinguish them. The pathologist is only justified in forming his opinion from what he finds, but the medical attendant called at the death, from the position of the body, and from what he may observe at the time of his visit, may justly give an opinion that the child was suffocated, where the other would not be justified in so doing.

The same is true of many cases of child neglect. The pathological condition of the body will often throw little light on gross cases of criminal negligence, as it is so frequently simulated by disease. Whether the disease was, or was not, the probable consequence of it can only be proved by witnesses to the child's treatment during life, and foremost in importance among these will usually be the medical attendant. To the argument that he would often be summoned together with the pathologist, it might be answered that it would only be likely when there was a public scandal, that is in a minority of the cases, and those in which his presence was of least importance, as evidence from other sources would be sufficient. In the majority, owing to the expense involved, he would probably not be summoned, and many guilty would escape, and public justice suffer accordingly.

Under the present system in many cases the responsibility is directly thrown on the practitioner to say whether or not a necropsy is necessary, and he feels that responsibility, and often consults the coroner in doubtful cases, occurring in his practice. This trust imposed on him, not by Statute law, but by professional conscientiousness, is invaluable for the public safety. But is it likely to be fostered or encouraged by friction such as that which has lately arisen between the coroner of South-west London and the local profession, and which will certainly follow in any district where the same procedure is adopted. The result will be that little or no assistance will be given either to the pathologist or coroner by the medical attendant beyond what is required by law. If subpoenaed, the latter is bound to attend the inquest and answer such questions as are put to him. No other obligation is upon him, and it is a mistake even to suppose that he is bound to communicate with the coroner at all. He cannot certify in cases where he has not attended the patient, but no law compels him to write to the coroner, as is usually done. The "common law obligation" which has been suggested exists only in the minds of certain coroners who formulated it. The giving of death certificates after deaths from injuries is not illegal, if the certifier has attended the deceased, but he must state (mention the injuries) the fact of the accident. In short, the medical practitioner is under no greater legal obligation to assist the coroner in the discharge of his duties than any other member of the community, and that official should not forget that his duties would be rendered much more difficult if the medical profession gave him no more assistance than they are legally bound to. Mr. Coroner Troutbeck is reported to have stated at a recent inquest that it was clear beyond the shadow of a doubt that nothing must interfere with the obvious duty of medical men to give information to prevent the ratepayers from being put to a perfectly useless expense. Why obvious duty? It is the coroner's duty to prevent the ratepayers being put to unnecessary expense, and if he requires the medical profession to assist him in carrying out duties for which he is paid, why should not the profession also be paid? To appoint a pathologist arbitrarily against the wish of the profession might be all very well, if he could dispense with the assistance of the latter in carrying out the duties of his office. To a medical coroner it must be obvious that a pathologist appointed under such conditions would be of very little use, unless he is supported heartily by the profession. For in order that he may do his work efficiently he must work in unison with the medical attendant of those on whom inquests are held.

As science becomes more and more diffused, it will not be ignored by criminals. The fact that a pathologist will be called to the necropsy will make it more necessary for the murderer to be careful of the means he employs to carry out his nefarious designs. He must see that the agent employed simulates the effects of natural disease, and he will be tolerably safe. His detection at the present time more often depends on circumstantial evidence than on pathological discoveries, the latter being only useful for confirmatory proof. For obtaining this circumstantial evidence the medical attendant, or the practitioner called in at the death is indispensable.

Nothing is more desirable than the employment of a pathologist in certain cases. But the request should come from the medical attendant, and he should be sent by the coroner to assist in making the necessary necropsy. The practitioner should not be mulcted of his customary fee, but the pathologist should be paid in addition. The expense would not be greater than under the recent change, for the latter would only be required in a comparatively few cases, and his work would be infinitely more effectual, as he would receive every assistance from the medical attendant. Few pathologists will underrate the value of suggestions that might be made by the practitioner called in at the death, or who may have had the deceased under observation during life, as to what had better be looked for at the necropsy.

Every coroner might select one or more pathologists to be referees, whenever a necessity arose for their assistance, and arrangements might be easily made by which they might work in perfect harmony with the profession. That such an arrangement may be arrived at, it is essential that the practitioner called to the case in the first instance should advise the coroner, who if he be a solicitor, has little or no medical knowledge as to the necessity of a pathologist, and except in rare cases, where the practitioner is personally interested he never ought to be thrust upon him against his wish.

The recent practice, too, tends to have a disastrous effect in other ways. It might seriously affect the teaching of pathology in our medical schools. One of the chief objects of instruction in this branch of science is to enable the practitioner to make necropsies, when required; and the knowledge that he will frequently be required to do so in his future practice has always acted as a useful stimulus in making the student give proper attention to the subject, so that he may be competent, when in practice, to perform these duties. If, however, the practitioner in future is to be debarred from work of this kind, the practical importance of the study will be greatly lessened, and it will tend to be neglected both by student and teacher.

The system hitherto adopted has worked well on the whole. It has enabled the busy practitioner to keep up his practical knowledge of pathology, and has made his professional skill more valuable to his patients, whereby the public are greatly the gainers. There is no evidence that any harm has arisen from their ignorance of pathology, and if occasionally an individual has been found wanting in this respect, it is unfair and illogical to assume that the whole of his class or even a majority, are no better. The only reform really necessary, is that there should be an official pathologist appointed, who might give assistance in difficult cases, which must from time to time arise. But to entirely ignore the duly qualified and registered medical man called first to the case, and to substitute a stranger in his place, is subversive of justice, and likely to be the means of concealing crime and neglect, which otherwise would be exposed.

The statute law on the subject clearly defines the duty of the coroner on this subject, and is as follows:—

The Coroners Act, 1887, Section xxi. (Clause 1).—"Where it appears to the coroner that the deceased was attended at his death or during his last illness by any legally qualified medical practitioner, the coroner may summon such practitioner as a witness; but if it appears to the coroner that the deceased person was not attended at his death or during his last illness by any legally qualified medical practitioner, the coroner may summon any legally qualified medical practitioner *who is at the time in actual practice in or near the place where the death happened*, and any such medical witness as is summoned in pursuance of this section may be asked to give evidence as to how in his opinion the deceased came to his death".

It will be observed that where there has been no medical attendant, the coroner is instructed by the Act "to summon a legally-qualified medical practitioner who is at the time in actual practice *in or near the place where the death happened.*"

ELECTION OF MEMBERS.

ANY candidate for election should forward his application upon a form, which will be furnished by the General Secretary of the Association, 429, Strand. Applications for membership should be sent to the General Secretary not less than thirty-five days prior to the date of a meeting of the Council.

GUY ELLISTON, *General Secretary.*

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SUPPLEMENT

TO THE

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ASSOCIATION INTELLIGENCE.

PROCEEDINGS OF COUNCIL.

At a meeting of the Council held in the Council Room of the Association, 429, Strand, W.C., on Wednesday, April 22nd, 1903,

Present:

Mr. ANDREW CLARK, Chairman of Council, in the Chair.
Mr. WALTER WHITEHEAD, President.
Dr. T. D GRIFFITHS, President-elect.
Dr. E. MARKHAM SKERRITT, Treasurer.

Dr. JAMES BARR, Liverpool.
Dr. MICHAEL BEVERLEY, Norwich.
Dr. R. C. BUIST, Dundee.
Mr. COLIN CAMPBELL, Southport.
Mr. JAMES CANTLIE (Hong Kong Branch), London.
Mr. J. WARD COUSINS, Portsmouth.
Dr. ALFRED COX, Gateshead-on-Tyne.
Dr. JAMES CRAIG, Dublin.
Dr. GEORGE W. CROWE, Worcester.
Brigade-Surgeon-Lieut.-Col. E. F. DRAKE-BROCKMAN (South Indian and Madras Branch), London.
Mr. GEORGE EASTES, M.B., London.
Dr. WILLIAM A. ELLISTON, Ipswich.
Dr. WILLIAM THOMAS FREEMAN, Reading.
Professor DAVID W. FINLAY, M.D., LL.D., Aberdeen.
Dr. EDWARD LAWRENCE FOX, Plymouth.
Dr. JOHN H. GALTON, Upper Norwood.
Dr. ALFRED GODSON, Cheadle.
Dr. BRUCE GOFF, Bothwell.
Dr. DAVID GOYDER, Bradford.
Dr. MAJOR GREENWOOD, London.
Dr. JOSEPH GROVES, Carisbrooke.
Dr. HENRY HANDFORD, Nottingham.
Dr. W. M. HARMAN, Winchester.
Mr. W. F. HASLAM, Edgbaston.
Dr. T. ARTHUR HELME, Manchester.
Dr. C. HOLMAN, London.
Sir VICTOR HORSLEY F.R.S., London.
Mr. EVAN JONES, Aberdare.
Sir FRANCIS LOVELL, C.M.G., (Trinidad Branch), London.
Dr. C. H. MILBURN, Hull.
Brigade-Surgeon T. B. MORIARTY, Cork.
Mr. W. JONES MORRIS, Portmadoc.
Dr. JAMES MURPHY, Sunderland.
Dr. JAMES MURRAY, Inverness.
Mr. C. H. WATTS PARKINSON, Wimborne Minster.
Dr. ROBERT W. PHILIP, Edinburgh.
Mr. H. BETHAM ROBINSON, M.S., London.
Professor ROBERT SAUNDBY, M.D., LL.D., Birmingham.
Dr. ALFRED SHEEN, Cardiff.
Dr. E. SOMERVILLE, Galashiels.
Mr. HENRY STEAR, Saffron Walden.
Dr. ROBERT STIRLING, Perth.
Mr. T. JENNER VERRALL, Brighton.
Dr. NORMAN WALKER, Edinburgh.
Mr. DENIS WALSHE, Graigue.
Mr. R. W. O. WITHERS, Shrewsbury.

The minutes of the last quarterly meeting and special meeting held on February 25th, having been printed and circulated, were taken as read and signed as correct.

Read letters of apology for non-attendance from the Past-President, Sir Walter Foster, M.P., Sir G. Hare Philipson, Dr. E. G. Barnes, Dr. Henry Barnes, Dr. R. W. Batten, Dr. T. Bridgwater, Dr. J. Brassey Brierley, Dr. Adolph Bronner, Dr. Langley Browne, Dr. E. J. Cave, Mr. T. H. Cheatle, Dr. H. Radcliffe Crocker, Dr. P. Maury Deas, Dr. Freeland Fergus, Dr. C. G. Gooding, Mr. R. H. Kinsey, Dr. W. A. Mackintosh, Dr. R. Maclaren, Dr. C. G. D. Morier, Surgeon-General T. F. O'Dwyer, Dr. C. Parsons, Dr. F. M. Pope, Dr. G. E. Shuttleworth, Mr. W. D. Spanton, Dr. J. Roberts Thomson, Dr. W. J. Tyson, Professor E. B. Whitcombe, and Dr. S. Woodcock.

The Chairman of Council reported receipt of a letter from Dr. W. Collier, Honorary Secretary of the Oxford Branch, conveying an invitation for the Association to hold its annual meeting at Oxford.

The General Secretary was instructed to inform Dr. Collier that the Council learned with much pleasure that the Oxford and District Division proposed to invite the Association to meet at Oxford in 1904.

Professor Saundby, on behalf of a few friends, presented to the Council a portrait of Mr. Francis Fowke, the late General Secretary. The Chairman of Council accepted the portrait with thanks, and it was ordered to be hung in the Library.

Resolved: That this Council desires to sympathize with Professor Byers in the anxiety he has recently undergone, and to congratulate him on the successful manner in which he has defeated the vexatious proceedings.

Read report from Mr. Spanton in reference to minute of Council 3, appointing him a delegate to the Egyptian Congress held in Cairo.

Resolved: That representations be made to the Privy Council on the lines suggested by Mr. Spanton.

Resolved: That the Chairman of Council be requested to write to the President of the General Medical Council to invite him to say whether the Council of the British Medical Association may regard the letter signed by Sir John Batty Tuke, as Chairman of the Education Committee, and forwarded to the General Secretary on November 28th, 1902, as the reply of the General Medical Council to the communication addressed to the latter by the Council of the Association in May last on the subject of the preliminary general education of medical students.

Resolved: That the consideration of the Report of the Preliminary Education Committee upon the letter of the Education Committee of the General Medical Council be deferred, and no further steps taken herein until a reply has been received from the President of the General Medical Council.

Resolved: That the question of appointing Representatives of the Services on the Council of the Association be referred to the Royal Naval and Military Committee, and that Inspector-General Alexander Turnbull, M.D., R.N., be added to that Committee.

Resolved: That the British Medical Association invite the co-operation of the Incorporated Society of Medical Officers of Health and Epidemiological Society with a view to approaching the President of the Local Government Board regarding further vaccination legislation on the lines approved by this Council.

The Report of Council was then considered.

REPORT OF COUNCIL.

Your Council, in meeting you at Swansea after the first year's working of the new Constitution, is pleased to report the continued prosperity of the Association. It is true that at the close of 1902, owing to deaths and arrears of subscriptions, the actual membership showed a certain shrinkage, but signs are not lacking to prove that the new Constitution will tend to make the British Medical Association a more powerful factor in the influencing of legislation for the good of the community and the profession at large, so much so, that it is hoped the day is not far distant when every qualified practitioner will feel it imperative to seek membership of the Association.

The King.

At Manchester your President, on behalf of the Association forwarded congratulations to His Majesty, the Patron of the Association, on his recovery from the illness which delayed his Coronation. These congratulations His Majesty graciously acknowledged.

Publication of Report.

Under the new Constitution it is necessary for your Council to make its report sufficiently early to enable it to be published in the JOURNAL and circulated to Branch secretaries two months before the annual meetings. As a consequence your Council reports three months earlier than has been the practice in past years.

Retirement of Mr. Francis Fowke.

Last year owing to ill-health, Mr. Francis Fowke, after thirty-one years' faithful service as General Secretary, tendered his resignation. This was accepted with general regret, and the Association made use of its powers under Article X to elect him an honorary member.

During Mr. Fowke's term of office he guided the affairs of the Association with conspicuous ability. When appointed he found the finances in a far from satisfactory condition, but by his close attention to every department he was able to change this condition of uncertainty to one of great stability. He watched the numbers of the Association increase from about five thousand to close on nineteen thousand, and helped to start Branches in India, Australia, Canada, Africa, and other parts of the British Empire beyond the Seas. Your Council hopes that Mr. Francis Fowke may long enjoy his well-earned rest, and watch from his retirement the continued success of the Association, which he has done so much to establish on a sound basis.

Your Council appointed Mr. Guy Elliston General Secretary. He had been associated with Mr. Fowke for upwards of three years, and by his work impressed your Council that he would prove a worthy successor in this important office. Mr. J. Smith Whitaker has been appointed Organizing Secretary to take charge of the business of the Medico-Political, Organizing, and Ethical Committees.

Death of a Member of the Council.

Surgeon-General Hamilton, a member of the Council, died during the past year, and your Council passed the following resolution:

Resolved: That the Council learns with profound regret of the death of Surgeon-General John Butler Hamilton, M.D., who has represented the Cape of Good Hope Branch for the past three years. Surgeon-General Hamilton was for many years a most active member of the Association and an indefatigable worker for the advancement of army medical reform. The Council desires to convey to Mrs. Hamilton and family its deep sympathy in their bereavement.

Deaths of Members of the Association.

Your Council regrets to have to report the following deaths of members of the Association:—Dr. Samuel Alexander, Dr. James Anderson, Dr. W. B. Arminson, Dr. J. Bankart, Dr. G. A. Barr, Mr. W. Bishop, Dr. A. B. Blacker, Mr. G. A. L. Bowling, Mr. Lennox Browne, Mr. G. Browning, Dr. H. G. Budd, Dr. A. G. S. Cameron, Dr. R. A. Campbell, Staff-Surgeon H. Canton, R.N., Dr. K. M. Chisholm, Dr. G. Cleghorn, Mr. A. Coleman, F.R.C.S., Dr. T. J. Colman, Lieutenant-Colonel D. W. D. Comins, M.D., Dr. J. Accacio Da Gama, Colonel A. St. C. Dane, M.D., Mr. E. R. Denton, Captain F. Dove, Dr. S. V. Duncan, Dr. A. Dunlop, Dr. W. England, President of the Southern Branch, 1884; Dr. S. Fenwick, Dr. W. J. M. Finzi, Dr. F. A. C. Fletcher, Mr. J. Hakes, Dr. R. Heath, Dr. T. Hoban, Mr. W. G. Johnson, Professor Wyatt Johnson, Mr. Paul Q. Karkeek, President of the South-Western Branch, 1900; Mr. R. Langford-Jones, Dr. D. Little, President of the Section of Ophthalmology at the Manchester meeting; Dr. H. J. Lloyd, Past President of the North Wales Branch; Captain A. A. F. McArdle, I.M.S., Lieutenant-Colonel N. McCreery, Dr. J. Macdonald, Dr. D. McDonnell, Dr. N. H. Macmillan, Dr. G. Mickley, Mr. R. T. A O'Callaghan, Mr. Henry Ormerod, Dr. T. L. Parry, Dr. W. E. Price, Dr. Andrew Ritchie, Dr. E. F. Ross, Dr. R. Rudland, Mr. J. K. Samson, Dr. Solomon Charles Smith, at one time a member of the staff of the BRITISH MEDICAL JOURNAL; Dr. C. Stephen, Mr. J. E. H. Stephens, Deputy Surgeon-General W. Stewart, M.D., Dr. S. Stirling, Dr. E. W. F. Stiven, Dr. A. Thomson, President of the Border Counties Branch, 1888; Dr. E. B. Truman, Dr. J. E. Tuxford, Mr. J. R. C. Vigurs, Dr. J. W. Watkins, Brigade-Surgeon C. W. Watling, Deputy Surgeon-General J. Watts, Dr. H. Whalley, Dr. F. W. Willmore, Dr. J. C. Woodburn, and Lieutenant-Colonel R. T. Wright, M.D.

Midwives Act.

Since the last occasion on which your Council reported, perhaps the most important piece of legislation that has been enacted by Parliament so far as the medical profession is concerned is the Midwives Act. Throughout the long conflict that attended this measure, your Council, on behalf of the Association, urged upon members of Parliament the absolute necessity of a penal clause. When, however, the Midwives Bill was brought forward in Parliament last year, the penal clause was omitted, and only reintroduced through the personal efforts of Sir Victor Horsley. Although another body has claimed the credit for the insertion of this clause, there is no doubt that the community at large is indebted to the British Medical Association, and to Sir Victor Horsley in particular, for having given to this measure whatever value it may possess.

Poor Law Officers (Ireland) Superannuation Bill.

Last year your Council appointed a deputation to wait upon the Chief Secretary for Ireland asking his support for the Poor-law Officers (Ireland) Superannuation Bill then before Parliament. Sir James Haslett, M.P., kindly consented to introduce the deputation, but so far he has been unable to arrange a date convenient to the Chief Secretary for Ireland.

The Imperial Vaccination League.

Your Council, in view of possible legislation, realizes the great importance of guiding public opinion as to the absolute necessity of vaccination and revaccination, as the only means of stamping out the terrible scourge of small-pox and has therefore voted the sum of £100 towards the funds of the Imperial Vaccination League to further its campaign in this direction.

APPOINTMENT OF AUDITORS.

Messrs. Price, Waterhouse and Co., who have audited the books of your Association for many years, offer themselves for re-election, in accordance with the requirements of the Companies Act, 1900.

JOURNAL.

The JOURNAL has continued to maintain its place among the leading medical periodicals of the world. The rapid progress of medicine and the more widespread interest yearly taken by members in clinical and scientific questions make increasing calls upon its space. This has led your Council from time to time to increase the number of pages in the weekly issue, and at the beginning of 1903 some further space was economically obtained by lengthening the column, thus allowing more matter on each page. Following the practice established some years ago supplementary pages were issued with each number during the autumn to provide for the early publication of the reports of the Sections of the annual meeting. This task was completed early in November, and at other seasons of the year numerous comprehensive lectures and papers on clinical and scientific topics of current interest have been published. Further, by the co-operation of many members in the United Kingdom and the Colonies, the JOURNAL is enabled to publish reports, to be numbered by hundreds every year, of clinical cases of interest from general practice. The contributors of such material might otherwise never have found an opportunity of publishing their observations, so that many records would have been lost which—as is shown by the frequency with which they are quoted in foreign reviews—are esteemed highly valuable by those best qualified to judge. The growth of interest in medico-political subjects is one of the characteristics of professional life at the present time, and under the new Constitution the part which the Association takes in such matters will, it is anticipated, greatly increase. Your Council have, therefore, made arrangements for the publication as occasion may demand, of special supplements in which reports of the political work of the Divisions, Branches, Committees and Council of the Association may be adequately presented, properly classified, and conveniently preserved for reference. Special arrangements have been made also for the immediate publication of preliminary reports from the scientific workers whose researches are assisted by the Association, through its Scientific Grants Committee. Such preliminary reports, while they will not interfere with the subsequent publication of full details in the most appropriate place, present the double advantage of affording an opportunity to the workers of establishing priority of observation, and to the members of the Association of becoming promptly acquainted with the results of the latest scientific investigations and of learning the manner in which the money voted for the advancement of science is utilized.

The interest aroused in the subject of vaccination by recent and prospective legislation, and the fact that small-pox was epidemic in London and was occurring in other parts of the country rendered opportune the publication of a Special Vaccination Number in July, 1902. It was originally proposed merely to reprint the Jenner Centenary number issued in 1896, but it was found that events had moved too fast to render this advisable, and a number consisting for the most part of new matter was prepared. It contained among other illustrations a set of coloured drawings, specially made from life, of modified and unmodified small-pox, of chicken-pox, and of the development of the vaccination vesicle. This number was reprinted with some additions, and commands a steady sale. In December the opportunity was taken of the occurrence of the jubilee of Lord Lister's entrance into the medical profession to publish a special Lister Number which contained personal narratives by those who had worked with him in Glasgow, Edinburgh, and London of the steps by which he was led to establish the antiseptic system of surgery, and a series of articles by foreign surgeons of the highest distinction. The number was thus an international tribute to the great English Master of Surgery. Your Council feels confident that the whole Association will join with it in congratulating Lord Lister on this tribute, and will rejoice that it was paid to him through the JOURNAL of the Association, of which he has long been a distinguished member. The number was illustrated by portraits of Lord Lister when Professor in Glasgow and Edinburgh, and by a portrait specially made for reproduction in this number by Mr. Hugh Riviere at sittings given by Lord Lister last autumn. The original oil sketch, which was purchased by a few members of your Council, was presented by them to the Association, and has been hung in the Library. Your Council has conveyed to the Editor and Assistant Editor its appreciation of this number, and feel confident that it has been equally appreciated by all the members of the Association.

THE ASSOCIATION PREMISES.

Your Council reports with considerable satisfaction that the premises in the Strand, the freehold of which was acquired in 1898, on which it was necessary to create a mortgage, are now free of all encumbrance. On December 29th, 1902, the final payment of £5,000 was made, so that the deeds have now passed into the possession of the Association and are lodged with its bankers for safe custody.

Owing to the steady increase of work, both in connexion with the affairs of the Association and the publishing of the JOURNAL, it has become necessary to increase and improve the accommodation for the clerical staff. The Premises and Library Committee is giving the matter most careful consideration, and hopes to formulate some comprehensive scheme to anticipate the future expansion of your Association.

Last year your Council had to report that certain tube railways were seeking powers in Parliament to acquire running powers in the neighbourhood of your premises. These powers were not granted in the 1902 Session, but they are being sought afresh, and owing to the splendid position of your premises it is not surprising that promoters of projected schemes should cast jealous eyes on your site for a station. Should Parliament grant powers for a tube railway along the Strand, and should your premises be compulsorily acquired, your Council feels that the disturbance which must follow would be of serious moment. At the same time it holds a strong belief, bearing in mind the ever-increasing value of property in the neighbourhood, that your Association will find that the investment of the funds in this property has been a judicious one. Your Council feels that it would be impossible to find other premises offering equal advantages for the successful conduct of the affairs of your Association, and will only part with the property if compulsory powers of acquirement are granted by Parliament.

Your Council regrets that the Inland Revenue has renewed its claim for taxes on the premises 429, Strand, under Schedule A. The amount in dispute is not large, but it is felt that the claim should not be passed over lightly, and expert opinion is again being obtained as to the legality of the tax proposed to be levied.

SUPERANNUATION FUND.

For some time your Council has felt that long and faithful service on the part of members of your office staff should not escape recognition when through age or sickness they are no longer able to devote their energies to the work of the Association. A special Committee was appointed and gave the matter of a Superannuation Fund most careful consideration; but there were difficulties which it could not see its way to overcome except at a cost your Association would not be justified in contemplating. However, your Council could not recommend that services well and faithfully performed should go without reward; they have therefore set aside a sum originally bequeathed by the late Sir Charles Hastings, amounting to £558 1s. 0d., which has been invested in Cape of Good Hope stock, to act as a nucleus of a Superannuation Fund. Your Council hopes that your Association will in annual meeting vote some further sum yearly until a sufficient amount has accrued to meet any claims that may deserve attention.

COLLECTION OF SUBSCRIPTIONS FOR MEDICAL CHARITIES.

Your Council authorized the General Secretary when sending out the notice for the annual subscription also to notify members that he would accept moneys on behalf of the British Medical Benevolent Fund and the Pensioners and Foundation Scholars' Fund of the Royal Medical Benevolent College, Epsom. As a result, up to the end of March the General Secretary has received some £600 to hand on to these charities.

BRANCHES.

Your cordial thanks are due for the able and efficient services rendered by the following gentlemen who have acted as Honorary Secretaries to the various Branches and have now retired from office: Dr. W. F. Farquharson, Border Counties Branch; Dr. Thomas Beattie, North of England Branch; Mr. R. B. Carey, South-Eastern of Ireland Branch, who resigns the

Secretaryship but retains the Treasurership; Dr. Graham Campbell, New Zealand Branch; Mr. J. Thomson, West Australian Branch; Dr. E. Howard Bannister, Barbadoes Branch; Dr. W. W. Grosvenor, Gloucester Branch; and Dr. H. H. Phillips-Conn, Reading Branch. The following gentlemen have been appointed to fill the respective offices: Mr. F. R. Hill, Border Counties Branch; Dr. Alfred Cox, North of England Branch; Mr. R. W. Orpen, South-Eastern of Ireland Branch; Mr. H. M. Gore, New Zealand Branch; Dr. G. H. S. Blackburne, West Australian Branch; Dr. J. W. Hawkins, Barbadoes Branch; Mr. John Howell, Gloucester Branch; and Dr. Wm. Thomas Freeman, Reading Branch.

COMMITTEES.

Since the Manchester meeting the various Committees have been actively engaged, and it is felt that the plan of paying all railway fares is equitable and productive of good results.

The *Scientific Grants Committee* has made certain amendments of the provisions under which scholarships and grants are given. It is felt that in future scholars should devote the whole of their time to the research work they undertake, and that scholars should not hold in addition any scholarship worth more than £50. Further, it is considered that the work both of scholars and grantees should be subject to periodical inspection, and that applicants for assistance should produce recommendations as to their fitness for undertaking any proposed research.

During the past year your Council voted £806 to the Scientific Grants Committee. This sum was distributed: £356 in twenty-five grants in aid of research work, and £450 to four Research Scholars.

The *Special Chloroform Committee* has held six meetings since its reappointment. Further work has been carried out with the view of ascertaining the best means of estimating chloroform vapour in air, and reports on this subject have been received from Dr. Waller. The methods of estimating chloroform in liquids—for example, water, blood, etc.—were also tested, and Mr. A. Vernon Harcourt, F.R.S., presented a report upon this matter. At the instance of Dr. Waller Mr. Wells has investigated this subject by means of vacuum experiments.

The Committee has entered upon the more practical side of its investigations during its present session. Various inhalers used for giving chloroform have been studied with the view of ascertaining the percentage dose in air of chloroform vapour delivered under known conditions. A report dealing with the purely practical question of the clinical use of such inhalers was presented by Dr. Dudley Buxton. The Committee examined the actual use of certain inhalers, and will report upon them. Under the direction of Dr. Waller Mr. Wells has investigated the precise percentages of chloroform vapour from these inhalers, including the germane questions of alterations of percentage due to evaporation, variation in depth and area of the chloroform through or over which air is passed before being inhaled by the patient. Mr. A. Vernon Harcourt has reported upon the regulating inhaler which he has devised. Professor Sherrington has reported upon the maximal dose of chloroform which, when introduced into the circulation, does not seriously depress the heart. The Committee proposes to furnish its full report upon these points, to which will be appended the individual reports of the members of the Committee, before the date of the annual meeting.

The *Annual Meeting Committee* has advised that the Annual Meeting Museum should be under the administration of the head office; your Council has endorsed this recommendation, and has taken steps to put the plan into practical working.

The *Public Health Committee* has held five meetings and has had under consideration many matters relating to public health. The vaccination question has been fully considered, and on two occasions the Committee met in conference with the Medico-Political Committee, to settle on what lines pressure should be brought on Parliament to amend the Vaccination Acts. Sir Francis Powell, M.P., has again been good enough to introduce into Parliament a Bill, prepared by this Committee and approved by your Council, to amend the law relating to the security of tenure of office of medical officers of health and sanitary inspectors, and to make provision for superannuation allowances. It is felt that, owing to the difficulty of passing any private Bill in the face of steady opposition by even a single member, the Bill does not stand much chance of becoming law unless taken up as a Government measure. The thanks of the Association, however, are due to Sir Francis Powell for his continued interest in this important question.

The Committee hopes that the request of the Council to the President of the Local Government Board, asking him to receive a deputation as to the security of tenure of sanitary officers will be acceded to, and at the same time it is hoped Mr. Long will also receive a deputation from this Association regarding future vaccination legislation.

The *Colonial Committee* has considered from time to time matters brought before its notice more especially the registration of European medical practitioners in Ceylon, and it has reason to hope that such registration will become compulsory. The Committee has also called attention to the absence of a representative of Medicine and Sanitary Science on the Council of the Viceroy of India and the Lieutenant-Governor of Burmah.

A Subcommittee has been appointed to prepare a scheme for the grouping of the Colonial Branches for the purposes of representation on the Council.

The *Joint Committee of the Association and the Medico-Psychological Association* is making recommendations to the Lord Chancellor as to the amendment of the Lunacy Acts. The matter has from time to time received the serious attention of the House of Lords. A Bill was passed by that House and sent down to the House of Commons on March 8th, 1900, but owing to pressure of other business was withdrawn. In view of the statement made by the Attorney-General in the Commons on March 4th, to the effect that the Government has already assented to at least one of the principles urged by this Joint Committee it is hoped that the reforms pressed for may become law.

The *Medical Charities Committee* has met and reaffirmed the Report it presented to your Council last year.

The *Preliminary General Education Committee* has only met once since the Manchester meeting, but it will be remembered that a deputation of your Association waited upon the General Medical Council to urge an improved standard of preliminary general education of medical students. A report has been received, signed by Sir John Batty Tuke as Chairman of their Education Committee. Your Council has asked whether this is to be regarded as the reply of the General Medical Council.

The *Medico-Political Committee* began its meetings after the vacation on October 22nd and met four times. The Coroners' Bill, which had been prepared by a special committee, was finally considered at a joint meeting of the two Committees and approved. An effort has been made to secure for the Bill the support of the Coroners' Society, but, unfortunately, without success, the Council of the Coroners' Society stating that in their opinion proposals for amendment of the law as to coroners should emanate from some Government department and not from any association of private individuals.

Prospective vaccination received the careful attention of two joint meetings of the Medico-Political and Public Health Committees. As prompt action might be necessary in expressing the opinion of the Association, it did not appear practicable to wait to ascertain that opinion through the Divisions, but the Committees jointly formulated six recommendations on the subject to the Council, which were approved by the Council and published in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL on February 7th, 1903.

The attention of the Committee having been drawn to the fact that the provisions of the Workmen's Compensation Act as to the employment of medical referees were not being carried out in accordance with the apparent intention of the Act, a Subcommittee was appointed to study the subject. Under the direction of the Subcommittee circulars were issued to all medical referees in the United Kingdom, 300 in number, and 230 replies have been received. The replies show that 144 referees have never been called upon to act officially under the Act, and that strong dissatisfaction exists generally among those who have acted as to the mode in which the apparent purpose of the Act in this respect is being defeated not only as concerned the interest of the referees, but also of the working classes. Various suggestions were received for remedying the evils pointed out, the greater number being in favour of an amendment of the clauses relating to the employment of the official referees. The question is still being actively considered.

A letter from the Secretary of the Scottish Poor-law Medical Officers' Association brought under the notice of the Committee the Local Government (Scotland) Act Amendment Bill, as likely to affect the interests of medical officers

of public bodies in Scotland, and the Committee took steps with a view to joint action with the society named, and with the Scottish Society of Medical Officers of Health, when matters concerning these bodies of medical men were before Parliament.

The Medical Acts Amendment Bill, prepared by the Parliamentary Bills Committee, has been recast, and is now under the consideration of the Committee.

The question of death certification has been also referred to the Committee, and action is being taken in the matter.

A detailed Report of the work of the Committee will be placed before the Annual Representative Meeting on July 28th, 1903.

The *Standing Organization Committee*, in conjunction with the Secretaries of Branches in the United Kingdom, formed the Temporary Reorganization Committee to which was referred the delimitation of boundaries of divisions and such changes in the boundaries of Branches as were necessitated by the adoption of the new Constitution of the Association.

Immediately upon the adoption of the new Constitution the Council passed resolutions whereby the local machinery of the Association was temporarily maintained until reorganization of Branches could be effected. The Reorganization Committee met during the Annual Meeting at Manchester to determine the method of carrying out its duties, and again on December 9th to report to the Council, schemes for various districts having been prepared in the interval by six subcommittees, to which this work was referred. The principles on which the adjustment of boundaries was determined were: (1) That Divisions should be such that in general the members of each could attend its meetings without more than half-a-day's absence from home; (2) that boundaries of existing Branches should not be interfered with unnecessarily; (3) that the wishes of the majority of members resident in a town or district should have predominant weight in deciding to what Branch or Division such town or district should be assigned.

The Report of the Committee was received, and in the main adopted by the Council on January 21st, and the matters not then decided were determined on February 25th. The general result was the formation in the United Kingdom of Divisions, grouped in Branches. Four pairs of Branches were combined, namely, the Metropolitan and Thames Valley, the Oxford and Reading, the North Wales and Shropshire, and the Londonderry and Belfast; and three new Branches were formed, the North Lancashire, Fife, and Connaught. With these exceptions the changes of Branch boundaries found necessary were relatively few, the principal difficulty arising in the demarcation of boundaries between Branches which previously had overlapped.

In addition to dealing with questions of boundaries, the Organization Committee has the duty of advising the Council on rules of Divisions and Branches. All Branch regulations losing their validity by the adoption of the new Constitution, the Council exercised on July 9th its special power to re-enact these so far as applicable until Divisions and Branches should be in a position to adopt new rules themselves. To assist in framing new rules the Organization Committee prepared sets of model rules to be put forward as suggestions, and these were approved by the Council, and have been adopted with only slight changes by most Divisions and Branches which have considered them.

The regulations and by-laws providing that Divisions of fewer than fifty members must, and Divisions of larger membership may, be grouped for representative purposes, and that Branches of fewer than 200 members must, except under special conditions, be grouped with neighbouring Branches to elect members of Council, the Organization Committee has been instructed to consider and report to the Council on the whole matter. On the recommendation of the Committee May 20th has been fixed as the date on which the membership of local bodies shall be ascertained for representative purposes. Subject to such changes of membership materially affecting representative rights as may be found on that date to have occurred, the Committee has recommended grouping, which will result in the election of members of Council by Branches in the United Kingdom and of representatives of Divisions in the same area.

The *Ethical Committee* has met three times, and has been called upon to advise the Council in several cases involving important questions of principle. Of matters touching the professional conduct of individuals, the majority have related to some form of advertisement, in a few cases by or with the consent of the medical practitioner concerned, but more usually by other persons who made use of his name for their own trade advantage. Attention having been drawn to the frequency of the latter kind of advertisement—as in the publication of a testimonial with the full name, qualifications, etc., of the giver—the Council approved a recommendation of the Committee that a standing instruction be given to the Organizing Secretary to deal in a specified form with all cases of the kind brought under his notice. The Council is gratified to be able to report that the action taken under this instruction has resulted in nearly all cases in the immediate cessation of the objectionable notice.

In addition to considering specific matters of individual conduct, the ethical work of the Council includes by By-law 11 the sanction or otherwise of such ethical regulations as may from time to time be adopted by Divisions or Branches among their local rules. In this connexion the Council has accepted a recommendation of the Ethical Committee advising that sanction should in general be given by the Council to rules adopted by Divisions or Branches for the regulation of the professional conduct of their own members, provided that such rules should be passed by a sufficient majority of the members affected.

A code of model rules to regulate procedure in ethical cases was also drawn up by the Committee to be suggested to Divisions and Branches for adoption, and was referred by the Council to Branch Councils for consideration.

The Committee having had under consideration the advertising of the name of a practitioner as physician to a bathing establishment, has expressed strong condemnation of the advertisement of the connexion of any medical practitioner with a bathing or hydropathic establishment.

The Committee also, in connexion with a case brought before it, advised that the advertising in local newspapers of the physician or surgeon of a hospital on duty for the week, or any systematic advertisement in newspapers of the names of the staff and their days of attendance, is open to grave objection, and instructed the Organizing Secretary to write to any member of the profession whose name may so appear, requesting him to take steps to have that practice discontinued.

Estimate of Receipts and Expenditure.

The practice of estimating the annual receipts and expenditure was inaugurated at Manchester and your Council is gratified that the surplus for the year 1902 has exceeded by £2,262 the surplus anticipated. This result is highly satisfactory, and your Council thinks that the thanks of the Association are due to the whole of the office staff for their close and faithful attention to the many ramifications of so large an Association. Your Council, while hoping to show equally good results during the current year, has not yet the necessary data to gauge accurately the cost of the Representative Meeting and other increased expenditure resulting from the new Constitution; therefore, in presenting an estimate of receipts and expenditure for 1903, it offers figures somewhat similar to those laid before you at Manchester last year.

Estimated Receipts and Expenditure for the Year 1903.

Receipts.	£ s. d.	*Expenditure.*	£ s. d.
Income, estimated on last years' figures with certain allowances	48,030 0 0	Expenses, estimated on last year's figures, with certain allowances for increased expenditure ...	40,000 0 0
		Cost of Committees Representative Meetings, etc.	3,000 0 0
		Contributions to Branches	3,530 0 0
			46,530 0 0
		Estimated Surplus, 1903	1,500 0 0
	£48,030 0 0		£48,030 0 0

Library.

The Library has fully maintained its usefulness. During the nine months ending March 31st, 4,084 attendances have been registered, and more use has been made of the Library latterly than during any corresponding period of its existence.

Your Association has again to thank numerous members, authors, and others for new books, new editions, and other volumes received towards completing series; in this way 482 volumes have been presented.

BRITISH MEDICAL ASSOCIATION.

FINANCIAL STATEMENT FOR THE YEAR ENDING DECEMBER 31ST, 1902.

BALANCE SHEET.

LIABILITIES.

DR.	£ s. d.
To Subscriptions paid in advance	760 16 6
,, Advertisements	798 19 9
,, Contributions	689 4 0
,, Reporting	52 10 0
,, Engraving	112 14 3
,, Printing Journal	377 1- 4
,, Paper for Journal	869 17 8
,, Miscellaneous Printing	157 8 0
,, Stationery	57 11 3
,, Repairs	110 18 4
,, Legal Charges	67 17 2
,, Rates and Taxes, and Electric Supply	302 10 4
,, Plant and Type	114 17 8
,, Editorial Expenses	14 14 0
,, Sundries	21 0 9
,, Architect's Fees	7 7 0
,, Organization Secretary - Travelling and Clerical Expenses	78 13 6
,, Library Committee	18 7 3
,, Income Tax on Interest on Mortgage	127 1 0
TOTAL LIABILITIES	4,689 - 9

	£ s. d	£ s. d.
,, Mortgage on Freehold, created 1898	38,000 0	
,, Paid off (March £5,000, Final Balance £5,000 December 29th, 1902)	38,000 0 0	
,, Surplus Account—	£ s. d.	
Balance on Jan. 1st, 1902	87,427 11 2	
Profit for 1902 brought from Revenue Account	4,499 6 7	
,, Balance, being total of excess of assets over liabilities		91,926 17 0
		£96,615 18 6

ASSETS.

CR.	£ s. d.	£ s. d.
By Subscriptions—Amount due		1,553 2 9
,, Advertisements—Amount due		3,365 5 9
,, Sundry Sales—Amount due		126 3 5
,, Furniture and Fixtures		1,302 5 10
,, Library		2,394 0 3
,, Plant and Type		1,336 16 4
,, Rents accrued		123 15 9
,, Freehold of 2 and 3, Harvey's Buildings, purchased 1894		4,640 0 0
,, Freehold of 429, Strand, 2, 3, 4, and 5, Agar Street at purchase price in 1898	79,000 0 0	
,, Redemption of Land Tax	880 0 0	
		79,880 0 0
,, Cash, namely :—		
At London and Westminster Bank current account	875 11 11	
Deposit account	1,000 0 0	
At Office	18 17 3	
		1,894 9 2
		£96,615 18 6

Revenue or Profit and Loss Account for Year ending December 31st, 1902.

	£ s. d.		£ s. d.
Editorial Expenses (Salaries, Contributions, Engraving, Reporting)	5,901 19 8	Subscriptions	20,451 8 8
Expenses of Printing Journal (Printing, Postage, and Paper)	21,933 7 2	,, Arrears of former years	314 19 7
Office Expenses (Rent, Taxes, Office Postage, etc.)	2,828 13 0	Advertisements	20,355 7 5
Office Salaries and Wages	3,010 9 6	Sundry Sales of Journal	1,815 18 2
Association Expenses (Scientific Grants, Scholarships, Expenses of Committees, etc.)	4,916 13 0	Sundries—Reading and Binding Covers, etc.	119 3 7
Library	247 2 6	Reprints	132 17 0
Interest on Mortgage and Tax	189 - 9	Interest on Investments and Rents	810 19 1
Plant, written off towards Depreciation	500 0 0	Scientific Grants unused and returned	62 13 6
	39,527 5 7	Sale of Waste, etc.	18 7 6
Subscription Losses from Deaths, Arrears etc.	997 17 7	Discount on Printing, Paper, etc.	942 15 3
	40,525 3 2		
Profit for Year carried to Balance Sheet	4,499 6 7		
	£45,024 9 -		£45,024 9 -

STEWART FUND.

Investment of £579 in 4 per cent. Caledonian Railway Debenture Stock, in the name of the British Medical Association.

1902.		£ s. d.	1902.		£ s. d.
Jan. 1.	To Balance brought over	20 13 10	Dec. 31.	,, Balance carried down	42 8 10
Dec. 31.	,, Interest one year on £579	21 15 0			
		£42 8 10			£42 8 10

MIDDLEMORE FUND.

Investment of £666 13s. 4d. in 3 per cent. North British Railway Debenture Stock in the name of the British Medical Association.

1902.		£ s. d.	1902.		£ s. d.
Jan. 1.	To Balance brought over	69 18 8	Dec. 31.	By Balance carried down	88 14 4
Dec. 31.	,, Interest one year on £666 13s. 4d.	18 15 8			
		£88 14 4			£88 14 4

We certify, in accordance with the provisions of the Companies Act, 1900, that all our requirements as Auditors have been complied with. Having examined the above Balance Sheet, dated December 31st, 1902, with the books and vouchers of the Association, and having inspected the Deeds of the properties, 429, Strand, 2, 3, 4, and 5, Agar Street, and 2, and 3, Harvey's Buildings deposited with your Bankers, we report that it is in our opinion properly drawn up so as to exhibit a true and correct view of the state of the Association's affairs as shown by the books of the Association.

(Signed) PRICE, WATERHOUSE & CO.,
3, Frederick's Place, Old Jewry, E.C.

March 31st, 1903.

In addition to these, the Library has also received some hundreds of English and Colonial Sanitary Reports, and the series of Continental theses for which your Library is unique has been maintained.

Several applications have been received from Home and Colonial Branches of your Association for grants of books from the list of accumulated duplicate volumes, and in all cases it has been found possible to comply with the request. There is now being regularly filed in the library a really useful working collection of English and Continental journals, and, in response to requests, several additional series have been started during the year. Both past experience and an "intelligent anticipation of events" emphasize the importance of completeness in these serials, and it is hoped that it may be found possible to make adequate provision for the proper and convenient housing of such selected periodicals as it may be considered advisable in the future to file.

ANDREW CLARK, Chairman of Council.

April 22nd, 1903.

Resolved: That the Report of Council be received and approved, and submitted to the Secretaries of each Branch and Division, and published in the JOURNAL in accordance with By-law 32 (see p. xxxiv).

The minutes of the Premises and Library Committee were then considered.

Resolved: That the minutes of the Premises and Library Committee be received.

Resolved: That the accounts for the quarter, amounting to £36 11s. 10d., be approved, and the Treasurer be empowered to pay them.

Resolved: That a grant of books, consisting of the sixteen odd volumes asked for, be made to the Medical Society of Port Blair, but in doing so the Council would point out that it does not wish this gift to constitute a precedent; the usual practice being for duplicate books to be reserved for the Branches of the Association.

The minutes of the Journal and Finance Committee were then considered.

Resolved: That the minutes of the Journal and Finance Committee be received.

Resolved: That the Financial Statement for the year ending December 31st, 1902, as certified by the auditors as correct, be received and approved and circulated, together with the estimate of receipts and expenditure for the year ending December 31st, 1903, to the Secretaries of Branches and Divisions and published in the JOURNAL, in accordance with By-law 32 (see page xxxviii).

Resolved: That this Council regrets to learn of the enforced absence of Dr. Roberts Thomson and hopes that he may soon be able to resume his attendance and valued counsels.

Resolved: That it be recommended that a sum of £300 be voted at the next annual general meeting to be added to the Superannuation Fund for the staff.

Resolved: That a grant of £100 be made to the Special Chloroform Committee for its work in 1903.

Resolved: That the scheme for alterations of ground floor offices, as recommended by the Premises and Library Committee, be approved and adopted, and that the Chairman of Council and the Treasurer be asked to confer with the Architect to take out quantities and make the most favourable terms for paying the cost of the alterations.

Resolved: That the accounts for the quarter ending March 31st last, amounting to £9,373 6s. 5d., be received and approved, and it be recommended that the Treasurer be empowered to pay those remaining unpaid, amounting to £2,644 17s. 10d.

Resolved: That the Auditors' report be received and approved and entered on the minutes.

Read communication from the Solicitor, Duchy of Lancaster Office, London, W.C.:

Law Department,
April 9th, 1903.

Sir,

LIVERPOOL THROAT, NOSE, AND EAR HOSPITAL.

Royalties from Pastilles manufactured by Messrs. Evans, Sons and Co.

Referring to Mr. Houston's interview with you yesterday, I now write as arranged to put the facts of the case shortly before you.

From what you mentioned to Mr. Houston yesterday I understand that the British Medical Association are aware, that by a recent order of the Court of Chancery of the County Palatine of Lancaster, a scheme was directed to be prepared on behalf of the above-mentioned hospita with respect to the dispositions of certain moneys standing to the credit of the action of Evans *v.* Jones in that Court, and which consists of an accumulation of royalties paid by Messrs. Evans on the sale by them of certain pastilles, known as antiseptic throat pastilles, and of which, by order of the Court, they are permitted to be sole manufacturers and vendors.

The amount now in Court is upwards of £1,400, and the future royalties on the sale, it is anticipated, will considerable exceed £1,000 per annum.

According to the arrangement made by the Attorney-General of the Duchy, and sanctioned by the Court, these royalties were directed to be paid, by way of donation, to or for the benefit of the above-mentioned (then projected) hospital, twice yearly, and the scheme itself on which the hospital was established was also duly approved on behalf of all parties interested.

The Medical Board attached to the hospital consists of Drs. John Bark, J. E. McDougall, William McClellan, and Wiliam C. Costine, the Trustees of the Institution being Mr. Reginald Bushell, J.P., of Liverpool, and Mr. William Macfie, C.B., J.P., also of Liverpool, with power to nominate a third trustee.

It appears, however, from representations which the Solicitors for the hospital have recently made to the Attorney-General that the General Medical Council have taken objection to these medical men associating themselves, in any way, with the sale of a medicinal remedy the composition of which they are pledged not to divulge.

Under these circumstances, and in view of the representations which have been made to the Council, the medical staff have decided to sever their connexion entirely from the hospital, and desire to hand over the building and its contents to their successors. This decision on their part has also, to a great extent, I believe, been prompted by the unfortunate and unauthorized use of the name of one of the doctors in connexion with the formula of the pastilles. This latter objection, I may mention, no longer obtains, as the manufacturers, Messrs. Evans and Co., have given the Attorney-General their undertaking to discontinue all further use of such name.

In view of the decision of the medical staff of the hospital, the scheme which the Duchy Court has formulated practically falls to the ground as, of course, the hospital cannot go on without medical men, and it is presumed that the objection which the General Medical Council has taken will apply to any other medical men who might be willing to associate themselves with the undertaking.

It is, however, with respect to this latter question that I now address you, and I shall be glad if you will inform me whether I am right in assuming that the British Medical Association will move the General Medical Council to take objection to any qualified medical practitioners associating themselves with an institution deriving benefit from the accumulated royalties arising out of the past sales of these pastilles, or the income to be derived from their anticipated sale in the future?

If this is so, it will be necessary for the Attorney-General of the Duchy to devise some other scheme, which will not be opposed to the professional ethics, now standing in the way of medical institutions deriving the benefit from the sale of these pastilles, which the Attorney-General, as well as the Duchy Court, would desire to confer.

May I ask you to be so good as to bring the subject before your Board at the meeting, which, I believe, takes place on the 22nd inst., and to favour me with an answer on as early a date as possible, in order that the whole subject of the disposition of these royalties may be again brought before the Court?

I am, Sir,
Your obedient Servant,
REGINALD C. HART DYKE,
Solicitor, Duchy of Lancaster.

Guy Elliston, Esq.,
General Secretary,
British Medical Association,
429, Strand, W.C.

Resolved: That a reply be forwarded to the Solicitor of the Duchy of Lancaster to the effect that the objections taken by the General Medical Council are shared by the British Medical Association.

Resolved: That the following notices of motion on behalf of the Council be given for the forthcoming annual representative meeting to be held at Swansea:

That By-law 2 be amended by the addition of a clause that any Branch may, by special resolution, require that each candidate for election to the Association shall furnish a certificate from two members of the Association to whom he is personally known.

That all officers on the active list of the Navy, Army, and Indian Medical Service be eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

The minutes of the Trust Funds Committee were then considered.

Resolved: That the Middlemore Prize be awarded for the best work or essay on the scientific and practical value of improvements in ophthalmic medicine and surgery during the previous three years, and that Mr. Adams Frost, Dr. George A. Berry, and the Chairman of Council be requested to act as adjudicators.

Resolved: That the Stewart Prize be awarded for the

recognition of important work already done, or of researches instituted and promising good results regarding the origin, spread, and prevention of epidemic disease, with a view to encourage the continuance of the same, and that Dr. Patrick Manson, C.M.G., Dr. Leslie Mackenzie, and the Chairman of of Council, be requested to act as adjudicators.

The minutes of the Joint Committee on Fees to Medical Witnesses of January 27th, 1903, were then considered.

Resolved: That the minutes of the Joint Committee on Fees to Medical Witnesses be received.

The minutes of the Joint Committee of the British Medical Association and Medico-Psychological Association of December 3rd, 1902, January 7th and February 23rd, 1903, were then considered.

Resolved: That the minutes of the Joint Committee of the British Medical Association and the Medico-Psychological Association of December 3rd, 1902, January 7th and February 23rd, 1903, be received.

Resolved: That the Report of the Joint Committee contained in the minutes of February 23rd, 1903, and forwarded to the Lord Chancellor, be received.

The minutes of the Medico-Political Committee of February 24th and March 19th, 1903, were then considered.

Resolved: That the minutes of the Medico-Political Committee of February 24th and March 19th, 1903, be received.

Resolved: That the Chairman of Council and the Chairman of the Medico-Political Committee be authorized to lay before the Lord Chancellor the facts contained in the report of the Medico-Political Committee in such manner as shall appear best after conference with the other medical bodies moving in the matter of the administration of the Coroners Act by Mr. Troutbeck, Coroner for South-West London.

The minutes of the Organization Committee of March 10th and April 7th, 1903, were then considered.

Resolved: That the minutes of the Organization Committee of March 10th and April 7th, 1903, be received.

The question of the Representation of Branches on the Council was then brought forward by the Chairman of the Organization Committee.

A petition from the Border Counties Branch was considered in conjunction with the minutes, as bearing upon the question of representation on the Council.

Resolved: That the Border Counties Branch be grouped with the North Lancashire Branch, to elect one member of Council.

Resolved: That the Gloucester Branch be grouped with the Worcester and Hereford Branch, to elect one member of Council.

With regard to the recommendation of the Organization Committee that the Dorset and West Hants Branch be grouped with the West Somerset Branch, to elect one member of Council,

Resolved: That the recommendation be referred back to the Organization Committee for further consideration, but with power to decide the question.

A petition from the East York and North Lincoln Branch regarding representation on the Council was considered in conjunction with the recommendation of the Organization Committee that the East York and North Lincoln Branch, though having fewer than 200 members, be accorded independent representation on the ground of the large membership of the neighbouring Branches, on account of which the East York and North Lincoln Branch, if grouped, would practically be deprived of any share in representation.

Resolved: That the question of the representation of the East York and North Lincoln Branch be referred back to the Organization Committee, and that the Committee be authorized to decide the question.

With regard to the recommendation of the Organization Committee that the Cambridge and Huntingdon Branch, though having fewer than 200 members, be accorded representation for similar reasons to those stated in reference to the East York and North Lincoln Branch,

Resolved: That the Cambridge Branch be not granted separate representation, and the grouping of the Branch be referred back to the Organization Committee with power to make arrangements for the ensuing year.

Resolved: That having regard to the wide area and sparse medical population of the Northern Counties of Scotland Branch, this Branch be accorded independent representation, though having fewer than 200 members.

With reference to the recommendation of the Organization Committee, that the Aberdeen Branch, even if not attaining 200 members by the day appointed for counting, be accorded independent representation,

Resolved: That the question of the representation of the Aberdeen Branch be referred back to the Organization Committee with power to settle the matter—that is, if the figures are over 200, they will get representation; if not, the Committee can do as it thinks fit.

Resolved: That the Dundee, Perth, and Stirling Branches be grouped together, to elect one member of Council, and the Fife with the Edinburgh Branch to elect two members of Council.

Resolved: That the South-Eastern of Ireland Branch be grouped with the Leinster Branch, to elect two members of Council.

Resolved: That the Connaught Branch be grouped with the Ulster Branch, to elect two members of Council.

Resolved: That in consideration of the special circumstances of the Munster Branch—namely, that it cannot be grouped with any other Irish Branch without unduly reducing the total number of members of Council representing Irish Branches—the Munster Branch be granted independent representation, though having fewer than 200 members.

Resolved: That the Council group the Divisions in the United Kingdom for representative purposes in accordance with the scheme as amended and submitted by the Organization Committee subject to such changes of membership, material to representation, as may be found to have taken place when the membership of each Division is ascertained on May 20th.

Scheme for Representation of Divisions.

Branch.	*Divisions.*	*Grouping for Representation.*
Bath and Bristol ..	Bristol	Alone, one representative
	Bath	Together ,,
	Trowbridge	
Birmingham and Midland Counties	Central	Alone, one, or with West Bromwich (*q.v.*)
	West Bromwich ...	Alone, one, if 50 members; otherwise with Central
	Dudley	Together, one
	Bromsgrove	
	Warwick and Leamington	Alone, one (or with following)
	Coventry	Together, one, if 50 members; otherwise with Warwick
	Nuneaton and Tamworth	
Border Counties	Scottish Border ...	Alone, one
	North Cumberland	Together, one
	Mid Cumberland	
	South Cumberland	
Cambridge and Hunts	Cambridge & Hunts	Alone, one
Dorset & West Hants	West Dorset	Alone, one
	Bournemouth ...	Alone, one
East Anglian	Norwich	Together, one
	West Norfolk ...	
	Mid Norfolk	Alone, one, if 50 members: otherwise with foregoing
	East Norfolk... ...	Together, one
	North Suffolk ...	
	South Suffolk ...	Together, one
	West Suffolk	
	North-East Essex ...	Alone, one, if 50 members; otherwise with following
	Mid Essex	Together, one
	South Essex	
East York and North Lincoln	Hull	Together, one
	North Lincoln ...	
Gloucestershire	Gloucestershire ...	Alone, one



Fig. 3.—Case III at rest.



Fig 4.—Case III; during elevation of shoulder.





Fig. 1.—Case I; at rest



Fig. 2.—Case I; during elevation of left shoulder.



Fig. 6.—Case IV; at rest.



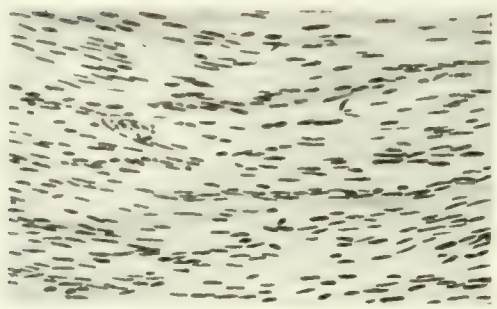


Fig. 8.—Facial palsy of three years' duration. Case v; longitudinal section of distal segment: Van Gieson stain. (× 200.) Shows proliferation of neurilemma cells and their arrangement in imbricating rows.

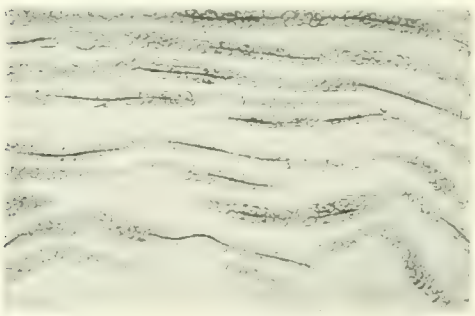


Fig. 9.—Facial palsy of three years' duration. Case v; longitudinal section of distal segment. Weigert stain. (× 300.) Shows young nerve fibres in the distal segment.



Fig. 10.—Facial palsy of six months' duration. Case III; longitudinal section of distal segment. Kulschitsky-Wolters method. (× 300.) Shows young nerve fibres in the distal segment.

Branch.	Divisions.	Grouping for Representation.
LANCASHIRE AND CHESHIRE	Manchester Central	
	,, South	
	,, West	
	,, North	
	Salford	Each, alone, one representative
	Bootle	
	Liverpool Northern	
	,, Western	
	,, Central	
	,, Southern	
	Birkenhead	
	Blackburn	Together, one
	Burnley	
	Bolton	
	Oldham	
	Preston	Each, alone, one
	Southport	
	Stockport	
	Blackpool	Together, one
	Isle of Man	
	Ashton	,, ,,
	Glossop	
	Altrincham	Alone, one
	Chester	Together, one
	Crewe	
	Rochdale	,, ,,
	Bury	
	Wigan	,, ,,
	Leigh	
	Warrington	,, ,,
	St. Helens	
METROPOLITAN COUNTIES	Brixton	Each, alone, one
	Central	
	City	
	Ealing	Alone, one, or with Watford, *q.v.*
	Hampstead	Each, alone, one
	Kensington	
	Lambeth	
	Richmond	
	St. Pancras	
	Stratford	
	Tottenham	
	Wandsworth	
	Walthamstow	
	Watford	Alone, one, if 50 members
	Weybridge	Alone, one
MIDLAND	Derby	Alone, one
	Leicester	Alone, one
	Nottingham	Alone, one
	Stamford	Together, one
	Lincoln	
	Boston and Spalding	
NORTH OF ENGLAND	Berwick	Together, one, if 50 members; if not, with Hexham, one
	Alnwick	
	Morpeth	
	Blyth	
	Hexham	With foregoing, one; or with Newcastle, one
	Newcastle	Alone, or with Hexham, one
	Tyneside	Together, one
	South Shields	
	Gateshead	Together, one
	Consett	
	Chester-le-Street	Together, one
	Durham	
	Bishop Auckland	
	Barnard Castle	
	Sunderland	Together, one
	Hartlepool	
	Darlington	Together, one
	Stockton	
	Cleveland	
NORTH LANCASHIRE	Furness	Together, one; with Lancaster if necessary
	Kendal	
	Lancaster	Alone, one, if 50 members; otherwise with foregoing
OXFORD AND READING	Oxford	Alone, one
	Maidenhead	Together, one
	Reading	
NORTH WALES & SHROPSHIRE	Four Divisions	Each alone, one

Branch.	Divisions.	Grouping for Representation.
SOUTH EASTERN	Isle of Thanet	Together, one
	Canterbury	
	Dover	Together, one
	Folkestone	
	Faversham	
	Rochester and Chatham	Together, one
	Maidstone	Together, one
	Ashford	
	Dartford	Alone, one
	Bromley	Together, one
	Sevenoaks	
	Tunbridge Wells	Alone, one
	Hastings	Together, one
	Eastbourne	
	Brighton	Alone, one
	Chichester and Worthing	Together, one
	Horsham	
	Guildford	Together, one
	Reigate	
	Croydon	Alone, one
	Norwood	Alone, one
SOUTHERN	Portsmouth	Together, one
	Isle of Wight	
	Southampton	Together, one; with Salisbury if required.
	Jersey	
	Guernsey	
	Salisbury	Alone, one, if 50 members; otherwise with foregoing
	Winchester	Alone, one
SOUTH MIDLAND	Three Divisions	Each Division alone, one representative
SOUTH WALES AND MONMOUTHSHIRE	Five Divisions	
SOUTH-WESTERN	Six Divisions	
STAFFORDSHIRE	Three Divisions	
WEST SOMERSET	One Division	
WORCESTER AND HEREFORD	Worcester	One representative each, if Hereford has 50 members; otherwise together
	Hereford	
YORKSHIRE	Sheffield	Each, alone, one
	Wakefield	
	Leeds	
	Bradford	
	Harrogate	Together, one
	Richmond	
	Huddersfield	Together, one
	Halifax	
	York	Each, alone, one, if Scarborough over 50 members; otherwise, together one
	Scarborough	
ABERDEEN	Aberdeen	Together, one
	Orkney	
	Shetland	
DUNDEE	Dundee	
FIFE	Fife	
NORTHERN COUNTIES	Northern Counties	Each, alone, one.
PERTH	Perth	
STIRLING	Stirling	
EDINBURGH	East Edinburgh	Each, alone, one.
	North Edinburgh	
	South Edinburgh	
	Lothians	Each, alone, one, if Border Counties have over 50 members; otherwise, together, one.
	Border Counties	
GLASGOW AND WEST OF SCOTLAND	Seven Divisions	Each, alone, one

Branch.	Divisions.	Grouping for Representation.
CONNAUGHT ...	Three Divisions ...	Together, one, if 50 members; otherwise, with nearest Ulster Division, one
MUNSTER	North Munster ...	Together, one, if 50 members; otherwise grouped with South Munster
	West Munster ...	
	South Munster ...	Alone, one, or if required grouped with foregoing
LEINSTER	Dublin	Alone, one
	East Leinster ...	Alone, one
	Four other Divisions	Together, one
SOUTH-EASTERN OF IRELAND	Three Divisions ...	Together one
ULSTER	Belfast	Alone, one
	Portadown	Alone, one
	Ballymoney	Together, one
	Derry	
	Monaghan and Cavan	Together, one
	Omagh...	
	Enniskillen	

The Chairman of the Organization Committee then submitted the Rules of Branches and Divisions.

Resolved: That the rules of the following Branches be approved:

Bath and Bristol Branch	North Lancashire Branch
Dundee Branch	Stirling Branch
East Anglian Branch	South-Western Branch
Fife Branch	South Midland Branch

Resolved: That the Rules of the Midland Branch, submitted by the Branch Council, be approved, subject to confirmation by the general meeting of the Branch.

Resolved: That the Gateshead Division Rules be approved with the exception of those rules relating to professional conduct which were referred to the Ethical Committee.

Resolved: That the Rules of the Yorkshire Branch be approved, with the exception of the rule requiring sponsors on behalf of candidates seeking election.

The Chairman of the Committee reported that in the Rules submitted by the British Guiana, Ceylon, and Natal Branches, were provisions which appeared to be inconsistent with the Regulations or By-laws of the Association.

Resolved: That all Rules which appear to conflict with the Articles and By-laws of the Association be referred to the Solicitor for his opinion.

Resolved: That the Rules of the following Divisions be approved:

Bedford Division	West Norfolk Division
Bucks Division	Furness Division
Northampton Division	Kendal Division
East Norfolk Divis on	Lancaster Division
Mid-Norfolk Division	South-Eastern Counties Division
Norwich Division	(Edinburgh Branch)

The minutes of the Public Health Committee of April 3rd were then considered.

Resolved: That the minutes of the Public Health Committee of April 3rd be received and approved, and the recommendations contained therein carried into effect.

Resolved: That this Council views with apprehension the withdrawal by the Board of Education of Article 101* from the Provisional Code recently issued. This article, in districts where it has been effieiently worked, has been most advantageous to the public health, and in the opinion of this Council its withdrawal will be detrimental in two directions—first, by causing the return to school of children not completely convalescent from acute disease; and, secondly, by making it increasingly difficult to exclude from attendance at school children who, although in fair health, are still capable of spreading infectious disease, either because they have suffered from slight attacks or because they have been recently in contact with cases of disease.

The minutes of the Ethical Committee of March 18th, 1903, were then considered.

Resolved: That the minutes of the Ethical Committee be received.

The minutes of the Medical Charities Committee of March 30th, 1903, were then presented.

Resolved: That the minutes of the Medical Charities Committee be not received.

The minutes of the Colonial Committee of April 7th, 1903, were then considered.

Resolved: That it be recommended that for the year 1903-4 the Council accept the Representatives of those Colonial Branches making a return.

Resolved: That the 25 candidates whose names appear on the circular convening the meeting be and they are hereby elected members of the British Medical Association.

Read communication from the Association of Public Vaccinators of England and Wales.

Resolved: That the same be received and entered on the minutes, and that the Secretary be instructed to inform the Association of Public Vaccinators of England and Wales that the Council in appointing any Committee takes into consideration the interests of all members of the British Medical Association.

Read communication from the Matrons' Council of Great Britain and Ireland.

Resolved: That the same be received and entered on the minutes.

Read report of the Birmingham and Midland Counties Branch in accordance with By-law 8.

Resolved: That the same be received and entered on the minutes.

Resolved: That Mr. Hempson be reappointed Solicitor to the Association for the ensuing twelve months on the same terms as before.

Read communication from the Royal Institute of Public Health, asking the Association to appoint Delegates to attend its forthcoming Congress to be held in Liverpool from July 15th to July 21st, under the presidency of the Right Hon. the Earl of Derby, K.G.

Resolved: That the communication lie on the table.

Resolved: That the question of appointing Delegates to the Eleventh International Congress of Hygiene and Demography to be held at Brussels in September be deferred to the next meeting of Council.

Resolved: That permission be granted to the Continental Anglo-American Medical Society to hold a meeting during the annual meeting of the Association at Swansea.

MEDICO-POLITICAL COMMITTEE.

A MEETING of the Medico Political Committee was held at the Office of the Association on February 24th, 1903, when there were present Sir Victor Horsley, F.R.S., in the chair; Mr. Andrew Clark, Chairman of Council; Dr. H. Langley Browne, Dr. Alfred Cox, Dr. Major Greenwood, Dr G. Heron, Mr. M. A. Messiter, Dr. C. H. Milburn, Dr. Norman Walker.

Bills before Parliament.

The Secretary was instructed to issue a circular calling the attention of Divisions to the following matters already announced in the JOURNAL:

1. The joint recommendations of the Committee and the Public Health Committee as to vaccination approved by the Council.

2 The joint action agreed to be taken by the Association in conjunction with the Scottish Poor-law Medical Officers' Association in respect of the Local Government Act Amendment (Scotland) Bill when this again comes before Parliament

3. The Coroners Bill.

4. The Public Health Bill.

Also, in reference to the first item, calling attention to the recent speech of the President of the Local Government Board forecasting a reduction of minimum fees paid to Public Vaccinators.

The Divisions were requested to consider each of the above matters, and to make arrangements with a view to supporting

the policy of the Association in Parliamentary matters by influencing members of Parliament representing the several localities.

It was directed that mention should also be made in the circular of the fact that a Medical Acts Amendment Bill is under consideration by the Committee, and will shortly be submitted to the Divisions, embodying the following main principles: The reform of the constitution of the General Medical Council; the one-portal system; an annual licence to practise; and the suppression of unqualified practice.

Another meeting of the Medico-Political Committee was held at the house of Sir Victor Horsley on March 19th, 1903, when there were present Sir Victor Horsley, F.R.S., in the chair, Mr. Andrew Clark, Chairman of Council, Dr. H. Langley Browne, Dr. Major Greenwood, Dr. G. A. Heron, Mr. M. A. Messiter, Dr. C. H. Milburn, and Dr. Norman Walker. Mr. Hempson also attended by request of the Chairman.

Irregular Certification of Death.

A case in which evidence was adduced that a form of certificate used by a medical herbalist with regard to the death of persons treated by him was accepted by the local registrar, who, however, entered such deaths as "uncertified," was considered.

Mr. HEMPSON stated the action which had been taken by the Medical Defence Union, and by himself as solicitor to the Union in the matter of deaths certified by unregistered practitioners with special reference to the interview which he had had with the Registrar-General, and it was resolved:

That a memorandum be prepared which the Committee should submit to the Council with the recommendation that the Registrar-General should be requested to receive a deputation from the Association on the matters dealt with in the memorandum, and that Mr. Hempson be consulted as to the drafting of the memorandum.

Coroner's Inquiries.

The action of the coroner at Huddersfield in requiring death certificates given by medical practitioners, in cases where a surgical operation has been performed within the fourteen days prior to death, to be submitted to him before registration, was considered, but as the Committee was informed that the Coroner had subsequently written intimating his withdrawal from the position previously taken up by him, the Committee was of opinion that no action by the Association appeared to be necessary.

The Committee then considered the action of the Coroner for South-West London in declining to take the evidence at inquests of practitioners who had been in attendance on the deceased, and resolved:

That the Council be recommended to approach the Lord Chancellor with a view to his receiving a deputation or a memorial from the Association as to the way in which the Coroners Act is being carried out by Mr. Troutbeck, and that a memorandum of the points to be raised in connexion therewith be prepared by an Emergency Subcommittee composed of the London members of the Committee, in conjunction with Mr. Hempson.

As the Committee was informed that the Medical Defence Union and the South-West London Medical Society were both preparing to approach the Lord Chancellor on the subject, it was resolved to recommend the Council to co-operate with these bodies.

The facts which it is recommended should be laid before the Lord Chancellor are embodied in the following memorandum:

That the attention of the British Medical Association has been drawn to the recent action of Mr. John Troutbeck, His Majesty's Coroner for the City and Liberty of Westminster and the South-Western District of the County of London, in creating a new procedure by dispensing at inquests with the evidence of the medical practitioner who had been in attendance upon the deceased prior to death or who had been called in immediately thereafter, and in placing before the jury and directing them as regards medical evidence solely upon that obtained by a pathologist performing a *post-mortem* examination and having no other direct knowledge of the actual facts of the case. Further, Mr. Troutbeck has recently adopted the practice of only informally conveying to the practitioner that a *post-mortem* examination will be made, and not officially directing him to take part therein.

On the above facts it is recommended that the Council of the British Medical Association, whilst making clear its recognition of the advantage which may accrue in special cases from the assistance of a pathologist skilled in making *post-mortem* examinations, should respectfully submit to the Lord Chancellor by petition, memorial, or deputation:

1. That the medical evidence of the cause of death is two kinds, namely:—
   (*a*) *Clinical*, as to facts observed during life, and
   (*b*) *Pathological*, as to facts observed by examination of the body after death.
2. That clinical evidence, if obtainable, is essential to the finding of the true cause of death, and therefore should be presented to the jury.
3. That where it is deemed by the coroner that the pathological investigation presents special difficulties demanding expert assistance, such assistance should be obtained as a supplement to, and not in substitution for, that of the practitioner called to the case during life or immediately after death.
4. That the procedure herein suggested is that contemplated by the Coroners Act, 1887.

Workmen's Compensation Act.

The following report of the Workmen's Compensation Act Subcommittee was received.

The Subcommittee reported that, inasmuch as information placed before them by members of the Subcommittee indicated that clauses of the Workmen's Compensation Act in reference to the appointment of Medical Referees appointed under the Act were not being carried out in accordance with the apparent intention of the Act, a circular had been addressed to all Referees appointed under the Act, 296 in number, inquiring whether they had acted under the Act, if so under what circumstances, and whether they had any suggestions to offer. Out of 230 replies received, 86 Referees stated that they had acted in their official capacity, and 144 that they had not so stated.

An abstract had been prepared by the Secretary of the information and suggestions so furnished, and on the basis of this abstract a Memorandum had been drafted setting forth the kind of action which appeared to be called for. The Subcommittee recommended thereupon as follows:—

(1) That the Committee should recommend the Council to approach the Home Office in order to lay before it certain facts as to the working of the Workmen's Compensation Act.

(2) That the Committee should ascertain from the Parliamentary Committee of the Trades Union Congress its views on certain matters set forth in the Memorandum prepared by the Secretary as to the effect of the non-employment of Referees on the position of workmen in compensation cases.

The Emergency Subcommittee was instructed to prepare a Memorandum of the points to be laid before the Home Secretary, and it was resolved that no recommendation should be made to the Council until this had been considered by the members of the Committee.

Irish Poor-law Medical Service.

A letter was read from Dr. Walshe, member of Council, representing the South-Eastern of Ireland Branch, as to the support desired from the Association by the Irish medical profession, particularly with reference to the status of Irish Poor-law medical officers. The Committee resolved:

That Dr. Walshe be informed that the Committee, fully appreciating the difficulties of the Irish medical profession, and sympathizing with them in relation thereto, would be glad to have before it specific statements of matters requiring attention on which definite recommendations to the Council might be based.

PUBLIC HEALTH COMMITTEE.

A MEETING of the Public Health Committee was held at the office of the Association on April 3rd, when there were present Dr. Joseph Groves, Chairman; Mr. Andrew Clark, Chairman of Council; Dr. Edgar Barnes, Dr. A. Newsholme, Dr. A. E. Cope attended at the request of the Chairman.

Letters of apology for non-attendance were read from Mr. W. Jones Morris and Dr. D. Walshe.

Vaccination.

The following questions submitted to the Association of Public Vaccinators in accordance with minute of this Committee dated July 8th, 1902, together with the *précis* of replies tabulated by Dr. Cope, were then considered:—

Question 1.—Is it in your opinion highly desirable that the Public Vaccinator should be an Officer of the Guardians or other

Authority, and not merely a contractor: and should he hold office during the pleasure of Local Government Board or other central authority?

Of 386 replies to this question, all are in the affirmative on both points.

Question 2.—Are the various Forms provided by the Local Government Board under the Vaccination Acts in your opinion satisfactory? If not, what alterations would you suggest?

Of the 386 replies, 143 consider the forms satisfactory; 243 suggest emendations or alterations.

Of these 243, more than half suggest that:—

Form A should contain parents' name and date of birth.
" H " "
" E " statement of number of insertions and vesicles.

Other suggestions are:—

Forms generally might be condensed and simplified in matter and in arrangement for convenience in filling up, *e.g.*, by use of phrase "herein described child."

New Forms suggested for:—

(1.) Notifying parent of postponement.
(2.) Certifying successful revaccination.
(3.) Register of postponed cases.
(4.) Certifying unsuccessful vaccinations, and calling attention to need for operation to be repeated.

Form A.—More liberal use of red ink in emphasizing points.

Form B.—P.V. should be able to postpone for more than 2 months, and postponement on account of illness of mother or nurse (sepsis, etc.) should be admitted.

Form D.—Should provide for interval between successive trials of at least a month; if form is not abolished.

Form E.—Should have provision for vaccinator's address and for source of lymph.

Form G.—As postcard, or in other form, should be given to every person registering a birth; and should have space for age.

Form H.—Should have columns for parents' name; should be supplied in duplicate, one to be retained by P.V., other returned to V.O.

Form I.—Is strongly objected to by many, who suggest:—

(1.) That V.O. should make the offer first.
(2.) That the offer should be an offer to vaccinate *or postpone.*
(3.) That no reference should be made to *such other lymph, etc.*
(4.) That postage should be prepaid.
(5.) That the carbon paper variety works badly.
(6.) That the vaccination should be stated to be "free of charge."
(7.) That postcards would be more satisfactory.

Question 3.—Is there, to your personal knowledge, any considerable number of imperfect vaccinations performed in your district?

240 report "Yes."
103 " "No."
32 " "Some," or "Not many."

Question 4.—What are your objections to the proposal that all registered practitioners should be de facto *Public Vaccinators, and entitled to charge their vaccinations to the rates (or Guardians)?*

One or two of the following are mentioned by many:

(*a*) That there will be a great increase in the expense of vaccination, as private vaccination will become almost extinct, and nearly every one will be vaccinated at the public expense.
(*b*) That there will be great difficulty in obtaining efficient inspection by the Government Inspector (now only every two years).
(*c*) That the cost of administration will be enormously increased.
(*d*) That there will be a difficulty in the supply of lymph, and in keeping correct records of its use.
(*e*) That the standard of vaccination will be lowered, as so many private practitioners have been teaching the public that one mark is sufficient.
(*f*) That it will do away entirely with the domiciliary visit, which was the leading feature of the last Act, and make the sending of the H. List an impossibility.
(*g*) That the existing legal machinery for enforcing the Vaccination Acts, dependent on the Public Vaccinator's visit and offer to vaccinate, would need complete reconstruction.

Several report no objection if only general practitioner can be got to vaccinate up to standard.

Most look on this, however, as impossible, and contemplate a downward competition to reduce scar area.

Friction between neighbouring practitioners would be greater.

Men of standing would object to supervision, and people to inspection.

Specialization in vaccination as desirable as in other directions, but in danger of destruction if all can vaccinate as Public Vaccinator.

Far better to widen areas of Public Vaccinators and debar from competitive practice.

Present plan is a working success; proposed is complex and dislocating.

Present system should have a longer experimental trial, five years too short to realize full effect of domiciliary vaccination and glycerinated calf lymph.

"My salary as District Medical Officer was reduced 25 per cent. when I was appointed Public Vaccinator; now domiciliary vaccination has destroyed my private practice, which can't be regained from younger men. Touting would be certain, men would make small marks, neglect removals and postponements" (Liverpool).

"Would the change make men more conscientious?"

Why not make all practitioners factory surgeons, medical officers of health, and district medical officers?"

"How could accounts be checked?"

Question 5.—(a.) What do you think of the utility of the Exemption Clause in the Act of 1898? (b.) Have any considerable portion of the antivaccinist population availed themselves of it? (c.) Should it be abolished in any fresh legislation, or should exemption be deferred to school age?

(*a.*) Useful	... ...	58		
Useless	... ...	112	184	
Doubtful	... ...	14		
(*b.*) Many	... ...	57	273	
Few	... ...	216		
(*c.*) Abolish	... ...	168		
Abolish or defer	... ...	21	315	
Defer	... ...	67		
Retain	... ...	59		

Raunds, Northants.—80 per cent of registered births exempted.

Rochdale.—Real conscientious objectors rare, but 900 certificates one night; many vaccinated since. One man brought certificate of exemption to vaccination officer for a child, 2 years old, which had been vaccinated a year before, but he had forgotten.

Maidstone.—10 per cent. Absurd to give a man a conscience up to four months, and refuse plea when raised in answer to summons.

Gloucester.—40 per cent. of births.

Many look on clause as an excellent safety valve and martyr destroyer.

Most think clause should be more clearly defined, and should be more equally administered, as well as less easy of employment.

In many districts dead letter, because vaccination officer is not strong enough to prosecute.

In London, removal to another district is easier than claiming exemption.

General view of those favouring retention well stated by Dr. Palmer, Mansfield, Notts, "Absolutely wrong in theory, yet permissible in practice on ground of policy."

The general impression among the most important Public Vaccinators appears to be that the clause is of service, but should be redrafted.

Question 6.—Do you approve of this regulation of Local Government Board that no primary vaccination of persons under 14 years may be done by Public Vaccinator anywhere at places other than their own homes? Should the parents or guardians have the option of seeking vaccination at the surgery of the Public Vaccinator if they so desire? In times of epidemic small-pox, does the above regulation interfere with prompt vaccination in many cases?

Approve	...	160	...	Not	... 130
Option	...	238	...	Not	... 46
Interfere	...	96	...	Not	... 58

35 think that "serious epidemic" should determine the power of option; they approve the regulation *except* in such times.

1 suggests that there should be option after 6 months.
1 ,, ,, ,, ,, 1 year.
1 ,, ,, ,, ,, 2 years.
16 suggest ,, ,, ,, 4 or 5 years.
5 ,, ,, ,, ,, 10 years.
8 ,, that the option should be at disposal of Public Vaccinator.

Several object to "vaccination at surgery"; some because they have no surgery proper, others because the room is small and inconvenient; and they suggest the employment of stations again for revaccinations, and in certain cases for primary vaccination.

Question 7.—In the case of schools, factories, and other places where people congregate together during the daytime only, in your opinion, ought the Public Vaccinator of the district in which the same are situated to be allowed to vaccinate all so desiring, regardless of where they reside?

Yes, 322. No, 48.

8 yeses and 5 noes are qualified by "epidemic."

A few suggest that all interested Public Vaccinators should attend at the factories and do the cases from their own district. This course worked well in Hull with three Public Vaccinators. It would not work in London.

Objection is raised on account of the inequality of rating charges which would result if a poor district, containing a large factory, had to pay for vaccination of all the hands, who lived in a richer district, which contributed nothing to the cost. In London the Metropolitan Common Poor Fund makes this argument inapplicable. The question is mooted of spreading charge over large areas in the provinces.

Question 8.—It is in your experience that certain persons, to avoid the Vaccination Officer, habitually neglect to register the births of their children?

No, 289. Yes, 49. Occasionally, 29.

It is, however, stated by several that the giving of false addresses is a much more common thing than the failure to register.

It is also stated that great difficulty is experienced in getting the Superintendent Registrars and Somerset House to prosecute, even though the cases are flagrant ones.

Also that smallpox outbreaks have been traced, during the recent London epidemic, to children whose births had been unregistered to avoid vaccination.

Question 9.—To what Authority should the administration of the Vaccination Acts be entrusted? Guardians, Sanitary Authority, Local Government Board, or other central Authority?

237	suggests	L.G.B.
64	,,	L.G.B. or C.A.
3	,,	L.G.B. ,, B.H.
1	,,	,, ,, ,, or G.
11	,,	,, ,, G.
9	,,	,, ,, C.C.
1	,,	,, ,, or S.A.
16	,,	,, ,, S.A.
8	,,	C.A.
2	,,	H.O.
1	,,	C.A. or B.H.
3	,,	B.H.
3	,,	C.C.
2	,,	C.C. or S.A.
12	,,	S.A.
12	,,	G.
385		

The letters signify—Local Government Board, Central Authority, Home Office, Board of Health, County Council, Sanitary Authority, Guardians.

The most interesting feature in this (*Question 9*) return is the practical unanimity with which a claim is made for central administration, only 29 out of 385 omitting any reference to central authority.

There is a strong feeling against leaving the public vaccination in the hands of local authorities without a guarantee of fixity of tenure and opportunity of superannuation. With such a guarantee there appears to be very little matter what local authority is selected, except that the general impression is distinctly against transfer to the sanitary authorities, in the present condition of those authorities.

The thanks of the Committee were given to Dr. A. E. Cope for his valuable assistance.

The following recommendations forwarded by the Hartlepools Division of the North of England Branch were read:

(*a*) That Revaccination be made compulsory by law, and that it be performed between the ages of 10 and 13 years.

(*b*) That both Primary Vaccination and Revaccination be subject to the same provisions for conscientious objection as in the present Act, but that the procedure for exemption should be more strictly defined in any future legislation.

(*c*) That the Vaccination Act should be administered directly by a Department of the Local Government Board.

(*d*) That in future Vaccination legislation no certificate of successful vaccination should be accepted unless it contain a statement as to the number and area of the vesicles produced.

(*e*) That all lymph shall be supplied by the Government, or by private establishments under Government supervision and guarantee.

(*f*) That every private practitioner furnishing the Vaccination Authority with certificates of successful and efficient Vaccination, satisfying a standard fixed by the L.G.B., should receive a suitable fee for each such certificate.

The Committee resolved to approve recommendations (*a*) to (*e*), and to take no action with regard to recommendation (*f*).

The following resolution from the Border Counties Branch was read, and directed to be forwarded to the President of the Local Government Board:

That this meeting of the Border Counties Branch of the British Medical Association is of opinion that the powers for dealing with contacts of small-pox and other infectious diseases conferred by the Public Health Acts are inadequate, and should be increased to the extent of giving power of control over the movements of contacts, more especially those of the tramp class.

Epidemic Grants to Public Elementary Day Schools.

Dr. NEWSHOLME called attention to an article in the BRITISH MEDICAL JOURNAL of April 4th, page 814, entitled "The Epidemic Grants for Public Elementary Day Schools."

The Committee adopted the following resolutions on the motion of Dr. NEWSHOLME, seconded by Dr. EDGAR BARNES:

That this Committee views with apprehension the withdrawal by the Board of Education of Article 101* from the Provisional Code recently issued. This article, in districts where it has been efficiently worked, has been most advantageous to the public health, and in the opinion of this Committee its withdrawal will be detrimental in two directions, first by causing the return to school of children not completely convalescent from acute disease, and secondly by making it increasingly difficult to exclude from attendance at school children who, although in fair health, are still capable of spreading infectious disease, either because they have suffered from slight attacks or because they have been recently in contact with cases of disease.

That it be recommended to the Council that representations to this effect be made to the Board of Education.

Public Health Bill.

The GENERAL SECRETARY reported that the Public Health Bill had been introduced into Parliament by Sir Francis Powell and read a first time. The Committee resolved:

That the best thanks of this Committee be forwarded to Sir Francis Powell, M.P., for his continued interest in forwarding the Public Health Bill (1903) in the House of Commons.

Deputation to President of the Local Government Board.

The GENERAL SECRETARY reported that in accordance with instructions from the Council he had applied to the President of the Local Government Board asking him to receive a deputation from the Association to bring before his notice certain recommendations regarding future vaccination legislation and urge the necessity for security of tenure of office for medical officers of health.

ORGANIZATION COMMITTEE.

AT meeting of the Organization was held at the Office of the Association on March 10th, 1903, when there were present—Mr. T. Jenner Verrall (in the chair), Mr. Andrew Clark (Chairman of Council), Dr. E. Markham Skerritt (Treasurer), Mr. H. A. Ballance, Dr. S. Crawshaw, Mr. George Eastes, and Professor J. T. J. Morrison.

Letters of apology for non-attendance were read from Dr. Calwell, Dr. McVail, and Dr. Roberts Thomson.

Meetings of Divisions.

The Organizing Secretary reported that since the last meeting of the Committee he had attended the first meetings of two Divisions, namely, East Norfolk and Norwich City. At each meeting the Model Rules prepared by the Committee were carefully considered and adopted without substantial modification.

Grouping of Branches.

The grouping of Branches for the purpose of electing members of Council, referred to the Committee by the Council, was considered, and a series of recommendations made.

Standing Orders.

The Chairman and Secretary were requested to prepare draft standing orders for the annual representative meeting.

A further meeting of the Organization Committee was held at the office of the Association, 429, Strand, W.C., on Tuesday, April 7th, 1903, when there were present Mr. T. Jenner Verrall, in the chair; Mr. Andrew Clark, Chairman of Council; Dr. E. Markham Skerritt, Treasurer; Mr. H. A. Ballance, Mr. George Eastes, Professor J. T. J. Morrison. Letters of apology for non attendance were read from Dr. W. Calwell, Dr. J. C. McVail, and Dr. J. Roberts Thomson.

Meetings of Divisions.

The Organizing Secretary reported having attended the inaugural meetings of the Newcastle and Cleveland Divisions on the 2nd and 3rd instant respectively, and that each Division adopted the Model Rules prepared by the Committee without substantial modification. At the meeting of the Cleveland Division the Organizing Secretary had been asked whether, in his opinion, if the Middlesbrough and District Medical Society and the Durham County Medical Union should be dissolved, the work now being done by those bodies could be as effectively carried on by the Divisions of the Association covering the same areas; and had replied that it depended on the medical men of the district. The organization of the Association, if fully employed, fitted the Divisions to do all the work of local medical societies as well as or better than purely local societies, and to do some work which no purely local society could attempt.

Changes in Boundaries.

The Committee in exercise of the authority delegated to it by the Council, sanctioned on behalf of the Council the following changes in boundaries of Divisions and Branches as to which it had evidence which satisfied it that there was agreement among those locally concerned:

(1) That Stourbridge should be included in the Bromsgrove Division of the Birmingham and Midland Counties Branch instead of as heretofore in the Worcester Division of the Worcester and Hereford Branch.

(2) That the Tyneside and Tynemouth Divisions be amalgamated to form one Division known as the Tyneside Division.

(3) That Walker-on-Tyne be included henceforth in the Newcastle Division instead of in the Tyneside Division.

(4) That the Elgin and Inverness Divisions be amalgamated, and that the Northern Counties of Scotland Branch henceforth consist of one Division.

(5) That Newburgh-on-Tay be included in the area of the Perth Branch.

The following changes of names desired by Branches and Divisions have been approved:

(1) That the Birmingham Division be named the Central Division of the Birmingham Branch, the Warwick Division, the Warwick and Leamington Division and the Tamworth Division, the Nuneaton and Tamworth Division.

(2) That the Divisions of the Staffordshire Branch be named North, Mid, and South Staffordshire respectively, instead of Stoke, Stafford, and Wolverhampton.

(3) That the Norwich City Division be called the Norwich Division.

(4) That the South East Hants Division be called the Salisbury Division.

(5) That the Berwick, Selkirk, Peebles and Roxburgh Division of the Edinburgh Branch be called the South-Eastern Counties Division.

Grouping of Branches.

The provisional scheme for the grouping of Branches for lection of members of Council was further considered, and directed to be sent as a recommendation to the Council.

Rules of Branches and Divisions.

The Chairman and Secretary were appointed a subcommittee to examine the various rules of Branches and Divisions referred to the Committee by the Council, and to ascertain whether any provisions thereof are contrary to the Articles and By-laws of the Association. The Committee further resolved that the Council should be recommended to approve the rules unless such provisions were found.

COLONIAL COMMITTEE.

A meeting of the Colonial Committee was held at the office of the Association on April 7th, 1903, when there were present: Mr. Edmund Owen, and afterwards Mr. Andrew Clark, the Chairman of Council, in the chair; Mr. James Cantlie, Brigade-Surgeon-Lieutenant-Colonel E. F. Drake-Brockman, Dr. Joseph Groves, Sir Francis Lovell, C.M.G., Dr. C. G. Drummond Morier.

Election of Chairman.

The Chairman of Council reported that the Council had passed the following resolution:

That the attention of the Colonial Committee be directed to By-law 40, namely:

"Each Standing Committee shall appoint from its own number a member of Council as Chairman."

On the motion of Dr. Groves, seconded by Brigade-Surgeon-Lieutenant-Colonel Drake-Brockman, it was resolved:

That the Chairman of Council be appointed Chairman of the Committee, *vice* Mr. Edmund Owen, who is precluded from acting as Chairman by reason of not being a member of the Council as required by By-law 40.

Election of Medical Officers, R.N.

A letter was read from an officer of the Medical Department, R.N., drawing attention to the difficulty of obtaining two signatures to the form of application for membership, and suggesting that officers on the active list should be allowed to make personal application without approving signatures.

On the motion of Dr. Morier, seconded by Mr. Cantlie, it was resolved:

1. That all officers on the active list of His Majesty's Forces be eligible for election through the Council without approving signatures as laid down in By-law 3.

2. That it be recommended to the Council to bring this matter before the Representative Meeting.

Grouping of Colonial Branches.

The question of grouping the Colonial Branches with a view to representation on the Council of the Association was then considered, and on the motion of Mr. Edmund Owen, seconded by Dr. Morier, it was resolved;

That the Chairman of the Colonial Committee Sir Francis Lovell, Mr. J. Cantlie, Brigade-Surgeon-Lieutenant-Colonel E. F. Drake-Brockman, and Dr. Morier be appointed a Subcommittee to prepare for this Committee a scheme of grouping, with a view to representation on the Council, preparatory for adoption by the Council.

On the motion of Dr. Groves, seconded by Mr. Cantlie, it was resolved:

That it be recommended that for the year 1903-4 the Council accept the representatives of those Branches making a return.

PREMISES AND LIBRARY COMMITTEE.

Meetings of the Premises and Library Committee for the consideration of the proposed alterations in the premises of the Association, were held on February 26th and March 26th. The following were present on both occasions: Mr. Andrew Clark (Chairman of Council) in the chair, Dr. E. Markham Skerritt (Treasurer), Mr. J. Ward Cousins, Dr. Bruce Goff, Dr. Holman, Mr. N. C. Macnamara, Dr. C. Parsons, and Dr. F. M. Pope. The architect also attended.

After considering the plans and reports, the Committee resolved that it could only recommend such alterations in the building as would provide the necessary office accommodation for the clerical staff, and recommended a scheme for the alteration of the ground floor to the Council for adoption. Briefly this scheme is to alter the general office so as to give sufficient room to accommodate the clerical staff. The number of the general office staff is now 21, and will probably have to be increased. To secure the additional space it is proposed to throw the Secretary's room into the general office (when he would have an office in the S.W. corner), to remove the existing strong rooms and cupboards by gutting the office, carrying the upper floors on steel piers and girders.

A further meeting of the Committee was held on April 21st, when there were present Mr. Andrew Clark (Chairman of Council), Mr. J. Ward Cousins, Dr. Bruce Goff, and Dr. Holman.

The Librarian's report stated that there had been 1,441 attendances in the Library during the three months ending March 31st, being 318 in excess of those for the corresponding period of last year. The report acknowledged also the receipt of some of the early issues of the *Provincial Medical and Surgical Journal*, 1840, which are extremely scarce.

ETHICAL COMMITTEE.

A MEETING of the Ethical Committee was held at the office of the Association on March 18th, when there were present: Professor R. Saundby, in the chair, Mr. Andrew Clark, Chairman of Council, Dr. J. Barr, Dr. A. G. Bateman, Dr. W. A Elliston, Dr. E. Jepson, Mr. R. H. Kinsey.

Trade Announcements.

The SECRETARY reported having written, in pursuance of the instruction received by him at the last meeting of the Committee, to four practitioners whose names had appeared in trade advertisements issued to the general public, that in two cases steps had at once been taken to discontinue such advertisements, and that in one case the practitioner written to was abroad, and his solicitors stated that the matter would be referred to him on his return, and in the fourth case no reply had yet been received.

Correspondence which had taken place between a Fellow of the Royal College of Physicians of London and the manager of a drug stores with reference to the publication of a Fellow's name in a list of London consultants, contained in a price list issued by the stores, was read.

The manager had undertaken to comply with the request that the name of the Fellow should not in future appear on the list.

It was resolved that the Organizing Secretary be instructed to write to each practitioner whose name appears in the list of London consultants contained in the price list of the drug stores in question, suggesting that he take action to have his name removed therefrom.

Advertisements of Bathing or Hydropathic Establishments.

The Committee having considered a case in which in cards and in the local visitors lists, the name, qualifications, consulting hours, and fees of the physician to certain baths had been given adopted the following resolution:

That the Committee strongly condemns the advertisement of any medical practitioner in connexion with a bathing or hydropathic establishment, but is glad to find that the physician concerned has decided to withdraw his name from such advertising as have been published in the past. The Committee does not consider that the course suggested that the name alone should appear of the consulting physician would be ethically correct, but regards any advertising whatever in this connexion as objectionable.

Hospital Notices.

A case in which an advertisement appeared in a provincial paper giving the name of the surgeon for the week at the local cottage hospital, with a statement as to his private consulting hours, was considered, and the Committee adopted the following resolution:

That the Committee is of opinion that the advertising in local newspapers of the physician or surgeon of a hospital on duty for the week, or any systematic advertisement in newspapers of the names of the staff and their days of attendance is open to grave objection, and instructs the Secretary to write to any member of the profession whose name may so appear, requesting him to take steps to have the practice discontinued.

JOINT COMMITTEE ON FEES TO MEDICAL WITNESSES.

A MEETING of the Joint Committee on Fees to Medical Witnesses was held at the offices of the Association on January 27th, 1903, when there were present: Mr. H. Nelson Hardy in the chair *pro tem.*, Dr. Major Greenwood, and Dr. J. Murphy.

Constitution of Committee.

The Committee consists of the Chairman of Council, Dr. Major Greenwood, and Dr. James Murphy, representing the British Medical Association; and Mr. H. Nelson Hardy, Dr. King Houchin, and Mr. H. W. Roberts, representing the United Kingdom Police Surgeons' Association.

Chairman.

On the motion of Mr. NELSON HARDY, seconded by Dr. MURPHY, the Chairman of Council was elected Chairman for the ensuing twelve months.

Departmental Committee.

Mr. NELSON HARDY reported as to the evidence he had given on the question of fees to medical witnesses before the Departmental Committee. It was decided that pending the issue of the Report of the Departmental Committee no further action be taken.

JOINT COMMITTEE OF THE BRITISH MEDICAL ASSOCIATION AND MEDICO-PSYCHOLOGICAL ASSOCIATION.

A MEETING of the Joint Committee of the British Medical Association and Medico-Psychological Association was held at the office of the Association, on February 23rd, 1903, when the following members were present: Mr. Andrew Clark, Chairman of Council, in the chair; Dr. T. D Griffiths, President-elect; Dr. Fletcher Beach, Dr. W. Douglas, Dr. C. A. Mercier, Mr. H. Hayes Newington, Dr. G. H. Savage, Dr. G. E Shuttleworth, Dr. Percy Smith, Dr. J. B. Spence, Dr. Ernest W. White.

Difficulties in the Lunacy Act.

In reference to the resolution of the last meeting appointing a Subcommittee to draw up a statement regarding certain difficulties now existing in the Lunacy Act, the following report was drafted by the Subcommittee, and, after emendation, was adopted as follows and directed to be forwarded to the Lord Chancellor, together with a copy of the correspondence between the General Secretary and the Lunacy Commissioners:

Memorandum.

The Joint Committee desires to draw the attention of the Right Honourable the Lord Chancellor to certain difficulties which have arisen in the construction and application of the Lunacy Acts now in force, especially with regard to the reception of persons not certifiably of unsound mind into private unlicensed houses for the purposes of board, lodging, and possible treatment.

The Medical Certificate requires a statement on the part of the certifier that a patient is first a lunatic, idiot, or person of unsound mind, and secondly, a fit and proper person to be detained under care and treatment. It would appear that two separate propositions are involved in the making of the certificate, namely, unsoundness of mind and fitness for detention. Otherwise, it would follow that every person of unsound mind is a person fit to be detained. That this is not so is indicated, it is submitted, by the following considerations:

(A)—Judges of the High Court have laid down this doctrine. For instance, "it is not any mere harmless delusion or eccentricity which requires a person to be confined in an asylum. It is not even every delusion which incapacitates from making a will or a contract, much less to require confinement. The statute requires not only that the party is unsound in mind, but in a state which requires detention, and therefore the Court sets aside the nonsuit and orders a new trial." (Manisty and Williams, JJ. Q B., Weldon *v.* Winslow, 1884, *Times* Law Report.)

(B)—The Lunacy Act (Sections CV and CVI) contemplates the distinction between the two conditions in that it provides for the resumption of liberty on the part of a lunatic who is not capable of managing his own affairs.

(C)—Further medical experience proves that there are persons not of sound mind who cannot, in justice to themselves, be certified as fit for detention, for example, persons who from want of comple mental development are apt to be troublesome at home and an annoyance to their relatives, who could live in comfort and with advantage to themselves in the house of a stranger; persons who have been discharged from institutions "relieved" only and not recovered, as no longer needing detention; persons, or many of them, who come within the provisions of Section CXVI (d) of the Lunacy Act.

It appears, therefore, that there is this necessity for the two separate conditions being found in a person before he can be certified as of unsound mind, and a fit and proper person to be detained under care and treatment. It is submitted that many persons of the classes mentioned above are placed in a difficult and prejudicial position, seeing that if they have no home or no home suitable to their requirements, they cannot, under the existing provisions of the Lunacy Acts, be legally received elsewhere to reside. The Commissioners in Lunacy

have recently stated in answer to an inquiry made by this Committee, that they would regard the receiver for payment of such a person as liable to prosecution, and this they would be bound to undertake.

Section cccxv makes it a misdemeanour if any person "for payment takes charge of, receives to board or lodge, or detains a lunatic or alleged lunatic in an unlicensed house."

It is suggested, therefore, that certain persons of unsound mind are totally unprovided for, unless they happen to be able to live at home or elsewhere without payment being made, for residence with a relative has been held to be a breach of the law if accompanied by a payment, however inadequate.

In the consideration of fitness for detention the margin of doubt is sometimes a narrow one, and the risk of a prosecution deters persons from receiving people of unsound mind, however slight the aberration may be. Accommodation for such cases is therefore unduly restricted. Further, the necessity for making some arrangements for them may lead, since certification affords the only method known to the law, to the doubt being resolved against a particular person, and in consequence he may be certified. Since certification involves personal responsibility on the part of the receiver, it is certain that the same amount of freedom cannot be accorded to the received person as would be his right in the absence of certificates.

It would appear, therefore, that some alteration of the law, in respect of such cases, is desirable, and such alteration would appropriately be afforded by the provision of a system of voluntary residence in unlicensed houses, under sufficient safeguards, parallel to that which now enables voluntary boarders to be received into certain institutions for the insane. The condition of reception and residence would naturally be a knowledge on the part of the boarder that he had freedom to depart when he so wished.

It is submitted that alteration such as the above would tend to restrict breaches of the law, since it would take away all ground for excuse from those who may now be disposed to receive doubtful cases without certificates and report to the Commissioners. As some sort of notification would undoubtedly be required, if the Committee's suggestion were adopted, a greater number of cases would be brought within official cognizance.

The Committee desires to point out that in giving a choice of terms ("lunatic" and "a person of unsound mind") a medical certificate appears to invite an opinion that there is a distinction between them. The definition of the word "lunatic" in Clause 341 is that it means "a person of unsound mind." One term or the other is therefore redundant, and it is suggested that the former be omitted from the certificate. Indeed, the Committee is firmly of the opinion that the use of the term "lunatic," though it cannot be entirely abolished, should be minimized to the utmost, and should disappear from all documents such as Orders for Reception, Petitions, Statements, Certificates, Affidavits, etc., which may come under the observation of the relatives of a patient or of the patient himself. It is certain that its use frequently causes annoyance to both parties. In the case of the former, experience shows that it does deter some from placing a relative under care, while as to the latter it is very highly painful and prejudicial to know that such a term had been applied to them.

It is also hoped that the voluntary boarder system in vogue in registered hospitals and licensed houses, which has proved of great benefit to the community, will be extended to county and borough asylums for both private and rate-paid-for patients.

[A copy of the report has been forwarded to the Lord Chancellor and acknowledged by him. In response to a request from the Commissioners in Lunacy, copies have also been supplied for their consideration.]

Reports of Branch Meetings.

BATH AND BRISTOL BRANCH.

THE fifth ordinary meeting of the session was held at the Medical Library, University College, Bristol, on Wednesday, March 25th, Dr. H. WALDO, President, in the chair. Thirty-three members present. The proposed new rules for the Branch were considered and passed unanimously.

[The scientific proceedings were published at p. 793.]

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE sixth ordinary meeting of the session was held in the Birmingham Medical Institute on March 12th, Dr. H. MALET, President, in the chair. Forty-two members were present.

Confirmation of Minutes.—The minutes of the previous meeting were read, confirmed, and signed.

Report to the Council of the Association.—A draft report, as prescribed in By law 8 of the new Constitution was submitted, with the recommendation of the Branch Council, and it was resolved:

That the report be adopted and forwarded to the Council of the Association.

[The scientific part of the proceedings was published at p. 790.]

BRITISH GUIANA BRANCH.

A SPECIAL meeting of this Branch was held at the Public Hospital, Georgetown, on February 28th The following members were present: The Hon. Sir David P. Ross, Surgeon-General; Drs. Edmonds, Conyers, Wishart, J. M. de Freitas, Hodgson, Wharton, Downer, and Q B. de Freitas, Hon. Secretary. Sir DAVID ROSS was voted to the chair, and explained the business of the meeting.

Election of Officers.—The following office-bearers were elected for the current year: *President:* Dr. J. H. Conyers. *Vice-Presidents:* Dr. W. de W. Wishart and Dr. J. M. de Freitas. *Council:* Sir David Palmer Ross, M.D., Dr. F. H. Edmonds, Dr. O. Dunscombe-Honiball, and Dr. J. C. P. Widdup. *Hon. Secretary and Treasurer:* Dr. Q B. de Freitas.

[The scientific part of the proceedings was published at p. 794.]

CEYLON BRANCH.

THE first meeting of the year was held on Saturday, January 24th, when Dr. T. F. GARVIN, the President, took the chair, and twenty-two members were present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed, and it was decided that a letter should be printed and circulated regarding the new subscriptions.

New Members.—The following were elected members of the Branch: Dr. J. A. H. Vanderwert, Dr. W. Marshall Philip, and Dr. Hugh de Mel.

New Rules.—It was decided that new rules for the Branch in accordance with the new rules of the Association be formed by the Council.

President's Address.—The PRESIDENT delivered his inaugural address, an abstract of which was published at p. 856.

Vote of Thanks.—After the address a vote of thanks was proposed by Dr. W. G. VAN DORT, seconded by Dr. E. N. SCHOKMAN, and carried unanimously.

DORSET AND WEST HANTS BRANCH.

A MEETING of this Branch was held at Poole on March 5th, under the presidency of Mr. A. G. S. MAHOMED. Twenty-three members were present. The meeting was called to consider (1) the desirability of Divisions of the Branch; (2) their area. —The PRESIDENT ruled that the question of Divisions having been decided by the Council of the Association should not be discussed.

Delimitation of Bournemouth Division.—Dr. JAMES DAVISON formally moved, and Dr. RAMSAY formally seconded:

That the Bournemouth Division should comprise that portion of the Branch territory which is included in a line drawn north from the west side of Poole to and including Cranborne, and through and including Wimborne.

Dr. MACDONALD moved and Dr. WHITTINGDALE seconded the following amendment:

That whereas the proposed Divisions would give the Bournemouth Division two-thirds of the members of the Branch and the West Dorset but one third, the Divisions shall consist of the county of Dorset for the one (Branksome excepted), and West Hants, with the addition of Branksome, for the other, which would give practically an equal number of members to each Division.

A discussion ensued, in which Dr. MOORHEAD, Mr. PARKINSON, Dr. MASTERS, Dr. SNOW, Dr. RAMSAY, Dr. LYS, Mr. TURNER, and Mr. DU BOULAY took part. On a division 10 voted for the amendment and 11 against. On the resolution being put as a substantive motion, 10 voted for it and 9 against.

DUNDEE AND DISTRICT BRANCH.

THE Branch met in University College, Dundee, on March 22nd, Dr. J. A. DEWAR, Arbroath, President, in the chair.

Resolution.—It was resolved:

That in view of the guarantee of January 22nd, 1903, given by Dr. Robert Miller, no further action be taken in the meantime. That the guarantee be included in the report for insertion in the BRITISH MEDICAL JOURNAL. The following is the guarantee:

80, Nethergate, Dundee,
January 22nd, 1903.

I regret that my recent announcement of removal in the daily papers was not in accordance with the custom of the profession, and I now apologize for its publication.

The intention on my part in distributing circulars was to combat the abuse of medical charity, but I undertake that I will not in future, either in my own name or under any other designation, issue, in the newspapers, or by circular or otherwise, any advertisement of my own practice.

I have now ceased to administer anaesthetics for unqualified dental practitioners, and undertake not to resume the practice.

(Signed) ROBERT MILLER.

Adoption of By-laws.—By-laws for the Branch were adopted and ordered to be submitted to the Council of the Association for approval.

Amendment of By-law.—A resolution was adopted the terms of which were printed among the notices of motion for discussion by the Annual Representative Meeting in the BRITISH MEDICAL JOURNAL of April 25th, p. 994.

EAST ANGLIAN BRANCH.

THE spring meeting of this Branch was held at Wymondham on March 26th, about thirty members being present. Mr. W. E. WYLLYS, President, occupied the chair.

COUNCIL MEETING.

New Members.—At the Council meeting the following gentlemen were elected members: Richard Alliott, B.A., Oxon., M.R.C.S., L.R.C.P., Weathersfield, Essex; Sidney Bree, M.B. Lond., M.R.C.S., Manningtree, Essex; Edward L. Martin, M.B., B.S., M.R.C.S., Chelmsford, Essex; Sheffield Neave, M.R.C.S., M.R.C.P., Ingatestone, Essex; F. N. Day, B.A., M.B., B.C., Harlow, Essex; T. W. S. Paterson, M.A., M.B.Cantab., Colchester, Essex; Arthur John Cleveland, M.D.Lond., M.R.C.P., Norwich, Norfolk; J. B. Gillam, M.B., B.C.Cantab., Holt, Norfolk; Arthur Heath, M.D., F.R.C.S., Norwich, Norfolk; William Leith, M.B., C.M., Norwich, Norfolk; George B. Pearson, L.R.C.P. and S., Diss, Norfolk; A. M. Ross, M.R.C.S., L.R.C.P., Norwich, Norfolk; L. Edgar Whitaker, M.R.C.S., L.R.C.P., Diss, Norfolk.

Future Meetings.—It was decided to hold the general meeting at Chelmsford on Thursday, June 11th, and the autumn meeting at Sudbury early in September, and to invite the Cambridge and Huntingdon Branch to a joint meeting at the latter place.

Disposal of Balance.—It was decided that the balance in hand belonging to the old Branch should be retained and used under special circumstances approved by the Council.

Special Council Meeting.—It was agreed to hold a special Council meeting at Norwich on May 12th for the election of candidates and the consideration of "Ethical Rules."

Combination of Divisions.—It was decided that the following divisions should combine for representation: Essex, the Mid and Southern Divisions; Suffolk, the Western and Southern Divisions; Norfolk, the Mid Norfolk and the Norwich Divisions, the Northern Division of Suffolk and the Eastern Division of Norfolk. No decision was arrived at regarding the Western Division of Norfolk.

GENERAL MEETING.

Model Rules.—Model rules for the management of the Branch were considered. Rule 4. It was proposed by Dr. EDGAR BARNES, and carried *nem. con.*:—

The officers of this Branch shall be a President, President-elect, three Vice-Presidents, three Secretaries, one of whom shall act as General Secretary and Treasurer. The President shall be elected annually from among those members of the Branch who have not held the said office during the previous five years. The President on retiring from office shall become a Vice-President for the term of three years next ensuing.

Rule 6. Proposed by Dr. BARNES, and carried *nem. con.*:—

The number of members of the Branch Council annually elected by the several Divisions shall be as follows: One for each Division and one additional representative for each division containing fifty or more members. The quorum of the Branch Council shall be five.

12. A special meeting may be convened by a requisition signed by twenty members of the Branch.

It was proposed by Mr. HAYNES ROBINSON, seconded by Dr. BEVERLEY, and carried *nem. con.*:—

That the rules be adopted with the alterations as above.

Visit to Wymondham Church, etc.—The members lunched together at the Green Dragon Hotel. Afternoon tea was kindly provided by Mr. David Hughes, of Wymondham. The Rev. the Hon. Arch. Parker showed the members over Wymondham Church, which is undergoing restoration. Messrs. Down Brothers gave an excellent display of surgical instruments and appliances. The meeting was a most enjoyable one.

[The scientific proceedings were published on p. 856.]

DIVISION OF EDINBURGH BRANCH.

A MEETING of members of the British Medical Association resident in the counties of Roxburgh, Berwick, Selkirk, and Peebles was held in the King's Arms Hotel, Melrose, on Friday, April 10th, at 3.30 p.m., in order to form a Division of the Edinburgh Branch, to elect office-bearers, and to consider the "model rules for a Division which is not in itself a Branch." There were present Drs. Blair, Johnstone, Cullen, Young, Hamilton, Somerville, Wade, and Calvert. Dr. Norman Walker, one of the Honorary Secretaries of the Edinburgh Branch, attended in order to advise as to the organization. Dr. BLAIR was called to the chair.

Model Rules.—"The model rules suggested for adoption by a Division which is not in itself a Branch" were then considered.

South-Eastern Counties Division of Edinburgh Branch.—It was agreed that the area shall include the counties of Roxburgh, Berwick, Selkirk, and Peebles, and shall be known as "the South-Eastern Counties Division of the Edinburgh Branch."

Executive Committee.—In regard to the Executive Committee, it was agreed that six other members be elected in addition to the five members who sit *ex officio*. The Chairman is to be elected annually from among those members of the Division who have not held the office during the previous five years; this rule shall not become operative until after the annual meeting. In regard to the representatives of the Division in the Branch Council, any member who shall have served as such representative for three years consecutively shall be ineligible for re-election for one year. The six non-official members of the Executive Committee shall be ineligible for re-election for one year if they happen to have served for three years consecutively. The quorum of the Executive Committee shall be three. Ordinary meetings of the Division shall be held twice yearly, and not less than seven days' clear notice shall be given to each member. The annual meeting shall be held in May or June of each year. A special meeting of the Division may be convened at any time by the Executive Committee, and shall be convened within seven days from the receipt by the Secretary of a notice from the Central Council of the Association, or within seven days from the receipt of a requisition signed by ten members of the Division. Not less than three clear days' notice shall be given of a special meeting. Otherwise the suggested model rules were approved.

Ethical Rules.—It was agreed that the ethical rules lie on the table for further consideration.

Election of Office-bearers.—Dr. Blair (Jedburgh) was unanimously elected chairman: Dr. Carlyle Johnstone, of Roxburgh District Asylum, Vice-Chairman; and Dr. Calvert (Melrose), Secretary and Treasurer.

Executive Committee.—On the motion of Dr. JOHNSTONE, seconded by Dr. HAMILTON, Dr. Somerville (Galashiels) was elected Representative of Division in the Representative Meetings of the Association. Dr. Hamilton (Hawick) was elected Representative of the Division in the Branch Council. The other members elected to the Executive Committee were Drs. Young (Earlston), Cullen (St. Boswells), Gunn (Peebles), Rutherford (Kelso), Muir (Selkirk), and Henderson (Coldstream).

A Standing Committee for Scotland.—Dr. SOMERVILLE gave notice of a motion, the terms of which were printed in the BRITISH MEDICAL JOURNAL, April 25th, p. 994. The Honorary Secretary was instructed to get copies of the Articles and By-laws of the Association for the use of members of the Executive Committee.

Annual Meeting of Division.—It was arranged that the Executive Committee meet in the Douglas Hotel, Galashiels, on Tuesday, April 28th, at 3.30 o'clock, in order to arrange for the annual meeting of the Division to be held in May or June next.

FIFE BRANCH.

THE first meeting of this Branch was held at Thornton on March 18th, when the following were elected office-bearers: *President:* Robert Spencer, M.B. (Burntisland). *President-elect:* T. G Nasmyth, M.D., D.Sc. (Cupar). *Honorary Secretary and Treasurer:* R. Balfour Graham, F.R.C.S.E., D.P.H. (Leven). *Council:* John Aitken, M.D. (Buckhaven), Wm. Craig, M.D. (Cowdenbeath), A. Lesslie Curror, M.B. (Kirkcaldy), C. E. Douglas, M.D., F.R.C.S.E. (Cupar), H. D. Hay, M.B. (Leslie), D. Hamilton Kyle, M.B. (St. Andrews), James Morris, F.F.P.S.G. (Dumfermline).

Draft Rules.—After some alterations the Draft Model Rules were adopted, and general approval was expressed of the Draft Model Ethical Rules.

GRAHAMSTOWN AND EASTERN PROVINCE BRANCH.

THE annual general meeting of this Branch was held at Steinman's Hotel, Grahamstown, on January 30th, Dr. GREENLEES (President) in the chair. Those present were Dr. Mitchell (Vice-President), Dr. Powell (Acting Secretary), Drs. Greathead, Drury, Bays, Fitzgerald, Purvis, Edington, Saunders.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Branch Reports.—Dr. FITZGERALD proposed, and Dr. BAYS seconded:

That Dr. Greathead be asked to approach the Colonial Medical Council with a view to asking them to publish the Branch reports in the BRITISH MEDICAL JOURNAL instead of the *Cape Times*.

—Carried.

Delimitation of Eastern Province Branch.—It was proposed by Dr. FITZGERALD, and seconded by Dr. PURVIS:

That the amount of territory embraced by the Eastern Province Branch be left in the hands of Dr. Greenlees and the incoming Secretary to arrange.

—Carried.

New Member.—Dr. Hawes, duly proposed and seconded, was unanimously elected a member of the British Medical Association.

President's Address.—Dr. GREENLEES delivered his presidential address, entitled the History of Insanity. After some discussion on the paper, a resolution was passed thanking Dr. Greenlees for his address, and a motion was carried that the Secretary be instructed to forward a copy of the address to the Editor of the BRITISH MEDICAL JOURNAL with a request that it be published.

Election of Officers.—The following office-bearers were elected for the ensuing year:—*President:* Dr. Saunders. *Vice-President:* Dr. Mitchell. *Secretaries:* Drs. Powell and Hawes. *Council:* Local Members—Drs. Greenlees, Bays, and Purvis. County Members—Drs. Considine (Port Elizabeth), Dr. Robertson (Capetown), Dr. Conry (Fort Beaufort).

Vote of Thanks to Retiring Secretary.—A vote of thanks to Dr. Grenfell, the outgoing Secretary, was carried unanimously.

Dinner.—Previous to the meeting Dr. Greenlees entertained the members of the Branch to dinner at Steinman's Hotel.

LEINSTER BRANCH.

ANNUAL MEETING.

THE twenty-sixth annual meeting of the Leinster (late Dublin) Branch of the British Medical Association was held in the Royal College of Physicians, Kildare Street, Dublin, on Tuesday, April 14th, at 4.30 o'clock.

Sir CHARLES BALL, the outgoing President, occupied the chair. The attendance included Dr. Dawson Williams, Editor of the BRITISH MEDICAL JOURNAL; Mr. J. Smith Whitaker, Organizing Secretary; Sir Charles Cameron, C.B.; Sir William Thomson, C.B.; Sir John Moore, Dr. J. Magee Finny, Professor E. H. Bennett, Professor W. H. Thompson, Professor F. W. Kidd, Dr. James Craig, Dr. Joseph Redmond, Drs. W. J. Thompson, C. F. Moore, A. H. Benson, W. Taylor, R. R. Leeper, Langford Symes, J. Mason, M. B. N. McMahon, T. G. McGrath, R. A. C. Burnes, J. C. McWalter, S. M. Cowe, P. King Joyce, T. Cahill, W. G. Ternan, J. W. Boyce, A. F. Boyd, J. Agar Matson, A. Magennis, Elizabeth Beatty, T. D. Good, J. P. Doyle, R. J. Rowlette, Joseph Kenny (Granard), J. M. Tabuteau (Portarlington), T. J. O'Connor (Celbridge), E. T. Coady (Clare).

Ballot.—The CHAIRMAN said the first business was for him to declare the ballot for officers of the Branch, and appointed Drs. Leeper and Kenny scrutineers.

Apologies for Non-Attendance.—Professor ARTHUR H. WHITE, Honorary Secretary, read apologies for non-attendance from: Sir George Duffey (founder of the Branch), Sir Philip Smyly, Drs. C. J. Delahoyde, J. M. Reddington, H. G. Day, E. Glenny, E. Moran, J. J. McCarthy, Kathleen F. Lynn, J. O'Brien (Dundalk), C. J. O'Rorke (Crossakeel), R. H. D'Olier Duckworth (Ballybrophy), George Hamill (Drogheda), O. P. Kerrigan (Castletown Geoghegan), R. N. Lyon (Lucan), W. A. Cooke (Lucan), R. G. O'Flaherty (Kingstown), J. T. Wighan (Monkstown) J. Roantree (Newbridge), J. S. Jameson (Greystones), J. M. Stothard (Monkstown), J. Byrne Power (Kingstown).

Confirmation of Minutes.—The minutes of the last general meeting were read and signed.

Annual Report.—Professor WHITE, Hon. Sec., then read the twenty-sixth annual report of the Branch as follows: During the past year they held fifteen meetings and selected twenty new members of the Association. The membership of the Branch now stands at 330, as compared with 162 last year. This large increase is, of course, due to the alteration in the Constitution of the Association, by which every member of the Association, residing within the Branch area became a member of the Branch. The financial position of the Branch is satisfactory. The Branch area has been clearly defined, and includes the whole province of Leinster, except the counties of Kilkenny and Carlow, and the extreme south-west corner of the county Wexford. Within this area it is proposed to form six Divisions. Your Council feels sure that the members of the Branch will join with them in congratulating the outgoing President, Sir Charles Ball, on the distinction which has been conferred upon him during his term of office. Your Council regret to report that Sir John Moore has resigned his position as representative of the Branch on the General Council of the Association. Dr. CRAIG moved the adoption of the report. Dr. SYMES seconded the motion, which was carried unanimously.

Resignation of Sir J. W. Moore.—Dr. KIDD moved:

That the members of this Branch have heard with much regret of the resignation of Sir John William Moore, after seven years' service as representative of the Branch on the Council of the Association, and hereby tender their best thanks for his valuable services during his years of office.

It seemed rather hard that they should lose the services of Sir John William Moore, especially at the present time, when they were passing through what might be termed a crisis—the reorganization of the Association. He thought Sir John Moore had borne the brunt of the battle, and at a sacrifice to his personal interests he had represented the Council at almost all the meetings held in London. It was the heartiness in which the duty was performed that they all recognized in passing this vote of thanks to Sir John William Moore. Dr. JOSEPH REDMOND seconded the resolution. The CHAIRMAN, in putting the resolution, said that the Council of the Leinster Branch of the British Medical Association would endorse everything that Dr. Kidd had said. Sir John Moore, since he had been the representative in London, had been practically the mainspring of the Branch here, and they always profited by the advice he brought back. There was only one thing which they could look forward to, and that was that he would have an able successor in Dr. Craig.—The motion was passed with acclamation.—Sir J. W. MOORE, in reply, expressed his grateful acknowledgements for the resolution, which had come upon him completely as a surprise.

Election of Officers.—The CHAIRMAN declared the result of the ballot, as follows:—*President:* J. Magee Finny, M.D. *President-Elect:* Sir Philip Smyly, F.R.C.S. *Vice-Presidents:* J. F. O'Carroll, M.D., and Sir Thomas Myles, F.R.C.S. *Representative on the Council of the Association:* James Craig, M.D. *Honorary Secretary and Treasurer:* Professor White.—Dr. J. Magee Finny then took the chair amidst applause.

Vote of Thanks to Retiring President.—Sir J. W. MOORE moved a vote of thanks to the outgoing President, Sir Charles Ball, for his universal courtesy and dignified conduct in the chair during his year of office. There were during the year an unusually large number of Council meetings, and notwithstanding the numerous calls upon his time Sir Charles was most punctual in his attendance. They all felt he was a strong man in the chair, and one on whose advice they could thoroughly rely. He might join in the chorus of congratulation on the well-deserved honour which had been conferred upon their outgoing President. There could be no more worthy recipient of such an honour than Sir Charles Ball.—

Sir WILLIAM THOMSON seconded the motion, which was adopted with acclamation.—Sir CHARLES BALL thanked the meeting very sincerely for the kind way in which they had received the resolution proposed in flattering terms by his friend, Sir John William Moore. What he had done contrasted very slightly with the great amount of work carried on for the benefit of the Association by the Secretary, Dr. Arthur White, who had been indefatigable in carrying out the reorganization.

Presidential Address.—Dr. J. MAGEE FINNEY then delivered his presidential address which was cordially applauded. In the course of his address he gave a very clear and detailed account of some of the changes in the constitution of the Association, and referred to the amended By-laws rendered necessary by the alterations referred to. Speaking of the new committees formed under the constitution, he said that by the enormous influence of the Association on members of Parliament and public opinion there could be no doubt that anything undertaken by the Medico Political Committee would be carried sooner or later to a successful issue. He instanced the happy results of the efforts of the Association, though extended over many years, in removing the grievances of the R.A.M.C., and he ventured to suggest that in Ireland the grievances of the Poor-law medical servants might receive the attention and support of that Committee. Continuing, he said that the grievances existed in the Poor-law Medical Service which should be remedied, and that hardships and disabilities were being endured by medical men in the daily discharge of their serious and harassing professional duties, to which they should not be exposed. Every right-minded man without or within the profession must long to see such grievances removed. Not only did the Leinster Branch tender its sympathy to the medical officers of the Poor-law Service, but he could say, and was authorized to do so by his Council, that their Branch would be as ready in the future as it had been in the past to render every assistance in its power towards aiding in such reforms. Moreover, such a union of interests would not be a novel one as on several occasions deputations comprising representatives of the Poor-law Medical Service and British Medical Association waited on the Government to urge their views, and in his own recollection, eleven years ago, when as President of the R.C.P.I. he went with the President of the R.C.S.I on a deputation to support the claims of the medical officers for superannuation before the Vice-President of the Local Government Board. They were ably assisted by the then Editor of the BRITISH MEDICAL JOURNAL, Mr. Ernest Hart, who pressed their views in the strongest manner possible. Might it not be that this burning question, with which the Irish Medical Association was at present engaged, would be in the near future one of those problems which might justly be referred to this new Committee of the British Medical Association? He had little hesitation in prophesying that the united forces of the Associations, directed towards the one object, could not fail, and that soon, to break down the opposition of prejudice and ignorance and secure for medical men throughout Ireland the advantages they all wished them to obtain.—Dr. DAWSON WILLIAMS, in proposing a vote of thanks to the President for his address, referred to that portion of the address which dealt with the subject of the Poor-law Medical Service of Ireland. This question had been brought very forcibly under the attention of the medical profession in England by Sir William Thomson eight years ago. He (Sir William) then set out the grievances of the Irish medical officers in a carefully compiled statement, and suggested some remedies. These remedies had not yet been put in force. He supposed that owing to the state of domestic politics in Ireland there had been some hesitation in imposing upon the local authorities duties which had been imposed upon local authorities in England. He hoped the new Constitution of the British Medical Association would provide an instrument which could be used in bringing about the reform considered necessary. It was with great pleasure that he came to be present at the twenty-fifth annual meeting, which marked a quarter of a century of the Dublin, and the beginning of what he hoped would be the even still more prosperous career of the Leinster Branch.—Mr. WHITAKER, Organizing Secretary of the Association, seconded the vote of thanks, and in doing so said the present system had impaired the efficiency of the profession by leaving medical men less able to meet the demands which the community required of them. In maintaining the honour of the profession they were also maintaining the efficiency of the profession as a public service He believed that great results would follow this reorganized Association.—The motion was carried, and the PRESIDENT briefly expressed his acknowledgments.

Irish Poor-law Medical Service.—Dr. BOYCE moved the resolution which was published in the BRITISH MEDICAL JOURNAL of April 25th, p. 994, among notices of motion for discussion at the Annual Representative Meeting to be held at Swansea, July 28th to 31st.—Dr. R. R. LEEPER seconded the resolution.—Dr. MCWALTER said it would be a very grave thing to ask men not to accept a salary of less than £200 when they had many members of the profession who were at present receiving £145, and who were receiving additional emoluments which increased their income to £300.—Sir JOHN MOORE said it was now quite time that the public should know it was better to prevent than to cure disease. An epidemic of small-pox in 1872 cost the City of Dublin £20,000. It was better to provide good medical advice in the prevention of disease that to let things go on in this country as they had been going on. It was a positive disgrace that sanitation in Ireland should be in its present condition. The sanitary laws had been carried out in a half-hearted way by Boards of Guardians. The guardians should be taught that if they were to cure disease or prevent disease it must cost money, and he maintained that no gentleman of education should be called upon to discharge the duties which fell to dispensary officers for anything less than £200 a year. He maintained the resolution was a most proper one to bring forward at that meeting, and he hoped it would pass by an overwhelming majority.—Dr. E. MAGENNIS said the time had come when the Association should stick to the Poor-law medical officers. Some of those gentlemen lived under conditions not at all fit for their station and responsibility.—The resolution was passed without dissent.

New Rules of Branch.—Sir CHARLES CAMERON moved and Mr. W. TAYLOR, F.R.C.S., seconded that the new rules of the Branch be adopted, with the alteration suggested in the constitution of the Council of the Branch.—Dr. MCWALTER drew attention to a rule dealing with professional conduct, and Dr. KING JOYCE proposed an amendment, which was accepted, providing that such cases might be considered at a special meeting of the Branch. The rules were then adopted, and the meeting concluded.

Annual Dinner.—The annual dinner of the Branch was held in the evening, under the presidency of Dr. J. MAGEE FINNY. After the usual loyal toasts, Mr. L. H. ORMSBY, President Royal College of Surgeons, proposed "The British Medical Association, and the Irish Medical Association;" and Dr. CRANNY, President of the latter, and Dr. DAWSON WILLIAMS, replied. To the toast of "The Guests," proposed by Dr. FINNY, Lord Justice WALKER, the Solicitor-General, M.P., and Sir GEORGE MORRIS, K.C.B., responded. The President's health was proposed by Mr. Justice MEREDITH, and enthusiastically honoured.

MALTA AND MEDITERRANEAN BRANCH.

A MEETING of this Branch was held on January 26th, Lieut.-Colonel R. P. SAMUT, Chief Government Medical Officer, in the chair. Twenty-two members were present.

Election of Council.—In accordance with Article 7 of By-laws a Council of the Branch, composed of seven members, was elected as follows: Surgeon-General T. O'Farrell, M.D., R.A.M.C., P.M.O.; Fleet-Surgeon J. Crowley, M.D., R.N.; Lieutenant-Colonel R. P. Samut, C.G.M.O.; Lieutenant-Colonel C. B. Hill, R.A.M.C.; Professor S. Cassar, M.D.; Surgeon R. T. Gilmour, R.N.; Them Zammit, M.D., Secretary.

New By-Laws.—The Council was requested to prepare draft of new By-laws for the Branch.

Communications.—Dr. THEM ZAMMIT read a paper on some new forms of Mediterranean fever hitherto undescribed. A discussion followed, in which Major KENNEDY, R.A.M.C., Lieutenant KENNEDY, R.A.M.C., Lieutenant-Colonel MANCHÉ, and Major ALLEN, R.A.M.C., took part.—Lieutenant-Colonel SWABEY, R.A.M.C., read a paper on the medical organization of the Italian army in peace and war, the first part of which was published under the head of "Naval and Military Medical Services" on p. 886.

New Members.—A meeting of the Branch Council took place afterwards, and the following gentlemen were elected as members of the British Medical Association: George Debono, M.D. (Valetta), Surgeon A. W. Livesay, R.N.; J. C. Bord, M.D. (Zabbar); F. X. Darmanin, M.D. (Notabile), Surgeon Lancelot Kilroy, R.N., Lieutenant J. S. Bostock, R.A.M.C.; Henry Cauchi, M.D. (Cospicua), Paul Micallef, M.D. (Valetta).

METROPOLITAN COUNTIES BRANCH: HAMPSTEAD DIVISION.

THE first meeting of this Division was held in the North-West London Hospital on April 23rd, Dr. T. MORTON in the chair.

Model Rules.—The model rules, published on page 22 of the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of March 7th, 1903, were discussed and approved.

Election of Officers.—The following were elected to hold office until the annual meeting in the first week in June: *Chairman:* T. Morton, M.D. *Vice-Chairman:* F. R. Humphreys, M.R.C.S., L.R.C.P. *Honorary Secretary:* J. Dill Russell, F.R.C.S. *Representatives on Branch Council:* F. R. Humphreys, M.R.C.S., L.R.C.P.; R. H. Wellington, M.R.C.S., L.R.C.P. *Committee:* H. Opperheimer, M.D.; Mrs. L. Fraser Nash, L.R.C.P., L.R.C.S.; N. Bishop Harman, F.R.C.S.; W. E. Hills, M.R.C.S., L.R.C.P.; J. Smith Whitaker, M.R.C.S., L.R.C.P.; H. W. Armit, M.R.C.S., L.R.C.P.

METROPOLITAN COUNTIES BRANCH: WEST LONDON DISTRICT.

A VERY large and most successful meeting was held at St. George's Hospital Medical School (by kind permission of the Deans and staff) on March 25th, Mr. J. BRINDLEY JAMES, L.R.C.P.I., Vice-President, in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Votes of Thanks.—Hearty votes of thanks were unanimously passed to the Deans and staff for allowing the meeting to be held at the School; to the exhibitors of the cases; and to the Vice-President. The VICE-PRESIDENT and Sir ISAMBARD OWEN suitably replied. Dr. DUTTON, the Honorary Secretary, thanked Mr. Jaffrey for the great assistance he had given him in making the meeting such a complete success.

Refreshments.—Light refreshments were served in the Club; these, with smoking being allowed, added greatly to the pleasant evening spent.

[The scientific proceedings were published at p. 855.]

NORTH OF ENGLAND BRANCH: CLEVELAND DIVISION.

THE inaugural meeting was held on April 3rd at the Hospital, North Ormesby. Notices of the meeting had been sent to all the medical practitioners in the Division, 64 in all: of these, 27 attended the meeting, and one or two from the country intimated their inability to be present owing to the hour being fixed for the evening. Dr. WALKER, a past President of the North of England Branch, was appointed Chairman of the meeting.

The Work of the Divisions.—The CHAIRMAN introduced Mr. J. SMITH WHITAKER, Organizing Secretary of the Association, who made a statement as to the effect of the reconstruction of the British Medical Association, pointing more particularly to the work of the Divisions in the future. He further explained how any Division could make its voice heard at the Annual Meeting of Representatives.

Model Rules.—The meeting then proceeded to adopt the Model Rules suggested by Council "for the adoption of a Division not in itself a Branch." These were adopted as printed in the SUPPLEMENT of the BRITISH MEDICAL JOURNAL for March 7th, subject to revision at some future meeting.

Election of Officers.—Officers were next elected as follows:—*Chairman:* Dr. Knott (Middlesbrough). *Vice-Chairman:* Dr. Fulton (Eston). *Secretary and Treasurer:* Dr. Howell (Middlesbrough). *Two Representatives on Branch;* Drs. Knott and Howell. *Executive Committee* (to be thirteen in number): Town Members—Drs. Pope (Middlesbrough), Pentony (Middlesbrough), Walker (Middlesbrough), Williams (Middlesbrough). Country Members—Drs. Barnett (Saltburn) Townsend (Normanby), Robinson (Redcar), Yeoman (Stokesley), Stephens (Loftus). All were elected, subject to re-election at the next annual meeting to be held in May or June.

Death Certification.—The CHAIRMAN opened a discussion on the question of death certification and the registration of uncertified deaths. After discussion a resolution printed among the notices of motion for discussion at the Annual Representative Meeting in the JOURNAL of April 25th, p. 994, was adopted unanimously.

SOUTH-EASTERN BRANCH: EAST KENT DIVISION.

THE 166th meeting of this District was held at the Town Hall, Deal, on March 26th, Dr. LYDDON in the chair. Twenty-two members present.

Confirmation of Minutes.—The minutes of meeting held at Canterbury, November, 1902, were read and confirmed.

Election of Chairman for Next Meeting.—Dr. LARKING proposed, and Dr. GOGARTY seconded, that Dr. Frank Wacker be asked to take the chair at the next meeting, to be held at Canterbury May, 1903.

The New Constitution.—Dr. LARKING read a paper, entitled "The New Constitution: Will it be a Success in East Kent?" The author said he believed the new Constitution to be excellent, but he questioned whether the members of the British Medical Association in the proposed Divisions would combine and work to make the thing a success. So much ill-feeling existed between individuals that it would be difficult to get a meeting together unless there were a good number of medical men in the Division. He questioned whether it would be possible to form six Divisions in East Kent, especially those at Ashford, Dover, and Sittingbourne. There were probably about 100 members of the British Medical Association resident in East Kent, and he suggested that two constituencies should be formed—one for the Thanet, Canterbury, and Sittingbourne Divisions, and the other for the Dover, Folkestone, and Ashford Divisions. The East Kent district should remain as previously, and be a combination of the proposed six Divisions, and the meetings be held at various places, as in the past. The Secretaries of the proposed two constituencies could arrange these. The meetings of the Divisions and election of officers would soon be held, and he hoped that well-known and old-established men would take the matter up and endeavour to make it a success.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

THE second meeting of the forty-sixth session was held on March 6th at St. Bartholomew's Hospital, Rochester. Fourteen members were present. In the unavoidable absence of Mr. F. W. H. Penfold, Dr. VINCENT BELL was voted to the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Next Meeting.—It was resolved that if possible the next meeting be held at Gravesend, the date and chairman being left to the Honorary Secretary.

Vaccination Legislation.—Dr. E. J. EDWARDES (Secretary of the Imperial Vaccination League) read a paper on the position of this country as regards vaccination legislation. The following resolution was proposed from the Chair, seconded by Dr. TYSON, and carried unanimously:

That this meeting would welcome legislation making revaccination compulsory at school age, and also for providing a supply of vaccine (prepared in State laboratories) adequate to meet all ordinary demands of either public or private practitioners.

Votes of Thanks.—On the proposition of Mr. BRYDEN, seconded by Dr. PYE OLIVER, a vote of thanks to the Committee of the Hospital for the use of the Board Room was unanimously passed. A vote of thanks to the Chairman terminated the meeting.

[The scientific proceedings were published on p. 671.]

SOUTH MIDLAND BRANCH: BUCKS AND NORTH-WEST HERTS DIVISION.

THE first meeting of the Bucks and North-West Herts Division of the South Midland Branch was held at the Royal Bucks Hospital on Tuesday, April 7th. The following were present: Drs. C. Hooper, W. Eagles, W. S. West, H. Rose, F. Shaw, J. C. Baker, T. G. Parrott, Aylesbury; G. W. Buxton, Fenny Stratford; T. L. Kennish, Winslow; S. A. Bontor, Great Berkhamsted. Dr. J. C. BAKER in the chair.

Election of Officers.—C. Hooper was appointed Chairman of the Division; J. C. Baker, Vice-Chairman; T. G. Parrott, Secretary and Treasurer. Three other members were elected on the Executive Committee: W. H. Bull, V. Howard, already representatives of their Divisions; T. L. Kennish.

Model Rules.—The model rules suggested on pp. 22 and 23 of the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of March 7th were adopted generally with the exception mentioned below as regards area of the Division—the quorum of the Executive Committee to be one-third.

Proposed Alteration of Area. It was proposed by G. W. BUXTON, and seconded by H. ROSE, and carried unanimously:

That the meeting is strongly of opinion that if the Division is to be a success an alteration of its area is necessary, and that the area should be as follows: The whole of Bucks north of a line drawn from Amersham to Thame, and including both Amersham and Thame, and Chesham, Great and Little Missenden and Princes Risborough, North-West Herts, and the inclusion of Leighton Buzzard.

SOUTH-WESTERN BRANCH.

THE spring intermediate meeting of the Branch was held at the Royal Devon and Exeter Hospital on April 1st, the President, Mr. J. DELPRATT HARRIS, in the chair. Forty-two members were present.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

New Members.—Messrs. Cecil Musgrave, of Lifton, and George Lestock Thornton, of Exmouth, were elected members of the Association and Branch by the Branch Council, which met previous to the general meeting.

[The scientific proceedings were published on p. 967.]

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.

THE spring meeting of this District was held at the Queen's Hotel, Upper Norwood, on Thursday, March 12th, at 4 p.m., Dr. B. N. DALTON (South Norwood) in the chair.

Confirmation of Minutes.—The minutes of the Reigate meeting were read and confirmed.

Next Meeting.—On the proposition of Dr. PARSONS SMITH, seconded by Dr. J. R. ADAMS, it was resolved that the next meeting should be held at the Croydon General Hospital on Thursday, May 14th, and that Mr. T. A. Richardson be invited to take the chair.

Re-election of Honorary Secretary.—The re-election of Mr. Prangley as Honorary Secretary was proposed by Mr. S. W. MACILWAINE, seconded by Dr. P. J. DUNCAN, and carried unanimously.

Dinner.—The meeting was attended by forty-seven members and visitors, of whom seventeen remained to dinner.

SOUTH-EASTERN BRANCH: EAST AND WEST SUSSEX DISTRICTS.

A CONJOINT meeting of these Districts was held on Thursday, March 26th, at the Hôtel Métropole, Brighton. Dr. GORDON DILL took the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and approved.

Next Meeting.—It was decided to hold the next meeting in May at Lewes.

Exhibits.—The Bovril Company exhibited a show case of pocket rations; the Holborn Surgical Instrument Company exhibited surgical instruments.

Dinner.—After the meeting, at which 28 were present, 18 members and 4 guests sat down to dinner.

[The scientific proceedings were published at p. 967.]

WEST SOMERSET BRANCH.

THE spring meeting of this Branch was held at the Taunton and Somerset Hospital on Friday, April 3rd. There were present Mr. E. E. FROSSARD in the chair, twenty-three members and one guest.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Rules for Branch.—It was decided to adopt the rules as set forth in the SUPPLEMENT of the BRITISH MEDICAL JOURNAL of March 7th, pp. xxi and xxii, with such additions and numerical alterations as were necessary.

Rules for the Regulation of Ethical Procedure.—These rules as they appear on p. xxiv, col. 2 of the same SUPPLEMENT of the JOURNAL were approved of.

Tea.—Tea was served before the members dispersed.

[The scientific proceedings were published at p. 855.]

British Medical Association.

SEVENTY-FIRST ANNUAL MEETING.

THE seventy-first annual meeting of the British Medical Association will be held at Swansea on Tuesday, Wednesday, Thursday, and Friday, July 28th, 29th, 30th, and 31st, 1903.

PROGRAMME.

President: WALTER WHITEHEAD, F.R.C.S.Edin., F.R.S.E., Consulting Surgeon, Manchester Royal Infirmary, Manchester.

President-elect: THOMAS DRYSLWYN GRIFFITHS, M.D.Lond., M.R.C.S., Swansea.

Chairman of Council: ANDREW CLARK, F.R.C.S., Surgeon to the Middlesex Hospital and Lecturer on the Principles and Practice of Surgery.

Treasurer: EDWARD MARKHAM SKERRITT, M.D., F.R.C.P. Lond., Senior Physician to the Bristol General Hospital; Professor of Medicine, University College, Bristol.

An Address in Medicine will be delivered by FREDERICK T. ROBERTS, M.D.

An Address in Surgery will be delivered by A. W. MAYO ROBSON, F.R.C.S.

The Scientific Business of the Meeting will be conducted in eleven Sections, as follow, namely:

A.—MEDICINE.

President: Sir ISAMBARD OWEN, M.D., London. *Vice-Presidents:* CHAS. TANFIELD VACHELL, M.D., Cardiff; DAVID ARTHUR DAVIES, M.B., Swansea; JAMES KINGSTON FOWLER, M.D., London. *Honorary Secretaries:* ERNEST LE CRONIER LANCASTER, M.B., Winchester House, Swansea: FRANCIS DARBY BOYD, C.M.G., M.D., 6, Athol Place, Edinburgh.

B.—SURGERY.

President: EDMUND OWEN, F.R.C.S., London. *Vice-Presidents:* ALFRED SHEEN, M.D., Cardiff; HENRY ARTHUR LATIMER, M.D., Swansea; JORDAN LLOYD, F.R.C.S., Birmingham. *Honorary Secretaries:* HENRY BETHAM ROBINSON, M.S., 1, Upper Wimpole Street, W.; RICHARD COGSWELL ELSWORTH, F.R.C.S., 203, St. Helen's Road, Swansea.

C.—OBSTETRICS AND GYNAECOLOGY.

President: Professor WILLIAM STEPHENSON, M.D., Aberdeen. *Vice-Presidents:* JOHN ADAMS RAWLINGS, M.R.C.P., Swansea; ANDREW JOHN HORNE, F.R.C.P.I., Dublin; RICHARD NELSON JONES, M.R.C.S., Swansea. *Honorary Secretaries:* THOMAS WATTS EDEN, M.D., 26, Queen Anne Street, Cavendish Square, W.; EWEN JOHN MACLEAN, M.D., 12, Park Place, Cardiff.

D.—STATE MEDICINE.

President: JOHN C. MCVAIL, M.D., Glasgow. *Vice-Presidents:* EBENEZER DAVIES, M.R.C.S., Swansea; Major ROBERT HAMMILL FIRTH, R.A.M.C., F.R.C.S., London; THOMAS JOSEPH STAFFORD, F.R.C.S.I., Dublin. *Honorary Secretaries:* ARTHUR LLOYD JONES, D.P.H., Rotherslade House, Glyncerrig, Oystermouth, Mumbles, Glam.; JOHN ROBERTSON, M.D., 76, Clarke Grove Road, Sheffield.

E.—PSYCHOLOGY.

President: ROBERT JONES, M.D., Woodford Bridge. *Vice-Presidents:* JAMES GLENDINNING M.D., Abergavenny; EDWIN GOODALL, M.D., Carmarthen. *Honorary Secretaries:* ROBERT SLOSS STEWART, M.D., Glamorgan County Asylum, Bridgend; ROBERT HENRY COLE, M.D., 48, Upper Berkeley Street, W.

F.—PATHOLOGY.

President: DAVID JAMES HAMILTON, M.B., Aberdeen. *Vice-Presidents:* JOHN MICHELL CLARKE, M.D., Clifton, Bristol; ALEX. CHARLES O'SULLIVAN, M.B., Dublin. *Honorary Secretaries:* GEORGE LESLIE EASTES, M.B., 62, Queen Anne Street, W.; DANIEL EDWARD EVANS, M.B., Picton House, Swansea.

G.—OPHTHALMOLOGY.

President: HENRY EDWARD JULER, F.R.C.S., London. *Vice-Presidents:* JABEZ THOMAS, F.R.C.S., Swansea; THOMAS HERBERT BICKERTON, M.R.C.S., Liverpool; A. FREELAND FERGUS, M.D., Glasgow. *Honorary Secretaries:* HENRY COLLEN ENSOR, M.R.C.S., 23, Windsor Place, Cardiff; WILLIAM TINDALL LISTER, F.R.C.S., 30, Queen Anne Street, W.

II.—DISEASES OF CHILDREN.

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President: Inspector-General HENRY CHARLES WOODS, R.N., M.D., C.B., C.V.O., London. *Vice-Presidents:* Brigade-Surgeon-Lieutenant-Colonel EVAN JONES, V.D., M.R.C.S., Welsh Brigade, Aberdare; Major FREDERIC SAMUEL HEUSTON, R.A.M.C., C.M.G., F.R.C.S.I., Dublin. *Honorary Secretaries:* Fleet-Surgeon JOHN LLOYD THOMAS, R.N., M.R.C.S., H.M.S. *Excellent*, Portsmouth; Lieutenant-Colonel M. W. H. RUSSELL, R.A.M.C., M.R.C.S., 48, Cheyne Court, Chelsea, S.W.; Surgeon-Major JOHN ARNALLT JONES, M.D., 2nd V.B. Welsh Regiment, Aberavon.

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President: GEORGE H. T. NUTTALL, M.D., Ph.D., Cambridge. *Vice-Presidents:* Sir FRANCIS LOVELL, C.M.G, 18, Clifton Villas, Maida Vale, W.; Staff-Surgeon PERCY WILLIAM BASSETT-SMITH, M.R.C.S., Royal Naval Hospital, Haslar, Gosport. *Honorary Secretaries:* G. C. LOW, M.B., London School of Tropical Medicine, Albert Docks, E.; Captain LEONARD ROGERS, I.M.S., M.D., Hartley, Plymouth.

ANNUAL EXHIBITION.

Chairman: Mr. E. B. Evans.

Secretaries: Mr. J. Kynaston Couch, Mansel House, Swansea; Dr. J. D. Davies, 1, Trinity Place, Swansea.

Telegraphic Address: Annually, Swansea.

Telephone No: 0539 National.

The Annual Exhibition in connexion with the above meeting will be held in the First and Second Floors of the Free Library, Swansea (which building includes the School of Art and Art Gallery of Engravings) on July 28th, 29th, 30th, and 31st, and will comprise the following Sections:

SECTION A.—Foods and Drugs, including Prepared Foods, Chemical and Pharmaceutical Preparations, Antiseptic Dressings, etc.

SECTION B.—Medical and Surgical Instruments and Appliances, Books, Diagrams, Charts, etc.

SECTION C.—Sanitary and Ambulance Appliances.

SECTION D.—Carriages, Automobiles, etc.

The Free Library (First and Second Floors) afford excellent accommodation for the purposes of the Exhibition, both of which floors give a total floor space area of about 11,000 square ft., also the Large Room on the right-hand side of the main entrance, through which room admission will be gained to the first and second floors. The Reception Rooms will occupy the Ground Floor of the building, which, of course, will be of great advantage to Exhibitors.

The Committee have also had placed at their disposal ample space for the erection of large marquee, etc., for the accommodation of exhibits of carriages, etc., and also for motor cars suitable for the use of medical men for professional and other purposes. A room will also be set apart here for the purposes of a Smoke Room, etc.

Arrangements are also being made on Exhibition premises for lounge and smoking room, and writing room.

Luncheons will also be provided in the building for Exhibitors, etc.

Exhibitors in Sections A, B, and C (other than members of the Association) will be charged for table space at prices from 5s. and upwards per square foot according to position.

In Sections C and D, floor space will be provided at prices from 6d. to 1s. 6d. per square foot, according to position. On floor space no erection, stands, or tables for the display of goods will be allowed, but exhibitors may at their own cost put down a platform in height not exceeding 6 in. from floor.

The use of spirit lamps, etc., will not be allowed in the building.

Plan of hall, particulars, and regulations are now ready, and may be obtained upon application to the Honorary Secretaries for the Exhibition.

Copies of prospectus and regulations in full can be obtained upon application.

A catalogue, giving short description of exhibits, will be distributed free to members of the Association attending the meeting. Applications for advertisements in the same should be made at an early date.

Communications on all general matters connected with the Exhibition, and all applications for space, should be addressed to Mr. J. Kynaston Couch, Mansel House, Swansea, to whom all cheques are to be made payable.

Space will, as far as possible, be allotted as it is applied for, and all applications will be dealt with in the order in which they are received, but in any case such allotment is subject to modification at the discretion of the Committee until June 1st. As soon as possible after that date plan marked, showing position of space definitely allotted, will be sent to each exhibitor.

Exhibits will only be received conditionally upon the regulations and conditions being strictly complied with; and, further, that in any question that arises the decision of the Honorary Secretaries shall be final and binding upon all parties.

GRANTS FOR SCIENTIFIC RESEARCH.

THE Council of the British Medical Association desires to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences that it is prepared to receive applications for grants in aid of such research. Applications, which must reach this office not later than May 31st, for sums to be granted must include details of the precise character and objects of the research which is proposed, and must be made on forms to be had of the General Secretary, at the office of the Association, 429, Strand, London.

Every recipient is expected to furnish to the Committee on or before May 31st following upon the allotment of the grant, a report (or, if the object of the grant be not then attained, an interim report to be renewed at the same date in each subsequent year until a final report can be furnished) containing: (*a*) A brief statement for the Report of the Scientific Grants Committee, showing the results arrived at, or the stage which the inquiry has reached; (*b*) a general statement of the expenditure incurred, accompanied, so far as is possible, with vouchers; (*c*) and references to any transactions, journals or other publications in which the results of the research have been printed.

RESEARCH SCHOLARSHIPS.

The Council of the British Medical Association is prepared to receive applications for three Research Scholarships which become vacant (two holders are eligible for and seek re-election), of the value each of £150 per annum, tenable for one year, and subject to renewal by the Council for another year.

Applications for Scholarships must be made on forms to be had of the General Secretary, and returned on or before May 31st.

ERNEST HART RESEARCH SCHOLARSHIP.

The Council of the British Medical Association is also prepared to receive applications for the Ernest Hart Research Scholarship of the value of £200 per annum, tenable for one year, but subject to renewal by the Council for another year. The Scholarship is for the study of some subject in the department of State Medicine.

The present scholar is eligible and seeks re-election.

GUY ELLISTON, *General Secretary.*

BRITISH MEDICAL ASSOCIATION LIBRARY.

List of Presentation of Books, etc.

Presented by the AUTHORS:
Ball, J. B. Diseases of the Nose. 4th Ed. 1901.
Fox, R. Hingston. William Hunter, Anatomist. 1901.
Hawthorne, C. O. Prevention of Heart Disease in Children. 1902.
———— Intracranial Thrombosis, a cause of Double Optic Neuritis. 1902.
Hartridge, G. The Ophthalmoscope. 4th Ed. 1901.
Hutchinson, R. and Rainy. Clinical Methods. 2nd Ed. 1902.
Keith, Arthur. Human Embryology and Morphology. 1902.
Newsholme, Arthur. Hygiene. New Ed. 1902.
———— Vital Statistics. 3rd Ed. 1899.
Ross, Major Ronald. Malarial Fever: its Causes, Prevention, and Treatment. 1902.
Taylor, Seymour. Index of Medicine.
Thorne, W. Bezly. The Schott Methods in the Treatment of Chronic Heart Disease. 4th Ed. 1902.

Presented by the FOREIGN OFFICE:
France: Statistique Médicale de l'Armée pendant l'Année 1900.

Presented by the GENERAL MEDICAL COUNCIL:
Indian and Colonial Addendum to the British Pharmacopoeia, 1898. 1901.

Presented by H.M. CHIEF INSPECTOR OF FACTORIES:
First Report of Departmental Committee on the Ventilation of Factories. 1902.

Presented by Mrs. D. J. LEECH, Manchester:
Leech, late D. J. The Pharmacological Action and Therapeutic Uses of the Nitrites and Allied Compounds. 1902.

Presented by the LONDON COUNTY COUNCIL:
Dr. Clowes's Fourth Report on the Experimental Treatment of Sewage. 1902.

Presented by the MEDICAL OFFICER TO THE LOCAL GOVERNMENT BOARD:
Dr. Bulstrode. Report on Diphtheria at Burnham-on-Crouch. 1902.
Dr. Low. Papers on Bubonic Plague, 1891-1901. Published 1902.
Dr. Mair. Diphtheria and Sanitation in the Chard Rural District. 1902.

Presented by ARTHUR NEWSHOLME, Esq., M.D.:
Health of Towns Commission Reports, 1, 2, 1845.

Presented by M. T. SADLER, Esq., M.D., Barnsley:
British and Foreign Medico-Chirurgical Review, 1836-1848.

Presented by INSPECTOR-GENERAL TURNBULL, M.D
Admiralty Committee Report on Scurvy, 1879.
Forbes, Edw. Memoir of. 1861.
Goodsir. Anatomical Memoirs. 2 vols, 1868.
Wilson, G. Memoir of. 1860.

Presented by the Editor of the BRITISH MEDICAL JOURNAL:
Colton, B. P. The Human Body; its Hygiene and Physiology. 1902.
Comby, J. Traité des Maladies des Enfants. 4th Ed. 1902.
Concetti, L. L'Igiene del Bambino. 1903.
Cornil et Ranvier. Manuel d'Histologie Pathologique. Tome 1. 3rd Ed. 1901.
Encyclopædia Medica. Vol 11. Sciatica-Syncope. 1902.
Gould. Yearbook of Medicine and Surgery. 2 Vols. 1902.
Grandin and Jarman. Textbook of Practical Obstetrics. New Ed. 1901.
Hill, L. Physiology for Beginners. 1902.
Langerhans. Grundriss der pathologische Anatomie. 3 Aufl. 1902.
Magnus and Wurdemann. Visual Economics. 1902.
Mercier, C. Psychology. 1901.
Rhodes and Marshall. Report of a Visit of Inspection to Colonies and Hospitals for Epilepics, Feeble-minded and Insane in U.S.A. 1902.
Rose and Carless. Manual of Surgery. 5th Ed. 1902
Schenk, L. The Determination of Sex. 1898.
De Schweinitz and Others. Uveitis. 1902.
Van Lint. Qu'est ce qui Determine le Sexe? 1902.
Wallace, J. S. The Causes and Prevention of Decay in Teeth. 2nd Ed. 1902
Windle, B. C. A. Handbook of Surface Anatomy. 3rd Ed. 1902.
Yarr, M. T. Military Ophthalmology. 1902.
And other volumes.

Calendars, Reports, and Transactions have been received from the following bodies:
American Association of Obstetricians and Gynecologists Transactions. Vol. 14 1901.
American Dermatological Association Transactions. 1901.
American Otological Society Transactions. 1902.
Birmingham University Calendar. 1902-3.
Bombay University Calendar. 1902-3
Bureau of Animal Industry. 17th Report. 1900.
Clinical Society of London Transactions. Vol 35. 1902.
Columbia University Pathological Studies. Vol. 8. 1902.
Dublin University Calendar 1902-3.
Dermatological Society of Great Britain and Ireland Transactions. Vol. 8. 1902.
Edinburgh Medico-Chirurgical Society Transactions. Vol. 19-21, 1902.
Edinburgh Obstetrical Society Transactions. Vol. 27. 1902.
Gibraltar Annual Report on the Public Health. 1901.
Guy's Hospital Reports. Vol. 57. 1902
Hong Kong. Annual Sanitary Report. 1901.
Jamaica. Annual Report of Lunatic Asylums. 1901.
King's College Calendar. 1902-3.
Malta. Annual Report of Public Health Department. 1901.
Massachusetts. State Board of Health Report 1902.
Medical Society of New York Transactions. 1902.
Metropolitan Asylums Board Report. 2 Vols. 1901.
Nagpur Malaria Conference Transactions. 1902.
New Zealand. Report of Public Health Department. 1902.
Pathological Society of London Transactions. Vol. 53. 1902.
Punjab University Calendar. 1902-3.
Reading Pathological Society Transactions. 1901-2.
Royal Academy of Medicine in Ireland Transactions. Vol. 20. 1902.
Royal College of Surgeons Calendar 1902.
Southern Surgical and Gynecological Society Transactions. Vol. 14. 1901.
Straits Settlements. Medical Report. 1901.
University College Calendar. 1902-3.
West Kent Medico-Chirurgical Society Transactions. 1902.

BOOKS NEEDED TO COMPLETE SERIES:

The Librarian will be glad to receive any of the following volumes which are needed to complete series in the Library:

American Climatological Transactions. Vols. 1, 4, 5, 6.
American Dermatological Association. Transactions. Vols. 5, 7, 8 and 11.
American Journal of the Medical Sciences. New series, vols. 4, 5, 1842-43; vols. 14, 15, 1847-48; vols. 18-30, 1850; vol. 33, 1857; vol. 46, 1864-65; vol. 59; or any parts of these vols.
American Journal of Ophthalmology. Vols. 1-9.
American Laryngological Association. Transactions. Vols. 1-6, 8-9.
American Medical Association. Transactions 1-28, 30, 31.
American Otological Society. Transactions. Vol. 3, part 2, 1883.
American Public Health Association. Transactions. Any vols.
Analyst. Vols. 1-24.
Annals of Surgery. Vols. 11; 13-16; and 26-27.
Archives Générales de Médecine. 1831-39 inclusive; 1846-1855 inclusive: 1857-64 inclusive: 1871.
Archives of Ophthalmology. Vols. 1-3, 6, 7, 14-21.
Archives of Otology. Vols. 1-7, and 20, 21, 22.
Archives of Pediatrics. Vols. 1-11.
Asylum Journal of Mental Science. Vol. 1, 1854.
Bentley and Trimen. Atlas of Medicinal Plants.
British Journal of Dermatology. Vol. 2, part 3.
Caledonian Medical Journal. Vol. 1 prior to 1894.
Carmichael Essays. Laffan, 1879. Rivington, 1879.
Centralblatt für Augenheilkunde. Hirschberg. 1891, January-July, 1892, January, September, and May. 1897.
———— für Bakteriologie. Bound volumes prior to 1899.
———— für klinische Medicin. 1880-1883; all 1888, 1891, No. 26; 1892, No. 17.
———— für medicinischen Wissenschaften. Vols. 1-19.
Congrès Français de Chirurgie. Transactions 1, 2, 3, 6, and 10.
Congrès Internat. d'Obstétrique et de Gynécologie. 1, Bruxelles, 1892; 3, Amsterdam, 1899.
Connecticut State Board of Health Report. Vol. xi. 1887-8.
Denman. Midwifery. 1801.
Dermatological Congress. Vienna, 1892, and Paris, 1900
Dublin Quarterly Journal of the Medical Sciences. Vols. 1-10, 13-28, 35-40.
Edinburgh Medical and Surgical Journal. Vols. 67-82. 1847-1855.
Edinburgh Obstetrical Society. Transactions. Vol. 5.
Fothergill. Midwifery. (Recent).
Gale. Surgery. 1563.
Glasgow Medical Journal. 1833-1868.
———— Pathological Society. Transactions. Vols. 1 and 2.
Guy's Hospital Gazette. Vols. 1-13.
Hare. Therapeutics. Vols. 3-4.
Hunterian Transactions containing 76th Report.
Indian Census Report. 3rd census, 1901.
———— Medical Gazette. 1866-1884.
International Congress of Hygiene. Congresses 1 to 6, 9 to 10.
International Medical Congress (13th). Vol. xi. Transactions.
International Ophthalmological Congress. Transactions of 5th, New York, 1876.
Johns Hopkins Hospital Bulletin. Vols. 1 10.
Journal of Laryngology. Vols. 1-9.
Lancet, 1850, vol. 2, pages 425-6, and August 23rd, 1851.
Pediatrics, prior to 1902.
Ophthalmic Review, January, 1882.
Pollatschek. Therapeutische Leistungen des Jahres. 1894, 1895, 1900.
Provincial Medical and Surgical Journal. 1840. Being the first 52 numbers before October 2nd, 1841
Recueil d'Ophtalmologie. 1891, Jan.-June; 1892, December.
Registrar-General's Decennial Report, 1871-1880.
Revue Générale d'Ophtalmologie Prior to 1888, and 1891-92.
St. Bartholomew's Hospital Gazette. Vols. 1-6.
St. George's Hospital Gazette. 1-7.
St. Mary's Hospital Gazette, 1-5.
Semaine Médicale Prior to 1890, and title and index to year 1892.
South African Medical Journal. February, April, 1895. And Titles for vols. 3 and 4.
Starling. Physiology.
Turner (D). Art of Surgery. Vol. 2. 1725.
University College Hospital Reports. Before 1877 and 1892-93.
Virchow's Archiv. Any vols. prior to 151.
Wiener klinische Wochenschrift. Nos. 5 and 6. 1899. Titles 1892 an 1888.
Willcock. Laws of the Medical Profession. 1836
Ziemssen's Cyclopaedia. Supplem. Vol.

Applications for duplicates from medical societies forming libraries may be addressed to the Librarian, 429, Strand.

THE DUBLIN BRANCH OF THE BRITISH MEDICAL ASSOCIATION AND IRISH DISPENSARY DOCTORS.

In the very interesting and important address which was delivered at the first meeting of the Leinster Branch by Dr. J. Magee Finny, the President, allusion was made to the work of the Association in support of the claims of the Irish dispensary doctors. Although for very many years their cause had been strenuously advocated in the BRITISH MEDICAL JOURNAL, it was not until 1892 that a great effort was made to put before the profession at large a full body of evidence which it was certain would influence an already ill-informed public opinion. The medical press was steadily devoted to an exposure of the scandals of the Poor-law Service, and vigorously denounced the wrong-doers. The Irish Medical Association had for its main object the redress of grievances; but there were two defects in the agitation. There was a want of publicity outside Ireland, and it was right to say a want of that cohesion and unity of action among the medical officers whose interests were involved without which no great changes could be achieved. Wider knowledge and deeper sympathy were needed, and these were attained through the organization of the British Medical Association.

In 1892 Sir (then Mr.) William Thomson obtained the approval of the then Editor of the BRITISH MEDICAL JOURNAL, the late Mr. Ernest Hart, in gathering evidence in reply to a number of questions which he proposed to submit to the Poor-law medical officers. The papers were sent out by the Association, and a great mass of replies came in. The evidence was sifted by Mr. Thomson, and the results were published in a long series of articles in the JOURNAL, and subsequently copied into some of the Dublin daily newspapers. These articles set forth the wrongs of the dispensary doctors and formulated demands, some of which had since been granted. They still formed the authoritative source of information upon the whole subject.

The awakening which then occurred made itself apparent. Mr. Ernest Hart went to Ireland to meet the members of the Irish Medical Association and of the Dublin Branch of the British Medical Association, and at the Royal College of Surgeons he infused new energy into their efforts by his powerful speeches. He was also one of an influential deputation to the Local Government Board in Ireland during the same week, and laid his views with great force before the then Commissioners.

But the interest of the Dublin Branch of the Association had been already stirred. In 1889 they united with the Irish Medical Association in a letter to Mr. Arthur Balfour, then Chief Secretary, urging an alteration of the law regarding superannuation allowances, and in the following year they joined in a deputation to the Chief Secretary on the same subject. Their views were supported by the Parliamentary Bills Committee, and were reported to the meeting of the Association at Newcastle-on-Tyne.

In 1893 a deputation of the Dublin Branch and of the Irish Association waited on Mr. Jackson, M.P., Chief Secretary, when the late Sir William Stokes, Mr. Thomson, and Dr. J. Molony, the honorary secretary, addressed him upon the subjects of pensions, leave, insufficiency of salary, and abuse of the visiting ticket system. In 1894 Sir John Moore, the incoming President of the Dublin Branch, devoted his attention to these subjects in his Presidential address. The Branch Council reported that:

"The condition of the Poor-law Medical Service has been under consideration of your Council the small salaries, the difficulties in reference to pensions, and the abuses in the issue of dispensary and visiting tickets. The subject as a whole is one which your Council submits is worthy of the best efforts of the Association; but unless the Poor law medical officers combine and make united effort, both in the columns of the BRITISH MEDICAL JOURNAL and through their parliamentary representatives, reform in that service can scarcely be expected."

The report went on to show the result which had been attained by the Army Medical Staff through the ventilation of their claims in the JOURNAL, and the question was asked,

"Is it not time for them to combine and make an effort similar to that which brought victory to their military brethren?"

In the following year the Branch petitioned Parliament in support of a Bill for the superannuation of the officers of the Poor-law service. In 1896 Mr. W. Thomson became President, and his address was devoted to reassertion of the medical officers' claims. Arising out of this the Council of the Dublin Branch obtained the signatures of the Irish licensing bodies and medical societies to a memorial to the then Chief Secretary, Mr. Gerald Balfour, asking for a Governmental inquiry. This memorial was backed up by a strong deputation, which included representatives of the bodies named, and of the Irish Medical Association. In the same year the Council again supported a petition to Parliament, and it was presented by the Solicitor-General for Ireland.

Among other amendments to the Local Government (Ireland) Bill, 1898, the Branch Council resolved:

That it is necessary that a clause should be introduced making it compulsory that the county and district councils shall give a suitable retiring allowance to medical officers of workhouses and of dispensaries, as is now done in England.

This was adopted by the Council of the British Medical Association. The Secretary of the Branch (Dr. James Craig), who was also Registrar of the Royal College of Physicians, attended in London and pressed this matter on the Irish members.

In 1899 Mr. F. Heuston delivered a Presidential address on the position of the Poor-law medical officers. Two years later the Branch, at its annual meeting, passed the following resolution:

That the support of the Dublin Branch of the British Medical Association be given to the Bill proposed by the Irish Medical Association for the superannuation of Poor-law medical officers and other public officers such as public vaccinators in Ireland, with the addition of a clause providing for the establishment of a central fund from which the pensions should be paid.

The Bill with these suggestions was adopted and supported by the Council of the British Medical Association.

The Secretary of the Branch summoned the Poor-law medical officers belonging to the Branch to a special meeting held prior to the recent annual meeting, in order that they might discuss the steps which they wished the Association to take in regard to the disabilities under which they laboured. The outcome of this meeting, at which only 5 out of 67 Poor-law officers attended, was the formulation of the following resolutions which were unanimously adopted at the subsequent annual meeting.

A. That in the opinion of this meeting the conditions of the Irish Poor-law Medical Service require amendment in the following respects: (1) That a minimum salary be fixed of £200 per annum for dispensary appointments and £120 per annum for workhouse appointments with a reasonable reduction where both appointments are held jointly. (2) Superannuation. (3) An annual holiday of at least a month.

B. That it be an instruction to the Council of the Association to take such steps as may be deemed best calculated to bring about the early adoption of these reforms.

It is clear that, if the efforts which the Leinster Branch is putting forth to obtain the support of the whole force of the Association in an endeavour to redress the grievances of the Poor-law medical officers are to succeed, it must take full advantage of the opportunities which are open to it by the recent reorganization of the Association, more especially by exhibiting a lively interest in the working of the Branches and Divisions which are now in process of formation.

This summary of the work of the Dublin Branch of the British Medical Association in the movement for the help of the Irish dispensary doctors will show how diligently it has pursued its purpose, acting always on the same line as, and chiefly in conjunction with, the Irish Medical Association. We very cordially welcome the new vigour which has been infused into the struggle for reform, and the unanimity which now marks the efforts of the medical officers. Previous failure has forced them into a position in which all the right is theirs. In maintaining that position, they have the sympathy and support of the greatest medical association in the world.

Printed and published by the British Medical Association at their Office, No. 429, Strand, in the Parish of St. Martin-in-the-Fields, in the County of Middlesex.

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MAY 30TH, 1903.

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Reports of Branch Meetings.

ULSTER BRANCH.

THE spring meeting of the Branch was held in the Medical Institute, Belfast, on May 13th, at 4 p.m., Professor SINCLAIR, F.R.C.S.Eng., in the chair. Thirty members were present.

Confirmation of Minutes.—The minutes of the winter meeting and of the special meeting of April 2nd were read and confirmed.

The late Dr. George Gray.—The PRESIDENT proposed the following resolution in feeling and suitable terms:

The Ulster Branch of the British Medical Association desire to express their sincere regret at the death of Dr. George Gray, J.P., Newcastle, county Down, their Honorary Treasurer for many years, and their President during the session 1889-90. Dr. Gray was one of the oldest members of the Branch, and always took the keenest interest in its success, and never spared any effort to advance its progress. The very general esteem in which Dr. Gray was held was due both to his sterling worth and genial and kindly disposition, as well as to his high professional skill and ability. The Branch desires to record its deep sorrow by the removal of so worthy and respected a member and colleague.

The resolution was seconded by Dr. HENRY O'NEILL, and passed in silence.

Irish Poor-law Medical Service.—Professor BYERS (President of the Belfast and District Branch of the Irish Medical Association) moved the following resolutions:—

1. That in the opinion of the Ulster Branch, the present position of the Poor-law Medical Service in Ireland is most unsatisfactory and calls for immediate amendment in respect to: (*a*) Remuneration; (*b*) annual holidays; (*c*) superannuation. 2. That the Council of the British Medical Association be requested to adopt such measures as may be considered advisable to redress as quickly as possible the grievances of the Irish Poor-law medical officers.

He said he was sure all thoughtful observers would admit that there was at present an urgent need of Poor-law reform in Ireland, and that there was no part of the Poor-law system more unsatisfactory than that which concerned the medical service, and he was confident if the public fully realized the disabilities of their medical brethren in that service they would speedily rectify them.

Grievances of Poor law Medical Officers.—The grievances of which the Poor-law medical officers complained are: 1. Inadequate remuneration. The average salary is about £100 per annum, and the average annual registration and vaccination fees are £30. No doubt in largely-populated centres like Belfast the income is larger, owing to registration and vaccination fees, but in many country unions it varies between £33 and £80 per annum. The average population of a dispensary district in Ireland is 6,577, with an average area of 44 square miles. Where the medical dispensary officer deducts the expenses necessary to the discharge of his duties—rent, taxes, horse and car, and servant—his salary is practically gone; and all he has to live on is the chance of private practice. Unfortunately this has gradually, in the country districts, become much less, owing to two causes: (1) the diminished income of the landed gentry, and (2) the trend at present existing from the rural districts into the towns. Further, medical education costs more now than formerly, and living is higher, yet the salary of the medical officer who has to work day and night, Saturday and Sunday, remains the same, until now he is, from a pecuniary point of view, paid no better than a skilled mechanic or a second-class Civil Service clerk. Looked at from the point of view of an investment, will any father regard £100 to £130 per annum as an adequate return for the time and money spent on the education of a son? 2. There is no promotion in the service. Neither efficiency in the discharge of his duties nor length of service brings any pecuniary reward. There is no stimulus to self-improvement or to original work. 3. There are no holidays as of a right. It is true there is at length (thanks to a long-continued agitation) an improvement, the Local Government Board having offered to pay one-half of the cost of a *locum tenens* for four weeks—that is, they will pay two guineas for each week; but the order made by them is not mandatory. 4. One of the worst features of the Irish Poor-law Medical Service is the want of superannuation. A man may struggle on thirty to forty years, long after he is physically unfit for work, when, if his pension was assured, he would have long before resigned. Under an Act of Parliament (32 and 33 Vic., c. 50) pensions may be given "at the discretion" of Boards of Guardians, but before the application can be considered the doctor must first resign his means of livelihood, and if he and his friends have not thoroughly canvassed the guardians they, "at their discretion," may refuse his application, and, as has occurred, he may be left almost penniless. If the Act of Parliament had said pensions shall, instead of may, be given, all this annoyance would have been avoided.

Results of these Grievances of Poor-law Medical Officers.—The result of these disabilities is bad for the medical profession, degrading to the Poor-law Medical Service in Ireland, and injurious to the best interests of the country. If the service is not reformed less competent men will enter it, as young medical men of ability and ambition will seek a sphere of duty either in the large areas of population, or will leave Ireland altogether. This, again is a very serious matter for the country, as in many sparsely-populated districts the dispensary doctor is the only one available, and he is responsible for the health of the people and the sanitary condition of his district. It is therefore of the utmost importance, not merely for the medical profession but for the sake of the Poor-law Medical Service in Ireland, and, above all, from a public and patriotic point of view, that the grievances of "workers

in whose efficiency the whole community is vitally interested" should be redressed.

The Demands of the Poor-law Medical Officers.—If the service were reformed so that £200 per annum be fixed as the minimum salary for any dispensary appointment, and £120 per annum for any workhouse appointment—unless held jointly, when £300 should be the amount for both; and if an annual holiday of one month (with paid *locum tenens*) be allowed, and superannuation secured, not as a favour but as a right, these grievances would largely disappear. These are the demands of the Irish Medical Association, and for over thirty years attempts have been made by interviews with public men and official Boards to have the grievances of the service rectified until the present acute state of affairs has arisen when the Irish Medical Association has advised the medical profession not to apply for vacant posts until these demands are yielded, and have called upon the teachers in the various colleges and hospitals to advise their pupils to avoid the service.

How can these Grievances be Redressed?—It seemed to him (Professor Byers) that there were two plans by which the service could be reformed: (1) By combination on the part of the medical profession, as advised by the Irish Medical Association; and, if the doctors in Ireland organized and combined not to offer themselves for any Poor-law appointment until their just demands were granted, the Local Government Board and the Poor-law guardians would in time realize that the sooner the grievances were redressed the better would it be for the public and for the profession. But unless this combination was unanimous it would break down like a chain with a weak link. Combination on the part of the medical profession had compelled the War Office to reform the Army Medical Service, and it would be equally effective in causing a change in the Irish Poor-law system.

Influence of the British Medical Association.—(2) There was a second method which would be most useful in redressing the grievances of the Irish Poor-law medical officers—and that was the help of their fellow practitioners. It was said by Bacon, in the preface to the largest and most important of his professional treatises, *Maxims of the Law:* "I hold every man a debtor to his profession; from the which, as men of course do seek to receive countenance and profit, so ought they of duty to endeavour themselves by way of amends to be a help and ornament thereunto." It was surely the bounden duty of every member of the profession to live up to such an ideal, and to do his best to elevate the profession, to remove the grievances that press hard on any members of it, and, above all things, to bring happiness and contentment to those who practise it. The Ulster Branch had on many occasions shown its sympathy with the members of the Poor-law Medical Service in Ireland, and he (Professor Byers) was confident the Council of the British Medical Association (and it carried enormous influence and weight with a body of 18 000 members behind it in all parts of the empire) would be most anxious to co-operate in any movement for the redress of the grievances of any branch of the profession. What direction this support would take must be left for future consideration; it might be in furthering a proper superannuation Bill in Parliament, or in suggesting to the Government the advisability of issuing a Commission to inquire into the whole question of Poor-law reform in Ireland, and especially the grievances of the medical officers in that service. So long as Dr. Calwell and he (Professor Byers) represented the Ulster Branch in the Central Council of the Association, they would be most happy to do anything in their power to reform the Poor-law Medical Service in Ireland.—Dr. M. KEOWN, in seconding the resolution proposed by Dr. Byers, remarked that the profession had actually the settlement of this question in their own hands if the members only acted loyally to each other in this matter. They did not require to beg any favours from guardians or even the interposition of Government. All they had to do was to say that in case of any wrong done to any officer of the Poor-law Service there would be no applicant for the place in case of vacancy. They had the power to enforce compliance with their terms and they should do it. He saw little to induce any young medical man to settle in the bogs of Ireland at starvation salary after an expensive education when the wide world was open to him. The Irish schools could do a vast deal. He recalled the fact that when he was a student the very best of the students went to the Army Medical Service; but when new regulations were introduced, interfering with the status of the medical officers, the Army Medical Service was boycotted on the advice of the teachers in the Irish medical schools, Irish surgeons ceased to enter the Army Medical Service, and the service became degraded in character and failed to find the necessary number of surgeons even to given it an appearance of efficiency. The War Office was brought to its knees. He had advised for some time all the students whom he met to avoid the Poor-law service, and if that were done generally, and if the advice were followed, as he believed it would be generally, by young medical men, the profession would be able to dictate its own terms.—Professor SYMINGTON (Queen's College, Belfast) supported the motion. He said that on a former occasion the teachers in the medical schools had advised their students to shun the Army Medical Service until improvements had been granted in the status of the officers. In future they would have to warn their students against such an ill-paid and uncertain service as that of the Poor-law system.—Dr. RITCHIE said he was in favour of the principle of the resolution; but as a Poor-law guardian he asked what were they to do, when applicants appeared in numbers for all posts.—The motion was unanimously passed.

Report of Council.—Dr. CALWELL (Honorary Secretary) read a report of Council, recommending (1) the adoption with certain modifications of the "model rules suggested for adoption by a Branch composed of more than one Division," given in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of March 7th on page xx; (2) that 2s. 6d. per head be retained for Branch expenses, and 1s. 6d. per head be allocated to Divisions; (3) that Dr. Darling be appointed Honorary Treasurer *pro tem.*, in the room of the late Dr. Gray; (4) that the usual list of members, with copies of new rules, be printed and circulated for annual meeting.

[The scientific proceedings were published at p. 1210.]

NORTH OF ENGLAND BRANCH.

THE Spring meeting of this Branch was held at the Infirmary, Sunderland, Dr. WARDLE (Bishop Auckland), President, in the chair. Over thirty members were present, and several letters of regret were announced.

Reports of Meetings of Medical Unions.—The following reply from the Journal and Finance Committee was announced as having been received in answer to a resolution passed at the last meeting, asking that more space be given to the reports of medical unions and other similar bodies, and that communications of this kind be invited:

Resolved: That this Committee do not see their way to recommend that communications be invited from organizations outside the Association.

Report on Organization of the Branch.—The SECRETARY (Dr. A. Cox) read the following:

A detailed report will be given at the annual meeting at Alnwick in June, but at present it may interest the Branch to know that since the reorganization of the Branch was begun, some six months ago, we have either elected, or are about to elect, 103 new members, and several other nominations have been received since these figures were made up. The number of resignations has been very small indeed. The work is going on most satisfactorily, the new Divisions promising to work well, and a great deal of energy is being thrown into the work of the Branch by members who have never had an opportunity of doing anything for it before. Great things are expected from the enlarged and representative Branch Council, and it is anticipated that after to-day the routine and most of the medico-political work will be done either by it or in the Divisions, so that the Branch meetings will be mainly devoted to scientific work and the social amenities. Before this can come about it is necessary that the decks should be cleared of much detail work, and this explains the long business agenda of to-day.

Branch Rules.—The suggested Model Branch Rules, which had been previously considered by the Branch Council, were then taken seriatim, and with certain necessary modifications were unanimously adopted subject to the approval of the Central Council.

Branch Ethical Rules.—The Draft Model Ethical Rules for a Branch, which had also been previously considered by the Branch Council, were unanimously adopted after being considered seriatim.

Printing of Rules.—On the motion of Dr. MURPHY, seconded by Dr. HOWELL, it was resolved that as soon as possible the General and Ethical Rules be printed and circulated to all members of the Branch.

Honorarium to Honorary Secretary of Branch.—The Branch Council recommended, Dr. MURPHY moved, and the PRESIDENT seconded, the following resolution:—

That the sum of £50 be granted as an honorarium out of the funds of the Branch to the Honorary Secretary for the extraordinary work carried on in reorganizing the Branch.

Both speakers spoke of the great amount of extra work in-

volved in the operations of the new constitution, and of the successful way in which the new order of things had been inaugurated in the Branch mainly owing to the great interest taken in the matter by Dr. Cox. Their remarks were received with marks of approbation by the meeting, and the resolution was carried *nem. con.*

Dr. COX, in replying, thanked the Branch for their consideration. He said the work had been very onerous, more so than even he had anticipated. He had soon found that if the work was to be done thoroughly and personally, as most of it must be, it would necessitate his getting an assistant, as he had attended all the inaugural meetings of Divisions except two, and that meant a good deal of being away from home. The kindness of the Branch would enable him to meet most of the extra cost that had been incurred. The work, he said, was very far from being finished, nor would it be until the Branch could say it had 90 per cent. of the practitioners in the area within its ranks.

Resolution of Sympathy with the late Honorary Secretary.—The PRESIDENT mentioned that Dr. T. Beattie, who was at Davos and was apparently cured of the pulmonary affection which had sent him there, had had the misfortune to contract enteric fever, and was again lying very ill. He moved that the Honorary Secretary be requested to send Dr. Beattie the sympathy of the Branch, and its hope that he would soon be back amongst his friends again.

Dr. MURPHY and Dr. DRUMMOND (South Shields) spoke in favour of the resolution and of the good work Dr. Beattie had done for the Branch, and the resolution was carried unanimously.

Dinner.—Fourteen members afterwards dined at the Grand Hotel. In the absence of the President, Dr. MURPHY presided.

GATESHEAD DIVISION.

The inaugural meeting of this Division was held at the Dispensary, Gateshead, at 8 p.m., on April 7th, 1903, Dr. GILBERT in the chair.

Previous to the formal beginning of the meeting, a meeting of the Gateshead Medical Association was held to discuss the following resolution:

That the Gateshead Medical Association be and hereby is dissolved.

This was carried with one dissentient.

The Gateshead Medical Association has been in existence for nearly seven years and has always been active in medico-ethical and medico-political work. It has had throughout its career every eligible medical practitioner in the district within its ranks. It was not without some natural reluctance that the members resolved to dissolve the old Association with its traditions of work and success. A great deal of preliminary discussion had taken place, and it was decided that if the large majority of the members could be induced to join the British Medical Association it would be idle to try to run two associations with similar objects, practically the same membership, two sets of meetings, and two subscriptions, when all this could be avoided by letting the greater assimilate the less. At the above meeting it was announced that out of 46 practitioners in the district 43 were members of the British Medical Association. The decision to dissolve the old Association was therefore soon arrived at.

Rules.—The model rules sent down for consideration by the Central Council were with few alterations adopted by the Division. The following (which is a modification of the old rule of the Gateshead Medical Association) was added..... In the event of the Division agreeing to take combined action, any member found guilty, after full discussion and ballot, of gross breach of faith shall be reported to the Branch Council, in the first instance, for expulsion. If this report shall lead eventually to the expulsion of the member from the British Medical Association, he shall be professionally ostracized by the other members of the Division. No member shall be thus reported except on the vote of a clear majority of the whole of the members of the Division. With this addition the rules were approved and sent up to the Central Council for approval.

Officers.—Drs. Blacklock and Todd were elected as representatives on the Branch Council. The old officers of the Gateshead Medical Association were asked to hold office in the Division until the annual meeting in June.

Resolutions for Annual Representative Meeting.—Dr. COX then moved four resolutions for the purpose of having them sent for discussion to the Annual Representative Meeting. These resolutions, which were unanimously adopted, have already appeared in the BRITISH MEDICAL JOURNAL in the agenda for that meeting. The meetings of the Division will be held in October, December, February, April, and June (annual).

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

THE 167th meeting of the District was held at the Kent and Canterbury Hospital on May 7th, Dr. FRANK WACHER in the chair. There were present at the meeting thirty-eight members.

Confirmation of Minutes.—The minutes of the last meeting held at Deal on March 26th were read and confirmed. The minutes of the last annual meeting held in May, 1902, were read and confirmed.

Election of Officers.—The question of election of officers for the ensuing year next came under discussion. Mr. Whitaker was asked by the CHAIRMAN kindly to let the members of the East Kent District know their position and the manner in which the new regulations would affect them. Mr. WHITAKER gave a lucid explanation of the new régime, and explained that, as the members of the East Kent District were loth entirely to disunite themselves into the Divisions, they were at liberty to have East Kent District meetings in addition to the various meetings of Divisions, and there would be amalgamated meetings of the several Divisions, once, twice, three times or more a year, and they could meet at the centres of the various Divisions in turn if they thought fit. Dr. HALSTEAD therefore moved, and Dr. DODD seconded:

That this meeting is of decided opinion that the present District of East Kent shall continue as a combination of the new Divisions, that it should meet at least twice a year for scientific and business objects as formerly, and that it now elect a secretary.

This was carried.—Dr. H. RAVEN proposed, and Dr. SCATLIFF seconded, that Dr. Larking, of Folkestone, be appointed, and this was carried *nem con.*—Dr. LARKING, in accepting the position, said that he did not consider that his office would be necessary for long, but that the secretaries of the several Divisions should form a committee, and choose one of their numbers as secretary of the East Kent District made up of the new Divisions.

Representation of Divisions.—Dr. LARKING also spoke as to the representation of the Divisions at the representative meeting, and proposed a resolution, which was seconded by Dr. EVERS:

That this meeting is of opinion that instead of the grouping for representatives, as published in the BRITISH MEDICAL JOURNAL of May 2nd, it would be much better to form two constituencies:

Division I.	Division II.
Thanet.	Dover.
Canterbury.	Folkestone.
Faversham.	Ashford.

This was carried, and Mr. WHITAKER undertook to bring the matter before the Organization Committee, Dr. LARKING having pointed out that he would hold no official positions unless the various Divisions agreed to the amalgamation as a district.—Dr. HUGH RAVEN proposed, and Dr. SCATLIFF seconded:

That it is, in the opinion of this meeting, desirable that the secretaries of the Divisions, on being appointed, shall communicate with Dr. Larking, the Secretary of the East Kent District.

This was carried.—It was now asked by Dr. ROBINSON, who was to start the Divisions electing their officers to arrange the meetings, and Mr. WHITAKER pointed out that it was the business of the Secretary of the Branch (Mr. Jenner Verrall) to arrange such matters.

Contract Medical Practice: Report of Committee.—Dr. Larking was called upon to read the report of the Committee appointed at the May meeting, 1902, "to investigate the conditions under which contract practice is carried on in the East Kent district." Dr. LARKING (the Secretary) read the report, considering in detail the rates and conditions under which Friendly Societies and private clubs were undertaken by medical men in the district, the question of collectors, and the estimation of the actual fees per visit which medical men obtain, and he gave a list of the opinions of the medical men in the district on contract practice. Of the 130 who responded to his letters, 76 were against contract practice as at present carried on, 36 expressed no opinion, 19 believed that contract practice was beneficial to the profession. He then read the conclusions the Committee had arrived at, and asked the meeting to approve of them:

Conclusions.

The Committee is of opinion that, speaking generally, contract practice should be discouraged as being detrimental to

the interests of the profession, but, as its abolition at present would be impossible, we offer the following suggestions to improve the conditions under which it is carried on :

1. (*a*) That in Friendly Societies, men should be taken in the contract, women (especially married women) should not be accepted.

(*b*) The medical officer should have absolute discretion as to whom he admits to the contract. No medical officer should accept any member who has been refused by another medical officer on the grounds that he is able to pay for ordinary attendance.

(*c*) A uniform fee should be charged to all the clubs in the locality.

(*d*) The minimum fee should be 6s. per annum for members living within two miles (by road) of the doctor's house.

(*e*) We consider that the custom of appointing one or more medical men as sole medical officers to the clubs in the locality is one that ought to be abolished. It has doubtless arisen from the conviction that the club practice is only profitable when the number of members is large, but with a rise in the fees paid by each member this consideration becomes of less importance. We think that every member of a Friendly Society should have, as is the case at Faversham, the option of choosing his medical man, from such as are willing to accept contract practice, at the beginning of each year, or some other convenient period. The Friendly Societies might be the more willing to raise their fees if it gave their members the option of selecting their medical attendant and the present medical officers to the Friendly Societies would gain, inasmuch as, although they might possibly have less members to attend, the increase in fee per member would safeguard them from pecuniary loss.

2. Whilst holding the opinion that contract work which includes women and children is unremunerative and detrimental to the profession, we recognize that there are many people who are unable or unwilling to pay ordinary medical fees. To avoid bad debts and to diminish the clerical work of a practice, it is of advantage to have a local dispensary or provident medical club. This should be managed by the medical men of the locality as a committee. The Eastbourne Provident Medical Association is an excellent example of this and a good model to go upon. No lay control should be encouraged, and the medical men should be the sole judges as to who should be admitted. The fees should be on a slightly higher scale than those of the Friendly Societies. Where such a dispensary or provident medical club exists, no medical man should be connected with any so-called private club, but every medical man practising in the locality should, if he wishes, be on the staff of the dispensary or provident medical club.

3. With regard to collectors, we think they should not be employed either for provident dispensaries or private clubs, but that a secretary should be appointed to receive the weekly or monthly subscriptions at his office. The objections to collectors are that they are always open to a suspicion of canvassing and are apt to encourage contract work to increase their commission, and that they are often prejudiced in favour of one or more medical men.

4. With regard to the National Deposit Friendly Society, we consider the general principles are on the right basis, but that some of the fees, especially the 1s. for intermediate visits and the mileage fee of 6d. beyond two miles, are absurdly low. We recommend that members of this Society (who are often able to pay ordinary fees) should be asked to pay the excess over and above the scheduled fees out of their own pockets. This recognizes the principle that both Society and patient should bear a share of the cost of medical attendance.

5. We suggest that an abstract of this report, if adopted, be sent to the British Medical Journal and the *Lancet*, and that a copy be sent to each member of the General Medical Council, and to every medical man practising in East Kent.

6. We regard it of great importance also that the Council of the British Medical Association be asked to consider the question of drawing up, printing, and circulating a code of ethics for contract practice, and of appointing officials to visit and advise, when requested, localities desirous of adopting combined action as to contract practice.

7. We also think that as a very small proportion of young medical men have, since the abolition of the apprenticeship system, any opportunity of becoming acquainted with the customs and ethics of general medical practice, it is most desirable that the British Medical Association should furnish every newly-qualified man with a copy of such code.

8. That in order to keep up the interest in the subject of contract practice, subscriptions be invited and a permanent committee for East Kent be appointed to carry out the principles brought forward in this report.

(Signed) A. W. Scatliff, Chairman.
William Gosse.
Z. Prentice.
C. M. Vernon.
A. E. Larking, Secretary.

Dr. Dodd proposed and Dr. Evers seconded that the suggestions be discussed seriatim. In the discussion which followed Drs. Frank Wacher, Powell, Halstead, Selby, Raven, Evers, Gosse, Street, Scatliff, Muirhead, Davis, Vernon, Hulke, and others members took part, and Mr. Whitaker kindly gave much information as to the ways contract practice was carried on in other parts of the country, and described how the Great Yarmouth medical men had united to deal with the question in their town and what satisfactory arrangements had been arrived at. He strongly pointed out how much easier it would be under the new regulations for medical men to unite, and how they could now represent their difficulties and views to the Council of the British Medical Associaton who had committees appointed to deal with all such matters for the benefit of the medical profession in different districts and the profession as a whole, and how by the new regulation the profession would be an organized mass of units who had means of making their wishes felt if necessary in Parliament. Mr. Whitaker also gave much information as regards the various points as they came up for discussion.—The report was finally approved with slight alterations. Dr. Street proposed and Dr. Bennett seconded :

That the report be not adopted until every member has a printed copy forwarded to him.

This was not carried.

A vote of thanks was passed to the Contract Practice Committee for their investigations, and the meeting decided that it should carry on its work, with power to add to its number.

Votes of Thanks, etc.—A vote of thanks was passed to Mr. Whitaker for so kindly coming down and helping with his experience in these matters.

A vote of sympathy was now passed with Dr. Raven, who was seriously ill, especially in connexion with his having to resign the secretaryship of East Kent District which he had held for so many years.

A vote of thanks to the Chairman was passed.

DORSET AND WEST HANTS BRANCH.

The annual meeting of this Branch was held at the Queen's Hall, Weymouth, on May 6th, under the presidency of Dr. John Moorhead. There were present sixty other members and visitors.

Vote of Thanks to Retiring President.—A vote of thanks was accorded to the retiring President.

Vote of Condolence.—It was resolved :

That the members of the Dorset and West Hants Branch of the British Medical Association express their sincere sorrow at the loss they have sustained in the death of Dr. Edward Morris Spooner, one of their former Presidents, and desire to convey to Mrs. Spooner and her family their sympathy in their sad bereavement.

Branch Council.—The following gentlemen were elected to fill the vacancies in the Branch Council: Dr. James Davison, Dr. Frank Winson Ramsay, and Dr. Harold Simmons, all of Bournemouth.

Summer Meeting.—It was resolved :

That the summer meeting be held at Swanage on July 22nd, provided the railway service be convenient, but if not, at Ringwood.

Grouping of Branches.—It was resolved :

That this Branch approves of the West Somerset Branch being grouped with the Dorset and West Hants Branch for the purpose of the election of a Member of Council.

Presentation to Dr. Lush.—Dr. William Vawdrey Lush was presented with a handsome service of plate and a clock with cathedral chimes, subscribed for by members of the Branch, "in recognition of his long and valuable services rendered to the Branch as its first Honorary Secretary."

New Rules.—The proposed new Branch rules were considered and, with a few alterations, were adopted.

Luncheon.—Visitors and friends were entertained to luncheon by the Weymouth members before the meeting, and to tea by the President after the meeting.

[The scientific proceedings were reported at p. 1150.]

GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION.

SUMMER SESSION, 1903.

REPORTS OF PROCEEDINGS.

Thursday, May 21st, 1903.

Sir WILLIAM TURNER, K.C.B., President, in the Chair.

THE seventy-sixth session of the General Medical Council commenced on Thursday, May 21st, at the offices of the Council.

NEW MEMBERS.

Dr. John Lindsay Steven (successor to Sir Hector Cameron) and Dr. McCall Anderson (successor to Sir Wm. T. Gairdner) were introduced to the President and took their seats on the Council.

PRESIDENT'S ADDRESS.

The PRESIDENT then read his address.

Date of Meeting.

GENTLEMEN,—Owing to Whit Monday falling this year on June 1st, it was felt by the Executive Committee that if the Council met on the fourth Tuesday in May, the time prescribed by the standing order, it was not likely that our business could be finished before the Whitsuntide recess, and that the Council might have to sit on Whit Monday, which in many respects would be very inconvenient. Thursday, May 21st, was therefore selected as the day of the opening meeting, and, as notice of the change was given a number of weeks ago, I hope that members of the Council have not been incommoded by this alteration of our customary procedure.

Retirements and Appointments.

The Council will hear with regret that owing to failure in health Sir Wm. T. Gairdner, after almost completing ten years' service with us, has found it necessary to resign the representation of the University of Glasgow. The Council has lost a member who showed an earnestness of purpose, a tone of culture and a breadth of thought which gave character to our debates, and who from the esteem in which he was held by his professional brethren was a source of strength to the Council. The University has appointed as his successor Dr. McCall Anderson, the Professor of Medicine, and we give a cordial welcome to him.

I think I ought to read a passage from a letter which he had received from Sir William Gairdner, in which he says:

> It only remains for me to ask you as President to be the means of conveying to my colleagues my deep sense of the kindness and consideration with which I have always been treated as the representative of the University of Glasgow, and my deep regret at the sudden termination of our always pleasant intercourse at the Council Board.

Since the Council met in November last, the period of office of Sir Hector Cameron, the representative of the Faculty of Physicians and Surgeons of Glasgow, has expired. As it was understood that Sir Hector did not seek re-election from the Faculty, Dr. John Lindsay Steven has been appointed as his successor. Sir Hector Cameron has sat on the Council for fifteen years—since 1888—and we cannot part with him as a colleague without expressing our sense of the soundness of his judgement and of the value of the services which he has rendered. We look to Dr. Lindsay Steven to continue the good work which has been so efficiently discharged by the previous representatives of his Faculty.

Inspection of Examination.

The final examinations of all the licensing authorities, with the exception of the Universities in Scotland, have now been inspected, and the reports of the Visitors and Inspector have for the most part been received. The Examination Committee at previous meetings has reported to the Council on the examinations which were amongst the earliest to be inspected, and I have no doubt it will be prepared to submit to the Council during the present session its reports on the inspection of some of those authorities which have not yet been considered by the Council.

Arrangements had been made for the inspection of the final examinations of the Scottish Universities during the summer, and a member of Council had consented to visit, along with the Inspector, each of these universities. About three weeks ago I received intimation that our Inspector was seriously ill, and that his medical adviser had prohibited serious work for some months to come. I wish on behalf of the Council to express deep sympathy with Sir George Duffey in his illness. He has almost completed the last of the three years of the present series of inspections, and the fairness and judgement displayed in his reports, both on this occasion and when he conducted similar inspections some years ago, have gained for him the confidence both of the Council and the bodies that he has inspected. I have to ask the Council to consider the course that should be taken in the circumstances that have arisen. We have, I think, a choice of one of two courses: Either to appoint a new Inspector at the present meeting of Council to attend the final examinations of the Universities in Scotland during the summer—and as the Clinical Examinations of the University of Edinburgh are now in progress the Inspector would require to commence his duties immediately; or, in the expectation that after some months' rest Sir George Duffey may be able to resume his duties and thereby complete the present cycle of inspection, to defer the inspection of the final examinations of the Scottish Universities until next year. Unless the Council has some special objection to this second alternative my feeling is that it is to be preferred, and it would give satisfaction to Sir George Duffey to see that we were willing to afford him an opportunity to regain his strength and to complete the important work in which he has been engaged.

The duty of inspecting the examinations in chemistry, physics, and biology of the English and Scottish Conjoint Boards and the Society of Apothecaries has been discharged by our Inspectors, Dr. Windle and Dr. Campbell Brown, of University College, Liverpool. The inspection of the Conjoint Board in Dublin will take place at the end of June. I have been fortunate in securing the services of the same gentlemen to inspect the examination in Ireland at that date, and the Council, when the series of reports are before them, will, I think, recognize the importance of having all the reports prepared by the same Inspectors and on lines which will admit of a comparison being instituted between them.

Finance.

The Council will recollect that at the last meeting a report was presented by the Financial Relations Committee accompanied by a draft Bill to amend the Medical Acts, one of the objects of which was, by raising the fee payable on registration to a sum not exceeding £10, to augment the income of the Council so as to make it sufficient to meet the increase in its expenditure. On December 2nd the Council resolved to refer the report and draft Bill back to the Committee for further consideration, and members of Council were invited to make suggestions in regard to "economies in expenditure." Many suggestions have been received, which have been grouped and summarized by our Registrar and circulated amongst members of Council. These will have to be considered by the Financial Relations Committee and reported on to the Council.

I may recall to the Council that in a paragraph in the report of the Financial Relations Committee (Minutes, November 29th, 1902, p. 137) it was stated that I had suggested that a memorial should be framed for presentation to the Privy Council in explanation of the condition of our finances. A memorandum on this subject which may serve as the basis of a memorial has been prepared and circulated amongst members of the Council, and I propose to ask you to consider it before the close of the meeting.

Canadian Medical Act.

In my address at the commencement of last session I called attention to the Medical Act, 1902, passed by the Canadian Legislature, and approved by the King, under which a Medical Council of Canada was constituted. Power was given to establish a Register of Medical Practitioners in Canada, and to provide them with the status required for the establishment of reciprocal relations between the Dominion of Canada and the United Kingdom, such as on the one hand would enable practitioners with recognized Canadian diplomas to acquire the right of registration under our home Medical Acts, and on the other would enable practitioners registered under these Acts to be admitted to the Canadian Register.

In order to bring the Canada Medical Act into operation and to enable the Canadian practitioners to obtain the benefit of Part II. of the Medical Act, 1886, it is necessary *inter alia* that the Provincial Legislatures in Canada should renounce their present right of independent registration, and consent

to the formation of a Register for the whole Dominion. From information which I have received it seems that at least one of the provinces is not prepared to adopt this course, and so long as this attitude is maintained the whole Dominion of Canada will, under the present law, be excluded from the provisions of Part II. of the Act of 1886. It is much to be regretted that local influences should have interfered with the adoption of the Act throughout the Dominion, for as by Section xxxvi of the Medical Act, 1858, no person can hold any appointment as a physician, surgeon, or other medical officer in the military or naval service of the Crown, or fill certain civil appointments, unless he is on the *Register* of the United Kingdom, Canadian practitioners will therefore continue to labour under their present disability.

Seeing that practitioners who possess diplomas granted in New Zealand and in three of the States of Australia, the Universities in which confer medical degrees, are admitted to the *Medical Register* of the United Kingdom and are thereby qualified to hold office in the public service, it is a matter for consideration whether something should not be done to put our Canadian brethren on an equal footing. Legislation to accomplish this purpose would not be complicated in its character. Sections XVII and XXVII of the Medical Act, 1886, Part II. might be so modified as to enable His Majesty, by Order in Council, to declare that when a British possession is under both a central and a provincial or local Legislature, this part of the Act might apply to any province which, in the opinion of His Majesty, affords to the registered medical practitioners of the United Kingdom such privileges of practising as to His Majesty may seem just. A modification of the Medical Act in this direction is to be preferred to the proposal originally made by General Laurie in a Bill of last year again before Parliament, by which colonial practitioners would be admitted to our home *Register* without a corresponding equivalent being granted in the colony. But a second Bill, also introduced by General Laurie, provides the necessary modification should the Canadian Medical Act, 1902, not become operative. It would also, I think, in course of time bring all the provinces in a British possession into line, as any province which might at first be disinclined to concur would, before long, find that the medical practitioners within its area were placed at a disadvantage compared with those practising in adjoining provinces.

Legislation.

The Bill prepared a few years ago at the request of the Council for amending the penal and disciplinary powers of the Council and the licensing bodies has been introduced into the House of Commons by our colleague Sir John Batty Tuke, and read a first time. Its place as determined by the ballot is low down on the list, and unless something unexpected arises to improve its position and to remove an opposition threatened by some members of the House of Commons, it is doubtful if it can make further progress during the present session.

Index to Minutes.

Mr. Norman King, one of the clerks in the office, has very usefully occupied his leisure by compiling on his own initiative an analytical index of the contents of our minutes from the year 1886 to 1902. Along with the index volume published in 1888, the Council will now have the means of referring to the subjects which have been under its consideration from its foundation in 1858, without the loss of time entailed in consulting the indices in the separate volumes. The Executive Committee has framed a resolution on the matter which will be submitted to the Council by the Chairman of the Business Committee.

Disciplinary Cases.

The disciplinary cases to be brought before you during the session are unusually numerous, and some of the offences alleged to have been committed are of a nature which seriously affect the character of the accused practitioners.

BUSINESS COMMITTEE.

Dr. MCVAIL moved, Mr. BROWN seconded, and it was carried that Dr. MacAlister, Mr. Bryant, Dr. Bruce, and Sir Christopher Nixon should be the Business Committee.

Dr. MACALISTER moved, Mr. BRYANT seconded, and it was agreed that the Council should rise at four o'clock to enable certain Committees to meet for the completion of their reports.

THE CONJOINT BOARD IN ENGLAND.

Sir VICTOR HORSLEY inquired why the customary practice had not been followed in the case of the report by the Visitors of the Examination in Chemistry, Physics, and Biology of the Conjoint Examining Board. He understood the practice was for the Chairman of the Examination Committee to draw up a draft report and send it round to members of the Examination Committee for their consideration.

The PRESIDENT said that the Examination Committee would have to report on the report.

Sir VICTOR HORSLEY asked if the Council would have the Committee's report on the comments of the bodies and their report before them during the present session.

The PRESIDENT replied that he hoped so.

Sir VICTOR HORSLEY asked the Chairman why the usual course had not been followed.

Mr. BRYANT replied that the Examination Committee had not met to consider the point. As Chairman of the Committee he had a very vivid recollection of what passed at the last meeting of the Council. It was then thoroughly understood that there would be no such report until all the other institutions had been visited, the reports handed in, and then the matter should be considered as a whole.

Sir VICTOR HORSLEY replied that there was no such bargain. In the ordinary course of business Mr. BRYANT should have circulated the draft report among the members of the Committee. He did not think that Mr. Bryant's explanation was at all satisfactory.

STATISTICS OF EXAMINATIONS.

The Committee then received the following yearly tables for 1902:

CONJOINT EXAMINING BOARDS.

	England.		Scotland.		Ireland.*	
	Rejected.	Passed.	Rejected.	Passed.	Rejected.	Passed.
First Examination ...	90	175	68	59	70	82
Second Examination ...	139	298	78	95	43	85
Third Examination ...	—	—	69	86	59	45
Final Examination ...	289	495	176	176	43	63

* Candidates who presented themselves in all the subjects, but who omitted some, are included in above; but the results of Part I of the Second Examination under the new regulations are not included.

APOTHECARIES.

The Apothecaries Society of London.—Eighteen out of 38 candidates were rejected at the First Examination (biology, chemistry, and materia medica) and 36 out of 71 at the Second Examination (anatomy and physiology). At the Final Examination of 165 candidates in surgery 64 were rejected, and of 251 candidates in medicine 122. The number of diplomas granted by the Society was 76.

The Apothecaries Hall of Ireland appears to have given its licence under the new conditions to 2 persons and to have rejected 4 at the Final Examination. It appears to have given its licence under the old conditions to 5 persons, all of whom were already on the *Register*.

UNIVERSITIES.

The following statistics, extracted from Table (*a*), give the number of rejected and successful candidates at the Final Examination or examinations for the Bachelor's degrees in Medicine and Surgery:

	Rejected.	Passed.
English Universities.		
Oxford, M.B., B.Ch.	15	12
Cambridge, M.B., B.C. Part I old regulations	53	40
Part I new ,,	11	100
Part II old ,,	14	43
Part II new ,,	67	49
Durham M.B.	10	36
Durham B.S.	3	35
London M.B.	92	100
London B.S.	26	56
Victoria, M.B., Ch.B. Part I	33	78
Victoria, M.B., Ch.B. Part II	42	43
Birmingham, M.B., Ch.B.	10	8*
Scottish Universities.		
Edinburgh M.B., C.M. (old)	6	7
Edinburgh M.B., Ch.B. (new)	46	179
Aberdeen, M.B., Ch.B. (new) Third examination ...	5	43
Aberdeen, M.B., Ch.B. (new) Final ,, ...	20	37
Glasgow M.B., C.M.	2	1
Glasgow M.B., Ch.B.	27	80
Irish Universities.		
Dublin, M.B., B.Ch., B.A.O.	13	40†
Royal, of Ireland, M.B., B.Ch., B.A.O.	30	40

* Qualified men admitted to final examination under special ordinance.
† Approximations only; exemptions not included.

Table (*b*) shows the results of examinations for qualifications in Sanitary Science, Public Health, or State Medicine.

	First Examination.		Final Examination.	
	Rejected.	Passed.	Rejected.	Passed.
Conjoint Board, England	0	31	11	30
,, ,, Scotland	7	18	4	20
,, ,, Ireland	0	26	3	25
University of Oxford	0	7	3	4
,, Cambridge	11	60	18	53
,, Durham (B Hy.)	1	4	—	2
,, (D.P.H.)	3	4	2	3
Victoria University	2	2	0	2
University of Edinburgh (B.Sc.) ..	2	5	2	4
,, Aberdeen	0	5	0	5
,, St. Andrews	—	1	—	2
University of Dublin	2	3	0	2

The University of Glasgow held no examination during 1902. There were no candidates in 1902 at the examination of the Royal University of Ireland. The University of London granted the degree of M.D. (State Medicine) to 3 candidates.

Table (*c*) shows the results of examinations held for qualifications under the Dentists Act.

Table (*d*), showing results of preliminary examinations in 1901. This table is designed to show the name of the examining body and of the examination, the highest percentage of marks obtained by any candidate, the lowest percentage obtained by any candidate who passed, the total number of candidates who passed or did not pass, and the percentage of rejections, and whether examination paper had been sent. The information under the head of percentage of marks is very fragmentary, and is not here reproduced, and the statistics of the principal examinations only are here given; the examination papers were sent in all cases.

	No. of Candidates.		Percentage of Rejections.
	Passed.	Rejected.	
University of Oxford :			
Junior Local Examination	3,593	1,722	32.4
Senior Local Examination	1,326	774	36.8
University of Cambridge :			
Junior Local Examination	5,596	2,649	32.1
Senior Local Examination	1,768	647	26.8
Oxford and Cambridge Schools Examination :			
Higher Certificate	1,127	636	36.1
Lower Certificate	586	504	46.2
University of Durham :			
Certificate of Proficiency Examination	10	20	66.6
University of London :			
Matriculation Examination	2,403	2,647	52.4
Victoria University :			
Preliminary Examination	415	418	50.2
University of Birmingham :			
Matriculation Examination	56	87	.
University of Wales :			
Matriculation Examination	—	—	—
University of Edinburgh :			
Medical Preliminary Examination ...	142	204	.0
University of Aberdeen :			
Medical Preliminary Examination ...	52	62	54.3
University of Glasgow :			
Medical Preliminary Examination ..	93	193	67.4
University of St Andrews :			
Medical Preliminary Examination ..	18	9	42.7
University of Dublin :			
Public Entrance Examination	—	—	—
Royal University of Ireland :			
Matriculation Examination	680	405	37.3
Royal Colleges of Physicians and Surgeons in Ireland	48		40.0
College of Preceptors :			
Examination for First Class Certificate	108	294	73.1
Educational Institute of Scotland	148	155	51.1
Inter. Education Board of Ireland :			
Junior Grade Examination	—	—	—
Middle Grade Examination	742	408	35.5
Senior Grade Examination	374	82	17.9
Central Welsh Board :			
Senior Certificate Examination... ...	441	243	43.7

Table (*e*) gave the statements of the medical authorities as to exemptions granted by them in any part of their examinations during 1902.

No Exemptions.

The "Summary of Answers" states that the following bodies granted no exemptions during 1902 :

The Royal College of Physicians of London (so far as the examinations for the Membership and independent licence were concerned).
The Royal College of Surgeons of England (so far as the examinations for the separate Membership were concerned).
The University of Oxford.
The University of Cambridge.
The University of Durham.
The University of London.
The Victoria University.
The Royal College of Physicians of Edinburgh.*
The Faculty of Physicians and Surgeons of Glasgow.*
The University of Aberdeen.
The University of Glasgow.
The University of St. Andrews.
The Royal College of Physicians of Ireland.*
The Royal College of Surgeons in Ireland.*
The Royal University of Ireland.

* So far as the single licences of these Colleges were concerned.

The *University of Birmingham* granted 8 exemptions at their First Examination, 1 at their Second, and 1 at their Third. Six of the exemptions at the First Examination were granted to students of the University of London, all the remaining students being from the University of Durham.

The *Scottish Conjoint Board* exempted 78 persons from the entire First Examination, 64 from the entire Second Examination, and 31 from the entire Third Examination, besides several exemptions from parts of these examinations. There were no exemptions from any part of the Final Examination.

The *University of Edinburgh* only grants exemptions in the subjects of the First Professional Examination—namely, Botany, Chemistry, Physics, and Zoology, and only under certain specified conditions. During the year 1902 exemptions were granted to 10 candidates.

The *Irish Conjoint Board* granted certain exemptions to 6 candidates during 1902.

The *Apothecaries' Hall, Dublin*, granted to 1 candidate exemption from Surgery at the Final Examination on the ground of his having passed in that subject at the Royal College of Surgeons of England.

The *University of Dublin* exempted 3 candidates from the written parts of the M.B. Examination on the ground of their being over five years registered.

Conjoint Board in England.

The statistics of exemptions submitted by this Board are shown in the following table :

Students from Universities of	Exempted First and Second Examinations during the Year 1902.	Exempted from Entire First Examinations.	Exempted from Chemistry only.	Exempted from Biology only.
London	77	62	2	8
Cambridge	62	15	—	4
Oxford	17	3	—	—
Durham	11	—	—	—
Victoria	12	3	—	1
Birmingham	—	—	—	1
Edinburgh	4	1	—	—
Aberdeen	1	—	—	—
St. Andrews	1	—	—	—
Dublin (Royal University)..	2	1	—	—
New Zealand	9	3	—	2
Melbourne	1	—	—	—
Toronto	16	—	—	—
Toronto (Trinity) ..	1	—	—	—
McGill College (Montreal)..	7	—	—	—
Kingston (Queen's) ...	2	—	—	—
Bishop's College (Montreal)	1	—	—	—
Dalhousie	1	—	—	—
Manitoba	2	—	—	—
Laval	1	—	—	—
Madras...	1	3	—	—
North-Western (Chicago) ..	1	—	—	—
Harvard	2	—	—	—
Michigan	1	—	—	—
Rostock	1	—	—	—
Vienna	1	—	—	—
Berlin	1	—	—	—
Leipzig...	1	—	—	—
Freiburg	1	—	—	—
Geneva...	1	—	—	—
Athens...	1	—	—	—
Bombay	—	4	—	—
Lausanne	—	1	—	—
Costa Rica	—	1	—	—
	242	92	2	16

Conjoint Board in Scotland.

The following is a summary of the exemptions:

First Examination:	
The entire examination	78
Chemistry only	4
Physics only	8
Elementary biology only	5
Second Examination:	
The entire examination	64
Anatomy only	3
Physiology only	4
Materia medica only	6
Third Examination:	
The entire examination	31
Pathology only	—
Materia medica only	30
Total exemptions from entire examinations	173

These exemptions were granted to students from British or foreign corporations, colleges or universities. The largest number of exemptions from entire examinations granted to the students of any one body was to those of the Society of Apothecaries of London (28).

Conjoint Board in Ireland.

This Board exempted 6 candidates from examination in certain subjects. In one 3 candidates had passed in these subjects at the Royal University of Ireland, and the other at the Jefferson College, Philadelphia, McGill University, Montreal, and the University of Seville respectively.

Society of Apothecaries of London.

This Society does not grant exemptions from any part of the Final Examination. The subjoined list shows the number of candidates admitted to the Final Examination during the year 1902 who were exempted at the Primary Examination from one or more subjects in which they had already satisfied the following Examining Bodies, being either British Medical Corporations or British, Canadian, or foreign Universites:

Conjoint Board in England	57
University of London	15
University of Oxford	4
University of Cambridge	6
University of Victoria	3
University of Durham	1
University of Edinburgh	1
Triple Board Edinburgh	1
Apothecaries' Hall, Dublin	1
Pharmaceutical Society, London	1
University of McGill	1
University of Toronto	1
University of Calcutta	1
University of France, Paris	2
University of Berlin	1
University of Athens	1
University of Rostock	1
College of Physicians and Surgeons, New York	1

(*f*) Table showing Results of Competition held on November 17, 1902, for Commissions in the Medical Staff of the Royal Navy:

(*g*) Table showing Results of Competition held in January, 1903, for Commissions in the Indian Medical Service.

Dr. MacAlister moved that the tables be received and entered on the minutes. He called special attention to one point. The Irish Conjoint Board had sent particulars of exemption granted to six candidates during the year 1902. It was stated "one candidate was exempted from surgery at the final examination of the Apothecaries' Hall, Dublin, in July, 1902, on the ground of his having passed in that subject at the Royal College of Surgeons of England." In a letter which had been received from the Apothecaries' Hall, Dublin, it was stated that this case was an exceptional one, the candidate having been examined and passed in surgery in the Royal College of Surgeons of England, he consequently was admitted to examination in his other final subjects. He wished to call special attention to this matter, because in his own university and elsewhere special pains had been taken to ensure that the final examination should be held by one body and embrace all three subjects. That was the opinion expressed by Mr. Muir Mackenzie in 1890.

Mr. Brown inquired what action the Council proposed to take in the matter.

The President thought that perhaps Mr. Tichborne would like to make a statement.

Mr. Tichborne said that the candidate produced a certificate from the Registrar of the College of Surgeons of England, and through inadvertence the candidate had allowed the time to pass when he could have registered on that qualification.

After some further discussion it was arranged that the name of the candidate should be given privately to the President, and he would then inform the Council what the candidate's qualifications were.

Dr. MacAlister's motion was then agreed to.

In reply to Sir Victor Horsley, Dr. MacAlister stated that no returns had been received from the Army.

Sir Victor Horsley drew attention to the extraordinary discrepancies between the percentages of rejection in the different examinations.

Dr. Heron Watson moved, Dr. McVail seconded, and it was carried

That the thanks of the Council be conveyed to the Director-General of the Medical Department of the Royal Navy, and to the Under-Secretary of State for India, respectively, for the returns which they have respectively again furnished to the Council, with the request that these returns may in the future continue to be furnished to the General Medical Council.

Income of the General Medical Council.

The President stated that with the very valuable assistance of the Registrar (Mr. Allen) he had prepared a memorandum on the present inadequacy of the income of the General Medical Council for presentation to the Lord President of the Privy Council. The memorandum had been before the members of Council, and therefore he did not propose to read it, but the question naturally arose as to what was to be done with it

Memorandum on the Present Inadequacy of the Income of the Medical Council submitted by the President for the Consideration of the Council.

It is submitted for consideration that since the establishment of the Medical Council in 1858 the conditions under which its duties to the State, the public, and the medical profession are discharged have become materially changed.

The Legislature in 1858 had within its purview the discharge by the Council of certain functions that were comparatively limited in their scope, and it apportioned for its maintenance a source of revenue which was then adequate. The Act gave power to the Council to exact a fee not exceeding £5 from all medical practitioners who should be entered on the *Medical Register* after January 1, 1859, but under altered conditions this source of revenue is no longer sufficient.

The size of the Council has been increased and the range of its duties has been extended.

By the Act of 1858 the Council was made to consist of twenty-four members, including the President. By the Act of 1886 eight members were added, viz., five elected by the profession in the three divisions of the United Kingdom, two additional by the Scottish Universities, so that each university might have separate representation, and one by the Victoria University. As, however, it was enacted at the same time that the Crown should in future be represented by five members instead of six, and the President be selected from among the members of the Council, the net increase was reduced to six. By a more recent Act, which gave a member to the University of Birmingham, this increase was raised to seven, while the contemplated establishment of additional universities at Liverpool and Leeds renders it possible that two more members will be given seats, and the size of the Council increased from its present thirty-one to thirty-three, as against its original number of twenty-four.

The extension in the Council's duties is quite as noteworthy as that of its membership.

Under the Act of 1858 power was given to visit the examinations of the various licensing bodies, and this was exercised to a considerable extent, but the Act of 1886 added to the existing power of visitation that of inspection. To ensure the efficiency of the qualifying examinations in medicine, surgery, and midwifery inspection was raised into a paramount duty, the due discharge of which has called for the constant consideration of the Council. The salary of a regular Inspector has to be provided, and although the members of the Council who are associated with him in his work as Visitors do not receive fees and are only repaid their actual outlays, the duration of the sittings of the Council, and consequently its expenses, are increased from the time which has to be given to the consideration of the reports of the Inspector and Visitors.

The supervision of education in the subjects of public health and the control of the examinations for diplomas qualifying for practice as medical officers of health were fresh duties assigned to the Council by the Act of 1886. Much time has had to be devoted to the consideration of these subjects, and a separate system of inspection has been established in connexion with them.

The practice has also become more frequent of late years for the Government Departments to refer to the Council for its advice on various questions bearing on the relations of the medical profession to the public. The professional knowledge of the Council has always been gladly placed at the disposal of the Government, but attention cannot be given to a variety

of subjects without the expenses of the Council being materially increased through the time expended in their consideration and the charge incurred in printing. As an illustration it may be mentioned that in 1898 a special session of two days, costing £642, was necessary for the consideration of the Midwives Registration Bill referred to the Medical Council by the Lord President of the Privy Council, in addition to which much time had to be devoted to proposed legislation on the subject during several previous years, and subsequently until the passing of the Midwives Act in 1902.

In 1878 fresh duties devolved on the Council in consequence of the administration of the Dentists Act being entrusted to it, and additional work requiring the expenditure of much thought and time had to be undertaken. No burden of a financial character was, however, placed on the Council by this legislation, as separate funds were allotted for the carrying out of these new duties. All expenses arising from this branch of its work have therefore been eliminated as far as possible from the calculations that follow.

As the result of this extension of the Council's duties, it necessarily follows that its sessions have been lengthened and multiplied. If the period before the passing of the Dentists Act of 1878 and the one subsequent to it be compared, this at once becomes apparent. Taking the former period of twenty years, from 1858 to 1877, there were only four occasions in which it was found necessary for more than one session to be held during the year, and the annual average number of days occupied with business was nine and two-fifths; during the latter period of twenty-five years, from 1878 to 1902, there were only three years in which it was not necessary to hold at least two sessions, and the annual average number of days occupied was thirteen, giving an annual increase of three and three-fifths days.

The financial results of the extension of the Council, both in its size and in the range of its duties, may now be considered. To institute a comparison between the expense incurred in the period before fresh legislation and that subsequent to it, two decades have been taken, namely, that immediately preceding the passing the Dentists Act in 1878, namely, from 1869 to 1878, and that terminating last year, namely, from 1893 to 1902.

During these respective decades the annual average expenditure for certain items was as follows:

	Fees and expenses for the attendance of Members.	Printing.	Law expenses.	Election expenses.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1869—1878	1,931 5 3	762 6 6	54 4 11	—
1893—1902	3,374 3 4	1,194 5 4	666 5 4	185 19 0 From 1886-1902
Showing an average annual increase of..	1,442 18 1	431 18 10	612 0 5	185 19 0

The cause of the increase in the fees to members has been sufficiently indicated to be the increase in the number of members, and not any addition to the fee sanctioned by the Act of 1858 to be paid with the approval of the Treasury to individual members.

The increase in the item of printing expenses has followed inevitably from the extended nature of the Council's work and in part also from the constantly increasing size of the Registers that are to be maintained and published.

The very noticeable increase in legal expenses shown in the above table requires the explanation that up to 1886 the Council did not regard itself as a prosecuting body, and the disciplinary sections of the Act were only occasionally brought into operation. Such legal expenses as had been up to that time incurred had been mostly in connexion with questions of education and registration.

The widespread evils to the public resulting from unqualified practice—evils encouraged largely by the at that time prevalent employment by registered medical practitioners of unqualified assistants—then demanded attention, and large sums have since that date been paid in legal expenses for the public benefit in successfully lessening such of those dangers as arose from the wrong conduct of members of the profession. Although the improper practice of employing unqualified assistants has been largely put a stop to, other forms of professional misconduct have arisen, which have called for the attention of the Council, and there is no prospect of a cessation of expenditure in connexion with the exercise of its disciplinary functions.

An altogether new expense was introduced in 1886 by the principle of direct representation, which necessitated the holding of elections. It was contemplated, no doubt, by the Legislature that these would recur only once in five years, but owing to the vacancies occurring at intervening times caused by death or resignation, six elections have been necessary up to the present date, involving altogether an expenditure of £3,161 3s. 11d., or £185 19s. per year, if spread over the whole period as an annual charge.

Under the head of general expenditure no increase in the expenditure of the Council that is worth taking into consideration has been incurred; the staff has not been increased for the last twenty-five years, and the salaries at the present time are no larger than were paid in 1885.

Bringing together the foregoing figures, the total average increase of expenditure over that which was sufficient twenty-nine years ago is £2,672 16s. 4d. per annum, and the position of the Council is rendered worse by the fact that its income is not growing. Practically the income of the Council and its Branches is derived from registration fees. Owing to the efforts that the Council has made during recent years to benefit the public by improving medical education, and by materially raising the standard of examination both in general and professional subjects, the number of persons entering the profession and the fees for registration paid by them have not increased. If we take the last two periods of ten years, namely, from 1883 to 1892, and from 1893 to 1902, while 13,644 practitioners were registered in the first period, only 13,565 were registered in the latter period, a decrease of 79. The income, therefore, from fees, so far from increasing, is somewhat diminished, and is not likely to rise in the near future, seeing that there has been a fall annually in the number of medical students for some years past. The average number of students entering during the period from 1879 to 1893 was 1,708, but owing to the higher standard demanded and the increased length of a medical course the average number entering during the period 1898 to 1902 was only 1,552, an average decrease of 156 a year.

The foregoing facts show that the financial position of the Council and its Branches is extremely unsatisfactory. There is still a balance of funds in hand, for during the first few years after the system of registration was introduced a large sum was received in fees and put aside as surplus income. Out of this fund the Council has purchased the freehold of its premises and adapted them to its use by an outlay of £25,670, and it has remaining in the hands of the Branch Councils of England and Scotland the sum of £15,466 1s. 2d. in Consols; but if the present state of things continues this reserve fund must before long be exhausted. Up to the year 1895 the Council's annual income was, with few exceptions, sufficient; since that year a regular deficiency has been annually disclosed as follows:

	£ s. d.
1896	683 4 9
1897	1,538 0 8
1898	2,358 11 11
1899	1,573 14 5
1900	1,037 11 1
1901	1,508 12 0
1902	1,332 18 1
	£10,033 1 11

Annual average deficit = £1,433 5s. 11d.

The Council would desire to emphasize the before-stated causes that have brought about this unsatisfactory financial position. By the action of Parliament in adding to this number of its members without at the same time providing for an addition to its income, and by the increase of its duties causing a necessary prolongation of the sessions, the Council is rapidly expending the savings of its early years, and unless other sources of income are provided it will soon not be able to meet the annual expenditure.

It is strongly urged that the efficiency of a body established to perform important services to the public should not be impaired by subsequent legislation superimposing, without corresponding increase of income, duties of a costly nature which were not foreseen when its source of income was first fixed, and fixed in such a way that in proportion as the Council does its duty in securing by education and examination

a highly trained class of practitioners to serve the public and the State, it lessens its source of revenue.

It would not be for the welfare of the community that the long exerted efforts of the Council to promote the efficiency of the profession should be relaxed, nor would it be desirable that its vigilance should be less exercised in the discipline of the profession however costly this work may be.

A jurisdiction somewhat analogous to that of the Medical Council is exercised over the lower branch of the legal profession by the Incorporated Law Society, which superintends legal education and administers discipline. Its income is derived from fees which, though small, amount in the aggregate to a larger sum than is at the disposal of the Medical Council, but it has been recognized by the Government that it should be assisted in the discharge of its disciplinary functions, and the Treasury of late has made an annual grant in aid for this purpose.

It is suggested that were a similar grant made to the Medical Council, sufficient to defray the expenses of this branch of its work, its financial position would be assured. During the last few years the disciplinary business of the Council has cost annually some £1,479 (made up of increased length and cost of sessions £929, legal expenses £500, and printing £50). Were the Council relieved of this charge, the expenses attending the exercise of its other functions could be defrayed out of its present income mainly derived from registration fees.

Sir CHRISTOPHER NIXON moved that the memorandum be referred to the Financial Relations Committee for consideration and report, in order to economize the time of the Council and in order to save a double discussion.

Dr. MCVAIL seconded, and the motion was carried.

The Council then went into camera and adjourned at four o'clock.

Friday, May 22nd, 1903.

Sir WM. TURNER, K.C.B., President, in the Chair.

The minutes of the previous day's proceedings were read, and as amended in camera confirmed.

THE DENTISTS' REGISTER.

Mr. TOMES said that his attention had been called by the British Dental Association to alleged inaccuracies in the *Dentists' Register*. It was stated that many persons who had qualified had not registered, and that a number of names once on the *Register* had gone off though the persons were still at the same addresses. The first of these matters was clearly not within the control of the Registrar. But it was further stated that the names of a considerable number of dead persons still remained on the *Register*, and it was suggested that this must be due to many of these being persons regarded by the registrars of death as chemists rather than dentists, so that death certificates did not reach the office. Without in any way implying censure upon the office he wished to afford the Registrar an opportunity of making a public statement as to the means employed to preserve the purity of the *Register*. It was obvious that the retention of the names of persons dead offered opportunities of personation.

The REGISTRAR explained that even in the first matter something was done by sending to all newly qualified persons a notice setting forth the advantages of and the necessity for registration. As to the second, it was wholly due to the negligence of registered persons who omitted to respond even to a registered letter sent to their address and known to have been delivered by its not being returned; this was always a second or third communication, and when no answer could be elicited the names were removed under Section XII. With regard to the removal of names of dead persons the office by no means confined itself to the removal of names furnished by the registrars of deaths, but made use of any and all available sources of information, such as lists kindly furnished by the dental dépôts, Messrs. Ash, and Messrs. Rutherford, and by private persons. He would gladly adopt Mr. Tomes's suggestion that the Registrar of the Pharmaceutical Society should be asked to furnish a list of names removed each year on account of death, and make use of any other sources of information which could be obtained or suggested.

Mr. TOMES stated that he was perfectly satisfied with the Registrar's explanation, and that it was not necessary to conclude with any motion.

THE APOTHECARIES' SOCIETY OF LONDON.

Sir HUGH BEEVOR moved, Mr. BRYANT seconded, and it was carried

That Mr. Peyton Todd Beale, F.R.C.S., be appointed an Assistant Examiner in Surgery to the Apothecaries' Society of London for a period of four years vice Mr. C. Stonham, F.R.C.S., who retires by rotation.

THE INSPECTOR OF EXAMINATIONS.

Dr. MACALISTER moved

That in consequence of the illness of Sir George Duffey, the Council's Inspector of Final Examinations, the inspection of the examinations of the Scottish Universities be postponed till next year.

He brought forward that motion in accordance with a suggestion which was made by the President in his opening address. There was no great hurry in regard to the Scottish Universities, and he thought the least the Council could do was to give Sir George Duffey the opportunity of continuing the series of inspections if it were possible for him to do so.

Dr. NORMAN MOORE seconded the motion, which was supported by Sir CHARLES BALL and Dr. BRUCE, and carried unanimously.

Dr. MACALISTER then brought forward the report of the Executive Committee in regard to a suggested change in the standing orders, and moved that the report be received and entered on the minutes. The report was as follows:

The Executive Committee have considered the following motion, which on December 2nd, 1902, was referred to them by the General Council with a request that they should consult the legal advisers of the Council on the subject:

That in the Standing Orders for the restoration of a name to the *Medical Register*, Chap. XVII. Clause 2, Sub-clauses 3, 4, and 5, the words "Penal Cases Committee" be substituted for the words "Executive Committee."

The Executive Committee having consulted Mr. Muir Mackenzie on the subject of the motion are advised that, having regard to the special function of the Penal Cases Committee, as defined by Chapter IX Section 5 of the Standing Orders, and to the powers of the Executive Committee under the Medical Acts, applications for restoration after penal erasure are most appropriately dealt with by the latter Committee. The Executive Committee are therefore not prepared to recommend that the proposed change should be made in the Standing Orders.

Mr. BRYANT seconded the resolution, which was carried.

DENTAL BUSINESS.

Dr. MACALISTER moved that a report from the Executive Committee on the dental business transacted by it since the last session of the Council be received and entered on the minutes. This was seconded by Mr. BRYANT.

In reply to Sir VICTOR HORSLEY, Dr. MACALISTER stated that the minutes of the Executive Committee would contain full information as to the decisions of the Committee in regard to the matters referred to in paragraphs 6 and 8. The report as amended at the instance of Sir William Thomson, was as follows:

Report.

1. The prescribed conditions having been duly fulfilled in each case [certain] names were restored to the *Dentists' Register*, from which they had been erased in conformity with the provisions of Section XII of the Dentists Act, 1878.

2. A question was considered by the Committee from a medical practitioner respecting the position of practitioners in regard to the administration of anaesthetics for registered dentists acting for dental companies, and they answered the inquiry by stating that the only answer they could give was to call his attention to the resolution of the Council in regard to the administration of anaesthetics.

3. The Committee received from the Colonial Office an Act relating to the practice of dentistry in South Australia, and referred it to the Dental Education and Examination Committee for their information.

4. A communication was also received from the Colonial Office seeking information as to the position of British dentists in Germany, and the Committee replied that:

"Inasmuch as under the Dentists Act no provision is made for the establishment of reciprocal relations with foreign countries, the Council has had no occasion to inquire into the privileges (if any) accorded to British dentists in Germany. German dental qualifications are not recognized as conferring any rights in this country.

"The Committee would be obliged to receive from the Colonial Office any information on the subject which may be obtained through the Foreign Office."

5. The Committee further received from the Colonial Office an Act to provide for the Registration of Dentists to practise in Queensland, and referred it to the Dental Education and Examination Committee for their information.

6. They considered a complaint from a medical practitioner in regard to continued dental advertising by a registered dental student.

7. They considered also an application made on behalf of a Canadian dentist for registration in the *Dentists' Register*, and referred the matter to the Dental Education and Examination Committee for consideration and report.

8. The Committee have also had under their consideration an application for registration under Section XXXVII of the Dentists Act by a dentist who was a pupil at the time of the passing of the Act.

THE PRELIMINARY EXAMINATION OF THE CONJOINT BOARD IN ENGLAND.

The PRESIDENT then called attention to a notice of motion which stood in Sir Victor Horsley's name, and inquired what he proposed to do in the matter. The notice of motion was

To call attention to the report by the Visitors of the Examination in Chemistry, Physics, and Biology of the Conjoint Examining Board in England, of the Royal College of Physicians of London and the Royal College of Surgeons of England, together with the remarks by the bodies inspected, and to move a motion thereon.

Sir VICTOR HORSLEY was under the hope that Mr. Bryant would do his duty and promptly report on the report of the Visitors of the Examination in Chemistry, Physics, and Biology of the Conjoint Examining Board in England and the comments of the Examining Bodies. He would like to know from Mr. Bryant whether he was or was not going to report before he proceeded with his motion.

The PRESIDENT stated that a report had been laid on his table that morning by the Visitor and Inspector of Examinations of the Apothecaries' Society of London, together with the remarks of that body.

Mr. BRYANT said that the Examination Committee had considered the question on the previous day without coming to any definite conclusion. They had not prepared a report to present to the Council, but if the Council was desirous that some report should be brought forward, then unquestionably they could manage to do so. At the same time, speaking for the Examination Committee, he was asked to bring before the Council the question whether it really wished for a report. They were prepared to consider some draft report which might be printed. He had undertaken to do that, and he would do so now, but he reminded the Council that last session, when the question came up, he proposed the appointment of two Inspectors and gave reasons. The two Inspectors stated that they had not been able to compare the examinations with any others of the same class. The Committee understood that the report of the Apothecaries Hall was complete on two subjects, and also that the two Inspectors had already visited the Scottish institutions. It seemed to him that as these Inspectors thought that they must take an ideal standard it would be more satisfactory now that they had had more information if the Inspectors reported on the other bodies they had already visited. As the Irish body would be inspected in June he proposed that the two Inspectors should be instructed to report to them on the four Colleges which they had inspected. He therefore proposed:

That the report in question be referred back to the Visitors for further consideration and report in view of the fact that subsequent to the date of this report the Visitors have had the opportunity of comparing this examination with others of its own class.

Sir VICTOR HORSLEY pointed out that he had not yet received an answer from Mr. Bryant.

The PRESIDENT though that Mr. Bryant had indicated that the Committee had not come to a conclusion.

Mr. BRYANT replied that the Committee was willing to report if the Council wished it.

Sir VICTOR HORSLEY said that was not an answer to his question.

Sir WILLIAM THOMSON submitted that Mr. Bryant's motion was not in order. Sir Victor Horsley had asked for certain information, but had not got an answer to his question. The Council should know what Mr. Bryant's answer was to the definite question put to him.

Mr. BRYANT said that he did answer the question, although not directly. He had said that the Examination Committee had not prepared a report on the paper in question, but was willing to give a report if it was the express wish of the Council.

Sir VICTOR HORSLEY again pointed out that was not an answer to his question. The standing orders provided that these reports should go the Examination Committee and the Examination Committee should report to the Council. That was the usual procedure, but Mr. Bryant, instead of adopting that course, had taken upon himself not to compose the report for his Examination Committee for presentation before the Council. Having done that, he had put the Council in an entirely false position. He wished to know finally, as the Committee had met on the previous day, whether or not a report was going to be presented to the Council in the ordinary way at the present session.

Mr. BRYANT did not know what more he could say. He had no report to present from the Examination Committee, but it was willing, as he had said, to give one if the Council specially asked for it.

Sir VICTOR HORSLEY said it was not a question of willingness or bargain. It was the Committee's duty, and he inquired whether it was going to discharge that duty or not.

Mr. BRYANT quite recognized that the Examination Committee would have to report, and last session it was understood that the matter would not be considered until the other reports had been discussed. ("No. no.") There was no resolution, but there was an understanding. ("No, no.")

Sir VICTOR HORSLEY stated that the last meeting he moved that the Council was of opinion that the Royal College of Surgeons of England and the Royal College of Physicians, London, had had time to consider the observations of the Visitors and Inspectors. It was true that that motion was lost, because the previous question was carried, inasmuch as the Council thought there had not been time to furnish the comments. Those comments could have been written in less than a week, and he suggested that six months was ample time for those comments to have been considered, and for the Chairman of the Examination Committee to have prepared his draft report, which it was his duty to send to members of the Examination Committee.

Dr. FINLAY thought the whole of the reports should be considered together.

The PRESIDENT pointed out that Mr. Bryant's motion had not been seconded, and further that the report was signed on August 23rd, 1902; that report was sent to the Royal College of Physicians of London, and the Royal College of Surgeons of England, the latter body responding on February 12th, 1903, and the former on April 7th, 1903.

Mr. YOUNG said that he would second Mr. Bryant's resolution so that it might be discussed.

Dr. WINDLE thought it would save time if he stated on behalf of his colleagues and himself that they absolutely refused to take back their report, because it would be returned in identically the same words. They had not altered their opinions, but if the report were to be altered it would be in a direction which Mr. Bryant would probably not exactly desire.

Mr. BRYANT stated he would withdraw his resolution.

Sir V. HORSLEY objected to this.

Dr. WINDLE concurred. He wanted the resolution voted upon and the names and numbers taken.

Dr. NORMAN MOORE pointed out that the question was whether time would be saved by discussing this report with the other reports, or whether they should arrive at the truth of the subject best by following the procedure which Sir V. Horsley had suggested. They had heard what Dr. Windle had said, and it was obvious that was the only possible answer that could be given. He could not imagine that any self-respecting Inspector would take back a report and modify the deliberate statements contained therein. He, however, thought, upon the whole, that it would be better to dispose of all the reports together.

Dr. ATTHILL and Sir CHRISTOPHER NIXON hoped the Council would permit the motion of Mr. Bryant to be withdrawn.

The PRESIDENT then (having obtained Mr. Young's permission) put the motion to the Council

That leave be given to Mr. Bryant to withdraw his motion.

Eighteen voted in favour and 7 against.

Dr. WINDLE asked that the names and numbers should be taken, when 18 voted for, 7 against; 5 did not vote, and 1 was absent.

The PRESIDENT inquired from Sir V. Horsley whether, after what had happened, he wished to bring forward any motion.

Sir V. HORSLEY replied in the affirmative, and moved:

That the Examination Committee be instructed to report during this present session on the report by the Visitors of the Examinations in Chemistry, Physics, and Biology of the Conjoint Examining Board in England, and of the Apothecaries' Society of London.

Dr. HERON WATSON seconded, and the motion was carried by 20 votes to 1.

INSPECTION OF THE EXAMINATIONS OF THE APOTHECARIES' HALL, DUBLIN.

Mr. BRYANT brought forward the report by the Examination Committee on the report of the Inspector on his inspection of the Final Examination (July, 1902) of the Apothecaries' Hall, Dublin. The report was as follows:

Report.

Four candidates presented themselves for this examination. One had been registered as a medical student in 1884, and had passed at the Royal College of Surgeons of England all his examinations, except that of Medicine and Midwifery. The Inspector reports that he passed creditably in those two subjects, and thus became entitled to the Diploma of the Hall eighteen years after his registration as a medical student.

This recognition of a final subject passed before a different Licensing

Body is quite irregular, in view of the opinion expressed by the Council's legal adviser, that "the examination must be one examination, in the sense that one medical authority or combination of authorities must conduct the whole examination of the candidate; that is, that he must be examined in all three subjects by one medical authority or combination of authorities."

A second candidate, having passed in Medicine at the Hall, received his licence after passing in Surgery and Midwifery.

The third candidate presented himself in Medicine, Surgery, and Midwifery. He passed in Medicine and Midwifery, but failed in Surgery.

The fourth candidate, who presented himself in Medicine, Surgery, and Midwifery, failed to pass in any.

Two of the four candidates received licences.

The Inspector reported that the examination was thoroughly and satisfactorily conducted, and the Examiners in Surgery were satisfied with the "bona fides" of the method of examination and with the standard of knowledge required. At the conference of examiners the Secretary of the Hall reported that an amended form of the regulations for conducting these examinations was agreed to, and that the changes made were based on recommendations suggested from time to time by the Inspector and Examiners. With the exception of what is recorded in the second paragraph, this report is fairly satisfactory to this Committee.

The report was received and entered on the minutes.

Dr. MACALISTER moved and Mr. BRYANT seconded the following resolution:

That the President be requested to call the attention of the authorities of the Apothecaries' Hall, Dublin, to the case referred to in the Examination Committee's report on the July (1902) examinations; and to state that in view of the legal interpretation placed by the Council's advisers on the terms of the Medical Act, 1886, the Council regards the course taken by the Apothecaries' Hall as irregular.

Mr. BROWN thought the case referred to was very unusual, and that he could safely predict that such another case was not likely to arise.

Mr. TICHBORNE said this matter had come on before he had received the necessary information.

The following resolution, proposed by Mr. BROWN and seconded by Mr. JACKSON, was carried:

That the consideration of the motion be postponed for the production by Mr. Tichborne of the documents relating to the case.

On the motion of Mr. BRYANT, seconded by Mr. YOUNG, the report of the Examination Committee on the inspection of the Final Examinations, October, 1902, of the Apothecaries' Hall, Dublin, was received and entered on the minutes.

Report.

There was but one candidate for the Third Examination, who had failed in medical jurisprudence in July. In this examination he passed.

The Secretary of the body visited stated that "the authorities of this Hall do not propose in the future to hold an *ad interim* examination for one candidate," and with the conclusion this Committee cordially agrees.

On the motion of Mr. BRYANT, seconded by Mr. YOUNG, the report of the Examination Committee on the Inspection of the Final Examinations of the Apothecaries' Hall, Dublin, anuary, 1903, was received and entered on the minutes.

Report.

In the First Examination there were two candidates, one passed: the other was rejected in chemistry. In the Second Examination there was one candidate, who passed. In the Third Examination there was one candidate, who passed in pharmacy and pathology, the subjects in which he presented himself. In the Final Examination there were three candidates, all of whom had been up before. All failed to pass. The Inspector reported "That the examination was thoroughly and satisfactorily conducted." The Examiners in Surgery "were satisfied with the methods by which the examination was conducted, and with the standard of knowledge required." With such approval this Committee is satisfied.

UNIVERSITY OF DUBLIN.

Mr. BRYANT, Chairman of the Education Committee, brought up the report of the Examination Committee on the reports of the visitation and inspection of the Final Examinations in medicine, surgery and midwifery of the University of Dublin by the Visitor, Mr. Bryant, and the Inspector, Sir George F. Duffey. The report consisted of the following parts:

1. Report of the Final Examination in May–June, 1901.
2. Remarks by the professors of the School of Physic of the body inspected.
3. Supplemental report by the Visitor and Inspector on Section B of the first part of the Final Examinations, November, 1902.
4. Remarks on this report by the professors of the body inspected.
5. Report by the Examination Committee.
6. Supplemental report by the Examination Committee on the examination in November.

The following is the text of the reports of the Examination Committee:

Report by the Examination Committee on the Report of the Visitor and Inspector on the Second Part of the Final Examinations of the University of Dublin, made in May and June, 1901.

The Visitor and Inspector report that the Final or Degree Examinations of the University of Dublin are "sufficient" (p. 30).

They draw attention to the fact that since the last visitation material changes have been made in the examinations, particularly as affecting candidates under the five years' course (p. 5); and that oral examinations are now held in Medicine and in Pathology for candidates for the M.B. Examination under the four years' course. There is still no oral examination in surgery for candidates for the B.Ch. degree under the four years' curriculum.

It is true that the number of these candidates is steadily diminishing, but five such candidates presented themselves in May last, and so long as these candidates continue so to apply for admission to the *Medical Register*, their examination should be conducted in conformity with the recommendation of this Council.

The Final Examination for candidates under the five years' course is divided into two parts:

Part I.—Section A includes Applied Anatomy (Medical and Surgical), paper; Applied Physiology, viva voce; Materia Medica and Therapeutics, paper and viva voce.

Section B, includes Medical Jurisprudence and Hygiene, Medicine, Surgery, and Pathology, with a paper and viva voce in each subject.

The second part is divided into Sections C, D, and E:

Section C, including Midwifery and Gynaecology, with a paper and viva voce in each; and a paper on Obstetrical Anatomy.

Section D, Clinical Medicine and Mental Diseases, and

Section E, Clinical Surgery with operations, and Ophthalmic Surgery.

The subjects in Part I must be passed at least one university term before the candidate can present himself for the second part of the examination.

The Visitor and Inspector attended the second part of the Final and Degree Examinations held in Trinity Term, 1901.

Both the Visitor and Inspector attended all the examinations between May 20th and 31st. The Inspector attended the Examination in Midwifery and Gynaecology alone, the Visitor's presence being required at the General Medical Council.

The Final Examinations in Clinical Medicine and Surgery were generally quite satisfactory, although it was thought that the arrangements for conducting the Examination in Ophthalmic Surgery might be improved, and that in Operative Surgery assistance could be given by a past candidate to a present candidate in his operation without requiring the presence of all the candidates during the entire examination—a practice which seems to be unnecessary.

In the Clinical Examination in Surgery both the Visitor and Inspector would have liked to see several doubtful candidates, who had shown weakness in the two cases allotted to them, further tested (p. 13) with a third or fourth case. In the Examination in Clinical Medicine this method was freely used, and with marked success.

It is satisfactory to note that the time formerly allowed for answering the written questions, and objected to at the former visitation as being too short, has for some subjects been extended. But in other subjects—namely, Surgery at the B.Ch. Examination, and in Materia Medica and Therapeutics, and in Forensic Medicine and Hygiene—the limit is still much under the average time (half an hour for each question) recommended by this Council (Vol. XXXIII, App. IV., p. 386).

Attention is drawn by the Visitor and Inspector to a well-known recommendation of this Council that "a candidate should not be orally examined except in the presence of two examiners," as it was observed that this recommendation was not followed either in the Examination in Ophthalmic Surgery or in any of the oral examinations which they attended in the University of Dublin. The only notice taken of this criticism by the body inspected comes from the Examiners in Midwifery and Gynaecology, who say (p. 42) that if they were both to sit together and examine alternately, such an arrangement "would necessitate a total revision of the system under which the examination is at present conducted." But such a revision is exactly what is suggested in the report, in order that this examination as well as the other examinations referred to should be conducted in accordance with Recommendation 7 of this Council.

With respect to the re-examination of candidates, which is referred to at page 24 of the report, it is satisfactory to read at page 42 that the professors, as a body, consider the re-examination of rejected candidates under the circumstances described to be "as a general rule most undesirable." The responsibility of having sanctioned the re-examination appears from the remarks to rest upon the Regius Professor of Physic—who previously presided at the meeting of the examiners at which both the candidates mentioned were rejected (p. 22). It is set forth in the reply that at the re-examination "the examiner having given the candidates high marks, their cases were considered anew, and they were allowed to pass." But there does not seem to have been any meeting of the Board of Examiners to reconsider their cases, and the professors do not state by whom their cases were reconsidered, or by whom the candidates were allowed to pass. In the letter on the subject (p. 24) from the Registrar of the School of Physic, he states that "the examiner allowed them to pass." These remarks of the body visited are not quite satisfactory, and do not appear to justify the deviation from a practice that has been carefully observed since 1887 (p. 42).

This Committee would call attention to the fact that at page 24 of the report a candidate is said to have passed who "could not test urine for albumen," and desires to express its opinion that no candidate should be allowed to pass any qualifying examination who was unable to carry out such an elementary clinical investigation. In the case alluded to this Committee had the benefit of an explanation from the examiner of the condition of the candidate whose failure to carry out the chemical test of albumen was reported, and learned that as the student had gained the Hudson Scholarship in Clinical Medicine, with other high scholarships

in the University, that it was entirely owing to an attack of incomprehensible nervousness on his part that his failure to perform this test was attributed, and that the examiners were induced to mark him as qualified to pass.

Your Committee report that, with the exception of the points mentioned, the examination as a whole was well arranged and carefully conducted.

Supplemental Report on Section B of the First Part of the Final Examination, November, 1902.

Section B of the First Part of the Final Examinations of the University of Dublin was visited and inspected in November, 1902, at the express wish of the Council. The examination lasted four days; there were twenty-one candidates, one of whom retired after presenting himself at the Oral Examination in Surgery.

Every candidate is now orally examined in the presence of two examiners, this improvement in practice having been brought about in consequence of attention having been drawn in the report of May last to the fact that the Oral Examinations in Part II of the Final Examinations were conducted by a single examiner.

The professors moreover agree with the expressed opinion of the Visitor and Inspector that the supervision of the viva voce examinations is inadequate, and recommend the Board to take steps to make it efficient.

Every written paper contained four questions, and two hours were allowed to answer each paper. The oral examinations generally occupied from ten to fifteen minutes for each candidate, but there was no fixed time. The Oral Examination in Medicine was conducted by the external Examiner in the presence of the Assessor, who is one of the Professors of Medicine in the University. The answering generally was poor (p. 49). The Assessor, with the Examiner, agreed as to the final mark to be awarded. From the Examiners not having the paper in Medicine before them there was some overlapping of questions. To guard against this overlapping, this Committee would point out the desirability of the Examiners in Medicine, Surgery, and Midwifery always having in the oral parts of the examinations the papers before them which contain the written questions.

The Oral Examination in Surgery was sound and practical. Both Examiners examined each candidate, and there were many museum specimens for use.

The examinations in Pathology and Medical Jurisprudence were altogether good.

Of the twenty candidates who completed the examination thirteen, or 65 per cent., passed, and seven, or 35 per cent., were rejected.

As a final conclusion, this supplemental visitation and inspection of November confirms the general opinion expressed in the report of May and June last, when the second part of the Final Examinations was visited and inspected: That the Final Examinations of the University of Dublin are sufficient.

Mr. BRYANT proposed, Mr. YOUNG seconded, and it was agreed that the report should be received and entered on the minutes.

Dr. LITTLE said that the examination of the two candidates referred to in the report was a matter for which he was responsible. The examination was permitted by the Board on his recommendation. He was prepared to admit that it was an error of judgement on his part.

After some discussion,

Mr. BROWN moved:

That in the opinion of this Council it is undesirable that candidates who have failed to obtain the minimum number of marks qualifying for a particular certificate should be re-examined without bringing evidence of further study.

Sir VICTOR HORSLEY seconded.

Sir CHRISTOPHER NIXON thought as a general principle Mr. Brown's motion was a correct one, but, if it was to be regarded as a censure on the Regius Professor of Medicine in Dublin, he should vote against it.

Sir VICTOR HORSLEY said, in seconding it, he did not regard it in that way.

Dr. FINLAY suggested that Mr. Brown should wait until all the reports were brought up.

Sir WILLIAM THOMSON asked Mr. Brown to withdraw the motion for the present session.

Dr. MACALISTER hoped Mr. Brown would accept the suggestion.

After some discussion,

Mr. BROWN said he was willing to accede to the suggestion if it was the wish of the Council, but he trusted he would have the opportunity of bringing the matter forward on another occasion as it was an important one.

Sir VICTOR HORSLEY having consented, the Council gave leave to Mr. Brown to withdraw his motion.

Mr. BRYANT stated that he had not received the reports from the Universities of Oxford, Durham, London, and the Victoria University, but he hoped to be able to present them to the Council next week.

PENAL CASES COMMITTEE.

The Council then proceeded to the election of the members of the Penal Cases Committee. The four representatives for England elected were Mr. Bryant, Dr. Windle, Mr. Tomes, and Sir Victor Horsley; for the Scottish Branch Dr. Heron Watson was elected, and there was a tie between Sir John Tuke and Dr. Finlay. Thereupon Sir John Tuke withdrew, and Dr. Finlay was declared elected. Those elected for the Irish Branch were Sir Christopher Nixon and Sir W. Thomson.

The Council then adjourned.

Saturday, May 23rd, 1903.

Sir WILLIAM TURNER, K.C.B., in the Chair.

ERRATA.

[IN yesterday's proceeding the motion by Mr. BROWN, seconded by Sir VICTOR HORSLEY, should read "that in the opinion of this Council it is undesirable that candidates who may have failed to obtain the minimum number of marks qualifying for a pass should be re-examined without bringing evidence of further study."]

The minutes of the previous proceedings were signed as correct.

EXECUTIVE COMMITTEE.

The following members were elected to the Executive Committee:

For England.—Mr. Bryant, Dr. Payne, Dr. MacAlister, and Dr. Pye-Smith.

For Ireland.—Sir Christopher Nixon and Sir Charles Ball.

For Scotland.—Dr. Heron Watson was elected, and there was a tie between Sir John Batty Tuke and Dr. McVail.

Dr. MCVAIL withdrew in favour of Sir John Batty Tuke, stating that he was Chairman of the Education Committee, and in addition to that was doing great service to this country in the House of Commons. He quite appreciated the honour which had been conferred upon him.

Sir JOHN BATTY TUKE thanked Dr. McVail for the course he had adopted.

THE PHARMACY BILL.

Sir HUGH BEEVOR asked the President:

Whether his attention had been called to the provisions of the Pharmacy Bill being promoted in the present session by Mr. Lough, M.P., and to the fact that the provisions of the Bill (*inter alia*) penalize any person other than a pharmaceutical chemist from dispensing medical prescriptions in a shop, the Bill containing no definition of the word shop, and no exemption of registered medical practitioners from its provisions; and, further, whether in view of this, the Council should not take some step in reference to this or any other Bill promoted on similar lines, to see that the interests of medical practitioners are properly protected.

He considered this to be a matter of public interest, and as he thought the Bill was capable of various interpretations.

The PRESIDENT said he was much indebted to Sir Hugh Beevor for a copy of the Bill. He had looked into the Bill, and he thought before he could properly submit anything like an answer to the question, it was necessary that he should look into the Pharmacy Acts which the Bill was suggested to amend, in order that he might see what the differences were. There were two Acts of Parliament bearing upon pharmaceutical chemists; the first was the Act of 1852, which was an Act for regulating the qualifications of pharmaceutical chemists. The interpretation of the 11th section was that medical practitioners were entirely outside the Pharmacy Act. The Act of 1868 was an Act to regulate the sale of poisons and to alter and amend the Pharmacy Act. The principal enacting clause was that

It should be unlawful for any person to sell or keep open shop for retailing, dispensing, or compounding poisons, or to assume or use the title of chemists or druggists.

He then referred to Sections XVI and XVII of the Act, and to the Act of 1869. He thought that those Acts did guard the interests of medical practitioners. The Bill now before Parliament was a Bill to alter and amend the Pharmacy Acts of 1852 and 1868, and the question was whether the interests of medical practitioners would be affected by the alterations and amendments. That was a matter he could not answer, because it was a legal question. But there were one or two points which he might refer to in the Bill which affected England and Wales and Scotland, but Ireland was expressly excluded. Clause 2 appeared to enlarge the Pharmacy Acts in a very important direction; that clause provided:

It shall be unlawful for any person, company, firm, co-partnership, or body of persons to keep any open shop or shops for the retailing, dispensing, or compounding of poisons or of medical prescriptions.

That was a very important addition. The former Act, as he

had pointed out, was an Act to regulate the sale of poisons. By the present Act, not only was the sale of poisons to be regulated, but the compounding of medical prescriptions was to be brought under the new provisions. The section proceeded:

Or to permit or suffer in such shop any poison to be retailed, or any medical prescription to be retailed, dispensed, or compounded, otherwise than by or under the supervision of a registered person.

That registered person was a person registered under that Act or under the Pharmacy Act, namely, a chemist or druggist. He submitted that was a very serious inroad into the position of the medical profession, and as far as he could see there was no proposition to safeguard the interests of the medical profession. Of course, the question so far as England was concerned would very materially affect the Society of Apothecaries, and he suggested whether that Society could not get a legal opinion upon the Bill. He did not know why the General Medical Council should go to the expense of getting a legal opinion in the first instance.

Sir Hugh Beevor said that he had brought the matter forward in the interests of the profession itself. He had not been asked to bring it forward by his Society.

The President admitted that it was a very wide Bill. He thought it might help the Council if the Secretary of the Apothecaries Society obtained a legal opinion as to the exact significance of the Bill, and how far under it the rights of the medical practitioners were interfered with or preserved.

Sir Victor Horsley wished to say that the British Medical Association had been moving on this question for the last two months. The Bill referred to arose out of a report of a departmental committee. The British Medical Association quite recognized that the Bill affected the whole profession, and he thought it was a very proper matter to be discussed before the Council.

The President did not object to the point being raised, but he thought that the legal opinion should be taken in the first instance by the Apothecaries' Society.

Dr. MacAlister thought it was extremely desirable that an explicit exemption of medical practitioners should be stated in the Bill, and he moved:

That the President be requested to represent to the Lord President of the Privy Council that in the Pharmacy Bill 1903, now before Parliament, the rights of the medical profession, as safeguarded by the existing Pharmacy Acts, appear to be encroached upon, and to state that in the opinion of the Council this encroachment ought not to obtain the sanction of Parliament.

Sir Hugh Beevor seconded, and the motion was carried.

Statistics of Results of Examinations.

Sir Charles Ball moved:

That the report of the Examination Committee upon the desirability of obtaining additional information from the various licensing bodies, for use in the preparation of the annual table, (a) showing results of professional examinations which was received by the Council and entered on the minutes, and appears as Appendix XXII of the volume of Minutes for 1902, be referred to the various licensing bodies, and that they be requested to inform the Council whether it is practicable to give the information in the form suggested in Table I of that report.

His point in bringing forward the motion was to ask the licensing bodies whether it was practicable to make a return in one of the ways suggested by the report of the Examination Committee. The Committee had had the benefit of the invaluable assistance of Mr. Allen, who was able to prepare a summary showing the history of the table, from which it could be seen that from the earliest days of the Council a return somewhat in that form was called for; and in 1864 there was a report of the Committee directing that returns should be made annually, and since that time the returns had been made in the original form, and appeared year by year in the table. That table absolutely gave no information upon which they could rely as to the passes and rejections, for the reason that since 1864, when probably it gave a tolerably correct summary, the examinations had become so complicated and involved that it was impossible to present the information in any useful form in such a table. Therefore he proposed that it be referred to the licensing bodies in order that they might state whether it was practicable to give the information desired.

Mr. Bryant seconded.

Dr. MacAlister had no objection to the matter going to the bodies asking them if it was practicable, but he pointed out that the Council made no statement as to the way in which the different subjects should be combined or distributed.

The President stated that they were simply asking the bodies to give certain information.

The resolution was carried.

The Representation of the New Northern Universities.

Mr. Jackson moved

That the Council petition the Privy Council that, in the event of the Victoria University being divided into two or more separate Universities, a single representative should continue to represent the whole collectively.

He brought forward that motion in view of the possible fact that fresh members might be added to the Council. He thought every one would agree that the Council was, at the present time, sufficiently large to discharge the duties imposed upon it. The Victoria University was about to be split up; at any rate there would be a new University of Liverpool, and although he understood they waived the right to appoint a member on the Council, still they might desire to do so. There might be a new University for Yorkshire, and, although he did not wish to speak disparagingly of universities, yet they seemed to be springing up almost like mushrooms. It did not follow that every fresh body that was created should have a member for itself.

Mr. Brown seconded.

The President observed that a Charter and an Act of Parliament had to be considered in connexion with the foundation of a university and the granting to that university of a representative on the Council. The Charter founded the university, but the Privy Council who granted the Charter had no power at any time to give to the university a representative on the Council. The General Medical Council was a body constituted by Parliament, and to introduce a new member on the Council meant a new Act of Parliament with reference to that body. The Privy Council could not do it; Parliament alone could do it. What was done in the case of the University of Birmingham was to apply to Parliament for an Act. The date of the Charter was March 24th, and the Act received the Royal Assent on May 25th. Therefore in discussing this question, which he thought was an important one, he wished the members of the Council to keep clearly in their minds that anything that was to be done in the way of expressing an opinion as to the representative or representatives to be appointed under the change in the constitution of the Victoria University was to be done through Parliament, and not through the Privy Council.

Mr. Tomes asked whether, under Section x, supposing the Council applied to the Privy Council, the Privy Council could not then nominate a person to represent the University.

The President pointed out that even then the matter would have to be laid before both Houses of Parliament.

Dr. Windle thought he could answer Mr. Tomes's question. After the University of Birmingham had obtained the power to give a registrable qualification the Privy Council had the power to give it a member, but the Privy Council had not the power of giving the University a registrable qualification.

The President said the question was whether the petition ought to be presented to the Privy Council or to Parliament when the Bill was introduced. So far as he knew the Bill was not yet introduced. These were matters of procedure which he thought it well to bring before the Council.

Dr. McVail inquired whether they were in order in discussing the matter. Under what section of the Medical Acts could they now discuss the question? They were only there to administer the Acts, and there was no clause in the Acts which said that they might devote their time, their energies, and their funds to discussing Acts of Parliament, or to making representations to the Privy Council to introduce into Parliament certain Bills. If and when a Bill was introduced into Parliament seeking to send a member to the Council for a particular university, and the Privy Council were to send on the particulars to the Council, then they would be quite entitled to give the Privy Council their opinion; but he held that they had no right to plunge into the consideration of possible Acts of Parliament. He raised that question as a point of order for the decision of the President.

Sir John Batty Tuke thought it was hardly regular to discuss a Bill which did not exist. The last time he made inquiries the Bill was not filed. He knew the nature of the Bill, and when the Bill came up he would move the rejection of the clause giving the new University a representative.

Dr. Pye-Smith said that a public body such as they were had an inherent right to petition either Parliament or the Government to enable it to transact its duties more efficiently for the public good. He asked the President to answer Dr. McVail's question, because he had an amendment which he was prepared to move if it was in order.

The President regarded the question as one which affected

the constitution of the Council itself, and therefore he thought they had a perfect right to express an opinion. Therefore his ruling in the matter was that they had a right to go into the matter, and to present a petition on a subject which affected their own constitution.

Dr. PYE-SMITH said that what had been said as to the inconvenient number of the Council as it existed at present; other difficulties in that direction were threatened. In regard to the last addition to their numbers he ventured to think that it was an unconstitutional action on the part of the Government to give a representative to the University of Birmingham without consulting the Council, but he was sure the Council would agree with him in being able to separate that entirely from the way in which the seat was filled. The University of Liverpool was within an appreciable distance of being founded. He thought that would be a great addition to the intellectual equipment of the kingdom, but it would be a very great evil if the same Act of Parliament that constituted it a separate University were to give it the right of sending a representative to the Council. Again there were other places such as Leeds, Sheffield and Bristol which would follow on in their turn. Dr. Pye-Smith concluded by moving the following amendment:

That the President be requested at the first opportunity to urge upon Government the importance of reducing the number of members of the Council.

Dr. PAYNE seconded the amendment.

Dr. MACALISTER thought the motion was not comprehensive enough to meet all the circumstances. He thought the amendment as proposed by Dr. Pye-Smith would be the best possible comment from the point of view of the public on the memorandum which the President had brought forward in regard to the finances of the Council.

Mr. TOMES asked whether it would not be better to put the amendment as a separate resolution. One was in the nature of a pious opinion, and the other had referenee to immediate circumstances.

Mr. JACKSON had originally drafted a resolution practically in the form proposed by Dr. Pye-Smith. He submitted it to his friends, and they thought it would be more likely to be carried if it dealt with a particular instance.

Sir CHRISTOPHER NIXON said that so far as the representation of the two Universities of Ireland were concerned he was strongly against the proposition. He did not think that because the Council's means were limited, and its chamber was not sufficiently large, were reasons which should be urged upon Parliament for not giving a separate representative to the new universities. If a university had a medical school in connexion with it, why should it not have all the ordinary privileges of other universities?

Dr. WINDLE wished to acknowledge the compliment which had been paid him by Dr. Pye-Smith. He thought that there were various ways in which the numbers could be reduced. The Government might abolish the Crown members. There were a number of bodies which were combined together for the purpose of giving one registrable qualification, and there was no reason why each should be represented; there was no reason why the three bodies of Scotland should have three representatives on the Council; but he would oppose any plan which would disfranchise any institution giving by itself a complete registrable qualification. He objected to their telling the Government they would like the Council reduced, if they were not able to say in which direction the reduction should be made.

Sir JOHN BATTY TUKE pointed out that the Council was committing itself to an important principle, much wider than appeared from the words of the amendment.

Dr. NORMAN MOORE felt the want of a definite scheme to be a difficulty. Merely to discuss the abstract question as to whether the Council ought to be smaller, or ought to be increased, seemed to him an unprofitable way of spending time; it could not lead to any really definite conclusion. He did not regard with the slightest apprehension the increase of universities. They could do nothing but good to the country. They were enormously useful to Scotland, and probably when universities had increased more in proportion to the population throughout England there would be the same general respect for learning which was certainly more prevalent north of the Border than south of it.

Dr. MACKAY thought the amendment could not be fairly brought forward without notice, and he asked the President if they were in order in discussing it.

The PRESIDENT replied that he should not have allowed the discussion to have proceeded so far had he been of the opinion that the motion was not in order.

Dr. PAYNE thought the reason for the amendment was that Mr. Jackson's motion was a little too particular.

Sir VICTOR HORSLEY hoped the amendment would be supported by the Council if only for the reason that the discussion which had taken place would crystallize the feeling that the Council was not a representative body so far as the universities were concerned. The Medical Act simply spoke of universities as suitable bodies who should choose members for the Council, and it spoke of the Government in the same sense. It nowhere spoke of the person so chosen as a representative, but evidently thought that universities were the most suitable collections of medical men from which to choose a person. The amendment of Dr. Pye-Smith was not a contradiction of Mr. Jackson's motion. Mr. Jackson dealt with a particular case, and he had noticed before in the Council that if a member brought forward a particular case somebody brought forward a general case, and if a member brought forward a general case some member would propose a particular case. They had now the opportunity of voting for both.

Mr. JACKSON, in reply, said he was prepared to abide by his resolution, although he should be contented if either the motion or the amendment were carried.

The PRESIDENT then put Dr. Pye-Smith's amendment, when 9 voted in favour and 15 against.

The names and numbers, being asked for, were taken, when it was found that 9 voted for, 15 against, 6 did not vote, and 1 was absent.

[The Council then rose. The original resolution was not put, Dr. McVail intimating that he had another amendment.]

Monday, May 25th, 1903.

Sir WILLIAM TURNER, K.C.B., President, in the Chair.

The minutes of Saturday's proceedings, as amended, were confirmed.

REPRESENTATION OF THE NEW NORTHERN UNIVERSITIES.

The PRESIDENT called attention to the fact that the first business on the programme was the resumed consideration, from Saturday, of Mr. Jackson's motion, but, inasmuch as there were several penal cases down for hearing at fixed hours, he thought the Council would agree with him that they ought to adjourn the further consideration of Mr. Jackson's motion and proceed at once with the penal cases.

This course was agreed to by the Council.

DISCIPLINARY CASES.

Case of Mr. James Kirkland, M.B., M.S.

The Council then proceeded to the consideration of the case of James Kirkland, of 7, Ladbroke Square, W., registered as M.B., Mast. Surg., 1895, Univ. Glasg., who had been summoned to appear before the Council to answer the following charge:

That being a registered medical practitioner, you have been and are a party to the publication of advertisements, circulated in pamphlets on Social Purity purporting to contain advice to young persons, informing the public that the authors of the pamphlets have secured the co-operation of a well-known physician who has for years made the nervous and physical conditions which evil habits bring about a special study, and whose charge is moderate, and inviting the public to apply for your address, and to the issue to persons who answered the advertisement o lithographed forms, stating your name, address, and hours of consultation, and that you are the physician recommended in the pamphlets.

Dr. Hugh Woods, of the London and Counties Medical Protection Society, Limited, appeared for the complainant; and Mr. W. B. Campbell, instructed by Messrs. Edwin Smith and Ellis, solicitors, appeared for Mr. Kirkland.

Mr. Muir Mackenzie, the Legal Adviser of the Council, and Mr. Winterbotham, the Solicitor of the Council, were also present. The SOLICITOR read the notice of inquiry.

Dr. WOODS, in opening the case, said that some time ago his Society became acquainted with the fact in a number of little pamphlets, mostly sold at one penny, and to be obtained at various stationers' shops, and all of them at Mr. John Kensit's place in Paternoster Row, there were paragraphs stating that those afflicted with the evils denoted in the little advertisements could obtain excellent advice from a man experienced in the matter, if they wrote to the office and got the address of the physician recommended. The first case inquired into was a perfectly genuine case in which a young man had actually been and seen Mr. Kirkland in consequence of the advertisement which he had found in the pamphlet. Since then they had repeatedly tested whether the books continued on sale. Within the last few days they had sent a little office boy to Paternoster Row to inquire for and purchase

a certain pamphlet which was said to be for men only, but nevertheless it was sold quite willingly to the boy. From that he asked the Council, unless the contrary was shown, to assume that the same system was being carried on as before, and that the physician referred to in each case was the same person. From the documents before the Council it was evident that Mr. Kensit did represent that Mr. Kirkland was the physician referred to, and he was perfectly certain also that in the case of the young man that he had alluded to, he wrote and told Mr. Kirkland that he was coming to him in consequence of reading the advertisement. Mr. Kirkland saw this young man, advised him, and claimed his fee. He never said that such advertisement was not authorized by him. The pamphlets in which the advertisements had been inserted were obscene, they were dirty little pamphlets that ought not to be circulated. Dr. Woods then proceeded to read various passages from the pamphlets, two issued by Mr. Kensit and one by Mr. Varley, and concluded by saying that whether the advertisements were authorized by Mr. Kirkland or not, he was perfectly aware of the issue of them; he had taken advantage of them, and had treated the patients who had come there in consequence of their issue.

In answer to Mr. Muir Mackenzie, Dr. Woods said that his evidence at present was that of the statutory declarations of three persons.

The President then asked Mr. Kirkland, through his legal representative, to state his case and produce his witnesses.

Mr. Campbell, in stating Mr. Kirkland's case, said that Mr. Kirkland was anxious to meet the charge, and, in fact, he submitted that Mr. Kirkland had met it in the frankest possible manner by the answer which he had already given to the Council. He was most anxious not to diminish by any concession that he made what he conceived to be the strength of Mr. Kirkland's case. He was not obliged, fortunately, to call in question the facts. He was able to accept as substantially accurate the facts that had been given. The question was how that affected the charge? As he understood it, the charge was that Mr. Kirkland had been guilty of self-advertisement. It came upon him somewhat by surprise that Dr. Woods should ask to add to that charge that the particular medium in which the advertisement appeared was a medium of a very undesirable character, and that the pamphlet contained what he described as obscene passages. He thought it would have been fairer to the accused if he had been told all that in the first instance. But he made no complaint about that, because those of the Council who had already read the answer of Mr. Kirkland were aware that his case was that he was not responsible for any single one of the pamphlets, nor for any expression of opinion they contained; that he was not the physician referred to in the note or notice which the pamphlet contained, and that he never knew that these advertisements were in the pamphlets. Therefore he (Mr. Campbell) was not called upon to defend the pamphlets, and he did not propose to do so, because that would be to raise an entirely irrelevant issue. With regard to Mr. Varley, Mr. Kirkland had admitted that he had some acquaintance with him and was associated with him, and that he did give his name to him, and authorized the use of his name for certain limited purposes only. Mr. Kirkland would tell the Council that he never knew the existence of that pamphlet until after the Council's notice. Members of the Council might ask how it came about, when the persons went to inquire for the name of the doctor, that Mr. Kirkland's name was given to them. Mr. Kirkland became the victim of an excess of authority. Mr. Kirkland would submit himself to them for cross-examination, and would bear out what he (Mr. Campbell) had stated, that he was not the physician referred to, and how it was that his name came to be given. Mr. Kirkland was called in to see Mr. Varley when that gentleman was ill, and in the course of the conversation Mr. Varley referred to certain cases which he had come across of young men being victimized by quacks, and he said he was continually being asked to give the name of a responsible medical man. In order to save him the trouble of writing so many letters, he asked Mr. Kirkland if he would leave him his name and address so that it might be put on a lithographed form to be given by Mr. Varley to those persons who applied to him. Mr. Kirkland thought he might allow his name to be given, and it was put on the lithographed form. He submitted that to treat that as being in the nature of a common self-advertisement would be trifling with common sense. It was only intended to furnish Mr. Varley with a handy and convenient way of answering the numerous questions addressed to him. Undoubtedly a wrong use was made of these lithographed forms. Mr. Kirkland had not the slightest idea that they were going to be used in connexion with any printed advertisement referring to him. The Council might ask him how it came about that Mr. Kensit gave Mr. Kirkland as the person referred to in the first two pamphlets. The solution of that was that Mr. Kensit when he advertised his pamphlet imitated it without altering at all Mr. Varley's notice, and it was to be noticed that in all the so-called advertisements there was a peculiar similarity; but Mr. Kirkland was not the medical man referred to in either of those advertisements. The question resolved itself into this, that the forms had been used for a purpose not contemplated by Mr. Kirkland and not authorized by him. So soon as the complaint reached him last October he immediately gave instructions that the circulation of them was to cease; but apart from that he was willing to give the fullest undertaking, if the Council was of opinion that the issuing of them was a breach of medical ethics, that in the future they should not be issued. As regards the pamphlets, Mr. Kirkland was in no way a party to their publication, and was not responsible for their contents, of the nature of which he was unaware until after the commencement of these proceedings.

Mr. Kirkland (examined by Mr. Campbell) said he met Mr. Henry Varley in September of 1899; he knew he was a public lecturer and preacher and was interested in social matters. In the spring of 1900 Mr. Varley for the first time approached him in his professional capacity with a view his, Dr. Kirkland's, allowing his name to be connected with the subject. At the time he was unacquainted with the book on "Lectures to Young Men," and did not know it invited young men to apply to a well-known medical man for advice, nor that it applied to himself. He did not intend the lithographed pamphlet containing his name and address to be used as an advertisement in connexion with the book. Until the Registrar called his attention to it he did not know of the two books which had been referred to, or that Mr. John Kensit was the publisher of them. He had not been associated with the so-called purity work of a certain class of people in London, and had not made any special study of the complaints which had been referred to. The lithographed forms were given to Mr. Varley to use privately in order to save his writing letters; this he thought he was underthe circumstances justified in doing. He did not think the forms contravened the rules of the General Medical Council with regard to advertising, or he would never have issued them. When the first form was issued he was not on the telephone, and consequently the second form was issued containing the telephone number and the hours of consultation. He did not at any time agree to these forms being given to Mr. John Kensit.

By Mr. Muir Mackenzie: He could not say how many forms were issued. The forms were not in circulation in February of this year; he ordered them to be destroyed last October.

By the President: He gave the order himself to destroy the forms to Mr. Kensit's publisher.

By Mr. Campbell: He did not remember a letter from Mr. Harold Smith, as was sworn to in the declaration; he had since found such a name in his book.

Cross-examined by Dr. Hugh Woods: It did not appear strange to him that a young man should come to him for treatment in respect of these complaints rather than go to his own family physician. In October, 1902, immediately he knew of the complaint, he wrote to the publisher saying that if his name was being given through the medium of any book it was to be stopped. He had had no patients through the medium of the pamphlets since October, 1902, and had no knowledge that he had had any before that time. He did not authorize Mr. Kensit to use his name or to distribute the pamphlets on his behalf.

Re-examined by Mr. Campbell: He knew that some of the patients he had attended had come from Mr. Varley, but they did not necessarily suffer from the particular diseases referred to.

By Dr. MacAlister: He had nothing to do with the pamphlets, and did not know they were in existence until 1902.

By Dr. McVail: He did not give the forms to Mr. Varley to distribute wherever he was delivering a lecture.

By Sir Victor Horsley: He paid for lithographing the circulars himself. He admitted that Mr. Varley had recommended a young man to consult him, and his case was a minor one. He could consult him by letter.

Mr. Holness (examined by Mr. Campbell) said he was the

publisher of Mr. Henry Varley's pamphlet to young men; it was first published about 20 years ago. The first edition had a notice similar to the one now complained of. The last edition was simply a reprint of the first, and could not therefore refer to Mr. Kirkland; the pamphlets never referred to Mr. Kirkland under any circumstances. Since May, 1900, Mr. Varley was desirous of recommending Mr. Kirkland as a physician to persons who sometimes wrote to him at his place in Paternoster Row, and if Mr. Varley was away he had authority to open his letters. He had the forms lithographed which had been referred to; there were about 200 or 300. He knew the late Mr. John Kensit, the publisher of the pamphlets which had been referred to. He came to him on one occasion and said he was dissatisfied with the medical man he, Mr. Kensit, had hitherto recommended, and asked if there was any objection to his having the circular which he knew had been prepared for Mr. Henry Varley. He, Mr. Holness, replied certainly not, and gave as a reason that in many cases he had seen how young men had been brought under the evil influence of quacks all over the country, and he felt that if a circular would put them in contact with an authorized practitioner it would be a great service to the young lads who so frequently sought advice. He took it upon himself to do this without asking Mr. Henry Varley for his consent, because he was away in America, or Mr. Kirkland's consent. Mr. Kirkland had no part in issuing the circulars. Eventually Mr. Kirkland instructed him not to issue any more circulars.

Cross-examined by Dr. HUGH WOODS: Mr. Kirkland gave him verbal instructions not to issue any more of the circulars, but he confessed he had done so notwithstanding. The explanation of any one having received a circular as late as February was that during his absence Mr. Kensit's people had applied for them, and, contrary to instructions, they had been given several copies. The course of proceeding now was that when an inquiry came for the name of a physician they sent the name of another medical man; he declined to give his name. He could not tell when the other doctor was appointed; in fact he was not aware of any formal appointment. He strongly advised young men to go to a proper medical practitioner, generally to their own practitioner.

By the PRESIDENT: If any circulars were sent out after October he took the responsibility. He thought he had himself sent out circulars since, and he regretted it. It was a great trouble to write letters, and he had therefore retained a few in order that he might not have that trouble. Mr. Kirkland said he trusted to him, Mr. Holness, to destroy the circulars, but he had not done it.

By Dr. MACALISTER: The first time he had any communication with Mr. Kirkland was in reference to the suppression of the circular. It was through his request to Mr. Varley that some such form should be supplied that Mr. Varley communicated with Mr. Kirkland on the subject.

Mr. HENRY VARLEY (examined by Mr. CAMPBELL) said he had made a declaration, and the statements contained therein were true.

Cross-examined by Dr. WOODS: The sending out of the forms was the result of a conference with Mr. Kirkland, who told him that advertising was not allowed in the medical profession. In going through the United States he was very much impressed with the sad letters which he had received from young men who got into the toils of quacks who advertised in urinals and other places in great cities, and he was exceedingly anxious to have a medical man whom he could trust, whose name he could privately send to them without any thought or idea of advertisement. When consulting Mr. Kirkland professionally he mentioned his difficulty, and asked him whether it was possible for him so to act without jeopardising his position. That was how Mr. Kirkland became connected with the matter. The paragraph in the pamphlets which had been referred to was never brought to Mr. Kirkland's notice; he, Mr. Varley, never thought it was necessary to do so. The circulars were never issued promiscuously; he never took them with him into the country for the purpose. Young men would never get the circular unless there was a bona fide application accompanied by an addressed envelope and a stamp. His publisher during his absence had authority to open his letters; it was practically impossible for him to attend to them all.

By Sir C. NIXON: Letters reached him from young men saying they had got into the hands of quacks, and he obtained Mr. Kirkland's co-operation in order to assist young men in this particular matter. He never discussed the question of fees with him. No other physician stood in the same relation to him as Mr. Kirkland.

Strangers and the parties were directed to withdraw; on readmission,

The PRESIDENT asked Mr. Kirkland if he accepted statement made on his behalf by his Council as to his regret for his conduct in the matter complained of, and as to his undertaking not to repeat it in the future.

Mr. KIRKLAND having given this undertaking,

The PRESIDENT announced the finding of the Council as follows:

1. The facts alleged against you in the notice of inquiry have been proved to the satisfaction of the Council.

2. Seeing, however, that you have expressed your regret that you have committed what the Council regards as a grave professional offence, and that you have promised to abstain from any conduct affording similar ground of complaint in the future, the Council has resolved not to proceed any further in reference to the facts proved against you.

Case of Mr. E. J. Smith, M.R.C.S., L.S.A.

The Council then proceeded to consider the case of Edward John Smith, of 110, Balsall Heath Road, Birmingham, registered as Lic. Soc. Apoth. Lond. 1883, Memb. R. Coll. Surg. Eng. 1885. The charge was:

That you being a registered medical practitioner, systematically seek to attract practice by a system of extensive public advertisements containing your name, address, and qualifications, and invitations to persons in need of medical aid to consult you professionally, the advertisements so systematically published by you being themselves of character discreditable to a professional medical man.

In November, 1902, the Council found that the facts alleged against Mr. Smith had been proved, but in order to give him an opportunity of reconsidering his position, they adjourned the further consideration of the charge to this session in order that he might satisfy the Council as to his conduct in the interval.

Mr. Muir Mackenzie, the Legal Assessor, and Mr. Winterbotham, the Solicitor, were present for the Council. Dr. Bateman appeared for the complainant, Mr. Smith appeared in person.

The SOLICITOR read the notice served on Mr. Smith.

The PRESIDENT asked Dr. Bateman if he had any further evidence to give or any objection to make.

Dr. BATEMAN answered in the negative.

The PRESIDENT inquired from Mr. Smith if he had been continuing the practice which had been objected to.

Mr. SMITH replied in the negative, and stated that he had entirely given it up.

The PRESIDENT asked if it was his intention not to resume it.

Mr. SMITH answered in the affirmative.

(Strangers and the parties were directed to withdraw). On their readmission,

The PRESIDENT, addressing Mr. Smith, said: Mr. Smith, the Council has deliberated on your case, and, relying on your statement and promise, has resolved: "That the Council, having further considered the facts proved against you, does not judge you guilty of infamous conduct in a professional respect."

PRELIMINARY EXAMINATION OF THE CONJOINT BOARD IN ENGLAND.

Sir VICTOR HORSLEY inquired when the Examination Committee would furnish the report which had been promised this session, because he wanted to give notice of a resolution with regard to it, but of course he wanted to see the report first.

The PRESIDENT pointed out that Mr. Bryant, the Chairman of that Committee, was not then present. He inquired if any member of the Examination Committee could answer the question.

Dr. FINLAY stated that the Chairman had promised the report on Wednesday.

The PRESIDENT asked if the Committee would undertake that the report should be in the hands of Council, together with the programme of business, on Thursday morning.

Sir WILLIAM THOMSON thought it would be, as the Chairman had undertaken to submit it to the Council for consideration on Wednesday.

The Council then adjourned.

Tuesday, May 26th, 1903.

Sir WILLIAM TURNER, K.C.B., President, in the Chair.

The minutes of the previous day's proceedings were confirmed.

DISCIPLINARY CASES—(*Continued*).

Case of J. D. Maclean, L.R.C.P. & S. Ed., L.F.P.S.G., M.B. and M.S.Ed.

The Council proceeded to the consideration of the case

against James Dugald McLean, of 72, Summer Hill Road, Birmingham, registered with the triple qualification of Scotland, 1893, and M.B., Mast. Surg., 1893, Univ. Edin., who had been summoned to appear before the Council to answer the following charge:

That at various dates on November and December, 1902, you signed certificates that you had examined Ernest Cotterill, of 6-8, Eyre Street, Birmingham, and found that he was at the date of the certificate unable to attend school; and that you gave these certificates without seeing or examining the said Ernest Cotterill.

Mr. Muir Mackenzie appeared as legal assessor, and Mr. Winterbotham as Solicitor, for the Council. Mr. Winterbotham represented the complainant, Mr. James Dugald Maclean appeared in person.

Dr. WOODS, the General Secretary of the London and Counties Medical Protection Society, stated that he had attended to assist Mr. Maclean as he was a member of that Society.

The PRESIDENT inquired in what capacity Dr. Woods appeared.

Dr. Woods replied that he desired to assist Mr. Maclean. He did the same thing in the case of Dr. Irvine.

The PRESIDENT remarked that Dr. Irvine was represented by counsel. He then referred to the standing order which provided that the accused practitioner might be represented or assisted by a solicitor with or without counsel. He then inquired if Dr. Woods was a member of the legal profession.

Dr. WOODS replied in the negative, but stated that he claimed the right to assist a member of his Society.

The PRESIDENT pointed out that in the minutes, in the case of Dr. Irvine, Dr. Woods attended as a witness.

Dr. WOODS thereupon said that he attended as a witness in the present case as he had investigated the whole case and could give the Council information about it.

The PRESIDENT said that Dr. Woods would be permitted to attend as a witness and not as assisting Mr. Maclean.

Dr. WINDLE stated that when the complaint was made by the Birmingham School Board he was not a member of that body, but when the School Board came to an end it was replaced by the Education Committee, of which he was a member, and under these circumstances he wished to take no part in the deliberation.

The PRESIDENT acquiesced, and directed that this should be entered on the minutes.

Mr. WINTERBOTHAM proceeded to state the case against Mr. Maclean, and said that although this was a complaint made by a public body, it was not usual for them to attend as complainants, but they attended as witnesses. He then referred to the declaration by Mr. John Aston, the Chief Superintendent of the Birmingham Education Committee, who stated that on December 11th, 1902, the father of Ernest Cotterill was summoned before the magistrates for the non-attendance of his boy at school. The boy was absent from school several weeks. The person attending the court on behalf of the father produced four certificates signed by Mr. Maclean, which certified that he had examined the boy, and found that he was on the date of the certificate unable to attend school. The certificates were on a printed form, and the blanks which were left were filled up, and the certificate signed by Mr. Maclean. The evidence given before the magistrates showed that the boy was in fact at work during the greater part of the time covered by the certificates. The magistrates adjourned the case in order that inquiries might be made of the medical man, and when the case came on again the magistrates fined the father ten shillings for his son's non-attendance, impounded the certificates, and desired the School Board to communicate with the proper authorities, so that hereinafter they might prevent certificates being given in such an improper manner. Mr. Woodhouse, who had made a declaration, said that Mr. Maclean told him that he had not seen the boy for several weeks, and that he had given the mother the certificates on her own statement that the boy was not well. He further said he had charged 6d. each for the certificates, but he said that he thought the case was rather fishy, as the mother wanted certificates but no medicine. Another declaration by Samuel Southall, attendance inspector of the Birmingham Education Committee, stated that he had seen the boy actually at work during the period covered by the certificates. He subsequently saw Mr. Maclean, and informed him of this fact, and Mr. Maclean said that he would not give another certificate unless he had better reasons for doing so. Mr. Maclean had sent a letter to the Council, in which he stated that the certificates were given in good faith, because he had treated the boy previously for a persistent cough, and he had been informed that the boy had been sent home because he was a source of annoyance at school. He had since learnt that there was a lot of deception in the case, and extremely regretted having given the certificates. The School Board, under these circumstances, felt it was necessary to report the matter to the Council, so that it might ask the accused individual to give an explanation.

Mr. HOWARD LLOYD, Chairman of the Attendance Committee at Birmingham, and Mr. JOHN ASTON, Chief Superintendent of the Attendance Office of the Birmingham Education Committee, gave evidence confirming the opening of Mr. Winterbotham.

In answer to the PRESIDENT, Mr. MACLEAN stated that he did not wish to ask questions himself, but he would like Dr. Woods to be allowed to do so for him.

The PRESIDENT inquired whether it was the wish of the Council, seeing that Mr. Maclean was not represented either by counsel or solicitor, that Dr. Woods should be allowed to ask questions on his behalf.

Sir VICTOR HORSLEY moved that the standing order relating to the matter be suspended in order that Dr. Woods might put the questions on behalf of Mr. Maclean. He did this because he understood that the accused practitioner wished that Dr. Woods should do so.

Mr. BROWN seconded.

The PRESIDENT put the motion, and leave was given to Dr. Woods to put questions.

The WITNESS, in answer to Dr. WOODS, said that all that he knew about the matter was the certificates and what he heard in court. He simply did his duty in reporting the matter after that evidence was given.

Mr. GEORGE WHITEHOUSE was the next witness, and he said that the statements in his statutory declaration were true.

Cross-examined by Dr. WOODS: He was positive he saw Mr. Maclean, and that he had made the statements contained in the declaration. He did not know anything against Mr. Maclean's character, professional or otherwise.

Mr. SOUTHALL was called and said the statements contained in his statutory declaration were true.

Cross examined by Dr. WOODS: He had no facts to show that Mr. Maclean ever gave a certificate which was untrue or which had not been arrived at by careful examination.

In defence Mr. MACLEAN tendered a number of declarations; whereupon

The SOLICITOR observed that by the rules of the Council such declarations should have been sent in a specified number of days before the hearing, otherwise they could not be used.

Mr. MACLEAN said the reason he had not been able to comply with the rule was that the Cotterills had removed and he had had great difficulty in tracing them.

Dr. WOODS took the responsibility for not having sent the declarations before; he did not get them in time.

Mr. MUIR MACKENZIE suggested that they should be read, bearing in mind the fact that the deponents were not present and that the declarations, therefore, were proportionately weaker. After some discussion the Council decided to adopt this course.

Mr. MACLEAN then read the statutory declaration of Alice Beard, who deposed that on November 24th, 1902, and December 3rd and 11th, 1902, she attended with the boy at his residence, when Mr. Maclean gave three certificates to the effect that Ernest Cotterill was unable to attend school owing to the unsatisfactory state of his health, and before giving the certificates Mr. Maclean further examined the boy. Also a declaration by Mary Ann Cotterill, who stated that on November 24th, 1902, she attended with her son, Ernest Cotterill, at the residence of Mr. Maclean, who examined him and gave a certificate to the effect that he was unable to attend school owing to the unsatisfactory state of his health, and that before giving such certificate Mr. Maclean carefully examined him. Also a statutory declaration by Ernest Cotterill to the effect that on the dates named he had attended at the residence of Mr. Maclean, who had examined him and given certificates to the effect that he was unable to attend school. Also a declaration made by himself, Mr. Maclean, to the effect that on the dates mentioned he had examined the boy and given certificates that he was unfit to attend school owing to the unsatisfactory state of his health; and that he had never said to Mr. George Whitehouse or to any other person that he had been giving medical certificates in this case and had not

seen the boy for several weeks, and that for six weeks at least the boy had not been under medical treatment, neither had he had any medicine. On the contrary he, Mr. Maclean, never gave a medical certificate without having first immediately seen the person before doing so.

By Mr. Muir Mackenzie: The statutory declarations which he had read were drafted by a Mr. Stubbs, who was a solicitor, and the persons making the declarations were taken to the solicitor's office. He met them there, but they gave the information themselves. He regretted to say that he had been deceived in the matter. By the statement in his letter, that he had found there was a lot of deception in the case, he meant that the boy had been malingering, and had been to work; as soon as he discovered that he refused to give a certificate.

By Dr. McCall Anderson: He gave a certificate three days after the first because he was asked to do so for the School Board officer.

The Solicitor said that this evidence came quite by surprise, and absolutely contradicted that which he had previously received, and recalled Mr. Ashton to ascertain whether it was before the magistrate.

Mr. Ashton (recalled, further examined by the Solicitor) said he was present before the magistrate on both occasions. No evidence was given on behalf of the boy as to attendance on the doctor. He had heard the declarations read, and no such evidence was given before the magistrate either by the boy or his friends; the latter did not even admit that the boy had been to work.

By Mr. George Brown: There was no evidence given before the magistrate on the point at all.

By the Solicitor: He was present, and heard Mr. Whitehouse give evidence to the effect that Mr. Maclean had told him he had given certificates but not attended the boy.

Mr. Maclean, addressing the Council, said he signed the certificates believing them to be true. He submitted that the magistrates had condemned him unheard, and that it was idle to suppose that he would have consented to accept a bribe of 6d. for giving a false certificate. He submitted that the proof brought forward by the prosecution would not be admitted as evidence in a court of law, being simply in the nature of hearsay evidence. While he gave his word of honour that the charges were false, he did not wish the Council to be contented with that, but he desired that they should have no possible doubt. In that view he had obtained at great trouble and expense the declarations which had already been referred to, and which, he contended, completely exonerated him.

The Solicitor, in reply, said the Council had a clear issue of fact to determine, and it was for them to say on which side the truth lay. The evidence which Dr. Maclean had produced in support of his case had been sprung upon the Council and had made the position difficult because the deponents could not be cross-examined. That the boy and his mother were uniting to deceive was obvious; and it was not disputed that the boy was at work all the time and was simply getting the certificates falsely and fraudulently for the purpose of deceiving the School Board. He ventured to think very little reliance could be placed on the boy's statutory declaration or on that of his mother. If the certificates were given for a small charge merely on the mother's statement, and Dr. Maclean had not seen the boy, he thought that was a serious matter, and one which the Council should attend to.

Strangers and the parties were directed to withdraw.

On readmission, the President (addressing Mr. Maclean) said, "Mr. Maclean, the Council, after deliberation, have adjudged that the facts alleged against you in the notice of enquiry have not been proved to its satisfaction."

Dental Business.

The Council then proceeded to consider dental disciplinary cases. In all cases it had before it reports of the Dental Committee containing findings as to the facts.

1. The case of Frederick de Roos Owen, registered as in practice before July 22nd, 1873, Oxford Street, Swansea. The charge was that Mr. Owen had allowed an unqualified person to attend patients and perform operations upon them and to practice dentistry on his behalf at 4, Windsor Place, Cardiff. Mr. Owen's counsel gave the committee an unqualified undertaking that in future he would employ as his assistants duly qualified persons only, and on the question being put from the Chair, Mr. Owen renewed the promise to the Council. The Council deliberated in camera; the President announced that having considered the report and the promise made by Mr. Owen, the Council had decided to proceed no further in reference to the facts proved against him.

2. The case of David Anthony, registered as in practice before July 22nd, 1878, 39, St. Mary's Street, Cardiff. The charge was that he had habitually permitted an unqualified person to attend patients and perform operations upon them, and to practice dentistry at 110, Queen Street, Cardiff. In January, 1903, a joint stock company, named Anthony, Dentists (Cardiff), Limited, was registered for the object, amongst others, of purchasing and carrying on the business of a dentist, and it appeared that Mr. Anthony subscribed the memorandum for 50 shares, the other six signatories being subscribers for 1 share each. The committee found that Mr. Anthony still has in his employment as his assistant an unqualified person. Mr. Anthony stated that he did not receive the circular of the General Medical Council issued in 1900 relating to the employment of unqualified assistants. His name had been taken off the *Register* in the latter part of 1900 under Section XII, but was restored in 1901. A previous issue of the circular took place in 1892. The Council having deliberated in camera, the President announced that on the facts found in the report of the Dental Committee it had been proved that David Anthony had been guilty of conduct infamous in a professional respect, and directed the Registrar to erase the name from the *Dentists' Register*.

3. The case of Henry Joseph Allwood, registered as in practice before July 22nd, 1878, 50, New Street, Birmingham. The charge was that he had sought to attract business by public advertisements containing his name, address, and qualifications, and in which he described himself as Dr. Allwood and claimed superiority over other practitioners. The Committee found that he was not entitled to assume the medical title of doctor, but that by his solicitor and personally he had given an unconditional undertaking to abstain from issuing any advertisement, and to withdraw the letters D.D.S. from his description of himself. Dr. Hugh Woods, who attended on behalf of the London and Counties Medical Protection Society, stated that he had ascertained that Mr. Allwood had done all he had undertaken to do. The Council, having regard to Mr. Allwood's unconditional assurance, decided to proceed no further.

4. The case of William Joseph Ferguson Mackeown, registered December 16th, 1902, 28, Tentercroft-street, St Mark's, Lincoln. The charge was that after obtaining a diploma of the Royal College of Surgeons of Edinburgh, and a few days before his name was registered in the *Dentists' Register*, he entered into the employment of two unregistered and unqualified persons who advertised extensively. Mr. Mackeown said that his error was committed through ignorance, and that it was his intention immediately to proceed to South Africa. He admitted that he had done wrong, and trusted that the Council, in consideration of his being young and inexperienced, would take a lenient view. Mr. Mackeown did not attend, but the solicitor to the Council explained that his absence was probably due to misapprehension. The Council having considered the undertaking to desist from the course of conduct set forth in the report, resolved to proceed no further in the case.

Disciplinary Cases (*continued*).

Case of Moses Blok, L.S.A.

The Council next considered the case of Moses Blok, of 47, Pyrland Road, Canonbury, N., registered as Lic. Soc. Apoth. Lond., 1871, who was charged with having on divers occasions permitted an unqualified person, namely, Camille Le Bon, to attend and prescribe for patients, and to practise medicine on his behalf, and in his name, both at his (Mr. Blok's) surgery, No. 7, New Goulston Street, Aldgate, and at the homes of his patients.

Mr. Muir Mackenzie, legal assessor, and Mr. Winterbotham, the solicitor to the Council, were present. Dr. Bateman represented the Medical Defence Union; Mr. Romaine (solicitor) appeared for Mr. Blok.

Dr. Bateman said that he had to prefer the charge of covering against Mr. Blok. The distance between 47, Pyrland Road, Canonbury, and his surgery at 7, New Gouleston Street, Aldgate, was some miles, and therefore it was impossible for Mr. Blok to personally superintend what was done at both places. He was informed that Mr. Blok had dismissed his assistant, but if a man, after having employed an unqualified assistant for sometime, received a notice from the Council that his conduct was going to be inquired into and then dismissed that assistant, and the Council should hold that that was a condonation of his offence, then there was an end of bringing charges of covering against anybody. He then proceeded to read the depositions bearing out the charges preferred.

Mr. Blok (examined by Mr. Romaine) said he practised at New Goulston Street and attended there from 10 to 1 and from 6.30 to 9; no one lived on the premises, and when he was not there it was shut up. In September of last year he engaged Mr. Le Bon who said he was an M.D. of Strasburg University and had another qualification and that he was going up for the Conjoint Board in April. His duties were simply to act as dispenser and surgery attendant as was pointed out to him at the time of his engagement. It was so entered in the receipt book. He had no authority to see patients without supervision. Le Bon was a good linguist, and able to converse with the patients, who were chiefly foreigners, in their own language. In all cases of night calls Le Bon was instructed to give the patient a cab fare and send him to his, Mr. Blok's, private address, which was about a quarter of an hour from the surgery. He arranged for night calls to be made at Le Bon's lodgings because he was able to give the patients directions. During

Le Bon's engagement only about three night calls were made, which he (Mr. Blok) had attended himself. He dismissed Le Bon on March 28th for seeing a patient and advising him without his (Mr. Blok's) supervision. He had since engaged a registered man.

Cross-examined by Dr. Bateman, he gave Le Bon four weeks' notice on March 10th, but he left on the 28th.

Mr. Romaine said that Mr. Blok had been in practice thirty years, and was a man of the highest character. He held an office under Dr. Adler, Chief Rabbi, which he could not have obtained unless he was a man of the highest integrity.

Dr. Bateman, having replied, strangers and the parties were directed to withdraw.

On readmission, the President, addressing Mr. Blok, said:

The facts alleged against Mr. Moses Blok in the notice of inquiry have not been proved to the satisfaction of the Council.

The Council then adjourned.

Wednesday, May 27th, 1903.

Sir William Turner, K.C.B., President, in the Chair.

Disciplinary Cases (*Continued*).

Case of William George Niall, M.D., M.S.

The Council then proceeded to the consideration of a case against Dr. William George Niall.

Mr. Muir Mackenzie, the Legal Assessor, and the Solicitor to the Council were present. Mr Bodkin and Mr. Simmonds, instructed by Mr. Hempson, appeared for Dr. Niall. Dr. Bateman represented the Medical Defence Union with Mr. Hempson.

Dr. Bateman suggested that the case should be heard in camera.

Mr. Bodkin did not oppose, and the Council sat in camera until the adjournment.

THE CENTRAL MIDWIVES BOARD.

DRAFT RULES. MINORITY REPORT BY MEDICAL MEMBERS.

We understand that the draft rules framed by the Central Midwives Board under Section 3 I of the Midwives Act, 1902, have been transmitted by the Privy Council to the General Medical Council, and they are now under the consideration of a special committee.

The Act, it will be remembered, does not extend to Scotland or Ireland, and Section 17 provides that:

The General Medical Council shall act by the English Branch Council, which for all purposes of this Act shall occupy the place of the General Medical Council.

The special committee will therefore make its report to the English Branch Council, which will hold a special session to receive it this day, Friday, May 29th.

The provision of the Act under which the rules have been made is as follows:

Section 3 I. To frame rules—

(*a*) Regulating their own proceedings.

(*b*) Regulating the issue of certificates and the conditions of admission to the roll of midwives.

(*c*) Regulating the course of training and the conduct of examinations, and the remuneration of the examiners.

(*d*) Regulating the admission to the roll of women already in practice as midwives at the passing of this Act.

(*e*) Regulating, supervizing, and restricting within due limits the practice of midwives.

(*f*) Deciding the conditions under which midwives may be suspended from practice.

(*g*) Defining the particulars required to be given in any notice under Section 10 of this Act.

DRAFT RULES.

The draft rules deals with the several paragraphs of the above provision seriatim:—

A.—Regulating the Proceedings of the Board.

Chairman.—The chairman is to be elected annually by ballot in April. A casual vacancy is to be filled by election at the next meeting of the Board, and the member so elected is to hold office for the remainder of the year.

Honorary Treasurer.—An honorary treasurer may be elected by ballot from among the members of the Board annually in April. A vacancy shall be filled in the same manner as provided in the case of the chairman.

Meetings. The Board shall meet on the last Thursday in each month and at such other times as may be necessary. The chairman may convene a meeting at any time, and the secretary shall do so on the written requisition of any three members. Not less than four days' notice of any meeting must be given. The quorum is fixed at four. If the chairman be absent his place is to be taken by the honorary treasurer. No business not upon the agenda paper shall be taken unless the chairman declares such business to be urgent, and is supported by two-thirds of the members present and voting.

Committees.—Every committee appointed by the Board shall make a report of its proceedings to the Board. The report will be submitted by the chairman of the committee.

Finance.—The secretary is to present at every ordinary meeting a statement showing the receipts and expenditure existing balance, and liability.

The following are the draft rules applying to paragraphs (*b*), (*c*), (*d*), (*e*) of the provisions quoted above.

B.—Regulating the Issue of Certificates and the Conditions of Admission to the Roll of Midwives.

1. Candidates must submit to the Central Midwives Board the following documents, duly filled in and signed:

(*a*) A certificate of birth, showing that the candidate is not under twenty-one years of age.

(*b*) Certificates to the effect:

(1) That the candidate has, under supervision satisfactory to the Central Midwives Board, attended and watched the progress of not fewer than twenty labours, making abdominal and vaginal examinations during the course of labour, and personally delivering the patient. (Schedule, Form I.)

(2) That she has (to the satisfaction of the person certifying) nursed twenty lying-in women during the ten days following labour. (Schedule, Form II.)

The above certificates (*b*, 1 and 2) must be in the form prescribed by the Central Midwives Board, and must be filled up and signed either by a registered medical practitioner or by the matron of an institution recognized by the Board, or by a midwife certified under the Midwives Act and approved by the Board for the purpose.

(3) That she has attended a course of instruction in the subjects named below. (Section C, 3.)

The above certificate (*b*, 3) must be in the form prescribed by the Central Midwives Board, and must be filled up and signed by a registered medical practitioner recognized by the Board as a teacher. (Schedule, Form III.)

(*c*) A certificate of good moral character. This certificate must be in the form prescribed by the Central Midwives Board, and must be filled up and signed by some person of approved position. The person signing must state in the certificate that he or she has known the candidate for at least twelve months, and must append to his or her signature a statement of his or her calling or social position (Schedule, Form IV).

2. Candidates must pass an examination as hereinafter set forth. (See C. below).

3. Candidates who have complied with the above requirements, and have successfully passed the examination, shall receive a certificate entitling them to be admitted to the roll of midwives.

The fee for the certificate shall be the same as the fee payable on being admitted to the examination, namely, one guinea.

C.—Regulating the Course of Training and the Conduct of Examinations, and the Remuneration of the Examiners.

1. Candidates who intend to present themselves for examination must send notice to the Secretary of the Central Midwives Board at least three weeks before the date fixed for the examination to commence.

The notice must be accompanied by the production of the necessary certificates, and by the payment of the fee of

1 guinea, or, in the event of the candidate having presented herself on a former occasion and having failed to pass, the fee of 15s.

2. Any candidate who during the examination shows a want of acquaintance with the ordinary subjects of elementary education may be rejected on that ground alone.

3. The examination shall be partly oral and practical, and partly written, and shall embrace the following subjects:

(*a*) The elementary anatomy of the female pelvis and generative organs.

(*b*) Pregnancy and its principal complications, including abortion.

(*c*) The symptoms, mechanism, course, and management of natural labour.

(*d*) The signs that a labour is abnormal.

(*e*) Haemorrhage: Its varieties and the treatment of each.

(*f*) Antiseptics in midwifery, and the way to prepare and use them.

(*g*) The management of the puerperal state, including the use of the clinical thermometer and of the catheter.

(*h*) The management (including the feeding) of children during the early months of life.

(*i*) The duties of the midwife in regard to the summoning of medical assistance.

(*j*) Obstetric emergencies, and how the midwife should deal with them until the arrival of a doctor. This will include some knowledge of the drugs commonly needed in such cases, and of the mode of their administration.

4. The remuneration of the examiners shall be such as may from time to time be recommended by the Central Midwives Board, and approved by the Privy Council.

D.—Regulating the Admission to the Roll of Women already in Practice as Midwives at the Passing of the Act.

1. Applications for admission to the roll of midwives under Section 2 of the Midwives Act must be made on the prescribed forms (Schedule, Forms V, VI, VIII), and must be forwarded to the Central Midwives Board, together with such one or more of the following certificates as may be required.

2. In the case of women claiming admission on the ground of having obtained a certificate in midwifery from the Royal College of Physicians of Ireland, the Obstetrical Society of London, the Coombe Lying-in Hospital, and Guinness's Dispensary, or the Rotunda Hospital for the Relief of the Poor Lying-in Women of Dublin, (*a*) either the original certificate on which the application is based, or in the event of the original certificate having been lost, a voucher from the accredited secretary or other agent of the certifying body to the effect that a certificate was granted to the applicant on such and such a date; and (*b*) a certificate signed by a justice of the peace, minister of religion, or registered medical practitioner, or the secretary of the institution (approved by the Central Midwives Board) of which the applicant is a member, or is or was an employé, stating that the applicant is the person to whom the afore-mentioned certificate in midwifery was granted. The application must be accompanied by the fee of 1 guinea.

3. In the case of women claiming admission on the ground of having obtained a certificate in midwifery from any institution or examining body other than those specified in Section 2 of the Midwives Act, the certificate on which the application is based, together with satisfactory evidence, in the form prescribed by the Central Midwives Board (Schedule, Form VII), to the effect that before the certificate was granted the applicant had received a proper course of instruction and training (including personal attendance, under competent supervision, upon at least twenty cases during and after labour), and had passed an examination in midwifery and the duties of a midwife, and that the institution or examining body by which the certificate was granted considers the applicant at the present time to be a proper person to be admitted to the Midwives Roll.

The applicant may be required to furnish other documents or particulars to enable the Board to decide whether the application can be granted. If her claim is allowed by the Board a fee of 1 guinea will be payable before the Board's certificate is issued to her.

No application under this clause will be entertained by the Board before April 1st, 1904.

4. In the case of women claiming admission on the ground of having been in bona-fide practice as midwives for the twelve months previous to July 31st, 1902, a certificate to the effect that the applicant has, to the personal knowledge of the person signing, been in bona-fide practice as a midwife—that is, that she has "habitually and for gain attended women in childbirth otherwise than under the direction of a qualified medical practitioner," for at least twelve months prior to July 31st, 1902, and that she is trustworthy, sober, and of good moral character. This certificate must be in the form given in the Schedule (Form IX), must be signed by two persons of approved position, and must be accompanied by the fee of 1 guinea.

5. No application for admission to the Roll of Midwives under Section 2 of the Midwives Act, 1902, can be received after March 31st, 1905.

6. The names of all women admitted to the Roll of Midwives under Section 2 of the Midwives Act shall be printed in one single list and in alphabetical order.

E.—Regulating, Supervising, and Restricting within due Limits the Practice of Midwives.

Directions to Midwives.

1. The midwife must be scrupulously clean in every way, because the smallest particle of decomposing matter may set up puerperal fever.

It is particularly dangerous for a midwife who is attending a case in which there are foul-smelling discharges to go direct to another case without first thoroughly cleansing and disinfecting her hands and forearms, and such appliances as she may have had occasion to use.

Unless the cleansing process be thoroughly carried out there will be, even after a healthy confinement, remains of blood, lochia, or liquor amnii on the fingers, and especially under the nails, which will there undergo decomposition, and so become dangerous to the next patient attended. The midwife must, therefore, keep her nails cut short, and preserve the skin of her hands as far as possible from chaps and other injuries.

She should wear a dress of washable material, and over it a clean washable apron; it is best to have the sleeves of the dress made so that the midwife can tuck them well up above the elbows.

2. When called to a confinement a midwife must take with her:

(*a*) An appliance for giving vaginal injections, an appliance for giving enemata, a catheter, a pair of scissors, a clinical thermometer, and a nail brush.

(*b*) An efficient antiseptic for disinfecting the hands, etc.

(*c*) An antiseptic for douching in special cases.

(*d*) An antiseptic lubricant for smearing the fingers, catheters, douche nozzles, and enema nozzles before they touch the patient.

3. On each occasion of touching the genital organs or their neighbourhood the midwife must previously disinfect her hands and forearms.

4. All instruments and other appliances brought into contact with the patient's generative organs must be properly disinfected.

5. Whenever a midwife has been in attendance upon a patient suffering from puerperal fever, or from any other illness supposed to be infectious, she must disinfect herself and all her instruments and other appliances, and must have her clothing thoroughly disinfected before going to another labour. Unless otherwise directed by the local supervising authority, all washable clothing should be boiled, and other clothing should be sent to be stoved (by the local sanitary authority), and then exposed freely to the open air for several days.

Duties to Patient.

6. In cases of threatened danger or of abnormal conditions occurring in women whether pregnant, in labour, or lying-in, or in their newborn children, or on the sudden death of a pregnant or lying-in woman, the midwife must decline to remain in attendance alone, and must advise that a registered medical practitioner be at once sent for.

7. If a midwife has charge of a lying-in case she must not leave the patient after the commencement of the second stage, and she must stay with the woman until the expulsion of the afterbirth, and as long after as may be necessary. In cases where a doctor has been sent for on account of the labour being abnormal or of there being threatened danger, she must await his arrival and faithfully carry out his instructions. (See Clauses 13 and 18 below.)

8. Before making the first internal examination, and always before passing a catheter, the midwife must wash the patient's external parts with soap and water, and then swab them with an antiseptic solution. For this purpose, and for washing the external parts immediately after labour and during the lying in, on no account must ordinary sponges or flannels be used, but material which can be boiled before use and thrown away afterwards, such as linen, cotton wool, cotton waste, tow, etc.

9. No more internal examinations should be made than are absolutely necessary.

10. On the birth of a child which is in danger of death, it is the midwife's duty to inform one of the parents of the child's condition.

11. The midwife must remove soiled linen, blood, faeces, urine, and the placenta from the neighbourhood of the patient and from the lying-in room as soon as possible after the labour, and in every case before she leaves the patient's house.

12. The midwife is responsible for the cleanliness, and should give full directions for securing the comfort and proper dieting of the mother and child during the lying-in period, which shall be held for the purpose of these regulations and in a normal case, to mean the time occupied by the labour and a period of ten days thereafter. (See Clause 18 (*c*).)

13. A "case of normal labour" in these regulations shall be held to mean a labour in which there are none of the conditions specified in Clause 18 below.

Duties to Child.

14. In the case of a child being born apparently dead, the midwife should carry out the methods of resuscitation which have been taught her.

15. As soon as the child's head is born, and if possible before the eyes are opened, its eyelids should be carefully cleansed.

General.

16. No midwife shall undertake the duty of laying out the dead, or follow any occupation that is in its nature liable to be a source of infection.

17. A midwife must enter in a book, to be kept for that purpose, all occasions on which she administers any drug scheduled as a poison, the dose, and the time and cause of its administration.

18. In all cases of illness of the patient or child, or of any abnormality occurring during pregnancy, labour, or lying-in, a midwife must decline to attend alone, and must advise that a registered medical practitioner be sent for, as for example, under the following circumstances:

(*a*) In the case of a pregnant woman:

1. When she suspects a deformed pelvis.
2. When there is loss of blood.
3. When the pregnancy presents any other unusual feature (as, for example, excessive sickness, persistent headache, dimness of vision, puffiness of face and hands, difficulty in emptying the bladder, incontinence of urine, large varicose veins, or rupture), or when it is complicated by fever or any other serious condition.

(*b*) In the case of a woman in labour:

1. In all presentations other than the uncomplicated vertex or breech; in all cases of flooding and convulsions; and also whenever there appears to be insufficient room for the child to pass, or when a tumour is felt in any part of the mother's passages.
2. If the midwife when the cervix has become dilated is unable to make out the presentation.
3. If there is loss of blood in excess of what is natural, at whatever time of the labour it may occur.
4. If an hour after the birth of the child the placenta has not been expelled, and cannot be expressed (that is, pressed out), even if no bleeding has occurred.
5. In cases of rupture of the perineum, or any other serious injury to the soft parts.

(*c*) In the case of lying-in women, and in the case of newly-born children:

Whenever, after delivery, the progress of the woman or child is not satisfactory.

(See Clauses 6, 7, 12, 13, above.)

When a doctor is sent for the midwife must state in writing the condition of the patient and the reason of the necessity for medical advice.

19. *Notification.*

1. *Deaths.*—In all cases where a registered medical practitioner is not in attendance the midwife shall, as soon as possible after the death of a mother or child, notify the same to the local supervising authority.

2. *Stillbirths.*—In all cases where a registered medical practitioner is not in attendance the midwife shall, as soon as possible after the occurrence of a stillbirth, notify the same to the local supervising authority.

A child is deemed to be stillborn when it has not breathed or shown any sign of life after being completely born.

3. *Puerperal Fever and other Infectious Diseases.*—These cases are included in the notice required when medical help is sent for. (See 20 (*b*) below.

20. A midwife shall keep the following records:

(*a*) A register of cases, in the following form:

No. .....
Date of engagement to attend .....
Name and address .....
Number of previous labours and miscarriages .....
Age ..... Married or single .....
Date and hour of midwife's arrival .....
Presentation .....
Duration of first and third stage of labour .....
Complications (if any) during or after labour .....
Sex of infant .. .. Born living or dead ... .
Full time or premature—number of months .....
If doctor called ..... Name of doctor .....
Date of midwife's last visit .....
Condition of mother then (see Clause 12, above) .....
" child then .....
Remarks .....

The midwife is also recommended to keep a casebook with fuller details:

(*b*) A record of sending for medical help, in the following form:

No. ..... Date .....
Name of patient .....
Address .....
Requires medical assistance at once on account of .....
(Signed) ..... (certified midwife).

Sent to (doctor) .....
At (address) .....
Time of sending message .....

The midwife shall make two copies of the above by means of transfer paper or otherwise; she shall preserve one of these copies for herself, and shall send the other by post to the local supervising authority within twelve hours (see Clause 19 (3) above).

F.—Deciding the Conditions under which Midwives may be Suspended from Practice.

(1) The committal of any offence punishable by law.
(2) Malpractice.
(3) Professional negligence.
(4) Contravention of the regulations for midwives laid down by the Central Midwives Board.

N.B.—In carrying out Section 8 (3) of the Midwives Act, 1902, the local supervising authority shall forthwith report any suspension to the Central Midwives Board.

G.—Defining the Particulars required to be given in any Notice under Section 10 of the Act.

The draft rules requires that the notification which every woman certified under the Act must give to the local supervising authority before holding herself out as a practising midwife or commencing to practise as a midwife shall contain the following particulars:

1. The number and date of her certificate.
2. Her name in full.
3. Her place of residence and if she practise elsewhere the address where she practises.
4. If she practise outside the area, the date and address at which commenced to practise or pursue her calling outside such area.

Schedule.

Forms of Applications and Certificates.

The following forms are set out in full in the Rules:—

Form I.—Certificate of attendance on cases.

I certify that..... (to whom this certificate refers) has, under my supervision, attended and watched the progress of not fewer than twenty labours, making abdominal and vaginal examinations during the course of labour, and personally delivering the patient.

Form II.—Certificate of attendance during the lying-in period.

I certify that ..... (to whom this certificate refers) has to my satisfaction nursed twenty lying-in women during the ten days following labour.

Form III.—Certificate of having attended a course of instruction.

I certify that ..... (to whom this certificate refers) has attended, to my satisfaction, a course of instruction given by myself on the subjects enumerated in the regulations.

Form IV.—Certificate of good moral character.

Form V.—Application to be admitted to the Roll of Midwives under Section 2 of the Midwives Act, on the ground of holding a certificate in midwifery from one of the bodies specified in the Act.

Form VI.—Application to be admitted to the Roll of Midwives under Section 2 of the Midwives Act, on the ground of holding a certificate in midwifery from a body not specified in the Act.

Form VII.—Testimony on behalf of a non-specified certifying body to the effect that its certificate was granted after a proper course of instruction and training, and that the applicant is at the present time a fit and proper person to be admitted to the Midwives Roll.

I hereby testify that before a certificate was granted to ..... by the institution or examining body of which I am at present the accredited or recognized representative ..... had received a proper course of instruction and training (including personal attendance under competent supervision upon at least twenty cases

during and after labour), and had passed an examination in midwifery and the duties of a midwife.

I further testify that she is at the present time a fit and proper person to be admitted to the Midwives Roll.

Form VIII.—Applicant to be admitted to the Roll of Midwives under Section 2 of the Midwives Act, on the ground of having been in bona-fide practice as a midwife for at least one year prior to July 31st, 1902.

Form IX.—Certificate of having been in bona-fide practice as a midwife for a period of at least one year prior to July 31st, 1902, and of being of good moral character.

I certify that ..... has, to my personal knowledge, been in bona-fide practice as a midwife (that is, that she has "habitually and for gain attended women in childbirth otherwise than under the direction of a qualified medical practioner") since ....., and that she is trustworthy, sober, and of good moral character.

MINORITY REPORT.

The following minority report, signed by three of the five medical members of the Board, has been transmitted to the Lord President of the Privy Council, and acknowledged by the Clerk to the Privy Council:

To His Grace the Duke of Devonshire, the Lord President of the Privy Council.

My Lord Duke,—

We the undersigned members of the Central Midwives Board beg to submit for the consideration of your Lordship and the Honourable Members of the Privy Council a minority report respecting the draft rules framed by the Board under Section 3 of the Midwives Act, 1902. We believe that the proposed modification of the rules as set forth in our report will greatly add to the efficient training of midwives and help to improve the practice of midwifery among the poorer classes throughout the country.

We have the honour to be,

Your Lordship's most humble servants,

(Signed) J. Ward Cousins, F.R.C.S., M.D. (Lond.),
Appointed by the Royal College of Surgeons.
W. J. Sinclair, M.D.,
Nominated by the Lord President of the Council.
E. Parker Young, L.S.A., L.M., M.R.C.S. (Eng.),
Appointed by the Society of Apothecaries.

London, May 21st, 1903.

Amendments and Additions.

By J. Ward Cousins, W. J. Sinclair, and E. Parker Young to the rules framed under Section 3 I of the Midwives Act, 1902 (2 Edw. 7, C. 17) by the Central Midwives Board.

A.—Regulating the Proceedings of the Board.

There is no provision for the admission of the public or of reporters. We do not see why the meetings of the Central Midwives Board should not be as open as those of the General Medical Council; and we consider that publicity is desirable in the interests, both of persons and institutions, whose interests may be affected by the work of the Board, so that they may have the opportunity of offering suggestions and objections before irrevocable steps are taken by the Board.

B.—Regulating the Issue of Certificates and the Condition of Admission to the Roll of Midwives.

We believe that *before* the midwife pupil is permitted to enter upon her professional training she should be required to furnish proof that she has received a certain specified minimum of general education. We regard such a provision as essential to improvement in the standard of intelligence and efficiency of the midwives of the future. A general education *equivalent* to the seventh standard in elementary schools would be sufficient at the present time.

I am satisfied with the report of the majority on this point. —E. Parker Young.

B 1 (*b*) (1) and (2). Some portion of the cases should be attended within a lying-in institution, or the midwifery ward of a workhouse hospital approved by the Board. Without such a regulation the pupil midwife may continue to obtain her practical instruction under the most unsatisfactory conditions in the homes of the poor. She must miss the opportunity of learning by precept and example the best quality of midwifery practice.

Although desirable, I am not prepared to insist on this, as it is not enforced on male medical students. —E. P. Y.

B 1 (*b*) (3). It should be specifically stated that no medical practitioner will be recognized as a teacher by the Board unless he holds an appointment on the staff of a recognized lying-in institution, or has charge of the lying-in ward of a workhouse hospital approved by the Board. Failing such a regulation, entailing responsibility to a Board on the part of the instructor, the present injurious practice of "coaching" will be encouraged, and other irregularities may grow up.

After B 1 (*b*) (3). No time is specified over which the course of instruction for midwife pupils ought to extend. We regard six months as the minimum for entirely untrained pupils. Whether a shorter period would suffice for fully trained and certificated nurses is a question for consideration.

C.—Regulating the Course of Training and the Conduct of Examinations, and the Remuneration of the Examiners.

2. "Any candidate who during the examination shows a want of acquaintance with the ordinary subjects of elementary education may be rejected on that ground alone."

We regard this as an unsatisfactory rule, because:

(1) Proof of elementary education ought to be supplied *before* professional training is begun. It seems extremely unfair to permit pupils to bear the expense of a professional training and pay the fee for examination if their general education is so defective that they must be rejected on this ground alone.

(2) The required standard of elementary education ought to be clearly and definitely fixed for the guidance of pupils and examiners.

(3) Otherwise the passing or rejection of the candidates must depend largely upon the caprice of the examiners in different parts of the country, and the candidates will have no means of knowing what is expected of them as a standard of elementary education for which they must prepare themselves.

C 3. *The Examination.*

While we do not object to information being given by the teachers on the subjects mentioned, we think the limits of what the midwife is to practise ought to be exactly defined, and the bearing of her knowledge on what she is forbidden to do clearly enunciated at this place in the Rules. We think this should be done for the guidance of pupils, teachers, and examiners; it would also be of advantage to the medical representatives of the Local Supervising Authorities. In the absence of some statement for guidance and warning, there will be a danger that the midwife may consider herself at liberty to use all her knowledge in practice.

(*b*) Seems to imply that midwives may be expected to use their own judgement with regard to the disorders of pregnancy. It seems also to imply that midwives are to attend cases of abortion. Attendance upon cases of abortion should be absolutely forbidden on the ground (1) that the patient's future health may depend upon the judicious medical and surgical treatment of abortion; and (2) the utmost care is required for the prevention of crime.

(*e*) The treatment of haemorrhage cannot be any part of a midwife's duties.

(*g*) Should read "the normal puerperal state."

(*h*) Instruction in "the management (including the feeding) of children during the early months of life" appears to imply that the midwife is to act as physician in the treatment of infantile diseases, and that her duties may extend beyond the ten days of the normal puerperium.

(*j*) The second sentence is highly objectionable unless guarded by instructions and limitations to be afterwards referred to. (E, 17, p. 8.)

To these subdivisions should be added at least (*k*) and (*l*), as under:

(*k*) The signs of the important diseases of the newborn which may develop during the first week.

(*l*) The relation of "childbed fever" to infectious diseases, the sanitary condition of the house, and the personal health of its inmates.

D.—Regulating the Admission to the Roll of Women already in Practice as Midwives at the Passing of the Act.

D 3. A portion of this rule is impracticable and in any

case it raises unfair difficulties. "In the case of women claiming admission (to the Midwives' Roll) on the ground of having obtained a certificate in midwifery from any institution or examining body other than those specified in Section 2 of the Midwives Act," it is unfair to lay upon such institution the burden of certifying that the applicant is considered to be "at the present time" "a proper person to be admitted to the Midwives' Roll." To comply with such a condition would necessitate an inquisitorial and perhaps mischievous investigation into the personal history of individual holders of certificates not of recent date. The object sought would be better obtained by certificates similar to those required from women claiming on the ground of bona fide practice.

"The applicant may be required to furnish other documents or particulars." This is also unfair to the unprivileged institutions or examining bodies not named in the Act. "Documents or particulars," which may be required, should be specifically mentioned in the rules from the first. Questions might arise under this dangerous paragraph the answers to which would throw a great strain upon the reputation of the Midwives Board for impartial judgement.

"No application under this clause will be entertained by the Board before April 1st, 1904." It is difficult to see the ground for this unequal treatment. Why should all women of this unprivileged class, which contain the best midwives trained in provincial England and Scotland, be kept in suspence for a year instead of receiving their certificates in order of application? There is nothing in the Act to justify this rule. It should be referred back to the Board for explanation.

E.—REGULATING, SUPERVISING, AND RESTRICTING WITHIN DUE LIMITS THE PRACTICE OF MIDWIVES.

E 6. There is in this paragraph an objectionably loose employment of the term "pregnant." It should be made clear here and everywhere in the rules that a midwife must not be professionally in charge of a pregnant woman.

Under "Directions to Midwives" should be interpolated a paragraph to the following effect:

It is desirable, in order that the lying-in room may be kept in the best condition practicable, that the midwife should be instructed to endeavour to prevent the admission of undesirable neighbours to the homes of the poor during labour.

E 17. This extremely difficult question of the administration of drugs by midwives has not received sufficient attention from the Board. The rule here laid down is most unsatisfactory. It ought to be strongly and clearly stated that midwives *must* not administer drugs, without precluding the use of household remedies or medicines such as the patient herself would take under ordinary circumstances. The rare exceptions *after* labour, when intense pain or imminent danger from haemorrhage or from syncope appears to demand the use of a sedative or other drug, ought to be distinctly stated.

The amount of the dose, the time of administration, and the midwife's reason for giving it should be set down in the *notes of the case*. The possession by the midwife of "a book to be kept for that purpose" appears to anticipate a common practice. The paragraph appears to imply that no check is to be kept on the administration of any drug not "scheduled as a poison."

If a woman *in labour* appears to the midwife to require the administration of a drug, the labour must be considered abnormal, and medical assistance must be obtained.

E 18 The assumption that midwives may be in attendance upon pregnant women again finds expression.

(*a*) The same assumption recurs again. This rule would be safer and more useful if it stated that the midwife shall not give advice to pregnant women, but on being made aware of any unusual feature of a pregnancy it is her duty to urge upon the pregnant woman the need for professional advice.

E 18 (*b*) We would add here "breech presentation in a primipara must be considered abnormal labour."

E 18 (*c*) This paragraph is so extremely inadequate as to be equivalent to abrogation of its function by the Board. Specific directions should be given on certain points with regard to both mother and child.

(I) *Mother:*

(1) Abdominal swelling and signs of insufficient contraction of the womb.
(2) Foul-smelling discharges.
(3) Haemorrhage — so-called "secondary *post partum* haemorrhage."
(4) Rigor.
(5) Rise of temperature and quickening of the pulse continuing for a time to be specified.

N.B.—(4) and (5) *are the only early signs of child bed fever that the midwife can be expected to detect.*

(6) Unusual swelling of the breasts, with local tenderness or pain.

Concerning other points to be observed which may call for medical treatment, the midwife will learn during training. These given above, as indicating serious conditions, should be specifically mentioned in the Rules.

(II) *The Child:*

(1) Injuries at birth.
(2) Obvious malformations or deformities, consistent with living.
(3) When the child is unable to suck or take nourishment (concealed malformations).
(4) Inflammation of the eyes, eyelids, and ears to even the slightest extent.
(5) Appearance of the skin in certain parts, the condition of the nostrils, etc.

N.B.—*Infants affected with congenital syphilis are in danger themselves, and are a source of danger to a whole family. Hence early detection and treatment are of the first importance.*

(6) Prematurity within the weeks from viability to full term.
(7) Jaundice (icterus neonatorum).
(8) Inflammation about the umbilicus (septic infection of the cord).

The midwife is responsible only for the *cleanliness* and *proper feeding* of the child during the lying-in period of ten days, but under no circumstance must any drug be administered except under the direction of a registered medical practitioner.

Concerning other points to be observed which may require medical treatment, the midwife will learn during training. These given above as involving serious consequences should be referred to specifically in the rules.

E 19 (1) *Deaths:* This paragraph appears to imply that a midwife may be attending either mother or child in a fatal illness not ending suddenly. If this is the meaning the paragraph should be expunged. If the Rule refers to *sudden* death it is superfluous, and is likely to lead to clashing with the duties of the registrar of deaths and of the coroner.

(2) *Stillbirths.*—This rule appears to go beyond existing legislation. The rule cannot be imposed, without legislation, upon the medical profession; and if notification of stillbirths, including the births of premature non-viable children, to the local supervising authority by the midwife, were to cause annoyance by gossip or scandal in certain localities the rule would act unfavourably on the employment of midwives. The rule appears to be *ultra vires*, uselessly meddlesome, and unfair to the midwife. Besides it closely approaches an evasion of the Midwives Act I (5). (See Act I (5), p. 2).

(3) This rule by which the midwife is required to notify puerperal fever and other infectious diseases is superfluous, and it would probably be injurious in its consequences.

Medical practitioners are required to notify puerperal fever and other infectious diseases. To lay the onus of notification on the midwife would be to afford her an excuse for loss of time while she completed her *diagnosis*. The midwife should be required to send for medical assistance on the ground of *symptoms alone* and not to wait for her diagnosis of a disease.

If this is not a just and reasonable objection to the rule, the rule is ambiguous and requires clear and exact enunciation.

Puerperal fever is vastly too important a subject to be dismissed with a reference to a Form.

E 20 (*a*) This form should afford space under "remarks" for the midwife's entries regarding drugs or medicines administered by her. Each case should be complete in itself, without need of further reference, for the perusal of the inspector or representative of the local supervising authority.

SCHEDULES.

Form III.—*Certificate of having attended a Course of Instruction.*

The exact duration of the course of instruction should be stated in the certificate. The date from which and to which the course extended; and the number of lessons or lectures comprised in the course should be explicitly stated in the certificate.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JUNE 20TH, 1903.

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British Medical Association.

SEVENTY-FIRST ANNUAL MEETING.

THE seventy-first annual meeting of the British Medical Association will be held at Swansea on Tuesday, Wednesday, Thursday, and Friday, July 28th, 29th, 30th, and 31st, 1903.

President: WALTER WHITEHEAD, F.R.C.S.Edin., F.R.S.E., Consulting Surgeon, Manchester Royal Infirmary, Manchester.

President-elect: THOMAS DRYSLWYN GRIFFITHS, M.D.Lond., M.R.C.S., Swansea.

Chairman of Council: ANDREW CLARK, F.R.C.S., Surgeon to the Middlesex Hospital and Lecturer on the Principles and Practice of Surgery.

Treasurer: EDWARD MARKHAM SKERRITT, M.D., F.R.C.P. Lond., Senior Physician to the Bristol General Hospital; Professor of Medicine, University College, Bristol.

An Address in Medicine will be delivered by FREDERICK T. ROBERTS, M.D.

An Address in Surgery will be delivered by A. W. MAYO ROBSON, F.R.C.S.

The *Honorary Local Secretaries* are: WILLIAM FREDERICK BROOK, F.R.C.S., Longlands House, St. Helens Road, Swansea; and FRANK GRIFFITH THOMAS, M.B., 2, Brunswick Place, Swansea.

The Scientific Business of the Meeting will be conducted in eleven Sections, as follow, namely:

A.—MEDICINE.

President: Sir ISAMBARD OWEN, M.D., London. *Vice-Presidents:* CHAS. TANFIELD VACHELL, M.D., Cardiff; DAVID ARTHUR DAVIES, M.B., Swansea; JAMES KINGSTON FOWLER, M.D., London. *Honorary Secretaries:* ERNEST LE CRONIER LANCASTER, M.B., Winchester House, Swansea; FRANCIS DARBY BOYD, C.M.G., M.D., 22, Manor Place, Edinburgh.

The following subjects have been selected for discussion:

1. The Medical Treatment of Inflammations in the Caecal Region.
2. Susceptibility and Infection.
3. The Treatment of Gastric Ulcer.

B.—SURGERY.

President: EDMUND OWEN, F.R.C.S., London. *Vice-Presidents:* ALFRED SHEEN, M.D., Cardiff; HENRY ARTHUR LATIMER, M.D., Swansea; JORDAN LLOYD, F.R.C.S., Birmingham. *Honorary Secretaries:* HENRY BETHAM ROBINSON, M.S., 1, Upper Wimpole Street, W.; RICHARD COGSWELL ELSWORTH, F.R.C.S., 203, St. Helen's Road, Swansea.

Special discussions have been arranged to take place on the following subjects:

1. Practical Experience Regarding the most Satisfactory Methods of Performing Intra-abdominal Anastomosis. To be introduced by Mr. G. H. Makins, C.B., and Mr. E. Stanmore Bishop.

2. The Treatment of Advanced Tuberculous Disease of the Knee-joint. To be introduced by Mr. G. A. Wright and Mr. Haslam. (By "advanced" is implied the stage where operative interference of some kind is imperative.)

C.—OBSTETRICS AND GYNAECOLOGY.

President: Professor WILLIAM STEPHENSON, M.D., Aberdeen. *Vice-Presidents:* JOHN ADAMS RAWLINGS, M.R.C.P., Swansea; ANDREW JOHN HORNE, F.R.C.P.I., Dublin; RICHARD NELSON JONES, M.R.C.S., Swansea. *Honorary Secretaries:* THOMAS WATTS EDEN, M.D., 26, Queen Anne Street, Cavendish Square, W.; EWEN JOHN MACLEAN, M.D., 12, Park Place, Cardiff.

It has been arranged that on July 29th and July 31st the first part of the meeting of this Section shall be occupied by a discussion on the following subjects:

1. Wednesday, July 29th.—The Management of Pregnancy complicated with Uterine Fibroids. To be introduced by Dr. Amand Routh.

2. Friday, July 31st. The Diagnosis and Treatment of Tuberculosis of the Uterus and Adnexa. To be introduced by J. H. Targett, M.S.

D.—STATE MEDICINE.

President: JOHN C. MCVAIL, M.D., Glasgow. *Vice-Presidents:* EBENEZER DAVIES, M.R.C.S., Swansea; Major ROBERT HAMMILL FIRTH, R.A.M.C., F.R.C.S., London; THOMAS JOSEPH STAFFORD, F.R.C.S.I., Dublin. *Honorary Secretaries:* ARTHUR LLOYD JONES, D.P.H., Rotherslade House, Glyncerrig, Oystermouth, Mumbles, Glam.; JOHN ROBERTSON, M.D., 76, Clarke Grove Road, Sheffield.

The following subjects have been selected for discussion, and it is proposed as far as possible that they shall be taken at the beginning of each of the three days of meeting, and that other subjects should be subsequently discussed as far as time may permit:

1. The Vaccination Acts and Small-pox Prevention.

2. Rivers Pollution Prevention, especially in Industrial Districts.

3. Seashore Pollution as it affects Oysters and other Shellfish and the Pisciculture of our Estuaries.

4. Food Poisoning and Adulteration.

E.—Psychology.

President: Robert Jones, M.D., Claybury. *Vice-Presidents:* James Glendinning, M.D., Abergavenny; Edwin Goodall, M.D., Carmarthen. *Honorary Secretaries:* Robert Sloss Stewart, M.D., Glamorgan County Asylum, Bridgend; Robert Henry Cole, M.D., 48, Upper Berkeley Street, W.

The following discussions have been arranged:

Wednesday, July 29th.—The Pathology of General Paralysis. To be introduced by Dr. W. Ford Robertson.

Thursday, July 30th.—Alcohol in its Relation to Mental Diseases. To be introduced by Dr. Theo. B. Hyslop.

Friday July 31st.—The Care and Treatment of Incipient Insanity. To be introduced by Dr. David Yellowlees.

F.—Pathology.

President: David James Hamilton, M.B., Aberdeen. *Vice-Presidents:* John Michell Clarke, M.D., Clifton, Bristol; Alex. Charles O'Sullivan, M.B., Dublin. *Honorary Secretaries:* George Leslie Eastes, M.B., 62, Queen Anne Street, W.; Daniel Edward Evans, M.B., Picton House, Swansea.

The following subjects have been arranged for general discussion, as important communications relative to them have already been promised:

Thursday, July 30th.—The Pathology of Splenic Anaemia. To be introduced by Dr. H. D. Rolleston.

The Pathology of Miners' Diseases. To be introduced by Dr. T. Oliver.

G.—Ophthalmology.

President: Henry Edward Juler, F.R.C.S., London. *Vice-Presidents:* Jabez Thomas, F.R.C.S., Swansea; Thomas Herbert Bickerton, M.R.C.S., Liverpool; A Freeland Fergus, M.D., Glasgow. *Honorary Secretaries:* Henry Collen Ensor, M.R.C.S., 23, Windsor Place, Cardiff; William Tindall Lister, F.R.C.S., 30, Queen Anne Street, W.

The following subjects have been chosen for discussion:

1. Eye Changes in Relation to Renal Disease. To be introduced by Edward Nettleship, F.R.C.S.

2. Conical Cornea and its Treatment. To be introduced by A. Stanford Morton, F.R.C.S.

3. The Treatment of Strabismus. To be introduced by Gustavus Hartridge, F.R.C.S.

Arrangements will be made for the exhibition of rare ophthalmoscopic and other cases in the Section. Further, it is proposed to have a special ophthalmological museum for specimens, drawings, instruments, etc.

H.—Diseases of Children.

President: William Arbuthnot Lane, F.R.C.S., London. *Vice-Presidents:* Abraham Garrod Thomas, M.D., Newport; Philip Rhys Griffiths, M.B., Cardiff; Robert Wm. Murray, F.R.C.S., Liverpool. *Honorary Secretaries:* Frederick Knight, M.D., 10, Walter Terrace, Swansea; William Langford Symes, F.R.C.P.I., 74, Merrion Square, Dublin.

The following subjects have been selected for discussion:

Wednesday, July 29th.—The Pathology and Treatment of Chorea. To be introduced by D. B. Lees, M.D., F.R.C.P.

Thursday, July 30th.—Congenital Dislocation of the Hip. To be introduced by F. F. Burghard, M.S., F.R.C.S.

Friday, July 31st.—Tuberculosis in Children; its Relation to Bovine Tuberculosis. To be introduced by Nathan Raw, M.D. (Professor Koch has been invited to take part in this discussion.)

I.—Laryngology and Otology.

President:—Patrick Watson Williams, M.D., Clifton, Bristol. *Vice-Presidents:* Donald Rose Paterson, M.D., Cardiff; Wm. Permewan, M.D., Liverpool; Arthur Logan Turner, M.D., Edinburgh. *Honorary Secretaries:* John Lacy Firth, M.D., 20, Richmond Park Road, Clifton, Bristol; Albert Francis Blagdon Richards, M.D., 5, Clevedon Terrace, Walter Road, Swansea.

The following subjects have been selected for special discussion:

1. Wednesday, July 29th.—On the Operative Treatment for Malignant Disease of the Larynx. To be introduced by Sir Felix Semon, C.V.O., and Dr. E. J. Moure (Bordeaux).

2. Thursday, July 30th.—On the Technique of Operations on the Temporal Bone in Suppurative Middle-Ear Disease. To be introduced by Dr. P. McBride and Dr. A. Hartmann (Berlin).

3. Friday, July 31st.—On the Upper Respiratory Tract as a Source of Systemic Infections. To be introduced by Dr. de Havilland Hall and Dr. Jobson Horne.

J.—Navy, Army, and Ambulance.

President: Inspector-General Henry Charles Woods, R.N., M.D., C.B., C.V.O., London. *Vice-Presidents:* Brigade-Surgeon-Lieutenant-Colonel Evan Jones, V.D., M.R.C.S., Welsh Brigade, Aberdare; Major Frederic Samuel Heuston, R.A.M.C., C.M.G., F.R.C.S.I., Dublin. *Honorary Secretaries:* Fleet-Surgeon John Lloyd Thomas, R.N., M.R.C.S., H.M.S. *Excellent*, Portsmouth; Lieutenant-Colonel M. W. H. Russell, R.A.M.C., M.R.C.S., 48, Cheyne Court, Chelsea, S.W.; Surgeon-Major John Arnallt Jones, M.D., 2nd V.B. Welsh Regiment, Aberavon.

The following subjects have been selected for discussion:

1. On Scurvy.

2. On the Value of Field Dressings.

3. On the Operation for the Radical Cure for Hernia in the Navy.

4. On Mediterranean Fever.

K.—Tropical Diseases.

President: George H. T. Nuttall, M.D., Ph.D., Cambridge. *Vice-Presidents:* Sir Francis Lovell, C.M.G, 18, Clifton Villas, Maida Vale, W.; Staff-Surgeon Percy William Bassett-Smith, M.R.C.S., Royal Naval Hospital, Haslar, Gosport. *Honorary Secretaries:* G. C. Low, M.B., London School of Tropical Medicine, Albert Docks, E.; Captain Leonard Rogers, I.M.S., M.D., Hartley, Plymouth.

The following subjects have been selected for discussion:

Wednesday, July 29th.—The Disposal of Excreta in the Tropics. To be opened by Professor W. J. Simpson.

Thursday, July 30th.—Trypanosomiasis. To be opened by Dr. Patrick Manson, C.M.G.

Friday, July 31st.—Leprosy; its Etiology, Histology, and Treatment.

Sectional Committees of Reference.

Under the regulations of the Association for the conduct of annual meetings, the president, vice-president, and secretaries of each Section form a committee of reference and are instructed to exercise the power of accepting, declining, or postponing any paper, and of arranging the order in which accepted papers shall be read. It is further laid down that papers shall not be accepted in excess of the number likely to be read, and that, save in exceptional circumstances, no paper should be accepted for reading until it has been sent in to the secretaries and actually approved by the committee of reference of the Section.

Reports of Branch Meetings.

BATH AND BRISTOL BRANCH:

Bath and Trowbridge Divisions.

A combined meeting of these Divisions was held at Bath on May 29th; Mr. R. J. H. Scott, Chairman of the Bath Division, in the chair. Mr. W. M. Beaumont was elected Representative of the two Divisions in Representative meetings of the Association.

Bath Division.

Election of Officers.—The following officers were elected at a meeting of the Bath Division on May 27th:—*Chairman of the Executive Committee:* Mr. R. J. H. Scott. *Vice-Chairman:* Dr. E. Field. *Secretary:* Mr. W. M. Beaumont. *Members of the Branch Council:* Mr. F. Lace, Mr. R. S. Fowler, Mr. T. B. Goss, Mr. T. D. Ransford, Dr. W. D. McD. Ellis, Mr. G. S. Pollard, Dr. G. A. Bannatyne, Mr. C. Curd, and Dr. T. W. Smith. Two other members of the Executive Committee were also elected—namely, Mr. A. Waugh and Dr. Cave.

DORSET AND WEST HANTS BRANCH:

Bournemouth Division.

The first meeting of the members of this Division was held at the Medical Society's Rooms, Shaftesbury Hall Chambers, Bournemouth, on Wednesday, May 27th. Thirty-two members

were present. Dr. J. ROBERTS THOMSON was voted to the chair.

Election of Officers, etc.—The officers of the Division were elected as follows:—*Chairman:* Dr. J. Roberts Thomson. *Vice-Chairman:* Dr. W. V. Snow. *Secretary:* Mr. C. H. W. Parkinson. Mr. Harold Simmons was elected Delegate to the representative meeting of the Association. It was resolved that the Executive Committee should consist of eleven members, including the *ex-officio* members. The following seven members were elected to represent the Division on the Branch Council: Drs. Roberts Thomson, Snow, Mahomed, Ramsay, Hosker, Lys, and Simmons, and Drs. J. R. Philpots, Batterbury, and Vernon were elected additional members of the Executive Committee.

Model Rules.—The draft model rules for the Division were considered and, with certain alterations, approved.

Ethical Rules.—The draft Ethical Rules were considered. It was resolved that the Executive Committee should be the Ethical Committee.

Notices of Motion.—The notices of motion for the representative meeting were considered, and instructions given to the delegate.

WEST DORSET DIVISION.

THE first meeting of this Division was held at Dorchester on May 20th. Seven members were present.

Election of Officers.—Dr. John Moorhead, of Weymouth, was elected Chairman, Mr. Frederic Bazley Fisher, of Dorchester, Vice-Chairman, and Dr. Thomas Henry-Jones, of Weymouth, Secretary. Dr. Thomas Henry-Jones was elected Representative of the Division on representative meetings of the Association.

Rules.—Rules for the Division were considered and agreed to, subject to the approval of the Council of the Association.

DUNDEE AND DISTRICT BRANCH.

THE annual meeting of the Branch was held in University College, Dundee, on Friday, May 22nd, at 4 p.m.; Dr. DEWAR presiding.

Election of Officers.—The Branch officers and members of Council were elected in accordance with the Council's nominations as follows: *President:* E. Waymouth Reid, M.D. (Dundee). *President-elect:* R. Grant, M.D. (Glamis). *Past-President:* J. A. Dewar, M.D. (Arbroath). *Vice-Presidents:* J. K. Tulloch, M.B. (Dundee); V. Stone, M.D. (Montrose). *Council:* W. Barron, M.D. (Letham), elected 1901; H. E. Fraser, M.D. (Dundee), elected 1901; W. Kinnear, M.D. (Dundee), elected 1902; G. Peterkin, M.D. (Forfar), elected 1902; G. Lowson, M.B. (Dundee); D. Wardrop, M.B. (Alyth). *Honorary Treasurer:* D. M. Greig, F.R.C.S.Edin. *Honorary Secretaries:* R. Cochrane Buist, M.D. (166, Nethergate, Dundee); G. Halley, F.R.C.S.Edin. Dr. W. Kinnear was elected a representative in the annual representative meeting.

Report of Branch Council.—The report of the Branch Council and of the Treasurer was approved.

Report of Representative on Council.—The report of the Representative on the Central Council was received.

Annual Representative Meeting.—The business of the Annual Representative Meeting[1] was considered.

1. The reports of the Council, Medico-Political Committee and Ethical Committee were received.
2. Amendments of by-laws relative to election of members.
3. Amendment to By-law 39, to establish a Scottish Committee.
4. Motions relating to contract practice.
5. Motion relating to death certification.
6. Motion relating to election of direct representatives on the General Medical Council.
7. Motions relating to the Irish Poor-law medical service.

Resolutions 2, 3, 4, 5 were approved.

Resolution 6 was disapproved.

On Resolution 7 no motion was made.

Medical Officers for School Boards.—The following resolution was passed by the Branch:

That, in the view of the prevalence of ringworm and other diseases contagious in children, it is highly important that the School Board should have at its disposal the service of one or more medical officers.

The following is a digest of the information relating to School Board medical officers:—Information has been obtained from the clerks and medical officers to the following School Boards: London, Bradford, Birmingham, Manchester, Salford, Halifax, Burnley, Inverness, Glasgow, Leeds. The details of the number of officers, their emoluments, the number of schools, and the number of pupils on the rolls are given in the table appended. With the exception of Glasgow and Leeds, where the medical officer examines and reports on the health of any employé or pupil when specially requested to do so, and is paid by fee, the duties are very similar, and the schedule of the Bradford School Board may be taken as typical. They are: (1) To act and attend meetings of the Board and Committees as may be required; (2) to keep a journal of his visits to cases and schools, and place it before the meetings of the School Management Committee; (3) to visit each department of the schools quarterly, and report on its sanitary condition, and on the general health of the pupils; (4) to advise as to the course of study, etc., for children in the schools, and especially for children defective mentally, or in vision or hearing; (5) to confer with the teachers as to children requiring special treatment or exemption; (6) to examine teeth, eyesight, hearing, and general condition of any scholar, and advise thereon; (7) to conduct, with the aid of the teachers, a general examination of the eyesight of the children at least once a year; (8) to examine and report and advise on all plans as to the sanitary arrangements, etc.; (9) to examine, when required to do so, candidates for employment, and any pupil or employé stated to be unfit for duty; (10) the duty of regulating the physical drill is not specifically mentioned in the Bradford regulations, but is so in some other cases, as, for instance, Manchester. (11) Manchester also requires special attention to any school when there is epidemic disease, so as to prevent its spread, and avoid the closing of the school. Special inquiry was made as to the way in which the contagious diseases of children, and particularly ringworm, are dealt with. There is practical unanimity on the necessity of excluding such cases from the classes. In several instances it is stated that these excluded cases are regularly visited by the compulsory officer, and when treatment is being neglected, the parents are dealt with as in default from neglect. In London three nurses are specially employed for ringworm.

Board.	Medical Staff.	Emoluments of M.O.	Schools.		On Rolls.	
			Board.	Denominational.	Board.	Denominational.
		£				
London ..	Chief M.O.	800—1,000	—	—	—	—
,, ...	3 Asst. M.O.	250 each	—	—	—	—
,, ..	5 Oculists		—	—	—	—
Bradford ...	1 M.O.	300 ,,	50	—	32,000	16,000
Birmingham ..	1 ,,	250 ,,	68	—	—	94,000
Manchester ..	1 ,,	250 ,,	—	—	52,000	54,000
Salford	1 ,,	150 ,,	25	—	13,000	—
Halifax ...	1 ,,	130 ,,	25	—	13,000	—
Burnley ...	1 ,,	80 ,,	17	—	9,000	9,000
Inverness ..	1 ,,	40 ,,	13	—	3,500	—

London requires the whole time of the Chief and half-time of the Assistant M.O. Bradford M.O. is allowed only consulting practice. The others are in general practice.

EAST ANGLIAN BRANCH.

THE number of candidates nominated for each office did not exceed the number of vacancies to be filled up, therefore the nominated candidates were duly elected as follows: *President:* J. C. Thresh, M.D. (Chelmsford). *President-elect:* H. B. Walker (Lowestoft). *Vice-Presidents:* E. T. Fenn, M.D. (Colchester); C. Scott Kilner, M.B. (Bury St. Edmunds); W. E. Wyllys (Great Yarmouth). *General Secretary and Treasurer of Branch:* B. H. Nicholson, M.B. (Colchester). *Honorary Secretaries:* B. H. Nicholson, M.B. (Colchester); H. A. Ballance, M.B. (Norwich); J. Gutch, M.D. (Ipswich). *Elective Members of Council:* Edgar G. Barnes, M.D. (Eye); Michael Beverley, M.D. (Norwich).

EDINBURGH BRANCH.

Report of the Branch for the Year 1902.—During the year the Branch held its usual clinical meeting in February, its annual meeting in June, and a special meeting in February. In addition a meeting of the medical practitioners of Edinburgh was

[1] BRITISH MEDICAL JOURNAL, April 25th; SUPPLEMENT, May 2nd.

held under its auspices, and the Branch by invitation attended the summer meeting of the Dundee and District Branch. Five meetings of Council were held during the year and twenty-five new members were elected. Owing to the re-arrangement of the area of the Branch, the list of members cannot be accurately made up, but approximately there are about 430 members. The income for the year was £25 6s. 6d. and the expenditure £23 14s.

North-East Edinburgh Division.

The annual meeting of this Division was held on May 21st.

Election of Officers.—The following office-bearers were elected: *Chairman:* Sir John Sibbald. *Vice-Chairman:* Dr. James Carmichael. *Secretary and Treasurer:* Dr. G. Keppie Paterson. *Committee:* Dr. Johnstone Alexander (Edinburgh), Dr. Cormack Smith (Edinburgh), Dr. G. Fyfe (Edinburgh), Dr. J. Mackay (Leith), Dr. H. G. Langwill (Leith), Dr. Leslie McKenzie (Trinity), Dr. Andrew Balfour (Portobello). *Representative to Annual Meeting:* Dr. James Carmichael. *Representative to Branch Council:* Dr. G. Keppie Paterson.

Proposed Central Scottish Committee.—The meeting instructed their representative to support the motion for a Central Scottish Committee for the discussion of matters affecting the profession in Scotland.

Southern Division.

The annual meeting of this Division was held at the Central Hall, Tollcross, on May 14th, at 8.15 p.m., Dr. Duddingston Wilson in the chair. Dr. Norman Walker, Secretary of the Branch Council, was present in an advisory capacity.

Rules.—Rules for the working of the Division were framed and adopted.

Election of Officers.—The following office-bearers were duly elected:—*Chairman:* Dr. Duddingston Wilson. *Vice-Chairman:* Dr. A. A. Matheson. *Secretary and Treasurer:* Dr. Michael Dewar, 24, Lauriston Place. *Representative to the Representative Meetings:* Dr. Simla Paterson. *Representatives on Branch Council:* Chairman and Secretary. *Members of the Executive:* Drs. Salt, Kennedy, Darling, Lundie, Cullen, McDonald, Davidson, Duncan, and Dickson.

Notices of Motion at Annual Meeting.—The notices of motion for discussion at the annual meeting were considered, and instructions were given to the representative.

GLASGOW AND WEST OF SCOTLAND BRANCH.

The annual meeting of this Branch was held in the Hall of the Faculty of Physicians and Surgeons of Glasgow on May 2nd.

Introduction of New President.—The retiring President, Dr. William Findlay, introduced as his successor the President-elect, Dr. Ebenezer Duncan.

Election of Officers.—The following appointments were made:—*President-elect:* Dr. J. C. McVail. *Vice-Presidents:* Drs. William Findlay and Thomas Graham. *Joint Secretaries:* Drs. James H. Nicoll and James Hamilton.

Annual Report, etc.—The annual report, financial statement, and report of the Medico-Ethical Committee were duly presented and adopted.

Model Rules.—The Branch then took up consideration of the Model Branch Rules as recommended by the Council of the Association. These, with various modifications, it was decided to adopt. The modifications, in specified form, it was further decided should be suggested to the Council of the Association.

GLOUCESTERSHIRE BRANCH.

The annual meeting of this Branch was held on Tuesday, May 19th, at the General Hospital, Cheltenham, Dr. F. T. Pruen, President, in the chair.

Election of Officers.—The following were appointed to office during the ensuing year:—*President:* Dr. Storry, of Stroud. *Council:* Dr. E. T. Wilson, Mr. E. Dykes Bower, Dr. Batten, Dr. Ferguson, who will retire at the end of four years; Mr. S. T. Ellis, Dr. Soutar, Dr. Oscar Clarke, Dr. Watters, who retire at the end of three years; Dr. A. S. Cooke, Mr. G. A. Cardew, Mr. O. H. Fowler, Dr. W. Brown, who retire at the end of two years. *Scrutineers:* Mr. T. S. Ellis, Dr. Anerum. *Auditors:* Mr. G. A. Cardew, Dr. Braine Hartnell. *Honorary Secretary:* Mr. John Howell. *Ethical Committee:* Dr. Batten, Dr. Ferguson, Mr. T. S. Ellis, Dr. E. T. Wilson, Mr. O. H. Fowler.

Paper.—Dr. Robinson, Assistant Physician to Westminster Hospital, then read a paper on points of practical interest to general practitioners in cancer of the cervix uteri, illustrated by limelight photographs. Dr. Ferguson proposed, and Mr. Ellis seconded, a vote of thanks to Dr. Robinson, which was carried unanimously.

Dinner.—Dinner was afterwards served at Gaze's Hotel, Imperial Square.

JAMAICA BRANCH.

An ordinary meeting of this Branch was held at the Public Hospital on April 14th. Present: Drs. Robinson (President), Henderson, Harry, Williams, Allwood, Ragg, and DaCosta (Secretary).

Visitor.—Lieutenant Ffrench, R.A.M.C., was present as a guest of the President.

New Members.—The following were elected members of the Branch: Lieutenant Fielding, R.A.M.C., Lieutenant Jones, R.A.M.C., Dr. E. G. O. Nixon, and Dr. A. T. Clarke.

[The scientific proceedings were published at p. 1376].

LANCASHIRE AND CHESHIRE BRANCH:

Liverpool Central Division.

The first meeting of the Liverpool Central Division of the Lancashire and Cheshire Branch was held in the Medical Institution on Thursday, May 28th, Dr. T. W. R. Bradshaw in the chair. There were fourteen members present.

Model Laws.—The model laws were adopted, with slight modifications, and with a provision to ensure the annual retirement of one member of the Executive Committee.

Election of Officers.—The officers for the year are as follows: *Chairman:* T. R. Bradshaw, M.D.; *Vice-Chairman:* C. J. Macalister, M.D.; *Secretary:* Frank H. Barendt, M.D.; *Delegate:* G. G. Hamilton; *Representatives on Branch Council:* the Chairman and the Secretary; *Committee:* E. W. Barnes, W. Murray Cairns, M.B., D. Douglas-Crawford, M.B., E. E. Glynn, M.B., T. D. Leigh.

Rejection of an Ethical Committee.—The following resolution was proposed by Dr. Alexander Davidson, seconded by Mr. Douglas-Crawford, and carried unanimously:

That it is undesirable for this Division to undertake the consideration of differences occurring between members, as proposed in the draft model rules to regulate the procedure in ethical matters.

LEINSTER BRANCH:

Dublin Division.

The first annual meeting of this Division was held at the Royal College of Physicians of Ireland on June 3rd.

Election of Officers.—The following office-bearers were elected for the year: *Chairman:* Arthur Chance, F.R.C.S.I. *Vice-Chairman:* Dr. H. T. Bewley. *Honorary Secretary:* L. G. Gunn, F.R.C.S.I. *Representatives on the Branch Council and Divisional Executive:* Sir Charles Ball, Sir George Duffey, Sir John Moore, Professor E. Bennett, Dr. J. M. Redmond, Lieutenant-Colonel J. C. MacNeece, R.A.M.C., Dr. Trevor Smith, Dr. Walter Smith, Dr. W. T. Thompson, Dr. Delahoyde, Dr. Fottrell, Dr. Martley, Dr. H. Oulton, Major Saunders, R.A.M.C. *Representative at Annual Meeting:* Dr. F. W. Kidd was chosen to represent the Division at the British Medical Association representative meeting to be held at Swansea in July next.

MALTA AND MEDITERRANEAN BRANCH.

A general meeting of this Branch was held at Valletta on May 11th, fourteen members being present. Professor S. Cassar occupied the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Approval of Rules.—The rules of the Branch, drawn by the Branch Council, were discussed, approved, and ordered to be submitted to the Council of the Association for approval.

Representatives of Colonial Branches.—The Secretary was requested to ascertain what was being done in the Colonial Branches to have representatives in representative meetings.

Delegate to Annual Meeting.—Major D. V. O'Connell, R.A.M.C., was selected to represent the Branch at the seventy-first annual meeting of the British Medical Association at Swansea on July 28th.

Election of Officers.—Election of a President and a Vice-President by secret ballot then followed, the following being returned:—*President:* Lieutenant-Colonel R. P. Samut, M.R.C.S., etc. *Vice-President:* Professor S. Cassar, M.D. The Secretary and Treasurer was confirmed unanimously for another year. The other four members of the Branch Council were likewise confirmed *nem. con.*

The scientific proceedings were published at p. 1324.

METROPOLITAN COUNTIES BRANCH:

Hampstead Division.

THE first annual meeting of this Division was held in the School for the Blind, Swiss Cottage, on June 3rd, Dr. T. MORTON in the chair.

Confirmation of Minutes.—The minutes were read and confirmed.

Election of Officers.—The following officers were elected for the ensuing year:—*Chairman:* J. Ford Anderson, M.D. *Vice-Chairman:* W. Heath-Strange, M.D. *Honorary Secretary:* J. Dill Russell, F.R.C.S. *Representatives on Branch Council:* F. R. Humphreys, M.R.C.S., L.R.C.P.; H. J. Macevoy, M.D. *Representative of the Division in Representative Meetings of the Association:* N. Bishop Harman, F.R.C.S. *Committee:* H. W. Armit, M.R.C.S., L.R.C.P.; C. W. Cummington, M.R.C.S., L.S.A.; A. W. George, M.D.; W. E. Hills, M.R.C.S., L.R.C.P.; Mrs. L. Fraser Nash, L.R.C.P., L.R.C.S.; J. Smith Whitaker, M.R.C.S., L.R.C.P.; R. H. Wellington, M.R.C.S., L.R.C.P.

Annual Representative Meeting.—The business of this meeting was discussed, and instructions given to the representative of the Division.

Vote of Thanks.—A hearty vote of thanks to Dr. Morton for presiding terminated the proceedings.

Kensington Division.

THE first annual meeting of this Division was held at the Kensington Town Hall on Wednesday, June 10th, Dr. H. CAMPBELL POPE in the chair.

Confirmation of Minutes.—The minutes of a general meeting held on May 4th were read and confirmed, which included the new rules for the Division and the election of officers for the year 1903-4.

Election of Officers.—The following officers were declared duly elected, namely:—*Chairman:* H. Campbell Pope, M.D. Lond, F.R.C.S. *Vice-Chairman:* Mr. J. Brindley James. *Secretary and Treasurer:* Dr. G. Crawford Thomson. *Representative:* Dr. G. Crawford Thomson. *Members of the Branch Council:* Drs. W. H. Lamb, G. Eastes, R. J. Collie, A. Masters, and Mr. Dennis Vinrace. *Ordinary Members of Executive Council:* Messrs. Harvey Hilliard, D. O'Sullivan, F. C. Dodsworth, E. C. Barnes, G. Crichton, W. H. Kiallmark.

Annual Representative Meeting.—The notices of motion for discussion by the annual representative meeting at Swansea were discussed seriatim, and directions were given to the representative of the Division with regard to his voting.

Vote of Thanks.—The following resolution was carried:

That this Division pass a very hearty vote of thanks to Dr. Thomas Dutton for his valuable services to the West London District of the Metropolitan Counties Branch as its secretary during a long term of years.

Richmond Division.

THE first annual meeting of the Richmond Division was held on Wednesday, May 28th, in the 'Talbot Hotel, Richmond. The Chairman of the Division, Dr. R. LANGDON DOWN, presided.

Election of Council, etc.—Drs. Bateman, Shuttleworth, Fletcher Beach, R. N. Goodman, Martindale Ward, and Scott were elected the Executive Council. Dr. R. Langdon Down was elected the Representative of the Division on the Metropolitan Counties Branch Council.

Dinner.—Members afterwards dined together.

[The scientific proceedings were published at p. 1374.]

Tottenham Division.

A MEETING of the above Division was convened by Mr. Betham Robinson, Secretary of the Branch, at the Tottenham Hospital, on May 5th. Rules were adopted, and the following officers were elected: *Chairman*, Dr. Hooper May; *Vice-Chairman*, Mr. C. E. Hutt; *Representative*, Mr. R. F. Tomlin; *Secretary and Treasurer*, Dr. Fred Tresilian.

Walthamstow Division.

THE first meeting of this Division was held at Walthamstow Hospital on May 1st, Dr. ST. CLAIR B. SHADWELL, in the chair. Eight members of the Division and Mr. H. Betham Robinson, Senior Secretary of the Branch, were present.

Adoption of Model Rules.—The model rules suggested for adoption by a Division which is not in itself a Branch and the ethical rules to regulate procedure were with some alterations adopted.

Election of Officers.—The following members were elected as officers of the Division: *Chairman*, C. H. Wise, M.D., Walthamstow. *Vice-Chairman*, P. Warner, Woodford. *Secretary*, C. J. Morton, M.D., Walthamstow. *Representative on the Branch Council*, St. C. B. Shadwell, M.D., Walthamstow. *Members of the Executive Council:* F. J. Coutts, M.D., Leytonstone, J. D. Cruickshank, Chingford, T. Fowler, Epping, C. F. Harford, M.D., Leyton, H. V. Hickman, M.B., Wanstead.

Wandsworth Division.

AT a meeting held on Thursday, April 30th, at the Bolingbroke Hospital, this Division was started and the suggested rules were submitted and approved with the additions and alterations as below:

Rules.—Rules 1 and 2 were filled in as required. Rule 4, "five" was inserted before "other members." Rule 6, "three" was inserted before "years" and "but this restriction shall not come into force before the first annual meeting" were added after "years." Rule 9, "five" was inserted before "in number." Rule 10, quorum was to be three. Rule 11, before "ordinary," "at least three," were added: and after "held" was put "annually." Before "clear days" "seven" was added. Words "in the month of May—June" were struck out; and "between May 15 and June 15" were inserted. Word "four" was altered to "two." Rule 12, "fourteen" was inserted in two places before "days," "ten" was inserted before "members," and "seven" was inserted before "clear days."

Ethical Rules.—Rule 2, words from "or" to end of paragraph were struck out. Rule 5, words after "committee," "or," etc., to "be" were struck out. Otherwise rules were passed as submitted.

Election of Officers.—The following officers were elected to serve until the annual meeting:—*President:* Dr. Biggs (Wandsworth). *Vice-President:* Dr. L. Williams (Wandsworth). *Honorary Secretary and Treasurer:* Dr. E. Rowland Fothergill (Southfields).

MIDLAND BRANCH.

THE annual meeting of this Branch was held at Derby on June 5th. About forty-five members were present.

Branch Funds.—The Branch Council reported that a balance of £7 10s. remained at the end of 1902, and recommended that this be added to the sum in the hands of trustees. This was carried.

Mr. Francis Fowke.—The SECRETARY read a letter from Mr. Francis Fowke acknowledging the resolution of regret passed at the last meeting.

Representative on Council of Association.—Dr. Handford having resigned his position as representative of the Branch on the Council of the Association, the PRESIDENT moved a vote of thanks to him for his services.

Adoption of Rules.—The rules of the Branch passed by the Council were considered and were adopted.

Votes of Thanks.—Votes of thanks to the retiring President, Mr. T. P. Greenwood, and to the auditors were passed.

Election of Officers and Council.—Mr. C. H. Hough was elected President for 1903-4. Dr. Frank Pope was elected Secretary and Treasurer of the Branch. On the nomination of the Divisions the following were elected:—*President-elect:* Dr. F. R. Mutch (Nottingham). *Vice-Presidents:* Leicester—Dr. J. C. S. Burkitt (Whitwick); Lincoln—Dr. Farrar (Gainsborough). The other members of the Branch Council elected by the Divisions were: Boston and Spalding—Dr. Wilson; Derby—Drs. Boswell, Bryson, Buckley, Cassidi; Leicester—A. V. Clarke, Pratt, J. T. Tibbles; Lincoln—Harrison;

Nottingham—Broadbent, Palmer, Handford, Boobbyer; Stamford—Dr. Mackenzie.

A Visit to the West Indies.—The PRESIDENT read a most interesting account of a visit to the West Indies, illustrated by lantern slides prepared by Dr. Collier Green.

Luncheon and Dinner.—The President entertained the members to luncheon. The annual dinner was held at the Midland Hotel, about thirty members being present.

MIDLAND BRANCH:

DERBY DIVISION.

THE first annual meeting of the Division was held on May 26th, at the Royal Infirmary, Derby.

Election of Officers.—The following officers were elected:—*Chairman of Division:* W. Benthall, M.B. (Derby). *Vice-Chairman of Division:* A. Chawner (Clay Cross). *Honorary Secretary and Treasurer:* W. St. A. St. John (Derby). *Representative of Division at Association Meetings.*—W. St. A. St. John. *Representatives of Division in Branch Council:* A. Boswell, M.D. (Ashbourne), L. R. Bryson, M.B. (Derby), C. W. Buckley, M.D. (Buxton), F. Cassidi, M.D. (Derby). *Members of the Executive Committee:* Four in number, to be elected at the next general meeting.

Rules.—Rules were adopted.

LEICESTER DIVISION.

THE first annual meeting of the Leicester Division was held at Leicester on May 20th. Twenty-eight members were present, and Dr. WILLAN, of Melton Mowbray, was Chairman of the meeting.

Adoption of Rules.—The rules of the Division were adopted.

Election of Officers.—The following officers were elected for 1903-4:—*Chairman:* C. J. Bond, F.R.C.S. *Vice-Chairman:* S. T. Willan. *Vice-President of Midland Branch:* J. C. S. Burkett, M.D. *Representatives on Branch Council:* Astley V. Clarke, M.D., R. Pratt, M.D., J. T. Tibbles. *Representative in Representative Meetings of the Association:* Astley V. Clarke, M.D. *Executive Committee:* The above *ex officio*, and also R. Ballard, C. W. S. Barrett, M.B., W. E. Gibbon, M.D., C. E. Marriott, M.B., R. Sevester, M.D., T. N. Thomas; *Honorary Secretary (pro tem.):* Astley V. Clarke, M.D., 37, London Road, Leicester.

It was arranged to hold meetings on Wednesday afternoons at four o'clock. The dates to be announced later.

LINCOLN DIVISION.

THE first annual meeting of the Lincoln Division was held at the Guildhall, Lincoln, on May 28th. The attendance was, unfortunately, but meagre. Dr. CARLINE was voted to the chair.

Adoption of Rules.—The rules for the Division were discussed and passed.

Election of Officers. — The following officers were then elected: *Vice-President of the Branch:* Dr. Farrar (Gainsborough). *Chairman of the Division:* Dr. Carline (Lincoln). *Vice-Chairman of the Division:* F. S. Lambert (Lincoln). *Secretary and Treasurer of the Division:* Dr. Mansel Sympson (Lincoln). *Member of Branch Council:* Dr. Harrison (Lincoln). *Members of Divisional Council:* Dr. W. H. B. Brook (Lincoln); Dr. Levinson (Gainsborough); J. C. Ellis (Metheringham). *Representative of the Division:* Dr. Genney (Lincoln).

Day for Meetings.—Thursday was considered to be the best day of the week on which to hold meetings.

Vote of Thanks, etc.—A cordial vote of thanks to the Mayor of Lincoln for the use of the Guildhall concluded the business of the meeting, and tea was partaken of in the adjoining parlour.

NOTTINGHAM DIVISION.

THE first annual meeting of the Nottingham Division was held at the Victoria Hotel, Nottingham, on May 20th.

Model Rules.—The model rules were, with a few alterations, adopted.

Election of Officers.—Officers and representative were elected.

Future Meetings.—It was resolved:

That the meetings be held quarterly and in the afternoon.

Annual Representative Meeting.—The resolutions for the annual representative meeting were discussed.

PERTHSHIRE BRANCH.

THE summer meeting of this Branch was held in Perth on June 5th; Dr. LIDDELL, President, in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

The Question of Representation.—It was resolved to remit the question of representation to the Branch Council, with instructions to bring the whole matter before the next annual meeting in November.

SOUTH-EASTERN BRANCH:

CROYDON DIVISION.

AT a meeting held on June 12th, the following officers were elected:—*Chairman:* P. T. Duncan, M.D. *Vice-Chairman:* W. Rosser, M.D. *Branch Representatives:* Dr. Parsons Smith, T. R. Adams, M.D. *Honorary Secretary:* E. H. Willock, M.R.C.S. *Direct Representative:* J. J. Macan, M.D. (Cheam, Surrey).

DOVER DIVISION.

THE inaugural meeting of this Division was held at the Royal Victoria Hospital, Dover, on June 12th, Dr. PARSONS, a Vice-President of the Council, in the chair. There were present the following 13 members: Drs. Arkwright, Howden, Ormsby and Robinson; Messrs. Best, M. Koettlitz, Lyddon, Murphy, Ord, F. A. Osborn, L. Roberts, and C. Wood.

Election of Officers.—Mr. WOOD proposed, and Mr. MURPHY seconded, that Dr. Parsons be elected Chairman of the Division, which was carried unanimously.—Dr. Robinson, M.O.H., was then unanimously elected Vice-Chairman, being proposed by Mr. ORD, seconded by Mr. BEST.—Mr. F. A. Osborn was then elected Honorary Secretary and Treasurer to the Branch, being proposed by Dr. HOWDEN, seconded by Mr. ORD.

Rules.—The suggested model rules for a Division were taken seriatim, and with certain modifications were unanimously adopted, subject to the approval of the Central Council.—It was resolved that the first paragraph in Rule 9 should read thus:

One member resident in Deal or Sandwich shall be elected annually in the annual meeting as a member of the Executive Committee of the Division.

—It was resolved to hold meetings quarterly.

Member of Branch Council.—Mr. F. A. Osborn was unanimously elected representative on the Branch Council, being proposed by Dr. HOWDEN, seconded by Dr. ROBINSON.

Executive Committee.—In accordance with Rule 9, it was resolved that Mr. Roberts (Deal), duly proposed by Dr. HOWDEN, and seconded by Mr. LYDDON, be elected a member of the Executive Committee.

Ethical Rules.—The draft model rules, after being submitted to the members, were unanimously approved *in toto*.

Vote of Thanks.—A vote of thanks to the Chairman terminated the proceedings.

ISLE OF THANET DIVISION.

THE first meeting of this Division was held on June 11th, at the Royal Sea-Bathing Infirmary, Margate. There were twenty members present.

Chairman.—Dr. HALSTEAD proposed, and Dr. TAMPLIN seconded, that Mr. Treves be elected Chairman. This was carried unanimously.

Honorary Secretary.—Dr. COTTON proposed, and Dr. SCATLIFFE seconded, that Mr. Hugh M. Raven be elected Honorary Secretary. This was carried.

Adoption of Rules.—Rules for the Division were then adopted, being the set of rules suggested by the Association for a Divisions with slight alterations.

Executive Committee.—Dr. Halstead, Dr. Flint, Dr. Courtney and Mr. Sutcliffe were elected members of the Executive Committee in addition to the *ex-officio* members.

Member of Branch Council.—The Honorary Secretary was elected the member of the Branch Council for the Division.

Ethical Rules.—The consideration of ethical rules was adjourned to the next meeting, to be held in September next; Mr. W. K. Treves, F.R.C.S., in the chair.

SOUTH WALES AND MONMOUTHSHIRE BRANCH:

CARDIFF DIVISION.

THE first meeting of this Division was held at the University College, Cardiff, on Thursday, May 28th.

Election of Officers.—The undermentioned members were

elected to the various offices. *Chairman:* W. T. Edwards, M.D. *Vice-Chairman:* T. Wallace, M.D. *Secretary:* Ewen J. Maclean, M.D. *Representative in the Representative Meetings of the Association:* T. Garrett Horder. *Representatives on the Branch Council:* Charles Vachell, M.D., P. Rhys Griffiths, M.B. (Cardiff), R. S. Stewart, M.D. (Bridgend), J. Powell (Barry). *Ordinary Members of the Executive Committee:* D. R. Paterson, M.D., J. Tatham Thompson, M.B., W. Sheen, M.S., J. Lynn Thomas, C.B., F.R.C.S. *Honorary Secretary:* Ewen J. Maclean, M.D.

MONMOUTH DIVISION.

THE first meeting of this Division was held at the Westgate Hotel, Newport, on May 29th.

Election of Officers.—The following officers were elected:—*Chairman:* Dr. J. W. Mulligan. *Vice-Chairman:* Dr. G. A. Brown. *Honorary Secretary:* Mr. W. J. Greer. *Representative:* Dr. W. D. Steel. *Representatives in Branch Council:* Mr. O. E. B. Marsh, Dr. J. Glendinning, Dr. J. W. Davies, Dr. A. G. Lawrence. *Members of Executive Committee:* Dr. J. R. Essex, Dr. T. G. Prosser, Dr. R. J. Paton, Dr. T. H. Redwood.

Future Meetings.—It was decided to hold the meetings quarterly: On the last Friday of May (annual) at Newport; of August at Tredegar; of November at Newport; of February at Abergavenny.

SOUTH WESTERN BRANCH.

THE sixty-fourth annual meeting of this Branch was held at the Guildhall, Launceston, on June 3rd, previous to which the members were hospitably entertained at luncheon by the President-elect, W. F. Thompson, M.D. The President, Mr. J. DELPRATT HARRIS, who was in the chair, was supported by forty-two members.

Confirmation of Minutes.—The minutes of the last annual meeting were read and confirmed.

President's Address.—Mr. J. DELPRATT HARRIS resigned the chair to the PRESIDENT-ELECT, who delivered his inaugural address, in which he drew attention to the records of the ancient and historic town of Launceston and to places of great archaeological interest in the nighbourhood. He then referred to the staple industry of the neighbourhood, namely, the manufacture of arsenic, and commented upon the surprising fact that, notwithstanding that there were many opportunities in this country of studying the subject, England had not taken a very prominent place in its investigation. The literature, however, of the subject had been enriched by several local medical men, and the President pointed out that in 1898 the output of arsenic was over 5,000 tons, the whole of which was manufactured on the banks of the Tamar, with the exception of one concern in South Wales. The President then dealt in detail with the ailments incidental to workers in the manufacture of arsenic.—Dr. ALEXANDER proposed, and Dr. ODELL seconded, that a very hearty vote of thanks be accorded to Dr. Thompson for his very interesting address, which was carried by acclamation.

Election of a Vice-President.—Mr. J. SOMER proposed and Dr. MONTGOMERIE seconded a vote of thanks to Mr. J. Delpratt Harris at the end of his year of office, and that he be elected a Vice-President of the Branch, which was carried unanimously.

Report of Branch Council.—The report of the Branch Council was then read by the HONORARY SECRETARY, and it was resolved, on the proposition of Mr. PAUL SWAIN, that the report be adopted.

Election of Officers.—Drs. P. M. Deas and G. L. Fox were declared elective members of Council, the election having been conducted in accordance with By-laws 22, 23, 25, 26. Dr. RUSSELL COOMBE then proposed and Dr. D. THOMPSON seconded that Mr. G. Young Eales be re-elected Honorary Secretary and Treasurer, which was carried unanimously.

Visits of Inspection.—The PRESIDENT kindly arranged visits of inspection to the noted Priory Ruins, the Church, and the Castle Ruins, after which the members were entertained at a garden party at the President's residence.

Annual Dinner.—Twenty-seven members and guests dined together in the evening at the White Hart Hotel.

Picnic.—On June 4th about a dozen members journeyed to Tintagel, where they were hospitably entertained at luncheon by the President, after which they coached to Boscastle, and received the kind hospitality of Dr. Wade at tea.

STIRLING BRANCH.

THE annual general meeting of this Branch was held in the Crown Hotel, Falkirk, on Thursday, May 7th, at 4.15 p.m., Dr. SMITH, President, in the chair. This was the first meeting of the Branch after the inclusion of the area of Perthshire served by the railway from Stirling to Callander.

New Rules.—New rules for the Branch and rules to regulate ethical procedure, based on the Model Rules published by the Central Council, were adopted, subject to the approval of the Council.

Associate Members.—Dr. C. J. Lewis (Edinburgh), Dr. J. Macpherson (Edinburgh), and Dr. McVail (Glasgow), were elected Associate members in recognition of valuable services rendered to the Branch.

Vote of Thanks.—A vote of thanks was accorded to Dr. Fergusson for his services as Treasurer of the Branch for many years.

Election of Officers.—The following elections for the ensuing year took place:—*President:* Dr. Highet (Stirling). *Vice-President:* Dr. Strachan (Dollar). *Secretary:* Dr. Moorhouse (Stirling). *Representative in Representative Meetings:* Dr. Strachan (Dollar). *Representative on Central Council (pro tem.).*—Dr. Mackintosh (Stirling). *Branch Council:* Dr. Fergusson (Alloa), Dr. Mathieson (Doune), Dr. Mitchell (Camelon), Dr. Smith (Falkirk).

[The scientific proceedings were published at p. 1210.]

SYDNEY AND NEW SOUTH WALES BRANCH.

A SPECIAL general meeting of this Branch was held at the Royal Society Room, Sydney, on February 13th, Dr. G. E. RENNIE, President, in the chair. There were thirty-four members and one visitor present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Fees for Insurance Certificates.—The report of the Council on the question of fees for insurance certificates was to the effect that the fee for examination of proponents for industrial insurances for policies under £100 may be 10s. 6d. each, and for all policies of £100 and over the minimum fee be £1 1s. Dr. SINCLAIR GILLIES proposed and Dr. CRAGO seconded the adoption of the report. A discussion ensued, in which Drs. BLAXLAND, DIXSON, HANKINS, READ, GORDON CRAIG, and GILL took part. The report was unanimously adopted.

Proposed Defence Fund.—The HONORARY SECRETARY reported that he had received the following replies as the result of the referendum with reference to the establishment of a special "defence fund:" 600 circulars were issued: 201 replies received; in favour of scheme, 177; against, 27; total amount promised, about £200. Dr. HANKINS moved:

That a fund be formed to be known as the "New South Wales Lodge Practitioners' Defence Fund."

This was seconded by Dr. CRAGO, and carried. The resolution was discussed by Drs. RENNIE, FIASCHI, JAMIESON, GILLIES, DIXSON, and NOLAN. Dr. GILL proposed as an amendment:

That the consideration of the resolution be postponed for three months.

This was seconded by Dr. BINNEY and negatived. The original resolution was put and carried unanimously. A Provisional Committee was formed, consisting of Drs. Rennie, Hankins, Hinder, Thomas, Walker-Smith, Crago, and Furnival. Dr. Furnival was appointed Honorary Secretary and Dr. Crago Honorary Treasurer *pro tem.*

Next Annual Meeting.—The PRESIDENT explained the arrangements for the next annual meeting.

BRITISH MEDICAL ASSOCIATION LIBRARY.

List of Presentations of Books, etc.

Presented by the AUTHORS.
- Bland-Sutton, J. Ligaments, their Nature and Morphology. 2nd Ed. 1902.
- Bury, Judson. Clinical Medicine. 2nd Ed. 1899.
- Fox, R. Hingston. Wm. Hunter, Anatomist. 1901.
- Freeman, E. C. Sanitation of British Troops in India. 2nd Ed. 1901.
- Horton-Smith, P. Gulstonian Lectures on the Typhoid Bacillus and Typhoid Fever. 1900.

Presented by Messrs. BAILLIÈRE, TINDALL, AND COX.
- Turner, Dawson. Medical Electricity. 3rd Ed. 1902.

Presented by the BRISTOL MEDICAL LIBRARY (University College, Bristol).
- Bristol Medical Journal. Vols. 9-19. 1891-1901.

Presented by Messrs. CASSELL AND CO. (Ludgate Hill).
- Morris, Malcolm. Diseases of the Skin. New Ed. 1903.
- Yeo, I. Burney. Manual of Medical Treatment. 2 vols. New Ed. 1902.

Presented by E. Wolfenden Collins, Esq. (Sydenham).
Collins, E. W. Report on Epidemic Cerebro-spinal Meningitis. 1868.
Hirsch-Mannkopff. Meningitis Cerebro-spinalis Epidemica. 1866.
Stillé. Epidemic Meningitis. 1867.
Tourdes-Boudin. Meningite Cerebro-spinale. 1841-54.

Presented by Dr. Comyns Leach (Sturminster Newton).
Brookes, R. Introduction to Physic and Surgery. 1754.
General Practice of Physic. Vol. 1. 1754.
English Dispensatory. No date.
Mead, R. Small-pox and Measles. 1748.
Hoblyn. Medical Terms. 1835.
Pitcairn, A. The whole works of. 1727.
Pharmacopoeia Extemporanea (Fuller). 1719.
Pott, P. On Ruptures 1756.
Quincy, John. Medicina Statica. 1737.
Sharp, S. Critical Enquiry into the Present State of Surgery. 1754.
Society of Physicians in Edinburgh. Medical and Philosophical Commentaries. Vol. 1. Part 1. 1774.
Thomas R. Modern Practice of Physic. 1807.
Underwood. Diseases of Children. 1846.
Wiseman, R. Eight Chirurgical Treatises. Vol 2. 1719.
Mechanical Essays on the Animal Œconomy. Author's name obliterated. 1721.

Presented by the London County Council Asylums Committee.
Archives of Neurology. Vol 2. 1903.

Presented by E. D. Mapother, Esq., M.D. (London).
Congrès International de Dermatologie et de Syphiligraphie. Compt. Rend. 1889.

Presented by H. C. Martin, Esq., M.B. (Wroughton).
London Medical Review. 1827.
Medico-Chirurgical Review. January, 1840.
Provincial Medical and Surgical Journal. Nos. 1 to 10, and 13 to 16. 1840-41.

Presented by the Medical Officer to the Local Government Board.
Special Report on Lead Poisoning and Water Supplies. 1903.
Report of the Medical Officer to Local Government Board. 1900-1.
Reports of Dr. Buchanan. Epidemic Small-pox at Orsett.
Report of Dr. Bulstrode. Diphtheria at Burnham-on Crouch.
Report of Dr. Manby. Diphtheria at Risborough.

Presented by the Medical Officer of the London County Council.
Report on Health of the Administrative County of London for 1901.

Presented by the New Sydenham Society.
Parts 3 and 4 of the Atlas of Clinical Medicine and Surgery. 1903.

Presented by the New York State Medical Association.
New York State Journal of Medicine. Vols. 1 and 2.

Presented by A. Brown Ritchie, Esq., M.B., Manchester.
Transactions of the Edinburgh Obstetrical Society. Vol. 22. 1897.

Presented by the Superintendent of Government Printing, Calcutta.
Scientific Memoirs by Medical Officers of the Medical and Sanitary Departments of the Government of India. New series. No. 2. 1902.

Presented by the Surgeon-General United States Army.
Vol. 7. Second series. Catalogue of the Library of the Surgeon-General. Washington.

Presented by the Editor of the British Medical Journal:
Baker and Smith. Research on the Eucalypts. 1902.
Corfield, W. H. The Etiology of Typhoid Fever. 1902.
Edinburgh Medical Journal. Vol. 12, N.S. 1902.
Encyclopedia Medica. Vol. 12. Syphilis to Typhus. 1902.
Gould, G. M. Biographic Clinics. 1903.
Grünwald. Atlas and Epitome of Diseases of the Mouth, Pharynx, and Nose. 1903.
Hewlett. Bacteriology. 2nd Ed. 1902.
Kelynack. Selection of Consumptive Cases for Sanatorium Treatment. 1902.
Latham and West. Prize Essay on the Erection of a Sanatorium for the Treatment of Tuberculosis in England. 1903.
Medical Officer to Local Government Board. Special Report on Lead Poisoning and Water Supplies. 1903.
Norden. Diseases of Metabolism and Nutrition. 1903.
Richet. Physiologie. Tome V. 1902.
Scientific Memoirs by Medical Officers of the Army in India. No. 2. 1902.

Calendars, Reports, and Transactions have been received from the following Bodies:
American Gynecological Society Transactions. Vol. 27. 1902.
——— Laryngological Association Transactions. 1902.
——— Orthopaedic Association Transactions. Vol. 15. 1902.
——— Ophthalmological Society Transactions. 1902.
——— Surgical Association Transactions. Vol. 20. 1902.
Assam. Annual Sanitary Report. 1901.
——— Dispensary Report. 1900.
Association of American Physicians. Transactions. Vol. 17. 1902.
Bengal Report of the Sanitary Commissioner. 1901.
Bombay Report on Civil Medical Institutions. 1900.
Bombay Public Health Report. 1901.
Bombay Sanitary Commissioner's report. 1901.
Boston City Hospital Medical and Surgical Reports. 13 Series. 1902.
British Orthopedic Society. Transactions. Vol. 4. 1899-1900.
Burma Report on Hospitals. 1900.
Burma Report on Sanitary Administration. 1901.
Ceylon Administration Report. Medical. 1901.
Dublin University Calendar. 1902-3.
Edinburgh Royal College of Physicians Laboratory Reports. Vol. 8. 1903.
General Medical Council Minutes. Vol. 39. 1903.
Glasgow Pathological and Clinical Society. Transactions. Vol. 6, 7, 8. 1895-1901.
Hong Kong Report of the Civil Medical Officer. 1901.
Hyderabad Report on Civil Hospitals. 1900.
Hyderabad Report on Sanitary Administration. 1901.
Indian Plague Commission Reports 1, 2, 3, 5. 1901.
Japan. Health of Navy, 1899.
Johns Hopkins Hospital Reports. Vol. x. 1902.
London County Council. Report on the London Ambulance Service. 1902.
Madras. Report on Civil Medical Institutions. 1901.
——— Report on Lunatic Asylums. 1900.
——— Report of Sanitary Commissioner. 1901.
Medical Officer of London County Council. Report. 1901.
Mofussil. Report on Civil Hospitals. 1900.
Navy. Health. 1901.
North-West Provinces and Oudh. Dispensaries Report. 1900.
Obstetrical Society. Transactions. Vol. 44. 1903.
Ophthalmological Society of United Kingdom. Transactions. Vol. 22. 1902.
Otological Society of United Kingdom. Transactions. Vol. 3. 1902.
Pasteur Institute of India. Report. 1902.
Pharmaceutical Society. Calendar. 1903.
Punjab. Dispensaries Report. 1900.
——— Sanitary Commissioner's Report. 1901.
Royal Medical and Chirurgical Society. Transactions. Vol. 85. 1902.
St. Bartholomew's Hospital Reports. Vol. 38. 1902.
Sanitary Commissioner with Government of India. Report. 1900.
Sheffield University. Calendar. 1903.
Society of Anaesthetists. Transactions. Vol. 5. 1903.
University College of New South Wales. Calendar. 1903.
Victoria University. Calendar. 1903.

Books Needed to Complete Series:

The Librarian will be glad to receive any of the following volumes which are needed to complete series in the Library:

American Climatological Transactions. Vols. 1, 4, 5, 6.
American Dermatological Association. Transactions. Vols. 5, 7, 8 and 11.
American Journal of the Medical Sciences. New series, vols. 4, 5, 1842-43; vols. 14, 15, 1847-48; vols. 18-30, 1850; vol. 33, 1857; vol. 46, 1864-65; vol. 59; or any parts of these vols.
American Journal of Ophthalmology. Vols. 1-9.
American Laryngological Association. Transactions. Vols. 1-6, 8-9.
American Medical Association. Transactions 1-28, 30, 31.
American Otological Society. Transactions. Vol. 3, part 2, 1883.
American Public Health Association. Transactions. Any vols.
Analyst. Vols. 1-24.
Annals of Surgery. Vols. 11; 13-16; and 26-27.
Archives Générales de Médecine. 1831-39 inclusive; 1846-1855 inclusive; 1857-64 inclusive: 1871.
Archives of Ophthalmology. Vols. 1-3, 6, 7, 14-21.
Archives of Otology. Vols. 1-7, and 20, 21, 22.
Archives of Pediatrics. Vols. 1-11.
Asylum Journal of Mental Science. Vol. 1, 1854.
Bentley and Trimen. Atlas of Medicinal Plants.
British Journal of Dermatology. Vol. 2, part 3.
Caledonian Medical Journal. Vol. 1 prior to 1894.
Carmichael Essays. Laffan. 1879. Rivington. 1879.
Centralblatt für Augenheilkunde. Hirschberg. All prior to 1891, Index to 1891.
——— für Bakteriologie. Bound volumes prior to 1899.
——— für klinische Medicin. 1880-1883; all 1888, 1891, No. 26: 1892, No. 17.
——— für medicinischen Wissenschaften. Vols. 1-19.
Congrès Français de Chirurgie. Transactions 1, 2, 3, 6, and 10.
Congrès Internat. d'Obstétrique et de Gynécologie. 1, Bruxelles, 1892; 3, Amsterdam, 1899.
Connecticut State Board of Health Report. Vol. xi. 1887-8.
Denman. Midwifery. 1801.
Dermatological Congress. Vienna, 1892, and Paris, 1900
Dublin Quarterly Journal of the Medical Sciences. Vols. 1-10, 13-28, 35-40.
Edinburgh Medical and Surgical Journal. Vols. 67-82. 1847-1855.
Edinburgh Obstetrical Society. Transactions. Vol. 5.
Fothergill. Midwifery. (Recent).
Gale. Surgery. 1563.
Glasgow Medical Journal. 1833-1868.
——— Pathological Society. Transactions. Vols. 1 and 2.
Guy's Hospital Gazette. Vols. 1-13.
Hare. Therapeutics. Vols. 3-4.
Hunterian Transactions containing 76th Report.
Indian Census Report. 3rd census, 1901.
——— Medical Gazette. 1866-1884.
International Congress of Hygiene. Congresses 1 to 6, 9 to 10.
International Medical Congress (13th). Vol. xi. Transactions.
International Ophthalmological Congress. Transactions of 5th, New York, 1876.
Johns Hopkins Hospital Bulletin. Vols. 1 10.
Journal of Laryngology. Vols. 1-9.
Lancet, 1850, vol. 2, pages 425-6, and August 23rd, 1851.
Pediatrics, prior to 1902.
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Corrected to Feb. 28th, 1903.

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OFFICERS OF THE MEDICAL DEPARTMENT OF THE ROYAL NAVY, THE ARMY MEDICAL AND THE INDIAN MEDICAL SERVICES.

Of retired officers, only those whose names are retained in the official Navy and Army Lists are included in the following Lists.

ROYAL NAVY.

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Alderson, P. F., Surg. R.N.
Andrews, A. G., Staff-Surg., R.N.
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Barnes, W. G. K., M.D., Staff-Surg., R.N
Barry, Jerome, M.D., Staff-Surg., R.N.
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Bell, G. A. S., Staff-Surg. R.N.
Bentham, R., Dep.-Insp.-Gen., R.N.
Biddulph, R. E., M.B., Fleet-Surg. R.N.
Biden, E. J., Fleet-Surg. R.N.
Bidwell, L., Staff-Surg., R.N.
Bird, R. G., Fleet-Surg., R.N. (ret.)
Birt, S. H., Surg., R.N.
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Bowie R. F., Staff-Surg., R.N.
Boyden, P. H., M.D., Surg. R.N.
Bradley, C., M.D., Staff-Surg. R.N.
Bradley, J., M.D., Staff-Surg. R.N.
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Breton, W. E., Fleet-Surg. R.N.
Brice, F. A., Staff-Surg., R.N.
Brown, R. G., M.B., Fleet-Surg., R.N.
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Conway, J. M. H., Surg., R.N.
Coolican, J. P. J., Staff. Surg. R.N.
Cooper, E., Surg., R.N.
Coppinger, R.W., M.D., Dep.Insp.-Gen. of Hosp. & Fleets R.N.
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Craig, W. M., M.B., Fleet-Surg., R.N
Cridland, E. C., M.B., Staff-Surg., R.N.
Crocker, H. L., Fleet-Surg., R.N.
Cropley, A., Staff-Surg. R.N.
Crowley, Joseph, M.D., Fleet-Surg. R.N.
Dalton, F. J. A., Surg. R.N.
Dartnell, L. E., Surg. R.N.
Davidson, Arthur, M.B., R.N.
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Delmege, A. G., M.D., Fleet-Surg. R.N.
Denny, H. R. H., Surg., R.N.
Dimsey, E. R., D.S.O., Staff-Surg. R.N.
Dinnis, J. J., M.D., Staff-Surg. R.N.
Dobbyn, J. S., M.D., Dep.-Insp.-Gen. of Hospitals and Fleets, R.N. (ret.)
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Eames, W. J., Insp.-Gen. of Hospitals and Fleets, R.N. (ret.)
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Facey, S. H., Surg. R.N.
Fairbank, C. B., Surg. R.N.
Falkner, M. W., Surgeon, R.N.
Fedarb, F., M.B., Staff-Surg. R.N.
Ferguson, J. C., M.B., Staff-Surg. R.N.
Finch, E. J., M.D., Surg. R.N.
Finlayson, H. W., M.B., Staff-Surg. R.N.
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Flood, A. W., Surg. R.N. (retired), Bundoran
Foott, G. H., M.D., Staff-Surg. R.N.
France, J. M., Staff-Surg., R.N.
French, A. M., Fleet-Surg. R.N
Geoghegan, C. E., Fleet-Surg. R.N.
Gibson, George, Surg. R.N.
Gill, H. H., M.B., Surg., R.N.
Gilmour, R. T., Surg., R.N.
Gipps, A. G. P., Fleet-Surg. R.N. (ret.)
Glynn, G. E., M.B., Surg. R.N.
Grant, J., M.B., Surg. R.N.
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Hall, J. F., M.B., Staff-Surg. R.N.
Handyside, P. B., M.B., Staff-Surg. R.N.
Harsan, T. J., Insp.-Gen. of Hospitals and Fleets R.N. (ret.)
Harris, N. H., Surg., R.N.
Hartley, T. S., Surg. R.N.
Harvey, C., Fleet-Surg. R.N. (retired), Newton Abbot
Harvey, D'A., M.B., Staff-Surg. R.N.
Hawton, J. W. H., Fleet-Surg. R.N. (retired)
Hewlett, G., M.B., Staff-Surg. R.N.
Hickson, R., Staff-Surg. R.N.
Hill, R., Staff-Surg. R.N.
Hilston, D. M.D., C.B., Insp.-Gen. of Hosps. & Flts., R.N. (ret.)
Holyoake, H., Staff-Surg. R.N.
Home, W. E., M.D., Staff-Surg. R.N.
Honey, T. E., M.D., Surg., R.N.
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Jeans, J. T., M.B., Surg. R.N.
Jackson, W., M.B., Surg. R.N.
Johnson, S. W., M.B., Staff-Surg. R.N. (ret.)
Johnston, A. J. J., Fleet-Surg. R.N.
Jones, K. H., M.B., Surg. R.N.
Joyce, A. R., Fleet-Surg. R.N. (retired), Caversham
Keays, S., Fleet-Surg. R.N.
Kellett, L. H., M.D., Fleet-Surg. R.N.
Kennedy, G. E., Staff-Surg. R.N.
Keogh, J. A., M.B., Staff-Surg., R.N.
Kidd, A., Fleet-Surg. R.N.
Kilroy, L., Surg. R.N.
Kirker, G., M.D., Staff.-Surg. R.N.
Knapp, M. H., Surg. R.N.
Knightley, W. R., Surg. R.N.
Lambert, J. S., Fleet-Surg. R.N.
Langford, M. C., Surg. R.N.
Lavertine, A. X., Surg., R.N.
Levinge R. T. A., Staff-Surg. R.N.
Ley, G., Surg. R.N.
Lightfoot, J. H., Surg. R.N.
Lilly, F. J., Fleet-Surg. R.N.
Livesay, A. W., Surg. R.N.
Lloyd-Thomas, A., Fleet-Surg. R.N.
Lobb, F. F., Surg. R.N.
Lory, W. M., Fleet-Surg. R.N.
Lowney, J., Staff-Surg. R.N.
Lumley, F. D., Surg., R.N.
Luther, E. W., Fleet-Surg., R.N.
Lyon, J., M.D., Fleet-Surg. R.N.
M'Adam, J. A., Fleet-Surg. R.N. (retired)
MacDonald, J. V., M.D., Surg. R.N.
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McNabb, D. J. P., Staff-Surg. R.N.
McSwiny, M. O'C. Fleet-Surg., R.N. (ret.)
Mahon, E. E., C.B., Dep. Insp.-Gen. of Hos. & Fleets, R.N
Mahon, F. F., Surg., R.N.
Mair, G., M.D., Fleet-Surg. R.N. (ret.), Aberdeen—A.B. & K.Br.
Maitland, P. E., Staff-Surg. R.N.
Major, H. G. T., Surg., R.N.
Mann, F. R., Surg. R.N.
Mansfield, C. J., M.D., Staff-Surg. R.N.
Marriott, H. B., Surg., R.N.
Marshall, W. E., Surg. R.N.
Martin, John, Surg. R.N.
Mathew, W. E., Surgeon R.N.
May, A. W., Fleet-Surg., R.N.
May, P. M., Surg., R.N.
Meaden, E. H., Staff-Surg. R.N.
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Miller, E. S., M.B., Surg. R.N.
Miller, R., M.B., Staff-Surg. R.N.
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Mortimer, Edgar F., Surg. R.N.
Mourilyan, E. P., M.B., Staff-Surg. R.N.
Muir, J. R., M.B., Surg. R.N.
Munday, R. C., Staff-Surg. R.N.
Murray, G. B., Dep. Insp.-Gen. of Hospitals & Fleets, R.N. (ret.)
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Nicholson, R. H., Staff-Surg. R.N.
Nimmo, F. H., Surg. R.N.
Nix, P. K., M.B., Surg. R.N.
O'Brien, M., M.D., Surg., R.N. (retired)
O'Grady, S. T., Fleet-Surg. R.N.
O'Keeffe, T. F., M.B., Surg. R.N.
O'Leary, E. G. E., Surg. R.N.
O'Regan, M. J., M.B., Staff-Surg. R.N.
Pead, J. H., M.B., Surg., R.N.
Penfold, E. A., M.B., Staff-Surg. R.N.
Penny, H. L., Surg., R.N.
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Pollard, E. R. H., Dep.-Insp.-Gen. R.N.
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Raymond, J. K., M.B., Surg. R.N.
Reed, J. C. G., Surg. R.N.
Rees, O., M.D., Surg., R.N.
Reid, E. S., M.B., Surg. R.N.
Reid, W., M.D., Insp.-Gen. of Hosps. and Fleets, R.N. (ret.)
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Rogers, H. I., Surg., R.N.
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Shewell, H. W. B., M.B., Surg. R.N.
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Skey, A. R. H., M.B., Surg. R.N.
Smith, J. L., M.B., Staff-Surg. R.N.
Smith, M. J., M.D., Surg. R.N.
South, H. E., Staff Surg. R.N.
Sparrow, H. S. R., Fleet-Surg. R.N.
Spry, W., Staff-Surg. R.N.
Stalkartt, W. H. S., M.D., Staff-Surg. R.N.
Stanistreet, H. D., Insp.-Gen. of Hospitals and Fleets, R.N.
Stanton, J. W. W., Surg. R.N.
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Stenhouse, J. H., M.B., Staff-Surg. R.N.
Stepheus, H. F. D., M.B., Staff-Surg. R.N.
Stephens, H. N., Surg. R.N.
Stewart R. W. G., M.B., Surg. R.N.
Stott, W. G., M.B., Staff-Surg. R.N.
Sugrue, J., M.D., Staff-Surg. R.N.
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Symonds, G. H. H., M.D., Surg., R.N.
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Thompson, W., Staff-Surg., R.N. (retired)
Thornhill, J., M.B., Surg. R.N.
Thorpe, V. G., Staff-Surg. R.N.
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Turnbull, H. P., Surg. R.N.
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Underhill, J. W. O., M.B., Staff-Surg. R.N.
Vasey, C. L., Fleet-Surg. R.N. (ret.)
Vasey, S. W., Fleet-Surg. R.N.
Vaudin, M. L. M., M.B., Surg., R.N.
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Walsh, H. W., Jnl. Fleet-Surg. R.N.
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Waters, G. A., Staff-Surg. R.N.
Watt, James George, Surg. R.N.
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Weightman, A. E., Staff-Surg. R.N.
Whelan, J. H., M.D., Staff-Surg., R.N.
Whicher, J. C. F., Staff-Surg. R.N.
White, R. Dormer, M.D., Dep. Insp.-Gen., R.N.
Williams, J. O'B., M.D., Fleet-Surg., R.N.
Williams, P. G., Surg. R.N.
Williams, R. W., Fleet-Surg. R.N.
Willis, J. P., M.B., Surg., R.N.
Wilson, G., M.B., Staff-Surg. R.N.
Wood, J. C., Staff-Surg., R.N.
Woods, H. C., C.V.O., C.B., K.H.P., M.D., Insp.-Gen Hospitals and Fleets, R.N.
Woollcombe, A., Surg. R.N.
Young, W. R. M. Staff-Surg., R.N.

ARMY MEDICAL SERVICE.

In this list, Surgeon-Generals of the Army Medical Staff, as well as retired officers of the late Army Medical Staff, are distinguished by the letters A.M.S. Officers of the Royal Army Medical Corps by the letters R.A.M.C., and retired officers of the late Medical Department by the letters A.M.D.

MEMBERS—850

Adams, G. G. Major, R.A.M.C.
Adamson, H. M., M.B., Major, R.A.M.C.
Adcock, Hon. Brig.-Surg. J., M.D., Surg.-Major (retired) A.M.D., 1, Queen's Parade, Bath.
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Ainsworth, R. B., R.A.M.C.
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Alexander, J. D., M.B., Capt., R.A.M.C.
Alexander, Hon. Brig.-Surg. W., M.D., Lieut.-Col. (ret. A.M.S., Mindoro, Park Side, Portobello
Allen, S. G., Major, R.A.M.C.
Allen, W. H., Lt.-Col., R.A.M.

W. B., M.B., Col., R.A.M.C.
ort, C. W., M.D., Major, R.A.M.C.
rt, H. K., M.D., Lt.-Col., R.A.M.C.
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Anderson, E. C., Captain, R.A.M.C.
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Anderson, J. B., Captain, R.A.M.C.
Anderson, J., M.B., Major, R.A.M.C.
Anderson, R., Lt.-Col., (ret.), A.M.S., Bury St. Edmunds.
Anthonisz, A. H., M.B., Colonel, R.A.M.C.
Archer, G. J. S., Capt., R.A.M.C.
Archer, S. A., Captain, R.A.M.C.
Archer, T., M.D., Lt.-Col., R.A.M.C.
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